

TOTAL IONIZING DOSE RADIATION TEST REPORT

PART TYPE: PC28F00AM29EWH



DATE CODE: 1409

DESCRIPTION: 1Gb x8/x16 Parallel NOR Flash Memory

MANUFACTURER: MICRON U




RadLab

Alter reference:	ATN-RR-464	Issue:	2	Date:	2018/10/10
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DOCUMENT CHANGE CONTROL

ISSUE	DATE	Affected Edition / Revision	Affected Paragraph / Modification
1	2017/11/10	--	First edition of this document
2	2018/10/10	1	Header: name of part type has been corrected Pag 9/462: The name of the bias configuration has been corrected. Section 8: Name of bias configuration and statistics have been corrected. Pag 337/462: Appendix 1 has been included

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1 INTRODUCTION

This report describes the Total Ionizing Dose (TID) test performed on device **PC28F00AM29EWHA 1Gb x8/x16 Parallel NOR Flash Memory** manufactured by **MICRON U** with **D/C 1406**. The purpose of this test is to evaluate its suitability for being used in space applications under TID radiation conditions.

TID testing has been performed in accordance with the approved test plan **ATN-RP-211 Draft F** (see ANNEX I: TEST PLAN). Testing plan accomplishes with the “**ESCC 22900**. Total Dose Steady State Irradiation” test method and follows the “**MFR DATASHEET** performance specification” for device performance evaluation.

TID testing, started on **2017/06/19** and finished on **2017/07/19**, was performed using a Cobalt-60 gamma ray source as it is described in paragraph “**4.2. Irradiation facility**” (see ANNEX II: DOSIMETRY).

A total of **30** samples with 2 different bias configurations were tested (**10 ON Bias LDC + 10 ON Bias HDC + 10 OFF bias**). Dose rate was **300.3 rad(Si)/h, 300.9 rad(Si)/h and 300.4 rad(Si)/h respectively**, for a total cumulative dose of **94.3 krad(Si), 93.9 krad(Si) and 149.1 krad(Si) respectively**. Irradiation steps were followed by two annealing steps: **24 hours at 25 °C** and **168h at 100°C**. TID testing sequence has been described in paragraph “**5.1.Radiation source dose rate and annealing**”.

A graphical summary of TID testing results is displayed in **TABLE X: Summary of Irradiation Testing Results**. A complete set of electrical measurements, together with graphical representation of measured parameters versus total absorbed dose are provided for all samples in paragraph “**8. TID RESULTS WITH GRAPHS AND TABLES**”.

2 APPLICABLE AND REFERENCE DOCUMENTS

2.1 Applicable documents


- TEST PLAN ATN-RP-211 Draft F

2.2 Reference documents

- ESCC 22900 Issue 5
- MFR. Datasheet.

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3 PART INFORMATION

3.1 Parts traceability data

TABLE I: Parts Traceability Data

COMPONENT DESCRIPTION	1Gb x8/x16 Parallel NOR Flash Memory	PART TYPE	PC28F00AM29EWHA
COMPONENT NUMBER	PC28F00AM29EWHA	PACKAGE	BGA
DATE CODE	1409	MANUFACTURER	MICRON U
GENERIC SPECIFICATION	MFR DATASHEET	WAFER LOT:	N/Av
DETAIL SPECIFICATION	MFR DATASHEET	AMENDMENT	--

3.2 Sample Pictures

3.2.1 External view

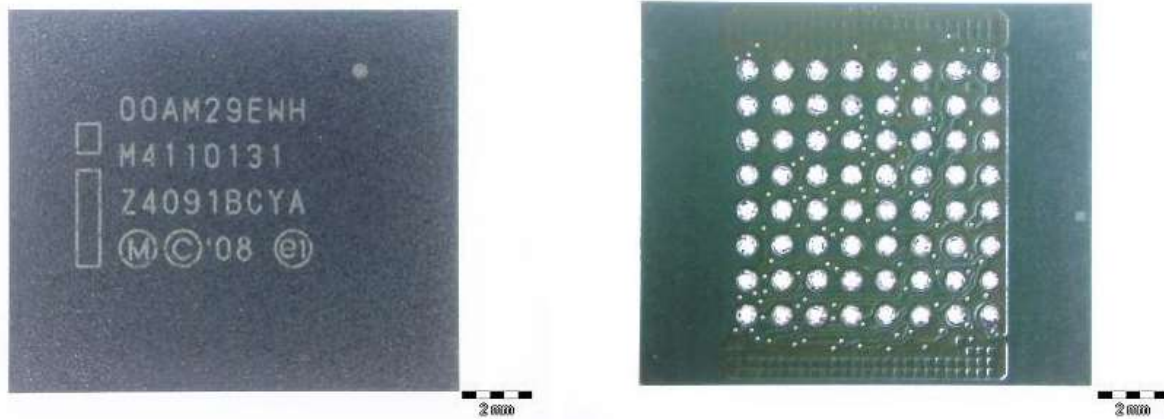



FIGURE 1: External General View

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 RadLab	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
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3.2.2 Internal view

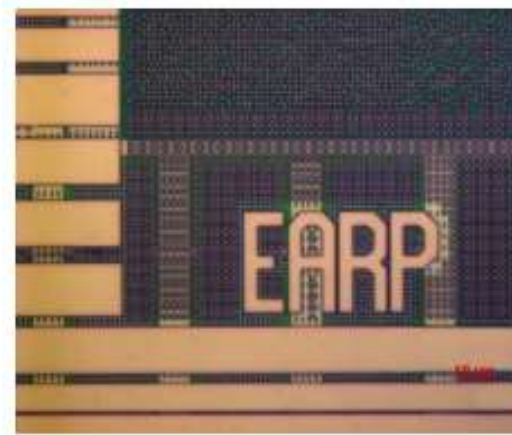


FIGURE 2: Internal Overall View

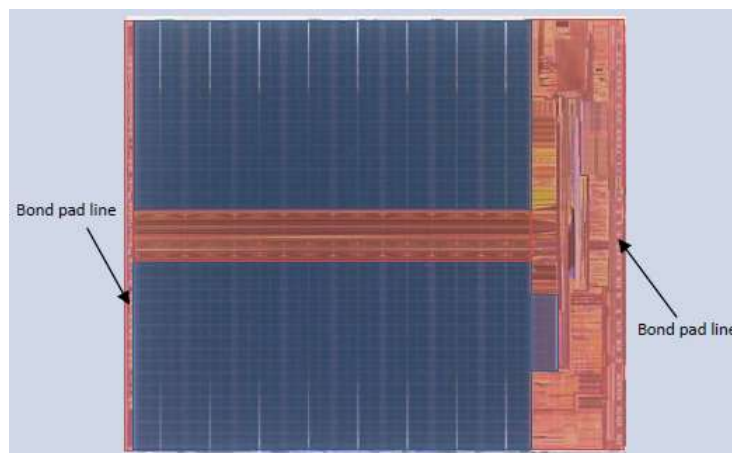


FIGURE 3: Die Mask Internal View

4 DOSIMETRY AND IRRADIATION FACILITY

4.1 Competences and irradiation facility


ALTER TECHNOLOGY laboratory has been audited by DSCC and ALTER TECHNOLOGY has been awarded **DLA Laboratory Suitability** for **MIL-STD-883 TM 1019** and **MIL-STD-750 TM 1019** TID tests performance in accordance with VQE-15-0222801.

ALTER TECHNOLOGY laboratory is **ENAC accredited ISO 17025** for **ESCC 22900, MIL-STD-883 TM 1019, MIL-STD-750 TM 1019** TID tests performance and dosimetry calculation and performance in accordance with Technical Annex 345/LE2116.

See **ANNEX III: COMPETENCES AND WARRANTIES**.

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4.2 Irradiation facility

4.2.1 Radlab facility

The **RADLAB** gamma radiation laboratory is based on a Cobalt-60 source placed into a **Gammabeam® X200 irradiator**. This Cobalt-60 source has photons of 1.17 and 1.33 MeV energies and 403TBq (10893Ci) certified on January 28th 2013.

The gamma radiation of around 1 MeV is a penetrating radiation, so the samples are irradiated completely.

The facility features meet the requirements for total dose irradiation tests currently demanded by the industry, and applicable standards such as ESCC, MIL-STD or ASTM. The dose rate can be adjusted to the level requested by the customer needs within a wide range, including standard and low window rates specified in ESCC 22900.

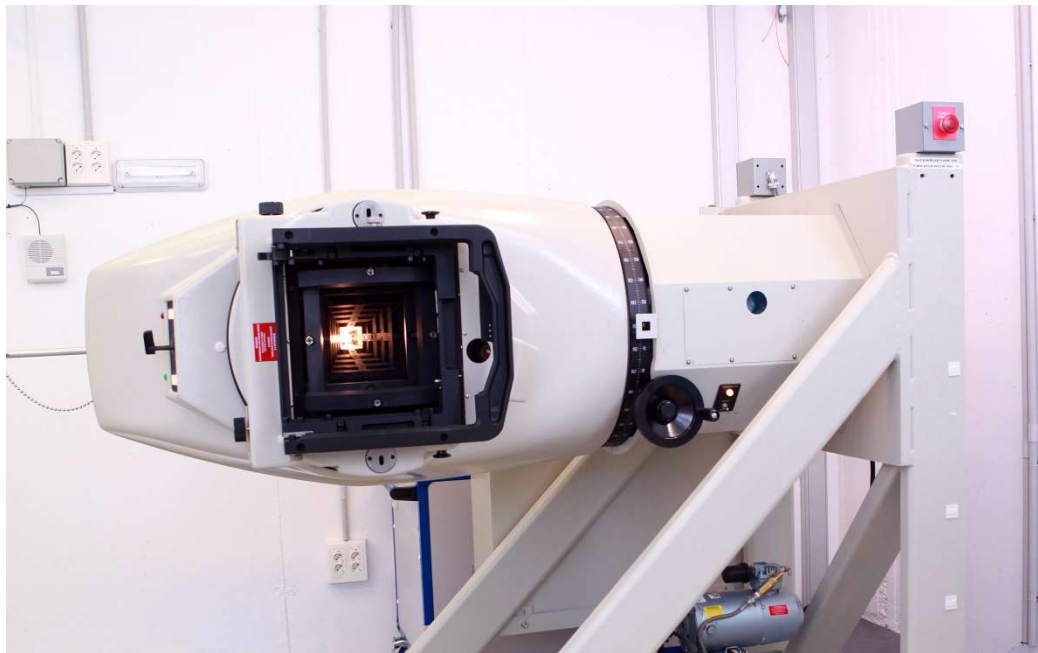


FIGURE 4: Gamma Irradiation Facility (RadLab®)

Test specimens are enclosed in a **Pb/Al container** to minimize dose enhancement effects caused by low-energy, scattered radiation.


4.2.2 Dose measurement

Dose rate measurement is performed through the **RMS (Radiation Monitoring System)**, a dosimetry system developed by ALTER TECHNOLOGY with less than 5% accuracy, which allows real time dose measurement thanks to a set of dedicated ionization chambers and electrometers.

The dosimetry is done regularly with calibrated dosimeters and ionization chambers manufactured by PTW Freiburg, Germany.

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The uniformity of each irradiation area is guaranteed through measurements of relative dose rate in precise profiles. The uniformity of the radiation field is included in the Dosimetry Report (see ANNEX II. DOSIMETRY).

The specific dosimetry equipment used to this radiation test is specified below:

TABLE II: Dosimetry Equipment List

REFERENCE	DESCRIPTION	CAL. DUE	USAGE
LE1007.007, LE1007.005 & LE1008.015	Ionization chamber	2018/05/09, 2018/07/20 & 2018/11/22	20, 30, 50, 70, 100 krad (Si), 20, 30, 50, 70, 100 krad (Si) & 20, 30, 50, 70, 100, 150 krad (Si)
LE1008.000	Electrometer	2019/09/19	20, 30, 50, 70, 100, 150 krad (Si)
LE1008.014, LE1007.009 & LE1008.011	Extension cable	N/A	20, 30, 50, 70, 100 krad (Si), 20, 30, 50, 70, 100 krad (Si) & 20, 30, 50, 70, 100, 150 krad (Si)
LE1009.054, LE1009.055 & LE1009.056	TID Box	N/A	20, 30, 50, 70, 100 krad (Si), 20, 30, 50, 70, 100 krad (Si) & 20, 30, 50, 70, 100, 150 krad (Si)

4.2.3 Environmental conditions

Environmental conditions (temperature, pressure and relative humidity) are controlled during the radiation exposures. All this equipment is periodically calibrated by ISO 17025 accredited companies.

Dose measurements are compensated against environmental temperature and pressure fluctuations in irradiation room.

4.2.4 Monitoring

A dedicated data acquisition system is available to record and to monitor online environment, absorbed dose and basing conditions in real-time. The radiation engineer has a complete test overview, with access to all test records during the whole test sequence (Table III. RVT steps).

5 EXPERIMENTAL CONDITIONS

5.1 Radiation source dose rate and annealing

The dose exposures were performed at **RadLab (CNA, Spain)**. A **Cobalt 60 source** is used to produce the ionizing radiation with the possibility of fixing the dose rate which arrives on samples by adjusting the samples distance to the source.

The total dose steady-state irradiation test was performed using a dose rate of **300.3 rad(Si)/h, 300.9 rad(Si)/h and 300.4 rad(Si)/h respectively** with 4.7 % of relative error (k=2) until a total accumulated dose of **94.3 krad(Si), 93.8 krad(Si) and 149.1 krad(Si) respectively**. Radiation uniformity on samples is equal to 92.6 %, 93.6% and 93.3% respectively (see ANNEX II: DOSIMETRY).

Absorbed dose has been controlled by a dedicated ionization chamber placed next to the samples. After radiation steps, annealing steps have been added to the TID.

See Table III to have a quick overview on performed steps and achieved dates.

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TABLE III: Radiation Monitoring System and TID Follow-Up Tool


Step	Required Acc. Dose	Total Step Dose	Real Acc. Dose	Deviation	Dose rate	Exposure time	Date
LDC	rad (Si)	rad(Si)	rad(Si)	%	rad(Si)/h	(h)	-
1	0	0	0	0	0	--	19/06/2017
2	20000	20329	20329.3	1.6	300.3	67.70	22/06/2017
3	30000	6718	27047.0	9.8	300.3	22.37	23/06/2017
4	50000	20697	47743.7	4.5	300.3	68.92	26/06/2017
5	70000	20264	68007.9	2.8	300.3	67.48	29/06/2017
6	100000	26357	94365.3	5.6	300.3	87.77	03/07/2017
Annealing							
7	Ann24h@25°C	24	--	--	--	--	04/07/2017
8	Ann168h@100°C	168	--	--	--	--	11/07/2017

Step	Required Acc. Dose	Total Step Dose	Real Acc. Dose	Deviation	Dose rate	Exposure time	Date
HDC	rad (Si)	rad(Si)	rad(Si)	%	rad(Si)/h	(h)	-
1	0	0	0	0	0	--	19/06/2017
2	20000	20355	20354.9	1.8	300.9	67.65	22/06/2017
3	30000	6799	27154.2	9.5	300.9	22.60	23/06/2017
4	50000	20641	47795.0	4.4	300.9	68.60	26/06/2017
5	70000	20547	68342.4	2.4	300.9	68.29	29/06/2017
6	100000	25551	93893.8	6.1	300.9	84.92	03/07/2017
Annealing							
7	Ann24h@25°C	24	--	--	--	--	04/07/2017
8	Ann168h@100°C	168	--	--	--	--	11/07/2017

Step	Required Acc. Dose	Total Step Dose	Real Acc. Dose	Deviation	Dose rate	Exposure time	Date
OFF	rad (Si)	rad(Si)	rad(Si)	%	rad(Si)/h	(h)	-
1	0	0	0	0	0	--	19/06/2017
2	20000	20097	20096.8	0.5	300.4	66.90	22/06/2017
3	30000	6949	27046.0	9.8	300.4	23.13	23/06/2017
4	50000	20433	47479.2	5.0	300.4	68.02	26/06/2017
5	70000	20581	68060.6	2.8	300.4	68.51	29/06/2017
6	100000	25429	93489.5	6.5	300.4	84.65	03/07/2017
7	150000	55613	149102.5	0.6	300.4	185.13	11/07/2017
Annealing							

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8	Ann24h@25°C	24	--	--	--	--	12/07/2017
9	Ann168h@100°C	168	--	--	--	--	19/07/2017

Note: The LDC and HDC samples finished their irradiation test at 150krad(Si) by customer request.

5.2 Bias setup

5.2.1 Parts distribution

In order to evaluate TID samples sensitivity between ON and OFF bias configuration, the irradiated parts were serialized as follows:

TABLE IV: Parts Distribution

LDC (Low Duty Cycle) samples

HDC (High Duty Cycle) samples

ALTER S/N	MANUFACTURER S/N	BIAS CONDITION
R1 (SN1)	N/A	Control Sample
R2 (SN2)	N/A	ON
R3 (SN3)	N/A	
R4 (SN4)	N/A	
R5 (SN5)	N/A	
R6 (SN6)	N/A	
R7 (SN7)	N/A	
R8 (SN8)	N/A	
R9 (SN9)	N/A	
R10 (SN10)	N/A	
R11 (SN11)	N/A	

ALTER S/N	MANUFACTURER S/N	BIAS CONDITION
R1 (SN1)	N/A	Control Sample
R2 (SN12)	N/A	ON
R3 (SN13)	N/A	
R4 (SN14)	N/A	
R5 (SN15)	N/A	
R6 (SN16)	N/A	
R7 (SN17)	N/A	
R8 (SN18)	N/A	
R9 (SN19)	N/A	
R10 (SN20)	N/A	
R11 (SN21)	N/A	

OFF samples

ALTER S/N	MANUFACTURER S/N	BIAS CONDITION
R1 (SN1)	N/A	Control Sample
R2 (SN22)	N/A	OFF
R3 (SN23)	N/A	
R4 (SN24)	N/A	
R5 (SN25)	N/A	
R6 (SN26)	N/A	
R7 (SN27)	N/A	
R8 (SN28)	N/A	
R9 (SN29)	N/A	
R10 (SN30)	N/A	
R11 (SN31)	N/A	

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5.2.2 Bias conditions

Test board allowed **20 ON** bias samples during exposures, in accordance with the electrical circuit provided in Figure 5, and **10 OFF** bias sample with all pins connected to ground.

During annealing steps same stress conditions were applied at 25° C and 100°C temperatures.

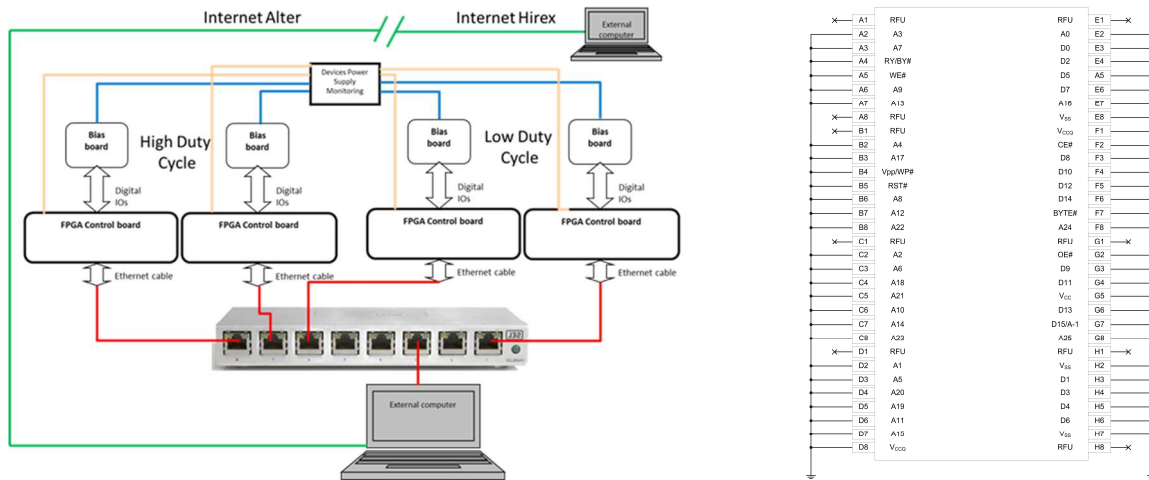


FIGURE 5: Radiation Bias Circuits, Biased and Unbiased respectively


5.2.3 Bias equipment identification

TABLE V: Bias Equipment List

REF. INVENT	DESCRIPTION	CAL. DUE	USAGE
LE0990.001	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE0990.002	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE0990.003	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1005.006	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1005.007	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1011.002	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1011.003	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1011.004	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)

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LE1046.002	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1046.003	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1046.004	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1046.005	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
LE1046.007	Power supply	N/A	20, 30, 50, 70, 100 krad (Si)
Hirex PCB	Bias PCB	N/A	20, 30, 50, 70, 100, 150 krad (Si)

5.3 Test parameters and measuring conditions

5.3.1 Test parameters and measuring conditions


Both electrical parameters test conditions and limits used for performing parameter measurements were provided in the test plan **ATN-RP-211 Draft F**. They are also reported in table VI for information purpose.

TABLE VI: Test Parameters and Conditions

Nº	SYMBOL	TEST	CONDITIONS (Note 1) ($T_{AMB}=22\pm 3^{\circ}C$)	LIMITS		UNIT
				MIN.	MAX.	
DC						
1	Cont	Continuity Test	--	--	--	V
2	I_{LI}	Input Leakage Current	$0V \leq V_{IN} \leq V_{CC}$	--	1 (Note 2)	μA
3	I_{LO}	Output Leakage Current	$0V \leq V_{OUT} \leq V_{CC}$	--	1 (Note 3)	μA
4	V_{OL}	Output LOW Voltage	$I_{OL} = 100\mu A$, $V_{CC} = V_{CC,min}$, $V_{CCQ} = V_{CCQ,min}$	--	$0.15 V_{CCQ}$ (Note 3)	V
5	V_{OH}	Output HIGH Voltage	$I_{OH} = 100\mu A$, $V_{CC} = V_{CC,min}$, $V_{CCQ} = V_{CCQ,min}$	$0.85 V_{CCQ}$ (Note 3)	--	V
6	V_{IL}	Input LOW Voltage	--	-0.5 (Note 3)	0.8 (Note 3)	V
7	V_{IH}	Input HIGH Voltage	--	$0.7 V_{CCQ}$ (Note 3)	$V_{CCQ}+0.4$ (Note 3)	V
POWER SUPPLY						
8	ICC1.1	Vcc Random Read Current	CE# = VIL, OE# = VIH, f = 5 MHz	--	31	mA

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Nº	SYMBOL	TEST	CONDITIONS (Note 1) (T _{AMB} =22±3°C)	LIMITS		UNIT
				MIN.	MAX.	
9	ICC1.2	V _{CC} Page Read Current	CE# = VIL, OE# = VIH, f = 13 MHz	--	16	mA
10	ICC3.1	V _{CC} Program Current	V _{PP} /WP# = VIH	--	50(Note 5)	mA
11	ICC3.2	V _{CC} Erase Current	V _{PP} /WP# = VIH	--	50(Note 5)	mA
AC						
12	tCS	CE# LOW to WE# LOW	--	0 (Note 4)	--	ns
13	tCH	WE# HIGH to CE# HIGH	--	0 (Note 4)	--	ns
14	tDS	Input valid to WE# HIGH	--	30 (Note 4)	--	ns
15	tDH	WE# HIGH to input transition	--	0 (Note 4)	--	ns
16	tWP	WE# LOW to WE# HIGH	--	35 (Note 4)	--	ns
17	tWPH	WE# HIGH to WE# LOW	--	20 (Note 4)	--	ns
FUNCTIONAL BLOCK						
18	Func_CHK	Pattern FCT Checkerboard.	Erase, write and read with pattern Checkerboard in block 0	(Note 6)	(Note 6)	--
19	Func_/CHK	Pattern FCT /Checkerboard	Erase, write and read with pattern Checkerboard Inverted in block 0	(Note 6)	(Note 6)	--
20	Data Retention	Read CC33h pattern	Write in 0kRad and read pattern CC33h in block 1 in following steps	(Note 6)(Note 7)	(Note 6)(Note 7)	--
21	Read Pattern	Read AAAAh pattern	Read only pattern AAAAh in block 512 only for ON parts	(Note 8)	(Note 8)	--

Notes:

1. The electrical testing to be performed with V_{CC}=V_{CCQ}=V_{PP}=3.3V unless otherwise noted in Table I. Therefore, when V_{PP} VIH=3.3V.
2. Performed in A25-A0.
3. Performed in DQ15-DQ0.
4. These electrical tests are GO/NO GO. This means that the test will be performed only for the minimum limits specified in Table I and the reported results will be GO/NO GO.
5. This limit is informative as the datasheet of the DUT indicate that it has not been 100% tested. Therefore, this does not constitute Pass/Fail information.
6. This test has a GO/NO GO result. If any of the written data is read incorrectly, the test is considered to be NO GO.
7. The pattern is written at 0kRad, and read only in the rest of steps.

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8. Block 512 will be written by ON radiation circuit. At the first execution (0 krad) the memory has not been written yet, and consequently the result should be a NO GO.
9. The limits above are included herein for reference purposes only. The degradation of any of these parameters above the limits must not be considered a reason for supplier lot rejection, due to the fact that the aim of this test is to characterize the electrical behaviour of this lot when is submitted to radiation.

5.3.2 Parameter measurement circuits

Test circuits used are the ones specified into the applicable documents.

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5.3.3 Test equipment identification

TABLE VII: Electrical Measurement Equipment List

REFERENCE	DESCRIPTION	CAL. DUE	USAGE
ATN-EM-SW-1424	Test software	N/A	0, 20, 30, 50, 70, 100, 150 krad (Si), Ann. 24h, Ann. 168h.
TLC-PCB-EM-338	Test Fixture	N/A	0, 20, 30, 50, 70, 100, 150 krad (Si), Ann. 24h, Ann. 168h.
LE0826.000	ULTRAFLEX	2018/03/08	0, 20, 30, 50, 70, 100, 150 krad (Si), Ann. 24h, Ann. 168h.
LE0826.004	ULTRAFLEX ALTER GENERIC DIB	N/A	0, 20, 30, 50, 70, 100, 150 krad (Si), Ann. 24h, Ann. 168h.

TABLE VIII: Annealing Equipment List


REFERENCE	DESCRIPTION	CAL. DUE	USAGE
LE0831.000	Oven	2018/03/28	Ann.24h, Ann.168h
LE0990.001	Power supply	N/A	Ann.24h, Ann.168h
LE0990.002	Power supply	N/A	Ann.24h, Ann.168h
LE0990.003	Power supply	N/A	Ann.24h, Ann.168h
LE1005.006	Power supply	N/A	Ann.24h, Ann.168h
LE1005.007	Power supply	N/A	Ann.24h, Ann.168h
LE1046.002	Power supply	N/A	Ann.24h, Ann.168h
LE1046.007	Power supply	N/A	Ann.24h, Ann.168h
LE1046.008	Power supply	N/A	Ann.24h, Ann.168h

TABLE IX: Other Equipment List

REFERENCE	DESCRIPTION	CAL. DUE	USAGE
LE0273.000	Digital Thermometer	2017/12/29	20, 30, 50, 70, 100, 150 krad (Si), Ann. 24h, Ann. 168h.
LE0273.002	Ball Probe	2017/12/29	20, 30, 50, 70, 100, 150 krad (Si), Ann. 24h, Ann. 168h.
LE1253.000	Multimeter	2018/04/24	0, 20, 30, 50, 70, 100, 150 krad (Si), Ann. 24h, Ann. 168h.

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	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
	PC28F00AM29EWHA	MICRON U	Ref.:	ATN-RR-464
			Issue:	2
	D/C 1409		Date:	2018/10/10
			Page:	21 / 462

6 TID TESTING RESULTS

6.1 Parameters drift

Next table show the irradiation step, using a colour legend, for which one sample (at least) is near, out of specification, or even, not measurable for each measured parameter.

The table legend of parameters drift is described as below:

- Normal operation
- Out of limits: out-of-tolerance defined in the test plan
- Catastrophic failure: sudden and total failure from which recovery is impossible.

TABLE X: Summary of Irradiation Testing Results

N.	Symbol	DOSE RATE: 303.3, 300.9 & 300.4 rad (Si)/h for LDC, HDC & OFF respectively							ANNEALING		
		0 krad	20 krad	30 krad	50 krad	70 krad	100 krad	150 krad	ANN. 24h	ANN. 168h	
1	ILI LowPin a25	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	
2	ILI LowPin a24	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	
3	ILI LowPin a23	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	
4	ILI LowPin a22	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	
5	ILI LowPin a21	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	
6	ILI LowPin a20	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	
7	ILI LowPin a19	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	
8	ILI LowPin a18	LDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓

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		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	
9	ILI LowPin a17	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	ILI LowPin a16	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	ILI LowPin a15	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	ILI LowPin a14	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	ILI LowPin a13	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	ILI LowPin a12	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	ILI LowPin a11	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	ILI LowPin a10	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	ILI LowPin a9	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18	ILI LowPin a8	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
19	ILI LowPin a7	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
20	ILI LowPin a6	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
21	ILI LowPin a5	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
22	ILI LowPin a4	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓

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info@altertechnology.com



		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	
23	ILI LowPin a3	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
24	ILI LowPin a2	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25	ILI LowPin a1	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
26	ILI LowPin a0	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
27	ILI HighPin a25	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
28	ILI HighPin a24	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
29	ILI HighPin a23	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30	ILI HighPin a22	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
31	ILI HighPin a21	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
32	ILI HighPin a20	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
33	ILI HighPin a19	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
34	ILI HighPin a18	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
35	ILI HighPin a17	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
36	ILI HighPin a16	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓

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info@altertechnology.com



		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	
37	ILI HighPin a15	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
38	ILI HighPin a14	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
39	ILI HighPin a13	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40	ILI HighPin a12	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
41	ILI HighPin a11	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
42	ILI HighPin a10	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
43	ILI HighPin a9	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
44	ILI HighPin a8	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
45	ILI HighPin a7	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
46	ILI HighPin a6	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
47	ILI HighPin a5	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
48	ILI HighPin a4	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
49	ILI HighPin a3	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50	ILI HighPin a2	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓

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info@altertechnology.com

		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	
51	ILI HighPin a1	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
52	ILI HighPin a0	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
53	ILO LowPin d15	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
54	ILO LowPin d14	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
55	ILO LowPin d13	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
56	ILO LowPin d12	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
57	ILO LowPin d11	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
58	ILO LowPin d10	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
59	ILO LowPin d9	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
60	ILO LowPin d8	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
61	ILO LowPin d7	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
62	ILO LowPin d6	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
63	ILO LowPin d5	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
64	ILO LowPin d4	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓

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		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	
65	ILO LowPin d3	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
66	ILO LowPin d2	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
67	ILO LowPin d1	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
68	ILO LowPin d0	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
69	ILO HighPin d15	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
70	ILO HighPin d14	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
71	ILO HighPin d13	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
72	ILO HighPin d12	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
73	ILO HighPin d11	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
74	ILO HighPin d10	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
75	ILO HighPin d9	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
76	ILO HighPin d8	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
77	ILO HighPin d7	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
78	ILO HighPin d6	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓

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		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	
79	ILO HighPin d5	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
80	ILO HighPin d4	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
81	ILO HighPin d3	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
82	ILO HighPin d2	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
83	ILO HighPin d1	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
84	ILO HighPin d0	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
85	VOL_MAX	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
86	VOH_MIN	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
87	VILmax fails	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
88	VIHmin fails	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
89	ICC1.1	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
90	ICC1.2	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
91	ICC3.1	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
92	ICC3.2	LDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓
		HDC	✓	✓	✓	✓	✓	✓	✓	NOTE 1	✓	✓

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		OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓
93	tCS fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
94	tCH fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
95	tDS fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
96	tDH fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
97	tWP fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
98	tWPH fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
99	Checkerboard fails	LDC	✓	✓	✓				NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
100	Checkerboard not fails	LDC	✓	✓	✓				NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
101	Retention fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓				NOTE 1		
		OFF	✓	✓	✓	✓	✓	✓			
102	Read Pattern fails	LDC	✓	✓	✓	✓			NOTE 1		✓
		HDC	✓	✓	✓	✓			NOTE 1		
		OFF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTE 1: LDC and HDC samples finalized their irradiation test at 100krad(Si) by customer request.

	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
	PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
			Issue:	2
			Date:	2018/10/10
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7 CONCLUSIONS

TID verification test was carried out by ALTER TECHNOLOGY on **PCB28F00AM29EWHA, 1Gb x8/x16 Parallel NOR Flash Memory** in **BGA** package, in accordance with TEST PLAN **ATN-RP-211 Draft F** (see **ANNEX I: TEST PLAN**) with a dose rate of **300.3 rad(Si)/h, 300.9 rad(Si)/h and 300.4 rad(Si)/h respectively** and a total cumulative dose of **94.3 krad(Si), 93.8 krad(Si) and 149.1 krad(Si) respectively**. Test was performed on **30 samples** (20 ON biased + 10 OFF biased).

For each parameter:


- ✓ Performed measurements are registered in a table for each irradiation or annealing step.
- ✓ Graphs for the total cumulative dose vs parameter values have been plotted for each irradiation or annealing step.

A short summary of testing results is provided in the following paragraphs:

- ✓ Some parameters show sensitivity to total cumulative TID and its variation is enough to surpass the limits defined in the testing plan.
- ✓ Within this TID sensitivity, the most affected parameters are ILO High, VOL_Max, VOH_Min, VILmax (fails), VIHmin (fails), ICC1.1, ICC1.2, ICC3.1, ICC3.2, AC Characteristics and Functional Tests.
- ✓ The most affected parameters were:
 - **ILO High:** The samples start to have an increasing trend beyond 30krad and then tend to recover their initial values after annealing processes in the case of LDC and HDC samples, but the intermediate behavior is not homogeneous between them, neither between diferents pins. Off samples start to have an increasing trend beyond 30krad(Si) and no values were measured in the Ann168h step (see Note2).
 - **VOL_Max:** Samples SN 2 to 21 (LDC and HDC) start to be out of the limits between 50 and 70krad(Si). The samples SN 22 to 31 (OFF) start to be out of the limits between 100 and 150krad(Si). Only the LDC samples tend to recover their initial values after annealing 168h process.
 - **VOH_Min:** LDC and HDC samples show a decreasing trend beyond 50krad(Si). LDC samples start to be out of the limits between 50 and 70krad(Si) and tend to recover their initial values after annealing processes.HDC samples start to be out of the limits between 50 and 70krad(Si) and don't tend to recover their initial values after annealing processes. In the case of the OFF samples, start to be out of the limits between 100 and 150krad and no values were measured in the Ann168h step (see Note2).
 - **VIL_max (fails):** LDC samples start to be out of the limits between 50 and 70krad(Si) and tend to recover their initial values after the annealing processes. HDC samples start to be out of the limits between 50 and 70krad(Si) and don't tend to recover their initial values after the annealing processes. OFF samples start to be out of the limits between 100 and 150krad(Si) and no values were measured in the Ann168h step (see Note2).
 - **VIH_min (fails):** LDC samples start to be out of the limits between 30 and 50krad(Si) and tend to recover their initial values after the annealing processes. HDC samples start to be out of the limits between 50 and 70krad(Si) and don't tend to recover their initial values after the annealing

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	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
	PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
			Issue:	2
			Date:	2018/10/10
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processes. OFF samples start to be out of the limits between 100 and 150krad(Si) and no values were measured in the Ann168h step (see Note2).

- **ICC1.1:** LDC samples show a decreasing trend between 50 and 70krad(Si) and an increasing trend beyond 70krad(Si) recovering their initial values after the annealing processes; HDC and OFF samples show an increasing trend beyond 70krad(Si) and tend to recover their initial values in the case of HDC samples. In the case of the OFF samples no values were measured in the Ann168h step (see Note2).
 - **ICC1.2:** LDC samples show an increasing trend between 50 and 70krad(Si) and they don't recover their initial values after the annealing processes; HDC samples start to be out of the limits between 70 and 100krad(Si) and they don't recover their initial values after the annealing processes. OFF samples show an increasing trend beyond 50krad and start to be out of the limits between 100 and 150krad(Si). No values were measured for OFF samples in the Ann168h step (see Note2).
 - **ICC3.1:** LDC samples show a decreasing trend between 50 and 70krad(Si) and they recover their initial values after the annealing processes; HDC samples show non-homogeneous variations beyond 50krad(Si). OFF samples show non-homogeneous variations beyond 70krad(Si) and no values were measured in the Ann168h step (see Note2).
 - **ICC3.2:** LDC samples show a decreasing trend between 50 and 70krad(Si) and they recover their initial values after the annealing processes; HDC samples show non-homogeneous variations beyond 50krad(Si). OFF samples show non-homogeneous variations beyond 100krad(Si) and no values were measured in the Ann168h step (see Note2).
 - **AC Characteristics:** LDC and HDC samples start to be out of the limits between 50 and 70krad(Si) and tend to recover their initial values after the annealing processes in the case of LDC samples. OFF samples start to be out of the limits between 100 and 150krad(Si) and no values were measured in the Ann168h step (see Note2).
 - **Functional tests:** LDC samples start to show functional failure between 30 and 50krad(Si) for Checkboard fails and Inverted Checkboard fails parameters, and between 50 and 70krad(Si) for Retention fails and Read patterns parameters; HDC samples start to show functional failure between 30 and 50krad(Si) for Retention fails and Read patterns parameters, and between 50 and 70krad(Si) for Checkboard fails and Inverted Checkboard fails parameters; OFF samples start to show functional failure between 100 and 150krad(Si). LDC samples tend to recover after annealing processes. Most samples in HDC samples don't tend to recover after annealing processes. No values were measured in the Ann168h step (see Note2) for OFF samples.
- ✓ **Note1:** Measurement of the Read Pattern fails parameter on part R2 (LDC samples) could not be performed due to hardware problem in the bias board.
- ✓ **Note2:** OFF biased samples (SN 22 to 31) failed in continuity test and it was not possible to perform measurement in post-annealing 168h step. The control sample was able to be measured in this step.

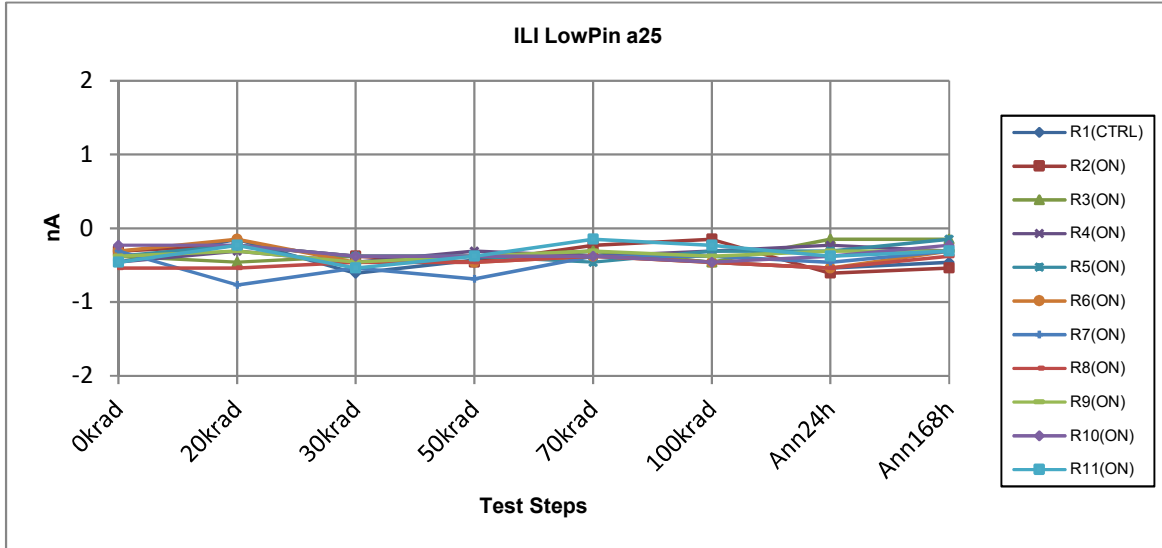
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8 TID RESULTS WITH GRAPHS AND TABLES.

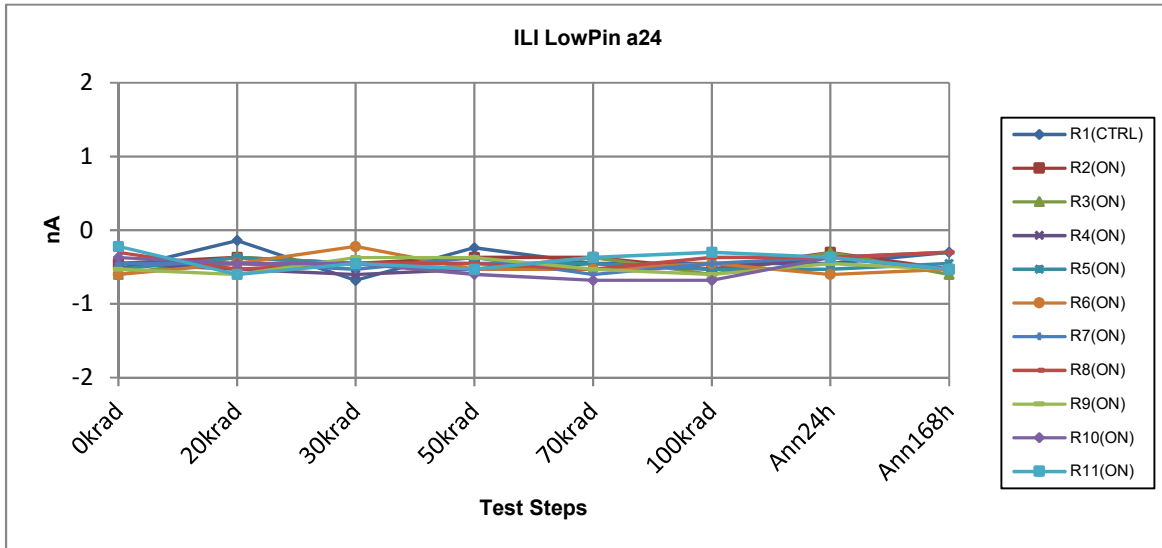
R1 + LDC (Low Duty Cycle) samples (SN 2 to 11)



ILI LowPin a25	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.46	-0.15	-0.61	-0.43	-0.31	-0.46	-0.54	-0.46
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.31	-0.23	-0.38	-0.46	-0.23	-0.15	-0.61	-0.54
R3(ON BIAS LDC)	-0.38	-0.46	-0.38	-0.38	-0.31	-0.46	-0.15	-0.15
R4(ON BIAS LDC)	-0.46	-0.31	-0.46	-0.31	-0.38	-0.31	-0.23	-0.31
R5(ON BIAS LDC)	-0.38	-0.23	-0.38	-0.38	-0.46	-0.31	-0.31	-0.15
R6(ON BIAS LDC)	-0.31	-0.15	-0.46	-0.46	-0.38	-0.46	-0.54	-0.31
R7(ON BIAS LDC)	-0.31	-0.77	-0.54	-0.69	-0.38	-0.38	-0.46	-0.31
R8(ON BIAS LDC)	-0.54	-0.54	-0.46	-0.46	-0.38	-0.46	-0.54	-0.38
R9(ON BIAS LDC)	-0.38	-0.31	-0.46	-0.38	-0.31	-0.38	-0.31	-0.31
R10(ON BIAS LDC)	-0.23	-0.23	-0.38	-0.38	-0.38	-0.46	-0.38	-0.23
R11(ON BIAS LDC)	-0.46	-0.23	-0.54	-0.38	-0.15	-0.23	-0.38	-0.31
Irradiated, ON biased LDC parts statistics								
Min Value	-0.54	-0.77	-0.54	-0.69	-0.46	-0.46	-0.61	-0.54
Max Value	-0.23	-0.15	-0.38	-0.31	-0.15	-0.15	-0.15	-0.15
Average	-0.38	-0.35	-0.44	-0.43	-0.34	-0.36	-0.39	-0.30
Sigma	0.09	0.19	0.06	0.10	0.09	0.11	0.15	0.11

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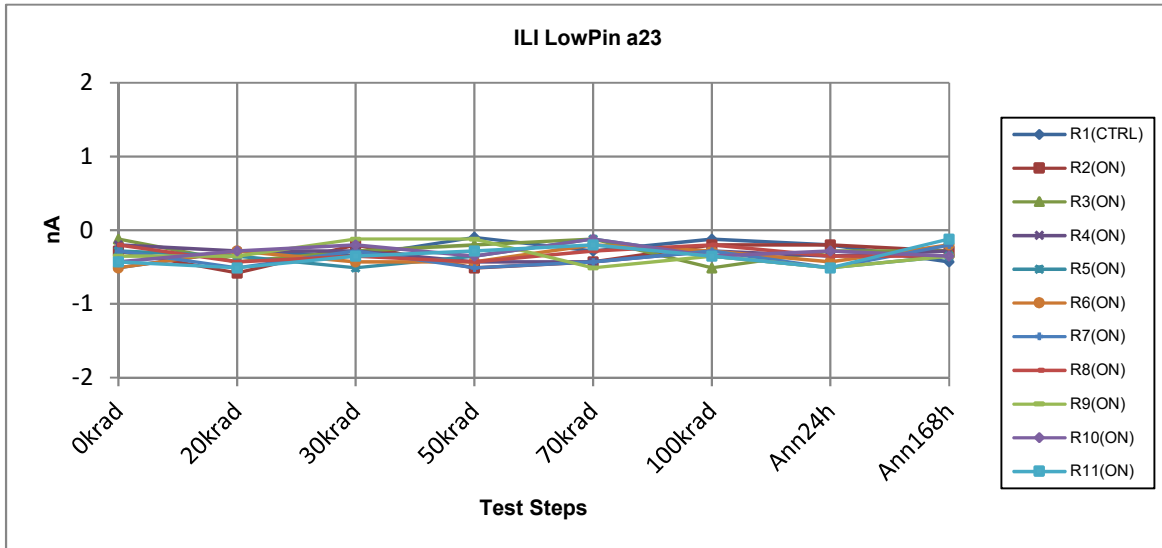
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ILI LowPin a24	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.53	-0.14	-0.68	-0.24	-0.45	-0.45	-0.45	-0.30
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.45	-0.37	-0.45	-0.37	-0.37	-0.53	-0.30	-0.53
R3(ON BIAS LDC)	-0.60	-0.37	-0.45	-0.53	-0.37	-0.60	-0.30	-0.60
R4(ON BIAS LDC)	-0.45	-0.53	-0.60	-0.53	-0.45	-0.53	-0.37	-0.53
R5(ON BIAS LDC)	-0.53	-0.37	-0.45	-0.45	-0.45	-0.53	-0.53	-0.45
R6(ON BIAS LDC)	-0.60	-0.45	-0.22	-0.53	-0.53	-0.45	-0.60	-0.53
R7(ON BIAS LDC)	-0.45	-0.45	-0.53	-0.37	-0.60	-0.45	-0.37	-0.30
R8(ON BIAS LDC)	-0.30	-0.53	-0.45	-0.45	-0.53	-0.37	-0.37	-0.30
R9(ON BIAS LDC)	-0.53	-0.60	-0.37	-0.37	-0.53	-0.60	-0.45	-0.53
R10(ON BIAS LDC)	-0.37	-0.45	-0.45	-0.60	-0.68	-0.68	-0.37	-0.53
R11(ON BIAS LDC)	-0.22	-0.60	-0.45	-0.53	-0.37	-0.30	-0.37	-0.53
Irradiated, ON biased LDC parts statistics								
Min Value	-0.60	-0.60	-0.60	-0.60	-0.68	-0.68	-0.60	-0.60
Max Value	-0.22	-0.37	-0.22	-0.37	-0.37	-0.30	-0.30	-0.30
Average	-0.45	-0.47	-0.44	-0.47	-0.49	-0.50	-0.40	-0.48
Sigma	0.12	0.09	0.10	0.08	0.11	0.11	0.10	0.10

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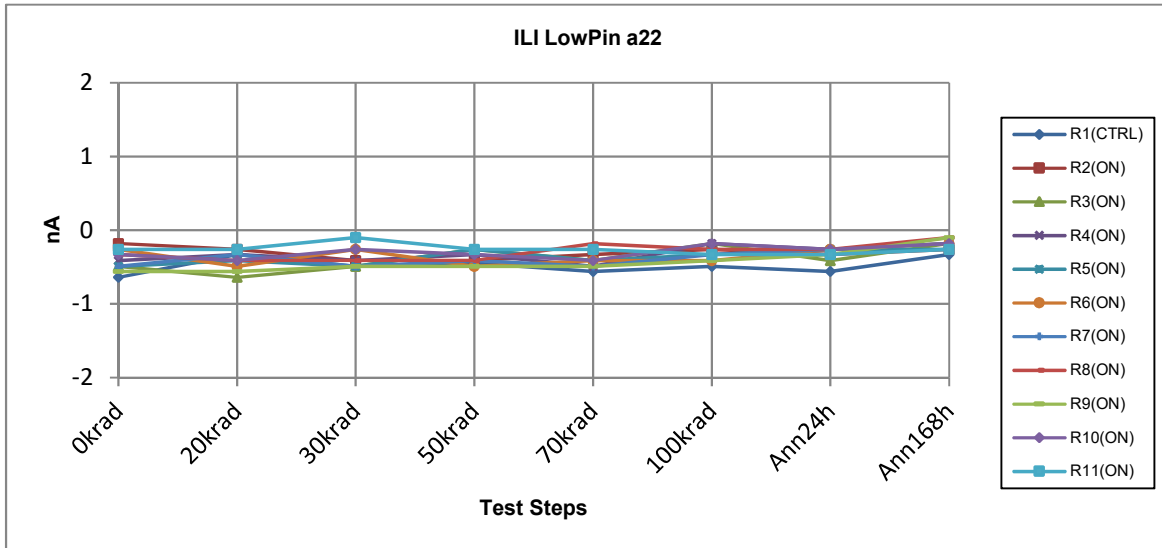
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ILI LowPin a23	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.51	-0.28	-0.35	-0.10	-0.28	-0.12	-0.20	-0.43
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.28	-0.58	-0.20	-0.51	-0.43	-0.20	-0.20	-0.28
R3(ON BIAS LDC)	-0.12	-0.43	-0.28	-0.20	-0.12	-0.51	-0.28	-0.28
R4(ON BIAS LDC)	-0.20	-0.28	-0.28	-0.43	-0.43	-0.28	-0.35	-0.28
R5(ON BIAS LDC)	-0.28	-0.35	-0.51	-0.35	-0.12	-0.35	-0.51	-0.35
R6(ON BIAS LDC)	-0.51	-0.28	-0.43	-0.43	-0.20	-0.28	-0.43	-0.20
R7(ON BIAS LDC)	-0.28	-0.51	-0.28	-0.51	-0.43	-0.28	-0.51	-0.20
R8(ON BIAS LDC)	-0.20	-0.43	-0.35	-0.43	-0.28	-0.20	-0.35	-0.35
R9(ON BIAS LDC)	-0.35	-0.35	-0.12	-0.12	-0.51	-0.35	-0.51	-0.35
R10(ON BIAS LDC)	-0.43	-0.28	-0.20	-0.35	-0.12	-0.35	-0.28	-0.35
R11(ON BIAS LDC)	-0.43	-0.51	-0.35	-0.28	-0.20	-0.35	-0.51	-0.12
Irradiated, ON biased LDC parts statistics								
Min Value	-0.51	-0.58	-0.51	-0.51	-0.51	-0.51	-0.51	-0.35
Max Value	-0.12	-0.28	-0.12	-0.12	-0.12	-0.20	-0.20	-0.12
Average	-0.31	-0.40	-0.30	-0.36	-0.28	-0.32	-0.39	-0.28
Sigma	0.12	0.11	0.12	0.13	0.15	0.09	0.12	0.08

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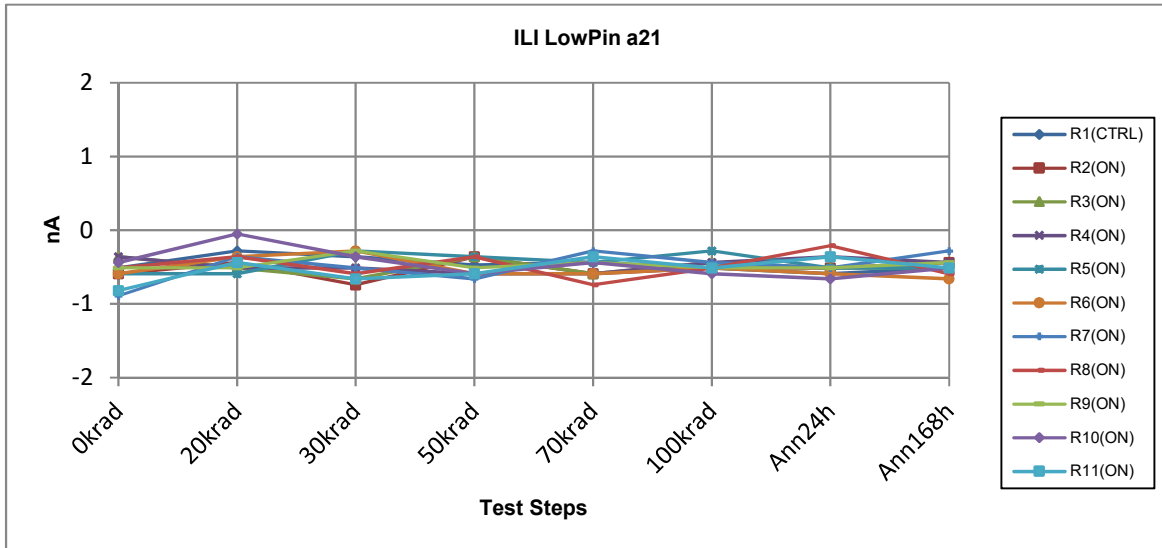
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ILI LowPin a22	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.64	-0.33	-0.49	-0.45	-0.56	-0.49	-0.56	-0.33
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.18	-0.26	-0.41	-0.41	-0.33	-0.26	-0.33	-0.26
R3(ON BIAS LDC)	-0.49	-0.64	-0.49	-0.26	-0.41	-0.18	-0.41	-0.18
R4(ON BIAS LDC)	-0.41	-0.33	-0.41	-0.33	-0.49	-0.18	-0.26	-0.18
R5(ON BIAS LDC)	-0.49	-0.41	-0.49	-0.26	-0.41	-0.33	-0.26	-0.26
R6(ON BIAS LDC)	-0.26	-0.49	-0.26	-0.49	-0.41	-0.41	-0.26	-0.18
R7(ON BIAS LDC)	-0.49	-0.33	-0.49	-0.41	-0.49	-0.33	-0.26	-0.18
R8(ON BIAS LDC)	-0.33	-0.41	-0.41	-0.41	-0.18	-0.26	-0.26	-0.10
R9(ON BIAS LDC)	-0.56	-0.56	-0.49	-0.49	-0.49	-0.41	-0.33	-0.10
R10(ON BIAS LDC)	-0.33	-0.41	-0.26	-0.33	-0.41	-0.18	-0.26	-0.18
R11(ON BIAS LDC)	-0.26	-0.26	-0.10	-0.26	-0.26	-0.33	-0.33	-0.26
Irradiated, ON biased LDC parts statistics								
Min Value	-0.56	-0.64	-0.49	-0.49	-0.49	-0.41	-0.41	-0.26
Max Value	-0.18	-0.26	-0.10	-0.26	-0.18	-0.18	-0.26	-0.10
Average	-0.38	-0.41	-0.38	-0.37	-0.39	-0.29	-0.30	-0.19
Sigma	0.13	0.12	0.13	0.09	0.10	0.09	0.05	0.06

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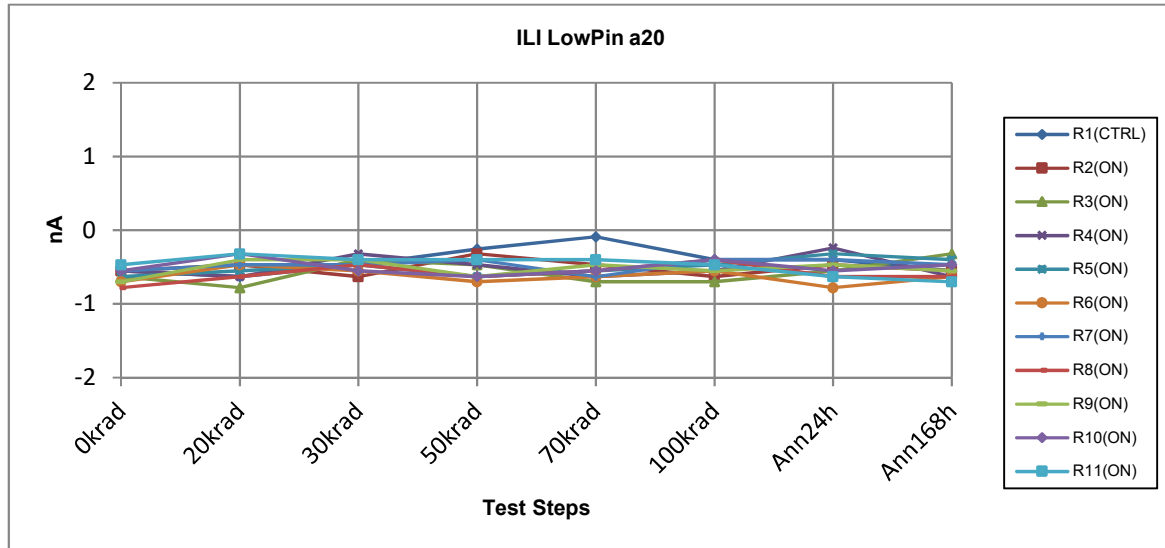
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ILI LowPin a21	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.51	-0.28	-0.36	-0.47	-0.44	-0.51	-0.59	-0.51
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.59	-0.44	-0.74	-0.36	-0.59	-0.51	-0.51	-0.44
R3(ON BIAS LDC)	-0.36	-0.51	-0.66	-0.36	-0.59	-0.44	-0.51	-0.51
R4(ON BIAS LDC)	-0.36	-0.51	-0.51	-0.59	-0.59	-0.44	-0.36	-0.44
R5(ON BIAS LDC)	-0.59	-0.59	-0.28	-0.36	-0.44	-0.28	-0.51	-0.51
R6(ON BIAS LDC)	-0.59	-0.36	-0.28	-0.59	-0.59	-0.51	-0.59	-0.66
R7(ON BIAS LDC)	-0.89	-0.36	-0.51	-0.66	-0.28	-0.44	-0.51	-0.28
R8(ON BIAS LDC)	-0.51	-0.36	-0.59	-0.36	-0.74	-0.51	-0.21	-0.59
R9(ON BIAS LDC)	-0.51	-0.51	-0.28	-0.51	-0.44	-0.51	-0.51	-0.44
R10(ON BIAS LDC)	-0.44	-0.05	-0.36	-0.59	-0.44	-0.59	-0.66	-0.51
R11(ON BIAS LDC)	-0.82	-0.44	-0.66	-0.59	-0.36	-0.51	-0.36	-0.51
Irradiated, ON biased LDC parts statistics								
Min Value	-0.89	-0.59	-0.74	-0.66	-0.74	-0.59	-0.66	-0.66
Max Value	-0.36	-0.05	-0.28	-0.36	-0.28	-0.28	-0.21	-0.28
Average	-0.57	-0.41	-0.49	-0.50	-0.51	-0.47	-0.47	-0.49
Sigma	0.18	0.15	0.18	0.12	0.14	0.08	0.13	0.10

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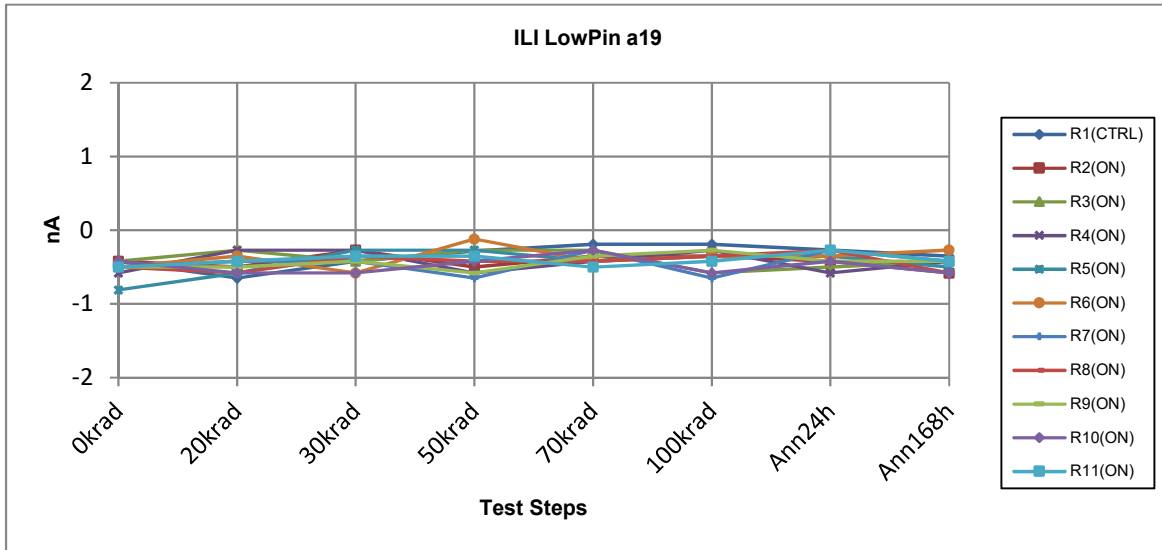
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ILI LowPin a20	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.55	-0.63	-0.47	-0.26	-0.09	-0.40	-0.40	-0.55
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.55	-0.47	-0.63	-0.32	-0.47	-0.63	-0.47	-0.55
R3(ON BIAS LDC)	-0.63	-0.78	-0.40	-0.47	-0.70	-0.70	-0.55	-0.32
R4(ON BIAS LDC)	-0.55	-0.63	-0.32	-0.47	-0.63	-0.55	-0.24	-0.63
R5(ON BIAS LDC)	-0.63	-0.55	-0.47	-0.63	-0.55	-0.47	-0.32	-0.40
R6(ON BIAS LDC)	-0.70	-0.47	-0.55	-0.70	-0.63	-0.55	-0.78	-0.63
R7(ON BIAS LDC)	-0.55	-0.47	-0.47	-0.40	-0.63	-0.40	-0.40	-0.47
R8(ON BIAS LDC)	-0.78	-0.63	-0.47	-0.63	-0.55	-0.40	-0.63	-0.63
R9(ON BIAS LDC)	-0.70	-0.40	-0.40	-0.63	-0.47	-0.55	-0.47	-0.55
R10(ON BIAS LDC)	-0.55	-0.32	-0.55	-0.63	-0.55	-0.40	-0.55	-0.47
R11(ON BIAS LDC)	-0.47	-0.32	-0.40	-0.40	-0.40	-0.47	-0.63	-0.70
Irradiated, ON biased LDC parts statistics								
Min Value	-0.78	-0.78	-0.63	-0.70	-0.70	-0.70	-0.78	-0.70
Max Value	-0.47	-0.32	-0.32	-0.32	-0.40	-0.40	-0.24	-0.32
Average	-0.61	-0.50	-0.47	-0.53	-0.56	-0.51	-0.50	-0.54
Sigma	0.09	0.15	0.09	0.13	0.09	0.10	0.16	0.12

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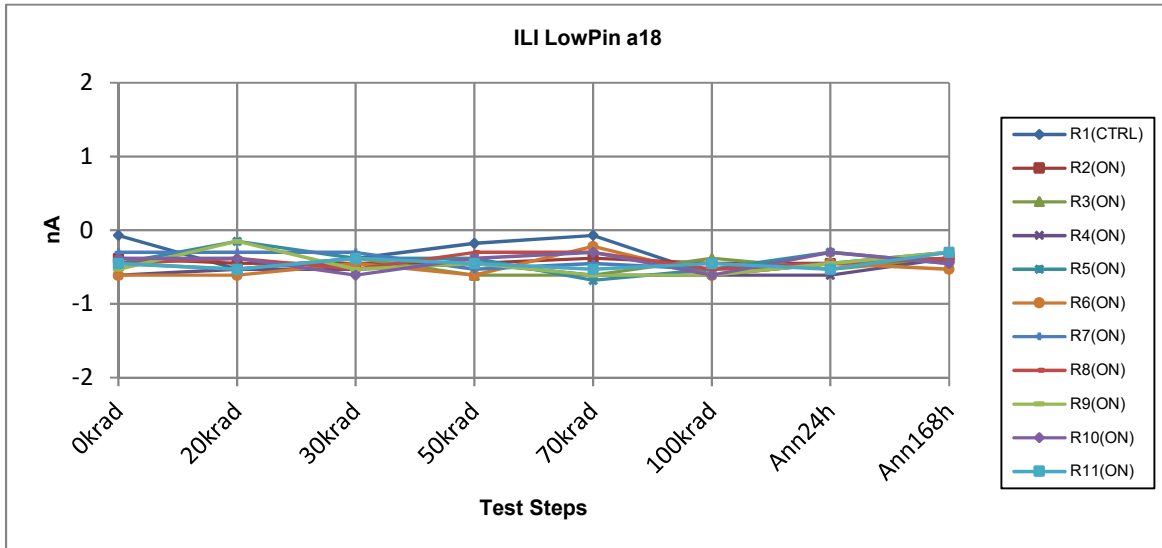
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ILI LowPin a19	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.42	-0.65	-0.42	-0.28	-0.19	-0.19	-0.27	-0.35
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.42	-0.50	-0.27	-0.50	-0.35	-0.35	-0.42	-0.58
R3(ON BIAS LDC)	-0.42	-0.27	-0.42	-0.27	-0.27	-0.58	-0.50	-0.42
R4(ON BIAS LDC)	-0.58	-0.27	-0.27	-0.58	-0.42	-0.27	-0.58	-0.42
R5(ON BIAS LDC)	-0.81	-0.58	-0.27	-0.27	-0.42	-0.35	-0.35	-0.50
R6(ON BIAS LDC)	-0.50	-0.35	-0.58	-0.12	-0.42	-0.35	-0.35	-0.27
R7(ON BIAS LDC)	-0.50	-0.42	-0.42	-0.65	-0.27	-0.65	-0.27	-0.42
R8(ON BIAS LDC)	-0.50	-0.58	-0.35	-0.42	-0.42	-0.35	-0.27	-0.58
R9(ON BIAS LDC)	-0.50	-0.50	-0.42	-0.58	-0.35	-0.27	-0.42	-0.42
R10(ON BIAS LDC)	-0.42	-0.58	-0.58	-0.42	-0.27	-0.58	-0.42	-0.58
R11(ON BIAS LDC)	-0.50	-0.42	-0.35	-0.35	-0.50	-0.42	-0.27	-0.42
Irradiated, ON biased LDC parts statistics								
Min Value	-0.81	-0.58	-0.58	-0.65	-0.50	-0.65	-0.58	-0.58
Max Value	-0.42	-0.27	-0.27	-0.12	-0.27	-0.27	-0.27	-0.27
Average	-0.52	-0.45	-0.39	-0.42	-0.37	-0.42	-0.39	-0.46
Sigma	0.12	0.12	0.12	0.17	0.08	0.14	0.10	0.10

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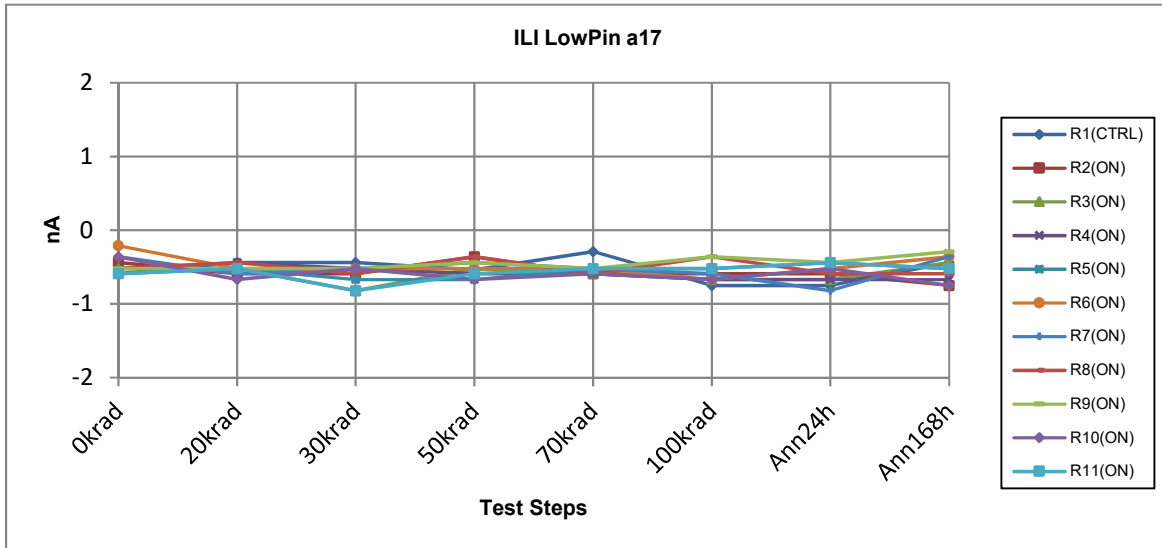
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ILI LowPin a18	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.07	-0.53	-0.38	-0.18	-0.07	-0.61	-0.45	-0.38
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.38	-0.45	-0.45	-0.45	-0.38	-0.45	-0.45	-0.38
R3(ON BIAS LDC)	-0.45	-0.53	-0.38	-0.61	-0.61	-0.38	-0.53	-0.38
R4(ON BIAS LDC)	-0.61	-0.53	-0.53	-0.45	-0.61	-0.61	-0.61	-0.38
R5(ON BIAS LDC)	-0.45	-0.15	-0.38	-0.38	-0.68	-0.53	-0.30	-0.45
R6(ON BIAS LDC)	-0.61	-0.61	-0.45	-0.61	-0.22	-0.61	-0.45	-0.53
R7(ON BIAS LDC)	-0.30	-0.30	-0.30	-0.53	-0.45	-0.53	-0.45	-0.30
R8(ON BIAS LDC)	-0.45	-0.38	-0.53	-0.30	-0.30	-0.53	-0.45	-0.38
R9(ON BIAS LDC)	-0.53	-0.15	-0.53	-0.45	-0.61	-0.61	-0.45	-0.30
R10(ON BIAS LDC)	-0.38	-0.38	-0.61	-0.38	-0.30	-0.61	-0.30	-0.45
R11(ON BIAS LDC)	-0.45	-0.53	-0.38	-0.45	-0.53	-0.45	-0.53	-0.30
Irradiated, ON biased LDC parts statistics								
Min Value	-0.61	-0.61	-0.61	-0.61	-0.68	-0.61	-0.61	-0.53
Max Value	-0.30	-0.15	-0.30	-0.30	-0.22	-0.38	-0.30	-0.30
Average	-0.46	-0.40	-0.45	-0.46	-0.47	-0.53	-0.45	-0.39
Sigma	0.10	0.16	0.10	0.10	0.16	0.08	0.10	0.08

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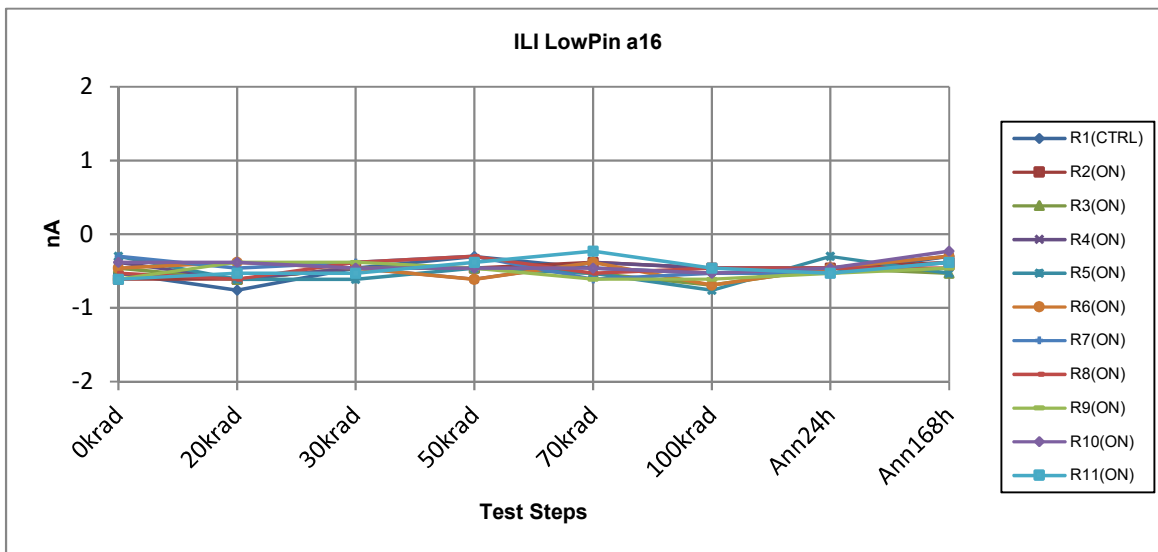
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ILI LowPin a17	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.59	-0.44	-0.44	-0.54	-0.29	-0.75	-0.75	-0.44
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.44	-0.59	-0.59	-0.36	-0.59	-0.59	-0.59	-0.75
R3(ON BIAS LDC)	-0.52	-0.52	-0.82	-0.52	-0.59	-0.67	-0.67	-0.44
R4(ON BIAS LDC)	-0.52	-0.44	-0.52	-0.59	-0.59	-0.67	-0.67	-0.67
R5(ON BIAS LDC)	-0.59	-0.52	-0.67	-0.67	-0.52	-0.52	-0.44	-0.52
R6(ON BIAS LDC)	-0.21	-0.52	-0.52	-0.52	-0.52	-0.67	-0.52	-0.36
R7(ON BIAS LDC)	-0.36	-0.59	-0.52	-0.44	-0.52	-0.59	-0.82	-0.36
R8(ON BIAS LDC)	-0.52	-0.44	-0.59	-0.36	-0.59	-0.36	-0.59	-0.59
R9(ON BIAS LDC)	-0.52	-0.52	-0.52	-0.44	-0.52	-0.36	-0.44	-0.29
R10(ON BIAS LDC)	-0.36	-0.67	-0.52	-0.67	-0.59	-0.67	-0.52	-0.75
R11(ON BIAS LDC)	-0.59	-0.52	-0.82	-0.59	-0.52	-0.52	-0.44	-0.52
Irradiated, ON biased LDC parts statistics								
Min Value	-0.59	-0.67	-0.82	-0.67	-0.59	-0.67	-0.82	-0.75
Max Value	-0.21	-0.44	-0.52	-0.36	-0.52	-0.36	-0.44	-0.29
Average	-0.46	-0.53	-0.61	-0.52	-0.56	-0.56	-0.57	-0.53
Sigma	0.12	0.07	0.12	0.11	0.04	0.12	0.12	0.16

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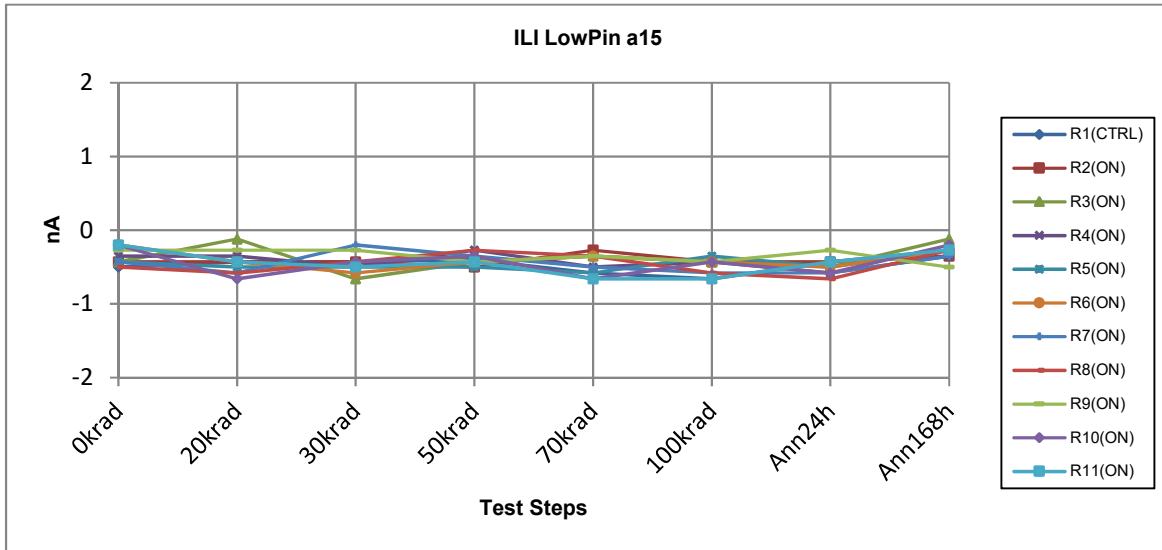
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ILI LowPin a16	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.53	-0.76	-0.46	-0.30	-0.46	-0.53	-0.53	-0.30
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.61	-0.61	-0.46	-0.46	-0.38	-0.46	-0.46	-0.38
R3(ON BIAS LDC)	-0.46	-0.61	-0.46	-0.46	-0.53	-0.69	-0.46	-0.53
R4(ON BIAS LDC)	-0.38	-0.61	-0.46	-0.61	-0.38	-0.46	-0.46	-0.30
R5(ON BIAS LDC)	-0.30	-0.61	-0.61	-0.46	-0.53	-0.76	-0.30	-0.53
R6(ON BIAS LDC)	-0.46	-0.38	-0.46	-0.61	-0.38	-0.69	-0.46	-0.30
R7(ON BIAS LDC)	-0.30	-0.46	-0.38	-0.30	-0.61	-0.53	-0.53	-0.38
R8(ON BIAS LDC)	-0.53	-0.61	-0.38	-0.30	-0.53	-0.46	-0.46	-0.46
R9(ON BIAS LDC)	-0.61	-0.38	-0.38	-0.46	-0.61	-0.61	-0.53	-0.46
R10(ON BIAS LDC)	-0.38	-0.38	-0.46	-0.46	-0.46	-0.53	-0.46	-0.23
R11(ON BIAS LDC)	-0.61	-0.53	-0.53	-0.38	-0.23	-0.46	-0.53	-0.38
Irradiated, ON biased LDC parts statistics								
Min Value	-0.61	-0.61	-0.61	-0.61	-0.61	-0.76	-0.53	-0.53
Max Value	-0.30	-0.38	-0.38	-0.30	-0.23	-0.46	-0.30	-0.23
Average	-0.46	-0.52	-0.46	-0.45	-0.46	-0.57	-0.47	-0.40
Sigma	0.12	0.11	0.07	0.11	0.12	0.11	0.07	0.10

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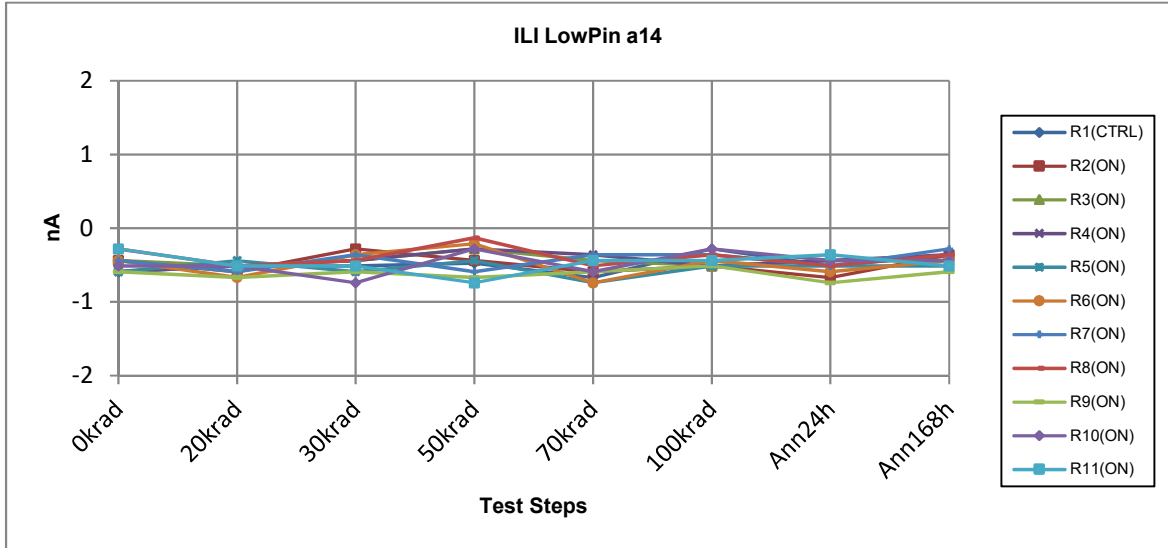
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ILI LowPin a15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.50	-0.43	-0.43	-0.40	-0.58	-0.66	-0.43	-0.27
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.43	-0.43	-0.43	-0.50	-0.27	-0.43	-0.43	-0.35
R3(ON BIAS LDC)	-0.43	-0.12	-0.66	-0.43	-0.35	-0.43	-0.50	-0.12
R4(ON BIAS LDC)	-0.35	-0.35	-0.50	-0.27	-0.50	-0.43	-0.58	-0.35
R5(ON BIAS LDC)	-0.43	-0.50	-0.50	-0.50	-0.58	-0.35	-0.50	-0.27
R6(ON BIAS LDC)	-0.20	-0.43	-0.58	-0.43	-0.35	-0.43	-0.50	-0.27
R7(ON BIAS LDC)	-0.43	-0.58	-0.20	-0.35	-0.50	-0.58	-0.58	-0.35
R8(ON BIAS LDC)	-0.50	-0.58	-0.43	-0.27	-0.35	-0.58	-0.66	-0.27
R9(ON BIAS LDC)	-0.27	-0.27	-0.27	-0.43	-0.35	-0.43	-0.27	-0.50
R10(ON BIAS LDC)	-0.20	-0.66	-0.43	-0.35	-0.66	-0.43	-0.58	-0.20
R11(ON BIAS LDC)	-0.20	-0.43	-0.50	-0.43	-0.66	-0.66	-0.43	-0.27
Irradiated, ON biased LDC parts statistics								
Min Value	-0.50	-0.66	-0.66	-0.50	-0.66	-0.66	-0.66	-0.50
Max Value	-0.20	-0.12	-0.20	-0.27	-0.27	-0.35	-0.27	-0.12
Average	-0.34	-0.44	-0.45	-0.40	-0.46	-0.48	-0.50	-0.30
Sigma	0.12	0.16	0.14	0.08	0.14	0.10	0.11	0.10

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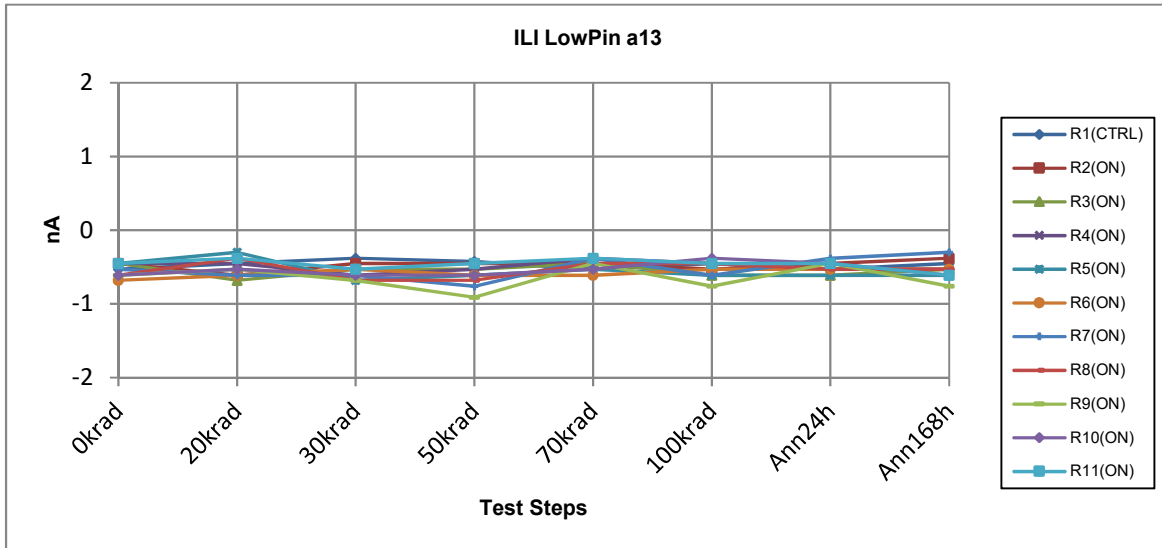
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ILI LowPin a14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.59	-0.51	-0.51	-0.47	-0.67	-0.28	-0.51	-0.36
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.44	-0.59	-0.28	-0.44	-0.59	-0.51	-0.67	-0.36
R3(ON BIAS LDC)	-0.44	-0.51	-0.44	-0.28	-0.44	-0.51	-0.44	-0.44
R4(ON BIAS LDC)	-0.59	-0.51	-0.44	-0.28	-0.36	-0.51	-0.44	-0.36
R5(ON BIAS LDC)	-0.59	-0.44	-0.59	-0.44	-0.74	-0.51	-0.51	-0.51
R6(ON BIAS LDC)	-0.44	-0.67	-0.36	-0.21	-0.74	-0.44	-0.59	-0.44
R7(ON BIAS LDC)	-0.44	-0.59	-0.36	-0.59	-0.36	-0.36	-0.51	-0.28
R8(ON BIAS LDC)	-0.28	-0.51	-0.44	-0.13	-0.51	-0.36	-0.51	-0.36
R9(ON BIAS LDC)	-0.59	-0.67	-0.59	-0.67	-0.59	-0.51	-0.74	-0.59
R10(ON BIAS LDC)	-0.51	-0.51	-0.74	-0.28	-0.59	-0.28	-0.44	-0.44
R11(ON BIAS LDC)	-0.28	-0.51	-0.51	-0.74	-0.44	-0.44	-0.36	-0.51
Irradiated, ON biased LDC parts statistics								
Min Value	-0.59	-0.67	-0.74	-0.74	-0.74	-0.51	-0.74	-0.59
Max Value	-0.28	-0.44	-0.28	-0.13	-0.36	-0.28	-0.36	-0.28
Average	-0.46	-0.55	-0.48	-0.41	-0.54	-0.44	-0.52	-0.43
Sigma	0.12	0.08	0.14	0.21	0.14	0.08	0.12	0.09

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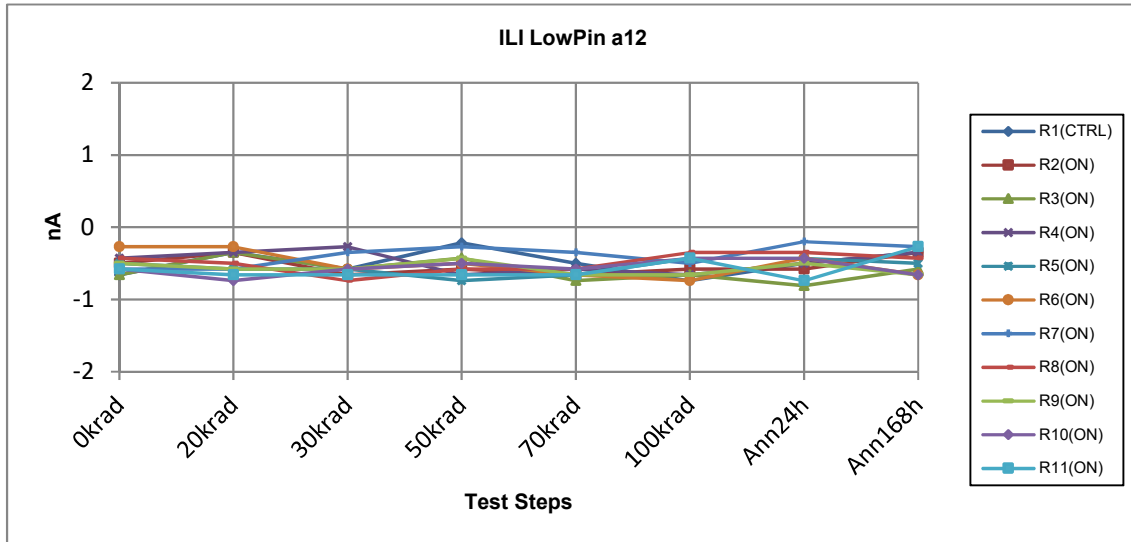
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ILI LowPin a13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.53	-0.45	-0.38	-0.42	-0.53	-0.45	-0.53	-0.45
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.45	-0.61	-0.45	-0.45	-0.45	-0.53	-0.45	-0.38
R3(ON BIAS LDC)	-0.45	-0.68	-0.53	-0.53	-0.45	-0.61	-0.61	-0.53
R4(ON BIAS LDC)	-0.45	-0.45	-0.61	-0.53	-0.38	-0.45	-0.53	-0.53
R5(ON BIAS LDC)	-0.45	-0.30	-0.68	-0.61	-0.53	-0.61	-0.61	-0.61
R6(ON BIAS LDC)	-0.68	-0.61	-0.53	-0.61	-0.61	-0.53	-0.53	-0.53
R7(ON BIAS LDC)	-0.53	-0.61	-0.61	-0.76	-0.38	-0.61	-0.38	-0.30
R8(ON BIAS LDC)	-0.61	-0.38	-0.68	-0.68	-0.45	-0.45	-0.53	-0.53
R9(ON BIAS LDC)	-0.61	-0.53	-0.68	-0.91	-0.45	-0.76	-0.45	-0.76
R10(ON BIAS LDC)	-0.61	-0.53	-0.61	-0.61	-0.53	-0.38	-0.45	-0.61
R11(ON BIAS LDC)	-0.45	-0.38	-0.53	-0.45	-0.38	-0.45	-0.45	-0.61
Irradiated, ON biased LDC parts statistics								
Min Value	-0.68	-0.68	-0.68	-0.91	-0.61	-0.76	-0.61	-0.76
Max Value	-0.45	-0.30	-0.45	-0.45	-0.38	-0.38	-0.38	-0.30
Average	-0.53	-0.51	-0.59	-0.61	-0.46	-0.54	-0.50	-0.54
Sigma	0.09	0.13	0.08	0.14	0.08	0.11	0.08	0.13

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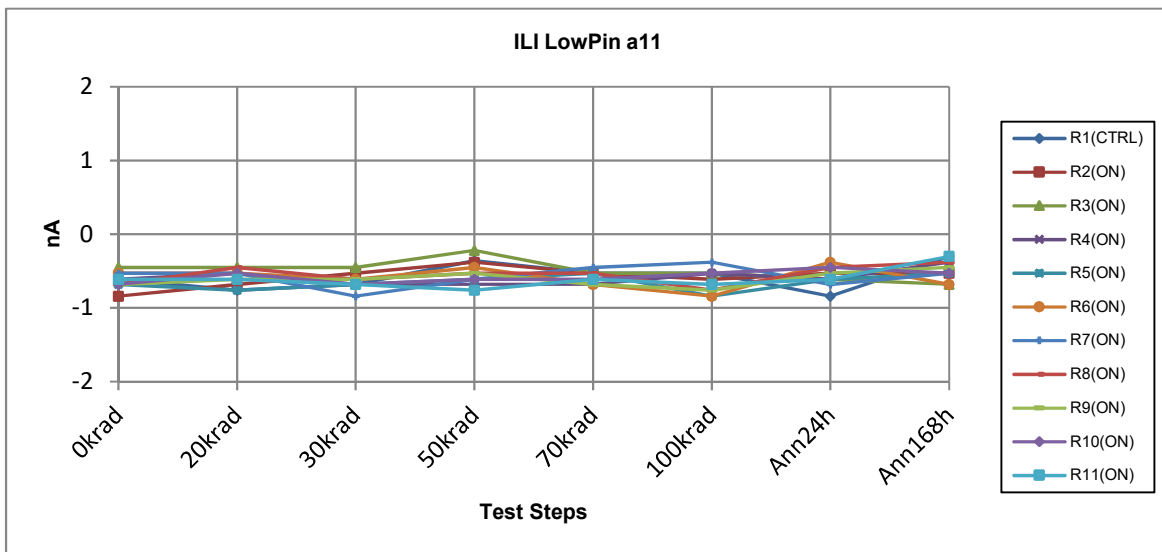
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ILI LowPin a12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.66	-0.35	-0.58	-0.22	-0.50	-0.74	-0.50	-0.35
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.50	-0.35	-0.66	-0.58	-0.66	-0.58	-0.58	-0.35
R3(ON BIAS LDC)	-0.66	-0.35	-0.58	-0.43	-0.74	-0.66	-0.81	-0.58
R4(ON BIAS LDC)	-0.43	-0.35	-0.27	-0.66	-0.58	-0.66	-0.50	-0.35
R5(ON BIAS LDC)	-0.50	-0.58	-0.58	-0.74	-0.66	-0.43	-0.43	-0.50
R6(ON BIAS LDC)	-0.27	-0.27	-0.58	-0.50	-0.66	-0.74	-0.43	-0.66
R7(ON BIAS LDC)	-0.58	-0.58	-0.35	-0.27	-0.35	-0.50	-0.20	-0.27
R8(ON BIAS LDC)	-0.43	-0.50	-0.74	-0.58	-0.58	-0.35	-0.35	-0.43
R9(ON BIAS LDC)	-0.50	-0.58	-0.58	-0.43	-0.66	-0.66	-0.50	-0.66
R10(ON BIAS LDC)	-0.58	-0.74	-0.58	-0.50	-0.58	-0.43	-0.43	-0.66
R11(ON BIAS LDC)	-0.58	-0.66	-0.66	-0.66	-0.66	-0.43	-0.74	-0.27
Irradiated, ON biased LDC parts statistics								
Min Value	-0.66	-0.74	-0.74	-0.74	-0.74	-0.74	-0.81	-0.66
Max Value	-0.27	-0.27	-0.27	-0.27	-0.35	-0.35	-0.20	-0.27
Average	-0.50	-0.50	-0.56	-0.54	-0.61	-0.54	-0.50	-0.47
Sigma	0.11	0.16	0.14	0.14	0.11	0.13	0.18	0.16

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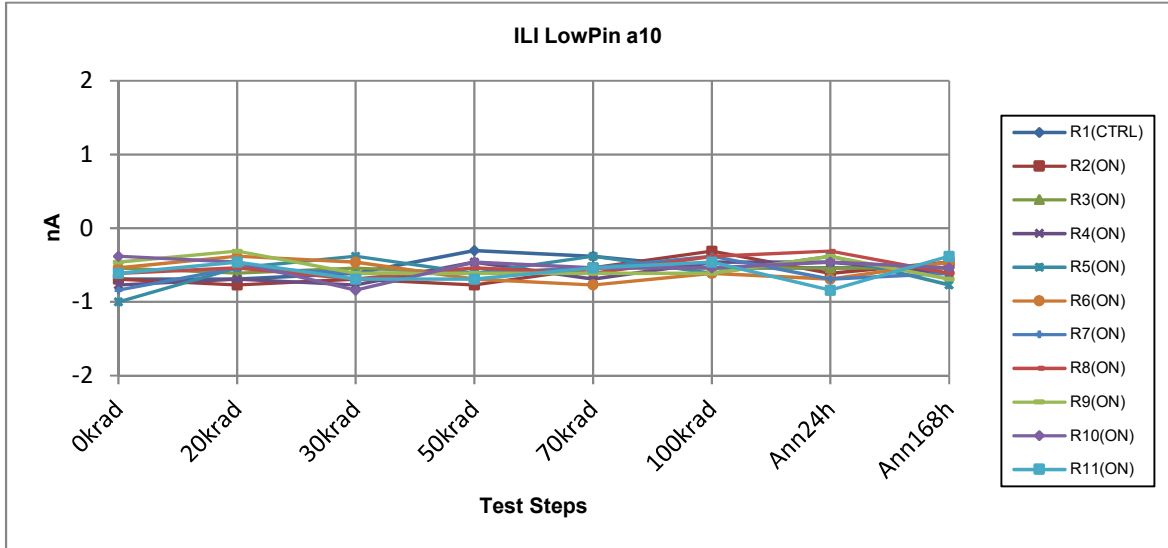
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ILI LowPin a11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.61	-0.76	-0.68	-0.36	-0.53	-0.53	-0.84	-0.30
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.84	-0.68	-0.53	-0.38	-0.53	-0.61	-0.53	-0.53
R3(ON BIAS LDC)	-0.45	-0.45	-0.45	-0.22	-0.53	-0.53	-0.61	-0.68
R4(ON BIAS LDC)	-0.61	-0.53	-0.68	-0.68	-0.68	-0.53	-0.61	-0.38
R5(ON BIAS LDC)	-0.68	-0.76	-0.68	-0.61	-0.53	-0.84	-0.61	-0.53
R6(ON BIAS LDC)	-0.53	-0.53	-0.61	-0.45	-0.68	-0.84	-0.38	-0.68
R7(ON BIAS LDC)	-0.53	-0.53	-0.84	-0.61	-0.45	-0.38	-0.68	-0.53
R8(ON BIAS LDC)	-0.68	-0.45	-0.61	-0.53	-0.53	-0.76	-0.45	-0.38
R9(ON BIAS LDC)	-0.68	-0.61	-0.61	-0.53	-0.68	-0.76	-0.53	-0.45
R10(ON BIAS LDC)	-0.68	-0.53	-0.68	-0.61	-0.61	-0.53	-0.45	-0.53
R11(ON BIAS LDC)	-0.61	-0.61	-0.68	-0.76	-0.61	-0.68	-0.61	-0.30
Irradiated, ON biased LDC parts statistics								
Min Value	-0.84	-0.76	-0.84	-0.76	-0.68	-0.84	-0.68	-0.68
Max Value	-0.45	-0.45	-0.45	-0.22	-0.45	-0.38	-0.38	-0.30
Average	-0.63	-0.57	-0.64	-0.54	-0.58	-0.65	-0.55	-0.50
Sigma	0.11	0.10	0.10	0.16	0.08	0.15	0.09	0.12

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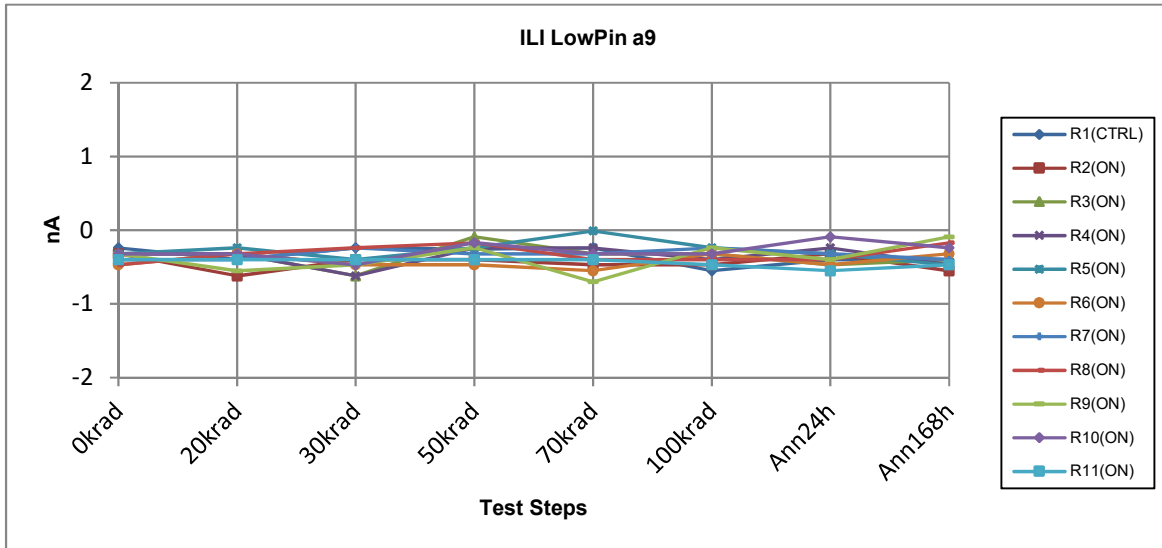
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ILI LowPin a10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.69	-0.69	-0.61	-0.30	-0.38	-0.54	-0.54	-0.54
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.69	-0.77	-0.69	-0.77	-0.54	-0.31	-0.61	-0.46
R3(ON BIAS LDC)	-0.54	-0.61	-0.54	-0.61	-0.54	-0.54	-0.54	-0.54
R4(ON BIAS LDC)	-0.77	-0.69	-0.77	-0.46	-0.69	-0.46	-0.46	-0.61
R5(ON BIAS LDC)	-1.00	-0.54	-0.38	-0.61	-0.38	-0.61	-0.38	-0.77
R6(ON BIAS LDC)	-0.54	-0.38	-0.46	-0.69	-0.77	-0.61	-0.69	-0.46
R7(ON BIAS LDC)	-0.84	-0.54	-0.61	-0.61	-0.54	-0.38	-0.69	-0.61
R8(ON BIAS LDC)	-0.61	-0.54	-0.69	-0.54	-0.61	-0.38	-0.31	-0.61
R9(ON BIAS LDC)	-0.46	-0.31	-0.61	-0.61	-0.61	-0.61	-0.38	-0.69
R10(ON BIAS LDC)	-0.38	-0.46	-0.84	-0.46	-0.54	-0.54	-0.46	-0.54
R11(ON BIAS LDC)	-0.61	-0.46	-0.69	-0.69	-0.54	-0.46	-0.84	-0.38
Irradiated, ON biased LDC parts statistics								
Min Value	-1.00	-0.77	-0.84	-0.77	-0.77	-0.61	-0.84	-0.77
Max Value	-0.38	-0.31	-0.38	-0.46	-0.38	-0.31	-0.31	-0.38
Average	-0.64	-0.53	-0.63	-0.61	-0.58	-0.49	-0.54	-0.57
Sigma	0.19	0.14	0.14	0.10	0.10	0.11	0.17	0.12

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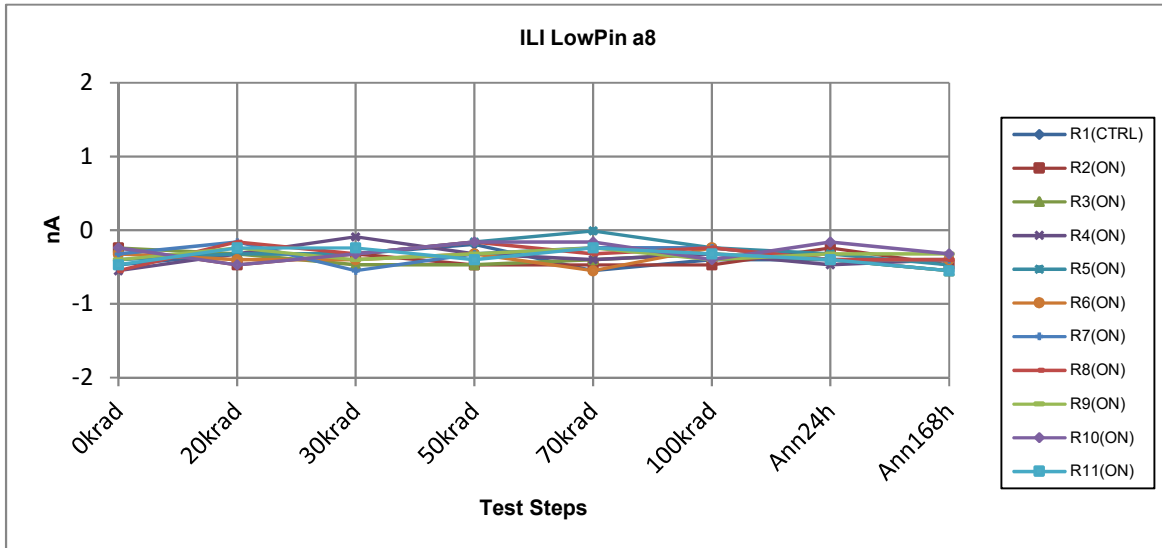
ALTER TECHNOLOGY TÜV NORD S.A.U., AN ISO 9001, EN 9100 ISO/IECE 17025:025 AND DLA SUITABILITY CERTIFIED COMPANY
 c/ Tomas Alba Edison, 4, Parque Científico y Tecnológico Cartuja - 41092 Seville, SPAIN. T: 34-95-446 70 50, Fax: 34-95-446 73 39, E-Mail:
info@altertechnology.com



ILI LowPin a9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.24	-0.40	-0.24	-0.26	-0.24	-0.55	-0.40	-0.40
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.32	-0.62	-0.40	-0.40	-0.47	-0.47	-0.32	-0.55
R3(ON BIAS LDC)	-0.32	-0.32	-0.62	-0.09	-0.32	-0.32	-0.47	-0.40
R4(ON BIAS LDC)	-0.32	-0.32	-0.62	-0.24	-0.24	-0.40	-0.24	-0.47
R5(ON BIAS LDC)	-0.32	-0.24	-0.40	-0.24	-0.01	-0.24	-0.32	-0.47
R6(ON BIAS LDC)	-0.47	-0.32	-0.47	-0.47	-0.55	-0.32	-0.47	-0.32
R7(ON BIAS LDC)	-0.40	-0.40	-0.24	-0.32	-0.32	-0.24	-0.32	-0.40
R8(ON BIAS LDC)	-0.47	-0.32	-0.24	-0.17	-0.40	-0.40	-0.40	-0.17
R9(ON BIAS LDC)	-0.32	-0.55	-0.47	-0.24	-0.70	-0.24	-0.40	-0.09
R10(ON BIAS LDC)	-0.32	-0.32	-0.47	-0.17	-0.32	-0.32	-0.09	-0.24
R11(ON BIAS LDC)	-0.40	-0.40	-0.40	-0.40	-0.40	-0.47	-0.55	-0.47
Irradiated, ON biased LDC parts statistics								
Min Value	-0.47	-0.62	-0.62	-0.47	-0.70	-0.47	-0.55	-0.55
Max Value	-0.32	-0.24	-0.24	-0.09	-0.01	-0.24	-0.09	-0.09
Average	-0.37	-0.38	-0.43	-0.27	-0.37	-0.34	-0.36	-0.36
Sigma	0.06	0.12	0.13	0.12	0.18	0.09	0.13	0.15

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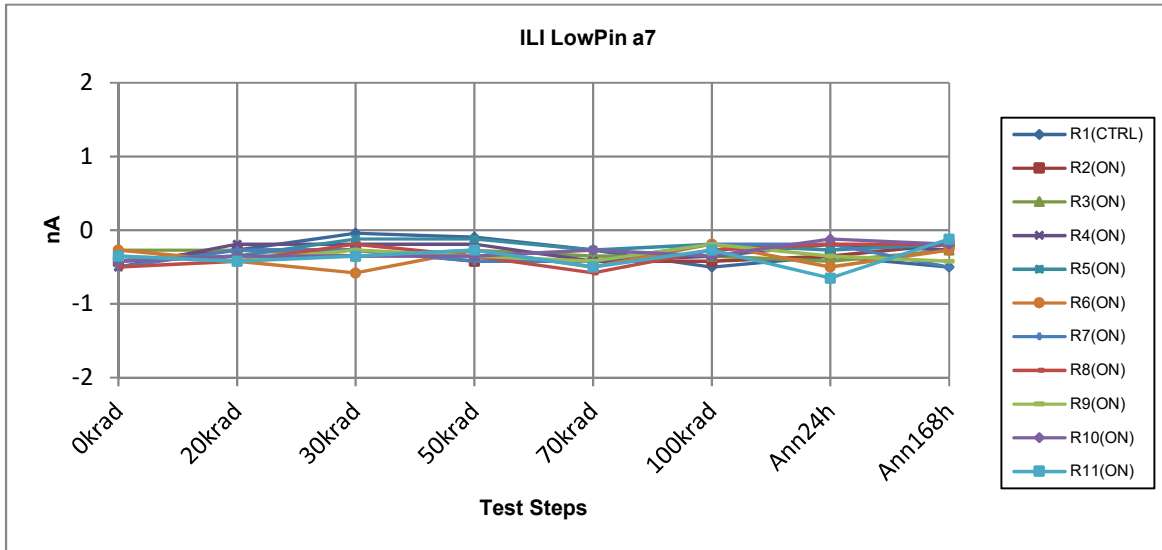
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ILI LowPin a8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.47	-0.32	-0.32	-0.19	-0.55	-0.40	-0.40	-0.55
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.24	-0.47	-0.32	-0.47	-0.47	-0.47	-0.24	-0.47
R3(ON BIAS LDC)	-0.24	-0.32	-0.47	-0.47	-0.40	-0.32	-0.40	-0.55
R4(ON BIAS LDC)	-0.55	-0.32	-0.09	-0.32	-0.40	-0.32	-0.47	-0.40
R5(ON BIAS LDC)	-0.40	-0.32	-0.32	-0.16	-0.01	-0.24	-0.32	-0.47
R6(ON BIAS LDC)	-0.32	-0.40	-0.40	-0.32	-0.55	-0.24	-0.40	-0.40
R7(ON BIAS LDC)	-0.32	-0.16	-0.55	-0.32	-0.24	-0.24	-0.40	-0.40
R8(ON BIAS LDC)	-0.55	-0.16	-0.32	-0.16	-0.32	-0.24	-0.40	-0.40
R9(ON BIAS LDC)	-0.40	-0.24	-0.40	-0.32	-0.24	-0.40	-0.32	-0.32
R10(ON BIAS LDC)	-0.24	-0.47	-0.32	-0.16	-0.16	-0.40	-0.16	-0.32
R11(ON BIAS LDC)	-0.47	-0.24	-0.24	-0.40	-0.24	-0.32	-0.40	-0.55
Irradiated, ON biased LDC parts statistics								
Min Value	-0.55	-0.47	-0.55	-0.47	-0.55	-0.47	-0.47	-0.55
Max Value	-0.24	-0.16	-0.09	-0.16	-0.01	-0.24	-0.16	-0.32
Average	-0.37	-0.31	-0.34	-0.31	-0.30	-0.32	-0.35	-0.43
Sigma	0.12	0.11	0.13	0.12	0.16	0.08	0.09	0.08

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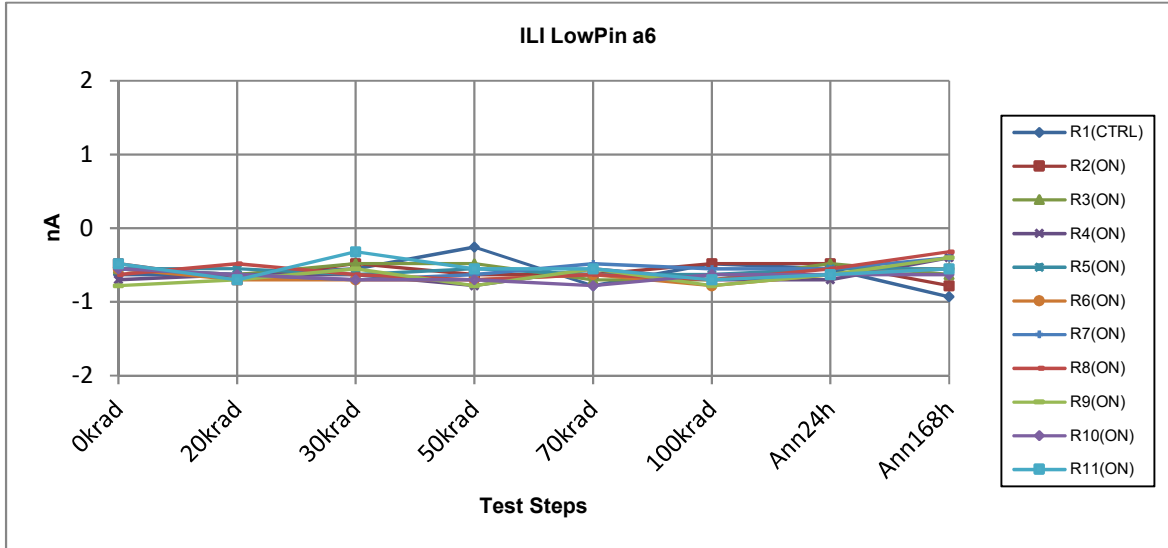
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ILI LowPin a7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.42	-0.27	-0.04	-0.10	-0.27	-0.50	-0.35	-0.50
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.42	-0.27	-0.27	-0.42	-0.42	-0.42	-0.35	-0.19
R3(ON BIAS LDC)	-0.27	-0.27	-0.35	-0.27	-0.35	-0.35	-0.42	-0.27
R4(ON BIAS LDC)	-0.50	-0.19	-0.19	-0.19	-0.42	-0.35	-0.19	-0.27
R5(ON BIAS LDC)	-0.42	-0.35	-0.12	-0.12	-0.27	-0.19	-0.27	-0.19
R6(ON BIAS LDC)	-0.27	-0.42	-0.58	-0.27	-0.50	-0.19	-0.50	-0.27
R7(ON BIAS LDC)	-0.50	-0.27	-0.27	-0.42	-0.42	-0.19	-0.19	-0.50
R8(ON BIAS LDC)	-0.50	-0.42	-0.19	-0.35	-0.58	-0.27	-0.19	-0.19
R9(ON BIAS LDC)	-0.35	-0.42	-0.27	-0.35	-0.42	-0.19	-0.35	-0.42
R10(ON BIAS LDC)	-0.42	-0.35	-0.35	-0.35	-0.27	-0.35	-0.12	-0.19
R11(ON BIAS LDC)	-0.35	-0.42	-0.35	-0.27	-0.50	-0.27	-0.65	-0.12
Irradiated, ON biased LDC parts statistics								
Min Value	-0.50	-0.42	-0.58	-0.42	-0.58	-0.42	-0.65	-0.50
Max Value	-0.27	-0.19	-0.12	-0.12	-0.27	-0.19	-0.12	-0.12
Average	-0.40	-0.34	-0.29	-0.30	-0.42	-0.28	-0.32	-0.26
Sigma	0.09	0.08	0.13	0.10	0.10	0.09	0.17	0.12

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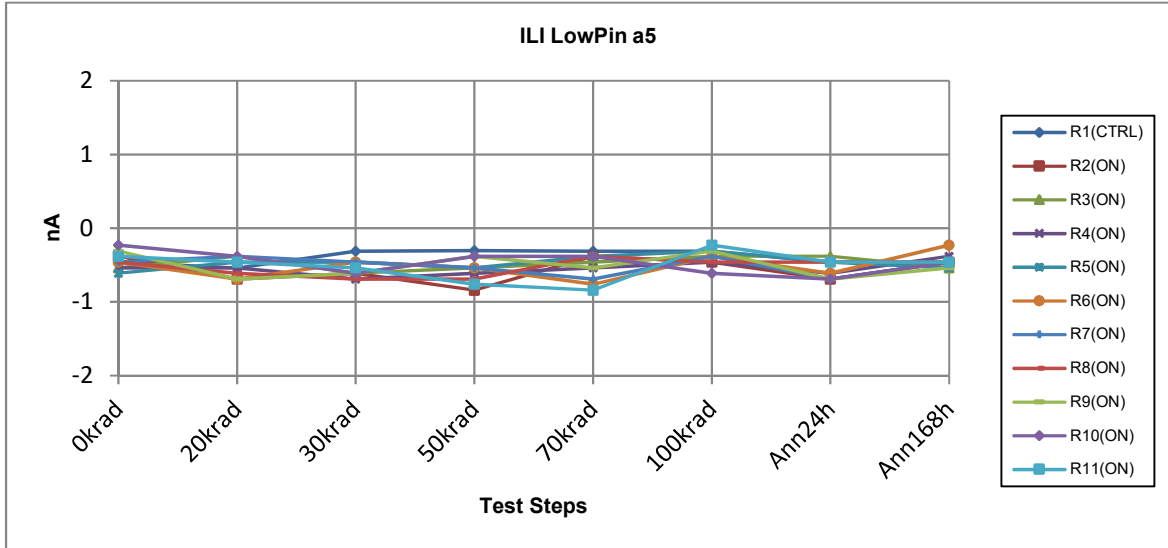
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ILI LowPin a6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.63	-0.63	-0.55	-0.26	-0.78	-0.48	-0.55	-0.93
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.48	-0.70	-0.48	-0.63	-0.63	-0.48	-0.48	-0.78
R3(ON BIAS LDC)	-0.55	-0.63	-0.48	-0.48	-0.70	-0.70	-0.48	-0.63
R4(ON BIAS LDC)	-0.70	-0.63	-0.63	-0.78	-0.55	-0.70	-0.70	-0.40
R5(ON BIAS LDC)	-0.55	-0.55	-0.63	-0.55	-0.63	-0.63	-0.55	-0.55
R6(ON BIAS LDC)	-0.55	-0.70	-0.70	-0.70	-0.63	-0.78	-0.63	-0.55
R7(ON BIAS LDC)	-0.55	-0.63	-0.70	-0.63	-0.48	-0.55	-0.55	-0.40
R8(ON BIAS LDC)	-0.63	-0.48	-0.63	-0.70	-0.63	-0.70	-0.55	-0.32
R9(ON BIAS LDC)	-0.78	-0.70	-0.55	-0.78	-0.55	-0.78	-0.63	-0.40
R10(ON BIAS LDC)	-0.55	-0.63	-0.70	-0.70	-0.78	-0.63	-0.63	-0.63
R11(ON BIAS LDC)	-0.48	-0.70	-0.32	-0.55	-0.55	-0.70	-0.63	-0.55
Irradiated, ON biased LDC parts statistics								
Min Value	-0.78	-0.70	-0.70	-0.78	-0.78	-0.78	-0.70	-0.78
Max Value	-0.48	-0.48	-0.32	-0.48	-0.48	-0.48	-0.48	-0.32
Average	-0.58	-0.64	-0.58	-0.65	-0.61	-0.67	-0.58	-0.52
Sigma	0.10	0.07	0.12	0.10	0.09	0.10	0.07	0.14

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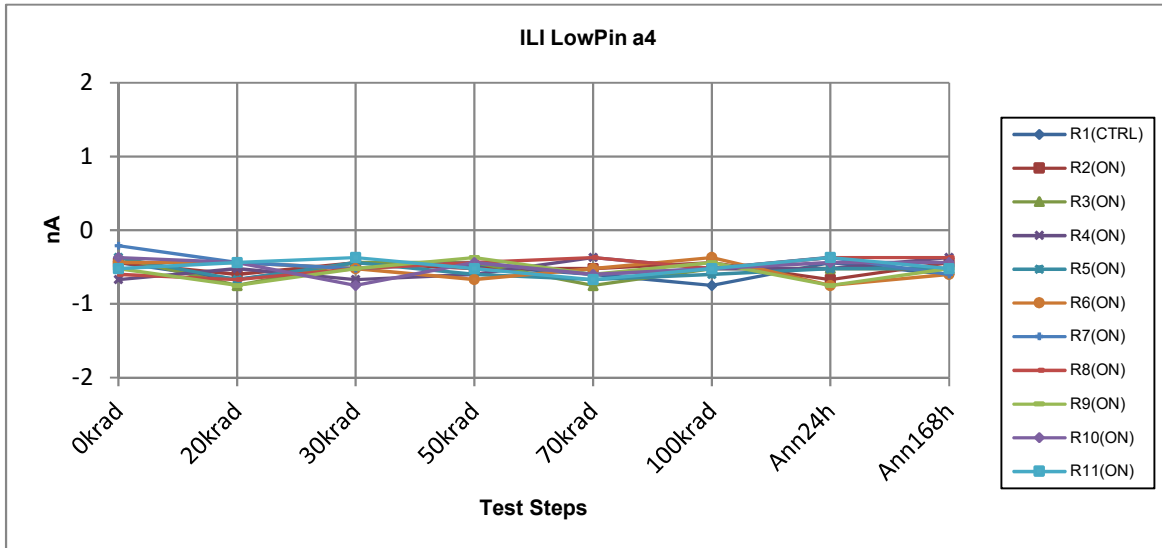
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ILI LowPin a5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.46	-0.54	-0.31	-0.30	-0.31	-0.31	-0.46	-0.46
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.38	-0.69	-0.61	-0.84	-0.38	-0.46	-0.69	-0.46
R3(ON BIAS LDC)	-0.54	-0.38	-0.61	-0.54	-0.46	-0.38	-0.38	-0.54
R4(ON BIAS LDC)	-0.54	-0.54	-0.69	-0.61	-0.54	-0.46	-0.61	-0.38
R5(ON BIAS LDC)	-0.61	-0.46	-0.46	-0.54	-0.38	-0.31	-0.46	-0.54
R6(ON BIAS LDC)	-0.46	-0.69	-0.46	-0.54	-0.76	-0.38	-0.61	-0.23
R7(ON BIAS LDC)	-0.46	-0.38	-0.46	-0.54	-0.69	-0.38	-0.69	-0.46
R8(ON BIAS LDC)	-0.46	-0.61	-0.69	-0.69	-0.38	-0.46	-0.46	-0.46
R9(ON BIAS LDC)	-0.31	-0.69	-0.61	-0.38	-0.54	-0.31	-0.69	-0.54
R10(ON BIAS LDC)	-0.23	-0.38	-0.61	-0.38	-0.38	-0.61	-0.69	-0.46
R11(ON BIAS LDC)	-0.38	-0.46	-0.54	-0.76	-0.84	-0.23	-0.46	-0.46
Irradiated, ON biased LDC parts statistics								
Min Value	-0.61	-0.69	-0.69	-0.84	-0.84	-0.61	-0.69	-0.54
Max Value	-0.23	-0.38	-0.46	-0.38	-0.38	-0.23	-0.38	-0.23
Average	-0.44	-0.53	-0.57	-0.58	-0.54	-0.40	-0.57	-0.45
Sigma	0.11	0.13	0.09	0.15	0.17	0.11	0.12	0.09

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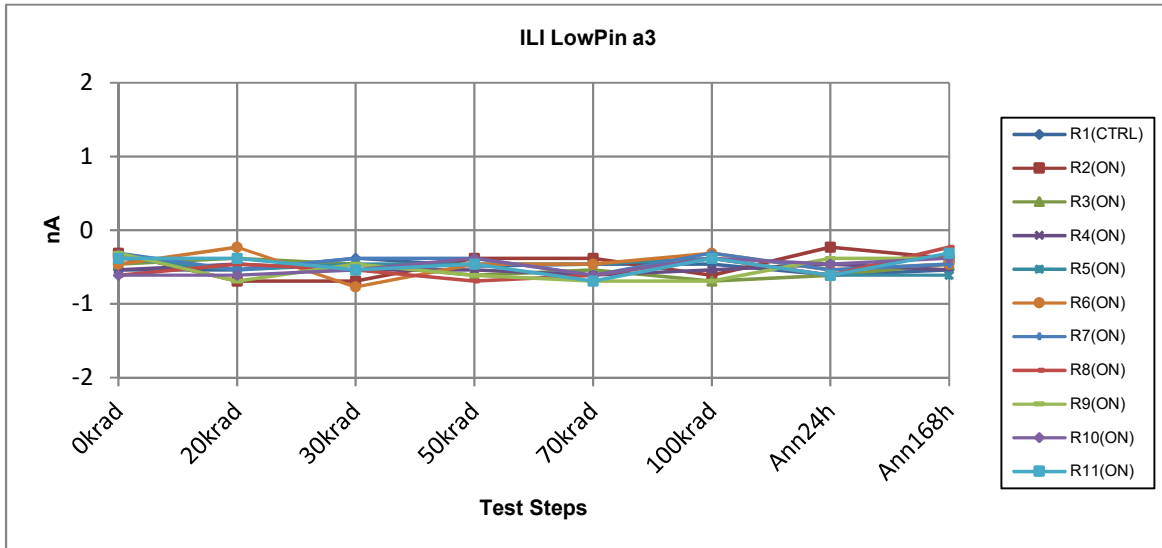
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ILI LowPin a4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.44	-0.67	-0.44	-0.48	-0.60	-0.75	-0.44	-0.60
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.44	-0.60	-0.44	-0.52	-0.52	-0.44	-0.67	-0.44
R3(ON BIAS LDC)	-0.37	-0.75	-0.44	-0.44	-0.75	-0.52	-0.52	-0.52
R4(ON BIAS LDC)	-0.67	-0.52	-0.67	-0.60	-0.37	-0.52	-0.52	-0.37
R5(ON BIAS LDC)	-0.37	-0.67	-0.44	-0.60	-0.67	-0.60	-0.52	-0.52
R6(ON BIAS LDC)	-0.44	-0.44	-0.52	-0.67	-0.52	-0.37	-0.75	-0.60
R7(ON BIAS LDC)	-0.21	-0.44	-0.52	-0.44	-0.60	-0.52	-0.37	-0.60
R8(ON BIAS LDC)	-0.60	-0.67	-0.52	-0.44	-0.37	-0.52	-0.37	-0.37
R9(ON BIAS LDC)	-0.52	-0.75	-0.52	-0.37	-0.60	-0.44	-0.75	-0.52
R10(ON BIAS LDC)	-0.37	-0.44	-0.75	-0.44	-0.60	-0.52	-0.44	-0.44
R11(ON BIAS LDC)	-0.52	-0.44	-0.37	-0.52	-0.67	-0.52	-0.37	-0.52
Irradiated, ON biased LDC parts statistics								
Min Value	-0.67	-0.75	-0.75	-0.67	-0.75	-0.60	-0.75	-0.60
Max Value	-0.21	-0.44	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
Average	-0.45	-0.57	-0.52	-0.50	-0.57	-0.50	-0.53	-0.49
Sigma	0.13	0.13	0.11	0.09	0.12	0.06	0.15	0.08

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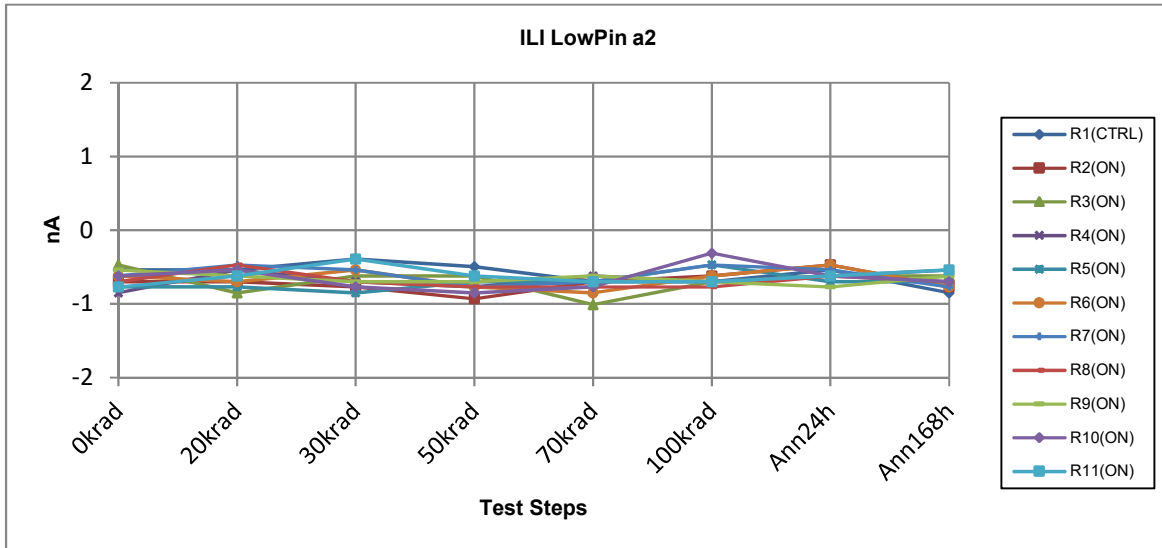
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ILI LowPin a3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.54	-0.54	-0.38	-0.49	-0.46	-0.46	-0.61	-0.54
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.31	-0.69	-0.69	-0.38	-0.38	-0.61	-0.23	-0.38
R3(ON BIAS LDC)	-0.46	-0.38	-0.46	-0.61	-0.54	-0.69	-0.61	-0.46
R4(ON BIAS LDC)	-0.54	-0.46	-0.54	-0.54	-0.61	-0.54	-0.46	-0.54
R5(ON BIAS LDC)	-0.38	-0.54	-0.46	-0.46	-0.46	-0.38	-0.61	-0.61
R6(ON BIAS LDC)	-0.46	-0.23	-0.77	-0.46	-0.46	-0.31	-0.54	-0.46
R7(ON BIAS LDC)	-0.31	-0.54	-0.38	-0.38	-0.61	-0.31	-0.54	-0.46
R8(ON BIAS LDC)	-0.61	-0.46	-0.54	-0.69	-0.61	-0.38	-0.61	-0.23
R9(ON BIAS LDC)	-0.31	-0.69	-0.46	-0.61	-0.69	-0.69	-0.38	-0.38
R10(ON BIAS LDC)	-0.61	-0.61	-0.54	-0.38	-0.61	-0.38	-0.46	-0.38
R11(ON BIAS LDC)	-0.38	-0.38	-0.54	-0.46	-0.69	-0.38	-0.61	-0.31
Irradiated, ON biased LDC parts statistics								
Min Value	-0.61	-0.69	-0.77	-0.69	-0.69	-0.69	-0.61	-0.61
Max Value	-0.31	-0.23	-0.38	-0.38	-0.38	-0.31	-0.23	-0.23
Average	-0.44	-0.50	-0.54	-0.50	-0.57	-0.47	-0.51	-0.42
Sigma	0.12	0.15	0.12	0.11	0.10	0.15	0.13	0.11

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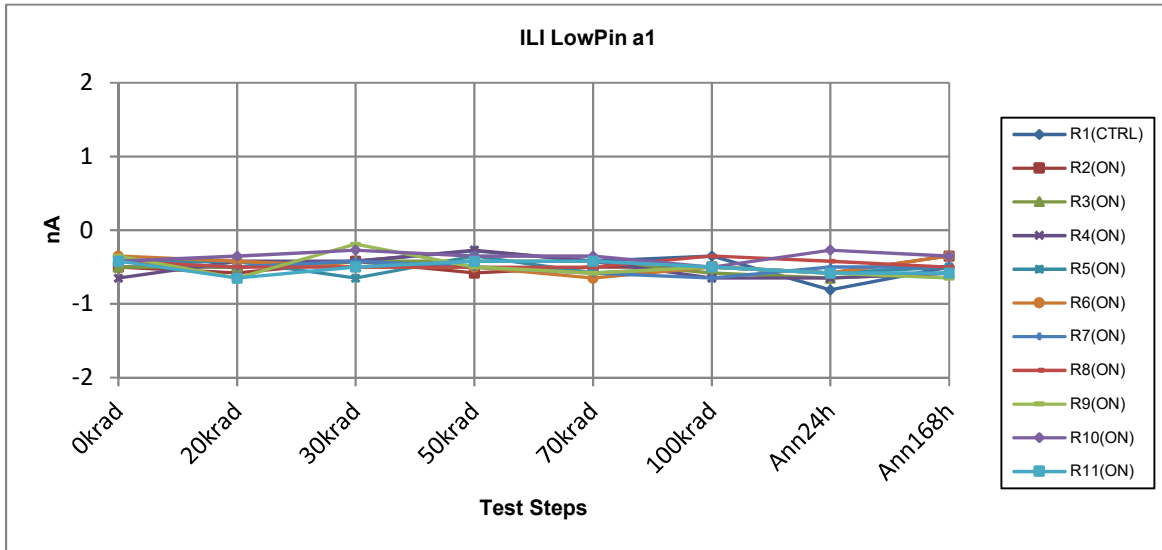
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ILI LowPin a2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.54	-0.54	-0.39	-0.50	-0.70	-0.70	-0.54	-0.85
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.70	-0.70	-0.77	-0.93	-0.70	-0.62	-0.47	-0.77
R3(ON BIAS LDC)	-0.47	-0.85	-0.62	-0.62	-1.01	-0.70	-0.62	-0.62
R4(ON BIAS LDC)	-0.85	-0.54	-0.70	-0.77	-0.62	-0.70	-0.62	-0.54
R5(ON BIAS LDC)	-0.77	-0.77	-0.85	-0.70	-0.70	-0.47	-0.70	-0.70
R6(ON BIAS LDC)	-0.62	-0.70	-0.54	-0.77	-0.85	-0.62	-0.47	-0.77
R7(ON BIAS LDC)	-0.62	-0.47	-0.54	-0.77	-0.70	-0.47	-0.54	-0.77
R8(ON BIAS LDC)	-0.70	-0.47	-0.70	-0.77	-0.77	-0.77	-0.62	-0.70
R9(ON BIAS LDC)	-0.54	-0.62	-0.70	-0.70	-0.62	-0.70	-0.77	-0.62
R10(ON BIAS LDC)	-0.62	-0.54	-0.77	-0.85	-0.77	-0.31	-0.62	-0.70
R11(ON BIAS LDC)	-0.77	-0.62	-0.39	-0.62	-0.70	-0.70	-0.62	-0.54
Irradiated, ON biased LDC parts statistics								
Min Value	-0.85	-0.85	-0.85	-0.93	-1.01	-0.77	-0.77	-0.77
Max Value	-0.47	-0.47	-0.39	-0.62	-0.62	-0.31	-0.47	-0.54
Average	-0.67	-0.63	-0.66	-0.75	-0.74	-0.61	-0.61	-0.67
Sigma	0.11	0.13	0.14	0.10	0.12	0.14	0.09	0.09

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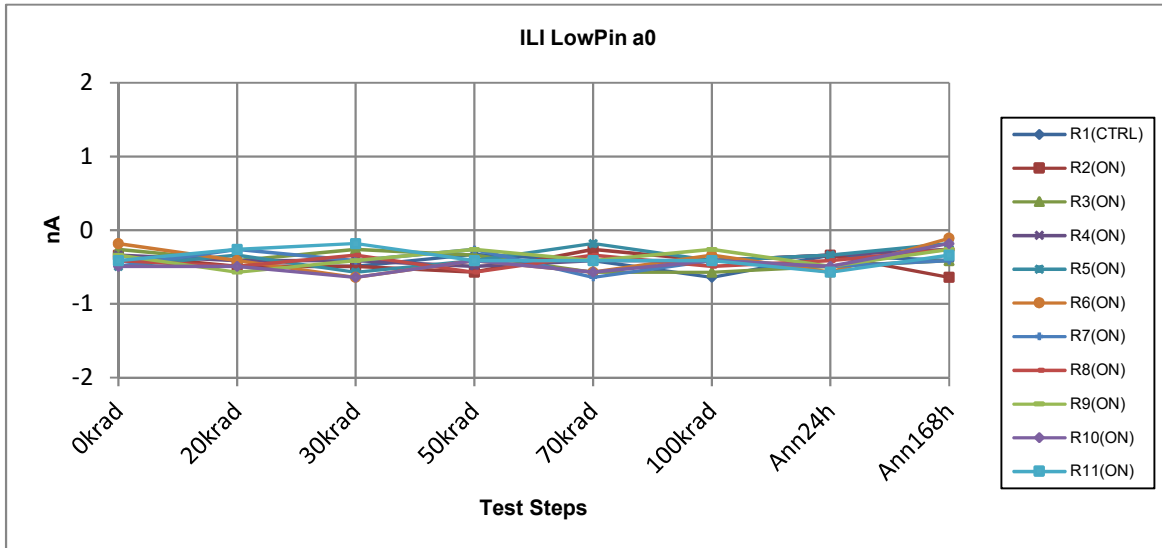
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ILI LowPin a1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.50	-0.50	-0.42	-0.28	-0.42	-0.35	-0.81	-0.50
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.50	-0.58	-0.42	-0.58	-0.50	-0.50	-0.58	-0.35
R3(ON BIAS LDC)	-0.50	-0.50	-0.42	-0.42	-0.42	-0.58	-0.65	-0.58
R4(ON BIAS LDC)	-0.65	-0.42	-0.42	-0.27	-0.42	-0.65	-0.65	-0.58
R5(ON BIAS LDC)	-0.42	-0.42	-0.65	-0.35	-0.58	-0.50	-0.58	-0.50
R6(ON BIAS LDC)	-0.35	-0.42	-0.50	-0.50	-0.65	-0.50	-0.58	-0.35
R7(ON BIAS LDC)	-0.42	-0.50	-0.42	-0.50	-0.58	-0.65	-0.50	-0.50
R8(ON BIAS LDC)	-0.42	-0.50	-0.50	-0.50	-0.50	-0.35	-0.42	-0.50
R9(ON BIAS LDC)	-0.35	-0.65	-0.19	-0.50	-0.58	-0.50	-0.58	-0.65
R10(ON BIAS LDC)	-0.42	-0.35	-0.27	-0.35	-0.35	-0.50	-0.27	-0.35
R11(ON BIAS LDC)	-0.42	-0.65	-0.50	-0.42	-0.42	-0.50	-0.58	-0.58
Irradiated, ON biased LDC parts statistics								
Min Value	-0.65	-0.65	-0.65	-0.58	-0.65	-0.65	-0.65	-0.65
Max Value	-0.35	-0.35	-0.19	-0.27	-0.35	-0.35	-0.27	-0.35
Average	-0.45	-0.50	-0.43	-0.44	-0.50	-0.52	-0.54	-0.49
Sigma	0.09	0.10	0.13	0.09	0.10	0.09	0.12	0.11

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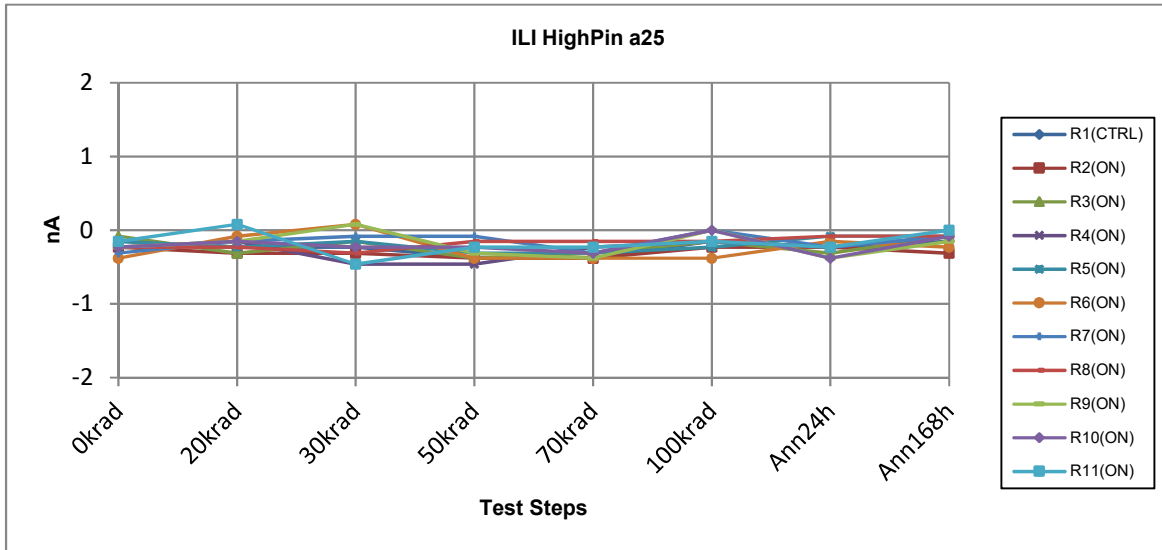
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ILI LowPin a0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.41	-0.49	-0.49	-0.33	-0.41	-0.64	-0.34	-0.41
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.34	-0.49	-0.49	-0.57	-0.26	-0.41	-0.34	-0.64
R3(ON BIAS LDC)	-0.26	-0.41	-0.26	-0.34	-0.57	-0.57	-0.49	-0.41
R4(ON BIAS LDC)	-0.34	-0.41	-0.41	-0.49	-0.41	-0.41	-0.34	-0.26
R5(ON BIAS LDC)	-0.49	-0.34	-0.57	-0.41	-0.18	-0.41	-0.34	-0.18
R6(ON BIAS LDC)	-0.18	-0.41	-0.64	-0.41	-0.57	-0.34	-0.57	-0.11
R7(ON BIAS LDC)	-0.49	-0.26	-0.41	-0.26	-0.64	-0.41	-0.49	-0.41
R8(ON BIAS LDC)	-0.41	-0.49	-0.34	-0.57	-0.34	-0.49	-0.41	-0.26
R9(ON BIAS LDC)	-0.34	-0.57	-0.41	-0.26	-0.41	-0.26	-0.49	-0.26
R10(ON BIAS LDC)	-0.49	-0.49	-0.64	-0.41	-0.57	-0.41	-0.49	-0.18
R11(ON BIAS LDC)	-0.41	-0.26	-0.18	-0.41	-0.41	-0.41	-0.57	-0.34
Irradiated, ON biased LDC parts statistics								
Min Value	-0.49	-0.57	-0.64	-0.57	-0.64	-0.57	-0.57	-0.64
Max Value	-0.18	-0.26	-0.18	-0.26	-0.18	-0.26	-0.34	-0.11
Average	-0.38	-0.41	-0.44	-0.41	-0.44	-0.41	-0.45	-0.31
Sigma	0.10	0.10	0.15	0.11	0.15	0.08	0.09	0.15

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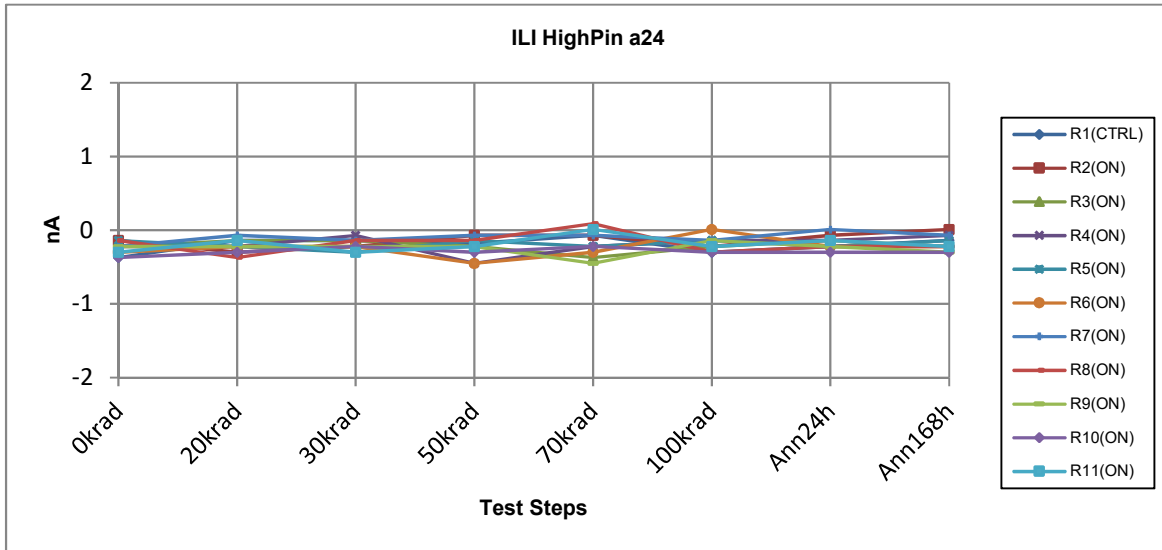
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ILI HighPin a25	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.15	-0.23	-0.23	-0.37	-0.38	-0.15	-0.23	-0.15
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.23	-0.31	-0.31	-0.38	-0.38	-0.23	-0.23	-0.31
R3(ON BIAS LDC)	-0.08	-0.31	-0.15	-0.38	-0.31	-0.15	-0.31	-0.08
R4(ON BIAS LDC)	-0.23	-0.15	-0.46	-0.46	-0.23	-0.15	-0.23	-0.08
R5(ON BIAS LDC)	-0.15	-0.23	-0.15	-0.31	-0.31	-0.23	-0.08	-0.08
R6(ON BIAS LDC)	-0.38	-0.08	0.08	-0.38	-0.38	-0.38	-0.15	-0.23
R7(ON BIAS LDC)	-0.31	-0.15	-0.08	-0.08	-0.31	0.00	-0.23	-0.08
R8(ON BIAS LDC)	-0.23	-0.23	-0.31	-0.15	-0.15	-0.15	-0.08	-0.08
R9(ON BIAS LDC)	-0.23	-0.15	0.08	-0.31	-0.38	0.00	-0.38	-0.15
R10(ON BIAS LDC)	-0.23	-0.15	-0.23	-0.23	-0.31	0.00	-0.38	-0.08
R11(ON BIAS LDC)	-0.15	0.08	-0.46	-0.23	-0.23	-0.15	-0.23	0.00
Irradiated, ON biased LDC parts statistics								
Min Value	-0.38	-0.31	-0.46	-0.46	-0.38	-0.38	-0.38	-0.31
Max Value	-0.08	0.08	0.08	-0.08	-0.15	0.00	-0.08	0.00
Average	-0.22	-0.17	-0.20	-0.29	-0.30	-0.14	-0.23	-0.12
Sigma	0.08	0.11	0.19	0.12	0.08	0.12	0.11	0.09

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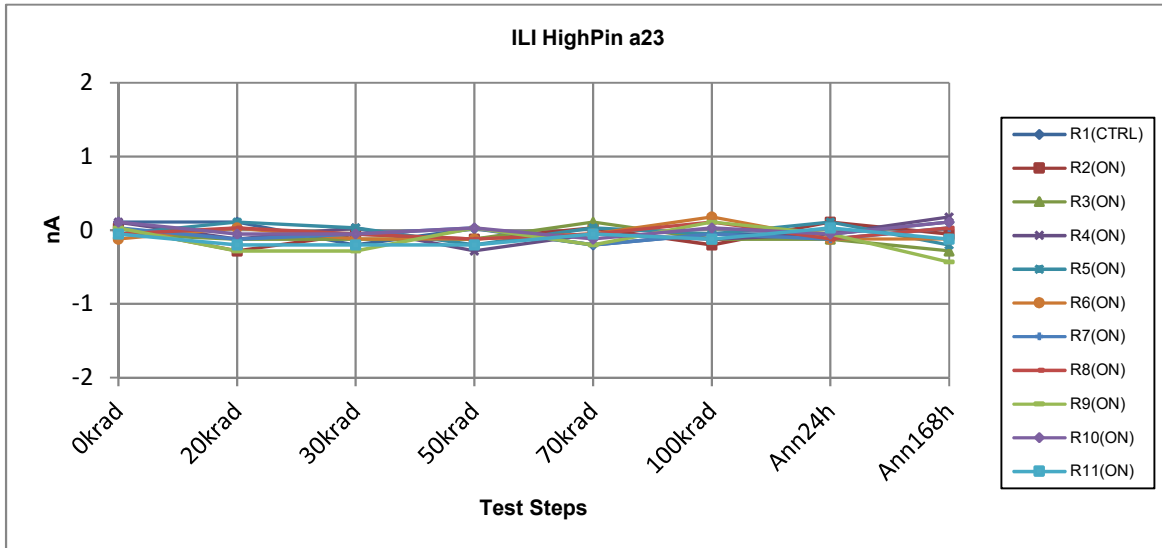
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ILI HighPin a24	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.14	-0.18	-0.07	-0.30	-0.22	-0.14
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.14	-0.30	-0.22	-0.07	-0.07	-0.22	-0.07	0.01
R3(ON BIAS LDC)	-0.22	-0.14	-0.14	-0.22	-0.37	-0.22	-0.14	-0.22
R4(ON BIAS LDC)	-0.22	-0.22	-0.07	-0.45	-0.22	-0.14	-0.14	-0.07
R5(ON BIAS LDC)	-0.14	-0.22	-0.30	-0.14	-0.22	-0.14	-0.22	-0.14
R6(ON BIAS LDC)	-0.30	-0.22	-0.22	-0.45	-0.30	0.01	-0.22	-0.22
R7(ON BIAS LDC)	-0.22	-0.07	-0.14	-0.07	-0.07	-0.14	0.01	-0.07
R8(ON BIAS LDC)	-0.14	-0.37	-0.14	-0.14	0.09	-0.30	-0.22	-0.22
R9(ON BIAS LDC)	-0.22	-0.22	-0.22	-0.22	-0.45	-0.14	-0.22	-0.30
R10(ON BIAS LDC)	-0.37	-0.30	-0.22	-0.30	-0.22	-0.30	-0.30	-0.30
R11(ON BIAS LDC)	-0.30	-0.14	-0.30	-0.22	0.01	-0.22	-0.14	-0.22
Irradiated, ON biased LDC parts statistics								
Min Value	-0.37	-0.37	-0.30	-0.45	-0.45	-0.30	-0.30	-0.30
Max Value	-0.14	-0.07	-0.07	-0.07	0.09	0.01	0.01	0.01
Average	-0.23	-0.22	-0.20	-0.23	-0.18	-0.18	-0.17	-0.18
Sigma	0.08	0.09	0.07	0.14	0.17	0.09	0.09	0.10

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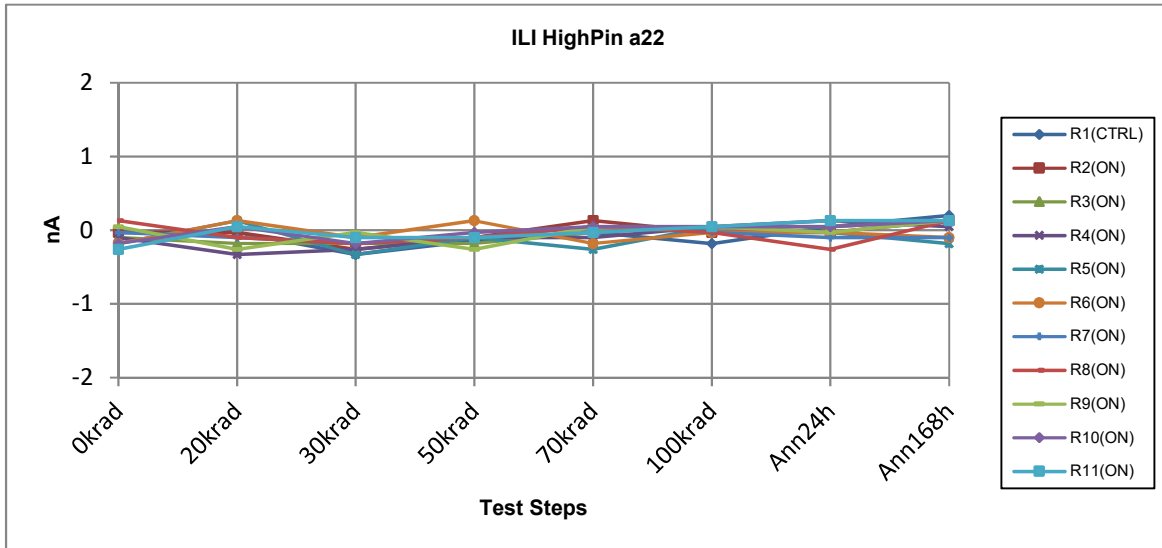
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ILI HighPin a23	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.11	0.11	-0.20	0.02	-0.20	-0.05	-0.05	0.11
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0.03	-0.28	-0.05	-0.12	0.03	-0.20	0.11	-0.05
R3(ON BIAS LDC)	-0.05	-0.12	-0.12	-0.12	0.11	-0.12	-0.12	-0.28
R4(ON BIAS LDC)	0.11	-0.12	0.03	-0.28	-0.05	-0.12	-0.05	0.18
R5(ON BIAS LDC)	-0.05	0.11	0.03	-0.20	0.03	-0.05	0.11	-0.20
R6(ON BIAS LDC)	-0.12	0.03	-0.12	-0.12	-0.05	0.18	-0.12	-0.12
R7(ON BIAS LDC)	0.03	-0.12	-0.05	0.03	-0.20	-0.05	-0.12	0.03
R8(ON BIAS LDC)	-0.05	0.03	-0.05	-0.12	-0.05	0.11	-0.12	0.03
R9(ON BIAS LDC)	0.03	-0.28	-0.28	0.03	-0.20	0.11	-0.05	-0.43
R10(ON BIAS LDC)	0.11	-0.05	-0.05	0.03	-0.12	0.03	-0.05	0.11
R11(ON BIAS LDC)	-0.05	-0.20	-0.20	-0.20	-0.05	-0.12	0.03	-0.12
Irradiated, ON biased LDC parts statistics								
Min Value	-0.12	-0.28	-0.28	-0.28	-0.20	-0.20	-0.12	-0.43
Max Value	0.11	0.11	0.03	0.03	0.11	0.18	0.11	0.18
Average	0.00	-0.10	-0.09	-0.11	-0.06	-0.02	-0.04	-0.09
Sigma	0.08	0.13	0.10	0.11	0.10	0.12	0.09	0.19

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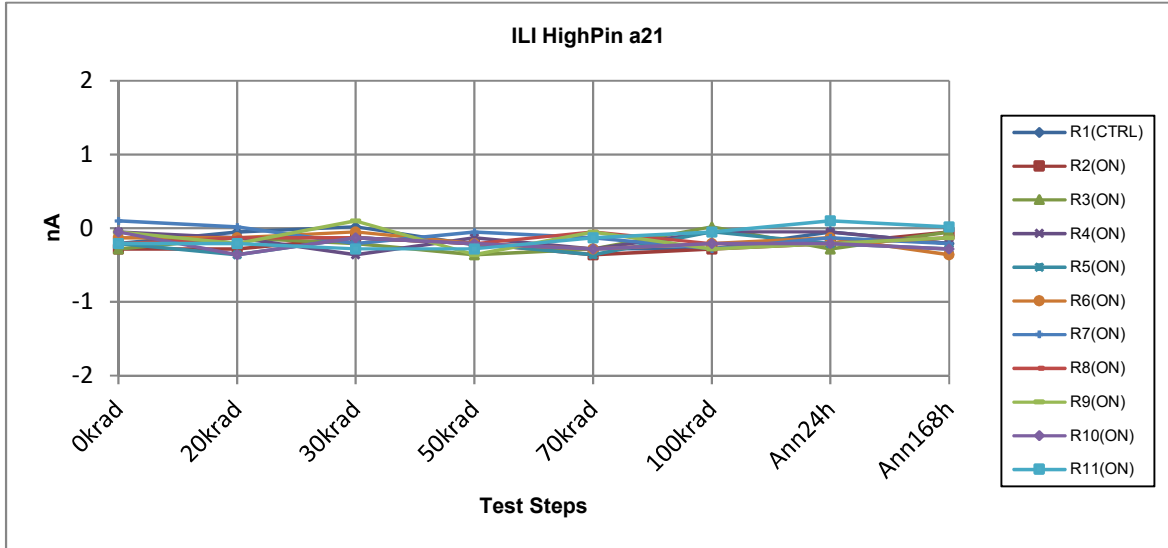
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ILI HighPin a22	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.03	-0.03	-0.33	-0.14	-0.03	-0.18	0.05	0.20
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.03	-0.03	-0.26	-0.10	0.13	-0.03	-0.03	0.13
R3(ON BIAS LDC)	-0.10	-0.18	-0.18	-0.18	-0.03	0.05	0.05	0.13
R4(ON BIAS LDC)	-0.10	-0.33	-0.26	-0.10	-0.10	0.05	0.13	0.05
R5(ON BIAS LDC)	-0.18	0.13	-0.33	-0.10	-0.26	0.05	-0.03	-0.18
R6(ON BIAS LDC)	-0.18	0.13	-0.10	0.13	-0.18	-0.03	-0.03	-0.10
R7(ON BIAS LDC)	-0.03	-0.10	-0.18	-0.10	0.05	-0.03	-0.10	-0.10
R8(ON BIAS LDC)	0.13	-0.10	-0.18	-0.10	0.05	-0.03	-0.26	0.13
R9(ON BIAS LDC)	0.05	-0.26	-0.03	-0.26	0.05	0.05	-0.03	0.13
R10(ON BIAS LDC)	-0.18	0.05	-0.18	-0.03	0.05	0.05	0.05	0.13
R11(ON BIAS LDC)	-0.26	0.05	-0.10	-0.10	-0.03	0.05	0.13	0.13
Irradiated, ON biased LDC parts statistics								
Min Value	-0.26	-0.33	-0.33	-0.26	-0.26	-0.03	-0.26	-0.18
Max Value	0.13	0.13	-0.03	0.13	0.13	0.05	0.13	0.13
Average	-0.09	-0.06	-0.18	-0.09	-0.03	0.02	-0.01	0.05
Sigma	0.12	0.16	0.09	0.10	0.12	0.04	0.11	0.12

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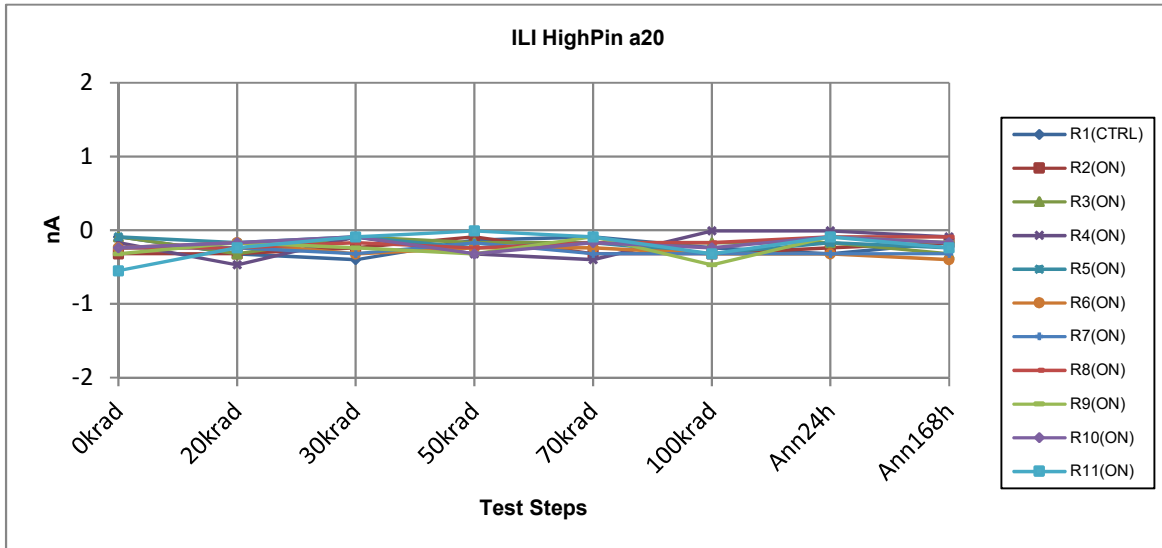
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ILI HighPin a21	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.21	-0.05	0.02	-0.22	-0.28	-0.28	-0.05	-0.21
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.28	-0.28	-0.13	-0.21	-0.36	-0.28	-0.21	-0.05
R3(ON BIAS LDC)	-0.28	-0.13	-0.21	-0.36	-0.28	0.02	-0.28	-0.05
R4(ON BIAS LDC)	-0.05	-0.13	-0.36	-0.13	-0.28	-0.05	-0.05	-0.21
R5(ON BIAS LDC)	-0.21	-0.36	-0.13	-0.21	-0.36	-0.05	-0.21	-0.28
R6(ON BIAS LDC)	-0.13	-0.13	-0.05	-0.21	-0.28	-0.21	-0.13	-0.36
R7(ON BIAS LDC)	0.10	0.02	-0.21	-0.05	-0.13	-0.28	-0.13	-0.21
R8(ON BIAS LDC)	-0.21	-0.13	-0.13	-0.21	-0.05	-0.21	-0.21	-0.13
R9(ON BIAS LDC)	-0.05	-0.21	0.10	-0.36	-0.05	-0.28	-0.21	-0.13
R10(ON BIAS LDC)	-0.05	-0.36	-0.13	-0.21	-0.28	-0.21	-0.21	-0.28
R11(ON BIAS LDC)	-0.21	-0.21	-0.28	-0.28	-0.13	-0.05	0.10	0.02
Irradiated, ON biased LDC parts statistics								
Min Value	-0.28	-0.36	-0.36	-0.36	-0.36	-0.28	-0.28	-0.36
Max Value	0.10	0.02	0.10	-0.05	-0.05	0.02	0.10	0.02
Average	-0.14	-0.19	-0.15	-0.22	-0.22	-0.16	-0.15	-0.17
Sigma	0.12	0.12	0.13	0.09	0.12	0.12	0.11	0.12

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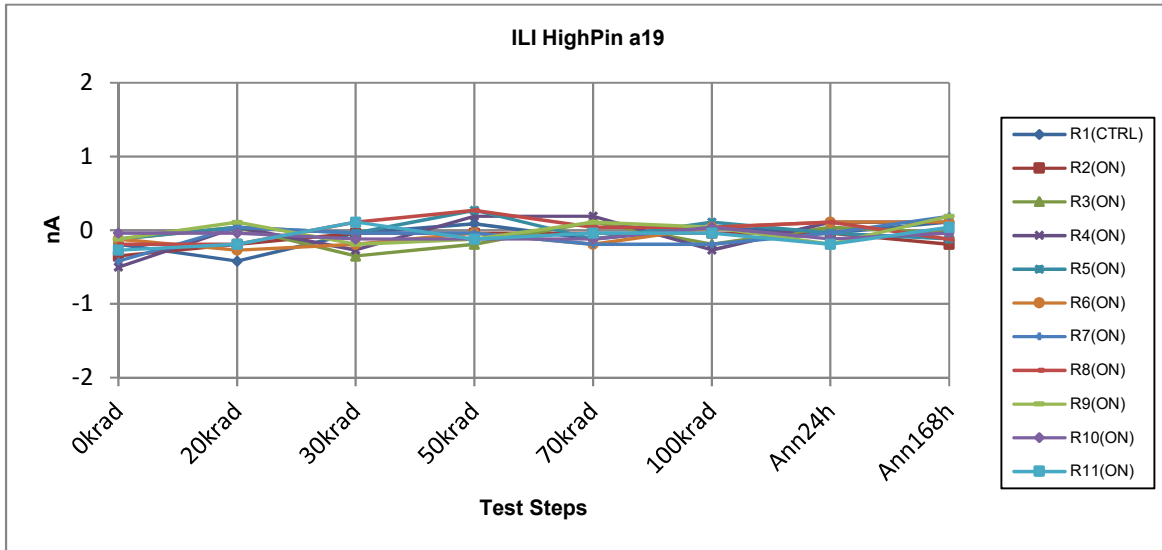
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ILI HighPin a20	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.09	-0.32	-0.40	-0.14	-0.09	-0.24	-0.32	-0.17
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.32	-0.32	-0.24	-0.09	-0.32	-0.32	-0.24	-0.17
R3(ON BIAS LDC)	-0.09	-0.32	-0.09	-0.17	-0.17	-0.17	-0.17	-0.32
R4(ON BIAS LDC)	-0.17	-0.47	-0.09	-0.32	-0.40	-0.01	-0.01	-0.09
R5(ON BIAS LDC)	-0.09	-0.17	-0.09	-0.24	-0.17	-0.32	-0.17	-0.24
R6(ON BIAS LDC)	-0.24	-0.17	-0.32	-0.24	-0.24	-0.32	-0.32	-0.40
R7(ON BIAS LDC)	-0.24	-0.24	-0.32	-0.17	-0.32	-0.32	-0.32	-0.32
R8(ON BIAS LDC)	-0.24	-0.24	-0.17	-0.24	-0.17	-0.17	-0.09	-0.09
R9(ON BIAS LDC)	-0.32	-0.17	-0.24	-0.32	-0.09	-0.47	-0.09	-0.17
R10(ON BIAS LDC)	-0.24	-0.17	-0.09	-0.32	-0.17	-0.24	-0.09	-0.17
R11(ON BIAS LDC)	-0.55	-0.24	-0.09	-0.01	-0.09	-0.32	-0.09	-0.24
Irradiated, ON biased LDC parts statistics								
Min Value	-0.55	-0.47	-0.32	-0.32	-0.40	-0.47	-0.32	-0.40
Max Value	-0.09	-0.17	-0.09	-0.01	-0.09	-0.01	-0.01	-0.09
Average	-0.25	-0.25	-0.17	-0.21	-0.21	-0.27	-0.16	-0.22
Sigma	0.13	0.10	0.10	0.10	0.10	0.13	0.11	0.10

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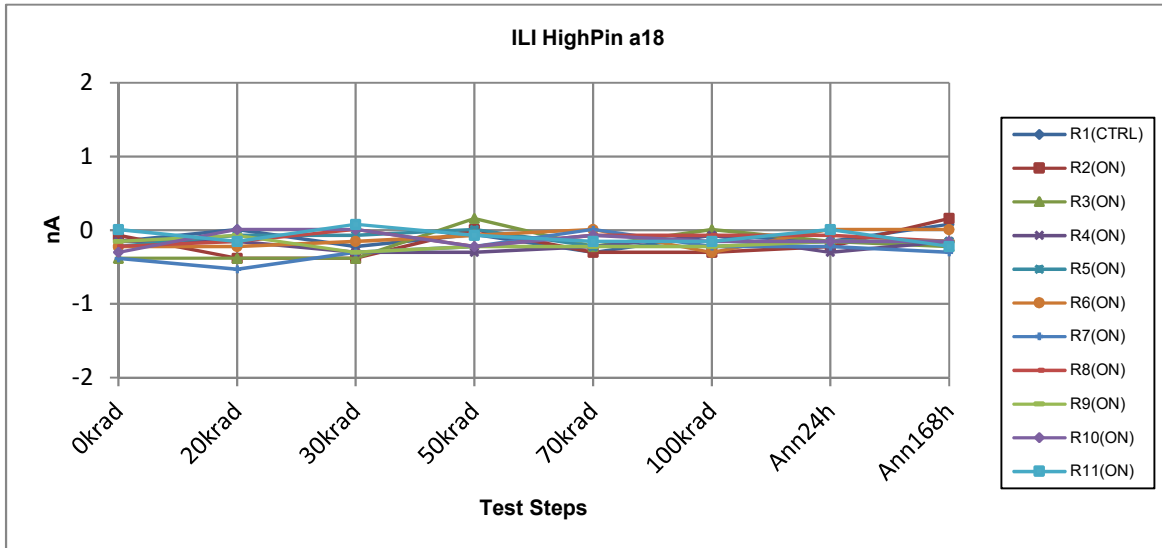
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ILI HighPin a19	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.19	-0.42	-0.04	0.09	-0.12	0.04	-0.04	0.11
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.35	-0.19	-0.04	-0.04	-0.04	-0.04	-0.04	-0.19
R3(ON BIAS LDC)	-0.12	0.04	-0.35	-0.19	0.11	-0.19	0.04	-0.04
R4(ON BIAS LDC)	-0.50	0.04	-0.27	0.19	0.19	-0.27	0.11	0.11
R5(ON BIAS LDC)	-0.12	0.04	-0.04	0.27	-0.12	0.11	-0.04	-0.12
R6(ON BIAS LDC)	-0.12	-0.27	-0.19	-0.04	-0.19	0.04	0.11	0.11
R7(ON BIAS LDC)	-0.42	0.04	-0.04	-0.04	-0.19	-0.19	-0.04	0.19
R8(ON BIAS LDC)	-0.19	-0.19	0.11	0.27	0.04	0.04	0.11	-0.12
R9(ON BIAS LDC)	-0.12	0.11	-0.19	-0.12	0.11	0.04	-0.19	0.19
R10(ON BIAS LDC)	-0.04	-0.04	-0.12	-0.12	-0.12	0.04	-0.12	-0.04
R11(ON BIAS LDC)	-0.27	-0.19	0.11	-0.12	-0.04	-0.04	-0.19	0.04
Irradiated, ON biased LDC parts statistics								
Min Value	-0.50	-0.27	-0.35	-0.19	-0.19	-0.27	-0.19	-0.19
Max Value	-0.04	0.11	0.11	0.27	0.19	0.11	0.11	0.19
Average	-0.23	-0.06	-0.10	0.01	-0.03	-0.05	-0.03	0.01
Sigma	0.15	0.14	0.15	0.17	0.13	0.13	0.12	0.14

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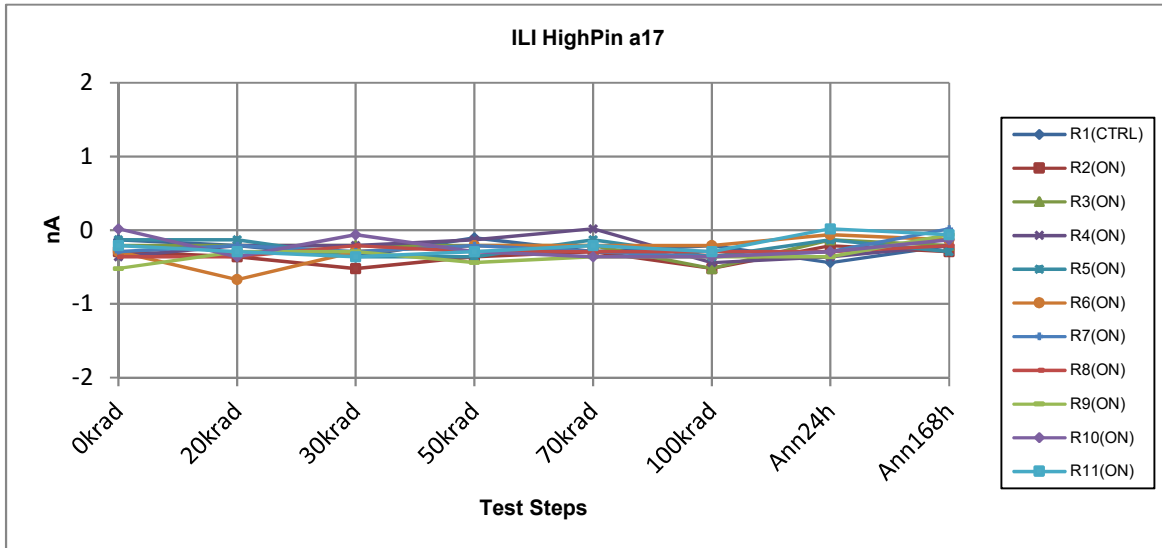
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ILI HighPin a18	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.15	0.01	-0.22	-0.06	-0.30	-0.07	-0.15	0.08
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.07	-0.38	-0.38	0.01	-0.30	-0.30	-0.22	0.16
R3(ON BIAS LDC)	-0.38	-0.38	-0.38	0.16	-0.22	0.01	-0.15	-0.22
R4(ON BIAS LDC)	-0.15	-0.15	-0.30	-0.30	-0.22	-0.07	-0.30	-0.15
R5(ON BIAS LDC)	-0.22	-0.07	-0.07	0.01	-0.22	-0.22	-0.15	-0.15
R6(ON BIAS LDC)	-0.22	-0.22	-0.15	-0.07	0.01	-0.30	0.01	0.01
R7(ON BIAS LDC)	-0.38	-0.53	-0.30	-0.22	0.01	-0.22	-0.22	-0.30
R8(ON BIAS LDC)	-0.22	-0.15	0.01	-0.22	-0.07	-0.07	-0.07	-0.15
R9(ON BIAS LDC)	-0.15	-0.07	-0.30	-0.22	-0.22	-0.22	-0.15	-0.15
R10(ON BIAS LDC)	-0.30	0.01	0.01	-0.22	-0.07	-0.15	-0.15	-0.15
R11(ON BIAS LDC)	0.01	-0.15	0.08	-0.07	-0.15	-0.15	0.01	-0.22
Irradiated, ON biased LDC parts statistics								
Min Value	-0.38	-0.53	-0.38	-0.30	-0.30	-0.30	-0.30	-0.30
Max Value	0.01	0.01	0.08	0.16	0.01	0.01	0.01	0.16
Average	-0.21	-0.21	-0.18	-0.11	-0.15	-0.17	-0.14	-0.13
Sigma	0.13	0.17	0.18	0.15	0.11	0.10	0.10	0.13

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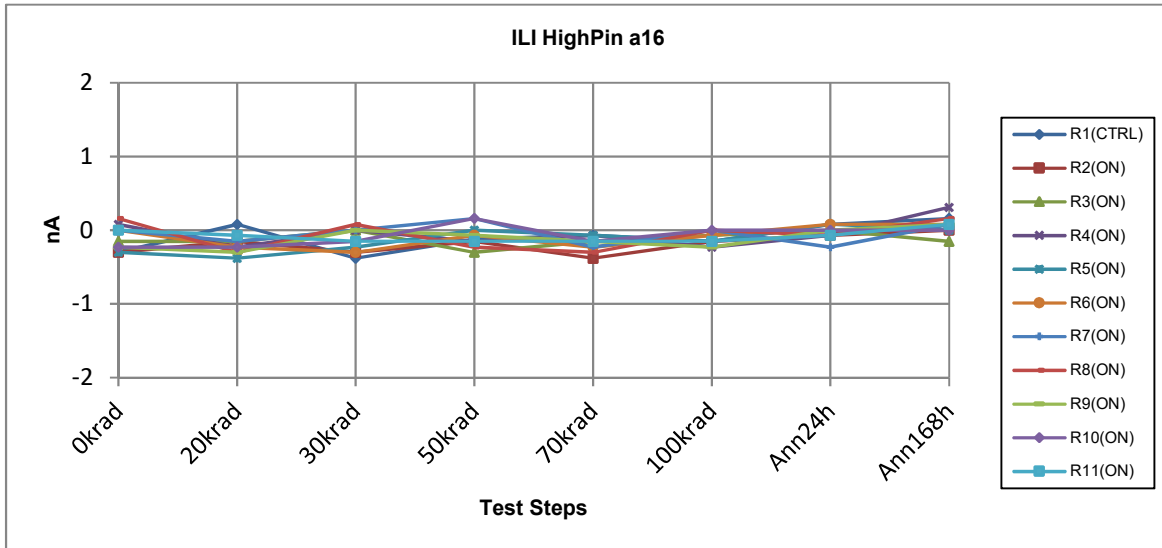
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ILI HighPin a17	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.13	-0.21	-0.36	-0.10	-0.29	-0.21	-0.44	-0.21
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.29	-0.36	-0.52	-0.36	-0.29	-0.52	-0.21	-0.29
R3(ON BIAS LDC)	-0.21	-0.21	-0.21	-0.21	-0.21	-0.52	-0.13	-0.21
R4(ON BIAS LDC)	-0.36	-0.21	-0.21	-0.13	0.02	-0.44	-0.36	-0.21
R5(ON BIAS LDC)	-0.13	-0.13	-0.36	-0.36	-0.13	-0.36	-0.13	-0.29
R6(ON BIAS LDC)	-0.29	-0.67	-0.29	-0.21	-0.21	-0.21	-0.06	-0.13
R7(ON BIAS LDC)	-0.29	-0.21	-0.29	-0.21	-0.29	-0.36	-0.29	0.02
R8(ON BIAS LDC)	-0.36	-0.36	-0.21	-0.29	-0.29	-0.29	-0.29	-0.21
R9(ON BIAS LDC)	-0.52	-0.29	-0.29	-0.44	-0.36	-0.36	-0.36	-0.06
R10(ON BIAS LDC)	0.02	-0.36	-0.06	-0.29	-0.36	-0.36	-0.29	-0.13
R11(ON BIAS LDC)	-0.21	-0.29	-0.36	-0.29	-0.21	-0.29	0.02	-0.06
Irradiated, ON biased LDC parts statistics								
Min Value	-0.52	-0.67	-0.52	-0.44	-0.36	-0.52	-0.36	-0.29
Max Value	0.02	-0.13	-0.06	-0.13	0.02	-0.21	0.02	0.02
Average	-0.26	-0.31	-0.28	-0.28	-0.23	-0.37	-0.21	-0.16
Sigma	0.15	0.15	0.12	0.09	0.11	0.10	0.13	0.10

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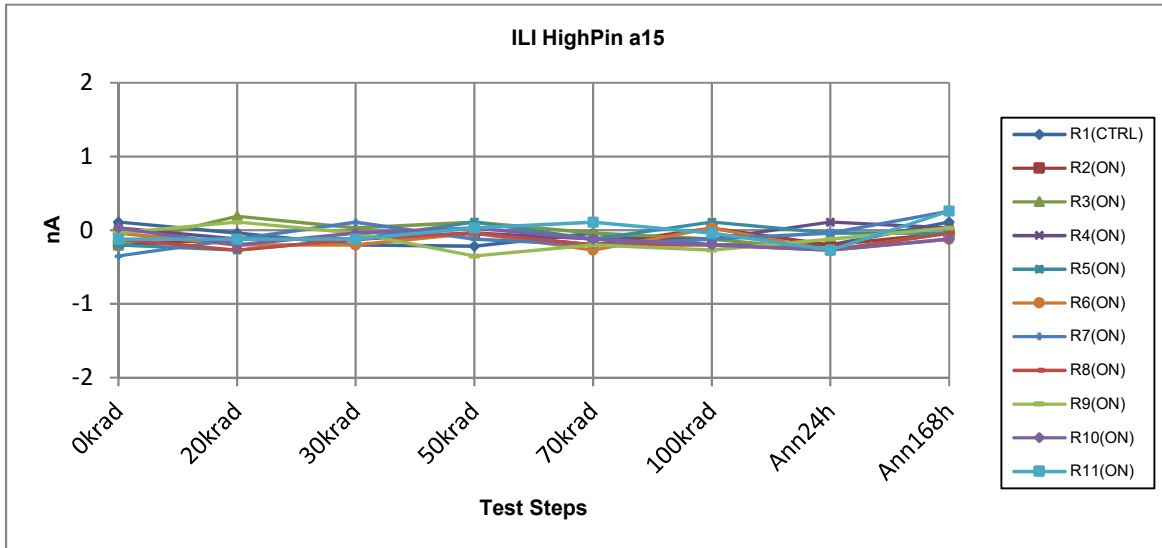
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ILI HighPin a16	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.30	0.08	-0.38	-0.12	-0.07	-0.15	0.08	0.16
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.30	-0.15	-0.30	-0.15	-0.38	-0.15	-0.07	0.00
R3(ON BIAS LDC)	-0.15	-0.15	0.00	-0.30	-0.15	-0.07	0.00	-0.15
R4(ON BIAS LDC)	0.08	-0.23	0.00	-0.15	-0.07	-0.23	-0.07	0.31
R5(ON BIAS LDC)	-0.30	-0.38	-0.23	0.00	-0.07	-0.15	0.08	0.00
R6(ON BIAS LDC)	0.00	-0.23	-0.30	-0.07	-0.23	-0.07	0.08	0.08
R7(ON BIAS LDC)	0.00	-0.15	0.00	0.16	-0.23	0.00	-0.23	0.08
R8(ON BIAS LDC)	0.16	-0.30	0.08	-0.23	-0.30	0.00	-0.07	0.16
R9(ON BIAS LDC)	-0.23	-0.30	0.00	-0.07	-0.15	-0.23	0.00	0.08
R10(ON BIAS LDC)	-0.23	-0.23	-0.15	0.16	-0.15	0.00	0.00	0.00
R11(ON BIAS LDC)	0.00	-0.07	-0.15	-0.15	-0.15	-0.15	-0.07	0.08
Irradiated, ON biased LDC parts statistics								
Min Value	-0.30	-0.38	-0.30	-0.30	-0.38	-0.23	-0.23	-0.15
Max Value	0.16	-0.07	0.08	0.16	-0.07	0.00	0.08	0.31
Average	-0.10	-0.22	-0.11	-0.08	-0.19	-0.11	-0.04	0.06
Sigma	0.17	0.09	0.14	0.15	0.10	0.09	0.09	0.12

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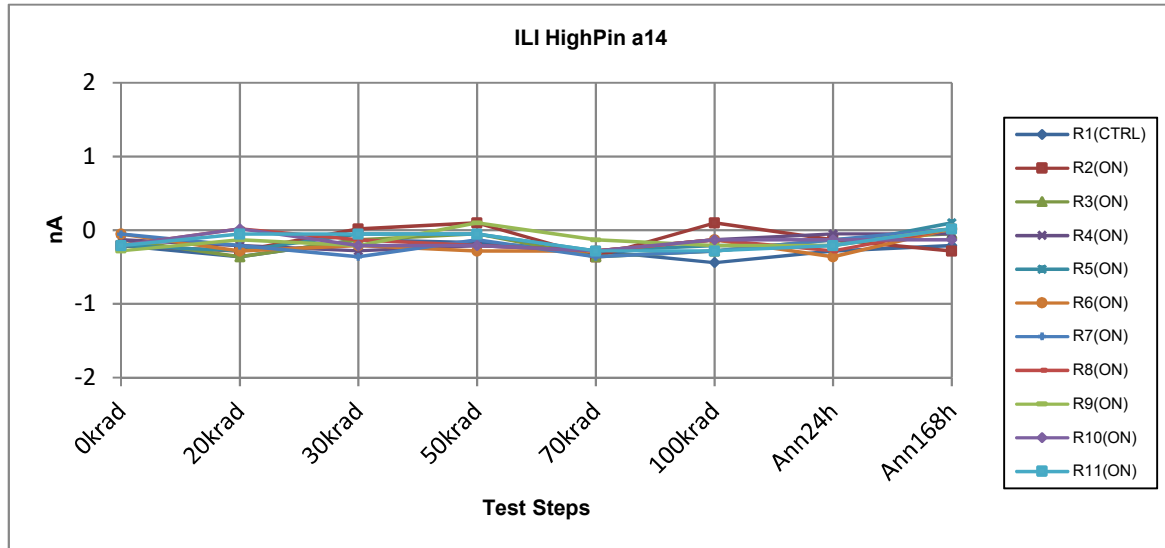
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ILI HighPin a15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.11	-0.04	-0.20	-0.22	-0.04	-0.20	-0.20	0.11
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.20	-0.12	-0.12	-0.04	-0.20	0.03	-0.20	-0.04
R3(ON BIAS LDC)	-0.20	0.19	0.03	0.11	-0.04	-0.12	-0.27	-0.04
R4(ON BIAS LDC)	0.03	-0.12	-0.12	-0.04	-0.12	-0.12	0.11	0.03
R5(ON BIAS LDC)	-0.20	-0.27	-0.12	0.11	-0.12	0.11	-0.04	-0.04
R6(ON BIAS LDC)	-0.04	-0.20	-0.20	-0.04	-0.27	0.03	-0.27	-0.12
R7(ON BIAS LDC)	-0.35	-0.12	0.11	-0.12	-0.20	-0.12	-0.04	0.26
R8(ON BIAS LDC)	-0.12	-0.27	-0.12	-0.04	-0.20	-0.20	-0.27	-0.04
R9(ON BIAS LDC)	-0.04	0.11	-0.04	-0.35	-0.20	-0.27	-0.12	0.03
R10(ON BIAS LDC)	0.03	-0.20	-0.04	0.03	-0.12	-0.20	-0.27	-0.12
R11(ON BIAS LDC)	-0.12	-0.12	-0.12	0.03	0.11	-0.04	-0.27	0.26
Irradiated, ON biased LDC parts statistics								
Min Value	-0.35	-0.27	-0.20	-0.35	-0.27	-0.27	-0.27	-0.12
Max Value	0.03	0.19	0.11	0.11	0.11	0.11	0.11	0.26
Average	-0.12	-0.11	-0.07	-0.04	-0.14	-0.09	-0.16	0.02
Sigma	0.12	0.15	0.09	0.13	0.11	0.12	0.14	0.14

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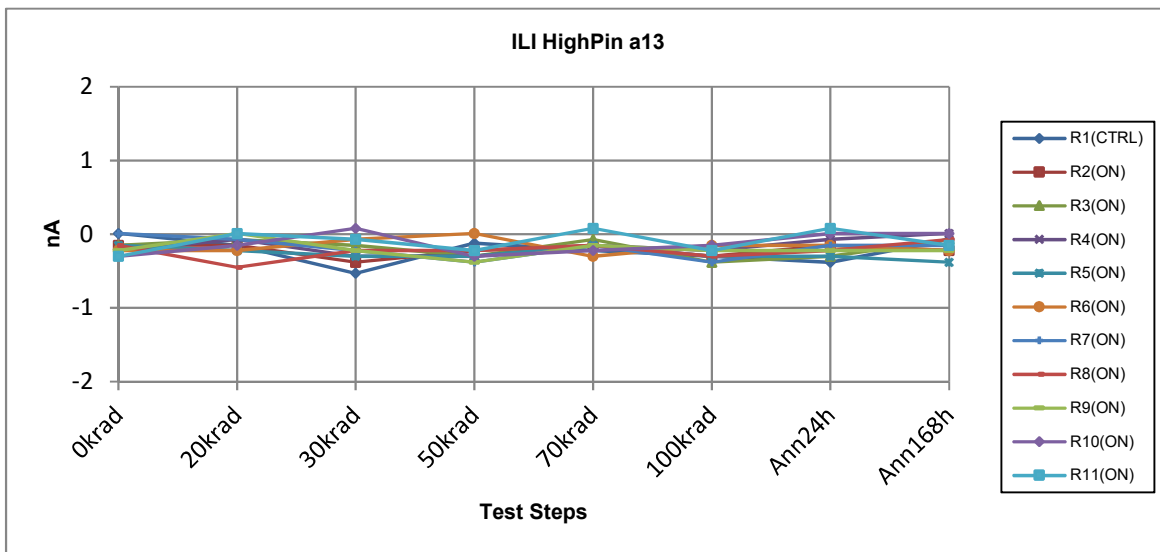
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ILI HighPin a14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.21	-0.36	-0.13	-0.17	-0.28	-0.44	-0.28	-0.21
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.21	-0.28	0.02	0.10	-0.36	0.10	-0.13	-0.28
R3(ON BIAS LDC)	-0.13	-0.36	-0.13	-0.05	-0.36	-0.28	-0.13	-0.05
R4(ON BIAS LDC)	-0.13	-0.21	-0.28	-0.21	-0.28	-0.13	-0.05	-0.05
R5(ON BIAS LDC)	-0.21	-0.28	-0.05	-0.05	-0.28	-0.21	-0.21	0.10
R6(ON BIAS LDC)	-0.05	-0.28	-0.21	-0.28	-0.28	-0.13	-0.36	0.02
R7(ON BIAS LDC)	-0.05	-0.21	-0.36	-0.13	-0.36	-0.28	-0.13	0.02
R8(ON BIAS LDC)	-0.21	0.02	-0.13	-0.21	-0.28	-0.13	-0.28	0.02
R9(ON BIAS LDC)	-0.28	-0.13	-0.21	0.10	-0.13	-0.21	-0.21	0.02
R10(ON BIAS LDC)	-0.21	0.02	-0.21	-0.21	-0.28	-0.13	-0.13	-0.13
R11(ON BIAS LDC)	-0.21	-0.05	-0.05	-0.05	-0.28	-0.28	-0.21	0.02
Irradiated, ON biased LDC parts statistics								
Min Value	-0.28	-0.36	-0.36	-0.28	-0.36	-0.28	-0.36	-0.28
Max Value	-0.05	0.02	0.02	0.10	-0.13	0.10	-0.05	0.10
Average	-0.17	-0.18	-0.16	-0.10	-0.29	-0.17	-0.18	-0.03
Sigma	0.08	0.13	0.12	0.13	0.07	0.11	0.09	0.11

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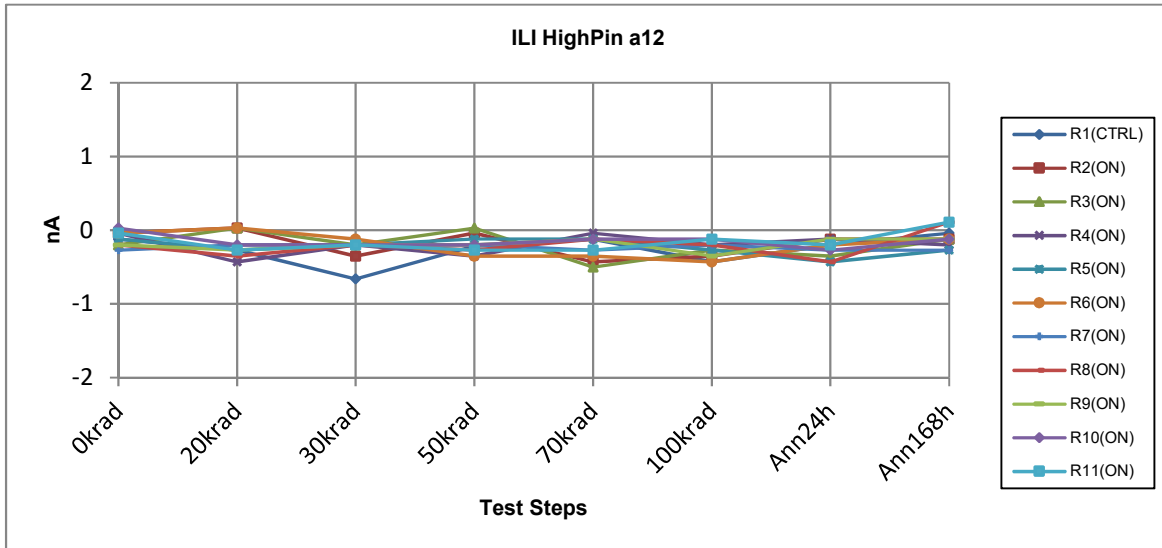
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ILI HighPin a13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.01	-0.15	-0.53	-0.12	-0.22	-0.30	-0.38	-0.07
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.15	-0.15	-0.38	-0.22	-0.15	-0.30	-0.15	-0.22
R3(ON BIAS LDC)	-0.15	-0.07	-0.15	-0.30	-0.07	-0.38	-0.30	-0.07
R4(ON BIAS LDC)	-0.22	-0.07	-0.30	-0.30	-0.15	-0.22	-0.07	0.01
R5(ON BIAS LDC)	-0.15	-0.22	-0.30	-0.30	-0.15	-0.30	-0.30	-0.38
R6(ON BIAS LDC)	-0.22	-0.22	-0.07	0.01	-0.30	-0.15	-0.15	-0.22
R7(ON BIAS LDC)	0.01	-0.07	-0.22	-0.38	-0.15	-0.38	-0.15	-0.15
R8(ON BIAS LDC)	-0.15	-0.45	-0.22	-0.22	-0.15	-0.30	-0.22	-0.07
R9(ON BIAS LDC)	-0.22	0.01	-0.22	-0.38	-0.15	-0.22	-0.22	-0.22
R10(ON BIAS LDC)	-0.30	-0.15	0.08	-0.30	-0.22	-0.15	0.01	0.01
R11(ON BIAS LDC)	-0.30	0.01	-0.07	-0.22	0.08	-0.22	0.08	-0.15
Irradiated, ON biased LDC parts statistics								
Min Value	-0.30	-0.45	-0.38	-0.38	-0.30	-0.38	-0.30	-0.38
Max Value	0.01	0.01	0.08	0.01	0.08	-0.15	0.08	0.01
Average	-0.19	-0.14	-0.19	-0.26	-0.14	-0.26	-0.15	-0.15
Sigma	0.09	0.14	0.14	0.11	0.10	0.08	0.12	0.12

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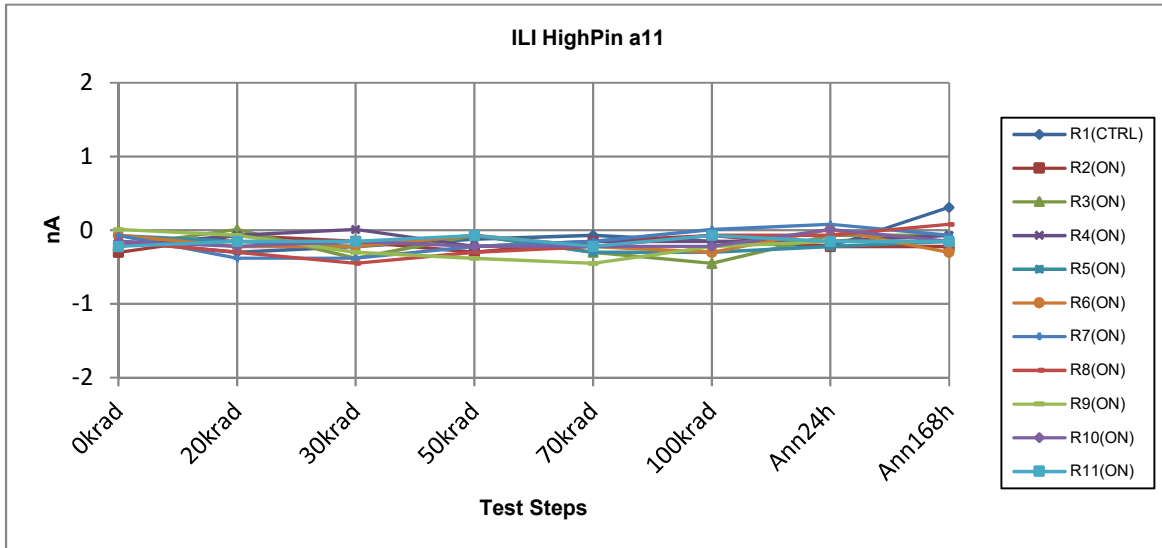
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ILI HighPin a12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.12	-0.27	-0.66	-0.22	-0.12	-0.43	-0.20	-0.04
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.04	0.03	-0.35	-0.04	-0.43	-0.35	-0.12	-0.12
R3(ON BIAS LDC)	-0.20	0.03	-0.20	0.03	-0.50	-0.27	-0.35	-0.12
R4(ON BIAS LDC)	-0.04	-0.43	-0.20	-0.35	-0.04	-0.20	-0.12	-0.20
R5(ON BIAS LDC)	-0.12	-0.27	-0.20	-0.12	-0.12	-0.27	-0.43	-0.27
R6(ON BIAS LDC)	-0.04	0.03	-0.12	-0.35	-0.35	-0.43	-0.20	-0.12
R7(ON BIAS LDC)	-0.27	-0.20	-0.20	-0.20	-0.27	-0.20	-0.27	-0.27
R8(ON BIAS LDC)	-0.20	-0.35	-0.20	-0.27	-0.12	-0.20	-0.43	0.11
R9(ON BIAS LDC)	-0.20	-0.27	-0.20	-0.20	-0.12	-0.35	-0.12	-0.12
R10(ON BIAS LDC)	0.03	-0.20	-0.20	-0.20	-0.12	-0.12	-0.27	-0.12
R11(ON BIAS LDC)	-0.04	-0.27	-0.20	-0.27	-0.27	-0.12	-0.20	0.11
Irradiated, ON biased LDC parts statistics								
Min Value	-0.27	-0.43	-0.35	-0.35	-0.50	-0.43	-0.43	-0.27
Max Value	0.03	0.03	-0.12	0.03	-0.04	-0.12	-0.12	0.11
Average	-0.11	-0.19	-0.21	-0.20	-0.23	-0.25	-0.25	-0.11
Sigma	0.10	0.17	0.06	0.12	0.15	0.10	0.12	0.13

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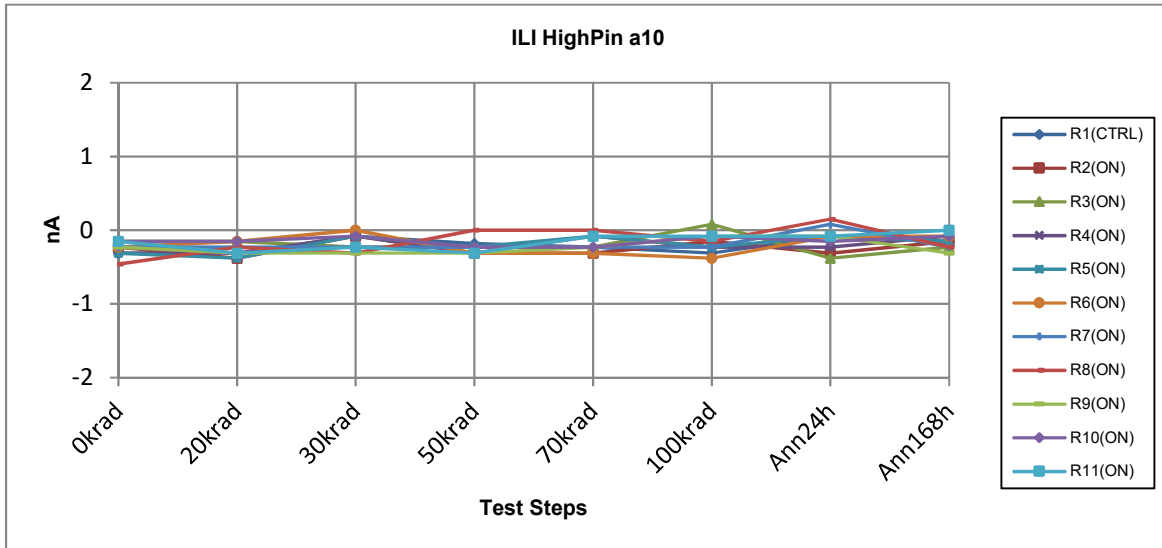
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ILI HighPin a11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.15	-0.30	-0.22	-0.12	-0.07	-0.15	-0.22	0.31
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.30	-0.07	-0.15	-0.30	-0.15	-0.07	-0.22	-0.22
R3(ON BIAS LDC)	-0.22	0.01	-0.38	-0.07	-0.30	-0.45	-0.07	-0.07
R4(ON BIAS LDC)	-0.22	-0.07	0.01	-0.22	-0.15	-0.15	-0.15	-0.07
R5(ON BIAS LDC)	-0.07	-0.15	-0.22	-0.07	-0.30	-0.30	-0.22	-0.15
R6(ON BIAS LDC)	-0.07	-0.22	-0.22	-0.07	-0.22	-0.30	0.01	-0.30
R7(ON BIAS LDC)	-0.07	-0.38	-0.38	-0.22	-0.15	0.01	0.08	-0.07
R8(ON BIAS LDC)	-0.15	-0.30	-0.45	-0.30	-0.22	-0.07	-0.07	0.08
R9(ON BIAS LDC)	0.01	-0.07	-0.30	-0.38	-0.45	-0.22	-0.15	-0.15
R10(ON BIAS LDC)	-0.15	-0.22	-0.15	-0.22	-0.22	-0.22	0.01	-0.15
R11(ON BIAS LDC)	-0.22	-0.15	-0.15	-0.07	-0.22	-0.07	-0.15	-0.15
Irradiated, ON biased LDC parts statistics								
Min Value	-0.30	-0.38	-0.45	-0.38	-0.45	-0.45	-0.22	-0.30
Max Value	0.01	0.01	0.01	-0.07	-0.15	0.01	0.08	0.08
Average	-0.15	-0.16	-0.24	-0.19	-0.24	-0.18	-0.09	-0.13
Sigma	0.10	0.12	0.14	0.12	0.09	0.14	0.10	0.10

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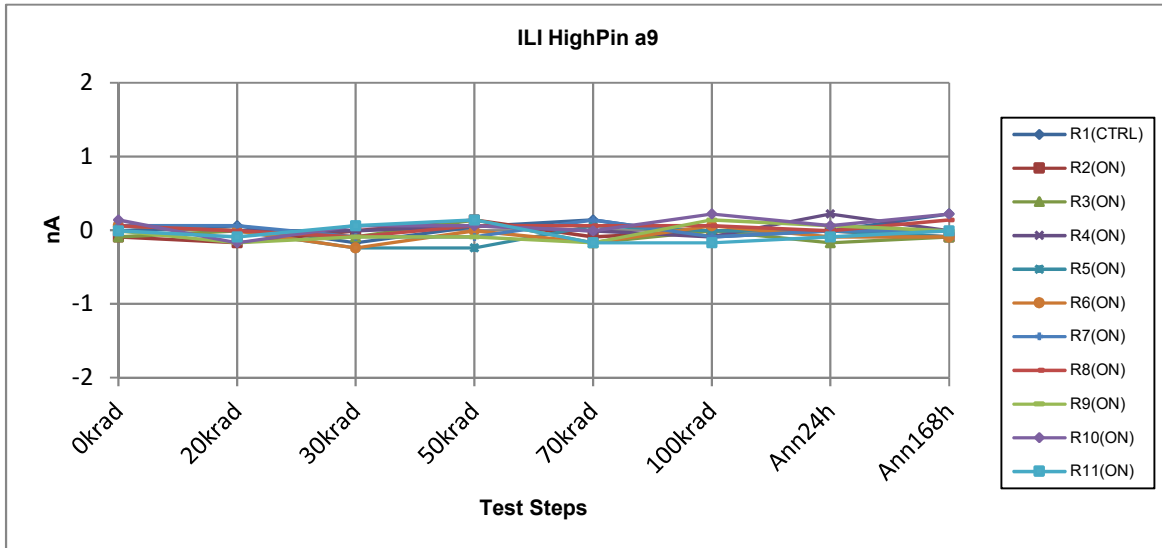
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ILI HighPin a10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.31	-0.31	-0.08	-0.18	-0.23	-0.31	-0.08	-0.15
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.23	-0.38	-0.08	-0.31	-0.31	-0.15	-0.31	-0.15
R3(ON BIAS LDC)	-0.15	-0.15	-0.23	-0.23	-0.23	0.08	-0.38	-0.23
R4(ON BIAS LDC)	-0.31	-0.31	-0.08	-0.31	-0.08	-0.23	-0.23	-0.08
R5(ON BIAS LDC)	-0.31	-0.38	-0.08	-0.23	-0.08	-0.23	-0.08	-0.15
R6(ON BIAS LDC)	-0.23	-0.15	0.00	-0.31	-0.31	-0.38	-0.08	-0.08
R7(ON BIAS LDC)	-0.23	-0.23	-0.23	-0.23	-0.23	-0.23	0.08	-0.23
R8(ON BIAS LDC)	-0.46	-0.23	-0.31	0.00	0.00	-0.15	0.15	-0.23
R9(ON BIAS LDC)	-0.23	-0.31	-0.31	-0.31	-0.23	-0.08	-0.08	-0.31
R10(ON BIAS LDC)	-0.15	-0.15	-0.08	-0.23	-0.23	-0.08	-0.15	-0.08
R11(ON BIAS LDC)	-0.15	-0.31	-0.23	-0.31	-0.08	-0.08	-0.08	0.00
Irradiated, ON biased LDC parts statistics								
Min Value	-0.46	-0.38	-0.31	-0.31	-0.31	-0.38	-0.38	-0.31
Max Value	-0.15	-0.15	0.00	0.00	0.00	0.08	0.15	0.00
Average	-0.25	-0.26	-0.16	-0.25	-0.18	-0.15	-0.12	-0.15
Sigma	0.10	0.09	0.11	0.10	0.11	0.12	0.16	0.10

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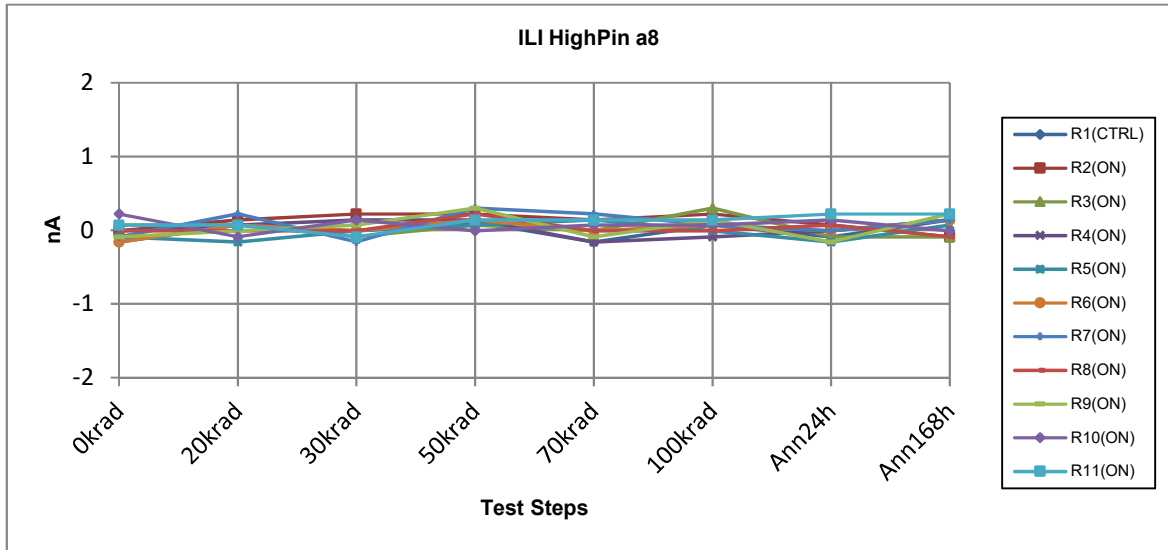
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ILI HighPin a9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.01	0.06	-0.17	0.05	0.14	-0.09	-0.01	0.22
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.09	-0.17	-0.01	0.14	-0.09	-0.01	-0.01	-0.09
R3(ON BIAS LDC)	-0.09	-0.01	-0.09	0.14	-0.17	-0.01	-0.17	-0.09
R4(ON BIAS LDC)	0.06	-0.01	-0.01	0.06	-0.01	-0.09	0.22	-0.01
R5(ON BIAS LDC)	0.06	-0.01	-0.24	-0.24	0.06	-0.01	-0.01	-0.09
R6(ON BIAS LDC)	0.06	-0.01	-0.24	-0.01	-0.17	0.06	-0.09	-0.09
R7(ON BIAS LDC)	0.06	0.06	-0.09	-0.09	0.14	-0.09	-0.01	-0.01
R8(ON BIAS LDC)	0.06	-0.01	-0.09	0.06	0.06	0.06	-0.01	0.14
R9(ON BIAS LDC)	-0.01	-0.17	-0.09	-0.09	-0.17	0.14	0.06	-0.01
R10(ON BIAS LDC)	0.14	-0.17	0.06	0.06	-0.01	0.22	0.06	0.22
R11(ON BIAS LDC)	-0.01	-0.09	0.06	0.14	-0.17	-0.17	-0.09	-0.01
Irradiated, ON biased LDC parts statistics								
Min Value	-0.09	-0.17	-0.24	-0.24	-0.17	-0.17	-0.17	-0.09
Max Value	0.14	0.06	0.06	0.14	0.14	0.22	0.22	0.22
Average	0.02	-0.06	-0.07	0.02	-0.05	0.01	-0.01	0.00
Sigma	0.07	0.08	0.11	0.12	0.12	0.12	0.11	0.11

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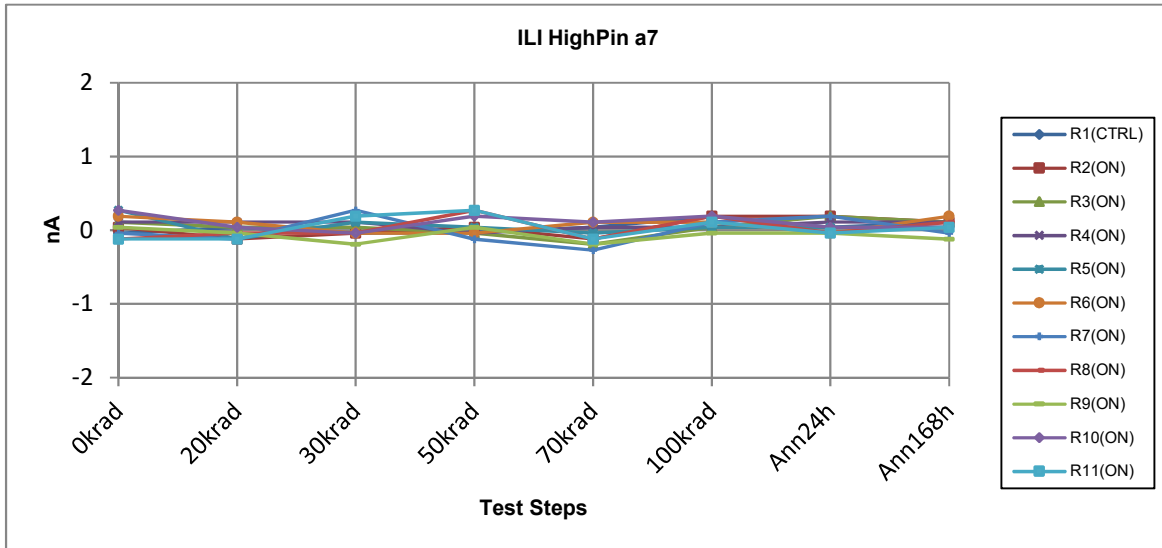
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ILI HighPin a8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.16	0.07	-0.01	0.11	-0.16	0.07	-0.09	0.14
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.01	0.14	0.22	0.22	0.14	0.22	0.07	-0.09
R3(ON BIAS LDC)	0.07	0.07	-0.09	0.07	-0.01	0.30	-0.09	-0.09
R4(ON BIAS LDC)	-0.01	0.07	0.14	0.14	-0.16	-0.09	-0.01	0.14
R5(ON BIAS LDC)	-0.09	-0.16	-0.01	0.07	0.14	-0.01	-0.16	0.07
R6(ON BIAS LDC)	-0.16	0.07	-0.01	0.14	-0.01	0.07	-0.01	0.14
R7(ON BIAS LDC)	-0.09	0.22	-0.16	0.30	0.22	0.07	-0.01	0.14
R8(ON BIAS LDC)	-0.01	-0.01	-0.01	0.22	-0.01	-0.01	0.07	-0.09
R9(ON BIAS LDC)	-0.09	-0.01	0.07	0.30	-0.09	0.14	-0.16	0.22
R10(ON BIAS LDC)	0.22	-0.09	0.14	-0.01	0.07	0.07	0.14	-0.01
R11(ON BIAS LDC)	0.07	0.07	-0.09	0.14	0.14	0.14	0.22	0.22
Irradiated, ON biased LDC parts statistics								
Min Value	-0.16	-0.16	-0.16	-0.01	-0.16	-0.09	-0.16	-0.09
Max Value	0.22	0.22	0.22	0.30	0.22	0.30	0.22	0.22
Average	-0.01	0.04	0.02	0.16	0.04	0.09	0.01	0.07
Sigma	0.11	0.11	0.12	0.10	0.12	0.12	0.12	0.13

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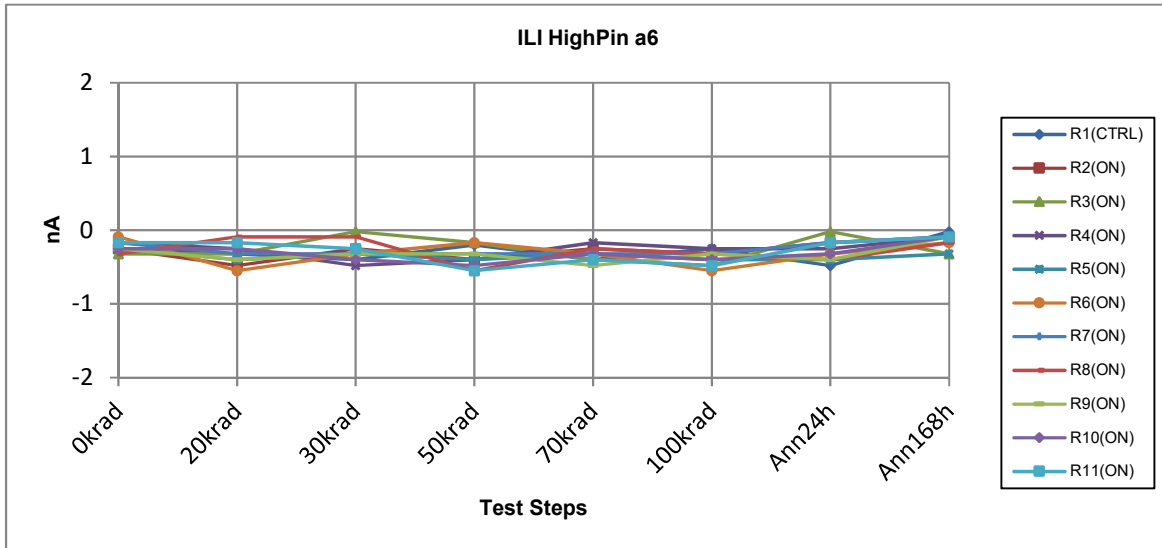
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ILI HighPin a7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.04	0.04	-0.04	-0.03	0.04	0.19	0.04	0.11
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0.04	-0.12	-0.04	0.04	-0.12	0.19	0.19	0.11
R3(ON BIAS LDC)	0.11	0.04	0.04	-0.04	-0.19	0.04	0.19	0.11
R4(ON BIAS LDC)	0.11	0.11	0.11	-0.04	0.04	0.04	0.11	0.11
R5(ON BIAS LDC)	0.27	-0.12	0.11	0.04	-0.04	0.04	0.04	0.04
R6(ON BIAS LDC)	0.19	0.11	-0.04	-0.04	0.11	0.11	-0.04	0.19
R7(ON BIAS LDC)	-0.04	-0.12	0.27	-0.12	-0.27	0.11	0.19	-0.04
R8(ON BIAS LDC)	-0.12	-0.04	-0.04	0.27	-0.12	0.19	-0.04	0.11
R9(ON BIAS LDC)	0.04	-0.04	-0.19	0.04	-0.19	-0.04	-0.04	-0.12
R10(ON BIAS LDC)	0.27	0.04	-0.04	0.19	0.11	0.19	0.04	0.04
R11(ON BIAS LDC)	-0.12	-0.12	0.19	0.27	-0.12	0.11	-0.04	0.04
Irradiated, ON biased LDC parts statistics								
Min Value	-0.12	-0.12	-0.19	-0.12	-0.27	-0.04	-0.04	-0.12
Max Value	0.27	0.11	0.27	0.27	0.11	0.19	0.19	0.19
Average	0.08	-0.03	0.04	0.06	-0.08	0.10	0.06	0.06
Sigma	0.14	0.10	0.13	0.14	0.13	0.08	0.10	0.09

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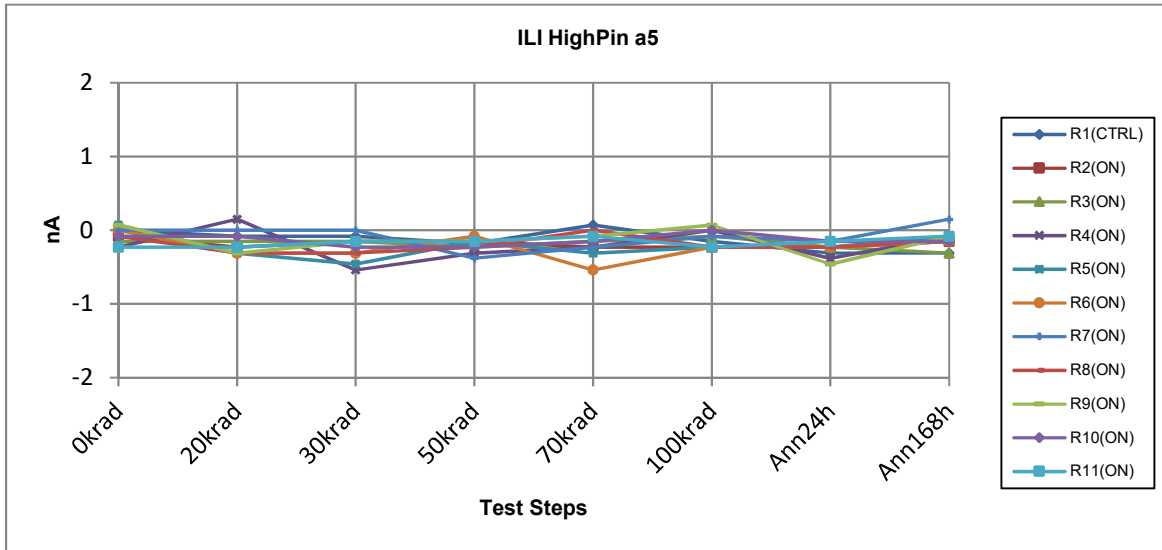
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ILI HighPin a6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.25	-0.32	-0.40	-0.20	-0.40	-0.25	-0.48	-0.02
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.25	-0.48	-0.25	-0.40	-0.25	-0.32	-0.17	-0.09
R3(ON BIAS LDC)	-0.32	-0.32	-0.02	-0.17	-0.40	-0.48	-0.02	-0.32
R4(ON BIAS LDC)	-0.17	-0.25	-0.48	-0.40	-0.17	-0.25	-0.25	-0.09
R5(ON BIAS LDC)	-0.25	-0.40	-0.32	-0.40	-0.32	-0.40	-0.40	-0.32
R6(ON BIAS LDC)	-0.09	-0.55	-0.32	-0.17	-0.32	-0.55	-0.32	-0.17
R7(ON BIAS LDC)	-0.17	-0.32	-0.32	-0.32	-0.32	-0.32	-0.17	-0.09
R8(ON BIAS LDC)	-0.32	-0.09	-0.09	-0.55	-0.25	-0.32	-0.40	-0.17
R9(ON BIAS LDC)	-0.25	-0.40	-0.32	-0.32	-0.48	-0.32	-0.40	-0.09
R10(ON BIAS LDC)	-0.25	-0.25	-0.40	-0.48	-0.32	-0.40	-0.32	-0.09
R11(ON BIAS LDC)	-0.17	-0.17	-0.25	-0.55	-0.40	-0.48	-0.17	-0.09
Irradiated, ON biased LDC parts statistics								
Min Value	-0.32	-0.55	-0.48	-0.55	-0.48	-0.55	-0.40	-0.32
Max Value	-0.09	-0.09	-0.02	-0.17	-0.17	-0.25	-0.02	-0.09
Average	-0.22	-0.32	-0.28	-0.38	-0.32	-0.38	-0.26	-0.15
Sigma	0.07	0.14	0.14	0.14	0.09	0.09	0.13	0.09

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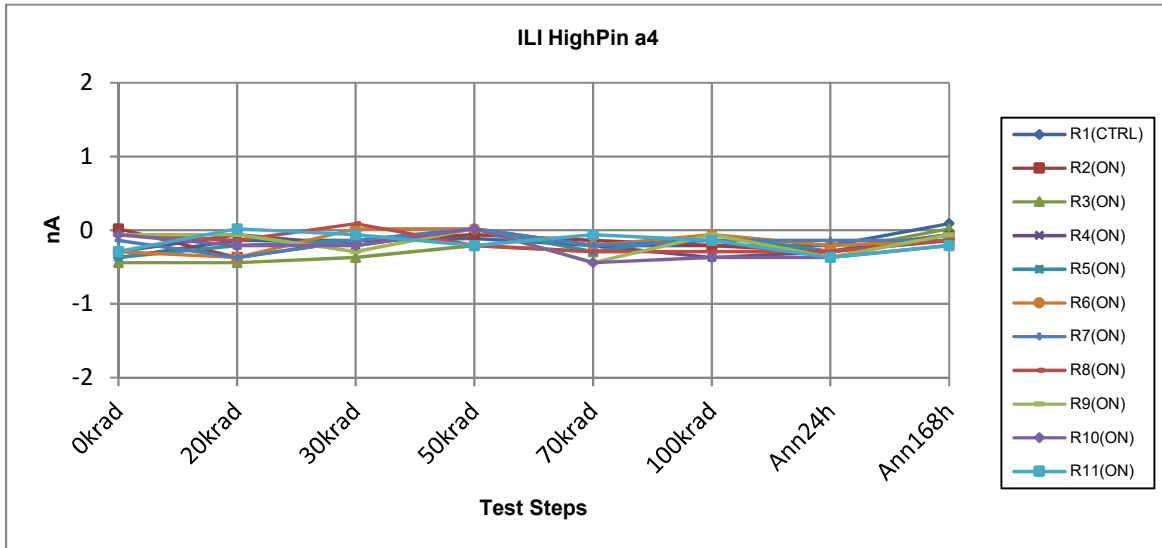
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ILI HighPin a5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.00	-0.08	-0.08	-0.18	0.07	-0.15	-0.31	-0.31
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.08	-0.23	-0.15	-0.15	-0.23	-0.23	-0.23	-0.15
R3(ON BIAS LDC)	-0.15	-0.15	-0.15	-0.23	-0.15	-0.08	-0.23	-0.31
R4(ON BIAS LDC)	-0.23	0.15	-0.54	-0.31	-0.23	0.00	-0.38	-0.08
R5(ON BIAS LDC)	0.07	-0.31	-0.46	-0.15	-0.31	-0.23	-0.23	-0.08
R6(ON BIAS LDC)	0.00	-0.31	-0.31	-0.08	-0.54	-0.23	-0.23	-0.15
R7(ON BIAS LDC)	0.00	0.00	0.00	-0.38	-0.23	-0.08	-0.15	0.15
R8(ON BIAS LDC)	-0.08	-0.31	-0.31	-0.23	0.00	-0.23	-0.23	-0.15
R9(ON BIAS LDC)	0.07	-0.31	-0.15	-0.15	-0.08	0.07	-0.46	-0.08
R10(ON BIAS LDC)	-0.08	-0.08	-0.23	-0.23	-0.15	0.00	-0.15	-0.15
R11(ON BIAS LDC)	-0.23	-0.23	-0.15	-0.15	-0.08	-0.23	-0.15	-0.08
Irradiated, ON biased LDC parts statistics								
Min Value	-0.23	-0.31	-0.54	-0.38	-0.54	-0.23	-0.46	-0.31
Max Value	0.07	0.15	0.00	-0.08	0.00	0.07	-0.15	0.15
Average	-0.07	-0.18	-0.25	-0.21	-0.20	-0.12	-0.24	-0.11
Sigma	0.11	0.16	0.16	0.09	0.15	0.12	0.10	0.11

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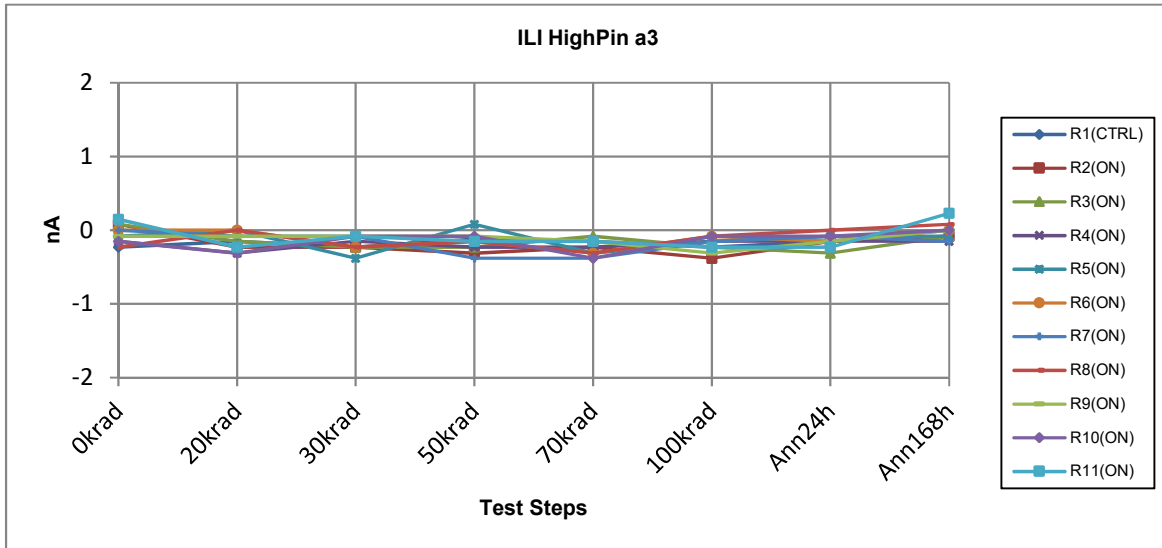
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ILI HighPin a4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.14	-0.11	-0.21	-0.21	-0.21	0.09
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0.02	-0.37	-0.14	-0.06	-0.14	-0.21	-0.29	-0.06
R3(ON BIAS LDC)	-0.44	-0.44	-0.37	-0.21	-0.29	-0.06	-0.29	0.02
R4(ON BIAS LDC)	-0.29	-0.06	-0.21	0.02	-0.21	-0.37	-0.29	-0.06
R5(ON BIAS LDC)	-0.37	-0.21	-0.14	0.02	-0.29	-0.06	-0.29	-0.14
R6(ON BIAS LDC)	-0.29	-0.37	0.02	0.02	-0.21	-0.06	-0.21	-0.14
R7(ON BIAS LDC)	-0.14	-0.37	-0.14	0.02	-0.21	-0.14	-0.14	-0.14
R8(ON BIAS LDC)	-0.06	-0.14	0.09	-0.21	-0.29	-0.29	-0.29	-0.14
R9(ON BIAS LDC)	-0.06	-0.06	-0.29	0.02	-0.44	-0.06	-0.37	-0.06
R10(ON BIAS LDC)	-0.06	-0.21	-0.21	0.02	-0.44	-0.37	-0.37	-0.21
R11(ON BIAS LDC)	-0.29	0.02	-0.06	-0.21	-0.06	-0.14	-0.37	-0.21
Irradiated, ON biased LDC parts statistics								
Min Value	-0.44	-0.44	-0.37	-0.21	-0.44	-0.37	-0.37	-0.21
Max Value	0.02	0.02	0.09	0.02	-0.06	-0.06	-0.14	0.02
Average	-0.20	-0.22	-0.15	-0.06	-0.26	-0.18	-0.29	-0.11
Sigma	0.16	0.16	0.14	0.11	0.12	0.13	0.07	0.07

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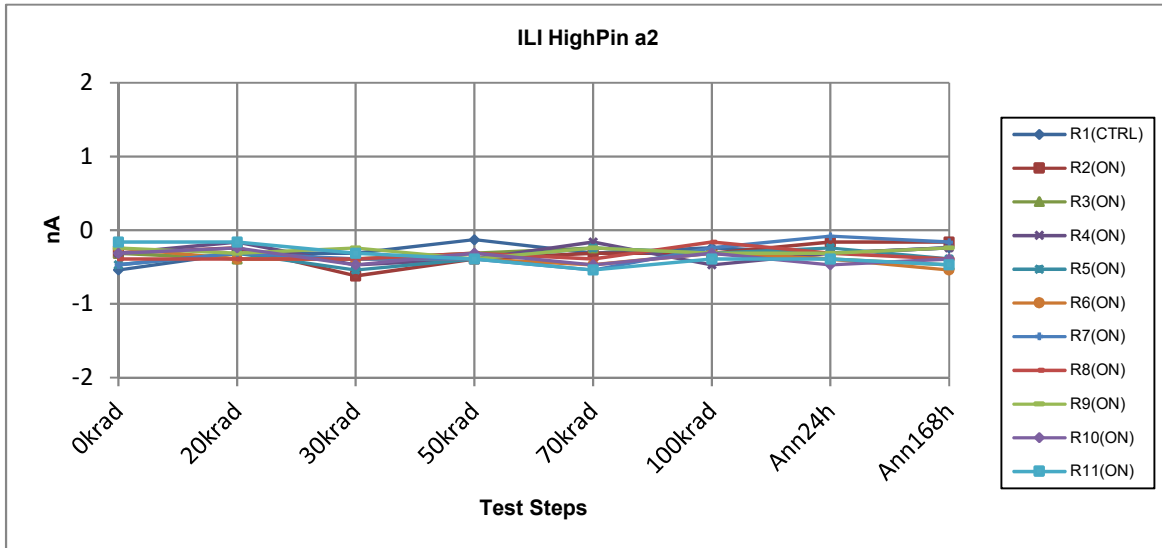
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ILI HighPin a3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.23	-0.15	-0.23	-0.12	-0.15	-0.23	-0.15	-0.08
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0.08	-0.23	-0.23	-0.31	-0.23	-0.38	-0.15	-0.08
R3(ON BIAS LDC)	0.08	-0.15	-0.23	-0.23	-0.08	-0.23	-0.31	-0.08
R4(ON BIAS LDC)	-0.15	-0.31	-0.15	-0.23	-0.23	-0.15	-0.15	-0.15
R5(ON BIAS LDC)	-0.08	0.00	-0.38	0.08	-0.31	-0.15	-0.08	-0.08
R6(ON BIAS LDC)	0.00	0.00	-0.23	-0.15	-0.31	-0.08	-0.15	0.00
R7(ON BIAS LDC)	0.00	-0.08	-0.08	-0.38	-0.38	-0.15	-0.08	-0.15
R8(ON BIAS LDC)	-0.23	0.00	-0.23	-0.15	-0.31	-0.08	0.00	0.08
R9(ON BIAS LDC)	-0.08	-0.08	-0.08	-0.08	-0.15	-0.31	-0.15	0.00
R10(ON BIAS LDC)	-0.15	-0.31	-0.08	-0.08	-0.38	-0.08	-0.08	0.00
R11(ON BIAS LDC)	0.15	-0.23	-0.08	-0.15	-0.15	-0.23	-0.23	0.23
Irradiated, ON biased LDC parts statistics								
Min Value	-0.23	-0.31	-0.38	-0.38	-0.38	-0.38	-0.31	-0.15
Max Value	0.15	0.00	-0.08	0.08	-0.08	-0.08	0.00	0.23
Average	-0.04	-0.14	-0.18	-0.17	-0.25	-0.18	-0.14	-0.02
Sigma	0.12	0.12	0.10	0.13	0.10	0.10	0.09	0.11

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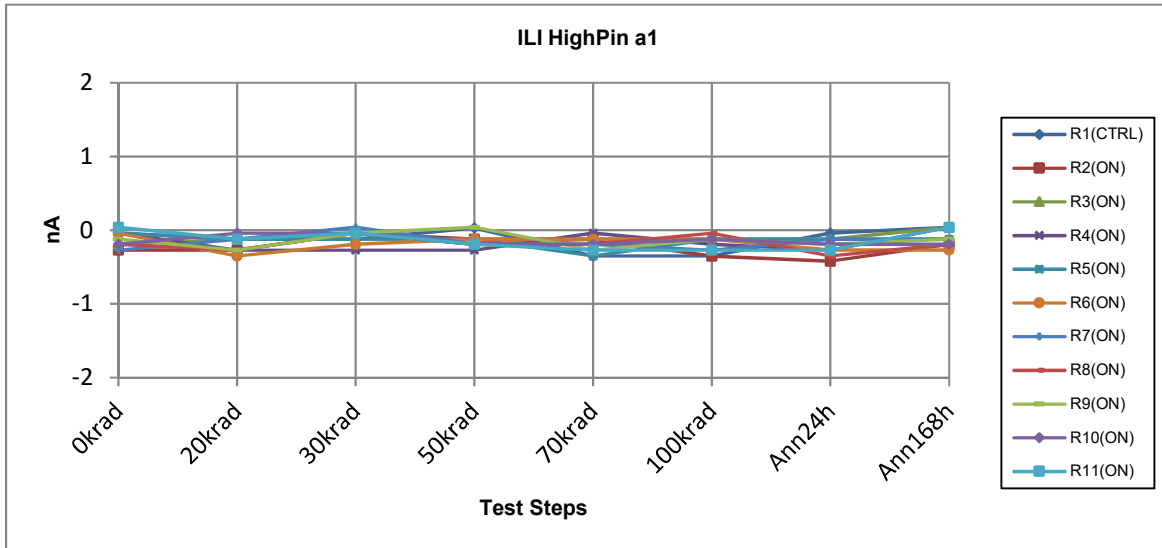
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ILI HighPin a2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.54	-0.31	-0.31	-0.13	-0.31	-0.24	-0.31	-0.24
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.31	-0.24	-0.62	-0.39	-0.31	-0.31	-0.16	-0.16
R3(ON BIAS LDC)	-0.31	-0.39	-0.39	-0.31	-0.24	-0.31	-0.39	-0.47
R4(ON BIAS LDC)	-0.31	-0.16	-0.47	-0.39	-0.16	-0.47	-0.31	-0.24
R5(ON BIAS LDC)	-0.47	-0.31	-0.54	-0.39	-0.24	-0.31	-0.24	-0.39
R6(ON BIAS LDC)	-0.24	-0.39	-0.39	-0.39	-0.47	-0.31	-0.39	-0.54
R7(ON BIAS LDC)	-0.47	-0.31	-0.39	-0.39	-0.54	-0.24	-0.08	-0.16
R8(ON BIAS LDC)	-0.39	-0.39	-0.39	-0.31	-0.39	-0.16	-0.31	-0.39
R9(ON BIAS LDC)	-0.24	-0.31	-0.24	-0.39	-0.24	-0.31	-0.31	-0.24
R10(ON BIAS LDC)	-0.31	-0.24	-0.47	-0.31	-0.47	-0.31	-0.47	-0.39
R11(ON BIAS LDC)	-0.16	-0.16	-0.31	-0.39	-0.54	-0.39	-0.39	-0.47
Irradiated, ON biased LDC parts statistics								
Min Value	-0.47	-0.39	-0.62	-0.39	-0.54	-0.47	-0.47	-0.54
Max Value	-0.16	-0.16	-0.24	-0.31	-0.16	-0.16	-0.08	-0.16
Average	-0.32	-0.29	-0.42	-0.37	-0.36	-0.31	-0.31	-0.35
Sigma	0.10	0.09	0.11	0.04	0.14	0.08	0.12	0.14

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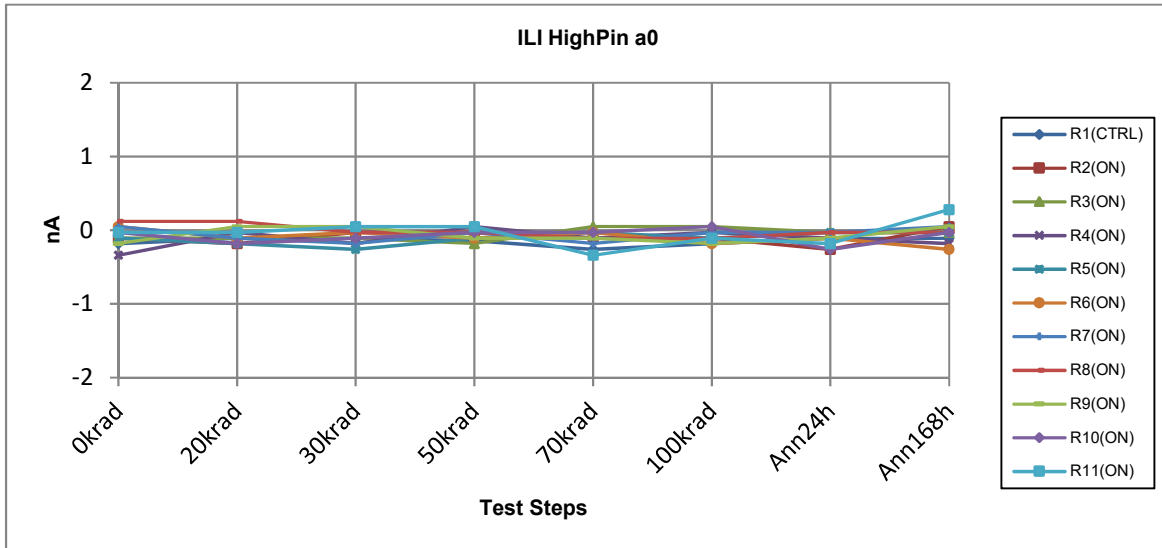
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ILI HighPin a1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.04	-0.12	-0.12	0.03	-0.35	-0.35	-0.04	0.04
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.27	-0.27	-0.04	-0.12	-0.12	-0.35	-0.42	-0.19
R3(ON BIAS LDC)	-0.19	-0.12	-0.04	-0.19	-0.12	-0.12	-0.12	0.04
R4(ON BIAS LDC)	-0.04	-0.27	-0.27	-0.27	-0.04	-0.19	-0.27	0.04
R5(ON BIAS LDC)	-0.04	-0.12	-0.12	-0.12	-0.35	-0.12	-0.12	-0.12
R6(ON BIAS LDC)	-0.04	-0.35	-0.19	-0.12	-0.12	-0.12	-0.27	-0.27
R7(ON BIAS LDC)	-0.27	-0.12	0.04	-0.19	-0.19	-0.27	-0.12	-0.12
R8(ON BIAS LDC)	-0.19	-0.27	-0.04	-0.19	-0.19	-0.04	-0.35	-0.19
R9(ON BIAS LDC)	-0.12	-0.27	-0.04	0.04	-0.27	-0.12	-0.19	-0.12
R10(ON BIAS LDC)	-0.19	-0.04	-0.04	-0.19	-0.19	-0.12	-0.19	-0.19
R11(ON BIAS LDC)	0.04	-0.12	-0.04	-0.19	-0.27	-0.27	-0.27	0.04
Irradiated, ON biased LDC parts statistics								
Min Value	-0.27	-0.35	-0.27	-0.27	-0.35	-0.35	-0.42	-0.27
Max Value	0.04	-0.04	0.04	0.04	-0.04	-0.04	-0.12	0.04
Average	-0.13	-0.20	-0.08	-0.15	-0.19	-0.17	-0.23	-0.11
Sigma	0.11	0.10	0.09	0.08	0.09	0.10	0.10	0.11

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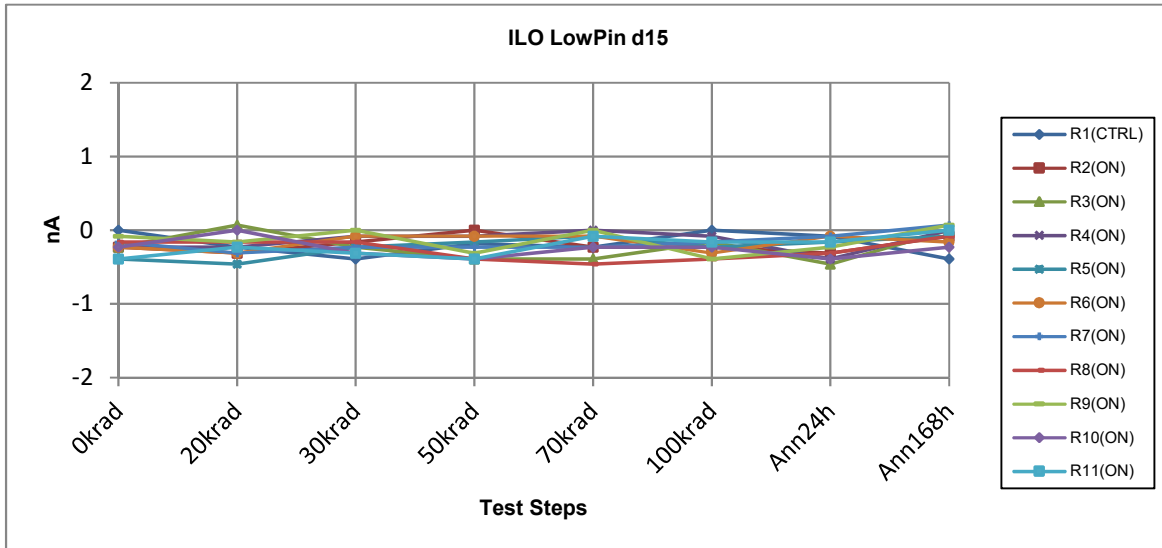
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ILI HighPin a0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.18	-0.11	-0.11	-0.14	-0.26	-0.18	-0.11	-0.11
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.11	-0.18	-0.03	-0.03	-0.11	-0.11	-0.26	0.05
R3(ON BIAS LDC)	-0.11	-0.11	-0.11	-0.18	0.05	0.05	-0.03	-0.03
R4(ON BIAS LDC)	-0.34	-0.03	-0.18	0.05	-0.11	-0.03	-0.11	-0.18
R5(ON BIAS LDC)	-0.11	-0.18	-0.26	-0.11	-0.03	-0.11	-0.03	-0.03
R6(ON BIAS LDC)	0.05	-0.11	-0.03	-0.11	-0.03	-0.18	-0.11	-0.26
R7(ON BIAS LDC)	0.05	-0.11	-0.18	-0.03	-0.18	-0.03	-0.03	0.05
R8(ON BIAS LDC)	0.12	0.12	-0.03	-0.03	-0.11	-0.11	-0.03	-0.03
R9(ON BIAS LDC)	-0.18	0.05	0.05	-0.11	-0.11	-0.18	-0.11	0.05
R10(ON BIAS LDC)	-0.03	-0.18	-0.11	-0.03	-0.03	0.05	-0.26	-0.03
R11(ON BIAS LDC)	-0.03	-0.03	0.05	0.05	-0.34	-0.11	-0.18	0.28
Irradiated, ON biased LDC parts statistics								
Min Value	-0.34	-0.18	-0.26	-0.18	-0.34	-0.18	-0.26	-0.26
Max Value	0.12	0.12	0.05	0.05	0.05	0.05	-0.03	0.28
Average	-0.07	-0.08	-0.08	-0.05	-0.10	-0.08	-0.12	-0.01
Sigma	0.13	0.10	0.10	0.07	0.11	0.08	0.09	0.14

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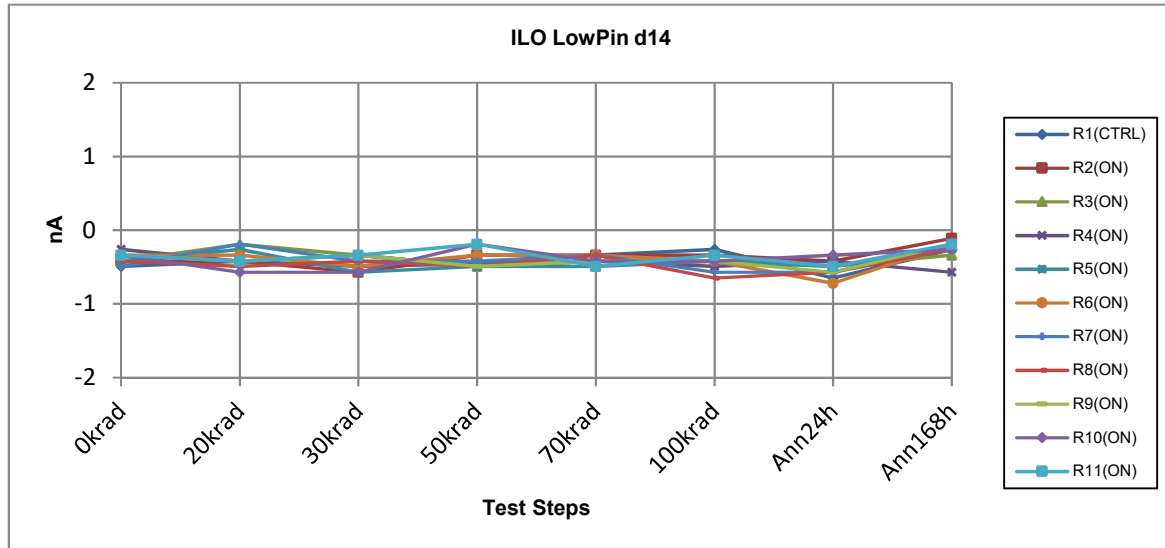
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ILO LowPin d15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.00	-0.23	-0.39	-0.18	-0.23	0.00	-0.08	-0.39
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.23	-0.31	-0.16	0.00	-0.23	-0.23	-0.31	-0.08
R3(ON BIAS LDC)	-0.23	0.07	-0.23	-0.39	-0.39	-0.16	-0.46	0.00
R4(ON BIAS LDC)	-0.23	-0.23	-0.08	-0.08	0.00	-0.08	-0.39	0.00
R5(ON BIAS LDC)	-0.39	-0.46	-0.23	-0.16	-0.08	-0.23	-0.16	-0.08
R6(ON BIAS LDC)	-0.23	-0.31	-0.08	-0.08	-0.08	-0.31	-0.08	-0.16
R7(ON BIAS LDC)	-0.16	-0.31	-0.23	-0.23	-0.23	-0.16	-0.08	0.07
R8(ON BIAS LDC)	-0.16	-0.16	-0.16	-0.39	-0.46	-0.39	-0.31	-0.08
R9(ON BIAS LDC)	-0.08	-0.16	0.00	-0.31	0.00	-0.39	-0.23	0.07
R10(ON BIAS LDC)	-0.23	0.00	-0.31	-0.39	-0.23	-0.23	-0.39	-0.23
R11(ON BIAS LDC)	-0.39	-0.23	-0.31	-0.39	-0.08	-0.16	-0.16	0.00
Irradiated, ON biased LDC parts statistics								
Min Value	-0.39	-0.46	-0.31	-0.39	-0.46	-0.39	-0.46	-0.23
Max Value	-0.08	0.07	0.00	0.00	0.00	-0.08	-0.08	0.07
Average	-0.23	-0.21	-0.18	-0.24	-0.18	-0.23	-0.26	-0.05
Sigma	0.10	0.16	0.10	0.15	0.16	0.10	0.14	0.10

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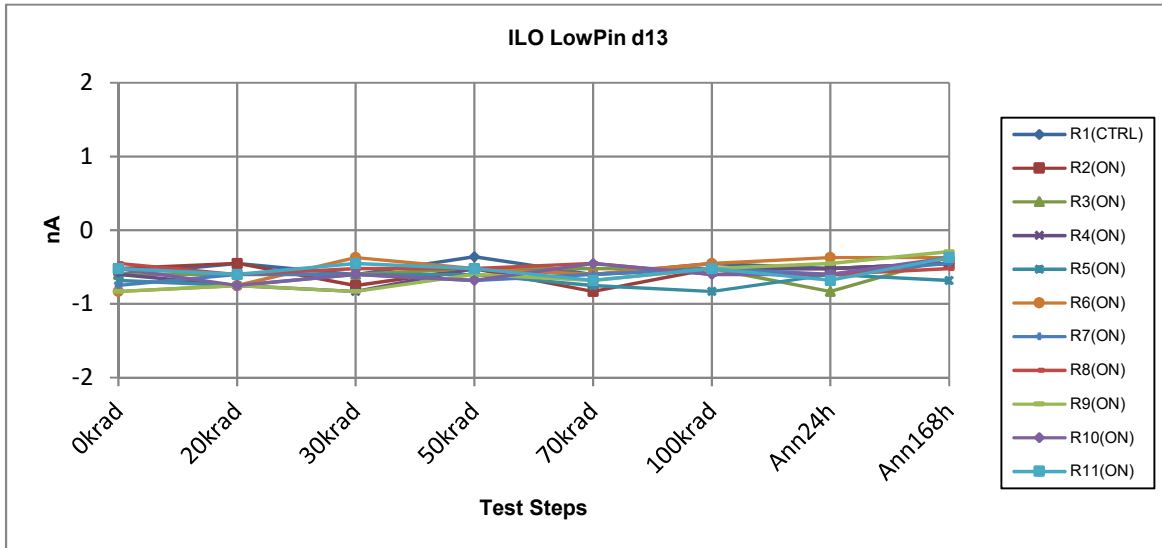
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ILO LowPin d14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.49	-0.42	-0.49	-0.46	-0.34	-0.26	-0.65	-0.26
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.42	-0.42	-0.57	-0.34	-0.34	-0.34	-0.42	-0.11
R3(ON BIAS LDC)	-0.42	-0.19	-0.34	-0.49	-0.42	-0.42	-0.49	-0.34
R4(ON BIAS LDC)	-0.26	-0.42	-0.34	-0.49	-0.42	-0.49	-0.42	-0.57
R5(ON BIAS LDC)	-0.42	-0.26	-0.57	-0.49	-0.49	-0.42	-0.49	-0.26
R6(ON BIAS LDC)	-0.34	-0.34	-0.49	-0.34	-0.34	-0.42	-0.72	-0.19
R7(ON BIAS LDC)	-0.49	-0.19	-0.42	-0.42	-0.34	-0.57	-0.57	-0.19
R8(ON BIAS LDC)	-0.42	-0.49	-0.42	-0.49	-0.34	-0.65	-0.57	-0.26
R9(ON BIAS LDC)	-0.34	-0.42	-0.34	-0.49	-0.42	-0.42	-0.57	-0.19
R10(ON BIAS LDC)	-0.34	-0.57	-0.57	-0.19	-0.42	-0.42	-0.34	-0.26
R11(ON BIAS LDC)	-0.34	-0.42	-0.34	-0.19	-0.49	-0.34	-0.49	-0.19
Irradiated,ON biased LDC parts statistics								
Min Value	-0.49	-0.57	-0.57	-0.49	-0.49	-0.65	-0.72	-0.57
Max Value	-0.26	-0.19	-0.34	-0.19	-0.34	-0.34	-0.34	-0.11
Average	-0.38	-0.37	-0.44	-0.39	-0.40	-0.45	-0.51	-0.26
Sigma	0.07	0.13	0.10	0.12	0.06	0.10	0.11	0.13

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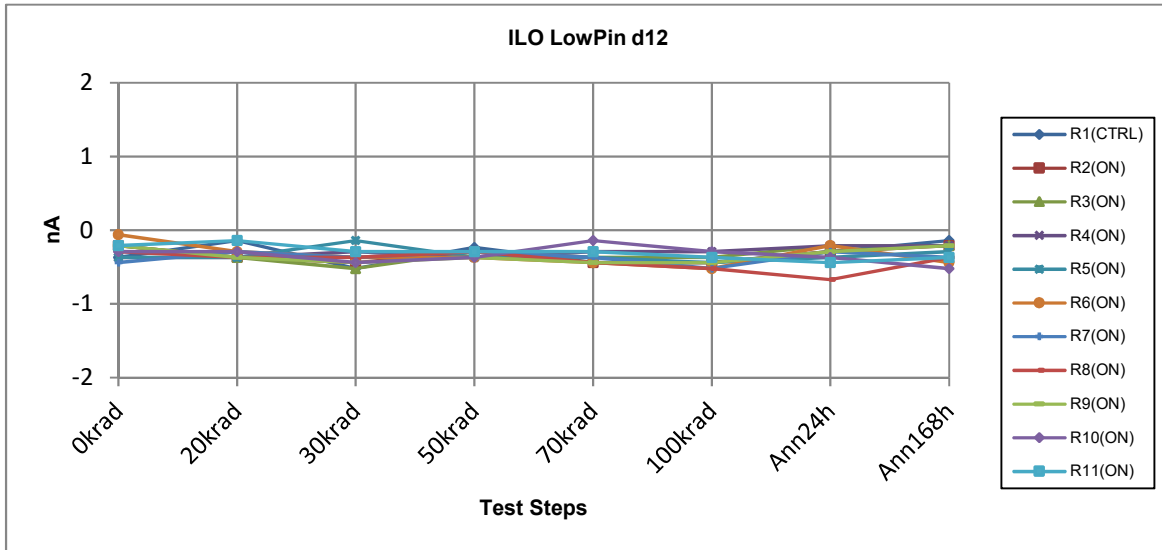
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ILO LowPin d13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.60	-0.45	-0.60	-0.36	-0.60	-0.45	-0.52	-0.45
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.52	-0.45	-0.75	-0.52	-0.83	-0.52	-0.52	-0.45
R3(ON BIAS LDC)	-0.60	-0.60	-0.60	-0.52	-0.52	-0.52	-0.83	-0.37
R4(ON BIAS LDC)	-0.60	-0.75	-0.83	-0.52	-0.60	-0.52	-0.52	-0.45
R5(ON BIAS LDC)	-0.68	-0.75	-0.60	-0.60	-0.75	-0.83	-0.60	-0.68
R6(ON BIAS LDC)	-0.83	-0.75	-0.37	-0.52	-0.60	-0.45	-0.37	-0.37
R7(ON BIAS LDC)	-0.75	-0.60	-0.60	-0.68	-0.60	-0.52	-0.60	-0.45
R8(ON BIAS LDC)	-0.45	-0.60	-0.52	-0.52	-0.45	-0.60	-0.60	-0.52
R9(ON BIAS LDC)	-0.83	-0.75	-0.83	-0.60	-0.68	-0.52	-0.45	-0.29
R10(ON BIAS LDC)	-0.52	-0.75	-0.60	-0.68	-0.45	-0.60	-0.60	-0.37
R11(ON BIAS LDC)	-0.52	-0.60	-0.45	-0.52	-0.68	-0.52	-0.68	-0.37
Irradiated, ON biased LDC parts statistics								
Min Value	-0.83	-0.75	-0.83	-0.68	-0.83	-0.83	-0.83	-0.68
Max Value	-0.45	-0.45	-0.37	-0.52	-0.45	-0.45	-0.37	-0.29
Average	-0.63	-0.66	-0.62	-0.57	-0.62	-0.56	-0.58	-0.43
Sigma	0.14	0.10	0.15	0.07	0.12	0.10	0.13	0.11

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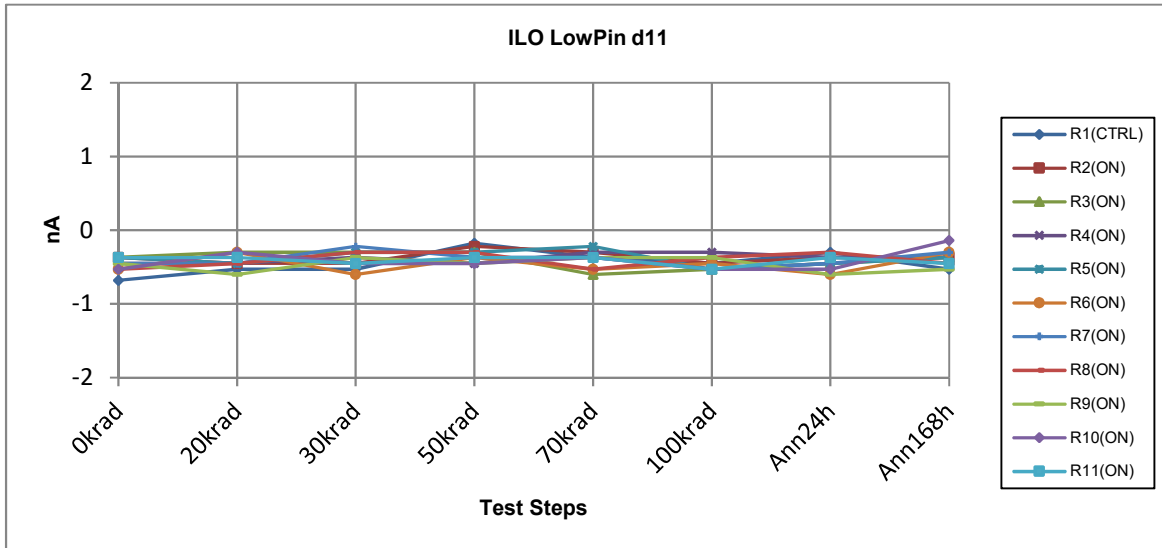
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ILO LowPin d12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.52	-0.23	-0.44	-0.44	-0.29	-0.14
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.21	-0.37	-0.44	-0.29	-0.44	-0.44	-0.29	-0.21
R3(ON BIAS LDC)	-0.21	-0.37	-0.52	-0.29	-0.37	-0.37	-0.21	-0.21
R4(ON BIAS LDC)	-0.37	-0.37	-0.29	-0.37	-0.29	-0.29	-0.21	-0.21
R5(ON BIAS LDC)	-0.37	-0.37	-0.14	-0.37	-0.37	-0.44	-0.37	-0.29
R6(ON BIAS LDC)	-0.06	-0.29	-0.37	-0.37	-0.44	-0.52	-0.21	-0.44
R7(ON BIAS LDC)	-0.44	-0.29	-0.37	-0.29	-0.37	-0.52	-0.29	-0.37
R8(ON BIAS LDC)	-0.29	-0.37	-0.37	-0.29	-0.44	-0.52	-0.67	-0.37
R9(ON BIAS LDC)	-0.21	-0.37	-0.44	-0.37	-0.44	-0.44	-0.29	-0.21
R10(ON BIAS LDC)	-0.29	-0.29	-0.44	-0.37	-0.14	-0.29	-0.37	-0.52
R11(ON BIAS LDC)	-0.21	-0.14	-0.29	-0.29	-0.29	-0.37	-0.44	-0.37
Irradiated, ON biased LDC parts statistics								
Min Value	-0.44	-0.37	-0.52	-0.37	-0.44	-0.52	-0.67	-0.52
Max Value	-0.06	-0.14	-0.14	-0.29	-0.14	-0.29	-0.21	-0.21
Average	-0.27	-0.32	-0.37	-0.33	-0.36	-0.42	-0.34	-0.32
Sigma	0.11	0.07	0.11	0.04	0.10	0.09	0.14	0.11

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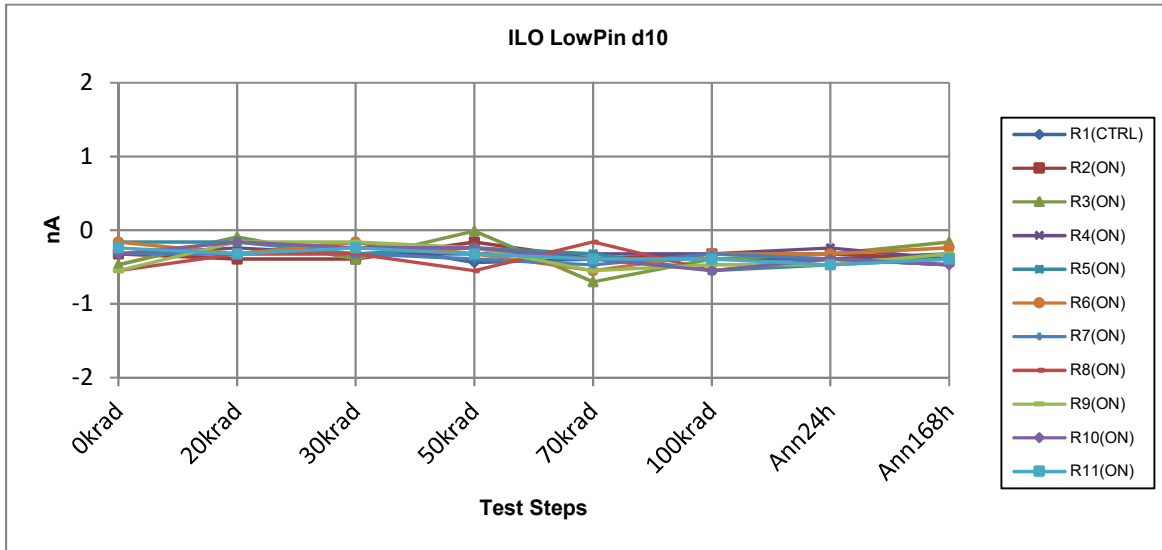
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ILO LowPin d11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.68	-0.53	-0.53	-0.18	-0.37	-0.45	-0.30	-0.53
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.37	-0.45	-0.45	-0.22	-0.30	-0.45	-0.37	-0.37
R3(ON BIAS LDC)	-0.37	-0.30	-0.30	-0.30	-0.60	-0.53	-0.45	-0.37
R4(ON BIAS LDC)	-0.45	-0.45	-0.37	-0.45	-0.30	-0.30	-0.37	-0.37
R5(ON BIAS LDC)	-0.37	-0.45	-0.30	-0.30	-0.22	-0.53	-0.45	-0.37
R6(ON BIAS LDC)	-0.53	-0.30	-0.60	-0.37	-0.53	-0.45	-0.60	-0.30
R7(ON BIAS LDC)	-0.45	-0.45	-0.22	-0.37	-0.37	-0.53	-0.45	-0.30
R8(ON BIAS LDC)	-0.53	-0.45	-0.30	-0.30	-0.53	-0.37	-0.30	-0.45
R9(ON BIAS LDC)	-0.45	-0.60	-0.37	-0.45	-0.37	-0.37	-0.60	-0.53
R10(ON BIAS LDC)	-0.53	-0.30	-0.45	-0.45	-0.37	-0.53	-0.53	-0.14
R11(ON BIAS LDC)	-0.37	-0.37	-0.45	-0.37	-0.37	-0.53	-0.37	-0.45
Irradiated, ON biased LDC parts statistics								
Min Value	-0.53	-0.60	-0.60	-0.45	-0.60	-0.53	-0.60	-0.53
Max Value	-0.37	-0.30	-0.22	-0.22	-0.22	-0.30	-0.30	-0.14
Average	-0.44	-0.41	-0.38	-0.36	-0.40	-0.46	-0.45	-0.37
Sigma	0.07	0.10	0.11	0.08	0.12	0.09	0.10	0.11

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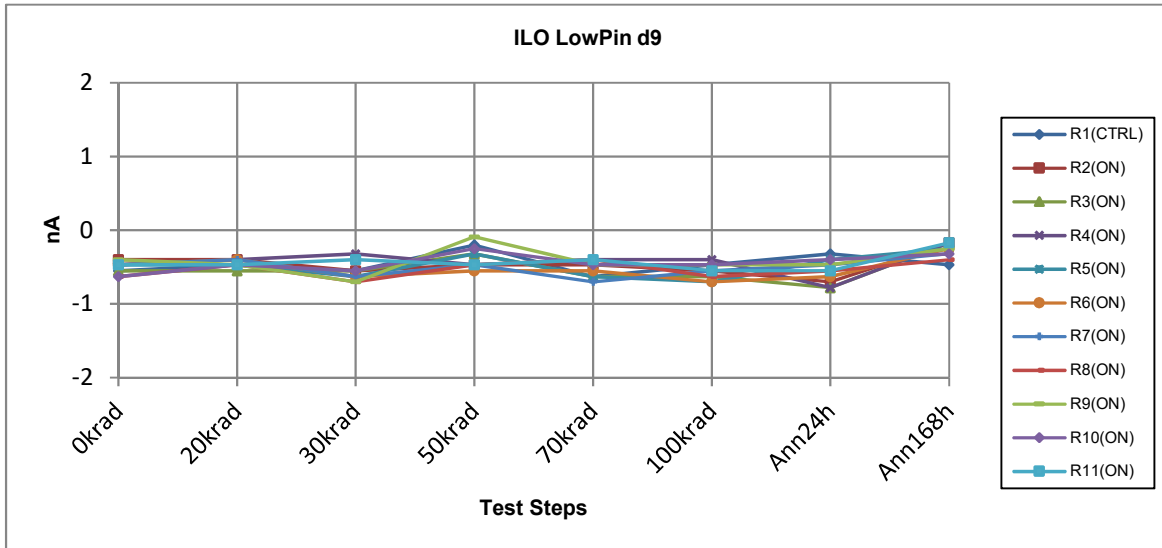
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ILO LowPin d10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.32	-0.32	-0.16	-0.44	-0.39	-0.39	-0.39	-0.32
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.32	-0.39	-0.39	-0.16	-0.39	-0.32	-0.32	-0.39
R3(ON BIAS LDC)	-0.47	-0.09	-0.39	-0.01	-0.70	-0.39	-0.32	-0.16
R4(ON BIAS LDC)	-0.32	-0.24	-0.32	-0.32	-0.32	-0.32	-0.24	-0.39
R5(ON BIAS LDC)	-0.16	-0.16	-0.32	-0.24	-0.32	-0.55	-0.47	-0.39
R6(ON BIAS LDC)	-0.16	-0.32	-0.16	-0.32	-0.55	-0.32	-0.32	-0.24
R7(ON BIAS LDC)	-0.32	-0.32	-0.32	-0.39	-0.47	-0.32	-0.39	-0.47
R8(ON BIAS LDC)	-0.55	-0.32	-0.32	-0.55	-0.16	-0.55	-0.39	-0.47
R9(ON BIAS LDC)	-0.55	-0.16	-0.16	-0.24	-0.55	-0.47	-0.47	-0.32
R10(ON BIAS LDC)	-0.32	-0.16	-0.24	-0.24	-0.39	-0.55	-0.39	-0.47
R11(ON BIAS LDC)	-0.24	-0.32	-0.24	-0.32	-0.39	-0.39	-0.47	-0.39
Irradiated, ON biased LDC parts statistics								
Min Value	-0.55	-0.39	-0.39	-0.55	-0.70	-0.55	-0.47	-0.47
Max Value	-0.16	-0.09	-0.16	-0.01	-0.16	-0.32	-0.24	-0.16
Average	-0.34	-0.25	-0.29	-0.28	-0.42	-0.42	-0.38	-0.37
Sigma	0.14	0.10	0.08	0.14	0.15	0.10	0.08	0.10

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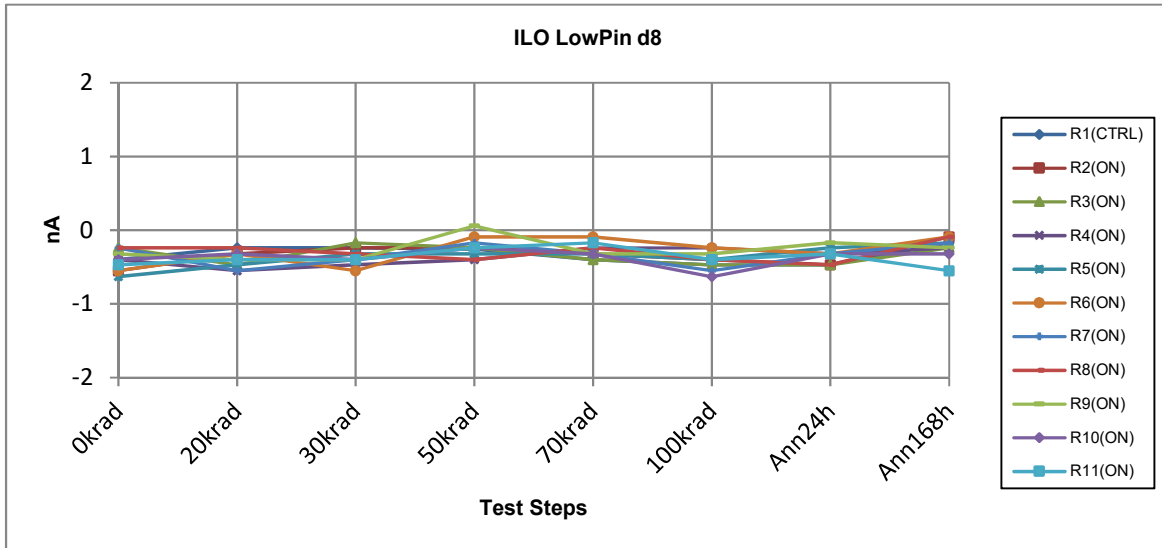
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ILO LowPin d9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.55	-0.47	-0.55	-0.20	-0.63	-0.47	-0.32	-0.47
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.40	-0.40	-0.55	-0.47	-0.47	-0.55	-0.70	-0.17
R3(ON BIAS LDC)	-0.55	-0.55	-0.55	-0.32	-0.63	-0.63	-0.78	-0.17
R4(ON BIAS LDC)	-0.47	-0.40	-0.32	-0.47	-0.40	-0.40	-0.78	-0.17
R5(ON BIAS LDC)	-0.47	-0.47	-0.63	-0.32	-0.63	-0.70	-0.40	-0.25
R6(ON BIAS LDC)	-0.47	-0.40	-0.63	-0.55	-0.55	-0.70	-0.63	-0.25
R7(ON BIAS LDC)	-0.47	-0.40	-0.63	-0.47	-0.70	-0.55	-0.47	-0.32
R8(ON BIAS LDC)	-0.63	-0.47	-0.70	-0.47	-0.40	-0.63	-0.55	-0.40
R9(ON BIAS LDC)	-0.40	-0.47	-0.70	-0.09	-0.47	-0.47	-0.47	-0.25
R10(ON BIAS LDC)	-0.63	-0.47	-0.55	-0.25	-0.47	-0.47	-0.40	-0.32
R11(ON BIAS LDC)	-0.47	-0.47	-0.40	-0.47	-0.40	-0.55	-0.55	-0.17
Irradiated, ON biased LDC parts statistics								
Min Value	-0.63	-0.55	-0.70	-0.55	-0.70	-0.70	-0.78	-0.40
Max Value	-0.40	-0.40	-0.32	-0.09	-0.40	-0.40	-0.40	-0.17
Average	-0.50	-0.45	-0.57	-0.39	-0.51	-0.57	-0.57	-0.25
Sigma	0.08	0.05	0.12	0.14	0.11	0.10	0.14	0.08

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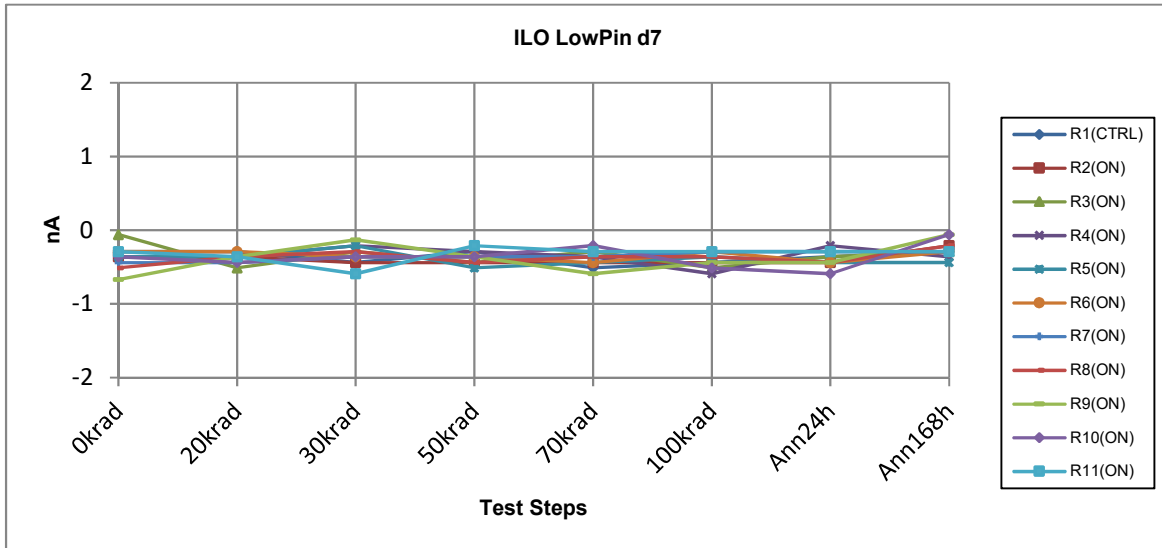
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ILO LowPin d8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.40	-0.24	-0.24	-0.26	-0.40	-0.47	-0.47	-0.17
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.55	-0.32	-0.24	-0.24	-0.32	-0.40	-0.47	-0.09
R3(ON BIAS LDC)	-0.24	-0.47	-0.17	-0.24	-0.40	-0.47	-0.47	-0.24
R4(ON BIAS LDC)	-0.40	-0.55	-0.47	-0.40	-0.24	-0.24	-0.32	-0.24
R5(ON BIAS LDC)	-0.63	-0.47	-0.32	-0.32	-0.32	-0.40	-0.24	-0.17
R6(ON BIAS LDC)	-0.55	-0.32	-0.55	-0.09	-0.09	-0.24	-0.32	-0.09
R7(ON BIAS LDC)	-0.24	-0.55	-0.40	-0.17	-0.32	-0.55	-0.32	-0.17
R8(ON BIAS LDC)	-0.24	-0.24	-0.32	-0.40	-0.24	-0.40	-0.47	-0.09
R9(ON BIAS LDC)	-0.32	-0.40	-0.40	0.06	-0.32	-0.32	-0.17	-0.24
R10(ON BIAS LDC)	-0.40	-0.32	-0.40	-0.24	-0.32	-0.63	-0.32	-0.32
R11(ON BIAS LDC)	-0.47	-0.40	-0.40	-0.24	-0.17	-0.40	-0.32	-0.55
Irradiated, ON biased LDC parts statistics								
Min Value	-0.63	-0.55	-0.55	-0.40	-0.40	-0.63	-0.47	-0.55
Max Value	-0.24	-0.24	-0.17	0.06	-0.09	-0.24	-0.17	-0.09
Average	-0.40	-0.40	-0.37	-0.23	-0.27	-0.41	-0.34	-0.22
Sigma	0.14	0.11	0.11	0.14	0.09	0.12	0.10	0.14

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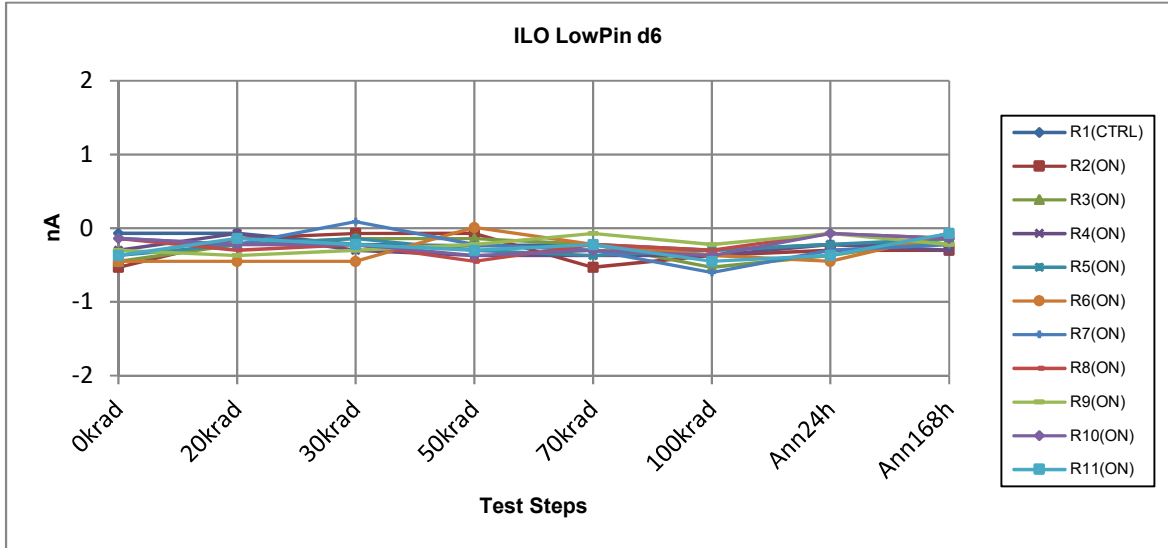
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ILO LowPin d7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.29	-0.29	-0.44	-0.29	-0.51	-0.44	-0.36	-0.29
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.36	-0.36	-0.44	-0.44	-0.44	-0.44	-0.44	-0.21
R3(ON BIAS LDC)	-0.06	-0.51	-0.29	-0.44	-0.29	-0.51	-0.36	-0.29
R4(ON BIAS LDC)	-0.36	-0.36	-0.21	-0.29	-0.36	-0.59	-0.21	-0.36
R5(ON BIAS LDC)	-0.36	-0.36	-0.21	-0.51	-0.44	-0.36	-0.44	-0.44
R6(ON BIAS LDC)	-0.29	-0.29	-0.36	-0.36	-0.44	-0.29	-0.44	-0.29
R7(ON BIAS LDC)	-0.44	-0.44	-0.36	-0.36	-0.36	-0.29	-0.29	-0.29
R8(ON BIAS LDC)	-0.51	-0.36	-0.29	-0.44	-0.36	-0.36	-0.44	-0.21
R9(ON BIAS LDC)	-0.67	-0.36	-0.13	-0.36	-0.59	-0.44	-0.44	-0.06
R10(ON BIAS LDC)	-0.36	-0.44	-0.36	-0.36	-0.21	-0.51	-0.59	-0.06
R11(ON BIAS LDC)	-0.29	-0.36	-0.59	-0.21	-0.29	-0.29	-0.29	-0.29
Irradiated, ON biased LDC parts statistics								
Min Value	-0.67	-0.51	-0.59	-0.51	-0.59	-0.59	-0.59	-0.44
Max Value	-0.06	-0.29	-0.13	-0.21	-0.21	-0.29	-0.21	-0.06
Average	-0.37	-0.38	-0.32	-0.38	-0.38	-0.41	-0.39	-0.25
Sigma	0.16	0.06	0.13	0.09	0.11	0.11	0.11	0.12

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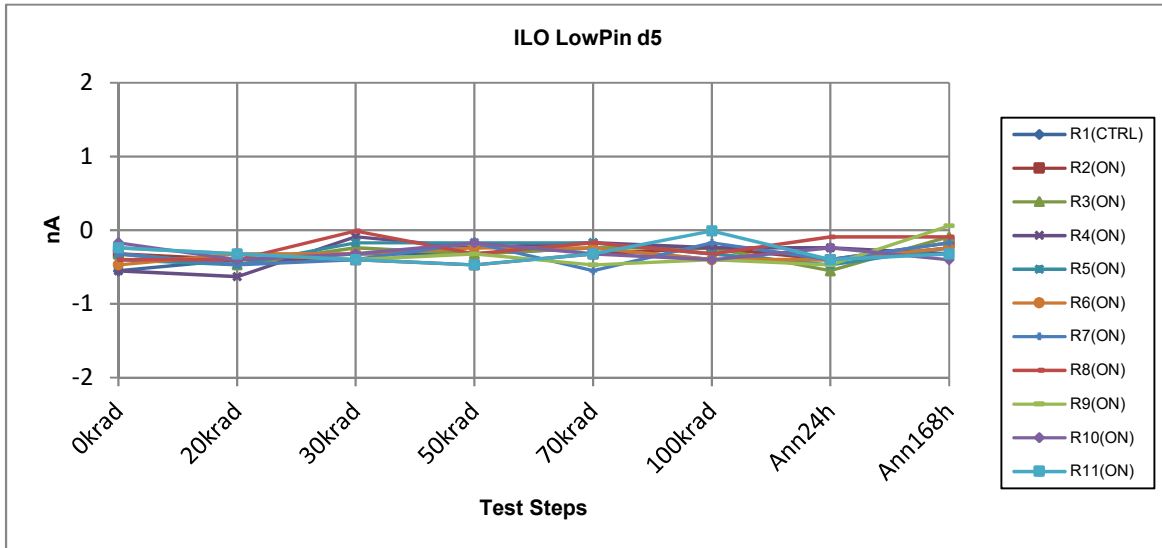
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ILO LowPin d6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.07	-0.07	-0.22	-0.24	-0.22	-0.30	-0.22	-0.22
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.53	-0.14	-0.07	-0.07	-0.53	-0.37	-0.30	-0.30
R3(ON BIAS LDC)	-0.45	-0.22	-0.14	-0.14	-0.22	-0.53	-0.37	-0.14
R4(ON BIAS LDC)	-0.30	-0.07	-0.30	-0.37	-0.37	-0.37	-0.22	-0.30
R5(ON BIAS LDC)	-0.37	-0.22	-0.14	-0.30	-0.37	-0.30	-0.22	-0.14
R6(ON BIAS LDC)	-0.45	-0.45	-0.45	0.01	-0.22	-0.37	-0.45	-0.07
R7(ON BIAS LDC)	-0.14	-0.22	0.09	-0.22	-0.30	-0.60	-0.30	-0.22
R8(ON BIAS LDC)	-0.14	-0.30	-0.22	-0.45	-0.22	-0.30	-0.07	-0.14
R9(ON BIAS LDC)	-0.30	-0.37	-0.30	-0.22	-0.07	-0.22	-0.07	-0.22
R10(ON BIAS LDC)	-0.14	-0.22	-0.22	-0.37	-0.30	-0.37	-0.07	-0.14
R11(ON BIAS LDC)	-0.37	-0.14	-0.22	-0.30	-0.22	-0.45	-0.37	-0.07
Irradiated, ON biased LDC parts statistics								
Min Value	-0.53	-0.45	-0.45	-0.45	-0.53	-0.60	-0.45	-0.30
Max Value	-0.14	-0.07	0.09	0.01	-0.07	-0.22	-0.07	-0.07
Average	-0.32	-0.24	-0.20	-0.24	-0.28	-0.39	-0.24	-0.17
Sigma	0.14	0.11	0.15	0.14	0.12	0.11	0.14	0.08

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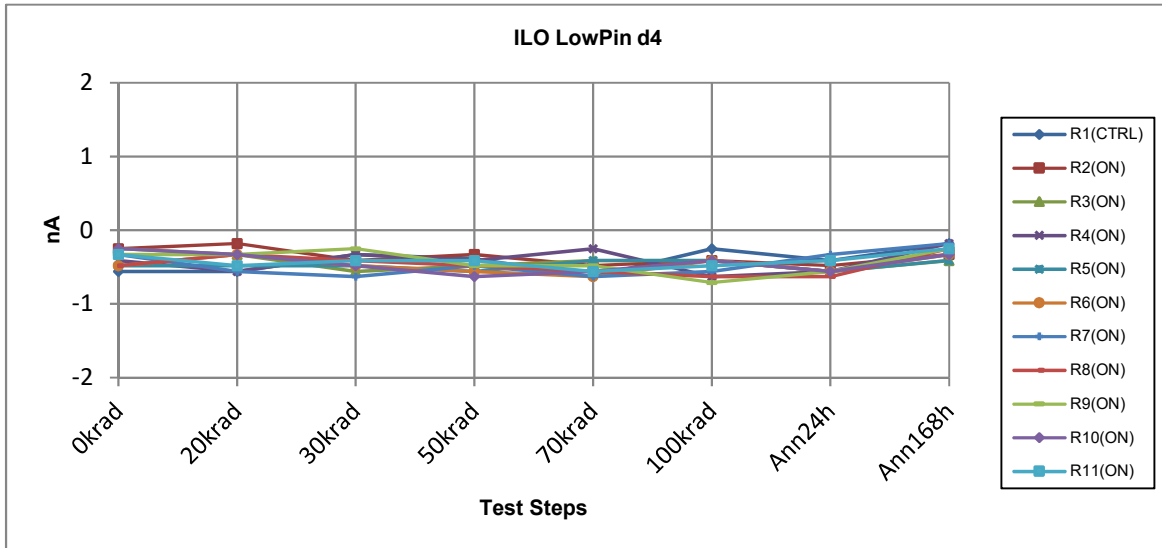
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ILO LowPin d5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.55	-0.40	-0.32	-0.32	-0.24	-0.40	-0.40	-0.24
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.32	-0.40	-0.40	-0.47	-0.32	-0.24	-0.40	-0.17
R3(ON BIAS LDC)	-0.32	-0.47	-0.24	-0.32	-0.24	-0.24	-0.55	-0.09
R4(ON BIAS LDC)	-0.55	-0.63	-0.09	-0.24	-0.17	-0.24	-0.24	-0.32
R5(ON BIAS LDC)	-0.40	-0.47	-0.17	-0.17	-0.17	-0.32	-0.47	-0.24
R6(ON BIAS LDC)	-0.47	-0.32	-0.32	-0.24	-0.24	-0.40	-0.40	-0.24
R7(ON BIAS LDC)	-0.32	-0.47	-0.40	-0.17	-0.55	-0.17	-0.40	-0.17
R8(ON BIAS LDC)	-0.40	-0.40	-0.01	-0.32	-0.17	-0.32	-0.09	-0.09
R9(ON BIAS LDC)	-0.24	-0.32	-0.40	-0.32	-0.47	-0.40	-0.47	0.06
R10(ON BIAS LDC)	-0.17	-0.40	-0.32	-0.17	-0.32	-0.40	-0.24	-0.40
R11(ON BIAS LDC)	-0.24	-0.32	-0.40	-0.47	-0.32	-0.01	-0.40	-0.32
Irradiated, ON biased LDC parts statistics								
Min Value	-0.55	-0.63	-0.40	-0.47	-0.55	-0.40	-0.55	-0.40
Max Value	-0.17	-0.32	-0.01	-0.17	-0.17	-0.01	-0.09	0.06
Average	-0.34	-0.42	-0.28	-0.29	-0.30	-0.27	-0.37	-0.20
Sigma	0.11	0.10	0.14	0.11	0.13	0.12	0.14	0.14

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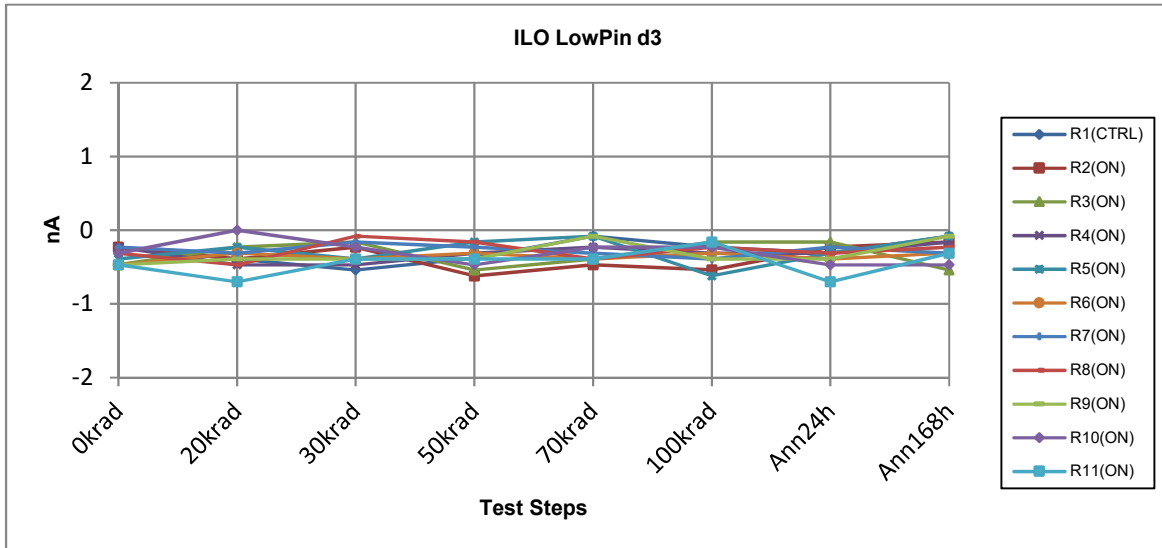
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ILO LowPin d4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.56	-0.56	-0.33	-0.38	-0.63	-0.25	-0.41	-0.18
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.25	-0.18	-0.41	-0.33	-0.48	-0.41	-0.48	-0.33
R3(ON BIAS LDC)	-0.25	-0.33	-0.56	-0.48	-0.41	-0.41	-0.56	-0.41
R4(ON BIAS LDC)	-0.41	-0.56	-0.33	-0.41	-0.25	-0.63	-0.56	-0.18
R5(ON BIAS LDC)	-0.48	-0.48	-0.48	-0.56	-0.41	-0.41	-0.56	-0.41
R6(ON BIAS LDC)	-0.48	-0.33	-0.48	-0.56	-0.63	-0.41	-0.56	-0.33
R7(ON BIAS LDC)	-0.33	-0.56	-0.63	-0.48	-0.63	-0.56	-0.33	-0.18
R8(ON BIAS LDC)	-0.48	-0.33	-0.41	-0.48	-0.56	-0.63	-0.63	-0.25
R9(ON BIAS LDC)	-0.33	-0.33	-0.25	-0.48	-0.48	-0.71	-0.56	-0.25
R10(ON BIAS LDC)	-0.25	-0.33	-0.48	-0.63	-0.56	-0.41	-0.56	-0.33
R11(ON BIAS LDC)	-0.33	-0.48	-0.41	-0.41	-0.56	-0.48	-0.41	-0.25
Irradiated, ON biased LDC parts statistics								
Min Value	-0.48	-0.56	-0.63	-0.63	-0.63	-0.71	-0.63	-0.41
Max Value	-0.25	-0.18	-0.25	-0.33	-0.25	-0.41	-0.33	-0.18
Average	-0.36	-0.39	-0.44	-0.48	-0.50	-0.51	-0.52	-0.29
Sigma	0.10	0.12	0.11	0.09	0.12	0.12	0.09	0.08

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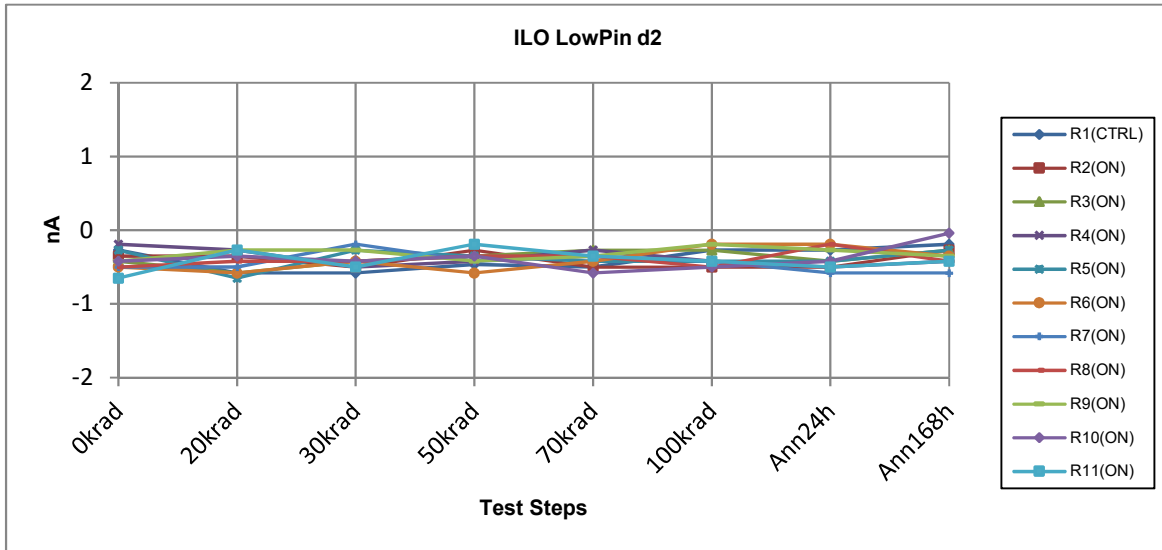
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ILO LowPin d3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.23	-0.39	-0.54	-0.38	-0.08	-0.23	-0.31	-0.08
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.23	-0.39	-0.23	-0.62	-0.47	-0.54	-0.23	-0.16
R3(ON BIAS LDC)	-0.47	-0.23	-0.16	-0.54	-0.39	-0.16	-0.16	-0.54
R4(ON BIAS LDC)	-0.23	-0.47	-0.47	-0.31	-0.23	-0.31	-0.31	-0.16
R5(ON BIAS LDC)	-0.39	-0.23	-0.39	-0.16	-0.08	-0.62	-0.31	-0.08
R6(ON BIAS LDC)	-0.47	-0.31	-0.39	-0.31	-0.39	-0.31	-0.39	-0.31
R7(ON BIAS LDC)	-0.23	-0.31	-0.16	-0.23	-0.31	-0.39	-0.23	-0.31
R8(ON BIAS LDC)	-0.31	-0.47	-0.08	-0.16	-0.39	-0.23	-0.31	-0.23
R9(ON BIAS LDC)	-0.47	-0.39	-0.39	-0.39	-0.08	-0.39	-0.39	-0.08
R10(ON BIAS LDC)	-0.31	0.00	-0.23	-0.47	-0.23	-0.23	-0.47	-0.47
R11(ON BIAS LDC)	-0.47	-0.70	-0.39	-0.39	-0.39	-0.16	-0.70	-0.31
Irradiated, ON biased LDC parts statistics								
Min Value	-0.47	-0.70	-0.47	-0.62	-0.47	-0.62	-0.70	-0.54
Max Value	-0.23	0.00	-0.08	-0.16	-0.08	-0.16	-0.16	-0.08
Average	-0.36	-0.35	-0.29	-0.36	-0.30	-0.33	-0.35	-0.27
Sigma	0.11	0.19	0.13	0.15	0.14	0.15	0.15	0.15

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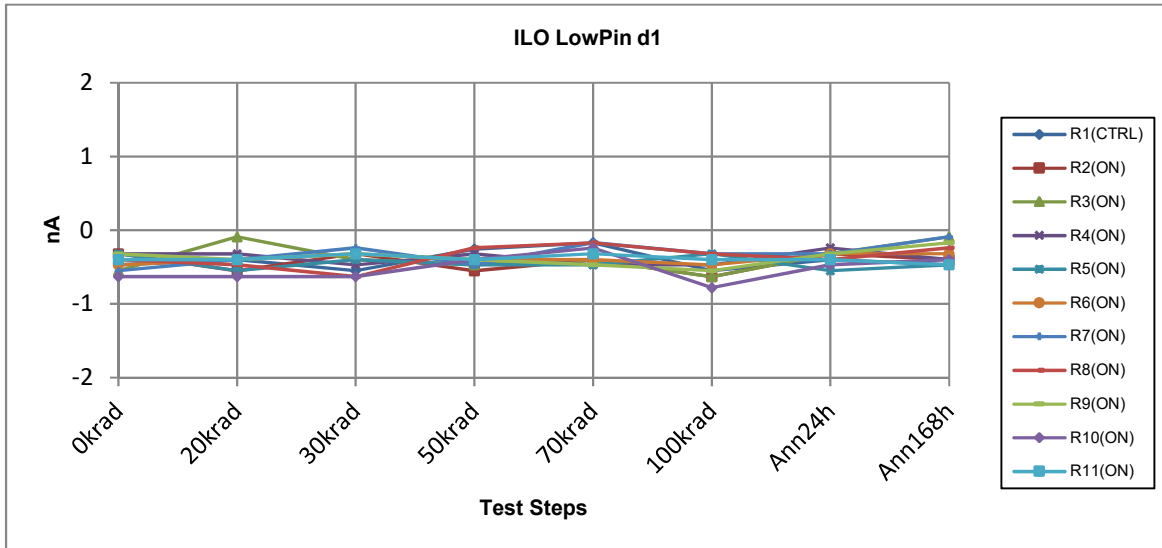
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ILO LowPin d2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.27	-0.58	-0.58	-0.46	-0.50	-0.27	-0.27	-0.19
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.35	-0.35	-0.50	-0.27	-0.50	-0.50	-0.50	-0.27
R3(ON BIAS LDC)	-0.42	-0.58	-0.42	-0.35	-0.27	-0.27	-0.42	-0.27
R4(ON BIAS LDC)	-0.19	-0.27	-0.50	-0.42	-0.27	-0.42	-0.50	-0.42
R5(ON BIAS LDC)	-0.27	-0.65	-0.27	-0.35	-0.42	-0.42	-0.42	-0.27
R6(ON BIAS LDC)	-0.50	-0.58	-0.42	-0.58	-0.42	-0.19	-0.19	-0.35
R7(ON BIAS LDC)	-0.50	-0.50	-0.19	-0.42	-0.35	-0.42	-0.58	-0.58
R8(ON BIAS LDC)	-0.50	-0.42	-0.42	-0.35	-0.35	-0.50	-0.19	-0.42
R9(ON BIAS LDC)	-0.42	-0.27	-0.27	-0.42	-0.35	-0.19	-0.27	-0.35
R10(ON BIAS LDC)	-0.42	-0.35	-0.42	-0.35	-0.58	-0.50	-0.42	-0.04
R11(ON BIAS LDC)	-0.65	-0.27	-0.50	-0.19	-0.35	-0.42	-0.50	-0.42
Irradiated, ON biased LDC parts statistics								
Min Value	-0.65	-0.65	-0.50	-0.58	-0.58	-0.50	-0.58	-0.58
Max Value	-0.19	-0.27	-0.19	-0.19	-0.27	-0.19	-0.19	-0.04
Average	-0.42	-0.42	-0.39	-0.37	-0.39	-0.38	-0.40	-0.34
Sigma	0.13	0.14	0.11	0.10	0.10	0.12	0.14	0.14

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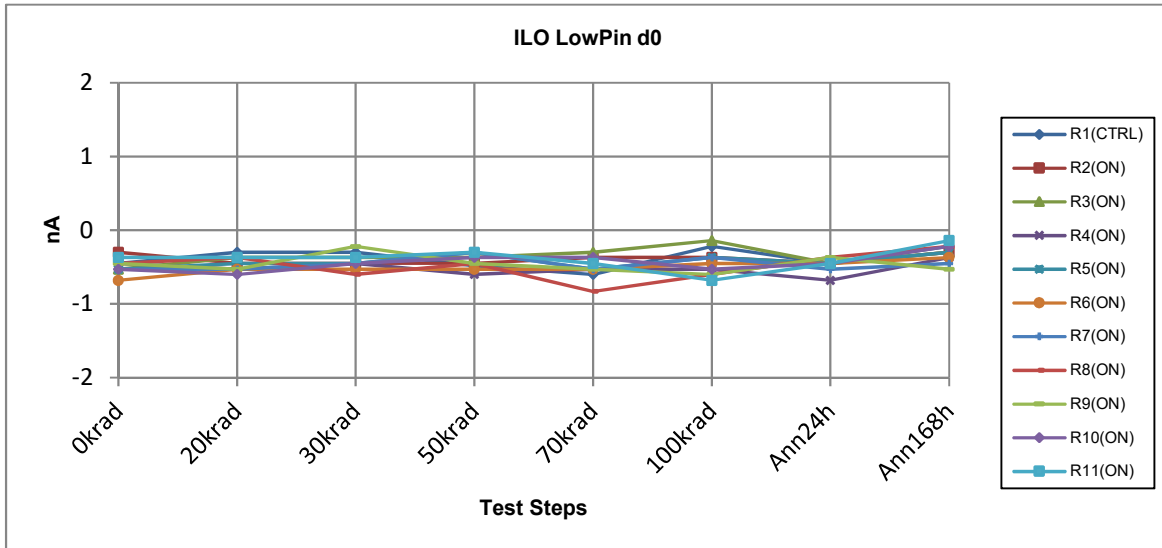
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ILO LowPin d1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.47	-0.40	-0.55	-0.26	-0.17	-0.55	-0.40	-0.47
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.32	-0.55	-0.32	-0.55	-0.40	-0.63	-0.32	-0.40
R3(ON BIAS LDC)	-0.55	-0.09	-0.40	-0.47	-0.40	-0.63	-0.32	-0.09
R4(ON BIAS LDC)	-0.32	-0.32	-0.47	-0.32	-0.47	-0.47	-0.24	-0.40
R5(ON BIAS LDC)	-0.32	-0.55	-0.40	-0.47	-0.47	-0.32	-0.55	-0.47
R6(ON BIAS LDC)	-0.47	-0.40	-0.32	-0.40	-0.40	-0.47	-0.32	-0.32
R7(ON BIAS LDC)	-0.55	-0.40	-0.24	-0.47	-0.17	-0.32	-0.32	-0.09
R8(ON BIAS LDC)	-0.40	-0.47	-0.63	-0.24	-0.17	-0.32	-0.40	-0.24
R9(ON BIAS LDC)	-0.32	-0.40	-0.32	-0.40	-0.47	-0.55	-0.32	-0.17
R10(ON BIAS LDC)	-0.63	-0.63	-0.63	-0.40	-0.24	-0.78	-0.47	-0.40
R11(ON BIAS LDC)	-0.40	-0.40	-0.32	-0.40	-0.32	-0.40	-0.40	-0.47
Irradiated, ON biased LDC parts statistics								
Min Value	-0.63	-0.63	-0.63	-0.55	-0.47	-0.78	-0.55	-0.47
Max Value	-0.32	-0.09	-0.24	-0.24	-0.17	-0.32	-0.24	-0.09
Average	-0.43	-0.42	-0.41	-0.41	-0.35	-0.49	-0.37	-0.31
Sigma	0.12	0.15	0.13	0.09	0.12	0.16	0.09	0.15

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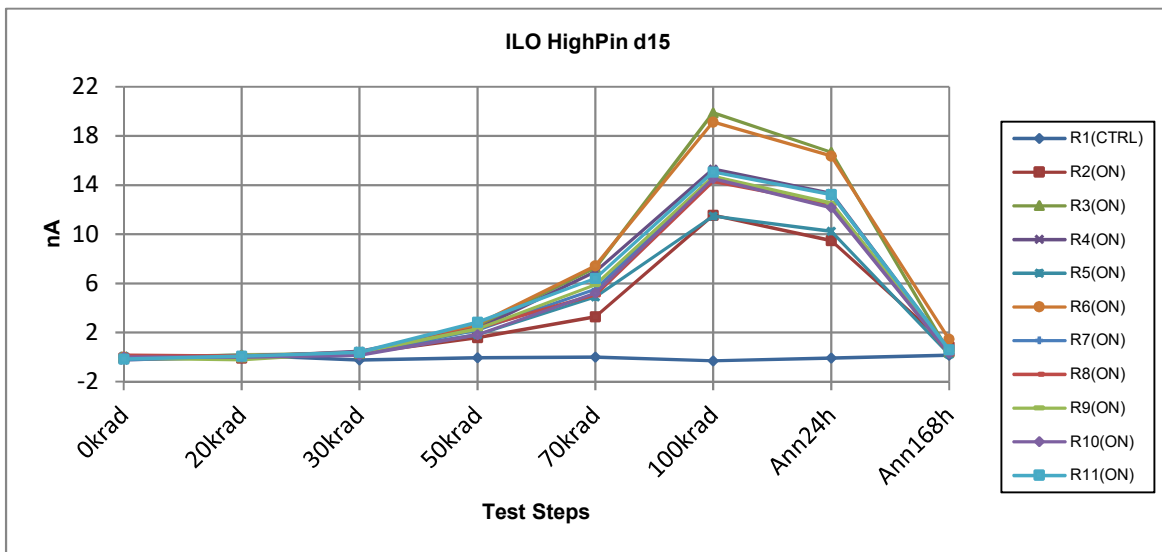
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ILO LowPin d0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.45	-0.30	-0.30	-0.48	-0.60	-0.22	-0.45	-0.22
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.30	-0.45	-0.45	-0.45	-0.37	-0.37	-0.45	-0.30
R3(ON BIAS LDC)	-0.53	-0.37	-0.37	-0.37	-0.30	-0.14	-0.45	-0.30
R4(ON BIAS LDC)	-0.45	-0.53	-0.45	-0.60	-0.53	-0.53	-0.68	-0.37
R5(ON BIAS LDC)	-0.53	-0.45	-0.45	-0.30	-0.53	-0.37	-0.45	-0.30
R6(ON BIAS LDC)	-0.68	-0.53	-0.53	-0.53	-0.53	-0.45	-0.45	-0.37
R7(ON BIAS LDC)	-0.53	-0.53	-0.45	-0.30	-0.53	-0.37	-0.53	-0.45
R8(ON BIAS LDC)	-0.45	-0.37	-0.60	-0.45	-0.83	-0.60	-0.37	-0.22
R9(ON BIAS LDC)	-0.45	-0.53	-0.22	-0.45	-0.53	-0.60	-0.37	-0.53
R10(ON BIAS LDC)	-0.53	-0.60	-0.45	-0.37	-0.37	-0.53	-0.45	-0.22
R11(ON BIAS LDC)	-0.37	-0.37	-0.37	-0.30	-0.45	-0.68	-0.45	-0.14
Irradiated, ON biased LDC parts statistics								
Min Value	-0.68	-0.60	-0.60	-0.60	-0.83	-0.68	-0.68	-0.53
Max Value	-0.30	-0.37	-0.22	-0.30	-0.30	-0.14	-0.37	-0.14
Average	-0.48	-0.47	-0.43	-0.41	-0.50	-0.46	-0.47	-0.32
Sigma	0.10	0.08	0.10	0.10	0.15	0.16	0.09	0.12

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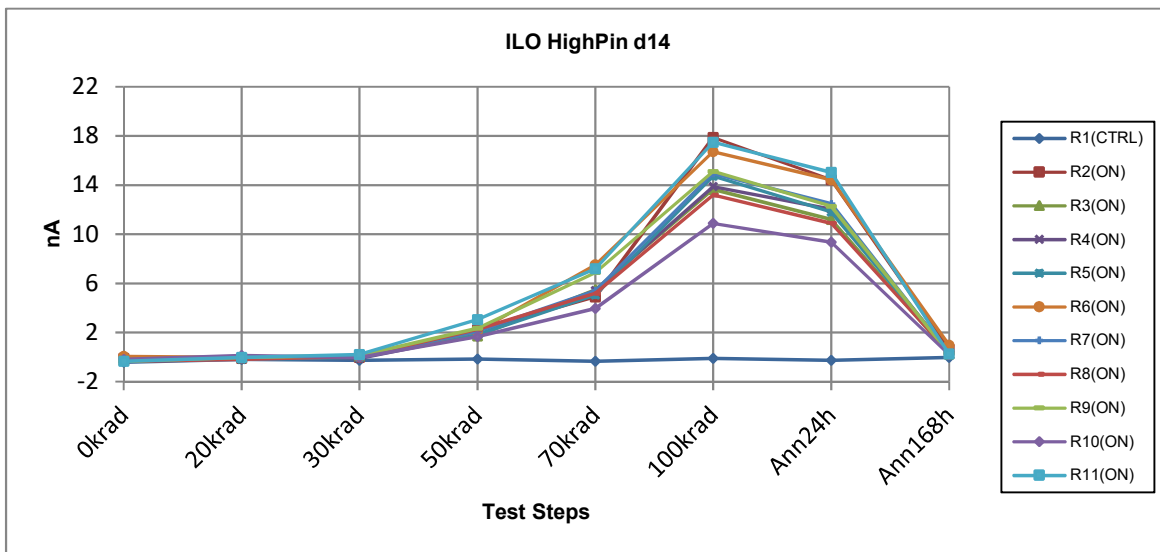
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ILO HighPin d15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.08	0.15	-0.23	-0.06	0.00	-0.31	-0.08	0.15
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.08	-0.08	0.30	1.60	3.29	11.55	9.48	0.84
R3(ON BIAS LDC)	0.00	0.15	0.30	2.52	7.27	19.89	16.68	0.38
R4(ON BIAS LDC)	-0.23	0.00	0.46	2.29	6.96	15.30	13.31	0.53
R5(ON BIAS LDC)	0.07	0.07	0.30	1.83	4.89	11.47	10.25	0.23
R6(ON BIAS LDC)	0.00	0.07	0.30	2.67	7.42	19.13	16.37	1.45
R7(ON BIAS LDC)	-0.23	0.00	0.30	2.22	5.51	14.69	12.24	0.38
R8(ON BIAS LDC)	0.15	0.07	0.38	2.37	5.05	14.30	12.47	0.23
R9(ON BIAS LDC)	-0.08	-0.23	0.38	2.29	5.89	14.69	12.54	0.53
R10(ON BIAS LDC)	0.00	0.00	0.15	1.83	5.20	14.53	12.16	0.30
R11(ON BIAS LDC)	-0.16	0.07	0.38	2.83	6.42	15.07	13.23	0.61
Irradiated, ON biased LDC parts statistics								
Min Value	-0.23	-0.23	0.15	1.60	3.29	11.47	9.48	0.23
Max Value	0.15	0.15	0.46	2.83	7.42	19.89	16.68	1.45
Average	-0.06	0.01	0.33	2.25	5.79	15.06	12.87	0.55
Sigma	0.12	0.11	0.08	0.39	1.28	2.71	2.28	0.37

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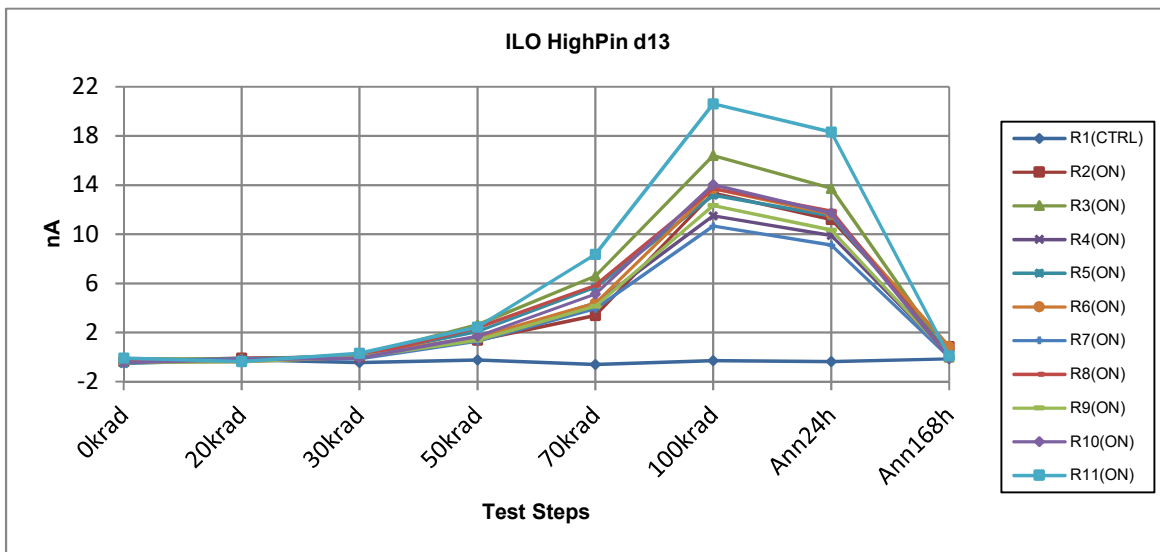
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ILO HighPin d14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.42	-0.19	-0.26	-0.15	-0.34	-0.11	-0.26	-0.03
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.11	-0.11	-0.03	2.20	4.89	17.87	14.42	0.66
R3(ON BIAS LDC)	-0.26	-0.03	0.04	1.73	5.50	13.65	11.19	0.27
R4(ON BIAS LDC)	-0.11	-0.03	-0.11	1.81	5.42	13.88	12.03	0.35
R5(ON BIAS LDC)	-0.11	-0.19	-0.03	1.81	5.04	14.72	11.80	0.35
R6(ON BIAS LDC)	0.04	-0.03	0.04	2.12	7.50	16.72	14.42	0.97
R7(ON BIAS LDC)	-0.26	-0.19	0.04	2.12	5.42	14.95	12.49	0.20
R8(ON BIAS LDC)	-0.34	-0.19	0.04	2.27	5.19	13.19	10.88	0.35
R9(ON BIAS LDC)	-0.34	-0.03	0.12	2.35	6.88	15.11	12.26	0.27
R10(ON BIAS LDC)	-0.19	0.12	-0.03	1.66	3.96	10.88	9.34	0.20
R11(ON BIAS LDC)	-0.34	-0.03	0.20	3.04	7.19	17.49	15.03	0.27
Irradiated, ON biased LDC parts statistics								
Min Value	-0.34	-0.19	-0.11	1.66	3.96	10.88	9.34	0.20
Max Value	0.04	0.12	0.20	3.04	7.50	17.87	15.03	0.97
Average	-0.20	-0.07	0.03	2.11	5.70	14.85	12.39	0.39
Sigma	0.13	0.10	0.09	0.41	1.13	2.12	1.79	0.24

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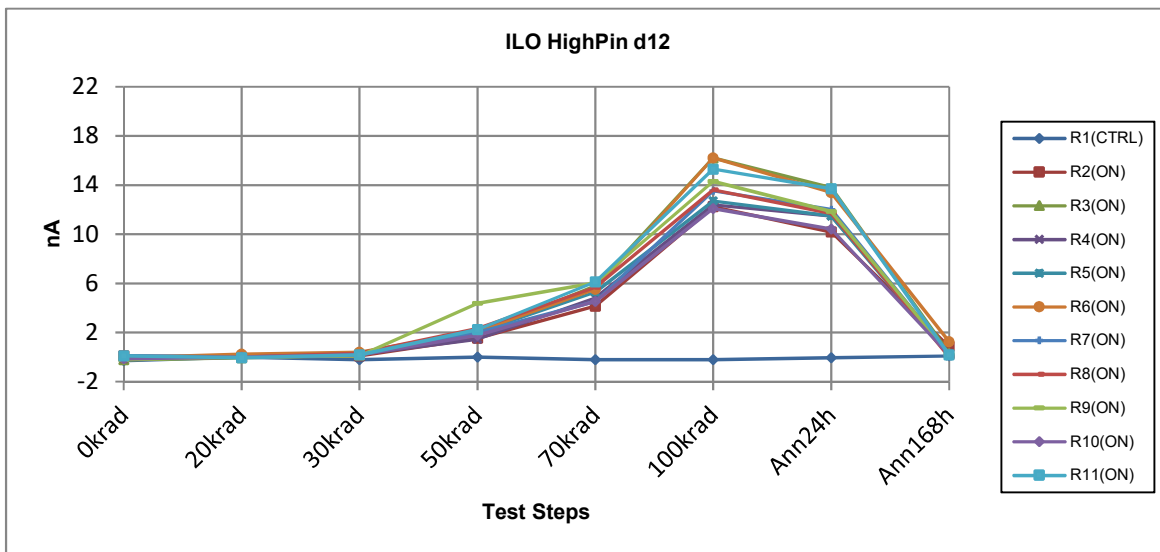
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ILO HighPin d13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.14	-0.22	-0.45	-0.23	-0.60	-0.29	-0.37	-0.14
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.37	-0.07	0.01	1.39	3.38	13.34	11.19	0.85
R3(ON BIAS LDC)	-0.14	-0.14	0.09	2.62	6.60	16.40	13.72	0.01
R4(ON BIAS LDC)	-0.45	-0.22	-0.07	1.47	4.38	11.50	9.89	0.16
R5(ON BIAS LDC)	-0.52	-0.22	0.16	2.08	5.68	13.18	11.50	0.24
R6(ON BIAS LDC)	-0.29	-0.29	0.16	1.62	4.38	13.72	11.65	0.85
R7(ON BIAS LDC)	-0.37	-0.14	-0.14	1.31	3.92	10.66	9.13	0.01
R8(ON BIAS LDC)	-0.37	-0.37	0.01	2.39	5.83	13.72	11.88	0.01
R9(ON BIAS LDC)	-0.45	-0.37	0.01	1.39	4.15	12.34	10.35	0.09
R10(ON BIAS LDC)	-0.45	-0.22	-0.07	1.70	5.14	14.03	11.73	-0.07
R11(ON BIAS LDC)	-0.07	-0.37	0.32	2.46	8.36	20.61	18.32	0.09
Irradiated, ON biased LDC parts statistics								
Min Value	-0.52	-0.37	-0.14	1.31	3.38	10.66	9.13	-0.07
Max Value	-0.07	-0.07	0.32	2.62	8.36	20.61	18.32	0.85
Average	-0.35	-0.24	0.05	1.84	5.18	13.95	11.94	0.22
Sigma	0.14	0.11	0.14	0.50	1.49	2.81	2.57	0.34

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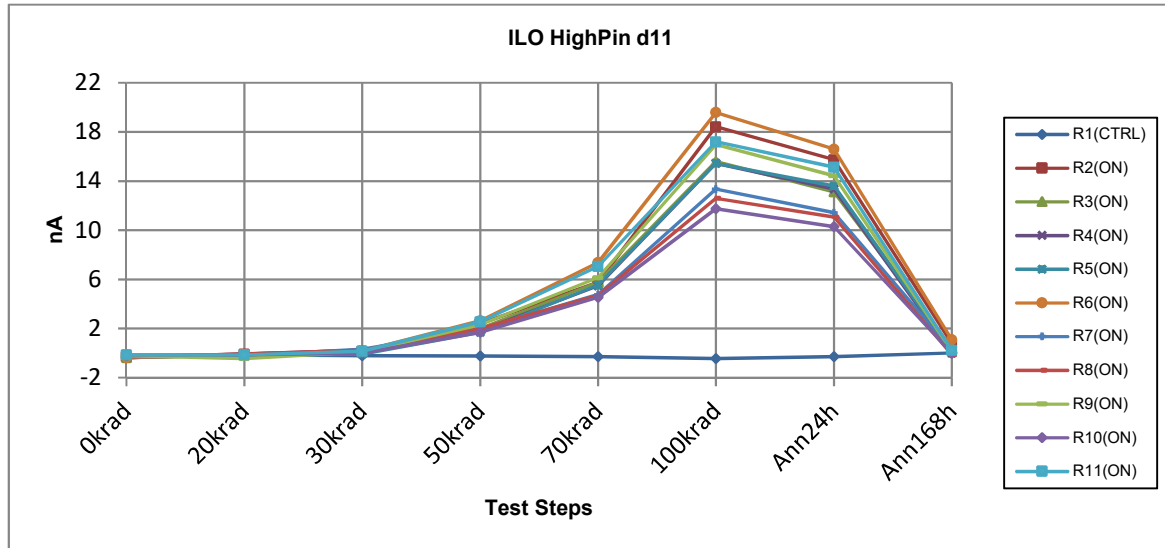
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ILO HighPin d12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.29	0.01	-0.21	0.01	-0.21	-0.21	-0.06	0.09
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0.09	0.01	0.09	1.54	4.14	12.24	10.18	0.86
R3(ON BIAS LDC)	-0.21	-0.06	0.17	1.92	5.82	16.21	13.77	0.32
R4(ON BIAS LDC)	-0.14	0.01	0.24	1.47	4.83	12.39	11.48	0.32
R5(ON BIAS LDC)	0.01	0.09	0.32	2.00	5.29	12.70	11.48	0.09
R6(ON BIAS LDC)	-0.06	0.24	0.40	2.08	5.52	16.21	13.39	1.24
R7(ON BIAS LDC)	0.09	0.01	0.24	2.00	4.52	13.54	12.01	0.17
R8(ON BIAS LDC)	-0.06	0.01	0.32	2.31	5.67	13.62	11.70	0.01
R9(ON BIAS LDC)	-0.21	0.01	0.09	4.37	6.05	14.30	11.86	0.24
R10(ON BIAS LDC)	-0.14	0.01	0.17	1.77	4.52	12.09	10.41	0.17
R11(ON BIAS LDC)	0.09	-0.06	0.17	2.23	6.13	15.30	13.69	0.17
Irradiated, ON biased LDC parts statistics								
Min Value	-0.21	-0.06	0.09	1.47	4.14	12.09	10.18	0.01
Max Value	0.09	0.24	0.40	4.37	6.13	16.21	13.77	1.24
Average	-0.05	0.03	0.22	2.17	5.25	13.86	12.00	0.36
Sigma	0.12	0.09	0.10	0.82	0.70	1.59	1.27	0.39

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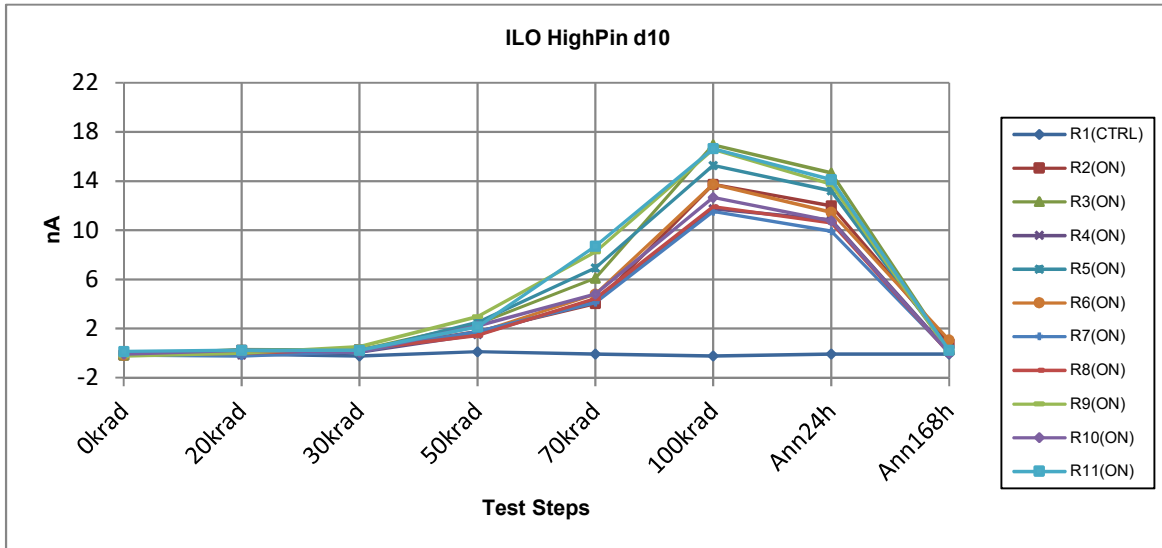
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ILO HighPin d11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.22	-0.24	-0.30	-0.45	-0.30	0.01
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.30	-0.07	0.16	2.39	5.77	18.43	15.74	0.78
R3(ON BIAS LDC)	-0.37	-0.14	0.09	2.01	5.77	15.59	13.13	0.39
R4(ON BIAS LDC)	-0.37	-0.07	0.24	1.85	5.46	15.44	13.36	0.01
R5(ON BIAS LDC)	-0.30	-0.22	-0.07	1.70	5.54	15.44	13.59	0.09
R6(ON BIAS LDC)	-0.37	-0.14	0.16	2.62	7.38	19.58	16.59	1.08
R7(ON BIAS LDC)	-0.30	-0.22	0.32	1.93	4.77	13.36	11.44	0.24
R8(ON BIAS LDC)	-0.30	-0.07	0.24	2.01	4.69	12.60	11.06	-0.14
R9(ON BIAS LDC)	-0.22	-0.45	0.09	2.31	6.15	16.97	14.44	0.16
R10(ON BIAS LDC)	-0.14	-0.14	0.01	1.70	4.54	11.75	10.29	0.01
R11(ON BIAS LDC)	-0.14	-0.14	0.16	2.54	7.07	17.20	15.13	0.24
Irradiated, ON biased LDC parts statistics								
Min Value	-0.37	-0.45	-0.07	1.70	4.54	11.75	10.29	-0.14
Max Value	-0.14	-0.07	0.32	2.62	7.38	19.58	16.59	1.08
Average	-0.28	-0.17	0.14	2.11	5.71	15.64	13.48	0.29
Sigma	0.09	0.11	0.12	0.34	0.96	2.52	2.08	0.38

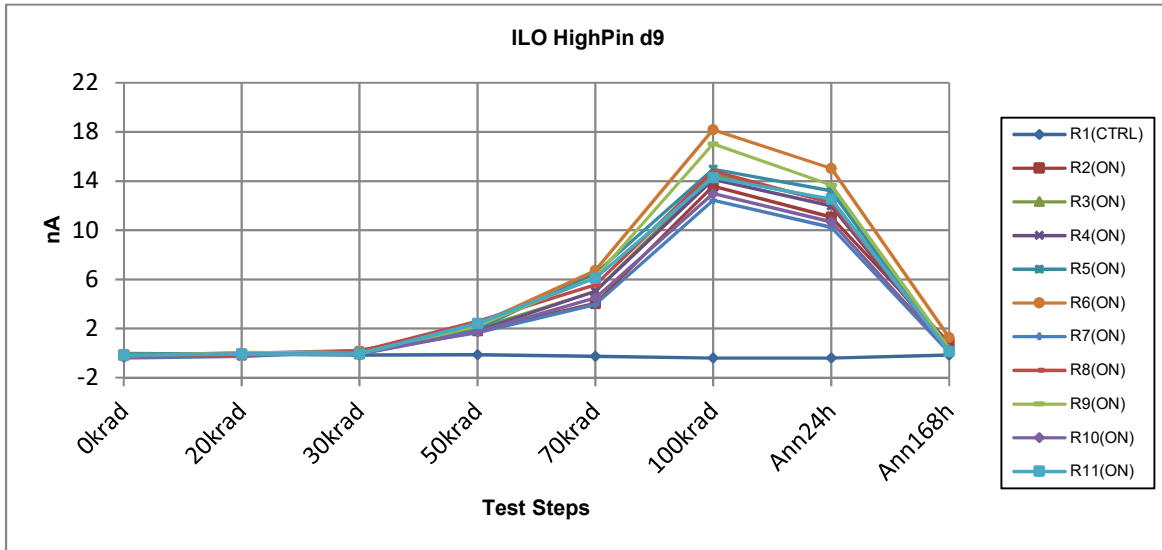
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ILO HighPin d10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.16	-0.09	-0.24	0.11	-0.09	-0.24	-0.09	-0.09
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.16	0.22	0.29	1.75	4.04	13.74	11.98	0.75
R3(ON BIAS LDC)	-0.16	0.29	0.22	2.36	6.10	16.95	14.66	0.22
R4(ON BIAS LDC)	-0.09	-0.16	0.07	1.52	4.34	11.75	10.84	0.07
R5(ON BIAS LDC)	-0.01	-0.01	0.07	2.51	6.94	15.27	13.21	0.29
R6(ON BIAS LDC)	-0.16	0.14	0.22	1.67	4.80	13.74	11.45	1.06
R7(ON BIAS LDC)	-0.16	-0.24	0.14	1.75	4.11	11.52	9.92	0.07
R8(ON BIAS LDC)	-0.16	-0.01	0.29	1.44	4.42	11.91	10.61	-0.01
R9(ON BIAS LDC)	-0.24	-0.01	0.52	2.97	8.24	16.57	13.74	0.14
R10(ON BIAS LDC)	-0.09	0.22	0.07	2.20	4.80	12.67	10.76	-0.01
R11(ON BIAS LDC)	0.14	0.22	0.22	2.13	8.70	16.64	14.12	0.22
Irradiated, ON biased LDC parts statistics								
Min Value	-0.24	-0.24	0.07	1.44	4.04	11.52	9.92	-0.01
Max Value	0.14	0.29	0.52	2.97	8.70	16.95	14.66	1.06
Average	-0.11	0.07	0.21	2.03	5.65	14.08	12.13	0.28
Sigma	0.11	0.18	0.14	0.49	1.75	2.14	1.68	0.35

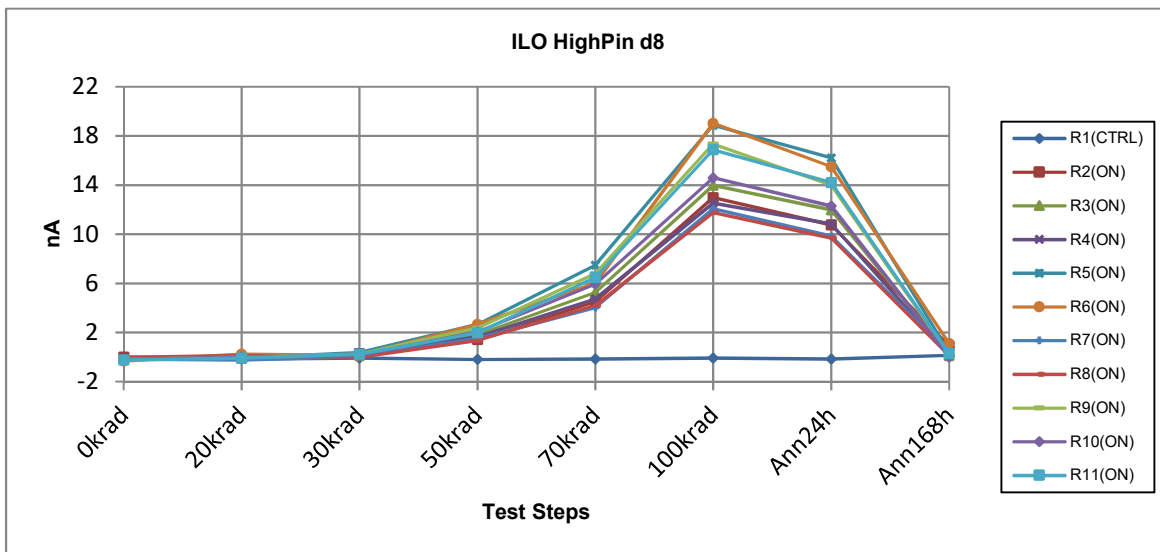
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ILO HighPin d9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.32	-0.09	-0.17	-0.14	-0.25	-0.40	-0.40	-0.17
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.17	-0.09	-0.02	1.82	4.04	13.59	11.07	0.82
R3(ON BIAS LDC)	-0.02	-0.09	0.14	1.97	5.03	14.51	12.37	0.29
R4(ON BIAS LDC)	-0.25	-0.25	0.21	1.82	5.03	14.13	11.99	0.21
R5(ON BIAS LDC)	-0.09	-0.02	0.21	1.97	6.48	14.97	13.21	0.14
R6(ON BIAS LDC)	-0.25	-0.02	0.14	2.35	6.71	18.18	15.04	1.28
R7(ON BIAS LDC)	-0.40	-0.25	0.14	1.67	3.96	12.44	10.23	0.06
R8(ON BIAS LDC)	-0.32	-0.17	0.14	2.58	5.56	14.81	12.21	0.29
R9(ON BIAS LDC)	-0.25	0.06	-0.02	2.20	6.18	17.03	13.67	0.37
R10(ON BIAS LDC)	-0.17	-0.09	-0.09	1.74	4.49	12.98	10.69	0.21
R11(ON BIAS LDC)	-0.17	-0.09	-0.09	2.43	6.10	14.28	12.52	0.14
Irradiated, ON biased LDC parts statistics								
Min Value	-0.40	-0.25	-0.09	1.67	3.96	12.44	10.23	0.06
Max Value	-0.02	0.06	0.21	2.58	6.71	18.18	15.04	1.28
Average	-0.21	-0.10	0.08	2.06	5.36	14.69	12.30	0.38
Sigma	0.11	0.10	0.12	0.32	1.00	1.75	1.44	0.38

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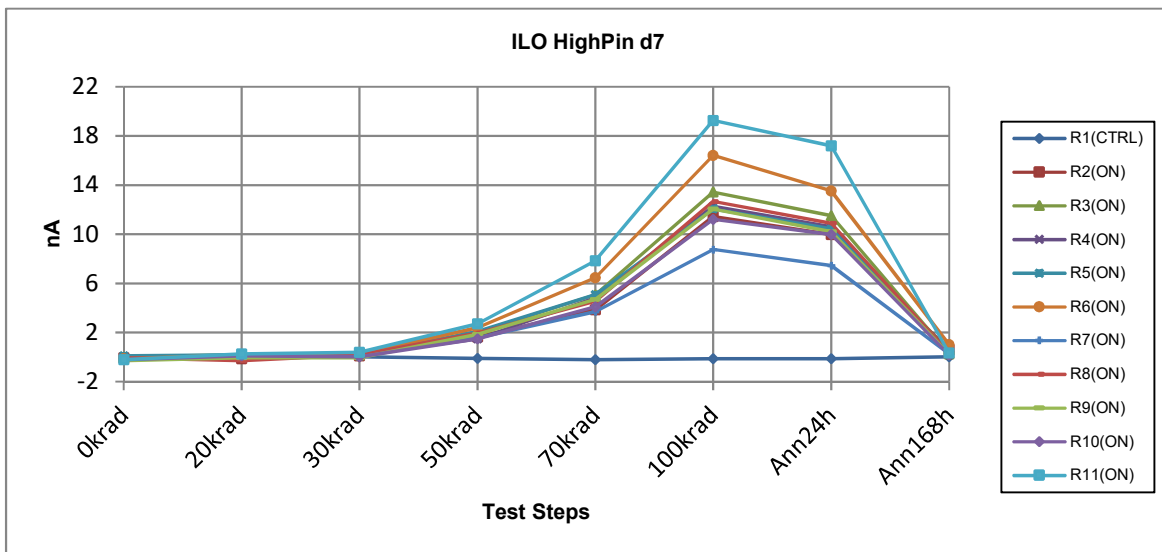
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ILO HighPin d8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.17	-0.17	-0.09	-0.19	-0.17	-0.09	-0.17	0.14
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.01	-0.09	0.29	1.44	4.50	12.98	10.77	0.90
R3(ON BIAS LDC)	-0.17	-0.01	0.14	1.82	5.26	13.98	11.99	0.14
R4(ON BIAS LDC)	-0.09	-0.17	0.29	1.67	4.73	12.53	10.84	0.14
R5(ON BIAS LDC)	-0.17	-0.09	0.37	2.66	7.48	18.87	16.20	0.37
R6(ON BIAS LDC)	-0.32	0.22	0.14	2.66	6.03	19.02	15.51	1.13
R7(ON BIAS LDC)	-0.17	-0.24	0.06	1.52	4.04	12.07	9.85	0.37
R8(ON BIAS LDC)	-0.01	0.14	-0.01	1.36	4.19	11.76	9.70	0.14
R9(ON BIAS LDC)	-0.17	-0.01	0.22	2.36	6.79	17.34	13.98	0.22
R10(ON BIAS LDC)	-0.17	-0.01	0.14	2.05	5.95	14.59	12.30	-0.01
R11(ON BIAS LDC)	-0.24	-0.09	0.22	1.97	6.49	16.88	14.21	0.29
Irradiated, ON biased LDC parts statistics								
Min Value	-0.32	-0.24	-0.01	1.36	4.04	11.76	9.70	-0.01
Max Value	-0.01	0.22	0.37	2.66	7.48	19.02	16.20	1.13
Average	-0.15	-0.04	0.19	1.95	5.55	15.00	12.54	0.37
Sigma	0.10	0.14	0.11	0.48	1.18	2.80	2.33	0.36

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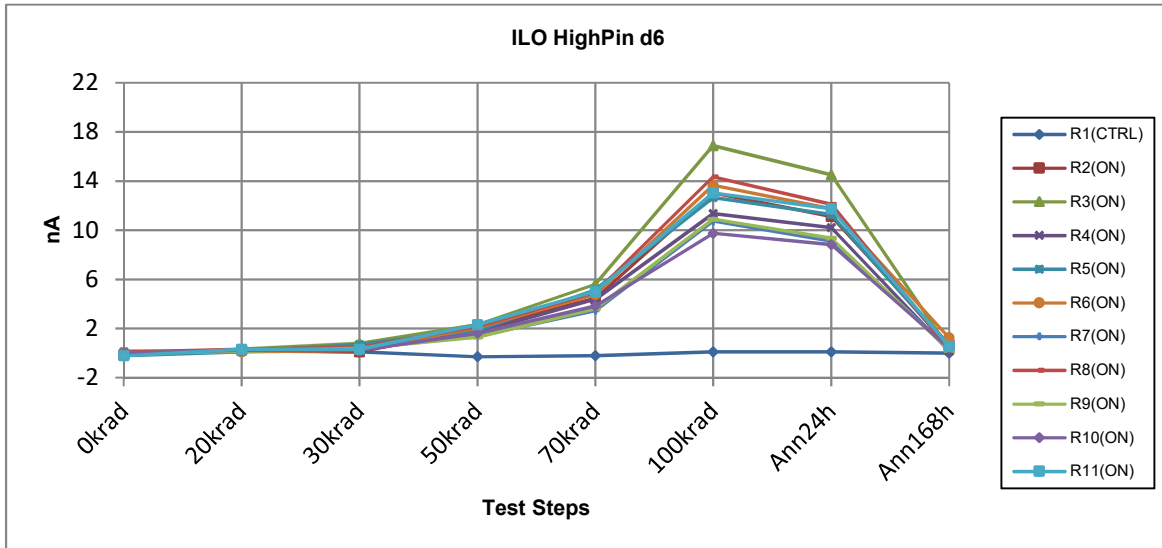
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ILO HighPin d7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.13	-0.06	0.02	-0.10	-0.21	-0.13	-0.13	0.02
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.06	-0.13	0.10	1.63	3.85	11.44	9.98	0.63
R3(ON BIAS LDC)	0.02	0.17	0.25	2.01	5.08	13.43	11.52	0.25
R4(ON BIAS LDC)	-0.21	0.02	0.17	1.48	4.85	12.28	10.60	0.17
R5(ON BIAS LDC)	0.10	0.17	0.10	2.09	5.08	12.05	10.44	0.25
R6(ON BIAS LDC)	-0.13	0.17	0.25	2.40	6.46	16.42	13.51	1.02
R7(ON BIAS LDC)	-0.13	-0.13	0.10	1.55	3.70	8.76	7.45	0.25
R8(ON BIAS LDC)	-0.06	-0.29	0.17	1.94	4.54	12.67	10.90	0.33
R9(ON BIAS LDC)	-0.29	-0.06	-0.06	1.86	4.70	12.05	10.21	0.25
R10(ON BIAS LDC)	-0.21	0.10	0.02	1.48	4.08	11.21	9.98	0.17
R11(ON BIAS LDC)	-0.21	0.25	0.40	2.70	7.84	19.26	17.19	0.33
Irradiated, ON biased LDC parts statistics								
Min Value	-0.29	-0.29	-0.06	1.48	3.70	8.76	7.45	0.17
Max Value	0.10	0.25	0.40	2.70	7.84	19.26	17.19	1.02
Average	-0.12	0.03	0.15	1.91	5.02	12.96	11.18	0.37
Sigma	0.12	0.17	0.13	0.41	1.26	2.93	2.59	0.26

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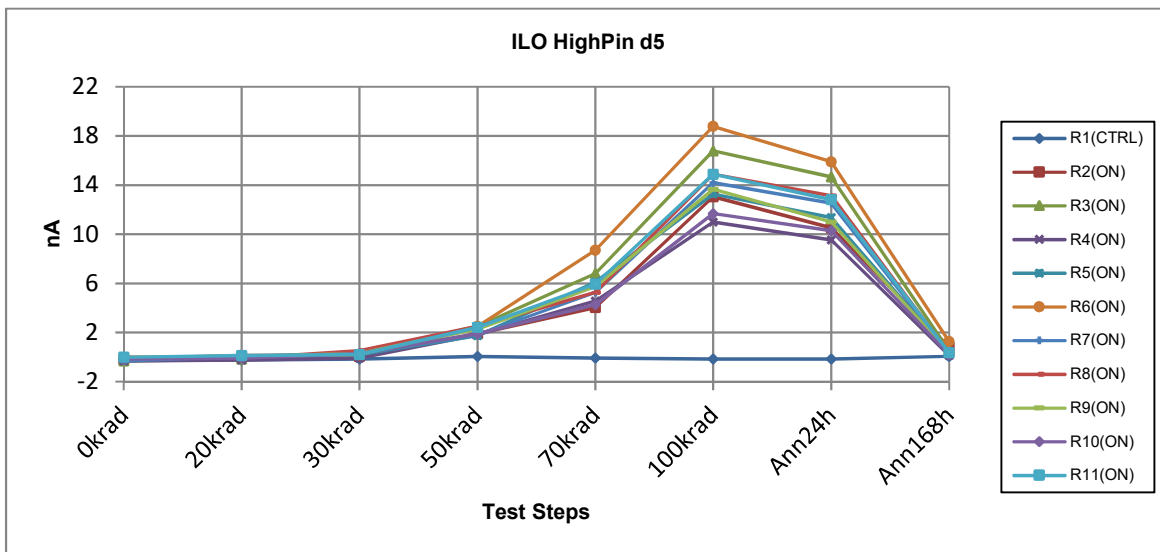
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ILO HighPin d6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.01	0.16	0.09	-0.30	-0.22	0.09	0.09	0.01
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.14	0.24	0.09	2.00	4.46	13.04	11.13	0.70
R3(ON BIAS LDC)	-0.14	0.32	0.78	2.31	5.61	16.88	14.50	0.39
R4(ON BIAS LDC)	0.09	0.16	0.24	1.70	4.38	11.36	10.21	0.16
R5(ON BIAS LDC)	-0.22	0.09	0.70	1.85	5.15	12.66	11.28	0.47
R6(ON BIAS LDC)	0.01	0.09	0.24	2.08	4.76	13.66	11.74	1.24
R7(ON BIAS LDC)	0.16	0.16	0.39	1.39	3.46	10.74	9.13	0.39
R8(ON BIAS LDC)	0.09	0.32	0.47	2.16	4.92	14.35	12.12	0.32
R9(ON BIAS LDC)	0.01	0.16	0.39	1.31	3.61	10.90	9.36	0.24
R10(ON BIAS LDC)	0.01	0.24	0.24	1.62	3.84	9.75	8.83	0.39
R11(ON BIAS LDC)	-0.22	0.32	0.32	2.31	4.99	13.04	11.74	0.55
Irradiated, ON biased LDC parts statistics								
Min Value	-0.22	0.09	0.09	1.31	3.46	9.75	8.83	0.16
Max Value	0.16	0.32	0.78	2.31	5.61	16.88	14.50	1.24
Average	-0.04	0.21	0.39	1.87	4.52	12.64	11.00	0.49
Sigma	0.14	0.09	0.22	0.36	0.70	2.08	1.71	0.31

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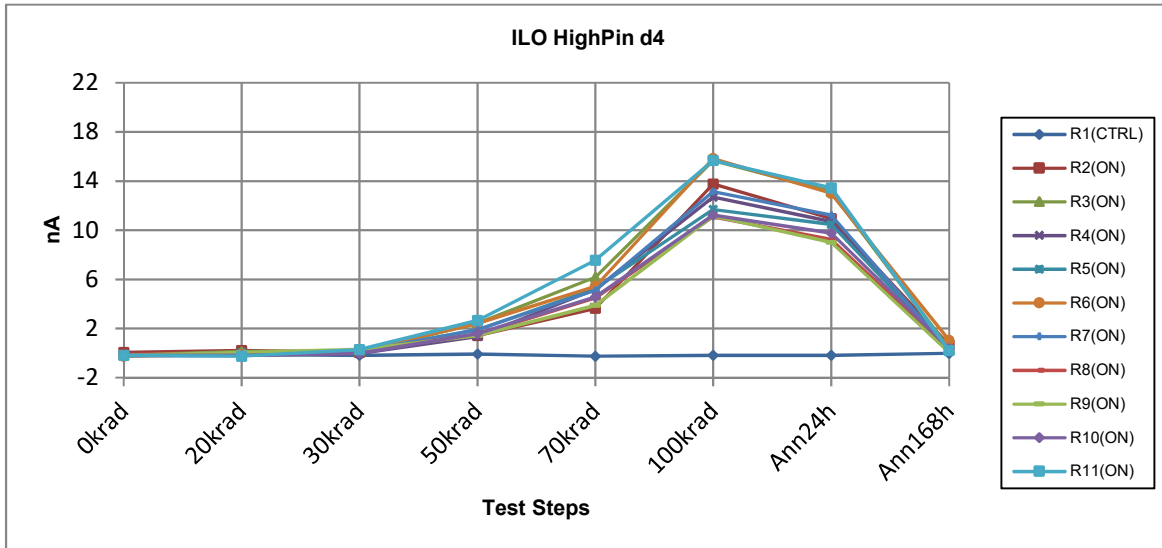
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ILO HighPin d5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.24	-0.24	-0.17	0.05	-0.09	-0.17	-0.17	0.06
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.17	-0.01	0.06	1.90	4.03	13.05	10.53	0.83
R3(ON BIAS LDC)	-0.32	-0.17	0.29	2.51	6.79	16.79	14.66	0.52
R4(ON BIAS LDC)	-0.32	-0.24	-0.09	1.82	4.57	10.99	9.54	0.14
R5(ON BIAS LDC)	-0.17	0.06	0.21	1.74	6.10	13.28	11.37	0.29
R6(ON BIAS LDC)	-0.09	0.14	0.21	2.51	8.70	18.78	15.88	1.28
R7(ON BIAS LDC)	-0.32	0.06	0.29	1.82	5.26	14.20	12.52	0.29
R8(ON BIAS LDC)	-0.01	-0.09	0.52	2.51	5.26	14.88	13.13	0.29
R9(ON BIAS LDC)	-0.01	0.06	0.29	2.28	5.72	13.66	10.99	0.37
R10(ON BIAS LDC)	-0.17	-0.09	0.29	1.90	4.26	11.68	10.30	0.21
R11(ON BIAS LDC)	-0.01	0.14	0.21	2.43	5.95	14.88	12.82	0.37
Irradiated, ON biased LDC parts statistics								
Min Value	-0.32	-0.24	-0.09	1.74	4.03	10.99	9.54	0.14
Max Value	-0.01	0.14	0.52	2.51	8.70	18.78	15.88	1.28
Average	-0.16	-0.01	0.23	2.14	5.66	14.22	12.17	0.46
Sigma	0.13	0.13	0.16	0.33	1.37	2.30	2.02	0.35

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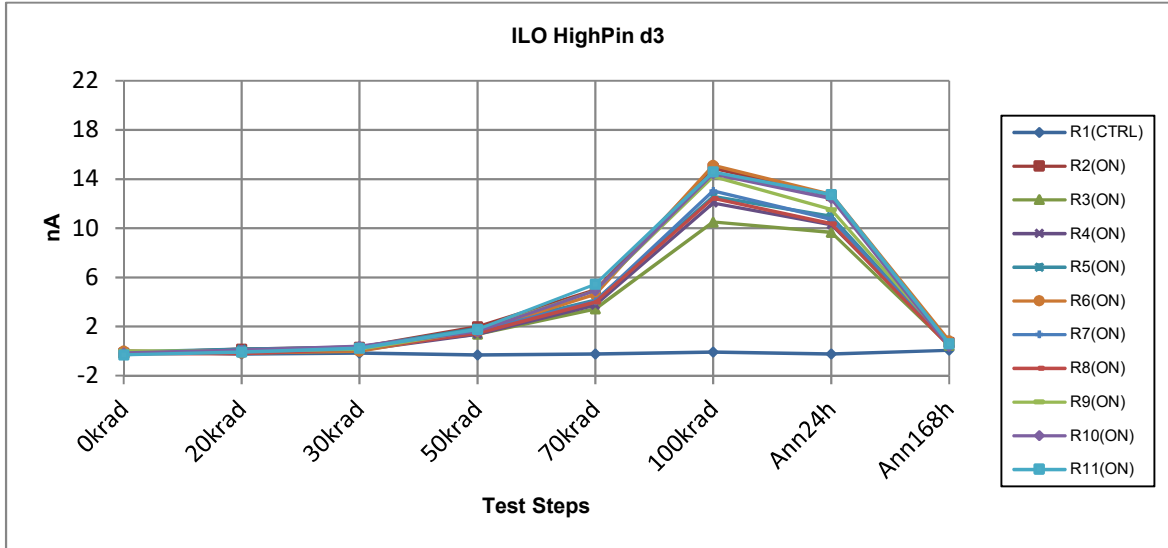
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ILO HighPin d4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.10	-0.10	-0.18	-0.08	-0.25	-0.18	-0.18	-0.02
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0.05	0.21	0.05	1.43	3.65	13.76	10.93	0.67
R3(ON BIAS LDC)	-0.18	0.13	0.13	2.43	6.18	15.67	13.15	0.36
R4(ON BIAS LDC)	-0.18	-0.18	-0.02	1.36	5.18	12.69	10.70	0.28
R5(ON BIAS LDC)	-0.25	0.05	0.13	1.89	5.26	11.69	10.47	0.36
R6(ON BIAS LDC)	-0.25	-0.10	0.21	2.43	5.41	15.83	12.99	1.05
R7(ON BIAS LDC)	-0.18	-0.18	0.13	1.89	5.11	13.15	11.23	0.21
R8(ON BIAS LDC)	-0.10	-0.02	0.21	1.51	4.49	11.08	9.24	0.28
R9(ON BIAS LDC)	-0.18	0.05	0.28	1.43	3.88	11.16	9.01	0.05
R10(ON BIAS LDC)	-0.18	-0.18	-0.02	1.59	4.57	11.23	9.78	0.36
R11(ON BIAS LDC)	-0.18	-0.25	0.28	2.66	7.56	15.67	13.45	0.21
Irradiated, ON biased LDC parts statistics								
Min Value	-0.25	-0.25	-0.02	1.36	3.65	11.08	9.01	0.05
Max Value	0.05	0.21	0.28	2.66	7.56	15.83	13.45	1.05
Average	-0.16	-0.05	0.14	1.86	5.13	13.19	11.10	0.38
Sigma	0.09	0.15	0.11	0.48	1.13	1.96	1.61	0.28

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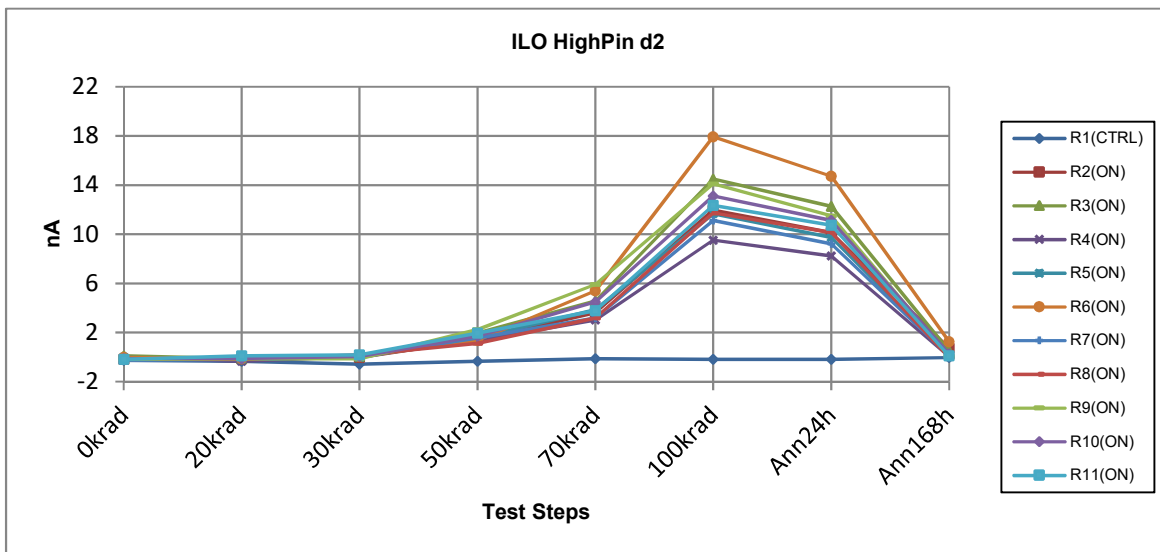
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ILO HighPin d3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.00	-0.23	-0.16	-0.31	-0.23	-0.08	-0.23	0.07
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.16	0.15	0.30	1.99	4.98	14.89	12.66	0.69
R3(ON BIAS LDC)	-0.16	0.07	0.30	1.38	3.45	10.51	9.67	0.46
R4(ON BIAS LDC)	-0.31	0.15	0.07	1.38	3.76	12.05	10.28	0.69
R5(ON BIAS LDC)	-0.08	0.15	0.30	1.84	4.14	12.58	10.97	0.53
R6(ON BIAS LDC)	0.00	-0.16	0.00	1.61	4.60	15.12	12.74	0.84
R7(ON BIAS LDC)	-0.16	-0.08	0.23	1.61	4.06	13.04	10.74	0.53
R8(ON BIAS LDC)	-0.23	-0.23	0.15	1.45	3.99	12.43	10.36	0.38
R9(ON BIAS LDC)	0.00	0.00	0.15	1.68	4.91	14.20	11.51	0.61
R10(ON BIAS LDC)	-0.16	0.07	0.38	1.61	4.91	14.43	12.43	0.38
R11(ON BIAS LDC)	-0.31	-0.08	0.23	1.76	5.45	14.58	12.74	0.61
Irradiated, ON biased LDC parts statistics								
Min Value	-0.31	-0.23	0.00	1.38	3.45	10.51	9.67	0.38
Max Value	0.00	0.15	0.38	1.99	5.45	15.12	12.74	0.84
Average	-0.16	0.00	0.21	1.63	4.43	13.38	11.41	0.57
Sigma	0.11	0.14	0.12	0.20	0.64	1.50	1.16	0.15

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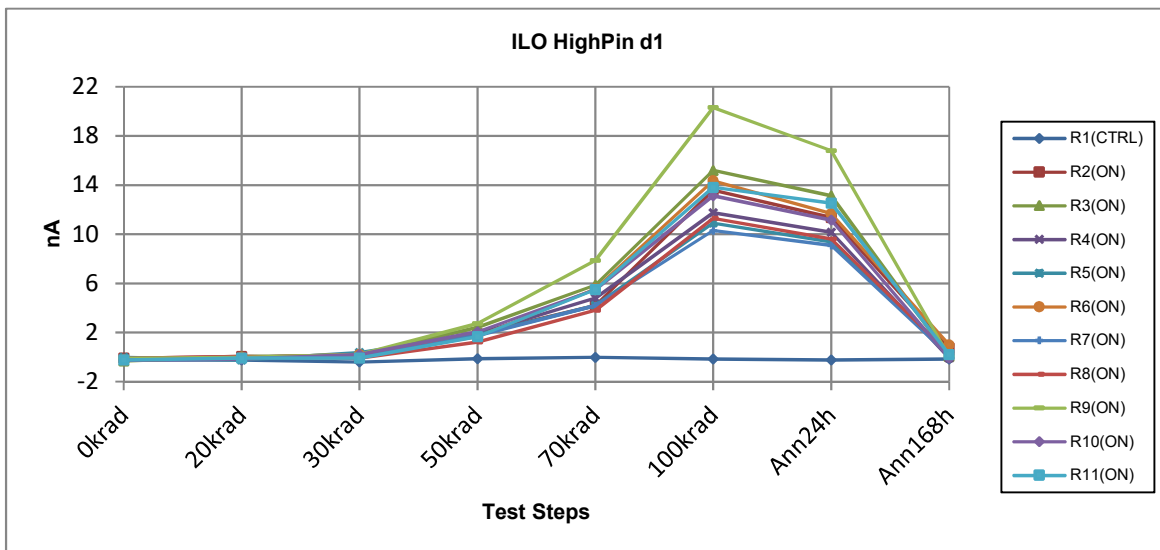
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ILO HighPin d2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.27	-0.35	-0.58	-0.34	-0.12	-0.19	-0.19	-0.04
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.19	-0.12	-0.04	1.41	3.63	11.96	10.13	0.72
R3(ON BIAS LDC)	0.11	-0.12	0.04	1.95	4.55	14.49	12.27	0.49
R4(ON BIAS LDC)	-0.04	-0.35	0.04	1.34	3.02	9.52	8.22	0.04
R5(ON BIAS LDC)	-0.04	-0.19	-0.04	1.56	3.86	11.66	9.75	0.11
R6(ON BIAS LDC)	-0.04	-0.12	0.04	1.34	5.39	17.93	14.72	1.26
R7(ON BIAS LDC)	-0.27	-0.19	0.04	1.56	3.17	11.12	9.21	0.11
R8(ON BIAS LDC)	-0.12	-0.19	0.19	1.11	3.17	11.73	10.13	-0.04
R9(ON BIAS LDC)	-0.19	-0.12	-0.12	2.25	5.92	14.10	11.50	0.04
R10(ON BIAS LDC)	-0.12	-0.12	0.04	1.72	4.47	13.11	11.12	0.26
R11(ON BIAS LDC)	-0.19	0.11	0.19	1.95	3.78	12.35	10.74	0.11
Irradiated, ON biased LDC parts statistics								
Min Value	-0.27	-0.35	-0.12	1.11	3.02	9.52	8.22	-0.04
Max Value	0.11	0.11	0.19	2.25	5.92	17.93	14.72	1.26
Average	-0.11	-0.14	0.04	1.62	4.10	12.80	10.78	0.31
Sigma	0.11	0.11	0.10	0.35	0.98	2.31	1.80	0.41

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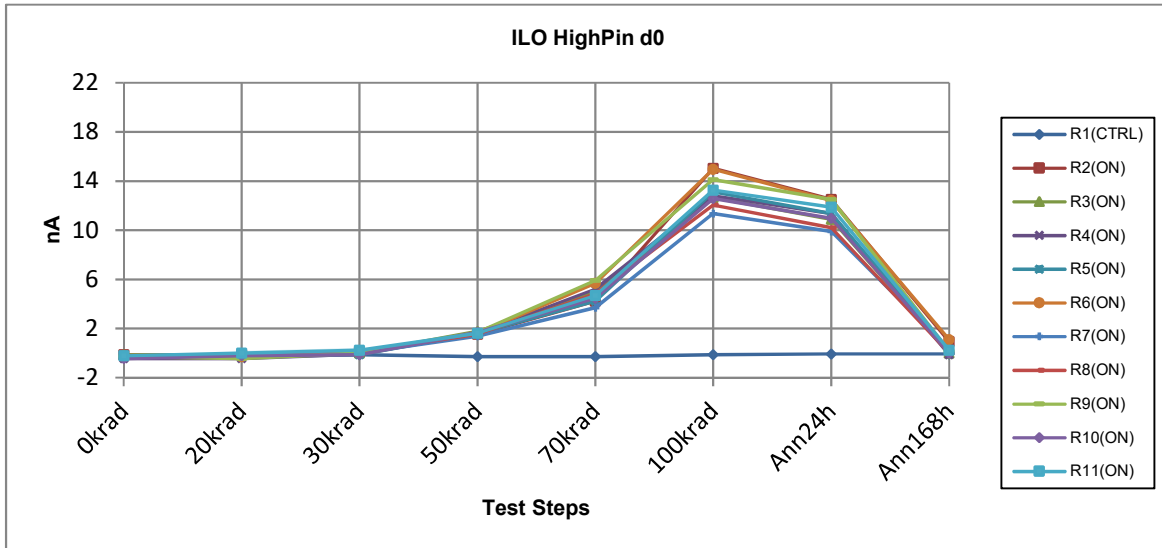
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ILO HighPin d1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.24	-0.24	-0.40	-0.14	-0.02	-0.17	-0.24	-0.17
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.09	0.06	-0.02	1.90	4.19	13.59	11.37	0.75
R3(ON BIAS LDC)	-0.32	0.06	0.14	2.43	5.87	15.19	13.13	0.06
R4(ON BIAS LDC)	-0.24	-0.02	0.21	1.90	4.80	11.75	10.15	-0.09
R5(ON BIAS LDC)	-0.02	-0.24	0.37	1.82	4.19	10.91	9.39	0.21
R6(ON BIAS LDC)	-0.24	-0.02	0.21	1.67	5.56	14.35	11.68	0.98
R7(ON BIAS LDC)	-0.24	-0.09	-0.02	1.74	4.19	10.30	9.08	0.14
R8(ON BIAS LDC)	-0.09	0.06	-0.09	1.21	3.81	11.30	9.61	0.29
R9(ON BIAS LDC)	-0.09	-0.02	0.21	2.74	7.86	20.31	16.80	0.06
R10(ON BIAS LDC)	-0.24	-0.17	0.21	2.05	5.49	13.13	11.14	-0.09
R11(ON BIAS LDC)	-0.24	-0.09	-0.09	1.67	5.49	13.82	12.52	0.21
Irradiated, ON biased LDC parts statistics								
Min Value	-0.32	-0.24	-0.09	1.21	3.81	10.30	9.08	-0.09
Max Value	-0.02	0.06	0.37	2.74	7.86	20.31	16.80	0.98
Average	-0.18	-0.05	0.11	1.91	5.15	13.47	11.49	0.25
Sigma	0.10	0.10	0.16	0.42	1.20	2.89	2.30	0.35

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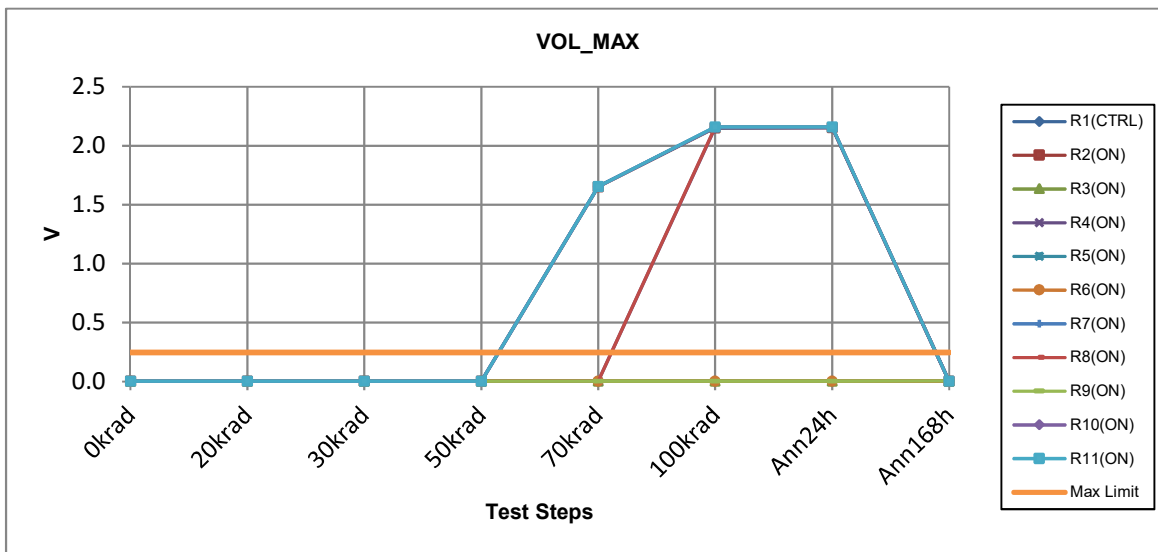
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ILO HighPin d0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.30	-0.14	-0.30	-0.30	-0.14	-0.07	-0.07
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	-0.14	-0.14	0.09	1.54	4.23	15.04	12.51	0.93
R3(ON BIAS LDC)	-0.14	-0.14	0.01	1.77	4.99	12.66	10.90	0.01
R4(ON BIAS LDC)	-0.45	-0.45	-0.07	1.62	5.22	12.81	11.36	-0.14
R5(ON BIAS LDC)	-0.30	-0.22	-0.14	1.62	4.23	13.12	11.36	0.16
R6(ON BIAS LDC)	-0.30	-0.30	0.01	1.62	5.68	14.96	12.43	1.08
R7(ON BIAS LDC)	-0.22	-0.14	0.01	1.39	3.69	11.36	9.90	0.32
R8(ON BIAS LDC)	-0.22	-0.30	0.09	1.54	4.84	12.05	10.21	0.01
R9(ON BIAS LDC)	-0.30	-0.45	0.01	1.70	5.91	14.12	12.51	0.16
R10(ON BIAS LDC)	-0.45	-0.22	-0.14	1.70	4.46	12.58	10.97	0.01
R11(ON BIAS LDC)	-0.22	0.01	0.24	1.62	4.69	13.27	11.89	0.24
Irradiated, ON biased LDC parts statistics								
Min Value	-0.45	-0.45	-0.14	1.39	3.69	11.36	9.90	-0.14
Max Value	-0.14	0.01	0.24	1.77	5.91	15.04	12.51	1.08
Average	-0.27	-0.24	0.01	1.61	4.79	13.20	11.40	0.28
Sigma	0.11	0.14	0.11	0.11	0.69	1.20	0.94	0.41

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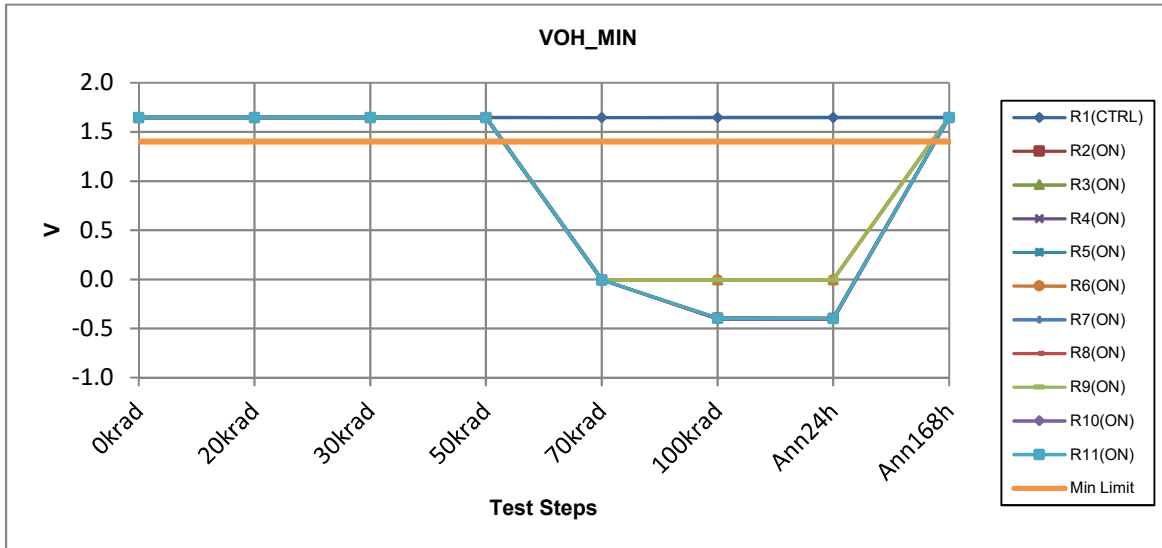
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VOL_MAX	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475
Unit	V	V	V	V	V	V	V	V
Control results								
R1(CTRL)	0.0048	0.0045	0.0047	0.0047	0.0047	0.0048	0.0048	0.0048
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0.0045	0.0045	0.0045	0.0047	1.6530	2.1516	2.1529	0.0048
R3(ON BIAS LDC)	0.0045	0.0045	0.0045	0.0045	0.0047	0.0048	0.0047	0.0048
R4(ON BIAS LDC)	0.0045	0.0045	0.0045	0.0045	0.0045	2.1523	2.1531	0.0048
R5(ON BIAS LDC)	0.0045	0.0045	0.0045	0.0045	1.6554	2.1551	2.1558	0.0050
R6(ON BIAS LDC)	0.0047	0.0047	0.0045	0.0047	0.0047	0.0050	0.0048	0.0050
R7(ON BIAS LDC)	0.0045	0.0047	0.0045	0.0045	1.6542	2.1558	2.1573	0.0048
R8(ON BIAS LDC)	0.0045	0.0047	0.0045	0.0047	0.0047	2.1580	2.1588	0.0050
R9(ON BIAS LDC)	0.0045	0.0047	0.0047	0.0045	0.0047	0.0050	0.0047	0.0051
R10(ON BIAS LDC)	0.0047	0.0045	0.0045	0.0047	1.6554	2.1579	2.1586	0.0048
R11(ON BIAS LDC)	0.0047	0.0045	0.0047	0.0045	1.6551	2.1595	2.1598	0.0048
Irradiated, ON biased LDC parts statistics								
Min Value	0.0045	0.0045	0.0045	0.0045	0.0045	0.0048	0.0047	0.0048
Max Value	0.0047	0.0047	0.0047	0.0047	1.6554	2.1595	2.1598	0.0051
Average	0.0046	0.0046	0.0046	0.0046	0.8296	1.5105	1.5110	0.0049
Sigma	0.0001	0.0001	0.0001	0.0001	0.8696	1.0389	1.0394	0.0001

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VOH_MIN	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025
Max Limit	--	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V	V
Control results								
R1(CTRL)	1.6459	1.6460	1.6460	1.6460	1.6459	1.6460	1.6462	1.6462
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	1.6463	1.6456	1.6457	1.6457	-0.0051	-0.3916	-0.3939	1.6457
R3(ON BIAS LDC)	1.6459	1.6459	1.6458	1.6456	-0.0052	-0.0051	-0.0051	1.6459
R4(ON BIAS LDC)	1.6460	1.6456	1.6456	1.6459	-0.0052	-0.4030	-0.4048	1.6459
R5(ON BIAS LDC)	1.6460	1.6456	1.6460	1.6459	-0.0048	-0.4009	-0.4023	1.6461
R6(ON BIAS LDC)	1.6459	1.6461	1.6460	1.6460	-0.0051	-0.0051	-0.0051	1.6460
R7(ON BIAS LDC)	1.6460	1.6456	1.6457	1.6456	-0.0051	-0.4019	-0.4037	1.6457
R8(ON BIAS LDC)	1.6456	1.6457	1.6459	1.6456	-0.0051	-0.4024	-0.4045	1.6459
R9(ON BIAS LDC)	1.6457	1.6456	1.6456	1.6456	-0.0052	-0.0051	-0.0051	1.6459
R10(ON BIAS LDC)	1.6459	1.6459	1.6459	1.6459	-0.0052	-0.3975	-0.3995	1.6459
R11(ON BIAS LDC)	1.6459	1.6458	1.6456	1.6458	-0.0051	-0.3962	-0.3974	1.6457
Irradiated, ON biased LDC parts statistics								
Min Value	1.6456	1.6456	1.6456	1.6456	-0.0052	-0.4030	-0.4048	1.6457
Max Value	1.6463	1.6461	1.6460	1.6460	-0.0048	-0.0051	-0.0051	1.6461
Average	1.6459	1.6457	1.6458	1.6458	-0.0051	-0.2809	-0.2821	1.6459
Sigma	0.0002	0.0002	0.0002	0.0002	0.0001	0.1903	0.1912	0.0001

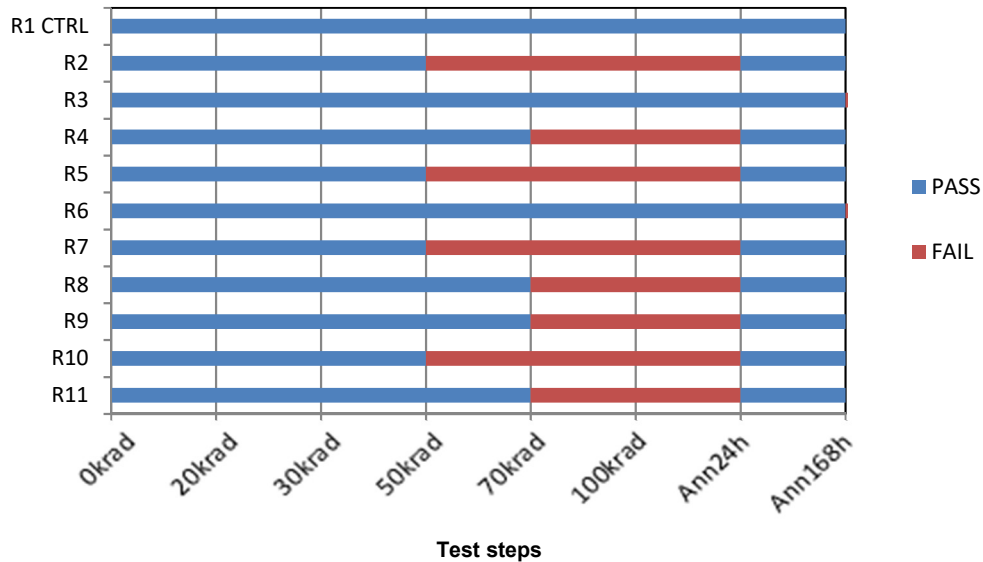
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Total Ionizing Dose Radiation Test PC28F00AM29EWHA D/C 1409		ALTER TECHNOLOGY	
		RL: 2017901237	Ref.: ATN-RR-464
MICRON U		Issue: 2	Date: 2018/10/10
		Page: 117 / 462	

VILmax fails



VILmax fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

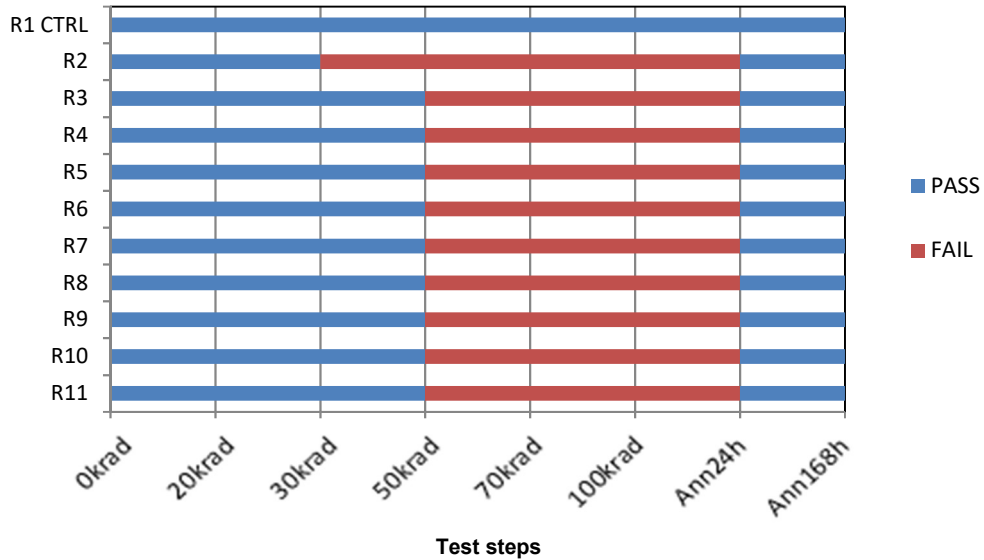
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Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
		RL:	2017901237
PC28F00AM29EWHA	MICRON U	Ref.:	ATN-RR-464
		Issue:	2
D/C 1409		Date:	2018/10/10
		Page:	118 / 462

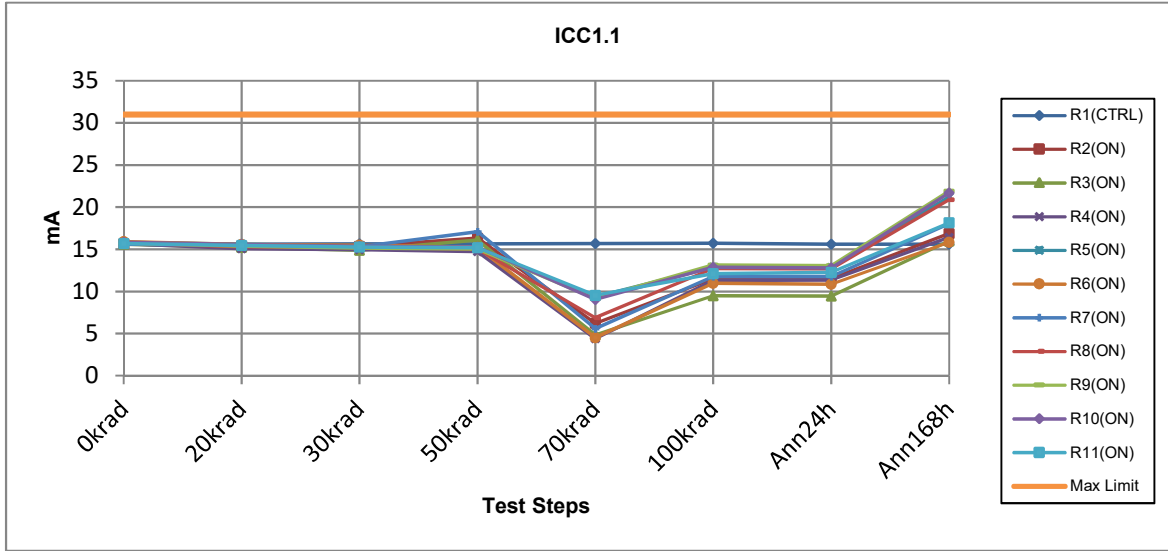
VIHmin fails



VIHmin fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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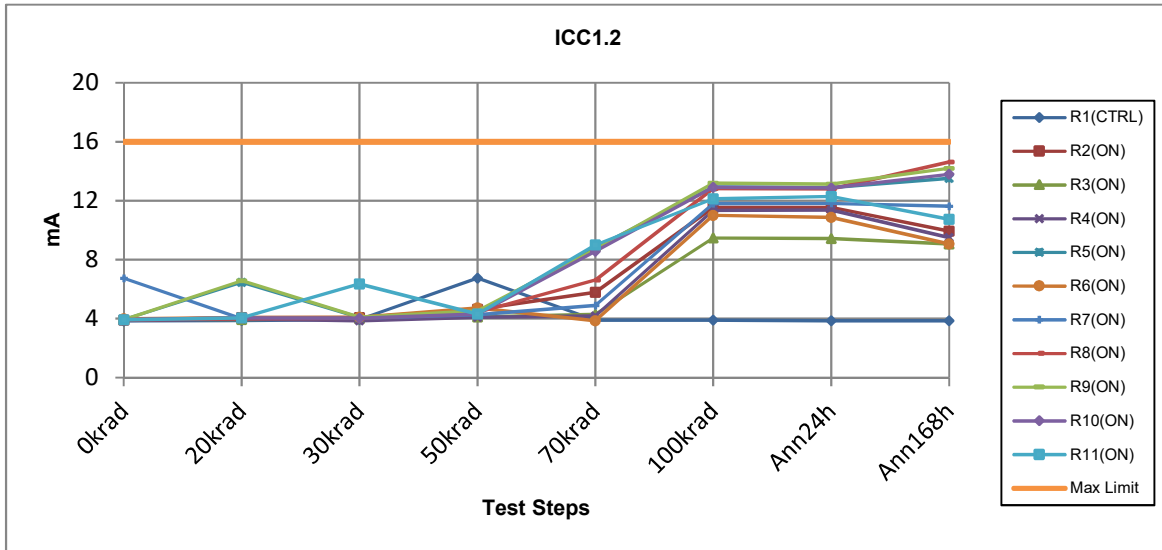
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ICC1.1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	31	31	31	31	31	31	31	31
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	15.60	15.61	15.63	15.64	15.67	15.71	15.62	15.61
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	15.64	15.38	15.35	16.32	6.20	11.50	11.55	16.87
R3(ON BIAS LDC)	15.61	15.24	14.90	16.09	4.84	9.48	9.46	15.98
R4(ON BIAS LDC)	15.70	15.08	14.96	14.71	4.39	11.29	11.34	16.41
R5(ON BIAS LDC)	15.83	15.60	15.34	15.16	9.36	12.89	12.82	21.22
R6(ON BIAS LDC)	15.90	15.58	15.50	15.22	4.52	10.96	10.86	15.84
R7(ON BIAS LDC)	15.61	15.46	15.31	17.07	5.59	11.77	11.75	18.03
R8(ON BIAS LDC)	15.74	15.30	15.21	15.03	6.88	12.73	12.69	20.88
R9(ON BIAS LDC)	15.75	15.37	15.17	15.05	9.15	13.12	13.05	21.92
R10(ON BIAS LDC)	15.84	15.56	15.36	15.27	9.05	12.86	12.80	21.68
R11(ON BIAS LDC)	15.69	15.46	15.27	15.17	9.54	12.11	12.25	18.14
Irradiated, ON biased LDC parts statistics								
Min Value	15.61	15.08	14.90	14.71	4.39	9.48	9.46	15.84
Max Value	15.90	15.60	15.50	17.07	9.54	13.12	13.05	21.92
Average	15.73	15.40	15.24	15.51	6.95	11.87	11.86	18.70
Sigma	0.10	0.16	0.18	0.74	2.14	1.12	1.12	2.48

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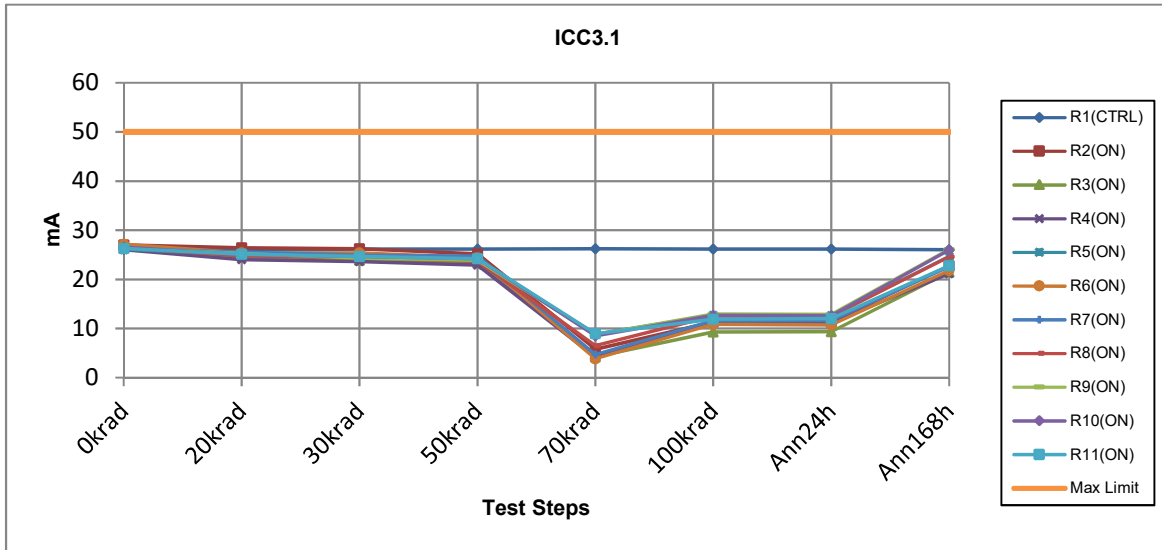
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ICC1.2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	16	16	16	16	16	16	16	16
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	3.84	3.87	3.94	6.76	3.91	3.90	3.85	3.85
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	3.90	4.07	4.08	4.64	5.79	11.54	11.55	9.94
R3(ON BIAS LDC)	3.96	3.94	4.01	4.11	4.29	9.47	9.45	9.06
R4(ON BIAS LDC)	3.88	3.99	3.86	4.10	4.18	11.34	11.37	9.51
R5(ON BIAS LDC)	3.94	6.46	4.08	4.42	8.81	12.94	12.90	13.52
R6(ON BIAS LDC)	3.99	4.08	4.09	4.72	3.86	11.01	10.87	9.08
R7(ON BIAS LDC)	6.76	4.00	4.03	4.27	4.90	11.79	11.82	11.62
R8(ON BIAS LDC)	3.91	3.99	4.03	4.41	6.61	12.82	12.81	14.63
R9(ON BIAS LDC)	3.93	6.56	4.10	4.54	8.71	13.19	13.12	14.20
R10(ON BIAS LDC)	3.95	4.05	4.03	4.31	8.58	12.91	12.87	13.79
R11(ON BIAS LDC)	3.92	4.05	6.36	4.32	9.00	12.14	12.29	10.74
Irradiated, ON biased LDC parts statistics								
Min Value	3.88	3.94	3.86	4.10	3.86	9.47	9.45	9.06
Max Value	6.76	6.56	6.36	4.72	9.00	13.19	13.12	14.63
Average	4.21	4.52	4.27	4.38	6.47	11.92	11.90	11.61
Sigma	0.89	1.05	0.74	0.21	2.14	1.15	1.15	2.24

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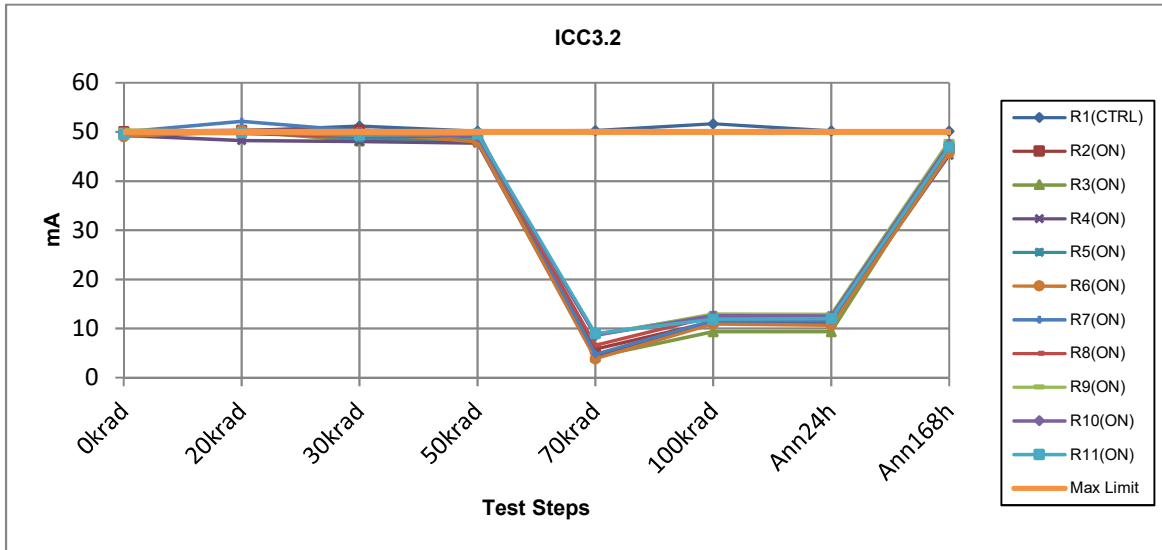
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ICC3.1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	50	50	50	50	50	50	50	50
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	26.1	26.0	26.2	26.2	26.2	26.2	26.2	26.0
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	27.0	26.4	26.3	25.2	5.8	11.3	11.3	22.8
R3(ON BIAS LDC)	26.4	24.7	23.9	23.4	4.2	9.3	9.4	21.5
R4(ON BIAS LDC)	26.0	24.0	23.6	22.9	4.2	11.2	11.2	21.1
R5(ON BIAS LDC)	26.1	25.0	24.4	24.1	8.8	12.7	12.6	24.7
R6(ON BIAS LDC)	27.1	25.4	25.4	24.4	3.8	10.9	10.7	21.8
R7(ON BIAS LDC)	26.3	25.5	25.0	24.7	4.7	11.6	11.6	22.6
R8(ON BIAS LDC)	26.4	24.8	24.4	23.7	6.5	12.5	12.5	24.6
R9(ON BIAS LDC)	26.4	25.3	24.3	23.9	8.7	12.9	12.9	26.1
R10(ON BIAS LDC)	26.6	25.0	24.7	24.2	8.5	12.7	12.6	26.0
R11(ON BIAS LDC)	26.3	25.1	24.7	24.2	9.0	11.9	12.0	22.8
Irradiated, ON biased LDC parts statistics								
Min Value	26.0	24.0	23.6	22.9	3.8	9.3	9.4	21.1
Max Value	27.1	26.4	26.3	25.2	9.0	12.9	12.9	26.1
Average	26.5	25.1	24.7	24.1	6.4	11.7	11.7	23.4
Sigma	0.3	0.6	0.8	0.7	2.2	1.1	1.1	1.8

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ICC3.2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	50	50	50	50	50	50	50	50
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	50.1	50.2	51.2	50.1	50.3	51.7	50.2	50.1
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	50.1	50.3	50.4	49.0	5.8	11.4	11.4	46.5
R3(ON BIAS LDC)	49.7	50.1	48.2	48.2	4.2	9.3	9.4	46.9
R4(ON BIAS LDC)	49.3	48.2	48.0	47.7	4.2	11.2	11.2	45.2
R5(ON BIAS LDC)	49.2	50.0	48.7	48.4	8.8	12.7	12.6	46.5
R6(ON BIAS LDC)	49.0	50.4	49.8	48.0	3.8	10.9	10.7	45.6
R7(ON BIAS LDC)	50.0	52.1	50.2	50.1	4.8	11.6	11.6	47.7
R8(ON BIAS LDC)	49.8	49.7	49.1	49.2	6.6	12.5	12.5	46.8
R9(ON BIAS LDC)	50.4	50.1	50.0	48.9	8.6	12.9	12.9	48.1
R10(ON BIAS LDC)	49.7	49.7	49.9	49.0	8.6	12.6	12.6	47.5
R11(ON BIAS LDC)	49.5	49.9	49.4	49.5	9.0	11.9	12.1	46.9
Irradiated, ON biased LDC parts statistics								
Min Value	49.0	48.2	48.0	47.7	3.8	9.3	9.4	45.2
Max Value	50.4	52.1	50.4	50.1	9.0	12.9	12.9	48.1
Average	49.7	50.1	49.4	48.8	6.4	11.7	11.7	46.8
Sigma	0.4	0.9	0.8	0.7	2.1	1.1	1.1	0.9

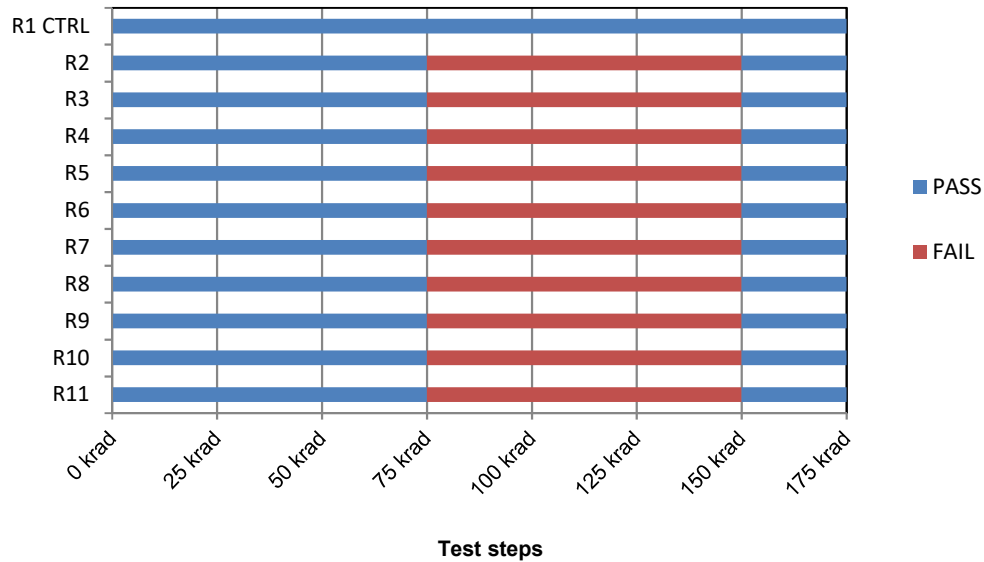
Note: The limit of this parameter must be considered as information only in accordance to Note 5 of TABLE I in test plan.



Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
D/C 1409	

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tCS fails



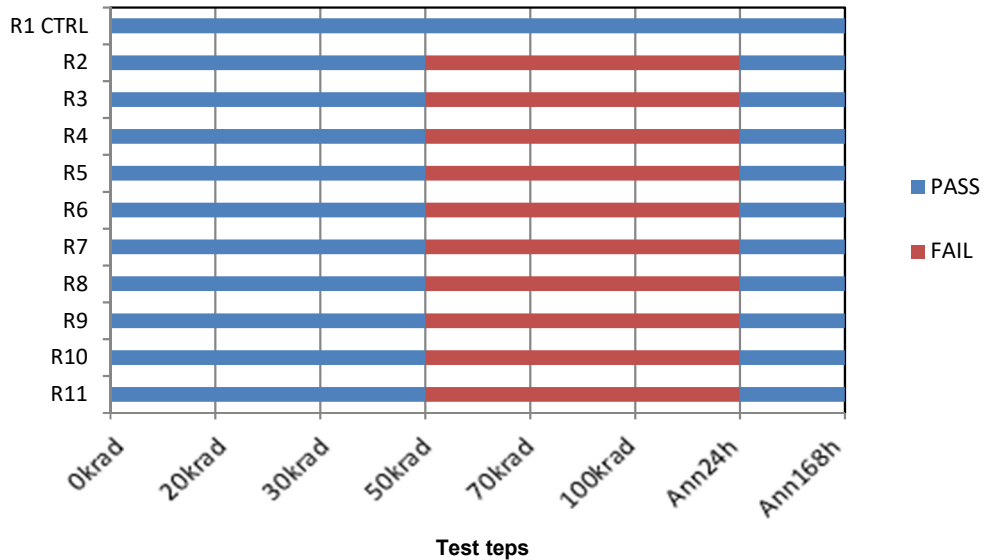
tCS fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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tCH fails



tCH fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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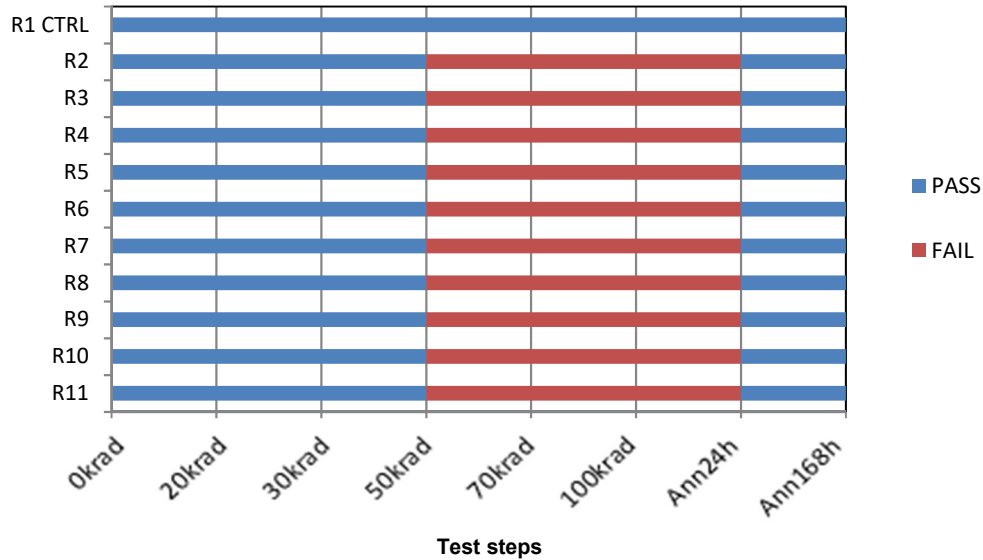
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Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
D/C 1409	

ALTER TECHNOLOGY	
RL:	2017901237
Ref.:	ATN-RR-464
Issue:	2
Date:	2018/10/10
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tDS fails



tDS fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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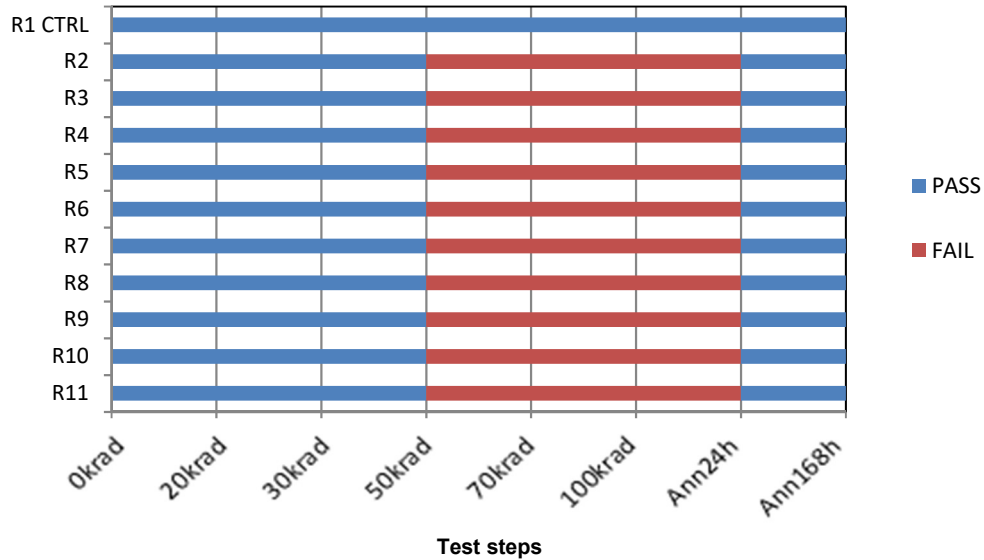
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Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
D/C 1409	

ALTER TECHNOLOGY	
RL:	2017901237
Ref.:	ATN-RR-464
Issue:	2
Date:	2018/10/10
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tDH fails



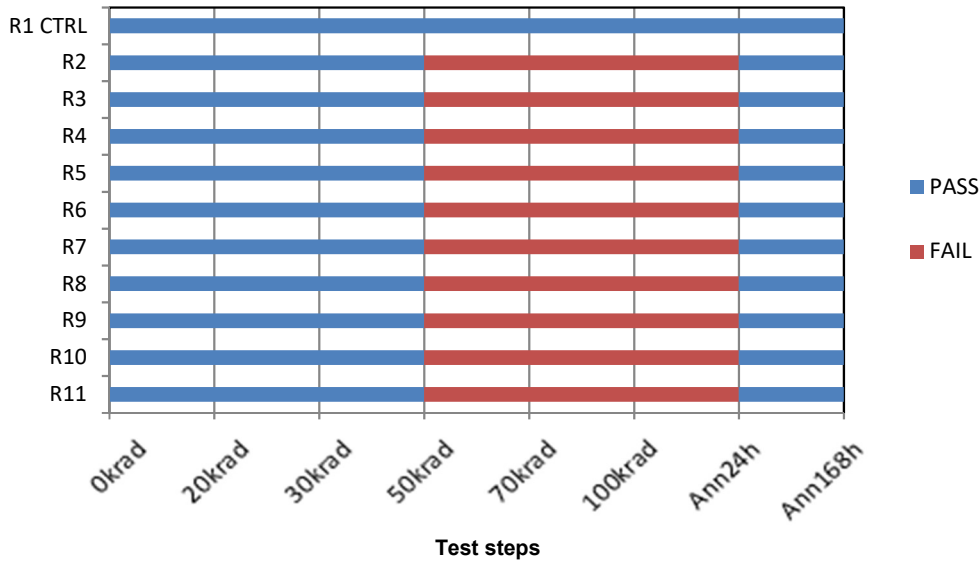
tDH fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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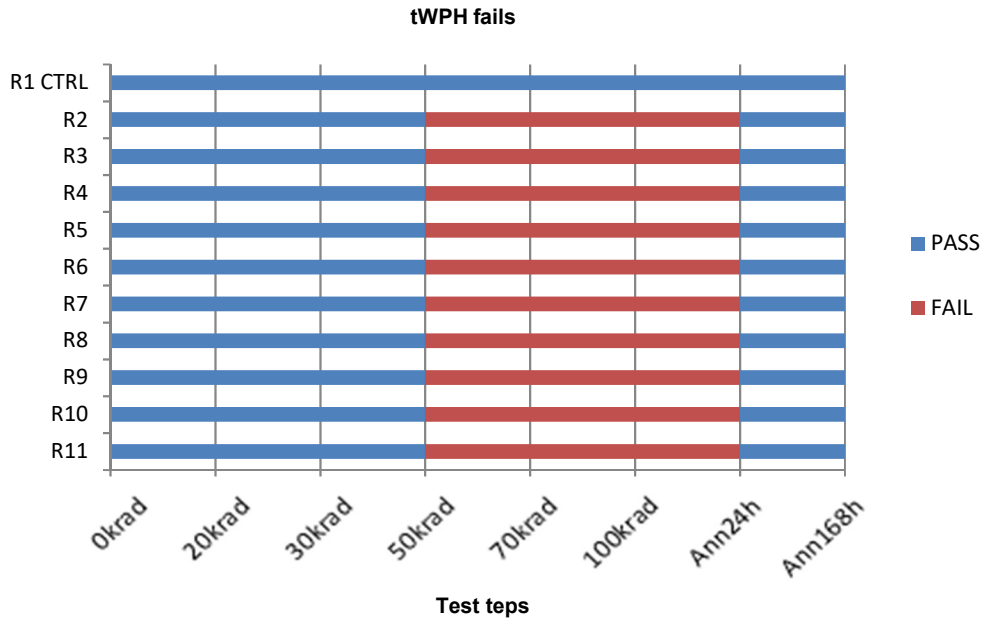
tWP fails



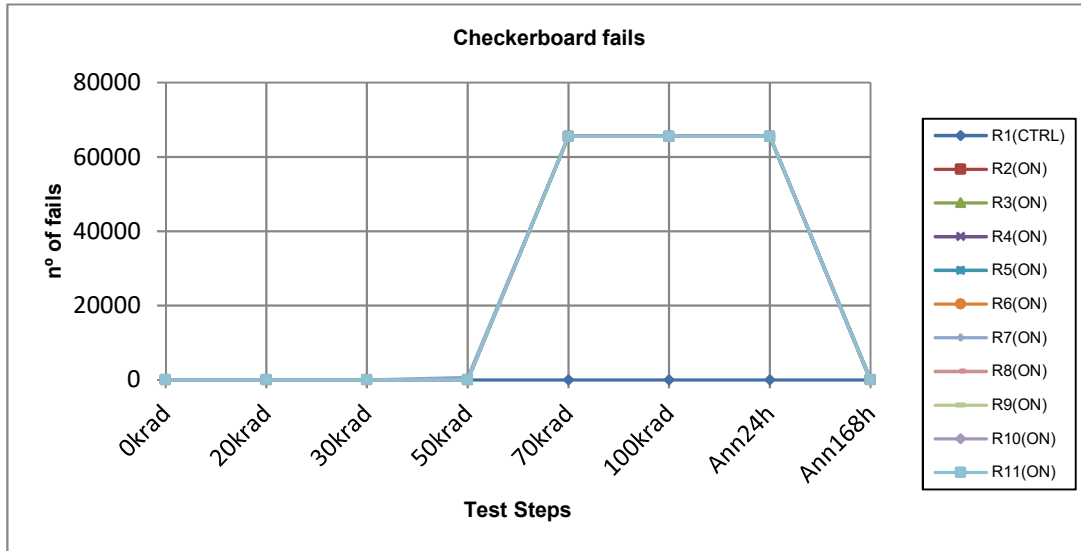
tWP fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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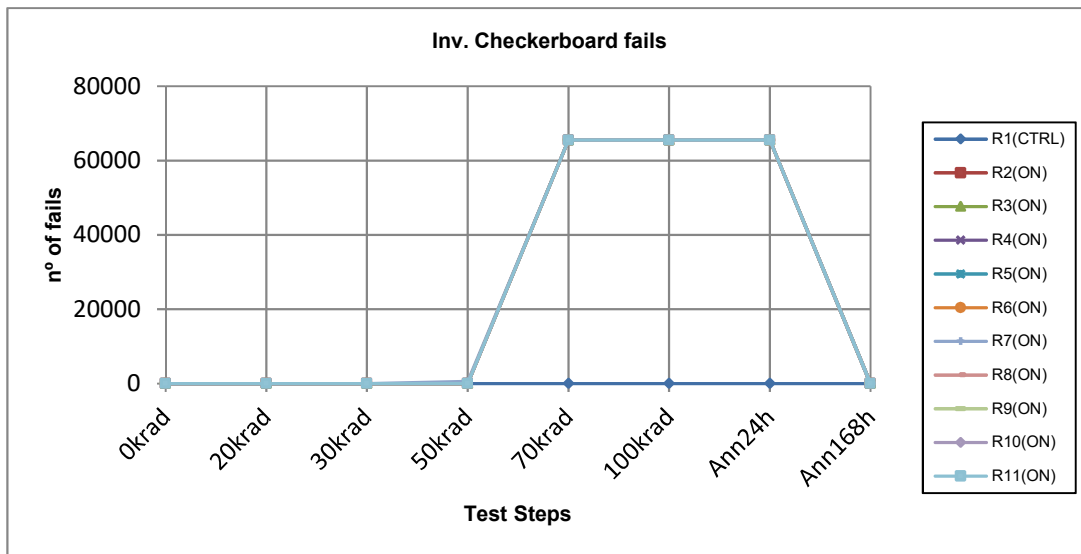
tWPH fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R3(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R4(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R5(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R6(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R7(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R8(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R9(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R11(ON BIAS LDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
Irradiated, ON biased LDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Checkerboard fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results								
R1(CTRL)	0	0	0	0	0	0	0	0
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R3(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R4(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R5(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R6(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R7(ON BIAS LDC)	0	0	0	618	65536	65536	65536	0
R8(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R9(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R10(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R11(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
Irradiated, ON biased LDC parts statistics								
Min Value	0	0	0	0	65536	65536	65536	0
Max Value	0	0	0	618	65536	65536	65536	0
Average	0	0	0	62	65536	65536	65536	0
Sigma	0	0	0	195	0	0	0	0

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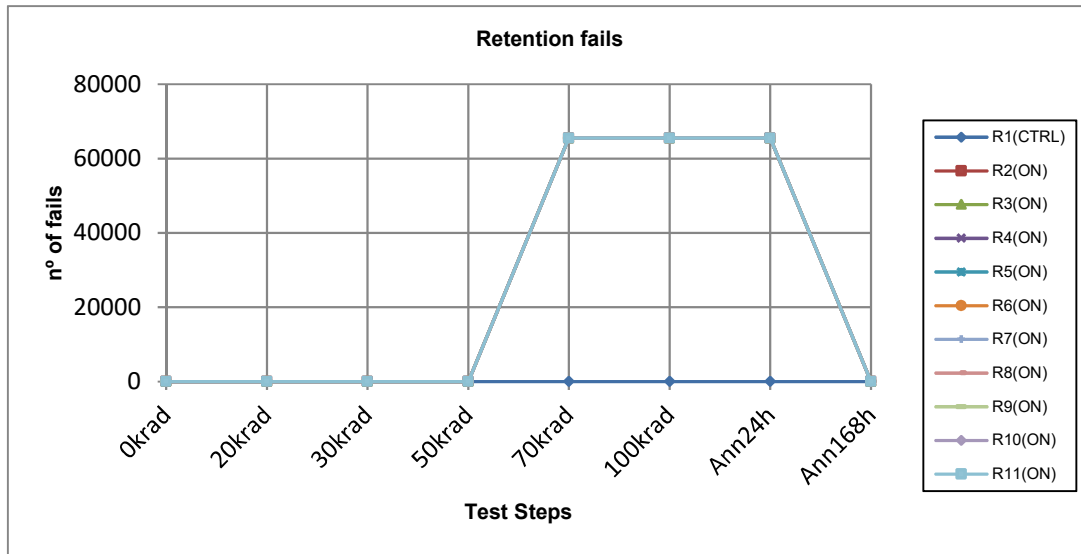
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Inv. Checkerboard fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results								
R1(CTRL)	0	0	0	0	0	0	0	0
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R3(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R4(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R5(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R6(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R7(ON BIAS LDC)	0	0	0	534	65536	65536	65536	0
R8(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R9(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R10(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R11(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
Irradiated, ON biased LDC parts statistics								
Min Value	0	0	0	0	65536	65536	65536	0
Max Value	0	0	0	534	65536	65536	65536	0
Average	0	0	0	53	65536	65536	65536	0
Sigma	0	0	0	169	0	0	0	0

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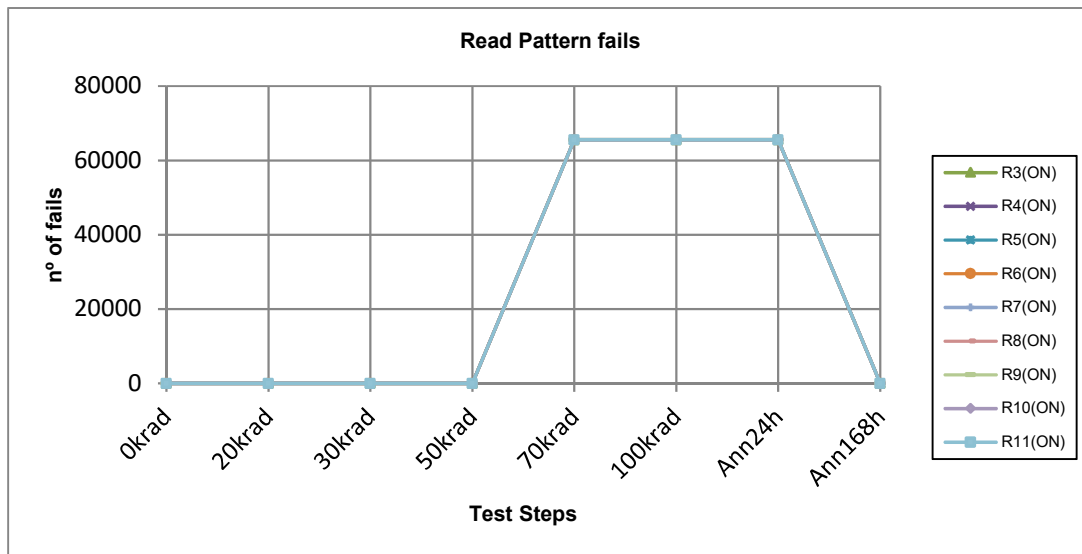
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Retention fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results								
R1(CTRL)	0	0	0	0	0	0	0	0
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R3(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R4(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R5(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R6(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R7(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R8(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R9(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R10(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R11(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
Irradiated, ON biased LDC parts statistics								
Min Value	0	0	0	0	65536	65536	65536	0
Max Value	0	0	0	0	65536	65536	65536	0
Average	0	0	0	0	65536	65536	65536	0
Sigma	0	0	0	0	0	0	0	0

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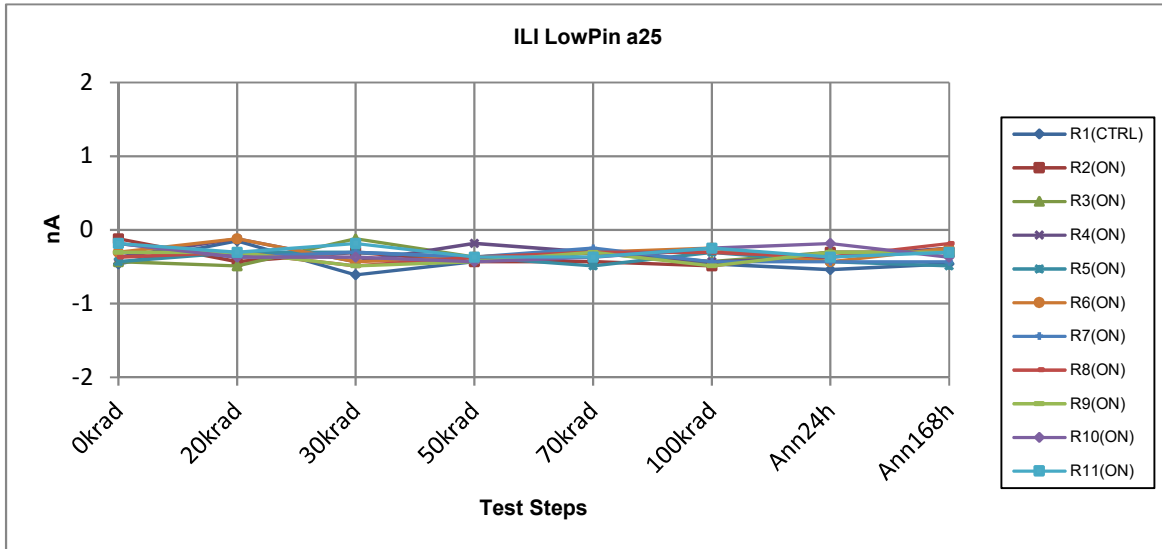
Read Pattern fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results								
R1(CTRL)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irradiated, ON biased LDC parts results								
R2(ON BIAS LDC)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R3(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R4(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R5(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R6(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R7(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R8(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R9(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R10(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
R11(ON BIAS LDC)	0	0	0	0	65536	65536	65536	0
Irradiated, ON biased LDC parts statistics								
Min Value	0	0	0	0	65536	65536	65536	0
Max Value	0	0	0	0	65536	65536	65536	0
Average	0	0	0	0	65536	65536	65536	0
Sigma	0	0	0	0	0	0	0	0

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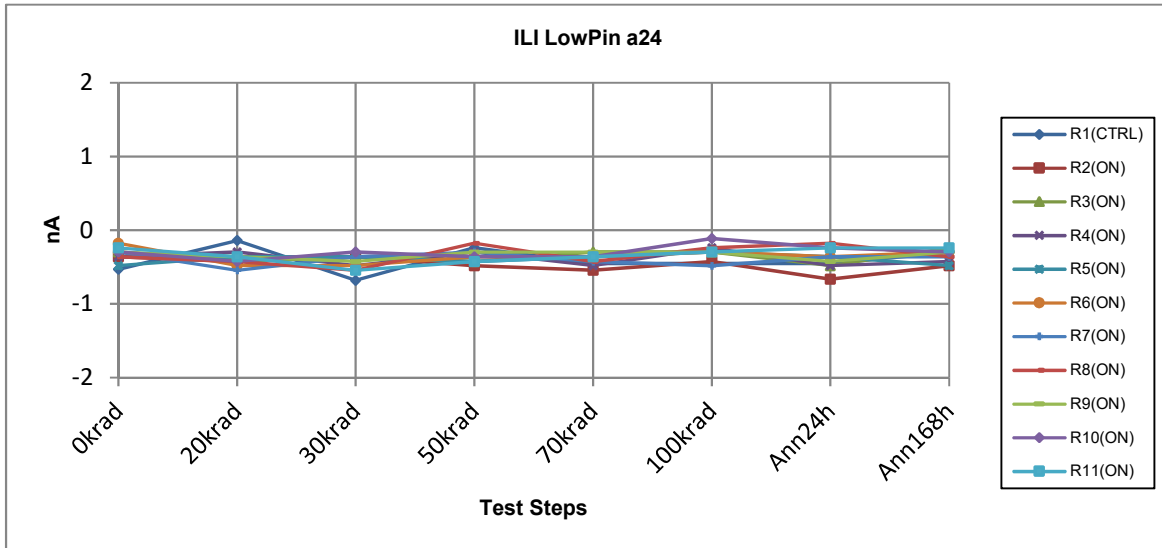
R1 + HDC (High Duty Cycle) samples (SN 12 to 21)



ILI LowPin a25	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.46	-0.15	-0.61	-0.43	-0.31	-0.46	-0.54	-0.46
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.12	-0.43	-0.30	-0.43	-0.43	-0.49	-0.30	-0.30
R3(ON BIAS HDC)	-0.43	-0.49	-0.12	-0.37	-0.30	-0.43	-0.30	-0.30
R4(ON BIAS HDC)	-0.37	-0.12	-0.43	-0.18	-0.30	-0.43	-0.37	-0.25
R5(ON BIAS HDC)	-0.43	-0.30	-0.30	-0.37	-0.49	-0.30	-0.43	-0.49
R6(ON BIAS HDC)	-0.30	-0.12	-0.43	-0.37	-0.30	-0.25	-0.43	-0.25
R7(ON BIAS HDC)	-0.18	-0.37	-0.30	-0.37	-0.25	-0.43	-0.43	-0.43
R8(ON BIAS HDC)	-0.37	-0.30	-0.49	-0.37	-0.30	-0.30	-0.37	-0.18
R9(ON BIAS HDC)	-0.30	-0.30	-0.49	-0.43	-0.30	-0.49	-0.30	-0.30
R10(ON BIAS HDC)	-0.18	-0.37	-0.37	-0.43	-0.37	-0.25	-0.18	-0.37
R11(ON BIAS HDC)	-0.18	-0.30	-0.18	-0.37	-0.37	-0.25	-0.37	-0.30
Irradiated, ON biased HDC parts statistics								
Min Value	-0.43	-0.49	-0.49	-0.43	-0.49	-0.49	-0.43	-0.49
Max Value	-0.12	-0.12	-0.12	-0.18	-0.25	-0.25	-0.18	-0.18
Average	-0.29	-0.31	-0.34	-0.37	-0.34	-0.36	-0.35	-0.32
Sigma	0.11	0.12	0.12	0.07	0.07	0.10	0.08	0.09

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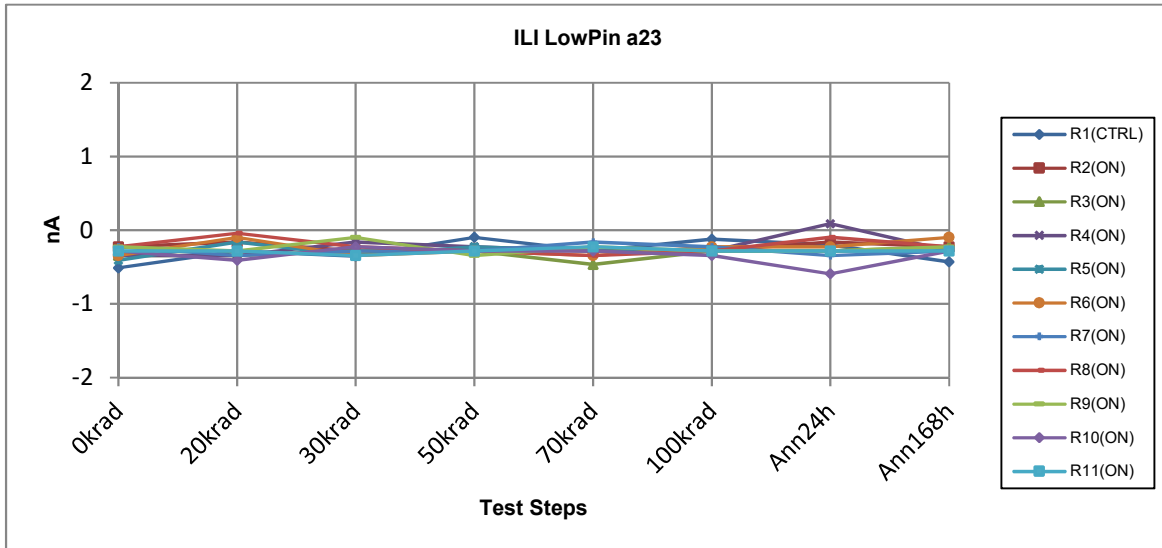
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ILI LowPin a24	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.53	-0.14	-0.68	-0.24	-0.45	-0.45	-0.45	-0.30
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.36	-0.42	-0.36	-0.48	-0.54	-0.42	-0.66	-0.48
R3(ON BIAS HDC)	-0.30	-0.42	-0.36	-0.42	-0.30	-0.30	-0.48	-0.24
R4(ON BIAS HDC)	-0.36	-0.30	-0.48	-0.30	-0.48	-0.24	-0.48	-0.42
R5(ON BIAS HDC)	-0.48	-0.36	-0.36	-0.42	-0.36	-0.30	-0.36	-0.48
R6(ON BIAS HDC)	-0.18	-0.48	-0.48	-0.36	-0.36	-0.30	-0.36	-0.30
R7(ON BIAS HDC)	-0.30	-0.54	-0.36	-0.30	-0.42	-0.48	-0.36	-0.36
R8(ON BIAS HDC)	-0.36	-0.42	-0.54	-0.18	-0.42	-0.24	-0.18	-0.36
R9(ON BIAS HDC)	-0.30	-0.36	-0.42	-0.30	-0.30	-0.30	-0.42	-0.30
R10(ON BIAS HDC)	-0.30	-0.42	-0.30	-0.36	-0.36	-0.11	-0.24	-0.30
R11(ON BIAS HDC)	-0.24	-0.36	-0.54	-0.42	-0.36	-0.30	-0.24	-0.24
Irradiated, ON biased HDC parts statistics								
Min Value	-0.48	-0.54	-0.54	-0.48	-0.54	-0.48	-0.66	-0.48
Max Value	-0.18	-0.30	-0.30	-0.18	-0.30	-0.11	-0.18	-0.24
Average	-0.32	-0.41	-0.42	-0.35	-0.39	-0.30	-0.38	-0.35
Sigma	0.08	0.07	0.09	0.09	0.08	0.10	0.14	0.09

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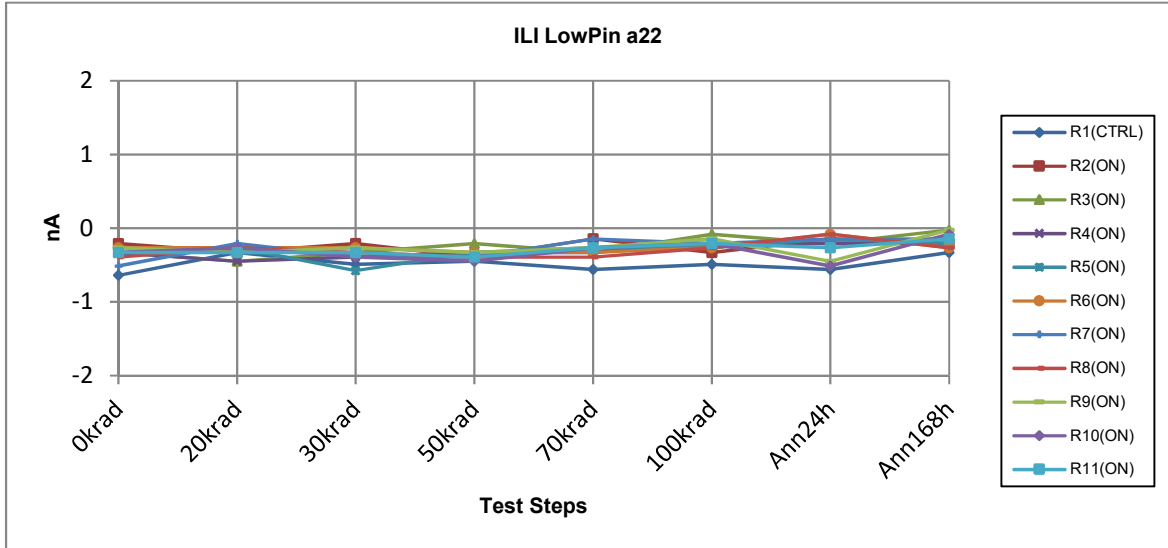
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ILI LowPin a23	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.51	-0.28	-0.35	-0.10	-0.28	-0.12	-0.20	-0.43
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.22	-0.16	-0.28	-0.28	-0.28	-0.28	-0.16	-0.22
R3(ON BIAS HDC)	-0.34	-0.34	-0.28	-0.28	-0.46	-0.28	-0.28	-0.22
R4(ON BIAS HDC)	-0.34	-0.34	-0.16	-0.22	-0.28	-0.28	0.09	-0.28
R5(ON BIAS HDC)	-0.41	-0.16	-0.34	-0.22	-0.28	-0.28	-0.28	-0.28
R6(ON BIAS HDC)	-0.34	-0.10	-0.34	-0.28	-0.34	-0.22	-0.22	-0.10
R7(ON BIAS HDC)	-0.22	-0.34	-0.28	-0.28	-0.16	-0.22	-0.34	-0.28
R8(ON BIAS HDC)	-0.22	-0.04	-0.22	-0.28	-0.34	-0.28	-0.10	-0.22
R9(ON BIAS HDC)	-0.22	-0.28	-0.10	-0.34	-0.22	-0.28	-0.28	-0.22
R10(ON BIAS HDC)	-0.28	-0.41	-0.22	-0.28	-0.28	-0.34	-0.59	-0.28
R11(ON BIAS HDC)	-0.28	-0.28	-0.34	-0.28	-0.22	-0.28	-0.28	-0.28
Irradiated, ON biased HDC parts statistics								
Min Value	-0.41	-0.41	-0.34	-0.34	-0.46	-0.34	-0.59	-0.28
Max Value	-0.22	-0.04	-0.10	-0.22	-0.16	-0.22	0.09	-0.10
Average	-0.29	-0.25	-0.26	-0.28	-0.29	-0.28	-0.24	-0.24
Sigma	0.07	0.12	0.08	0.03	0.08	0.03	0.18	0.06

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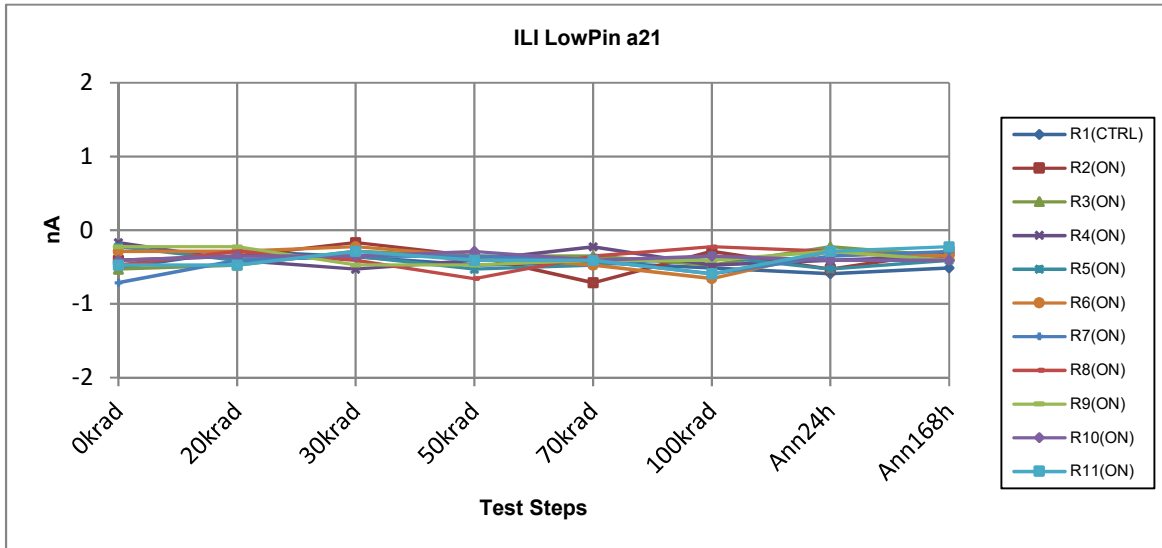
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ILI LowPin a22	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.64	-0.33	-0.49	-0.45	-0.56	-0.49	-0.56	-0.33
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.21	-0.33	-0.21	-0.39	-0.14	-0.33	-0.14	-0.21
R3(ON BIAS HDC)	-0.33	-0.45	-0.33	-0.21	-0.33	-0.08	-0.21	-0.02
R4(ON BIAS HDC)	-0.33	-0.45	-0.39	-0.33	-0.33	-0.21	-0.21	-0.21
R5(ON BIAS HDC)	-0.33	-0.26	-0.58	-0.33	-0.26	-0.26	-0.14	-0.21
R6(ON BIAS HDC)	-0.26	-0.26	-0.26	-0.33	-0.33	-0.26	-0.08	-0.26
R7(ON BIAS HDC)	-0.51	-0.21	-0.39	-0.39	-0.14	-0.21	-0.14	-0.14
R8(ON BIAS HDC)	-0.39	-0.26	-0.33	-0.39	-0.39	-0.26	-0.08	-0.26
R9(ON BIAS HDC)	-0.26	-0.33	-0.26	-0.33	-0.26	-0.14	-0.45	-0.02
R10(ON BIAS HDC)	-0.33	-0.26	-0.39	-0.45	-0.26	-0.21	-0.51	-0.08
R11(ON BIAS HDC)	-0.33	-0.33	-0.33	-0.39	-0.26	-0.21	-0.26	-0.14
Irradiated, ON biased HDC parts statistics								
Min Value	-0.51	-0.45	-0.58	-0.45	-0.39	-0.33	-0.51	-0.26
Max Value	-0.21	-0.21	-0.21	-0.21	-0.14	-0.08	-0.08	-0.02
Average	-0.33	-0.31	-0.35	-0.35	-0.27	-0.22	-0.22	-0.16
Sigma	0.08	0.08	0.10	0.07	0.08	0.07	0.15	0.09

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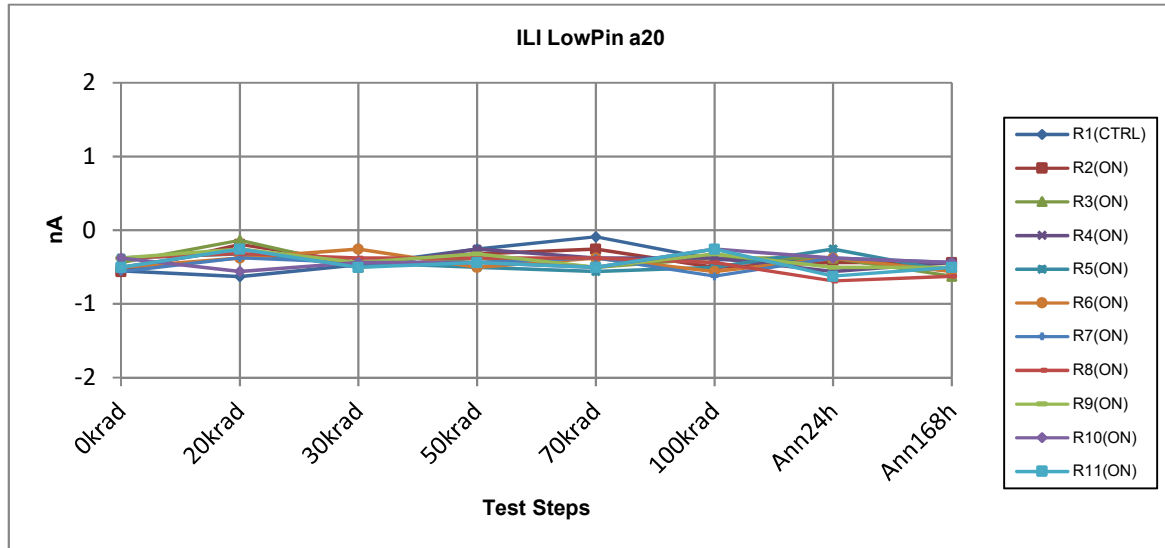
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ILI LowPin a21	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.51	-0.28	-0.36	-0.47	-0.44	-0.51	-0.59	-0.51
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.41	-0.35	-0.17	-0.35	-0.71	-0.29	-0.53	-0.29
R3(ON BIAS HDC)	-0.53	-0.47	-0.29	-0.35	-0.35	-0.47	-0.22	-0.35
R4(ON BIAS HDC)	-0.17	-0.41	-0.53	-0.41	-0.22	-0.47	-0.41	-0.35
R5(ON BIAS HDC)	-0.22	-0.41	-0.35	-0.53	-0.47	-0.35	-0.53	-0.41
R6(ON BIAS HDC)	-0.29	-0.29	-0.22	-0.35	-0.47	-0.66	-0.29	-0.35
R7(ON BIAS HDC)	-0.71	-0.41	-0.35	-0.35	-0.41	-0.59	-0.35	-0.29
R8(ON BIAS HDC)	-0.47	-0.29	-0.41	-0.66	-0.35	-0.22	-0.29	-0.41
R9(ON BIAS HDC)	-0.22	-0.22	-0.47	-0.47	-0.41	-0.41	-0.29	-0.41
R10(ON BIAS HDC)	-0.41	-0.35	-0.35	-0.29	-0.41	-0.35	-0.41	-0.41
R11(ON BIAS HDC)	-0.47	-0.47	-0.29	-0.41	-0.41	-0.59	-0.29	-0.22
Irradiated, ON biased HDC parts statistics								
Min Value	-0.71	-0.47	-0.53	-0.66	-0.71	-0.66	-0.53	-0.41
Max Value	-0.17	-0.22	-0.17	-0.29	-0.22	-0.22	-0.22	-0.22
Average	-0.39	-0.37	-0.34	-0.42	-0.42	-0.44	-0.36	-0.35
Sigma	0.17	0.08	0.11	0.11	0.12	0.14	0.11	0.06

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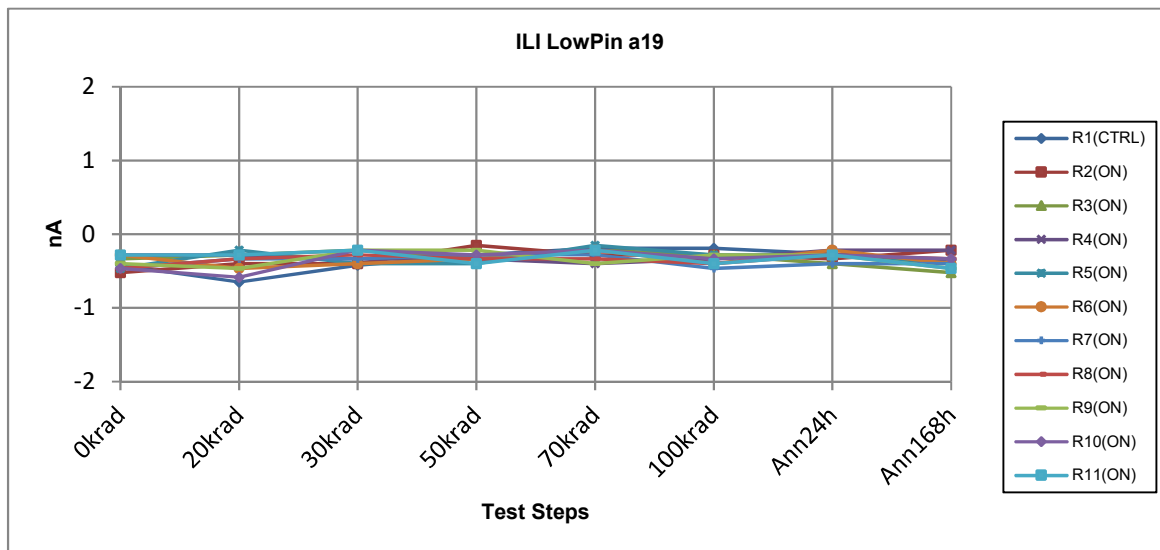
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ILI LowPin a20	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.55	-0.63	-0.47	-0.26	-0.09	-0.40	-0.40	-0.55
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.56	-0.19	-0.44	-0.32	-0.26	-0.50	-0.44	-0.44
R3(ON BIAS HDC)	-0.44	-0.14	-0.50	-0.38	-0.50	-0.38	-0.38	-0.62
R4(ON BIAS HDC)	-0.50	-0.26	-0.50	-0.26	-0.38	-0.38	-0.56	-0.44
R5(ON BIAS HDC)	-0.38	-0.32	-0.44	-0.50	-0.56	-0.50	-0.26	-0.56
R6(ON BIAS HDC)	-0.50	-0.38	-0.26	-0.50	-0.38	-0.56	-0.38	-0.56
R7(ON BIAS HDC)	-0.56	-0.38	-0.44	-0.44	-0.38	-0.62	-0.38	-0.44
R8(ON BIAS HDC)	-0.38	-0.32	-0.38	-0.38	-0.38	-0.44	-0.69	-0.62
R9(ON BIAS HDC)	-0.38	-0.26	-0.44	-0.32	-0.50	-0.32	-0.50	-0.50
R10(ON BIAS HDC)	-0.38	-0.56	-0.44	-0.44	-0.50	-0.26	-0.38	-0.44
R11(ON BIAS HDC)	-0.50	-0.26	-0.50	-0.44	-0.50	-0.26	-0.62	-0.50
Irradiated, ON biased HDC parts statistics								
Min Value	-0.56	-0.56	-0.50	-0.50	-0.56	-0.62	-0.69	-0.62
Max Value	-0.38	-0.14	-0.26	-0.26	-0.26	-0.26	-0.26	-0.44
Average	-0.46	-0.30	-0.43	-0.40	-0.43	-0.42	-0.46	-0.51
Sigma	0.08	0.12	0.07	0.08	0.09	0.13	0.13	0.07

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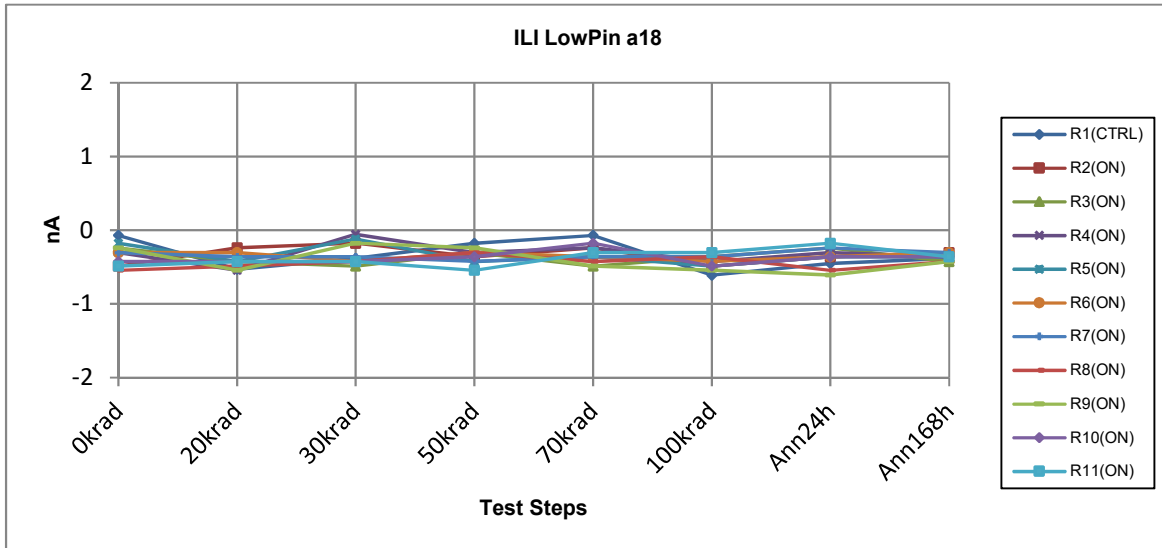
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ILI LowPin a19	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.42	-0.65	-0.42	-0.28	-0.19	-0.19	-0.27	-0.35
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.52	-0.40	-0.40	-0.15	-0.28	-0.28	-0.34	-0.22
R3(ON BIAS HDC)	-0.34	-0.28	-0.22	-0.34	-0.22	-0.28	-0.40	-0.52
R4(ON BIAS HDC)	-0.28	-0.28	-0.34	-0.34	-0.40	-0.34	-0.22	-0.22
R5(ON BIAS HDC)	-0.46	-0.22	-0.40	-0.40	-0.15	-0.28	-0.28	-0.40
R6(ON BIAS HDC)	-0.28	-0.46	-0.40	-0.34	-0.22	-0.40	-0.22	-0.40
R7(ON BIAS HDC)	-0.46	-0.34	-0.34	-0.28	-0.28	-0.46	-0.40	-0.40
R8(ON BIAS HDC)	-0.46	-0.34	-0.28	-0.34	-0.34	-0.40	-0.28	-0.34
R9(ON BIAS HDC)	-0.40	-0.46	-0.22	-0.22	-0.40	-0.28	-0.28	-0.46
R10(ON BIAS HDC)	-0.46	-0.58	-0.22	-0.28	-0.22	-0.34	-0.28	-0.34
R11(ON BIAS HDC)	-0.28	-0.28	-0.22	-0.40	-0.22	-0.40	-0.28	-0.46
Irradiated, ON biased HDC parts statistics								
Min Value	-0.52	-0.58	-0.40	-0.40	-0.40	-0.46	-0.40	-0.52
Max Value	-0.28	-0.22	-0.22	-0.15	-0.15	-0.28	-0.22	-0.22
Average	-0.40	-0.36	-0.30	-0.31	-0.27	-0.35	-0.30	-0.38
Sigma	0.09	0.11	0.08	0.08	0.08	0.07	0.06	0.10

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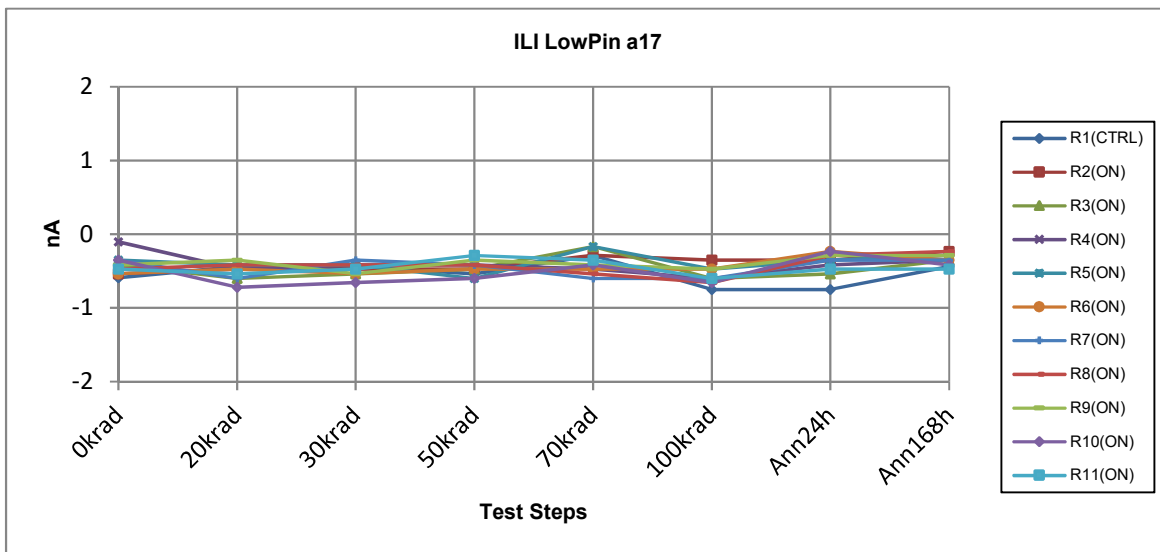
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ILI LowPin a18	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.07	-0.53	-0.38	-0.18	-0.07	-0.61	-0.45	-0.38
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.49	-0.24	-0.18	-0.36	-0.24	-0.49	-0.36	-0.30
R3(ON BIAS HDC)	-0.24	-0.42	-0.49	-0.30	-0.49	-0.36	-0.24	-0.42
R4(ON BIAS HDC)	-0.30	-0.54	-0.06	-0.30	-0.24	-0.42	-0.30	-0.36
R5(ON BIAS HDC)	-0.18	-0.42	-0.12	-0.42	-0.36	-0.49	-0.36	-0.36
R6(ON BIAS HDC)	-0.30	-0.30	-0.42	-0.30	-0.36	-0.42	-0.36	-0.30
R7(ON BIAS HDC)	-0.30	-0.36	-0.36	-0.42	-0.36	-0.36	-0.24	-0.30
R8(ON BIAS HDC)	-0.54	-0.49	-0.42	-0.30	-0.42	-0.36	-0.54	-0.42
R9(ON BIAS HDC)	-0.24	-0.54	-0.18	-0.24	-0.49	-0.54	-0.61	-0.42
R10(ON BIAS HDC)	-0.42	-0.42	-0.42	-0.36	-0.18	-0.49	-0.36	-0.36
R11(ON BIAS HDC)	-0.49	-0.42	-0.42	-0.54	-0.30	-0.30	-0.18	-0.36
Irradiated, ON biased HDC parts statistics								
Min Value	-0.54	-0.54	-0.49	-0.54	-0.49	-0.54	-0.61	-0.42
Max Value	-0.18	-0.24	-0.06	-0.24	-0.18	-0.30	-0.18	-0.30
Average	-0.35	-0.42	-0.31	-0.36	-0.34	-0.42	-0.36	-0.36
Sigma	0.13	0.10	0.16	0.09	0.11	0.08	0.13	0.05

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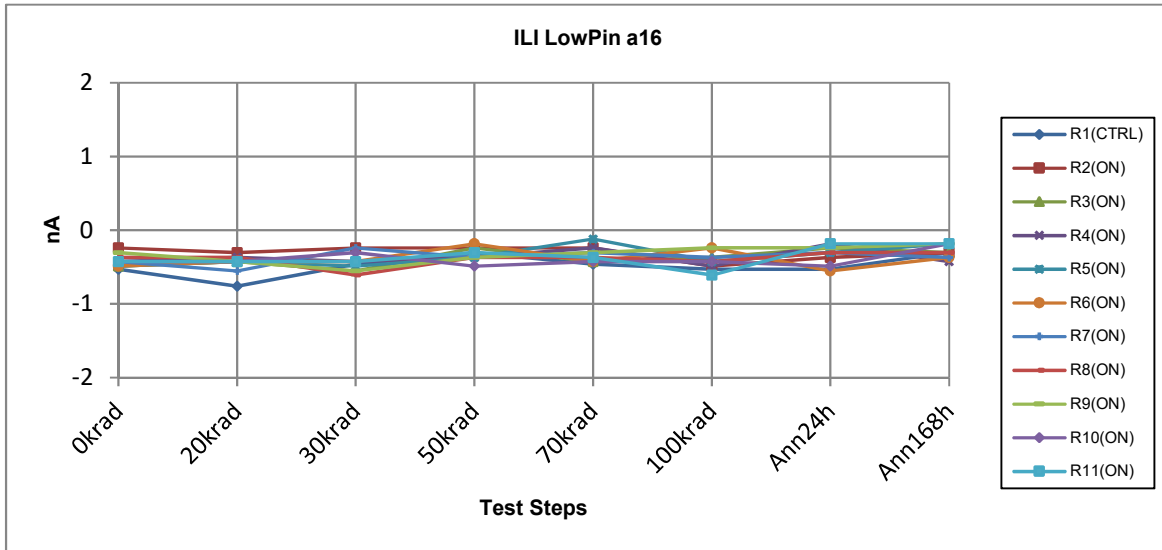
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ILI LowPin a17	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.59	-0.44	-0.44	-0.54	-0.29	-0.75	-0.75	-0.44
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.54	-0.47	-0.47	-0.47	-0.29	-0.35	-0.35	-0.23
R3(ON BIAS HDC)	-0.42	-0.60	-0.54	-0.47	-0.17	-0.60	-0.54	-0.35
R4(ON BIAS HDC)	-0.10	-0.47	-0.42	-0.42	-0.47	-0.60	-0.42	-0.35
R5(ON BIAS HDC)	-0.35	-0.42	-0.42	-0.60	-0.17	-0.47	-0.35	-0.29
R6(ON BIAS HDC)	-0.54	-0.47	-0.54	-0.47	-0.47	-0.47	-0.23	-0.35
R7(ON BIAS HDC)	-0.35	-0.60	-0.35	-0.42	-0.60	-0.60	-0.35	-0.35
R8(ON BIAS HDC)	-0.47	-0.42	-0.42	-0.42	-0.54	-0.66	-0.29	-0.23
R9(ON BIAS HDC)	-0.42	-0.35	-0.54	-0.35	-0.42	-0.47	-0.29	-0.29
R10(ON BIAS HDC)	-0.35	-0.72	-0.66	-0.60	-0.42	-0.66	-0.23	-0.42
R11(ON BIAS HDC)	-0.47	-0.54	-0.47	-0.29	-0.35	-0.60	-0.47	-0.47
Irradiated, ON biased HDC parts statistics								
Min Value	-0.54	-0.72	-0.66	-0.60	-0.60	-0.66	-0.54	-0.47
Max Value	-0.10	-0.35	-0.35	-0.29	-0.17	-0.35	-0.23	-0.23
Average	-0.40	-0.51	-0.48	-0.45	-0.39	-0.55	-0.35	-0.33
Sigma	0.13	0.11	0.09	0.10	0.15	0.10	0.10	0.08

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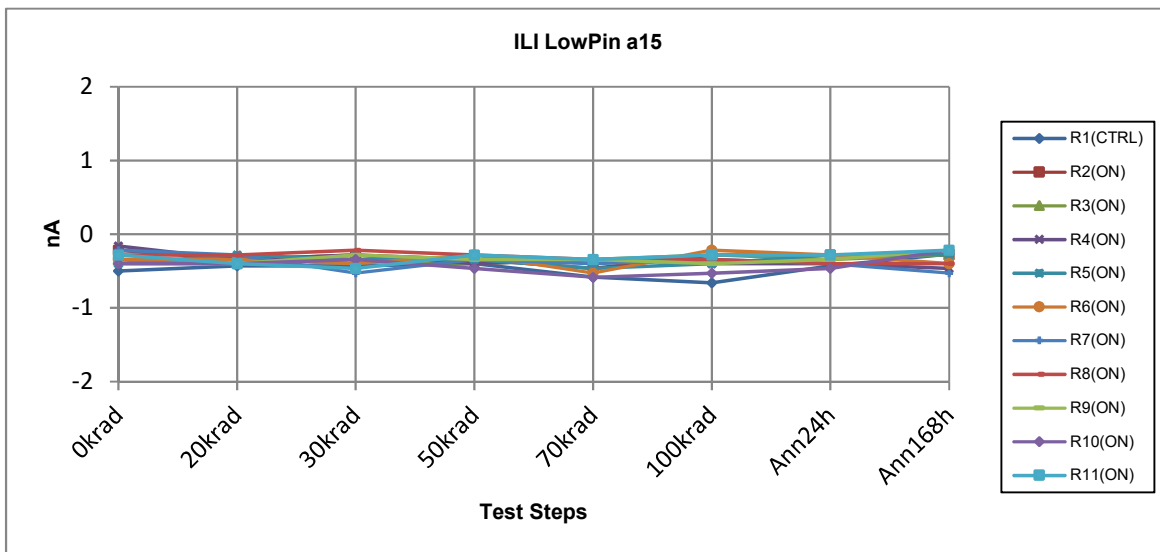
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ILI LowPin a16	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.53	-0.76	-0.46	-0.30	-0.46	-0.53	-0.53	-0.30
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.24	-0.30	-0.24	-0.24	-0.24	-0.49	-0.37	-0.30
R3(ON BIAS HDC)	-0.49	-0.42	-0.55	-0.24	-0.42	-0.37	-0.24	-0.30
R4(ON BIAS HDC)	-0.42	-0.37	-0.42	-0.37	-0.24	-0.49	-0.18	-0.42
R5(ON BIAS HDC)	-0.49	-0.42	-0.49	-0.37	-0.12	-0.42	-0.30	-0.18
R6(ON BIAS HDC)	-0.49	-0.42	-0.42	-0.18	-0.42	-0.24	-0.55	-0.37
R7(ON BIAS HDC)	-0.42	-0.55	-0.24	-0.37	-0.30	-0.37	-0.30	-0.37
R8(ON BIAS HDC)	-0.37	-0.37	-0.61	-0.37	-0.37	-0.42	-0.30	-0.30
R9(ON BIAS HDC)	-0.30	-0.42	-0.55	-0.37	-0.30	-0.24	-0.24	-0.18
R10(ON BIAS HDC)	-0.42	-0.42	-0.30	-0.49	-0.42	-0.42	-0.49	-0.18
R11(ON BIAS HDC)	-0.42	-0.42	-0.42	-0.30	-0.37	-0.61	-0.18	-0.18
Irradiated, ON biased HDC parts statistics								
Min Value	-0.49	-0.55	-0.61	-0.49	-0.42	-0.61	-0.55	-0.42
Max Value	-0.24	-0.30	-0.24	-0.18	-0.12	-0.24	-0.18	-0.18
Average	-0.41	-0.41	-0.43	-0.33	-0.32	-0.41	-0.32	-0.28
Sigma	0.08	0.06	0.13	0.09	0.10	0.11	0.12	0.09

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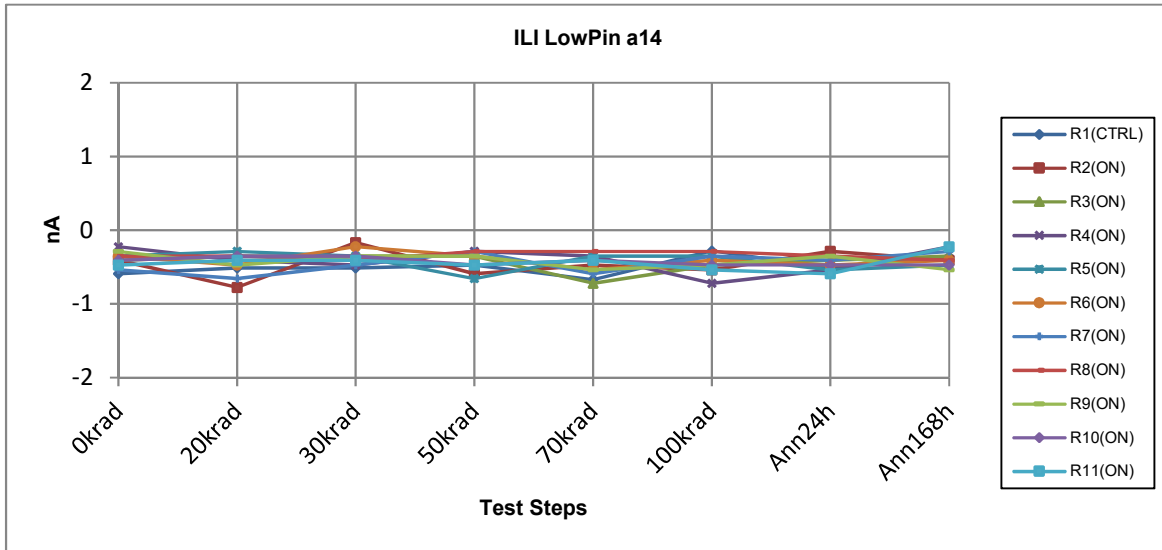
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ILI LowPin a15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.50	-0.43	-0.43	-0.40	-0.58	-0.66	-0.43	-0.27
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.22	-0.34	-0.28	-0.34	-0.46	-0.28	-0.28	-0.28
R3(ON BIAS HDC)	-0.34	-0.40	-0.34	-0.40	-0.34	-0.28	-0.34	-0.28
R4(ON BIAS HDC)	-0.16	-0.34	-0.28	-0.40	-0.34	-0.40	-0.40	-0.46
R5(ON BIAS HDC)	-0.40	-0.28	-0.34	-0.34	-0.46	-0.40	-0.28	-0.28
R6(ON BIAS HDC)	-0.34	-0.34	-0.40	-0.28	-0.53	-0.22	-0.28	-0.40
R7(ON BIAS HDC)	-0.22	-0.28	-0.53	-0.34	-0.40	-0.34	-0.40	-0.53
R8(ON BIAS HDC)	-0.28	-0.28	-0.22	-0.28	-0.34	-0.34	-0.40	-0.40
R9(ON BIAS HDC)	-0.40	-0.40	-0.28	-0.34	-0.34	-0.40	-0.34	-0.22
R10(ON BIAS HDC)	-0.40	-0.40	-0.34	-0.46	-0.58	-0.53	-0.46	-0.22
R11(ON BIAS HDC)	-0.28	-0.40	-0.46	-0.28	-0.34	-0.28	-0.28	-0.22
Irradiated, ON biased HDC parts statistics								
Min Value	-0.40	-0.40	-0.53	-0.46	-0.58	-0.53	-0.46	-0.53
Max Value	-0.16	-0.28	-0.22	-0.28	-0.34	-0.22	-0.28	-0.22
Average	-0.30	-0.35	-0.35	-0.35	-0.42	-0.35	-0.35	-0.33
Sigma	0.09	0.05	0.09	0.06	0.09	0.09	0.07	0.11

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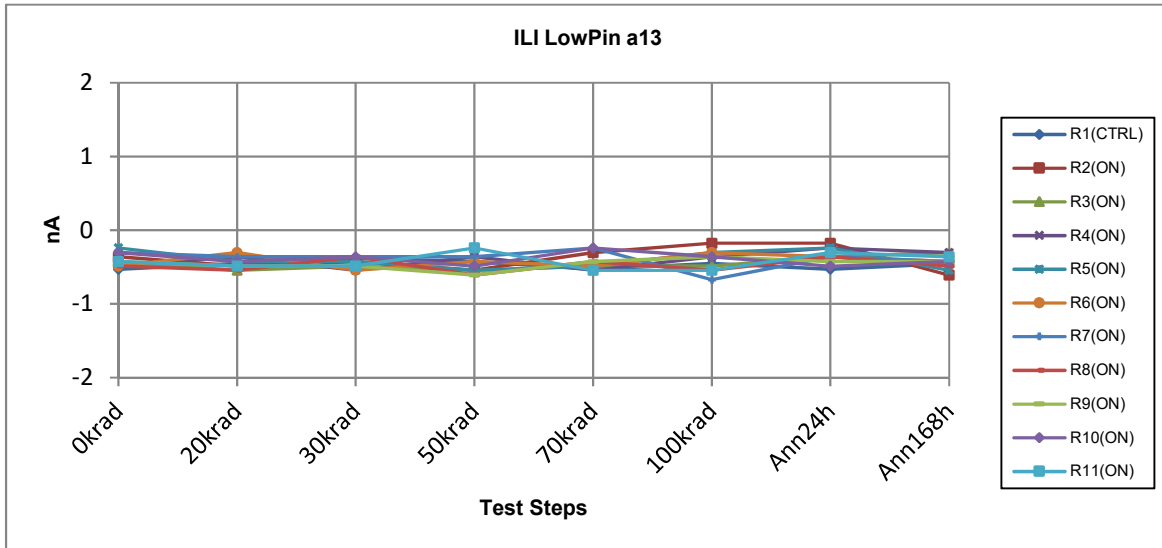
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ILI LowPin a14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.59	-0.51	-0.51	-0.47	-0.67	-0.28	-0.51	-0.36
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.41	-0.78	-0.17	-0.59	-0.47	-0.54	-0.29	-0.41
R3(ON BIAS HDC)	-0.41	-0.35	-0.35	-0.35	-0.72	-0.47	-0.41	-0.35
R4(ON BIAS HDC)	-0.22	-0.41	-0.47	-0.29	-0.35	-0.72	-0.54	-0.22
R5(ON BIAS HDC)	-0.35	-0.29	-0.35	-0.66	-0.35	-0.35	-0.54	-0.47
R6(ON BIAS HDC)	-0.35	-0.47	-0.22	-0.35	-0.54	-0.41	-0.47	-0.41
R7(ON BIAS HDC)	-0.54	-0.66	-0.47	-0.29	-0.59	-0.35	-0.41	-0.29
R8(ON BIAS HDC)	-0.35	-0.35	-0.41	-0.29	-0.29	-0.29	-0.35	-0.41
R9(ON BIAS HDC)	-0.29	-0.47	-0.35	-0.35	-0.54	-0.47	-0.35	-0.54
R10(ON BIAS HDC)	-0.41	-0.35	-0.35	-0.47	-0.41	-0.47	-0.47	-0.47
R11(ON BIAS HDC)	-0.47	-0.41	-0.41	-0.47	-0.41	-0.54	-0.59	-0.22
Irradiated, ON biased HDC parts statistics								
Min Value	-0.54	-0.78	-0.47	-0.66	-0.72	-0.72	-0.59	-0.54
Max Value	-0.22	-0.29	-0.17	-0.29	-0.29	-0.29	-0.29	-0.22
Average	-0.38	-0.45	-0.36	-0.41	-0.47	-0.46	-0.44	-0.38
Sigma	0.09	0.15	0.10	0.13	0.13	0.12	0.10	0.11

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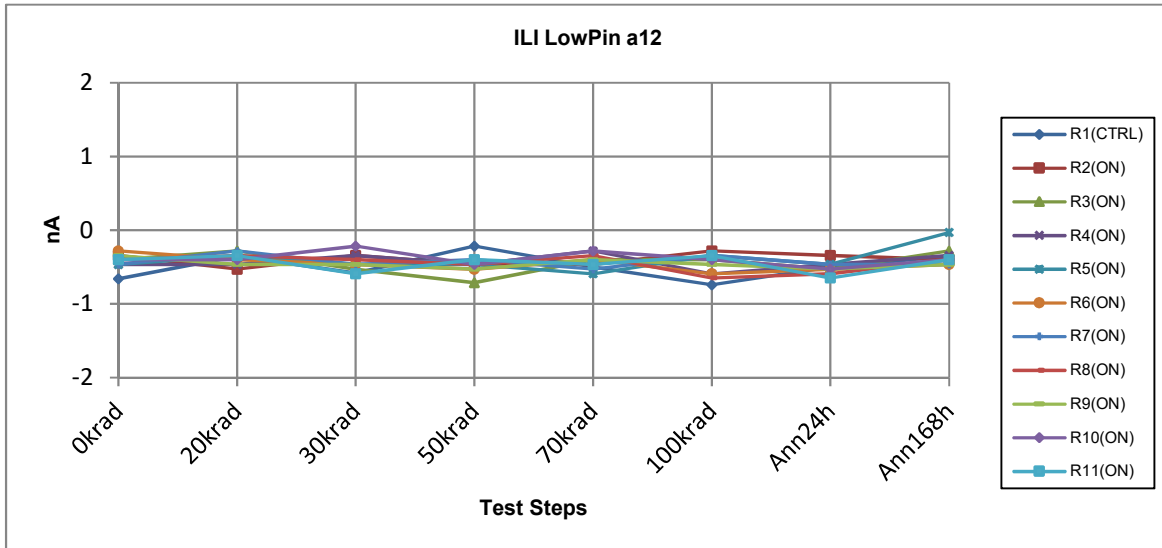
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ILI LowPin a13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.53	-0.45	-0.38	-0.42	-0.53	-0.45	-0.53	-0.45
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.36	-0.49	-0.42	-0.54	-0.30	-0.18	-0.18	-0.61
R3(ON BIAS HDC)	-0.42	-0.54	-0.49	-0.54	-0.49	-0.49	-0.36	-0.30
R4(ON BIAS HDC)	-0.49	-0.36	-0.54	-0.36	-0.54	-0.36	-0.24	-0.30
R5(ON BIAS HDC)	-0.24	-0.42	-0.42	-0.54	-0.49	-0.30	-0.24	-0.54
R6(ON BIAS HDC)	-0.49	-0.30	-0.54	-0.42	-0.49	-0.30	-0.36	-0.42
R7(ON BIAS HDC)	-0.30	-0.36	-0.36	-0.36	-0.24	-0.67	-0.36	-0.42
R8(ON BIAS HDC)	-0.49	-0.54	-0.36	-0.61	-0.42	-0.54	-0.36	-0.49
R9(ON BIAS HDC)	-0.42	-0.49	-0.49	-0.61	-0.42	-0.36	-0.42	-0.42
R10(ON BIAS HDC)	-0.30	-0.42	-0.36	-0.49	-0.24	-0.36	-0.49	-0.42
R11(ON BIAS HDC)	-0.42	-0.49	-0.49	-0.24	-0.54	-0.54	-0.30	-0.36
Irradiated, ON biased HDC parts statistics								
Min Value	-0.49	-0.54	-0.54	-0.61	-0.54	-0.67	-0.49	-0.61
Max Value	-0.24	-0.30	-0.36	-0.24	-0.24	-0.18	-0.18	-0.30
Average	-0.39	-0.44	-0.45	-0.47	-0.42	-0.41	-0.33	-0.43
Sigma	0.09	0.08	0.07	0.12	0.12	0.15	0.09	0.10

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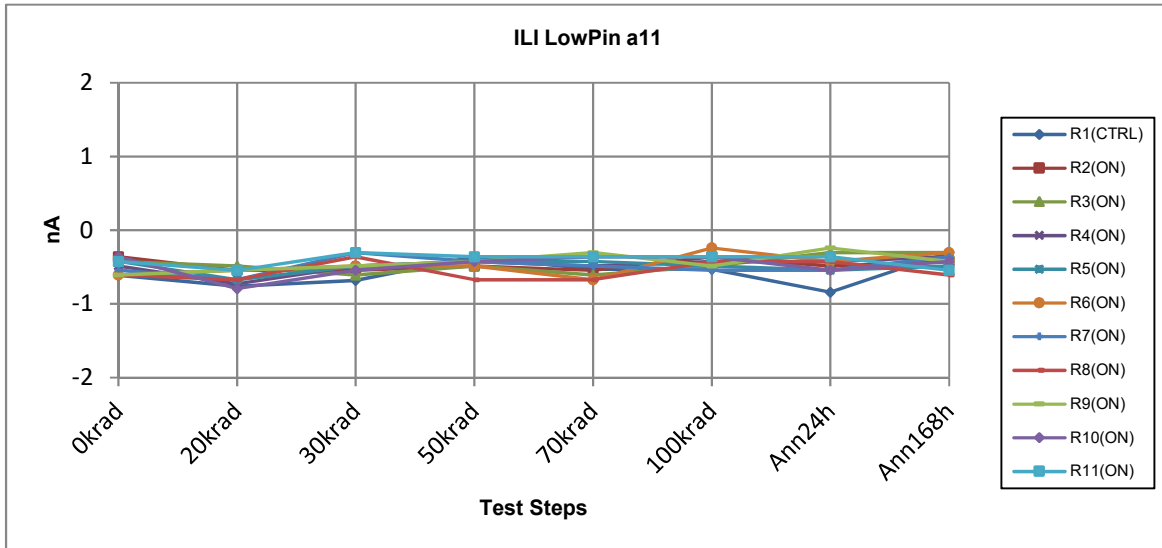
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ILI LowPin a12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.66	-0.35	-0.58	-0.22	-0.50	-0.74	-0.50	-0.35
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.34	-0.53	-0.34	-0.46	-0.46	-0.28	-0.34	-0.40
R3(ON BIAS HDC)	-0.40	-0.28	-0.53	-0.71	-0.40	-0.40	-0.53	-0.28
R4(ON BIAS HDC)	-0.46	-0.46	-0.34	-0.46	-0.28	-0.59	-0.46	-0.34
R5(ON BIAS HDC)	-0.46	-0.34	-0.46	-0.46	-0.59	-0.34	-0.46	-0.03
R6(ON BIAS HDC)	-0.28	-0.40	-0.46	-0.53	-0.40	-0.59	-0.53	-0.46
R7(ON BIAS HDC)	-0.46	-0.28	-0.46	-0.40	-0.53	-0.34	-0.46	-0.46
R8(ON BIAS HDC)	-0.40	-0.34	-0.40	-0.46	-0.34	-0.65	-0.59	-0.40
R9(ON BIAS HDC)	-0.34	-0.46	-0.46	-0.53	-0.40	-0.46	-0.53	-0.46
R10(ON BIAS HDC)	-0.40	-0.40	-0.22	-0.46	-0.28	-0.40	-0.53	-0.40
R11(ON BIAS HDC)	-0.40	-0.34	-0.59	-0.40	-0.46	-0.34	-0.65	-0.40
Irradiated, ON biased HDC parts statistics								
Min Value	-0.46	-0.53	-0.59	-0.71	-0.59	-0.65	-0.65	-0.46
Max Value	-0.28	-0.28	-0.22	-0.40	-0.28	-0.28	-0.34	-0.03
Average	-0.40	-0.38	-0.43	-0.49	-0.42	-0.44	-0.51	-0.36
Sigma	0.06	0.08	0.11	0.09	0.10	0.13	0.08	0.13

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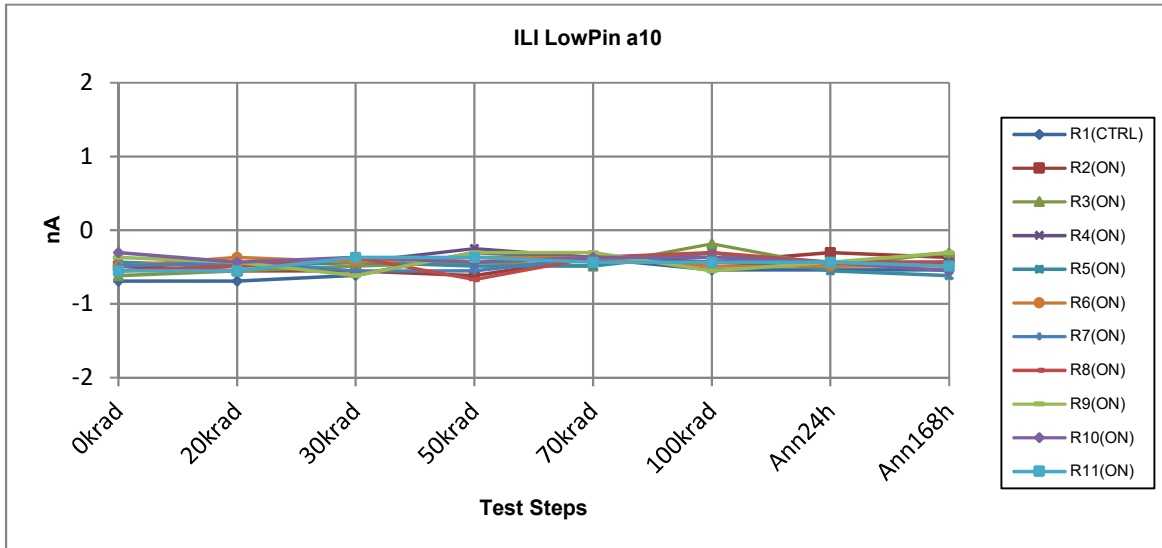
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ILI LowPin a11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.61	-0.76	-0.68	-0.36	-0.53	-0.53	-0.84	-0.30
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.36	-0.54	-0.54	-0.49	-0.54	-0.36	-0.49	-0.42
R3(ON BIAS HDC)	-0.42	-0.49	-0.61	-0.49	-0.61	-0.49	-0.30	-0.30
R4(ON BIAS HDC)	-0.49	-0.73	-0.49	-0.42	-0.49	-0.42	-0.42	-0.36
R5(ON BIAS HDC)	-0.42	-0.67	-0.49	-0.42	-0.42	-0.49	-0.54	-0.49
R6(ON BIAS HDC)	-0.61	-0.54	-0.49	-0.49	-0.67	-0.24	-0.42	-0.30
R7(ON BIAS HDC)	-0.54	-0.67	-0.30	-0.42	-0.49	-0.54	-0.54	-0.36
R8(ON BIAS HDC)	-0.61	-0.67	-0.36	-0.67	-0.67	-0.42	-0.42	-0.61
R9(ON BIAS HDC)	-0.61	-0.54	-0.49	-0.42	-0.30	-0.49	-0.24	-0.42
R10(ON BIAS HDC)	-0.36	-0.79	-0.54	-0.42	-0.36	-0.36	-0.54	-0.42
R11(ON BIAS HDC)	-0.42	-0.54	-0.30	-0.36	-0.36	-0.36	-0.36	-0.54
Irradiated, ON biased HDC parts statistics								
Min Value	-0.61	-0.79	-0.61	-0.67	-0.67	-0.54	-0.54	-0.61
Max Value	-0.36	-0.49	-0.30	-0.36	-0.30	-0.24	-0.24	-0.30
Average	-0.48	-0.62	-0.46	-0.46	-0.49	-0.42	-0.43	-0.42
Sigma	0.10	0.10	0.10	0.08	0.13	0.09	0.11	0.10

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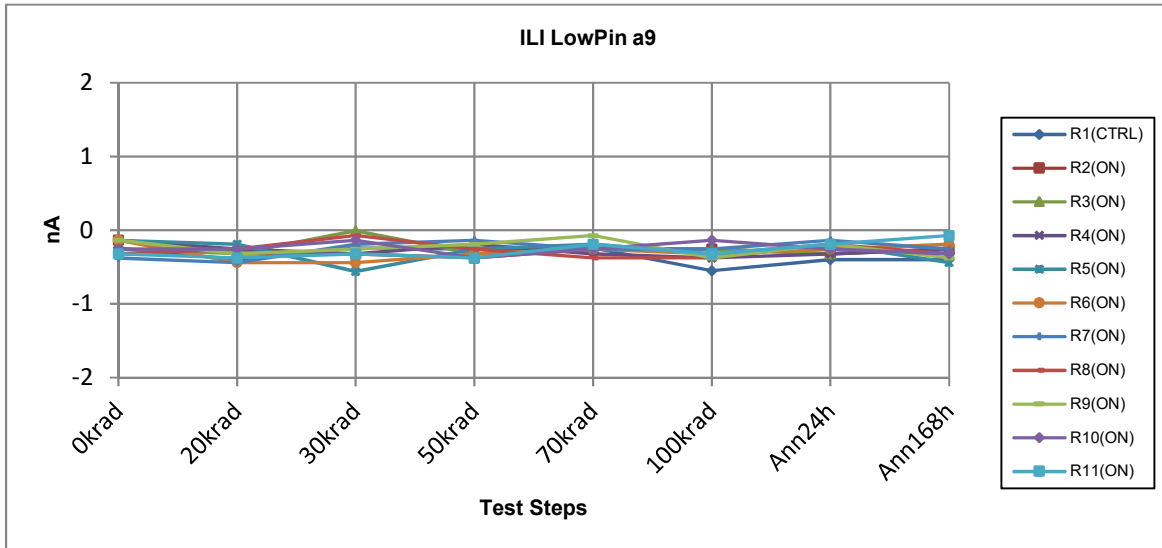
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ILI LowPin a10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.69	-0.69	-0.61	-0.30	-0.38	-0.54	-0.54	-0.54
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.49	-0.55	-0.55	-0.62	-0.37	-0.43	-0.30	-0.37
R3(ON BIAS HDC)	-0.62	-0.55	-0.49	-0.43	-0.49	-0.18	-0.49	-0.30
R4(ON BIAS HDC)	-0.55	-0.49	-0.43	-0.25	-0.37	-0.43	-0.49	-0.43
R5(ON BIAS HDC)	-0.43	-0.49	-0.43	-0.49	-0.49	-0.30	-0.55	-0.62
R6(ON BIAS HDC)	-0.49	-0.37	-0.43	-0.37	-0.37	-0.49	-0.49	-0.49
R7(ON BIAS HDC)	-0.49	-0.43	-0.55	-0.55	-0.37	-0.37	-0.43	-0.43
R8(ON BIAS HDC)	-0.55	-0.49	-0.37	-0.67	-0.37	-0.30	-0.43	-0.43
R9(ON BIAS HDC)	-0.37	-0.43	-0.62	-0.30	-0.30	-0.55	-0.43	-0.30
R10(ON BIAS HDC)	-0.30	-0.43	-0.37	-0.43	-0.37	-0.37	-0.43	-0.55
R11(ON BIAS HDC)	-0.55	-0.55	-0.37	-0.37	-0.43	-0.43	-0.43	-0.49
Irradiated, ON biased HDC parts statistics								
Min Value	-0.62	-0.55	-0.62	-0.67	-0.49	-0.55	-0.55	-0.62
Max Value	-0.30	-0.37	-0.37	-0.25	-0.30	-0.18	-0.30	-0.30
Average	-0.48	-0.48	-0.46	-0.45	-0.39	-0.39	-0.45	-0.44
Sigma	0.09	0.06	0.09	0.14	0.06	0.10	0.06	0.10

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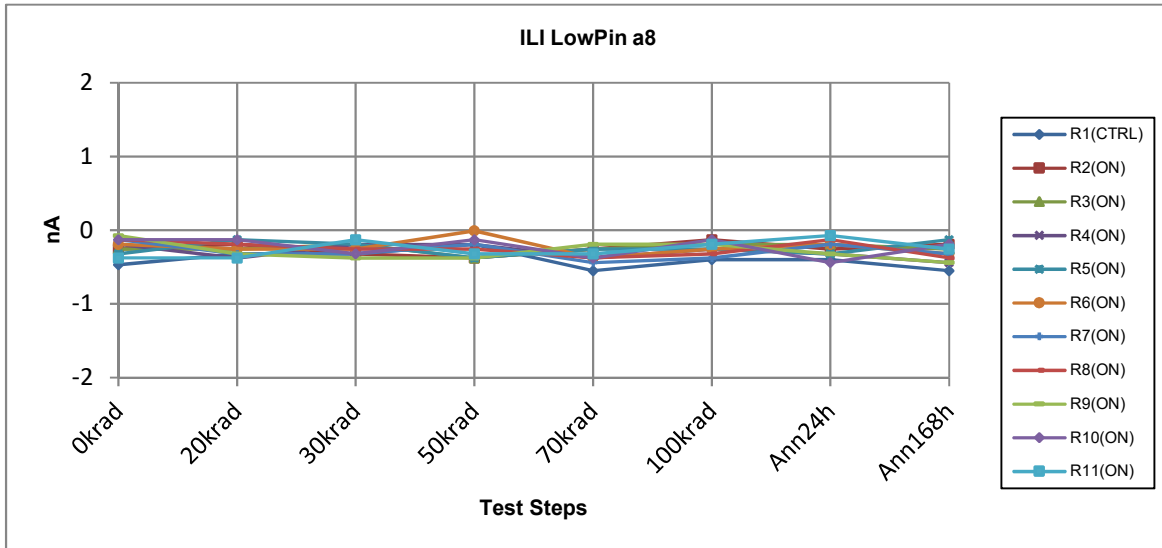
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ILI LowPin a9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.24	-0.40	-0.24	-0.26	-0.24	-0.55	-0.40	-0.40
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.14	-0.32	-0.32	-0.38	-0.26	-0.26	-0.32	-0.26
R3(ON BIAS HDC)	-0.26	-0.32	-0.01	-0.32	-0.26	-0.26	-0.32	-0.26
R4(ON BIAS HDC)	-0.14	-0.26	-0.32	-0.19	-0.32	-0.38	-0.32	-0.26
R5(ON BIAS HDC)	-0.14	-0.19	-0.56	-0.26	-0.19	-0.32	-0.19	-0.44
R6(ON BIAS HDC)	-0.14	-0.44	-0.44	-0.32	-0.26	-0.32	-0.26	-0.19
R7(ON BIAS HDC)	-0.38	-0.44	-0.19	-0.14	-0.26	-0.26	-0.14	-0.26
R8(ON BIAS HDC)	-0.32	-0.26	-0.07	-0.26	-0.38	-0.38	-0.19	-0.32
R9(ON BIAS HDC)	-0.14	-0.32	-0.26	-0.19	-0.07	-0.38	-0.19	-0.38
R10(ON BIAS HDC)	-0.26	-0.26	-0.14	-0.38	-0.26	-0.14	-0.26	-0.32
R11(ON BIAS HDC)	-0.32	-0.38	-0.32	-0.38	-0.19	-0.32	-0.19	-0.07
Irradiated, ON biased HDC parts statistics								
Min Value	-0.38	-0.44	-0.56	-0.38	-0.38	-0.38	-0.32	-0.44
Max Value	-0.14	-0.19	-0.01	-0.14	-0.07	-0.14	-0.14	-0.07
Average	-0.22	-0.32	-0.26	-0.28	-0.24	-0.30	-0.24	-0.27
Sigma	0.10	0.08	0.17	0.09	0.08	0.08	0.07	0.10

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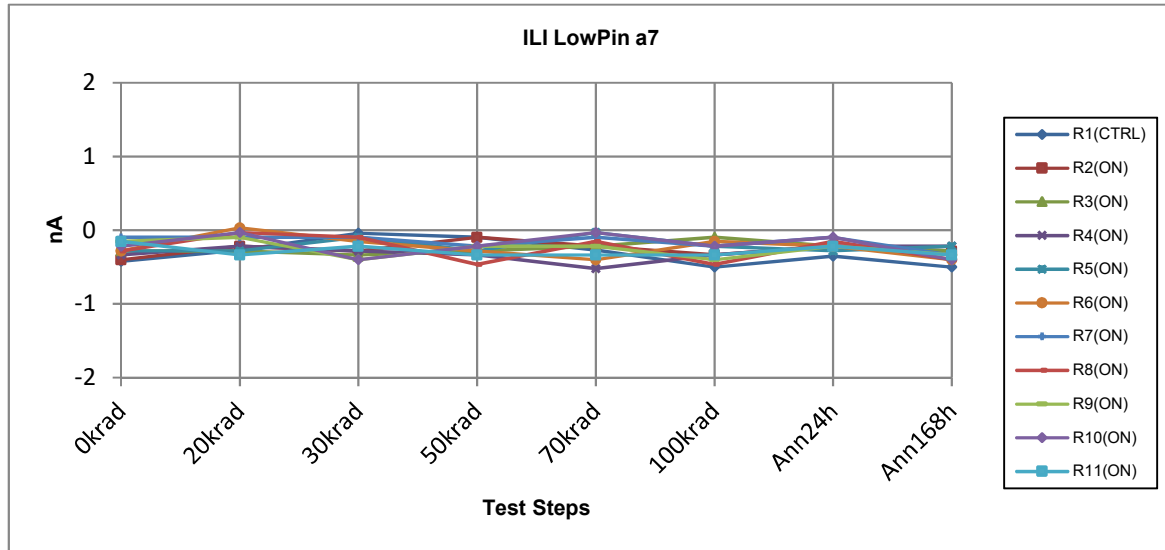
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ILI LowPin a8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.47	-0.32	-0.32	-0.19	-0.55	-0.40	-0.40	-0.55
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.26	-0.19	-0.32	-0.38	-0.26	-0.13	-0.26	-0.19
R3(ON BIAS HDC)	-0.26	-0.26	-0.19	-0.38	-0.26	-0.19	-0.19	-0.26
R4(ON BIAS HDC)	-0.19	-0.38	-0.19	-0.19	-0.38	-0.26	-0.32	-0.44
R5(ON BIAS HDC)	-0.32	-0.13	-0.19	-0.38	-0.26	-0.26	-0.32	-0.13
R6(ON BIAS HDC)	-0.19	-0.26	-0.26	-0.01	-0.38	-0.26	-0.19	-0.32
R7(ON BIAS HDC)	-0.13	-0.32	-0.32	-0.19	-0.44	-0.38	-0.19	-0.32
R8(ON BIAS HDC)	-0.13	-0.19	-0.26	-0.26	-0.38	-0.32	-0.13	-0.38
R9(ON BIAS HDC)	-0.07	-0.32	-0.38	-0.38	-0.19	-0.19	-0.32	-0.44
R10(ON BIAS HDC)	-0.13	-0.13	-0.32	-0.13	-0.38	-0.13	-0.44	-0.19
R11(ON BIAS HDC)	-0.38	-0.38	-0.13	-0.32	-0.32	-0.19	-0.07	-0.26
Irradiated, ON biased HDC parts statistics								
Min Value	-0.38	-0.38	-0.38	-0.38	-0.44	-0.38	-0.44	-0.44
Max Value	-0.07	-0.13	-0.13	-0.01	-0.19	-0.13	-0.07	-0.13
Average	-0.20	-0.25	-0.26	-0.26	-0.32	-0.23	-0.24	-0.29
Sigma	0.10	0.09	0.08	0.13	0.08	0.08	0.11	0.11

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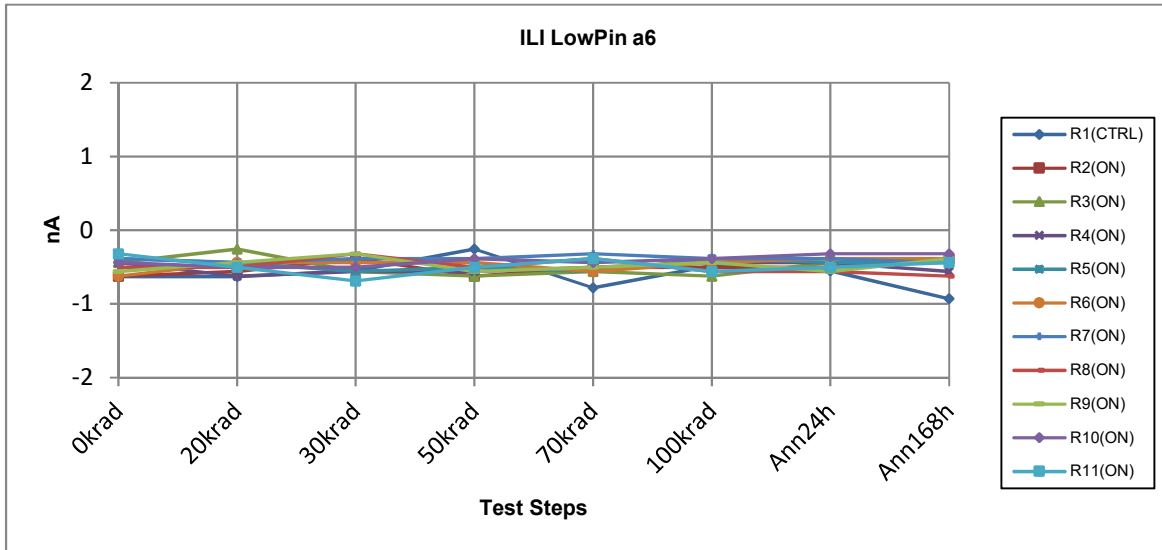
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ILI LowPin a7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.42	-0.27	-0.04	-0.10	-0.27	-0.50	-0.35	-0.50
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.40	-0.22	-0.28	-0.10	-0.22	-0.34	-0.22	-0.28
R3(ON BIAS HDC)	-0.28	-0.28	-0.34	-0.28	-0.22	-0.10	-0.22	-0.28
R4(ON BIAS HDC)	-0.34	-0.22	-0.28	-0.34	-0.52	-0.34	-0.22	-0.22
R5(ON BIAS HDC)	-0.28	-0.28	-0.10	-0.28	-0.03	-0.22	-0.28	-0.22
R6(ON BIAS HDC)	-0.28	0.03	-0.15	-0.28	-0.40	-0.15	-0.22	-0.40
R7(ON BIAS HDC)	-0.10	-0.10	-0.10	-0.22	-0.10	-0.22	-0.10	-0.34
R8(ON BIAS HDC)	-0.28	-0.03	-0.10	-0.46	-0.15	-0.46	-0.15	-0.40
R9(ON BIAS HDC)	-0.15	-0.10	-0.40	-0.22	-0.22	-0.40	-0.22	-0.34
R10(ON BIAS HDC)	-0.22	-0.03	-0.40	-0.22	-0.03	-0.22	-0.10	-0.40
R11(ON BIAS HDC)	-0.15	-0.34	-0.22	-0.34	-0.34	-0.34	-0.22	-0.34
Irradiated, ON biased HDC parts statistics								
Min Value	-0.40	-0.34	-0.40	-0.46	-0.52	-0.46	-0.28	-0.40
Max Value	-0.10	0.03	-0.10	-0.10	-0.03	-0.10	-0.10	-0.22
Average	-0.25	-0.16	-0.24	-0.27	-0.22	-0.28	-0.19	-0.32
Sigma	0.09	0.13	0.12	0.10	0.16	0.12	0.06	0.07

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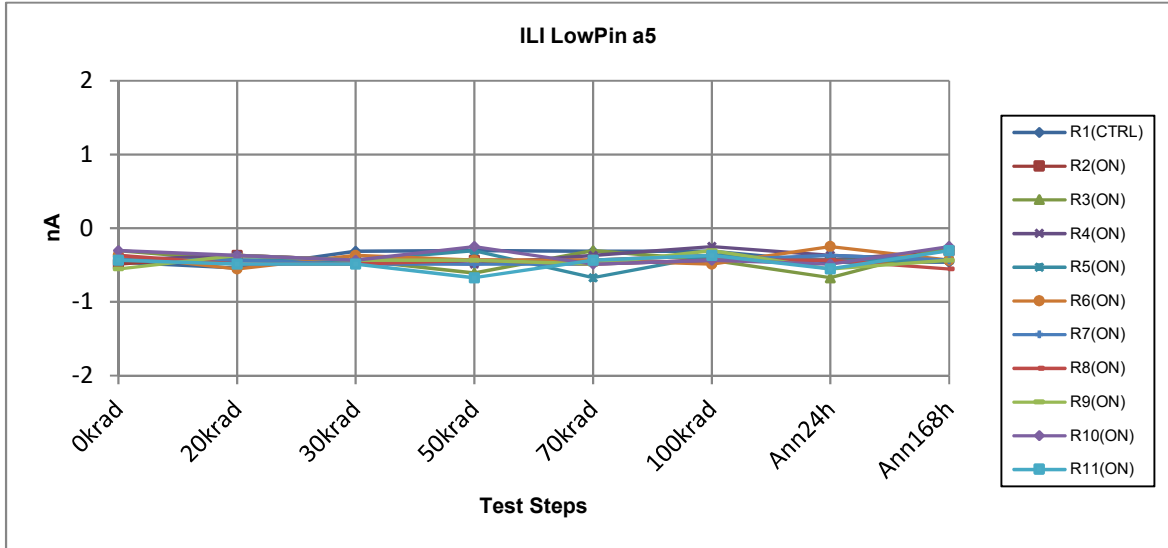
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ILI LowPin a6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.63	-0.63	-0.55	-0.26	-0.78	-0.48	-0.55	-0.93
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.62	-0.56	-0.38	-0.62	-0.50	-0.50	-0.50	-0.38
R3(ON BIAS HDC)	-0.44	-0.26	-0.56	-0.62	-0.56	-0.62	-0.44	-0.38
R4(ON BIAS HDC)	-0.44	-0.62	-0.56	-0.56	-0.50	-0.44	-0.44	-0.56
R5(ON BIAS HDC)	-0.38	-0.44	-0.56	-0.50	-0.56	-0.38	-0.44	-0.44
R6(ON BIAS HDC)	-0.62	-0.44	-0.44	-0.44	-0.56	-0.44	-0.38	-0.38
R7(ON BIAS HDC)	-0.38	-0.44	-0.38	-0.38	-0.32	-0.38	-0.38	-0.44
R8(ON BIAS HDC)	-0.50	-0.50	-0.32	-0.50	-0.38	-0.56	-0.56	-0.62
R9(ON BIAS HDC)	-0.56	-0.44	-0.32	-0.56	-0.50	-0.44	-0.56	-0.38
R10(ON BIAS HDC)	-0.44	-0.50	-0.50	-0.38	-0.44	-0.38	-0.32	-0.32
R11(ON BIAS HDC)	-0.32	-0.50	-0.69	-0.50	-0.38	-0.56	-0.50	-0.44
Irradiated, ON biased HDC parts statistics								
Min Value	-0.62	-0.62	-0.69	-0.62	-0.56	-0.62	-0.56	-0.62
Max Value	-0.32	-0.26	-0.32	-0.38	-0.32	-0.38	-0.32	-0.32
Average	-0.47	-0.47	-0.47	-0.51	-0.47	-0.47	-0.45	-0.44
Sigma	0.10	0.10	0.12	0.09	0.09	0.09	0.08	0.09

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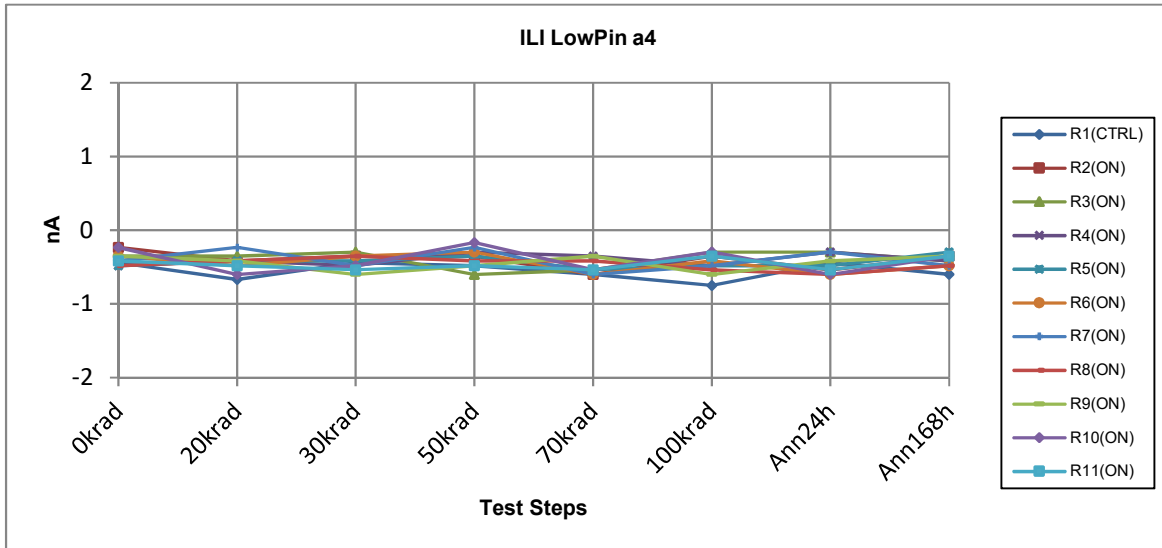
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ILI LowPin a5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.46	-0.54	-0.31	-0.30	-0.31	-0.31	-0.46	-0.46
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.49	-0.37	-0.43	-0.43	-0.43	-0.37	-0.43	-0.30
R3(ON BIAS HDC)	-0.30	-0.43	-0.43	-0.61	-0.30	-0.43	-0.67	-0.25
R4(ON BIAS HDC)	-0.43	-0.37	-0.43	-0.49	-0.37	-0.25	-0.37	-0.43
R5(ON BIAS HDC)	-0.43	-0.43	-0.43	-0.30	-0.67	-0.37	-0.43	-0.43
R6(ON BIAS HDC)	-0.37	-0.55	-0.37	-0.43	-0.43	-0.49	-0.25	-0.43
R7(ON BIAS HDC)	-0.43	-0.43	-0.49	-0.49	-0.49	-0.43	-0.37	-0.43
R8(ON BIAS HDC)	-0.37	-0.49	-0.49	-0.43	-0.49	-0.43	-0.43	-0.55
R9(ON BIAS HDC)	-0.55	-0.37	-0.43	-0.43	-0.49	-0.30	-0.55	-0.43
R10(ON BIAS HDC)	-0.30	-0.37	-0.43	-0.25	-0.49	-0.43	-0.49	-0.25
R11(ON BIAS HDC)	-0.43	-0.49	-0.49	-0.67	-0.43	-0.37	-0.55	-0.30
Irradiated, ON biased HDC parts statistics								
Min Value	-0.55	-0.55	-0.49	-0.67	-0.67	-0.49	-0.67	-0.55
Max Value	-0.30	-0.37	-0.37	-0.25	-0.30	-0.25	-0.25	-0.25
Average	-0.41	-0.43	-0.44	-0.45	-0.46	-0.39	-0.45	-0.38
Sigma	0.08	0.06	0.04	0.12	0.10	0.07	0.12	0.10

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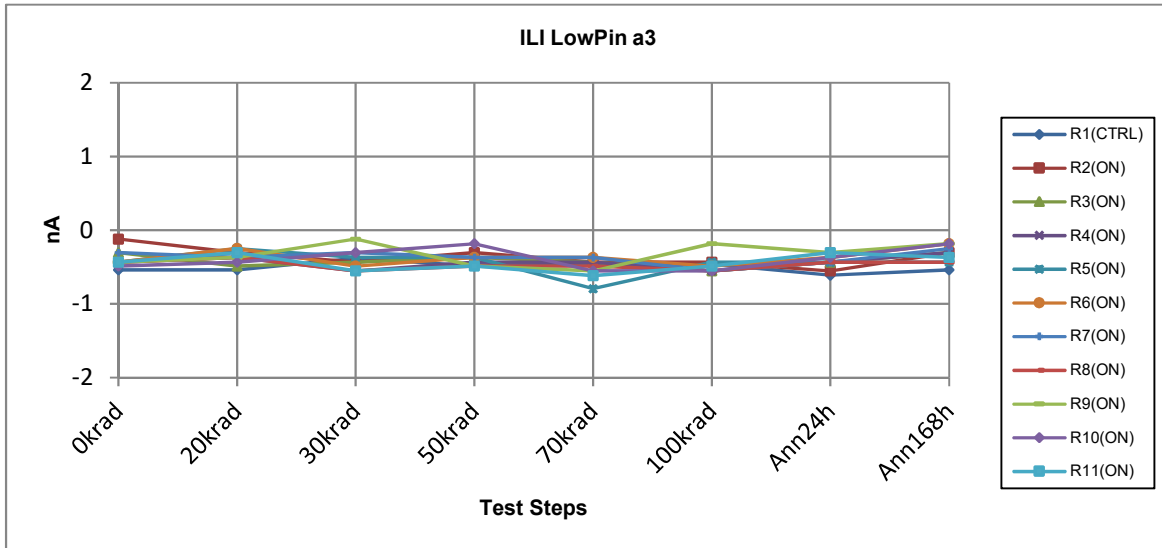
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ILI LowPin a4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.44	-0.67	-0.44	-0.48	-0.60	-0.75	-0.44	-0.60
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.23	-0.42	-0.35	-0.35	-0.60	-0.35	-0.54	-0.35
R3(ON BIAS HDC)	-0.35	-0.35	-0.30	-0.60	-0.54	-0.30	-0.30	-0.42
R4(ON BIAS HDC)	-0.48	-0.42	-0.48	-0.30	-0.35	-0.48	-0.30	-0.42
R5(ON BIAS HDC)	-0.48	-0.42	-0.42	-0.35	-0.54	-0.48	-0.48	-0.30
R6(ON BIAS HDC)	-0.35	-0.48	-0.35	-0.30	-0.60	-0.42	-0.60	-0.48
R7(ON BIAS HDC)	-0.42	-0.23	-0.48	-0.23	-0.60	-0.48	-0.30	-0.48
R8(ON BIAS HDC)	-0.48	-0.42	-0.35	-0.42	-0.42	-0.54	-0.60	-0.48
R9(ON BIAS HDC)	-0.35	-0.42	-0.60	-0.48	-0.35	-0.60	-0.42	-0.35
R10(ON BIAS HDC)	-0.23	-0.60	-0.48	-0.17	-0.54	-0.30	-0.60	-0.35
R11(ON BIAS HDC)	-0.42	-0.48	-0.54	-0.48	-0.54	-0.35	-0.54	-0.35
Irradiated, ON biased HDC parts statistics								
Min Value	-0.48	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.48
Max Value	-0.23	-0.23	-0.30	-0.17	-0.35	-0.30	-0.30	-0.30
Average	-0.38	-0.42	-0.43	-0.37	-0.51	-0.43	-0.47	-0.40
Sigma	0.09	0.09	0.10	0.13	0.10	0.10	0.13	0.07

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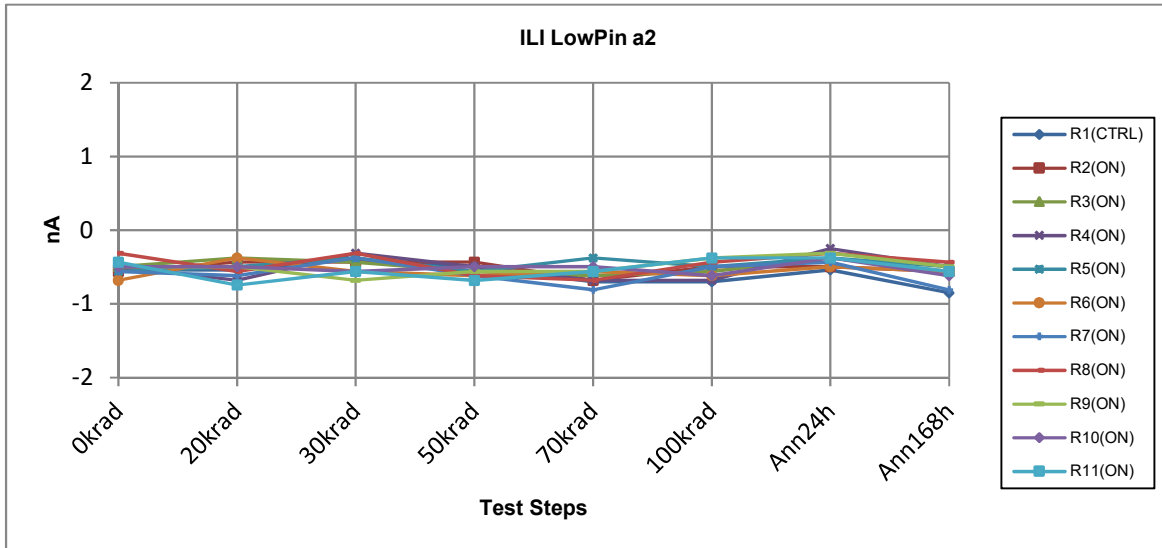
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ILI LowPin a3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.54	-0.54	-0.38	-0.49	-0.46	-0.46	-0.61	-0.54
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.12	-0.30	-0.43	-0.30	-0.43	-0.43	-0.55	-0.30
R3(ON BIAS HDC)	-0.30	-0.49	-0.43	-0.37	-0.43	-0.55	-0.43	-0.30
R4(ON BIAS HDC)	-0.43	-0.37	-0.55	-0.43	-0.43	-0.55	-0.43	-0.30
R5(ON BIAS HDC)	-0.43	-0.25	-0.37	-0.37	-0.79	-0.43	-0.43	-0.43
R6(ON BIAS HDC)	-0.43	-0.25	-0.49	-0.37	-0.37	-0.49	-0.37	-0.18
R7(ON BIAS HDC)	-0.30	-0.37	-0.30	-0.37	-0.37	-0.55	-0.43	-0.25
R8(ON BIAS HDC)	-0.43	-0.37	-0.55	-0.49	-0.49	-0.55	-0.43	-0.43
R9(ON BIAS HDC)	-0.43	-0.37	-0.12	-0.49	-0.55	-0.18	-0.30	-0.18
R10(ON BIAS HDC)	-0.49	-0.43	-0.30	-0.18	-0.55	-0.55	-0.37	-0.18
R11(ON BIAS HDC)	-0.43	-0.30	-0.55	-0.49	-0.62	-0.49	-0.30	-0.37
Irradiated, ON biased HDC parts statistics								
Min Value	-0.49	-0.49	-0.55	-0.49	-0.79	-0.55	-0.55	-0.43
Max Value	-0.12	-0.25	-0.12	-0.18	-0.37	-0.18	-0.30	-0.18
Average	-0.38	-0.35	-0.41	-0.39	-0.50	-0.48	-0.41	-0.29
Sigma	0.11	0.08	0.14	0.10	0.13	0.11	0.07	0.10

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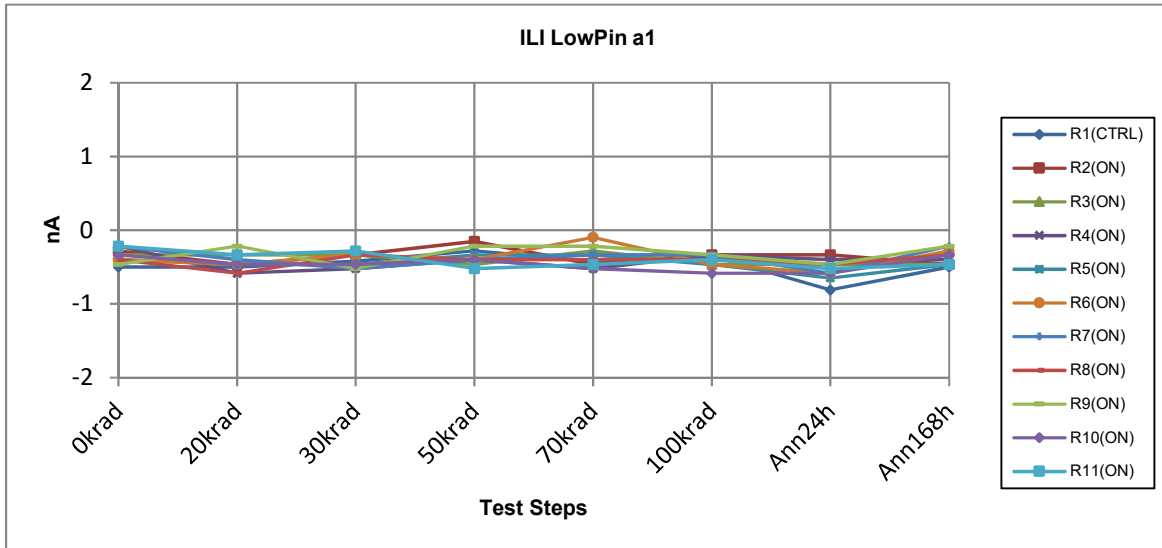
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ILI LowPin a2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.54	-0.54	-0.39	-0.50	-0.70	-0.70	-0.54	-0.85
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.56	-0.43	-0.43	-0.43	-0.68	-0.50	-0.50	-0.56
R3(ON BIAS HDC)	-0.50	-0.38	-0.43	-0.56	-0.62	-0.56	-0.38	-0.56
R4(ON BIAS HDC)	-0.50	-0.68	-0.31	-0.50	-0.68	-0.68	-0.25	-0.50
R5(ON BIAS HDC)	-0.56	-0.50	-0.38	-0.56	-0.38	-0.50	-0.38	-0.50
R6(ON BIAS HDC)	-0.68	-0.38	-0.56	-0.62	-0.56	-0.62	-0.50	-0.56
R7(ON BIAS HDC)	-0.56	-0.62	-0.38	-0.62	-0.81	-0.50	-0.43	-0.81
R8(ON BIAS HDC)	-0.31	-0.56	-0.31	-0.62	-0.68	-0.43	-0.31	-0.43
R9(ON BIAS HDC)	-0.50	-0.50	-0.68	-0.56	-0.56	-0.38	-0.31	-0.50
R10(ON BIAS HDC)	-0.50	-0.50	-0.56	-0.50	-0.50	-0.62	-0.38	-0.62
R11(ON BIAS HDC)	-0.43	-0.74	-0.56	-0.68	-0.56	-0.38	-0.38	-0.56
Irradiated, ON biased HDC parts statistics								
Min Value	-0.68	-0.74	-0.68	-0.68	-0.81	-0.68	-0.50	-0.81
Max Value	-0.31	-0.38	-0.31	-0.43	-0.38	-0.38	-0.25	-0.43
Average	-0.51	-0.53	-0.46	-0.56	-0.60	-0.51	-0.38	-0.56
Sigma	0.10	0.12	0.12	0.07	0.12	0.10	0.08	0.10

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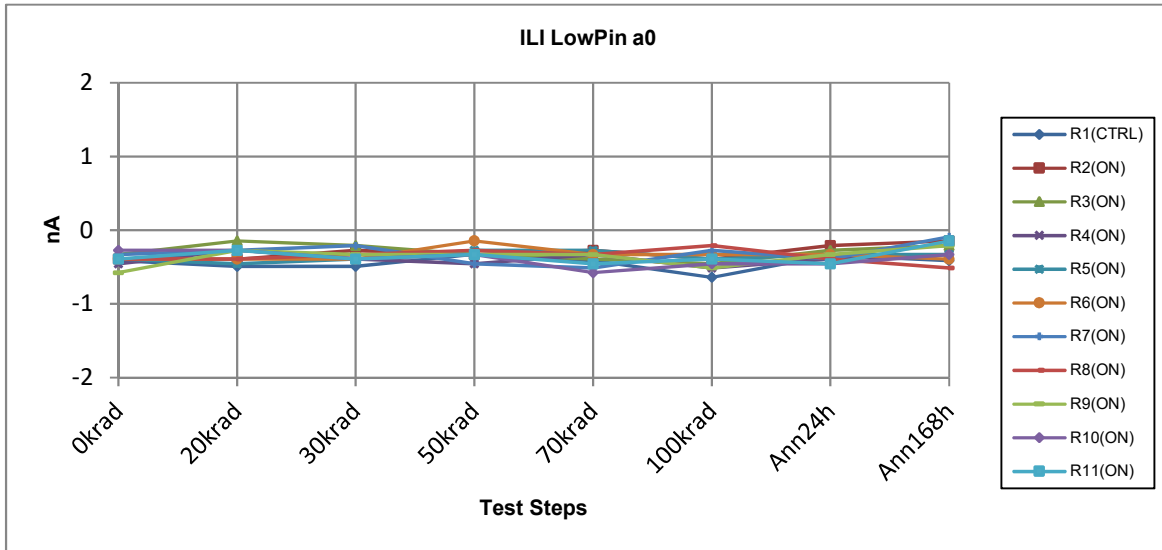
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ILI LowPin a1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.50	-0.50	-0.42	-0.28	-0.42	-0.35	-0.81	-0.50
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.28	-0.46	-0.34	-0.15	-0.46	-0.34	-0.34	-0.46
R3(ON BIAS HDC)	-0.34	-0.34	-0.34	-0.46	-0.28	-0.46	-0.46	-0.46
R4(ON BIAS HDC)	-0.22	-0.58	-0.52	-0.40	-0.52	-0.34	-0.40	-0.40
R5(ON BIAS HDC)	-0.40	-0.46	-0.46	-0.34	-0.34	-0.46	-0.65	-0.46
R6(ON BIAS HDC)	-0.40	-0.46	-0.34	-0.40	-0.10	-0.46	-0.58	-0.28
R7(ON BIAS HDC)	-0.22	-0.40	-0.52	-0.40	-0.34	-0.34	-0.58	-0.22
R8(ON BIAS HDC)	-0.40	-0.58	-0.34	-0.40	-0.40	-0.40	-0.46	-0.34
R9(ON BIAS HDC)	-0.46	-0.22	-0.52	-0.22	-0.22	-0.34	-0.46	-0.22
R10(ON BIAS HDC)	-0.34	-0.46	-0.46	-0.40	-0.52	-0.58	-0.58	-0.34
R11(ON BIAS HDC)	-0.22	-0.34	-0.28	-0.52	-0.46	-0.40	-0.52	-0.46
Irradiated, ON biased HDC parts statistics								
Min Value	-0.46	-0.58	-0.52	-0.52	-0.52	-0.58	-0.65	-0.46
Max Value	-0.22	-0.22	-0.28	-0.15	-0.10	-0.34	-0.34	-0.22
Average	-0.33	-0.43	-0.41	-0.37	-0.36	-0.41	-0.50	-0.36
Sigma	0.09	0.11	0.09	0.11	0.14	0.08	0.10	0.10

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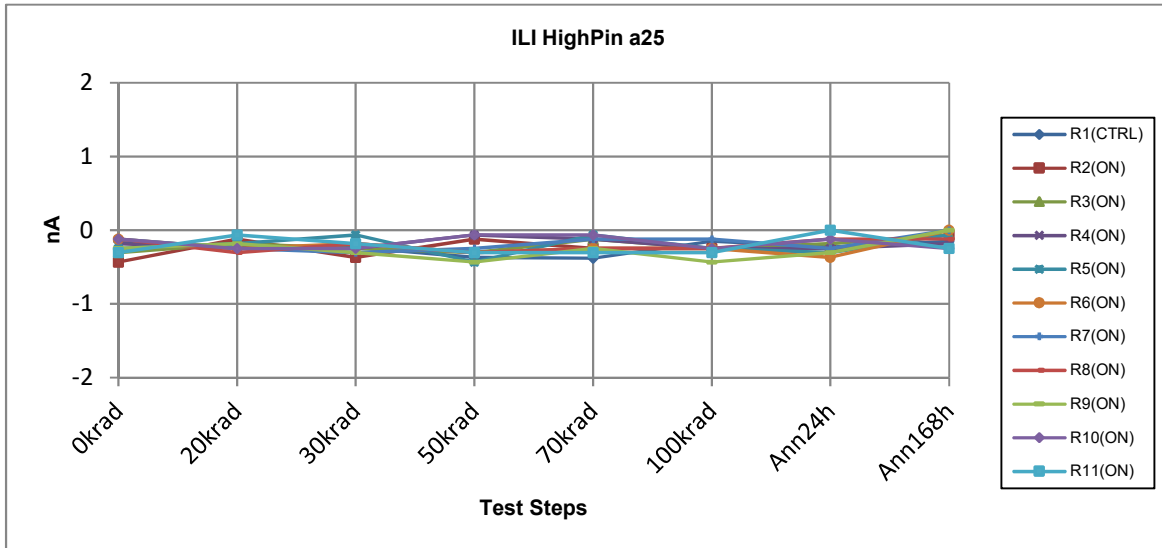
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ILI LowPin a0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.41	-0.49	-0.49	-0.33	-0.41	-0.64	-0.34	-0.41
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.39	-0.39	-0.27	-0.33	-0.27	-0.39	-0.21	-0.14
R3(ON BIAS HDC)	-0.33	-0.14	-0.21	-0.33	-0.39	-0.46	-0.27	-0.21
R4(ON BIAS HDC)	-0.46	-0.27	-0.39	-0.46	-0.33	-0.51	-0.39	-0.33
R5(ON BIAS HDC)	-0.39	-0.46	-0.39	-0.27	-0.27	-0.39	-0.33	-0.33
R6(ON BIAS HDC)	-0.39	-0.39	-0.39	-0.14	-0.33	-0.33	-0.33	-0.39
R7(ON BIAS HDC)	-0.33	-0.27	-0.21	-0.46	-0.51	-0.27	-0.39	-0.09
R8(ON BIAS HDC)	-0.39	-0.39	-0.33	-0.27	-0.33	-0.21	-0.39	-0.51
R9(ON BIAS HDC)	-0.58	-0.27	-0.33	-0.33	-0.33	-0.51	-0.33	-0.21
R10(ON BIAS HDC)	-0.27	-0.27	-0.39	-0.33	-0.58	-0.46	-0.46	-0.33
R11(ON BIAS HDC)	-0.39	-0.27	-0.39	-0.33	-0.46	-0.39	-0.46	-0.14
Irradiated, ON biased HDC parts statistics								
Min Value	-0.58	-0.46	-0.39	-0.46	-0.58	-0.51	-0.46	-0.51
Max Value	-0.27	-0.14	-0.21	-0.14	-0.27	-0.21	-0.21	-0.09
Average	-0.39	-0.31	-0.33	-0.32	-0.38	-0.39	-0.36	-0.27
Sigma	0.08	0.09	0.08	0.09	0.10	0.10	0.08	0.13

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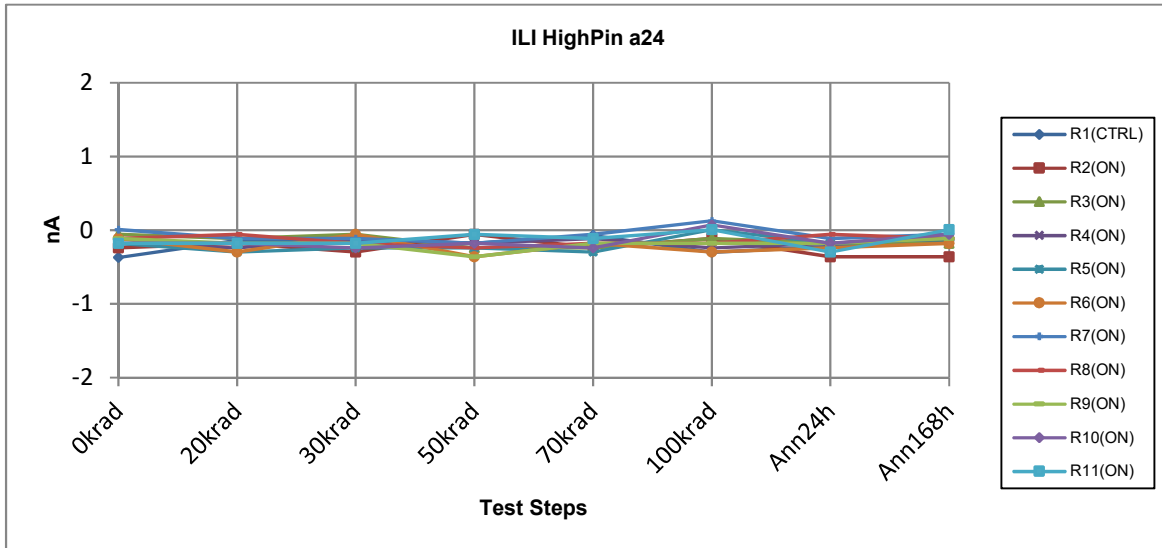
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ILI HighPin a25	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.15	-0.23	-0.23	-0.37	-0.38	-0.15	-0.23	-0.15
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.43	-0.12	-0.37	-0.12	-0.25	-0.25	-0.25	-0.06
R3(ON BIAS HDC)	-0.30	-0.18	-0.25	-0.30	-0.12	-0.25	-0.18	-0.06
R4(ON BIAS HDC)	-0.18	-0.25	-0.25	-0.06	-0.12	-0.25	-0.25	-0.18
R5(ON BIAS HDC)	-0.25	-0.18	-0.06	-0.43	-0.06	-0.25	-0.30	-0.06
R6(ON BIAS HDC)	-0.12	-0.25	-0.18	-0.30	-0.25	-0.25	-0.37	0.00
R7(ON BIAS HDC)	-0.12	-0.25	-0.30	-0.25	-0.12	-0.12	-0.25	0.00
R8(ON BIAS HDC)	-0.12	-0.30	-0.18	-0.30	-0.25	-0.25	-0.12	-0.12
R9(ON BIAS HDC)	-0.25	-0.18	-0.30	-0.43	-0.25	-0.43	-0.30	0.00
R10(ON BIAS HDC)	-0.12	-0.25	-0.25	-0.06	-0.06	-0.25	-0.12	-0.25
R11(ON BIAS HDC)	-0.30	-0.06	-0.18	-0.30	-0.30	-0.30	0.00	-0.25
Irradiated, ON biased HDC parts statistics								
Min Value	-0.43	-0.30	-0.37	-0.43	-0.30	-0.43	-0.37	-0.25
Max Value	-0.12	-0.06	-0.06	-0.06	-0.06	-0.12	0.00	0.00
Average	-0.22	-0.20	-0.23	-0.26	-0.18	-0.26	-0.21	-0.10
Sigma	0.11	0.07	0.08	0.13	0.09	0.08	0.11	0.10

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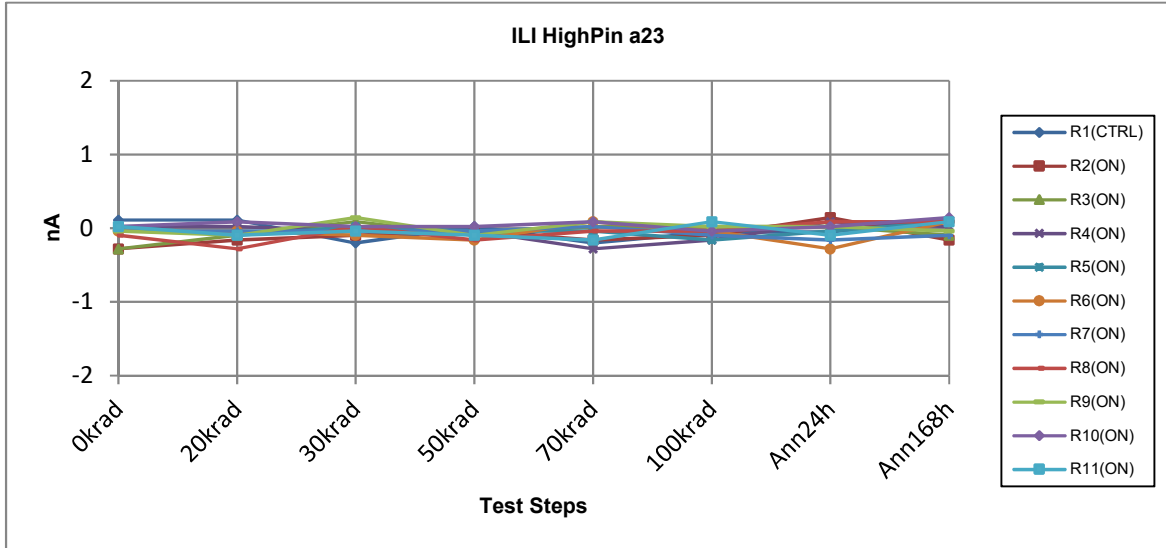
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ILI HighPin a24	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.14	-0.18	-0.07	-0.30	-0.22	-0.14
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.24	-0.18	-0.30	-0.06	-0.24	-0.11	-0.36	-0.36
R3(ON BIAS HDC)	-0.06	-0.11	-0.06	-0.24	-0.24	-0.11	-0.18	-0.18
R4(ON BIAS HDC)	-0.18	-0.24	-0.11	-0.18	-0.11	-0.24	-0.18	-0.11
R5(ON BIAS HDC)	-0.18	-0.30	-0.24	-0.24	-0.30	0.01	-0.18	-0.11
R6(ON BIAS HDC)	-0.11	-0.30	-0.06	-0.36	-0.18	-0.30	-0.24	-0.18
R7(ON BIAS HDC)	0.01	-0.11	-0.11	-0.18	-0.06	0.13	-0.11	-0.06
R8(ON BIAS HDC)	-0.11	-0.06	-0.18	-0.24	-0.18	-0.18	-0.06	-0.11
R9(ON BIAS HDC)	-0.11	-0.18	-0.18	-0.36	-0.18	-0.18	-0.18	-0.11
R10(ON BIAS HDC)	-0.18	-0.18	-0.24	-0.18	-0.24	0.07	-0.18	-0.06
R11(ON BIAS HDC)	-0.18	-0.18	-0.18	-0.06	-0.11	0.01	-0.30	0.01
Irradiated, ON biased HDC parts statistics								
Min Value	-0.24	-0.30	-0.30	-0.36	-0.30	-0.30	-0.36	-0.36
Max Value	0.01	-0.06	-0.06	-0.06	-0.06	0.13	-0.06	0.01
Average	-0.13	-0.18	-0.16	-0.21	-0.18	-0.09	-0.19	-0.13
Sigma	0.07	0.08	0.08	0.10	0.07	0.14	0.09	0.10

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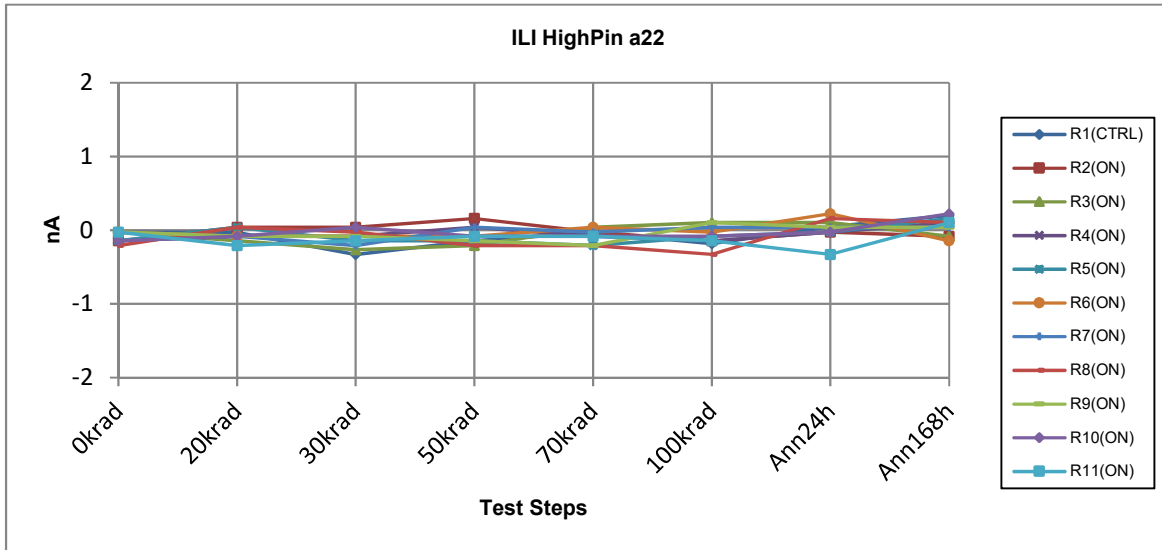
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ILI HighPin a23	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.11	0.11	-0.20	0.02	-0.20	-0.05	-0.05	0.11
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.28	-0.16	-0.10	-0.04	-0.16	-0.10	0.14	-0.16
R3(ON BIAS HDC)	-0.28	-0.10	0.09	-0.10	0.02	0.02	0.02	-0.10
R4(ON BIAS HDC)	0.02	0.02	-0.04	-0.04	-0.28	-0.16	0.09	0.02
R5(ON BIAS HDC)	0.02	-0.10	0.02	-0.04	-0.04	-0.16	-0.04	0.09
R6(ON BIAS HDC)	-0.04	-0.04	-0.10	-0.16	0.09	-0.04	-0.28	0.09
R7(ON BIAS HDC)	-0.04	-0.04	-0.04	-0.04	0.02	-0.10	-0.16	-0.10
R8(ON BIAS HDC)	-0.10	-0.28	0.02	-0.16	-0.04	-0.04	0.09	0.09
R9(ON BIAS HDC)	-0.04	-0.10	0.14	-0.10	0.09	0.02	0.02	-0.04
R10(ON BIAS HDC)	0.02	0.09	0.02	0.02	0.09	-0.04	0.02	0.14
R11(ON BIAS HDC)	0.02	-0.10	-0.04	-0.10	-0.16	0.09	-0.10	0.09
Irradiated, ON biased HDC parts statistics								
Min Value	-0.28	-0.28	-0.10	-0.16	-0.28	-0.16	-0.28	-0.16
Max Value	0.02	0.09	0.14	0.02	0.09	0.09	0.14	0.14
Average	-0.07	-0.08	0.00	-0.07	-0.04	-0.05	-0.02	0.01
Sigma	0.12	0.10	0.08	0.06	0.13	0.08	0.13	0.10

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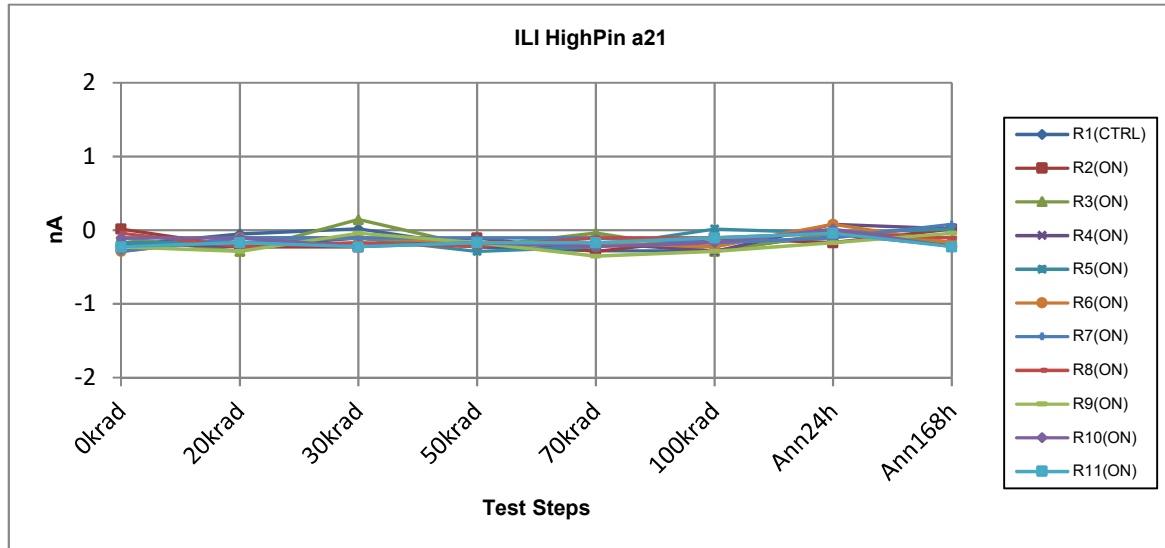
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ILI HighPin a22	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.03	-0.03	-0.33	-0.14	-0.03	-0.18	0.05	0.20
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.14	0.04	0.04	0.16	-0.02	-0.14	-0.02	-0.08
R3(ON BIAS HDC)	-0.02	-0.14	-0.26	-0.21	0.04	0.10	0.10	-0.08
R4(ON BIAS HDC)	-0.14	-0.08	-0.08	0.04	-0.08	-0.14	-0.02	0.10
R5(ON BIAS HDC)	-0.14	0.04	-0.14	-0.14	-0.21	-0.08	-0.02	0.16
R6(ON BIAS HDC)	-0.02	-0.08	-0.08	-0.08	0.04	-0.02	0.22	-0.14
R7(ON BIAS HDC)	-0.14	-0.08	-0.21	0.04	-0.02	0.04	0.04	0.04
R8(ON BIAS HDC)	-0.21	0.04	-0.02	-0.21	-0.21	-0.33	0.16	0.10
R9(ON BIAS HDC)	-0.02	-0.08	-0.08	-0.14	-0.21	0.10	0.04	0.04
R10(ON BIAS HDC)	-0.14	-0.08	0.04	-0.08	-0.08	-0.08	-0.02	0.22
R11(ON BIAS HDC)	-0.02	-0.21	-0.14	-0.08	-0.08	-0.14	-0.33	0.10
Irradiated, ON biased HDC parts statistics								
Min Value	-0.21	-0.21	-0.26	-0.21	-0.21	-0.33	-0.33	-0.14
Max Value	-0.02	0.04	0.04	0.16	0.04	0.10	0.22	0.22
Average	-0.10	-0.06	-0.09	-0.07	-0.08	-0.07	0.01	0.05
Sigma	0.07	0.08	0.10	0.12	0.10	0.13	0.15	0.12

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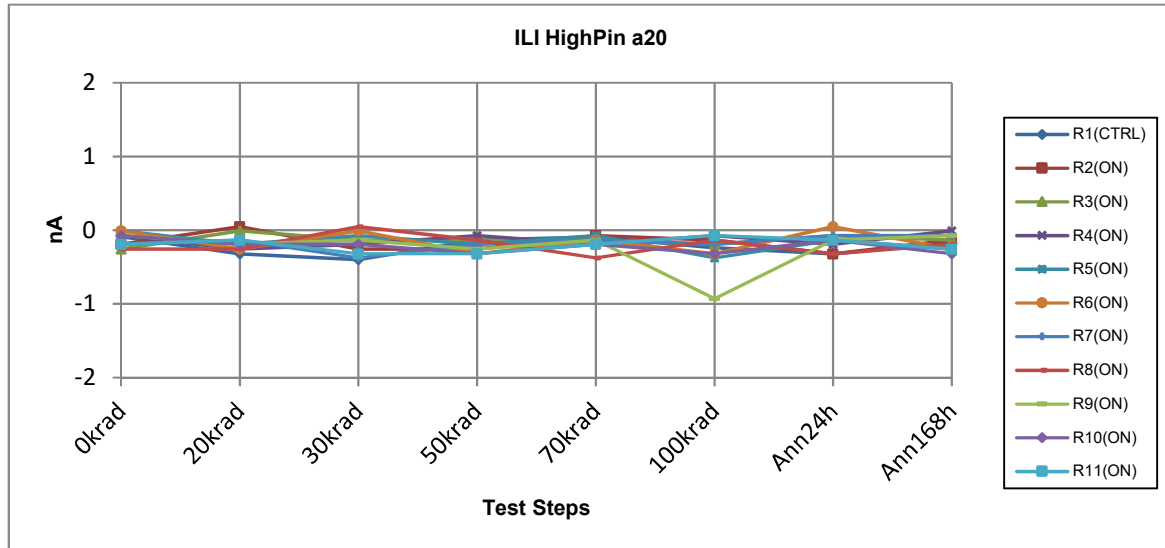
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ILI HighPin a21	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.21	-0.05	0.02	-0.22	-0.28	-0.28	-0.05	-0.21
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.02	-0.22	-0.22	-0.10	-0.29	-0.10	-0.17	0.02
R3(ON BIAS HDC)	-0.10	-0.29	0.14	-0.22	-0.04	-0.29	-0.04	-0.17
R4(ON BIAS HDC)	-0.17	-0.22	-0.10	-0.22	-0.17	-0.29	0.08	0.02
R5(ON BIAS HDC)	-0.17	-0.17	-0.10	-0.29	-0.22	0.02	-0.04	0.02
R6(ON BIAS HDC)	-0.29	-0.10	-0.10	-0.17	-0.17	-0.22	0.08	-0.17
R7(ON BIAS HDC)	-0.29	-0.10	-0.10	-0.10	-0.10	-0.17	-0.10	0.08
R8(ON BIAS HDC)	-0.04	-0.22	-0.17	-0.22	-0.10	-0.10	-0.04	-0.10
R9(ON BIAS HDC)	-0.22	-0.29	-0.04	-0.17	-0.35	-0.29	-0.17	-0.04
R10(ON BIAS HDC)	-0.10	-0.10	-0.22	-0.17	-0.22	-0.17	0.02	-0.22
R11(ON BIAS HDC)	-0.22	-0.17	-0.22	-0.17	-0.17	-0.10	-0.04	-0.22
Irradiated, ON biased HDC parts statistics								
Min Value	-0.29	-0.29	-0.22	-0.29	-0.35	-0.29	-0.17	-0.22
Max Value	0.02	-0.10	0.14	-0.10	-0.04	0.02	0.08	0.08
Average	-0.16	-0.19	-0.12	-0.18	-0.18	-0.17	-0.04	-0.08
Sigma	0.10	0.07	0.11	0.06	0.09	0.10	0.09	0.11

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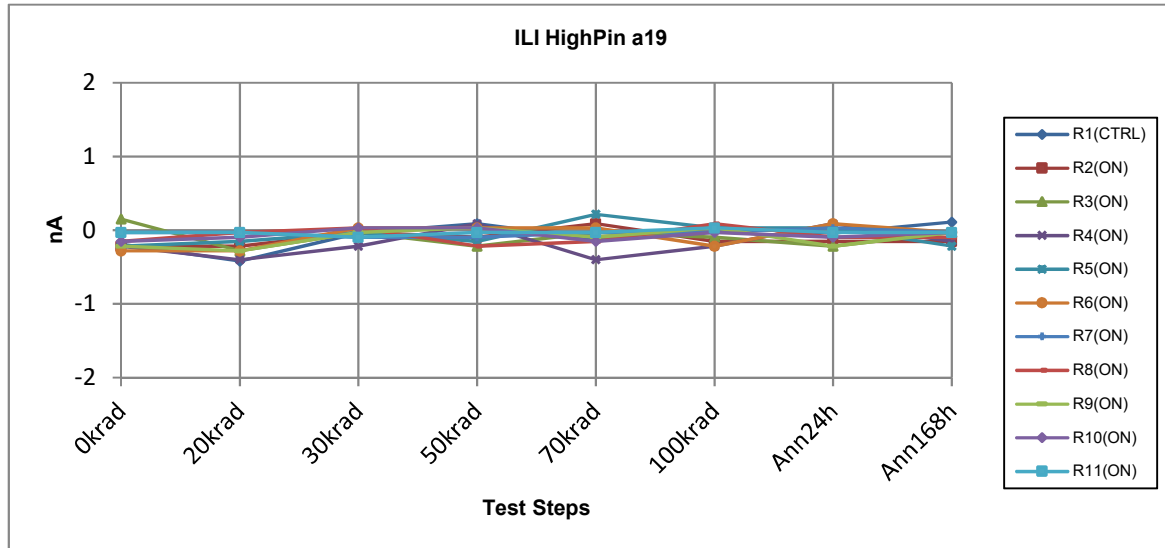
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ILI HighPin a20	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.09	-0.32	-0.40	-0.14	-0.09	-0.24	-0.32	-0.17
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.19	0.05	-0.26	-0.26	-0.07	-0.14	-0.32	-0.14
R3(ON BIAS HDC)	-0.26	-0.01	-0.14	-0.14	-0.14	-0.19	-0.07	-0.14
R4(ON BIAS HDC)	-0.07	-0.26	-0.19	-0.07	-0.19	-0.07	-0.19	-0.01
R5(ON BIAS HDC)	-0.01	-0.19	-0.07	-0.19	-0.07	-0.38	-0.14	-0.26
R6(ON BIAS HDC)	-0.01	-0.26	-0.01	-0.32	-0.14	-0.32	0.05	-0.26
R7(ON BIAS HDC)	-0.19	-0.14	-0.38	-0.19	-0.14	-0.19	-0.07	-0.07
R8(ON BIAS HDC)	-0.26	-0.26	0.05	-0.14	-0.38	-0.14	-0.32	-0.19
R9(ON BIAS HDC)	-0.07	-0.19	-0.14	-0.26	-0.14	-0.93	-0.14	-0.07
R10(ON BIAS HDC)	-0.07	-0.19	-0.19	-0.32	-0.19	-0.32	-0.14	-0.32
R11(ON BIAS HDC)	-0.19	-0.14	-0.32	-0.32	-0.19	-0.07	-0.14	-0.26
Irradiated, ON biased HDC parts statistics								
Min Value	-0.26	-0.26	-0.38	-0.32	-0.38	-0.93	-0.32	-0.32
Max Value	-0.01	0.05	0.05	-0.07	-0.07	-0.07	0.05	-0.01
Average	-0.13	-0.16	-0.16	-0.22	-0.16	-0.27	-0.15	-0.17
Sigma	0.10	0.10	0.13	0.09	0.09	0.25	0.11	0.10

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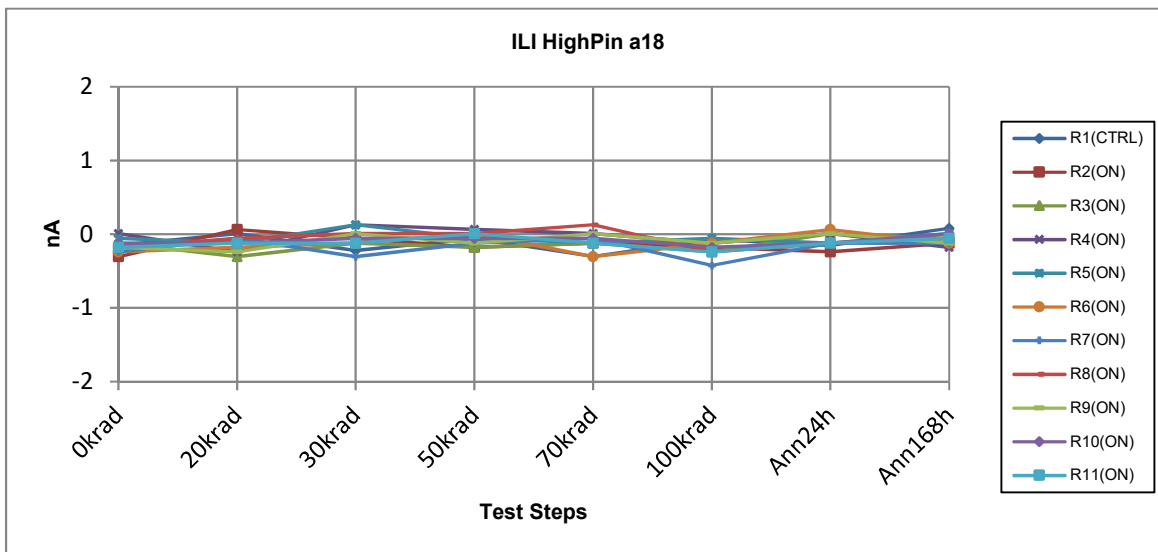
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ILI HighPin a19	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.19	-0.42	-0.04	0.09	-0.12	0.04	-0.04	0.11
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.22	-0.22	-0.03	-0.10	0.09	-0.15	-0.15	-0.15
R3(ON BIAS HDC)	0.15	-0.28	-0.03	-0.22	-0.03	-0.10	-0.22	-0.03
R4(ON BIAS HDC)	-0.22	-0.40	-0.22	0.09	-0.40	-0.22	0.09	-0.15
R5(ON BIAS HDC)	-0.22	-0.15	-0.03	-0.15	0.22	0.03	0.03	-0.22
R6(ON BIAS HDC)	-0.28	-0.28	0.03	0.03	0.03	-0.22	0.09	-0.03
R7(ON BIAS HDC)	-0.03	-0.03	-0.10	-0.10	-0.03	-0.03	0.03	-0.03
R8(ON BIAS HDC)	-0.15	-0.03	0.03	-0.22	-0.15	0.09	-0.10	-0.10
R9(ON BIAS HDC)	-0.22	-0.28	-0.03	0.03	-0.10	0.03	-0.22	-0.03
R10(ON BIAS HDC)	-0.15	-0.10	0.03	0.03	-0.15	-0.03	-0.10	-0.03
R11(ON BIAS HDC)	-0.03	-0.03	-0.10	-0.03	-0.03	0.03	-0.03	-0.03
Irradiated, ON biased HDC parts statistics								
Min Value	-0.28	-0.40	-0.22	-0.22	-0.40	-0.22	-0.22	-0.22
Max Value	0.15	-0.03	0.03	0.09	0.22	0.09	0.09	-0.03
Average	-0.14	-0.18	-0.04	-0.06	-0.06	-0.06	-0.06	-0.08
Sigma	0.13	0.13	0.08	0.11	0.16	0.11	0.12	0.07

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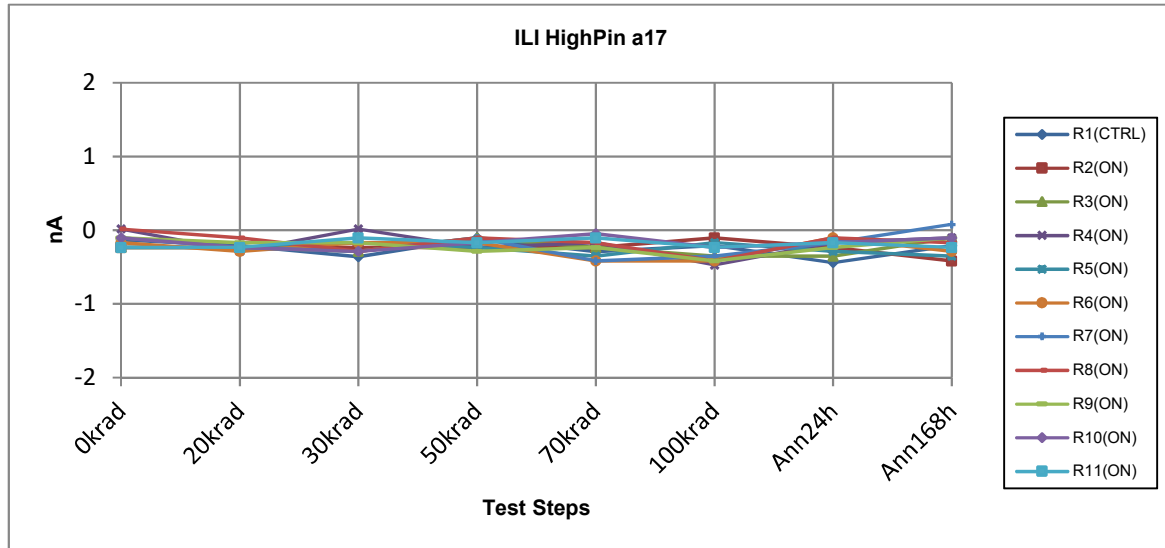
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ILI HighPin a18	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.15	0.01	-0.22	-0.06	-0.30	-0.07	-0.15	0.08
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.30	0.06	-0.06	-0.18	-0.12	-0.18	-0.24	-0.12
R3(ON BIAS HDC)	-0.12	-0.30	-0.12	-0.18	-0.12	-0.24	0.01	-0.06
R4(ON BIAS HDC)	0.01	-0.24	0.13	0.06	0.01	-0.12	0.01	-0.18
R5(ON BIAS HDC)	-0.06	-0.12	0.13	-0.06	-0.12	-0.06	-0.12	0.01
R6(ON BIAS HDC)	-0.24	-0.18	-0.12	0.01	-0.30	-0.12	0.06	-0.12
R7(ON BIAS HDC)	-0.24	-0.06	-0.30	-0.12	-0.06	-0.42	-0.12	-0.12
R8(ON BIAS HDC)	-0.18	-0.06	0.01	0.01	0.13	-0.24	-0.12	-0.06
R9(ON BIAS HDC)	-0.18	-0.24	0.01	-0.12	0.01	-0.12	0.01	-0.12
R10(ON BIAS HDC)	-0.12	-0.12	-0.06	-0.06	-0.06	-0.18	-0.12	0.01
R11(ON BIAS HDC)	-0.18	-0.12	-0.12	0.01	-0.12	-0.24	-0.12	-0.06
Irradiated, ON biased HDC parts statistics								
Min Value	-0.30	-0.30	-0.30	-0.18	-0.30	-0.42	-0.24	-0.18
Max Value	0.01	0.06	0.13	0.06	0.13	-0.06	0.06	0.01
Average	-0.16	-0.14	-0.05	-0.06	-0.08	-0.19	-0.08	-0.08
Sigma	0.09	0.11	0.13	0.08	0.11	0.10	0.09	0.06

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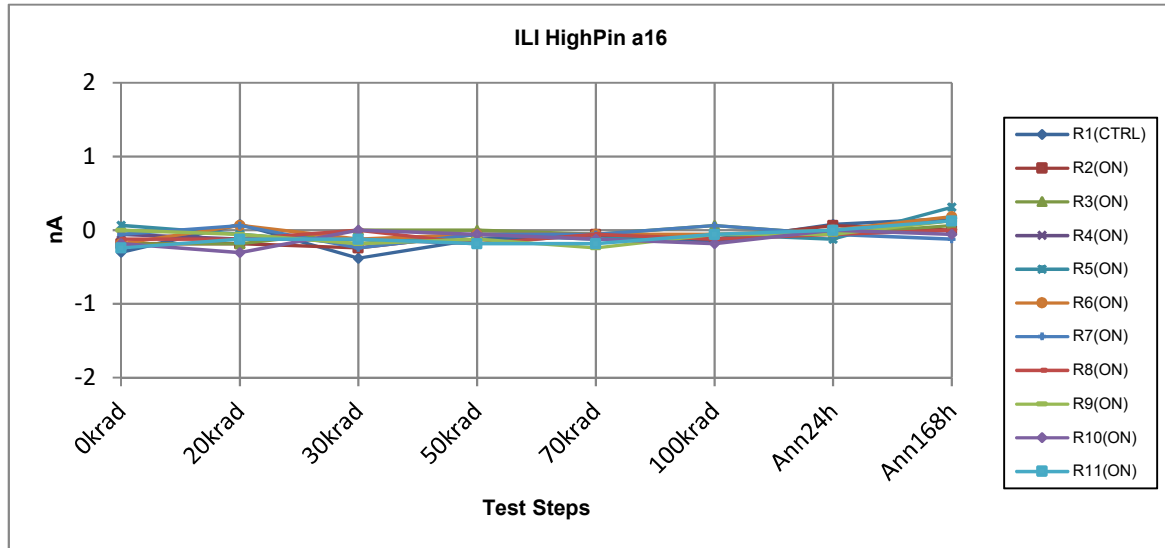
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ILI HighPin a17	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.13	-0.21	-0.36	-0.10	-0.29	-0.21	-0.44	-0.21
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.23	-0.23	-0.23	-0.23	-0.23	-0.10	-0.23	-0.42
R3(ON BIAS HDC)	-0.23	-0.23	-0.29	-0.10	-0.23	-0.35	-0.35	-0.10
R4(ON BIAS HDC)	0.02	-0.29	0.02	-0.23	-0.17	-0.47	-0.17	-0.10
R5(ON BIAS HDC)	-0.23	-0.23	-0.17	-0.23	-0.35	-0.17	-0.29	-0.35
R6(ON BIAS HDC)	-0.17	-0.29	-0.17	-0.17	-0.42	-0.42	-0.10	-0.29
R7(ON BIAS HDC)	-0.10	-0.23	-0.29	-0.10	-0.42	-0.35	-0.17	0.08
R8(ON BIAS HDC)	0.02	-0.10	-0.29	-0.10	-0.17	-0.42	-0.10	-0.17
R9(ON BIAS HDC)	-0.10	-0.17	-0.17	-0.29	-0.23	-0.42	-0.23	-0.10
R10(ON BIAS HDC)	-0.10	-0.23	-0.29	-0.17	-0.05	-0.23	-0.17	-0.10
R11(ON BIAS HDC)	-0.23	-0.23	-0.10	-0.17	-0.10	-0.23	-0.17	-0.23
Irradiated, ON biased HDC parts statistics								
Min Value	-0.23	-0.29	-0.29	-0.29	-0.42	-0.47	-0.35	-0.42
Max Value	0.02	-0.10	0.02	-0.10	-0.05	-0.10	-0.10	0.08
Average	-0.14	-0.22	-0.20	-0.18	-0.24	-0.32	-0.20	-0.18
Sigma	0.10	0.05	0.10	0.06	0.12	0.12	0.08	0.15

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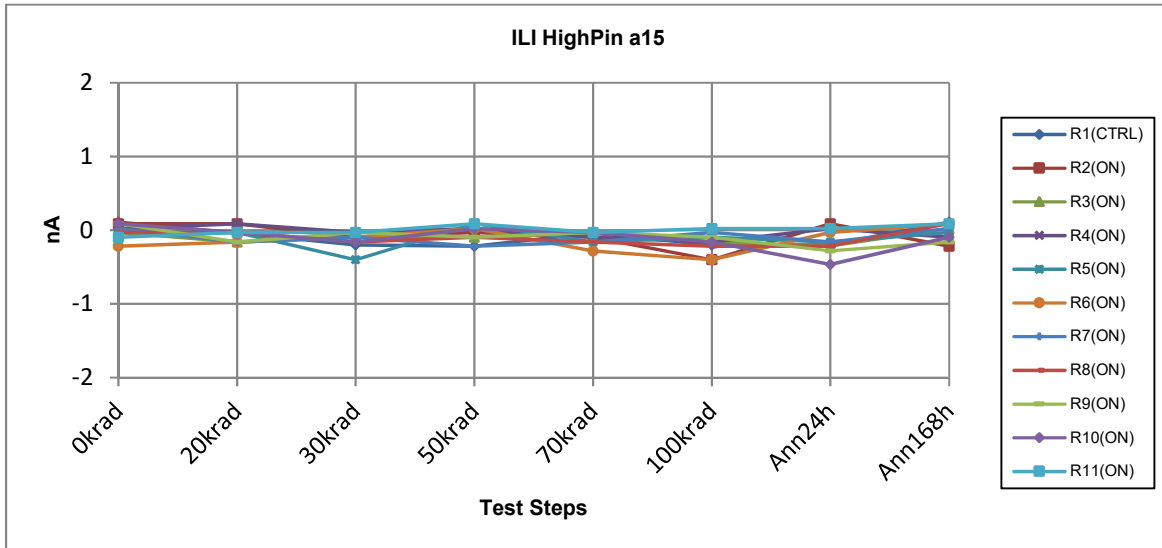
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ILI HighPin a16	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.30	0.08	-0.38	-0.12	-0.07	-0.15	0.08	0.16
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.18	-0.18	-0.24	-0.06	-0.06	-0.12	0.06	0.00
R3(ON BIAS HDC)	-0.18	-0.18	0.00	0.00	-0.06	0.06	-0.06	0.06
R4(ON BIAS HDC)	-0.06	-0.12	-0.12	-0.18	-0.06	-0.12	0.00	0.13
R5(ON BIAS HDC)	0.06	-0.06	-0.18	-0.06	-0.12	-0.06	-0.12	0.31
R6(ON BIAS HDC)	-0.18	0.06	-0.12	-0.06	-0.06	-0.06	0.00	0.18
R7(ON BIAS HDC)	-0.06	0.06	-0.24	-0.06	-0.06	0.06	-0.06	-0.12
R8(ON BIAS HDC)	-0.12	-0.12	0.00	-0.18	-0.06	-0.12	-0.06	0.00
R9(ON BIAS HDC)	0.00	-0.06	-0.18	-0.12	-0.24	-0.06	-0.06	0.13
R10(ON BIAS HDC)	-0.18	-0.30	0.00	-0.06	-0.12	-0.18	0.00	-0.06
R11(ON BIAS HDC)	-0.24	-0.12	-0.12	-0.18	-0.18	-0.06	0.00	0.13
Irradiated, ON biased HDC parts statistics								
Min Value	-0.24	-0.30	-0.24	-0.18	-0.24	-0.18	-0.12	-0.12
Max Value	0.06	0.06	0.00	0.00	-0.06	0.06	0.06	0.31
Average	-0.11	-0.10	-0.12	-0.10	-0.10	-0.06	-0.03	0.08
Sigma	0.10	0.11	0.09	0.07	0.07	0.08	0.05	0.13

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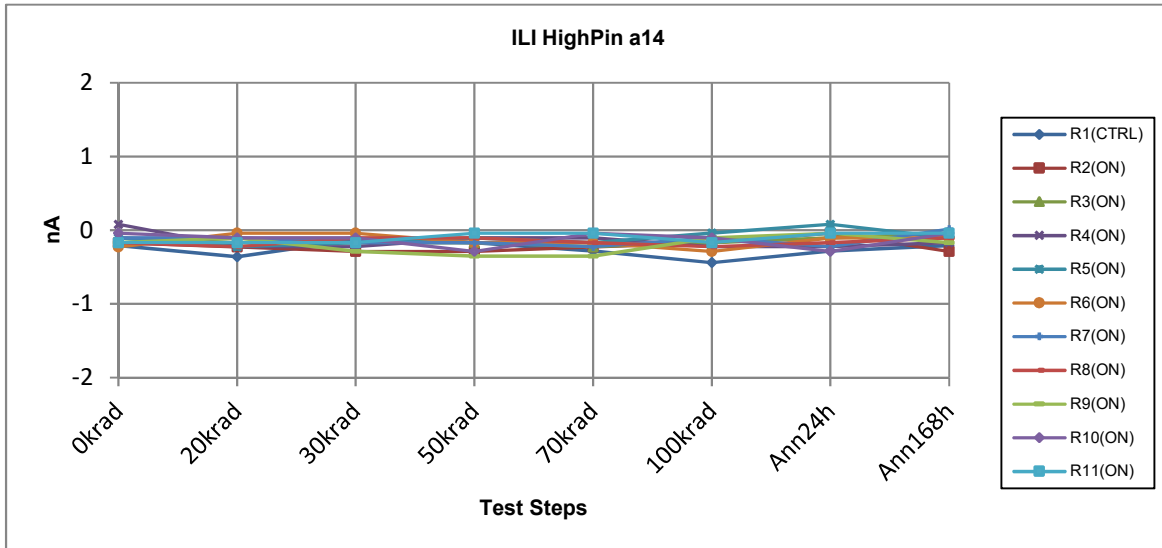
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ILI HighPin a15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.11	-0.04	-0.20	-0.22	-0.04	-0.20	-0.20	0.11
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.09	0.09	-0.10	-0.03	-0.10	-0.40	0.09	-0.22
R3(ON BIAS HDC)	-0.03	-0.16	-0.10	-0.10	-0.03	-0.16	-0.22	0.02
R4(ON BIAS HDC)	0.02	0.09	-0.03	0.02	-0.10	-0.16	0.02	-0.10
R5(ON BIAS HDC)	-0.03	-0.03	-0.40	0.09	-0.16	-0.10	-0.16	-0.03
R6(ON BIAS HDC)	-0.22	-0.16	-0.10	0.02	-0.28	-0.40	-0.03	0.09
R7(ON BIAS HDC)	0.02	-0.16	-0.10	-0.22	-0.16	-0.03	-0.16	0.02
R8(ON BIAS HDC)	-0.03	-0.03	-0.16	-0.10	-0.16	-0.22	-0.22	0.09
R9(ON BIAS HDC)	0.09	-0.16	-0.03	-0.10	-0.03	-0.10	-0.28	-0.16
R10(ON BIAS HDC)	0.09	-0.03	-0.16	0.02	-0.03	-0.16	-0.46	-0.10
R11(ON BIAS HDC)	-0.10	-0.03	-0.03	0.09	-0.03	0.02	0.02	0.09
Irradiated, ON biased HDC parts statistics								
Min Value	-0.22	-0.16	-0.40	-0.22	-0.28	-0.40	-0.46	-0.22
Max Value	0.09	0.09	-0.03	0.09	-0.03	0.02	0.09	0.09
Average	-0.01	-0.06	-0.12	-0.03	-0.11	-0.17	-0.14	-0.03
Sigma	0.10	0.10	0.11	0.10	0.08	0.14	0.17	0.11

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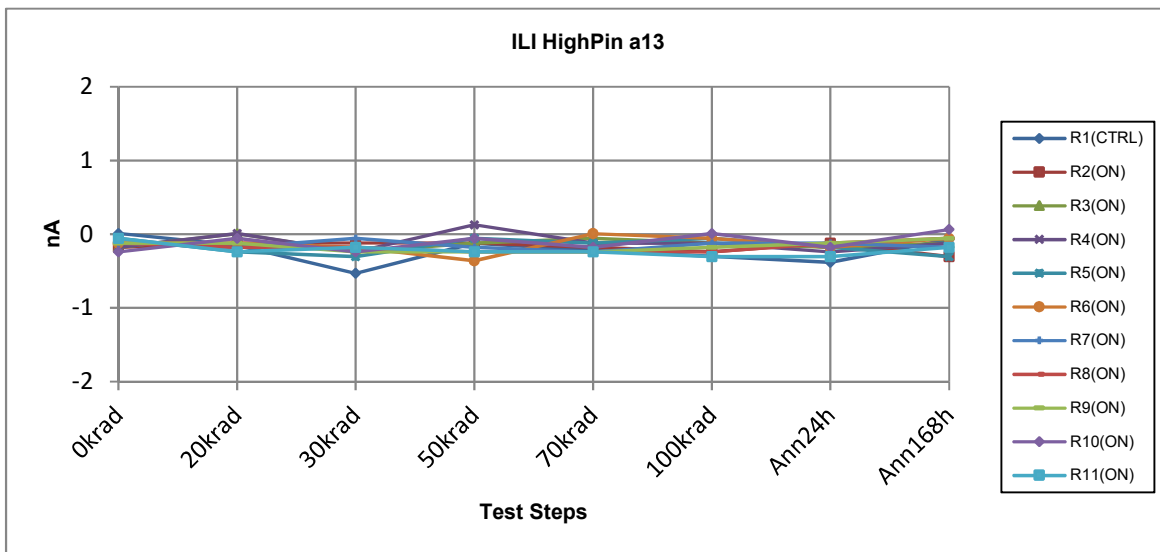
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ILI HighPin a14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.21	-0.36	-0.13	-0.17	-0.28	-0.44	-0.28	-0.21
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.17	-0.22	-0.29	-0.29	-0.22	-0.17	-0.04	-0.29
R3(ON BIAS HDC)	-0.10	-0.17	-0.17	-0.17	-0.22	-0.17	-0.10	-0.04
R4(ON BIAS HDC)	0.08	-0.22	-0.22	-0.10	-0.10	-0.22	-0.22	-0.17
R5(ON BIAS HDC)	-0.10	-0.22	-0.17	-0.10	-0.17	-0.04	0.08	-0.10
R6(ON BIAS HDC)	-0.22	-0.04	-0.04	-0.17	-0.17	-0.29	-0.10	-0.10
R7(ON BIAS HDC)	-0.10	-0.10	-0.17	-0.17	-0.22	-0.10	-0.22	0.02
R8(ON BIAS HDC)	-0.17	-0.22	-0.10	-0.10	-0.17	-0.22	-0.17	-0.10
R9(ON BIAS HDC)	-0.17	-0.10	-0.29	-0.35	-0.35	-0.10	-0.04	-0.17
R10(ON BIAS HDC)	-0.04	-0.10	-0.10	-0.29	-0.04	-0.10	-0.29	-0.04
R11(ON BIAS HDC)	-0.17	-0.17	-0.17	-0.04	-0.04	-0.17	-0.04	-0.04
Irradiated, ON biased HDC parts statistics								
Min Value	-0.22	-0.22	-0.29	-0.35	-0.35	-0.29	-0.29	-0.29
Max Value	0.08	-0.04	-0.04	-0.04	-0.04	-0.04	0.08	0.02
Average	-0.12	-0.16	-0.17	-0.18	-0.17	-0.16	-0.12	-0.10
Sigma	0.09	0.07	0.08	0.10	0.09	0.07	0.11	0.09

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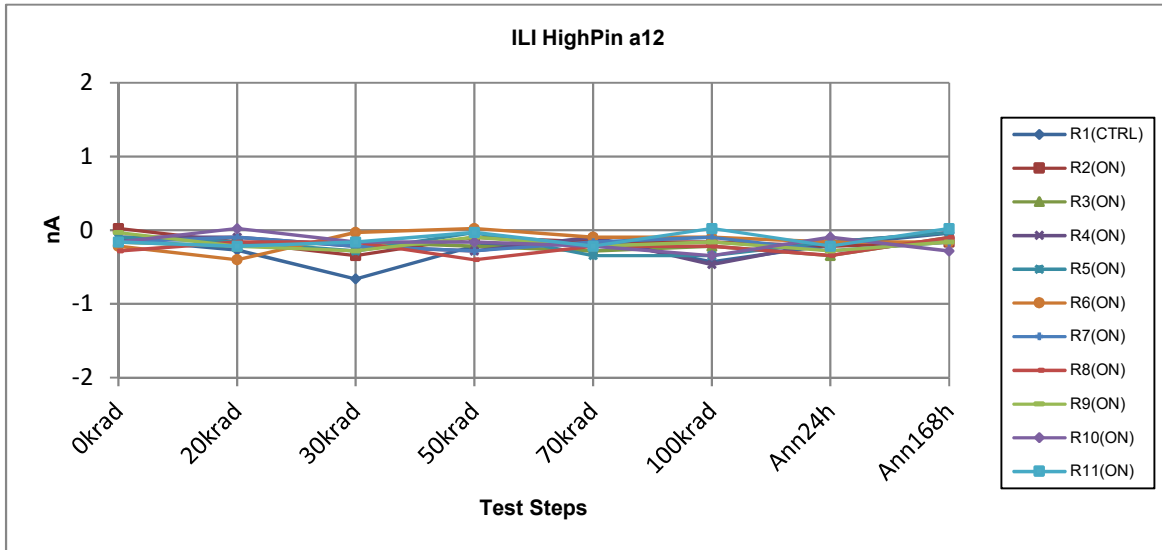
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ILI HighPin a13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.01	-0.15	-0.53	-0.12	-0.22	-0.30	-0.38	-0.07
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.18	-0.12	-0.12	-0.12	-0.18	-0.24	-0.12	-0.30
R3(ON BIAS HDC)	-0.18	0.01	-0.24	-0.12	-0.06	-0.12	-0.18	-0.12
R4(ON BIAS HDC)	-0.18	0.01	-0.24	0.13	-0.12	-0.12	-0.24	-0.12
R5(ON BIAS HDC)	-0.06	-0.24	-0.30	-0.06	-0.12	-0.06	-0.18	-0.30
R6(ON BIAS HDC)	-0.12	-0.12	-0.18	-0.36	0.01	-0.06	-0.18	-0.06
R7(ON BIAS HDC)	-0.12	-0.18	-0.06	-0.18	-0.24	-0.12	-0.12	-0.18
R8(ON BIAS HDC)	-0.12	-0.18	-0.18	-0.24	-0.24	-0.24	-0.12	-0.06
R9(ON BIAS HDC)	-0.12	-0.12	-0.24	-0.24	-0.24	-0.18	-0.12	-0.06
R10(ON BIAS HDC)	-0.24	-0.06	-0.24	-0.06	-0.18	0.01	-0.18	0.06
R11(ON BIAS HDC)	-0.06	-0.24	-0.18	-0.24	-0.24	-0.30	-0.30	-0.18
Irradiated, ON biased HDC parts statistics								
Min Value	-0.24	-0.24	-0.30	-0.36	-0.24	-0.30	-0.30	-0.30
Max Value	-0.06	0.01	-0.06	0.13	0.01	0.01	-0.12	0.06
Average	-0.14	-0.12	-0.20	-0.15	-0.16	-0.14	-0.17	-0.13
Sigma	0.06	0.09	0.07	0.14	0.09	0.10	0.06	0.12

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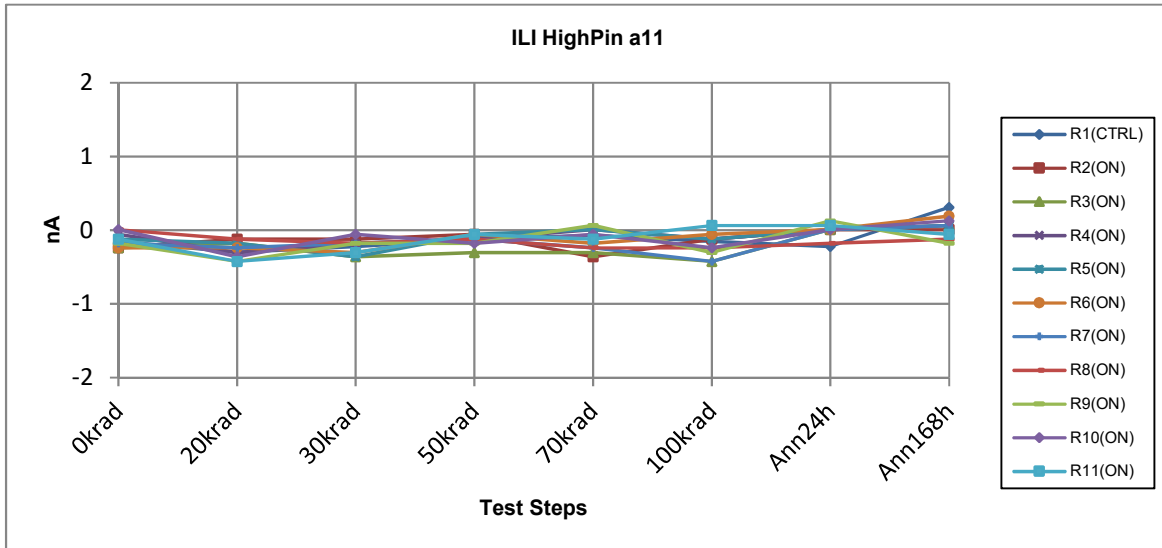
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ILI HighPin a12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.12	-0.27	-0.66	-0.22	-0.12	-0.43	-0.20	-0.04
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.02	-0.16	-0.34	-0.10	-0.16	-0.16	-0.22	-0.16
R3(ON BIAS HDC)	-0.16	-0.22	-0.16	-0.22	-0.28	-0.22	-0.34	-0.10
R4(ON BIAS HDC)	-0.10	-0.10	-0.22	-0.28	-0.10	-0.46	-0.16	-0.03
R5(ON BIAS HDC)	-0.10	-0.16	-0.28	-0.03	-0.34	-0.34	-0.16	-0.03
R6(ON BIAS HDC)	-0.22	-0.40	-0.03	0.02	-0.10	-0.10	-0.16	-0.16
R7(ON BIAS HDC)	-0.16	-0.10	-0.22	-0.28	-0.16	-0.10	-0.28	-0.16
R8(ON BIAS HDC)	-0.28	-0.16	-0.16	-0.40	-0.22	-0.22	-0.34	-0.10
R9(ON BIAS HDC)	-0.03	-0.22	-0.28	-0.10	-0.22	-0.16	-0.28	-0.16
R10(ON BIAS HDC)	-0.16	0.02	-0.16	-0.16	-0.22	-0.34	-0.10	-0.28
R11(ON BIAS HDC)	-0.16	-0.22	-0.16	-0.03	-0.22	0.02	-0.22	0.02
Irradiated, ON biased HDC parts statistics								
Min Value	-0.28	-0.40	-0.34	-0.40	-0.34	-0.46	-0.34	-0.28
Max Value	0.02	0.02	-0.03	0.02	-0.10	0.02	-0.10	0.02
Average	-0.13	-0.17	-0.20	-0.16	-0.20	-0.21	-0.23	-0.12
Sigma	0.09	0.11	0.09	0.14	0.08	0.14	0.08	0.09

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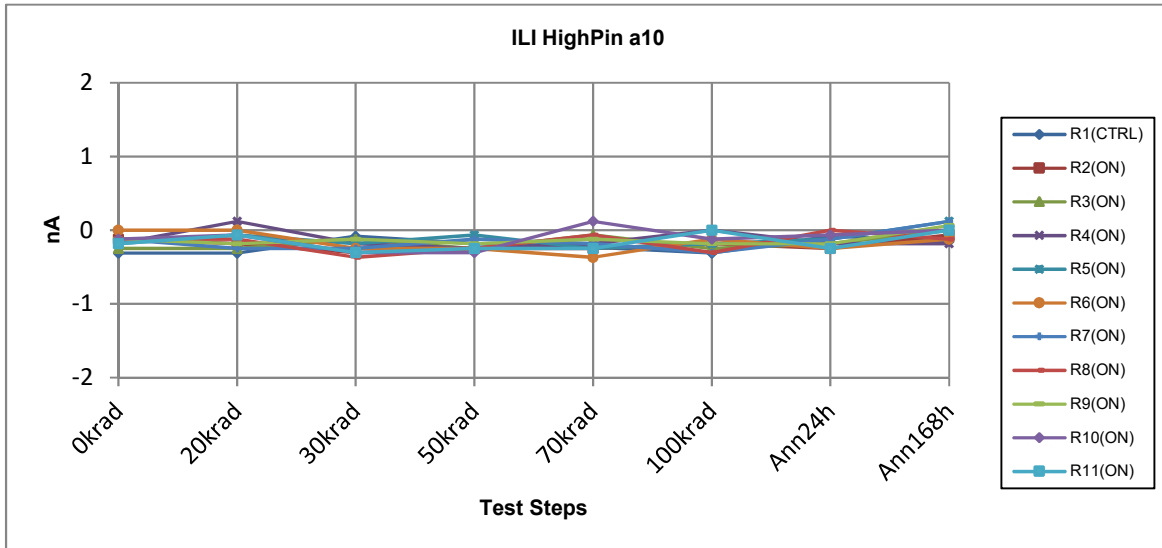
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ILI HighPin a11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.15	-0.30	-0.22	-0.12	-0.07	-0.15	-0.22	0.31
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.24	-0.12	-0.12	-0.06	-0.36	-0.12	0.01	0.01
R3(ON BIAS HDC)	-0.24	-0.18	-0.36	-0.30	-0.30	-0.42	0.01	0.06
R4(ON BIAS HDC)	-0.06	-0.30	-0.18	-0.12	0.01	-0.12	0.01	0.06
R5(ON BIAS HDC)	-0.12	-0.18	-0.36	-0.06	0.01	-0.12	0.01	0.06
R6(ON BIAS HDC)	-0.24	-0.24	-0.30	-0.06	-0.18	-0.06	0.01	0.19
R7(ON BIAS HDC)	-0.18	-0.24	-0.18	-0.12	-0.24	-0.42	0.01	0.06
R8(ON BIAS HDC)	0.01	-0.12	-0.18	-0.12	-0.24	-0.24	-0.18	-0.12
R9(ON BIAS HDC)	-0.18	-0.42	-0.18	-0.18	0.06	-0.30	0.13	-0.18
R10(ON BIAS HDC)	0.01	-0.36	-0.06	-0.18	-0.06	-0.24	0.01	0.13
R11(ON BIAS HDC)	-0.12	-0.42	-0.30	-0.06	-0.12	0.06	0.06	-0.06
Irradiated, ON biased HDC parts statistics								
Min Value	-0.24	-0.42	-0.36	-0.30	-0.36	-0.42	-0.18	-0.18
Max Value	0.01	-0.12	-0.06	-0.06	0.06	0.06	0.13	0.19
Average	-0.14	-0.26	-0.22	-0.12	-0.14	-0.20	0.01	0.02
Sigma	0.10	0.12	0.10	0.08	0.15	0.16	0.08	0.11

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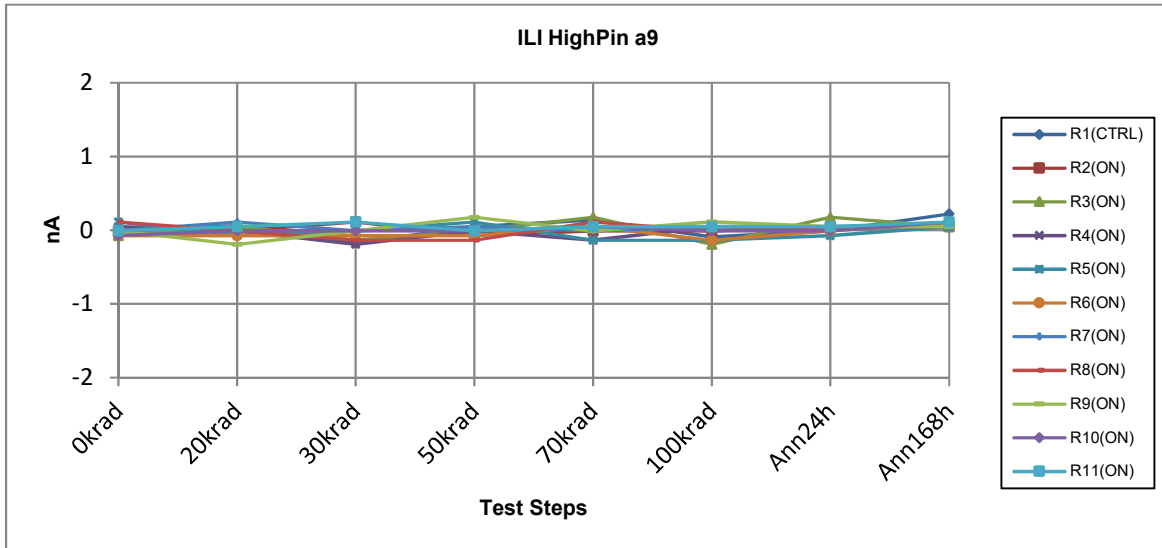
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ILI HighPin a10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.31	-0.31	-0.08	-0.18	-0.23	-0.31	-0.08	-0.15
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.12	-0.18	-0.30	-0.25	-0.25	-0.18	-0.25	-0.06
R3(ON BIAS HDC)	-0.25	-0.25	-0.12	-0.25	-0.06	-0.25	-0.18	0.00
R4(ON BIAS HDC)	-0.18	0.12	-0.18	-0.25	-0.18	0.00	-0.18	-0.18
R5(ON BIAS HDC)	-0.18	-0.06	-0.18	-0.06	-0.25	-0.18	-0.12	0.12
R6(ON BIAS HDC)	0.00	0.00	-0.25	-0.25	-0.37	-0.12	-0.25	-0.12
R7(ON BIAS HDC)	-0.12	-0.25	-0.25	-0.12	-0.18	-0.30	-0.12	0.12
R8(ON BIAS HDC)	-0.12	-0.12	-0.37	-0.25	-0.06	-0.30	0.00	-0.12
R9(ON BIAS HDC)	-0.12	-0.18	-0.12	-0.18	-0.12	-0.18	-0.18	0.06
R10(ON BIAS HDC)	-0.12	-0.06	-0.30	-0.30	0.12	-0.12	-0.06	0.00
R11(ON BIAS HDC)	-0.18	-0.06	-0.30	-0.25	-0.25	0.00	-0.25	0.00
Irradiated, ON biased HDC parts statistics								
Min Value	-0.25	-0.25	-0.37	-0.30	-0.37	-0.30	-0.25	-0.18
Max Value	0.00	0.12	-0.12	-0.06	0.12	0.00	0.00	0.12
Average	-0.14	-0.11	-0.24	-0.22	-0.16	-0.16	-0.16	-0.02
Sigma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

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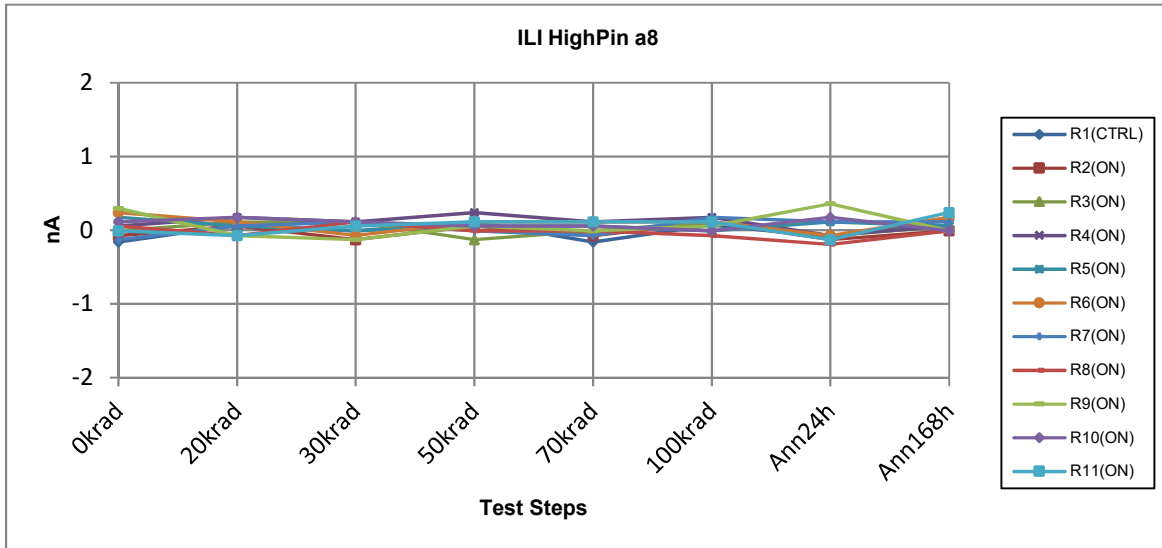
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ILI HighPin a9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.01	0.06	-0.17	0.05	0.14	-0.09	-0.01	0.22
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.01	-0.01	0.11	-0.07	-0.01	-0.01	0.05	0.05
R3(ON BIAS HDC)	-0.07	0.05	-0.14	-0.01	0.18	-0.19	0.18	0.05
R4(ON BIAS HDC)	0.05	-0.01	-0.19	-0.01	-0.14	0.05	0.05	0.05
R5(ON BIAS HDC)	0.11	-0.07	-0.01	0.11	-0.14	-0.14	-0.07	0.05
R6(ON BIAS HDC)	-0.07	-0.07	-0.07	-0.07	0.05	-0.14	-0.01	0.11
R7(ON BIAS HDC)	-0.01	0.11	-0.01	0.05	-0.01	0.05	0.05	0.05
R8(ON BIAS HDC)	0.11	-0.01	-0.14	-0.14	0.11	-0.01	0.05	0.05
R9(ON BIAS HDC)	-0.01	-0.19	-0.01	0.18	-0.01	0.11	0.05	0.05
R10(ON BIAS HDC)	-0.07	-0.01	-0.01	-0.01	0.05	-0.01	-0.01	0.11
R11(ON BIAS HDC)	-0.01	0.05	0.11	-0.01	0.05	0.05	0.05	0.11
Irradiated, ON biased HDC parts statistics								
Min Value	-0.07	-0.19	-0.19	-0.14	-0.14	-0.19	-0.07	0.05
Max Value	0.11	0.11	0.11	0.18	0.18	0.11	0.18	0.11
Average	0.00	-0.02	-0.03	0.00	0.01	-0.02	0.04	0.07
Sigma	0.07	0.08	0.10	0.09	0.10	0.10	0.06	0.03

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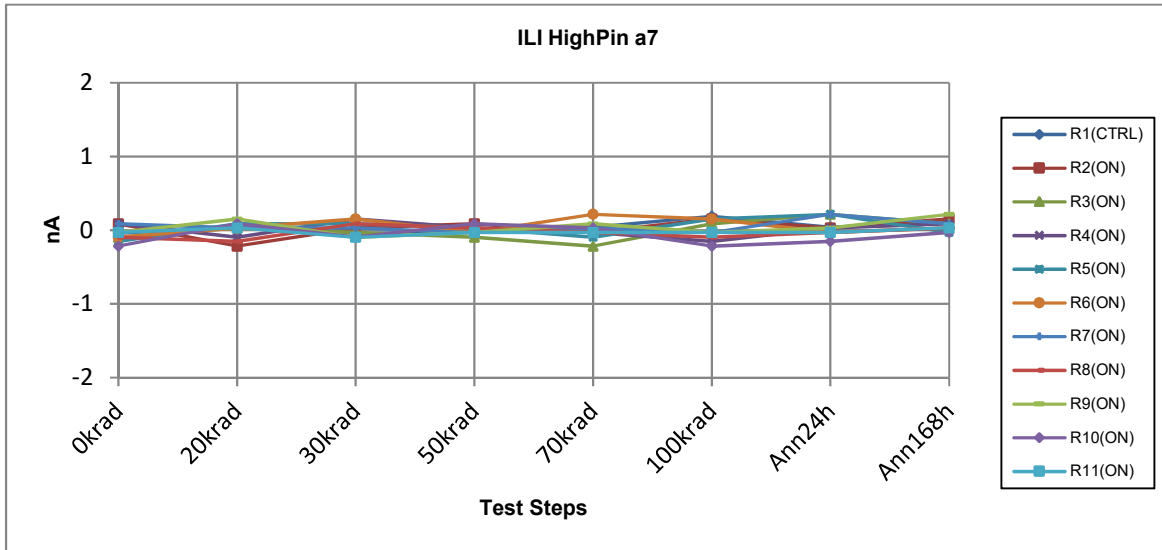
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ILI HighPin a8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.16	0.07	-0.01	0.11	-0.16	0.07	-0.09	0.14
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.07	0.06	-0.13	0.06	-0.07	0.11	-0.13	-0.01
R3(ON BIAS HDC)	-0.01	0.11	0.11	-0.13	-0.01	0.11	-0.07	0.06
R4(ON BIAS HDC)	0.06	0.18	0.11	0.24	0.11	0.18	-0.07	0.06
R5(ON BIAS HDC)	0.18	0.06	-0.01	0.06	0.06	-0.01	0.11	0.06
R6(ON BIAS HDC)	0.24	0.11	-0.07	0.11	0.11	0.11	-0.07	0.18
R7(ON BIAS HDC)	-0.13	0.06	0.11	-0.01	-0.07	0.18	0.11	0.11
R8(ON BIAS HDC)	0.06	-0.07	0.11	-0.01	-0.01	-0.07	-0.19	-0.01
R9(ON BIAS HDC)	0.30	-0.07	-0.13	0.06	-0.01	0.06	0.36	-0.01
R10(ON BIAS HDC)	0.11	0.18	0.11	0.06	0.06	-0.01	0.18	-0.01
R11(ON BIAS HDC)	-0.01	-0.07	0.06	0.11	0.11	0.11	-0.13	0.24
Irradiated, ON biased HDC parts statistics								
Min Value	-0.13	-0.07	-0.13	-0.13	-0.07	-0.07	-0.19	-0.01
Max Value	0.30	0.18	0.11	0.24	0.11	0.18	0.36	0.24
Average	0.07	0.05	0.03	0.05	0.03	0.08	0.01	0.07
Sigma	0.14	0.10	0.10	0.10	0.07	0.08	0.17	0.09

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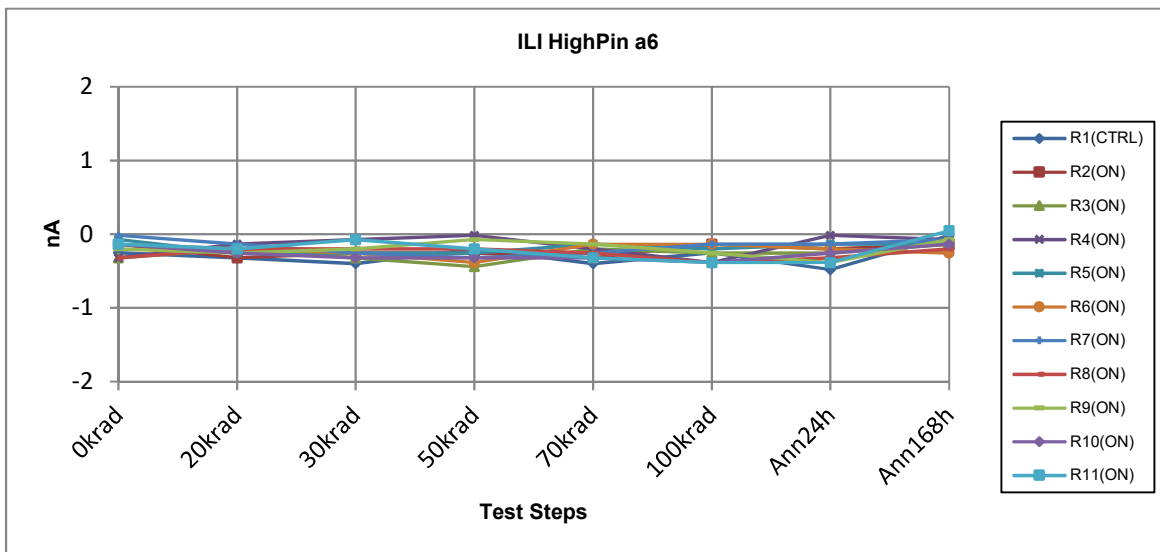
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ILI HighPin a7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.04	0.04	-0.04	-0.03	0.04	0.19	0.04	0.11
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.09	-0.22	0.03	0.09	-0.03	0.15	0.03	0.15
R3(ON BIAS HDC)	-0.10	0.03	-0.03	-0.10	-0.22	0.09	0.22	0.09
R4(ON BIAS HDC)	0.09	-0.10	0.15	0.03	-0.03	-0.15	0.03	0.09
R5(ON BIAS HDC)	-0.15	0.09	0.09	0.03	-0.10	0.15	0.22	-0.03
R6(ON BIAS HDC)	-0.10	0.03	0.15	-0.03	0.22	0.15	-0.03	0.03
R7(ON BIAS HDC)	0.09	0.03	0.03	-0.03	0.03	-0.03	0.22	0.09
R8(ON BIAS HDC)	-0.10	-0.15	0.09	0.03	-0.03	-0.10	-0.03	0.03
R9(ON BIAS HDC)	-0.03	0.15	-0.10	-0.03	0.09	-0.03	0.03	0.22
R10(ON BIAS HDC)	-0.22	0.09	-0.10	0.09	0.03	-0.22	-0.15	-0.03
R11(ON BIAS HDC)	-0.03	0.03	-0.10	-0.03	-0.03	-0.03	-0.03	0.03
Irradiated, ON biased HDC parts statistics								
Min Value	-0.22	-0.22	-0.10	-0.10	-0.22	-0.22	-0.15	-0.03
Max Value	0.09	0.15	0.15	0.09	0.22	0.15	0.22	0.22
Average	-0.05	0.00	0.02	0.00	-0.01	0.00	0.05	0.07
Sigma	0.11	0.12	0.10	0.06	0.11	0.13	0.13	0.08

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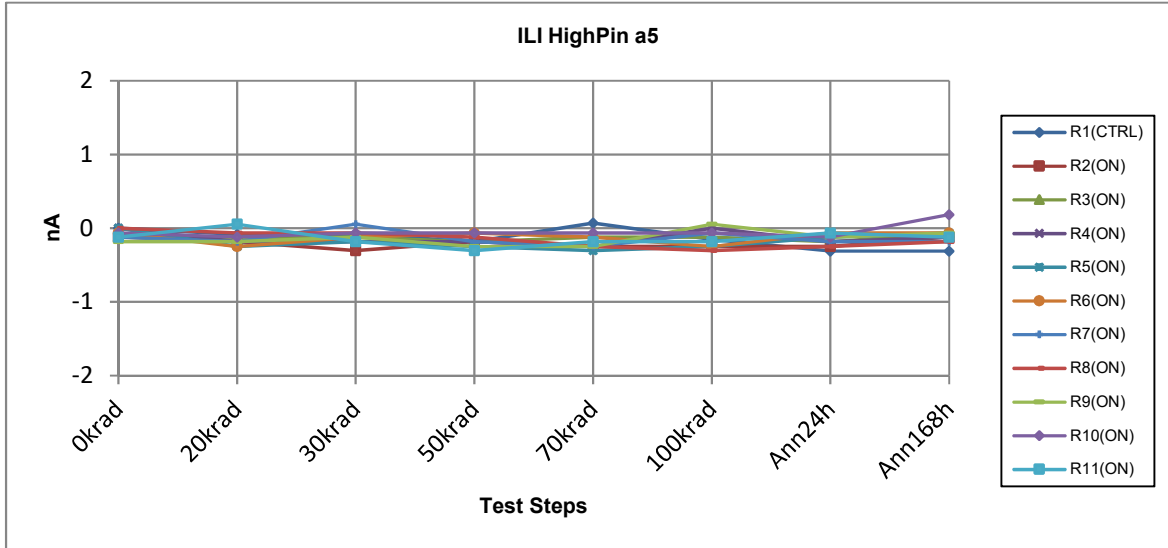
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ILI HighPin a6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.25	-0.32	-0.40	-0.20	-0.40	-0.25	-0.48	-0.02
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.14	-0.32	-0.26	-0.26	-0.32	-0.14	-0.20	-0.14
R3(ON BIAS HDC)	-0.32	-0.20	-0.32	-0.44	-0.20	-0.26	-0.26	-0.14
R4(ON BIAS HDC)	-0.32	-0.14	-0.07	-0.02	-0.20	-0.38	-0.02	-0.07
R5(ON BIAS HDC)	-0.07	-0.26	-0.26	-0.26	-0.14	-0.20	-0.14	-0.14
R6(ON BIAS HDC)	-0.14	-0.20	-0.26	-0.38	-0.14	-0.14	-0.20	-0.26
R7(ON BIAS HDC)	-0.02	-0.14	-0.26	-0.32	-0.26	-0.14	-0.14	-0.07
R8(ON BIAS HDC)	-0.32	-0.20	-0.20	-0.20	-0.26	-0.38	-0.32	-0.20
R9(ON BIAS HDC)	-0.20	-0.26	-0.20	-0.07	-0.14	-0.26	-0.38	-0.07
R10(ON BIAS HDC)	-0.14	-0.26	-0.32	-0.32	-0.32	-0.38	-0.26	-0.14
R11(ON BIAS HDC)	-0.14	-0.20	-0.07	-0.20	-0.32	-0.38	-0.38	0.05
Irradiated, ON biased HDC parts statistics								
Min Value	-0.32	-0.32	-0.32	-0.44	-0.32	-0.38	-0.38	-0.26
Max Value	-0.02	-0.14	-0.07	-0.02	-0.14	-0.14	-0.02	0.05
Average	-0.18	-0.22	-0.22	-0.25	-0.23	-0.27	-0.23	-0.12
Sigma	0.11	0.06	0.09	0.13	0.08	0.11	0.12	0.08

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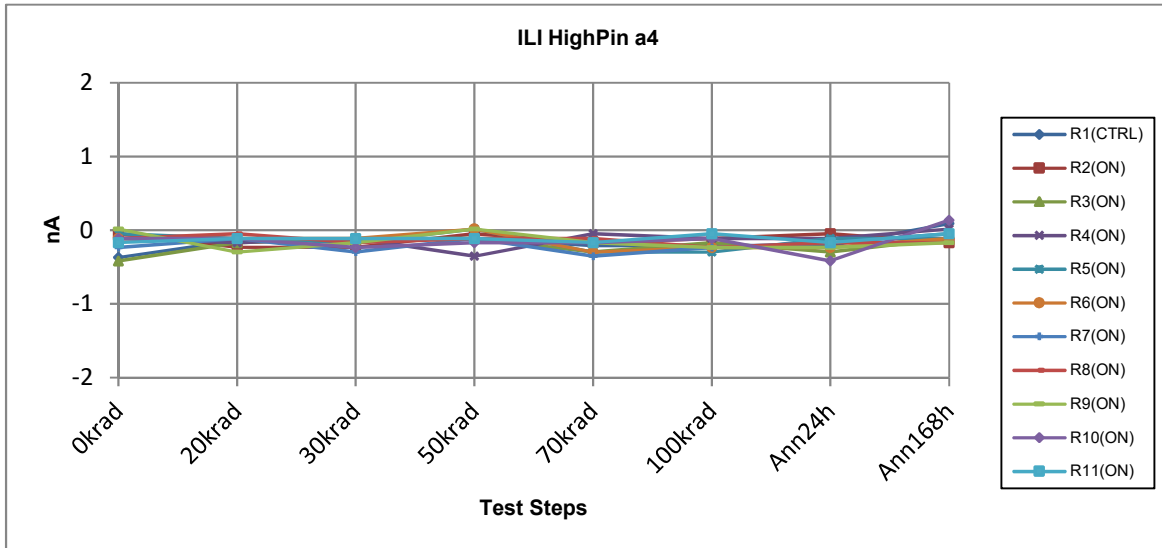
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ILI HighPin a5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.00	-0.08	-0.08	-0.18	0.07	-0.15	-0.31	-0.31
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.12	-0.18	-0.30	-0.18	-0.25	-0.25	-0.25	-0.12
R3(ON BIAS HDC)	-0.12	-0.12	-0.12	-0.18	-0.12	-0.12	-0.18	-0.06
R4(ON BIAS HDC)	0.00	-0.18	-0.18	-0.18	-0.25	0.00	-0.18	-0.12
R5(ON BIAS HDC)	0.00	-0.25	-0.18	-0.25	-0.30	-0.25	-0.12	-0.06
R6(ON BIAS HDC)	-0.06	-0.25	-0.12	-0.06	-0.12	-0.25	-0.06	-0.06
R7(ON BIAS HDC)	-0.12	-0.18	0.06	-0.18	-0.25	-0.06	-0.18	-0.18
R8(ON BIAS HDC)	0.00	-0.06	-0.06	-0.12	-0.25	-0.30	-0.25	-0.18
R9(ON BIAS HDC)	-0.18	-0.18	-0.12	-0.25	-0.25	0.06	-0.12	-0.06
R10(ON BIAS HDC)	-0.06	-0.12	-0.06	-0.06	-0.06	-0.06	-0.12	0.18
R11(ON BIAS HDC)	-0.12	0.06	-0.18	-0.30	-0.18	-0.18	-0.06	-0.12
Irradiated, ON biased HDC parts statistics								
Min Value	-0.18	-0.25	-0.30	-0.30	-0.30	-0.30	-0.25	-0.18
Max Value	0.00	0.06	0.06	-0.06	-0.06	0.06	-0.06	0.18
Average	-0.08	-0.15	-0.13	-0.18	-0.20	-0.14	-0.15	-0.08
Sigma	0.06	0.09	0.10	0.08	0.08	0.12	0.07	0.10

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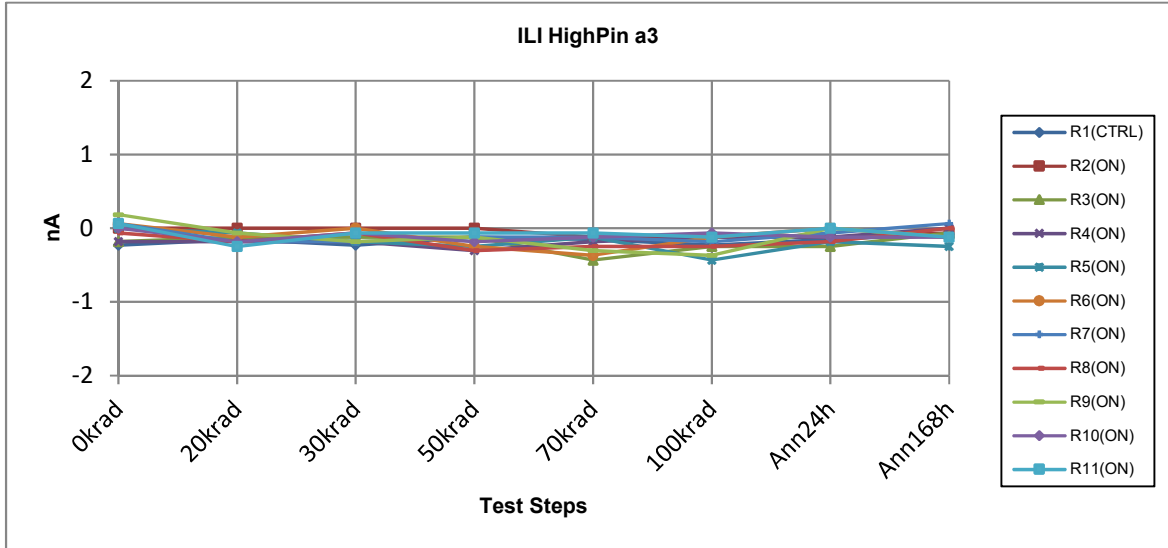
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ILI HighPin a4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.14	-0.11	-0.21	-0.21	-0.21	0.09
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.05	-0.23	-0.23	-0.05	-0.17	-0.11	-0.05	-0.17
R3(ON BIAS HDC)	-0.42	-0.17	-0.11	-0.11	-0.30	-0.17	-0.30	-0.11
R4(ON BIAS HDC)	-0.11	-0.17	-0.11	-0.35	-0.05	-0.11	-0.11	0.02
R5(ON BIAS HDC)	-0.05	-0.11	-0.17	0.02	-0.30	-0.30	-0.11	-0.11
R6(ON BIAS HDC)	-0.11	-0.11	-0.11	0.02	-0.30	-0.23	-0.23	-0.11
R7(ON BIAS HDC)	-0.23	-0.11	-0.30	-0.11	-0.35	-0.23	-0.17	-0.05
R8(ON BIAS HDC)	-0.11	-0.05	-0.17	-0.11	-0.11	-0.23	-0.17	-0.17
R9(ON BIAS HDC)	0.02	-0.30	-0.17	0.02	-0.17	-0.23	-0.23	-0.17
R10(ON BIAS HDC)	-0.11	-0.11	-0.23	-0.17	-0.17	-0.11	-0.42	0.14
R11(ON BIAS HDC)	-0.17	-0.11	-0.11	-0.11	-0.17	-0.05	-0.17	-0.05
Irradiated, ON biased HDC parts statistics								
Min Value	-0.42	-0.30	-0.30	-0.35	-0.35	-0.30	-0.42	-0.17
Max Value	0.02	-0.05	-0.11	0.02	-0.05	-0.05	-0.05	0.14
Average	-0.13	-0.15	-0.17	-0.10	-0.21	-0.18	-0.20	-0.08
Sigma	0.12	0.07	0.06	0.11	0.10	0.08	0.11	0.10

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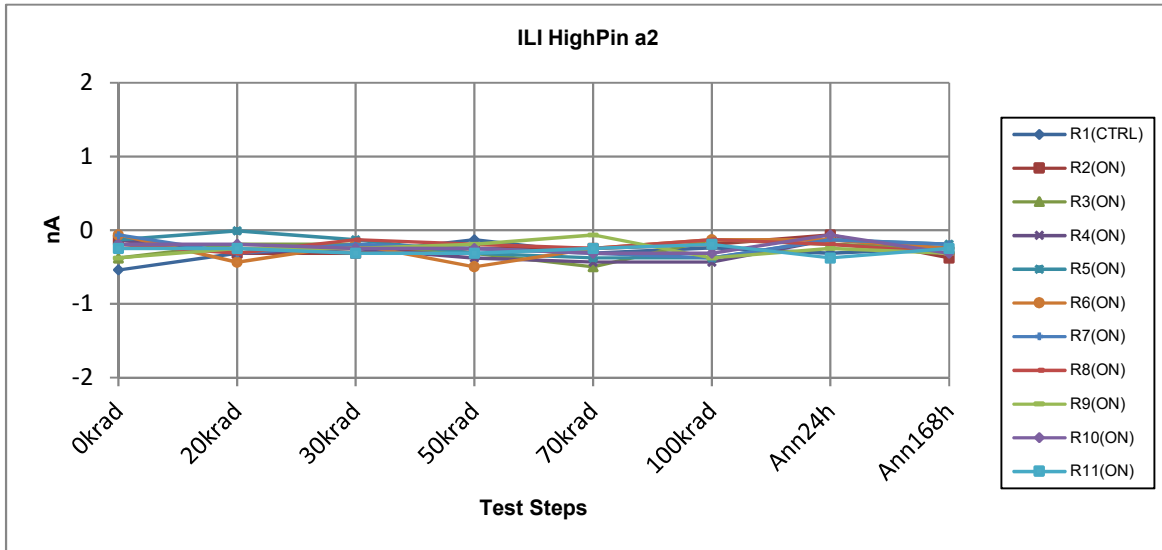
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ILI HighPin a3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.23	-0.15	-0.23	-0.12	-0.15	-0.23	-0.15	-0.08
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.00	0.00	0.00	0.00	-0.12	-0.12	-0.12	-0.06
R3(ON BIAS HDC)	-0.18	-0.12	-0.12	-0.12	-0.43	-0.25	-0.25	-0.06
R4(ON BIAS HDC)	-0.18	-0.18	-0.18	-0.30	-0.18	-0.12	-0.12	0.00
R5(ON BIAS HDC)	0.00	-0.06	-0.18	-0.25	-0.12	-0.43	-0.18	-0.25
R6(ON BIAS HDC)	0.06	-0.12	0.00	-0.25	-0.37	-0.12	0.00	-0.12
R7(ON BIAS HDC)	0.06	-0.18	-0.18	-0.12	-0.12	-0.18	-0.06	0.06
R8(ON BIAS HDC)	-0.06	-0.18	-0.06	-0.30	-0.25	-0.25	-0.18	0.00
R9(ON BIAS HDC)	0.18	-0.06	-0.18	-0.12	-0.30	-0.37	0.00	-0.12
R10(ON BIAS HDC)	0.00	-0.18	-0.06	-0.18	-0.12	-0.06	-0.12	-0.12
R11(ON BIAS HDC)	0.06	-0.25	-0.06	-0.06	-0.06	-0.12	0.00	-0.12
Irradiated, ON biased HDC parts statistics								
Min Value	-0.18	-0.25	-0.18	-0.30	-0.43	-0.43	-0.25	-0.25
Max Value	0.18	0.00	0.00	0.00	-0.06	-0.06	0.00	0.06
Average	-0.01	-0.14	-0.10	-0.17	-0.21	-0.20	-0.10	-0.08
Sigma	0.11	0.08	0.08	0.10	0.12	0.12	0.09	0.09

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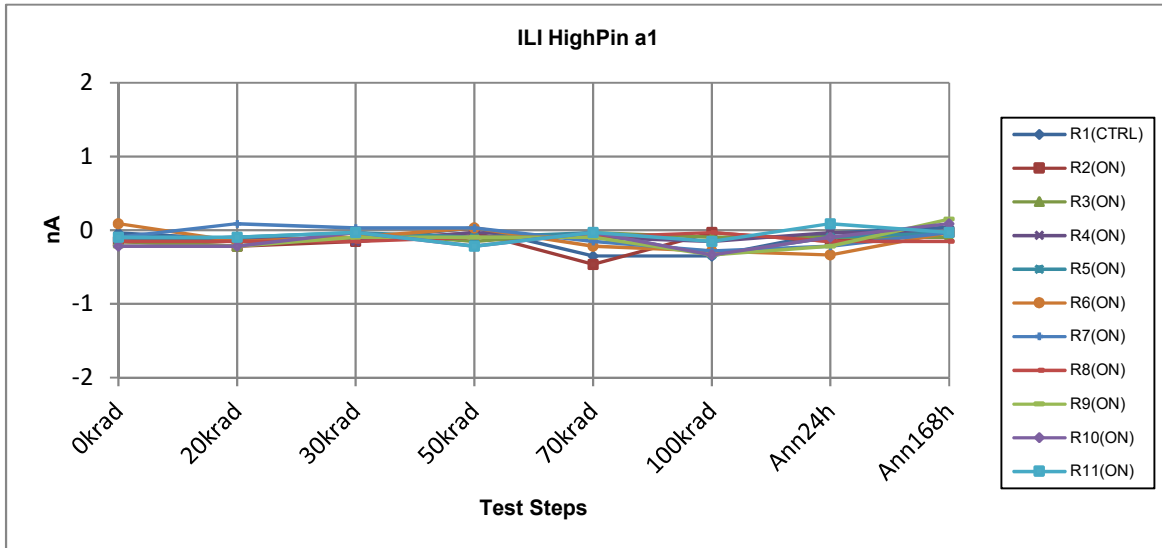
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ILI HighPin a2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.54	-0.31	-0.31	-0.13	-0.31	-0.24	-0.31	-0.24
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.13	-0.31	-0.31	-0.25	-0.25	-0.19	-0.06	-0.38
R3(ON BIAS HDC)	-0.38	-0.19	-0.19	-0.31	-0.50	-0.13	-0.19	-0.25
R4(ON BIAS HDC)	-0.13	-0.31	-0.25	-0.38	-0.43	-0.43	-0.13	-0.25
R5(ON BIAS HDC)	-0.13	-0.01	-0.13	-0.31	-0.38	-0.38	-0.13	-0.19
R6(ON BIAS HDC)	-0.06	-0.43	-0.19	-0.50	-0.25	-0.13	-0.13	-0.25
R7(ON BIAS HDC)	-0.06	-0.31	-0.19	-0.25	-0.31	-0.38	-0.13	-0.19
R8(ON BIAS HDC)	-0.19	-0.31	-0.13	-0.19	-0.25	-0.13	-0.19	-0.31
R9(ON BIAS HDC)	-0.38	-0.25	-0.25	-0.19	-0.06	-0.38	-0.25	-0.31
R10(ON BIAS HDC)	-0.19	-0.19	-0.25	-0.25	-0.31	-0.31	-0.06	-0.31
R11(ON BIAS HDC)	-0.25	-0.25	-0.31	-0.31	-0.25	-0.19	-0.38	-0.25
Irradiated, ON biased HDC parts statistics								
Min Value	-0.38	-0.43	-0.31	-0.50	-0.50	-0.43	-0.38	-0.38
Max Value	-0.06	-0.01	-0.13	-0.19	-0.06	-0.13	-0.06	-0.19
Average	-0.19	-0.26	-0.22	-0.29	-0.30	-0.26	-0.16	-0.27
Sigma	0.11	0.11	0.07	0.09	0.12	0.12	0.09	0.06

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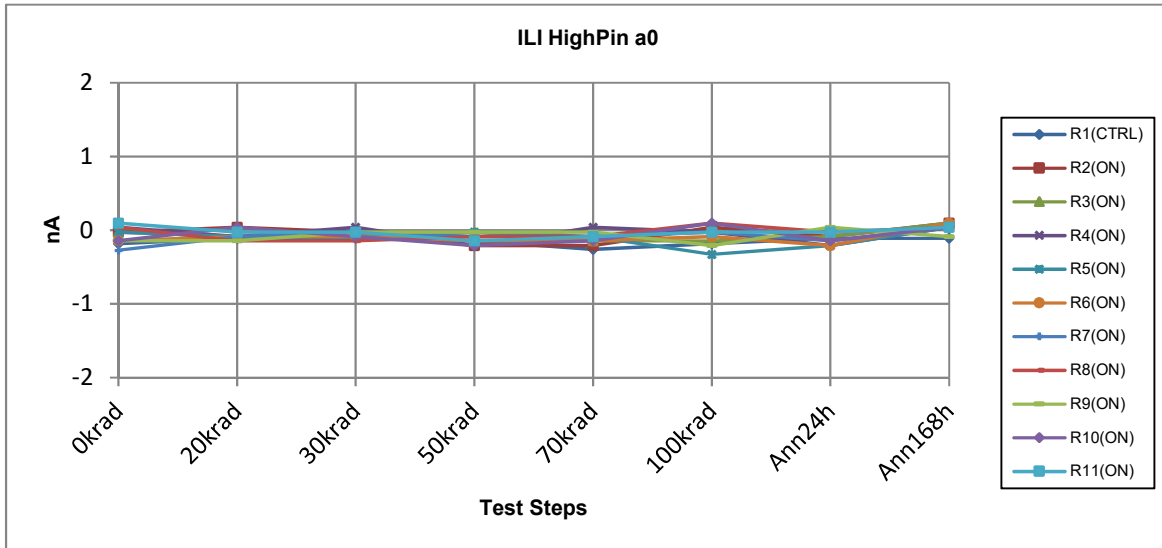
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ILI HighPin a1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.04	-0.12	-0.12	0.03	-0.35	-0.35	-0.04	0.04
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.15	-0.22	-0.15	-0.03	-0.46	-0.03	-0.15	-0.03
R3(ON BIAS HDC)	-0.15	-0.22	-0.03	-0.15	-0.03	-0.10	-0.10	-0.10
R4(ON BIAS HDC)	-0.15	-0.10	-0.15	-0.03	-0.10	-0.15	-0.03	-0.03
R5(ON BIAS HDC)	-0.15	-0.10	-0.03	-0.10	-0.03	-0.34	-0.10	-0.03
R6(ON BIAS HDC)	0.09	-0.15	-0.10	0.03	-0.22	-0.28	-0.34	-0.03
R7(ON BIAS HDC)	-0.10	0.09	0.03	0.03	-0.15	-0.28	-0.22	-0.03
R8(ON BIAS HDC)	-0.15	-0.15	-0.15	-0.10	-0.10	-0.03	-0.15	-0.15
R9(ON BIAS HDC)	-0.22	-0.22	-0.10	-0.10	-0.10	-0.34	-0.22	0.15
R10(ON BIAS HDC)	-0.22	-0.22	-0.03	-0.22	-0.03	-0.34	-0.10	0.09
R11(ON BIAS HDC)	-0.10	-0.10	-0.03	-0.22	-0.03	-0.15	0.09	-0.03
Irradiated, ON biased HDC parts statistics								
Min Value	-0.22	-0.22	-0.15	-0.22	-0.46	-0.34	-0.34	-0.15
Max Value	0.09	0.09	0.03	0.03	-0.03	-0.03	0.09	0.15
Average	-0.13	-0.14	-0.07	-0.09	-0.12	-0.20	-0.13	-0.02
Sigma	0.09	0.09	0.06	0.09	0.13	0.12	0.11	0.09

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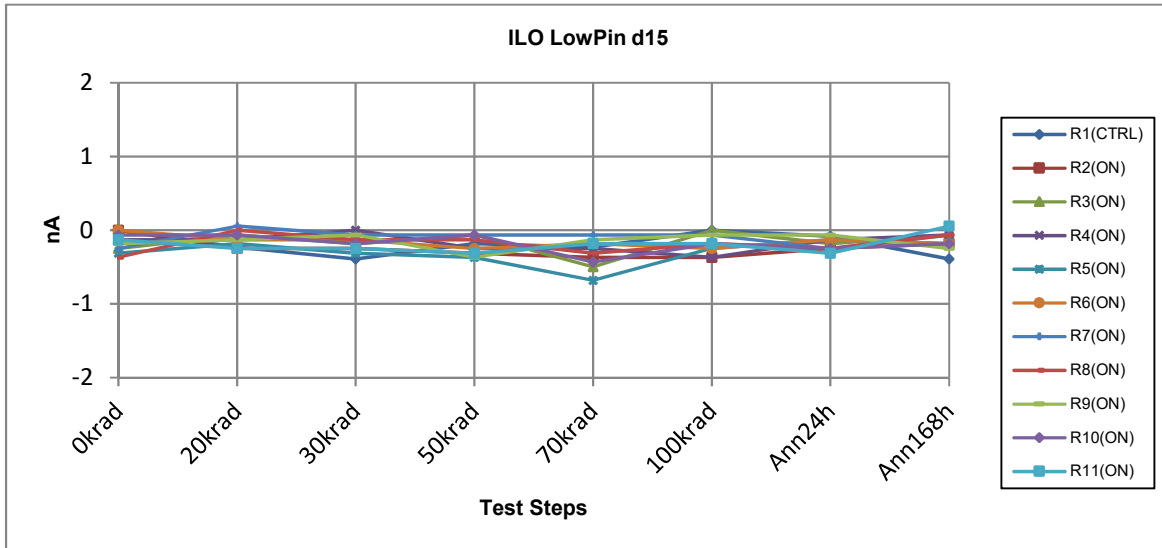
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ILI HighPin a0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.18	-0.11	-0.11	-0.14	-0.26	-0.18	-0.11	-0.11
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.02	0.04	-0.02	-0.21	-0.21	0.04	-0.09	0.10
R3(ON BIAS HDC)	-0.02	-0.09	-0.09	-0.02	-0.14	-0.14	-0.09	0.10
R4(ON BIAS HDC)	0.04	-0.09	0.04	-0.21	0.04	-0.02	-0.21	0.04
R5(ON BIAS HDC)	-0.02	-0.09	-0.09	-0.02	-0.09	-0.33	-0.21	0.04
R6(ON BIAS HDC)	-0.14	-0.09	-0.09	-0.14	-0.14	-0.09	-0.21	0.10
R7(ON BIAS HDC)	-0.27	-0.09	-0.02	-0.09	-0.09	-0.02	-0.14	0.04
R8(ON BIAS HDC)	0.04	-0.14	-0.14	-0.09	-0.09	0.10	-0.02	0.04
R9(ON BIAS HDC)	-0.14	-0.14	-0.02	-0.02	-0.02	-0.21	0.04	-0.09
R10(ON BIAS HDC)	-0.14	0.04	-0.09	-0.21	-0.14	0.10	-0.14	0.04
R11(ON BIAS HDC)	0.10	-0.02	-0.02	-0.14	-0.09	-0.02	-0.02	0.04
Irradiated, ON biased HDC parts statistics								
Min Value	-0.27	-0.14	-0.14	-0.21	-0.21	-0.33	-0.21	-0.09
Max Value	0.10	0.04	0.04	-0.02	0.04	0.10	0.04	0.10
Average	-0.06	-0.07	-0.06	-0.12	-0.10	-0.06	-0.11	0.04
Sigma	0.11	0.07	0.05	0.08	0.07	0.14	0.09	0.05

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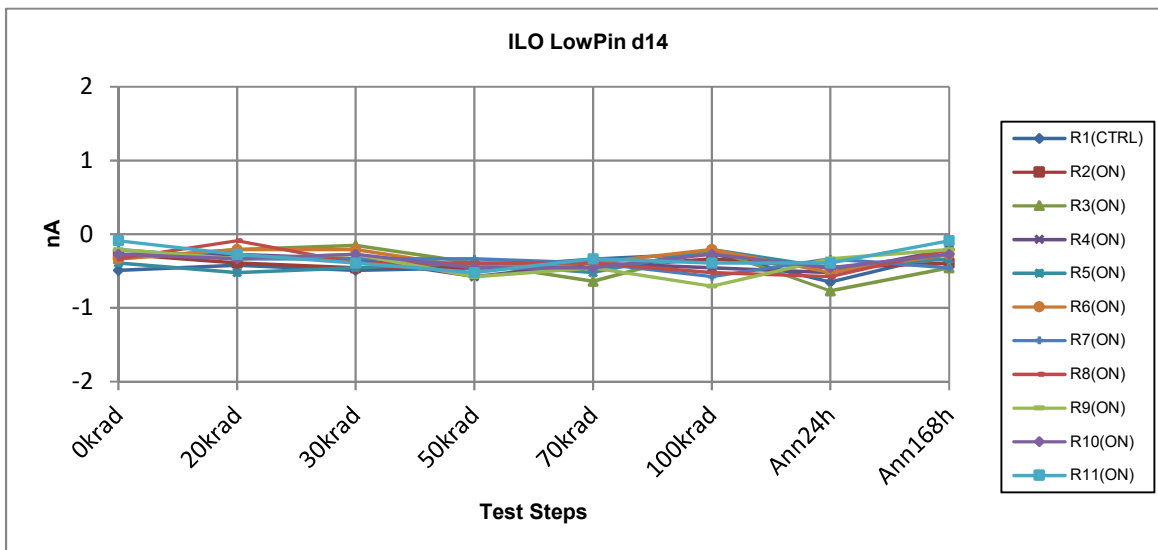
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ILO LowPin d15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.00	-0.23	-0.39	-0.18	-0.23	0.00	-0.08	-0.39
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.00	-0.25	-0.25	-0.31	-0.37	-0.37	-0.25	-0.18
R3(ON BIAS HDC)	-0.25	-0.06	-0.18	-0.06	-0.50	0.00	-0.18	-0.06
R4(ON BIAS HDC)	-0.13	-0.13	0.00	-0.25	-0.25	-0.37	-0.13	-0.06
R5(ON BIAS HDC)	-0.31	-0.18	-0.31	-0.37	-0.68	-0.25	-0.13	-0.18
R6(ON BIAS HDC)	0.00	-0.13	-0.13	-0.25	-0.18	-0.25	-0.13	-0.18
R7(ON BIAS HDC)	-0.25	0.06	-0.06	-0.06	-0.06	-0.06	-0.25	-0.06
R8(ON BIAS HDC)	-0.37	0.00	-0.13	-0.13	-0.31	-0.18	-0.25	-0.06
R9(ON BIAS HDC)	-0.18	-0.13	-0.06	-0.37	-0.13	-0.06	-0.06	-0.25
R10(ON BIAS HDC)	-0.06	-0.06	-0.18	-0.06	-0.43	-0.18	-0.25	-0.18
R11(ON BIAS HDC)	-0.13	-0.25	-0.25	-0.31	-0.18	-0.18	-0.31	0.06
Irradiated, ON biased HDC parts statistics								
Min Value	-0.37	-0.25	-0.31	-0.37	-0.68	-0.37	-0.31	-0.25
Max Value	0.00	0.06	0.00	-0.06	-0.06	0.00	-0.06	0.06
Average	-0.17	-0.11	-0.16	-0.22	-0.31	-0.19	-0.19	-0.12
Sigma	0.13	0.10	0.10	0.13	0.19	0.12	0.08	0.09

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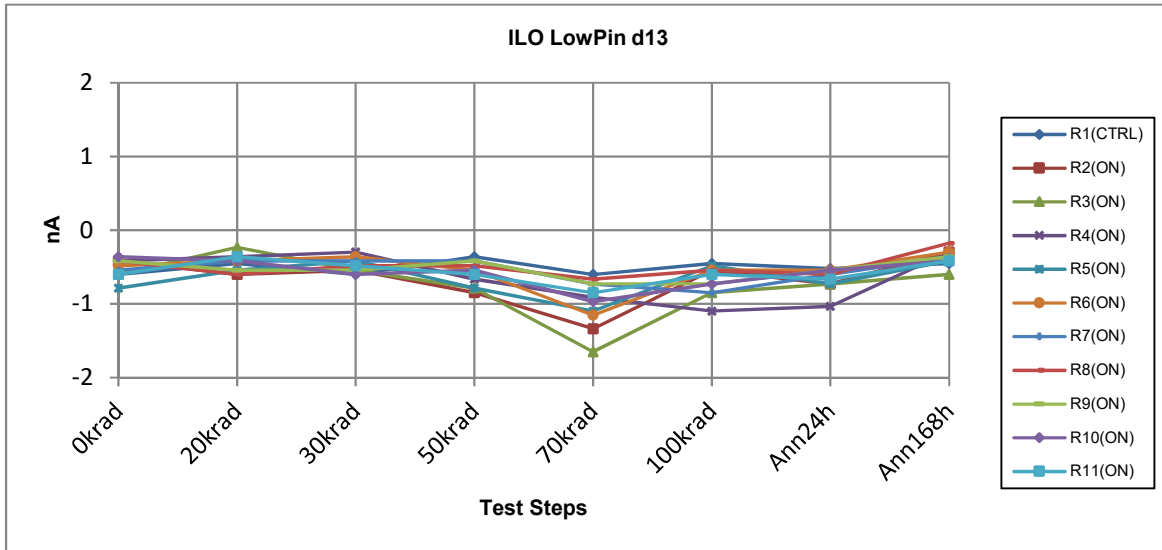
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ILO LowPin d14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.49	-0.42	-0.49	-0.46	-0.34	-0.26	-0.65	-0.26
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.27	-0.39	-0.46	-0.46	-0.46	-0.34	-0.46	-0.39
R3(ON BIAS HDC)	-0.34	-0.21	-0.15	-0.39	-0.64	-0.21	-0.77	-0.46
R4(ON BIAS HDC)	-0.27	-0.27	-0.34	-0.58	-0.39	-0.46	-0.52	-0.21
R5(ON BIAS HDC)	-0.39	-0.52	-0.46	-0.39	-0.52	-0.21	-0.46	-0.34
R6(ON BIAS HDC)	-0.34	-0.21	-0.21	-0.46	-0.39	-0.21	-0.52	-0.27
R7(ON BIAS HDC)	-0.21	-0.34	-0.34	-0.34	-0.39	-0.58	-0.34	-0.46
R8(ON BIAS HDC)	-0.34	-0.09	-0.39	-0.39	-0.39	-0.52	-0.58	-0.21
R9(ON BIAS HDC)	-0.21	-0.34	-0.27	-0.58	-0.46	-0.70	-0.34	-0.21
R10(ON BIAS HDC)	-0.27	-0.34	-0.27	-0.46	-0.46	-0.27	-0.46	-0.27
R11(ON BIAS HDC)	-0.09	-0.27	-0.39	-0.52	-0.34	-0.39	-0.39	-0.09
Irradiated, ON biased HDC parts statistics								
Min Value	-0.39	-0.52	-0.46	-0.58	-0.64	-0.70	-0.77	-0.46
Max Value	-0.09	-0.09	-0.15	-0.34	-0.34	-0.21	-0.34	-0.09
Average	-0.27	-0.30	-0.33	-0.46	-0.44	-0.39	-0.48	-0.29
Sigma	0.09	0.12	0.10	0.08	0.09	0.17	0.13	0.12

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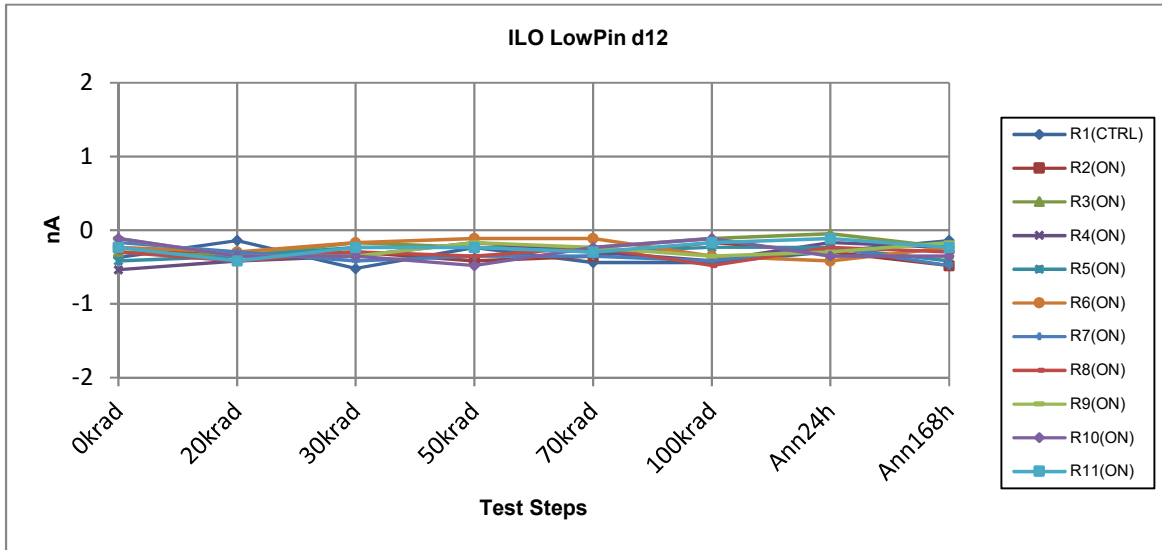
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ILO LowPin d13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.60	-0.45	-0.60	-0.36	-0.60	-0.45	-0.52	-0.45
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.42	-0.60	-0.54	-0.85	-1.34	-0.54	-0.73	-0.30
R3(ON BIAS HDC)	-0.60	-0.23	-0.54	-0.78	-1.65	-0.85	-0.73	-0.60
R4(ON BIAS HDC)	-0.42	-0.36	-0.30	-0.66	-0.91	-1.10	-1.03	-0.30
R5(ON BIAS HDC)	-0.78	-0.54	-0.42	-0.78	-1.10	-0.48	-0.73	-0.42
R6(ON BIAS HDC)	-0.48	-0.42	-0.36	-0.54	-1.15	-0.54	-0.54	-0.30
R7(ON BIAS HDC)	-0.54	-0.42	-0.42	-0.42	-0.73	-0.85	-0.60	-0.36
R8(ON BIAS HDC)	-0.42	-0.60	-0.48	-0.48	-0.66	-0.54	-0.60	-0.18
R9(ON BIAS HDC)	-0.42	-0.54	-0.54	-0.42	-0.73	-0.73	-0.54	-0.36
R10(ON BIAS HDC)	-0.36	-0.42	-0.60	-0.54	-0.97	-0.73	-0.54	-0.42
R11(ON BIAS HDC)	-0.60	-0.36	-0.48	-0.60	-0.85	-0.60	-0.66	-0.42
Irradiated, ON biased HDC parts statistics								
Min Value	-0.78	-0.60	-0.60	-0.85	-1.65	-1.10	-1.03	-0.60
Max Value	-0.36	-0.23	-0.30	-0.42	-0.66	-0.48	-0.54	-0.18
Average	-0.50	-0.45	-0.47	-0.61	-1.01	-0.70	-0.67	-0.36
Sigma	0.13	0.12	0.10	0.16	0.31	0.19	0.15	0.11

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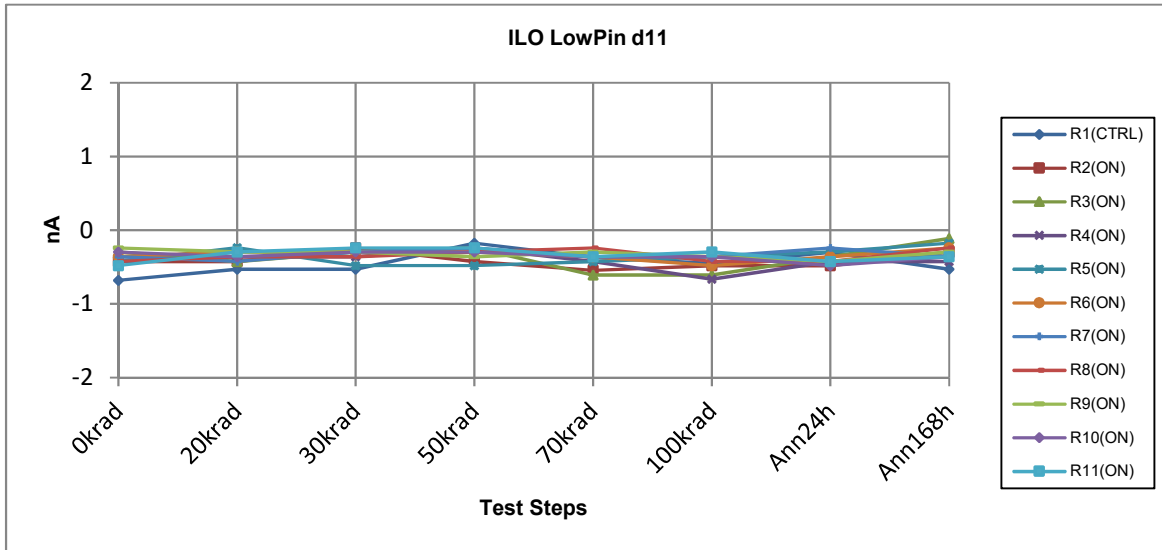
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ILO LowPin d12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.52	-0.23	-0.44	-0.44	-0.29	-0.14
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.23	-0.35	-0.30	-0.42	-0.35	-0.17	-0.30	-0.48
R3(ON BIAS HDC)	-0.30	-0.35	-0.17	-0.23	-0.23	-0.11	-0.05	-0.23
R4(ON BIAS HDC)	-0.54	-0.42	-0.35	-0.17	-0.30	-0.42	-0.17	-0.23
R5(ON BIAS HDC)	-0.42	-0.35	-0.23	-0.23	-0.30	-0.23	-0.23	-0.42
R6(ON BIAS HDC)	-0.23	-0.30	-0.17	-0.11	-0.11	-0.35	-0.42	-0.23
R7(ON BIAS HDC)	-0.17	-0.30	-0.42	-0.35	-0.35	-0.42	-0.23	-0.48
R8(ON BIAS HDC)	-0.30	-0.42	-0.30	-0.35	-0.23	-0.48	-0.23	-0.30
R9(ON BIAS HDC)	-0.11	-0.35	-0.35	-0.17	-0.23	-0.35	-0.30	-0.17
R10(ON BIAS HDC)	-0.11	-0.35	-0.35	-0.48	-0.23	-0.11	-0.35	-0.35
R11(ON BIAS HDC)	-0.23	-0.42	-0.23	-0.23	-0.30	-0.17	-0.11	-0.23
Irradiated, ON biased HDC parts statistics								
Min Value	-0.54	-0.42	-0.42	-0.48	-0.35	-0.48	-0.42	-0.48
Max Value	-0.11	-0.30	-0.17	-0.11	-0.11	-0.11	-0.05	-0.17
Average	-0.26	-0.36	-0.29	-0.27	-0.26	-0.28	-0.24	-0.31
Sigma	0.13	0.04	0.08	0.12	0.07	0.14	0.11	0.11

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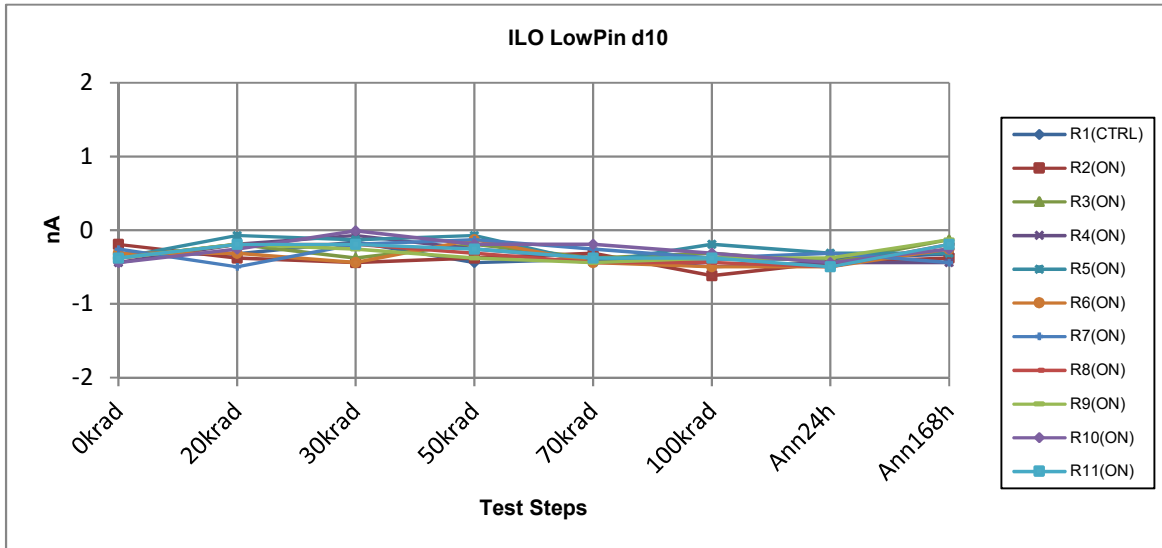
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ILO LowPin d11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.68	-0.53	-0.53	-0.18	-0.37	-0.45	-0.30	-0.53
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.42	-0.42	-0.24	-0.42	-0.54	-0.48	-0.48	-0.30
R3(ON BIAS HDC)	-0.30	-0.42	-0.30	-0.24	-0.61	-0.61	-0.36	-0.11
R4(ON BIAS HDC)	-0.42	-0.36	-0.36	-0.24	-0.42	-0.66	-0.42	-0.42
R5(ON BIAS HDC)	-0.42	-0.24	-0.48	-0.48	-0.42	-0.36	-0.30	-0.18
R6(ON BIAS HDC)	-0.36	-0.30	-0.30	-0.30	-0.36	-0.48	-0.36	-0.24
R7(ON BIAS HDC)	-0.36	-0.42	-0.30	-0.24	-0.36	-0.36	-0.24	-0.36
R8(ON BIAS HDC)	-0.42	-0.36	-0.36	-0.30	-0.24	-0.42	-0.42	-0.24
R9(ON BIAS HDC)	-0.24	-0.30	-0.30	-0.36	-0.30	-0.36	-0.42	-0.30
R10(ON BIAS HDC)	-0.30	-0.36	-0.30	-0.30	-0.36	-0.36	-0.48	-0.36
R11(ON BIAS HDC)	-0.48	-0.30	-0.24	-0.24	-0.36	-0.30	-0.42	-0.36
Irradiated, ON biased HDC parts statistics								
Min Value	-0.48	-0.42	-0.48	-0.48	-0.61	-0.66	-0.48	-0.42
Max Value	-0.24	-0.24	-0.24	-0.24	-0.24	-0.30	-0.24	-0.11
Average	-0.37	-0.35	-0.32	-0.31	-0.40	-0.44	-0.39	-0.29
Sigma	0.08	0.06	0.07	0.08	0.11	0.12	0.08	0.10

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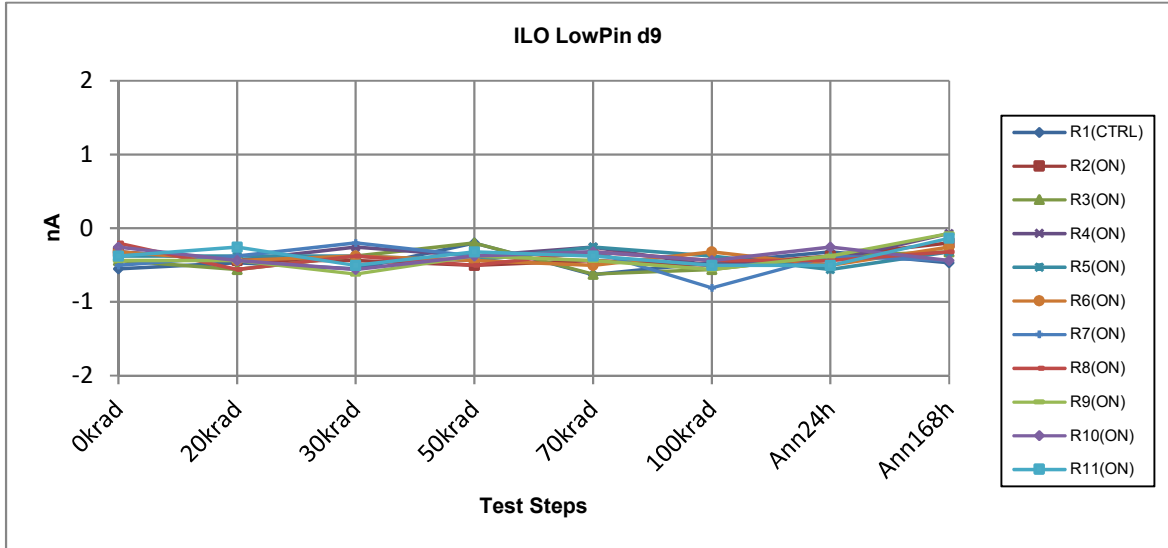
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ILO LowPin d10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.32	-0.32	-0.16	-0.44	-0.39	-0.39	-0.39	-0.32
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.19	-0.38	-0.44	-0.38	-0.31	-0.62	-0.44	-0.38
R3(ON BIAS HDC)	-0.38	-0.19	-0.38	-0.19	-0.38	-0.31	-0.44	-0.13
R4(ON BIAS HDC)	-0.44	-0.19	-0.07	-0.26	-0.38	-0.50	-0.44	-0.44
R5(ON BIAS HDC)	-0.38	-0.07	-0.13	-0.07	-0.44	-0.19	-0.31	-0.31
R6(ON BIAS HDC)	-0.31	-0.31	-0.44	-0.13	-0.44	-0.50	-0.50	-0.26
R7(ON BIAS HDC)	-0.26	-0.50	-0.19	-0.13	-0.26	-0.38	-0.31	-0.44
R8(ON BIAS HDC)	-0.38	-0.19	-0.19	-0.31	-0.44	-0.44	-0.50	-0.19
R9(ON BIAS HDC)	-0.38	-0.19	-0.26	-0.38	-0.44	-0.38	-0.38	-0.13
R10(ON BIAS HDC)	-0.44	-0.26	-0.01	-0.19	-0.19	-0.31	-0.44	-0.26
R11(ON BIAS HDC)	-0.38	-0.19	-0.19	-0.26	-0.38	-0.38	-0.50	-0.19
Irradiated, ON biased HDC parts statistics								
Min Value	-0.44	-0.50	-0.44	-0.38	-0.44	-0.62	-0.50	-0.44
Max Value	-0.19	-0.07	-0.01	-0.07	-0.19	-0.19	-0.31	-0.13
Average	-0.35	-0.25	-0.23	-0.23	-0.36	-0.40	-0.42	-0.27
Sigma	0.08	0.12	0.15	0.11	0.09	0.12	0.07	0.12

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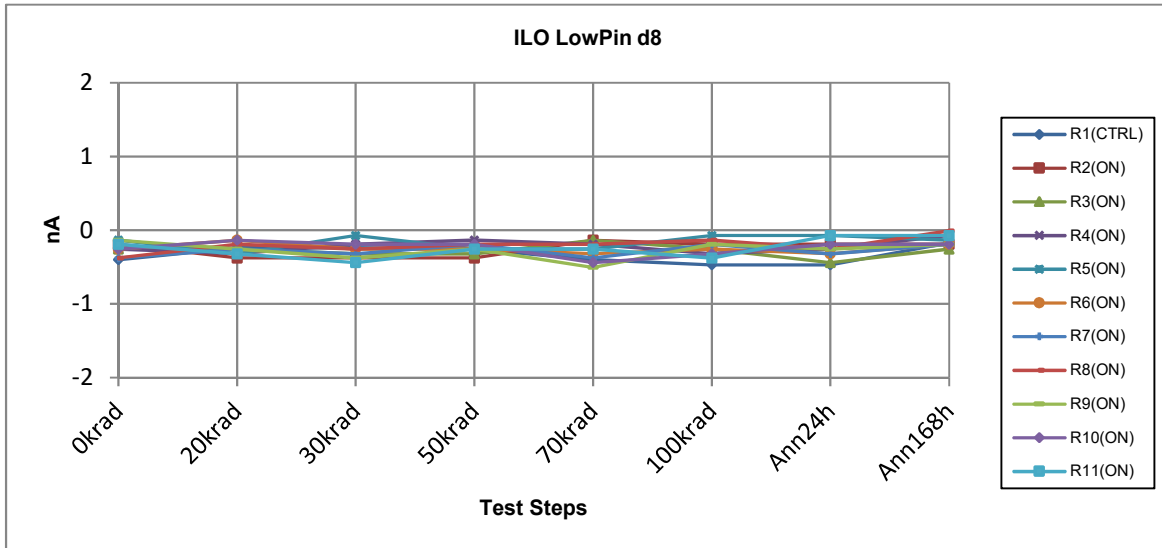
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ILO LowPin d9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.55	-0.47	-0.55	-0.20	-0.63	-0.47	-0.32	-0.47
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.32	-0.44	-0.44	-0.50	-0.44	-0.50	-0.38	-0.20
R3(ON BIAS HDC)	-0.44	-0.56	-0.38	-0.20	-0.62	-0.56	-0.38	-0.32
R4(ON BIAS HDC)	-0.32	-0.44	-0.26	-0.38	-0.26	-0.50	-0.44	-0.07
R5(ON BIAS HDC)	-0.38	-0.38	-0.38	-0.44	-0.26	-0.38	-0.56	-0.32
R6(ON BIAS HDC)	-0.32	-0.44	-0.38	-0.44	-0.50	-0.32	-0.50	-0.26
R7(ON BIAS HDC)	-0.50	-0.38	-0.20	-0.38	-0.32	-0.81	-0.38	-0.44
R8(ON BIAS HDC)	-0.20	-0.56	-0.38	-0.50	-0.32	-0.44	-0.44	-0.32
R9(ON BIAS HDC)	-0.44	-0.44	-0.62	-0.38	-0.44	-0.56	-0.38	-0.07
R10(ON BIAS HDC)	-0.26	-0.44	-0.56	-0.38	-0.32	-0.44	-0.26	-0.44
R11(ON BIAS HDC)	-0.38	-0.26	-0.50	-0.32	-0.38	-0.50	-0.50	-0.14
Irradiated, ON biased HDC parts statistics								
Min Value	-0.50	-0.56	-0.62	-0.50	-0.62	-0.81	-0.56	-0.44
Max Value	-0.20	-0.26	-0.20	-0.20	-0.26	-0.32	-0.26	-0.07
Average	-0.36	-0.43	-0.41	-0.39	-0.39	-0.50	-0.42	-0.26
Sigma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

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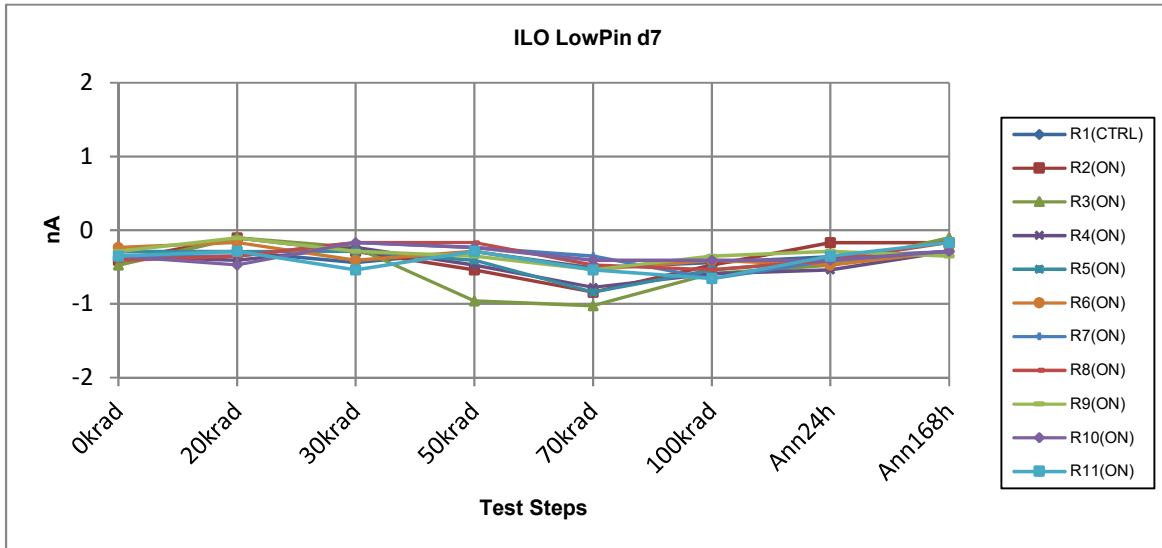
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ILO LowPin d8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.40	-0.24	-0.24	-0.26	-0.40	-0.47	-0.47	-0.17
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.19	-0.38	-0.38	-0.38	-0.14	-0.19	-0.19	-0.19
R3(ON BIAS HDC)	-0.26	-0.26	-0.32	-0.32	-0.14	-0.26	-0.44	-0.26
R4(ON BIAS HDC)	-0.26	-0.32	-0.19	-0.14	-0.19	-0.32	-0.26	-0.07
R5(ON BIAS HDC)	-0.14	-0.32	-0.07	-0.26	-0.26	-0.07	-0.07	-0.14
R6(ON BIAS HDC)	-0.26	-0.14	-0.26	-0.26	-0.32	-0.26	-0.32	-0.19
R7(ON BIAS HDC)	-0.38	-0.26	-0.32	-0.19	-0.38	-0.19	-0.32	-0.19
R8(ON BIAS HDC)	-0.38	-0.19	-0.26	-0.19	-0.19	-0.14	-0.26	-0.01
R9(ON BIAS HDC)	-0.14	-0.26	-0.38	-0.26	-0.50	-0.19	-0.26	-0.19
R10(ON BIAS HDC)	-0.26	-0.14	-0.19	-0.19	-0.44	-0.32	-0.19	-0.19
R11(ON BIAS HDC)	-0.19	-0.32	-0.44	-0.26	-0.26	-0.38	-0.07	-0.07
Irradiated, ON biased HDC parts statistics								
Min Value	-0.38	-0.38	-0.44	-0.38	-0.50	-0.38	-0.44	-0.26
Max Value	-0.14	-0.14	-0.07	-0.14	-0.14	-0.07	-0.07	-0.01
Average	-0.24	-0.26	-0.28	-0.24	-0.28	-0.23	-0.24	-0.15
Sigma	0.08	0.08	0.11	0.07	0.13	0.09	0.11	0.08

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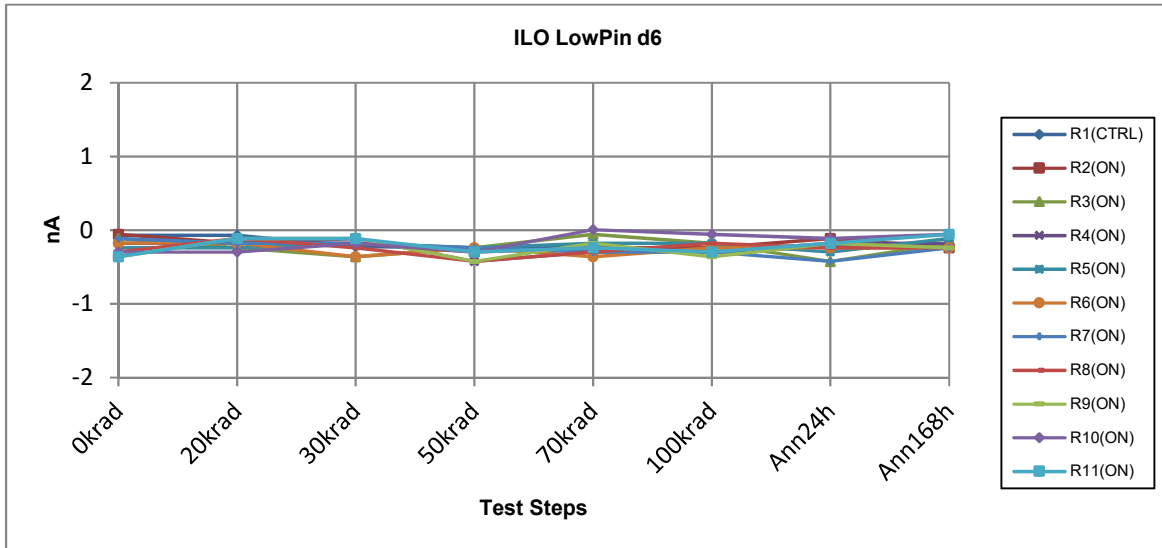
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ILO LowPin d7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.29	-0.29	-0.44	-0.29	-0.51	-0.44	-0.36	-0.29
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.41	-0.10	-0.29	-0.54	-0.84	-0.47	-0.17	-0.17
R3(ON BIAS HDC)	-0.47	-0.10	-0.23	-0.96	-1.02	-0.59	-0.47	-0.10
R4(ON BIAS HDC)	-0.35	-0.41	-0.23	-0.47	-0.78	-0.59	-0.54	-0.29
R5(ON BIAS HDC)	-0.29	-0.29	-0.29	-0.41	-0.84	-0.54	-0.41	-0.29
R6(ON BIAS HDC)	-0.23	-0.17	-0.41	-0.29	-0.54	-0.41	-0.47	-0.29
R7(ON BIAS HDC)	-0.35	-0.35	-0.17	-0.23	-0.35	-0.66	-0.41	-0.29
R8(ON BIAS HDC)	-0.41	-0.35	-0.17	-0.17	-0.47	-0.54	-0.41	-0.17
R9(ON BIAS HDC)	-0.29	-0.10	-0.29	-0.35	-0.54	-0.35	-0.29	-0.35
R10(ON BIAS HDC)	-0.35	-0.47	-0.17	-0.23	-0.41	-0.41	-0.41	-0.29
R11(ON BIAS HDC)	-0.35	-0.29	-0.54	-0.29	-0.54	-0.66	-0.35	-0.17
Irradiated, ON biased HDC parts statistics								
Min Value	-0.47	-0.47	-0.54	-0.96	-1.02	-0.66	-0.54	-0.35
Max Value	-0.23	-0.10	-0.17	-0.17	-0.35	-0.35	-0.17	-0.10
Average	-0.35	-0.26	-0.28	-0.39	-0.63	-0.52	-0.39	-0.24
Sigma	0.07	0.14	0.12	0.23	0.22	0.11	0.10	0.08

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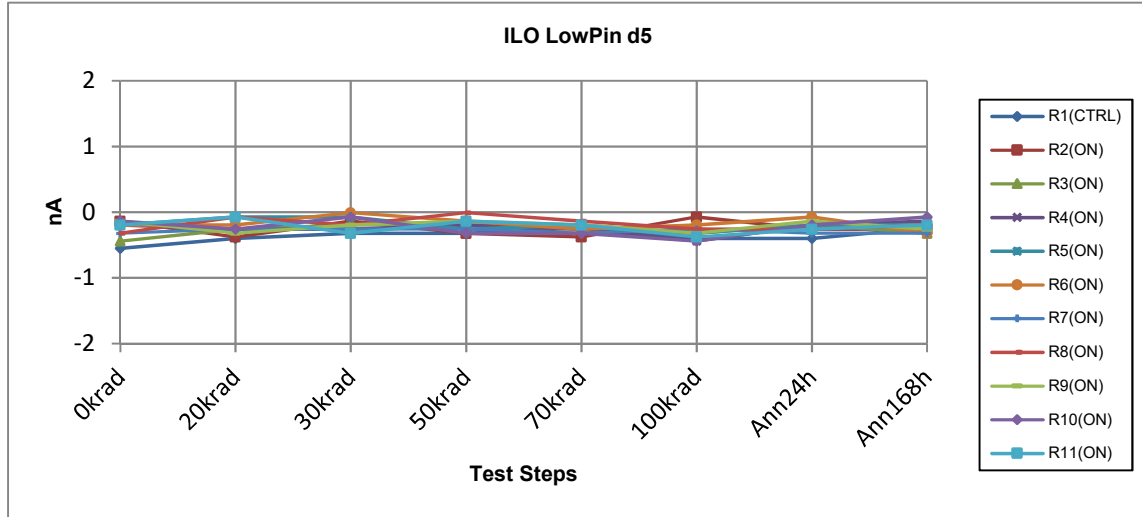
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ILO LowPin d6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.07	-0.07	-0.22	-0.24	-0.22	-0.30	-0.22	-0.22
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.06	-0.18	-0.18	-0.30	-0.24	-0.24	-0.11	-0.24
R3(ON BIAS HDC)	-0.11	-0.24	-0.36	-0.24	-0.06	-0.18	-0.42	-0.18
R4(ON BIAS HDC)	-0.18	-0.18	-0.11	-0.42	-0.30	-0.30	-0.18	-0.18
R5(ON BIAS HDC)	-0.24	-0.24	-0.18	-0.24	-0.18	-0.18	-0.30	-0.11
R6(ON BIAS HDC)	-0.18	-0.18	-0.36	-0.24	-0.36	-0.24	-0.24	-0.24
R7(ON BIAS HDC)	-0.11	-0.18	-0.18	-0.24	-0.30	-0.30	-0.42	-0.24
R8(ON BIAS HDC)	-0.30	-0.11	-0.24	-0.42	-0.30	-0.18	-0.24	-0.24
R9(ON BIAS HDC)	-0.36	-0.11	-0.11	-0.42	-0.18	-0.36	-0.18	-0.24
R10(ON BIAS HDC)	-0.30	-0.30	-0.18	-0.30	0.01	-0.06	-0.11	-0.06
R11(ON BIAS HDC)	-0.36	-0.11	-0.11	-0.30	-0.24	-0.30	-0.18	-0.06
Irradiated, ON biased HDC parts statistics								
Min Value	-0.36	-0.30	-0.36	-0.42	-0.36	-0.36	-0.42	-0.24
Max Value	-0.06	-0.11	-0.11	-0.24	0.01	-0.06	-0.11	-0.06
Average	-0.22	-0.18	-0.20	-0.31	-0.21	-0.23	-0.24	-0.18
Sigma	0.11	0.06	0.09	0.08	0.12	0.09	0.11	0.08

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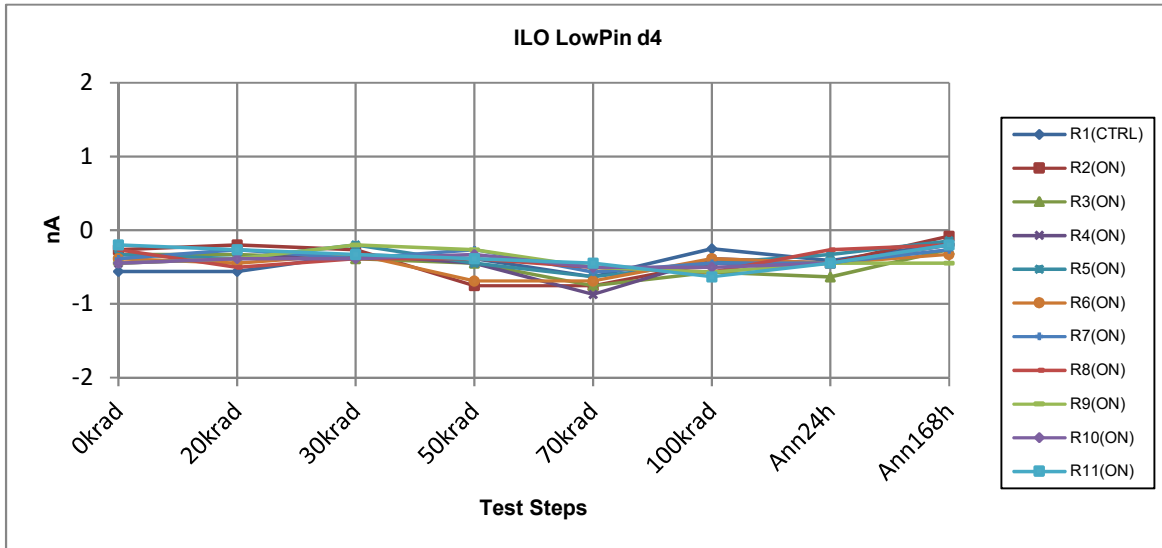
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ILO LowPin d5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.55	-0.40	-0.32	-0.32	-0.24	-0.40	-0.40	-0.24
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.14	-0.38	-0.14	-0.32	-0.38	-0.07	-0.26	-0.26
R3(ON BIAS HDC)	-0.44	-0.26	-0.19	-0.19	-0.26	-0.32	-0.19	-0.32
R4(ON BIAS HDC)	-0.19	-0.26	-0.26	-0.19	-0.26	-0.44	-0.19	-0.14
R5(ON BIAS HDC)	-0.19	-0.07	-0.07	-0.26	-0.19	-0.32	-0.19	-0.19
R6(ON BIAS HDC)	-0.19	-0.19	-0.01	-0.14	-0.26	-0.19	-0.07	-0.32
R7(ON BIAS HDC)	-0.32	-0.26	-0.26	-0.26	-0.32	-0.26	-0.32	-0.32
R8(ON BIAS HDC)	-0.32	-0.07	-0.19	-0.01	-0.14	-0.26	-0.26	-0.19
R9(ON BIAS HDC)	-0.14	-0.32	-0.19	-0.14	-0.19	-0.32	-0.14	-0.26
R10(ON BIAS HDC)	-0.14	-0.26	-0.07	-0.32	-0.32	-0.44	-0.19	-0.07
R11(ON BIAS HDC)	-0.19	-0.07	-0.32	-0.14	-0.19	-0.38	-0.26	-0.19
Irradiated, ON biased HDC parts statistics								
Min Value	-0.44	-0.38	-0.32	-0.32	-0.38	-0.44	-0.32	-0.32
Max Value	-0.14	-0.07	-0.01	-0.01	-0.14	-0.07	-0.07	-0.07
Average	-0.23	-0.21	-0.17	-0.20	-0.25	-0.30	-0.21	-0.23
Sigma	0.10	0.11	0.10	0.10	0.07	0.11	0.07	0.08

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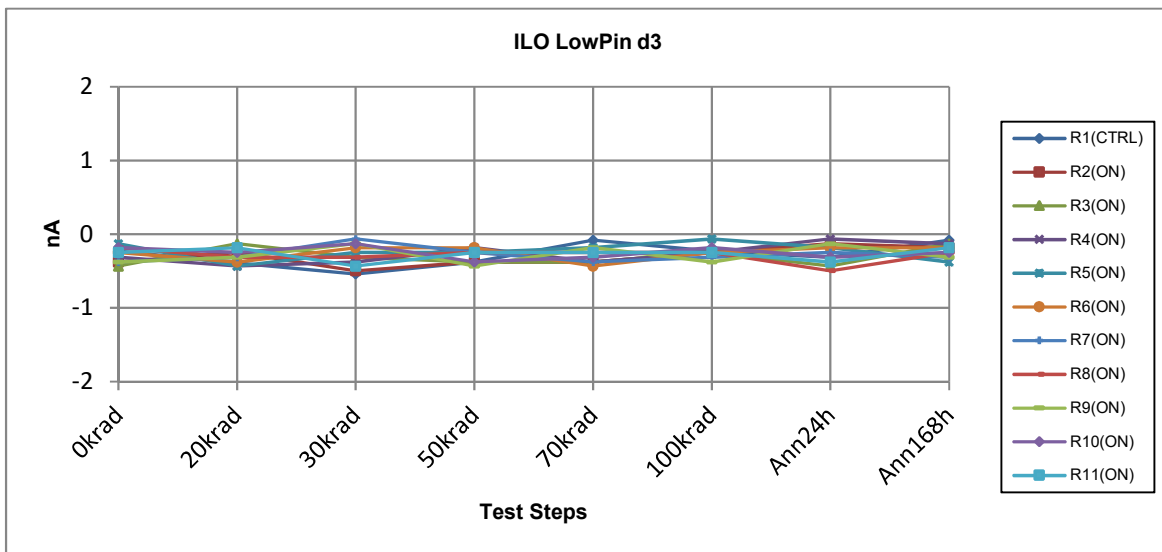
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ILO LowPin d4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.56	-0.56	-0.33	-0.38	-0.63	-0.25	-0.41	-0.18
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.26	-0.20	-0.26	-0.75	-0.75	-0.45	-0.45	-0.08
R3(ON BIAS HDC)	-0.33	-0.33	-0.38	-0.45	-0.75	-0.57	-0.63	-0.26
R4(ON BIAS HDC)	-0.45	-0.38	-0.33	-0.45	-0.87	-0.38	-0.45	-0.20
R5(ON BIAS HDC)	-0.33	-0.38	-0.20	-0.45	-0.63	-0.45	-0.33	-0.14
R6(ON BIAS HDC)	-0.38	-0.45	-0.33	-0.69	-0.69	-0.38	-0.45	-0.33
R7(ON BIAS HDC)	-0.38	-0.26	-0.38	-0.26	-0.57	-0.45	-0.45	-0.26
R8(ON BIAS HDC)	-0.26	-0.50	-0.38	-0.38	-0.50	-0.57	-0.26	-0.20
R9(ON BIAS HDC)	-0.45	-0.38	-0.20	-0.26	-0.50	-0.57	-0.45	-0.45
R10(ON BIAS HDC)	-0.45	-0.38	-0.38	-0.33	-0.50	-0.50	-0.45	-0.20
R11(ON BIAS HDC)	-0.20	-0.26	-0.33	-0.38	-0.45	-0.63	-0.45	-0.20
Irradiated, ON biased HDC parts statistics								
Min Value	-0.45	-0.50	-0.38	-0.75	-0.87	-0.63	-0.63	-0.45
Max Value	-0.20	-0.20	-0.20	-0.26	-0.45	-0.38	-0.26	-0.08
Average	-0.35	-0.35	-0.32	-0.44	-0.62	-0.50	-0.44	-0.23
Sigma	0.09	0.09	0.07	0.16	0.14	0.09	0.09	0.10

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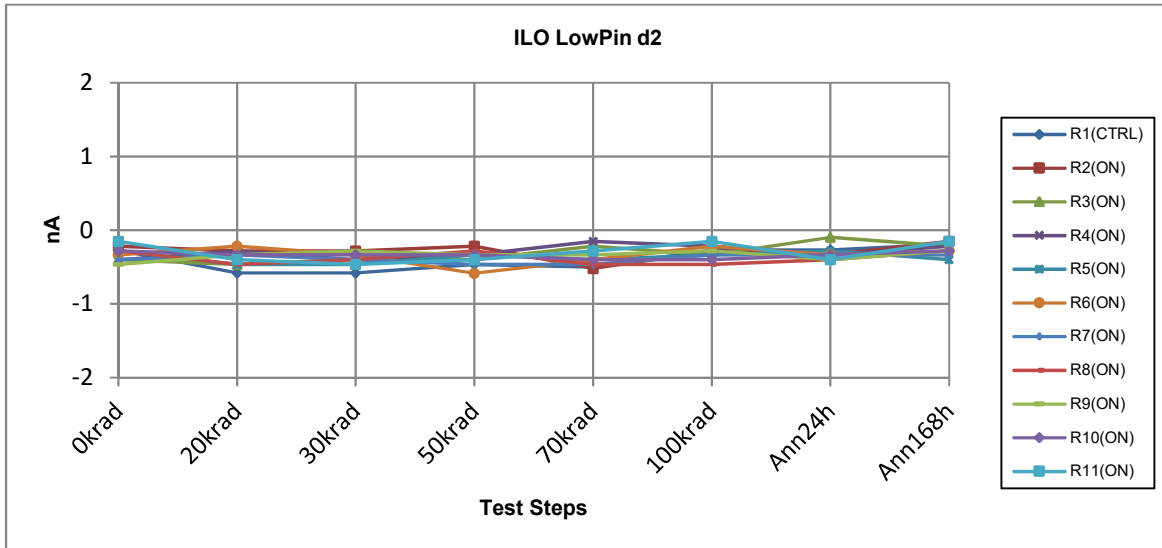
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ILO LowPin d3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.23	-0.39	-0.54	-0.38	-0.08	-0.23	-0.31	-0.08
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.38	-0.25	-0.50	-0.38	-0.38	-0.25	-0.13	-0.18
R3(ON BIAS HDC)	-0.43	-0.13	-0.31	-0.38	-0.38	-0.25	-0.43	-0.13
R4(ON BIAS HDC)	-0.31	-0.43	-0.38	-0.18	-0.38	-0.25	-0.06	-0.13
R5(ON BIAS HDC)	-0.13	-0.43	-0.25	-0.25	-0.18	-0.06	-0.18	-0.38
R6(ON BIAS HDC)	-0.25	-0.38	-0.18	-0.18	-0.43	-0.25	-0.18	-0.18
R7(ON BIAS HDC)	-0.38	-0.31	-0.06	-0.25	-0.38	-0.31	-0.25	-0.31
R8(ON BIAS HDC)	-0.18	-0.31	-0.31	-0.25	-0.25	-0.25	-0.50	-0.25
R9(ON BIAS HDC)	-0.38	-0.31	-0.13	-0.43	-0.18	-0.38	-0.13	-0.31
R10(ON BIAS HDC)	-0.18	-0.25	-0.13	-0.38	-0.31	-0.18	-0.31	-0.25
R11(ON BIAS HDC)	-0.25	-0.18	-0.43	-0.25	-0.25	-0.25	-0.38	-0.18
Irradiated, ON biased HDC parts statistics								
Min Value	-0.43	-0.43	-0.50	-0.43	-0.43	-0.38	-0.50	-0.38
Max Value	-0.13	-0.13	-0.06	-0.18	-0.18	-0.06	-0.06	-0.13
Average	-0.29	-0.30	-0.27	-0.29	-0.31	-0.24	-0.26	-0.23
Sigma	0.10	0.10	0.14	0.09	0.09	0.08	0.14	0.08

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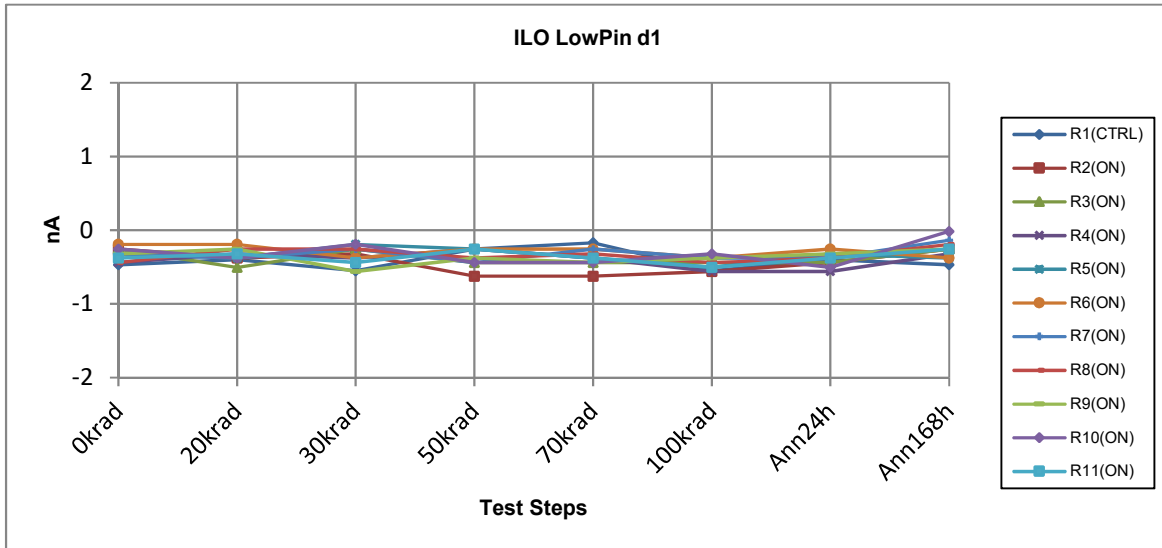
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ILO LowPin d2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.27	-0.58	-0.58	-0.46	-0.50	-0.27	-0.27	-0.19
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.22	-0.28	-0.28	-0.22	-0.52	-0.28	-0.34	-0.15
R3(ON BIAS HDC)	-0.40	-0.46	-0.40	-0.40	-0.22	-0.34	-0.10	-0.22
R4(ON BIAS HDC)	-0.40	-0.28	-0.40	-0.34	-0.15	-0.22	-0.34	-0.22
R5(ON BIAS HDC)	-0.28	-0.46	-0.46	-0.34	-0.40	-0.34	-0.28	-0.40
R6(ON BIAS HDC)	-0.34	-0.22	-0.34	-0.58	-0.40	-0.22	-0.34	-0.28
R7(ON BIAS HDC)	-0.40	-0.34	-0.40	-0.46	-0.46	-0.34	-0.34	-0.34
R8(ON BIAS HDC)	-0.28	-0.46	-0.40	-0.28	-0.46	-0.46	-0.40	-0.28
R9(ON BIAS HDC)	-0.46	-0.34	-0.28	-0.34	-0.34	-0.28	-0.40	-0.28
R10(ON BIAS HDC)	-0.28	-0.34	-0.34	-0.34	-0.40	-0.40	-0.34	-0.28
R11(ON BIAS HDC)	-0.15	-0.40	-0.46	-0.40	-0.28	-0.15	-0.40	-0.15
Irradiated, ON biased HDC parts statistics								
Min Value	-0.46	-0.46	-0.46	-0.58	-0.52	-0.46	-0.40	-0.40
Max Value	-0.15	-0.22	-0.28	-0.22	-0.15	-0.15	-0.10	-0.15
Average	-0.32	-0.36	-0.38	-0.37	-0.36	-0.30	-0.33	-0.26
Sigma	0.10	0.09	0.07	0.10	0.12	0.09	0.09	0.08

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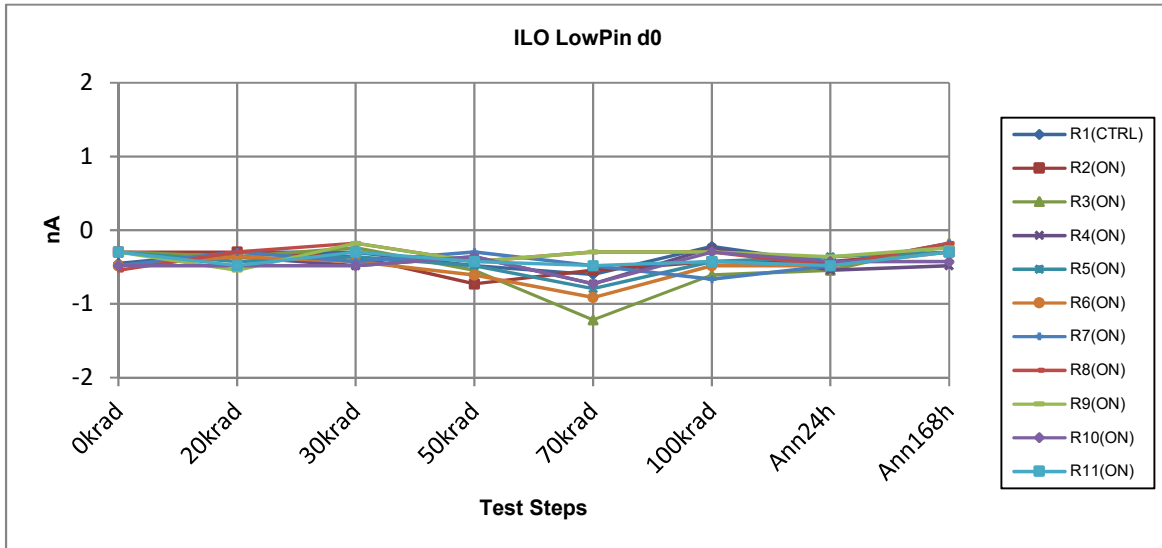
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ILO LowPin d1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.47	-0.40	-0.55	-0.26	-0.17	-0.55	-0.40	-0.47
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.26	-0.38	-0.32	-0.62	-0.62	-0.56	-0.44	-0.26
R3(ON BIAS HDC)	-0.26	-0.50	-0.26	-0.44	-0.44	-0.44	-0.44	-0.26
R4(ON BIAS HDC)	-0.44	-0.32	-0.38	-0.26	-0.38	-0.56	-0.56	-0.32
R5(ON BIAS HDC)	-0.32	-0.38	-0.19	-0.26	-0.38	-0.50	-0.32	-0.38
R6(ON BIAS HDC)	-0.19	-0.19	-0.38	-0.26	-0.26	-0.38	-0.26	-0.38
R7(ON BIAS HDC)	-0.32	-0.38	-0.26	-0.44	-0.26	-0.38	-0.38	-0.14
R8(ON BIAS HDC)	-0.44	-0.26	-0.26	-0.38	-0.32	-0.44	-0.38	-0.19
R9(ON BIAS HDC)	-0.32	-0.26	-0.56	-0.38	-0.44	-0.38	-0.32	-0.26
R10(ON BIAS HDC)	-0.26	-0.38	-0.19	-0.44	-0.44	-0.32	-0.50	-0.02
R11(ON BIAS HDC)	-0.38	-0.32	-0.44	-0.26	-0.38	-0.50	-0.38	-0.26
Irradiated, ON biased HDC parts statistics								
Min Value	-0.44	-0.50	-0.56	-0.62	-0.62	-0.56	-0.56	-0.38
Max Value	-0.19	-0.19	-0.19	-0.26	-0.26	-0.32	-0.26	-0.02
Average	-0.32	-0.34	-0.32	-0.37	-0.39	-0.45	-0.40	-0.24
Sigma	0.08	0.09	0.12	0.12	0.11	0.08	0.09	0.11

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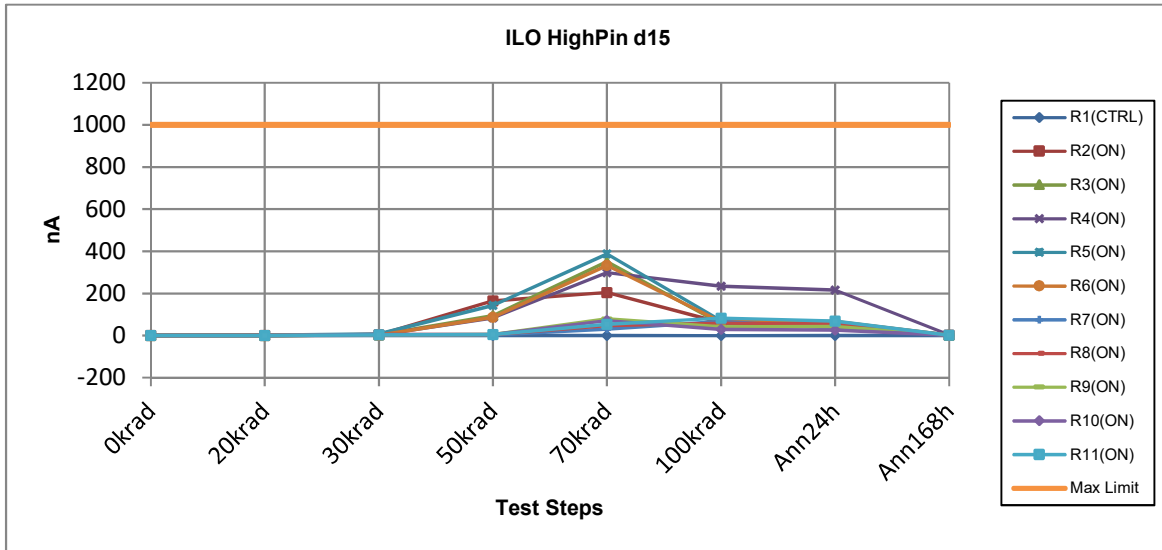
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ILO LowPin d0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.45	-0.30	-0.30	-0.48	-0.60	-0.22	-0.45	-0.22
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.30	-0.30	-0.36	-0.73	-0.54	-0.42	-0.42	-0.30
R3(ON BIAS HDC)	-0.30	-0.36	-0.24	-0.54	-1.22	-0.61	-0.54	-0.18
R4(ON BIAS HDC)	-0.48	-0.36	-0.48	-0.36	-0.73	-0.24	-0.54	-0.48
R5(ON BIAS HDC)	-0.30	-0.42	-0.36	-0.48	-0.79	-0.42	-0.36	-0.30
R6(ON BIAS HDC)	-0.48	-0.36	-0.42	-0.61	-0.91	-0.48	-0.48	-0.30
R7(ON BIAS HDC)	-0.48	-0.30	-0.42	-0.30	-0.48	-0.66	-0.48	-0.18
R8(ON BIAS HDC)	-0.54	-0.30	-0.18	-0.42	-0.30	-0.30	-0.48	-0.18
R9(ON BIAS HDC)	-0.30	-0.54	-0.18	-0.42	-0.30	-0.30	-0.36	-0.24
R10(ON BIAS HDC)	-0.48	-0.48	-0.48	-0.36	-0.73	-0.30	-0.42	-0.42
R11(ON BIAS HDC)	-0.30	-0.48	-0.30	-0.42	-0.48	-0.42	-0.48	-0.30
Irradiated, ON biased HDC parts statistics								
Min Value	-0.54	-0.54	-0.48	-0.73	-1.22	-0.66	-0.54	-0.48
Max Value	-0.30	-0.30	-0.18	-0.30	-0.30	-0.24	-0.36	-0.18
Average	-0.39	-0.39	-0.34	-0.46	-0.65	-0.42	-0.46	-0.29
Sigma	0.11	0.09	0.12	0.13	0.29	0.14	0.07	0.10

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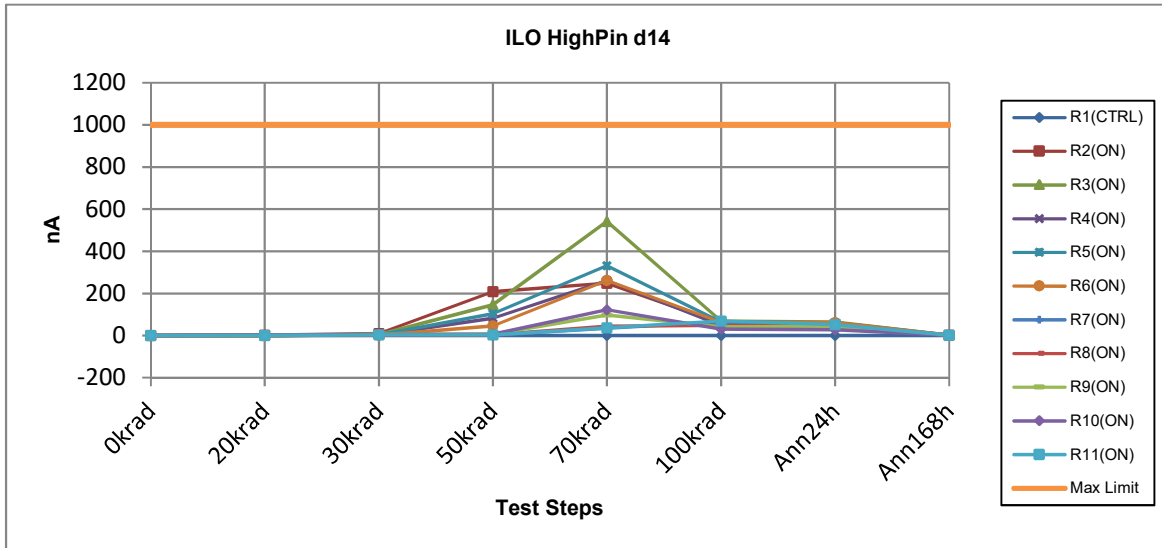
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ILO HighPin d15	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.08	0.15	-0.23	-0.06	0.00	-0.31	-0.08	0.15
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.06	0.67	3.36	164.54	204.08	60.84	51.48	1.83
R3(ON BIAS HDC)	-0.13	0.67	3.30	93.78	350.44	56.50	52.58	1.59
R4(ON BIAS HDC)	-0.06	0.61	2.57	83.62	298.71	233.46	216.45	2.82
R5(ON BIAS HDC)	-0.06	1.04	7.71	143.66	387.10	69.42	64.76	1.78
R6(ON BIAS HDC)	0.18	0.42	1.95	86.18	332.50	66.17	66.54	2.02
R7(ON BIAS HDC)	-0.06	0.42	1.41	2.57	30.36	67.14	34.40	1.78
R8(ON BIAS HDC)	0.00	1.04	4.65	4.90	47.50	58.34	54.11	2.02
R9(ON BIAS HDC)	-0.13	0.49	2.94	4.95	79.63	41.93	42.48	2.14
R10(ON BIAS HDC)	-0.13	0.73	4.28	4.90	71.13	28.34	26.02	1.71
R11(ON BIAS HDC)	-0.13	0.67	2.75	4.28	53.68	82.70	68.25	1.95
Irradiated, ON biased HDC parts statistics								
Min Value	-0.13	0.42	1.41	2.57	30.36	28.34	26.02	1.59
Max Value	0.18	1.04	7.71	164.54	387.10	233.46	216.45	2.82
Average	-0.05	0.68	3.49	59.34	185.51	76.48	67.71	1.96
Sigma	0.10	0.22	1.77	63.08	144.30	57.17	54.05	0.34

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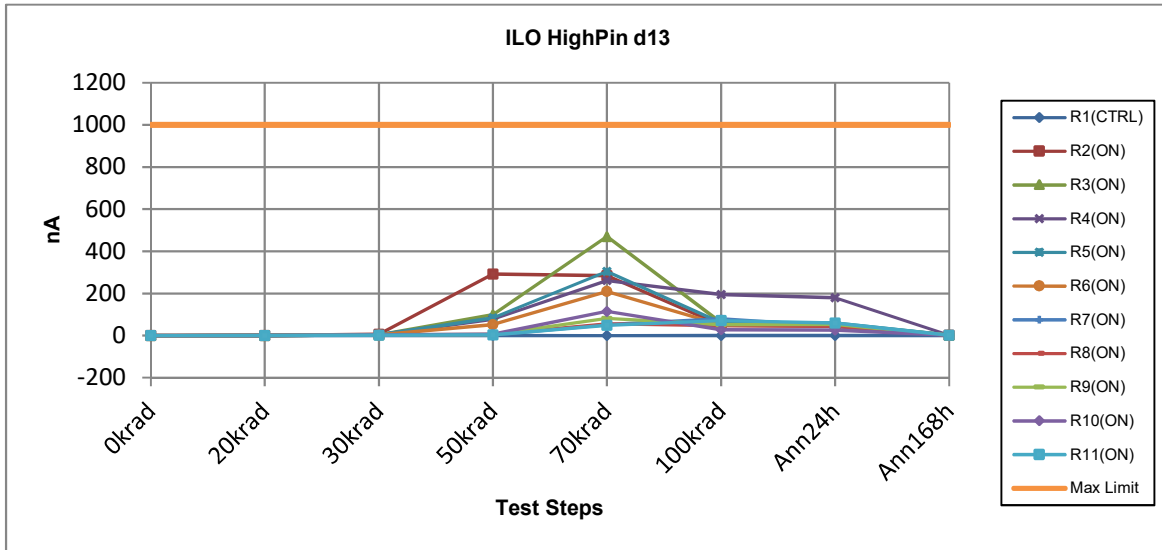
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ILO HighPin d14	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.42	-0.19	-0.26	-0.15	-0.34	-0.11	-0.26	-0.03
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.15	1.51	9.14	208.29	248.31	58.26	53.10	2.00
R3(ON BIAS HDC)	-0.15	0.71	4.34	145.38	541.84	68.47	63.67	1.63
R4(ON BIAS HDC)	-0.15	0.46	2.98	82.49	261.29	46.76	45.72	1.33
R5(ON BIAS HDC)	-0.27	0.40	2.50	103.02	331.56	64.17	60.60	1.58
R6(ON BIAS HDC)	-0.21	0.46	2.06	45.29	261.59	62.14	61.40	1.70
R7(ON BIAS HDC)	-0.15	0.53	4.03	3.17	34.46	65.34	35.58	1.70
R8(ON BIAS HDC)	-0.02	0.34	2.80	3.66	44.42	48.06	45.72	1.45
R9(ON BIAS HDC)	-0.09	0.83	5.69	6.86	97.42	41.17	42.52	2.06
R10(ON BIAS HDC)	-0.09	1.33	4.34	5.82	122.21	30.84	27.95	1.58
R11(ON BIAS HDC)	-0.15	0.46	2.55	3.60	36.00	69.08	52.54	1.33
Irradiated, ON biased HDC parts statistics								
Min Value	-0.27	0.34	2.06	3.17	34.46	30.84	27.95	1.33
Max Value	-0.02	1.51	9.14	208.29	541.84	69.08	63.67	2.06
Average	-0.14	0.70	4.04	60.76	197.91	55.43	48.88	1.63
Sigma	0.07	0.41	2.11	72.41	162.99	13.00	11.64	0.25

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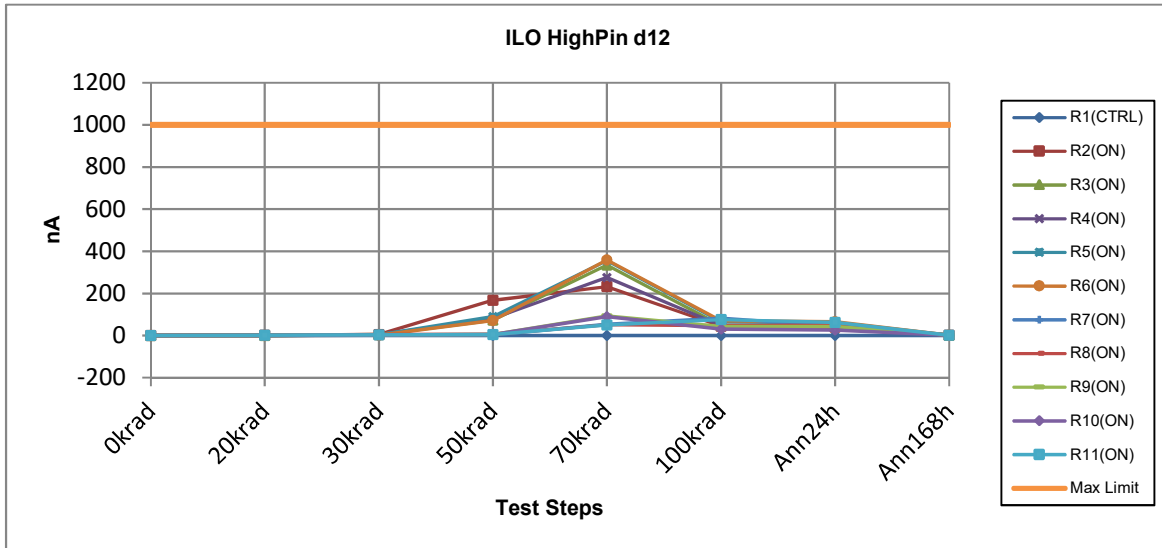
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ILO HighPin d13	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.14	-0.22	-0.45	-0.23	-0.60	-0.29	-0.37	-0.14
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.11	0.50	6.07	291.77	284.72	48.72	44.49	1.91
R3(ON BIAS HDC)	-0.23	0.56	2.58	98.71	470.06	61.10	56.07	1.54
R4(ON BIAS HDC)	-0.23	0.44	3.56	76.90	260.89	194.05	180.14	2.10
R5(ON BIAS HDC)	-0.23	0.50	2.70	83.58	303.84	61.46	59.56	1.66
R6(ON BIAS HDC)	-0.30	0.38	2.46	51.23	209.49	50.86	49.33	1.54
R7(ON BIAS HDC)	-0.42	0.31	2.52	3.81	52.51	80.14	43.82	1.66
R8(ON BIAS HDC)	-0.36	0.56	3.62	4.66	55.34	47.37	43.51	1.54
R9(ON BIAS HDC)	-0.11	0.56	3.50	5.03	81.74	51.47	52.64	2.15
R10(ON BIAS HDC)	-0.18	0.56	3.44	6.32	114.58	27.89	25.43	1.30
R11(ON BIAS HDC)	-0.23	0.31	2.22	3.44	48.54	71.20	59.26	1.54
Irradiated, ON biased HDC parts statistics								
Min Value	-0.42	0.31	2.22	3.44	48.54	27.89	25.43	1.30
Max Value	-0.11	0.56	6.07	291.77	470.06	194.05	180.14	2.15
Average	-0.24	0.47	3.27	62.55	188.17	69.43	61.42	1.70
Sigma	0.10	0.10	1.12	89.06	141.50	46.05	42.90	0.27

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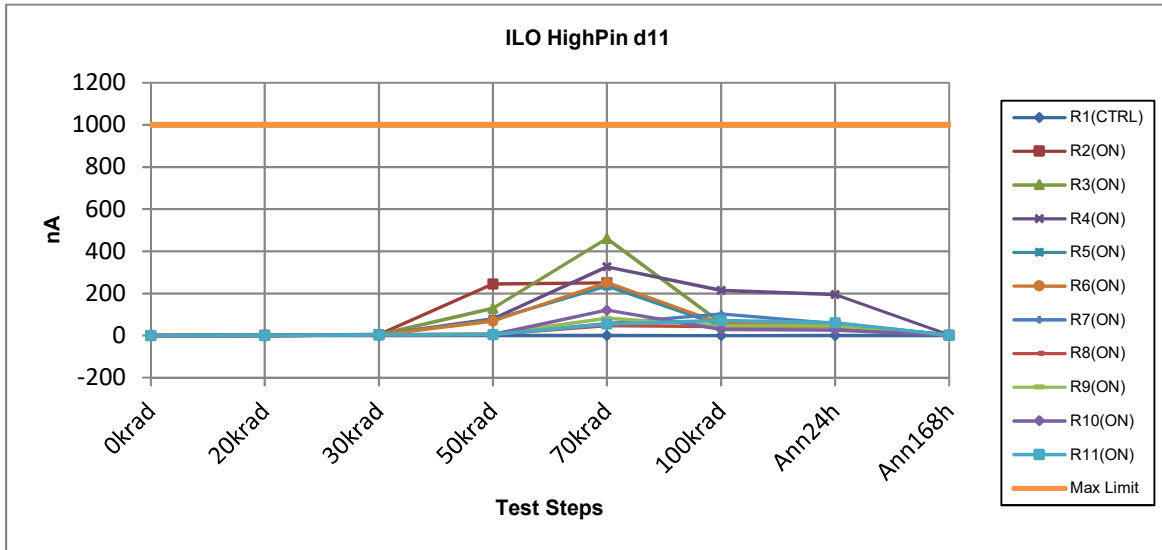
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ILO HighPin d12	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.29	0.01	-0.21	0.01	-0.21	-0.21	-0.06	0.09
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.17	1.05	4.35	167.80	232.17	43.78	39.81	1.66
R3(ON BIAS HDC)	0.19	0.56	3.98	72.82	334.19	47.94	46.04	1.36
R4(ON BIAS HDC)	0.14	0.44	2.64	80.51	275.57	47.26	47.14	1.85
R5(ON BIAS HDC)	0.07	0.44	2.64	90.48	355.58	65.90	61.14	1.66
R6(ON BIAS HDC)	-0.11	0.26	1.72	71.22	358.22	70.06	64.74	1.90
R7(ON BIAS HDC)	0.01	0.38	2.03	3.92	53.98	82.84	44.51	1.72
R8(ON BIAS HDC)	0.14	0.93	4.84	6.49	51.06	47.57	48.18	1.85
R9(ON BIAS HDC)	-0.11	0.86	3.43	5.39	93.90	42.55	42.13	2.03
R10(ON BIAS HDC)	-0.05	0.69	3.43	5.02	89.69	30.33	26.66	1.60
R11(ON BIAS HDC)	0.01	0.99	3.31	4.17	49.70	75.74	62.61	1.42
Irradiated, ON biased HDC parts statistics								
Min Value	-0.17	0.26	1.72	3.92	49.70	30.33	26.66	1.36
Max Value	0.19	1.05	4.84	167.80	358.22	82.84	64.74	2.03
Average	0.01	0.66	3.24	50.78	189.41	55.40	48.30	1.71
Sigma	0.12	0.28	1.00	55.32	134.32	17.01	11.73	0.21

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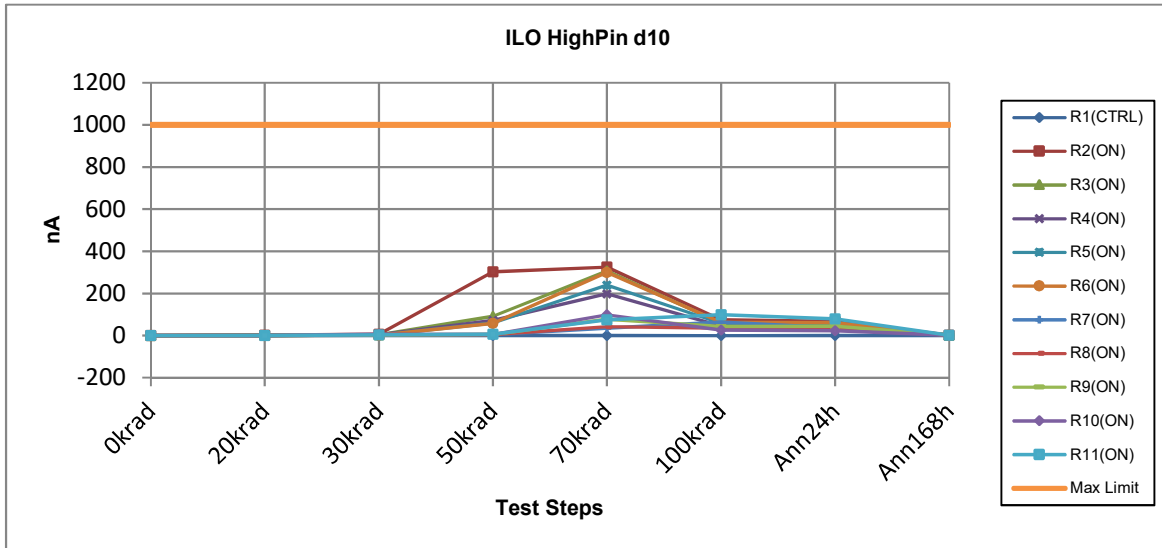
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ILO HighPin d11	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.14	-0.22	-0.24	-0.30	-0.45	-0.30	0.01
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.01	0.93	4.55	245.28	250.44	54.90	50.35	1.79
R3(ON BIAS HDC)	-0.18	0.68	4.98	128.82	460.78	59.38	57.04	1.42
R4(ON BIAS HDC)	-0.11	0.56	3.45	79.39	326.20	214.82	194.38	2.46
R5(ON BIAS HDC)	-0.36	0.44	2.95	75.03	234.60	47.96	45.14	1.23
R6(ON BIAS HDC)	-0.18	0.50	3.75	68.40	251.36	57.41	56.37	1.91
R7(ON BIAS HDC)	-0.18	0.56	2.95	4.18	56.18	102.47	55.88	1.79
R8(ON BIAS HDC)	-0.30	0.68	3.87	5.59	46.98	42.00	42.00	1.73
R9(ON BIAS HDC)	-0.30	0.93	4.12	6.33	82.40	45.56	45.01	2.16
R10(ON BIAS HDC)	-0.24	1.42	3.63	4.43	120.53	28.86	26.34	1.54
R11(ON BIAS HDC)	-0.24	0.31	2.46	4.18	55.14	71.78	60.24	1.42
Irradiated, ON biased HDC parts statistics								
Min Value	-0.36	0.31	2.46	4.18	46.98	28.86	26.34	1.23
Max Value	0.01	1.42	4.98	245.28	460.78	214.82	194.38	2.46
Average	-0.21	0.70	3.67	62.16	188.46	72.51	63.28	1.75
Sigma	0.11	0.32	0.77	78.07	139.13	53.78	47.12	0.37

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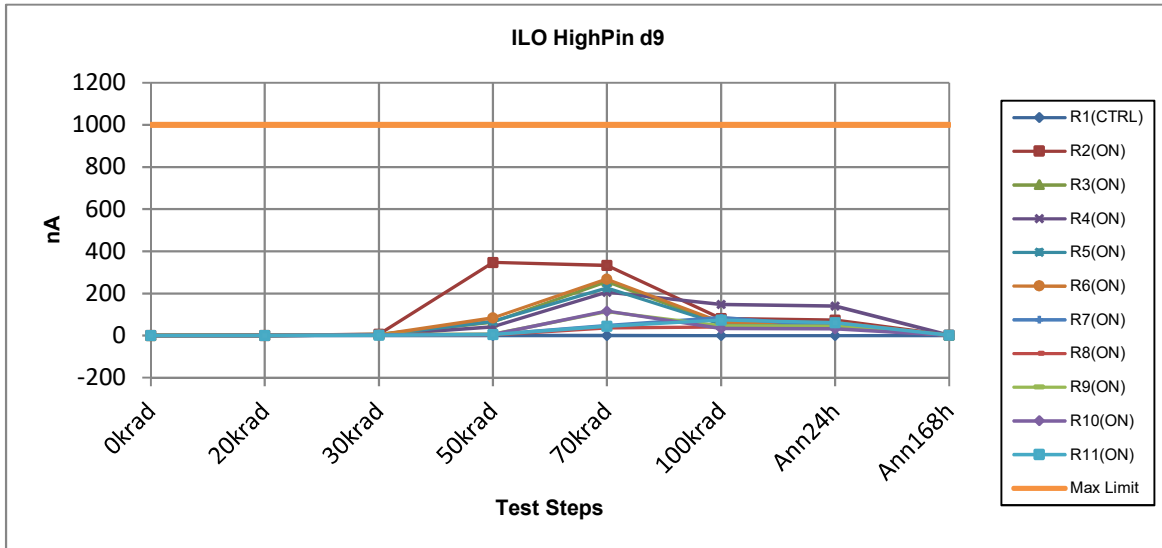
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ILO HighPin d10	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.16	-0.09	-0.24	0.11	-0.09	-0.24	-0.09	-0.09
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.31	1.76	6.10	301.84	324.70	74.18	66.54	1.89
R3(ON BIAS HDC)	-0.26	1.03	3.35	90.62	306.42	59.22	55.36	1.40
R4(ON BIAS HDC)	-0.07	0.73	2.62	71.38	198.38	44.54	43.75	1.58
R5(ON BIAS HDC)	-0.13	0.42	1.64	59.15	239.44	57.69	53.46	1.15
R6(ON BIAS HDC)	-0.19	0.78	2.13	58.60	300.26	62.02	60.50	1.89
R7(ON BIAS HDC)	-0.26	0.48	2.62	4.02	35.74	64.16	36.54	1.58
R8(ON BIAS HDC)	-0.19	0.66	3.47	3.96	41.92	35.14	33.85	1.46
R9(ON BIAS HDC)	-0.26	0.73	2.74	4.70	77.67	42.90	44.54	2.07
R10(ON BIAS HDC)	-0.26	0.66	6.04	4.88	98.21	25.48	23.64	1.46
R11(ON BIAS HDC)	-0.07	0.78	2.93	5.49	74.13	99.18	78.65	1.46
Irradiated, ON biased HDC parts statistics								
Min Value	-0.31	0.42	1.64	3.96	35.74	25.48	23.64	1.15
Max Value	-0.07	1.76	6.10	301.84	324.70	99.18	78.65	2.07
Average	-0.20	0.80	3.36	60.46	169.69	56.45	49.68	1.59
Sigma	0.08	0.38	1.52	91.22	116.64	21.03	16.50	0.28

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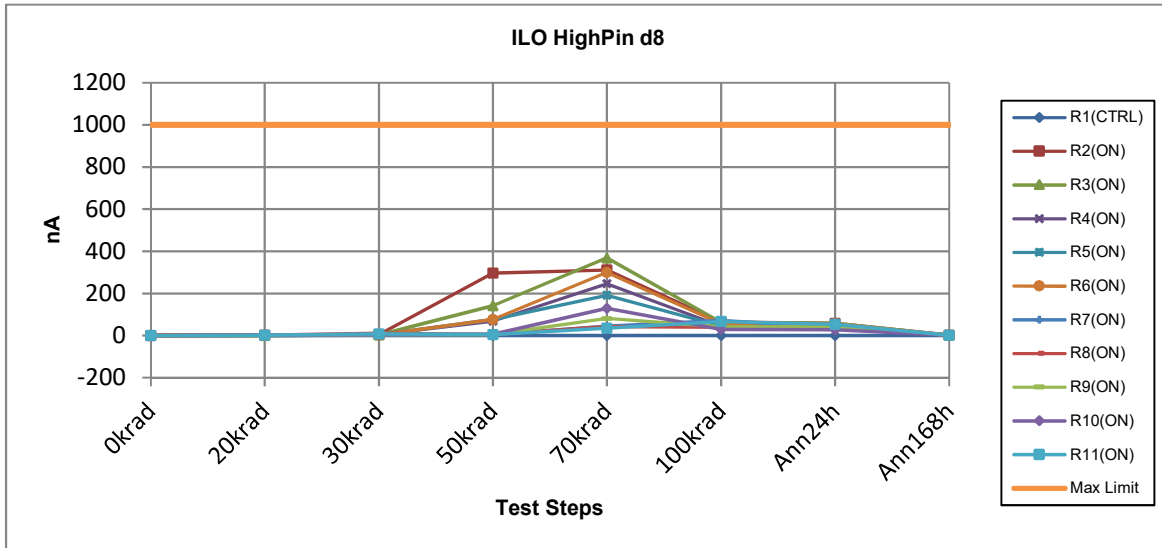
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ILO HighPin d9	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.32	-0.09	-0.17	-0.14	-0.25	-0.40	-0.40	-0.17
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.20	0.72	5.49	347.02	332.96	80.28	73.13	1.94
R3(ON BIAS HDC)	-0.20	1.21	3.96	64.62	256.34	52.76	50.13	1.39
R4(ON BIAS HDC)	-0.14	0.60	2.62	41.75	206.01	148.04	140.14	2.01
R5(ON BIAS HDC)	-0.32	0.30	2.62	67.38	225.46	53.50	50.81	1.51
R6(ON BIAS HDC)	-0.07	0.66	2.62	84.07	267.78	63.89	60.46	1.88
R7(ON BIAS HDC)	-0.20	0.60	2.92	4.02	47.14	85.30	44.32	1.46
R8(ON BIAS HDC)	-0.20	0.54	2.62	3.41	36.98	40.78	38.88	1.27
R9(ON BIAS HDC)	-0.07	0.84	4.76	6.59	113.36	44.99	44.63	2.06
R10(ON BIAS HDC)	-0.26	0.72	3.47	5.12	116.36	33.93	31.48	1.76
R11(ON BIAS HDC)	-0.20	0.30	2.38	4.70	43.71	73.43	60.95	1.46
Irradiated, ON biased HDC parts statistics								
Min Value	-0.32	0.30	2.38	3.41	36.98	33.93	31.48	1.27
Max Value	-0.07	1.21	5.49	347.02	332.96	148.04	140.14	2.06
Average	-0.19	0.65	3.34	62.87	164.61	67.69	59.49	1.67
Sigma	0.08	0.26	1.07	104.64	106.71	32.96	30.76	0.29

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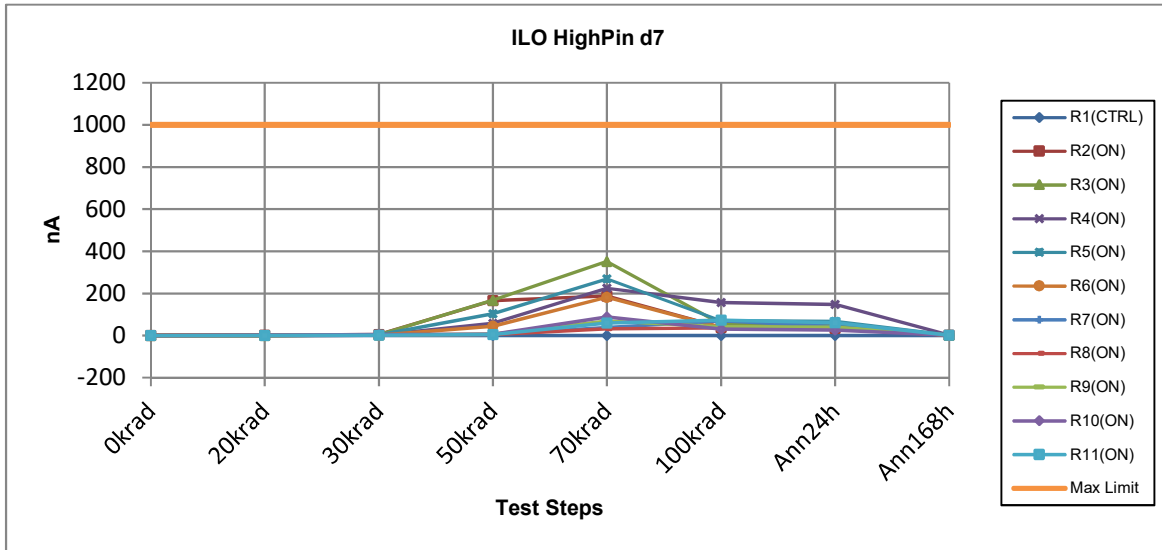
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ILO HighPin d8	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.17	-0.17	-0.09	-0.19	-0.17	-0.09	-0.17	0.14
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.14	1.46	5.19	296.04	310.96	64.10	57.54	2.01
R3(ON BIAS HDC)	0.11	0.66	2.68	141.90	368.65	62.56	58.22	1.70
R4(ON BIAS HDC)	-0.19	1.89	4.02	69.05	245.76	43.66	41.95	1.15
R5(ON BIAS HDC)	-0.26	0.85	3.17	76.33	191.07	44.89	43.60	1.52
R6(ON BIAS HDC)	-0.14	0.54	2.98	76.08	299.77	56.26	54.92	2.01
R7(ON BIAS HDC)	-0.14	0.54	2.19	4.15	43.85	71.80	38.22	1.82
R8(ON BIAS HDC)	-0.07	1.27	10.38	5.25	42.93	39.81	39.87	1.52
R9(ON BIAS HDC)	-0.14	0.78	4.02	5.01	81.03	41.03	40.85	2.13
R10(ON BIAS HDC)	-0.01	1.22	4.51	5.92	129.36	29.78	27.21	1.89
R11(ON BIAS HDC)	-0.26	1.03	7.02	5.43	34.91	66.42	53.39	1.27
Irradiated, ON biased HDC parts statistics								
Min Value	-0.26	0.54	2.19	4.15	34.91	29.78	27.21	1.15
Max Value	0.11	1.89	10.38	296.04	368.65	71.80	58.22	2.13
Average	-0.12	1.02	4.62	68.52	174.83	52.03	45.58	1.70
Sigma	0.11	0.44	2.46	92.70	125.61	13.98	10.08	0.33

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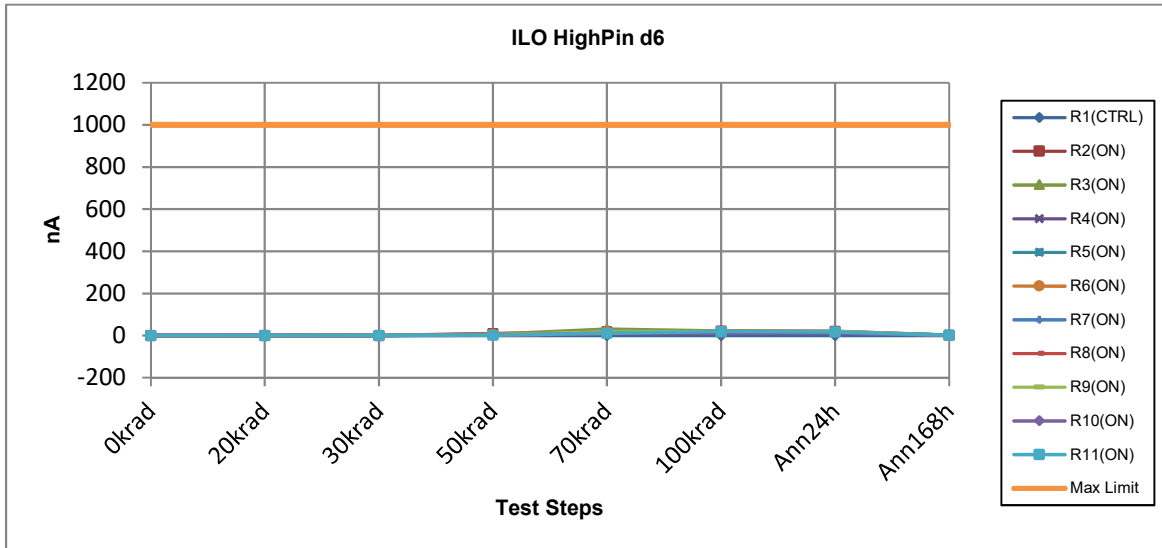
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ILO HighPin d7	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.13	-0.06	0.02	-0.10	-0.21	-0.13	-0.13	0.02
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.05	0.94	5.35	166.22	187.80	38.46	34.17	1.67
R3(ON BIAS HDC)	0.08	0.82	3.45	166.65	351.30	54.89	53.84	1.30
R4(ON BIAS HDC)	-0.17	0.45	1.86	58.62	224.77	157.14	147.22	2.22
R5(ON BIAS HDC)	0.02	0.87	3.58	102.95	268.97	69.72	67.02	1.79
R6(ON BIAS HDC)	-0.10	0.20	1.37	44.10	181.42	38.82	37.47	1.79
R7(ON BIAS HDC)	0.08	0.87	2.22	4.13	38.89	68.98	42.50	1.74
R8(ON BIAS HDC)	-0.10	0.63	2.59	4.50	32.45	35.94	34.10	1.61
R9(ON BIAS HDC)	0.02	0.63	3.51	6.58	68.98	41.15	39.99	2.22
R10(ON BIAS HDC)	-0.05	0.94	4.13	5.47	88.24	30.61	26.50	1.42
R11(ON BIAS HDC)	-0.29	0.50	2.41	4.13	58.87	73.15	60.83	1.92
Irradiated, ON biased HDC parts statistics								
Min Value	-0.29	0.20	1.37	4.13	32.45	30.61	26.50	1.30
Max Value	0.08	0.94	5.35	166.65	351.30	157.14	147.22	2.22
Average	-0.06	0.68	3.05	56.33	150.17	60.89	54.37	1.77
Sigma	0.11	0.25	1.19	66.48	109.31	37.29	35.04	0.30

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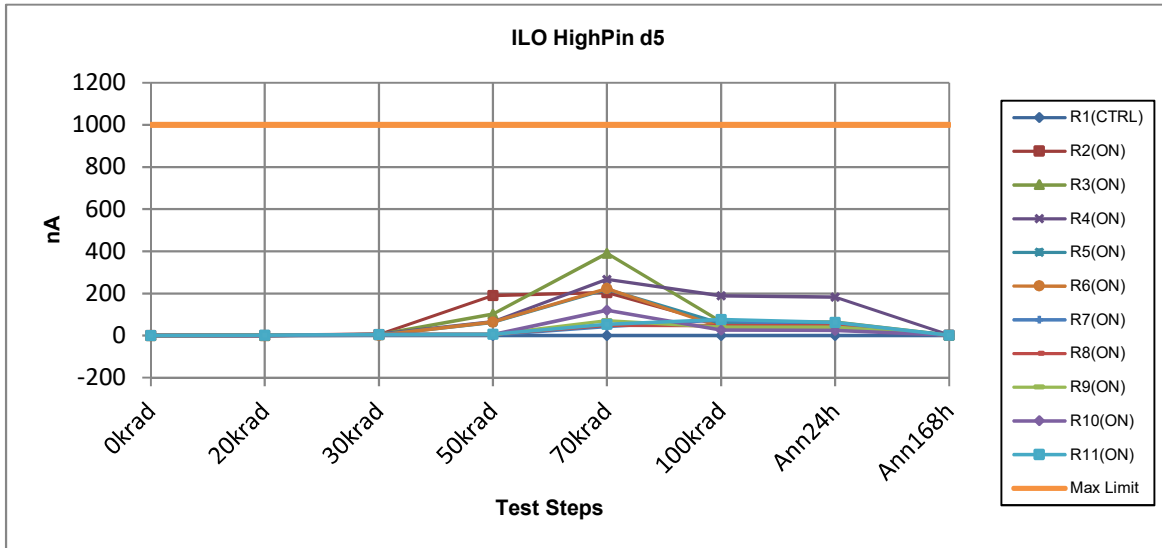
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ILO HighPin d6	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.01	0.16	0.09	-0.30	-0.22	0.09	0.09	0.01
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.01	0.62	0.74	9.58	17.74	21.11	19.46	1.05
R3(ON BIAS HDC)	-0.24	0.38	0.68	6.82	30.92	20.68	20.13	1.05
R4(ON BIAS HDC)	-0.06	0.26	0.19	5.41	19.02	14.98	15.34	0.93
R5(ON BIAS HDC)	0.01	0.19	0.68	5.65	16.02	13.75	13.50	0.93
R6(ON BIAS HDC)	0.07	0.26	0.56	6.94	18.47	16.20	16.20	1.42
R7(ON BIAS HDC)	-0.06	0.56	0.99	1.97	10.19	18.10	12.10	1.11
R8(ON BIAS HDC)	0.01	0.26	0.93	1.78	8.66	13.99	14.24	0.99
R9(ON BIAS HDC)	-0.06	0.38	0.99	2.77	18.17	17.67	19.33	1.66
R10(ON BIAS HDC)	0.07	0.31	0.86	1.97	11.23	12.46	11.66	1.23
R11(ON BIAS HDC)	-0.06	0.26	0.81	2.10	10.56	19.09	16.63	1.23
Irradiated, ON biased HDC parts statistics								
Min Value	-0.24	0.19	0.19	1.78	8.66	12.46	11.66	0.93
Max Value	0.07	0.62	0.99	9.58	30.92	21.11	20.13	1.66
Average	-0.03	0.35	0.74	4.50	16.10	16.80	15.86	1.16
Sigma	0.1	0.1	0.2	2.8	6.5	3.0	3.1	0.2

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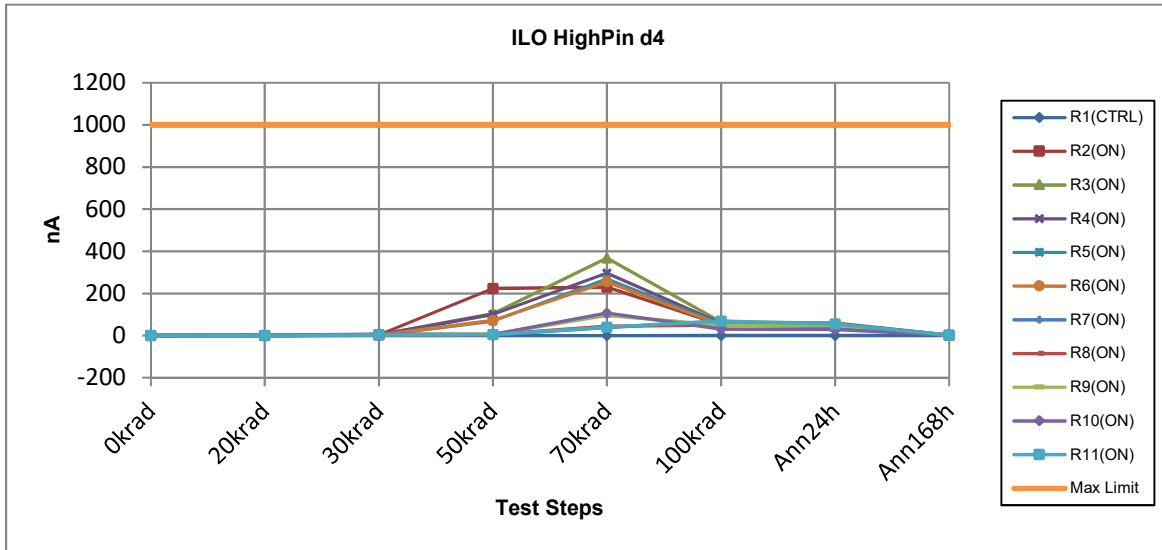
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ILO HighPin d5	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.24	-0.24	-0.17	0.05	-0.09	-0.17	-0.17	0.06
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.05	0.48	4.08	189.90	204.08	53.66	48.22	1.52
R3(ON BIAS HDC)	-0.07	0.66	4.08	102.13	390.02	65.51	64.72	1.39
R4(ON BIAS HDC)	0.05	0.54	6.46	65.46	266.79	188.43	183.18	2.43
R5(ON BIAS HDC)	-0.07	1.15	3.78	62.46	220.16	56.78	54.39	1.76
R6(ON BIAS HDC)	-0.19	0.54	2.19	64.42	223.03	40.02	40.94	1.46
R7(ON BIAS HDC)	-0.01	0.54	1.76	3.72	43.38	73.58	38.68	1.58
R8(ON BIAS HDC)	-0.14	1.09	6.65	5.98	49.01	46.69	46.14	1.76
R9(ON BIAS HDC)	0.11	1.02	4.70	5.18	70.83	39.42	40.02	2.19
R10(ON BIAS HDC)	-0.07	0.90	4.21	5.00	120.10	25.97	24.86	1.46
R11(ON BIAS HDC)	-0.01	1.15	4.51	6.90	53.66	75.84	62.82	1.82
Irradiated, ON biased HDC parts statistics								
Min Value	-0.19	0.48	1.76	3.72	43.38	25.97	24.86	1.39
Max Value	0.11	1.15	6.65	189.90	390.02	188.43	183.18	2.43
Average	-0.04	0.81	4.24	51.11	164.11	66.59	60.40	1.74
Sigma	0.09	0.28	1.55	60.42	115.69	45.63	44.74	0.34

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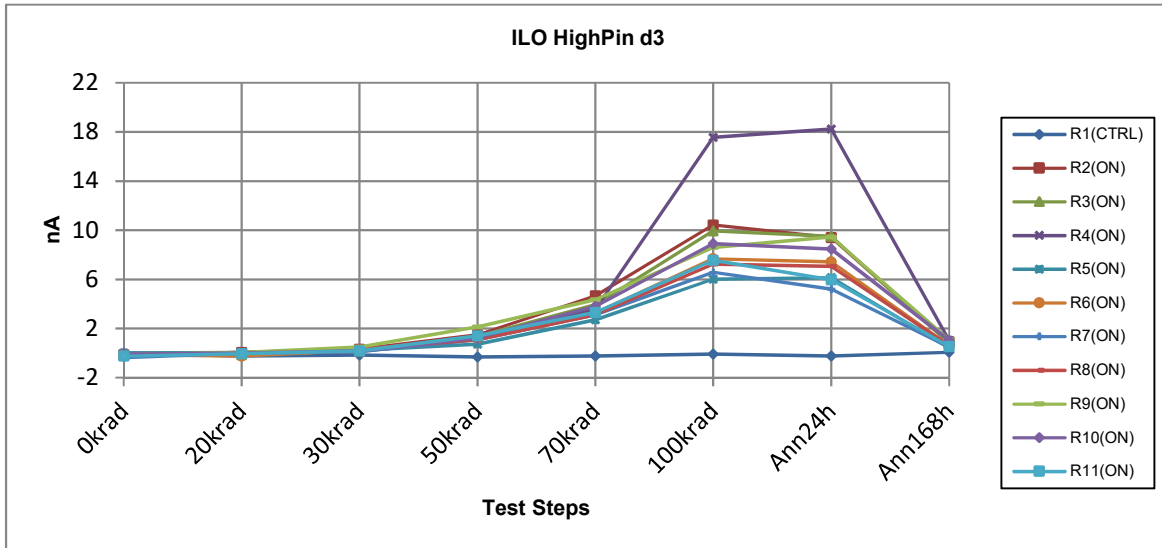
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ILO HighPin d4	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.10	-0.10	-0.18	-0.08	-0.25	-0.18	-0.18	-0.02
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.14	0.47	2.68	222.99	229.85	49.84	44.57	1.76
R3(ON BIAS HDC)	-0.14	0.84	3.42	103.43	368.15	64.11	59.34	1.39
R4(ON BIAS HDC)	-0.20	0.90	3.90	100.43	296.55	58.11	56.21	1.70
R5(ON BIAS HDC)	-0.08	0.54	2.00	68.34	268.93	54.80	51.86	1.39
R6(ON BIAS HDC)	-0.08	0.35	1.88	72.19	255.21	50.27	48.31	1.94
R7(ON BIAS HDC)	-0.26	0.29	1.76	3.10	37.65	68.70	37.71	1.63
R8(ON BIAS HDC)	-0.14	0.66	5.19	4.82	43.66	49.35	48.18	1.51
R9(ON BIAS HDC)	-0.20	0.84	3.96	5.50	95.78	48.67	46.90	2.31
R10(ON BIAS HDC)	-0.14	0.96	5.55	5.25	107.05	30.36	28.58	1.70
R11(ON BIAS HDC)	-0.14	0.54	2.43	4.02	39.67	68.70	54.80	1.46
Irradiated, ON biased HDC parts statistics								
Min Value	-0.26	0.29	1.76	3.10	37.65	30.36	28.58	1.39
Max Value	-0.08	0.96	5.55	222.99	368.15	68.70	59.34	2.31
Average	-0.15	0.64	3.28	59.01	174.25	54.29	47.65	1.68
Sigma	0.06	0.24	1.36	71.24	122.78	11.51	9.14	0.28

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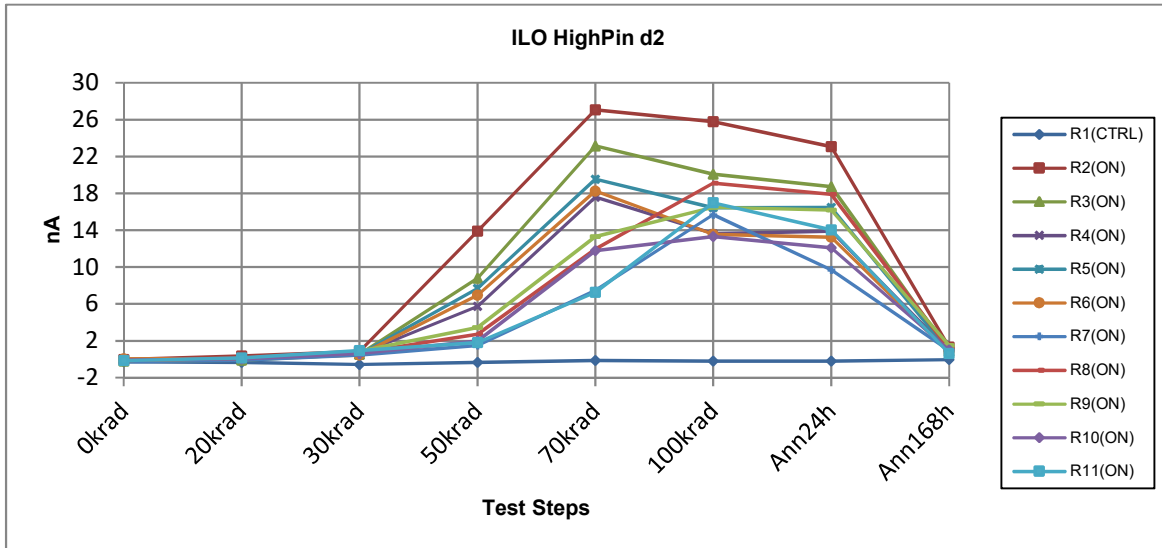
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ILO HighPin d3	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	0.00	-0.23	-0.16	-0.31	-0.23	-0.08	-0.23	0.07
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.13	0.06	0.30	1.47	4.66	10.43	9.39	0.92
R3(ON BIAS HDC)	-0.18	-0.13	0.18	1.34	3.93	9.94	9.51	0.79
R4(ON BIAS HDC)	0.00	0.00	0.12	1.22	3.56	17.56	18.23	1.04
R5(ON BIAS HDC)	0.00	0.06	0.24	0.74	2.70	6.02	6.14	0.42
R6(ON BIAS HDC)	-0.13	-0.25	0.24	1.22	3.25	7.67	7.42	0.61
R7(ON BIAS HDC)	-0.38	0.00	0.12	1.10	3.13	6.57	5.22	0.49
R8(ON BIAS HDC)	-0.18	0.06	0.30	1.10	3.13	7.24	7.06	0.61
R9(ON BIAS HDC)	-0.13	0.06	0.49	2.14	4.36	8.59	9.46	1.10
R10(ON BIAS HDC)	-0.06	0.00	0.18	1.22	3.80	8.90	8.47	1.04
R11(ON BIAS HDC)	-0.25	-0.06	0.18	1.41	3.31	7.55	5.95	0.55
Irradiated, ON biased HDC parts statistics								
Min Value	-0.38	-0.25	0.12	0.74	2.70	6.02	5.22	0.42
Max Value	0.00	0.06	0.49	2.14	4.66	17.56	18.23	1.10
Average	-0.14	-0.02	0.24	1.30	3.58	9.05	8.68	0.76
Sigma	0.11	0.10	0.11	0.36	0.61	3.30	3.70	0.25

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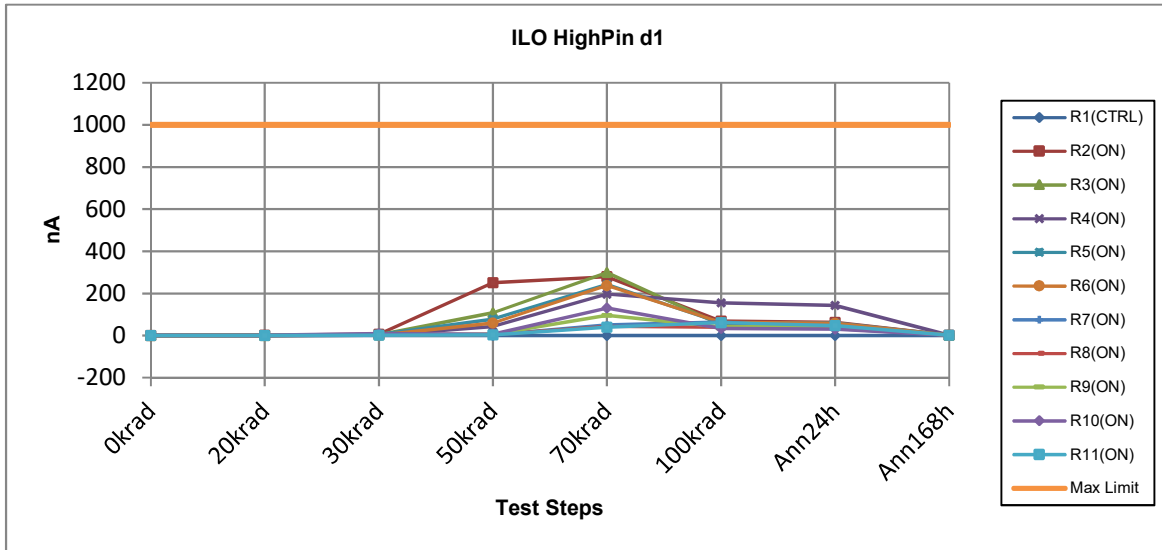
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ILO HighPin d2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.27	-0.35	-0.58	-0.34	-0.12	-0.19	-0.19	-0.04
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.03	0.34	0.82	13.91	27.06	25.78	23.09	1.31
R3(ON BIAS HDC)	-0.22	-0.10	0.52	8.78	23.15	20.09	18.74	0.89
R4(ON BIAS HDC)	-0.10	0.03	0.58	5.72	17.58	13.61	13.91	0.89
R5(ON BIAS HDC)	-0.10	0.03	0.52	7.67	19.54	16.42	16.48	0.82
R6(ON BIAS HDC)	0.03	0.09	0.46	6.94	18.26	13.54	13.24	0.76
R7(ON BIAS HDC)	-0.28	-0.10	0.46	1.50	7.49	15.69	9.70	0.94
R8(ON BIAS HDC)	-0.15	0.15	0.70	2.72	11.96	19.11	17.89	1.13
R9(ON BIAS HDC)	-0.15	0.09	0.89	3.46	13.30	16.48	16.18	1.50
R10(ON BIAS HDC)	-0.10	0.03	0.64	1.98	11.78	13.30	12.08	1.01
R11(ON BIAS HDC)	-0.15	0.15	0.94	1.80	7.25	16.98	14.04	0.64
Irradiated, ON biased HDC parts statistics								
Min Value	-0.28	-0.10	0.46	1.50	7.25	13.30	9.70	0.64
Max Value	0.03	0.34	0.94	13.91	27.06	25.78	23.09	1.50
Average	-0.12	0.07	0.65	5.45	15.74	17.10	15.53	0.99
Sigma	0.09	0.13	0.18	3.98	6.53	3.81	3.81	0.26

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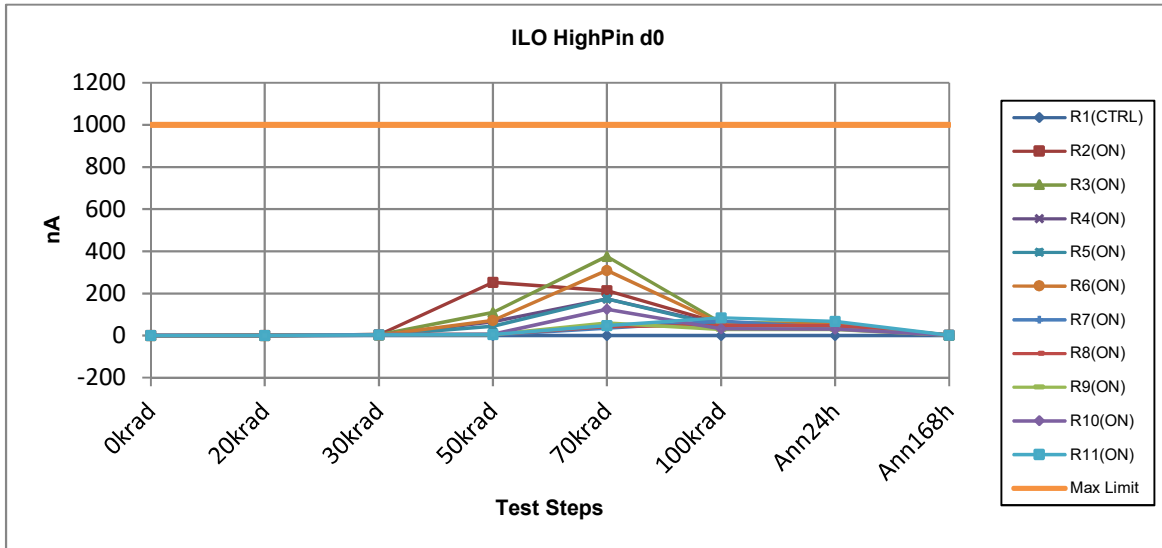
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ILO HighPin d1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.24	-0.24	-0.40	-0.14	-0.02	-0.17	-0.24	-0.17
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.14	1.21	5.92	250.30	279.28	68.90	62.59	1.94
R3(ON BIAS HDC)	-0.14	0.66	3.10	108.58	298.97	50.00	48.05	1.15
R4(ON BIAS HDC)	-0.14	0.17	1.27	42.06	196.86	155.10	143.42	1.76
R5(ON BIAS HDC)	-0.07	0.48	4.21	77.33	242.04	59.11	58.68	1.64
R6(ON BIAS HDC)	-0.32	0.54	2.38	59.30	237.70	62.96	57.34	2.01
R7(ON BIAS HDC)	-0.14	0.48	2.38	3.23	50.55	64.37	33.18	1.58
R8(ON BIAS HDC)	-0.14	0.78	3.84	4.09	43.52	39.91	40.03	1.58
R9(ON BIAS HDC)	-0.32	1.09	3.78	6.04	95.92	41.56	42.85	2.01
R10(ON BIAS HDC)	-0.26	1.70	8.61	6.96	130.65	33.00	29.89	1.52
R11(ON BIAS HDC)	-0.19	0.35	2.25	3.54	39.24	61.25	47.19	1.02
Irradiated, ON biased HDC parts statistics								
Min Value	-0.32	0.17	1.27	3.23	39.24	33.00	29.89	1.02
Max Value	-0.07	1.70	8.61	250.30	298.97	155.10	143.42	2.01
Average	-0.18	0.75	3.77	56.14	161.47	63.62	56.32	1.62
Sigma	0.09	0.46	2.14	77.68	101.51	34.31	32.43	0.34

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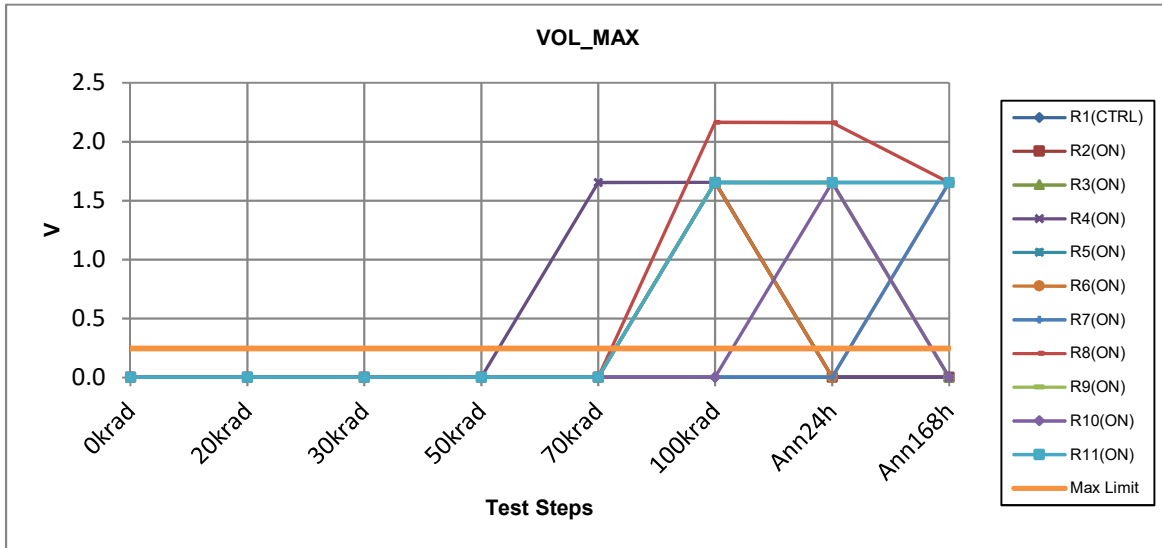
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ILO HighPin d0	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA
Control results								
R1(CTRL)	-0.37	-0.30	-0.14	-0.30	-0.30	-0.14	-0.07	-0.07
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	-0.18	0.50	3.02	252.18	212.26	55.65	49.82	1.85
R3(ON BIAS HDC)	-0.30	0.74	3.81	109.07	376.16	60.74	58.53	1.23
R4(ON BIAS HDC)	-0.11	0.38	2.10	65.52	174.04	50.00	46.87	1.54
R5(ON BIAS HDC)	-0.11	0.26	1.85	43.99	174.78	45.65	46.69	1.23
R6(ON BIAS HDC)	-0.30	0.56	2.22	71.41	309.18	56.07	53.38	1.54
R7(ON BIAS HDC)	-0.11	0.19	1.91	3.07	35.40	68.78	37.37	1.78
R8(ON BIAS HDC)	-0.18	0.86	4.54	4.24	42.70	48.10	46.57	1.42
R9(ON BIAS HDC)	-0.24	0.50	4.67	4.54	59.63	28.47	29.39	1.54
R10(ON BIAS HDC)	-0.36	0.86	4.91	5.83	124.84	31.85	29.94	1.66
R11(ON BIAS HDC)	-0.11	0.62	2.89	4.67	46.81	84.05	66.62	1.36
Irradiated, ON biased HDC parts statistics								
Min Value	-0.36	0.19	1.85	3.07	35.40	28.47	29.39	1.23
Max Value	-0.11	0.86	4.91	252.18	376.16	84.05	66.62	1.85
Average	-0.20	0.55	3.19	56.45	155.58	52.94	46.52	1.52
Sigma	0.09	0.23	1.21	78.21	118.01	16.42	11.82	0.21

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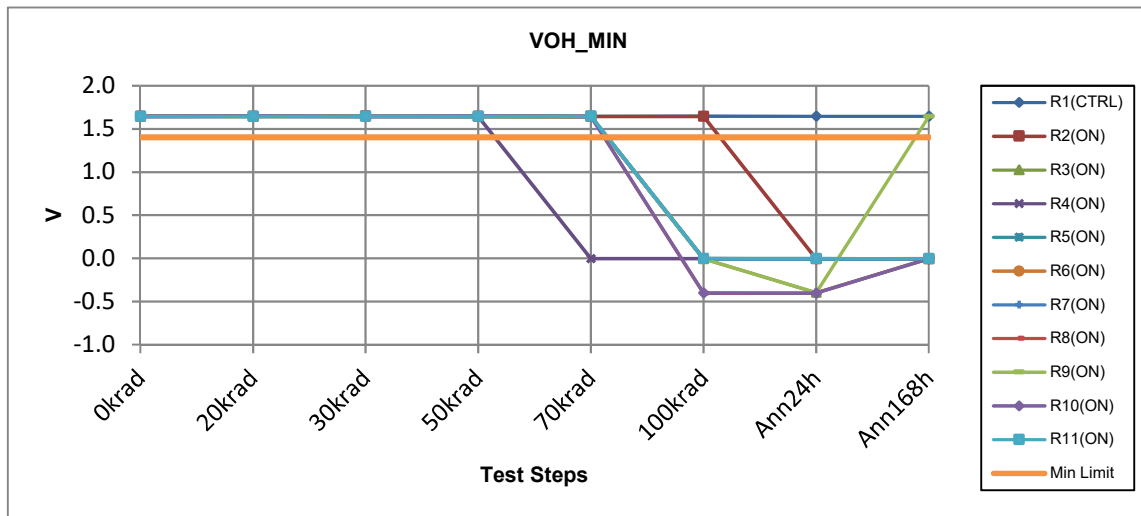
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VOL_MAX	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475
Unit	V	V	V	V	V	V	V	V
Control results								
R1(CTRL)	0.0048	0.0045	0.0047	0.0047	0.0047	0.0048	0.0048	0.0048
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0.0047	0.0047	0.0047	0.0045	0.0047	1.6556	0.0047	0.0048
R3(ON BIAS HDC)	0.0048	0.0045	0.0045	0.0047	0.0047	1.6548	1.6548	0.0048
R4(ON BIAS HDC)	0.0047	0.0047	0.0045	0.0047	1.6548	1.6557	0.0047	0.0048
R5(ON BIAS HDC)	0.0047	0.0047	0.0047	0.0045	0.0047	1.6550	1.6547	1.6540
R6(ON BIAS HDC)	0.0047	0.0045	0.0048	0.0045	0.0047	1.6553	0.0047	1.6523
R7(ON BIAS HDC)	0.0047	0.0045	0.0045	0.0047	0.0048	0.0047	0.0048	1.6553
R8(ON BIAS HDC)	0.0045	0.0045	0.0045	0.0047	0.0047	2.1644	2.1611	1.6553
R9(ON BIAS HDC)	0.0047	0.0045	0.0045	0.0045	0.0047	1.6560	1.6553	0.0048
R10(ON BIAS HDC)	0.0045	0.0045	0.0045	0.0045	0.0047	0.0047	1.6554	0.0050
R11(ON BIAS HDC)	0.0047	0.0047	0.0045	0.0047	0.0048	1.6550	1.6550	1.6540
Irradiated, ON biased HDC parts statistics								
Min Value	0.0045	0.0045	0.0045	0.0045	0.0047	0.0047	0.0047	0.0048
Max Value	0.0048	0.0047	0.0048	0.0047	1.6548	2.1644	2.1611	1.6553
Average	0.0047	0.0046	0.0046	0.0046	0.1697	1.3761	1.0455	0.8295
Sigma	0.0001	0.0001	0.0001	0.0001	0.5218	0.7400	0.9089	0.8693

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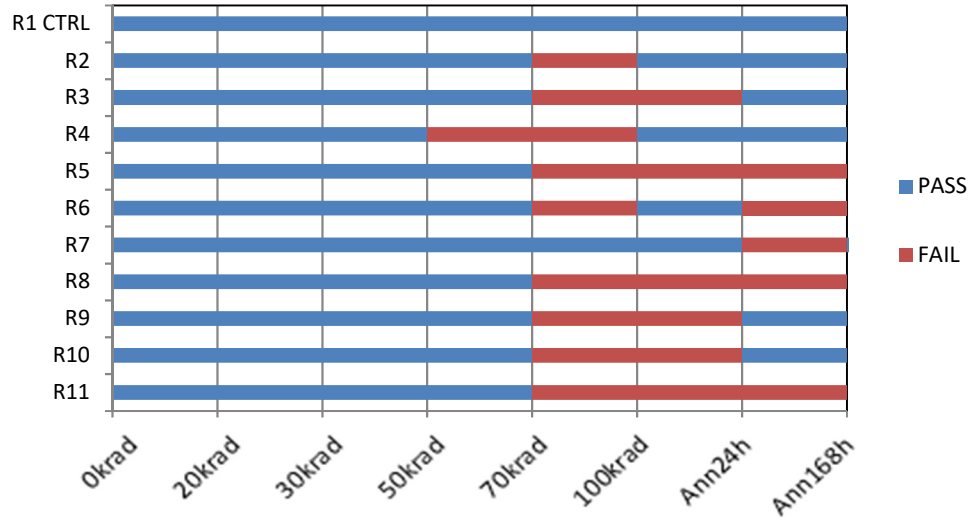
VOH_MIN	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025
Max Limit	--	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V	V
Control results								
R1(CTRL)	1.6459	1.6460	1.6460	1.6460	1.6459	1.6460	1.6462	1.6462
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	1.6459	1.6458	1.6459	1.6459	1.6456	1.6456	-0.0052	-0.0052
R3(ON BIAS HDC)	1.6461	1.6459	1.6462	1.6456	1.6456	-0.0052	-0.3971	-0.0052
R4(ON BIAS HDC)	1.6457	1.6461	1.6462	1.6456	-0.0049	-0.0049	-0.0052	-0.0052
R5(ON BIAS HDC)	1.6462	1.6460	1.6457	1.6457	1.6459	-0.0050	-0.0050	-0.0050
R6(ON BIAS HDC)	1.6459	1.6460	1.6459	1.6459	1.6458	-0.0049	-0.0051	-0.0050
R7(ON BIAS HDC)	1.6457	1.6460	1.6459	1.6459	1.6459	-0.0052	-0.0051	-0.0053
R8(ON BIAS HDC)	1.6462	1.6460	1.6457	1.6456	1.6456	-0.4069	-0.4047	-0.0049
R9(ON BIAS HDC)	1.6460	1.6458	1.6459	1.6456	1.6458	-0.0051	-0.3988	1.6453
R10(ON BIAS HDC)	1.6460	1.6459	1.6454	1.6459	1.6459	-0.3997	-0.4038	-0.0052
R11(ON BIAS HDC)	1.6456	1.6456	1.6457	1.6457	1.6459	-0.0049	-0.0048	-0.0049
Irradiated, ON biased HDC parts statistics								
Min Value	1.6456	1.6456	1.6454	1.6456	-0.0049	-0.4069	-0.4047	-0.0053
Max Value	1.6462	1.6461	1.6462	1.6459	1.6459	1.6456	-0.0048	1.6453
Average	1.6459	1.6459	1.6458	1.6457	1.4807	0.0804	-0.1635	0.1599
Sigma	0.0002	0.0001	0.0002	0.0001	0.5220	0.5743	0.2045	0.5219

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VILmax fails



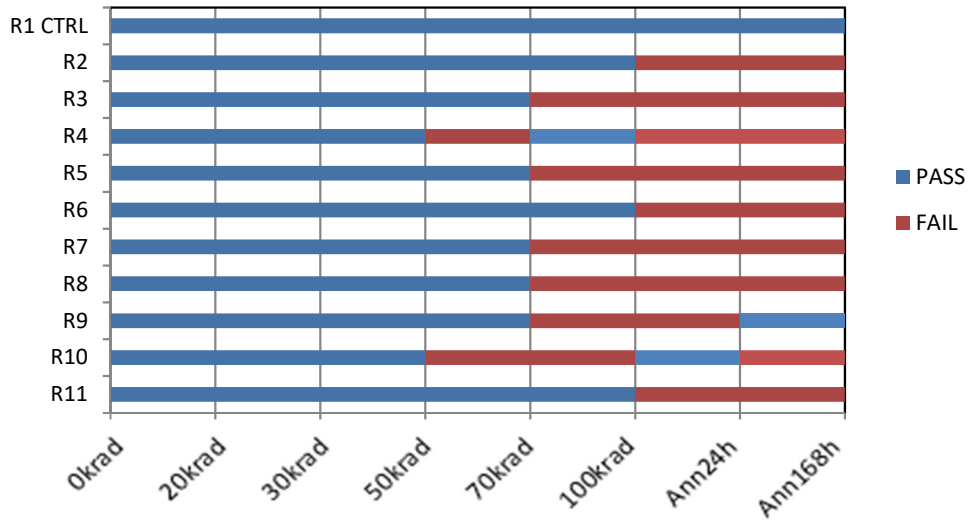
VILmax fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	--	--	--	--	--	--	--	--
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	PASS	PASS
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS	PASS
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	PASS	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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VIHmin fails

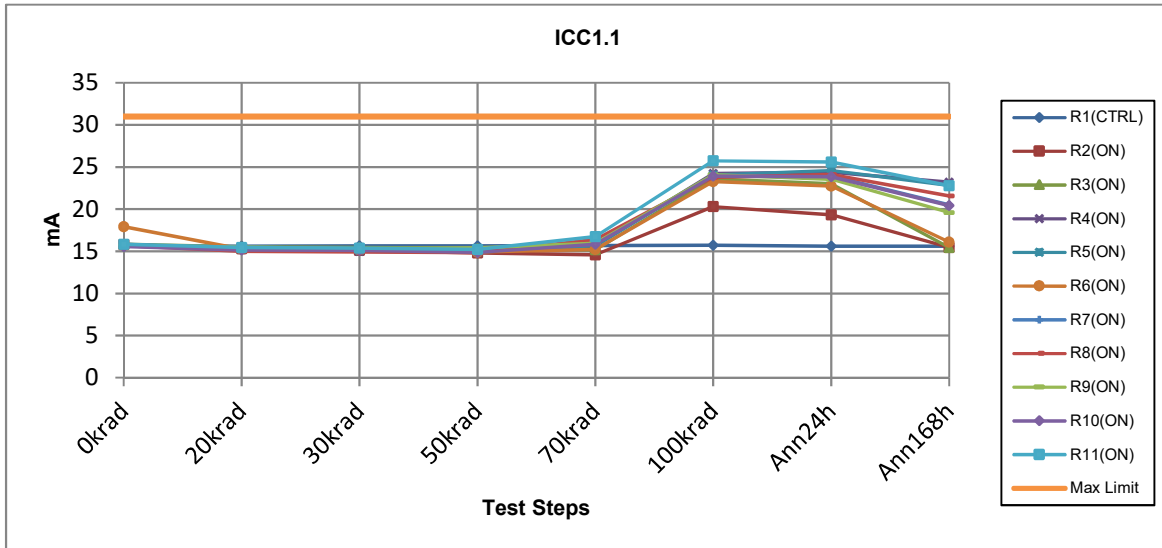


Test steps

VIHmin fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	--	--	--	--	--	--	--	--
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	PASS	FAIL	FAIL
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS	FAIL
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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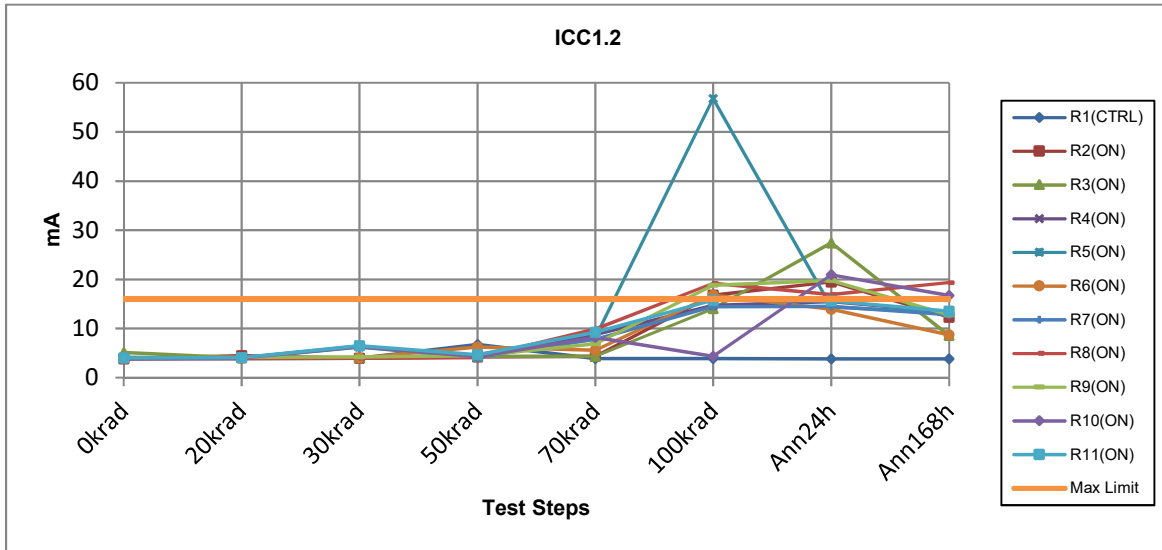
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ICC1.1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	31	31	31	31	31	31	31	31
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	15.60	15.61	15.63	15.64	15.67	15.71	15.62	15.61
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	15.78	15.31	15.10	14.80	14.58	20.31	19.31	15.46
R3(ON BIAS HDC)	15.84	15.54	15.44	15.34	15.18	23.61	23.01	15.46
R4(ON BIAS HDC)	15.85	15.23	15.01	14.87	15.63	24.25	24.38	23.19
R5(ON BIAS HDC)	15.71	15.21	15.12	14.89	15.67	24.04	24.60	22.82
R6(ON BIAS HDC)	17.91	15.28	15.18	14.89	15.22	23.28	22.75	16.12
R7(ON BIAS HDC)	15.67	15.49	15.29	15.10	15.86	24.03	23.94	20.51
R8(ON BIAS HDC)	15.69	15.01	14.92	14.82	16.39	23.78	24.11	21.56
R9(ON BIAS HDC)	15.67	15.50	15.32	15.43	15.97	24.07	23.55	19.60
R10(ON BIAS HDC)	15.58	15.17	15.10	14.85	15.83	23.93	23.86	20.42
R11(ON BIAS HDC)	15.84	15.44	15.37	15.22	16.76	25.74	25.59	22.79
Irradiated, ON biased HDC parts statistics								
Min Value	15.58	15.01	14.92	14.80	14.58	20.31	19.31	15.46
Max Value	17.91	15.54	15.44	15.43	16.76	25.74	25.59	23.19
Average	15.95	15.32	15.19	15.02	15.71	23.70	23.51	19.79
Sigma	0.69	0.17	0.17	0.23	0.62	1.36	1.68	3.07

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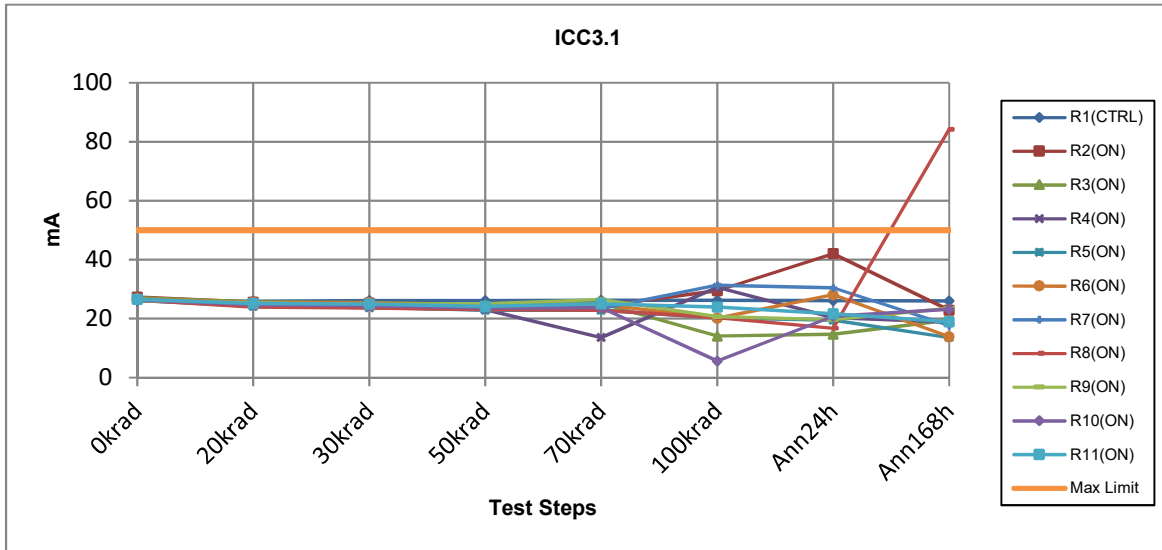
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ICC1.2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	16	16	16	16	16	16	16	16
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	3.84	3.87	3.94	6.76	3.91	3.90	3.86	3.85
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	3.85	4.45	3.97	4.23	4.32	16.76	19.47	12.30
R3(ON BIAS HDC)	5.14	4.03	4.05	4.32	4.34	14.06	27.43	8.59
R4(ON BIAS HDC)	3.87	3.96	4.01	4.60	8.79	14.70	15.49	13.38
R5(ON BIAS HDC)	4.17	3.94	6.23	4.08	8.22	56.80	14.38	13.20
R6(ON BIAS HDC)	3.89	4.05	4.01	6.22	5.56	16.79	13.95	8.68
R7(ON BIAS HDC)	3.85	3.99	6.44	4.20	7.83	14.42	14.50	12.84
R8(ON BIAS HDC)	3.84	3.86	3.93	4.10	9.90	19.16	16.94	19.35
R9(ON BIAS HDC)	3.93	4.13	4.18	4.45	6.86	18.81	19.77	12.72
R10(ON BIAS HDC)	3.85	4.03	6.29	4.28	8.18	4.38	20.93	16.74
R11(ON BIAS HDC)	3.99	4.07	6.52	4.67	9.24	15.76	15.64	13.51
Irradiated, ON biased HDC parts statistics								
Min Value	3.84	3.86	3.93	4.08	4.32	4.38	13.95	8.59
Max Value	5.14	4.45	6.52	6.22	9.90	56.80	27.43	19.35
Average	4.04	4.05	4.96	4.52	7.32	19.16	17.85	13.13
Sigma	0.40	0.16	1.22	0.63	1.99	13.85	4.18	3.22

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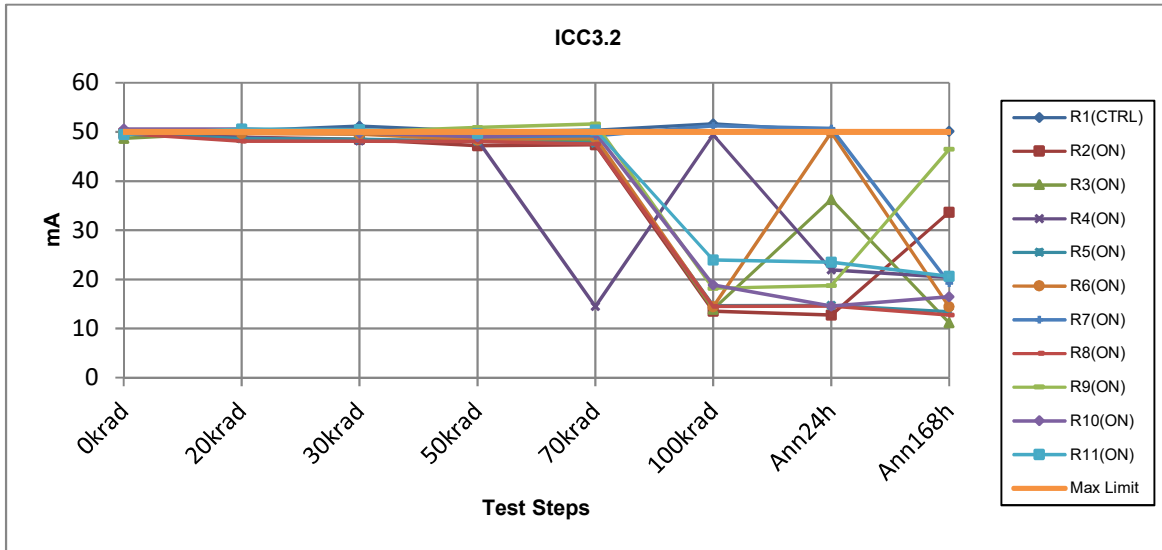
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ICC3.1	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	50	50	50	50	50	50	50	50
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	26.1	26.0	26.2	26.2	26.2	26.2	26.2	26.0
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	27.4	25.6	25.3	24.1	24.2	29.5	42.0	22.9
R3(ON BIAS HDC)	27.1	25.7	25.5	24.8	25.2	14.1	14.7	19.5
R4(ON BIAS HDC)	26.3	24.4	23.8	23.1	13.6	30.6	20.4	18.9
R5(ON BIAS HDC)	26.3	24.2	23.9	22.9	22.9	20.3	19.5	13.6
R6(ON BIAS HDC)	26.6	25.5	25.3	24.1	24.9	20.2	28.1	13.9
R7(ON BIAS HDC)	26.0	25.3	24.6	23.7	23.4	31.4	30.5	17.7
R8(ON BIAS HDC)	26.3	23.9	23.7	23.1	22.9	20.4	16.8	84.2
R9(ON BIAS HDC)	26.3	25.4	24.8	25.0	26.5	20.7	19.7	23.5
R10(ON BIAS HDC)	26.4	24.7	24.4	23.7	23.8	5.7	20.9	23.2
R11(ON BIAS HDC)	26.6	25.2	24.9	24.2	25.0	24.0	21.7	18.9
Irradiated, ON biased HDC parts statistics								
Min Value	26.0	23.9	23.7	22.9	13.6	5.7	14.7	13.6
Max Value	27.4	25.7	25.5	25.0	26.5	31.4	42.0	84.2
Average	26.5	25.0	24.6	23.9	23.2	21.7	23.4	25.6
Sigma	0.4	0.6	0.7	0.7	3.6	7.9	8.1	20.9

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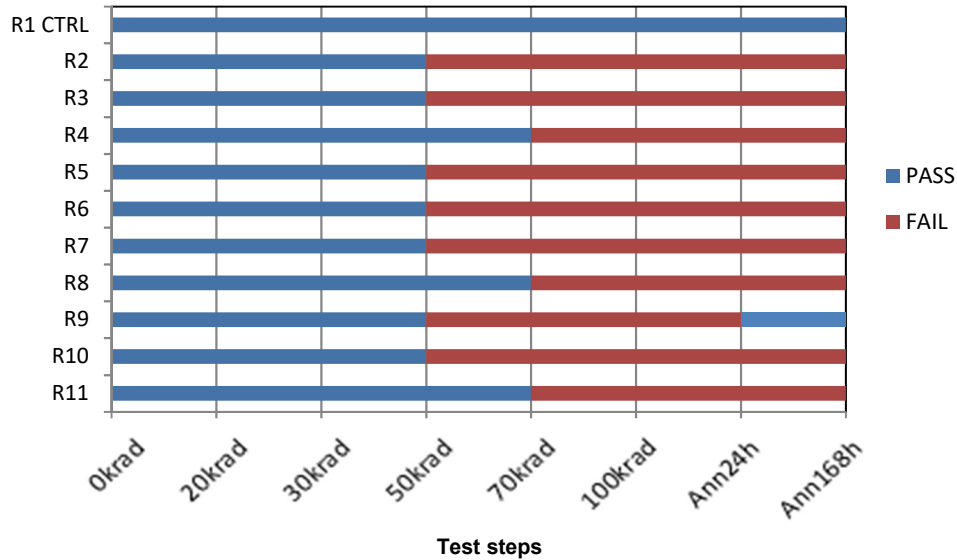


ICC3.2	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	50	50	50	50	50	50	50	50
Unit	mA	mA	mA	mA	mA	mA	mA	mA
Control results								
R1(CTRL)	50.1	50.2	51.2	50.1	50.3	51.7	50.2	50.1
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	49.8	48.9	48.5	47.2	47.4	13.5	12.7	33.7
R3(ON BIAS HDC)	48.7	49.9	49.8	48.8	48.2	13.9	36.3	11.2
R4(ON BIAS HDC)	49.6	48.9	48.2	48.3	14.5	49.4	21.9	20.4
R5(ON BIAS HDC)	49.6	48.7	48.5	48.1	47.7	14.6	14.7	13.4
R6(ON BIAS HDC)	49.8	49.7	49.5	48.4	48.8	14.4	49.9	14.4
R7(ON BIAS HDC)	49.5	50.4	50.3	49.0	49.2	51.2	50.7	19.3
R8(ON BIAS HDC)	49.6	48.1	48.1	48.0	47.5	14.5	14.6	12.7
R9(ON BIAS HDC)	49.9	50.4	50.0	50.9	51.6	18.2	18.8	46.5
R10(ON BIAS HDC)	50.6	50.6	49.8	49.0	49.8	18.9	14.6	16.5
R11(ON BIAS HDC)	49.5	50.6	50.5	49.7	50.4	23.9	23.5	20.6
Irradiated, ON biased HDC parts statistics								
Min Value	48.7	48.1	48.1	47.2	14.5	13.5	12.7	11.2
Max Value	50.6	50.6	50.5	50.9	51.6	51.2	50.7	46.5
Average	49.7	49.6	49.3	48.7	45.5	23.3	25.8	20.9
Sigma	0.5	0.9	0.9	1.0	11.0	14.6	14.6	11.1

Note: The limit of this parameter must be considered as information only in accordance to Note 5 of TABLE I in test plan.



tCS fails



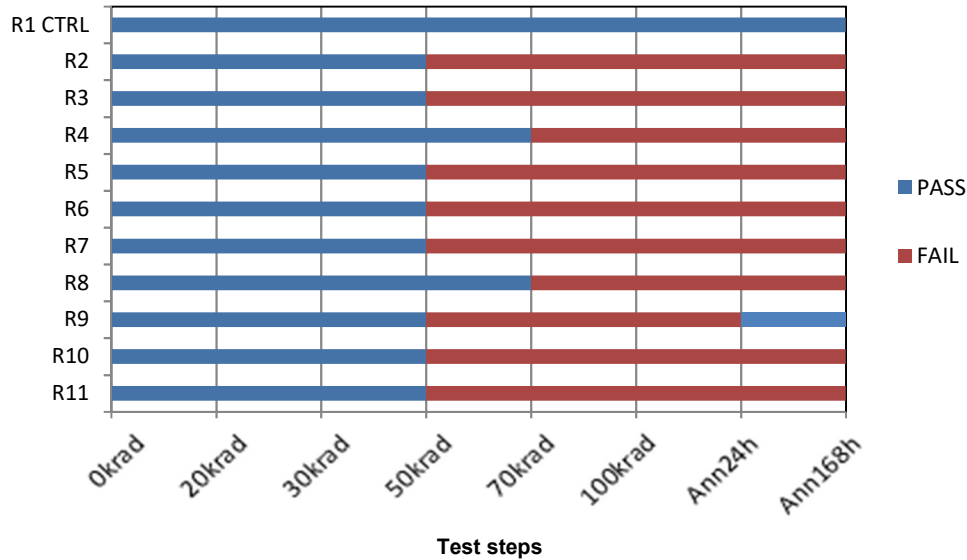
tCS fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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tCH fails



tCH fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

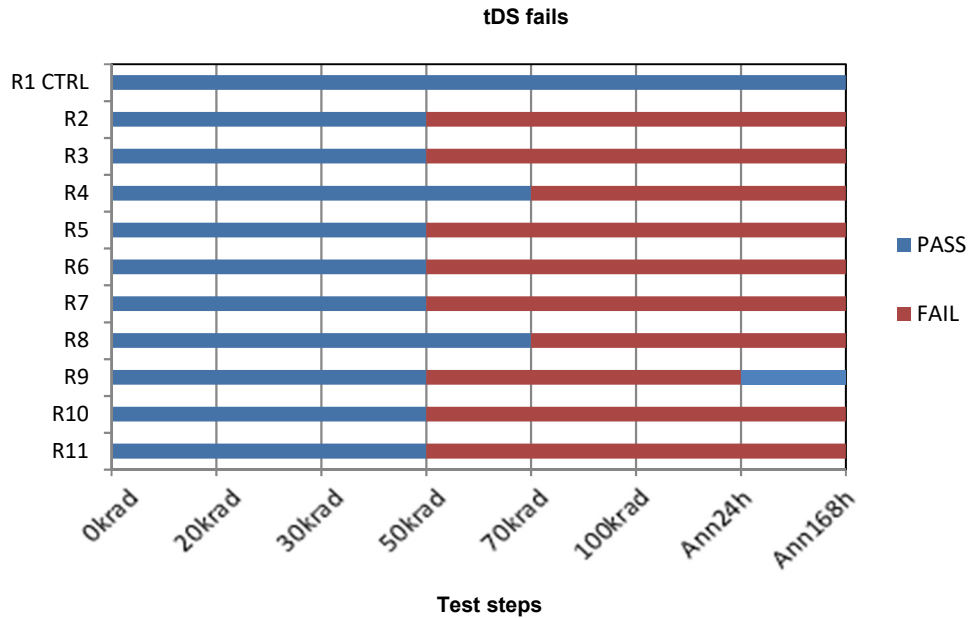
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Total Ionizing Dose Radiation Test PC28F00AM29EWHA D/C 1409		MICRON U	ALTER TECHNOLOGY	
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RL: 2017901237 Ref.: ATN-RR-464 Issue: 2 Date: 2018/10/10 Page: 227 / 462	



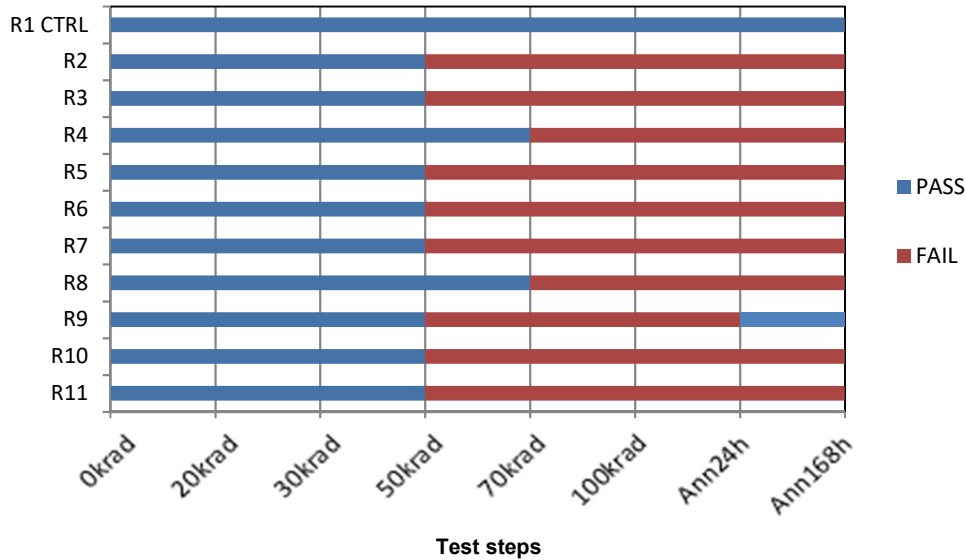
tDS fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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tDH fails



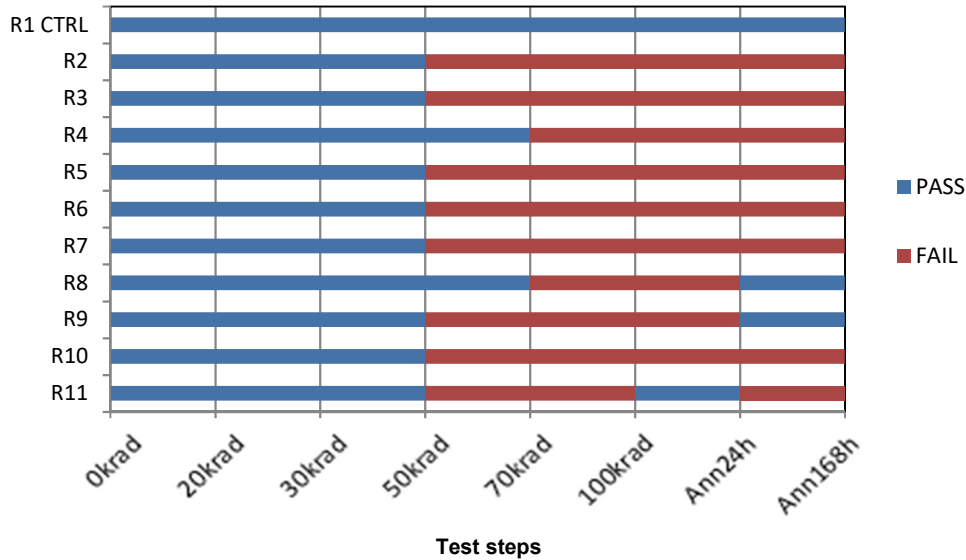
tDH fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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tWP fails



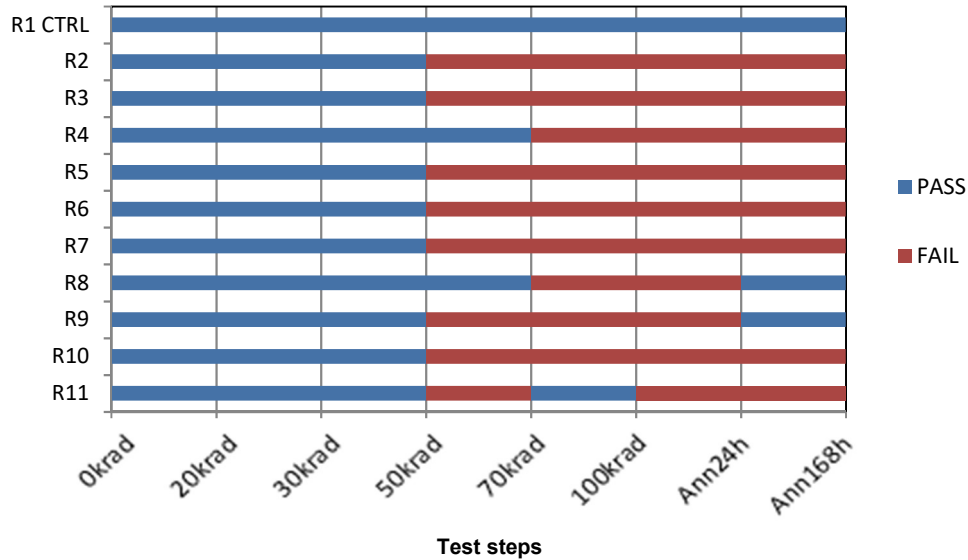
tWP fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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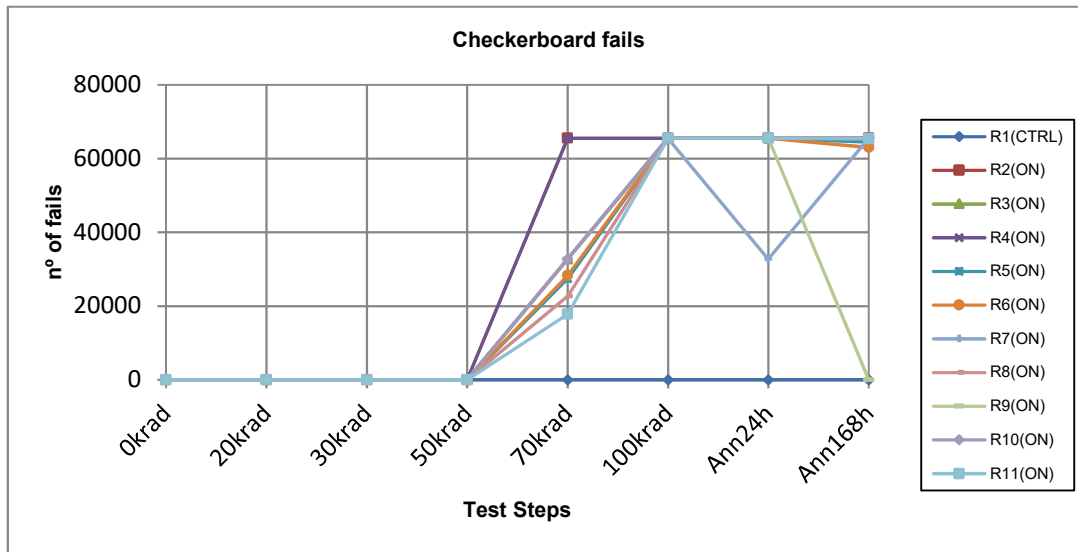
tWPH fails



tWPH fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results								
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R3(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R4(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL
R5(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R6(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R7(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R8(ON BIAS HDC)	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	PASS
R9(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	PASS
R10(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	FAIL	FAIL	FAIL
R11(ON BIAS HDC)	PASS	PASS	PASS	PASS	FAIL	PASS	FAIL	FAIL
Irradiated, ON biased HDC parts statistics								
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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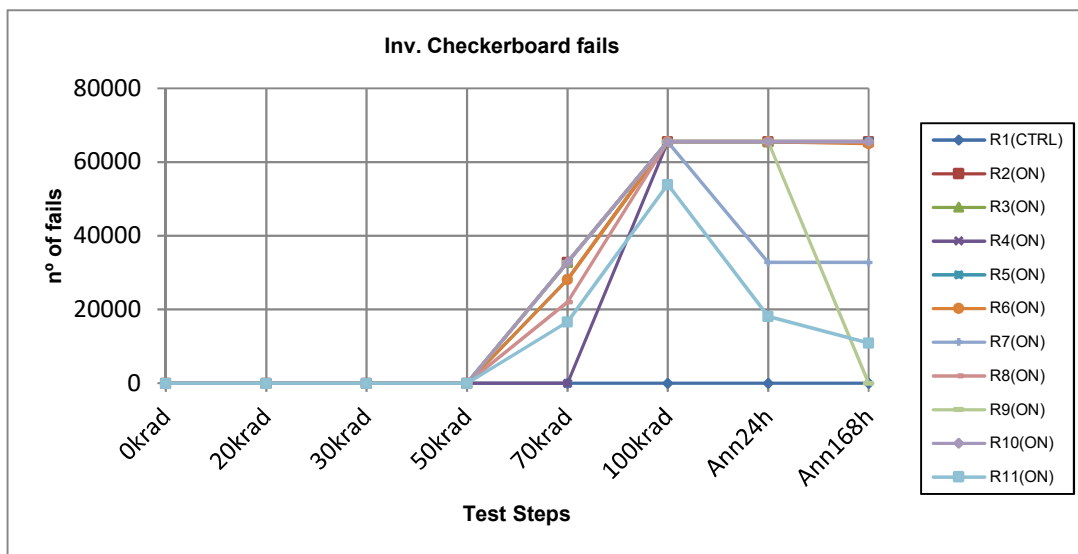
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Checkerboard fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results								
R1(CTRL)	0	0	0	0	0	0	0	0
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0	0	0	0	65536	65536	65536	65536
R3(ON BIAS HDC)	0	0	0	0	32768	65536	65536	65536
R4(ON BIAS HDC)	0	0	0	0	65536	65536	65536	65536
R5(ON BIAS HDC)	0	0	0	0	27459	65536	65536	64545
R6(ON BIAS HDC)	0	0	0	0	28328	65536	65536	63014
R7(ON BIAS HDC)	0	0	0	0	32777	65461	32773	65536
R8(ON BIAS HDC)	0	0	0	0	22636	65536	65536	65536
R9(ON BIAS HDC)	0	0	0	0	32768	65536	65536	0
R10(ON BIAS HDC)	0	0	0	0	32768	65536	65536	65536
R11(ON BIAS HDC)	0	0	0	0	17784	65536	65536	65382
Irradiated, ON biased HDC parts statistics								
Min Value	0	0	0	0	17784	65461	32773	0
Max Value	0	0	0	0	65536	65536	65536	65536
Average	0	0	0	0	35836	65529	62260	58616
Sigma	0	0	0	0	16426	24	10361	20611

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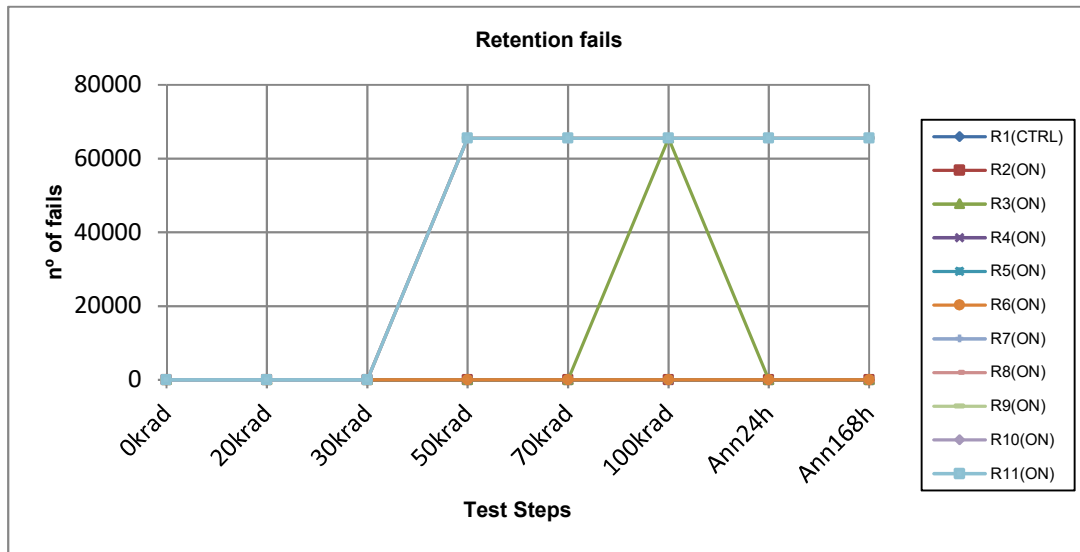
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Inv. Checkerboard fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results								
R1(CTRL)	0	0	0	0	0	0	0	0
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0	0	0	0	32838	65536	65536	65536
R3(ON BIAS HDC)	0	0	0	0	32768	65536	65536	65536
R4(ON BIAS HDC)	0	0	0	0	0	65536	65536	65536
R5(ON BIAS HDC)	0	0	0	0	28196	65536	65536	65536
R6(ON BIAS HDC)	0	0	0	0	28098	65536	65536	65064
R7(ON BIAS HDC)	0	0	0	0	32774	65529	32768	32768
R8(ON BIAS HDC)	0	0	0	0	22012	65536	65536	65536
R9(ON BIAS HDC)	0	0	0	0	32768	65536	65536	0
R10(ON BIAS HDC)	0	0	0	0	32769	65536	65536	65536
R11(ON BIAS HDC)	0	0	0	0	16661	53942	18082	10948
Irradiated, ON biased HDC parts statistics								
Min Value	0	0	0	0	0	53942	18082	0
Max Value	0	0	0	0	32838	65536	65536	65536
Average	0	0	0	0	25888	64376	57514	50200
Sigma	0	0	0	0	10637	3666	17263	25813

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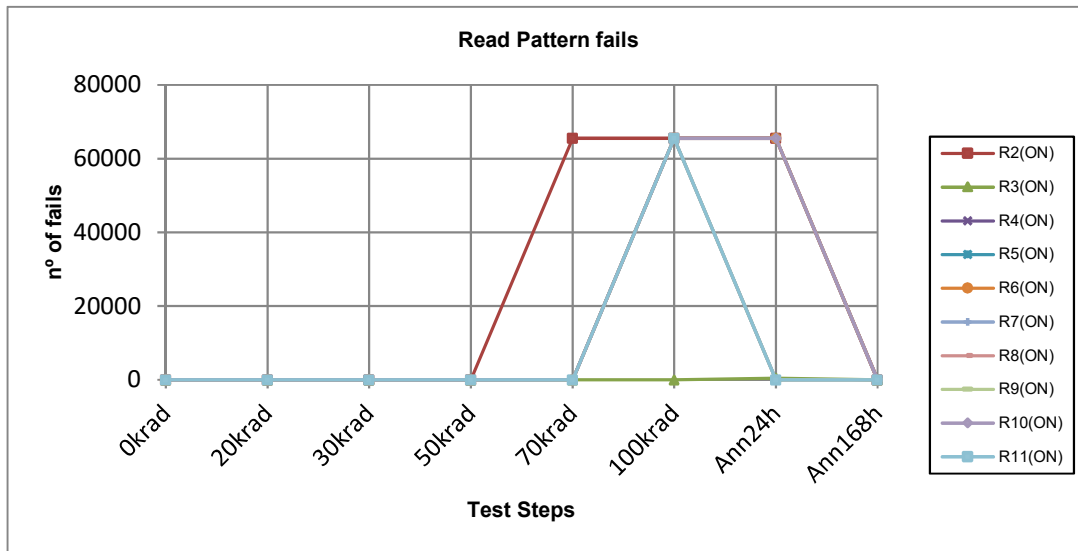
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Retention fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results								
R1(CTRL)	0	0	0	0	0	0	0	0
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0	0	0	0	0	1	1	0
R3(ON BIAS HDC)	0	0	0	0	0	65536	0	0
R4(ON BIAS HDC)	0	0	0	0	0	0	0	0
R5(ON BIAS HDC)	0	0	0	0	0	0	0	1
R6(ON BIAS HDC)	0	0	0	0	0	1	0	0
R7(ON BIAS HDC)	0	0	0	65536	65536	65536	65536	65536
R8(ON BIAS HDC)	0	0	0	65536	65536	65536	65536	65536
R9(ON BIAS HDC)	0	0	0	65536	65536	65536	65536	65536
R10(ON BIAS HDC)	0	0	0	65536	65536	65536	65536	65536
R11(ON BIAS HDC)	0	0	0	65536	65536	65536	65536	65536
Irradiated, ON biased HDC parts statistics								
Min Value	0	0	0	0	0	0	0	0
Max Value	0	0	0	65536	65536	65536	65536	65536
Average	0	0	0	32768	32768	39322	32768	32768
Sigma	0	0	0	34541	34541	33842	34540	34540

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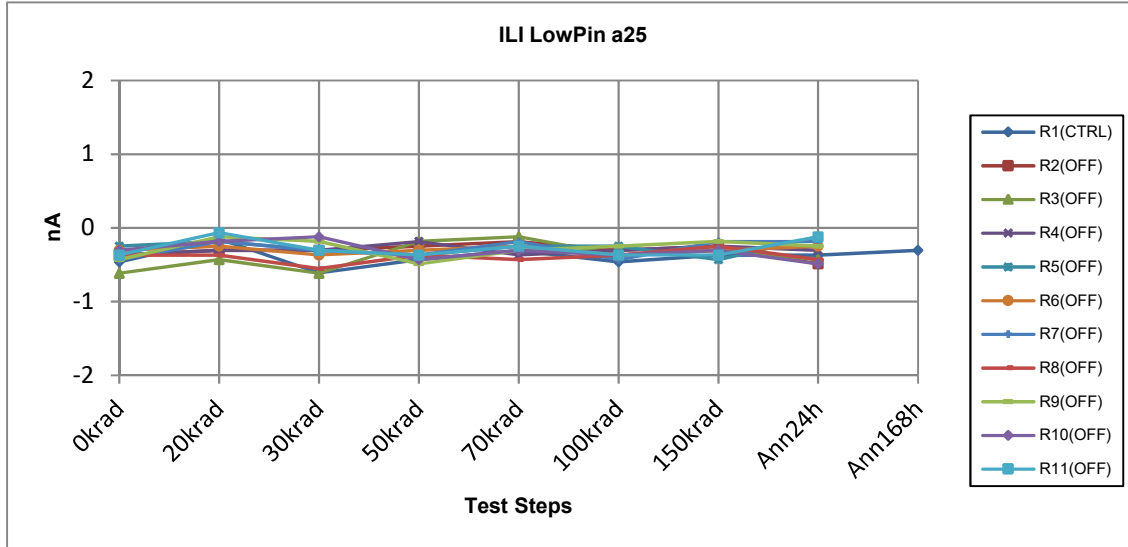
Read Pattern fails	0krad	20krad	30krad	50krad	70krad	100krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results								
R1(CTRL)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irradiated, ON biased HDC parts results								
R2(ON BIAS HDC)	0	0	0	0	65536	65536	65536	0
R3(ON BIAS HDC)	0	0	0	0	0	0	452	0
R4(ON BIAS HDC)	0	0	0	0	0	65536	0	0
R5(ON BIAS HDC)	0	0	0	0	0	65536	65536	5
R6(ON BIAS HDC)	0	0	0	0	0	65536	65536	0
R7(ON BIAS HDC)	0	0	0	0	4	65536	0	0
R8(ON BIAS HDC)	0	0	0	0	0	65536	65536	0
R9(ON BIAS HDC)	0	0	0	0	16	65536	0	0
R10(ON BIAS HDC)	0	0	0	0	0	65536	65536	0
R11(ON BIAS HDC)	0	0	0	0	0	65536	0	0
Irradiated, ON biased HDC parts statistics								
Min Value	0	0	0	0	0	0	0	0
Max Value	0	0	0	0	65536	65536	65536	5
Average	0	0	0	0	6556	58982	32813	1
Sigma	0	0	0	0	20724	20724	34493	2

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c/ Tomas Alba Edison, 4, Parque Científico y Tecnológico Cartuja - 41092 Seville, SPAIN. T: 34-95-446 70 50, Fax: 34-95-446 73 39, E-Mail: info@altertechnology.com



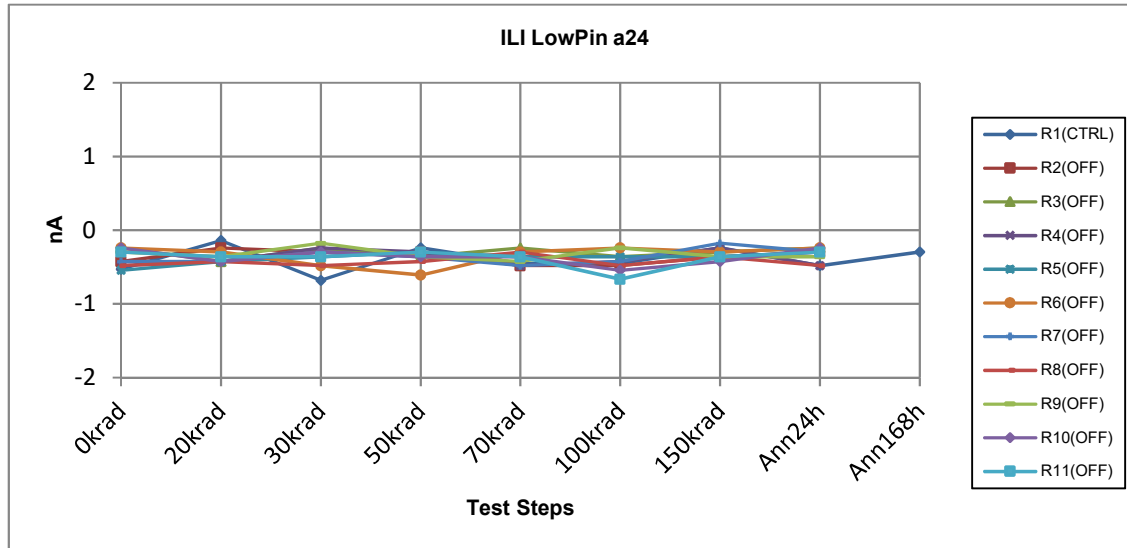
R1 + OFF samples (SN 22 to 31)



ILI LowPin a25	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.46	-0.15	-0.61	-0.43	-0.31	-0.46	-0.37	-0.37	-0.30
Irradiated, unbiased parts results									
R2(OFF)	-0.37	-0.30	-0.30	-0.25	-0.18	-0.30	-0.25	-0.49	No meas.
R3(OFF)	-0.62	-0.43	-0.62	-0.18	-0.12	-0.37	-0.30	-0.43	No meas.
R4(OFF)	-0.37	-0.30	-0.30	-0.18	-0.37	-0.30	-0.25	-0.30	No meas.
R5(OFF)	-0.25	-0.18	-0.30	-0.37	-0.25	-0.25	-0.43	-0.12	No meas.
R6(OFF)	-0.30	-0.25	-0.37	-0.30	-0.25	-0.37	-0.30	-0.25	No meas.
R7(OFF)	-0.43	-0.18	-0.30	-0.37	-0.18	-0.43	-0.18	-0.18	No meas.
R8(OFF)	-0.37	-0.37	-0.55	-0.37	-0.43	-0.37	-0.25	-0.43	No meas.
R9(OFF)	-0.43	-0.12	-0.18	-0.49	-0.30	-0.25	-0.18	-0.25	No meas.
R10(OFF)	-0.30	-0.18	-0.12	-0.43	-0.30	-0.37	-0.30	-0.49	No meas.
R11(OFF)	-0.37	-0.06	-0.30	-0.37	-0.25	-0.37	-0.37	-0.12	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.62	-0.43	-0.62	-0.49	-0.43	-0.43	-0.43	-0.49	N/A
Max Value	-0.25	-0.06	-0.12	-0.18	-0.12	-0.25	-0.18	-0.12	N/A
Average	-0.38	-0.24	-0.34	-0.33	-0.26	-0.34	-0.28	-0.31	N/A
Sigma	0.10	0.11	0.15	0.10	0.09	0.06	0.08	0.14	N/A

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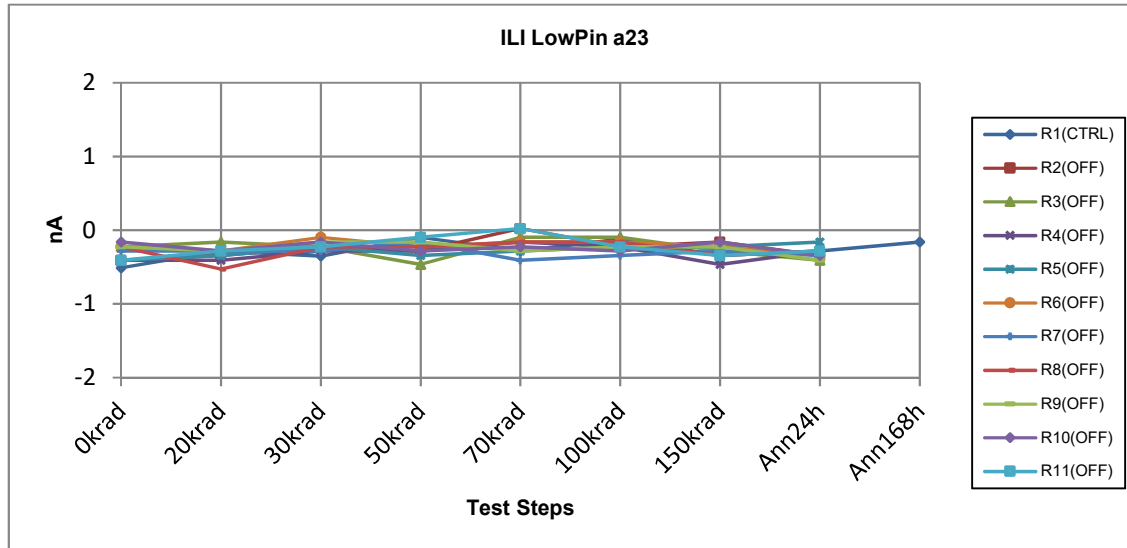
ALTER TECHNOLOGY TÜV NORD S.A.U., AN ISO 9001, EN 9100 ISO/IECE 17025:025 AND DLA SUITABILITY CERTIFIED COMPANY
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ILI LowPin a24	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.53	-0.14	-0.68	-0.24	-0.45	-0.45	-0.24	-0.48	-0.30
Irradiated, unbiased parts results									
R2(OFF)	-0.42	-0.24	-0.30	-0.30	-0.48	-0.48	-0.36	-0.30	No meas.
R3(OFF)	-0.24	-0.42	-0.24	-0.36	-0.24	-0.36	-0.30	-0.24	No meas.
R4(OFF)	-0.48	-0.42	-0.24	-0.30	-0.48	-0.42	-0.24	-0.48	No meas.
R5(OFF)	-0.54	-0.42	-0.36	-0.30	-0.36	-0.36	-0.36	-0.30	No meas.
R6(OFF)	-0.24	-0.30	-0.48	-0.61	-0.30	-0.24	-0.30	-0.24	No meas.
R7(OFF)	-0.42	-0.42	-0.30	-0.36	-0.48	-0.42	-0.18	-0.30	No meas.
R8(OFF)	-0.48	-0.42	-0.48	-0.42	-0.30	-0.48	-0.36	-0.48	No meas.
R9(OFF)	-0.30	-0.36	-0.18	-0.36	-0.42	-0.24	-0.36	-0.36	No meas.
R10(OFF)	-0.24	-0.42	-0.30	-0.36	-0.36	-0.54	-0.42	-0.24	No meas.
R11(OFF)	-0.30	-0.36	-0.36	-0.30	-0.36	-0.66	-0.36	-0.30	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.54	-0.42	-0.48	-0.61	-0.48	-0.66	-0.42	-0.48	N/A
Max Value	-0.24	-0.24	-0.18	-0.30	-0.24	-0.24	-0.18	-0.24	N/A
Average	-0.37	-0.38	-0.32	-0.37	-0.38	-0.42	-0.32	-0.32	N/A
Sigma	0.12	0.07	0.10	0.10	0.09	0.13	0.07	0.09	N/A

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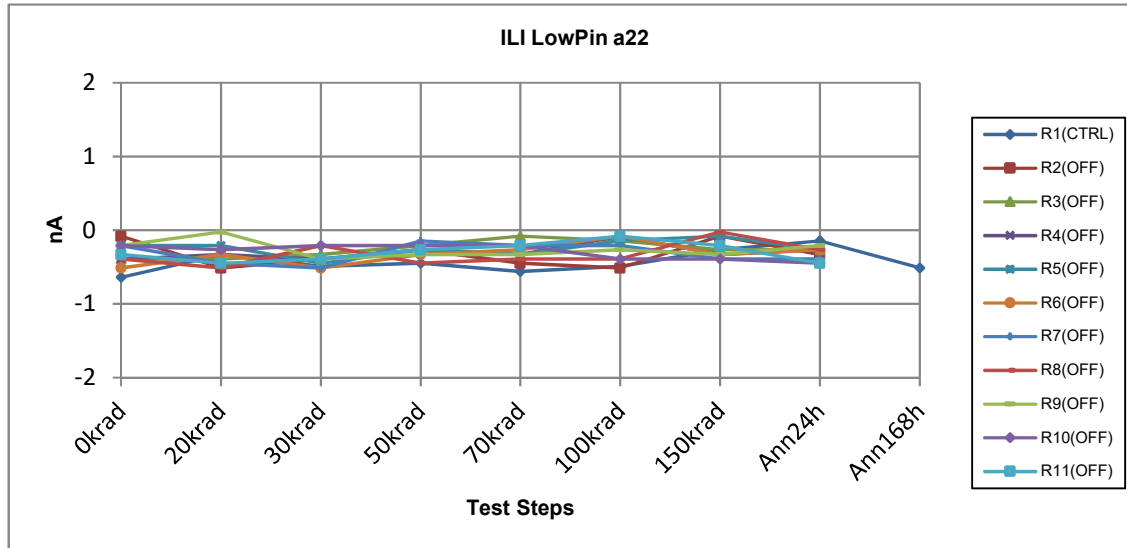
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ILI LowPin a23	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.51	-0.28	-0.35	-0.10	-0.28	-0.12	-0.34	-0.28	-0.16
Irradiated, unbiased parts results									
R2(OFF)	-0.41	-0.34	-0.22	-0.28	0.02	-0.22	-0.16	-0.34	No meas.
R3(OFF)	-0.22	-0.16	-0.22	-0.46	-0.10	-0.10	-0.28	-0.41	No meas.
R4(OFF)	-0.41	-0.41	-0.28	-0.28	-0.16	-0.22	-0.46	-0.28	No meas.
R5(OFF)	-0.41	-0.34	-0.22	-0.34	-0.28	-0.22	-0.22	-0.16	No meas.
R6(OFF)	-0.22	-0.28	-0.10	-0.22	-0.16	-0.16	-0.22	-0.34	No meas.
R7(OFF)	-0.28	-0.28	-0.28	-0.16	-0.41	-0.34	-0.28	-0.34	No meas.
R8(OFF)	-0.22	-0.53	-0.22	-0.22	-0.16	-0.16	-0.34	-0.28	No meas.
R9(OFF)	-0.22	-0.28	-0.16	-0.16	-0.28	-0.22	-0.22	-0.41	No meas.
R10(OFF)	-0.16	-0.28	-0.16	-0.28	-0.22	-0.28	-0.16	-0.34	No meas.
R11(OFF)	-0.41	-0.28	-0.22	-0.10	0.02	-0.22	-0.34	-0.28	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.41	-0.53	-0.28	-0.46	-0.41	-0.34	-0.46	-0.41	N/A
Max Value	-0.16	-0.16	-0.10	-0.10	0.02	-0.10	-0.16	-0.16	N/A
Average	-0.30	-0.32	-0.21	-0.25	-0.17	-0.22	-0.27	-0.32	N/A
Sigma	0.10	0.10	0.06	0.10	0.14	0.07	0.09	0.07	N/A

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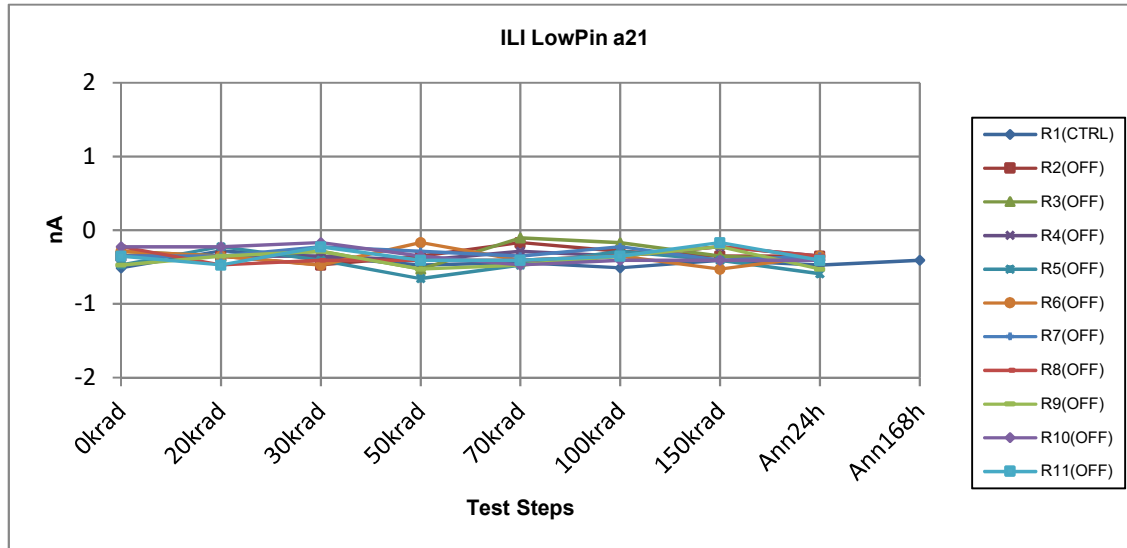
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ILI LowPin a22	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.64	-0.33	-0.49	-0.45	-0.56	-0.49	-0.26	-0.14	-0.51
Irradiated, unbiased parts results									
R2(OFF)	-0.08	-0.51	-0.39	-0.26	-0.45	-0.51	-0.08	-0.33	No meas.
R3(OFF)	-0.39	-0.39	-0.33	-0.21	-0.08	-0.14	-0.26	-0.26	No meas.
R4(OFF)	-0.39	-0.33	-0.39	-0.26	-0.33	-0.08	-0.33	-0.26	No meas.
R5(OFF)	-0.21	-0.21	-0.45	-0.26	-0.33	-0.14	-0.08	-0.26	No meas.
R6(OFF)	-0.51	-0.33	-0.51	-0.33	-0.26	-0.08	-0.33	-0.26	No meas.
R7(OFF)	-0.21	-0.45	-0.51	-0.14	-0.21	-0.21	-0.39	-0.39	No meas.
R8(OFF)	-0.39	-0.51	-0.21	-0.45	-0.39	-0.39	-0.02	-0.26	No meas.
R9(OFF)	-0.21	-0.02	-0.39	-0.33	-0.33	-0.26	-0.33	-0.21	No meas.
R10(OFF)	-0.21	-0.26	-0.21	-0.21	-0.21	-0.39	-0.39	-0.45	No meas.
R11(OFF)	-0.33	-0.45	-0.39	-0.26	-0.21	-0.08	-0.21	-0.45	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.51	-0.51	-0.51	-0.45	-0.45	-0.51	-0.39	-0.45	N/A
Max Value	-0.08	-0.02	-0.21	-0.14	-0.08	-0.08	-0.02	-0.21	N/A
Average	-0.29	-0.35	-0.38	-0.27	-0.28	-0.23	-0.24	-0.31	N/A
Sigma	0.13	0.15	0.11	0.08	0.11	0.15	0.14	0.09	N/A

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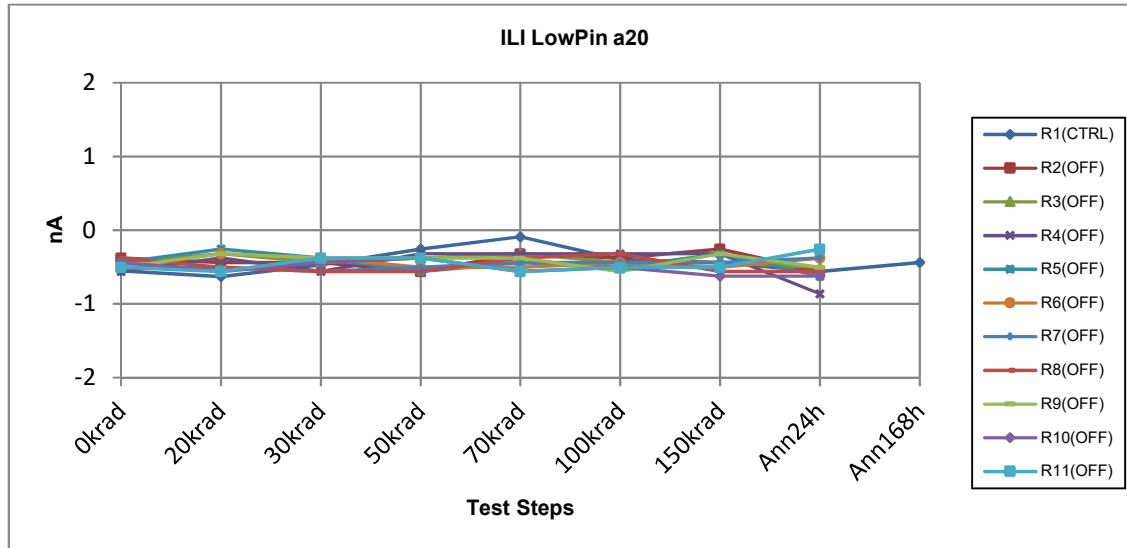
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ILI LowPin a21	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.51	-0.28	-0.36	-0.47	-0.44	-0.51	-0.41	-0.47	-0.41
Irradiated, unbiased parts results									
R2(OFF)	-0.35	-0.35	-0.47	-0.35	-0.17	-0.29	-0.35	-0.35	No meas.
R3(OFF)	-0.29	-0.35	-0.29	-0.53	-0.10	-0.17	-0.35	-0.41	No meas.
R4(OFF)	-0.35	-0.35	-0.35	-0.41	-0.29	-0.35	-0.22	-0.35	No meas.
R5(OFF)	-0.47	-0.22	-0.41	-0.66	-0.47	-0.29	-0.41	-0.59	No meas.
R6(OFF)	-0.29	-0.35	-0.47	-0.17	-0.41	-0.35	-0.53	-0.35	No meas.
R7(OFF)	-0.35	-0.35	-0.22	-0.29	-0.35	-0.22	-0.41	-0.35	No meas.
R8(OFF)	-0.22	-0.47	-0.41	-0.41	-0.41	-0.35	-0.22	-0.35	No meas.
R9(OFF)	-0.47	-0.35	-0.29	-0.53	-0.47	-0.35	-0.22	-0.53	No meas.
R10(OFF)	-0.22	-0.22	-0.17	-0.35	-0.47	-0.41	-0.41	-0.41	No meas.
R11(OFF)	-0.35	-0.47	-0.22	-0.41	-0.41	-0.35	-0.17	-0.41	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.47	-0.47	-0.47	-0.66	-0.47	-0.41	-0.53	-0.59	N/A
Max Value	-0.22	-0.22	-0.17	-0.17	-0.10	-0.17	-0.17	-0.35	N/A
Average	-0.34	-0.35	-0.33	-0.41	-0.36	-0.31	-0.33	-0.41	N/A
Sigma	0.09	0.08	0.11	0.14	0.13	0.07	0.11	0.08	N/A

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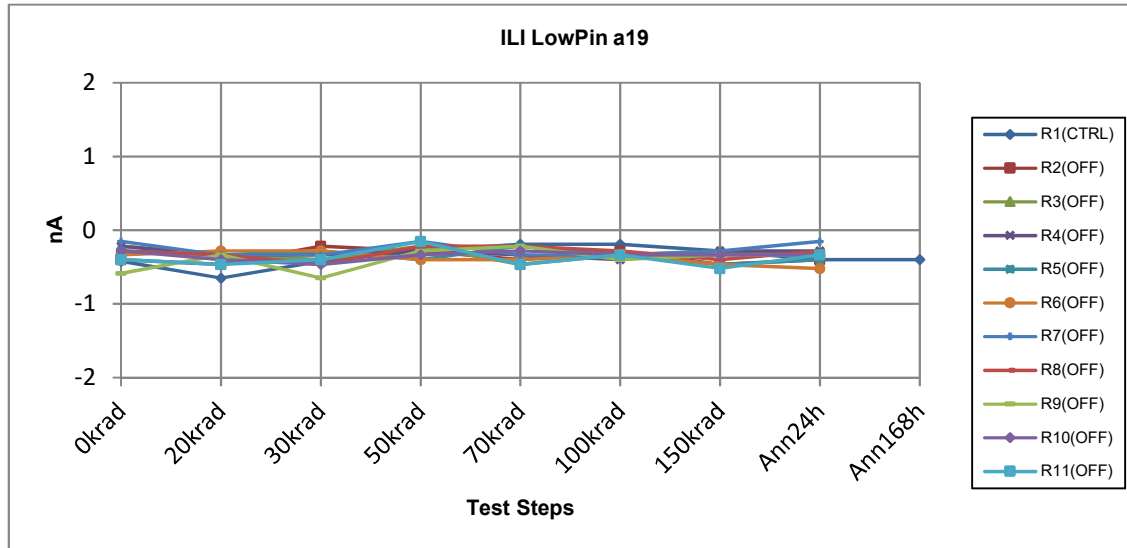
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ILI LowPin a20	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.55	-0.63	-0.47	-0.26	-0.09	-0.40	-0.44	-0.56	-0.44
Irradiated, unbiased parts results									
R2(OFF)	-0.38	-0.44	-0.44	-0.56	-0.32	-0.38	-0.26	-0.56	No meas.
R3(OFF)	-0.44	-0.32	-0.44	-0.38	-0.32	-0.44	-0.44	-0.50	No meas.
R4(OFF)	-0.56	-0.38	-0.56	-0.32	-0.32	-0.32	-0.32	-0.86	No meas.
R5(OFF)	-0.44	-0.26	-0.38	-0.56	-0.44	-0.50	-0.32	-0.62	No meas.
R6(OFF)	-0.50	-0.32	-0.38	-0.50	-0.50	-0.44	-0.50	-0.38	No meas.
R7(OFF)	-0.50	-0.50	-0.56	-0.50	-0.44	-0.44	-0.44	-0.38	No meas.
R8(OFF)	-0.38	-0.50	-0.56	-0.56	-0.38	-0.32	-0.56	-0.56	No meas.
R9(OFF)	-0.50	-0.32	-0.38	-0.38	-0.38	-0.56	-0.32	-0.50	No meas.
R10(OFF)	-0.44	-0.56	-0.44	-0.38	-0.56	-0.50	-0.62	-0.62	No meas.
R11(OFF)	-0.50	-0.56	-0.38	-0.38	-0.56	-0.50	-0.50	-0.26	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.62	-0.86	N/A
Max Value	-0.38	-0.26	-0.38	-0.32	-0.32	-0.32	-0.26	-0.26	N/A
Average	-0.46	-0.42	-0.45	-0.45	-0.42	-0.44	-0.43	-0.52	N/A
Sigma	0.06	0.11	0.08	0.09	0.09	0.08	0.12	0.17	N/A

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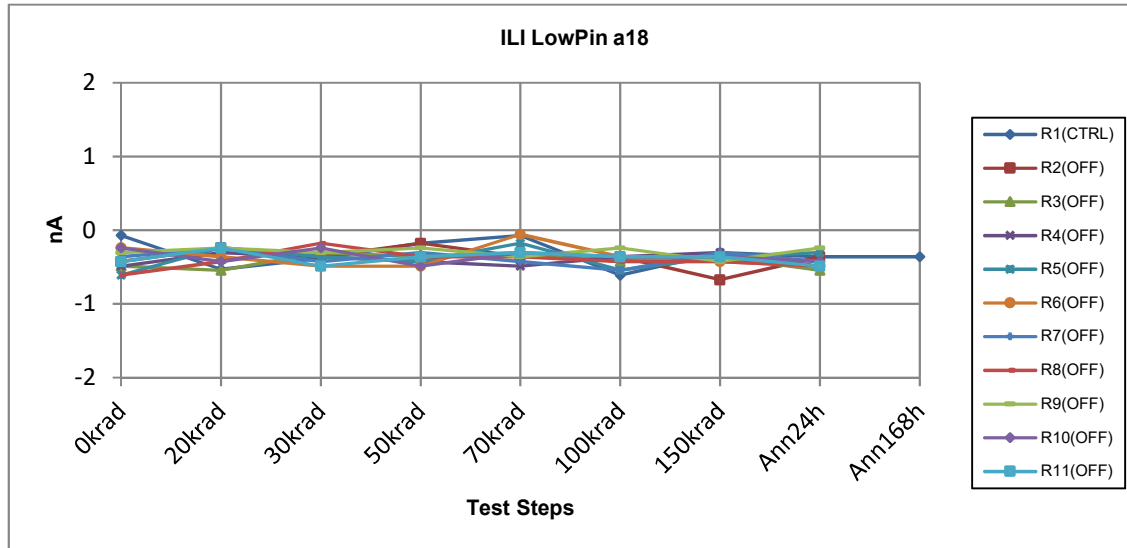
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ILI LowPin a19	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.42	-0.65	-0.42	-0.28	-0.19	-0.19	-0.28	-0.40	-0.40
Irradiated, unbiased parts results									
R2(OFF)	-0.40	-0.46	-0.22	-0.28	-0.40	-0.28	-0.46	-0.40	No meas.
R3(OFF)	-0.22	-0.34	-0.40	-0.22	-0.46	-0.34	-0.28	-0.34	No meas.
R4(OFF)	-0.22	-0.34	-0.34	-0.28	-0.34	-0.40	-0.28	-0.28	No meas.
R5(OFF)	-0.28	-0.34	-0.28	-0.40	-0.22	-0.34	-0.46	-0.40	No meas.
R6(OFF)	-0.34	-0.28	-0.28	-0.40	-0.40	-0.34	-0.46	-0.52	No meas.
R7(OFF)	-0.15	-0.34	-0.34	-0.15	-0.34	-0.34	-0.28	-0.15	No meas.
R8(OFF)	-0.28	-0.34	-0.46	-0.22	-0.22	-0.28	-0.40	-0.28	No meas.
R9(OFF)	-0.58	-0.34	-0.65	-0.28	-0.22	-0.40	-0.34	-0.34	No meas.
R10(OFF)	-0.28	-0.40	-0.46	-0.34	-0.28	-0.34	-0.34	-0.34	No meas.
R11(OFF)	-0.40	-0.46	-0.40	-0.15	-0.46	-0.34	-0.52	-0.34	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.58	-0.46	-0.65	-0.40	-0.46	-0.40	-0.52	-0.52	N/A
Max Value	-0.15	-0.28	-0.22	-0.15	-0.22	-0.28	-0.28	-0.15	N/A
Average	-0.31	-0.36	-0.38	-0.27	-0.33	-0.34	-0.38	-0.34	N/A
Sigma	0.12	0.06	0.12	0.09	0.10	0.04	0.09	0.10	N/A

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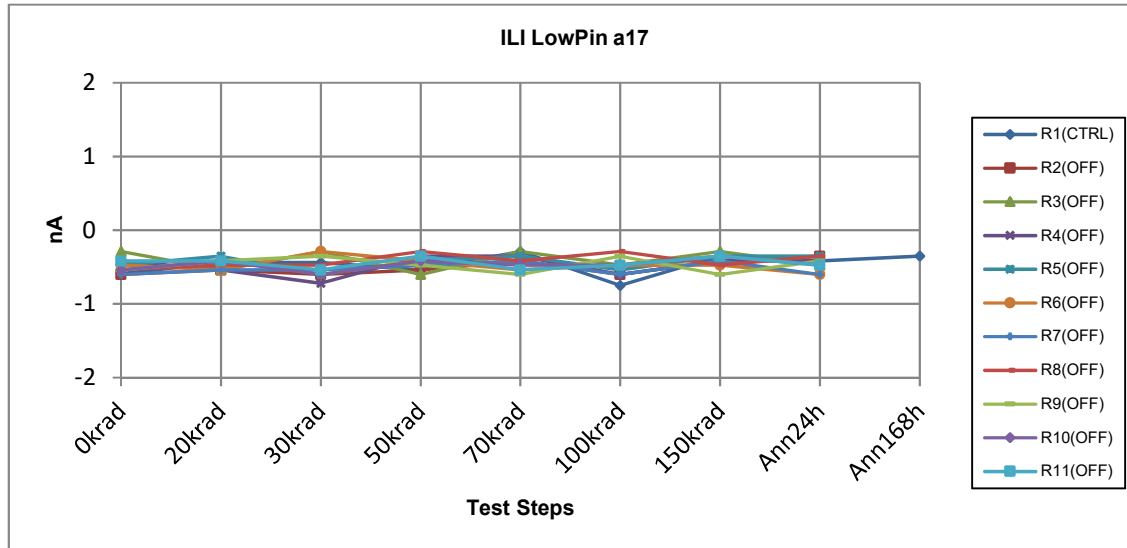
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ILI LowPin a18	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.07	-0.53	-0.38	-0.18	-0.07	-0.61	-0.30	-0.36	-0.36
Irradiated, unbiased parts results									
R2(OFF)	-0.42	-0.24	-0.36	-0.18	-0.36	-0.36	-0.67	-0.36	No meas.
R3(OFF)	-0.49	-0.54	-0.30	-0.36	-0.30	-0.42	-0.36	-0.54	No meas.
R4(OFF)	-0.49	-0.30	-0.36	-0.42	-0.49	-0.36	-0.30	-0.49	No meas.
R5(OFF)	-0.61	-0.24	-0.36	-0.42	-0.18	-0.54	-0.36	-0.30	No meas.
R6(OFF)	-0.24	-0.36	-0.49	-0.49	-0.06	-0.36	-0.42	-0.49	No meas.
R7(OFF)	-0.36	-0.24	-0.42	-0.30	-0.42	-0.54	-0.30	-0.42	No meas.
R8(OFF)	-0.61	-0.42	-0.18	-0.36	-0.36	-0.42	-0.42	-0.49	No meas.
R9(OFF)	-0.30	-0.24	-0.30	-0.24	-0.36	-0.24	-0.42	-0.24	No meas.
R10(OFF)	-0.24	-0.42	-0.24	-0.49	-0.30	-0.36	-0.36	-0.42	No meas.
R11(OFF)	-0.42	-0.24	-0.49	-0.36	-0.30	-0.36	-0.36	-0.49	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.61	-0.54	-0.49	-0.49	-0.49	-0.54	-0.67	-0.54	N/A
Max Value	-0.24	-0.24	-0.18	-0.18	-0.06	-0.24	-0.30	-0.24	N/A
Average	-0.42	-0.33	-0.35	-0.36	-0.31	-0.40	-0.40	-0.42	N/A
Sigma	0.13	0.11	0.10	0.10	0.12	0.09	0.11	0.10	N/A

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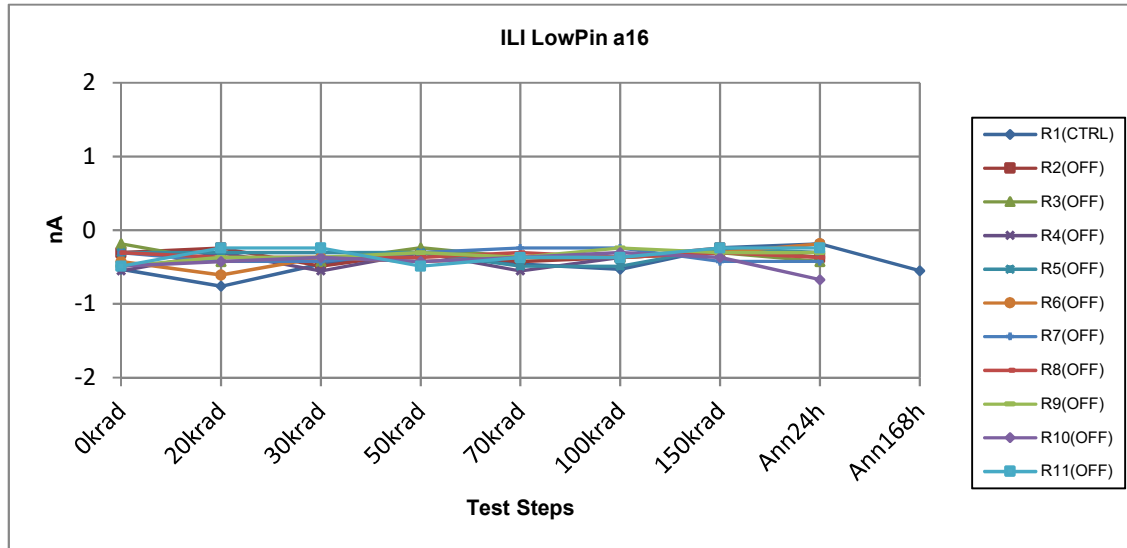
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ILI LowPin a17	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.59	-0.44	-0.44	-0.54	-0.29	-0.75	-0.35	-0.42	-0.35
Irradiated, unbiased parts results									
R2(OFF)	-0.60	-0.54	-0.60	-0.54	-0.42	-0.60	-0.42	-0.35	No meas.
R3(OFF)	-0.29	-0.54	-0.29	-0.60	-0.29	-0.47	-0.29	-0.47	No meas.
R4(OFF)	-0.42	-0.54	-0.72	-0.35	-0.35	-0.60	-0.42	-0.42	No meas.
R5(OFF)	-0.47	-0.35	-0.60	-0.42	-0.35	-0.54	-0.35	-0.35	No meas.
R6(OFF)	-0.47	-0.54	-0.29	-0.42	-0.54	-0.47	-0.47	-0.60	No meas.
R7(OFF)	-0.60	-0.54	-0.54	-0.47	-0.42	-0.60	-0.42	-0.60	No meas.
R8(OFF)	-0.54	-0.47	-0.47	-0.29	-0.42	-0.29	-0.47	-0.35	No meas.
R9(OFF)	-0.54	-0.42	-0.35	-0.47	-0.60	-0.35	-0.60	-0.42	No meas.
R10(OFF)	-0.54	-0.42	-0.60	-0.42	-0.47	-0.47	-0.35	-0.47	No meas.
R11(OFF)	-0.42	-0.42	-0.54	-0.35	-0.54	-0.47	-0.35	-0.47	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.60	-0.54	-0.72	-0.60	-0.60	-0.60	-0.60	-0.60	N/A
Max Value	-0.29	-0.35	-0.29	-0.29	-0.29	-0.29	-0.29	-0.35	N/A
Average	-0.49	-0.48	-0.50	-0.43	-0.44	-0.49	-0.41	-0.45	N/A
Sigma	0.10	0.07	0.15	0.09	0.10	0.11	0.09	0.09	N/A

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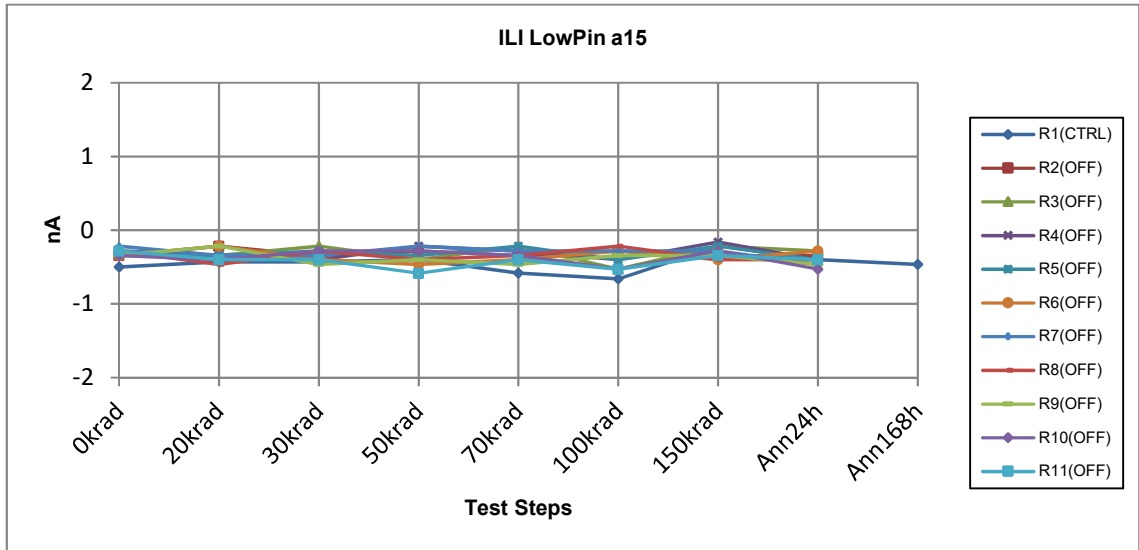
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ILI LowPin a16	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.53	-0.76	-0.46	-0.30	-0.46	-0.53	-0.24	-0.18	-0.55
Irradiated, unbiased parts results									
R2(OFF)	-0.30	-0.24	-0.49	-0.30	-0.42	-0.37	-0.24	-0.37	No meas.
R3(OFF)	-0.18	-0.42	-0.42	-0.24	-0.37	-0.37	-0.30	-0.42	No meas.
R4(OFF)	-0.55	-0.30	-0.55	-0.30	-0.55	-0.37	-0.30	-0.18	No meas.
R5(OFF)	-0.30	-0.30	-0.30	-0.30	-0.49	-0.49	-0.24	-0.30	No meas.
R6(OFF)	-0.42	-0.61	-0.37	-0.42	-0.37	-0.37	-0.30	-0.18	No meas.
R7(OFF)	-0.30	-0.42	-0.42	-0.30	-0.24	-0.24	-0.42	-0.42	No meas.
R8(OFF)	-0.30	-0.37	-0.37	-0.37	-0.30	-0.37	-0.30	-0.37	No meas.
R9(OFF)	-0.49	-0.37	-0.37	-0.30	-0.37	-0.24	-0.30	-0.30	No meas.
R10(OFF)	-0.49	-0.42	-0.37	-0.42	-0.37	-0.30	-0.37	-0.67	No meas.
R11(OFF)	-0.49	-0.24	-0.24	-0.49	-0.37	-0.37	-0.24	-0.24	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.55	-0.61	-0.55	-0.49	-0.55	-0.49	-0.42	-0.67	N/A
Max Value	-0.18	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.18	N/A
Average	-0.38	-0.37	-0.39	-0.35	-0.38	-0.35	-0.30	-0.35	N/A
Sigma	0.12	0.11	0.09	0.08	0.09	0.07	0.06	0.14	N/A

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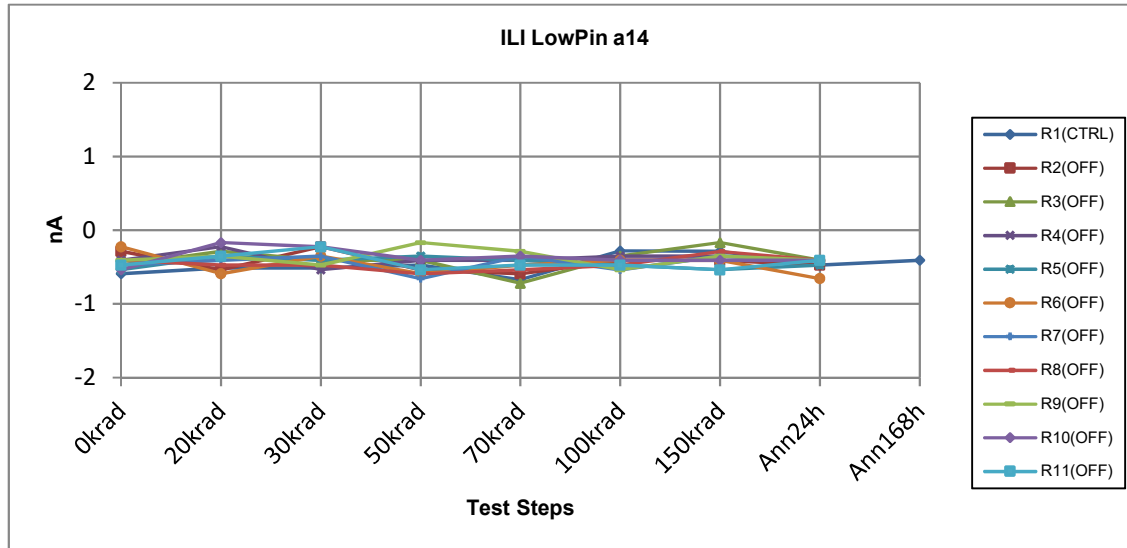
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ILI LowPin a15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.50	-0.43	-0.43	-0.40	-0.58	-0.66	-0.22	-0.40	-0.46
Irradiated, unbiased parts results									
R2(OFF)	-0.34	-0.22	-0.34	-0.28	-0.34	-0.28	-0.34	-0.34	No meas.
R3(OFF)	-0.28	-0.34	-0.22	-0.40	-0.22	-0.53	-0.22	-0.28	No meas.
R4(OFF)	-0.28	-0.34	-0.40	-0.22	-0.28	-0.40	-0.16	-0.40	No meas.
R5(OFF)	-0.34	-0.34	-0.28	-0.34	-0.22	-0.40	-0.22	-0.40	No meas.
R6(OFF)	-0.34	-0.22	-0.40	-0.46	-0.40	-0.28	-0.40	-0.28	No meas.
R7(OFF)	-0.22	-0.34	-0.34	-0.22	-0.28	-0.28	-0.28	-0.46	No meas.
R8(OFF)	-0.28	-0.46	-0.28	-0.40	-0.34	-0.22	-0.40	-0.40	No meas.
R9(OFF)	-0.34	-0.22	-0.46	-0.40	-0.46	-0.34	-0.34	-0.46	No meas.
R10(OFF)	-0.34	-0.40	-0.28	-0.28	-0.34	-0.53	-0.28	-0.53	No meas.
R11(OFF)	-0.28	-0.40	-0.40	-0.58	-0.40	-0.53	-0.34	-0.40	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.34	-0.46	-0.46	-0.58	-0.46	-0.53	-0.40	-0.53	N/A
Max Value	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.16	-0.28	N/A
Average	-0.31	-0.33	-0.34	-0.36	-0.33	-0.38	-0.30	-0.40	N/A
Sigma	0.04	0.09	0.08	0.12	0.08	0.12	0.08	0.08	N/A

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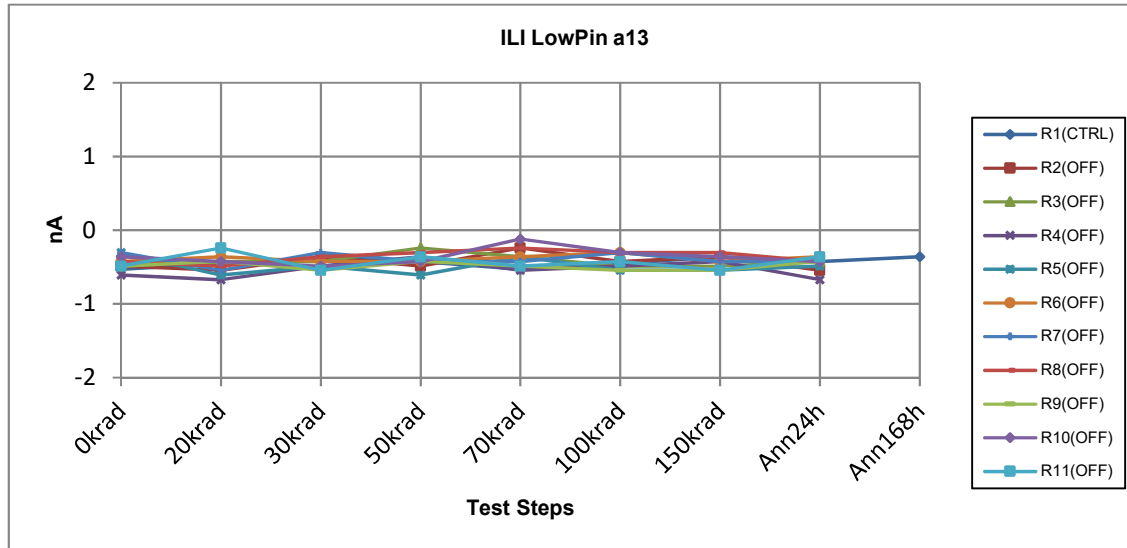
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ILI LowPin a14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.59	-0.51	-0.51	-0.47	-0.67	-0.28	-0.29	-0.47	-0.41
Irradiated, unbiased parts results									
R2(OFF)	-0.29	-0.54	-0.22	-0.54	-0.59	-0.41	-0.41	-0.47	No meas.
R3(OFF)	-0.47	-0.29	-0.41	-0.41	-0.72	-0.35	-0.17	-0.41	No meas.
R4(OFF)	-0.41	-0.22	-0.54	-0.41	-0.41	-0.35	-0.35	-0.41	No meas.
R5(OFF)	-0.54	-0.35	-0.41	-0.35	-0.41	-0.47	-0.54	-0.47	No meas.
R6(OFF)	-0.22	-0.59	-0.35	-0.59	-0.47	-0.41	-0.41	-0.66	No meas.
R7(OFF)	-0.47	-0.41	-0.35	-0.66	-0.35	-0.54	-0.35	-0.41	No meas.
R8(OFF)	-0.41	-0.47	-0.47	-0.59	-0.54	-0.47	-0.29	-0.41	No meas.
R9(OFF)	-0.41	-0.35	-0.47	-0.17	-0.29	-0.54	-0.35	-0.41	No meas.
R10(OFF)	-0.54	-0.17	-0.22	-0.41	-0.35	-0.41	-0.41	-0.41	No meas.
R11(OFF)	-0.47	-0.35	-0.22	-0.54	-0.47	-0.47	-0.54	-0.41	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.54	-0.59	-0.54	-0.66	-0.72	-0.54	-0.54	-0.66	N/A
Max Value	-0.22	-0.17	-0.22	-0.17	-0.29	-0.35	-0.17	-0.41	N/A
Average	-0.42	-0.37	-0.37	-0.47	-0.46	-0.44	-0.38	-0.45	N/A
Sigma	0.10	0.13	0.11	0.15	0.13	0.07	0.11	0.08	N/A

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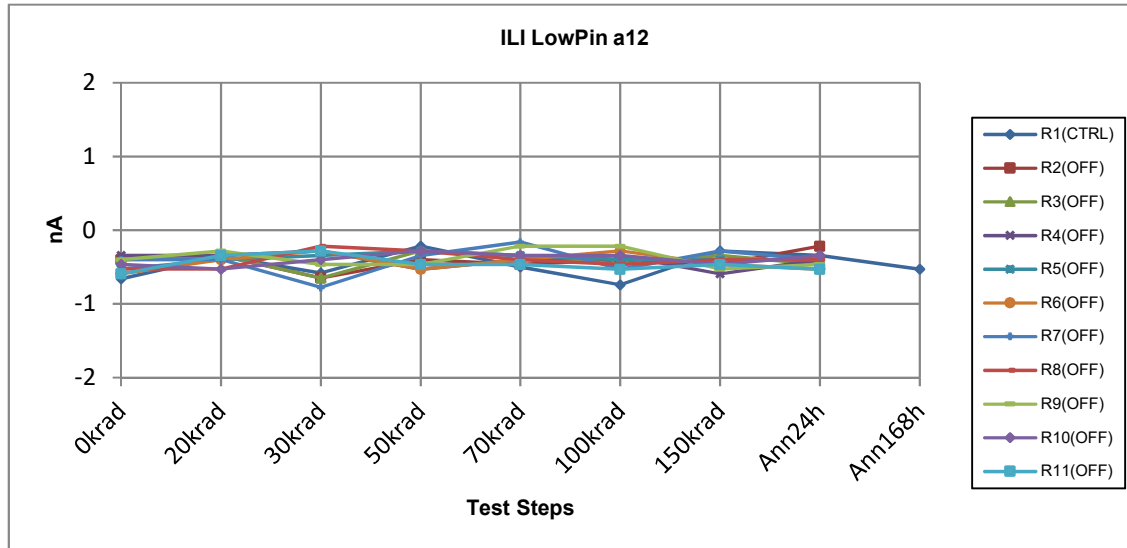
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ILI LowPin a13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.53	-0.45	-0.38	-0.42	-0.53	-0.45	-0.36	-0.42	-0.36
Irradiated, unbiased parts results									
R2(OFF)	-0.49	-0.54	-0.36	-0.49	-0.24	-0.42	-0.36	-0.54	No meas.
R3(OFF)	-0.49	-0.42	-0.42	-0.24	-0.36	-0.49	-0.49	-0.42	No meas.
R4(OFF)	-0.61	-0.67	-0.49	-0.36	-0.54	-0.49	-0.42	-0.67	No meas.
R5(OFF)	-0.30	-0.61	-0.49	-0.61	-0.36	-0.54	-0.54	-0.49	No meas.
R6(OFF)	-0.42	-0.36	-0.42	-0.42	-0.36	-0.30	-0.42	-0.36	No meas.
R7(OFF)	-0.30	-0.54	-0.30	-0.42	-0.42	-0.30	-0.42	-0.42	No meas.
R8(OFF)	-0.42	-0.49	-0.36	-0.30	-0.24	-0.30	-0.30	-0.42	No meas.
R9(OFF)	-0.49	-0.42	-0.54	-0.42	-0.49	-0.54	-0.54	-0.42	No meas.
R10(OFF)	-0.36	-0.42	-0.49	-0.42	-0.12	-0.30	-0.36	-0.42	No meas.
R11(OFF)	-0.49	-0.24	-0.54	-0.36	-0.49	-0.42	-0.54	-0.36	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.61	-0.67	-0.54	-0.61	-0.54	-0.54	-0.54	-0.67	N/A
Max Value	-0.30	-0.24	-0.30	-0.24	-0.12	-0.30	-0.30	-0.36	N/A
Average	-0.44	-0.47	-0.44	-0.41	-0.36	-0.41	-0.44	-0.45	N/A
Sigma	0.10	0.13	0.08	0.10	0.13	0.10	0.09	0.09	N/A

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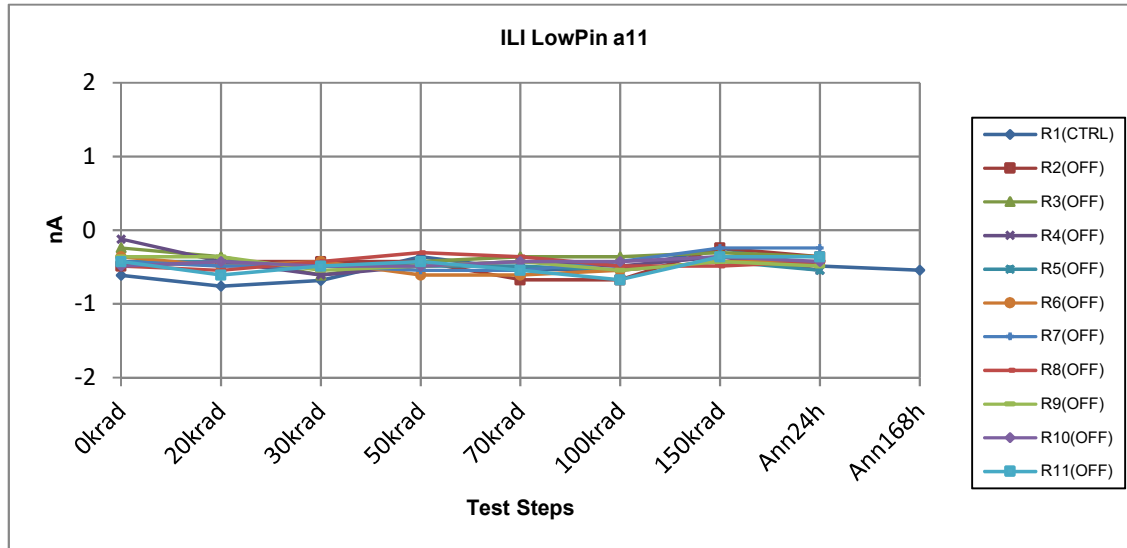
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ILI LowPin a12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.66	-0.35	-0.58	-0.22	-0.50	-0.74	-0.28	-0.34	-0.53
Irradiated, unbiased parts results									
R2(OFF)	-0.40	-0.34	-0.65	-0.40	-0.46	-0.40	-0.46	-0.22	No meas.
R3(OFF)	-0.40	-0.34	-0.65	-0.28	-0.34	-0.46	-0.34	-0.46	No meas.
R4(OFF)	-0.34	-0.34	-0.28	-0.53	-0.40	-0.34	-0.59	-0.40	No meas.
R5(OFF)	-0.53	-0.40	-0.34	-0.28	-0.34	-0.40	-0.40	-0.40	No meas.
R6(OFF)	-0.59	-0.40	-0.28	-0.53	-0.40	-0.28	-0.46	-0.53	No meas.
R7(OFF)	-0.40	-0.40	-0.78	-0.34	-0.16	-0.53	-0.28	-0.40	No meas.
R8(OFF)	-0.53	-0.53	-0.22	-0.28	-0.40	-0.46	-0.40	-0.40	No meas.
R9(OFF)	-0.40	-0.28	-0.46	-0.46	-0.22	-0.22	-0.53	-0.46	No meas.
R10(OFF)	-0.46	-0.53	-0.40	-0.28	-0.34	-0.34	-0.46	-0.34	No meas.
R11(OFF)	-0.59	-0.34	-0.28	-0.46	-0.46	-0.53	-0.46	-0.53	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.59	-0.53	-0.78	-0.53	-0.46	-0.53	-0.59	-0.53	N/A
Max Value	-0.34	-0.28	-0.22	-0.28	-0.16	-0.22	-0.28	-0.22	N/A
Average	-0.46	-0.39	-0.43	-0.38	-0.35	-0.40	-0.44	-0.41	N/A
Sigma	0.09	0.08	0.19	0.11	0.10	0.10	0.09	0.09	N/A

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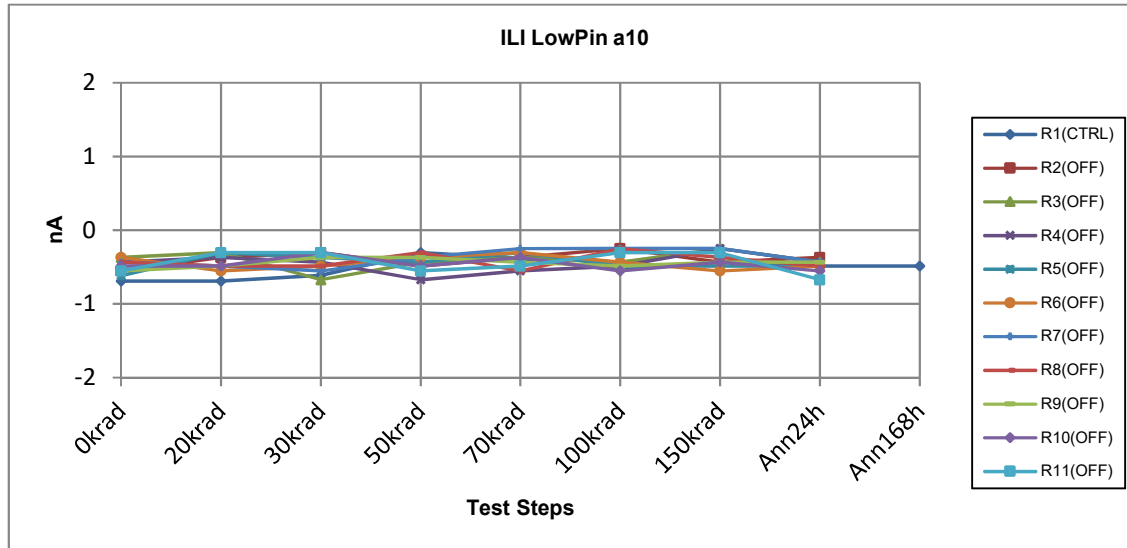
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ILI LowPin a11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.61	-0.76	-0.68	-0.36	-0.53	-0.53	-0.24	-0.49	-0.54
Irradiated, unbiased parts results									
R2(OFF)	-0.49	-0.42	-0.42	-0.42	-0.67	-0.67	-0.24	-0.36	No meas.
R3(OFF)	-0.24	-0.36	-0.61	-0.42	-0.36	-0.36	-0.30	-0.36	No meas.
R4(OFF)	-0.12	-0.42	-0.61	-0.49	-0.42	-0.49	-0.36	-0.54	No meas.
R5(OFF)	-0.42	-0.42	-0.49	-0.49	-0.49	-0.54	-0.42	-0.54	No meas.
R6(OFF)	-0.36	-0.49	-0.42	-0.61	-0.61	-0.54	-0.42	-0.42	No meas.
R7(OFF)	-0.42	-0.49	-0.49	-0.54	-0.54	-0.42	-0.24	-0.24	No meas.
R8(OFF)	-0.49	-0.54	-0.42	-0.30	-0.36	-0.49	-0.49	-0.42	No meas.
R9(OFF)	-0.36	-0.36	-0.54	-0.49	-0.42	-0.54	-0.42	-0.49	No meas.
R10(OFF)	-0.49	-0.42	-0.49	-0.49	-0.42	-0.42	-0.36	-0.42	No meas.
R11(OFF)	-0.42	-0.61	-0.49	-0.42	-0.54	-0.67	-0.36	-0.36	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.49	-0.61	-0.61	-0.61	-0.67	-0.67	-0.49	-0.54	N/A
Max Value	-0.12	-0.36	-0.42	-0.30	-0.36	-0.36	-0.24	-0.24	N/A
Average	-0.38	-0.45	-0.50	-0.47	-0.48	-0.52	-0.36	-0.42	N/A
Sigma	0.12	0.08	0.07	0.08	0.11	0.10	0.08	0.09	N/A

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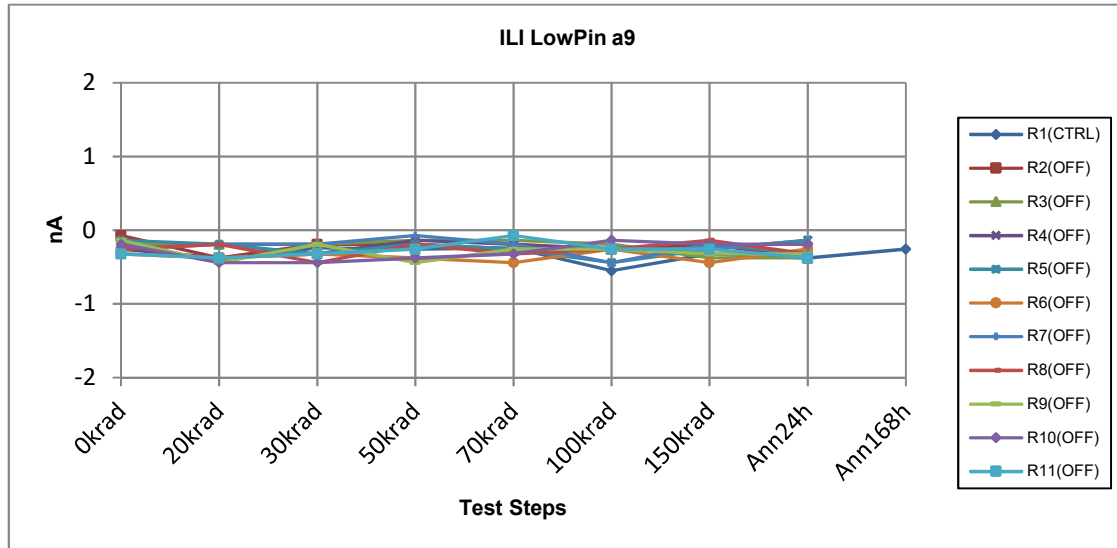
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ILI LowPin a10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.69	-0.69	-0.61	-0.30	-0.38	-0.54	-0.43	-0.49	-0.49
Irradiated, unbiased parts results									
R2(OFF)	-0.55	-0.37	-0.30	-0.49	-0.37	-0.25	-0.43	-0.37	No meas.
R3(OFF)	-0.37	-0.30	-0.67	-0.43	-0.37	-0.43	-0.25	-0.43	No meas.
R4(OFF)	-0.43	-0.37	-0.43	-0.67	-0.55	-0.49	-0.25	-0.43	No meas.
R5(OFF)	-0.62	-0.30	-0.37	-0.43	-0.30	-0.49	-0.49	-0.49	No meas.
R6(OFF)	-0.37	-0.55	-0.49	-0.37	-0.30	-0.43	-0.55	-0.49	No meas.
R7(OFF)	-0.43	-0.49	-0.55	-0.37	-0.25	-0.25	-0.25	-0.43	No meas.
R8(OFF)	-0.43	-0.49	-0.49	-0.30	-0.55	-0.25	-0.37	-0.49	No meas.
R9(OFF)	-0.55	-0.49	-0.37	-0.37	-0.43	-0.49	-0.43	-0.43	No meas.
R10(OFF)	-0.49	-0.49	-0.30	-0.49	-0.37	-0.55	-0.43	-0.55	No meas.
R11(OFF)	-0.55	-0.30	-0.30	-0.55	-0.49	-0.30	-0.30	-0.67	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.62	-0.55	-0.67	-0.67	-0.55	-0.55	-0.55	-0.67	N/A
Max Value	-0.37	-0.30	-0.30	-0.30	-0.25	-0.25	-0.25	-0.37	N/A
Average	-0.48	-0.42	-0.43	-0.45	-0.40	-0.39	-0.38	-0.48	N/A
Sigma	0.09	0.10	0.12	0.11	0.11	0.12	0.11	0.08	N/A

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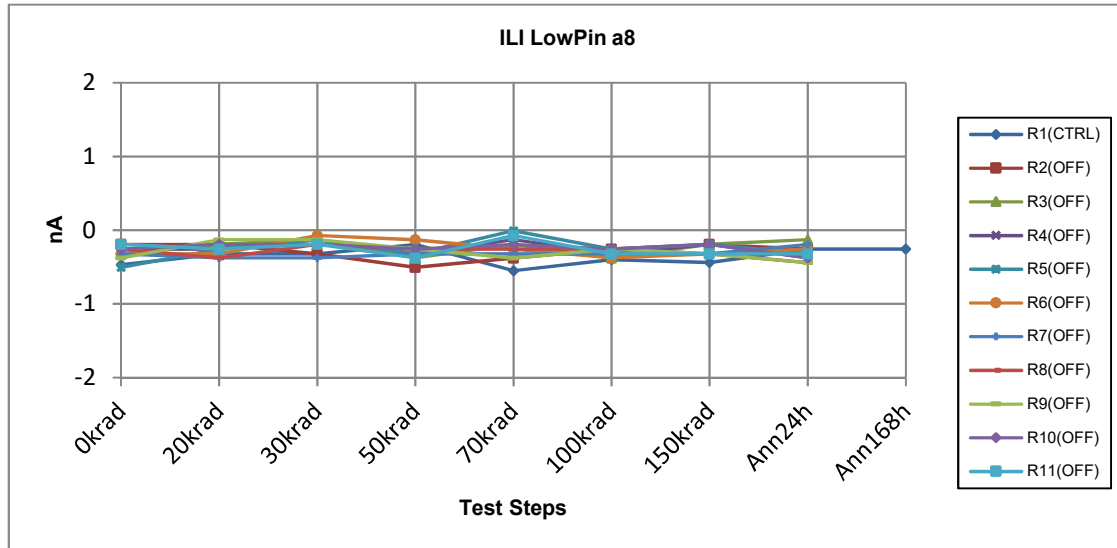
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ILI LowPin a9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.24	-0.40	-0.24	-0.26	-0.24	-0.55	-0.32	-0.38	-0.26
Irradiated, unbiased parts results									
R2(OFF)	-0.07	-0.38	-0.19	-0.19	-0.26	-0.26	-0.19	-0.38	No meas.
R3(OFF)	-0.19	-0.19	-0.19	-0.14	-0.14	-0.19	-0.38	-0.38	No meas.
R4(OFF)	-0.26	-0.38	-0.32	-0.14	-0.19	-0.26	-0.26	-0.14	No meas.
R5(OFF)	-0.14	-0.19	-0.32	-0.19	-0.26	-0.44	-0.26	-0.14	No meas.
R6(OFF)	-0.32	-0.38	-0.32	-0.38	-0.44	-0.26	-0.44	-0.26	No meas.
R7(OFF)	-0.26	-0.19	-0.19	-0.07	-0.19	-0.44	-0.19	-0.32	No meas.
R8(OFF)	-0.26	-0.19	-0.44	-0.19	-0.32	-0.26	-0.14	-0.32	No meas.
R9(OFF)	-0.14	-0.44	-0.19	-0.44	-0.26	-0.26	-0.32	-0.32	No meas.
R10(OFF)	-0.19	-0.44	-0.44	-0.38	-0.32	-0.14	-0.19	-0.19	No meas.
R11(OFF)	-0.32	-0.38	-0.32	-0.26	-0.07	-0.26	-0.26	-0.38	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.32	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44	-0.38	N/A
Max Value	-0.07	-0.19	-0.19	-0.07	-0.07	-0.14	-0.14	-0.14	N/A
Average	-0.21	-0.32	-0.29	-0.24	-0.24	-0.27	-0.26	-0.28	N/A
Sigma	0.08	0.11	0.10	0.12	0.10	0.10	0.09	0.10	N/A

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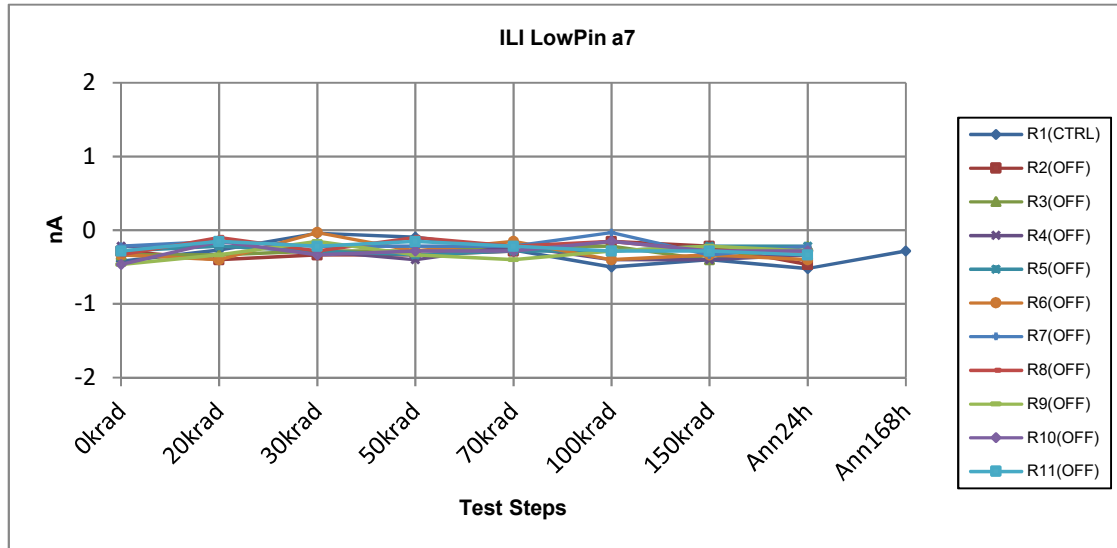
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ILI LowPin a8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.47	-0.32	-0.32	-0.19	-0.55	-0.40	-0.44	-0.26	-0.26
Irradiated, unbiased parts results									
R2(OFF)	-0.19	-0.19	-0.32	-0.50	-0.38	-0.26	-0.19	-0.26	No meas.
R3(OFF)	-0.32	-0.19	-0.13	-0.38	-0.19	-0.38	-0.19	-0.13	No meas.
R4(OFF)	-0.26	-0.26	-0.13	-0.32	-0.13	-0.32	-0.19	-0.38	No meas.
R5(OFF)	-0.50	-0.26	-0.13	-0.32	-0.01	-0.26	-0.19	-0.32	No meas.
R6(OFF)	-0.32	-0.32	-0.07	-0.13	-0.26	-0.38	-0.32	-0.26	No meas.
R7(OFF)	-0.32	-0.38	-0.38	-0.32	-0.32	-0.32	-0.32	-0.19	No meas.
R8(OFF)	-0.26	-0.38	-0.19	-0.26	-0.26	-0.26	-0.32	-0.44	No meas.
R9(OFF)	-0.38	-0.13	-0.13	-0.26	-0.38	-0.26	-0.32	-0.44	No meas.
R10(OFF)	-0.26	-0.19	-0.19	-0.26	-0.19	-0.26	-0.19	-0.38	No meas.
R11(OFF)	-0.19	-0.26	-0.19	-0.38	-0.07	-0.32	-0.32	-0.32	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.50	-0.38	-0.38	-0.50	-0.38	-0.38	-0.32	-0.44	N/A
Max Value	-0.19	-0.13	-0.07	-0.13	-0.01	-0.26	-0.19	-0.13	N/A
Average	-0.30	-0.25	-0.19	-0.31	-0.22	-0.30	-0.26	-0.31	N/A
Sigma	0.09	0.08	0.09	0.10	0.12	0.05	0.07	0.10	N/A

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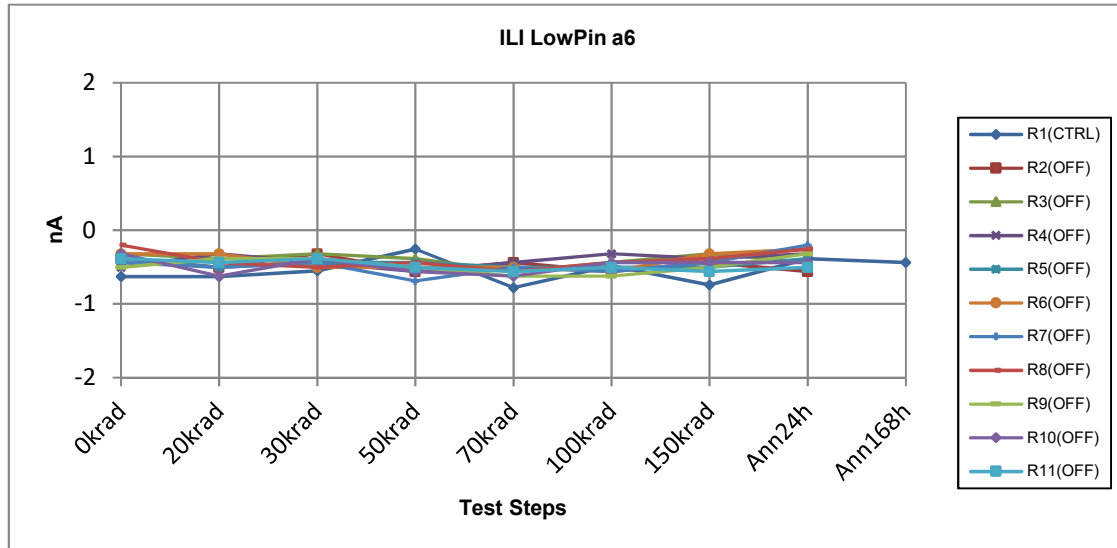
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ILI LowPin a7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.42	-0.27	-0.04	-0.10	-0.27	-0.50	-0.40	-0.52	-0.28
Irradiated, unbiased parts results									
R2(OFF)	-0.28	-0.40	-0.34	-0.34	-0.28	-0.15	-0.22	-0.46	No meas.
R3(OFF)	-0.34	-0.34	-0.28	-0.28	-0.22	-0.22	-0.40	-0.22	No meas.
R4(OFF)	-0.22	-0.22	-0.28	-0.40	-0.22	-0.40	-0.40	-0.34	No meas.
R5(OFF)	-0.28	-0.22	-0.28	-0.34	-0.28	-0.28	-0.22	-0.22	No meas.
R6(OFF)	-0.34	-0.40	-0.03	-0.28	-0.15	-0.40	-0.34	-0.40	No meas.
R7(OFF)	-0.22	-0.15	-0.22	-0.22	-0.22	-0.03	-0.34	-0.22	No meas.
R8(OFF)	-0.34	-0.10	-0.28	-0.10	-0.22	-0.15	-0.28	-0.28	No meas.
R9(OFF)	-0.46	-0.34	-0.15	-0.34	-0.40	-0.28	-0.22	-0.28	No meas.
R10(OFF)	-0.46	-0.15	-0.34	-0.28	-0.28	-0.15	-0.28	-0.28	No meas.
R11(OFF)	-0.28	-0.15	-0.22	-0.15	-0.22	-0.28	-0.28	-0.34	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.46	-0.40	-0.34	-0.40	-0.40	-0.40	-0.40	-0.46	N/A
Max Value	-0.22	-0.10	-0.03	-0.10	-0.15	-0.03	-0.22	-0.22	N/A
Average	-0.32	-0.25	-0.24	-0.27	-0.25	-0.23	-0.30	-0.30	N/A
Sigma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N/A

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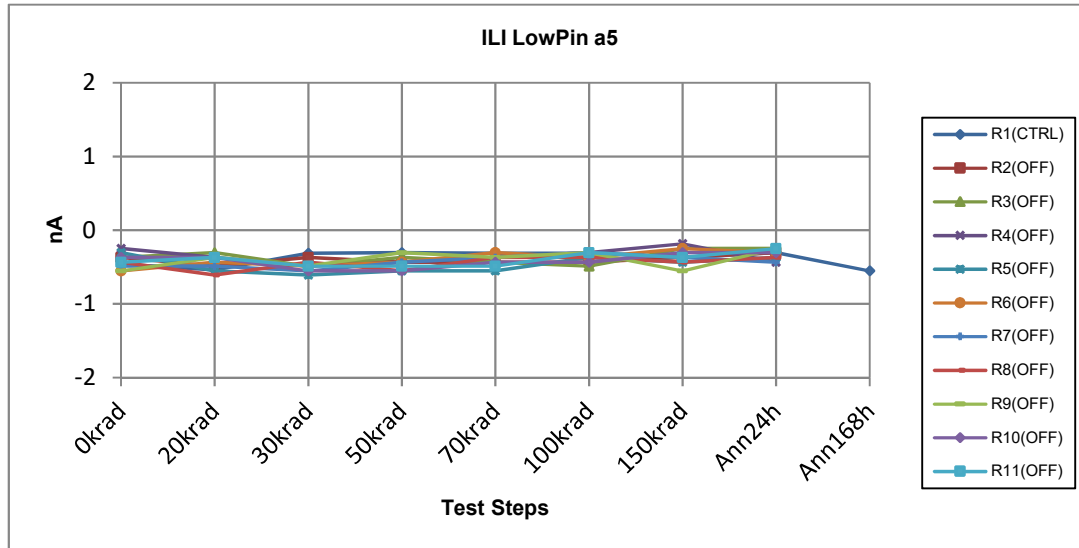
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ILI LowPin a6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.63	-0.63	-0.55	-0.26	-0.78	-0.48	-0.74	-0.38	-0.44
Irradiated, unbiased parts results									
R2(OFF)	-0.38	-0.50	-0.32	-0.56	-0.44	-0.56	-0.44	-0.56	No meas.
R3(OFF)	-0.32	-0.38	-0.32	-0.38	-0.56	-0.44	-0.32	-0.44	No meas.
R4(OFF)	-0.50	-0.32	-0.44	-0.56	-0.44	-0.32	-0.38	-0.32	No meas.
R5(OFF)	-0.38	-0.50	-0.44	-0.44	-0.50	-0.50	-0.50	-0.38	No meas.
R6(OFF)	-0.32	-0.32	-0.50	-0.50	-0.50	-0.56	-0.32	-0.26	No meas.
R7(OFF)	-0.44	-0.50	-0.44	-0.69	-0.50	-0.56	-0.44	-0.20	No meas.
R8(OFF)	-0.20	-0.44	-0.50	-0.44	-0.56	-0.44	-0.38	-0.26	No meas.
R9(OFF)	-0.50	-0.38	-0.38	-0.50	-0.62	-0.62	-0.50	-0.32	No meas.
R10(OFF)	-0.32	-0.62	-0.38	-0.56	-0.62	-0.44	-0.44	-0.44	No meas.
R11(OFF)	-0.38	-0.44	-0.38	-0.50	-0.56	-0.50	-0.56	-0.50	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.50	-0.62	-0.50	-0.69	-0.62	-0.62	-0.56	-0.56	N/A
Max Value	-0.20	-0.32	-0.32	-0.38	-0.44	-0.32	-0.32	-0.20	N/A
Average	-0.38	-0.44	-0.41	-0.51	-0.53	-0.50	-0.43	-0.37	N/A
Sigma	0.09	0.09	0.07	0.08	0.07	0.09	0.08	0.12	N/A

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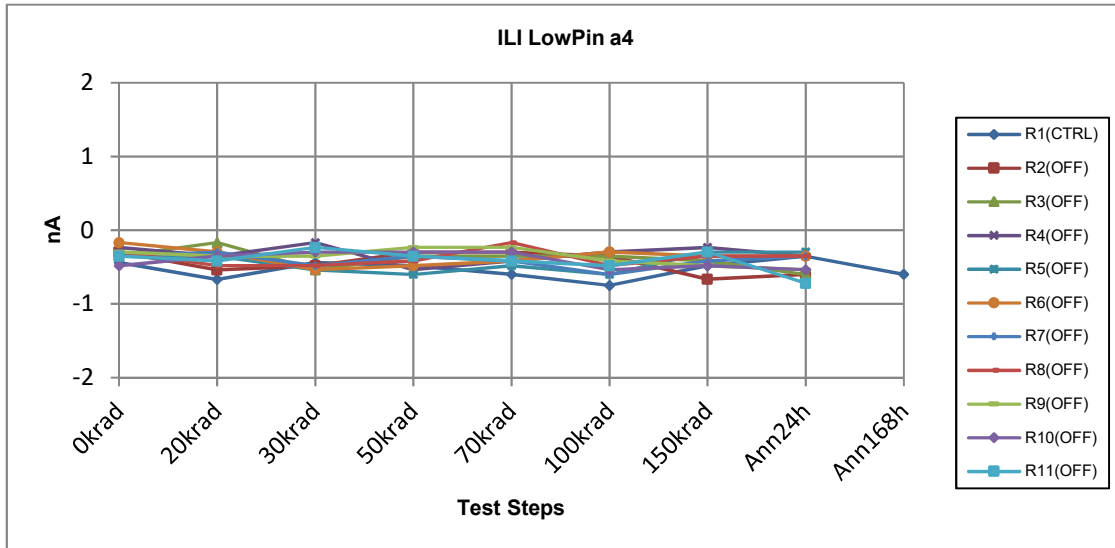
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ILI LowPin a5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.46	-0.54	-0.31	-0.30	-0.31	-0.31	-0.37	-0.30	-0.55
Irradiated, unbiased parts results									
R2(OFF)	-0.37	-0.49	-0.37	-0.43	-0.43	-0.43	-0.37	-0.30	No meas.
R3(OFF)	-0.37	-0.30	-0.49	-0.37	-0.43	-0.49	-0.25	-0.25	No meas.
R4(OFF)	-0.25	-0.37	-0.49	-0.43	-0.37	-0.30	-0.18	-0.43	No meas.
R5(OFF)	-0.30	-0.55	-0.61	-0.55	-0.55	-0.37	-0.43	-0.37	No meas.
R6(OFF)	-0.55	-0.43	-0.49	-0.43	-0.30	-0.37	-0.25	-0.30	No meas.
R7(OFF)	-0.49	-0.49	-0.55	-0.43	-0.37	-0.30	-0.37	-0.43	No meas.
R8(OFF)	-0.43	-0.61	-0.43	-0.55	-0.37	-0.37	-0.43	-0.37	No meas.
R9(OFF)	-0.55	-0.37	-0.49	-0.30	-0.37	-0.30	-0.55	-0.25	No meas.
R10(OFF)	-0.37	-0.37	-0.55	-0.55	-0.43	-0.43	-0.30	-0.30	No meas.
R11(OFF)	-0.43	-0.37	-0.49	-0.49	-0.49	-0.30	-0.37	-0.25	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.55	-0.61	-0.61	-0.55	-0.55	-0.49	-0.55	-0.43	N/A
Max Value	-0.25	-0.30	-0.37	-0.30	-0.30	-0.30	-0.18	-0.25	N/A
Average	-0.41	-0.43	-0.50	-0.45	-0.41	-0.37	-0.35	-0.33	N/A
Sigma	0.10	0.10	0.07	0.08	0.07	0.07	0.11	0.07	N/A

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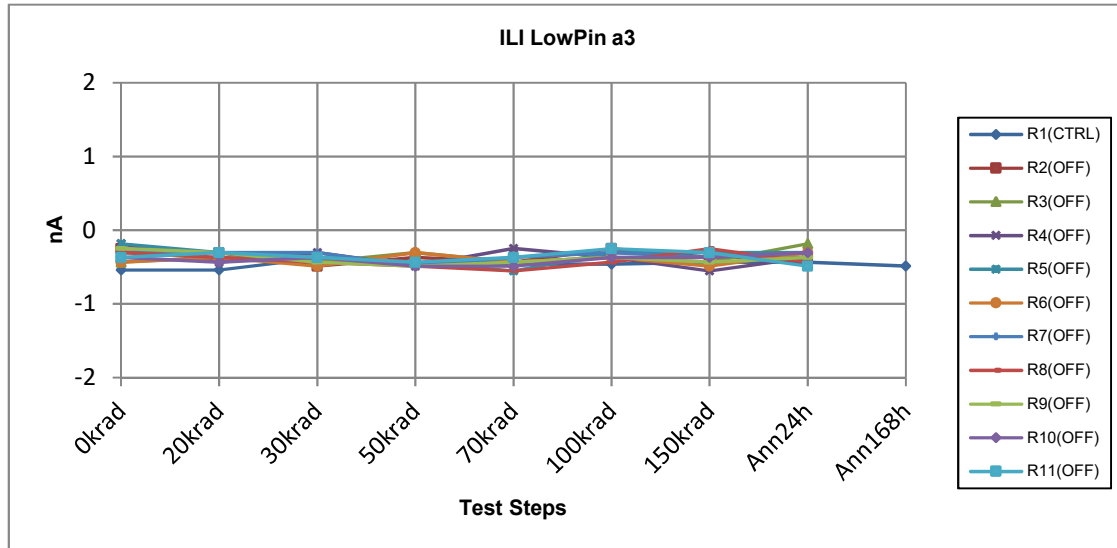
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ILI LowPin a4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.44	-0.67	-0.44	-0.48	-0.60	-0.75	-0.48	-0.35	-0.60
Irradiated, unbiased parts results									
R2(OFF)	-0.30	-0.54	-0.48	-0.30	-0.30	-0.35	-0.66	-0.60	No meas.
R3(OFF)	-0.35	-0.17	-0.54	-0.35	-0.35	-0.35	-0.42	-0.60	No meas.
R4(OFF)	-0.23	-0.35	-0.17	-0.54	-0.42	-0.30	-0.23	-0.35	No meas.
R5(OFF)	-0.35	-0.35	-0.54	-0.60	-0.48	-0.60	-0.30	-0.30	No meas.
R6(OFF)	-0.17	-0.30	-0.54	-0.48	-0.42	-0.30	-0.35	-0.35	No meas.
R7(OFF)	-0.35	-0.30	-0.48	-0.35	-0.42	-0.60	-0.42	-0.35	No meas.
R8(OFF)	-0.30	-0.48	-0.48	-0.42	-0.17	-0.48	-0.35	-0.35	No meas.
R9(OFF)	-0.30	-0.35	-0.35	-0.23	-0.23	-0.42	-0.48	-0.54	No meas.
R10(OFF)	-0.48	-0.35	-0.30	-0.30	-0.30	-0.54	-0.48	-0.54	No meas.
R11(OFF)	-0.35	-0.42	-0.23	-0.35	-0.42	-0.48	-0.30	-0.72	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.48	-0.54	-0.54	-0.60	-0.48	-0.60	-0.66	-0.72	N/A
Max Value	-0.17	-0.17	-0.17	-0.23	-0.17	-0.30	-0.23	-0.30	N/A
Average	-0.32	-0.36	-0.41	-0.39	-0.35	-0.44	-0.40	-0.47	N/A
Sigma	0.08	0.10	0.14	0.12	0.10	0.12	0.12	0.15	N/A

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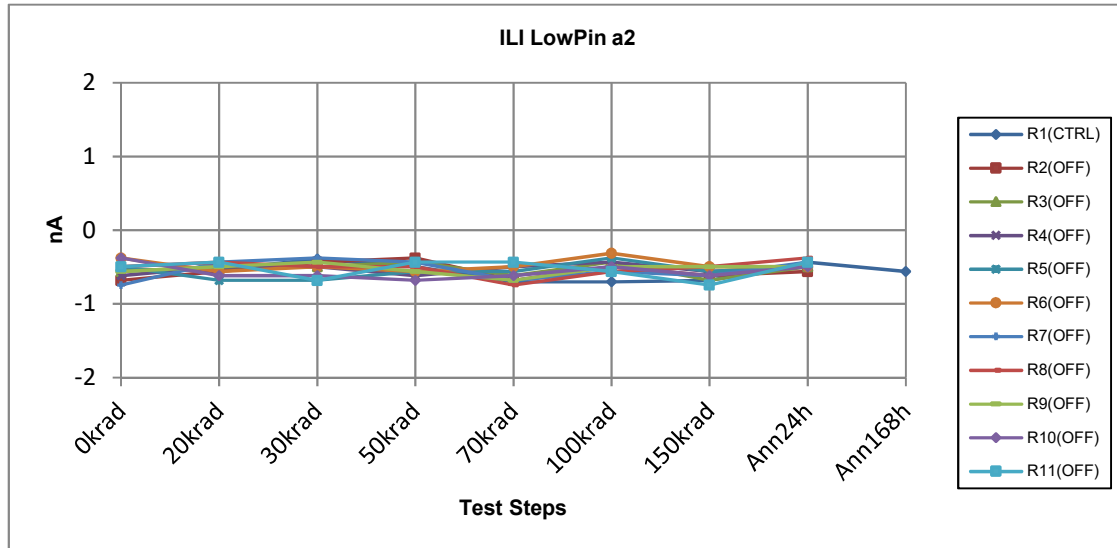
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ILI LowPin a3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.54	-0.54	-0.38	-0.49	-0.46	-0.46	-0.43	-0.43	-0.49
Irradiated, unbiased parts results									
R2(OFF)	-0.25	-0.30	-0.49	-0.37	-0.43	-0.25	-0.37	-0.37	No meas.
R3(OFF)	-0.43	-0.37	-0.43	-0.30	-0.43	-0.37	-0.43	-0.18	No meas.
R4(OFF)	-0.18	-0.43	-0.30	-0.49	-0.25	-0.37	-0.55	-0.37	No meas.
R5(OFF)	-0.18	-0.30	-0.37	-0.43	-0.55	-0.30	-0.30	-0.30	No meas.
R6(OFF)	-0.43	-0.37	-0.49	-0.30	-0.43	-0.37	-0.49	-0.30	No meas.
R7(OFF)	-0.30	-0.30	-0.30	-0.49	-0.37	-0.30	-0.37	-0.30	No meas.
R8(OFF)	-0.30	-0.37	-0.43	-0.49	-0.55	-0.43	-0.25	-0.43	No meas.
R9(OFF)	-0.25	-0.30	-0.43	-0.49	-0.43	-0.37	-0.43	-0.37	No meas.
R10(OFF)	-0.37	-0.43	-0.37	-0.49	-0.49	-0.37	-0.37	-0.30	No meas.
R11(OFF)	-0.37	-0.30	-0.37	-0.43	-0.37	-0.25	-0.30	-0.49	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.43	-0.43	-0.49	-0.49	-0.55	-0.43	-0.55	-0.49	N/A
Max Value	-0.18	-0.30	-0.30	-0.30	-0.25	-0.25	-0.25	-0.18	N/A
Average	-0.31	-0.35	-0.40	-0.43	-0.43	-0.34	-0.39	-0.34	N/A
Sigma	0.09	0.05	0.07	0.08	0.09	0.06	0.09	0.08	N/A

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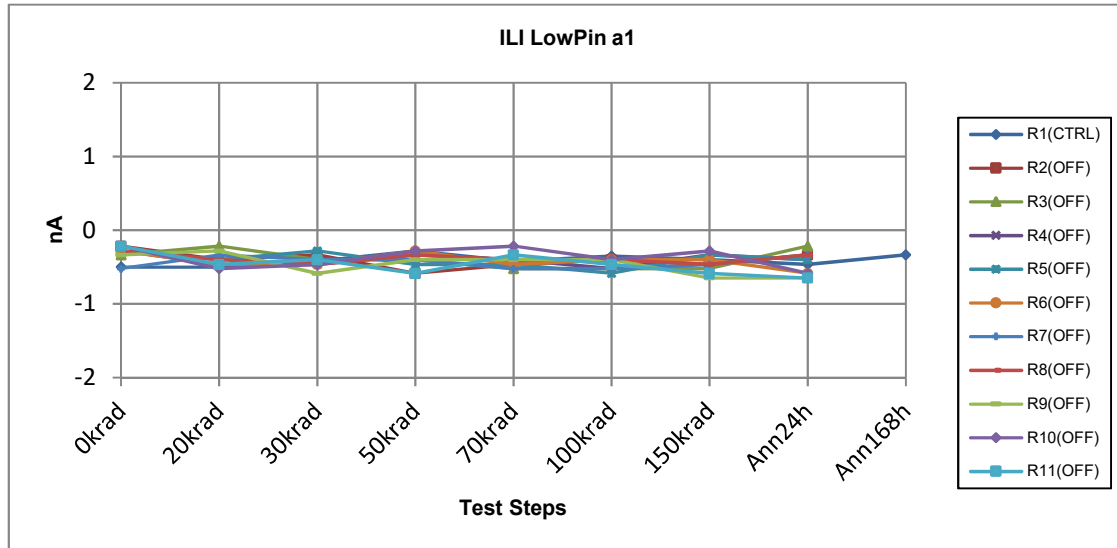
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ILI LowPin a2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.54	-0.54	-0.39	-0.50	-0.70	-0.70	-0.68	-0.43	-0.56
Irradiated, unbiased parts results									
R2(OFF)	-0.68	-0.56	-0.43	-0.38	-0.68	-0.50	-0.62	-0.56	No meas.
R3(OFF)	-0.56	-0.50	-0.50	-0.43	-0.62	-0.43	-0.68	-0.50	No meas.
R4(OFF)	-0.62	-0.50	-0.50	-0.62	-0.50	-0.43	-0.56	-0.50	No meas.
R5(OFF)	-0.50	-0.68	-0.68	-0.56	-0.56	-0.38	-0.56	-0.50	No meas.
R6(OFF)	-0.38	-0.56	-0.50	-0.56	-0.50	-0.31	-0.50	-0.50	No meas.
R7(OFF)	-0.74	-0.43	-0.38	-0.43	-0.68	-0.56	-0.62	-0.43	No meas.
R8(OFF)	-0.50	-0.43	-0.50	-0.50	-0.74	-0.56	-0.50	-0.38	No meas.
R9(OFF)	-0.56	-0.50	-0.43	-0.56	-0.68	-0.50	-0.50	-0.50	No meas.
R10(OFF)	-0.38	-0.62	-0.62	-0.68	-0.62	-0.50	-0.62	-0.50	No meas.
R11(OFF)	-0.50	-0.43	-0.68	-0.43	-0.43	-0.56	-0.74	-0.43	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.74	-0.68	-0.68	-0.68	-0.74	-0.56	-0.74	-0.56	N/A
Max Value	-0.38	-0.43	-0.38	-0.38	-0.43	-0.31	-0.50	-0.38	N/A
Average	-0.54	-0.52	-0.52	-0.51	-0.60	-0.47	-0.59	-0.48	N/A
Sigma	0.12	0.08	0.10	0.10	0.10	0.08	0.08	0.05	N/A

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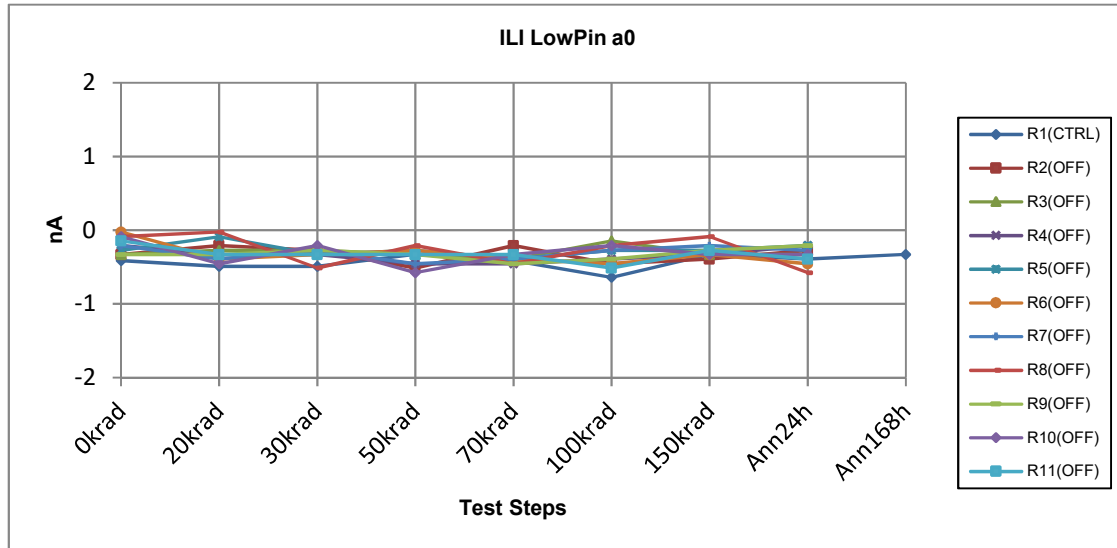
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ILI LowPin a1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.50	-0.50	-0.42	-0.28	-0.42	-0.35	-0.40	-0.46	-0.34
Irradiated, unbiased parts results									
R2(OFF)	-0.22	-0.40	-0.34	-0.58	-0.46	-0.40	-0.46	-0.34	No meas.
R3(OFF)	-0.34	-0.22	-0.40	-0.40	-0.52	-0.52	-0.52	-0.22	No meas.
R4(OFF)	-0.28	-0.46	-0.46	-0.34	-0.40	-0.52	-0.34	-0.40	No meas.
R5(OFF)	-0.28	-0.40	-0.28	-0.46	-0.46	-0.58	-0.34	-0.40	No meas.
R6(OFF)	-0.28	-0.46	-0.46	-0.28	-0.46	-0.40	-0.40	-0.58	No meas.
R7(OFF)	-0.52	-0.34	-0.40	-0.40	-0.52	-0.52	-0.46	-0.34	No meas.
R8(OFF)	-0.28	-0.40	-0.46	-0.34	-0.40	-0.40	-0.46	-0.34	No meas.
R9(OFF)	-0.34	-0.28	-0.58	-0.40	-0.40	-0.40	-0.65	-0.65	No meas.
R10(OFF)	-0.22	-0.52	-0.46	-0.28	-0.22	-0.40	-0.28	-0.58	No meas.
R11(OFF)	-0.22	-0.46	-0.40	-0.58	-0.34	-0.46	-0.58	-0.65	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.52	-0.52	-0.58	-0.58	-0.52	-0.58	-0.65	-0.65	N/A
Max Value	-0.22	-0.22	-0.28	-0.28	-0.22	-0.40	-0.28	-0.22	N/A
Average	-0.30	-0.39	-0.43	-0.41	-0.42	-0.46	-0.45	-0.45	N/A
Sigma	0.09	0.09	0.08	0.11	0.09	0.07	0.12	0.15	N/A

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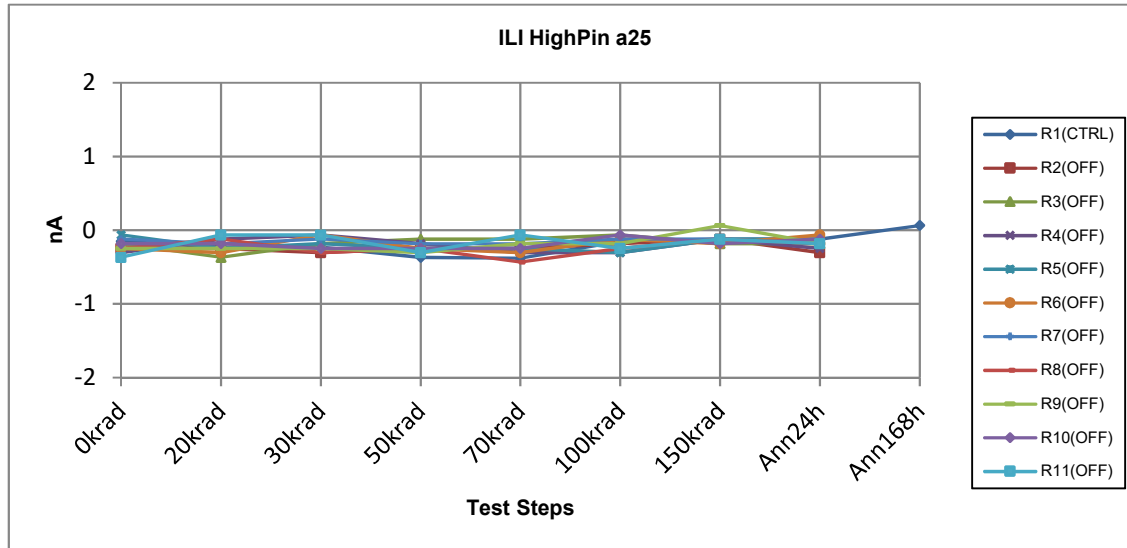
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ILI LowPin a0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.41	-0.49	-0.49	-0.33	-0.41	-0.64	-0.33	-0.39	-0.33
Irradiated, unbiased parts results									
R2(OFF)	-0.33	-0.21	-0.27	-0.51	-0.21	-0.46	-0.39	-0.27	No meas.
R3(OFF)	-0.33	-0.27	-0.27	-0.33	-0.39	-0.14	-0.33	-0.33	No meas.
R4(OFF)	-0.21	-0.33	-0.33	-0.46	-0.46	-0.39	-0.33	-0.21	No meas.
R5(OFF)	-0.27	-0.09	-0.33	-0.27	-0.39	-0.27	-0.27	-0.21	No meas.
R6(OFF)	-0.02	-0.39	-0.33	-0.27	-0.39	-0.46	-0.33	-0.46	No meas.
R7(OFF)	-0.21	-0.39	-0.27	-0.46	-0.39	-0.27	-0.21	-0.27	No meas.
R8(OFF)	-0.09	-0.02	-0.51	-0.21	-0.46	-0.21	-0.09	-0.58	No meas.
R9(OFF)	-0.33	-0.33	-0.27	-0.33	-0.46	-0.39	-0.27	-0.21	No meas.
R10(OFF)	-0.09	-0.46	-0.21	-0.58	-0.33	-0.21	-0.33	-0.33	No meas.
R11(OFF)	-0.14	-0.33	-0.33	-0.33	-0.33	-0.51	-0.27	-0.39	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.33	-0.46	-0.51	-0.58	-0.46	-0.51	-0.39	-0.58	N/A
Max Value	-0.02	-0.02	-0.21	-0.21	-0.21	-0.14	-0.09	-0.21	N/A
Average	-0.20	-0.28	-0.31	-0.37	-0.38	-0.33	-0.28	-0.32	N/A
Sigma	0.11	0.14	0.08	0.12	0.08	0.13	0.08	0.12	N/A

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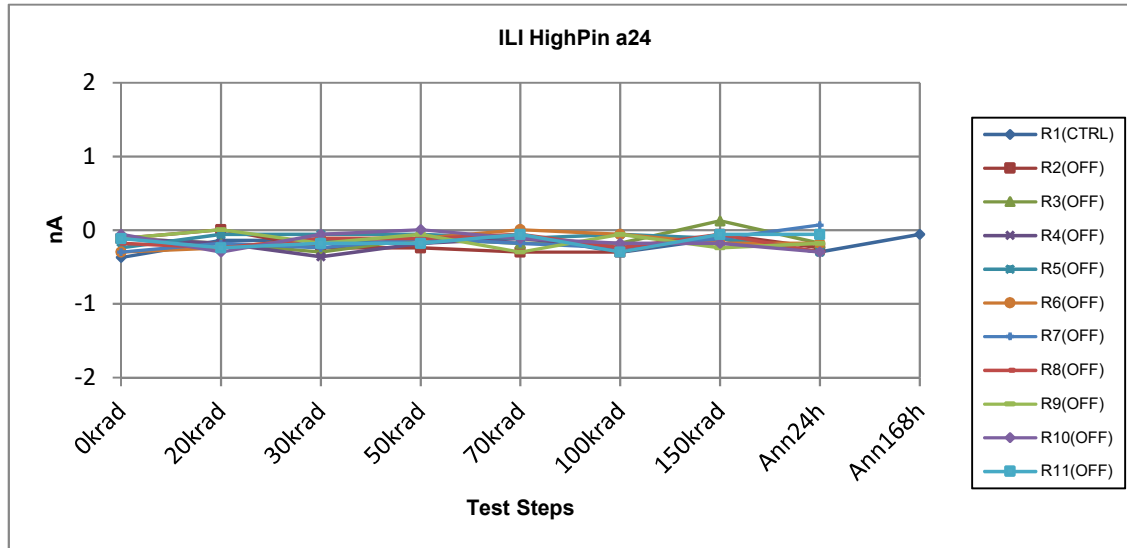
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ILI HighPin a25	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.15	-0.23	-0.23	-0.37	-0.38	-0.15	-0.12	-0.12	0.06
Irradiated, unbiased parts results									
R2(OFF)	-0.25	-0.25	-0.30	-0.25	-0.25	-0.18	-0.12	-0.30	No meas.
R3(OFF)	-0.18	-0.37	-0.18	-0.12	-0.12	-0.06	-0.18	-0.18	No meas.
R4(OFF)	-0.30	-0.12	-0.06	-0.18	-0.30	-0.30	-0.12	-0.25	No meas.
R5(OFF)	-0.06	-0.25	-0.18	-0.25	-0.25	-0.30	-0.12	-0.12	No meas.
R6(OFF)	-0.25	-0.30	-0.06	-0.25	-0.30	-0.12	-0.18	-0.06	No meas.
R7(OFF)	-0.12	-0.18	-0.12	-0.18	-0.18	-0.12	-0.12	-0.18	No meas.
R8(OFF)	-0.25	-0.12	-0.30	-0.25	-0.43	-0.25	-0.12	-0.18	No meas.
R9(OFF)	-0.25	-0.25	-0.25	-0.30	-0.18	-0.18	0.06	-0.18	No meas.
R10(OFF)	-0.18	-0.18	-0.25	-0.25	-0.25	-0.06	-0.18	-0.12	No meas.
R11(OFF)	-0.37	-0.06	-0.06	-0.30	-0.06	-0.25	-0.12	-0.18	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.37	-0.37	-0.30	-0.30	-0.43	-0.30	-0.18	-0.30	N/A
Max Value	-0.06	-0.06	-0.06	-0.12	-0.06	-0.06	0.06	-0.06	N/A
Average	-0.22	-0.21	-0.18	-0.23	-0.23	-0.18	-0.12	-0.18	N/A
Sigma	0.09	0.09	0.10	0.06	0.10	0.09	0.07	0.07	N/A

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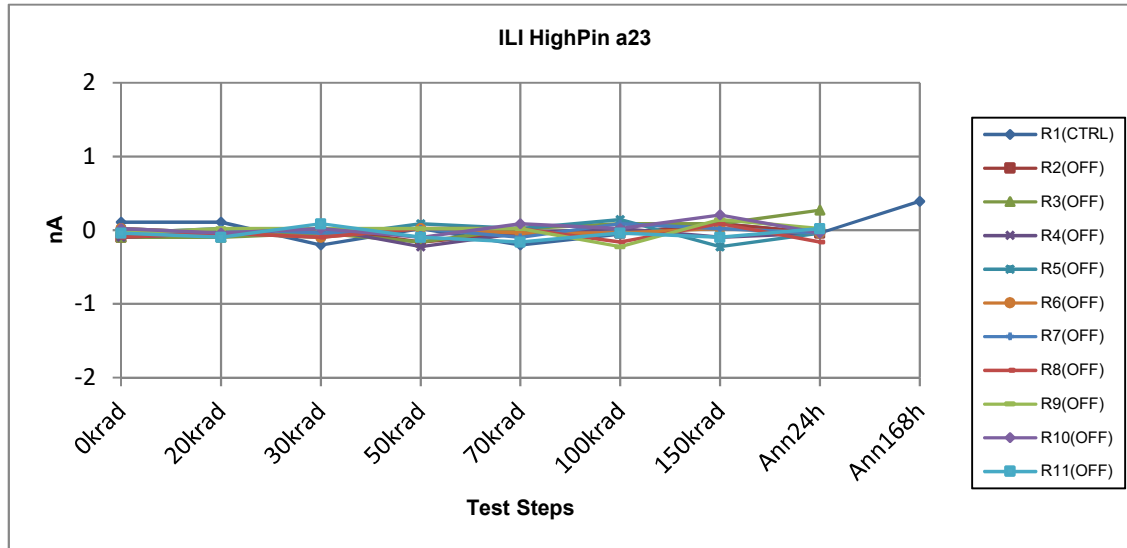
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ILI HighPin a24	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.37	-0.14	-0.14	-0.18	-0.07	-0.30	-0.11	-0.30	-0.06
Irradiated, unbiased parts results									
R2(OFF)	-0.11	0.01	-0.24	-0.24	-0.30	-0.30	-0.06	-0.24	No meas.
R3(OFF)	-0.11	-0.18	-0.30	-0.11	-0.18	-0.18	0.13	-0.18	No meas.
R4(OFF)	-0.11	-0.18	-0.36	-0.18	-0.11	-0.24	-0.11	-0.30	No meas.
R5(OFF)	-0.24	-0.06	-0.06	-0.06	-0.11	-0.06	-0.11	-0.30	No meas.
R6(OFF)	-0.30	-0.24	-0.11	-0.11	0.01	-0.06	-0.18	-0.18	No meas.
R7(OFF)	-0.30	-0.18	-0.24	-0.11	-0.18	-0.24	-0.11	0.07	No meas.
R8(OFF)	-0.18	-0.24	-0.11	-0.11	-0.06	-0.24	-0.06	-0.30	No meas.
R9(OFF)	-0.11	0.01	-0.18	-0.06	-0.30	-0.06	-0.24	-0.18	No meas.
R10(OFF)	-0.06	-0.30	-0.06	0.01	-0.11	-0.18	-0.18	-0.30	No meas.
R11(OFF)	-0.11	-0.24	-0.18	-0.18	-0.06	-0.30	-0.06	-0.06	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.30	-0.30	-0.36	-0.24	-0.30	-0.30	-0.24	-0.30	N/A
Max Value	-0.06	0.01	-0.06	0.01	0.01	-0.06	0.13	0.07	N/A
Average	-0.16	-0.16	-0.18	-0.11	-0.14	-0.18	-0.10	-0.19	N/A
Sigma	0.09	0.11	0.10	0.07	0.10	0.10	0.10	0.12	N/A

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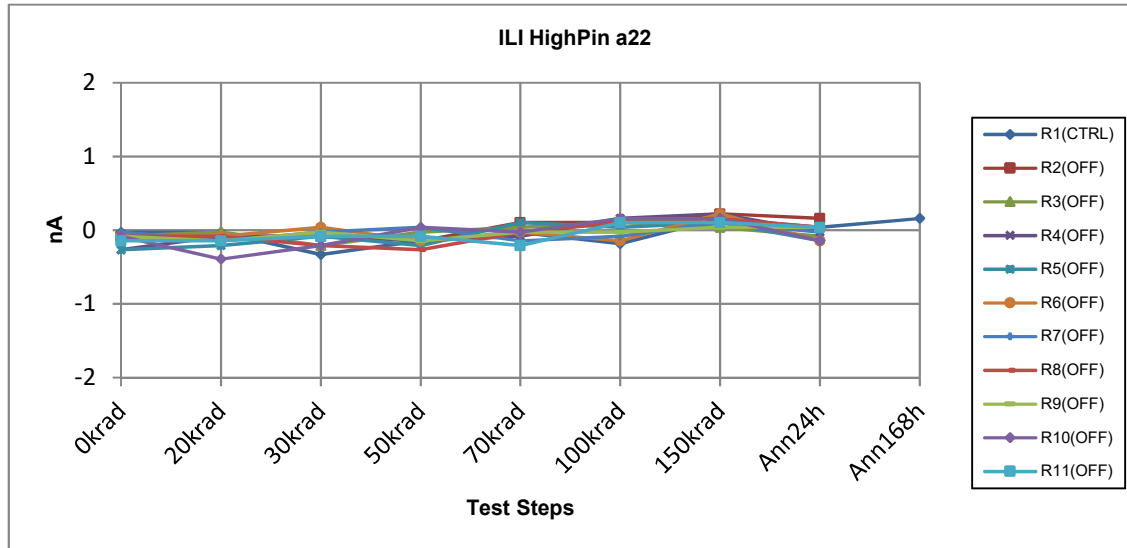
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ILI HighPin a23	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.11	0.11	-0.20	0.02	-0.20	-0.05	0.09	-0.04	0.39
Irradiated, unbiased parts results									
R2(OFF)	-0.10	-0.04	0.02	-0.16	-0.04	-0.04	0.09	-0.04	No meas.
R3(OFF)	-0.10	-0.10	-0.04	-0.16	0.02	0.09	0.09	0.27	No meas.
R4(OFF)	-0.10	-0.04	0.02	-0.22	-0.04	0.02	-0.10	-0.04	No meas.
R5(OFF)	0.02	-0.04	-0.10	0.09	0.02	0.14	-0.22	-0.04	No meas.
R6(OFF)	0.02	-0.04	-0.10	0.02	-0.04	-0.04	0.02	-0.04	No meas.
R7(OFF)	-0.04	0.02	-0.04	0.02	-0.10	0.09	0.02	-0.04	No meas.
R8(OFF)	-0.10	-0.04	-0.10	0.02	0.02	-0.16	0.09	-0.16	No meas.
R9(OFF)	-0.04	0.02	0.02	0.02	0.02	-0.22	0.14	0.02	No meas.
R10(OFF)	0.02	-0.04	0.02	-0.10	0.09	0.02	0.21	-0.04	No meas.
R11(OFF)	-0.04	-0.10	0.09	-0.10	-0.16	-0.04	-0.10	0.02	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.10	-0.10	-0.10	-0.22	-0.16	-0.22	-0.22	-0.16	N/A
Max Value	0.02	0.02	0.09	0.09	0.09	0.14	0.21	0.27	N/A
Average	-0.04	-0.04	-0.02	-0.06	-0.02	-0.01	0.02	-0.01	N/A
Sigma	0.05	0.04	0.06	0.11	0.07	0.11	0.13	0.11	N/A

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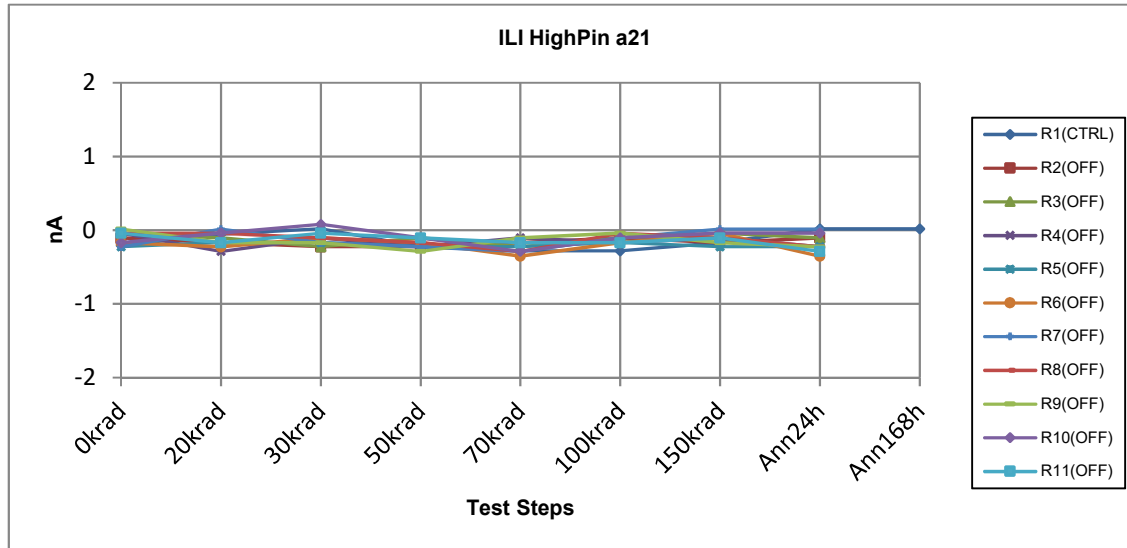
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ILI HighPin a22	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.03	-0.03	-0.33	-0.14	-0.03	-0.18	0.16	0.04	0.16
Irradiated, unbiased parts results									
R2(OFF)	-0.08	-0.08	-0.08	-0.14	0.10	0.10	0.22	0.16	No meas.
R3(OFF)	-0.08	-0.02	-0.21	-0.02	0.04	0.10	0.04	-0.08	No meas.
R4(OFF)	-0.26	-0.08	-0.08	-0.14	-0.08	0.16	0.22	-0.02	No meas.
R5(OFF)	-0.26	-0.21	-0.08	-0.21	0.10	0.04	0.10	-0.14	No meas.
R6(OFF)	-0.08	-0.08	0.04	-0.14	-0.02	-0.14	0.22	-0.14	No meas.
R7(OFF)	-0.02	-0.14	-0.02	0.04	-0.14	-0.08	0.10	-0.02	No meas.
R8(OFF)	-0.08	-0.08	-0.21	-0.26	-0.02	0.10	0.16	0.04	No meas.
R9(OFF)	-0.08	-0.14	-0.02	-0.14	-0.02	-0.02	0.04	0.04	No meas.
R10(OFF)	-0.08	-0.39	-0.21	0.04	-0.02	0.16	0.16	-0.14	No meas.
R11(OFF)	-0.14	-0.14	-0.08	-0.08	-0.21	0.10	0.10	0.04	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.26	-0.39	-0.21	-0.26	-0.21	-0.14	0.04	-0.14	N/A
Max Value	-0.02	-0.02	0.04	0.04	0.10	0.16	0.22	0.16	N/A
Average	-0.12	-0.14	-0.10	-0.11	-0.03	0.05	0.14	-0.03	N/A
Sigma	0.08	0.10	0.09	0.10	0.10	0.10	0.07	0.10	N/A

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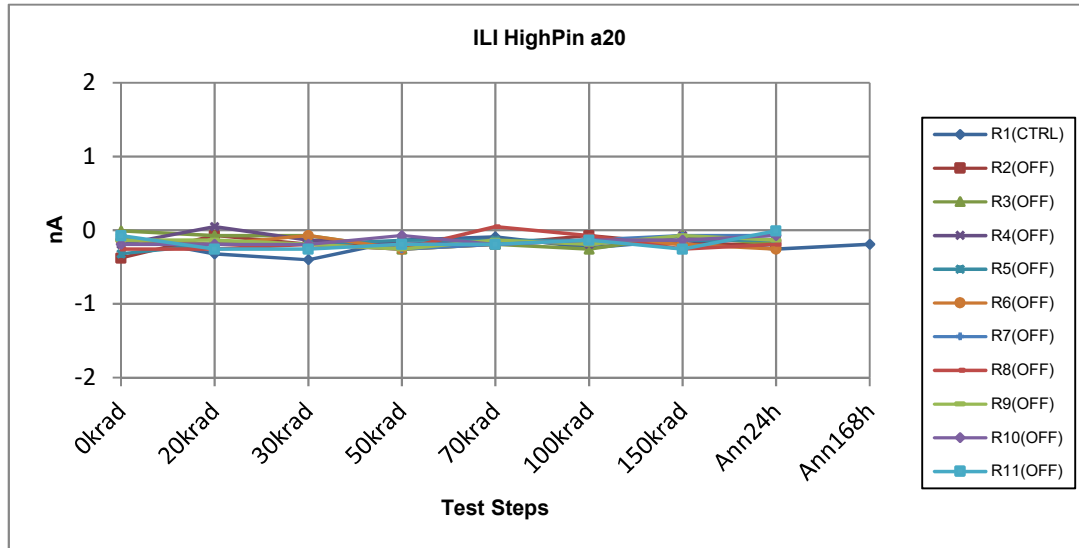
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ILI HighPin a21	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.21	-0.05	0.02	-0.22	-0.28	-0.28	-0.17	0.02	0.02
Irradiated, unbiased parts results									
R2(OFF)	-0.10	-0.17	-0.22	-0.22	-0.17	-0.10	-0.17	-0.10	No meas.
R3(OFF)	-0.04	-0.10	-0.22	-0.10	-0.22	-0.10	-0.04	-0.10	No meas.
R4(OFF)	-0.04	-0.29	-0.10	-0.22	-0.10	-0.17	-0.10	-0.22	No meas.
R5(OFF)	-0.22	-0.17	-0.17	-0.22	-0.22	-0.17	-0.22	-0.22	No meas.
R6(OFF)	-0.17	-0.22	-0.10	-0.17	-0.35	-0.17	-0.04	-0.35	No meas.
R7(OFF)	-0.22	0.02	-0.17	-0.22	-0.29	-0.10	0.02	0.02	No meas.
R8(OFF)	-0.04	-0.04	-0.10	-0.17	-0.29	-0.04	-0.10	-0.22	No meas.
R9(OFF)	0.02	-0.17	-0.17	-0.29	-0.10	-0.04	-0.17	-0.22	No meas.
R10(OFF)	-0.17	-0.04	0.08	-0.10	-0.29	-0.10	-0.04	-0.04	No meas.
R11(OFF)	-0.04	-0.17	-0.04	-0.10	-0.17	-0.17	-0.10	-0.29	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.22	-0.29	-0.22	-0.29	-0.35	-0.17	-0.22	-0.35	N/A
Max Value	0.02	0.02	0.08	-0.10	-0.10	-0.04	0.02	0.02	N/A
Average	-0.10	-0.14	-0.12	-0.18	-0.22	-0.12	-0.10	-0.18	N/A
Sigma	0.09	0.09	0.09	0.06	0.08	0.05	0.07	0.11	N/A

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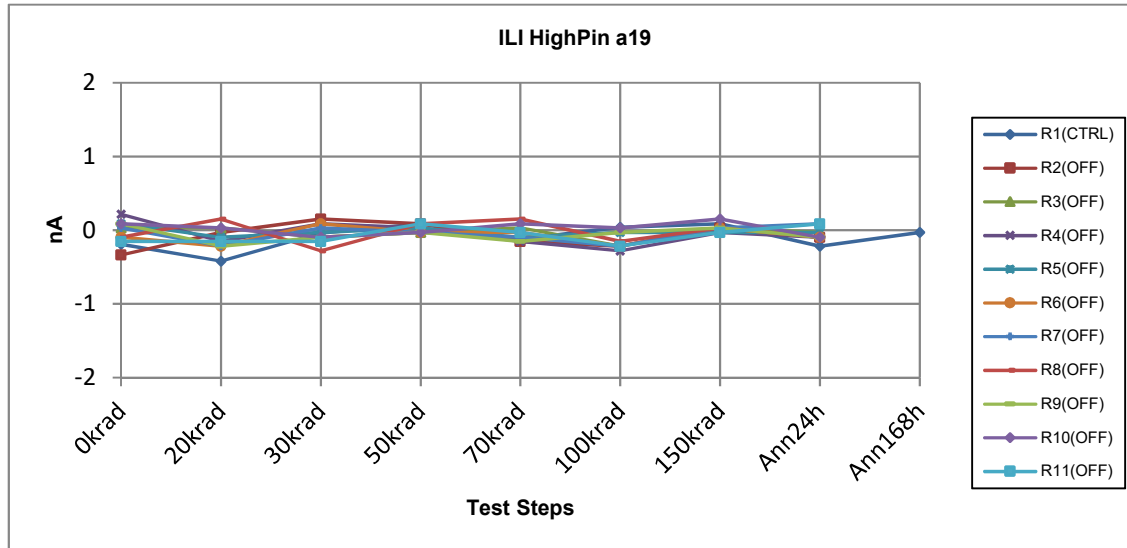
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ILI HighPin a20	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.09	-0.32	-0.40	-0.14	-0.09	-0.24	-0.14	-0.26	-0.19
Irradiated, unbiased parts results									
R2(OFF)	-0.38	-0.07	-0.19	-0.19	-0.19	-0.07	-0.19	-0.19	No meas.
R3(OFF)	-0.01	-0.07	-0.07	-0.26	-0.19	-0.26	-0.07	-0.19	No meas.
R4(OFF)	-0.19	0.05	-0.14	-0.19	-0.14	-0.19	-0.07	-0.14	No meas.
R5(OFF)	-0.32	-0.19	-0.19	-0.14	-0.14	-0.14	-0.14	-0.14	No meas.
R6(OFF)	-0.14	-0.19	-0.07	-0.26	-0.19	-0.14	-0.19	-0.26	No meas.
R7(OFF)	-0.19	-0.19	-0.19	-0.26	-0.19	-0.14	-0.07	-0.07	No meas.
R8(OFF)	-0.26	-0.26	-0.19	-0.26	0.05	-0.07	-0.26	-0.19	No meas.
R9(OFF)	-0.14	-0.14	-0.19	-0.26	-0.14	-0.19	-0.07	-0.14	No meas.
R10(OFF)	-0.19	-0.19	-0.19	-0.07	-0.19	-0.14	-0.14	-0.07	No meas.
R11(OFF)	-0.07	-0.26	-0.26	-0.19	-0.19	-0.14	-0.26	-0.01	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.38	-0.26	-0.26	-0.26	-0.19	-0.26	-0.26	-0.26	N/A
Max Value	-0.01	0.05	-0.07	-0.07	0.05	-0.07	-0.07	-0.01	N/A
Average	-0.19	-0.15	-0.17	-0.21	-0.15	-0.15	-0.15	-0.14	N/A
Sigma	0.11	0.09	0.06	0.06	0.07	0.06	0.07	0.07	N/A

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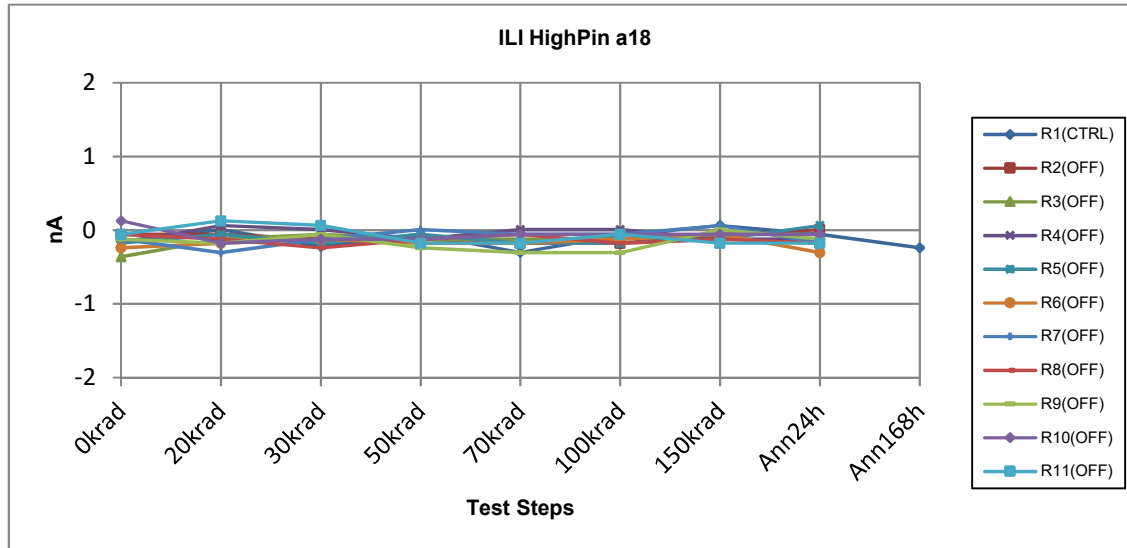
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ILI HighPin a19	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.19	-0.42	-0.04	0.09	-0.12	0.04	0.09	-0.22	-0.03
Irradiated, unbiased parts results									
R2(OFF)	-0.34	-0.03	0.15	0.09	-0.15	-0.22	0.03	-0.10	No meas.
R3(OFF)	0.03	0.03	-0.10	-0.03	0.03	-0.22	0.03	-0.03	No meas.
R4(OFF)	0.22	-0.15	0.09	0.03	-0.15	-0.28	-0.03	-0.10	No meas.
R5(OFF)	0.09	-0.10	-0.03	0.03	-0.10	-0.03	-0.03	-0.03	No meas.
R6(OFF)	-0.10	-0.22	0.09	-0.03	-0.03	-0.22	0.03	-0.10	No meas.
R7(OFF)	0.03	-0.22	0.03	-0.03	-0.10	-0.22	0.03	0.09	No meas.
R8(OFF)	-0.10	0.15	-0.28	0.09	0.15	-0.15	0.03	-0.10	No meas.
R9(OFF)	0.09	-0.22	-0.10	-0.03	-0.15	-0.03	0.03	-0.10	No meas.
R10(OFF)	0.09	0.03	-0.10	-0.03	0.09	0.03	0.15	-0.10	No meas.
R11(OFF)	-0.15	-0.15	-0.15	0.09	-0.03	-0.22	-0.03	0.09	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.34	-0.22	-0.28	-0.03	-0.15	-0.28	-0.03	-0.10	N/A
Max Value	0.22	0.15	0.15	0.09	0.15	0.03	0.15	0.09	N/A
Average	-0.01	-0.09	-0.04	0.02	-0.04	-0.15	0.02	-0.05	N/A
Sigma	0.16	0.13	0.13	0.06	0.11	0.11	0.05	0.08	N/A

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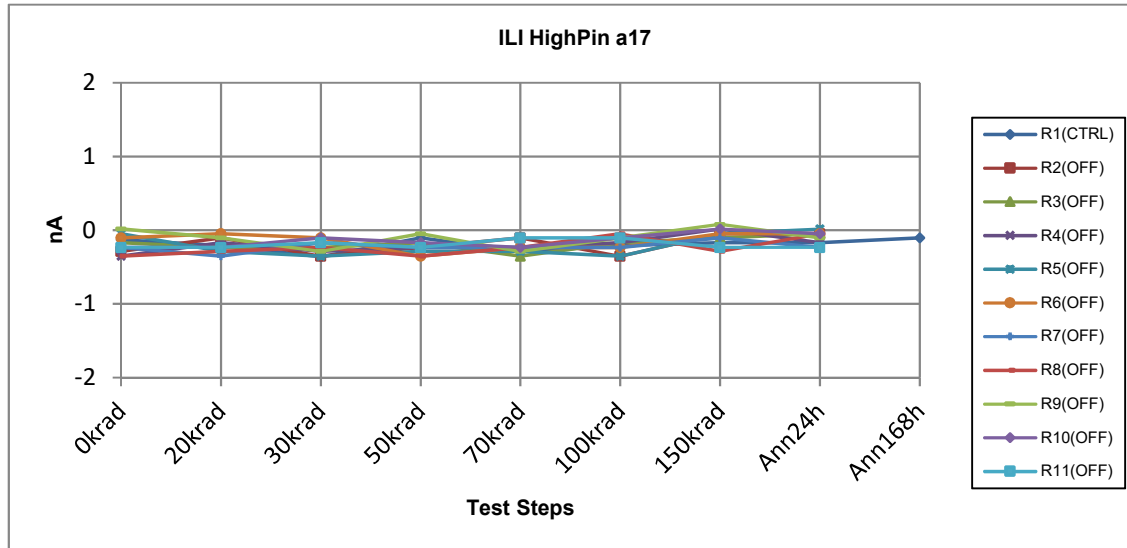
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ILI HighPin a18	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.15	0.01	-0.22	-0.06	-0.30	-0.07	0.06	-0.06	-0.24
Irradiated, unbiased parts results									
R2(OFF)	-0.06	-0.06	-0.12	-0.12	-0.18	-0.18	-0.06	0.01	No meas.
R3(OFF)	-0.36	-0.12	-0.06	-0.12	-0.12	-0.12	-0.06	-0.06	No meas.
R4(OFF)	-0.18	0.06	0.01	-0.12	0.01	0.01	-0.12	-0.12	No meas.
R5(OFF)	-0.18	-0.06	-0.18	-0.06	-0.18	-0.18	-0.12	0.06	No meas.
R6(OFF)	-0.24	-0.18	-0.12	-0.18	-0.18	-0.12	-0.06	-0.30	No meas.
R7(OFF)	-0.12	-0.30	-0.12	0.01	-0.06	-0.06	0.06	-0.18	No meas.
R8(OFF)	-0.06	-0.12	-0.24	-0.12	-0.06	-0.18	-0.12	-0.18	No meas.
R9(OFF)	-0.12	-0.18	-0.06	-0.24	-0.30	-0.30	0.01	-0.12	No meas.
R10(OFF)	0.13	-0.18	-0.12	-0.12	-0.06	-0.06	-0.06	-0.06	No meas.
R11(OFF)	-0.06	0.13	0.06	-0.18	-0.18	-0.06	-0.18	-0.18	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.36	-0.30	-0.24	-0.24	-0.30	-0.30	-0.18	-0.30	N/A
Max Value	0.13	0.13	0.06	0.01	0.01	0.01	0.06	0.06	N/A
Average	-0.12	-0.10	-0.09	-0.12	-0.13	-0.12	-0.07	-0.11	N/A
Sigma	0.13	0.13	0.09	0.07	0.09	0.09	0.07	0.11	N/A

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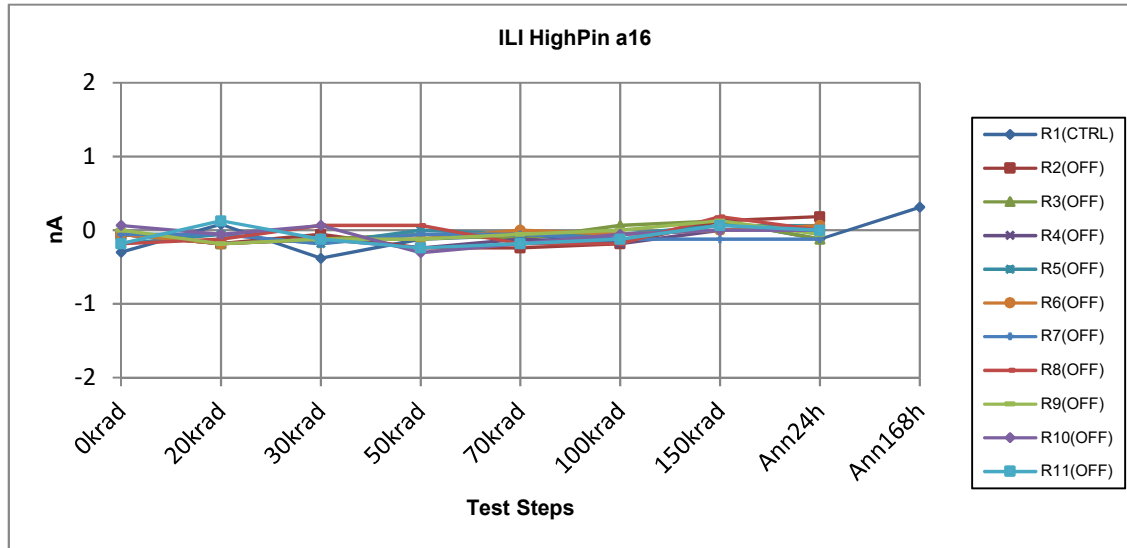
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ILI HighPin a17	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.13	-0.21	-0.36	-0.10	-0.29	-0.21	-0.17	-0.17	-0.10
Irradiated, unbiased parts results									
R2(OFF)	-0.29	-0.10	-0.35	-0.23	-0.10	-0.35	-0.05	-0.05	No meas.
R3(OFF)	-0.17	-0.23	-0.23	-0.17	-0.35	-0.17	-0.10	-0.05	No meas.
R4(OFF)	-0.35	-0.17	-0.29	-0.23	-0.23	-0.17	0.02	-0.17	No meas.
R5(OFF)	-0.05	-0.29	-0.35	-0.29	-0.29	-0.35	-0.05	0.02	No meas.
R6(OFF)	-0.10	-0.05	-0.10	-0.35	-0.23	-0.23	-0.05	-0.05	No meas.
R7(OFF)	-0.23	-0.35	-0.17	-0.23	-0.23	-0.23	-0.10	-0.23	No meas.
R8(OFF)	-0.35	-0.29	-0.23	-0.35	-0.23	-0.05	-0.29	-0.05	No meas.
R9(OFF)	0.02	-0.10	-0.29	-0.05	-0.29	-0.10	0.08	-0.10	No meas.
R10(OFF)	-0.23	-0.23	-0.10	-0.17	-0.23	-0.10	0.02	-0.05	No meas.
R11(OFF)	-0.23	-0.23	-0.17	-0.23	-0.10	-0.10	-0.23	-0.23	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.29	-0.23	N/A
Max Value	0.02	-0.05	-0.10	-0.05	-0.10	-0.05	0.08	0.02	N/A
Average	-0.20	-0.20	-0.23	-0.23	-0.23	-0.19	-0.08	-0.10	N/A
Sigma	0.12	0.10	0.09	0.09	0.08	0.10	0.11	0.09	N/A

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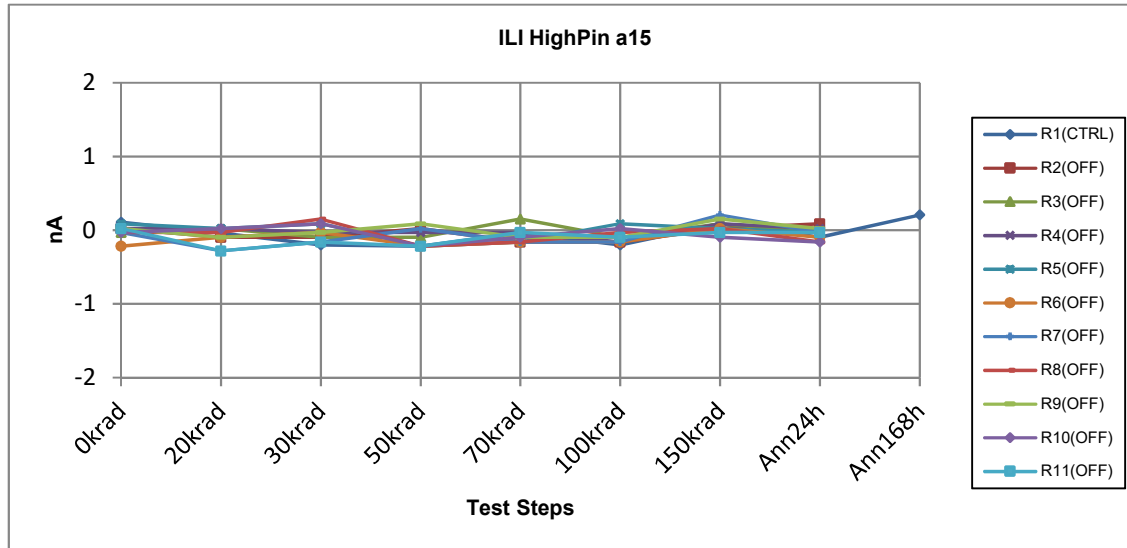
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ILI HighPin a16	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.30	0.08	-0.38	-0.12	-0.07	-0.15	0.13	-0.12	0.31
Irradiated, unbiased parts results									
R2(OFF)	-0.06	-0.18	-0.06	-0.24	-0.24	-0.18	0.13	0.18	No meas.
R3(OFF)	-0.06	-0.18	-0.12	-0.06	-0.12	0.06	0.13	-0.12	No meas.
R4(OFF)	-0.06	-0.18	-0.12	-0.24	-0.12	-0.18	0.00	0.06	No meas.
R5(OFF)	-0.18	-0.06	-0.18	0.00	-0.06	-0.06	0.06	0.06	No meas.
R6(OFF)	-0.06	-0.18	-0.12	-0.12	0.00	-0.06	0.00	0.06	No meas.
R7(OFF)	-0.06	-0.06	-0.18	-0.06	-0.06	-0.12	-0.12	-0.12	No meas.
R8(OFF)	-0.18	-0.12	0.06	0.06	-0.18	-0.18	0.18	0.00	No meas.
R9(OFF)	0.00	-0.18	-0.12	-0.12	-0.06	0.00	0.13	-0.06	No meas.
R10(OFF)	0.06	-0.06	0.06	-0.30	-0.18	-0.06	0.00	0.00	No meas.
R11(OFF)	-0.18	0.13	-0.12	-0.24	-0.18	-0.12	0.06	0.00	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.18	-0.18	-0.18	-0.30	-0.24	-0.18	-0.12	-0.12	N/A
Max Value	0.06	0.13	0.06	0.06	0.00	0.06	0.18	0.18	N/A
Average	-0.08	-0.11	-0.09	-0.13	-0.12	-0.09	0.06	0.01	N/A
Sigma	0.08	0.10	0.09	0.12	0.08	0.08	0.09	0.09	N/A

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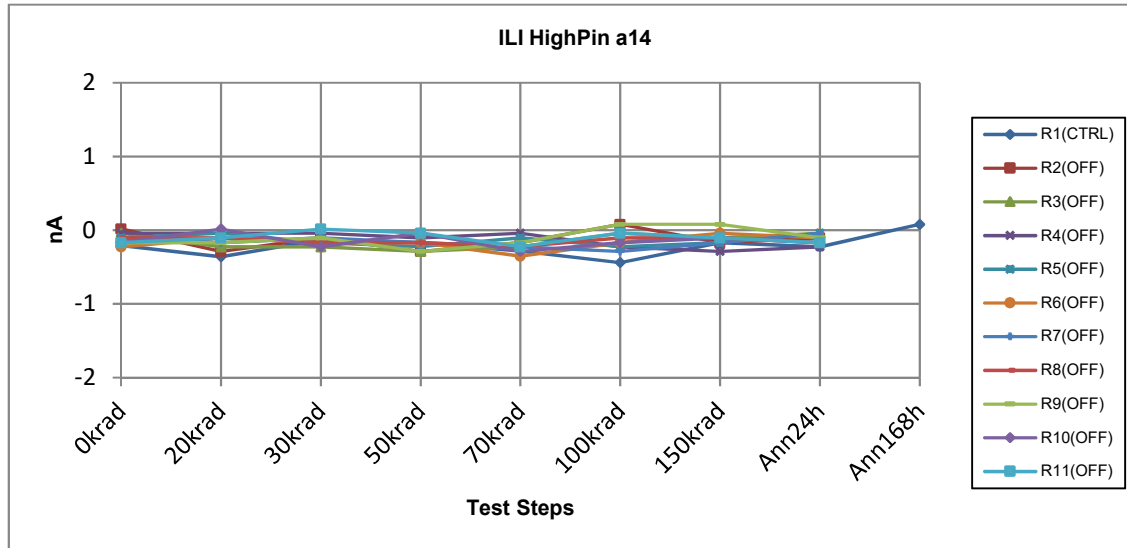
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ILI HighPin a15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.11	-0.04	-0.20	-0.22	-0.04	-0.20	0.09	-0.10	0.21
Irradiated, unbiased parts results									
R2(OFF)	0.02	-0.10	-0.10	0.02	-0.16	-0.16	0.02	0.09	No meas.
R3(OFF)	-0.03	0.02	-0.10	-0.10	0.15	-0.10	0.09	-0.03	No meas.
R4(OFF)	0.02	0.02	-0.03	-0.03	-0.03	-0.16	0.09	0.02	No meas.
R5(OFF)	0.09	0.02	0.09	-0.22	-0.16	0.09	0.02	-0.03	No meas.
R6(OFF)	-0.22	-0.10	-0.03	-0.22	-0.16	-0.16	0.02	-0.10	No meas.
R7(OFF)	-0.03	-0.28	-0.16	0.02	-0.16	-0.16	0.21	-0.03	No meas.
R8(OFF)	-0.03	-0.03	0.15	-0.22	-0.16	-0.03	0.02	-0.16	No meas.
R9(OFF)	0.02	-0.10	-0.03	0.09	-0.10	-0.10	0.15	0.02	No meas.
R10(OFF)	-0.03	0.02	0.09	-0.22	-0.10	0.02	-0.10	-0.16	No meas.
R11(OFF)	0.02	-0.28	-0.16	-0.22	-0.03	-0.10	-0.03	-0.03	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.22	-0.28	-0.16	-0.22	-0.16	-0.16	-0.10	-0.16	N/A
Max Value	0.09	0.02	0.15	0.09	0.15	0.09	0.21	0.09	N/A
Average	-0.02	-0.08	-0.03	-0.11	-0.09	-0.08	0.05	-0.04	N/A
Sigma	0.08	0.12	0.11	0.12	0.10	0.09	0.09	0.08	N/A

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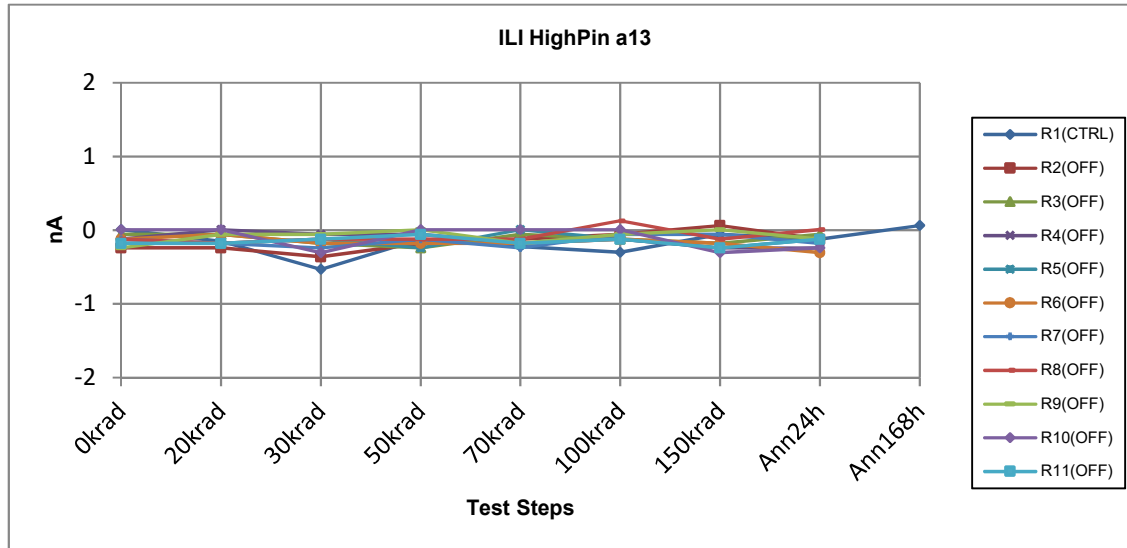
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ILI HighPin a14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.21	-0.36	-0.13	-0.17	-0.28	-0.44	-0.17	-0.22	0.08
Irradiated, unbiased parts results									
R2(OFF)	0.02	-0.29	-0.10	-0.29	-0.17	0.08	-0.17	-0.10	No meas.
R3(OFF)	-0.04	-0.22	-0.22	-0.29	-0.22	-0.04	-0.10	-0.04	No meas.
R4(OFF)	-0.04	-0.04	-0.04	-0.10	-0.04	-0.22	-0.29	-0.22	No meas.
R5(OFF)	-0.10	-0.04	-0.17	-0.22	-0.10	-0.22	-0.17	-0.04	No meas.
R6(OFF)	-0.22	-0.10	-0.17	-0.17	-0.35	-0.17	-0.04	-0.10	No meas.
R7(OFF)	-0.10	-0.17	-0.10	-0.17	-0.22	-0.29	-0.17	-0.04	No meas.
R8(OFF)	-0.10	-0.10	-0.17	-0.17	-0.22	-0.10	-0.10	-0.17	No meas.
R9(OFF)	-0.17	-0.17	-0.10	-0.29	-0.17	0.08	0.08	-0.10	No meas.
R10(OFF)	-0.17	0.02	-0.22	-0.04	-0.29	-0.17	-0.10	-0.17	No meas.
R11(OFF)	-0.17	-0.10	0.02	-0.04	-0.22	-0.04	-0.10	-0.17	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.22	-0.29	-0.22	-0.29	-0.35	-0.29	-0.29	-0.22	N/A
Max Value	0.02	0.02	0.02	-0.04	-0.04	0.08	0.08	-0.04	N/A
Average	-0.11	-0.12	-0.13	-0.18	-0.20	-0.11	-0.12	-0.12	N/A
Sigma	0.07	0.09	0.08	0.10	0.09	0.13	0.10	0.06	N/A

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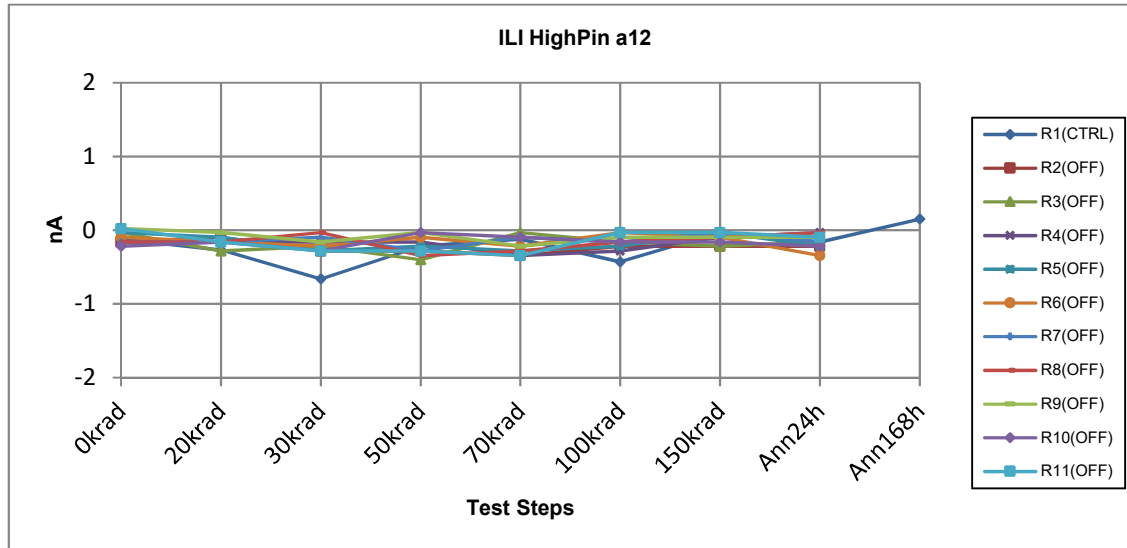
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ILI HighPin a13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.01	-0.15	-0.53	-0.12	-0.22	-0.30	-0.06	-0.12	0.06
Irradiated, unbiased parts results									
R2(OFF)	-0.24	-0.24	-0.36	-0.18	-0.12	-0.06	0.06	-0.12	No meas.
R3(OFF)	-0.06	-0.06	-0.18	-0.24	-0.06	-0.12	-0.18	-0.06	No meas.
R4(OFF)	-0.12	0.01	-0.06	-0.06	-0.18	-0.12	-0.24	-0.24	No meas.
R5(OFF)	-0.18	-0.18	-0.12	-0.24	0.01	-0.12	-0.24	-0.12	No meas.
R6(OFF)	-0.12	-0.06	-0.18	-0.18	-0.18	-0.12	-0.18	-0.30	No meas.
R7(OFF)	-0.12	-0.18	-0.24	-0.12	-0.24	-0.06	-0.06	-0.18	No meas.
R8(OFF)	-0.12	-0.18	-0.12	-0.12	-0.12	0.13	-0.12	0.01	No meas.
R9(OFF)	-0.24	-0.06	-0.06	0.01	-0.18	-0.06	0.01	-0.12	No meas.
R10(OFF)	0.01	0.01	-0.30	0.01	0.01	0.01	-0.30	-0.24	No meas.
R11(OFF)	-0.18	-0.18	-0.12	-0.06	-0.18	-0.12	-0.24	-0.12	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.24	-0.24	-0.36	-0.24	-0.24	-0.12	-0.30	-0.30	N/A
Max Value	0.01	0.01	-0.06	0.01	0.01	0.13	0.06	0.01	N/A
Average	-0.14	-0.11	-0.17	-0.12	-0.12	-0.06	-0.15	-0.15	N/A
Sigma	0.08	0.09	0.10	0.09	0.08	0.08	0.12	0.09	N/A

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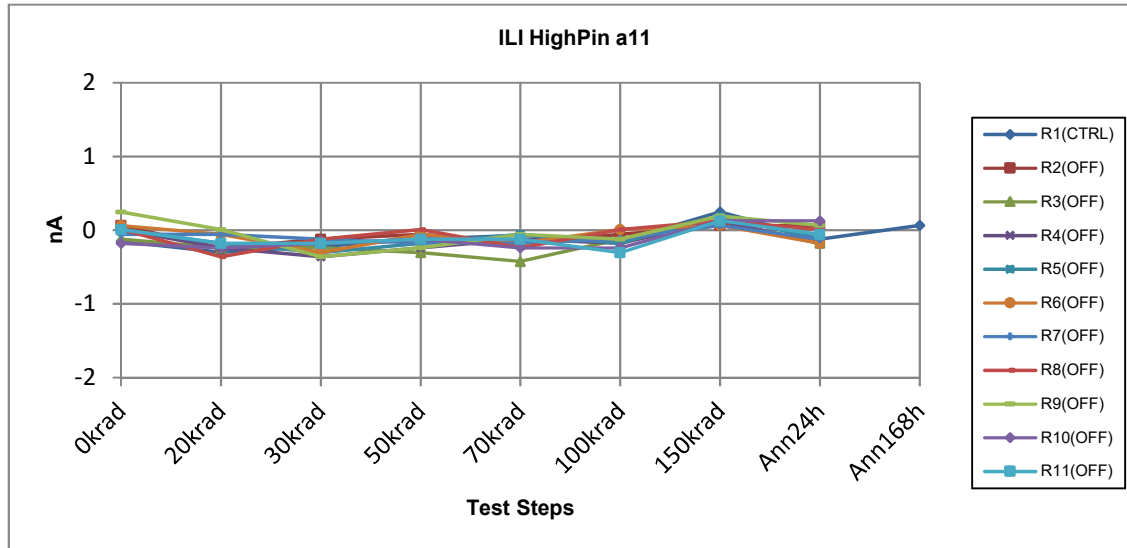
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ILI HighPin a12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.12	-0.27	-0.66	-0.22	-0.12	-0.43	-0.03	-0.16	0.15
Irradiated, unbiased parts results									
R2(OFF)	-0.16	-0.10	-0.28	-0.28	-0.34	-0.22	-0.22	-0.22	No meas.
R3(OFF)	-0.03	-0.28	-0.22	-0.40	-0.03	-0.16	-0.22	-0.16	No meas.
R4(OFF)	-0.16	-0.16	-0.16	-0.16	-0.34	-0.28	-0.10	-0.03	No meas.
R5(OFF)	-0.03	-0.10	-0.28	-0.22	-0.28	-0.22	-0.03	-0.22	No meas.
R6(OFF)	-0.10	-0.16	-0.22	-0.10	-0.22	-0.03	-0.10	-0.34	No meas.
R7(OFF)	-0.16	-0.16	-0.10	-0.28	-0.10	-0.16	-0.03	-0.16	No meas.
R8(OFF)	-0.16	-0.16	-0.03	-0.34	-0.28	-0.16	-0.10	-0.03	No meas.
R9(OFF)	0.02	-0.03	-0.16	-0.03	-0.22	-0.10	-0.10	-0.10	No meas.
R10(OFF)	-0.22	-0.16	-0.28	-0.03	-0.10	-0.16	-0.16	-0.22	No meas.
R11(OFF)	0.02	-0.16	-0.28	-0.28	-0.34	-0.03	-0.03	-0.10	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.22	-0.28	-0.28	-0.40	-0.34	-0.28	-0.22	-0.34	N/A
Max Value	0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	N/A
Average	-0.10	-0.15	-0.20	-0.21	-0.22	-0.15	-0.11	-0.16	N/A
Sigma	0.09	0.06	0.09	0.13	0.12	0.08	0.07	0.10	N/A

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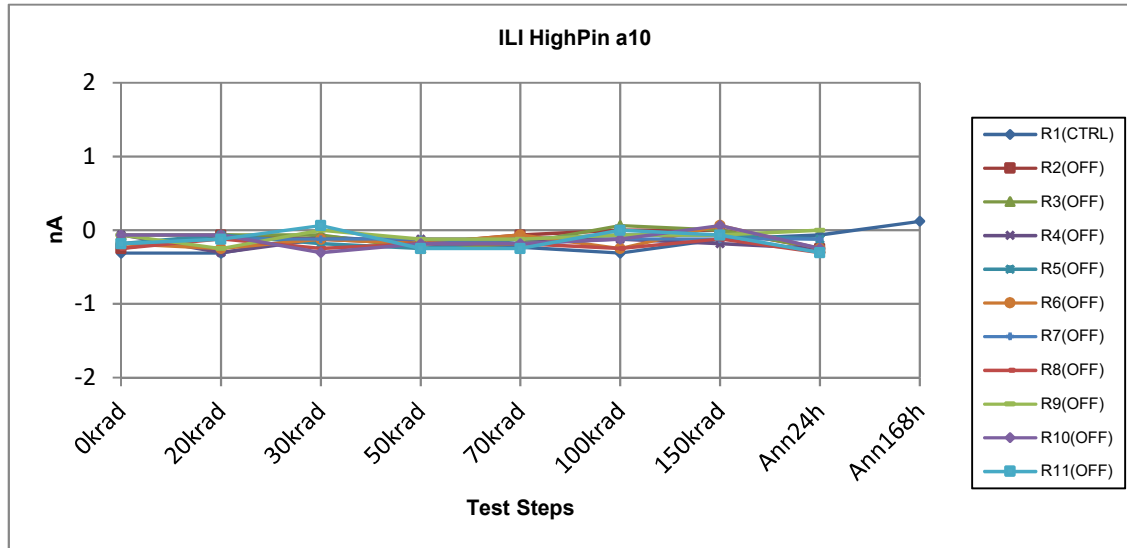
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ILI HighPin a11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.15	-0.30	-0.22	-0.12	-0.07	-0.15	0.25	-0.12	0.06
Irradiated, unbiased parts results									
R2(OFF)	0.06	-0.24	-0.12	-0.06	-0.18	-0.06	0.06	0.06	No meas.
R3(OFF)	-0.12	-0.24	-0.24	-0.30	-0.42	-0.12	0.13	-0.18	No meas.
R4(OFF)	0.01	-0.24	-0.36	-0.24	-0.12	-0.18	0.13	-0.18	No meas.
R5(OFF)	0.01	-0.18	-0.30	-0.18	-0.06	-0.18	0.19	-0.12	No meas.
R6(OFF)	0.06	-0.06	-0.30	-0.06	-0.18	0.01	0.06	-0.18	No meas.
R7(OFF)	-0.06	-0.06	-0.12	-0.18	-0.18	-0.12	0.06	-0.12	No meas.
R8(OFF)	0.01	-0.36	-0.12	0.01	-0.24	0.01	0.13	0.01	No meas.
R9(OFF)	0.25	0.01	-0.36	-0.24	-0.06	-0.12	0.19	0.06	No meas.
R10(OFF)	-0.18	-0.24	-0.18	-0.12	-0.24	-0.24	0.13	0.13	No meas.
R11(OFF)	0.01	-0.18	-0.18	-0.12	-0.12	-0.30	0.13	-0.06	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.18	-0.36	-0.36	-0.30	-0.42	-0.30	0.06	-0.18	N/A
Max Value	0.25	0.01	-0.12	0.01	-0.06	0.01	0.19	0.13	N/A
Average	0.01	-0.18	-0.23	-0.15	-0.18	-0.13	0.12	-0.06	N/A
Sigma	0.11	0.11	0.10	0.10	0.11	0.10	0.05	0.11	N/A

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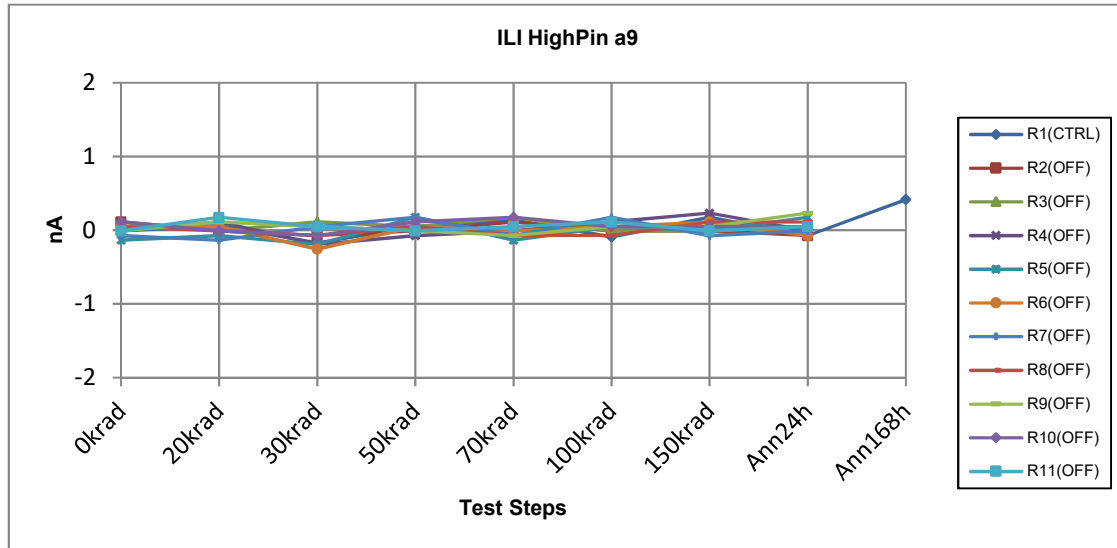
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ILI HighPin a10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.31	-0.31	-0.08	-0.18	-0.23	-0.31	-0.12	-0.06	0.12
Irradiated, unbiased parts results									
R2(OFF)	-0.25	-0.06	-0.12	-0.18	-0.06	0.00	0.00	-0.25	No meas.
R3(OFF)	-0.06	-0.06	-0.06	-0.25	-0.18	0.06	0.00	-0.25	No meas.
R4(OFF)	-0.06	-0.30	-0.12	-0.12	-0.12	-0.12	-0.18	-0.25	No meas.
R5(OFF)	-0.18	-0.06	-0.18	-0.25	-0.12	-0.06	-0.06	-0.12	No meas.
R6(OFF)	-0.18	-0.25	-0.12	-0.18	-0.06	-0.25	0.06	-0.25	No meas.
R7(OFF)	-0.18	-0.12	-0.12	-0.12	-0.18	-0.12	-0.12	-0.12	No meas.
R8(OFF)	-0.25	-0.12	-0.25	-0.18	-0.18	-0.25	-0.12	-0.30	No meas.
R9(OFF)	-0.06	-0.25	0.00	-0.12	-0.12	-0.06	-0.06	0.00	No meas.
R10(OFF)	-0.06	-0.06	-0.30	-0.18	-0.18	-0.12	0.06	-0.25	No meas.
R11(OFF)	-0.18	-0.12	0.06	-0.25	-0.25	0.00	-0.06	-0.30	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.25	-0.30	-0.30	-0.25	-0.25	-0.25	-0.18	-0.30	N/A
Max Value	-0.06	-0.06	0.06	-0.12	-0.06	0.06	0.06	0.00	N/A
Average	-0.15	-0.14	-0.12	-0.18	-0.15	-0.09	-0.05	-0.21	N/A
Sigma	0.08	0.09	0.11	0.05	0.06	0.10	0.08	0.10	N/A

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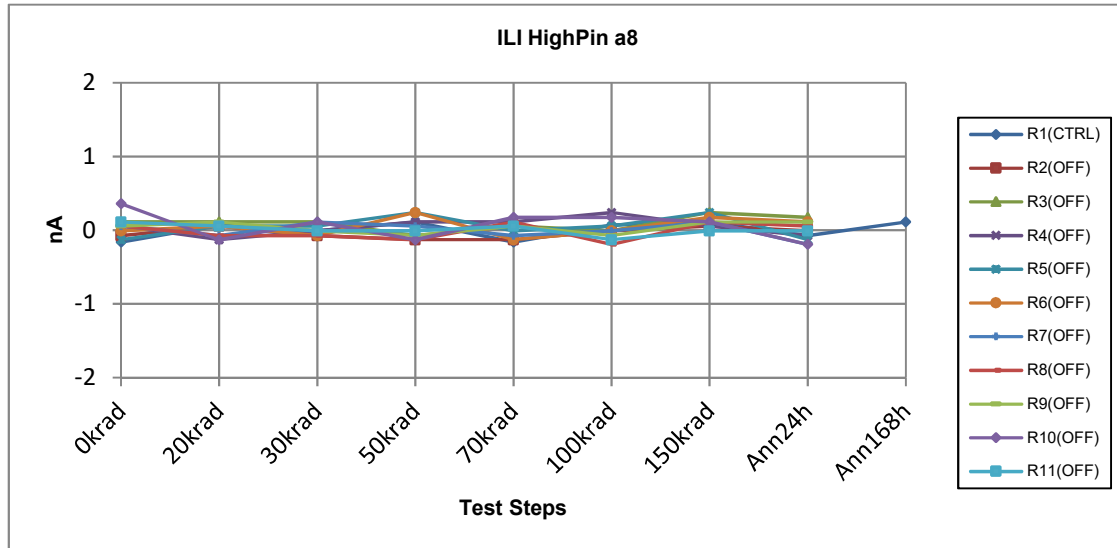
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ILI HighPin a9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.01	0.06	-0.17	0.05	0.14	-0.09	0.18	-0.07	0.42
Irradiated, unbiased parts results									
R2(OFF)	0.11	-0.01	-0.07	-0.01	0.11	-0.01	-0.01	-0.07	No meas.
R3(OFF)	0.11	-0.01	0.11	0.05	0.18	-0.01	-0.01	0.05	No meas.
R4(OFF)	-0.01	0.11	-0.19	-0.07	-0.01	0.11	0.23	-0.01	No meas.
R5(OFF)	-0.14	-0.07	-0.19	0.18	-0.14	0.05	-0.01	0.18	No meas.
R6(OFF)	0.05	0.05	-0.26	0.05	-0.01	0.05	0.11	-0.07	No meas.
R7(OFF)	-0.07	-0.14	0.05	0.18	-0.07	0.18	-0.07	-0.01	No meas.
R8(OFF)	0.05	-0.01	-0.07	0.05	-0.07	-0.07	0.11	0.11	No meas.
R9(OFF)	-0.01	0.11	0.05	-0.01	-0.07	0.05	0.05	0.23	No meas.
R10(OFF)	0.11	-0.01	-0.07	0.11	0.18	0.05	0.05	0.05	No meas.
R11(OFF)	-0.01	0.18	0.05	-0.01	0.05	0.11	-0.01	0.05	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.14	-0.14	-0.26	-0.07	-0.14	-0.07	-0.07	-0.07	N/A
Max Value	0.11	0.18	0.11	0.18	0.18	0.18	0.23	0.23	N/A
Average	0.02	0.02	-0.06	0.05	0.01	0.05	0.04	0.05	N/A
Sigma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N/A

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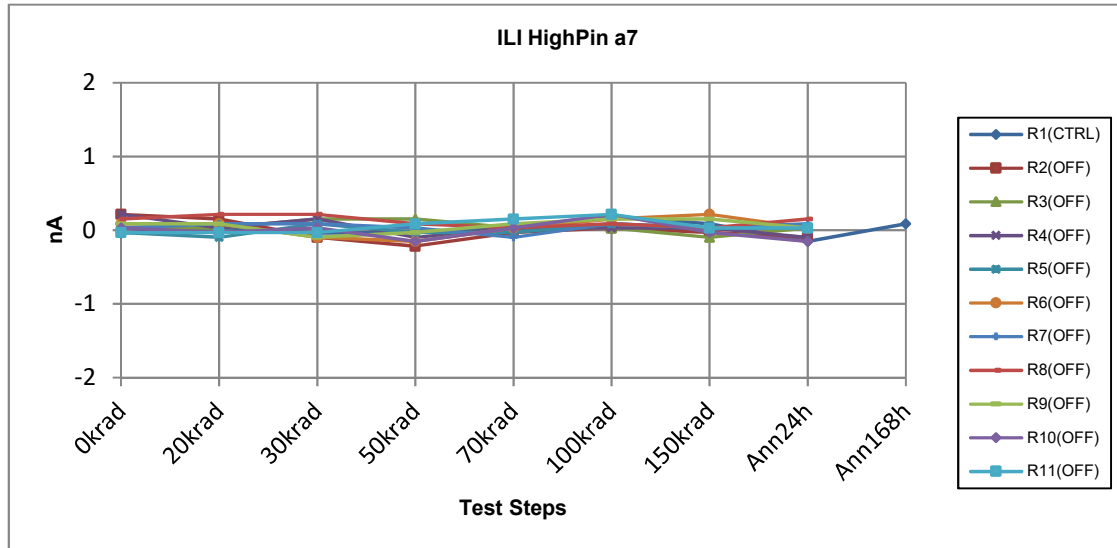
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ILI HighPin a8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.16	0.07	-0.01	0.11	-0.16	0.07	0.11	-0.07	0.11
Irradiated, unbiased parts results									
R2(OFF)	-0.07	0.06	-0.07	-0.13	-0.13	-0.01	0.06	-0.01	No meas.
R3(OFF)	0.11	0.11	0.11	-0.07	0.06	-0.01	0.24	0.18	No meas.
R4(OFF)	0.06	-0.13	-0.01	0.11	0.11	0.24	0.06	-0.07	No meas.
R5(OFF)	-0.13	0.06	0.06	0.24	-0.01	0.06	0.24	-0.13	No meas.
R6(OFF)	-0.01	0.06	-0.07	0.24	-0.13	-0.01	0.18	0.11	No meas.
R7(OFF)	0.06	-0.07	0.11	0.06	-0.07	-0.01	0.11	-0.19	No meas.
R8(OFF)	0.06	-0.07	-0.07	-0.13	0.11	-0.19	0.11	0.06	No meas.
R9(OFF)	0.06	0.11	-0.01	-0.07	0.06	-0.07	0.11	0.11	No meas.
R10(OFF)	0.36	-0.13	0.11	-0.13	0.18	0.18	0.11	-0.19	No meas.
R11(OFF)	0.11	0.06	-0.01	-0.01	0.06	-0.13	-0.01	-0.01	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.13	-0.13	-0.07	-0.13	-0.13	-0.19	-0.01	-0.19	N/A
Max Value	0.36	0.11	0.11	0.24	0.18	0.24	0.24	0.18	N/A
Average	0.06	0.00	0.02	0.01	0.02	0.00	0.12	-0.01	N/A
Sigma	0.13	0.09	0.08	0.14	0.10	0.13	0.08	0.13	N/A

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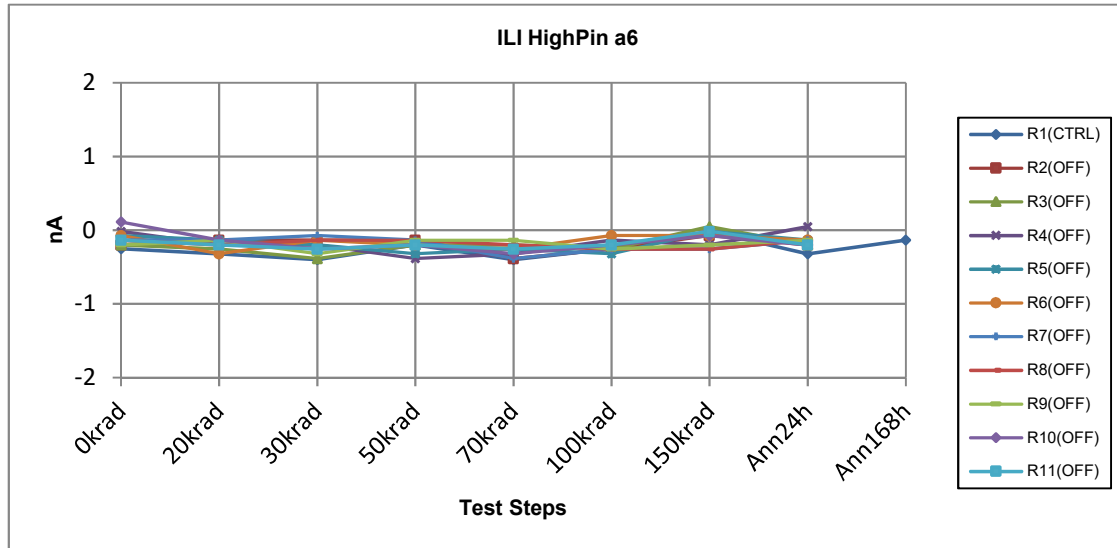
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ILI HighPin a7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.04	0.04	-0.04	-0.03	0.04	0.19	0.09	-0.15	0.09
Irradiated, unbiased parts results									
R2(OFF)	0.22	0.15	-0.10	-0.22	-0.03	0.03	-0.03	-0.10	No meas.
R3(OFF)	0.03	0.03	0.15	0.15	0.03	0.03	-0.10	0.03	No meas.
R4(OFF)	0.22	0.03	0.15	-0.10	0.03	0.03	0.03	-0.10	No meas.
R5(OFF)	-0.03	-0.10	0.09	-0.03	-0.03	0.09	0.03	0.03	No meas.
R6(OFF)	0.09	0.09	-0.10	-0.15	0.03	0.15	0.22	0.03	No meas.
R7(OFF)	0.03	0.09	0.09	0.03	-0.10	0.09	0.03	0.09	No meas.
R8(OFF)	0.15	0.22	0.22	0.09	0.03	0.09	0.03	0.15	No meas.
R9(OFF)	0.09	0.09	-0.10	-0.03	0.09	0.15	0.15	0.03	No meas.
R10(OFF)	0.03	-0.03	0.03	-0.15	0.03	0.22	-0.03	-0.15	No meas.
R11(OFF)	-0.03	-0.03	-0.03	0.09	0.15	0.22	0.03	0.03	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.03	-0.10	-0.10	-0.22	-0.10	0.03	-0.10	-0.15	N/A
Max Value	0.22	0.22	0.22	0.15	0.15	0.22	0.22	0.15	N/A
Average	0.08	0.05	0.04	-0.03	0.02	0.11	0.04	0.01	N/A
Sigma	0.09	0.09	0.12	0.12	0.07	0.07	0.09	0.09	N/A

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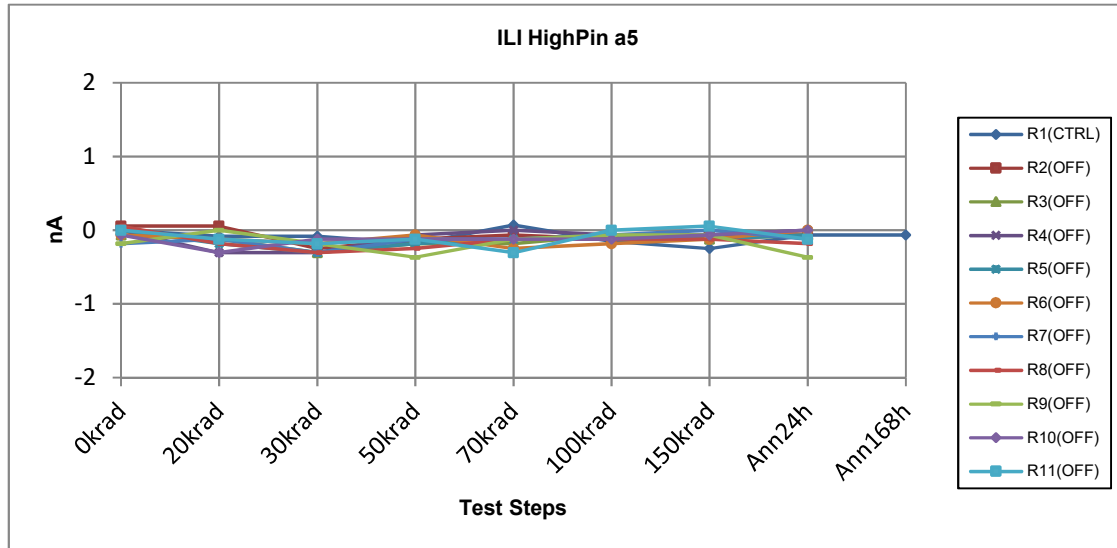
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ILI HighPin a6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.25	-0.32	-0.40	-0.20	-0.40	-0.25	-0.02	-0.32	-0.14
Irradiated, unbiased parts results									
R2(OFF)	-0.20	-0.14	-0.14	-0.14	-0.38	-0.26	-0.07	-0.20	No meas.
R3(OFF)	-0.20	-0.26	-0.38	-0.20	-0.20	-0.26	0.05	-0.20	No meas.
R4(OFF)	-0.02	-0.20	-0.20	-0.38	-0.32	-0.14	-0.20	0.05	No meas.
R5(OFF)	-0.07	-0.14	-0.20	-0.32	-0.26	-0.32	-0.02	-0.14	No meas.
R6(OFF)	-0.07	-0.32	-0.14	-0.20	-0.26	-0.07	-0.07	-0.14	No meas.
R7(OFF)	-0.14	-0.14	-0.07	-0.14	-0.38	-0.26	-0.26	-0.14	No meas.
R8(OFF)	-0.14	-0.20	-0.14	-0.14	-0.20	-0.26	-0.26	-0.14	No meas.
R9(OFF)	-0.20	-0.14	-0.32	-0.14	-0.14	-0.26	-0.20	-0.14	No meas.
R10(OFF)	0.11	-0.14	-0.26	-0.20	-0.32	-0.20	-0.07	-0.20	No meas.
R11(OFF)	-0.14	-0.20	-0.26	-0.20	-0.26	-0.20	-0.02	-0.20	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.20	-0.32	-0.38	-0.38	-0.38	-0.32	-0.26	-0.20	N/A
Max Value	0.11	-0.14	-0.07	-0.14	-0.14	-0.07	0.05	0.05	N/A
Average	-0.11	-0.19	-0.21	-0.20	-0.27	-0.22	-0.11	-0.14	N/A
Sigma	0.10	0.06	0.10	0.08	0.08	0.07	0.11	0.07	N/A

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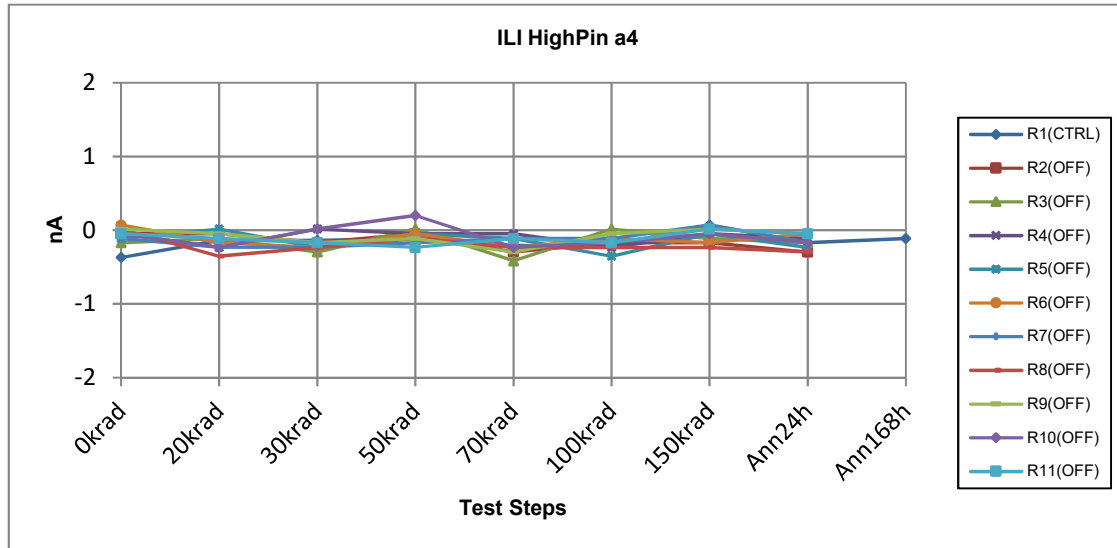
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ILI HighPin a5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.00	-0.08	-0.08	-0.18	0.07	-0.15	-0.25	-0.06	-0.06
Irradiated, unbiased parts results									
R2(OFF)	0.06	0.06	-0.25	-0.12	-0.06	-0.12	-0.06	-0.06	No meas.
R3(OFF)	-0.06	-0.12	-0.30	-0.18	-0.18	-0.06	-0.12	-0.06	No meas.
R4(OFF)	0.00	-0.30	-0.30	-0.06	0.00	-0.06	-0.06	0.00	No meas.
R5(OFF)	0.00	-0.18	-0.30	-0.18	-0.12	-0.12	-0.12	-0.06	No meas.
R6(OFF)	-0.06	-0.12	-0.18	-0.06	-0.25	-0.18	-0.12	0.00	No meas.
R7(OFF)	-0.18	-0.12	-0.30	-0.12	-0.12	-0.06	0.00	-0.12	No meas.
R8(OFF)	0.06	-0.18	-0.30	-0.25	-0.12	-0.12	-0.12	-0.18	No meas.
R9(OFF)	-0.18	0.00	-0.18	-0.37	-0.12	-0.06	-0.06	-0.37	No meas.
R10(OFF)	-0.06	-0.30	-0.12	-0.12	-0.12	-0.12	-0.06	0.00	No meas.
R11(OFF)	0.00	-0.12	-0.18	-0.12	-0.30	0.00	0.06	-0.12	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.18	-0.30	-0.30	-0.37	-0.30	-0.18	-0.12	-0.37	N/A
Max Value	0.06	0.06	-0.12	-0.06	0.00	0.00	0.06	0.00	N/A
Average	-0.04	-0.14	-0.24	-0.16	-0.14	-0.09	-0.07	-0.10	N/A
Sigma	0.09	0.11	0.07	0.09	0.09	0.05	0.06	0.11	N/A

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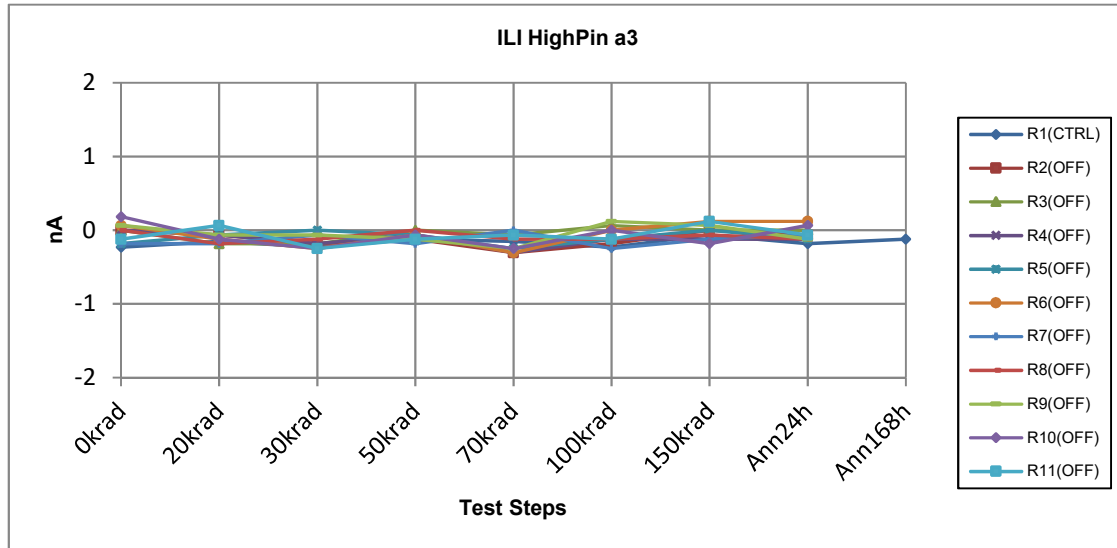
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ILI HighPin a4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.37	-0.14	-0.14	-0.11	-0.21	-0.21	0.07	-0.17	-0.11
Irradiated, unbiased parts results									
R2(OFF)	-0.05	-0.05	-0.17	-0.05	-0.30	-0.17	-0.17	-0.30	No meas.
R3(OFF)	-0.17	-0.11	-0.30	0.02	-0.42	0.02	-0.11	-0.17	No meas.
R4(OFF)	-0.05	-0.23	0.02	-0.05	-0.05	-0.23	-0.05	-0.11	No meas.
R5(OFF)	-0.11	0.02	-0.23	-0.05	-0.11	-0.35	-0.05	-0.23	No meas.
R6(OFF)	0.07	-0.17	-0.23	-0.05	-0.23	-0.11	-0.17	-0.05	No meas.
R7(OFF)	-0.11	-0.23	-0.23	-0.17	-0.11	-0.11	0.07	-0.17	No meas.
R8(OFF)	0.02	-0.35	-0.23	-0.11	-0.23	-0.23	-0.23	-0.30	No meas.
R9(OFF)	0.02	-0.05	-0.17	-0.11	-0.30	-0.05	0.02	-0.05	No meas.
R10(OFF)	-0.05	-0.23	0.02	0.20	-0.23	-0.17	-0.05	-0.17	No meas.
R11(OFF)	-0.05	-0.11	-0.17	-0.23	-0.11	-0.17	0.02	-0.05	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.17	-0.35	-0.30	-0.23	-0.42	-0.35	-0.23	-0.30	N/A
Max Value	0.07	0.02	0.02	0.20	-0.05	0.02	0.07	-0.05	N/A
Average	-0.05	-0.15	-0.17	-0.06	-0.21	-0.16	-0.07	-0.16	N/A
Sigma	0.07	0.11	0.11	0.12	0.11	0.10	0.10	0.10	N/A

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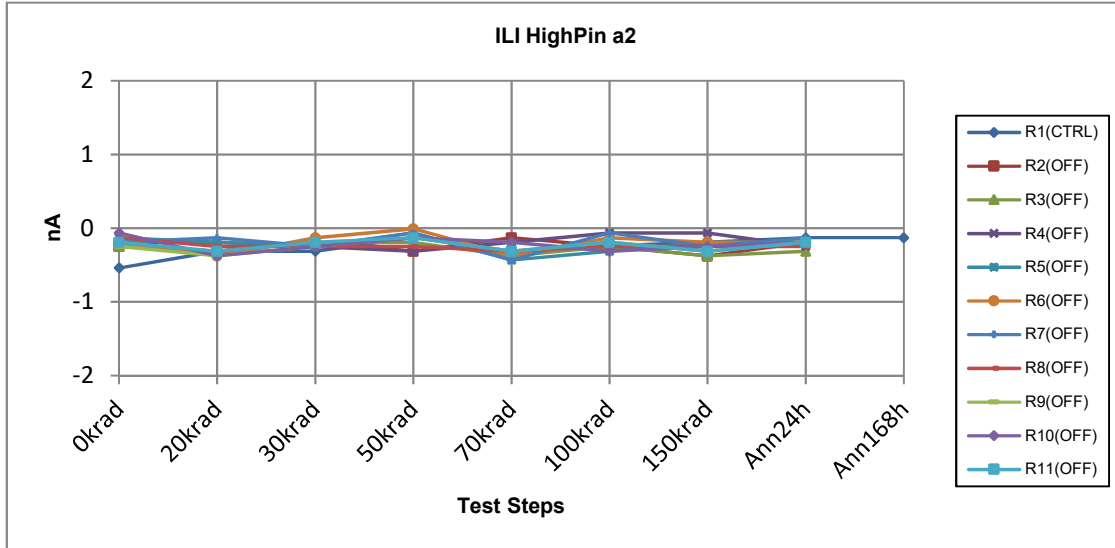
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ILI HighPin a3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.23	-0.15	-0.23	-0.12	-0.15	-0.23	-0.06	-0.18	-0.12
Irradiated, unbiased parts results									
R2(OFF)	0.00	-0.06	-0.18	-0.12	-0.30	-0.18	0.00	-0.06	No meas.
R3(OFF)	0.00	-0.18	-0.18	0.00	-0.06	0.06	0.00	0.00	No meas.
R4(OFF)	0.00	-0.06	-0.18	-0.06	-0.30	-0.12	-0.12	-0.12	No meas.
R5(OFF)	-0.18	-0.06	0.00	-0.06	-0.25	-0.12	0.00	-0.12	No meas.
R6(OFF)	0.06	-0.12	-0.25	-0.06	-0.30	0.00	0.12	0.12	No meas.
R7(OFF)	-0.18	-0.18	-0.06	-0.18	0.00	-0.25	-0.12	-0.06	No meas.
R8(OFF)	0.00	-0.18	-0.12	0.00	-0.12	-0.12	-0.06	-0.12	No meas.
R9(OFF)	0.06	-0.06	-0.06	-0.12	-0.25	0.12	0.06	-0.12	No meas.
R10(OFF)	0.18	-0.12	-0.25	-0.06	-0.25	0.00	-0.18	0.06	No meas.
R11(OFF)	-0.12	0.06	-0.25	-0.12	-0.06	-0.12	0.12	-0.06	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.18	-0.18	-0.25	-0.18	-0.30	-0.25	-0.18	-0.12	N/A
Max Value	0.18	0.06	0.00	0.00	0.00	0.12	0.12	0.12	N/A
Average	-0.02	-0.10	-0.15	-0.08	-0.19	-0.07	-0.02	-0.05	N/A
Sigma	0.12	0.08	0.09	0.06	0.12	0.11	0.10	0.08	N/A

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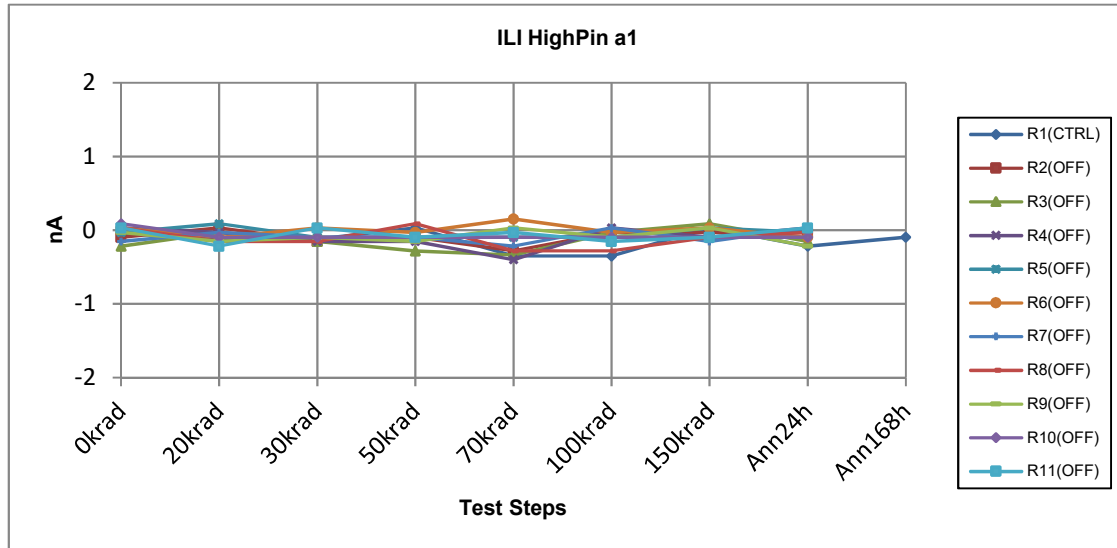
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ILI HighPin a2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.54	-0.31	-0.31	-0.13	-0.31	-0.24	-0.19	-0.13	-0.13
Irradiated, unbiased parts results									
R2(OFF)	-0.25	-0.31	-0.19	-0.31	-0.13	-0.25	-0.38	-0.19	No meas.
R3(OFF)	-0.25	-0.31	-0.19	-0.19	-0.38	-0.25	-0.38	-0.31	No meas.
R4(OFF)	-0.19	-0.19	-0.25	-0.31	-0.19	-0.06	-0.06	-0.25	No meas.
R5(OFF)	-0.13	-0.19	-0.25	-0.06	-0.43	-0.31	-0.19	-0.19	No meas.
R6(OFF)	-0.19	-0.38	-0.13	-0.01	-0.38	-0.13	-0.19	-0.19	No meas.
R7(OFF)	-0.19	-0.13	-0.25	-0.06	-0.43	-0.06	-0.25	-0.13	No meas.
R8(OFF)	-0.13	-0.25	-0.25	-0.25	-0.31	-0.25	-0.25	-0.25	No meas.
R9(OFF)	-0.25	-0.38	-0.25	-0.13	-0.31	-0.19	-0.31	-0.19	No meas.
R10(OFF)	-0.06	-0.38	-0.25	-0.13	-0.19	-0.31	-0.25	-0.19	No meas.
R11(OFF)	-0.19	-0.31	-0.19	-0.13	-0.31	-0.19	-0.31	-0.19	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.25	-0.38	-0.25	-0.31	-0.43	-0.31	-0.38	-0.31	N/A
Max Value	-0.06	-0.13	-0.13	-0.01	-0.13	-0.06	-0.06	-0.13	N/A
Average	-0.18	-0.28	-0.22	-0.16	-0.31	-0.20	-0.26	-0.21	N/A
Sigma	0.06	0.09	0.04	0.11	0.11	0.09	0.09	0.05	N/A

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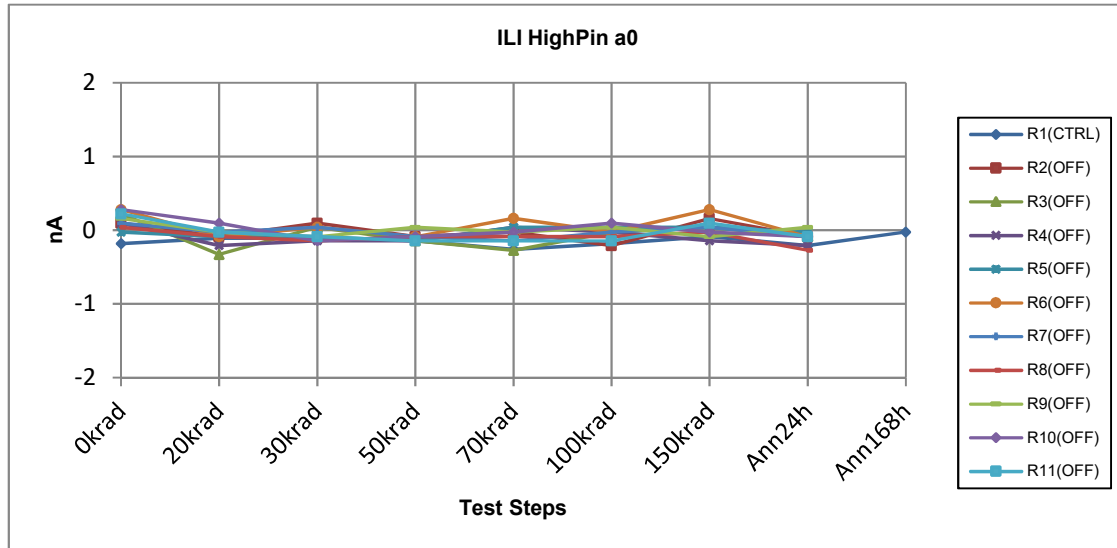
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ILI HighPin a1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.04	-0.12	-0.12	0.03	-0.35	-0.35	0.03	-0.22	-0.10
Irradiated, unbiased parts results									
R2(OFF)	-0.10	0.03	-0.15	-0.10	-0.28	-0.03	-0.03	-0.03	No meas.
R3(OFF)	-0.22	-0.03	-0.15	-0.28	-0.34	-0.03	0.09	-0.15	No meas.
R4(OFF)	0.03	-0.03	-0.15	-0.15	-0.40	0.03	-0.10	0.03	No meas.
R5(OFF)	-0.03	0.09	-0.10	-0.10	-0.10	-0.10	0.03	-0.03	No meas.
R6(OFF)	0.03	-0.10	0.03	-0.03	0.15	-0.03	0.03	-0.10	No meas.
R7(OFF)	-0.15	-0.03	-0.10	-0.10	-0.22	0.03	-0.15	0.03	No meas.
R8(OFF)	0.03	-0.15	-0.15	0.09	-0.28	-0.28	-0.10	-0.03	No meas.
R9(OFF)	-0.03	-0.15	-0.10	-0.15	0.03	-0.10	0.03	-0.22	No meas.
R10(OFF)	0.09	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	No meas.
R11(OFF)	0.03	-0.22	0.03	-0.10	-0.03	-0.15	-0.10	0.03	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.22	-0.22	-0.15	-0.28	-0.40	-0.28	-0.15	-0.22	N/A
Max Value	0.09	0.09	0.03	0.09	0.15	0.03	0.09	0.03	N/A
Average	-0.03	-0.07	-0.09	-0.10	-0.16	-0.08	-0.04	-0.06	N/A
Sigma	0.10	0.09	0.07	0.09	0.18	0.09	0.08	0.08	N/A

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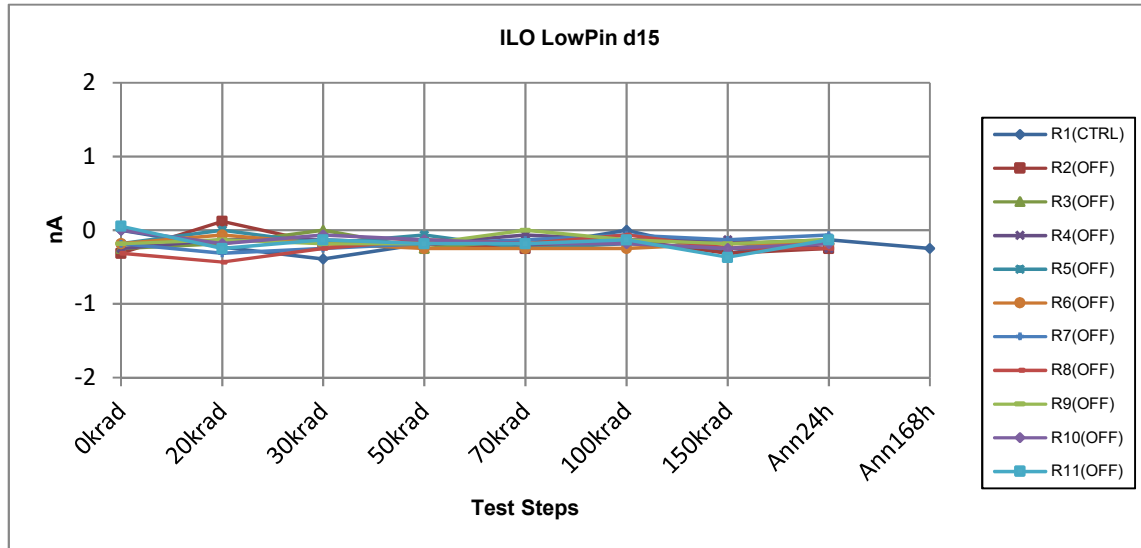
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ILI HighPin a0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.18	-0.11	-0.11	-0.14	-0.26	-0.18	-0.09	-0.21	-0.02
Irradiated, unbiased parts results									
R2(OFF)	0.10	-0.09	0.10	-0.09	-0.02	-0.21	0.16	-0.09	No meas.
R3(OFF)	0.22	-0.33	0.04	-0.14	-0.27	-0.02	0.04	-0.09	No meas.
R4(OFF)	0.10	-0.21	-0.14	-0.14	0.04	-0.02	-0.14	-0.21	No meas.
R5(OFF)	-0.02	-0.09	-0.09	-0.14	0.04	0.04	0.04	-0.02	No meas.
R6(OFF)	0.28	-0.09	0.04	-0.09	0.16	-0.02	0.28	-0.09	No meas.
R7(OFF)	0.10	-0.02	0.04	-0.09	-0.14	-0.02	0.04	-0.09	No meas.
R8(OFF)	0.04	-0.09	-0.14	-0.09	-0.09	-0.09	-0.02	-0.27	No meas.
R9(OFF)	0.16	-0.02	-0.09	0.04	-0.02	0.04	-0.09	0.04	No meas.
R10(OFF)	0.28	0.10	-0.14	-0.09	-0.02	0.10	-0.02	-0.09	No meas.
R11(OFF)	0.22	-0.02	-0.09	-0.14	-0.14	-0.14	0.10	-0.09	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.02	-0.33	-0.14	-0.14	-0.27	-0.21	-0.14	-0.27	N/A
Max Value	0.28	0.10	0.10	0.04	0.16	0.10	0.28	0.04	N/A
Average	0.15	-0.09	-0.05	-0.10	-0.05	-0.04	0.04	-0.10	N/A
Sigma	0.10	0.11	0.09	0.06	0.12	0.09	0.12	0.09	N/A

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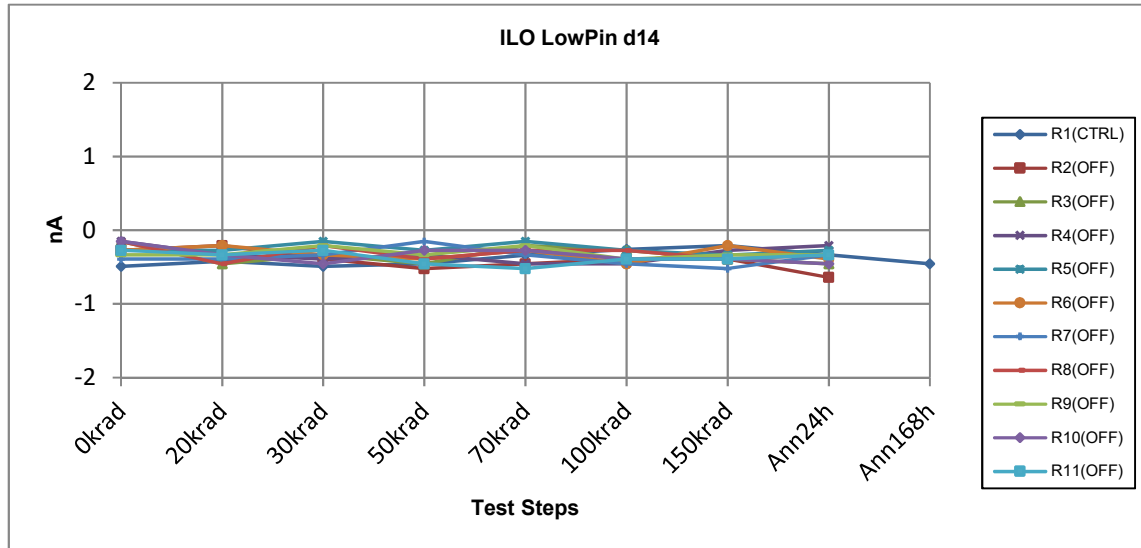
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ILO LowPin d15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.00	-0.23	-0.39	-0.18	-0.23	0.00	-0.31	-0.13	-0.25
Irradiated, unbiased parts results									
R2(OFF)	-0.31	0.12	-0.18	-0.18	-0.25	-0.13	-0.31	-0.25	No meas.
R3(OFF)	-0.25	-0.18	0.00	-0.25	-0.13	-0.13	-0.18	-0.13	No meas.
R4(OFF)	-0.25	-0.13	-0.13	-0.18	-0.06	-0.13	-0.13	-0.25	No meas.
R5(OFF)	-0.18	0.00	-0.18	-0.06	-0.25	-0.18	-0.25	-0.13	No meas.
R6(OFF)	-0.18	-0.06	-0.18	-0.25	-0.25	-0.25	-0.18	-0.18	No meas.
R7(OFF)	-0.18	-0.31	-0.25	-0.18	-0.13	-0.06	-0.13	-0.06	No meas.
R8(OFF)	-0.31	-0.43	-0.25	-0.13	-0.18	-0.06	-0.25	-0.25	No meas.
R9(OFF)	-0.18	-0.13	-0.18	-0.18	0.00	-0.13	-0.18	-0.13	No meas.
R10(OFF)	0.00	-0.18	-0.06	-0.13	-0.18	-0.18	-0.25	-0.18	No meas.
R11(OFF)	0.06	-0.25	-0.13	-0.18	-0.18	-0.13	-0.37	-0.13	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.31	-0.43	-0.25	-0.25	-0.25	-0.25	-0.37	-0.25	N/A
Max Value	0.06	0.12	0.00	-0.06	0.00	-0.06	-0.13	-0.06	N/A
Average	-0.18	-0.16	-0.16	-0.17	-0.16	-0.14	-0.22	-0.17	N/A
Sigma	0.12	0.16	0.08	0.06	0.08	0.06	0.08	0.06	N/A

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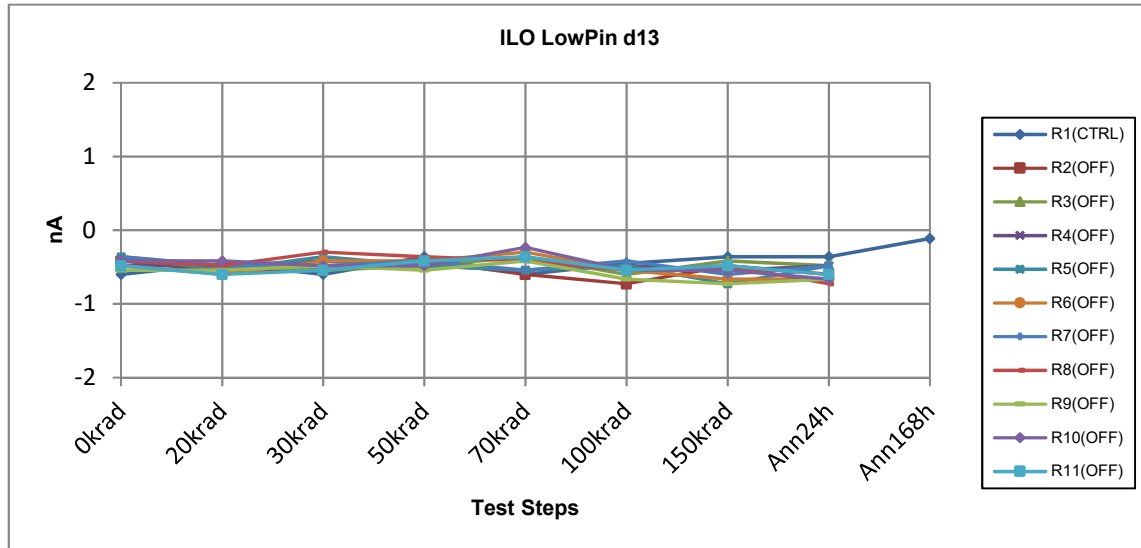
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ILO LowPin d14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.49	-0.42	-0.49	-0.46	-0.34	-0.26	-0.21	-0.34	-0.46
Irradiated, unbiased parts results									
R2(OFF)	-0.27	-0.21	-0.39	-0.52	-0.46	-0.39	-0.39	-0.64	No meas.
R3(OFF)	-0.15	-0.46	-0.34	-0.46	-0.21	-0.27	-0.39	-0.46	No meas.
R4(OFF)	-0.15	-0.34	-0.39	-0.34	-0.46	-0.46	-0.27	-0.21	No meas.
R5(OFF)	-0.27	-0.27	-0.15	-0.27	-0.15	-0.27	-0.34	-0.27	No meas.
R6(OFF)	-0.27	-0.21	-0.34	-0.39	-0.27	-0.46	-0.21	-0.39	No meas.
R7(OFF)	-0.39	-0.39	-0.34	-0.15	-0.34	-0.46	-0.52	-0.34	No meas.
R8(OFF)	-0.15	-0.46	-0.21	-0.39	-0.27	-0.27	-0.39	-0.34	No meas.
R9(OFF)	-0.34	-0.34	-0.21	-0.34	-0.21	-0.39	-0.34	-0.34	No meas.
R10(OFF)	-0.15	-0.34	-0.46	-0.27	-0.27	-0.39	-0.39	-0.46	No meas.
R11(OFF)	-0.27	-0.34	-0.27	-0.46	-0.52	-0.39	-0.39	-0.34	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.39	-0.46	-0.46	-0.52	-0.52	-0.46	-0.52	-0.64	N/A
Max Value	-0.15	-0.21	-0.15	-0.15	-0.15	-0.27	-0.21	-0.21	N/A
Average	-0.24	-0.33	-0.31	-0.36	-0.32	-0.38	-0.36	-0.38	N/A
Sigma	0.09	0.09	0.10	0.11	0.12	0.08	0.08	0.12	N/A

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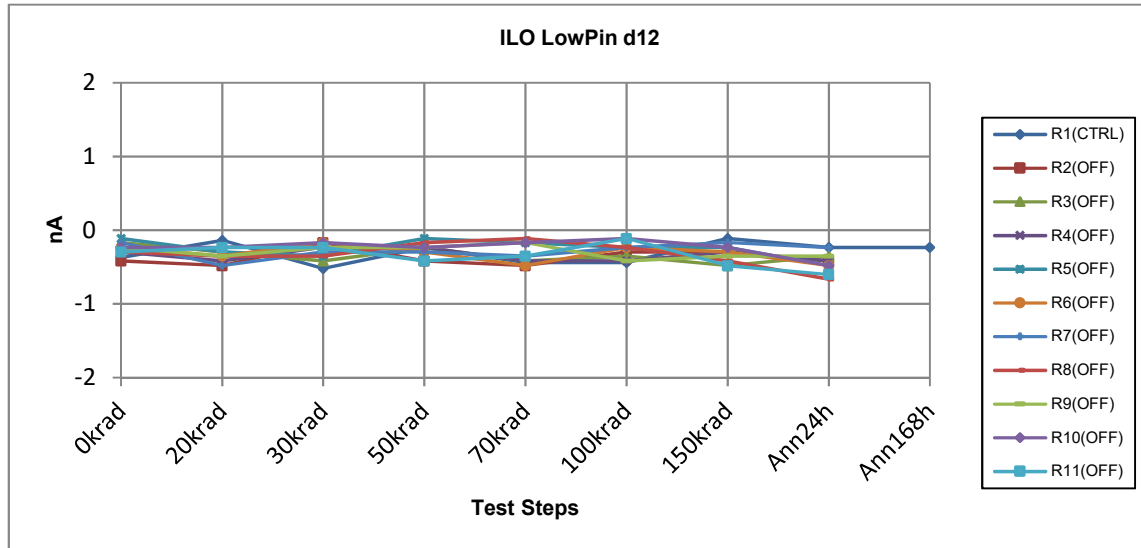
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ILO LowPin d13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.60	-0.45	-0.60	-0.36	-0.60	-0.45	-0.36	-0.36	-0.11
Irradiated, unbiased parts results									
R2(OFF)	-0.42	-0.54	-0.54	-0.42	-0.60	-0.73	-0.48	-0.60	No meas.
R3(OFF)	-0.36	-0.48	-0.54	-0.48	-0.36	-0.60	-0.42	-0.48	No meas.
R4(OFF)	-0.48	-0.48	-0.42	-0.48	-0.54	-0.48	-0.54	-0.48	No meas.
R5(OFF)	-0.36	-0.54	-0.36	-0.48	-0.54	-0.48	-0.73	-0.48	No meas.
R6(OFF)	-0.48	-0.60	-0.42	-0.42	-0.30	-0.54	-0.66	-0.66	No meas.
R7(OFF)	-0.36	-0.48	-0.48	-0.42	-0.54	-0.42	-0.60	-0.48	No meas.
R8(OFF)	-0.42	-0.48	-0.30	-0.36	-0.42	-0.54	-0.48	-0.73	No meas.
R9(OFF)	-0.54	-0.54	-0.48	-0.54	-0.42	-0.66	-0.73	-0.66	No meas.
R10(OFF)	-0.42	-0.42	-0.48	-0.48	-0.23	-0.54	-0.54	-0.66	No meas.
R11(OFF)	-0.48	-0.60	-0.54	-0.42	-0.36	-0.54	-0.48	-0.60	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.54	-0.60	-0.54	-0.54	-0.60	-0.73	-0.73	-0.73	N/A
Max Value	-0.36	-0.42	-0.30	-0.36	-0.23	-0.42	-0.42	-0.48	N/A
Average	-0.43	-0.52	-0.46	-0.45	-0.43	-0.55	-0.57	-0.58	N/A
Sigma	0.06	0.06	0.08	0.05	0.12	0.09	0.11	0.10	N/A

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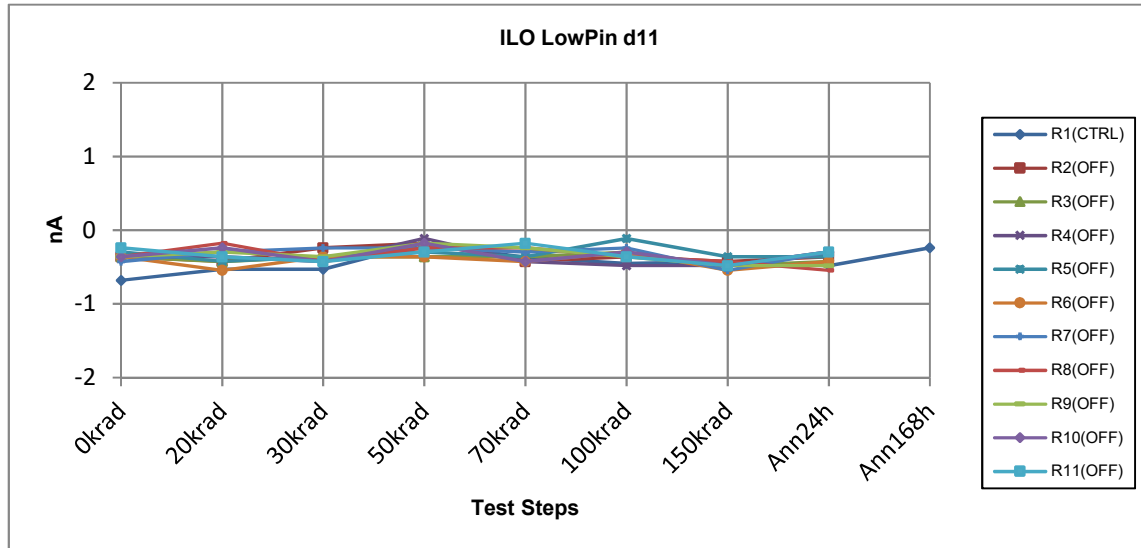
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ILO LowPin d12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.37	-0.14	-0.52	-0.23	-0.44	-0.44	-0.11	-0.23	-0.23
Irradiated, unbiased parts results									
R2(OFF)	-0.42	-0.48	-0.17	-0.42	-0.48	-0.30	-0.30	-0.42	No meas.
R3(OFF)	-0.17	-0.30	-0.42	-0.23	-0.42	-0.35	-0.48	-0.35	No meas.
R4(OFF)	-0.30	-0.42	-0.23	-0.23	-0.42	-0.42	-0.30	-0.42	No meas.
R5(OFF)	-0.11	-0.30	-0.35	-0.11	-0.17	-0.23	-0.23	-0.48	No meas.
R6(OFF)	-0.23	-0.35	-0.17	-0.30	-0.48	-0.23	-0.30	-0.48	No meas.
R7(OFF)	-0.17	-0.48	-0.30	-0.30	-0.35	-0.23	-0.17	-0.23	No meas.
R8(OFF)	-0.30	-0.35	-0.35	-0.17	-0.11	-0.23	-0.42	-0.66	No meas.
R9(OFF)	-0.23	-0.35	-0.23	-0.23	-0.17	-0.42	-0.35	-0.35	No meas.
R10(OFF)	-0.23	-0.23	-0.17	-0.23	-0.17	-0.11	-0.23	-0.48	No meas.
R11(OFF)	-0.30	-0.23	-0.23	-0.42	-0.35	-0.11	-0.48	-0.60	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.42	-0.48	-0.42	-0.42	-0.48	-0.42	-0.48	-0.66	N/A
Max Value	-0.11	-0.23	-0.17	-0.11	-0.11	-0.11	-0.17	-0.23	N/A
Average	-0.24	-0.35	-0.26	-0.26	-0.31	-0.26	-0.32	-0.45	N/A
Sigma	0.09	0.09	0.09	0.10	0.14	0.11	0.11	0.12	N/A

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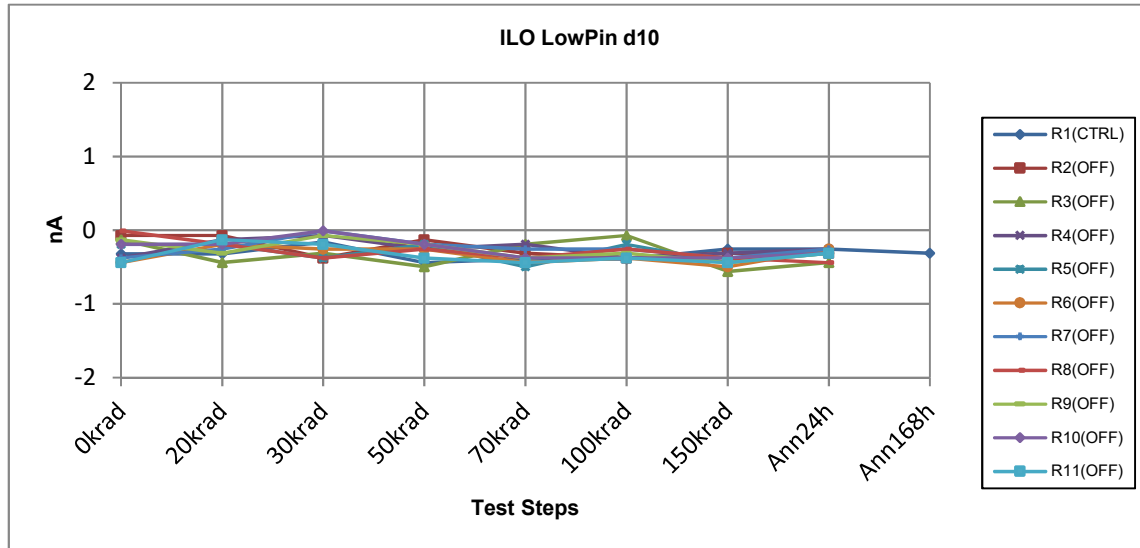
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ILO LowPin d11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.68	-0.53	-0.53	-0.18	-0.37	-0.45	-0.42	-0.48	-0.24
Irradiated, unbiased parts results									
R2(OFF)	-0.36	-0.42	-0.24	-0.18	-0.42	-0.36	-0.42	-0.36	No meas.
R3(OFF)	-0.36	-0.42	-0.36	-0.36	-0.36	-0.30	-0.48	-0.42	No meas.
R4(OFF)	-0.36	-0.36	-0.42	-0.11	-0.42	-0.48	-0.48	-0.30	No meas.
R5(OFF)	-0.30	-0.42	-0.36	-0.30	-0.36	-0.11	-0.36	-0.36	No meas.
R6(OFF)	-0.36	-0.54	-0.36	-0.36	-0.42	-0.30	-0.54	-0.42	No meas.
R7(OFF)	-0.42	-0.30	-0.24	-0.24	-0.30	-0.24	-0.54	-0.30	No meas.
R8(OFF)	-0.36	-0.18	-0.42	-0.24	-0.24	-0.36	-0.42	-0.54	No meas.
R9(OFF)	-0.36	-0.30	-0.36	-0.18	-0.24	-0.36	-0.48	-0.48	No meas.
R10(OFF)	-0.36	-0.24	-0.42	-0.18	-0.42	-0.30	-0.48	-0.30	No meas.
R11(OFF)	-0.24	-0.36	-0.42	-0.30	-0.18	-0.36	-0.48	-0.30	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.42	-0.54	-0.42	-0.36	-0.42	-0.48	-0.54	-0.54	N/A
Max Value	-0.24	-0.18	-0.24	-0.11	-0.18	-0.11	-0.36	-0.30	N/A
Average	-0.35	-0.35	-0.36	-0.24	-0.34	-0.32	-0.47	-0.38	N/A
Sigma	0.05	0.11	0.07	0.08	0.09	0.10	0.06	0.09	N/A

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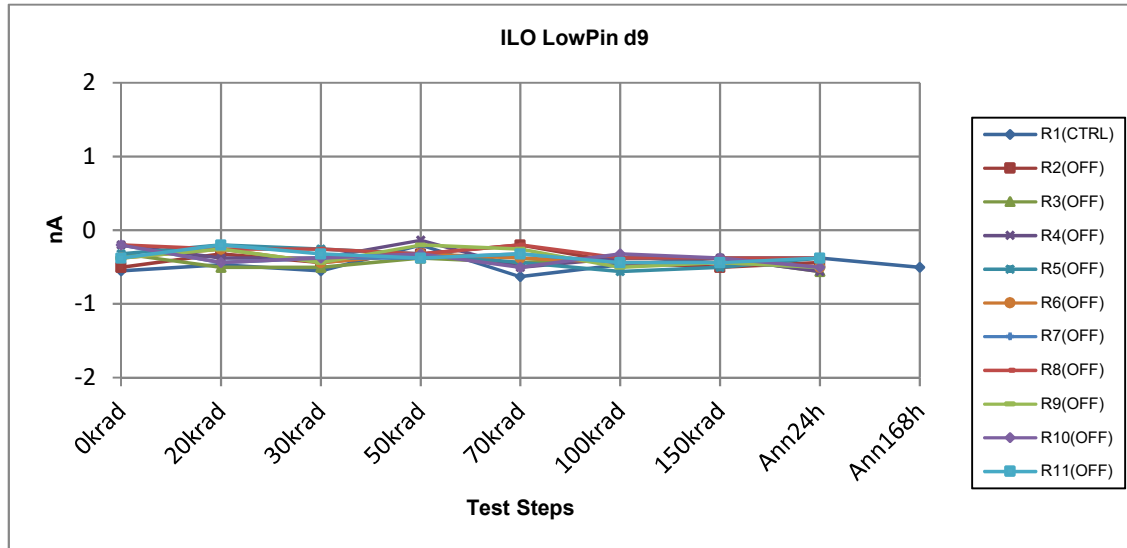
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ILO LowPin d10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.32	-0.32	-0.16	-0.44	-0.39	-0.39	-0.26	-0.26	-0.31
Irradiated, unbiased parts results									
R2(OFF)	-0.07	-0.07	-0.38	-0.13	-0.31	-0.38	-0.31	-0.31	No meas.
R3(OFF)	-0.13	-0.44	-0.31	-0.50	-0.19	-0.07	-0.56	-0.44	No meas.
R4(OFF)	-0.38	-0.13	-0.07	-0.26	-0.19	-0.38	-0.31	-0.26	No meas.
R5(OFF)	-0.19	-0.19	-0.38	-0.19	-0.50	-0.19	-0.44	-0.31	No meas.
R6(OFF)	-0.44	-0.19	-0.26	-0.26	-0.44	-0.38	-0.50	-0.26	No meas.
R7(OFF)	-0.38	-0.26	-0.01	-0.19	-0.26	-0.26	-0.38	-0.26	No meas.
R8(OFF)	-0.01	-0.19	-0.38	-0.26	-0.38	-0.26	-0.38	-0.44	No meas.
R9(OFF)	-0.13	-0.31	-0.07	-0.19	-0.38	-0.31	-0.44	-0.31	No meas.
R10(OFF)	-0.19	-0.19	-0.01	-0.19	-0.38	-0.38	-0.38	-0.31	No meas.
R11(OFF)	-0.44	-0.13	-0.19	-0.38	-0.44	-0.38	-0.44	-0.31	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.44	-0.44	-0.38	-0.50	-0.50	-0.38	-0.56	-0.44	N/A
Max Value	-0.01	-0.07	-0.01	-0.13	-0.19	-0.07	-0.31	-0.26	N/A
Average	-0.24	-0.21	-0.20	-0.25	-0.35	-0.30	-0.41	-0.32	N/A
Sigma	0.16	0.10	0.15	0.11	0.11	0.10	0.08	0.07	N/A

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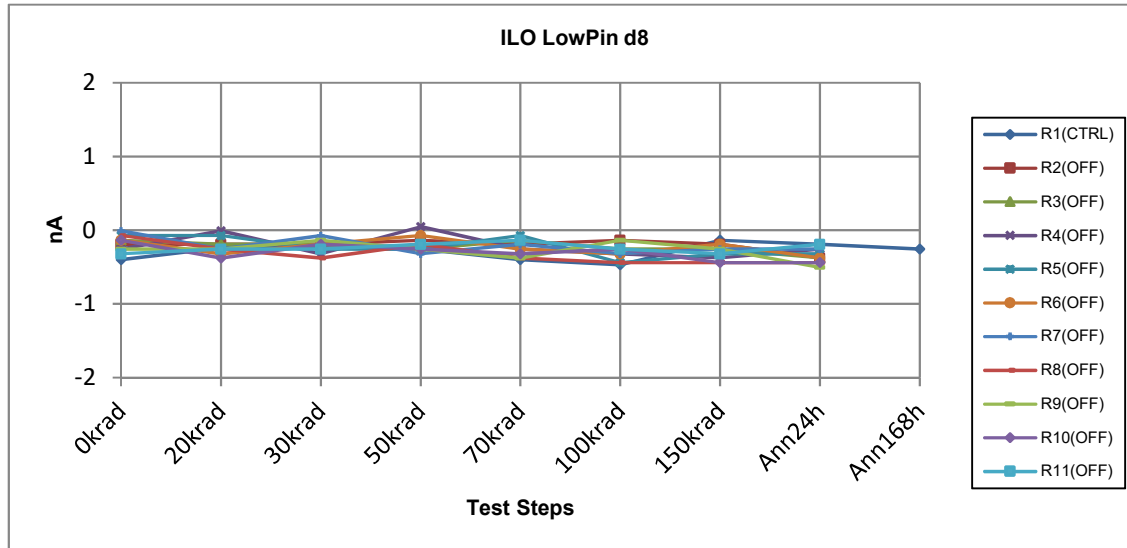
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ILO LowPin d9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.55	-0.47	-0.55	-0.20	-0.63	-0.47	-0.38	-0.38	-0.50
Irradiated, unbiased parts results									
R2(OFF)	-0.50	-0.32	-0.44	-0.32	-0.20	-0.44	-0.50	-0.44	No meas.
R3(OFF)	-0.32	-0.50	-0.50	-0.38	-0.44	-0.38	-0.38	-0.56	No meas.
R4(OFF)	-0.20	-0.38	-0.38	-0.14	-0.50	-0.38	-0.38	-0.56	No meas.
R5(OFF)	-0.32	-0.20	-0.26	-0.32	-0.44	-0.56	-0.50	-0.38	No meas.
R6(OFF)	-0.38	-0.26	-0.44	-0.32	-0.38	-0.44	-0.44	-0.50	No meas.
R7(OFF)	-0.20	-0.44	-0.38	-0.38	-0.32	-0.44	-0.44	-0.50	No meas.
R8(OFF)	-0.20	-0.26	-0.26	-0.32	-0.20	-0.38	-0.38	-0.38	No meas.
R9(OFF)	-0.38	-0.26	-0.44	-0.20	-0.26	-0.50	-0.44	-0.50	No meas.
R10(OFF)	-0.20	-0.44	-0.38	-0.32	-0.50	-0.32	-0.38	-0.50	No meas.
R11(OFF)	-0.38	-0.20	-0.32	-0.38	-0.32	-0.44	-0.44	-0.38	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.50	-0.50	-0.50	-0.38	-0.50	-0.56	-0.50	-0.56	N/A
Max Value	-0.20	-0.20	-0.26	-0.14	-0.20	-0.32	-0.38	-0.38	N/A
Average	-0.31	-0.32	-0.38	-0.31	-0.36	-0.43	-0.43	-0.47	N/A
Sigma	0.11	0.11	0.08	0.08	0.12	0.07	0.05	0.07	N/A

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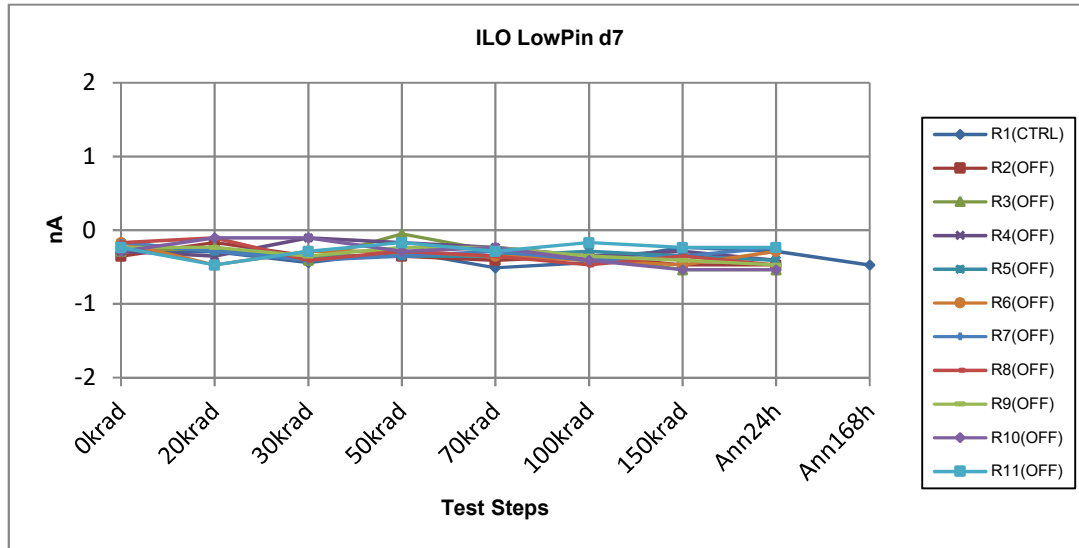
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ILO LowPin d8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.40	-0.24	-0.24	-0.26	-0.40	-0.47	-0.14	-0.19	-0.26
Irradiated, unbiased parts results									
R2(OFF)	-0.19	-0.19	-0.19	-0.14	-0.19	-0.14	-0.19	-0.38	No meas.
R3(OFF)	-0.14	-0.19	-0.19	-0.26	-0.14	-0.26	-0.26	-0.38	No meas.
R4(OFF)	-0.26	-0.01	-0.32	0.05	-0.26	-0.32	-0.38	-0.26	No meas.
R5(OFF)	-0.07	-0.07	-0.26	-0.26	-0.07	-0.44	-0.32	-0.32	No meas.
R6(OFF)	-0.14	-0.32	-0.19	-0.07	-0.26	-0.32	-0.19	-0.38	No meas.
R7(OFF)	-0.01	-0.26	-0.07	-0.32	-0.19	-0.32	-0.26	-0.26	No meas.
R8(OFF)	-0.07	-0.26	-0.38	-0.19	-0.38	-0.44	-0.44	-0.44	No meas.
R9(OFF)	-0.26	-0.26	-0.14	-0.26	-0.38	-0.14	-0.26	-0.50	No meas.
R10(OFF)	-0.14	-0.38	-0.19	-0.26	-0.32	-0.26	-0.44	-0.44	No meas.
R11(OFF)	-0.32	-0.26	-0.26	-0.19	-0.14	-0.26	-0.32	-0.19	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.32	-0.38	-0.38	-0.32	-0.38	-0.44	-0.44	-0.50	N/A
Max Value	-0.01	-0.01	-0.07	0.05	-0.07	-0.14	-0.19	-0.19	N/A
Average	-0.16	-0.22	-0.22	-0.19	-0.23	-0.29	-0.30	-0.35	N/A
Sigma	0.10	0.11	0.09	0.11	0.10	0.10	0.09	0.10	N/A

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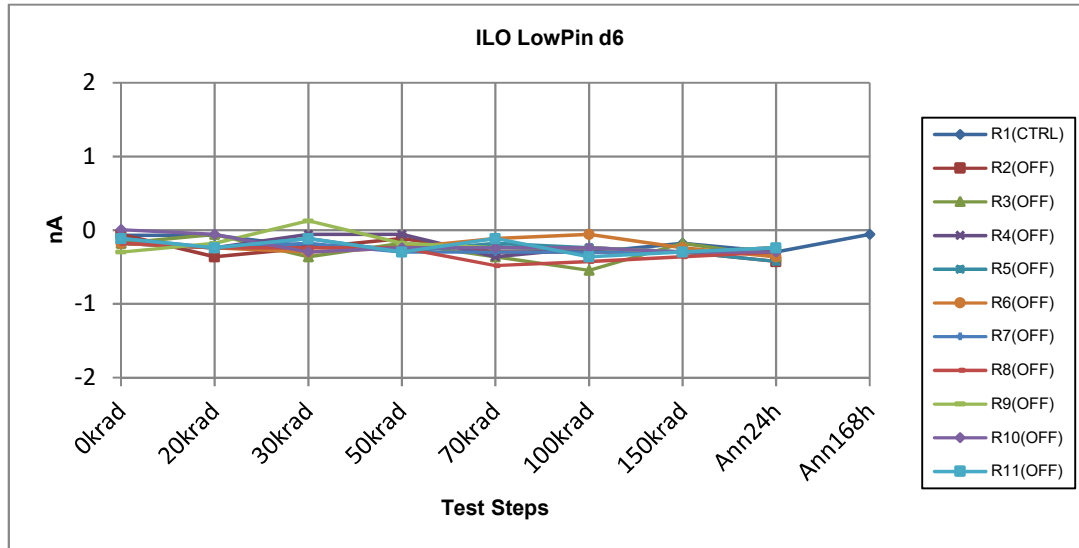
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ILO LowPin d7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.29	-0.29	-0.44	-0.29	-0.51	-0.44	-0.23	-0.29	-0.47
Irradiated, unbiased parts results									
R2(OFF)	-0.35	-0.17	-0.35	-0.35	-0.41	-0.35	-0.47	-0.47	No meas.
R3(OFF)	-0.29	-0.23	-0.41	-0.05	-0.29	-0.35	-0.54	-0.54	No meas.
R4(OFF)	-0.29	-0.35	-0.10	-0.17	-0.23	-0.35	-0.29	-0.41	No meas.
R5(OFF)	-0.17	-0.29	-0.35	-0.35	-0.35	-0.29	-0.35	-0.41	No meas.
R6(OFF)	-0.17	-0.47	-0.29	-0.29	-0.35	-0.41	-0.47	-0.29	No meas.
R7(OFF)	-0.17	-0.29	-0.41	-0.35	-0.29	-0.41	-0.35	-0.23	No meas.
R8(OFF)	-0.17	-0.10	-0.41	-0.29	-0.35	-0.47	-0.35	-0.47	No meas.
R9(OFF)	-0.23	-0.23	-0.35	-0.23	-0.23	-0.35	-0.41	-0.47	No meas.
R10(OFF)	-0.29	-0.10	-0.10	-0.29	-0.23	-0.41	-0.54	-0.54	No meas.
R11(OFF)	-0.23	-0.47	-0.29	-0.17	-0.29	-0.17	-0.23	-0.23	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.35	-0.47	-0.41	-0.35	-0.41	-0.47	-0.54	-0.54	N/A
Max Value	-0.17	-0.10	-0.10	-0.05	-0.23	-0.17	-0.23	-0.23	N/A
Average	-0.24	-0.27	-0.31	-0.25	-0.30	-0.36	-0.40	-0.41	N/A
Sigma	0.07	0.13	0.12	0.10	0.06	0.08	0.10	0.12	N/A

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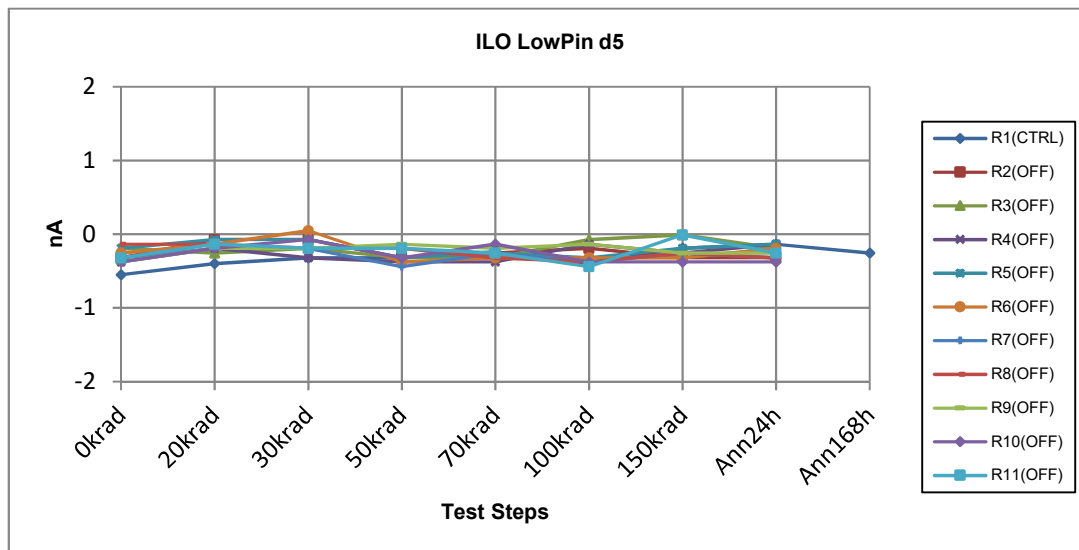
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ILO LowPin d6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.07	-0.07	-0.22	-0.24	-0.22	-0.30	-0.18	-0.30	-0.06
Irradiated, unbiased parts results									
R2(OFF)	-0.06	-0.36	-0.24	-0.11	-0.30	-0.30	-0.30	-0.42	No meas.
R3(OFF)	-0.18	-0.06	-0.36	-0.18	-0.36	-0.54	-0.18	-0.36	No meas.
R4(OFF)	-0.18	-0.24	-0.06	-0.06	-0.36	-0.24	-0.30	-0.24	No meas.
R5(OFF)	-0.18	-0.24	-0.11	-0.30	-0.18	-0.24	-0.30	-0.42	No meas.
R6(OFF)	-0.18	-0.24	-0.30	-0.24	-0.11	-0.06	-0.24	-0.36	No meas.
R7(OFF)	-0.11	-0.24	-0.18	-0.30	-0.30	-0.30	-0.30	-0.24	No meas.
R8(OFF)	-0.18	-0.24	-0.24	-0.24	-0.48	-0.42	-0.36	-0.30	No meas.
R9(OFF)	-0.30	-0.18	0.13	-0.18	-0.24	-0.24	-0.30	-0.24	No meas.
R10(OFF)	0.01	-0.06	-0.30	-0.24	-0.24	-0.24	-0.30	-0.30	No meas.
R11(OFF)	-0.11	-0.24	-0.11	-0.30	-0.11	-0.36	-0.30	-0.24	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.30	-0.36	-0.36	-0.30	-0.48	-0.54	-0.36	-0.42	N/A
Max Value	0.01	-0.06	0.13	-0.06	-0.11	-0.06	-0.18	-0.24	N/A
Average	-0.14	-0.21	-0.18	-0.21	-0.27	-0.29	-0.28	-0.31	N/A
Sigma	0.08	0.09	0.14	0.08	0.12	0.13	0.05	0.08	N/A

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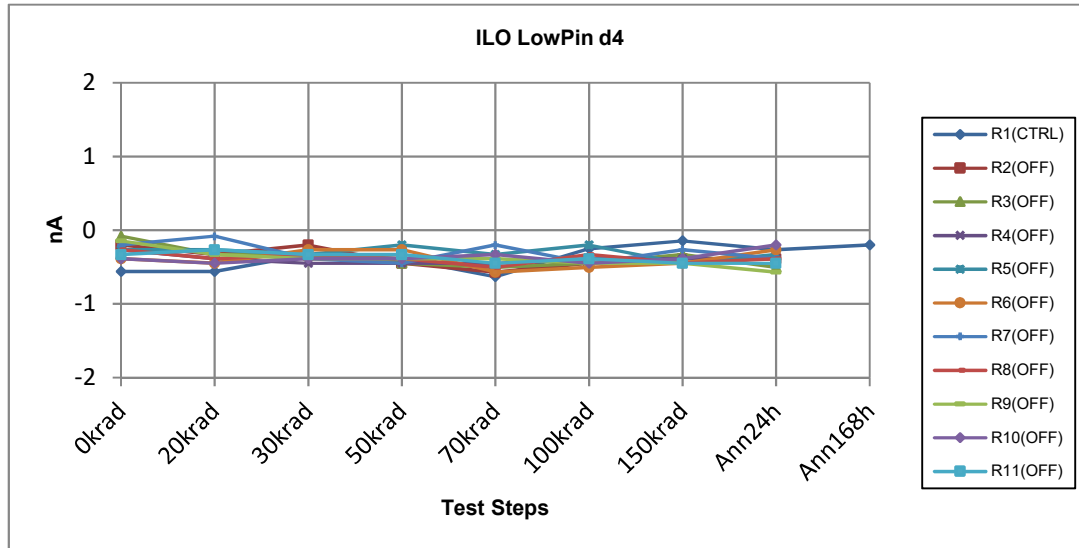
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ILO LowPin d5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.55	-0.40	-0.32	-0.32	-0.24	-0.40	-0.19	-0.14	-0.26
Irradiated, unbiased parts results									
R2(OFF)	-0.32	-0.07	-0.07	-0.32	-0.26	-0.19	-0.32	-0.32	No meas.
R3(OFF)	-0.19	-0.26	-0.19	-0.32	-0.32	-0.07	-0.01	-0.19	No meas.
R4(OFF)	-0.38	-0.19	-0.32	-0.38	-0.38	-0.14	-0.26	-0.14	No meas.
R5(OFF)	-0.19	-0.07	-0.07	-0.32	-0.26	-0.32	-0.19	-0.14	No meas.
R6(OFF)	-0.26	-0.14	0.05	-0.38	-0.32	-0.32	-0.32	-0.19	No meas.
R7(OFF)	-0.32	-0.19	-0.19	-0.44	-0.26	-0.38	-0.26	-0.32	No meas.
R8(OFF)	-0.14	-0.14	-0.19	-0.19	-0.32	-0.38	-0.26	-0.32	No meas.
R9(OFF)	-0.38	-0.19	-0.19	-0.14	-0.19	-0.14	-0.26	-0.26	No meas.
R10(OFF)	-0.38	-0.19	-0.07	-0.32	-0.14	-0.38	-0.38	-0.38	No meas.
R11(OFF)	-0.32	-0.14	-0.19	-0.19	-0.26	-0.44	-0.01	-0.26	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.38	-0.26	-0.32	-0.44	-0.38	-0.44	-0.38	-0.38	N/A
Max Value	-0.14	-0.07	0.05	-0.14	-0.14	-0.07	-0.01	-0.14	N/A
Average	-0.29	-0.16	-0.14	-0.30	-0.27	-0.27	-0.22	-0.25	N/A
Sigma	0.09	0.06	0.10	0.10	0.07	0.13	0.12	0.08	N/A

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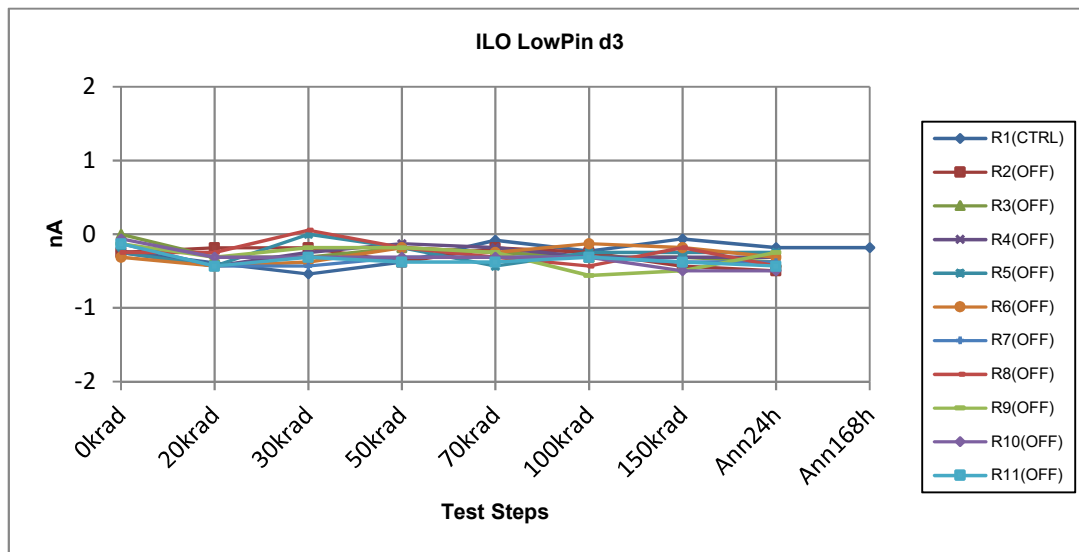
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ILO LowPin d4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.56	-0.56	-0.33	-0.38	-0.63	-0.25	-0.14	-0.26	-0.20
Irradiated, unbiased parts results									
R2(OFF)	-0.20	-0.33	-0.20	-0.45	-0.57	-0.45	-0.38	-0.38	No meas.
R3(OFF)	-0.08	-0.33	-0.33	-0.45	-0.50	-0.45	-0.33	-0.50	No meas.
R4(OFF)	-0.26	-0.38	-0.45	-0.45	-0.45	-0.38	-0.38	-0.38	No meas.
R5(OFF)	-0.26	-0.26	-0.33	-0.20	-0.33	-0.20	-0.45	-0.33	No meas.
R6(OFF)	-0.38	-0.45	-0.26	-0.26	-0.57	-0.50	-0.45	-0.26	No meas.
R7(OFF)	-0.20	-0.08	-0.38	-0.45	-0.20	-0.45	-0.26	-0.38	No meas.
R8(OFF)	-0.26	-0.38	-0.33	-0.38	-0.50	-0.33	-0.45	-0.38	No meas.
R9(OFF)	-0.14	-0.33	-0.38	-0.38	-0.38	-0.45	-0.45	-0.57	No meas.
R10(OFF)	-0.38	-0.45	-0.38	-0.38	-0.33	-0.45	-0.38	-0.20	No meas.
R11(OFF)	-0.33	-0.26	-0.33	-0.33	-0.45	-0.38	-0.45	-0.45	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.38	-0.45	-0.45	-0.45	-0.57	-0.50	-0.45	-0.57	N/A
Max Value	-0.08	-0.08	-0.20	-0.20	-0.20	-0.20	-0.26	-0.20	N/A
Average	-0.25	-0.33	-0.34	-0.37	-0.43	-0.40	-0.40	-0.38	N/A
Sigma	0.10	0.11	0.07	0.09	0.12	0.09	0.06	0.11	N/A

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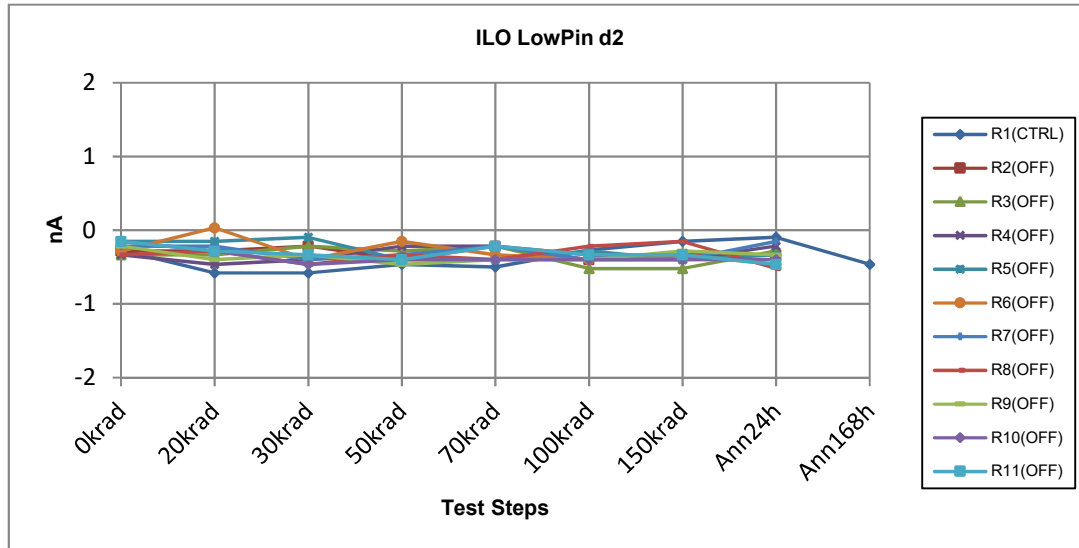
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ILO LowPin d3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.23	-0.39	-0.54	-0.38	-0.08	-0.23	-0.06	-0.18	-0.18
Irradiated, unbiased parts results									
R2(OFF)	-0.25	-0.18	-0.18	-0.38	-0.18	-0.25	-0.43	-0.50	No meas.
R3(OFF)	0.00	-0.31	-0.31	-0.18	-0.25	-0.31	-0.31	-0.38	No meas.
R4(OFF)	-0.25	-0.43	-0.25	-0.13	-0.18	-0.31	-0.31	-0.31	No meas.
R5(OFF)	-0.25	-0.43	0.00	-0.18	-0.43	-0.25	-0.25	-0.25	No meas.
R6(OFF)	-0.31	-0.43	-0.38	-0.18	-0.25	-0.13	-0.18	-0.31	No meas.
R7(OFF)	-0.13	-0.43	-0.43	-0.31	-0.31	-0.31	-0.38	-0.38	No meas.
R8(OFF)	-0.25	-0.25	0.06	-0.18	-0.31	-0.43	-0.18	-0.43	No meas.
R9(OFF)	-0.13	-0.31	-0.18	-0.18	-0.25	-0.56	-0.50	-0.25	No meas.
R10(OFF)	-0.06	-0.31	-0.31	-0.31	-0.31	-0.31	-0.50	-0.50	No meas.
R11(OFF)	-0.13	-0.43	-0.31	-0.38	-0.38	-0.31	-0.38	-0.43	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.31	-0.43	-0.43	-0.38	-0.43	-0.56	-0.50	-0.50	N/A
Max Value	0.00	-0.18	0.06	-0.13	-0.18	-0.13	-0.18	-0.25	N/A
Average	-0.18	-0.35	-0.23	-0.24	-0.29	-0.32	-0.34	-0.37	N/A
Sigma	0.10	0.09	0.16	0.09	0.08	0.11	0.11	0.09	N/A

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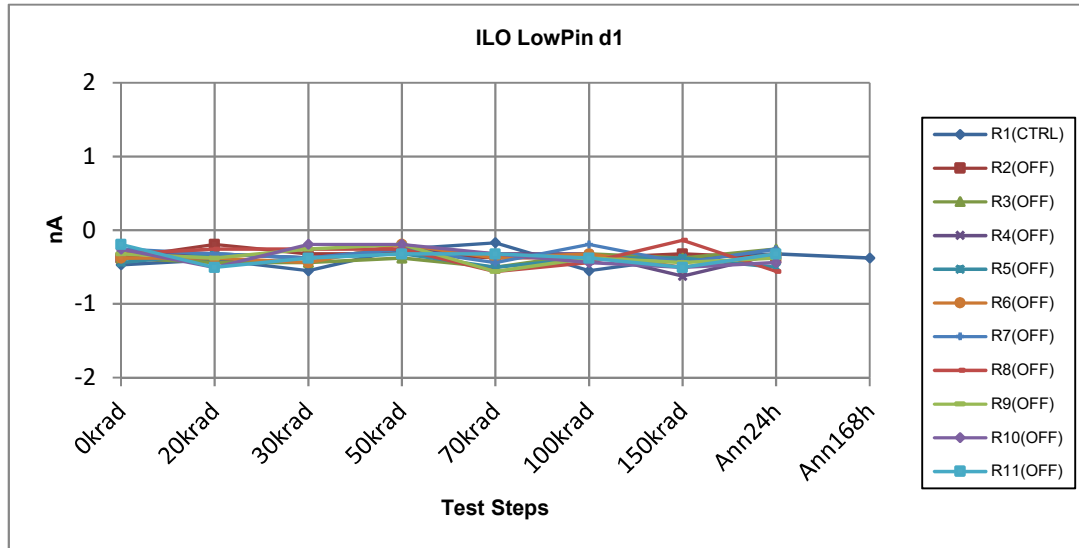
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ILO LowPin d2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.27	-0.58	-0.58	-0.46	-0.50	-0.27	-0.15	-0.10	-0.46
Irradiated, unbiased parts results									
R2(OFF)	-0.28	-0.28	-0.22	-0.40	-0.22	-0.40	-0.34	-0.34	No meas.
R3(OFF)	-0.34	-0.34	-0.22	-0.28	-0.22	-0.52	-0.52	-0.28	No meas.
R4(OFF)	-0.34	-0.46	-0.40	-0.22	-0.22	-0.34	-0.40	-0.22	No meas.
R5(OFF)	-0.15	-0.15	-0.10	-0.40	-0.40	-0.28	-0.40	-0.34	No meas.
R6(OFF)	-0.28	0.03	-0.40	-0.15	-0.34	-0.40	-0.34	-0.46	No meas.
R7(OFF)	-0.22	-0.22	-0.40	-0.34	-0.22	-0.40	-0.40	-0.15	No meas.
R8(OFF)	-0.34	-0.28	-0.46	-0.34	-0.40	-0.22	-0.15	-0.52	No meas.
R9(OFF)	-0.22	-0.40	-0.34	-0.46	-0.40	-0.40	-0.28	-0.34	No meas.
R10(OFF)	-0.15	-0.28	-0.46	-0.40	-0.40	-0.40	-0.40	-0.40	No meas.
R11(OFF)	-0.15	-0.28	-0.34	-0.40	-0.22	-0.34	-0.34	-0.46	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.34	-0.46	-0.46	-0.46	-0.40	-0.52	-0.52	-0.52	N/A
Max Value	-0.15	0.03	-0.10	-0.15	-0.22	-0.22	-0.15	-0.15	N/A
Average	-0.25	-0.27	-0.33	-0.34	-0.30	-0.37	-0.36	-0.35	N/A
Sigma	0.08	0.14	0.12	0.10	0.09	0.08	0.10	0.12	N/A

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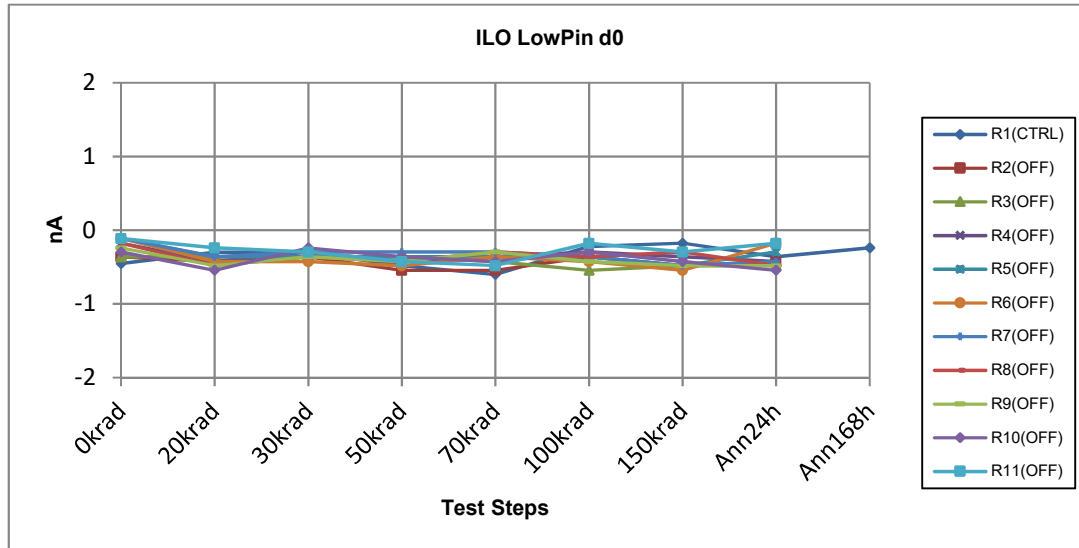
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ILO LowPin d1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.47	-0.40	-0.55	-0.26	-0.17	-0.55	-0.38	-0.32	-0.38
Irradiated, unbiased parts results									
R2(OFF)	-0.38	-0.19	-0.32	-0.32	-0.38	-0.38	-0.32	-0.38	No meas.
R3(OFF)	-0.38	-0.44	-0.44	-0.38	-0.50	-0.32	-0.38	-0.26	No meas.
R4(OFF)	-0.32	-0.32	-0.38	-0.26	-0.32	-0.32	-0.62	-0.32	No meas.
R5(OFF)	-0.44	-0.32	-0.38	-0.32	-0.50	-0.38	-0.38	-0.50	No meas.
R6(OFF)	-0.38	-0.38	-0.44	-0.19	-0.38	-0.32	-0.50	-0.32	No meas.
R7(OFF)	-0.26	-0.32	-0.38	-0.26	-0.44	-0.19	-0.44	-0.26	No meas.
R8(OFF)	-0.32	-0.26	-0.26	-0.26	-0.56	-0.44	-0.14	-0.56	No meas.
R9(OFF)	-0.32	-0.38	-0.26	-0.19	-0.56	-0.38	-0.44	-0.38	No meas.
R10(OFF)	-0.26	-0.50	-0.19	-0.19	-0.32	-0.44	-0.50	-0.44	No meas.
R11(OFF)	-0.19	-0.50	-0.38	-0.32	-0.32	-0.38	-0.50	-0.32	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.44	-0.50	-0.44	-0.38	-0.56	-0.44	-0.62	-0.56	N/A
Max Value	-0.19	-0.19	-0.19	-0.19	-0.32	-0.19	-0.14	-0.26	N/A
Average	-0.32	-0.36	-0.34	-0.27	-0.43	-0.35	-0.42	-0.37	N/A
Sigma	0.07	0.10	0.08	0.06	0.10	0.07	0.13	0.10	N/A

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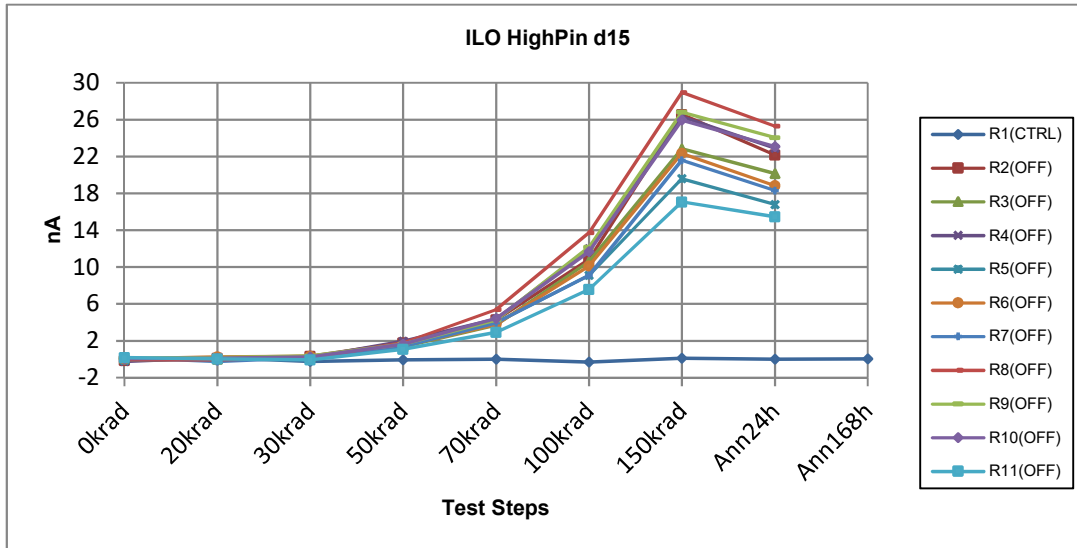
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ILO LowPin d0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.45	-0.30	-0.30	-0.48	-0.60	-0.22	-0.18	-0.36	-0.24
Irradiated, unbiased parts results									
R2(OFF)	-0.36	-0.42	-0.36	-0.54	-0.54	-0.36	-0.48	-0.42	No meas.
R3(OFF)	-0.36	-0.36	-0.36	-0.36	-0.42	-0.54	-0.48	-0.48	No meas.
R4(OFF)	-0.18	-0.42	-0.30	-0.42	-0.36	-0.30	-0.36	-0.42	No meas.
R5(OFF)	-0.11	-0.36	-0.36	-0.36	-0.36	-0.36	-0.48	-0.30	No meas.
R6(OFF)	-0.11	-0.42	-0.42	-0.48	-0.36	-0.42	-0.54	-0.18	No meas.
R7(OFF)	-0.11	-0.36	-0.30	-0.30	-0.30	-0.36	-0.48	-0.42	No meas.
R8(OFF)	-0.18	-0.48	-0.36	-0.42	-0.30	-0.36	-0.30	-0.48	No meas.
R9(OFF)	-0.24	-0.48	-0.36	-0.42	-0.30	-0.42	-0.48	-0.48	No meas.
R10(OFF)	-0.30	-0.54	-0.24	-0.36	-0.42	-0.30	-0.42	-0.54	No meas.
R11(OFF)	-0.11	-0.24	-0.30	-0.42	-0.48	-0.18	-0.30	-0.18	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.36	-0.54	-0.42	-0.54	-0.54	-0.54	-0.54	-0.54	N/A
Max Value	-0.11	-0.24	-0.24	-0.30	-0.30	-0.18	-0.30	-0.18	N/A
Average	-0.21	-0.41	-0.34	-0.41	-0.38	-0.36	-0.43	-0.39	N/A
Sigma	0.10	0.08	0.05	0.07	0.08	0.10	0.09	0.13	N/A

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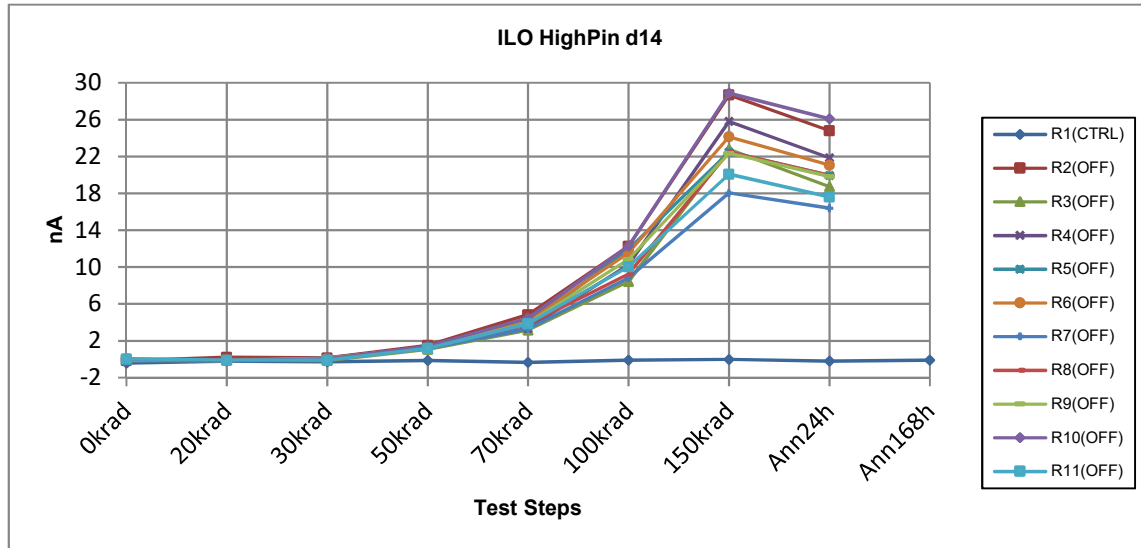
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ILO HighPin d15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.08	0.15	-0.23	-0.06	0.00	-0.31	0.12	0.00	0.06
Irradiated, unbiased parts results									
R2(OFF)	-0.13	0.12	0.30	1.78	4.28	10.83	26.56	22.15	No meas.
R3(OFF)	0.06	0.00	0.24	1.34	3.73	10.58	22.83	20.14	No meas.
R4(OFF)	-0.25	0.18	0.18	1.95	4.34	11.99	26.32	22.89	No meas.
R5(OFF)	-0.13	0.00	0.24	1.46	3.98	9.12	19.58	16.77	No meas.
R6(OFF)	0.06	0.24	0.30	1.46	3.79	10.10	22.34	18.85	No meas.
R7(OFF)	0.18	-0.25	0.18	1.41	3.98	9.12	21.61	18.30	No meas.
R8(OFF)	-0.06	-0.06	0.18	1.78	5.38	13.71	28.95	25.28	No meas.
R9(OFF)	0.12	0.18	0.37	1.65	4.28	12.18	26.81	24.06	No meas.
R10(OFF)	0.06	0.12	0.24	1.65	4.41	11.69	25.95	23.07	No meas.
R11(OFF)	0.18	0.06	-0.06	1.10	2.94	7.58	17.07	15.48	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.25	-0.25	-0.06	1.10	2.94	7.58	17.07	15.48	N/A
Max Value	0.18	0.24	0.37	1.95	5.38	13.71	28.95	25.28	N/A
Average	0.01	0.06	0.22	1.56	4.11	10.69	23.80	20.70	N/A
Sigma	0.14	0.14	0.12	0.25	0.62	1.79	3.73	3.28	N/A

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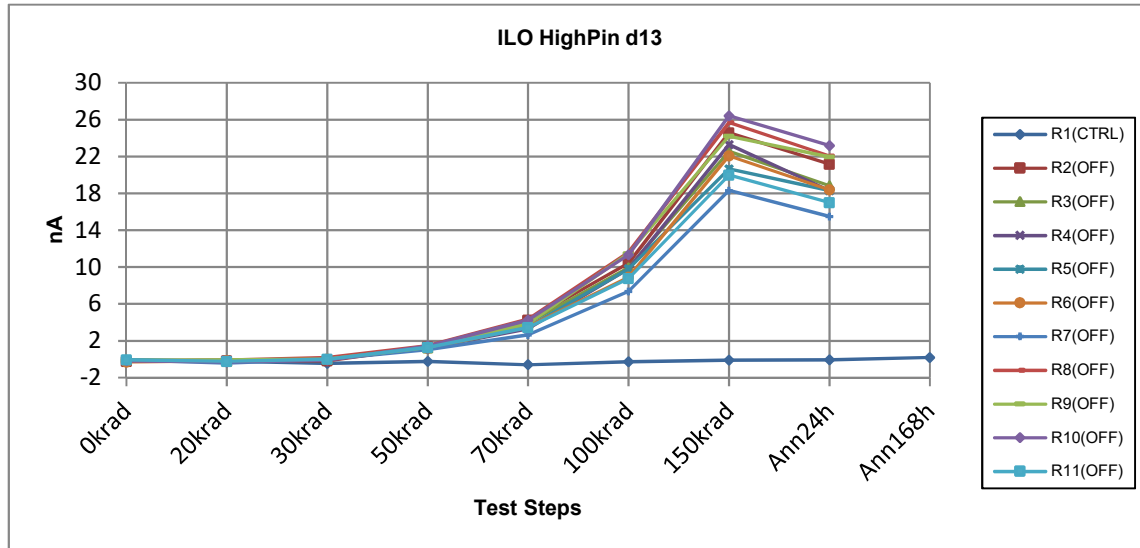
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ILO HighPin d14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.42	-0.19	-0.26	-0.15	-0.34	-0.11	-0.02	-0.21	-0.09
Irradiated, unbiased parts results									
R2(OFF)	-0.15	0.22	0.16	1.51	4.83	12.27	28.69	24.82	No meas.
R3(OFF)	-0.02	-0.09	-0.15	1.08	3.17	8.46	22.78	18.73	No meas.
R4(OFF)	-0.21	-0.15	0.16	1.26	3.35	10.24	25.80	21.86	No meas.
R5(OFF)	-0.21	-0.09	0.03	1.33	3.78	11.90	22.48	19.96	No meas.
R6(OFF)	0.03	-0.09	0.03	1.20	4.22	11.54	24.14	21.06	No meas.
R7(OFF)	-0.02	-0.21	0.03	1.20	3.30	8.82	18.05	16.39	No meas.
R8(OFF)	-0.15	-0.02	0.03	1.33	3.78	9.26	22.48	19.96	No meas.
R9(OFF)	-0.09	-0.15	0.10	1.26	3.91	10.86	22.35	19.83	No meas.
R10(OFF)	-0.02	-0.15	0.03	1.38	4.46	12.27	28.87	26.10	No meas.
R11(OFF)	0.03	-0.09	-0.09	1.20	3.85	10.06	20.08	17.62	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.21	-0.21	-0.15	1.08	3.17	8.46	18.05	16.39	N/A
Max Value	0.03	0.22	0.16	1.51	4.83	12.27	28.87	26.10	N/A
Average	-0.08	-0.08	0.03	1.28	3.87	10.57	23.57	20.63	N/A
Sigma	0.09	0.12	0.10	0.12	0.53	1.42	3.44	3.01	N/A

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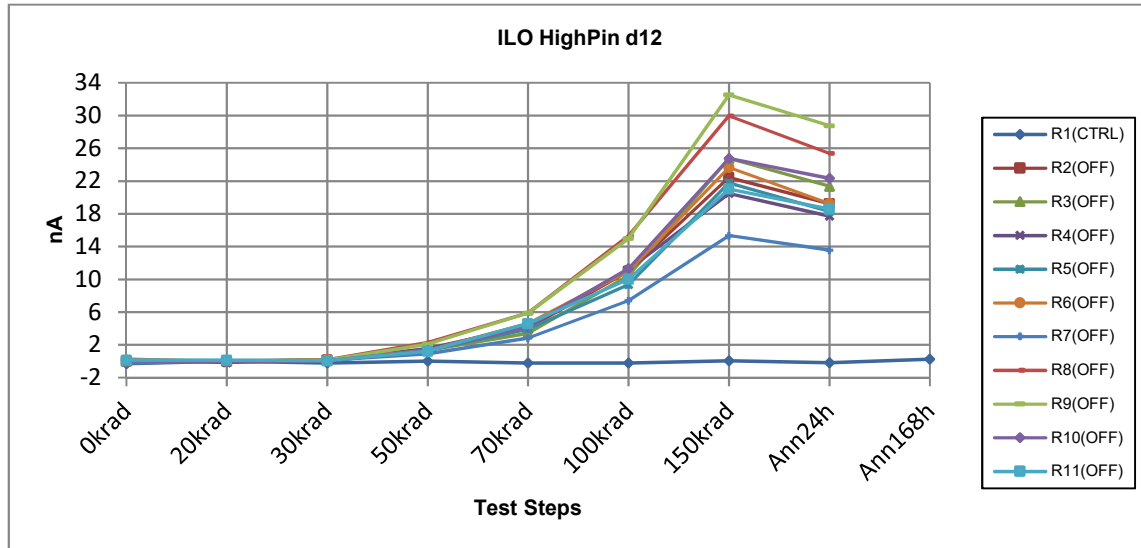
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ILO HighPin d13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.14	-0.22	-0.45	-0.23	-0.60	-0.29	-0.11	-0.06	0.19
Irradiated, unbiased parts results									
R2(OFF)	-0.23	-0.18	-0.18	1.36	4.24	10.42	24.58	21.14	No meas.
R3(OFF)	-0.06	-0.23	0.01	1.23	3.93	9.94	22.55	18.82	No meas.
R4(OFF)	-0.23	-0.11	0.01	1.23	3.32	9.82	23.29	18.33	No meas.
R5(OFF)	-0.11	-0.18	0.01	1.18	3.50	9.82	20.66	18.33	No meas.
R6(OFF)	-0.30	-0.18	0.01	1.18	3.56	8.90	22.06	18.39	No meas.
R7(OFF)	-0.06	-0.42	0.01	1.05	2.64	7.36	18.33	15.51	No meas.
R8(OFF)	-0.18	-0.11	0.19	1.48	4.36	11.59	25.68	22.06	No meas.
R9(OFF)	-0.11	-0.06	0.01	1.30	3.87	11.46	24.21	21.94	No meas.
R10(OFF)	-0.18	-0.30	-0.11	1.42	4.24	11.34	26.42	23.17	No meas.
R11(OFF)	-0.06	-0.23	0.01	1.30	3.44	8.77	19.98	16.98	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.30	-0.42	-0.18	1.05	2.64	7.36	18.33	15.51	N/A
Max Value	-0.06	-0.06	0.19	1.48	4.36	11.59	26.42	23.17	N/A
Average	-0.15	-0.20	0.00	1.27	3.71	9.94	22.78	19.47	N/A
Sigma	0.09	0.10	0.09	0.13	0.53	1.35	2.58	2.48	N/A

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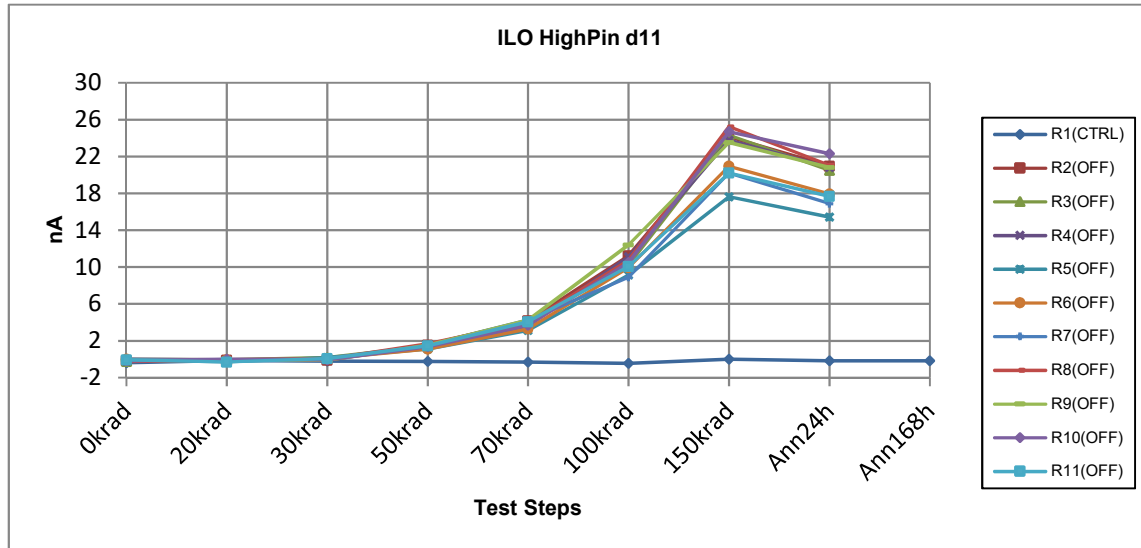
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ILO HighPin d12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.29	0.01	-0.21	0.01	-0.21	-0.21	0.07	-0.17	0.26
Irradiated, unbiased parts results									
R2(OFF)	0.01	0.01	0.19	1.36	4.05	11.02	22.45	19.26	No meas.
R3(OFF)	0.07	0.01	0.14	1.36	3.43	10.46	24.77	21.34	No meas.
R4(OFF)	0.14	-0.17	0.14	1.54	4.29	11.20	20.49	17.74	No meas.
R5(OFF)	-0.05	0.01	0.01	1.36	3.92	9.36	21.78	18.29	No meas.
R6(OFF)	0.14	0.01	0.19	1.30	4.60	11.02	23.66	19.26	No meas.
R7(OFF)	-0.23	0.07	0.14	0.93	2.82	7.41	15.35	13.58	No meas.
R8(OFF)	0.26	-0.05	0.19	2.27	5.88	15.30	29.96	25.38	No meas.
R9(OFF)	0.14	0.07	0.14	2.09	5.88	14.98	32.53	28.74	No meas.
R10(OFF)	0.07	-0.05	0.07	1.30	4.23	11.32	24.77	22.32	No meas.
R11(OFF)	0.14	0.14	0.07	1.23	4.60	10.04	21.04	18.59	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.23	-0.17	0.01	0.93	2.82	7.41	15.35	13.58	N/A
Max Value	0.26	0.14	0.19	2.27	5.88	15.30	32.53	28.74	N/A
Average	0.07	0.00	0.13	1.47	4.37	11.21	23.68	20.45	N/A
Sigma	0.13	0.08	0.06	0.41	0.96	2.38	4.85	4.25	N/A

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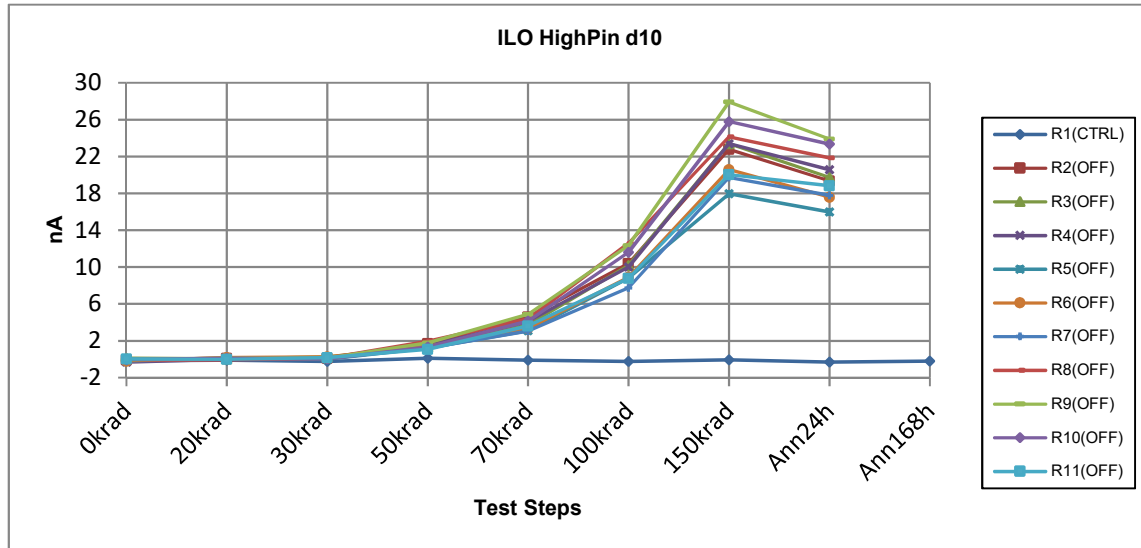
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ILO HighPin d11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.37	-0.14	-0.22	-0.24	-0.30	-0.45	0.01	-0.18	-0.18
Irradiated, unbiased parts results									
R2(OFF)	-0.18	-0.11	-0.11	1.54	4.18	11.24	24.14	20.94	No meas.
R3(OFF)	-0.24	-0.06	0.19	1.42	4.06	10.26	24.32	20.51	No meas.
R4(OFF)	-0.24	-0.11	0.07	1.36	3.63	11.12	23.77	20.82	No meas.
R5(OFF)	-0.06	-0.30	0.19	1.11	3.14	9.15	17.63	15.42	No meas.
R6(OFF)	0.01	-0.06	0.07	1.11	3.32	9.95	20.94	17.94	No meas.
R7(OFF)	0.01	-0.06	0.01	1.54	4.25	8.91	20.21	16.89	No meas.
R8(OFF)	-0.24	-0.06	0.01	1.66	4.00	10.75	25.24	21.06	No meas.
R9(OFF)	-0.11	-0.11	-0.11	1.54	4.25	12.41	23.52	20.82	No meas.
R10(OFF)	-0.18	0.01	-0.06	1.36	3.69	10.50	24.69	22.30	No meas.
R11(OFF)	-0.06	-0.30	0.07	1.48	4.06	10.08	20.21	17.69	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.24	-0.30	-0.11	1.11	3.14	8.91	17.63	15.42	N/A
Max Value	0.01	0.01	0.19	1.66	4.25	12.41	25.24	22.30	N/A
Average	-0.13	-0.11	0.03	1.41	3.86	10.44	22.47	19.44	N/A
Sigma	0.10	0.10	0.11	0.18	0.40	1.03	2.53	2.26	N/A

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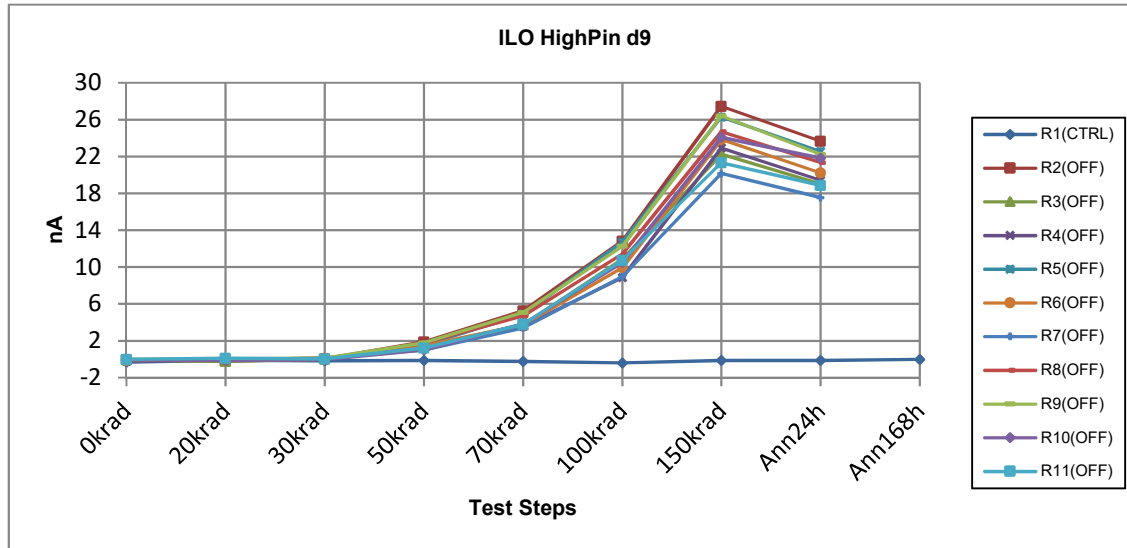
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ILO HighPin d10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.16	-0.09	-0.24	0.11	-0.09	-0.24	-0.07	-0.31	-0.19
Irradiated, unbiased parts results									
R2(OFF)	-0.07	0.11	0.11	1.70	4.58	10.38	22.78	19.37	No meas.
R3(OFF)	0.11	0.06	0.23	1.34	3.72	10.20	23.40	19.73	No meas.
R4(OFF)	-0.31	-0.01	0.11	1.46	4.09	10.02	23.40	20.58	No meas.
R5(OFF)	-0.07	-0.01	-0.01	1.22	3.11	8.79	17.96	16.00	No meas.
R6(OFF)	-0.19	0.18	0.23	1.40	3.35	8.91	20.58	17.59	No meas.
R7(OFF)	-0.19	0.06	0.11	1.22	3.05	7.75	19.73	17.78	No meas.
R8(OFF)	-0.13	-0.07	0.11	1.94	4.39	12.58	24.14	21.87	No meas.
R9(OFF)	-0.07	0.11	0.11	1.76	4.88	12.34	27.92	23.89	No meas.
R10(OFF)	-0.01	0.11	0.06	1.34	4.14	11.60	25.78	23.34	No meas.
R11(OFF)	0.06	-0.01	0.18	1.09	3.60	8.79	20.04	18.82	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.31	-0.07	-0.01	1.09	3.05	7.75	17.96	16.00	N/A
Max Value	0.11	0.18	0.23	1.94	4.88	12.58	27.92	23.89	N/A
Average	-0.09	0.05	0.12	1.45	3.89	10.14	22.57	19.90	N/A
Sigma	0.13	0.08	0.07	0.27	0.63	1.63	3.03	2.55	N/A

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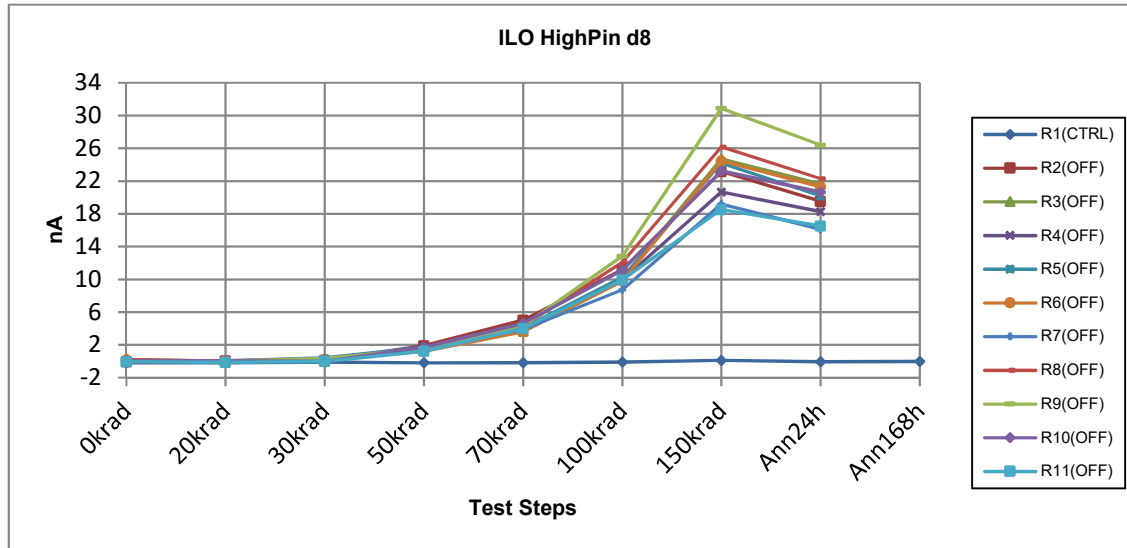
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ILO HighPin d9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.32	-0.09	-0.17	-0.14	-0.25	-0.40	-0.14	-0.14	-0.02
Irradiated, unbiased parts results									
R2(OFF)	-0.02	-0.20	0.05	1.88	5.25	12.83	27.45	23.66	No meas.
R3(OFF)	-0.07	-0.26	0.05	1.39	3.72	10.87	22.25	19.01	No meas.
R4(OFF)	-0.20	-0.07	0.11	1.27	3.59	8.86	22.92	19.43	No meas.
R5(OFF)	-0.02	-0.02	0.05	1.51	4.88	12.70	26.28	22.55	No meas.
R6(OFF)	-0.14	-0.02	0.11	1.46	3.72	9.95	23.84	20.23	No meas.
R7(OFF)	-0.07	-0.02	0.11	1.02	3.41	8.98	20.17	17.54	No meas.
R8(OFF)	-0.07	-0.02	-0.02	1.76	4.70	11.42	24.70	21.33	No meas.
R9(OFF)	-0.02	0.05	0.11	1.76	5.06	12.28	26.41	22.25	No meas.
R10(OFF)	-0.07	-0.14	-0.02	1.02	3.84	10.50	24.08	21.82	No meas.
R11(OFF)	-0.02	0.11	0.05	1.21	3.78	10.75	21.33	18.88	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.20	-0.26	-0.02	1.02	3.41	8.86	20.17	17.54	N/A
Max Value	-0.02	0.11	0.11	1.88	5.25	12.83	27.45	23.66	N/A
Average	-0.07	-0.06	0.06	1.43	4.19	10.92	23.94	20.67	N/A
Sigma	0.06	0.11	0.05	0.30	0.69	1.42	2.34	1.95	N/A

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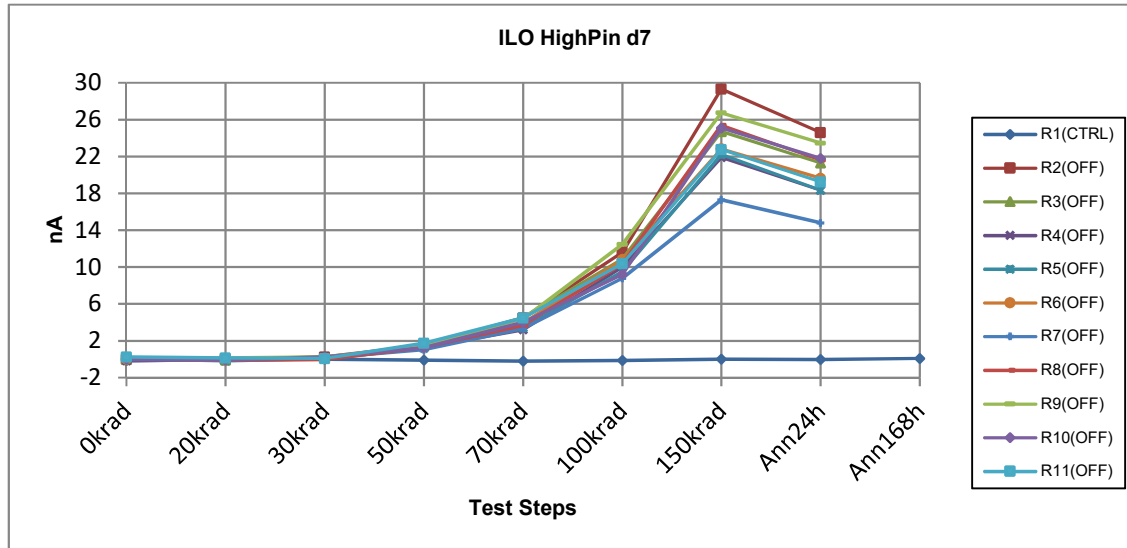
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ILO HighPin d8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.17	-0.17	-0.09	-0.19	-0.17	-0.09	0.11	-0.07	-0.01
Irradiated, unbiased parts results									
R2(OFF)	-0.07	0.05	0.11	1.89	5.01	11.18	23.17	19.50	No meas.
R3(OFF)	0.18	-0.01	0.18	1.52	3.66	10.02	24.70	21.64	No meas.
R4(OFF)	-0.01	-0.07	0.11	1.76	3.84	9.96	20.66	18.28	No meas.
R5(OFF)	0.05	0.05	0.30	1.46	4.09	10.26	24.21	20.18	No meas.
R6(OFF)	0.18	0.05	0.23	1.22	3.60	9.78	24.46	21.34	No meas.
R7(OFF)	-0.01	0.05	0.42	1.70	3.90	8.74	19.19	16.14	No meas.
R8(OFF)	0.18	0.05	0.23	1.46	4.33	12.10	26.17	22.31	No meas.
R9(OFF)	0.05	0.05	0.35	1.52	4.33	12.83	30.88	26.42	No meas.
R10(OFF)	0.05	0.05	-0.01	1.70	4.64	11.12	23.23	20.66	No meas.
R11(OFF)	-0.07	-0.14	-0.01	1.22	4.02	9.96	18.52	16.50	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.07	-0.14	-0.01	1.22	3.60	8.74	18.52	16.14	N/A
Max Value	0.18	0.05	0.42	1.89	5.01	12.83	30.88	26.42	N/A
Average	0.05	0.01	0.19	1.54	4.14	10.60	23.52	20.30	N/A
Sigma	0.10	0.07	0.14	0.22	0.44	1.21	3.59	3.00	N/A

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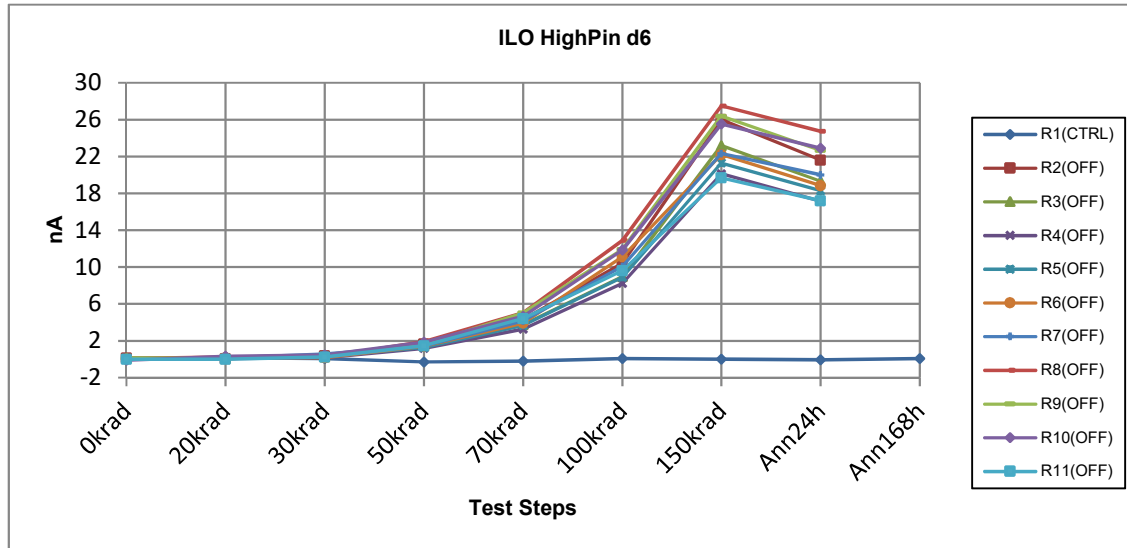
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ILO HighPin d7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.13	-0.06	0.02	-0.10	-0.21	-0.13	0.02	-0.05	0.08
Irradiated, unbiased parts results									
R2(OFF)	0.02	0.02	0.26	1.49	4.50	11.61	29.32	24.60	No meas.
R3(OFF)	-0.05	-0.10	0.14	1.49	4.50	10.87	24.72	21.29	No meas.
R4(OFF)	-0.17	-0.05	0.14	1.30	3.21	10.01	21.90	18.34	No meas.
R5(OFF)	0.08	-0.17	0.08	1.18	3.39	9.52	22.21	18.34	No meas.
R6(OFF)	0.02	-0.05	0.08	1.61	3.94	10.81	22.82	19.63	No meas.
R7(OFF)	-0.05	-0.05	0.14	1.06	3.33	8.78	17.30	14.79	No meas.
R8(OFF)	0.08	-0.10	-0.05	1.30	3.70	10.32	25.40	21.60	No meas.
R9(OFF)	0.02	0.14	0.26	1.37	4.37	12.46	26.74	23.44	No meas.
R10(OFF)	0.02	-0.10	0.26	1.24	4.00	9.22	25.09	21.78	No meas.
R11(OFF)	0.26	0.14	0.08	1.74	4.50	10.38	22.76	19.26	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.17	-0.17	-0.05	1.06	3.21	8.78	17.30	14.79	N/A
Max Value	0.26	0.14	0.26	1.74	4.50	12.46	29.32	24.60	N/A
Average	0.02	-0.03	0.14	1.38	3.94	10.40	23.83	20.31	N/A
Sigma	0.11	0.10	0.10	0.20	0.51	1.11	3.24	2.84	N/A

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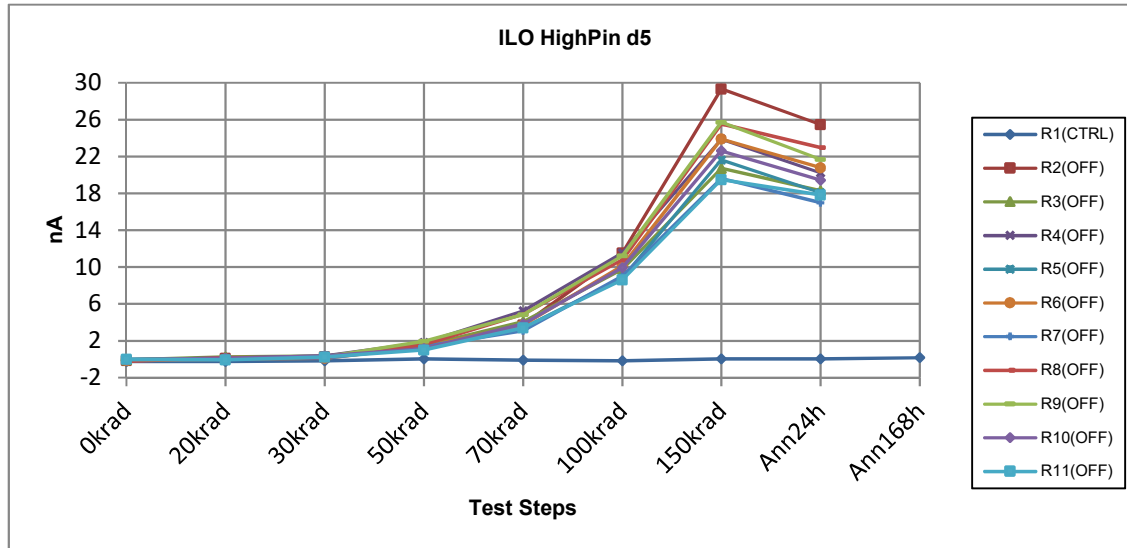
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ILO HighPin d6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.01	0.16	0.09	-0.30	-0.22	0.09	0.01	-0.06	0.07
Irradiated, unbiased parts results									
R2(OFF)	0.13	0.07	0.38	1.66	4.30	10.43	26.02	21.60	No meas.
R3(OFF)	0.13	0.13	0.26	1.48	3.75	8.96	23.19	19.33	No meas.
R4(OFF)	0.07	0.07	0.19	1.18	3.26	8.22	20.13	17.12	No meas.
R5(OFF)	0.01	0.07	0.31	1.30	3.69	8.90	21.30	18.29	No meas.
R6(OFF)	0.01	0.19	0.19	1.42	3.94	11.11	22.22	18.84	No meas.
R7(OFF)	0.01	0.13	0.56	1.48	4.18	10.06	22.34	20.01	No meas.
R8(OFF)	0.07	0.26	0.26	1.91	5.04	12.89	27.49	24.73	No meas.
R9(OFF)	0.13	0.07	0.38	1.60	5.04	11.91	26.38	22.64	No meas.
R10(OFF)	-0.11	0.31	0.44	1.85	4.67	11.85	25.53	22.89	No meas.
R11(OFF)	0.01	0.01	0.26	1.48	4.42	9.64	19.70	17.18	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.11	0.01	0.19	1.18	3.26	8.22	19.70	17.12	N/A
Max Value	0.13	0.31	0.56	1.91	5.04	12.89	27.49	24.73	N/A
Average	0.04	0.13	0.32	1.54	4.23	10.40	23.43	20.26	N/A
Sigma	0.08	0.09	0.12	0.23	0.59	1.52	2.76	2.59	N/A

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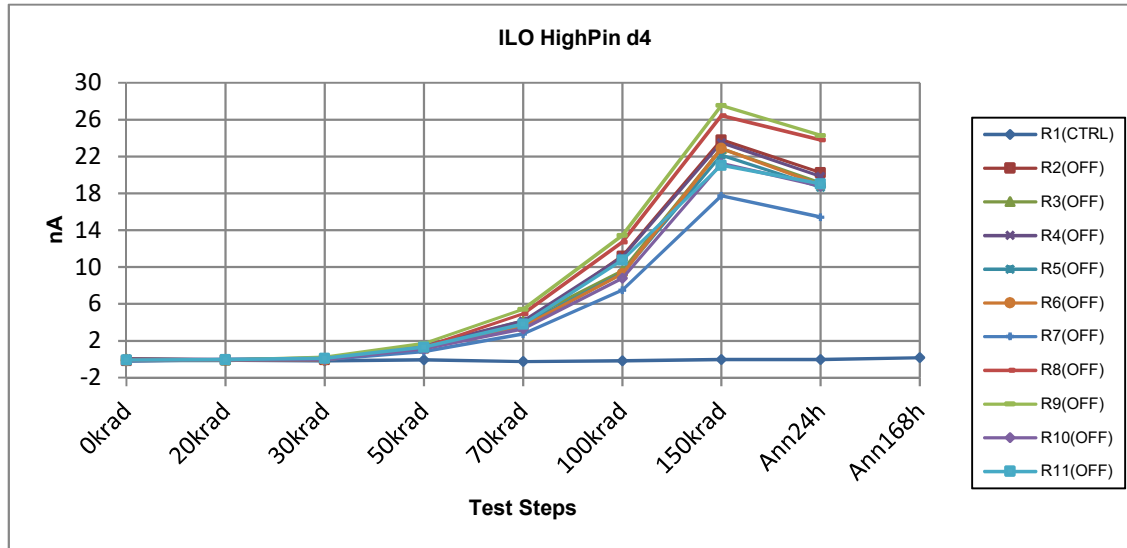
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ILO HighPin d5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.24	-0.24	-0.17	0.05	-0.09	-0.17	0.05	0.05	0.17
Irradiated, unbiased parts results									
R2(OFF)	-0.14	0.11	0.30	1.52	3.72	11.54	29.33	25.48	No meas.
R3(OFF)	-0.07	0.23	0.35	1.46	4.08	9.77	20.71	18.26	No meas.
R4(OFF)	-0.01	0.11	0.35	1.82	5.25	11.54	23.89	20.22	No meas.
R5(OFF)	-0.01	0.05	0.23	1.27	3.41	8.79	21.62	18.08	No meas.
R6(OFF)	-0.14	-0.01	0.11	1.34	3.72	10.14	23.89	20.77	No meas.
R7(OFF)	-0.19	0.05	0.11	1.39	3.10	9.03	19.61	16.98	No meas.
R8(OFF)	-0.26	0.17	0.17	1.58	4.88	10.81	25.54	22.97	No meas.
R9(OFF)	-0.07	0.05	0.23	1.94	4.82	11.23	25.72	21.69	No meas.
R10(OFF)	-0.07	0.11	0.35	1.15	3.84	9.95	22.61	19.42	No meas.
R11(OFF)	-0.01	-0.07	0.23	1.02	3.41	8.61	19.49	17.84	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.26	-0.07	0.11	1.02	3.10	8.61	19.49	16.98	N/A
Max Value	-0.01	0.23	0.35	1.94	5.25	11.54	29.33	25.48	N/A
Average	-0.10	0.08	0.24	1.45	4.02	10.14	23.24	20.17	N/A
Sigma	0.08	0.09	0.09	0.28	0.72	1.11	3.09	2.64	N/A

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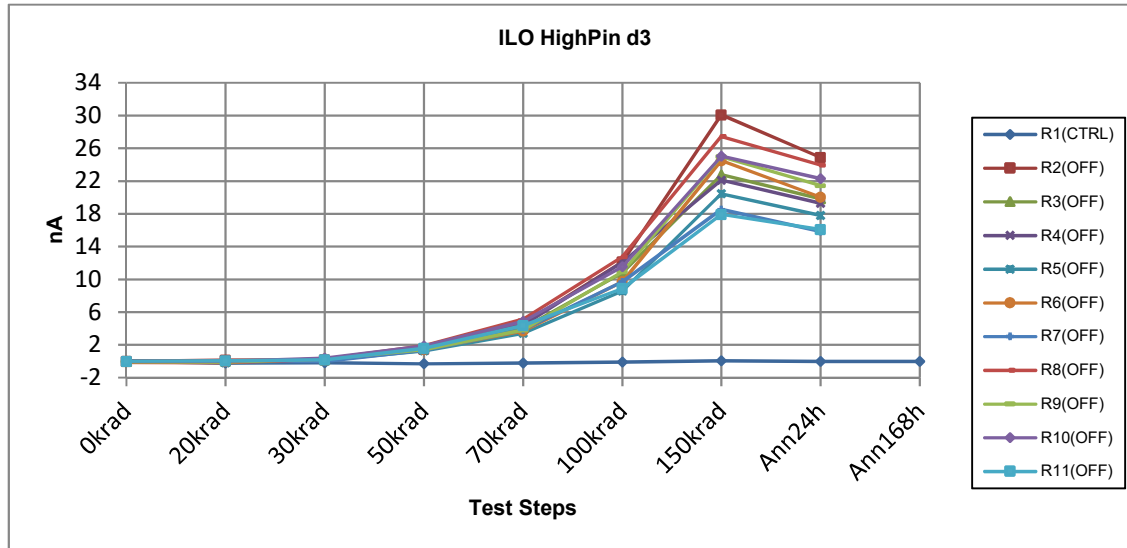
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ILO HighPin d4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.10	-0.10	-0.18	-0.08	-0.25	-0.18	-0.02	-0.02	0.17
Irradiated, unbiased parts results									
R2(OFF)	-0.14	-0.08	-0.02	1.21	3.59	11.19	23.81	20.26	No meas.
R3(OFF)	0.04	-0.08	0.10	1.33	4.14	9.60	22.83	19.15	No meas.
R4(OFF)	0.04	-0.02	0.10	1.46	4.14	11.07	23.50	19.82	No meas.
R5(OFF)	-0.14	-0.14	0.10	1.33	3.72	9.35	22.15	18.66	No meas.
R6(OFF)	-0.14	-0.08	-0.08	1.21	3.54	9.30	22.89	18.91	No meas.
R7(OFF)	-0.20	-0.02	-0.02	0.84	2.74	7.51	17.74	15.42	No meas.
R8(OFF)	-0.02	-0.08	0.10	1.33	4.94	12.72	26.44	23.81	No meas.
R9(OFF)	-0.08	-0.08	0.22	1.70	5.43	13.46	27.54	24.30	No meas.
R10(OFF)	-0.08	-0.08	-0.02	1.14	3.29	8.80	21.23	18.78	No meas.
R11(OFF)	-0.08	-0.02	0.10	1.33	3.84	10.76	21.06	19.03	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.20	-0.14	-0.08	0.84	2.74	7.51	17.74	15.42	N/A
Max Value	0.04	-0.02	0.22	1.70	5.43	13.46	27.54	24.30	N/A
Average	-0.08	-0.07	0.06	1.29	3.94	10.38	22.92	19.81	N/A
Sigma	0.08	0.04	0.09	0.22	0.78	1.82	2.76	2.58	N/A

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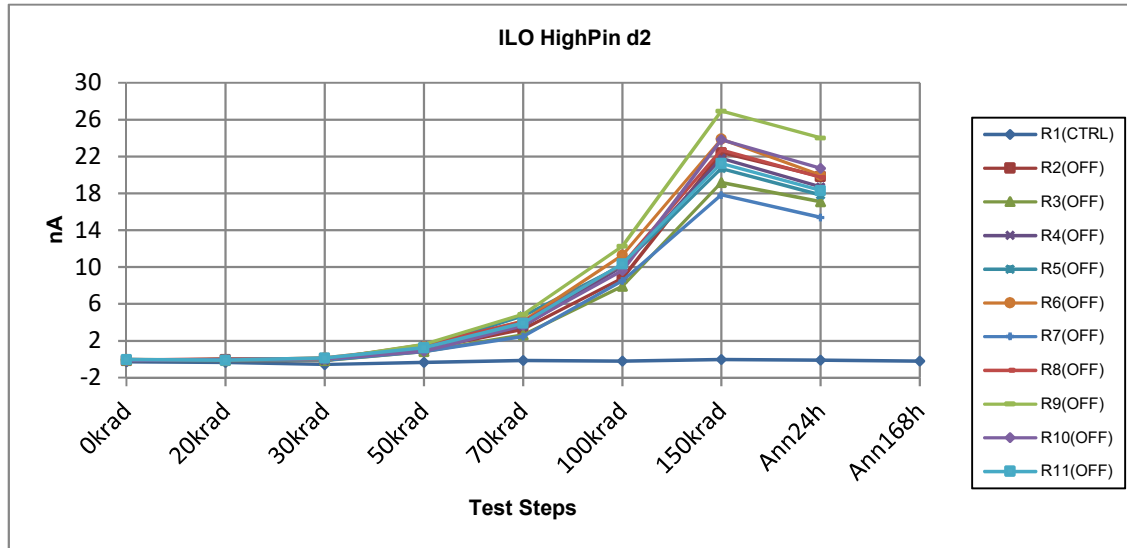
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ILO HighPin d3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.000	-0.230	-0.160	-0.312	-0.230	-0.080	0.056	0.000	0.000
Irradiated, unbiased parts results									
R2(OFF)	0.000	0.120	0.184	1.472	4.544	12.152	30.088	24.864	No meas.
R3(OFF)	0.000	0.000	0.184	1.776	4.048	10.808	22.776	19.832	No meas.
R4(OFF)	0.056	-0.128	0.184	1.592	4.416	12.096	22.104	19.280	No meas.
R5(OFF)	0.056	-0.184	0.120	1.288	3.432	8.592	20.448	17.808	No meas.
R6(OFF)	0.000	0.000	0.240	1.408	3.680	9.696	24.496	20.016	No meas.
R7(OFF)	-0.064	0.000	0.000	1.344	3.864	9.696	18.544	15.840	No meas.
R8(OFF)	-0.128	-0.184	0.240	1.904	5.152	12.768	27.448	23.944	No meas.
R9(OFF)	-0.064	-0.128	0.304	1.408	3.800	10.928	24.992	21.432	No meas.
R10(OFF)	0.000	0.000	0.368	1.840	4.848	11.544	25.048	22.288	No meas.
R11(OFF)	0.000	0.056	0.184	1.592	4.360	8.904	17.928	16.088	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.128	-0.184	0.000	1.288	3.432	8.592	17.928	15.840	N/A
Max Value	0.056	0.120	0.368	1.904	5.152	12.768	30.088	24.864	N/A
Average	-0.014	-0.045	0.201	1.562	4.214	10.718	23.387	20.139	N/A
Sigma	0.057	0.104	0.100	0.216	0.545	1.445	3.828	3.060	N/A

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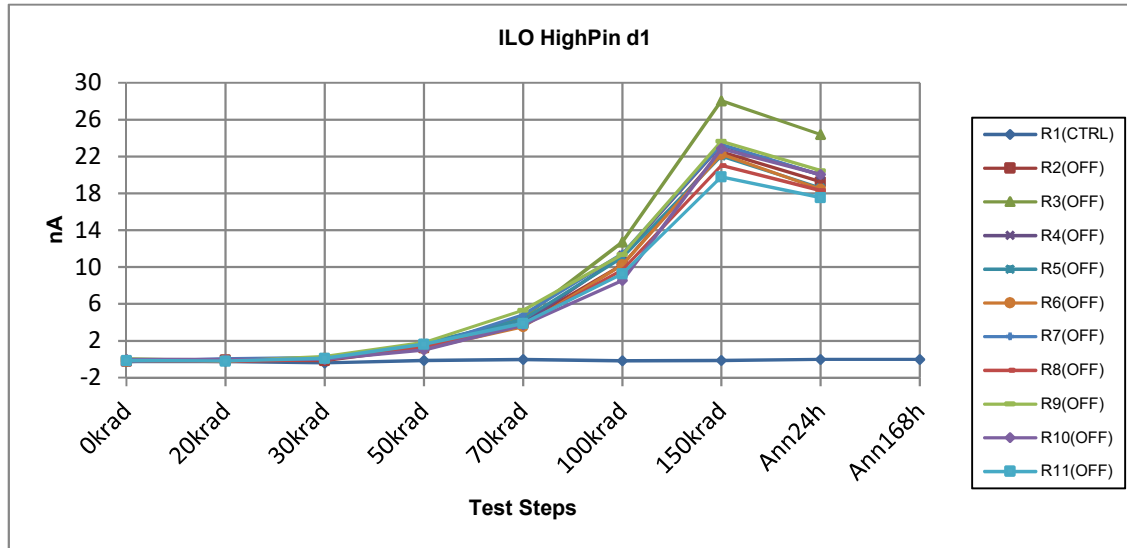
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ILO HighPin d2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.27	-0.35	-0.58	-0.34	-0.12	-0.19	-0.03	-0.10	-0.22
Irradiated, unbiased parts results									
R2(OFF)	-0.15	-0.03	0.09	1.07	3.27	8.78	22.42	19.85	No meas.
R3(OFF)	-0.10	-0.15	-0.15	0.82	2.66	7.92	19.18	17.10	No meas.
R4(OFF)	-0.03	-0.15	-0.15	1.43	3.58	10.06	21.81	18.69	No meas.
R5(OFF)	-0.15	-0.03	0.03	1.25	4.68	10.18	20.70	17.83	No meas.
R6(OFF)	-0.03	-0.10	0.15	1.31	4.13	11.28	23.89	19.97	No meas.
R7(OFF)	-0.10	-0.03	-0.10	0.82	2.47	8.53	17.83	15.38	No meas.
R8(OFF)	-0.10	0.03	-0.03	1.56	4.06	10.30	22.72	19.73	No meas.
R9(OFF)	-0.10	-0.03	-0.03	1.62	4.86	12.26	26.94	24.01	No meas.
R10(OFF)	-0.15	-0.03	0.03	0.89	3.70	9.63	23.82	20.70	No meas.
R11(OFF)	-0.03	-0.10	0.15	1.25	3.94	10.37	21.26	18.32	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.15	-0.15	-0.15	0.82	2.47	7.92	17.83	15.38	N/A
Max Value	-0.03	0.03	0.15	1.62	4.86	12.26	26.94	24.01	N/A
Average	-0.09	-0.06	0.00	1.20	3.74	9.93	22.06	19.16	N/A
Sigma	0.05	0.06	0.11	0.29	0.78	1.30	2.57	2.32	N/A

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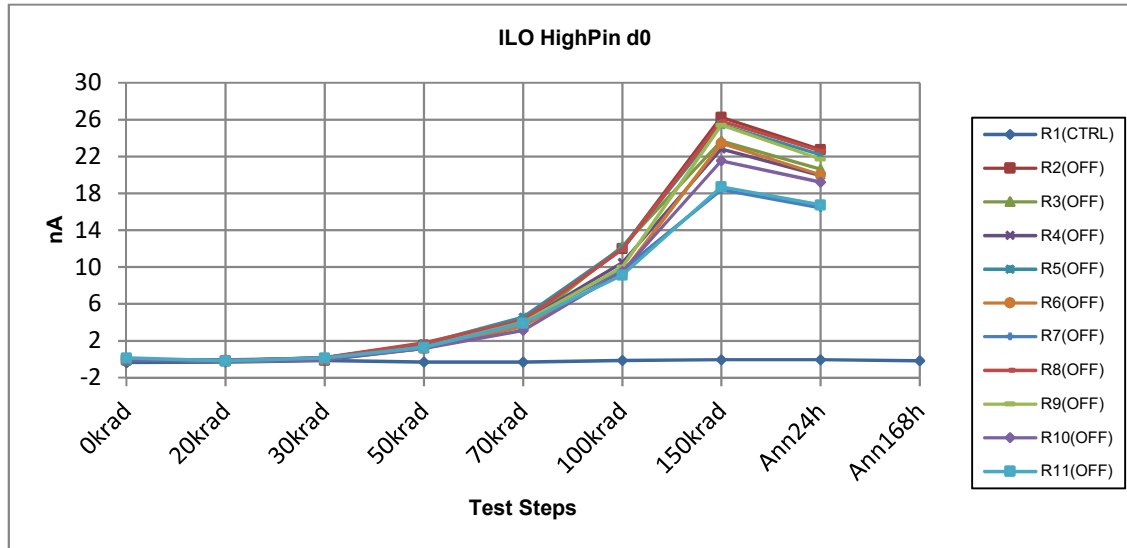
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ILO HighPin d1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.24	-0.24	-0.40	-0.14	-0.02	-0.17	-0.14	-0.02	-0.02
Irradiated, unbiased parts results									
R2(OFF)	-0.19	-0.07	-0.14	1.27	3.96	10.26	22.49	19.25	No meas.
R3(OFF)	-0.02	-0.07	0.11	1.46	4.51	12.70	28.05	24.38	No meas.
R4(OFF)	-0.26	-0.02	0.05	1.46	3.90	11.30	23.22	19.98	No meas.
R5(OFF)	-0.14	-0.14	0.11	1.70	4.33	11.06	22.06	18.58	No meas.
R6(OFF)	-0.19	-0.07	0.11	1.15	3.54	10.26	22.24	18.46	No meas.
R7(OFF)	-0.26	0.05	0.17	1.34	4.82	11.48	23.28	19.98	No meas.
R8(OFF)	-0.14	-0.26	-0.02	1.34	3.72	9.71	21.02	18.33	No meas.
R9(OFF)	0.05	-0.19	0.30	1.82	5.30	11.36	23.65	20.47	No meas.
R10(OFF)	-0.02	-0.02	-0.02	1.02	3.72	8.54	22.86	20.04	No meas.
R11(OFF)	-0.14	-0.19	0.11	1.64	3.90	9.28	19.80	17.54	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.26	-0.26	-0.14	1.02	3.54	8.54	19.80	17.54	N/A
Max Value	0.05	0.05	0.30	1.82	5.30	12.70	28.05	24.38	N/A
Average	-0.13	-0.10	0.08	1.42	4.17	10.59	22.87	19.70	N/A
Sigma	0.10	0.09	0.12	0.25	0.56	1.22	2.15	1.90	N/A

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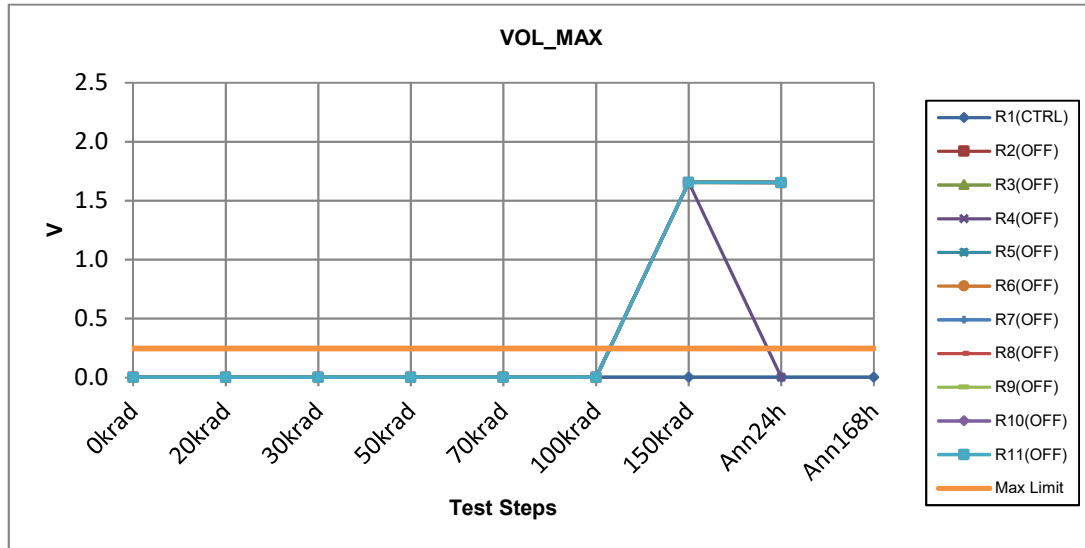
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ILO HighPin d0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.37	-0.30	-0.14	-0.30	-0.30	-0.14	-0.06	-0.06	-0.18
Irradiated, unbiased parts results									
R2(OFF)	-0.06	-0.18	-0.11	1.54	4.06	12.03	26.26	22.77	No meas.
R3(OFF)	-0.06	-0.06	0.01	1.23	3.57	12.22	23.69	20.62	No meas.
R4(OFF)	-0.11	-0.11	0.13	1.66	4.06	10.50	22.82	19.94	No meas.
R5(OFF)	-0.06	-0.18	0.13	1.66	4.54	12.09	25.46	22.15	No meas.
R6(OFF)	0.01	-0.11	0.01	1.18	3.62	9.33	23.44	20.01	No meas.
R7(OFF)	-0.06	-0.06	0.07	1.18	4.18	9.70	18.41	16.45	No meas.
R8(OFF)	-0.06	-0.18	0.19	1.78	4.24	11.97	25.83	22.58	No meas.
R9(OFF)	0.07	-0.30	0.01	1.30	3.99	10.01	25.40	21.72	No meas.
R10(OFF)	-0.06	-0.24	-0.06	1.18	3.14	9.51	21.54	19.21	No meas.
R11(OFF)	0.13	-0.18	0.13	1.30	3.94	9.14	18.72	16.75	No meas.
Irradiated, unbiased parts statistics									
Min Value	-0.11	-0.30	-0.11	1.18	3.14	9.14	18.41	16.45	N/A
Max Value	0.13	-0.06	0.19	1.78	4.54	12.22	26.26	22.77	N/A
Average	-0.02	-0.16	0.05	1.40	3.93	10.65	23.16	20.22	N/A
Sigma	0.07	0.08	0.10	0.24	0.40	1.28	2.84	2.25	N/A

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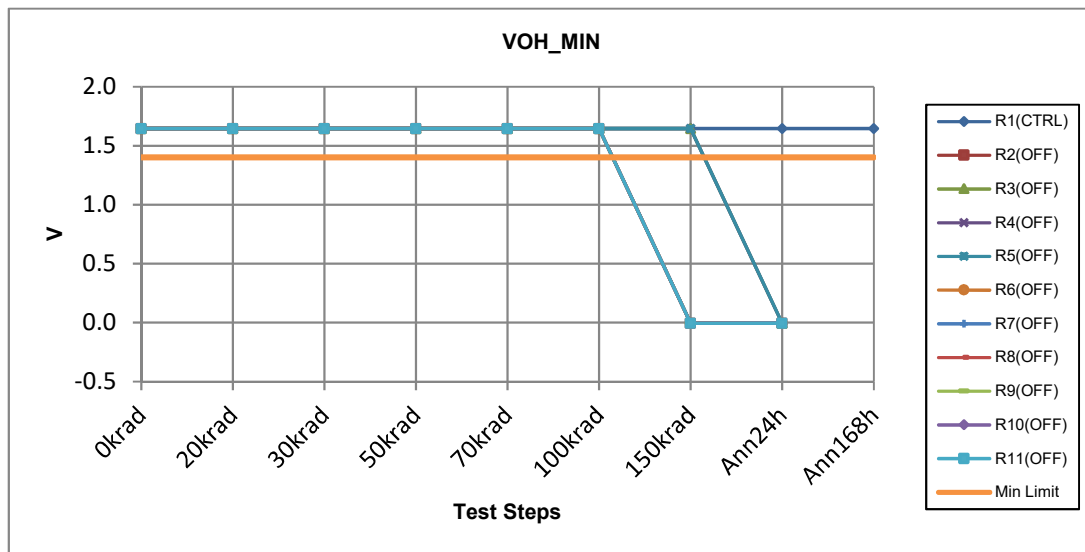
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VOL_MAX	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475	0.2475
Unit	V	V	V	V	V	V	V	V	V
Control results									
R1(CTRL)	0.0048	0.0045	0.0047	0.0047	0.0047	0.0048	0.0048	0.0047	0.0048
Irradiated, unbiased parts results									
R2(OFF)	0.0048	0.0045	0.0047	0.0048	0.0045	0.0048	1.6554	1.6551	No meas.
R3(OFF)	0.0045	0.0047	0.0044	0.0047	0.0045	0.0047	1.6554	1.6554	No meas.
R4(OFF)	0.0047	0.0045	0.0047	0.0045	0.0047	0.0047	1.6554	0.0047	No meas.
R5(OFF)	0.0047	0.0045	0.0045	0.0047	0.0045	0.0047	1.6556	1.6559	No meas.
R6(OFF)	0.0048	0.0047	0.0045	0.0048	0.0048	0.0048	1.6553	1.6557	No meas.
R7(OFF)	0.0047	0.0047	0.0045	0.0045	0.0045	0.0050	1.6556	1.6556	No meas.
R8(OFF)	0.0047	0.0044	0.0045	0.0047	0.0044	0.0047	1.6560	1.6559	No meas.
R9(OFF)	0.0047	0.0045	0.0045	0.0045	0.0048	0.0047	1.6557	1.6556	No meas.
R10(OFF)	0.0048	0.0045	0.0045	0.0047	0.0048	0.0048	1.6562	1.6554	No meas.
R11(OFF)	0.0048	0.0047	0.0048	0.0047	0.0048	0.0047	1.6562	1.6553	No meas.
Irradiated, unbiased parts statistics									
Min Value	0.0045	0.0044	0.0044	0.0045	0.0044	0.0047	1.6553	0.0047	N/A
Max Value	0.0048	0.0047	0.0048	0.0048	0.0048	0.0050	1.6562	1.6559	N/A
Average	0.0047	0.0046	0.0046	0.0047	0.0047	0.0048	1.6557	1.4905	N/A
Sigma	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003	0.5220	N/A

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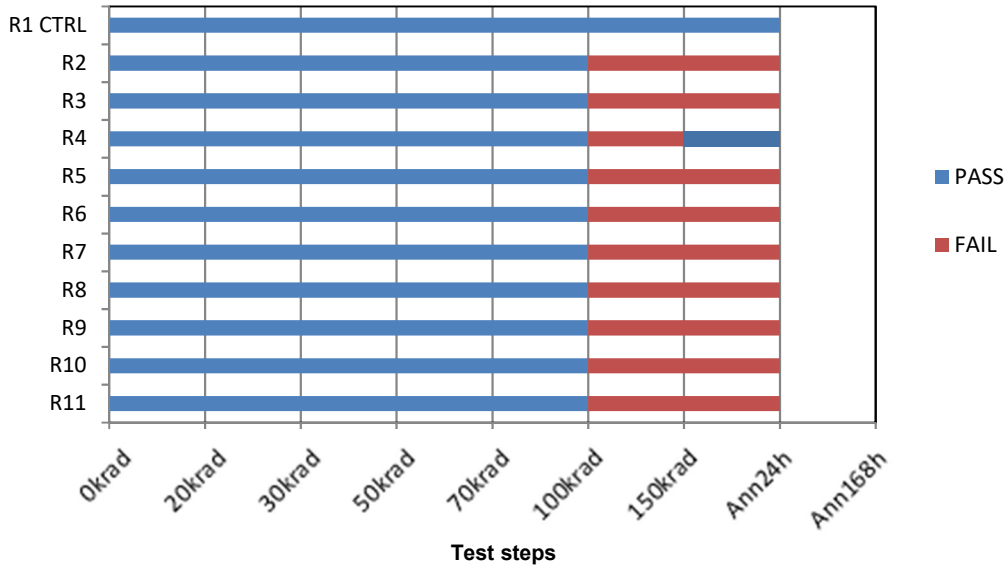
VOH_MIN	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025	1.4025
Max Limit	--	--	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V	V	V
Control results									
R1(CTRL)	1.6459	1.6460	1.6460	1.6460	1.6459	1.6460	1.6462	1.6463	1.6459
Irradiated, unbiased parts results									
R2(OFF)	1.6462	1.6460	1.6458	1.6457	1.6459	1.6458	-0.0048	-0.0051	No meas.
R3(OFF)	1.6457	1.6457	1.6458	1.6458	1.6457	1.6456	1.6455	-0.0051	No meas.
R4(OFF)	1.6457	1.6459	1.6457	1.6454	1.6459	1.6457	1.6457	-0.0050	No meas.
R5(OFF)	1.6460	1.6456	1.6459	1.6459	1.6457	1.6453	1.6455	-0.0047	No meas.
R6(OFF)	1.6457	1.6461	1.6456	1.6457	1.6458	1.6459	-0.0049	-0.0052	No meas.
R7(OFF)	1.6454	1.6458	1.6457	1.6456	1.6457	1.6453	-0.0047	-0.0049	No meas.
R8(OFF)	1.6463	1.6457	1.6459	1.6457	1.6457	1.6453	-0.0048	-0.0048	No meas.
R9(OFF)	1.6460	1.6460	1.6459	1.6459	1.6461	1.6456	-0.0049	-0.0049	No meas.
R10(OFF)	1.6459	1.6461	1.6452	1.6457	1.6457	1.6456	-0.0046	-0.0048	No meas.
R11(OFF)	1.6461	1.6458	1.6459	1.6455	1.6457	1.6456	-0.0049	-0.0048	No meas.
Irradiated, unbiased parts statistics									
Min Value	1.6454	1.6456	1.6452	1.6454	1.6457	1.6453	-0.0049	-0.0052	N/A
Max Value	1.6463	1.6461	1.6459	1.6459	1.6461	1.6459	1.6457	-0.0047	N/A
Average	1.6459	1.6459	1.6457	1.6457	1.6458	1.6456	0.4903	-0.0049	N/A
Sigma	0.0003	0.0002	0.0002	0.0002	0.0001	0.0002	0.7972	0.0002	N/A

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VILmax fails



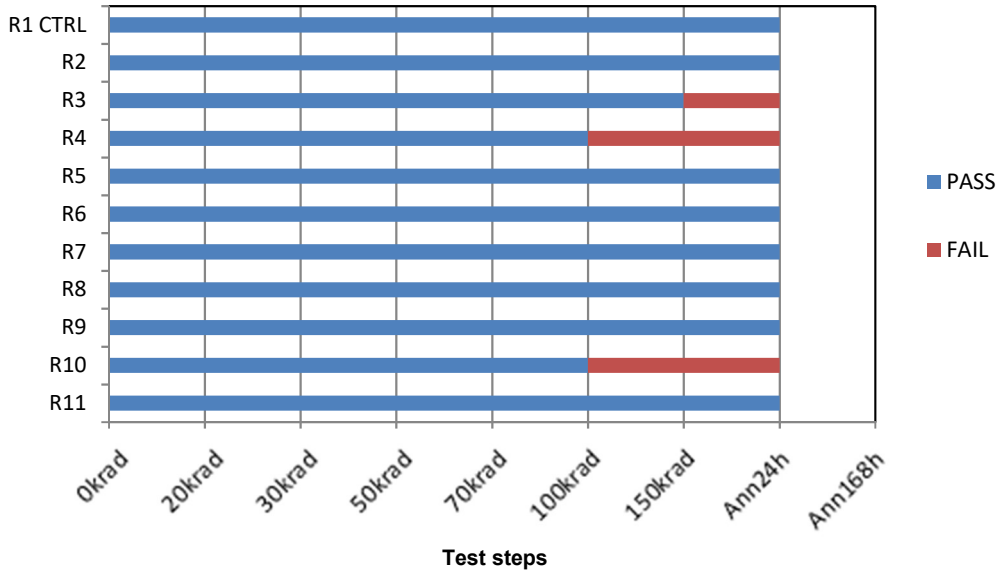
VILmax fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	PASS	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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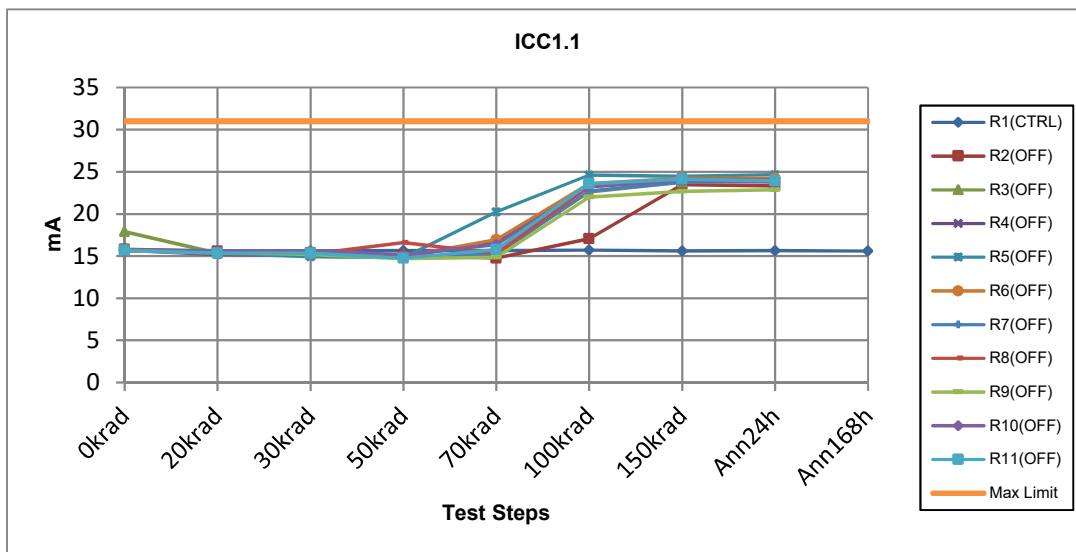
VIHmin fails



VIHmin fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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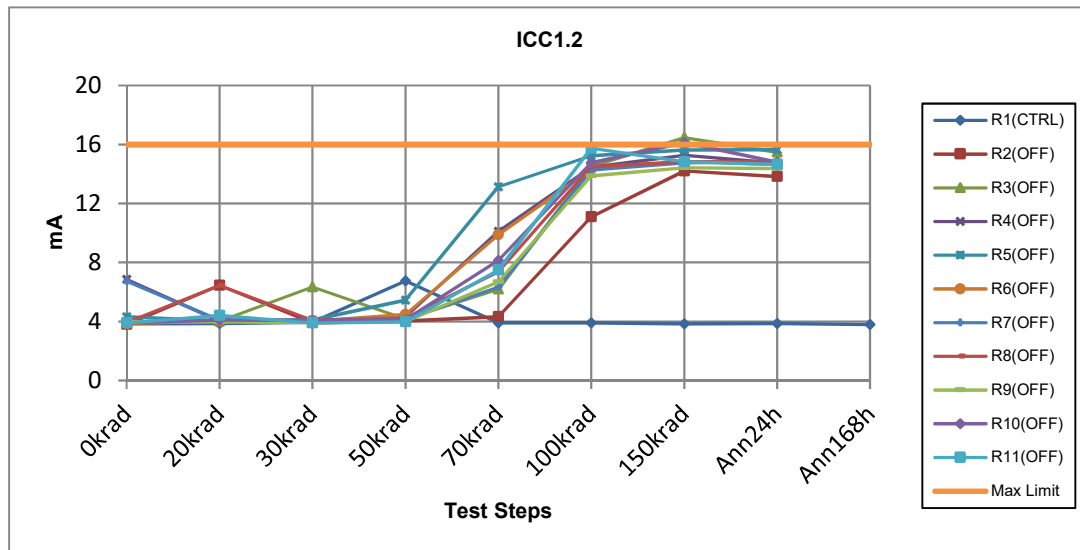
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ICC1.1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	31	31	31	31	31	31	31	31	31
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control results									
R1(CTRL)	15.60	15.61	15.63	15.64	15.67	15.71	15.61	15.64	15.60
Irradiated, unbiased parts results									
R2(OFF)	15.82	15.56	15.38	15.08	14.75	17.08	23.48	23.32	No meas.
R3(OFF)	17.91	15.34	15.22	14.87	15.32	22.62	23.79	23.90	No meas.
R4(OFF)	15.67	15.21	15.09	14.92	16.73	23.23	23.95	24.06	No meas.
R5(OFF)	15.69	15.33	14.93	14.82	20.26	24.62	24.46	24.67	No meas.
R6(OFF)	15.71	15.33	15.25	14.97	16.96	23.59	24.26	24.24	No meas.
R7(OFF)	15.70	15.63	15.24	14.93	15.17	22.71	23.77	23.89	No meas.
R8(OFF)	15.76	15.32	15.23	16.59	15.29	23.24	24.13	24.10	No meas.
R9(OFF)	15.65	15.41	15.19	14.70	14.87	22.00	22.68	22.86	No meas.
R10(OFF)	15.71	15.59	15.61	15.16	16.36	23.33	23.97	23.77	No meas.
R11(OFF)	15.68	15.34	15.34	14.75	15.78	23.58	24.12	23.95	No meas.
Irradiated, unbiased parts statistics									
Min Value	15.65	15.21	14.93	14.70	14.75	17.08	22.68	22.86	N/A
Max Value	17.91	15.63	15.61	16.59	20.26	24.62	24.46	24.67	N/A
Average	15.93	15.41	15.25	15.08	16.15	22.60	23.86	23.88	N/A
Sigma	0.70	0.14	0.18	0.55	1.63	2.06	0.50	0.49	N/A

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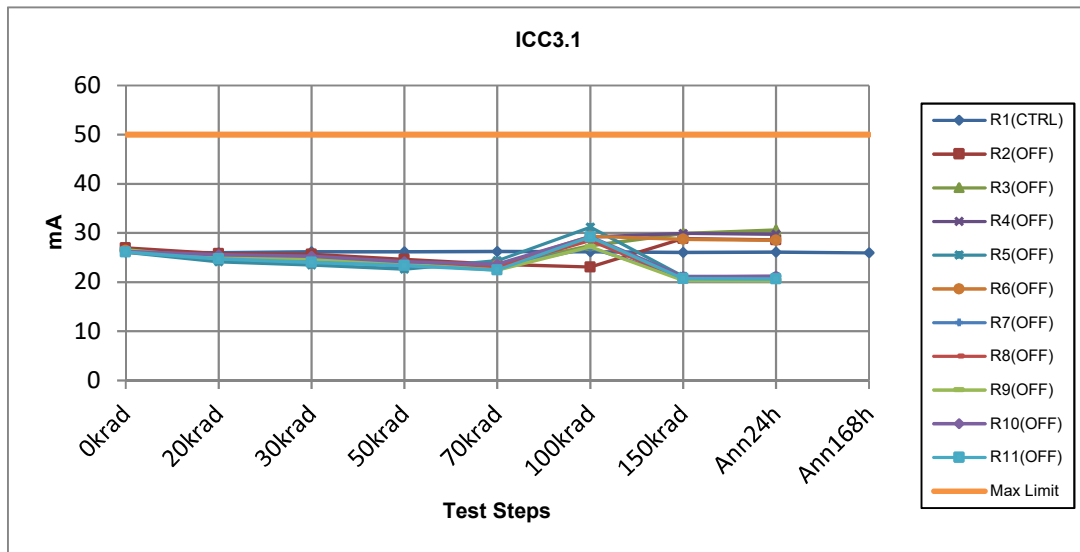
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ICC1.2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	16	16	16	16	16	16	16	16	16
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control results									
R1(CTRL)	3.84	3.87	3.94	6.76	3.91	3.90	3.85	3.87	3.79
Irradiated, unbiased parts results									
R2(OFF)	3.79	6.44	3.90	4.05	4.32	11.09	14.21	13.83	No meas.
R3(OFF)	3.95	4.01	6.34	4.17	6.18	14.51	16.47	15.49	No meas.
R4(OFF)	6.85	4.03	4.03	4.32	10.11	14.45	15.27	14.75	No meas.
R5(OFF)	4.32	4.05	4.11	5.45	13.13	15.24	15.63	15.65	No meas.
R6(OFF)	3.85	4.03	4.01	4.48	9.87	14.32	14.86	14.66	No meas.
R7(OFF)	6.72	4.09	4.09	4.12	6.33	14.29	14.75	14.87	No meas.
R8(OFF)	3.93	6.46	4.08	4.21	7.38	14.51	14.83	14.84	No meas.
R9(OFF)	3.99	3.98	3.91	3.99	6.69	13.88	14.42	14.37	No meas.
R10(OFF)	3.90	4.10	4.08	4.13	8.15	14.77	16.13	14.82	No meas.
R11(OFF)	3.90	4.40	3.90	3.96	7.48	15.75	14.84	14.66	No meas.
Irradiated, unbiased parts statistics									
Min Value	3.79	3.98	3.90	3.96	4.32	11.09	14.21	13.83	N/A
Max Value	6.85	6.46	6.34	5.45	13.13	15.75	16.47	15.65	N/A
Average	4.52	4.56	4.25	4.29	7.96	14.28	15.14	14.79	N/A
Sigma	1.20	1.00	0.74	0.44	2.50	1.24	0.73	0.51	N/A

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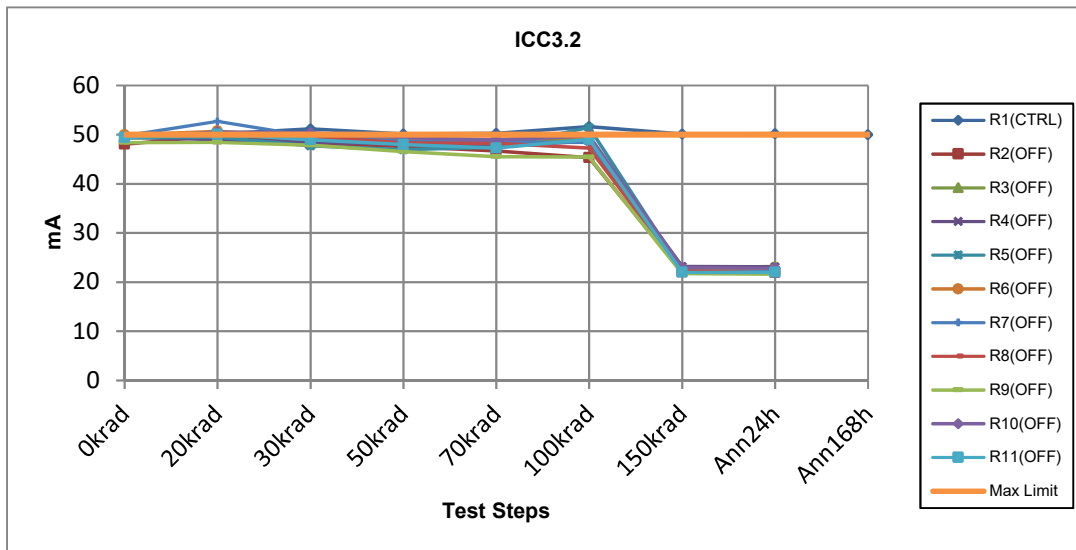
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ICC3.1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	50	50	50	50	50	50	50	50	50
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control results									
R1(CTRL)	26.1	26.0	26.2	26.2	26.2	26.2	26.0	26.1	26.0
Irradiated, unbiased parts results									
R2(OFF)	27.0	25.8	25.7	24.6	23.6	23.1	28.9	28.6	No meas.
R3(OFF)	26.3	24.9	24.5	23.5	23.4	27.4	29.9	30.6	No meas.
R4(OFF)	26.5	24.9	24.4	23.7	23.2	29.2	29.9	29.7	No meas.
R5(OFF)	26.1	24.2	23.5	22.6	24.4	31.2	21.2	21.1	No meas.
R6(OFF)	26.4	24.9	24.5	23.7	23.4	29.3	28.7	28.5	No meas.
R7(OFF)	26.3	25.4	24.5	23.3	23.0	27.0	20.9	20.7	No meas.
R8(OFF)	26.1	25.2	24.8	24.1	23.0	28.5	20.7	20.5	No meas.
R9(OFF)	26.6	25.0	24.8	23.6	22.5	27.2	20.3	20.2	No meas.
R10(OFF)	26.2	25.6	25.3	24.1	23.6	29.2	21.1	21.2	No meas.
R11(OFF)	26.1	24.8	24.0	23.4	22.5	29.2	20.7	20.6	No meas.
Irradiated, unbiased parts statistics									
Min Value	26.1	24.2	23.5	22.6	22.5	23.1	20.3	20.2	N/A
Max Value	27.0	25.8	25.7	24.6	24.4	31.2	29.9	30.6	N/A
Average	26.4	25.1	24.6	23.7	23.3	28.1	24.2	24.2	N/A
Sigma	0.3	0.5	0.6	0.5	0.6	2.2	4.4	4.5	N/A

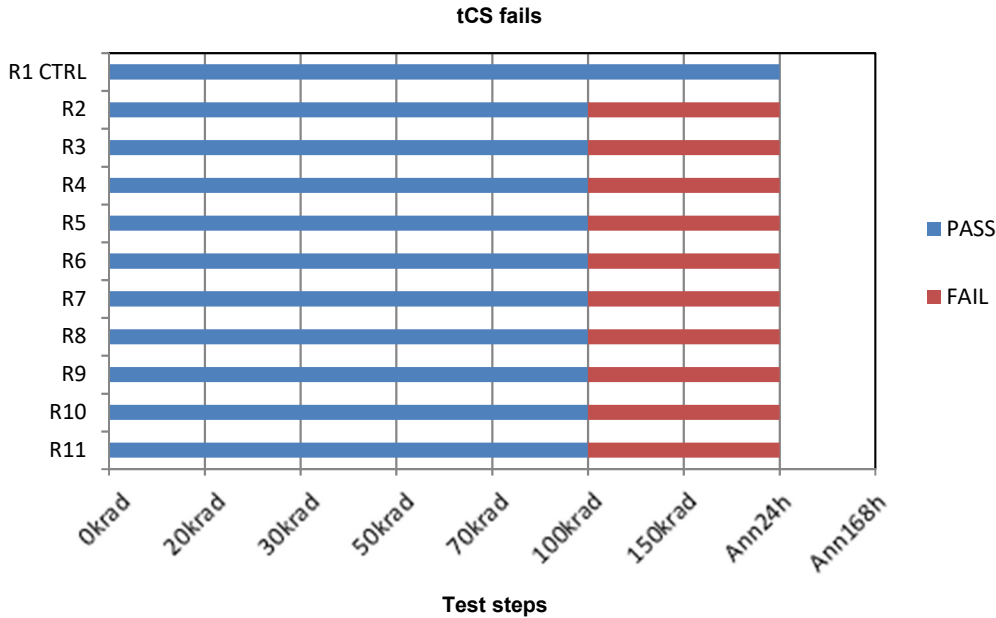
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ICC3.2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	50	50	50	50	50	50	50	50	50
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control results									
R1(CTRL)	50.1	50.2	51.2	50.1	50.3	51.7	50.1	50.2	50.0
Irradiated, unbiased parts results									
R2(OFF)	48.1	49.8	48.3	47.6	46.7	45.4	22.1	21.9	No meas.
R3(OFF)	49.4	49.5	50.3	49.0	48.5	49.1	22.9	23.2	No meas.
R4(OFF)	49.6	49.0	48.5	48.1	47.6	48.7	23.2	23.1	No meas.
R5(OFF)	49.3	49.5	47.7	46.9	47.5	51.5	22.4	22.4	No meas.
R6(OFF)	50.0	50.7	49.6	49.1	49.0	49.6	22.6	22.6	No meas.
R7(OFF)	49.7	52.7	49.6	48.6	48.4	48.5	22.2	22.2	No meas.
R8(OFF)	50.0	50.0	49.7	48.3	48.3	47.3	22.3	21.9	No meas.
R9(OFF)	48.4	48.4	47.9	46.6	45.5	45.4	21.8	21.6	No meas.
R10(OFF)	49.5	50.6	50.4	49.4	48.9	49.8	23.0	22.8	No meas.
R11(OFF)	49.4	50.1	49.0	48.0	47.3	49.0	22.0	22.0	No meas.
Irradiated, unbiased parts statistics									
Min Value	48.1	48.4	47.7	46.6	45.5	45.4	21.8	21.6	N/A
Max Value	50.0	52.7	50.4	49.4	49.0	51.5	23.2	23.2	N/A
Average	49.3	50.0	49.1	48.2	47.8	48.4	22.4	22.4	N/A
Sigma	0.6	1.2	1.0	0.9	1.1	1.9	0.5	0.5	N/A

Note: The limit of this parameter must be considered as information only in accordance to Note 5 of TABLE I in test plan.



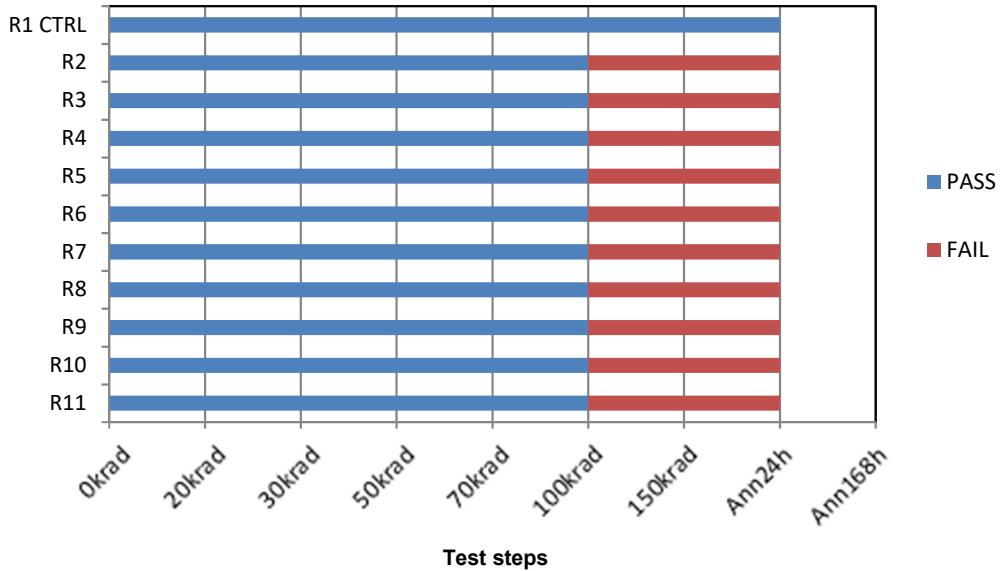
tCS fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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tCH fails



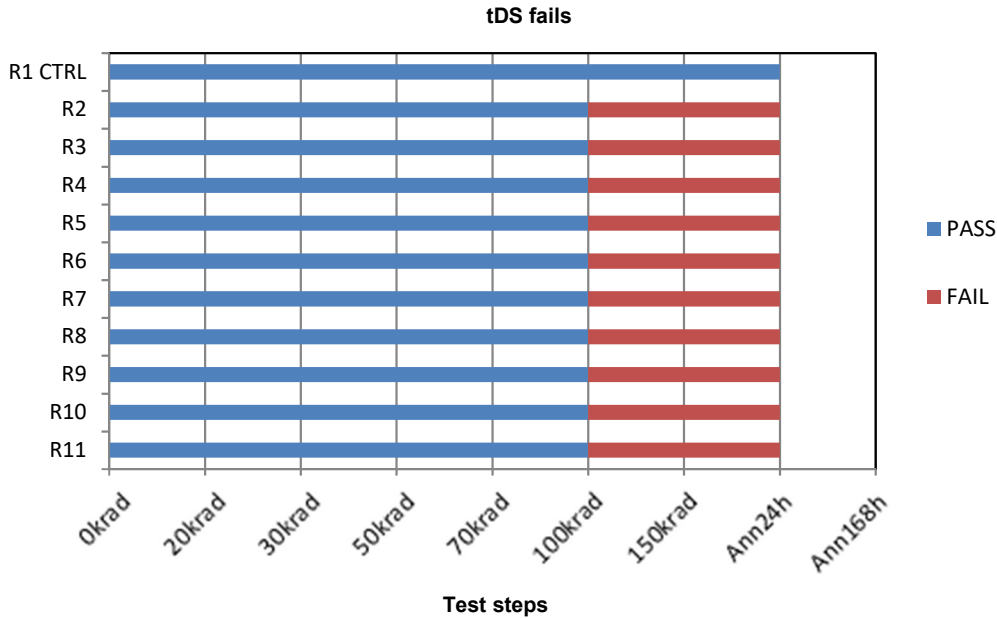
tCH fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Total Ionizing Dose Radiation Test PC28F00AM29EWHA D/C 1409		MICRON U	ALTER TECHNOLOGY	
			RL: 2017901237 Ref.: ATN-RR-464 Issue: 2 Date: 2018/10/10 Page: 329 / 462	



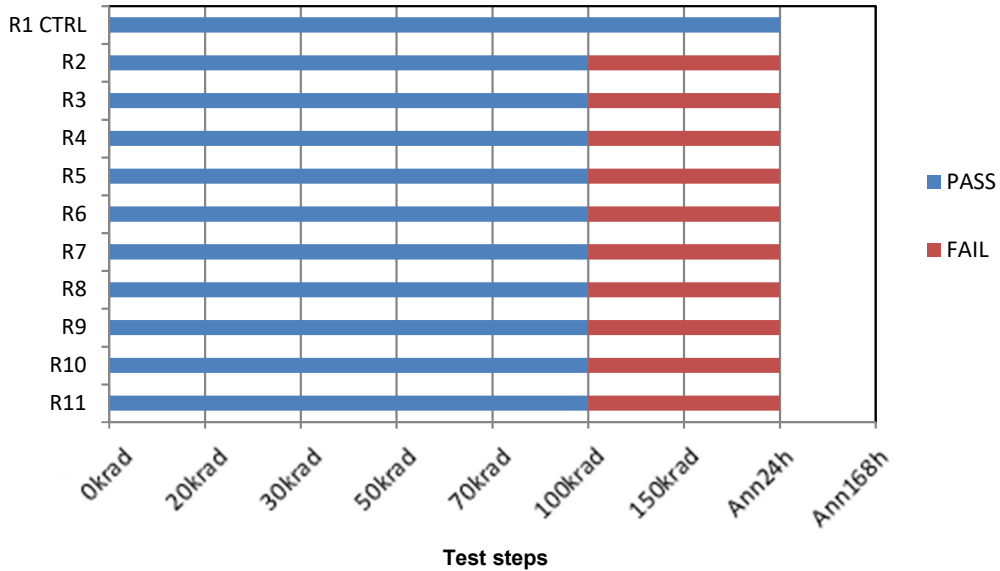
tDS fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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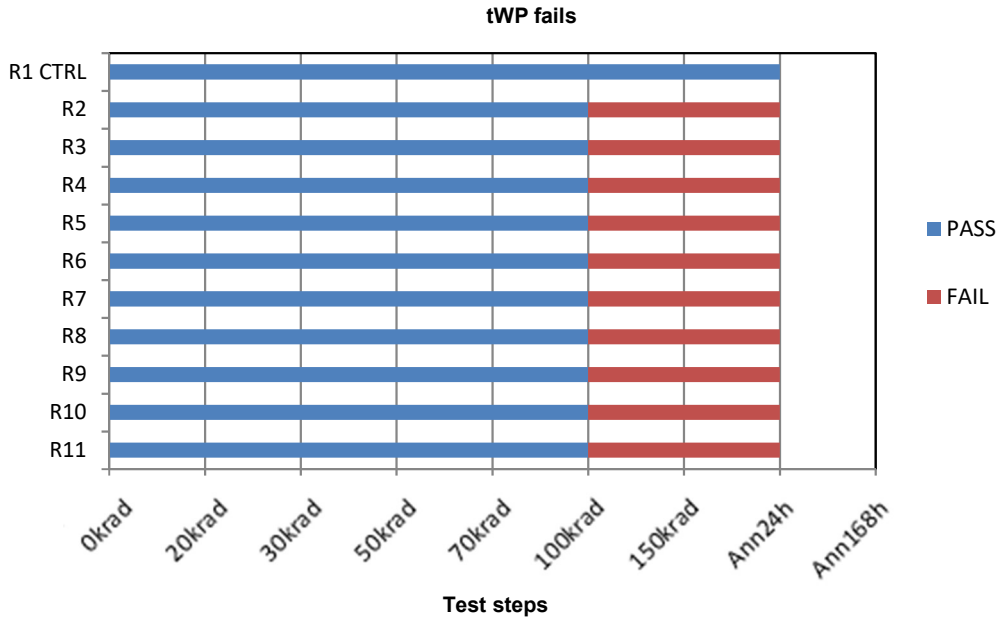
tDH fails



tDH fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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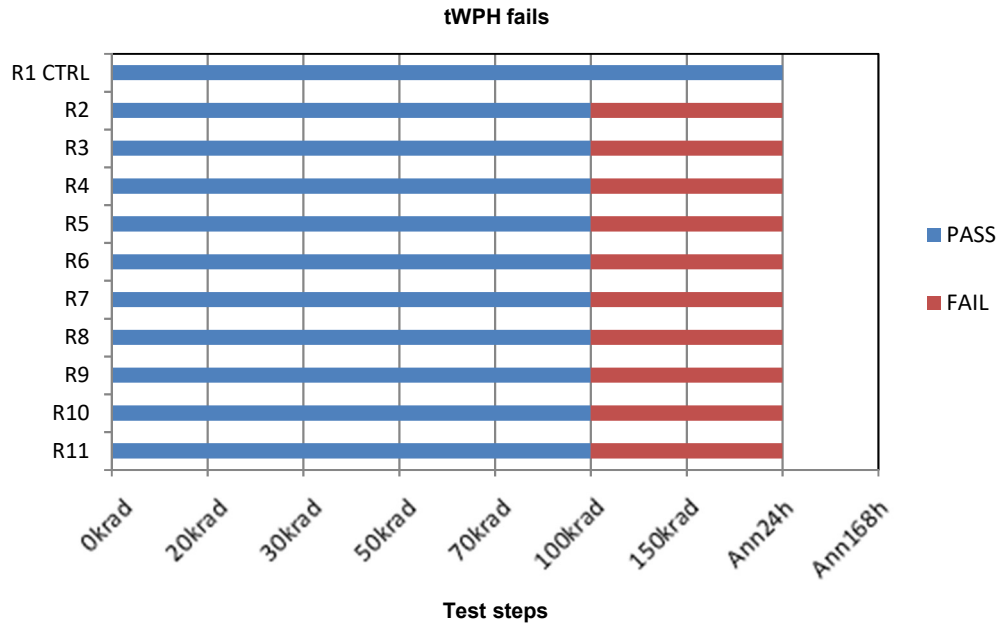
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tWP fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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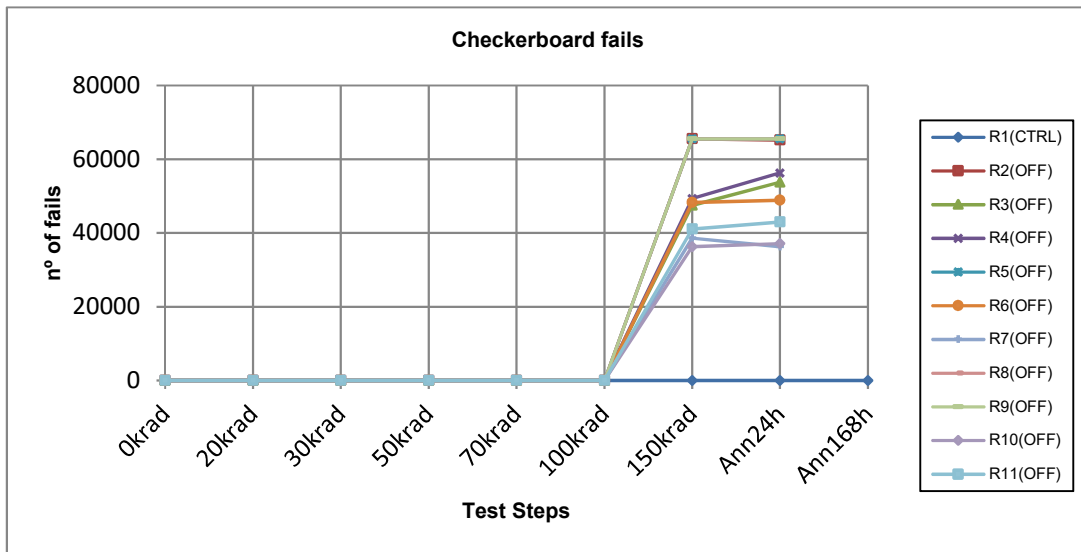
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tWPH fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	FAIL	No meas.
Irradiated, unbiased parts statistics									
Min Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sigma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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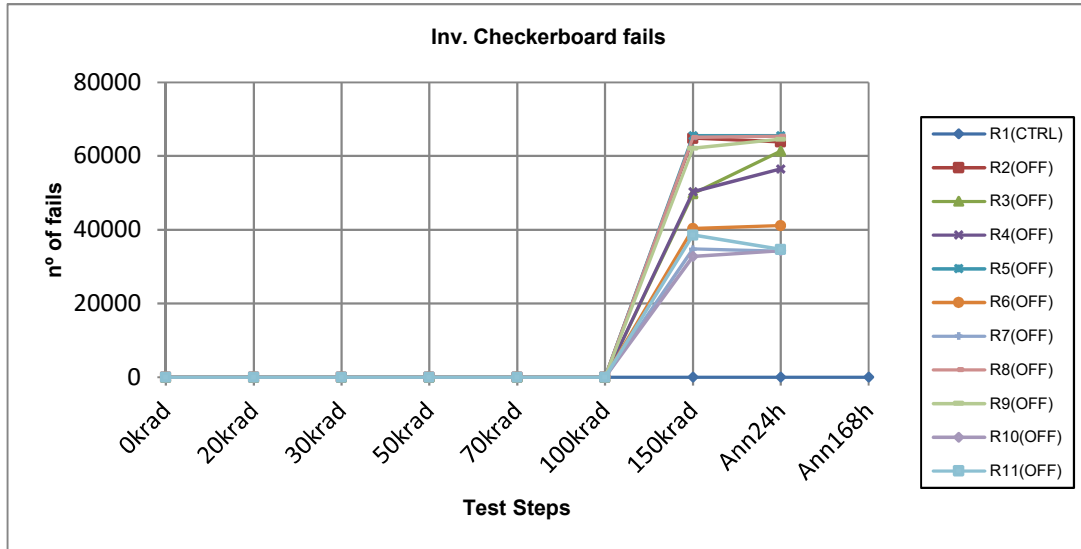
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Checkerboard fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results									
R1(CTRL)	0	0	0	0	0	0	0	0	0
Irradiated, unbiased parts results									
R2(OFF)	0	0	0	0	0	0	65536	65246	No meas.
R3(OFF)	0	0	0	0	0	0	47539	53756	No meas.
R4(OFF)	0	0	0	0	0	0	49340	56283	No meas.
R5(OFF)	0	0	0	0	0	0	65536	65536	No meas.
R6(OFF)	0	0	0	0	0	0	48300	48892	No meas.
R7(OFF)	0	0	0	0	0	0	38612	36332	No meas.
R8(OFF)	0	0	0	0	0	0	65536	65536	No meas.
R9(OFF)	0	0	0	0	0	0	65536	65536	No meas.
R10(OFF)	0	0	0	0	0	0	36277	37141	No meas.
R11(OFF)	0	0	0	0	0	0	41068	42995	No meas.
Irradiated, unbiased parts statistics									
Min Value	0	0	0	0	0	0	36277	36332	N/A
Max Value	0	0	0	0	0	0	65536	65536	N/A
Average	0	0	0	0	0	0	52328	53725	N/A
Sigma	0	0	0	0	0	0	12103	11897	N/A

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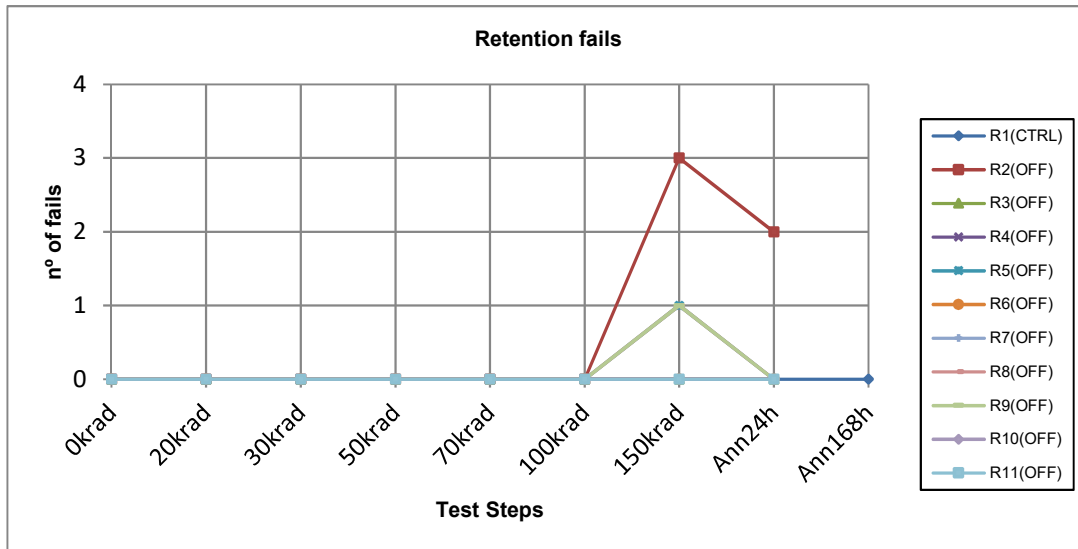
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Inv. Checkerboard fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails	n° of fails
Control results									
R1(CTRL)	0	0	0	0	0	0	0	0	0
Irradiated, unbiased parts results									
R2(OFF)	0	0	0	0	0	0	64846	63821	No meas.
R3(OFF)	0	0	0	0	0	0	49794	61320	No meas.
R4(OFF)	0	0	0	0	0	0	50309	56512	No meas.
R5(OFF)	0	0	0	0	0	0	65536	65536	No meas.
R6(OFF)	0	0	0	0	0	0	40354	41128	No meas.
R7(OFF)	0	0	0	0	0	0	34811	34153	No meas.
R8(OFF)	0	0	0	0	0	0	65089	65401	No meas.
R9(OFF)	0	0	0	0	0	0	62164	64588	No meas.
R10(OFF)	0	0	0	0	0	0	32769	34313	No meas.
R11(OFF)	0	0	0	0	0	0	38596	34650	No meas.
Irradiated, unbiased parts statistics									
Min Value	0	0	0	0	0	0	32769	34153	N/A
Max Value	0	0	0	0	0	0	65536	65536	N/A
Average	0	0	0	0	0	0	50427	52142	N/A
Sigma	0	0	0	0	0	0	13277	14215	N/A

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Retention fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results									
R1(CTRL)	0	0	0	0	0	0	0	0	0
Irradiated, unbiased parts results									
R2(OFF)	0	0	0	0	0	0	3	2	No meas.
R3(OFF)	0	0	0	0	0	0	0	0	No meas.
R4(OFF)	0	0	0	0	0	0	0	0	No meas.
R5(OFF)	0	0	0	0	0	0	1	0	No meas.
R6(OFF)	0	0	0	0	0	0	0	0	No meas.
R7(OFF)	0	0	0	0	0	0	0	0	No meas.
R8(OFF)	0	0	0	0	0	0	1	0	No meas.
R9(OFF)	0	0	0	0	0	0	1	0	No meas.
R10(OFF)	0	0	0	0	0	0	0	0	No meas.
R11(OFF)	0	0	0	0	0	0	0	0	No meas.
Irradiated, unbiased parts statistics									
Min Value	0	0	0	0	0	0	0	0	N/A
Max Value	0	0	0	0	0	0	3	2	N/A
Average	0	0	0	0	0	0	1	0	N/A
Sigma	0	0	0	0	0	0	1	1	N/A

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APPENDIX 1: IN-SITU TEST REPORT

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9 INTRODUCTION

This report presents the functional test results obtained on PC28F00AM29EWH NOR flash during beam exposure and annealing. A supervisor board (provided by HIREX, reference: STB025C) connected to a DUT (Devices Under Test) bias board (provided by HIREX, reference: PL266A) sends in parallel the test sequence commands to each DUT on the bias board and test data are transmitted via an Ethernet cable to the test monitoring laptop PC.

10 IN-SITU TEST SYSTEM DESCRIPTION

10.1 Overview

The following figure shows the test system overview for dynamic in-situ test.

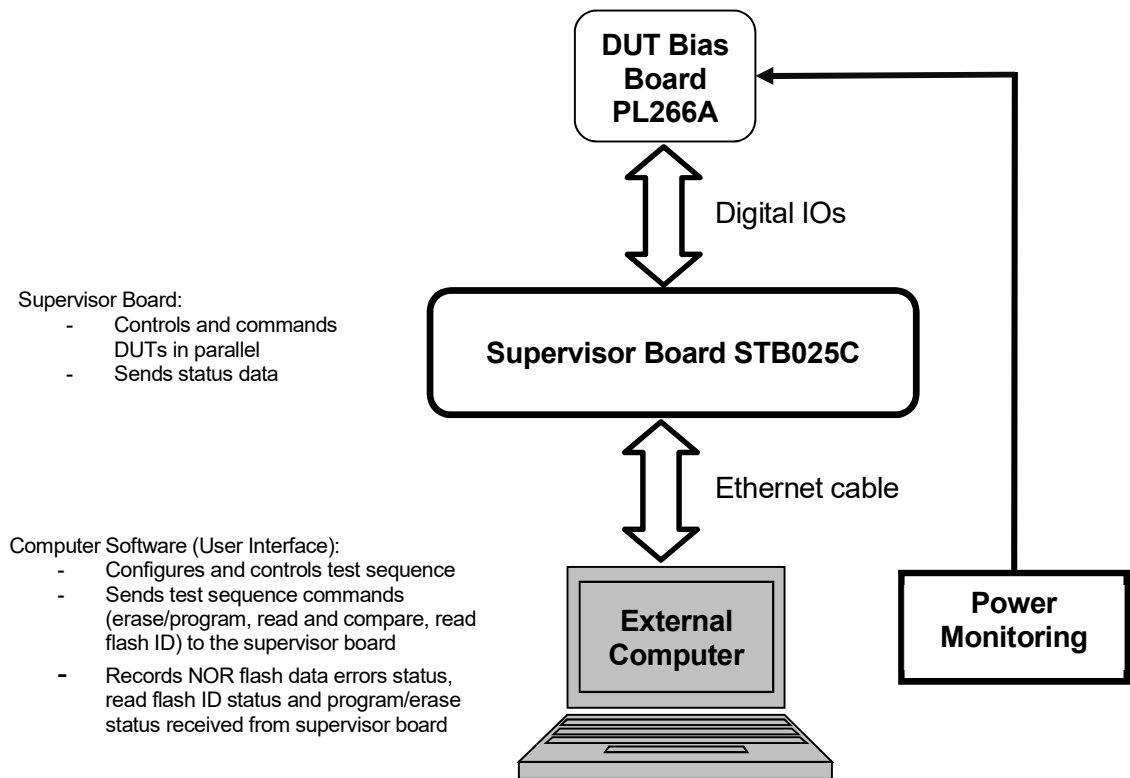



FIGURE 6: In-situ test system overview

User interface (UI) software developed by HIREX permits to configure the test flow, sends the test sequence commands to the supervisor board and records data errors status, read flash ID status and program/erase status of the NOR flash memories, received from the supervisor board.

Supervisor board receives test commands from the UI software and drives the DUTs by his In/Out digital signals. DUT Bias board can receive up to 5 devices. Supervisor board is connected to the computer with an Ethernet cable.

Power monitoring is managed by an external power supply.

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10.2 Supervisor board description

The supervisor board can drive up to 5 NOR flash memories at same time. Test data are sent to the computer by Ethernet at 100Mbps. This board has the following features:

Main devices:

- FPGA Xilinx Spartan 6
- CPU 32bits MX32 – 105 DMIPS

Interfaces:

- Ethernet
- Bus CAN 2.0B
- 2 x I2C, CPU input interrupt
- USB
- 300 IO with external driver (FPGA interface)
- 24 IO directly connected to the FPGA
- 8 IO directly connected to the CPU

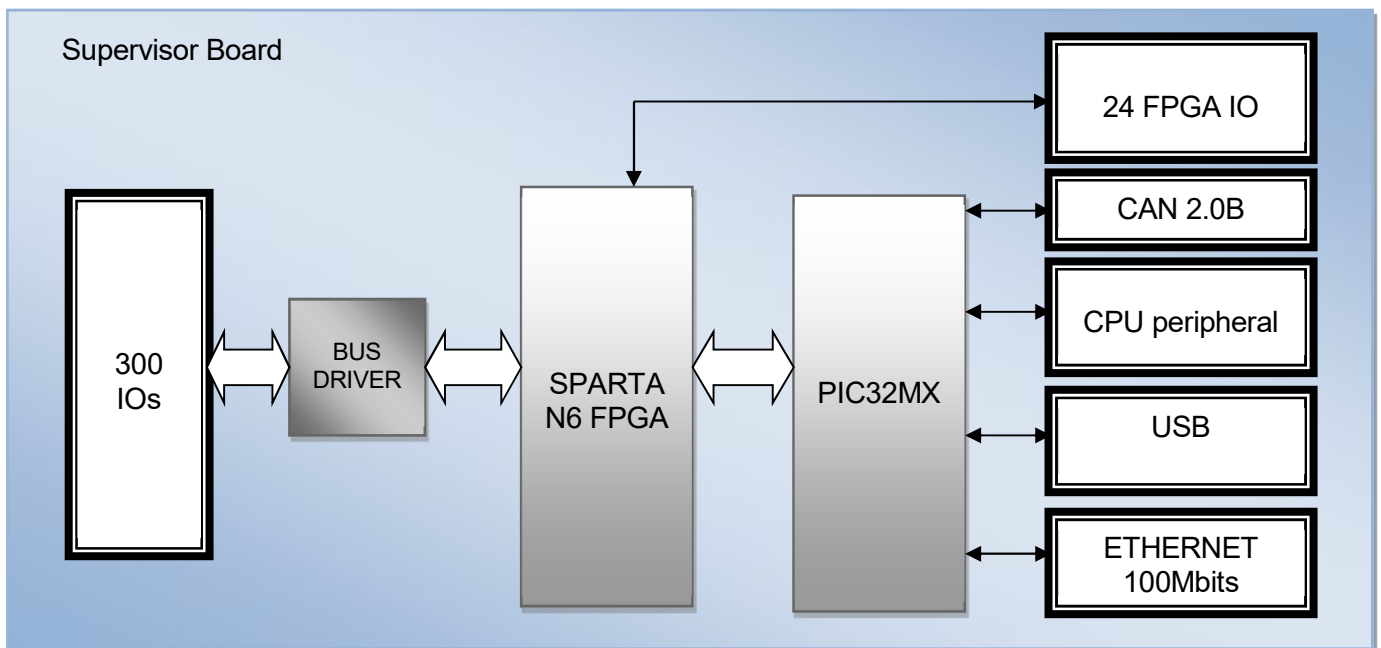


FIGURE 7: Supervisor board overview.

11 TEST CONDITIONS

11.1 Bias conditions

Bias boards allowed 20 ON bias samples during exposures, in accordance with the electrical circuit provided in **¡Error! No se encuentra el origen de la referencia.** 10 samples were biased in low duty cycle (LDC) and 10 other samples in high duty cycle (HDC). 2 bias boards with 2 supervisor boards were used for LDC bias (5 devices per bias board). Similarly for HDC bias.

During annealing steps same stress conditions were applied at 25° C and 100°C temperatures.

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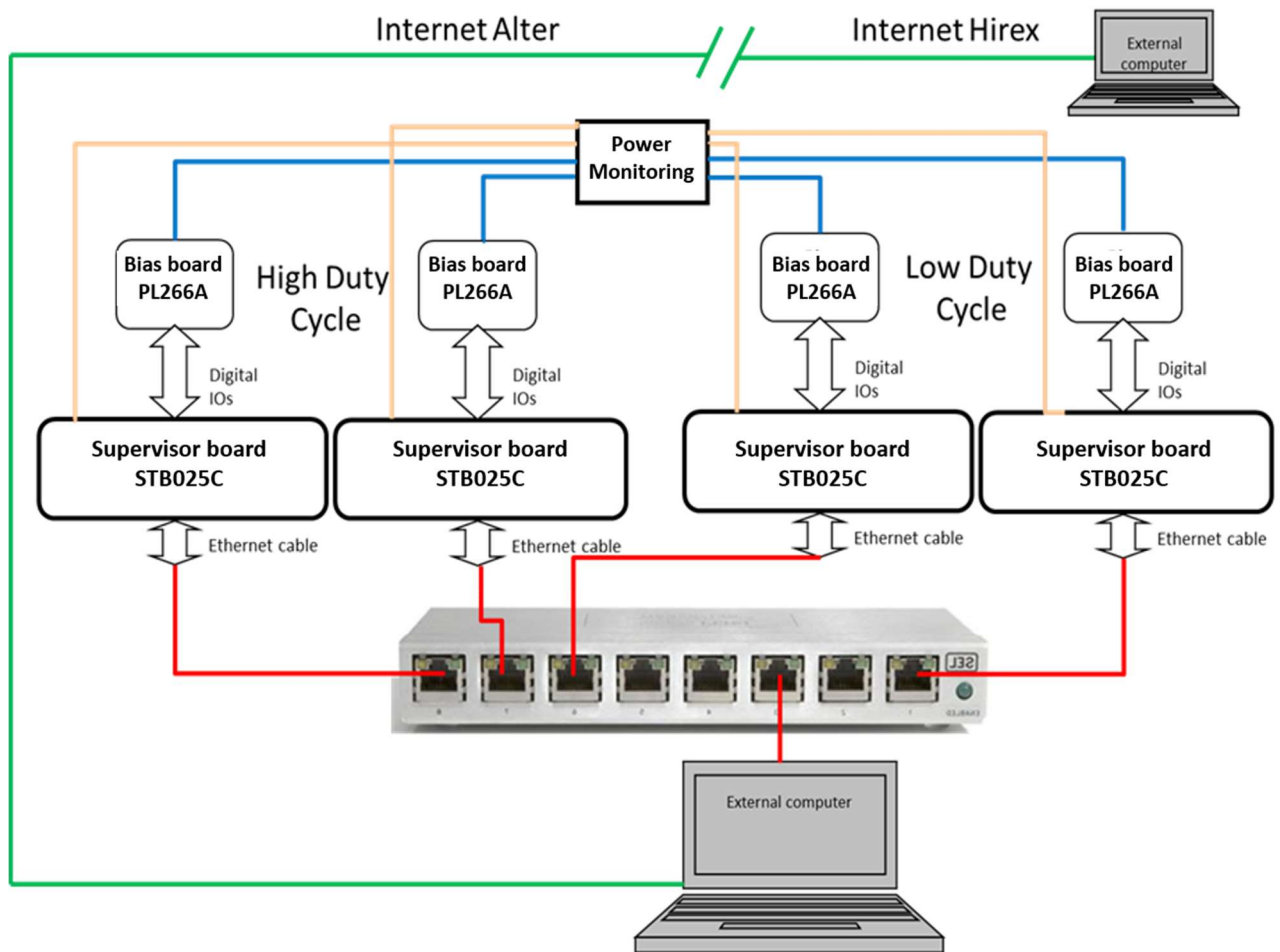



FIGURE 8: Bias setup overview.

11.2 Parts distribution

The following table identifies the irradiated samples positions on DUT bias boards. In the following section, the DUT number on the bias board (DUT N°) is used with the bias board number to identify the sample, e.g. DUT0 Board1 for device on position 0 of Board1.

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LDC				HDC			
Supervisor Board STB025C serial number	Bias Board PL266A serial number	DUT N°on bias board	ALTER Sample serial number	Supervisor Board STB025C serial number	Bias Board serial number	DUT N°on bias board	ALTER Sample serial number
SN2.IP33	Board1	0	R2 (SN2)	SN5.IP41	Board3	0	R2 (SN12)
		1	R3 (SN3)			1	R3 (SN13)
		2	R4 (SN4)			2	R4 (SN14)
		3	R5 (SN5)			3	R5 (SN15)
		4	R6 (SN6)			4	R6 (SN16)
SN0.IP40	Board2	0	R7 (SN7)	SN10.IP45	Board4	0	R7 (SN17)
		1	R8 (SN8)			1	R8 (SN18)
		2	R9 (SN9)			2	R9 (SN19)
		3	R10 (SN10)			3	R10 (SN20)
		4	R11 (SN11)			4	R11 (SN21)

11.3 High duty cycle (HDC) bias

Campaign start date: 19/06/2017 14:27

Campaign end date: 11/07/2017 9:46

Step	Required Acc. Dose	Total Step Dose	Real Acc. Dose	Deviation	Dose rate	Exposure time	Date
HDC	rad (Si)	rad(Si)	rad(Si)	%	rad(Si)/h	(h)	-
0	0	0	0	0	0	--	19/06/2017
1	20000	20355	20354.9	1.8	300.9	67.65	22/06/2017
2	30000	6799	27154.2	9.5	300.9	22.60	23/06/2017
3	50000	20641	47795.0	4.4	300.9	68.60	26/06/2017
4	70000	20547	68342.4	2.4	300.9	68.29	29/06/2017
5	100000	25551	93893.8	6.1	300.9	84.92	03/07/2017
Annealing							
6	Ann24h@25°C	24	--	--	--	--	04/07/2017
7	Ann168h@100°C	168	--	--	--	--	11/07/2017

Note 1: Exposure have been stopped after 100krad(Si) step, by customer request.


11.3.1 Test flow

On one hand, blocks 2 to 511 are erased/programmed and read permanently during exposure and annealing.

On the other hand, blocks 512 to 1023 are written with hexadecimal pattern AAAA at the beginning of each step. These blocks are then only read permanently during exposure and annealing.

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The following test sequence is applied during exposure and annealing:

1. Read NOR flash DUT ID code
2. Erase/Program blocks 512 to 1023 with hexadecimal pattern AAAA
3. Read NOR flash DUT ID code
4. Erase/Program blocks 2 to 511 with hexadecimal pattern 5555
5. Read blocks 2 to 511 and check for errors
6. Erase/Program blocks 2 to 511 with hexadecimal pattern AAAA
7. Read blocks 2 to 511 and check for errors
8. Read blocks 512 to 1023 and check for errors
9. Loop to step 3

¡Error! No se encuentra el origen de la referencia. represents the in-situ test iteration cycle, i.e. from step 3 to step 8. **¡Error! No se encuentra el origen de la referencia.** represents the entire HDC test flow including electrical measurements steps that were applied to the DUTs.

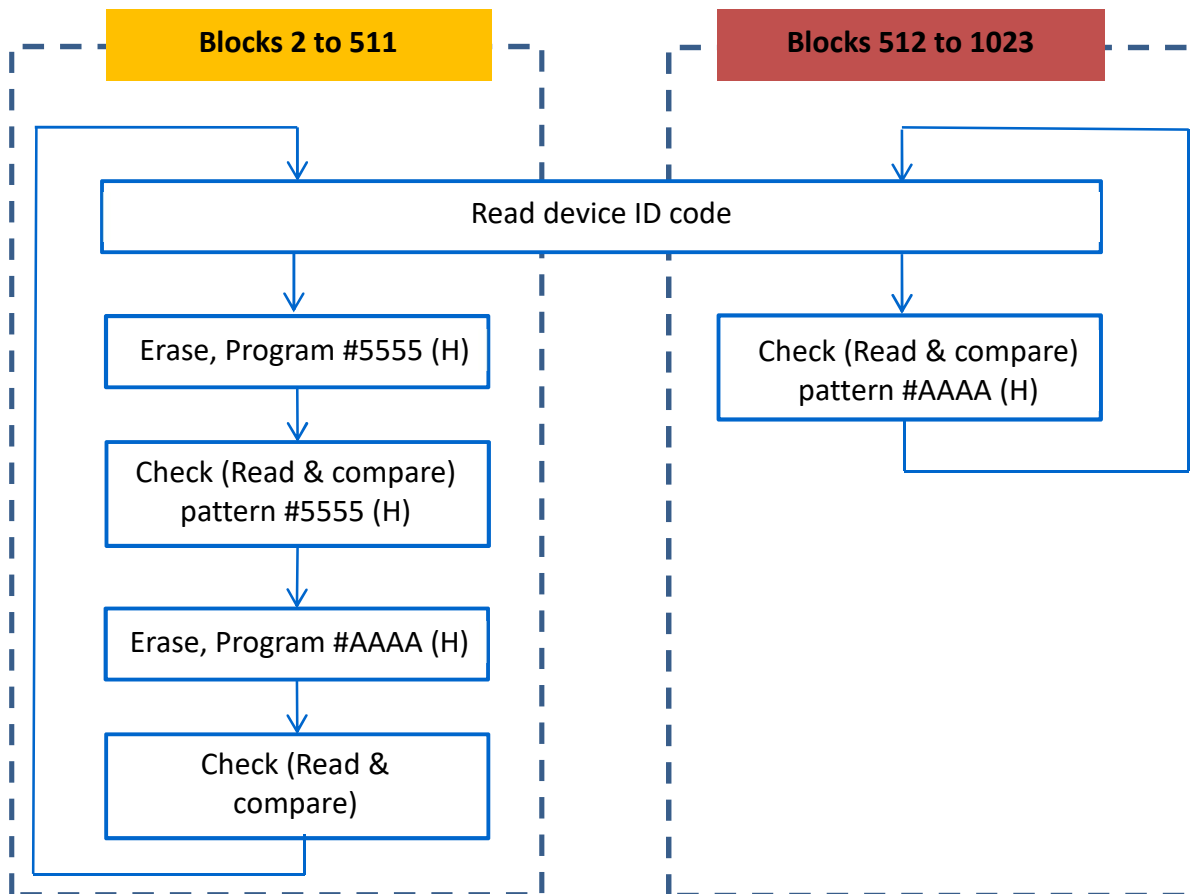


FIGURE 9: High duty cycle in-situ test iteration cycle flow chart.

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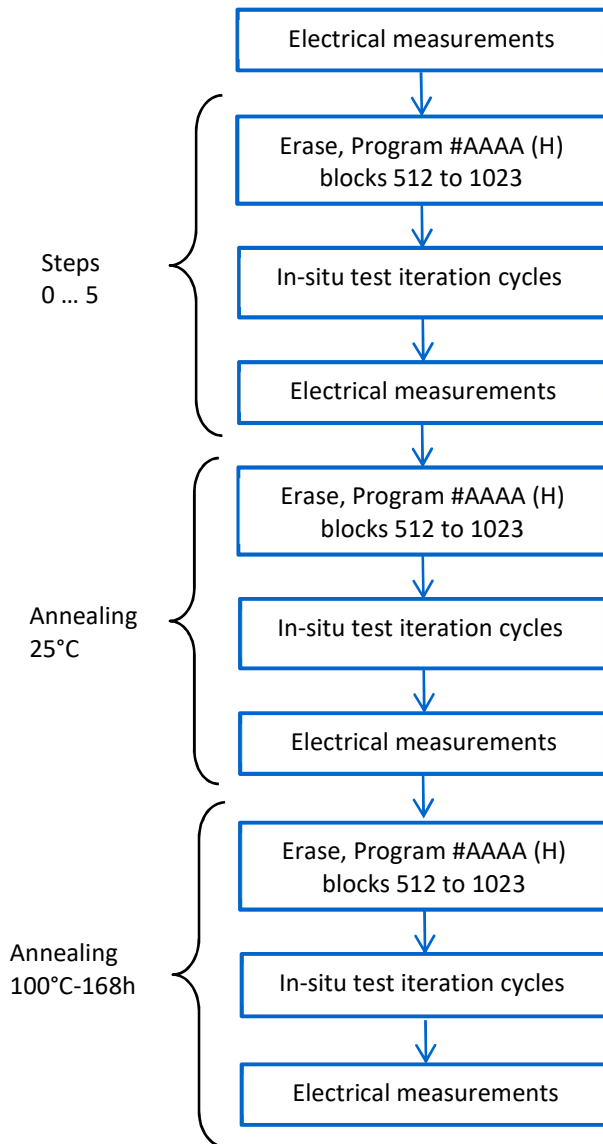



FIGURE 10: High duty cycle in-situ test flow chart.

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11.4 Low duty cycle (LDC) bias

Campaign start date: 19/06/2016 11:36

Campaign end date: 11/07/2017 12:28

Step	Required Acc. Dose	Total Step Dose	Real Acc. Dose	Deviation	Dose rate	Exposure time	Date
LDC	rad (Si)	rad(Si)	rad(Si)	%	rad(Si)/h	(h)	-
0	0	0	0	0	0	--	19/06/2017
1	20000	20329	20329.3	1.6	300.3	67.70	22/06/2017
2	30000	6718	27047.0	9.8	300.3	22.37	23/06/2017
3	50000	20697	47743.7	4.5	300.3	68.92	26/06/2017
4	70000	20264	68007.9	2.8	300.3	67.48	29/06/2017
5	100000	26357	94365.3	5.6	300.3	87.77	03/07/2017
Annealing							
6	Ann24h@25°C	24	--	--	--	--	04/07/2017
7	Ann168h@100°C	168	--	--	--	--	11/07/2017

Note 1: Exposure have been stopped after 100krad(Si) step, by customer request.

11.4.1 Test flow

Excepted block 0 and 1, all other blocks are written with hexadecimal pattern AAAA at the beginning of irradiation campaign.

Then, blocks 2 to 511 are written with hexadecimal pattern AAAA at the beginning of each step. These blocks are erased/programmed and read during exposure and annealing.

Otherwise, blocks 512 to 1023 are only read during exposure and annealing.

The following test sequence is applied during exposure and annealing:

1. Read NOR flash DUT ID code
2. Erase/Program blocks 2 to 511 with hexadecimal pattern AAAA
3. Read NOR flash DUT ID code
4. Read blocks 512 to 1023 and check for errors
5. Read blocks 2 to 511 and check for errors
6. Erase/Program blocks 2 to 511 with hexadecimal pattern 5555
7. Read blocks 2 to 511 and check for errors
8. Erase/Program blocks 2 to 511 with hexadecimal pattern AAAA
9. Read blocks 2 to 511 and check for errors
10. Wait for an exposure time equivalent to about 1krad (Si)
11. Loop to step 3

¡Error! No se encuentra el origen de la referencia. represents the in-situ test iteration cycle, i.e. from step 3 to step 10. **¡Error! No se encuentra el origen de la referencia.** represents the entire LDC test flow including electrical measurements steps that were applied to the DUTs.

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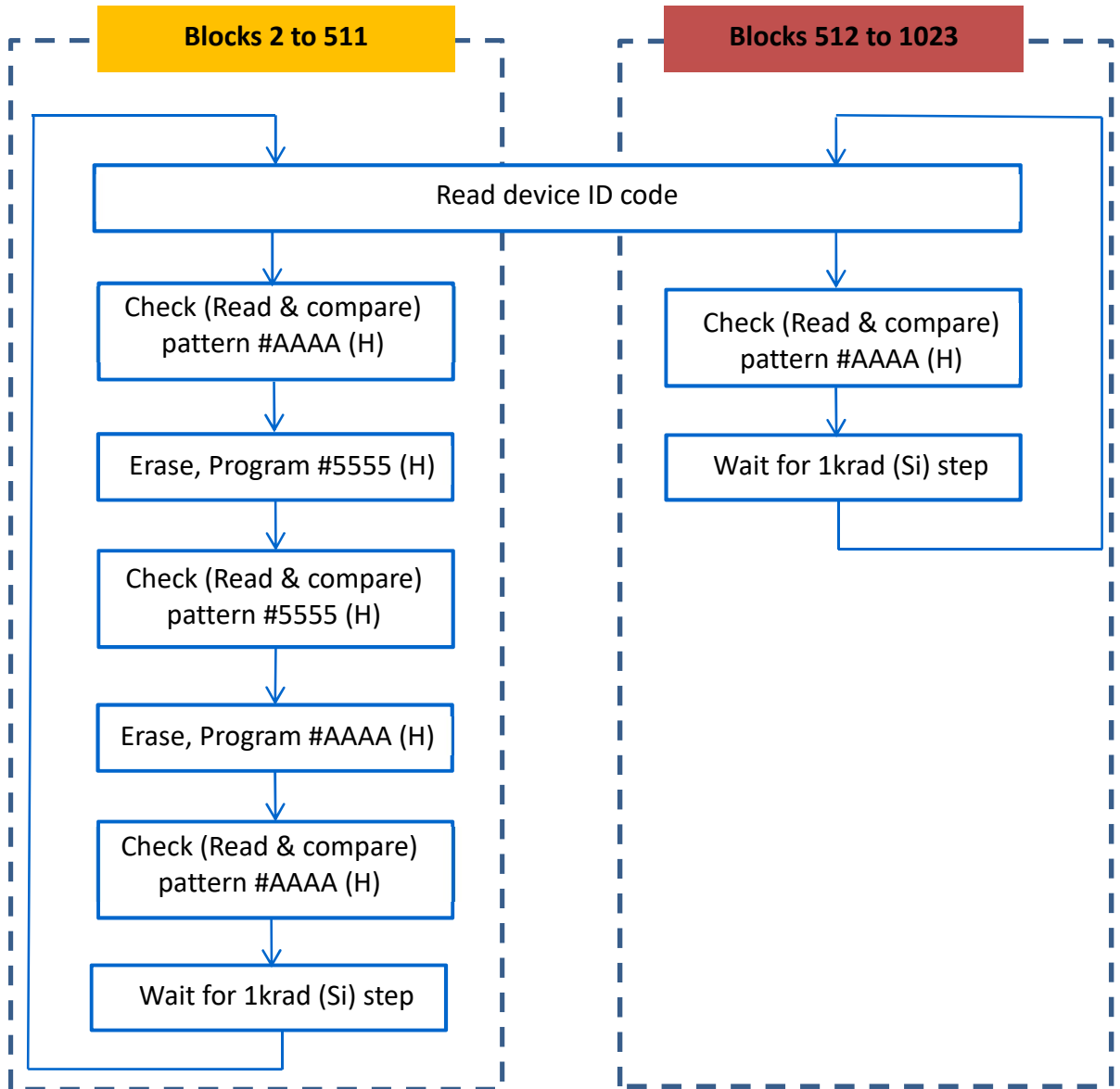


FIGURE 11: Low duty cycle in-situ test iteration cycle flow chart.

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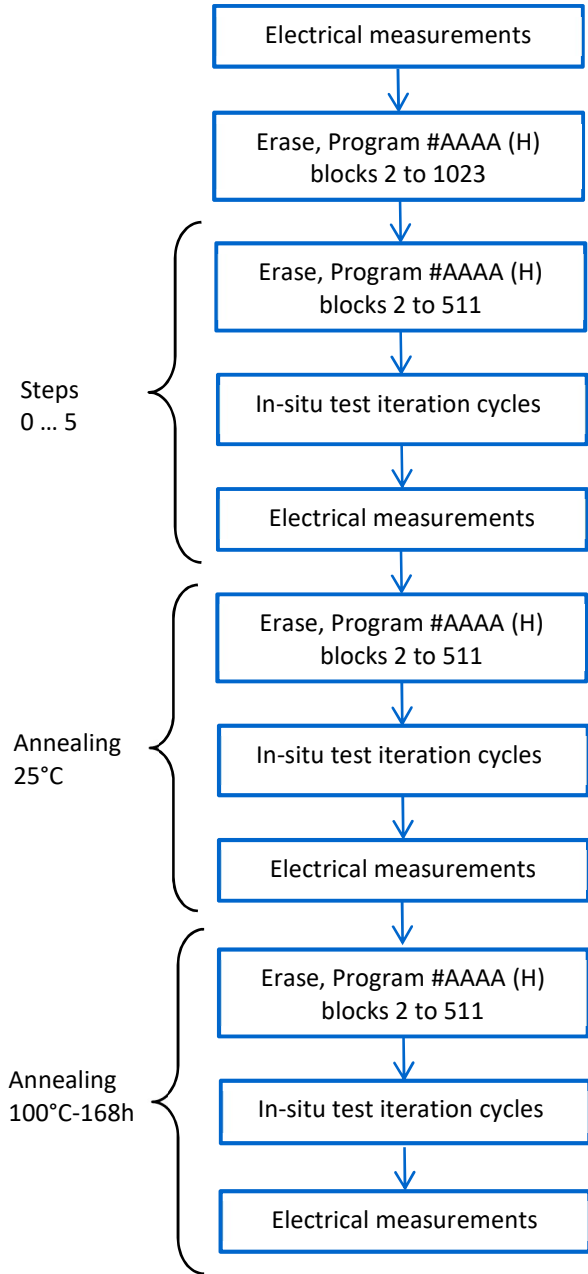



FIGURE 12: Low duty cycle in-situ test flow chart.

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11.5 Test operations

Below are given some precisions for the test operations.

Erase: for each block of the nor flash memory device, up to 2 erase commands are sent. If the DUT raises an erase failure at the second tentative, the test program jumps to next block without executing program command. An erase failure is detected if one of the following three cases occurs: 1) failed to reset the device, i.e. the DUT remains busy (R/B# low) after physical reset; 2) the device raises a fail status flag; 3) the erase operation time duration exceeds the maximum block erase time specified in the device datasheet.

Program: for each block of the nor flash memory device, if erase was successful, up to 2 program commands are sent. If a page program fails, the block is re-erased before being reprogrammed. If the DUT raises a program failure at the second tentative, the test program jumps to next block.

A program failure is detected if one of the following three cases occurs: 1) failed to reset the device, i.e. the DUT remains busy (R/B# low) after physical reset; 2) the device raises a fail status flag; 3) the page program operation time duration exceeds the maximum page program time specified in the device datasheet.

Read: for each block, each data word (16 bits) is read and compared with the pattern being written previously. If data read is different from the pattern, an error is detected.

Read device ID code: reads device electronic signature which is composed of manufacturer code and device's codes like specified in component's datasheet. This command serves to test the DUT access status.

12 TEST RESULTS


Results are transmitted via an Ethernet network from the supervisor boards to the laptop pc situated outside the exposure room.

The results consist in:

- Board level:
 - Program/Erase duration: presents the evolution of the time duration in seconds of erase/program operation.
- DUT level:
 - Erase/Program: contains the results of erase/program operations.
 - Failed erase blocks (E).
 - Failed program blocks (P).
 - Failed blocks (E+P).
 - Read: contains the results of read operations.
 - Blocks with minimum 1 word (16 bits) in error.
 - Blocks with 90% words in error.
 - Words in error: total number of words in error per device
 - DUT access status: contains the device identification (read device ID)

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operation results.

- Identification ok.
- Identification wrong.
- Reset failed.

Figures in 0 present the bias boards supply currents. There are 5 DUTs on each bias board. We can observe that above an irradiation dose of 30krad, current supplies became irregular, especially the current supply of the core (Vcc).

In the following figures representing test results, firstly in sections 4.2 to 4.9 the duration of Program/Erase operations of each board are presented for each step. This time duration is expressed by devices bias board (each devices bias board contains 5 devices). The rest of sections presents the results per DUT.

Secondly, the number of blocks with Erase / Program failure are represented for each step. As explained previously, an Erase / Program failure is registered, only after 2 unsuccessful tentative, if one of the following three cases occurs: 1) failed to reset the device, i.e. the DUT remains busy (R/B# low) after physical reset; 2) the device raises a fail status flag for the erase / program operation; 3) the erase / program operation time duration exceeds the maximum erase / program time specified in the device datasheet.

In addition, if the DUT raises a block erase failure (at the second tentative), the concerned block won't be programmed. Furthermore, the number of blocks (E+P) with either an erase or program failure is represented.


Thirdly, the number of blocks having at least 1 word in error and blocks having more than 90% of their bytes in error are represented respectively. Additionally, the total number of words in error in the read blocks are represented. Please note that when failing to access the device (device remains busy after reset), the number of blocks with 90% words in error and number of words in error will be left equal to 0 while the number of blocks with minimum 1 word in error will be set to all blocks.

Finally, the DUT access status is showed. Identification ok means that the read device ID is conformed to the attended device ID like specified in the device datasheet. Identification wrong means that the read device ID is different from the attended device ID. Reset failed is indicated if there is a fail to reset the device, i.e. device remains busy (R/B# low) after physical reset. The latter state may be interpreted as the device is not responding anymore (broken).

Erase, program duration pattern 0x5555 / 0xAAAA (board):

In LDC bias, till an irradiation dose of 50krad the duration has increased approximately at a constant rate. In step 4, between 50krad and 70krad, at first the rate of increment continues but later there is an abrupt raise of time duration simultaneously with sudden fail to program all blocks and DUTs access status changing from identification ok to identification wrong. After this abrupt raise, the duration continues to increase but at a higher rate than before. At the beginning of step 5, a second abrupt raise much more important is observed simultaneously with all blocks erase/program status changing

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from program fail to erase fail. After that, in step 5, the duration remains roughly constant. During annealing at room temperature, no erase/program operations were done given that all blocks were in erase failure state all through step 5. Finally, the duration decreases significantly during annealing at 100°C and reach at the end of it the same level as that of the end of step 3 (50krad).

In HDC bias, till an irradiation dose of 50krad the duration has increased approximately at a constant rate. At the middle or end of step 4, between 50krad and 70krad, at first the rate of increment continues but later there is an abrupt raise and it stops working at the middle or end of step 5, between 70krad and 100krad. Finally, the DUTs do not recover during the annealing processes.

Erase, program, pattern 0x5555 / 0xAAAA (DUT blocks 2 to 511):

Same behavior was observed for both written patterns 0x5555 and 0xAAAA in either LDC or HDC biases.

In LDC bias, in average the DUTs start to have failed programming in all blocks from the middle of step 4 (50krad to 70krad). From the beginning of step 5 (70krad to 100krad), it changes from programming problems to failed erasing blocks in all blocks. Please note that erase/program operations were interrupted in the second halves of step 4 and step 5 for 0xAAAA and 0x5555 patterns respectively due to technical issues in the user interface software. At the beginning of the second annealing process, the DUTs have failed erasing in all blocks till the middle of the process where the devices recover abruptly to have no errors again.

In HDC, in board 3, there is heterogenous behavior where for almost all DUTs programming and erasing failures appear in step 4 (50-70 krad) and 5 (70-100 krad). At the end of step 5 (70-100 krad) all the DUTs have erasing problems in all blocks. All the DUTs continue with this behavior in both annealing processes. Regarding board 4, in most cases, in the middle of step 4 (50-70 krad) commence to occur failed programming in all blocks. During step 5 (70-100 krad), it changes to failed erasing in all blocks. These failures continue during both annealing processes.

Read pattern 0x5555 (blocks 2 to 511):


In LDC bias, the DUT errors suddenly raise to have all blocks with at least 90% words in error during step 3 (30-50 krad). The errors persist till the second annealing, where all the DUTs are recovered at the end.

In HDC bias, the DUT errors rapidly raise to have all blocks with at least 90% words in error during step 3 (30-50 krad) or beginning of step 4 (50-70 krad). In general, the DUT continue to have minimum 1 word in error during step 5 (70-100 krad) and during both the annealing processes. This is due to DUT reset failed status. (Note 3)

Read pattern 0xAAAA (blocks 2 to 511):

In LDC bias, in general, suddenly start to have all blocks with at least 90% words in error at the middle of step 4 (50-70 krad). These errors persist until the second annealing (100°C) where at the end all the DUTs are recuperated.

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In HDC bias, in general, suddenly start to have all blocks with at least 90% words in error at the middle of step 4 (50-70 krad). In most of the DUTs, the DUT continue to have minimum 1 word in error during step 5 (70-100 krad) and during both the annealing processes. (Note 3)

Read only, pattern 0xAAAA (blocks 512 to 1023):

In LDC bias, in general, suddenly start to have all blocks with at least 90% words in error at the middle of step 4 (50-70 krad) or beginning of step 5 (70-100 krad). These errors persist until the second annealing (100°C) where at the end all the DUTs are recuperated.

In HDC bias, the DUTs start to have all blocks with minimum 1 word in error from middle step 4 (50-70 krad) to end of step 5 (70-100 krad). In certain cases, the error changed from minimum 1 word in error to at least 90% words in error in all blocks during step 5 (70-100krad). The annealing processes are not able to recover the DUTs which continues with all the blocks with minimum 1 word in error due to devices reset failed status. (Note 3)

DUT access status:

In LDC bias, the identification is ok till middle to end of step 4 (50-70 krad). In general, the DUTs continues with wrong identification till the second annealing (100° C) when they recover the correct identification.


In HDC, the identification changes from ok to wrong or even reset failed heterogeneously from step 4 (50-70 krad) to step 5 (70-100 krad). There are diverse points where the DUTs change from identification ok or wrong to reset failed. During the second annealing (100°C), all the DUTs are in reset failed status. However, we can observe a recover of identification ok status at the beginning of each step where DUTs are subject to a power reset.

To conclude, above an irradiation dose threshold of about 30 krad, DUTs were widely affected by erase/program failures and data errors. In read only mode (blocks 512 to 1023), above an irradiation dose threshold of about 50 krad, DUTs were widely affected by data errors. There is a significant difference in results observed between HDC and LDC biases. During the second annealing (100°C) the LDC DUTs recovered their functionality, while HDC ones continue with failures. Moreover, HDC DUTs suffered of reset failed status starting from step 4 and till the end of campaign. However, a power reset seems to recover the identification ok status.

Notes:

- 1- DUT 0 in board 1 had connectivity problems. The data shown here are not representative of the actual behavior of the device.
- 2- The bias board 4 power supply measurement was not functioning during step 3 due to technical difficulties.
- 3- The lack of data observed sometimes in results graphs for number of blocks with at least 90% words in error and number of words in error is due to device reset failed status (cf. DUT

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access status figures). As said previously, when failing to access the device (DUT access status is reset failed), the number of blocks with 90% words in error and number of words in error will be left equal to 0 while the number of blocks with minimum 1 word in error will be set to all blocks.

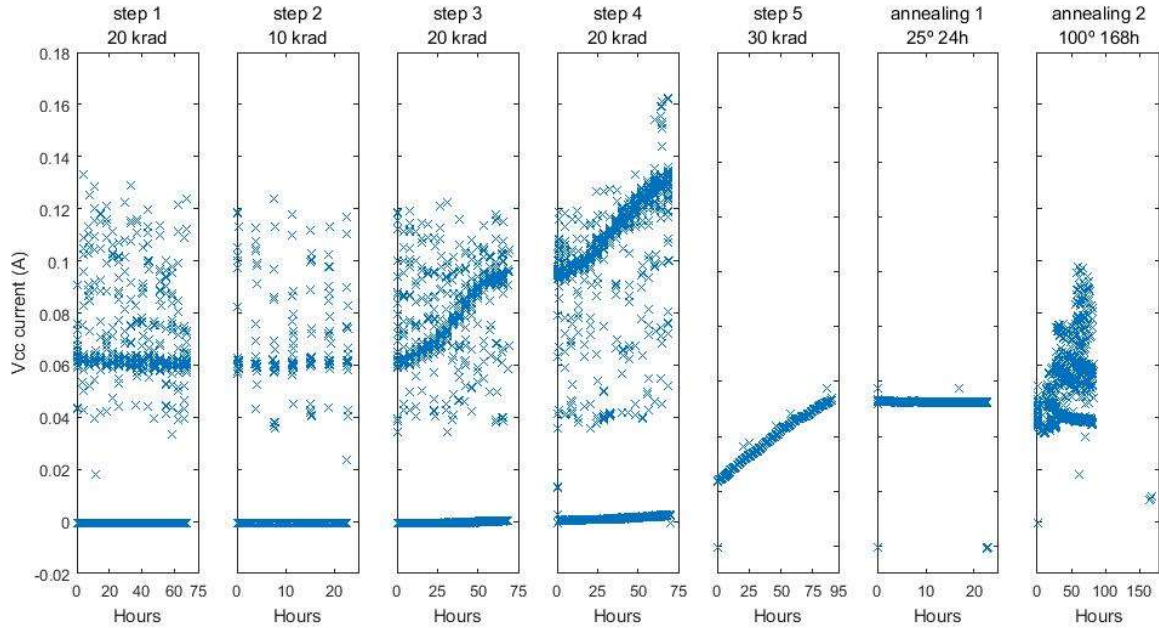
- 4- Board 1 & 2, step 4: in the second half of step 4, the operations read (check) pattern 0x5555 and erase/program pattern 0xAAAA were missed due to technical issues.
- 5- Board 1, step 5: in the second half of step 5, the operations erase/program pattern 0x5555 were missed due to technical issues.
- 6- Board 2, step 5: in the second half of step 5, the operations erase/program pattern 0x5555 and erase/program pattern 0xAAAA were missed due to technical issues.
- 7- Board 4, step 3: lack of data due to technical issues.
- 8- Board4, step 4: in the second half of step 4, the operations read (check) pattern 0x5555 and erase/program pattern 0xAAAA were missed due to technical issues.

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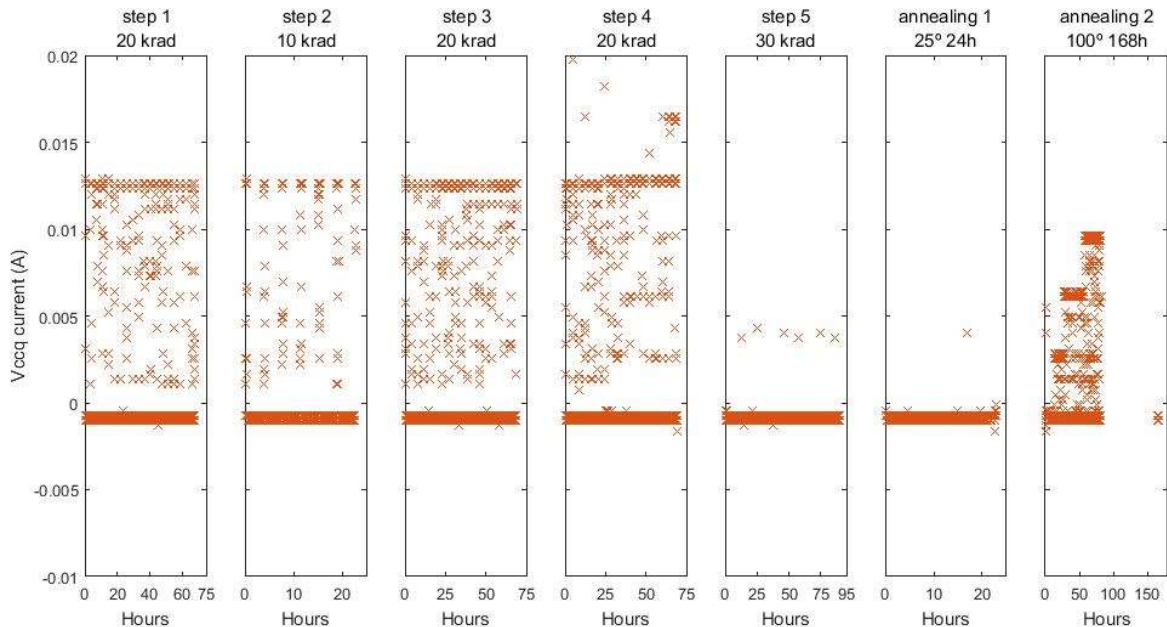
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12.1 DUT bias boards supply current

12.1.1 Board1 3V3 Vcc supply (A)



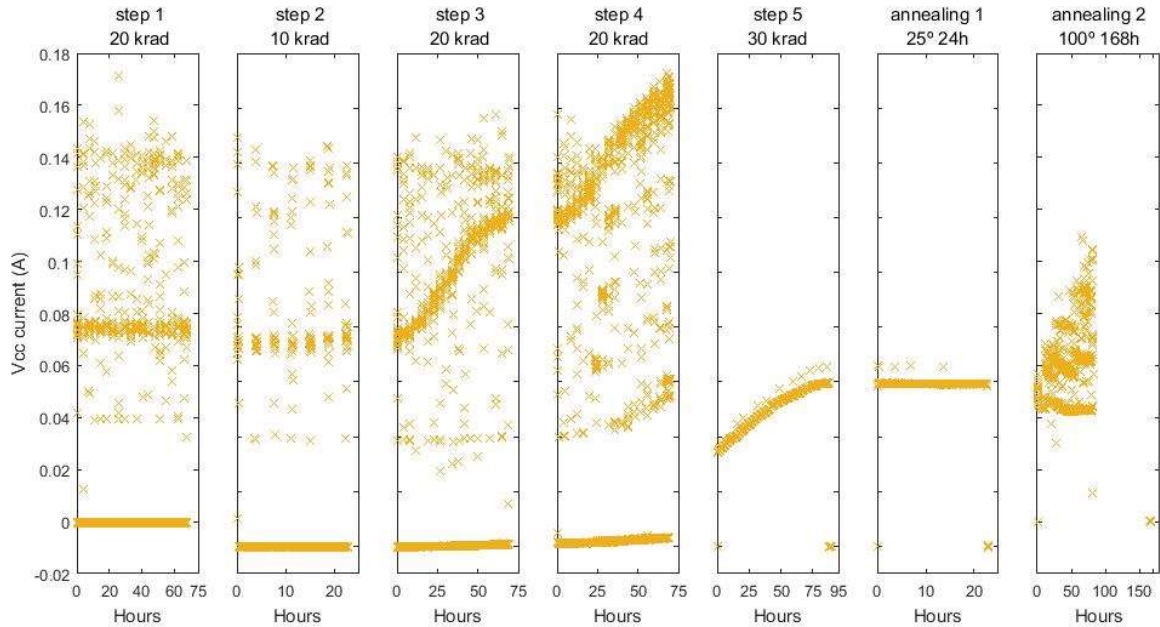
12.1.2 Board1 3V3 Vccq supply (A)



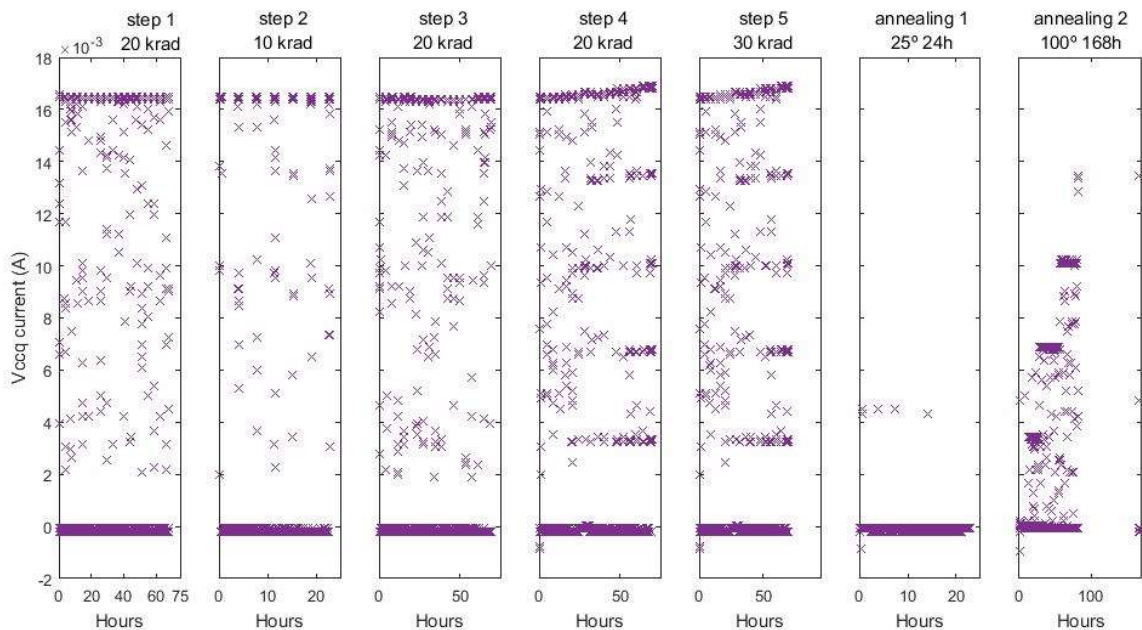
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12.1.3 Board2 3V3 Vcc supply (A)



12.1.4 Board2 3V3 Vccq supply (A)



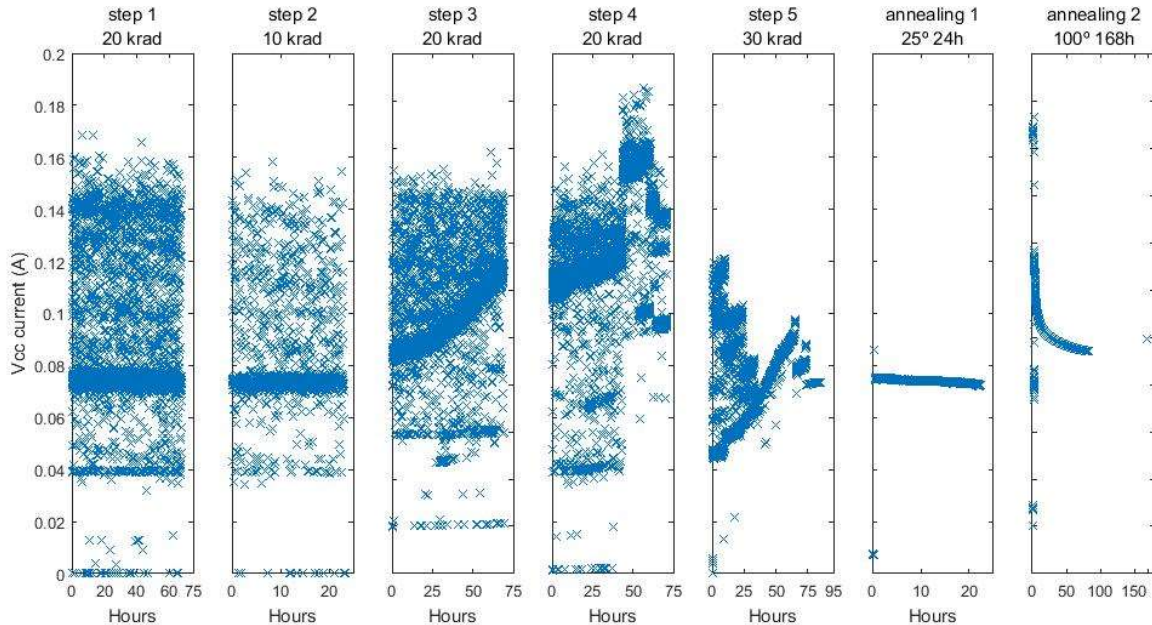
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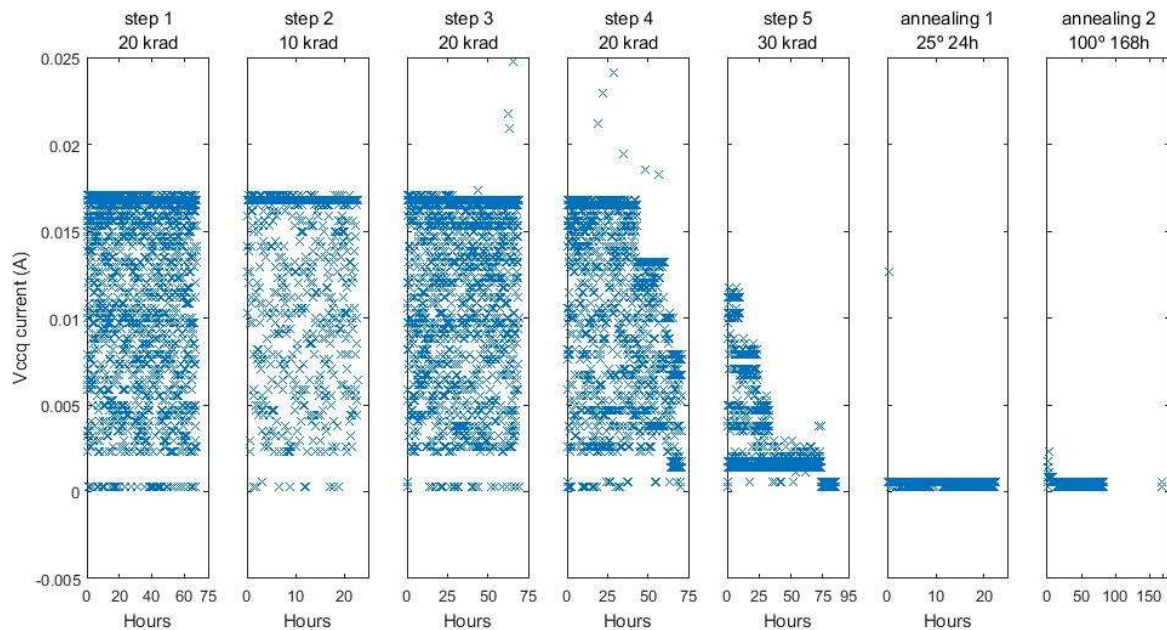


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12.1.5 Board3 3V3 Vcc supply (A)



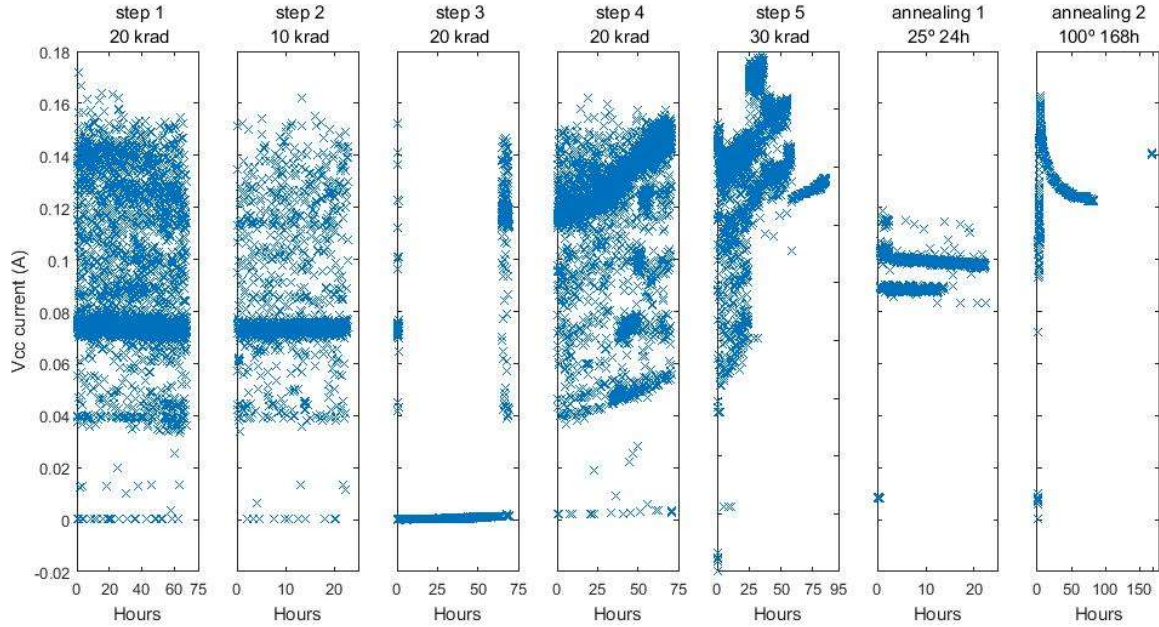
12.1.6 Board3 3V3 Vccq supply (A)



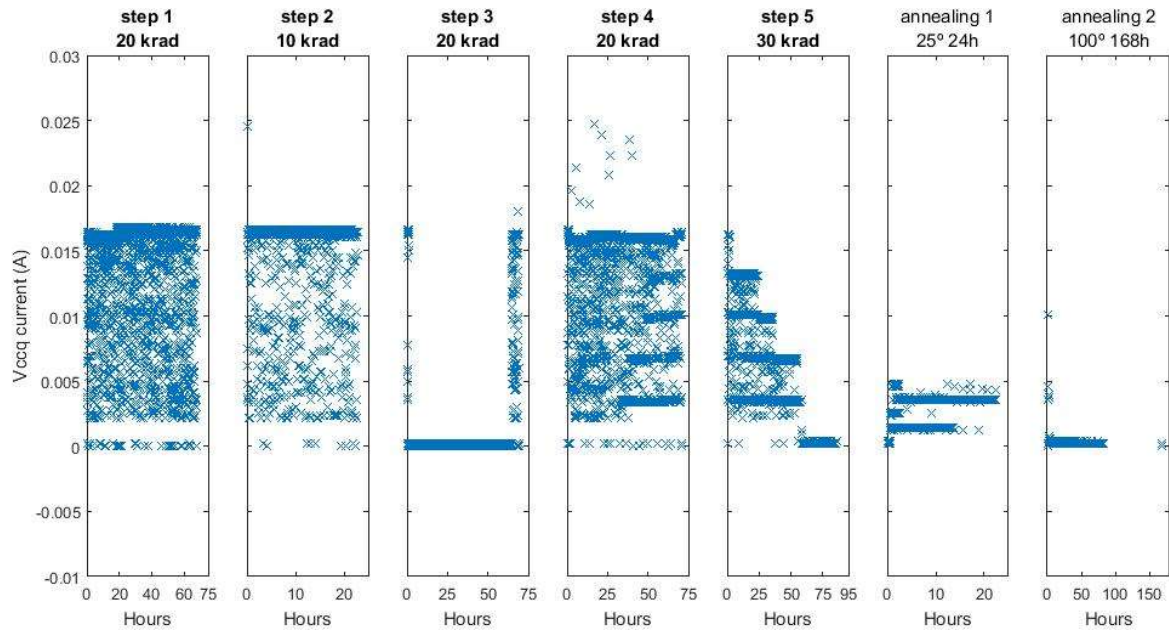
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12.1.7 Board4 3V3 Vcc supply (A)



12.1.8 Board4 3V3 Vccq supply (A)



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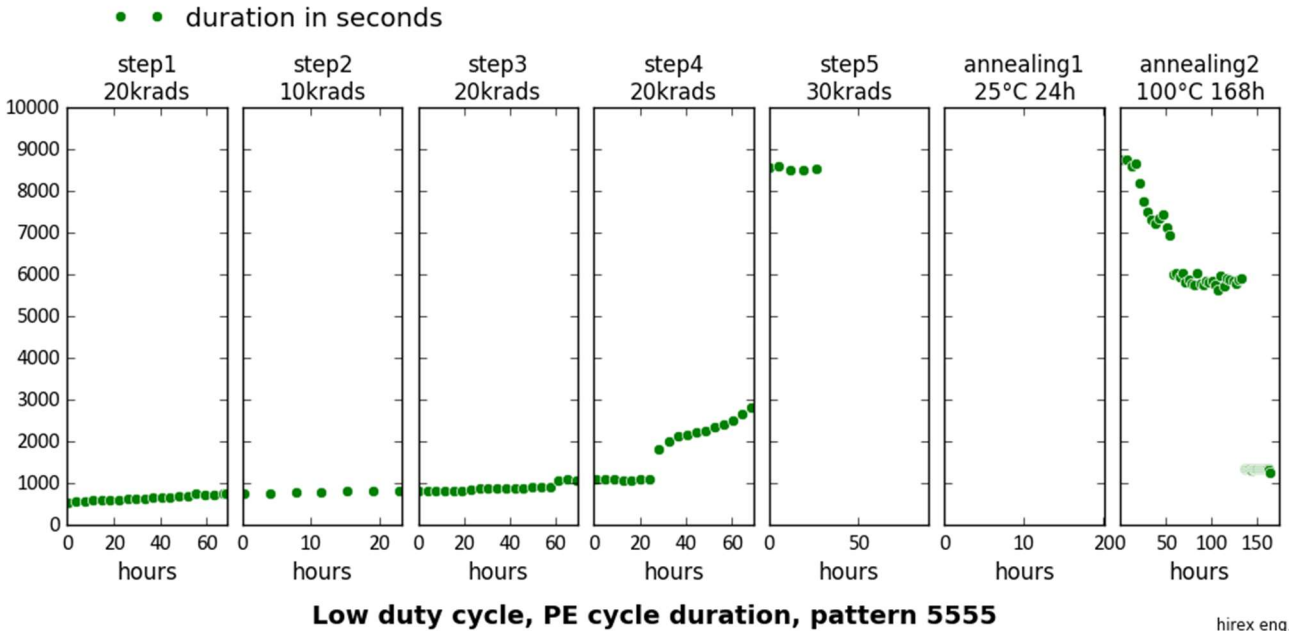
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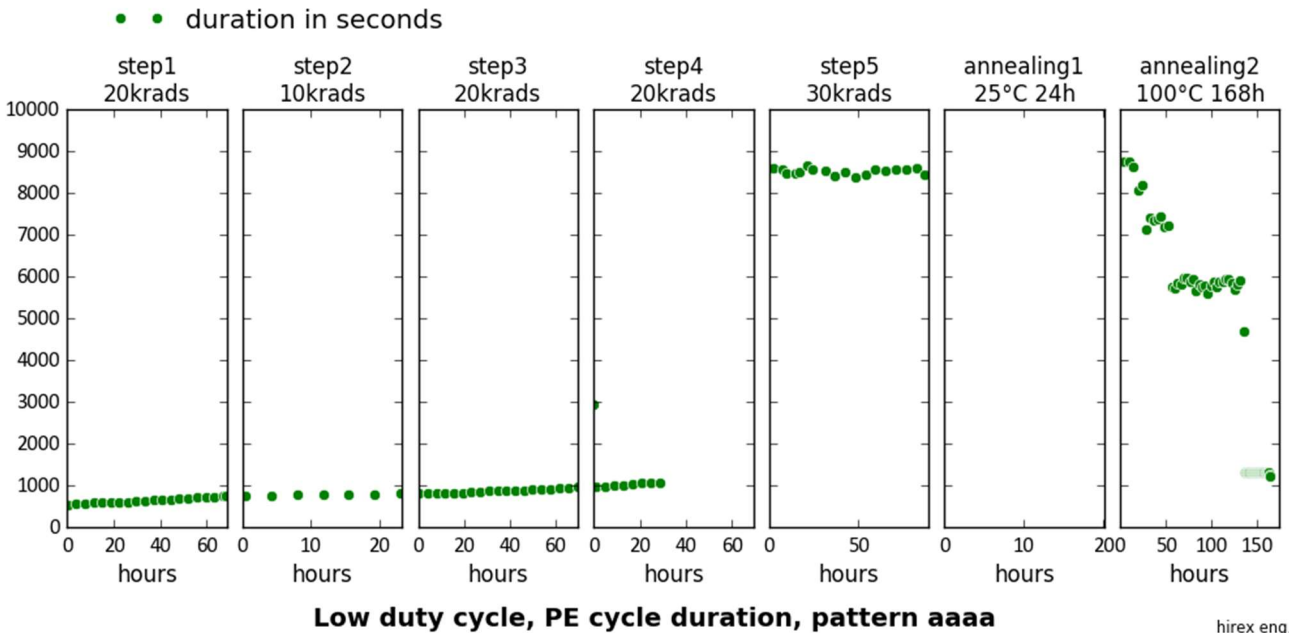
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12.2 Board1, Low Duty Cycle, Program/Erase Duration, Pattern 0x5555



12.3 Board1, Low Duty Cycle, Program/Erase Duration, Pattern 0xaaaa



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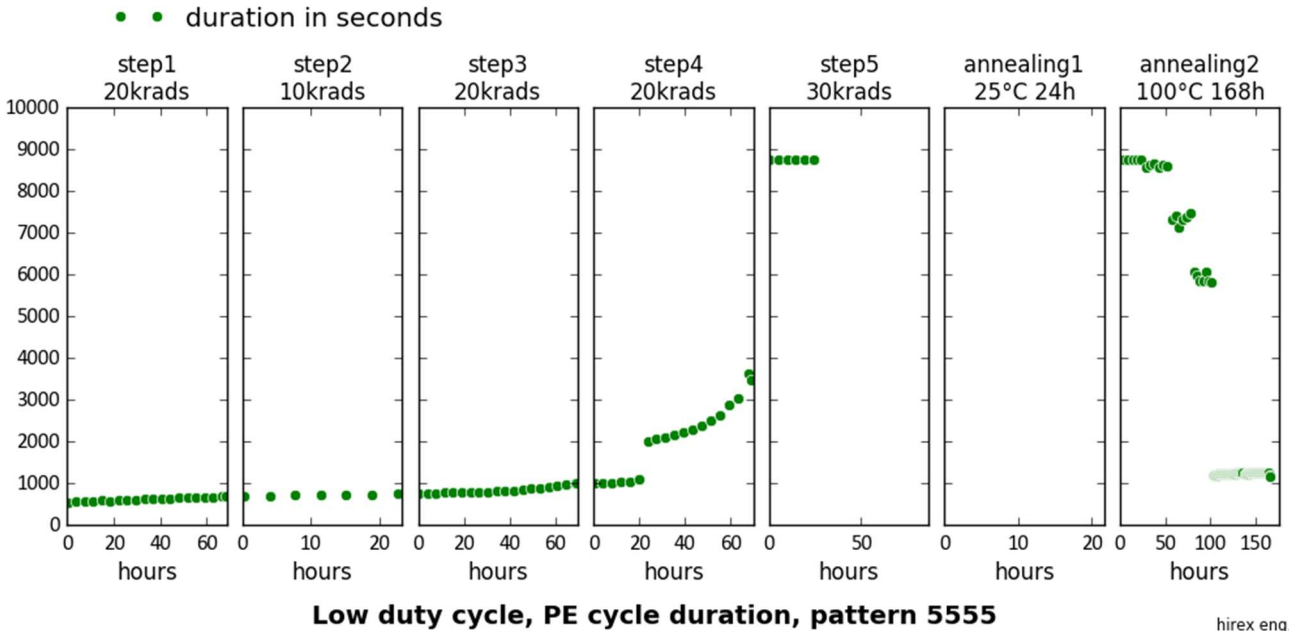
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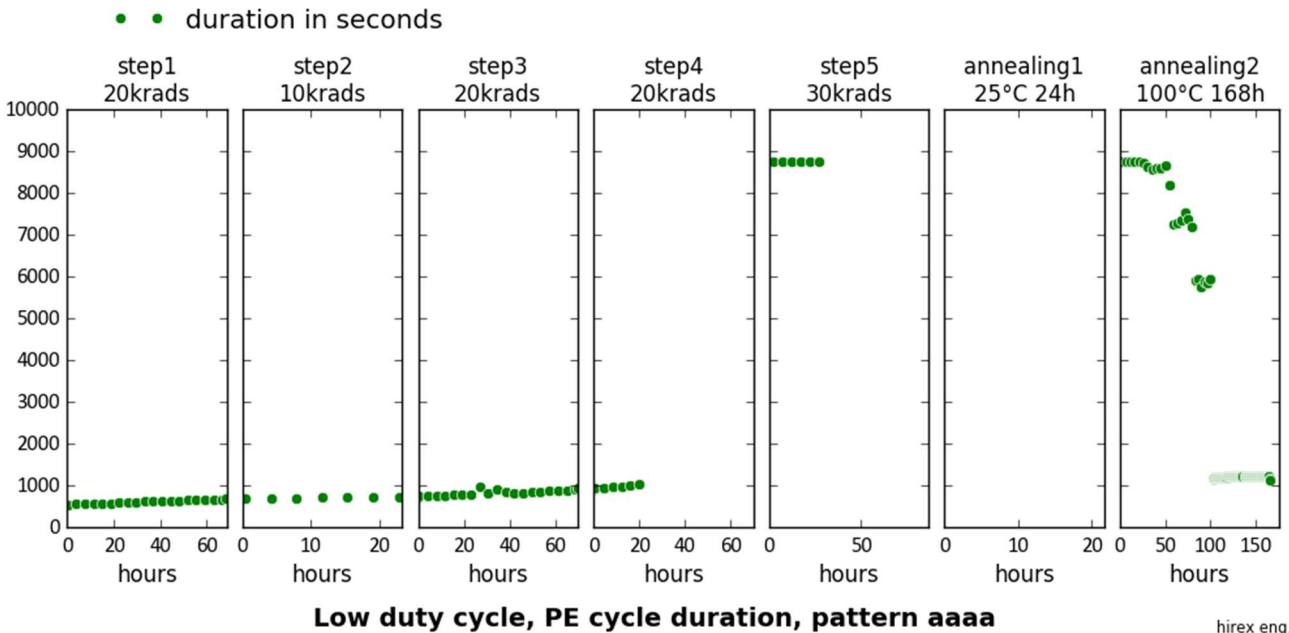
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12.4 Board2, Low Duty Cycle, Program/Erase Duration, Pattern 0x5555



12.5 Board2, Low Duty Cycle, Program/Erase Duration, Pattern 0xaaaa



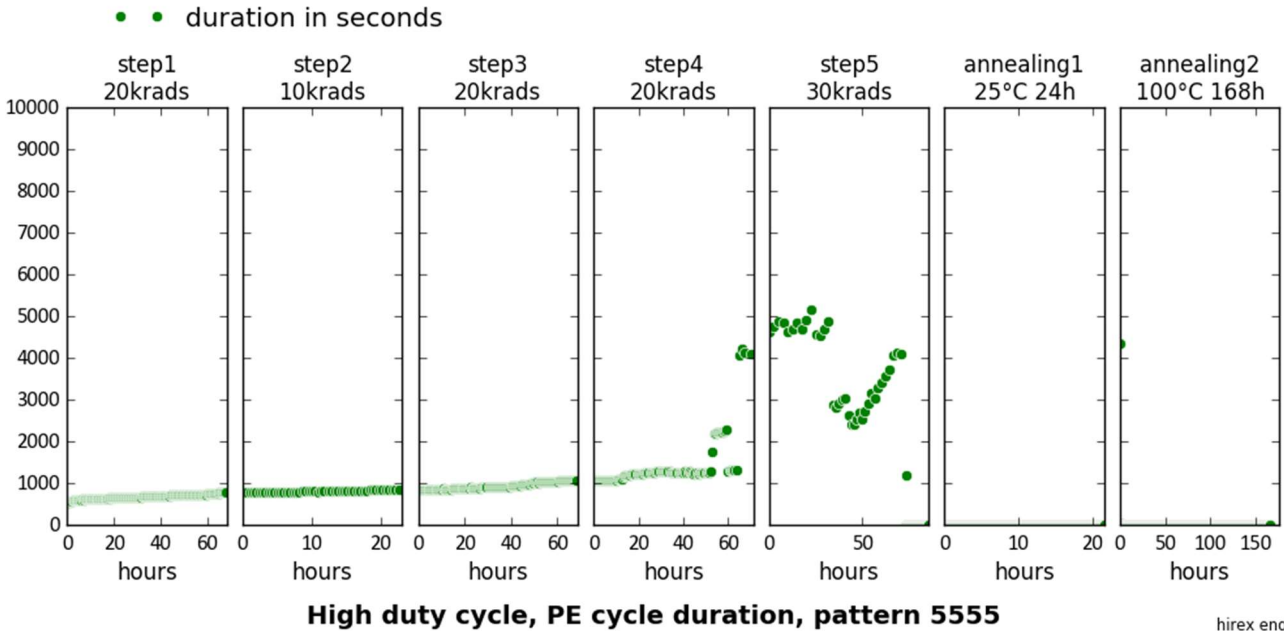
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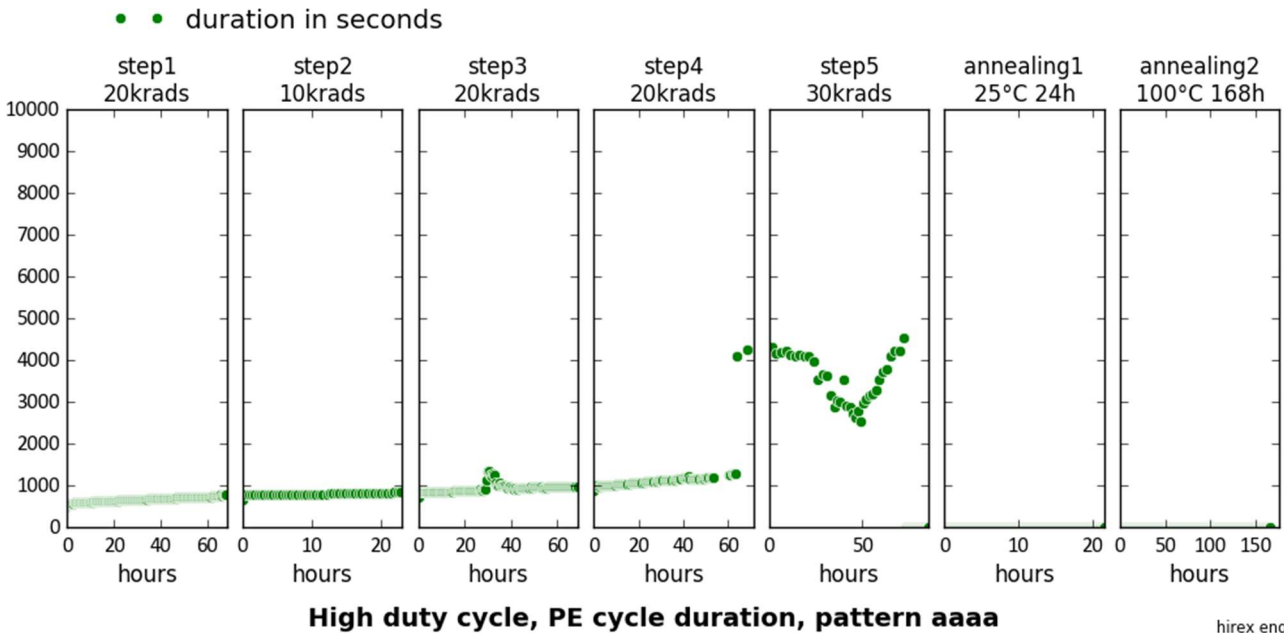


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12.6 Board3, High Duty Cycle, Program/Erase Duration, Pattern 0x5555



12.7 Board3, High Duty Cycle, Program/Erase Duration, Pattern 0xaaaa



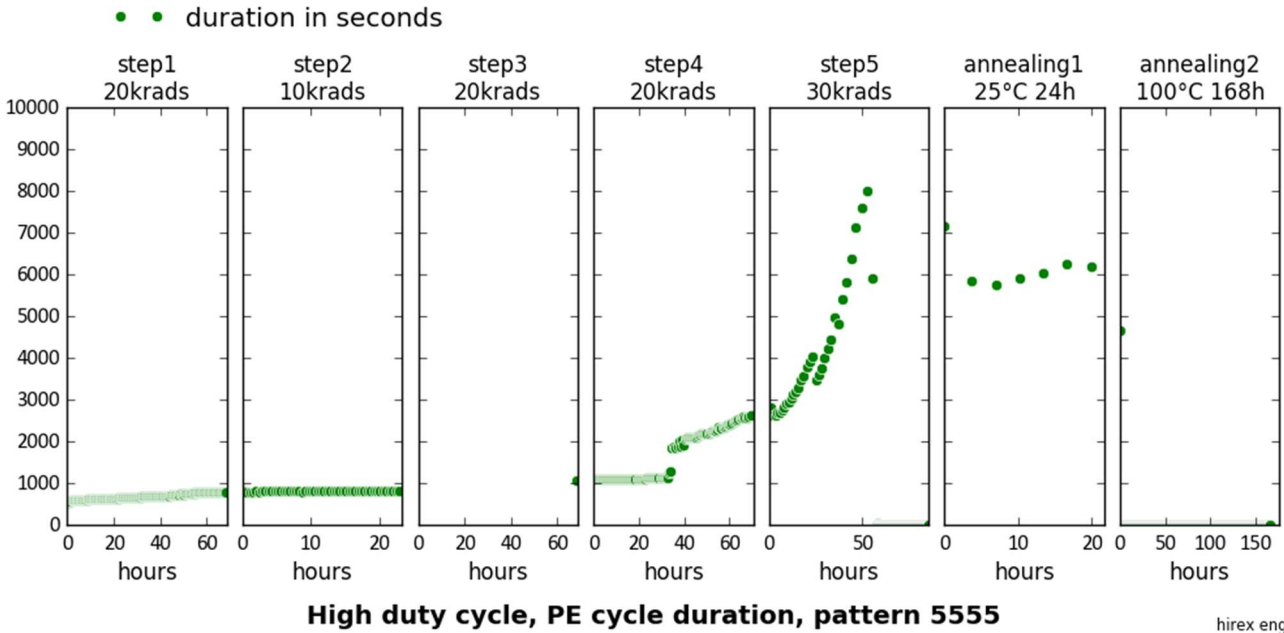
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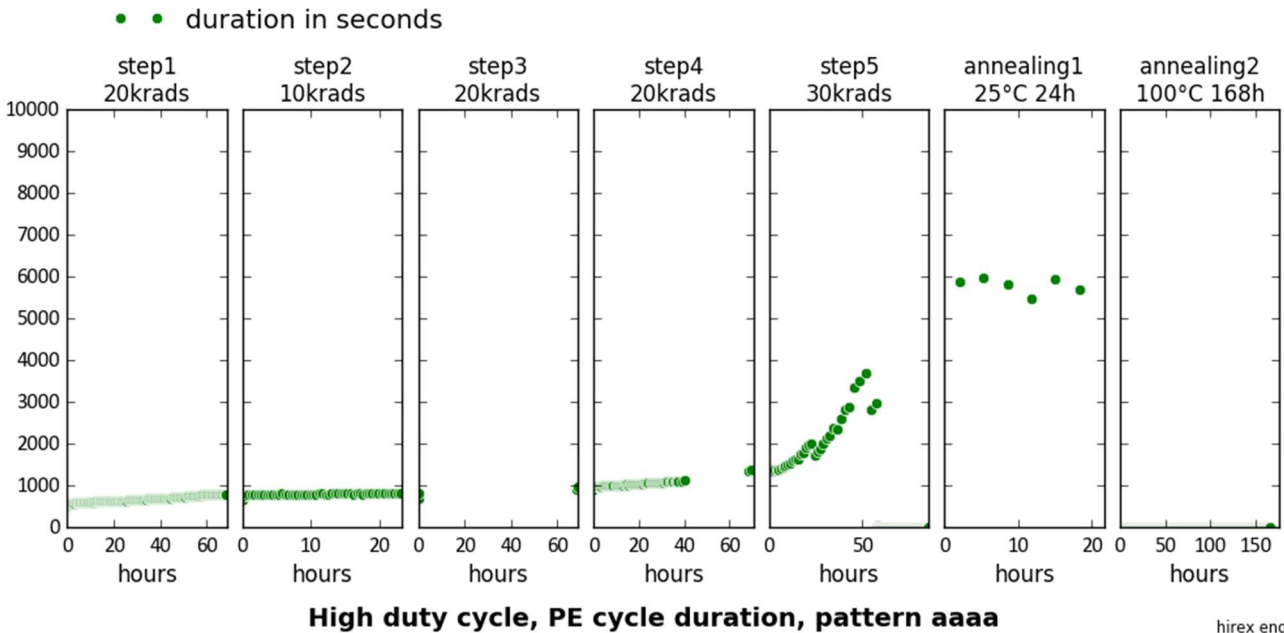


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12.8 Board4, High Duty Cycle, Program/Erase Duration, Pattern 0x5555




12.9 Board4, High Duty Cycle, Program/Erase Duration, Pattern 0xaaaa



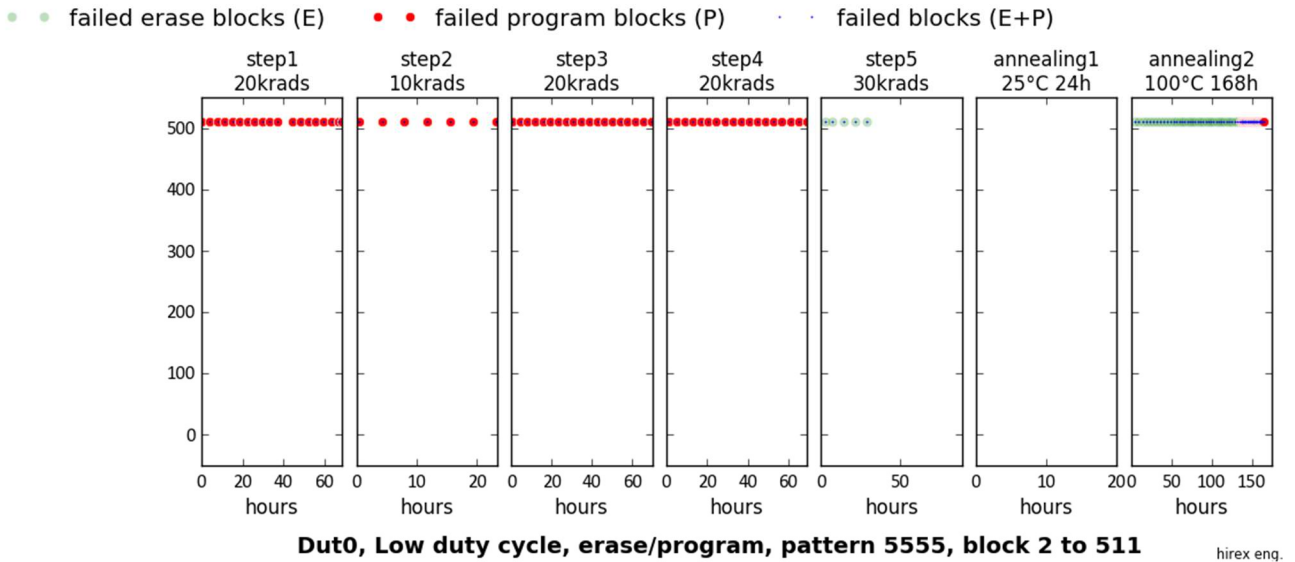
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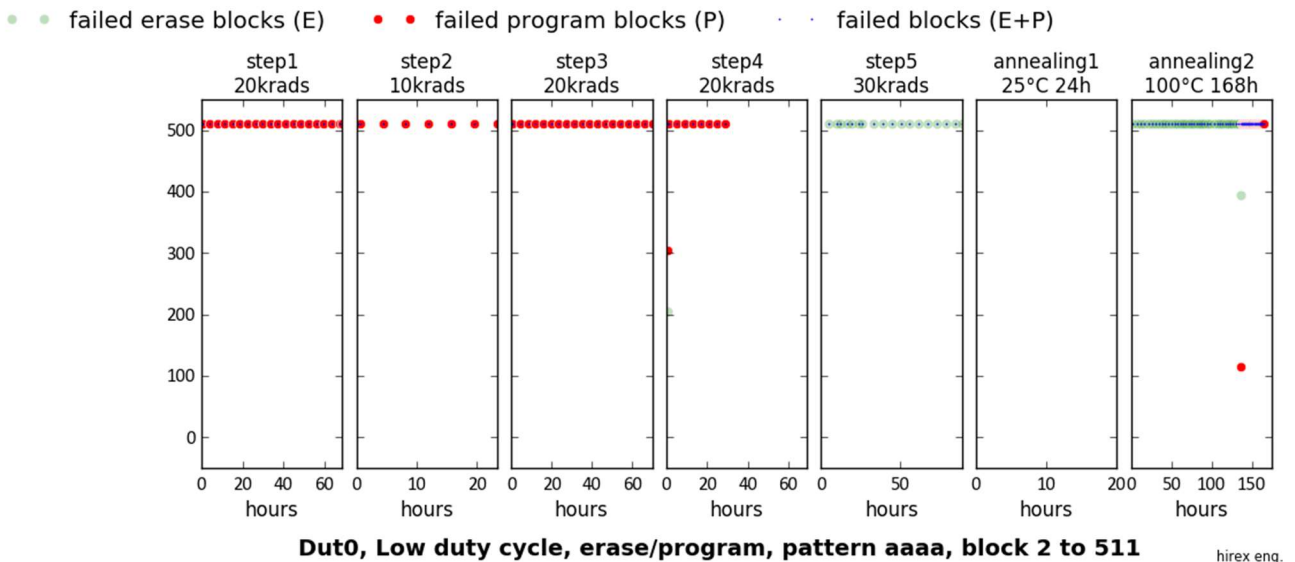
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12.10 DUT0 (Board 1), Low duty cycle

12.10.1 DUT0, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511



12.10.2 DUT0, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511



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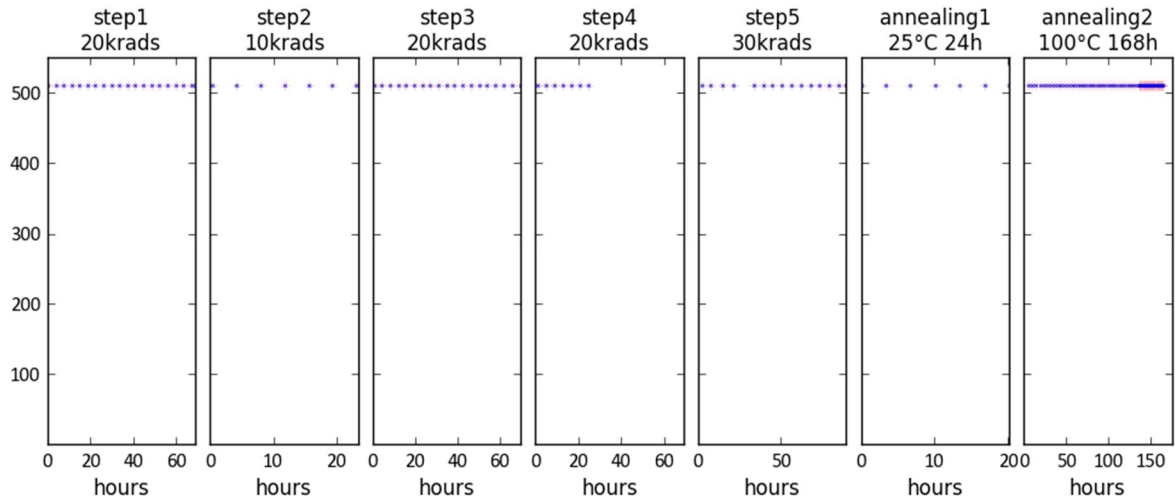
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12.10.3 DUT0, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

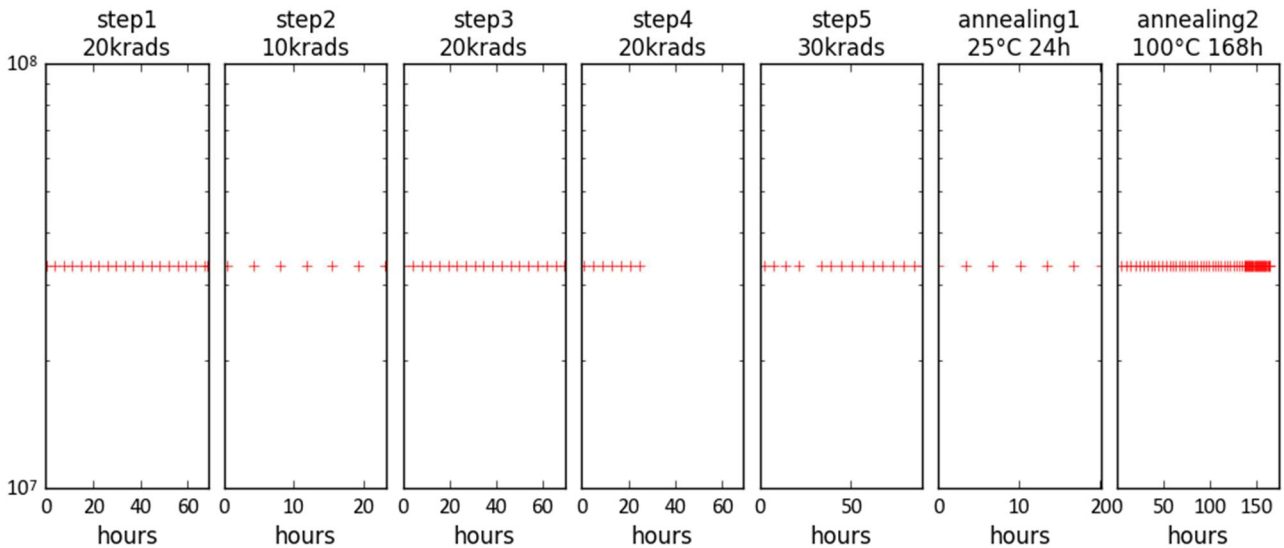
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut0, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut0, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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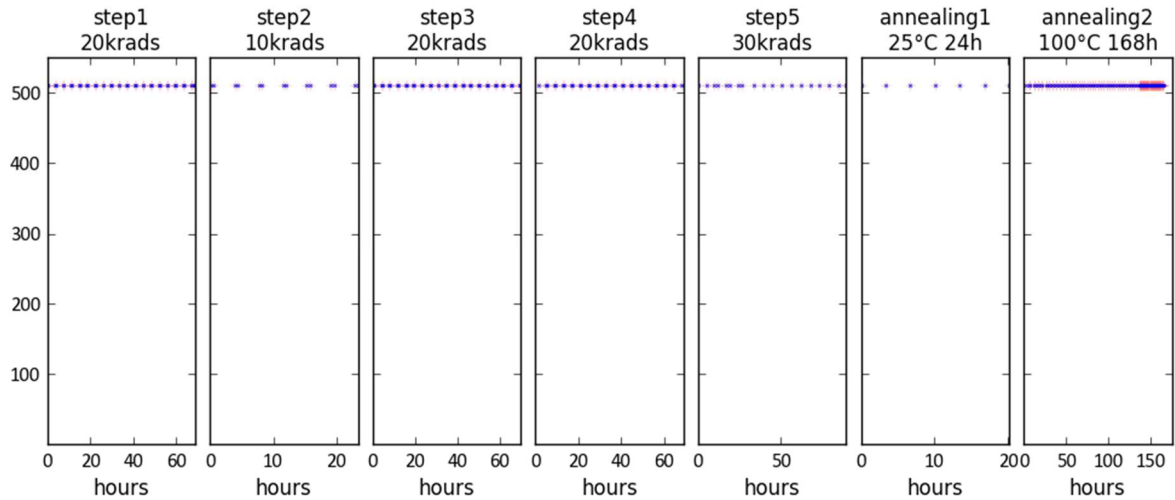
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12.10.4 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

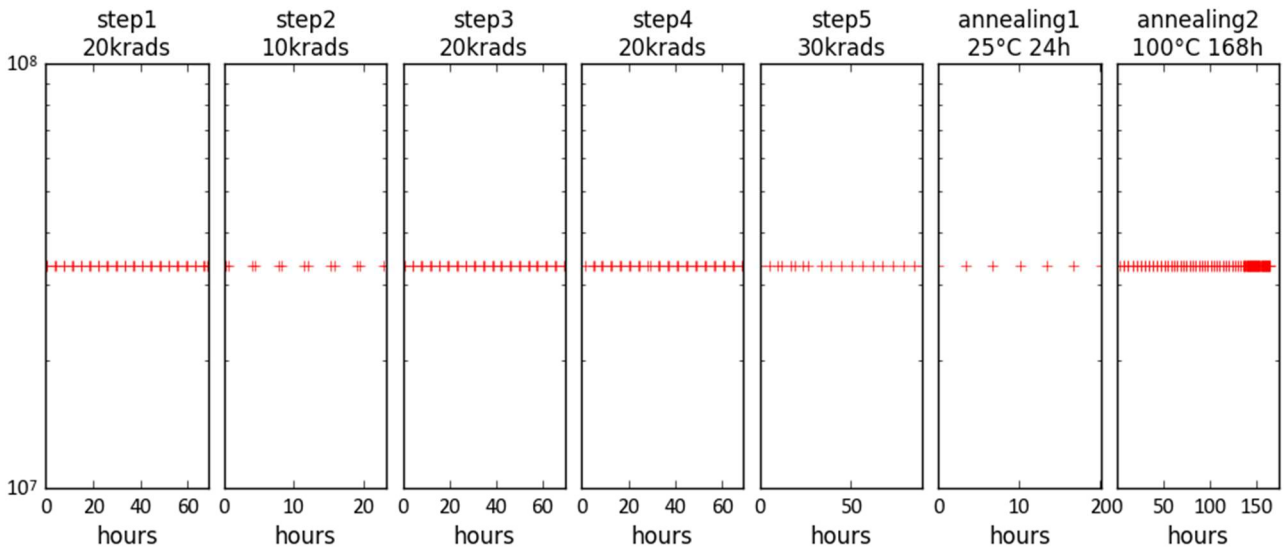
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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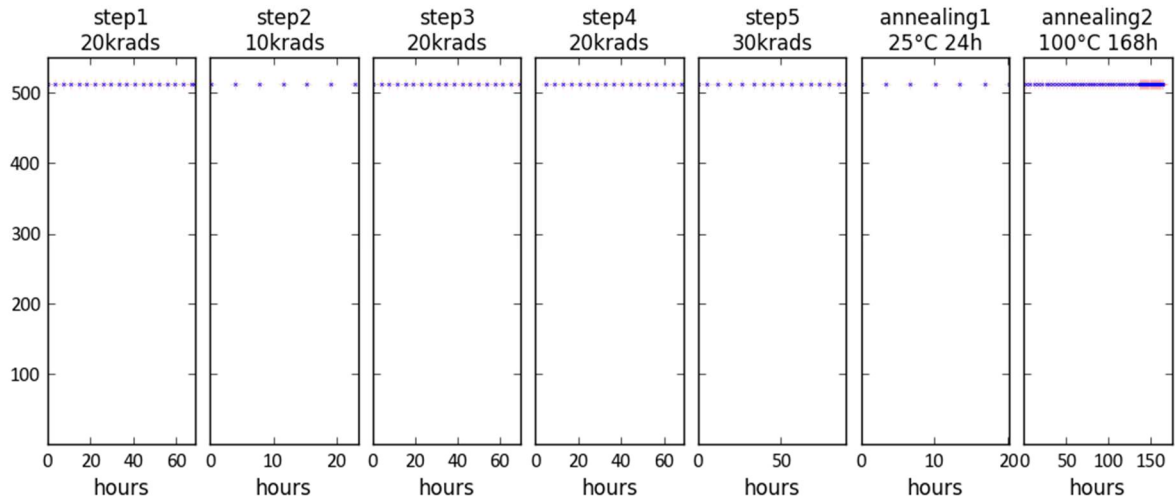
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12.10.5 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

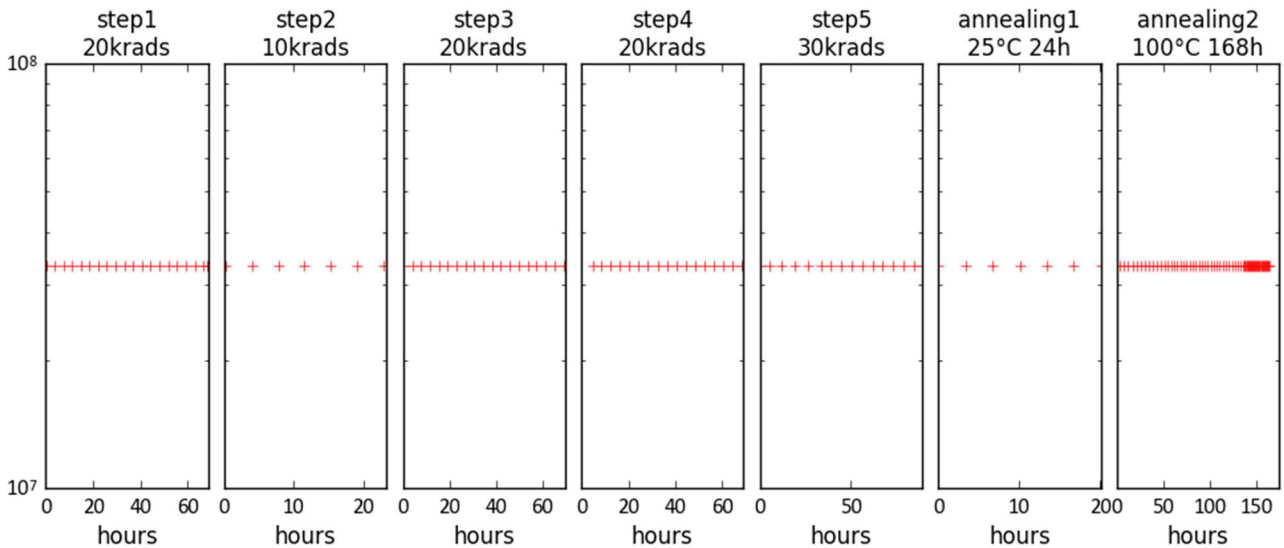
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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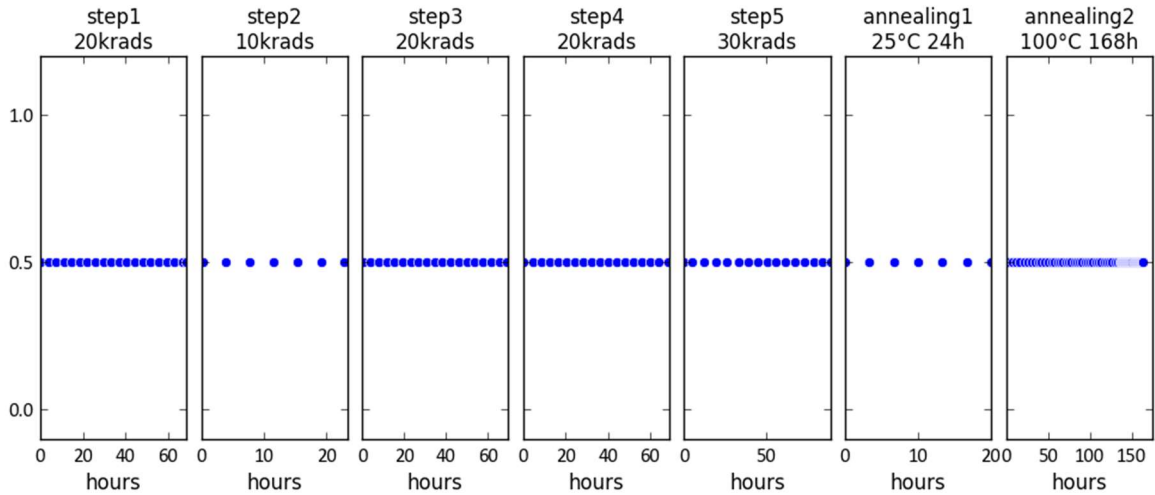


Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
D/C 1409	

ALTER TECHNOLOGY	
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12.10.6 DUT0, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut0, Low duty cycle, DUT access status

hirex eng.

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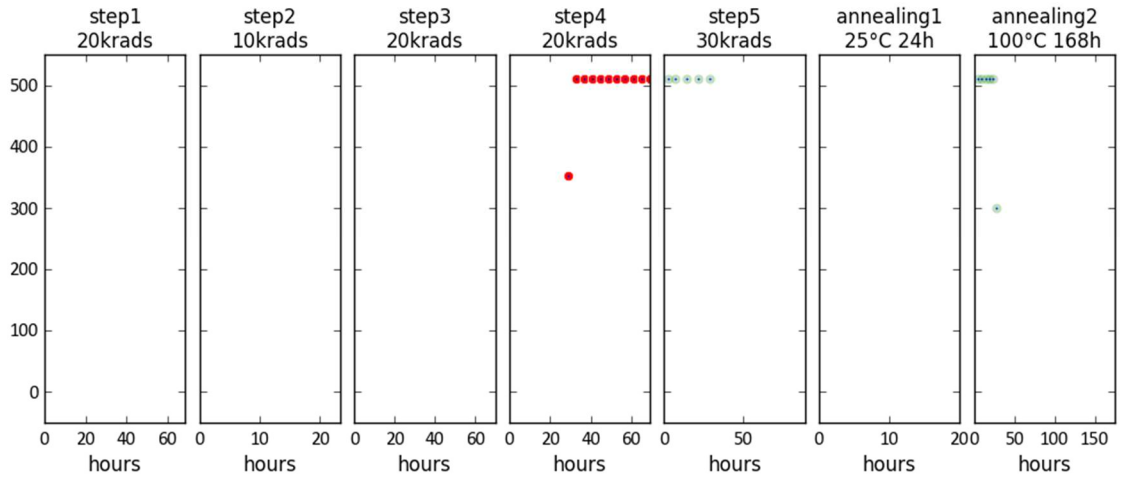
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12.11 DUT1 (Board 1), Low duty cycle

12.11.1 DUT1, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E)
 ● failed program blocks (P)
 ● failed blocks (E+P)

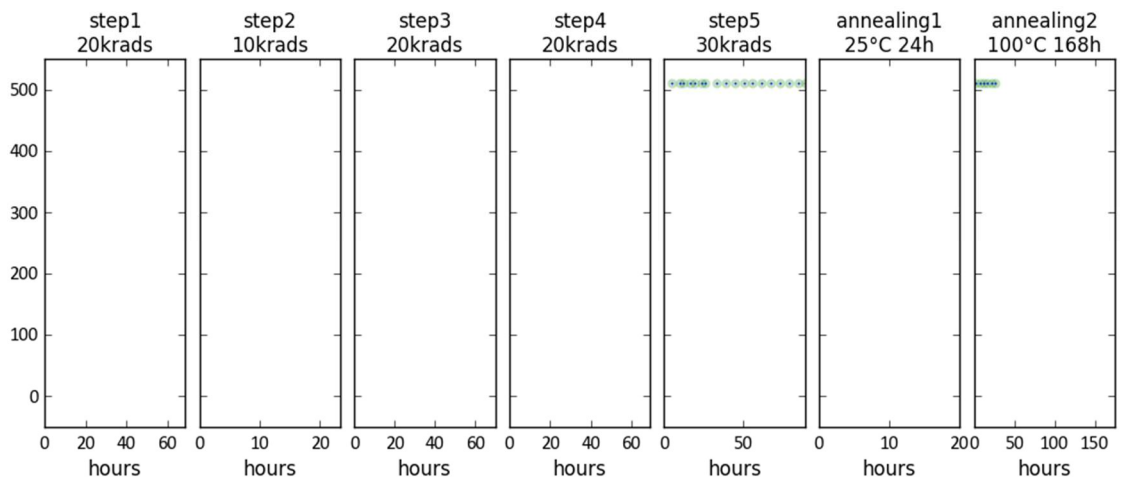


Dut1, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.11.2 DUT1, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E)
 ● failed program blocks (P)
 ● failed blocks (E+P)



Dut1, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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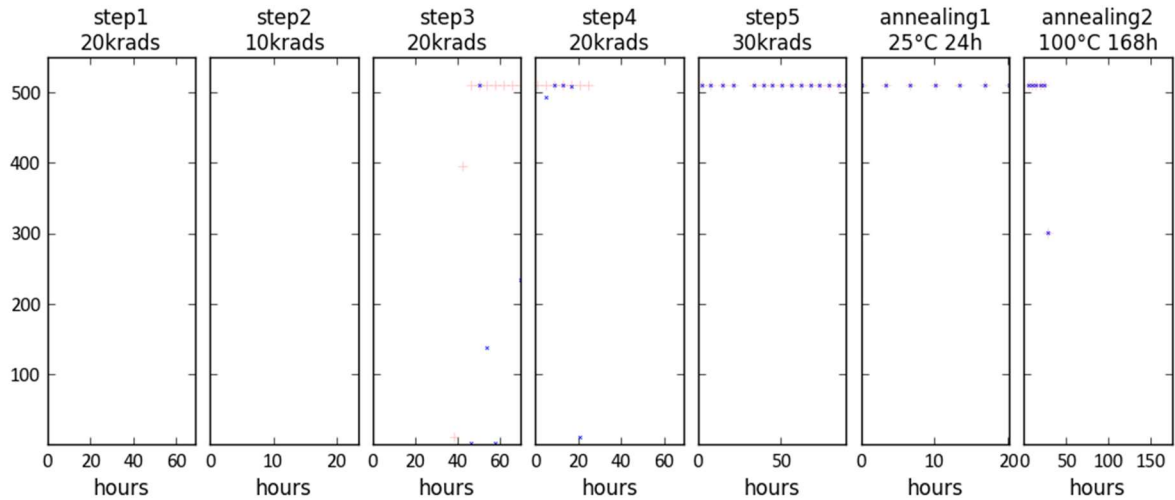
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12.11.3 DUT1, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

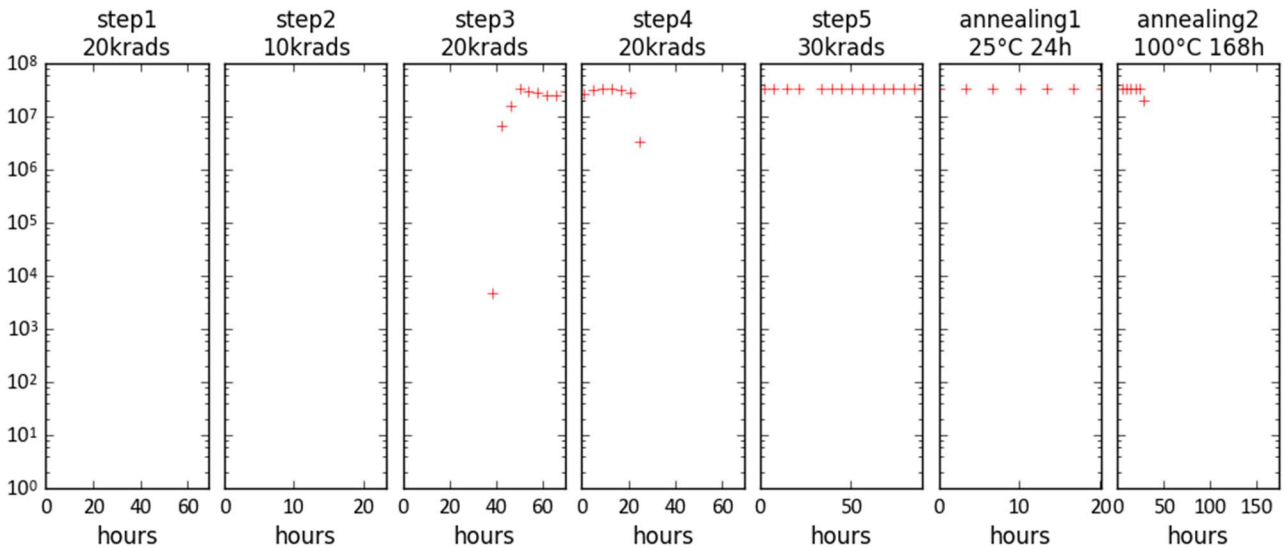
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut1, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error




Dut1, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

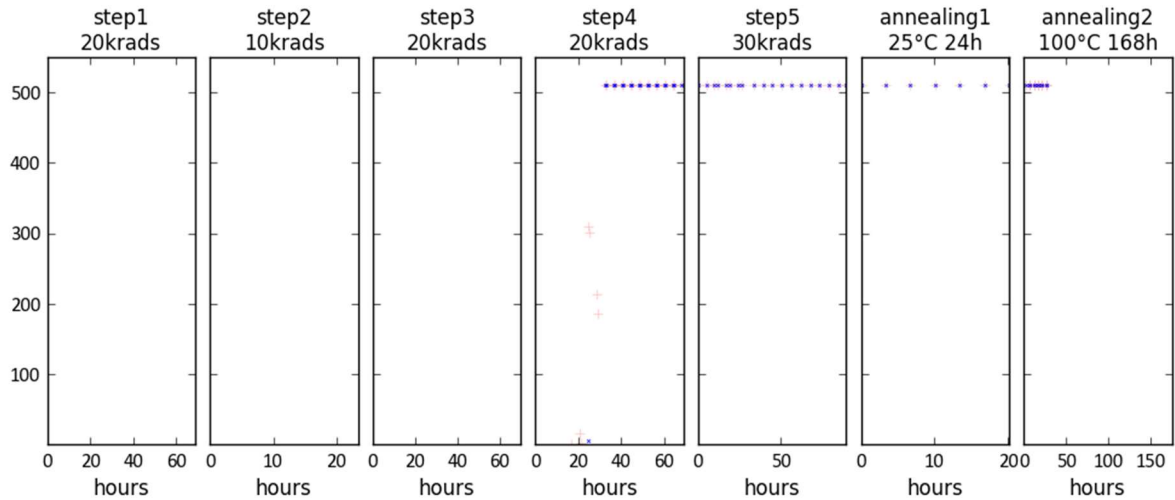
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	MICRON U		Date:	2018/10/10
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12.11.4 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

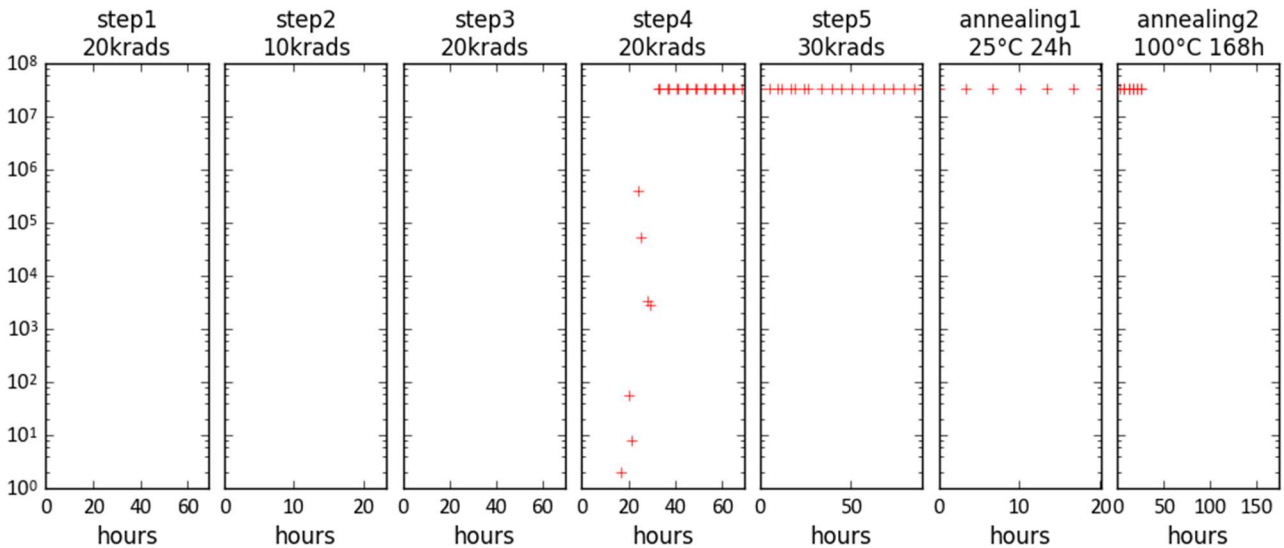
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut1, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut1, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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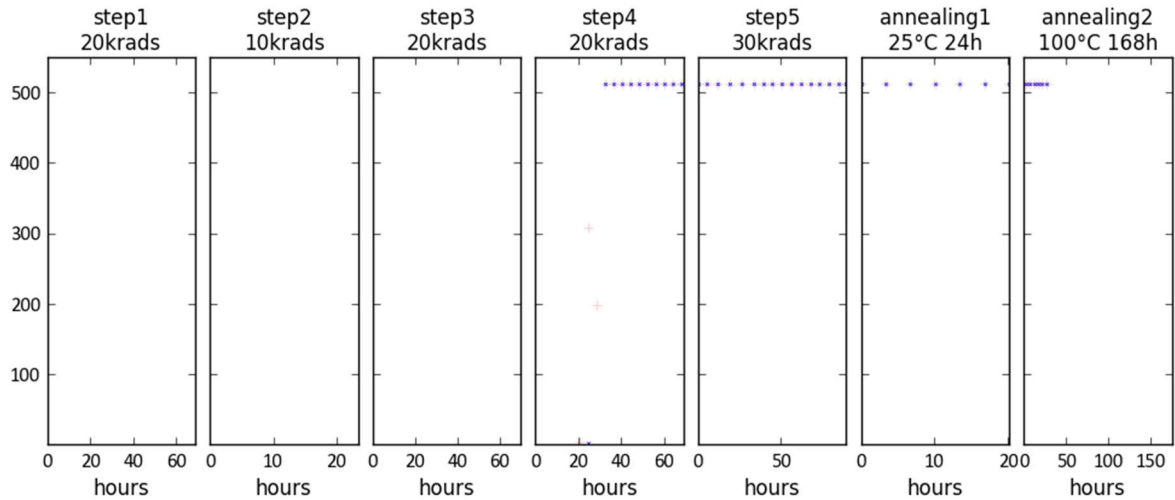
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12.11.5 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

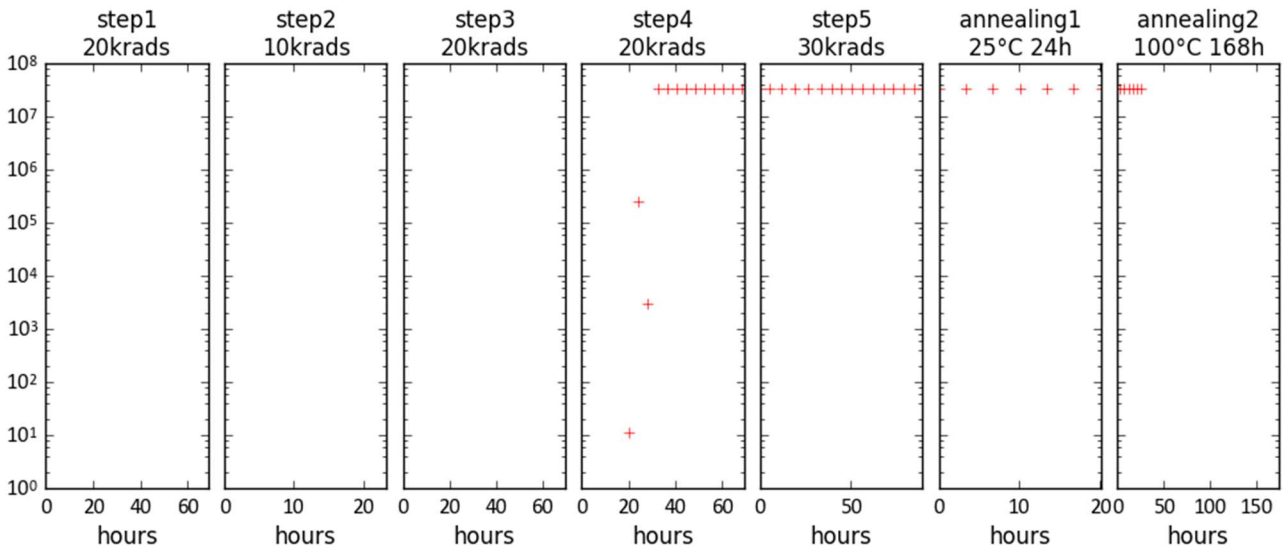
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut1, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut1, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

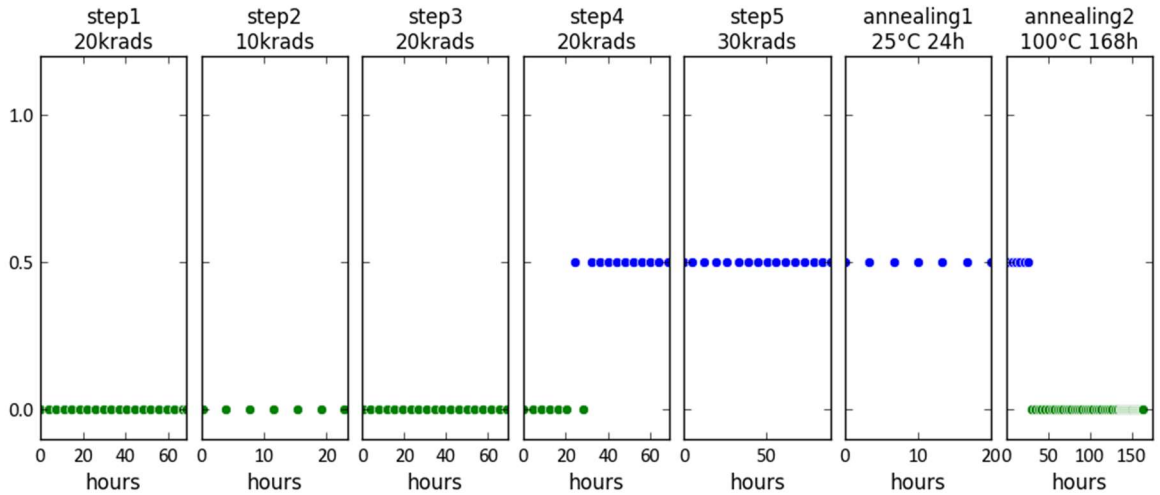
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12.11.6 DUT1, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut1, Low duty cycle, DUT access status

hirex eng.

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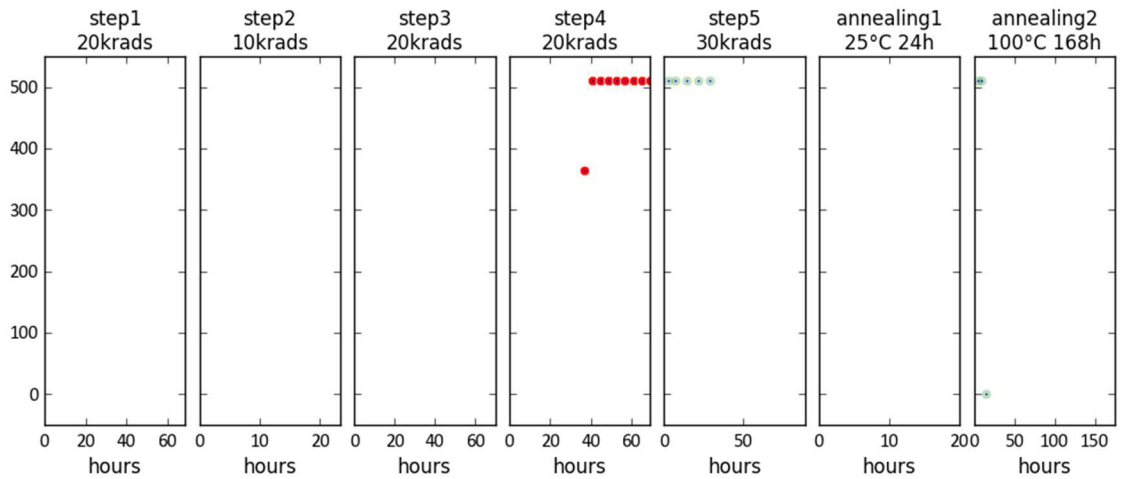
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12.12 DUT2 (Board 1), Low duty cycle

12.12.1 DUT2, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)

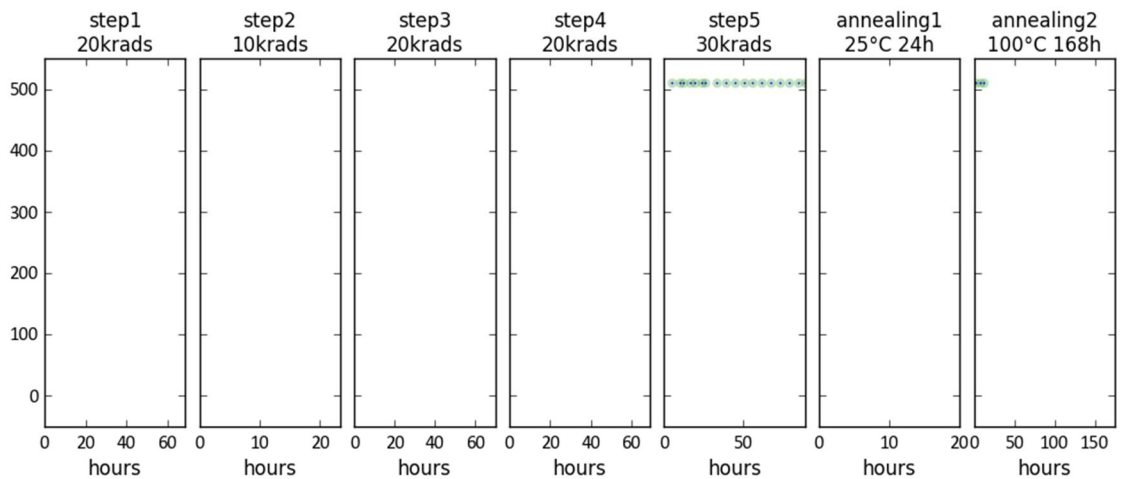


Dut2, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.12.2 DUT2, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)



Dut2, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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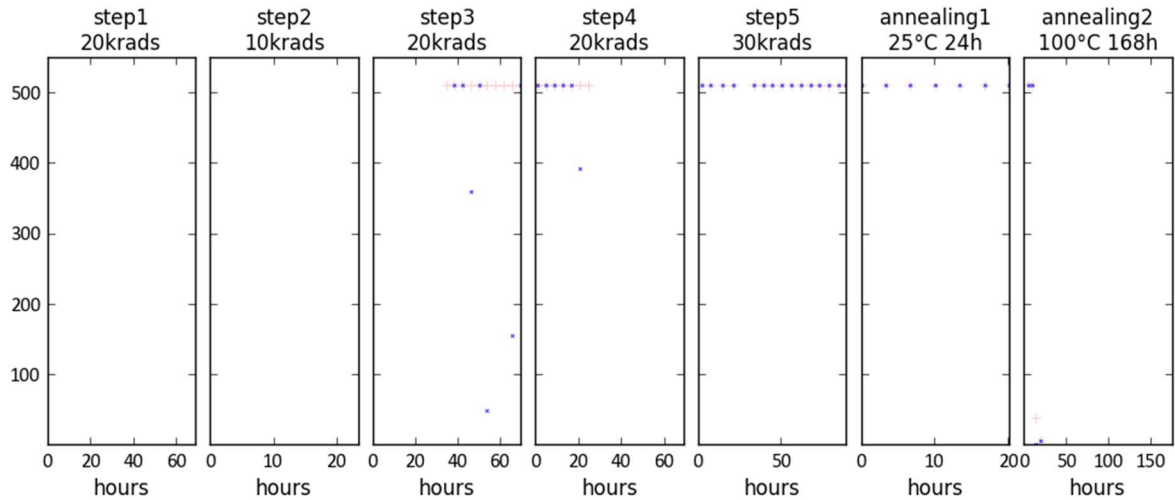
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12.12.3 DUT2, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

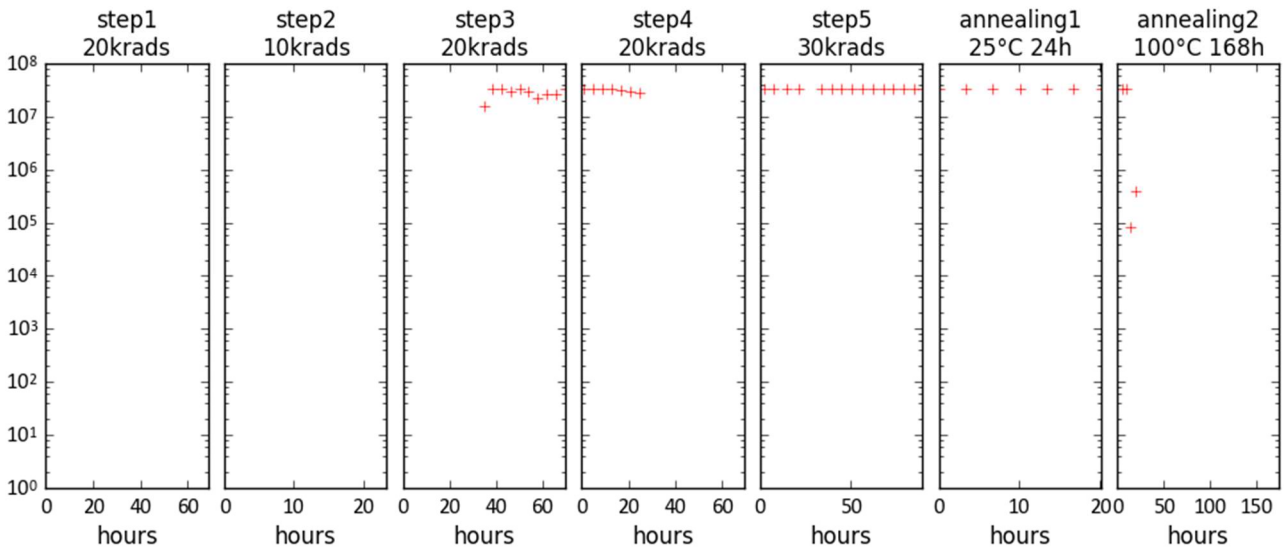
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut2, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut2, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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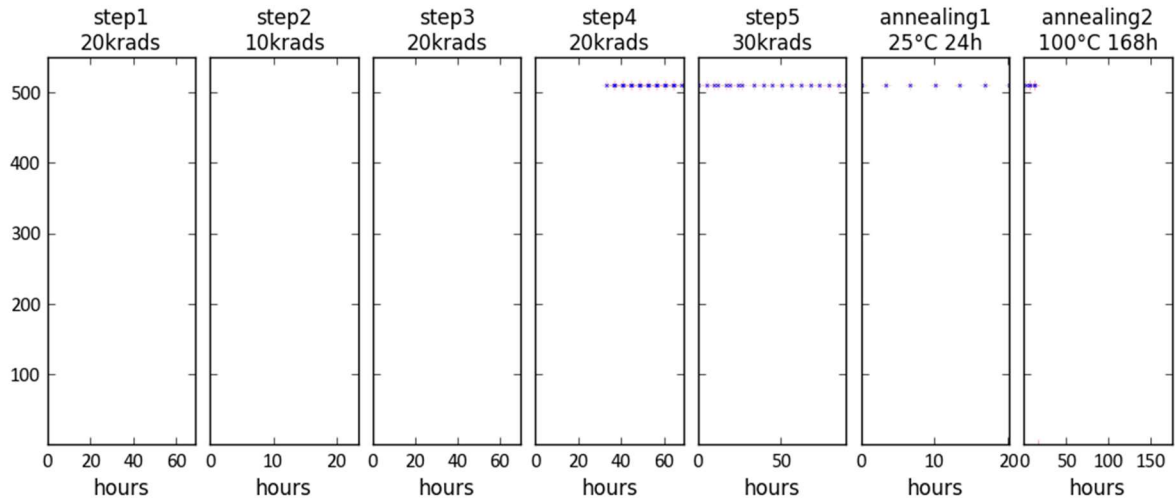
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12.12.4 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

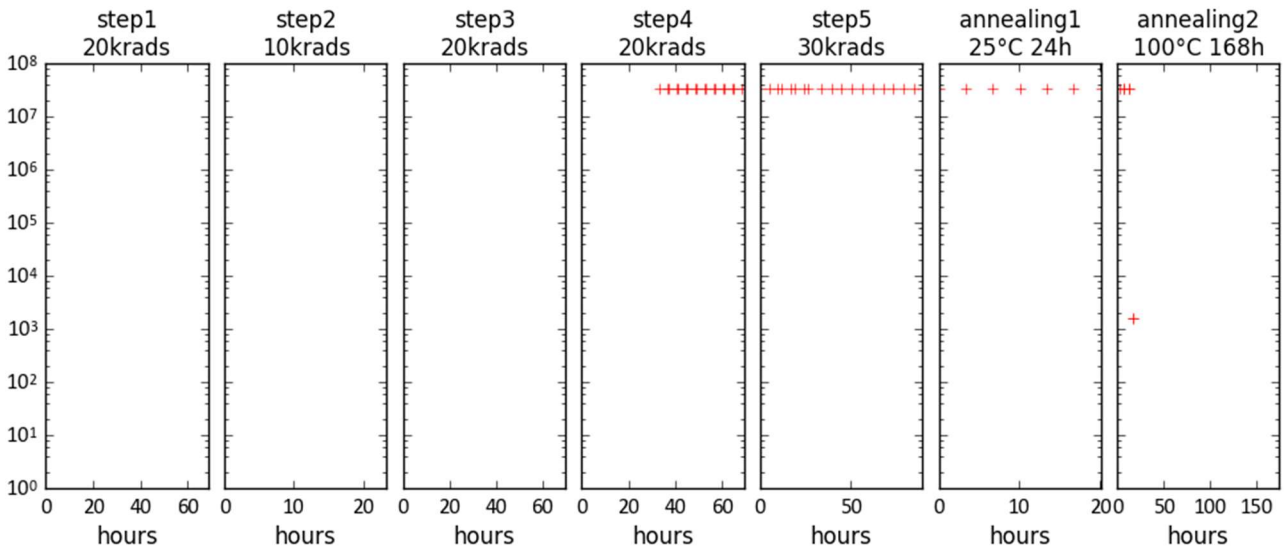
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut2, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut2, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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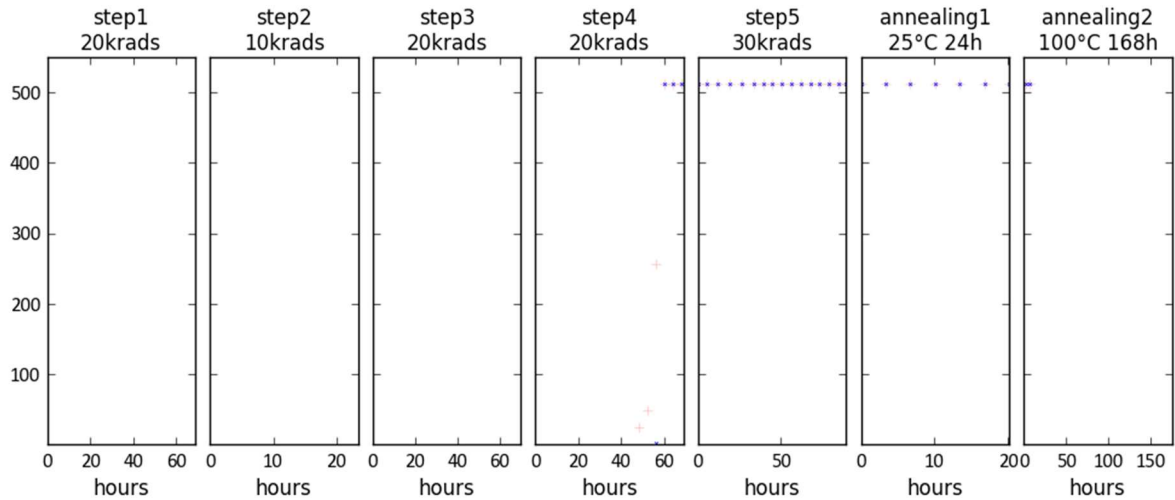
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12.12.5 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

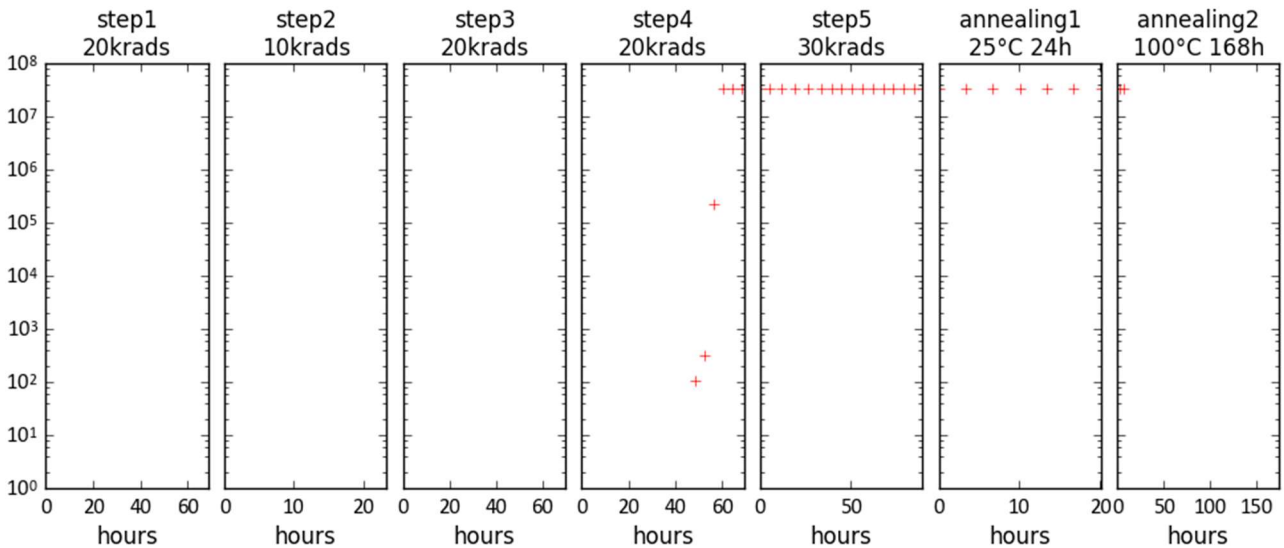
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut2, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut2, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

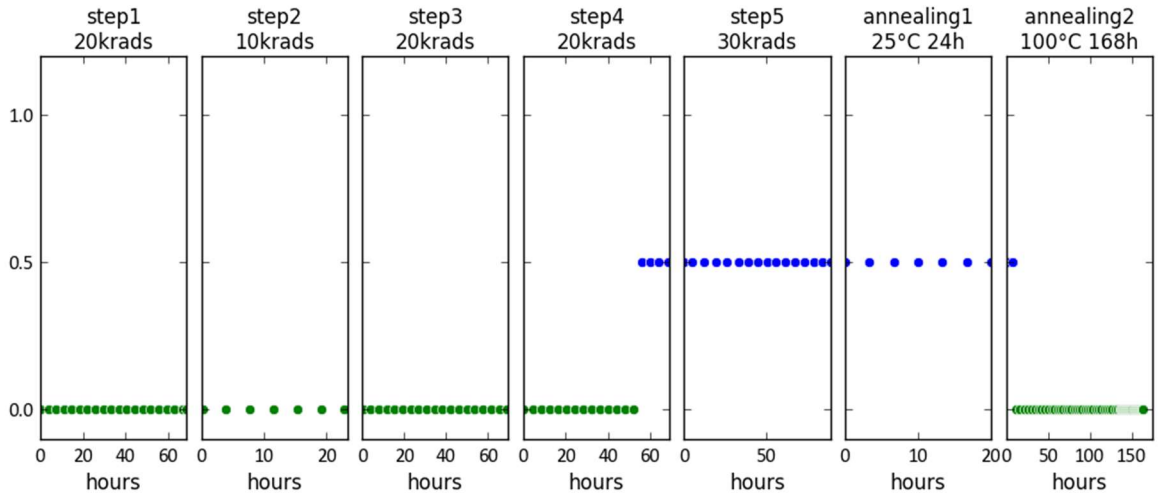
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12.12.6 DUT2, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut2, Low duty cycle, DUT access status

hirex eng.

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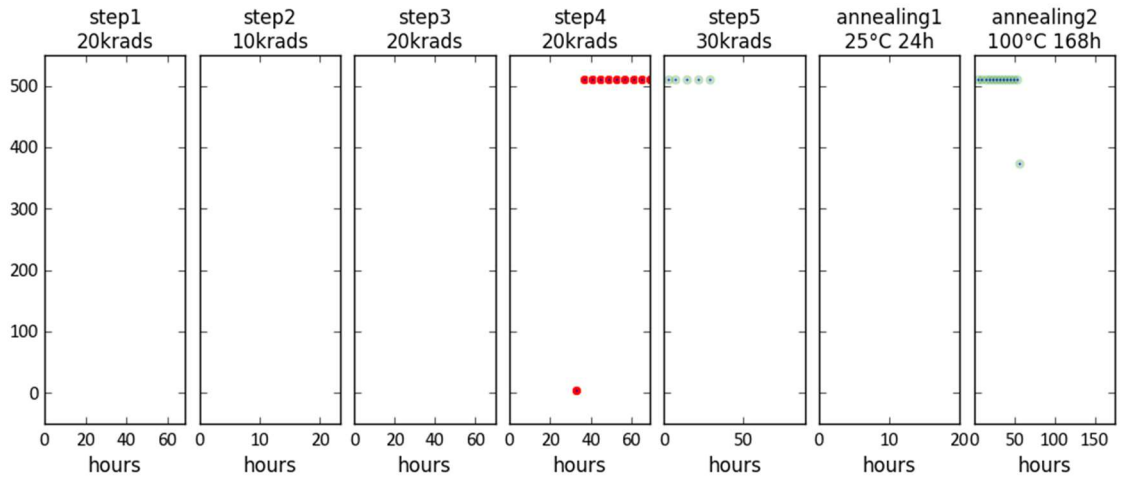
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12.13 DUT3 (Board 1), Low duty cycle

12.13.1 DUT3, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

• • failed erase blocks (E) • • failed program blocks (P) • • failed blocks (E+P)

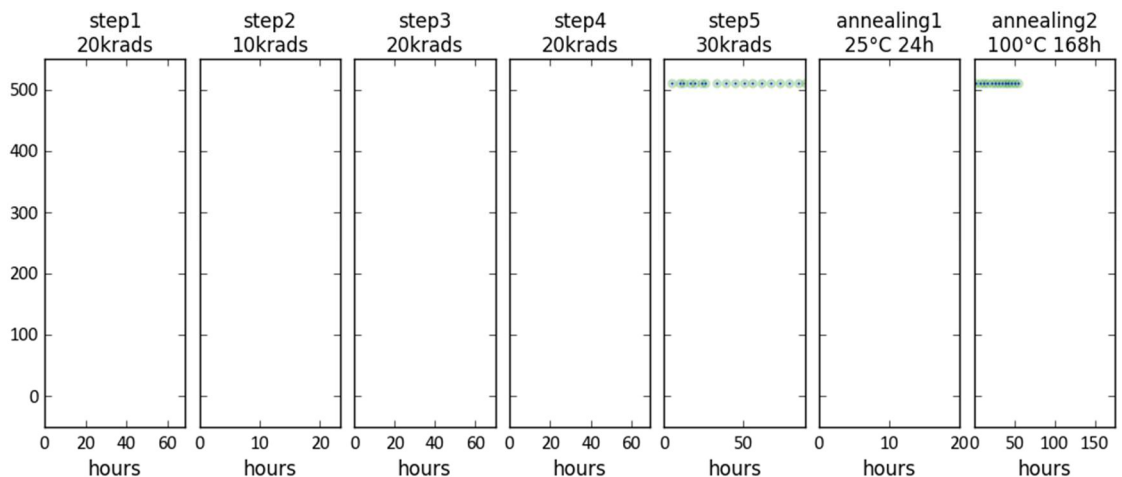


Dut3, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.13.2 DUT3, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

• • failed erase blocks (E) • • failed program blocks (P) • • failed blocks (E+P)



Dut3, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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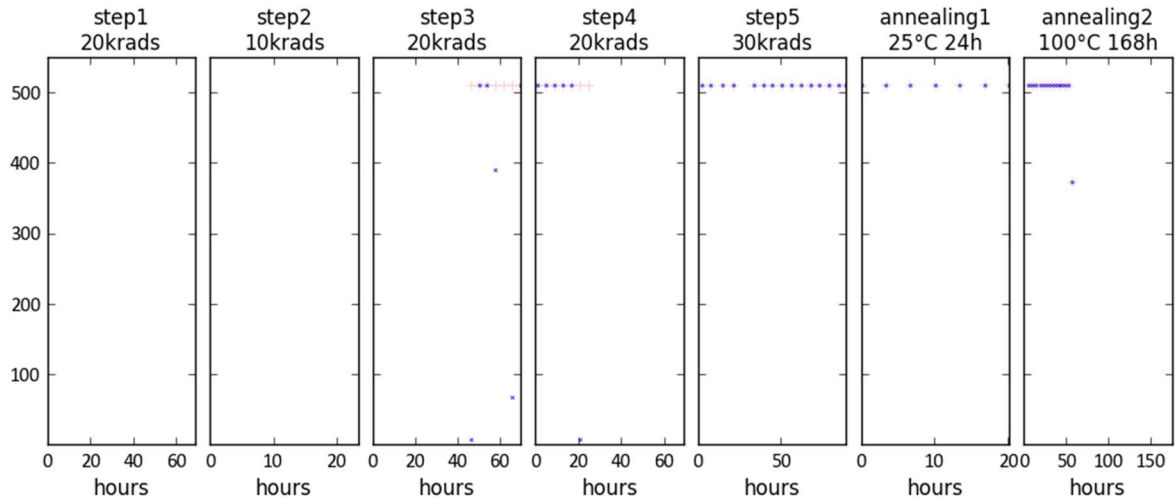
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12.13.3 DUT3, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

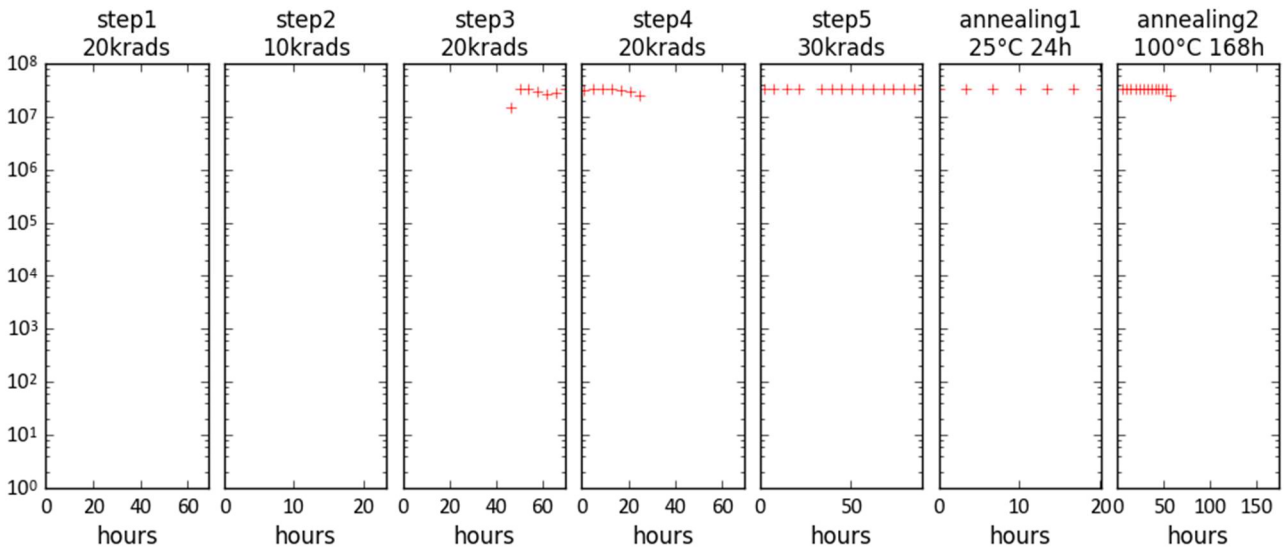
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut3, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut3, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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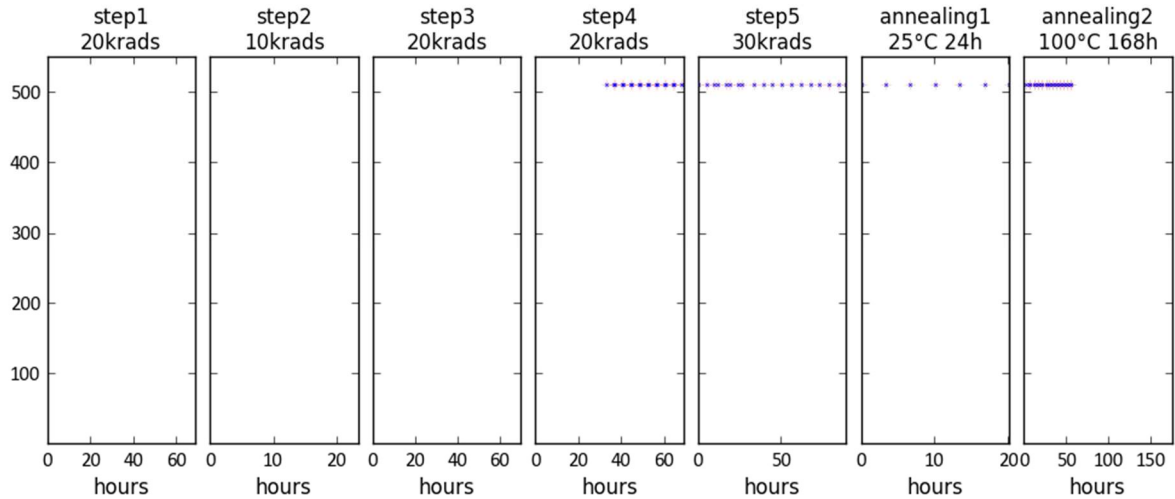
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12.13.4 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

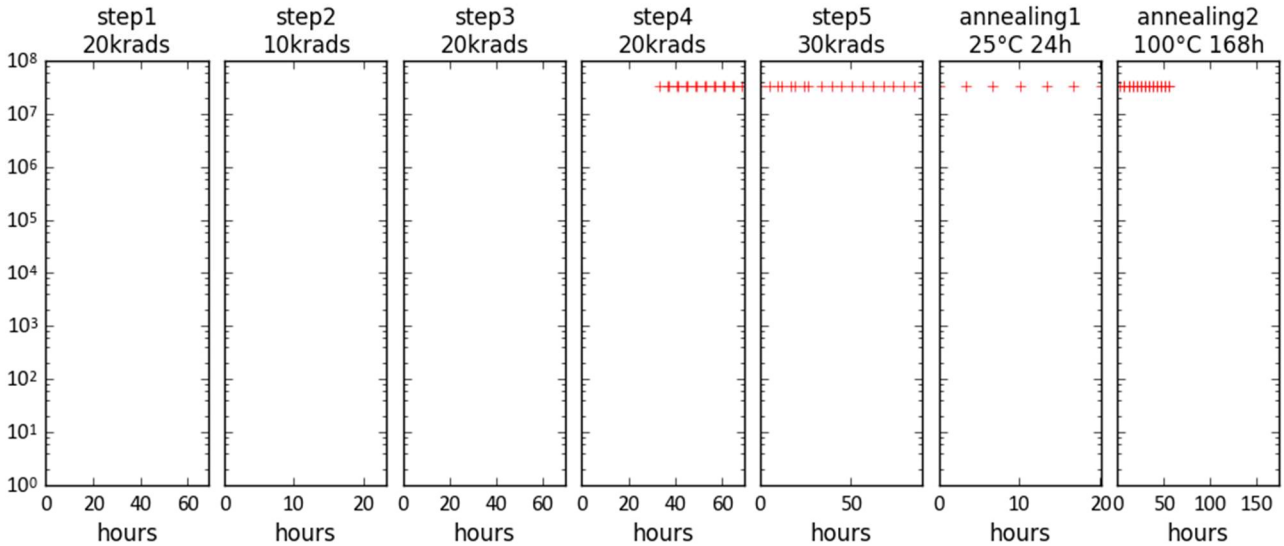
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut3, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut3, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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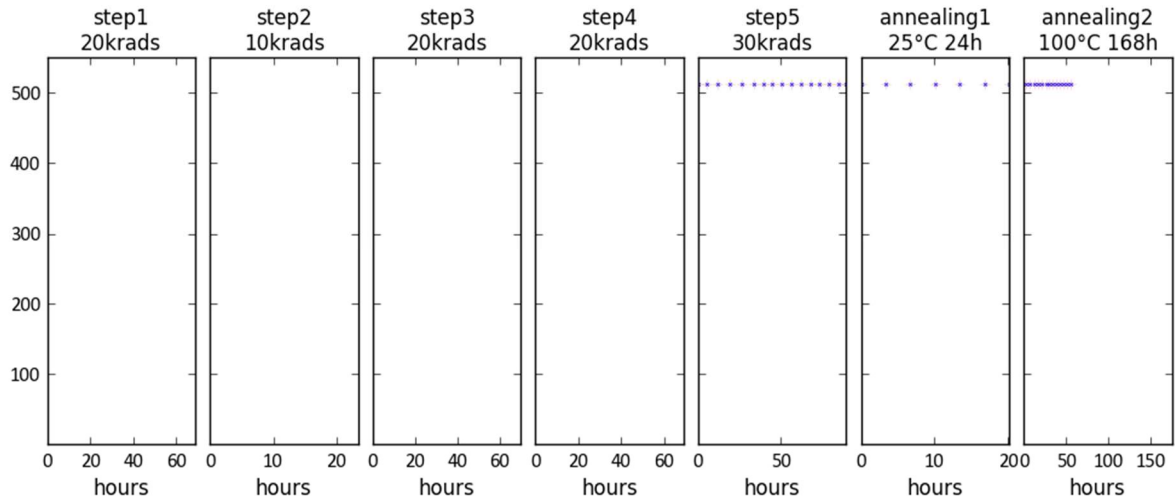
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12.13.5 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

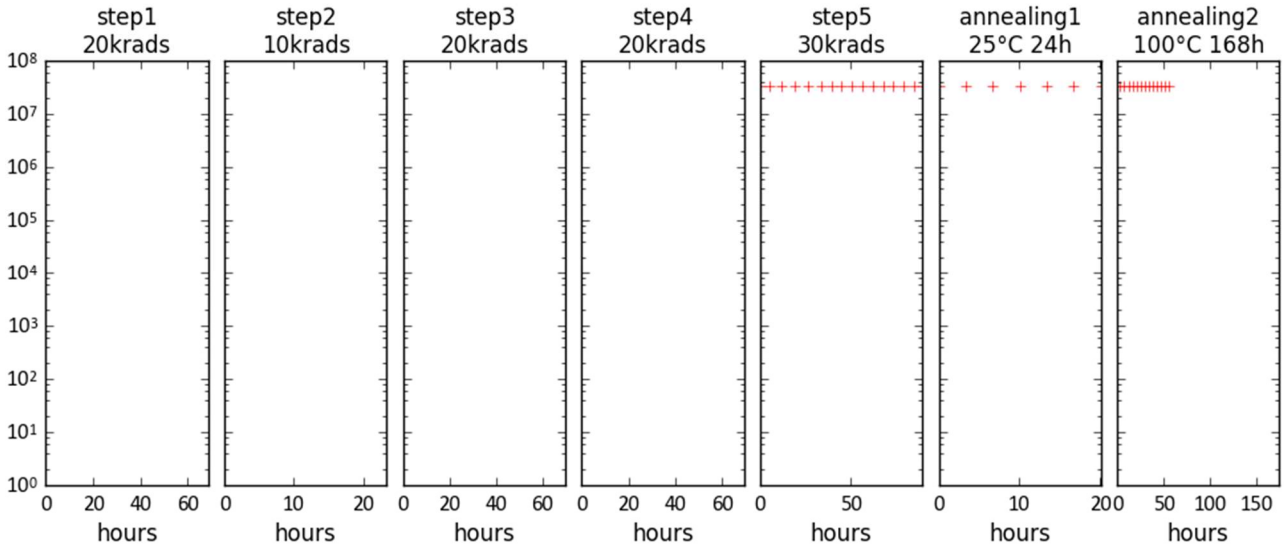
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut3, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut3, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

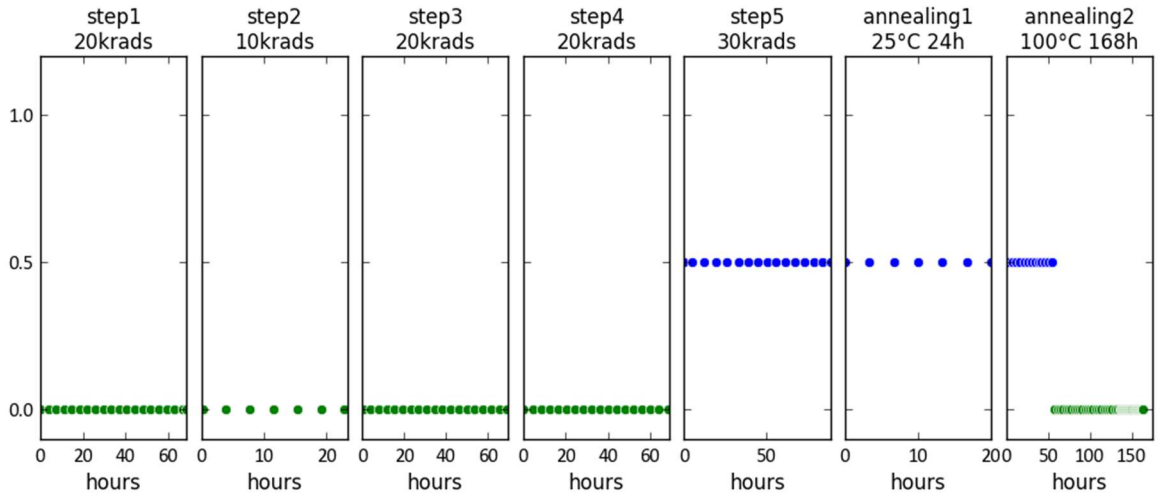
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12.13.6 DUT3, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed



Dut3, Low duty cycle, DUT access status

hirex eng.

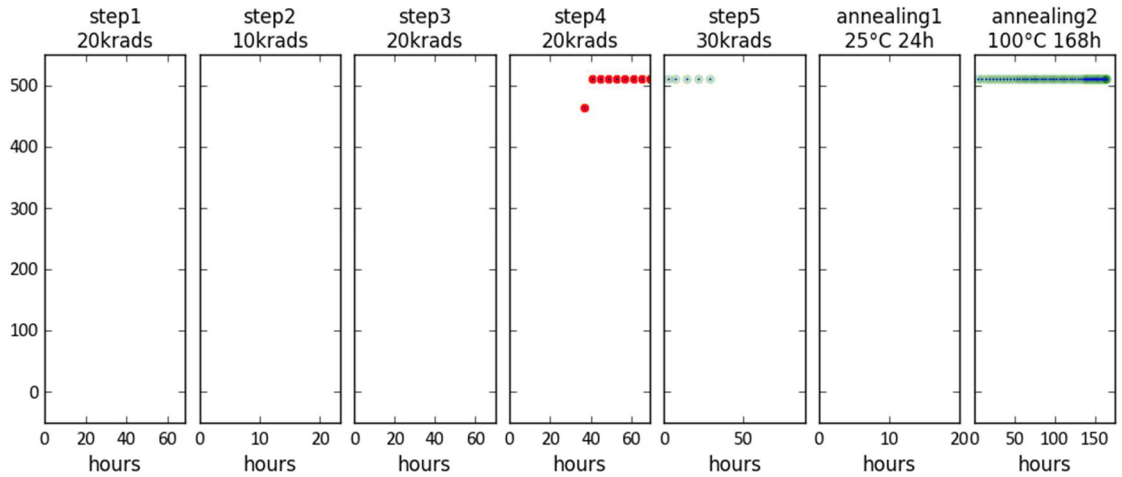
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12.14 DUT4 (Board 1), Low duty cycle

12.14.1 DUT4, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)

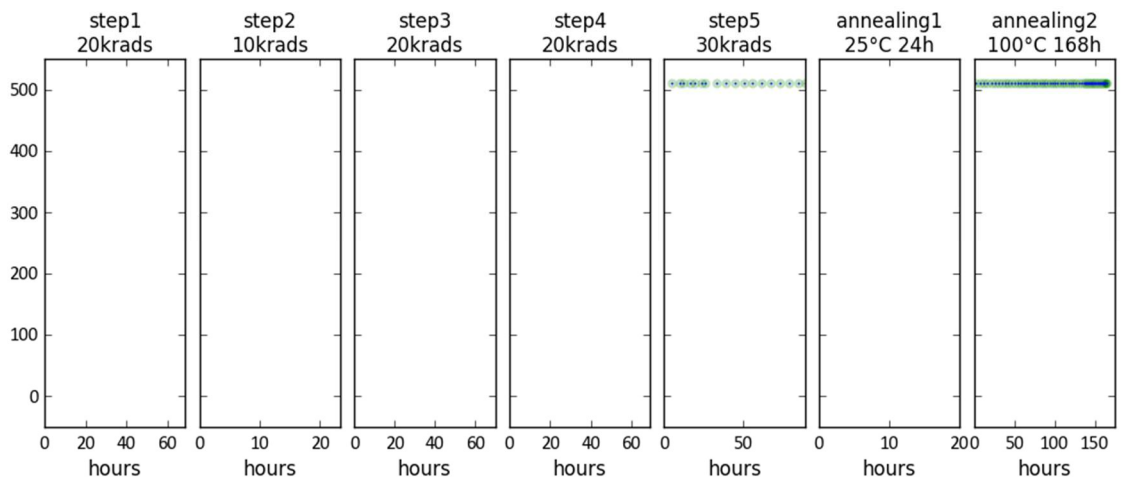


Dut4, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.14.2 DUT4, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)



Dut4, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

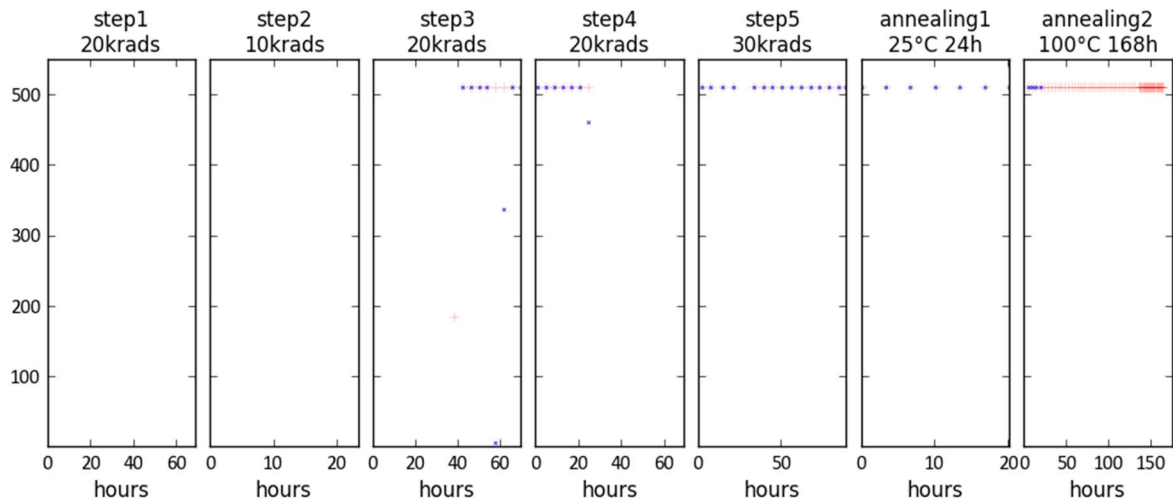
hirex eng.



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12.14.3 DUT4, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

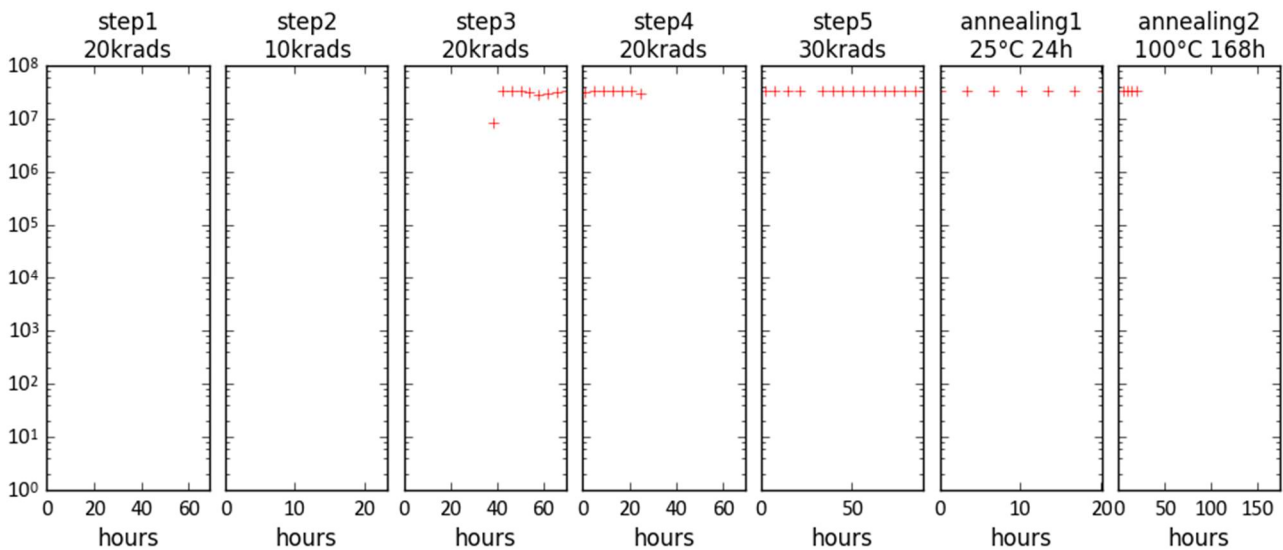
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut4, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eq.

+ + words in error



Dut4, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eq.

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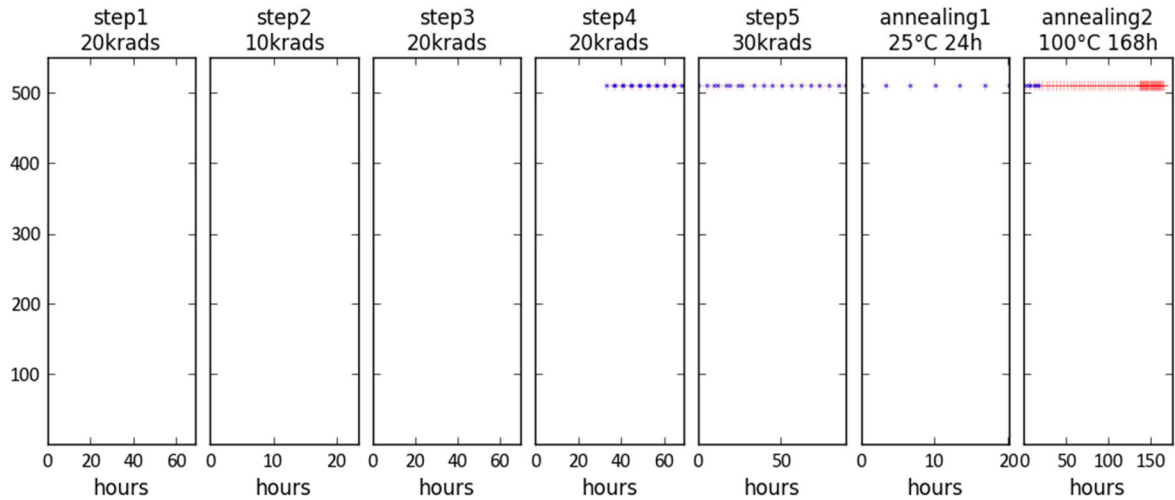
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12.14.4 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

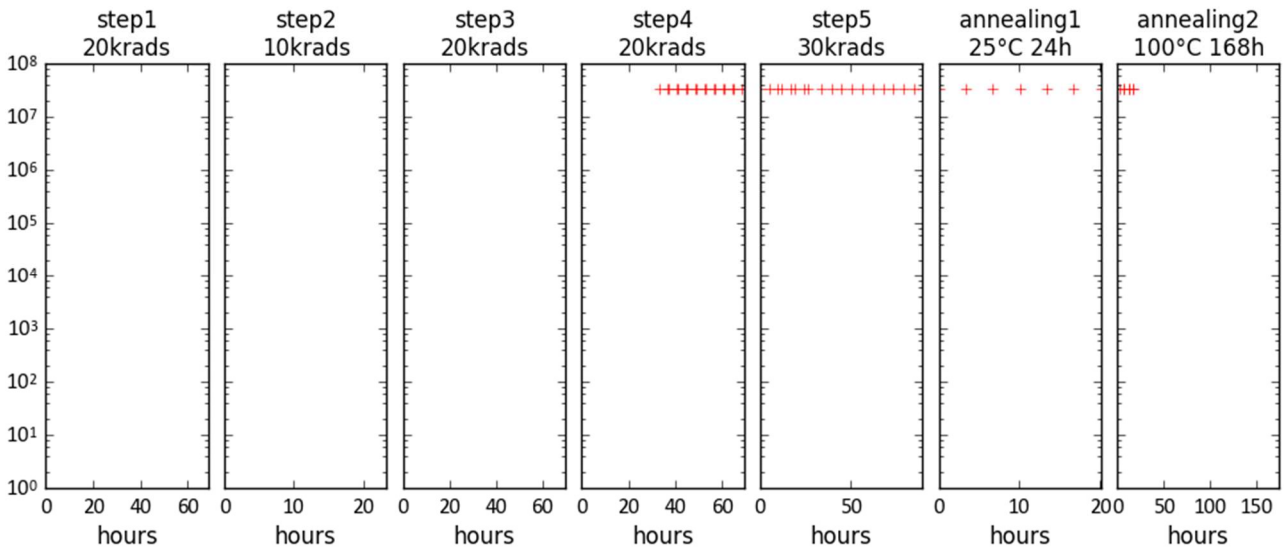
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut4, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut4, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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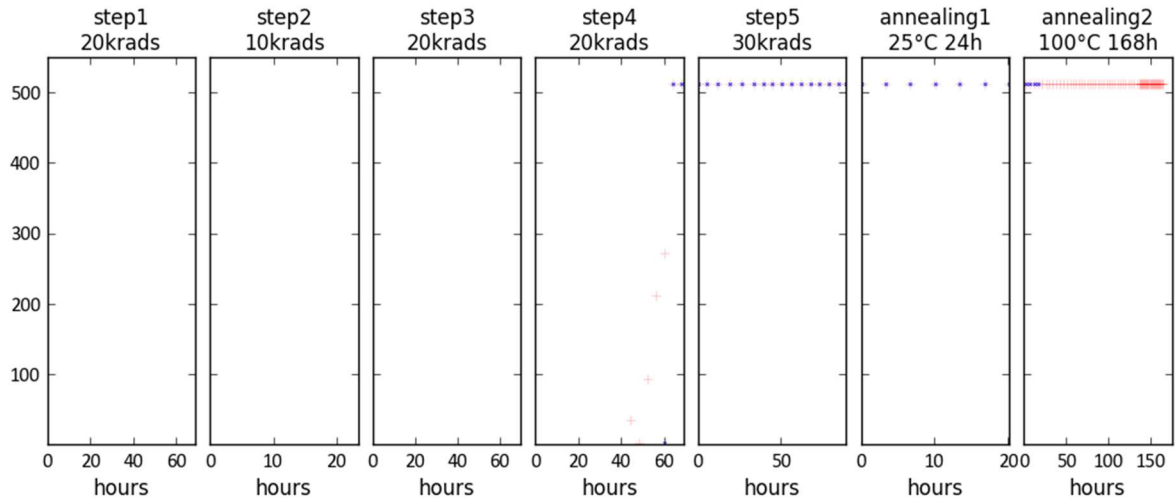
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12.14.5 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

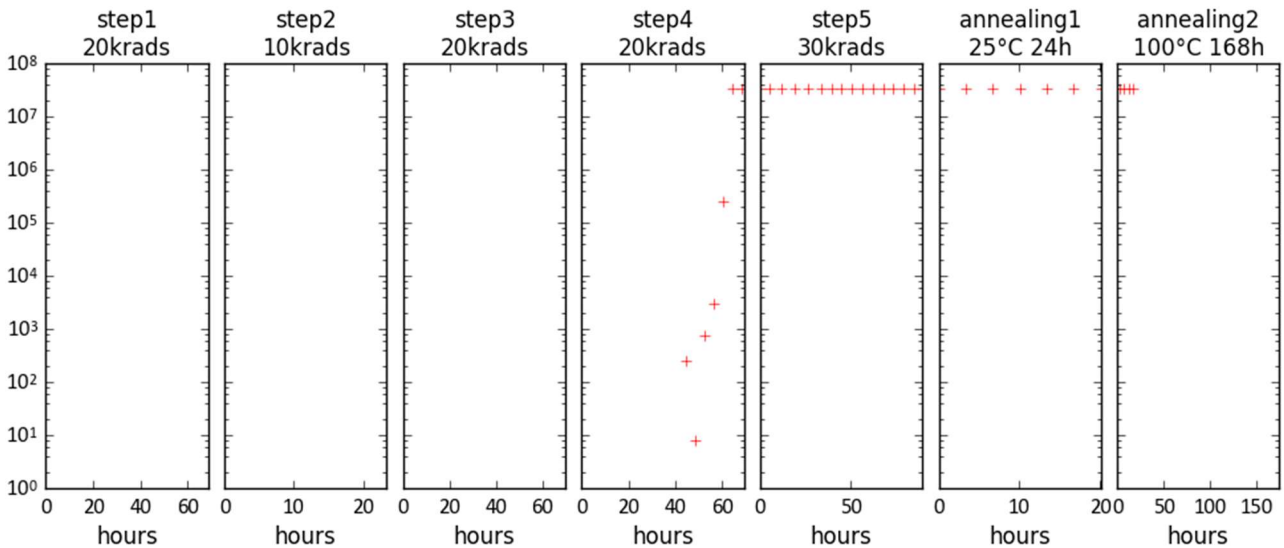
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut4, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut4, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

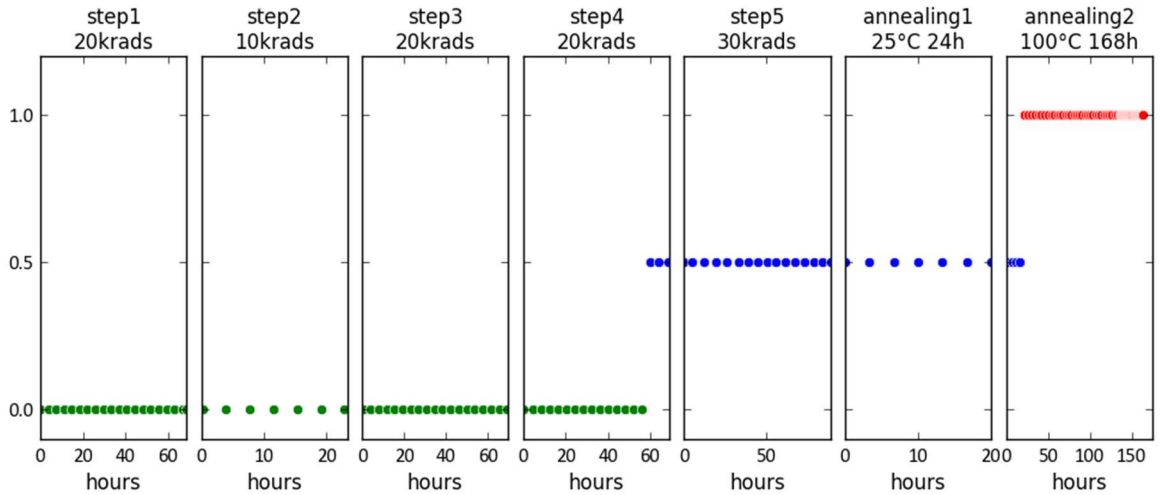
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12.14.6 DUT4, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut4, Low duty cycle, DUT access status

hirex eng.

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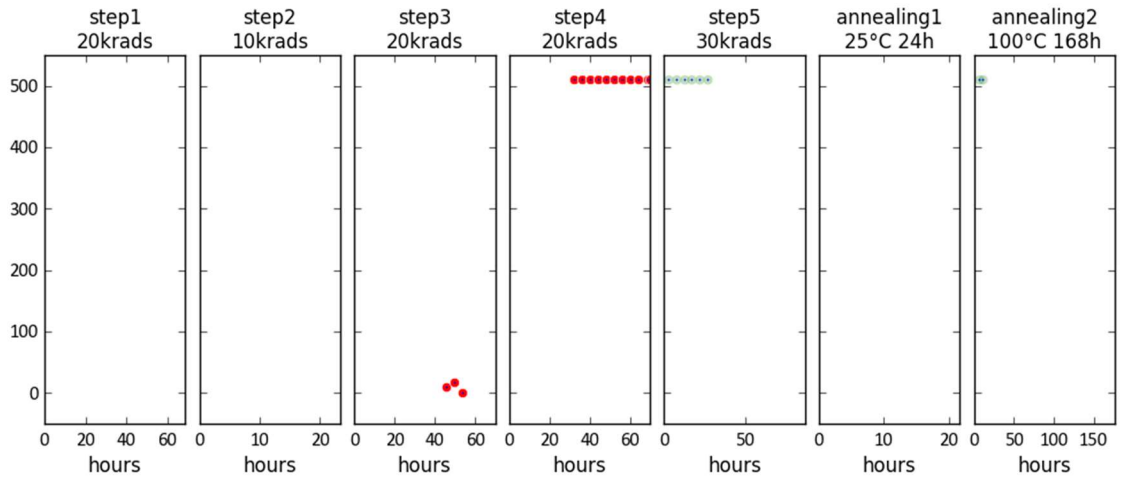
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12.15 DUT0 (Board 2), Low duty cycle

12.15.1 DUT0, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)

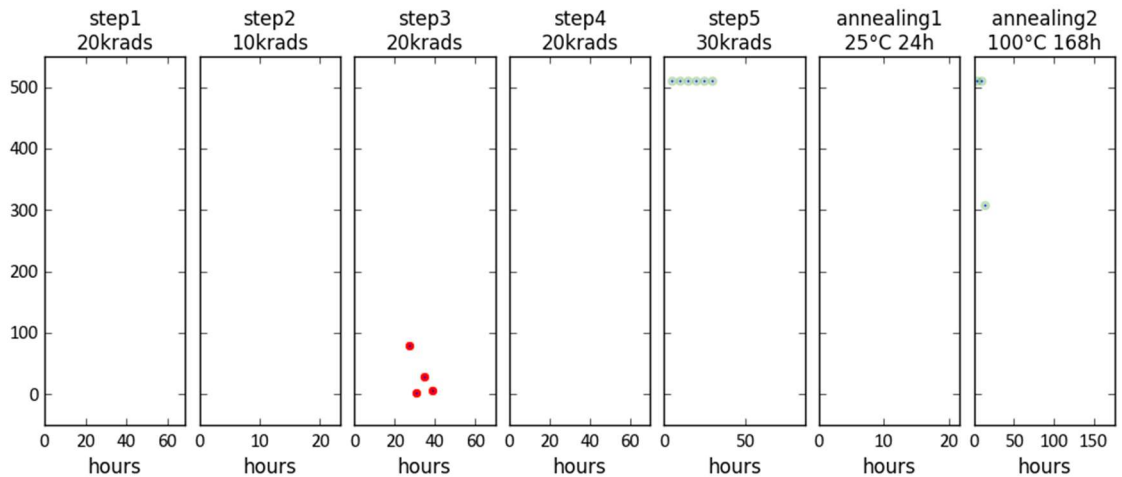


Dut0, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.15.2 DUT0, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)



Dut0, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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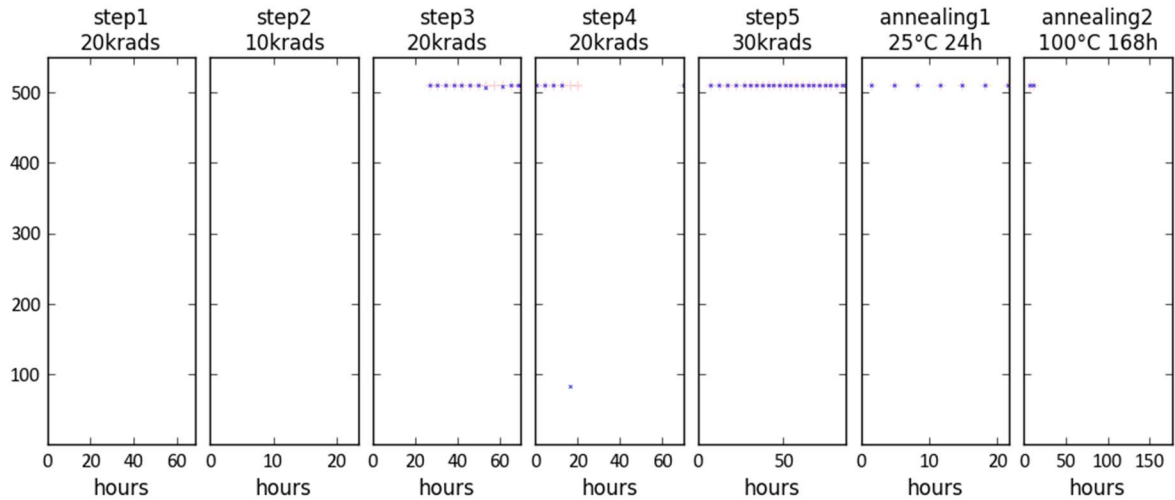
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12.15.3 DUT0, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

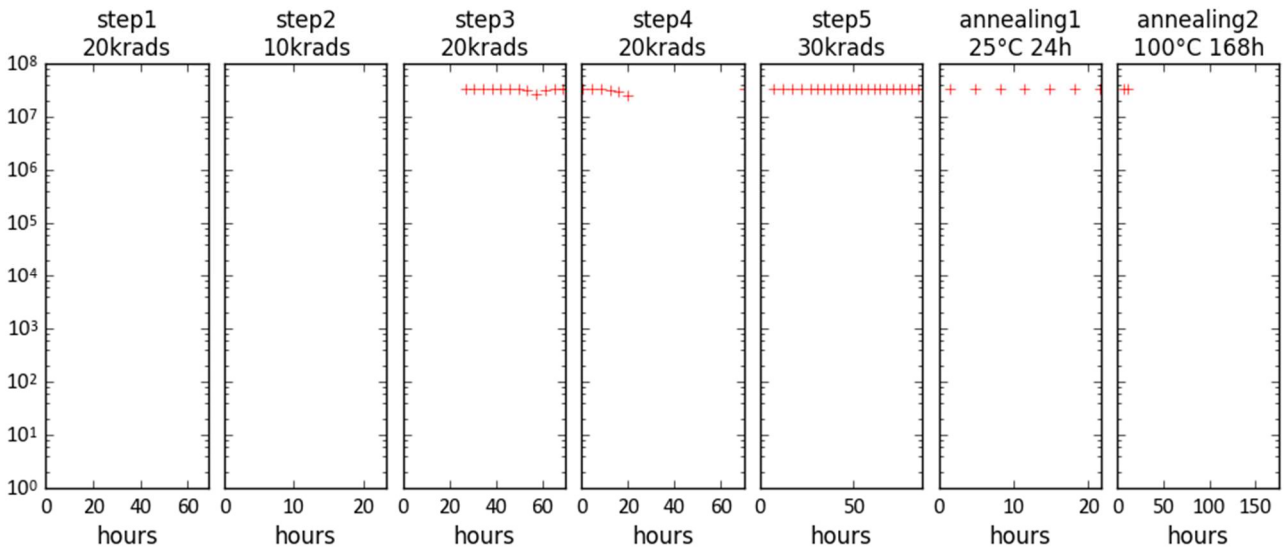
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut0, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut0, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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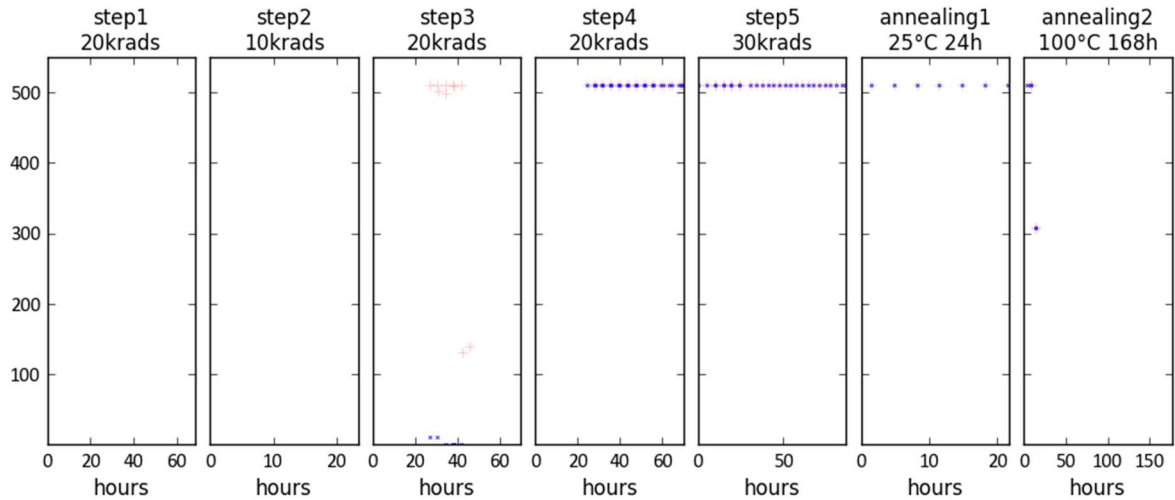
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12.15.4 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

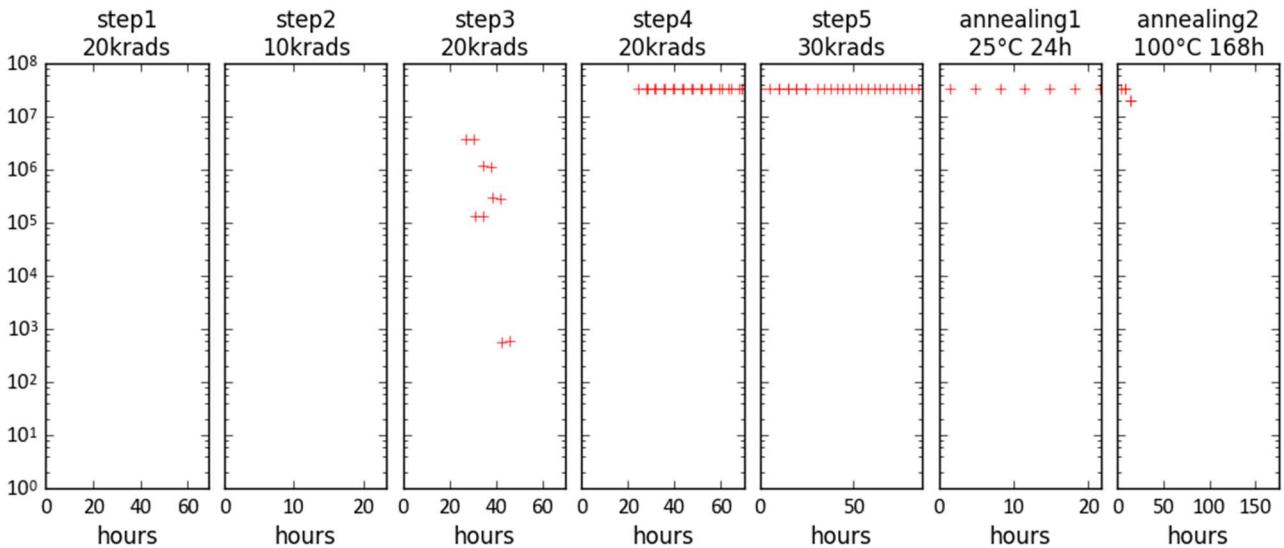
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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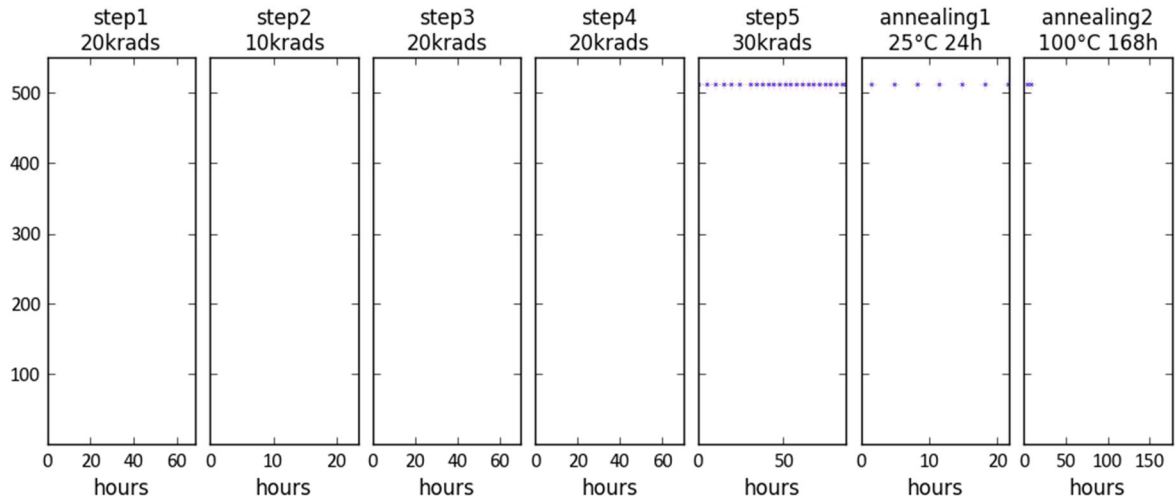
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12.15.5 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

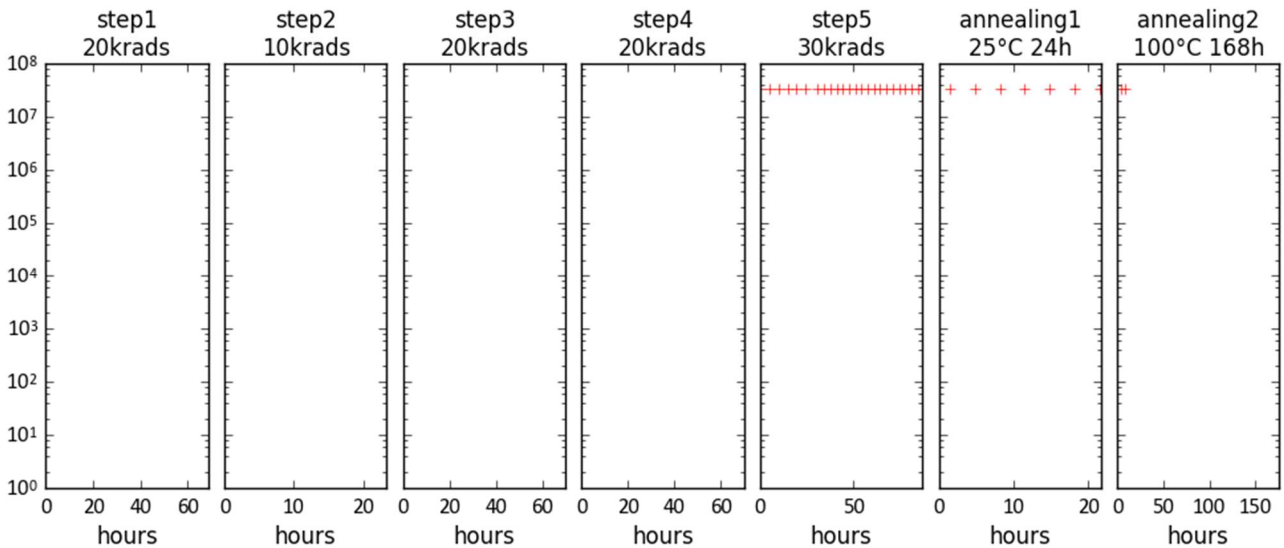
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut0, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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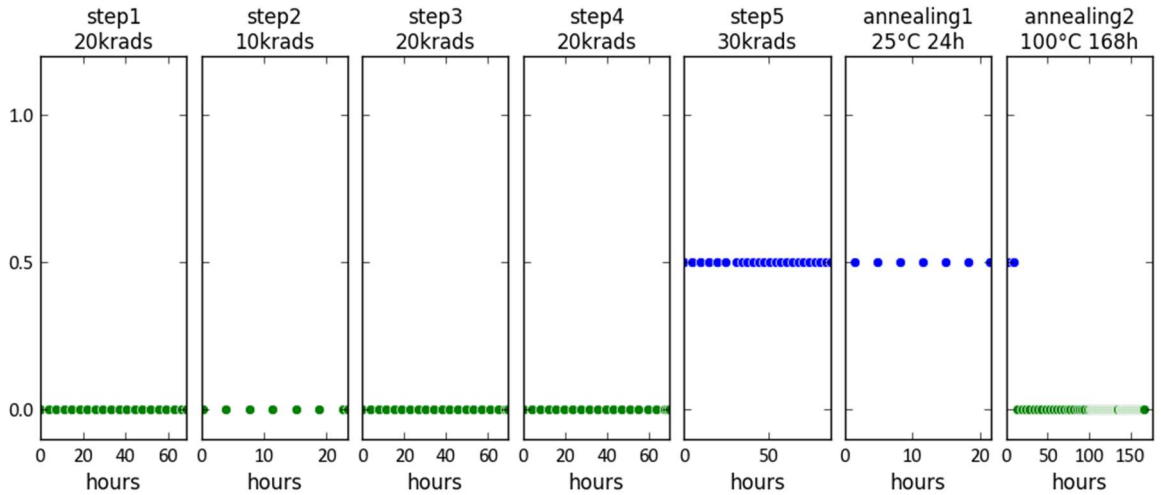


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PC28F00AM29EWHA	MICRON U
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12.15.6 DUT0, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut0, Low duty cycle, DUT access status

hirex eng.

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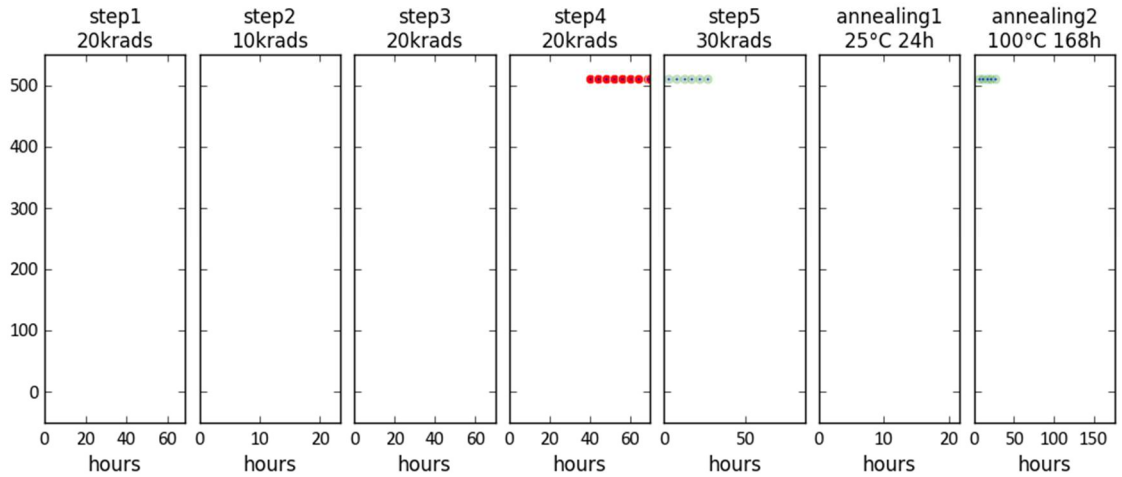
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12.16 DUT1 (Board 2), Low duty cycle

12.16.1 DUT1, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)

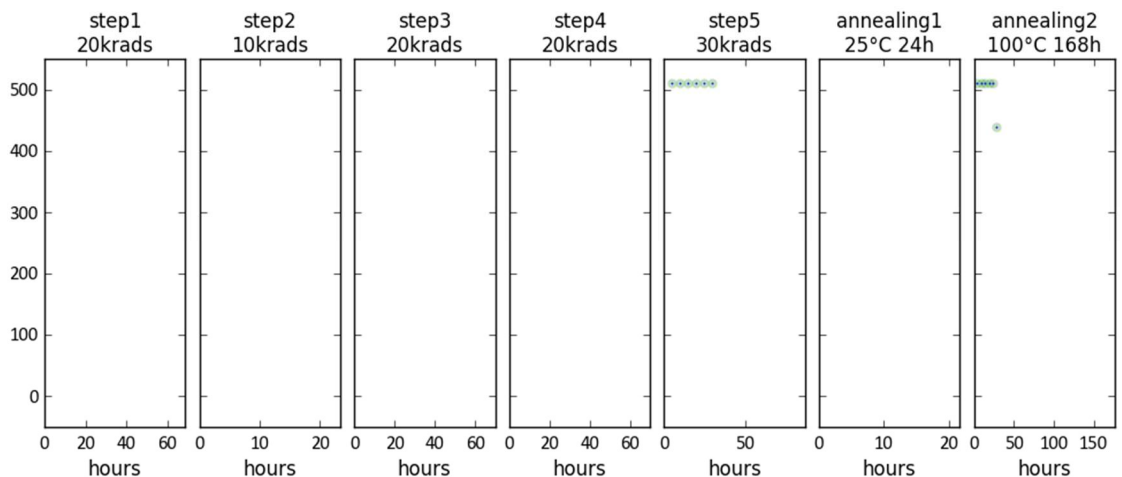


Dut1, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.16.2 DUT1, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)



Dut1, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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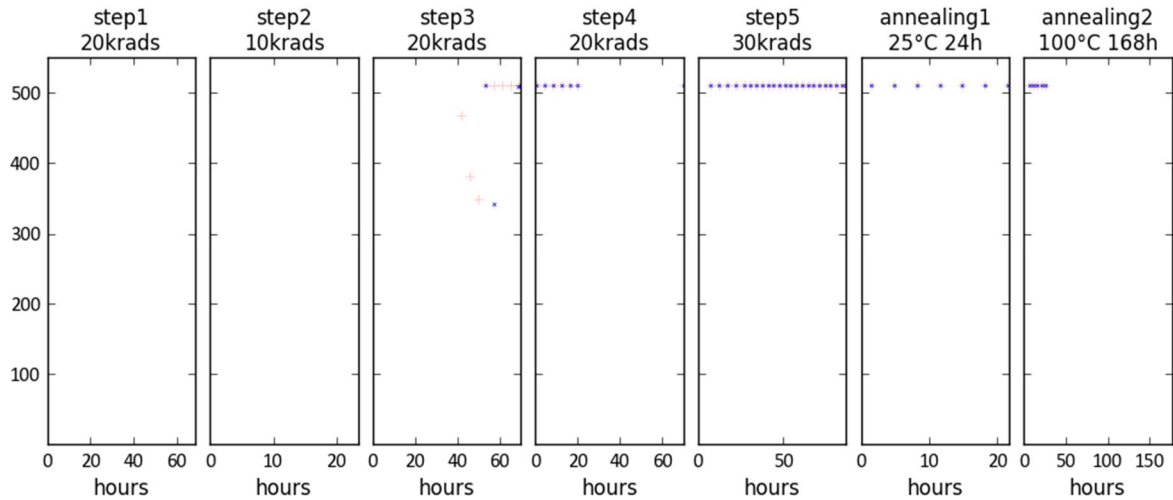
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12.16.3 DUT1, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

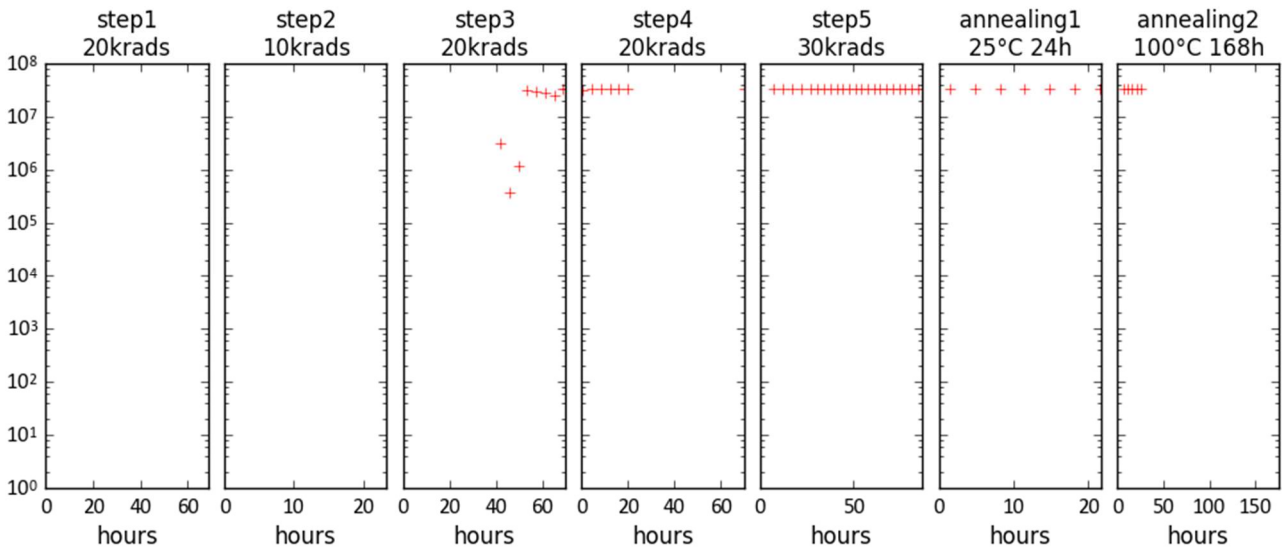
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut1, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut1, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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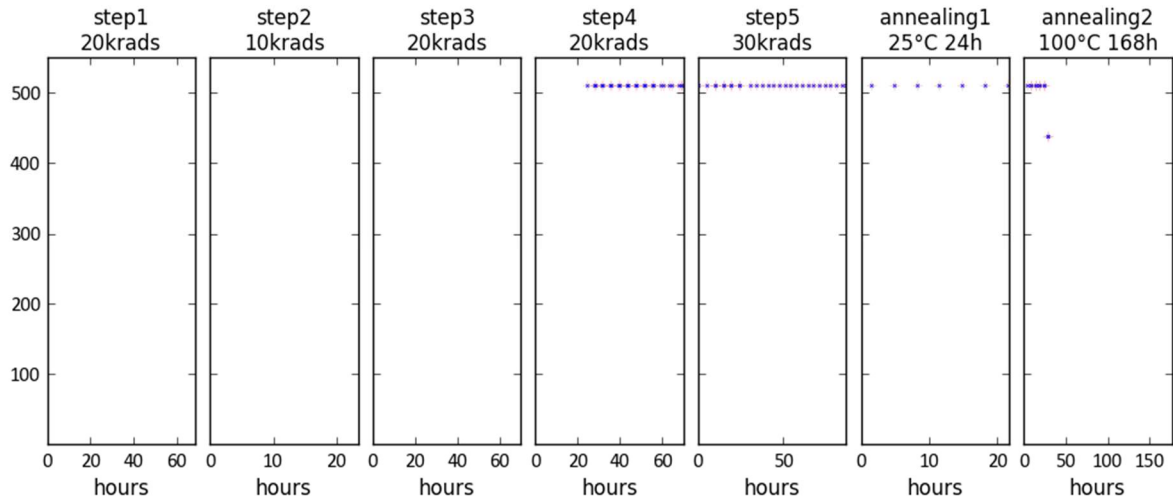
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12.16.4 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

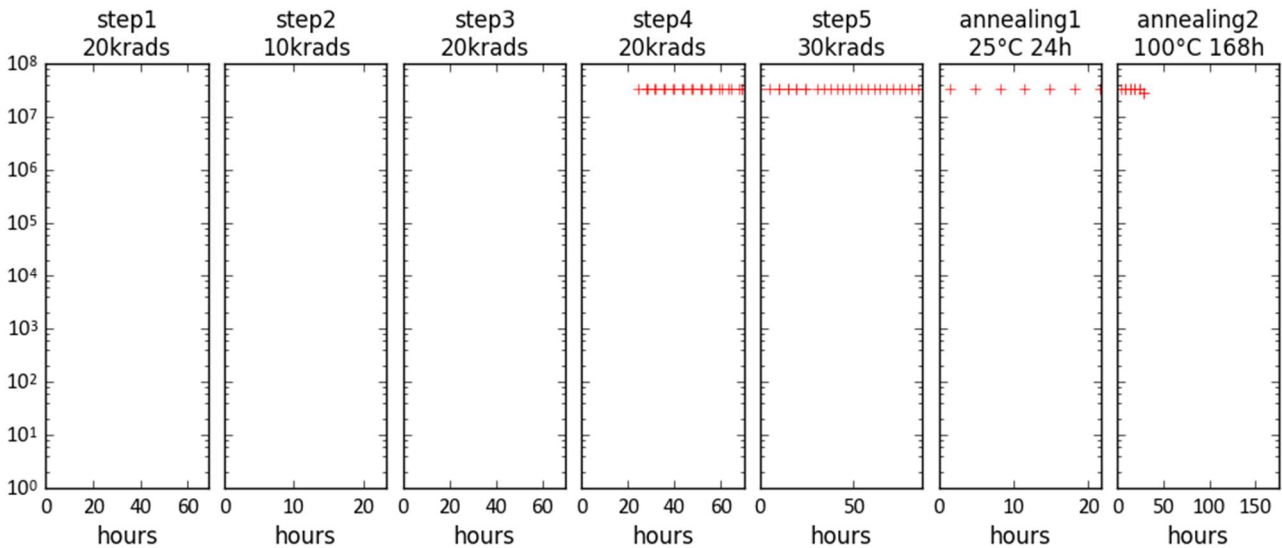
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut1, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut1, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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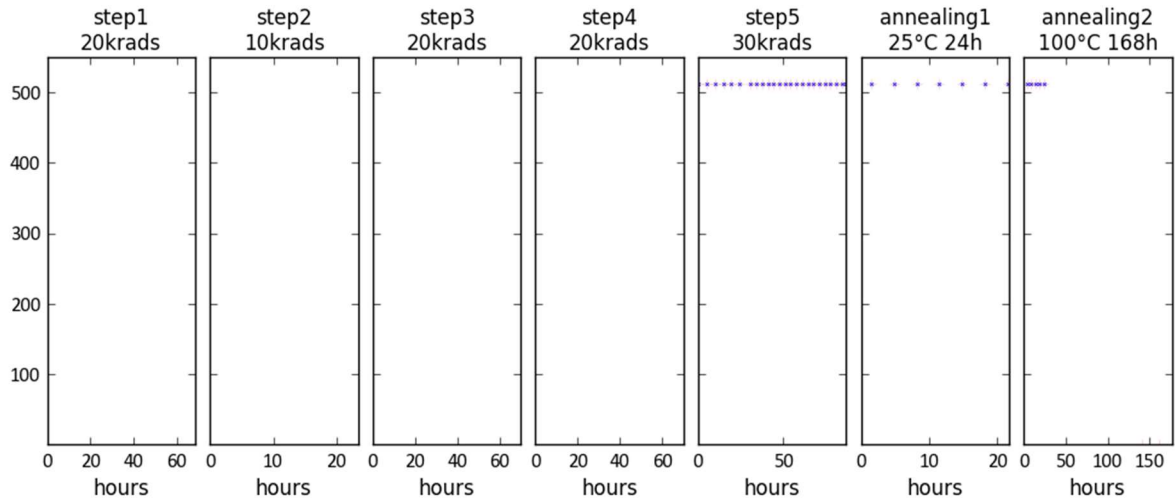
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12.16.5 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

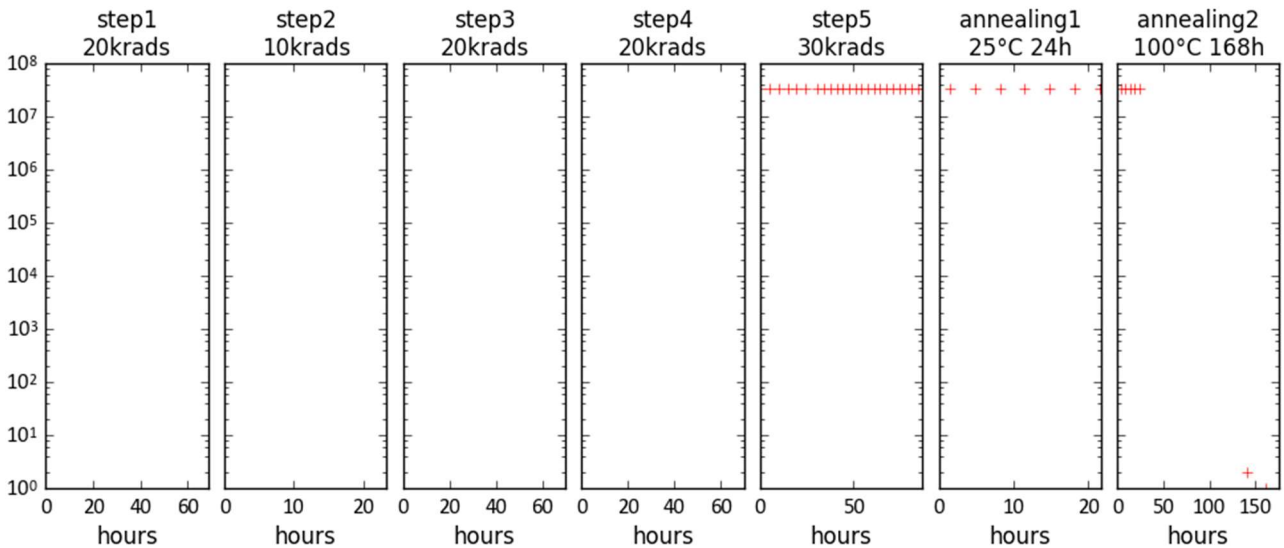
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut1, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut1, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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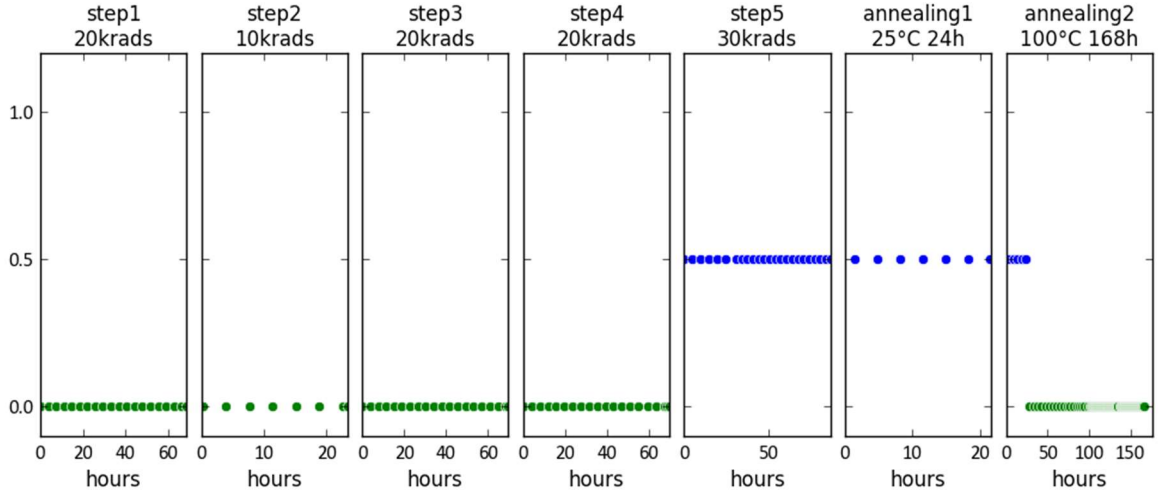


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12.16.6 DUT1, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed



Dut1, Low duty cycle, DUT access status

hirex eng.

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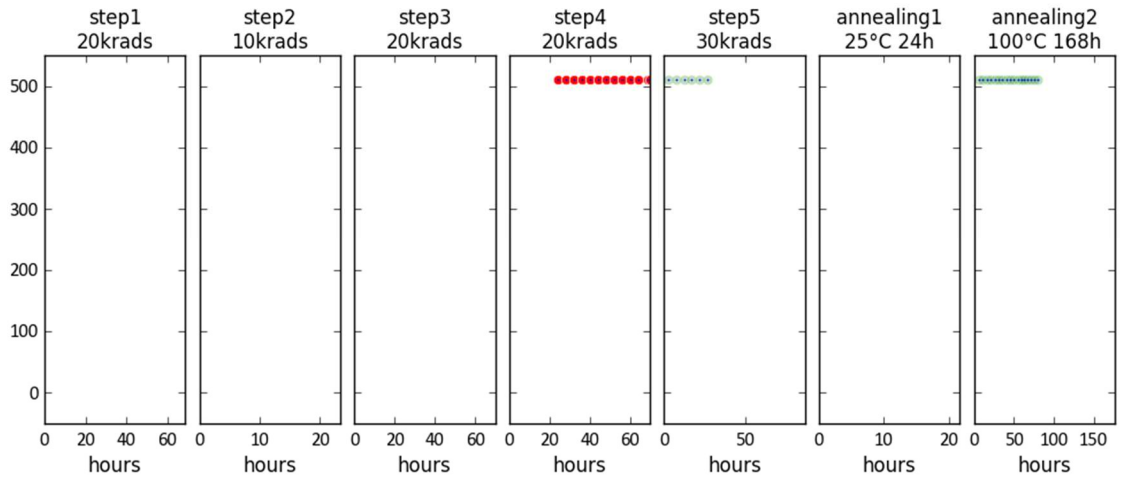


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12.17 DUT2 (Board 2), Low duty cycle

12.17.1 DUT2, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E)
 ● failed program blocks (P)
 ● failed blocks (E+P)

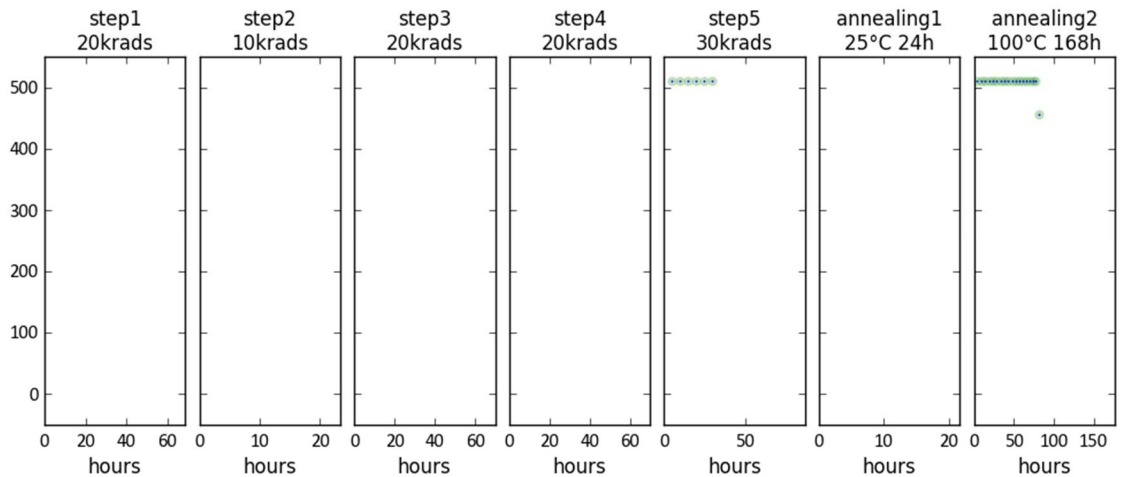


Dut2, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.17.2 DUT2, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E)
 ● failed program blocks (P)
 ● failed blocks (E+P)



Dut2, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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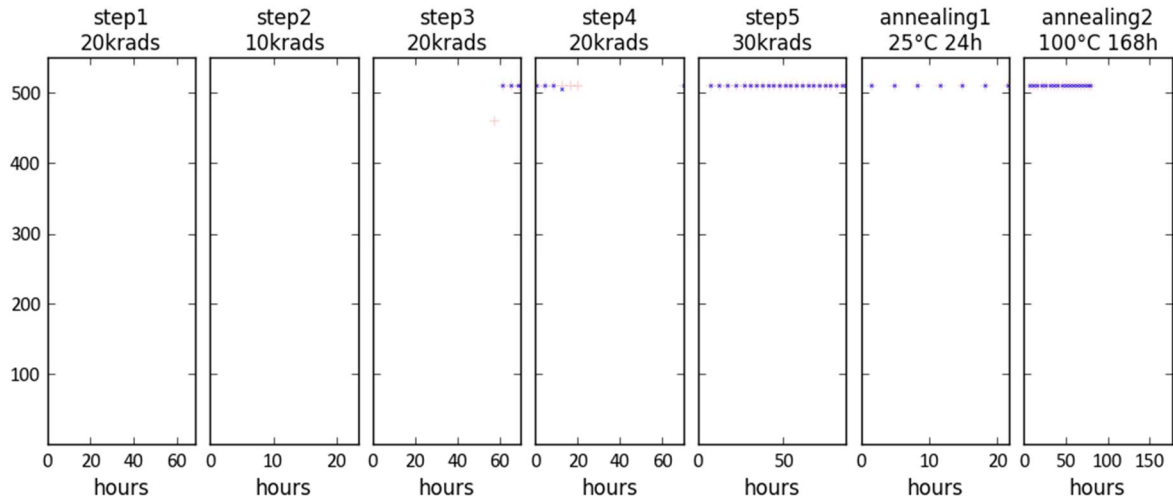


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12.17.3 DUT2, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

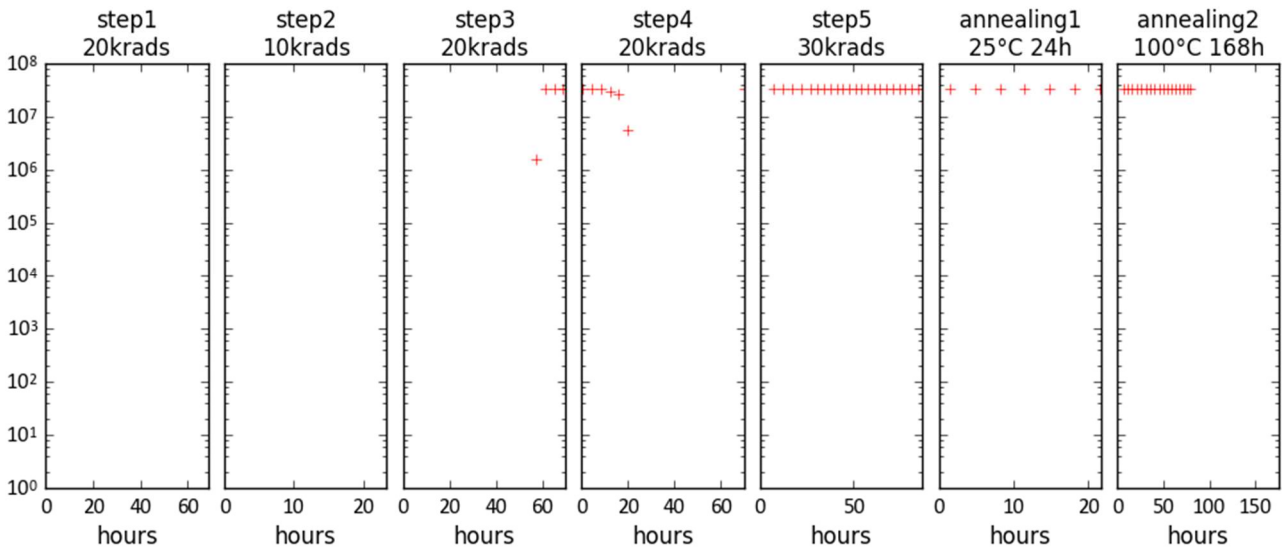
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut2, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut2, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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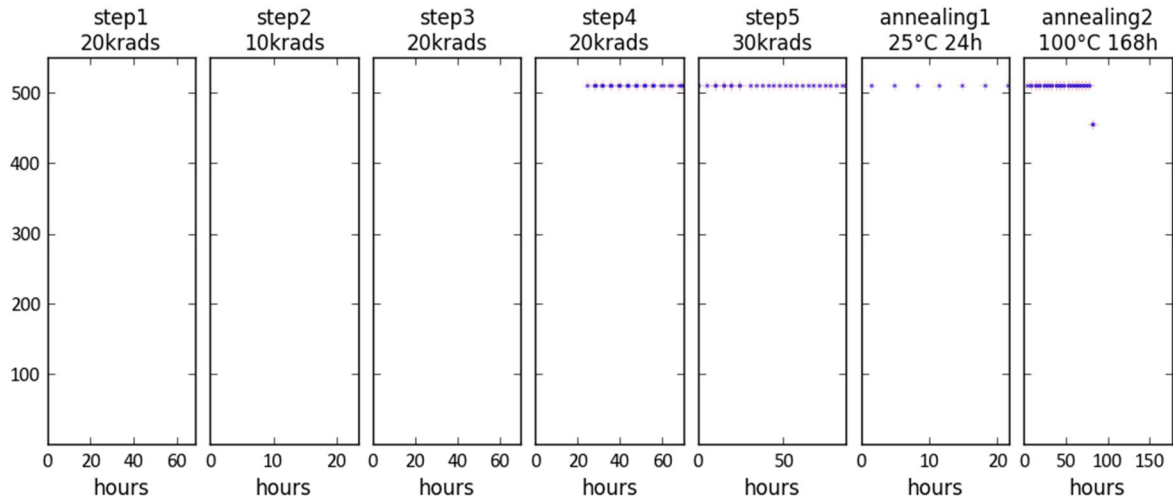


Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
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ALTER TECHNOLOGY	
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12.17.4 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

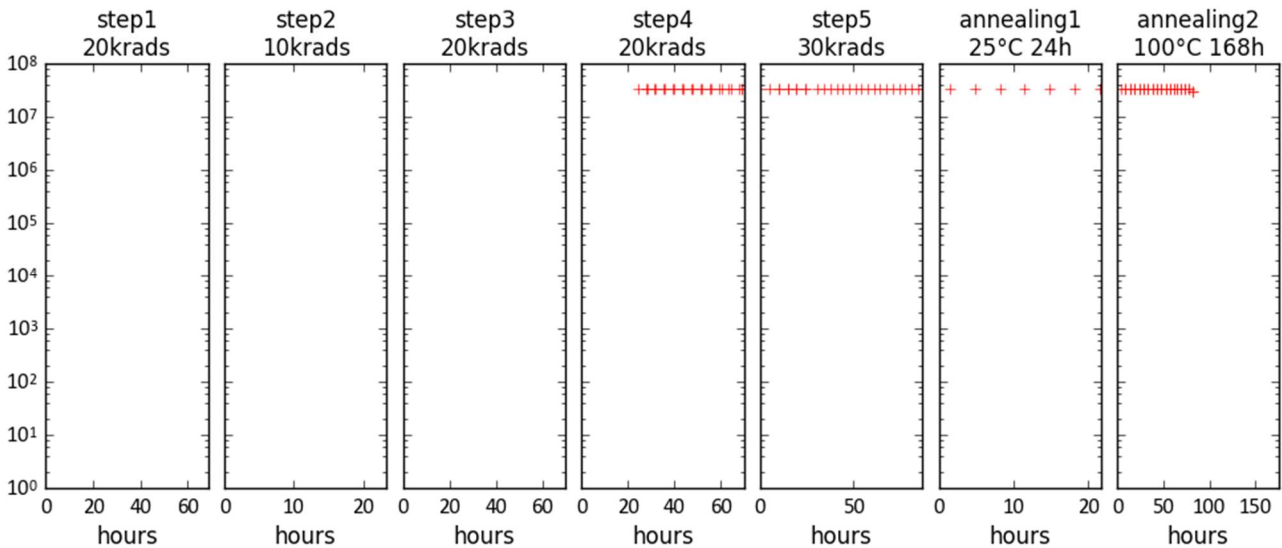
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Dut2, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut2, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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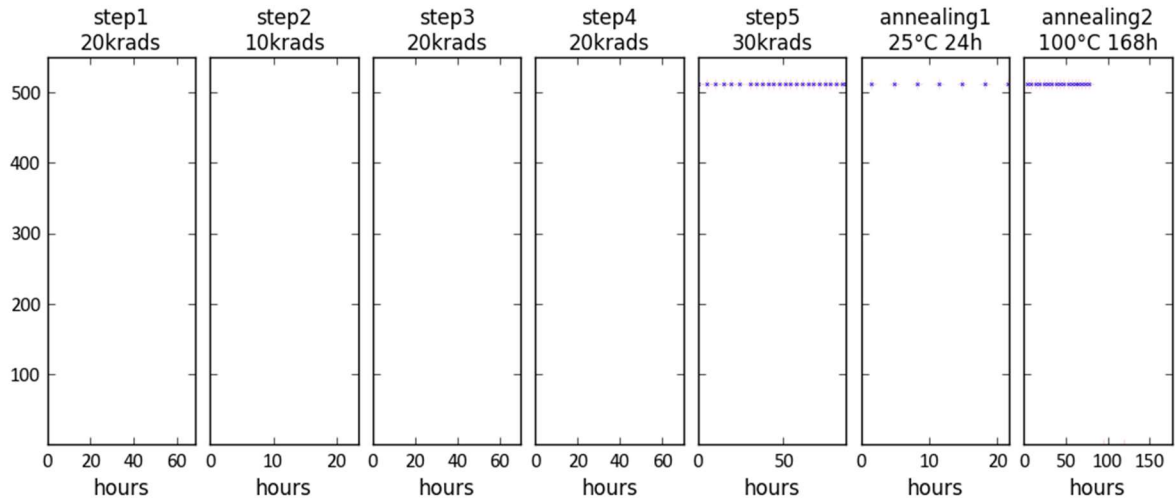
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12.17.5 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

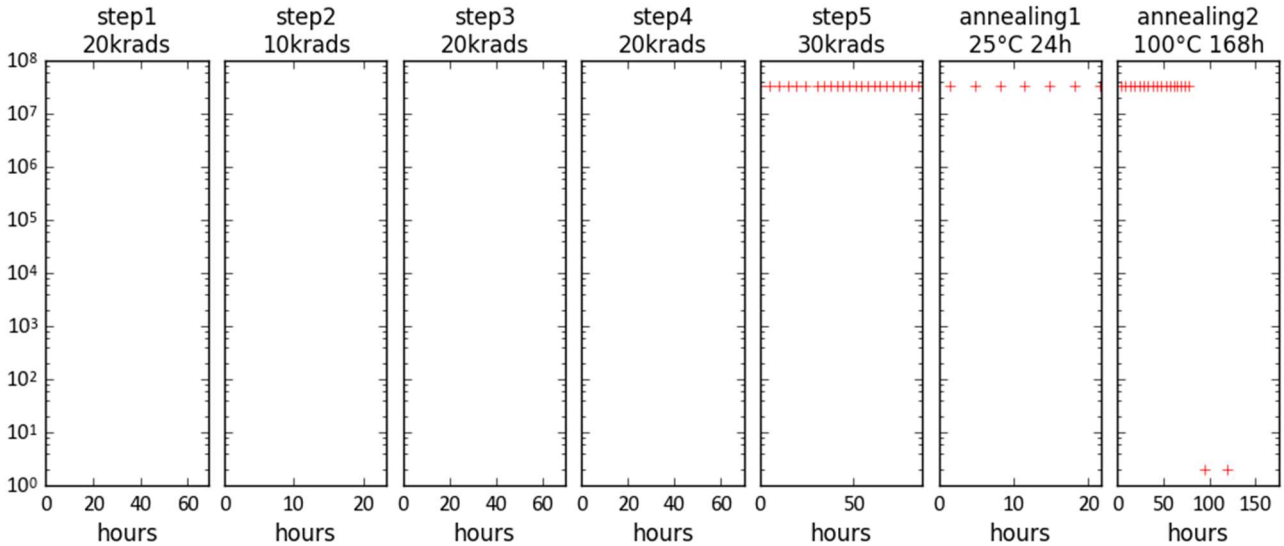
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut2, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut2, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

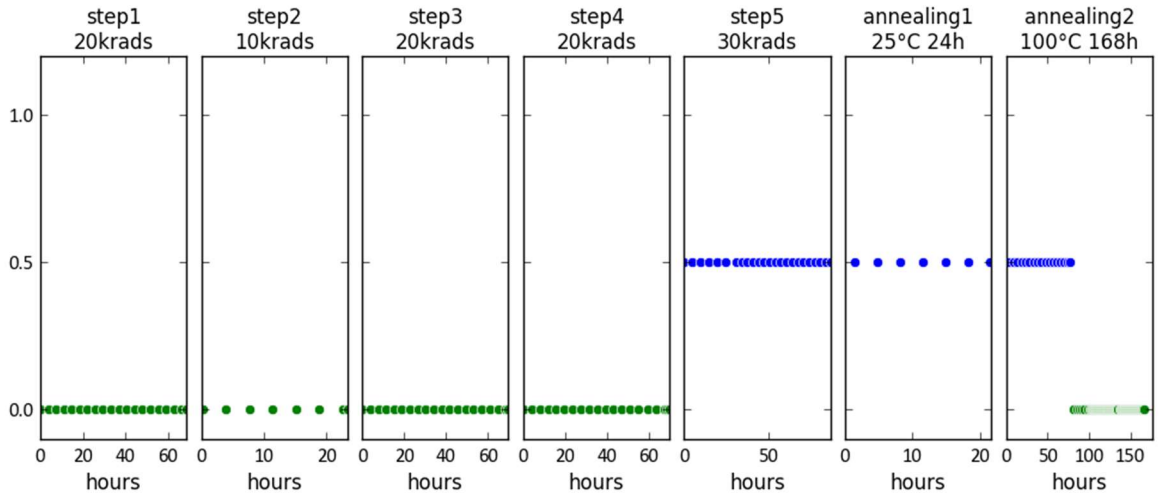
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12.17.6 DUT2, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut2, Low duty cycle, DUT access status

hirex eng.

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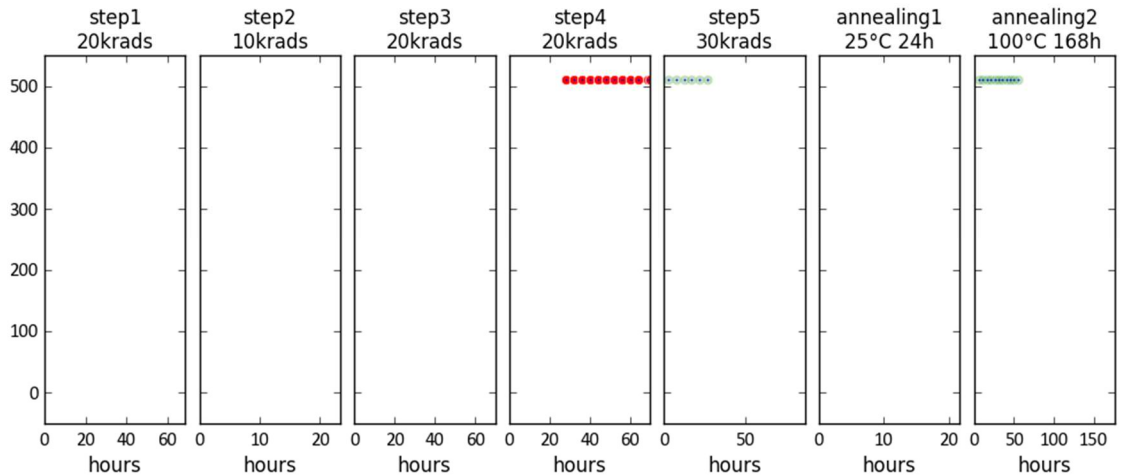
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12.18 DUT3 (Board 2), Low duty cycle

12.18.1 DUT3, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)

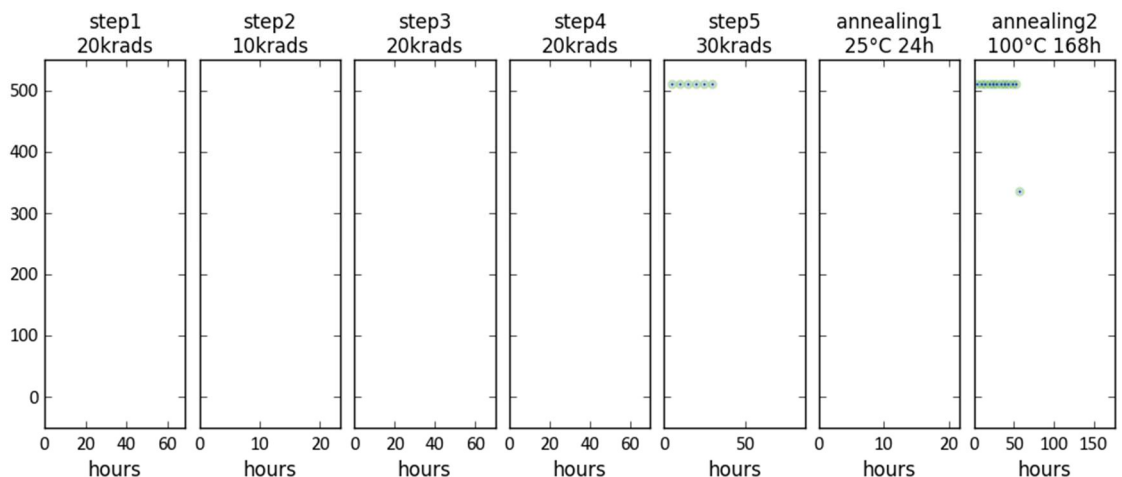


Dut3, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.18.2 DUT3, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)



Dut3, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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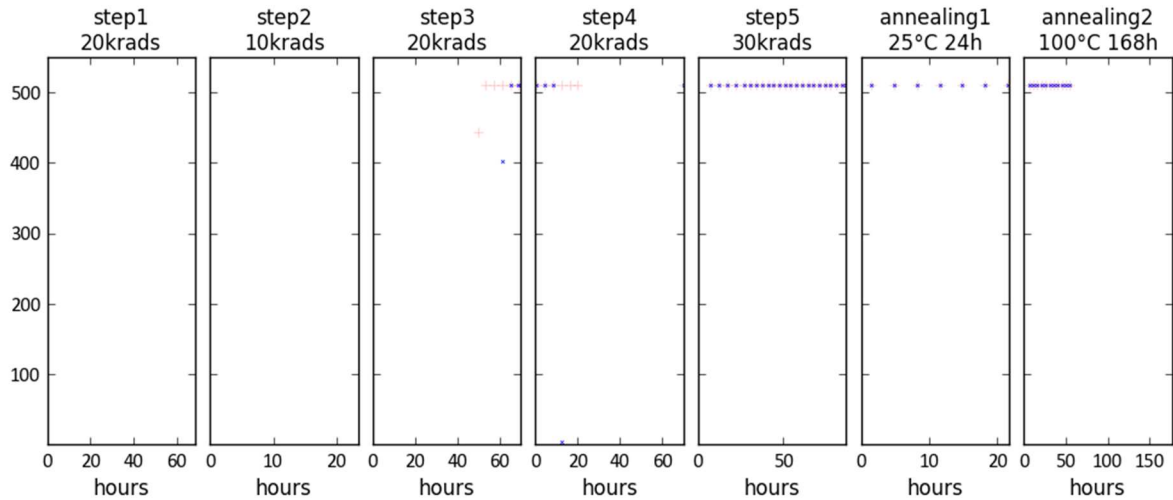


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12.18.3 DUT3, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

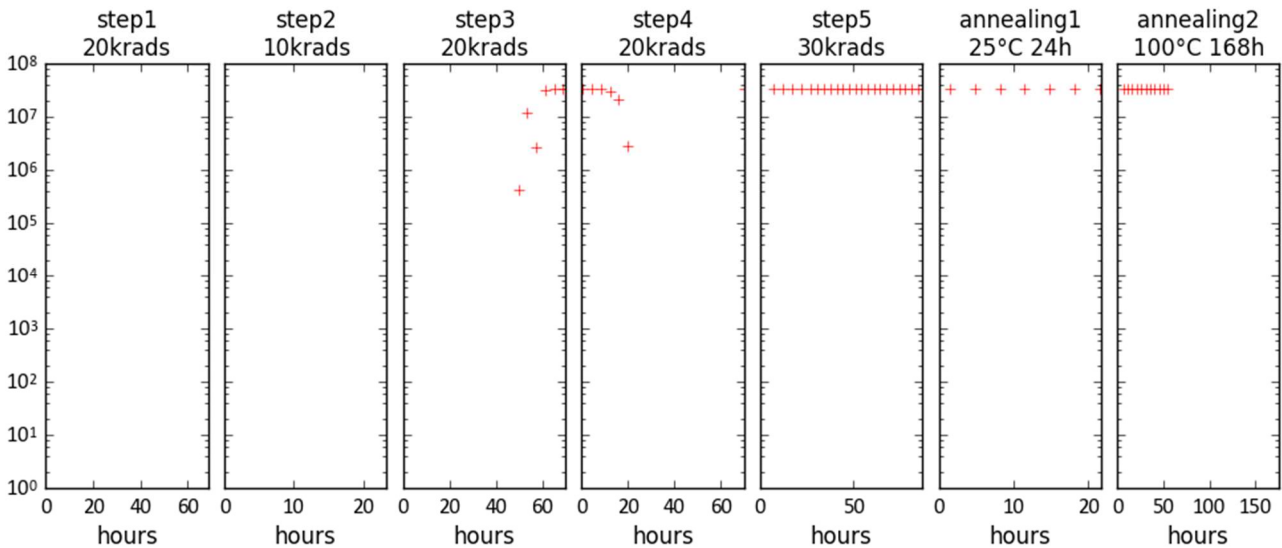
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut3, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut3, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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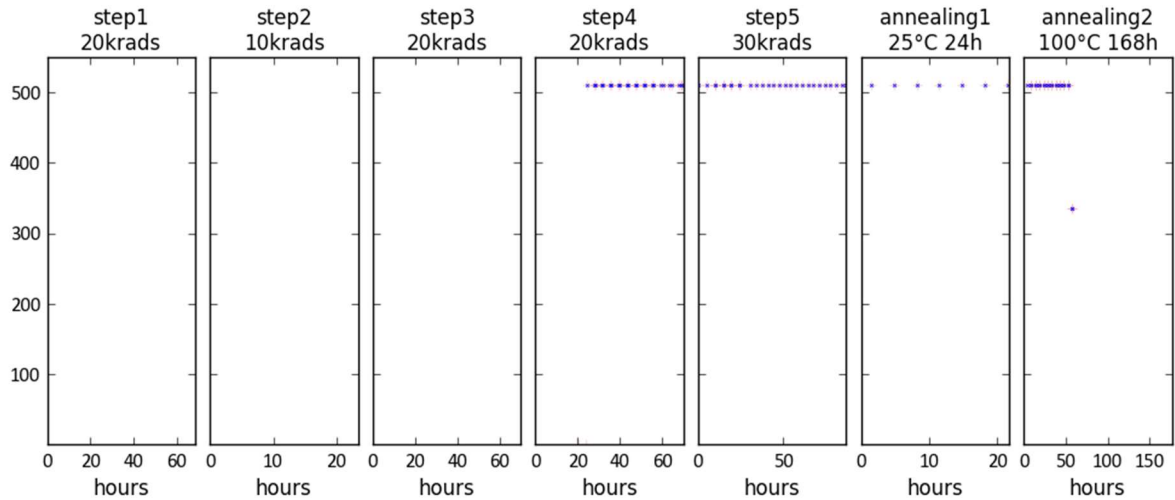
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12.18.4 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

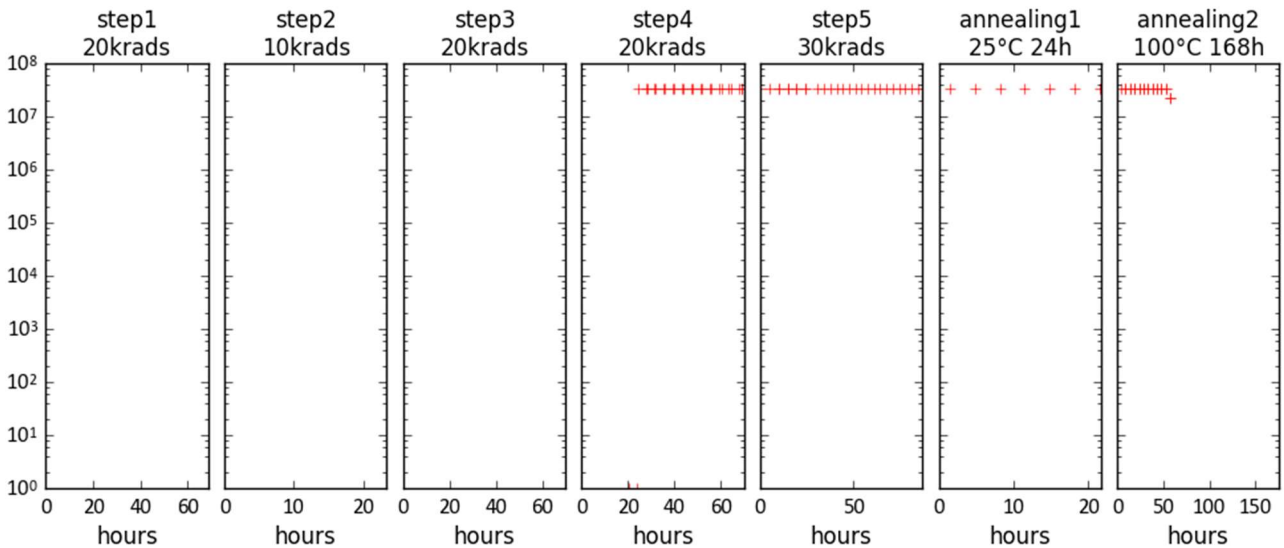
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut3, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut3, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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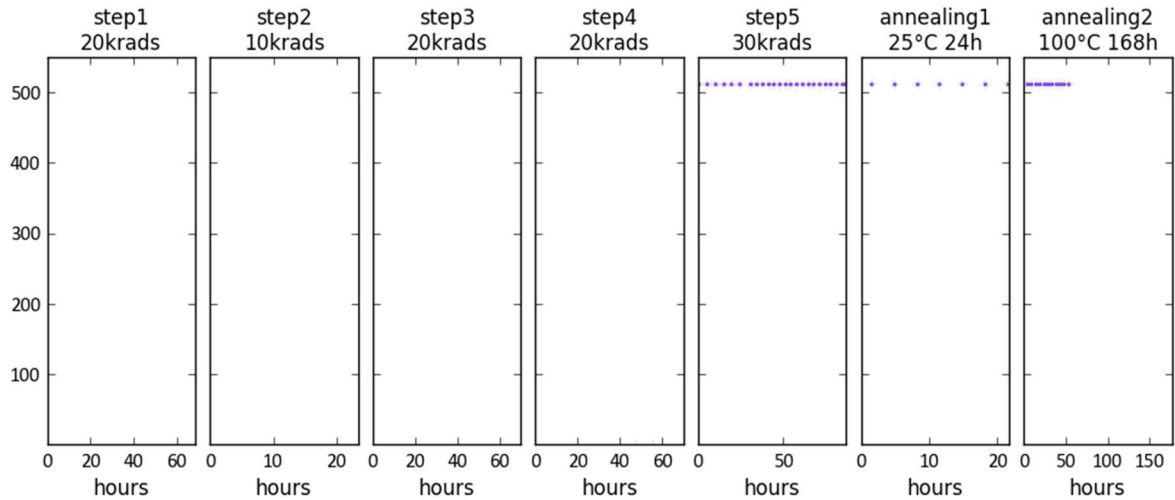
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12.18.5 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

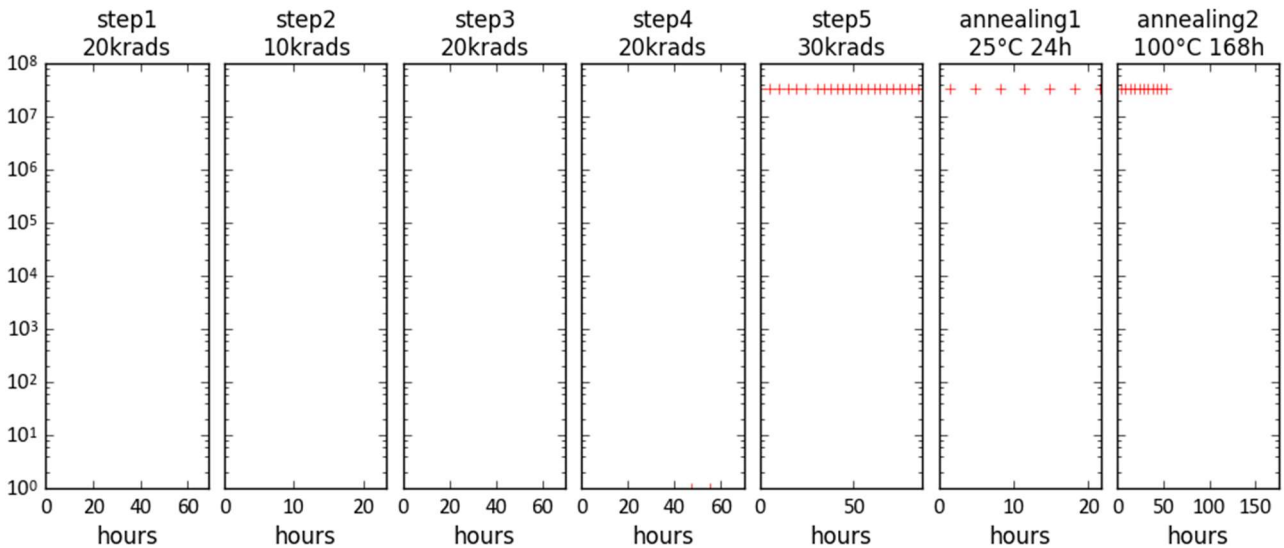
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut3, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut3, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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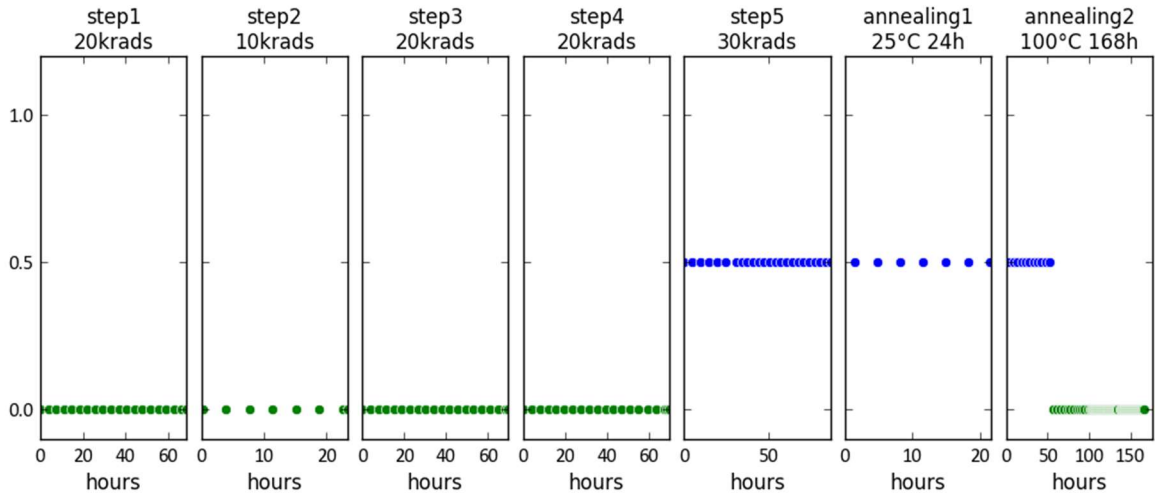


Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
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12.18.6 DUT3, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut3, Low duty cycle, DUT access status

hirex eng.

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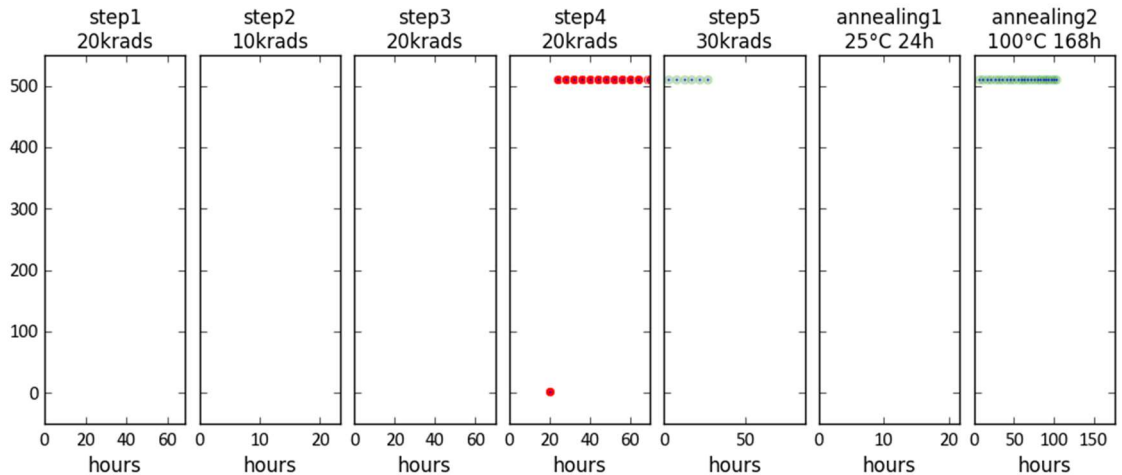
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12.19 DUT4 (Board 2), Low duty cycle

12.19.1 DUT4, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)

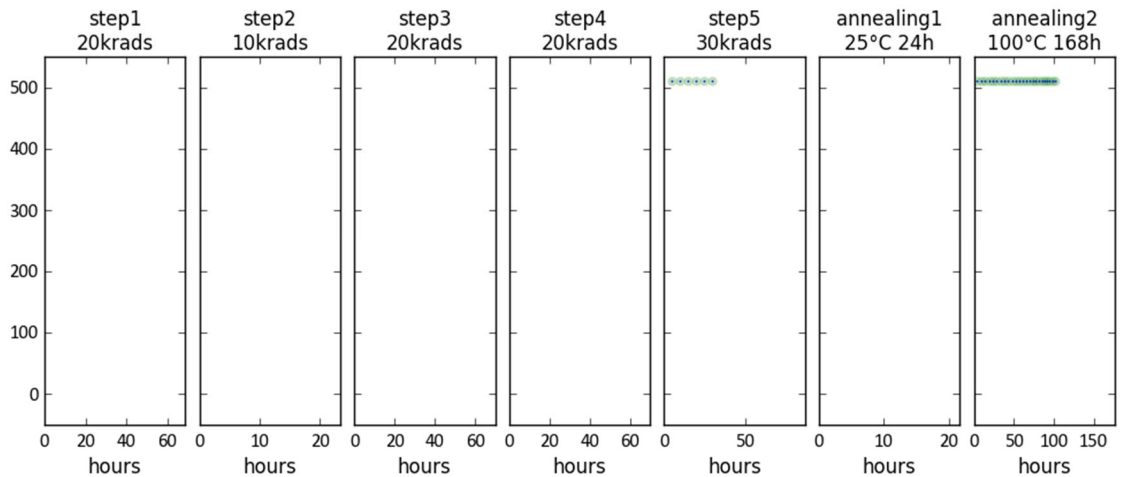


Dut4, Low duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.19.2 DUT4, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) ● failed blocks (E+P)



Dut4, Low duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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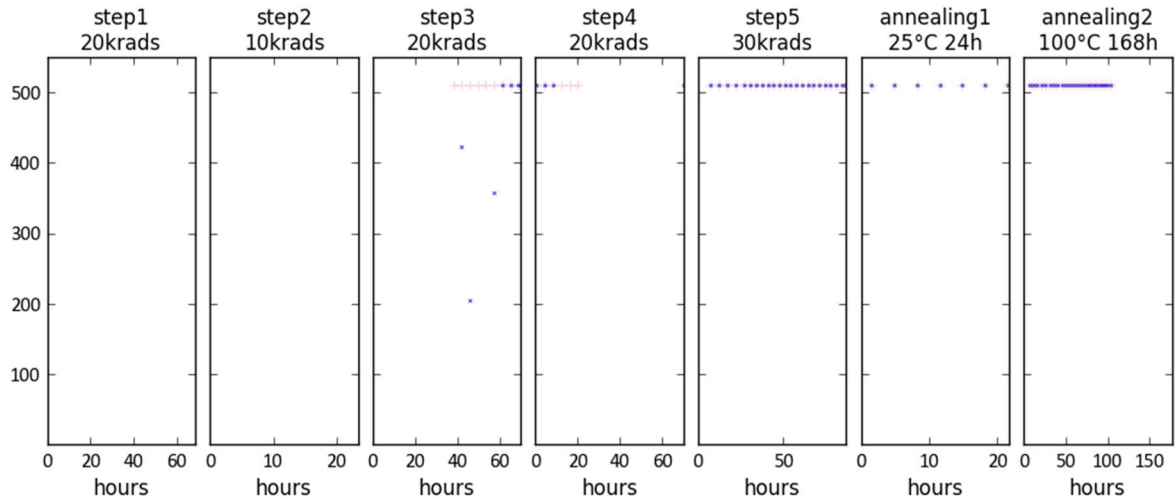
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12.19.3 DUT4, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

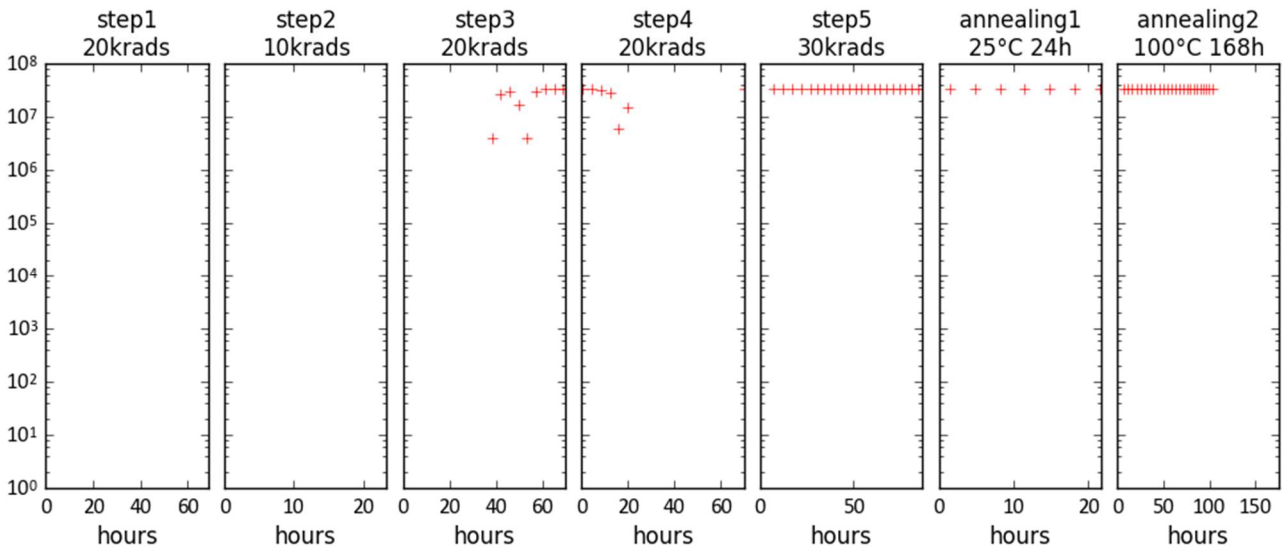
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut4, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut4, Low duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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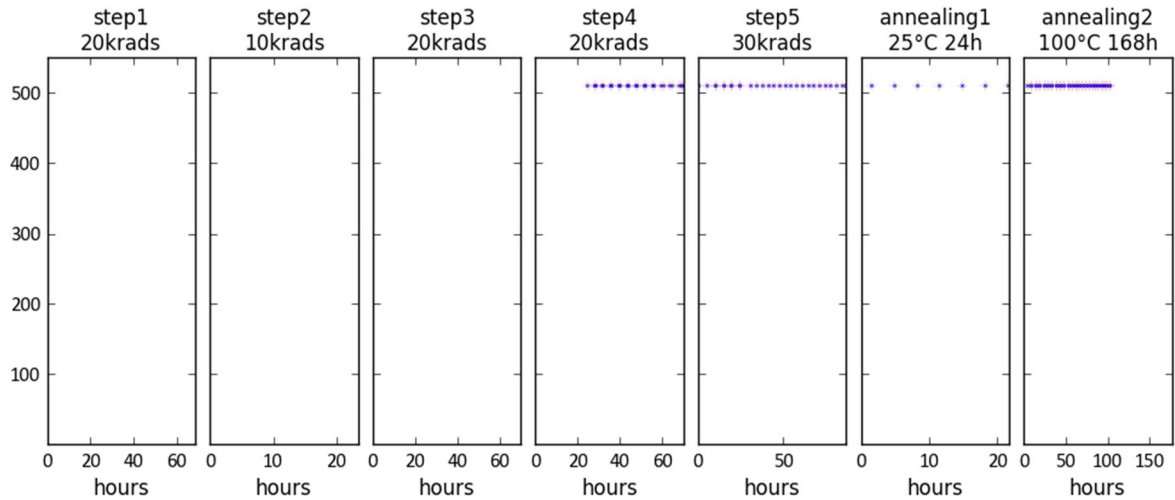
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12.19.4 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

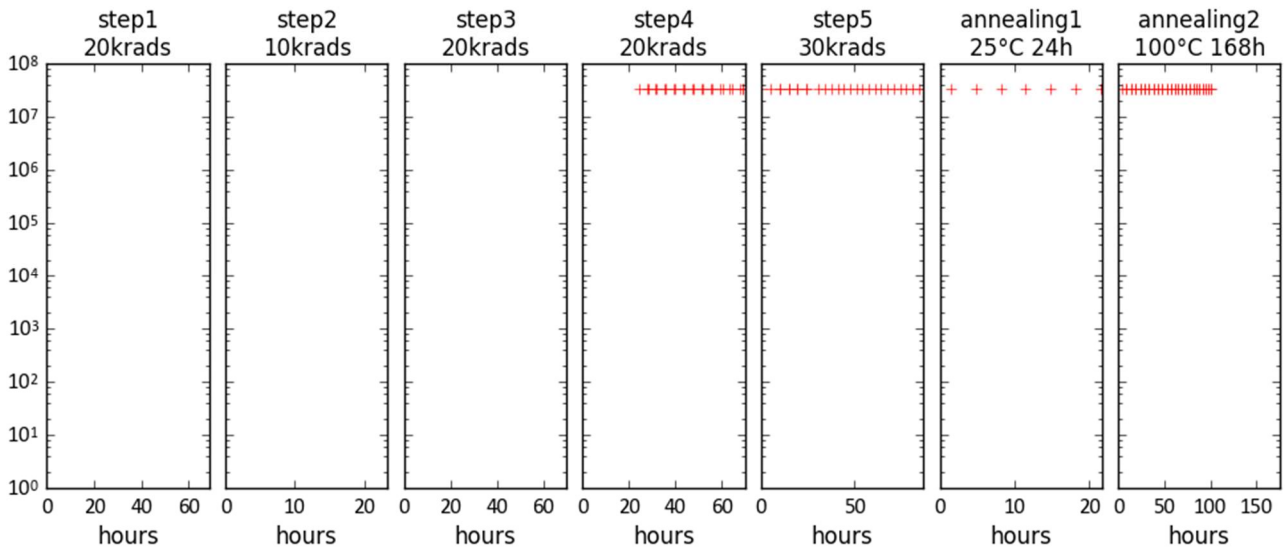
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut4, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut4, Low duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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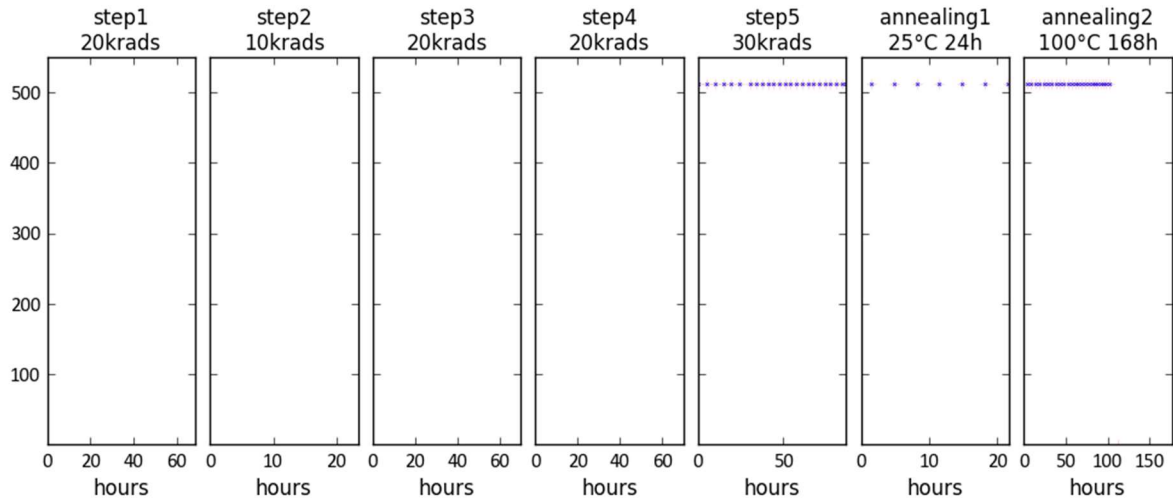
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12.19.5 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

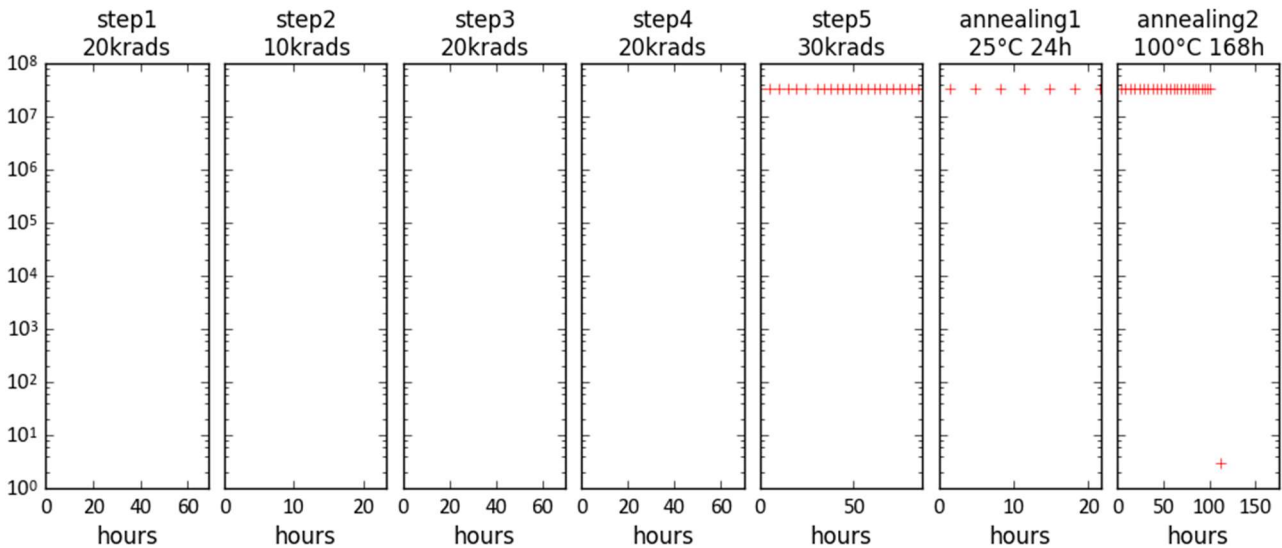
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut4, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut4, Low duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

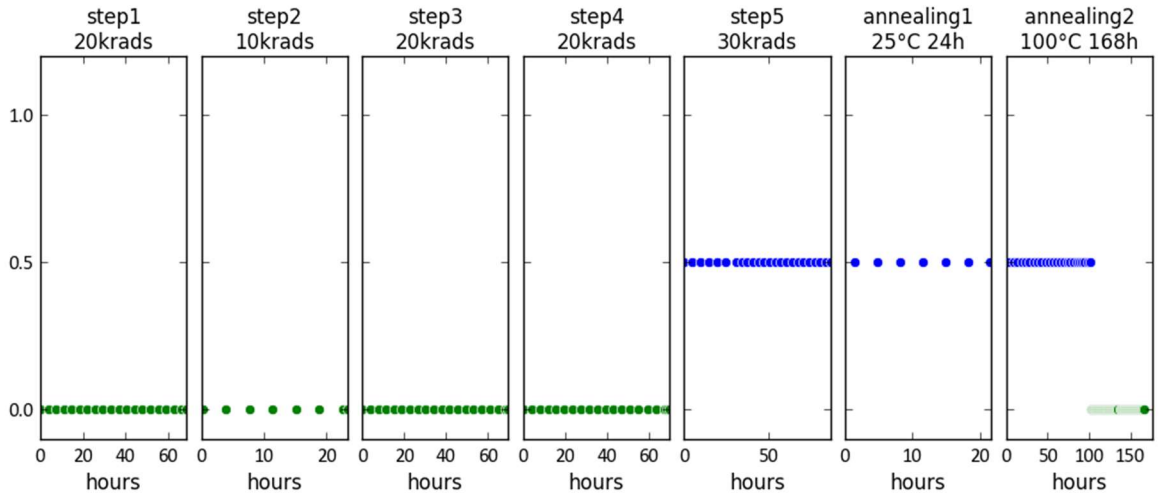
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12.19.6 DUT4, Low Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut4, Low duty cycle, DUT access status

hirex eng.

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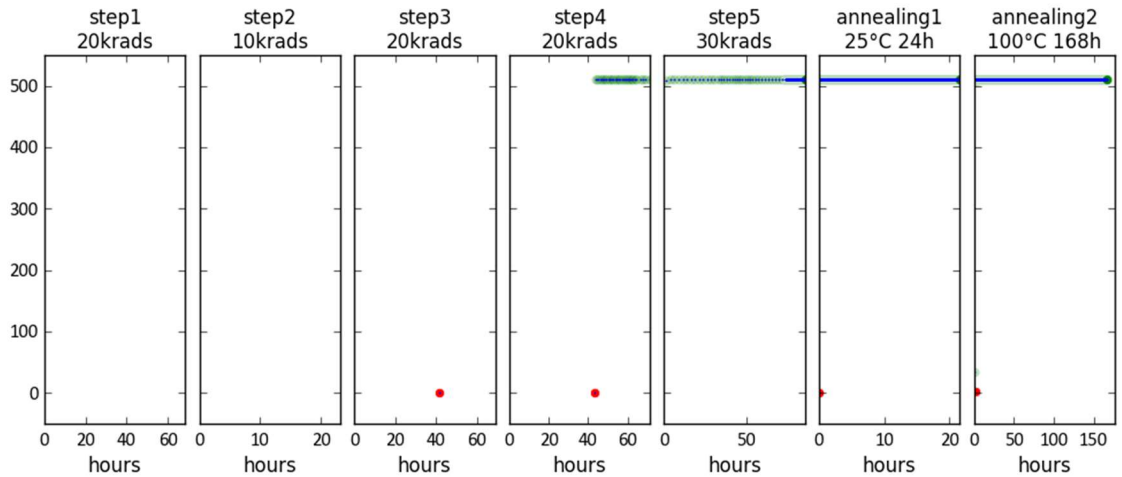
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12.20 DUT0 (Board 3), High duty cycle

12.20.1 DUT0, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) · failed blocks (E+P)

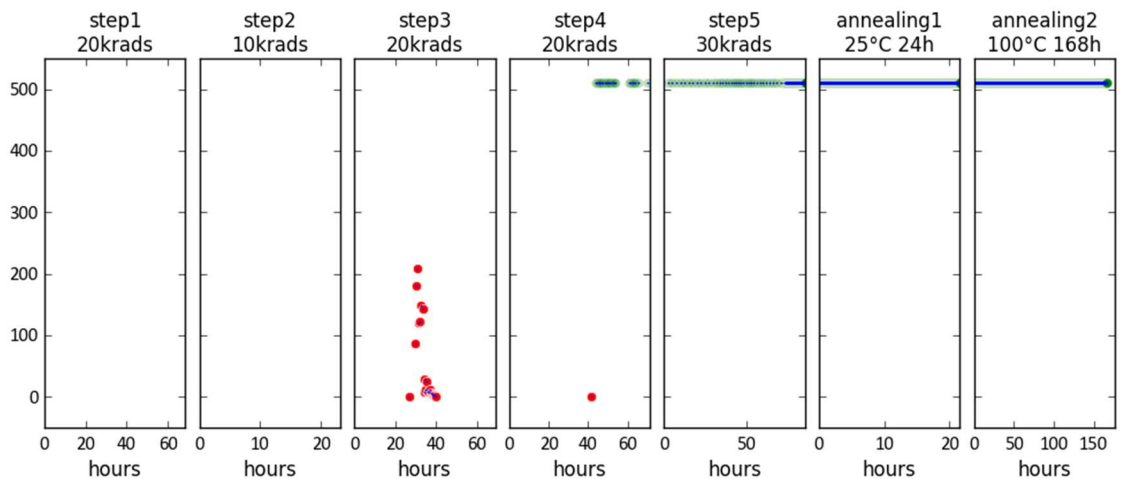


Dut0, High duty cycle, erase/program, pattern 5555, block 2 to 511

hirex eng.

12.20.2 DUT0, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

● failed erase blocks (E) ● failed program blocks (P) · failed blocks (E+P)



Dut0, High duty cycle, erase/program, pattern aaaa, block 2 to 511

hirex eng.

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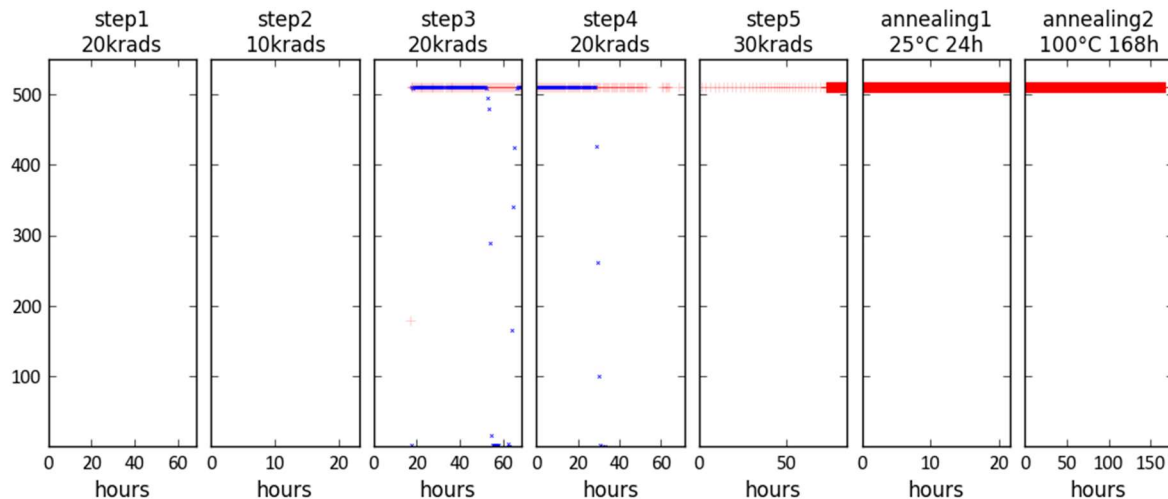
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MICRON U		Issue: 2	Date: 2018/10/10
		Date: 2018/10/10	Page: 410 / 462
		Page: 410 / 462	

12.20.3 DUT0, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

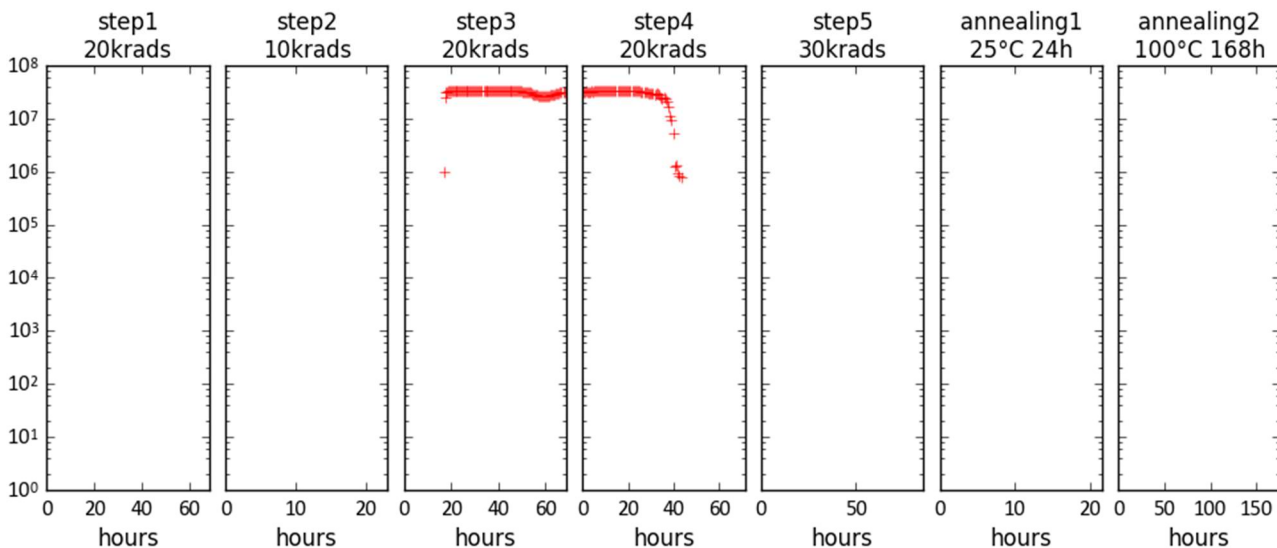
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut0, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error




Dut0, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

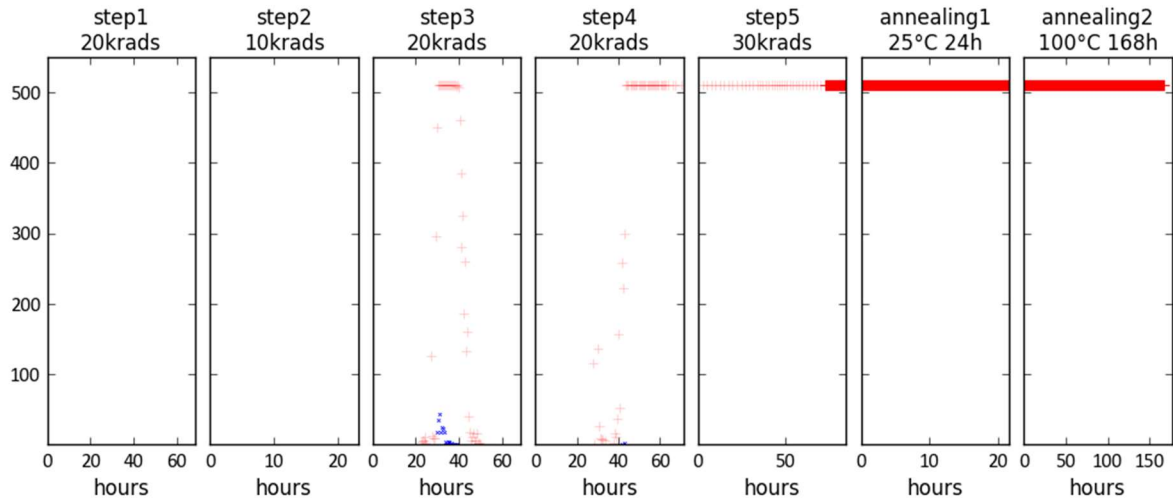
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	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
	PC28F00AM29EWH4		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
			Page:	411 / 462

12.20.4 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

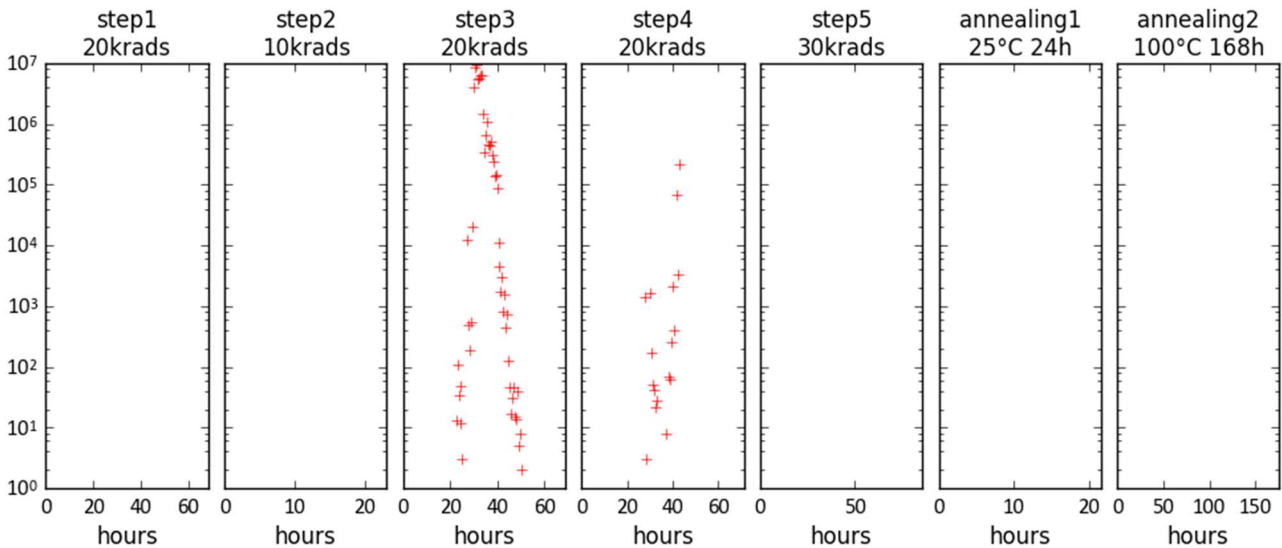
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut0, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut0, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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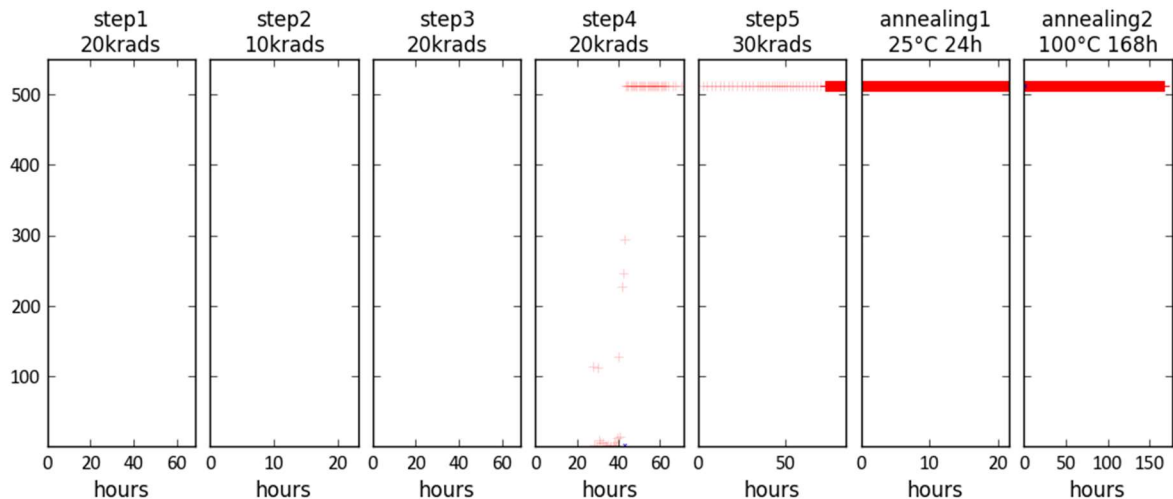
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		RL:	2017901237
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		Issue:	2
		Date:	2018/10/10
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12.20.5 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

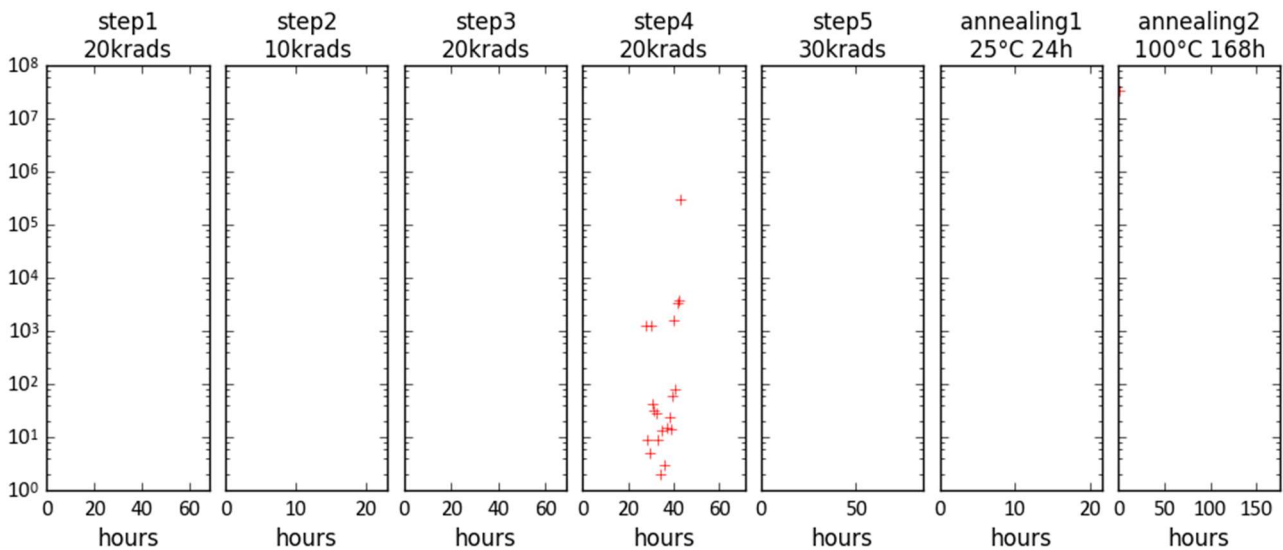
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut0, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut0, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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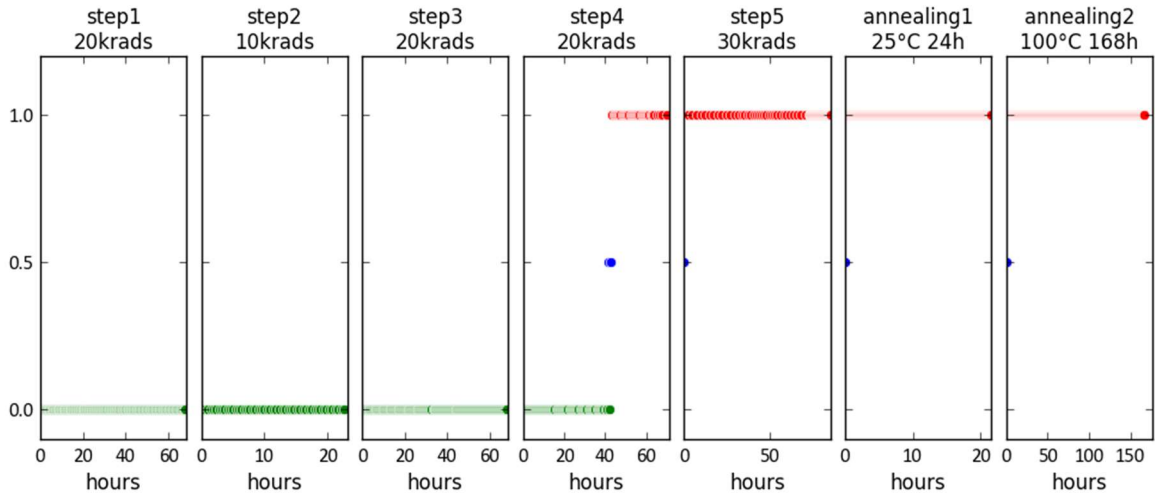
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Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
		RL:	2017901237
PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
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12.20.6 DUT0, High Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed



Dut0, High duty cycle, DUT access status

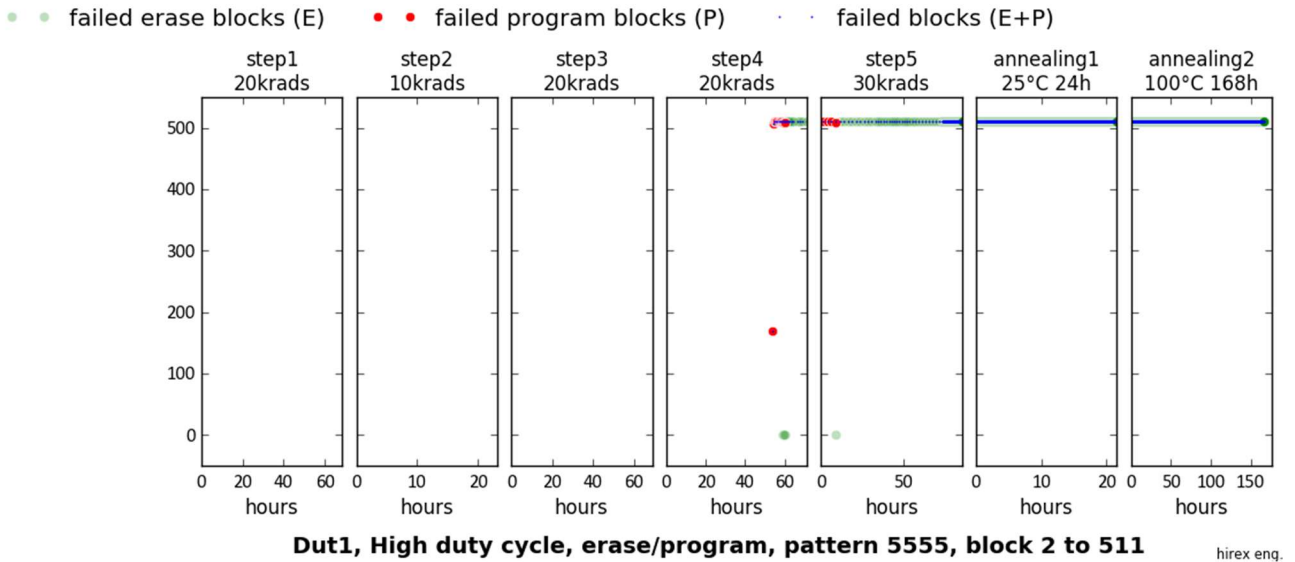
hirex eng.

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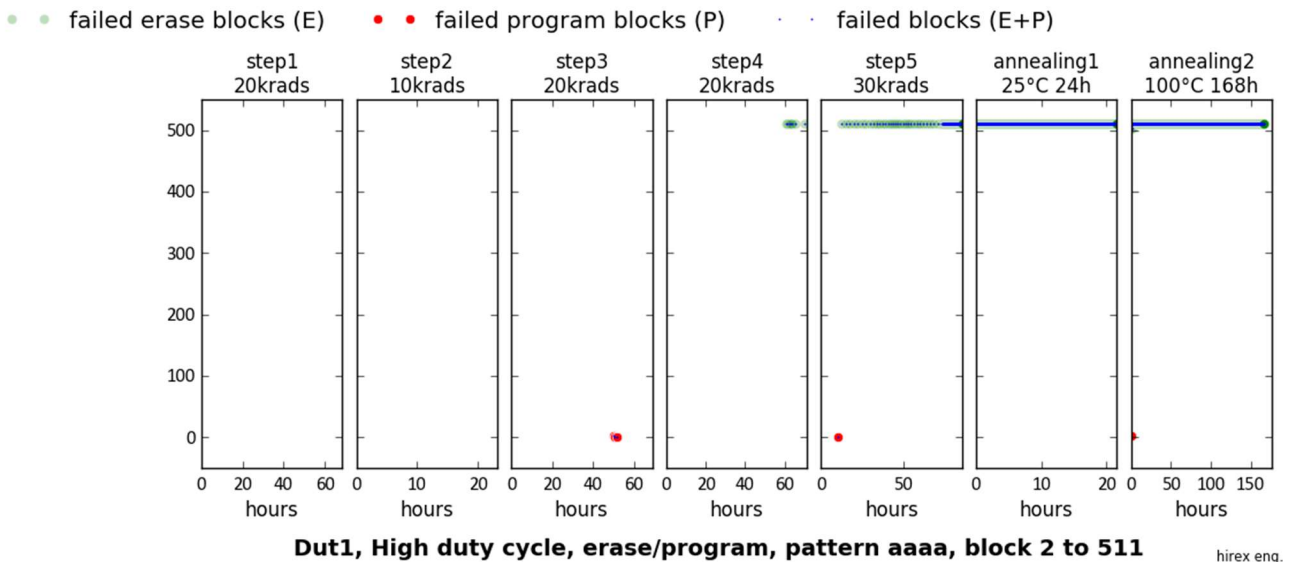
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12.21 DUT1 (Board 3), High duty cycle

12.21.1 DUT1, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511




12.21.2 DUT1, High Duty Cycle, Erase/Program, pattern = 0xA AAAA, blocks 2 to 511



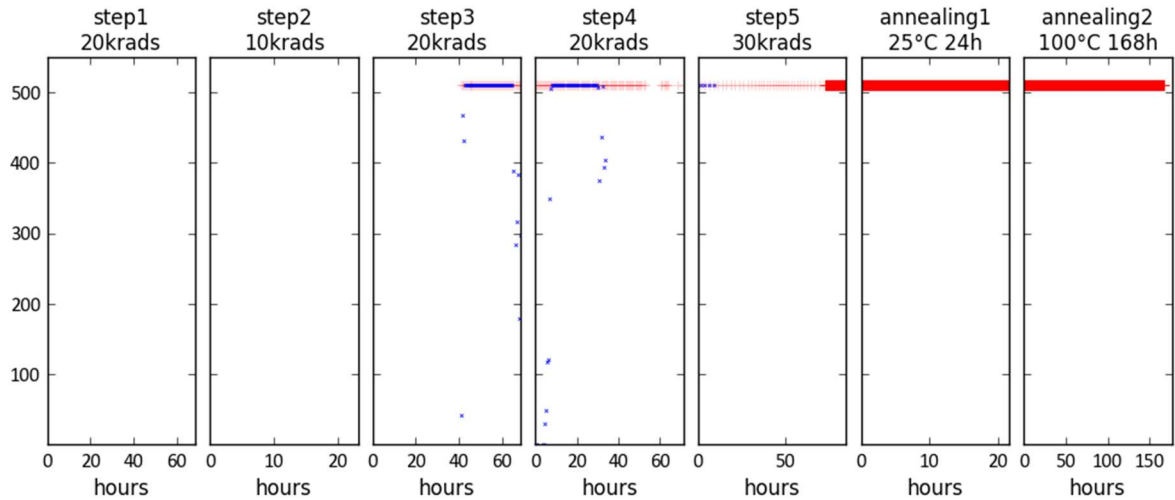
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	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
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	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
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12.21.3 DUT1, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

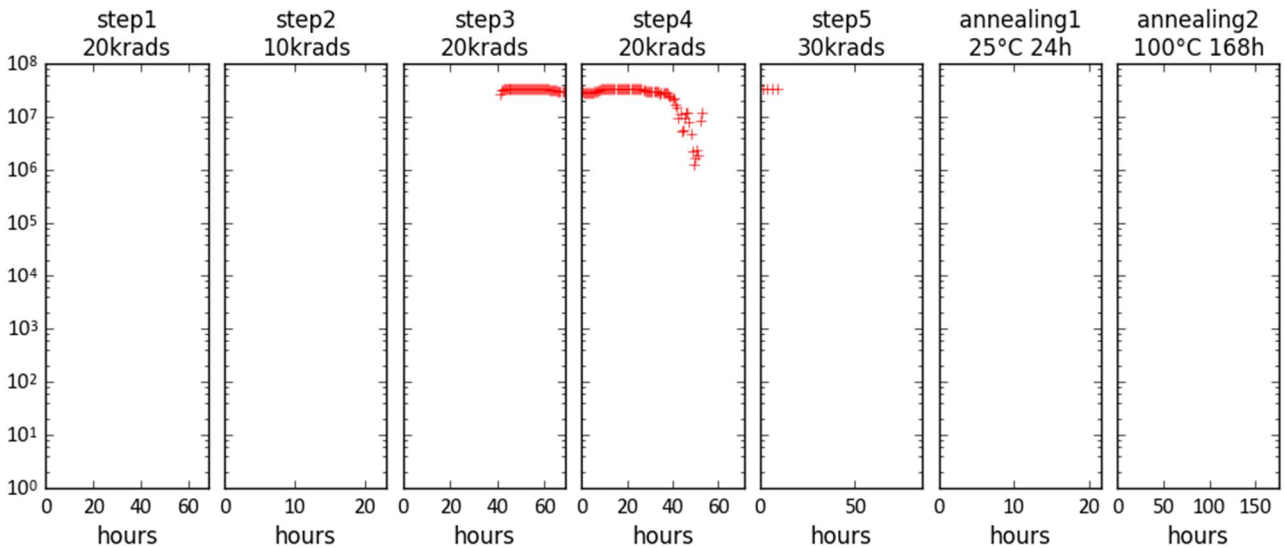
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut1, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut1, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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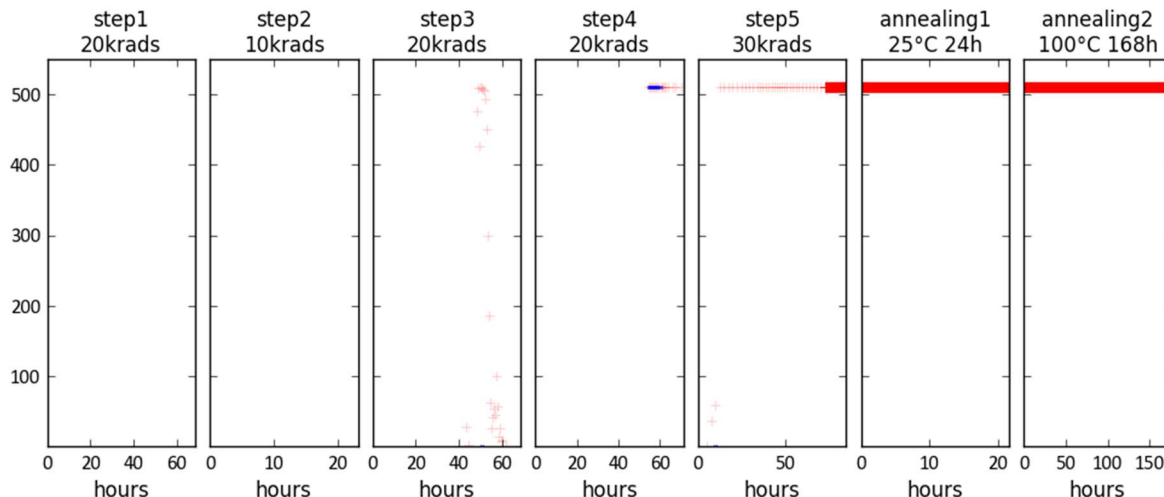
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D/C 1409		Date:	2018/10/10
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12.21.4 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

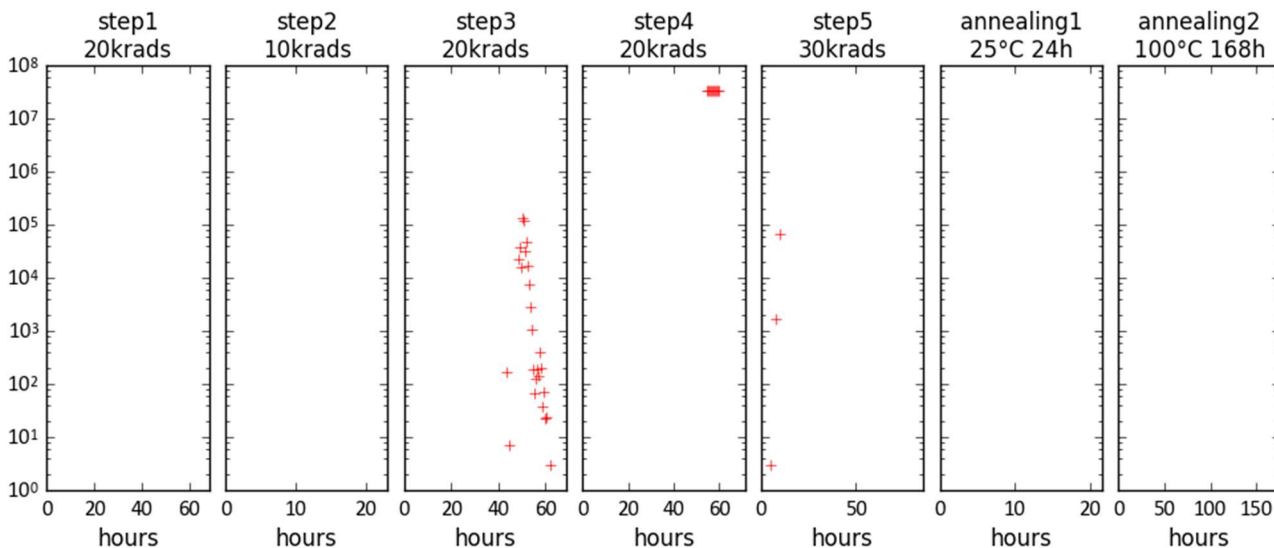
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut1, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut1, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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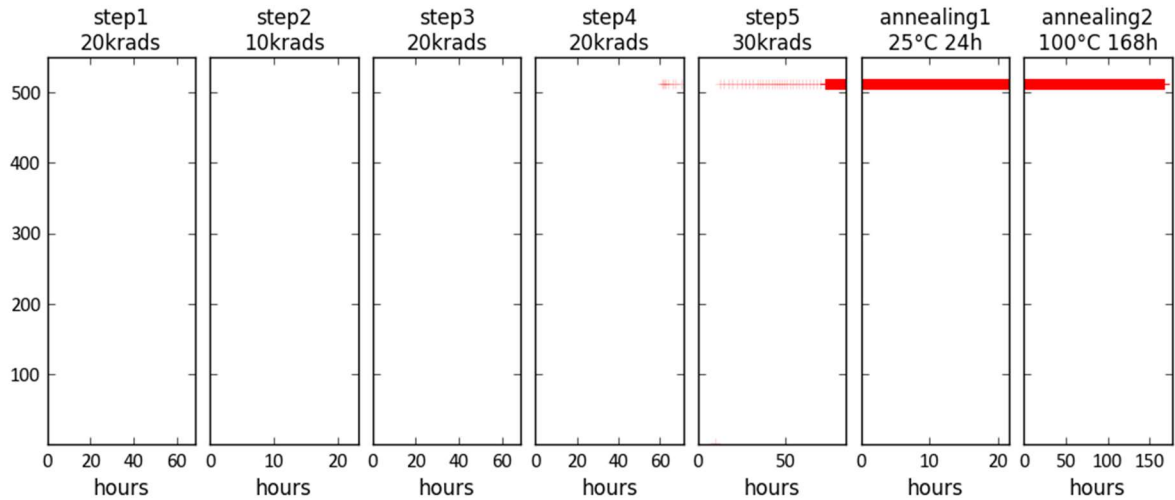
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		RL:	2017901237
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12.21.5 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

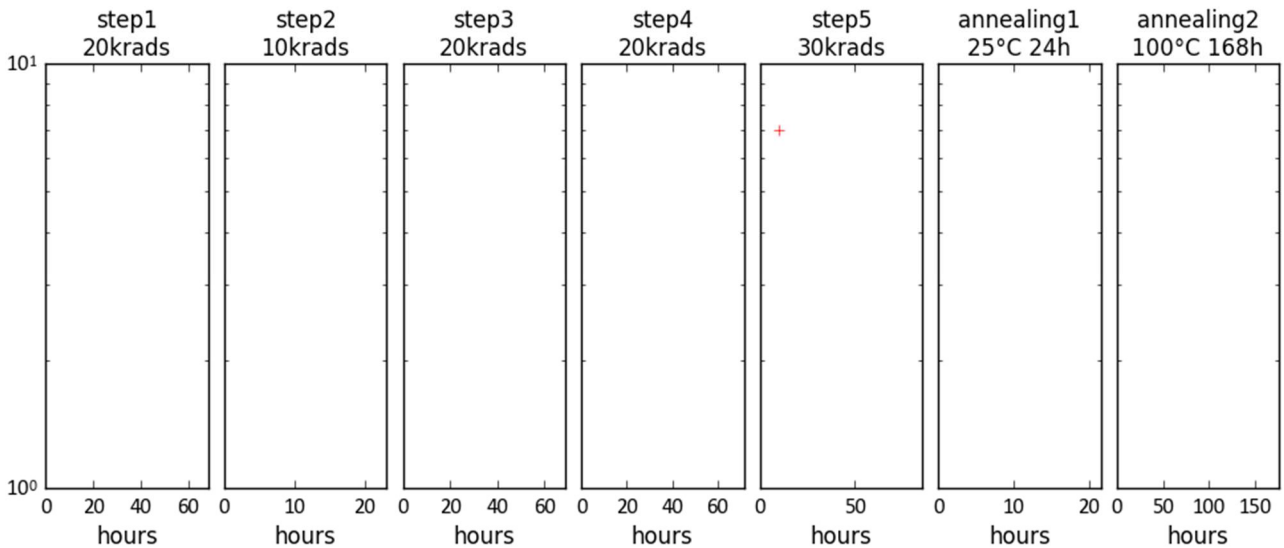
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Dut1, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut1, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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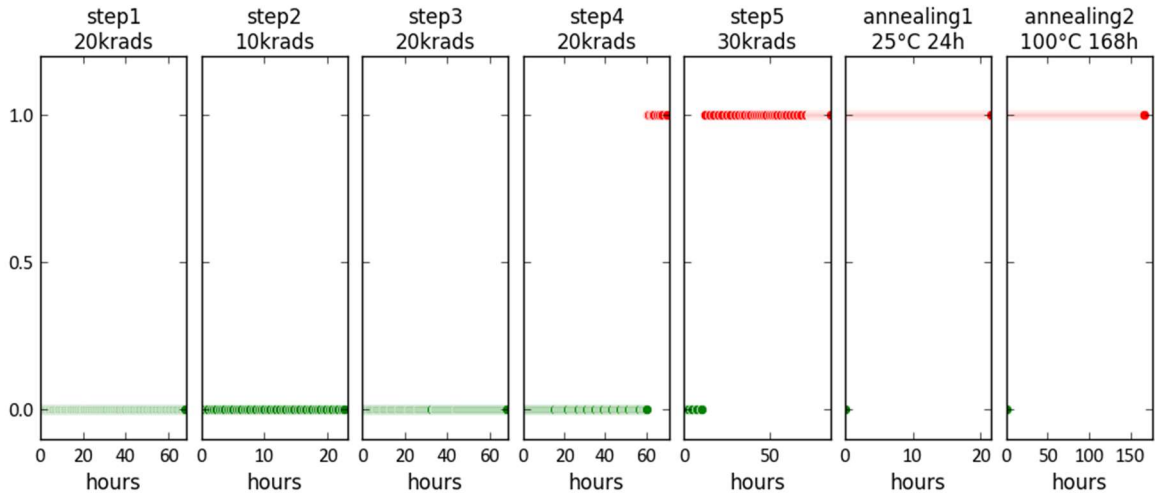
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PC28F00AM29EWHA	D/C 1409	MICRON U	Ref.:	ATN-RR-464
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12.21.6 DUT1, High Duty Cycle, DUT access status

- ● identification ok
- ● identification wrong
- ● reset failed




Dut1, High duty cycle, DUT access status

hirex eng.

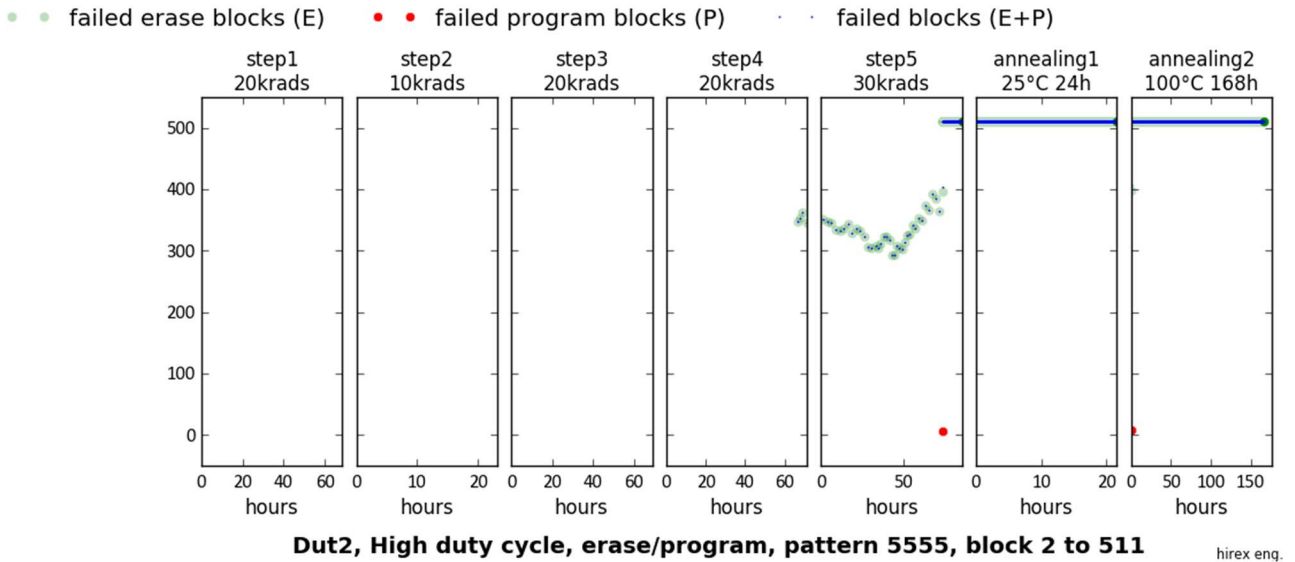
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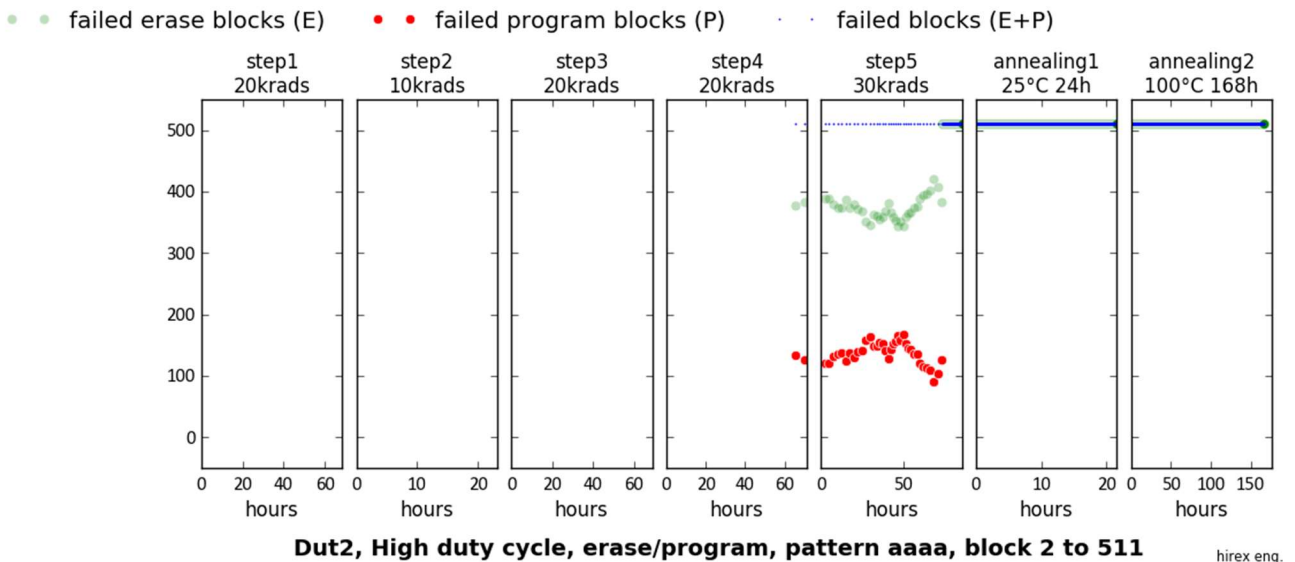
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	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
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12.22 DUT2 (Board 3), High duty cycle

12.22.1 DUT2, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511



12.22.2 DUT2, High Duty Cycle, Erase/Program, pattern = 0xA AAA, blocks 2 to 511



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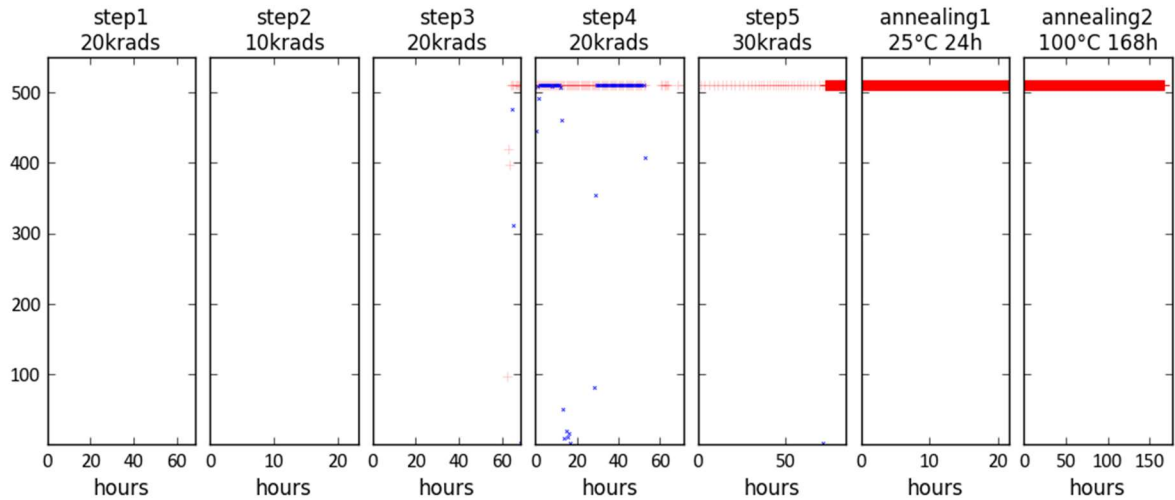
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Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY		
		RL:	2017901237	
PC28F00AM29EWHA	D/C 1409	MICRON U	Ref.:	ATN-RR-464
			Issue:	2
			Date:	2018/10/10
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12.22.3 DUT2, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

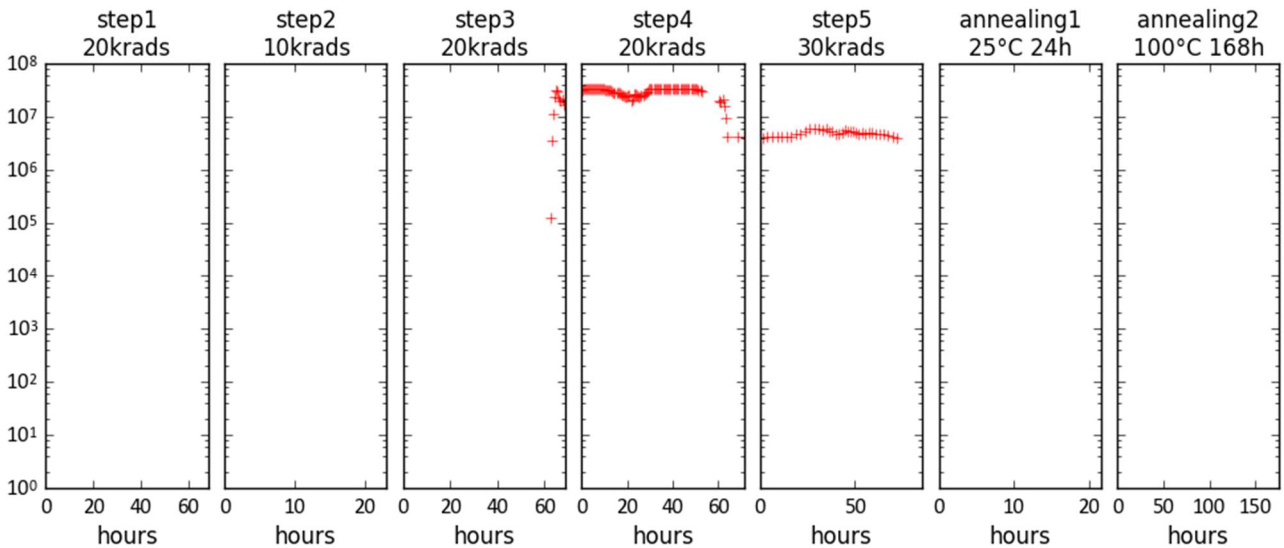
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut2, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut2, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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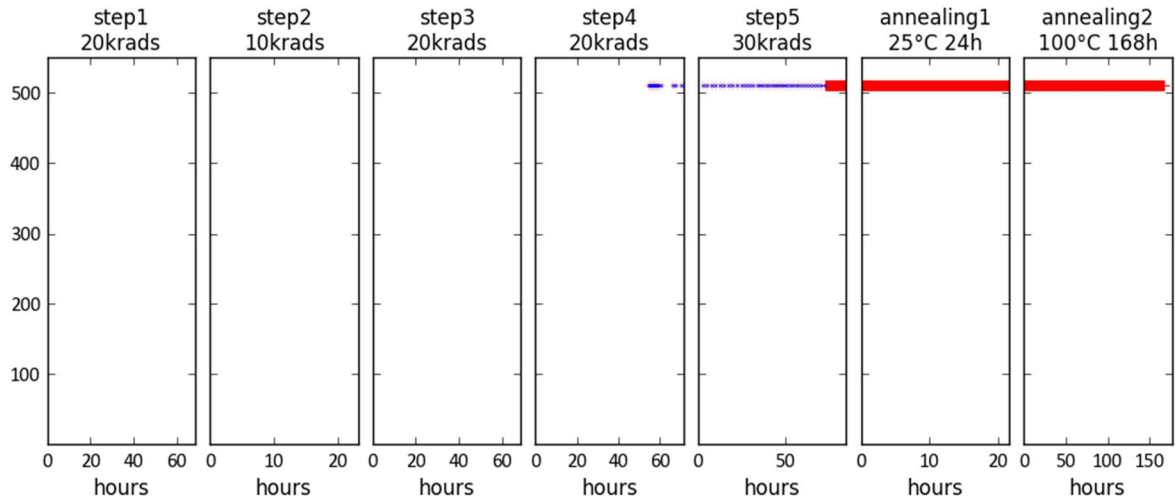
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		RL:	2017901237
PC28F00AM29EWHA	MICRON U	Ref.:	ATN-RR-464
		Issue:	2
D/C 1409		Date:	2018/10/10
		Page:	421 / 462

12.22.4 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

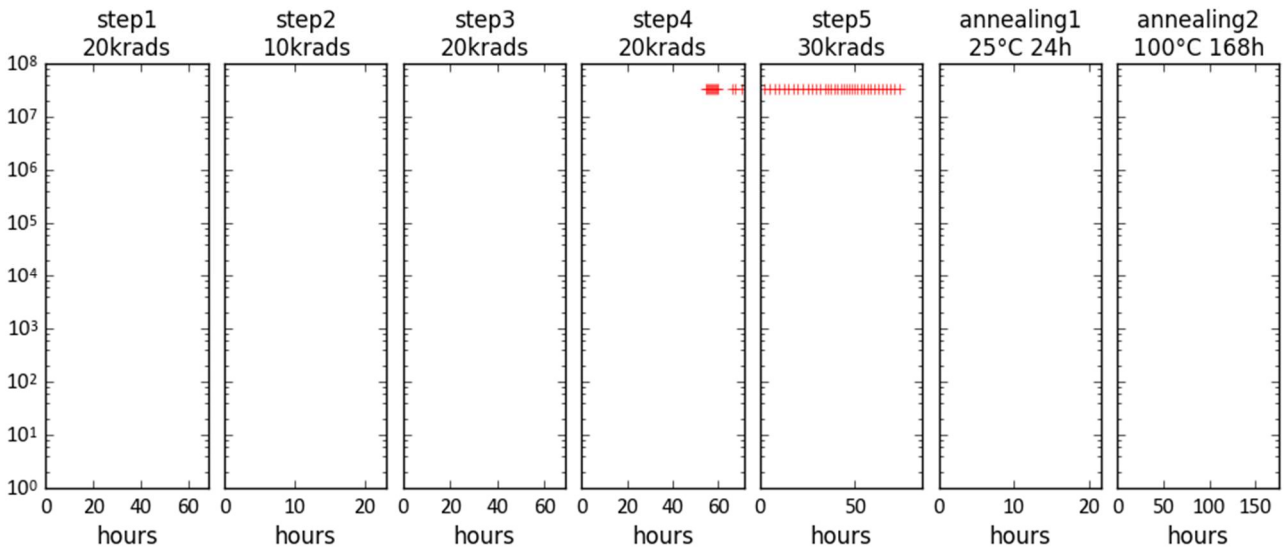
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut2, High duty cycle, Read, pattern aaa, block 2 to 511

hirex eng.

+ + words in error



Dut2, High duty cycle, Read, pattern aaa, block 2 to 511

hirex eng.

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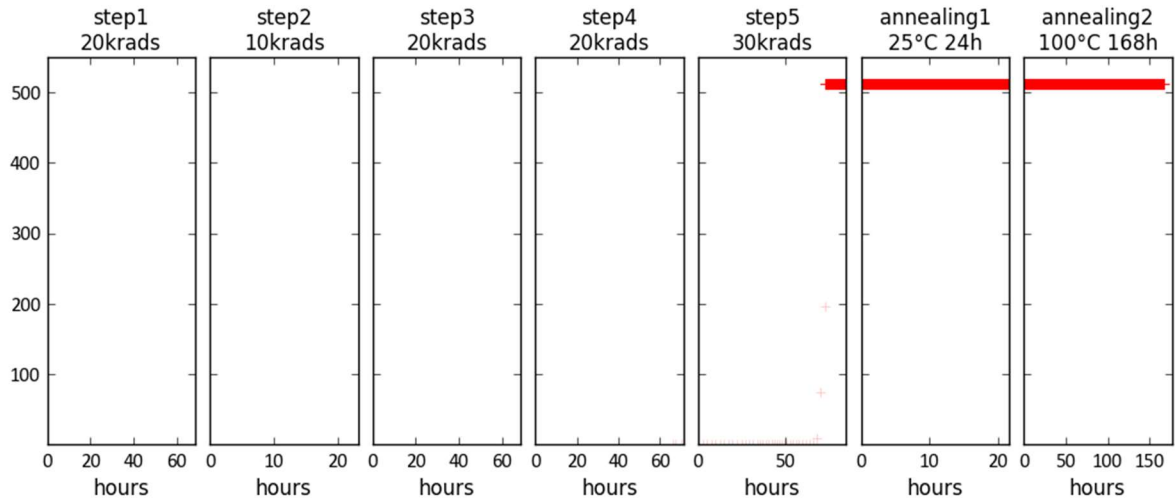
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		Issue:	2
		Date:	2018/10/10
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12.22.5 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

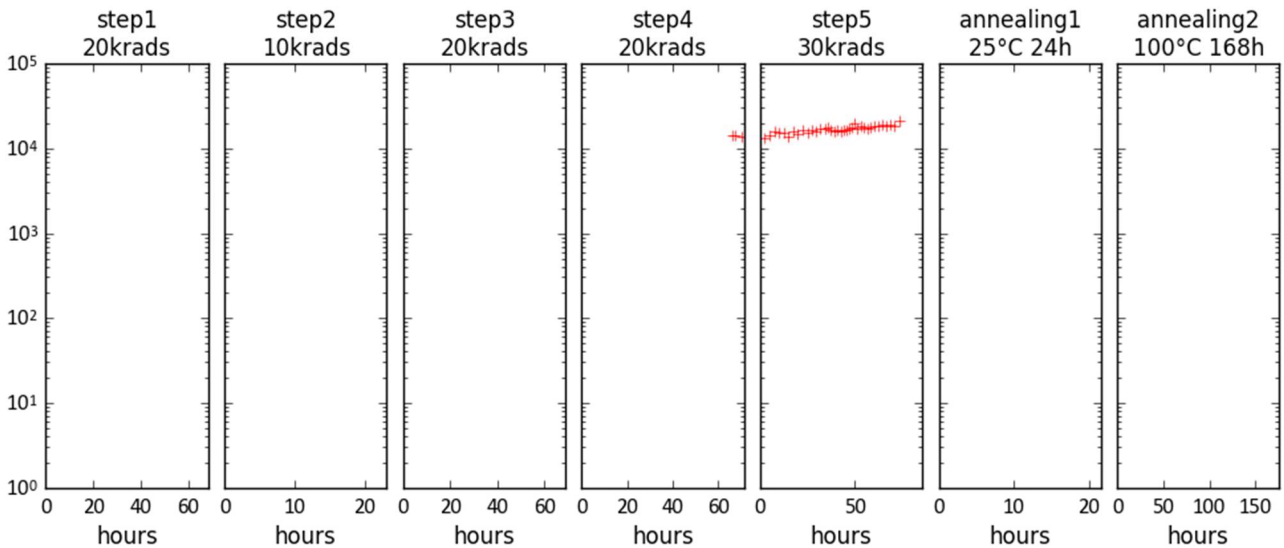
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut2, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut2, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

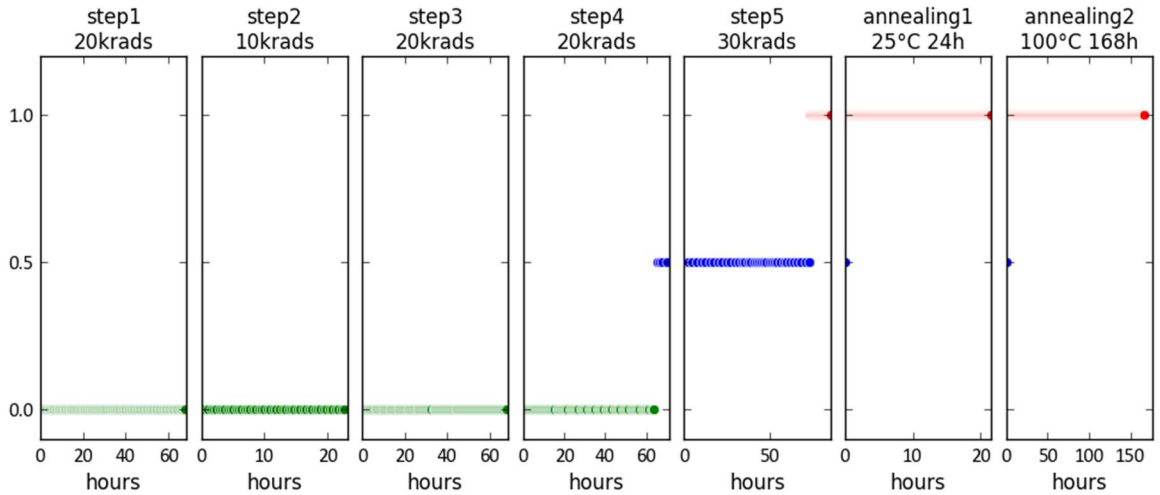
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			RL:	2017901237
	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
		Page:	423 / 462	

12.22.6 DUT2, High Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed



Dut2, High duty cycle, DUT access status

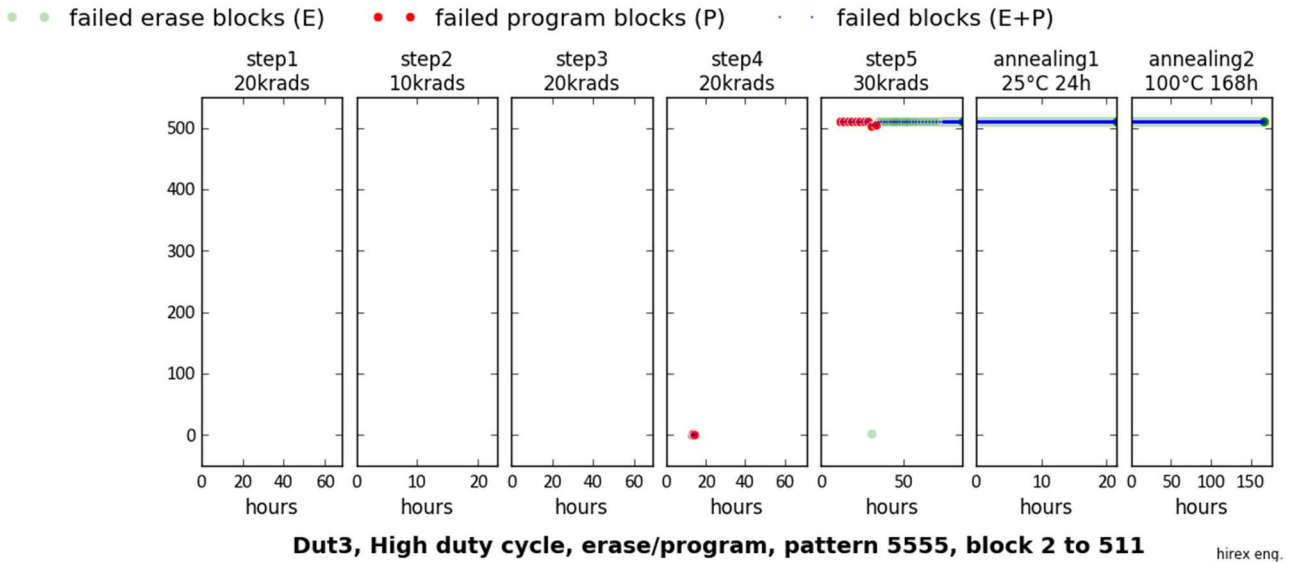
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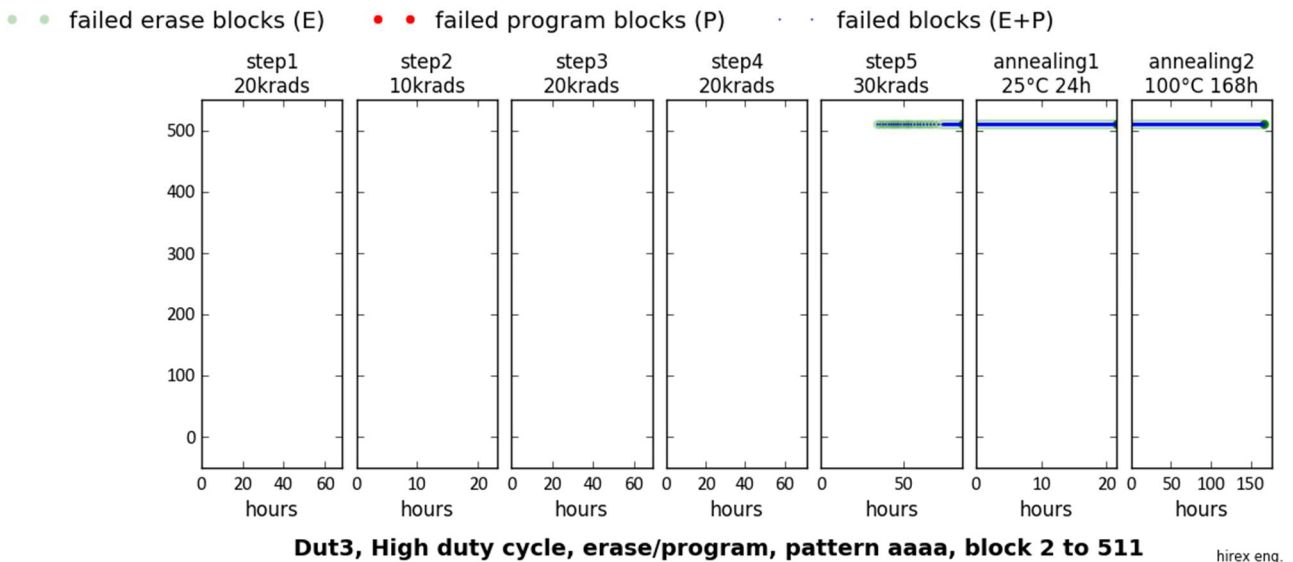
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12.23 DUT3 (Board 3), High duty cycle

12.23.1 DUT3, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511




12.23.2 DUT3, High Duty Cycle, Erase/Program, pattern = 0xA AAA, blocks 2 to 511



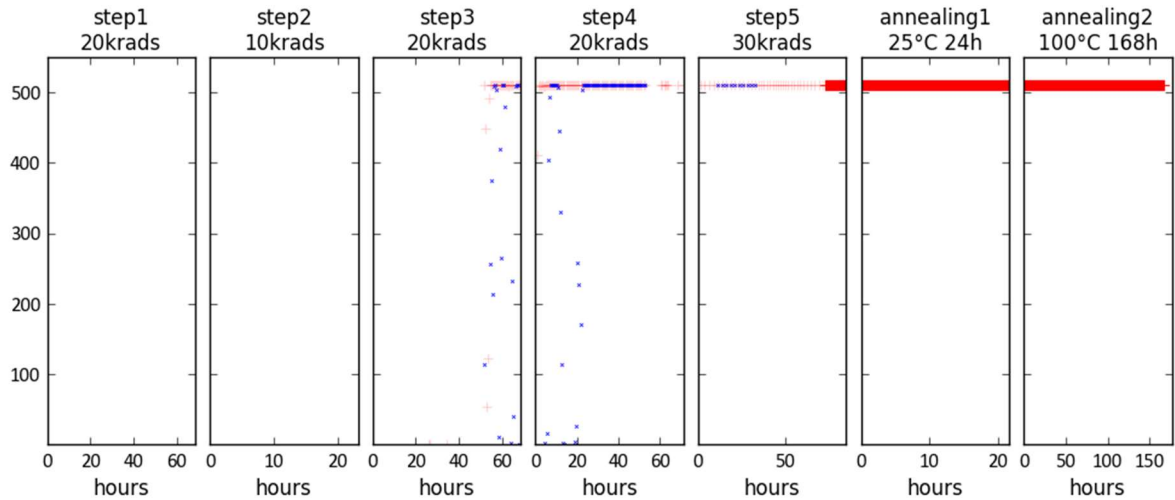
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	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
		Page:	425 / 462	

12.23.3 DUT3, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

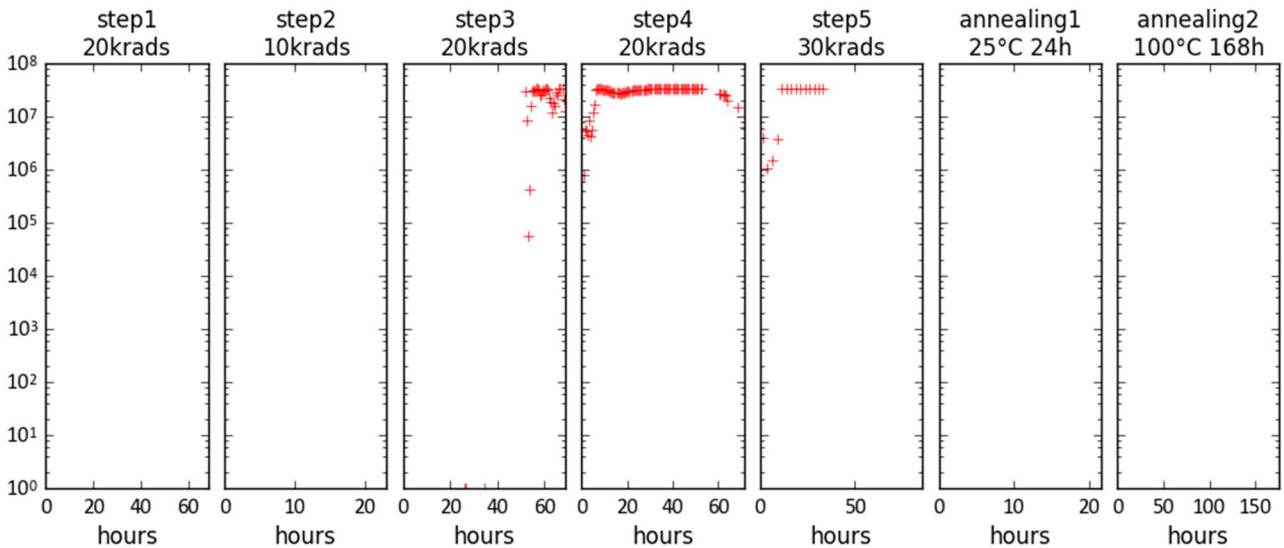
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut3, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut3, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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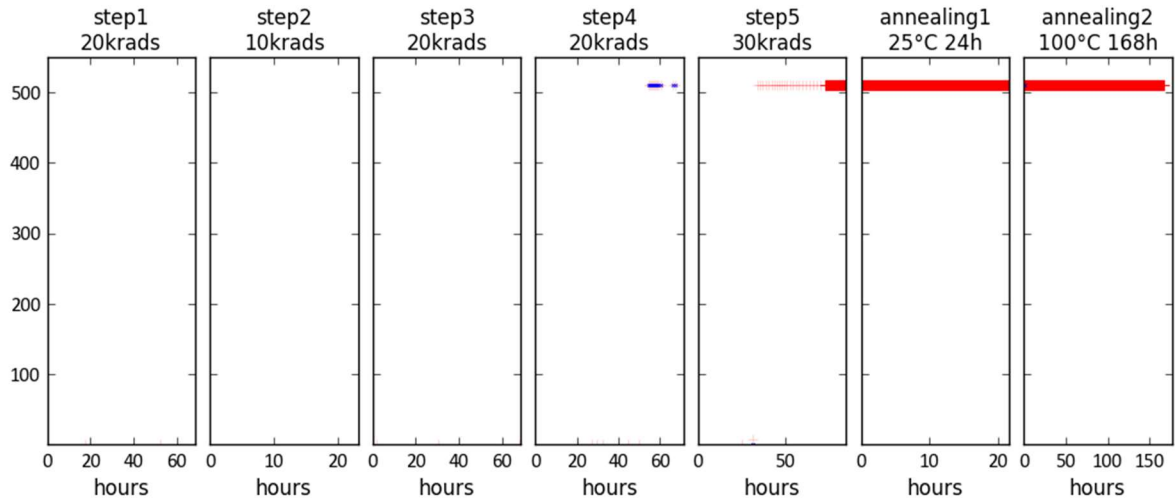
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			Issue:	2
			Date:	2018/10/10
			Page:	426 / 462

12.23.4 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

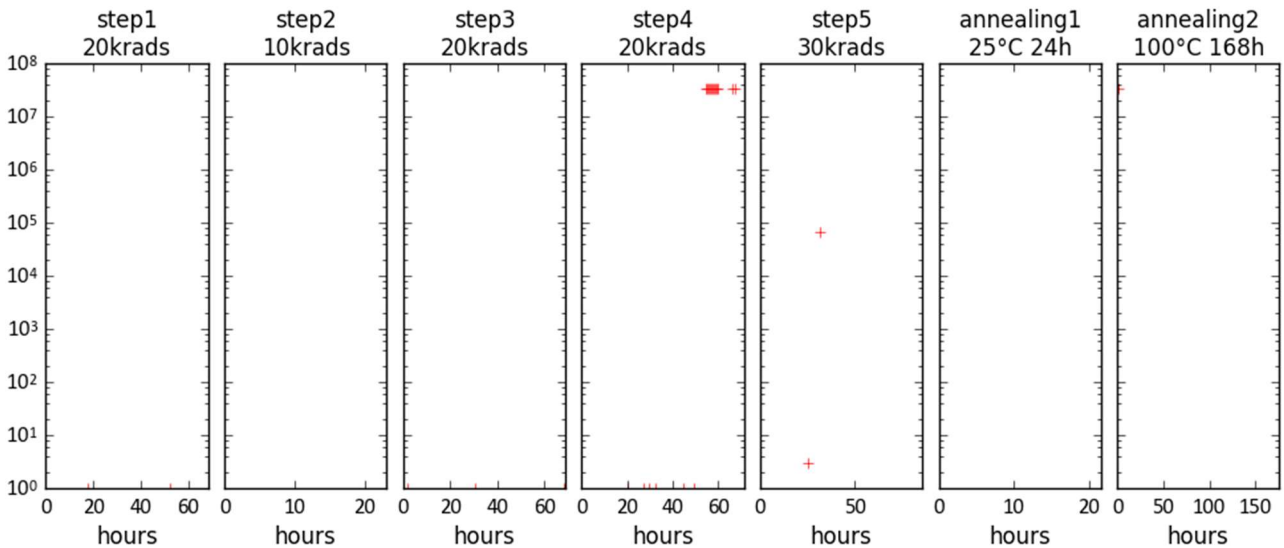
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut3, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut3, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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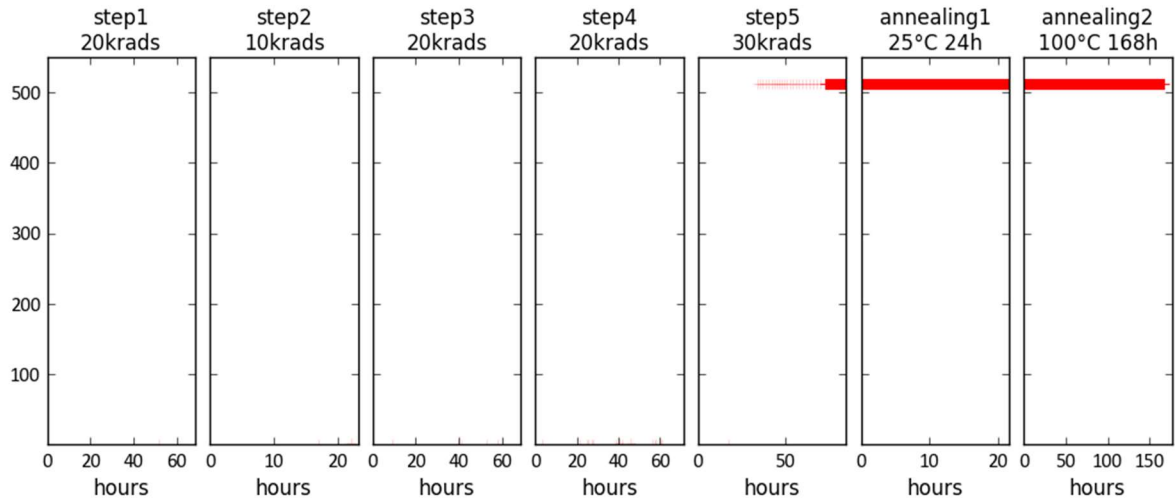
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12.23.5 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

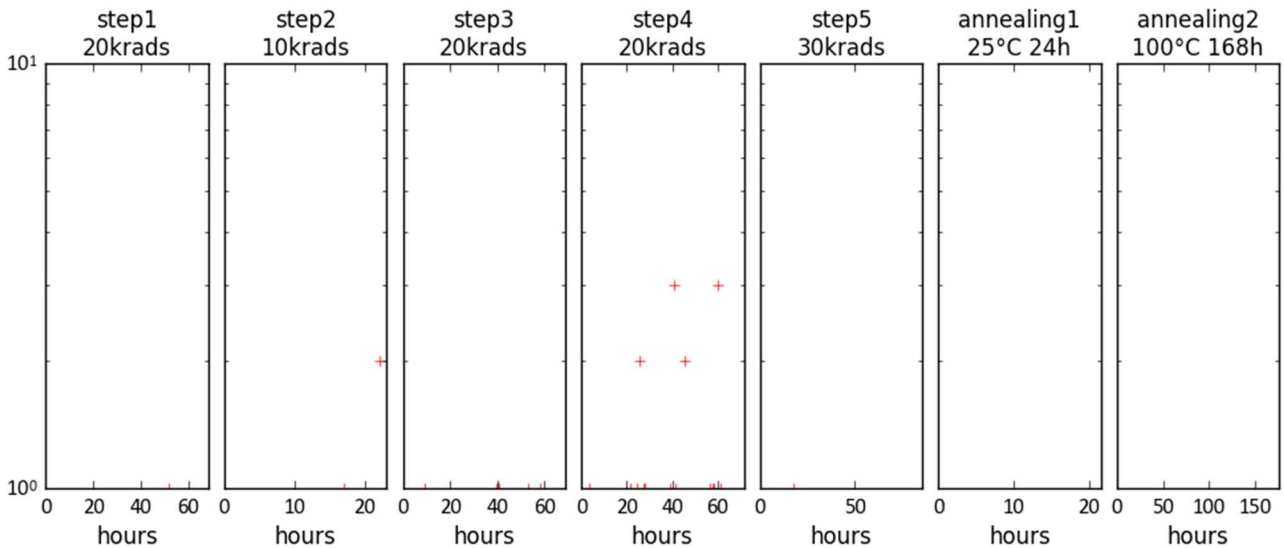
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut3, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut3, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

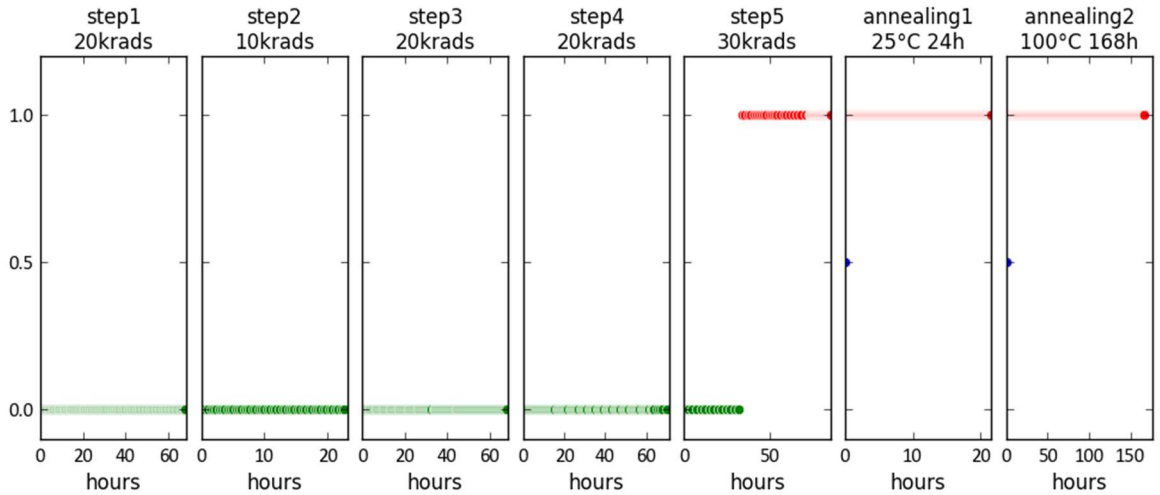
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	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
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12.23.6 DUT3, High Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut3, High duty cycle, DUT access status

hirex eng.

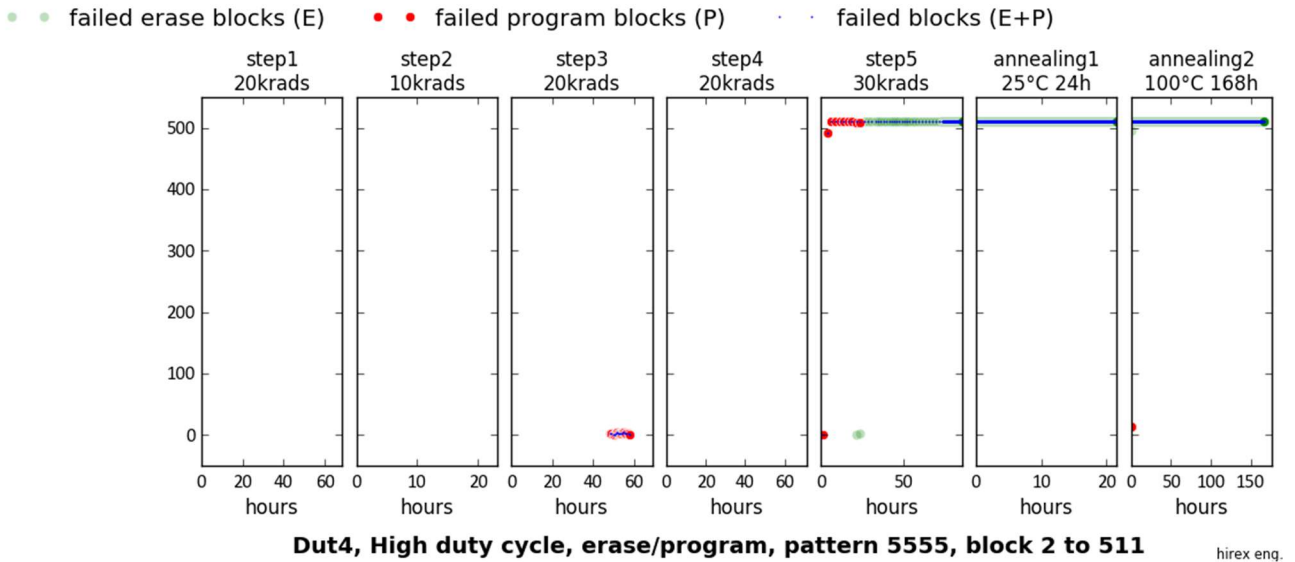
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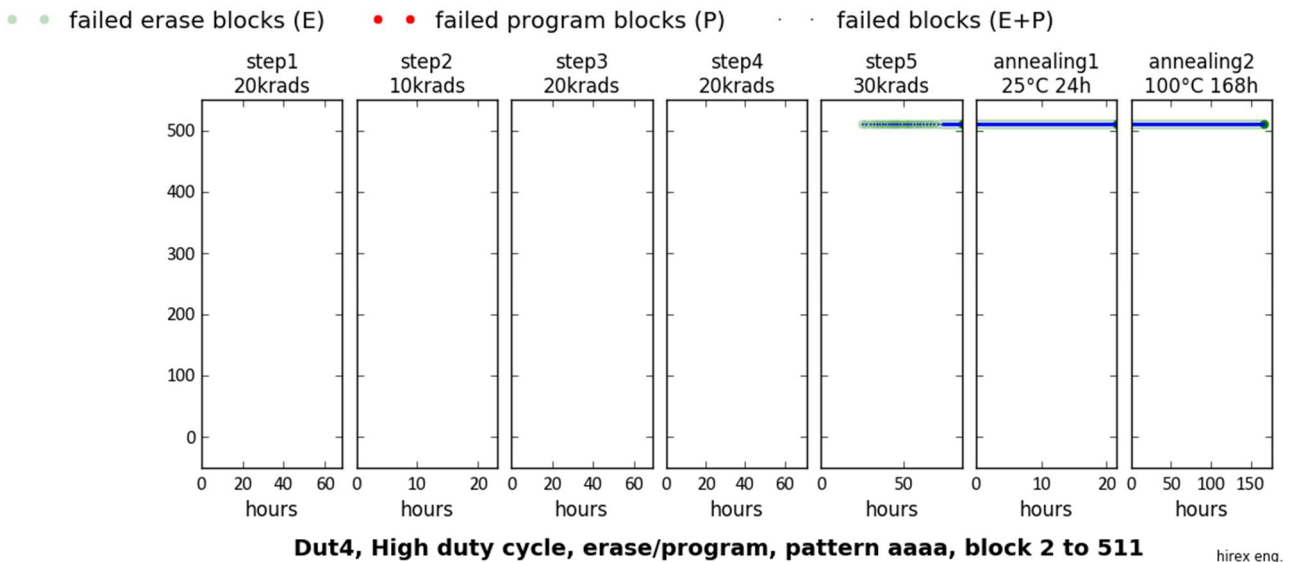
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	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
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12.24 DUT4 (Board 3), High Duty Cycle

12.24.1 DUT4, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511




12.24.2 DUT4, High Duty Cycle, Erase/Program, pattern = 0xA AAA, blocks 2 to 511



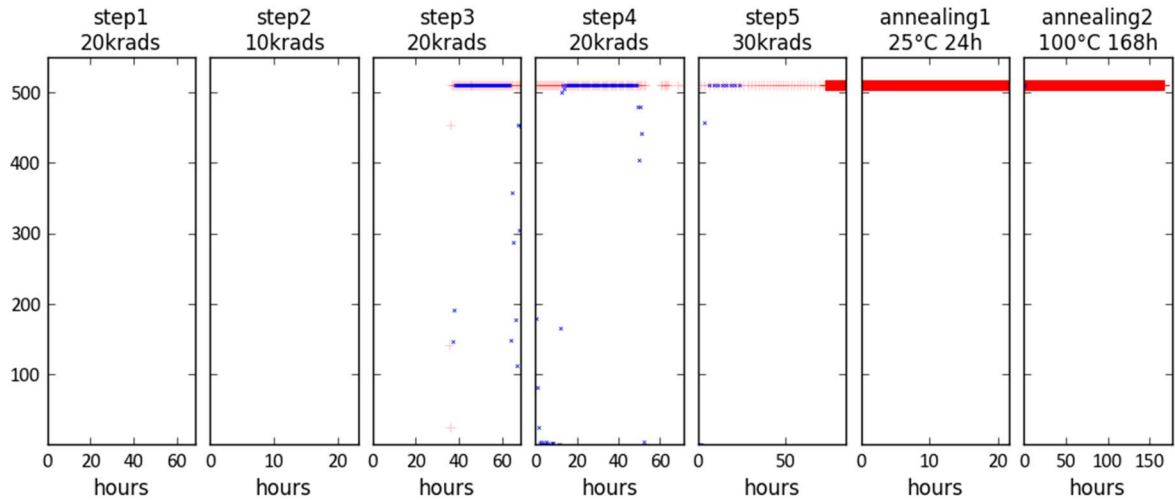
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	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
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	MICRON U		Date:	2018/10/10
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12.24.3 DUT4, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

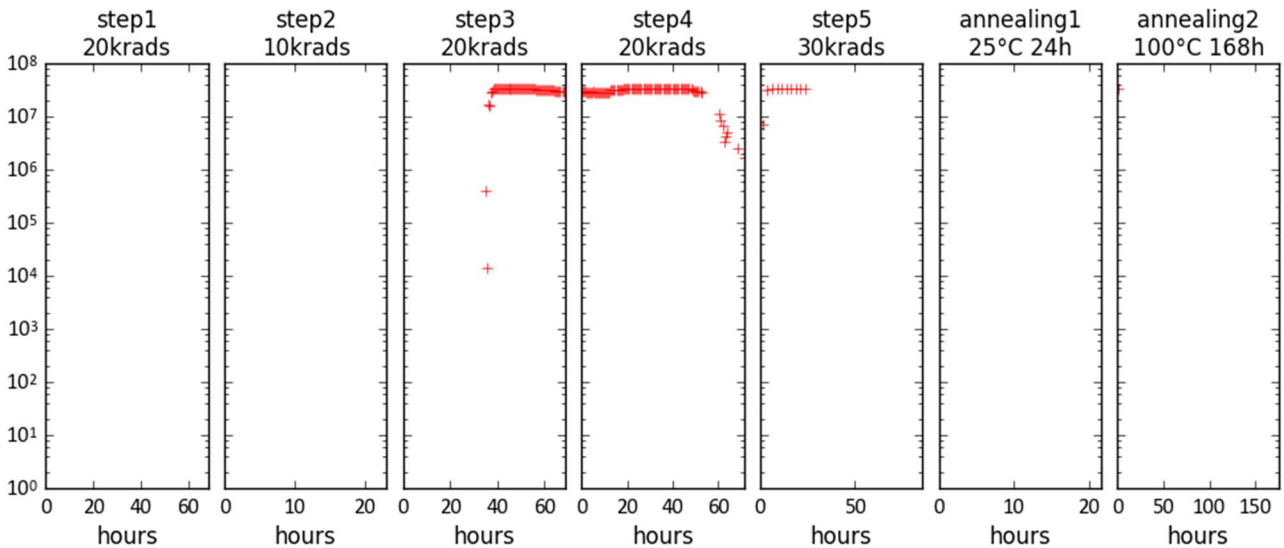
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Dut4, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut4, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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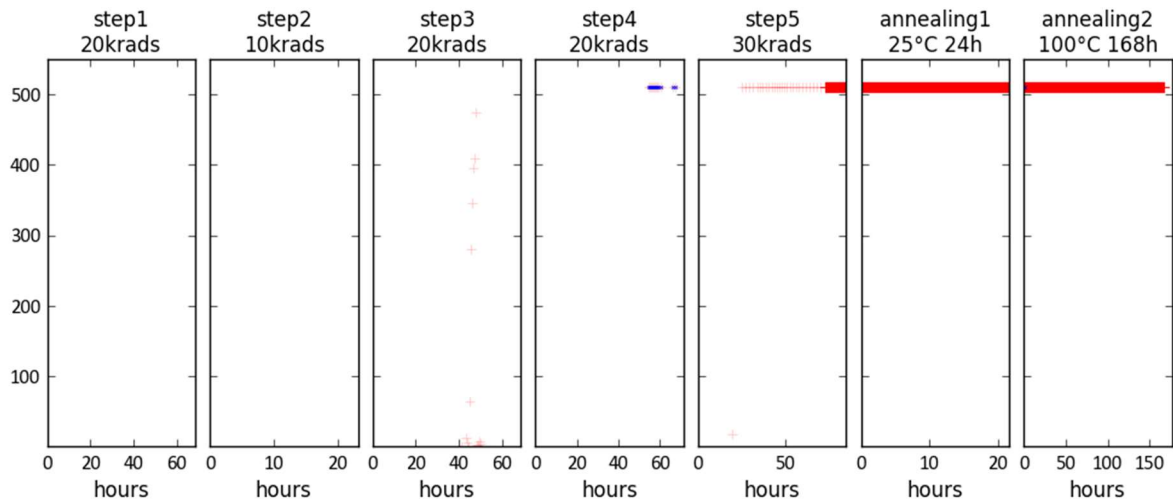
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		RL:	2017901237	
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			Issue:	2
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12.24.4 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

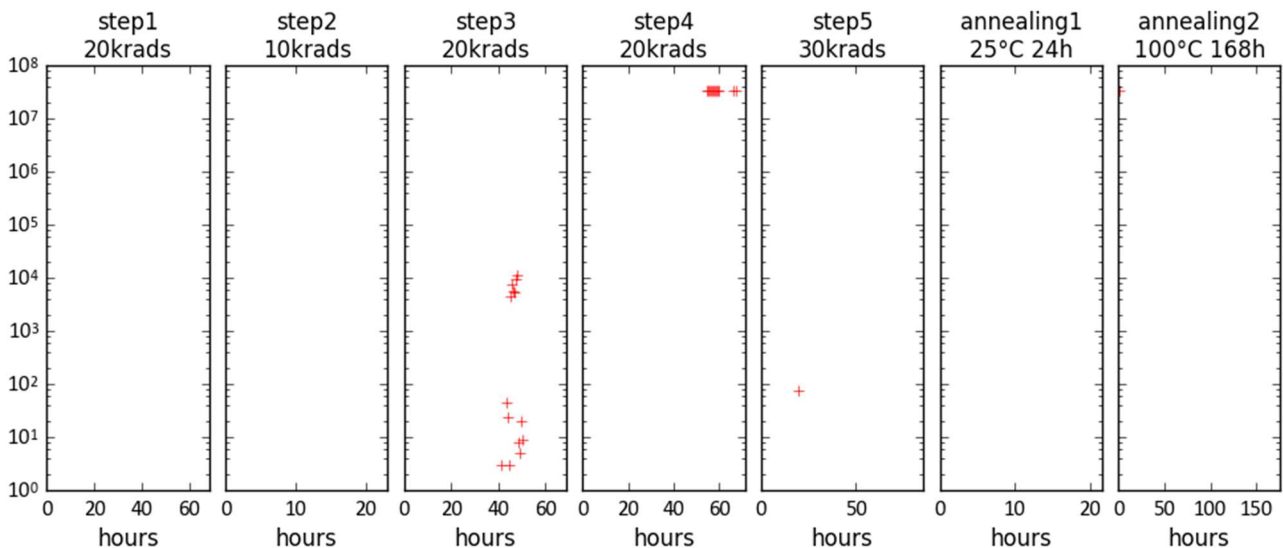
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut4, High duty cycle, Read, pattern aaa, block 2 to 511

hirex eng.

+ + words in error



Dut4, High duty cycle, Read, pattern aaa, block 2 to 511

hirex eng.

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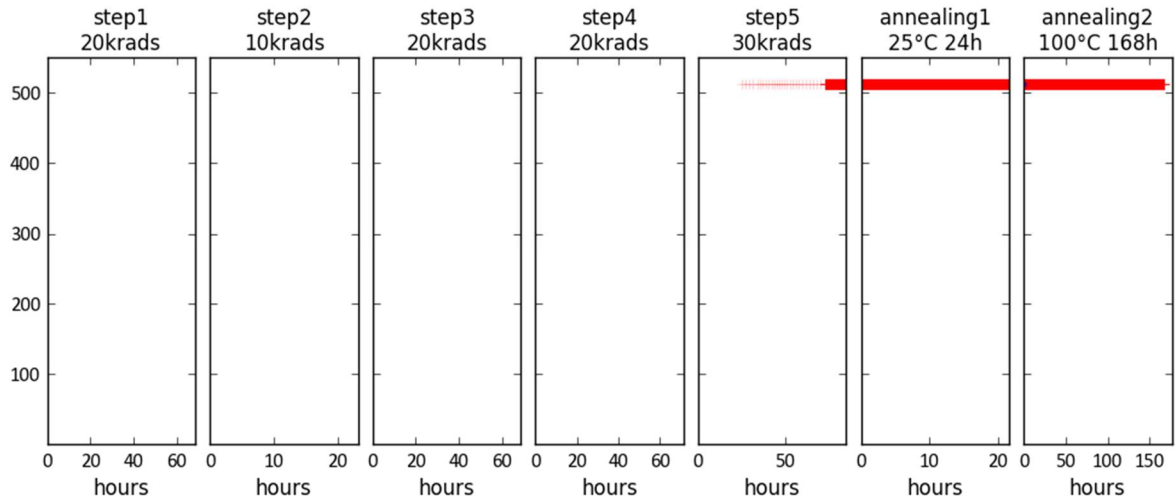
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12.24.5 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

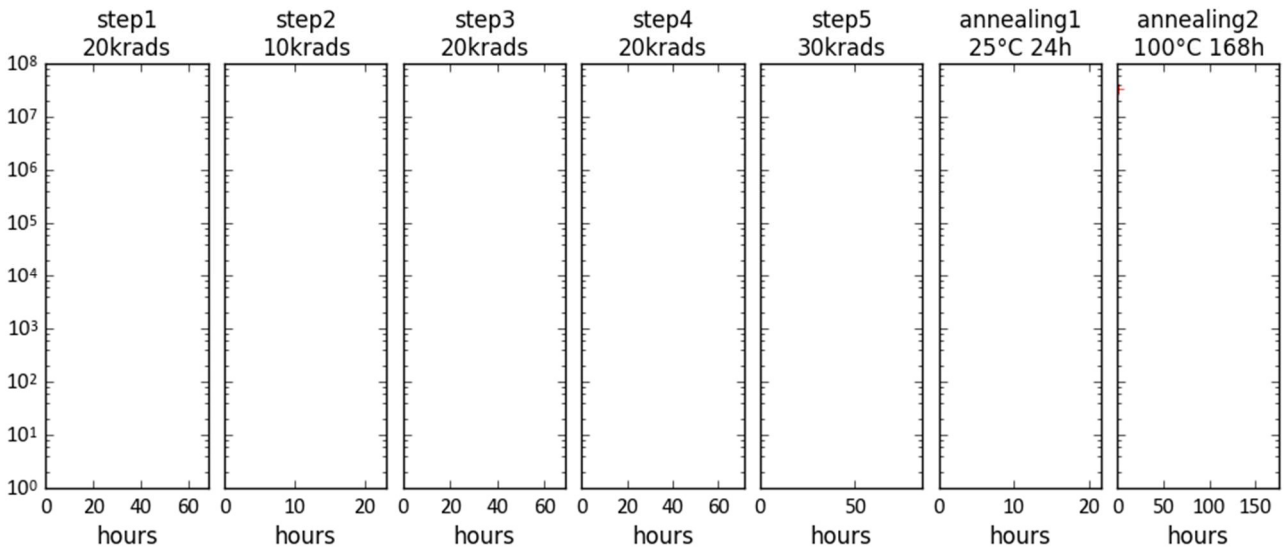
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Dut4, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut4, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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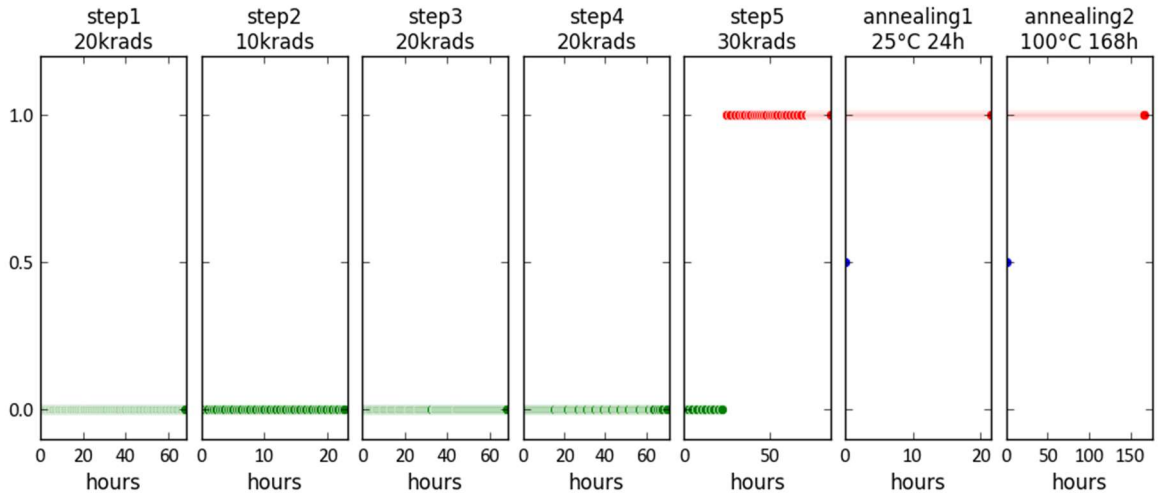


Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
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12.24.6 DUT4, High Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut4, High duty cycle, DUT access status

hirex eng.

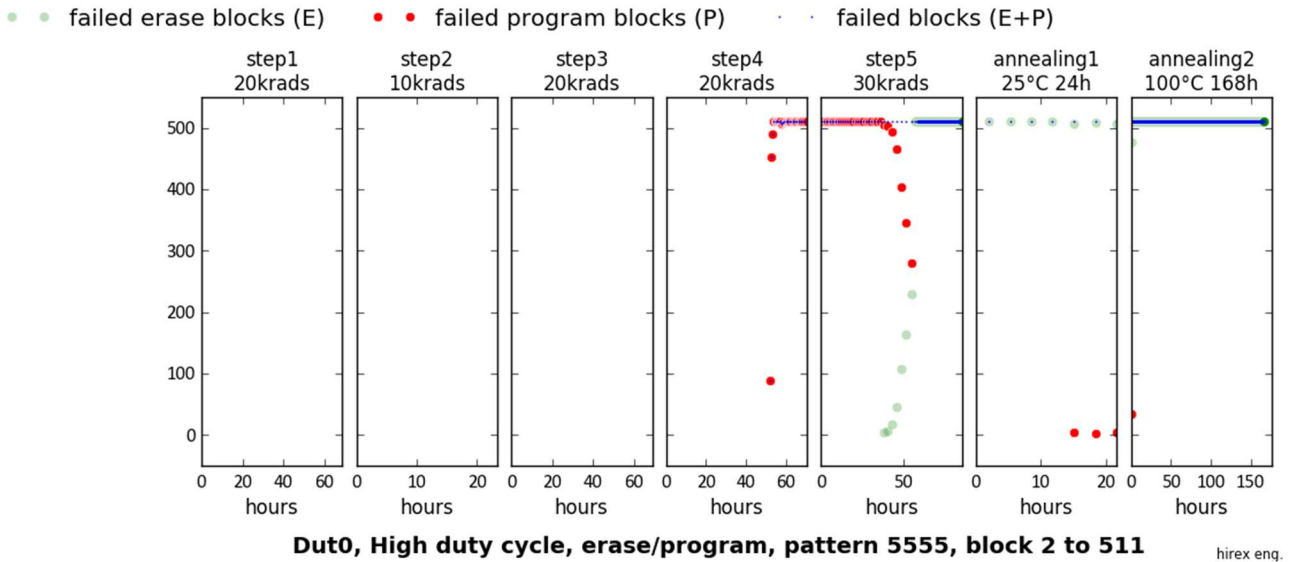
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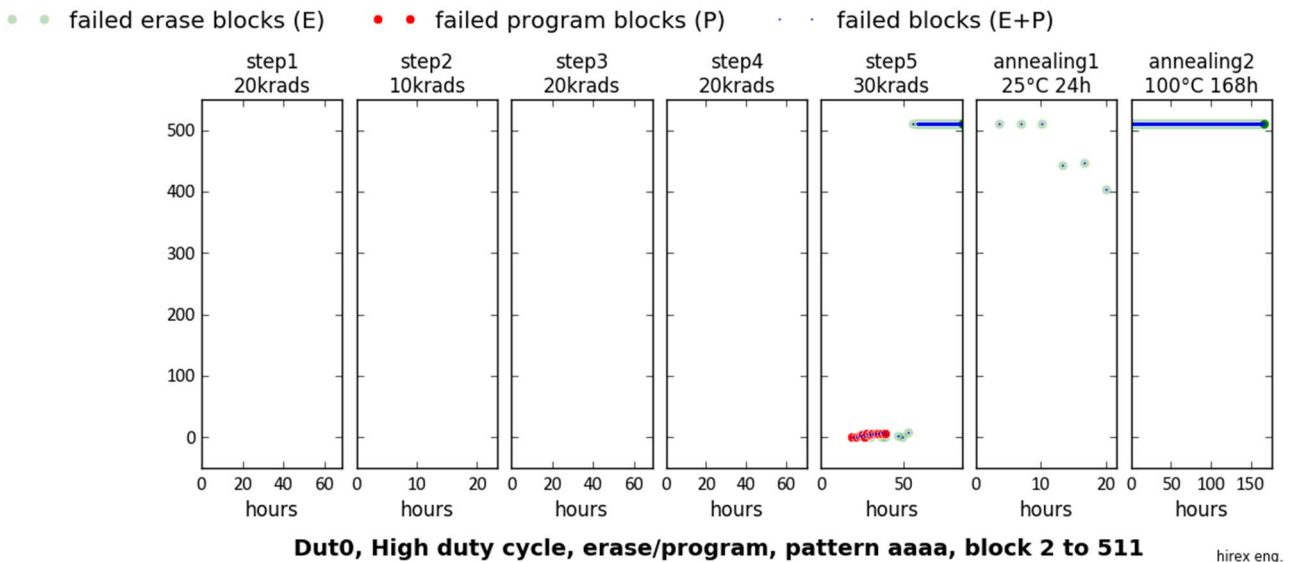
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	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
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12.25 DUT0 (Board 4), High duty cycle

12.25.1 DUT0, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511



12.25.2 DUT0, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511



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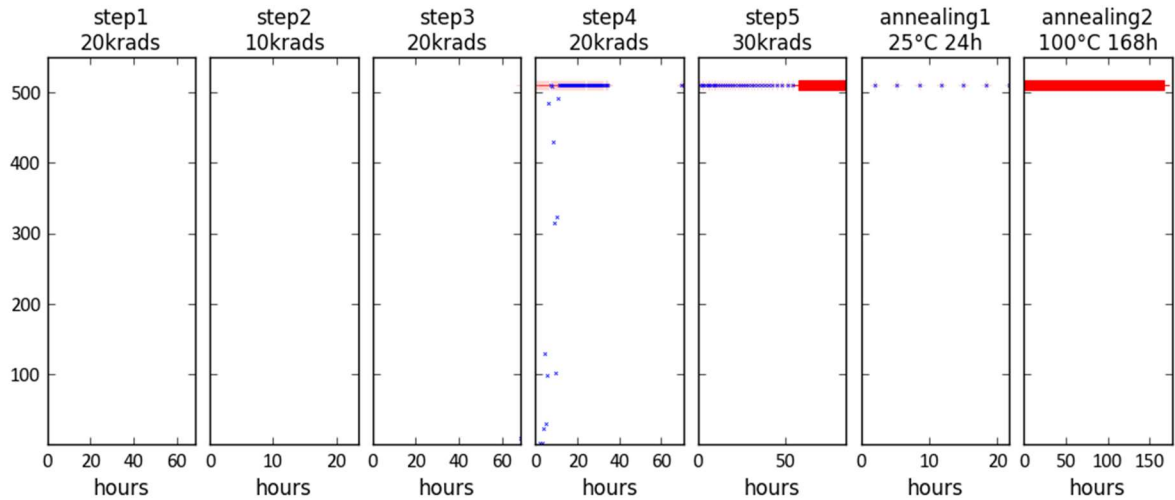
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12.25.3 DUT0, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

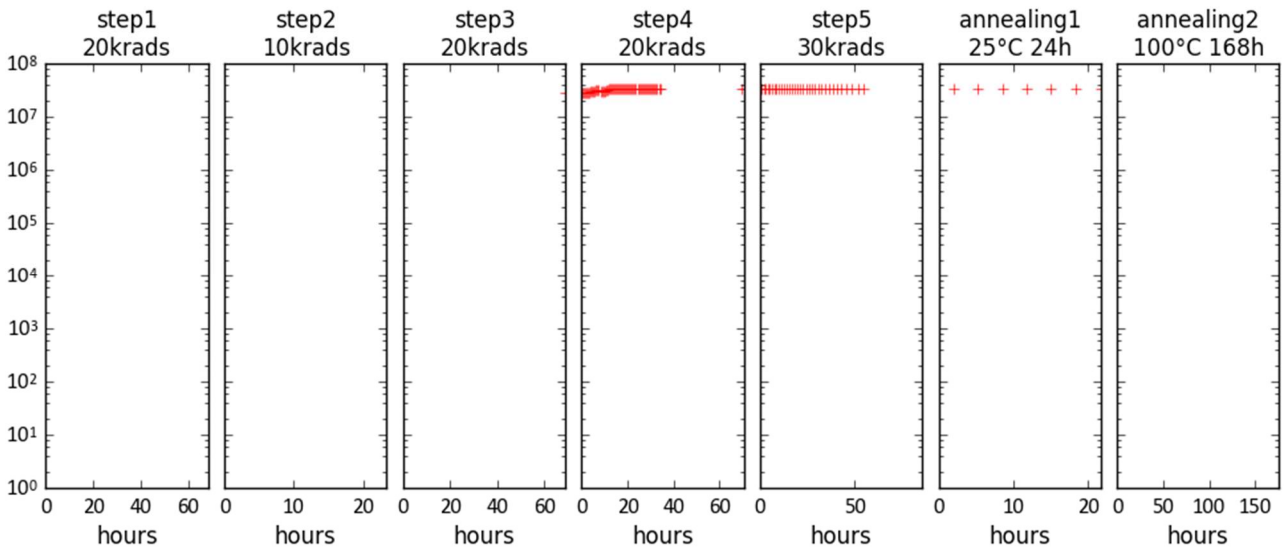
+ + blocks with minimum 1 word in error * * blocks with 90% words in error



Dut0, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut0, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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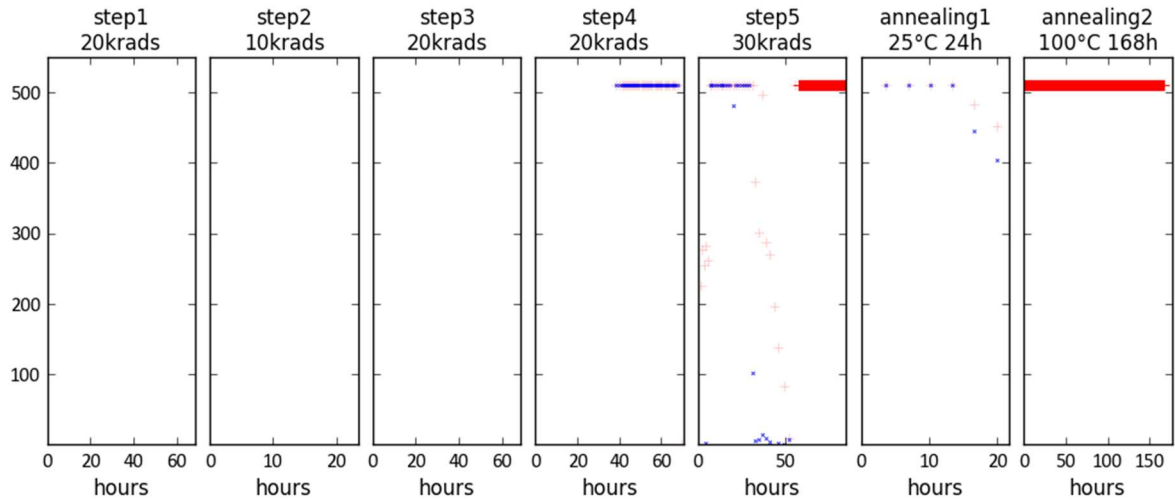
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12.25.4 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

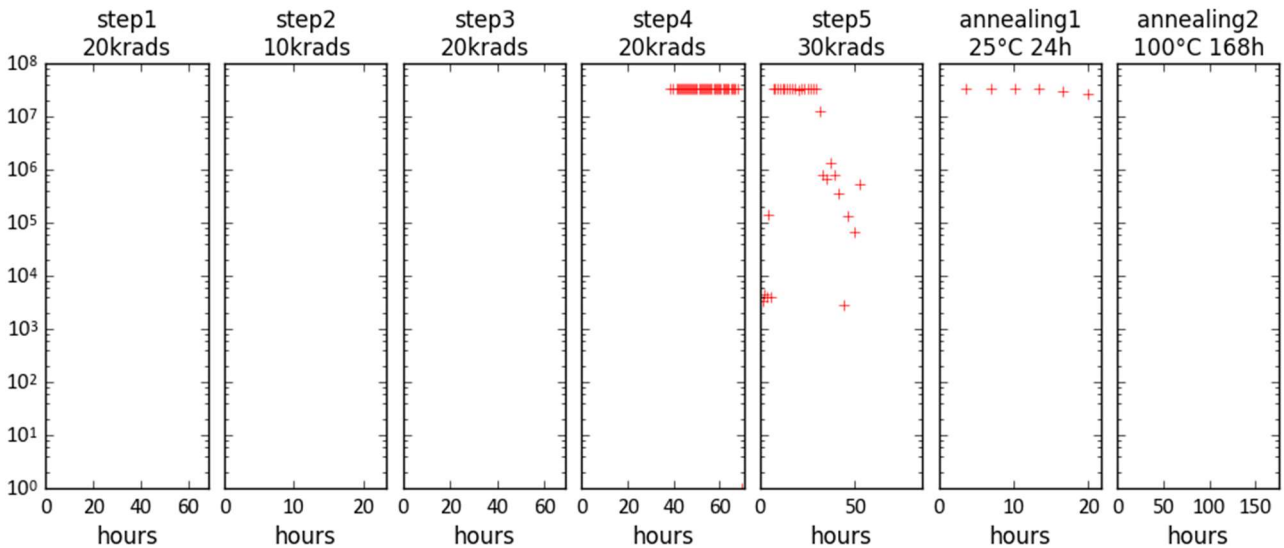
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut0, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut0, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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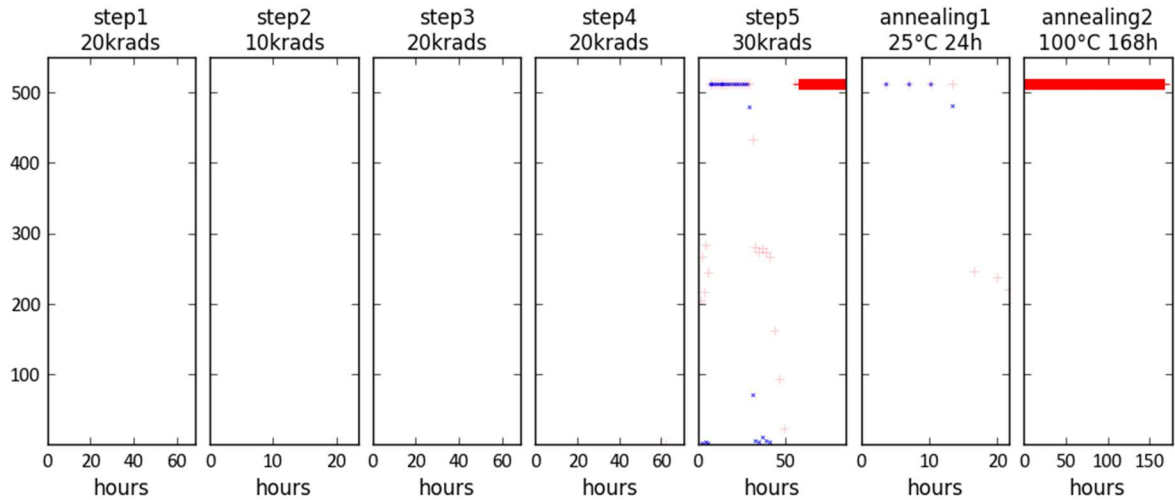
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12.25.5 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

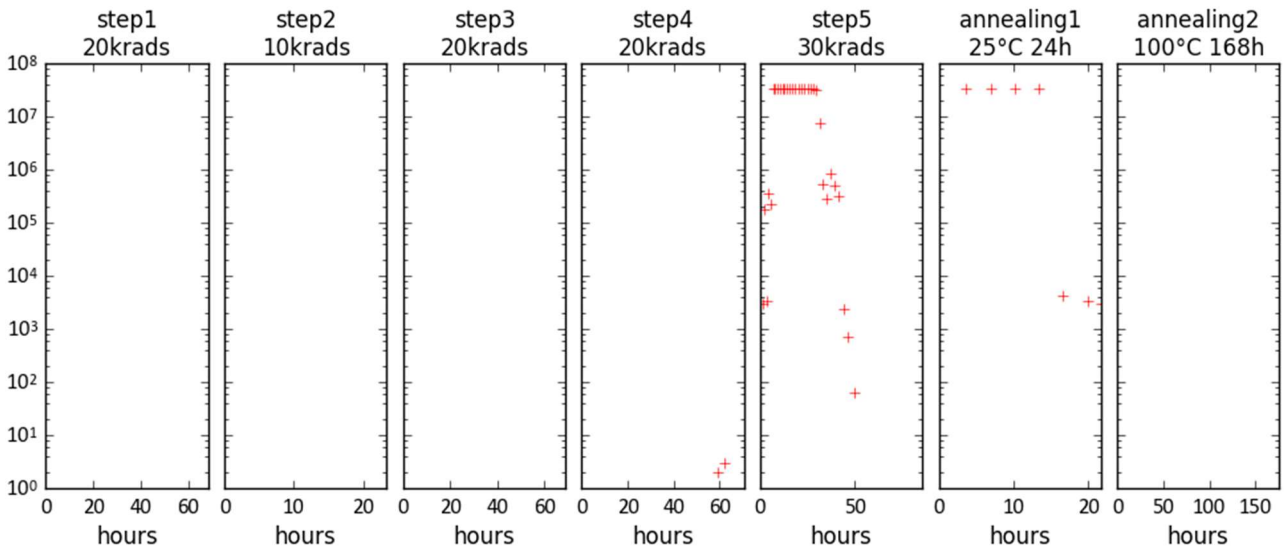
+ + blocks with minimum 1 word in error · · blocks with 90% words in error



Dut0, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut0, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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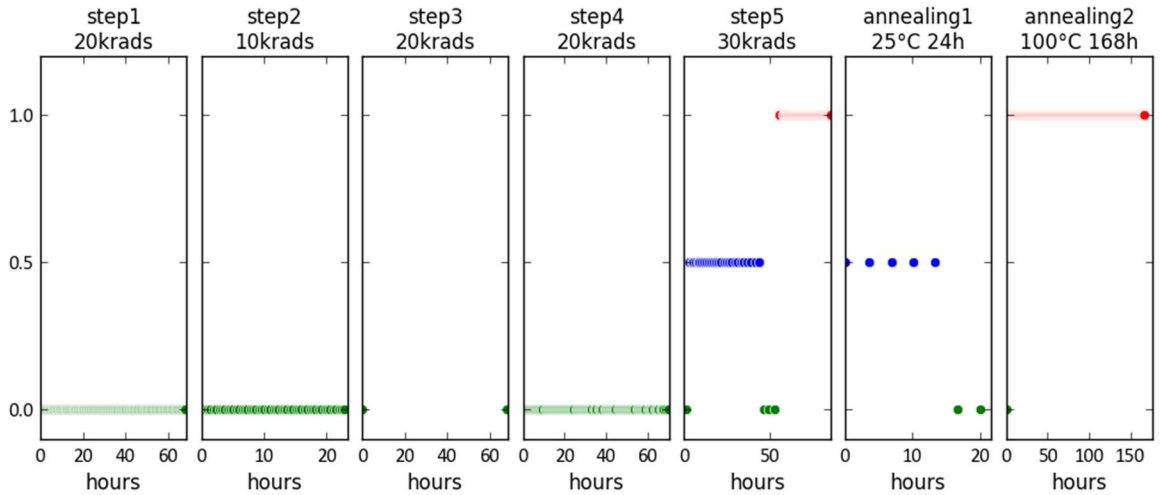


Total Ionizing Dose Radiation Test	
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12.25.6 DUT0, High Duty Cycle, DUT access status

- ● identification ok
- ● identification wrong
- ● reset failed



Dut0, High duty cycle, DUT access status

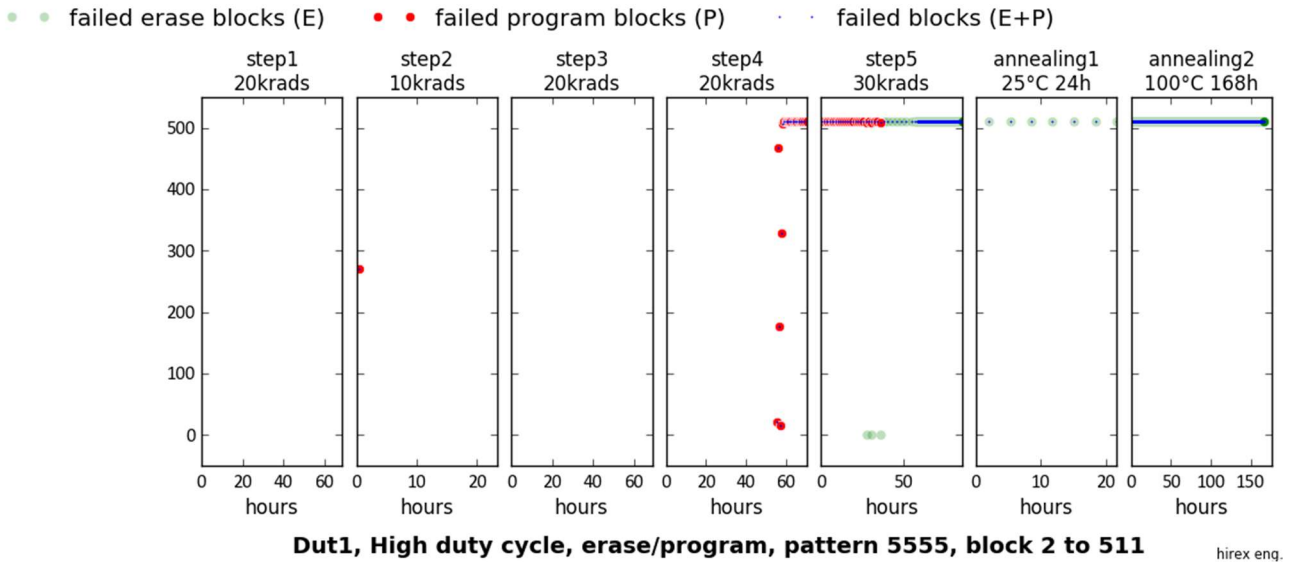
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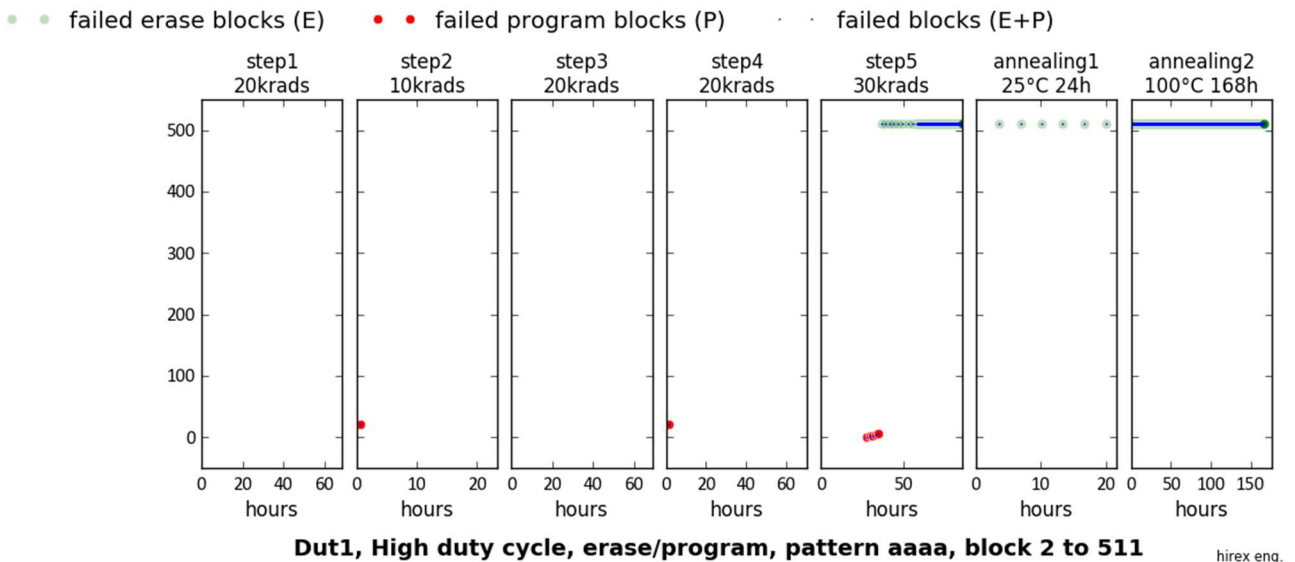
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12.26 DUT1 (Board 4), High duty cycle

12.26.1 DUT1, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511



12.26.2 DUT1, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511



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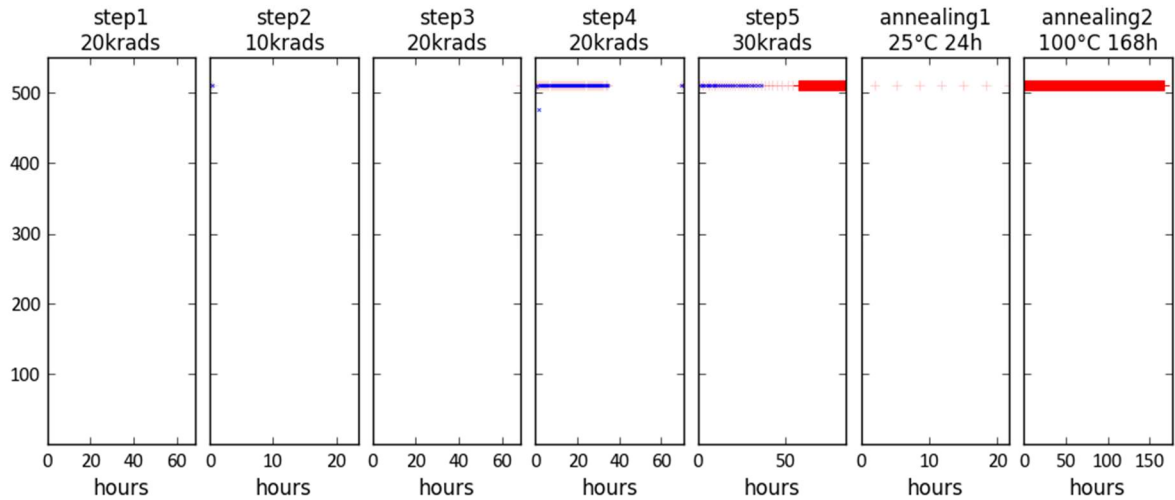
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MICRON U		Issue: 2	Date: 2018/10/10
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12.26.3 DUT1, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

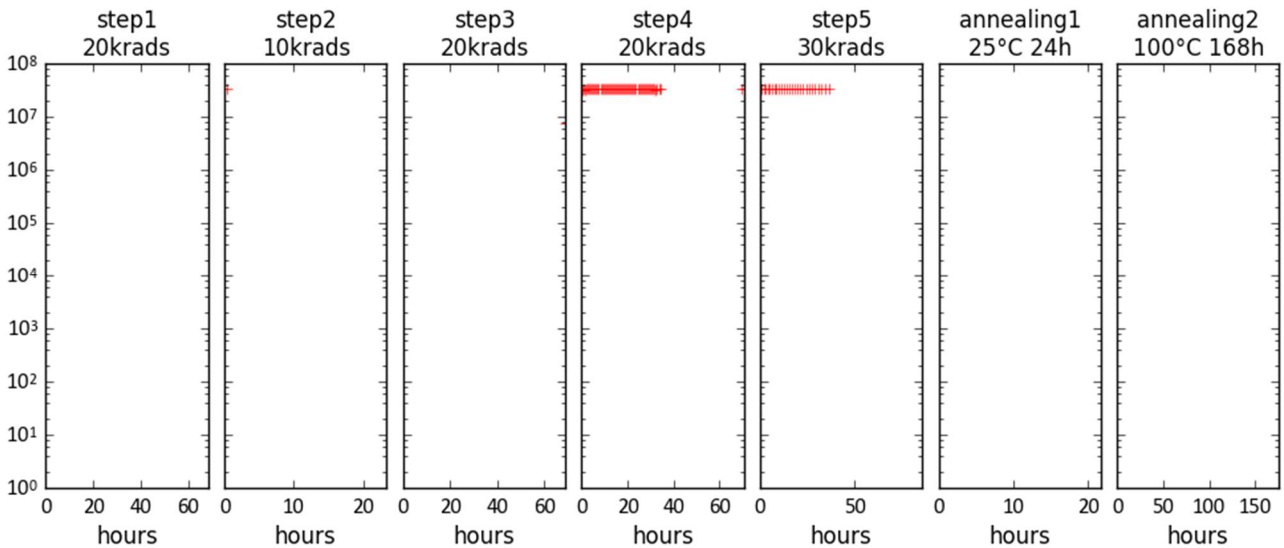
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Dut1, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut1, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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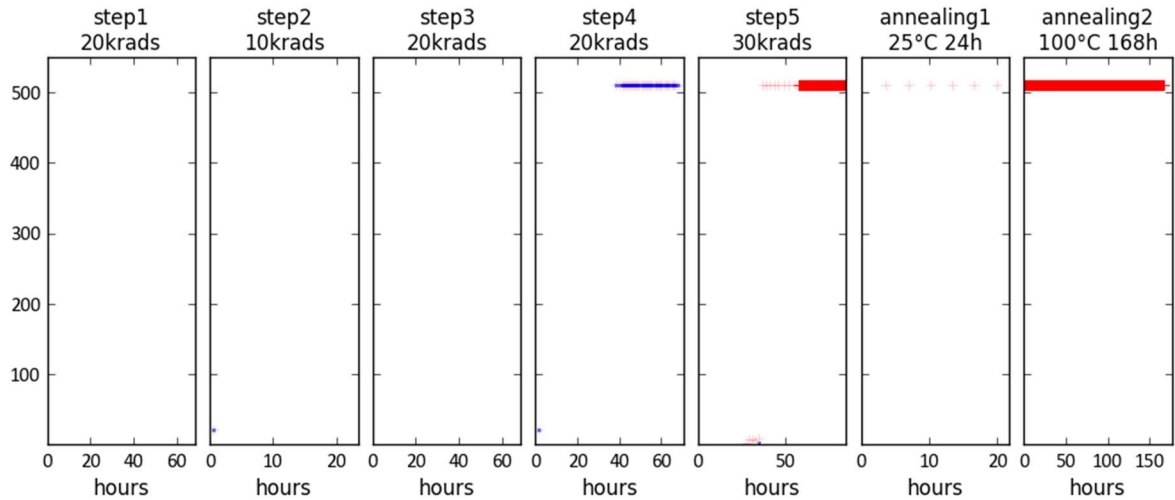
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12.26.4 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

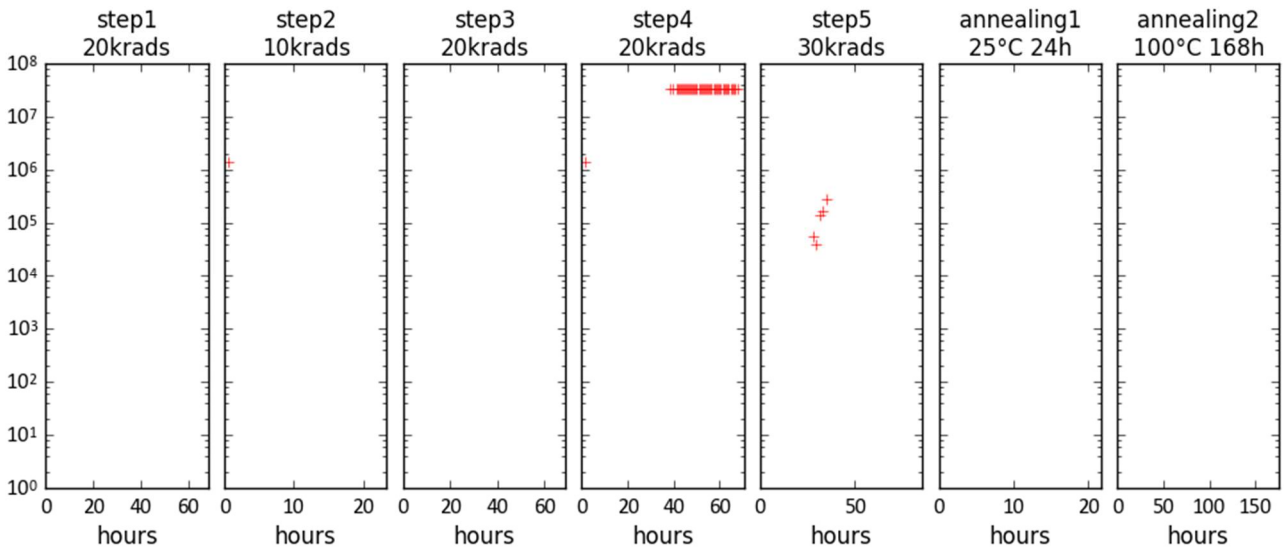
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Dut1, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut1, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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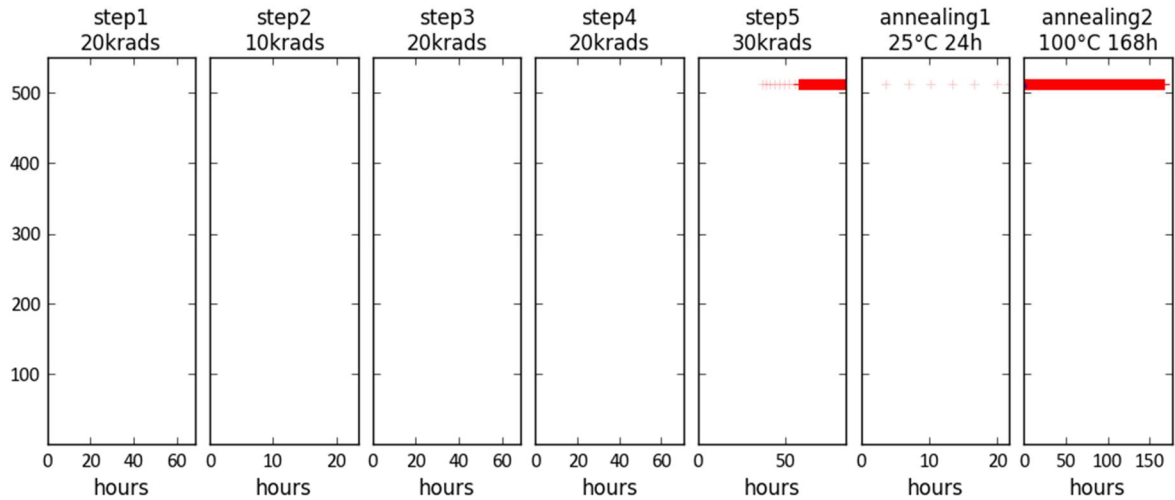
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12.26.5 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

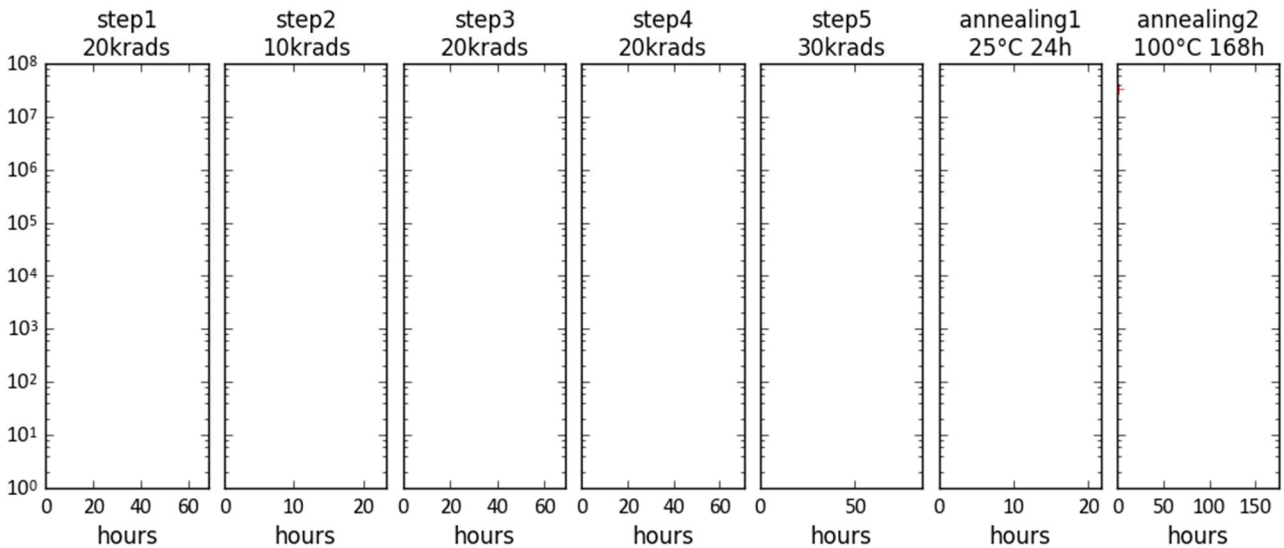
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Dut1, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut1, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

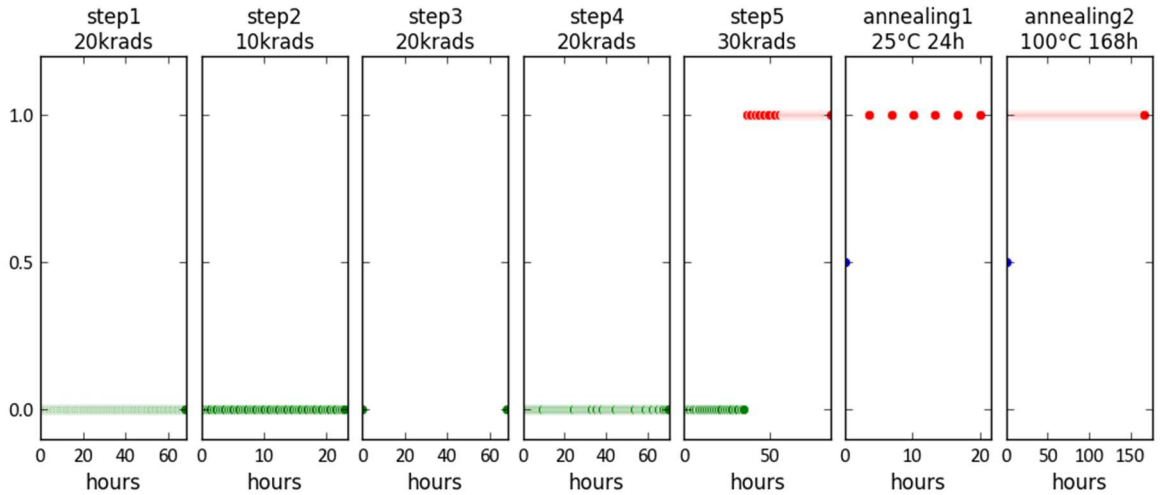
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12.26.6 DUT1, High Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed



Dut1, High duty cycle, DUT access status

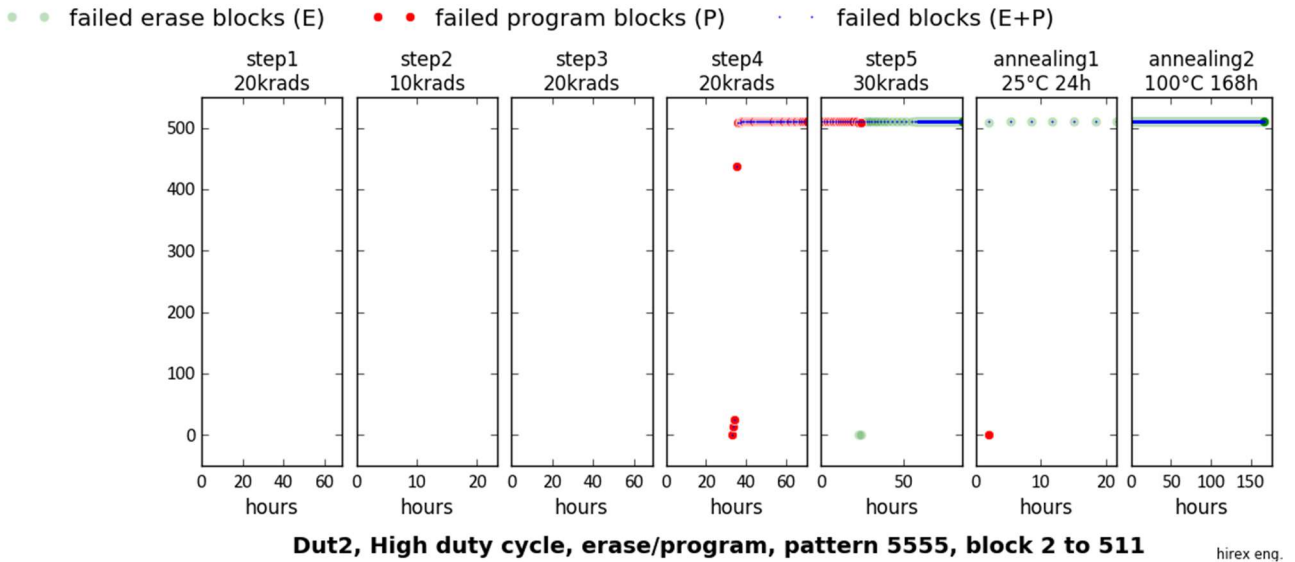
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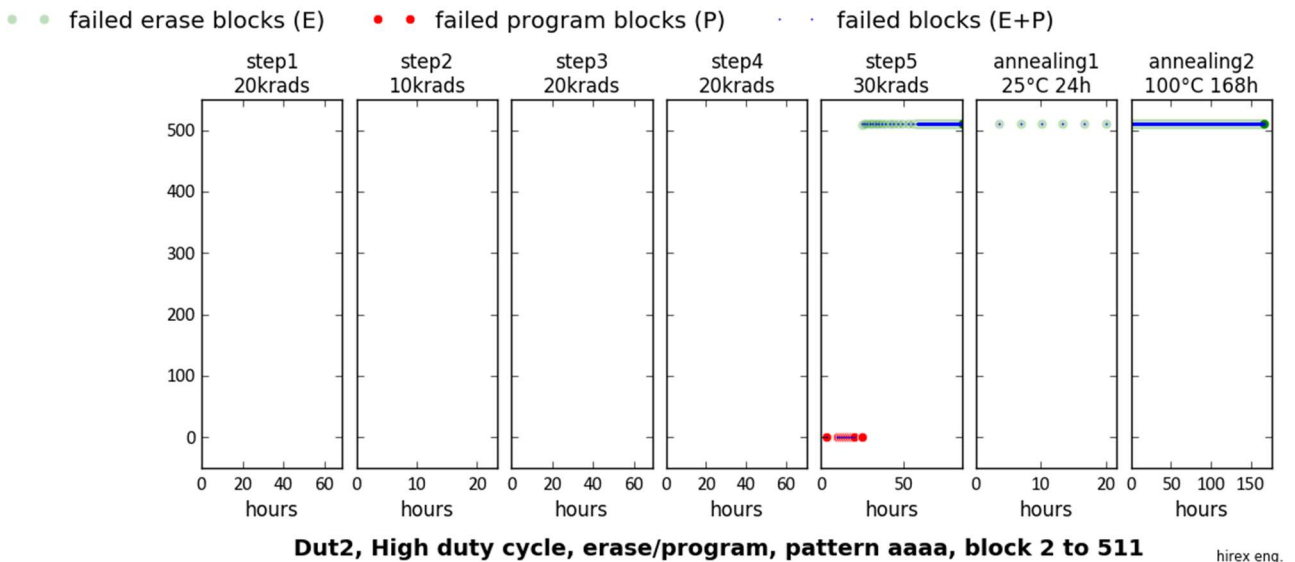
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12.27 DUT2 (Board 4), High duty cycle

12.27.1 DUT2, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511



12.27.2 DUT2, High Duty Cycle, Erase/Program, pattern = 0xA AAA, blocks 2 to 511



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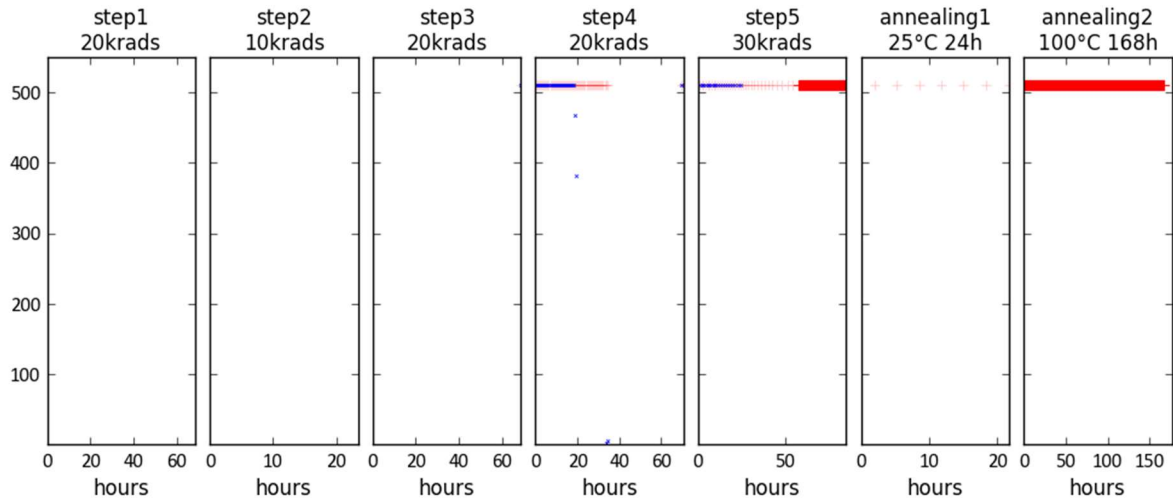
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Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY		
		RL:	2017901237	
PC28F00AM29EWHA	D/C 1409	MICRON U	Ref.:	ATN-RR-464
			Issue:	2
			Date:	2018/10/10
			Page:	445 / 462

12.27.3 DUT2, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

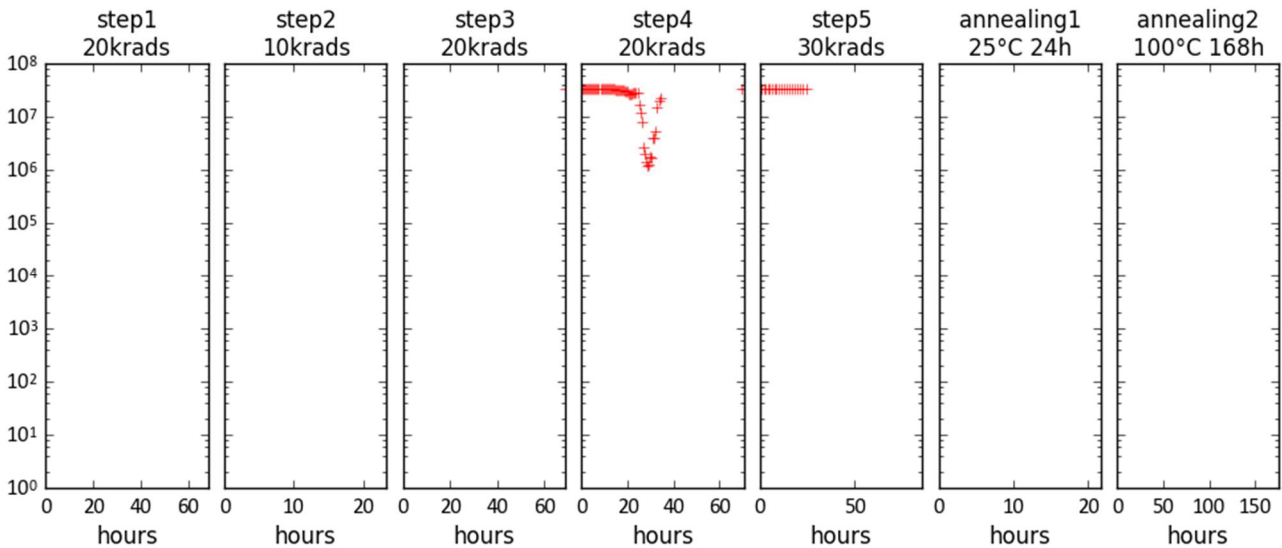
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Dut2, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut2, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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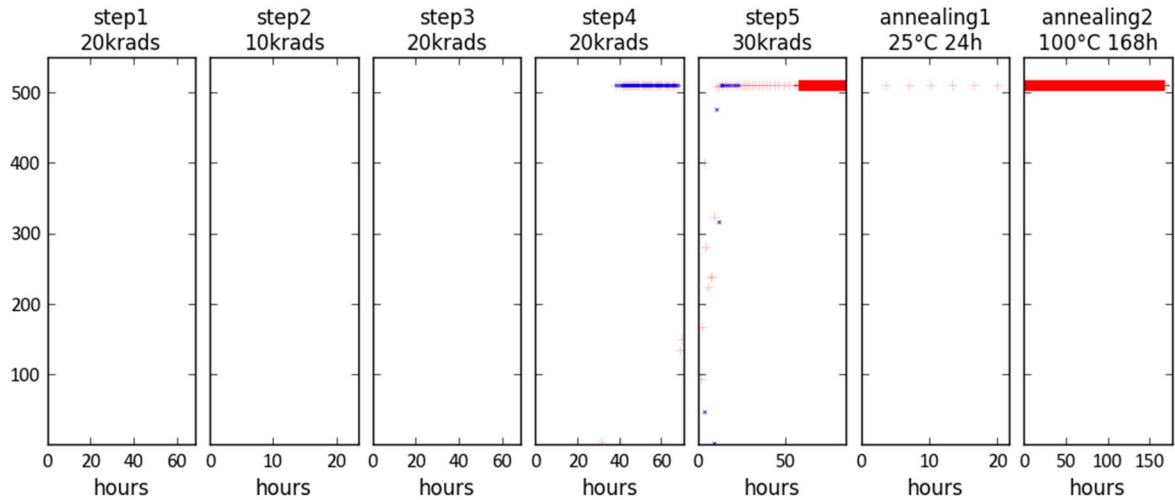
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		RL:	2017901237	
PC28F00AM29EWHA	D/C 1409	MICRON U	Ref.:	ATN-RR-464
			Issue:	2
			Date:	2018/10/10
			Page:	446 / 462

12.27.4 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

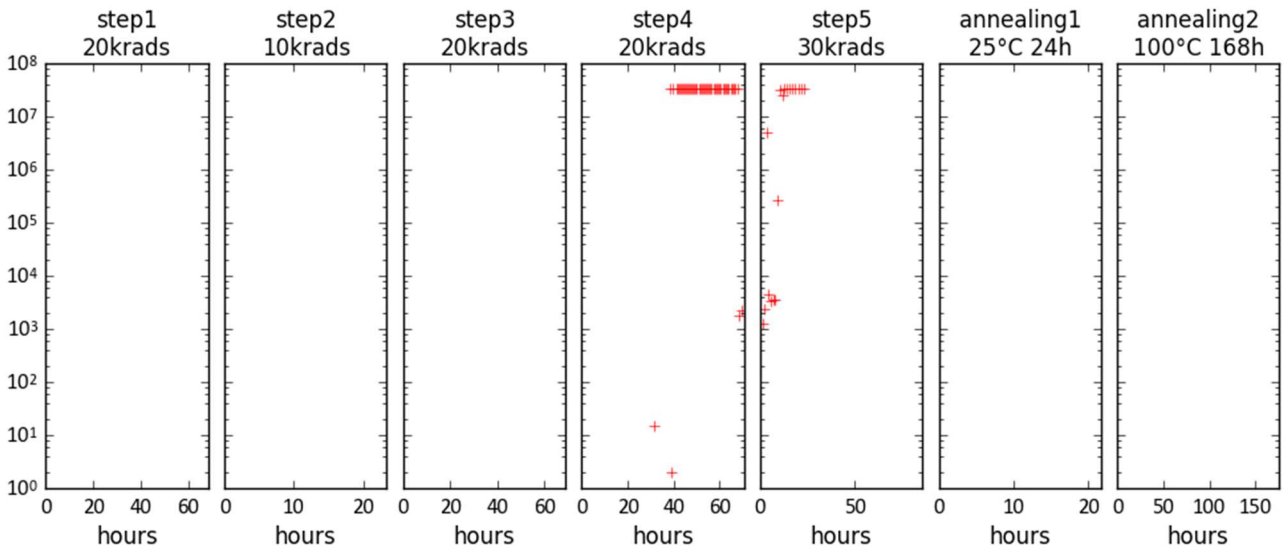
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Dut2, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut2, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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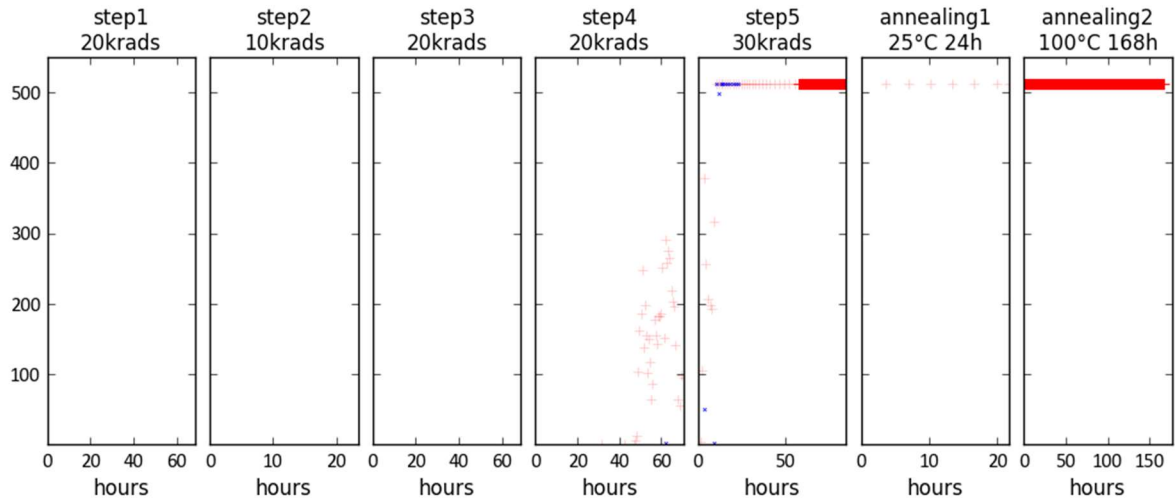
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			Issue:	2
			Date:	2018/10/10
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12.27.5 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

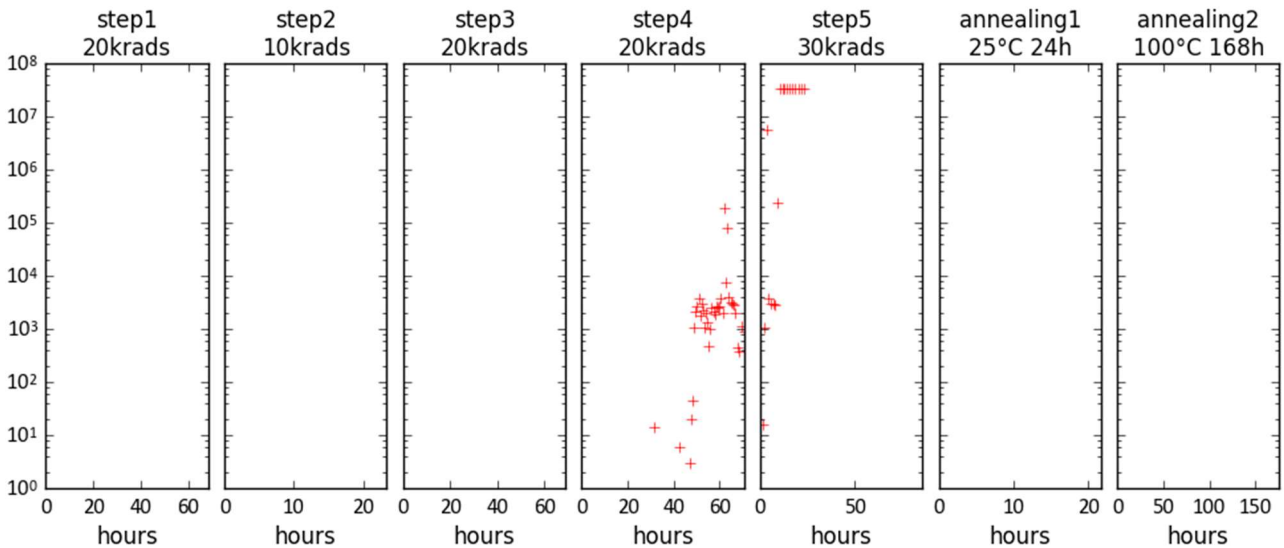
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Dut2, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error



Dut2, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

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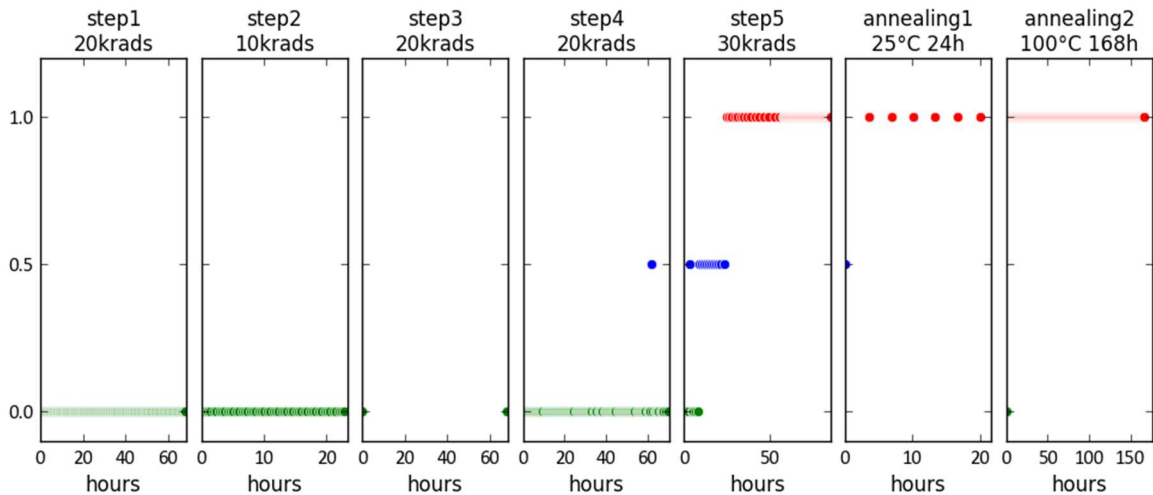
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PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
		Issue:	2
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12.27.6 DUT2, High Duty Cycle, DUT access status

- ● identification ok
- ● identification wrong
- ● reset failed




Dut2, High duty cycle, DUT access status

hirex eng.

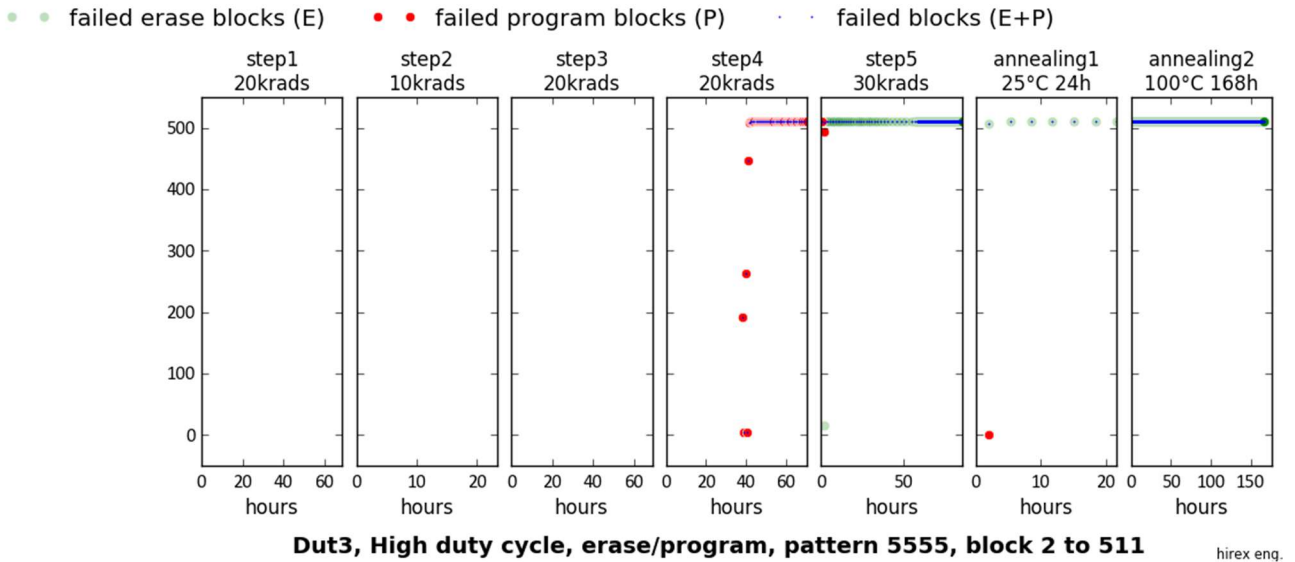
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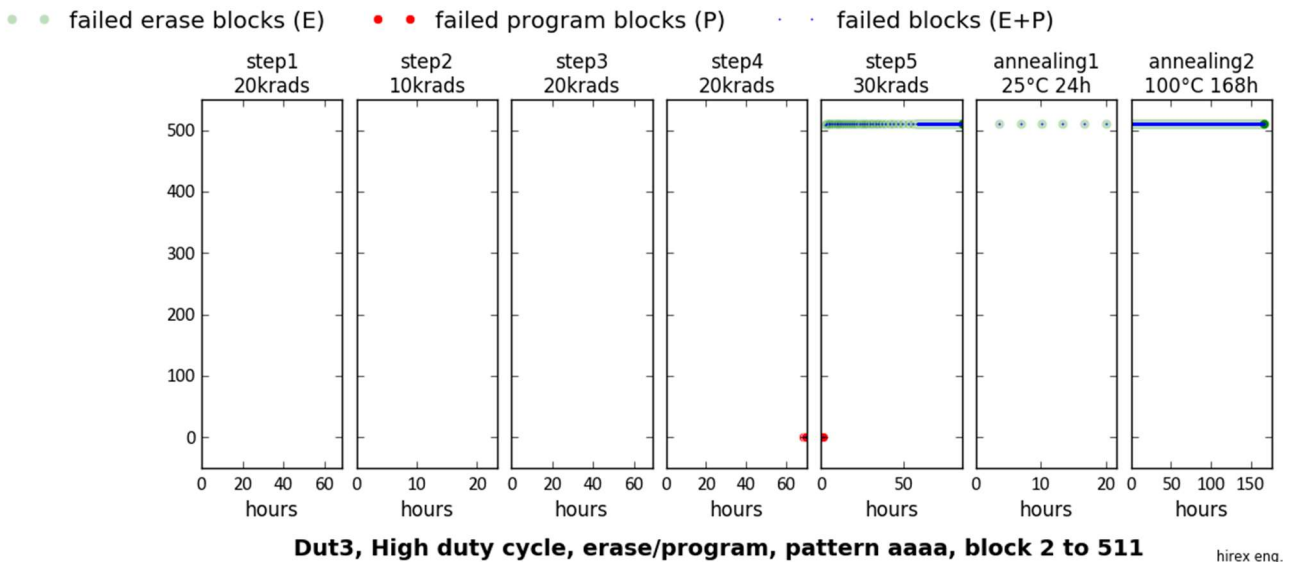
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	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
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12.28 DUT3 (Board 4), High duty cycle

12.28.1 DUT3, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511




12.28.2 DUT3, High Duty Cycle, Erase/Program, pattern = 0xA AAAA, blocks 2 to 511



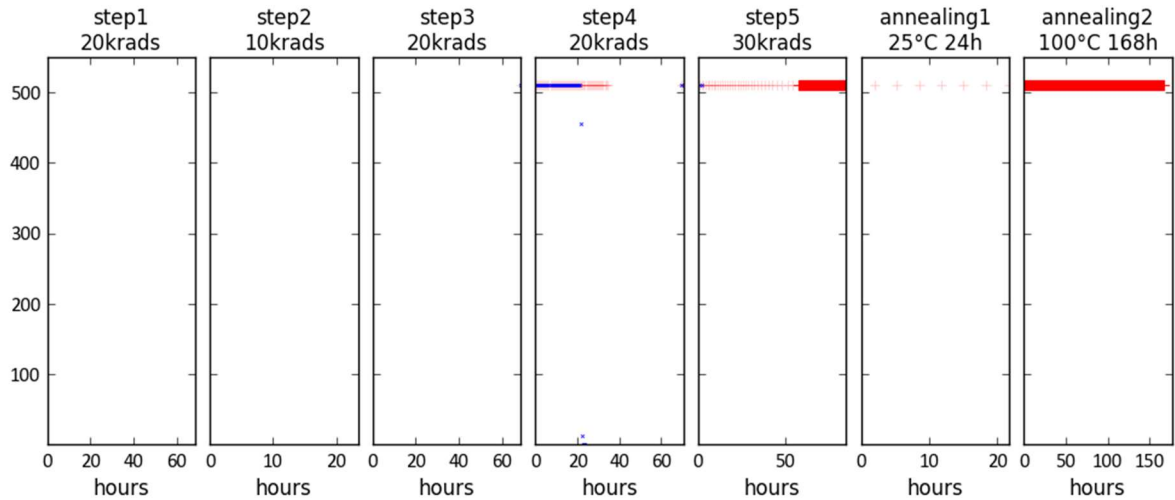
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	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
		Page:	450 / 462	

12.28.3 DUT3, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

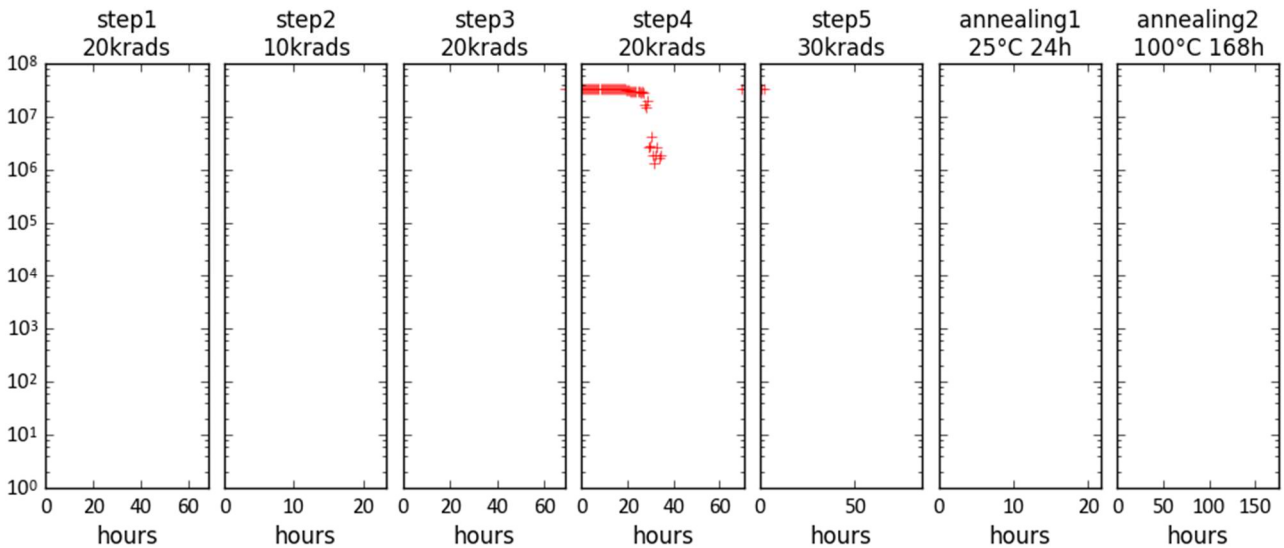
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Dut3, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error



Dut3, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

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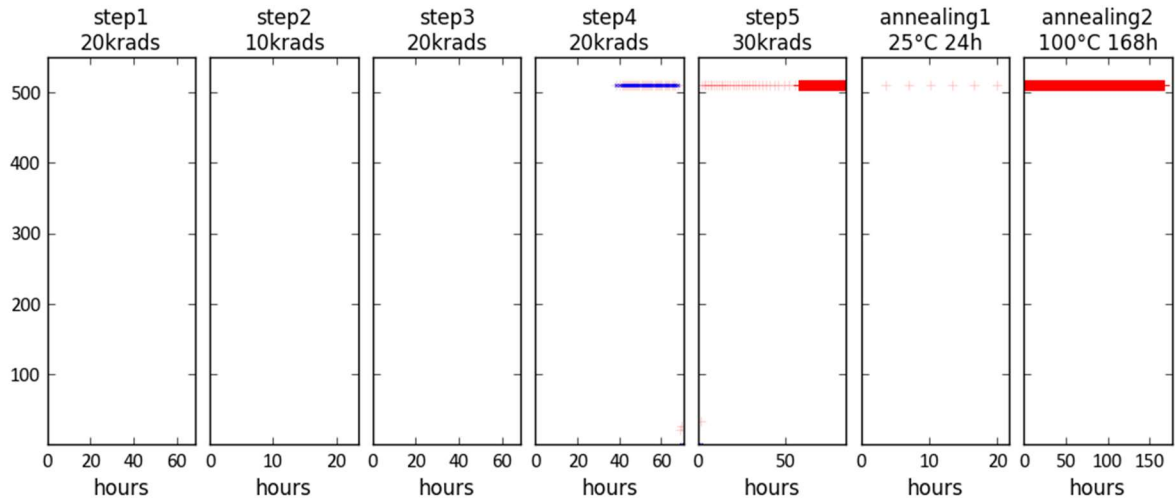
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Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
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PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
		Issue:	2
		Date:	2018/10/10
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12.28.4 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

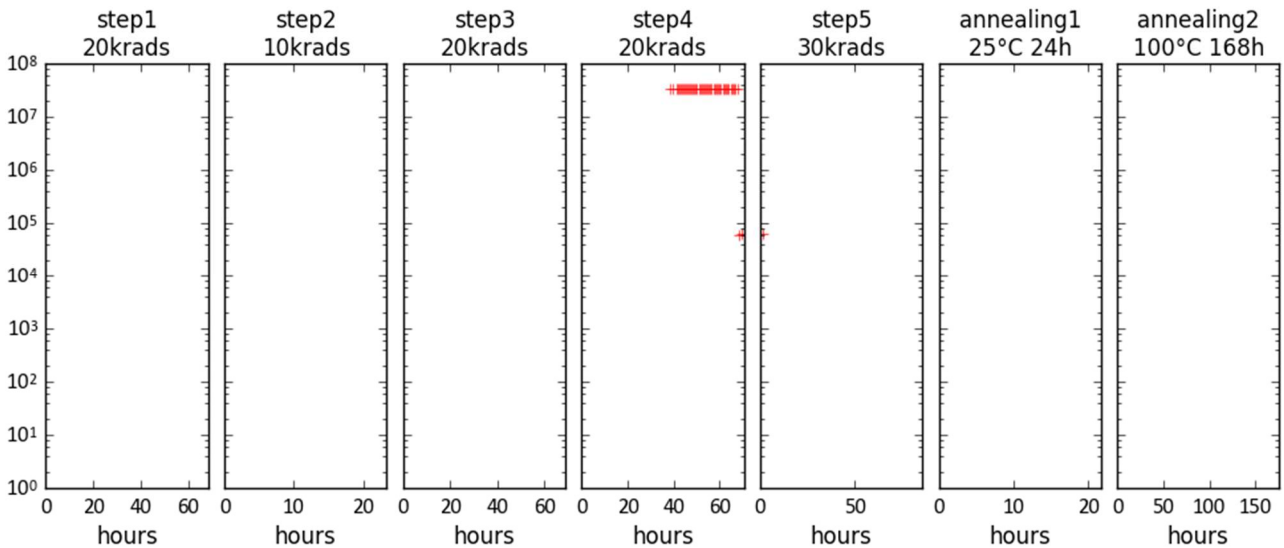
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Dut3, High duty cycle, Read, pattern aaa, block 2 to 511

hirex eng.

+ + words in error



Dut3, High duty cycle, Read, pattern aaa, block 2 to 511

hirex eng.

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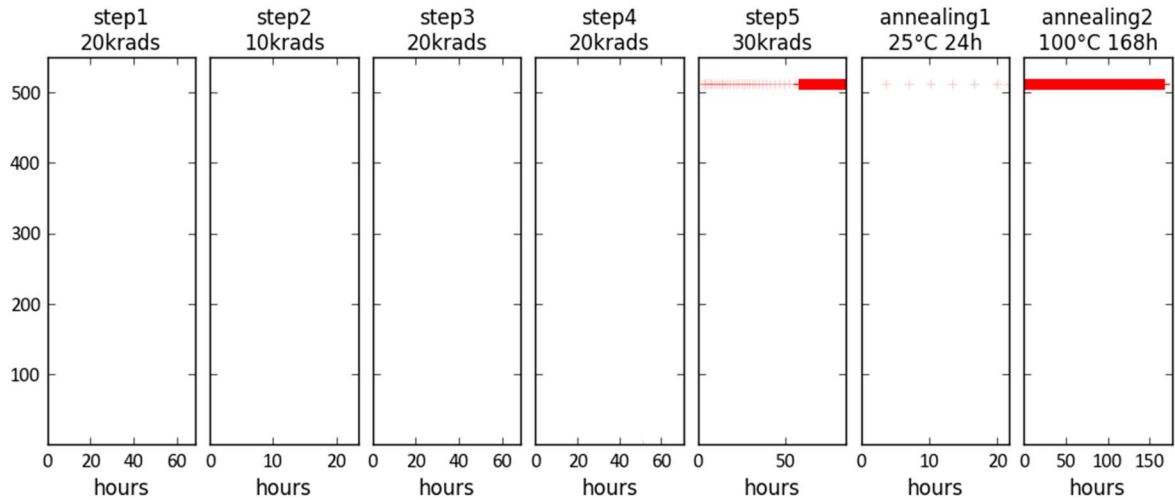
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		RL:	2017901237
PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
		Issue:	2
		Date:	2018/10/10
		Page:	452 / 462

12.28.5 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

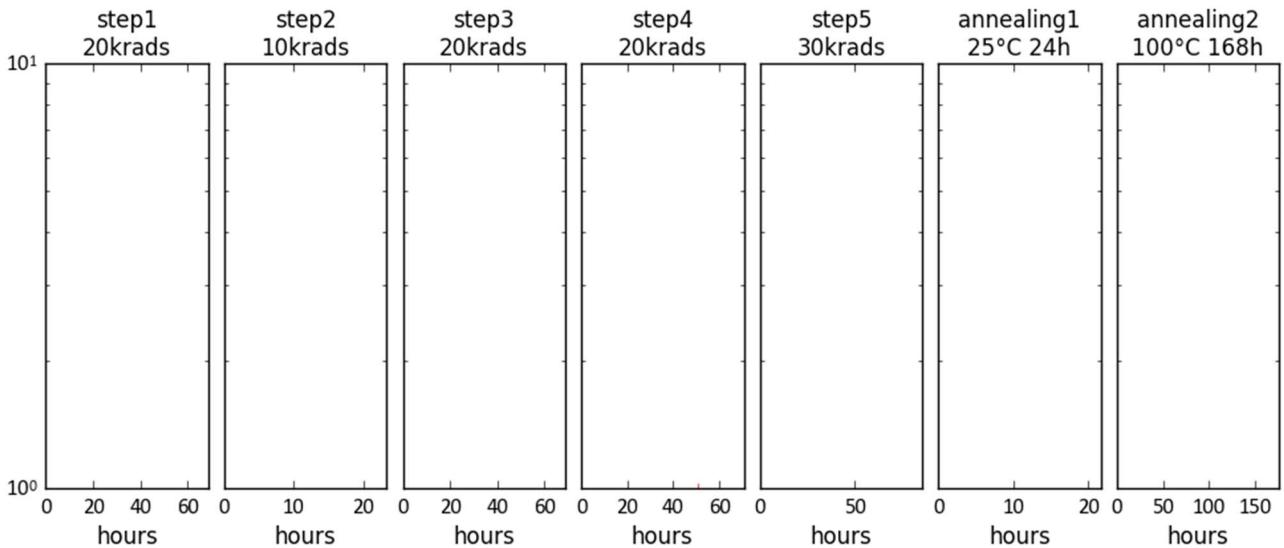
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Dut3, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut3, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

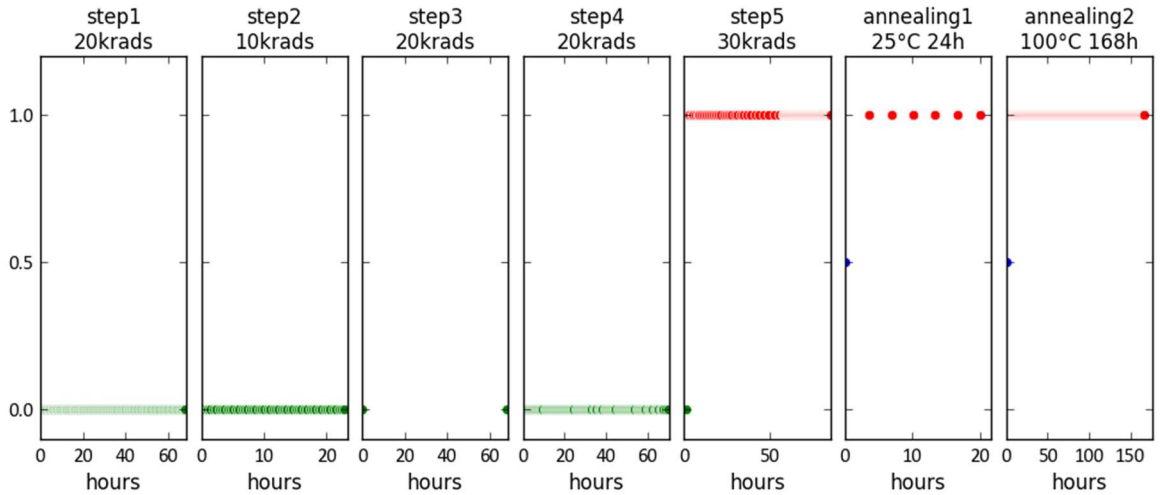
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	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
			Page:	453 / 462

12.28.6 DUT3, High Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut3, High duty cycle, DUT access status

hirex eng.

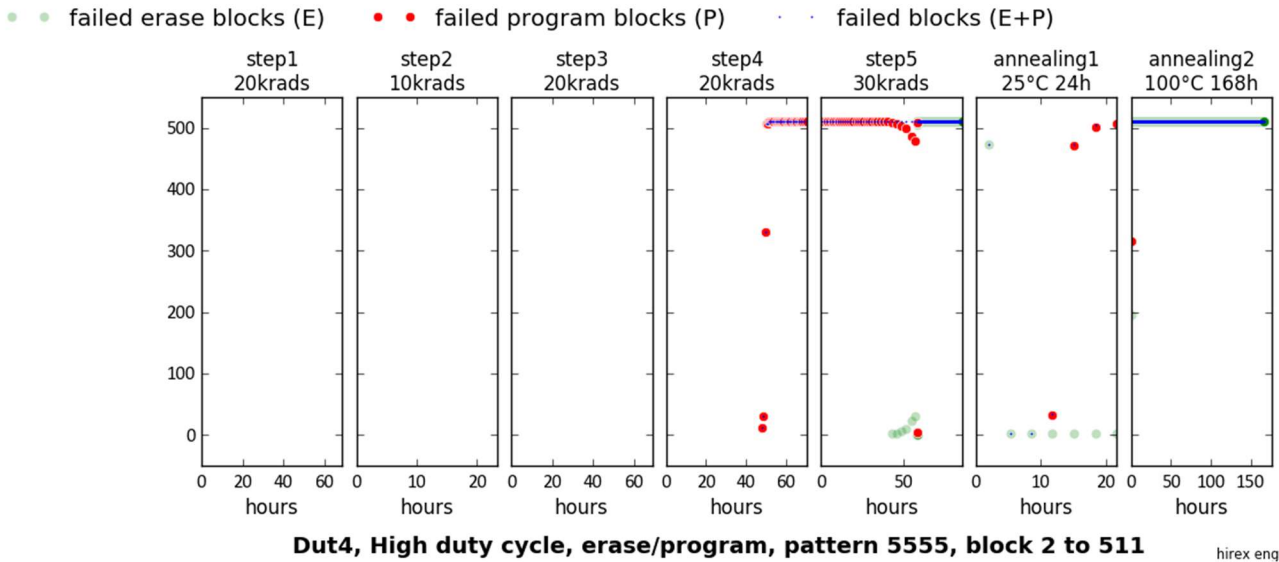
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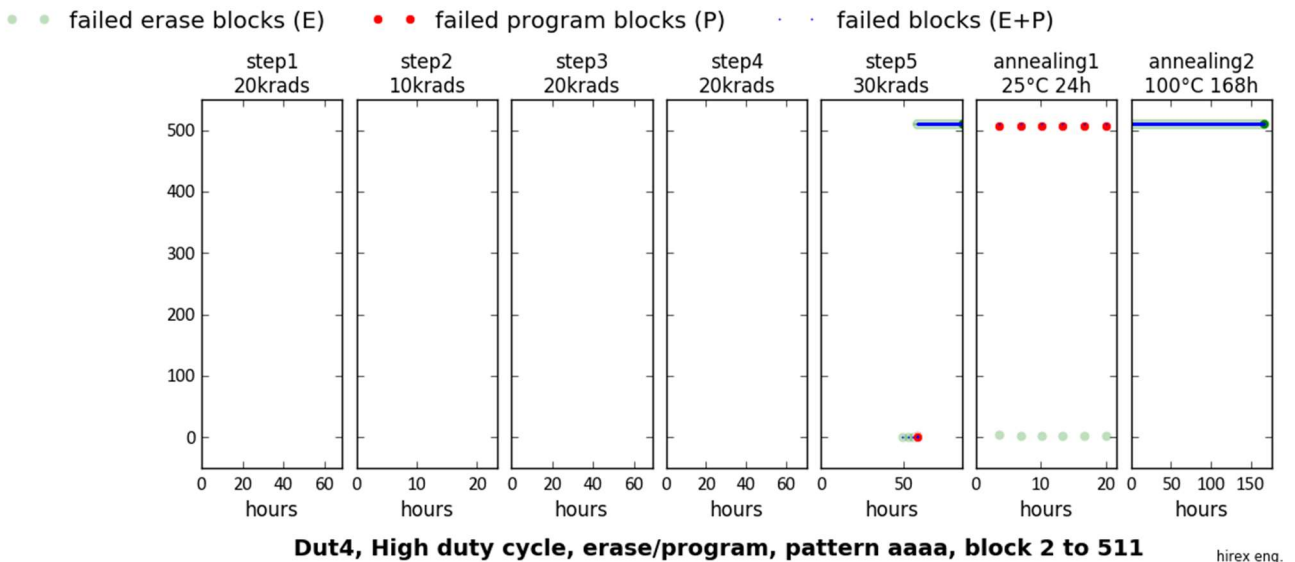
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	PC28F00AM29EWHA		Ref.:	ATN-RR-464
	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
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12.29 DUT4 (Board 4), High duty cycle

12.29.1 DUT4, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511



12.29.2 DUT4, High Duty Cycle, Erase/Program, pattern = 0xA AAAA, blocks 2 to 511



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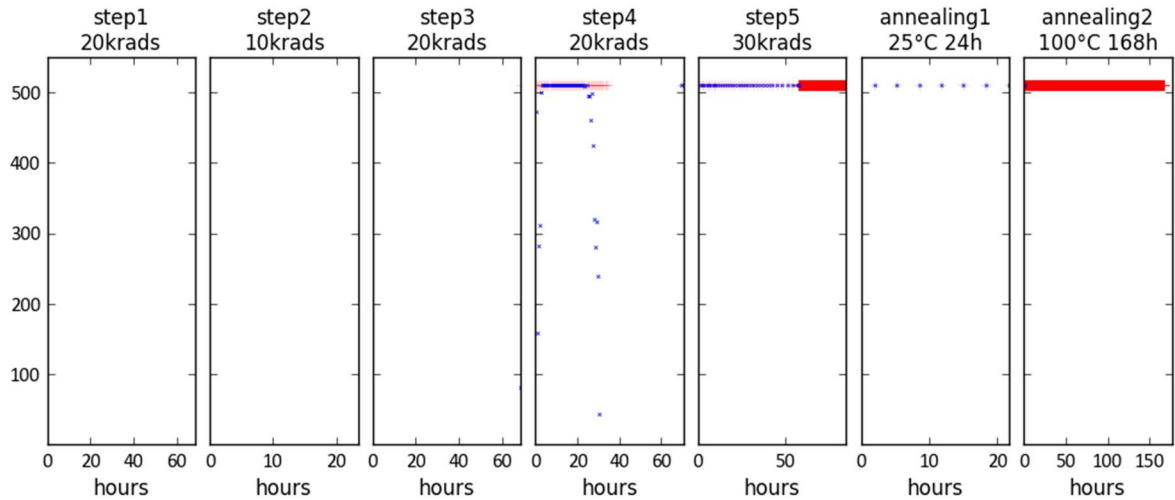


Total Ionizing Dose Radiation Test	
PC28F00AM29EWHA	MICRON U
D/C 1409	

ALTER TECHNOLOGY	
RL:	2017901237
Ref.:	ATN-RR-464
Issue:	2
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12.29.3 DUT4, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511

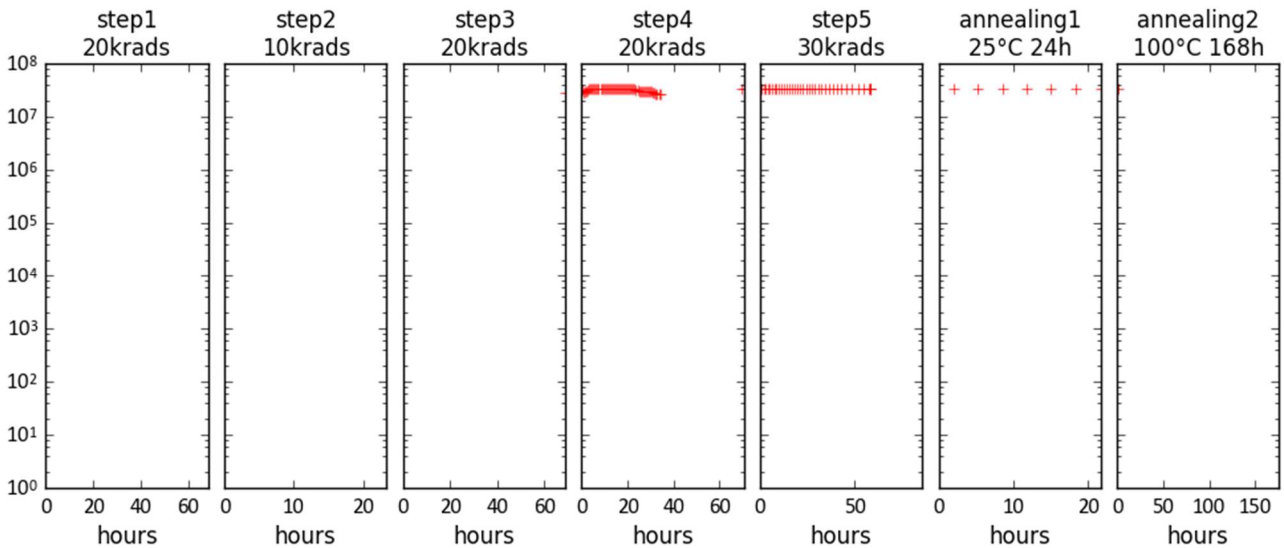
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Dut4, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

+ + words in error




Dut4, High duty cycle, Read, pattern 5555, block 2 to 511

hirex eng.

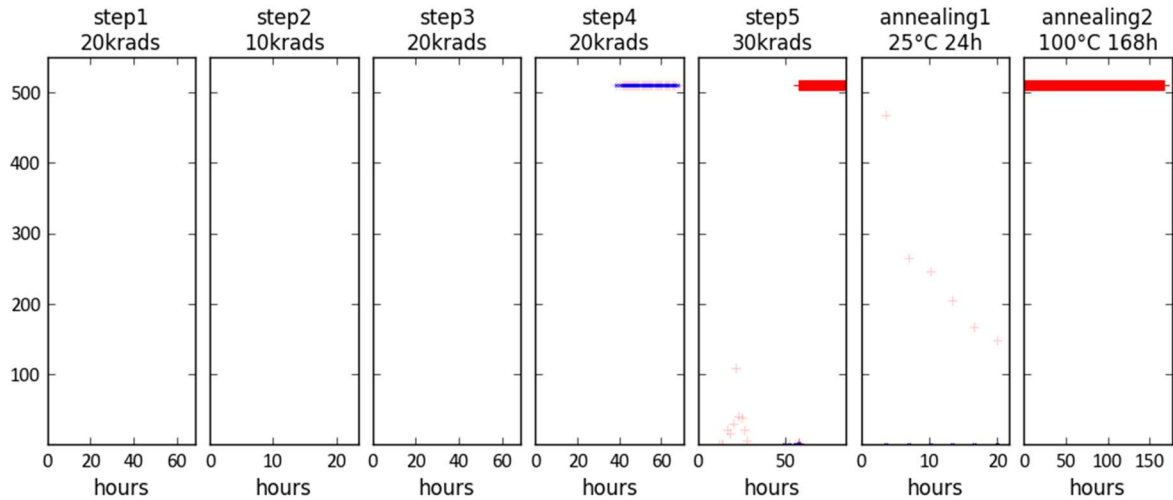
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	D/C 1409		Issue:	2
	MICRON U		Date:	2018/10/10
		Page:	456 / 462	

12.29.4 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511

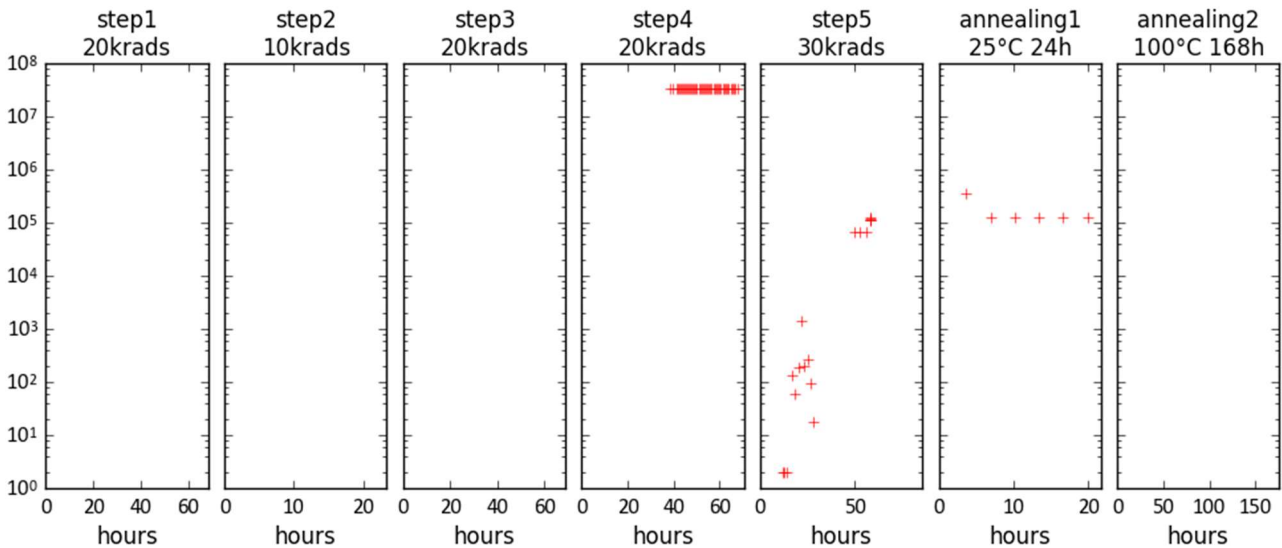
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Dut4, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

+ + words in error



Dut4, High duty cycle, Read, pattern aaaa, block 2 to 511

hirex eng.

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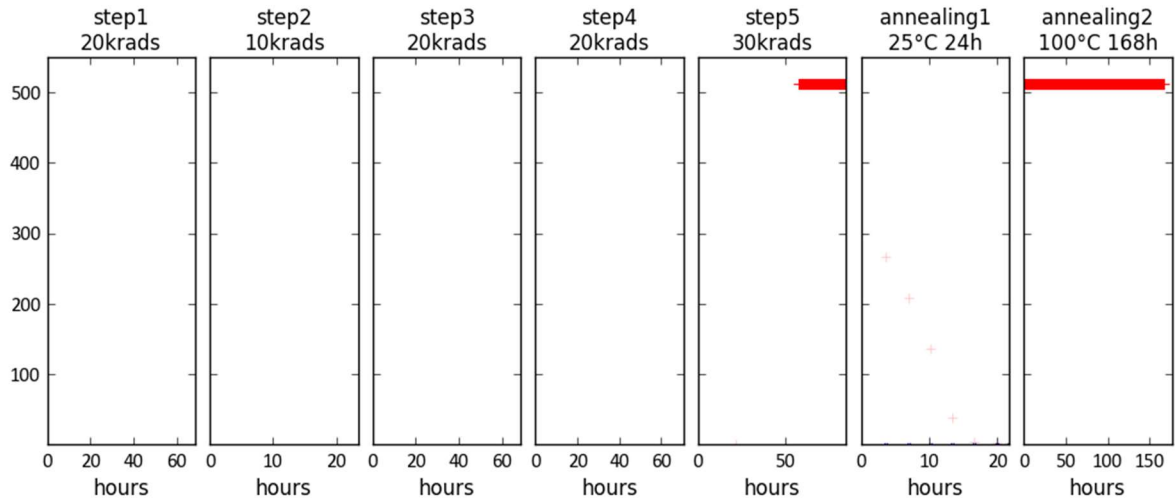
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		Issue:	2
		Date:	2018/10/10
		Page:	457 / 462

12.29.5 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023

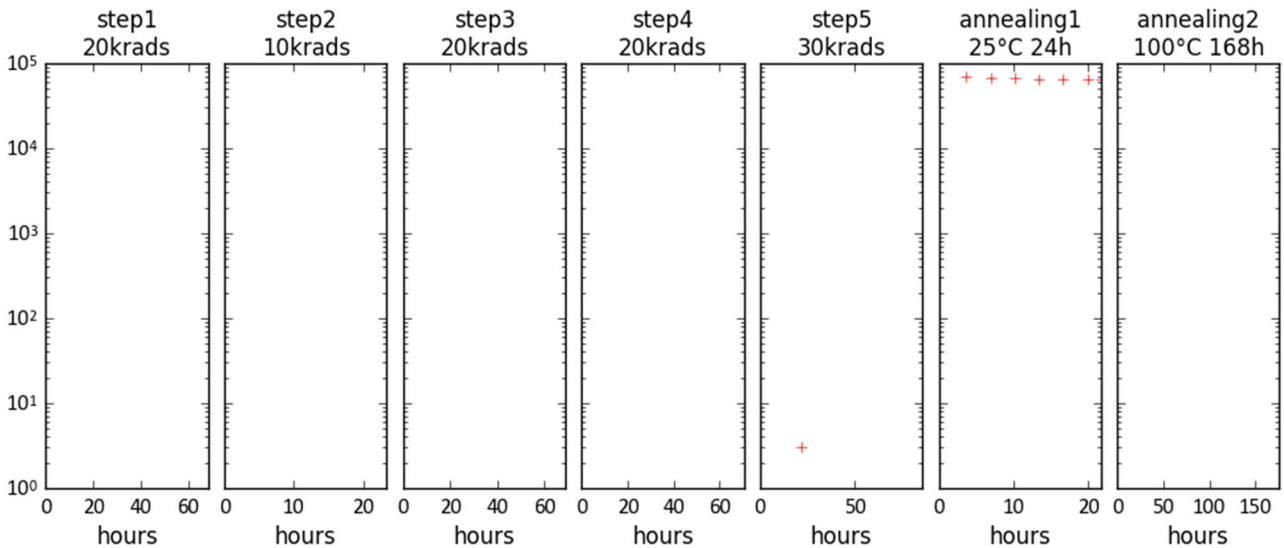
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Dut4, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

+ + words in error




Dut4, High duty cycle, Read, pattern aaaa, block 512 to 1023

hirex eng.

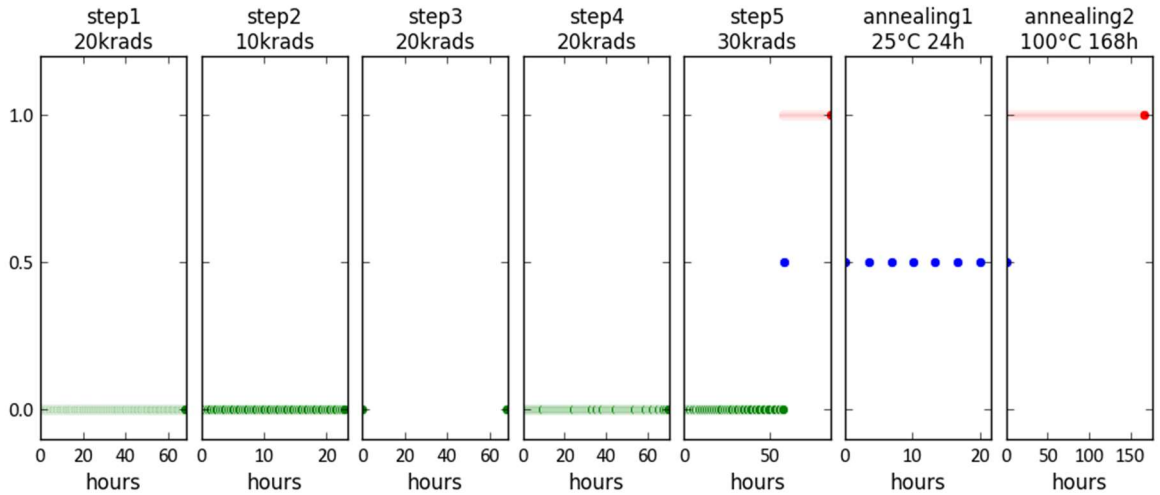
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	PC28F00AM29EWHA		Ref.:	ATN-RR-464
			Issue:	2
	D/C 1409		Date:	2018/10/10
	MICRON U		Page:	458 / 462

12.29.6 DUT4, High Duty Cycle, DUT access status

- • identification ok
- • identification wrong
- • reset failed




Dut4, High duty cycle, DUT access status

hirex eng.

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	PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
			Issue:	2
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ANNEX I: TEST PLAN

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**TOTAL DOSE RADIATION
TEST PLAN
No. ATN-RP-211**

Issue: DRAFT F Rev.:

Date: 2017/06/14

Page: 1 / 8

Component No. PC28F00AM29EWHA		Component Designation: PC28F00AM29EWHA				Irradiation Spec. No.: ESCC 22900 Issue 5 (Note 6)			
Gen. Spec.: MFR DATA SHEET Det. Spec.: MFR DATA SHEET Amend.: N/A		Date Code: N/Av Lot Number: N/Av Wafer No.: N/Av				Project/Programme: JUICE			
Family/Group: 08/29	Technology: --	Functional Assignment: 1Gb x8/x16 Parallel NOR Flash Memory				Package: 64 BGA			
Manuf. Name: MICRON Address: USA		Sample Size: 31 Irradiation Devices: 30 Control Devices: 1				Level of Interest: N/Av krad(Si) Maximum Test Level: 150 krad(Si) Radiation Source: ⁶⁰ Co			
EXPERIMENTAL STEPS		1	2	3	4	5	6	7	8
PROCESS		Irrad	Irrad	Irrad	Irrad	Irrad	Irrad	Ann	Ann
Dose [krad (Si)]		20	10	20	20	30	50	-	-
Cumulative Dose [krad (Si)]		20	30	50	70	100	150	-	-
Dose Rate [rad(Si)/h]		300	300	300	300	300	300	-	-
Exposure Time (h)		66.7	33.3	66.7	66.7	100	166.7	24	168
Temperature (°C)		25	25	25	25	25	25	25	100
Irradiation Conditions: Biased: 20 samples (Note 4) Unbiased: 10 samples (Note 5) Test Circuit: Figure 1 & 2		Irradiation Measurements Interval: Remote Test: X In situ Test: X				Annealing Conditions: Biased: 20 samples (Note 4) Unbiased: 10 samples (Note 5) Test Circuit: Figure 1 & 2			
Notes:									
1. The total dose step values recommended in the table above should be considered as indicative. If any step cannot reach a deviation ≤10%, it should be separated in two intermediate steps (before and after).									
2. The dose rate given must be considered as a guide. In any case, it must be maintained ≤ 360 rad(Si)/h.									
3. Samples submitted to this irradiation test were not submitted to screening sequence.									
4. Distribution of biased samples: 10 at high duty cycle and 10 at low duty cycle (Figure 1).									
5. See Figure 2.									
6. According to ESA approval According to ESA approval the time interval from the completion of an exposure to the start of the next exposure shall be a maximum of 3 hours.									
	Name			Signature			Date		
Prepared by	Sonia Vargas / Pablo Frutos (ATN)(TID Engineer)						2017/06/14		
Reviewed by	José J. González (ATN) (TID Supervisor)						2017/06/14		
Approved by									

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**TOTAL DOSE RADIATION
TEST PLAN
No. ATN-RP-211**

Issue: DRAFT F

Rev.:

Date: 2017/06/14

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DOCUMENT CONTROL CHANGE

Edition / Revision	Date	Affected Edition / Revision	Affected Paragraph / Modification
ATN-RP-211 Draft A	2015/01/16	--	Draft edition of this document.
ATN-RP-211 Draft B	2015/02/21	ATN-RP-211 Draft A	<ul style="list-style-type: none"> - Included Annex with PCB information. - Exposure time at step 6 (Annealing), modified to 24 hours instead 168 hours. - Project name changed from EPE to JUICE.
ATN-RP-211 Draft C	2015/05/07	ATN-RP-211 Draft B	<ul style="list-style-type: none"> - Package option changed from TSOP 56 to BGA 64 - Electrical Measurements updated -Unbiased Radiation Circuit Schematic included -Socket of Unbiased Radiation Circuit included in Annex
ATN-RP-211 Draft D	2015/10/19	ATN-RP-211 Draft C	<ul style="list-style-type: none"> -I_{LI} test conditions updated -I_{LO} test conditions updated -V_{OL} test conditions updated -V_{OH} test conditions updated -V_{IL} test conditions updated -V_{IH} test conditions updated -Inclusion of data retention of read inverted checkerboard test
ATN-RP-211 Draft E	2015/05/25	ATN-RP-211 Draft E	<ul style="list-style-type: none"> -Removal of data retention of read inverted checkerboard test -Inclusion of data retention test of pattern CC33h -Inclusion of read of AAAAh pattern. -The dose rate and irradiation test step have been updated. -Note 6 in page 1 has been included.
ATN-RP-211 Draft F	2017/06/14	ATN-RP-211 Draft E	<ul style="list-style-type: none"> -Figure 1. The circuit for the high and low duty cycle radiation circuit has been included.

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FIGURE 1 – HIGH AND LOW DUTY CYCLE RADIATION CIRCUIT

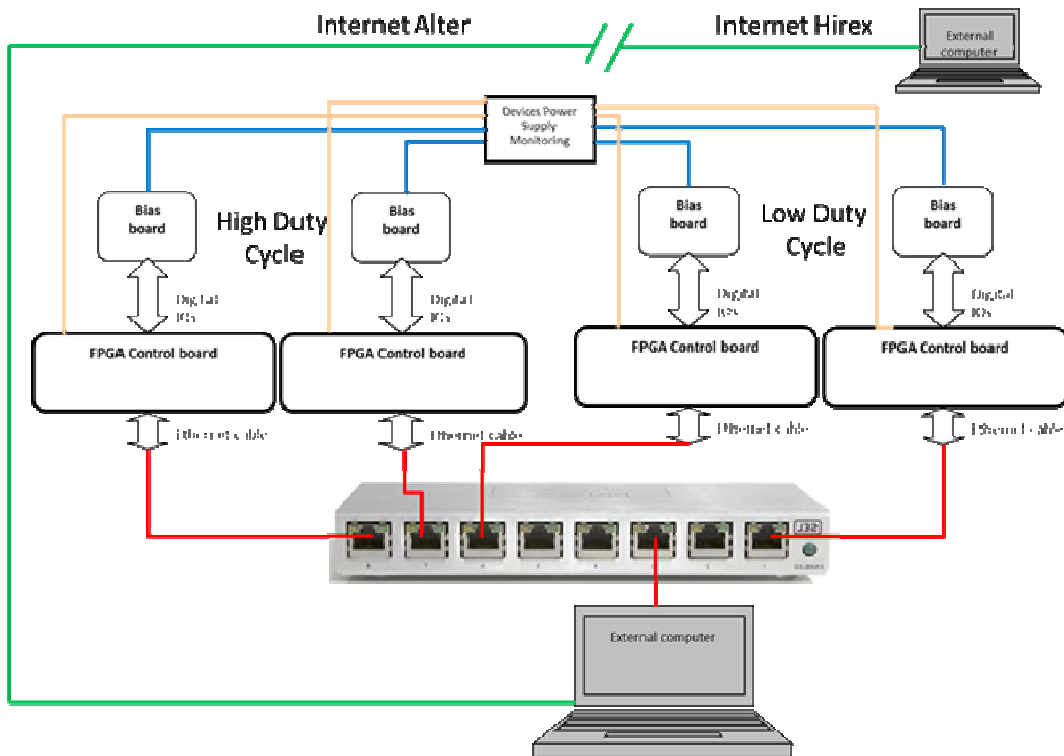
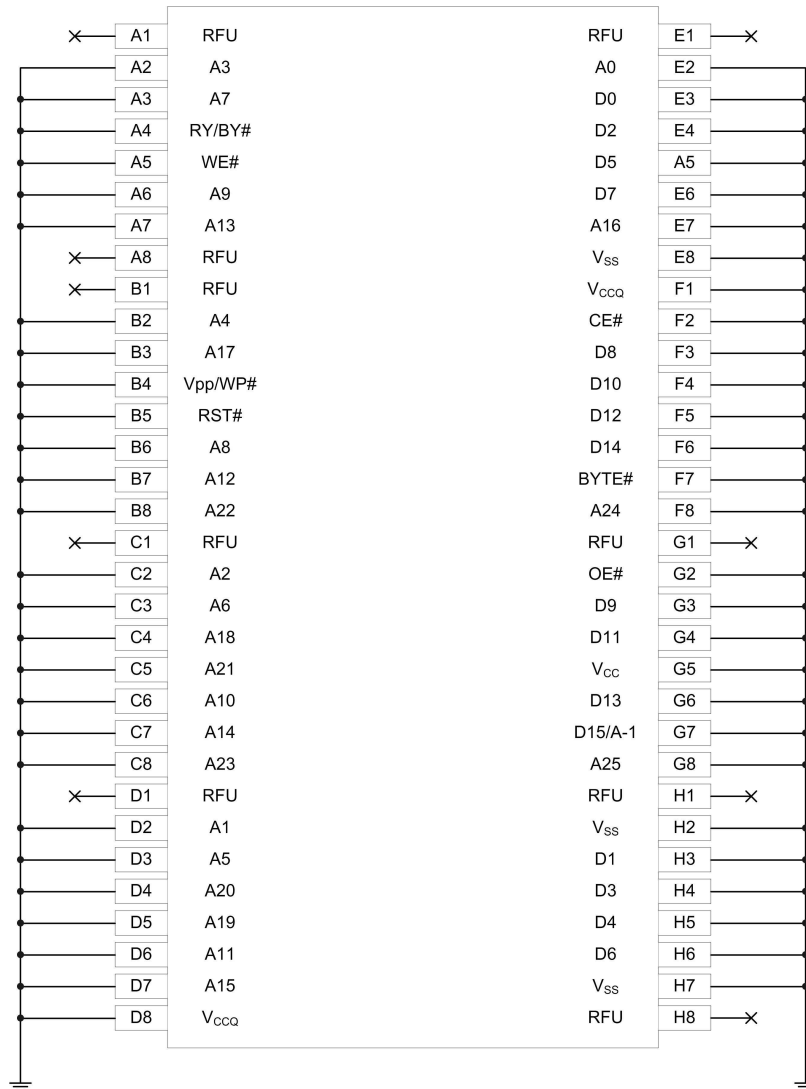


FIGURE 2 - UNBIASED RADIATION CIRCUIT



Notes:

Socket information of circuit is shown in fig.3



**TOTAL DOSE RADIATION
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TABLE I.- ELECTRICAL MEASUREMENTS MICRON NOR FLASH

Nº	SYMBOL	TEST	CONDITIONS (Note 1) ($T_{AMB}=22\pm 3^{\circ}C$)	LIMITS		UNIT
				MIN.	MAX.	
DC						
1	Cont	Continuity Test	--	--	--	V
2	I_{LI}	Input Leakage Current	$0V \leq V_{IN} \leq V_{CC}$	--	1 (Note 2)	μA
3	I_{LO}	Output Leakage Current	$0V \leq V_{OUT} \leq V_{CC}$	--	1 (Note 3)	μA
4	V_{OL}	Output LOW Voltage	$I_{OL} = 100\mu A,$ $V_{CC} = V_{CC,min},$ $V_{CCQ} = V_{CCQ,min}$	--	$0.15 V_{CCQ}$ (Note 3)	V
5	V_{OH}	Output HIGH Voltage	$I_{OH} = 100\mu A,$ $V_{CC} = V_{CC,min},$ $V_{CCQ} = V_{CCQ,min}$	$0.85 V_{CCQ}$ (Note 3)	--	V
6	V_{IL}	Input LOW Voltage	--	-0.5 (Note 3)	0.8 (Note 3)	V
7	V_{IH}	Input HIGH Voltage	--	$0.7 V_{CCQ}$ (Note 3)	$V_{CCQ}+0.4$ (Note 3)	V
POWER SUPPLY						
8	ICC1.1	Vcc Random Read Current	CE# = VIL, OE# = VIH, f = 5 MHz	--	31	mA
9	ICC1.2	Vcc Page Read Current	CE# = VIL, OE# = VIH, f = 13 MHz	--	16	mA
10	ICC3.1	Vcc Program Current	$V_{PP}/WP\# = VIH$	--	50(Note 5)	mA
11	ICC3.2	Vcc Erase Current	$V_{PP}/WP\# = VIH$	--	50(Note 5)	mA
AC						
12	tCS	CE# LOW to WE# LOW	--	0 (Note 4)	--	ns
13	tCH	WE# HIGH to CE# HIGH	--	0 (Note 4)	--	ns
14	tDS	Input valid to WE# HIGH	--	30 (Note 4)	--	ns
15	tDH	WE# HIGH to input transition	--	0 (Note 4)	--	ns
16	tWP	WE# LOW to WE# HIGH	--	35 (Note 4)	--	ns
17	tWPH	WE# HIGH to WE# LOW	--	20 (Note 4)	--	ns
FUNCTIONAL BLOCK						
18	Func_CHK	Pattern FCT Checkerboard.	Erase, write and read with pattern Checkerboard in block 0	(Note 6)	(Note 6)	--

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Nº	SYMBOL	TEST	CONDITIONS (Note 1) (T _{AMB} =22±3°C)	LIMITS		UNIT
				MIN.	MAX.	
19	Func_/CHK	Pattern FCT /Checkerboard	Erase, write and read with pattern Checkerboard Inverted in block 0	(Note 6)	(Note 6)	--
20	Data Retention	Read CC33h pattern	Write in 0kRad and read pattern CC33h in block 1 in following steps	(Note 6)(Note 7)	(Note 6)(Note 7)	--
21	Read Pattern	Read AAAAh pattern	Read only pattern AAAAh in block 512 only for ON parts	(Note 8)	(Note 8)	--

Notes:

1. The electrical testing to be performed with $V_{CC}=V_{CCQ}=V_{PP}=3.3V$ unless otherwise noted in Table I. Therefore, when V_{PP} $V_{IH}=3.3V$.
2. Performed in A25-A0.
3. Performed in DQ15-DQ0.
4. These electrical tests are GO/NO GO. This means that the test will be performed only for the minimum limits specified in Table I and the reported results will be GO/NO GO.
5. This limit is informative as the datasheet of the DUT indicate that it has not been 100% tested. Therefore, this does not constitute Pass/Fail information.
6. This test has a GO/NO GO result. If any of the written data is read incorrectly, the test is considered to be NO GO.
7. The pattern is written at 0kRad, and read only in the rest of steps.
8. Block 512 will be written by ON radiation circuit. At the first execution (0 krad) the memory has not been written yet, and consequently the result should be a NO GO.
9. The limits above are included herein for reference purposes only. The degradation of any of these parameters above the limits must not be considered a reason for supplier lot rejection, due to the fact that the aim of this test is to characterize the electrical behaviour of this lot when is submitted to radiation.

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ANNEX I

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41092 Sevilla, ESPAÑA. T: 34-95-446 70 50, Fax: 34-95-446 73 39, E-Mail: info@altertechnology.com

ATNF140.E

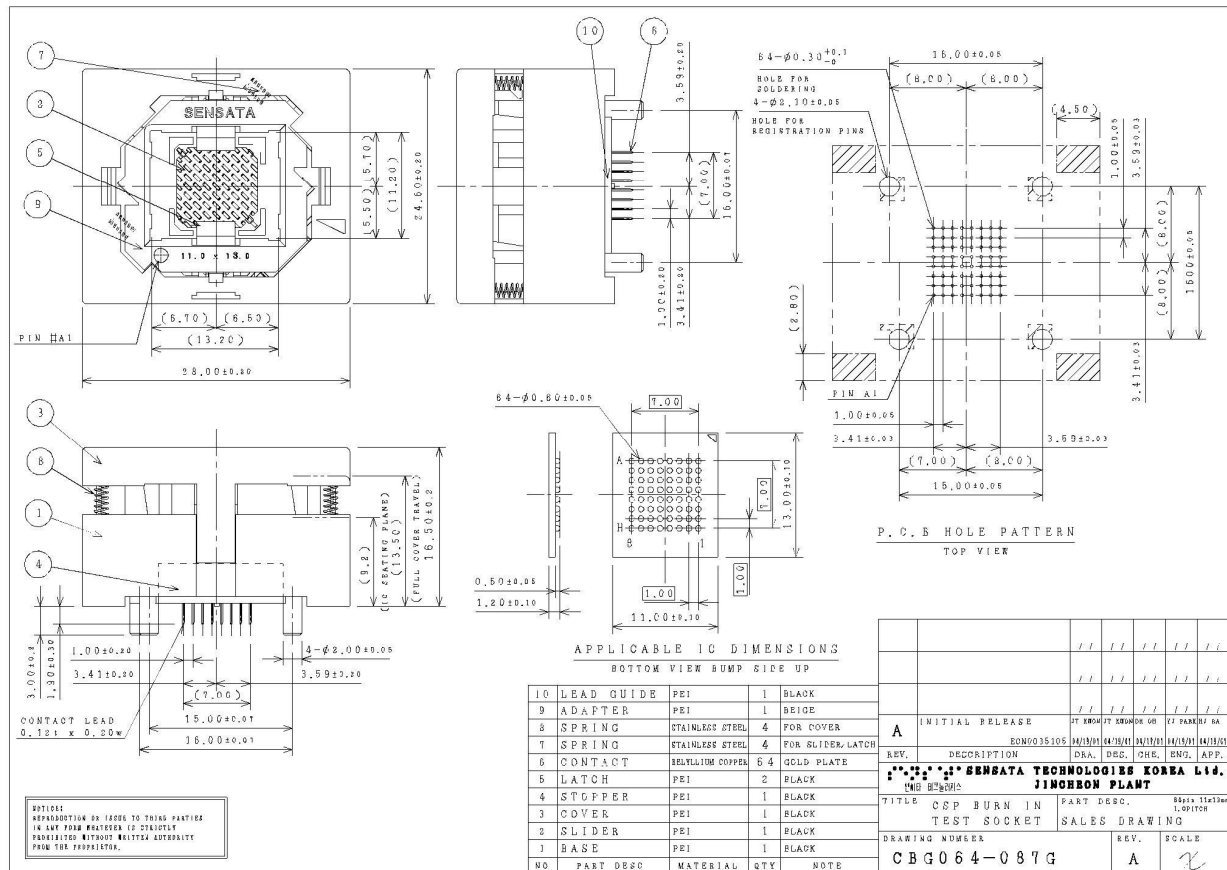



FIGURE 3. Radiation Circuit Socket

	Total Ionizing Dose Radiation Test		ALTER TECHNOLOGY	
			RL:	2017901237
	PC28F00AM29EWHA D/C 1409	MICRON U	Ref.:	ATN-RR-464
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			Date:	2018/10/10
			Page:	460 / 462

ANNEX II: DOSIMETRY REPORT

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ALTER TECHNOLOGY TÜV NORD S.A.U., AN ISO 9001, EN 9100 ISO/IECE 17025:025 AND DLA SUITABILITY CERTIFIED COMPANY
c/ Tomas Alba Edison, 4, Parque Científico y Tecnológico Cartuja - 41092 Seville, SPAIN. T: 34-95-446 70 50, Fax: 34-95-446 73 39, E-Mail:
info@altertechnology.com

CNA DATA

Reception date of the samples: N/A

Irradiation Test Report Number:
20170612_ GR10

TITLE

ALTER TECHNOLOGY TESTS

TEST REQUESTER

Company/Organism Alter Technology	Department Parts Laboratory	Name Eugenio	Surname Muñoz
Address C/ Tomás A. Edison 4	Phone 954467050	E-mail eugenio.munoz@altertechnology.com	

REQUESTED CONDITIONS


Total area (cm ²)	Lead Box
Dose rate [rad(Si)/h]	~ 300 rad (Si)/h
Accumulated dose [krad(Si)]	N/A
Others conditions	N/A

GENERAL IRRADIATION CONDITIONS

Test Date	12/06/2017
Source Activity on Test Date (TBq)	224.686
Detection System	Farmer Ionization Chamber and Electrometer MULTIDOS
SDD ⁽¹⁾ (cm)	260
Field Size	Maximum
Position	GR10

DOSIMETRY CHARACTERIZATION

Point	A	B	C	D
Dose Rate [rad(Si)/h]	308.93	291.56	311.95	288.89
Uncertainty ⁽²⁾ (%)	2.8	4.7	4.7	2.8
Average dose rate [rad(Si)/h]	300.3			
Uncertainty ⁽²⁾ (%)	4.7			
Uniformity (%)	92.6			

Supervisor	Date of Report Delivery
 Pedro Martín	07/11/2017

- (1) SDD: Source Detector Distance
- (2) Uncertainty determined considering the uncertainties of the experimental conditions and with a coverage factor $k=2$.

CNA DATA

Reception date of the samples: N/A

Irradiation Test Report Number:
20170612_ GRD12

TITLE

ALTER TECHNOLOGY TESTS

TEST REQUESTER


Company/Organism Alter Technology	Department Parts Laboratory	Name Eugenio	Surname Muñoz
Address C/ Tomás A. Edison 4	Phone 954467050	E-mail eugenio.munoz@altertechnology.com	

REQUESTED CONDITIONS

Total area (cm ²)	Lead Box
Dose rate [rad(Si)/h]	~ 300 rad (Si)/h
Accumulated dose [krad(Si)]	N/A
Others conditions	N/A

GENERAL IRRADIATION CONDITIONS	
Test Date	12/06/2017
Source Activity on Test Date (TBq)	224.686
Detection System	Farmer Ionization Chamber and Electrometer MULTIDOS
SDD ⁽¹⁾ (cm)	260
Field Size	Maximum
Position	GRD12

DOSIMETRY CHARACTERIZATION				
Point	A	B	C	D
Dose Rate [rad(Si)/h]	309.73	298.18	305.94	289.82
Uncertainty ⁽²⁾ (%)	2.8	4.7	4.7	2.8
Average dose rate [rad(Si)/h]	300.9			
Uncertainty ⁽²⁾ (%)	4.7			
Uniformity (%)	93.6			

Supervisor	Date of Report Delivery
 Pedro Martín	07/11/2017

- (1) SDD: Source Detector Distance
- (2) Uncertainty determined considering the uncertainties of the experimental conditions and with a coverage factor $k=2$.

CNA DATA

Reception date of the samples: N/A

Irradiation Test Report Number:
20170612_ GRU12

TITLE

ALTER TECHNOLOGY TESTS

TEST REQUESTER

Company/Organism Alter Technology	Department Parts Laboratory	Name Eugenio	Surname Muñoz
Address C/ Tomás A. Edison 4	Phone 954467050	E-mail eugenio.munoz@altertechnology.com	

REQUESTED CONDITIONS


Total area (cm ²)	Lead Box
Dose rate [rad(Si)/h]	~ 300 rad (Si)/h
Accumulated dose [krad(Si)]	N/A
Others conditions	N/A

GENERAL IRRADIATION CONDITIONS


Test Date	12/06/2017
Source Activity on Test Date (TBq)	224.686
Detection System	Farmer Ionization Chamber and Electrometer MULTIDOS
SDD ⁽¹⁾ (cm)	260
Field Size	Maximum
Position	GRU12

DOSIMETRY CHARACTERIZATION

Point	A	B	C	D
Dose Rate [rad(Si)/h]	302.26	290.94	311.83	296.43
Uncertainty ⁽²⁾ (%)	2.8	4.7	4.7	2.8
Average dose rate [rad(Si)/h]	300.4			
Uncertainty ⁽²⁾ (%)	4.7			
Uniformity (%)	93.3			

Supervisor	Date of Report Delivery
 Pedro Martín	07/11/2017

- (1) SDD: Source Detector Distance
- (2) Uncertainty determined considering the uncertainties of the experimental conditions and with a coverage factor $k=2$.

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ANNEX III: COMPETENCES AND WARRANTIES

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info@altertechnology.com



DEFENSE LOGISTICS AGENCY
LAND AND MARITIME
POST OFFICE BOX 3990
COLUMBUS, OH 43218-3990

April 25, 2018

Mr. Jose Andres Izquierdo
Alter Technology TUV Nord S.A.U.
C/ Tomas A. Edison 4
41092 Sevilla, Spain

Dear Mr. Izquierdo:

Re: Retention of Laboratory Suitability, January 1, 2017 through December 31, 2017, MIL-STD-750F and Mil-STD-883; FSC 5961 and FSC 5962, VQE-18-032559, Control Number: 061195

We have reviewed your January 1, 2017 through December 31, 2017 commercial laboratory suitability annual retention report for MIL-STD-750 & MIL-STD-883. The reports indicate conformance with the requirements of DLA Land and Maritime's Laboratory Suitability Information booklet. Therefore, the listing of your MIL-STD-750 & MIL-STD-883 capabilities as stated in your latest laboratory suitability letter, VQE-18-031782, will be continued on the List of Commercial Laboratories Suitable for Testing Military Devices.

This suitability prohibits your company from removing or altering the device marking. Any device that fails testing conditions shall be identified (isolated) as a reject and returned to the device manufacturer for verification of failure mode.

Electrostatic discharge sensitivity (ESDS) requirements as stated in MIL-PRF-19500 and MIL-STD-883 are enforced by this Center. Therefore, all semiconductor and microcircuit devices will be handled as marked, unless otherwise notified by device manufacturer.

Your next retention report of commercial laboratory suitability should cover calendar year 2018 and must be submitted no later than March 1, 2019. It should be formatted to contain the items of Section IV of the DLA Land and Maritime booklet mentioned above. If we do not receive the report by this date, your capabilities may be removed from the List of Commercial Laboratories Suitable for Testing Military Devices.

If you have any questions, please contact Mr. Carl DelloStritto at 614-692-0616.

Sincerely,

Digitally signed by
KOLONCHUK.RAYMOND.L.JR.1230207093
Date: 2018.04.26 13:41:03 -04'00'

RAYMOND L. KOLONCHUK
Chief
Electronic Devices Branch

ANEXO TÉCNICO
ACREDITACIÓN Nº 345/LE2116
SCHEDULE OF ACCREDITATION

Entidad/Entity: ALTER TECHNOLOGY TÜV NORD, S.A. (Unipersonal)

Dirección/Address: C/ Tomás Alba Edison, 4 Parque Científico y Tecnológico Cartuja; 41092 Sevilla

Norma de referencia/Reference Standard: UNE-EN ISO/IEC 17025: 2005

Ensayos en la siguiente área/Test in the following area:

Ensayos Eléctricos, Funcionales y Seguridad / Electrical, Functional And Safety Tests

Categoría 0 (Ensayos en el laboratorio permanente)
Category 0 (Test performed at permanent laboratory)


PRODUCTO/MATERIAL A ENSAYAR PRODUCTS/MATERIALS TESTED	ENSAYO TYPE OF TEST	NORMA/PROCEDIMIENTO DE ENSAYO STANDARD SPECIFICATIONS/ TEST PROCEDURE
Componentes eléctricos, electrónicos, electromecánicos y opto electrónicos para aplicaciones aeroespaciales y de defensa <i>Electrical, electronic, electromechanical and opto electronics components for aerospace and defence application</i>		
Dispositivos semiconductores, incluyendo dispositivos discretos y circuitos integrados <i>Semiconductor devices, including discrete devices and integrated circuits</i>	Radiación ionizante dosis total <i>Total dose steady-state irradiation (TID)</i>	ESCC 22900, iss. 4: 2010
Dispositivos microelectrónicos <i>Microelectronic devices</i>	Radiación ionizante dosis total <i>Ionizing radiation total dose (TID)</i>	MIL-STD-883H 26 February 2010 MIL-STD-883J 7 June 2013 Método 1019.8
Dispositivos semiconductores <i>Semiconductor devices</i>	Radiación ionizante dosis total <i>Steady - state total dose irradiation (TID)</i>	MIL-STD-750E 20 November 2006 MIL-STD-750F 3 January 2012 Método 1019.5
Dispositivos eléctricos, electrónicos y electromecánicos <i>Electrical, electronical and electromechanical devices</i>	Dosimetría para ensayos de dosis absorbida <i>Dosimetry for absorbed dose testing</i>	Procedimiento interno / <i>In-house procedure</i> ATN-Q-IO-21-73



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