TOTAL IONIZING DOSE RADIATION TEST REPORT

PART TYPE: MX68GL1G0GHXFI-10G

DATE CODE: 1519

DESCRIPTION: 1Gb x8/x16 Single Voltage 3V Only Flash Memory

MANUFACTURER: MACRONIX

RadLab

Alter reference:	ATN-RR-467	**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	Pag 9/460: The name of the bias configuration has been corrected. Section 8: Name of bias configuration and statistics have been corrected. Errors in Retention fails parameter for OFF parts have been corrected. Pag 333/460: Appendix 1 has been included.

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1 INTRODUCTION

This report describes the Total Ionizing Dose (TID) test performed on device **MX68GL1G0GHXFI-10G 1Gb x8/x16 Single Voltage 3V Only Flash Memory** manufactured by **MACRONIX** with **D/C 1519.** 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-210 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 **2017/07/24** and finished on **2017/08/24**, 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 **297.1 rad(Si)/h, 297.7 rad(Si)/h and 297.2 rad(Si)/h respectively**, for a total cumulative dose of **64.7 krad(Si), 65.2 krad(Si) and 153.8 krad(Si) respectively.** Irradiation steps were followed by two annealing steps**: 24 hours at 25 ºC** and **168h at 100ºC.** 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-210 Draft F

2.2 Reference documents

- ESCC 22900 Issue 5
- MFR Datasheet

3 PART INFORMATION

3.1 Parts traceability data

TABLE I: Parts Traceability Data

COMPONENT DESCRIPTION	1Gb x8/x16 Single Voltage 3V Only Flash Memory	**PART TYPE**	MX68GL1G0GHXFI-10G
COMPONENT NUMBER	MX68GL1G0GHXFI-10G	**PACKAGE**	BGA
DATE CODE	1519	**MANUFACTURER**	MACRONIX
GENERIC SPECIFICATION	MFR Datasheet	**WAFER LOT:**	N/Av
DETAIL SPECIFICATION	MFR Datasheet	**AMENDMENT**	--

3.2 Sample Pictures

3.2.1 External view

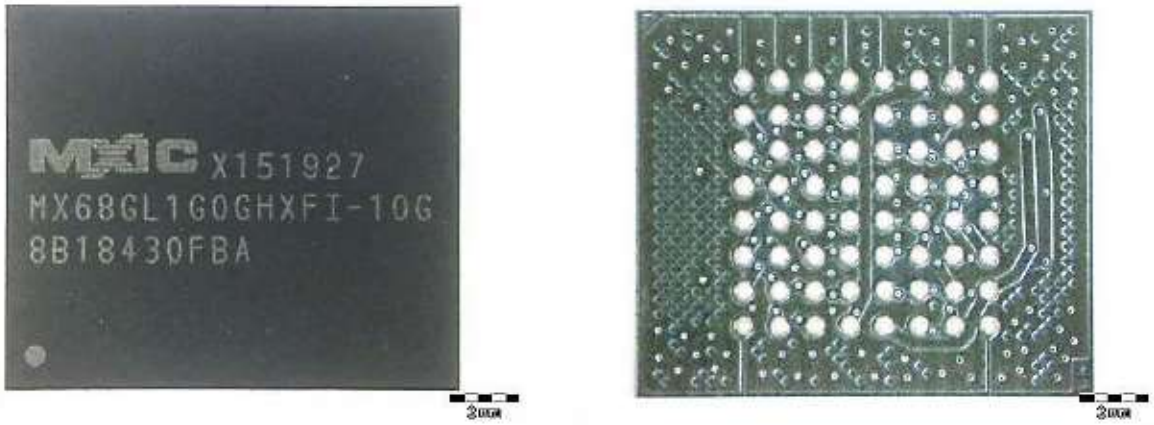

FIGURE 1: External General View

3.2.2 Internal view

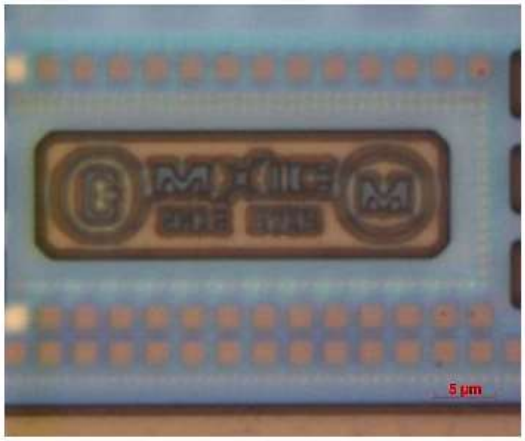

FIGURE 2: Internal Overall View

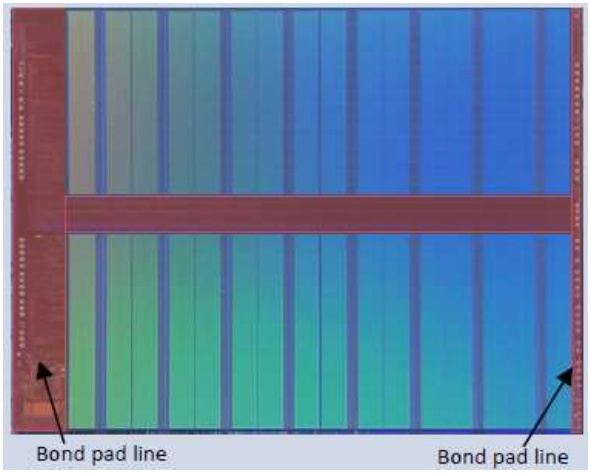

FIGURE 3: Die Mask Internal View

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 II:*** .

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.

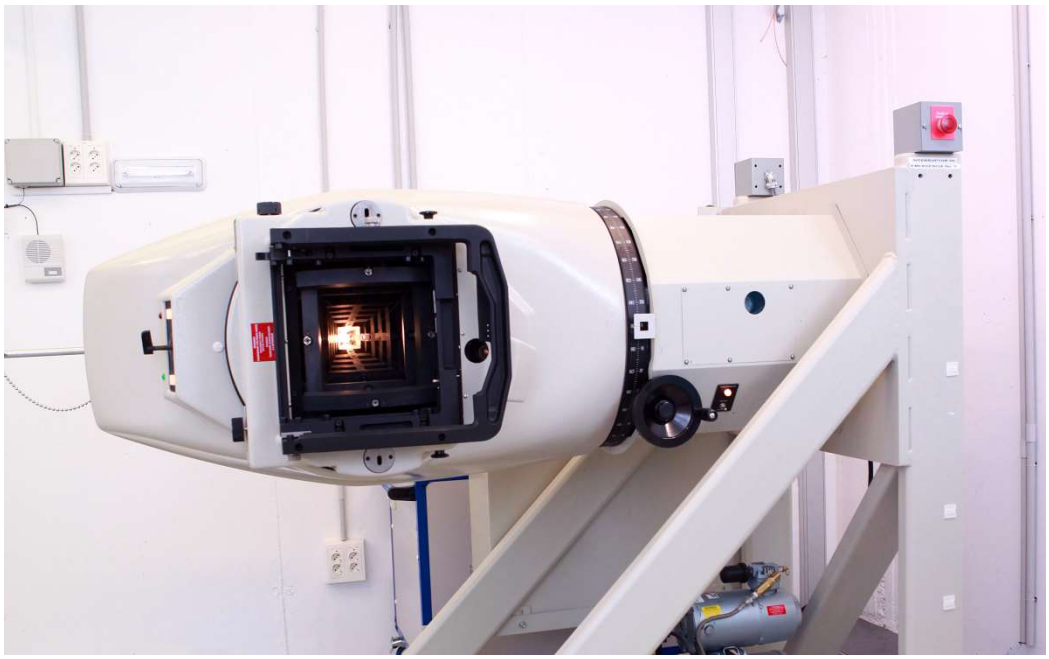

FIGURE 4: Gamma Irradiation Facility (RadLab®)

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.

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 **297.1 rad(Si)/h**, **297.7 rad(Si)/h and 297.2 rad(Si)/h respectively** with 4.7 % of relative error (k=2) until a total accumulated dose of **64.7 krad(Si), 65.2 krad(Si) and 153.8 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.

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	--	24/07/2017
2	20000	18539	18539.0	7.3	297.1	62.40	27/07/2017
3	30000	6575	25113.9	16.3	297.1	22.13	28/07/2017
4	50000	20321	45434.5	9.1	297.1	68.40	31/07/2017
5	70000	19227	64661.8	7.6	297.1	64.72	03/08/2017
	Annealing						
6	Ann24h@25ºC	24	--	--	--	--	04/08/2017
7	Ann168h@100ºC	168	--	--	--	--	11/08/2017

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	--	24/07/2017
2	20000	18347	18347.3	8.3	297.7	61.63	27/07/2017
3	30000	6619	24966.1	16.8	297.7	22.23	28/07/2017
4	50000	20833	45799.2	8.4	297.7	69.98	31/07/2017
5	70000	19441	65240.0	6.8	297.7	65.30	03/08/2017
	Annealing						
6	Ann24h@25ºC	24	--	--	--	--	04/08/2017
7	Ann168h@100ºC	168	--	--	--	--	11/08/2017

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	--	24/07/2017
2	20000	18486	18485.8	7.6	297.2	62.20	27/07/2017
3	30000	6396	24881.6	17.1	297.2	21.52	28/07/2017
4	50000	20729	45610.3	8.8	297.2	69.75	31/07/2017
5	70000	18965	64575.6	7.7	297.2	63.81	03/08/2017
6	100000	27184	91759.5	8.2	297.2	91.47	07/08/2017
7	150000	62006	153765.3	2.5	297.2	208.63	16/08/2017
	Annealing						
8	Ann24h@25ºC	24	--	--	--	--	17/08/2017
9	Ann168h@100ºC	168	--	--	--	--	24/08/2017

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

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	

HDC (High Duty Cycle) samples

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	

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 25º C and 100°C temperatures.

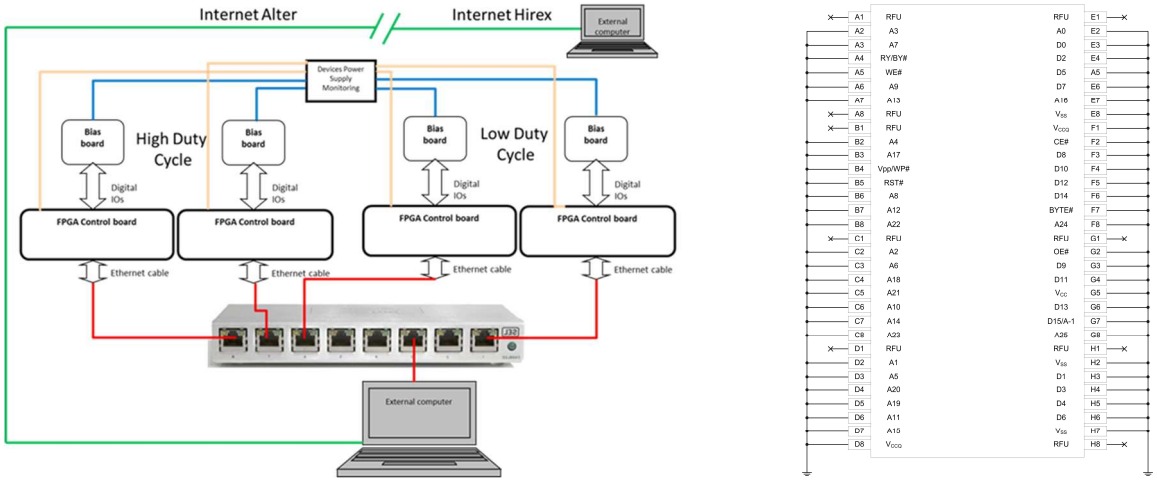

FIGURE 5: Radiation Bias Circuits, Biased and Unbiased respectively

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 krad (Si)
LE0990.002	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE0990.003	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1005.006	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1005.007	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1011.002	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1011.003	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1011.004	Power supply	N/A	20, 30, 50, 70 krad (Si)

LE1046.002	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1046.003	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1046.004	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1046.005	Power supply	N/A	20, 30, 50, 70 krad (Si)
LE1046.007	Power supply	N/A	20, 30, 50, 70 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-210 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±3ºC)	LIMITS		UNIT
				MIN.	MAX.	
DC						
1	**Cont**	**Continuity Test**	**--**	**--**	**--**	**V**
2	**I_{ilk}**	**Input Leakage Current**	**--**	**--**	**±2.0 (Note 2)**	**µA**
3	**I_{olk}**	**Output Leakage Current**	**--**	**--**	**±1.0 (Note 3)**	**µA**
4	**V_{ol}**	**Output Low voltage**	**Iol=100uA**	**--**	**0.45 (Note 3)**	**V**
5	**V_{oh}**	**Output High voltage**	**Ioh=-100uA**	**0.85xVI/O (Note 3)**	**--**	**V**
6	**V_{il}**	**Input Low voltage**	**--**	**-0.1V (Note 3)**	**0.3xVI/O (Note 3)**	**V**
7	**V_{ih}**	**Input High voltage**	**--**	**0.7xVI/O (Note 3)**	**VI/O+0.3V (Note 3)**	**V**
POWER SUPPLY						
8	**Icr1**	**V_{CC} Read Current**	**CE#=Vil, OE#=Vih, VCC=VCCmax; f=5MHz**	**--**	**35**	**mA**

Nº	SYMBOL	TEST	CONDITIONS (Note 1) (T_{AMB}=22±3ºC)	LIMITS		UNIT
				MIN.	MAX.	
9	**Icr2**	**Vcc Page Read Current**	**CE#=Vil, OE#=Vih, VCC=VCCmax; f=10MHz**	**--**	**15**	**mA**
10	**Icw**	**V_{CC} Write Current**	**CE#=Vil, OE#=Vih, WE#=Vil**	**--**	**55**	**mA**
AC						
11	**Tcs**	**Chip Enable Setup Time**	**--**	**0 (Note 4)(Note 5)**	**--**	**ns**
12	**Tch**	**Chip Enable Hold Time**	**--**	**0 (Note 4)(Note 5)**	**--**	**ns**
13	**Tds**	**Data Setup Time**	**--**	**30 (Note 4)(Note 5)**	**--**	**ns**
14	**Tdh**	**Data Hold Time**	**--**	**0 (Note 4)(Note 5)**	**--**	**ns**
15	**Twp**	**WE# Pulse Width**	**--**	**35 (Note 4)(Note 5)**	**--**	**ns**
16	**Twph**	**WE# Pulse Width High**	**--**	**30 (Note 4)(Note 5)**	**--**	**ns**
FUNCTIONAL BLOCK						
17	**Func_CHK**	**Pattern FCT Checkerboard.**	**Erase, write and read with pattern Checkerboard in block 0**	**(Note 6)**	**(Note 6)**	**--**
18	**Func_/CHK**	**Pattern FCT Inverted Checkerboard**	**Erase, write and read with pattern Checkerboard Inverted in block 0**	**(Note 6)**	**(Note 6)**	**--**
19	**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)**	**--**
20	**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}= VI/O =3.3V unless otherwise noted in Table I.
2. Performed in A25-A0.
3. Performed in Q15-Q0.
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 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-1425	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.

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: 297.1, 297.7 & 297.2 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	**lilk LowPin a25**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
2	**lilk LowPin a24**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
3	**lilk LowPin a23**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
4	**lilk LowPin a22**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
5	**lilk LowPin a21**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
6	**lilk LowPin a20**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
7	**lilk LowPin a19**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
8	**lilk LowPin a18**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔

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

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

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

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

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

79	**Iolk HighPin d5**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
80	**Iolk HighPin d4**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
81	**Iolk HighPin d3**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
82	**Iolk HighPin d2**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
83	**Iolk HighPin d1**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
84	**Iolk HighPin d0**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
85	**Vol_MAX**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		✔
		HDC	✔	✔	✔			NOTE 1	NOTE 1		✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
86	**Voh_MIN**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
87	**Vil max fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		✔
		HDC	✔	✔	✔			NOTE 1	NOTE 1		✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
88	**Vih min fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		✔
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
89	**Icr1**	**LDC**	✔	✔	✔	✔		NOTE 1	NOTE 1		✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
90	**Icr2**	**LDC**	✔	✔	✔	✔		NOTE 1	NOTE 1		✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
91	**Icw**	**LDC**	✔	✔	✔	✔	✔	NOTE 1	NOTE 1	✔	✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
92	**Tcs fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔

93	**Tch fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
94	**Tds fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
95	**Tdh fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
96	**Twp fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
97	**Twph fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
98	**Checkerboard fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
99	**Checkerboard not fails**	**LDC**	✔	✔	✔			NOTE 1	NOTE 1		
		HDC	✔	✔	✔			NOTE 1	NOTE 1		
		OFF	✔	✔	✔	✔	✔	✔	✔	✔	✔
100	**Retention fails**	**LDC**	✔	✔	✔	✔		NOTE 1	NOTE 1		✔
		HDC	✔	✔	✔	✔		NOTE 1	NOTE 1		✔
		OFF	✔								
101	**Read Pattern fails**	**LDC**	✔	✔	✔	✔		NOTE 1	NOTE 1		✔
		HDC	✔	✔	✔	✔		NOTE 1	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 70krad by customer request.

7 CONCLUSIONS

TID verification test was carried out by ALTER TECHNOLOGY on **MX68GL1G0GHXFI-10G**, **1Gb x8/x16 Single Voltage 3V Only Flash Memory** in **BGA** package, in accordance with TEST PLAN **ATN-RP-210 Draft F** (see ANNEX I: TEST PLAN) with a dose rate of **297.1 rad(Si)/h, 297.7 rad(Si)/h and 297.2 rad(Si)/h respectively** and a total cumulative dose of **64.7 krad(Si), 65.2 krad(Si) and 153.8 krad(Si) respectively**. Test was performed on **30 samples** (10 ON biased + 10 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 Iilk Low & Hight, Iolk Low & High, Vol_Max, Voh_Min, Vol_max (fails), Voh_min (fails), Vil_max (fails), Vih_min (fails), Icr1, Icr2, Icw, AC Characteristics and Functional Tests.

- ✓ The most affected parameters were:

  - **Iilk Low**: The sample R3 (HDC samples) start to have a decreasing trend beyond 70krad and doesn't tend to recover its initial values after annealing processes except in pins a15, a13, a9, and a7 to a0.

  - **Iilk High**: The samples R3 and R10 (HDC samples) start to be out of the limits between 50 and 70krad in the first case and between 70krad and the annealing processes in the second case. In both cases the sample do not recover their values within limits after annealing 168h process except in pin a9 where this parameter remains within limits during the whole irradiation test.

  - **Iolk Low**: The sample R3 (HDC samples) start to be out of the limits between 50 and 70krad and does not show any tendency to recover its initial value during annealing processes, while the sample R10 (HDC samples) start to be out of the limits between 70krad and the annealing 24h, showing a tendency to recover their initial value after annealing 168h step.

  - **Iolk High**: The sample R3 (HDC samples) start to be out of the limits between 50 and 70krad while the sample R10 (HDC samples) start to be out of the limits between 70krad and the annealing 24h step. In both cases the samples do not show any tendency to recover their initial values after annealing 168h process.

  - **Vol_Max**: Some LDC and HDC samples start to be out of the limits between 30 and 50 krad while most of these samples are out of the limits beyond 70 krad and annealing 24h, showing a tendency to recover their initial parameters after annealing 168h process.

  - **Voh_Min**: Most LDC and HDC samples start to be out of the limits between 30 and 50krad. In the case of the LDC samples do not show any tendency to recover their initial parameters after annealing processes in most of the cases. HDC samples tend to recover their initial values after annealing 168h process in most of the parts.

- **Vil max (fails)& Vih min (fails):** LDC and HDC samples start to be out of the limits between 30 and 50krad(Si). In the case of LDC samples don't recover after the annealing processes. In the case of HDC samples, all samples tend to recover after annealing 168h step.

- **Icr1 & Icr2**: Some LDC and HDC samples are out of limits between 50 and 70krad. In the case of LDC samples, the parts are within limits after the annealing processes in all cases. In the HDC samples, the parts with S/N R3 and R10 don't recover their values within limits after the annealing 168h step.

- **Icw**: LDC samples show an increasing trend between 30 and 50krad(Si) and tend to recover their initial values after annealing processes. On the other hand, samples R3 and R10 (HDC samples) start to be out of limits between 50 and 70krad(SI) in the first case and between 70krad(Si) and annealing 24h step in the second case.

- **AC Characteristics**: LDC and HDC samples start to be out of limits between 30 and 70krad(Si). In most cases the HDC samples tend to recover their initial values after the annealing processes. The LDC samples don't. OFF samples do not show a variation during the whole irradiation process.

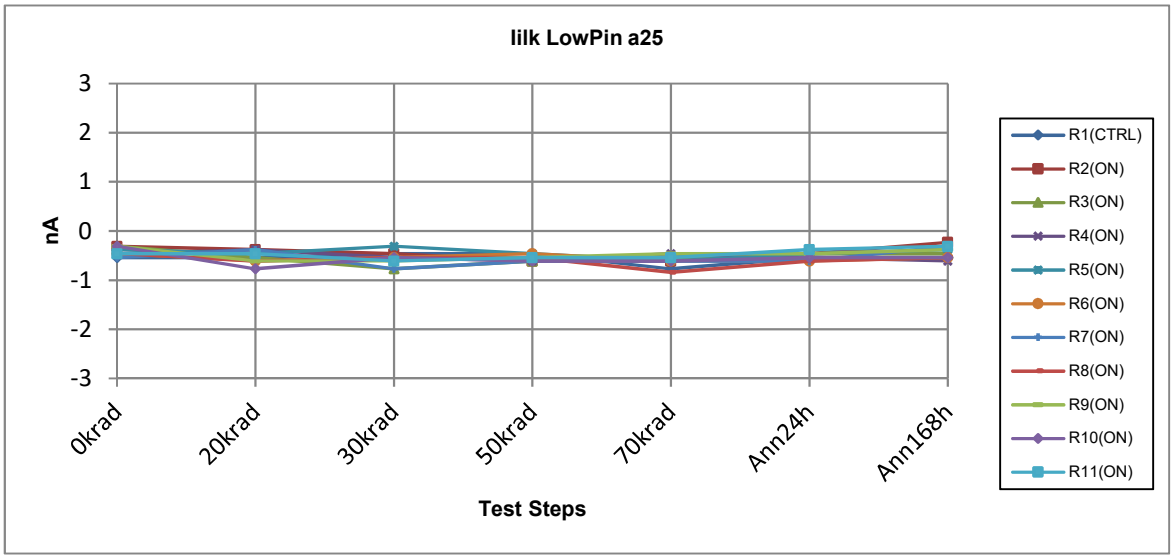
- **Functional tests:** LDC and HDC samples start to show functiontal failure between 30 and 50krad(Si) for Checkboard fails and Inverted Checkboard fails parameters, and between 50 and 70krad(Si) for Retention fails and Read patterns parameters; OFF samples start to show functional failure between 0 and 20krad(Si) for sample R10 and between 70 and 100krad(Si) for sample R8 in the case of Retention fails parameter. LDC samples tend to recover after annealing processes only in Retention fails and Read pattern parameters. HDC samples don't tend to recover after annealing processes except in the case of Retention fails paramenter. The OFF sample with S/N R8 shows a normal behaviour after 100krad(Si) step.

✓ **Note1**: The sample R3 (HDC samples) show a different behaviour compared to other parts beyond 70 krad, affecting the effects of radiation more than the rest of the parts.

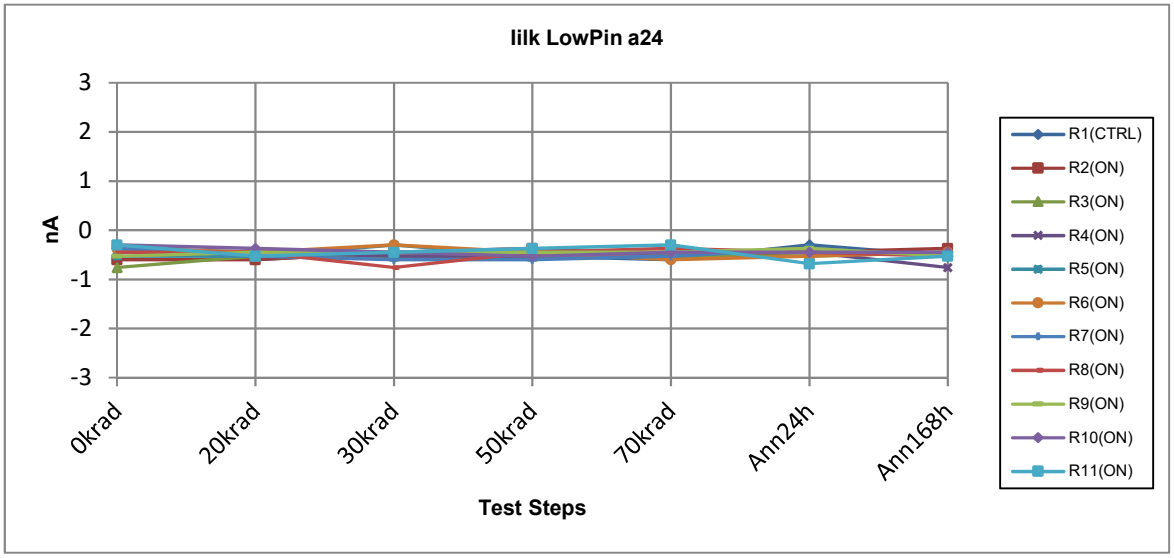
✓ **Note2**: Measurement of the Read Pattern fails parameter on part R2 (LDC samples) could not be performed due to hardware problem in the bias board.

8 TID RESULTS WITH GRAPHS AND TABLES.

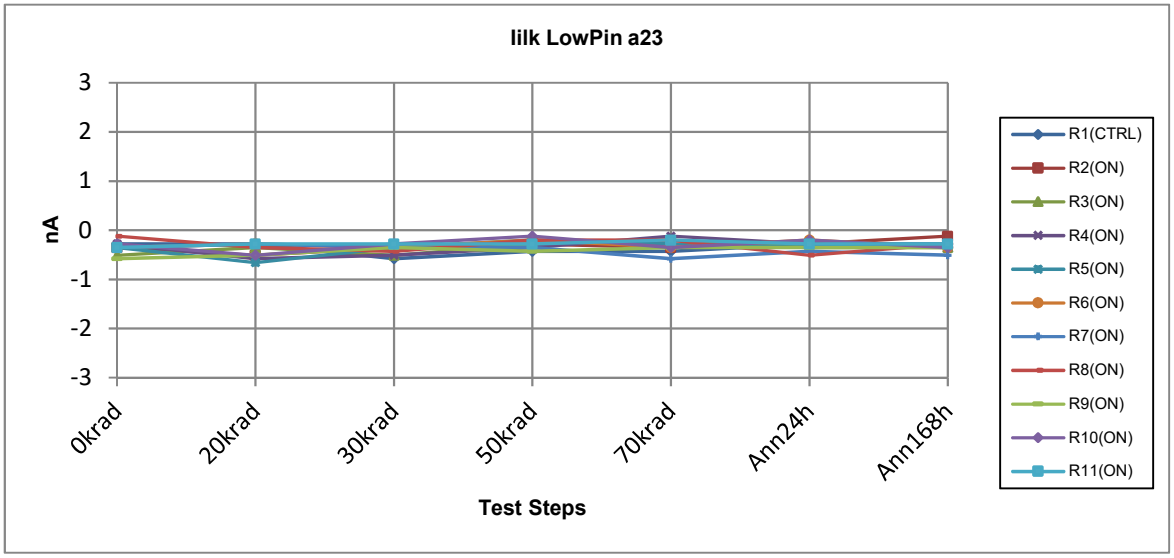
R1 + LDC (Low Duty Cycle) samples (SN 2 to 11)



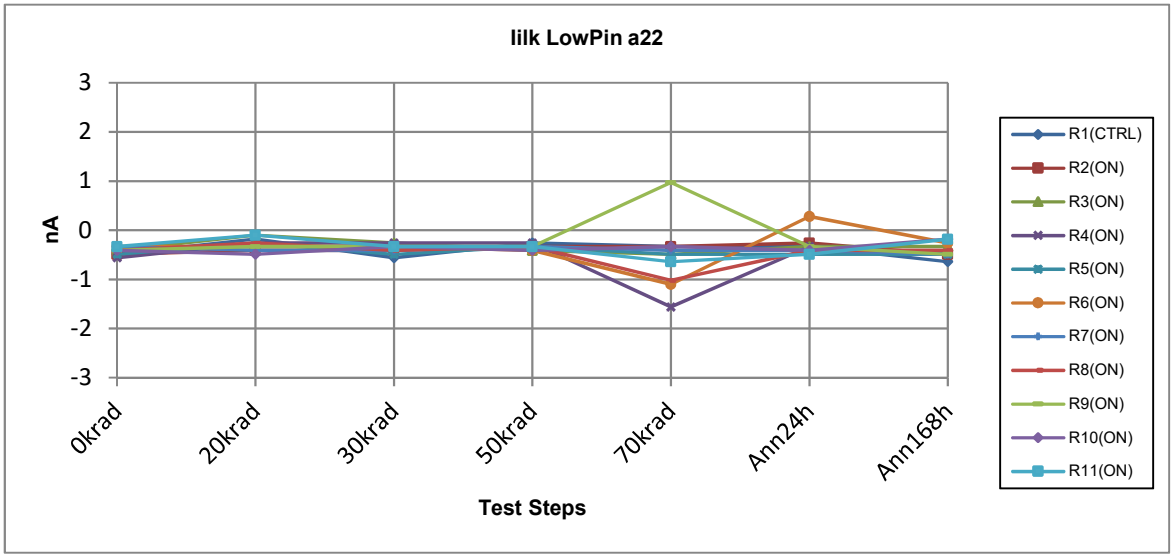
Iilk LowPin a25	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.54	-0.54	-0.46	-0.46	-0.77	-0.54	-0.54
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.31	-0.38	-0.46	-0.61	-0.61	-0.46	-0.23
R3(ON BIAS LDC)	-0.31	-0.54	-0.77	-0.61	-0.54	-0.46	-0.46
R4(ON BIAS LDC)	-0.46	-0.38	-0.54	-0.61	-0.46	-0.54	-0.61
R5(ON BIAS LDC)	-0.38	-0.46	-0.31	-0.46	-0.61	-0.46	-0.38
R6(ON BIAS LDC)	-0.46	-0.61	-0.54	-0.46	-0.61	-0.61	-0.54
R7(ON BIAS LDC)	-0.54	-0.38	-0.77	-0.61	-0.61	-0.61	-0.31
R8(ON BIAS LDC)	-0.46	-0.61	-0.54	-0.54	-0.84	-0.61	-0.54
R9(ON BIAS LDC)	-0.31	-0.61	-0.61	-0.54	-0.46	-0.46	-0.38
R10(ON BIAS LDC)	-0.31	-0.77	-0.54	-0.61	-0.61	-0.54	-0.54
R11(ON BIAS LDC)	-0.46	-0.46	-0.61	-0.54	-0.54	-0.38	-0.31
Irradiated, LDC biased parts statistics							
Min Value	-0.54	-0.77	-0.77	-0.61	-0.84	-0.61	-0.61
Max Value	-0.31	-0.38	-0.31	-0.46	-0.46	-0.38	-0.23
Average	-0.40	-0.52	-0.57	-0.56	-0.59	-0.51	-0.43
Sigma	0.09	0.13	0.14	0.06	0.11	0.08	0.13



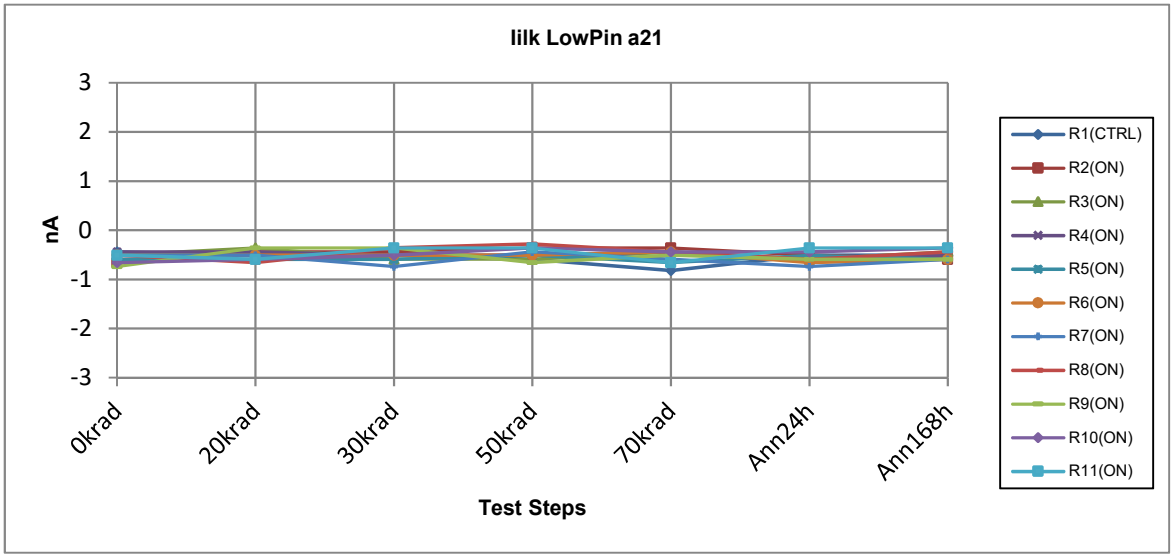
Iilk LowPin a24	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.37	-0.60	-0.45	-0.53	-0.60	-0.30	-0.53
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.60	-0.60	-0.45	-0.37	-0.53	-0.45	-0.37
R3(ON BIAS LDC)	-0.76	-0.53	-0.53	-0.53	-0.53	-0.53	-0.45
R4(ON BIAS LDC)	-0.37	-0.45	-0.53	-0.53	-0.45	-0.45	-0.76
R5(ON BIAS LDC)	-0.53	-0.53	-0.30	-0.53	-0.53	-0.37	-0.53
R6(ON BIAS LDC)	-0.37	-0.45	-0.30	-0.45	-0.60	-0.53	-0.45
R7(ON BIAS LDC)	-0.37	-0.53	-0.60	-0.60	-0.53	-0.37	-0.53
R8(ON BIAS LDC)	-0.45	-0.45	-0.76	-0.45	-0.37	-0.45	-0.53
R9(ON BIAS LDC)	-0.53	-0.45	-0.45	-0.45	-0.45	-0.37	-0.53
R10(ON BIAS LDC)	-0.30	-0.37	-0.45	-0.53	-0.45	-0.45	-0.45
R11(ON BIAS LDC)	-0.30	-0.53	-0.45	-0.37	-0.30	-0.68	-0.53
Irradiated, LDC biased parts statistics							
Min Value	-0.76	-0.60	-0.76	-0.60	-0.60	-0.68	-0.76
Max Value	-0.30	-0.37	-0.30	-0.37	-0.30	-0.37	-0.37
Average	-0.46	-0.49	-0.48	-0.48	-0.47	-0.47	-0.51
Sigma	0.15	0.07	0.14	0.08	0.09	0.10	0.10



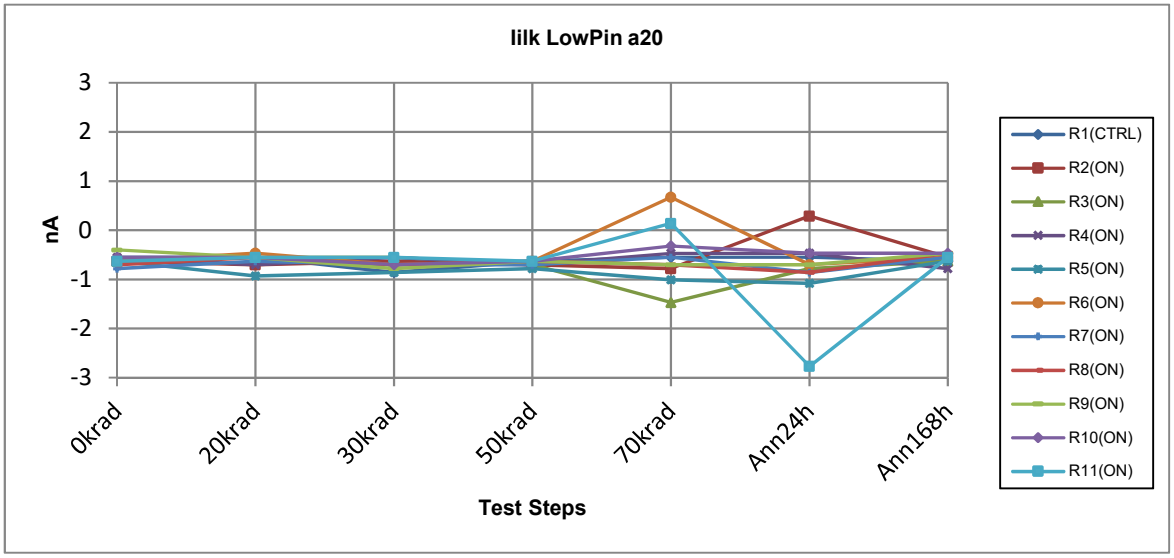
Iilk LowPin a23	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.28	-0.28	-0.58	-0.43	-0.43	-0.28	-0.28
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.35	-0.51	-0.35	-0.28	-0.35	-0.28	-0.12
R3(ON BIAS LDC)	-0.51	-0.35	-0.51	-0.28	-0.20	-0.35	-0.35
R4(ON BIAS LDC)	-0.28	-0.58	-0.51	-0.35	-0.12	-0.28	-0.35
R5(ON BIAS LDC)	-0.35	-0.66	-0.35	-0.20	-0.28	-0.35	-0.28
R6(ON BIAS LDC)	-0.35	-0.28	-0.35	-0.20	-0.35	-0.20	-0.35
R7(ON BIAS LDC)	-0.35	-0.28	-0.35	-0.35	-0.58	-0.43	-0.51
R8(ON BIAS LDC)	-0.12	-0.35	-0.43	-0.20	-0.20	-0.51	-0.28
R9(ON BIAS LDC)	-0.58	-0.51	-0.35	-0.43	-0.35	-0.35	-0.35
R10(ON BIAS LDC)	-0.28	-0.51	-0.28	-0.12	-0.35	-0.20	-0.35
R11(ON BIAS LDC)	-0.35	-0.28	-0.28	-0.28	-0.20	-0.28	-0.28
Irradiated, LDC biased parts statistics							
Min Value	-0.58	-0.66	-0.51	-0.43	-0.58	-0.51	-0.51
Max Value	-0.12	-0.28	-0.28	-0.12	-0.12	-0.20	-0.12
Average	-0.35	-0.43	-0.38	-0.27	-0.30	-0.32	-0.32
Sigma	0.13	0.14	0.08	0.09	0.13	0.10	0.10



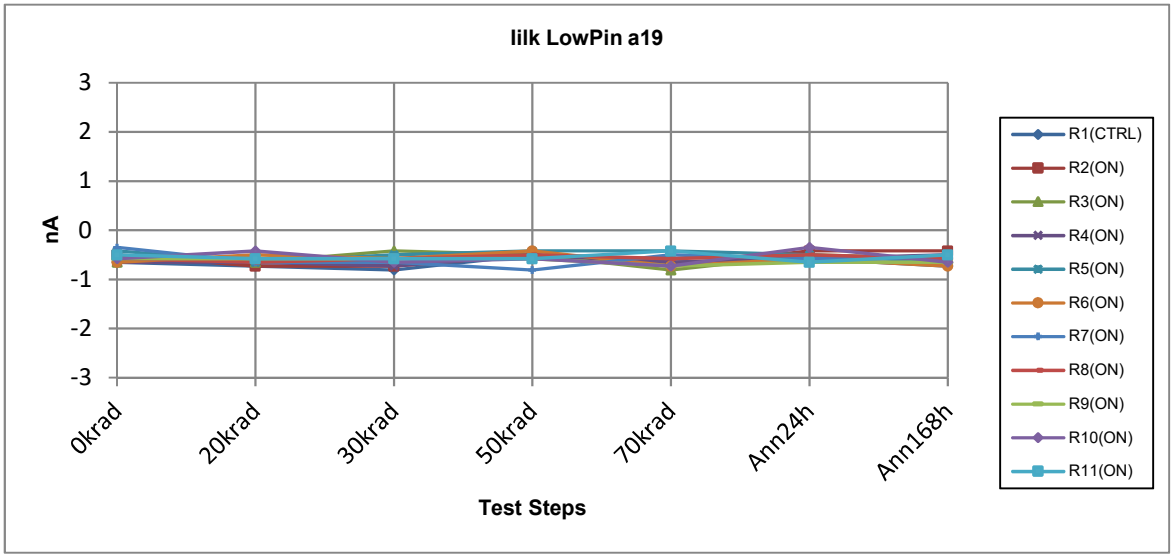
Iilk LowPin a22	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.49	-0.18	-0.56	-0.26	-0.33	-0.33	-0.64
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.49	-0.41	-0.41	-0.33	-0.33	-0.26	-0.49
R3(ON BIAS LDC)	-0.41	-0.10	-0.26	-0.41	-0.49	-0.33	-0.33
R4(ON BIAS LDC)	-0.56	-0.26	-0.26	-0.26	-1.56	-0.33	-0.49
R5(ON BIAS LDC)	-0.49	-0.26	-0.49	-0.33	-0.49	-0.49	-0.49
R6(ON BIAS LDC)	-0.33	-0.33	-0.33	-0.41	-1.10	0.28	-0.26
R7(ON BIAS LDC)	-0.33	-0.41	-0.41	-0.33	-0.41	-0.41	-0.49
R8(ON BIAS LDC)	-0.41	-0.26	-0.41	-0.33	-1.02	-0.41	-0.41
R9(ON BIAS LDC)	-0.41	-0.33	-0.33	-0.33	0.97	-0.33	-0.49
R10(ON BIAS LDC)	-0.41	-0.49	-0.33	-0.41	-0.33	-0.41	-0.18
R11(ON BIAS LDC)	-0.33	-0.10	-0.33	-0.33	-0.64	-0.49	-0.18
Irradiated, LDC biased parts statistics							
Min Value	-0.56	-0.49	-0.49	-0.41	-1.56	-0.49	-0.49
Max Value	-0.33	-0.10	-0.26	-0.26	0.97	0.28	-0.18
Average	-0.42	-0.30	-0.36	-0.35	-0.54	-0.32	-0.38
Sigma	0.08	0.13	0.07	0.05	0.67	0.22	0.13



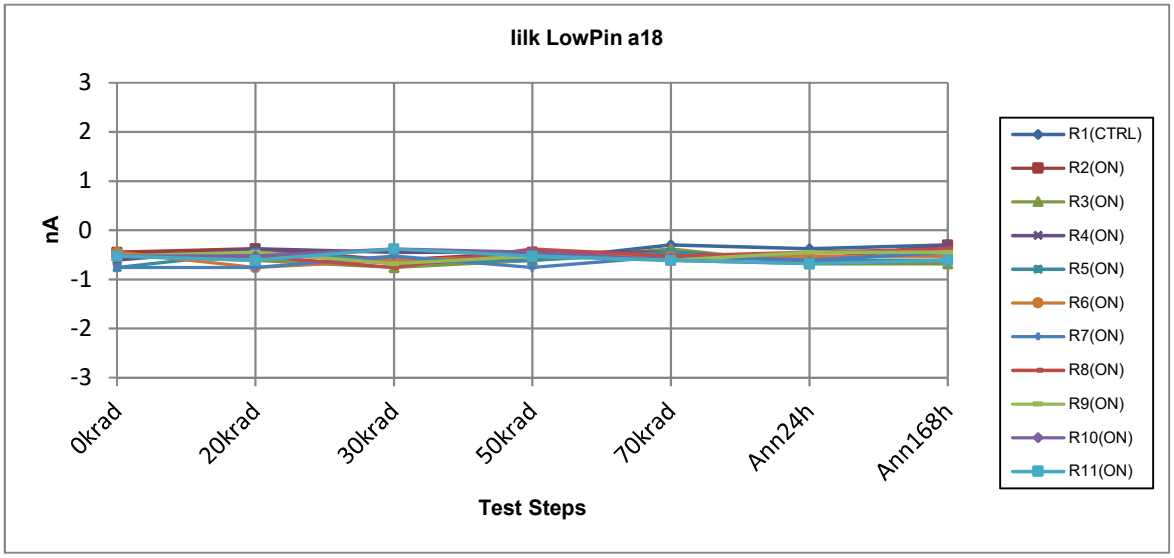
Iilk LowPin a21	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.44	-0.51	-0.51	-0.59	-0.82	-0.51	-0.51
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.66	-0.44	-0.44	-0.36	-0.36	-0.51	-0.59
R3(ON BIAS LDC)	-0.51	-0.36	-0.59	-0.59	-0.44	-0.59	-0.44
R4(ON BIAS LDC)	-0.44	-0.44	-0.51	-0.51	-0.44	-0.59	-0.51
R5(ON BIAS LDC)	-0.59	-0.59	-0.59	-0.51	-0.66	-0.51	-0.59
R6(ON BIAS LDC)	-0.51	-0.51	-0.51	-0.51	-0.44	-0.66	-0.59
R7(ON BIAS LDC)	-0.51	-0.51	-0.74	-0.44	-0.59	-0.74	-0.59
R8(ON BIAS LDC)	-0.51	-0.66	-0.36	-0.28	-0.44	-0.59	-0.44
R9(ON BIAS LDC)	-0.74	-0.36	-0.36	-0.66	-0.51	-0.59	-0.59
R10(ON BIAS LDC)	-0.66	-0.59	-0.51	-0.36	-0.44	-0.44	-0.36
R11(ON BIAS LDC)	-0.51	-0.59	-0.36	-0.36	-0.66	-0.36	-0.36
Irradiated, LDC biased parts statistics							
Min Value	-0.74	-0.66	-0.74	-0.66	-0.66	-0.74	-0.59
Max Value	-0.44	-0.36	-0.36	-0.28	-0.36	-0.36	-0.36
Average	-0.56	-0.51	-0.50	-0.46	-0.50	-0.56	-0.51
Sigma	0.09	0.10	0.12	0.12	0.10	0.11	0.10



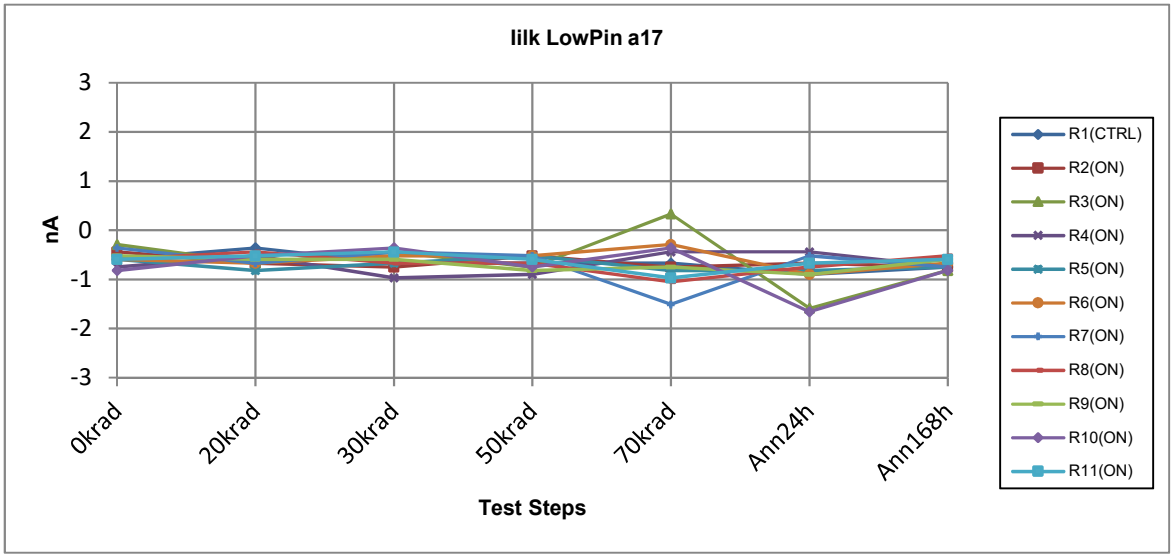
Iilk LowPin a20	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.55	-0.55	-0.86	-0.63	-0.55	-0.55	-0.63
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.63	-0.70	-0.63	-0.70	-0.78	0.29	-0.55
R3(ON BIAS LDC)	-0.63	-0.55	-0.55	-0.70	-1.47	-0.78	-0.63
R4(ON BIAS LDC)	-0.55	-0.70	-0.55	-0.70	-0.47	-0.47	-0.78
R5(ON BIAS LDC)	-0.63	-0.93	-0.86	-0.78	-1.01	-1.08	-0.63
R6(ON BIAS LDC)	-0.63	-0.47	-0.70	-0.63	0.67	-0.70	-0.55
R7(ON BIAS LDC)	-0.78	-0.63	-0.70	-0.70	-0.55	-0.86	-0.55
R8(ON BIAS LDC)	-0.70	-0.55	-0.70	-0.63	-0.70	-0.86	-0.47
R9(ON BIAS LDC)	-0.40	-0.55	-0.78	-0.63	-0.70	-0.70	-0.47
R10(ON BIAS LDC)	-0.55	-0.55	-0.70	-0.63	-0.32	-0.47	-0.47
R11(ON BIAS LDC)	-0.63	-0.55	-0.55	-0.63	0.14	-2.77	-0.55
Irradiated, LDC biased parts statistics							
Min Value	-0.78	-0.93	-0.86	-0.78	-1.47	-2.77	-0.78
Max Value	-0.40	-0.47	-0.55	-0.63	0.67	0.29	-0.47
Average	-0.61	-0.62	-0.67	-0.67	-0.52	-0.84	-0.57
Sigma	0.10	0.13	0.10	0.05	0.59	0.77	0.10



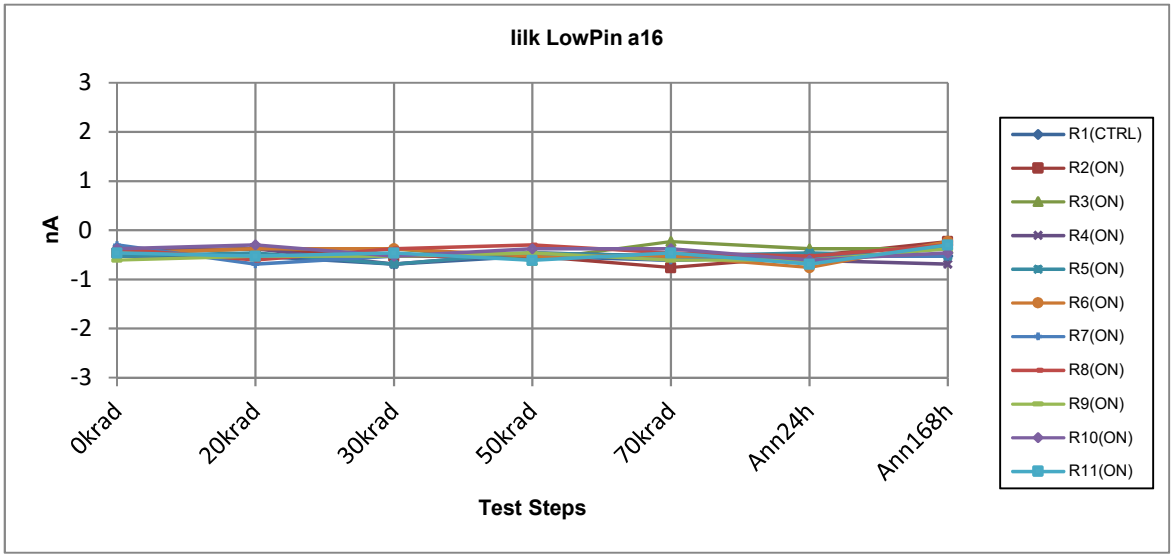
Iilk LowPin a19	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.65	-0.73	-0.81	-0.50	-0.65	-0.58	-0.73
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.50	-0.73	-0.73	-0.50	-0.73	-0.42	-0.42
R3(ON BIAS LDC)	-0.65	-0.65	-0.42	-0.50	-0.81	-0.50	-0.58
R4(ON BIAS LDC)	-0.65	-0.65	-0.73	-0.50	-0.65	-0.58	-0.50
R5(ON BIAS LDC)	-0.42	-0.65	-0.50	-0.42	-0.42	-0.50	-0.65
R6(ON BIAS LDC)	-0.65	-0.50	-0.58	-0.42	-0.73	-0.58	-0.73
R7(ON BIAS LDC)	-0.35	-0.65	-0.65	-0.81	-0.50	-0.58	-0.58
R8(ON BIAS LDC)	-0.58	-0.65	-0.58	-0.50	-0.58	-0.50	-0.58
R9(ON BIAS LDC)	-0.58	-0.58	-0.58	-0.58	-0.73	-0.65	-0.65
R10(ON BIAS LDC)	-0.58	-0.42	-0.65	-0.58	-0.73	-0.35	-0.65
R11(ON BIAS LDC)	-0.50	-0.58	-0.58	-0.58	-0.42	-0.65	-0.50
Irradiated, LDC biased parts statistics							
Min Value	-0.65	-0.73	-0.73	-0.81	-0.81	-0.65	-0.73
Max Value	-0.35	-0.42	-0.42	-0.42	-0.42	-0.35	-0.42
Average	-0.55	-0.61	-0.60	-0.54	-0.63	-0.53	-0.58
Sigma	0.10	0.09	0.10	0.11	0.14	0.10	0.09



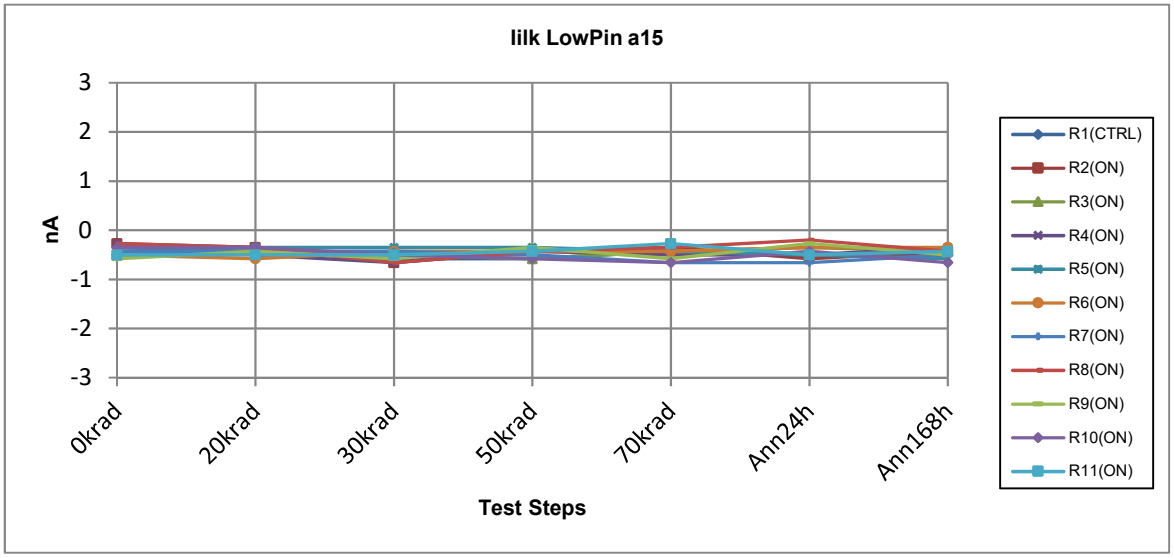
Iilk LowPin a18	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.45	-0.45	-0.68	-0.61	-0.30	-0.38	-0.30
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.45	-0.38	-0.61	-0.45	-0.53	-0.61	-0.30
R3(ON BIAS LDC)	-0.53	-0.61	-0.76	-0.61	-0.38	-0.68	-0.68
R4(ON BIAS LDC)	-0.61	-0.38	-0.45	-0.45	-0.45	-0.61	-0.30
R5(ON BIAS LDC)	-0.76	-0.45	-0.61	-0.61	-0.45	-0.61	-0.61
R6(ON BIAS LDC)	-0.45	-0.76	-0.61	-0.53	-0.53	-0.53	-0.53
R7(ON BIAS LDC)	-0.76	-0.76	-0.53	-0.76	-0.53	-0.61	-0.45
R8(ON BIAS LDC)	-0.53	-0.53	-0.76	-0.38	-0.53	-0.45	-0.38
R9(ON BIAS LDC)	-0.53	-0.45	-0.68	-0.53	-0.61	-0.45	-0.45
R10(ON BIAS LDC)	-0.53	-0.53	-0.38	-0.45	-0.61	-0.68	-0.61
R11(ON BIAS LDC)	-0.53	-0.61	-0.38	-0.53	-0.61	-0.68	-0.61
Irradiated, LDC biased parts statistics							
Min Value	-0.76	-0.76	-0.76	-0.76	-0.61	-0.68	-0.68
Max Value	-0.45	-0.38	-0.38	-0.38	-0.38	-0.45	-0.30
Average	-0.57	-0.55	-0.58	-0.53	-0.52	-0.59	-0.49
Sigma	0.11	0.14	0.14	0.11	0.08	0.09	0.14



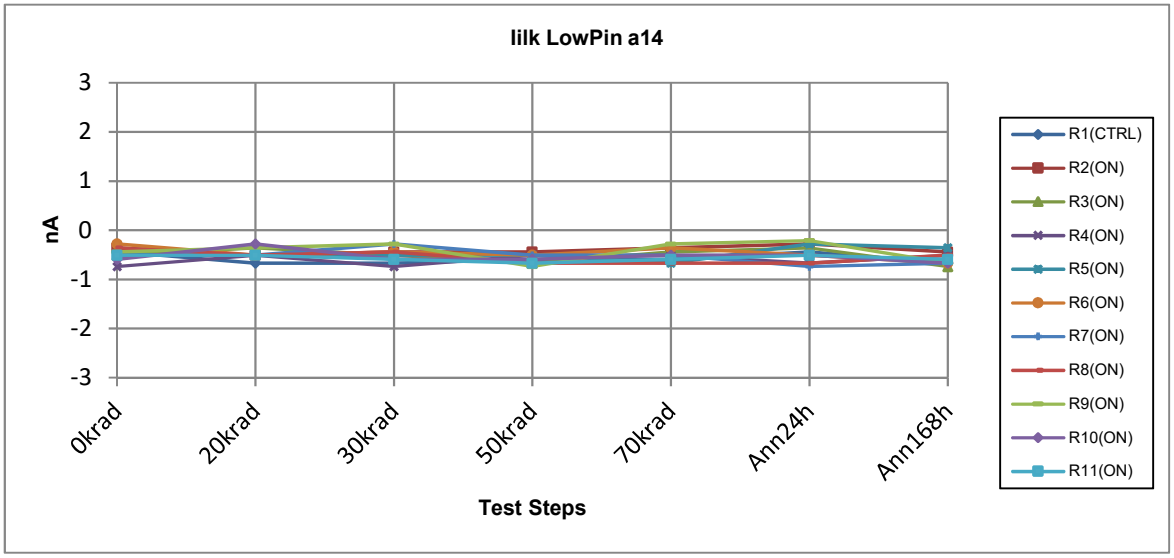
Iilk LowPin a17	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.59	-0.36	-0.67	-0.67	-0.67	-0.90	-0.75
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.44	-0.67	-0.75	-0.52	-0.75	-0.67	-0.75
R3(ON BIAS LDC)	-0.29	-0.67	-0.44	-0.75	0.33	-1.59	-0.82
R4(ON BIAS LDC)	-0.75	-0.52	-0.97	-0.90	-0.44	-0.44	-0.75
R5(ON BIAS LDC)	-0.59	-0.82	-0.67	-0.52	-0.82	-0.82	-0.75
R6(ON BIAS LDC)	-0.59	-0.67	-0.52	-0.52	-0.29	-0.90	-0.67
R7(ON BIAS LDC)	-0.36	-0.67	-0.44	-0.52	-1.51	-0.52	-0.75
R8(ON BIAS LDC)	-0.59	-0.44	-0.67	-0.67	-1.05	-0.75	-0.52
R9(ON BIAS LDC)	-0.52	-0.59	-0.59	-0.82	-0.75	-0.90	-0.59
R10(ON BIAS LDC)	-0.82	-0.52	-0.36	-0.75	-0.36	-1.66	-0.82
R11(ON BIAS LDC)	-0.59	-0.52	-0.44	-0.59	-0.97	-0.67	-0.59
Irradiated, LDC biased parts statistics							
Min Value	-0.82	-0.82	-0.97	-0.90	-1.51	-1.66	-0.82
Max Value	-0.29	-0.44	-0.36	-0.52	0.33	-0.44	-0.52
Average	-0.55	-0.61	-0.59	-0.66	-0.66	-0.89	-0.70
Sigma	0.16	0.11	0.18	0.14	0.50	0.41	0.10



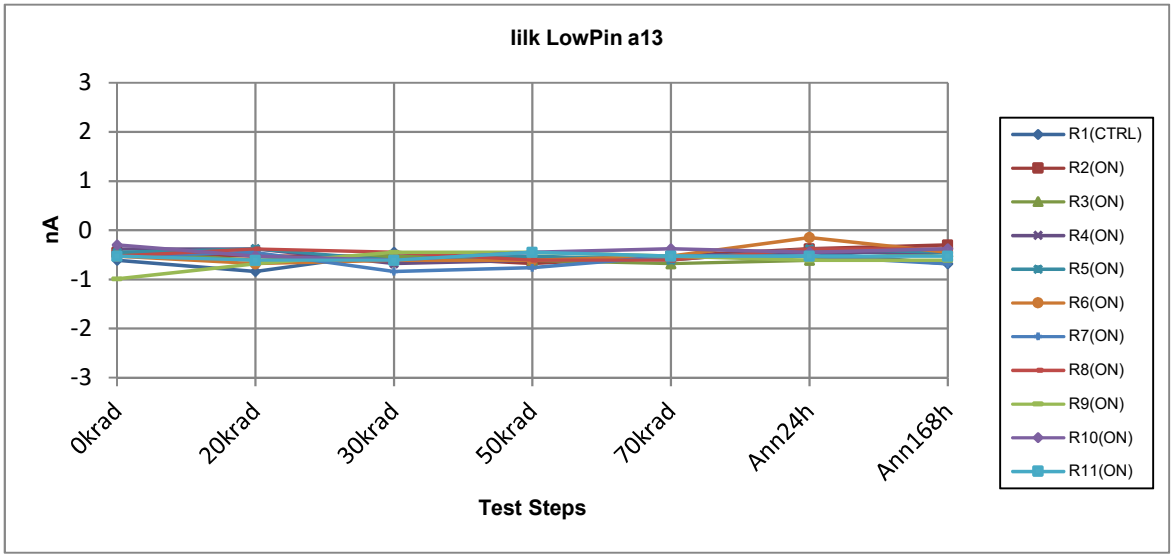
Iilk LowPin a16	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.53	-0.53	-0.69	-0.53	-0.61	-0.53	-0.53
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.46	-0.38	-0.53	-0.53	-0.76	-0.53	-0.23
R3(ON BIAS LDC)	-0.46	-0.38	-0.38	-0.61	-0.23	-0.38	-0.38
R4(ON BIAS LDC)	-0.38	-0.38	-0.69	-0.46	-0.53	-0.61	-0.69
R5(ON BIAS LDC)	-0.53	-0.46	-0.69	-0.46	-0.53	-0.46	-0.53
R6(ON BIAS LDC)	-0.46	-0.38	-0.38	-0.53	-0.53	-0.76	-0.23
R7(ON BIAS LDC)	-0.30	-0.69	-0.53	-0.46	-0.61	-0.53	-0.53
R8(ON BIAS LDC)	-0.38	-0.61	-0.38	-0.30	-0.46	-0.53	-0.30
R9(ON BIAS LDC)	-0.61	-0.53	-0.53	-0.46	-0.61	-0.61	-0.38
R10(ON BIAS LDC)	-0.38	-0.30	-0.53	-0.38	-0.38	-0.61	-0.46
R11(ON BIAS LDC)	-0.46	-0.53	-0.46	-0.61	-0.46	-0.69	-0.30
Irradiated, LDC biased parts statistics							
Min Value	-0.61	-0.69	-0.69	-0.61	-0.76	-0.76	-0.69
Max Value	-0.30	-0.30	-0.38	-0.30	-0.23	-0.38	-0.23
Average	-0.44	-0.46	-0.51	-0.48	-0.51	-0.57	-0.40
Sigma	0.09	0.12	0.12	0.10	0.14	0.11	0.15



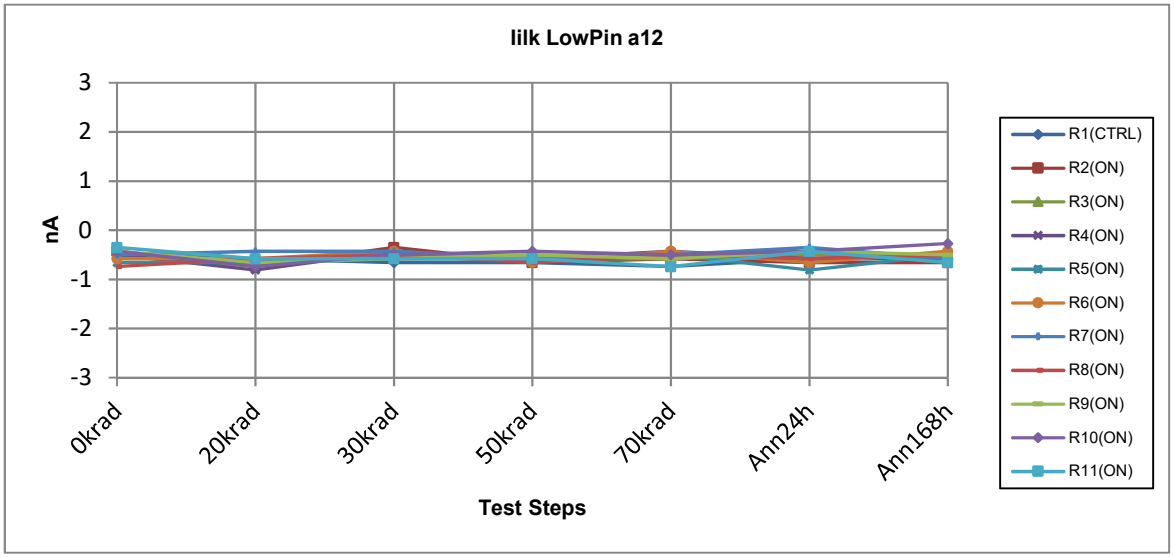
Iilk LowPin a15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.50	-0.43	-0.58	-0.58	-0.43	-0.50	-0.50
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.27	-0.35	-0.66	-0.43	-0.35	-0.58	-0.43
R3(ON BIAS LDC)	-0.43	-0.43	-0.50	-0.58	-0.43	-0.35	-0.43
R4(ON BIAS LDC)	-0.27	-0.50	-0.66	-0.43	-0.50	-0.50	-0.35
R5(ON BIAS LDC)	-0.43	-0.35	-0.35	-0.35	-0.43	-0.50	-0.58
R6(ON BIAS LDC)	-0.50	-0.58	-0.43	-0.43	-0.43	-0.35	-0.35
R7(ON BIAS LDC)	-0.43	-0.43	-0.43	-0.50	-0.66	-0.66	-0.50
R8(ON BIAS LDC)	-0.27	-0.35	-0.66	-0.43	-0.35	-0.20	-0.43
R9(ON BIAS LDC)	-0.58	-0.43	-0.58	-0.35	-0.58	-0.27	-0.50
R10(ON BIAS LDC)	-0.35	-0.35	-0.50	-0.58	-0.66	-0.43	-0.66
R11(ON BIAS LDC)	-0.50	-0.50	-0.50	-0.43	-0.27	-0.50	-0.43
Irradiated, LDC biased parts statistics							
Min Value	-0.58	-0.58	-0.66	-0.58	-0.66	-0.66	-0.66
Max Value	-0.27	-0.35	-0.35	-0.35	-0.27	-0.20	-0.35
Average	-0.40	-0.43	-0.53	-0.45	-0.47	-0.43	-0.47
Sigma	0.11	0.08	0.11	0.08	0.13	0.14	0.10



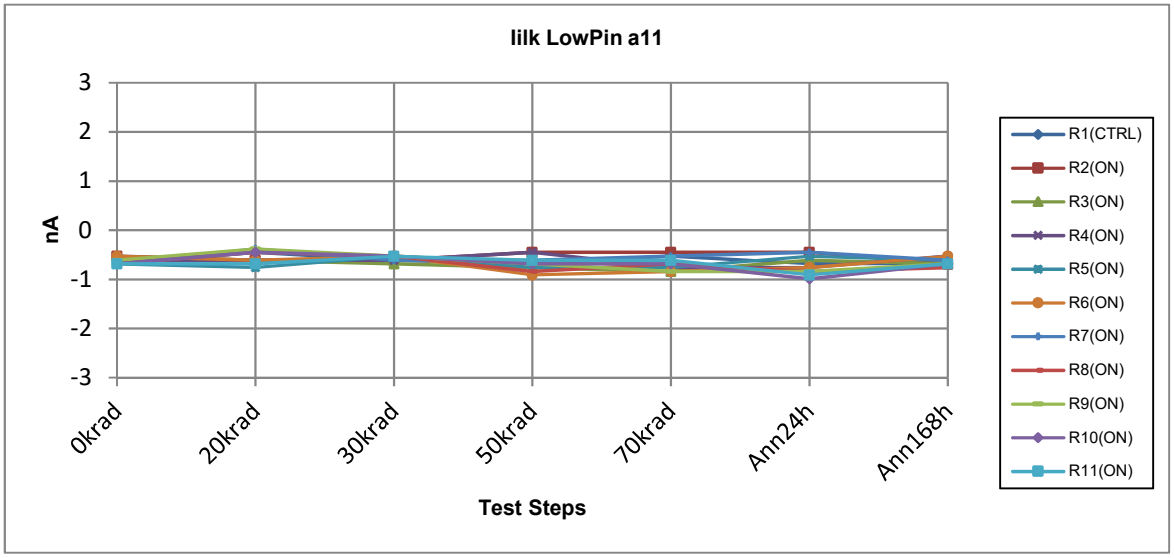
Iilk LowPin a14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.44	-0.67	-0.67	-0.59	-0.59	-0.44	-0.67
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.36	-0.51	-0.44	-0.44	-0.36	-0.28	-0.44
R3(ON BIAS LDC)	-0.51	-0.36	-0.51	-0.67	-0.44	-0.36	-0.74
R4(ON BIAS LDC)	-0.74	-0.51	-0.74	-0.51	-0.51	-0.67	-0.51
R5(ON BIAS LDC)	-0.51	-0.51	-0.51	-0.51	-0.67	-0.28	-0.36
R6(ON BIAS LDC)	-0.28	-0.51	-0.44	-0.51	-0.36	-0.51	-0.67
R7(ON BIAS LDC)	-0.51	-0.51	-0.28	-0.51	-0.51	-0.74	-0.67
R8(ON BIAS LDC)	-0.36	-0.51	-0.44	-0.67	-0.67	-0.67	-0.51
R9(ON BIAS LDC)	-0.44	-0.36	-0.28	-0.74	-0.28	-0.21	-0.67
R10(ON BIAS LDC)	-0.59	-0.28	-0.59	-0.59	-0.51	-0.51	-0.67
R11(ON BIAS LDC)	-0.51	-0.51	-0.59	-0.67	-0.59	-0.51	-0.59
Irradiated, LDC biased parts statistics							
Min Value	-0.74	-0.51	-0.74	-0.74	-0.67	-0.74	-0.74
Max Value	-0.28	-0.28	-0.28	-0.44	-0.28	-0.21	-0.36
Average	-0.48	-0.46	-0.48	-0.58	-0.49	-0.47	-0.58
Sigma	0.13	0.09	0.14	0.10	0.13	0.19	0.12



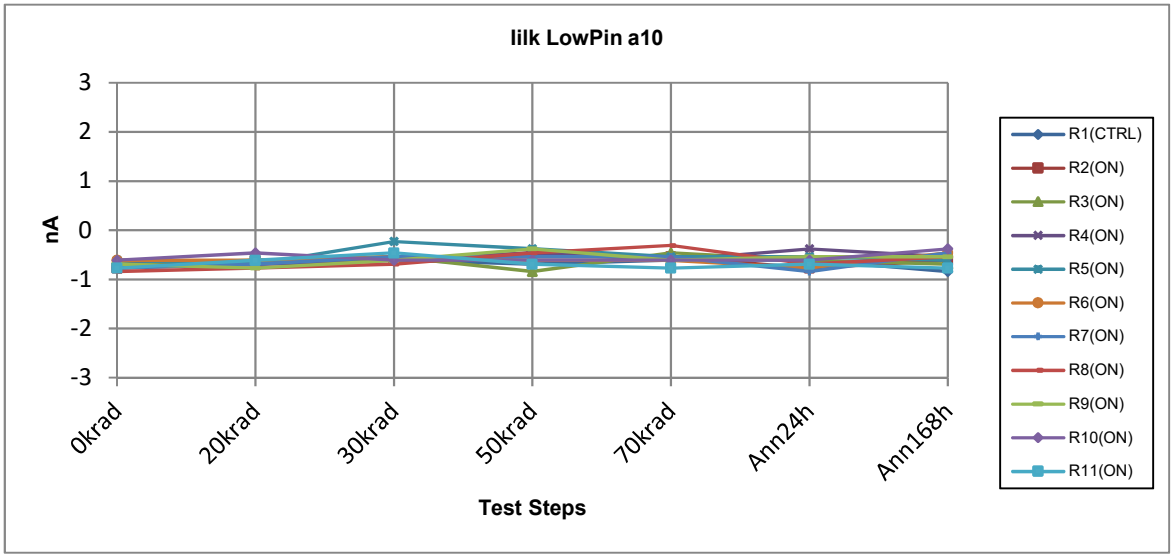
Iilk LowPin a13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.61	-0.84	-0.45	-0.61	-0.53	-0.45	-0.68
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.45	-0.53	-0.53	-0.68	-0.53	-0.38	-0.30
R3(ON BIAS LDC)	-0.45	-0.61	-0.53	-0.61	-0.68	-0.61	-0.45
R4(ON BIAS LDC)	-0.38	-0.38	-0.68	-0.61	-0.53	-0.45	-0.45
R5(ON BIAS LDC)	-0.45	-0.38	-0.61	-0.53	-0.61	-0.38	-0.45
R6(ON BIAS LDC)	-0.53	-0.68	-0.61	-0.61	-0.53	-0.15	-0.45
R7(ON BIAS LDC)	-0.53	-0.45	-0.84	-0.76	-0.53	-0.53	-0.68
R8(ON BIAS LDC)	-0.53	-0.38	-0.45	-0.61	-0.61	-0.38	-0.38
R9(ON BIAS LDC)	-0.99	-0.68	-0.45	-0.45	-0.53	-0.61	-0.61
R10(ON BIAS LDC)	-0.30	-0.53	-0.61	-0.45	-0.38	-0.45	-0.38
R11(ON BIAS LDC)	-0.53	-0.61	-0.61	-0.45	-0.53	-0.53	-0.53
Irradiated, LDC biased parts statistics							
Min Value	-0.99	-0.68	-0.84	-0.76	-0.68	-0.61	-0.68
Max Value	-0.30	-0.38	-0.45	-0.45	-0.38	-0.15	-0.30
Average	-0.51	-0.52	-0.59	-0.58	-0.55	-0.45	-0.47
Sigma	0.18	0.12	0.11	0.10	0.08	0.14	0.11



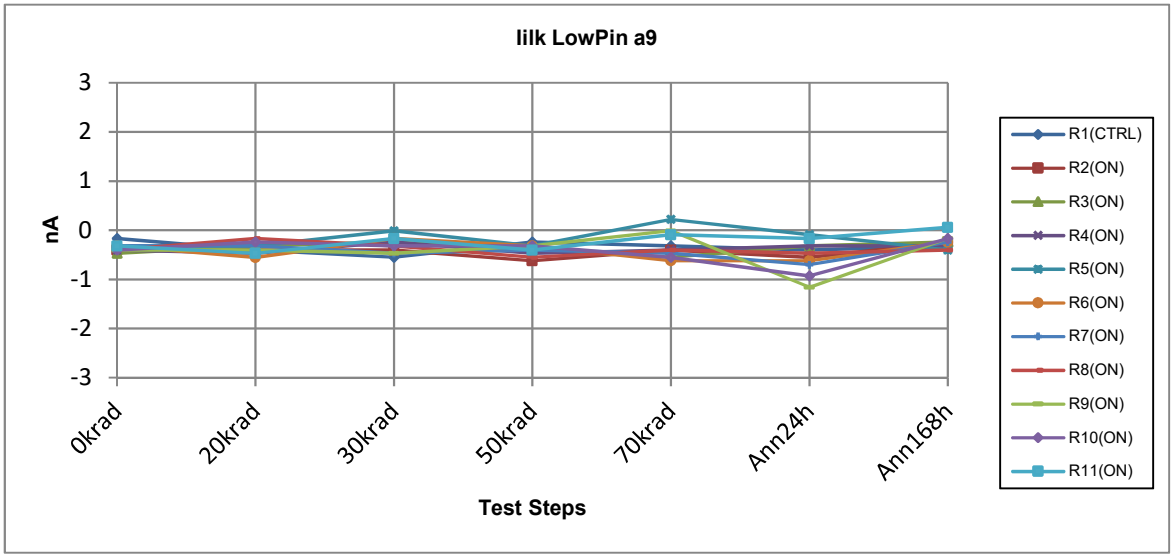
Iilk LowPin a12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.50	-0.58	-0.66	-0.66	-0.74	-0.58	-0.58
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.43	-0.74	-0.35	-0.66	-0.58	-0.66	-0.66
R3(ON BIAS LDC)	-0.50	-0.74	-0.43	-0.58	-0.58	-0.50	-0.50
R4(ON BIAS LDC)	-0.50	-0.81	-0.43	-0.58	-0.43	-0.58	-0.50
R5(ON BIAS LDC)	-0.66	-0.66	-0.58	-0.58	-0.50	-0.81	-0.50
R6(ON BIAS LDC)	-0.58	-0.58	-0.43	-0.66	-0.43	-0.66	-0.43
R7(ON BIAS LDC)	-0.50	-0.43	-0.43	-0.58	-0.50	-0.35	-0.58
R8(ON BIAS LDC)	-0.74	-0.58	-0.50	-0.66	-0.50	-0.58	-0.50
R9(ON BIAS LDC)	-0.43	-0.66	-0.58	-0.50	-0.58	-0.43	-0.50
R10(ON BIAS LDC)	-0.43	-0.74	-0.50	-0.43	-0.50	-0.43	-0.27
R11(ON BIAS LDC)	-0.35	-0.58	-0.58	-0.58	-0.74	-0.43	-0.66
Irradiated, LDC biased parts statistics							
Min Value	-0.74	-0.81	-0.58	-0.66	-0.74	-0.81	-0.66
Max Value	-0.35	-0.43	-0.35	-0.43	-0.43	-0.35	-0.27
Average	-0.51	-0.65	-0.48	-0.58	-0.53	-0.54	-0.51
Sigma	0.12	0.11	0.08	0.07	0.09	0.14	0.11



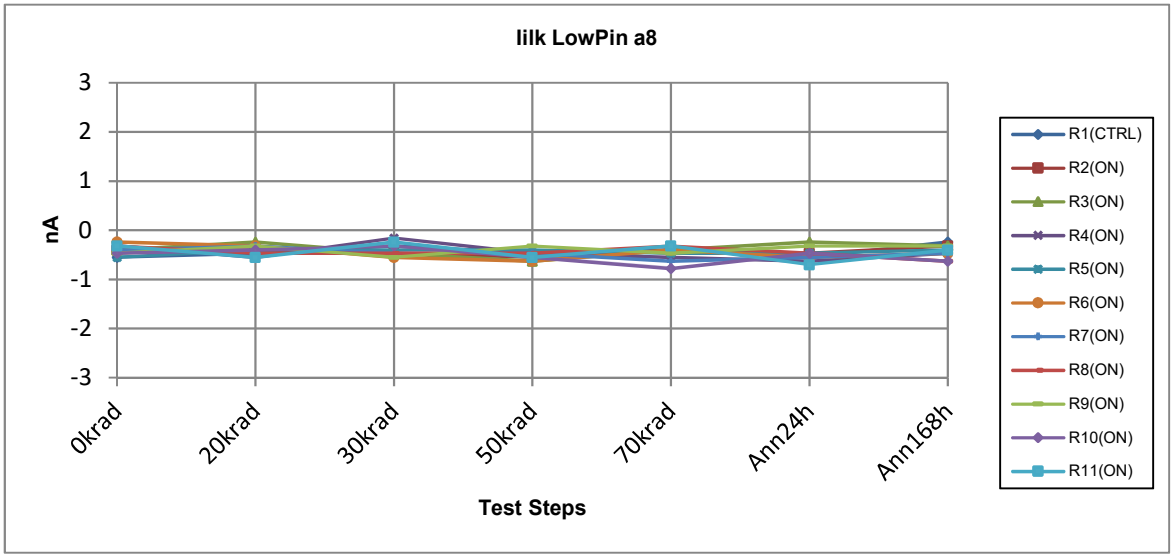
Iilk LowPin a11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.68	-0.45	-0.61	-0.68	-0.53	-0.68	-0.68
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.53	-0.61	-0.61	-0.45	-0.45	-0.45	-0.68
R3(ON BIAS LDC)	-0.53	-0.61	-0.68	-0.76	-0.84	-0.61	-0.68
R4(ON BIAS LDC)	-0.61	-0.61	-0.61	-0.45	-0.76	-0.76	-0.53
R5(ON BIAS LDC)	-0.68	-0.76	-0.53	-0.76	-0.76	-0.53	-0.61
R6(ON BIAS LDC)	-0.53	-0.61	-0.53	-0.91	-0.84	-0.76	-0.53
R7(ON BIAS LDC)	-0.68	-0.38	-0.61	-0.61	-0.53	-0.45	-0.61
R8(ON BIAS LDC)	-0.68	-0.45	-0.53	-0.84	-0.68	-0.84	-0.76
R9(ON BIAS LDC)	-0.61	-0.38	-0.53	-0.68	-0.84	-0.84	-0.68
R10(ON BIAS LDC)	-0.68	-0.45	-0.53	-0.68	-0.68	-0.99	-0.68
R11(ON BIAS LDC)	-0.68	-0.68	-0.53	-0.61	-0.61	-0.91	-0.68
Irradiated, LDC biased parts statistics							
Min Value	-0.68	-0.76	-0.68	-0.91	-0.84	-0.99	-0.76
Max Value	-0.53	-0.38	-0.53	-0.45	-0.45	-0.45	-0.53
Average	-0.62	-0.55	-0.57	-0.68	-0.70	-0.71	-0.64
Sigma	0.07	0.13	0.05	0.15	0.14	0.19	0.07



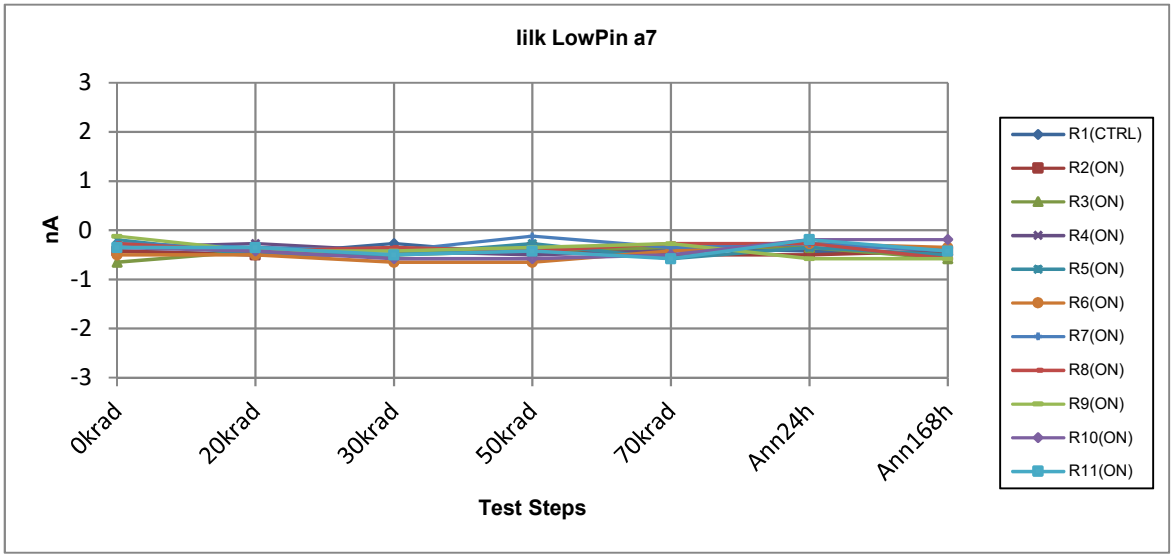
Iilk LowPin a10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.77	-0.69	-0.61	-0.69	-0.61	-0.61	-0.84
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.77	-0.61	-0.61	-0.46	-0.54	-0.77	-0.61
R3(ON BIAS LDC)	-0.69	-0.61	-0.54	-0.84	-0.46	-0.61	-0.69
R4(ON BIAS LDC)	-0.61	-0.69	-0.61	-0.46	-0.61	-0.38	-0.54
R5(ON BIAS LDC)	-0.61	-0.69	-0.23	-0.38	-0.54	-0.54	-0.61
R6(ON BIAS LDC)	-0.61	-0.61	-0.54	-0.61	-0.61	-0.77	-0.46
R7(ON BIAS LDC)	-0.77	-0.69	-0.54	-0.54	-0.54	-0.84	-0.46
R8(ON BIAS LDC)	-0.84	-0.77	-0.69	-0.46	-0.31	-0.69	-0.54
R9(ON BIAS LDC)	-0.69	-0.77	-0.61	-0.38	-0.61	-0.54	-0.54
R10(ON BIAS LDC)	-0.61	-0.46	-0.61	-0.61	-0.61	-0.61	-0.38
R11(ON BIAS LDC)	-0.77	-0.61	-0.46	-0.69	-0.77	-0.69	-0.77
Irradiated, LDC biased parts statistics							
Min Value	-0.84	-0.77	-0.69	-0.84	-0.77	-0.84	-0.77
Max Value	-0.61	-0.46	-0.23	-0.38	-0.31	-0.38	-0.38
Average	-0.70	-0.65	-0.54	-0.54	-0.56	-0.64	-0.56
Sigma	0.09	0.09	0.13	0.15	0.12	0.14	0.12



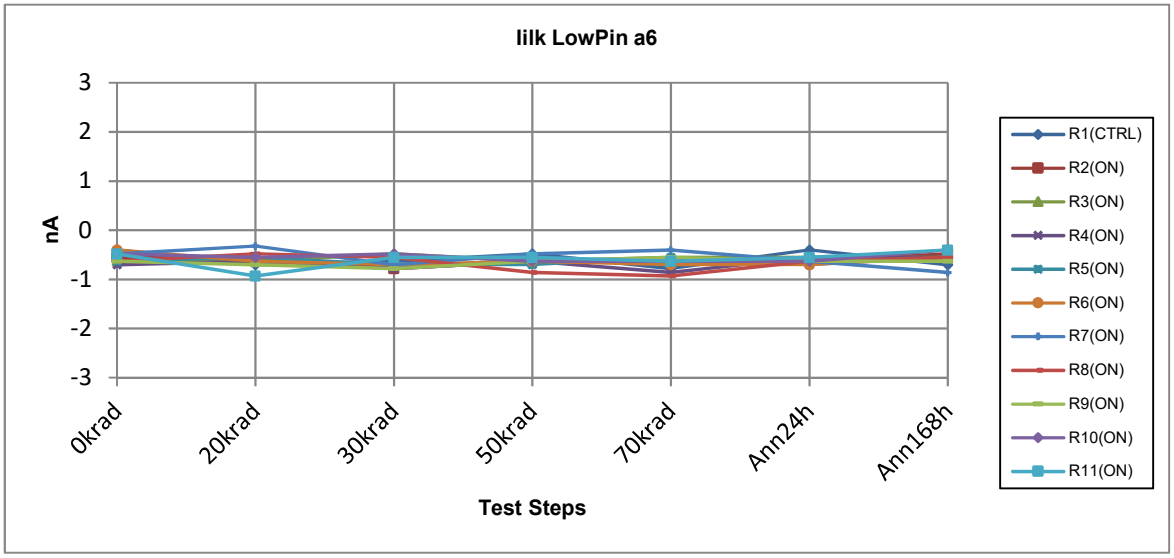
Iilk LowPin a9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.17	-0.40	-0.55	-0.24	-0.32	-0.40	-0.32
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.40	-0.40	-0.40	-0.62	-0.40	-0.55	-0.24
R3(ON BIAS LDC)	-0.47	-0.32	-0.24	-0.40	-0.55	-0.32	-0.24
R4(ON BIAS LDC)	-0.40	-0.47	-0.24	-0.47	-0.40	-0.32	-0.32
R5(ON BIAS LDC)	-0.32	-0.32	-0.01	-0.32	0.22	-0.09	-0.40
R6(ON BIAS LDC)	-0.32	-0.55	-0.17	-0.32	-0.62	-0.62	-0.24
R7(ON BIAS LDC)	-0.32	-0.32	-0.47	-0.40	-0.47	-0.70	-0.24
R8(ON BIAS LDC)	-0.40	-0.17	-0.32	-0.55	-0.40	-0.47	-0.40
R9(ON BIAS LDC)	-0.40	-0.40	-0.47	-0.32	-0.01	-1.16	-0.17
R10(ON BIAS LDC)	-0.40	-0.24	-0.32	-0.32	-0.55	-0.93	-0.17
R11(ON BIAS LDC)	-0.32	-0.47	-0.17	-0.40	-0.09	-0.17	0.06
Irradiated, LDC biased parts statistics							
Min Value	-0.47	-0.55	-0.47	-0.62	-0.62	-1.16	-0.40
Max Value	-0.32	-0.17	-0.01	-0.32	0.22	-0.09	0.06
Average	-0.38	-0.37	-0.28	-0.41	-0.33	-0.53	-0.24
Sigma	0.05	0.11	0.15	0.11	0.27	0.33	0.13



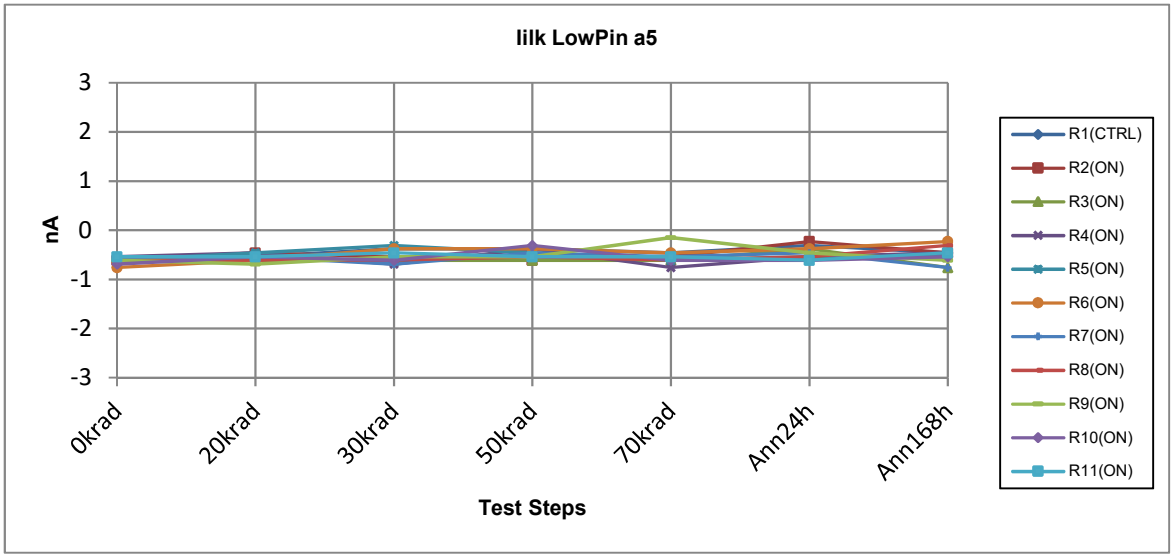
Iilk LowPin a8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.47	-0.32	-0.47	-0.40	-0.55	-0.24
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.40	-0.40	-0.47	-0.55	-0.40	-0.47	-0.32
R3(ON BIAS LDC)	-0.40	-0.24	-0.47	-0.63	-0.40	-0.24	-0.32
R4(ON BIAS LDC)	-0.32	-0.55	-0.16	-0.47	-0.55	-0.63	-0.47
R5(ON BIAS LDC)	-0.55	-0.40	-0.40	-0.40	-0.47	-0.47	-0.40
R6(ON BIAS LDC)	-0.24	-0.32	-0.55	-0.63	-0.40	-0.55	-0.47
R7(ON BIAS LDC)	-0.40	-0.32	-0.47	-0.47	-0.63	-0.55	-0.47
R8(ON BIAS LDC)	-0.32	-0.47	-0.47	-0.47	-0.32	-0.47	-0.63
R9(ON BIAS LDC)	-0.47	-0.32	-0.55	-0.32	-0.47	-0.32	-0.32
R10(ON BIAS LDC)	-0.47	-0.40	-0.32	-0.55	-0.78	-0.47	-0.63
R11(ON BIAS LDC)	-0.32	-0.55	-0.24	-0.55	-0.32	-0.70	-0.40
Irradiated, LDC biased parts statistics							
Min Value	-0.55	-0.55	-0.55	-0.63	-0.78	-0.70	-0.63
Max Value	-0.24	-0.24	-0.16	-0.32	-0.32	-0.24	-0.32
Average	-0.39	-0.40	-0.41	-0.50	-0.47	-0.49	-0.44
Sigma	0.09	0.10	0.13	0.10	0.14	0.13	0.12



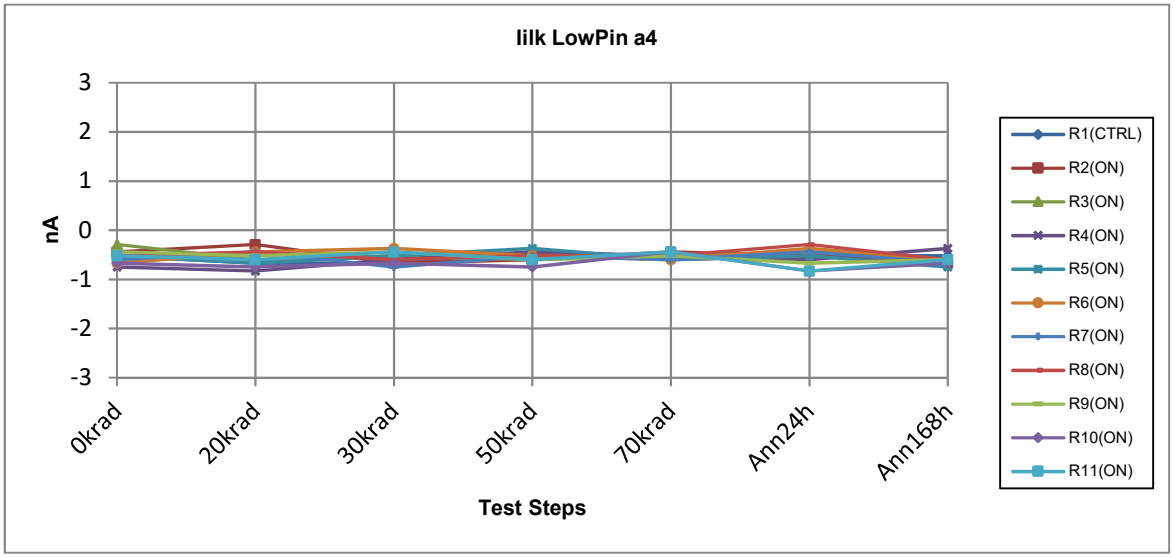
Iilk LowPin a7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.42	-0.50	-0.27	-0.50	-0.35	-0.42	-0.50
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.42	-0.50	-0.50	-0.35	-0.50	-0.50	-0.42
R3(ON BIAS LDC)	-0.65	-0.42	-0.50	-0.42	-0.35	-0.35	-0.58
R4(ON BIAS LDC)	-0.35	-0.27	-0.42	-0.50	-0.42	-0.27	-0.42
R5(ON BIAS LDC)	-0.19	-0.50	-0.50	-0.27	-0.58	-0.35	-0.50
R6(ON BIAS LDC)	-0.50	-0.50	-0.65	-0.65	-0.42	-0.27	-0.35
R7(ON BIAS LDC)	-0.27	-0.35	-0.42	-0.12	-0.35	-0.27	-0.42
R8(ON BIAS LDC)	-0.27	-0.42	-0.35	-0.42	-0.27	-0.27	-0.58
R9(ON BIAS LDC)	-0.12	-0.42	-0.42	-0.35	-0.27	-0.58	-0.58
R10(ON BIAS LDC)	-0.35	-0.42	-0.58	-0.58	-0.50	-0.19	-0.19
R11(ON BIAS LDC)	-0.35	-0.35	-0.50	-0.42	-0.58	-0.19	-0.42
Irradiated, LDC biased parts statistics							
Min Value	-0.65	-0.50	-0.65	-0.65	-0.58	-0.58	-0.58
Max Value	-0.12	-0.27	-0.35	-0.12	-0.27	-0.19	-0.19
Average	-0.35	-0.42	-0.48	-0.41	-0.42	-0.32	-0.45
Sigma	0.15	0.08	0.09	0.15	0.11	0.13	0.12



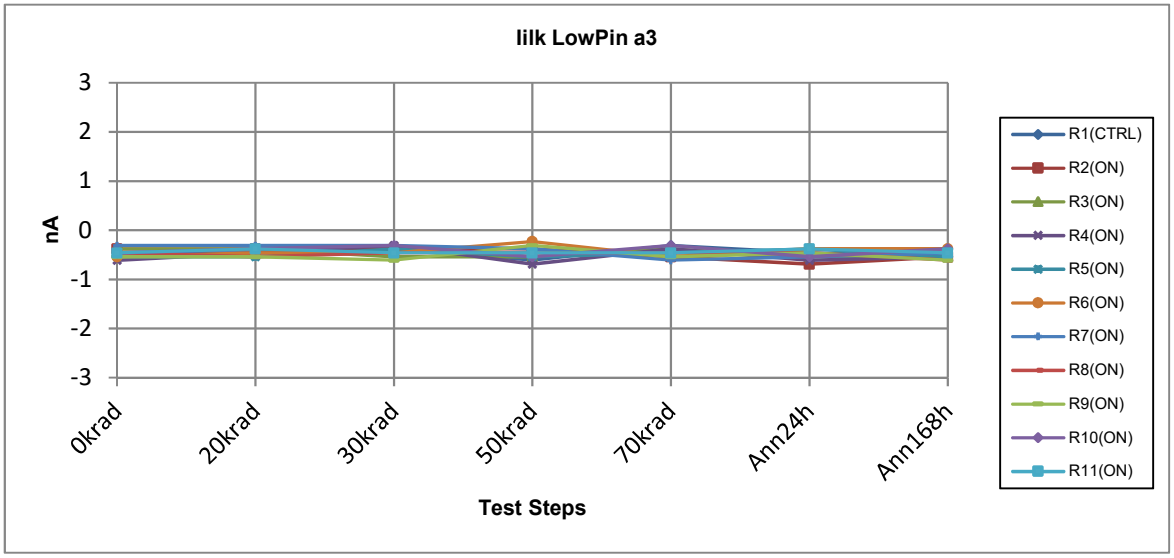
Iilk LowPin a6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.40	-0.70	-0.63	-0.48	-0.78	-0.40	-0.70
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.55	-0.55	-0.78	-0.63	-0.63	-0.63	-0.48
R3(ON BIAS LDC)	-0.63	-0.63	-0.48	-0.63	-0.55	-0.55	-0.55
R4(ON BIAS LDC)	-0.70	-0.63	-0.78	-0.63	-0.86	-0.55	-0.55
R5(ON BIAS LDC)	-0.63	-0.55	-0.70	-0.70	-0.55	-0.70	-0.55
R6(ON BIAS LDC)	-0.40	-0.63	-0.70	-0.63	-0.70	-0.70	-0.55
R7(ON BIAS LDC)	-0.48	-0.32	-0.70	-0.48	-0.40	-0.63	-0.86
R8(ON BIAS LDC)	-0.63	-0.48	-0.55	-0.86	-0.93	-0.63	-0.55
R9(ON BIAS LDC)	-0.63	-0.70	-0.78	-0.63	-0.55	-0.63	-0.63
R10(ON BIAS LDC)	-0.48	-0.55	-0.48	-0.63	-0.63	-0.63	-0.40
R11(ON BIAS LDC)	-0.48	-0.93	-0.55	-0.55	-0.63	-0.55	-0.40
Irradiated, LDC biased parts statistics							
Min Value	-0.70	-0.93	-0.78	-0.86	-0.93	-0.70	-0.86
Max Value	-0.40	-0.32	-0.48	-0.48	-0.40	-0.55	-0.40
Average	-0.56	-0.60	-0.65	-0.64	-0.64	-0.62	-0.55
Sigma	0.10	0.16	0.12	0.10	0.16	0.06	0.13



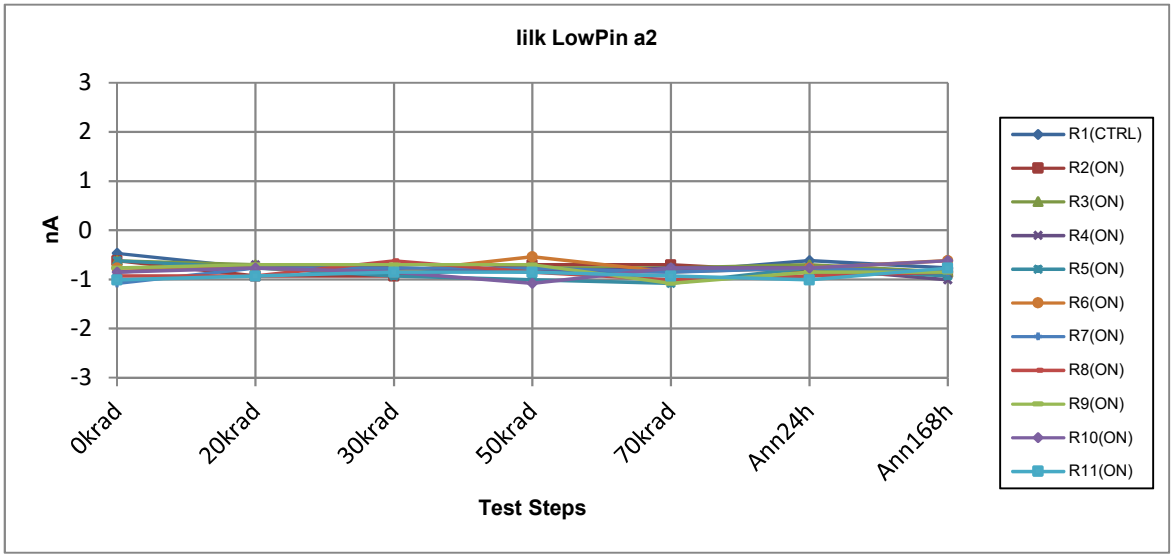
Iilk LowPin a5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.61	-0.54	-0.38	-0.38	-0.46	-0.31	-0.46
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.61	-0.46	-0.54	-0.61	-0.54	-0.23	-0.46
R3(ON BIAS LDC)	-0.54	-0.61	-0.61	-0.61	-0.61	-0.38	-0.76
R4(ON BIAS LDC)	-0.54	-0.46	-0.69	-0.38	-0.76	-0.54	-0.46
R5(ON BIAS LDC)	-0.61	-0.46	-0.31	-0.46	-0.61	-0.54	-0.54
R6(ON BIAS LDC)	-0.76	-0.61	-0.38	-0.38	-0.46	-0.38	-0.23
R7(ON BIAS LDC)	-0.61	-0.54	-0.69	-0.46	-0.54	-0.46	-0.76
R8(ON BIAS LDC)	-0.61	-0.61	-0.61	-0.54	-0.61	-0.54	-0.31
R9(ON BIAS LDC)	-0.61	-0.69	-0.54	-0.54	-0.15	-0.46	-0.61
R10(ON BIAS LDC)	-0.69	-0.54	-0.61	-0.31	-0.61	-0.61	-0.54
R11(ON BIAS LDC)	-0.54	-0.54	-0.46	-0.54	-0.54	-0.61	-0.46
Irradiated, LDC biased parts statistics							
Min Value	-0.69	-0.69	-0.69	-0.54	-0.61	-0.61	-0.76
Max Value	-0.54	-0.54	-0.46	-0.31	-0.15	-0.46	-0.31
Average	-0.61	-0.58	-0.58	-0.48	-0.49	-0.54	-0.54
Sigma	0.05	0.07	0.09	0.10	0.19	0.08	0.17



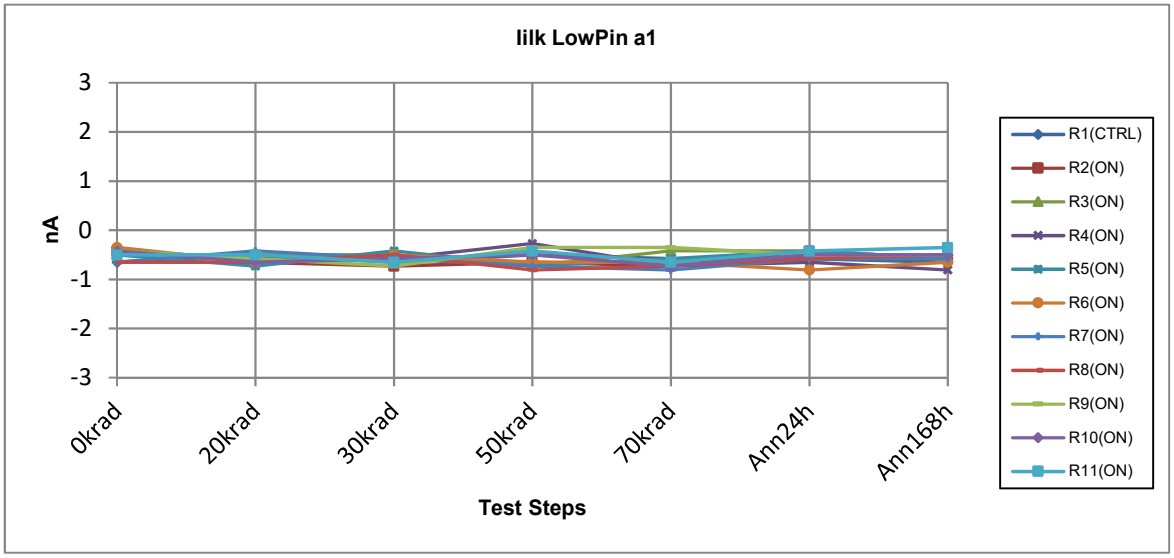
Iilk LowPin a4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.52	-0.67	-0.67	-0.44	-0.60	-0.52	-0.52
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.44	-0.29	-0.67	-0.60	-0.44	-0.52	-0.67
R3(ON BIAS LDC)	-0.29	-0.60	-0.52	-0.60	-0.52	-0.44	-0.60
R4(ON BIAS LDC)	-0.75	-0.83	-0.60	-0.44	-0.52	-0.60	-0.37
R5(ON BIAS LDC)	-0.52	-0.67	-0.52	-0.37	-0.60	-0.52	-0.75
R6(ON BIAS LDC)	-0.67	-0.44	-0.37	-0.52	-0.60	-0.37	-0.60
R7(ON BIAS LDC)	-0.60	-0.44	-0.75	-0.52	-0.60	-0.44	-0.67
R8(ON BIAS LDC)	-0.52	-0.44	-0.60	-0.52	-0.52	-0.29	-0.60
R9(ON BIAS LDC)	-0.44	-0.52	-0.44	-0.60	-0.52	-0.67	-0.60
R10(ON BIAS LDC)	-0.67	-0.75	-0.67	-0.75	-0.44	-0.83	-0.67
R11(ON BIAS LDC)	-0.52	-0.60	-0.44	-0.60	-0.44	-0.83	-0.60
Irradiated, LDC biased parts statistics							
Min Value	-0.67	-0.75	-0.75	-0.75	-0.60	-0.83	-0.67
Max Value	-0.44	-0.44	-0.44	-0.52	-0.44	-0.29	-0.60
Average	-0.55	-0.55	-0.58	-0.60	-0.50	-0.61	-0.63
Sigma	0.09	0.13	0.14	0.09	0.07	0.24	0.04



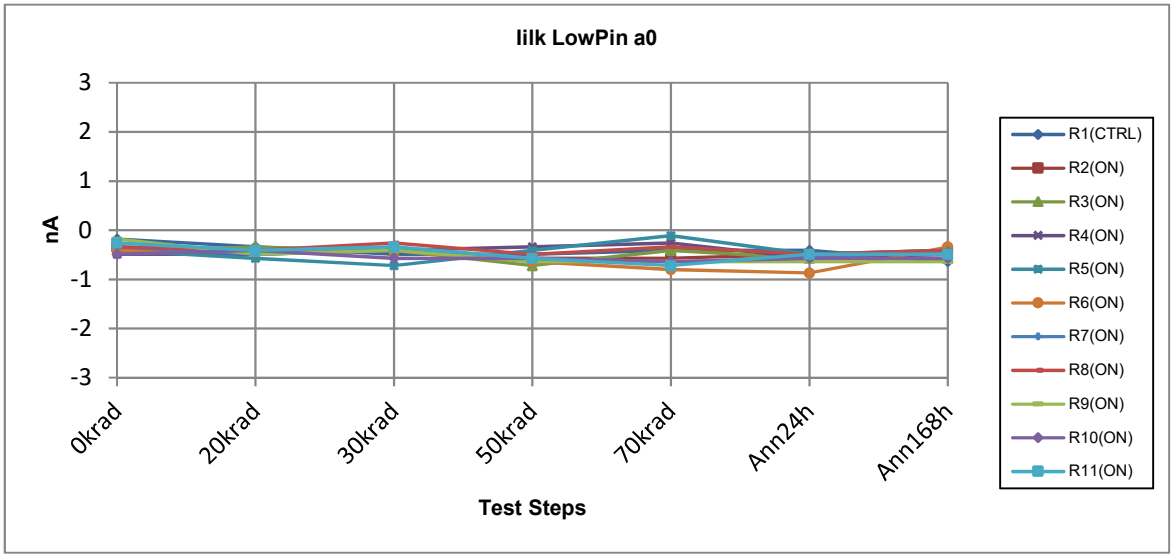
Iilk LowPin a3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.46	-0.46	-0.38	-0.61	-0.31	-0.46	-0.54
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.38	-0.38	-0.38	-0.38	-0.54	-0.69	-0.54
R3(ON BIAS LDC)	-0.38	-0.38	-0.54	-0.54	-0.38	-0.54	-0.54
R4(ON BIAS LDC)	-0.61	-0.46	-0.31	-0.69	-0.38	-0.61	-0.54
R5(ON BIAS LDC)	-0.54	-0.54	-0.38	-0.54	-0.46	-0.38	-0.54
R6(ON BIAS LDC)	-0.54	-0.46	-0.46	-0.23	-0.54	-0.38	-0.38
R7(ON BIAS LDC)	-0.31	-0.31	-0.31	-0.38	-0.61	-0.54	-0.46
R8(ON BIAS LDC)	-0.46	-0.54	-0.46	-0.46	-0.46	-0.46	-0.61
R9(ON BIAS LDC)	-0.54	-0.54	-0.61	-0.31	-0.54	-0.46	-0.61
R10(ON BIAS LDC)	-0.46	-0.38	-0.31	-0.54	-0.31	-0.54	-0.38
R11(ON BIAS LDC)	-0.46	-0.38	-0.46	-0.46	-0.46	-0.38	-0.46
Irradiated, LDC biased parts statistics							
Min Value	-0.54	-0.54	-0.61	-0.54	-0.61	-0.54	-0.61
Max Value	-0.31	-0.31	-0.31	-0.31	-0.31	-0.38	-0.38
Average	-0.45	-0.43	-0.43	-0.43	-0.48	-0.48	-0.50
Sigma	0.08	0.10	0.13	0.09	0.11	0.07	0.10



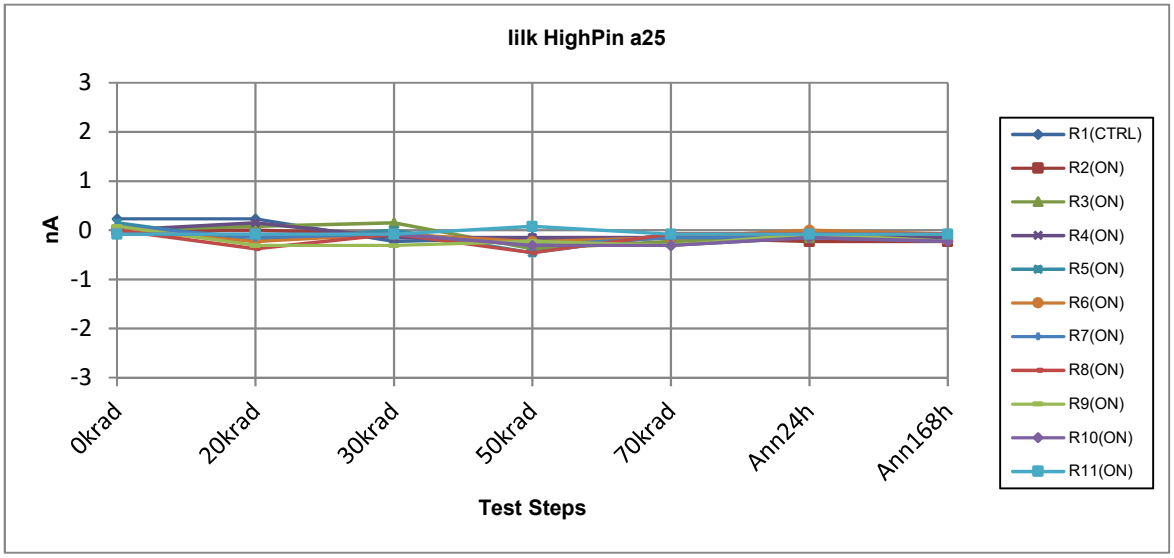
Iilk LowPin a2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.47	-0.77	-0.77	-0.85	-0.85	-0.62	-0.77
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.62	-0.93	-0.93	-0.70	-0.70	-0.85	-0.85
R3(ON BIAS LDC)	-0.62	-0.70	-0.85	-0.77	-0.77	-0.70	-0.85
R4(ON BIAS LDC)	-0.85	-0.70	-0.77	-0.85	-0.77	-0.77	-1.01
R5(ON BIAS LDC)	-0.62	-0.77	-0.93	-1.01	-1.08	-0.77	-0.93
R6(ON BIAS LDC)	-0.77	-0.77	-0.85	-0.54	-0.85	-0.77	-0.62
R7(ON BIAS LDC)	-1.08	-0.77	-0.77	-0.77	-0.85	-0.77	-0.85
R8(ON BIAS LDC)	-0.93	-0.93	-0.62	-0.85	-1.01	-0.93	-0.85
R9(ON BIAS LDC)	-0.77	-0.70	-0.70	-0.70	-1.08	-0.85	-0.85
R10(ON BIAS LDC)	-0.85	-0.77	-0.85	-1.08	-0.77	-0.77	-0.62
R11(ON BIAS LDC)	-1.01	-0.93	-0.85	-0.85	-0.93	-1.01	-0.77
Irradiated, LDC biased parts statistics							
Min Value	-1.08	-0.93	-0.85	-1.08	-1.08	-1.01	-0.85
Max Value	-0.77	-0.70	-0.62	-0.70	-0.77	-0.77	-0.62
Average	-0.93	-0.82	-0.76	-0.85	-0.93	-0.87	-0.79
Sigma	0.12	0.10	0.10	0.14	0.12	0.10	0.10



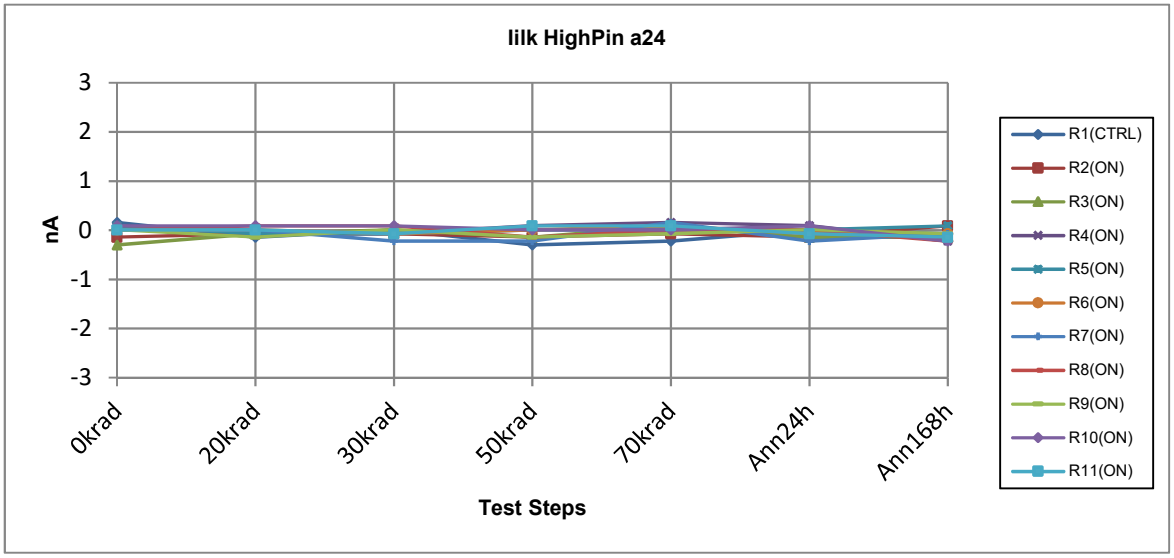
Iilk LowPin a1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.65	-0.50	-0.65	-0.50	-0.58	-0.58	-0.65
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.42	-0.65	-0.73	-0.65	-0.73	-0.42	-0.58
R3(ON BIAS LDC)	-0.50	-0.50	-0.50	-0.73	-0.42	-0.42	-0.58
R4(ON BIAS LDC)	-0.42	-0.58	-0.58	-0.27	-0.73	-0.65	-0.81
R5(ON BIAS LDC)	-0.50	-0.73	-0.42	-0.73	-0.58	-0.42	-0.58
R6(ON BIAS LDC)	-0.35	-0.65	-0.50	-0.65	-0.65	-0.81	-0.65
R7(ON BIAS LDC)	-0.65	-0.42	-0.58	-0.73	-0.81	-0.58	-0.58
R8(ON BIAS LDC)	-0.65	-0.65	-0.50	-0.81	-0.73	-0.58	-0.50
R9(ON BIAS LDC)	-0.42	-0.58	-0.73	-0.35	-0.35	-0.50	-0.50
R10(ON BIAS LDC)	-0.42	-0.65	-0.58	-0.50	-0.73	-0.50	-0.50
R11(ON BIAS LDC)	-0.50	-0.50	-0.65	-0.42	-0.65	-0.42	-0.35
Irradiated, LDC biased parts statistics							
Min Value	-0.65	-0.65	-0.73	-0.81	-0.81	-0.58	-0.58
Max Value	-0.42	-0.42	-0.50	-0.35	-0.35	-0.42	-0.35
Average	-0.53	-0.56	-0.61	-0.56	-0.65	-0.52	-0.49
Sigma	0.12	0.10	0.09	0.20	0.18	0.07	0.08



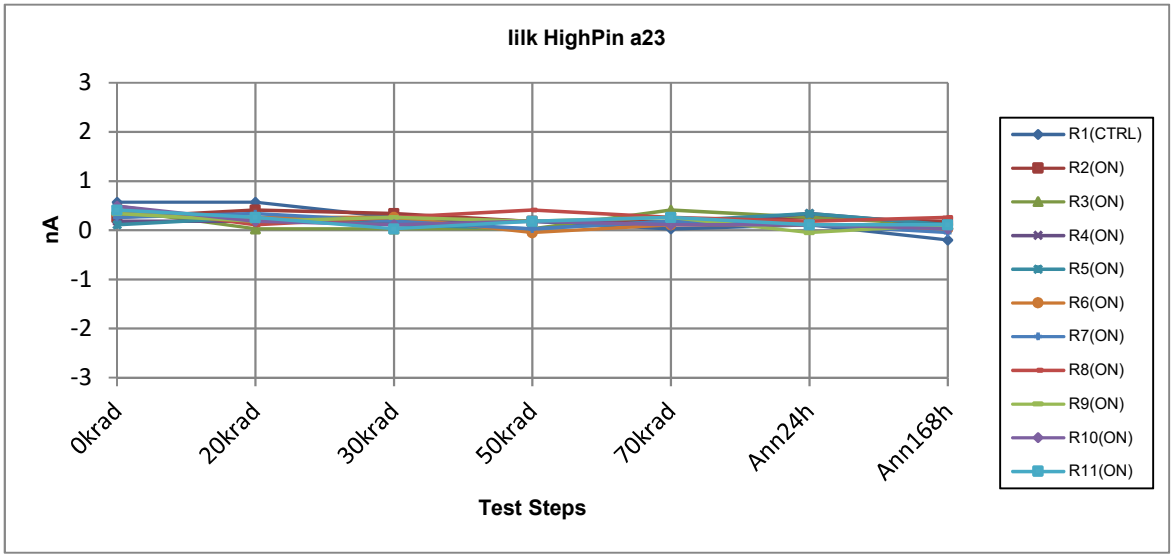
Iilk LowPin a0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.18	-0.34	-0.49	-0.49	-0.41	-0.41	-0.64
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.34	-0.41	-0.41	-0.57	-0.57	-0.49	-0.41
R3(ON BIAS LDC)	-0.41	-0.34	-0.41	-0.72	-0.41	-0.57	-0.57
R4(ON BIAS LDC)	-0.49	-0.49	-0.41	-0.34	-0.26	-0.57	-0.49
R5(ON BIAS LDC)	-0.41	-0.57	-0.72	-0.41	-0.11	-0.49	-0.41
R6(ON BIAS LDC)	-0.41	-0.41	-0.41	-0.64	-0.80	-0.87	-0.34
R7(ON BIAS LDC)	-0.34	-0.49	-0.41	-0.57	-0.64	-0.57	-0.41
R8(ON BIAS LDC)	-0.34	-0.41	-0.26	-0.49	-0.34	-0.49	-0.41
R9(ON BIAS LDC)	-0.18	-0.49	-0.41	-0.64	-0.64	-0.64	-0.64
R10(ON BIAS LDC)	-0.49	-0.41	-0.57	-0.57	-0.64	-0.57	-0.57
R11(ON BIAS LDC)	-0.26	-0.41	-0.34	-0.57	-0.72	-0.49	-0.49
Irradiated, LDC biased parts statistics							
Min Value	-0.49	-0.49	-0.57	-0.64	-0.72	-0.64	-0.64
Max Value	-0.18	-0.41	-0.26	-0.49	-0.34	-0.49	-0.41
Average	-0.32	-0.44	-0.40	-0.57	-0.60	-0.55	-0.50
Sigma	0.11	0.04	0.11	0.05	0.15	0.06	0.10



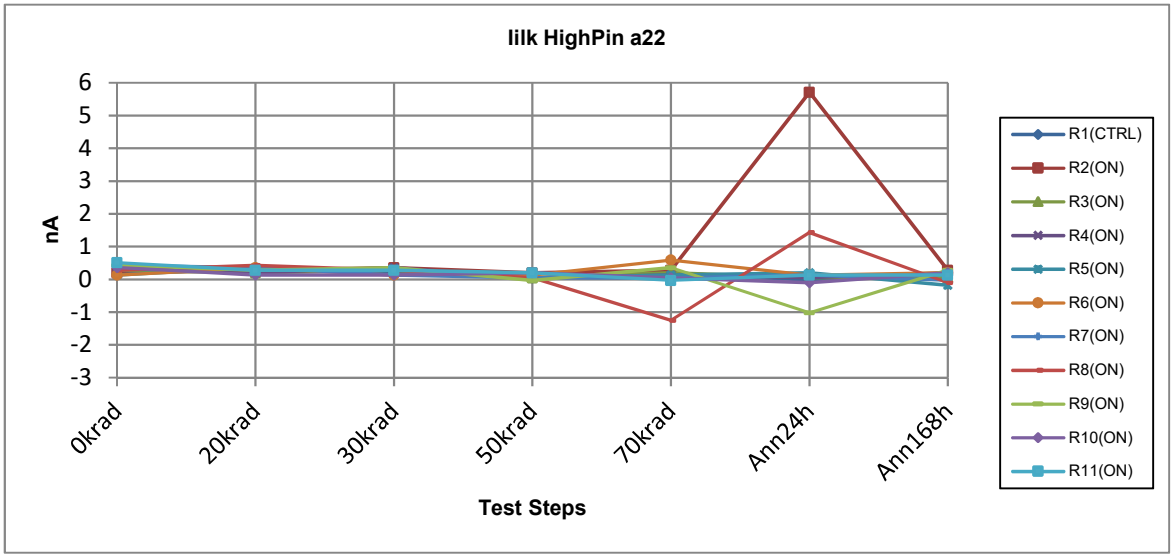
ILI HighPin a25	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.23	0.23	-0.23	-0.15	-0.31	-0.15	-0.15
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.00	0.00	-0.08	-0.31	-0.15	-0.23	-0.23
R3(ON BIAS LDC)	0.00	0.08	0.15	-0.38	-0.23	-0.15	-0.15
R4(ON BIAS LDC)	0.00	0.15	-0.15	-0.15	-0.15	-0.08	-0.15
R5(ON BIAS LDC)	0.15	-0.23	0.00	-0.46	-0.08	-0.08	-0.08
R6(ON BIAS LDC)	0.00	-0.23	-0.08	-0.23	-0.15	0.00	-0.08
R7(ON BIAS LDC)	0.08	-0.15	-0.08	-0.31	-0.15	-0.15	-0.23
R8(ON BIAS LDC)	0.00	-0.38	-0.08	-0.46	-0.08	-0.08	-0.08
R9(ON BIAS LDC)	0.08	-0.31	-0.31	-0.23	-0.31	-0.08	-0.23
R10(ON BIAS LDC)	-0.08	-0.08	-0.08	-0.31	-0.31	-0.15	-0.23
R11(ON BIAS LDC)	-0.08	-0.08	-0.08	0.08	-0.08	-0.08	-0.08
Irradiated, LDC biased parts statistics							
Min Value	-0.08	-0.38	-0.31	-0.46	-0.31	-0.15	-0.23
Max Value	0.08	-0.08	-0.08	0.08	-0.08	-0.08	-0.08
Average	0.00	-0.20	-0.13	-0.25	-0.19	-0.11	-0.17
Sigma	0.08	0.14	0.10	0.20	0.12	0.04	0.08



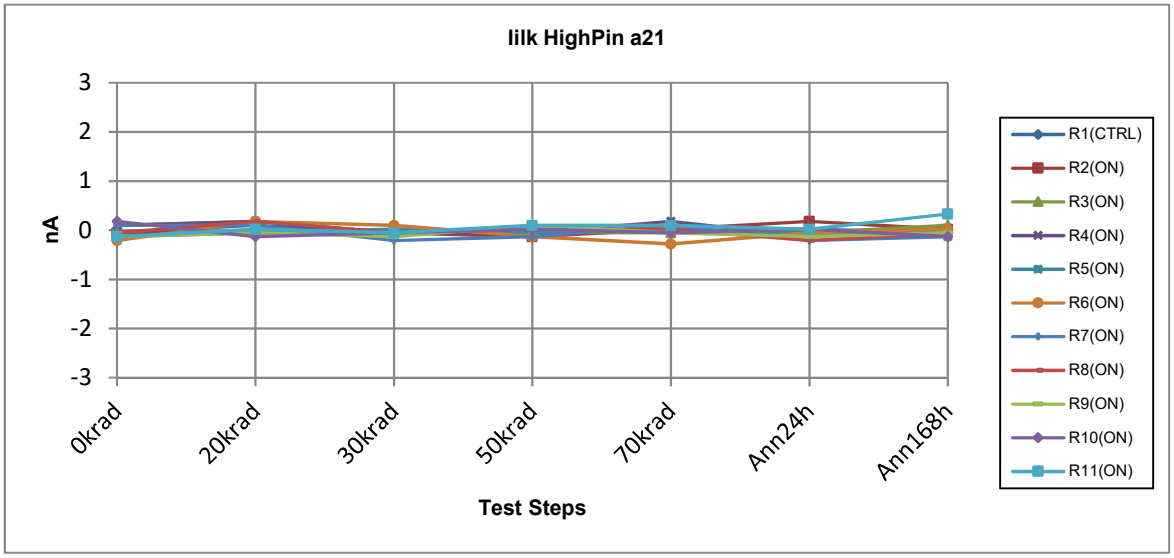
ILI HighPin a24	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.16	-0.14	0.01	-0.30	-0.22	0.01	-0.07
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.14	-0.07	-0.07	-0.14	-0.07	-0.14	0.09
R3(ON BIAS LDC)	-0.30	-0.07	0.01	-0.14	0.09	-0.14	-0.14
R4(ON BIAS LDC)	0.09	-0.07	-0.07	0.09	0.16	0.09	-0.22
R5(ON BIAS LDC)	0.09	-0.07	-0.07	0.01	0.01	0.01	0.09
R6(ON BIAS LDC)	0.01	0.01	-0.07	0.01	0.09	-0.07	-0.07
R7(ON BIAS LDC)	0.01	0.01	-0.22	-0.22	0.16	-0.22	-0.07
R8(ON BIAS LDC)	0.01	0.09	0.09	-0.14	0.01	0.01	-0.22
R9(ON BIAS LDC)	0.01	-0.14	0.01	-0.14	-0.07	0.01	-0.07
R10(ON BIAS LDC)	0.09	0.09	0.09	0.01	0.01	0.09	-0.22
R11(ON BIAS LDC)	0.01	0.01	-0.07	0.09	0.09	-0.07	-0.14
Irradiated, LDC biased parts statistics							
Min Value	0.01	-0.14	-0.22	-0.22	-0.07	-0.22	-0.22
Max Value	0.09	0.09	0.09	0.09	0.16	0.09	-0.07
Average	0.03	0.01	-0.02	-0.08	0.04	-0.04	-0.14
Sigma	0.04	0.09	0.13	0.13	0.09	0.12	0.08



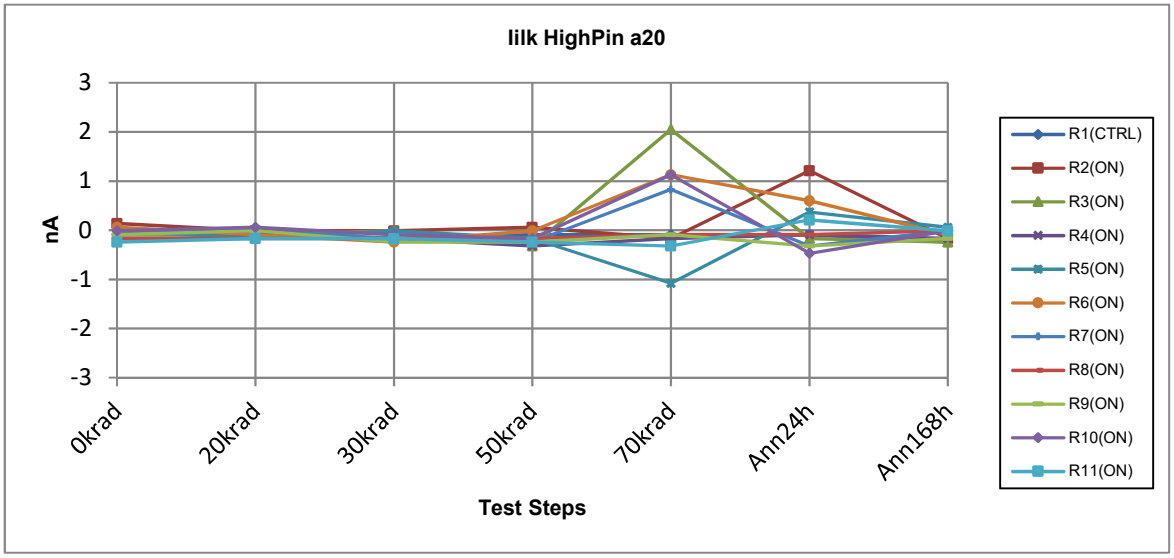
ILI HighPin a23	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	0.57	0.57	0.26	0.18	0.03	0.11	-0.20
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.26	0.41	0.34	0.18	0.18	0.26	0.18
R3(ON BIAS LDC)	0.41	0.03	0.03	0.03	0.41	0.26	0.11
R4(ON BIAS LDC)	0.18	0.18	0.18	0.18	0.11	0.34	0.11
R5(ON BIAS LDC)	0.11	0.26	0.11	0.03	0.18	0.34	0.11
R6(ON BIAS LDC)	0.34	0.26	0.26	-0.05	0.11	0.11	0.03
R7(ON BIAS LDC)	0.26	0.34	0.18	0.03	0.18	0.11	-0.05
R8(ON BIAS LDC)	0.49	0.11	0.26	0.41	0.26	0.18	0.26
R9(ON BIAS LDC)	0.34	0.18	0.26	0.18	0.26	-0.05	0.11
R10(ON BIAS LDC)	0.49	0.18	0.11	0.18	0.11	0.11	0.03
R11(ON BIAS LDC)	0.41	0.26	0.03	0.18	0.26	0.11	0.11
Irradiated, LDC biased parts statistics							
Min Value	0.26	0.11	0.03	0.03	0.11	-0.05	-0.05
Max Value	0.49	0.34	0.26	0.41	0.26	0.18	0.26
Average	0.40	0.21	0.17	0.20	0.21	0.09	0.09
Sigma	0.10	0.09	0.10	0.14	0.07	0.08	0.11



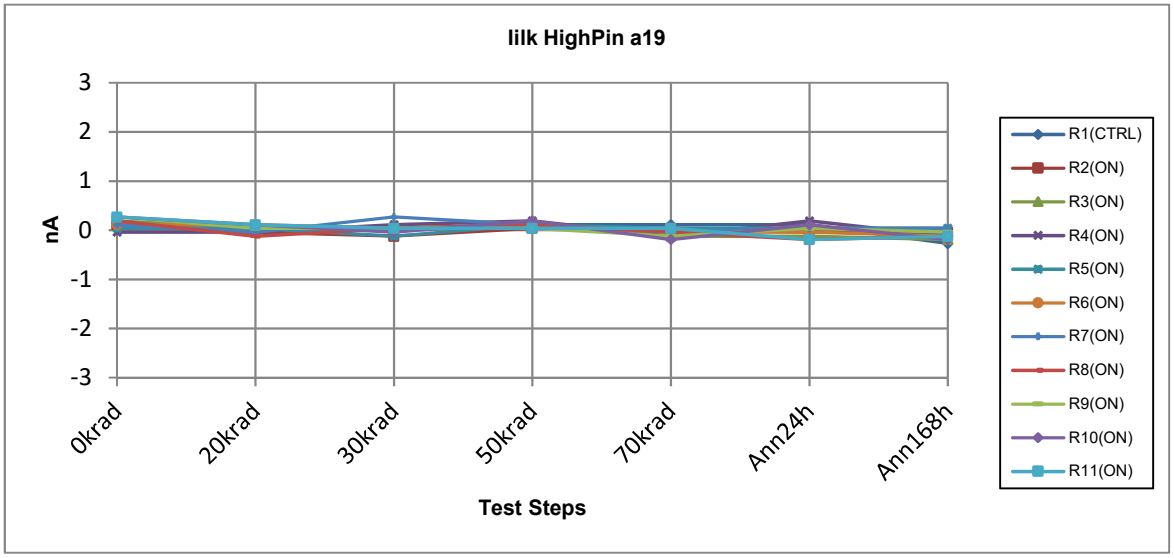
ILI HighPin a22	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.36	0.36	0.20	0.05	0.20	-0.03	0.13
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.20	0.28	0.36	0.20	0.28	5.71	0.28
R3(ON BIAS LDC)	0.28	0.20	0.28	0.05	0.20	0.05	0.05
R4(ON BIAS LDC)	0.36	0.20	0.36	0.05	0.13	0.05	0.20
R5(ON BIAS LDC)	0.13	0.36	0.28	0.05	0.13	0.20	-0.18
R6(ON BIAS LDC)	0.13	0.36	0.13	0.13	0.59	0.13	0.20
R7(ON BIAS LDC)	0.43	0.36	0.13	0.05	0.05	0.13	-0.03
R8(ON BIAS LDC)	0.28	0.43	0.28	0.05	-1.25	1.43	-0.10
R9(ON BIAS LDC)	0.43	0.28	0.36	-0.03	0.36	-1.02	0.28
R10(ON BIAS LDC)	0.36	0.13	0.13	0.20	0.05	-0.10	0.20
R11(ON BIAS LDC)	0.51	0.28	0.28	0.20	-0.03	0.13	0.13
Irradiated, LDC biased parts statistics							
Min Value	0.28	0.13	0.13	-0.03	-1.25	-1.02	-0.10
Max Value	0.51	0.43	0.36	0.20	0.36	1.43	0.28
Average	0.40	0.30	0.24	0.09	-0.16	0.11	0.10
Sigma	0.09	0.11	0.10	0.10	0.63	0.88	0.16



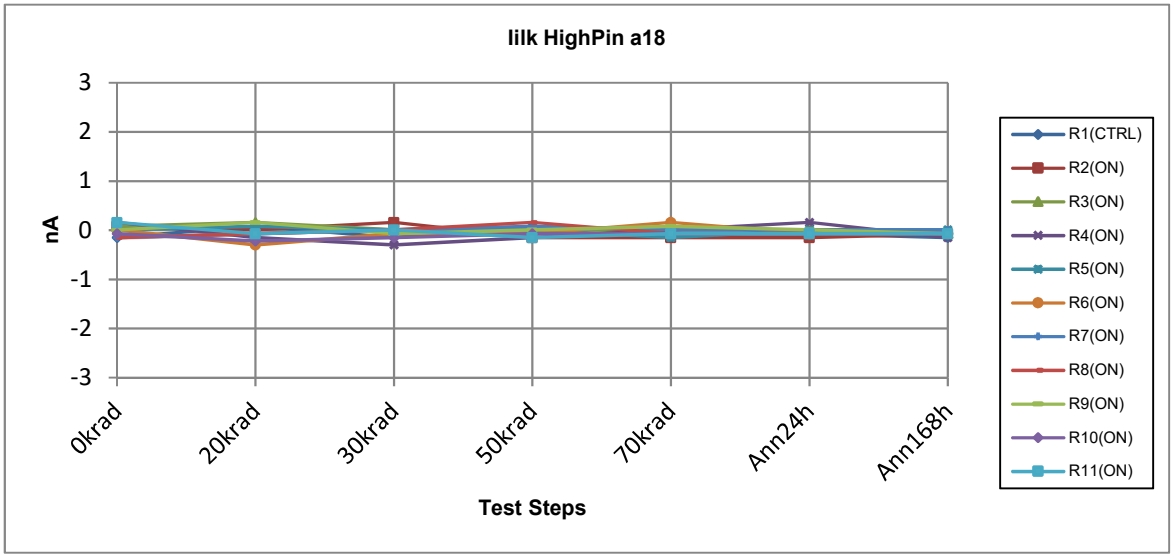
ILI HighPin a21	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.05	0.10	-0.05	-0.05	-0.05	0.02	-0.05
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.05	-0.05	-0.05	-0.13	0.02	0.18	0.02
R3(ON BIAS LDC)	0.10	0.18	-0.05	-0.05	-0.05	-0.05	0.10
R4(ON BIAS LDC)	0.10	0.18	-0.05	-0.05	0.18	-0.13	0.02
R5(ON BIAS LDC)	-0.13	-0.05	0.02	-0.05	0.02	-0.05	-0.13
R6(ON BIAS LDC)	-0.21	0.18	0.10	-0.13	-0.28	-0.05	0.02
R7(ON BIAS LDC)	0.10	0.10	-0.21	-0.13	0.10	-0.21	-0.13
R8(ON BIAS LDC)	-0.05	0.18	-0.05	0.02	0.02	-0.21	-0.05
R9(ON BIAS LDC)	-0.13	-0.05	-0.13	0.10	-0.05	-0.13	-0.05
R10(ON BIAS LDC)	0.18	-0.13	-0.05	0.02	-0.05	0.02	-0.13
R11(ON BIAS LDC)	-0.13	0.02	-0.05	0.10	0.10	0.02	0.33
Irradiated, LDC biased parts statistics							
Min Value	-0.13	-0.13	-0.21	-0.13	-0.05	-0.21	-0.13
Max Value	0.18	0.18	-0.05	0.10	0.10	0.02	0.33
Average	-0.01	0.02	-0.10	0.02	0.02	-0.10	-0.01
Sigma	0.14	0.12	0.07	0.09	0.08	0.12	0.19



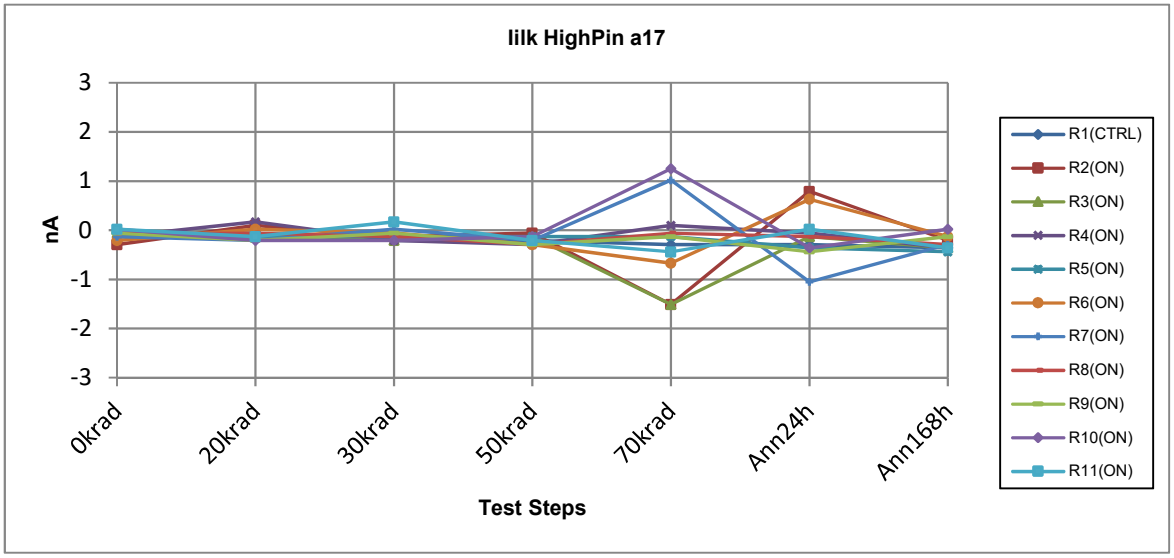
ILI HighPin a20	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.09	-0.09	-0.17	-0.09	-0.09	-0.09	-0.24
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.14	-0.01	-0.01	0.06	-0.17	1.21	-0.17
R3(ON BIAS LDC)	-0.09	-0.09	-0.01	-0.32	2.05	-0.17	-0.24
R4(ON BIAS LDC)	-0.01	-0.09	-0.17	-0.32	-0.17	-0.09	-0.17
R5(ON BIAS LDC)	-0.01	-0.17	-0.01	-0.17	-1.08	0.37	0.06
R6(ON BIAS LDC)	0.06	-0.09	-0.24	-0.01	1.13	0.60	-0.09
R7(ON BIAS LDC)	-0.01	-0.01	-0.17	-0.24	0.83	-0.32	-0.01
R8(ON BIAS LDC)	-0.17	-0.17	-0.17	-0.17	-0.09	-0.09	-0.01
R9(ON BIAS LDC)	-0.09	-0.01	-0.24	-0.24	-0.09	-0.32	-0.17
R10(ON BIAS LDC)	-0.01	0.06	-0.09	-0.17	1.13	-0.47	-0.01
R11(ON BIAS LDC)	-0.24	-0.17	-0.17	-0.24	-0.32	0.21	-0.01
Irradiated, LDC biased parts statistics							
Min Value	-0.24	-0.17	-0.24	-0.24	-0.32	-0.47	-0.17
Max Value	-0.01	0.06	-0.09	-0.17	1.13	0.21	-0.01
Average	-0.10	-0.06	-0.17	-0.21	0.29	-0.20	-0.04
Sigma	0.10	0.10	0.05	0.04	0.64	0.27	0.07



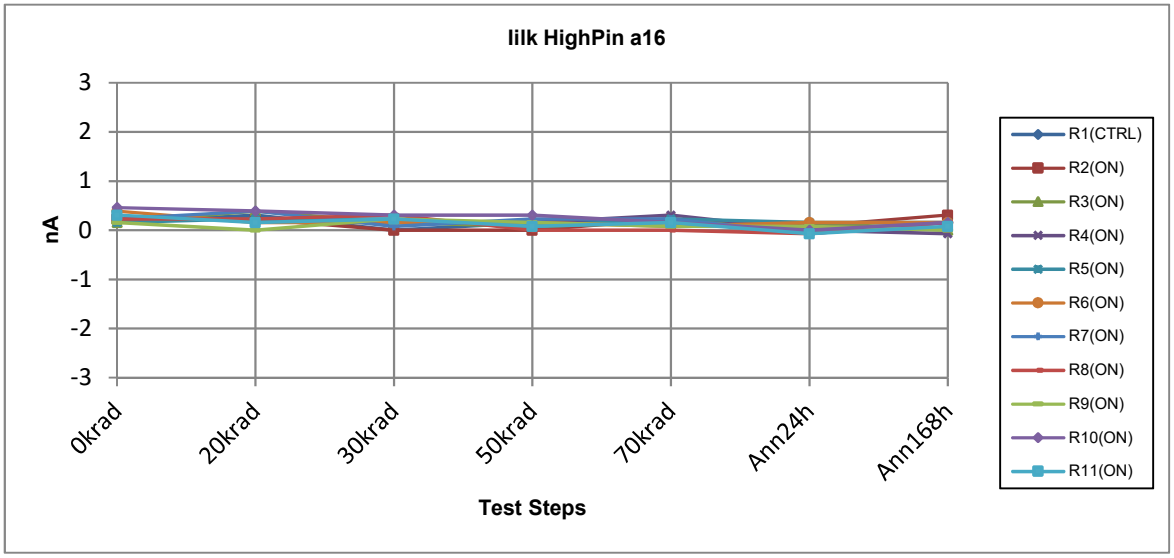
ILI HighPin a19	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.11	0.04	0.04	0.11	0.11	0.11	-0.27
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.11	-0.04	-0.12	0.04	0.04	-0.04	-0.04
R3(ON BIAS LDC)	0.19	0.04	0.04	0.11	-0.12	-0.12	-0.19
R4(ON BIAS LDC)	-0.04	-0.04	0.11	0.19	-0.12	0.19	-0.12
R5(ON BIAS LDC)	0.04	0.04	-0.12	0.11	0.04	0.04	0.04
R6(ON BIAS LDC)	0.11	0.11	0.04	0.11	-0.04	-0.04	-0.12
R7(ON BIAS LDC)	0.11	-0.04	0.27	0.11	-0.04	0.04	0.04
R8(ON BIAS LDC)	0.19	-0.12	0.04	0.11	-0.04	-0.19	-0.12
R9(ON BIAS LDC)	0.27	0.04	0.04	0.04	-0.12	0.04	-0.04
R10(ON BIAS LDC)	0.27	0.11	-0.04	0.19	-0.19	0.11	-0.19
R11(ON BIAS LDC)	0.27	0.11	0.04	0.04	0.04	-0.19	-0.12
Irradiated, LDC biased parts statistics							
Min Value	0.11	-0.12	-0.04	0.04	-0.19	-0.19	-0.19
Max Value	0.27	0.11	0.27	0.19	0.04	0.11	0.04
Average	0.22	0.02	0.07	0.10	-0.07	-0.04	-0.09
Sigma	0.07	0.10	0.12	0.06	0.09	0.14	0.09



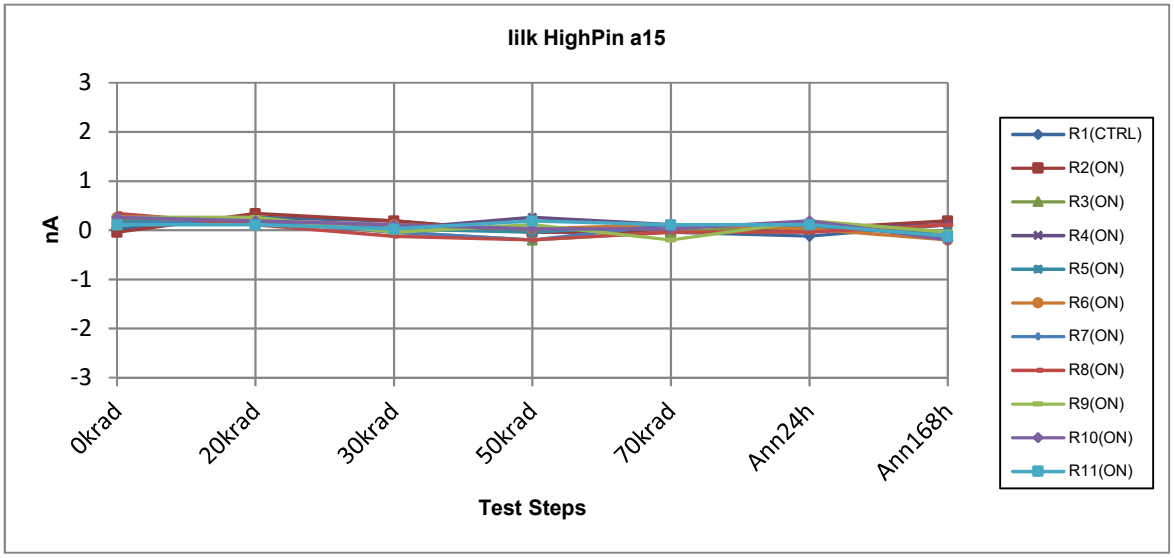
ILI HighPin a18	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.15	0.08	-0.15	0.08	-0.07	-0.07	-0.15
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.08	0.01	0.16	-0.15	-0.15	-0.15	-0.07
R3(ON BIAS LDC)	0.08	0.16	0.01	0.01	0.01	0.01	-0.07
R4(ON BIAS LDC)	0.16	-0.15	-0.30	-0.15	0.01	0.16	-0.15
R5(ON BIAS LDC)	0.01	0.08	0.01	0.01	-0.15	0.01	0.01
R6(ON BIAS LDC)	0.01	-0.30	-0.07	-0.07	0.16	-0.07	-0.07
R7(ON BIAS LDC)	-0.15	-0.07	0.01	0.08	0.01	0.01	0.01
R8(ON BIAS LDC)	-0.15	-0.07	0.01	0.16	-0.07	-0.07	-0.07
R9(ON BIAS LDC)	0.01	0.16	-0.07	0.01	0.08	0.01	-0.07
R10(ON BIAS LDC)	-0.07	-0.22	-0.15	-0.07	-0.07	-0.07	-0.07
R11(ON BIAS LDC)	0.16	-0.07	0.01	-0.15	-0.07	-0.07	-0.07
Irradiated, LDC biased parts statistics							
Min Value	-0.15	-0.22	-0.15	-0.15	-0.07	-0.07	-0.07
Max Value	0.16	0.16	0.01	0.16	0.08	0.01	0.01
Average	-0.04	-0.05	-0.04	0.01	-0.02	-0.04	-0.05
Sigma	0.13	0.14	0.07	0.12	0.07	0.04	0.04



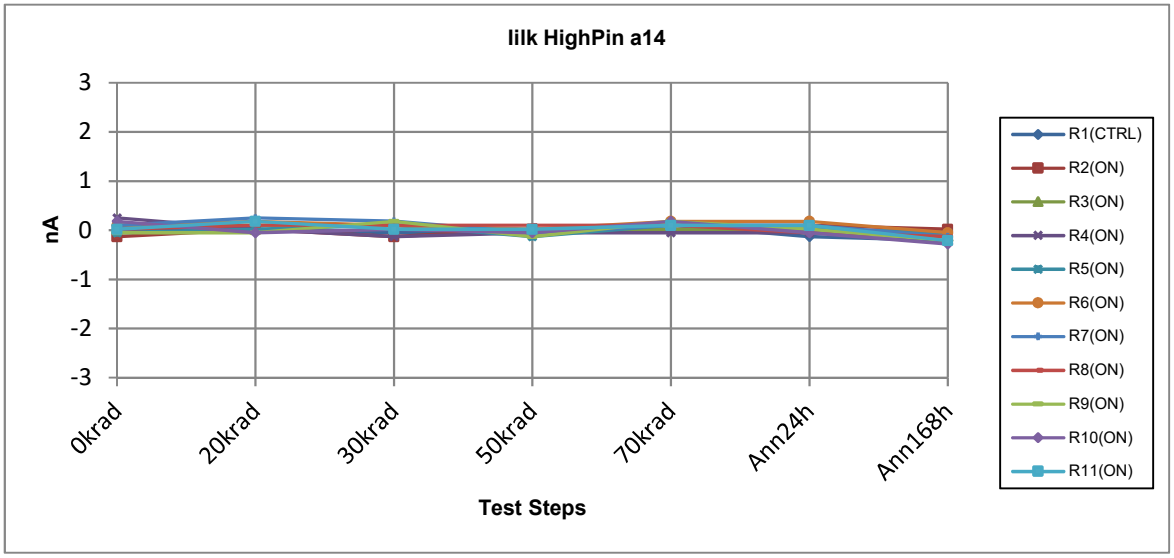
ILI HighPin a17	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.06	-0.06	-0.21	-0.21	-0.29	-0.29	-0.36
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.29	0.10	-0.13	-0.06	-1.51	0.79	-0.21
R3(ON BIAS LDC)	-0.06	-0.06	-0.21	-0.13	-1.51	-0.13	-0.36
R4(ON BIAS LDC)	-0.13	0.17	-0.21	-0.29	0.10	-0.06	-0.36
R5(ON BIAS LDC)	-0.13	-0.13	-0.13	-0.13	-0.13	-0.36	-0.44
R6(ON BIAS LDC)	-0.21	0.02	-0.06	-0.29	-0.67	0.63	-0.13
R7(ON BIAS LDC)	-0.13	-0.21	0.02	-0.21	1.02	-1.05	-0.29
R8(ON BIAS LDC)	-0.06	-0.06	-0.13	-0.29	-0.06	-0.13	-0.29
R9(ON BIAS LDC)	-0.06	-0.21	-0.06	-0.29	-0.13	-0.44	-0.13
R10(ON BIAS LDC)	0.02	-0.21	-0.21	-0.13	1.25	-0.36	0.02
R11(ON BIAS LDC)	0.02	-0.13	0.17	-0.21	-0.44	0.02	-0.36
Irradiated, LDC biased parts statistics							
Min Value	-0.13	-0.21	-0.21	-0.29	-0.44	-1.05	-0.36
Max Value	0.02	-0.06	0.17	-0.13	1.25	0.02	0.02
Average	-0.04	-0.16	-0.04	-0.23	0.33	-0.39	-0.21
Sigma	0.06	0.07	0.15	0.07	0.75	0.41	0.15



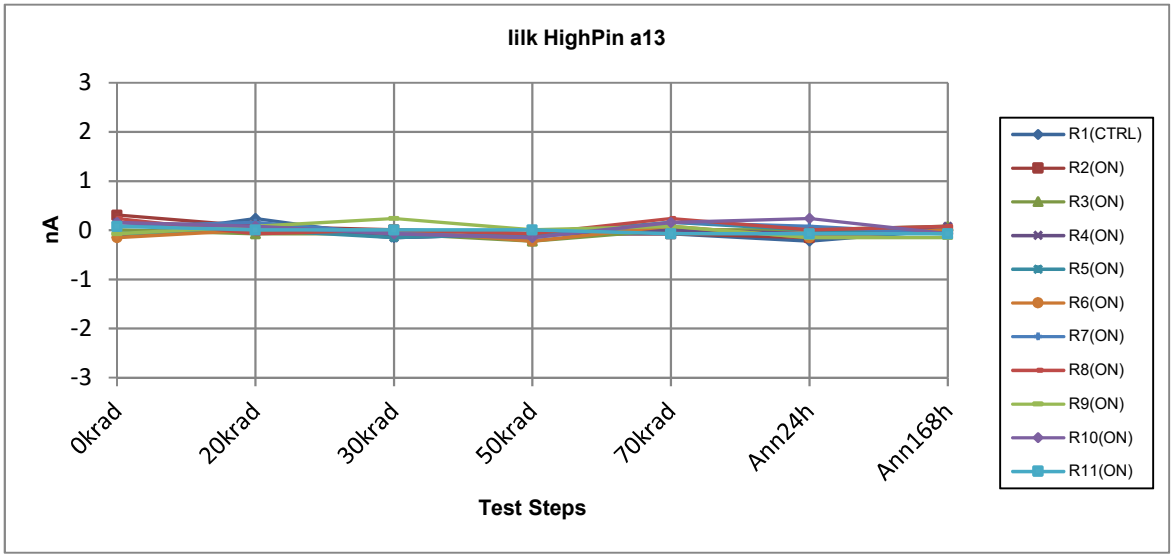
ILI HighPin a16	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	0.16	0.31	0.00	0.16	0.23	0.00	0.16
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.23	0.23	0.00	0.00	0.23	0.08	0.31
R3(ON BIAS LDC)	0.16	0.39	0.16	0.08	0.16	0.16	0.00
R4(ON BIAS LDC)	0.23	0.23	0.16	0.16	0.31	0.00	-0.07
R5(ON BIAS LDC)	0.16	0.23	0.23	0.08	0.23	0.16	0.16
R6(ON BIAS LDC)	0.39	0.16	0.16	0.16	0.08	0.16	0.16
R7(ON BIAS LDC)	0.23	0.39	0.08	0.23	0.23	-0.07	0.16
R8(ON BIAS LDC)	0.23	0.23	0.31	0.00	0.00	-0.07	0.16
R9(ON BIAS LDC)	0.16	0.00	0.23	0.16	0.08	0.08	0.00
R10(ON BIAS LDC)	0.46	0.39	0.31	0.31	0.16	0.00	0.16
R11(ON BIAS LDC)	0.31	0.16	0.23	0.08	0.16	-0.07	0.08
Irradiated, LDC biased parts statistics							
Min Value	0.16	0.00	0.08	0.00	0.00	-0.07	0.00
Max Value	0.46	0.39	0.31	0.31	0.23	0.08	0.16
Average	0.28	0.23	0.23	0.16	0.13	-0.03	0.11
Sigma	0.11	0.17	0.09	0.12	0.09	0.07	0.07



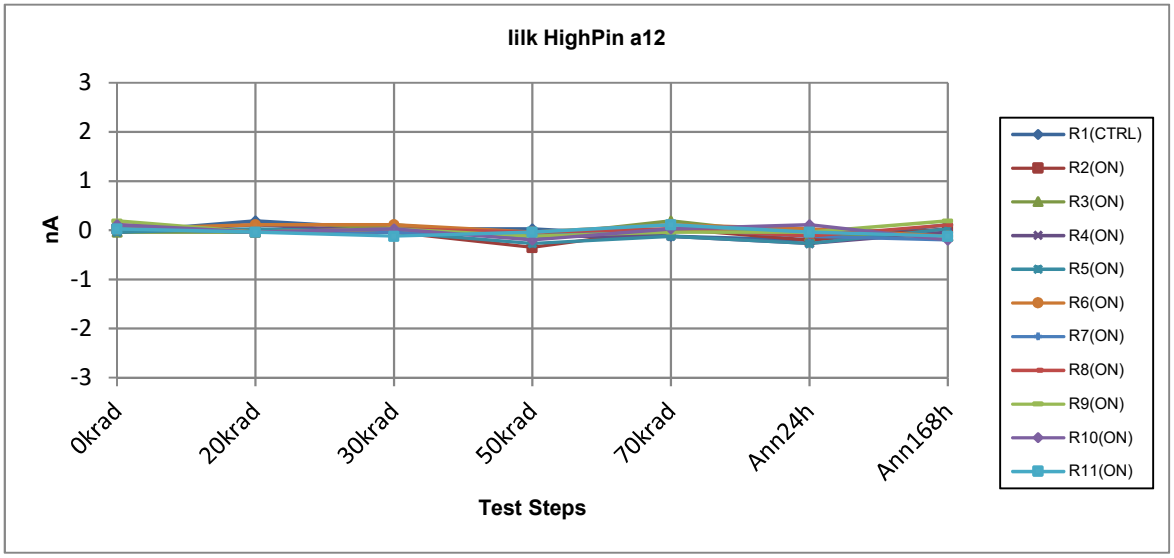
ILI HighPin a15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	0.03	0.26	0.19	-0.04	-0.04	-0.12	0.11
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.04	0.34	0.19	-0.04	-0.04	0.03	0.19
R3(ON BIAS LDC)	0.11	0.19	-0.04	-0.20	-0.04	0.11	-0.04
R4(ON BIAS LDC)	0.19	0.19	0.03	0.26	0.11	0.03	0.11
R5(ON BIAS LDC)	0.19	0.19	0.03	-0.04	0.11	0.03	-0.04
R6(ON BIAS LDC)	0.26	0.19	0.11	0.03	0.11	0.03	-0.20
R7(ON BIAS LDC)	0.11	0.19	-0.04	-0.20	0.11	0.11	-0.12
R8(ON BIAS LDC)	0.34	0.11	-0.12	-0.20	-0.04	-0.04	0.11
R9(ON BIAS LDC)	0.26	0.26	-0.04	0.11	-0.20	0.19	-0.04
R10(ON BIAS LDC)	0.26	0.19	0.11	0.03	0.03	0.19	-0.20
R11(ON BIAS LDC)	0.11	0.11	0.03	0.19	0.11	0.11	-0.12
Irradiated, LDC biased parts statistics							
Min Value	0.11	0.11	-0.12	-0.20	-0.20	-0.04	-0.20
Max Value	0.34	0.26	0.11	0.19	0.11	0.19	0.11
Average	0.22	0.17	-0.01	-0.01	0.00	0.11	-0.07
Sigma	0.10	0.06	0.09	0.18	0.13	0.09	0.12



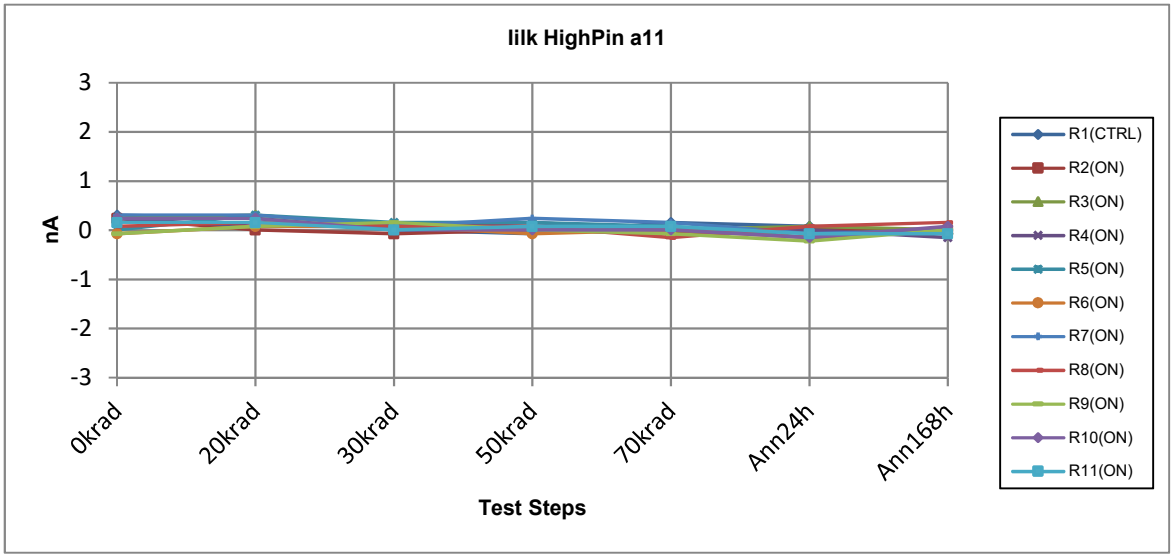
ILI HighPin a14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	0.02	0.02	-0.05	-0.05	0.10	-0.13	-0.21
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	-0.13	0.02	-0.13	0.02	0.10	0.10	0.02
R3(ON BIAS LDC)	0.10	0.10	0.10	-0.05	0.02	0.02	-0.13
R4(ON BIAS LDC)	0.25	0.02	-0.13	-0.05	-0.05	-0.05	-0.13
R5(ON BIAS LDC)	-0.05	0.02	0.10	-0.13	0.10	0.02	-0.05
R6(ON BIAS LDC)	0.10	0.18	0.10	0.02	0.18	0.18	-0.05
R7(ON BIAS LDC)	0.10	0.25	0.18	-0.05	0.10	0.10	-0.13
R8(ON BIAS LDC)	0.02	0.10	0.10	0.10	0.10	-0.05	-0.13
R9(ON BIAS LDC)	-0.05	-0.05	0.18	-0.13	0.18	0.02	-0.21
R10(ON BIAS LDC)	0.18	-0.05	0.02	-0.05	0.18	-0.05	-0.28
R11(ON BIAS LDC)	0.02	0.18	0.02	0.02	0.10	0.10	-0.21
Irradiated, LDC biased parts statistics							
Min Value	-0.05	-0.05	0.02	-0.13	0.10	-0.05	-0.28
Max Value	0.18	0.25	0.18	0.10	0.18	0.10	-0.13
Average	0.05	0.09	0.10	-0.02	0.13	0.02	-0.19
Sigma	0.09	0.14	0.08	0.09	0.04	0.08	0.06



ILI HighPin a13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.15	0.24	-0.15	-0.07	-0.07	-0.22	0.01
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.31	0.08	0.01	-0.07	-0.07	-0.15	0.01
R3(ON BIAS LDC)	0.01	-0.07	-0.07	-0.22	0.01	0.01	0.08
R4(ON BIAS LDC)	0.16	0.08	-0.15	-0.07	0.01	-0.07	0.08
R5(ON BIAS LDC)	-0.07	0.01	-0.15	-0.07	0.16	0.01	-0.07
R6(ON BIAS LDC)	-0.15	0.01	0.01	-0.22	0.08	-0.15	0.01
R7(ON BIAS LDC)	0.08	0.16	-0.07	-0.15	0.16	0.08	-0.07
R8(ON BIAS LDC)	0.24	-0.07	0.01	-0.07	0.24	0.01	0.08
R9(ON BIAS LDC)	-0.07	0.08	0.24	0.01	0.08	-0.15	-0.15
R10(ON BIAS LDC)	0.16	0.08	-0.07	-0.15	0.16	0.24	-0.07
R11(ON BIAS LDC)	0.08	0.01	0.01	0.01	-0.07	-0.07	-0.07
Irradiated, LDC biased parts statistics							
Min Value	-0.07	-0.07	-0.07	-0.15	-0.07	-0.15	-0.15
Max Value	0.24	0.16	0.24	0.01	0.24	0.24	0.08
Average	0.10	0.05	0.02	-0.07	0.11	0.02	-0.06
Sigma	0.11	0.09	0.13	0.08	0.12	0.15	0.08



ILI HighPin a12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.04	0.19	0.03	0.03	-0.12	-0.20	0.11
Irradiated, LDC biased parts results							
R2(ON BIAS LDC)	0.03	-0.04	-0.04	-0.35	0.03	-0.20	0.03
R3(ON BIAS LDC)	-0.04	-0.04	0.11	-0.12	0.19	-0.12	-0.12
R4(ON BIAS LDC)	-0.04	0.11	-0.04	-0.12	-0.12	-0.27	-0.04
R5(ON BIAS LDC)	-0.04	0.03	-0.04	-0.27	-0.12	-0.27	0.03
R6(ON BIAS LDC)	0.03	0.11	0.11	-0.04	0.11	0.03	-0.12
R7(ON BIAS LDC)	0.03	-0.04	-0.04	-0.12	0.03	-0.12	-0.20
R8(ON BIAS LDC)	0.11	-0.04	0.03	-0.04	0.03	-0.12	0.11
R9(ON BIAS LDC)	0.19	-0.04	0.03	-0.12	-0.04	-0.04	0.19
R10(ON BIAS LDC)	0.11	-0.04	0.03	-0.20	0.03	0.11	-0.20
R11(ON BIAS LDC)	0.03	-0.04	-0.12	-0.04	0.11	-0.04	-0.12
Irradiated, LDC biased parts statistics							
Min Value	0.03	-0.04	-0.12	-0.20	-0.04	-0.12	-0.20
Max Value	0.19	-0.04	0.03	-0.04	0.11	0.11	0.19
Average	0.09	-0.04	-0.01	-0.10	0.03	-0.04	-0.04
Sigma	0.07	0.00	0.07	0.07	0.05	0.09	0.18



ILI HighPin a11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	0.31	0.24	0.01	-0.07	0.16	0.08	-0.07
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.24	0.01	-0.07	0.01	-0.07	0.01	0.01
R3(ON BIAS LDC)	0.24	0.31	0.08	0.08	0.01	0.08	0.01
R4(ON BIAS LDC)	0.24	0.08	0.08	0.16	0.01	0.01	-0.15
R5(ON BIAS LDC)	0.01	0.31	0.16	0.16	0.08	-0.15	0.01
R6(ON BIAS LDC)	-0.07	0.08	0.08	-0.07	0.01	-0.15	0.01
R7(ON BIAS LDC)	0.31	0.31	0.08	0.24	0.16	-0.07	0.01
R8(ON BIAS LDC)	0.08	0.16	0.08	0.08	-0.15	0.08	0.16
R9(ON BIAS LDC)	-0.07	0.08	0.16	0.01	-0.07	-0.22	0.01
R10(ON BIAS LDC)	0.24	0.24	0.01	0.01	0.01	-0.15	0.08
R11(ON BIAS LDC)	0.16	0.16	0.01	0.08	0.08	-0.07	-0.07
Irradiated, ON biased LDC parts statistics							
Min Value	-0.07	0.01	-0.07	-0.07	-0.15	-0.22	-0.15
Max Value	0.31	0.31	0.16	0.24	0.16	0.08	0.16
Average	0.14	0.17	0.07	0.08	0.01	-0.06	0.01
Sigma	0.14	0.11	0.07	0.09	0.09	0.10	0.08

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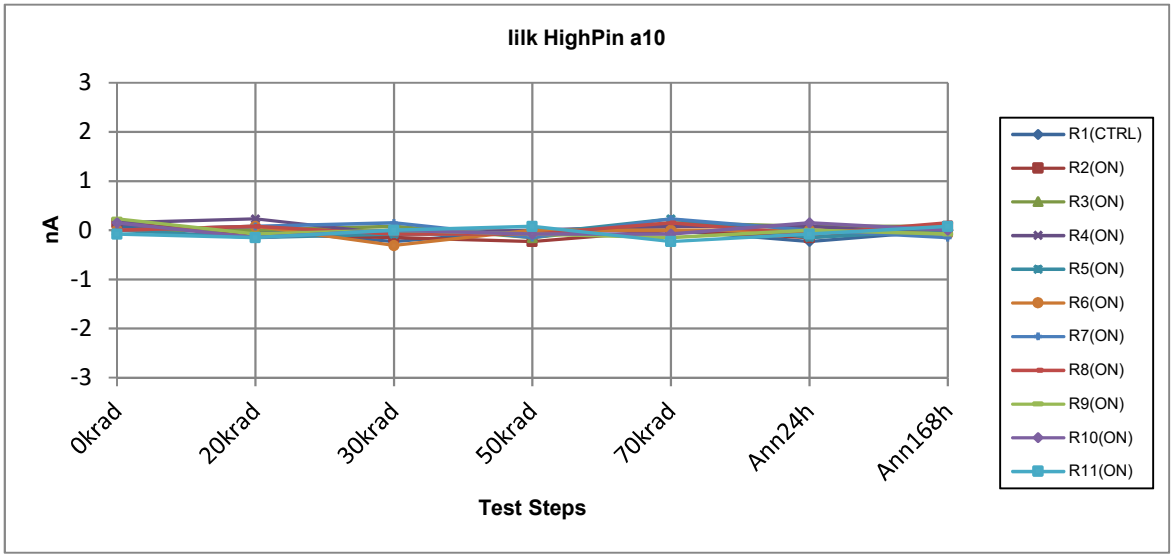
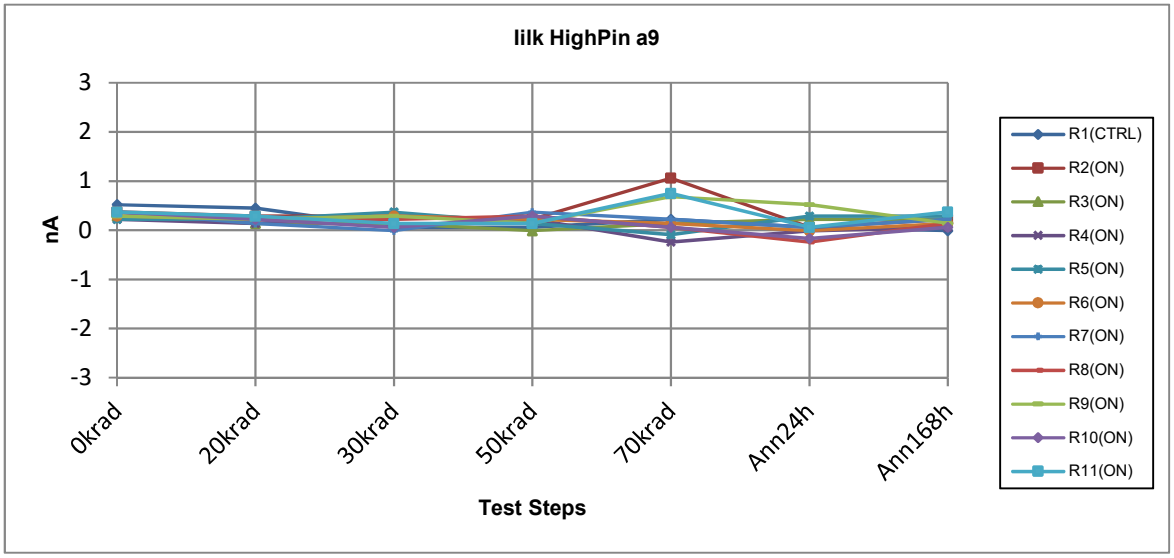
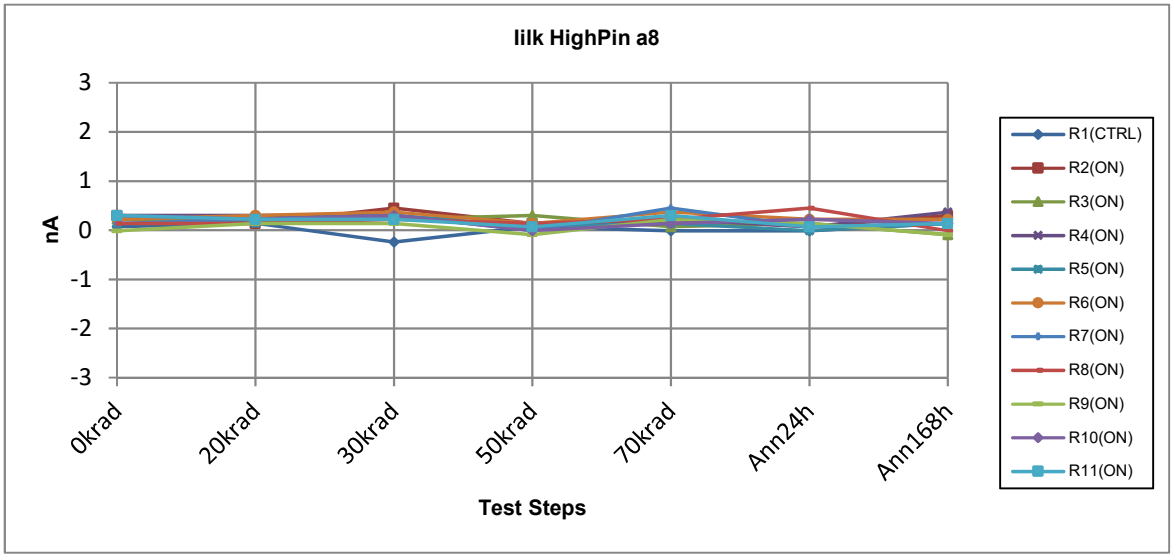


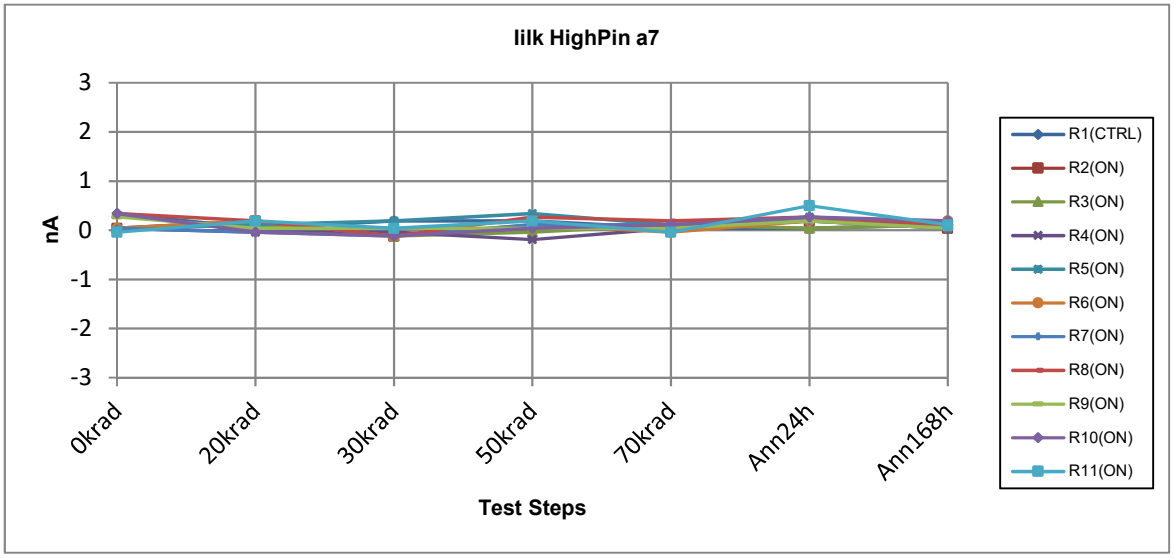
ILI HighPin a10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.08	0.00	-0.23	0.00	0.00	-0.23	0.00
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.15	-0.08	-0.15	-0.23	0.00	-0.15	0.08
R3(ON BIAS LDC)	0.00	0.00	0.08	-0.15	0.15	0.08	0.08
R4(ON BIAS LDC)	0.15	0.23	-0.08	0.00	0.08	0.08	-0.08
R5(ON BIAS LDC)	0.00	-0.15	-0.08	-0.08	0.23	-0.15	0.00
R6(ON BIAS LDC)	0.00	0.08	-0.31	0.00	0.00	0.00	-0.08
R7(ON BIAS LDC)	0.00	0.08	0.15	-0.15	0.23	0.00	-0.15
R8(ON BIAS LDC)	0.00	0.08	-0.08	-0.08	0.15	-0.08	0.15
R9(ON BIAS LDC)	0.23	-0.08	0.00	-0.08	-0.15	0.00	-0.08
R10(ON BIAS LDC)	0.15	-0.15	0.00	-0.08	-0.08	0.15	0.00
R11(ON BIAS LDC)	-0.08	-0.15	0.00	0.08	-0.23	-0.08	0.08
Irradiated, ON biased LDC parts statistics							
Min Value	-0.08	-0.15	-0.31	-0.23	-0.23	-0.15	-0.15
Max Value	0.23	0.23	0.15	0.08	0.23	0.15	0.15
Average	0.06	-0.01	-0.05	-0.08	0.04	-0.02	0.00
Sigma	0.10	0.13	0.13	0.09	0.16	0.10	0.10



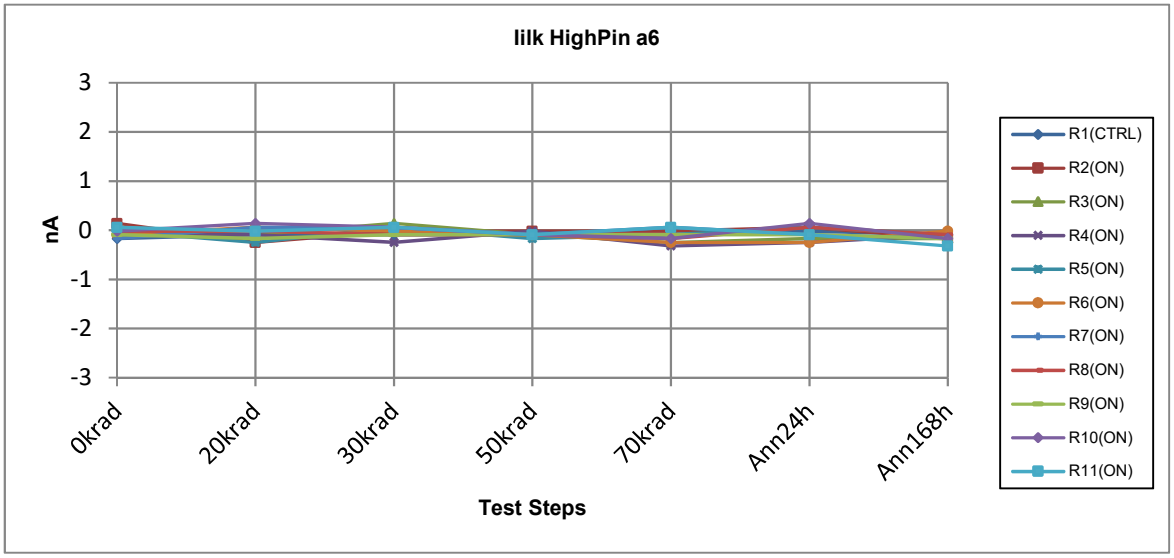
ILI HighPin a9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.52	0.45	0.06	0.06	0.22	0.06	-0.01
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.37	0.29	0.29	0.22	1.06	0.06	0.22
R3(ON BIAS LDC)	0.29	0.14	0.14	-0.01	0.14	0.22	0.22
R4(ON BIAS LDC)	0.22	0.14	0.29	0.22	-0.24	-0.01	0.06
R5(ON BIAS LDC)	0.22	0.22	0.37	0.14	-0.09	0.29	0.29
R6(ON BIAS LDC)	0.29	0.22	0.29	0.22	0.14	-0.01	0.14
R7(ON BIAS LDC)	0.37	0.14	-0.01	0.37	0.22	0.06	0.22
R8(ON BIAS LDC)	0.37	0.22	0.22	0.29	0.06	-0.24	0.14
R9(ON BIAS LDC)	0.29	0.22	0.29	0.14	0.68	0.52	0.14
R10(ON BIAS LDC)	0.37	0.22	0.06	0.29	0.06	-0.17	0.06
R11(ON BIAS LDC)	0.37	0.29	0.14	0.14	0.75	0.06	0.37
Irradiated, ON biased LDC parts statistics							
Min Value	0.22	0.14	-0.01	-0.01	-0.24	-0.24	0.06
Max Value	0.37	0.29	0.37	0.37	1.06	0.52	0.37
Average	0.32	0.21	0.21	0.20	0.28	0.08	0.19
Sigma	0.06	0.06	0.12	0.11	0.41	0.22	0.10



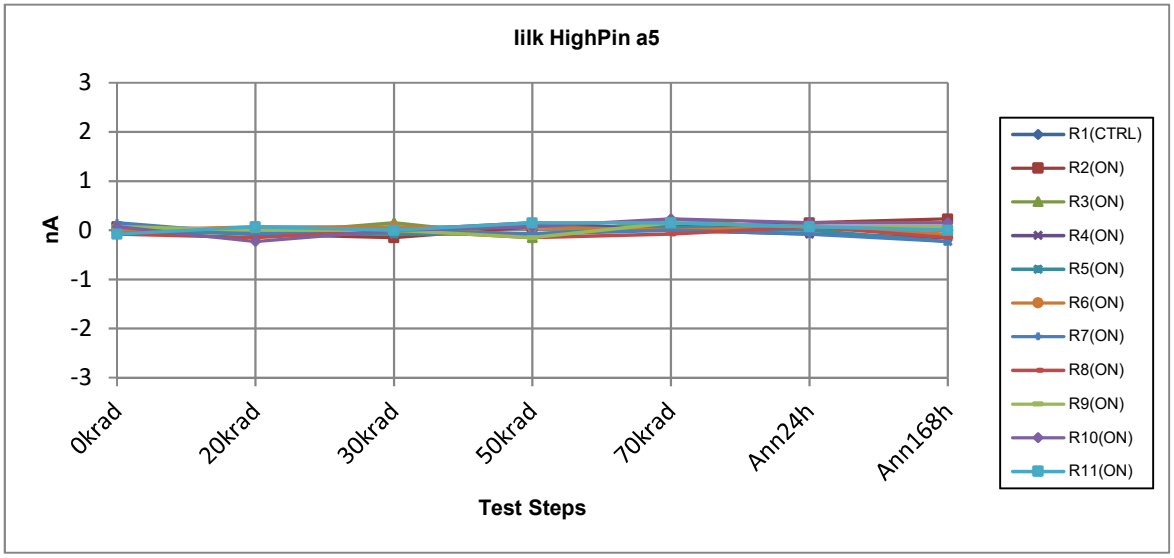
ILI HighPin a8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.07	0.14	-0.24	0.07	-0.01	-0.01	0.14
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.30	0.14	0.45	0.14	0.22	0.07	0.30
R3(ON BIAS LDC)	0.22	0.22	0.22	0.30	0.07	0.14	-0.09
R4(ON BIAS LDC)	0.30	0.30	0.30	0.07	0.22	0.07	0.37
R5(ON BIAS LDC)	0.14	0.14	0.30	0.07	0.14	-0.01	0.14
R6(ON BIAS LDC)	0.22	0.30	0.37	0.14	0.37	0.22	0.22
R7(ON BIAS LDC)	0.14	0.22	0.30	-0.01	0.45	0.07	0.14
R8(ON BIAS LDC)	0.14	0.14	0.22	0.14	0.22	0.45	-0.01
R9(ON BIAS LDC)	-0.01	0.14	0.14	-0.09	0.22	0.14	-0.09
R10(ON BIAS LDC)	0.30	0.22	0.30	-0.01	0.14	0.22	0.14
R11(ON BIAS LDC)	0.30	0.22	0.22	0.07	0.30	0.07	0.14
Irradiated, ON biased LDC parts statistics							
Min Value	-0.01	0.14	0.14	-0.09	0.07	-0.01	-0.09
Max Value	0.30	0.30	0.45	0.30	0.45	0.45	0.37
Average	0.21	0.20	0.28	0.08	0.24	0.14	0.13
Sigma	0.10	0.06	0.09	0.11	0.11	0.13	0.15



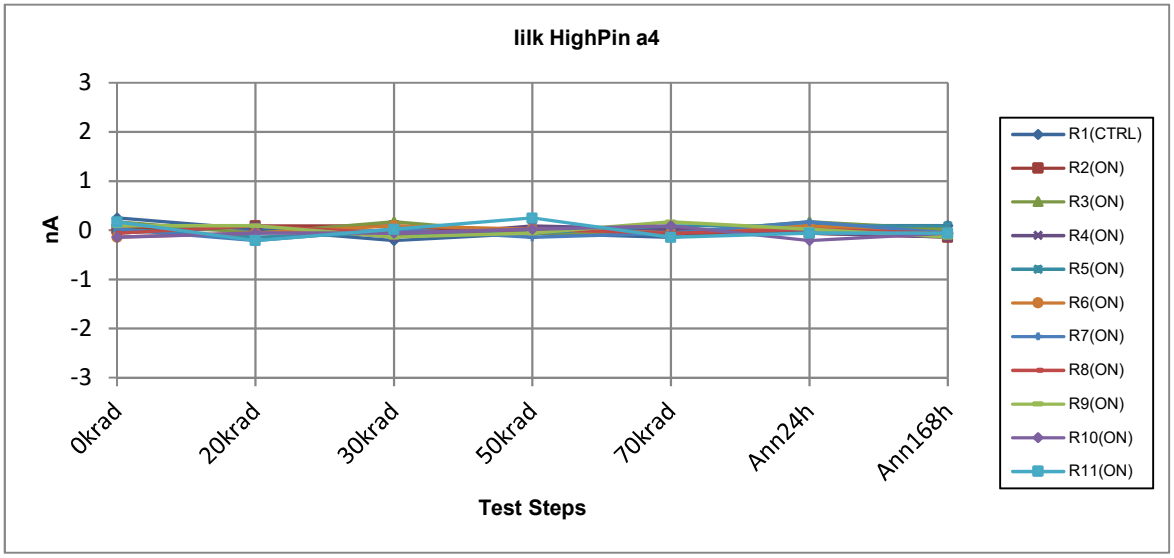
ILI HighPin a7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.34	0.04	0.19	0.19	0.04	0.04	0.11
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.04	0.19	-0.12	0.04	0.04	0.19	0.04
R3(ON BIAS LDC)	0.04	0.11	-0.12	-0.04	0.11	0.04	0.11
R4(ON BIAS LDC)	0.04	-0.04	-0.04	-0.19	0.04	0.19	0.19
R5(ON BIAS LDC)	0.04	0.11	0.19	0.34	0.11	0.27	0.04
R6(ON BIAS LDC)	0.04	0.19	-0.12	0.11	-0.04	0.19	0.19
R7(ON BIAS LDC)	0.04	-0.04	-0.12	0.11	0.11	0.19	0.04
R8(ON BIAS LDC)	0.34	0.19	-0.12	0.27	0.19	0.27	0.11
R9(ON BIAS LDC)	0.27	0.04	0.04	0.04	0.04	0.19	0.04
R10(ON BIAS LDC)	0.34	-0.04	-0.12	0.04	0.11	0.27	0.19
R11(ON BIAS LDC)	-0.04	0.19	0.04	0.19	-0.04	0.50	0.11
Irradiated, ON biased LDC parts statistics							
Min Value	-0.04	-0.04	-0.12	-0.19	-0.04	0.04	0.04
Max Value	0.34	0.19	0.19	0.34	0.19	0.50	0.19
Average	0.12	0.09	-0.05	0.09	0.07	0.23	0.11
Sigma	0.14	0.10	0.11	0.15	0.07	0.12	0.07



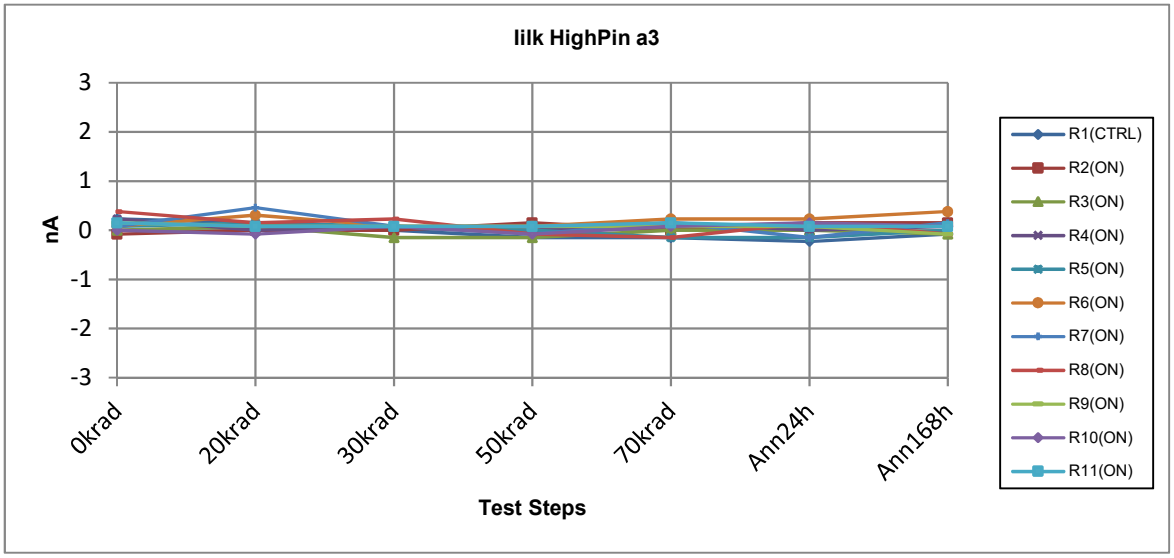
ILI HighPin a6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.17	-0.09	-0.09	-0.09	-0.09	-0.02	-0.09
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.14	-0.25	-0.02	-0.02	-0.02	0.06	-0.17
R3(ON BIAS LDC)	0.06	-0.09	0.14	-0.09	-0.25	-0.17	-0.17
R4(ON BIAS LDC)	-0.09	-0.09	-0.25	-0.02	-0.32	-0.25	-0.09
R5(ON BIAS LDC)	-0.02	-0.25	0.06	-0.17	-0.09	0.06	-0.09
R6(ON BIAS LDC)	-0.09	0.06	-0.02	-0.09	-0.25	-0.25	-0.02
R7(ON BIAS LDC)	-0.17	0.06	0.06	-0.09	0.06	-0.09	-0.17
R8(ON BIAS LDC)	-0.02	-0.02	-0.09	-0.09	-0.17	0.06	-0.09
R9(ON BIAS LDC)	-0.09	-0.17	-0.09	-0.09	-0.09	-0.09	-0.17
R10(ON BIAS LDC)	-0.02	0.14	0.06	-0.09	-0.17	0.14	-0.17
R11(ON BIAS LDC)	0.06	-0.02	0.06	-0.09	0.06	-0.09	-0.32
Irradiated, ON biased LDC parts statistics							
Min Value	-0.17	-0.25	-0.25	-0.17	-0.32	-0.25	-0.32
Max Value	0.14	0.14	0.14	-0.02	0.06	0.14	-0.02
Average	-0.02	-0.06	-0.01	-0.08	-0.12	-0.06	-0.15
Sigma	0.09	0.13	0.11	0.04	0.13	0.14	0.08



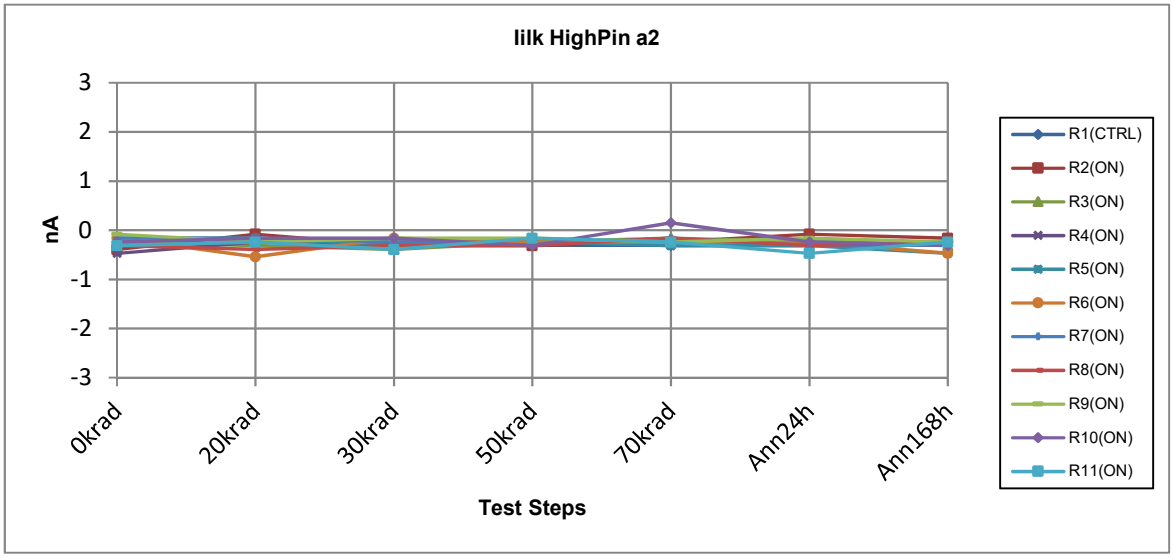
ILI HighPin a5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.08	0.00	0.00	-0.08	0.07	0.07	0.00
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.07	-0.08	-0.15	0.07	0.07	0.15	0.23
R3(ON BIAS LDC)	0.07	-0.08	0.15	-0.15	0.23	0.00	0.07
R4(ON BIAS LDC)	0.07	0.00	0.00	0.15	0.00	-0.08	-0.15
R5(ON BIAS LDC)	0.00	-0.08	-0.08	-0.08	0.07	0.00	-0.23
R6(ON BIAS LDC)	0.00	0.07	0.07	0.07	0.00	0.07	-0.08
R7(ON BIAS LDC)	0.15	-0.08	0.00	-0.08	0.00	-0.08	-0.23
R8(ON BIAS LDC)	-0.08	-0.15	0.00	-0.15	-0.08	0.07	-0.15
R9(ON BIAS LDC)	0.07	0.00	0.00	-0.15	0.15	0.07	0.07
R10(ON BIAS LDC)	0.07	-0.23	0.00	0.07	0.23	0.15	0.15
R11(ON BIAS LDC)	-0.08	0.07	0.00	0.15	0.15	0.07	0.00
Irradiated, ON biased LDC parts statistics							
Min Value	-0.08	-0.23	-0.15	-0.15	-0.08	-0.08	-0.23
Max Value	0.15	0.07	0.15	0.15	0.23	0.15	0.23
Average	0.03	-0.06	0.00	-0.01	0.08	0.04	-0.03
Sigma	0.07	0.09	0.08	0.12	0.11	0.08	0.16



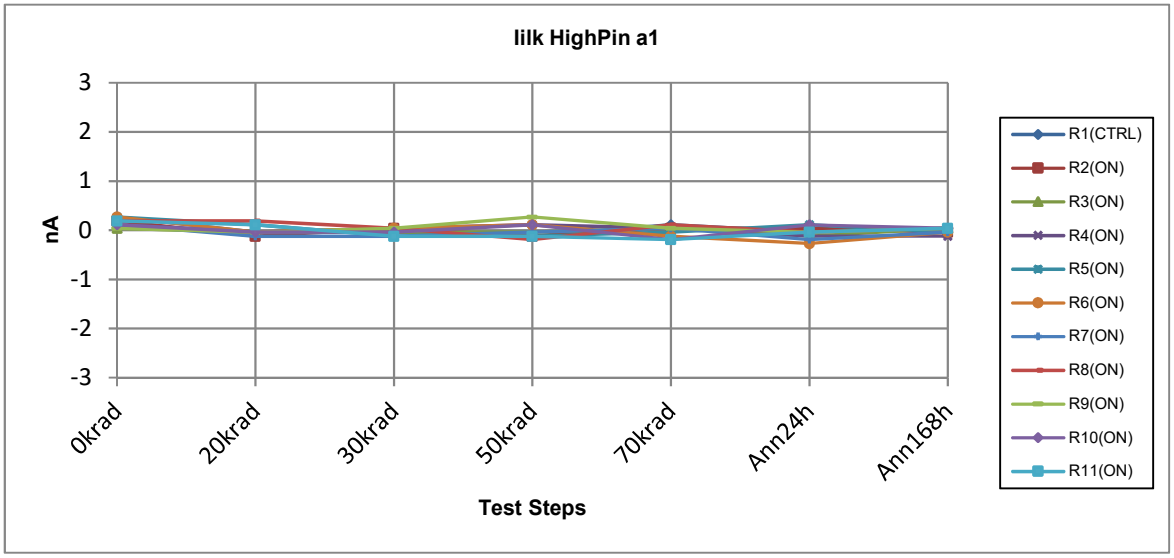
ILI HighPin a4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.25	0.02	-0.21	-0.06	-0.14	0.09	0.09
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.02	0.09	0.09	-0.06	-0.06	-0.06	-0.14
R3(ON BIAS LDC)	0.17	-0.06	0.17	-0.06	-0.06	0.17	0.02
R4(ON BIAS LDC)	-0.06	0.09	-0.14	0.09	0.02	-0.06	-0.14
R5(ON BIAS LDC)	0.02	-0.14	-0.06	-0.06	0.09	0.09	0.09
R6(ON BIAS LDC)	-0.14	-0.06	0.09	0.02	-0.06	0.09	-0.06
R7(ON BIAS LDC)	0.02	-0.21	0.02	-0.14	-0.06	0.17	-0.06
R8(ON BIAS LDC)	-0.06	0.09	-0.06	0.02	-0.06	0.02	-0.06
R9(ON BIAS LDC)	0.09	0.09	-0.14	-0.06	0.17	0.02	-0.14
R10(ON BIAS LDC)	-0.14	-0.06	-0.06	0.02	0.09	-0.21	-0.06
R11(ON BIAS LDC)	0.17	-0.21	0.02	0.25	-0.14	-0.06	-0.06
Irradiated, ON biased LDC parts statistics							
Min Value	-0.14	-0.21	-0.14	-0.14	-0.14	-0.21	-0.14
Max Value	0.17	0.09	0.17	0.25	0.17	0.17	0.09
Average	0.01	-0.04	-0.01	0.00	-0.01	0.02	-0.06
Sigma	0.11	0.12	0.10	0.11	0.10	0.12	0.07



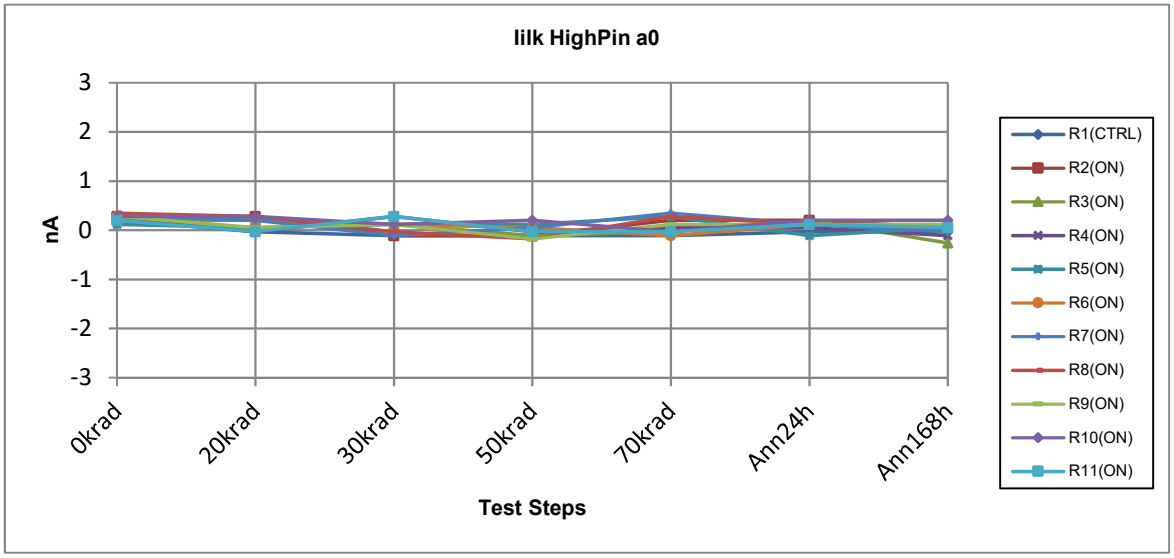
ILI HighPin a3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	0.23	0.15	0.00	-0.15	-0.15	-0.23	-0.08
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.08	0.00	0.00	0.15	0.00	0.15	0.15
R3(ON BIAS LDC)	0.00	0.08	-0.15	-0.15	0.00	0.00	-0.08
R4(ON BIAS LDC)	0.23	0.00	0.08	0.00	0.15	0.00	0.08
R5(ON BIAS LDC)	0.08	0.15	0.08	0.00	-0.15	-0.15	0.00
R6(ON BIAS LDC)	0.08	0.31	0.08	0.08	0.23	0.23	0.38
R7(ON BIAS LDC)	0.08	0.46	0.08	-0.08	0.15	-0.15	0.15
R8(ON BIAS LDC)	0.38	0.15	0.23	-0.08	-0.15	0.15	-0.08
R9(ON BIAS LDC)	0.15	0.08	0.08	0.08	0.08	0.08	-0.08
R10(ON BIAS LDC)	0.00	-0.08	0.08	-0.08	0.08	0.15	0.08
R11(ON BIAS LDC)	0.15	0.08	0.08	0.08	0.15	0.08	0.08
Irradiated, ON biased LDC parts statistics							
Min Value	-0.08	-0.08	-0.15	-0.15	-0.15	-0.15	-0.08
Max Value	0.38	0.46	0.23	0.15	0.23	0.23	0.38
Average	0.11	0.12	0.06	0.00	0.05	0.05	0.07
Sigma	0.13	0.16	0.09	0.10	0.13	0.13	0.14



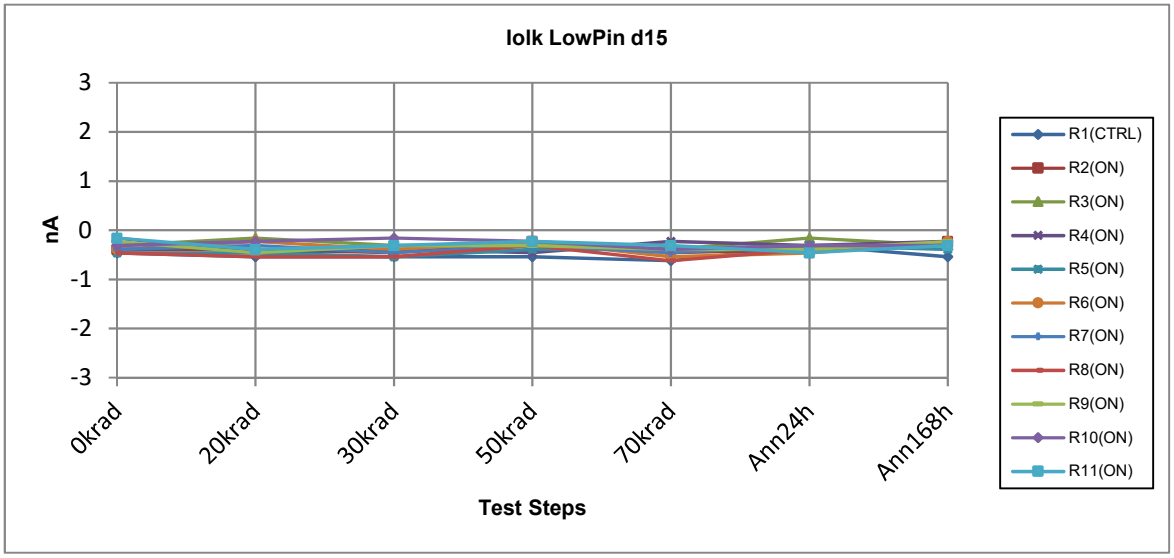
ILI HighPin a2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.31	-0.24	-0.31	-0.31	-0.31	-0.24	-0.24
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.39	-0.08	-0.31	-0.31	-0.24	-0.08	-0.16
R3(ON BIAS LDC)	-0.24	-0.31	-0.39	-0.24	-0.16	-0.24	-0.31
R4(ON BIAS LDC)	-0.47	-0.24	-0.24	-0.24	-0.31	-0.31	-0.24
R5(ON BIAS LDC)	-0.16	-0.16	-0.31	-0.24	-0.31	-0.31	-0.47
R6(ON BIAS LDC)	-0.16	-0.54	-0.16	-0.24	-0.24	-0.24	-0.47
R7(ON BIAS LDC)	-0.16	-0.16	-0.24	-0.31	-0.16	-0.31	-0.31
R8(ON BIAS LDC)	-0.31	-0.39	-0.31	-0.31	-0.16	-0.31	-0.24
R9(ON BIAS LDC)	-0.08	-0.24	-0.16	-0.16	-0.24	-0.16	-0.24
R10(ON BIAS LDC)	-0.24	-0.16	-0.16	-0.31	0.15	-0.24	-0.31
R11(ON BIAS LDC)	-0.31	-0.24	-0.39	-0.16	-0.24	-0.47	-0.24
Irradiated, ON biased LDC parts statistics							
Min Value	-0.47	-0.54	-0.39	-0.31	-0.31	-0.47	-0.47
Max Value	-0.08	-0.08	-0.16	-0.16	0.15	-0.08	-0.16
Average	-0.25	-0.25	-0.27	-0.25	-0.19	-0.27	-0.30
Sigma	0.12	0.13	0.09	0.06	0.13	0.10	0.10



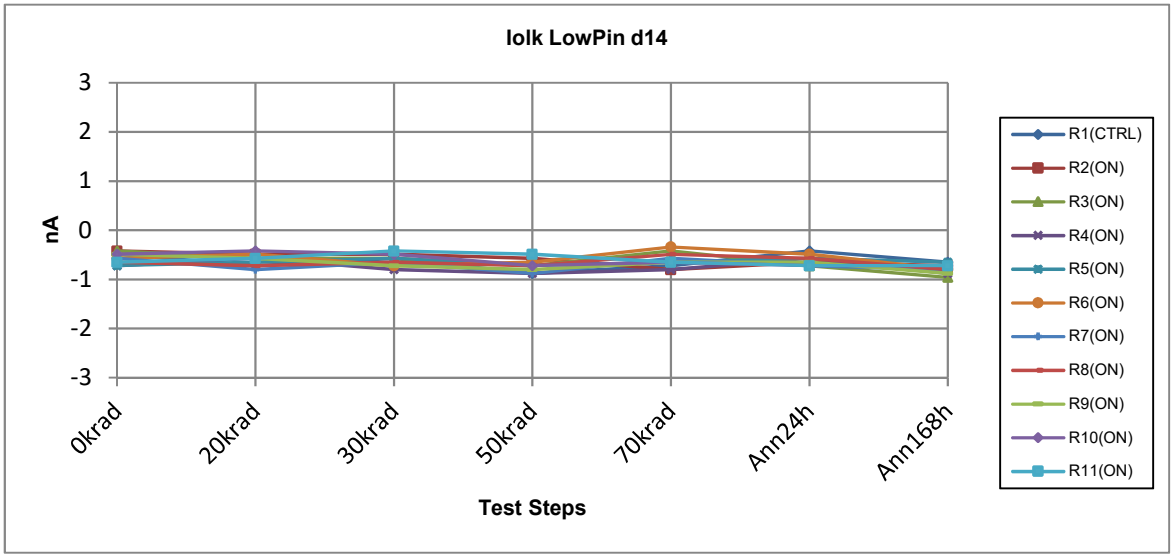
ILI HighPin a1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	0.27	-0.04	-0.04	-0.12	0.11	-0.04	0.04
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.19	-0.12	0.04	-0.12	0.04	0.04	-0.04
R3(ON BIAS LDC)	0.04	-0.04	-0.04	-0.04	0.04	-0.12	0.04
R4(ON BIAS LDC)	0.11	-0.04	0.04	0.11	0.04	-0.12	-0.12
R5(ON BIAS LDC)	0.27	0.11	-0.12	-0.12	-0.04	0.11	-0.04
R6(ON BIAS LDC)	0.27	-0.04	0.04	0.11	-0.12	-0.27	-0.04
R7(ON BIAS LDC)	0.11	-0.12	-0.12	-0.04	0.04	-0.19	-0.04
R8(ON BIAS LDC)	0.19	0.19	0.04	-0.19	0.11	-0.04	0.04
R9(ON BIAS LDC)	0.04	-0.04	0.04	0.27	0.04	-0.04	0.04
R10(ON BIAS LDC)	0.11	-0.04	-0.04	0.11	-0.19	0.11	0.04
R11(ON BIAS LDC)	0.19	0.11	-0.12	-0.12	-0.19	-0.04	0.04
Irradiated, ON biased LDC parts statistics							
Min Value	0.04	-0.12	-0.12	-0.19	-0.19	-0.27	-0.12
Max Value	0.27	0.19	0.04	0.27	0.11	0.11	0.04
Average	0.15	0.00	-0.02	0.00	-0.02	-0.06	-0.01
Sigma	0.08	0.10	0.07	0.15	0.11	0.12	0.06



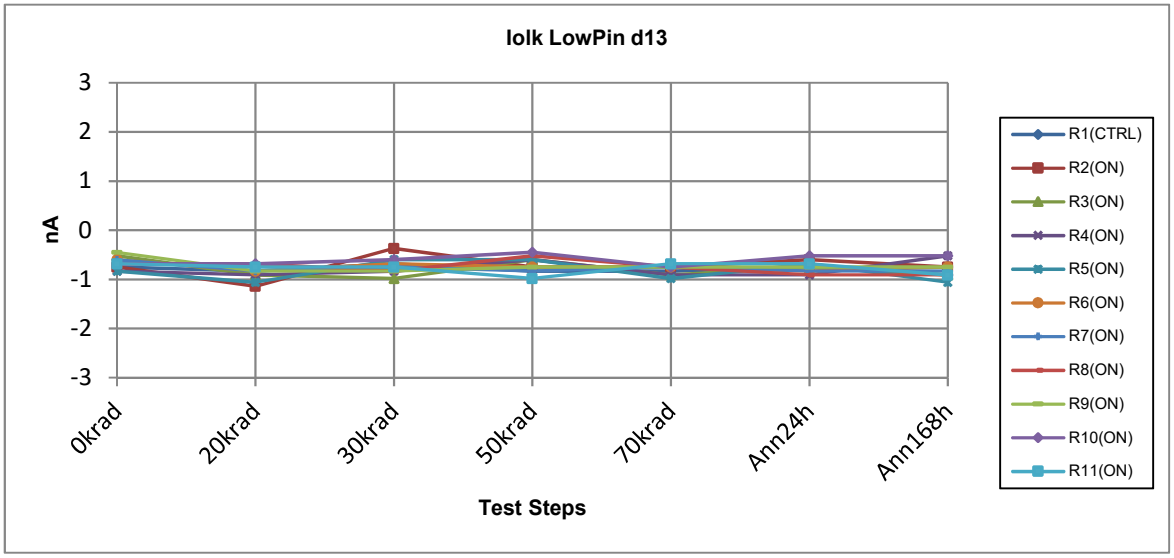
ILI HighPin a0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.20	-0.03	-0.11	-0.11	-0.11	-0.03	-0.03
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.28	0.28	-0.11	-0.11	0.20	0.20	0.05
R3(ON BIAS LDC)	0.20	0.20	0.12	-0.11	-0.03	0.20	-0.26
R4(ON BIAS LDC)	0.28	-0.03	0.28	-0.03	0.05	0.05	-0.11
R5(ON BIAS LDC)	0.12	0.05	0.12	0.12	0.28	-0.11	0.05
R6(ON BIAS LDC)	0.28	0.20	0.12	0.05	-0.11	0.12	0.05
R7(ON BIAS LDC)	0.28	0.20	-0.11	0.05	0.35	0.12	-0.03
R8(ON BIAS LDC)	0.35	0.28	-0.03	-0.18	0.28	0.12	0.05
R9(ON BIAS LDC)	0.28	0.05	0.12	-0.18	0.12	0.12	0.12
R10(ON BIAS LDC)	0.28	0.28	0.12	0.20	-0.03	0.20	0.20
R11(ON BIAS LDC)	0.20	-0.03	0.28	-0.03	-0.03	0.12	0.05
Irradiated, ON biased LDC parts statistics							
Min Value	0.12	-0.03	-0.11	-0.18	-0.11	-0.11	-0.26
Max Value	0.35	0.28	0.28	0.20	0.35	0.20	0.20
Average	0.26	0.15	0.09	-0.02	0.11	0.11	0.02
Sigma	0.06	0.13	0.14	0.13	0.16	0.09	0.13



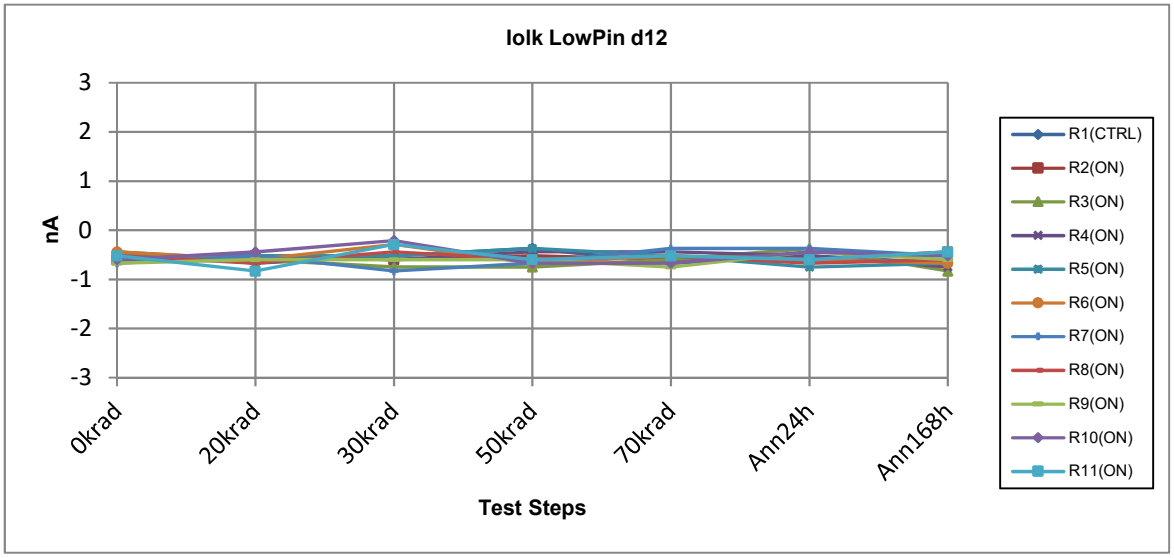
Iolk LowPin d15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.46	-0.54	-0.54	-0.54	-0.62	-0.31	-0.54
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.39	-0.39	-0.46	-0.23	-0.46	-0.39	-0.23
R3(ON BIAS LDC)	-0.31	-0.16	-0.31	-0.31	-0.39	-0.16	-0.31
R4(ON BIAS LDC)	-0.16	-0.46	-0.39	-0.46	-0.23	-0.31	-0.23
R5(ON BIAS LDC)	-0.46	-0.46	-0.54	-0.39	-0.39	-0.31	-0.39
R6(ON BIAS LDC)	-0.39	-0.23	-0.39	-0.23	-0.54	-0.46	-0.23
R7(ON BIAS LDC)	-0.39	-0.31	-0.46	-0.31	-0.46	-0.31	-0.31
R8(ON BIAS LDC)	-0.46	-0.54	-0.54	-0.31	-0.62	-0.39	-0.23
R9(ON BIAS LDC)	-0.23	-0.46	-0.31	-0.31	-0.39	-0.39	-0.23
R10(ON BIAS LDC)	-0.31	-0.23	-0.16	-0.23	-0.39	-0.31	-0.31
R11(ON BIAS LDC)	-0.16	-0.39	-0.31	-0.23	-0.31	-0.46	-0.31
Irradiated, ON biased LDC parts statistics							
Min Value	-0.46	-0.54	-0.54	-0.46	-0.62	-0.46	-0.39
Max Value	-0.16	-0.16	-0.16	-0.23	-0.23	-0.16	-0.23
Average	-0.33	-0.36	-0.39	-0.30	-0.42	-0.35	-0.28
Sigma	0.11	0.12	0.12	0.08	0.11	0.09	0.06



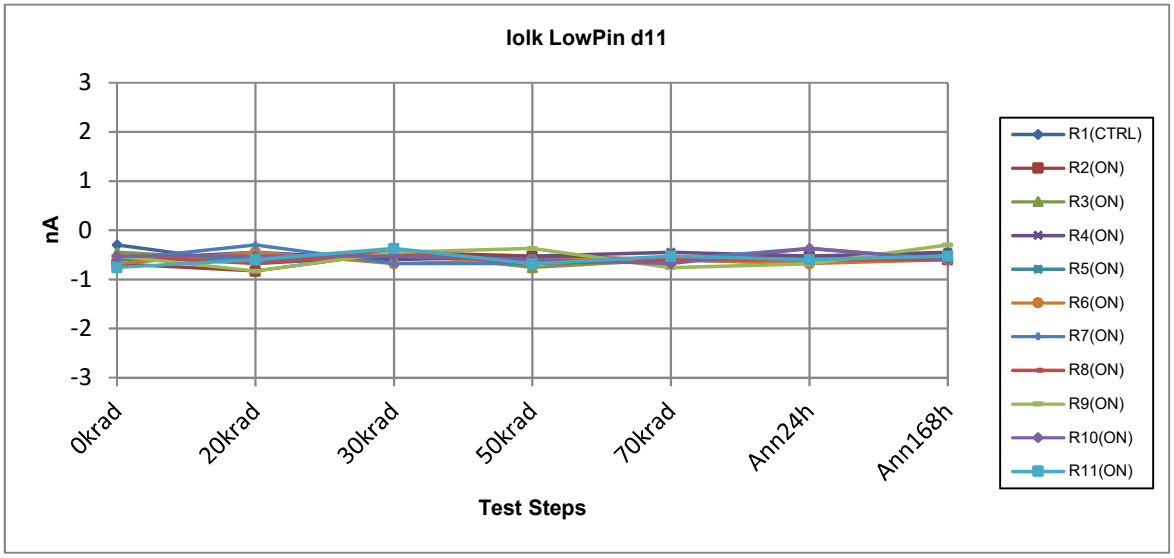
Iolk LowPin d14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.49	-0.72	-0.57	-0.88	-0.72	-0.42	-0.65
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.42	-0.49	-0.49	-0.57	-0.80	-0.65	-0.72
R3(ON BIAS LDC)	-0.42	-0.57	-0.57	-0.72	-0.42	-0.72	-0.96
R4(ON BIAS LDC)	-0.72	-0.57	-0.80	-0.88	-0.80	-0.57	-0.88
R5(ON BIAS LDC)	-0.72	-0.65	-0.57	-0.72	-0.65	-0.57	-0.65
R6(ON BIAS LDC)	-0.57	-0.49	-0.72	-0.65	-0.34	-0.49	-0.80
R7(ON BIAS LDC)	-0.57	-0.80	-0.65	-0.88	-0.57	-0.72	-0.80
R8(ON BIAS LDC)	-0.65	-0.72	-0.65	-0.72	-0.49	-0.57	-0.80
R9(ON BIAS LDC)	-0.49	-0.57	-0.72	-0.80	-0.65	-0.65	-0.88
R10(ON BIAS LDC)	-0.49	-0.42	-0.49	-0.72	-0.65	-0.72	-0.72
R11(ON BIAS LDC)	-0.65	-0.57	-0.42	-0.49	-0.65	-0.72	-0.72
Irradiated, ON biased LDC parts statistics							
Min Value	-0.72	-0.80	-0.80	-0.88	-0.80	-0.72	-0.96
Max Value	-0.42	-0.42	-0.42	-0.49	-0.34	-0.49	-0.65
Average	-0.57	-0.59	-0.61	-0.72	-0.60	-0.64	-0.79
Sigma	0.11	0.11	0.12	0.12	0.15	0.08	0.09



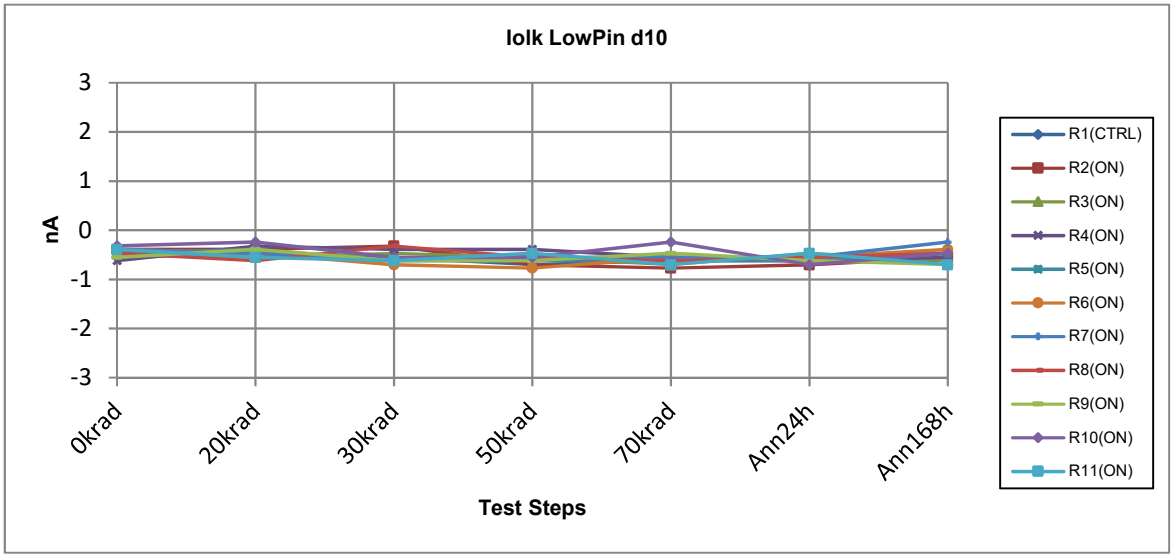
Iolk LowPin d13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.75	-0.83	-0.68	-0.83	-0.83	-0.75	-0.91
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.75	-1.14	-0.37	-0.75	-0.75	-0.60	-0.75
R3(ON BIAS LDC)	-0.52	-0.91	-0.98	-0.60	-0.91	-0.75	-0.91
R4(ON BIAS LDC)	-0.83	-0.91	-0.83	-0.60	-0.91	-0.91	-0.52
R5(ON BIAS LDC)	-0.83	-1.06	-0.60	-0.60	-0.98	-0.68	-1.06
R6(ON BIAS LDC)	-0.60	-0.83	-0.68	-0.75	-0.75	-0.83	-0.75
R7(ON BIAS LDC)	-0.60	-0.83	-0.75	-0.83	-0.75	-0.83	-0.83
R8(ON BIAS LDC)	-0.68	-0.68	-0.83	-0.52	-0.75	-0.91	-0.91
R9(ON BIAS LDC)	-0.45	-0.83	-0.83	-0.75	-0.75	-0.75	-0.75
R10(ON BIAS LDC)	-0.68	-0.68	-0.60	-0.45	-0.75	-0.52	-0.52
R11(ON BIAS LDC)	-0.68	-0.75	-0.75	-0.98	-0.68	-0.68	-0.91
Irradiated, ON biased LDC parts statistics							
Min Value	-0.83	-1.14	-0.98	-0.98	-0.98	-0.91	-1.06
Max Value	-0.45	-0.68	-0.37	-0.45	-0.68	-0.52	-0.52
Average	-0.66	-0.86	-0.72	-0.68	-0.80	-0.75	-0.79
Sigma	0.12	0.15	0.17	0.16	0.10	0.13	0.17



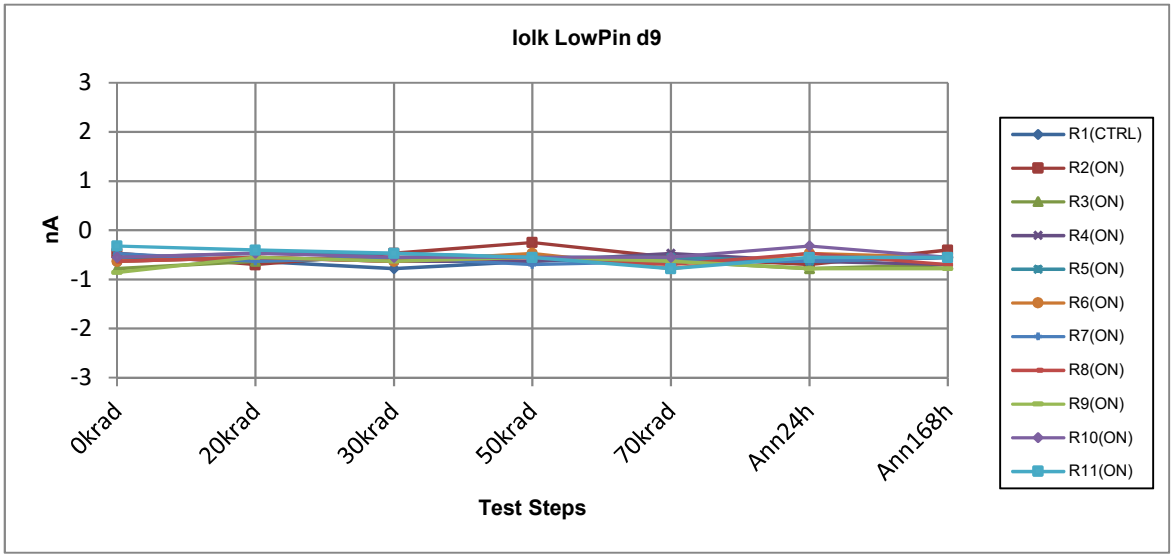
Iolk LowPin d12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.44	-0.67	-0.52	-0.37	-0.67	-0.52	-0.67
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.60	-0.52	-0.60	-0.52	-0.60	-0.60	-0.44
R3(ON BIAS LDC)	-0.44	-0.60	-0.75	-0.75	-0.60	-0.37	-0.83
R4(ON BIAS LDC)	-0.60	-0.52	-0.60	-0.44	-0.44	-0.52	-0.75
R5(ON BIAS LDC)	-0.52	-0.52	-0.52	-0.37	-0.52	-0.75	-0.67
R6(ON BIAS LDC)	-0.44	-0.60	-0.29	-0.67	-0.52	-0.60	-0.67
R7(ON BIAS LDC)	-0.67	-0.52	-0.83	-0.67	-0.37	-0.37	-0.52
R8(ON BIAS LDC)	-0.52	-0.67	-0.44	-0.60	-0.52	-0.67	-0.60
R9(ON BIAS LDC)	-0.67	-0.60	-0.60	-0.60	-0.75	-0.44	-0.60
R10(ON BIAS LDC)	-0.60	-0.44	-0.21	-0.67	-0.67	-0.44	-0.52
R11(ON BIAS LDC)	-0.52	-0.83	-0.29	-0.60	-0.52	-0.60	-0.44
Irradiated, ON biased LDC parts statistics							
Min Value	-0.67	-0.83	-0.83	-0.75	-0.75	-0.75	-0.83
Max Value	-0.44	-0.44	-0.21	-0.37	-0.37	-0.37	-0.44
Average	-0.56	-0.58	-0.51	-0.59	-0.55	-0.54	-0.60
Sigma	0.08	0.11	0.20	0.12	0.11	0.13	0.13



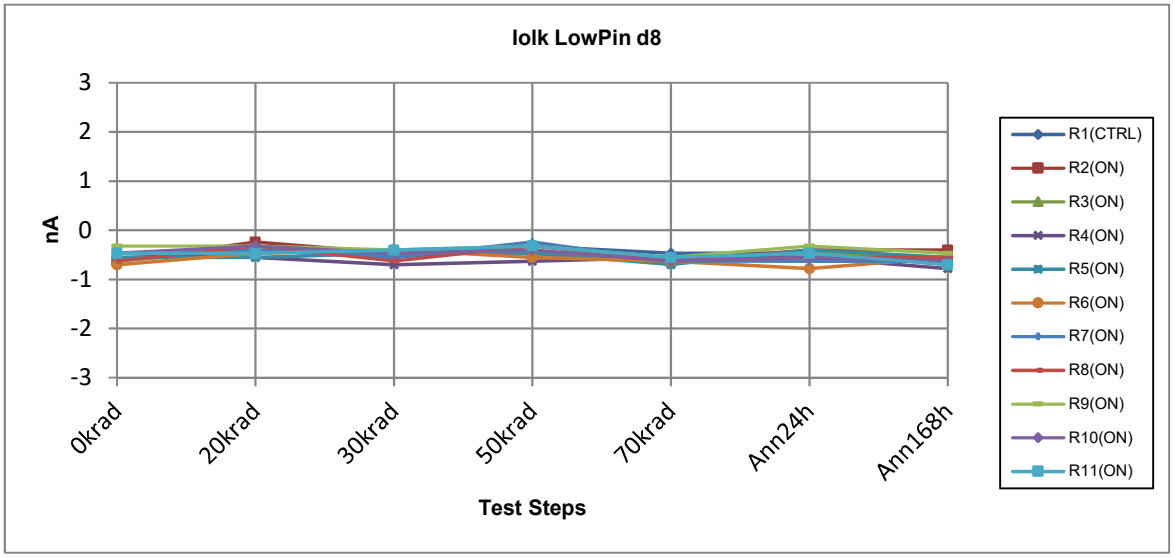
Iolk LowPin d11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.30	-0.68	-0.53	-0.60	-0.60	-0.68	-0.45
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.68	-0.83	-0.45	-0.53	-0.60	-0.53	-0.60
R3(ON BIAS LDC)	-0.45	-0.60	-0.45	-0.76	-0.60	-0.60	-0.53
R4(ON BIAS LDC)	-0.60	-0.45	-0.60	-0.53	-0.45	-0.53	-0.45
R5(ON BIAS LDC)	-0.60	-0.60	-0.53	-0.60	-0.60	-0.60	-0.53
R6(ON BIAS LDC)	-0.68	-0.45	-0.68	-0.60	-0.60	-0.68	-0.60
R7(ON BIAS LDC)	-0.60	-0.30	-0.68	-0.68	-0.60	-0.37	-0.60
R8(ON BIAS LDC)	-0.53	-0.68	-0.45	-0.68	-0.60	-0.60	-0.60
R9(ON BIAS LDC)	-0.53	-0.83	-0.45	-0.37	-0.76	-0.68	-0.30
R10(ON BIAS LDC)	-0.53	-0.53	-0.53	-0.60	-0.68	-0.37	-0.60
R11(ON BIAS LDC)	-0.76	-0.60	-0.37	-0.68	-0.53	-0.60	-0.53
Irradiated, ON biased LDC parts statistics							
Min Value	-0.76	-0.83	-0.68	-0.76	-0.76	-0.68	-0.60
Max Value	-0.45	-0.30	-0.37	-0.37	-0.45	-0.37	-0.30
Average	-0.60	-0.59	-0.52	-0.60	-0.60	-0.56	-0.53
Sigma	0.09	0.17	0.11	0.11	0.08	0.11	0.10



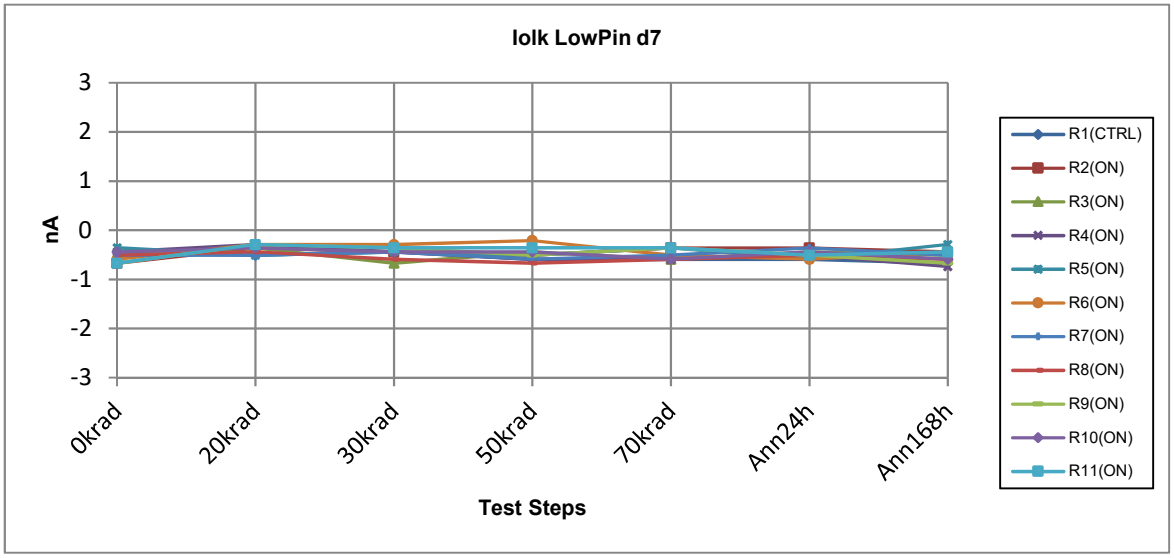
Iolk LowPin d10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.47	-0.55	-0.70	-0.62	-0.62	-0.62
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.39	-0.39	-0.32	-0.70	-0.77	-0.70	-0.55
R3(ON BIAS LDC)	-0.47	-0.55	-0.47	-0.55	-0.70	-0.47	-0.62
R4(ON BIAS LDC)	-0.62	-0.32	-0.39	-0.39	-0.55	-0.62	-0.55
R5(ON BIAS LDC)	-0.47	-0.39	-0.62	-0.62	-0.62	-0.62	-0.47
R6(ON BIAS LDC)	-0.39	-0.47	-0.70	-0.77	-0.55	-0.55	-0.39
R7(ON BIAS LDC)	-0.39	-0.47	-0.62	-0.55	-0.55	-0.55	-0.24
R8(ON BIAS LDC)	-0.47	-0.62	-0.32	-0.55	-0.62	-0.55	-0.47
R9(ON BIAS LDC)	-0.55	-0.39	-0.62	-0.62	-0.47	-0.62	-0.70
R10(ON BIAS LDC)	-0.32	-0.24	-0.55	-0.55	-0.24	-0.70	-0.47
R11(ON BIAS LDC)	-0.39	-0.55	-0.62	-0.47	-0.70	-0.47	-0.70
Irradiated, ON biased LDC parts statistics							
Min Value	-0.62	-0.62	-0.70	-0.77	-0.77	-0.70	-0.70
Max Value	-0.32	-0.24	-0.32	-0.39	-0.24	-0.47	-0.24
Average	-0.45	-0.44	-0.52	-0.58	-0.58	-0.59	-0.52
Sigma	0.09	0.12	0.14	0.11	0.15	0.08	0.14



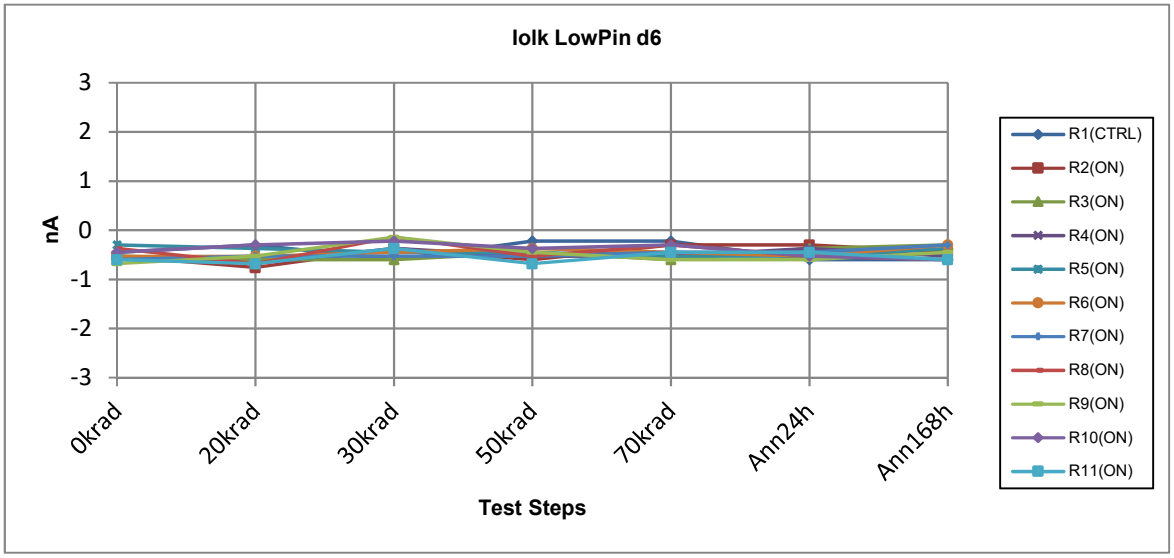
Iolk LowPin d9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.63	-0.78	-0.63	-0.55	-0.63	-0.55
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.47	-0.70	-0.47	-0.25	-0.55	-0.70	-0.40
R3(ON BIAS LDC)	-0.78	-0.63	-0.55	-0.55	-0.63	-0.78	-0.70
R4(ON BIAS LDC)	-0.63	-0.55	-0.63	-0.63	-0.47	-0.63	-0.70
R5(ON BIAS LDC)	-0.55	-0.47	-0.47	-0.55	-0.55	-0.63	-0.55
R6(ON BIAS LDC)	-0.63	-0.55	-0.63	-0.47	-0.78	-0.47	-0.55
R7(ON BIAS LDC)	-0.47	-0.63	-0.55	-0.70	-0.63	-0.63	-0.55
R8(ON BIAS LDC)	-0.63	-0.55	-0.63	-0.55	-0.70	-0.47	-0.70
R9(ON BIAS LDC)	-0.86	-0.55	-0.63	-0.55	-0.63	-0.78	-0.78
R10(ON BIAS LDC)	-0.55	-0.47	-0.55	-0.55	-0.55	-0.32	-0.55
R11(ON BIAS LDC)	-0.32	-0.40	-0.47	-0.55	-0.78	-0.55	-0.55
Irradiated, ON biased LDC parts statistics							
Min Value	-0.86	-0.70	-0.63	-0.70	-0.78	-0.78	-0.78
Max Value	-0.32	-0.40	-0.47	-0.25	-0.47	-0.32	-0.40
Average	-0.59	-0.55	-0.56	-0.54	-0.63	-0.60	-0.60
Sigma	0.16	0.09	0.07	0.12	0.10	0.15	0.11



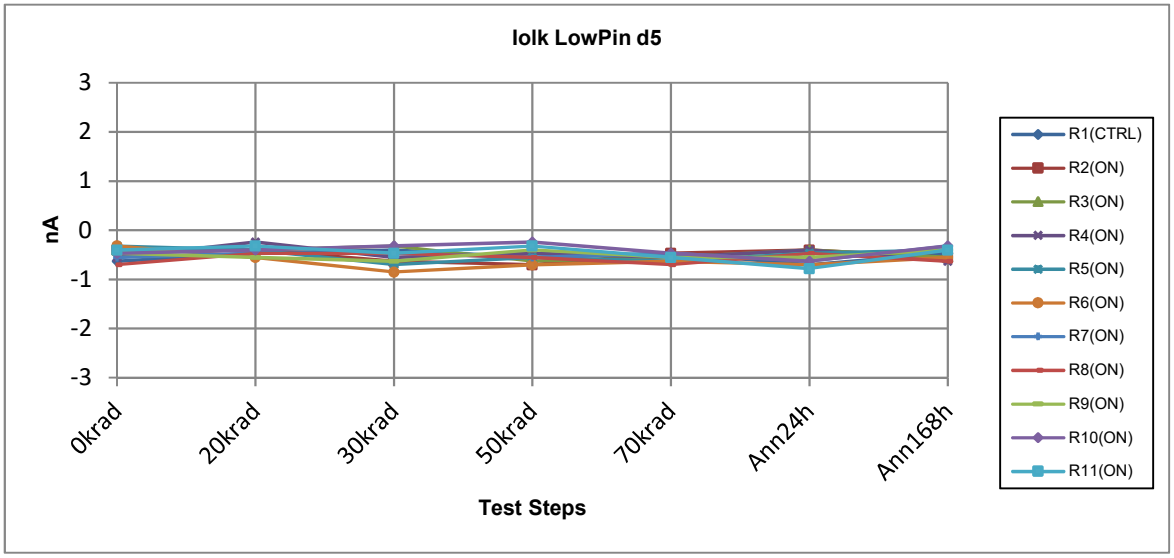
Iolk LowPin d8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.47	-0.40	-0.55	-0.32	-0.47	-0.47	-0.70
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.63	-0.24	-0.47	-0.47	-0.63	-0.40	-0.40
R3(ON BIAS LDC)	-0.63	-0.40	-0.40	-0.47	-0.63	-0.47	-0.55
R4(ON BIAS LDC)	-0.47	-0.55	-0.70	-0.63	-0.55	-0.55	-0.78
R5(ON BIAS LDC)	-0.55	-0.55	-0.47	-0.47	-0.70	-0.40	-0.55
R6(ON BIAS LDC)	-0.70	-0.47	-0.40	-0.55	-0.63	-0.78	-0.55
R7(ON BIAS LDC)	-0.47	-0.40	-0.55	-0.24	-0.63	-0.63	-0.63
R8(ON BIAS LDC)	-0.63	-0.32	-0.63	-0.32	-0.63	-0.55	-0.55
R9(ON BIAS LDC)	-0.32	-0.32	-0.40	-0.32	-0.55	-0.32	-0.47
R10(ON BIAS LDC)	-0.47	-0.32	-0.47	-0.40	-0.63	-0.55	-0.63
R11(ON BIAS LDC)	-0.47	-0.47	-0.40	-0.32	-0.55	-0.47	-0.70
Irradiated, ON biased LDC parts statistics							
Min Value	-0.70	-0.55	-0.70	-0.63	-0.70	-0.78	-0.78
Max Value	-0.32	-0.24	-0.40	-0.24	-0.55	-0.32	-0.40
Average	-0.53	-0.40	-0.49	-0.42	-0.61	-0.51	-0.58
Sigma	0.11	0.11	0.11	0.12	0.05	0.13	0.11



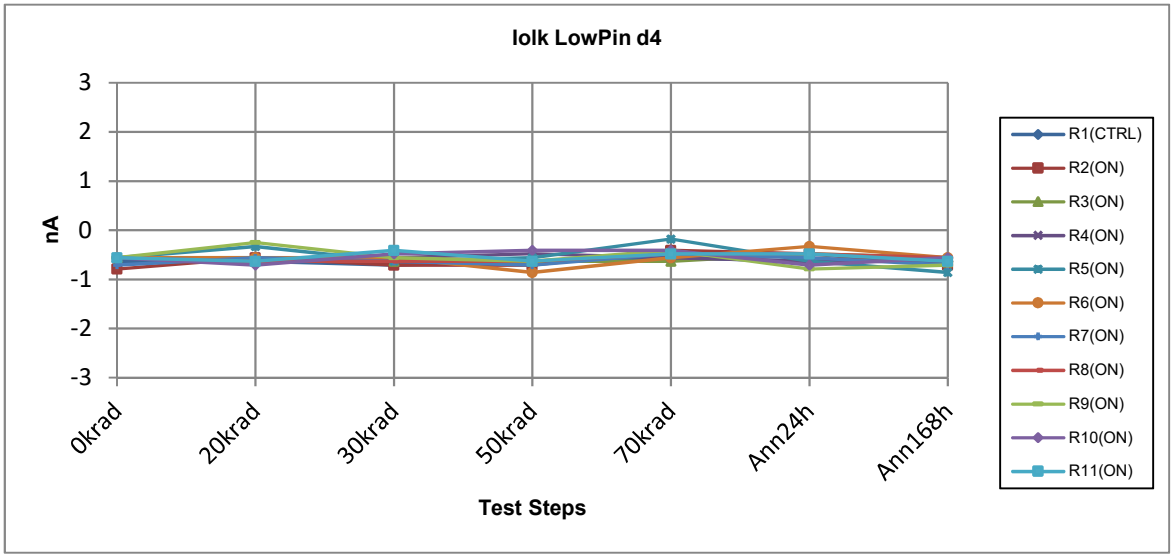
Iolk LowPin d7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.44	-0.51	-0.44	-0.59	-0.59	-0.59	-0.67
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.67	-0.36	-0.44	-0.51	-0.36	-0.36	-0.44
R3(ON BIAS LDC)	-0.51	-0.36	-0.67	-0.44	-0.59	-0.44	-0.51
R4(ON BIAS LDC)	-0.44	-0.29	-0.44	-0.59	-0.59	-0.51	-0.74
R5(ON BIAS LDC)	-0.36	-0.51	-0.44	-0.51	-0.36	-0.59	-0.29
R6(ON BIAS LDC)	-0.59	-0.29	-0.29	-0.21	-0.51	-0.59	-0.44
R7(ON BIAS LDC)	-0.51	-0.51	-0.44	-0.59	-0.51	-0.36	-0.51
R8(ON BIAS LDC)	-0.51	-0.44	-0.59	-0.67	-0.59	-0.51	-0.59
R9(ON BIAS LDC)	-0.67	-0.29	-0.36	-0.51	-0.36	-0.51	-0.67
R10(ON BIAS LDC)	-0.44	-0.36	-0.44	-0.44	-0.59	-0.44	-0.59
R11(ON BIAS LDC)	-0.67	-0.29	-0.36	-0.36	-0.36	-0.51	-0.44
Irradiated, ON biased LDC parts statistics							
Min Value	-0.67	-0.51	-0.67	-0.67	-0.59	-0.59	-0.74
Max Value	-0.36	-0.29	-0.29	-0.21	-0.36	-0.36	-0.29
Average	-0.54	-0.37	-0.45	-0.48	-0.48	-0.48	-0.52
Sigma	0.11	0.09	0.11	0.13	0.11	0.08	0.13



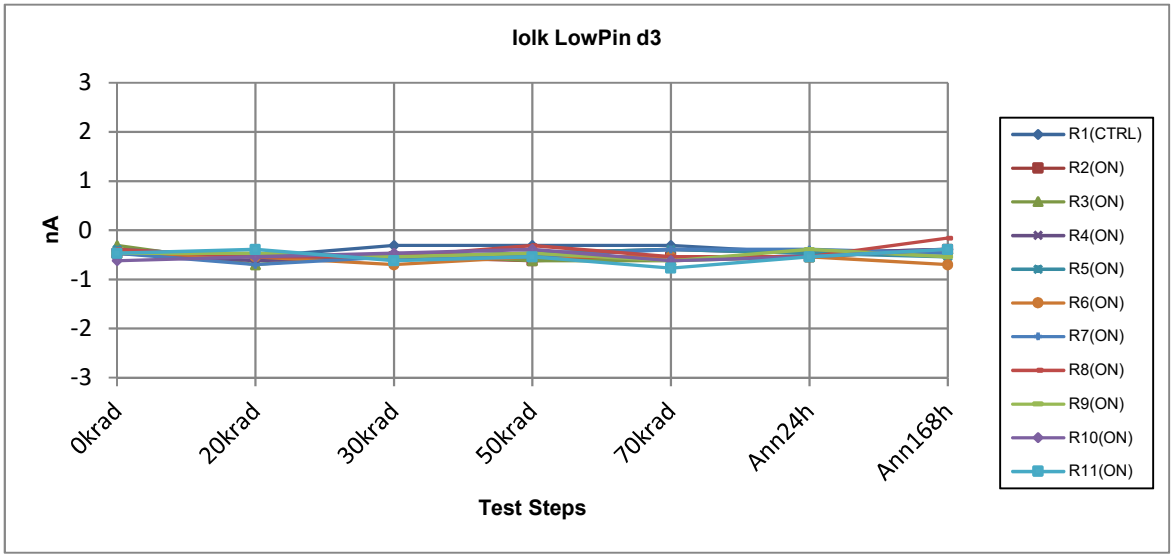
Iolk LowPin d6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.45	-0.30	-0.60	-0.22	-0.22	-0.60	-0.60
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.53	-0.76	-0.37	-0.60	-0.30	-0.30	-0.45
R3(ON BIAS LDC)	-0.53	-0.60	-0.60	-0.45	-0.60	-0.37	-0.30
R4(ON BIAS LDC)	-0.53	-0.68	-0.37	-0.53	-0.53	-0.37	-0.53
R5(ON BIAS LDC)	-0.30	-0.37	-0.45	-0.45	-0.53	-0.53	-0.37
R6(ON BIAS LDC)	-0.53	-0.53	-0.45	-0.37	-0.45	-0.53	-0.30
R7(ON BIAS LDC)	-0.60	-0.53	-0.53	-0.53	-0.45	-0.45	-0.30
R8(ON BIAS LDC)	-0.37	-0.68	-0.14	-0.53	-0.30	-0.53	-0.60
R9(ON BIAS LDC)	-0.68	-0.53	-0.14	-0.45	-0.60	-0.60	-0.45
R10(ON BIAS LDC)	-0.45	-0.30	-0.22	-0.37	-0.30	-0.53	-0.60
R11(ON BIAS LDC)	-0.60	-0.68	-0.37	-0.68	-0.45	-0.45	-0.60
Irradiated, ON biased LDC parts statistics							
Min Value	-0.68	-0.76	-0.60	-0.68	-0.60	-0.60	-0.60
Max Value	-0.30	-0.30	-0.14	-0.37	-0.30	-0.30	-0.30
Average	-0.51	-0.57	-0.36	-0.50	-0.45	-0.47	-0.45
Sigma	0.11	0.15	0.16	0.10	0.12	0.09	0.13



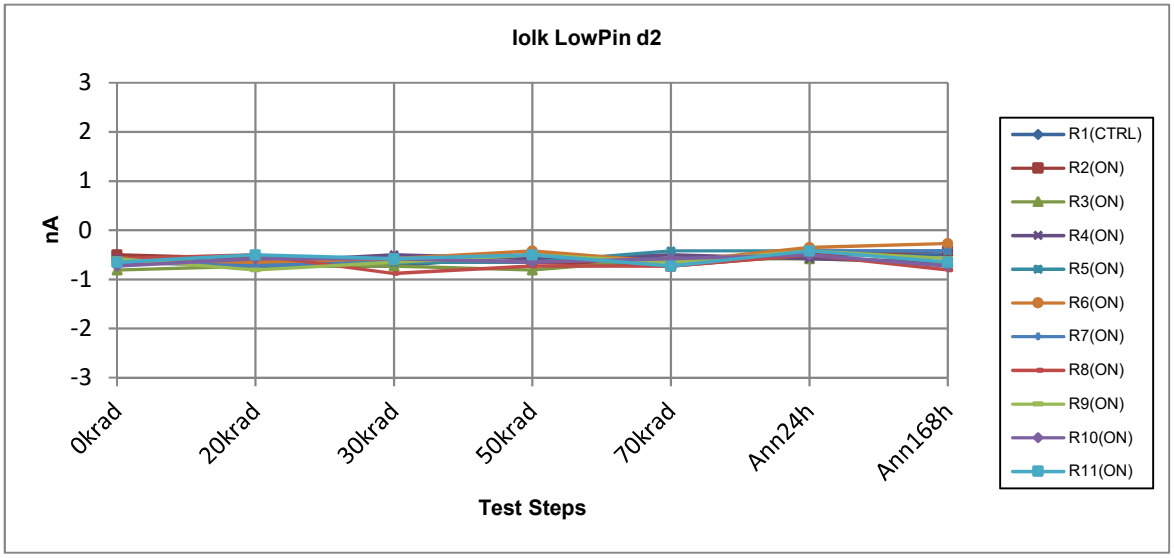
Iolk LowPin d5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.63	-0.47	-0.40	-0.55	-0.47	-0.70	-0.47
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.40	-0.40	-0.63	-0.70	-0.47	-0.40	-0.55
R3(ON BIAS LDC)	-0.40	-0.40	-0.32	-0.63	-0.55	-0.40	-0.55
R4(ON BIAS LDC)	-0.55	-0.24	-0.55	-0.47	-0.55	-0.40	-0.63
R5(ON BIAS LDC)	-0.32	-0.40	-0.70	-0.55	-0.63	-0.47	-0.40
R6(ON BIAS LDC)	-0.32	-0.55	-0.85	-0.70	-0.63	-0.70	-0.55
R7(ON BIAS LDC)	-0.55	-0.47	-0.47	-0.55	-0.47	-0.63	-0.32
R8(ON BIAS LDC)	-0.70	-0.47	-0.47	-0.55	-0.70	-0.47	-0.63
R9(ON BIAS LDC)	-0.47	-0.55	-0.63	-0.40	-0.55	-0.55	-0.40
R10(ON BIAS LDC)	-0.47	-0.40	-0.32	-0.24	-0.47	-0.63	-0.32
R11(ON BIAS LDC)	-0.40	-0.32	-0.47	-0.32	-0.55	-0.78	-0.40
Irradiated, ON biased LDC parts statistics							
Min Value	-0.70	-0.55	-0.85	-0.70	-0.70	-0.78	-0.63
Max Value	-0.32	-0.24	-0.32	-0.24	-0.47	-0.40	-0.32
Average	-0.46	-0.42	-0.54	-0.51	-0.56	-0.54	-0.48
Sigma	0.1	0.1	0.2	0.2	0.1	0.1	0.1



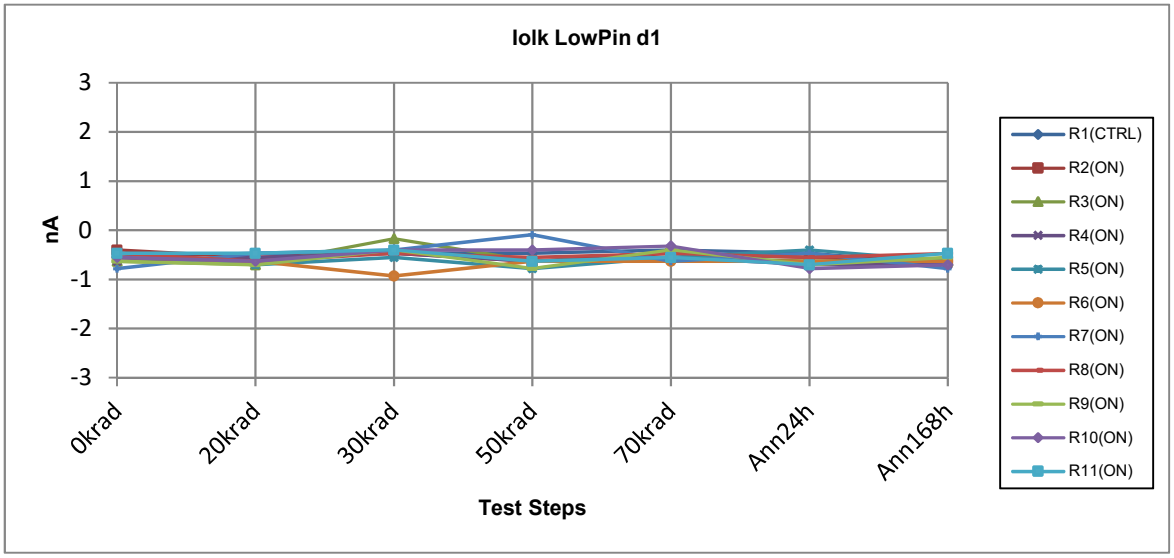
Iolk LowPin d4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.63	-0.63	-0.71	-0.63	-0.56	-0.63	-0.63
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.79	-0.56	-0.71	-0.71	-0.41	-0.48	-0.71
R3(ON BIAS LDC)	-0.56	-0.56	-0.63	-0.63	-0.63	-0.48	-0.56
R4(ON BIAS LDC)	-0.56	-0.63	-0.56	-0.48	-0.56	-0.63	-0.63
R5(ON BIAS LDC)	-0.56	-0.33	-0.63	-0.56	-0.18	-0.63	-0.86
R6(ON BIAS LDC)	-0.56	-0.56	-0.56	-0.86	-0.56	-0.33	-0.56
R7(ON BIAS LDC)	-0.71	-0.56	-0.63	-0.71	-0.48	-0.56	-0.71
R8(ON BIAS LDC)	-0.56	-0.63	-0.63	-0.63	-0.48	-0.48	-0.56
R9(ON BIAS LDC)	-0.56	-0.25	-0.56	-0.63	-0.41	-0.79	-0.71
R10(ON BIAS LDC)	-0.56	-0.71	-0.48	-0.41	-0.41	-0.71	-0.56
R11(ON BIAS LDC)	-0.56	-0.63	-0.41	-0.63	-0.48	-0.48	-0.63
Irradiated, ON biased LDC parts statistics							
Min Value	-0.79	-0.71	-0.71	-0.86	-0.63	-0.79	-0.86
Max Value	-0.56	-0.25	-0.41	-0.41	-0.18	-0.33	-0.56
Average	-0.60	-0.54	-0.58	-0.63	-0.46	-0.56	-0.65
Sigma	0.08	0.14	0.09	0.13	0.12	0.13	0.10



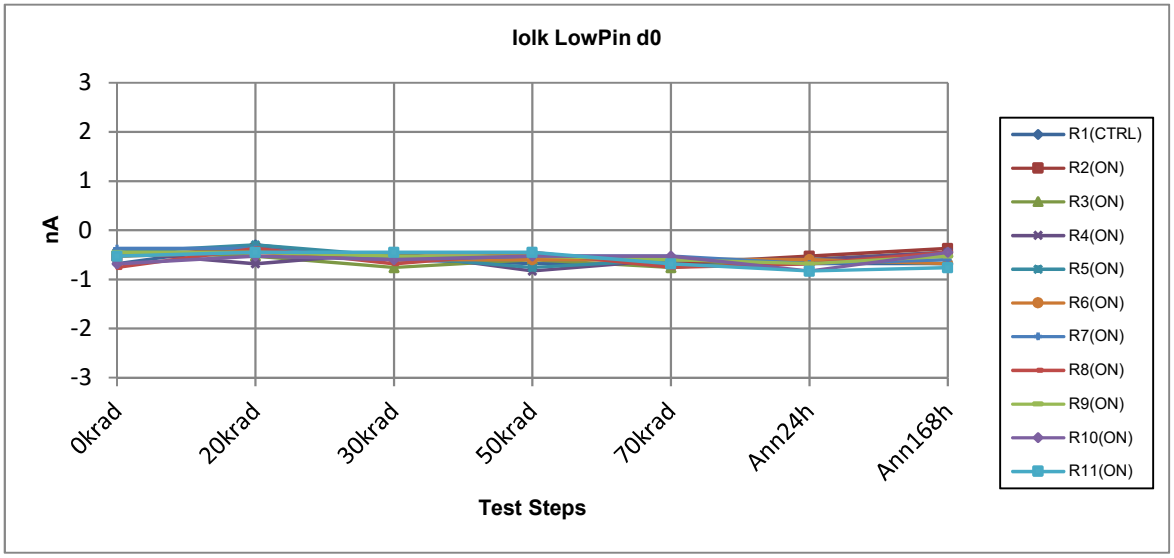
Iolk LowPin d3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.39	-0.54	-0.31	-0.31	-0.31	-0.47	-0.39
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.47	-0.54	-0.54	-0.62	-0.54	-0.54	-0.39
R3(ON BIAS LDC)	-0.31	-0.70	-0.47	-0.62	-0.62	-0.54	-0.39
R4(ON BIAS LDC)	-0.47	-0.62	-0.54	-0.47	-0.39	-0.47	-0.39
R5(ON BIAS LDC)	-0.39	-0.54	-0.54	-0.47	-0.39	-0.47	-0.54
R6(ON BIAS LDC)	-0.47	-0.54	-0.70	-0.54	-0.54	-0.54	-0.70
R7(ON BIAS LDC)	-0.47	-0.70	-0.54	-0.54	-0.39	-0.39	-0.47
R8(ON BIAS LDC)	-0.39	-0.54	-0.54	-0.31	-0.54	-0.54	-0.16
R9(ON BIAS LDC)	-0.47	-0.47	-0.54	-0.47	-0.62	-0.39	-0.54
R10(ON BIAS LDC)	-0.62	-0.54	-0.47	-0.39	-0.62	-0.54	-0.39
R11(ON BIAS LDC)	-0.47	-0.39	-0.62	-0.54	-0.77	-0.54	-0.39
Irradiated, ON biased LDC parts statistics							
Min Value	-0.62	-0.70	-0.70	-0.62	-0.77	-0.54	-0.70
Max Value	-0.31	-0.39	-0.47	-0.31	-0.39	-0.39	-0.16
Average	-0.45	-0.56	-0.55	-0.50	-0.54	-0.50	-0.44
Sigma	0.08	0.10	0.07	0.10	0.12	0.06	0.14



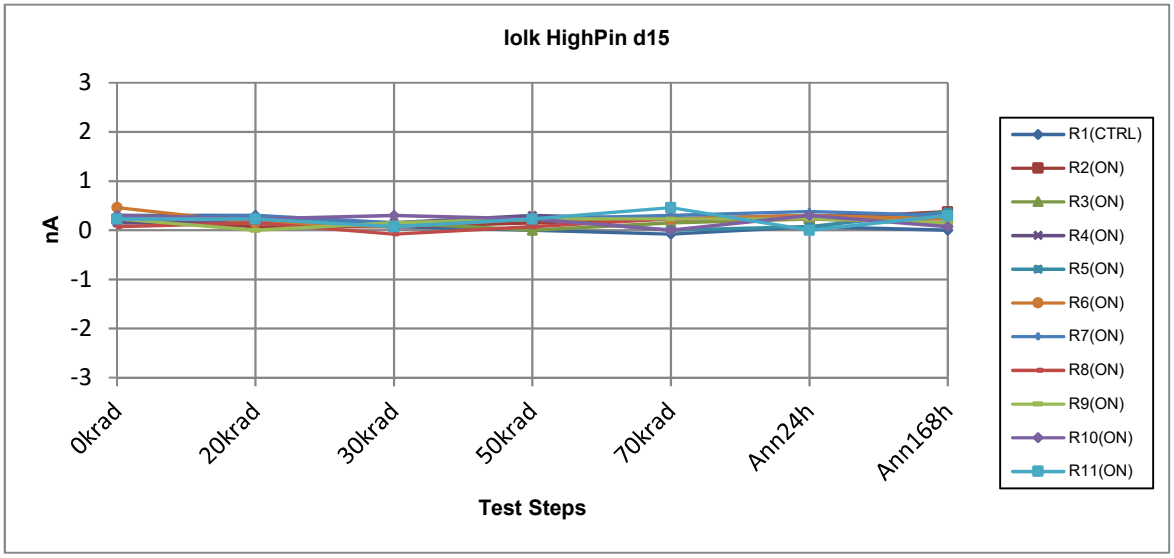
Iolk LowPin d2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.58	-0.73	-0.73	-0.50	-0.58	-0.50	-0.50
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.50	-0.58	-0.65	-0.65	-0.73	-0.50	-0.42
R3(ON BIAS LDC)	-0.81	-0.73	-0.73	-0.81	-0.58	-0.58	-0.65
R4(ON BIAS LDC)	-0.58	-0.65	-0.50	-0.58	-0.50	-0.58	-0.65
R5(ON BIAS LDC)	-0.65	-0.65	-0.65	-0.65	-0.42	-0.42	-0.42
R6(ON BIAS LDC)	-0.65	-0.65	-0.58	-0.42	-0.65	-0.35	-0.27
R7(ON BIAS LDC)	-0.65	-0.73	-0.65	-0.50	-0.73	-0.42	-0.42
R8(ON BIAS LDC)	-0.58	-0.50	-0.88	-0.73	-0.73	-0.50	-0.81
R9(ON BIAS LDC)	-0.58	-0.81	-0.65	-0.50	-0.65	-0.42	-0.58
R10(ON BIAS LDC)	-0.73	-0.58	-0.58	-0.65	-0.58	-0.50	-0.73
R11(ON BIAS LDC)	-0.65	-0.50	-0.58	-0.50	-0.73	-0.42	-0.65
Irradiated, ON biased LDC parts statistics							
Min Value	-0.81	-0.81	-0.88	-0.81	-0.73	-0.58	-0.81
Max Value	-0.50	-0.50	-0.50	-0.42	-0.42	-0.35	-0.27
Average	-0.64	-0.64	-0.65	-0.60	-0.63	-0.47	-0.56
Sigma	0.09	0.10	0.10	0.12	0.11	0.08	0.17



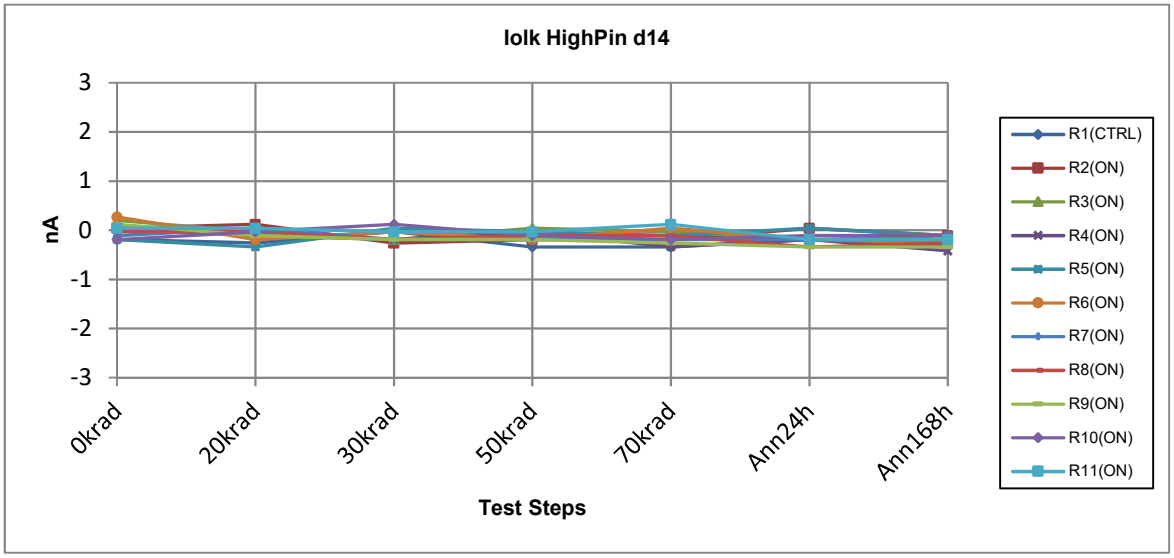
Iolk LowPin d1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.47	-0.47	-0.47	-0.40	-0.47	-0.70
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.40	-0.55	-0.47	-0.63	-0.47	-0.55	-0.63
R3(ON BIAS LDC)	-0.63	-0.70	-0.17	-0.63	-0.55	-0.63	-0.63
R4(ON BIAS LDC)	-0.63	-0.55	-0.47	-0.63	-0.55	-0.70	-0.70
R5(ON BIAS LDC)	-0.47	-0.70	-0.55	-0.78	-0.55	-0.40	-0.63
R6(ON BIAS LDC)	-0.55	-0.63	-0.93	-0.63	-0.63	-0.63	-0.63
R7(ON BIAS LDC)	-0.78	-0.47	-0.40	-0.09	-0.63	-0.47	-0.78
R8(ON BIAS LDC)	-0.47	-0.63	-0.47	-0.55	-0.47	-0.55	-0.47
R9(ON BIAS LDC)	-0.63	-0.70	-0.40	-0.78	-0.40	-0.70	-0.55
R10(ON BIAS LDC)	-0.55	-0.63	-0.40	-0.40	-0.32	-0.78	-0.70
R11(ON BIAS LDC)	-0.47	-0.47	-0.40	-0.63	-0.55	-0.70	-0.47
Irradiated, ON biased LDC parts statistics							
Min Value	-0.78	-0.70	-0.93	-0.78	-0.63	-0.78	-0.78
Max Value	-0.40	-0.47	-0.17	-0.09	-0.32	-0.40	-0.47
Average	-0.56	-0.60	-0.47	-0.58	-0.51	-0.61	-0.62
Sigma	0.11	0.09	0.19	0.20	0.10	0.12	0.10



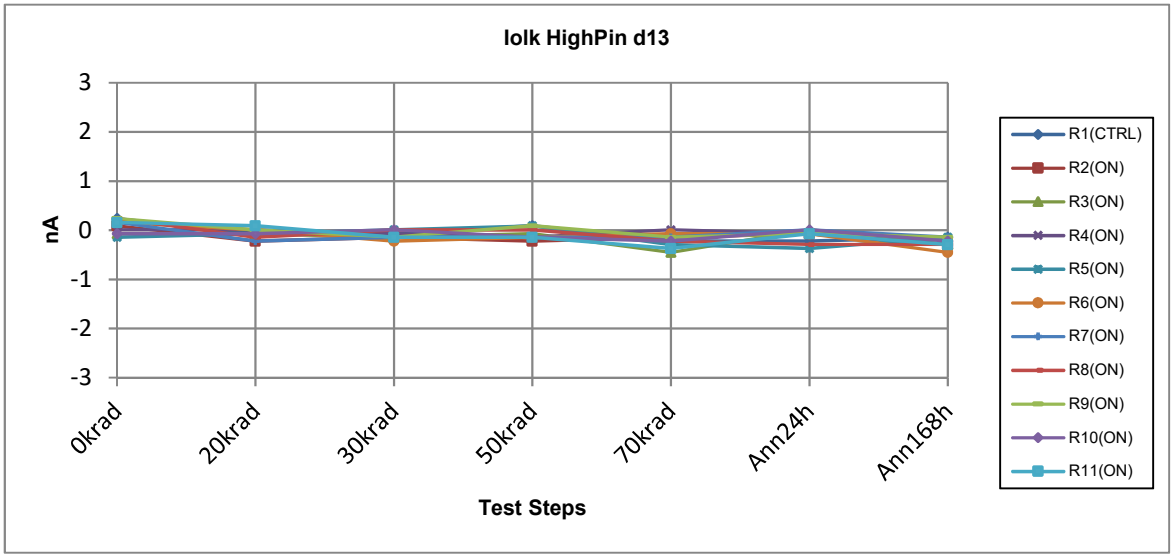
Iolk LowPin d0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.68	-0.30	-0.60	-0.68	-0.68	-0.68	-0.68
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.53	-0.37	-0.53	-0.53	-0.68	-0.53	-0.37
R3(ON BIAS LDC)	-0.45	-0.53	-0.76	-0.60	-0.76	-0.60	-0.45
R4(ON BIAS LDC)	-0.45	-0.68	-0.45	-0.83	-0.60	-0.60	-0.45
R5(ON BIAS LDC)	-0.45	-0.30	-0.53	-0.76	-0.60	-0.60	-0.68
R6(ON BIAS LDC)	-0.53	-0.45	-0.60	-0.60	-0.60	-0.60	-0.68
R7(ON BIAS LDC)	-0.37	-0.37	-0.60	-0.53	-0.53	-0.68	-0.60
R8(ON BIAS LDC)	-0.76	-0.37	-0.68	-0.45	-0.76	-0.68	-0.45
R9(ON BIAS LDC)	-0.45	-0.45	-0.53	-0.53	-0.60	-0.68	-0.53
R10(ON BIAS LDC)	-0.68	-0.53	-0.60	-0.53	-0.53	-0.83	-0.45
R11(ON BIAS LDC)	-0.53	-0.45	-0.45	-0.45	-0.68	-0.83	-0.76
Irradiated, ON biased LDC parts statistics							
Min Value	-0.76	-0.68	-0.76	-0.83	-0.76	-0.83	-0.76
Max Value	-0.37	-0.30	-0.45	-0.45	-0.53	-0.53	-0.37
Average	-0.52	-0.45	-0.57	-0.58	-0.63	-0.66	-0.54
Sigma	0.12	0.11	0.10	0.12	0.08	0.10	0.13



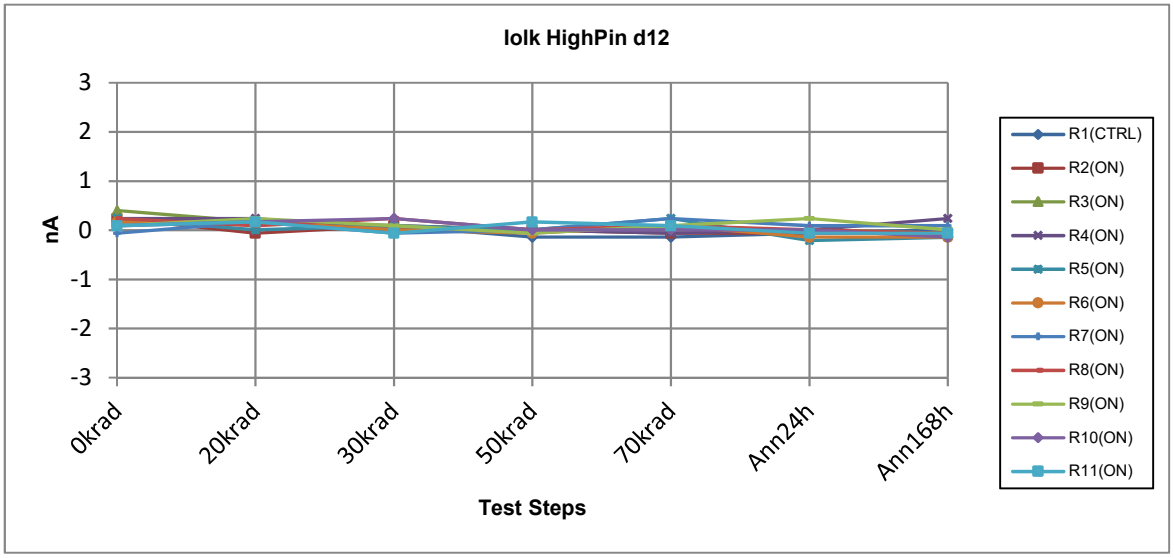
Iolk HighPin d15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.30	0.30	0.07	0.00	-0.08	0.07	0.00
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.23	0.07	0.07	0.15	0.23	0.23	0.38
R3(ON BIAS LDC)	0.30	0.23	0.15	0.00	0.15	0.23	0.15
R4(ON BIAS LDC)	0.15	0.15	0.15	0.30	0.23	0.30	0.30
R5(ON BIAS LDC)	0.23	0.23	0.07	0.23	0.00	0.07	0.38
R6(ON BIAS LDC)	0.46	0.15	0.07	0.23	0.23	0.30	0.23
R7(ON BIAS LDC)	0.23	0.30	0.15	0.23	0.30	0.38	0.30
R8(ON BIAS LDC)	0.07	0.15	-0.08	0.07	0.23	0.23	0.15
R9(ON BIAS LDC)	0.23	0.00	0.15	0.23	0.23	0.23	0.15
R10(ON BIAS LDC)	0.30	0.23	0.30	0.23	0.00	0.30	0.07
R11(ON BIAS LDC)	0.23	0.23	0.07	0.23	0.46	0.00	0.30
Irradiated, ON biased LDC parts statistics							
Min Value	0.07	0.00	-0.08	0.00	0.00	0.00	0.07
Max Value	0.46	0.30	0.30	0.30	0.46	0.38	0.38
Average	0.24	0.17	0.11	0.19	0.21	0.23	0.24
Sigma	0.10	0.09	0.10	0.09	0.14	0.11	0.11



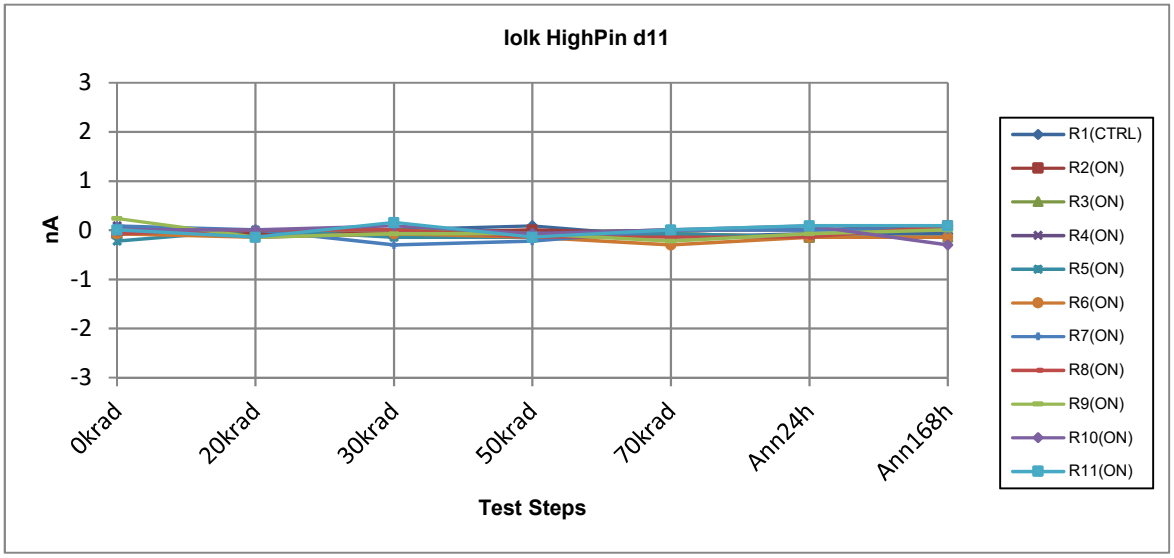
Iolk HighPin d14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.19	-0.26	-0.03	-0.34	-0.34	-0.19	-0.34
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.04	0.12	-0.26	-0.19	-0.19	0.04	-0.11
R3(ON BIAS LDC)	0.20	-0.03	-0.19	0.04	-0.03	-0.19	-0.11
R4(ON BIAS LDC)	0.04	-0.11	-0.19	-0.03	-0.34	-0.19	-0.42
R5(ON BIAS LDC)	-0.19	-0.34	0.04	-0.03	-0.11	0.04	-0.11
R6(ON BIAS LDC)	0.27	-0.19	-0.03	-0.19	0.04	-0.19	-0.26
R7(ON BIAS LDC)	-0.11	0.04	-0.19	-0.19	-0.19	-0.19	-0.19
R8(ON BIAS LDC)	-0.03	-0.03	-0.19	-0.11	-0.11	-0.34	-0.26
R9(ON BIAS LDC)	0.12	-0.11	-0.19	-0.19	-0.26	-0.34	-0.34
R10(ON BIAS LDC)	-0.19	-0.03	0.12	-0.11	-0.19	-0.11	-0.11
R11(ON BIAS LDC)	0.04	0.04	-0.03	-0.03	0.12	-0.19	-0.19
Irradiated, ON biased LDC parts statistics							
Min Value	-0.19	-0.34	-0.26	-0.19	-0.34	-0.34	-0.42
Max Value	0.27	0.12	0.12	0.04	0.12	0.04	-0.11
Average	0.02	-0.06	-0.11	-0.10	-0.13	-0.17	-0.21
Sigma	0.15	0.13	0.13	0.09	0.14	0.13	0.11



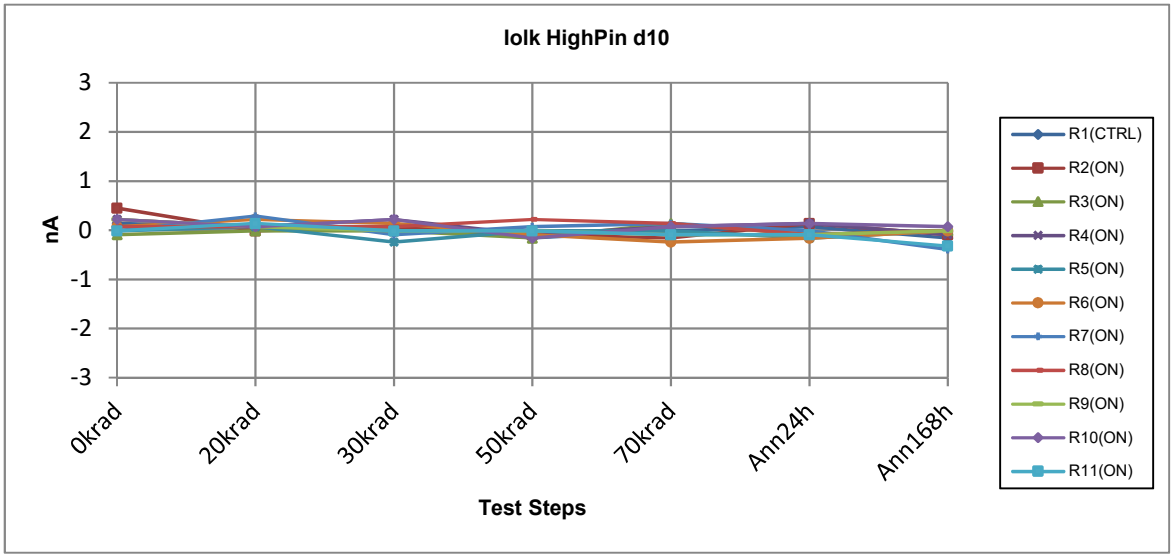
Iolk HighPin d13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.24	-0.07	-0.07	0.09	-0.22	-0.22	-0.14
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.09	-0.22	-0.14	-0.22	-0.14	-0.07	-0.29
R3(ON BIAS LDC)	-0.07	-0.07	-0.14	-0.07	-0.45	0.01	-0.29
R4(ON BIAS LDC)	0.01	0.01	-0.07	-0.14	0.01	-0.07	-0.29
R5(ON BIAS LDC)	-0.14	-0.07	0.01	0.09	-0.29	-0.37	-0.14
R6(ON BIAS LDC)	0.16	0.01	-0.22	-0.14	-0.07	-0.07	-0.45
R7(ON BIAS LDC)	0.16	-0.22	-0.14	-0.14	-0.14	0.01	-0.14
R8(ON BIAS LDC)	0.24	-0.14	0.01	0.01	-0.22	-0.29	-0.29
R9(ON BIAS LDC)	0.24	0.01	-0.14	0.09	-0.14	-0.07	-0.14
R10(ON BIAS LDC)	-0.07	-0.07	0.01	-0.14	-0.22	0.01	-0.22
R11(ON BIAS LDC)	0.16	0.09	-0.14	-0.14	-0.37	-0.07	-0.29
Irradiated, ON biased LDC parts statistics							
Min Value	-0.14	-0.22	-0.22	-0.22	-0.45	-0.37	-0.45
Max Value	0.24	0.09	0.01	0.09	0.01	0.01	-0.14
Average	0.08	-0.07	-0.10	-0.08	-0.20	-0.10	-0.25
Sigma	0.14	0.10	0.08	0.11	0.14	0.13	0.10



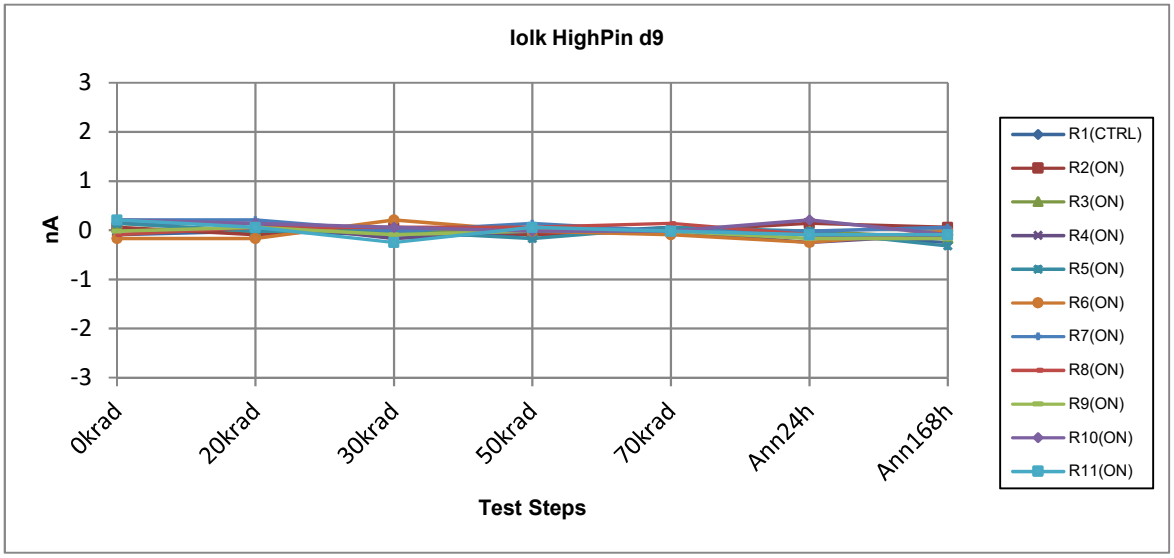
Iolk HighPin d12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.17	0.17	0.09	-0.14	-0.14	-0.06	0.01
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.24	-0.06	0.09	0.01	-0.06	-0.06	-0.06
R3(ON BIAS LDC)	0.40	0.17	0.01	0.01	0.01	0.01	-0.06
R4(ON BIAS LDC)	0.24	0.24	0.01	0.01	-0.06	0.01	0.24
R5(ON BIAS LDC)	0.24	0.01	0.09	0.01	0.24	-0.21	-0.14
R6(ON BIAS LDC)	0.17	0.17	0.01	-0.06	0.09	-0.14	-0.14
R7(ON BIAS LDC)	-0.06	0.17	-0.06	0.01	0.24	0.09	0.09
R8(ON BIAS LDC)	0.24	0.09	0.24	0.01	0.09	0.01	-0.06
R9(ON BIAS LDC)	0.09	0.24	0.09	-0.06	0.09	0.24	0.01
R10(ON BIAS LDC)	0.09	0.17	0.24	0.01	0.01	0.01	-0.14
R11(ON BIAS LDC)	0.09	0.17	-0.06	0.17	0.09	-0.06	-0.06
Irradiated, ON biased LDC parts statistics							
Min Value	-0.06	-0.06	-0.06	-0.06	-0.06	-0.21	-0.14
Max Value	0.40	0.24	0.24	0.17	0.24	0.24	0.24
Average	0.17	0.14	0.07	0.01	0.07	-0.01	-0.03
Sigma	0.13	0.10	0.11	0.06	0.11	0.12	0.12



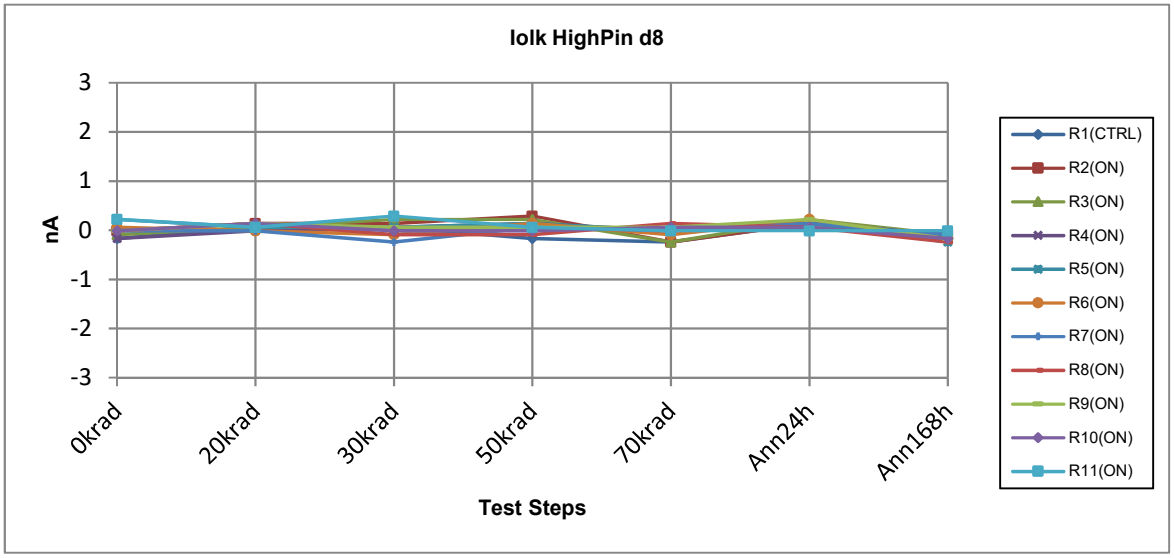
Iolk HighPin d11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.07	0.01	0.01	0.09	-0.14	-0.07	-0.07
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.07	-0.07	-0.07	0.01	-0.07	-0.14	0.09
R3(ON BIAS LDC)	-0.07	0.01	0.01	-0.07	-0.07	-0.14	-0.14
R4(ON BIAS LDC)	0.09	-0.14	-0.07	-0.07	0.01	0.01	0.09
R5(ON BIAS LDC)	-0.22	0.01	-0.14	-0.14	-0.07	-0.14	-0.14
R6(ON BIAS LDC)	-0.07	-0.14	-0.07	-0.14	-0.30	-0.14	-0.14
R7(ON BIAS LDC)	0.09	0.01	-0.30	-0.22	0.01	0.01	0.01
R8(ON BIAS LDC)	-0.07	0.01	0.01	-0.14	-0.14	-0.14	0.09
R9(ON BIAS LDC)	0.24	-0.14	-0.07	-0.07	-0.22	-0.07	0.01
R10(ON BIAS LDC)	0.01	0.01	0.09	-0.07	0.01	0.09	-0.30
R11(ON BIAS LDC)	0.01	-0.14	0.16	-0.14	0.01	0.09	0.09
Irradiated, ON biased LDC parts statistics							
Min Value	-0.22	-0.14	-0.30	-0.22	-0.30	-0.14	-0.30
Max Value	0.24	0.01	0.16	0.01	0.01	0.09	0.09
Average	-0.01	-0.06	-0.05	-0.11	-0.08	-0.06	-0.03
Sigma	0.13	0.07	0.13	0.06	0.11	0.10	0.14



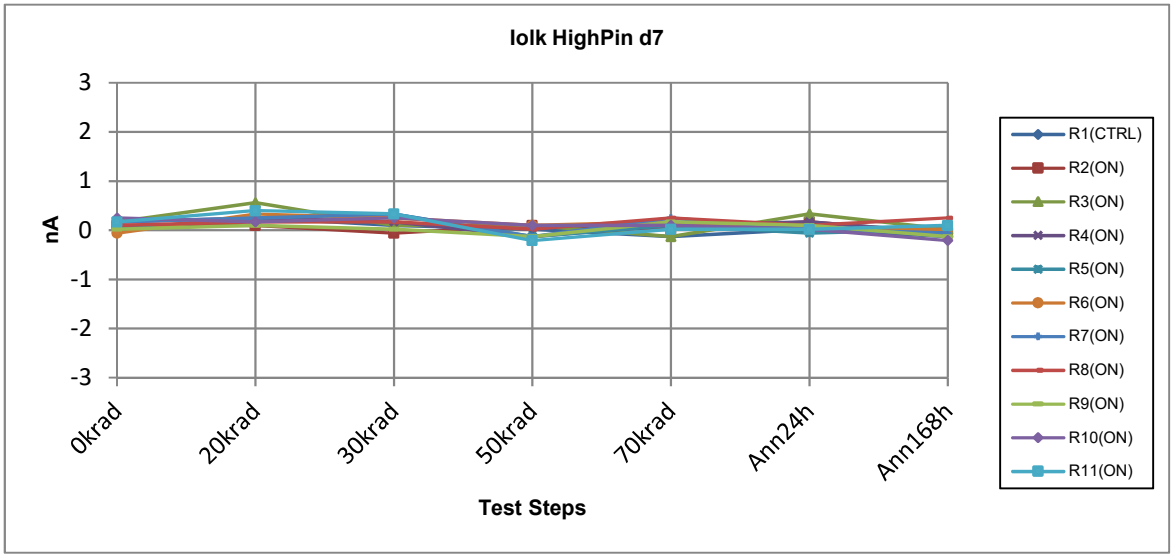
Iolk HighPin d10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.14	0.07	0.07	-0.16	-0.01	0.07	-0.16
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.45	-0.01	0.07	-0.09	-0.16	0.14	-0.09
R3(ON BIAS LDC)	-0.09	-0.01	-0.01	-0.16	0.14	-0.09	-0.01
R4(ON BIAS LDC)	0.22	0.07	0.22	-0.09	0.07	0.14	-0.09
R5(ON BIAS LDC)	-0.01	0.07	-0.24	-0.01	-0.01	-0.16	-0.01
R6(ON BIAS LDC)	0.07	0.22	0.14	-0.09	-0.24	-0.16	-0.01
R7(ON BIAS LDC)	-0.01	0.29	-0.09	0.07	0.14	-0.01	-0.39
R8(ON BIAS LDC)	0.07	0.07	0.07	0.22	0.14	-0.09	-0.01
R9(ON BIAS LDC)	0.22	0.07	-0.01	-0.01	-0.09	-0.09	-0.01
R10(ON BIAS LDC)	0.22	0.07	0.22	-0.16	0.07	0.14	0.07
R11(ON BIAS LDC)	-0.01	0.14	-0.01	-0.01	-0.09	-0.09	-0.32
Irradiated, ON biased LDC parts statistics							
Min Value	-0.09	-0.01	-0.24	-0.16	-0.24	-0.16	-0.39
Max Value	0.45	0.29	0.22	0.22	0.14	0.14	0.07
Average	0.11	0.10	0.04	-0.03	0.00	-0.03	-0.09
Sigma	0.16	0.09	0.14	0.11	0.14	0.12	0.15



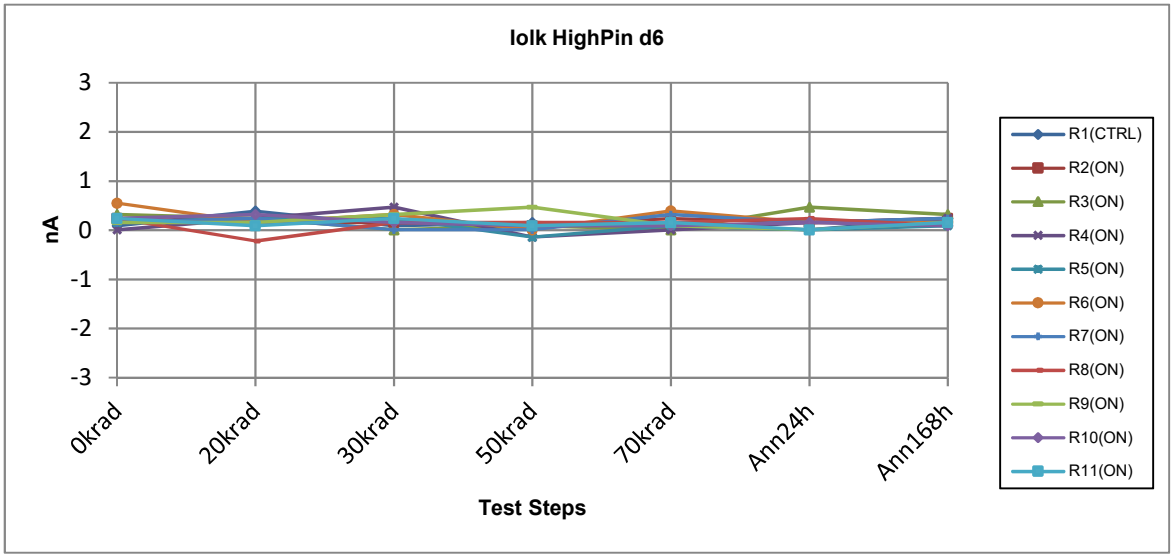
Iolk HighPin d9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.09	-0.02	-0.09	-0.09	0.06	-0.09	-0.25
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.06	-0.09	0.06	-0.09	-0.02	0.14	0.06
R3(ON BIAS LDC)	0.14	-0.02	-0.02	-0.02	-0.02	-0.02	-0.17
R4(ON BIAS LDC)	0.14	0.14	-0.17	-0.02	-0.02	-0.25	-0.09
R5(ON BIAS LDC)	0.14	-0.02	-0.02	-0.17	0.06	-0.02	-0.32
R6(ON BIAS LDC)	-0.17	-0.17	0.21	-0.02	-0.09	-0.25	-0.02
R7(ON BIAS LDC)	0.21	0.21	-0.02	0.14	-0.02	-0.02	0.06
R8(ON BIAS LDC)	-0.09	0.06	0.06	0.06	0.14	-0.09	-0.09
R9(ON BIAS LDC)	-0.02	0.06	-0.09	-0.02	-0.02	-0.17	-0.17
R10(ON BIAS LDC)	0.21	0.14	0.06	-0.02	-0.02	0.21	-0.09
R11(ON BIAS LDC)	0.21	0.06	-0.25	0.06	-0.02	-0.09	-0.09
Irradiated, ON biased LDC parts statistics							
Min Value	-0.17	-0.17	-0.25	-0.17	-0.09	-0.25	-0.32
Max Value	0.21	0.21	0.21	0.14	0.14	0.21	0.06
Average	0.08	0.04	-0.02	-0.01	0.00	-0.06	-0.09
Sigma	0.13	0.11	0.13	0.08	0.06	0.15	0.11



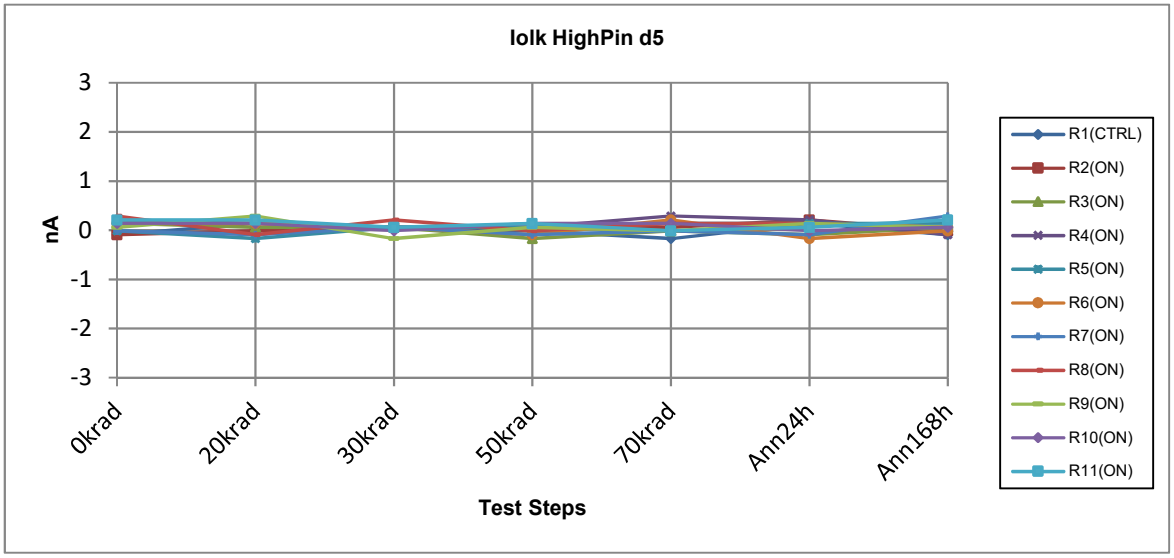
Iolk HighPin d8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.17	0.06	0.06	-0.17	-0.24	0.14	-0.17
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.01	0.14	0.14	0.29	-0.24	0.14	-0.09
R3(ON BIAS LDC)	-0.09	0.06	0.22	0.22	-0.24	0.22	-0.09
R4(ON BIAS LDC)	-0.17	-0.01	0.06	0.14	-0.01	0.14	-0.09
R5(ON BIAS LDC)	0.22	0.06	0.06	0.14	-0.01	0.14	-0.24
R6(ON BIAS LDC)	0.06	-0.01	-0.09	0.14	-0.09	0.22	-0.17
R7(ON BIAS LDC)	-0.01	-0.01	-0.24	0.06	-0.01	0.14	-0.09
R8(ON BIAS LDC)	-0.01	0.14	-0.09	-0.09	0.14	0.06	-0.24
R9(ON BIAS LDC)	-0.01	0.14	0.06	0.06	0.06	0.22	-0.17
R10(ON BIAS LDC)	-0.01	0.14	-0.01	-0.01	0.06	0.06	-0.17
R11(ON BIAS LDC)	0.22	0.06	0.29	0.06	-0.01	-0.01	-0.01
Irradiated, ON biased LDC parts statistics							
Min Value	-0.17	-0.01	-0.24	-0.09	-0.24	-0.01	-0.24
Max Value	0.22	0.14	0.29	0.29	0.14	0.22	-0.01
Average	0.02	0.07	0.04	0.10	-0.04	0.13	-0.14
Sigma	0.12	0.07	0.16	0.11	0.12	0.08	0.07



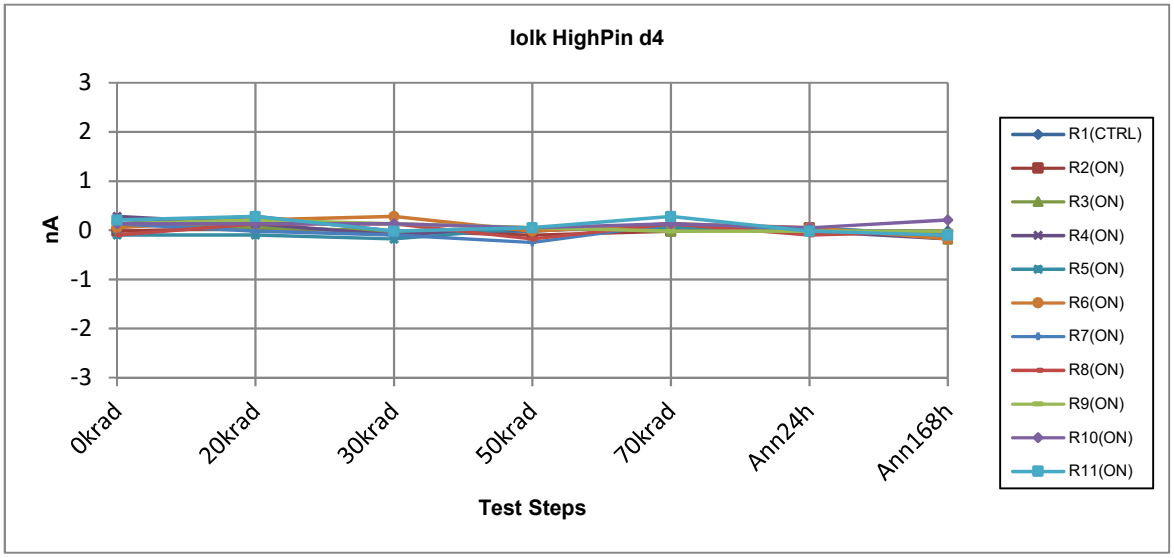
Iolk HighPin d7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.02	0.25	0.10	0.02	-0.13	0.02	-0.13
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.10	0.10	-0.06	0.10	0.02	0.17	-0.06
R3(ON BIAS LDC)	0.17	0.56	0.10	0.10	-0.13	0.33	0.02
R4(ON BIAS LDC)	0.17	0.25	0.17	-0.13	0.10	0.17	-0.06
R5(ON BIAS LDC)	0.02	0.25	0.33	-0.13	0.10	-0.06	0.02
R6(ON BIAS LDC)	-0.06	0.33	0.25	0.10	0.17	0.02	0.02
R7(ON BIAS LDC)	0.17	0.25	0.33	-0.13	0.25	0.02	-0.06
R8(ON BIAS LDC)	0.10	0.17	0.17	0.02	0.25	0.10	0.25
R9(ON BIAS LDC)	0.02	0.10	0.02	-0.13	0.17	0.10	-0.13
R10(ON BIAS LDC)	0.25	0.17	0.25	0.10	0.10	0.02	-0.21
R11(ON BIAS LDC)	0.17	0.40	0.33	-0.21	0.02	0.02	0.10
Irradiated, ON biased LDC parts statistics							
Min Value	-0.06	0.10	-0.06	-0.21	-0.13	-0.06	-0.21
Max Value	0.25	0.56	0.33	0.10	0.25	0.33	0.25
Average	0.11	0.26	0.19	-0.03	0.11	0.09	-0.01
Sigma	0.09	0.14	0.14	0.13	0.12	0.11	0.13



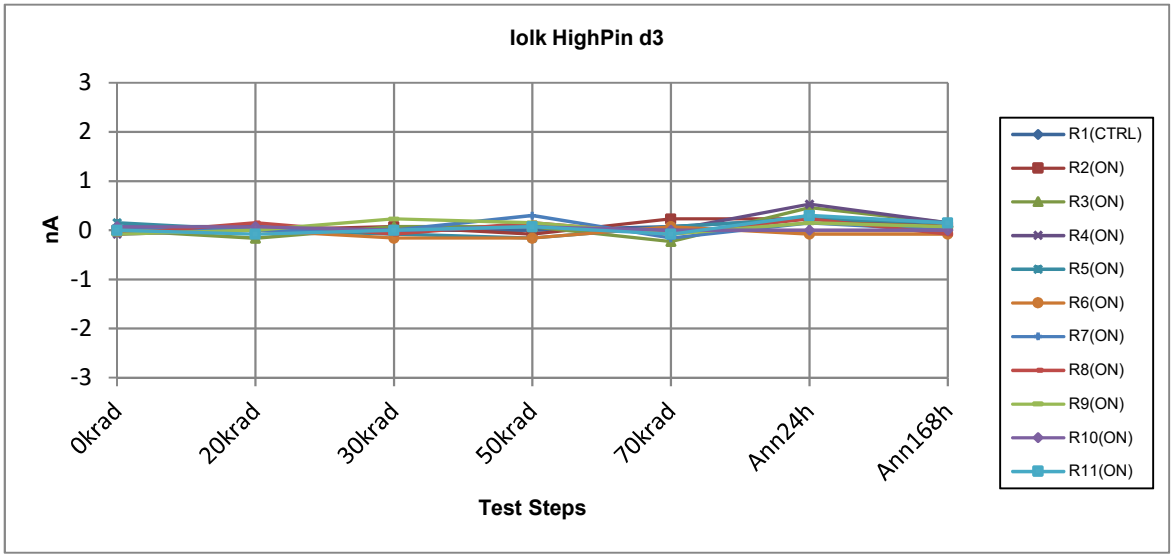
Iolk HighPin d6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.09	0.39	0.09	0.16	0.09	0.01	0.24
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.24	0.16	0.16	0.09	0.24	0.16	0.24
R3(ON BIAS LDC)	0.32	0.24	0.01	0.09	0.01	0.47	0.32
R4(ON BIAS LDC)	0.01	0.24	0.47	-0.14	0.01	0.16	0.24
R5(ON BIAS LDC)	0.16	0.24	0.24	-0.14	0.09	0.01	0.09
R6(ON BIAS LDC)	0.55	0.16	0.32	0.01	0.39	0.16	0.16
R7(ON BIAS LDC)	0.16	0.24	0.01	0.01	0.32	0.16	0.24
R8(ON BIAS LDC)	0.24	-0.22	0.16	0.16	0.16	0.24	0.09
R9(ON BIAS LDC)	0.16	0.16	0.32	0.47	0.09	0.01	0.16
R10(ON BIAS LDC)	0.24	0.32	0.16	0.09	0.09	0.16	0.09
R11(ON BIAS LDC)	0.24	0.09	0.24	0.09	0.16	0.01	0.16
Irradiated, ON biased LDC parts statistics							
Min Value	0.01	-0.22	0.01	-0.14	0.01	0.01	0.09
Max Value	0.55	0.32	0.47	0.47	0.39	0.47	0.32
Average	0.23	0.16	0.21	0.07	0.16	0.15	0.18
Sigma	0.14	0.15	0.14	0.17	0.13	0.14	0.08



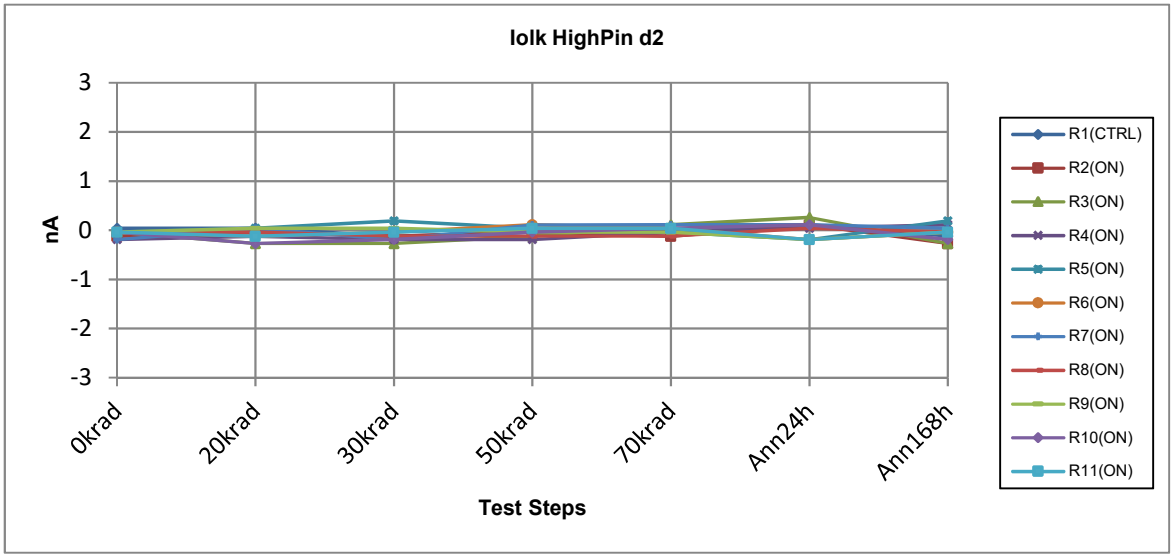
Iolk HighPin d5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.09	0.14	0.06	-0.01	-0.17	0.14	-0.09
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.09	-0.01	0.06	0.06	0.06	0.21	-0.01
R3(ON BIAS LDC)	0.14	0.06	0.06	-0.17	-0.01	-0.09	0.06
R4(ON BIAS LDC)	0.21	0.14	0.06	0.06	0.29	0.21	-0.09
R5(ON BIAS LDC)	-0.01	-0.17	0.06	0.06	0.14	0.14	0.14
R6(ON BIAS LDC)	0.14	0.14	0.06	-0.09	0.21	-0.17	-0.01
R7(ON BIAS LDC)	-0.01	-0.09	0.06	-0.09	-0.01	-0.09	0.29
R8(ON BIAS LDC)	0.29	-0.09	0.21	-0.01	0.14	0.14	0.06
R9(ON BIAS LDC)	0.06	0.29	-0.17	0.06	-0.01	0.14	0.06
R10(ON BIAS LDC)	0.14	0.14	-0.01	0.14	0.14	-0.01	0.06
R11(ON BIAS LDC)	0.21	0.21	0.06	0.14	-0.01	0.06	0.21
Irradiated, ON biased LDC parts statistics							
Min Value	-0.09	-0.17	-0.17	-0.17	-0.01	-0.17	-0.09
Max Value	0.29	0.29	0.21	0.14	0.29	0.21	0.29
Average	0.11	0.06	0.05	0.02	0.09	0.05	0.08
Sigma	0.12	0.15	0.09	0.10	0.11	0.14	0.11



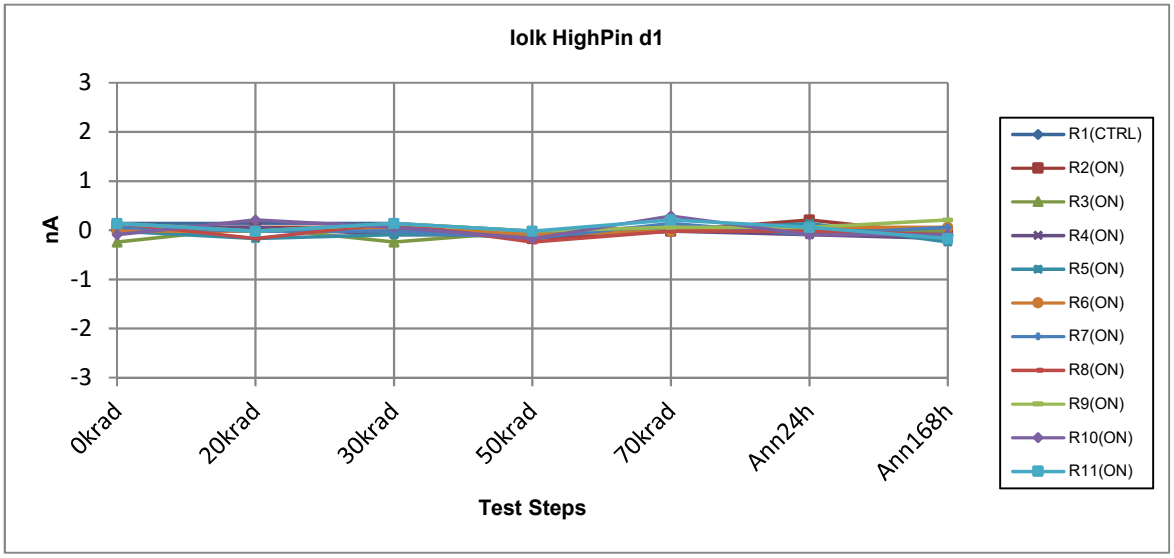
Iolk HighPin d4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.13	0.28	-0.02	-0.02	0.13	-0.02	-0.02
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.02	0.05	-0.02	-0.10	-0.02	0.05	-0.10
R3(ON BIAS LDC)	0.13	0.05	-0.02	0.05	-0.02	0.05	-0.18
R4(ON BIAS LDC)	0.28	0.13	-0.10	0.05	0.05	-0.02	-0.18
R5(ON BIAS LDC)	-0.10	-0.10	-0.18	0.05	0.05	0.05	-0.10
R6(ON BIAS LDC)	0.05	0.21	0.28	-0.02	0.13	0.05	-0.18
R7(ON BIAS LDC)	0.13	-0.02	-0.10	-0.25	0.13	-0.02	-0.10
R8(ON BIAS LDC)	-0.10	0.13	0.13	-0.18	0.13	-0.10	-0.02
R9(ON BIAS LDC)	0.13	0.21	0.13	0.05	-0.02	-0.02	-0.02
R10(ON BIAS LDC)	0.13	0.13	0.13	0.05	0.13	0.05	0.21
R11(ON BIAS LDC)	0.21	0.28	-0.02	0.05	0.28	-0.02	-0.10
Irradiated, ON biased LDC parts statistics							
Min Value	-0.10	-0.10	-0.18	-0.25	-0.02	-0.10	-0.18
Max Value	0.28	0.28	0.28	0.05	0.28	0.05	0.21
Average	0.08	0.11	0.02	-0.03	0.08	0.01	-0.08
Sigma	0.13	0.11	0.14	0.11	0.10	0.05	0.12



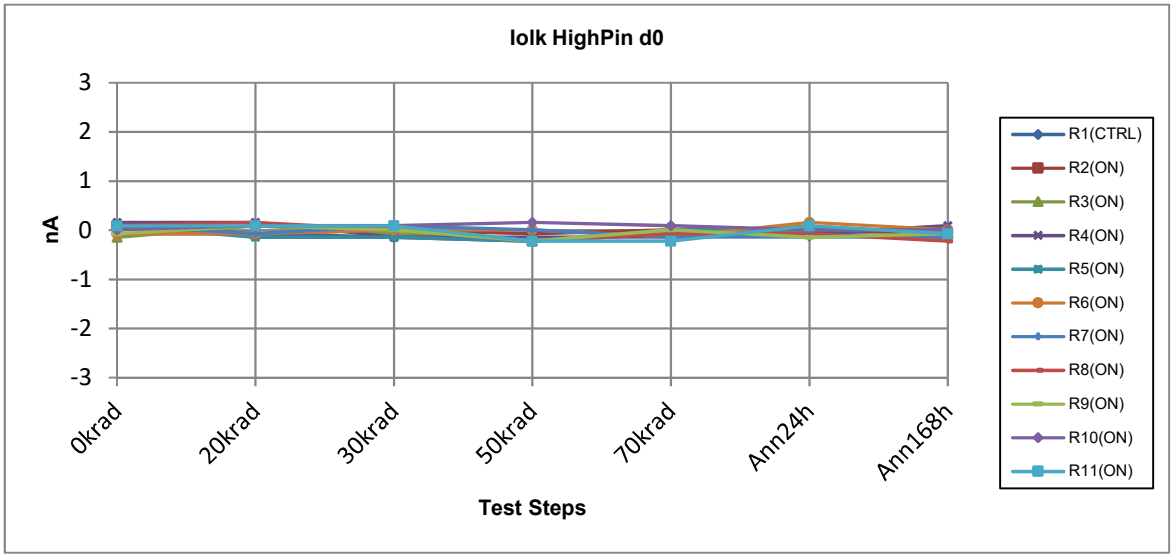
Iolk HighPin d3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.07	0.07	0.00	0.00	0.07	0.23	0.07
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.00	0.00	0.07	-0.08	0.23	0.23	0.07
R3(ON BIAS LDC)	0.00	-0.16	0.07	0.07	-0.23	0.46	0.15
R4(ON BIAS LDC)	-0.08	0.00	0.00	0.07	0.00	0.53	0.15
R5(ON BIAS LDC)	0.15	0.00	-0.08	-0.16	0.07	0.23	0.15
R6(ON BIAS LDC)	0.00	0.00	-0.16	-0.16	0.07	-0.08	-0.08
R7(ON BIAS LDC)	0.07	0.00	0.00	0.30	-0.16	0.15	0.00
R8(ON BIAS LDC)	-0.08	0.15	-0.08	0.15	-0.08	0.23	-0.08
R9(ON BIAS LDC)	-0.08	0.00	0.23	0.15	-0.08	0.15	0.07
R10(ON BIAS LDC)	0.07	0.07	0.00	0.07	0.00	0.00	0.00
R11(ON BIAS LDC)	0.00	-0.08	0.00	0.07	-0.08	0.30	0.15
Irradiated, ON biased LDC parts statistics							
Min Value	-0.08	-0.16	-0.16	-0.16	-0.23	-0.08	-0.08
Max Value	0.15	0.15	0.23	0.30	0.23	0.53	0.15
Average	0.01	0.00	0.01	0.05	-0.03	0.22	0.06
Sigma	0.08	0.08	0.11	0.14	0.13	0.19	0.09



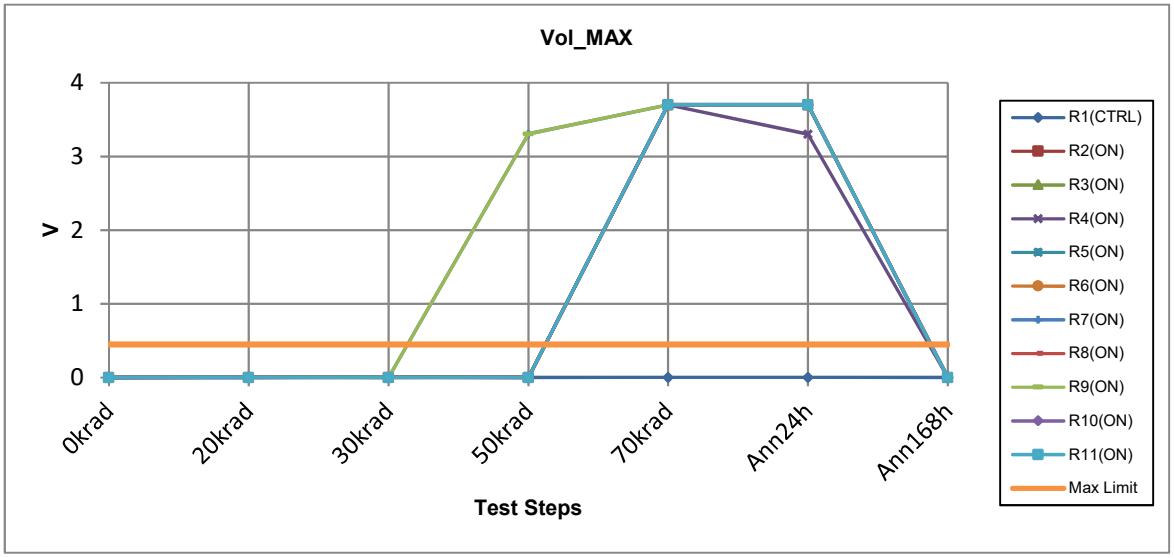
Iolk HighPin d2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.04	0.04	-0.12	-0.04	-0.04	0.11	-0.12
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	-0.12	-0.04	-0.12	-0.04	-0.12	0.11	-0.27
R3(ON BIAS LDC)	-0.04	-0.27	-0.27	-0.12	0.11	0.26	-0.27
R4(ON BIAS LDC)	-0.19	-0.12	-0.19	-0.19	-0.04	0.04	0.11
R5(ON BIAS LDC)	-0.04	0.04	0.19	0.04	-0.04	-0.19	0.19
R6(ON BIAS LDC)	-0.04	-0.12	-0.04	0.11	0.04	-0.19	-0.04
R7(ON BIAS LDC)	-0.19	0.04	-0.19	0.11	0.11	0.11	0.04
R8(ON BIAS LDC)	-0.04	-0.04	-0.12	-0.12	-0.12	0.04	-0.04
R9(ON BIAS LDC)	-0.04	0.04	0.04	-0.04	-0.04	-0.19	-0.04
R10(ON BIAS LDC)	-0.04	-0.27	-0.19	-0.04	0.04	0.11	-0.19
R11(ON BIAS LDC)	-0.04	-0.12	-0.04	0.04	0.04	-0.19	-0.04
Irradiated, ON biased LDC parts statistics							
Min Value	-0.19	-0.27	-0.27	-0.19	-0.12	-0.19	-0.27
Max Value	-0.04	0.04	0.19	0.11	0.11	0.26	0.19
Average	-0.08	-0.09	-0.09	-0.03	0.00	-0.01	-0.06
Sigma	0.06	0.12	0.14	0.10	0.08	0.17	0.15



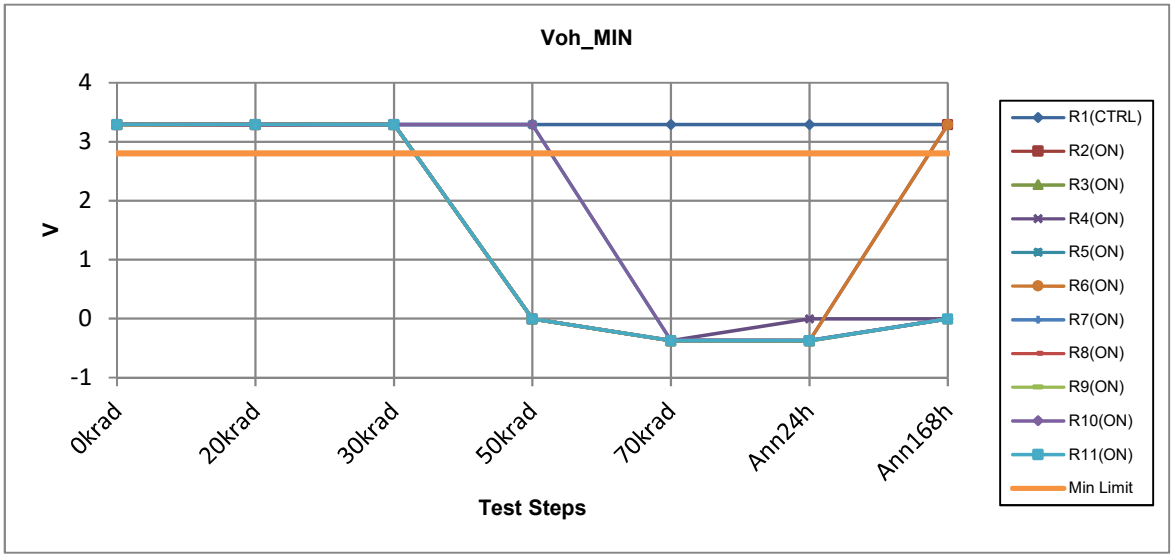
Iolk HighPin d1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.14	0.14	0.14	-0.02	0.06	0.06	-0.09
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.06	0.06	0.06	-0.17	-0.02	0.21	-0.09
R3(ON BIAS LDC)	-0.24	0.06	-0.24	-0.02	0.06	-0.02	-0.02
R4(ON BIAS LDC)	0.06	0.06	-0.09	-0.09	-0.02	-0.09	-0.17
R5(ON BIAS LDC)	-0.02	-0.17	-0.09	-0.09	-0.02	0.14	-0.24
R6(ON BIAS LDC)	-0.02	-0.02	0.06	-0.09	-0.02	0.06	0.06
R7(ON BIAS LDC)	0.06	-0.02	-0.02	-0.17	0.14	-0.09	0.06
R8(ON BIAS LDC)	0.14	-0.17	0.14	-0.24	-0.02	-0.02	-0.09
R9(ON BIAS LDC)	0.14	-0.02	0.14	-0.02	0.06	0.06	0.21
R10(ON BIAS LDC)	-0.09	0.21	0.06	-0.17	0.29	-0.09	-0.09
R11(ON BIAS LDC)	0.14	-0.02	0.14	-0.02	0.21	0.06	-0.17
Irradiated, ON biased LDC parts statistics							
Min Value	-0.24	-0.17	-0.24	-0.24	-0.02	-0.09	-0.24
Max Value	0.14	0.21	0.14	-0.02	0.29	0.21	0.21
Average	0.02	0.00	0.02	-0.11	0.07	0.02	-0.05
Sigma	0.12	0.11	0.13	0.08	0.11	0.10	0.13



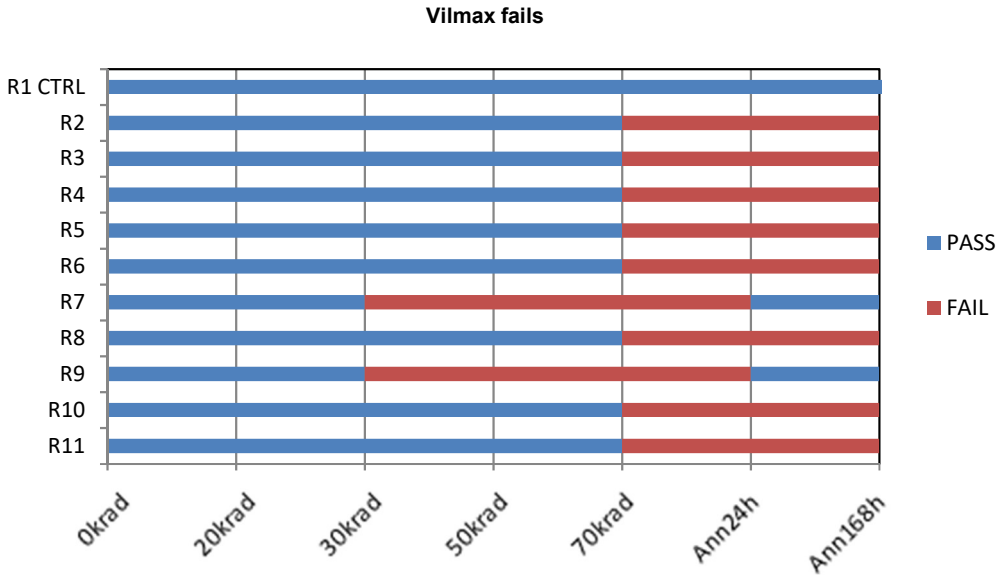
Iolk HighPin d0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.07	-0.07	-0.14	-0.22	-0.07	-0.07	-0.14
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.09	-0.07	0.01	-0.07	0.01	0.01	-0.07
R3(ON BIAS LDC)	-0.14	0.09	-0.07	-0.22	-0.07	0.09	-0.07
R4(ON BIAS LDC)	0.16	0.16	-0.14	-0.14	-0.14	-0.07	0.09
R5(ON BIAS LDC)	0.09	-0.14	-0.14	-0.22	0.01	0.01	0.01
R6(ON BIAS LDC)	-0.07	-0.07	0.01	0.01	-0.14	0.16	0.01
R7(ON BIAS LDC)	0.09	-0.07	0.09	0.01	-0.14	-0.14	-0.14
R8(ON BIAS LDC)	0.09	0.16	0.01	-0.22	-0.07	-0.07	-0.22
R9(ON BIAS LDC)	-0.07	0.09	0.01	-0.22	0.01	-0.14	-0.07
R10(ON BIAS LDC)	0.01	0.09	0.09	0.16	0.09	0.01	0.01
R11(ON BIAS LDC)	0.09	0.09	0.09	-0.22	-0.22	0.09	-0.07
Irradiated, ON biased LDC parts statistics							
Min Value	-0.14	-0.14	-0.14	-0.22	-0.22	-0.14	-0.22
Max Value	0.16	0.16	0.09	0.16	0.09	0.16	0.09
Average	0.03	0.03	0.00	-0.11	-0.07	0.00	-0.05
Sigma	0.10	0.11	0.09	0.14	0.10	0.10	0.09



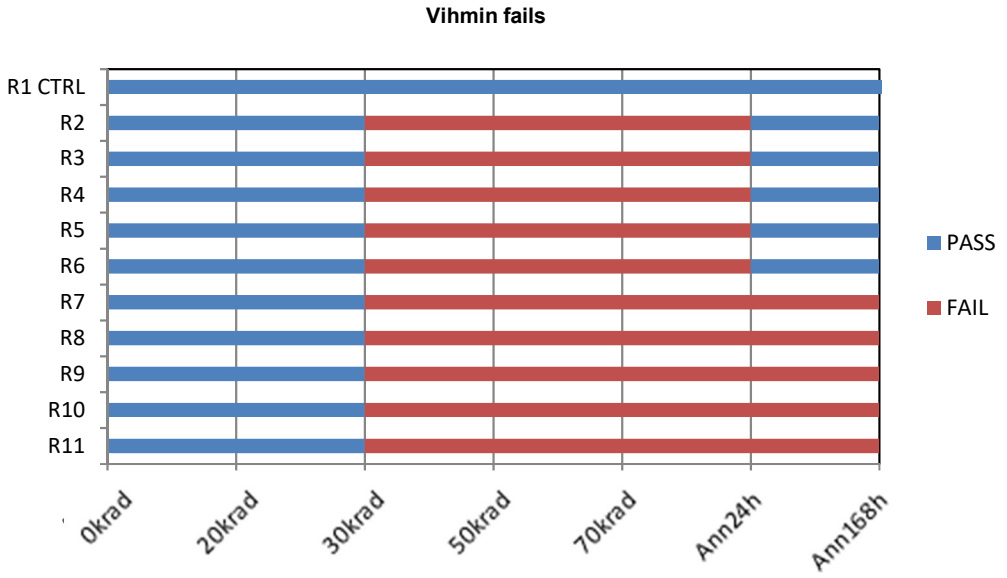
Vol_MAX	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Unit	V	V	V	V	V	V	V
Control results							
R1(CTRL)	0.0045	0.0045	0.0044	0.0045	0.0044	0.0044	0.0045
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0.0045	0.0044	0.0044	0.0044	**3.7025**	**3.7014**	0.0044
R3(ON BIAS LDC)	0.0044	0.0044	0.0044	0.0043	**3.7043**	**3.7039**	0.0045
R4(ON BIAS LDC)	0.0045	0.0044	0.0043	0.0043	**3.7016**	**3.3052**	0.0044
R5(ON BIAS LDC)	0.0045	0.0043	0.0043	0.0043	**3.7025**	**3.7024**	0.0044
R6(ON BIAS LDC)	0.0044	0.0043	0.0043	0.0043	3.7011	3.7017	0.0043
R7(ON BIAS LDC)	0.0043	0.0043	0.0043	**3.3059**	**3.6987**	**3.6986**	0.0045
R8(ON BIAS LDC)	0.0044	0.0043	0.0044	0.0045	**3.7002**	**3.7004**	0.0045
R9(ON BIAS LDC)	0.0043	0.0043	0.0044	**3.3060**	**3.7013**	**3.7010**	0.0045
R10(ON BIAS LDC)	0.0043	0.0043	0.0042	0.0043	**3.7008**	**3.7019**	0.0043
R11(ON BIAS LDC)	0.0044	0.0043	0.0045	0.0043	**3.7022**	**3.7029**	0.0043
Irradiated, ON biased LDC parts statistics							
Min Value	0.0043	0.0043	0.0042	0.0043	3.6987	3.3052	0.0043
Max Value	0.0045	0.0044	0.0045	3.3060	3.7043	3.7039	0.0045
Average	0.0044	0.0044	0.0044	0.6647	3.7015	3.6619	0.0044
Sigma	0.0001	0.0000	0.0001	1.3921	0.0015	0.1253	0.0001



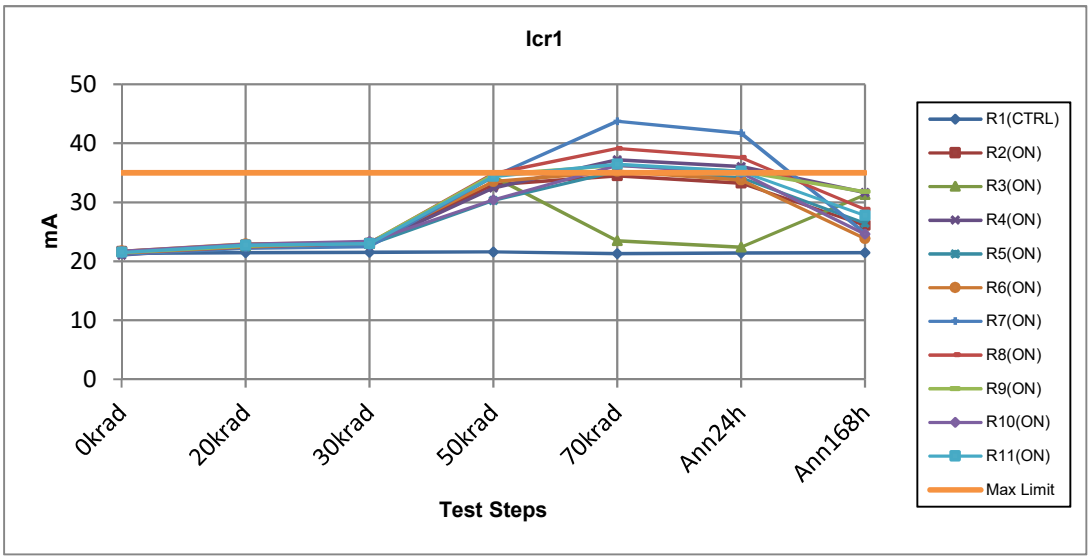
Voh_MIN	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	2.805	2.805	2.805	2.805	2.805	2.805	2.805
Max Limit	--	--	--	--	--	--	--
Unit	V	V	V	V	V	V	V
Control results							
R1(CTRL)	3.2932	3.2929	3.2931	3.2926	3.2926	3.2929	3.2927
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	3.2929	3.2927	3.2930	**-0.0042**	**-0.3727**	**-0.3728**	3.2929
R3(ON BIAS LDC)	3.2929	3.2929	3.2929	**-0.0044**	**-0.3753**	**-0.3753**	**-0.0046**
R4(ON BIAS LDC)	3.2930	3.2928	3.2930	**-0.0048**	**-0.3721**	**-0.0048**	**-0.0044**
R5(ON BIAS LDC)	3.2927	3.2932	3.2929	3.2927	**-0.3718**	**-0.3727**	**-0.0048**
R6(ON BIAS LDC)	3.2929	3.2928	3.2924	-0.0044	-0.3724	-0.3728	3.2927
R7(ON BIAS LDC)	3.2930	3.2929	3.2928	**-0.0042**	**-0.3675**	**-0.3675**	**-0.0046**
R8(ON BIAS LDC)	3.2926	3.2928	3.2927	**-0.0043**	**-0.3712**	**-0.3717**	**-0.0048**
R9(ON BIAS LDC)	3.2930	3.2931	3.2928	**-0.0043**	**-0.3721**	**-0.3722**	**-0.0045**
R10(ON BIAS LDC)	3.2930	3.2927	3.2929	3.2929	**-0.3671**	**-0.3683**	**-0.0048**
R11(ON BIAS LDC)	3.2930	3.2930	3.2927	**-0.0044**	**-0.3707**	**-0.3716**	**-0.0047**
Irradiated, ON biased LDC parts statistics							
Min Value	3.2926	3.2927	3.2924	-0.0048	-0.3753	-0.3753	-0.0048
Max Value	3.2930	3.2932	3.2930	3.2929	-0.3671	-0.0048	3.2929
Average	3.2929	3.2929	3.2928	0.6551	-0.3713	-0.3350	0.6549
Sigma	0.0002	0.0002	0.0002	1.3902	0.0024	0.1160	1.3903



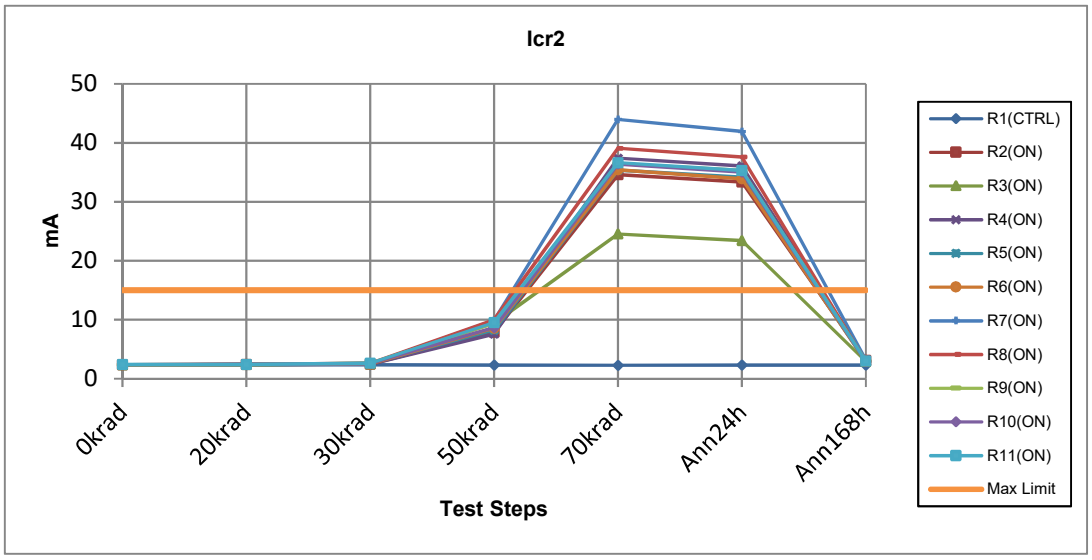
Vil max fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS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



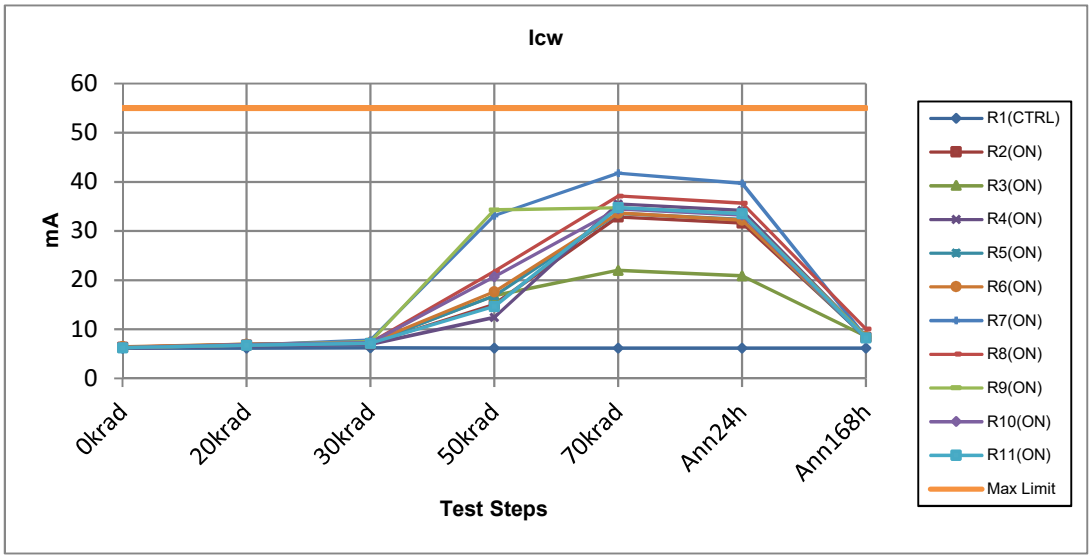
Vih min fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS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



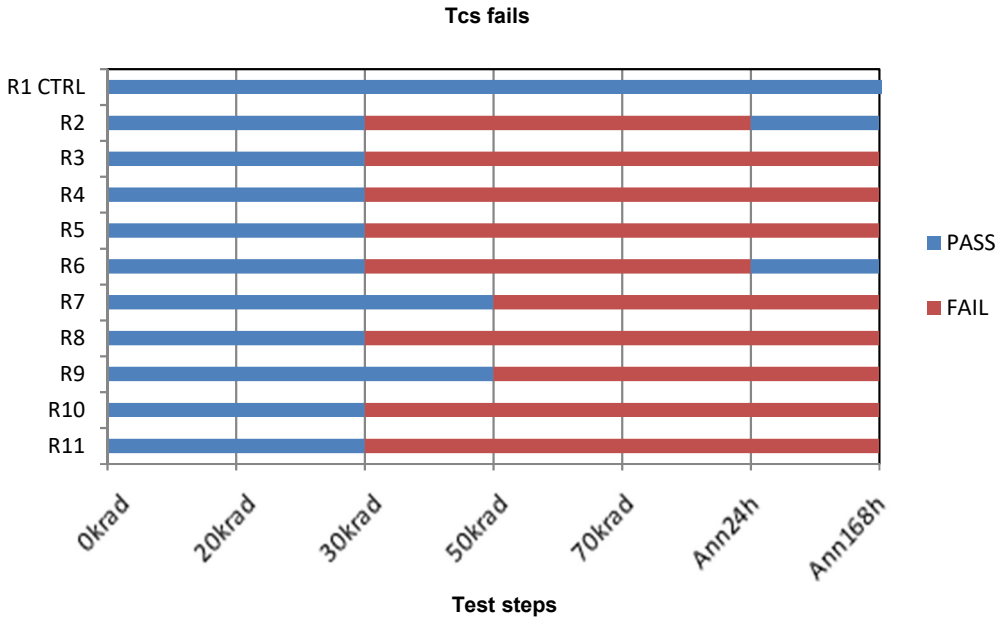
Icr1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	**35**	**35**	**35**	**35**	**35**	**35**	**35**
Unit	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**
Control results							
R1(CTRL)	21.37	21.44	21.52	21.59	21.28	21.39	21.45
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	21.63	22.69	22.99	32.97	34.49	33.22	26.04
R3(ON BIAS LDC)	21.70	22.59	23.03	34.34	23.49	22.36	31.26
R4(ON BIAS LDC)	21.04	22.41	22.71	32.41	**37.20**	**36.05**	31.68
R5(ON BIAS LDC)	21.52	22.38	22.83	30.30	**35.25**	34.17	26.43
R6(ON BIAS LDC)	21.70	22.90	23.14	33.48	**35.24**	33.78	23.87
R7(ON BIAS LDC)	21.15	22.19	22.50	34.37	**43.73**	**41.72**	24.79
R8(ON BIAS LDC)	21.37	22.43	23.08	34.86	**39.11**	**37.56**	28.79
R9(ON BIAS LDC)	21.44	22.55	23.15	34.72	**36.26**	**35.26**	31.76
R10(ON BIAS LDC)	21.67	22.88	23.38	30.42	**36.24**	34.99	24.62
R11(ON BIAS LDC)	21.49	22.69	22.98	34.35	**36.44**	**35.25**	27.76
Irradiated, ON biased LDC parts statistics							
Min Value	21.04	22.19	22.50	30.30	23.49	22.36	23.87
Max Value	21.70	22.90	23.38	34.86	43.73	41.72	31.76
Average	21.47	22.57	22.98	33.22	35.74	34.44	27.70
Sigma	0.23	0.23	0.25	1.70	5.06	4.89	3.04



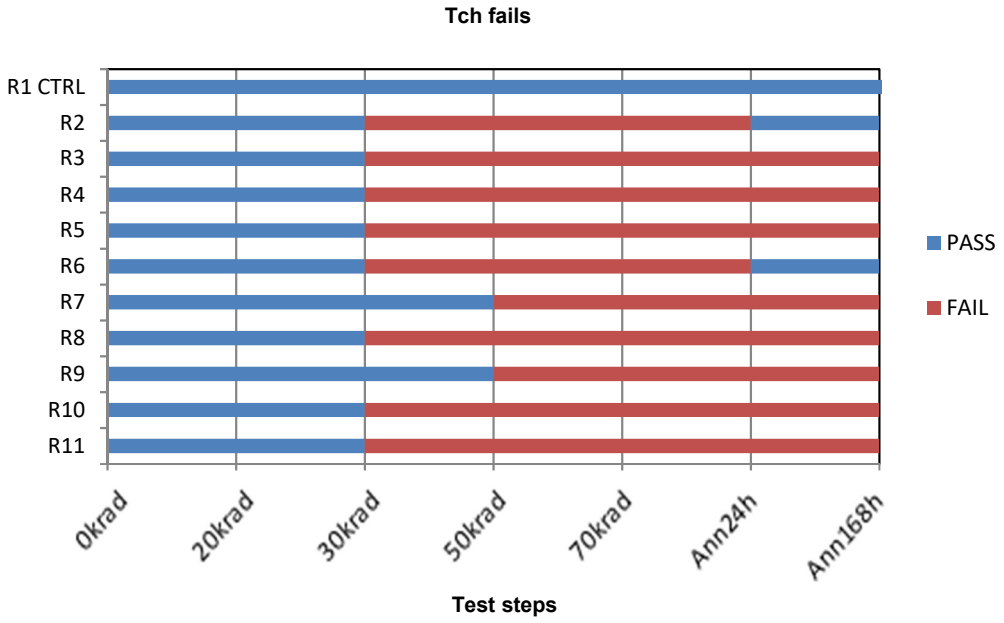
Icr2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	15	15	15	15	15	15	15
Unit	mA	mA	mA	mA	mA	mA	mA
Control results							
R1(CTRL)	2.36	2.35	2.36	2.32	2.27	2.30	2.31
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	2.38	2.44	2.48	7.90	**34.59**	**33.33**	3.10
R3(ON BIAS LDC)	2.35	2.43	2.55	9.41	**24.55**	**23.40**	2.95
R4(ON BIAS LDC)	2.31	2.43	2.46	7.55	**37.39**	**36.05**	3.18
R5(ON BIAS LDC)	2.31	2.33	2.58	8.22	**35.36**	**34.16**	2.91
R6(ON BIAS LDC)	2.37	2.39	2.50	8.54	**35.41**	**33.91**	2.97
R7(ON BIAS LDC)	2.35	2.39	2.53	9.93	**43.98**	**41.91**	3.21
R8(ON BIAS LDC)	2.40	2.41	2.62	10.03	**39.08**	**37.56**	2.88
R9(ON BIAS LDC)	2.36	2.38	2.63	9.34	**36.48**	**35.29**	3.09
R10(ON BIAS LDC)	2.38	2.43	2.56	8.66	**36.37**	**35.04**	2.97
R11(ON BIAS LDC)	2.41	2.42	2.61	9.53	**36.62**	**35.30**	3.02
Irradiated, ON biased LDC parts statistics							
Min Value	2.31	2.33	2.46	7.55	24.55	23.40	2.88
Max Value	2.41	2.44	2.63	10.03	43.98	41.91	3.21
Average	2.36	2.40	2.55	8.91	35.98	34.60	3.03
Sigma	0.04	0.03	0.06	0.86	4.83	4.63	0.11



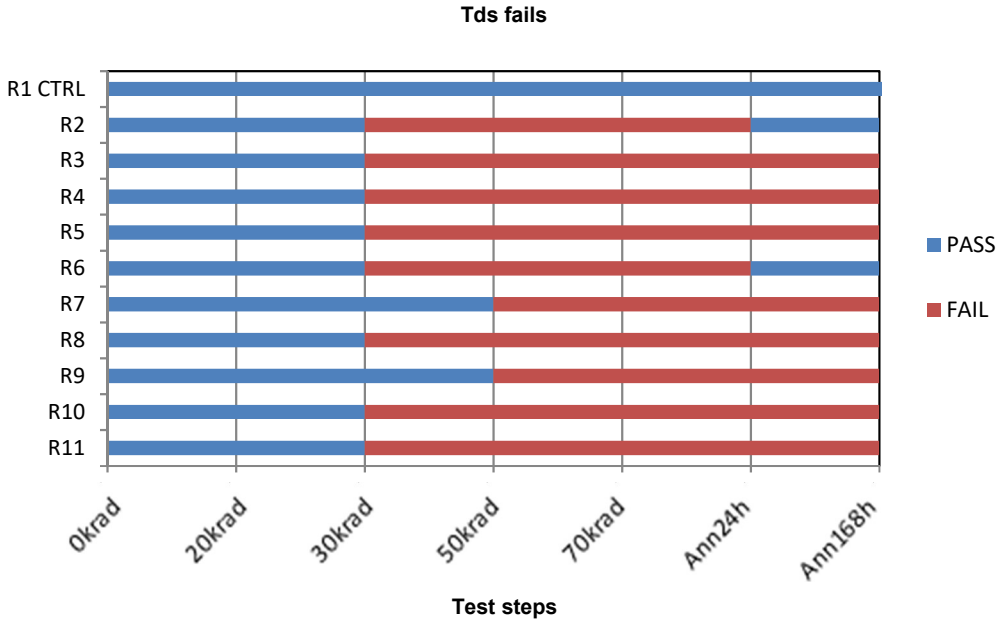
Icw	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	55	55	55	55	55	55	55
Unit	mA	mA	mA	mA	mA	mA	mA
Control results							
R1(CTRL)	6.13	6.17	6.23	6.17	6.18	6.19	6.20
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	6.33	6.81	7.07	15.10	32.85	31.63	8.35
R3(ON BIAS LDC)	6.34	6.91	7.23	16.86	22.00	20.92	8.55
R4(ON BIAS LDC)	6.17	6.61	6.98	12.40	35.50	34.17	8.51
R5(ON BIAS LDC)	6.24	6.76	7.18	16.78	33.58	32.36	8.18
R6(ON BIAS LDC)	6.46	6.94	7.28	17.61	33.64	32.20	8.54
R7(ON BIAS LDC)	6.25	6.73	7.79	33.12	41.78	39.71	8.44
R8(ON BIAS LDC)	6.35	6.81	7.28	21.79	37.13	35.67	10.06
R9(ON BIAS LDC)	6.30	6.83	7.48	34.30	34.71	33.55	8.51
R10(ON BIAS LDC)	6.28	6.86	7.30	20.69	34.48	33.24	8.18
R11(ON BIAS LDC)	6.26	6.76	7.16	14.66	34.75	33.53	8.23
Irradiated, ON biased LDC parts statistics							
Min Value	6.25	6.73	7.16	14.66	34.48	33.24	8.18
Max Value	6.35	6.86	7.79	34.30	41.78	39.71	10.06
Average	6.29	6.80	7.40	24.91	36.57	35.14	8.69
Sigma	0.04	0.05	0.24	8.49	3.11	2.73	0.78



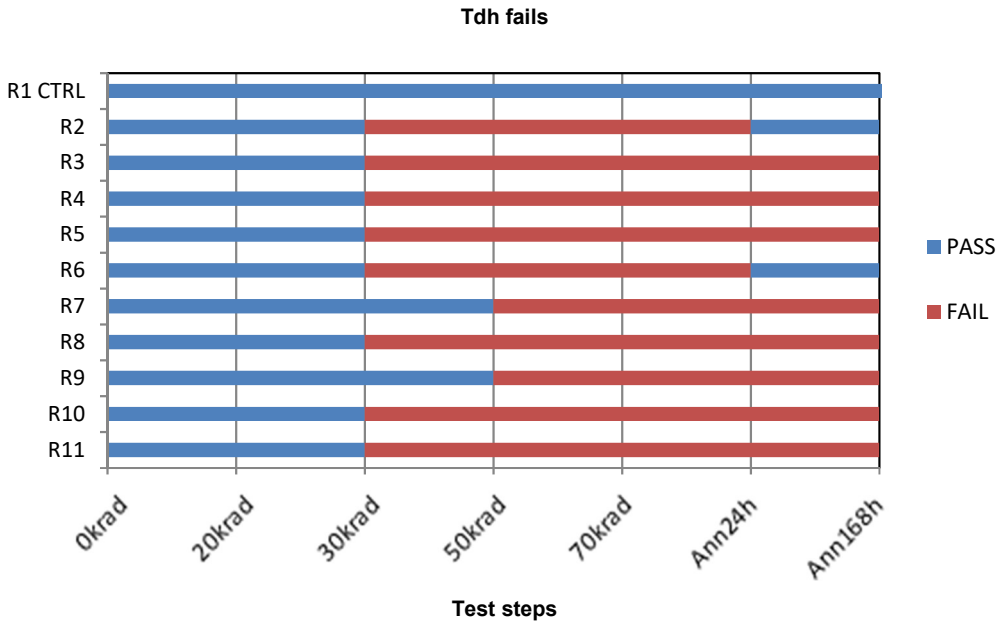
Tcs fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS	FAIL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



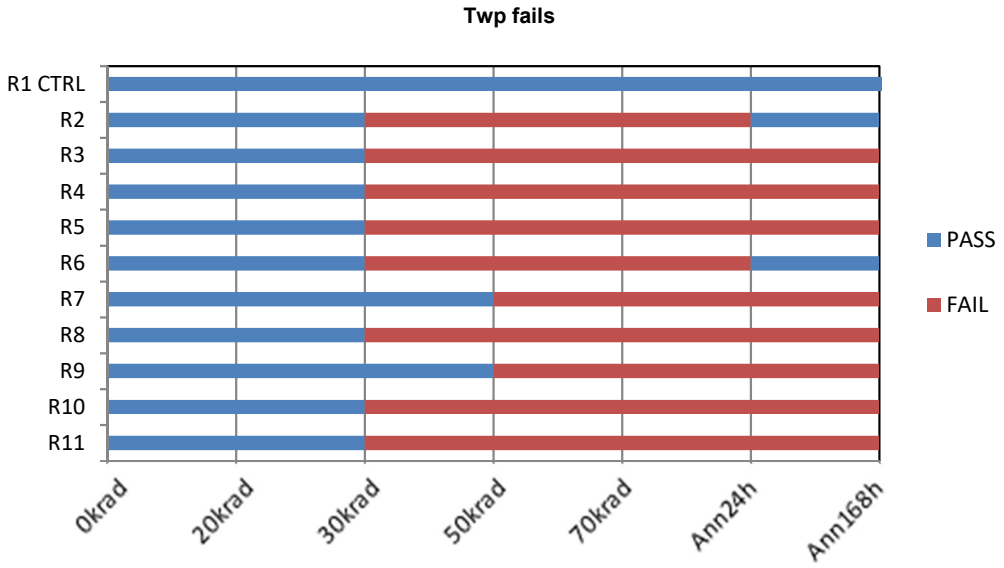
Tch fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS	FAIL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



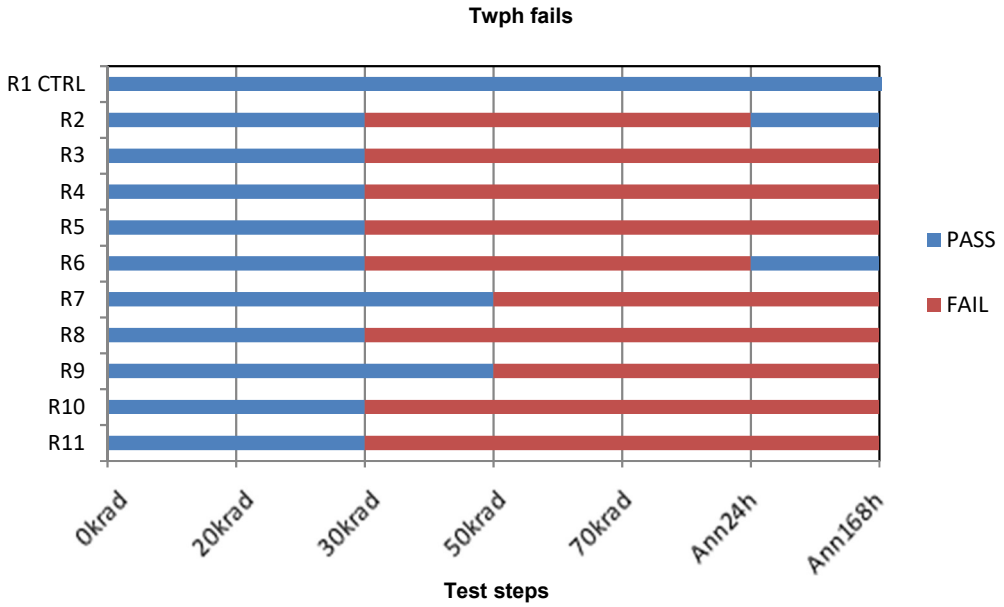
Tds fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS	FAIL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



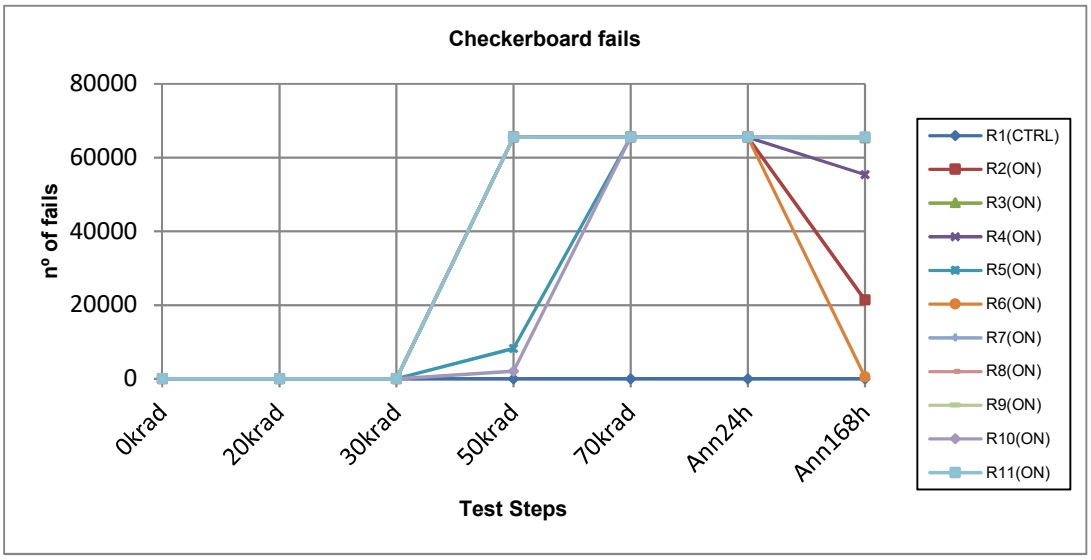
Tdh fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS	FAIL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



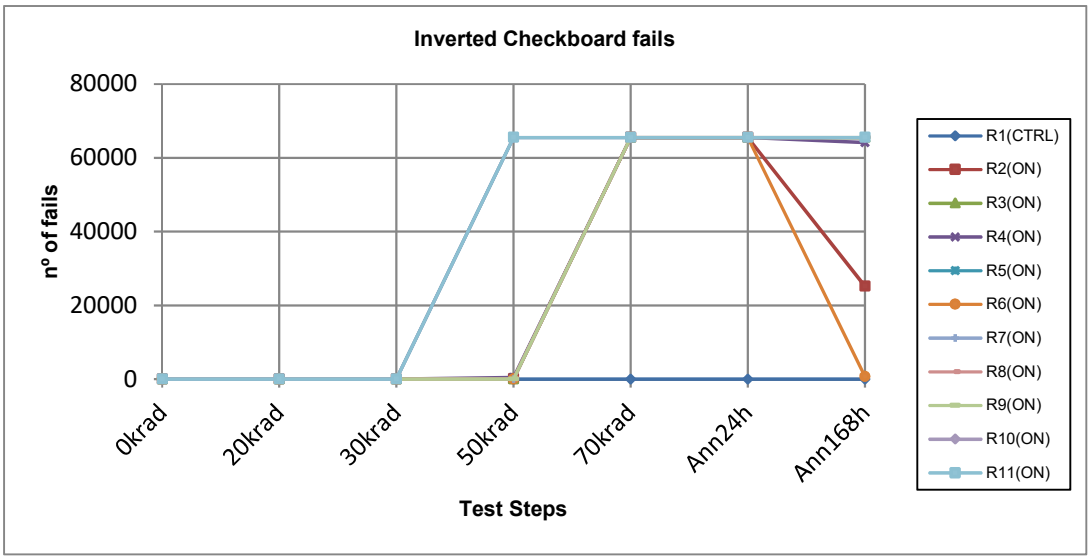
Twp fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS	FAIL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



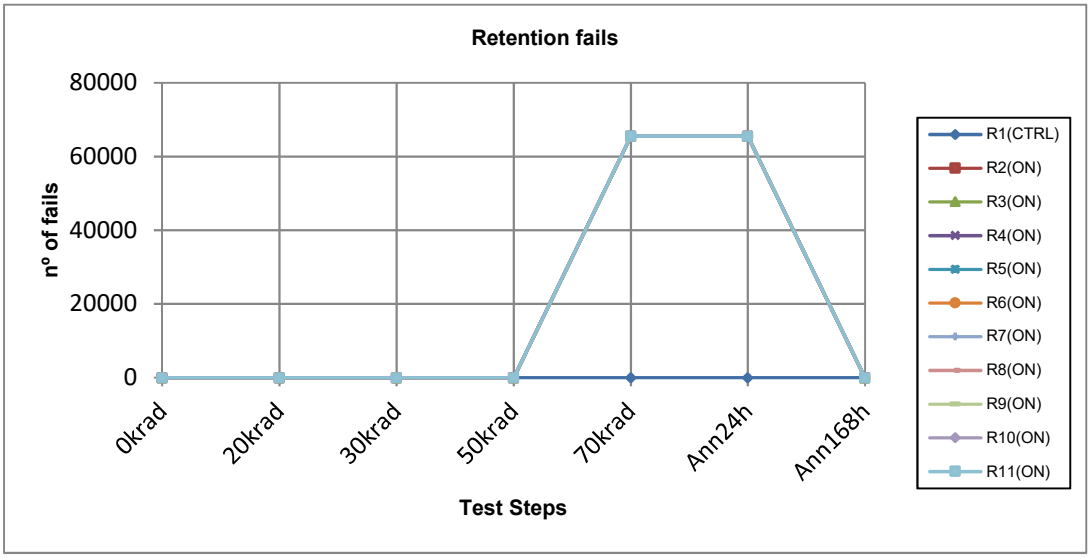
Twph fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	PASS	PASS	PASS	FAIL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



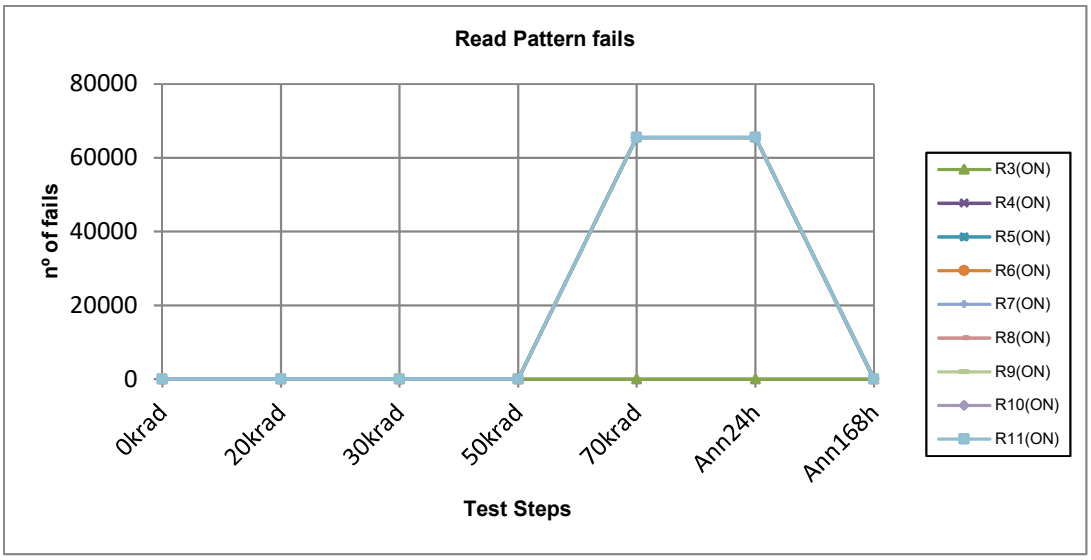
Checkerboard fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results							
R1(CTRL)	0	0	0	0	0	0	0
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0	0	0	65536	65536	65536	21366
R3(ON BIAS LDC)	0	0	0	65536	65536	65536	65332
R4(ON BIAS LDC)	0	0	0	65536	65536	65536	55382
R5(ON BIAS LDC)	0	0	0	8279	65536	65536	65536
R6(ON BIAS LDC)	0	0	0	65536	65536	65536	534
R7(ON BIAS LDC)	0	0	0	65536	65536	65536	65536
R8(ON BIAS LDC)	0	0	0	65536	65536	65536	65536
R9(ON BIAS LDC)	0	0	0	65536	65536	65536	65245
R10(ON BIAS LDC)	0	0	0	2119	65536	65536	65536
R11(ON BIAS LDC)	0	0	0	65536	65536	65536	65536
Irradiated, ON biased LDC parts statistics							
Min Value	0	0	0	2119	65536	65536	534
Max Value	0	0	0	65536	65536	65536	65536
Average	0	0	0	53469	65536	65536	53554
Sigma	0	0	0	25482	0	0	23199



Inverted Checkboard fails	0krad	20krad	30krad	50krad	70krad	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
Control results							
R1(CTRL)	0	0	0	0	0	0	0
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	0	0	0	**129**	**65536**	**65536**	**25174**
R3(ON BIAS LDC)	0	0	0	**9**	**65536**	**65536**	**65536**
R4(ON BIAS LDC)	0	0	0	**441**	**65536**	**65536**	**64148**
R5(ON BIAS LDC)	0	0	0	**65536**	**65536**	**65536**	**65536**
R6(ON BIAS LDC)	0	0	0	**31**	**65536**	**65536**	**696**
R7(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	**65536**
R8(ON BIAS LDC)	0	0	0	**35**	**65536**	**65536**	**65536**
R9(ON BIAS LDC)	0	0	0	**2**	**65536**	**65536**	**65526**
R10(ON BIAS LDC)	0	0	0	**65536**	**65536**	**65536**	**65536**
R11(ON BIAS LDC)	0	0	0	**65536**	**65536**	**65536**	**65536**
Irradiated, ON biased LDC parts statistics							
Min Value	0	0	0	0	65536	65536	696
Max Value	0	0	0	65536	65536	65536	65536
Average	0	0	0	19726	65536	65536	54876
Sigma	0	0	0	31613	0	0	22849

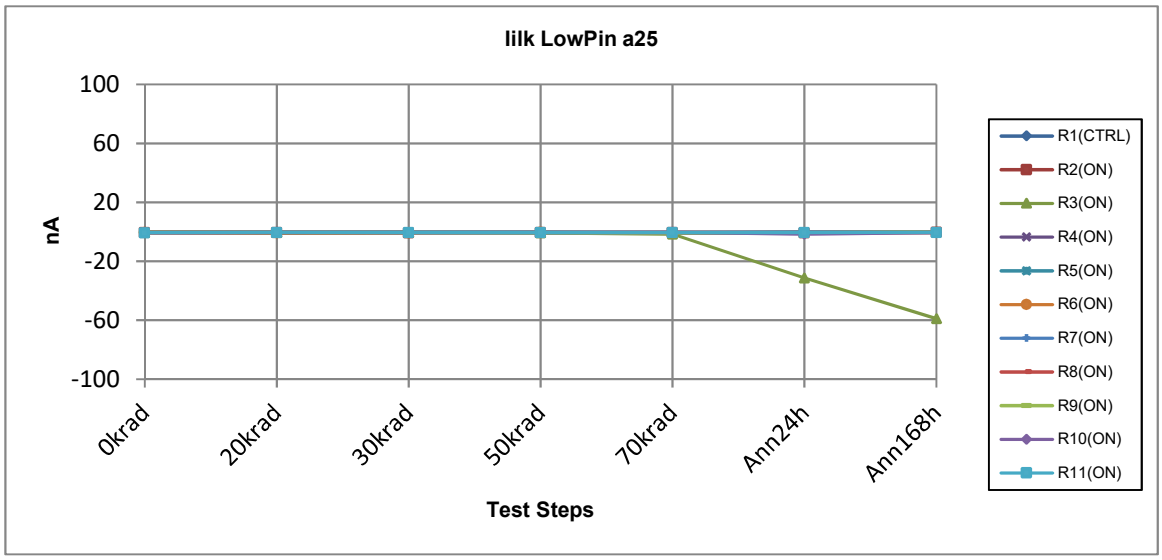


Retention fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results							
R1(CTRL)	0	0	0	0	0	0	0
Irradiated, ON biased LDC parts results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

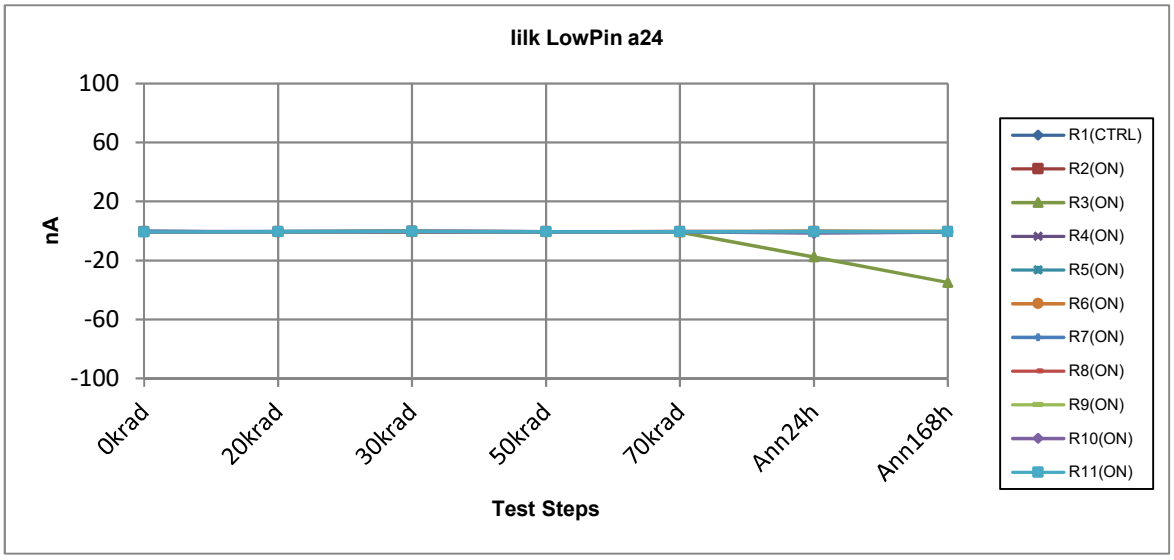


Read Pattern fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results							
R1(CTRL)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irradiated, ON biased LDC parts results							
R2(ON BIAS LDC)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R3(ON BIAS LDC)	0	0	0	0	0	0	0
R4(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
R5(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
R6(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
R7(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
R8(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
R9(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
R10(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
R11(ON BIAS LDC)	0	0	0	0	**65536**	**65536**	0
Irradiated, ON biased LDC parts statistics							
Min Value	0	0	0	0	0	0	0
Max Value	0	0	0	0	65536	65536	65536
Average	0	0	0	0	58982	58982	6554
Sigma	0	0	0	0	20724	20724	20724

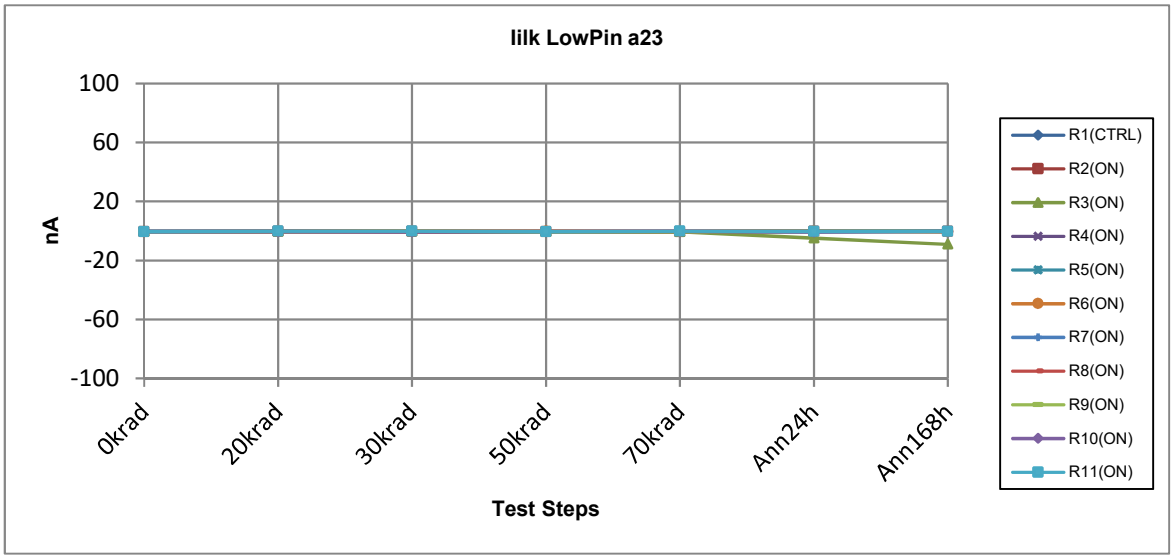
R1 + HDC (High Duty Cycle) samples (SN 12 to 21)



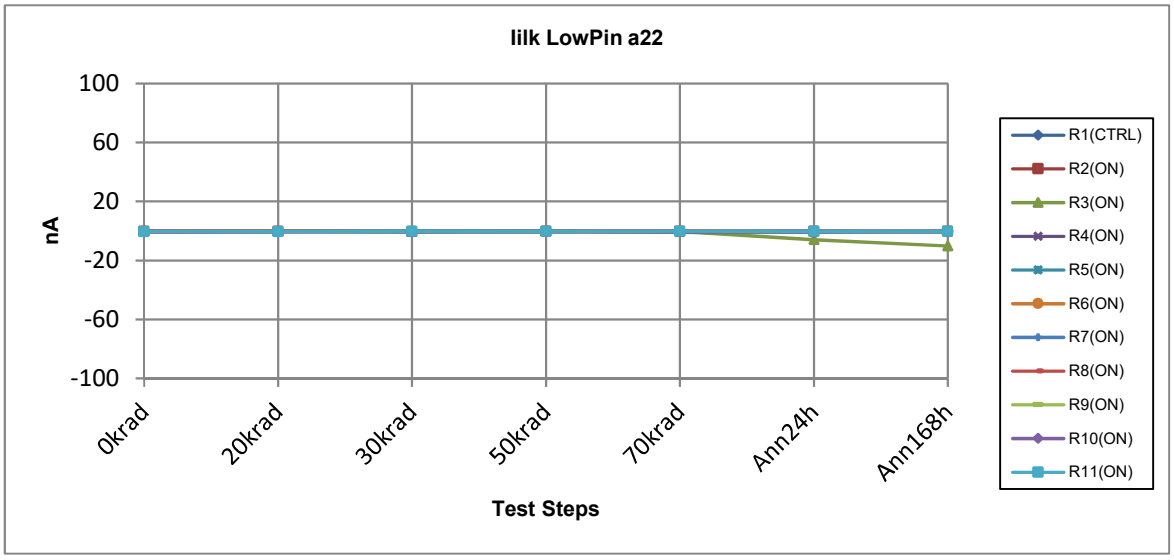
Iilk LowPin a25	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.54	-0.54	-0.46	-0.46	-0.77	-0.54	-0.54
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.38	-0.54	-0.61	-0.46	-0.54	-0.61	-0.31
R3(ON BIAS HDC)	-0.54	-0.38	-0.38	-0.61	-1.61	-31.36	-58.88
R4(ON BIAS HDC)	-0.31	-0.69	-0.46	-0.31	-0.46	-0.31	-0.46
R5(ON BIAS HDC)	-0.46	-0.38	-0.38	-0.46	-0.61	-0.31	-0.23
R6(ON BIAS HDC)	-0.38	-0.61	-0.61	-0.31	-0.61	-0.69	-0.38
R7(ON BIAS HDC)	-0.38	-0.38	-0.31	-0.54	-0.54	-0.46	-0.31
R8(ON BIAS HDC)	-0.38	-0.54	-0.54	-0.61	-0.38	-0.46	-0.31
R9(ON BIAS HDC)	-0.23	-0.46	-0.38	-0.61	-0.69	-0.61	-0.23
R10(ON BIAS HDC)	-0.46	-0.31	-0.46	-0.38	-0.31	-1.53	-0.54
R11(ON BIAS HDC)	-0.61	-0.38	-0.46	-0.54	-0.46	-0.54	-0.38
Irradiated, ON biased HDC parts statistics							
Min Value	-0.61	-0.69	-0.61	-0.61	-1.61	-31.36	-58.88
Max Value	-0.23	-0.31	-0.31	-0.31	-0.31	-0.31	-0.23
Average	-0.41	-0.47	-0.46	-0.48	-0.62	-3.69	-6.20
Sigma	0.11	0.12	0.10	0.12	0.37	9.73	18.51



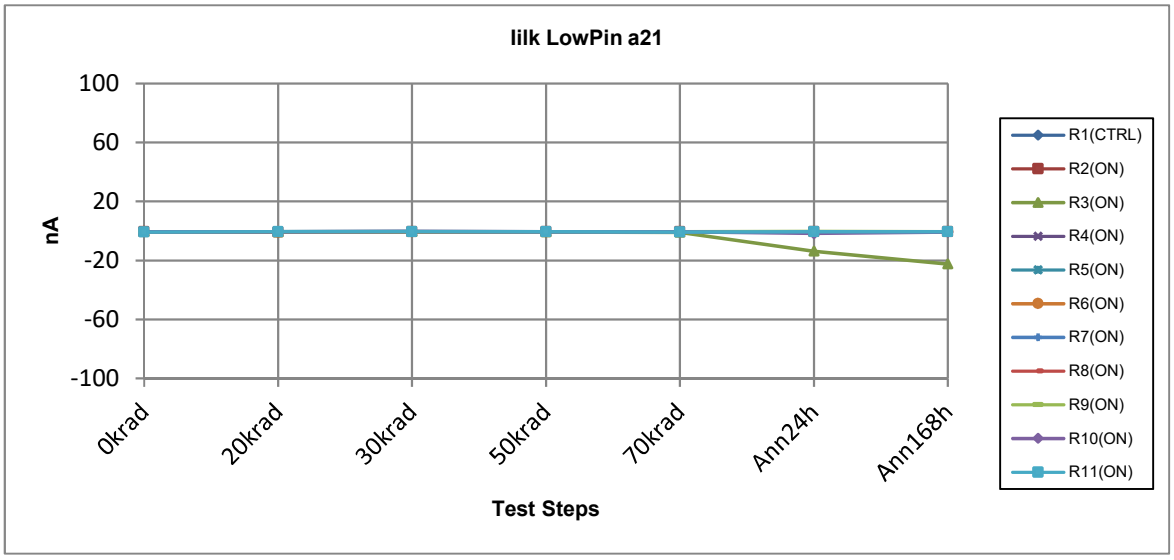
Iilk LowPin a24	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.37	-0.60	-0.45	-0.53	-0.60	-0.30	-0.53
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.60	-0.45	-0.37	-0.53	-0.60	-0.45	-0.45
R3(ON BIAS HDC)	-0.53	-0.60	-0.53	-0.53	-0.83	-17.78	-34.96
R4(ON BIAS HDC)	-0.37	-0.53	-0.45	-0.53	-0.53	-0.37	-0.60
R5(ON BIAS HDC)	-0.68	-0.30	-0.37	-0.53	-0.45	-0.45	-0.76
R6(ON BIAS HDC)	-0.45	-0.76	-0.37	-0.45	-0.68	-0.37	-0.60
R7(ON BIAS HDC)	-0.30	-0.60	-0.37	-0.53	-0.53	-0.60	-0.53
R8(ON BIAS HDC)	-0.53	-0.53	-0.45	-0.60	-0.37	-0.45	-0.37
R9(ON BIAS HDC)	-0.53	-0.60	-0.30	-0.68	-0.45	-0.22	-0.30
R10(ON BIAS HDC)	-0.53	-0.60	-0.30	-0.45	-0.53	-1.52	-0.68
R11(ON BIAS HDC)	-0.68	-0.45	-0.37	-0.45	-0.45	-0.60	-0.53
Irradiated, ON biased HDC parts statistics							
Min Value	-0.68	-0.76	-0.53	-0.68	-0.83	-17.78	-34.96
Max Value	-0.30	-0.30	-0.30	-0.45	-0.37	-0.22	-0.30
Average	-0.52	-0.54	-0.39	-0.53	-0.54	-2.28	-3.98
Sigma	0.12	0.12	0.07	0.07	0.13	5.46	10.89



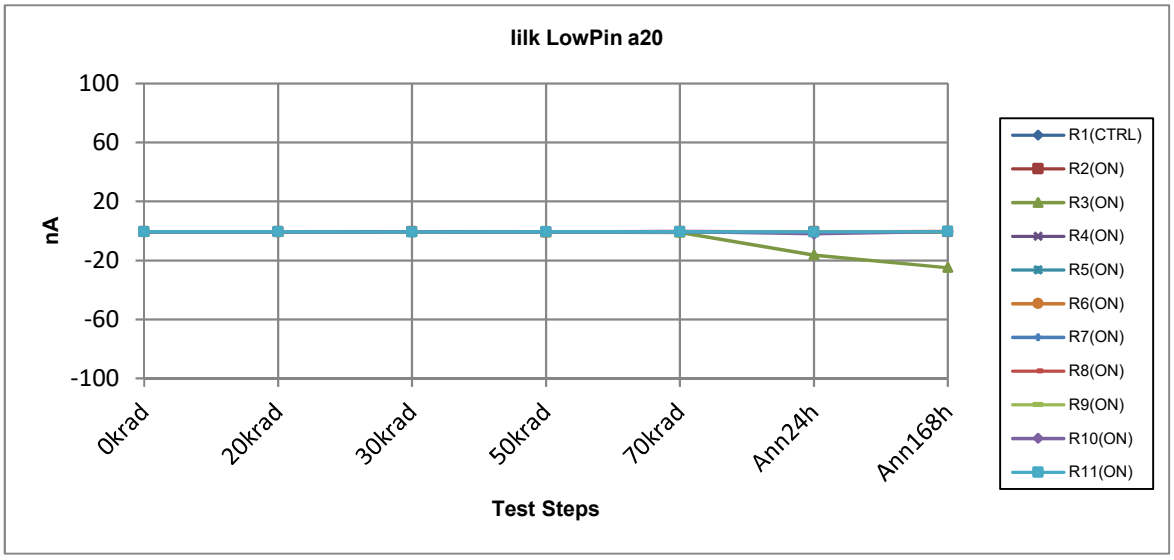
Iilk LowPin a23	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.28	-0.28	-0.58	-0.43	-0.43	-0.28	-0.28
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.51	-0.35	-0.35	-0.43	-0.43	-0.28	-0.28
R3(ON BIAS HDC)	-0.28	-0.35	-0.12	-0.28	-0.43	-4.88	-9.10
R4(ON BIAS HDC)	-0.28	-0.35	-0.58	-0.51	-0.51	-0.51	-0.20
R5(ON BIAS HDC)	-0.43	-0.43	-0.43	-0.28	-0.35	-0.12	-0.20
R6(ON BIAS HDC)	-0.51	-0.35	-0.35	-0.20	-0.35	-0.05	-0.51
R7(ON BIAS HDC)	-0.20	-0.35	-0.20	-0.51	-0.20	-0.35	-0.35
R8(ON BIAS HDC)	-0.43	-0.43	-0.28	-0.51	-0.28	-0.20	-0.58
R9(ON BIAS HDC)	-0.51	-0.58	-0.20	-0.43	-0.43	-0.35	-0.35
R10(ON BIAS HDC)	-0.43	-0.58	-0.43	-0.28	-0.28	-0.81	-0.28
R11(ON BIAS HDC)	-0.51	-0.20	-0.20	-0.51	-0.20	-0.28	-0.35
Irradiated, ON biased HDC parts statistics							
Min Value	-0.51	-0.58	-0.58	-0.51	-0.51	-4.88	-9.10
Max Value	-0.20	-0.20	-0.12	-0.20	-0.20	-0.05	-0.20
Average	-0.41	-0.40	-0.31	-0.39	-0.35	-0.78	-1.22
Sigma	0.12	0.11	0.14	0.12	0.11	1.46	2.77



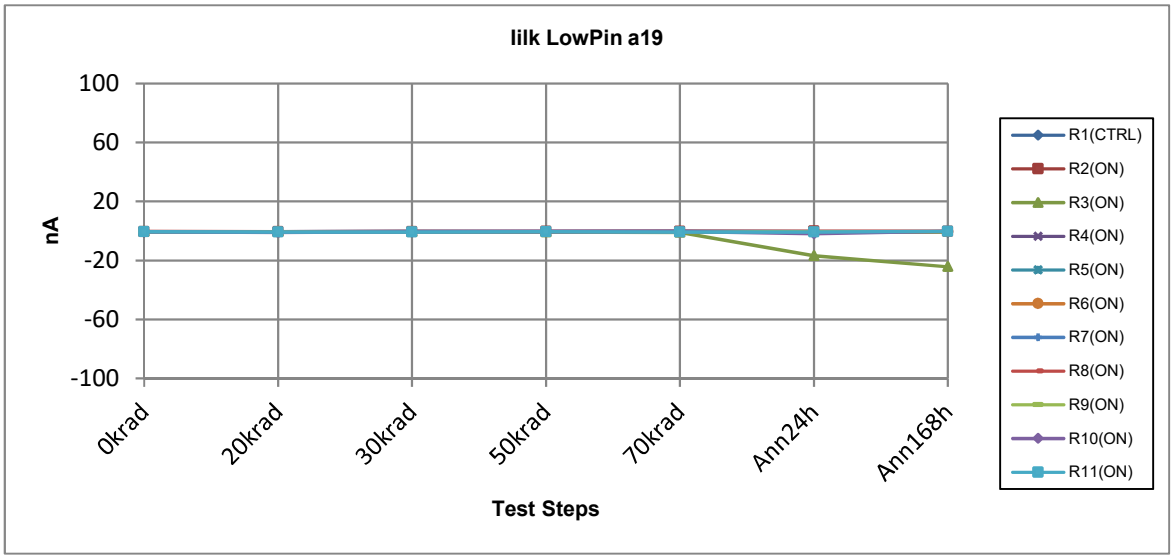
Iilk LowPin a22	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.49	-0.18	-0.56	-0.26	-0.33	-0.33	-0.64
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.26	-0.26	-0.56	-0.41	-0.41	-0.41	-0.26
R3(ON BIAS HDC)	-0.41	-0.33	-0.03	-0.18	-0.41	-6.07	-10.20
R4(ON BIAS HDC)	-0.56	-0.33	-0.18	-0.33	-0.72	-0.56	-0.33
R5(ON BIAS HDC)	-0.41	-0.41	-0.26	-0.41	-0.10	-0.41	-0.41
R6(ON BIAS HDC)	-0.41	-0.33	-0.18	-0.41	-0.18	-0.41	-0.26
R7(ON BIAS HDC)	-0.03	-0.41	-0.18	-0.18	-0.49	-0.03	-0.41
R8(ON BIAS HDC)	-0.33	-0.33	-0.49	-0.33	-0.26	-0.26	-0.41
R9(ON BIAS HDC)	-0.49	-0.41	-0.41	-0.33	-0.33	-0.56	-0.26
R10(ON BIAS HDC)	-0.49	-0.33	-0.33	-0.33	-0.26	-0.87	-0.18
R11(ON BIAS HDC)	-0.49	-0.49	-0.41	-0.33	-0.26	-0.41	-0.33
Irradiated, ON biased HDC parts statistics							
Min Value	-0.56	-0.49	-0.56	-0.41	-0.72	-6.07	-10.20
Max Value	-0.03	-0.26	-0.03	-0.18	-0.10	-0.03	-0.18
Average	-0.39	-0.36	-0.30	-0.32	-0.34	-1.00	-1.31
Sigma	0.15	0.07	0.17	0.08	0.18	1.79	3.13



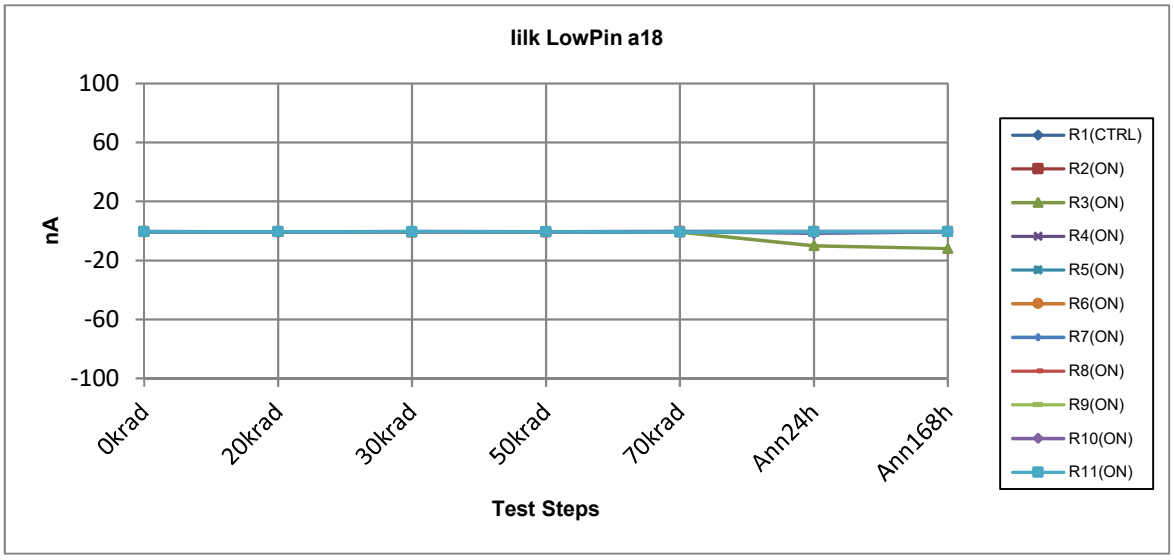
Iilk LowPin a21	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.44	-0.51	-0.51	-0.59	-0.82	-0.51	-0.51
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.51	-0.66	-0.51	-0.59	-0.44	-0.51	-0.59
R3(ON BIAS HDC)	-0.51	-0.66	-0.44	-0.66	-0.97	-13.82	-22.46
R4(ON BIAS HDC)	-0.51	-0.66	-0.51	-0.59	-0.44	-0.51	-0.74
R5(ON BIAS HDC)	-0.66	-0.51	-0.36	-0.44	-0.44	-0.59	-0.59
R6(ON BIAS HDC)	-0.44	-0.66	-0.44	-0.59	-0.59	-0.51	-0.44
R7(ON BIAS HDC)	-0.82	-0.59	-0.51	-0.51	-0.44	-0.59	-0.44
R8(ON BIAS HDC)	-0.59	-0.44	-0.51	-0.66	-0.66	-0.51	-0.51
R9(ON BIAS HDC)	-0.44	-0.66	-0.44	-0.51	-0.59	-0.28	-0.59
R10(ON BIAS HDC)	-0.59	-0.44	-0.36	-0.44	-0.51	-1.74	-0.66
R11(ON BIAS HDC)	-0.66	-0.44	-0.44	-0.51	-0.74	-0.51	-0.59
Irradiated, ON biased HDC parts statistics							
Min Value	-0.82	-0.66	-0.51	-0.66	-0.97	-13.82	-22.46
Max Value	-0.44	-0.44	-0.36	-0.44	-0.44	-0.28	-0.44
Average	-0.57	-0.57	-0.45	-0.55	-0.58	-1.96	-2.76
Sigma	0.12	0.10	0.06	0.08	0.17	4.19	6.92



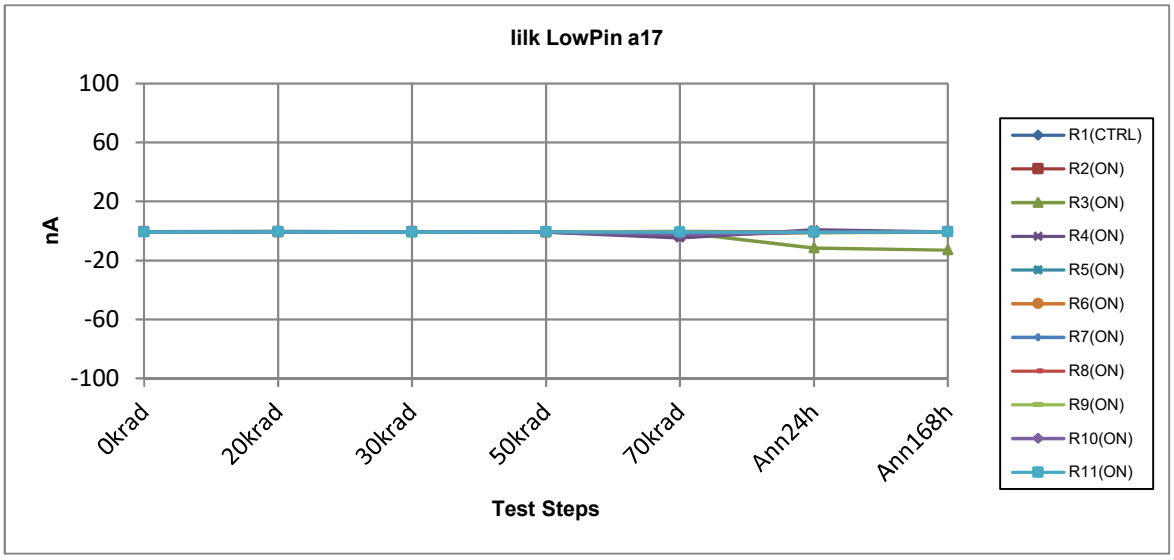
Iilk LowPin a20	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.55	-0.86	-0.63	-0.55	-0.55	-0.63
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.63	-0.47	-0.63	-0.70	-0.63	-0.47	-0.63
R3(ON BIAS HDC)	-0.47	-0.63	-0.55	-0.70	-0.93	-16.29	-24.93
R4(ON BIAS HDC)	-0.40	-0.86	-0.63	-0.78	-0.47	-0.55	-0.55
R5(ON BIAS HDC)	-0.70	-0.63	-0.70	-0.55	-0.55	-0.47	-0.47
R6(ON BIAS HDC)	-0.55	-0.78	-0.55	-0.55	-0.55	-0.70	-0.24
R7(ON BIAS HDC)	-0.55	-0.63	-0.63	-0.70	-0.70	-0.70	-0.70
R8(ON BIAS HDC)	-0.47	-0.63	-0.63	-0.63	-0.24	-0.63	-0.63
R9(ON BIAS HDC)	-0.63	-0.63	-0.70	-0.63	-0.47	-0.70	-0.78
R10(ON BIAS HDC)	-0.55	-0.63	-0.55	-0.63	-0.40	-2.00	-0.40
R11(ON BIAS HDC)	-0.63	-0.47	-0.70	-0.55	-0.55	-0.70	-0.40
Irradiated, ON biased HDC parts statistics							
Min Value	-0.70	-0.86	-0.70	-0.78	-0.93	-16.29	-24.93
Max Value	-0.40	-0.47	-0.55	-0.55	-0.24	-0.47	-0.24
Average	-0.56	-0.64	-0.63	-0.64	-0.55	-2.32	-2.97
Sigma	0.09	0.12	0.06	0.08	0.18	4.93	7.72



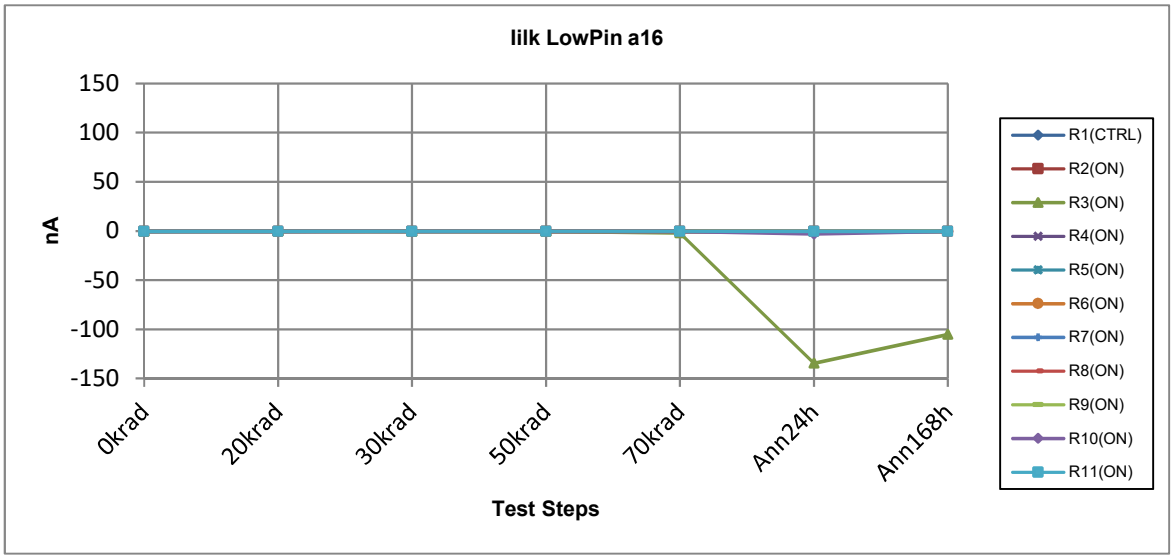
Iilk LowPin a19	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.65	-0.73	-0.81	-0.50	-0.65	-0.58	-0.73
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.50	-0.58	-0.58	-0.42	-0.42	-0.19	-0.35
R3(ON BIAS HDC)	-0.42	-0.42	-0.58	-0.65	-0.88	-16.77	-24.29
R4(ON BIAS HDC)	-0.50	-0.58	-0.27	-0.42	-0.42	-0.50	-0.58
R5(ON BIAS HDC)	-0.50	-0.58	-0.50	-0.58	-0.50	-0.58	-0.73
R6(ON BIAS HDC)	-0.50	-0.81	-0.58	-0.58	-0.73	-0.65	-0.50
R7(ON BIAS HDC)	-0.50	-0.58	-0.35	-0.58	-0.35	-0.50	-0.50
R8(ON BIAS HDC)	-0.35	-0.50	-0.42	-0.50	-0.42	-0.35	-0.35
R9(ON BIAS HDC)	-0.58	-0.58	-0.58	-0.42	-0.50	-0.50	-0.58
R10(ON BIAS HDC)	-0.50	-0.88	-0.58	-0.27	-0.42	-1.88	-0.19
R11(ON BIAS HDC)	-0.50	-0.65	-0.65	-0.58	-0.73	-0.73	-0.27
Irradiated, ON biased HDC parts statistics							
Min Value	-0.58	-0.88	-0.65	-0.65	-0.88	-16.77	-24.29
Max Value	-0.35	-0.42	-0.27	-0.27	-0.35	-0.19	-0.19
Average	-0.49	-0.62	-0.51	-0.50	-0.54	-2.27	-2.83
Sigma	0.06	0.14	0.12	0.12	0.18	5.12	7.54



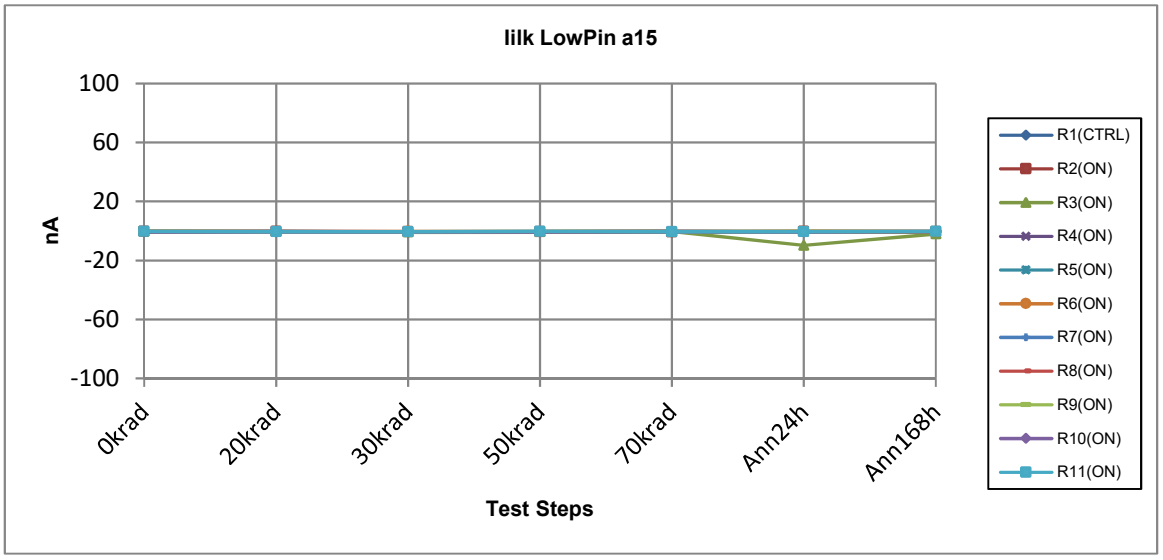
Iilk LowPin a18	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.45	-0.45	-0.68	-0.61	-0.30	-0.38	-0.30
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.53	-0.61	-0.68	-0.68	-0.45	-0.61	-0.53
R3(ON BIAS HDC)	-0.61	-0.45	-0.68	-0.38	-0.76	-10.10	-11.94
R4(ON BIAS HDC)	-0.45	-0.68	-0.61	-0.68	-0.61	-0.61	-0.68
R5(ON BIAS HDC)	-0.53	-0.68	-0.38	-0.53	-0.68	-0.53	-0.45
R6(ON BIAS HDC)	-0.61	-0.68	-0.61	-0.68	-0.45	-0.61	-0.53
R7(ON BIAS HDC)	-0.30	-0.68	-0.38	-0.53	-0.53	-0.53	-0.61
R8(ON BIAS HDC)	-0.38	-0.38	-0.45	-0.61	-0.53	-0.61	-0.68
R9(ON BIAS HDC)	-0.45	-0.76	-0.53	-0.61	-0.53	-0.53	-0.53
R10(ON BIAS HDC)	-0.45	-0.76	-0.61	-0.61	-0.38	-1.60	-0.45
R11(ON BIAS HDC)	-0.61	-0.61	-0.45	-0.53	-0.76	-0.61	-0.45
Irradiated, ON biased HDC parts statistics							
Min Value	-0.61	-0.76	-0.68	-0.68	-0.76	-10.10	-11.94
Max Value	-0.30	-0.38	-0.38	-0.38	-0.38	-0.53	-0.45
Average	-0.49	-0.63	-0.54	-0.58	-0.57	-1.63	-1.69
Sigma	0.11	0.12	0.12	0.09	0.13	2.99	3.60



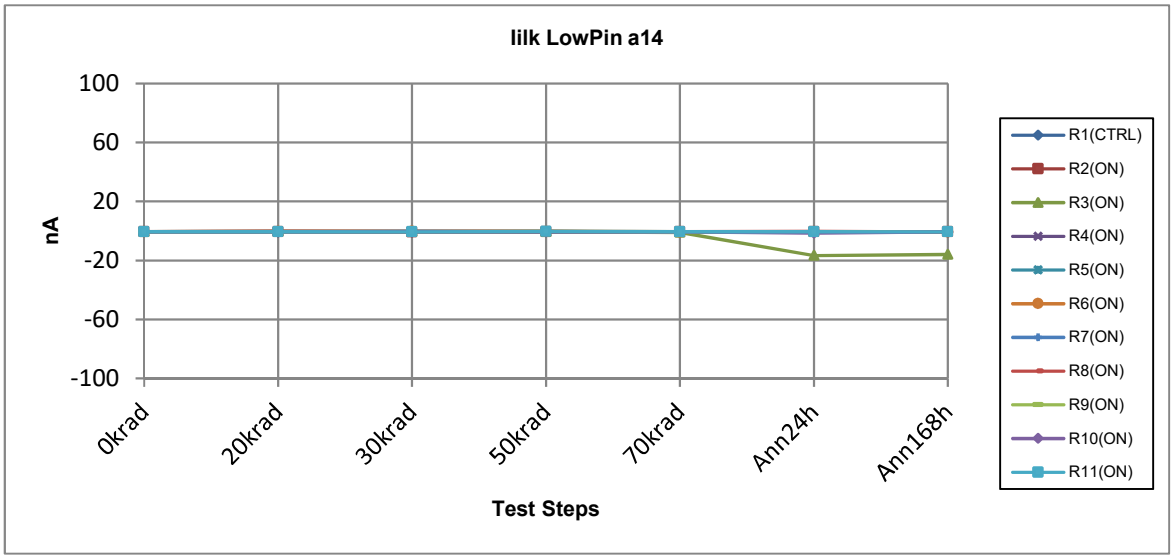
Iilk LowPin a17	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.59	-0.36	-0.67	-0.67	-0.67	-0.90	-0.75
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.44	-0.44	-0.44	-0.67	-3.12	-0.67	-0.44
R3(ON BIAS HDC)	-0.59	-0.67	-0.75	-0.67	-1.05	-11.70	-13.00
R4(ON BIAS HDC)	-0.67	-0.52	-0.75	-0.75	-4.73	0.79	-0.75
R5(ON BIAS HDC)	-0.52	-0.52	-0.75	-0.75	-0.29	-0.67	-0.67
R6(ON BIAS HDC)	-0.59	-0.67	-0.59	-0.67	-0.90	-0.59	-0.82
R7(ON BIAS HDC)	-0.52	-0.59	-0.52	-0.75	-1.89	-0.75	-0.75
R8(ON BIAS HDC)	-0.44	-0.52	-0.52	-0.67	-0.82	-0.97	-0.59
R9(ON BIAS HDC)	-0.67	-0.67	-0.67	-0.67	-0.75	-1.36	-0.82
R10(ON BIAS HDC)	-0.52	-0.82	-0.59	-0.82	-2.35	-0.75	-0.82
R11(ON BIAS HDC)	-0.67	-0.59	-0.67	-0.59	-0.82	-0.82	-0.59
Irradiated, ON biased HDC parts statistics							
Min Value	-0.67	-0.82	-0.75	-0.82	-4.73	-11.70	-13.00
Max Value	-0.44	-0.44	-0.44	-0.59	-0.29	0.79	-0.44
Average	-0.56	-0.60	-0.63	-0.70	-1.67	-1.75	-1.93
Sigma	0.09	0.11	0.11	0.07	1.38	3.54	3.89



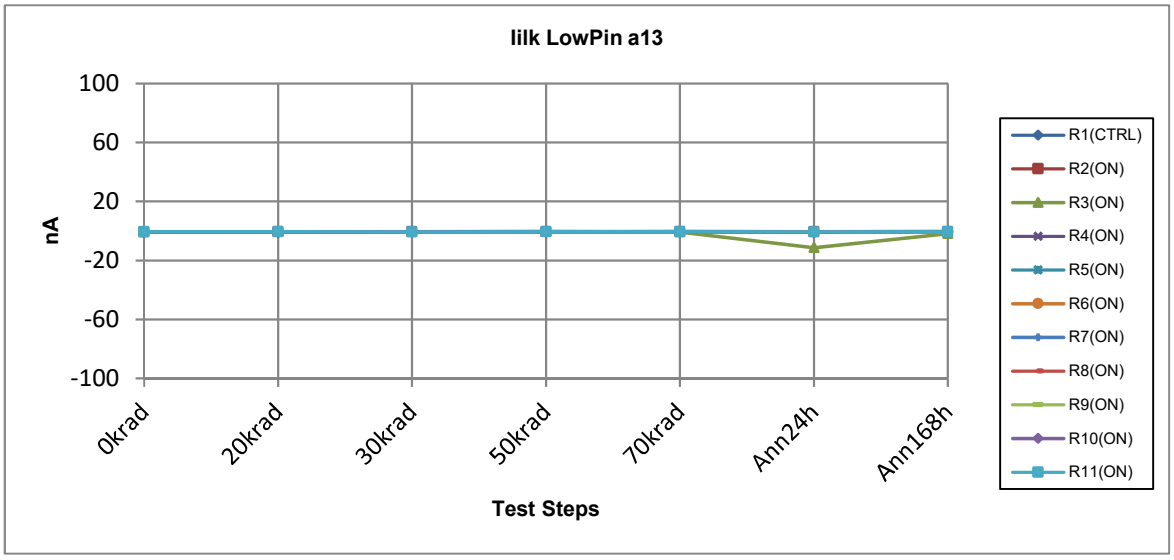
Iilk LowPin a16	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.53	-0.53	-0.69	-0.53	-0.61	-0.53	-0.53
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.38	-0.46	-0.53	-0.46	-0.53	-0.53	-0.46
R3(ON BIAS HDC)	-0.53	-0.30	-0.46	-0.46	-2.06	-134.70	-105.39
R4(ON BIAS HDC)	-0.38	-0.53	-0.23	-0.30	-0.38	-0.61	-0.61
R5(ON BIAS HDC)	-0.61	-0.38	-0.61	-0.46	-0.53	-0.46	-0.53
R6(ON BIAS HDC)	-0.46	-0.46	-0.46	-0.53	-0.53	-0.61	-0.38
R7(ON BIAS HDC)	-0.46	-0.38	-0.53	-0.38	-0.53	-0.53	-0.30
R8(ON BIAS HDC)	-0.53	-0.53	-0.38	-0.46	-0.53	-0.53	-0.61
R9(ON BIAS HDC)	-0.46	-0.46	-0.53	-0.46	-0.46	-0.53	-0.53
R10(ON BIAS HDC)	-0.53	-0.46	-0.46	-0.53	-0.61	-3.06	-0.53
R11(ON BIAS HDC)	-0.53	-0.46	-0.38	-0.38	-0.38	-0.53	-0.46
Irradiated, ON biased HDC parts statistics							
Min Value	-0.61	-0.53	-0.61	-0.53	-2.06	-134.70	-105.39
Max Value	-0.38	-0.30	-0.23	-0.30	-0.38	-0.46	-0.30
Average	-0.49	-0.44	-0.46	-0.44	-0.65	-14.21	-10.98
Sigma	0.07	0.07	0.11	0.07	0.50	42.34	33.17



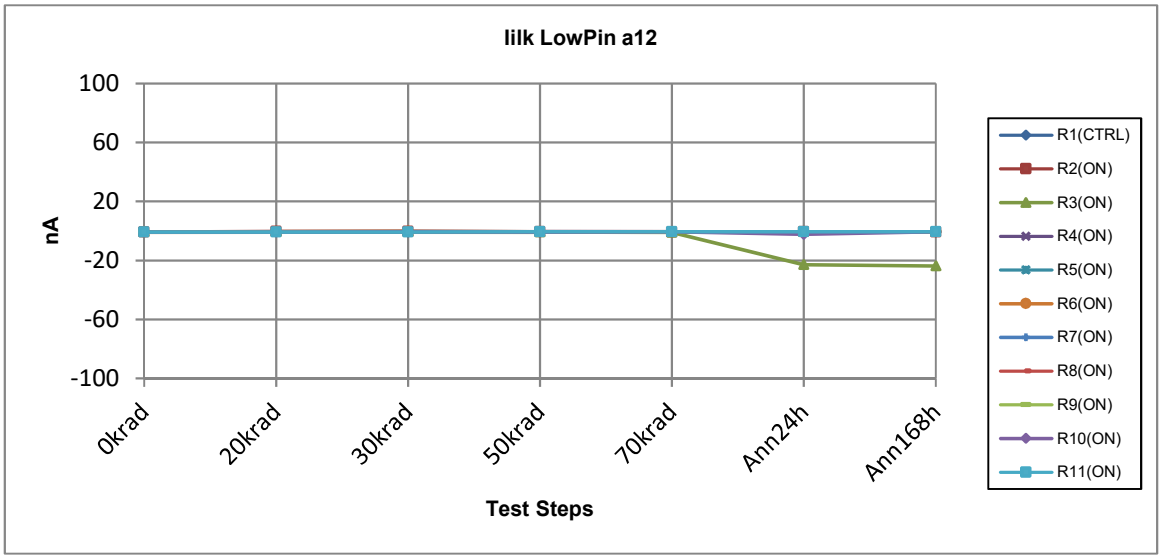
Iilk LowPin a15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.50	-0.43	-0.58	-0.58	-0.43	-0.50	-0.50
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.27	-0.27	-0.43	-0.43	-0.73	-0.27	-0.50
R3(ON BIAS HDC)	-0.27	-0.35	-0.66	-0.43	-0.35	-9.79	-1.96
R4(ON BIAS HDC)	-0.43	-0.35	-0.43	-0.35	-0.58	-0.43	-0.43
R5(ON BIAS HDC)	-0.27	-0.43	-0.58	-0.58	-0.35	-0.35	-0.50
R6(ON BIAS HDC)	-0.43	-0.50	-0.20	-0.50	-0.50	-0.35	-0.35
R7(ON BIAS HDC)	-0.50	-0.50	-0.50	-0.50	-0.50	-0.58	-0.43
R8(ON BIAS HDC)	-0.35	-0.43	-0.50	-0.43	-0.35	-0.66	-0.43
R9(ON BIAS HDC)	-0.20	-0.50	-0.43	-0.20	-0.35	-0.35	-0.35
R10(ON BIAS HDC)	-0.58	-0.58	-0.50	-0.43	-0.27	-0.58	-0.20
R11(ON BIAS HDC)	-0.35	-0.50	-0.50	-0.35	-0.50	-0.58	-0.35
Irradiated, ON biased HDC parts statistics							
Min Value	-0.58	-0.58	-0.66	-0.58	-0.73	-9.79	-1.96
Max Value	-0.20	-0.27	-0.20	-0.20	-0.27	-0.27	-0.20
Average	-0.37	-0.44	-0.47	-0.42	-0.45	-1.39	-0.55
Sigma	0.12	0.09	0.12	0.10	0.14	2.95	0.50



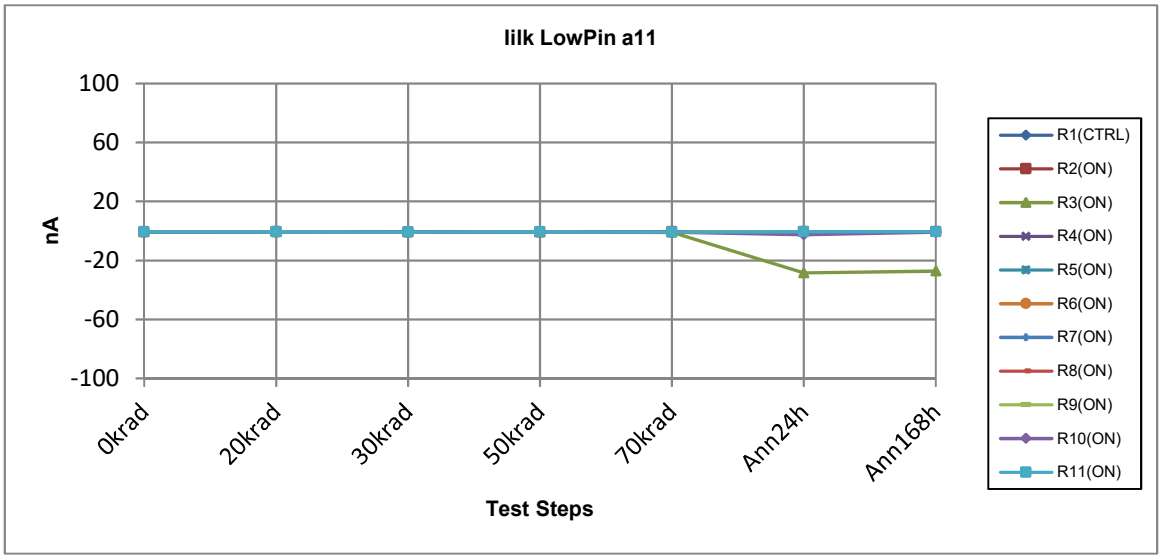
Iilk LowPin a14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.44	-0.67	-0.67	-0.59	-0.59	-0.44	-0.67
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.51	-0.51	-0.67	-0.51	-0.44	-0.51	-0.59
R3(ON BIAS HDC)	-0.59	-0.36	-0.36	-0.44	-0.90	-16.68	-15.99
R4(ON BIAS HDC)	-0.51	-0.36	-0.36	-0.36	-0.82	-0.51	-0.51
R5(ON BIAS HDC)	-0.44	-0.44	-0.59	-0.44	-0.44	-0.67	-0.44
R6(ON BIAS HDC)	-0.59	-0.36	-0.21	-0.28	-0.74	-0.51	-0.67
R7(ON BIAS HDC)	-0.51	-0.59	-0.21	-0.44	-0.44	-0.44	-0.59
R8(ON BIAS HDC)	-0.51	-0.36	-0.51	-0.36	-0.44	-0.36	-0.67
R9(ON BIAS HDC)	-0.59	-0.51	-0.44	-0.36	-0.59	-0.59	-0.67
R10(ON BIAS HDC)	-0.59	-0.59	-0.51	-0.59	-0.51	-1.51	-0.59
R11(ON BIAS HDC)	-0.51	-0.44	-0.59	-0.36	-0.44	-0.44	-0.59
Irradiated, ON biased HDC parts statistics							
Min Value	-0.59	-0.59	-0.67	-0.59	-0.90	-16.68	-15.99
Max Value	-0.44	-0.36	-0.21	-0.28	-0.44	-0.36	-0.44
Average	-0.54	-0.45	-0.45	-0.41	-0.58	-2.22	-2.13
Sigma	0.05	0.09	0.16	0.09	0.18	5.09	4.87



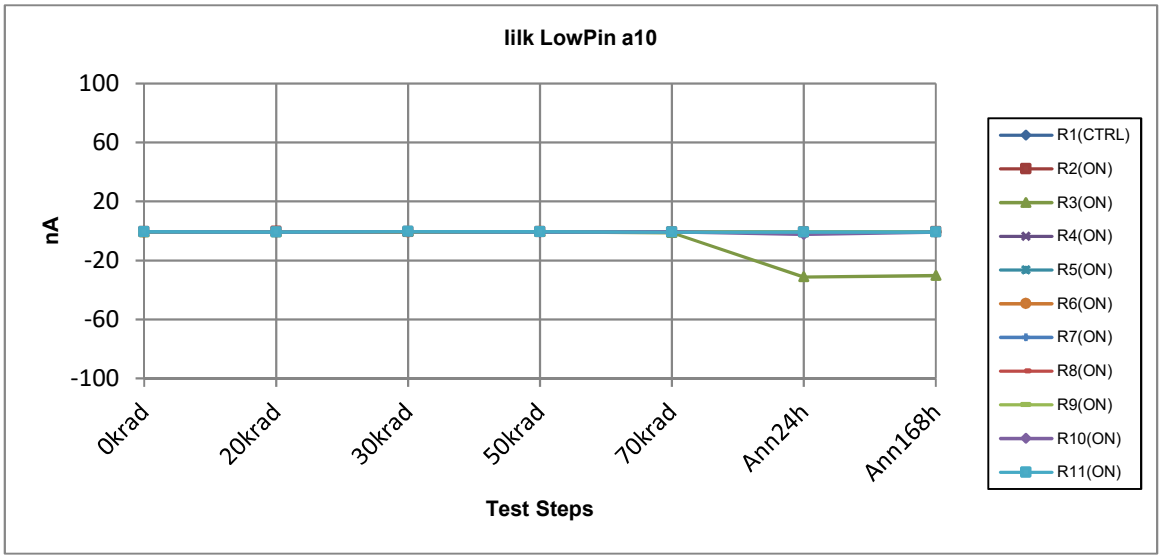
Iilk LowPin a13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA
Control results							
R1(CTRL)	-0.61	-0.84	-0.45	-0.61	-0.53	-0.45	-0.68
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.76	-0.45	-0.45	-0.45	-0.45	-0.45	-0.45
R3(ON BIAS HDC)	-0.45	-0.45	-0.38	-0.53	-0.68	-11.41	-1.91
R4(ON BIAS HDC)	-0.53	-0.53	-0.53	-0.61	-0.53	-0.45	-0.53
R5(ON BIAS HDC)	-0.68	-0.61	-0.53	-0.61	-0.30	-0.61	-0.30
R6(ON BIAS HDC)	-0.38	-0.68	-0.53	-0.45	-0.38	-0.68	-0.45
R7(ON BIAS HDC)	-0.45	-0.45	-0.53	-0.22	-0.68	-0.61	-0.53
R8(ON BIAS HDC)	-0.45	-0.61	-0.53	-0.53	-0.38	-0.38	-0.45
R9(ON BIAS HDC)	-0.38	-0.45	-0.45	-0.53	-0.53	-0.76	-0.68
R10(ON BIAS HDC)	-0.53	-0.76	-0.61	-0.61	-0.45	-0.91	-0.38
R11(ON BIAS HDC)	-0.61	-0.53	-0.68	-0.61	-0.61	-0.68	-0.53
Irradiated, ON biased HDC parts statistics							
Min Value	-0.76	-0.76	-0.68	-0.61	-0.68	-11.41	-1.91
Max Value	-0.38	-0.45	-0.38	-0.22	-0.30	-0.38	-0.30
Average	-0.52	-0.55	-0.52	-0.52	-0.50	-1.69	-0.62
Sigma	0.13	0.11	0.08	0.12	0.13	3.42	0.46



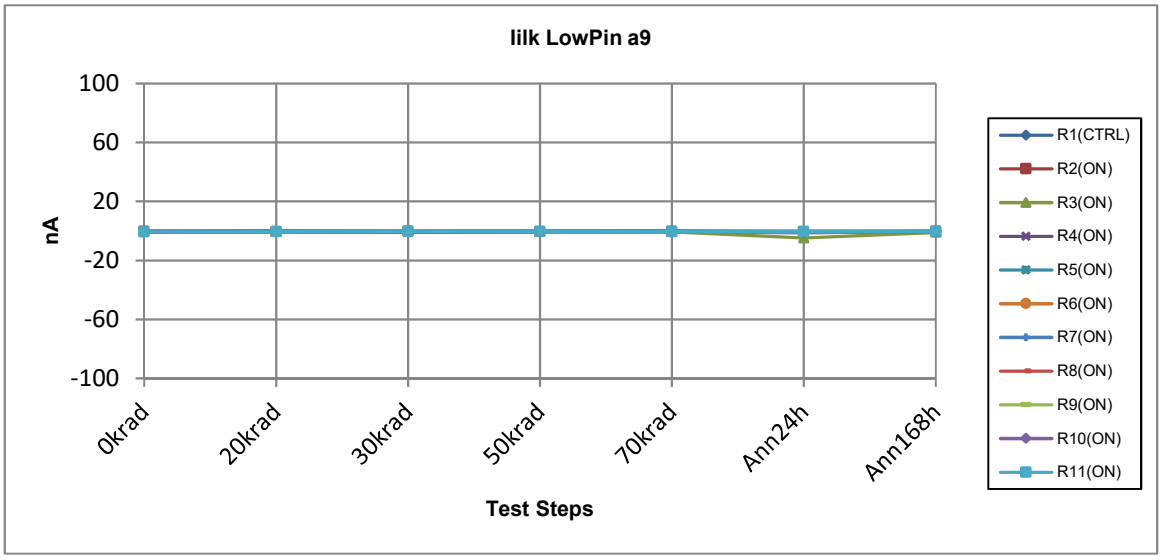
Iilk LowPin a12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.50	-0.58	-0.66	-0.66	-0.74	-0.58	-0.58
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.66	-0.35	-0.27	-0.58	-0.66	-0.50	-0.74
R3(ON BIAS HDC)	-0.50	-0.58	-0.58	-0.81	-0.97	-22.99	-23.75
R4(ON BIAS HDC)	-0.50	-0.43	-0.35	-0.50	-0.66	-0.74	-0.66
R5(ON BIAS HDC)	-0.66	-0.50	-0.74	-0.81	-0.50	-0.50	-0.50
R6(ON BIAS HDC)	-0.74	-0.43	-0.35	-0.58	-0.58	-0.81	-0.58
R7(ON BIAS HDC)	-0.50	-0.66	-0.43	-0.58	-0.43	-0.66	-0.50
R8(ON BIAS HDC)	-0.50	-0.43	-0.50	-0.50	-0.74	-0.58	-0.58
R9(ON BIAS HDC)	-0.50	-0.58	-0.43	-0.66	-0.58	-0.43	-0.58
R10(ON BIAS HDC)	-0.66	-0.74	-0.50	-0.66	-0.50	-2.35	-0.50
R11(ON BIAS HDC)	-0.66	-0.74	-0.66	-0.50	-0.58	-0.50	-0.58
Irradiated, ON biased HDC parts statistics							
Min Value	-0.74	-0.74	-0.74	-0.81	-0.97	-22.99	-23.75
Max Value	-0.50	-0.35	-0.27	-0.50	-0.43	-0.43	-0.50
Average	-0.59	-0.54	-0.48	-0.62	-0.62	-3.01	-2.90
Sigma	0.10	0.14	0.15	0.12	0.15	7.04	7.33



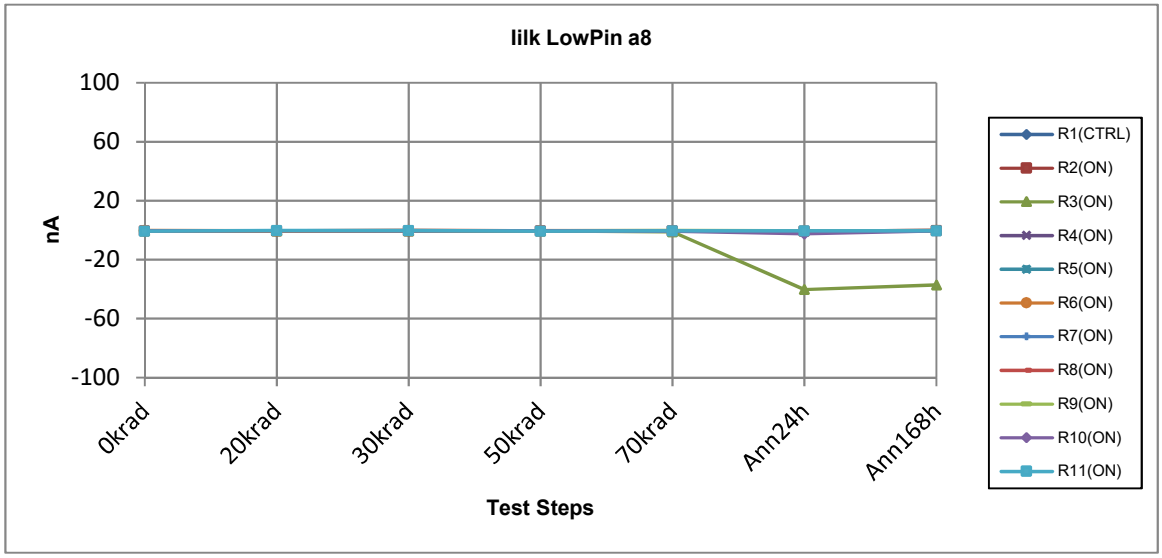
Iilk LowPin a11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.68	-0.45	-0.61	-0.68	-0.53	-0.68	-0.68
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.68	-0.53	-0.76	-0.68	-0.61	-0.61	-0.45
R3(ON BIAS HDC)	-0.61	-0.84	-0.61	-0.84	-0.91	-28.46	-27.32
R4(ON BIAS HDC)	-0.53	-0.53	-0.76	-0.45	-0.68	-0.76	-0.53
R5(ON BIAS HDC)	-0.61	-0.84	-0.53	-0.53	-0.68	-0.68	-0.61
R6(ON BIAS HDC)	-0.53	-0.68	-0.68	-0.53	-0.84	-0.76	-0.61
R7(ON BIAS HDC)	-0.45	-0.61	-0.53	-0.76	-0.76	-0.61	-0.76
R8(ON BIAS HDC)	-0.84	-0.76	-0.68	-0.61	-0.61	-0.68	-0.53
R9(ON BIAS HDC)	-0.68	-0.76	-0.53	-0.68	-0.76	-0.45	-0.84
R10(ON BIAS HDC)	-0.68	-0.61	-0.53	-0.53	-0.76	-2.52	-0.76
R11(ON BIAS HDC)	-0.61	-0.61	-0.68	-0.53	-0.84	-0.61	-0.45
Irradiated, ON biased HDC parts statistics							
Min Value	-0.84	-0.84	-0.76	-0.84	-0.91	-28.46	-27.32
Max Value	-0.45	-0.53	-0.53	-0.45	-0.61	-0.45	-0.45
Average	-0.62	-0.68	-0.63	-0.61	-0.75	-3.61	-3.29
Sigma	0.11	0.12	0.10	0.12	0.10	8.75	8.45



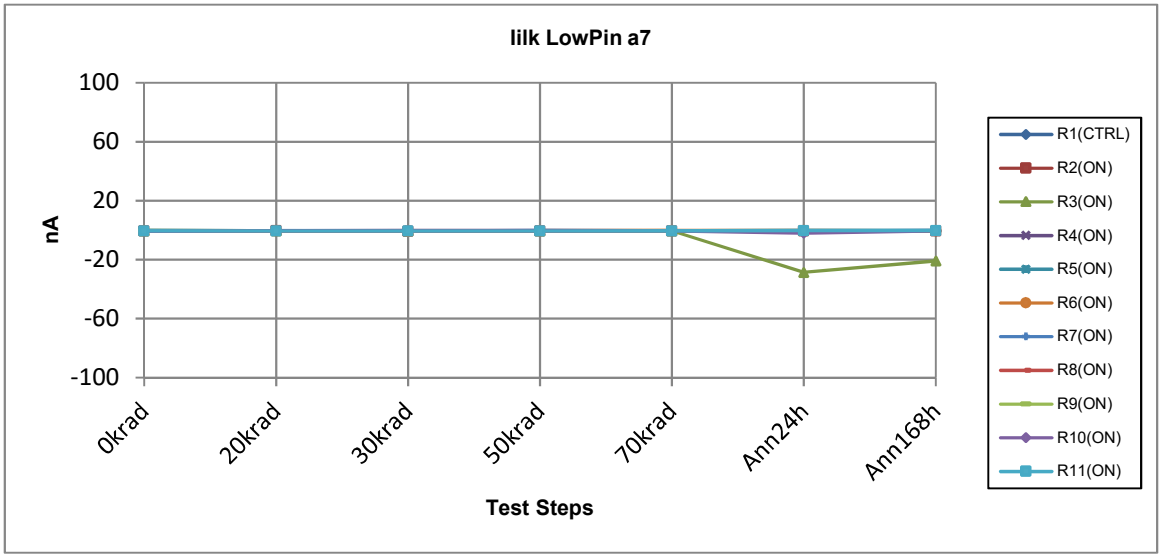
Iilk LowPin a10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.77	-0.69	-0.61	-0.69	-0.61	-0.61	-0.84
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.46	-0.38	-0.46	-0.54	-0.69	-0.69	-0.61
R3(ON BIAS HDC)	-0.77	-0.69	-0.38	-0.61	-1.15	-31.22	-30.23
R4(ON BIAS HDC)	-0.69	-0.69	-0.69	-0.61	-0.92	-0.61	-0.61
R5(ON BIAS HDC)	-0.77	-0.54	-0.54	-0.77	-0.69	-0.84	-0.69
R6(ON BIAS HDC)	-0.77	-0.54	-0.77	-0.38	-0.54	-0.69	-0.77
R7(ON BIAS HDC)	-0.61	-0.61	-0.46	-0.38	-0.54	-0.46	-0.69
R8(ON BIAS HDC)	-0.46	-0.54	-0.38	-0.38	-0.54	-0.46	-0.54
R9(ON BIAS HDC)	-0.69	-0.54	-0.54	-0.61	-0.77	-0.61	-0.61
R10(ON BIAS HDC)	-0.54	-0.77	-0.46	-0.69	-0.54	-2.38	-0.69
R11(ON BIAS HDC)	-0.61	-0.77	-0.38	-0.61	-0.84	-0.69	-0.69
Irradiated, ON biased HDC parts statistics							
Min Value	-0.77	-0.77	-0.77	-0.77	-1.15	-31.22	-30.23
Max Value	-0.46	-0.38	-0.38	-0.38	-0.54	-0.46	-0.54
Average	-0.64	-0.61	-0.51	-0.56	-0.72	-3.87	-3.61
Sigma	0.12	0.12	0.13	0.14	0.20	9.63	9.35



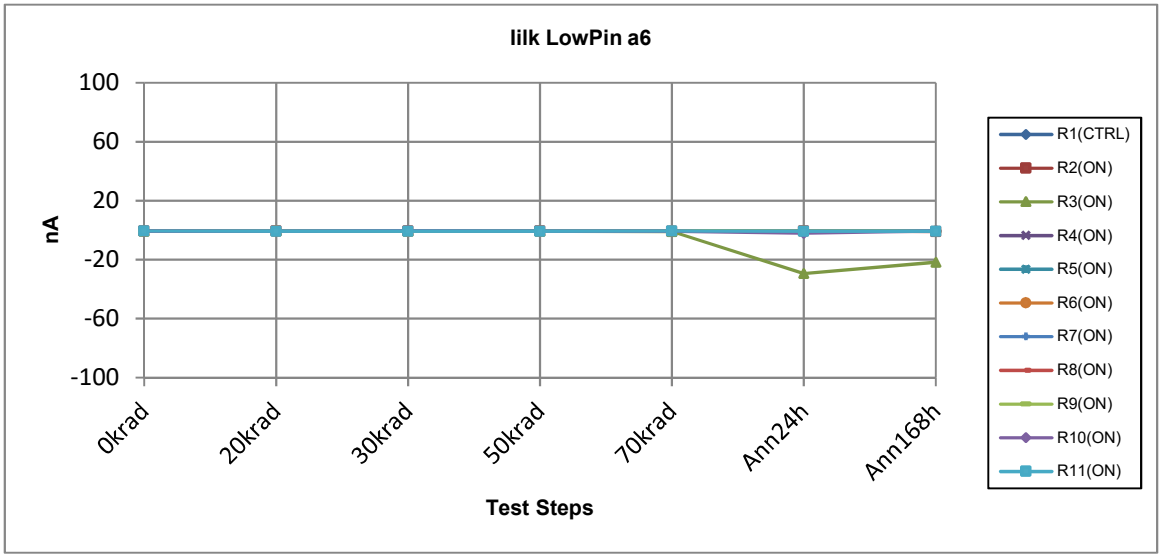
Iilk LowPin a9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.17	-0.40	-0.55	-0.24	-0.32	-0.40	-0.32
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.40	-0.47	-0.32	-0.47	-0.32	-0.55	-0.24
R3(ON BIAS HDC)	-0.47	-0.40	-0.17	-0.40	-0.62	-4.83	-1.01
R4(ON BIAS HDC)	-0.40	-0.32	-0.55	-0.32	-0.24	-0.55	-0.55
R5(ON BIAS HDC)	-0.47	-0.32	-0.40	-0.24	-0.47	-0.47	-0.47
R6(ON BIAS HDC)	-0.47	-0.24	-0.40	-0.47	-0.78	-0.62	-0.47
R7(ON BIAS HDC)	-0.24	-0.55	-0.32	-0.17	-0.47	-0.32	-0.24
R8(ON BIAS HDC)	-0.47	-0.24	-0.32	-0.24	-0.40	-0.47	-0.24
R9(ON BIAS HDC)	-0.32	-0.47	-0.40	-0.40	-0.47	-0.40	-0.09
R10(ON BIAS HDC)	-0.47	-0.32	-0.62	-0.40	-0.32	-1.16	-0.17
R11(ON BIAS HDC)	-0.70	-0.55	-0.32	-0.32	-0.55	-0.62	-0.40
Irradiated, ON biased HDC parts statistics							
Min Value	-0.70	-0.55	-0.62	-0.47	-0.78	-4.83	-1.01
Max Value	-0.24	-0.24	-0.17	-0.17	-0.24	-0.32	-0.09
Average	-0.44	-0.39	-0.38	-0.34	-0.46	-1.00	-0.39
Sigma	0.12	0.12	0.13	0.10	0.16	1.37	0.26



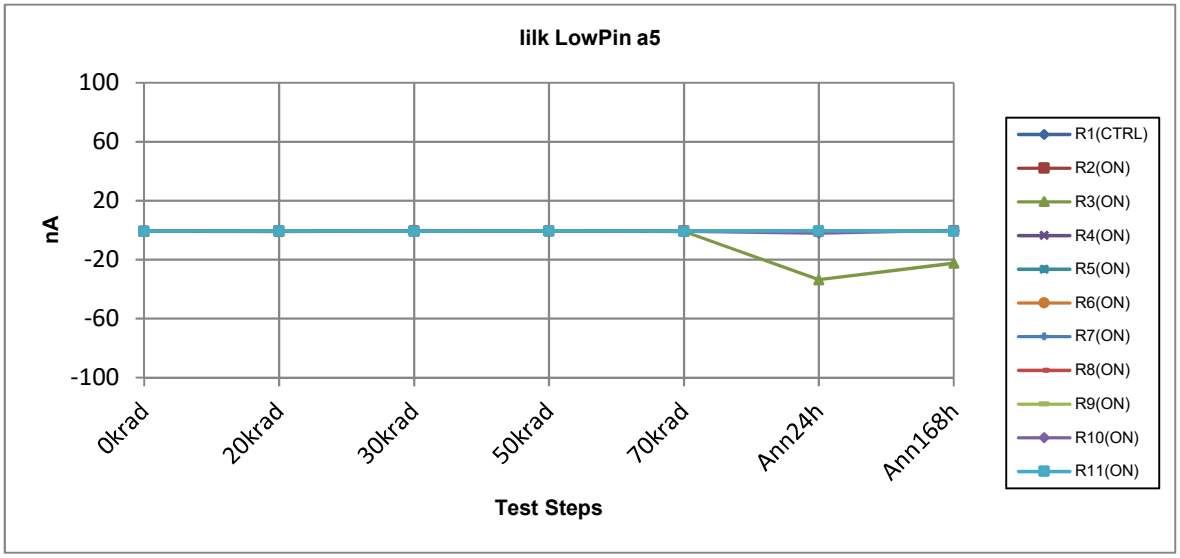
Iilk LowPin a8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.47	-0.32	-0.47	-0.40	-0.55	-0.24
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.32	-0.47	-0.32	-0.32	-0.32	-0.55	-0.24
R3(ON BIAS HDC)	-0.40	-0.40	-0.40	-0.47	-1.01	-40.22	-37.08
R4(ON BIAS HDC)	-0.32	-0.55	-0.40	-0.47	-0.47	-0.32	-0.63
R5(ON BIAS HDC)	-0.40	-0.70	-0.32	-0.40	-0.47	-0.40	-0.32
R6(ON BIAS HDC)	-0.24	-0.40	-0.24	-0.32	-0.55	-0.55	-0.24
R7(ON BIAS HDC)	-0.55	-0.40	-0.32	-0.55	-0.32	-0.32	-0.47
R8(ON BIAS HDC)	-0.40	-0.40	-0.16	-0.40	-0.32	-0.55	-0.47
R9(ON BIAS HDC)	-0.32	-0.63	-0.40	-0.40	-0.24	-0.47	-0.40
R10(ON BIAS HDC)	-0.47	-0.47	-0.40	-0.32	-0.55	-2.54	-0.40
R11(ON BIAS HDC)	-0.55	-0.09	-0.24	-0.63	-0.32	-0.47	-0.32
Irradiated, ON biased HDC parts statistics							
Min Value	-0.55	-0.70	-0.40	-0.63	-1.01	-40.22	-37.08
Max Value	-0.24	-0.09	-0.16	-0.32	-0.24	-0.32	-0.24
Average	-0.40	-0.45	-0.32	-0.43	-0.46	-4.64	-4.06
Sigma	0.10	0.17	0.08	0.10	0.22	12.52	11.60



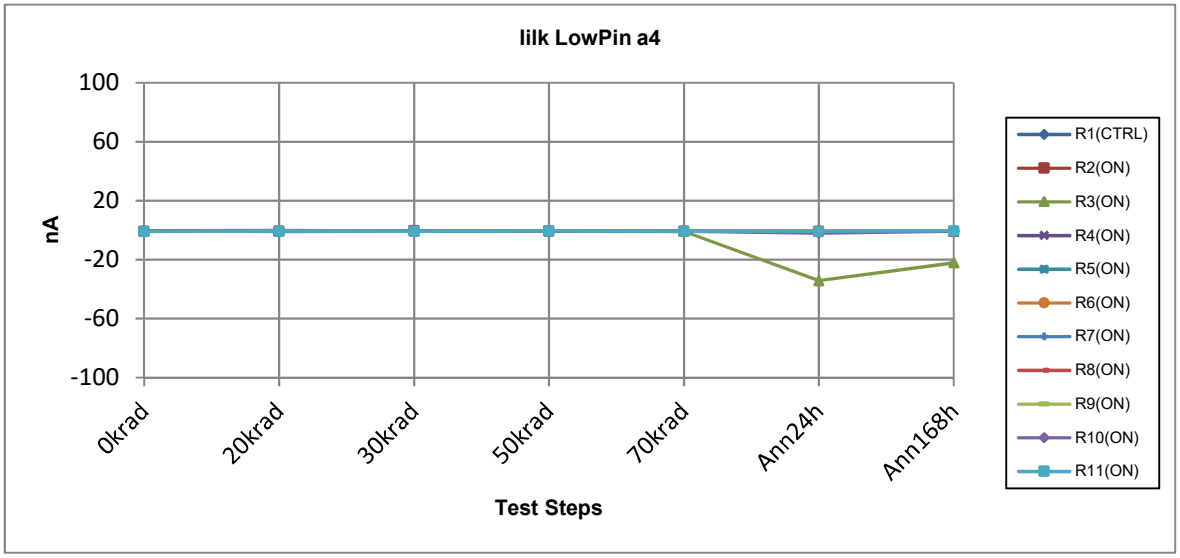
Iilk LowPin a7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.42	-0.50	-0.27	-0.50	-0.35	-0.42	-0.50
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.42	-0.27	-0.58	-0.50	-0.50	-0.35	-0.42
R3(ON BIAS HDC)	-0.50	-0.50	-0.50	-0.35	-0.50	-28.55	-20.73
R4(ON BIAS HDC)	-0.50	-0.42	-0.04	-0.27	-0.50	-0.58	-0.27
R5(ON BIAS HDC)	-0.27	-0.42	-0.35	-0.42	-0.35	-0.19	-0.27
R6(ON BIAS HDC)	-0.42	-0.42	-0.58	-0.50	-0.19	-0.27	-0.50
R7(ON BIAS HDC)	-0.12	-0.50	-0.65	-0.27	-0.42	-0.65	-0.58
R8(ON BIAS HDC)	-0.35	-0.58	-0.50	-0.65	-0.50	-0.58	-0.50
R9(ON BIAS HDC)	-0.19	-0.35	-0.50	-0.50	-0.58	-0.50	-0.35
R10(ON BIAS HDC)	-0.65	-0.50	-0.42	-0.50	-0.50	-1.96	-0.42
R11(ON BIAS HDC)	-0.42	-0.50	-0.50	-0.50	-0.35	-0.27	-0.19
Irradiated, ON biased HDC parts statistics							
Min Value	-0.65	-0.58	-0.65	-0.65	-0.58	-28.55	-20.73
Max Value	-0.12	-0.27	-0.04	-0.27	-0.19	-0.19	-0.19
Average	-0.38	-0.45	-0.46	-0.45	-0.44	-3.39	-2.42
Sigma	0.16	0.09	0.17	0.12	0.11	8.85	6.43



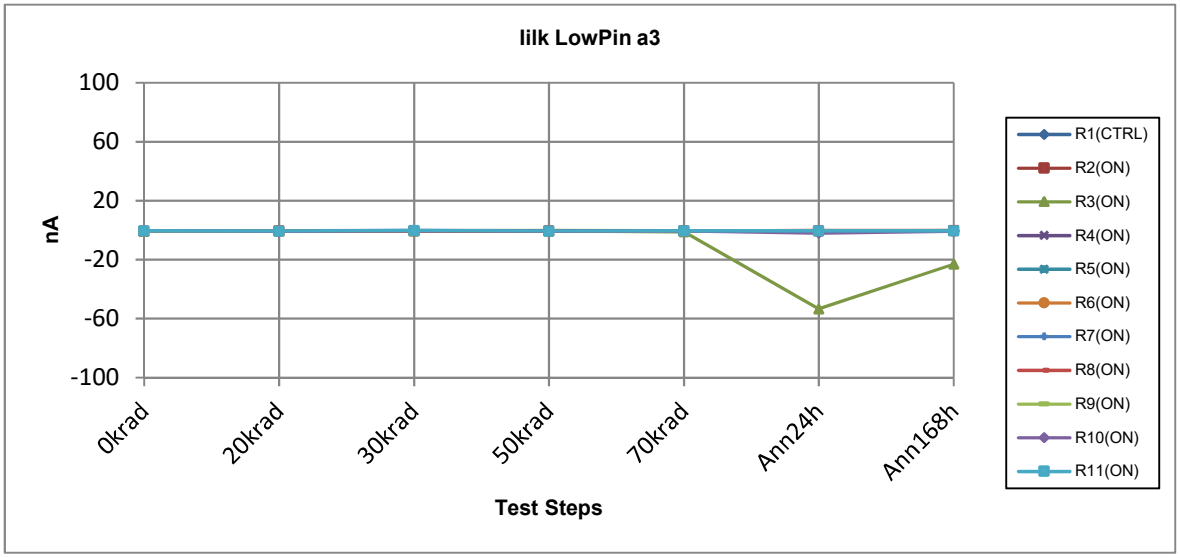
Iilk LowPin a6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.40	-0.70	-0.63	-0.48	-0.78	-0.40	-0.70
Irradiated, ON biased HDC parts results							
R2(ON BIAS HDC)	-0.40	-0.48	-0.40	-0.40	-0.63	-0.40	-0.78
R3(ON BIAS HDC)	-0.63	-0.40	-0.63	-0.63	-0.93	-29.36	-21.72
R4(ON BIAS HDC)	-0.48	-0.78	-0.48	-0.70	-0.40	-0.70	-0.63
R5(ON BIAS HDC)	-0.70	-0.63	-0.48	-0.48	-0.63	-0.48	-0.63
R6(ON BIAS HDC)	-0.55	-0.48	-0.78	-0.63	-0.48	-0.55	-0.55
R7(ON BIAS HDC)	-0.63	-0.48	-0.78	-0.70	-0.40	-0.55	-0.55
R8(ON BIAS HDC)	-0.55	-0.48	-0.63	-0.55	-0.63	-0.48	-0.86
R9(ON BIAS HDC)	-0.78	-0.32	-0.55	-0.55	-0.40	-0.63	-0.70
R10(ON BIAS HDC)	-0.63	-0.63	-0.32	-0.63	-0.55	-2.08	-0.48
R11(ON BIAS HDC)	-0.48	-0.55	-0.63	-0.55	-0.48	-0.63	-0.55
Irradiated, ON biased HDC parts statistics							
Min Value	-0.78	-0.78	-0.78	-0.70	-0.93	-29.36	-21.72
Max Value	-0.40	-0.32	-0.32	-0.40	-0.40	-0.40	-0.48
Average	-0.58	-0.52	-0.57	-0.58	-0.55	-3.59	-2.75
Sigma	0.11	0.13	0.15	0.10	0.16	9.07	6.67



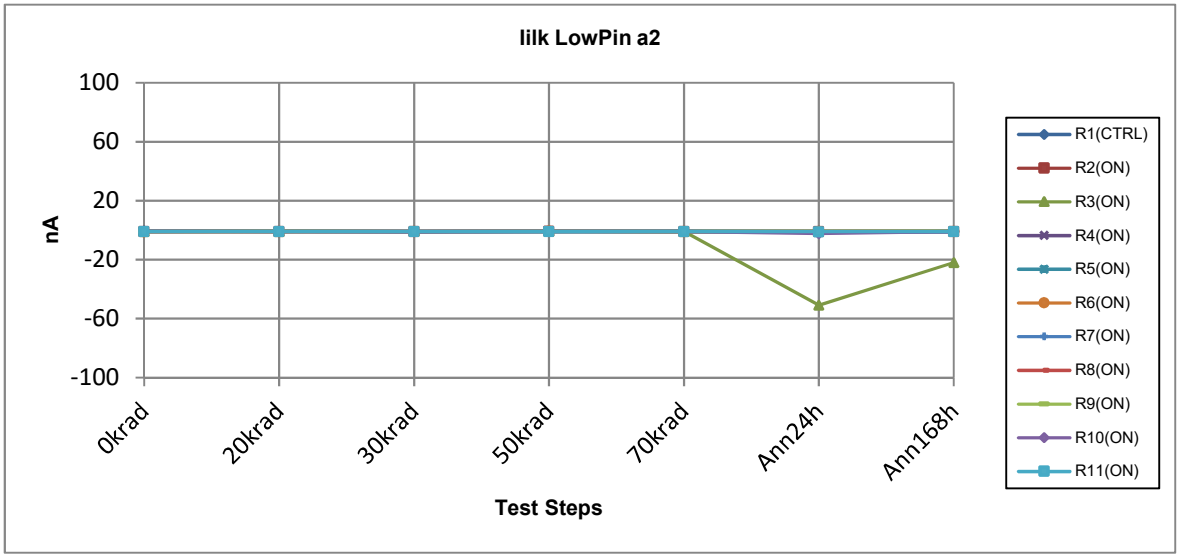
Iilk LowPin a5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.61	-0.54	-0.38	-0.38	-0.46	-0.31	-0.46
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.54	-0.31	-0.38	-0.31	-0.38	-0.54	-0.46
R3(ON BIAS HDC)	-0.54	-0.76	-0.46	-0.38	-0.76	-33.59	-22.44
R4(ON BIAS HDC)	-0.69	-0.76	-0.61	-0.54	-0.69	-0.76	-0.61
R5(ON BIAS HDC)	-0.61	-0.54	-0.54	-0.54	-0.54	-0.54	-0.46
R6(ON BIAS HDC)	-0.76	-0.38	-0.54	-0.38	-0.61	-0.54	-0.46
R7(ON BIAS HDC)	-0.61	-0.61	-0.54	-0.61	-0.54	-0.38	-0.54
R8(ON BIAS HDC)	-0.54	-0.54	-0.54	-0.46	-0.76	-0.61	-0.54
R9(ON BIAS HDC)	-0.38	-0.54	-0.54	-0.69	-0.38	-0.69	-0.46
R10(ON BIAS HDC)	-0.69	-0.38	-0.46	-0.38	-0.69	-1.91	-0.15
R11(ON BIAS HDC)	-0.61	-0.46	-0.61	-0.46	-0.54	-0.46	-0.61
Irradiated, HDC biased parts statistics							
Min Value	-0.76	-0.76	-0.61	-0.69	-0.76	-33.59	-22.44
Max Value	-0.38	-0.31	-0.38	-0.31	-0.38	-0.38	-0.15
Average	-0.60	-0.53	-0.52	-0.48	-0.59	-4.00	-2.67
Sigma	0.11	0.15	0.07	0.12	0.14	10.41	6.95



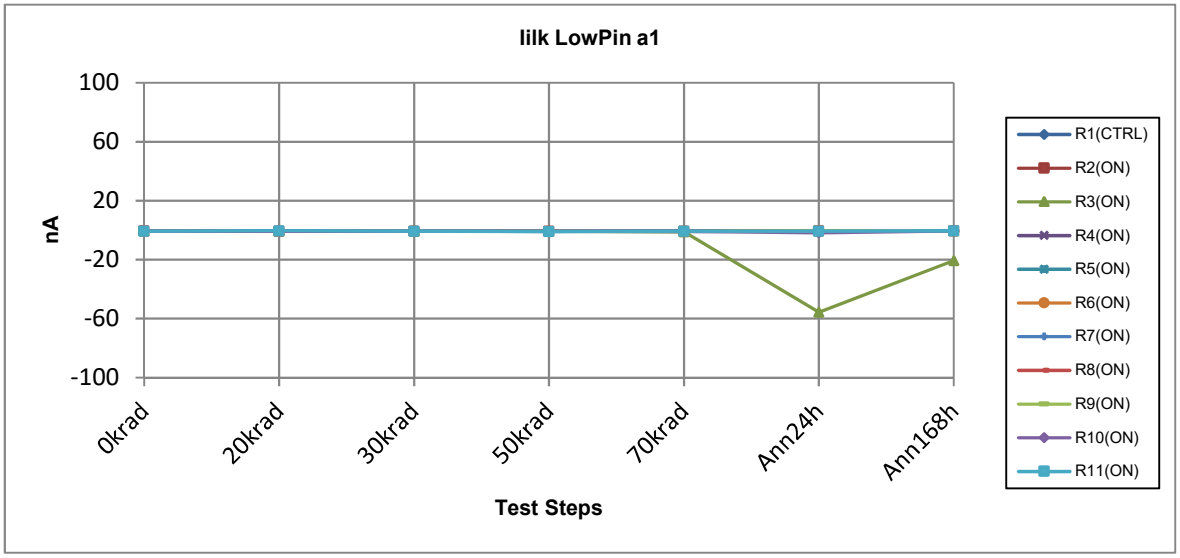
Iilk LowPin a4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.52	-0.67	-0.67	-0.44	-0.60	-0.52	-0.52
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.67	-0.60	-0.29	-0.37	-0.60	-0.52	-0.75
R3(ON BIAS HDC)	-0.83	-0.44	-0.52	-0.60	-0.83	-34.18	-22.02
R4(ON BIAS HDC)	-0.37	-0.52	-0.60	-0.60	-0.67	-0.75	-0.52
R5(ON BIAS HDC)	-0.52	-0.52	-0.60	-0.52	-0.52	-0.67	-0.67
R6(ON BIAS HDC)	-0.60	-0.44	-0.60	-0.60	-0.67	-0.60	-0.52
R7(ON BIAS HDC)	-0.44	-0.21	-0.52	-0.75	-0.67	-0.60	-0.44
R8(ON BIAS HDC)	-0.67	-0.52	-0.52	-0.44	-0.37	-0.52	-0.75
R9(ON BIAS HDC)	-0.52	-0.60	-0.60	-0.60	-0.52	-0.44	-0.44
R10(ON BIAS HDC)	-0.37	-0.90	-0.67	-0.67	-0.67	-1.90	-0.52
R11(ON BIAS HDC)	-0.75	-0.60	-0.60	-0.44	-0.67	-0.75	-0.44
Irradiated, HDC biased parts statistics							
Min Value	-0.83	-0.90	-0.67	-0.75	-0.83	-34.18	-22.02
Max Value	-0.37	-0.21	-0.29	-0.37	-0.37	-0.44	-0.44
Average	-0.57	-0.54	-0.55	-0.56	-0.62	-4.09	-2.71
Sigma	0.16	0.17	0.10	0.12	0.12	10.58	6.79



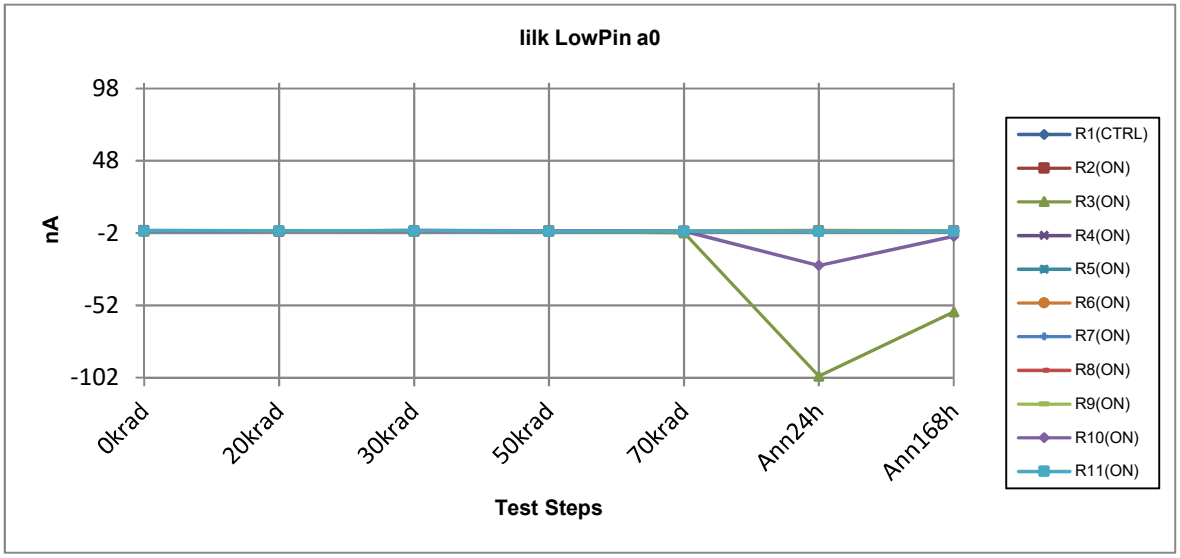
Iilk LowPin a3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.46	-0.46	-0.38	-0.61	-0.31	-0.46	-0.54
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.54	-0.38	-0.46	-0.31	-0.31	-0.38	-0.23
R3(ON BIAS HDC)	-0.61	-0.31	-0.46	-0.46	-1.07	-53.31	-23.02
R4(ON BIAS HDC)	-0.46	-0.54	-0.31	-0.46	-0.77	-0.54	-0.38
R5(ON BIAS HDC)	-0.46	-0.46	-0.38	-0.46	-0.61	-0.31	-0.31
R6(ON BIAS HDC)	-0.46	-0.54	-0.31	-0.54	-0.38	-0.61	-0.54
R7(ON BIAS HDC)	-0.46	-0.38	-0.15	-0.46	-0.46	-0.54	-0.38
R8(ON BIAS HDC)	-0.61	-0.46	-0.31	-0.46	-0.54	-0.23	-0.38
R9(ON BIAS HDC)	-0.31	-0.46	-0.38	-0.15	-0.38	-0.46	-0.38
R10(ON BIAS HDC)	-0.31	-0.54	-0.46	-0.38	-0.46	-1.91	-0.54
R11(ON BIAS HDC)	-0.31	-0.54	-0.15	-0.54	-0.46	-0.38	-0.46
Irradiated, HDC biased parts statistics							
Min Value	-0.61	-0.54	-0.46	-0.54	-1.07	-53.31	-23.02
Max Value	-0.31	-0.31	-0.15	-0.15	-0.31	-0.23	-0.23
Average	-0.45	-0.46	-0.34	-0.42	-0.54	-5.87	-2.66
Sigma	0.11	0.08	0.12	0.12	0.23	16.68	7.15



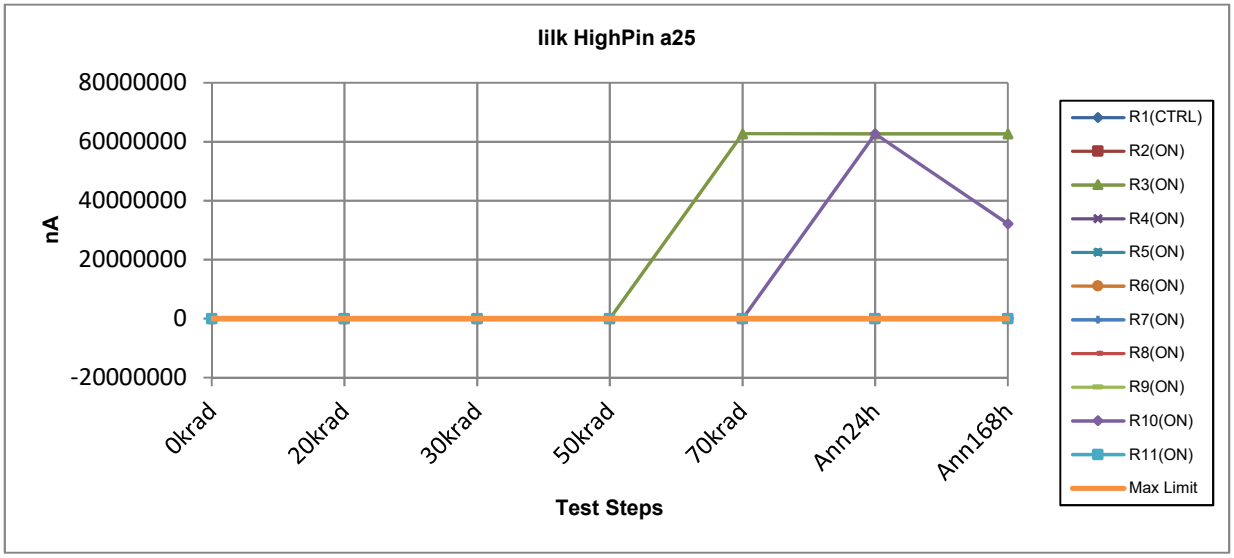
Iilk LowPin a2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.47	-0.77	-0.77	-0.85	-0.85	-0.62	-0.77
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.93	-0.93	-0.93	-0.70	-0.77	-0.93	-0.85
R3(ON BIAS HDC)	-0.77	-0.85	-0.70	-0.70	-0.93	-50.81	-21.99
R4(ON BIAS HDC)	-0.70	-0.62	-1.08	-0.85	-0.77	-1.01	-0.77
R5(ON BIAS HDC)	-0.93	-0.77	-0.93	-0.85	-0.85	-0.77	-0.85
R6(ON BIAS HDC)	-1.01	-0.85	-0.85	-0.62	-0.85	-0.77	-0.85
R7(ON BIAS HDC)	-0.77	-0.85	-0.77	-0.85	-0.77	-1.01	-1.16
R8(ON BIAS HDC)	-0.85	-0.85	-0.70	-0.70	-0.93	-0.93	-0.70
R9(ON BIAS HDC)	-0.77	-0.62	-1.01	-0.85	-0.77	-0.85	-0.62
R10(ON BIAS HDC)	-0.77	-0.70	-1.01	-0.85	-0.93	-2.31	-0.85
R11(ON BIAS HDC)	-0.85	-0.93	-0.85	-0.85	-0.85	-1.01	-0.93
Irradiated, HDC biased parts statistics							
Min Value	-1.01	-0.93	-1.08	-0.85	-0.93	-50.81	-21.99
Max Value	-0.70	-0.62	-0.70	-0.62	-0.77	-0.77	-0.62
Average	-0.84	-0.80	-0.88	-0.78	-0.84	-6.04	-2.96
Sigma	0.10	0.12	0.13	0.09	0.07	15.74	6.69



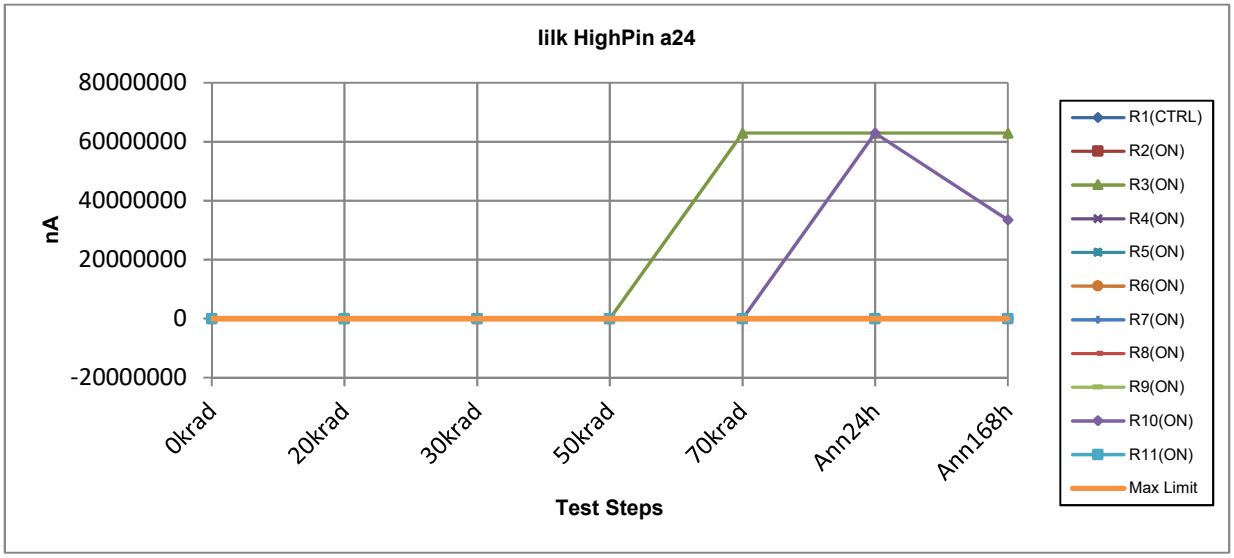
Iilk LowPin a1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.65	-0.50	-0.65	-0.50	-0.58	-0.58	-0.65
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.42	-0.58	-0.58	-0.58	-0.65	-0.42	-0.42
R3(ON BIAS HDC)	-0.58	-0.50	-0.58	-0.73	-0.96	-55.62	-20.51
R4(ON BIAS HDC)	-0.50	-0.58	-0.58	-0.58	-0.88	-0.65	-0.58
R5(ON BIAS HDC)	-0.35	-0.35	-0.58	-0.50	-0.73	-0.58	-0.65
R6(ON BIAS HDC)	-0.65	-0.58	-0.50	-0.65	-0.65	-0.58	-0.58
R7(ON BIAS HDC)	-0.65	-0.65	-0.50	-0.81	-0.50	-0.50	-0.50
R8(ON BIAS HDC)	-0.42	-0.42	-0.35	-0.50	-0.50	-0.42	-0.42
R9(ON BIAS HDC)	-0.73	-0.65	-0.58	-0.65	-0.73	-0.42	-0.58
R10(ON BIAS HDC)	-0.65	-0.65	-0.65	-0.58	-0.73	-1.80	-0.50
R11(ON BIAS HDC)	-0.58	-0.35	-0.65	-0.81	-0.65	-0.73	-0.42
Irradiated, HDC biased parts statistics							
Min Value	-0.73	-0.65	-0.65	-0.81	-0.96	-55.62	-20.51
Max Value	-0.35	-0.35	-0.35	-0.50	-0.50	-0.42	-0.42
Average	-0.55	-0.53	-0.56	-0.64	-0.70	-6.17	-2.52
Sigma	0.12	0.12	0.09	0.11	0.15	17.38	6.32



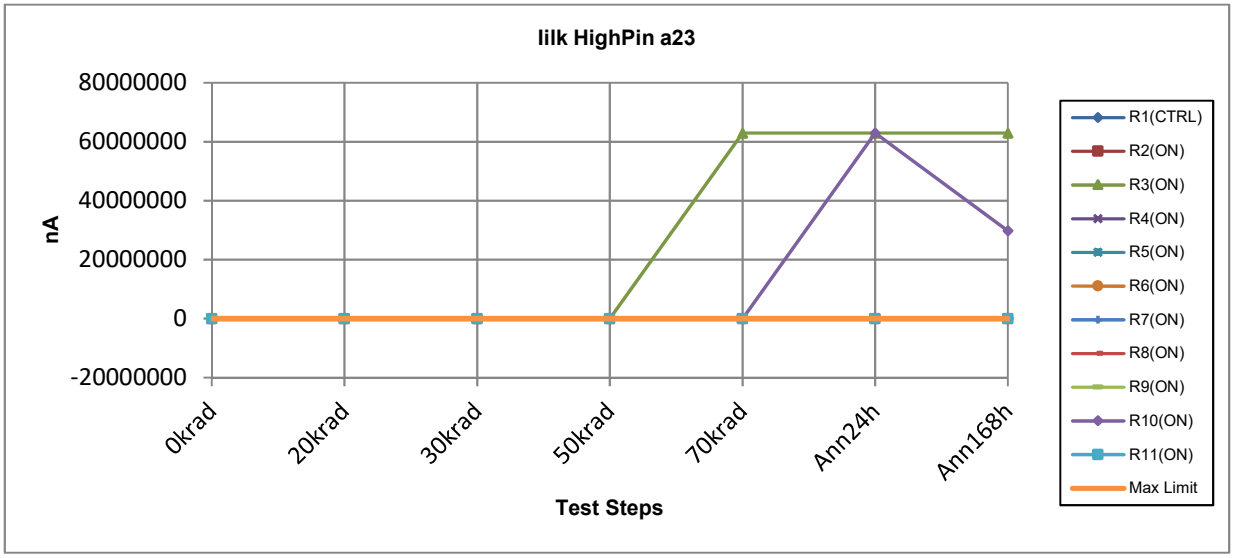
Iilk LowPin a0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.18	-0.34	-0.49	-0.49	-0.41	-0.41	-0.64
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.26	-0.64	-0.49	-0.49	-0.57	-0.49	-0.41
R3(ON BIAS HDC)	-0.57	-0.49	-0.64	-0.72	-1.72	-100.92	-56.42
R4(ON BIAS HDC)	-0.34	-0.41	-0.26	-0.57	-0.64	-0.49	-0.41
R5(ON BIAS HDC)	-0.41	-0.34	-0.26	-0.49	-0.26	-0.34	-0.41
R6(ON BIAS HDC)	-0.34	-0.41	-0.34	-0.57	-0.41	-0.18	-0.49
R7(ON BIAS HDC)	-0.34	-0.57	-0.18	-0.49	-0.41	-0.57	-0.34
R8(ON BIAS HDC)	-0.49	-0.64	-0.18	-0.64	-0.57	-0.57	-0.34
R9(ON BIAS HDC)	-0.26	-0.64	-0.41	-0.72	-0.41	-0.64	-0.49
R10(ON BIAS HDC)	-0.57	-0.41	-0.49	-0.64	-0.64	-24.43	-4.17
R11(ON BIAS HDC)	-0.49	-0.34	-0.34	-0.57	-0.57	-0.72	-0.64
Irradiated, HDC biased parts statistics							
Min Value	-0.57	-0.64	-0.64	-0.72	-1.72	-100.92	-56.42
Max Value	-0.26	-0.34	-0.18	-0.49	-0.26	-0.18	-0.34
Average	-0.41	-0.49	-0.36	-0.59	-0.62	-12.94	-6.41
Sigma	0.12	0.12	0.15	0.09	0.41	31.82	17.61



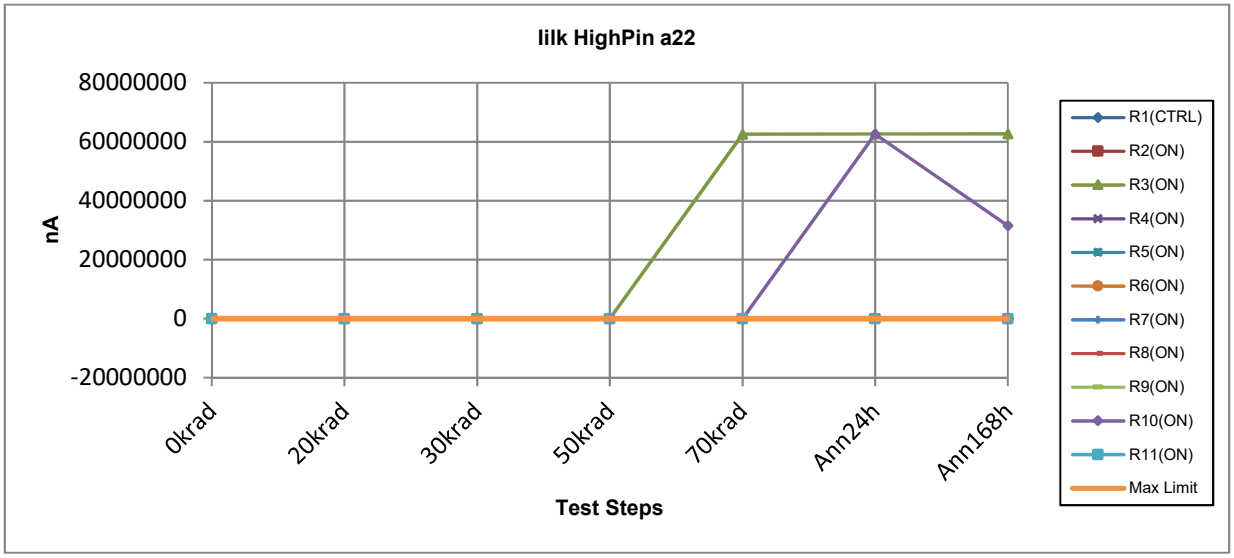
ILI HighPin a25	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.23	0.23	-0.23	-0.15	-0.31	-0.15	-0.15
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.08	0.00	-0.31	-0.08	-0.31	-0.46	-0.08
R3(ON BIAS HDC)	0.08	0.00	-0.15	-0.23	**62712490.56**	**62708653.51**	**62704823.91**
R4(ON BIAS HDC)	0.23	-0.08	-0.08	-0.08	0.00	0.31	0.00
R5(ON BIAS HDC)	0.08	-0.15	0.00	-0.23	-0.15	0.08	-0.08
R6(ON BIAS HDC)	0.08	0.00	-0.15	-0.15	-0.08	-0.38	-0.08
R7(ON BIAS HDC)	0.00	0.08	-0.23	-0.31	-0.15	-0.08	-0.23
R8(ON BIAS HDC)	-0.08	-0.08	0.00	-0.31	-0.08	-0.23	-0.08
R9(ON BIAS HDC)	0.23	-0.08	-0.15	0.08	-0.08	-0.15	-0.15
R10(ON BIAS HDC)	0.15	0.00	-0.08	-0.15	-0.15	**62681831.42**	**32234057.78**
R11(ON BIAS HDC)	0.15	-0.08	-0.15	-0.31	-0.23	0.00	-0.08
Irradiated, HDC biased parts statistics							
Min Value	-0.08	-0.15	-0.31	-0.31	-0.31	-0.46	-0.23
Max Value	0.23	0.08	0.00	0.08	62712490.56	62708653.51	62704823.91
Average	0.08	-0.04	-0.13	-0.18	6271248.93	12539048.40	9493888.09
Sigma	0.11	0.07	0.10	0.13	19831430.83	26434636.09	21264446.88



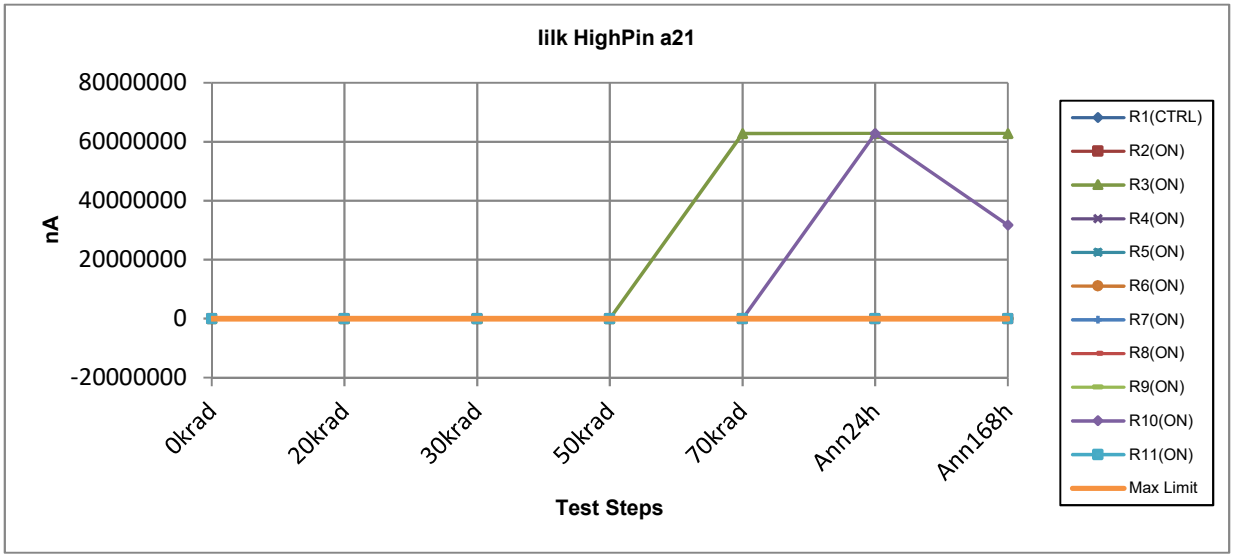
ILI HighPin a24	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.16	-0.14	0.01	-0.30	-0.22	0.01	-0.07
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.01	0.09	0.01	-0.14	-0.07	-0.07	-0.07
R3(ON BIAS HDC)	0.24	-0.07	0.01	0.16	**62936626.37**	**62936626.37**	**62936626.37**
R4(ON BIAS HDC)	0.09	-0.07	0.16	-0.22	0.16	0.09	-0.07
R5(ON BIAS HDC)	-0.07	-0.07	0.09	-0.30	-0.14	-0.07	-0.07
R6(ON BIAS HDC)	0.09	-0.07	0.01	0.16	0.16	0.16	-0.22
R7(ON BIAS HDC)	0.01	-0.30	-0.07	-0.14	0.01	-0.07	-0.22
R8(ON BIAS HDC)	-0.07	-0.07	0.01	-0.14	-0.14	0.09	0.09
R9(ON BIAS HDC)	0.01	0.09	-0.07	-0.30	-0.14	-0.07	-0.07
R10(ON BIAS HDC)	0.01	0.01	0.09	-0.07	0.01	**62936626.37**	**33489678.06**
R11(ON BIAS HDC)	-0.22	0.01	0.09	-0.22	-0.14	0.01	0.09
Irradiated, HDC biased parts statistics							
Min Value	-0.22	-0.30	-0.07	-0.30	-0.14	-0.07	-0.22
Max Value	0.24	0.09	0.16	0.16	62936626.37	62936626.37	62936626.37
Average	0.01	-0.05	0.03	-0.12	6293662.61	12587325.28	9642630.39
Sigma	0.12	0.11	0.07	0.17	19902308.77	26536411.67	21480674.18



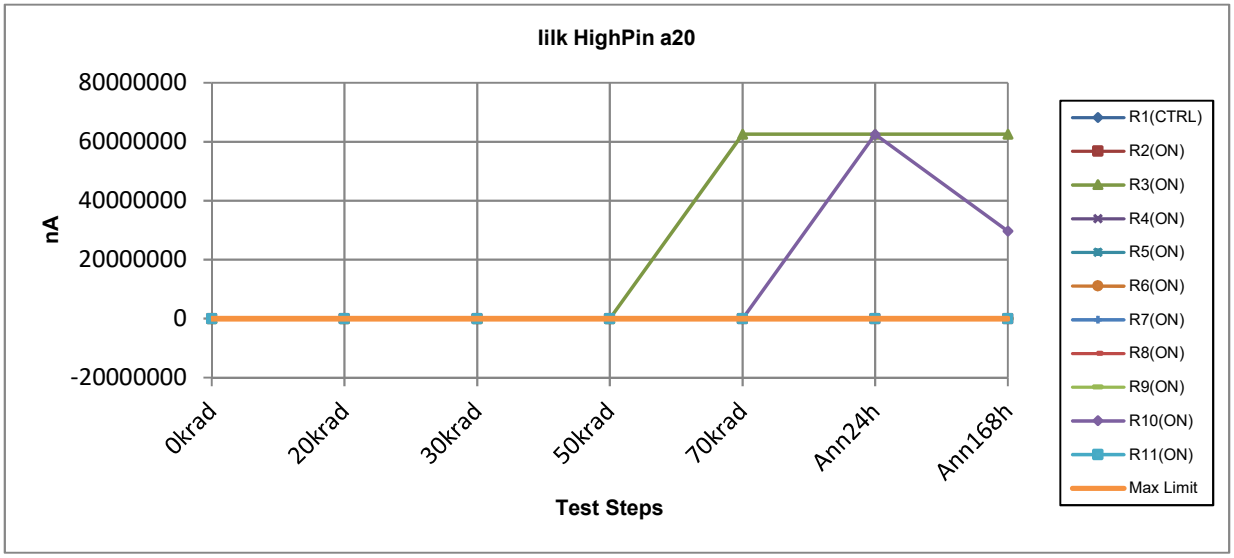
ILI HighPin a23	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.57	0.57	0.26	0.18	0.03	0.11	-0.20
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.26	0.34	0.11	0.11	0.26	0.18	0.34
R3(ON BIAS HDC)	0.41	0.03	-0.05	0.11	**62932044.27**	**62932044.27**	**62932044.27**
R4(ON BIAS HDC)	0.41	0.34	0.03	-0.05	0.18	0.26	0.11
R5(ON BIAS HDC)	0.57	0.18	0.11	0.11	0.26	0.18	0.11
R6(ON BIAS HDC)	0.49	0.26	0.26	0.18	0.34	0.11	0.26
R7(ON BIAS HDC)	0.41	0.26	0.18	-0.12	0.18	0.11	0.11
R8(ON BIAS HDC)	0.41	0.26	0.18	-0.05	0.34	0.11	0.03
R9(ON BIAS HDC)	0.34	0.18	0.11	-0.05	0.26	0.26	0.11
R10(ON BIAS HDC)	0.26	0.26	0.11	0.34	0.03	**62932044.27**	**29795480.89**
R11(ON BIAS HDC)	0.34	0.34	0.26	0.26	0.34	0.18	0.18
Irradiated, HDC biased parts statistics							
Min Value	0.26	0.03	-0.05	-0.12	0.03	0.11	0.03
Max Value	0.57	0.34	0.26	0.34	62932044.27	62932044.27	62932044.27
Average	0.39	0.25	0.13	0.08	6293204.65	12586408.99	9272752.64
Sigma	0.10	0.10	0.10	0.15	19900859.69	26534479.62	21051190.15



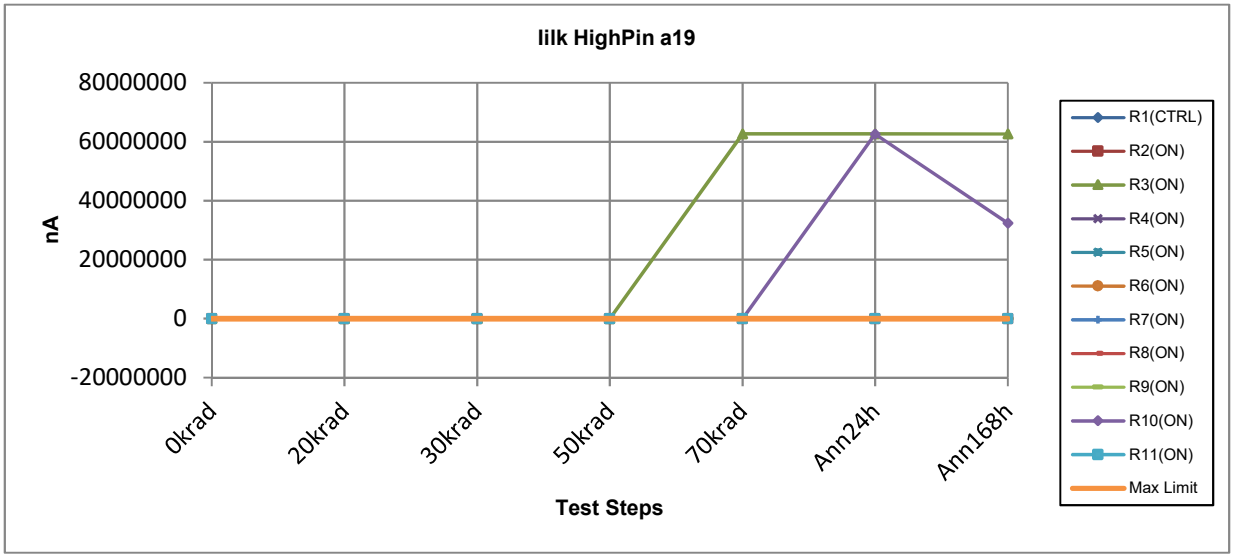
ILI HighPin a22	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.36	0.36	0.20	0.05	0.20	-0.03	0.13
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.36	0.13	-0.03	0.13	0.13	0.20	-0.03
R3(ON BIAS HDC)	0.36	0.43	0.43	0.20	**62624126.67**	**62643311.92**	**62637560.07**
R4(ON BIAS HDC)	0.43	0.28	0.20	0.13	0.20	0.28	0.28
R5(ON BIAS HDC)	0.36	0.28	0.20	0.20	0.20	0.05	0.05
R6(ON BIAS HDC)	0.36	0.43	-0.03	0.13	0.13	0.13	-0.18
R7(ON BIAS HDC)	0.36	0.28	-0.03	0.05	-0.10	0.13	0.13
R8(ON BIAS HDC)	0.36	0.36	0.13	0.13	0.13	0.28	0.20
R9(ON BIAS HDC)	0.36	0.51	0.20	0.13	0.36	-0.10	-0.03
R10(ON BIAS HDC)	0.28	0.13	-0.03	0.28	0.20	**62585748.73**	**31496644.02**
R11(ON BIAS HDC)	0.20	0.20	0.13	0.20	0.13	0.13	0.05
Irradiated, HDC biased parts statistics							
Min Value	0.20	0.13	-0.03	0.05	-0.10	-0.10	-0.18
Max Value	0.43	0.51	0.43	0.28	62624126.67	62643311.92	62637560.07
Average	0.34	0.30	0.12	0.16	6262412.81	12522906.18	9413420.46
Sigma	0.06	0.13	0.15	0.06	19803487.63	26400607.49	21159126.40



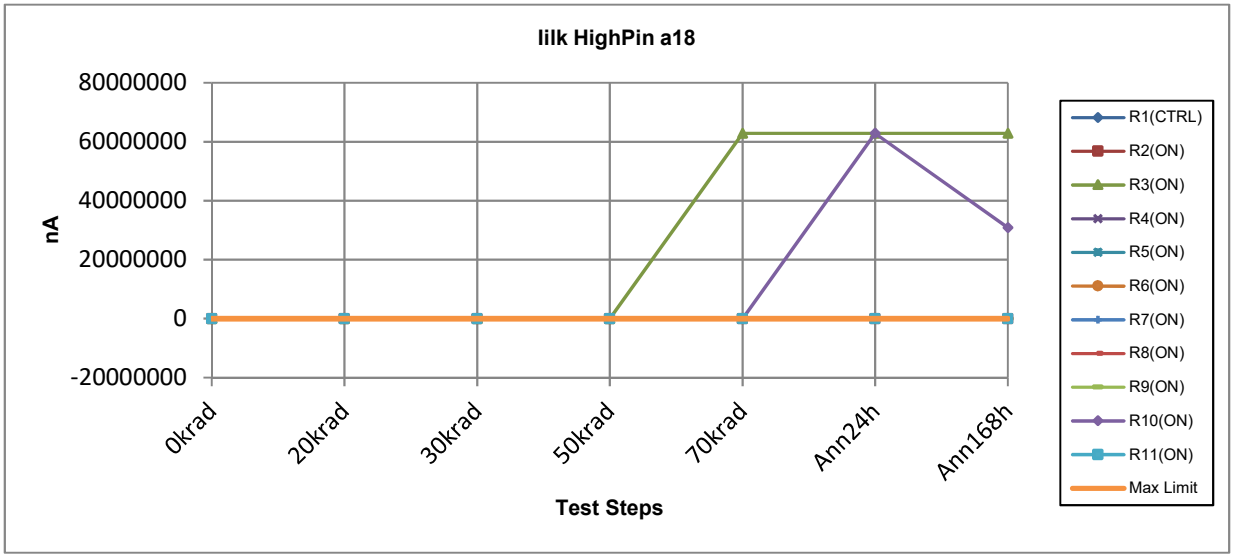
ILI HighPin a21	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.05	0.10	-0.05	-0.05	-0.05	0.02	-0.05
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.05	0.10	0.02	-0.05	0.02	-0.21	-0.13
R3(ON BIAS HDC)	0.02	0.02	-0.05	0.02	**62828414.14**	**62832243.74**	**62832243.74**
R4(ON BIAS HDC)	0.18	0.02	-0.13	-0.05	0.18	0.25	0.18
R5(ON BIAS HDC)	0.02	-0.05	0.10	0.02	0.25	-0.05	-0.21
R6(ON BIAS HDC)	0.18	0.02	-0.13	-0.05	0.18	0.02	0.02
R7(ON BIAS HDC)	0.18	-0.21	0.02	-0.05	-0.13	-0.05	0.02
R8(ON BIAS HDC)	0.25	0.33	-0.13	-0.13	-0.13	-0.05	-0.21
R9(ON BIAS HDC)	0.10	0.18	-0.05	0.02	0.10	0.10	-0.21
R10(ON BIAS HDC)	0.18	0.10	0.25	0.02	0.02	**62784351.41**	**31773112.71**
R11(ON BIAS HDC)	-0.05	0.33	-0.13	0.10	-0.28	0.10	-0.13
Irradiated, HDC biased parts statistics							
Min Value	-0.05	-0.21	-0.13	-0.13	-0.28	-0.21	-0.21
Max Value	0.25	0.33	0.25	0.10	62828414.14	62832243.74	62832243.74
Average	0.10	0.08	-0.02	-0.02	6282841.44	12561659.53	9460535.58
Sigma	0.11	0.17	0.12	0.06	19868089.04	26482305.91	21245664.16



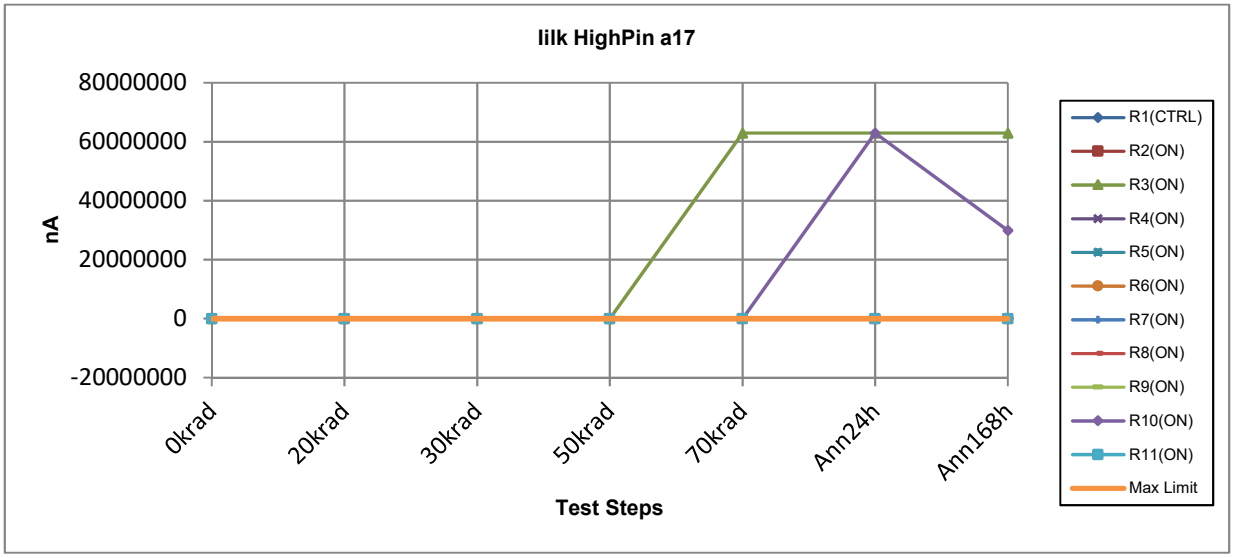
ILI HighPin a20	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.09	-0.09	-0.17	-0.09	-0.09	-0.09	-0.24
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.01	-0.17	-0.17	-0.09	-0.17	-0.09	-0.17
R3(ON BIAS HDC)	-0.01	-0.17	-0.17	-0.17	**62585383.65**	**62591128.05**	**62593050.30**
R4(ON BIAS HDC)	-0.01	-0.17	-0.01	-0.17	-0.09	0.21	0.06
R5(ON BIAS HDC)	-0.09	-0.17	-0.17	-0.17	-0.24	-0.01	-0.01
R6(ON BIAS HDC)	0.06	-0.17	-0.24	-0.09	0.14	-0.01	-0.17
R7(ON BIAS HDC)	-0.09	-0.17	-0.01	-0.09	-0.01	-0.17	-0.24
R8(ON BIAS HDC)	-0.01	-0.01	0.06	-0.17	-0.32	-0.01	-0.17
R9(ON BIAS HDC)	-0.01	-0.01	-0.24	-0.32	0.06	-0.09	-0.09
R10(ON BIAS HDC)	0.14	-0.09	0.06	-0.01	0.06	**62499143.18**	**29638851.06**
R11(ON BIAS HDC)	-0.17	0.06	-0.17	-0.17	-0.01	-0.01	-0.09
Irradiated, HDC biased parts statistics							
Min Value	-0.17	-0.17	-0.24	-0.32	-0.32	-0.17	-0.24
Max Value	0.14	0.06	0.06	-0.01	62585383.65	62591128.05	62593050.30
Average	-0.02	-0.11	-0.11	-0.15	6258538.31	12509027.11	9223190.05
Sigma	0.08	0.09	0.12	0.08	19791236.08	26371353.60	20938213.58



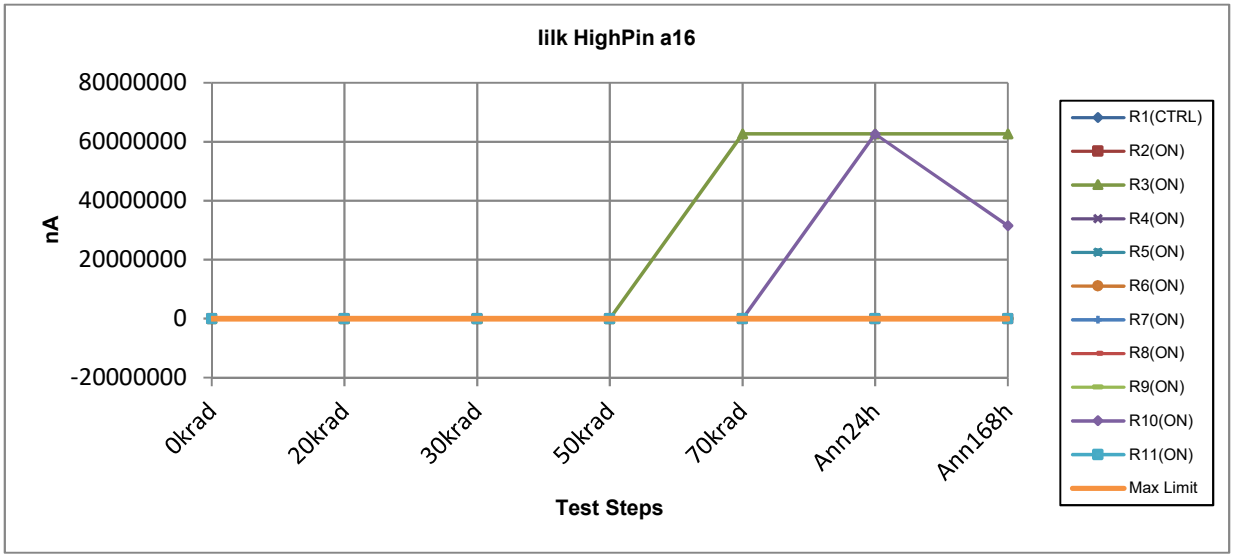
ILI HighPin a19	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.11	0.04	0.04	0.11	0.11	0.11	-0.27
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.11	-0.27	0.11	-0.12	-0.04	0.04	-0.12
R3(ON BIAS HDC)	0.11	-0.04	0.04	-0.04	**62641821.80**	**62639899.55**	**62649495.90**
R4(ON BIAS HDC)	0.19	0.11	0.11	0.11	-0.04	0.11	0.27
R5(ON BIAS HDC)	0.11	-0.04	-0.19	0.04	0.19	0.11	0.11
R6(ON BIAS HDC)	0.19	0.04	0.04	0.19	0.04	-0.19	-0.12
R7(ON BIAS HDC)	0.19	0.11	-0.04	-0.12	0.19	-0.12	0.04
R8(ON BIAS HDC)	0.19	-0.04	0.11	-0.04	0.11	-0.12	0.04
R9(ON BIAS HDC)	0.34	-0.35	-0.12	0.19	0.04	-0.04	-0.12
R10(ON BIAS HDC)	0.11	0.04	-0.12	-0.12	-0.12	**62588080.76**	**32415274.53**
R11(ON BIAS HDC)	0.27	0.11	-0.12	0.19	0.19	0.19	-0.12
Irradiated, HDC biased parts statistics							
Min Value	0.11	-0.35	-0.19	-0.12	-0.12	-0.19	-0.12
Max Value	0.34	0.11	0.11	0.19	62641821.80	62639899.55	62649495.90
Average	0.18	-0.03	-0.02	0.03	6264182.24	12522798.03	9506477.04
Sigma	0.08	0.16	0.11	0.13	19809083.35	26400379.13	21270684.84



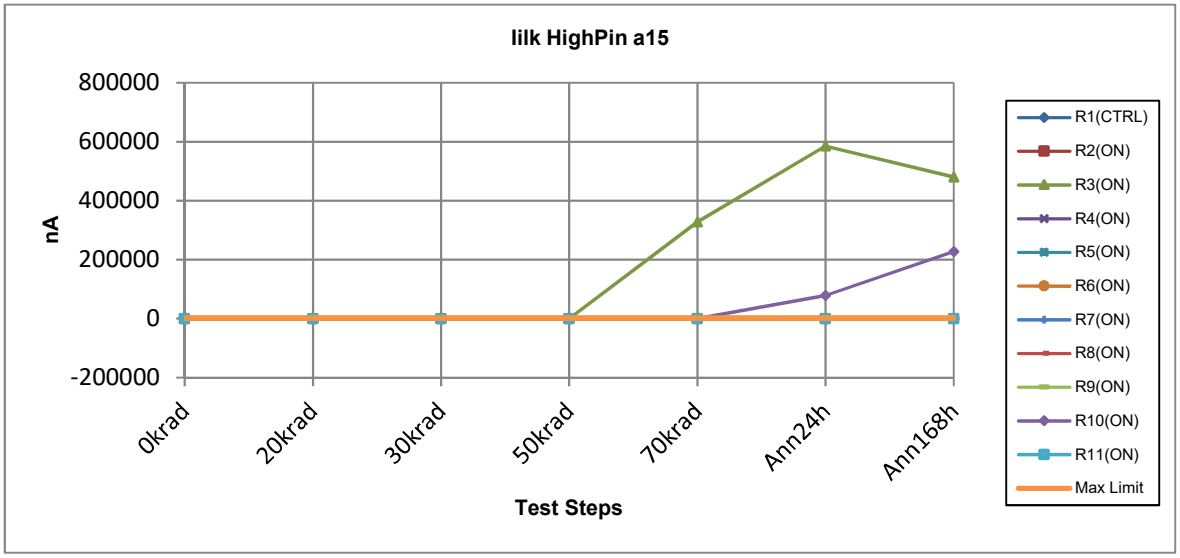
ILI HighPin a18	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.15	0.08	-0.15	0.08	-0.07	-0.07	-0.15
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.07	-0.22	-0.30	0.01	-0.15	-0.30	0.01
R3(ON BIAS HDC)	-0.15	-0.07	0.16	0.01	**62872864.31**	**62872864.31**	**62872864.31**
R4(ON BIAS HDC)	0.01	-0.22	0.01	-0.07	0.16	0.08	0.08
R5(ON BIAS HDC)	0.01	-0.30	0.08	0.01	0.01	-0.07	0.01
R6(ON BIAS HDC)	0.01	-0.07	0.08	0.08	0.31	0.01	0.16
R7(ON BIAS HDC)	0.01	0.01	-0.15	-0.15	-0.07	-0.15	-0.07
R8(ON BIAS HDC)	0.16	0.01	-0.07	-0.15	0.01	-0.07	-0.22
R9(ON BIAS HDC)	0.01	-0.30	0.01	-0.15	0.16	-0.22	-0.15
R10(ON BIAS HDC)	-0.22	-0.15	0.01	-0.15	0.08	**62872864.31**	**30932791.53**
R11(ON BIAS HDC)	0.01	0.16	-0.07	0.16	-0.30	0.16	0.01
Irradiated, HDC biased parts statistics							
Min Value	-0.22	-0.30	-0.30	-0.15	-0.30	-0.30	-0.22
Max Value	0.16	0.16	0.16	0.16	62872864.31	62872864.31	62872864.31
Average	-0.02	-0.12	-0.02	-0.04	6287286.45	12574572.81	9380565.57
Sigma	0.10	0.15	0.13	0.11	19882145.42	26509527.26	21160457.24



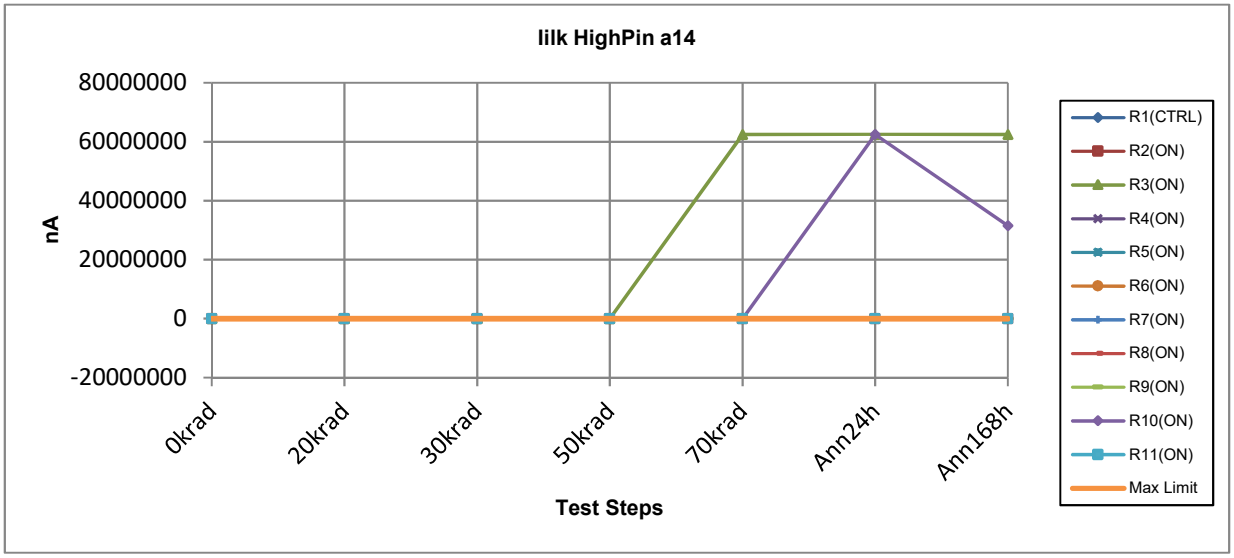
ILI HighPin a17	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.06	-0.06	-0.21	-0.21	-0.29	-0.29	-0.36
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.13	-0.13	-0.13	-0.29	-1.20	-0.13	-0.36
R3(ON BIAS HDC)	0.17	-0.06	-0.13	-0.13	**62935568.39**	**62935568.39**	**62935568.39**
R4(ON BIAS HDC)	0.10	-0.29	-0.13	0.02	-0.36	0.33	-0.13
R5(ON BIAS HDC)	-0.13	-0.29	-0.21	-0.13	-1.51	-0.13	-0.36
R6(ON BIAS HDC)	0.02	-0.06	-0.06	-0.13	0.10	-0.13	-0.29
R7(ON BIAS HDC)	0.10	0.17	-0.13	-0.29	-1.59	-1.51	-0.06
R8(ON BIAS HDC)	0.02	-0.13	-0.06	-0.29	-0.36	-0.06	-0.29
R9(ON BIAS HDC)	-0.06	0.02	-0.21	-0.21	0.86	-0.82	-0.21
R10(ON BIAS HDC)	-0.13	-0.13	-0.06	-0.13	0.71	**62935568.39**	**29874809.09**
R11(ON BIAS HDC)	0.02	-0.29	-0.06	-0.13	-0.21	-0.44	-0.13
Irradiated, HDC biased parts statistics							
Min Value	-0.13	-0.29	-0.21	-0.29	-1.59	-1.51	-0.36
Max Value	0.17	0.17	-0.06	0.02	62935568.39	62935568.39	62935568.39
Average	0.00	-0.12	-0.12	-0.17	6293556.48	12587113.39	9281037.57
Sigma	0.11	0.15	0.06	0.10	19901974.32	26535965.75	21060794.02



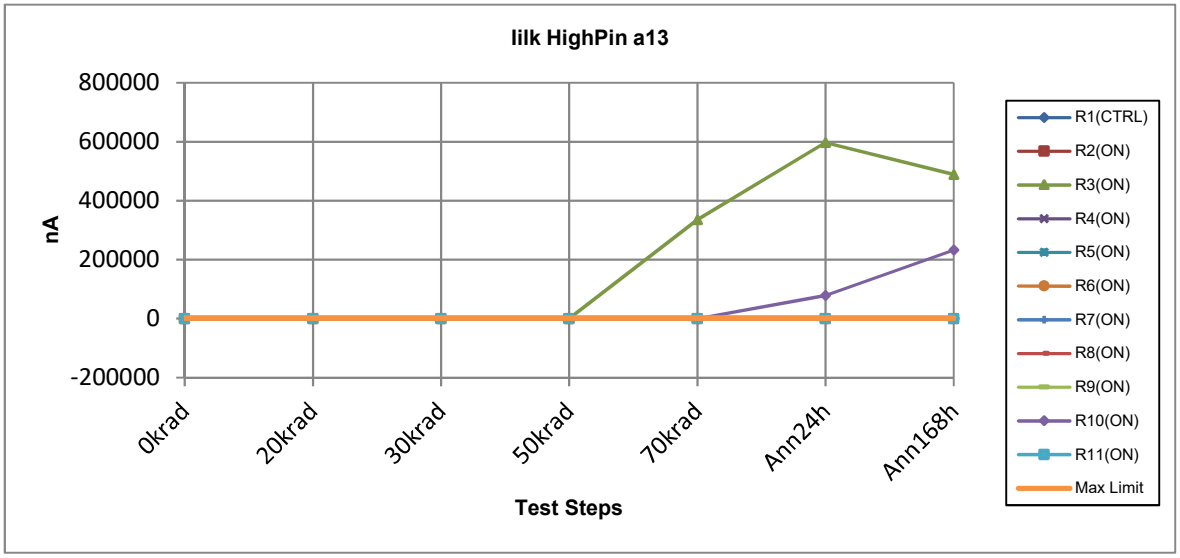
ILI HighPin a16	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.16	0.31	0.00	0.16	0.23	0.00	0.16
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.31	0.39	0.23	0.00	0.16	0.16	0.08
R3(ON BIAS HDC)	0.46	0.39	0.16	0.23	**62670610.85**	**62674440.44**	**62676355.24**
R4(ON BIAS HDC)	0.31	0.31	0.16	0.00	0.23	0.31	0.39
R5(ON BIAS HDC)	0.46	0.31	0.08	0.16	0.00	0.08	0.00
R6(ON BIAS HDC)	0.31	0.31	0.16	0.08	0.39	0.00	0.00
R7(ON BIAS HDC)	0.31	0.23	0.39	0.16	0.08	-0.07	0.08
R8(ON BIAS HDC)	0.16	0.23	-0.07	0.08	0.08	0.00	0.23
R9(ON BIAS HDC)	0.31	0.16	0.08	0.00	0.31	0.00	0.00
R10(ON BIAS HDC)	0.23	0.31	0.08	0.16	0.16	**62632277.61**	**31504902.99**
R11(ON BIAS HDC)	0.16	0.23	0.08	0.16	0.23	0.23	0.23
Irradiated, HDC biased parts statistics							
Min Value	0.16	0.16	-0.07	0.00	0.00	-0.07	0.00
Max Value	0.46	0.39	0.39	0.23	62670610.85	62674440.44	62676355.24
Average	0.30	0.29	0.14	0.10	6267061.25	12530671.88	9418125.92
Sigma	0.10	0.07	0.12	0.08	19818187.21	26416977.51	21170927.29



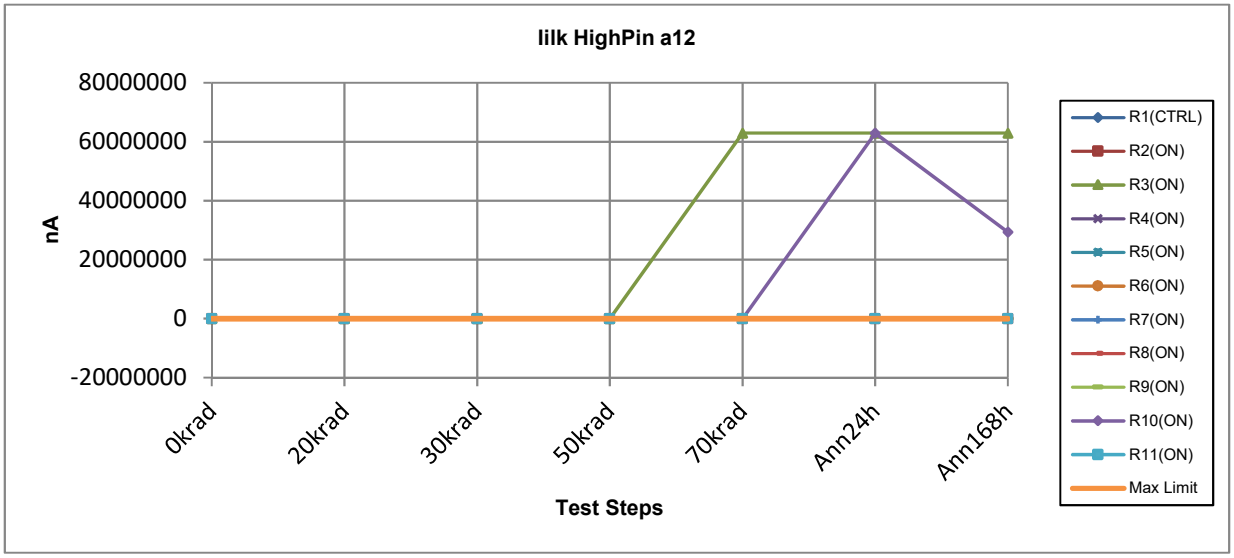
ILI HighPin a15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.03	0.26	0.19	-0.04	-0.04	-0.12	0.11
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.26	0.26	0.11	0.03	0.03	0.03	0.11
R3(ON BIAS HDC)	0.34	0.03	0.11	0.03	**328019.09**	**585424.95**	**480389.34**
R4(ON BIAS HDC)	0.34	-0.04	-0.04	0.03	0.11	0.03	-0.04
R5(ON BIAS HDC)	0.34	0.03	0.11	-0.04	0.11	-0.12	-0.20
R6(ON BIAS HDC)	0.26	0.26	-0.04	-0.04	0.19	0.03	0.03
R7(ON BIAS HDC)	0.34	0.19	0.03	-0.04	0.03	-0.04	-0.04
R8(ON BIAS HDC)	0.26	0.34	0.03	0.03	-0.04	-0.04	0.11
R9(ON BIAS HDC)	0.34	0.03	-0.04	0.11	-0.12	-0.04	0.19
R10(ON BIAS HDC)	0.26	0.26	-0.04	-0.04	0.19	**78821.34**	**227480.63**
R11(ON BIAS HDC)	0.26	0.34	-0.04	0.03	-0.12	0.34	0.03
Irradiated, HDC biased parts statistics							
Min Value	0.26	-0.04	-0.04	-0.04	-0.12	-0.12	-0.20
Max Value	0.34	0.34	0.11	0.11	328019.09	585424.95	480389.34
Average	0.30	0.17	0.02	0.01	32801.95	66424.65	70787.02
Sigma	0.04	0.14	0.07	0.05	103728.73	184032.86	160697.56



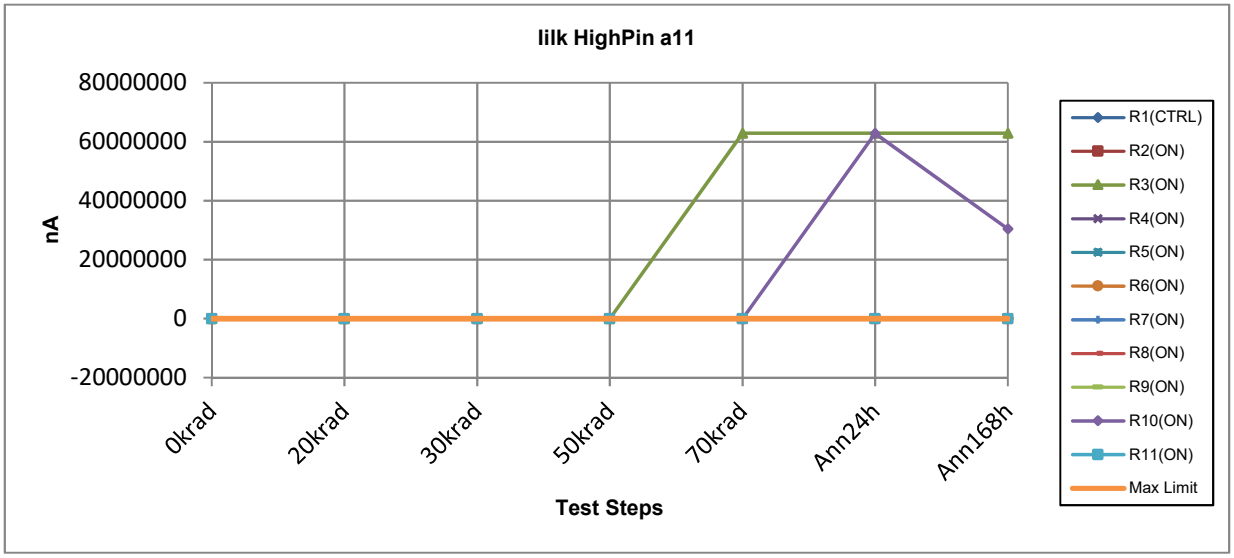
ILI HighPin a14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.02	0.02	-0.05	-0.05	0.10	-0.13	-0.21
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.18	0.02	-0.05	0.10	-0.13	-0.13	-0.05
R3(ON BIAS HDC)	-0.13	0.02	0.10	0.02	**62512479.72**	**62525898.22**	**62518231.57**
R4(ON BIAS HDC)	0.18	-0.05	0.10	0.10	0.10	0.25	0.25
R5(ON BIAS HDC)	-0.05	0.18	0.18	0.33	0.02	0.10	0.02
R6(ON BIAS HDC)	0.10	0.18	0.18	0.18	0.02	-0.13	-0.13
R7(ON BIAS HDC)	0.18	0.18	0.10	-0.05	-0.28	-0.05	-0.21
R8(ON BIAS HDC)	0.02	0.10	0.10	0.18	0.10	0.02	0.02
R9(ON BIAS HDC)	-0.05	0.10	0.02	0.10	-0.05	-0.13	-0.05
R10(ON BIAS HDC)	0.18	0.02	-0.05	-0.05	-0.05	**62462657.69**	**31481694.43**
R11(ON BIAS HDC)	0.18	0.10	0.10	0.18	-0.21	-0.05	0.02
Irradiated, HDC biased parts statistics							
Min Value	-0.13	-0.05	-0.05	-0.05	-0.28	-0.13	-0.21
Max Value	0.18	0.18	0.18	0.33	62512479.72	62525898.22	62518231.57
Average	0.08	0.09	0.08	0.11	6251247.92	12498855.58	9399992.59
Sigma	0.12	0.08	0.08	0.12	19768181.83	26349905.43	21124045.69



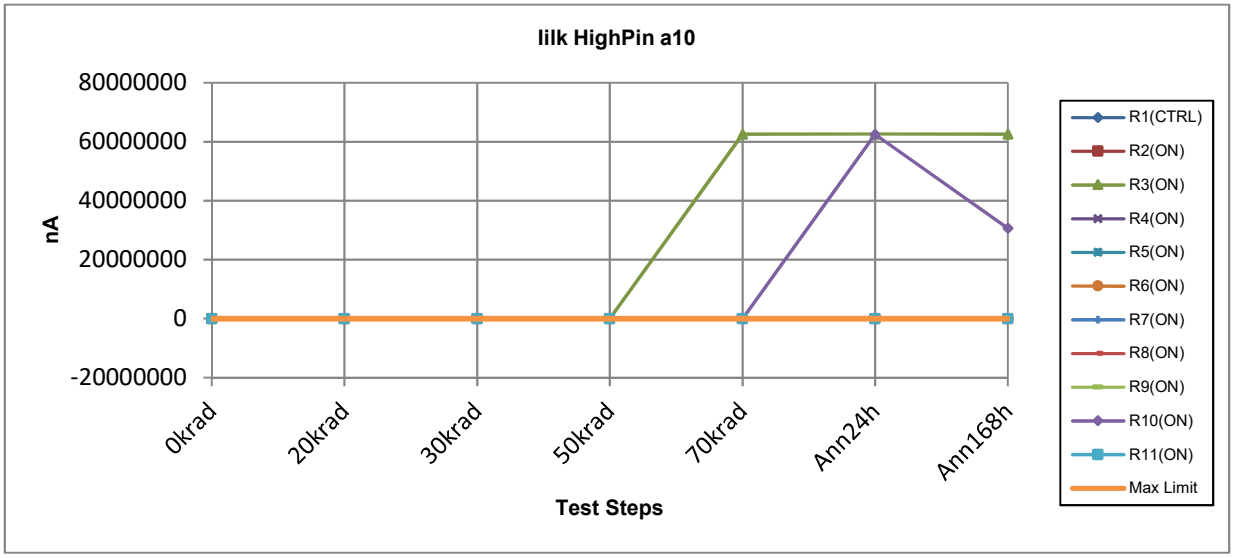
ILI HighPin a13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.15	0.24	-0.15	-0.07	-0.07	-0.22	0.01
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.01	-0.15	-0.15	-0.15	0.01	-0.07	-0.07
R3(ON BIAS HDC)	0.08	-0.07	-0.15	0.16	**335993.83**	**597107.22**	**488849.94**
R4(ON BIAS HDC)	0.16	-0.07	-0.22	-0.07	0.08	0.01	0.01
R5(ON BIAS HDC)	0.01	0.16	0.08	0.01	-0.07	0.01	-0.07
R6(ON BIAS HDC)	0.08	-0.07	0.01	-0.15	-0.07	-0.07	-0.22
R7(ON BIAS HDC)	0.01	0.24	0.01	-0.07	-0.15	-0.15	0.08
R8(ON BIAS HDC)	0.24	0.08	0.16	-0.07	0.08	-0.07	0.01
R9(ON BIAS HDC)	0.08	0.16	-0.15	-0.15	0.24	0.08	0.08
R10(ON BIAS HDC)	0.08	-0.07	0.01	-0.07	0.01	**78664.38**	**232768.27**
R11(ON BIAS HDC)	-0.07	0.16	-0.15	-0.22	0.08	0.01	-0.07
Irradiated, HDC biased parts statistics							
Min Value	-0.07	-0.15	-0.22	-0.22	-0.15	-0.15	-0.22
Max Value	0.24	0.24	0.16	0.16	335993.83	597107.22	488849.94
Average	0.07	0.04	-0.06	-0.08	33599.40	67577.14	72161.80
Sigma	0.09	0.14	0.12	0.11	106250.57	187693.14	163667.03



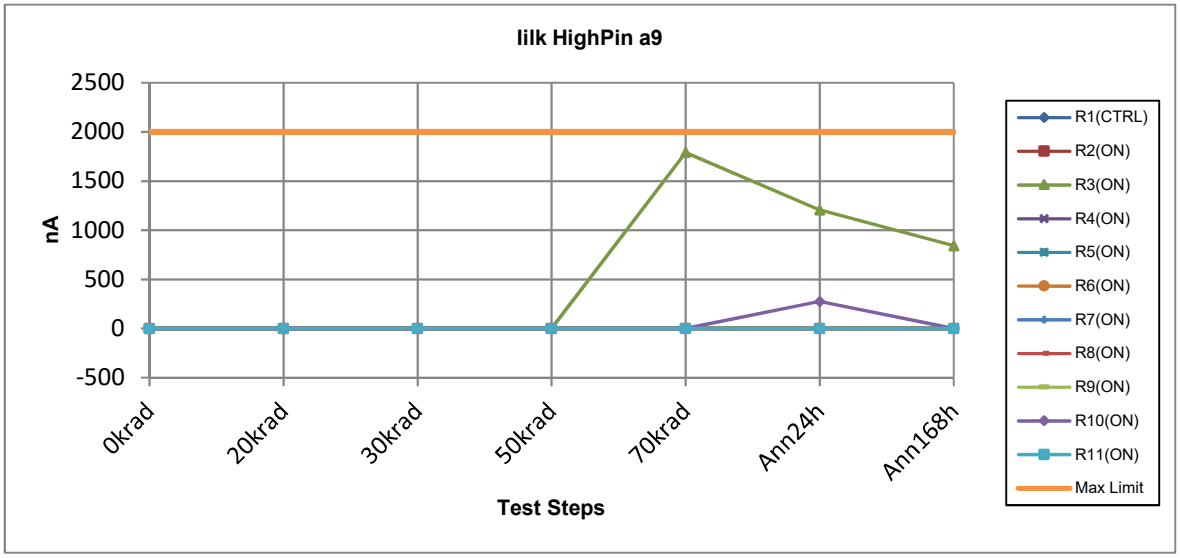
ILI HighPin a12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.04	0.19	0.03	0.03	-0.12	-0.20	0.11
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.03	-0.04	-0.04	-0.12	0.19	-0.12	0.11
R3(ON BIAS HDC)	0.11	0.11	-0.04	-0.20	**62953621.15**	**62953621.15**	**62953621.15**
R4(ON BIAS HDC)	0.26	0.03	-0.20	0.03	0.26	0.19	0.11
R5(ON BIAS HDC)	-0.12	0.03	-0.04	-0.04	-0.04	0.03	-0.20
R6(ON BIAS HDC)	-0.04	0.11	0.03	0.11	0.03	0.11	-0.20
R7(ON BIAS HDC)	0.11	0.11	0.11	0.03	0.03	0.03	-0.04
R8(ON BIAS HDC)	-0.04	0.11	0.11	0.03	0.03	-0.04	-0.20
R9(ON BIAS HDC)	-0.04	0.11	0.03	-0.12	-0.04	0.11	-0.04
R10(ON BIAS HDC)	-0.04	0.03	0.03	-0.20	-0.12	**62896057.96**	**29415171.59**
R11(ON BIAS HDC)	-0.04	0.03	-0.12	-0.12	0.03	0.11	-0.12
Irradiated, HDC biased parts statistics							
Min Value	-0.12	-0.04	-0.20	-0.20	-0.12	-0.12	-0.20
Max Value	0.26	0.11	0.11	0.11	62953621.15	62953621.15	62953621.15
Average	0.02	0.06	-0.01	-0.06	6295362.15	12584967.95	9236879.22
Sigma	0.11	0.05	0.10	0.11	19907682.97	26531445.37	21016425.74



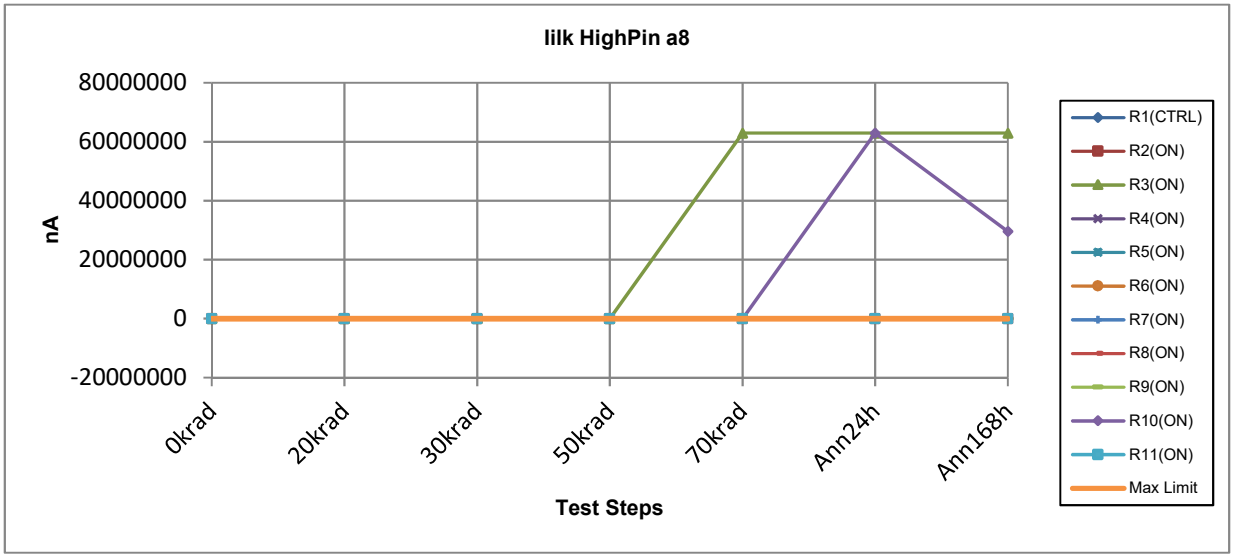
ILI HighPin a11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.31	0.24	0.01	-0.07	0.16	0.08	-0.07
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.24	0.08	-0.07	0.01	0.01	0.01	0.08
R3(ON BIAS HDC)	0.24	0.39	-0.22	-0.07	**62886379.66**	**62899805.61**	**62899805.61**
R4(ON BIAS HDC)	0.39	0.16	-0.07	-0.07	0.08	0.08	-0.15
R5(ON BIAS HDC)	0.24	0.08	-0.15	0.01	-0.15	0.08	-0.15
R6(ON BIAS HDC)	0.47	0.16	0.01	-0.07	0.01	-0.07	-0.07
R7(ON BIAS HDC)	0.24	0.47	0.08	0.08	-0.15	0.16	-0.22
R8(ON BIAS HDC)	0.31	0.08	-0.07	0.08	-0.07	-0.07	0.01
R9(ON BIAS HDC)	0.16	0.31	0.01	-0.07	-0.07	-0.15	0.01
R10(ON BIAS HDC)	0.24	0.16	0.08	0.24	-0.07	**62815420.33**	**30418032.78**
R11(ON BIAS HDC)	0.24	0.08	0.01	0.16	-0.07	-0.07	0.01
Irradiated, HDC biased parts statistics							
Min Value	0.16	0.08	-0.22	-0.07	-0.15	-0.15	-0.22
Max Value	0.47	0.47	0.08	0.24	62886379.66	62899805.61	62899805.61
Average	0.28	0.20	-0.04	0.03	6288637.92	12571522.59	9331783.79
Sigma	0.09	0.14	0.10	0.11	19886419.37	26503104.17	21110346.01



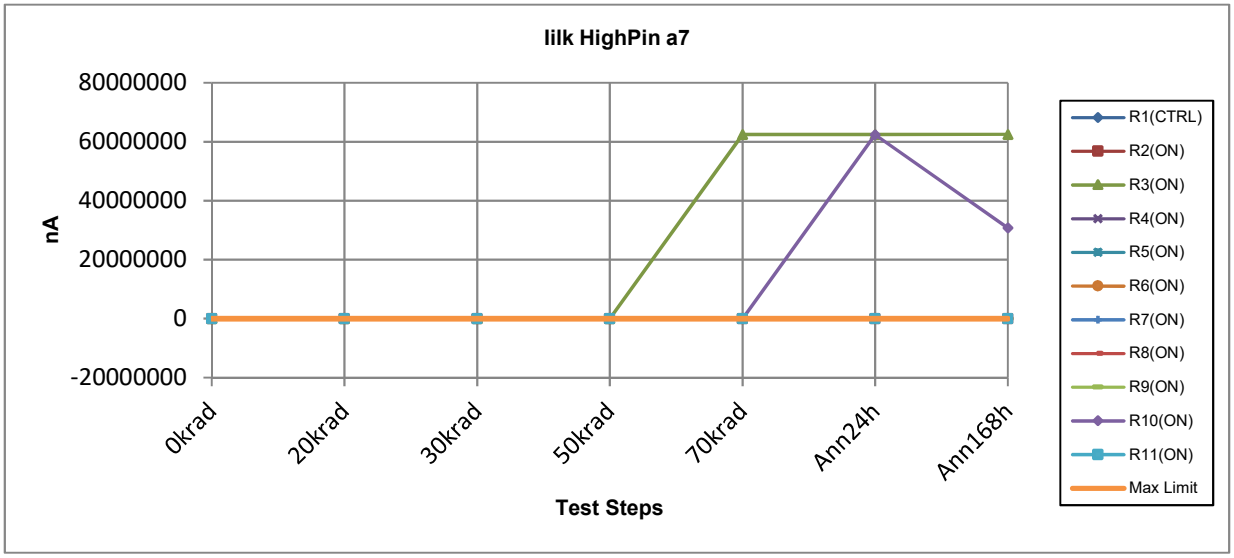
ILI HighPin a10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.08	0.00	-0.23	0.00	0.00	-0.23	0.00
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.15	0.08	-0.08	0.15	-0.15	-0.08	-0.15
R3(ON BIAS HDC)	0.08	0.00	-0.15	0.00	**62591105.70**	**62608353.79**	**62600687.15**
R4(ON BIAS HDC)	0.15	0.00	-0.15	0.00	0.08	0.23	0.15
R5(ON BIAS HDC)	0.15	0.15	0.15	-0.31	-0.23	0.00	-0.08
R6(ON BIAS HDC)	0.15	0.08	0.08	-0.15	0.00	-0.15	-0.08
R7(ON BIAS HDC)	0.15	0.15	-0.08	0.31	0.00	-0.08	0.00
R8(ON BIAS HDC)	0.08	0.23	0.08	-0.08	0.00	-0.08	0.00
R9(ON BIAS HDC)	0.00	0.15	0.08	0.00	-0.15	0.08	-0.08
R10(ON BIAS HDC)	0.08	0.00	0.00	0.08	0.00	**62525942.92**	**30649809.17**
R11(ON BIAS HDC)	0.15	0.15	-0.23	0.00	-0.15	0.08	0.00
Irradiated, HDC biased parts statistics							
Min Value	0.00	0.00	-0.23	-0.31	-0.23	-0.15	-0.15
Max Value	0.15	0.23	0.15	0.31	62591105.70	62608353.79	62600687.15
Average	0.11	0.10	-0.03	0.00	6259110.51	12513429.67	9325049.61
Sigma	0.05	0.08	0.13	0.17	19793045.55	26380633.22	21052029.02



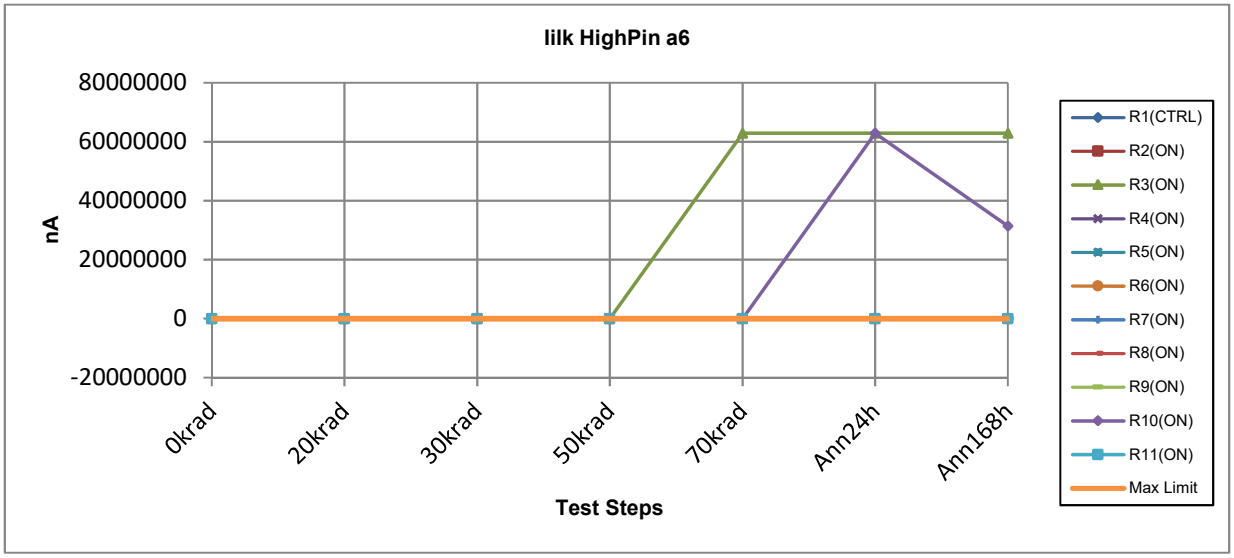
ILI HighPin a9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.52	0.45	0.06	0.06	0.22	0.06	-0.01
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.45	0.37	0.06	0.22	0.29	0.29	0.22
R3(ON BIAS HDC)	0.22	0.37	0.29	0.14	1790.71	1204.33	841.20
R4(ON BIAS HDC)	0.29	0.29	0.06	0.45	0.22	0.37	0.45
R5(ON BIAS HDC)	0.06	0.22	0.06	0.14	0.22	0.22	0.14
R6(ON BIAS HDC)	0.37	0.29	0.06	0.14	0.29	0.22	0.14
R7(ON BIAS HDC)	0.29	0.29	0.06	0.22	0.22	0.06	0.22
R8(ON BIAS HDC)	0.14	0.29	0.06	0.14	0.06	0.29	-0.01
R9(ON BIAS HDC)	0.29	0.22	0.14	0.22	0.22	0.29	0.45
R10(ON BIAS HDC)	0.22	0.45	-0.01	0.37	0.29	275.62	0.22
R11(ON BIAS HDC)	0.29	0.45	0.22	0.37	0.06	0.22	0.22
Irradiated, HDC biased parts statistics							
Min Value	0.06	0.22	-0.01	0.14	0.06	0.06	-0.01
Max Value	0.45	0.45	0.29	0.45	1790.71	1204.33	841.20
Average	0.26	0.32	0.10	0.24	179.26	148.19	84.33
Sigma	0.11	0.08	0.09	0.12	566.21	381.05	265.94



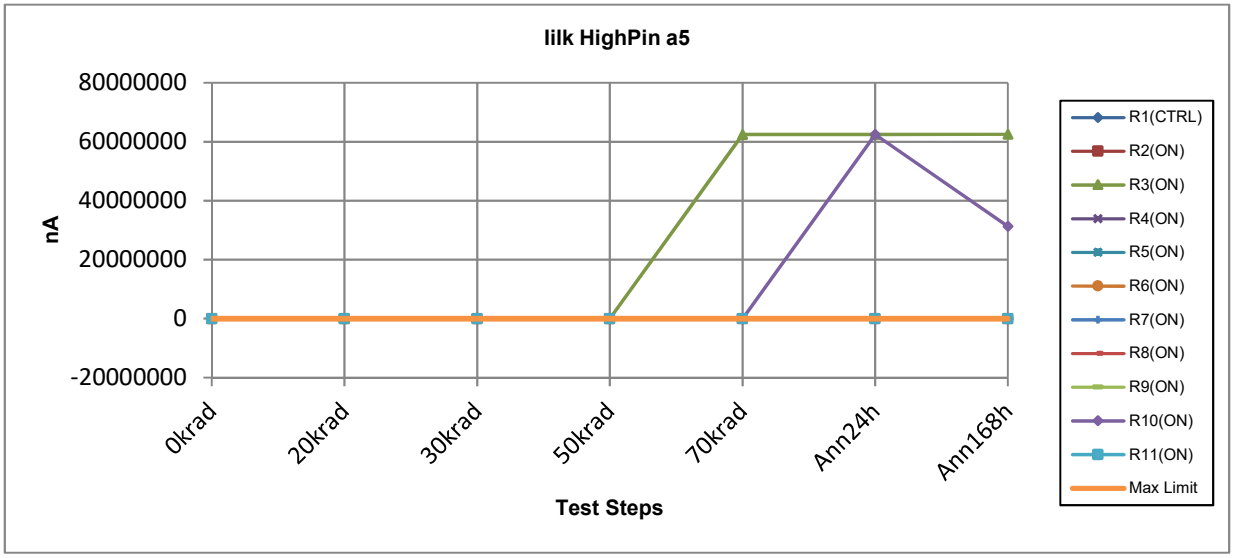
ILI HighPin a8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.07	0.14	-0.24	0.07	-0.01	-0.01	0.14
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.30	0.30	0.14	-0.01	0.22	0.07	0.07
R3(ON BIAS HDC)	0.30	0.22	0.14	0.22	**62948778.27**	**62948778.27**	**62948778.27**
R4(ON BIAS HDC)	0.37	0.14	0.30	0.07	0.30	0.53	0.22
R5(ON BIAS HDC)	0.22	0.22	0.07	0.30	0.14	0.30	-0.09
R6(ON BIAS HDC)	0.30	0.30	0.22	0.22	0.30	0.37	0.22
R7(ON BIAS HDC)	-0.09	0.30	0.30	-0.09	0.22	0.14	-0.01
R8(ON BIAS HDC)	0.07	0.37	0.30	0.14	0.22	0.07	0.45
R9(ON BIAS HDC)	0.14	0.14	0.37	0.22	0.22	0.30	0.14
R10(ON BIAS HDC)	0.14	0.07	0.37	0.22	0.07	**62948778.27**	**29614051.80**
R11(ON BIAS HDC)	0.30	0.22	0.30	0.14	0.22	0.37	0.37
Irradiated, HDC biased parts statistics							
Min Value	-0.09	0.07	0.07	-0.09	0.07	0.07	-0.09
Max Value	0.37	0.37	0.37	0.30	62948778.27	62948778.27	62948778.27
Average	0.21	0.23	0.25	0.14	6294878.02	12589755.87	9256283.14
Sigma	0.14	0.09	0.10	0.12	19906151.46	26541535.25	21036352.06



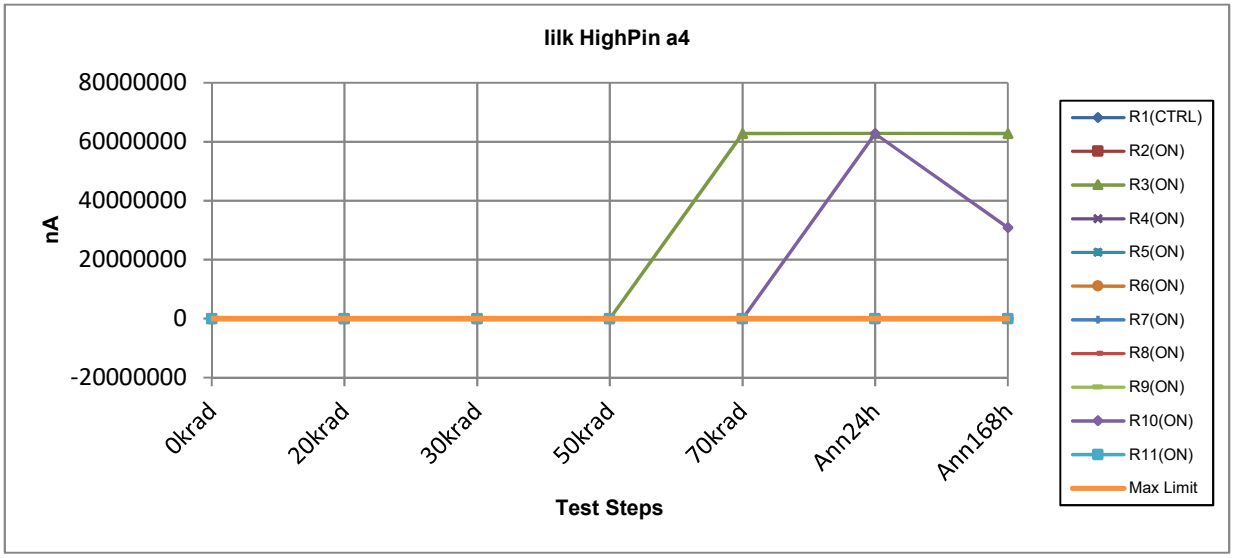
ILI HighPin a7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.34	0.04	0.19	0.19	0.04	0.04	0.11
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.27	-0.04	0.11	0.27	0.04	0.27	0.04
R3(ON BIAS HDC)	0.19	0.11	0.11	0.19	**62491256.74**	**62497001.14**	**62502749.26**
R4(ON BIAS HDC)	0.19	0.11	0.19	0.11	0.19	0.11	0.11
R5(ON BIAS HDC)	0.34	0.04	0.34	0.11	0.34	-0.12	-0.12
R6(ON BIAS HDC)	-0.04	-0.04	0.19	0.04	0.19	0.19	0.11
R7(ON BIAS HDC)	0.34	0.04	0.19	0.11	0.11	-0.12	-0.04
R8(ON BIAS HDC)	0.27	0.19	0.04	-0.12	-0.04	0.19	0.04
R9(ON BIAS HDC)	0.19	0.04	0.27	-0.04	0.19	0.11	0.19
R10(ON BIAS HDC)	0.19	-0.19	0.19	0.04	0.19	**62412735.07**	**30764080.58**
R11(ON BIAS HDC)	0.34	0.04	0.50	0.19	0.27	0.11	0.34
Irradiated, HDC biased parts statistics							
Min Value	-0.04	-0.19	0.04	-0.12	-0.04	-0.12	-0.12
Max Value	0.34	0.19	0.50	0.27	62491256.74	62497001.14	62502749.26
Average	0.23	0.03	0.21	0.09	6249125.82	12490973.70	9326683.05
Sigma	0.11	0.10	0.13	0.12	19761470.46	26333292.01	21037406.24



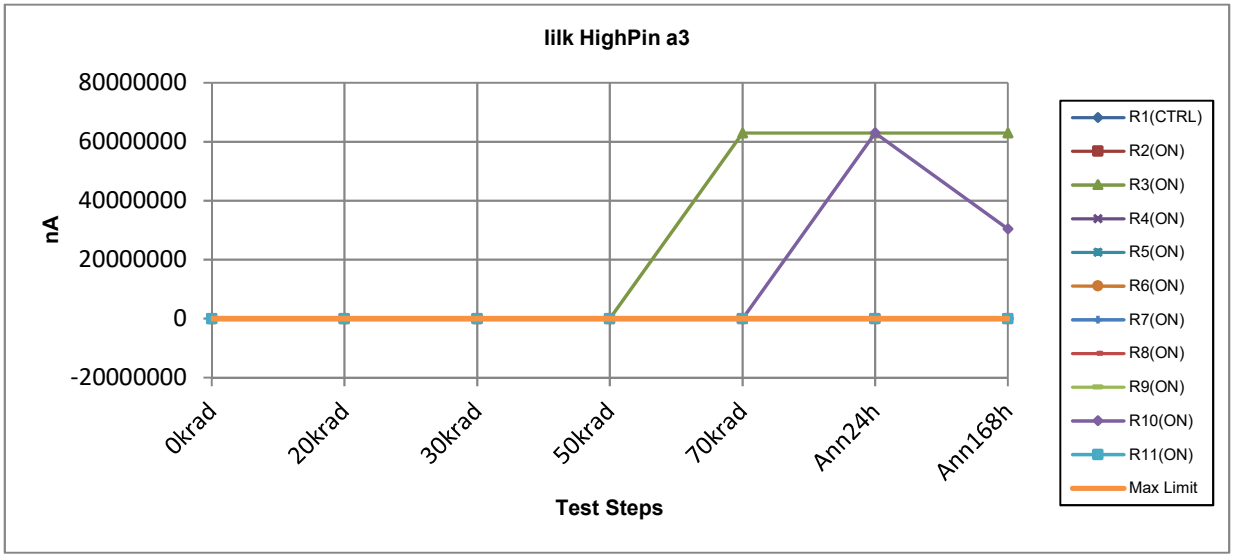
ILI HighPin a6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.17	-0.09	-0.09	-0.09	-0.09	-0.02	-0.09
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.09	-0.02	-0.09	0.06	-0.25	-0.17	-0.40
R3(ON BIAS HDC)	-0.09	-0.02	0.06	0.06	**62887713.31**	**62887713.31**	**62887713.31**
R4(ON BIAS HDC)	-0.09	-0.09	0.06	-0.02	0.14	0.14	0.14
R5(ON BIAS HDC)	0.06	-0.02	-0.02	-0.09	-0.17	0.06	-0.09
R6(ON BIAS HDC)	-0.09	0.06	0.06	-0.25	0.29	-0.02	-0.17
R7(ON BIAS HDC)	-0.09	-0.02	-0.02	-0.17	-0.02	-0.09	0.06
R8(ON BIAS HDC)	-0.17	0.06	-0.09	-0.25	-0.25	-0.17	-0.25
R9(ON BIAS HDC)	0.06	-0.02	-0.09	-0.40	-0.09	0.14	-0.02
R10(ON BIAS HDC)	-0.17	-0.32	-0.17	0.14	0.06	**62887713.31**	**31387798.49**
R11(ON BIAS HDC)	-0.17	-0.02	-0.09	-0.32	0.14	0.14	-0.02
Irradiated, HDC biased parts statistics							
Min Value	-0.17	-0.32	-0.17	-0.40	-0.25	-0.17	-0.40
Max Value	0.06	0.06	0.06	0.14	62887713.31	62887713.31	62887713.31
Average	-0.08	-0.04	-0.04	-0.12	6288771.32	12577542.67	9427551.11
Sigma	0.08	0.11	0.08	0.18	19886841.10	26515788.12	21216532.29



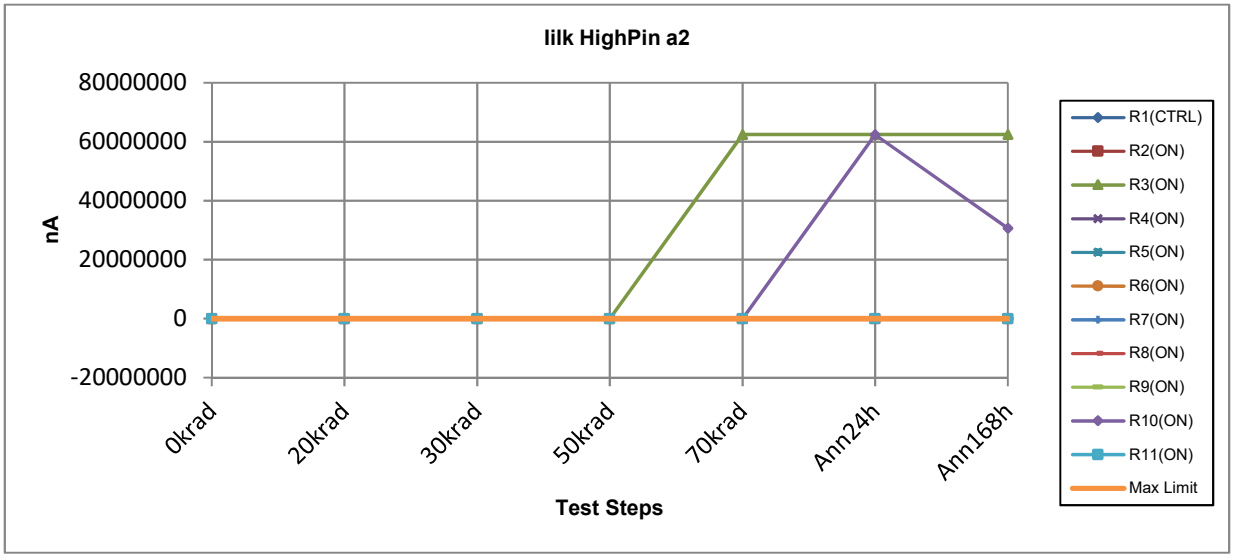
ILI HighPin a5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.08	0.00	0.00	-0.08	0.07	0.07	0.00
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.08	0.07	-0.08	-0.23	-0.23	0.00	0.15
R3(ON BIAS HDC)	0.00	-0.08	0.07	0.07	**62522806.23**	**62524728.48**	**62536232.17**
R4(ON BIAS HDC)	-0.08	-0.08	0.00	-0.08	0.23	0.07	0.00
R5(ON BIAS HDC)	-0.08	-0.08	-0.15	0.07	-0.08	0.00	0.15
R6(ON BIAS HDC)	0.07	0.23	0.00	0.23	0.00	0.15	0.15
R7(ON BIAS HDC)	-0.15	0.07	0.07	0.07	-0.08	-0.15	0.00
R8(ON BIAS HDC)	0.15	0.15	0.07	0.15	0.00	0.07	0.00
R9(ON BIAS HDC)	0.15	0.07	0.15	0.07	0.15	0.15	0.00
R10(ON BIAS HDC)	-0.08	0.07	-0.08	-0.08	-0.08	**62453757.97**	**31336497.52**
R11(ON BIAS HDC)	0.00	0.23	-0.15	0.15	-0.08	-0.15	0.00
Irradiated, HDC biased parts statistics							
Min Value	-0.15	-0.08	-0.15	-0.23	-0.23	-0.15	0.00
Max Value	0.15	0.23	0.15	0.23	62522806.23	62524728.48	62536232.17
Average	-0.01	0.07	-0.01	0.04	6252280.61	12497848.66	9387273.01
Sigma	0.10	0.12	0.10	0.14	19771447.35	26347783.68	21112259.38



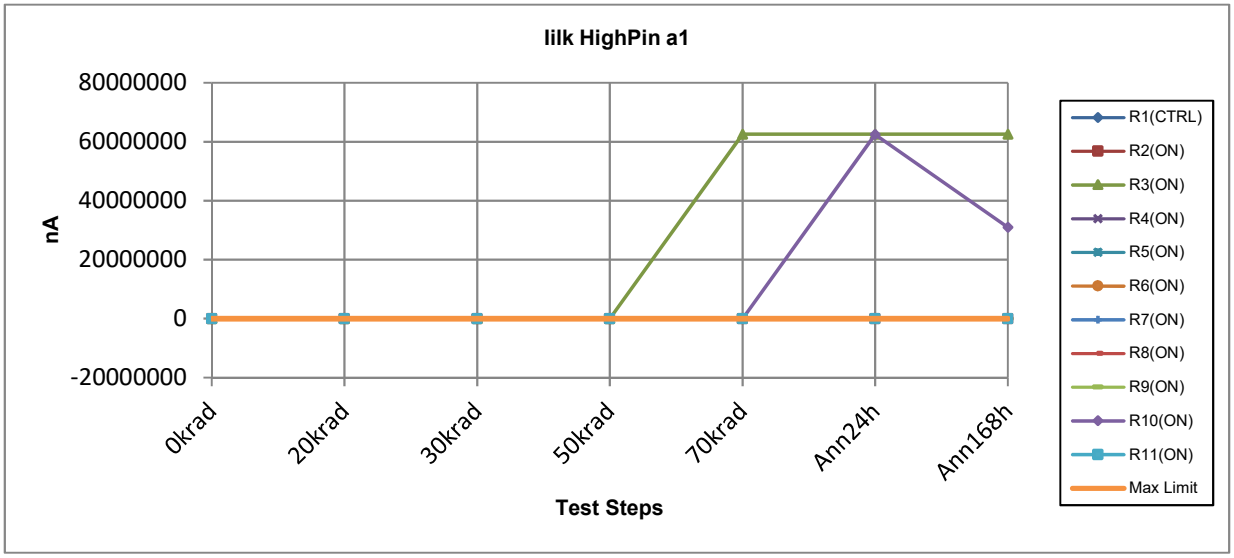
ILI HighPin a4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.25	0.02	-0.21	-0.06	-0.14	0.09	0.09
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.02	0.09	-0.06	0.09	0.17	0.02	-0.06
R3(ON BIAS HDC)	0.09	0.09	0.32	0.17	**62841378.15**	**62849044.80**	**62847130.00**
R4(ON BIAS HDC)	0.02	0.17	-0.06	-0.06	0.02	0.17	-0.21
R5(ON BIAS HDC)	-0.14	-0.14	-0.06	-0.06	0.09	-0.06	0.09
R6(ON BIAS HDC)	-0.06	-0.06	0.02	-0.06	0.02	0.32	-0.06
R7(ON BIAS HDC)	-0.06	-0.21	-0.06	0.09	-0.06	0.02	-0.06
R8(ON BIAS HDC)	-0.06	-0.14	-0.06	-0.06	-0.14	-0.06	-0.06
R9(ON BIAS HDC)	0.09	0.02	-0.29	0.02	-0.14	0.17	0.17
R10(ON BIAS HDC)	-0.14	-0.06	-0.21	0.09	-0.06	**62759019.43**	**30859177.93**
R11(ON BIAS HDC)	0.02	0.17	-0.14	-0.06	0.09	0.17	-0.06
Irradiated, HDC biased parts statistics							
Min Value	-0.14	-0.21	-0.29	-0.06	-0.14	-0.06	-0.21
Max Value	0.09	0.17	0.32	0.17	62841378.15	62849044.80	62847130.00
Average	-0.02	-0.01	-0.06	0.02	6284137.81	12560806.50	9370630.77
Sigma	0.08	0.14	0.16	0.09	19872188.63	26480513.49	21144905.88



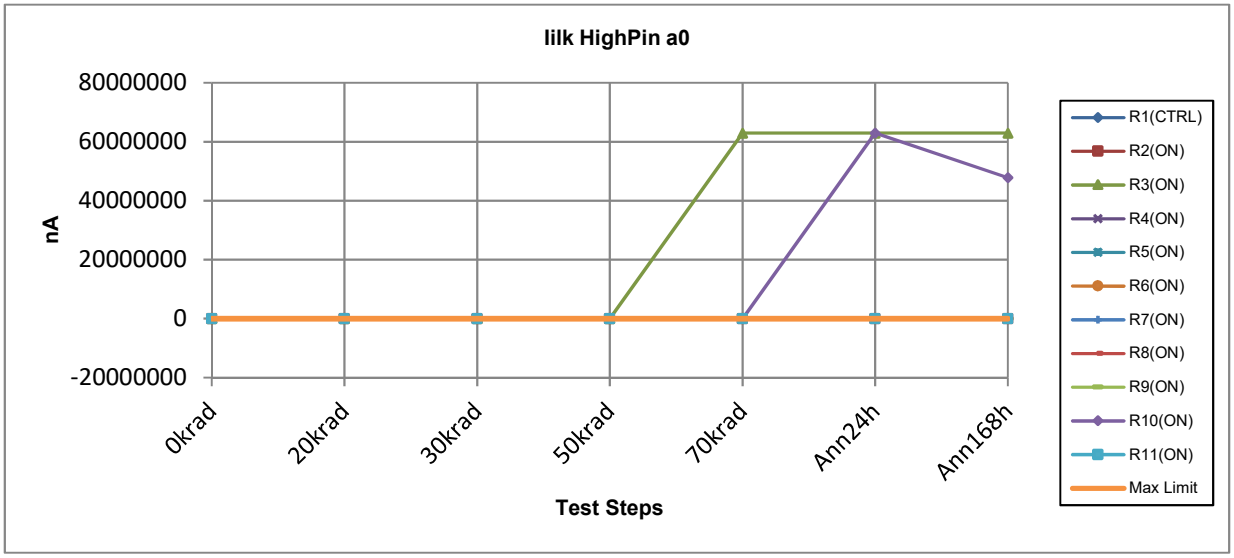
ILI HighPin a3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.23	0.15	0.00	-0.15	-0.15	-0.23	-0.08
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.23	0.15	0.08	0.00	0.15	0.31	0.08
R3(ON BIAS HDC)	0.00	0.08	0.08	0.08	**62975704.67**	**62975704.67**	**62975704.67**
R4(ON BIAS HDC)	0.23	0.08	0.38	0.00	0.00	0.46	0.23
R5(ON BIAS HDC)	0.08	0.08	0.23	0.08	0.00	0.15	0.08
R6(ON BIAS HDC)	0.08	0.31	0.15	0.08	0.08	0.08	0.08
R7(ON BIAS HDC)	0.08	0.08	0.15	-0.08	0.00	0.08	-0.23
R8(ON BIAS HDC)	0.00	0.15	-0.08	-0.15	-0.08	0.00	0.23
R9(ON BIAS HDC)	-0.08	-0.08	0.23	0.31	0.08	0.15	0.15
R10(ON BIAS HDC)	0.00	0.00	0.15	-0.15	0.15	**62975704.67**	**30433917.42**
R11(ON BIAS HDC)	0.00	-0.08	0.31	-0.15	0.00	0.15	0.00
Irradiated, HDC biased parts statistics							
Min Value	-0.08	-0.08	-0.08	-0.15	-0.08	0.00	-0.23
Max Value	0.23	0.31	0.38	0.31	62975704.67	62975704.67	62975704.67
Average	0.06	0.08	0.17	0.00	6297570.51	12595141.07	9340962.27
Sigma	0.10	0.12	0.13	0.14	19914666.39	26552888.46	21133509.32



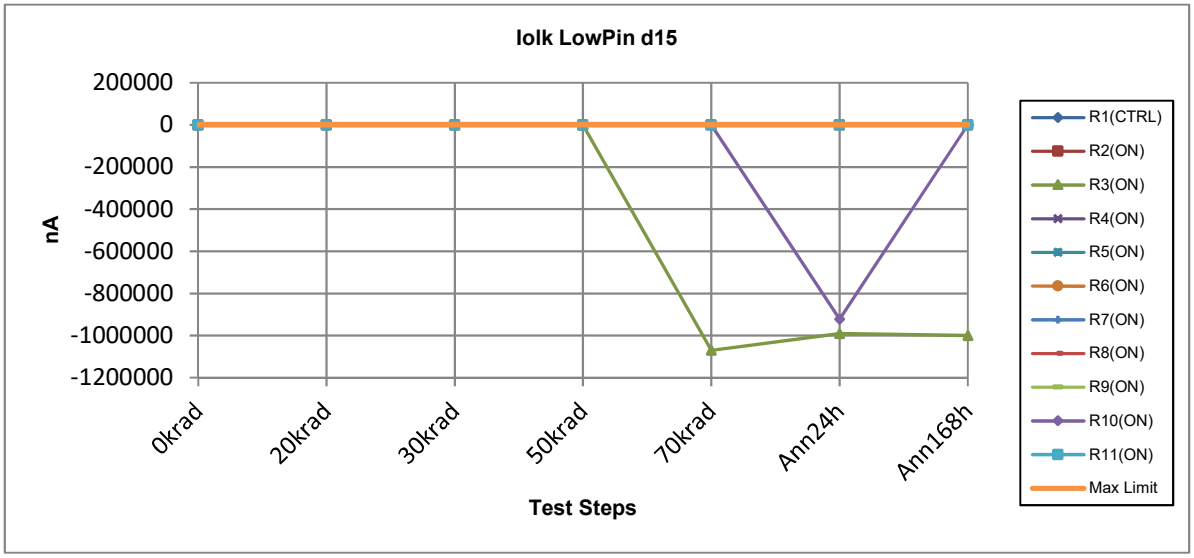
ILI HighPin a2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.31	-0.24	-0.31	-0.31	-0.31	-0.24	-0.24
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.08	-0.24	-0.24	-0.39	-0.31	-0.24	-0.39
R3(ON BIAS HDC)	-0.08	-0.31	-0.47	-0.31	**62463171.78**	**62472760.68**	**62470842.15**
R4(ON BIAS HDC)	-0.24	-0.16	-0.24	-0.31	-0.08	-0.08	-0.24
R5(ON BIAS HDC)	-0.24	-0.31	-0.39	-0.47	-0.31	-0.39	-0.31
R6(ON BIAS HDC)	-0.24	-0.31	-0.31	-0.39	-0.16	-0.39	-0.31
R7(ON BIAS HDC)	-0.54	-0.16	-0.16	-0.47	-0.24	-0.39	-0.24
R8(ON BIAS HDC)	-0.24	-0.01	-0.39	-0.01	-0.16	-0.47	-0.47
R9(ON BIAS HDC)	-0.47	-0.16	-0.24	-0.39	-0.16	-0.08	-0.39
R10(ON BIAS HDC)	-0.31	-0.24	-0.24	-0.24	-0.08	**62390301.38**	**30715368.69**
R11(ON BIAS HDC)	-0.08	-0.16	-0.39	-0.31	-0.39	-0.24	-0.24
Irradiated, HDC biased parts statistics							
Min Value	-0.54	-0.31	-0.47	-0.47	-0.39	-0.47	-0.47
Max Value	-0.08	-0.01	-0.16	-0.01	62463171.78	62472760.68	62470842.15
Average	-0.25	-0.21	-0.31	-0.33	6246316.99	12486305.98	9318620.83
Sigma	0.16	0.10	0.10	0.13	19752589.34	26323452.08	21022932.06



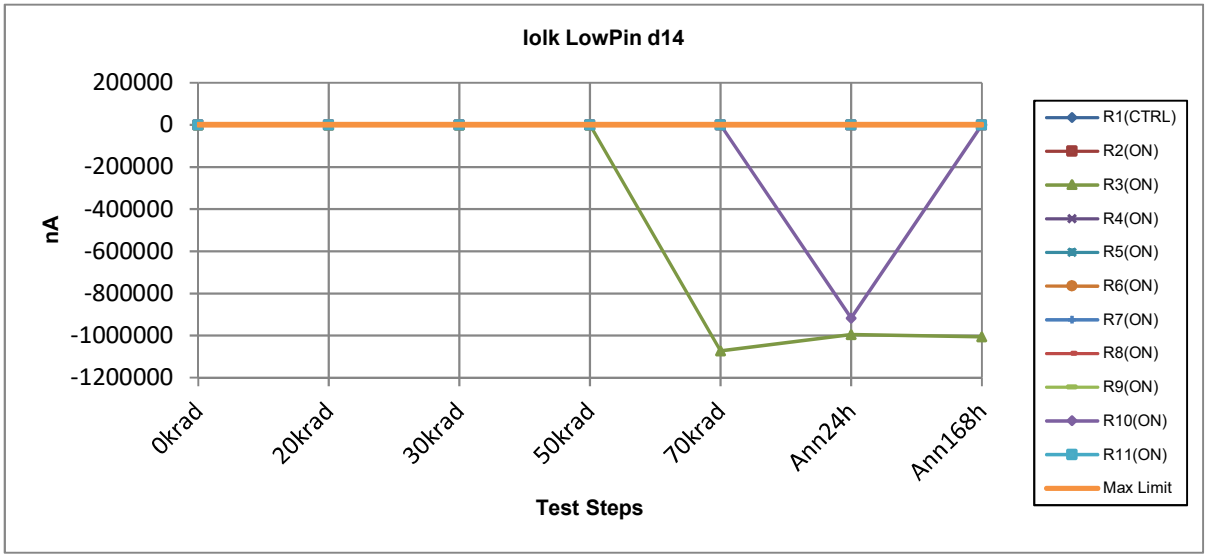
ILI HighPin a1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.27	-0.04	-0.04	-0.12	0.11	-0.04	0.04
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.04	0.11	-0.04	0.04	0.04	0.04	0.04
R3(ON BIAS HDC)	-0.04	0.11	0.11	-0.19	**62538638.71**	**62555909.16**	**62553986.91**
R4(ON BIAS HDC)	-0.04	-0.04	0.04	-0.19	0.04	0.19	0.11
R5(ON BIAS HDC)	0.11	-0.04	0.11	-0.19	-0.04	0.04	0.04
R6(ON BIAS HDC)	0.11	-0.04	0.11	-0.12	0.19	-0.04	0.04
R7(ON BIAS HDC)	-0.12	-0.19	0.19	-0.27	0.11	-0.12	-0.12
R8(ON BIAS HDC)	0.27	0.04	0.11	-0.12	-0.12	0.04	0.04
R9(ON BIAS HDC)	0.11	0.19	0.04	-0.27	0.04	-0.04	-0.04
R10(ON BIAS HDC)	0.11	-0.04	-0.04	-0.19	-0.12	**62469545.75**	**30975120.14**
R11(ON BIAS HDC)	-0.04	0.19	-0.12	-0.12	-0.04	0.19	0.04
Irradiated, HDC biased parts statistics							
Min Value	-0.12	-0.19	-0.12	-0.27	-0.12	-0.12	-0.12
Max Value	0.27	0.19	0.19	0.04	62538638.71	62555909.16	62553986.91
Average	0.05	0.03	0.05	-0.16	6253863.88	12502545.52	9352910.72
Sigma	0.11	0.12	0.09	0.09	19776454.01	26357688.05	21075762.69



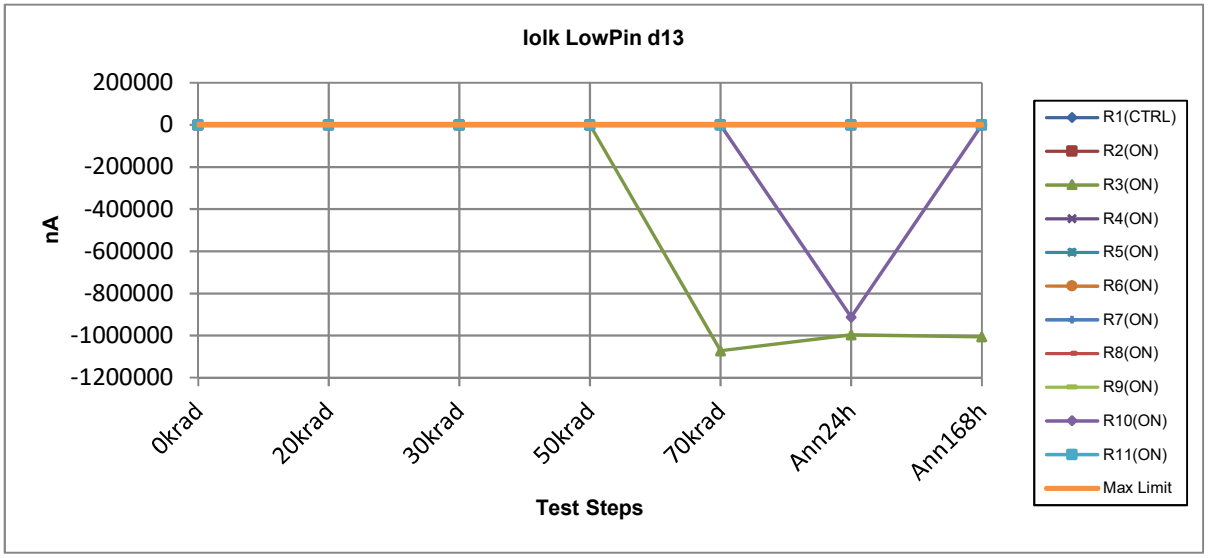
ILI HighPin a0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.20	-0.03	-0.11	-0.11	-0.11	-0.03	-0.03
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.12	0.12	0.12	-0.03	0.05	-0.03	-0.03
R3(ON BIAS HDC)	0.05	0.12	0.12	-0.11	**62953770.16**	**62953770.16**	**62953770.16**
R4(ON BIAS HDC)	0.20	0.20	0.20	-0.03	0.20	0.35	0.43
R5(ON BIAS HDC)	0.12	0.28	0.20	-0.18	0.20	0.12	0.20
R6(ON BIAS HDC)	0.12	0.20	-0.03	0.12	0.12	0.12	0.05
R7(ON BIAS HDC)	0.20	0.20	-0.03	0.20	0.35	0.12	0.20
R8(ON BIAS HDC)	0.12	0.28	0.28	-0.03	0.12	0.12	-0.18
R9(ON BIAS HDC)	0.28	0.12	0.20	0.05	0.05	-0.03	0.12
R10(ON BIAS HDC)	0.28	0.05	0.12	0.05	0.12	**62953770.16**	**47836501.15**
R11(ON BIAS HDC)	0.12	0.20	0.12	-0.34	0.05	0.35	0.28
Irradiated, HDC biased parts statistics							
Min Value	0.05	0.05	-0.03	-0.34	0.05	-0.03	-0.18
Max Value	0.28	0.28	0.28	0.20	62953770.16	62953770.16	62953770.16
Average	0.16	0.18	0.13	-0.03	6295377.14	12590754.14	11079027.24
Sigma	0.08	0.07	0.10	0.15	19907730.06	26543640.07	23626866.94



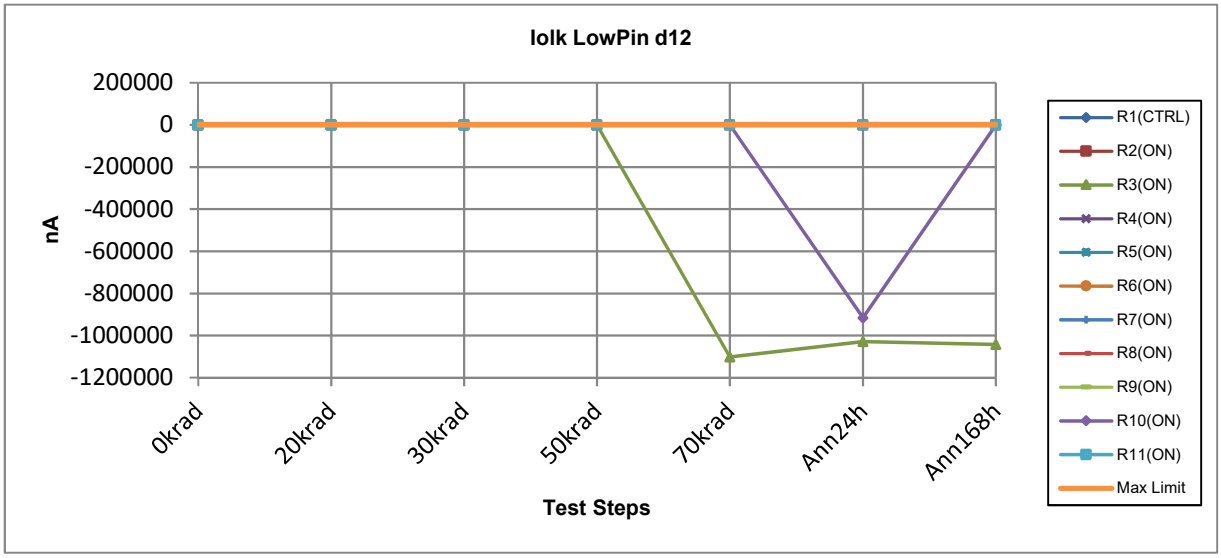
Iolk LowPin d15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.46	-0.54	-0.54	-0.54	-0.62	-0.31	-0.54
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.39	-0.62	-0.54	-0.54	-0.39	-0.62	-0.39
R3(ON BIAS HDC)	-0.16	-0.54	-0.31	-0.23	**-1070241.21**	**-990259.34**	**-999713.78**
R4(ON BIAS HDC)	-0.46	-0.16	-0.31	-0.54	-0.69	-0.85	-0.54
R5(ON BIAS HDC)	-0.54	-0.31	-0.31	-0.23	-0.31	-0.31	-0.23
R6(ON BIAS HDC)	-0.39	-0.31	-0.62	-0.46	-0.77	-0.54	-0.23
R7(ON BIAS HDC)	-0.23	-0.46	-0.46	-0.46	-0.46	-0.46	-0.54
R8(ON BIAS HDC)	-0.39	-0.54	-0.31	-0.31	-0.85	-0.54	-0.39
R9(ON BIAS HDC)	-0.23	-0.31	-0.31	-0.46	-0.31	-0.39	-0.39
R10(ON BIAS HDC)	-0.23	-0.39	-0.31	-0.39	-0.46	**-922247.94**	-0.31
R11(ON BIAS HDC)	-0.23	-0.46	-0.46	-0.39	-0.31	-0.39	-0.46
Irradiated, HDC biased parts statistics							
Min Value	-0.54	-0.62	-0.62	-0.54	-1070241.21	-990259.34	-999713.78
Max Value	-0.16	-0.16	-0.31	-0.23	-0.31	-0.31	-0.23
Average	-0.33	-0.41	-0.39	-0.40	-107024.58	-191251.14	-99971.73
Sigma	0.12	0.14	0.12	0.11	338439.83	403510.27	316137.13



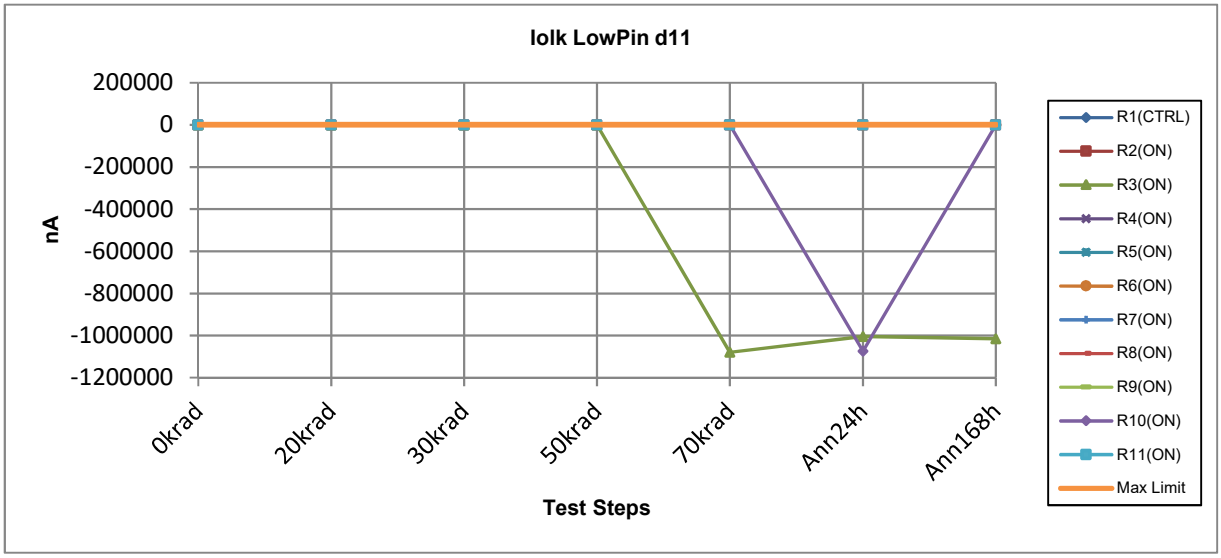
Iolk LowPin d14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.49	-0.72	-0.57	-0.88	-0.72	-0.42	-0.65
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.57	-0.42	-0.72	-0.65	-0.65	-0.65	-0.72
R3(ON BIAS HDC)	-0.65	-0.49	-0.65	-0.65	**-1073076.86**	**-994588.02**	**-1006563.54**
R4(ON BIAS HDC)	-0.49	-0.49	-0.65	-0.72	-1.80	-1.88	-0.88
R5(ON BIAS HDC)	-0.34	-0.65	-0.49	-0.65	-0.72	-0.65	-0.65
R6(ON BIAS HDC)	-0.57	-0.65	-0.49	-0.42	-1.19	-0.65	-0.72
R7(ON BIAS HDC)	-0.57	-0.65	-0.65	-0.42	-0.57	-0.65	-0.80
R8(ON BIAS HDC)	-0.42	-0.57	-0.49	-0.65	-1.19	-0.96	-0.80
R9(ON BIAS HDC)	-0.57	-0.34	-0.49	-0.65	-0.57	-0.72	-0.65
R10(ON BIAS HDC)	-0.80	-0.42	-0.57	-0.65	-0.65	**-917319.73**	-0.42
R11(ON BIAS HDC)	-0.26	-0.57	-0.72	-0.49	-0.72	-0.57	-0.65
Irradiated, HDC biased parts statistics							
Min Value	-0.80	-0.65	-0.72	-0.72	-1073076.86	-994588.02	-1006563.54
Max Value	-0.26	-0.34	-0.49	-0.42	-0.57	-0.57	-0.42
Average	-0.52	-0.53	-0.59	-0.60	-107308.49	-191191.45	-100656.98
Sigma	0.15	0.11	0.10	0.11	339336.42	403476.44	318303.12



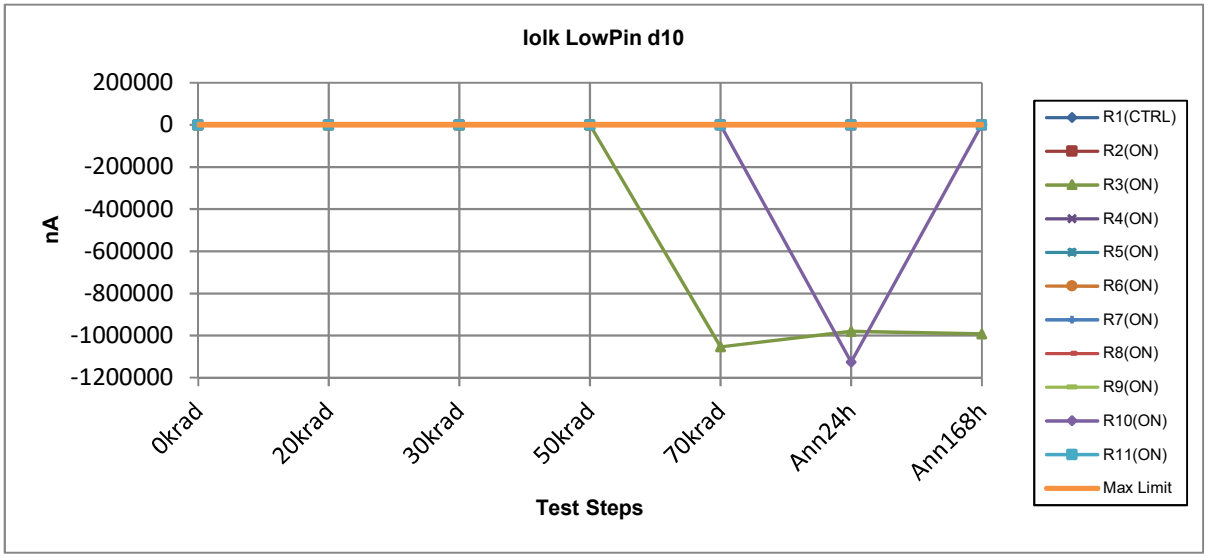
Iolk LowPin d13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.75	-0.83	-0.68	-0.83	-0.83	-0.75	-0.91
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.60	-0.75	-0.91	-0.75	-0.75	-0.68	-0.83
R3(ON BIAS HDC)	-0.68	-0.83	-0.83	-0.68	**-1072155.66**	**-997013.41**	**-1006539.56**
R4(ON BIAS HDC)	-0.29	-0.45	-0.68	-0.75	-4.12	-4.05	-0.83
R5(ON BIAS HDC)	-0.45	-0.68	-0.75	-0.68	-0.83	-0.83	-0.98
R6(ON BIAS HDC)	-0.60	-0.98	-0.91	-0.75	-2.06	-1.60	-0.68
R7(ON BIAS HDC)	-0.68	-0.60	-0.68	-0.83	-0.75	-0.68	-0.91
R8(ON BIAS HDC)	-0.60	-0.60	-0.68	-0.68	-2.98	-2.90	-0.91
R9(ON BIAS HDC)	-0.75	-0.83	-0.91	-0.75	-0.91	-0.91	-0.91
R10(ON BIAS HDC)	-0.75	-0.91	-0.75	-0.52	-0.60	**-912954.80**	-0.75
R11(ON BIAS HDC)	-0.60	-0.91	-0.75	-0.68	-0.83	-0.98	-0.83
Irradiated, HDC biased parts statistics							
Min Value	-0.75	-0.98	-0.91	-0.83	-1072155.66	-997013.41	-1006539.56
Max Value	-0.29	-0.45	-0.68	-0.52	-0.60	-0.68	-0.68
Average	-0.60	-0.75	-0.79	-0.71	-107216.95	-190998.08	-100654.72
Sigma	0.14	0.17	0.10	0.08	339044.90	403143.14	318295.49



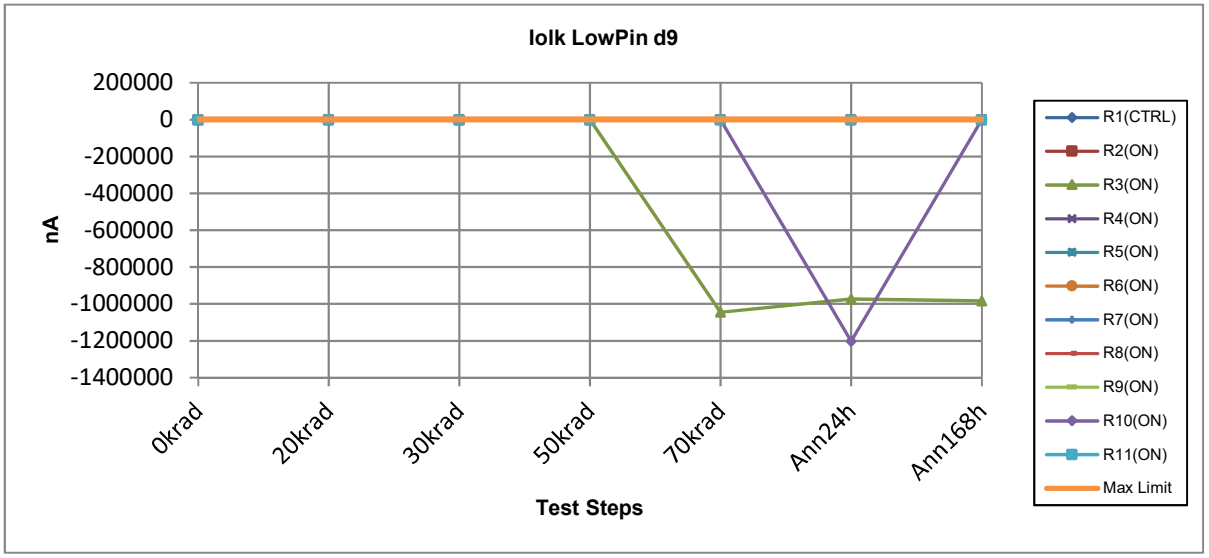
Iolk LowPin d12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.44	-0.67	-0.52	-0.37	-0.67	-0.52	-0.67
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.44	-0.37	-0.44	-0.52	-0.44	-0.37	-0.67
R3(ON BIAS HDC)	-0.67	-0.37	-0.60	-0.60	**-1101785.57**	**-1029122.16**	**-1041855.43**
R4(ON BIAS HDC)	-0.44	-0.37	-0.67	-0.67	-0.52	-0.75	-0.60
R5(ON BIAS HDC)	-0.37	-0.37	-0.37	-0.52	-0.52	-0.60	-0.52
R6(ON BIAS HDC)	-0.37	-0.52	-0.52	-0.52	-0.83	-0.44	-0.37
R7(ON BIAS HDC)	-0.60	-0.60	-0.52	-0.67	-0.52	-0.44	-0.37
R8(ON BIAS HDC)	-0.67	-0.52	-0.37	-0.60	-0.52	-0.60	-0.75
R9(ON BIAS HDC)	-0.67	-0.44	-0.37	-0.29	-0.83	-0.44	-0.60
R10(ON BIAS HDC)	-0.60	-0.52	-0.60	-0.52	-0.75	**-915971.47**	-0.21
R11(ON BIAS HDC)	-0.60	-0.44	-0.21	-0.52	-0.52	-0.52	-0.67
Irradiated, HDC biased parts statistics							
Min Value	-0.67	-0.60	-0.67	-0.67	-1101785.57	-1029122.16	-1041855.43
Max Value	-0.37	-0.37	-0.21	-0.29	-0.44	-0.37	-0.21
Average	-0.54	-0.45	-0.47	-0.54	-110179.10	-194509.78	-104186.02
Sigma	0.12	0.08	0.14	0.11	348415.00	410927.89	329463.45



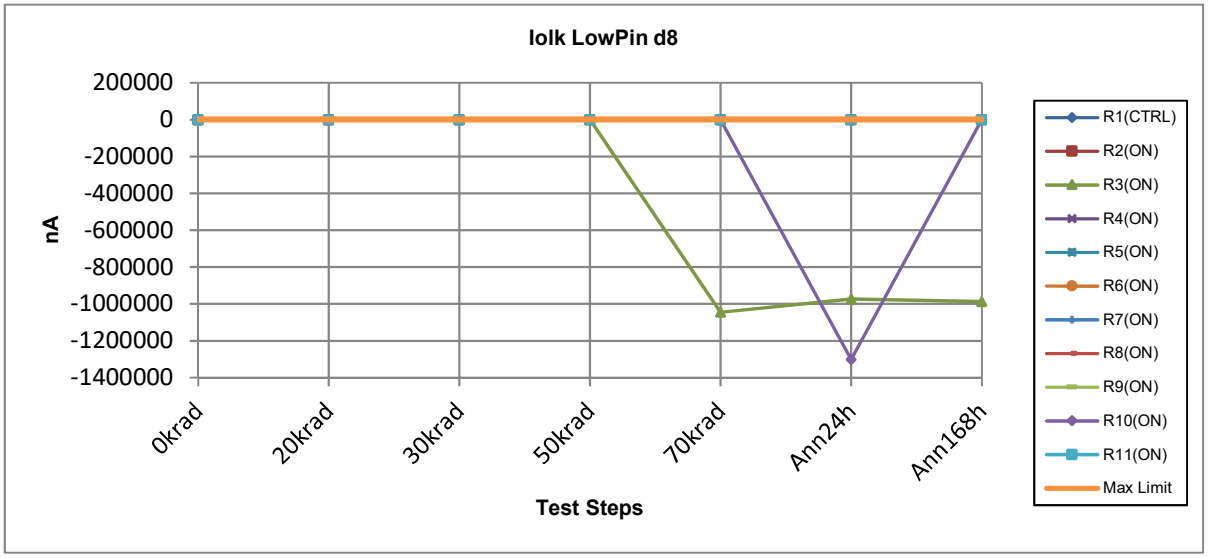
Iolk LowPin d11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.30	-0.68	-0.53	-0.60	-0.60	-0.68	-0.45
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.37	-0.68	-0.83	-0.53	-0.60	-0.45	-0.45
R3(ON BIAS HDC)	-0.68	-0.60	-0.60	-0.30	**-1079562.59**	**-1004278.54**	**-1014565.35**
R4(ON BIAS HDC)	-0.45	-0.68	-0.68	-0.68	-1.52	-1.37	-0.45
R5(ON BIAS HDC)	-0.45	-0.45	-0.45	-0.53	-0.60	-0.45	-0.60
R6(ON BIAS HDC)	-0.45	-0.45	-0.60	-0.53	-0.91	-0.91	-0.45
R7(ON BIAS HDC)	-0.53	-0.53	-0.45	-0.68	-0.60	-0.30	-0.37
R8(ON BIAS HDC)	-0.60	-0.45	-0.45	-0.68	-1.45	-1.29	-0.60
R9(ON BIAS HDC)	-0.53	-0.83	-0.68	-0.37	-0.83	-0.60	-0.37
R10(ON BIAS HDC)	-0.60	-0.53	-0.53	-0.76	-0.68	**-1074381.17**	-0.60
R11(ON BIAS HDC)	-0.76	-0.60	-0.60	-0.68	-0.53	-0.76	-0.60
Irradiated, HDC biased parts statistics							
Min Value	-0.76	-0.83	-0.83	-0.76	-1079562.59	-1074381.17	-1014565.35
Max Value	-0.37	-0.45	-0.45	-0.30	-0.53	-0.30	-0.37
Average	-0.54	-0.58	-0.59	-0.57	-107957.03	-207866.58	-101456.98
Sigma	0.12	0.12	0.12	0.15	341387.39	438531.02	320833.58



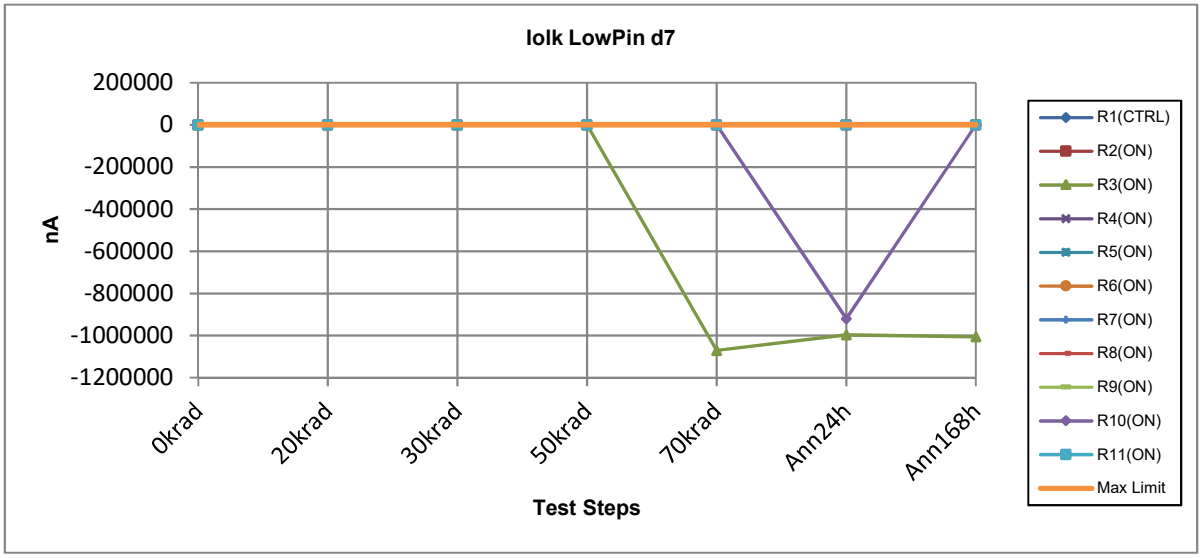
Iolk LowPin d10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.47	-0.55	-0.70	-0.62	-0.62	-0.62
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.55	-0.32	-0.55	-0.39	-0.47	-0.55	-0.55
R3(ON BIAS HDC)	-0.62	-0.39	-0.55	-0.62	**-1053696.03**	**-979949.60**	**-991922.92**
R4(ON BIAS HDC)	-0.39	-0.55	-0.32	-0.77	-0.93	-0.85	-0.70
R5(ON BIAS HDC)	-0.39	-0.39	-0.39	-0.47	-0.62	-0.32	-0.55
R6(ON BIAS HDC)	-0.39	-0.47	-0.47	-0.62	-0.70	-0.77	-0.62
R7(ON BIAS HDC)	-0.39	-0.32	-0.24	-0.39	-0.62	-0.39	-0.39
R8(ON BIAS HDC)	-0.55	-0.39	-0.55	-0.39	-0.70	-1.00	-0.70
R9(ON BIAS HDC)	-0.62	-0.39	-0.55	-0.62	-0.55	-0.55	-0.32
R10(ON BIAS HDC)	-0.32	-0.39	-0.47	-0.55	-0.62	**-1125688.32**	-0.39
R11(ON BIAS HDC)	-0.47	-0.55	-0.55	-0.55	-0.55	-0.62	-0.55
Irradiated, HDC biased parts statistics							
Min Value	-0.62	-0.55	-0.55	-0.77	-1053696.03	-1125688.32	-991922.92
Max Value	-0.32	-0.32	-0.24	-0.39	-0.47	-0.32	-0.32
Average	-0.47	-0.42	-0.46	-0.54	-105370.18	-210564.30	-99192.77
Sigma	0.11	0.08	0.11	0.13	333207.74	445234.29	313673.40



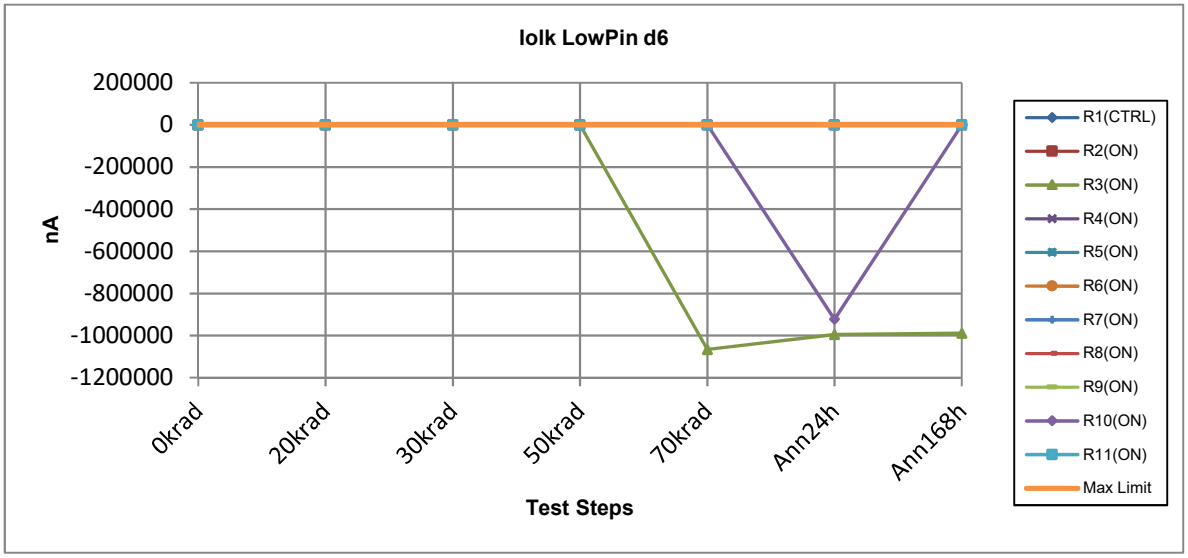
Iolk LowPin d9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.63	-0.78	-0.63	-0.55	-0.63	-0.55
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.47	-0.47	-0.70	-0.40	-0.63	-0.86	-0.55
R3(ON BIAS HDC)	-0.70	-0.47	-0.55	-0.55	**-1045023.56**	**-972502.28**	**-984093.41**
R4(ON BIAS HDC)	-0.47	-0.78	-0.78	-0.55	-1.24	-1.09	-0.70
R5(ON BIAS HDC)	-0.70	-0.63	-0.32	-0.47	-0.70	-0.70	-0.25
R6(ON BIAS HDC)	-0.40	-0.63	-0.55	-0.63	-0.86	-0.86	-0.63
R7(ON BIAS HDC)	-0.55	-0.63	-0.63	-0.70	-0.63	-0.47	-0.55
R8(ON BIAS HDC)	-0.70	-0.70	-0.55	-0.70	-1.01	-0.93	-0.47
R9(ON BIAS HDC)	-0.78	-0.55	-0.63	-0.55	-0.55	-0.40	-0.78
R10(ON BIAS HDC)	-0.47	-0.47	-0.63	-0.55	-0.55	**-1202801.24**	-0.32
R11(ON BIAS HDC)	-0.55	-0.70	-0.40	-0.63	-0.70	-0.70	-0.70
Irradiated, HDC biased parts statistics							
Min Value	-0.78	-0.78	-0.78	-0.70	-1045023.56	-1202801.24	-984093.41
Max Value	-0.40	-0.47	-0.32	-0.40	-0.55	-0.40	-0.25
Average	-0.58	-0.60	-0.57	-0.57	-104503.04	-217530.95	-98409.84
Sigma	0.13	0.11	0.14	0.10	330465.22	461795.33	311197.49



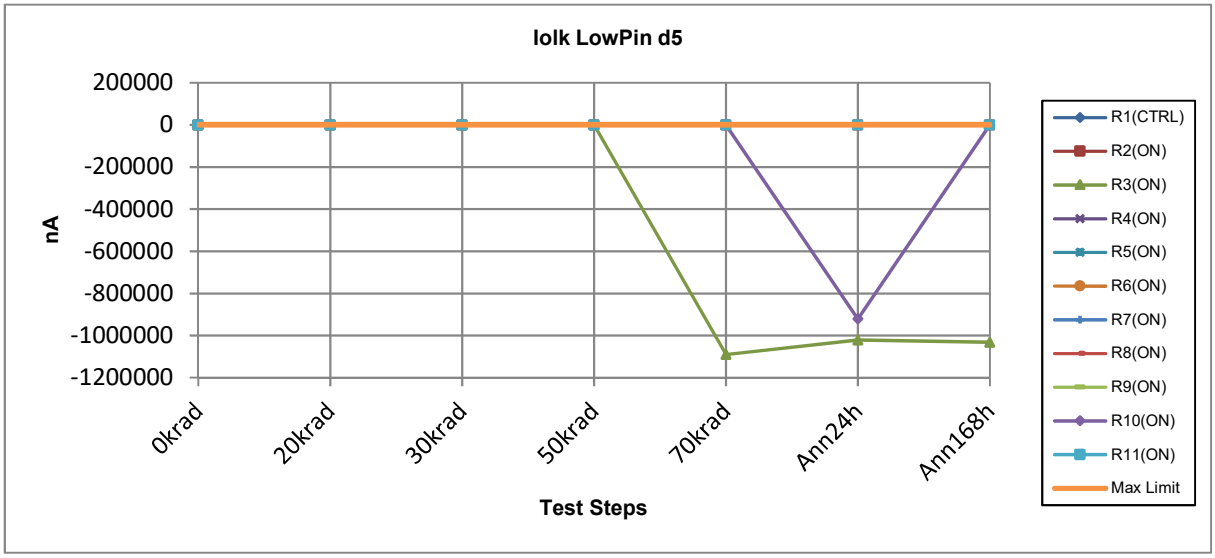
Iolk LowPin d8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.47	-0.40	-0.55	-0.32	-0.47	-0.47	-0.70
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.24	-0.32	-0.70	-0.40	-0.55	-0.55	-0.70
R3(ON BIAS HDC)	-0.40	-0.55	-0.24	-0.47	**-1045307.96**	**-972553.68**	**-986738.36**
R4(ON BIAS HDC)	-0.40	-0.47	-0.63	-0.55	-0.85	-0.47	-0.63
R5(ON BIAS HDC)	-0.55	-0.47	-0.40	-0.32	-0.40	-0.70	-0.40
R6(ON BIAS HDC)	-0.40	-0.55	-0.55	-0.55	-0.78	-0.63	-0.63
R7(ON BIAS HDC)	-0.55	-0.40	-0.40	-0.32	-0.55	-0.47	-0.40
R8(ON BIAS HDC)	-0.55	-0.40	-0.55	-0.40	-0.32	-0.47	-0.47
R9(ON BIAS HDC)	-0.47	-0.40	-0.47	-0.24	-0.40	-0.47	-0.55
R10(ON BIAS HDC)	-0.63	-0.40	-0.32	-0.17	-0.47	**-1301016.31**	-0.32
R11(ON BIAS HDC)	-0.63	-0.47	-0.55	-0.55	-0.40	-0.70	-0.47
Irradiated, HDC biased parts statistics							
Min Value	-0.63	-0.55	-0.70	-0.55	-1045307.96	-1301016.31	-986738.36
Max Value	-0.24	-0.32	-0.24	-0.17	-0.32	-0.47	-0.32
Average	-0.48	-0.44	-0.48	-0.40	-104531.27	-227357.45	-98674.29
Sigma	0.12	0.07	0.14	0.13	330555.24	485522.63	312033.91



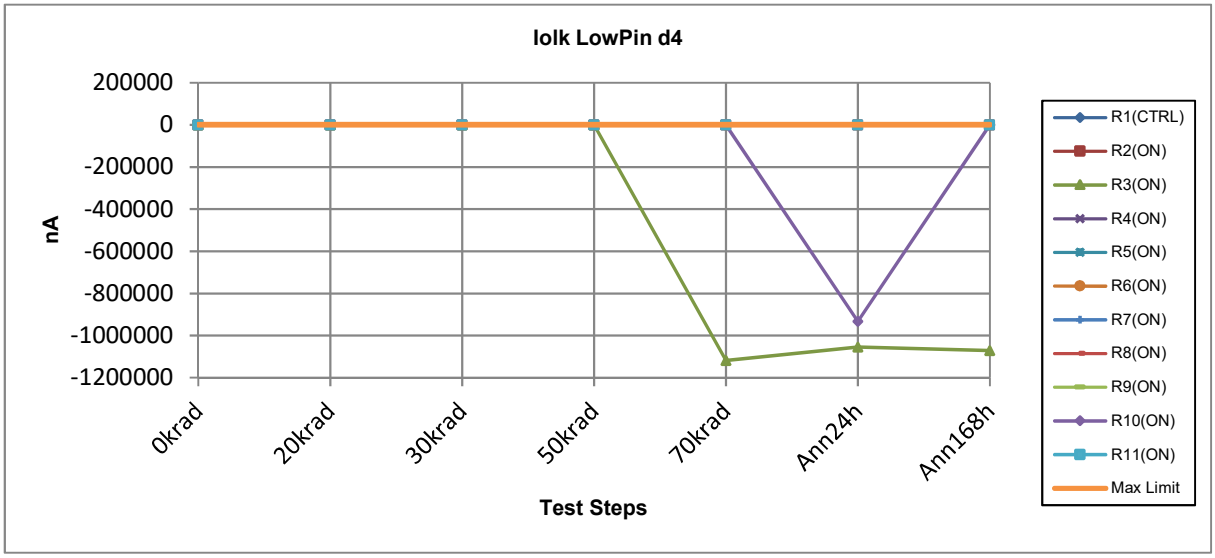
Iolk LowPin d7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.44	-0.51	-0.44	-0.59	-0.59	-0.59	-0.67
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.51	-0.36	-0.36	-0.59	-0.59	-0.67	-0.59
R3(ON BIAS HDC)	-0.51	-0.51	-0.44	-0.29	**-1070935.16**	**-997449.85**	**-1005377.62**
R4(ON BIAS HDC)	-0.44	-0.44	-0.51	-0.36	-2.20	-1.89	-0.51
R5(ON BIAS HDC)	-0.51	-0.36	-0.36	-0.44	-0.51	-0.74	-0.51
R6(ON BIAS HDC)	-0.59	-0.06	-0.36	-0.36	-1.20	-0.67	-0.44
R7(ON BIAS HDC)	-0.59	-0.51	-0.36	-0.36	-0.44	-0.44	-0.67
R8(ON BIAS HDC)	-0.67	-0.51	-0.59	-0.44	-2.58	-1.82	-0.59
R9(ON BIAS HDC)	-0.44	-0.44	-0.59	-0.36	-0.59	-0.44	-0.51
R10(ON BIAS HDC)	-0.67	-0.29	-0.36	-0.44	-0.59	**-920610.33**	-0.13
R11(ON BIAS HDC)	-0.74	-0.36	-0.29	-0.44	-0.44	-0.67	-0.59
Irradiated, HDC biased parts statistics							
Min Value	-0.74	-0.51	-0.59	-0.59	-1070935.16	-997449.85	-1005377.62
Max Value	-0.44	-0.06	-0.29	-0.29	-0.44	-0.44	-0.13
Average	-0.57	-0.38	-0.42	-0.41	-107094.43	-191806.75	-100538.22
Sigma	0.10	0.14	0.11	0.08	338659.11	404767.60	317928.16



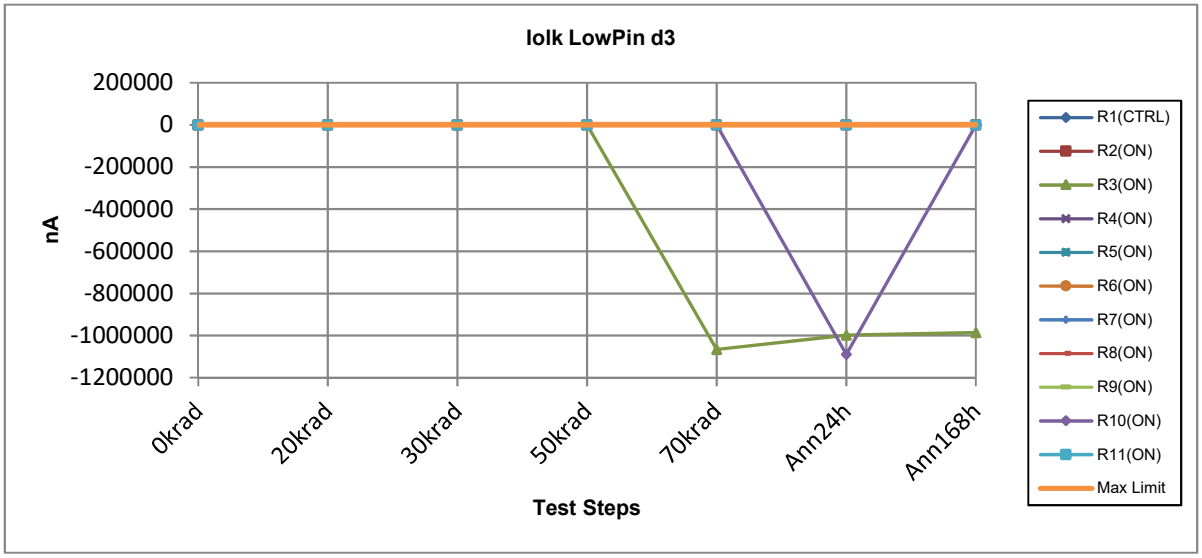
Iolk LowPin d6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.45	-0.30	-0.60	-0.22	-0.22	-0.60	-0.60
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.30	-0.37	-0.76	-0.60	-0.45	-0.37	-0.53
R3(ON BIAS HDC)	-0.45	-0.37	-0.37	-0.53	**-1066350.38**	**-995593.84**	**-989189.26**
R4(ON BIAS HDC)	-0.37	-0.45	-0.53	-0.60	-0.68	-0.60	-0.45
R5(ON BIAS HDC)	-0.53	-0.45	-0.60	-0.68	-0.37	-0.37	-0.30
R6(ON BIAS HDC)	-0.45	-0.37	-0.45	-0.53	-0.68	-0.45	-0.60
R7(ON BIAS HDC)	-0.91	-0.22	-0.45	-0.60	-0.37	-0.53	-0.14
R8(ON BIAS HDC)	-0.53	-0.37	-0.45	-0.37	-0.37	-0.30	-0.60
R9(ON BIAS HDC)	-0.60	-0.53	-0.53	-0.60	-0.68	-0.60	-0.60
R10(ON BIAS HDC)	-0.30	-0.60	-0.60	-0.76	-0.30	**-922702.43**	-0.37
R11(ON BIAS HDC)	-0.53	-0.45	-0.37	-0.45	-0.45	-0.53	-0.30
Irradiated, HDC biased parts statistics							
Min Value	-0.91	-0.60	-0.76	-0.76	-1066350.38	-995593.84	-989189.26
Max Value	-0.30	-0.22	-0.37	-0.37	-0.30	-0.30	-0.14
Average	-0.50	-0.42	-0.51	-0.57	-106635.47	-191830.00	-98919.32
Sigma	0.18	0.10	0.12	0.11	337209.45	404776.94	312808.97



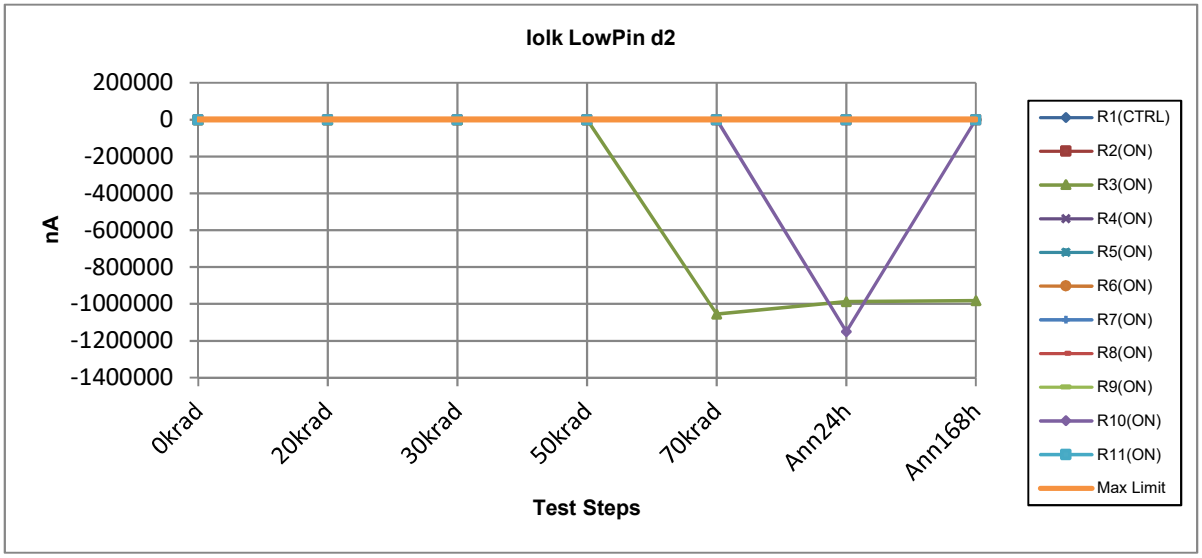
Iolk LowPin d5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.63	-0.47	-0.40	-0.55	-0.47	-0.70	-0.47
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.47	-0.32	-0.63	-0.55	-0.55	-0.47	-0.40
R3(ON BIAS HDC)	-0.40	-0.55	-0.55	-0.47	**-1090041.94**	**-1021047.12**	**-1031415.42**
R4(ON BIAS HDC)	-0.63	-0.63	-0.32	-0.32	-0.47	-1.08	-0.63
R5(ON BIAS HDC)	-0.47	-0.55	-0.63	-0.40	-0.32	-0.55	-0.55
R6(ON BIAS HDC)	-0.47	-0.32	-0.47	-0.63	-0.70	-0.47	-0.55
R7(ON BIAS HDC)	-0.47	-0.32	-0.63	-0.63	-0.70	-0.47	-0.47
R8(ON BIAS HDC)	-0.55	-0.47	-0.24	-0.55	-0.55	-0.55	-0.70
R9(ON BIAS HDC)	-0.85	-0.63	-0.47	-0.55	-0.55	-0.63	-0.17
R10(ON BIAS HDC)	-0.55	-0.70	-0.40	-0.40	-0.40	**-921176.22**	-0.47
R11(ON BIAS HDC)	-0.40	-0.40	-0.55	-0.47	-0.47	-0.40	-0.63
Irradiated, HDC biased parts statistics							
Min Value	-0.85	-0.70	-0.63	-0.63	-1090041.94	-1021047.12	-1031415.42
Max Value	-0.40	-0.32	-0.24	-0.32	-0.32	-0.40	-0.17
Average	-0.53	-0.49	-0.49	-0.50	-109004.67	-194222.80	-103142.00
Sigma	0.13	0.14	0.14	0.10	344701.36	410132.49	326162.03



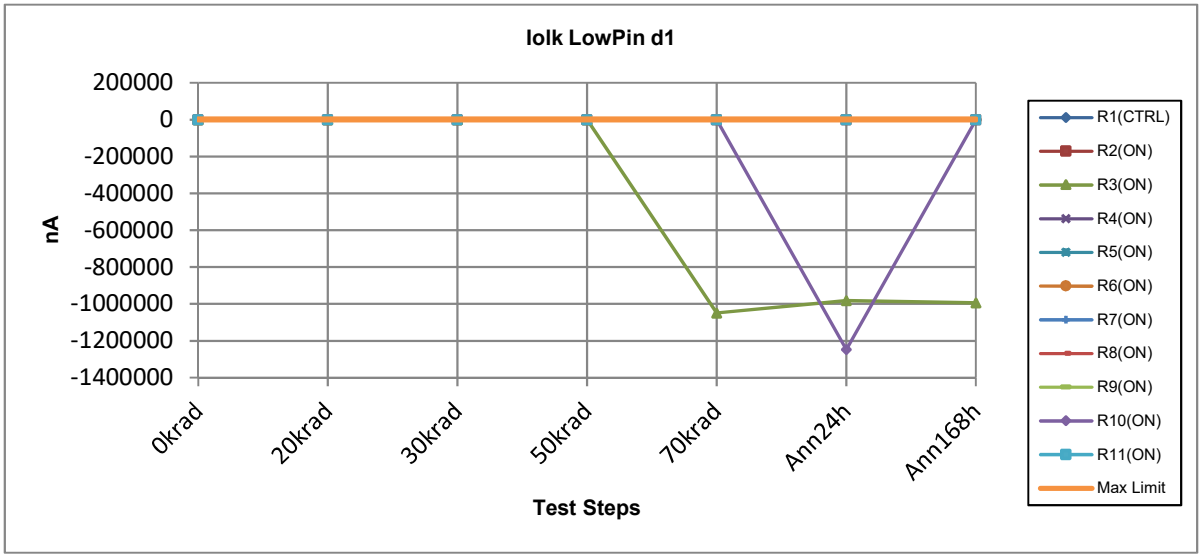
Iolk LowPin d4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.63	-0.63	-0.71	-0.63	-0.56	-0.63	-0.63
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.71	-0.56	-0.79	-0.71	-0.71	-0.71	-0.48
R3(ON BIAS HDC)	-0.56	-0.41	-0.56	-0.56	**-1118622.02**	**-1053996.62**	**-1070534.00**
R4(ON BIAS HDC)	-0.63	-0.63	-0.56	-0.71	-2.24	-2.70	-0.71
R5(ON BIAS HDC)	-0.56	-0.56	-0.71	-0.71	-0.41	-0.56	-0.48
R6(ON BIAS HDC)	-0.56	-0.71	-0.56	-0.94	-1.09	-1.02	-0.63
R7(ON BIAS HDC)	-0.48	-0.79	-0.79	-0.56	-0.56	-0.56	-0.63
R8(ON BIAS HDC)	-0.71	-0.79	-0.71	-0.63	-1.32	-1.40	-0.56
R9(ON BIAS HDC)	-0.33	-0.71	-0.63	-0.48	-0.56	-0.56	-0.71
R10(ON BIAS HDC)	-0.71	-0.63	-0.86	-0.79	-0.48	**-933052.51**	-0.25
R11(ON BIAS HDC)	-0.63	-0.63	-0.48	-0.48	-0.56	-0.79	-0.56
Irradiated, HDC biased parts statistics							
Min Value	-0.71	-0.79	-0.86	-0.94	-1118622.02	-1053996.62	-1070534.00
Max Value	-0.33	-0.41	-0.48	-0.48	-0.41	-0.56	-0.25
Average	-0.59	-0.64	-0.67	-0.66	-111863.00	-198705.74	-107053.90
Sigma	0.12	0.12	0.13	0.14	353739.06	419875.13	338532.40



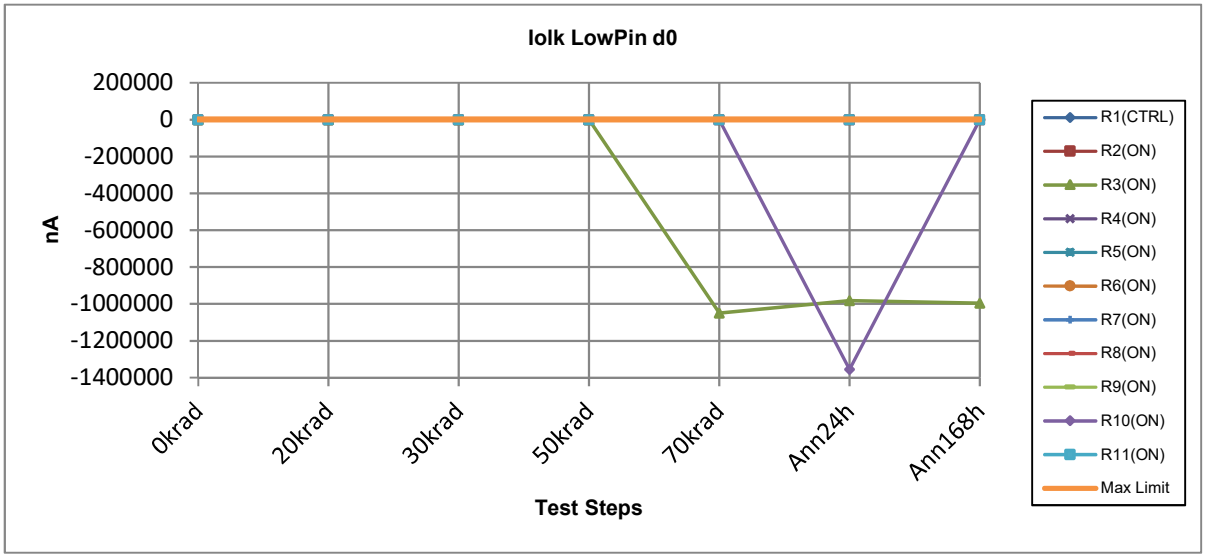
Iolk LowPin d3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.39	-0.54	-0.31	-0.31	-0.31	-0.47	-0.39
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.70	-0.39	-0.47	-0.39	-0.47	-0.47	-0.77
R3(ON BIAS HDC)	-0.39	-0.54	-0.62	-0.62	**-1066473.43**	**-998956.85**	**-986002.04**
R4(ON BIAS HDC)	-0.62	-0.54	-0.70	-0.54	-0.77	-0.85	-0.54
R5(ON BIAS HDC)	-0.77	-0.47	-0.70	-0.39	-0.62	-0.39	-0.62
R6(ON BIAS HDC)	-0.31	-0.54	-0.62	-0.47	-0.62	-0.54	-0.47
R7(ON BIAS HDC)	-0.54	-0.47	-0.85	-0.39	-0.47	-0.47	-0.47
R8(ON BIAS HDC)	-0.54	-0.47	-0.23	-0.62	-0.54	-0.54	-0.47
R9(ON BIAS HDC)	-0.70	-0.47	-0.77	-0.31	-0.62	-0.62	-0.54
R10(ON BIAS HDC)	-0.39	-0.47	-0.23	-0.47	-0.77	**-1089182.22**	-0.31
R11(ON BIAS HDC)	-0.47	-0.62	-0.39	-0.54	-0.62	-0.62	-0.39
Irradiated, HDC biased parts statistics							
Min Value	-0.77	-0.62	-0.85	-0.62	-1066473.43	-1089182.22	-986002.04
Max Value	-0.31	-0.39	-0.23	-0.31	-0.47	-0.39	-0.31
Average	-0.54	-0.50	-0.56	-0.47	-106647.89	-208814.36	-98600.66
Sigma	0.15	0.06	0.22	0.11	337248.32	440731.51	311801.06



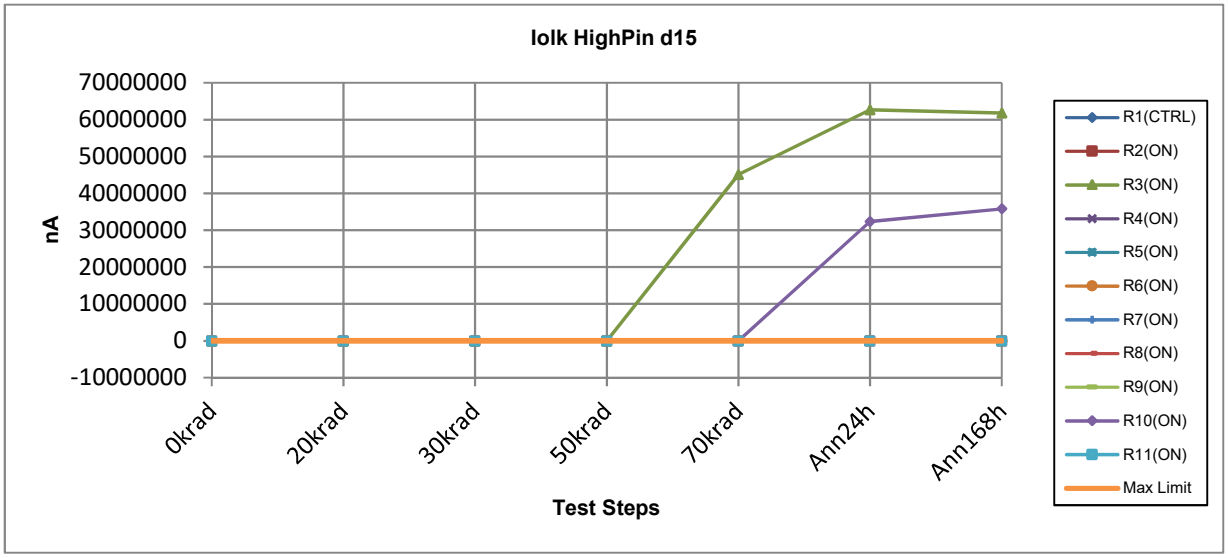
Iolk LowPin d2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.58	-0.73	-0.73	-0.50	-0.58	-0.50	-0.50
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.58	-0.65	-0.81	-0.35	-0.58	-0.58	-0.65
R3(ON BIAS HDC)	-0.58	-0.73	-0.73	-0.42	**-1054823.63**	**-986748.37**	**-982631.81**
R4(ON BIAS HDC)	-0.58	-0.65	-0.73	-0.73	-1.19	-0.88	-0.58
R5(ON BIAS HDC)	-0.42	-0.58	-0.58	-0.50	-0.58	-0.65	-0.58
R6(ON BIAS HDC)	-0.50	-0.65	-0.42	-0.50	-0.65	-0.50	-0.65
R7(ON BIAS HDC)	-0.58	-0.65	-0.58	-0.81	-0.19	-0.50	-0.58
R8(ON BIAS HDC)	-0.65	-0.88	-0.73	-0.73	-0.88	-0.65	-0.73
R9(ON BIAS HDC)	-0.73	-0.50	-0.58	-0.65	-0.42	-0.58	-0.50
R10(ON BIAS HDC)	-0.65	-0.65	-0.50	-0.73	-0.65	**-1150342.52**	-0.58
R11(ON BIAS HDC)	-0.88	-0.58	-0.65	-0.81	-0.42	-0.65	-0.65
Irradiated, HDC biased parts statistics							
Min Value	-0.88	-0.88	-0.81	-0.81	-1054823.63	-1150342.52	-982631.81
Max Value	-0.42	-0.50	-0.42	-0.35	-0.19	-0.50	-0.50
Average	-0.62	-0.65	-0.63	-0.62	-105482.92	-213709.59	-98263.73
Sigma	0.13	0.10	0.12	0.17	333564.32	452185.11	310735.27



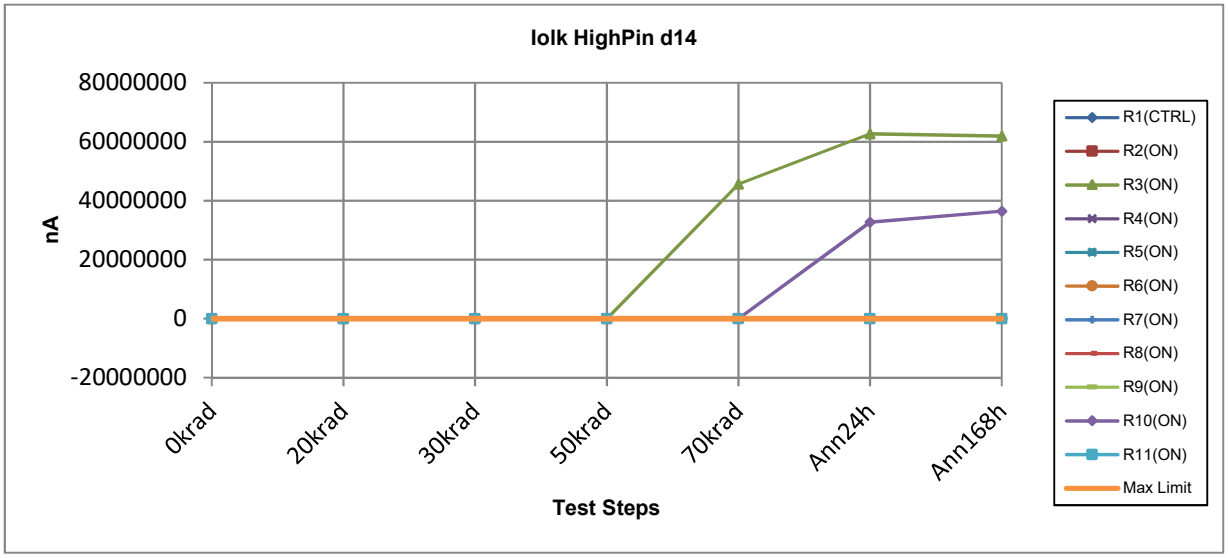
Iolk LowPin d1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.55	-0.47	-0.47	-0.47	-0.40	-0.47	-0.70
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.47	-0.47	-0.47	-0.63	-0.70	-0.63	-0.70
R3(ON BIAS HDC)	-0.40	-0.63	-0.47	-0.78	**-1049154.79**	**-981239.72**	**-993511.64**
R4(ON BIAS HDC)	-0.70	-0.63	-0.55	-0.55	-0.63	-0.86	-0.70
R5(ON BIAS HDC)	-0.70	-0.55	-0.47	-0.63	-0.55	-0.55	-0.40
R6(ON BIAS HDC)	-0.70	-0.63	-0.32	-0.55	-0.47	-0.55	-0.55
R7(ON BIAS HDC)	-0.55	-0.47	-0.47	-0.55	-0.63	-0.40	-0.40
R8(ON BIAS HDC)	-0.47	-0.55	-0.47	-0.78	-0.86	-0.93	-0.55
R9(ON BIAS HDC)	-0.63	-0.55	-0.47	-0.63	-0.55	-0.55	-0.63
R10(ON BIAS HDC)	-0.40	-0.55	-0.47	-0.55	-0.78	**-1247564.45**	-0.40
R11(ON BIAS HDC)	-0.63	-0.47	-0.63	-0.70	-0.55	-0.63	-0.55
Irradiated, HDC biased parts statistics							
Min Value	-0.70	-0.63	-0.63	-0.78	-1049154.79	-1247564.45	-993511.64
Max Value	-0.40	-0.47	-0.32	-0.55	-0.47	-0.40	-0.40
Average	-0.57	-0.55	-0.48	-0.64	-104916.05	-222880.93	-99351.65
Sigma	0.12	0.07	0.08	0.09	331771.67	474047.51	314175.79



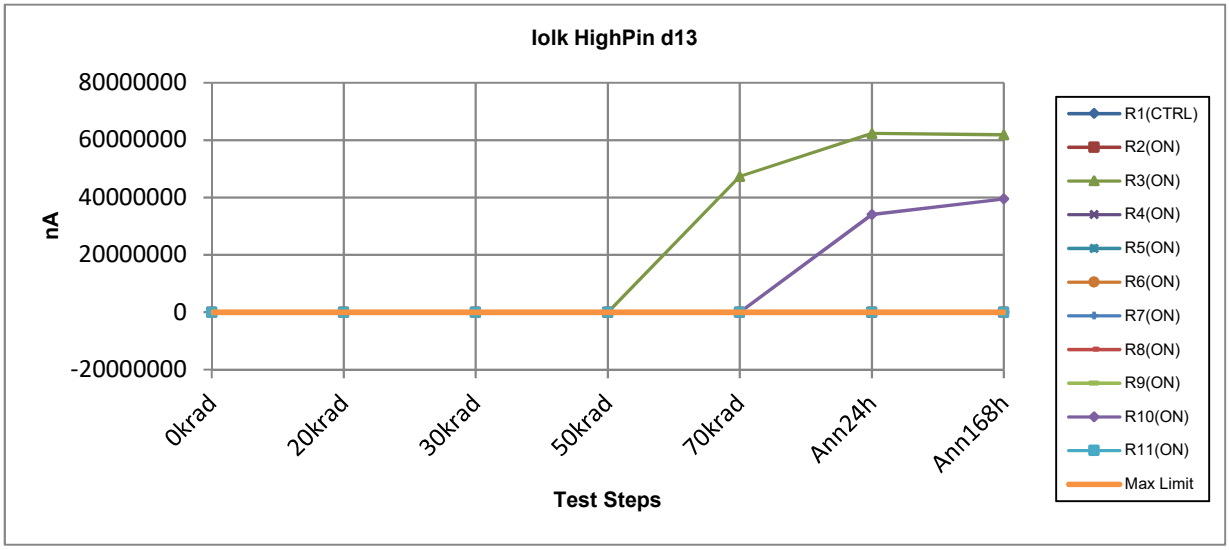
Iolk LowPin d0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.68	-0.30	-0.60	-0.68	-0.68	-0.68	-0.68
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.60	-0.45	-0.83	-0.68	-0.83	-0.76	-0.53
R3(ON BIAS HDC)	-0.45	-0.37	-0.53	-0.76	**-1049541.87**	**-981885.12**	**-995751.59**
R4(ON BIAS HDC)	-0.37	-0.60	-0.37	-0.68	-1.68	-1.22	-0.53
R5(ON BIAS HDC)	-0.53	-0.53	-0.45	-0.60	-0.60	-0.60	-0.45
R6(ON BIAS HDC)	-0.22	-0.53	-0.60	-0.60	-1.14	-0.91	-0.68
R7(ON BIAS HDC)	-0.45	-0.68	-0.53	-0.53	-0.68	-0.45	-0.53
R8(ON BIAS HDC)	-0.53	-0.53	-0.45	-0.68	-1.14	-1.06	-0.53
R9(ON BIAS HDC)	-0.53	-0.60	-0.30	-0.37	-0.60	-0.53	-0.60
R10(ON BIAS HDC)	-0.37	-0.68	-0.37	-0.60	-0.60	**-1355902.41**	-0.30
R11(ON BIAS HDC)	-0.68	-0.53	-0.53	-0.68	-0.68	-0.83	-0.60
Irradiated, HDC biased parts statistics							
Min Value	-0.68	-0.68	-0.83	-0.76	-1049541.87	-1355902.41	-995751.59
Max Value	-0.22	-0.37	-0.30	-0.37	-0.60	-0.45	-0.30
Average	-0.47	-0.55	-0.50	-0.62	-104954.98	-233779.39	-99575.63
Sigma	0.13	0.10	0.15	0.11	331894.00	500670.85	314884.13



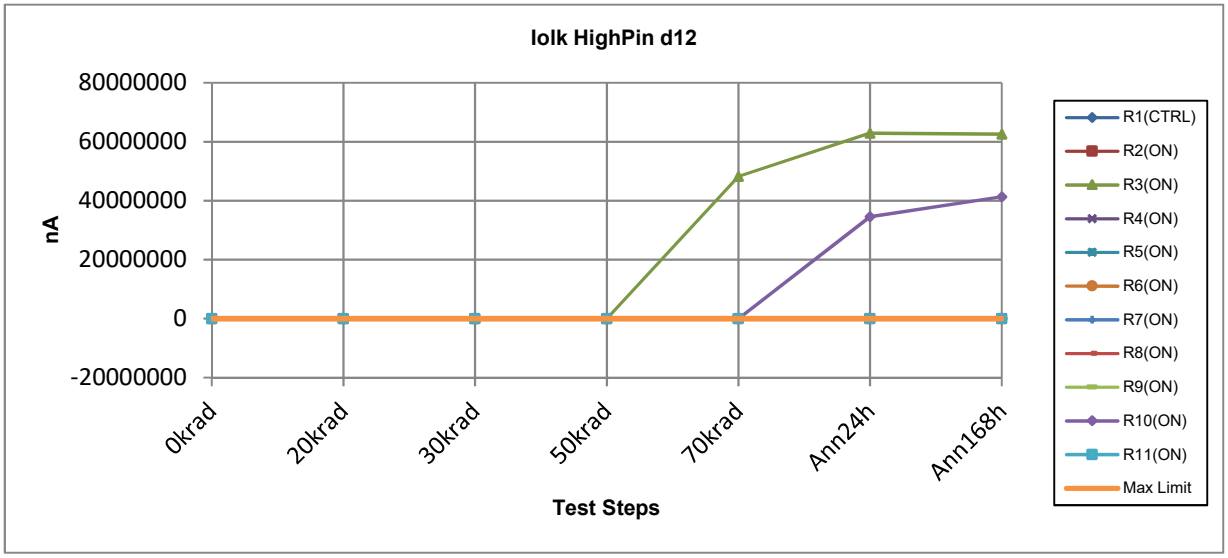
Iolk HighPin d15	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.30	0.30	0.07	0.00	-0.08	0.07	0.00
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.23	0.23	0.30	5.51	20.20	13.46	0.23
R3(ON BIAS HDC)	0.15	0.23	0.23	0.30	**45098863.54**	**62673561.28**	**61838954.69**
R4(ON BIAS HDC)	0.23	0.30	0.15	3.67	513.57	507.53	1.07
R5(ON BIAS HDC)	0.30	0.38	0.00	0.23	0.38	0.30	0.00
R6(ON BIAS HDC)	0.15	0.30	0.15	1.99	244.85	121.27	0.38
R7(ON BIAS HDC)	0.23	0.23	0.15	1.60	1.22	1.07	0.15
R8(ON BIAS HDC)	0.23	0.00	0.00	2.37	403.77	344.16	0.99
R9(ON BIAS HDC)	0.15	0.15	-0.08	0.30	0.15	0.15	0.07
R10(ON BIAS HDC)	0.00	0.07	0.30	0.68	0.38	**32328426.84**	**35795401.78**
R11(ON BIAS HDC)	0.46	0.15	0.15	2.60	0.84	1.07	0.15
Irradiated, HDC biased parts statistics							
Min Value	0.00	0.00	-0.08	0.23	0.15	0.15	0.00
Max Value	0.46	0.38	0.30	5.51	45098863.54	62673561.28	61838954.69
Average	0.21	0.20	0.14	1.93	4510004.89	9500297.71	9763435.95
Sigma	0.12	0.11	0.13	1.71	14261471.22	21266943.31	21478982.72



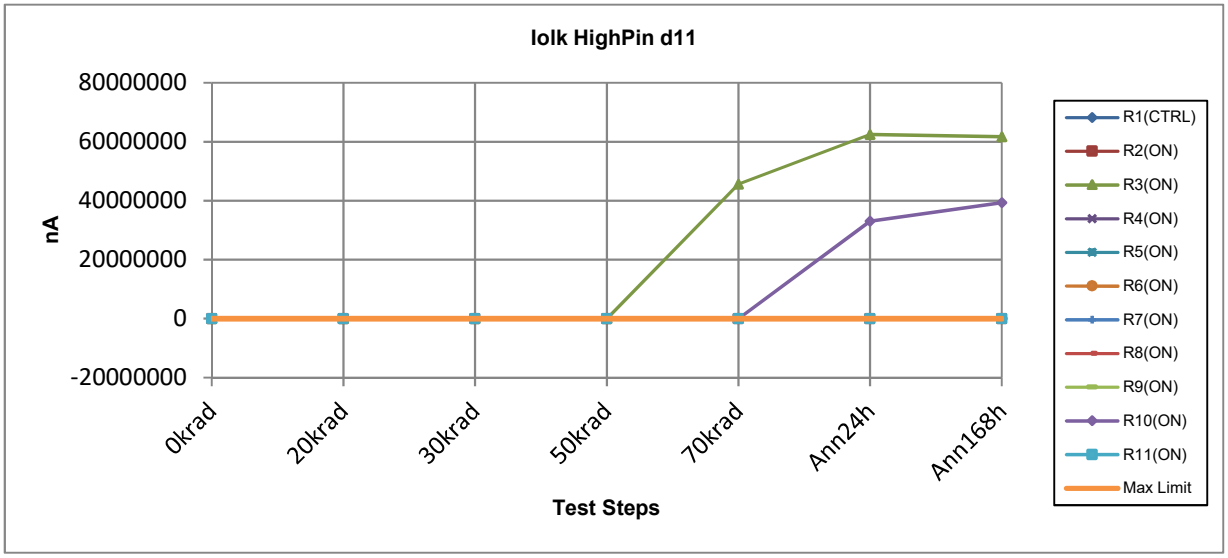
Iolk HighPin d14	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.19	-0.26	-0.03	-0.34	-0.34	-0.19	-0.34
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.20	0.04	-0.34	7.81	20.56	16.41	-0.11
R3(ON BIAS HDC)	0.12	-0.11	-0.26	-0.11	**45689471.07**	**62679328.02**	**61943717.30**
R4(ON BIAS HDC)	-0.11	-0.11	-0.19	0.97	849.46	803.42	2.96
R5(ON BIAS HDC)	0.20	-0.03	-0.03	-0.11	0.35	0.27	-0.26
R6(ON BIAS HDC)	0.04	-0.26	0.04	0.66	176.28	85.20	0.20
R7(ON BIAS HDC)	0.04	-0.11	0.12	1.89	1.27	0.89	-0.34
R8(ON BIAS HDC)	0.12	-0.03	-0.03	1.20	481.55	417.07	0.81
R9(ON BIAS HDC)	-0.11	-0.03	-0.19	-0.03	0.12	-0.11	-0.19
R10(ON BIAS HDC)	-0.11	-0.19	-0.19	1.04	-0.03	**32749291.51**	**36456063.39**
R11(ON BIAS HDC)	0.27	-0.03	0.04	0.43	0.04	0.43	-0.19
Irradiated, HDC biased parts statistics							
Min Value	-0.11	-0.26	-0.34	-0.11	-0.03	-0.11	-0.34
Max Value	0.27	0.04	0.12	7.81	45689471.07	62679328.02	61943717.30
Average	0.07	-0.09	-0.10	1.38	4569100.07	9542994.31	9839978.36
Sigma	0.14	0.09	0.15	2.35	14448225.63	21319075.58	21596854.02



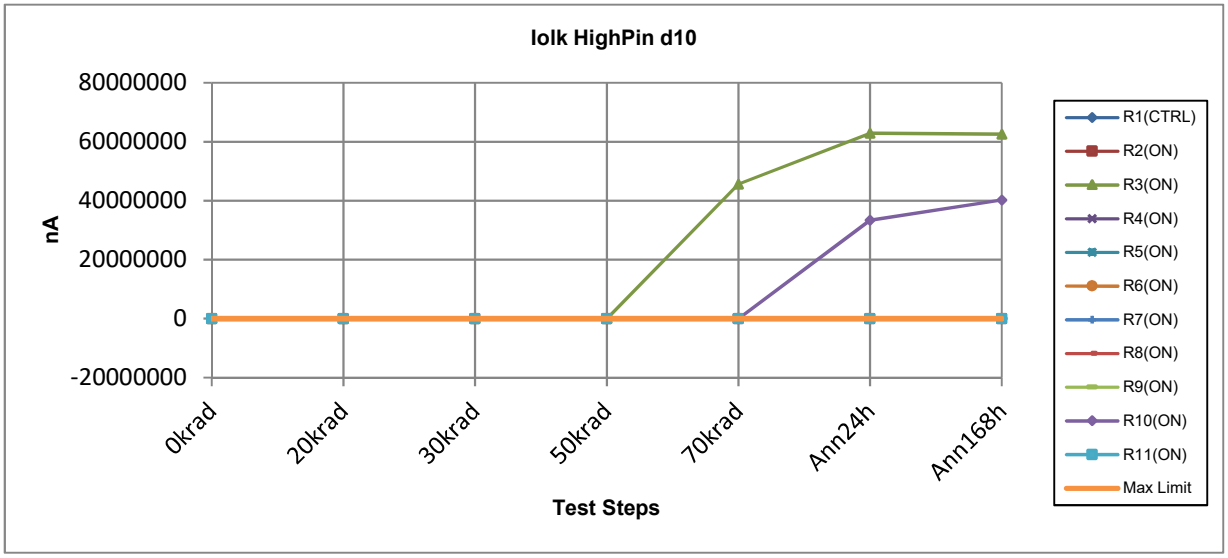
Iolk HighPin d13	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.24	-0.07	-0.07	0.09	-0.22	-0.22	-0.14
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.32	0.01	-0.22	3.76	18.24	12.04	-0.29
R3(ON BIAS HDC)	0.32	-0.07	-0.22	0.09	**47322694.21**	**62346287.07**	**61878778.04**
R4(ON BIAS HDC)	0.16	-0.22	-0.14	1.70	592.78	547.98	0.93
R5(ON BIAS HDC)	0.16	-0.22	-0.14	-0.07	0.01	0.09	-0.29
R6(ON BIAS HDC)	0.32	-0.14	-0.07	2.54	294.48	166.58	0.47
R7(ON BIAS HDC)	0.09	0.01	-0.29	4.07	1.01	0.62	-0.14
R8(ON BIAS HDC)	0.16	0.09	-0.22	2.00	503.86	432.26	0.85
R9(ON BIAS HDC)	0.09	-0.29	-0.14	0.62	-0.07	0.09	-0.14
R10(ON BIAS HDC)	0.01	-0.07	-0.37	5.37	-0.07	**34033108.50**	**39514869.45**
R11(ON BIAS HDC)	0.01	-0.14	-0.22	2.00	0.39	0.47	-0.07
Irradiated, HDC biased parts statistics							
Min Value	0.01	-0.29	-0.37	-0.07	-0.07	0.09	-0.29
Max Value	0.32	0.09	-0.07	5.37	47322694.21	62346287.07	61878778.04
Average	0.16	-0.10	-0.20	2.21	4732410.48	9638055.57	10139364.88
Sigma	0.12	0.12	0.09	1.78	14964700.31	21386368.54	22016006.49



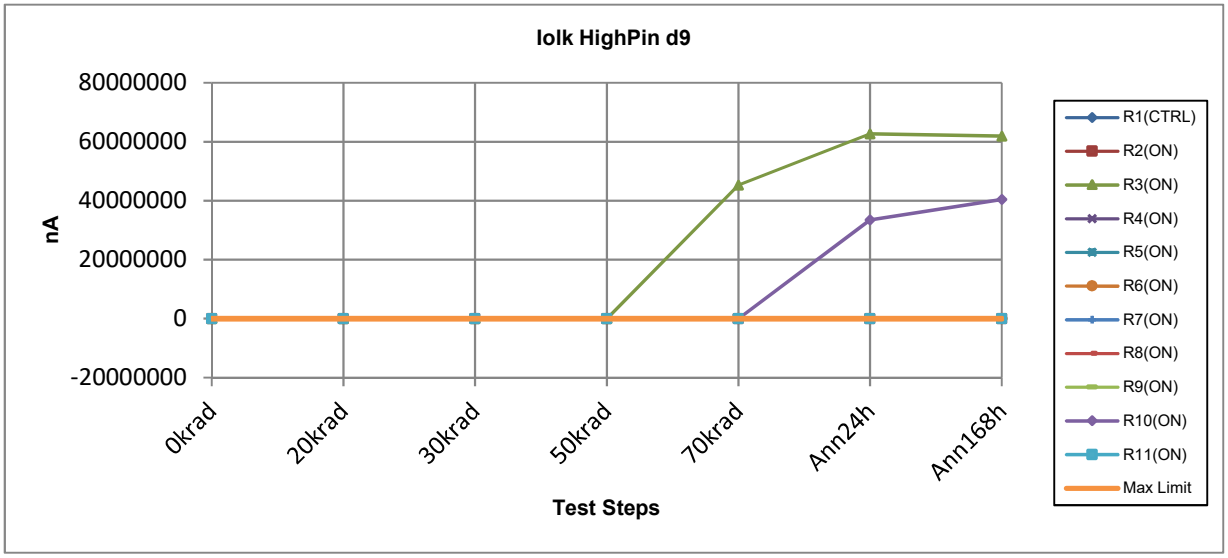
Iolk HighPin d12	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.17	0.17	0.09	-0.14	-0.14	-0.06	0.01
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.09	0.24	0.01	2.38	16.90	12.16	-0.06
R3(ON BIAS HDC)	0.24	0.17	0.09	0.09	**48298936.34**	**62923304.74**	**62595419.59**
R4(ON BIAS HDC)	0.17	0.09	-0.06	2.23	921.88	891.85	2.84
R5(ON BIAS HDC)	0.17	0.17	0.09	0.17	0.63	0.47	0.01
R6(ON BIAS HDC)	0.40	0.09	0.09	0.86	188.05	100.49	0.09
R7(ON BIAS HDC)	0.17	0.01	0.01	5.90	1.47	1.24	0.09
R8(ON BIAS HDC)	0.01	0.09	0.24	8.42	805.97	694.03	7.73
R9(ON BIAS HDC)	0.09	0.09	0.01	0.09	0.24	0.17	-0.06
R10(ON BIAS HDC)	0.24	0.17	0.01	1.31	0.01	**34585360.44**	**41319433.60**
R11(ON BIAS HDC)	0.17	0.17	0.01	0.70	0.24	0.47	-0.14
Irradiated, HDC biased parts statistics							
Min Value	0.01	0.01	-0.06	0.09	0.01	0.17	-0.14
Max Value	0.40	0.24	0.24	8.42	48298936.34	62923304.74	62595419.59
Average	0.18	0.13	0.05	2.22	4830087.17	9751036.61	10391486.37
Sigma	0.11	0.07	0.08	2.79	15273396.74	21614455.78	22473817.50



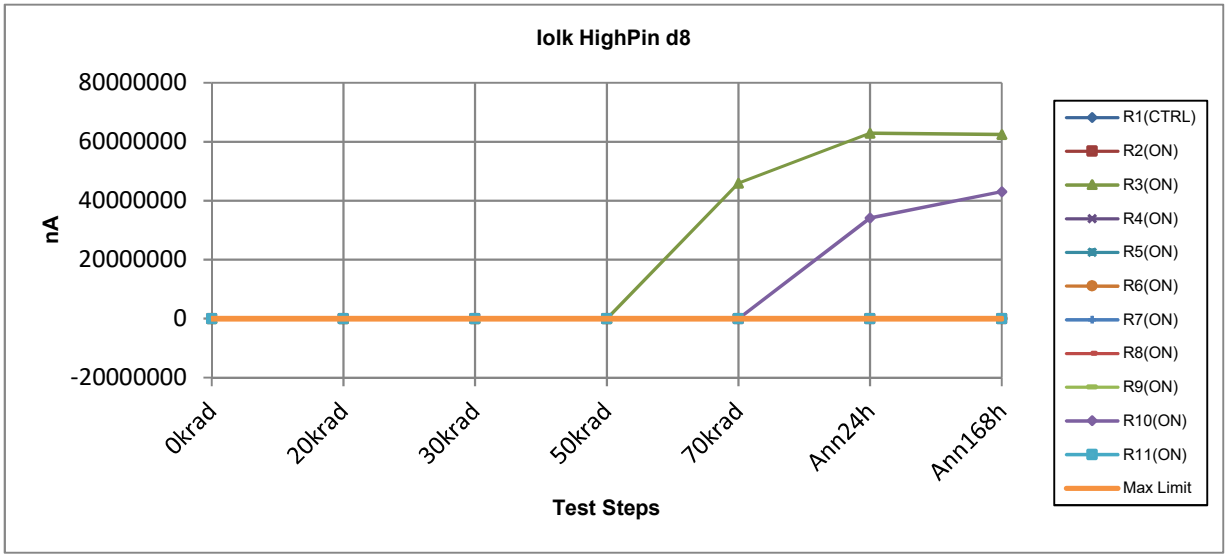
Iolk HighPin d11	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.07	0.01	0.01	0.09	-0.14	-0.07	-0.07
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.39	-0.07	-0.07	2.16	18.74	13.52	0.01
R3(ON BIAS HDC)	-0.14	0.01	-0.14	-0.14	**45599300.41**	**62461145.22**	**61701409.52**
R4(ON BIAS HDC)	-0.07	-0.07	-0.07	2.31	789.77	761.61	4.84
R5(ON BIAS HDC)	0.01	-0.07	-0.07	-0.14	0.47	0.47	-0.14
R6(ON BIAS HDC)	0.01	-0.07	-0.14	0.55	260.48	137.92	0.47
R7(ON BIAS HDC)	-0.14	-0.14	-0.07	5.92	2.08	1.39	-0.07
R8(ON BIAS HDC)	-0.14	-0.14	-0.22	1.93	562.77	464.92	1.93
R9(ON BIAS HDC)	-0.07	0.09	-0.14	0.78	0.09	-0.07	-0.07
R10(ON BIAS HDC)	-0.07	-0.22	-0.22	1.16	0.01	**33080980.18**	**39337262.51**
R11(ON BIAS HDC)	0.16	-0.07	-0.07	0.78	0.32	0.32	0.01
Irradiated, HDC biased parts statistics							
Min Value	-0.14	-0.22	-0.22	-0.14	0.01	-0.07	-0.14
Max Value	0.39	0.09	-0.07	5.92	45599300.41	62461145.22	61701409.52
Average	-0.01	-0.08	-0.12	1.53	4560093.51	9554350.55	10103867.90
Sigma	0.17	0.08	0.06	1.77	14419707.46	21299164.74	21943368.25



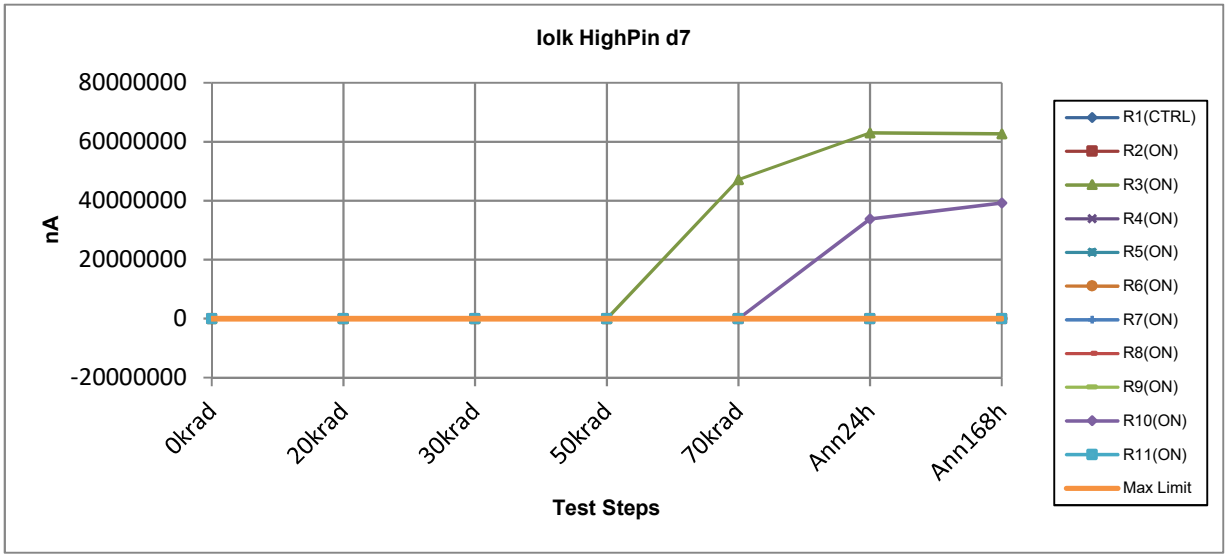
Iolk HighPin d10	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.14	0.07	0.07	-0.16	-0.01	0.07	-0.16
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.07	-0.09	0.29	2.82	12.98	9.62	-0.09
R3(ON BIAS HDC)	0.07	0.14	-0.09	-0.16	**45651692.90**	**62883630.39**	**62617227.44**
R4(ON BIAS HDC)	0.22	0.07	0.29	2.28	625.28	590.75	1.52
R5(ON BIAS HDC)	0.14	0.07	0.22	-0.01	0.29	0.14	-0.01
R6(ON BIAS HDC)	0.22	0.14	0.14	3.35	419.70	236.05	1.06
R7(ON BIAS HDC)	-0.16	-0.01	0.22	3.27	1.59	0.83	-0.16
R8(ON BIAS HDC)	-0.09	0.14	0.22	2.13	433.53	402.59	1.44
R9(ON BIAS HDC)	0.29	0.14	0.14	0.14	-0.01	-0.01	-0.16
R10(ON BIAS HDC)	-0.01	-0.09	-0.09	-0.01	-0.01	**33383689.82**	**40262281.89**
R11(ON BIAS HDC)	-0.01	0.14	-0.01	0.75	0.37	0.45	0.22
Irradiated, HDC biased parts statistics							
Min Value	-0.16	-0.09	-0.09	-0.16	-0.01	-0.01	-0.16
Max Value	0.29	0.14	0.29	3.35	45651692.90	62883630.39	62617227.44
Average	0.07	0.07	0.13	1.46	4565318.66	9626856.06	10287951.32
Sigma	0.15	0.10	0.15	1.45	14436280.38	21452941.11	22319769.74



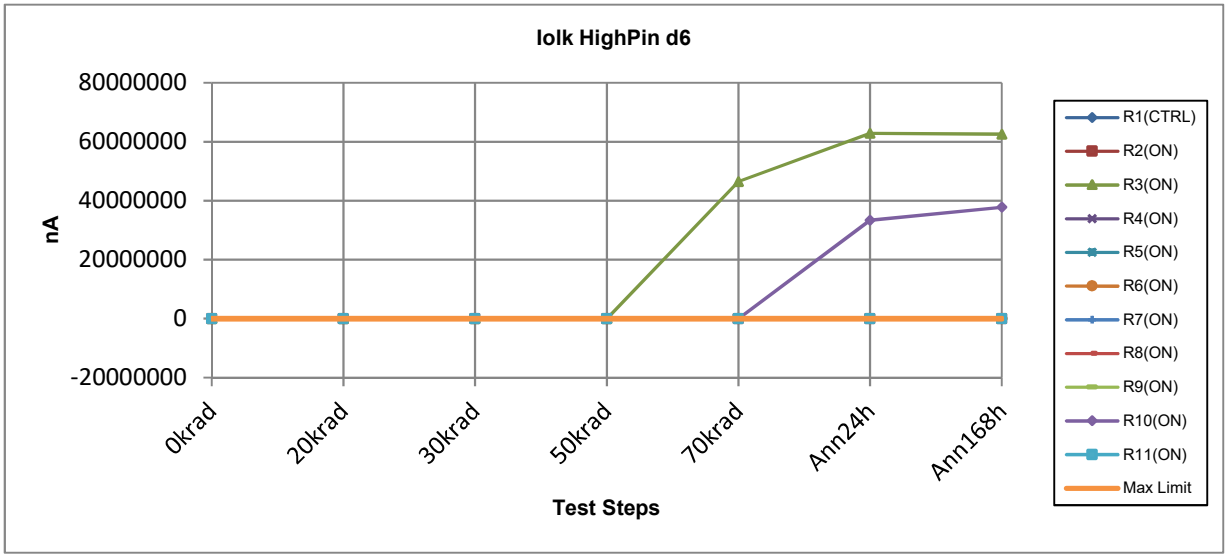
Iolk HighPin d9	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.09	-0.02	-0.09	-0.09	0.06	-0.09	-0.25
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.32	-0.32	-0.02	6.63	21.46	14.20	-0.02
R3(ON BIAS HDC)	0.06	-0.02	-0.09	-0.17	**45282527.80**	**62679253.52**	**61884827.91**
R4(ON BIAS HDC)	-0.02	0.06	-0.09	1.51	623.12	606.15	1.05
R5(ON BIAS HDC)	-0.09	-0.02	-0.09	-0.02	0.29	0.29	-0.02
R6(ON BIAS HDC)	-0.17	0.06	0.06	1.89	244.06	124.89	0.06
R7(ON BIAS HDC)	0.06	-0.17	-0.17	4.11	2.05	1.36	-0.02
R8(ON BIAS HDC)	-0.02	-0.02	-0.25	6.02	526.58	464.36	1.74
R9(ON BIAS HDC)	-0.02	0.06	0.06	-0.02	-0.02	0.14	-0.09
R10(ON BIAS HDC)	0.06	0.06	-0.17	1.36	-0.17	**33488981.43**	**40439229.46**
R11(ON BIAS HDC)	-0.09	-0.25	0.06	1.13	0.44	0.75	0.06
Irradiated, HDC biased parts statistics							
Min Value	-0.32	-0.32	-0.25	-0.17	-0.17	0.14	-0.09
Max Value	0.06	0.06	0.06	6.63	45282527.80	62679253.52	61884827.91
Average	-0.06	-0.06	-0.07	2.24	4528394.56	9616944.71	10232406.01
Sigma	0.12	0.14	0.11	2.49	14319542.79	21409614.78	22156117.48



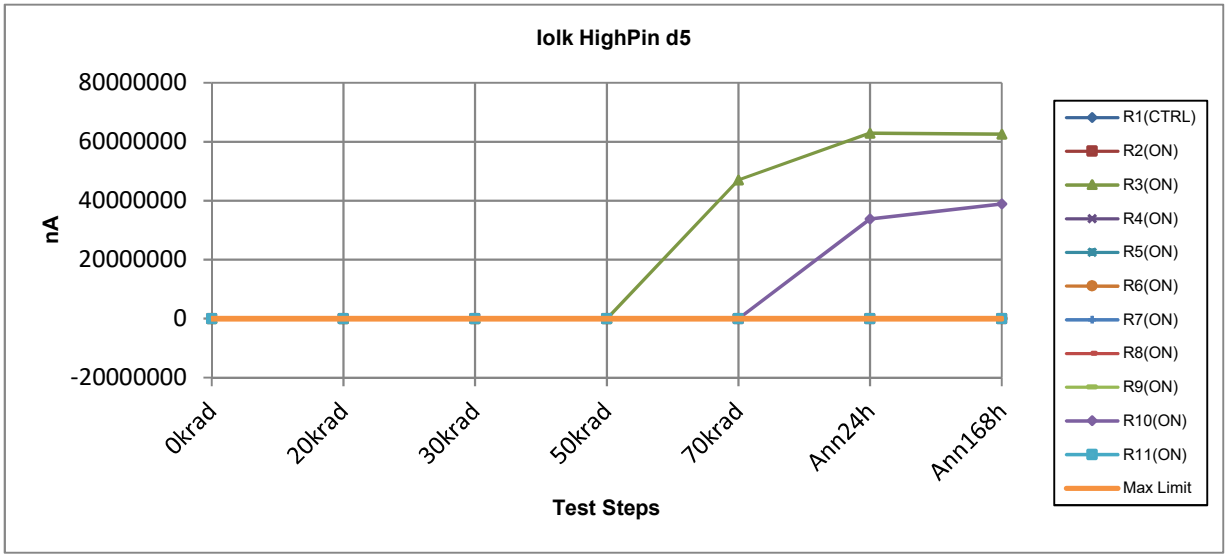
Iolk HighPin d8	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.17	0.06	0.06	-0.17	-0.24	0.14	-0.17
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.14	0.14	-0.17	8.09	30.26	23.23	-0.17
R3(ON BIAS HDC)	0.14	0.14	0.22	0.06	**45953169.47**	**62915861.61**	**62419436.87**
R4(ON BIAS HDC)	0.06	0.06	-0.09	5.19	705.32	678.71	1.29
R5(ON BIAS HDC)	-0.01	0.22	-0.09	0.14	0.44	0.22	0.14
R6(ON BIAS HDC)	-0.01	0.14	0.22	2.89	320.43	190.14	0.83
R7(ON BIAS HDC)	0.14	0.06	-0.01	2.74	1.29	0.98	0.06
R8(ON BIAS HDC)	0.06	-0.01	-0.09	10.54	583.68	529.08	2.89
R9(ON BIAS HDC)	-0.09	0.06	-0.24	0.37	0.22	0.14	-0.17
R10(ON BIAS HDC)	-0.01	-0.09	0.22	1.29	0.22	**34175120.29**	**43081969.02**
R11(ON BIAS HDC)	-0.09	-0.24	0.14	5.03	0.60	0.83	-0.01
Irradiated, HDC biased parts statistics							
Min Value	-0.09	-0.24	-0.24	0.06	0.22	0.14	-0.17
Max Value	0.14	0.22	0.22	10.54	45953169.47	62915861.61	62419436.87
Average	0.03	0.05	0.01	3.63	4595481.19	9709240.52	10550141.08
Sigma	0.09	0.13	0.17	3.57	14531610.42	21560382.84	22703860.14



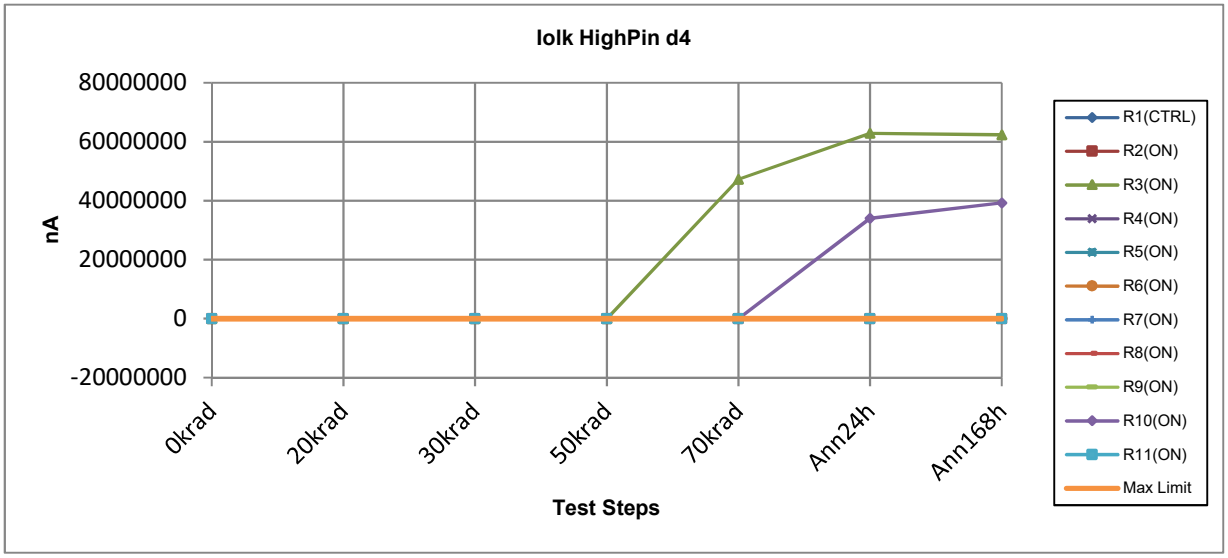
Iolk HighPin d7	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.02	0.25	0.10	0.02	-0.13	0.02	-0.13
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.48	0.17	0.02	2.24	16.34	10.14	0.10
R3(ON BIAS HDC)	0.25	0.48	0.10	0.02	**47195956.11**	**63002608.72**	**62728360.30**
R4(ON BIAS HDC)	0.25	0.17	0.10	1.17	339.27	323.33	0.63
R5(ON BIAS HDC)	0.33	0.17	0.17	0.25	0.40	0.25	-0.06
R6(ON BIAS HDC)	0.25	0.25	0.17	0.25	112.82	48.15	0.10
R7(ON BIAS HDC)	0.40	0.25	0.10	0.79	0.56	0.25	-0.06
R8(ON BIAS HDC)	0.10	0.33	0.10	1.25	418.97	344.48	1.17
R9(ON BIAS HDC)	0.17	0.33	0.10	0.17	0.40	0.10	-0.06
R10(ON BIAS HDC)	0.02	0.17	0.17	0.25	0.10	**33773150.30**	**39246603.85**
R11(ON BIAS HDC)	-0.06	0.33	0.33	0.56	0.40	0.25	-0.06
Irradiated, HDC biased parts statistics							
Min Value	-0.06	0.17	0.02	0.02	0.10	0.10	-0.06
Max Value	0.48	0.48	0.33	2.24	47195956.11	63002608.72	62728360.30
Average	0.22	0.27	0.14	0.70	4719684.54	9677648.60	10197496.59
Sigma	0.17	0.10	0.08	0.69	14924640.52	21533915.27	22199233.55



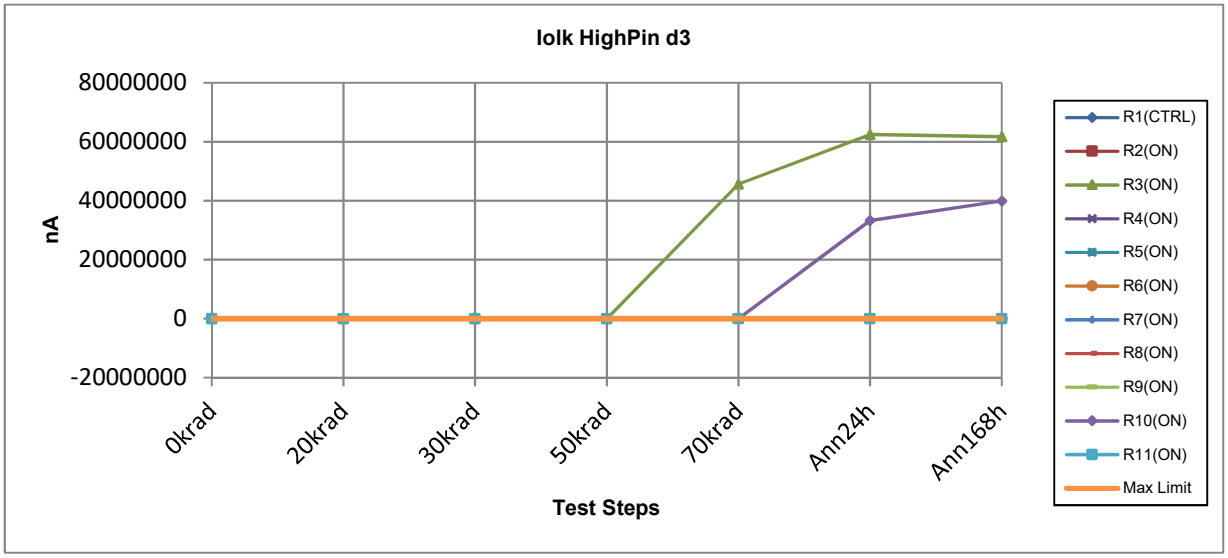
Iolk HighPin d6	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.09	0.39	0.09	0.16	0.09	0.01	0.24
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.47	0.24	-0.14	0.16	0.39	0.16	0.01
R3(ON BIAS HDC)	0.32	0.24	0.32	-0.14	**46461809.43**	**62862463.30**	**62555871.90**
R4(ON BIAS HDC)	0.16	0.47	-0.07	0.01	0.39	0.85	0.39
R5(ON BIAS HDC)	0.24	0.24	0.16	-0.14	0.09	0.09	0.16
R6(ON BIAS HDC)	0.24	0.16	0.09	0.09	0.39	0.32	0.24
R7(ON BIAS HDC)	0.24	0.24	-0.07	0.09	0.24	0.01	0.09
R8(ON BIAS HDC)	0.39	0.09	0.09	-0.07	0.47	0.78	0.09
R9(ON BIAS HDC)	0.24	0.16	0.32	0.09	-0.07	0.39	0.16
R10(ON BIAS HDC)	0.39	0.39	0.01	0.01	0.09	**33358916.64**	**37798725.07**
R11(ON BIAS HDC)	-0.07	0.16	0.09	-0.07	-0.30	0.01	-0.07
Irradiated, HDC biased parts statistics							
Min Value	-0.07	0.09	-0.14	-0.14	-0.30	0.01	-0.07
Max Value	0.47	0.47	0.32	0.16	46461809.43	62862463.30	62555871.90
Average	0.26	0.24	0.08	0.00	4646181.11	9622138.26	10035459.80
Sigma	0.15	0.11	0.16	0.10	14692514.14	21444116.43	21946592.22



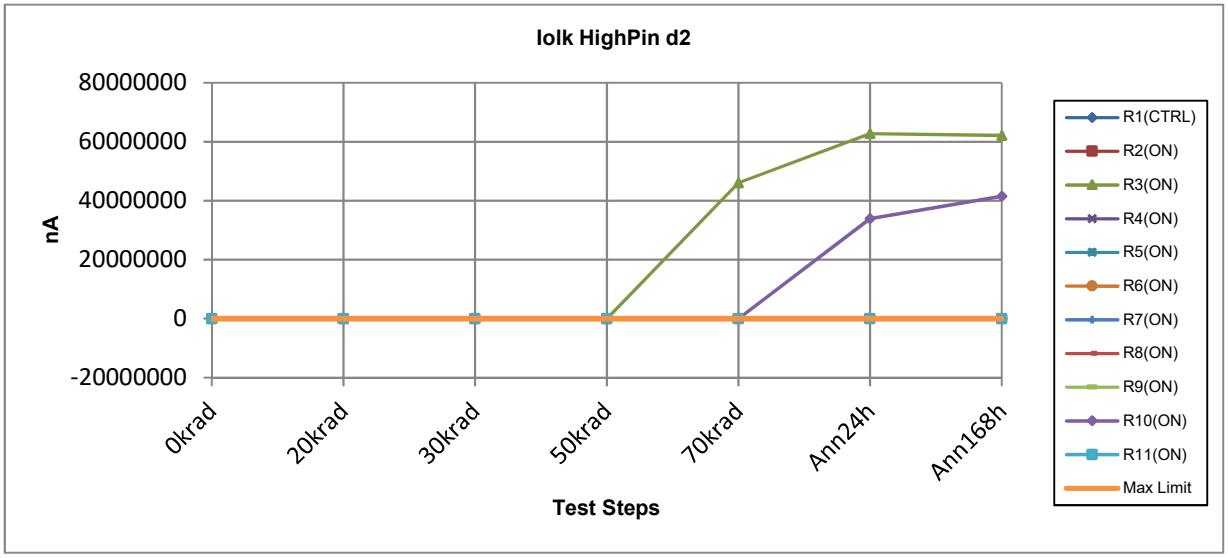
Iolk HighPin d5	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.09	0.14	0.06	-0.01	-0.17	0.14	-0.09
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.14	-0.01	0.29	3.81	22.30	17.48	-0.17
R3(ON BIAS HDC)	0.14	-0.09	0.06	0.21	**47032807.02**	**62921635.81**	**62534339.73**
R4(ON BIAS HDC)	0.14	0.14	0.06	7.63	825.16	817.52	3.58
R5(ON BIAS HDC)	0.14	-0.09	0.06	-0.01	0.52	0.44	0.06
R6(ON BIAS HDC)	-0.09	-0.09	-0.01	2.89	333.80	171.13	0.52
R7(ON BIAS HDC)	-0.01	0.21	-0.09	2.74	1.82	1.36	-0.01
R8(ON BIAS HDC)	0.29	0.06	0.06	3.42	599.08	531.08	3.65
R9(ON BIAS HDC)	0.06	0.14	0.06	0.14	0.14	0.21	-0.09
R10(ON BIAS HDC)	-0.24	0.37	0.14	0.37	0.21	**33768791.71**	**38895703.85**
R11(ON BIAS HDC)	0.06	0.37	-0.01	6.33	0.75	1.44	0.06
Irradiated, HDC biased parts statistics							
Min Value	-0.24	-0.09	-0.09	-0.01	0.14	0.21	-0.17
Max Value	0.29	0.37	0.29	7.63	47032807.02	62921635.81	62534339.73
Average	0.06	0.10	0.06	2.75	4703459.08	9669196.82	10143005.12
Sigma	0.15	0.18	0.10	2.68	14873016.82	21511056.27	22097294.69



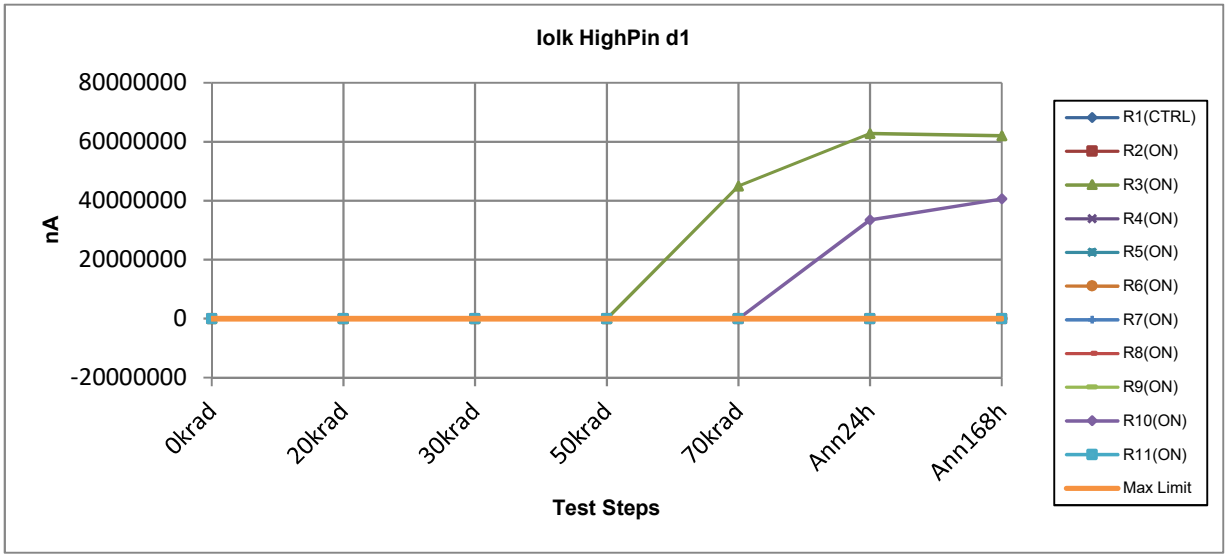
Iolk HighPin d4	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.13	0.28	-0.02	-0.02	0.13	-0.02	-0.02
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.28	0.05	-0.18	2.89	14.52	12.46	0.05
R3(ON BIAS HDC)	0.13	0.21	0.05	-0.10	**47301679.85**	**62874145.81**	**62316685.91**
R4(ON BIAS HDC)	0.21	0.13	0.05	3.88	661.01	635.52	1.51
R5(ON BIAS HDC)	-0.02	0.21	-0.02	0.13	0.36	0.36	-0.25
R6(ON BIAS HDC)	0.21	0.28	-0.02	1.51	262.97	124.01	0.28
R7(ON BIAS HDC)	0.05	0.28	-0.02	2.89	2.58	1.66	0.05
R8(ON BIAS HDC)	-0.10	0.05	-0.10	6.72	516.39	464.33	3.12
R9(ON BIAS HDC)	0.13	0.21	-0.10	0.13	0.36	0.13	-0.18
R10(ON BIAS HDC)	-0.10	0.36	-0.18	0.74	0.13	**34006942.06**	**39275027.81**
R11(ON BIAS HDC)	0.13	-0.10	-0.18	3.65	0.82	0.90	-0.10
Irradiated, HDC biased parts statistics							
Min Value	-0.10	-0.10	-0.18	-0.10	0.13	0.13	-0.25
Max Value	0.28	0.36	0.05	6.72	47301679.85	62874145.81	62316685.91
Average	0.09	0.17	-0.07	2.24	4730313.90	9688232.72	10159171.82
Sigma	0.13	0.14	0.09	2.18	14958053.28	21527790.27	22095272.07



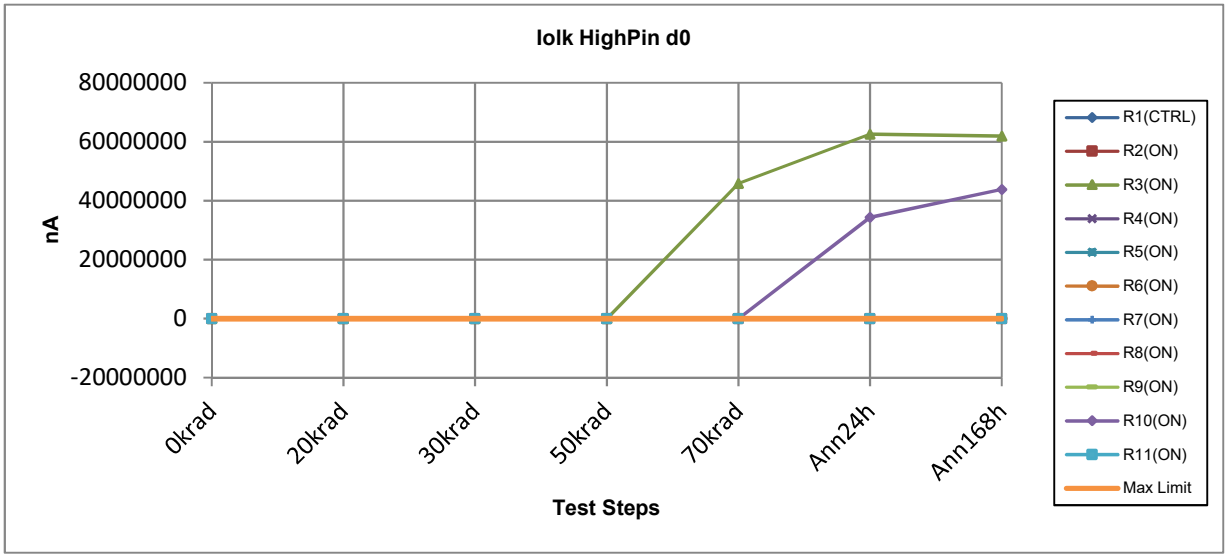
Iolk HighPin d3	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.07	0.07	0.00	0.00	0.07	0.23	0.07
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.16	-0.08	0.07	0.53	0.15	0.23	-0.16
R3(ON BIAS HDC)	0.15	0.15	0.00	-0.16	**45656234.03**	**62449950.72**	**61710543.93**
R4(ON BIAS HDC)	0.15	0.00	-0.39	0.00	0.23	0.30	0.23
R5(ON BIAS HDC)	0.07	0.00	-0.08	0.00	0.07	0.15	0.15
R6(ON BIAS HDC)	0.00	-0.31	0.07	-0.08	0.15	-0.08	-0.16
R7(ON BIAS HDC)	0.00	0.07	-0.16	0.07	0.00	0.07	0.07
R8(ON BIAS HDC)	0.00	0.07	0.23	0.15	0.15	0.23	0.07
R9(ON BIAS HDC)	0.15	-0.08	0.15	0.38	-0.16	0.23	0.07
R10(ON BIAS HDC)	0.23	0.07	0.07	0.15	0.23	**33237654.72**	**39936371.15**
R11(ON BIAS HDC)	0.00	0.00	0.15	0.07	0.00	0.46	0.23
Irradiated, HDC biased parts statistics							
Min Value	-0.16	-0.31	-0.39	-0.16	-0.16	-0.08	-0.16
Max Value	0.23	0.15	0.23	0.53	45656234.03	62449950.72	61710543.93
Average	0.06	-0.01	0.01	0.11	4565623.49	9568760.70	10164691.56
Sigma	0.11	0.13	0.18	0.21	14437768.86	21315425.35	22035061.53



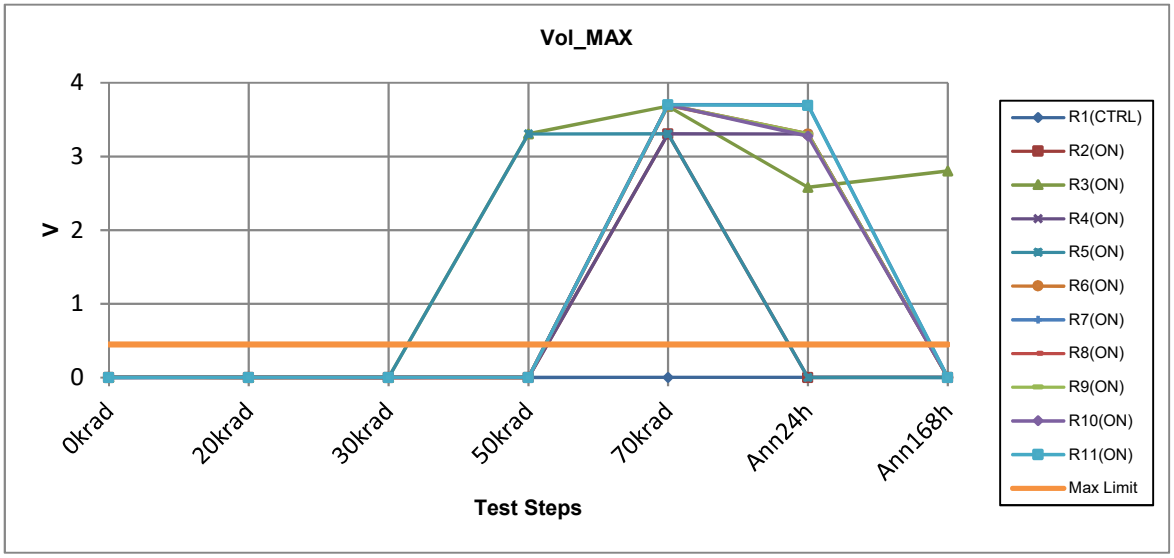
Iolk HighPin d2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.04	0.04	-0.12	-0.04	-0.04	0.11	-0.12
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.04	-0.04	-0.12	-0.27	-0.12	0.04	-0.04
R3(ON BIAS HDC)	0.04	-0.04	0.04	-0.04	**46059940.01**	**62765903.77**	**62124773.86**
R4(ON BIAS HDC)	-0.12	-0.19	-0.19	-0.04	0.65	0.88	0.04
R5(ON BIAS HDC)	-0.27	-0.12	0.04	0.04	0.04	-0.19	-0.27
R6(ON BIAS HDC)	-0.12	-0.35	0.11	-0.12	0.34	0.04	-0.12
R7(ON BIAS HDC)	0.04	-0.12	0.04	-0.04	0.42	0.11	-0.04
R8(ON BIAS HDC)	-0.04	-0.12	0.04	-0.19	0.26	0.04	-0.12
R9(ON BIAS HDC)	-0.12	0.11	0.04	-0.12	-0.04	-0.04	0.04
R10(ON BIAS HDC)	-0.12	-0.19	-0.19	-0.12	-0.04	**33889904.62**	**41520170.87**
R11(ON BIAS HDC)	-0.27	0.04	-0.12	-0.27	0.04	0.19	0.04
Irradiated, HDC biased parts statistics							
Min Value	-0.27	-0.35	-0.19	-0.27	-0.12	-0.19	-0.27
Max Value	0.04	0.11	0.11	0.04	46059940.01	62765903.77	62124773.86
Average	-0.10	-0.10	-0.03	-0.12	4605994.16	9665580.95	10364494.43
Sigma	0.11	0.13	0.11	0.10	14565431.88	21483455.55	22383487.64



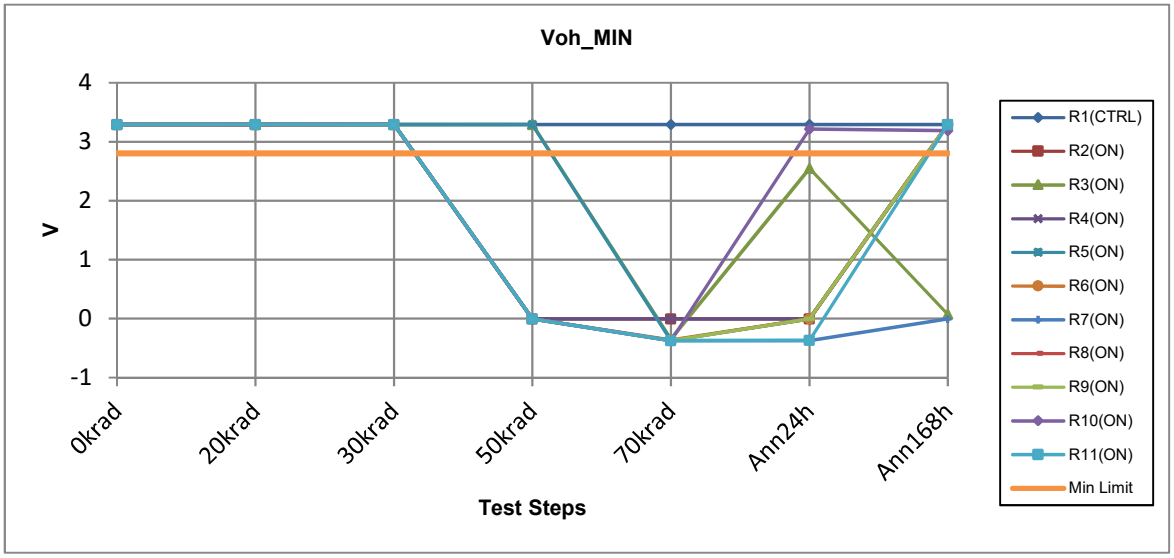
Iolk HighPin d1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	0.14	0.14	0.14	-0.02	0.06	0.06	-0.09
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.09	-0.09	0.06	8.85	19.01	13.05	-0.17
R3(ON BIAS HDC)	0.21	-0.17	-0.09	-0.17	**44967602.94**	**62808215.62**	**61992574.48**
R4(ON BIAS HDC)	-0.02	-0.17	0.14	1.36	515.25	503.40	2.12
R5(ON BIAS HDC)	0.21	-0.02	0.06	-0.17	0.14	0.14	-0.24
R6(ON BIAS HDC)	-0.32	-0.17	-0.02	1.13	207.86	104.84	0.14
R7(ON BIAS HDC)	0.06	-0.02	0.14	0.90	1.21	0.83	0.06
R8(ON BIAS HDC)	0.14	-0.02	-0.09	3.65	557.36	510.20	2.28
R9(ON BIAS HDC)	0.14	0.21	-0.09	0.29	0.37	0.06	-0.09
R10(ON BIAS HDC)	-0.09	-0.09	0.21	1.51	0.14	**33458705.99**	**40602225.81**
R11(ON BIAS HDC)	-0.17	-0.09	-0.17	0.75	0.21	0.21	0.06
Irradiated, HDC biased parts statistics							
Min Value	-0.32	-0.17	-0.17	-0.17	0.14	0.06	-0.24
Max Value	0.21	0.21	0.21	8.85	44967602.94	62808215.62	61992574.48
Average	0.01	-0.06	0.02	1.81	4496890.45	9626805.43	10259480.45
Sigma	0.18	0.11	0.13	2.70	14219958.89	21441401.09	22208733.62



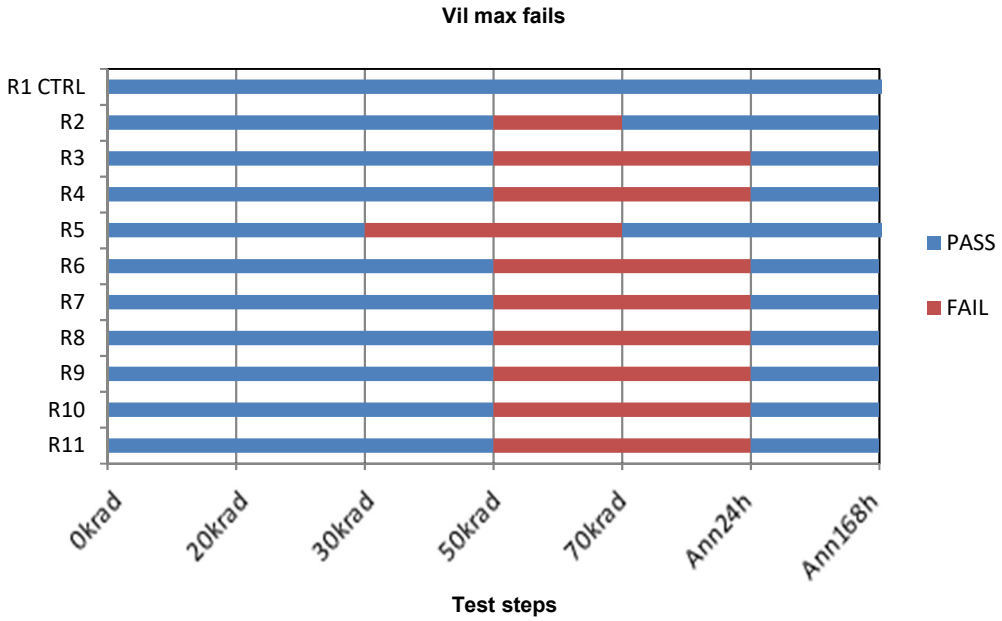
Iolk HighPin d0	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results							
R1(CTRL)	-0.07	-0.07	-0.14	-0.22	-0.07	-0.07	-0.14
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	-0.14	0.01	0.09	5.91	15.88	11.05	0.09
R3(ON BIAS HDC)	0.01	0.01	-0.07	0.01	**45888721.94**	**62588453.29**	**61929579.82**
R4(ON BIAS HDC)	0.24	-0.07	0.09	2.31	543.12	519.12	2.00
R5(ON BIAS HDC)	0.01	-0.07	0.16	0.01	-0.07	0.16	-0.07
R6(ON BIAS HDC)	0.01	0.16	0.09	1.70	293.30	165.17	0.32
R7(ON BIAS HDC)	0.09	-0.07	-0.14	4.84	1.31	1.01	0.09
R8(ON BIAS HDC)	0.09	0.01	0.16	3.46	398.28	344.37	2.31
R9(ON BIAS HDC)	-0.07	0.09	-0.07	0.62	0.16	0.09	0.01
R10(ON BIAS HDC)	-0.07	-0.14	-0.07	0.47	0.01	**34387189.89**	**43839324.27**
R11(ON BIAS HDC)	-0.07	0.09	0.09	0.78	0.39	0.47	0.16
Irradiated, HDC biased parts statistics							
Min Value	-0.14	-0.14	-0.14	0.01	-0.07	0.09	-0.07
Max Value	0.24	0.16	0.16	5.91	45888721.94	62588453.29	61929579.82
Average	0.01	0.00	0.03	2.01	4588997.43	9697668.46	10576890.90
Sigma	0.11	0.09	0.11	2.09	14511244.02	21497662.87	22702063.04



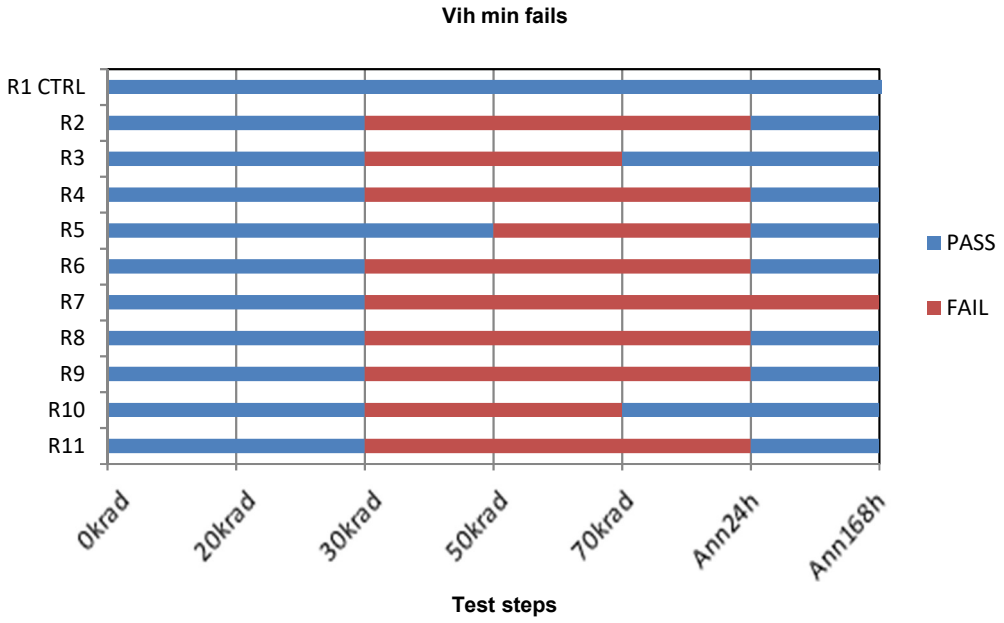
Vol_MAX	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Unit	V	V	V	V	V	V	V
Control results							
R1(CTRL)	0.0045	0.0045	0.0044	0.0045	0.0044	0.0044	0.0045
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0.0043	0.0043	0.0044	0.0044	**3.3063**	0.0044	0.0043
R3(ON BIAS HDC)	0.0043	0.0043	0.0045	**3.3065**	**3.6825**	**2.5805**	**2.8032**
R4(ON BIAS HDC)	0.0043	0.0043	0.0045	0.0043	**3.3055**	**3.3062**	0.0045
R5(ON BIAS HDC)	0.0043	0.0043	0.0045	**3.3065**	**3.3064**	0.0045	0.0044
R6(ON BIAS HDC)	0.0044	0.0044	0.0045	0.0045	3.6902	3.3049	0.0045
R7(ON BIAS HDC)	0.0044	0.0045	0.0044	0.0043	**3.7007**	**3.7022**	0.0043
R8(ON BIAS HDC)	0.0043	0.0044	0.0045	0.0044	**3.7004**	**3.3064**	0.0043
R9(ON BIAS HDC)	0.0043	0.0045	0.0043	0.0044	**3.6991**	**3.3058**	0.0045
R10(ON BIAS HDC)	0.0043	0.0045	0.0043	0.0045	**3.6998**	**3.2777**	0.0050
R11(ON BIAS HDC)	0.0044	0.0043	0.0043	0.0043	**3.7008**	**3.6938**	0.0045
Irradiated, HDC biased parts statistics							
Min Value	0.0043	0.0043	0.0043	0.0043	3.3055	0.0044	0.0043
Max Value	0.0044	0.0045	0.0045	3.3065	3.7008	3.7022	2.8032
Average	0.0044	0.0044	0.0044	0.6648	3.5792	2.6486	0.2844
Sigma	0.0000	0.0001	0.0001	1.3923	0.1885	1.4265	0.8850



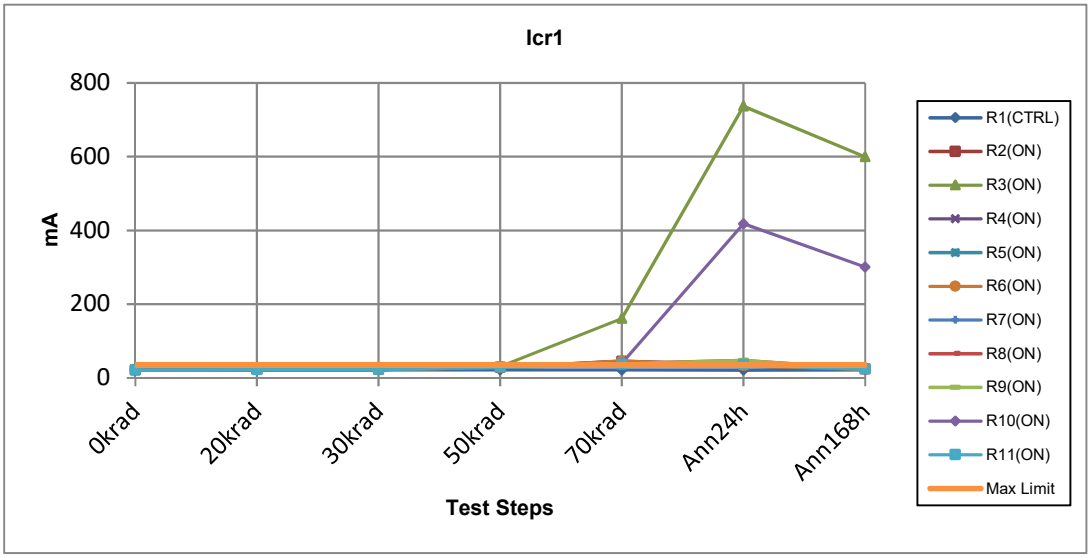
Voh_MIN	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**
Max Limit	--	--	--	--	--	--	--
Unit	**V**	**V**	**V**	**V**	**V**	**V**	**V**
Control results							
R1(CTRL)	3.2932	3.2929	3.2931	3.2926	3.2926	3.2929	3.2927
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	3.2929	3.2929	3.2924	**-0.0048**	**-0.0045**	**-0.0048**	3.2929
R3(ON BIAS HDC)	3.2929	3.2928	3.2929	3.2930	**-0.3459**	**2.5500**	**0.0706**
R4(ON BIAS HDC)	3.2927	3.2929	3.2929	**-0.0047**	**-0.0047**	**-0.0046**	3.2926
R5(ON BIAS HDC)	3.2931	3.2927	3.2930	3.2929	**-0.3692**	**-0.0046**	3.2929
R6(ON BIAS HDC)	3.2929	3.2930	3.2929	-0.0047	-0.3590	-0.0047	3.2929
R7(ON BIAS HDC)	3.2926	3.2932	3.2930	**-0.0047**	**-0.3718**	**-0.3721**	**-0.0039**
R8(ON BIAS HDC)	3.2927	3.2928	3.2930	**-0.0047**	**-0.3702**	**-0.0045**	3.2926
R9(ON BIAS HDC)	3.2930	3.2927	3.2929	**-0.0047**	**-0.3721**	**-0.0045**	3.2933
R10(ON BIAS HDC)	3.2929	3.2928	3.2931	**-0.0046**	**-0.3720**	3.2141	3.1910
R11(ON BIAS HDC)	3.2929	3.2929	3.2927	**-0.0046**	**-0.3715**	**-0.3640**	3.2928
Irradiated, HDC biased parts statistics							
Min Value	3.2926	3.2927	3.2924	-0.0048	-0.3721	-0.3721	-0.0039
Max Value	3.2931	3.2932	3.2931	3.2930	-0.0045	3.2141	3.2933
Average	3.2928	3.2929	3.2929	0.6548	-0.2941	0.5000	2.6308
Sigma	0.0001	0.0002	0.0002	1.3904	0.1528	1.2738	1.3694



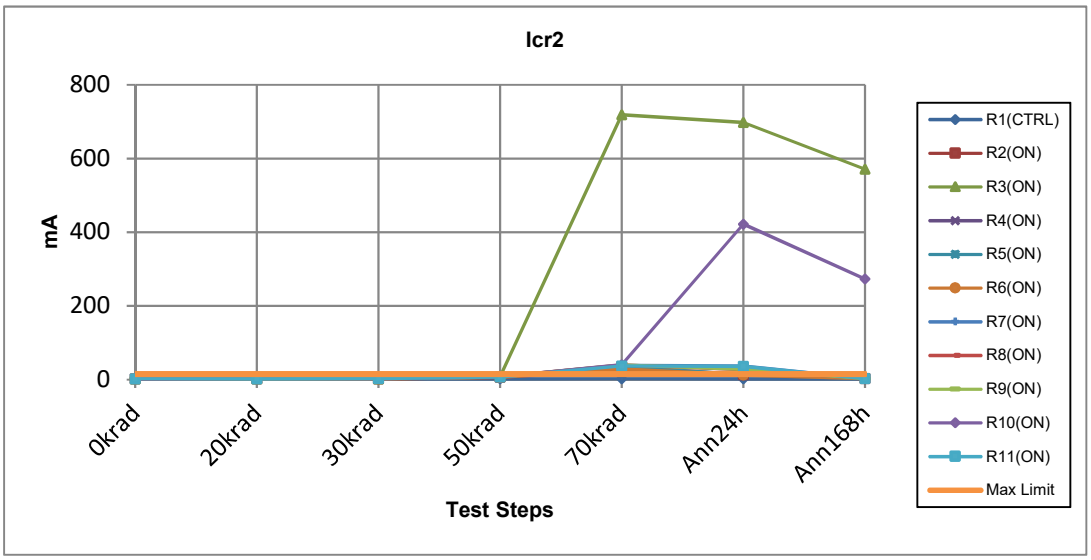
Vil max fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	PASS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



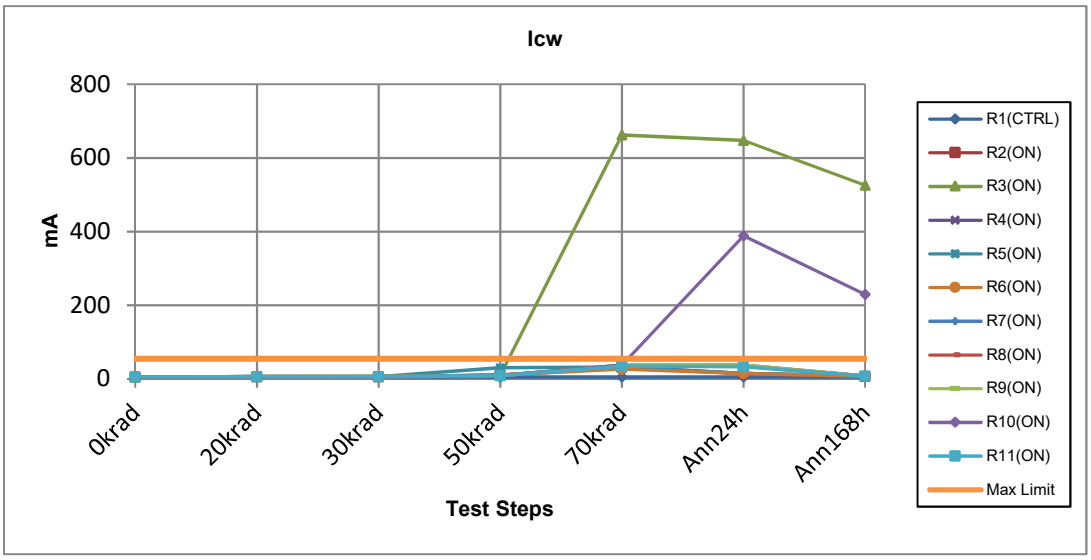
Vih min fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	FAIL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



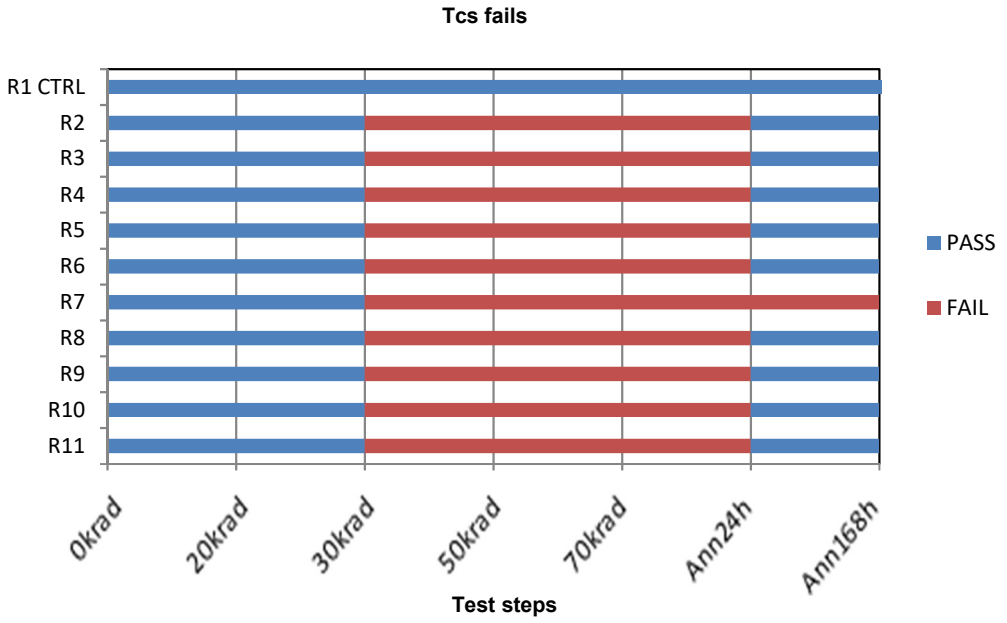
Icr1	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	35	35	35	35	35	35	35
Unit	mA	mA	mA	mA	mA	mA	mA
Control results							
R1(CTRL)	21.37	21.44	21.52	21.59	21.28	21.39	21.45
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	21.33	22.39	22.85	28.37	**44.44**	32.92	23.54
R3(ON BIAS HDC)	21.35	22.58	22.81	30.19	**161.11**	**736.81**	**599.31**
R4(ON BIAS HDC)	21.58	22.69	22.93	28.04	**45.68**	33.69	23.64
R5(ON BIAS HDC)	21.22	22.04	22.67	28.81	34.76	32.49	23.27
R6(ON BIAS HDC)	21.74	22.61	23.02	27.99	**45.42**	33.41	23.98
R7(ON BIAS HDC)	21.52	22.49	22.92	29.93	**37.51**	**35.55**	26.48
R8(ON BIAS HDC)	21.53	22.60	23.13	30.02	**39.38**	**47.35**	24.17
R9(ON BIAS HDC)	21.53	22.71	23.14	29.31	**38.80**	**47.22**	24.31
R10(ON BIAS HDC)	21.31	22.26	22.70	29.10	**38.99**	**418.21**	**300.45**
R11(ON BIAS HDC)	20.97	22.24	22.42	28.76	**36.54**	**35.44**	23.66
Irradiated, HDC biased parts statistics							
Min Value	20.97	22.04	22.42	27.99	34.76	32.49	23.27
Max Value	21.74	22.71	23.14	30.19	161.11	736.81	599.31
Average	21.41	22.46	22.86	29.05	52.26	145.31	109.28
Sigma	0.22	0.22	0.22	0.80	38.43	239.91	192.84



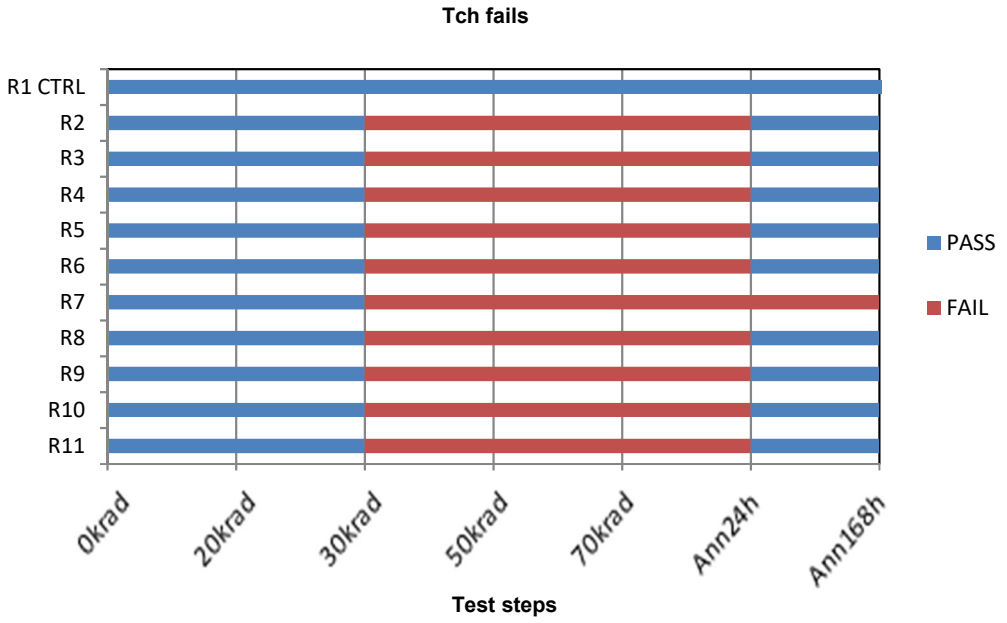
Icr2	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	15	15	15	15	15	15	15
Unit	mA	mA	mA	mA	mA	mA	mA
Control results							
R1(CTRL)	2.36	2.35	2.36	2.32	2.27	2.30	2.31
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	2.36	2.40	2.48	6.70	**34.84**	13.62	2.85
R3(ON BIAS HDC)	2.34	2.38	2.44	8.14	**718.52**	**697.38**	**570.90**
R4(ON BIAS HDC)	2.37	2.48	2.43	6.51	**25.42**	14.17	3.00
R5(ON BIAS HDC)	2.32	2.38	2.50	7.29	**35.10**	13.61	2.81
R6(ON BIAS HDC)	2.36	2.36	2.48	6.43	**29.11**	12.82	2.96
R7(ON BIAS HDC)	2.36	2.65	2.61	7.92	**38.79**	**36.86**	3.32
R8(ON BIAS HDC)	2.29	2.45	2.52	8.21	**39.84**	**27.63**	3.21
R9(ON BIAS HDC)	2.29	2.36	2.57	7.46	**39.74**	**28.53**	2.97
R10(ON BIAS HDC)	2.38	2.36	2.62	7.56	**40.10**	**421.94**	**272.67**
R11(ON BIAS HDC)	2.35	2.45	2.57	7.38	**36.99**	**35.61**	3.12
Irradiated, HDC biased parts statistics							
Min Value	2.29	2.36	2.43	6.43	25.42	12.82	2.81
Max Value	2.38	2.65	2.62	8.21	718.52	697.38	570.90
Average	2.34	2.43	2.52	7.36	103.84	130.22	86.78
Sigma	0.03	0.09	0.07	0.64	216.03	235.64	190.04



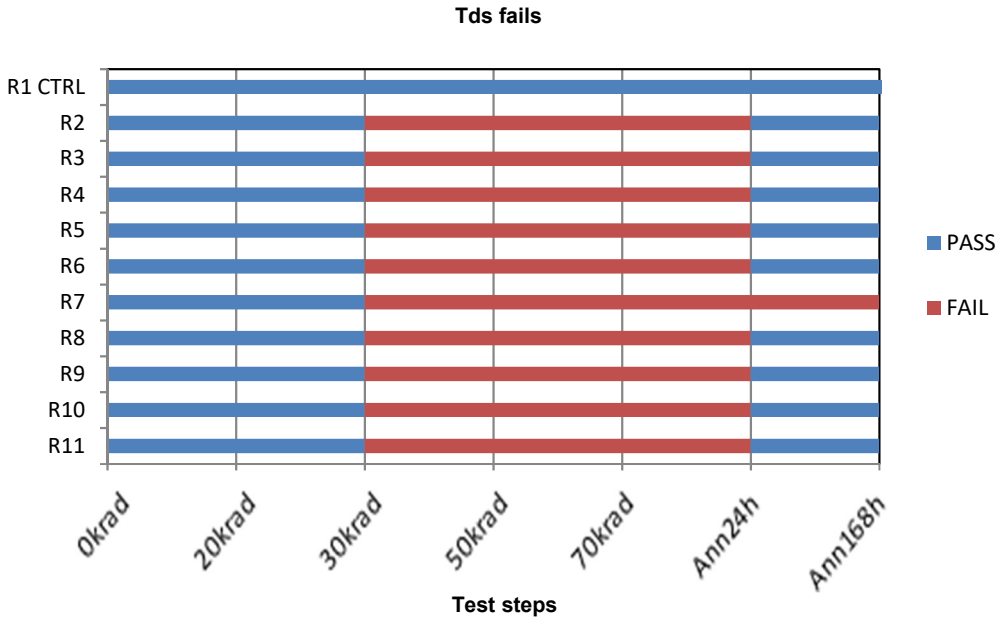
Icw	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	55	55	55	55	55	55	55
Unit	mA	mA	mA	mA	mA	mA	mA
Control results							
R1(CTRL)	6.13	6.17	6.23	6.17	6.18	6.19	6.20
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	6.21	6.62	6.86	11.33	33.12	15.76	7.67
R3(ON BIAS HDC)	6.13	6.62	6.89	9.82	**662.33**	**647.46**	**526.16**
R4(ON BIAS HDC)	6.27	6.74	6.94	10.17	30.53	15.37	7.74
R5(ON BIAS HDC)	6.32	6.77	6.97	30.65	32.76	15.71	8.27
R6(ON BIAS HDC)	6.33	6.79	6.99	10.96	26.98	14.94	7.90
R7(ON BIAS HDC)	6.26	6.67	6.98	9.61	36.93	35.08	8.39
R8(ON BIAS HDC)	6.27	6.80	7.09	9.97	37.73	37.52	8.17
R9(ON BIAS HDC)	6.34	6.90	7.17	9.26	37.85	37.51	8.02
R10(ON BIAS HDC)	6.25	6.78	7.04	9.19	37.90	**388.53**	**229.90**
R11(ON BIAS HDC)	6.15	6.62	6.87	8.98	35.19	33.74	7.99
Irradiated, HDC biased parts statistics							
Min Value	6.13	6.62	6.86	8.98	26.98	14.94	7.67
Max Value	6.34	6.90	7.17	30.65	662.33	647.46	526.16
Average	6.26	6.73	6.98	11.99	97.13	124.16	82.02
Sigma	0.07	0.09	0.10	6.60	198.62	216.57	170.93



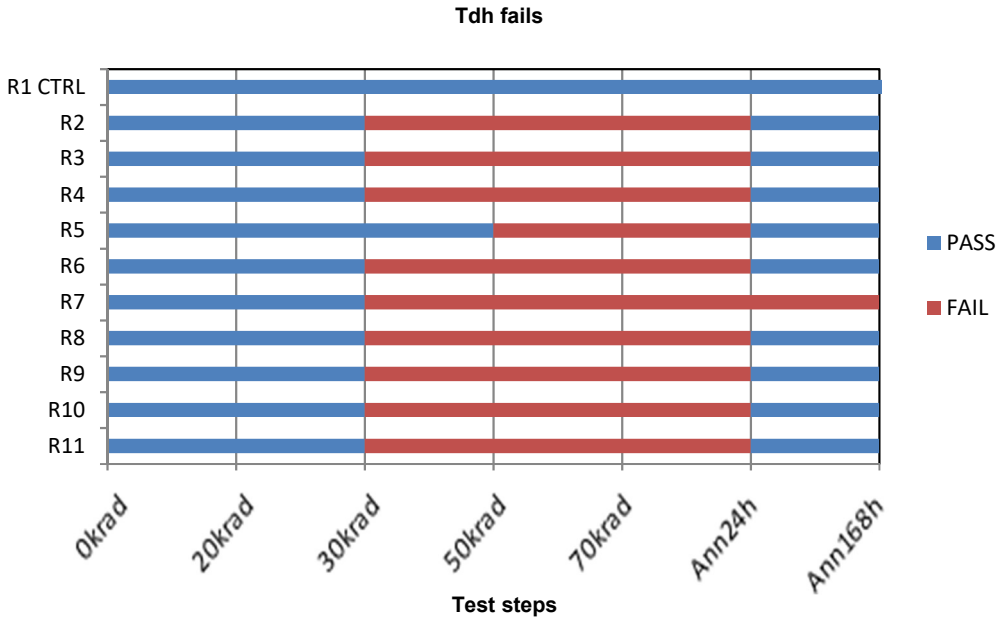
Tcs fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	FAIL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



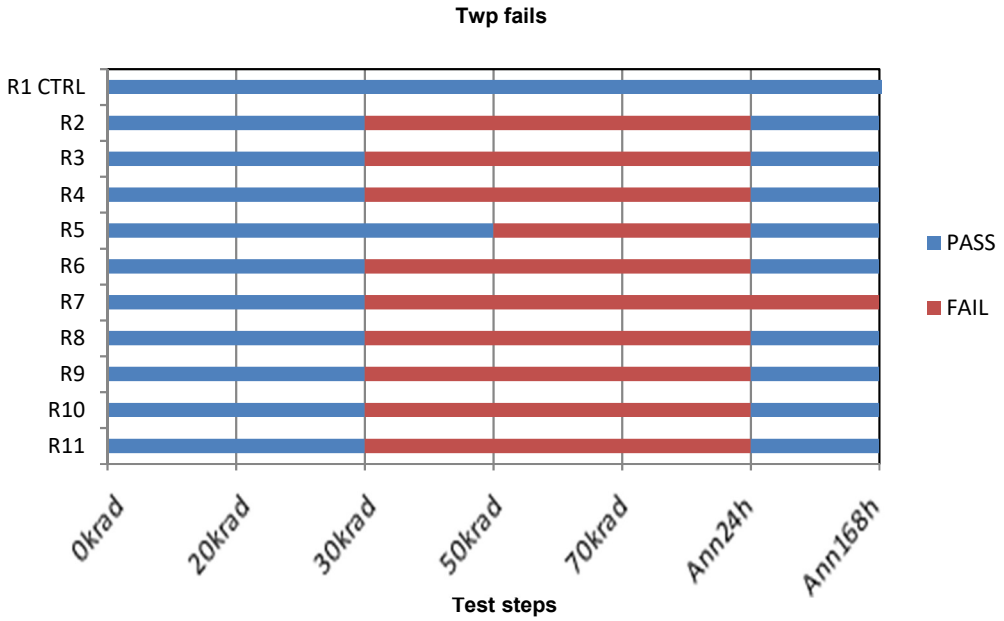
Tch fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	FAIL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



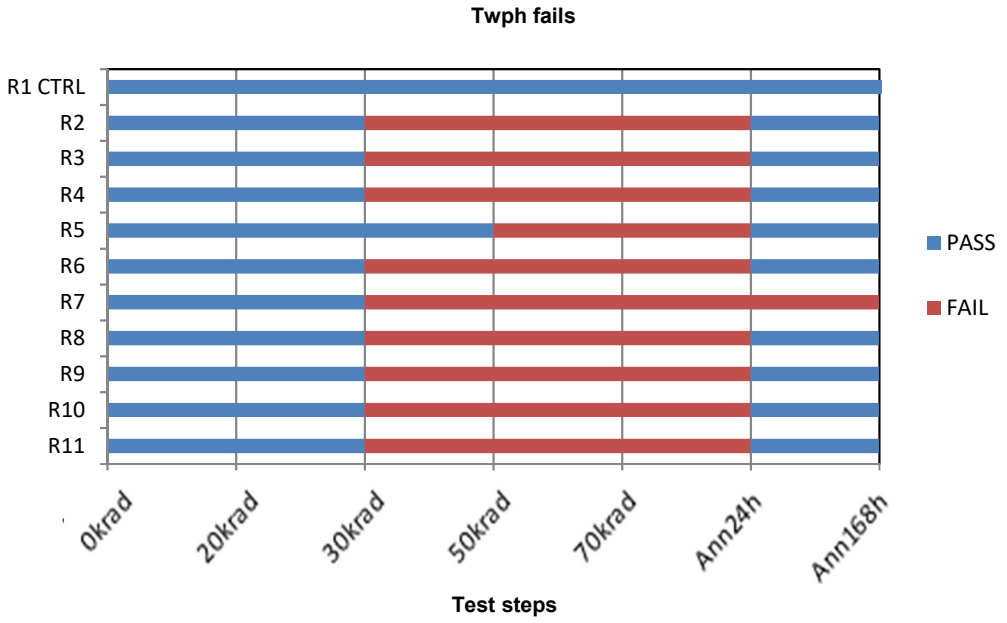
Tds fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	FAIL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



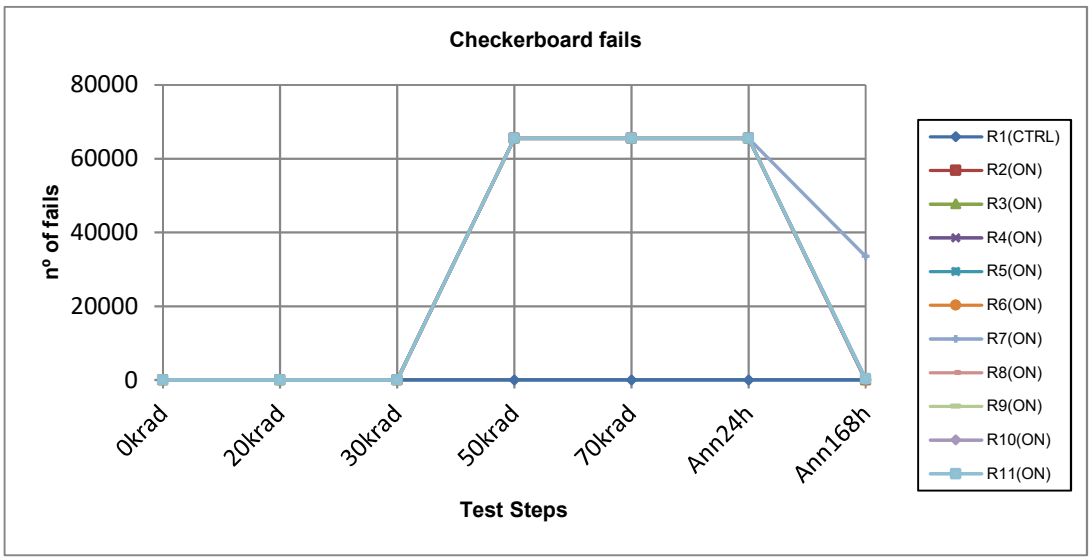
Tdh fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	FAIL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



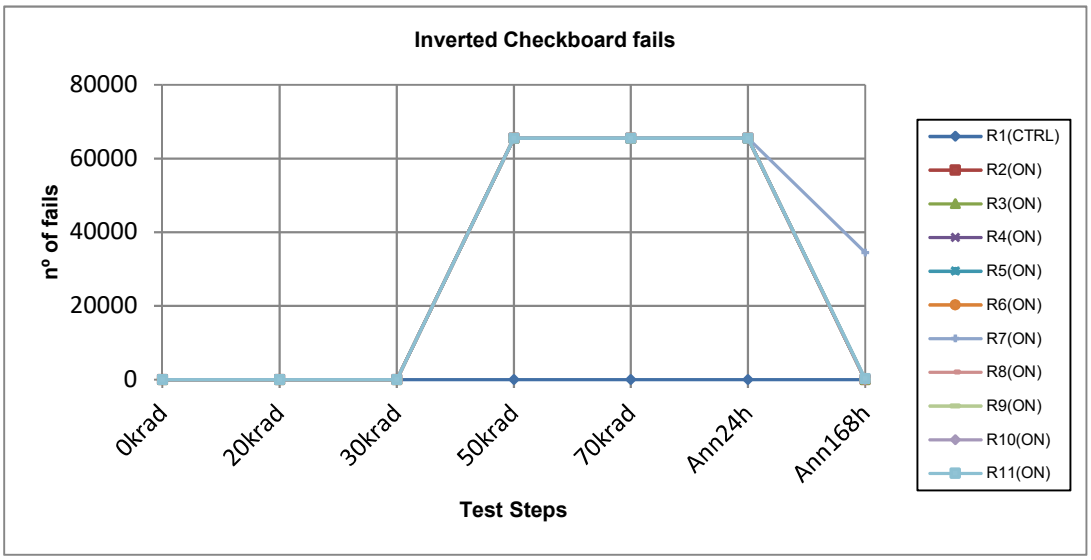
Twp fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	FAIL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



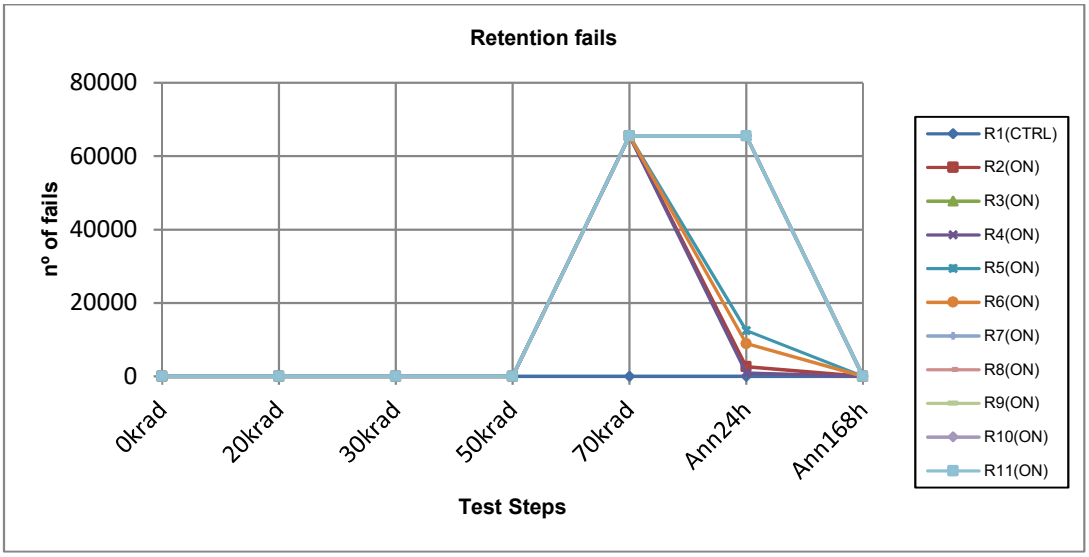
Twph fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results							
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	PASS	PASS	PASS	FAIL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



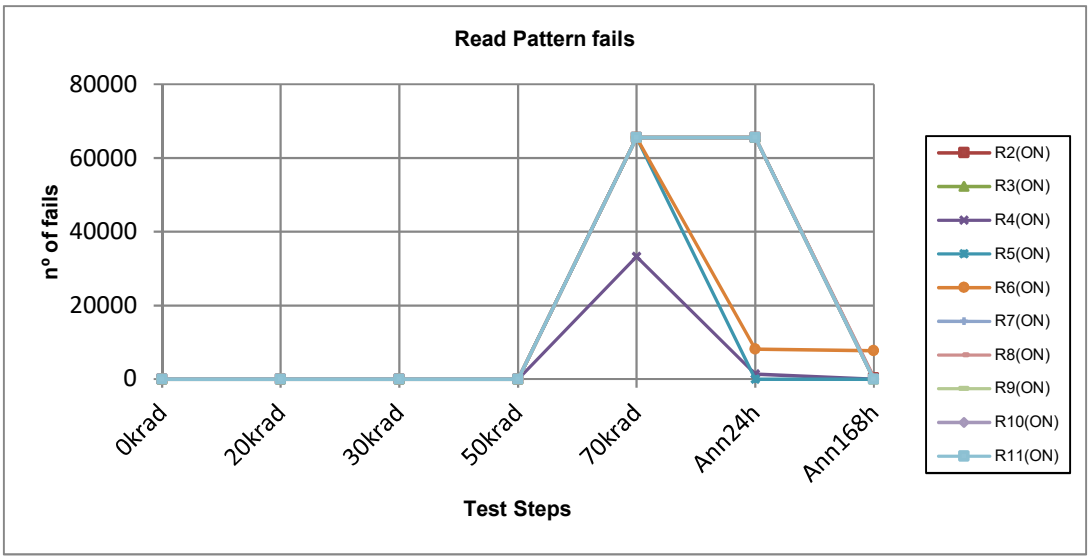
Checkerboard fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results							
R1(CTRL)	0	0	0	0	0	0	0
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R3(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R4(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R5(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R6(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R7(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**33520**
R8(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**1**
R9(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**1**
R10(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R11(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**325**
Irradiated, HDC biased parts statistics							
Min Value	0	0	0	65536	65536	65536	0
Max Value	0	0	0	65536	65536	65536	33520
Average	0	0	0	65536	65536	65536	3385
Sigma	0	0	0	0	0	0	10589



Inverted Checkboard fails	0krad	20krad	30krad	50krad	70krad	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
Control results							
R1(CTRL)	0	0	0	0	0	0	0
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R3(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R4(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R5(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R6(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R7(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**34484**
R8(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**1**
R9(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**3**
R10(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	0
R11(ON BIAS HDC)	0	0	0	**65536**	**65536**	**65536**	**324**
Irradiated, HDC biased parts statistics							
Min Value	0	0	0	65536	65536	65536	0
Max Value	0	0	0	65536	65536	65536	34484
Average	0	0	0	65536	65536	65536	3481
Sigma	0	0	0	0	0	0	10894

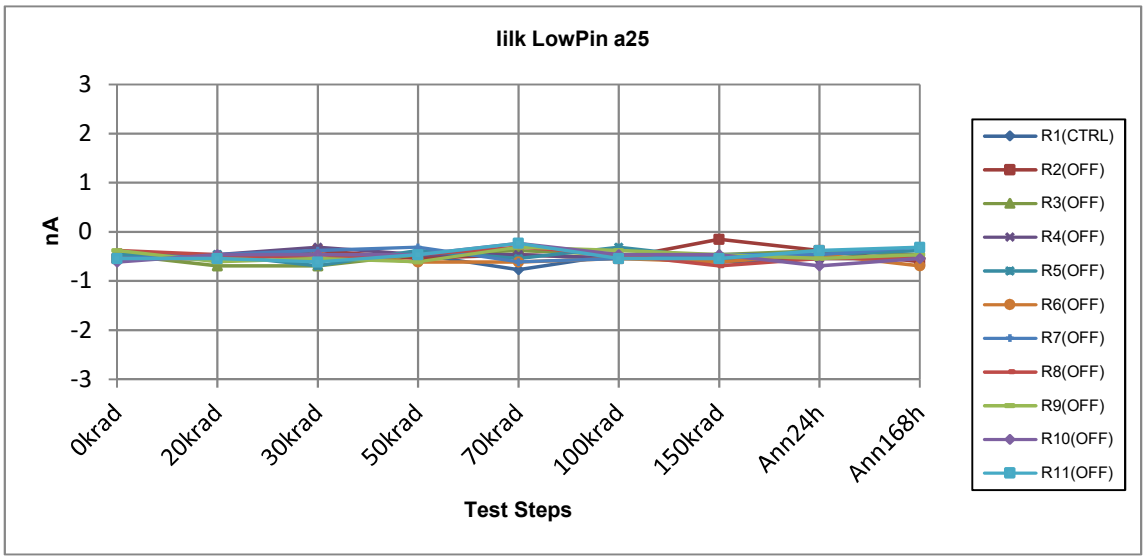


Retention fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results							
R1(CTRL)	0	0	0	0	0	0	0
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0	0	0	0	65536	2643	0
R3(ON BIAS HDC)	0	0	0	0	65536	65536	0
R4(ON BIAS HDC)	0	0	0	0	65536	876	0
R5(ON BIAS HDC)	0	0	0	0	65536	12508	0
R6(ON BIAS HDC)	0	0	0	0	65536	8866	0
R7(ON BIAS HDC)	0	0	0	0	65536	65536	0
R8(ON BIAS HDC)	0	0	0	0	65536	65536	0
R9(ON BIAS HDC)	0	0	0	0	65536	65536	0
R10(ON BIAS HDC)	0	0	0	0	65536	65536	0
R11(ON BIAS HDC)	0	0	0	0	65536	65536	0
Irradiated, HDC biased parts statistics							
Min Value	0	0	0	0	65536	876	0
Max Value	0	0	0	0	65536	65536	0
Average	0	0	0	0	65536	41811	0
Sigma	0	0	0	0	0	30788	0

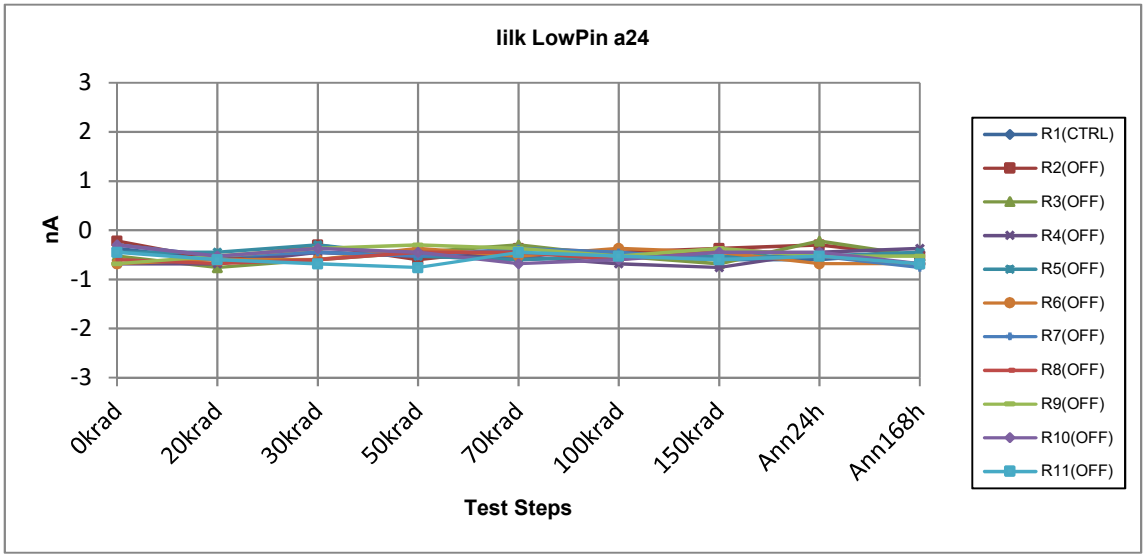


Read Pattern fails	0krad	20krad	30krad	50krad	70krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--
Unit	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails	nº of fails
Control results							
R1(CTRL)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Irradiated, HDC biased parts results							
R2(ON BIAS HDC)	0	0	0	0	**65536**	**65536**	**350**
R3(ON BIAS HDC)	0	0	0	0	**65536**	**65536**	0
R4(ON BIAS HDC)	0	0	0	0	**33220**	**1396**	**2**
R5(ON BIAS HDC)	0	0	0	0	**65536**	**24**	0
R6(ON BIAS HDC)	0	0	0	0	**65536**	**8143**	**7708**
R7(ON BIAS HDC)	0	0	0	0	**65536**	**65536**	0
R8(ON BIAS HDC)	0	0	0	0	**65536**	**65536**	**626**
R9(ON BIAS HDC)	0	0	0	0	**65536**	**65536**	0
R10(ON BIAS HDC)	0	0	0	0	**65536**	**65536**	0
R11(ON BIAS HDC)	0	0	0	0	**65536**	**65536**	0
Irradiated, HDC biased parts statistics							
Min Value	0	0	0	0	33220	24	0
Max Value	0	0	0	0	65536	65536	7708
Average	0	0	0	0	62304	46832	869
Sigma	0	0	0	0	10219	30187	2413

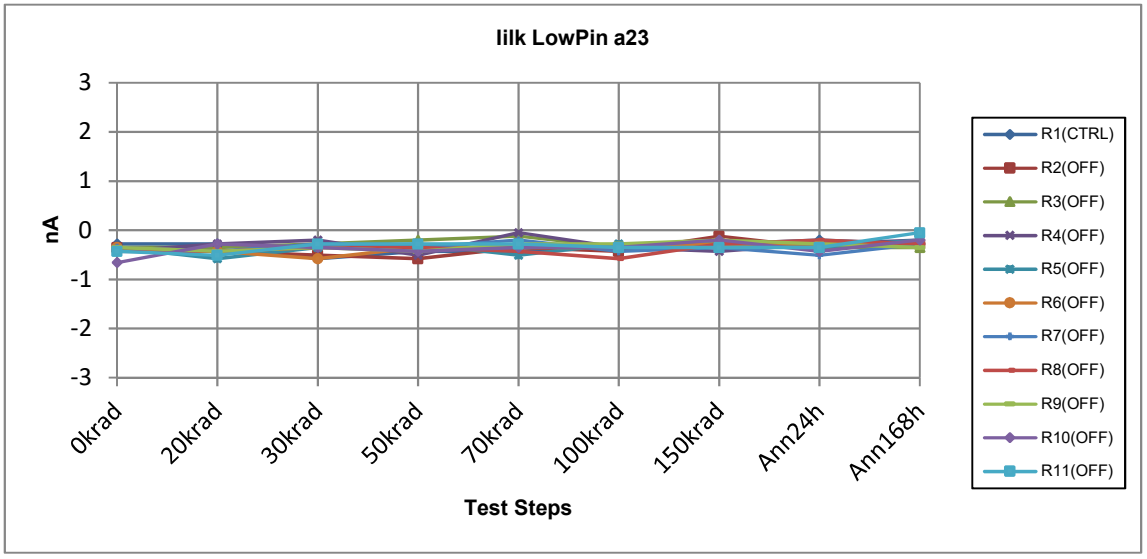
R1 + OFF samples (SN 22 to 31)



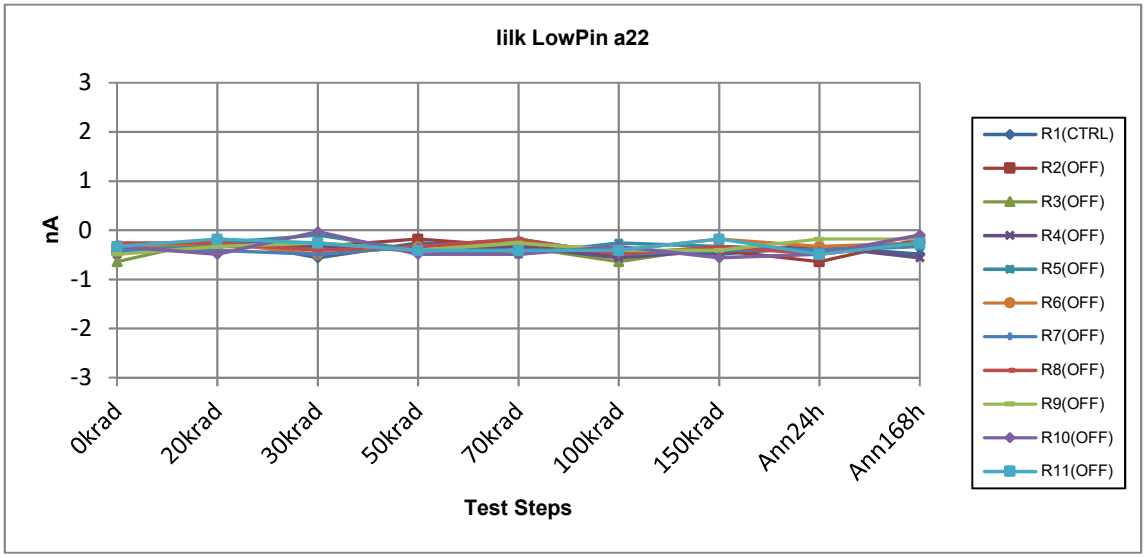
Iilk LowPin a25	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.54	-0.54	-0.46	-0.46	-0.77	-0.46	-0.61	-0.54	-0.54
Irradiated, unbiased parts results									
R2(OFF)	-0.54	-0.54	-0.38	-0.54	-0.46	-0.54	-0.15	-0.38	-0.61
R3(OFF)	-0.46	-0.69	-0.69	-0.46	-0.38	-0.46	-0.46	-0.38	-0.46
R4(OFF)	-0.54	-0.46	-0.31	-0.46	-0.46	-0.54	-0.54	-0.54	-0.46
R5(OFF)	-0.46	-0.46	-0.69	-0.38	-0.54	-0.31	-0.54	-0.46	-0.38
R6(OFF)	-0.54	-0.54	-0.46	-0.61	-0.61	-0.54	-0.61	-0.46	-0.69
R7(OFF)	-0.54	-0.46	-0.38	-0.31	-0.61	-0.54	-0.46	-0.46	-0.31
R8(OFF)	-0.38	-0.46	-0.54	-0.46	-0.31	-0.46	-0.69	-0.54	-0.54
R9(OFF)	-0.38	-0.61	-0.54	-0.61	-0.31	-0.38	-0.46	-0.54	-0.46
R10(OFF)	-0.61	-0.46	-0.46	-0.46	-0.23	-0.46	-0.46	-0.69	-0.54
R11(OFF)	-0.54	-0.54	-0.61	-0.46	-0.23	-0.54	-0.54	-0.38	-0.31
Irradiated, unbiased parts statistics									
Min Value	-0.61	-0.69	-0.69	-0.61	-0.61	-0.54	-0.69	-0.69	-0.69
Max Value	-0.38	-0.46	-0.31	-0.31	-0.23	-0.31	-0.15	-0.38	-0.31
Average	-0.50	-0.52	-0.51	-0.48	-0.41	-0.48	-0.49	-0.48	-0.48
Sigma	0.08	0.08	0.13	0.09	0.14	0.08	0.14	0.10	0.12



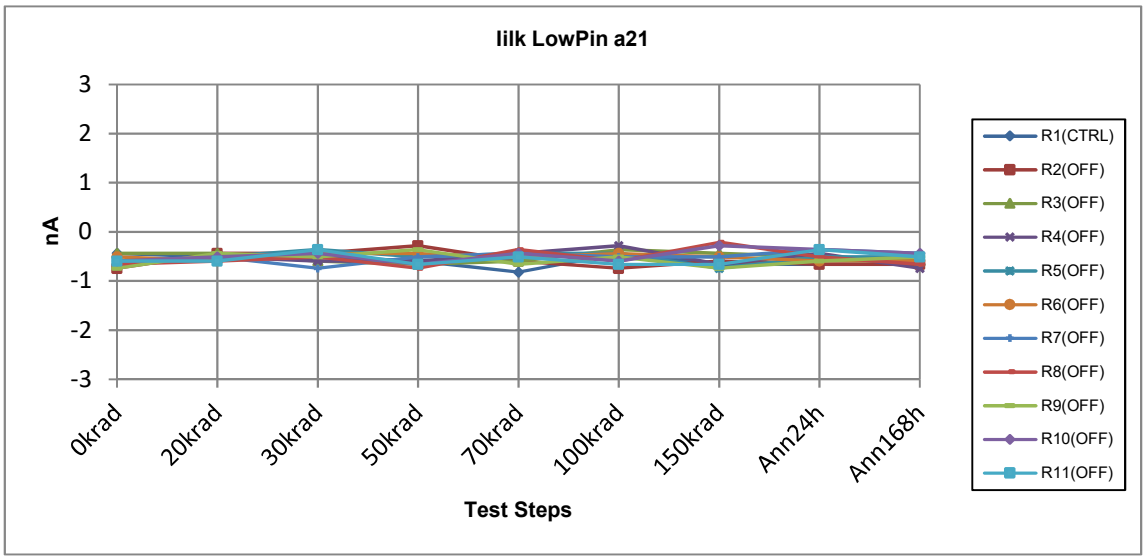
Iilk LowPin a24	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.37	-0.60	-0.45	-0.53	-0.60	-0.53	-0.60	-0.60	-0.45
Irradiated, unbiased parts results									
R2(OFF)	-0.22	-0.60	-0.30	-0.60	-0.37	-0.45	-0.37	-0.30	-0.53
R3(OFF)	-0.53	-0.76	-0.60	-0.45	-0.30	-0.53	-0.68	-0.22	-0.53
R4(OFF)	-0.68	-0.68	-0.45	-0.53	-0.53	-0.68	-0.76	-0.45	-0.37
R5(OFF)	-0.45	-0.45	-0.30	-0.53	-0.60	-0.53	-0.53	-0.53	-0.45
R6(OFF)	-0.68	-0.60	-0.60	-0.37	-0.53	-0.37	-0.45	-0.68	-0.68
R7(OFF)	-0.30	-0.53	-0.45	-0.53	-0.37	-0.45	-0.60	-0.53	-0.76
R8(OFF)	-0.60	-0.68	-0.60	-0.45	-0.45	-0.60	-0.37	-0.53	-0.68
R9(OFF)	-0.68	-0.53	-0.37	-0.30	-0.37	-0.53	-0.37	-0.53	-0.53
R10(OFF)	-0.30	-0.53	-0.37	-0.45	-0.68	-0.60	-0.45	-0.45	-0.68
R11(OFF)	-0.45	-0.60	-0.68	-0.76	-0.45	-0.53	-0.60	-0.53	-0.68
Irradiated, unbiased parts statistics									
Min Value	-0.68	-0.76	-0.68	-0.76	-0.68	-0.68	-0.76	-0.68	-0.76
Max Value	-0.22	-0.45	-0.30	-0.30	-0.30	-0.37	-0.37	-0.22	-0.37
Average	-0.49	-0.60	-0.47	-0.50	-0.47	-0.53	-0.52	-0.48	-0.59
Sigma	0.17	0.09	0.14	0.13	0.12	0.09	0.14	0.13	0.12



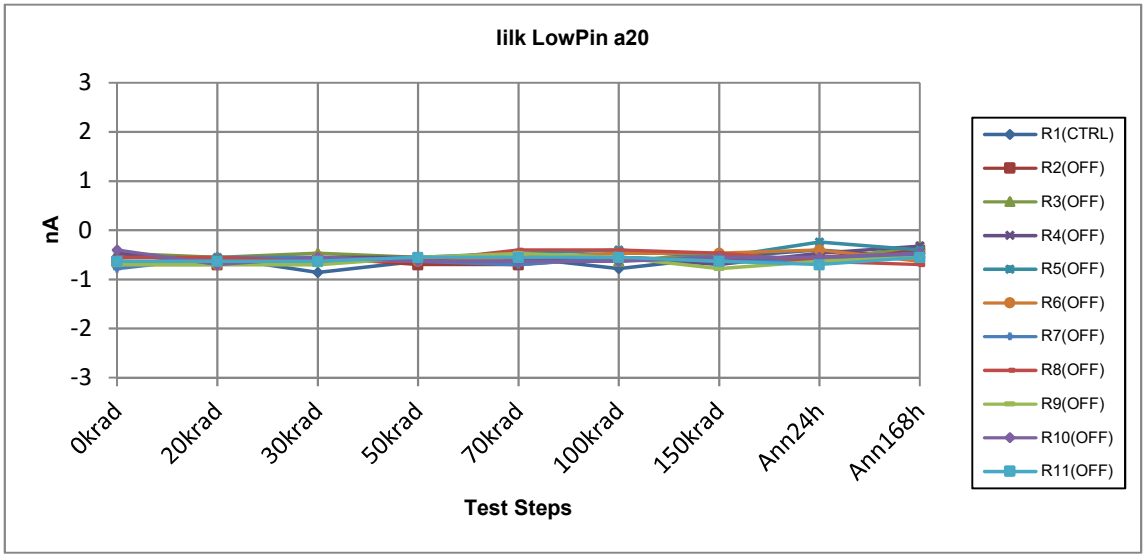
Iilk LowPin a23	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.28	-0.28	-0.58	-0.43	-0.43	-0.35	-0.28	-0.20	-0.28
Irradiated, unbiased parts results									
R2(OFF)	-0.35	-0.43	-0.51	-0.58	-0.35	-0.43	-0.12	-0.35	-0.28
R3(OFF)	-0.35	-0.35	-0.28	-0.20	-0.12	-0.35	-0.28	-0.35	-0.35
R4(OFF)	-0.43	-0.28	-0.20	-0.51	-0.05	-0.35	-0.43	-0.28	-0.20
R5(OFF)	-0.35	-0.58	-0.35	-0.28	-0.51	-0.28	-0.28	-0.35	-0.20
R6(OFF)	-0.35	-0.43	-0.58	-0.35	-0.35	-0.35	-0.28	-0.28	-0.28
R7(OFF)	-0.35	-0.43	-0.28	-0.35	-0.20	-0.43	-0.35	-0.51	-0.28
R8(OFF)	-0.43	-0.43	-0.35	-0.35	-0.43	-0.58	-0.28	-0.20	-0.28
R9(OFF)	-0.35	-0.43	-0.35	-0.43	-0.28	-0.28	-0.20	-0.28	-0.35
R10(OFF)	-0.66	-0.28	-0.35	-0.43	-0.35	-0.35	-0.20	-0.43	-0.20
R11(OFF)	-0.43	-0.51	-0.28	-0.28	-0.28	-0.35	-0.35	-0.35	-0.05
Irradiated, unbiased parts statistics									
Min Value	-0.66	-0.58	-0.58	-0.58	-0.51	-0.58	-0.43	-0.51	-0.35
Max Value	-0.35	-0.28	-0.20	-0.20	-0.05	-0.28	-0.12	-0.20	-0.05
Average	-0.41	-0.42	-0.35	-0.38	-0.29	-0.38	-0.28	-0.34	-0.25
Sigma	0.10	0.09	0.11	0.11	0.14	0.09	0.09	0.09	0.09



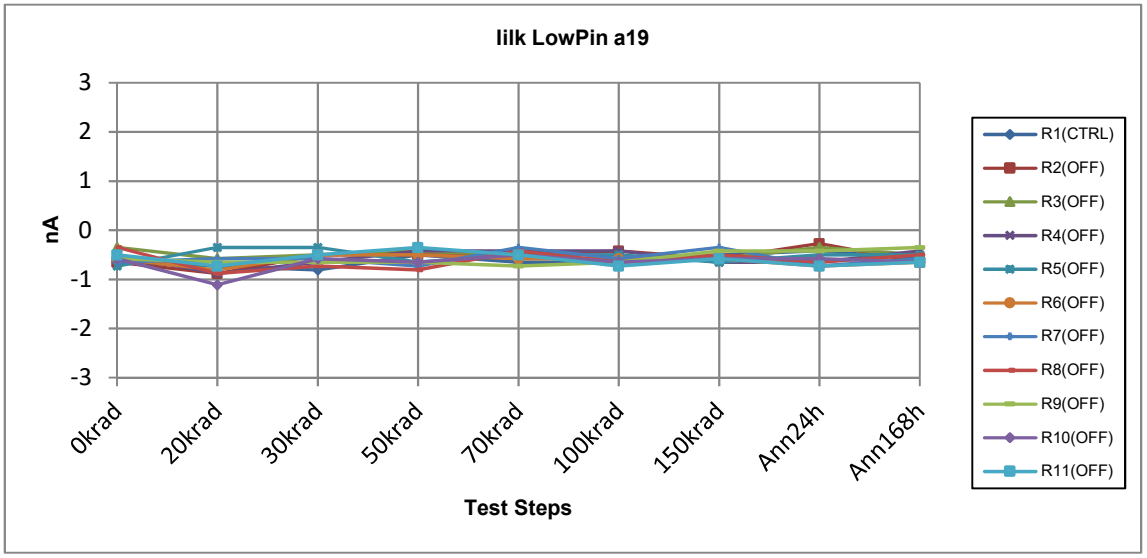
Iilk LowPin a22	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.49	-0.18	-0.56	-0.26	-0.33	-0.41	-0.49	-0.33	-0.49
Irradiated, unbiased parts results									
R2(OFF)	-0.41	-0.33	-0.33	-0.18	-0.33	-0.49	-0.41	-0.64	-0.18
R3(OFF)	-0.64	-0.18	-0.33	-0.41	-0.33	-0.64	-0.33	-0.41	-0.26
R4(OFF)	-0.49	-0.18	-0.33	-0.41	-0.33	-0.56	-0.41	-0.33	-0.56
R5(OFF)	-0.41	-0.26	-0.10	-0.41	-0.49	-0.26	-0.33	-0.41	-0.33
R6(OFF)	-0.33	-0.26	-0.49	-0.33	-0.26	-0.41	-0.18	-0.33	-0.26
R7(OFF)	-0.41	-0.41	-0.49	-0.33	-0.18	-0.49	-0.41	-0.41	-0.26
R8(OFF)	-0.26	-0.26	-0.41	-0.33	-0.18	-0.49	-0.33	-0.49	-0.26
R9(OFF)	-0.49	-0.33	-0.26	-0.41	-0.26	-0.41	-0.41	-0.18	-0.18
R10(OFF)	-0.33	-0.49	-0.03	-0.49	-0.49	-0.33	-0.56	-0.49	-0.10
R11(OFF)	-0.33	-0.18	-0.26	-0.41	-0.41	-0.41	-0.18	-0.49	-0.26
Irradiated, unbiased parts statistics									
Min Value	-0.64	-0.49	-0.49	-0.49	-0.49	-0.64	-0.56	-0.64	-0.56
Max Value	-0.26	-0.18	-0.03	-0.18	-0.18	-0.26	-0.18	-0.18	-0.10
Average	-0.41	-0.29	-0.30	-0.37	-0.33	-0.45	-0.36	-0.42	-0.27
Sigma	0.11	0.10	0.15	0.08	0.11	0.11	0.11	0.12	0.12



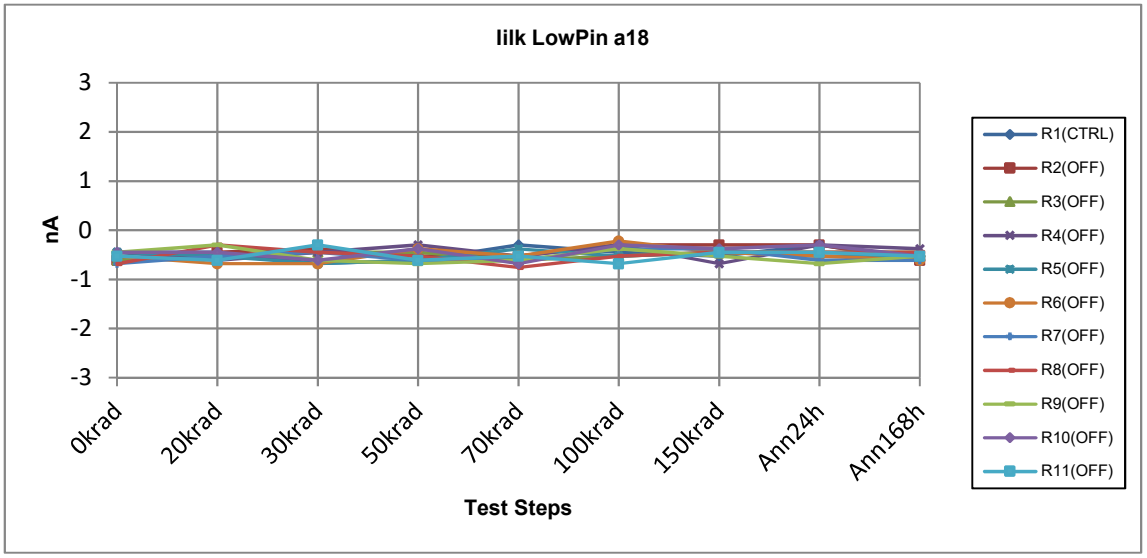
Iilk LowPin a21	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.44	-0.51	-0.51	-0.59	-0.82	-0.44	-0.66	-0.66	-0.66
Irradiated, unbiased parts results									
R2(OFF)	-0.74	-0.44	-0.44	-0.28	-0.59	-0.74	-0.59	-0.66	-0.66
R3(OFF)	-0.44	-0.44	-0.59	-0.66	-0.59	-0.36	-0.44	-0.51	-0.59
R4(OFF)	-0.59	-0.51	-0.59	-0.59	-0.44	-0.28	-0.66	-0.44	-0.74
R5(OFF)	-0.59	-0.51	-0.36	-0.51	-0.44	-0.44	-0.74	-0.51	-0.51
R6(OFF)	-0.51	-0.59	-0.44	-0.44	-0.51	-0.44	-0.51	-0.59	-0.59
R7(OFF)	-0.66	-0.51	-0.74	-0.51	-0.44	-0.51	-0.51	-0.36	-0.44
R8(OFF)	-0.66	-0.59	-0.51	-0.74	-0.36	-0.59	-0.21	-0.51	-0.66
R9(OFF)	-0.74	-0.44	-0.51	-0.36	-0.66	-0.51	-0.74	-0.59	-0.51
R10(OFF)	-0.59	-0.51	-0.44	-0.66	-0.44	-0.59	-0.28	-0.36	-0.44
R11(OFF)	-0.59	-0.59	-0.36	-0.66	-0.51	-0.66	-0.66	-0.36	-0.51
Irradiated, unbiased parts statistics									
Min Value	-0.74	-0.59	-0.74	-0.74	-0.66	-0.74	-0.74	-0.66	-0.74
Max Value	-0.44	-0.44	-0.36	-0.28	-0.36	-0.28	-0.21	-0.36	-0.44
Average	-0.61	-0.51	-0.50	-0.54	-0.50	-0.51	-0.53	-0.49	-0.57
Sigma	0.09	0.06	0.12	0.15	0.09	0.14	0.18	0.11	0.10



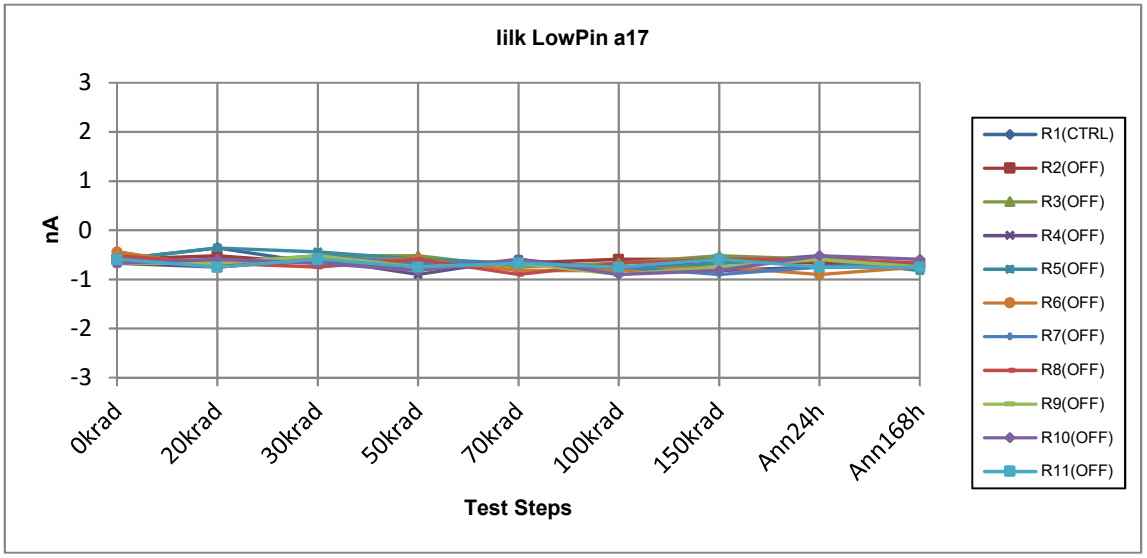
Iilk LowPin a20	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.55	-0.55	-0.86	-0.63	-0.55	-0.78	-0.55	-0.40	-0.55
Irradiated, unbiased parts results									
R2(OFF)	-0.63	-0.70	-0.55	-0.70	-0.70	-0.55	-0.63	-0.55	-0.40
R3(OFF)	-0.47	-0.55	-0.47	-0.55	-0.55	-0.63	-0.47	-0.63	-0.32
R4(OFF)	-0.47	-0.70	-0.55	-0.55	-0.63	-0.55	-0.70	-0.47	-0.32
R5(OFF)	-0.70	-0.55	-0.63	-0.55	-0.47	-0.40	-0.55	-0.24	-0.40
R6(OFF)	-0.70	-0.70	-0.55	-0.63	-0.55	-0.47	-0.47	-0.40	-0.63
R7(OFF)	-0.78	-0.55	-0.55	-0.63	-0.70	-0.55	-0.63	-0.63	-0.47
R8(OFF)	-0.55	-0.55	-0.63	-0.63	-0.40	-0.40	-0.47	-0.63	-0.70
R9(OFF)	-0.70	-0.70	-0.70	-0.55	-0.47	-0.55	-0.78	-0.63	-0.55
R10(OFF)	-0.40	-0.70	-0.55	-0.63	-0.63	-0.63	-0.55	-0.55	-0.47
R11(OFF)	-0.63	-0.63	-0.63	-0.55	-0.55	-0.55	-0.63	-0.70	-0.55
Irradiated, unbiased parts statistics									
Min Value	-0.78	-0.70	-0.70	-0.70	-0.70	-0.63	-0.78	-0.70	-0.70
Max Value	-0.40	-0.55	-0.47	-0.55	-0.40	-0.40	-0.47	-0.24	-0.32
Average	-0.60	-0.63	-0.58	-0.60	-0.57	-0.53	-0.59	-0.54	-0.48
Sigma	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1



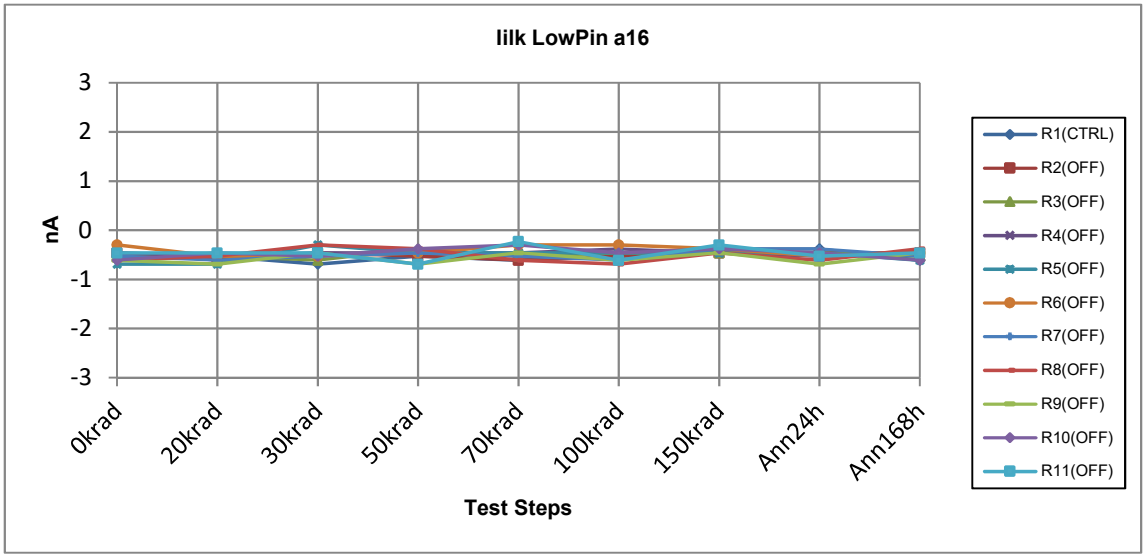
Iilk LowPin a19	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.65	-0.73	-0.81	-0.50	-0.65	-0.65	-0.50	-0.42	-0.58
Irradiated, unbiased parts results									
R2(OFF)	-0.65	-0.88	-0.50	-0.50	-0.50	-0.42	-0.58	-0.27	-0.65
R3(OFF)	-0.35	-0.58	-0.50	-0.42	-0.50	-0.65	-0.58	-0.35	-0.50
R4(OFF)	-0.50	-0.88	-0.65	-0.42	-0.42	-0.42	-0.65	-0.65	-0.42
R5(OFF)	-0.73	-0.35	-0.35	-0.65	-0.50	-0.50	-0.65	-0.50	-0.50
R6(OFF)	-0.58	-0.81	-0.50	-0.50	-0.58	-0.58	-0.58	-0.73	-0.65
R7(OFF)	-0.65	-0.58	-0.58	-0.73	-0.35	-0.58	-0.35	-0.73	-0.58
R8(OFF)	-0.35	-0.88	-0.73	-0.81	-0.42	-0.65	-0.50	-0.65	-0.50
R9(OFF)	-0.58	-0.65	-0.65	-0.65	-0.73	-0.65	-0.42	-0.42	-0.35
R10(OFF)	-0.58	-1.11	-0.58	-0.65	-0.50	-0.65	-0.58	-0.58	-0.65
R11(OFF)	-0.50	-0.73	-0.50	-0.35	-0.50	-0.73	-0.58	-0.73	-0.65
Irradiated, unbiased parts statistics									
Min Value	-0.73	-1.11	-0.73	-0.81	-0.73	-0.73	-0.65	-0.73	-0.65
Max Value	-0.35	-0.35	-0.35	-0.35	-0.35	-0.42	-0.35	-0.27	-0.35
Average	-0.55	-0.75	-0.55	-0.57	-0.50	-0.58	-0.55	-0.56	-0.55
Sigma	0.12	0.21	0.11	0.15	0.10	0.11	0.10	0.17	0.11



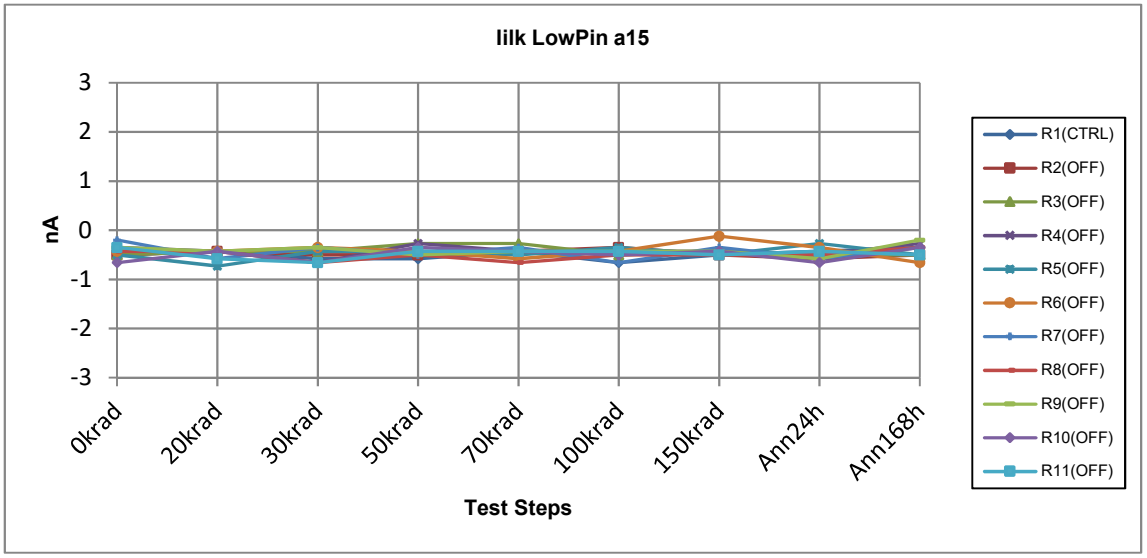
Iilk LowPin a18	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.45	-0.45	-0.68	-0.61	-0.30	-0.45	-0.53	-0.30	-0.61
Irradiated, unbiased parts results									
R2(OFF)	-0.61	-0.45	-0.38	-0.53	-0.53	-0.30	-0.30	-0.30	-0.61
R3(OFF)	-0.61	-0.53	-0.45	-0.45	-0.61	-0.53	-0.45	-0.45	-0.45
R4(OFF)	-0.45	-0.61	-0.45	-0.30	-0.53	-0.30	-0.68	-0.30	-0.38
R5(OFF)	-0.45	-0.53	-0.68	-0.61	-0.38	-0.53	-0.45	-0.53	-0.53
R6(OFF)	-0.53	-0.68	-0.68	-0.38	-0.53	-0.22	-0.45	-0.53	-0.61
R7(OFF)	-0.68	-0.53	-0.45	-0.61	-0.61	-0.38	-0.38	-0.61	-0.61
R8(OFF)	-0.68	-0.30	-0.45	-0.53	-0.76	-0.53	-0.45	-0.45	-0.45
R9(OFF)	-0.45	-0.30	-0.61	-0.68	-0.61	-0.38	-0.53	-0.68	-0.53
R10(OFF)	-0.45	-0.45	-0.61	-0.38	-0.68	-0.30	-0.38	-0.30	-0.53
R11(OFF)	-0.53	-0.61	-0.30	-0.61	-0.53	-0.68	-0.45	-0.45	-0.53
Irradiated, unbiased parts statistics									
Min Value	-0.68	-0.68	-0.68	-0.68	-0.76	-0.68	-0.68	-0.68	-0.61
Max Value	-0.45	-0.30	-0.30	-0.30	-0.38	-0.22	-0.30	-0.30	-0.38
Average	-0.54	-0.50	-0.51	-0.51	-0.58	-0.42	-0.45	-0.46	-0.52
Sigma	0.10	0.13	0.13	0.13	0.10	0.15	0.10	0.13	0.08



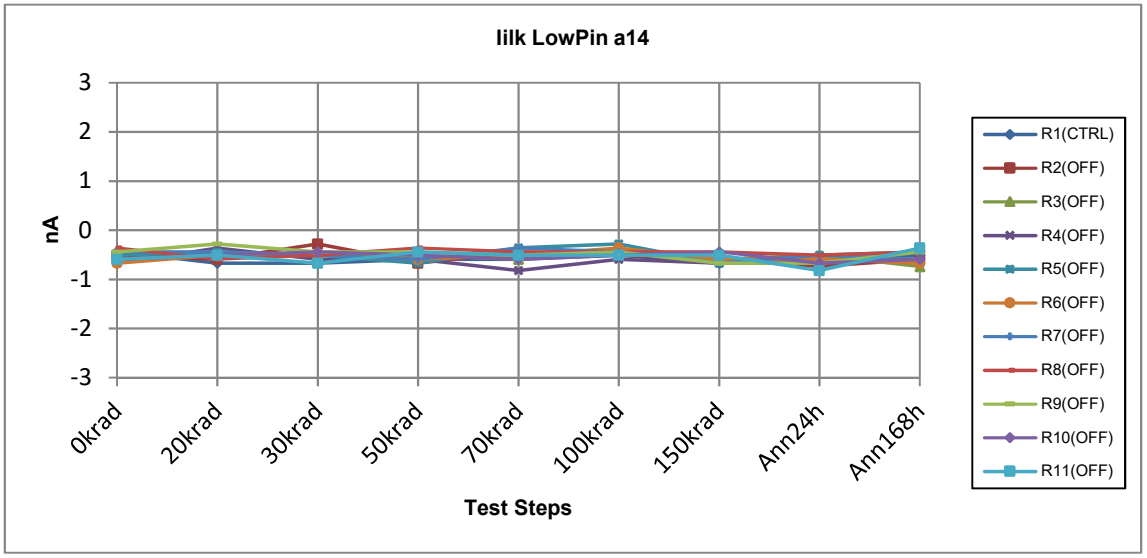
Iilk LowPin a17	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.59	-0.36	-0.67	-0.67	-0.67	-0.75	-0.67	-0.52	-0.75
Irradiated, unbiased parts results									
R2(OFF)	-0.59	-0.52	-0.67	-0.75	-0.67	-0.59	-0.59	-0.67	-0.67
R3(OFF)	-0.44	-0.75	-0.52	-0.52	-0.75	-0.67	-0.52	-0.59	-0.67
R4(OFF)	-0.67	-0.75	-0.59	-0.90	-0.59	-0.82	-0.82	-0.75	-0.75
R5(OFF)	-0.59	-0.36	-0.44	-0.59	-0.67	-0.82	-0.67	-0.59	-0.82
R6(OFF)	-0.44	-0.75	-0.59	-0.59	-0.82	-0.82	-0.75	-0.90	-0.75
R7(OFF)	-0.59	-0.67	-0.52	-0.67	-0.67	-0.75	-0.90	-0.75	-0.67
R8(OFF)	-0.52	-0.67	-0.75	-0.59	-0.90	-0.67	-0.59	-0.59	-0.67
R9(OFF)	-0.67	-0.67	-0.52	-0.75	-0.67	-0.90	-0.75	-0.59	-0.75
R10(OFF)	-0.67	-0.59	-0.67	-0.82	-0.59	-0.90	-0.82	-0.52	-0.59
R11(OFF)	-0.59	-0.75	-0.59	-0.75	-0.67	-0.75	-0.59	-0.75	-0.75
Irradiated, unbiased parts statistics									
Min Value	-0.67	-0.75	-0.75	-0.90	-0.90	-0.90	-0.90	-0.90	-0.82
Max Value	-0.44	-0.36	-0.44	-0.52	-0.59	-0.59	-0.52	-0.52	-0.59
Average	-0.58	-0.65	-0.59	-0.69	-0.70	-0.77	-0.70	-0.67	-0.71
Sigma	0.09	0.13	0.09	0.12	0.10	0.10	0.13	0.12	0.07



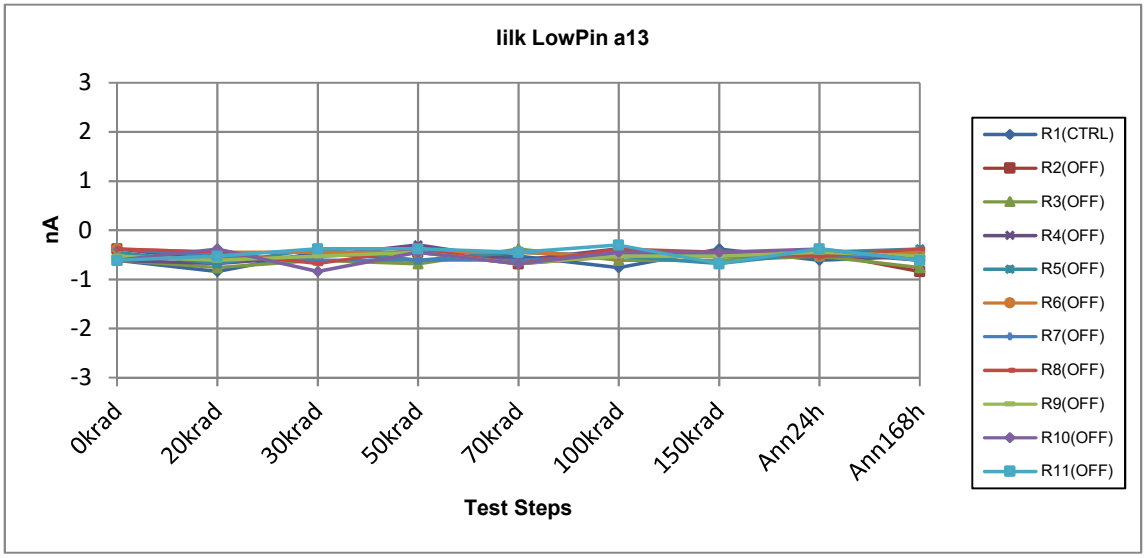
Iilk LowPin a16	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.53	-0.53	-0.69	-0.53	-0.61	-0.53	-0.38	-0.38	-0.61
Irradiated, unbiased parts results									
R2(OFF)	-0.46	-0.61	-0.46	-0.53	-0.61	-0.53	-0.46	-0.46	-0.46
R3(OFF)	-0.46	-0.53	-0.61	-0.38	-0.53	-0.46	-0.46	-0.46	-0.53
R4(OFF)	-0.46	-0.53	-0.46	-0.46	-0.46	-0.38	-0.46	-0.53	-0.46
R5(OFF)	-0.69	-0.69	-0.30	-0.46	-0.46	-0.46	-0.46	-0.46	-0.61
R6(OFF)	-0.30	-0.53	-0.53	-0.46	-0.30	-0.30	-0.38	-0.53	-0.46
R7(OFF)	-0.53	-0.61	-0.53	-0.46	-0.53	-0.61	-0.38	-0.38	-0.53
R8(OFF)	-0.61	-0.53	-0.30	-0.38	-0.61	-0.69	-0.46	-0.61	-0.38
R9(OFF)	-0.61	-0.69	-0.46	-0.69	-0.46	-0.61	-0.46	-0.69	-0.46
R10(OFF)	-0.61	-0.46	-0.53	-0.38	-0.30	-0.46	-0.38	-0.46	-0.61
R11(OFF)	-0.46	-0.46	-0.46	-0.69	-0.23	-0.61	-0.30	-0.53	-0.46
Irradiated, unbiased parts statistics									
Min Value	-0.69	-0.69	-0.61	-0.69	-0.61	-0.69	-0.46	-0.69	-0.61
Max Value	-0.30	-0.46	-0.30	-0.38	-0.23	-0.30	-0.30	-0.38	-0.38
Average	-0.52	-0.56	-0.46	-0.49	-0.45	-0.51	-0.42	-0.51	-0.50
Sigma	0.11	0.08	0.10	0.12	0.13	0.12	0.06	0.09	0.07



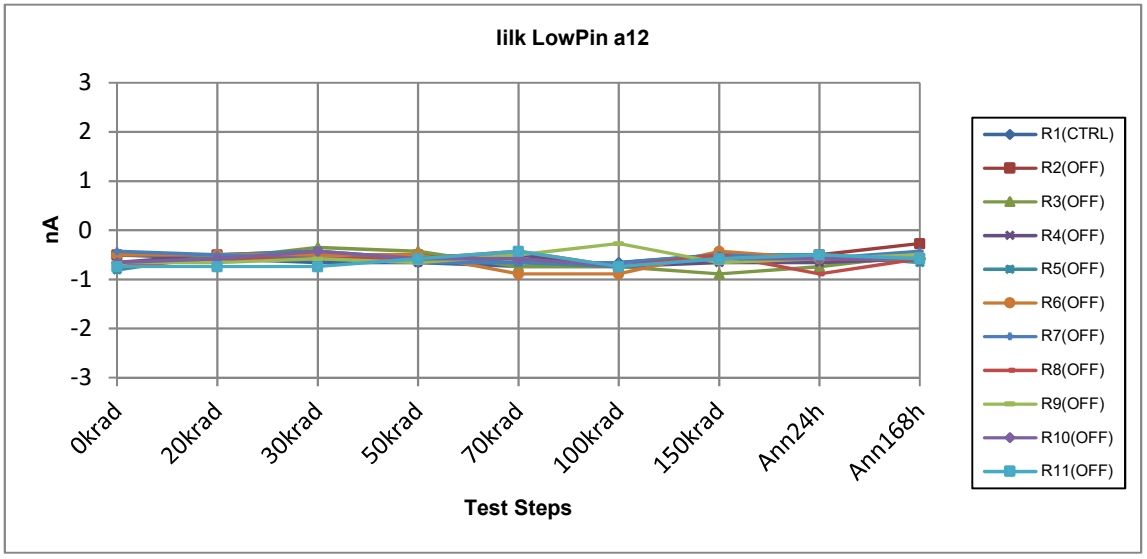
Iilk LowPin a15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.50	-0.43	-0.58	-0.58	-0.43	-0.66	-0.50	-0.43	-0.35
Irradiated, unbiased parts results									
R2(OFF)	-0.50	-0.43	-0.50	-0.50	-0.43	-0.35	-0.50	-0.58	-0.50
R3(OFF)	-0.50	-0.43	-0.43	-0.27	-0.27	-0.50	-0.43	-0.50	-0.50
R4(OFF)	-0.35	-0.43	-0.66	-0.27	-0.43	-0.43	-0.43	-0.50	-0.27
R5(OFF)	-0.50	-0.73	-0.43	-0.43	-0.50	-0.35	-0.50	-0.27	-0.50
R6(OFF)	-0.43	-0.43	-0.35	-0.43	-0.58	-0.43	-0.12	-0.35	-0.66
R7(OFF)	-0.20	-0.58	-0.35	-0.50	-0.35	-0.66	-0.35	-0.58	-0.35
R8(OFF)	-0.43	-0.43	-0.66	-0.50	-0.66	-0.50	-0.50	-0.50	-0.35
R9(OFF)	-0.35	-0.43	-0.35	-0.50	-0.43	-0.43	-0.43	-0.58	-0.20
R10(OFF)	-0.66	-0.43	-0.66	-0.35	-0.43	-0.50	-0.43	-0.66	-0.35
R11(OFF)	-0.35	-0.58	-0.66	-0.43	-0.43	-0.43	-0.50	-0.43	-0.50
Irradiated, unbiased parts statistics									
Min Value	-0.66	-0.73	-0.66	-0.50	-0.66	-0.66	-0.50	-0.66	-0.66
Max Value	-0.20	-0.43	-0.35	-0.27	-0.27	-0.35	-0.12	-0.27	-0.20
Average	-0.43	-0.49	-0.51	-0.42	-0.45	-0.46	-0.42	-0.50	-0.42
Sigma	0.12	0.10	0.14	0.09	0.11	0.09	0.12	0.12	0.14



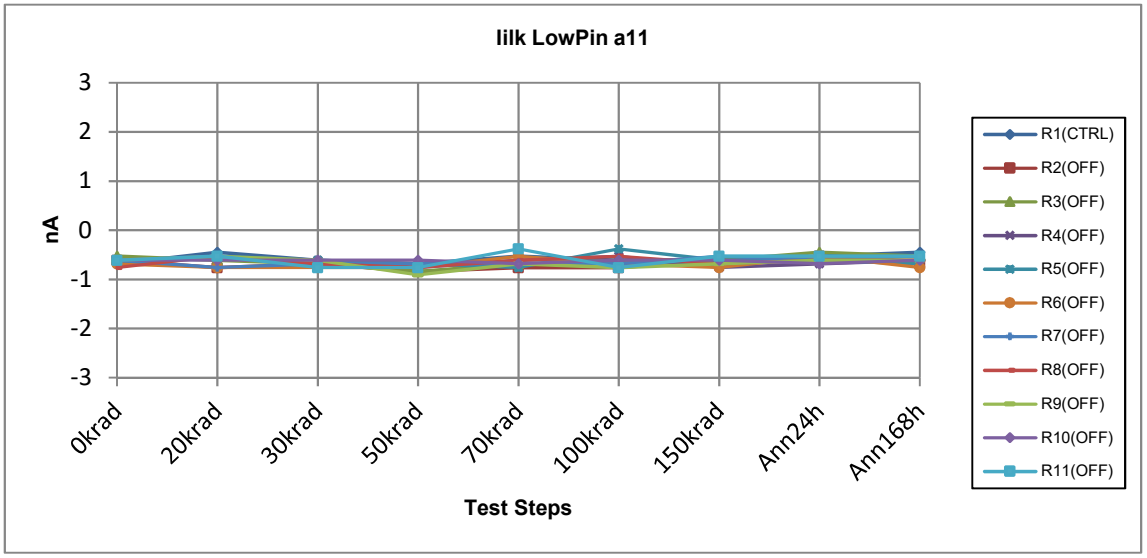
Iilk LowPin a14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.44	-0.67	-0.67	-0.59	-0.59	-0.51	-0.67	-0.59	-0.51
Irradiated, unbiased parts results									
R2(OFF)	-0.51	-0.59	-0.28	-0.67	-0.44	-0.51	-0.59	-0.74	-0.59
R3(OFF)	-0.59	-0.51	-0.51	-0.51	-0.59	-0.44	-0.59	-0.51	-0.74
R4(OFF)	-0.67	-0.36	-0.59	-0.59	-0.82	-0.59	-0.67	-0.67	-0.59
R5(OFF)	-0.51	-0.44	-0.51	-0.67	-0.36	-0.28	-0.67	-0.51	-0.44
R6(OFF)	-0.67	-0.51	-0.51	-0.59	-0.51	-0.36	-0.59	-0.59	-0.67
R7(OFF)	-0.44	-0.44	-0.51	-0.59	-0.36	-0.44	-0.67	-0.51	-0.59
R8(OFF)	-0.36	-0.59	-0.51	-0.36	-0.44	-0.44	-0.44	-0.51	-0.44
R9(OFF)	-0.44	-0.28	-0.44	-0.44	-0.51	-0.44	-0.67	-0.67	-0.44
R10(OFF)	-0.59	-0.51	-0.44	-0.51	-0.59	-0.51	-0.44	-0.67	-0.59
R11(OFF)	-0.59	-0.51	-0.67	-0.44	-0.51	-0.51	-0.51	-0.82	-0.36
Irradiated, unbiased parts statistics									
Min Value	-0.67	-0.59	-0.67	-0.67	-0.82	-0.59	-0.67	-0.82	-0.74
Max Value	-0.36	-0.28	-0.28	-0.36	-0.36	-0.28	-0.44	-0.51	-0.36
Average	-0.54	-0.47	-0.50	-0.54	-0.51	-0.45	-0.58	-0.62	-0.55
Sigma	0.10	0.10	0.10	0.10	0.13	0.09	0.09	0.11	0.12



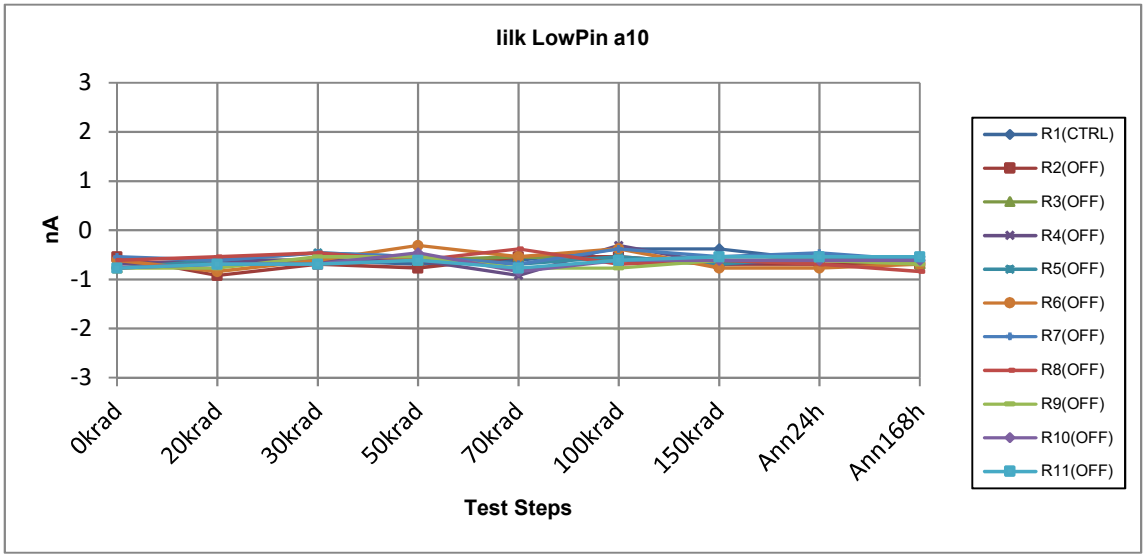
Iilk LowPin a13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.61	-0.84	-0.45	-0.61	-0.53	-0.76	-0.38	-0.61	-0.53
Irradiated, unbiased parts results									
R2(OFF)	-0.38	-0.61	-0.53	-0.45	-0.68	-0.53	-0.53	-0.45	-0.84
R3(OFF)	-0.61	-0.76	-0.61	-0.68	-0.38	-0.61	-0.61	-0.53	-0.76
R4(OFF)	-0.61	-0.68	-0.53	-0.30	-0.61	-0.38	-0.53	-0.45	-0.61
R5(OFF)	-0.45	-0.68	-0.38	-0.61	-0.45	-0.53	-0.68	-0.45	-0.38
R6(OFF)	-0.38	-0.45	-0.45	-0.45	-0.45	-0.53	-0.53	-0.53	-0.45
R7(OFF)	-0.38	-0.53	-0.61	-0.61	-0.61	-0.53	-0.53	-0.53	-0.53
R8(OFF)	-0.38	-0.45	-0.68	-0.38	-0.68	-0.38	-0.45	-0.53	-0.38
R9(OFF)	-0.53	-0.61	-0.53	-0.45	-0.68	-0.53	-0.53	-0.45	-0.53
R10(OFF)	-0.61	-0.38	-0.84	-0.45	-0.68	-0.45	-0.45	-0.38	-0.61
R11(OFF)	-0.61	-0.53	-0.38	-0.38	-0.45	-0.30	-0.68	-0.38	-0.61
Irradiated, unbiased parts statistics									
Min Value	-0.61	-0.76	-0.84	-0.68	-0.68	-0.61	-0.68	-0.53	-0.84
Max Value	-0.38	-0.38	-0.38	-0.30	-0.38	-0.30	-0.45	-0.38	-0.38
Average	-0.49	-0.57	-0.55	-0.48	-0.57	-0.48	-0.55	-0.47	-0.57
Sigma	0.11	0.12	0.14	0.12	0.12	0.10	0.08	0.06	0.15



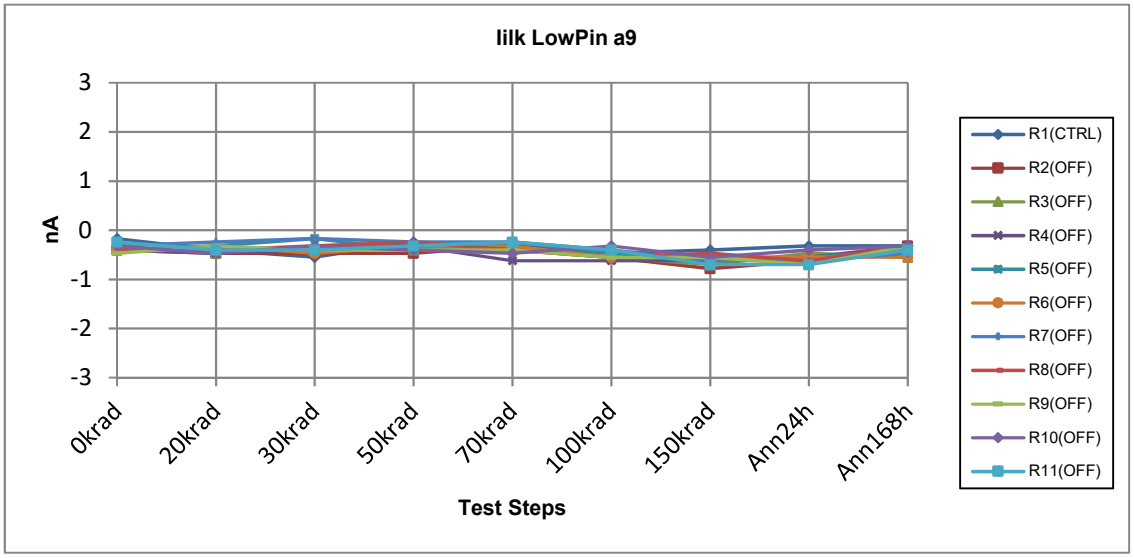
Iilk LowPin a12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.50	-0.58	-0.66	-0.66	-0.74	-0.66	-0.50	-0.66	-0.58
Irradiated, unbiased parts results									
R2(OFF)	-0.50	-0.50	-0.50	-0.50	-0.58	-0.74	-0.58	-0.50	-0.27
R3(OFF)	-0.66	-0.58	-0.35	-0.43	-0.74	-0.74	-0.89	-0.74	-0.50
R4(OFF)	-0.66	-0.50	-0.43	-0.66	-0.50	-0.74	-0.66	-0.66	-0.58
R5(OFF)	-0.81	-0.50	-0.43	-0.58	-0.66	-0.74	-0.50	-0.50	-0.66
R6(OFF)	-0.50	-0.50	-0.50	-0.50	-0.89	-0.89	-0.43	-0.58	-0.58
R7(OFF)	-0.43	-0.50	-0.58	-0.66	-0.66	-0.66	-0.50	-0.58	-0.43
R8(OFF)	-0.74	-0.58	-0.58	-0.58	-0.43	-0.74	-0.50	-0.89	-0.58
R9(OFF)	-0.66	-0.66	-0.58	-0.66	-0.50	-0.27	-0.66	-0.58	-0.50
R10(OFF)	-0.66	-0.58	-0.43	-0.58	-0.58	-0.74	-0.58	-0.58	-0.58
R11(OFF)	-0.74	-0.74	-0.74	-0.58	-0.43	-0.74	-0.58	-0.50	-0.58
Irradiated, unbiased parts statistics									
Min Value	-0.81	-0.74	-0.74	-0.66	-0.89	-0.89	-0.89	-0.89	-0.66
Max Value	-0.43	-0.50	-0.35	-0.43	-0.43	-0.27	-0.43	-0.50	-0.27
Average	-0.64	-0.56	-0.51	-0.57	-0.60	-0.70	-0.59	-0.61	-0.53
Sigma	0.12	0.08	0.11	0.08	0.15	0.16	0.13	0.12	0.11



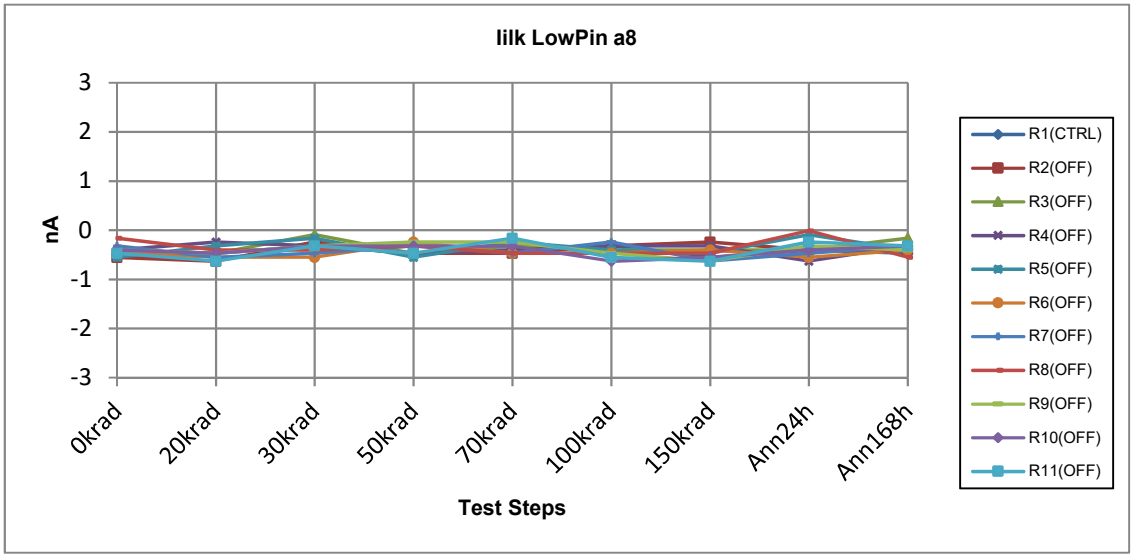
Iilk LowPin a11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.68	-0.45	-0.61	-0.68	-0.53	-0.61	-0.61	-0.53	-0.45
Irradiated, unbiased parts results									
R2(OFF)	-0.61	-0.76	-0.68	-0.84	-0.76	-0.76	-0.61	-0.53	-0.68
R3(OFF)	-0.53	-0.61	-0.68	-0.84	-0.68	-0.61	-0.61	-0.45	-0.53
R4(OFF)	-0.61	-0.53	-0.61	-0.76	-0.61	-0.53	-0.76	-0.68	-0.61
R5(OFF)	-0.68	-0.53	-0.61	-0.68	-0.76	-0.38	-0.61	-0.61	-0.68
R6(OFF)	-0.68	-0.76	-0.76	-0.76	-0.53	-0.68	-0.76	-0.53	-0.76
R7(OFF)	-0.61	-0.76	-0.68	-0.68	-0.68	-0.68	-0.53	-0.61	-0.53
R8(OFF)	-0.76	-0.53	-0.68	-0.76	-0.61	-0.53	-0.68	-0.61	-0.61
R9(OFF)	-0.61	-0.53	-0.61	-0.91	-0.68	-0.76	-0.68	-0.61	-0.61
R10(OFF)	-0.61	-0.61	-0.61	-0.61	-0.68	-0.61	-0.61	-0.68	-0.61
R11(OFF)	-0.61	-0.53	-0.76	-0.76	-0.38	-0.76	-0.53	-0.53	-0.53
Irradiated, unbiased parts statistics									
Min Value	-0.76	-0.76	-0.76	-0.91	-0.76	-0.76	-0.76	-0.68	-0.76
Max Value	-0.53	-0.53	-0.61	-0.61	-0.38	-0.38	-0.53	-0.45	-0.53
Average	-0.63	-0.62	-0.67	-0.76	-0.64	-0.63	-0.64	-0.58	-0.62
Sigma	0.06	0.11	0.06	0.09	0.11	0.12	0.08	0.07	0.08



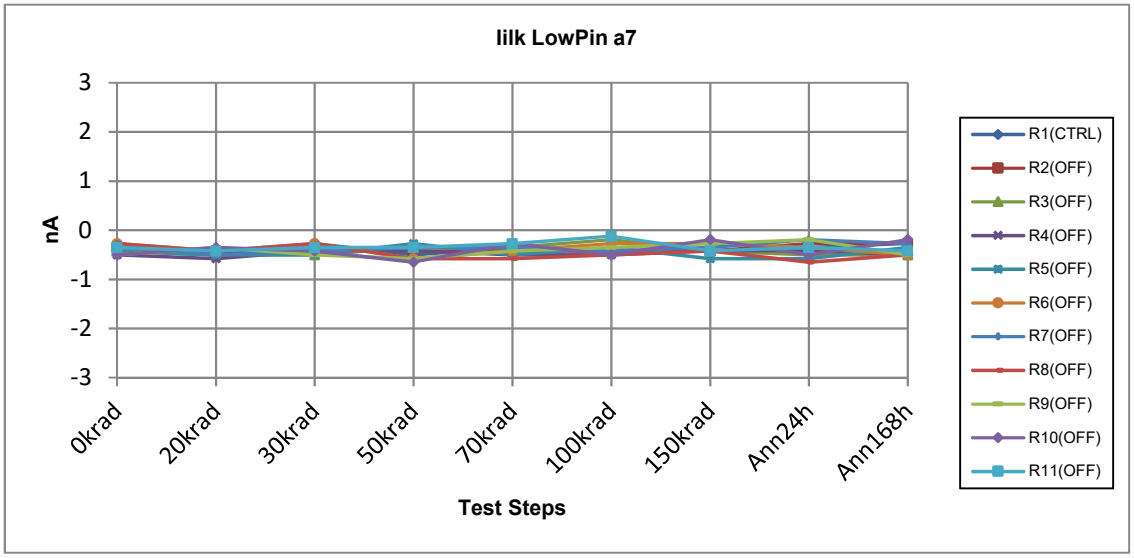
Iilk LowPin a10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.77	-0.69	-0.61	-0.69	-0.61	-0.38	-0.38	-0.61	-0.54
Irradiated, unbiased parts results									
R2(OFF)	-0.54	-0.92	-0.69	-0.77	-0.54	-0.54	-0.69	-0.69	-0.69
R3(OFF)	-0.77	-0.61	-0.61	-0.61	-0.54	-0.61	-0.69	-0.54	-0.69
R4(OFF)	-0.69	-0.61	-0.61	-0.61	-0.92	-0.31	-0.69	-0.61	-0.61
R5(OFF)	-0.77	-0.61	-0.46	-0.54	-0.69	-0.54	-0.69	-0.54	-0.54
R6(OFF)	-0.61	-0.84	-0.61	-0.31	-0.54	-0.38	-0.77	-0.77	-0.69
R7(OFF)	-0.54	-0.61	-0.46	-0.54	-0.69	-0.38	-0.54	-0.46	-0.61
R8(OFF)	-0.61	-0.54	-0.46	-0.61	-0.38	-0.69	-0.61	-0.69	-0.84
R9(OFF)	-0.77	-0.77	-0.54	-0.54	-0.77	-0.77	-0.61	-0.61	-0.69
R10(OFF)	-0.77	-0.69	-0.69	-0.46	-0.84	-0.61	-0.61	-0.61	-0.61
R11(OFF)	-0.77	-0.69	-0.69	-0.61	-0.77	-0.61	-0.54	-0.54	-0.54
Irradiated, unbiased parts statistics									
Min Value	-0.77	-0.92	-0.69	-0.77	-0.92	-0.77	-0.77	-0.77	-0.84
Max Value	-0.54	-0.54	-0.46	-0.31	-0.38	-0.31	-0.54	-0.46	-0.54
Average	-0.68	-0.69	-0.58	-0.56	-0.67	-0.54	-0.64	-0.61	-0.65
Sigma	0.10	0.12	0.10	0.12	0.17	0.15	0.07	0.09	0.09



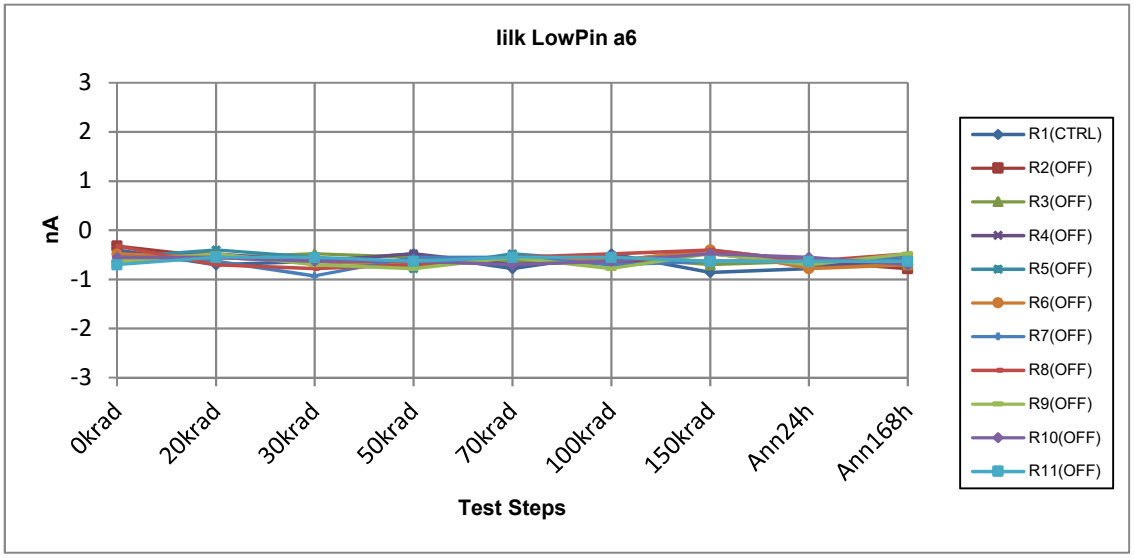
Iilk LowPin a9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.17	-0.40	-0.55	-0.24	-0.32	-0.47	-0.40	-0.32	-0.32
Irradiated, unbiased parts results									
R2(OFF)	-0.40	-0.47	-0.47	-0.47	-0.32	-0.55	-0.78	-0.62	-0.32
R3(OFF)	-0.32	-0.47	-0.32	-0.40	-0.40	-0.55	-0.70	-0.47	-0.55
R4(OFF)	-0.40	-0.47	-0.40	-0.32	-0.62	-0.62	-0.62	-0.55	-0.32
R5(OFF)	-0.40	-0.32	-0.17	-0.40	-0.24	-0.47	-0.55	-0.55	-0.40
R6(OFF)	-0.40	-0.32	-0.47	-0.32	-0.32	-0.55	-0.55	-0.55	-0.55
R7(OFF)	-0.32	-0.24	-0.17	-0.24	-0.24	-0.40	-0.62	-0.62	-0.47
R8(OFF)	-0.40	-0.40	-0.32	-0.24	-0.40	-0.55	-0.47	-0.62	-0.32
R9(OFF)	-0.47	-0.32	-0.40	-0.40	-0.40	-0.55	-0.55	-0.70	-0.32
R10(OFF)	-0.32	-0.47	-0.32	-0.40	-0.47	-0.32	-0.55	-0.40	-0.32
R11(OFF)	-0.24	-0.40	-0.40	-0.32	-0.24	-0.40	-0.70	-0.70	-0.40
Irradiated, unbiased parts statistics									
Min Value	-0.47	-0.47	-0.47	-0.47	-0.62	-0.62	-0.78	-0.70	-0.55
Max Value	-0.24	-0.24	-0.17	-0.24	-0.24	-0.32	-0.47	-0.40	-0.32
Average	-0.37	-0.39	-0.34	-0.35	-0.37	-0.50	-0.61	-0.58	-0.40
Sigma	0.07	0.08	0.11	0.08	0.12	0.09	0.09	0.09	0.10



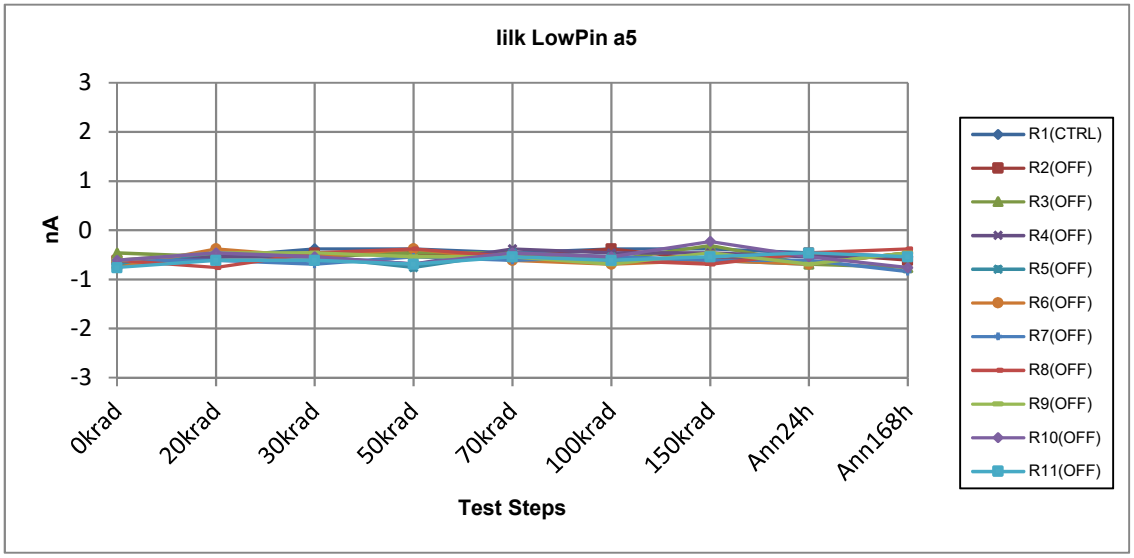
Iilk LowPin a8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.55	-0.47	-0.32	-0.47	-0.40	-0.32	-0.55	-0.40	-0.47
Irradiated, unbiased parts results									
R2(OFF)	-0.55	-0.63	-0.24	-0.47	-0.47	-0.32	-0.24	-0.40	-0.40
R3(OFF)	-0.47	-0.47	-0.09	-0.47	-0.32	-0.40	-0.40	-0.40	-0.16
R4(OFF)	-0.40	-0.24	-0.32	-0.47	-0.40	-0.32	-0.32	-0.63	-0.32
R5(OFF)	-0.55	-0.32	-0.16	-0.55	-0.24	-0.40	-0.47	-0.09	-0.40
R6(OFF)	-0.47	-0.55	-0.55	-0.24	-0.47	-0.47	-0.40	-0.55	-0.40
R7(OFF)	-0.32	-0.55	-0.47	-0.32	-0.47	-0.24	-0.63	-0.47	-0.32
R8(OFF)	-0.16	-0.40	-0.40	-0.32	-0.47	-0.47	-0.47	-0.01	-0.55
R9(OFF)	-0.40	-0.47	-0.32	-0.24	-0.24	-0.47	-0.63	-0.32	-0.40
R10(OFF)	-0.40	-0.47	-0.32	-0.32	-0.32	-0.63	-0.55	-0.40	-0.32
R11(OFF)	-0.47	-0.63	-0.32	-0.47	-0.16	-0.55	-0.63	-0.24	-0.32
Irradiated, unbiased parts statistics									
Min Value	-0.55	-0.63	-0.55	-0.55	-0.47	-0.63	-0.63	-0.63	-0.55
Max Value	-0.16	-0.24	-0.09	-0.24	-0.16	-0.24	-0.24	-0.01	-0.16
Average	-0.42	-0.47	-0.32	-0.39	-0.36	-0.43	-0.47	-0.35	-0.36
Sigma	0.12	0.13	0.14	0.11	0.12	0.12	0.14	0.19	0.10



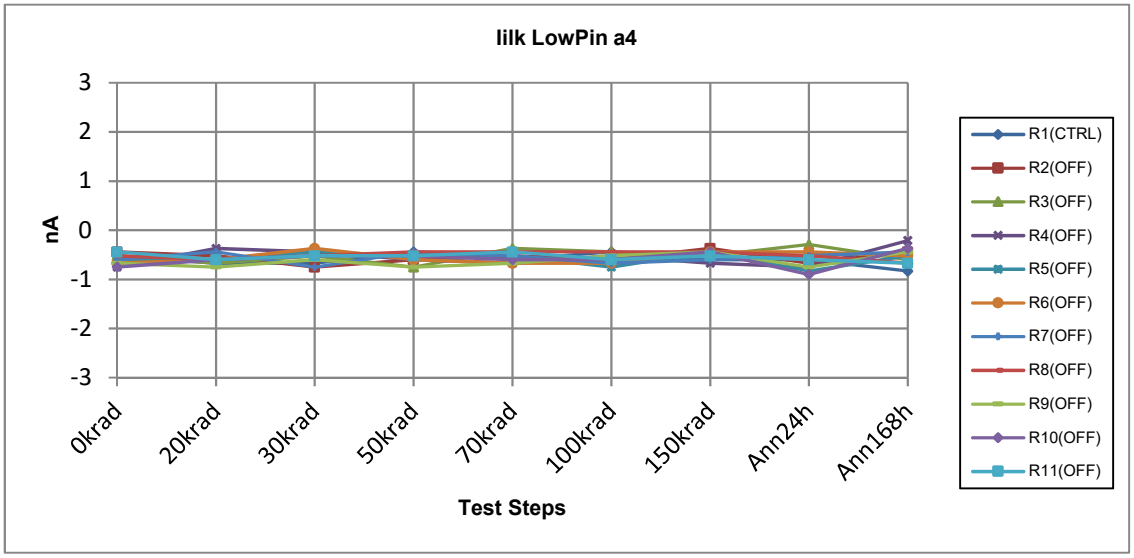
Iilk LowPin a7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.42	-0.50	-0.27	-0.50	-0.35	-0.42	-0.42	-0.35	-0.27
Irradiated, unbiased parts results									
R2(OFF)	-0.35	-0.50	-0.35	-0.42	-0.42	-0.42	-0.42	-0.27	-0.27
R3(OFF)	-0.42	-0.50	-0.50	-0.35	-0.35	-0.19	-0.42	-0.50	-0.50
R4(OFF)	-0.50	-0.58	-0.42	-0.42	-0.50	-0.50	-0.42	-0.42	-0.50
R5(OFF)	-0.42	-0.50	-0.50	-0.27	-0.50	-0.35	-0.58	-0.58	-0.35
R6(OFF)	-0.27	-0.42	-0.27	-0.58	-0.42	-0.27	-0.27	-0.35	-0.50
R7(OFF)	-0.27	-0.50	-0.42	-0.35	-0.35	-0.42	-0.35	-0.19	-0.27
R8(OFF)	-0.27	-0.42	-0.27	-0.58	-0.58	-0.50	-0.42	-0.65	-0.50
R9(OFF)	-0.50	-0.35	-0.50	-0.58	-0.42	-0.35	-0.27	-0.19	-0.50
R10(OFF)	-0.50	-0.35	-0.42	-0.65	-0.27	-0.50	-0.19	-0.50	-0.19
R11(OFF)	-0.35	-0.42	-0.35	-0.35	-0.27	-0.12	-0.42	-0.35	-0.42
Irradiated, unbiased parts statistics									
Min Value	-0.50	-0.58	-0.50	-0.65	-0.58	-0.50	-0.58	-0.65	-0.50
Max Value	-0.27	-0.35	-0.27	-0.27	-0.27	-0.12	-0.19	-0.19	-0.19
Average	-0.39	-0.45	-0.40	-0.46	-0.41	-0.36	-0.38	-0.40	-0.40
Sigma	0.10	0.07	0.09	0.13	0.10	0.13	0.11	0.16	0.12



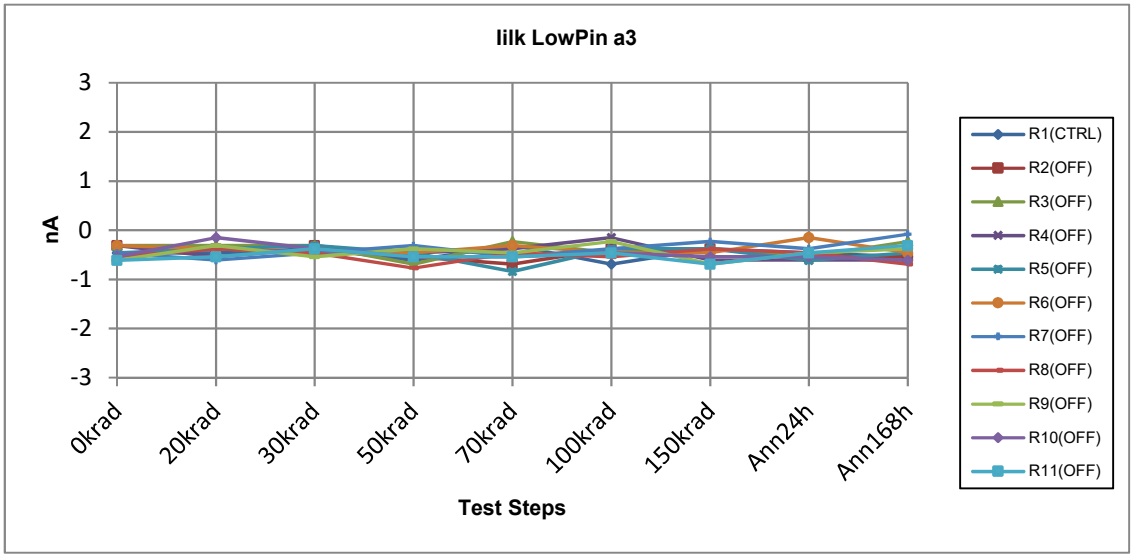
Iilk LowPin a6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.40	-0.70	-0.63	-0.48	-0.78	-0.48	-0.86	-0.78	-0.55
Irradiated, unbiased parts results									
R2(OFF)	-0.32	-0.55	-0.63	-0.70	-0.63	-0.63	-0.63	-0.63	-0.78
R3(OFF)	-0.63	-0.55	-0.48	-0.55	-0.63	-0.55	-0.70	-0.63	-0.70
R4(OFF)	-0.48	-0.48	-0.63	-0.48	-0.70	-0.63	-0.48	-0.70	-0.63
R5(OFF)	-0.55	-0.40	-0.55	-0.78	-0.48	-0.63	-0.40	-0.63	-0.55
R6(OFF)	-0.48	-0.55	-0.63	-0.70	-0.55	-0.63	-0.40	-0.78	-0.70
R7(OFF)	-0.55	-0.63	-0.93	-0.55	-0.55	-0.70	-0.63	-0.63	-0.55
R8(OFF)	-0.32	-0.70	-0.78	-0.70	-0.55	-0.48	-0.40	-0.63	-0.48
R9(OFF)	-0.63	-0.48	-0.70	-0.78	-0.55	-0.78	-0.48	-0.70	-0.48
R10(OFF)	-0.55	-0.55	-0.63	-0.63	-0.70	-0.63	-0.48	-0.55	-0.70
R11(OFF)	-0.70	-0.55	-0.55	-0.63	-0.55	-0.55	-0.63	-0.63	-0.63
Irradiated, unbiased parts statistics									
Min Value	-0.70	-0.70	-0.93	-0.78	-0.70	-0.78	-0.70	-0.78	-0.78
Max Value	-0.32	-0.40	-0.48	-0.48	-0.48	-0.48	-0.40	-0.55	-0.48
Average	-0.52	-0.54	-0.65	-0.65	-0.59	-0.62	-0.52	-0.65	-0.62
Sigma	0.13	0.08	0.13	0.10	0.07	0.08	0.11	0.06	0.10



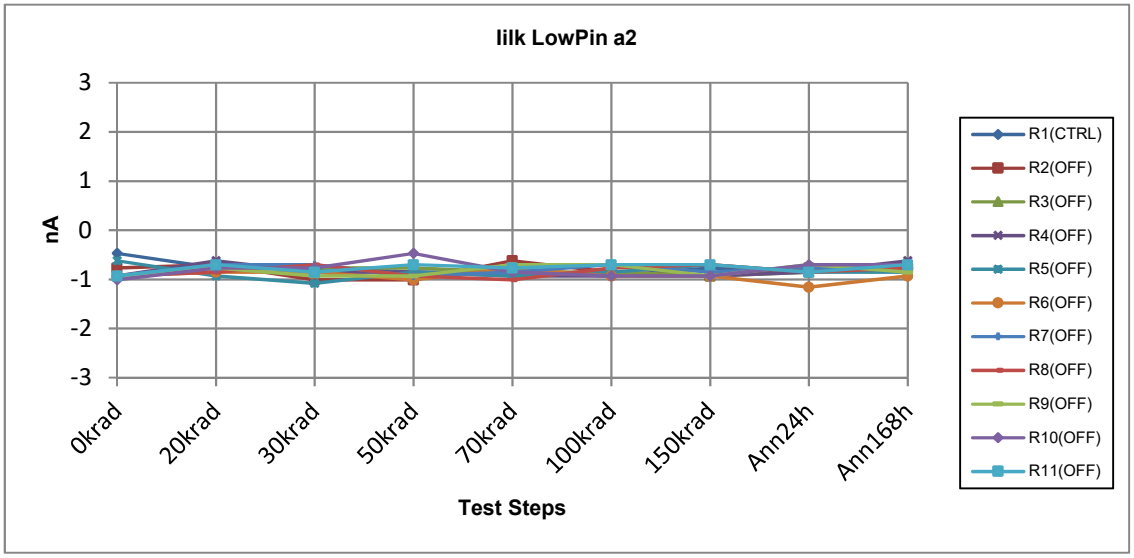
Iilk LowPin a5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.61	-0.54	-0.38	-0.38	-0.46	-0.38	-0.38	-0.46	-0.54
Irradiated, unbiased parts results									
R2(OFF)	-0.61	-0.54	-0.46	-0.46	-0.54	-0.38	-0.61	-0.46	-0.61
R3(OFF)	-0.46	-0.54	-0.54	-0.46	-0.46	-0.61	-0.31	-0.69	-0.76
R4(OFF)	-0.69	-0.54	-0.54	-0.69	-0.38	-0.46	-0.46	-0.54	-0.54
R5(OFF)	-0.69	-0.46	-0.54	-0.76	-0.46	-0.54	-0.61	-0.69	-0.46
R6(OFF)	-0.76	-0.38	-0.54	-0.38	-0.61	-0.69	-0.61	-0.69	-0.46
R7(OFF)	-0.61	-0.61	-0.69	-0.54	-0.61	-0.54	-0.61	-0.61	-0.84
R8(OFF)	-0.61	-0.76	-0.46	-0.38	-0.54	-0.61	-0.69	-0.46	-0.38
R9(OFF)	-0.61	-0.46	-0.46	-0.54	-0.54	-0.69	-0.46	-0.69	-0.46
R10(OFF)	-0.61	-0.46	-0.54	-0.69	-0.46	-0.54	-0.23	-0.54	-0.76
R11(OFF)	-0.76	-0.61	-0.61	-0.69	-0.54	-0.61	-0.54	-0.46	-0.54
Irradiated, unbiased parts statistics									
Min Value	-0.76	-0.76	-0.69	-0.76	-0.61	-0.69	-0.69	-0.69	-0.84
Max Value	-0.46	-0.38	-0.46	-0.38	-0.38	-0.38	-0.23	-0.46	-0.38
Average	-0.64	-0.54	-0.54	-0.56	-0.51	-0.57	-0.51	-0.58	-0.58
Sigma	0.09	0.11	0.07	0.14	0.07	0.10	0.15	0.10	0.16



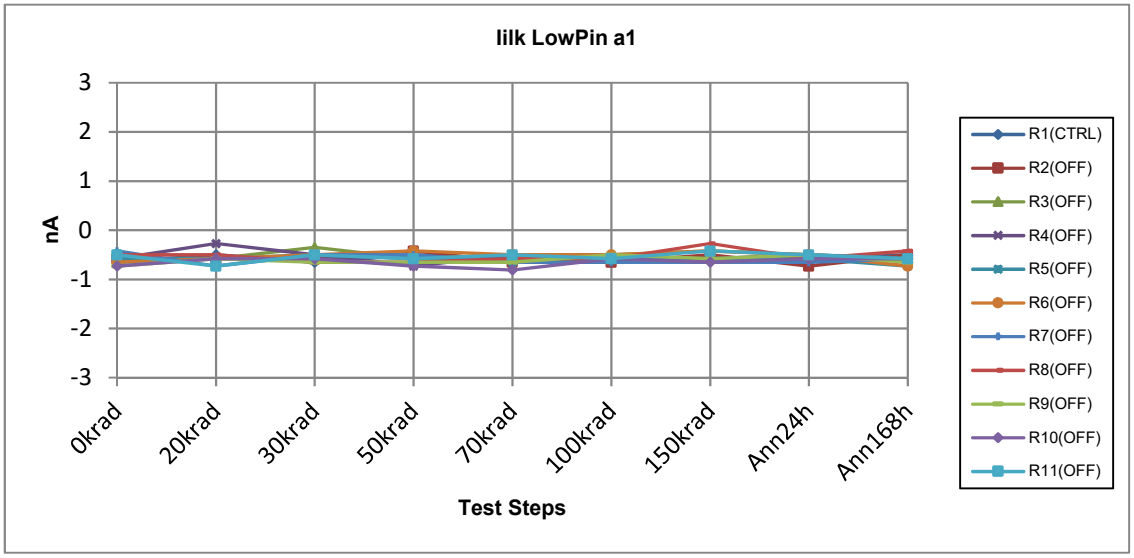
Iilk LowPin a4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.52	-0.67	-0.67	-0.44	-0.60	-0.44	-0.60	-0.60	-0.83
Irradiated, unbiased parts results									
R2(OFF)	-0.44	-0.52	-0.75	-0.60	-0.52	-0.60	-0.37	-0.67	-0.44
R3(OFF)	-0.52	-0.67	-0.52	-0.75	-0.37	-0.44	-0.52	-0.29	-0.60
R4(OFF)	-0.75	-0.37	-0.44	-0.60	-0.67	-0.52	-0.67	-0.75	-0.21
R5(OFF)	-0.60	-0.60	-0.44	-0.52	-0.52	-0.75	-0.44	-0.83	-0.52
R6(OFF)	-0.67	-0.60	-0.37	-0.60	-0.67	-0.67	-0.44	-0.44	-0.52
R7(OFF)	-0.60	-0.44	-0.75	-0.44	-0.52	-0.67	-0.60	-0.52	-0.44
R8(OFF)	-0.52	-0.60	-0.52	-0.44	-0.44	-0.44	-0.44	-0.52	-0.67
R9(OFF)	-0.67	-0.75	-0.60	-0.75	-0.67	-0.52	-0.44	-0.75	-0.44
R10(OFF)	-0.75	-0.60	-0.52	-0.52	-0.60	-0.60	-0.44	-0.90	-0.37
R11(OFF)	-0.44	-0.60	-0.52	-0.52	-0.44	-0.60	-0.52	-0.60	-0.67
Irradiated, unbiased parts statistics									
Min Value	-0.75	-0.75	-0.75	-0.75	-0.67	-0.75	-0.67	-0.90	-0.67
Max Value	-0.44	-0.37	-0.37	-0.44	-0.37	-0.44	-0.37	-0.29	-0.21
Average	-0.60	-0.58	-0.54	-0.57	-0.54	-0.58	-0.49	-0.63	-0.49
Sigma	0.11	0.11	0.13	0.11	0.11	0.10	0.09	0.19	0.14



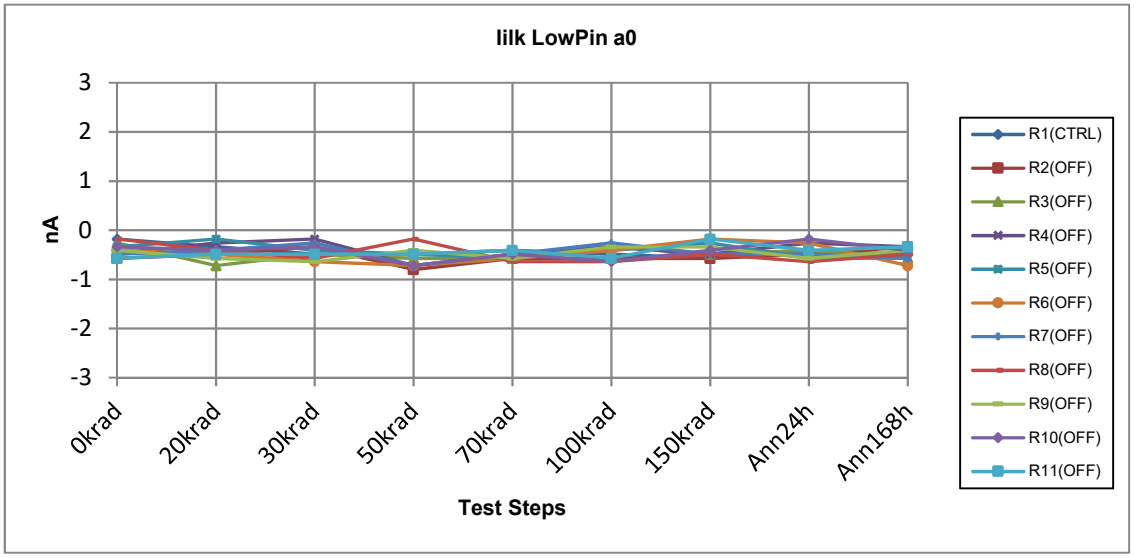
Iilk LowPin a3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.46	-0.46	-0.38	-0.61	-0.31	-0.69	-0.38	-0.46	-0.54
Irradiated, unbiased parts results									
R2(OFF)	-0.31	-0.38	-0.31	-0.54	-0.69	-0.38	-0.38	-0.54	-0.54
R3(OFF)	-0.31	-0.31	-0.31	-0.69	-0.23	-0.46	-0.38	-0.54	-0.23
R4(OFF)	-0.31	-0.54	-0.38	-0.46	-0.38	-0.15	-0.61	-0.61	-0.61
R5(OFF)	-0.46	-0.38	-0.31	-0.46	-0.84	-0.38	-0.38	-0.61	-0.46
R6(OFF)	-0.31	-0.38	-0.46	-0.46	-0.31	-0.46	-0.46	-0.15	-0.46
R7(OFF)	-0.46	-0.61	-0.46	-0.31	-0.54	-0.38	-0.23	-0.38	-0.08
R8(OFF)	-0.54	-0.38	-0.46	-0.77	-0.46	-0.54	-0.38	-0.46	-0.69
R9(OFF)	-0.61	-0.31	-0.54	-0.38	-0.46	-0.23	-0.69	-0.46	-0.38
R10(OFF)	-0.54	-0.15	-0.38	-0.54	-0.54	-0.46	-0.54	-0.54	-0.61
R11(OFF)	-0.61	-0.54	-0.38	-0.54	-0.54	-0.46	-0.69	-0.46	-0.31
Irradiated, unbiased parts statistics									
Min Value	-0.61	-0.61	-0.54	-0.77	-0.84	-0.54	-0.69	-0.61	-0.69
Max Value	-0.31	-0.15	-0.31	-0.31	-0.23	-0.15	-0.23	-0.15	-0.08
Average	-0.45	-0.40	-0.40	-0.52	-0.50	-0.39	-0.47	-0.48	-0.44
Sigma	0.13	0.13	0.08	0.14	0.18	0.12	0.15	0.14	0.19



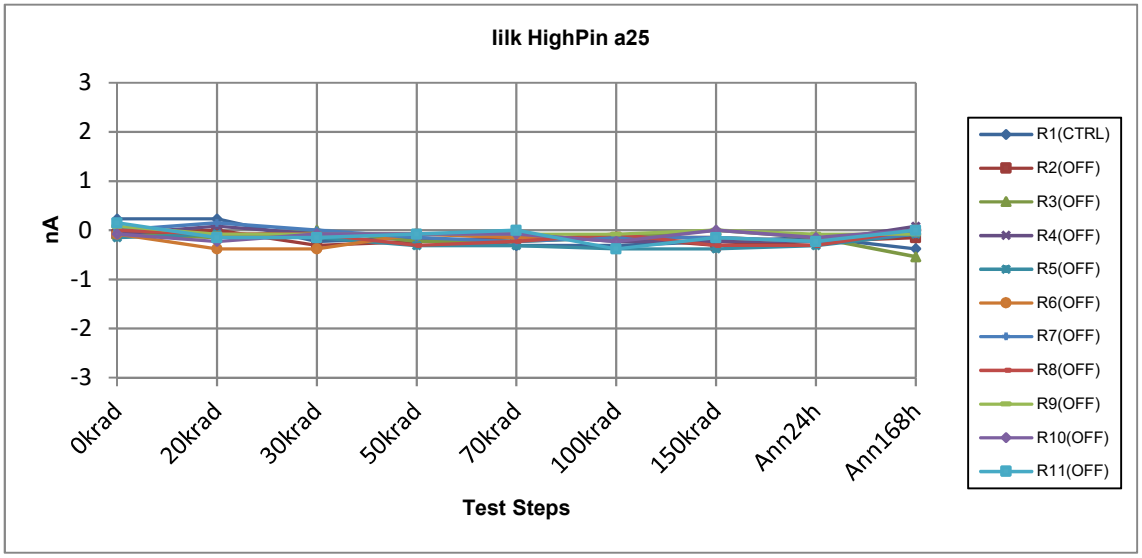
Iilk LowPin a2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.47	-0.77	-0.77	-0.85	-0.85	-0.93	-0.77	-0.85	-0.77
Irradiated, unbiased parts results									
R2(OFF)	-0.77	-0.70	-1.01	-1.01	-0.62	-0.85	-0.93	-0.77	-0.77
R3(OFF)	-0.93	-0.77	-0.77	-0.77	-0.85	-0.85	-0.93	-0.85	-0.70
R4(OFF)	-0.93	-0.62	-0.85	-0.85	-0.93	-0.93	-0.93	-0.85	-0.62
R5(OFF)	-0.62	-0.93	-1.08	-0.85	-0.93	-0.85	-0.70	-0.85	-0.85
R6(OFF)	-0.93	-0.85	-0.85	-1.01	-0.77	-0.93	-0.93	-1.16	-0.93
R7(OFF)	-0.93	-0.70	-0.70	-0.93	-0.85	-0.70	-0.85	-0.77	-0.70
R8(OFF)	-0.93	-0.85	-0.70	-0.93	-1.01	-0.77	-0.70	-0.85	-0.77
R9(OFF)	-0.93	-0.77	-0.93	-0.93	-0.70	-0.70	-0.93	-0.70	-0.85
R10(OFF)	-1.01	-0.77	-0.77	-0.47	-0.85	-0.93	-0.93	-0.70	-0.70
R11(OFF)	-0.93	-0.70	-0.85	-0.70	-0.77	-0.70	-0.70	-0.85	-0.70
Irradiated, unbiased parts statistics									
Min Value	-1.01	-0.93	-1.08	-1.01	-1.01	-0.93	-0.93	-1.16	-0.93
Max Value	-0.62	-0.62	-0.70	-0.47	-0.62	-0.70	-0.70	-0.70	-0.62
Average	-0.89	-0.77	-0.85	-0.85	-0.83	-0.82	-0.85	-0.84	-0.76
Sigma	0.11	0.09	0.13	0.16	0.12	0.10	0.11	0.13	0.09



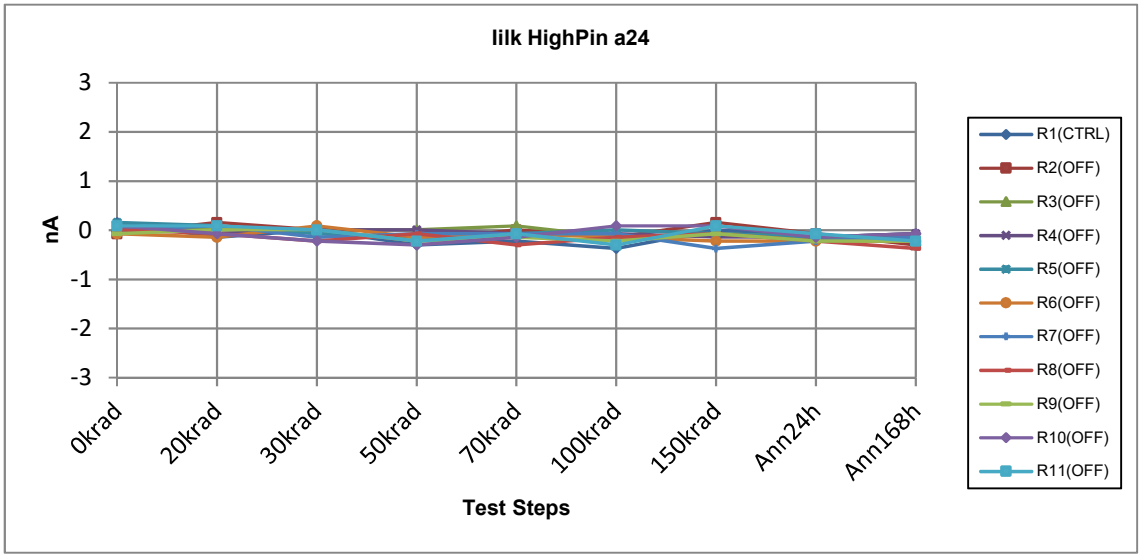
Iilk LowPin a1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.65	-0.50	-0.65	-0.50	-0.58	-0.58	-0.58	-0.58	-0.50
Irradiated, unbiased parts results									
R2(OFF)	-0.58	-0.58	-0.58	-0.42	-0.65	-0.65	-0.50	-0.73	-0.50
R3(OFF)	-0.65	-0.58	-0.35	-0.58	-0.50	-0.50	-0.42	-0.50	-0.58
R4(OFF)	-0.58	-0.27	-0.50	-0.73	-0.50	-0.58	-0.58	-0.50	-0.58
R5(OFF)	-0.58	-0.58	-0.50	-0.58	-0.65	-0.58	-0.58	-0.58	-0.73
R6(OFF)	-0.65	-0.58	-0.50	-0.42	-0.50	-0.50	-0.42	-0.50	-0.73
R7(OFF)	-0.42	-0.73	-0.50	-0.50	-0.65	-0.65	-0.65	-0.65	-0.58
R8(OFF)	-0.50	-0.50	-0.65	-0.65	-0.58	-0.58	-0.27	-0.58	-0.42
R9(OFF)	-0.73	-0.58	-0.65	-0.65	-0.65	-0.50	-0.58	-0.50	-0.65
R10(OFF)	-0.73	-0.58	-0.58	-0.73	-0.81	-0.58	-0.65	-0.58	-0.58
R11(OFF)	-0.50	-0.73	-0.50	-0.58	-0.50	-0.58	-0.42	-0.50	-0.58
Irradiated, unbiased parts statistics									
Min Value	-0.73	-0.73	-0.65	-0.73	-0.81	-0.65	-0.65	-0.73	-0.73
Max Value	-0.42	-0.27	-0.35	-0.42	-0.50	-0.50	-0.27	-0.50	-0.42
Average	-0.59	-0.57	-0.53	-0.58	-0.60	-0.57	-0.51	-0.56	-0.59
Sigma	0.10	0.13	0.09	0.11	0.10	0.06	0.12	0.08	0.09



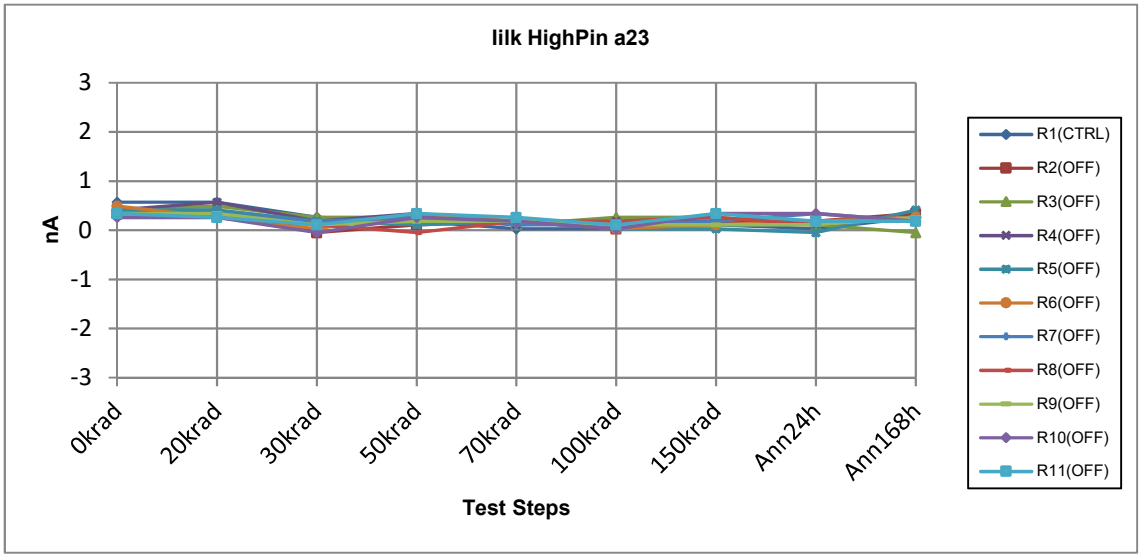
Iilk LowPin a0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.18	-0.34	-0.49	-0.49	-0.41	-0.49	-0.57	-0.41	-0.49
Irradiated, unbiased parts results									
R2(OFF)	-0.57	-0.49	-0.34	-0.80	-0.57	-0.57	-0.57	-0.49	-0.34
R3(OFF)	-0.26	-0.72	-0.49	-0.57	-0.57	-0.34	-0.49	-0.41	-0.57
R4(OFF)	-0.49	-0.26	-0.18	-0.72	-0.49	-0.34	-0.49	-0.26	-0.34
R5(OFF)	-0.34	-0.18	-0.41	-0.49	-0.57	-0.41	-0.26	-0.57	-0.57
R6(OFF)	-0.41	-0.49	-0.64	-0.72	-0.57	-0.41	-0.18	-0.26	-0.72
R7(OFF)	-0.49	-0.41	-0.26	-0.72	-0.49	-0.26	-0.49	-0.49	-0.57
R8(OFF)	-0.18	-0.41	-0.57	-0.18	-0.64	-0.64	-0.49	-0.64	-0.49
R9(OFF)	-0.41	-0.57	-0.64	-0.41	-0.57	-0.34	-0.34	-0.57	-0.41
R10(OFF)	-0.34	-0.41	-0.34	-0.72	-0.49	-0.64	-0.41	-0.18	-0.41
R11(OFF)	-0.57	-0.49	-0.49	-0.49	-0.41	-0.57	-0.18	-0.41	-0.34
Irradiated, unbiased parts statistics									
Min Value	-0.57	-0.72	-0.64	-0.80	-0.64	-0.64	-0.57	-0.64	-0.72
Max Value	-0.18	-0.18	-0.18	-0.18	-0.41	-0.26	-0.18	-0.18	-0.34
Average	-0.41	-0.44	-0.44	-0.58	-0.54	-0.45	-0.39	-0.43	-0.48
Sigma	0.13	0.15	0.16	0.19	0.07	0.14	0.14	0.15	0.13



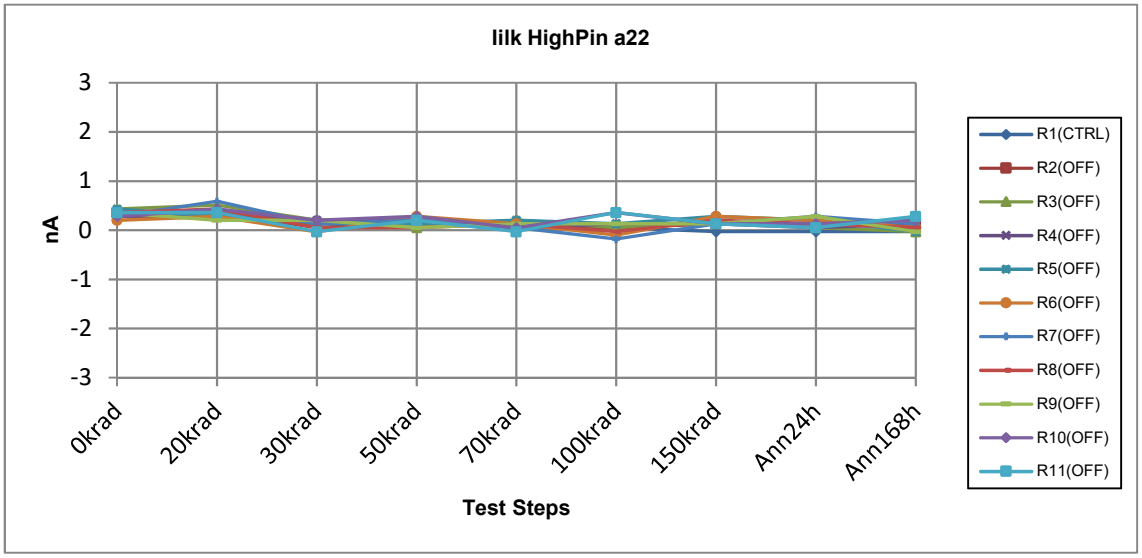
ILI HighPin a25	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.23	0.23	-0.23	-0.15	-0.31	-0.31	-0.23	-0.15	-0.38
Irradiated, unbiased parts results									
R2(OFF)	-0.08	0.00	-0.31	-0.23	-0.15	-0.15	-0.31	-0.23	-0.15
R3(OFF)	-0.08	-0.15	0.00	-0.23	-0.23	-0.15	0.00	-0.15	-0.54
R4(OFF)	-0.08	0.08	-0.08	-0.08	-0.08	-0.23	-0.23	-0.23	0.08
R5(OFF)	-0.15	-0.08	-0.15	-0.31	-0.31	-0.38	-0.38	-0.31	-0.08
R6(OFF)	-0.08	-0.38	-0.38	-0.08	-0.15	-0.15	-0.15	-0.23	0.00
R7(OFF)	0.00	0.15	0.00	-0.15	-0.23	-0.15	-0.15	-0.23	-0.08
R8(OFF)	0.00	-0.08	-0.08	-0.31	-0.23	-0.08	-0.31	-0.31	0.00
R9(OFF)	0.08	-0.08	-0.08	-0.08	-0.08	-0.08	0.00	-0.08	-0.08
R10(OFF)	-0.08	-0.23	-0.08	-0.08	-0.08	-0.23	0.00	-0.15	0.00
R11(OFF)	0.15	-0.15	-0.15	-0.08	0.00	-0.38	-0.15	-0.23	0.00
Irradiated, unbiased parts statistics									
Min Value	-0.15	-0.38	-0.38	-0.31	-0.31	-0.38	-0.38	-0.31	-0.54
Max Value	0.15	0.15	0.00	-0.08	0.00	-0.08	0.00	-0.08	0.08
Average	-0.03	-0.09	-0.13	-0.16	-0.15	-0.20	-0.17	-0.22	-0.09
Sigma	0.09	0.15	0.12	0.10	0.10	0.11	0.14	0.07	0.17



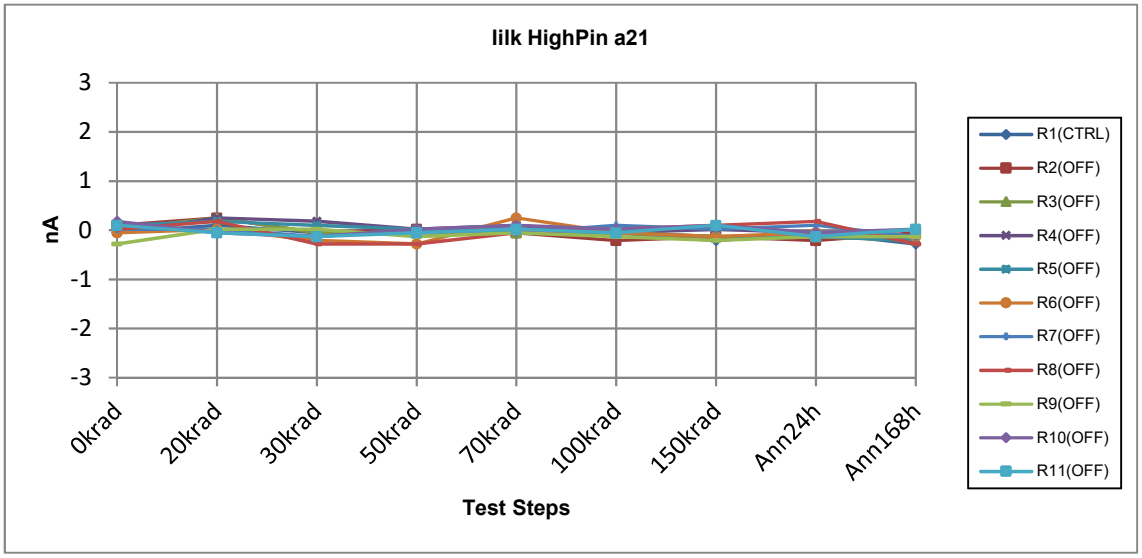
ILI HighPin a24	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.16	-0.14	0.01	-0.30	-0.22	-0.37	0.01	-0.14	-0.07
Irradiated, unbiased parts results									
R2(OFF)	-0.07	0.16	0.01	-0.22	0.01	-0.14	0.16	-0.07	-0.30
R3(OFF)	0.09	0.01	0.01	0.01	0.09	-0.14	-0.07	-0.14	-0.22
R4(OFF)	0.09	-0.07	0.01	0.01	-0.07	-0.07	-0.14	-0.14	-0.07
R5(OFF)	0.16	0.09	-0.07	-0.14	-0.07	0.01	-0.07	-0.14	-0.14
R6(OFF)	-0.07	-0.14	0.09	-0.14	-0.07	-0.14	-0.22	-0.22	-0.22
R7(OFF)	0.01	0.09	-0.14	-0.07	-0.07	-0.07	-0.37	-0.22	-0.14
R8(OFF)	0.01	-0.07	-0.22	-0.07	-0.30	-0.14	-0.07	-0.22	-0.37
R9(OFF)	-0.07	0.01	0.01	-0.22	-0.14	-0.22	-0.07	-0.22	-0.22
R10(OFF)	0.09	-0.07	-0.22	-0.30	-0.14	0.09	0.09	-0.14	-0.07
R11(OFF)	0.09	0.09	0.01	-0.22	-0.07	-0.30	0.09	-0.07	-0.22
Irradiated, unbiased parts statistics									
Min Value	-0.07	-0.14	-0.22	-0.30	-0.30	-0.30	-0.37	-0.22	-0.37
Max Value	0.16	0.16	0.09	0.01	0.09	0.09	0.16	-0.07	-0.07
Average	0.03	0.01	-0.05	-0.14	-0.08	-0.11	-0.07	-0.16	-0.20
Sigma	0.08	0.10	0.11	0.11	0.10	0.11	0.16	0.06	0.10



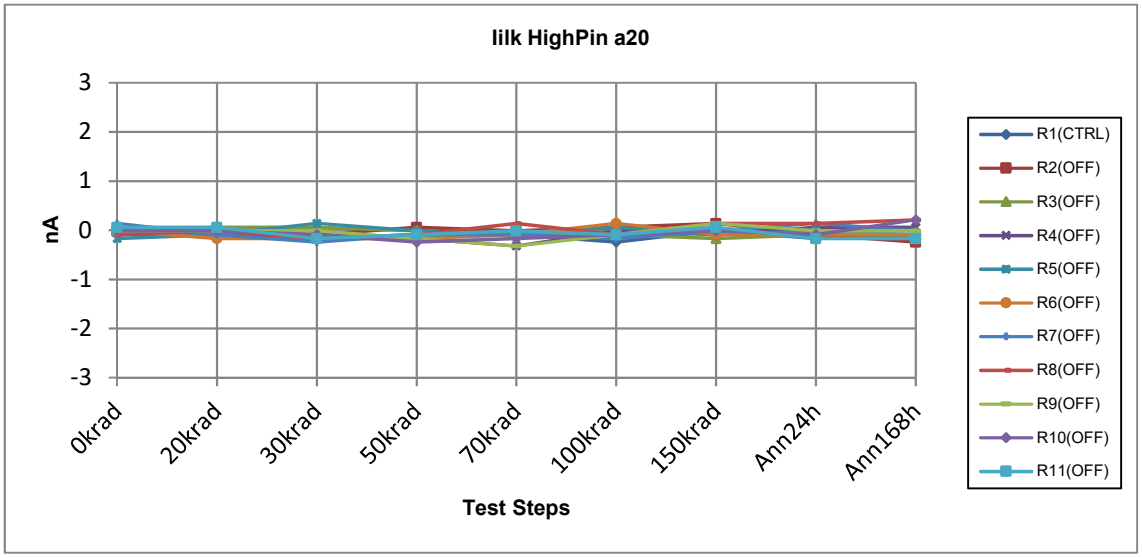
ILI HighPin a23	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.57	0.57	0.26	0.18	0.03	0.03	0.11	0.03	0.26
Irradiated, unbiased parts results									
R2(OFF)	0.34	0.41	-0.05	0.11	0.18	0.03	0.18	0.18	0.34
R3(OFF)	0.41	0.49	0.26	0.26	0.11	0.26	0.26	0.11	-0.05
R4(OFF)	0.41	0.57	0.18	0.34	0.11	0.18	0.18	0.11	0.26
R5(OFF)	0.41	0.41	0.18	0.11	0.18	0.03	0.03	-0.05	0.41
R6(OFF)	0.49	0.26	0.03	0.34	0.18	0.03	0.11	0.18	0.26
R7(OFF)	0.34	0.34	0.18	0.26	0.11	0.11	0.18	0.34	0.18
R8(OFF)	0.26	0.26	0.11	-0.05	0.18	0.18	0.26	0.11	0.26
R9(OFF)	0.34	0.34	0.11	0.18	0.18	0.11	0.11	0.11	0.26
R10(OFF)	0.26	0.26	-0.05	0.26	0.18	0.03	0.34	0.34	0.18
R11(OFF)	0.34	0.26	0.11	0.34	0.26	0.11	0.34	0.18	0.18
Irradiated, unbiased parts statistics									
Min Value	0.26	0.26	-0.05	-0.05	0.11	0.03	0.03	-0.05	-0.05
Max Value	0.49	0.57	0.26	0.34	0.26	0.26	0.34	0.34	0.41
Average	0.36	0.36	0.11	0.22	0.17	0.11	0.20	0.16	0.23
Sigma	0.07	0.11	0.10	0.13	0.05	0.08	0.10	0.12	0.12



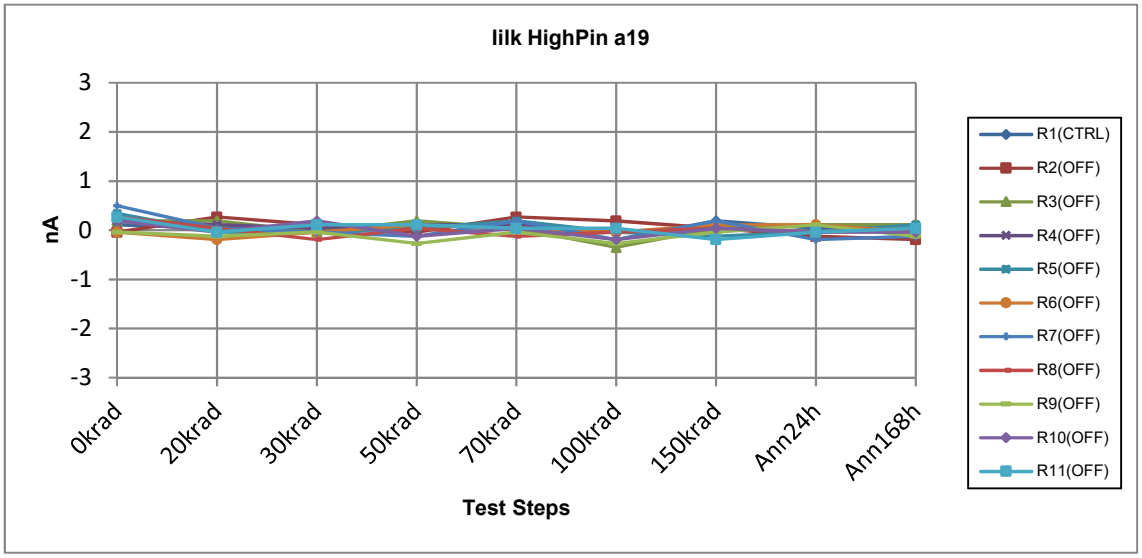
ILI HighPin a22	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.36	0.36	0.20	0.05	0.20	0.05	-0.03	-0.03	-0.03
Irradiated, unbiased parts results									
R2(OFF)	0.36	0.36	0.05	0.20	0.05	0.05	0.13	0.13	0.20
R3(OFF)	0.43	0.51	0.20	0.05	0.20	0.05	0.20	0.05	-0.03
R4(OFF)	0.28	0.28	0.20	0.20	0.05	0.13	0.13	0.05	0.13
R5(OFF)	0.43	0.28	0.13	0.13	0.20	0.13	0.28	0.20	-0.03
R6(OFF)	0.20	0.28	-0.03	0.28	0.13	-0.10	0.28	0.20	0.05
R7(OFF)	0.28	0.59	0.13	0.20	0.05	-0.18	0.13	0.28	0.13
R8(OFF)	0.36	0.43	0.05	0.05	0.13	-0.03	0.20	0.13	0.05
R9(OFF)	0.36	0.20	0.20	0.05	0.13	0.13	0.13	0.28	-0.03
R10(OFF)	0.28	0.43	0.20	0.28	0.05	0.36	0.13	0.13	0.20
R11(OFF)	0.36	0.36	-0.03	0.20	-0.03	0.36	0.13	0.05	0.28
Irradiated, unbiased parts statistics									
Min Value	0.20	0.20	-0.03	0.05	-0.03	-0.18	0.13	0.05	-0.03
Max Value	0.43	0.59	0.20	0.28	0.20	0.36	0.28	0.28	0.28
Average	0.33	0.37	0.11	0.16	0.10	0.09	0.17	0.15	0.10
Sigma	0.07	0.12	0.09	0.09	0.07	0.18	0.06	0.09	0.11



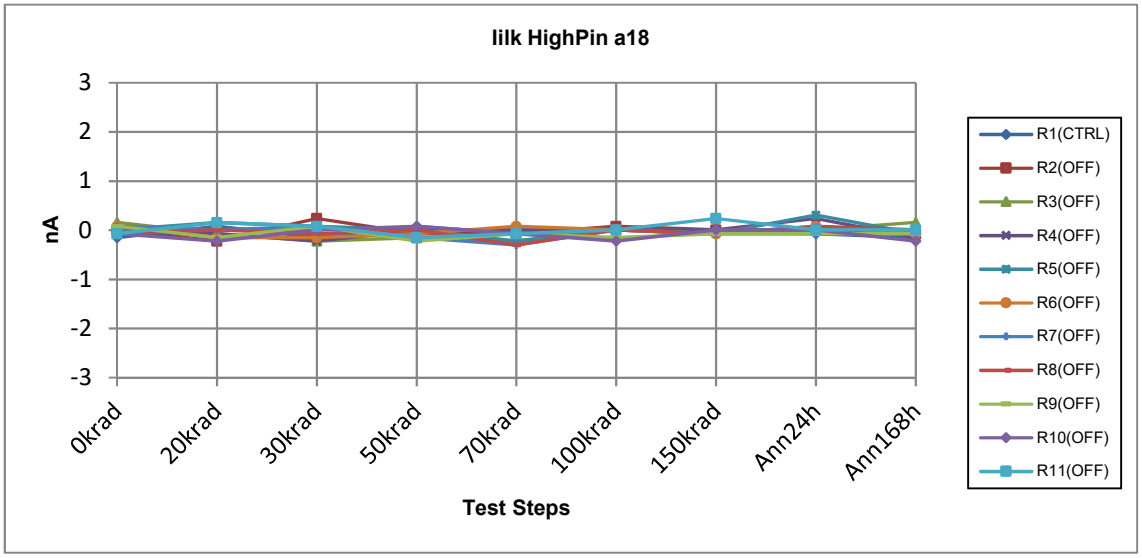
ILI HighPin a21	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.05	0.10	-0.05	-0.05	-0.05	-0.05	-0.21	-0.05	-0.28
Irradiated, unbiased parts results									
R2(OFF)	0.10	0.25	-0.05	0.02	-0.05	-0.21	-0.13	-0.21	-0.05
R3(OFF)	0.02	0.25	-0.05	-0.05	-0.05	-0.05	-0.13	-0.13	-0.21
R4(OFF)	-0.05	0.25	0.18	0.02	0.10	-0.05	0.02	-0.05	-0.21
R5(OFF)	0.10	0.18	0.10	0.02	0.02	-0.05	-0.13	-0.13	-0.21
R6(OFF)	-0.05	0.02	-0.21	-0.28	0.25	-0.05	-0.13	-0.05	-0.13
R7(OFF)	0.02	0.02	-0.13	0.02	-0.05	0.10	0.02	0.10	-0.13
R8(OFF)	0.02	0.18	-0.28	-0.28	-0.05	0.02	0.10	0.18	-0.28
R9(OFF)	-0.28	0.02	0.02	-0.13	-0.05	-0.13	-0.21	-0.13	-0.13
R10(OFF)	0.18	-0.05	-0.13	0.02	0.10	0.02	0.10	-0.05	0.02
R11(OFF)	0.10	-0.05	-0.13	-0.05	0.02	-0.05	0.10	-0.13	0.02
Irradiated, unbiased parts statistics									
Min Value	-0.28	-0.05	-0.28	-0.28	-0.05	-0.21	-0.21	-0.21	-0.28
Max Value	0.18	0.25	0.18	0.02	0.25	0.10	0.10	0.18	0.02
Average	0.02	0.11	-0.07	-0.07	0.02	-0.05	-0.04	-0.06	-0.13
Sigma	0.13	0.13	0.14	0.12	0.10	0.08	0.12	0.12	0.10



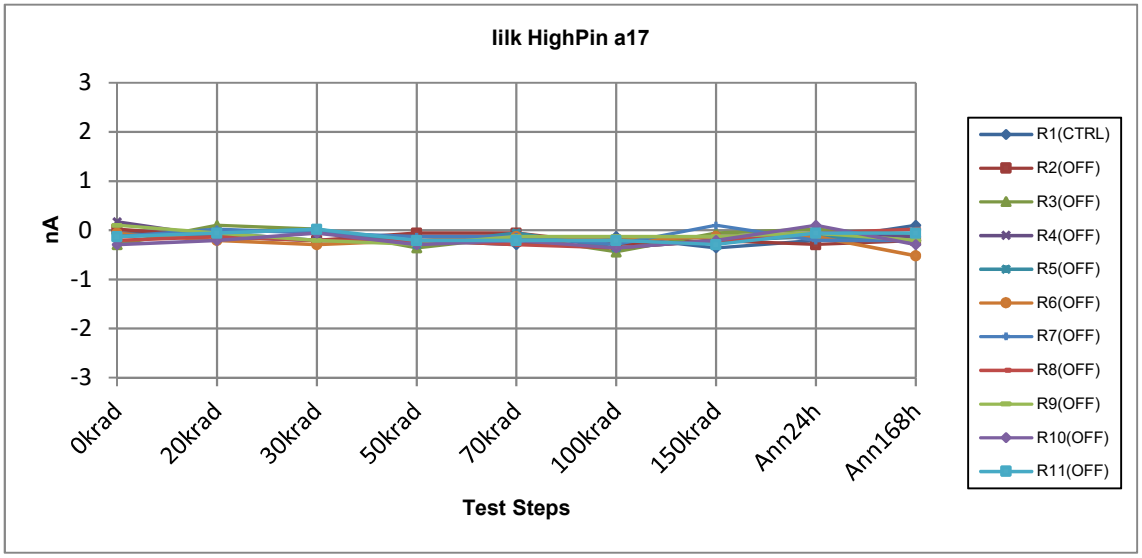
ILI HighPin a20	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.09	-0.09	-0.17	-0.09	-0.09	-0.24	-0.01	-0.17	-0.09
Irradiated, unbiased parts results									
R2(OFF)	-0.01	-0.01	-0.09	0.06	-0.01	0.06	0.14	-0.09	-0.24
R3(OFF)	-0.01	0.06	0.06	-0.01	-0.09	-0.09	-0.17	-0.09	-0.09
R4(OFF)	-0.01	-0.09	-0.09	-0.17	-0.32	-0.01	-0.09	0.06	0.06
R5(OFF)	-0.17	-0.09	0.14	-0.01	-0.09	0.06	-0.09	-0.01	-0.09
R6(OFF)	-0.01	-0.17	-0.17	-0.17	-0.09	0.14	-0.09	-0.09	-0.09
R7(OFF)	0.14	-0.09	-0.24	-0.09	-0.09	-0.17	-0.01	0.14	-0.01
R8(OFF)	-0.09	-0.01	-0.17	-0.09	0.14	-0.09	0.14	0.14	0.21
R9(OFF)	-0.01	-0.01	-0.01	-0.17	-0.32	-0.09	0.14	-0.01	-0.01
R10(OFF)	-0.01	-0.01	-0.09	-0.24	-0.17	-0.09	-0.01	-0.09	0.21
R11(OFF)	0.06	0.06	-0.17	-0.09	-0.01	-0.09	0.06	-0.17	-0.17
Irradiated, unbiased parts statistics									
Min Value	-0.17	-0.17	-0.24	-0.24	-0.32	-0.17	-0.17	-0.17	-0.24
Max Value	0.14	0.06	0.14	0.06	0.14	0.14	0.14	0.14	0.21
Average	-0.01	-0.04	-0.08	-0.10	-0.11	-0.04	0.00	-0.02	-0.02
Sigma	0.08	0.07	0.12	0.09	0.14	0.10	0.11	0.11	0.15



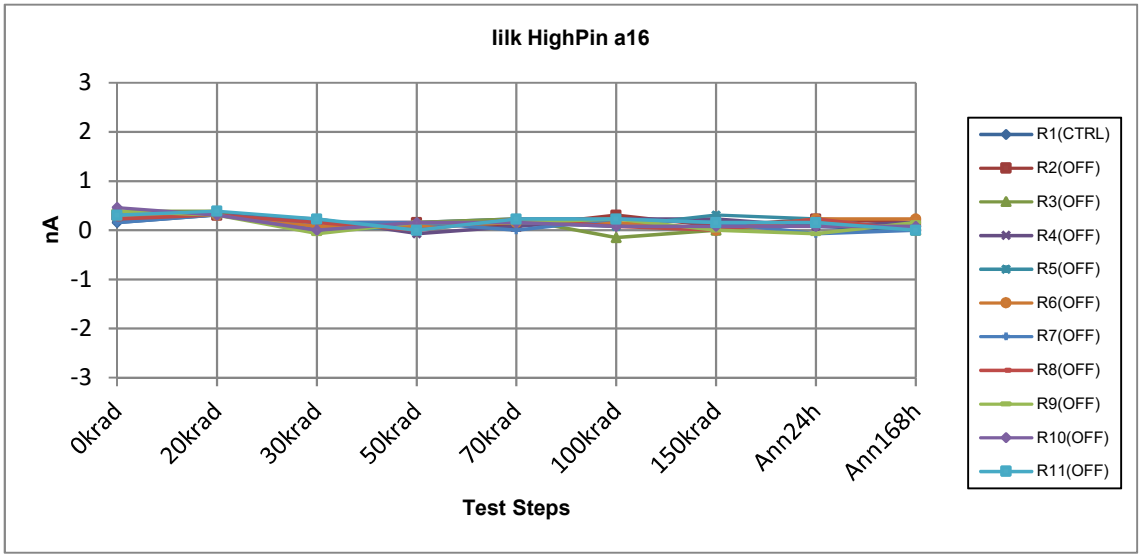
ILI HighPin a19	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.11	0.04	0.04	0.11	0.11	-0.19	0.19	0.04	0.11
Irradiated, unbiased parts results									
R2(OFF)	-0.04	0.27	0.11	-0.04	0.27	0.19	0.04	-0.12	-0.19
R3(OFF)	0.19	0.19	-0.04	0.19	0.04	-0.35	0.04	0.11	0.11
R4(OFF)	0.19	0.11	0.04	0.11	0.11	-0.04	0.04	-0.04	0.04
R5(OFF)	0.34	-0.04	-0.04	0.04	0.19	-0.04	-0.12	-0.04	0.11
R6(OFF)	-0.04	-0.19	-0.04	0.11	0.04	-0.04	0.11	0.11	-0.04
R7(OFF)	0.50	0.04	-0.04	-0.12	0.19	-0.19	0.19	-0.19	-0.12
R8(OFF)	0.27	0.04	-0.19	0.04	-0.12	-0.04	0.04	-0.04	0.04
R9(OFF)	-0.04	-0.12	-0.04	-0.27	-0.04	-0.27	-0.04	0.11	-0.12
R10(OFF)	0.19	-0.04	0.19	-0.12	0.04	-0.19	0.04	-0.04	-0.04
R11(OFF)	0.27	-0.04	0.11	0.11	0.04	0.04	-0.19	-0.04	0.04
Irradiated, unbiased parts statistics									
Min Value	-0.04	-0.19	-0.19	-0.27	-0.12	-0.35	-0.19	-0.19	-0.19
Max Value	0.50	0.27	0.19	0.19	0.27	0.19	0.19	0.11	0.11
Average	0.18	0.02	0.01	0.00	0.08	-0.09	0.02	-0.02	-0.02
Sigma	0.18	0.14	0.11	0.14	0.12	0.16	0.11	0.10	0.10



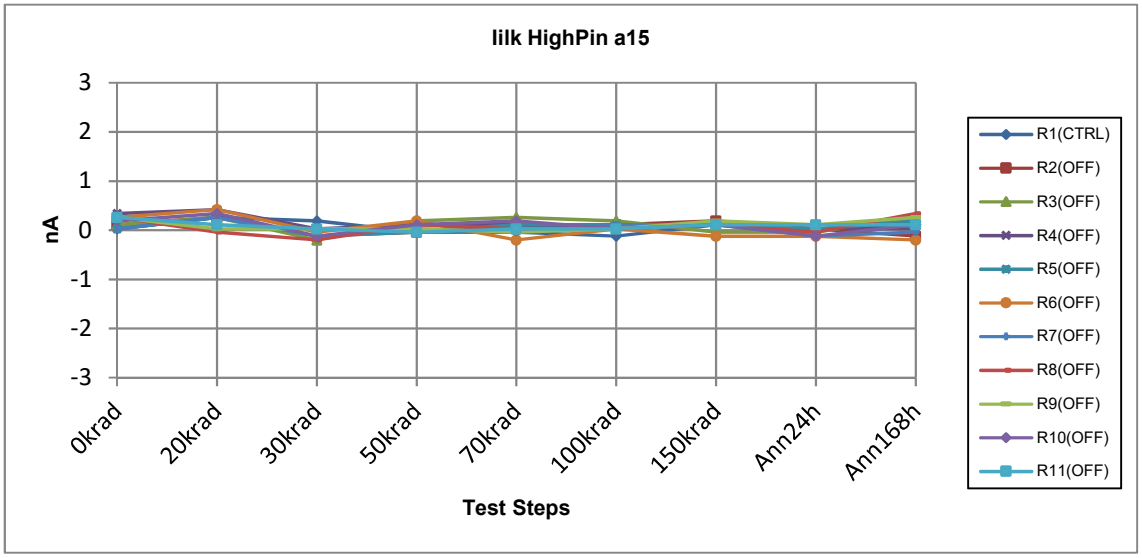
ILI HighPin a18	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.15	0.08	-0.15	0.08	-0.07	0.01	0.01	-0.07	-0.15
Irradiated, unbiased parts results									
R2(OFF)	0.01	-0.22	0.24	-0.07	-0.07	0.08	0.01	0.01	-0.07
R3(OFF)	0.16	-0.07	-0.22	-0.15	-0.22	0.01	0.01	0.01	0.16
R4(OFF)	-0.07	-0.07	-0.22	0.01	0.01	0.01	0.01	0.24	-0.15
R5(OFF)	0.01	0.16	0.08	0.01	-0.22	0.01	-0.07	0.31	-0.07
R6(OFF)	0.08	-0.15	-0.15	-0.07	0.08	0.01	-0.07	0.08	-0.07
R7(OFF)	0.08	0.01	0.08	-0.15	-0.30	0.01	-0.07	-0.07	-0.07
R8(OFF)	-0.07	0.01	-0.07	0.01	-0.30	0.01	-0.07	0.08	0.01
R9(OFF)	0.08	-0.15	0.08	-0.22	-0.07	-0.15	-0.07	-0.07	-0.07
R10(OFF)	-0.07	-0.22	0.01	0.08	-0.07	-0.22	0.01	0.01	-0.22
R11(OFF)	-0.07	0.16	0.08	-0.15	-0.07	0.01	0.24	0.01	0.01
Irradiated, unbiased parts statistics									
Min Value	-0.07	-0.22	-0.22	-0.22	-0.30	-0.22	-0.07	-0.07	-0.22
Max Value	0.16	0.16	0.24	0.08	0.08	0.08	0.24	0.31	0.16
Average	0.01	-0.05	-0.01	-0.07	-0.12	-0.02	-0.01	0.06	-0.05
Sigma	0.08	0.14	0.15	0.10	0.13	0.09	0.10	0.12	0.10



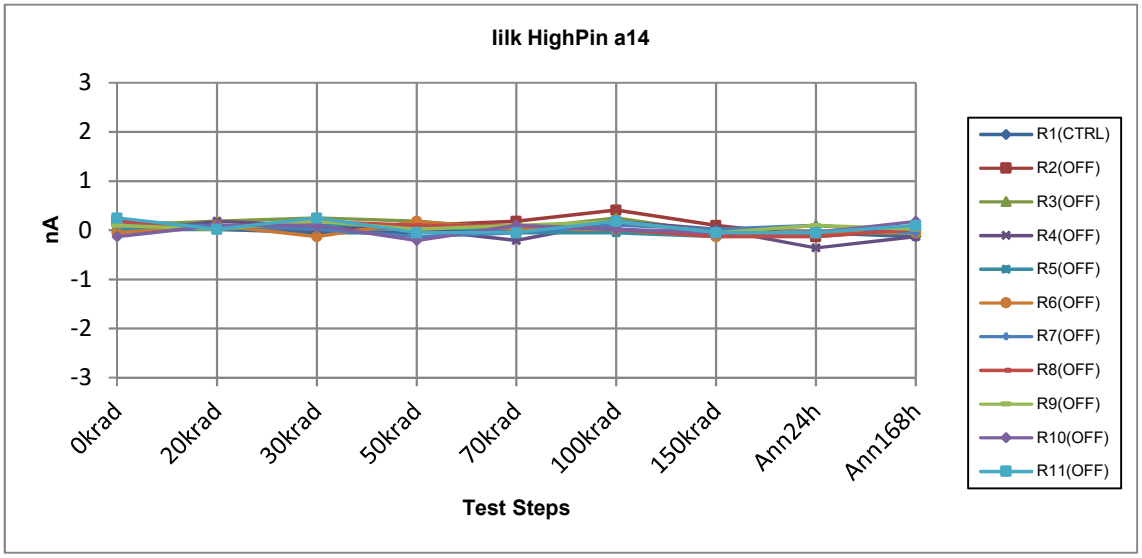
ILI HighPin a17	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.06	-0.06	-0.21	-0.21	-0.29	-0.13	-0.36	-0.21	0.10
Irradiated, unbiased parts results									
R2(OFF)	0.02	-0.13	-0.21	-0.06	-0.06	-0.29	-0.21	-0.29	-0.21
R3(OFF)	-0.29	0.10	0.02	-0.36	-0.13	-0.44	-0.06	0.02	-0.13
R4(OFF)	0.17	-0.13	-0.21	-0.21	-0.21	-0.21	-0.13	-0.06	-0.13
R5(OFF)	-0.13	-0.06	0.02	-0.29	-0.06	-0.36	-0.21	-0.13	-0.21
R6(OFF)	-0.06	-0.21	-0.29	-0.21	-0.13	-0.21	-0.13	-0.13	-0.52
R7(OFF)	-0.13	0.02	-0.06	-0.13	-0.13	-0.29	0.10	-0.21	-0.21
R8(OFF)	-0.21	-0.13	-0.21	-0.21	-0.29	-0.36	-0.21	-0.06	0.02
R9(OFF)	0.10	-0.06	-0.21	-0.29	-0.13	-0.13	-0.13	-0.06	-0.21
R10(OFF)	-0.29	-0.21	-0.06	-0.29	-0.21	-0.36	-0.21	0.10	-0.29
R11(OFF)	-0.13	-0.06	0.02	-0.21	-0.21	-0.21	-0.29	-0.06	-0.06
Irradiated, unbiased parts statistics									
Min Value	-0.29	-0.21	-0.29	-0.36	-0.29	-0.44	-0.29	-0.29	-0.52
Max Value	0.17	0.10	0.02	-0.06	-0.06	-0.13	0.10	0.10	0.02
Average	-0.10	-0.09	-0.12	-0.23	-0.16	-0.29	-0.15	-0.09	-0.20
Sigma	0.15	0.10	0.12	0.09	0.07	0.10	0.11	0.11	0.14



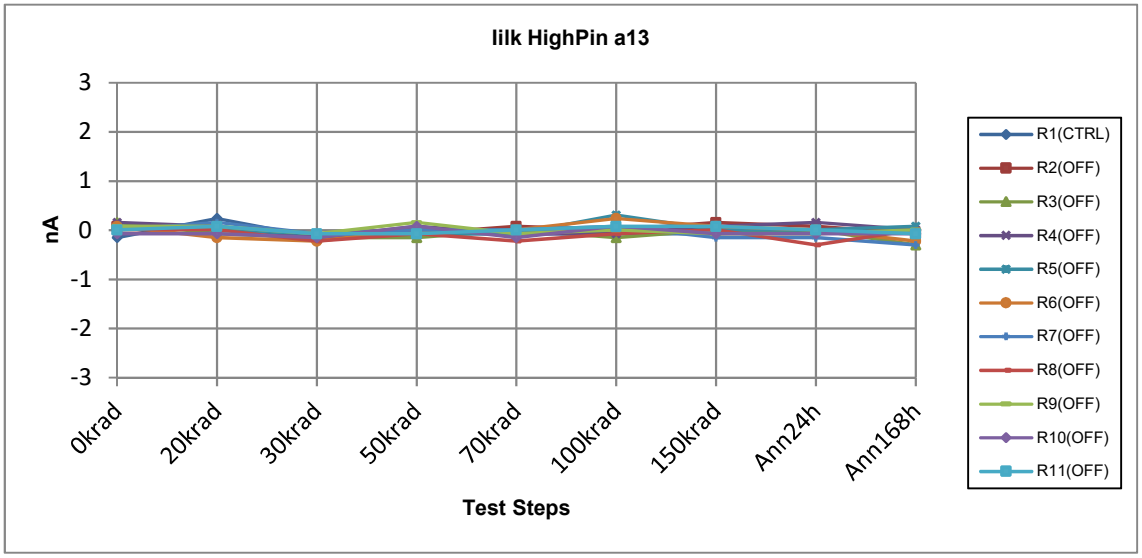
ILI HighPin a16	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.16	0.31	0.00	0.16	0.23	0.23	0.16	0.08	0.00
Irradiated, unbiased parts results									
R2(OFF)	0.31	0.31	0.16	0.16	0.08	0.31	0.08	0.23	0.16
R3(OFF)	0.39	0.39	0.00	0.16	0.23	-0.15	0.00	0.16	0.00
R4(OFF)	0.23	0.31	0.23	-0.07	0.08	0.23	0.23	0.08	0.16
R5(OFF)	0.23	0.31	0.00	0.08	0.16	0.08	0.31	0.23	0.00
R6(OFF)	0.31	0.31	0.08	0.08	0.16	0.16	0.00	0.23	0.23
R7(OFF)	0.16	0.31	0.16	0.16	0.00	0.23	0.16	-0.07	0.00
R8(OFF)	0.23	0.31	0.16	0.00	0.23	0.08	0.00	0.23	0.00
R9(OFF)	0.39	0.31	-0.07	0.16	0.16	0.23	0.00	-0.07	0.16
R10(OFF)	0.46	0.31	0.00	0.16	0.16	0.08	0.08	0.08	0.08
R11(OFF)	0.31	0.39	0.23	0.00	0.23	0.23	0.16	0.16	0.00
Irradiated, unbiased parts statistics									
Min Value	0.16	0.31	-0.07	-0.07	0.00	-0.15	0.00	-0.07	0.00
Max Value	0.46	0.39	0.23	0.16	0.23	0.31	0.31	0.23	0.23
Average	0.30	0.33	0.10	0.09	0.15	0.15	0.10	0.13	0.08
Sigma	0.09	0.03	0.11	0.09	0.08	0.13	0.11	0.12	0.09



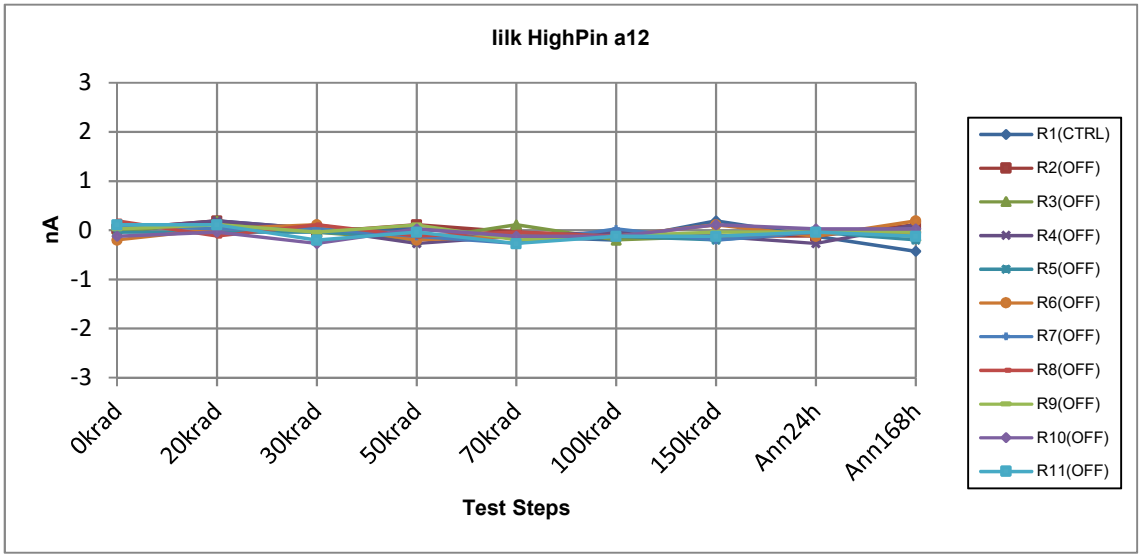
ILI HighPin a15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.03	0.26	0.19	-0.04	-0.04	-0.12	0.11	0.03	0.11
Irradiated, unbiased parts results									
R2(OFF)	0.11	0.26	-0.12	-0.04	0.11	0.11	0.19	0.03	-0.12
R3(OFF)	0.11	0.26	-0.20	0.19	0.26	0.19	-0.04	-0.04	0.26
R4(OFF)	0.34	0.42	0.03	0.11	0.11	0.03	0.11	0.03	0.03
R5(OFF)	0.03	0.26	-0.12	-0.04	0.11	0.11	0.11	0.03	0.19
R6(OFF)	0.26	0.42	-0.04	0.19	-0.20	0.03	-0.12	-0.12	-0.20
R7(OFF)	0.03	0.26	-0.12	0.03	-0.04	0.11	0.11	-0.12	-0.04
R8(OFF)	0.26	-0.04	-0.20	0.11	0.03	0.03	0.11	-0.04	0.34
R9(OFF)	0.26	0.03	0.03	0.03	-0.04	0.03	0.19	0.11	0.26
R10(OFF)	0.19	0.34	-0.12	0.11	0.19	0.03	0.11	-0.12	0.11
R11(OFF)	0.26	0.11	0.03	-0.04	0.03	0.03	0.11	0.11	0.11
Irradiated, unbiased parts statistics									
Min Value	0.03	-0.04	-0.20	-0.04	-0.20	0.03	-0.12	-0.12	-0.20
Max Value	0.34	0.42	0.03	0.19	0.26	0.19	0.19	0.11	0.34
Average	0.19	0.23	-0.08	0.07	0.06	0.07	0.09	-0.01	0.09
Sigma	0.11	0.15	0.09	0.09	0.13	0.06	0.10	0.09	0.18



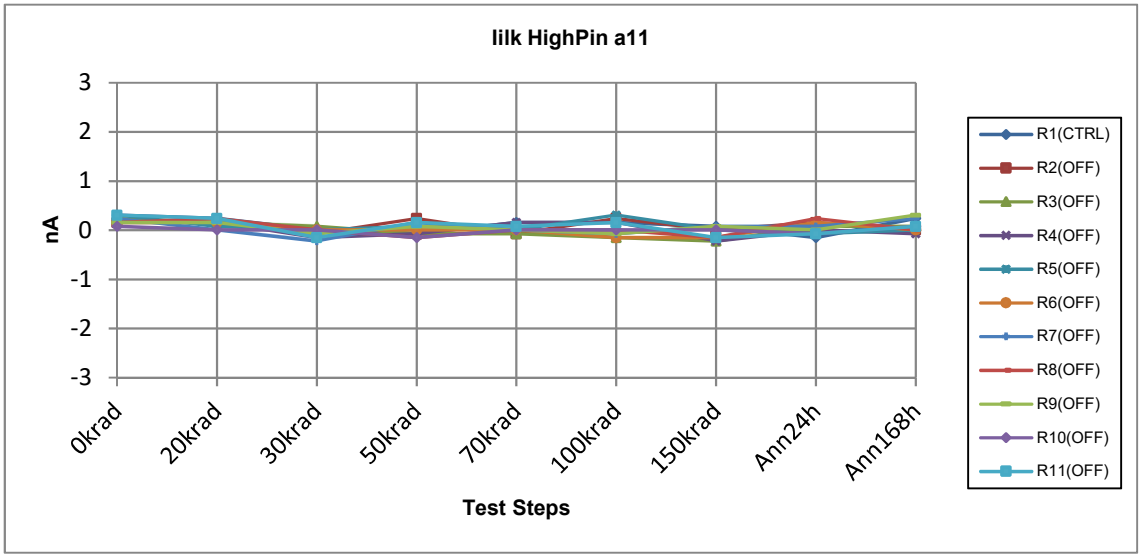
ILI HighPin a14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.02	0.02	-0.05	-0.05	0.10	0.02	-0.13	-0.05	-0.13
Irradiated, unbiased parts results									
R2(OFF)	0.18	0.10	0.02	0.10	0.18	0.41	0.10	-0.13	0.02
R3(OFF)	0.10	0.18	0.25	0.18	0.02	0.25	-0.05	0.10	-0.05
R4(OFF)	-0.05	0.18	0.10	0.02	-0.21	0.18	0.02	-0.36	-0.13
R5(OFF)	0.02	0.02	0.10	0.10	-0.05	-0.05	-0.13	-0.05	-0.05
R6(OFF)	-0.05	0.10	-0.13	0.18	0.02	0.02	-0.13	-0.05	-0.05
R7(OFF)	0.10	0.10	0.02	-0.13	-0.05	0.10	0.02	0.10	-0.05
R8(OFF)	0.18	0.02	0.18	0.10	0.10	0.02	-0.13	-0.13	0.02
R9(OFF)	0.10	0.02	0.18	0.02	0.10	0.18	-0.05	0.10	0.02
R10(OFF)	-0.13	0.10	0.10	-0.21	0.10	0.02	-0.05	-0.05	0.18
R11(OFF)	0.25	0.02	0.25	-0.05	-0.05	0.18	-0.05	-0.05	0.10
Irradiated, unbiased parts statistics									
Min Value	-0.13	0.02	-0.13	-0.21	-0.21	-0.05	-0.13	-0.36	-0.13
Max Value	0.25	0.18	0.25	0.18	0.18	0.41	0.10	0.10	0.18
Average	0.07	0.08	0.11	0.03	0.02	0.13	-0.05	-0.05	0.00
Sigma	0.12	0.06	0.12	0.13	0.11	0.14	0.08	0.14	0.09



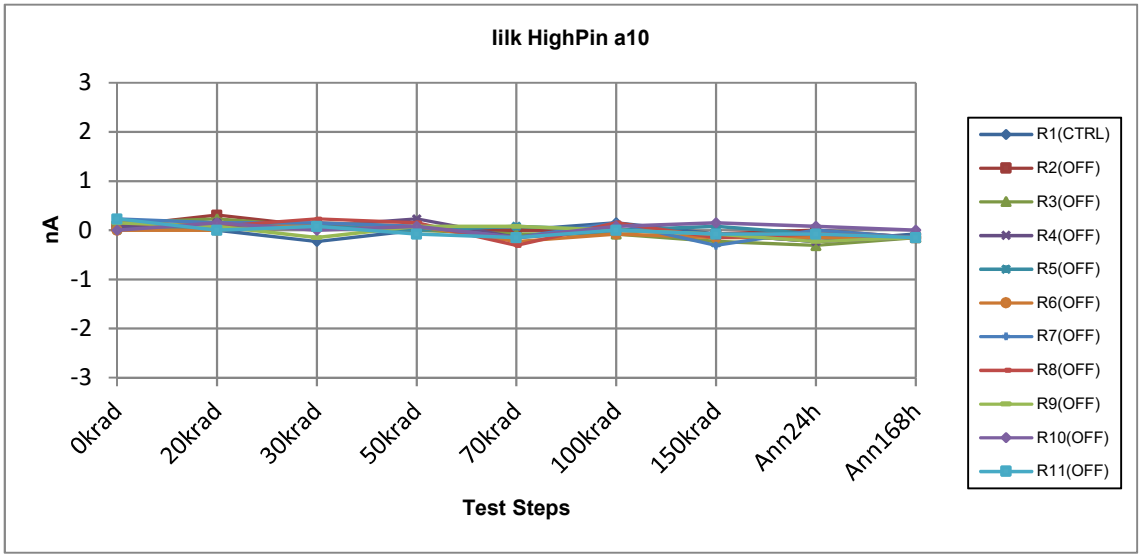
ILI HighPin a13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.15	0.24	-0.15	-0.07	-0.07	-0.07	-0.07	0.01	0.01
Irradiated, unbiased parts results									
R2(OFF)	0.08	0.08	-0.15	-0.07	0.08	0.01	0.16	0.08	-0.07
R3(OFF)	0.16	-0.07	-0.15	-0.15	0.01	-0.15	0.01	0.01	-0.30
R4(OFF)	0.16	0.08	-0.15	0.08	-0.07	-0.07	0.08	0.16	0.01
R5(OFF)	0.08	0.01	-0.07	-0.07	-0.07	0.31	0.01	0.01	0.08
R6(OFF)	0.08	-0.15	-0.22	0.01	0.01	0.24	0.08	0.01	-0.22
R7(OFF)	0.01	0.16	-0.07	0.01	0.01	0.08	-0.15	-0.15	-0.30
R8(OFF)	0.01	0.01	-0.22	-0.07	-0.22	-0.07	0.01	-0.30	0.01
R9(OFF)	0.08	0.08	-0.07	0.16	-0.07	0.01	-0.07	-0.07	0.01
R10(OFF)	-0.07	-0.07	-0.15	0.08	-0.15	0.08	-0.07	-0.07	-0.07
R11(OFF)	0.01	0.08	-0.07	-0.07	0.01	0.08	0.08	0.01	-0.07
Irradiated, unbiased parts statistics									
Min Value	-0.07	-0.15	-0.22	-0.15	-0.22	-0.15	-0.15	-0.30	-0.30
Max Value	0.16	0.16	-0.07	0.16	0.08	0.31	0.16	0.16	0.08
Average	0.06	0.02	-0.13	-0.01	-0.05	0.05	0.01	-0.03	-0.09
Sigma	0.07	0.09	0.06	0.09	0.09	0.14	0.09	0.13	0.14



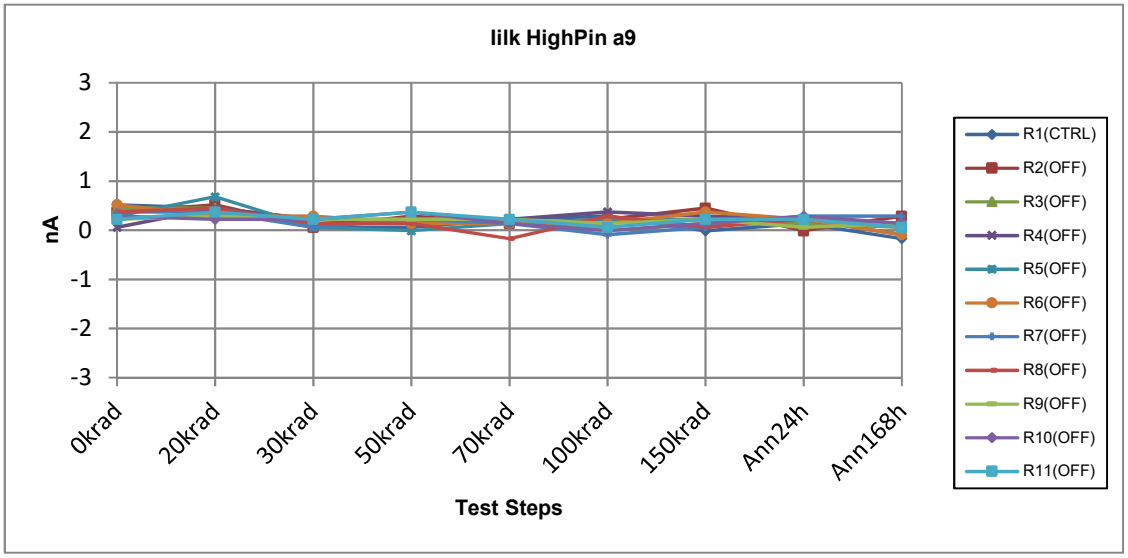
ILI HighPin a12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.04	0.19	0.03	0.03	-0.12	-0.20	0.19	-0.12	-0.43
Irradiated, unbiased parts results									
R2(OFF)	0.03	0.19	-0.04	0.11	-0.04	-0.12	-0.12	-0.12	0.11
R3(OFF)	-0.04	0.19	-0.04	-0.20	0.11	-0.20	-0.12	-0.04	-0.12
R4(OFF)	0.03	0.19	0.03	-0.27	-0.12	-0.04	-0.12	-0.27	0.11
R5(OFF)	-0.04	-0.04	-0.04	-0.12	-0.12	-0.12	-0.20	-0.04	-0.20
R6(OFF)	-0.20	0.03	0.11	-0.20	-0.12	-0.12	0.11	-0.12	0.19
R7(OFF)	0.11	0.03	0.03	-0.12	-0.27	0.03	-0.20	-0.04	0.03
R8(OFF)	0.19	-0.12	0.11	-0.12	-0.04	-0.12	-0.12	-0.04	-0.04
R9(OFF)	0.03	0.11	-0.04	0.11	-0.20	-0.12	-0.04	-0.04	-0.04
R10(OFF)	-0.12	-0.04	-0.27	0.03	-0.12	-0.12	0.11	0.03	0.03
R11(OFF)	0.11	0.11	-0.20	-0.04	-0.27	-0.12	-0.12	-0.04	-0.12
Irradiated, unbiased parts statistics									
Min Value	-0.20	-0.12	-0.27	-0.27	-0.27	-0.20	-0.20	-0.27	-0.20
Max Value	0.19	0.19	0.11	0.11	0.11	0.03	0.11	0.03	0.19
Average	0.01	0.07	-0.04	-0.08	-0.12	-0.11	-0.08	-0.07	-0.01
Sigma	0.12	0.11	0.12	0.13	0.11	0.06	0.11	0.08	0.12



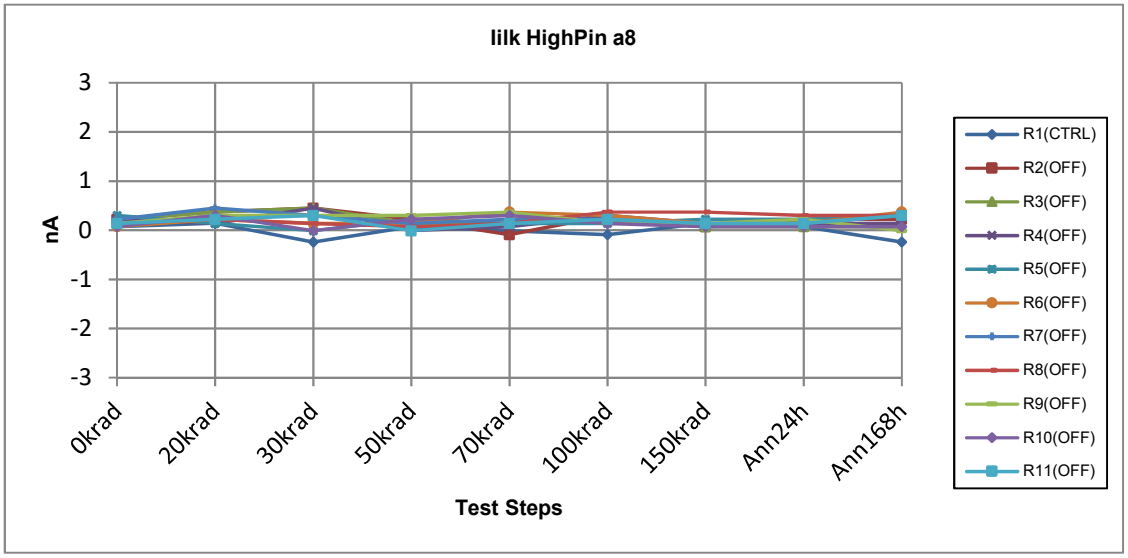
ILI HighPin a11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.31	0.24	0.01	-0.07	0.16	0.16	0.08	-0.15	0.24
Irradiated, unbiased parts results									
R2(OFF)	0.16	0.16	-0.07	0.24	-0.07	0.24	0.01	0.16	0.01
R3(OFF)	0.24	0.16	0.08	-0.07	-0.07	-0.15	-0.22	0.08	0.08
R4(OFF)	0.16	0.16	-0.15	-0.07	0.16	0.16	-0.22	0.01	-0.07
R5(OFF)	0.31	0.08	0.01	0.08	0.01	0.31	0.01	-0.07	0.01
R6(OFF)	0.16	0.16	0.01	0.01	0.01	-0.15	-0.15	0.16	0.01
R7(OFF)	0.24	0.01	-0.22	0.16	0.01	-0.07	0.08	0.08	0.24
R8(OFF)	0.16	0.24	0.01	-0.15	0.01	0.01	-0.15	0.24	0.01
R9(OFF)	0.16	0.16	-0.07	0.08	0.01	-0.07	0.08	0.01	0.31
R10(OFF)	0.08	0.01	0.01	-0.15	0.01	0.01	0.01	-0.07	0.08
R11(OFF)	0.31	0.24	-0.15	0.16	0.08	0.16	-0.15	-0.07	0.08
Irradiated, unbiased parts statistics									
Min Value	0.08	0.01	-0.22	-0.15	-0.07	-0.15	-0.22	-0.07	-0.07
Max Value	0.31	0.24	0.08	0.24	0.16	0.31	0.08	0.24	0.31
Average	0.20	0.14	-0.05	0.03	0.02	0.05	-0.07	0.05	0.08
Sigma	0.07	0.08	0.09	0.14	0.07	0.16	0.12	0.11	0.12



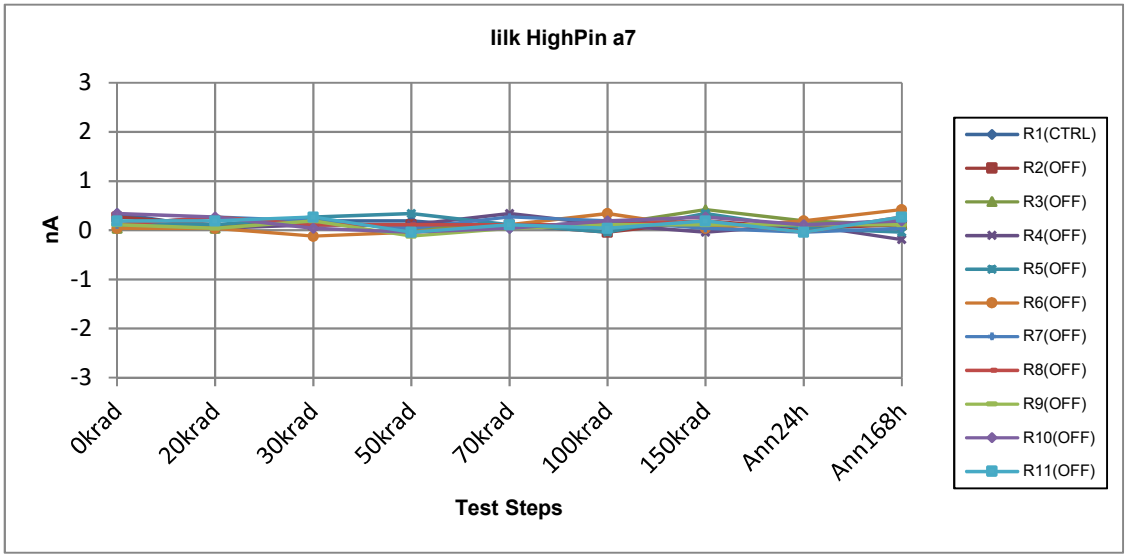
ILI HighPin a10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.08	0.00	-0.23	0.00	0.00	0.15	-0.08	-0.23	-0.08
Irradiated, unbiased parts results									
R2(OFF)	0.08	0.31	0.08	0.00	0.00	0.00	-0.08	0.00	-0.15
R3(OFF)	0.15	0.23	0.08	0.00	-0.08	-0.08	-0.23	-0.31	-0.15
R4(OFF)	0.08	0.15	0.08	0.23	-0.15	0.00	-0.08	-0.23	-0.15
R5(OFF)	0.00	0.08	0.08	0.00	0.08	0.00	0.08	-0.08	-0.15
R6(OFF)	0.00	0.00	0.15	0.08	-0.23	-0.08	-0.15	-0.15	-0.15
R7(OFF)	0.23	0.15	0.15	0.08	-0.15	0.15	-0.31	0.00	-0.15
R8(OFF)	0.15	0.08	0.23	0.15	-0.31	0.15	-0.15	-0.08	-0.15
R9(OFF)	0.15	0.08	-0.15	0.08	0.08	0.00	-0.08	-0.23	-0.15
R10(OFF)	0.00	0.15	0.00	0.08	-0.15	0.08	0.15	0.08	0.00
R11(OFF)	0.23	0.00	0.08	-0.08	-0.15	0.00	-0.08	-0.08	-0.15
Irradiated, unbiased parts statistics									
Min Value	0.00	0.00	-0.15	-0.08	-0.31	-0.08	-0.31	-0.31	-0.15
Max Value	0.23	0.31	0.23	0.23	0.08	0.15	0.15	0.08	0.00
Average	0.11	0.12	0.08	0.06	-0.11	0.02	-0.09	-0.11	-0.14
Sigma	0.09	0.10	0.10	0.09	0.13	0.08	0.13	0.12	0.05



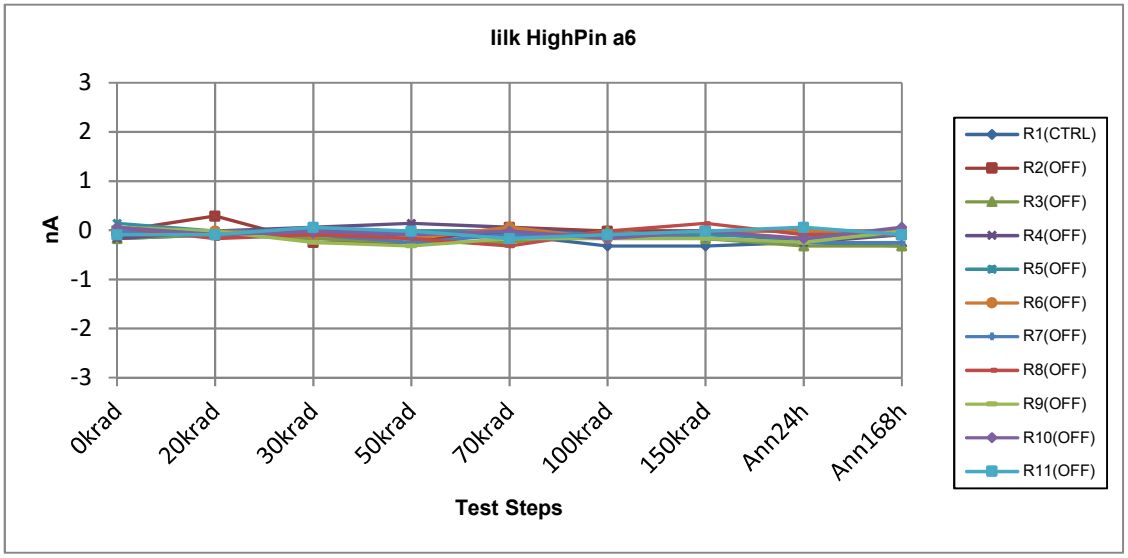
ILI HighPin a9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.52	0.45	0.06	0.06	0.22	0.29	-0.01	0.14	-0.17
Irradiated, unbiased parts results									
R2(OFF)	0.37	0.52	0.06	0.29	0.14	0.22	0.45	-0.01	0.29
R3(OFF)	0.45	0.45	0.22	0.22	0.22	-0.01	0.14	0.14	0.06
R4(OFF)	0.06	0.45	0.22	0.14	0.22	0.37	0.29	0.22	-0.09
R5(OFF)	0.29	0.68	0.06	-0.01	0.14	0.22	0.22	0.22	0.14
R6(OFF)	0.52	0.29	0.29	0.14	0.14	0.14	0.37	0.22	-0.09
R7(OFF)	0.37	0.37	0.06	0.22	0.14	-0.09	0.06	0.29	0.29
R8(OFF)	0.37	0.45	0.14	0.14	-0.17	0.29	0.06	0.22	0.14
R9(OFF)	0.22	0.29	0.22	0.22	0.22	0.14	0.22	0.06	0.14
R10(OFF)	0.29	0.22	0.22	0.37	0.14	-0.01	0.14	0.29	0.14
R11(OFF)	0.22	0.37	0.22	0.37	0.22	0.06	0.22	0.22	0.06
Irradiated, unbiased parts statistics									
Min Value	0.06	0.22	0.06	-0.01	-0.17	-0.09	0.06	-0.01	-0.09
Max Value	0.52	0.68	0.29	0.37	0.22	0.37	0.45	0.29	0.29
Average	0.32	0.41	0.17	0.21	0.14	0.13	0.22	0.19	0.11
Sigma	0.13	0.13	0.08	0.12	0.12	0.15	0.13	0.10	0.13



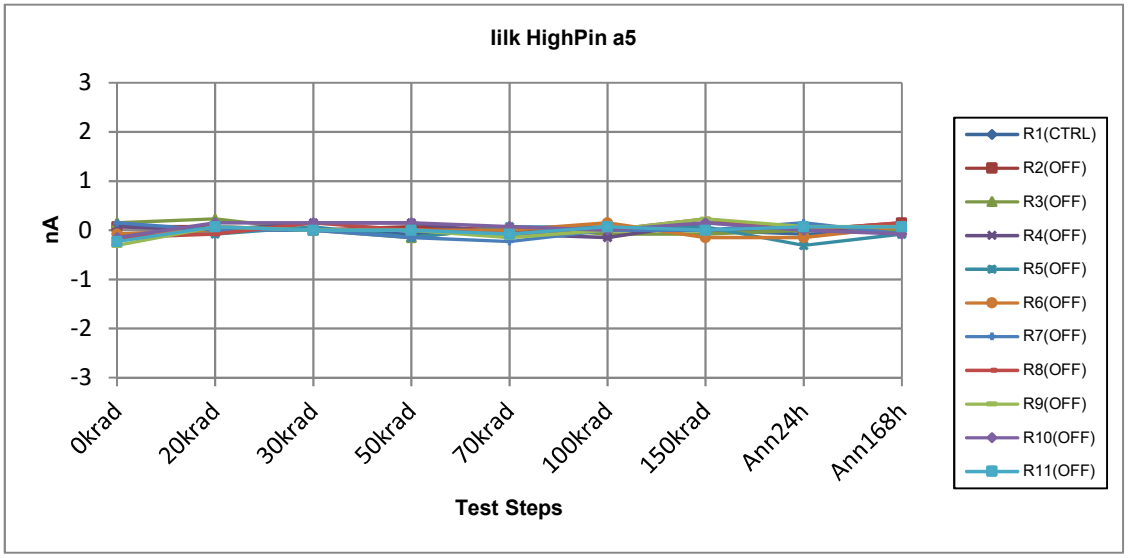
ILI HighPin a8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.07	0.14	-0.24	0.07	-0.01	-0.09	0.14	0.07	-0.24
Irradiated, unbiased parts results									
R2(OFF)	0.22	0.37	0.45	0.22	-0.09	0.30	0.07	0.22	0.22
R3(OFF)	0.22	0.37	0.45	0.14	0.14	0.22	0.07	0.07	0.07
R4(OFF)	0.22	0.14	0.45	-0.01	0.07	0.30	0.14	0.14	0.14
R5(OFF)	0.30	0.14	-0.01	0.22	0.14	0.14	0.22	0.22	0.30
R6(OFF)	0.07	0.22	0.14	0.14	0.37	0.30	0.14	0.14	0.37
R7(OFF)	0.22	0.45	0.30	0.14	0.22	0.22	0.07	0.14	0.30
R8(OFF)	0.14	0.22	0.14	0.07	0.14	0.37	0.37	0.30	0.30
R9(OFF)	0.14	0.30	0.30	0.30	0.37	0.14	0.14	0.22	-0.01
R10(OFF)	0.07	0.30	-0.01	0.22	0.30	0.14	0.07	0.07	0.07
R11(OFF)	0.14	0.22	0.30	-0.01	0.14	0.22	0.14	0.14	0.30
Irradiated, unbiased parts statistics									
Min Value	0.07	0.14	-0.01	-0.01	-0.09	0.14	0.07	0.07	-0.01
Max Value	0.30	0.45	0.45	0.30	0.37	0.37	0.37	0.30	0.37
Average	0.17	0.27	0.25	0.14	0.18	0.24	0.14	0.17	0.21
Sigma	0.07	0.10	0.18	0.10	0.14	0.08	0.09	0.07	0.13



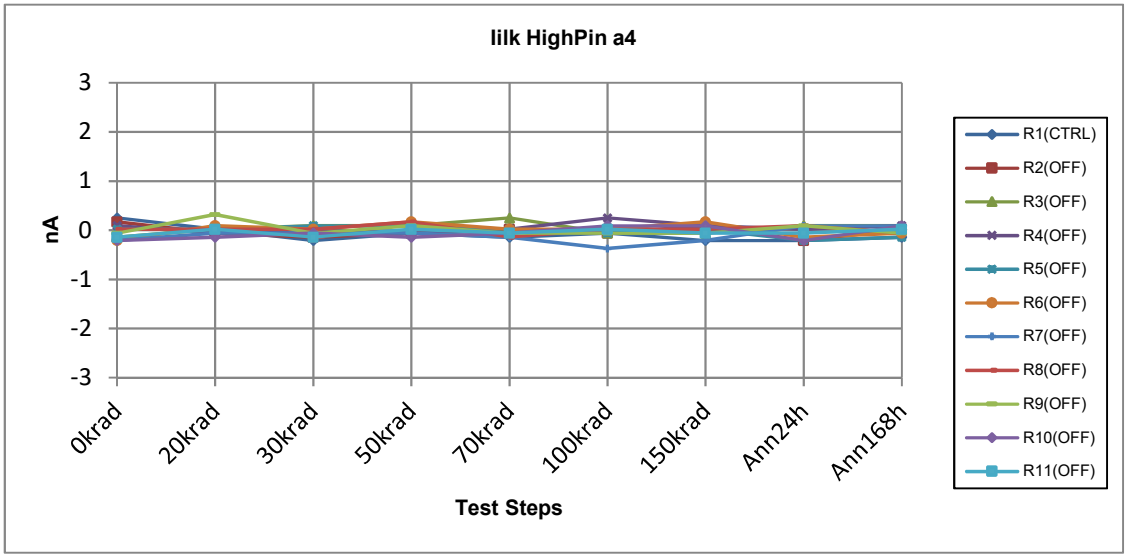
ILI HighPin a7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.34	0.04	0.19	0.19	0.04	0.19	0.11	0.11	0.19
Irradiated, unbiased parts results									
R2(OFF)	0.27	0.11	0.11	0.11	0.11	-0.04	0.19	0.04	0.11
R3(OFF)	0.04	0.04	0.19	0.04	0.11	0.11	0.42	0.19	0.11
R4(OFF)	0.11	0.04	0.11	0.11	0.34	0.11	-0.04	0.11	-0.19
R5(OFF)	0.11	0.11	0.27	0.34	0.11	-0.04	0.34	0.04	-0.04
R6(OFF)	0.04	0.04	-0.12	-0.04	0.11	0.34	0.04	0.19	0.42
R7(OFF)	0.11	0.27	0.19	0.04	0.27	0.19	0.04	-0.04	0.04
R8(OFF)	0.11	0.27	0.11	0.11	0.11	0.11	0.19	-0.04	0.27
R9(OFF)	0.11	0.04	0.19	-0.12	0.04	0.11	0.11	0.11	0.11
R10(OFF)	0.34	0.27	0.04	-0.04	0.04	0.19	0.27	0.11	0.19
R11(OFF)	0.19	0.19	0.27	-0.04	0.11	0.04	0.19	-0.04	0.27
Irradiated, unbiased parts statistics									
Min Value	0.04	0.04	-0.12	-0.12	0.04	-0.04	-0.04	-0.04	-0.19
Max Value	0.34	0.27	0.27	0.34	0.34	0.34	0.42	0.19	0.42
Average	0.14	0.14	0.14	0.05	0.14	0.11	0.18	0.07	0.13
Sigma	0.10	0.10	0.12	0.13	0.10	0.11	0.14	0.09	0.17



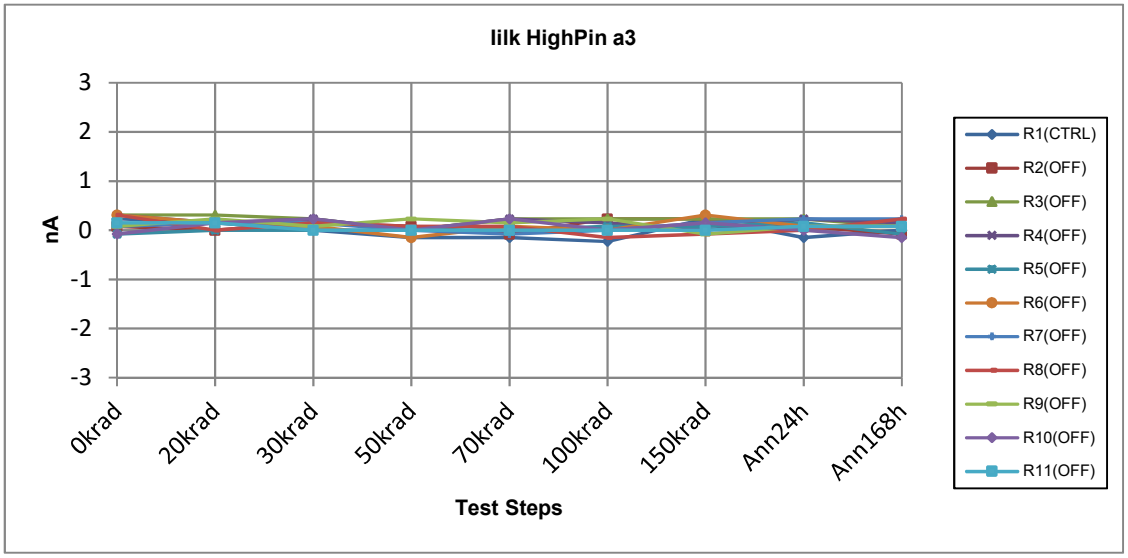
ILI HighPin a6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**	**-2000**
Max Limit	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.17	-0.09	-0.09	-0.09	-0.09	-0.32	-0.32	-0.25	-0.32
Irradiated, unbiased parts results									
R2(OFF)	-0.02	0.29	-0.25	-0.25	0.06	-0.02	-0.02	-0.02	-0.09
R3(OFF)	-0.17	-0.09	-0.17	-0.25	-0.25	-0.02	-0.17	-0.32	-0.32
R4(OFF)	-0.17	-0.02	0.06	0.14	0.06	-0.09	-0.02	-0.25	-0.09
R5(OFF)	0.14	-0.02	-0.02	-0.02	-0.02	-0.09	-0.09	-0.17	-0.09
R6(OFF)	-0.02	-0.02	-0.09	-0.17	0.06	-0.17	-0.02	-0.02	-0.02
R7(OFF)	-0.02	-0.09	-0.09	-0.25	-0.09	-0.09	-0.17	-0.25	-0.25
R8(OFF)	0.06	-0.17	-0.09	-0.17	-0.32	-0.02	0.14	-0.09	-0.09
R9(OFF)	0.06	-0.02	-0.25	-0.32	-0.17	-0.17	-0.17	-0.25	-0.02
R10(OFF)	0.06	-0.09	-0.02	-0.09	-0.02	-0.17	-0.02	-0.17	0.06
R11(OFF)	-0.09	-0.09	0.06	-0.02	-0.17	-0.09	-0.02	0.06	-0.09
Irradiated, unbiased parts statistics									
Min Value	-0.17	-0.17	-0.25	-0.32	-0.32	-0.17	-0.17	-0.32	-0.32
Max Value	0.14	0.29	0.06	0.14	0.06	-0.02	0.14	0.06	0.06
Average	-0.02	-0.03	-0.09	-0.14	-0.09	-0.09	-0.06	-0.15	-0.10
Sigma	0.10	0.12	0.11	0.14	0.14	0.06	0.10	0.13	0.11



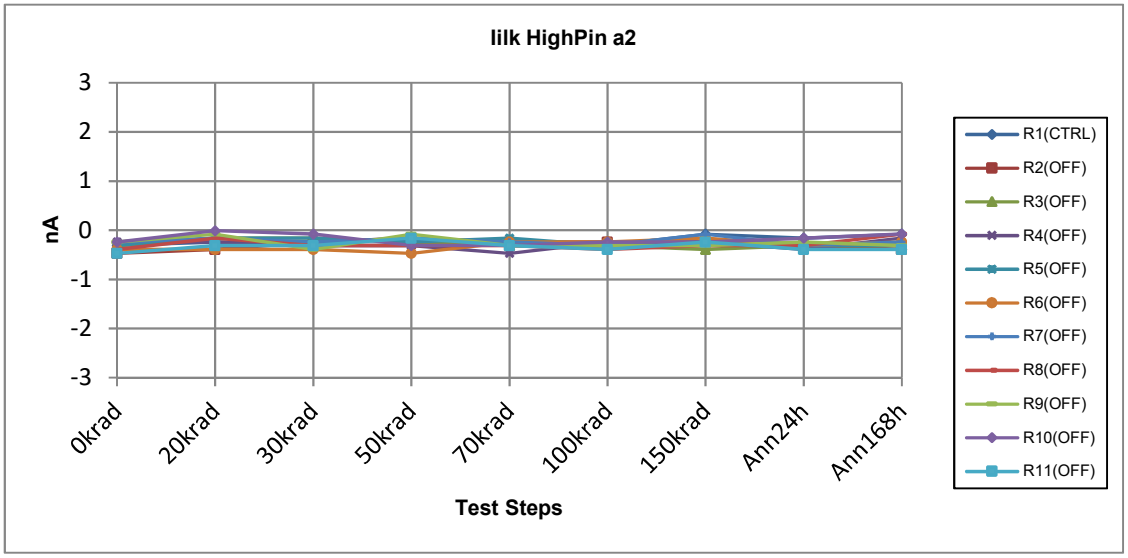
ILI HighPin a5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.08	0.00	0.00	-0.08	0.07	0.00	0.00	-0.08	0.00
Irradiated, unbiased parts results									
R2(OFF)	0.07	0.07	0.00	0.07	0.00	0.00	0.00	0.00	0.15
R3(OFF)	0.15	0.23	0.00	-0.15	0.07	-0.08	-0.08	0.00	0.00
R4(OFF)	0.07	0.00	0.15	0.15	-0.08	-0.15	0.15	0.07	-0.08
R5(OFF)	-0.08	-0.08	0.07	-0.15	0.07	0.07	0.07	-0.31	-0.08
R6(OFF)	-0.08	0.00	0.00	0.00	0.00	0.15	-0.15	-0.15	0.07
R7(OFF)	0.15	0.00	0.00	-0.15	-0.23	0.00	0.00	0.15	-0.08
R8(OFF)	-0.15	-0.08	0.15	0.00	-0.08	0.00	0.23	0.00	0.15
R9(OFF)	-0.31	0.07	0.00	0.00	-0.15	0.00	0.23	0.07	0.07
R10(OFF)	-0.15	0.15	0.15	0.15	0.07	0.00	0.15	0.00	-0.08
R11(OFF)	-0.23	0.07	0.00	0.00	-0.08	0.07	0.00	0.07	0.07
Irradiated, unbiased parts statistics									
Min Value	-0.31	-0.08	0.00	-0.15	-0.23	-0.15	-0.15	-0.31	-0.08
Max Value	0.15	0.23	0.15	0.15	0.07	0.15	0.23	0.15	0.15
Average	-0.06	0.04	0.05	-0.01	-0.04	0.01	0.06	-0.01	0.02
Sigma	0.16	0.10	0.07	0.11	0.10	0.08	0.13	0.13	0.10



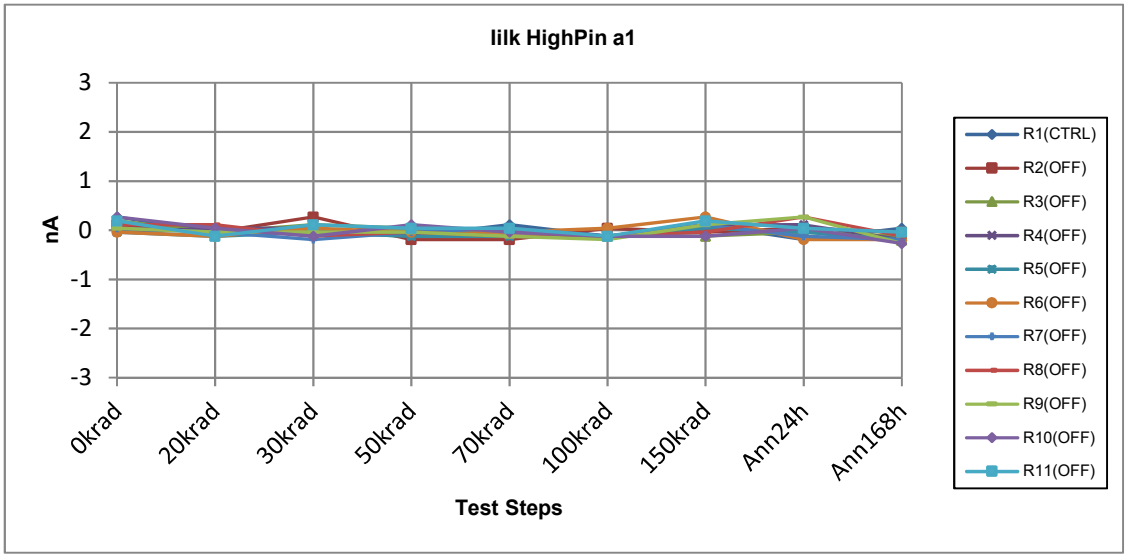
ILI HighPin a4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.25	0.02	-0.21	-0.06	-0.14	-0.06	-0.21	-0.21	-0.14
Irradiated, unbiased parts results									
R2(OFF)	0.17	-0.06	-0.14	-0.06	0.02	-0.06	0.09	-0.21	0.02
R3(OFF)	-0.14	0.02	0.09	0.09	0.25	-0.06	-0.06	0.09	0.09
R4(OFF)	0.09	-0.06	0.02	-0.06	0.02	0.25	0.09	0.02	0.09
R5(OFF)	0.02	0.02	0.09	0.09	0.02	-0.06	0.02	-0.21	-0.14
R6(OFF)	-0.21	0.09	0.02	0.17	0.02	0.02	0.17	-0.14	-0.06
R7(OFF)	-0.21	-0.06	-0.06	-0.06	-0.14	-0.37	-0.21	0.09	0.09
R8(OFF)	0.02	0.02	0.02	0.17	-0.14	0.02	0.02	0.09	-0.06
R9(OFF)	-0.06	0.32	-0.06	0.09	-0.06	-0.06	-0.06	0.09	-0.06
R10(OFF)	-0.21	-0.14	-0.06	-0.14	-0.06	0.09	0.09	-0.21	0.09
R11(OFF)	-0.14	0.02	-0.14	0.02	-0.06	0.02	-0.06	-0.06	0.02
Irradiated, unbiased parts statistics									
Min Value	-0.21	-0.14	-0.14	-0.14	-0.14	-0.37	-0.21	-0.21	-0.14
Max Value	0.17	0.32	0.09	0.17	0.25	0.25	0.17	0.09	0.09
Average	-0.07	0.02	-0.02	0.03	-0.01	-0.02	0.01	-0.05	0.01
Sigma	0.14	0.12	0.08	0.11	0.11	0.16	0.11	0.14	0.08



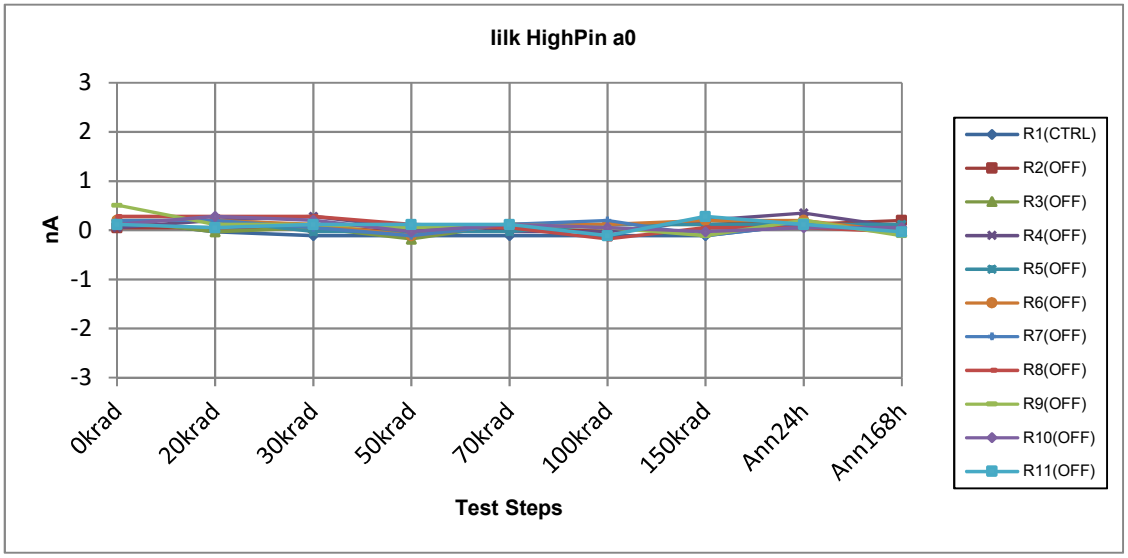
ILI HighPin a3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.23	0.15	0.00	-0.15	-0.15	-0.23	0.23	-0.15	0.00
Irradiated, unbiased parts results									
R2(OFF)	0.08	0.00	0.15	0.08	-0.08	0.23	0.23	0.08	-0.08
R3(OFF)	0.31	0.31	0.23	0.00	0.23	0.23	0.23	0.23	0.08
R4(OFF)	0.31	0.15	0.23	0.00	0.23	0.15	0.00	0.23	0.15
R5(OFF)	-0.08	0.00	0.00	0.00	0.00	0.08	0.08	0.15	-0.08
R6(OFF)	0.31	0.15	0.08	-0.15	0.08	0.00	0.31	0.08	0.08
R7(OFF)	0.08	0.15	0.15	0.00	-0.08	0.00	0.15	0.23	0.23
R8(OFF)	0.31	0.00	0.15	0.08	0.08	-0.15	-0.08	0.00	0.23
R9(OFF)	0.08	0.23	0.08	0.23	0.15	0.23	-0.08	0.08	0.08
R10(OFF)	-0.08	0.15	0.23	0.00	0.23	0.00	0.15	0.00	-0.15
R11(OFF)	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.08	0.08
Irradiated, unbiased parts statistics									
Min Value	-0.08	0.00	0.00	-0.15	-0.08	-0.15	-0.08	0.00	-0.15
Max Value	0.31	0.31	0.23	0.23	0.23	0.23	0.31	0.23	0.23
Average	0.15	0.13	0.13	0.02	0.08	0.08	0.10	0.12	0.06
Sigma	0.16	0.10	0.09	0.10	0.12	0.13	0.14	0.09	0.13



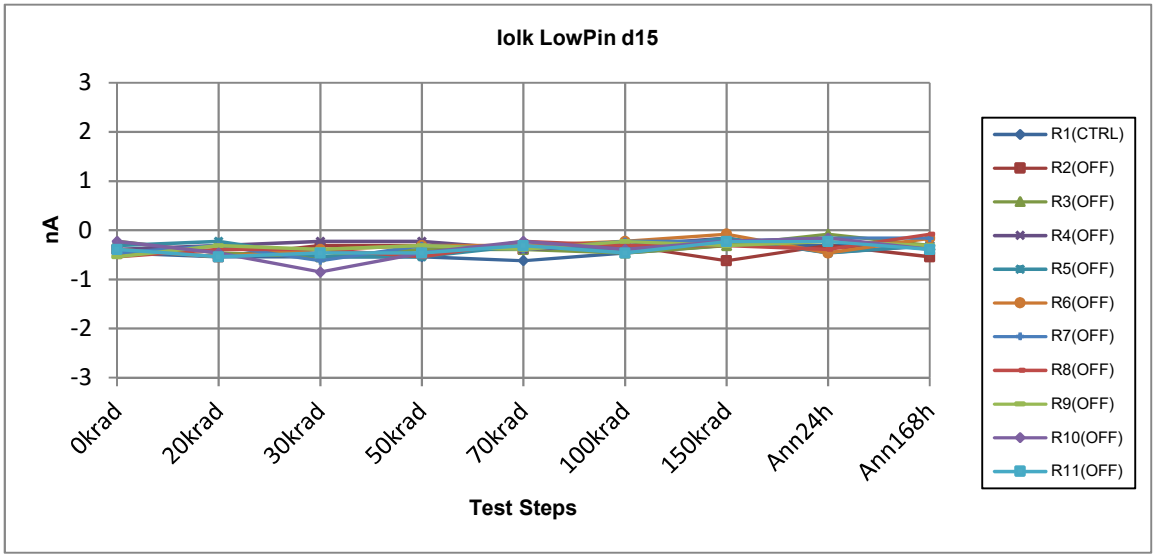
ILI HighPin a2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.31	-0.24	-0.31	-0.31	-0.31	-0.31	-0.08	-0.16	-0.08
Irradiated, unbiased parts results									
R2(OFF)	-0.47	-0.39	-0.24	-0.16	-0.24	-0.24	-0.24	-0.31	-0.39
R3(OFF)	-0.31	-0.16	-0.16	-0.24	-0.31	-0.31	-0.39	-0.31	-0.31
R4(OFF)	-0.24	-0.24	-0.31	-0.31	-0.47	-0.24	-0.24	-0.39	-0.16
R5(OFF)	-0.31	-0.16	-0.16	-0.24	-0.16	-0.31	-0.24	-0.31	-0.31
R6(OFF)	-0.39	-0.39	-0.39	-0.47	-0.24	-0.24	-0.16	-0.31	-0.24
R7(OFF)	-0.24	-0.16	-0.24	-0.16	-0.24	-0.31	-0.08	-0.31	-0.24
R8(OFF)	-0.39	-0.16	-0.31	-0.31	-0.31	-0.39	-0.31	-0.31	-0.08
R9(OFF)	-0.24	-0.08	-0.39	-0.08	-0.31	-0.31	-0.31	-0.24	-0.31
R10(OFF)	-0.24	-0.01	-0.08	-0.31	-0.31	-0.24	-0.24	-0.16	-0.08
R11(OFF)	-0.47	-0.31	-0.31	-0.16	-0.31	-0.39	-0.24	-0.39	-0.39
Irradiated, unbiased parts statistics									
Min Value	-0.47	-0.39	-0.39	-0.47	-0.47	-0.39	-0.39	-0.39	-0.39
Max Value	-0.24	-0.01	-0.08	-0.08	-0.16	-0.24	-0.08	-0.16	-0.08
Average	-0.33	-0.21	-0.26	-0.24	-0.29	-0.30	-0.25	-0.30	-0.25
Sigma	0.09	0.13	0.10	0.11	0.08	0.06	0.08	0.07	0.11



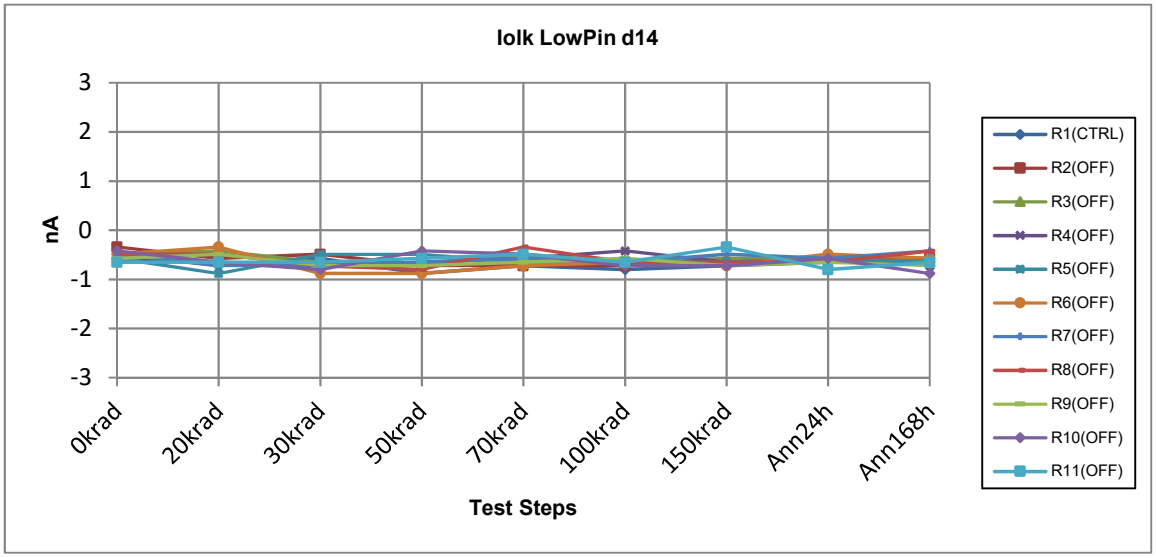
ILI HighPin a1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.27	-0.04	-0.04	-0.12	0.11	-0.12	0.11	-0.19	0.04
Irradiated, unbiased parts results									
R2(OFF)	0.11	-0.04	0.27	-0.19	-0.19	0.04	-0.04	0.04	-0.04
R3(OFF)	0.19	-0.04	0.11	0.04	-0.04	-0.12	-0.12	-0.04	-0.12
R4(OFF)	-0.04	0.04	0.04	-0.12	0.04	-0.12	0.11	0.11	-0.19
R5(OFF)	-0.04	-0.12	-0.04	-0.12	-0.12	-0.12	0.04	-0.04	-0.19
R6(OFF)	-0.04	-0.12	0.04	-0.04	-0.04	0.04	0.27	-0.19	-0.19
R7(OFF)	0.04	-0.04	-0.19	-0.04	0.04	-0.12	0.11	-0.12	-0.19
R8(OFF)	0.11	0.11	-0.12	-0.04	-0.12	-0.12	-0.04	0.27	-0.12
R9(OFF)	0.04	-0.04	-0.04	-0.04	-0.12	-0.19	0.11	0.27	-0.27
R10(OFF)	0.27	0.04	-0.12	0.11	-0.04	-0.12	-0.12	0.04	-0.27
R11(OFF)	0.19	-0.12	0.11	0.04	0.04	-0.12	0.19	0.04	-0.04
Irradiated, unbiased parts statistics									
Min Value	-0.04	-0.12	-0.19	-0.19	-0.19	-0.19	-0.12	-0.19	-0.27
Max Value	0.27	0.11	0.27	0.11	0.04	0.04	0.27	0.27	-0.04
Average	0.08	-0.03	0.01	-0.04	-0.06	-0.10	0.05	0.04	-0.16
Sigma	0.11	0.08	0.14	0.09	0.08	0.07	0.13	0.15	0.08



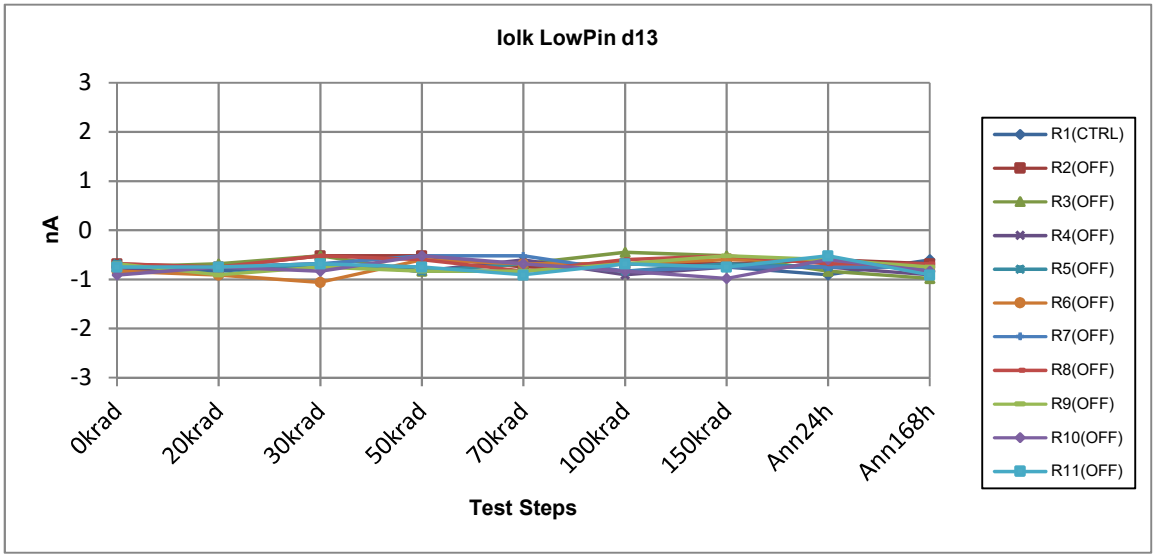
ILI HighPin a0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000	-2000
Max Limit	2000	2000	2000	2000	2000	2000	2000	2000	2000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	0.20	-0.03	-0.11	-0.11	-0.11	-0.11	-0.11	0.12	0.05
Irradiated, unbiased parts results									
R2(OFF)	0.05	0.05	0.05	-0.03	0.05	-0.03	0.20	0.12	0.20
R3(OFF)	0.20	-0.03	0.05	-0.18	0.12	0.12	0.12	0.12	-0.03
R4(OFF)	0.05	0.20	0.28	0.05	-0.03	-0.03	0.20	0.35	0.05
R5(OFF)	0.20	0.20	-0.03	-0.03	-0.03	0.12	0.12	0.12	0.12
R6(OFF)	0.20	0.20	0.12	-0.11	0.12	0.12	0.20	0.20	-0.03
R7(OFF)	0.20	0.20	0.05	-0.11	0.12	0.20	-0.11	0.12	-0.03
R8(OFF)	0.28	0.28	0.28	0.12	0.05	-0.18	0.05	0.05	-0.03
R9(OFF)	0.51	0.12	0.12	0.05	0.12	0.05	-0.11	0.20	-0.11
R10(OFF)	0.12	0.28	0.20	-0.03	0.12	0.05	-0.03	0.05	0.05
R11(OFF)	0.12	0.05	0.12	0.12	0.12	-0.11	0.28	0.12	-0.03
Irradiated, unbiased parts statistics									
Min Value	0.05	-0.03	-0.03	-0.18	-0.03	-0.18	-0.11	0.05	-0.11
Max Value	0.51	0.28	0.28	0.12	0.12	0.20	0.28	0.35	0.20
Average	0.19	0.16	0.12	-0.02	0.08	0.03	0.09	0.15	0.02
Sigma	0.13	0.10	0.10	0.10	0.06	0.12	0.14	0.09	0.09



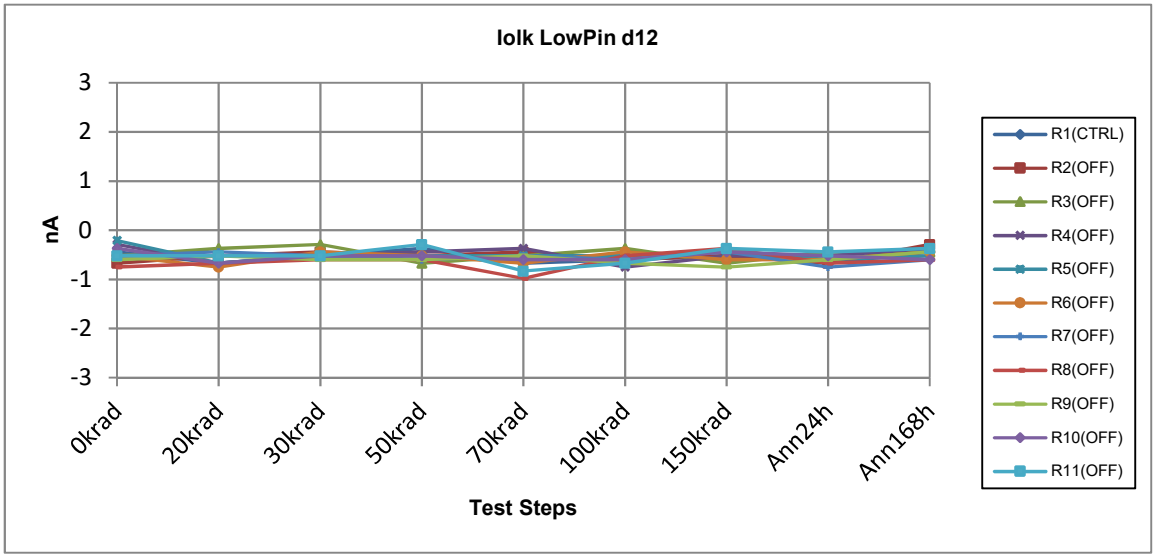
Iolk LowPin d15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.46	-0.54	-0.54	-0.54	-0.62	-0.46	-0.31	-0.31	-0.31
Irradiated, unbiased parts results									
R2(OFF)	-0.39	-0.54	-0.31	-0.31	-0.39	-0.31	-0.62	-0.31	-0.54
R3(OFF)	-0.23	-0.46	-0.54	-0.39	-0.39	-0.46	-0.31	-0.08	-0.31
R4(OFF)	-0.39	-0.31	-0.23	-0.23	-0.39	-0.31	-0.16	-0.46	-0.31
R5(OFF)	-0.31	-0.23	-0.54	-0.54	-0.31	-0.39	-0.16	-0.46	-0.31
R6(OFF)	-0.39	-0.54	-0.39	-0.31	-0.31	-0.23	-0.08	-0.46	-0.16
R7(OFF)	-0.46	-0.31	-0.62	-0.31	-0.39	-0.23	-0.23	-0.16	-0.16
R8(OFF)	-0.54	-0.39	-0.39	-0.54	-0.23	-0.31	-0.31	-0.39	-0.08
R9(OFF)	-0.54	-0.31	-0.39	-0.31	-0.39	-0.23	-0.31	-0.23	-0.31
R10(OFF)	-0.23	-0.46	-0.85	-0.46	-0.23	-0.39	-0.23	-0.16	-0.39
R11(OFF)	-0.39	-0.54	-0.46	-0.46	-0.31	-0.46	-0.23	-0.23	-0.39
Irradiated, unbiased parts statistics									
Min Value	-0.54	-0.54	-0.85	-0.54	-0.39	-0.46	-0.62	-0.46	-0.54
Max Value	-0.23	-0.23	-0.23	-0.23	-0.23	-0.23	-0.08	-0.08	-0.08
Average	-0.39	-0.41	-0.47	-0.39	-0.33	-0.33	-0.26	-0.29	-0.30
Sigma	0.11	0.11	0.18	0.11	0.07	0.09	0.15	0.14	0.13



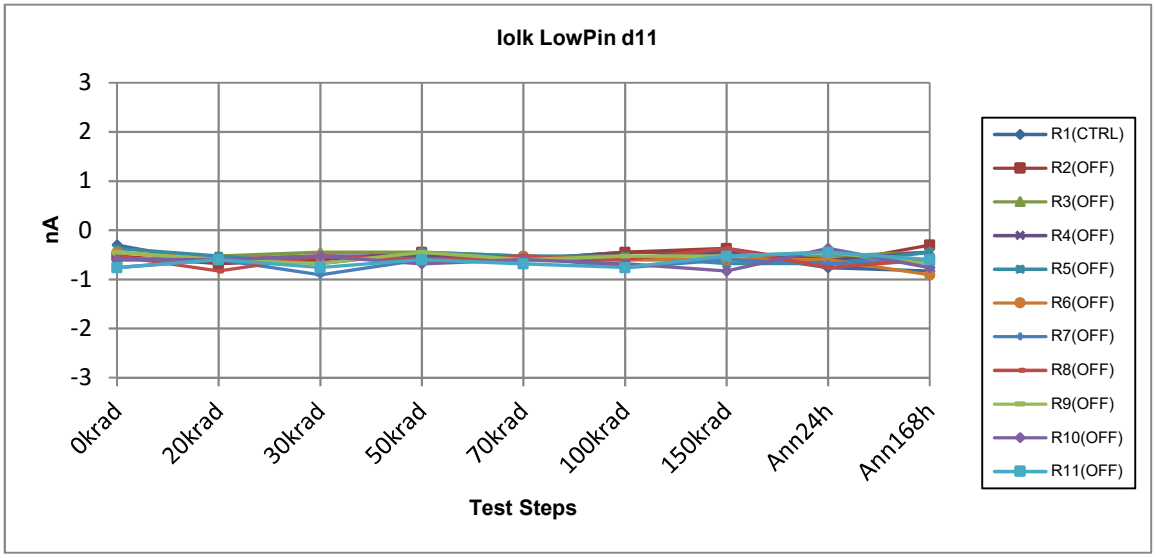
Iolk LowPin d14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000
Max Limit	1000	1000	1000	1000	1000	1000	1000	1000	1000
Unit	nA	nA	nA	nA	nA	nA	nA	nA	nA
Control results									
R1(CTRL)	-0.49	-0.72	-0.57	-0.88	-0.72	-0.80	-0.72	-0.65	-0.65
Irradiated, unbiased parts results									
R2(OFF)	-0.34	-0.57	-0.49	-0.72	-0.72	-0.72	-0.65	-0.57	-0.57
R3(OFF)	-0.49	-0.42	-0.65	-0.72	-0.49	-0.65	-0.57	-0.57	-0.65
R4(OFF)	-0.57	-0.65	-0.72	-0.65	-0.57	-0.42	-0.65	-0.57	-0.72
R5(OFF)	-0.57	-0.88	-0.49	-0.49	-0.65	-0.65	-0.65	-0.57	-0.65
R6(OFF)	-0.49	-0.34	-0.88	-0.88	-0.72	-0.65	-0.72	-0.49	-0.57
R7(OFF)	-0.49	-0.72	-0.72	-0.65	-0.57	-0.65	-0.49	-0.57	-0.42
R8(OFF)	-0.49	-0.49	-0.72	-0.80	-0.34	-0.65	-0.65	-0.65	-0.42
R9(OFF)	-0.57	-0.49	-0.72	-0.72	-0.65	-0.57	-0.72	-0.65	-0.72
R10(OFF)	-0.42	-0.65	-0.80	-0.42	-0.49	-0.72	-0.72	-0.57	-0.88
R11(OFF)	-0.65	-0.65	-0.65	-0.57	-0.49	-0.65	-0.34	-0.80	-0.65
Irradiated, unbiased parts statistics									
Min Value	-0.65	-0.88	-0.88	-0.88	-0.72	-0.72	-0.72	-0.80	-0.88
Max Value	-0.34	-0.34	-0.49	-0.42	-0.34	-0.42	-0.34	-0.49	-0.42
Average	-0.51	-0.59	-0.68	-0.66	-0.57	-0.63	-0.62	-0.60	-0.63
Sigma	0.09	0.16	0.12	0.14	0.12	0.09	0.12	0.08	0.14



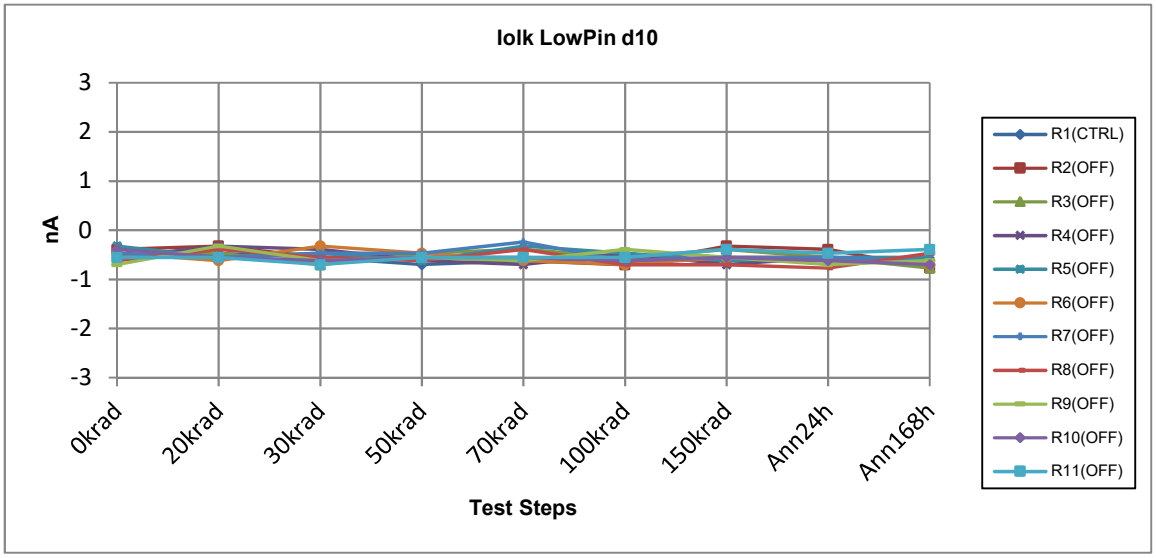
Iolk LowPin d13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.75	-0.83	-0.68	-0.83	-0.83	-0.68	-0.75	-0.91	-0.60
Irradiated, unbiased parts results									
R2(OFF)	-0.68	-0.75	-0.52	-0.52	-0.75	-0.68	-0.68	-0.60	-0.68
R3(OFF)	-0.75	-0.68	-0.52	-0.83	-0.68	-0.45	-0.52	-0.83	-0.98
R4(OFF)	-0.83	-0.75	-0.68	-0.83	-0.60	-0.91	-0.75	-0.75	-0.91
R5(OFF)	-0.68	-0.91	-0.68	-0.83	-0.68	-0.83	-0.68	-0.75	-0.75
R6(OFF)	-0.83	-0.91	-1.06	-0.60	-0.68	-0.68	-0.60	-0.60	-0.83
R7(OFF)	-0.75	-0.75	-0.68	-0.52	-0.52	-0.83	-0.75	-0.75	-0.75
R8(OFF)	-0.68	-0.75	-0.52	-0.60	-0.83	-0.60	-0.52	-0.68	-0.68
R9(OFF)	-0.68	-0.91	-0.75	-0.83	-0.83	-0.68	-0.52	-0.60	-0.75
R10(OFF)	-0.91	-0.75	-0.83	-0.52	-0.68	-0.83	-0.98	-0.60	-0.83
R11(OFF)	-0.75	-0.75	-0.68	-0.75	-0.91	-0.68	-0.75	-0.52	-0.91
Irradiated, unbiased parts statistics									
Min Value	-0.91	-0.91	-1.06	-0.83	-0.91	-0.91	-0.98	-0.83	-0.98
Max Value	-0.68	-0.68	-0.52	-0.52	-0.52	-0.45	-0.52	-0.52	-0.68
Average	-0.75	-0.79	-0.69	-0.68	-0.72	-0.72	-0.68	-0.67	-0.81
Sigma	0.08	0.08	0.17	0.14	0.12	0.14	0.14	0.10	0.10



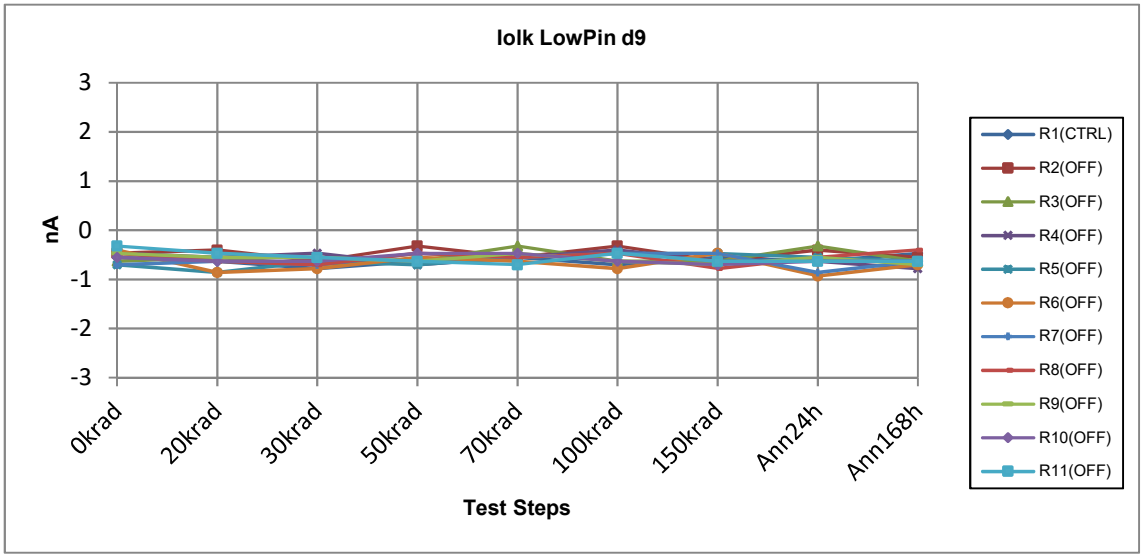
Iolk LowPin d12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.44	-0.67	-0.52	-0.37	-0.67	-0.60	-0.52	-0.67	-0.44
Irradiated, unbiased parts results									
R2(OFF)	-0.67	-0.52	-0.44	-0.52	-0.44	-0.60	-0.52	-0.67	-0.29
R3(OFF)	-0.52	-0.37	-0.29	-0.67	-0.52	-0.37	-0.67	-0.44	-0.44
R4(OFF)	-0.29	-0.67	-0.52	-0.44	-0.37	-0.75	-0.52	-0.52	-0.37
R5(OFF)	-0.21	-0.67	-0.52	-0.52	-0.52	-0.52	-0.44	-0.60	-0.52
R6(OFF)	-0.52	-0.75	-0.44	-0.52	-0.67	-0.44	-0.60	-0.60	-0.44
R7(OFF)	-0.52	-0.44	-0.52	-0.60	-0.52	-0.60	-0.44	-0.75	-0.60
R8(OFF)	-0.75	-0.67	-0.60	-0.60	-0.98	-0.52	-0.37	-0.67	-0.60
R9(OFF)	-0.60	-0.52	-0.60	-0.60	-0.52	-0.67	-0.75	-0.60	-0.44
R10(OFF)	-0.37	-0.67	-0.52	-0.52	-0.60	-0.60	-0.44	-0.52	-0.60
R11(OFF)	-0.52	-0.52	-0.52	-0.29	-0.83	-0.67	-0.37	-0.44	-0.37
Irradiated, unbiased parts statistics									
Min Value	-0.75	-0.75	-0.60	-0.67	-0.98	-0.75	-0.75	-0.75	-0.60
Max Value	-0.21	-0.37	-0.29	-0.29	-0.37	-0.37	-0.37	-0.44	-0.29
Average	-0.50	-0.58	-0.50	-0.53	-0.60	-0.57	-0.51	-0.58	-0.47
Sigma	0.17	0.12	0.09	0.11	0.18	0.11	0.13	0.10	0.11



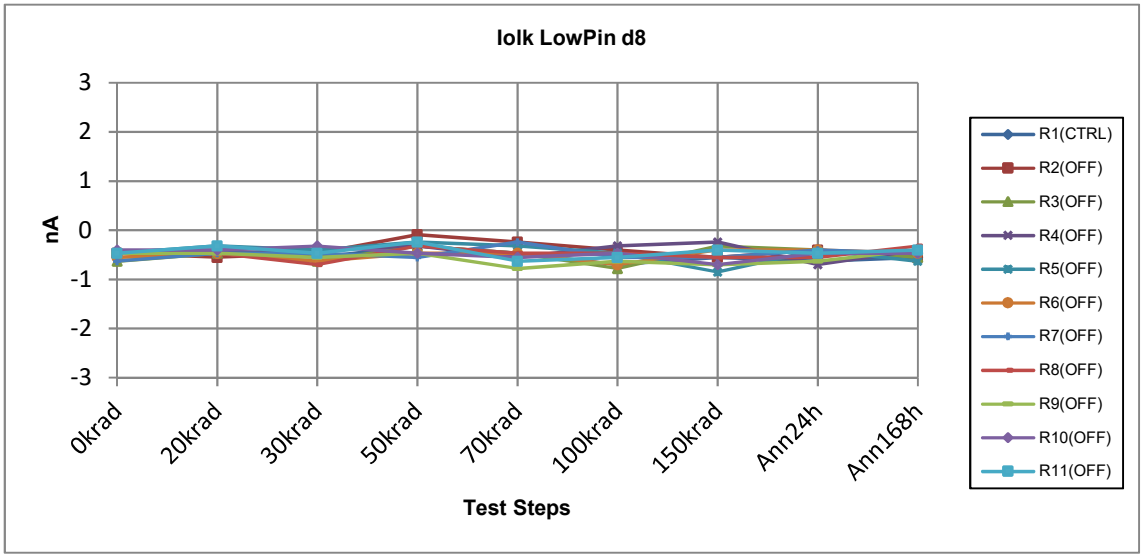
Iolk LowPin d11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.30	-0.68	-0.53	-0.60	-0.60	-0.45	-0.45	-0.76	-0.83
Irradiated, unbiased parts results									
R2(OFF)	-0.53	-0.68	-0.60	-0.45	-0.60	-0.45	-0.37	-0.68	-0.30
R3(OFF)	-0.60	-0.53	-0.45	-0.45	-0.53	-0.60	-0.60	-0.53	-0.45
R4(OFF)	-0.60	-0.60	-0.53	-0.53	-0.60	-0.60	-0.45	-0.60	-0.45
R5(OFF)	-0.37	-0.53	-0.68	-0.45	-0.53	-0.53	-0.68	-0.68	-0.45
R6(OFF)	-0.45	-0.60	-0.53	-0.60	-0.53	-0.60	-0.60	-0.60	-0.91
R7(OFF)	-0.76	-0.60	-0.91	-0.60	-0.53	-0.76	-0.60	-0.68	-0.60
R8(OFF)	-0.53	-0.83	-0.53	-0.60	-0.53	-0.60	-0.37	-0.76	-0.60
R9(OFF)	-0.45	-0.60	-0.68	-0.45	-0.60	-0.53	-0.53	-0.45	-0.68
R10(OFF)	-0.60	-0.60	-0.53	-0.68	-0.60	-0.68	-0.83	-0.37	-0.76
R11(OFF)	-0.76	-0.60	-0.76	-0.60	-0.68	-0.76	-0.53	-0.45	-0.60
Irradiated, unbiased parts statistics									
Min Value	-0.76	-0.83	-0.91	-0.68	-0.68	-0.76	-0.83	-0.76	-0.91
Max Value	-0.37	-0.53	-0.45	-0.45	-0.53	-0.45	-0.37	-0.37	-0.30
Average	-0.57	-0.62	-0.62	-0.54	-0.57	-0.61	-0.56	-0.58	-0.58
Sigma	0.13	0.09	0.14	0.09	0.05	0.10	0.14	0.13	0.18



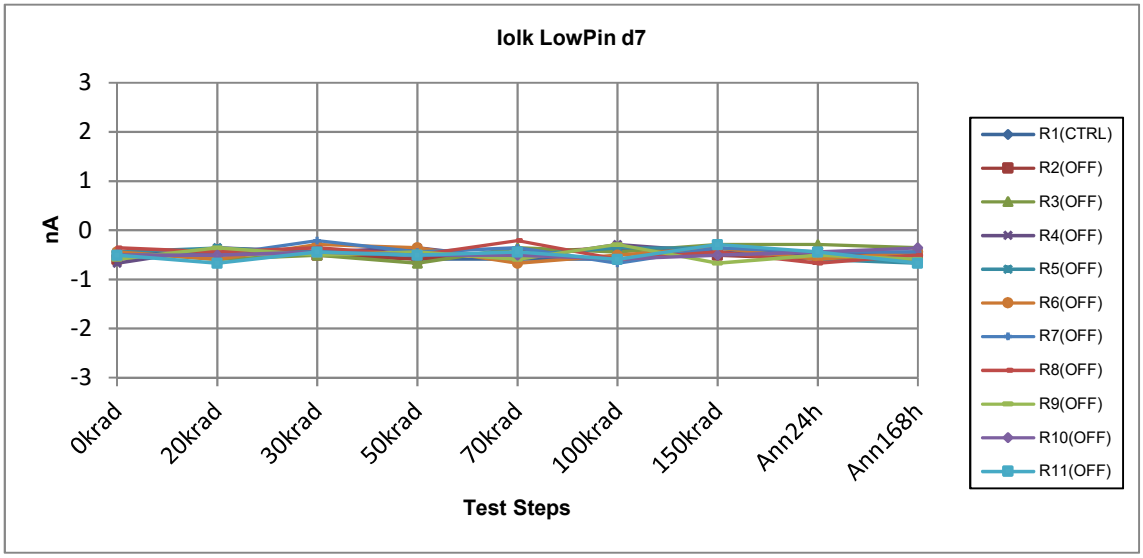
Iolk LowPin d10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.55	-0.47	-0.55	-0.70	-0.62	-0.55	-0.62	-0.62	-0.62
Irradiated, unbiased parts results									
R2(OFF)	-0.39	-0.32	-0.55	-0.55	-0.62	-0.70	-0.32	-0.39	-0.77
R3(OFF)	-0.55	-0.47	-0.70	-0.47	-0.39	-0.55	-0.39	-0.55	-0.77
R4(OFF)	-0.55	-0.32	-0.39	-0.62	-0.70	-0.47	-0.70	-0.55	-0.62
R5(OFF)	-0.32	-0.55	-0.47	-0.62	-0.32	-0.47	-0.62	-0.55	-0.55
R6(OFF)	-0.47	-0.62	-0.32	-0.47	-0.62	-0.70	-0.55	-0.55	-0.70
R7(OFF)	-0.47	-0.55	-0.47	-0.47	-0.24	-0.62	-0.55	-0.55	-0.62
R8(OFF)	-0.62	-0.39	-0.55	-0.62	-0.39	-0.70	-0.70	-0.77	-0.47
R9(OFF)	-0.70	-0.32	-0.62	-0.55	-0.62	-0.39	-0.55	-0.70	-0.62
R10(OFF)	-0.39	-0.55	-0.62	-0.55	-0.55	-0.62	-0.55	-0.62	-0.70
R11(OFF)	-0.55	-0.55	-0.70	-0.55	-0.55	-0.55	-0.39	-0.47	-0.39
Irradiated, unbiased parts statistics									
Min Value	-0.70	-0.62	-0.70	-0.62	-0.70	-0.70	-0.70	-0.77	-0.77
Max Value	-0.32	-0.32	-0.32	-0.47	-0.24	-0.39	-0.32	-0.39	-0.39
Average	-0.50	-0.46	-0.54	-0.55	-0.50	-0.58	-0.53	-0.57	-0.62
Sigma	0.12	0.12	0.13	0.06	0.15	0.11	0.13	0.11	0.12



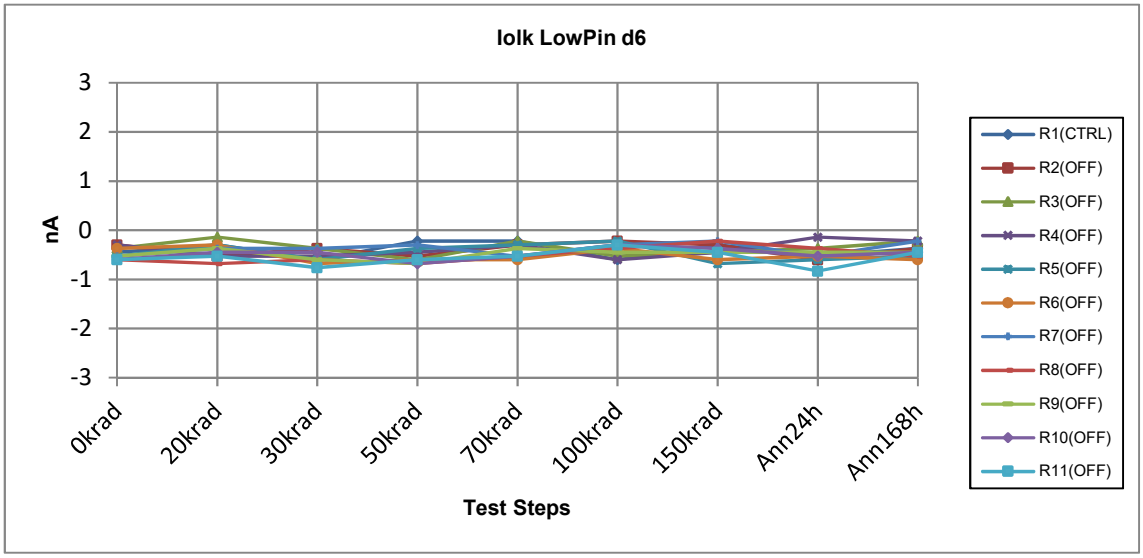
Iolk LowPin d9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.55	-0.63	-0.78	-0.63	-0.55	-0.70	-0.55	-0.63	-0.47
Irradiated, unbiased parts results									
R2(OFF)	-0.47	-0.40	-0.63	-0.32	-0.55	-0.32	-0.63	-0.40	-0.55
R3(OFF)	-0.63	-0.55	-0.70	-0.63	-0.32	-0.63	-0.63	-0.32	-0.63
R4(OFF)	-0.47	-0.55	-0.47	-0.70	-0.55	-0.40	-0.63	-0.63	-0.78
R5(OFF)	-0.70	-0.86	-0.63	-0.70	-0.55	-0.47	-0.47	-0.55	-0.63
R6(OFF)	-0.40	-0.86	-0.78	-0.55	-0.63	-0.78	-0.47	-0.93	-0.70
R7(OFF)	-0.70	-0.63	-0.70	-0.47	-0.55	-0.47	-0.47	-0.86	-0.63
R8(OFF)	-0.47	-0.63	-0.70	-0.47	-0.55	-0.47	-0.78	-0.55	-0.40
R9(OFF)	-0.47	-0.55	-0.55	-0.63	-0.47	-0.63	-0.70	-0.55	-0.70
R10(OFF)	-0.55	-0.63	-0.63	-0.47	-0.47	-0.63	-0.70	-0.63	-0.63
R11(OFF)	-0.32	-0.47	-0.55	-0.63	-0.70	-0.47	-0.63	-0.63	-0.63
Irradiated, unbiased parts statistics									
Min Value	-0.70	-0.86	-0.78	-0.70	-0.70	-0.78	-0.78	-0.93	-0.78
Max Value	-0.32	-0.40	-0.47	-0.32	-0.32	-0.32	-0.47	-0.32	-0.40
Average	-0.52	-0.61	-0.63	-0.56	-0.53	-0.53	-0.61	-0.61	-0.63
Sigma	0.13	0.15	0.09	0.12	0.10	0.14	0.11	0.18	0.10



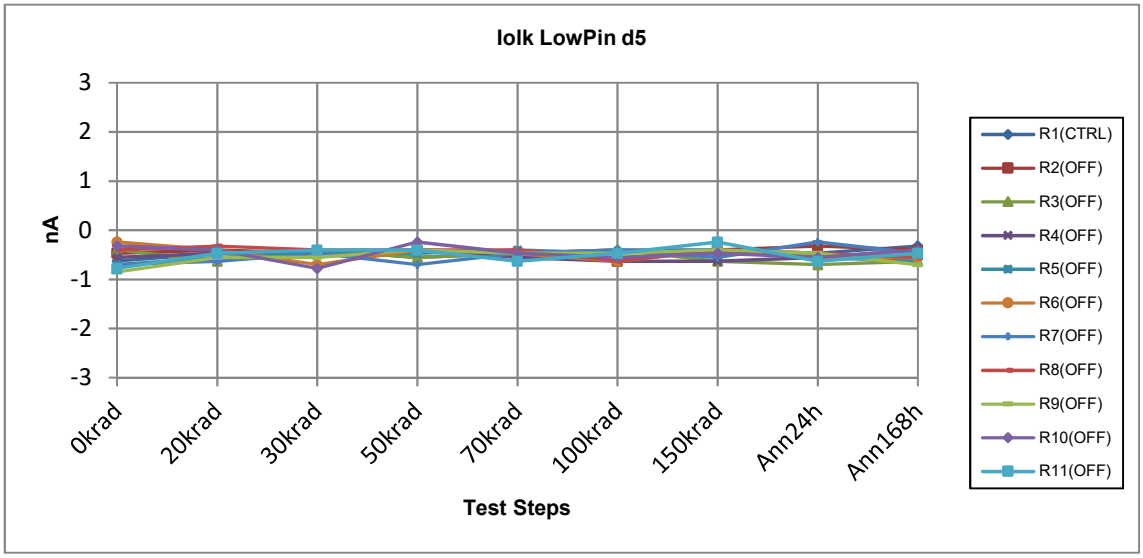
Iolk LowPin d8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.47	-0.40	-0.55	-0.32	-0.47	-0.70	-0.55	-0.63	-0.55
Irradiated, unbiased parts results									
R2(OFF)	-0.47	-0.55	-0.47	-0.09	-0.24	-0.40	-0.55	-0.40	-0.55
R3(OFF)	-0.63	-0.47	-0.63	-0.32	-0.47	-0.78	-0.32	-0.40	-0.55
R4(OFF)	-0.47	-0.47	-0.40	-0.32	-0.55	-0.32	-0.24	-0.70	-0.40
R5(OFF)	-0.47	-0.32	-0.40	-0.24	-0.32	-0.47	-0.85	-0.40	-0.63
R6(OFF)	-0.55	-0.47	-0.63	-0.47	-0.47	-0.70	-0.40	-0.40	-0.47
R7(OFF)	-0.63	-0.47	-0.47	-0.55	-0.24	-0.55	-0.55	-0.40	-0.47
R8(OFF)	-0.47	-0.47	-0.70	-0.32	-0.47	-0.47	-0.55	-0.55	-0.32
R9(OFF)	-0.47	-0.47	-0.55	-0.47	-0.78	-0.63	-0.70	-0.63	-0.40
R10(OFF)	-0.40	-0.40	-0.32	-0.47	-0.55	-0.47	-0.70	-0.47	-0.47
R11(OFF)	-0.47	-0.32	-0.47	-0.24	-0.63	-0.55	-0.40	-0.47	-0.40
Irradiated, unbiased parts statistics									
Min Value	-0.63	-0.55	-0.70	-0.55	-0.78	-0.78	-0.85	-0.70	-0.63
Max Value	-0.40	-0.32	-0.32	-0.09	-0.24	-0.32	-0.24	-0.40	-0.32
Average	-0.50	-0.44	-0.50	-0.35	-0.47	-0.53	-0.53	-0.48	-0.47
Sigma	0.08	0.07	0.12	0.14	0.17	0.14	0.19	0.11	0.09



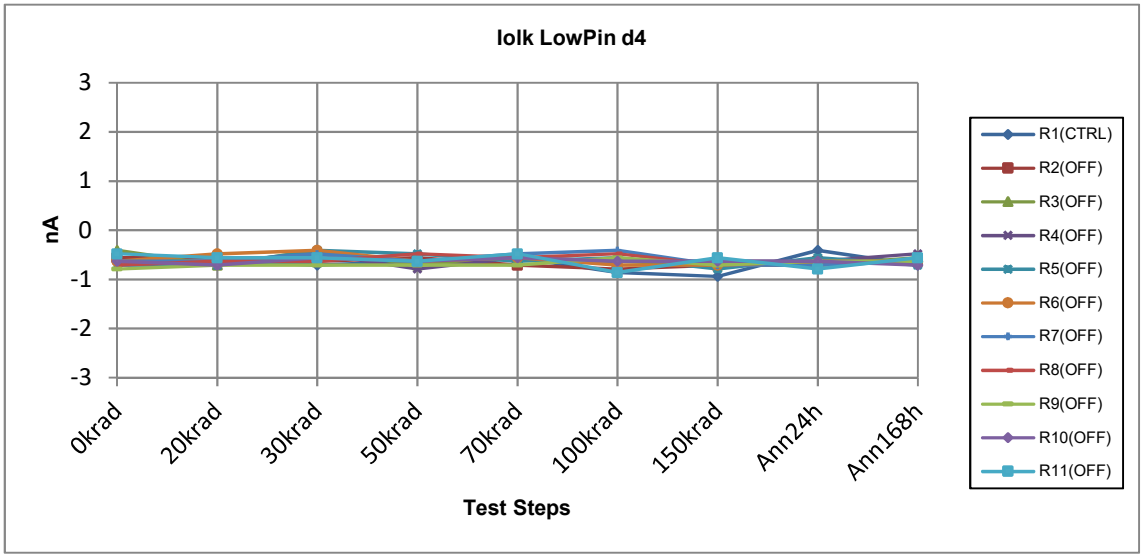
Iolk LowPin d7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.44	-0.51	-0.44	-0.59	-0.59	-0.59	-0.36	-0.51	-0.51
Irradiated, unbiased parts results									
R2(OFF)	-0.59	-0.44	-0.51	-0.59	-0.44	-0.36	-0.51	-0.59	-0.59
R3(OFF)	-0.44	-0.59	-0.51	-0.67	-0.36	-0.44	-0.29	-0.29	-0.36
R4(OFF)	-0.67	-0.36	-0.44	-0.36	-0.59	-0.29	-0.44	-0.51	-0.44
R5(OFF)	-0.44	-0.36	-0.44	-0.51	-0.51	-0.36	-0.36	-0.59	-0.67
R6(OFF)	-0.44	-0.59	-0.29	-0.36	-0.67	-0.51	-0.36	-0.59	-0.44
R7(OFF)	-0.51	-0.51	-0.21	-0.44	-0.36	-0.67	-0.36	-0.44	-0.44
R8(OFF)	-0.36	-0.44	-0.36	-0.51	-0.21	-0.59	-0.44	-0.67	-0.51
R9(OFF)	-0.59	-0.36	-0.51	-0.44	-0.59	-0.29	-0.67	-0.51	-0.59
R10(OFF)	-0.51	-0.51	-0.44	-0.51	-0.51	-0.59	-0.51	-0.44	-0.36
R11(OFF)	-0.51	-0.67	-0.44	-0.51	-0.44	-0.59	-0.29	-0.44	-0.67
Irradiated, unbiased parts statistics									
Min Value	-0.67	-0.67	-0.51	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67
Max Value	-0.36	-0.36	-0.21	-0.36	-0.21	-0.29	-0.29	-0.29	-0.36
Average	-0.51	-0.48	-0.42	-0.49	-0.47	-0.47	-0.42	-0.51	-0.51
Sigma	0.09	0.11	0.10	0.10	0.14	0.14	0.12	0.11	0.12



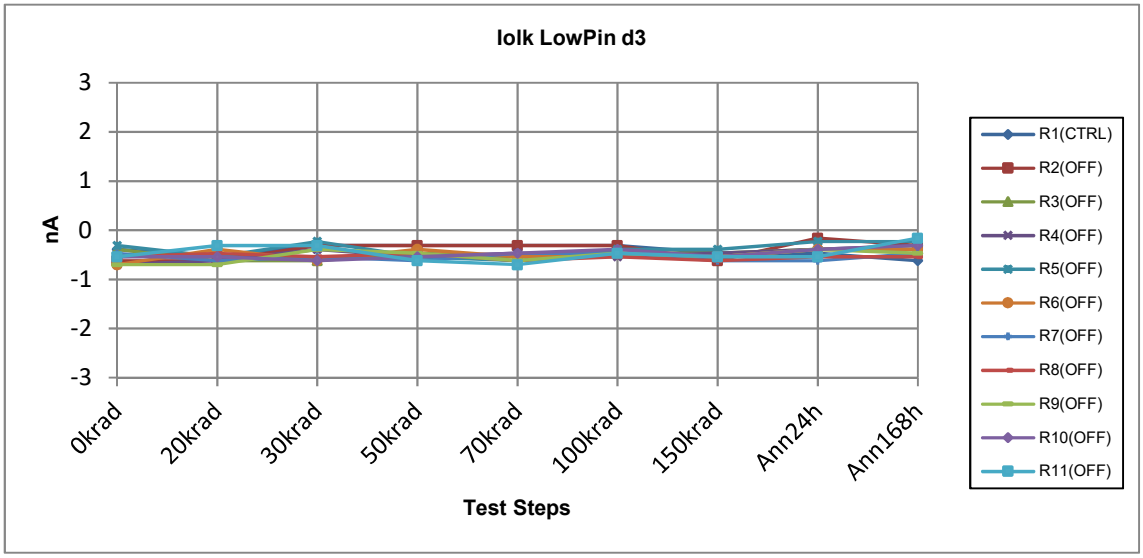
Iolk LowPin d6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.45	-0.30	-0.60	-0.22	-0.22	-0.60	-0.30	-0.53	-0.37
Irradiated, unbiased parts results									
R2(OFF)	-0.30	-0.53	-0.37	-0.53	-0.30	-0.22	-0.30	-0.60	-0.37
R3(OFF)	-0.37	-0.14	-0.37	-0.60	-0.22	-0.53	-0.45	-0.37	-0.22
R4(OFF)	-0.30	-0.53	-0.53	-0.45	-0.30	-0.60	-0.45	-0.14	-0.22
R5(OFF)	-0.53	-0.30	-0.60	-0.37	-0.30	-0.22	-0.68	-0.60	-0.53
R6(OFF)	-0.37	-0.30	-0.68	-0.60	-0.60	-0.37	-0.60	-0.53	-0.60
R7(OFF)	-0.53	-0.37	-0.37	-0.30	-0.53	-0.30	-0.22	-0.53	-0.22
R8(OFF)	-0.60	-0.68	-0.60	-0.68	-0.53	-0.37	-0.22	-0.37	-0.53
R9(OFF)	-0.53	-0.37	-0.60	-0.68	-0.37	-0.45	-0.45	-0.45	-0.45
R10(OFF)	-0.60	-0.45	-0.45	-0.68	-0.53	-0.30	-0.37	-0.53	-0.45
R11(OFF)	-0.60	-0.53	-0.76	-0.60	-0.53	-0.30	-0.45	-0.83	-0.45
Irradiated, unbiased parts statistics									
Min Value	-0.60	-0.68	-0.76	-0.68	-0.60	-0.60	-0.68	-0.83	-0.60
Max Value	-0.30	-0.14	-0.37	-0.30	-0.22	-0.22	-0.22	-0.14	-0.22
Average	-0.47	-0.42	-0.53	-0.55	-0.42	-0.37	-0.42	-0.50	-0.40
Sigma	0.12	0.16	0.14	0.13	0.14	0.13	0.15	0.18	0.14



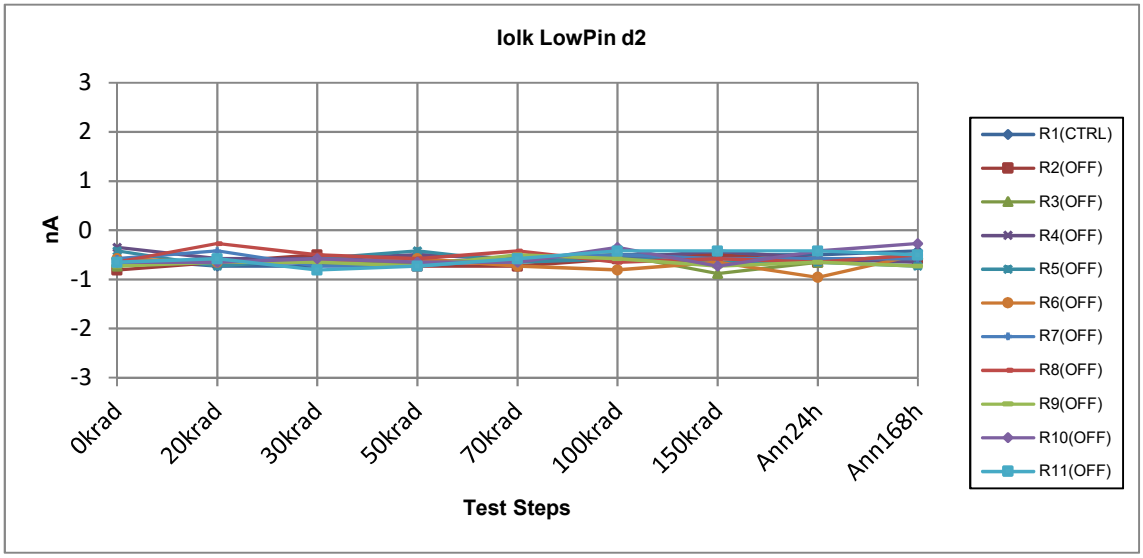
Iolk LowPin d5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.63	-0.47	-0.40	-0.55	-0.47	-0.40	-0.40	-0.47	-0.32
Irradiated, unbiased parts results									
R2(OFF)	-0.47	-0.40	-0.47	-0.40	-0.47	-0.63	-0.40	-0.32	-0.40
R3(OFF)	-0.40	-0.63	-0.40	-0.55	-0.47	-0.40	-0.63	-0.70	-0.63
R4(OFF)	-0.55	-0.47	-0.47	-0.40	-0.55	-0.63	-0.63	-0.55	-0.40
R5(OFF)	-0.70	-0.55	-0.47	-0.47	-0.40	-0.47	-0.40	-0.55	-0.63
R6(OFF)	-0.24	-0.40	-0.70	-0.40	-0.47	-0.63	-0.40	-0.55	-0.55
R7(OFF)	-0.70	-0.63	-0.47	-0.70	-0.47	-0.40	-0.55	-0.24	-0.47
R8(OFF)	-0.40	-0.32	-0.40	-0.40	-0.40	-0.63	-0.40	-0.47	-0.55
R9(OFF)	-0.85	-0.55	-0.55	-0.40	-0.47	-0.47	-0.40	-0.47	-0.70
R10(OFF)	-0.32	-0.40	-0.78	-0.24	-0.47	-0.55	-0.47	-0.55	-0.40
R11(OFF)	-0.78	-0.47	-0.40	-0.40	-0.63	-0.47	-0.24	-0.63	-0.47
Irradiated, unbiased parts statistics									
Min Value	-0.85	-0.63	-0.78	-0.70	-0.63	-0.63	-0.63	-0.70	-0.70
Max Value	-0.24	-0.32	-0.40	-0.24	-0.40	-0.40	-0.24	-0.24	-0.40
Average	-0.54	-0.48	-0.51	-0.44	-0.48	-0.53	-0.45	-0.50	-0.52
Sigma	0.21	0.11	0.13	0.12	0.07	0.10	0.12	0.14	0.11



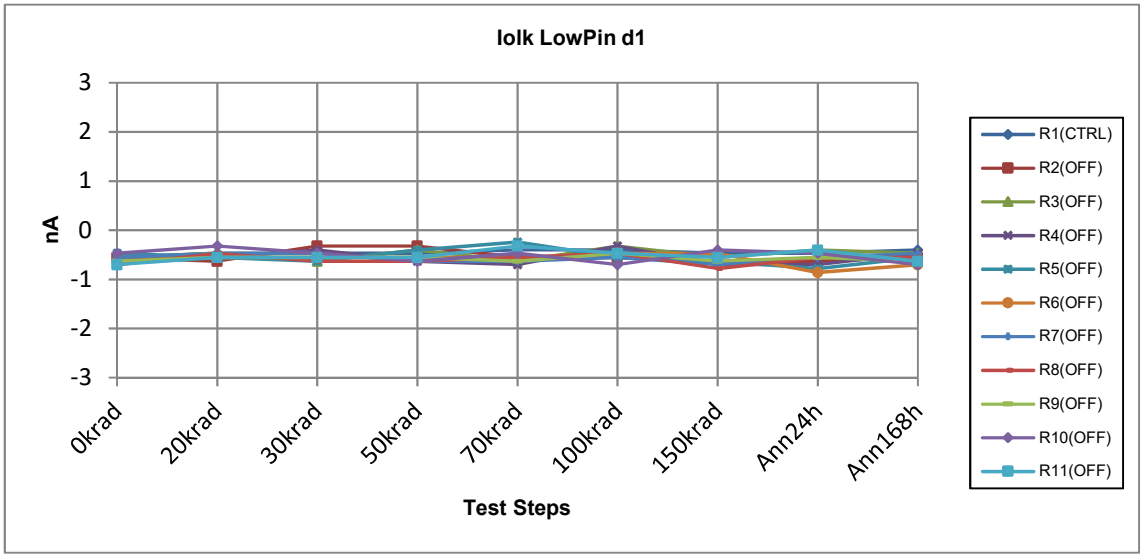
Iolk LowPin d4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.63	-0.63	-0.71	-0.63	-0.56	-0.86	-0.94	-0.41	-0.71
Irradiated, unbiased parts results									
R2(OFF)	-0.56	-0.56	-0.63	-0.56	-0.71	-0.79	-0.71	-0.63	-0.63
R3(OFF)	-0.41	-0.71	-0.41	-0.71	-0.56	-0.63	-0.71	-0.71	-0.56
R4(OFF)	-0.63	-0.71	-0.48	-0.79	-0.56	-0.63	-0.63	-0.63	-0.48
R5(OFF)	-0.71	-0.71	-0.41	-0.48	-0.63	-0.56	-0.79	-0.56	-0.71
R6(OFF)	-0.63	-0.48	-0.41	-0.63	-0.56	-0.71	-0.71	-0.71	-0.63
R7(OFF)	-0.63	-0.63	-0.48	-0.63	-0.48	-0.41	-0.71	-0.71	-0.63
R8(OFF)	-0.71	-0.63	-0.63	-0.48	-0.56	-0.48	-0.71	-0.63	-0.63
R9(OFF)	-0.79	-0.71	-0.71	-0.71	-0.71	-0.56	-0.71	-0.63	-0.63
R10(OFF)	-0.63	-0.71	-0.56	-0.63	-0.56	-0.63	-0.63	-0.63	-0.71
R11(OFF)	-0.48	-0.56	-0.56	-0.63	-0.48	-0.86	-0.56	-0.79	-0.56
Irradiated, unbiased parts statistics									
Min Value	-0.79	-0.71	-0.71	-0.79	-0.71	-0.86	-0.79	-0.79	-0.71
Max Value	-0.41	-0.48	-0.41	-0.48	-0.48	-0.41	-0.56	-0.56	-0.48
Average	-0.62	-0.64	-0.53	-0.63	-0.58	-0.63	-0.69	-0.66	-0.62
Sigma	0.11	0.08	0.11	0.10	0.08	0.14	0.06	0.07	0.07



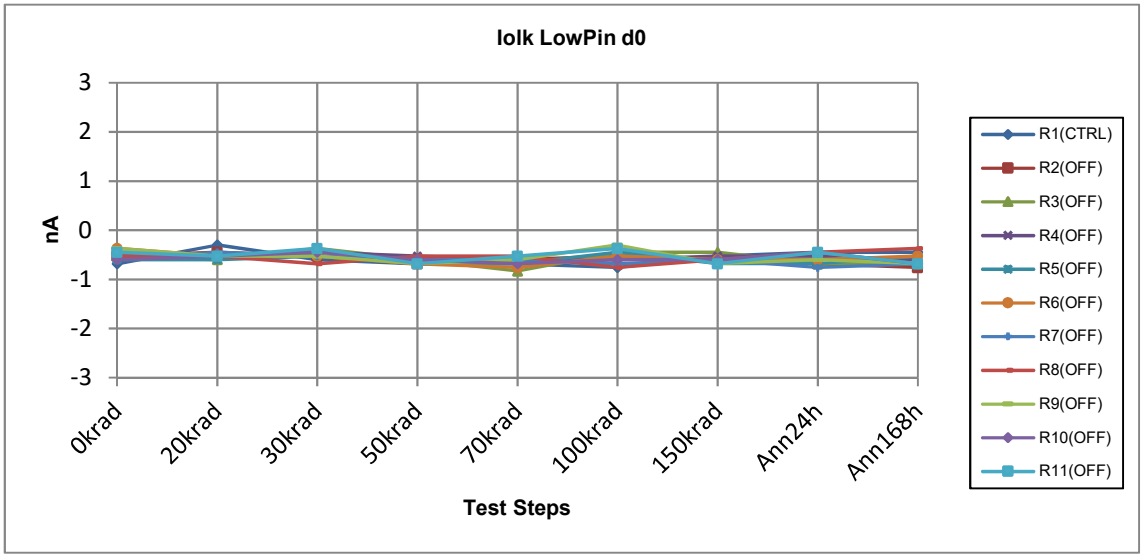
Iolk LowPin d3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.39	-0.54	-0.31	-0.31	-0.31	-0.31	-0.47	-0.47	-0.62
Irradiated, unbiased parts results									
R2(OFF)	-0.62	-0.62	-0.31	-0.31	-0.31	-0.31	-0.62	-0.16	-0.31
R3(OFF)	-0.39	-0.62	-0.62	-0.47	-0.54	-0.47	-0.47	-0.39	-0.39
R4(OFF)	-0.70	-0.62	-0.39	-0.54	-0.47	-0.54	-0.47	-0.39	-0.31
R5(OFF)	-0.31	-0.54	-0.23	-0.54	-0.62	-0.39	-0.39	-0.23	-0.23
R6(OFF)	-0.70	-0.39	-0.62	-0.39	-0.54	-0.47	-0.54	-0.39	-0.39
R7(OFF)	-0.47	-0.62	-0.54	-0.62	-0.47	-0.47	-0.62	-0.62	-0.47
R8(OFF)	-0.54	-0.47	-0.54	-0.47	-0.62	-0.54	-0.62	-0.54	-0.54
R9(OFF)	-0.70	-0.70	-0.39	-0.47	-0.62	-0.47	-0.54	-0.39	-0.47
R10(OFF)	-0.54	-0.54	-0.62	-0.54	-0.47	-0.39	-0.54	-0.39	-0.31
R11(OFF)	-0.54	-0.31	-0.31	-0.62	-0.70	-0.47	-0.54	-0.54	-0.16
Irradiated, unbiased parts statistics									
Min Value	-0.70	-0.70	-0.62	-0.62	-0.70	-0.54	-0.62	-0.62	-0.54
Max Value	-0.31	-0.31	-0.23	-0.31	-0.31	-0.31	-0.39	-0.16	-0.16
Average	-0.55	-0.54	-0.46	-0.50	-0.54	-0.45	-0.54	-0.40	-0.36
Sigma	0.13	0.12	0.15	0.10	0.11	0.07	0.08	0.14	0.12



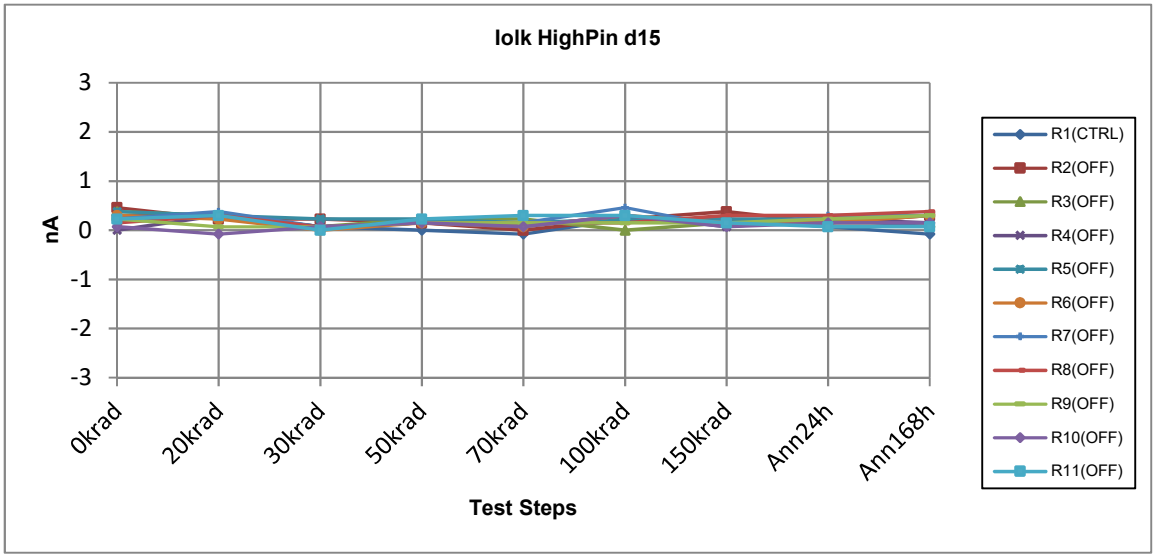
Iolk LowPin d2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.58	-0.73	-0.73	-0.50	-0.58	-0.50	-0.50	-0.50	-0.42
Irradiated, unbiased parts results									
R2(OFF)	-0.81	-0.65	-0.50	-0.73	-0.73	-0.58	-0.50	-0.65	-0.58
R3(OFF)	-0.73	-0.58	-0.65	-0.65	-0.58	-0.50	-0.88	-0.65	-0.50
R4(OFF)	-0.35	-0.58	-0.58	-0.50	-0.58	-0.58	-0.42	-0.58	-0.65
R5(OFF)	-0.42	-0.73	-0.58	-0.42	-0.65	-0.58	-0.65	-0.65	-0.73
R6(OFF)	-0.58	-0.65	-0.65	-0.58	-0.73	-0.81	-0.65	-0.96	-0.50
R7(OFF)	-0.58	-0.42	-0.73	-0.73	-0.58	-0.50	-0.58	-0.58	-0.58
R8(OFF)	-0.65	-0.27	-0.50	-0.58	-0.42	-0.65	-0.58	-0.65	-0.50
R9(OFF)	-0.73	-0.65	-0.65	-0.73	-0.50	-0.58	-0.73	-0.65	-0.73
R10(OFF)	-0.65	-0.65	-0.58	-0.65	-0.65	-0.35	-0.73	-0.42	-0.27
R11(OFF)	-0.65	-0.58	-0.81	-0.73	-0.58	-0.42	-0.42	-0.42	-0.50
Irradiated, unbiased parts statistics									
Min Value	-0.81	-0.73	-0.81	-0.73	-0.73	-0.81	-0.88	-0.96	-0.73
Max Value	-0.35	-0.27	-0.50	-0.42	-0.42	-0.35	-0.42	-0.42	-0.27
Average	-0.62	-0.58	-0.62	-0.63	-0.60	-0.56	-0.61	-0.62	-0.55
Sigma	0.14	0.13	0.10	0.11	0.10	0.13	0.15	0.15	0.14



Iolk LowPin d1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
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	-0.47	-0.47	-0.40	-0.40	-0.47	-0.47	-0.40
Irradiated, unbiased parts results									
R2(OFF)	-0.55	-0.63	-0.32	-0.32	-0.55	-0.55	-0.63	-0.63	-0.55
R3(OFF)	-0.55	-0.47	-0.63	-0.40	-0.63	-0.32	-0.55	-0.40	-0.47
R4(OFF)	-0.63	-0.55	-0.40	-0.63	-0.70	-0.32	-0.70	-0.70	-0.47
R5(OFF)	-0.47	-0.55	-0.63	-0.40	-0.24	-0.55	-0.63	-0.78	-0.55
R6(OFF)	-0.63	-0.55	-0.55	-0.55	-0.55	-0.47	-0.47	-0.86	-0.70
R7(OFF)	-0.55	-0.47	-0.47	-0.63	-0.63	-0.55	-0.70	-0.55	-0.47
R8(OFF)	-0.70	-0.47	-0.63	-0.63	-0.55	-0.47	-0.78	-0.55	-0.55
R9(OFF)	-0.63	-0.55	-0.55	-0.55	-0.63	-0.47	-0.63	-0.55	-0.63
R10(OFF)	-0.47	-0.32	-0.47	-0.63	-0.47	-0.70	-0.40	-0.47	-0.70
R11(OFF)	-0.70	-0.55	-0.55	-0.55	-0.32	-0.47	-0.55	-0.40	-0.63
Irradiated, unbiased parts statistics									
Min Value	-0.70	-0.63	-0.63	-0.63	-0.70	-0.70	-0.78	-0.86	-0.70
Max Value	-0.47	-0.32	-0.32	-0.32	-0.24	-0.32	-0.40	-0.40	-0.47
Average	-0.59	-0.51	-0.52	-0.53	-0.53	-0.49	-0.60	-0.59	-0.57
Sigma	0.08	0.08	0.10	0.12	0.15	0.11	0.11	0.15	0.09



Iolk LowPin d0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
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	-0.30	-0.60	-0.68	-0.68	-0.76	-0.53	-0.45	-0.45
Irradiated, unbiased parts results									
R2(OFF)	-0.53	-0.45	-0.53	-0.68	-0.60	-0.53	-0.60	-0.68	-0.76
R3(OFF)	-0.53	-0.60	-0.37	-0.60	-0.83	-0.45	-0.45	-0.68	-0.68
R4(OFF)	-0.53	-0.53	-0.45	-0.53	-0.60	-0.60	-0.53	-0.53	-0.60
R5(OFF)	-0.60	-0.60	-0.53	-0.68	-0.68	-0.45	-0.68	-0.68	-0.53
R6(OFF)	-0.37	-0.53	-0.53	-0.68	-0.76	-0.53	-0.60	-0.60	-0.53
R7(OFF)	-0.60	-0.45	-0.53	-0.60	-0.60	-0.68	-0.60	-0.76	-0.68
R8(OFF)	-0.53	-0.53	-0.68	-0.53	-0.53	-0.76	-0.60	-0.45	-0.37
R9(OFF)	-0.37	-0.53	-0.53	-0.68	-0.60	-0.30	-0.68	-0.60	-0.68
R10(OFF)	-0.60	-0.53	-0.45	-0.60	-0.68	-0.60	-0.60	-0.45	-0.68
R11(OFF)	-0.45	-0.53	-0.37	-0.68	-0.53	-0.37	-0.68	-0.45	-0.68
Irradiated, unbiased parts statistics									
Min Value	-0.60	-0.60	-0.68	-0.68	-0.83	-0.76	-0.68	-0.76	-0.76
Max Value	-0.37	-0.45	-0.37	-0.53	-0.53	-0.30	-0.45	-0.45	-0.37
Average	-0.51	-0.53	-0.50	-0.63	-0.64	-0.53	-0.60	-0.59	-0.62
Sigma	0.09	0.05	0.09	0.06	0.10	0.14	0.07	0.11	0.11



Iolk HighPin d15	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000
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	0.30	0.07	0.00	-0.08	0.23	0.23	0.07	-0.08
Irradiated, unbiased parts results									
R2(OFF)	0.46	0.23	0.23	0.15	0.00	0.23	0.38	0.15	0.30
R3(OFF)	0.38	0.30	0.07	0.23	0.23	0.00	0.15	0.15	0.15
R4(OFF)	0.00	0.30	0.07	0.15	0.07	0.30	0.07	0.23	0.15
R5(OFF)	0.38	0.30	0.23	0.23	0.15	0.23	0.23	0.23	0.07
R6(OFF)	0.30	0.23	0.00	0.15	0.07	0.30	0.15	0.15	0.30
R7(OFF)	0.23	0.38	0.07	0.15	0.15	0.46	0.07	0.30	0.30
R8(OFF)	0.15	0.30	0.07	0.15	0.15	0.15	0.30	0.30	0.38
R9(OFF)	0.23	0.07	0.07	0.15	0.15	0.15	0.15	0.23	0.30
R10(OFF)	0.07	-0.08	0.07	0.15	0.07	0.30	0.07	0.15	0.15
R11(OFF)	0.23	0.30	0.00	0.23	0.30	0.30	0.15	0.07	0.07
Irradiated, unbiased parts statistics									
Min Value	0.00	-0.08	0.00	0.15	0.00	0.00	0.07	0.07	0.07
Max Value	0.46	0.38	0.23	0.23	0.30	0.46	0.38	0.30	0.38
Average	0.24	0.23	0.09	0.17	0.13	0.24	0.17	0.20	0.22
Sigma	0.14	0.14	0.08	0.04	0.09	0.12	0.10	0.07	0.11

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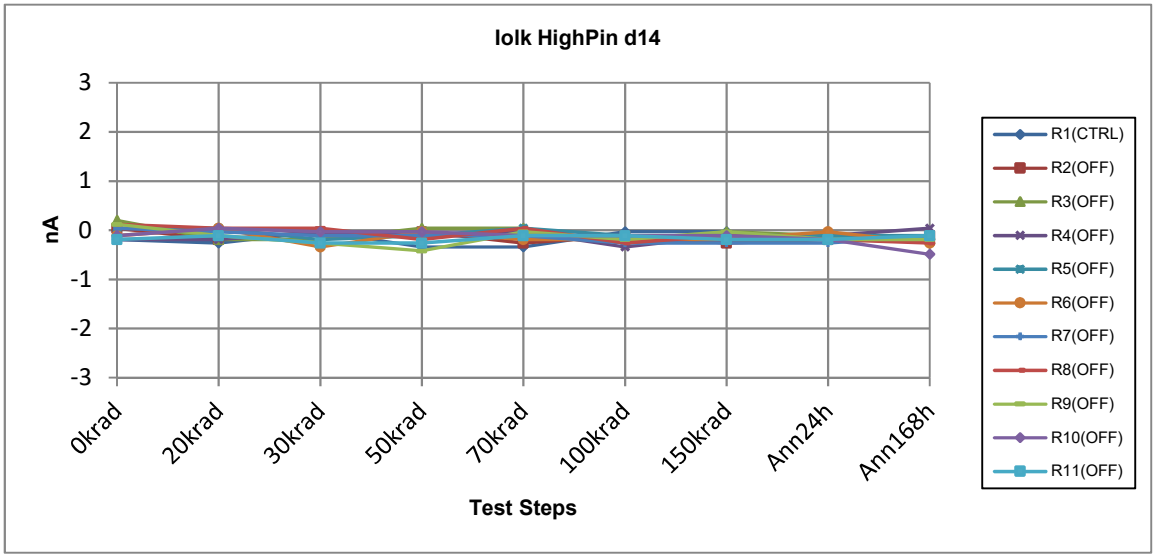
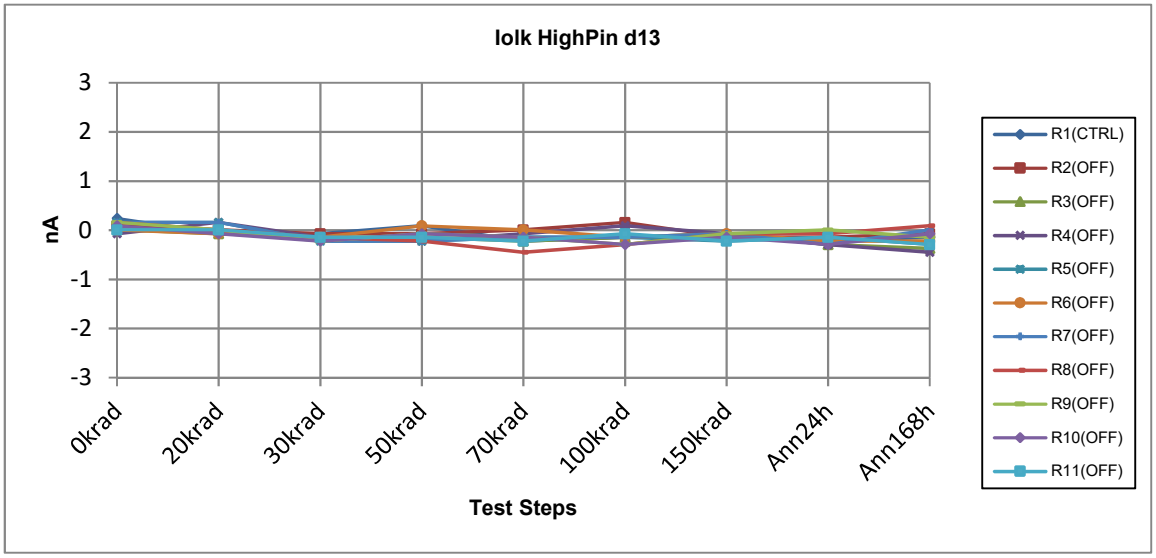
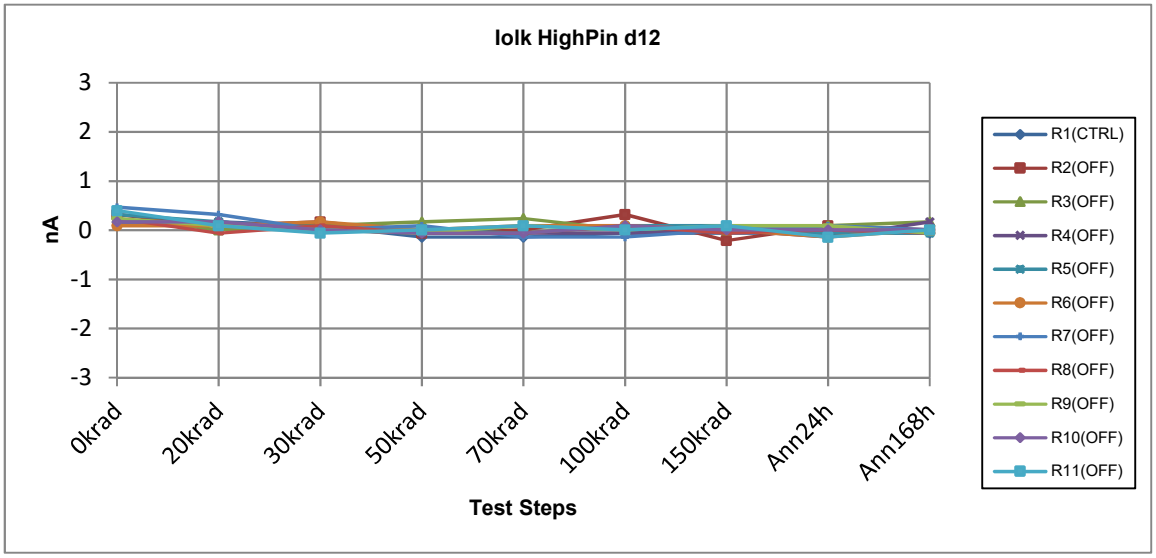


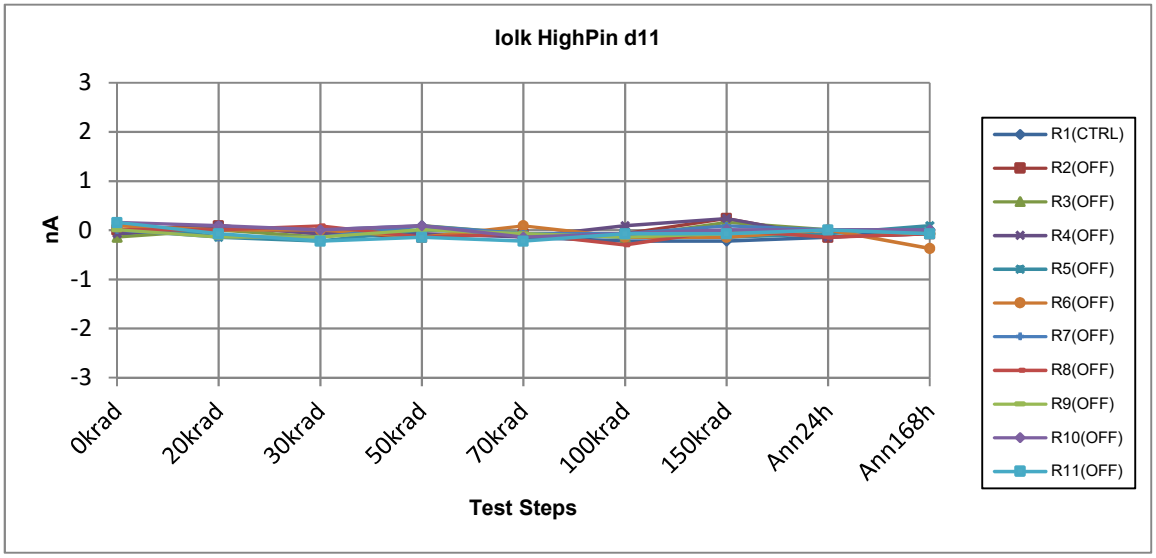
Iolk HighPin d14	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.19	-0.26	-0.03	-0.34	-0.34	-0.03	-0.03	-0.19	-0.19
Irradiated, unbiased parts results									
R2(OFF)	0.04	-0.19	-0.03	-0.03	-0.26	-0.11	-0.26	-0.19	-0.11
R3(OFF)	0.20	-0.19	-0.19	0.04	0.04	-0.26	-0.03	-0.11	-0.19
R4(OFF)	-0.19	-0.19	-0.03	-0.11	-0.03	-0.34	-0.11	-0.11	0.04
R5(OFF)	0.04	0.04	-0.19	-0.11	0.04	-0.11	-0.11	-0.11	-0.11
R6(OFF)	-0.11	0.04	-0.34	-0.03	-0.19	-0.19	-0.19	-0.03	-0.26
R7(OFF)	0.04	-0.03	-0.11	-0.11	-0.11	-0.26	-0.26	-0.26	-0.11
R8(OFF)	0.12	0.04	0.04	-0.19	0.04	-0.26	-0.11	-0.19	-0.26
R9(OFF)	0.12	-0.11	-0.26	-0.42	-0.03	-0.19	-0.03	-0.19	-0.19
R10(OFF)	-0.11	0.04	-0.03	-0.03	-0.11	-0.11	-0.11	-0.19	-0.49
R11(OFF)	-0.19	-0.11	-0.26	-0.26	-0.11	-0.11	-0.19	-0.19	-0.11
Irradiated, unbiased parts statistics									
Min Value	-0.19	-0.19	-0.34	-0.42	-0.26	-0.34	-0.26	-0.26	-0.49
Max Value	0.20	0.04	0.04	0.04	0.04	-0.11	-0.03	-0.03	0.04
Average	0.00	-0.07	-0.14	-0.13	-0.07	-0.19	-0.14	-0.16	-0.18
Sigma	0.14	0.10	0.13	0.14	0.10	0.08	0.08	0.07	0.14



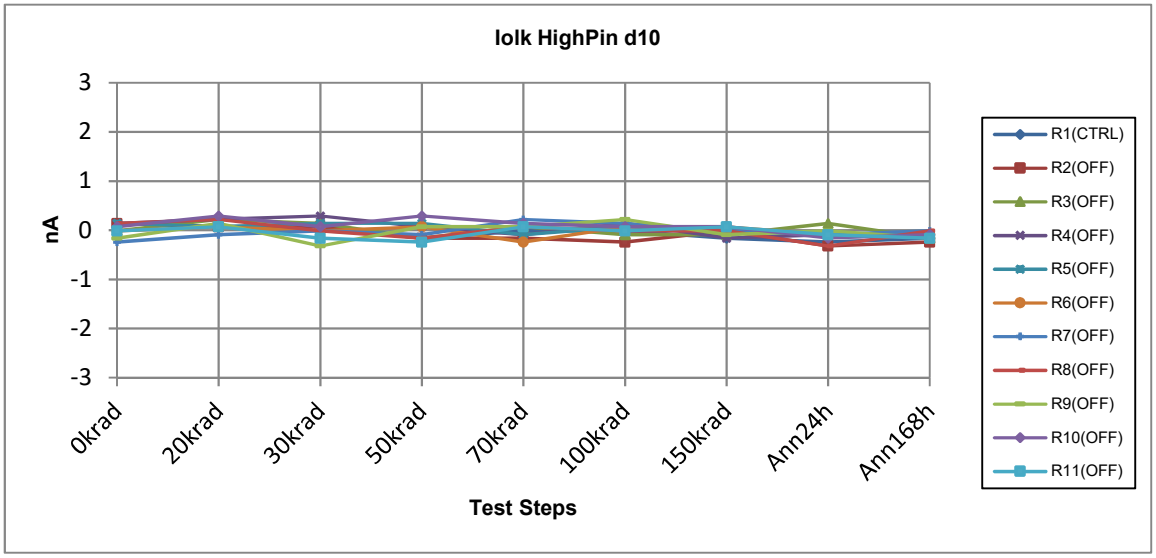
Iolk HighPin d13	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.24	-0.07	-0.07	0.09	-0.22	-0.14	-0.14	-0.22	-0.14
Irradiated, unbiased parts results									
R2(OFF)	0.09	0.01	-0.07	-0.07	0.01	0.16	-0.14	-0.14	-0.07
R3(OFF)	0.01	-0.07	-0.14	-0.14	-0.22	-0.14	-0.07	-0.29	-0.37
R4(OFF)	-0.07	0.16	-0.14	-0.22	-0.07	0.09	-0.07	-0.29	-0.45
R5(OFF)	0.16	0.16	-0.22	-0.22	-0.14	-0.14	-0.22	-0.14	-0.29
R6(OFF)	0.01	-0.07	-0.14	0.09	0.01	-0.14	-0.07	-0.22	-0.22
R7(OFF)	0.16	0.16	-0.22	-0.22	-0.14	-0.14	-0.07	-0.29	0.01
R8(OFF)	0.16	0.01	-0.14	-0.22	-0.45	-0.29	-0.07	-0.07	0.09
R9(OFF)	0.16	0.01	-0.22	-0.07	-0.14	-0.29	-0.07	0.01	-0.14
R10(OFF)	0.09	-0.07	-0.22	-0.07	-0.14	-0.29	-0.14	-0.29	-0.07
R11(OFF)	0.01	0.01	-0.14	-0.14	-0.22	-0.07	-0.22	-0.14	-0.29
Irradiated, unbiased parts statistics									
Min Value	-0.07	-0.07	-0.22	-0.22	-0.45	-0.29	-0.22	-0.29	-0.45
Max Value	0.16	0.16	-0.07	0.09	0.01	0.16	-0.07	0.01	0.09
Average	0.08	0.03	-0.17	-0.13	-0.15	-0.13	-0.11	-0.19	-0.18
Sigma	0.08	0.10	0.05	0.10	0.13	0.15	0.06	0.11	0.17



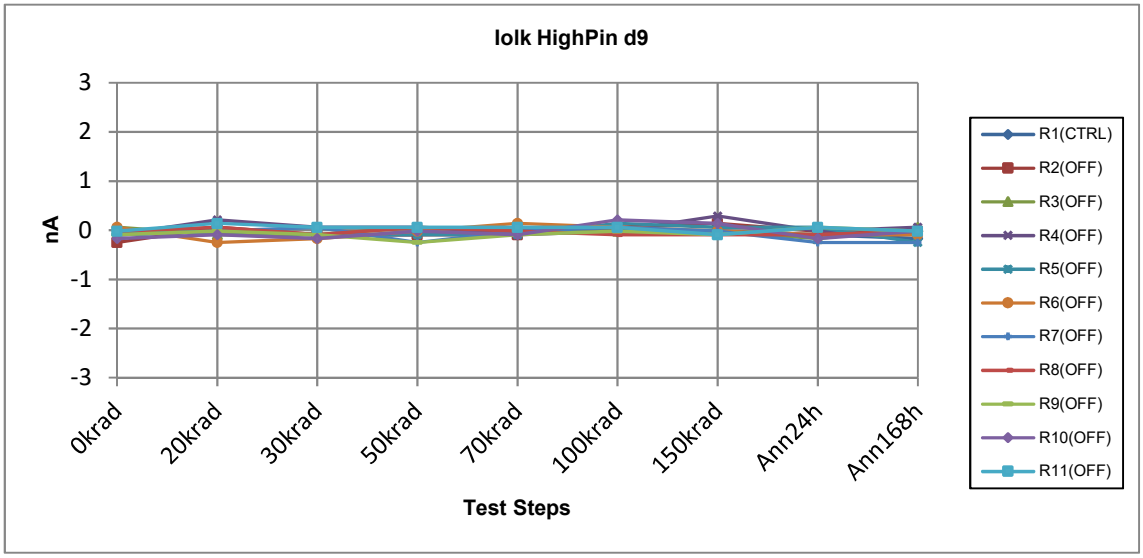
Iolk HighPin d12	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.17	0.17	0.09	-0.14	-0.14	-0.06	-0.06	-0.06	-0.06
Irradiated, unbiased parts results									
R2(OFF)	0.32	0.09	0.17	-0.06	0.01	0.32	-0.21	0.09	0.01
R3(OFF)	0.24	0.01	0.09	0.17	0.24	0.01	0.01	0.09	0.17
R4(OFF)	0.17	0.17	0.01	-0.06	-0.06	-0.06	0.01	-0.14	0.17
R5(OFF)	0.32	0.17	0.01	0.01	-0.06	0.09	0.09	-0.06	-0.06
R6(OFF)	0.09	0.09	0.17	0.01	0.09	0.09	0.01	-0.14	0.01
R7(OFF)	0.47	0.32	0.01	0.09	-0.14	-0.14	0.01	0.09	0.01
R8(OFF)	0.24	-0.06	0.09	-0.06	-0.06	0.09	-0.06	0.01	-0.06
R9(OFF)	0.24	0.09	0.01	-0.06	0.09	0.01	0.09	0.09	-0.06
R10(OFF)	0.17	0.17	0.01	-0.06	-0.06	0.09	0.01	0.01	0.01
R11(OFF)	0.40	0.09	-0.06	0.01	0.09	0.01	0.09	-0.14	0.01
Irradiated, unbiased parts statistics									
Min Value	0.09	-0.06	-0.06	-0.06	-0.14	-0.14	-0.21	-0.14	-0.06
Max Value	0.47	0.32	0.17	0.17	0.24	0.32	0.09	0.09	0.17
Average	0.27	0.11	0.05	0.00	0.01	0.05	0.01	-0.01	0.02
Sigma	0.11	0.10	0.08	0.08	0.11	0.12	0.09	0.10	0.08



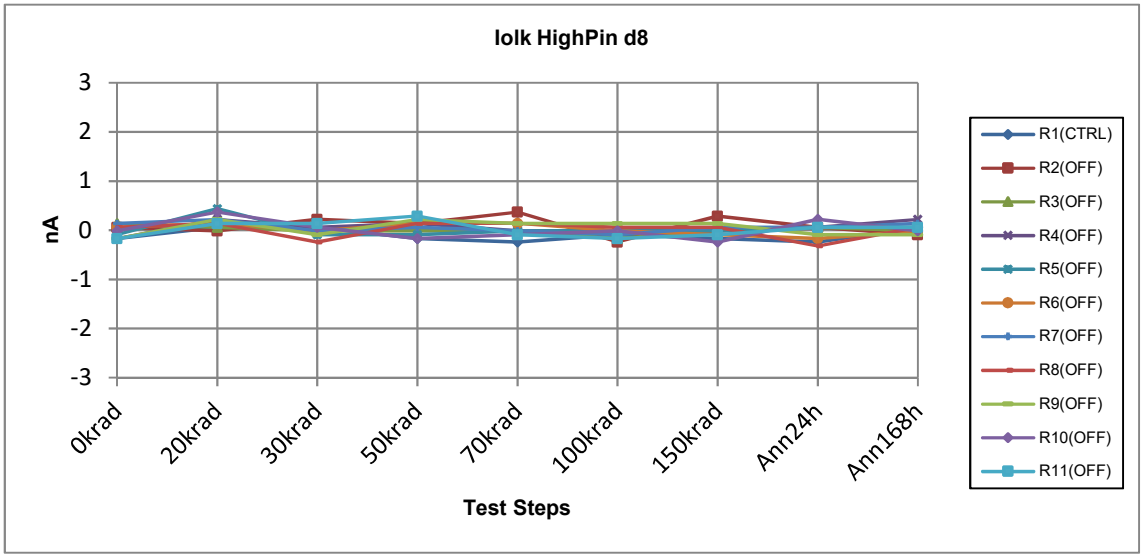
Iolk HighPin d11	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.07	0.01	0.01	0.09	-0.14	-0.22	-0.22	-0.14	0.01
Irradiated, unbiased parts results									
R2(OFF)	0.01	0.09	-0.07	-0.14	-0.07	-0.07	0.24	-0.14	-0.07
R3(OFF)	-0.14	0.01	-0.14	0.09	-0.07	-0.14	0.16	0.01	0.01
R4(OFF)	-0.07	0.09	-0.07	-0.07	-0.14	0.09	0.24	-0.14	-0.07
R5(OFF)	0.16	-0.14	-0.22	0.01	-0.07	-0.14	-0.14	-0.07	0.09
R6(OFF)	0.09	0.01	0.01	-0.14	0.09	-0.14	-0.14	0.01	-0.37
R7(OFF)	0.01	-0.14	-0.14	0.09	-0.07	-0.07	0.09	0.01	0.01
R8(OFF)	0.01	0.01	0.09	-0.14	-0.07	-0.30	0.01	-0.14	-0.07
R9(OFF)	0.01	-0.14	-0.14	0.01	-0.07	-0.14	-0.07	0.01	-0.07
R10(OFF)	0.16	0.09	0.01	0.09	-0.14	-0.07	0.01	0.01	0.01
R11(OFF)	0.16	-0.07	-0.22	-0.14	-0.22	-0.07	-0.07	0.01	-0.07
Irradiated, unbiased parts statistics									
Min Value	-0.14	-0.14	-0.22	-0.14	-0.22	-0.30	-0.14	-0.14	-0.37
Max Value	0.16	0.09	0.09	0.09	0.09	0.09	0.24	0.01	0.09
Average	0.04	-0.02	-0.09	-0.03	-0.08	-0.11	0.03	-0.04	-0.06
Sigma	0.10	0.10	0.10	0.10	0.08	0.10	0.14	0.07	0.12



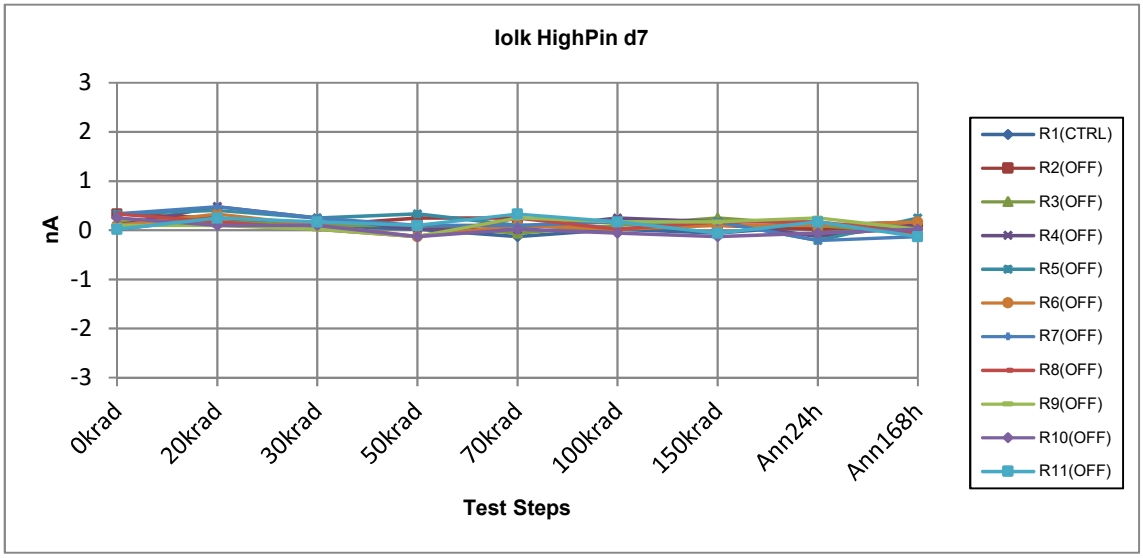
Iolk HighPin d10	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.14	0.07	0.07	-0.16	-0.01	-0.01	-0.16	-0.24	-0.16
Irradiated, unbiased parts results									
R2(OFF)	0.14	0.07	0.07	-0.16	-0.16	-0.24	-0.01	-0.32	-0.24
R3(OFF)	-0.01	0.22	0.14	-0.16	0.07	-0.09	-0.09	0.14	-0.16
R4(OFF)	0.14	0.22	0.29	0.07	-0.09	0.14	-0.16	-0.09	-0.16
R5(OFF)	0.14	0.07	0.14	0.14	-0.09	0.07	-0.01	-0.09	-0.09
R6(OFF)	-0.01	0.07	-0.01	0.07	-0.24	0.07	0.07	-0.09	-0.09
R7(OFF)	-0.24	-0.09	-0.01	-0.09	0.22	0.14	-0.01	-0.09	-0.01
R8(OFF)	0.14	0.22	-0.01	-0.16	0.07	-0.01	-0.01	-0.32	-0.01
R9(OFF)	-0.16	0.14	-0.32	0.07	0.07	0.22	-0.09	-0.01	-0.16
R10(OFF)	0.07	0.29	0.07	0.29	0.14	0.07	0.07	-0.16	-0.09
R11(OFF)	-0.01	0.07	-0.16	-0.24	0.07	-0.01	0.07	-0.09	-0.16
Irradiated, unbiased parts statistics									
Min Value	-0.24	-0.09	-0.32	-0.24	-0.24	-0.24	-0.16	-0.32	-0.24
Max Value	0.14	0.29	0.29	0.29	0.22	0.22	0.07	0.14	-0.01
Average	0.02	0.13	0.02	-0.02	0.01	0.04	-0.02	-0.11	-0.12
Sigma	0.13	0.11	0.17	0.17	0.14	0.13	0.08	0.14	0.07



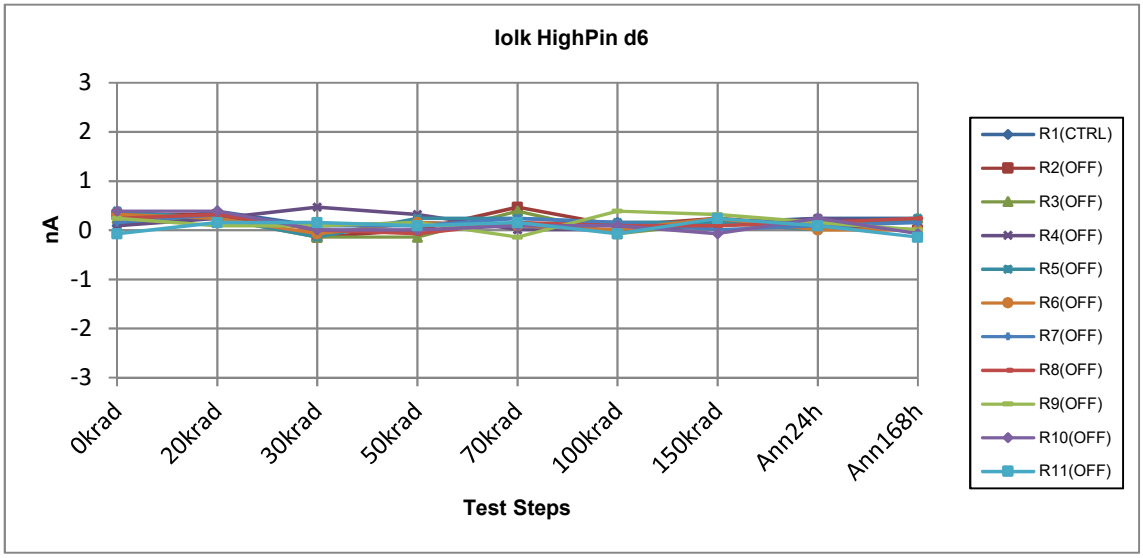
Iolk HighPin d9	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.09	-0.02	-0.09	-0.09	0.06	-0.02	-0.02	-0.09	-0.17
Irradiated, unbiased parts results									
R2(OFF)	-0.25	0.06	-0.09	-0.09	-0.09	0.06	0.14	-0.02	-0.02
R3(OFF)	0.06	-0.09	-0.09	0.06	-0.02	-0.02	-0.02	-0.17	0.06
R4(OFF)	-0.09	0.21	0.06	0.06	-0.09	-0.02	0.29	-0.02	0.06
R5(OFF)	-0.09	-0.02	-0.09	-0.09	-0.09	0.14	0.06	0.06	-0.25
R6(OFF)	0.06	-0.25	-0.17	-0.02	0.14	0.06	-0.02	-0.09	-0.09
R7(OFF)	-0.09	-0.02	0.06	-0.25	-0.02	0.06	-0.02	-0.25	-0.25
R8(OFF)	-0.02	0.06	-0.09	0.06	-0.02	-0.09	-0.09	-0.09	-0.02
R9(OFF)	-0.09	-0.02	-0.09	-0.25	-0.09	-0.02	-0.09	0.06	-0.02
R10(OFF)	-0.17	-0.09	-0.17	-0.02	-0.09	0.21	0.14	-0.17	-0.02
R11(OFF)	-0.02	0.14	0.06	0.06	0.06	0.06	-0.09	0.06	-0.02
Irradiated, unbiased parts statistics									
Min Value	-0.25	-0.25	-0.17	-0.25	-0.09	-0.09	-0.09	-0.25	-0.25
Max Value	0.06	0.21	0.06	0.06	0.14	0.21	0.29	0.06	0.06
Average	-0.07	0.00	-0.06	-0.05	-0.03	0.04	0.03	-0.06	-0.06
Sigma	0.10	0.13	0.09	0.12	0.08	0.09	0.13	0.11	0.11



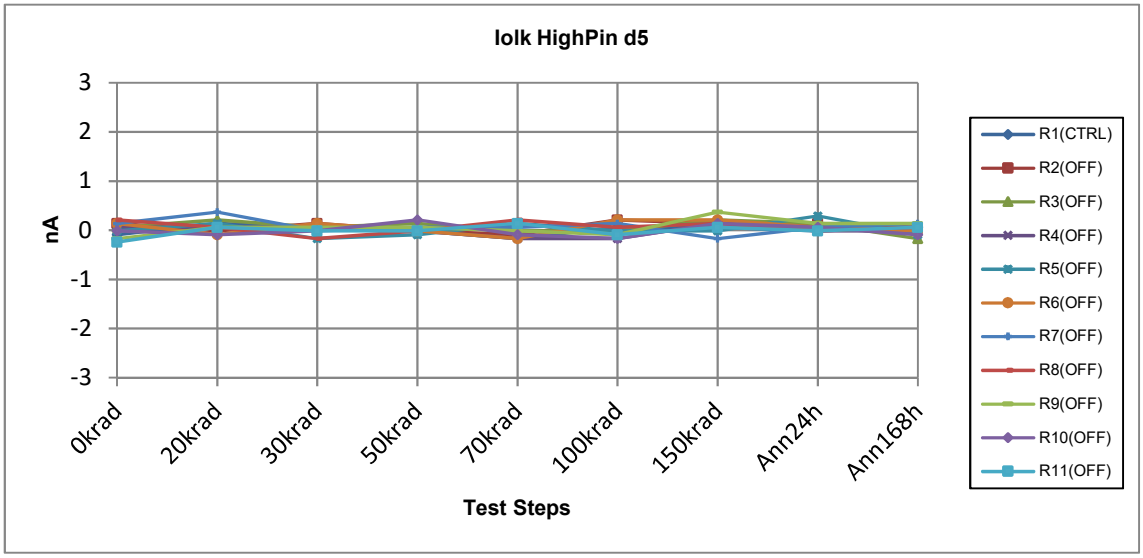
Iolk HighPin d8	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.17	0.06	0.06	-0.17	-0.24	-0.09	-0.17	-0.24	0.06
Irradiated, unbiased parts results									
R2(OFF)	0.06	-0.01	0.22	0.14	0.37	-0.24	0.29	0.06	-0.09
R3(OFF)	0.14	0.06	-0.01	-0.01	-0.01	-0.17	-0.01	0.06	-0.01
R4(OFF)	-0.17	0.22	0.06	0.14	-0.01	-0.01	-0.01	0.06	0.22
R5(OFF)	-0.09	0.44	-0.09	-0.09	-0.01	-0.01	-0.01	0.06	0.06
R6(OFF)	0.06	0.14	-0.01	0.14	0.14	-0.01	-0.09	-0.17	-0.01
R7(OFF)	0.14	0.22	-0.01	0.06	-0.01	-0.09	0.06	0.06	0.14
R8(OFF)	0.06	0.14	-0.24	0.14	0.14	0.06	0.06	-0.32	0.06
R9(OFF)	-0.17	0.22	-0.09	0.22	0.14	0.14	0.14	-0.09	-0.09
R10(OFF)	-0.01	0.37	0.06	-0.17	-0.09	-0.01	-0.24	0.22	-0.01
R11(OFF)	-0.17	0.14	0.14	0.29	-0.09	-0.17	-0.09	0.06	0.06
Irradiated, unbiased parts statistics									
Min Value	-0.17	-0.01	-0.24	-0.17	-0.09	-0.24	-0.24	-0.32	-0.09
Max Value	0.14	0.44	0.22	0.29	0.37	0.14	0.29	0.22	0.22
Average	-0.02	0.19	0.00	0.09	0.06	-0.05	0.01	0.00	0.03
Sigma	0.13	0.13	0.13	0.14	0.14	0.12	0.14	0.15	0.10



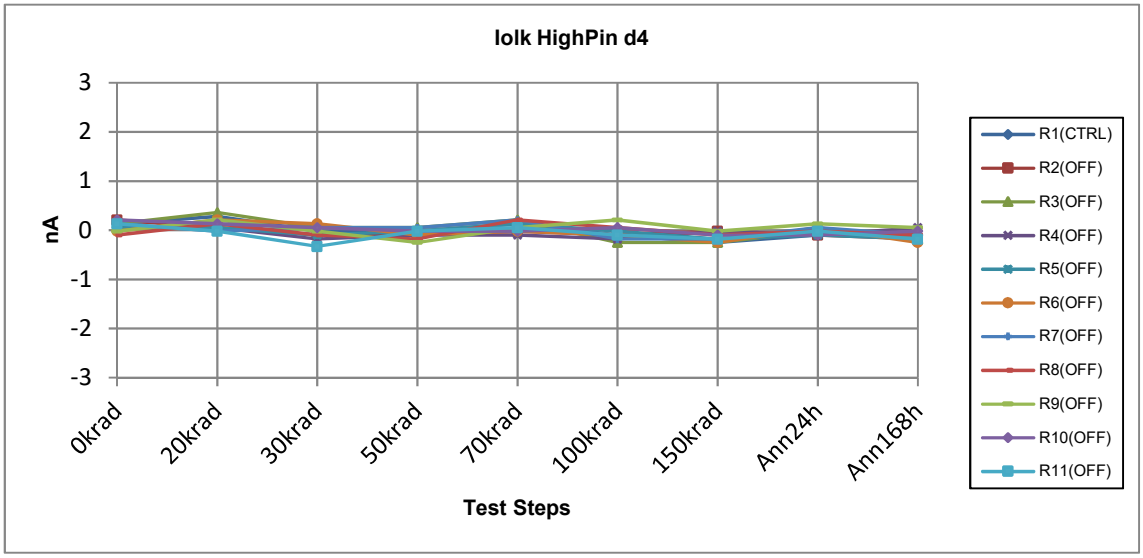
Iolk HighPin d7	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.02	0.25	0.10	0.02	-0.13	0.02	-0.06	0.10	0.17
Irradiated, unbiased parts results									
R2(OFF)	0.33	0.25	0.10	0.25	0.25	0.17	0.10	0.02	0.10
R3(OFF)	0.17	0.17	0.10	0.10	-0.06	0.10	0.25	0.10	-0.06
R4(OFF)	0.10	0.48	0.25	0.02	0.02	0.25	0.17	-0.13	0.10
R5(OFF)	0.33	0.40	0.25	0.33	0.10	0.02	0.17	-0.21	0.25
R6(OFF)	0.10	0.33	0.10	-0.13	0.10	0.02	0.10	0.10	0.17
R7(OFF)	0.33	0.48	0.25	0.10	0.10	0.17	0.17	-0.21	-0.13
R8(OFF)	0.33	0.17	0.02	-0.13	0.25	0.02	0.17	0.17	-0.06
R9(OFF)	0.10	0.10	0.02	-0.13	0.25	0.17	0.17	0.25	0.02
R10(OFF)	0.25	0.10	0.10	-0.13	0.02	-0.06	-0.13	-0.06	0.02
R11(OFF)	0.02	0.25	0.17	0.10	0.33	0.17	-0.06	0.17	-0.13
Irradiated, unbiased parts statistics									
Min Value	0.02	0.10	0.02	-0.13	-0.06	-0.06	-0.13	-0.21	-0.13
Max Value	0.33	0.48	0.25	0.33	0.33	0.25	0.25	0.25	0.25
Average	0.21	0.27	0.14	0.04	0.14	0.10	0.11	0.02	0.03
Sigma	0.12	0.14	0.09	0.17	0.13	0.10	0.12	0.17	0.13



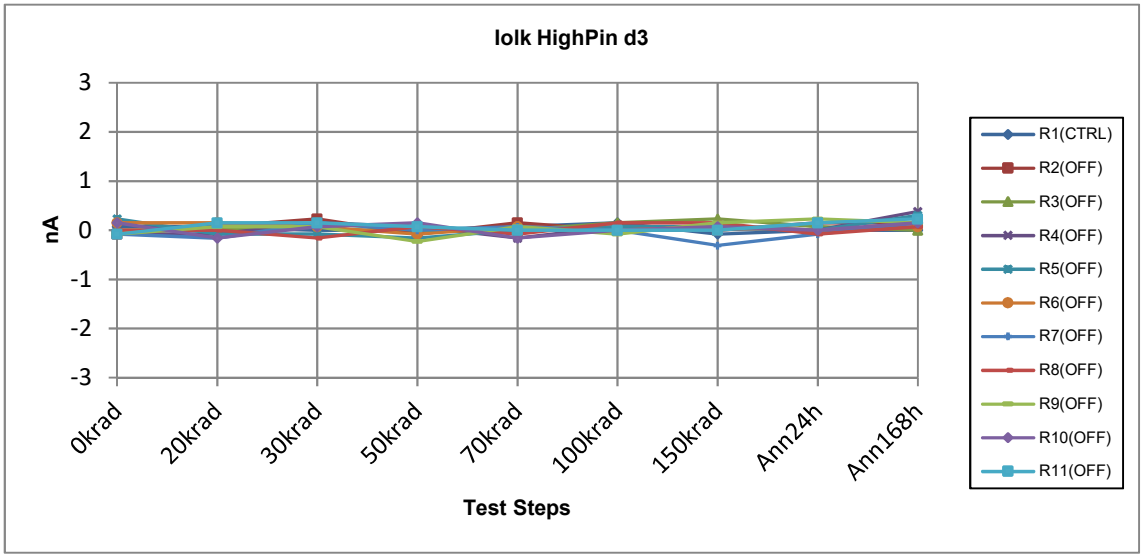
Iolk HighPin d6	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.09	0.39	0.09	0.16	0.09	0.16	0.16	0.24	0.24
Irradiated, unbiased parts results									
R2(OFF)	0.32	0.32	-0.14	0.01	0.47	0.09	0.24	0.09	0.01
R3(OFF)	0.24	0.24	-0.14	-0.14	0.39	-0.07	0.16	0.09	0.24
R4(OFF)	0.09	0.24	0.47	0.32	0.01	0.01	0.09	0.24	0.16
R5(OFF)	0.39	0.24	-0.14	0.24	0.24	0.16	0.16	0.01	0.24
R6(OFF)	0.32	0.24	-0.07	0.16	0.09	0.01	0.24	0.01	0.01
R7(OFF)	0.16	0.32	0.09	0.09	0.24	0.16	0.01	0.09	0.16
R8(OFF)	0.24	0.32	0.01	-0.07	0.16	0.09	0.09	0.16	0.24
R9(OFF)	0.24	0.09	0.09	0.16	-0.14	0.39	0.32	0.16	0.01
R10(OFF)	0.39	0.39	0.01	0.01	0.09	0.09	-0.07	0.24	-0.07
R11(OFF)	-0.07	0.16	0.16	0.09	0.16	-0.07	0.24	0.09	-0.14
Irradiated, unbiased parts statistics									
Min Value	-0.07	0.09	-0.14	-0.14	-0.14	-0.07	-0.07	0.01	-0.14
Max Value	0.39	0.39	0.47	0.32	0.47	0.39	0.32	0.24	0.24
Average	0.23	0.26	0.03	0.09	0.17	0.09	0.15	0.12	0.09
Sigma	0.14	0.09	0.19	0.14	0.18	0.13	0.12	0.08	0.14



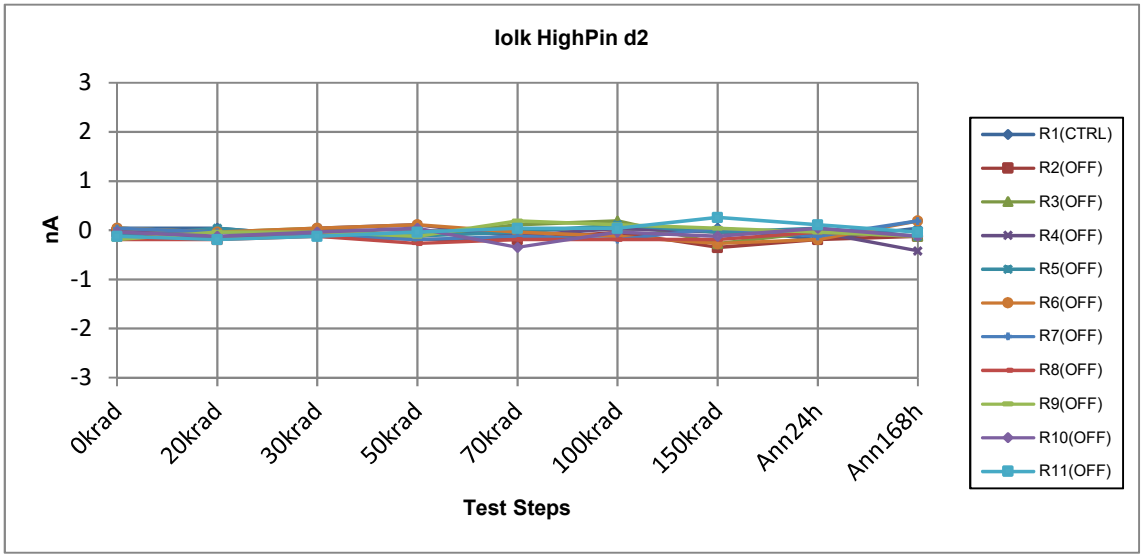
Iolk HighPin d5	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.09	0.14	0.06	-0.01	-0.17	0.06	0.06	-0.01	0.06
Irradiated, unbiased parts results									
R2(OFF)	0.14	-0.01	0.14	-0.01	-0.09	0.21	0.14	0.14	0.06
R3(OFF)	0.06	0.21	0.06	0.14	-0.01	-0.01	0.21	0.14	-0.17
R4(OFF)	0.06	0.06	0.06	-0.01	-0.17	-0.17	0.14	-0.01	-0.01
R5(OFF)	-0.01	0.14	-0.17	-0.09	0.14	-0.01	-0.01	0.29	-0.09
R6(OFF)	0.14	-0.09	0.14	-0.01	-0.17	0.21	0.21	0.06	-0.01
R7(OFF)	0.14	0.37	-0.01	0.06	0.06	0.14	-0.17	0.06	0.14
R8(OFF)	0.21	0.06	-0.17	-0.01	0.21	0.06	0.14	-0.01	0.06
R9(OFF)	-0.17	0.06	0.06	0.06	-0.01	-0.09	0.37	0.14	0.14
R10(OFF)	-0.01	-0.09	-0.01	0.21	-0.09	-0.17	0.14	0.06	-0.09
R11(OFF)	-0.24	0.06	-0.01	-0.01	0.14	-0.09	0.06	-0.01	0.06
Irradiated, unbiased parts statistics									
Min Value	-0.24	-0.09	-0.17	-0.09	-0.17	-0.17	-0.17	-0.01	-0.17
Max Value	0.21	0.37	0.14	0.21	0.21	0.21	0.37	0.29	0.14
Average	0.03	0.08	0.01	0.03	0.00	0.01	0.12	0.09	0.01
Sigma	0.14	0.14	0.11	0.09	0.13	0.14	0.14	0.09	0.10



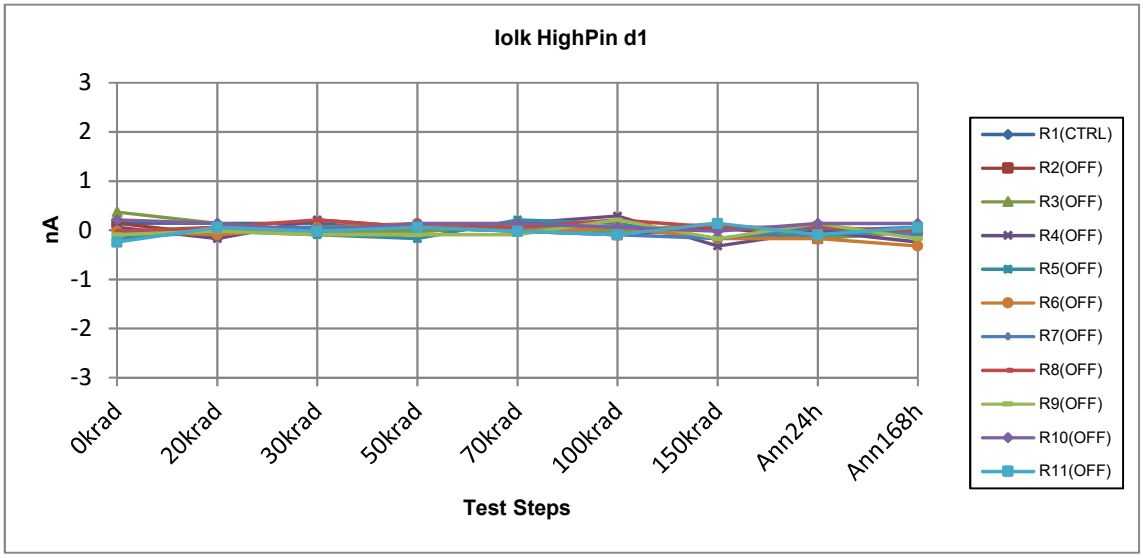
Iolk HighPin d4	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.13	0.28	-0.02	-0.02	0.13	-0.10	-0.25	-0.10	-0.10
Irradiated, unbiased parts results									
R2(OFF)	0.21	0.05	-0.10	-0.10	-0.02	-0.10	-0.02	-0.10	-0.18
R3(OFF)	0.13	0.36	0.05	0.05	0.21	-0.25	-0.25	-0.02	-0.18
R4(OFF)	0.05	0.05	-0.18	-0.10	-0.10	-0.18	-0.02	-0.10	0.05
R5(OFF)	0.05	0.05	-0.10	-0.02	0.13	-0.02	-0.18	-0.10	-0.18
R6(OFF)	-0.02	0.21	0.13	-0.10	-0.02	-0.10	-0.25	0.05	-0.25
R7(OFF)	0.13	-0.02	0.05	0.05	0.21	-0.18	-0.18	0.05	-0.10
R8(OFF)	-0.10	0.13	-0.10	-0.18	0.21	0.05	-0.10	-0.02	-0.10
R9(OFF)	-0.02	0.21	-0.02	-0.25	0.05	0.21	-0.02	0.13	0.05
R10(OFF)	0.21	0.13	0.05	-0.02	-0.02	0.05	-0.10	-0.10	-0.02
R11(OFF)	0.13	-0.02	-0.33	-0.02	0.05	-0.10	-0.18	-0.02	-0.18
Irradiated, unbiased parts statistics									
Min Value	-0.10	-0.02	-0.33	-0.25	-0.10	-0.25	-0.25	-0.10	-0.25
Max Value	0.21	0.36	0.13	0.05	0.21	0.21	-0.02	0.13	0.05
Average	0.08	0.12	-0.06	-0.07	0.07	-0.06	-0.13	-0.02	-0.11
Sigma	0.10	0.12	0.14	0.10	0.11	0.14	0.09	0.08	0.10



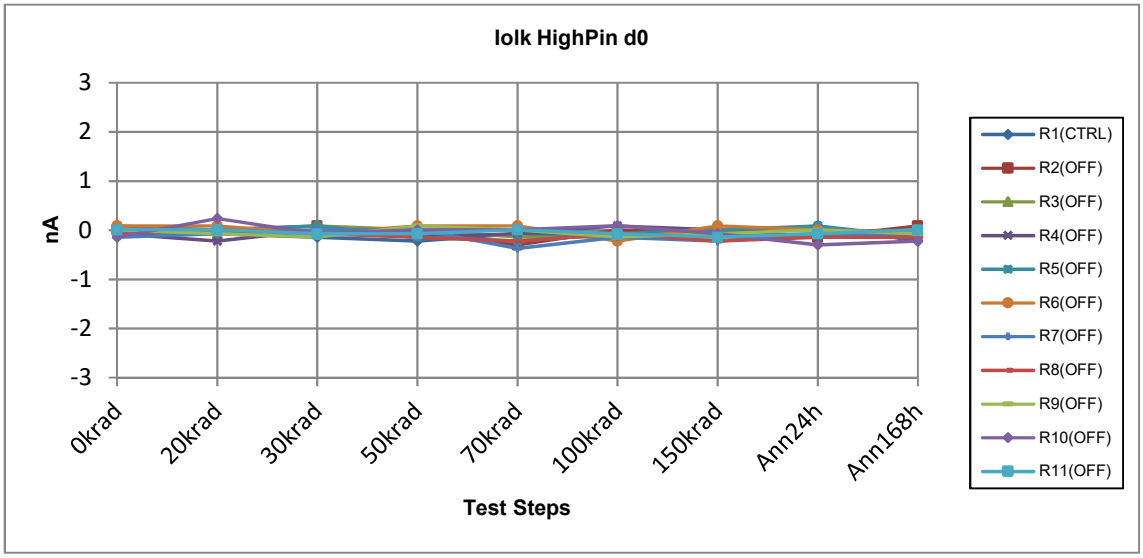
Iolk HighPin d3	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.07	0.07	0.00	0.00	0.07	0.15	-0.08	0.00	0.00
Irradiated, unbiased parts results									
R2(OFF)	-0.08	0.07	0.23	-0.08	0.15	0.00	0.00	0.15	0.15
R3(OFF)	0.00	0.00	0.15	0.00	0.00	0.15	0.23	0.07	0.00
R4(OFF)	-0.08	-0.08	0.15	0.07	-0.16	0.07	0.07	0.00	0.38
R5(OFF)	0.23	-0.08	-0.08	-0.16	0.00	0.07	0.07	0.00	0.30
R6(OFF)	0.15	0.15	0.07	-0.08	0.07	0.00	0.07	0.00	0.07
R7(OFF)	-0.08	-0.16	0.15	0.00	0.07	0.00	-0.31	-0.08	0.15
R8(OFF)	0.00	0.00	-0.16	0.07	-0.08	0.15	0.15	-0.08	0.07
R9(OFF)	-0.08	0.07	0.07	-0.23	0.07	-0.08	0.15	0.23	0.15
R10(OFF)	0.15	-0.16	0.07	0.15	-0.16	0.00	0.07	0.00	0.15
R11(OFF)	-0.08	0.15	0.15	0.07	0.00	0.00	0.00	0.15	0.23
Irradiated, unbiased parts statistics									
Min Value	-0.08	-0.16	-0.16	-0.23	-0.16	-0.08	-0.31	-0.08	0.00
Max Value	0.23	0.15	0.23	0.15	0.15	0.15	0.23	0.23	0.38
Average	0.01	0.00	0.08	-0.02	0.00	0.04	0.05	0.04	0.17
Sigma	0.12	0.11	0.12	0.12	0.10	0.07	0.14	0.10	0.11



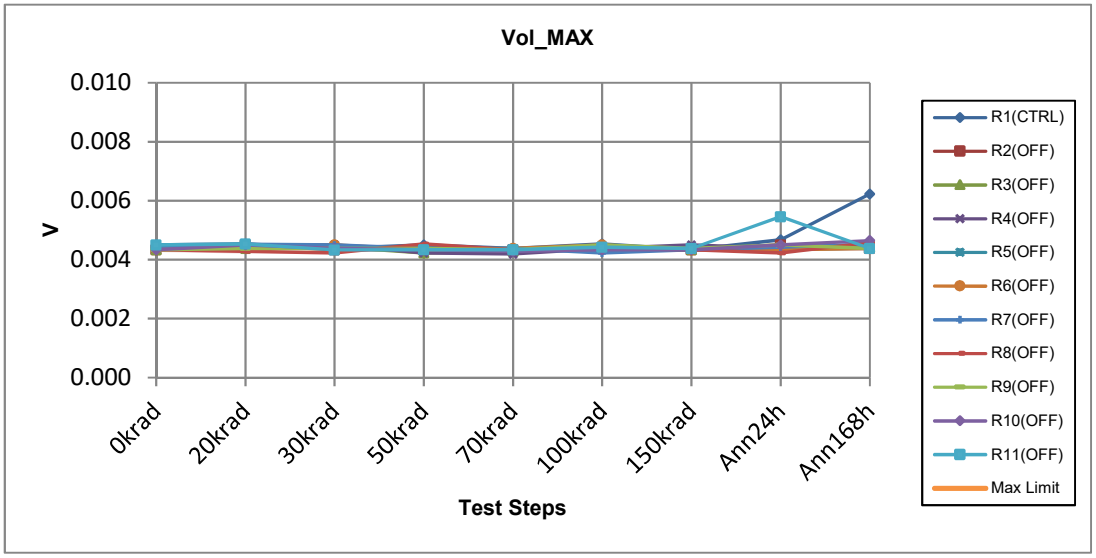
Iolk HighPin d2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.04	0.04	-0.12	-0.04	-0.04	-0.12	0.04	-0.19	0.04
Irradiated, unbiased parts results									
R2(OFF)	-0.04	-0.19	-0.04	-0.19	-0.19	-0.04	-0.35	-0.19	-0.12
R3(OFF)	0.04	-0.04	0.04	-0.12	0.11	0.19	-0.27	-0.04	-0.12
R4(OFF)	0.04	-0.19	0.04	0.11	-0.12	0.04	-0.04	-0.04	-0.42
R5(OFF)	-0.12	0.04	-0.12	-0.12	-0.04	0.11	-0.04	0.04	-0.12
R6(OFF)	0.04	-0.04	0.04	0.11	-0.04	-0.12	-0.27	-0.19	0.19
R7(OFF)	0.04	-0.04	-0.12	-0.19	-0.12	-0.19	0.04	-0.12	0.19
R8(OFF)	-0.19	-0.19	-0.12	-0.27	-0.19	-0.19	-0.19	-0.04	-0.12
R9(OFF)	-0.19	-0.04	-0.04	-0.12	0.19	0.11	0.04	-0.04	-0.12
R10(OFF)	-0.04	-0.12	-0.04	0.04	-0.35	-0.04	-0.12	0.04	-0.12
R11(OFF)	-0.12	-0.19	-0.12	-0.04	0.04	0.04	0.26	0.11	-0.04
Irradiated, unbiased parts statistics									
Min Value	-0.19	-0.19	-0.12	-0.27	-0.35	-0.19	-0.35	-0.19	-0.42
Max Value	0.04	0.04	0.04	0.11	0.19	0.19	0.26	0.11	0.19
Average	-0.05	-0.10	-0.05	-0.08	-0.07	-0.01	-0.09	-0.05	-0.08
Sigma	0.10	0.09	0.07	0.13	0.16	0.13	0.18	0.10	0.17



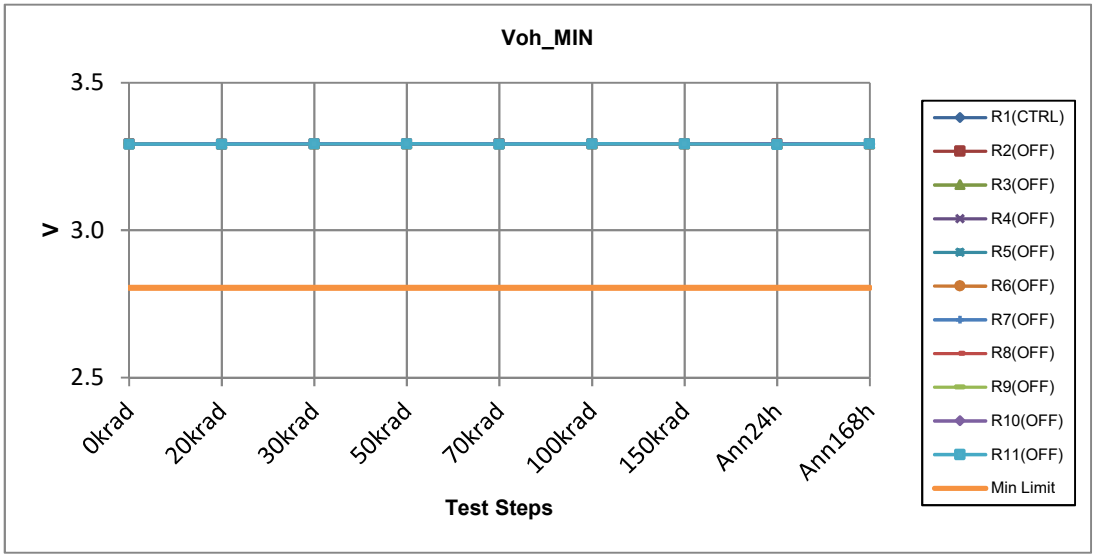
Iolk HighPin d1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	0.14	0.14	0.14	-0.02	0.06	0.06	-0.17	-0.02	0.06
Irradiated, unbiased parts results									
R2(OFF)	0.14	-0.09	0.06	0.06	-0.02	-0.09	0.06	-0.17	-0.02
R3(OFF)	0.37	0.14	-0.02	-0.02	0.06	-0.02	0.14	-0.17	-0.02
R4(OFF)	0.06	-0.17	0.21	0.06	0.14	0.29	-0.32	-0.02	-0.24
R5(OFF)	-0.17	-0.02	-0.09	-0.17	0.21	0.14	-0.17	-0.09	-0.02
R6(OFF)	-0.02	-0.09	0.06	0.14	-0.02	0.06	-0.17	-0.17	-0.32
R7(OFF)	-0.09	0.06	0.06	0.06	-0.02	-0.09	-0.17	0.06	-0.09
R8(OFF)	-0.02	0.06	0.21	0.06	0.06	0.21	0.06	0.06	-0.02
R9(OFF)	-0.09	-0.02	-0.09	-0.09	-0.09	0.21	-0.17	0.14	-0.17
R10(OFF)	0.21	0.14	-0.02	0.14	0.14	0.06	-0.02	0.14	0.14
R11(OFF)	-0.24	0.06	-0.02	0.06	-0.02	-0.09	0.14	-0.09	0.06
Irradiated, unbiased parts statistics									
Min Value	-0.24	-0.17	-0.09	-0.17	-0.09	-0.09	-0.32	-0.17	-0.32
Max Value	0.37	0.14	0.21	0.14	0.21	0.29	0.14	0.14	0.14
Average	0.02	0.01	0.04	0.03	0.04	0.07	-0.06	-0.03	-0.07
Sigma	0.18	0.10	0.11	0.10	0.09	0.14	0.16	0.12	0.14



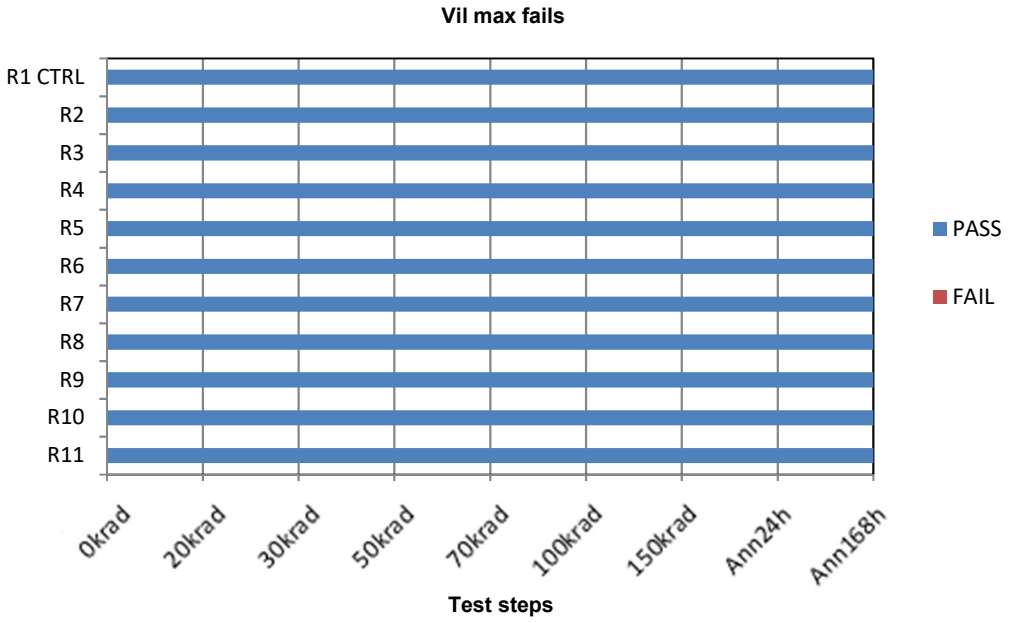
Iolk HighPin d0	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**	**-1000**
Max Limit	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**
Unit	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**	**nA**
Control results									
R1(CTRL)	-0.07	-0.07	-0.14	-0.22	-0.07	-0.14	-0.07	0.09	-0.22
Irradiated, unbiased parts results									
R2(OFF)	0.01	0.01	0.09	-0.07	-0.30	0.01	-0.07	-0.14	0.09
R3(OFF)	0.01	-0.07	0.09	0.01	-0.14	-0.14	-0.14	-0.07	0.01
R4(OFF)	-0.07	-0.22	0.01	-0.14	-0.07	0.09	0.01	-0.14	0.01
R5(OFF)	0.09	0.01	0.09	-0.14	-0.22	-0.07	0.01	0.09	-0.14
R6(OFF)	0.09	0.09	-0.07	0.09	0.09	-0.22	0.09	0.01	-0.07
R7(OFF)	-0.14	-0.07	0.01	0.01	-0.37	-0.14	-0.22	-0.07	-0.14
R8(OFF)	-0.07	0.01	-0.07	-0.14	-0.22	-0.07	-0.22	-0.14	-0.14
R9(OFF)	0.01	-0.07	-0.14	0.09	0.01	-0.14	-0.07	0.01	-0.07
R10(OFF)	-0.14	0.24	-0.07	0.01	0.01	0.09	-0.07	-0.30	-0.22
R11(OFF)	0.01	0.01	-0.07	-0.07	0.01	-0.07	-0.14	-0.07	0.01
Irradiated, unbiased parts statistics									
Min Value	-0.14	-0.22	-0.14	-0.14	-0.37	-0.22	-0.22	-0.30	-0.22
Max Value	0.09	0.24	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Average	-0.02	-0.01	-0.01	-0.04	-0.12	-0.07	-0.08	-0.08	-0.07
Sigma	0.08	0.12	0.08	0.09	0.15	0.10	0.10	0.11	0.10



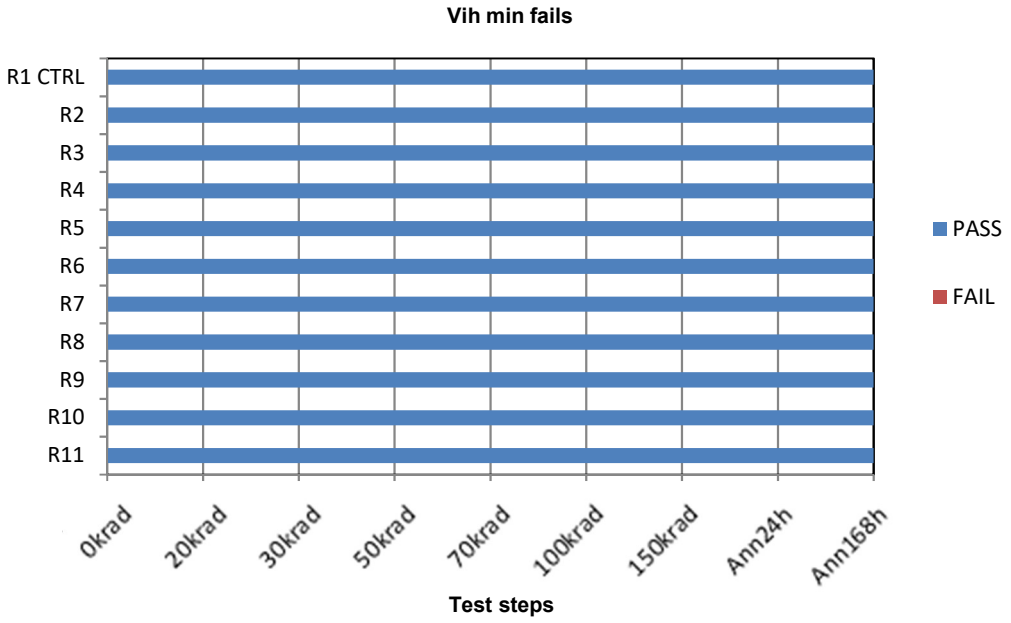
Vol_MAX	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Unit	V	V	V	V	V	V	V	V	V
Control results									
R1(CTRL)	0.0045	0.0045	0.0044	0.0045	0.0044	0.0045	0.0043	0.0047	0.0062
Irradiated, unbiased parts results									
R2(OFF)	0.0043	0.0045	0.0043	0.0043	0.0043	0.0044	0.0043	0.0045	0.0044
R3(OFF)	0.0043	0.0044	0.0044	0.0042	0.0043	0.0044	0.0043	0.0044	0.0044
R4(OFF)	0.0044	0.0045	0.0045	0.0042	0.0042	0.0044	0.0045	0.0044	0.0044
R5(OFF)	0.0044	0.0045	0.0044	0.0044	0.0044	0.0043	0.0043	0.0043	0.0044
R6(OFF)	0.0044	0.0045	0.0045	0.0043	0.0044	0.0045	0.0043	0.0043	0.0044
R7(OFF)	0.0044	0.0045	0.0045	0.0044	0.0044	0.0042	0.0043	0.0044	0.0045
R8(OFF)	0.0043	0.0043	0.0042	0.0045	0.0043	0.0044	0.0043	0.0042	0.0046
R9(OFF)	0.0043	0.0044	0.0044	0.0044	0.0043	0.0045	0.0044	0.0045	0.0044
R10(OFF)	0.0043	0.0045	0.0044	0.0043	0.0043	0.0043	0.0043	0.0045	0.0047
R11(OFF)	0.0045	0.0045	0.0043	0.0043	0.0043	0.0044	0.0044	0.0055	0.0044
Irradiated, unbiased parts statistics									
Min Value	0.0043	0.0043	0.0042	0.0042	0.0042	0.0042	0.0043	0.0042	0.0044
Max Value	0.0045	0.0045	0.0045	0.0045	0.0044	0.0045	0.0045	0.0055	0.0047
Average	0.0044	0.0045	0.0044	0.0043	0.0043	0.0044	0.0044	0.0045	0.0044
Sigma	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001



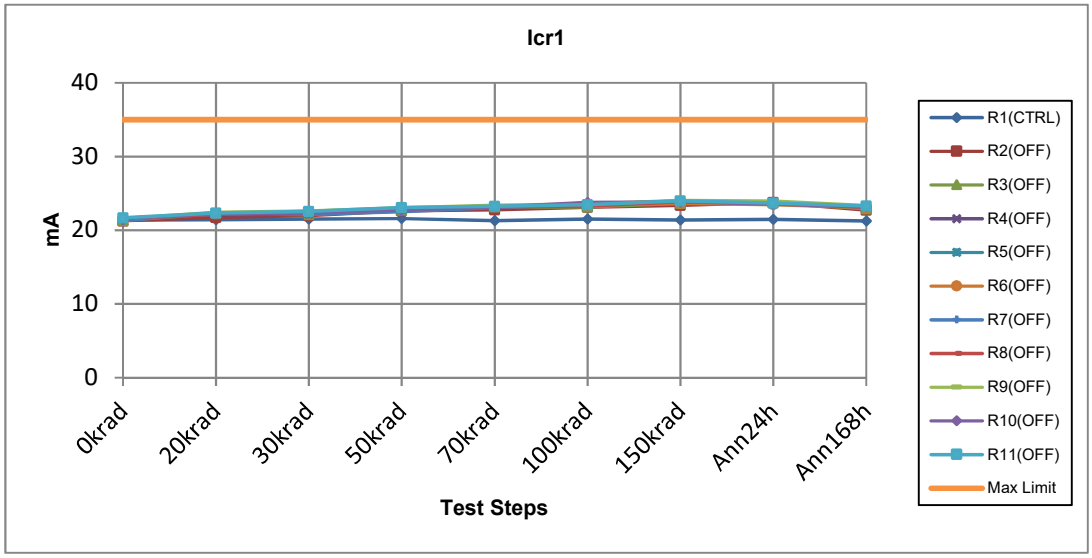
Voh_MIN	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**	**2.805**
Max Limit	--	--	--	--	--	--	--	--	--
Unit	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**
Control results									
R1(CTRL)	3.2932	3.2929	3.2931	3.2926	3.2926	3.2926	3.2930	3.2930	3.2917
Irradiated, unbiased parts results									
R2(OFF)	3.2929	3.2926	3.2929	3.2930	3.2927	3.2928	3.2927	3.2928	3.2930
R3(OFF)	3.2930	3.2930	3.2927	3.2929	3.2928	3.2929	3.2929	3.2924	3.2927
R4(OFF)	3.2929	3.2931	3.2928	3.2927	3.2931	3.2929	3.2926	3.2928	3.2930
R5(OFF)	3.2929	3.2928	3.2926	3.2925	3.2929	3.2928	3.2927	3.2929	3.2926
R6(OFF)	3.2928	3.2929	3.2927	3.2931	3.2931	3.2927	3.2929	3.2926	3.2925
R7(OFF)	3.2931	3.2923	3.2927	3.2929	3.2927	3.2927	3.2930	3.2928	3.2927
R8(OFF)	3.2924	3.2929	3.2930	3.2926	3.2929	3.2930	3.2930	3.2929	3.2927
R9(OFF)	3.2931	3.2931	3.2931	3.2930	3.2924	3.2927	3.2926	3.2929	3.2929
R10(OFF)	3.2926	3.2930	3.2927	3.2931	3.2931	3.2930	3.2924	3.2927	3.2926
R11(OFF)	3.2926	3.2925	3.2929	3.2927	3.2926	3.2927	3.2929	3.2914	3.2927
Irradiated, unbiased parts statistics									
Min Value	3.2924	3.2923	3.2926	3.2925	3.2924	3.2927	3.2924	3.2914	3.2925
Max Value	3.2931	3.2931	3.2931	3.2931	3.2931	3.2930	3.2930	3.2929	3.2930
Average	3.2928	3.2928	3.2928	3.2928	3.2928	3.2928	3.2928	3.2926	3.2927
Sigma	0.0002	0.0003	0.0002	0.0002	0.0002	0.0001	0.0002	0.0005	0.0002



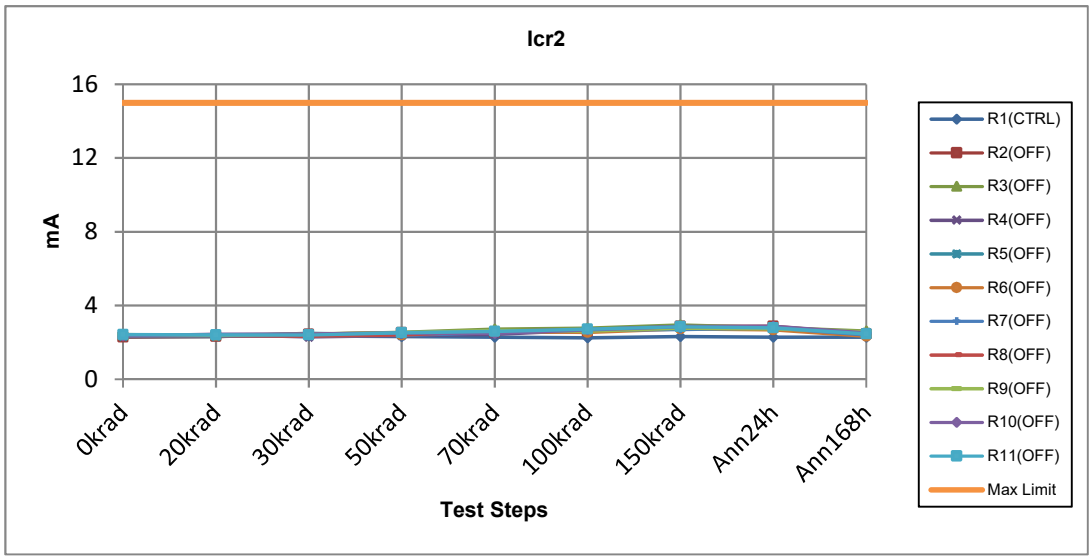
Vil max fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



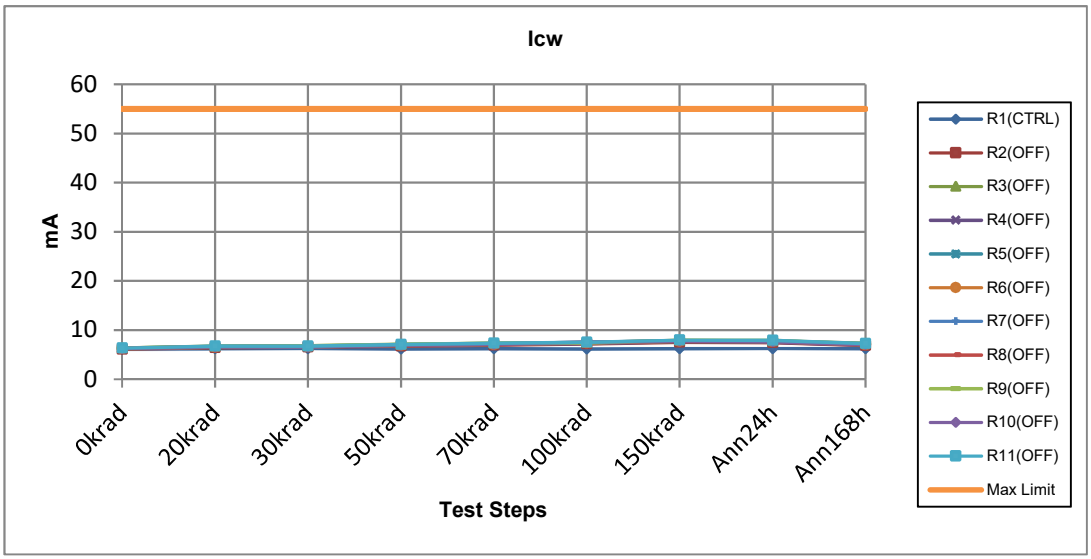
Vih min fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



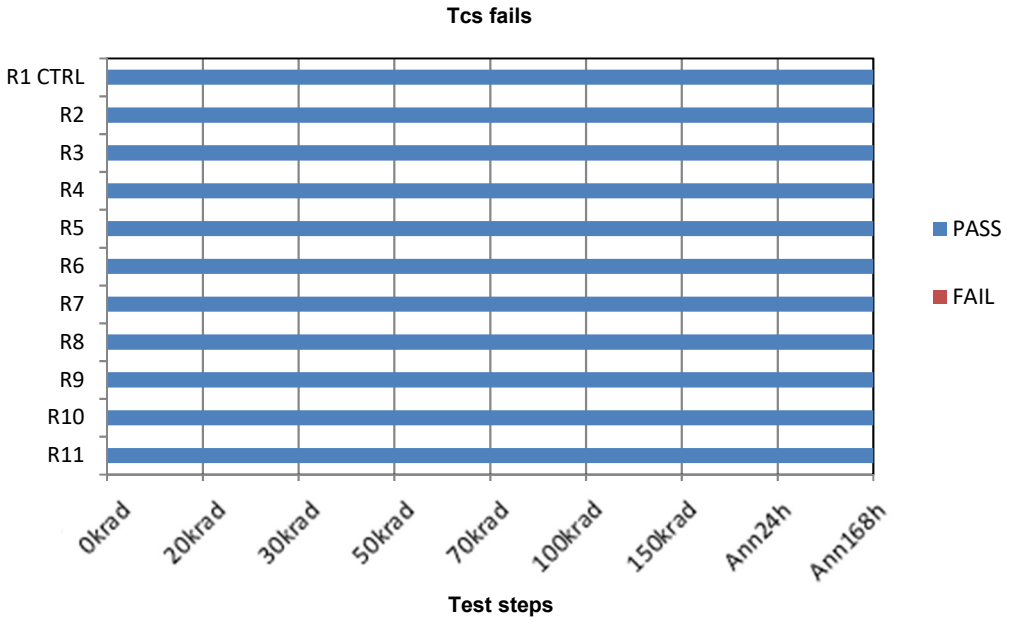
Icr1	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	35	35	35	35	35	35	35	35	35
Unit	mA	mA	mA	mA	mA	mA	mA	mA	mA
Control results									
R1(CTRL)	21.37	21.44	21.52	21.59	21.28	21.53	21.39	21.46	21.25
Irradiated, unbiased parts results									
R2(OFF)	21.27	21.74	21.98	22.65	22.79	23.11	23.38	23.76	22.71
R3(OFF)	21.31	22.25	22.14	22.73	23.17	23.18	23.63	23.78	22.92
R4(OFF)	21.65	22.06	22.20	22.81	23.12	23.38	23.99	23.70	23.23
R5(OFF)	21.61	22.17	22.56	22.89	23.30	23.43	23.89	23.73	23.26
R6(OFF)	21.48	22.25	22.36	22.92	23.18	23.43	23.61	23.46	23.07
R7(OFF)	21.27	22.38	22.18	22.53	23.07	23.57	23.93	23.65	23.12
R8(OFF)	21.54	22.18	22.41	22.88	23.23	23.31	23.84	23.75	23.11
R9(OFF)	21.56	22.43	22.59	23.04	23.40	23.56	24.03	23.96	23.35
R10(OFF)	21.53	22.31	22.34	22.76	23.12	23.79	23.84	23.56	23.22
R11(OFF)	21.69	22.33	22.55	23.06	23.23	23.46	23.98	23.68	23.30
Irradiated, unbiased parts statistics									
Min Value	21.27	21.74	21.98	22.53	22.79	23.11	23.38	23.46	22.71
Max Value	21.69	22.43	22.59	23.06	23.40	23.79	24.03	23.96	23.35
Average	21.49	22.21	22.33	22.83	23.16	23.42	23.81	23.70	23.13
Sigma	0.16	0.20	0.21	0.17	0.16	0.20	0.21	0.13	0.19



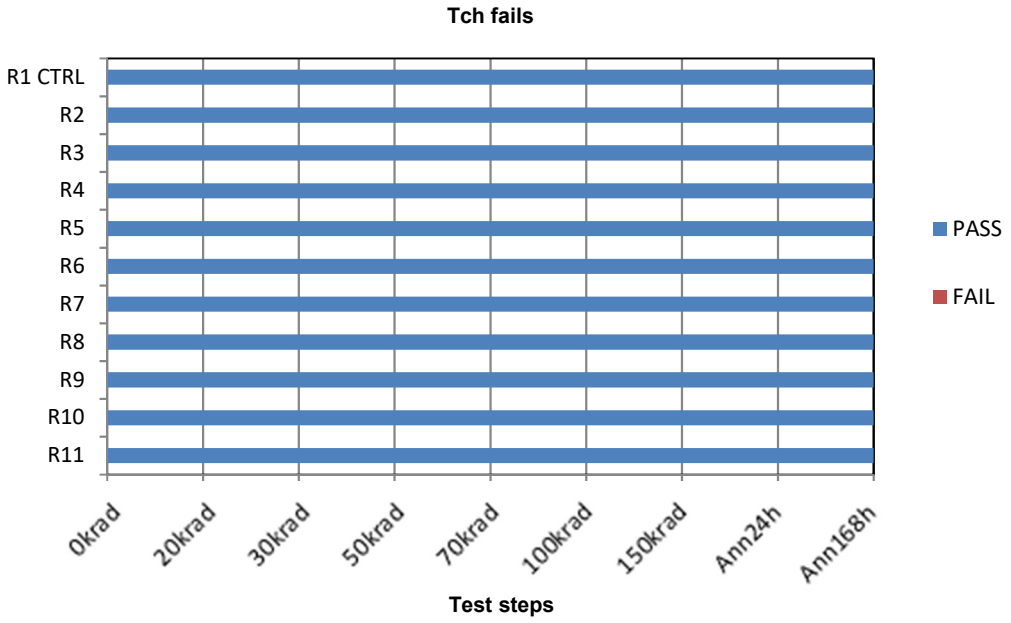
Icr2	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**
Unit	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**
Control results									
R1(CTRL)	2.36	2.35	2.36	2.32	2.27	2.24	2.32	2.27	2.29
Irradiated, unbiased parts results									
R2(OFF)	2.28	2.32	2.43	2.52	2.53	2.59	2.88	2.88	2.46
R3(OFF)	2.41	2.40	2.44	2.53	2.71	2.77	2.95	2.80	2.61
R4(OFF)	2.35	2.41	2.29	2.36	2.43	2.66	2.83	2.79	2.49
R5(OFF)	2.31	2.32	2.49	2.41	2.56	2.70	2.88	2.77	2.55
R6(OFF)	2.40	2.39	2.42	2.41	2.60	2.55	2.72	2.68	2.33
R7(OFF)	2.33	2.36	2.32	2.38	2.52	2.66	2.70	2.78	2.39
R8(OFF)	2.37	2.36	2.33	2.41	2.61	2.67	2.85	2.81	2.49
R9(OFF)	2.41	2.37	2.46	2.53	2.64	2.60	2.76	2.72	2.57
R10(OFF)	2.36	2.43	2.45	2.51	2.50	2.67	2.86	2.88	2.51
R11(OFF)	2.41	2.40	2.40	2.53	2.59	2.71	2.85	2.78	2.45
Irradiated, unbiased parts statistics									
Min Value	2.28	2.32	2.29	2.36	2.43	2.55	2.70	2.68	2.33
Max Value	2.41	2.43	2.49	2.53	2.71	2.77	2.95	2.88	2.61
Average	2.36	2.38	2.40	2.46	2.57	2.66	2.83	2.79	2.49
Sigma	0.05	0.04	0.07	0.07	0.08	0.06	0.08	0.06	0.08



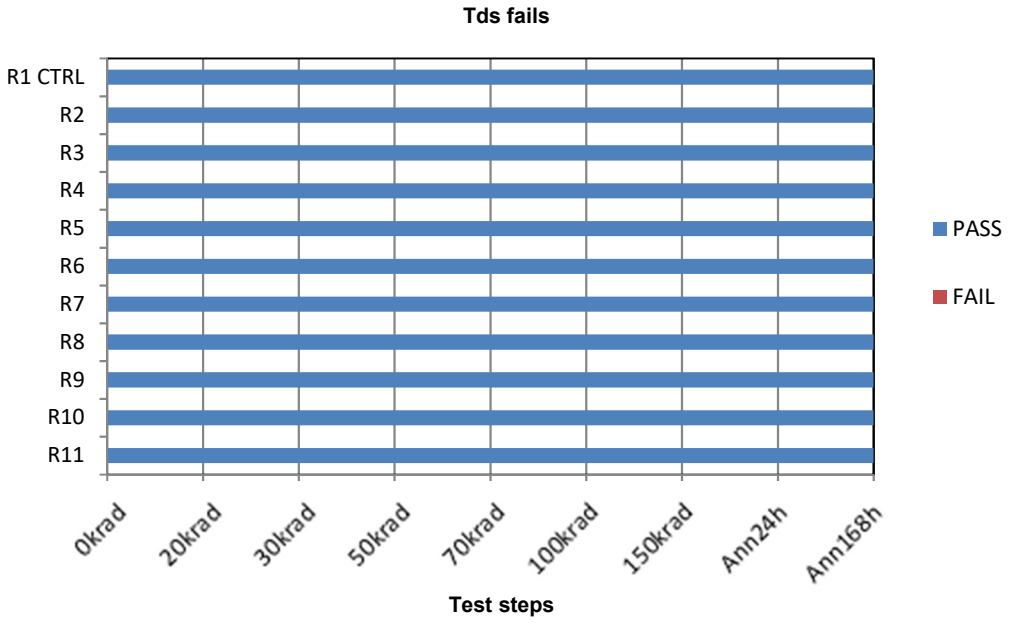
Icw	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**
Unit	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**	**mA**
Control results									
R1(CTRL)	6.13	6.17	6.23	6.17	6.18	6.17	6.20	6.23	6.20
Irradiated, unbiased parts results									
R2(OFF)	6.09	6.40	6.50	6.74	6.91	7.15	7.51	7.45	6.85
R3(OFF)	6.37	6.73	6.78	7.04	7.30	7.47	7.89	7.78	7.28
R4(OFF)	6.17	6.55	6.59	6.86	7.03	7.26	7.61	7.49	6.94
R5(OFF)	6.33	6.67	6.74	7.03	7.25	7.49	7.84	7.82	7.15
R6(OFF)	6.19	6.55	6.62	6.86	7.07	7.35	7.69	7.63	6.98
R7(OFF)	6.24	6.56	6.59	6.90	7.14	7.42	7.76	7.70	7.14
R8(OFF)	6.26	6.57	6.74	6.95	7.09	7.42	7.73	7.68	7.05
R9(OFF)	6.37	6.64	6.79	7.12	7.32	7.40	7.94	7.92	7.20
R10(OFF)	6.28	6.57	6.62	6.94	7.12	7.54	7.75	7.64	7.07
R11(OFF)	6.32	6.70	6.75	7.03	7.28	7.52	7.94	7.90	7.26
Irradiated, unbiased parts statistics									
Min Value	6.09	6.40	6.50	6.74	6.91	7.15	7.51	7.45	6.85
Max Value	6.37	6.73	6.79	7.12	7.32	7.54	7.94	7.92	7.28
Average	6.26	6.59	6.67	6.95	7.15	7.40	7.76	7.70	7.09
Sigma	0.09	0.09	0.10	0.11	0.13	0.12	0.14	0.16	0.14



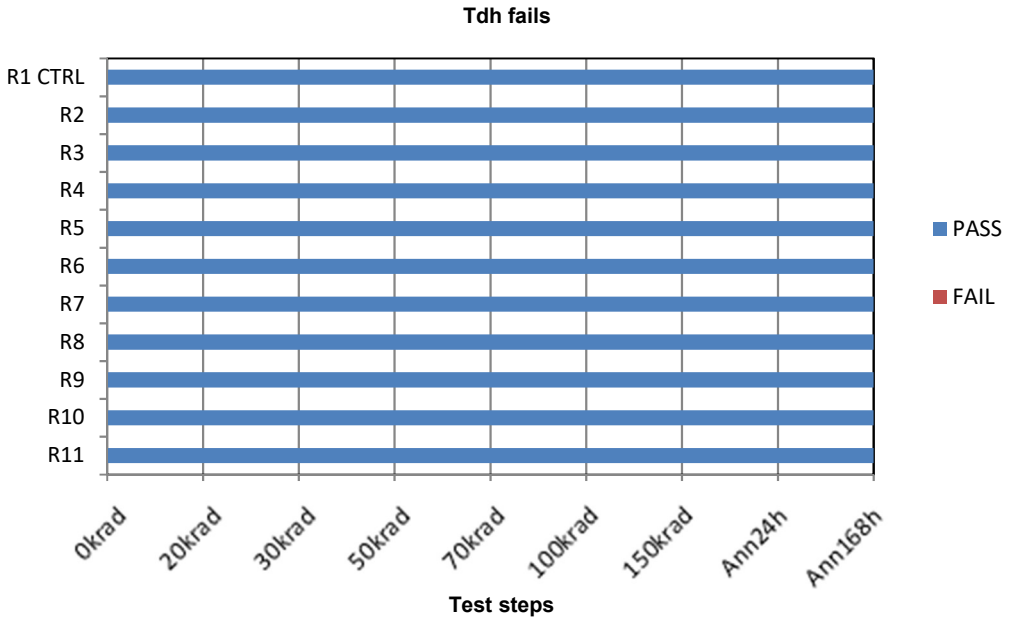
Tcs fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



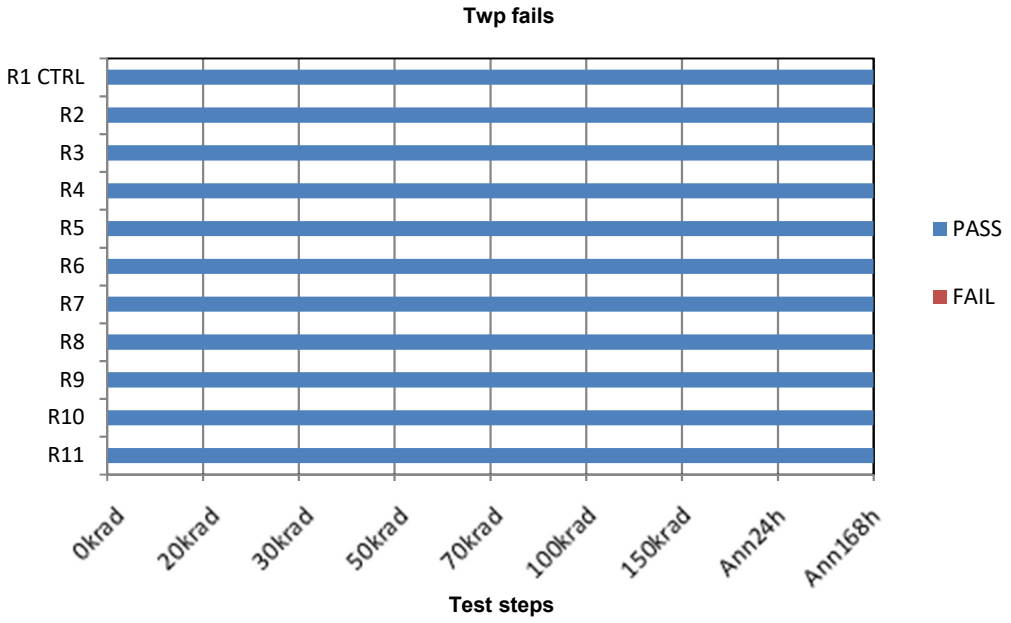
Tch fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



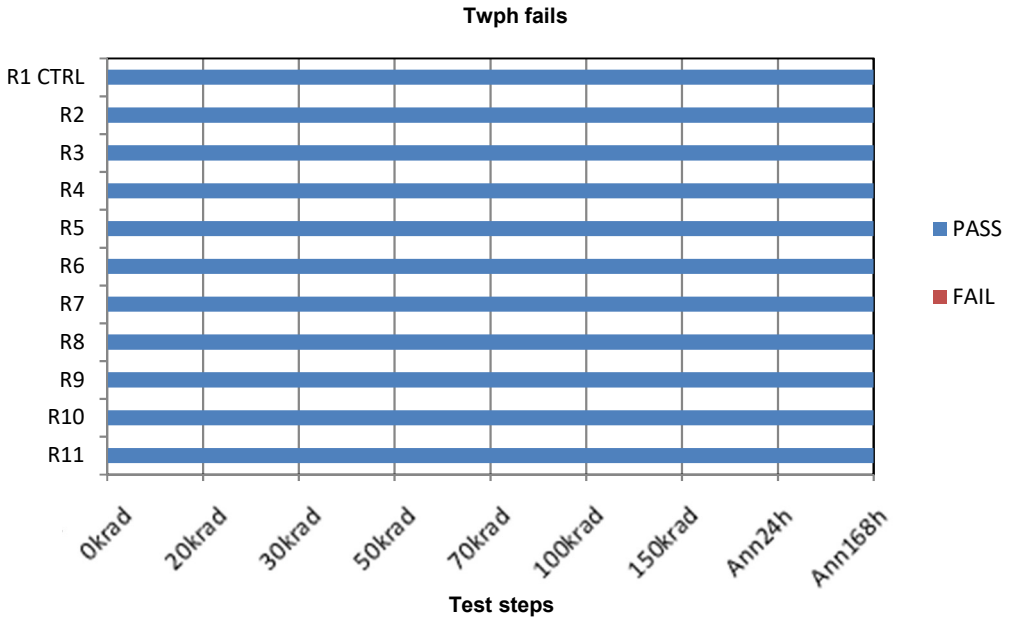
Tds fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



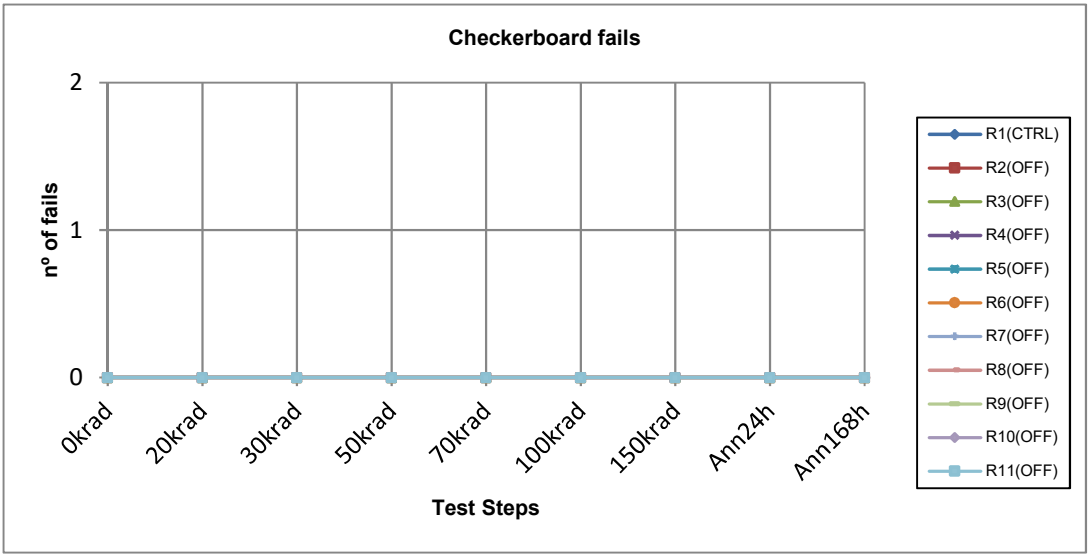
Tdh fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



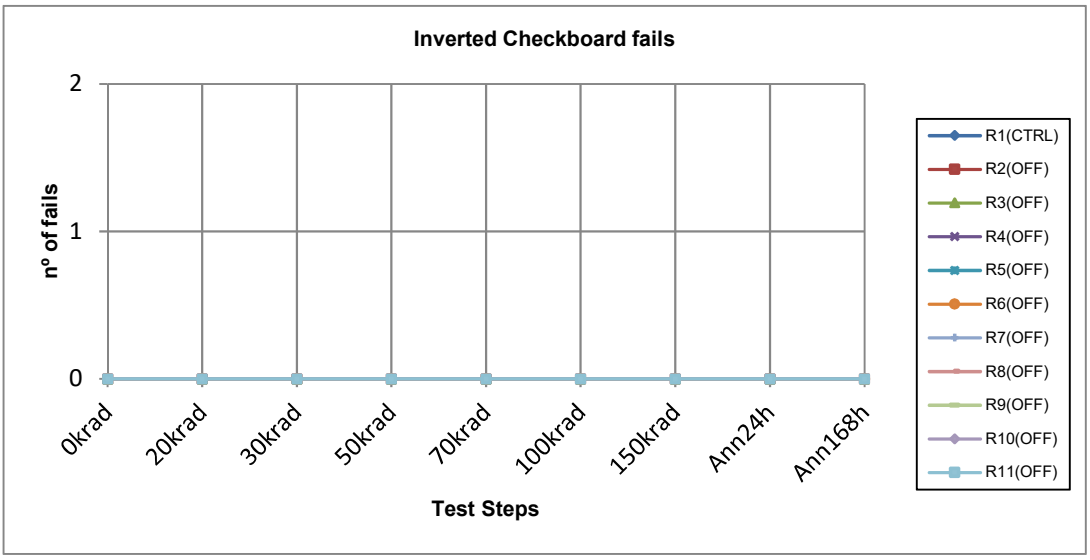
Twp fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



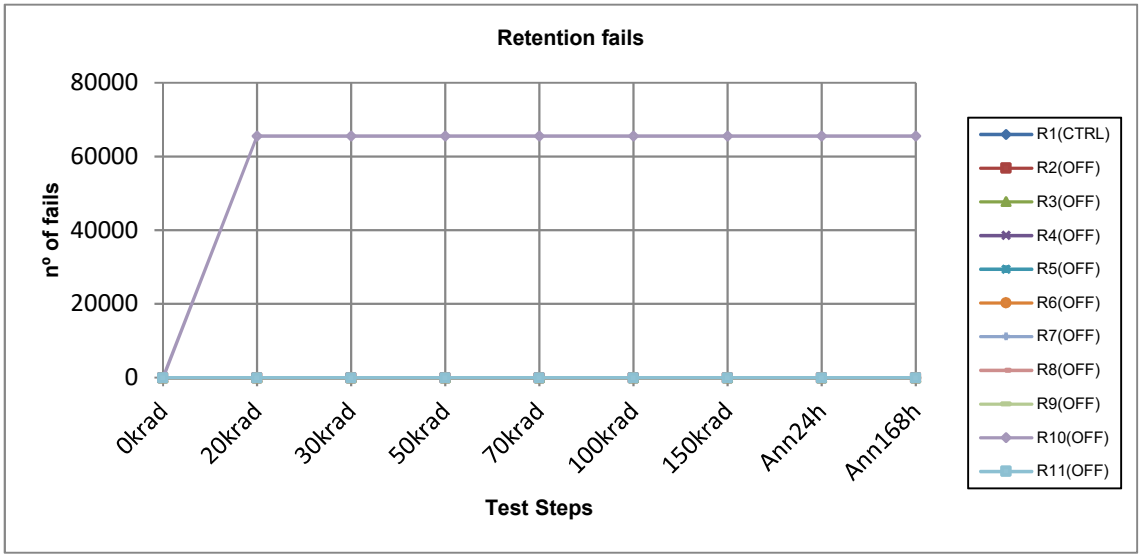
Twph fails	0krad	20krad	30krad	50krad	70krad	100krad	150krad	Ann24h	Ann168h
Min Limit	--	--	--	--	--	--	--	--	--
Max Limit	--	--	--	--	--	--	--	--	--
Unit	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F	P/F
Control results									
R1(CTRL)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Irradiated, unbiased parts results									
R2(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R3(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R4(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R5(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R6(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R7(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R8(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R9(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R10(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
R11(OFF)	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
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



Checkerboard 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	0	0	0
R3(OFF)	0	0	0	0	0	0	0	0	0
R4(OFF)	0	0	0	0	0	0	0	0	0
R5(OFF)	0	0	0	0	0	0	0	0	0
R6(OFF)	0	0	0	0	0	0	0	0	0
R7(OFF)	0	0	0	0	0	0	0	0	0
R8(OFF)	0	0	0	0	0	0	0	0	0
R9(OFF)	0	0	0	0	0	0	0	0	0
R10(OFF)	0	0	0	0	0	0	0	0	0
R11(OFF)	0	0	0	0	0	0	0	0	0
Irradiated, unbiased parts statistics									
Min Value	0	0	0	0	0	0	0	0	0
Max Value	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0
Sigma	0	0	0	0	0	0	0	0	0



Inverted Checkboard 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	0	0	0
R3(OFF)	0	0	0	0	0	0	0	0	0
R4(OFF)	0	0	0	0	0	0	0	0	0
R5(OFF)	0	0	0	0	0	0	0	0	0
R6(OFF)	0	0	0	0	0	0	0	0	0
R7(OFF)	0	0	0	0	0	0	0	0	0
R8(OFF)	0	0	0	0	0	0	0	0	0
R9(OFF)	0	0	0	0	0	0	0	0	0
R10(OFF)	0	0	0	0	0	0	0	0	0
R11(OFF)	0	0	0	0	0	0	0	0	0
Irradiated, unbiased parts statistics									
Min Value	0	0	0	0	0	0	0	0	0
Max Value	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0
Sigma	0	0	0	0	0	0	0	0	0



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	0	0	0
R3(OFF)	0	0	0	0	0	0	0	0	0
R4(OFF)	0	0	0	0	0	0	0	0	0
R5(OFF)	0	0	0	0	0	0	0	0	0
R6(OFF)	0	0	0	0	0	0	0	0	0
R7(OFF)	0	0	0	0	0	0	0	0	0
R8(OFF)	0	0	0	0	0	0	0	0	0
R9(OFF)	0	0	0	0	0	0	0	0	0
R10(OFF)	0	65536	65536	65536	65536	65536	65536	65536	65536
R11(OFF)	0	0	0	0	0	0	0	0	0
Irradiated, unbiased parts statistics									
Min Value	0	0	0	0	0	0	0	0	0
Max Value	0	65536	65536	65536	65536	65536	65536	65536	65536
Average	0	6554	6554	6554	6554	6554	6554	6554	6554
Sigma	0	20724	20724	20724	20724	20724	20724	20724	20724

APPENDIX 1: IN SITU TEST REPORT

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

9 INTRODUCTION

This report presents the functional test results obtained on MX68GL1G0GHXFI-10G 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.

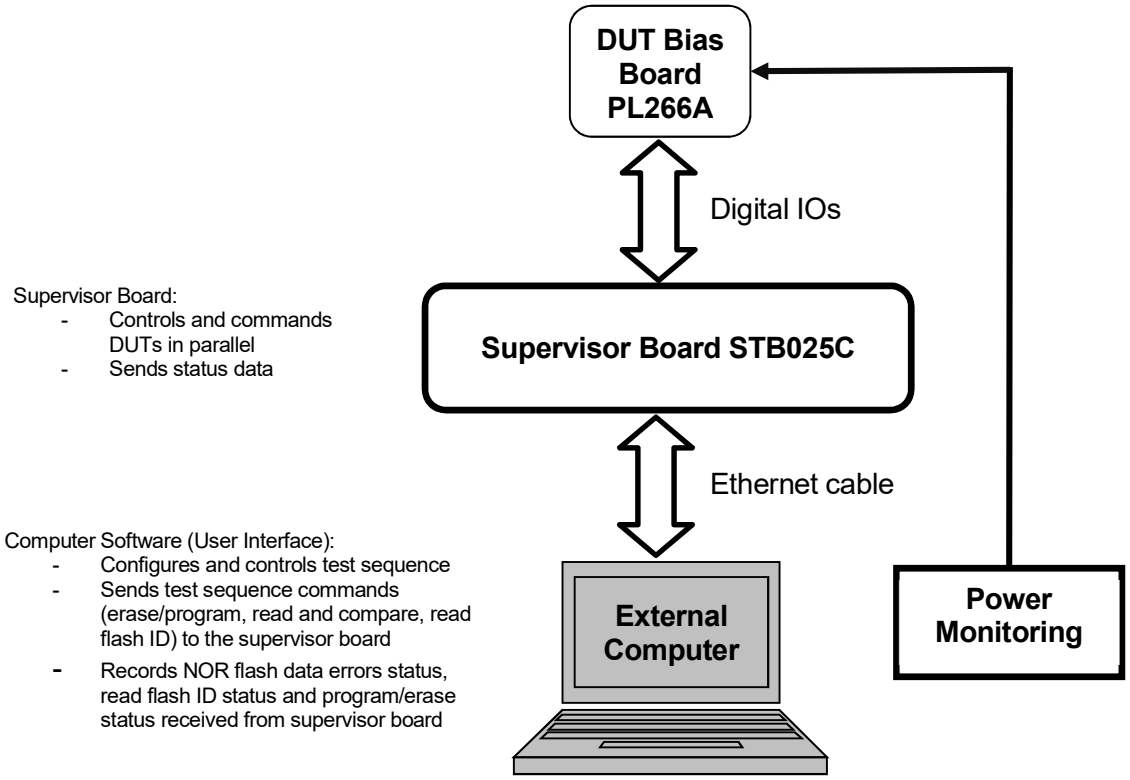


FIGURE 6: In-situ test system overview

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.

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

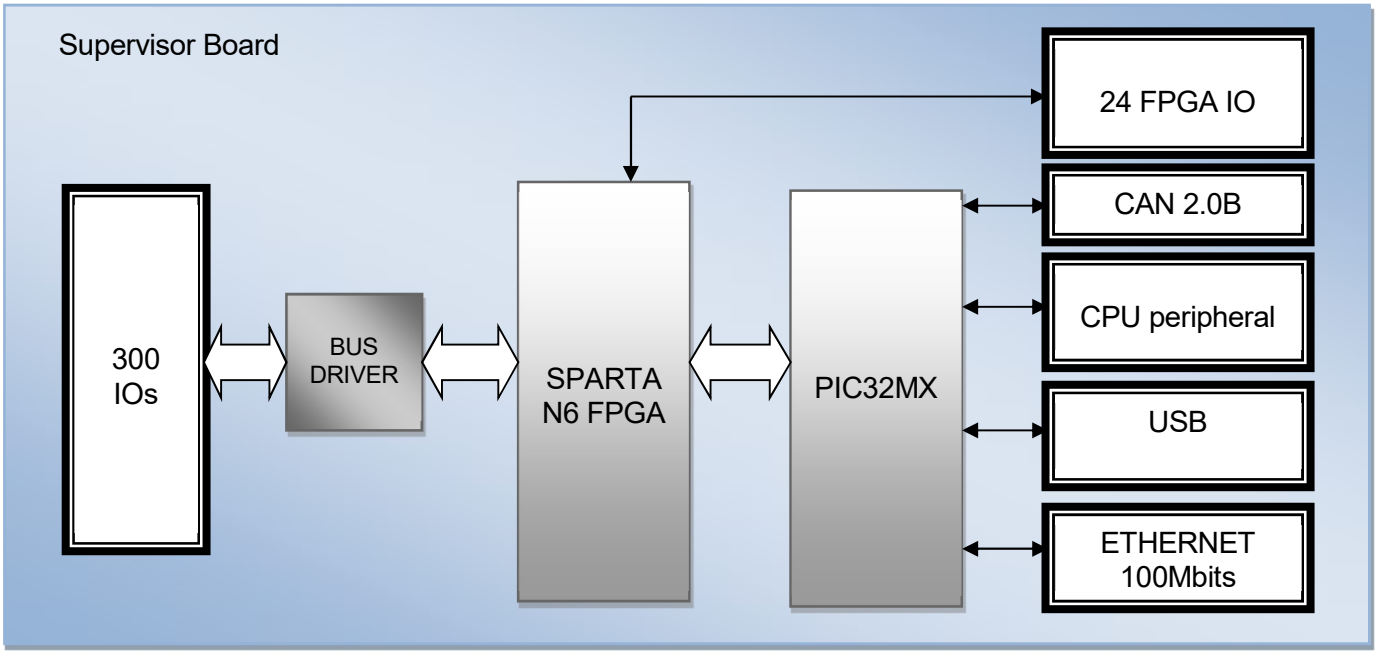


FIGURE 7:: Supervisor board overview.

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 25º C and 100°C temperatures.

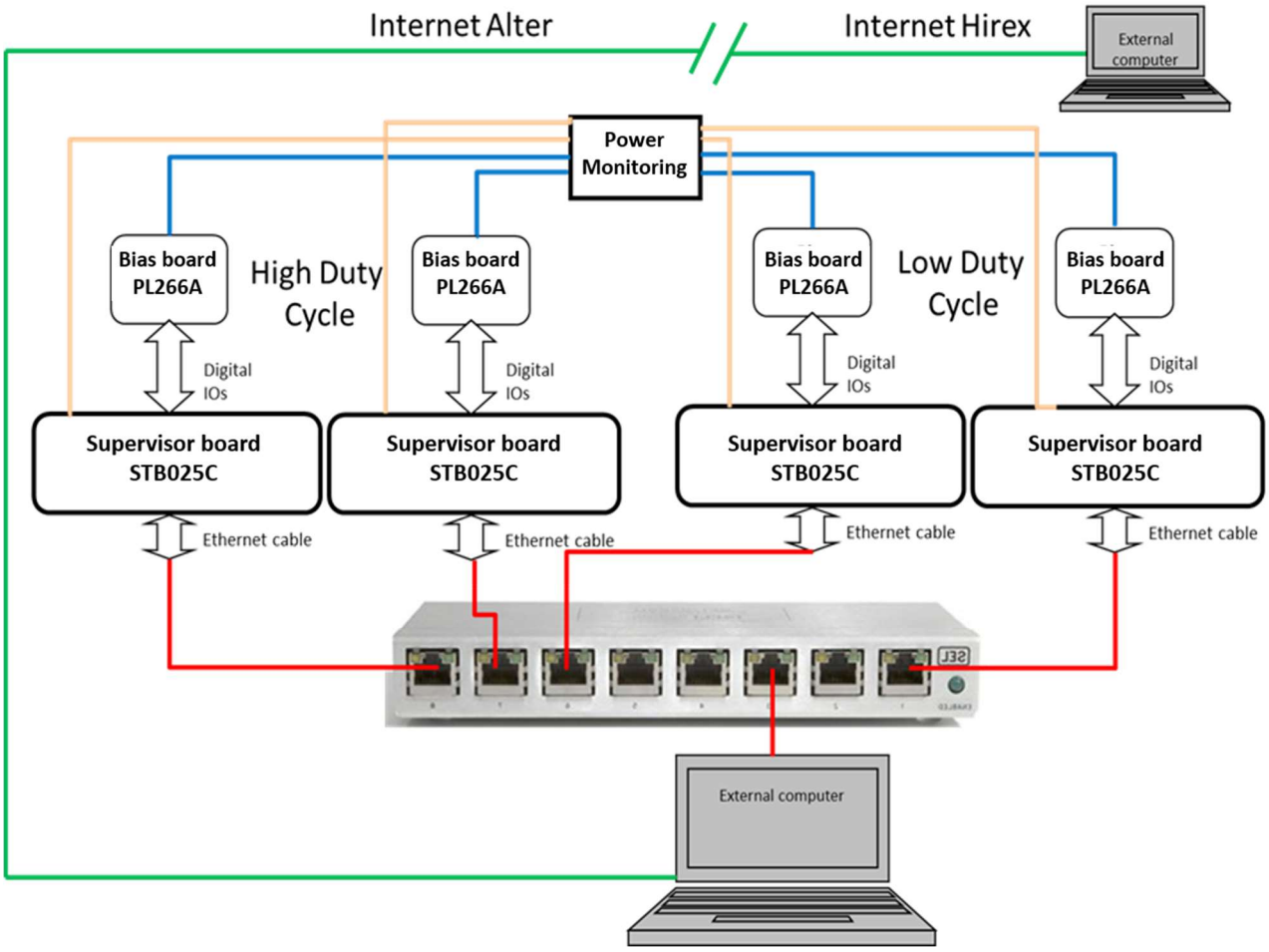


FIGURE 8: Bias setup overview.

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.

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: 24/07/2017 15:24
Campaign end date: 11/08/2017 10:26

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	--	24/07/2017
1	20000	18347	18347.3	8.3	297.7	61.63	27/07/2017
2	30000	6619	24966.1	16.8	297.7	22.23	28/07/2017
3	50000	20833	45799.2	8.4	297.7	69.98	31/07/2017
4	70000	19441	65240.0	6.8	297.7	65.30	03/08/2017
	Annealing						
5	Ann24h@25ºC	24	--	--	--	--	04/08/2017
6	Ann168h@100ºC	168	--	--	--	--	11/08/2017

Note 1: Exposure have been stopped after 70krad(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.

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.

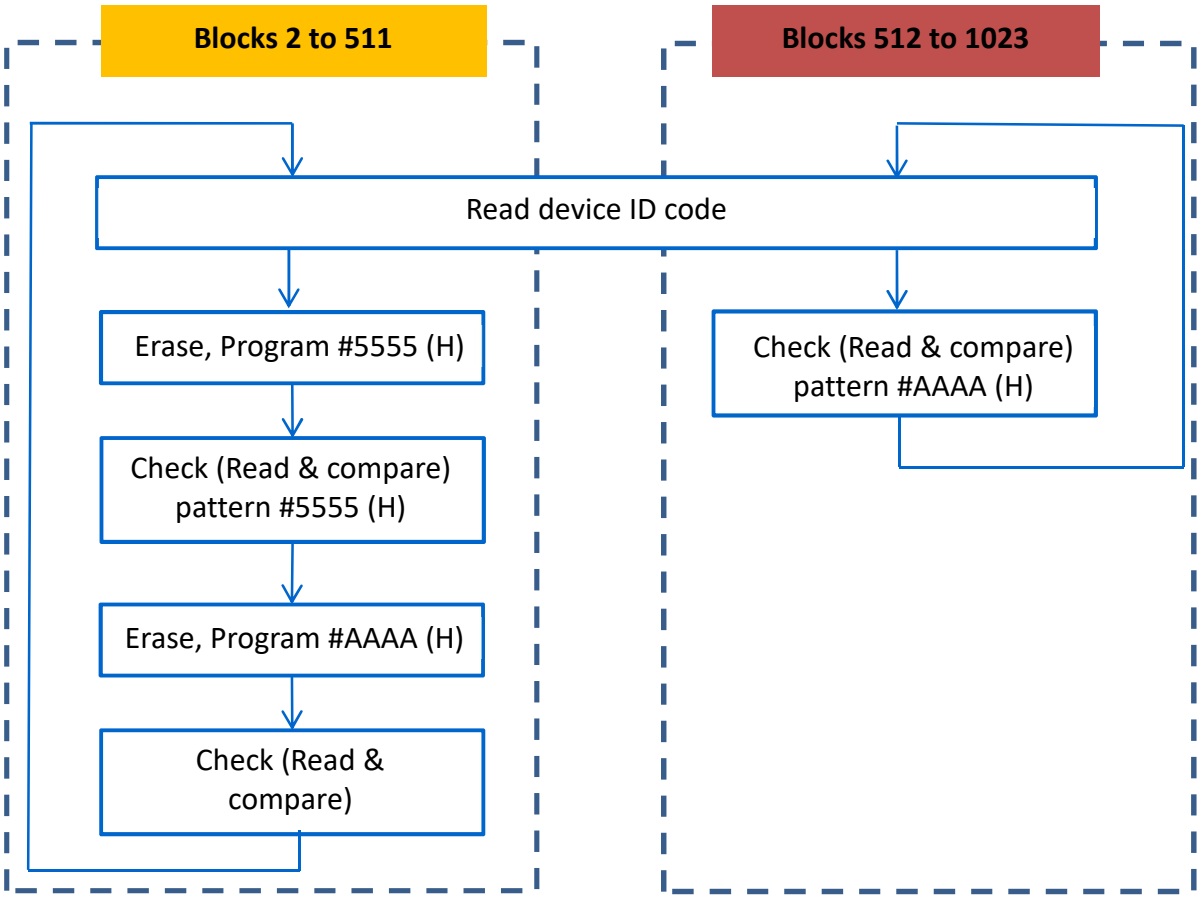


FIGURE 9: High duty cycle in-situ test iteration cycle flow chart.

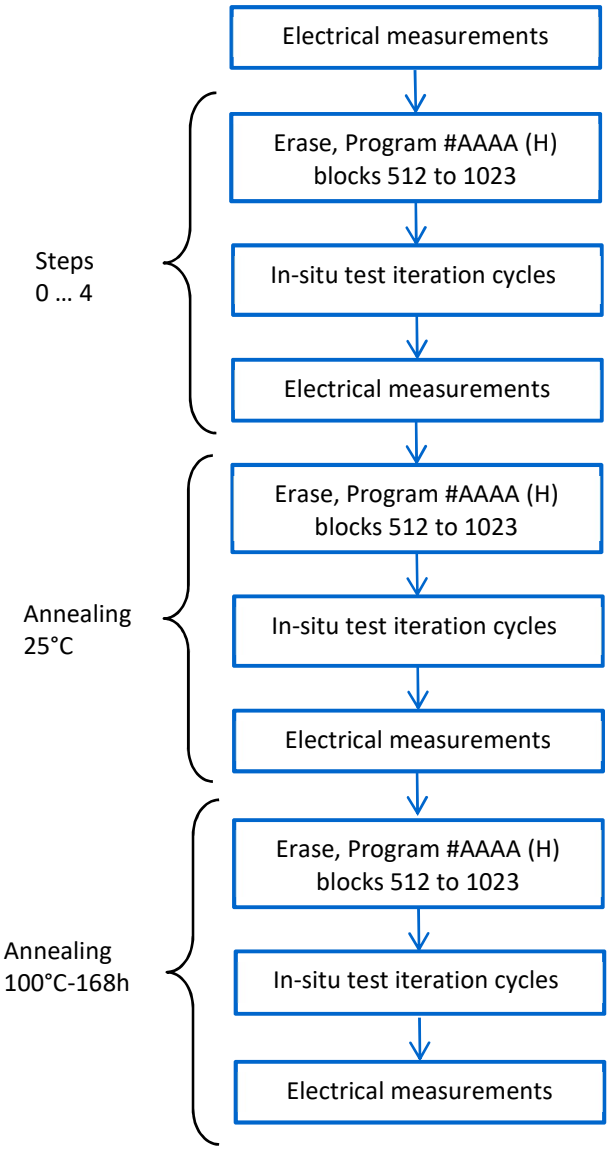


FIGURE 10: High duty cycle in-situ test flow chart.

11.4 Low duty cycle (LDC) bias

Campaign start date: 24/07/2017 11:10
Campaign end date: 11/08/2017 08:17

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	--	24/07/2017
1	20000	18539	18539.0	7.3	297.1	62.40	27/07/2017
2	30000	6575	25113.9	16.3	297.1	22.13	28/07/2017
3	50000	20321	45434.5	9.1	297.1	68.40	31/07/2017
4	70000	19227	64661.8	7.6	297.1	64.72	03/08/2017
	Annealing						
5	Ann24h@25ºC	24	--	--	--	--	04/08/2017
6	Ann168h@100ºC	168	--	--	--	--	11/08/2017

Note 1: Exposure have been stopped after 70krad(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.

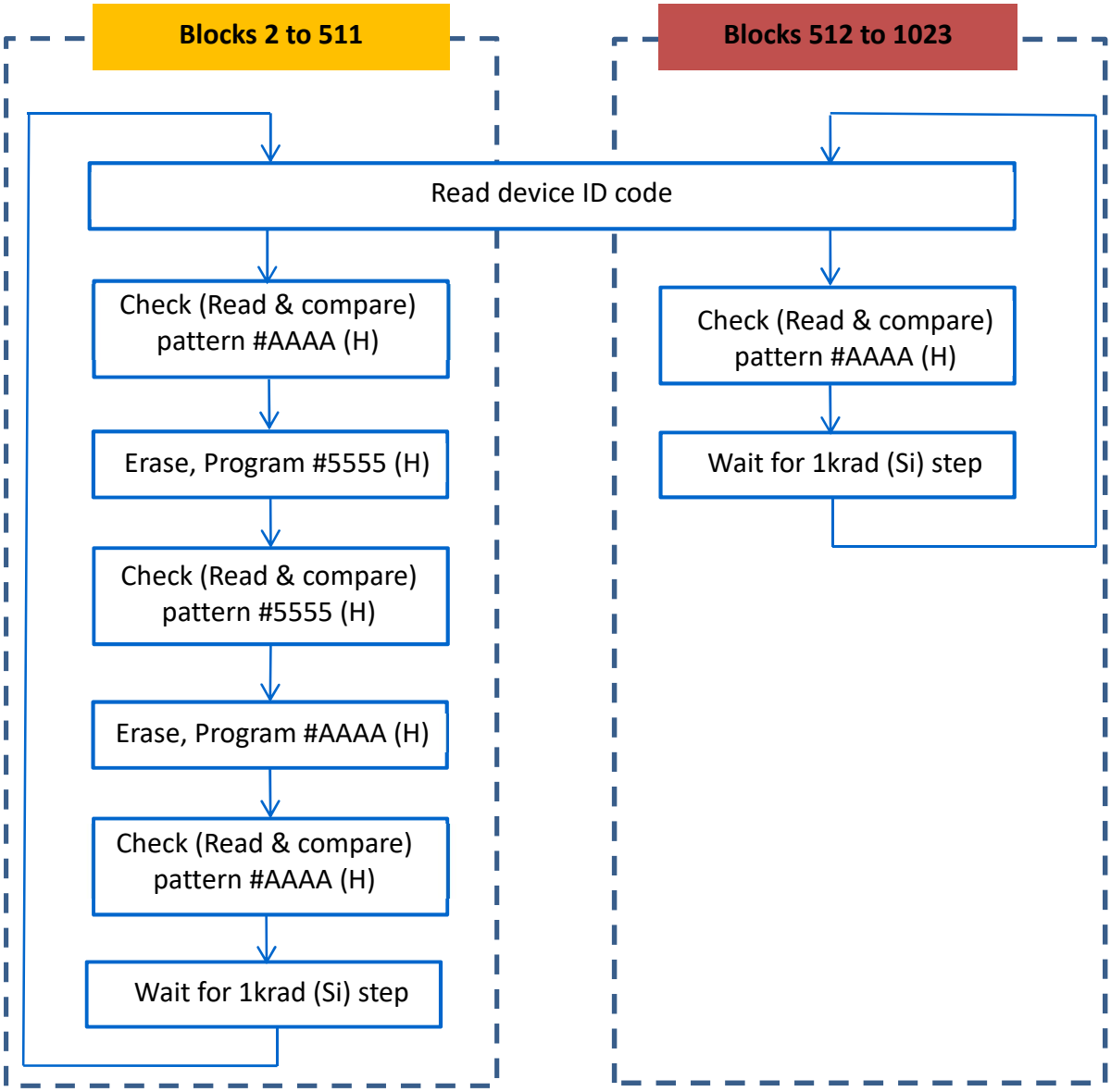


FIGURE 11: Low duty cycle in-situ test iteration cycle flow chart.

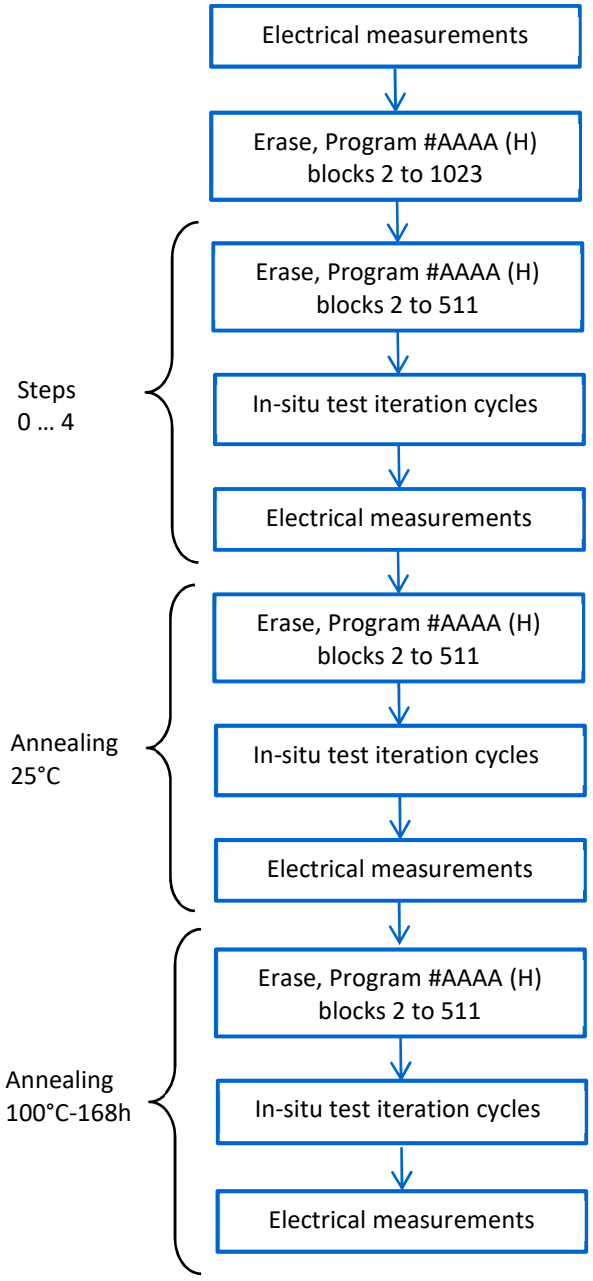


FIGURE 12: Low duty cycle in-situ test flow chart.

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) operation results.

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

Figures in 12.1 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 (board):
In LDC bias, the duration starts to increase slightly in the middle of step2 (20-30 krad) and raise abruptly at the beginning of step 3 (30-50 krad). During step 4 (50-70 krad), there is a smooth reduction till one third of the duration. However, this reduction does not reflect a real decrease of this duration. This is due to the reset failed status during this period, resulting that the erase/program operation is not performed. At the beginning of the first annealing (25º C) the duration suddenly raises up to recover the level in step 3 (30-50 krad). This raise corresponds to the recovery of the identification ok status. Finally, at the end of the first third of the second annealing (100ºC), the

duration has a quick reduction in one third of the duration. This reduction again corresponds to a reset failed status.

In HDC bias, there is a different behavior in the boards. In board 3, the duration increases suddenly at the middle of step 3 (30-50 krad), and this value continuous till the end of all the processes. Regarding board 4, the behavior is similar except that there are reductions of duration during the second half of step 4 (50-70 krad) and the first half of the second annealing process (100ºC). These reductions do not imply real decrement of the duration as it occurs during the reset failed status of several DUTs of board 4.

Erase, program duration pattern 0xAAAA (board):
In LDC bias, the duration starts to increase slightly in the middle of step 2 (20-30 krad) and raise abruptly at the beginning of step 3 (30-50 krad). During step 4 (50-70 krad), there is a smooth reduction till about one third of the duration. At the beginning of the first annealing (25º C) the duration suddenly raises up to recover the level in step 3 (30-50 krad). Finally, at the end of the first third of the second annealing (100º C), the duration has a quick reduction in one third of the duration. These reductions do not imply real effect on the duration of the operations as they are concurrent with the reset failed status of several DUTs.

In HDC bias, there is a different behavior in the boards. In board 3, the duration increases suddenly at the middle of step 3 (30-50 krad), and this value continuous till the end of all the processes. Regarding board 4, the behavior is similar except that there are reductions of duration during the second half of step 4 (50-70 krad) and the first half of the second annealing process (100ºC). These reductions do not imply real effect on the duration of the operations as they are concurrent with the reset failed status of several DUTs.

Erase, program, pattern 0x5555 (DUT blocks 2 to 511):
In LDC bias, DUTs start to have some failed erased blocks in the second half of step 2 (20-30 krad). The amount of failed erased blocks rises abruptly to all blocks at the end of the first third of step 3 (30-50 krad). From this point there is an heterogenous behavior, some DUT maintain all blocks failed to be erased till the end of the second annealing (100ºC), while other DUTs experiment fluctuations with a decrement of failed erased blocks coupled with an increment of failed programmed blocks.

In HDC bias, between first one third and half of the step 3 (30-50 krad), there is an abrupt raise when all blocks failed to be erased. In general, the DUTs remains with all blocks failed to be erased till the end of the first annealing (25ºC). In the second annealing, the behavior is heterogeneous but most of them finish it with all blocks failed to be erased.

Erase, program, pattern 0xAAAA (blocks 2 to 511):
In LDC bias, DUTs start to have some failed erased blocks in the second half of step 2 (20-30 krad). The amount of failed erased blocks rises abruptly to all blocks at the end of the first third of step 3 (30-50 krad). From this point there is an heterogenous

behavior, some DUT maintain all blocks failed to be erased till the end of the second annealing (100ºC), while other DUTs experiment fluctuations with a decrement of failed erased blocks coupled with an increment of failed programmed blocks.

In HDC bias, between first one third and half of the step 3 (30-50 krad), there is an abrupt raise when all blocks failed to be erased. In general, the DUTs remains with all blocks failed to be erased till the end of the first annealing (25ºC). In the second annealing, the behavior is heterogeneous but most of them finish it with all blocks failed to be erased.

Read pattern 0x5555 (blocks 2 to 511):
In LDC bias, in the second half of step 2 (20-30 krad), the DUTs start to fail with some blocks with at least 90% of words in error. At the beginning of step 3 (30-50 krad), there is a quick increment to all blocks containing at least 90% of words in error. During step 4 (50-70 krad) in some DUTs the failures change from all blocks with at least 90% words in error to minimum 1 word in error. During the first annealing (25ºC), all DUTs have all blocks with at least 90% words in error. During the second annealing (100º C), the majority of the DUTs failures changed from all blocks with at least 90% words in error to minimum 1 word in error. However, these changes from all blocks with at least 90% words in error to all blocks with minimum 1 word in error do not indicate a real behavior, but the absence of data due to reset failed status (Note 2).

In HDC bias, in general, the DUTs start to suffer failure in the first third of step 3 (30-50 krad), when all blocks suddenly have all blocks with at least 90% words in error. During step 4 (50-70 krad), the common behavior is that the DUTs change from all blocks with at least 90% words in error to minimum 1 word in error in different moments. However, this change from all blocks with at least 90% words in error to all blocks with minimum 1 word in error does not indicate a real behavior, but the absence of data due to reset failed status (Note 2). During the first annealing (25ºC), all DUTs have all blocks with at least 90% words in error. In the second annealing, the behavior is heterogeneous but most of them finish it with all blocks with at least 90% words in error. Only DUT1 of Board3 recuperated at the end of the second annealing.

Read pattern 0xAAAA (blocks 2 to 511):
In LDC bias, in the second half of step 2 (20-30 krad), the DUTs start to fail with some blocks with at least 90% of word in error. At the beginning of step 3 (30-50 krad), there is a quick increment to all blocks containing at least 90% of words in error. During step 4 (50-70 krad) in some DUTs the failures change from all blocks with at least 90% words in error to minimum 1 word in error. During the first annealing (25ºC), all DUTs have all blocks with at least 90% words in error. During the second annealing (100º C), the majority of the DUTs failures changed from all blocks with at least 90% words in error to minimum 1 word in error. However, these changes from all blocks with at least 90% words in error to all blocks with minimum 1 word in error do not indicate a real behavior, but the absence of data due to reset failed status (Note 2).

In HDC bias, in general, the DUTs start to suffer failure in the first third of step 3 (30-50 krad), when all blocks suddenly have all blocks with at least 90% words in error. During step 4 (50-70 krad), the common behavior is that the DUTs change from all blocks with

at least 90% words in error to minimum 1 word in error in different moments. However, this change from all blocks with at least 90% words in error to all blocks with minimum 1 word in error does not indicate a real behavior, but the absence of data due to reset failed status (Note 2). During the first annealing (25ºC), all DUTs have all blocks with at least 90% words in error. In the second annealing, the behavior is heterogeneous but most of them finish it with all blocks with at least 90% words in error. Only DUT1 of Board3 recuperated at the end of the second annealing.

Read only, pattern 0xAAAA (blocks 512 to 1023):
In LDC bias, during step 4 (50-70 krad), there is a sudden raise of failures where all blocks start to have a minimum of 1 word in error. Some DUTs change from minimum 1 word to at least 90% in error during this step. During the first annealing (25ºC), all the DUTs have all blocks with at least 90% words in error. In the majority of cases, during the second annealing the DUTs change from at least 90% to minimum 1 word in error. However, this change from all blocks with at least 90% words in error to all blocks with minimum 1 word in error does not indicate a real behavior, but the absence of data due to reset failed status (Note 2).

In HDC bias, some DUTs suddenly start to failure in step 3 (30-50 krad) with all blocks with minimum 1 word in error. At the beginning of step 4 (50-70 krad), there is a rapid increment of failure leading to all blocks with minimum 1 word in error except some spurious in certain DUTs of blocks with at least 90% words in error. During the first annealing (25º C), all DUTs have all the blocks with at least 90% words in error. In the second annealing, there is diverse effects, but in general some failures remain. However, the raises to all blocks with minimum 1 word in error does not indicate a real behavior, but the absence of data due to reset failed status (Note 2).

DUT access status:
In LDC bias, till the end of first third of step 4 (50-70 krad) the identification is ok for all DUTs. During this step, except 2 DUTs which change to identification wrong, the rest of DUTs start to have failed reset status. During the first annealing (25º C), almost all the DUTs are in identification wrong status. During the second annealing, except two cases, the DUTs change their status to reset failed.

In HDC, till the end of second half of step 4 (50-70 krad) the identification is ok for all DUTs. Later in this step, there are several behaviors. Some of them change directly to reset failed, others change to reset failed passing through identification wrong or even remains in identification wrong only. During the first annealing (25ºC), the status of all the DUTs is identification wrong. During the second annealing (100ºC), there is different performances but in general the DUTs finally recover the status of identification ok.

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 no significant difference in results observed between HDC and

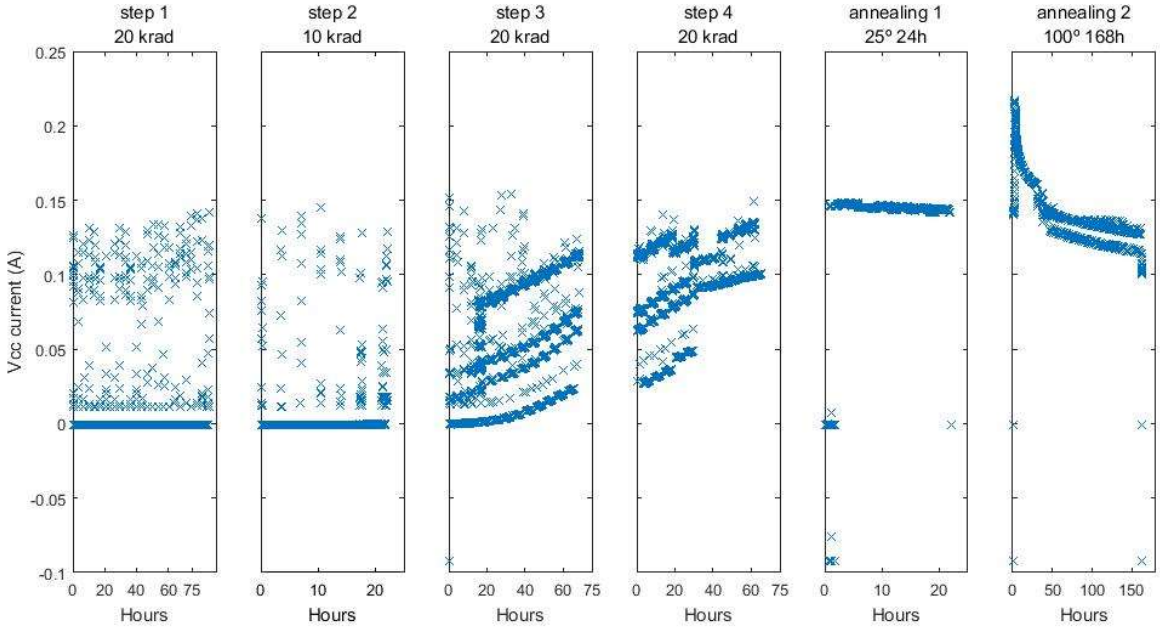
LDC biases. The annealing at 100ºC does not seem to totally recover all the DUTs neither in HDC nor LDC bias.

Notes:

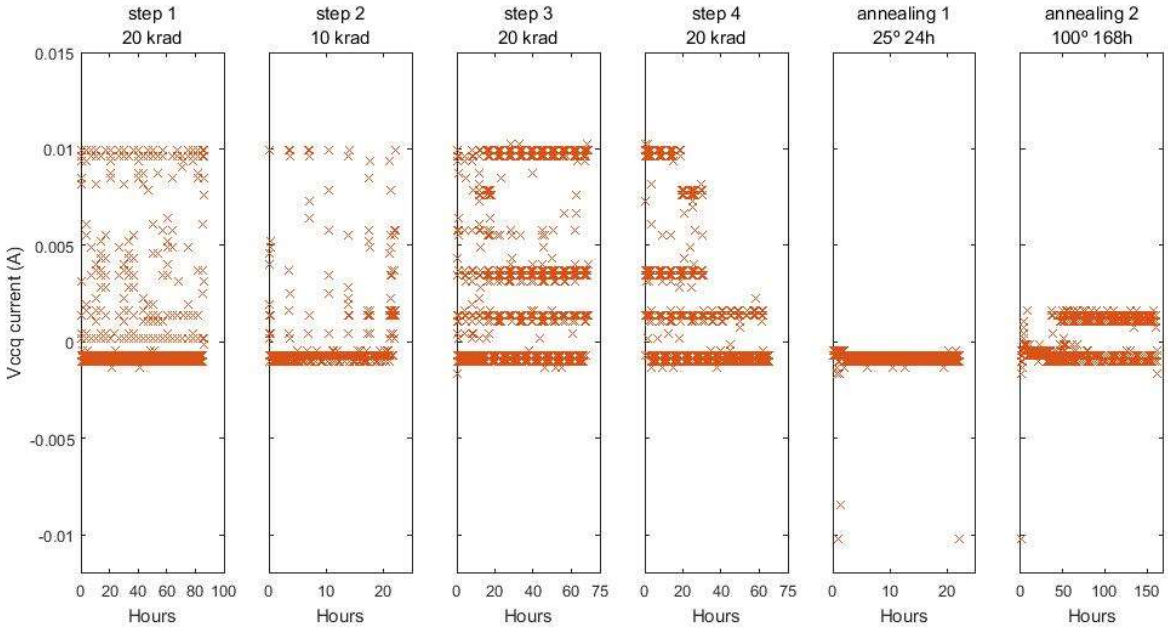
1- DUT 0 in board 1 had connectivity problems. The data shown here are not representative of the actual behavior of the device.
2- The lack of data observed sometimes in results graphs for number of blocks with at least 90% words in error and number of words in error is due to device reset failed status (cf. DUT 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.
3- Board 3, annealing at 100°C: gap in data due to technical issues.

12.1 DUT bias boards supply current

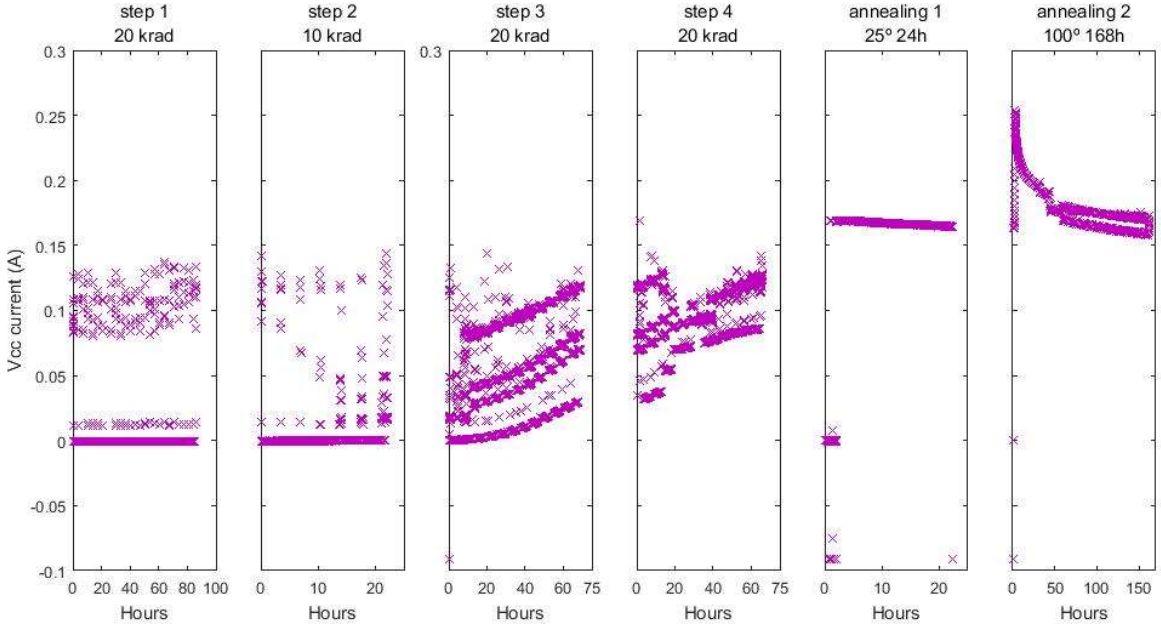
12.1.1 Board1 3V3 Vcc supply (A)



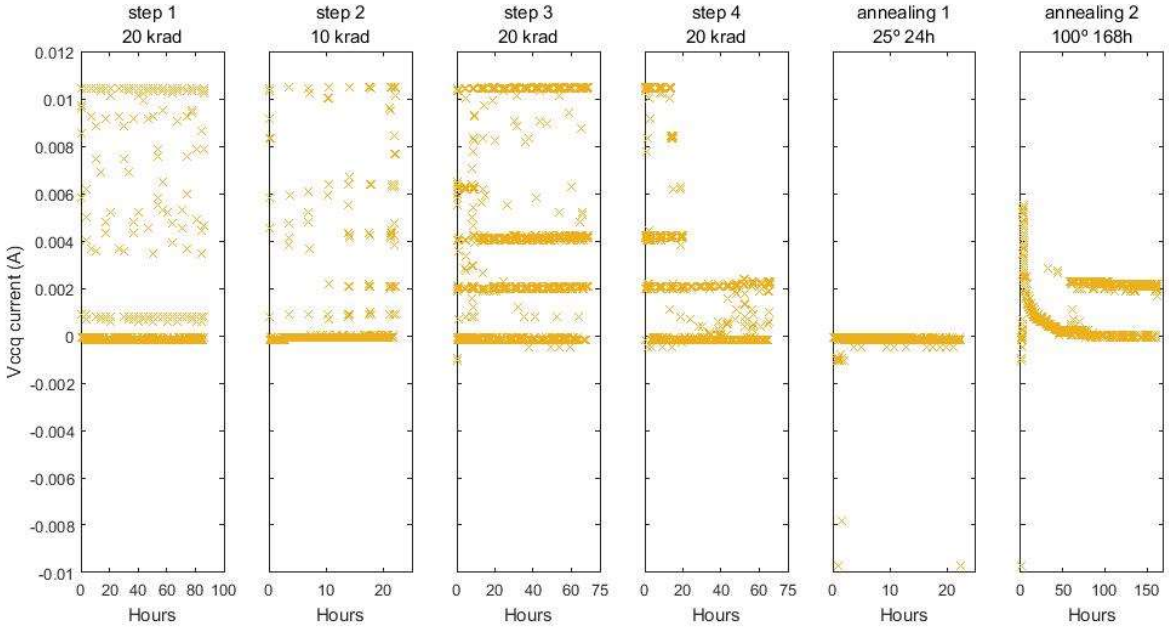
12.1.2 Board1 3V3 Vccq supply (A)



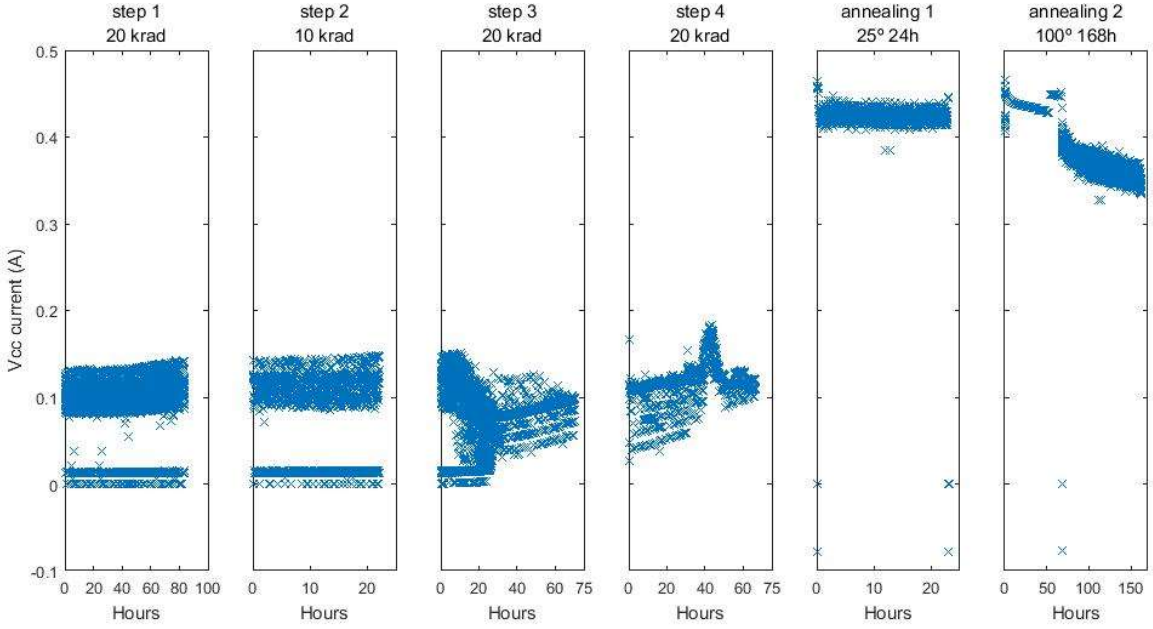
12.1.3 Board2 3V3 Vcc supply (A)



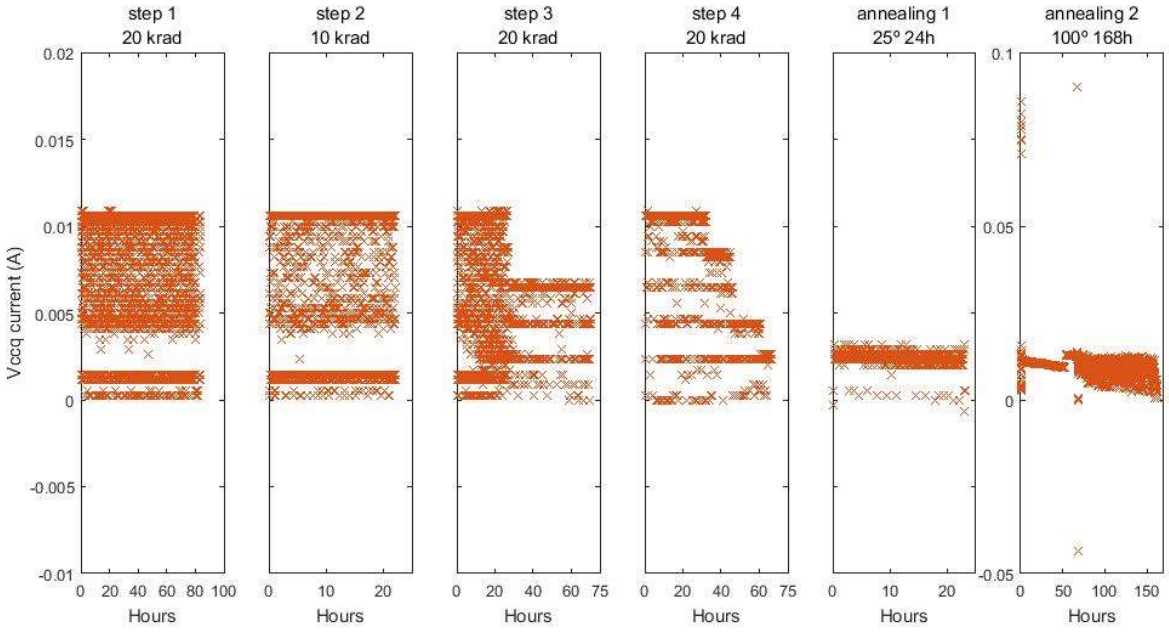
12.1.4 Board2 3V3 Vccq supply (A)



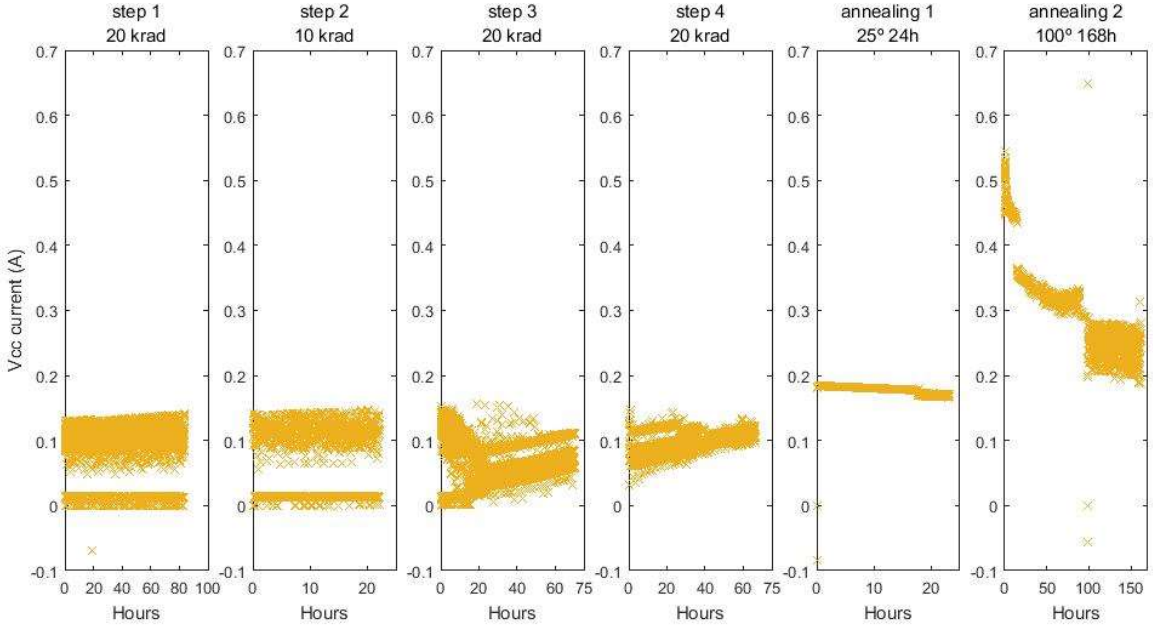
12.1.5 Board3 3V3 Vcc supply (A)



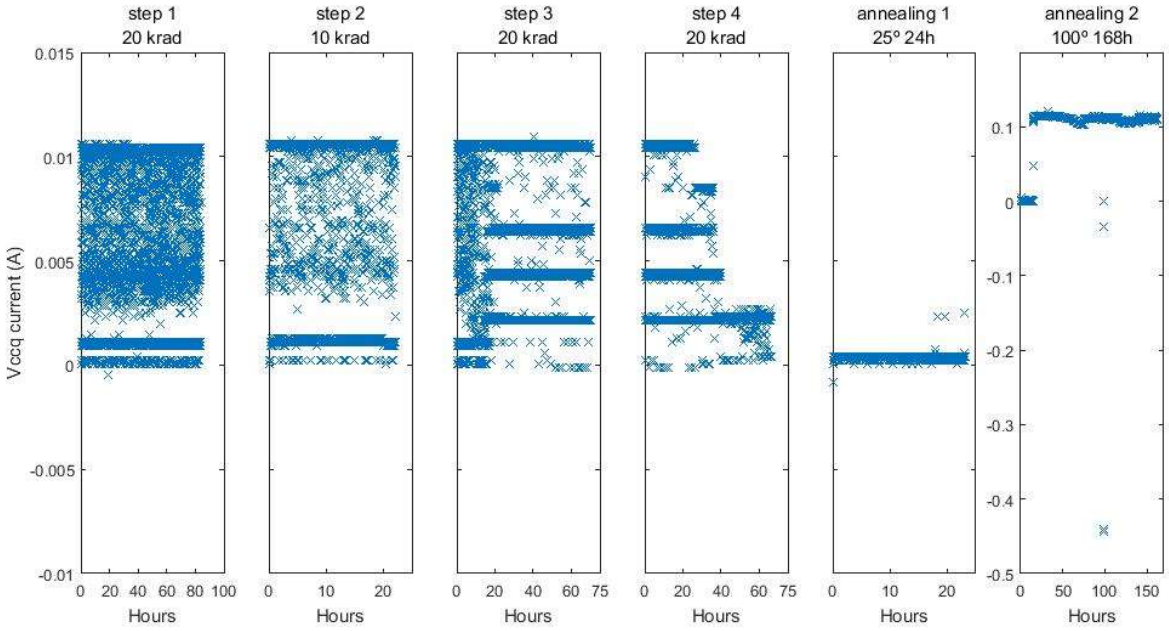
12.1.6 Board3 3V3 Vccq supply (A)



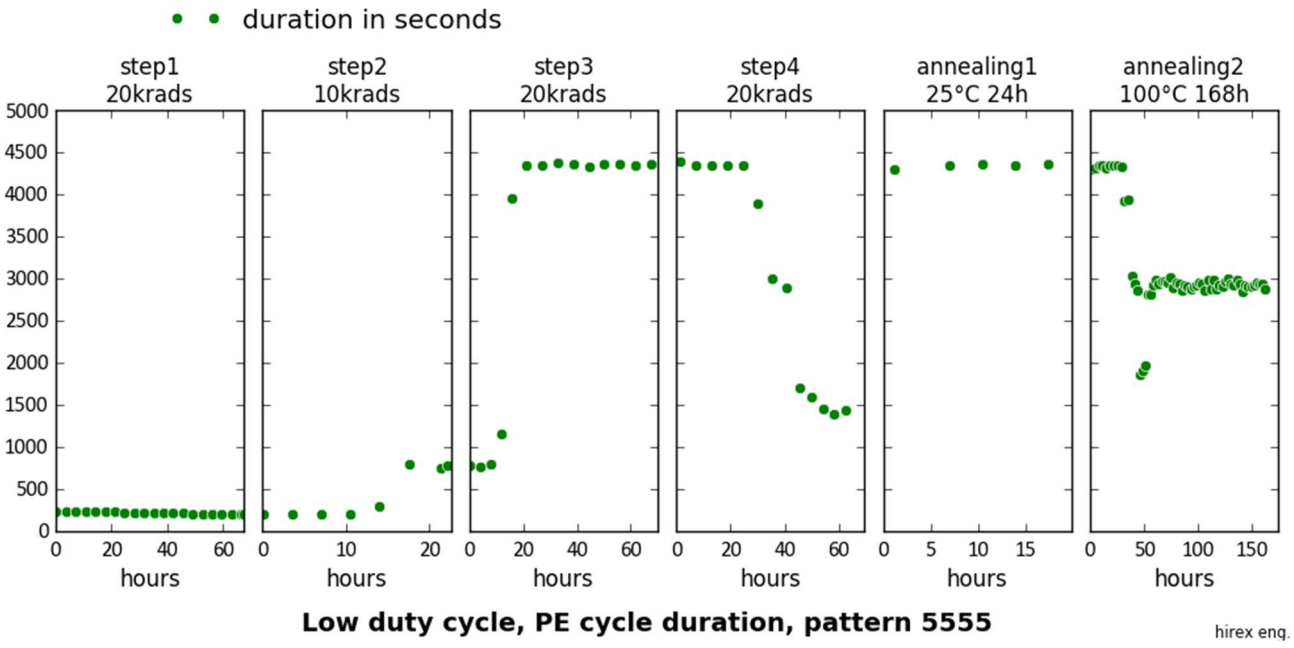
12.1.7 Board4 3V3 Vcc supply (A)



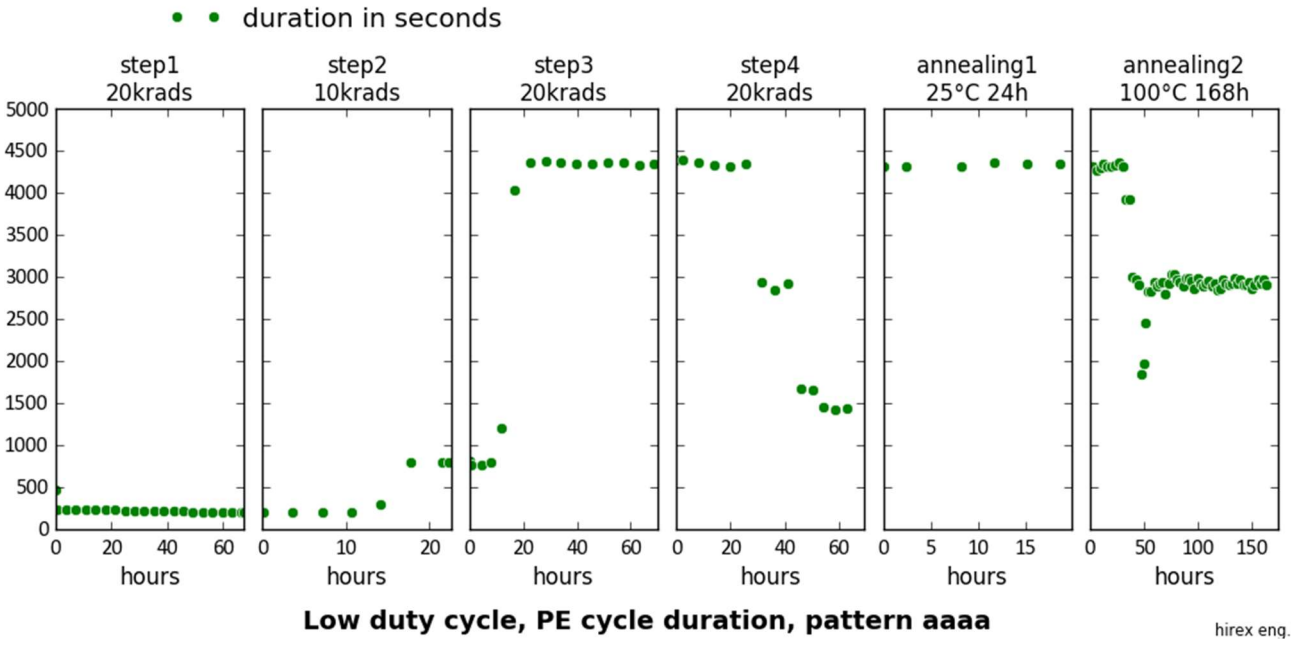
12.1.8 Board4 3V3 Vccq supply (A)



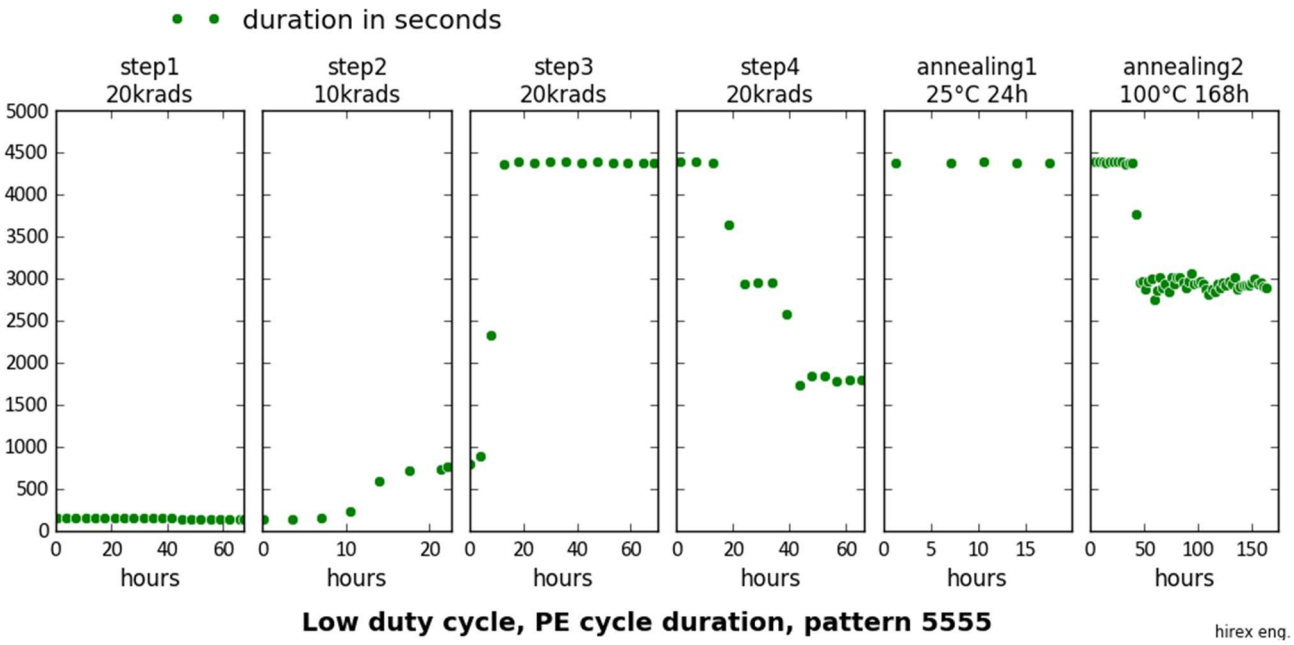
12.2 Board1, Low Duty Cycle, Program/Erase Duration, Pattern 0x5555



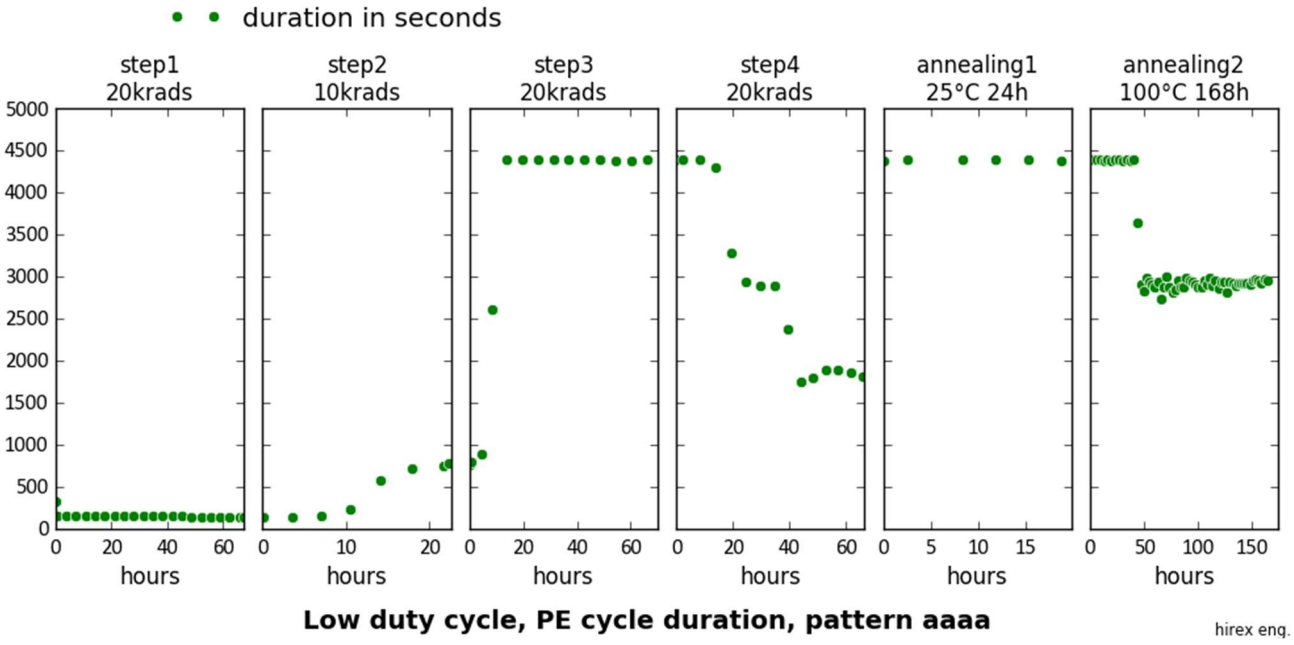
12.3 Board1, Low Duty Cycle, Program/Erase Duration, Pattern 0xaaaa



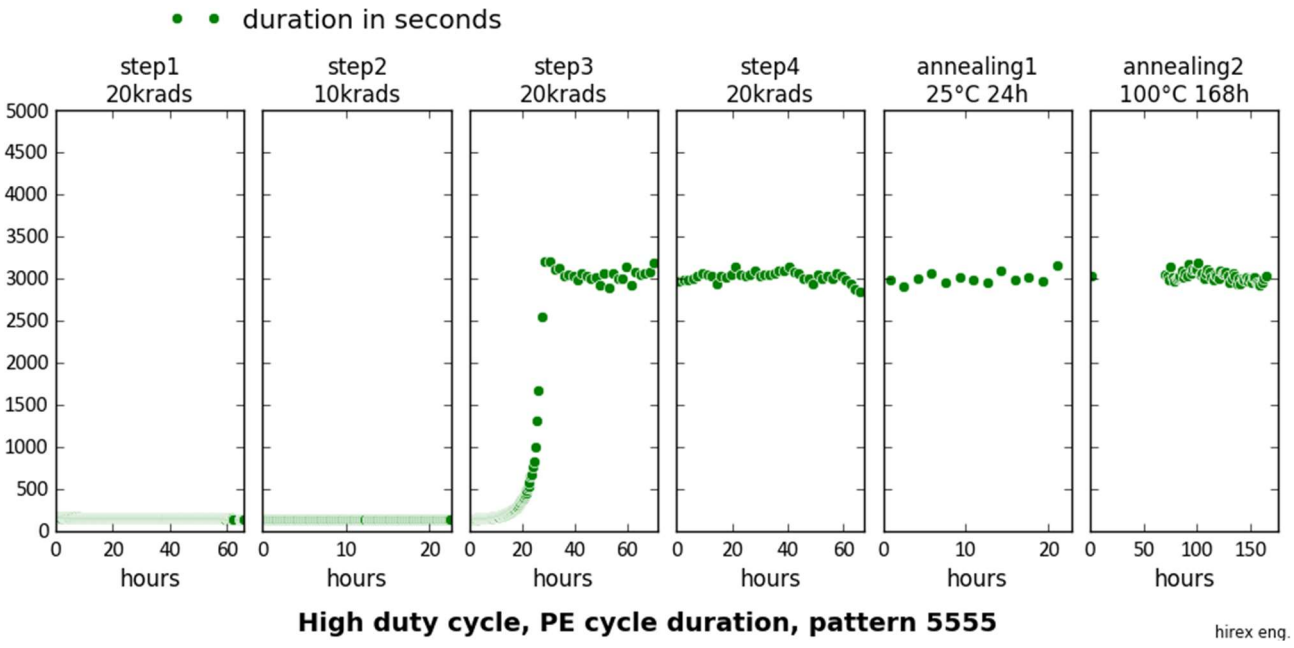
12.4 Board2, Low Duty Cycle, Program/Erase Duration, Pattern 0x5555



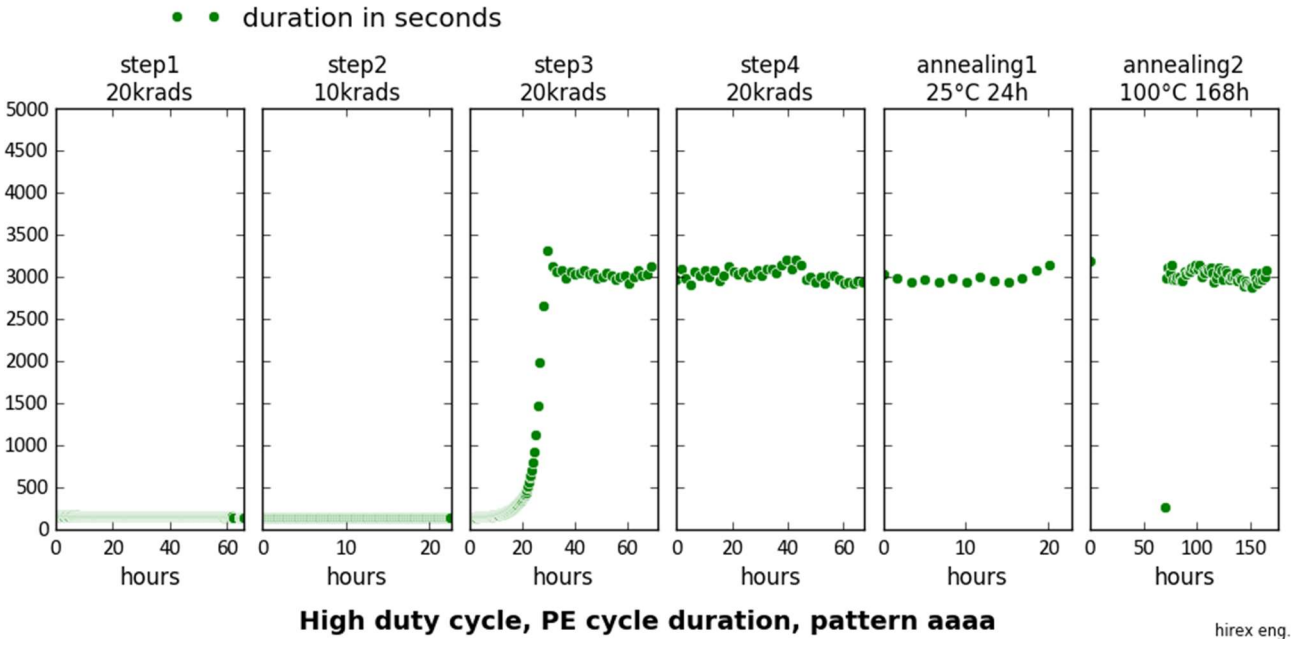
12.5 Board2, Low Duty Cycle, Program/Erase Duration, Pattern 0xaaaa



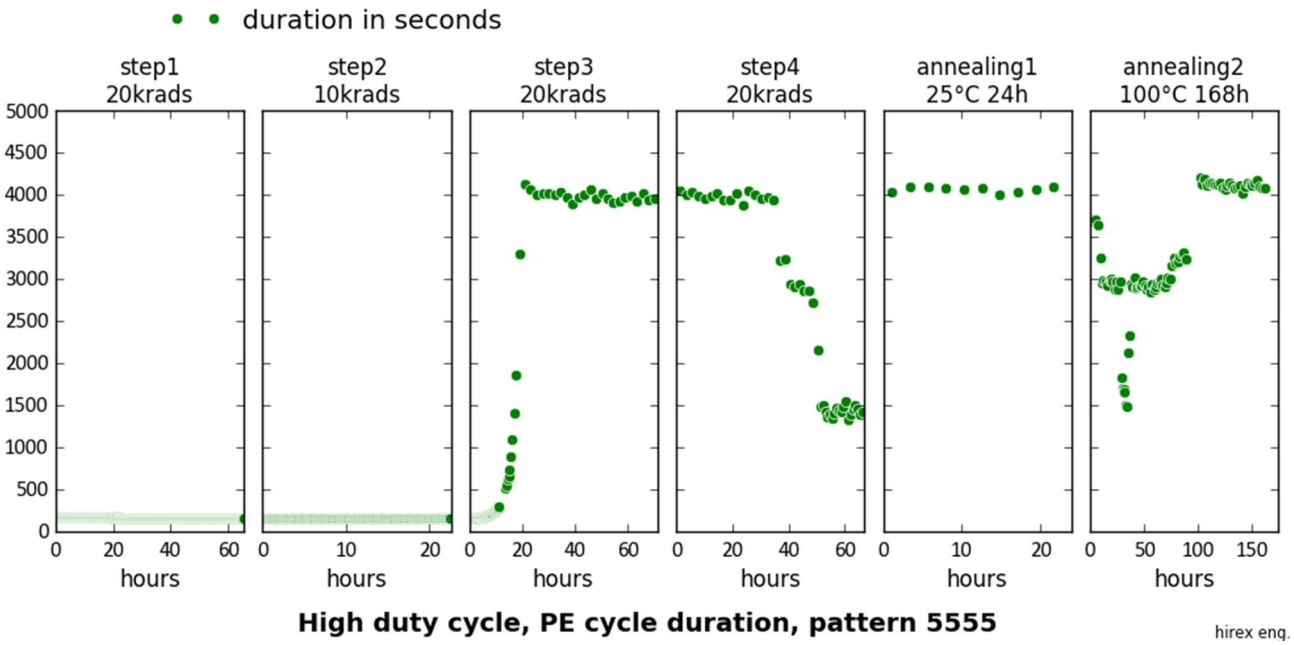
12.6 Board3, High Duty Cycle, Program/Erase Duration, Pattern 0x5555



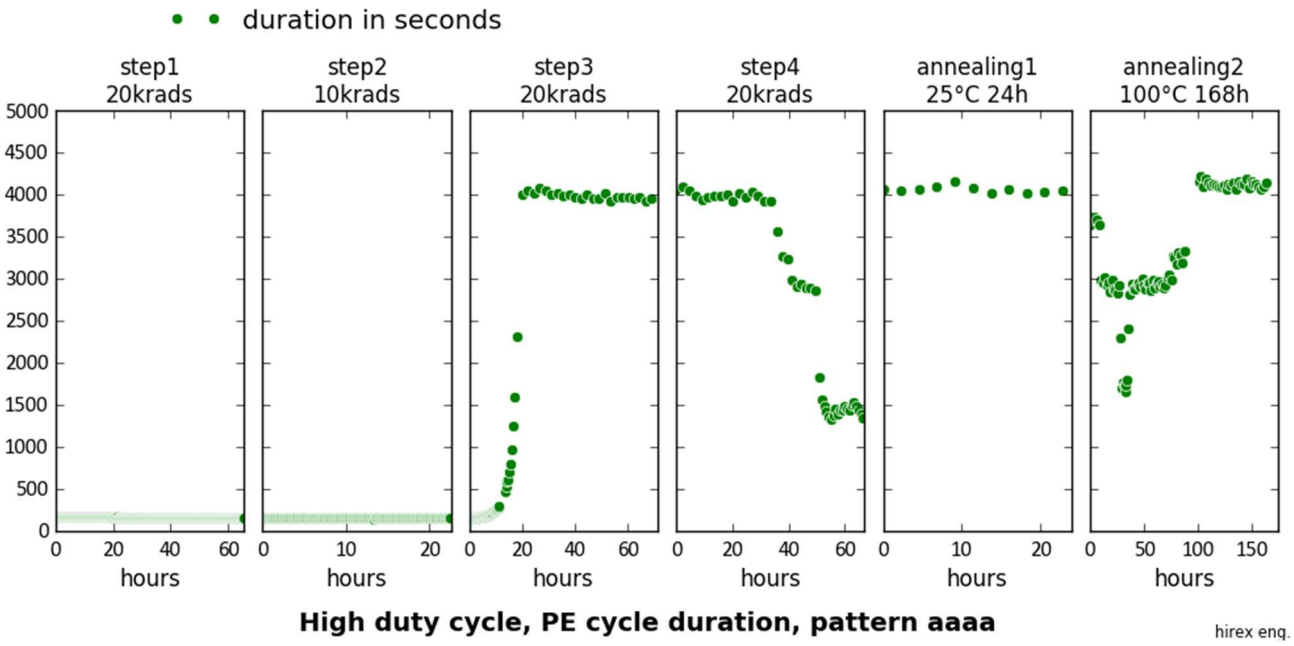
12.7 Board3, High Duty Cycle, Program/Erase Duration, Pattern 0xaaaa



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

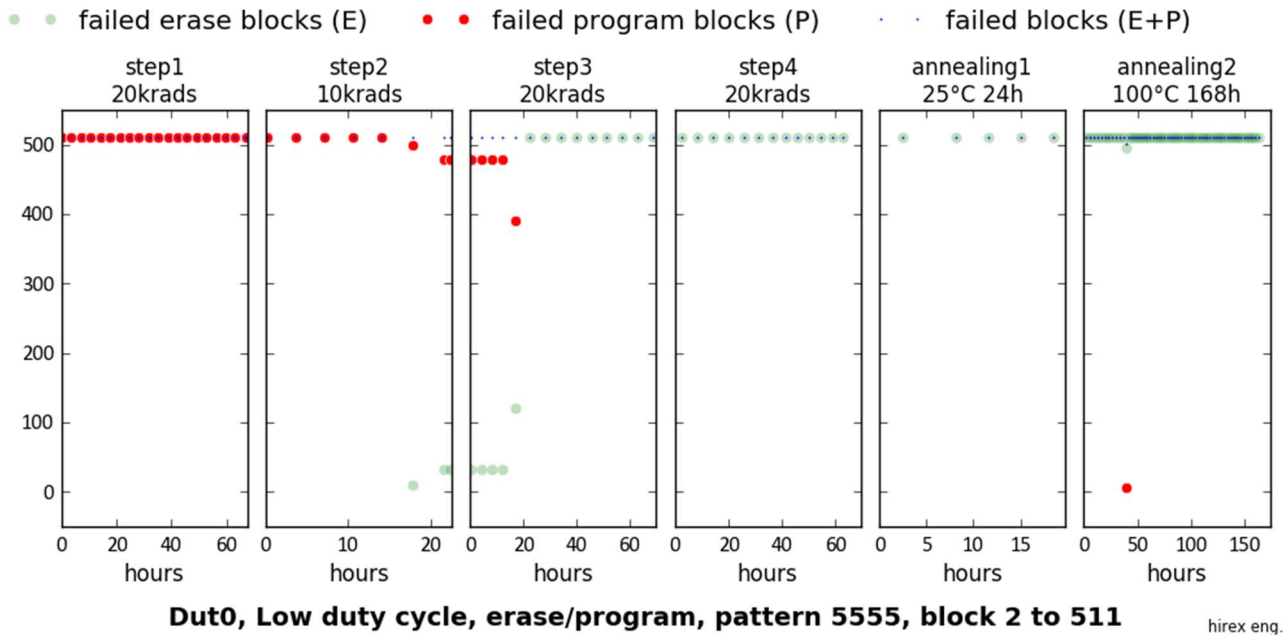


12.9 Board4, High Duty Cycle, Program/Erase Duration, Pattern 0xaaaa

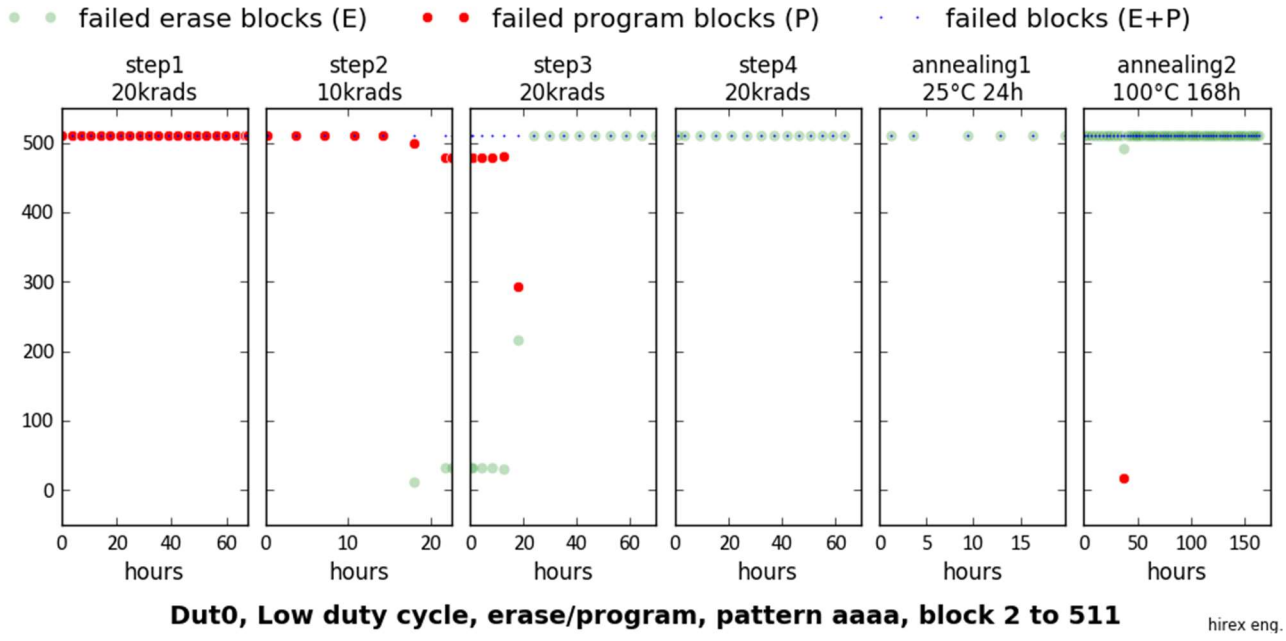


12.10 DUT0 (Board 1), Low duty cycle

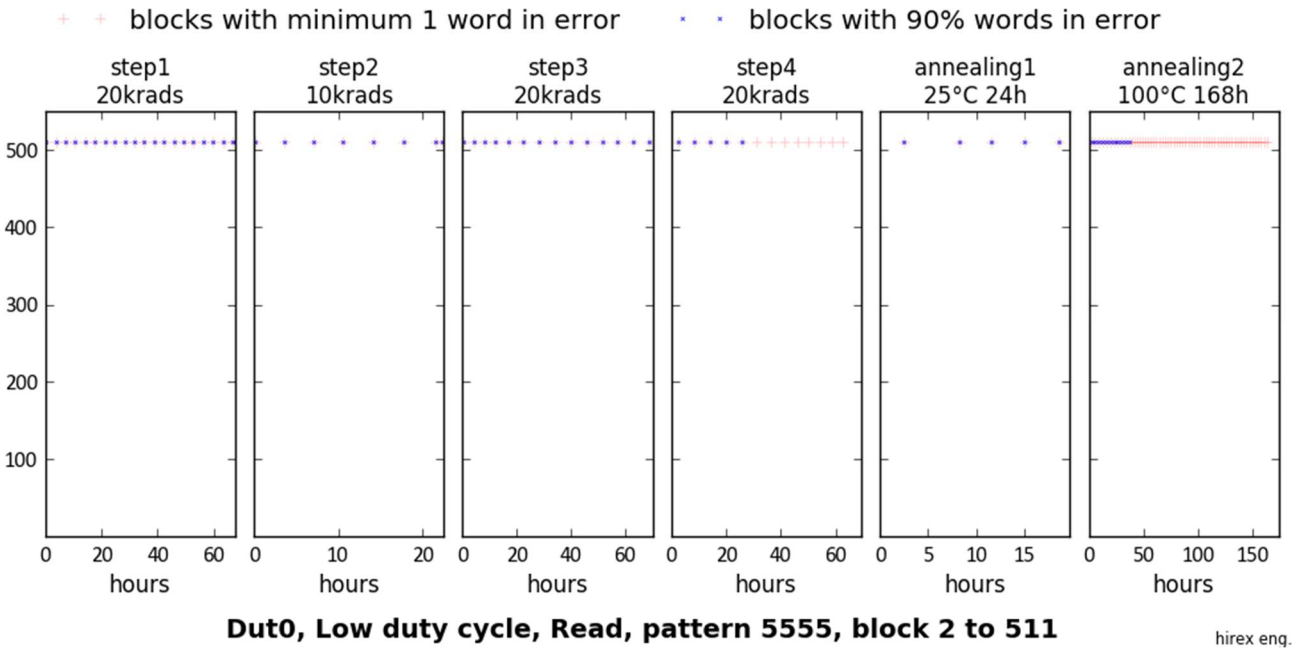
12.10.1 DUT0, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

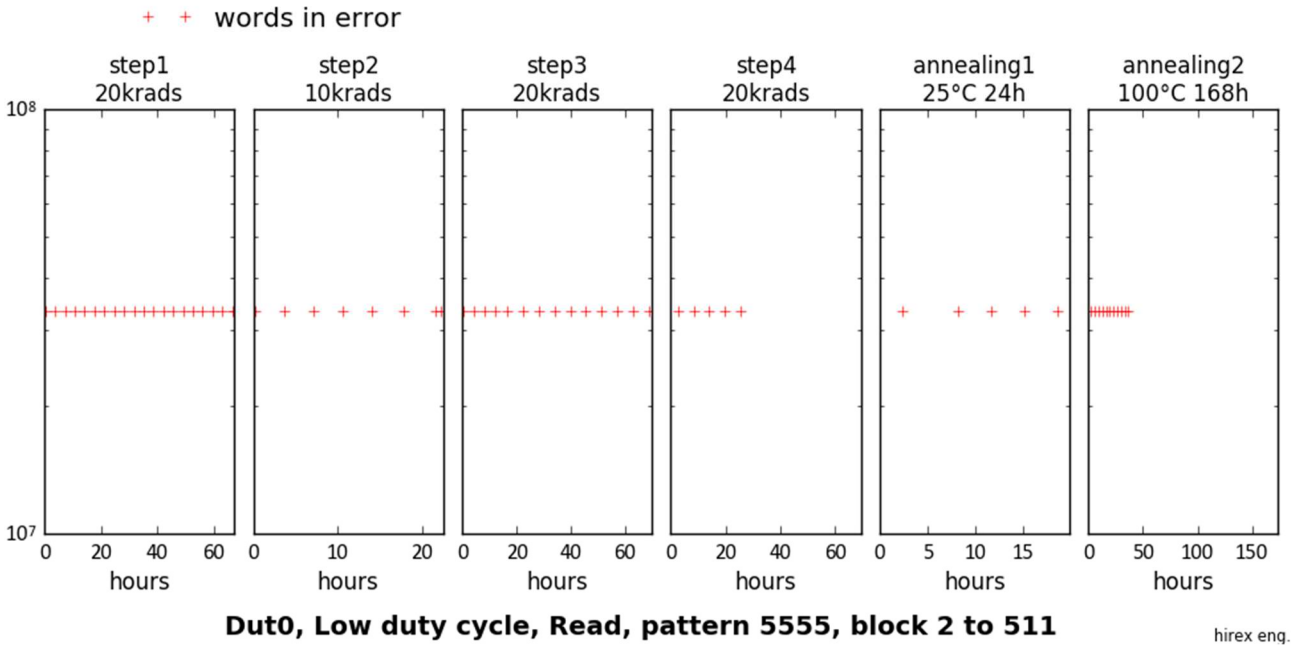


12.10.2 DUT0, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

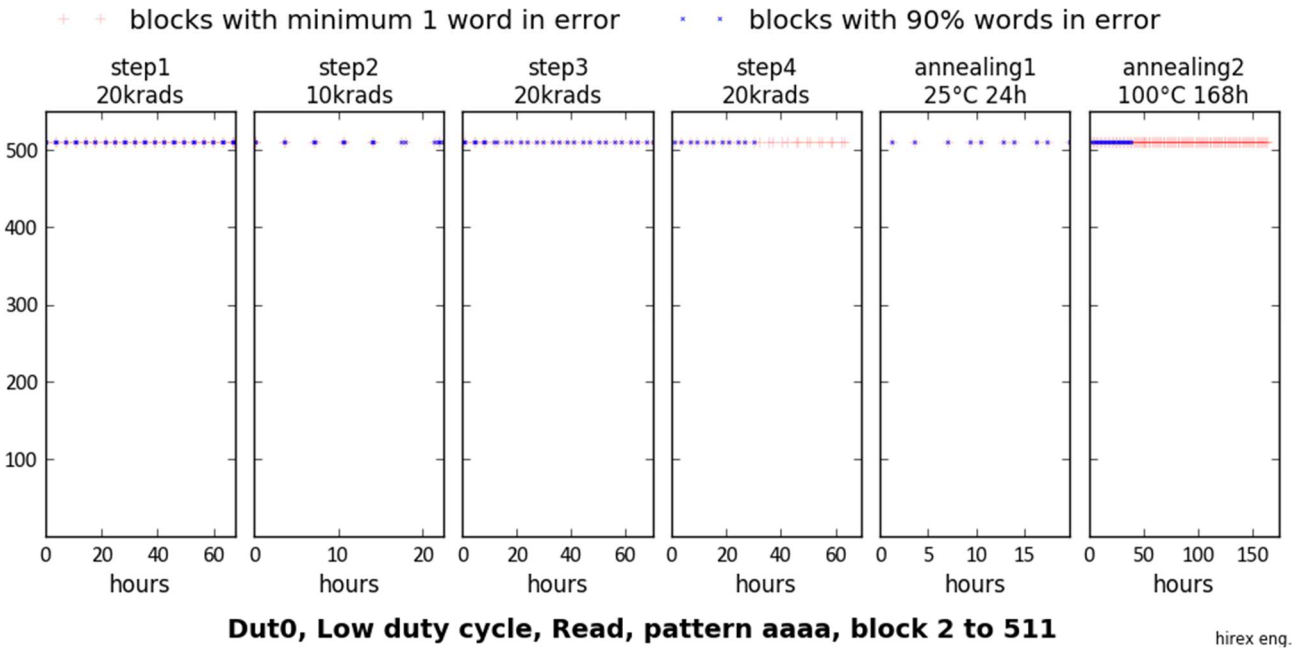


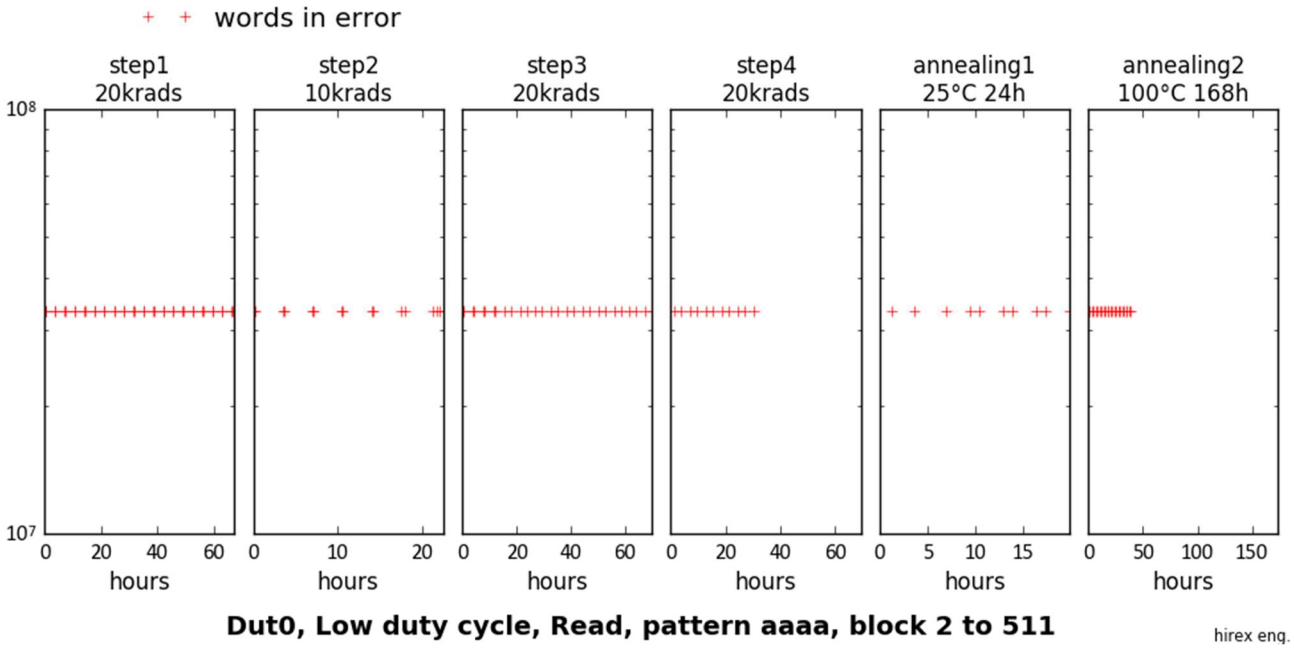
12.10.3 DUT0, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



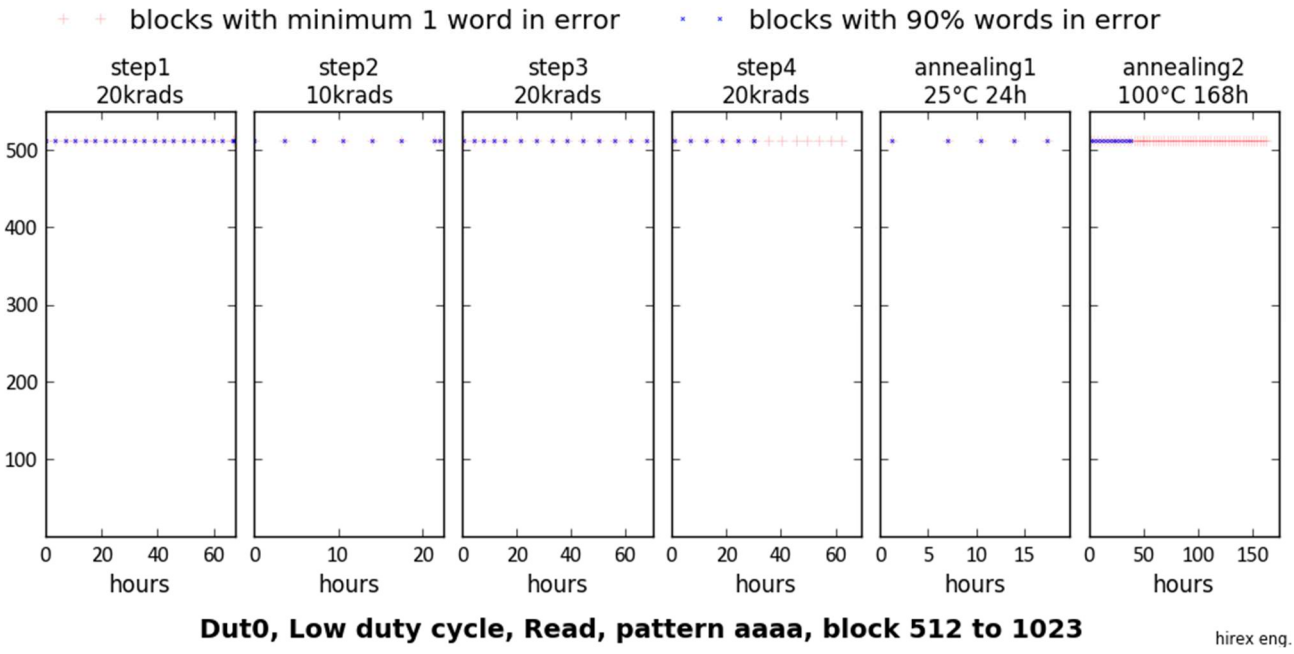


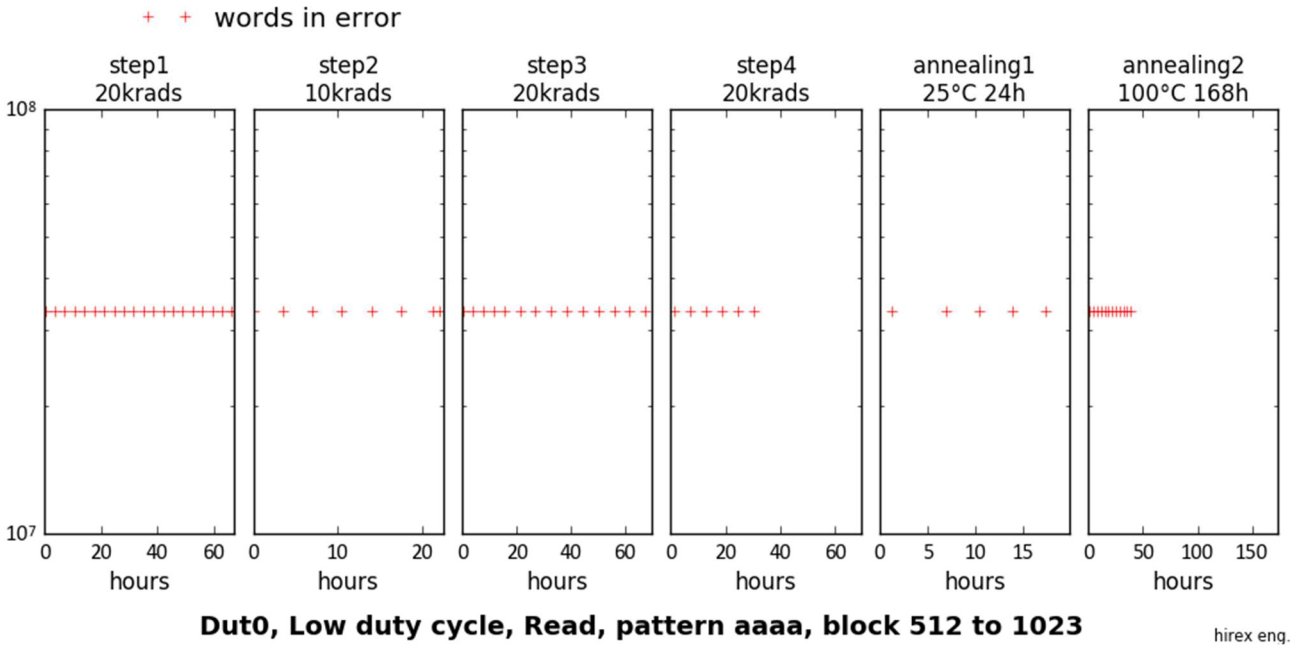
12.10.4 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



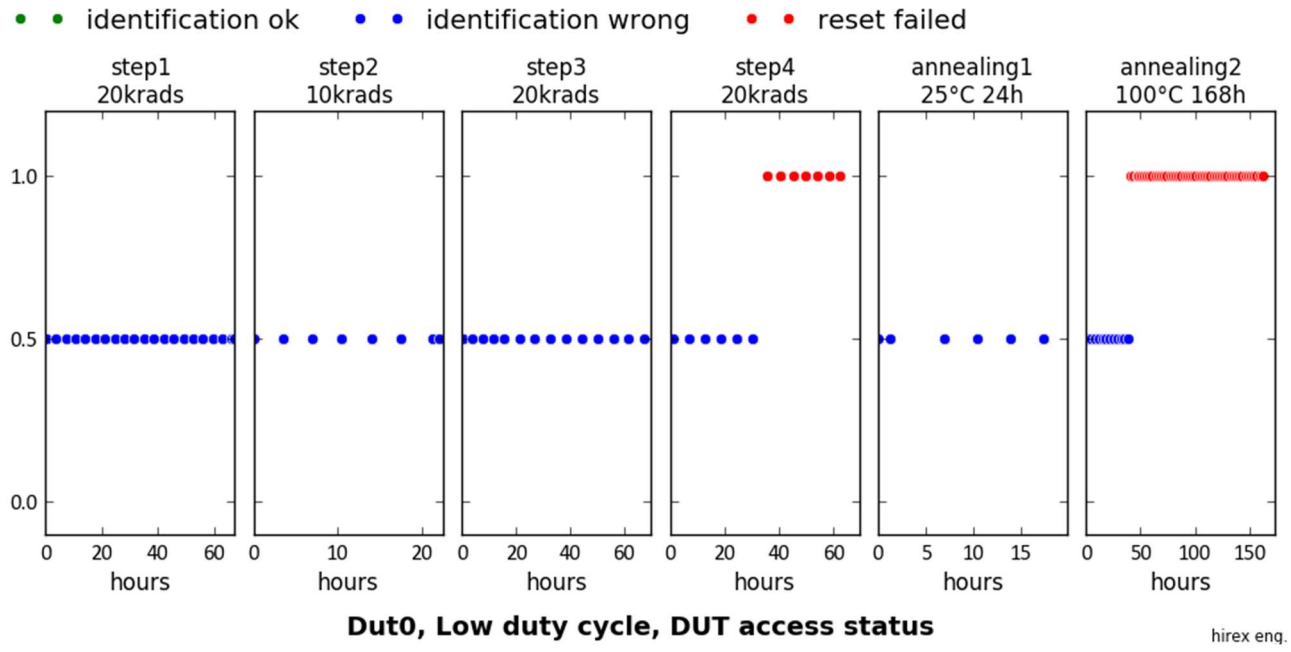


12.10.5 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



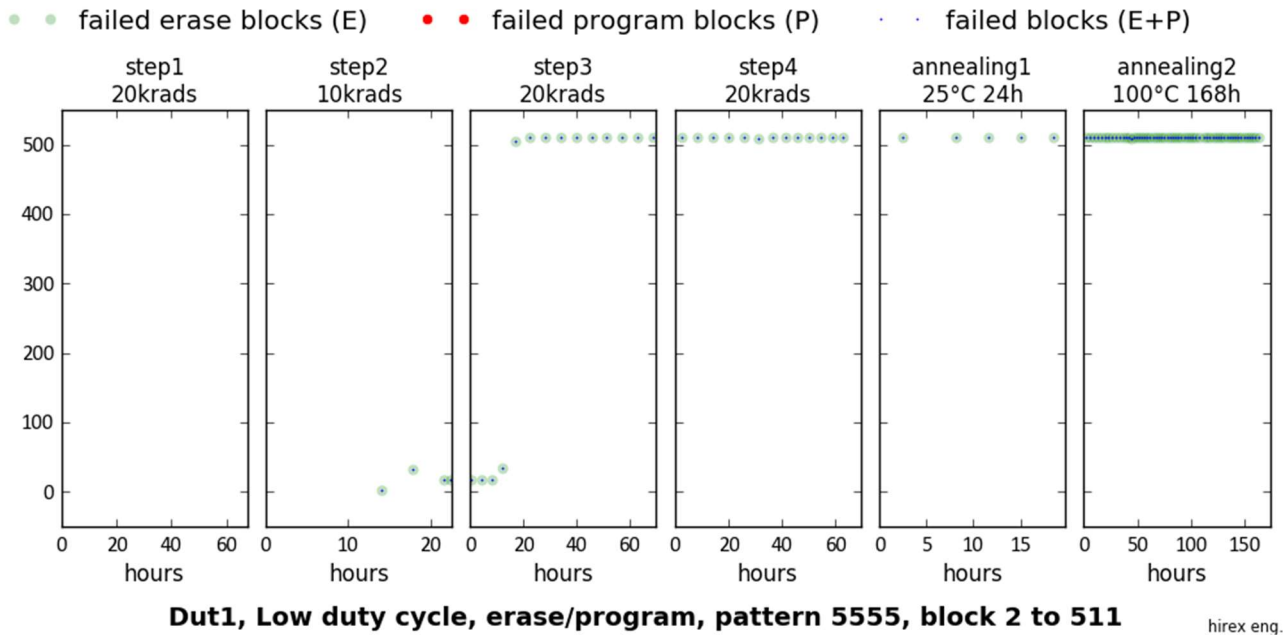


12.10.6 DUT0, Low Duty Cycle, DUT access status

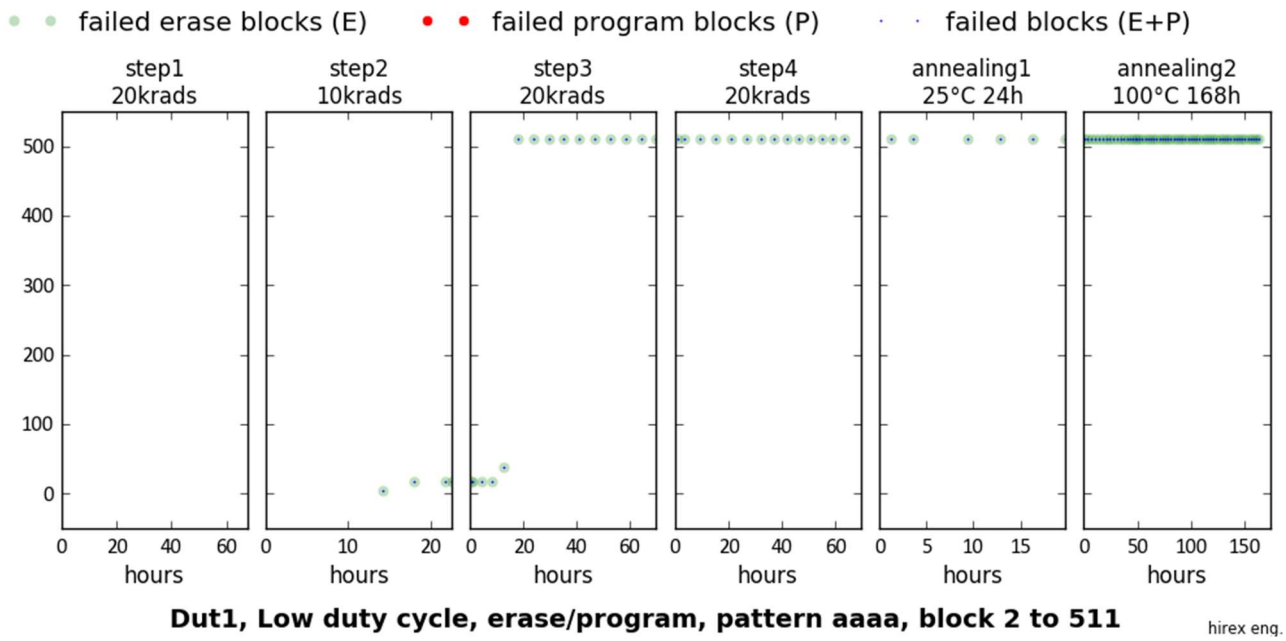


12.11 DUT1 (Board 1), Low duty cycle

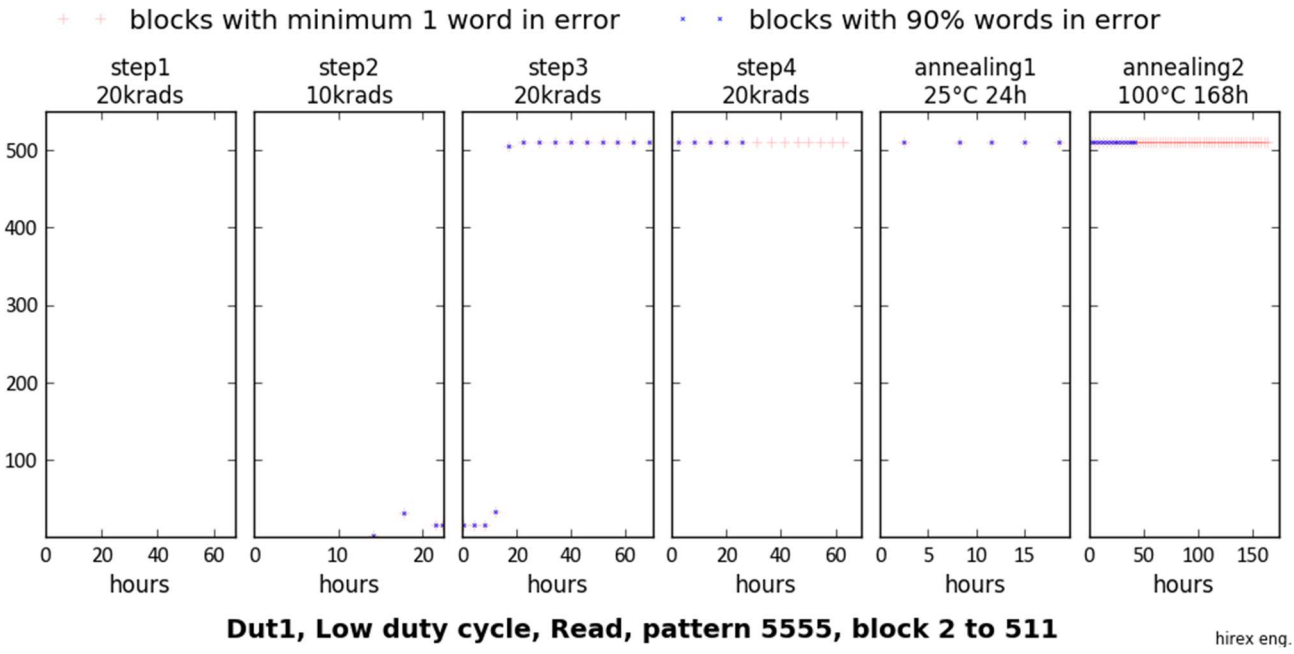
12.11.1 DUT1, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

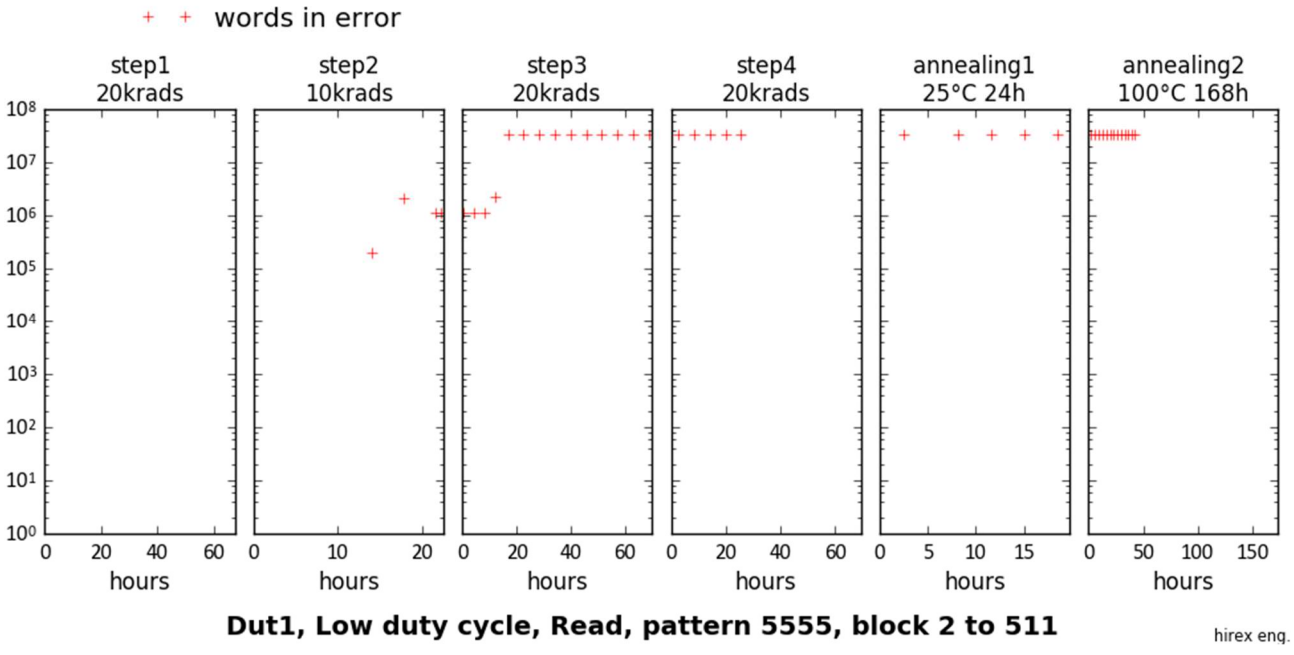


12.11.2 DUT1, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

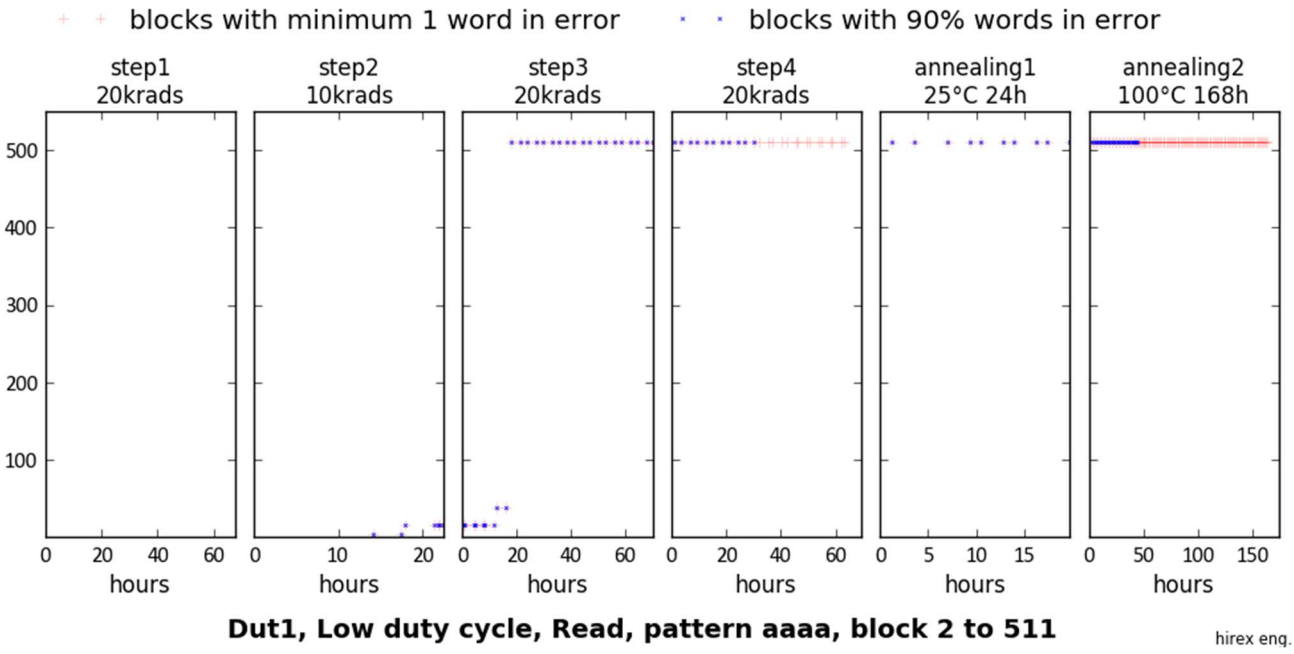


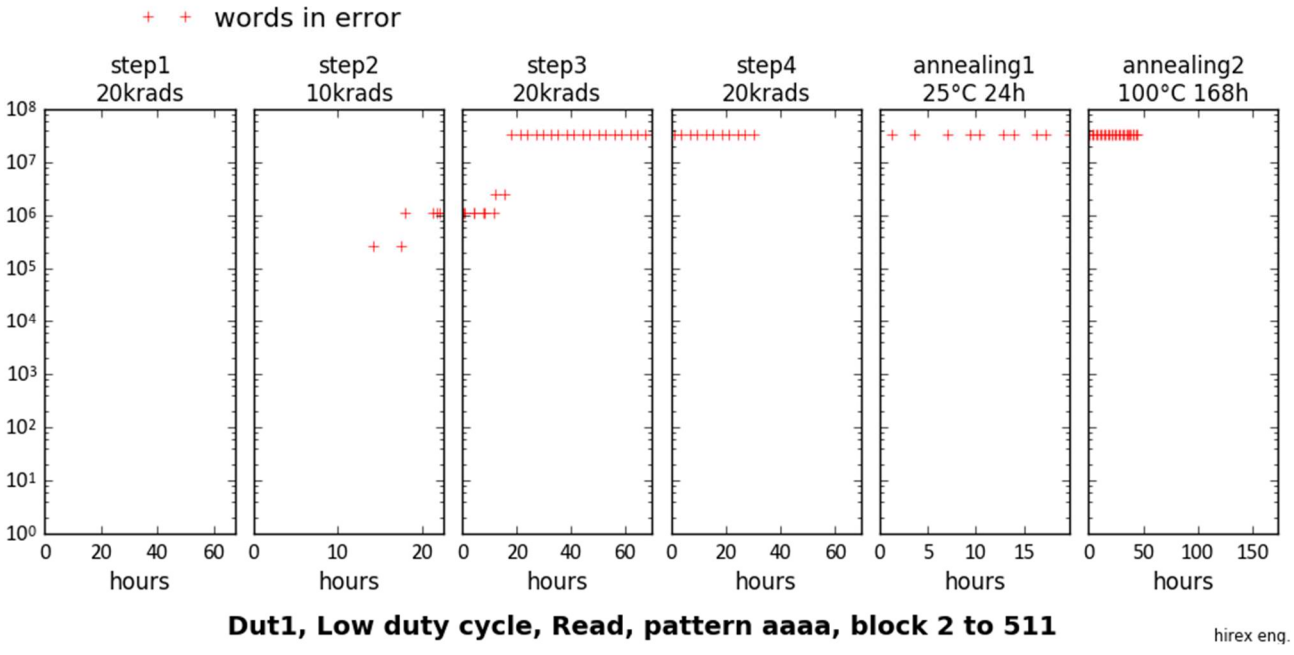
12.11.3 DUT1, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



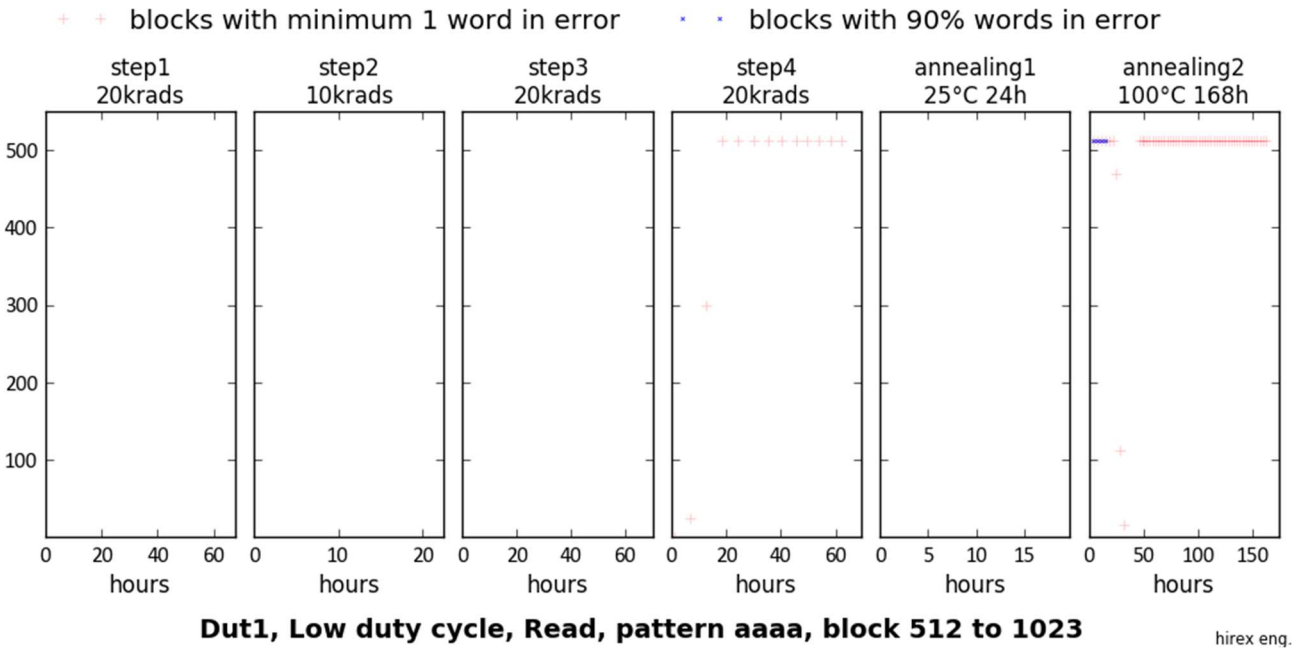


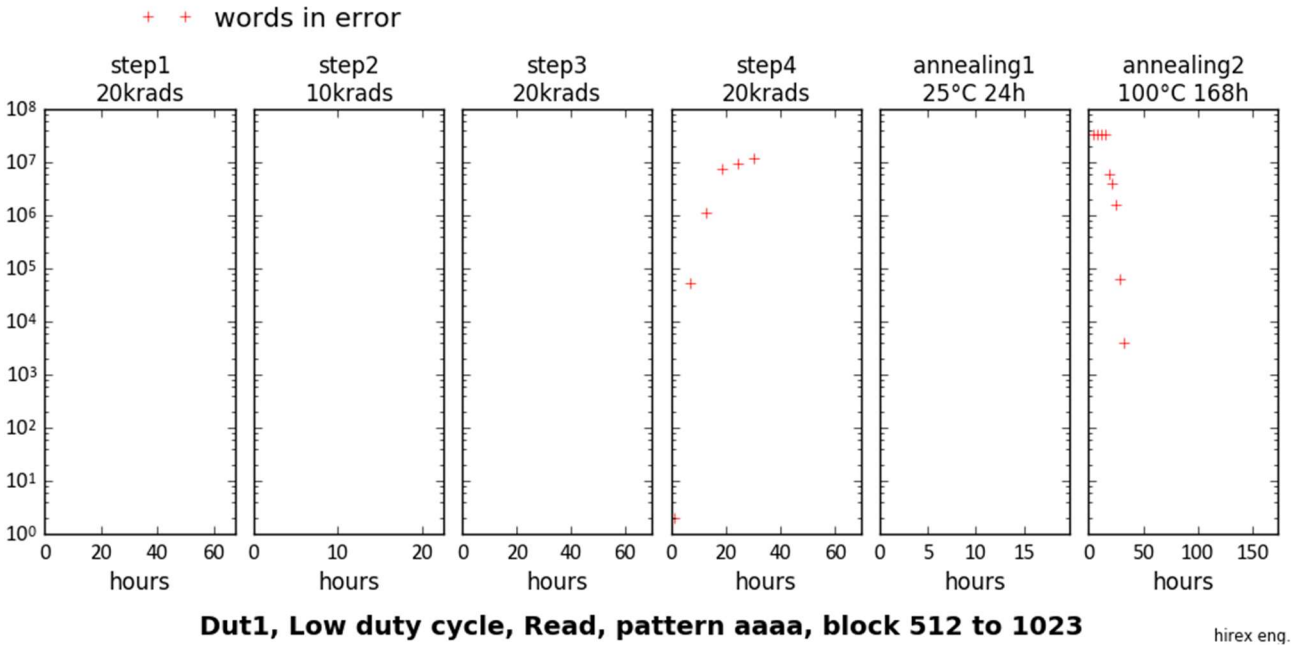
12.11.4 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



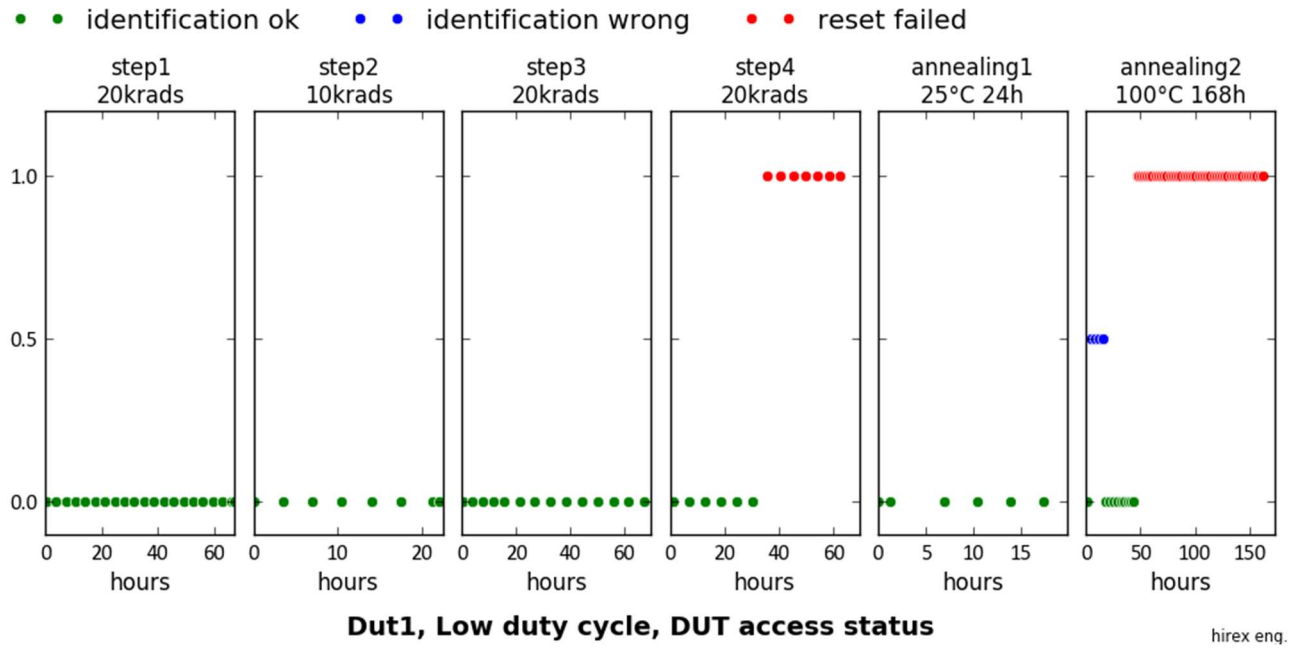


12.11.5 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



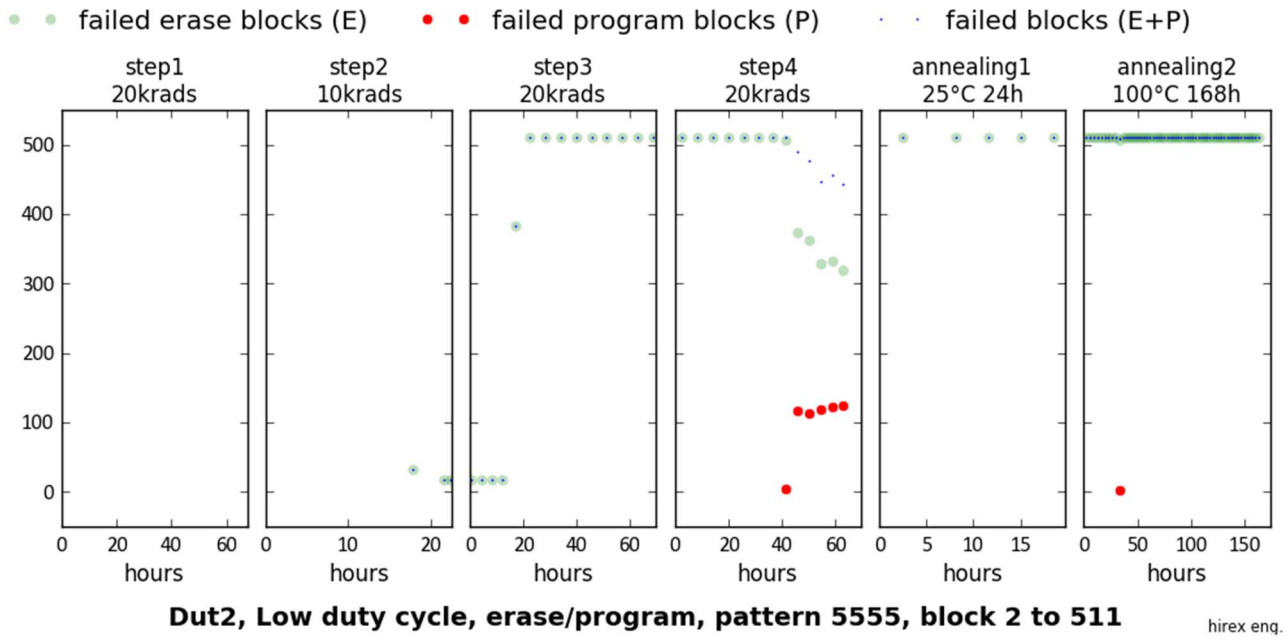


12.11.6 DUT1, Low Duty Cycle, DUT access status

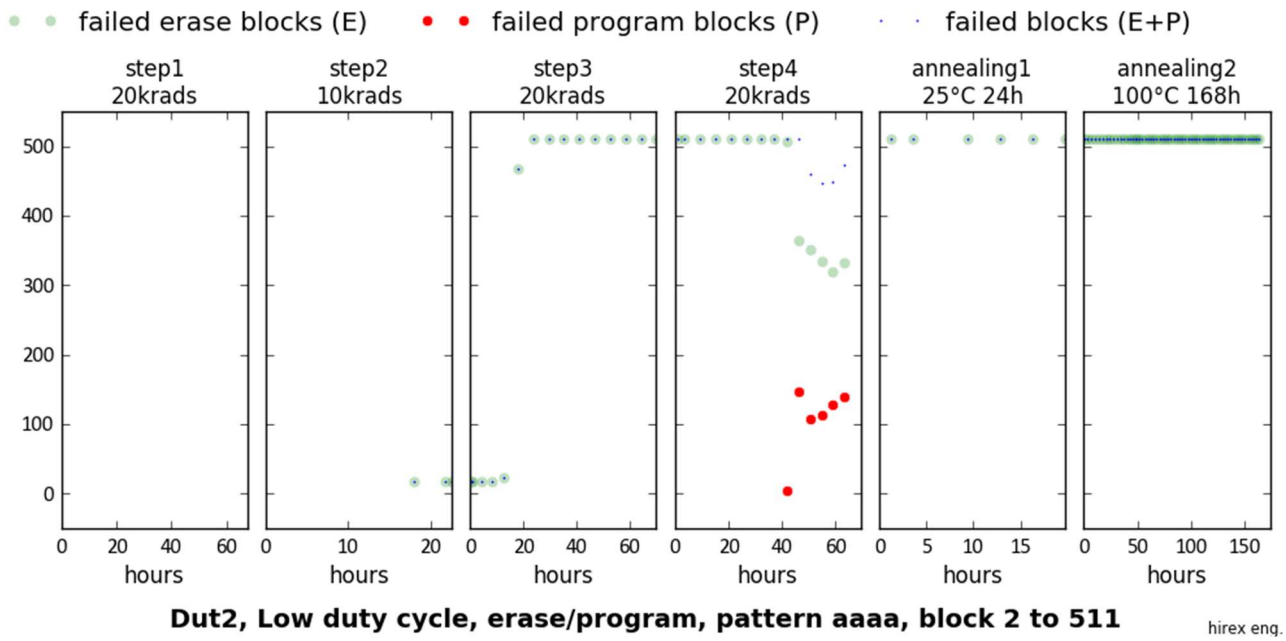


12.12 DUT2 (Board 1), Low duty cycle

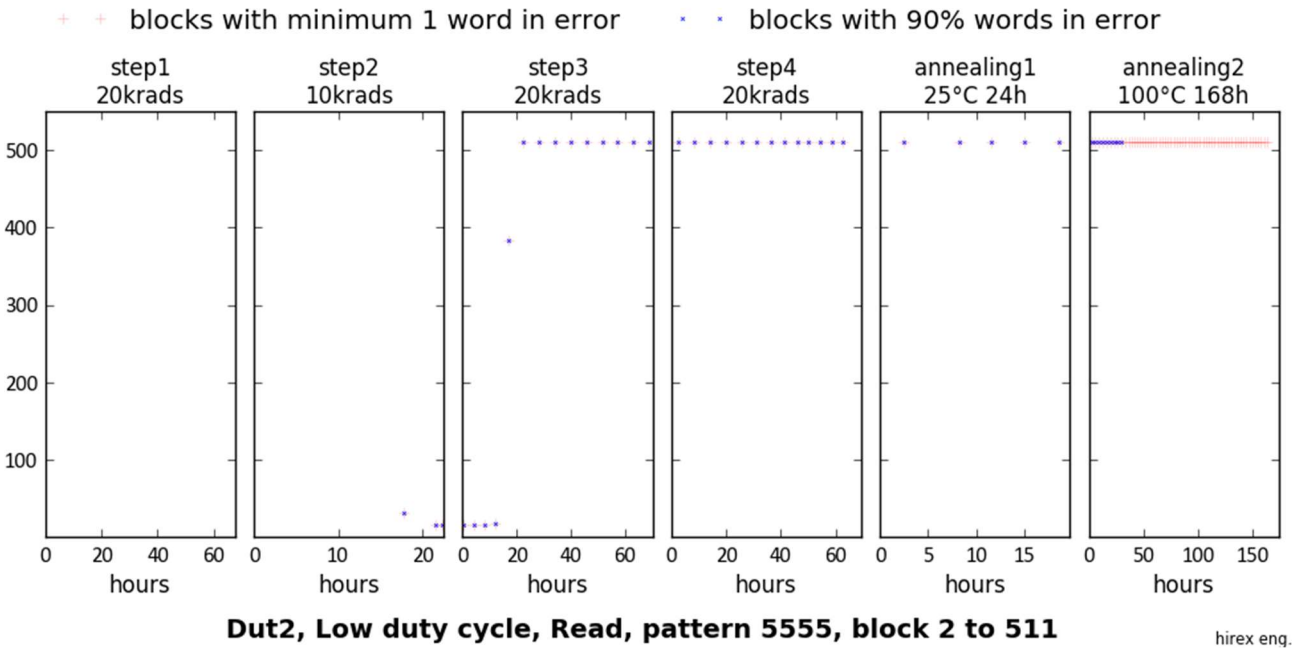
12.12.1 DUT2, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

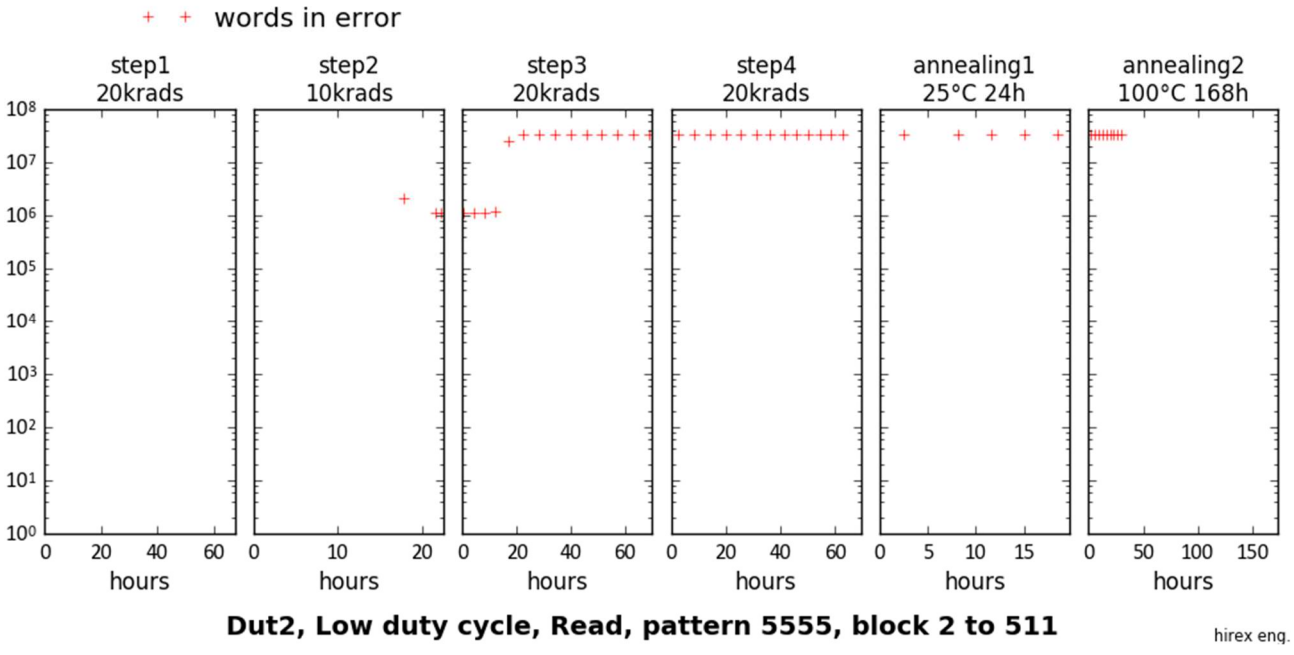


12.12.2 DUT2, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

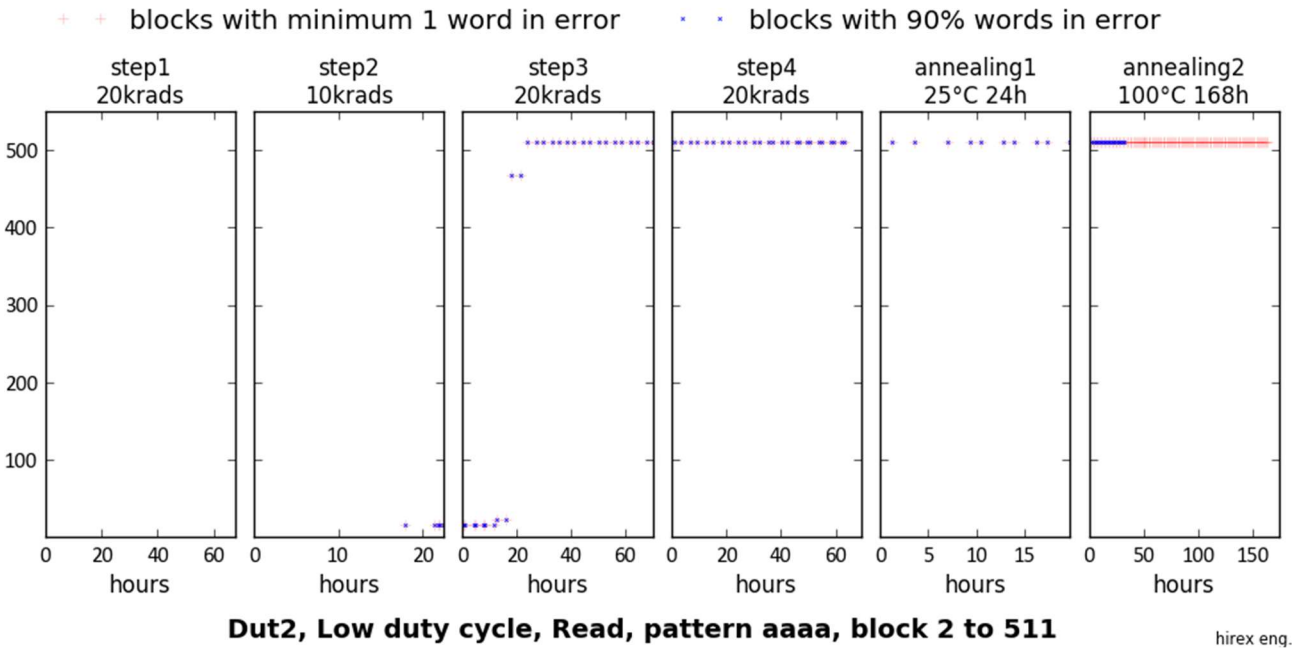


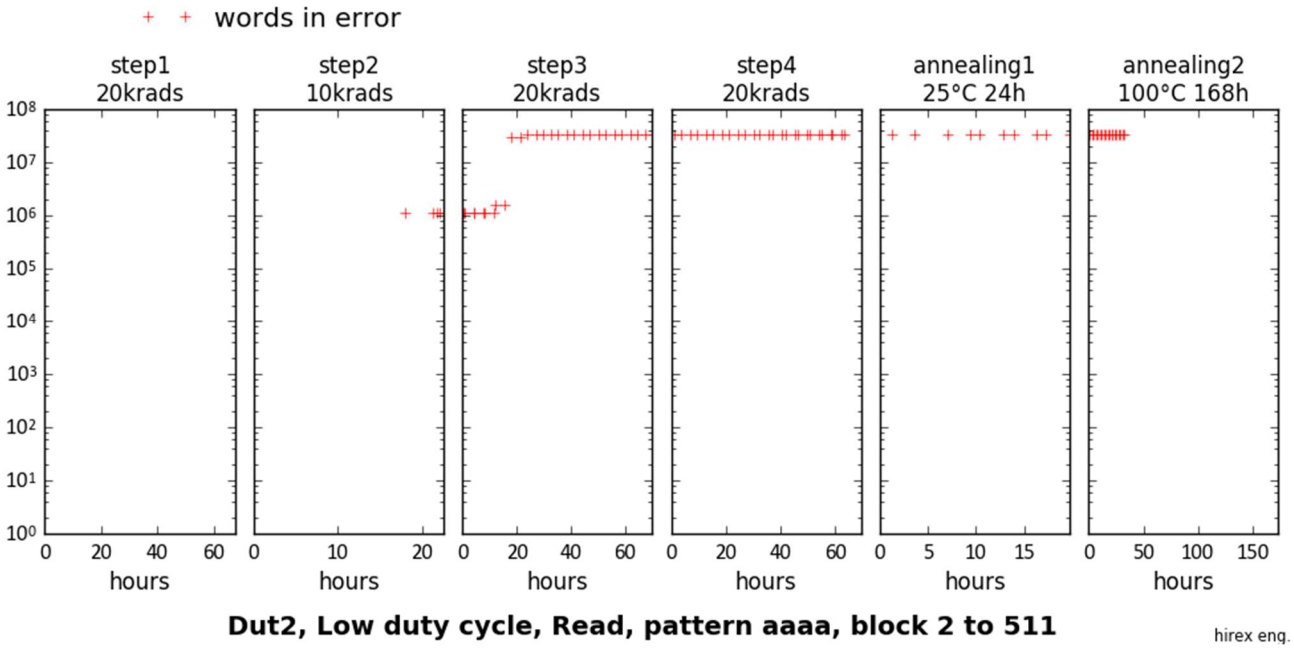
12.12.3 DUT2, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



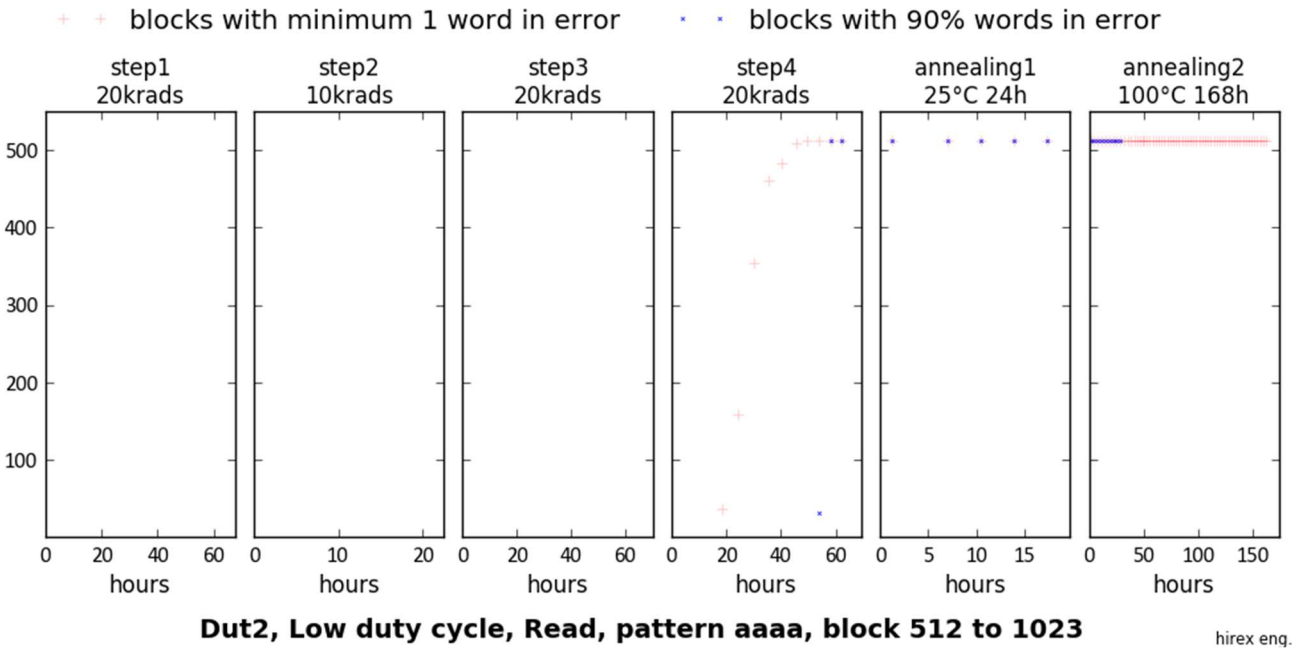


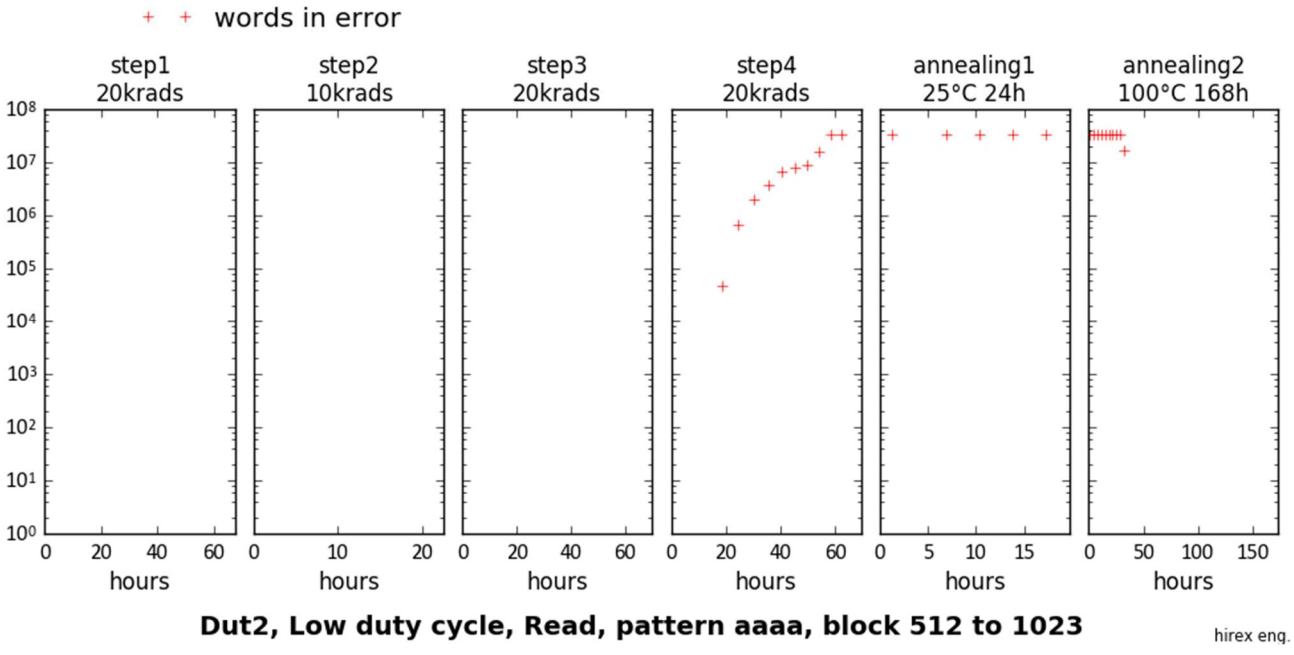
12.12.4 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



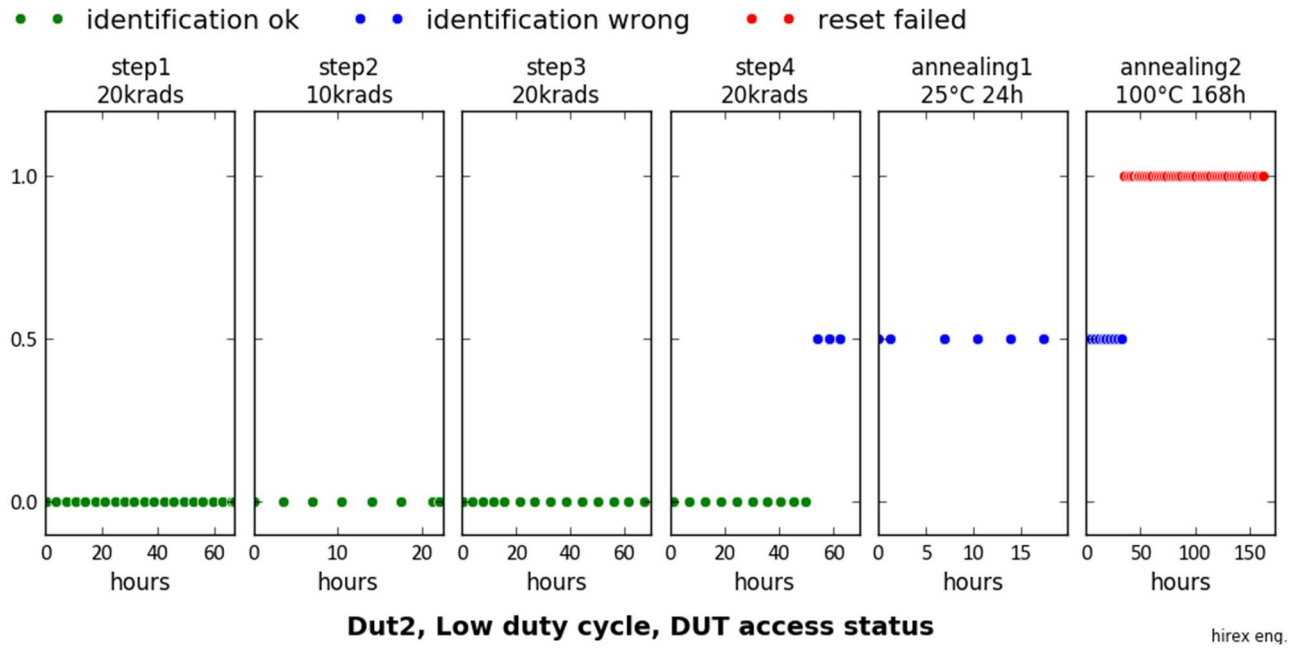


12.12.5 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



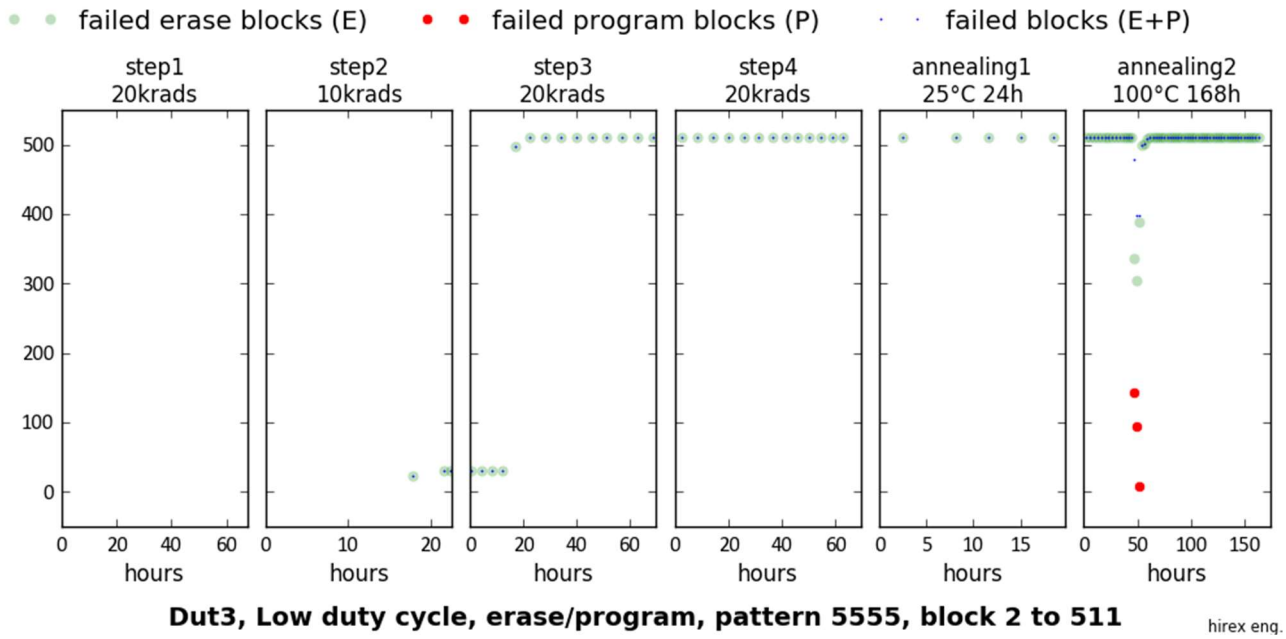


12.12.6 DUT2, Low Duty Cycle, DUT access status

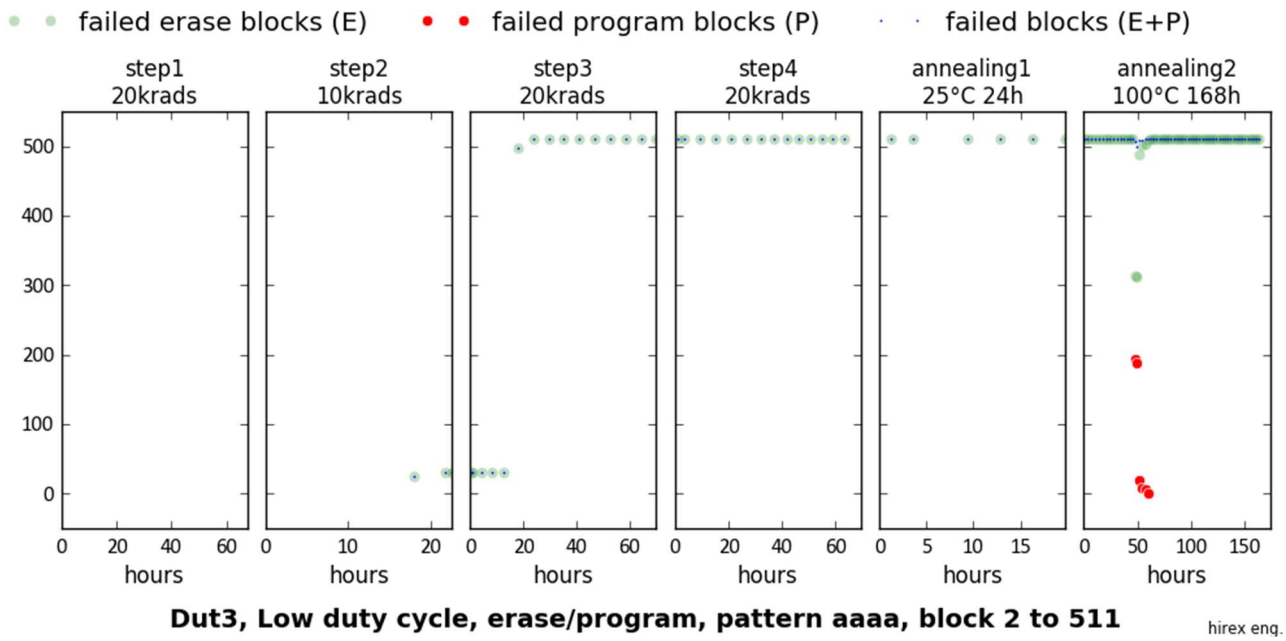


12.13 DUT3 (Board 1), Low duty cycle

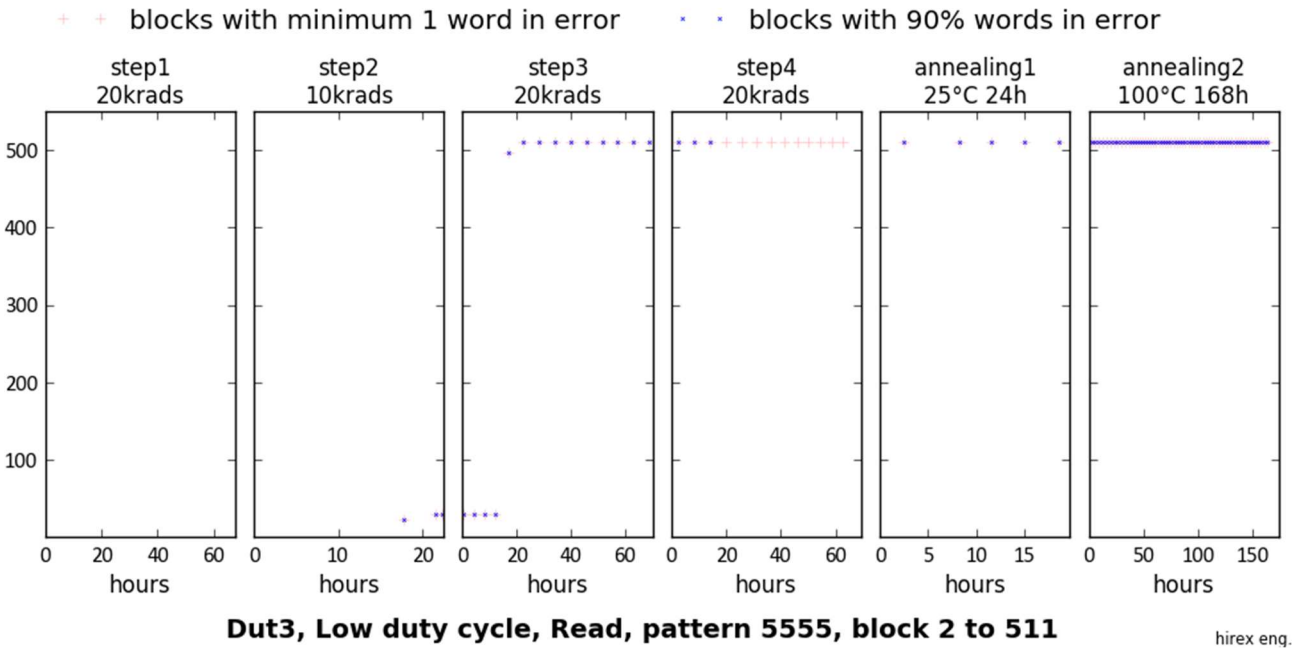
12.13.1 DUT3, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

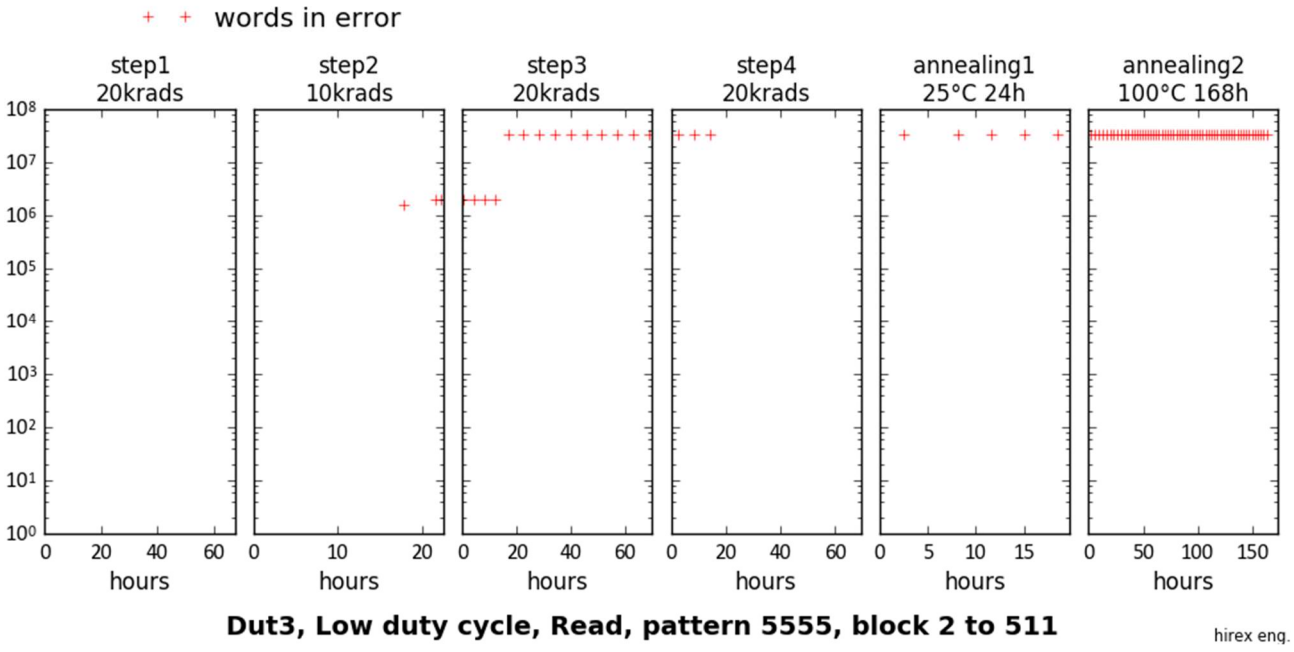


12.13.2 DUT3, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

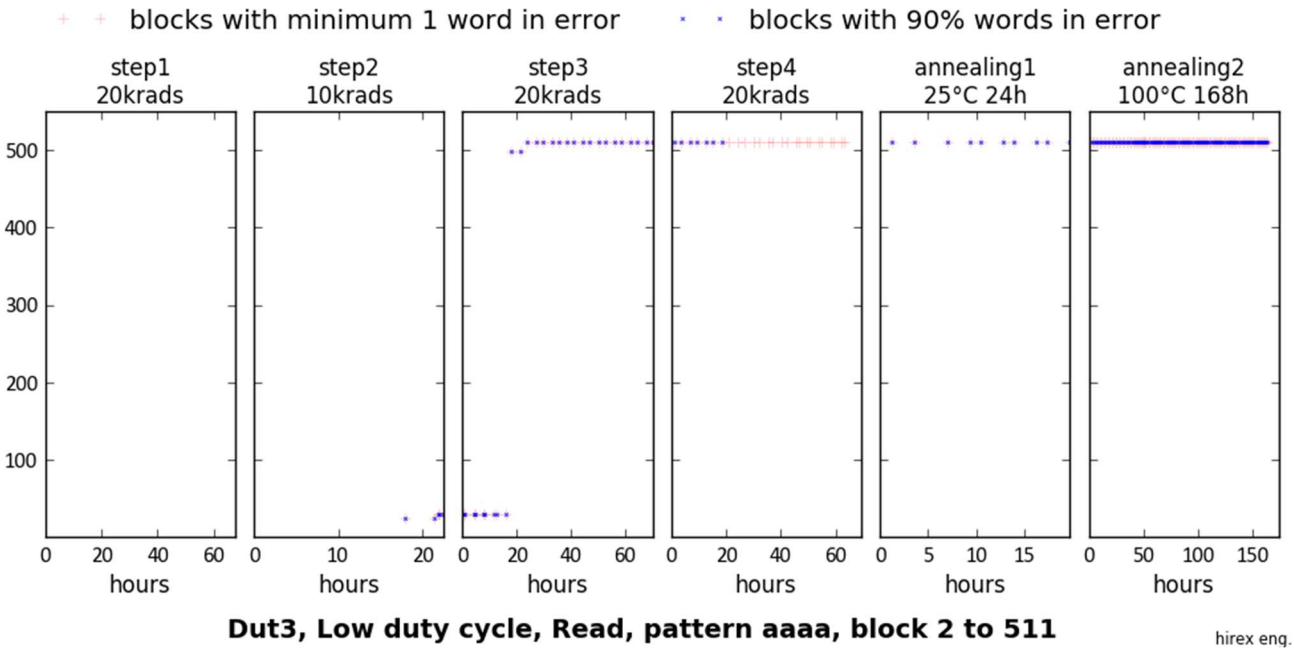


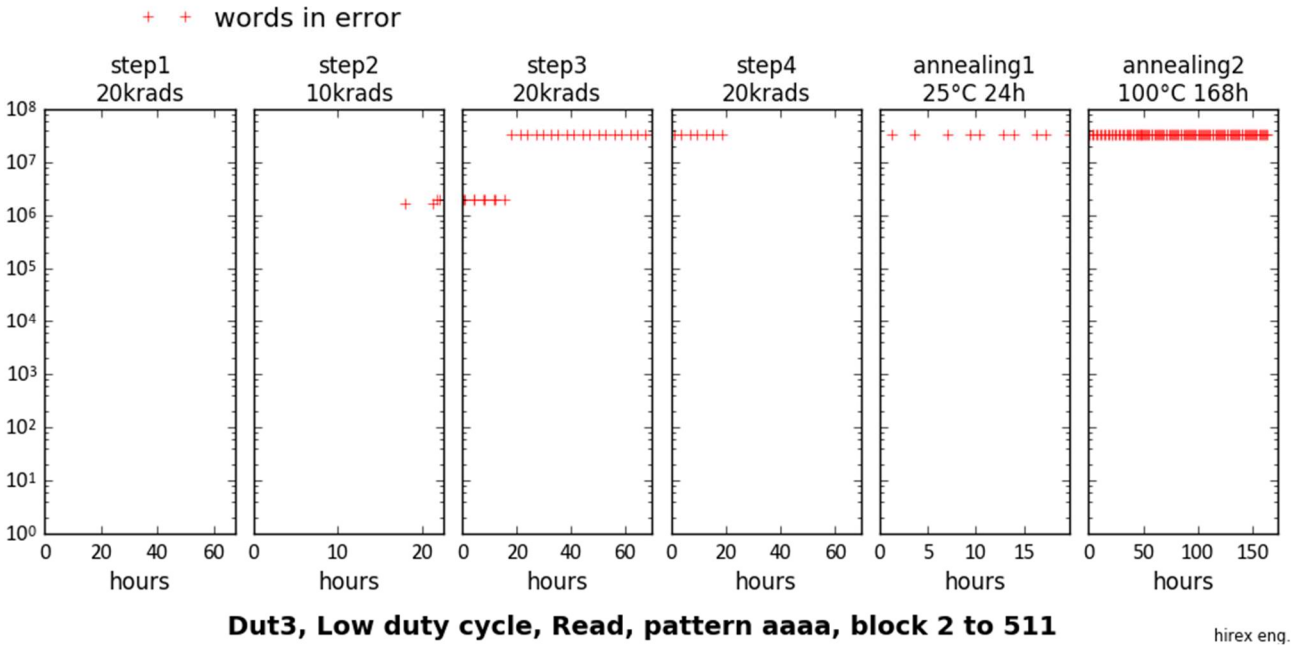
12.13.3 DUT3, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



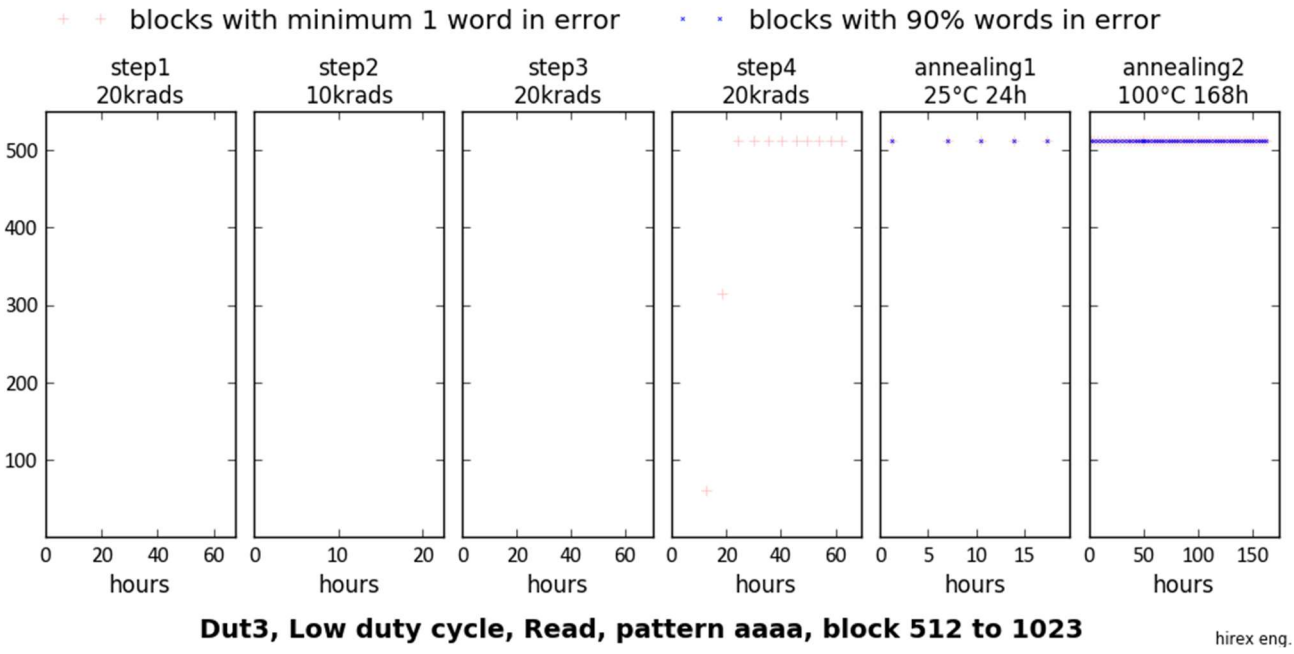


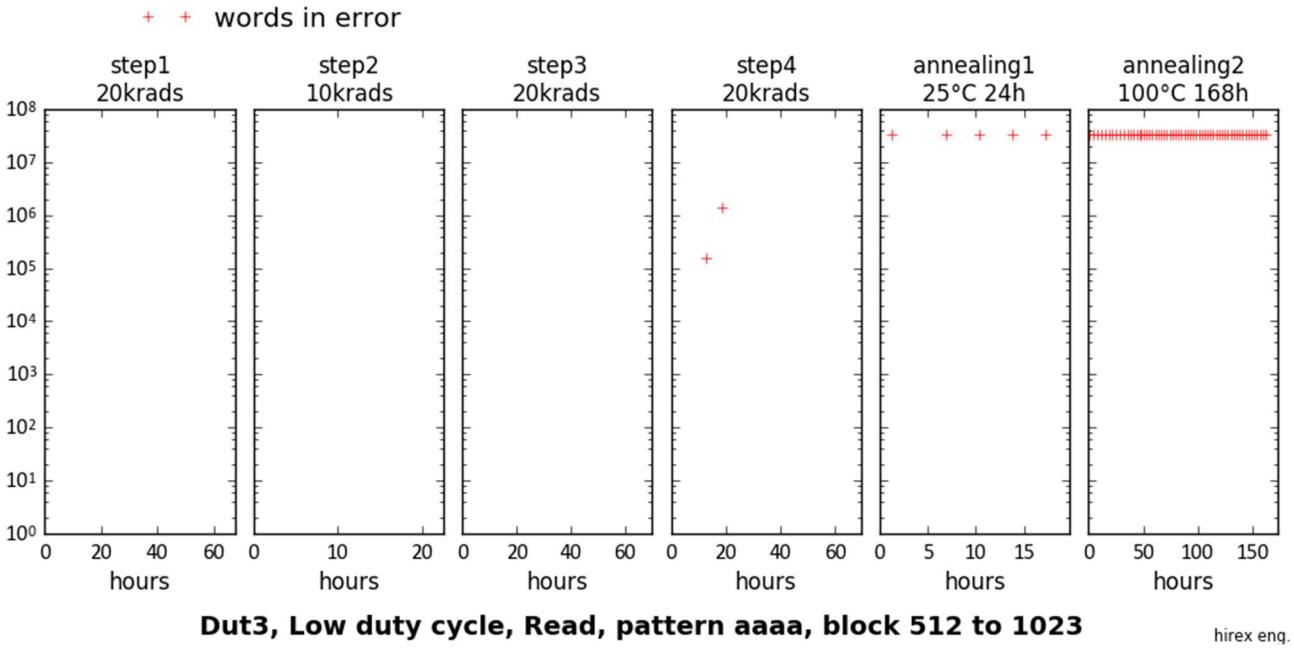
12.13.4 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



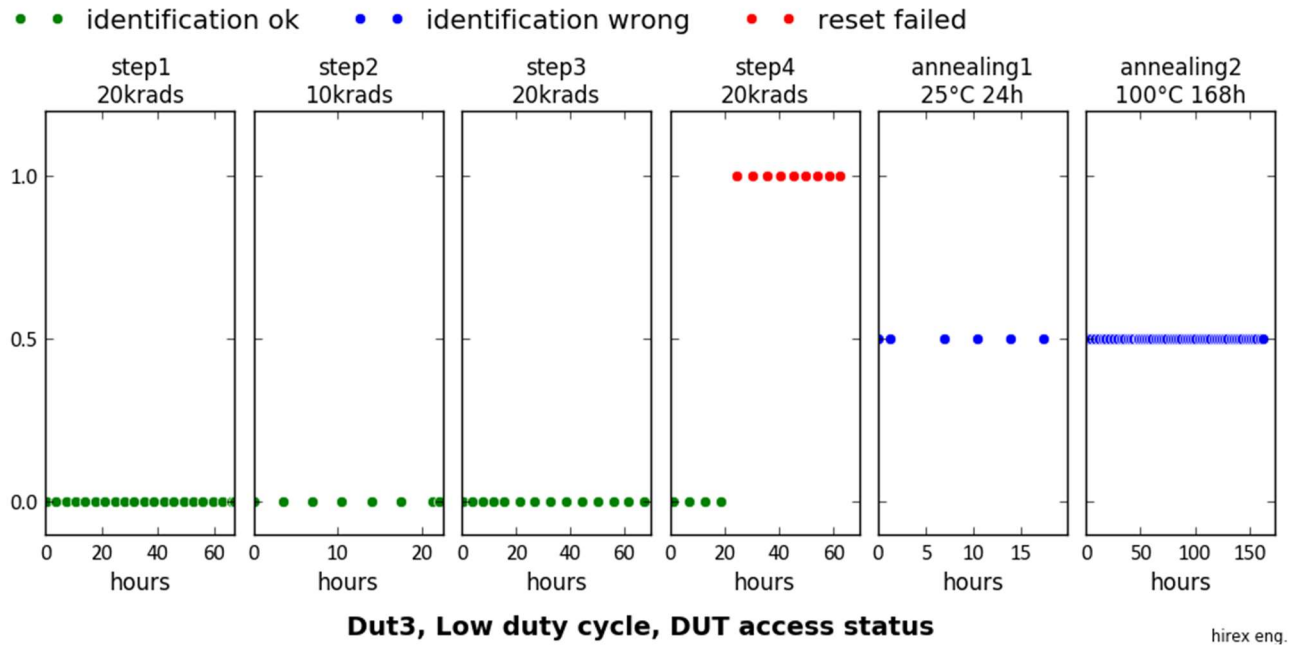


12.13.5 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



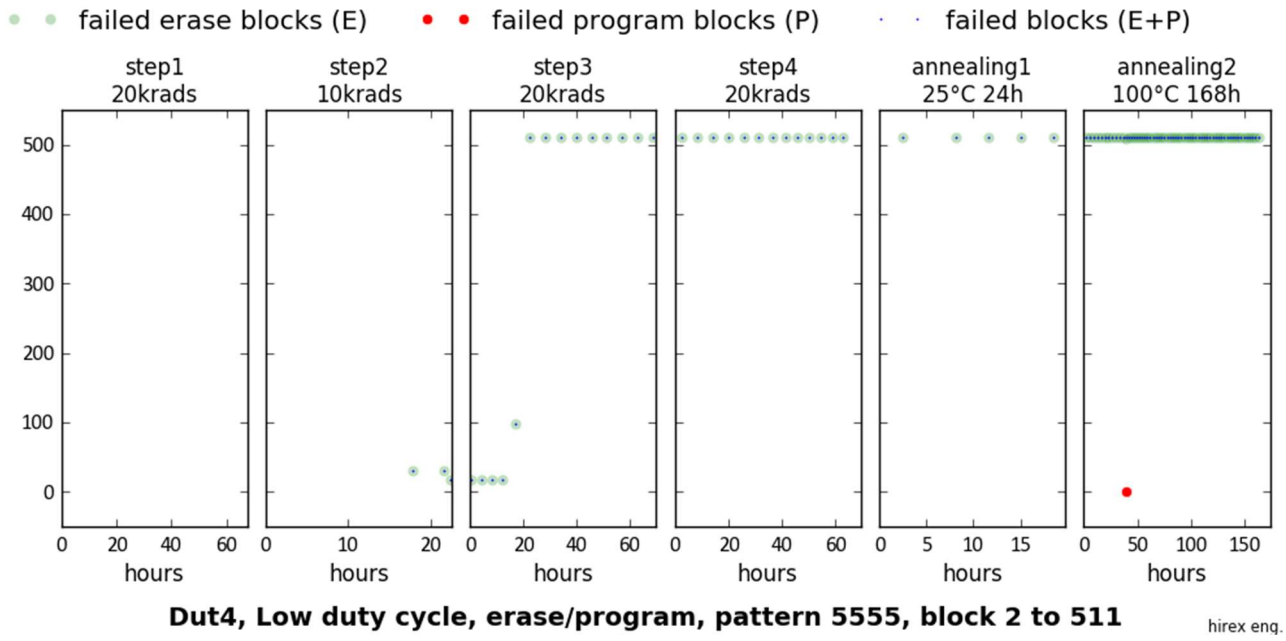


12.13.6 DUT3, Low Duty Cycle, DUT access status

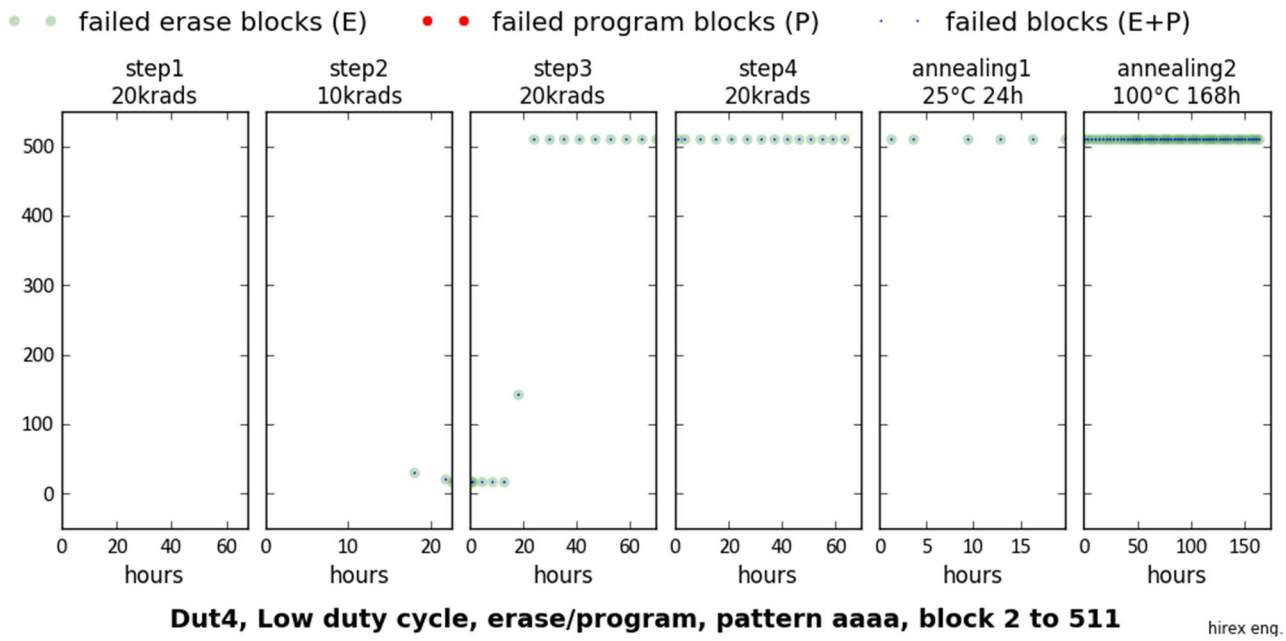


12.14 DUT4 (Board 1), Low duty cycle

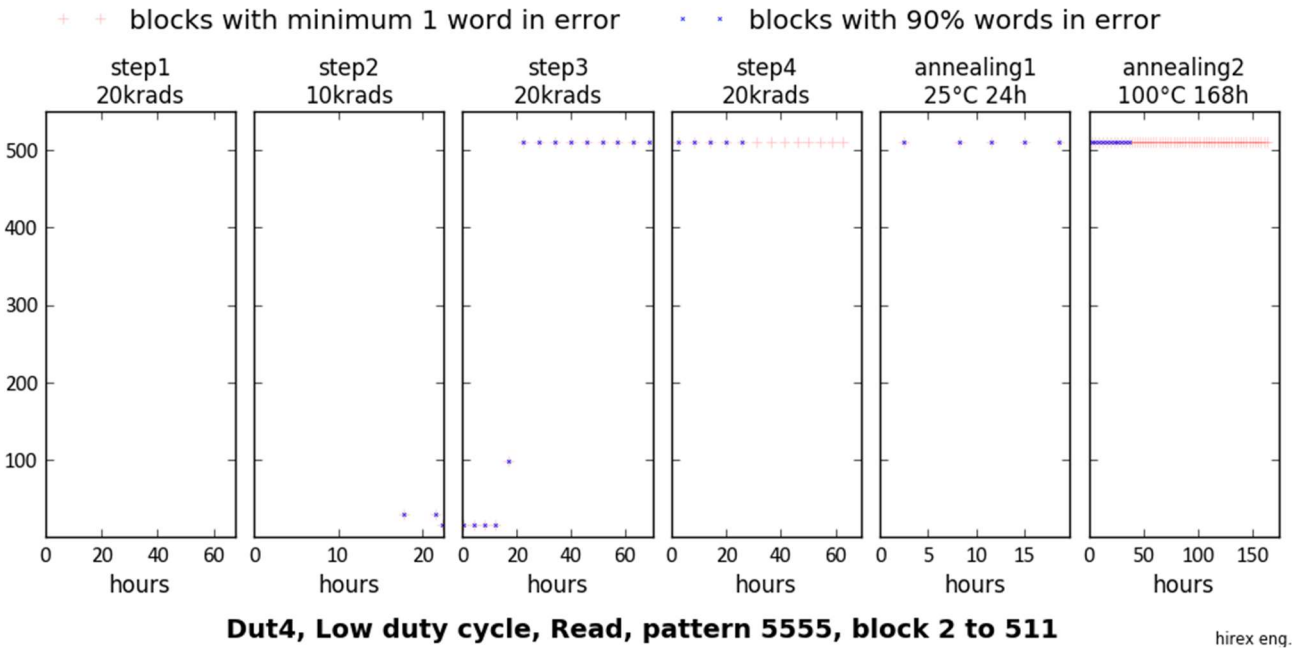
12.14.1 DUT4, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

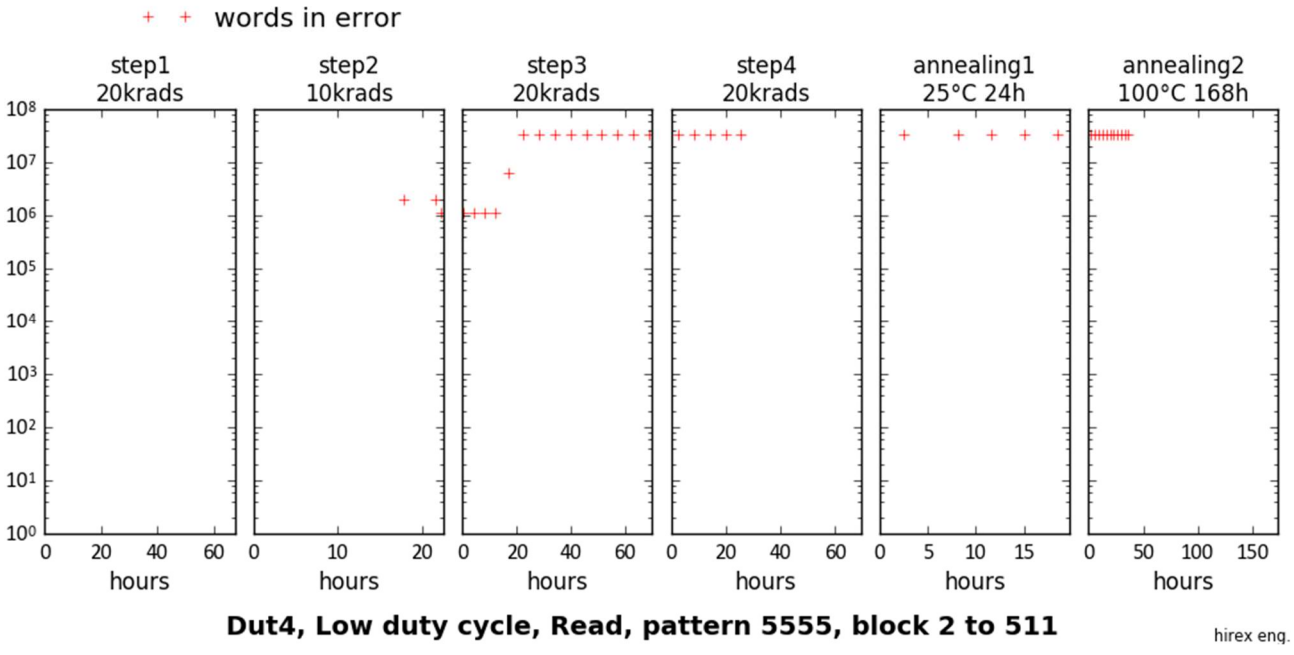


12.14.2 DUT4, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

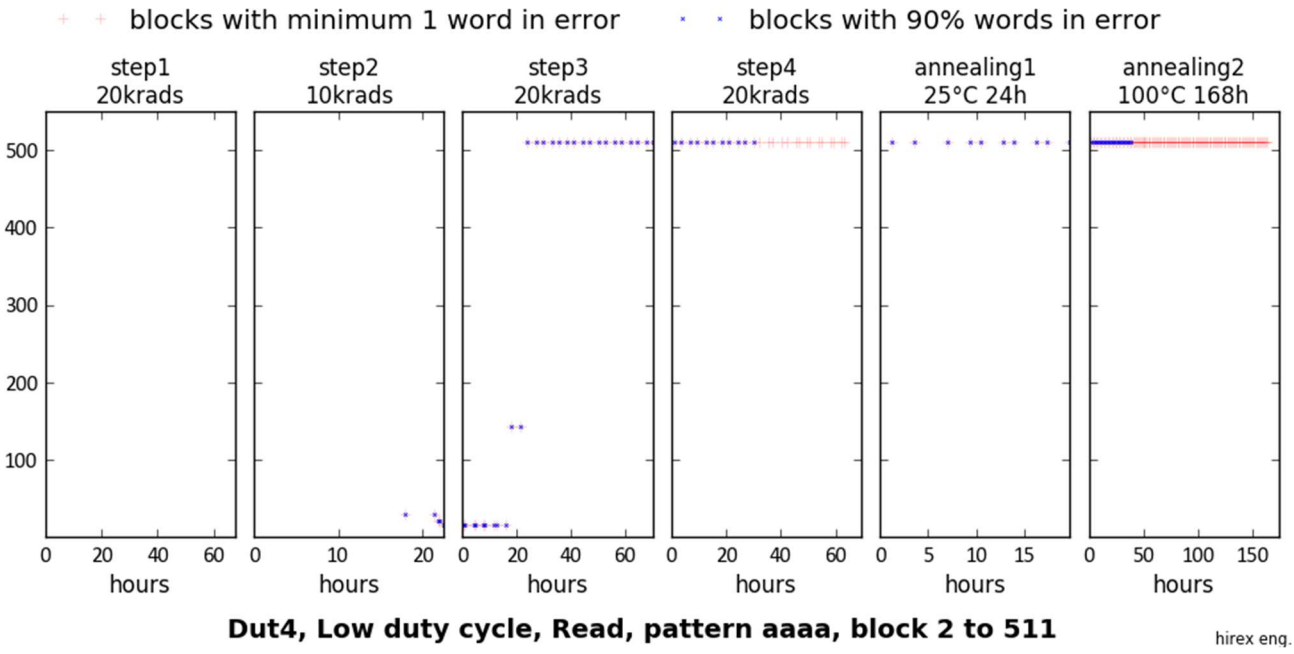


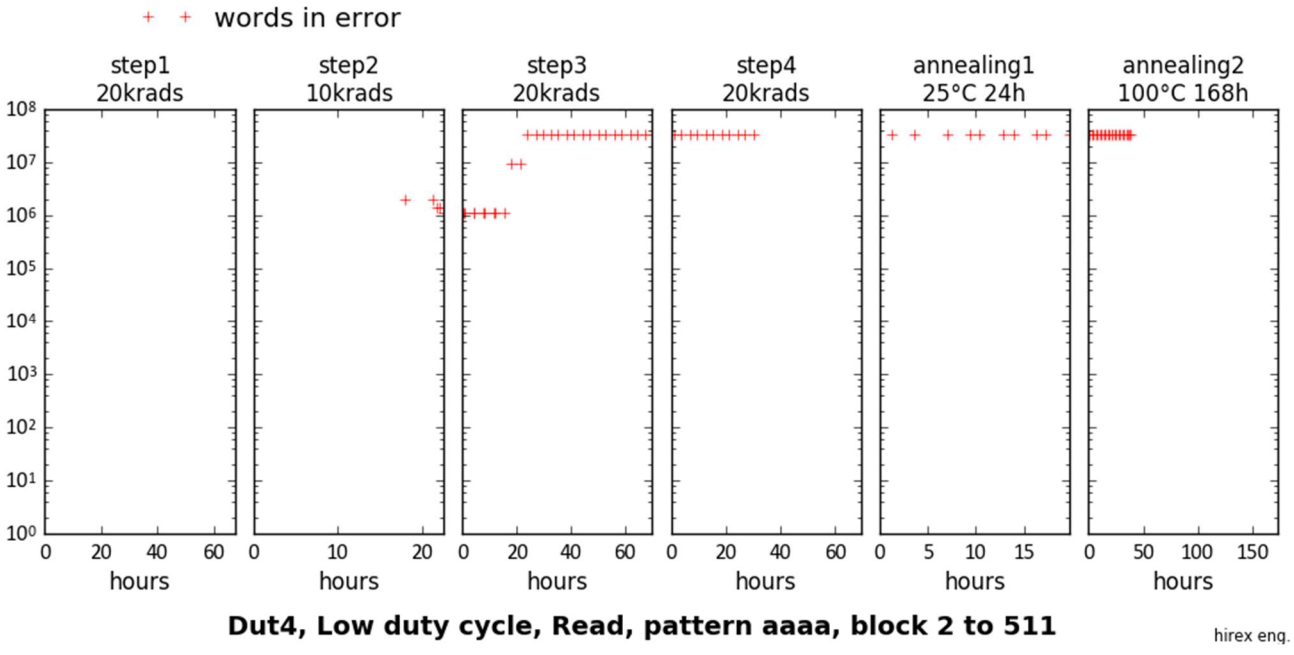
12.14.3 DUT4, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



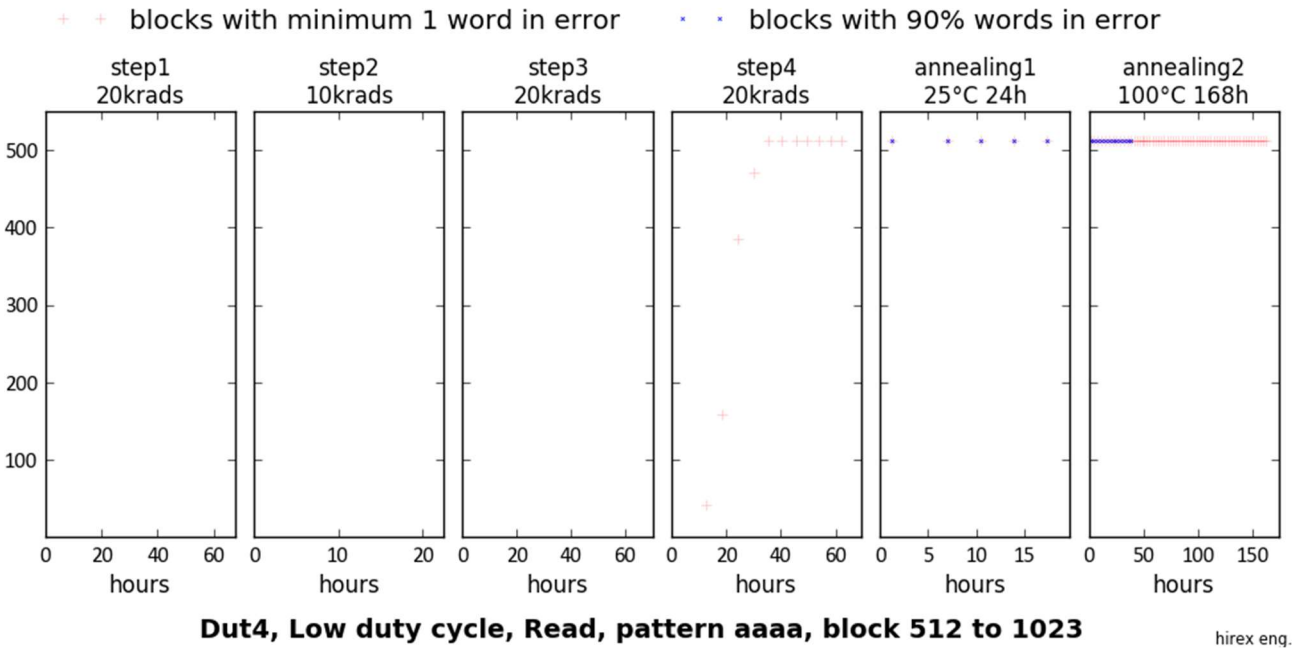


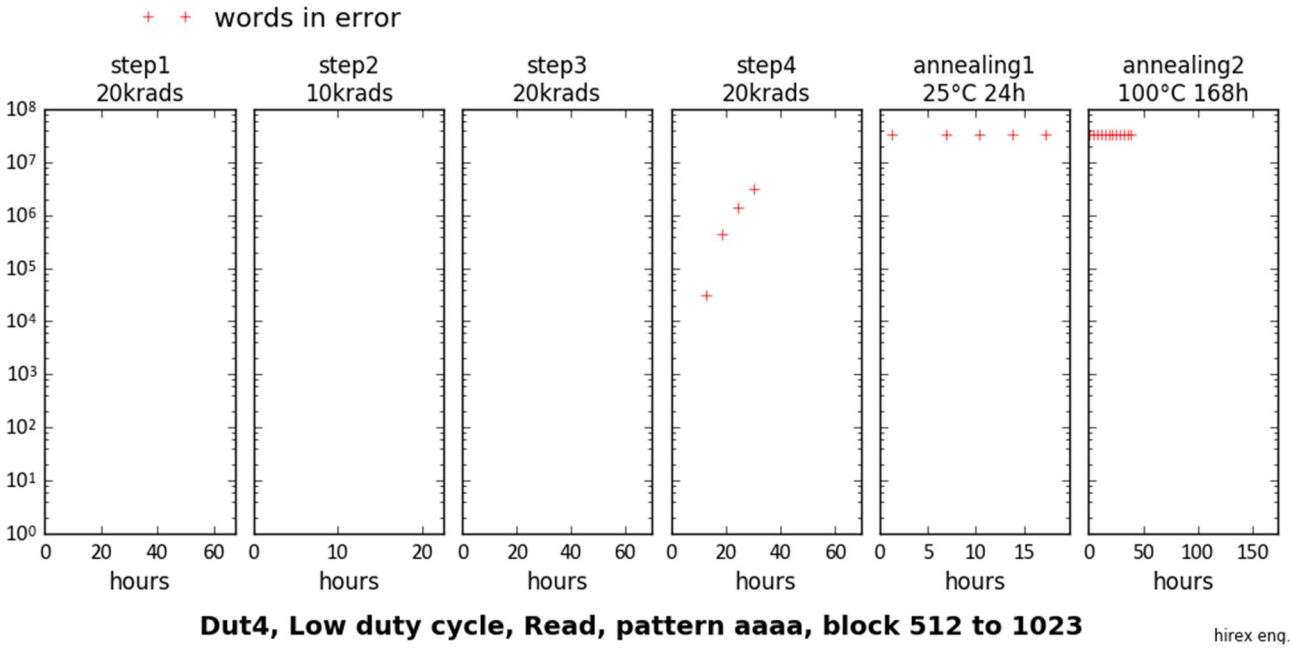
12.14.4 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



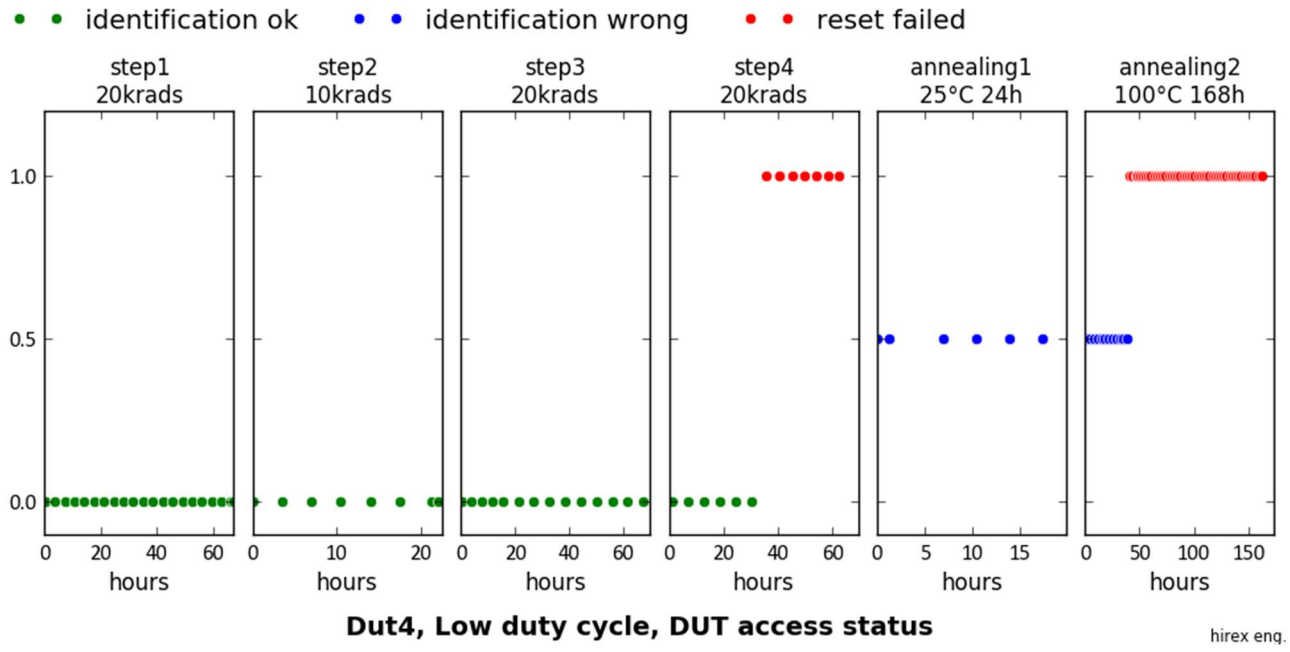


12.14.5 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



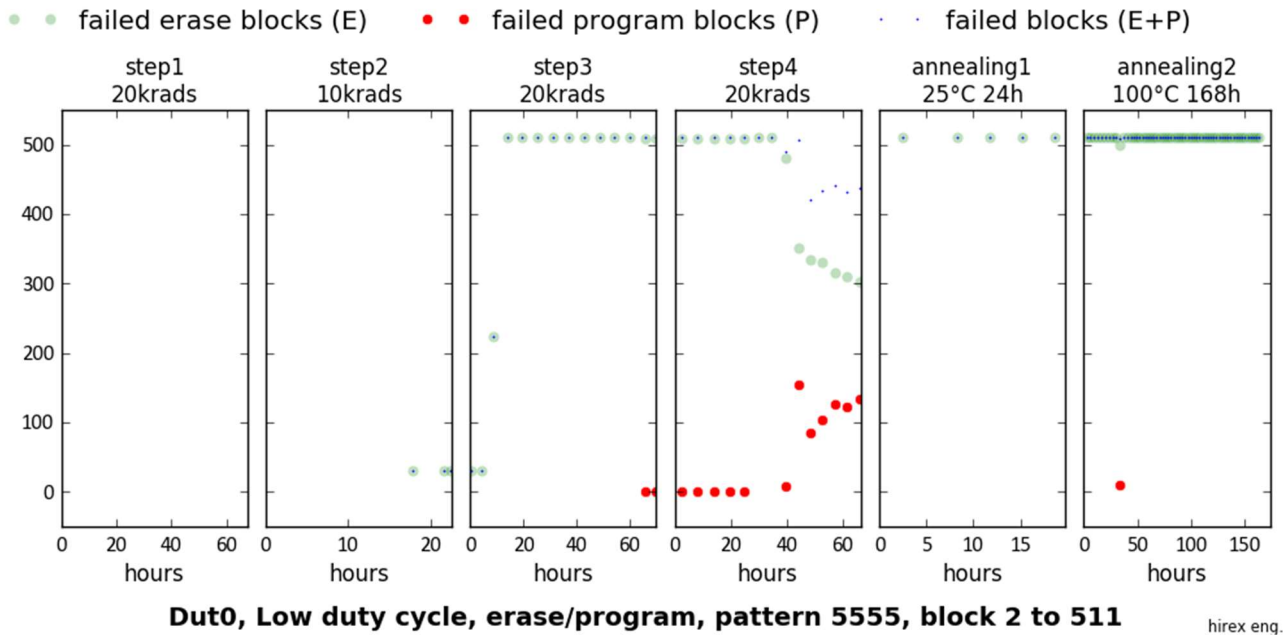


12.14.6 DUT4, Low Duty Cycle, DUT access status

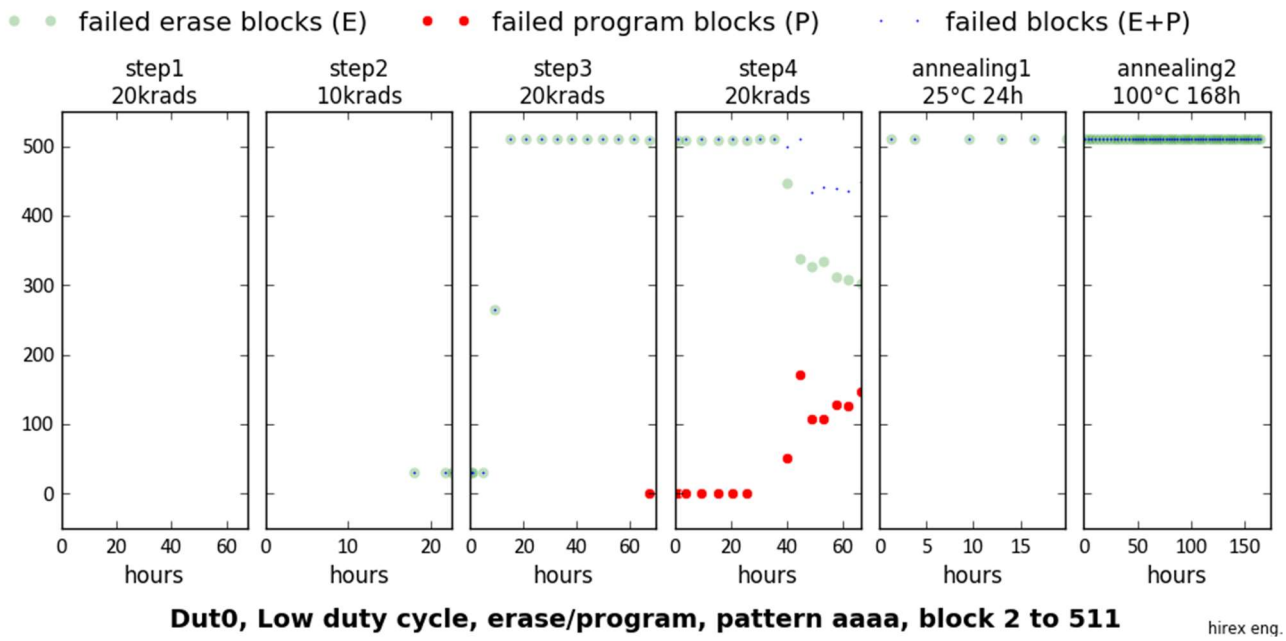


12.15 DUT0 (Board 2), Low duty cycle

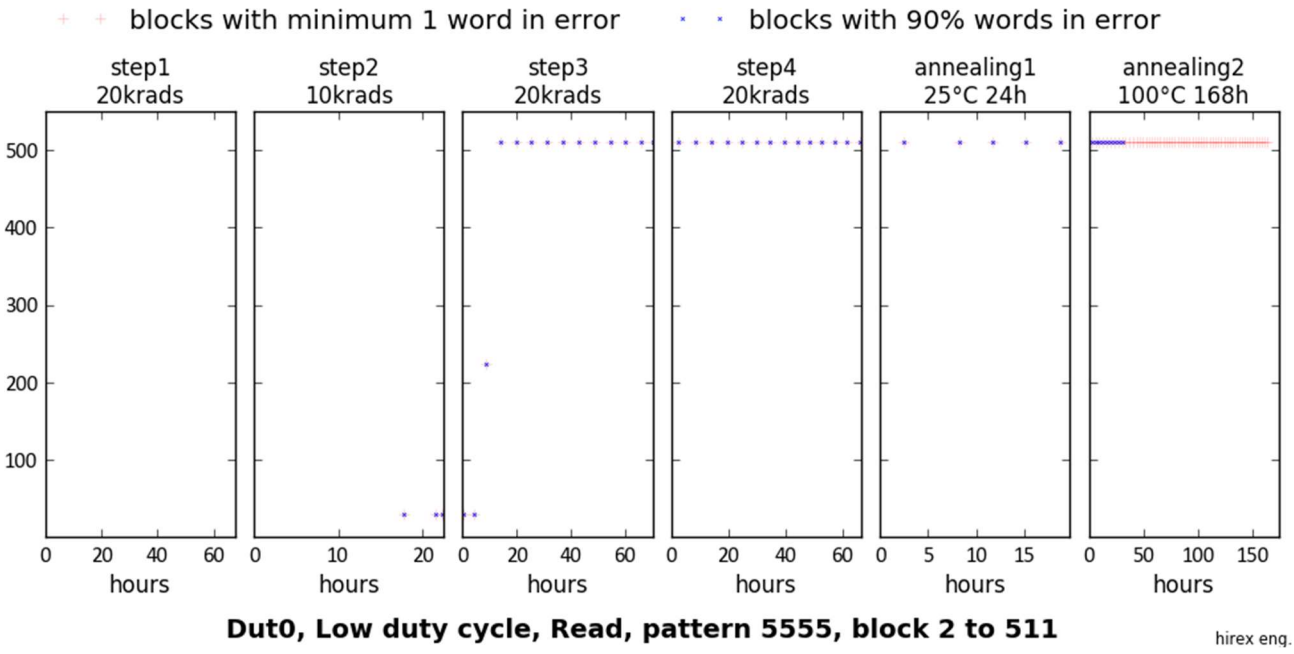
12.15.1 DUT0, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

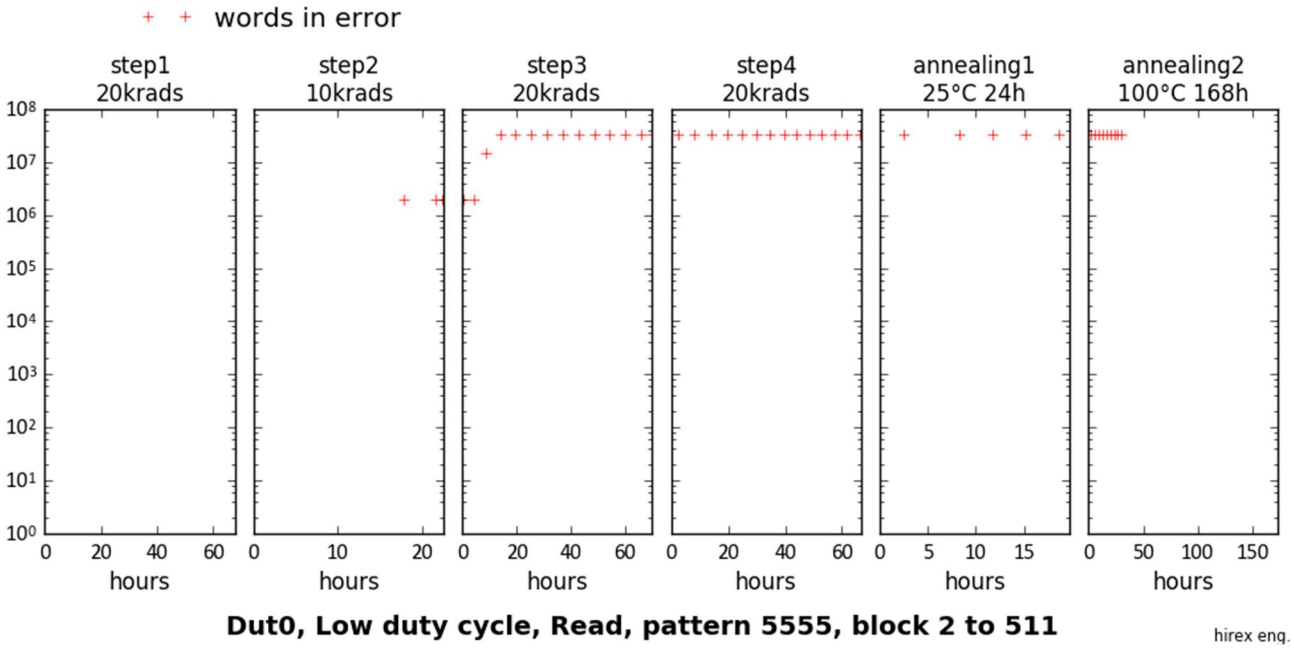


12.15.2 DUT0, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

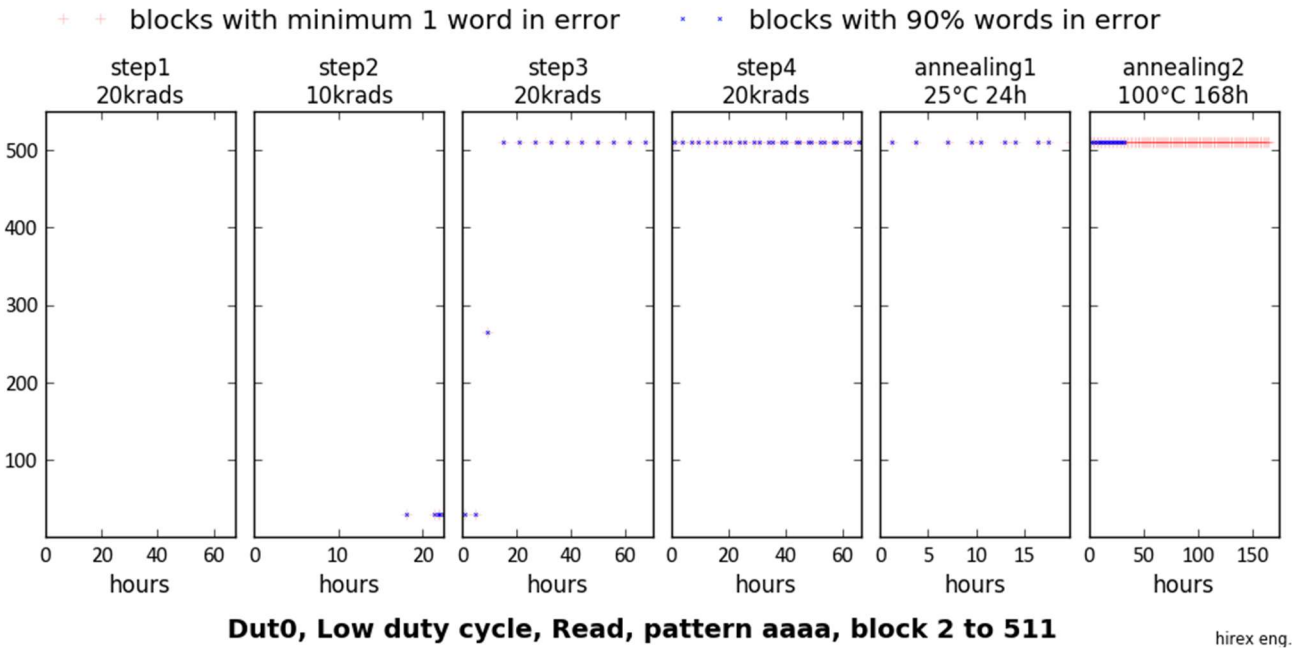


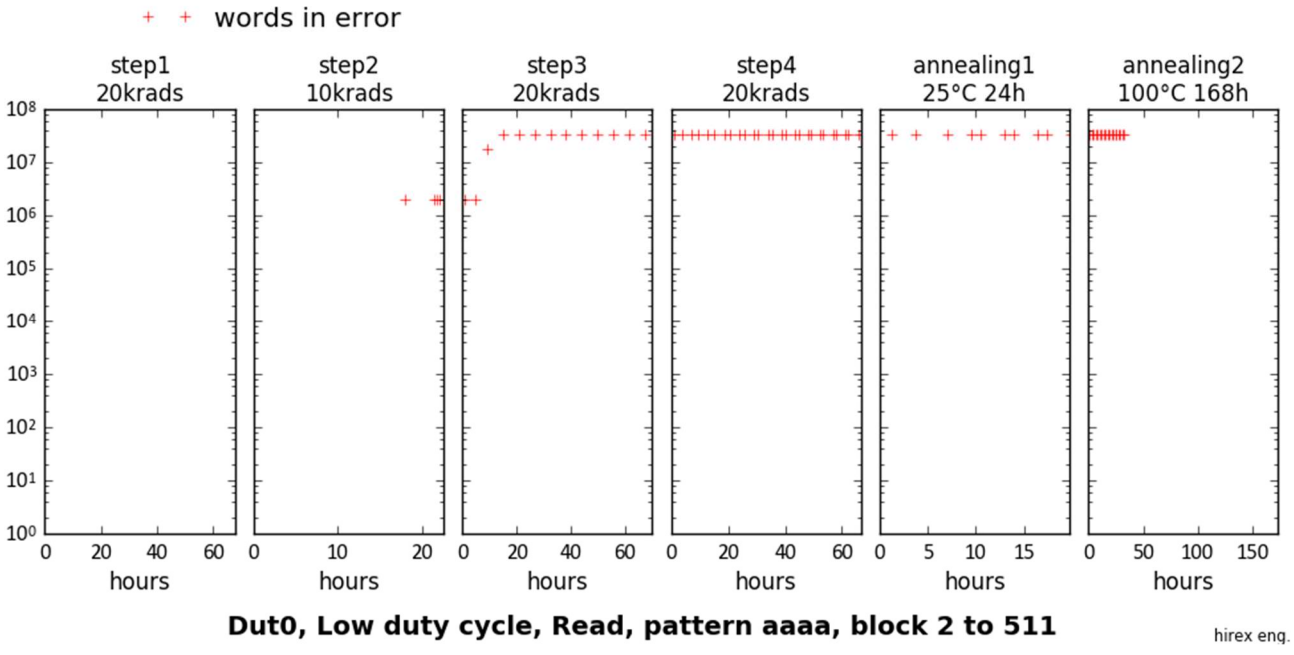
12.15.3 DUT0, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



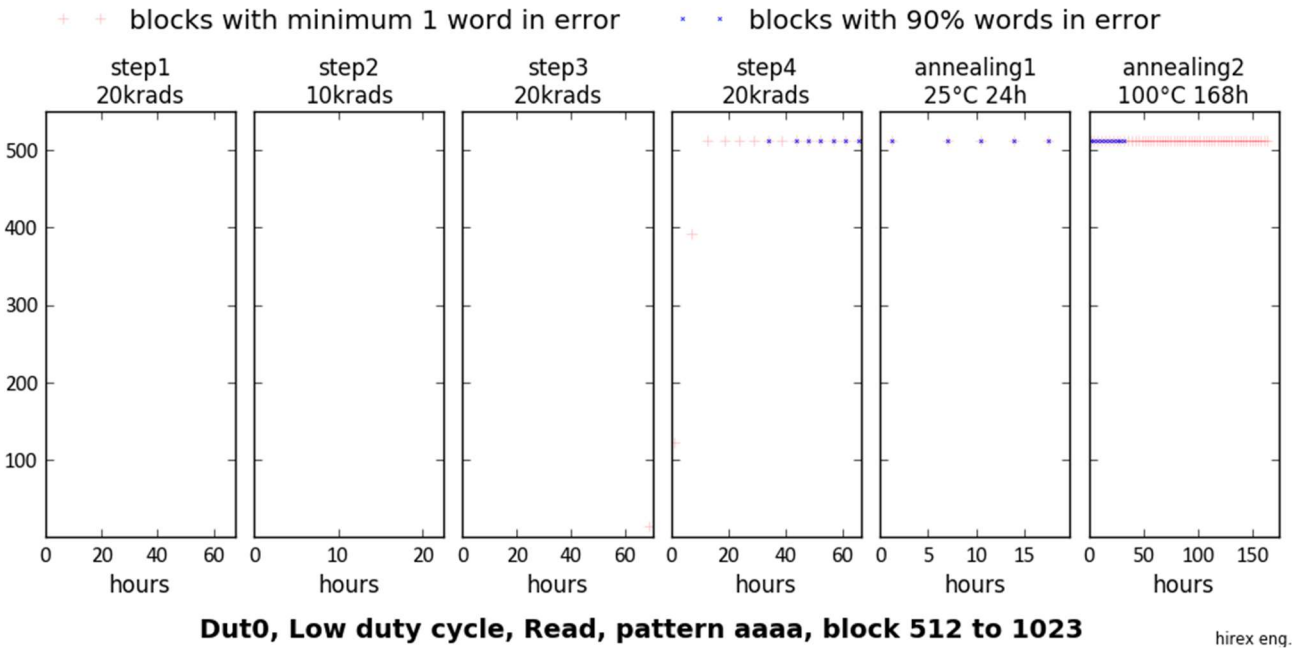


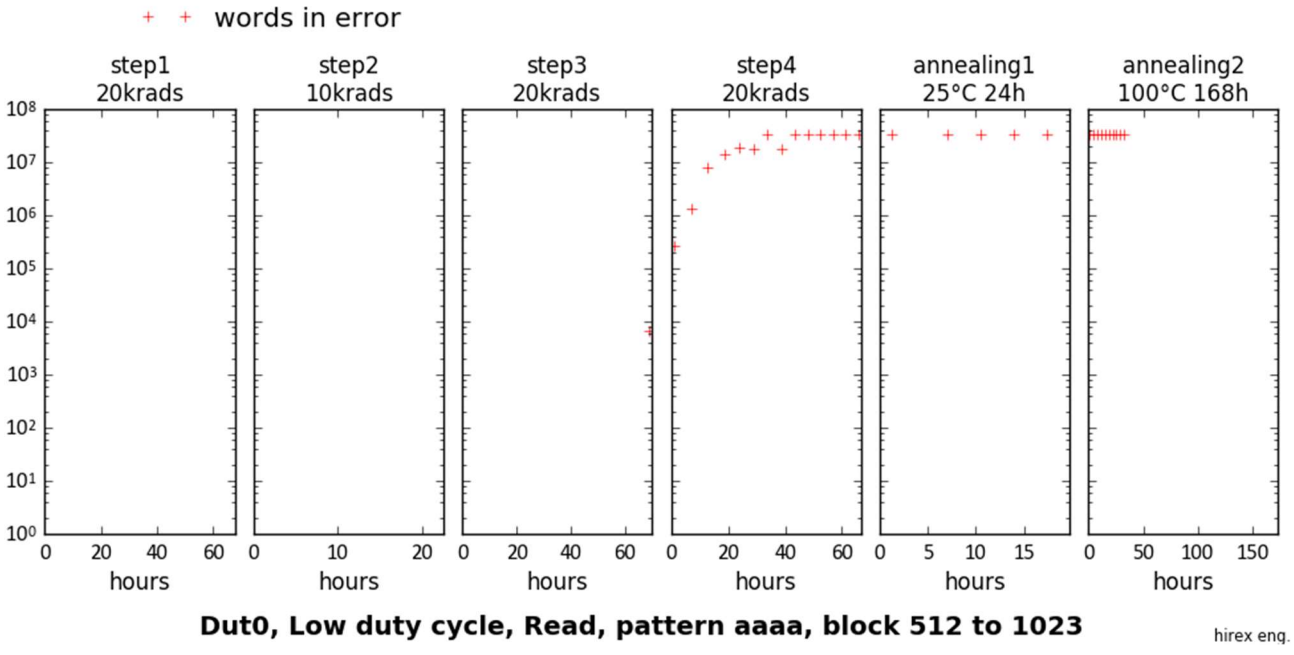
12.15.4 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



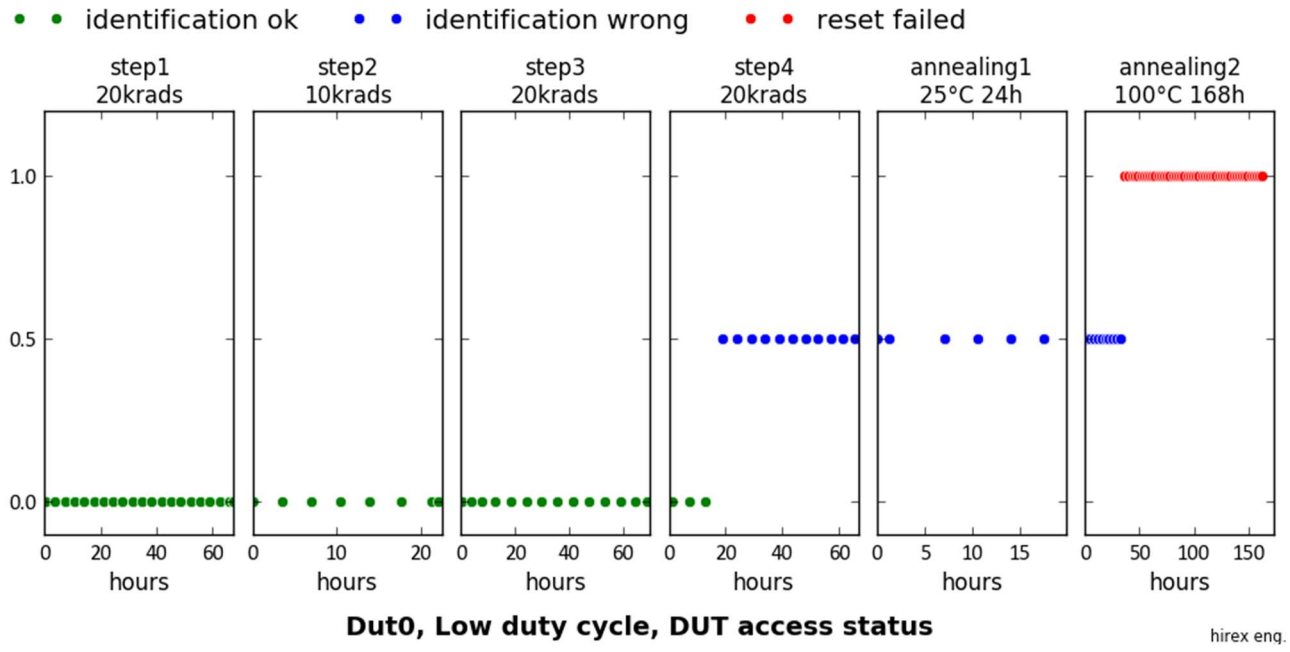


12.15.5 DUT0, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



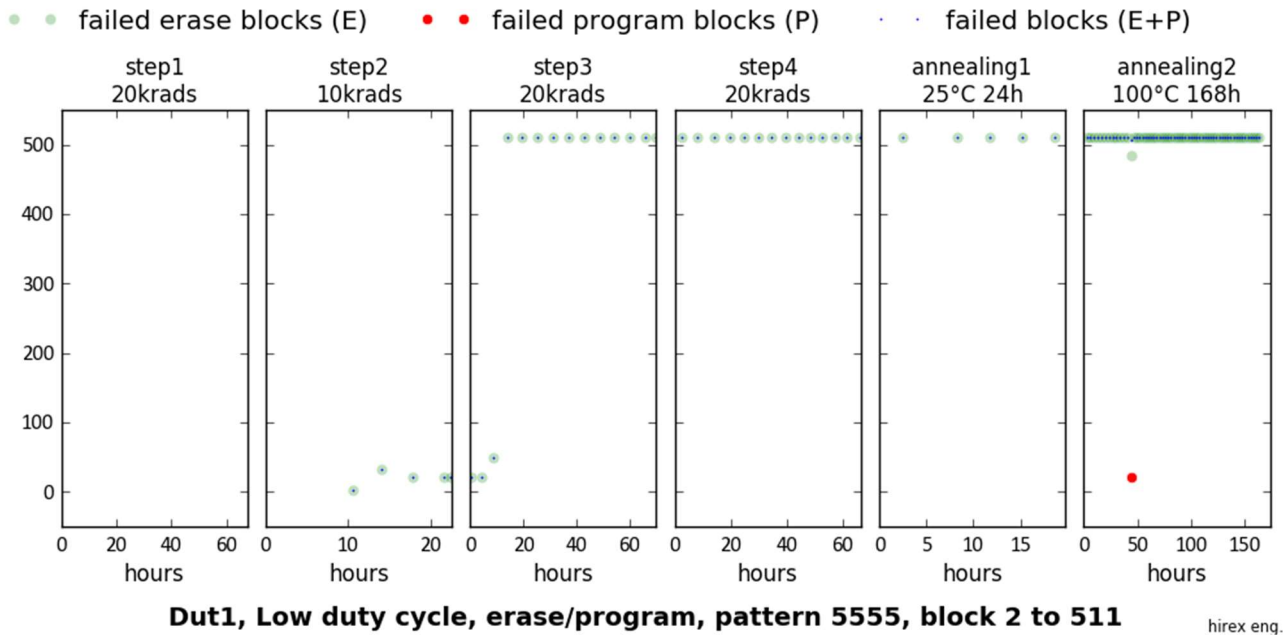


12.15.6 DUT0, Low Duty Cycle, DUT access status

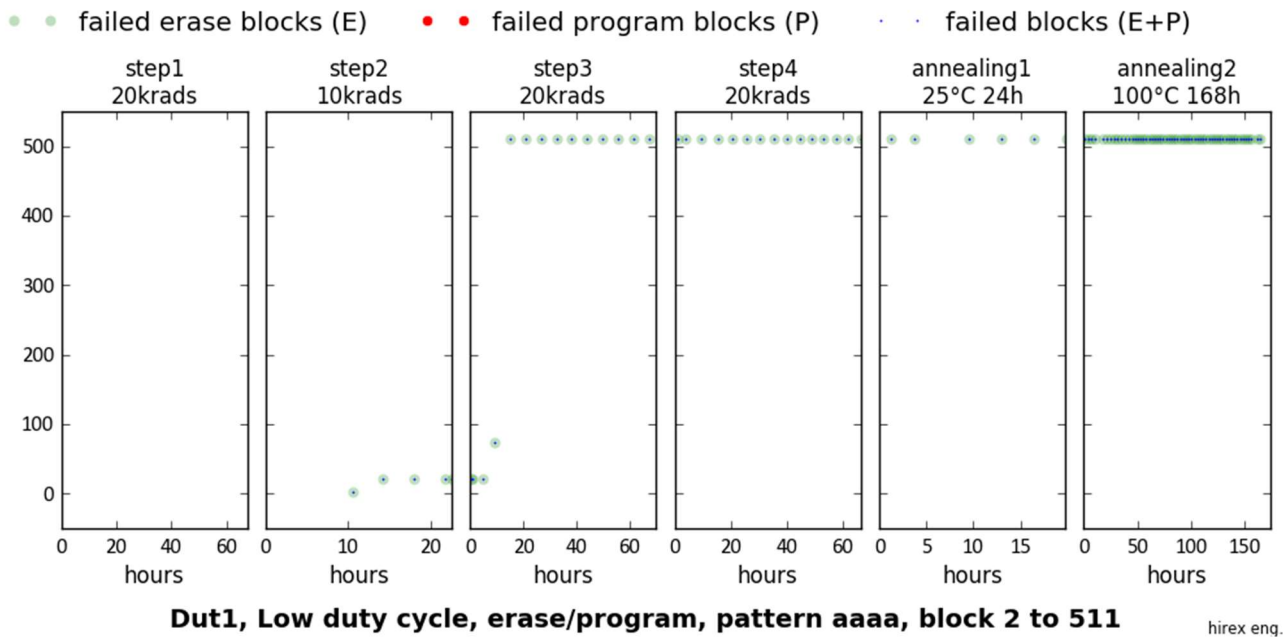


12.16 DUT1 (Board 2), Low duty cycle

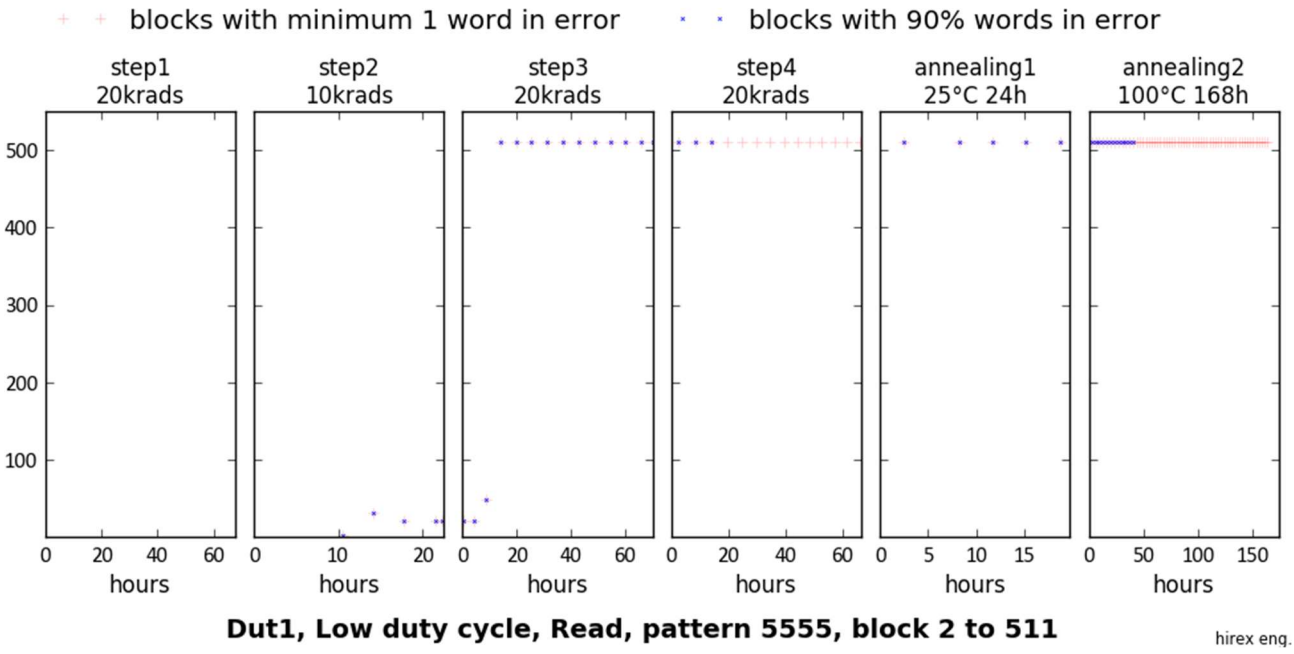
12.16.1 DUT1, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

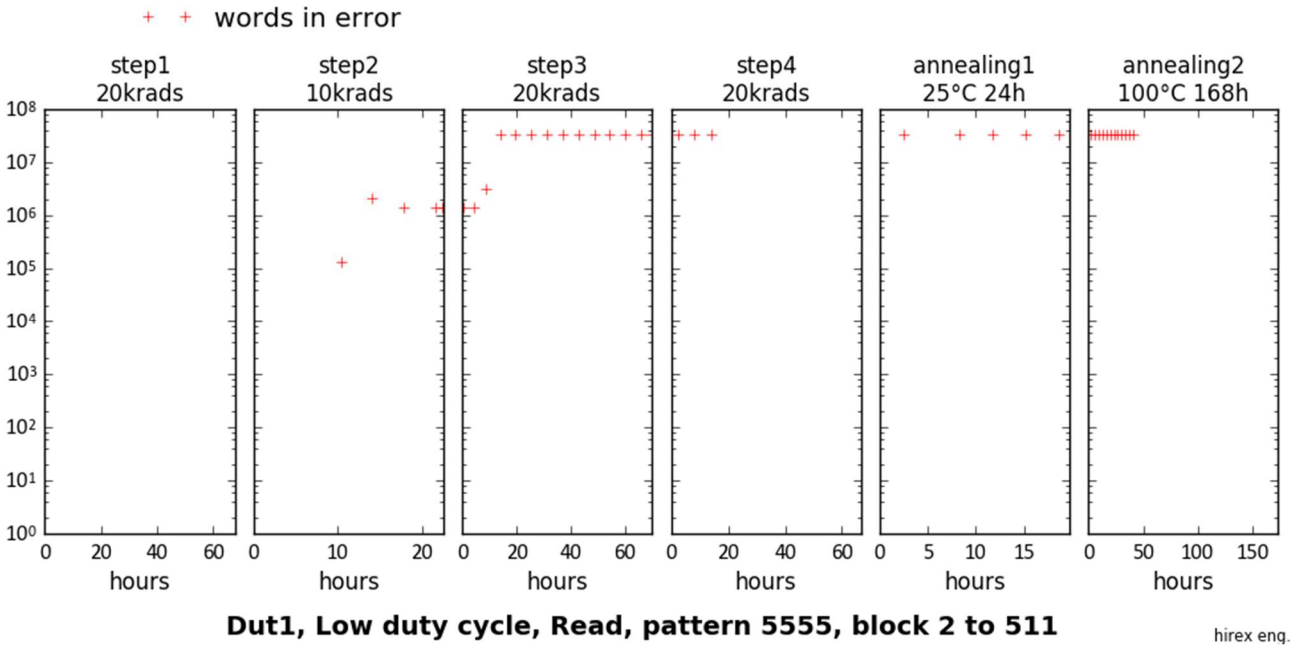


12.16.2 DUT1, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

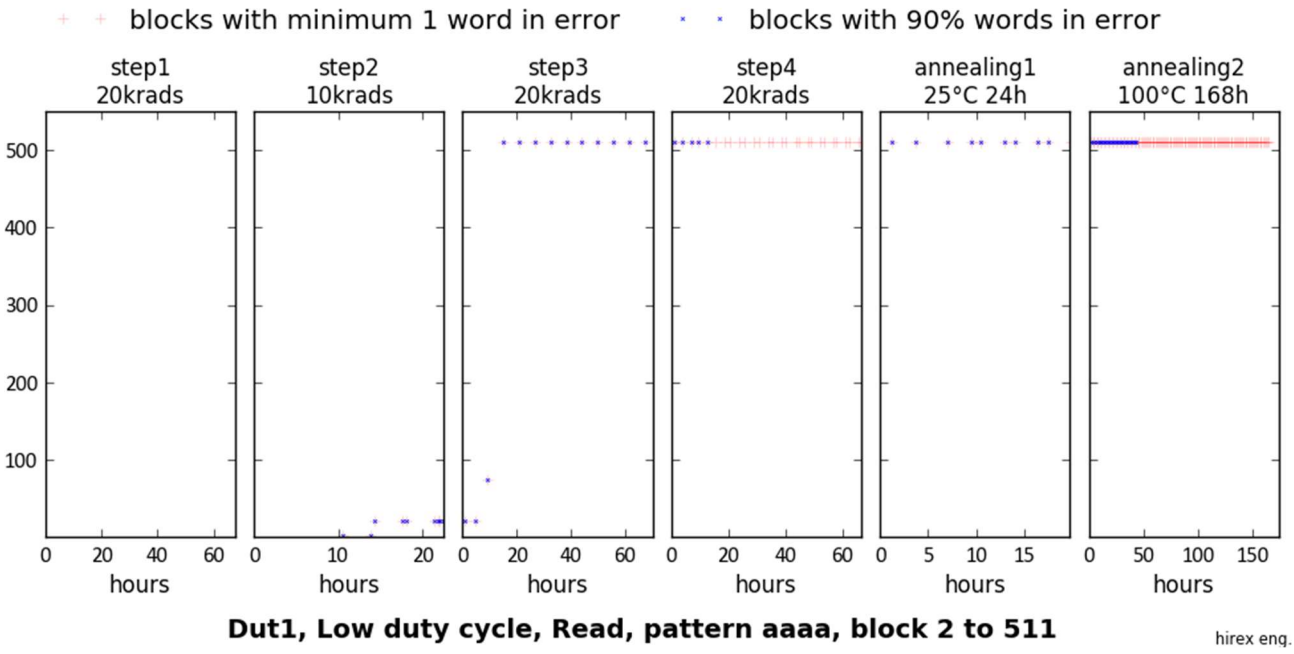


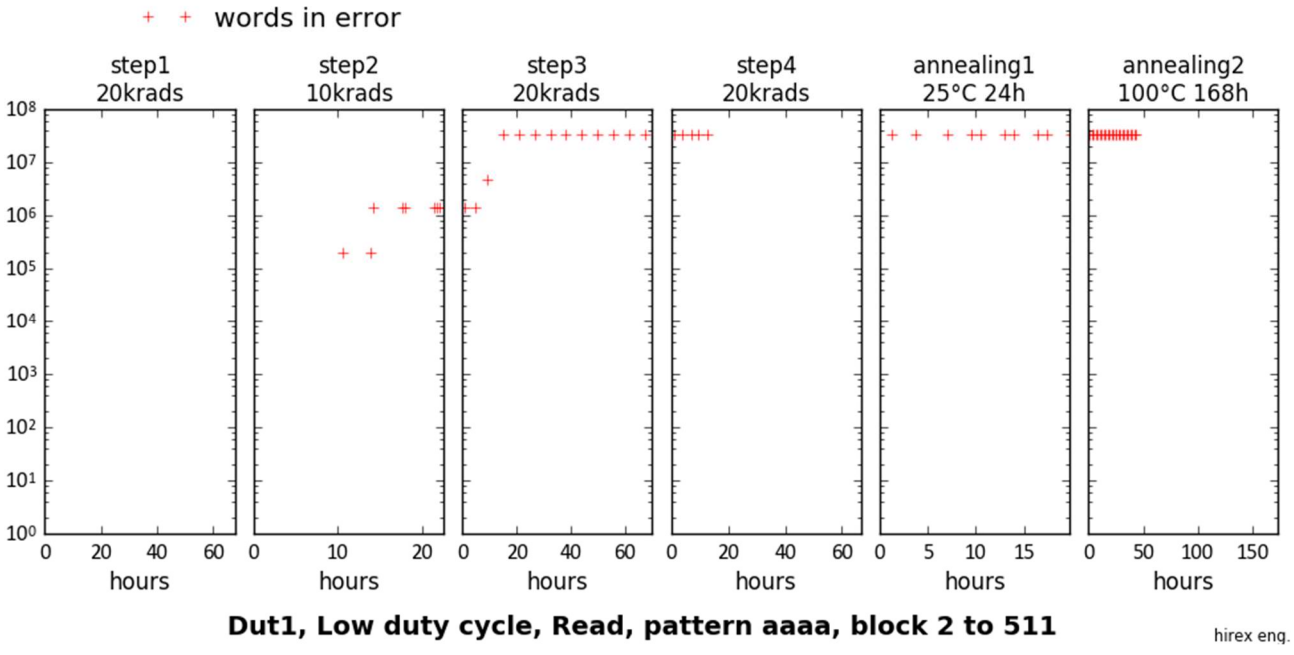
12.16.3 DUT1, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



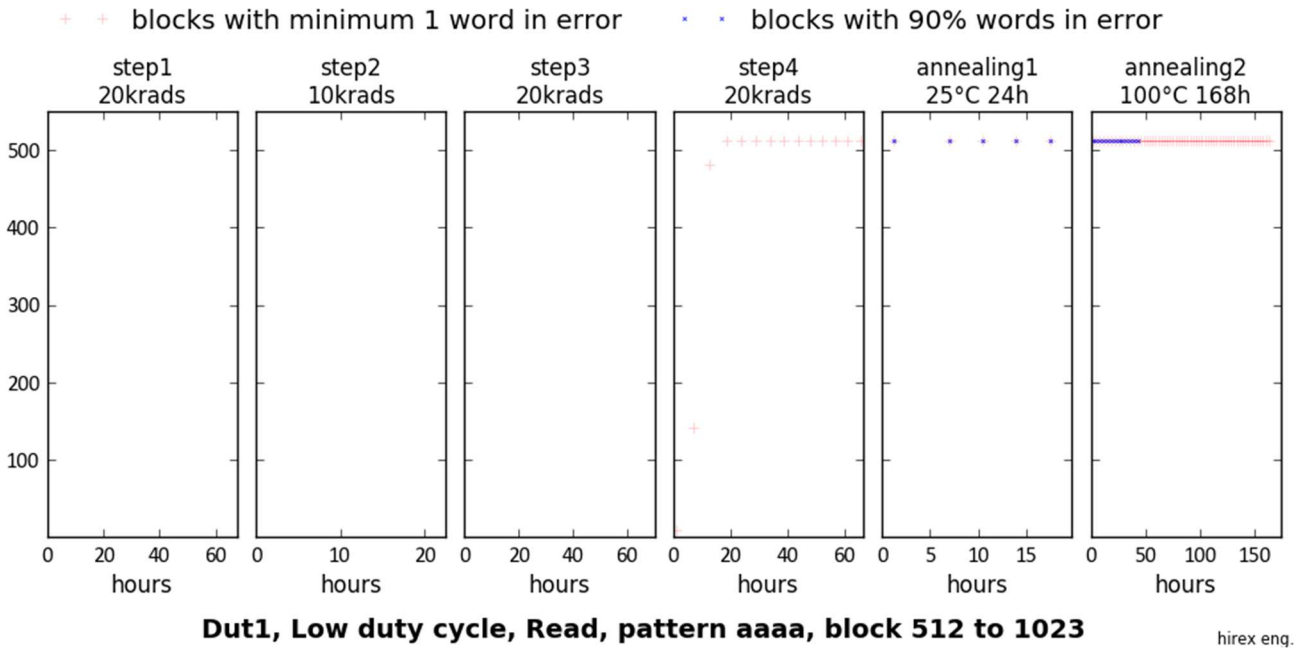


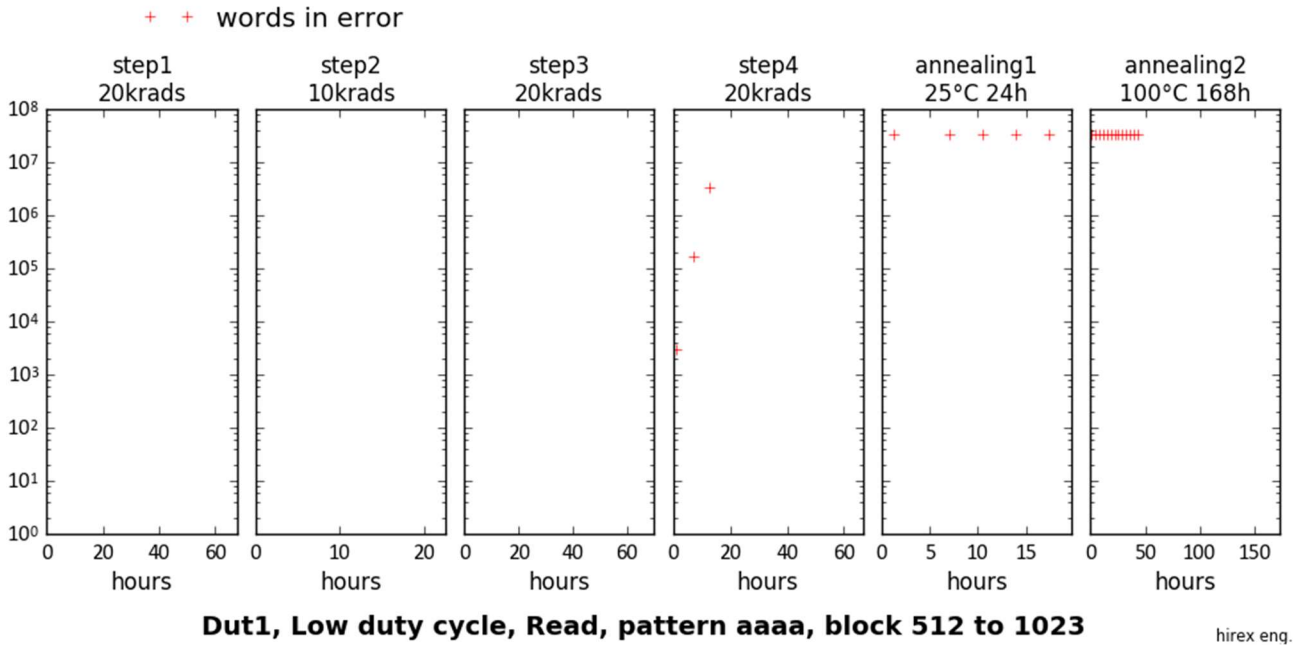
12.16.4 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



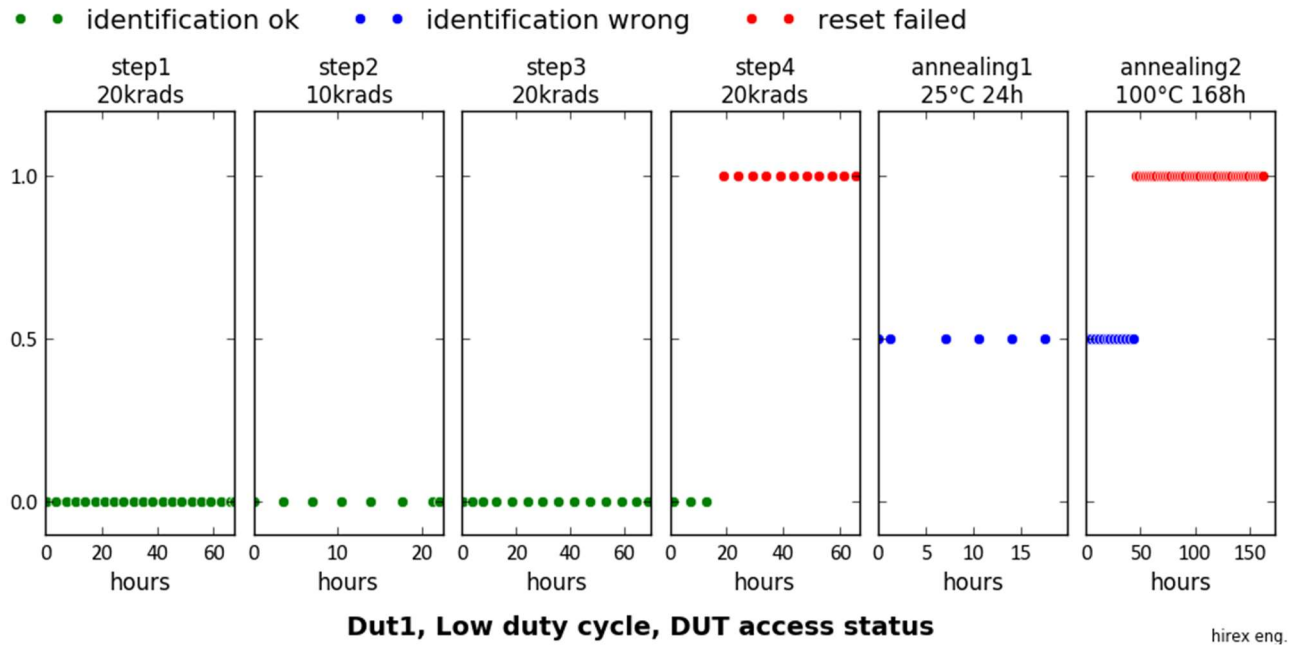


12.16.5 DUT1, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



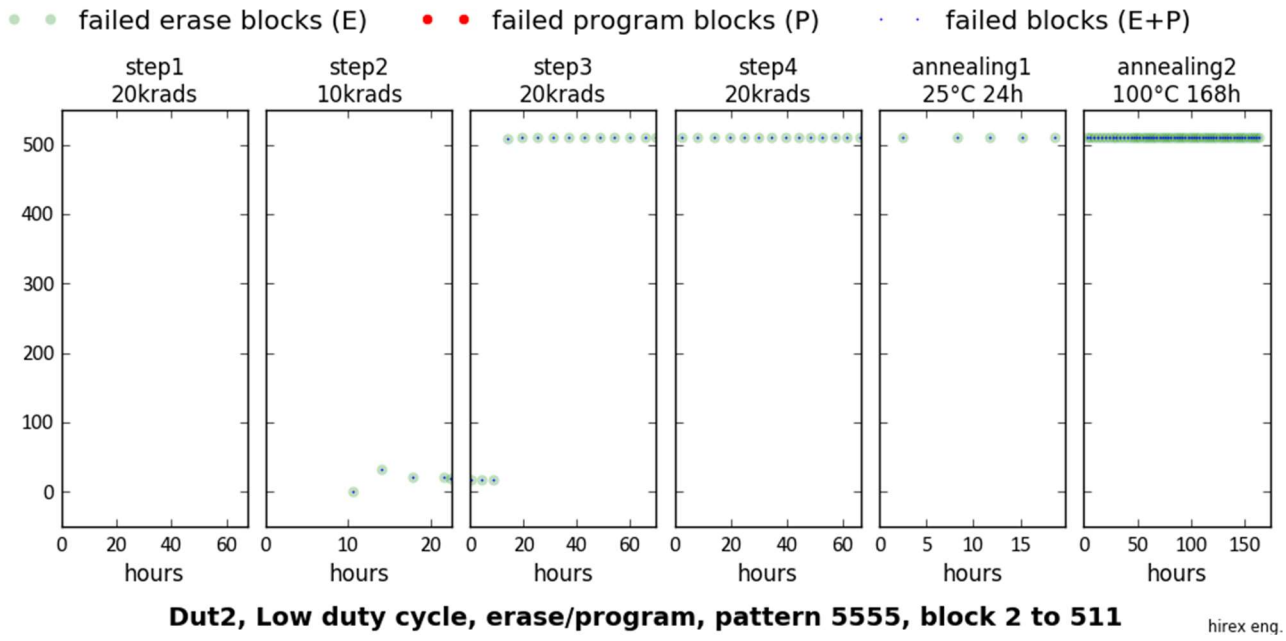


12.16.6 DUT1, Low Duty Cycle, DUT access status

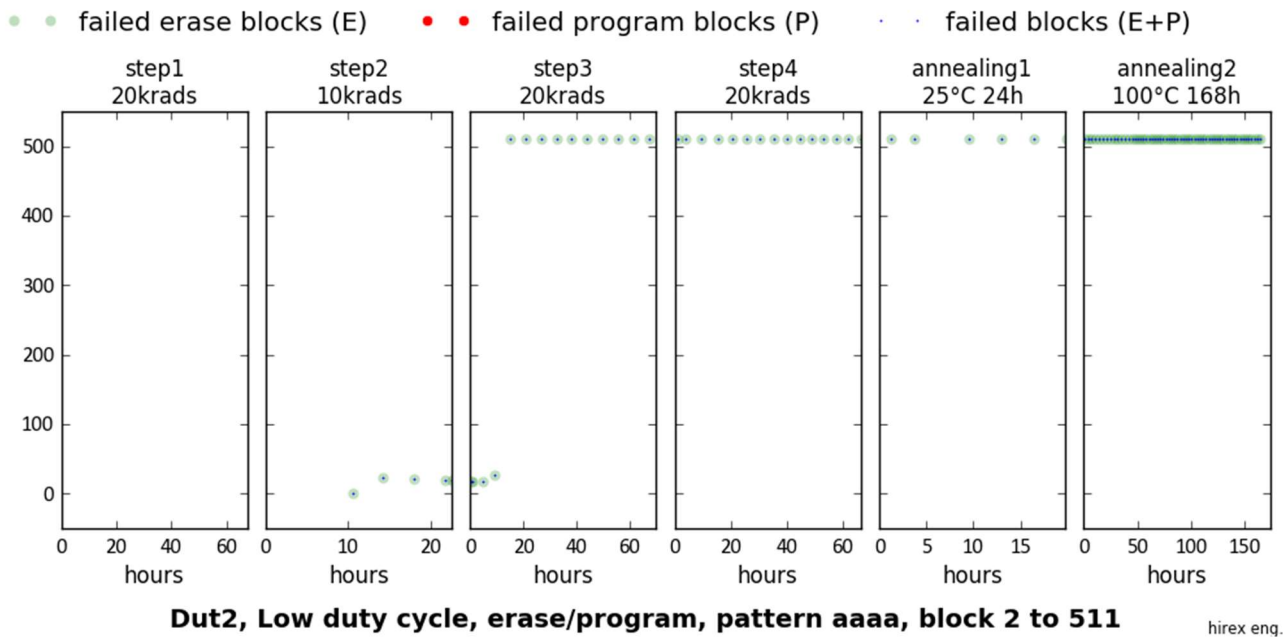


12.17 DUT2 (Board 2), Low duty cycle

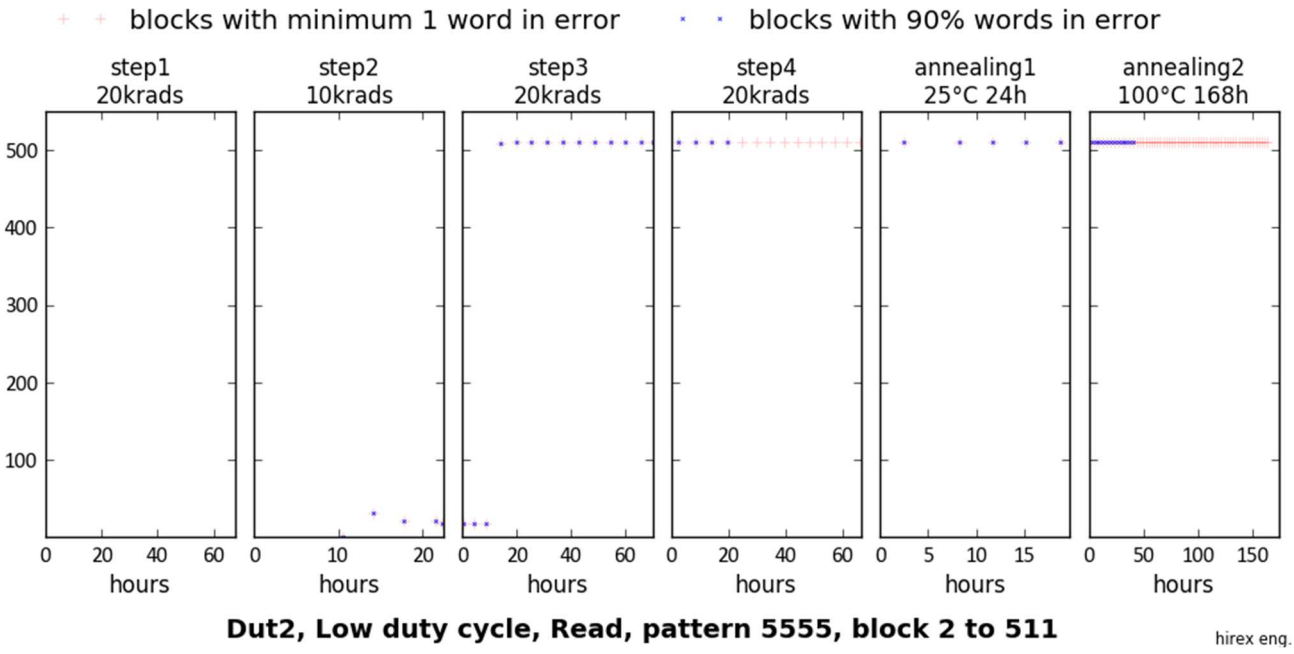
12.17.1 DUT2, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

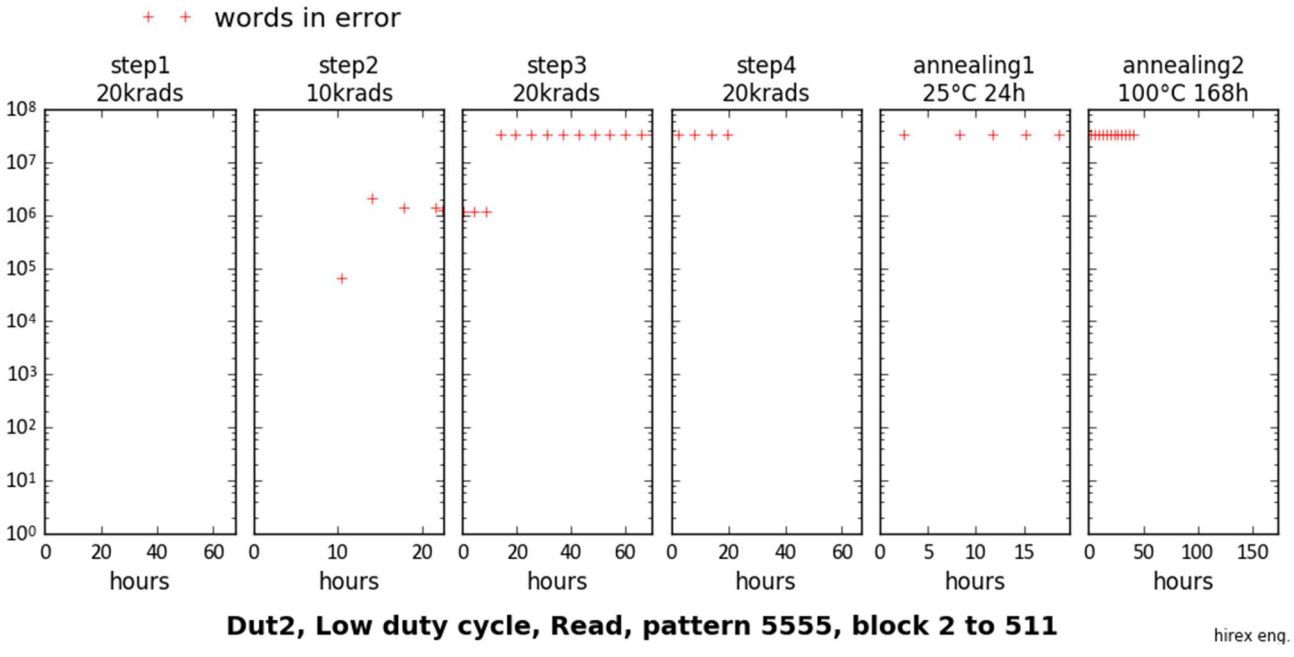


12.17.2 DUT2, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

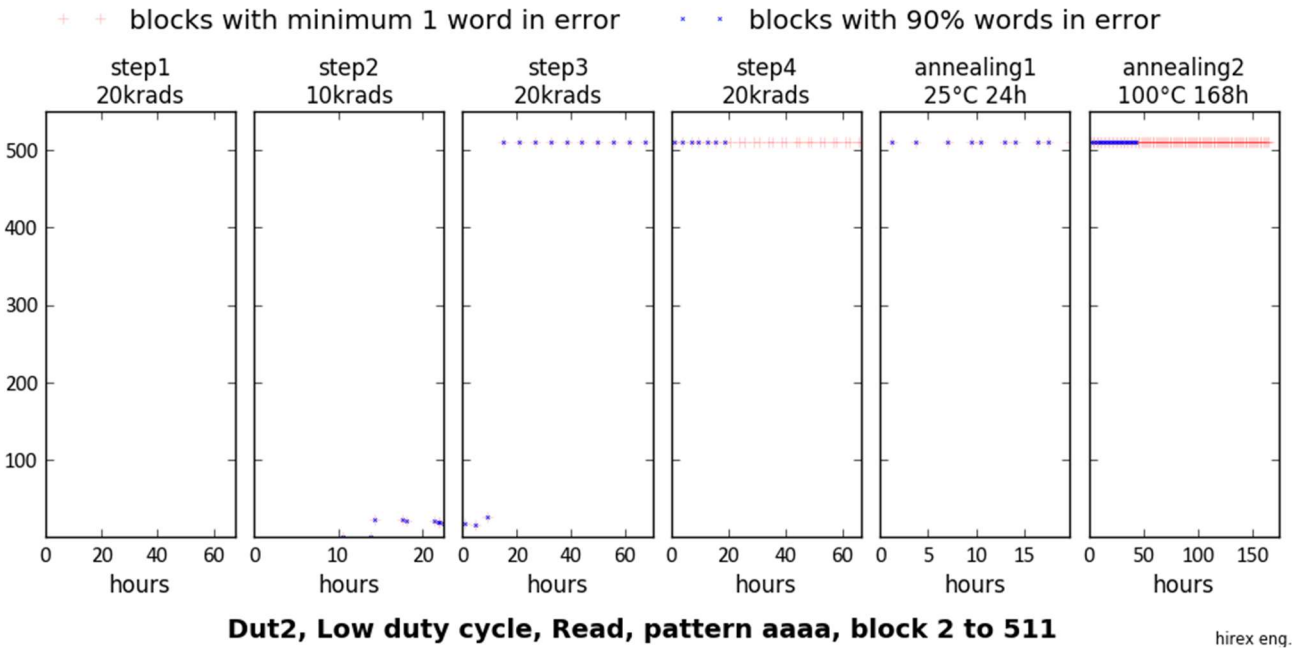


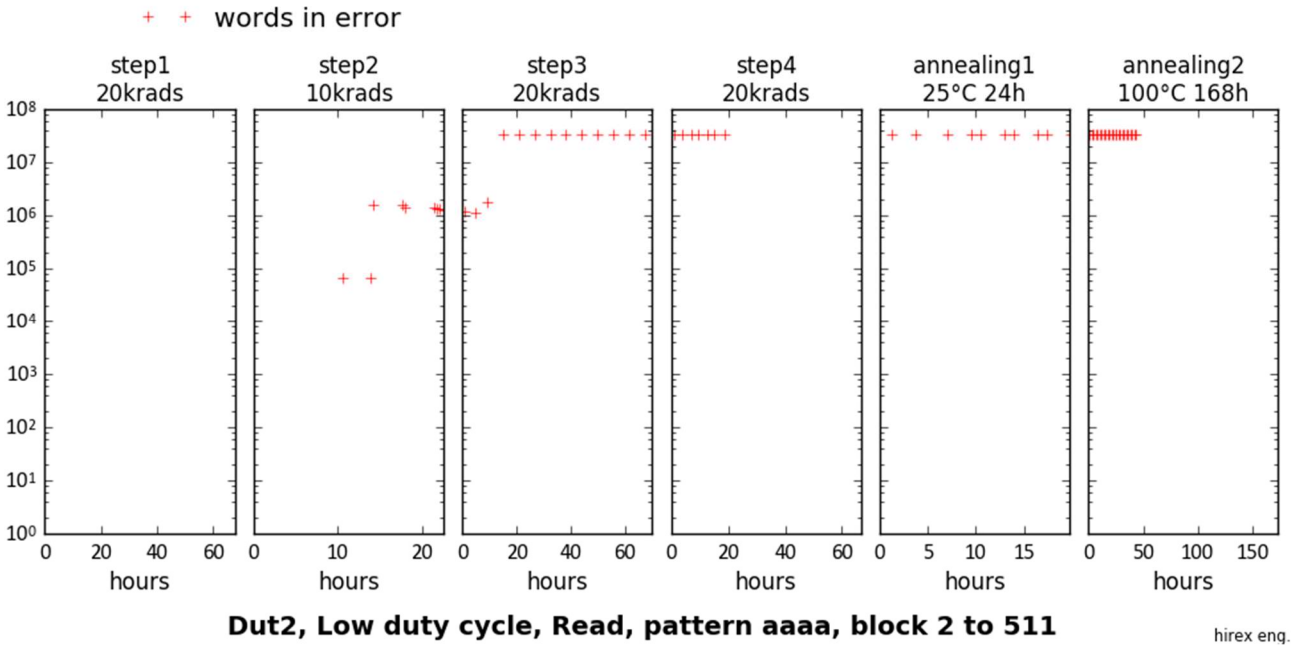
12.17.3 DUT2, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



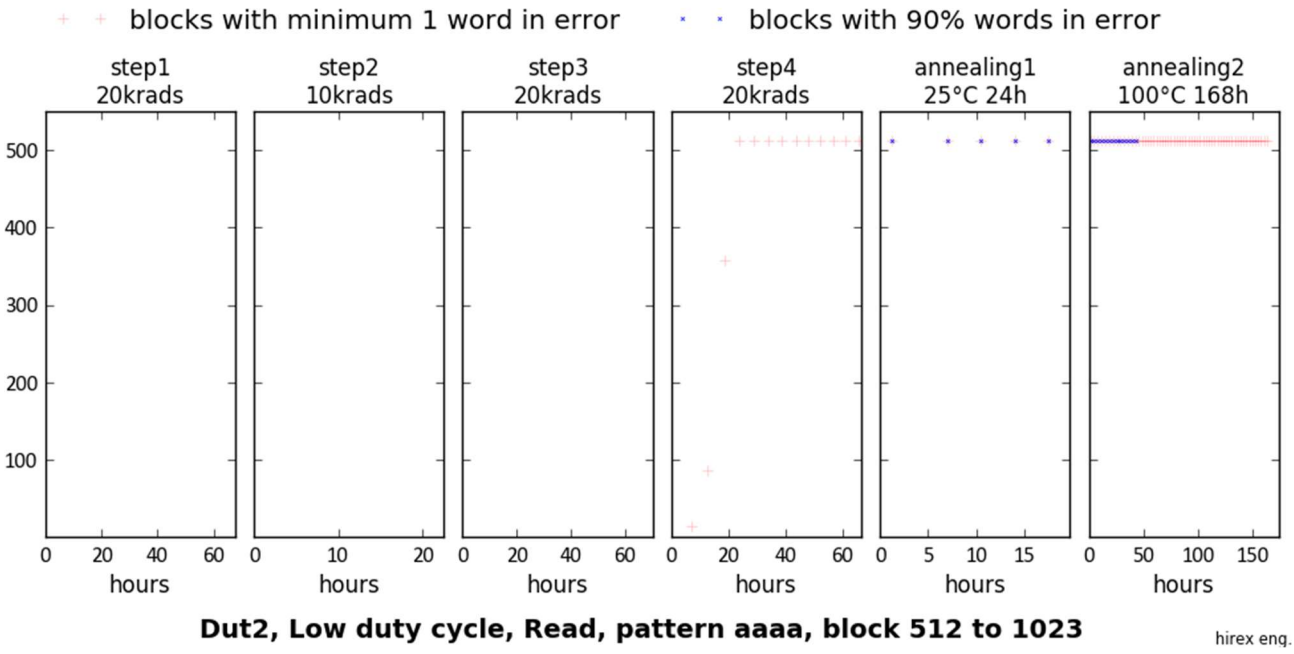


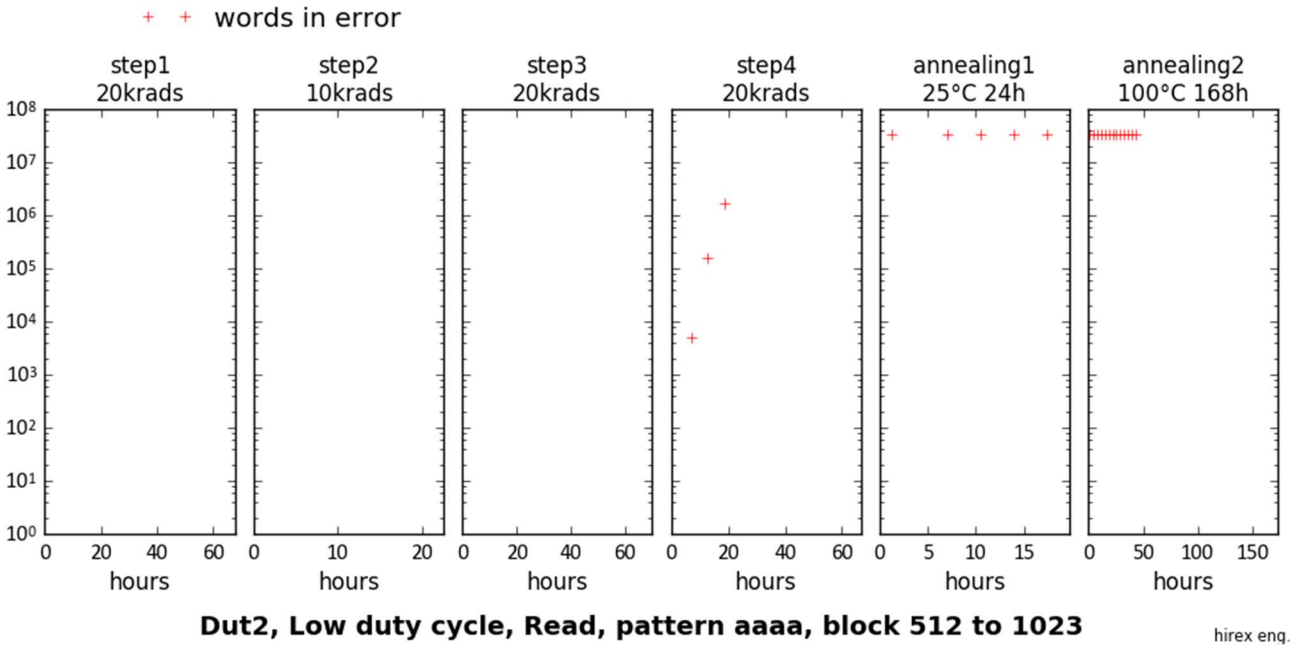
12.17.4 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



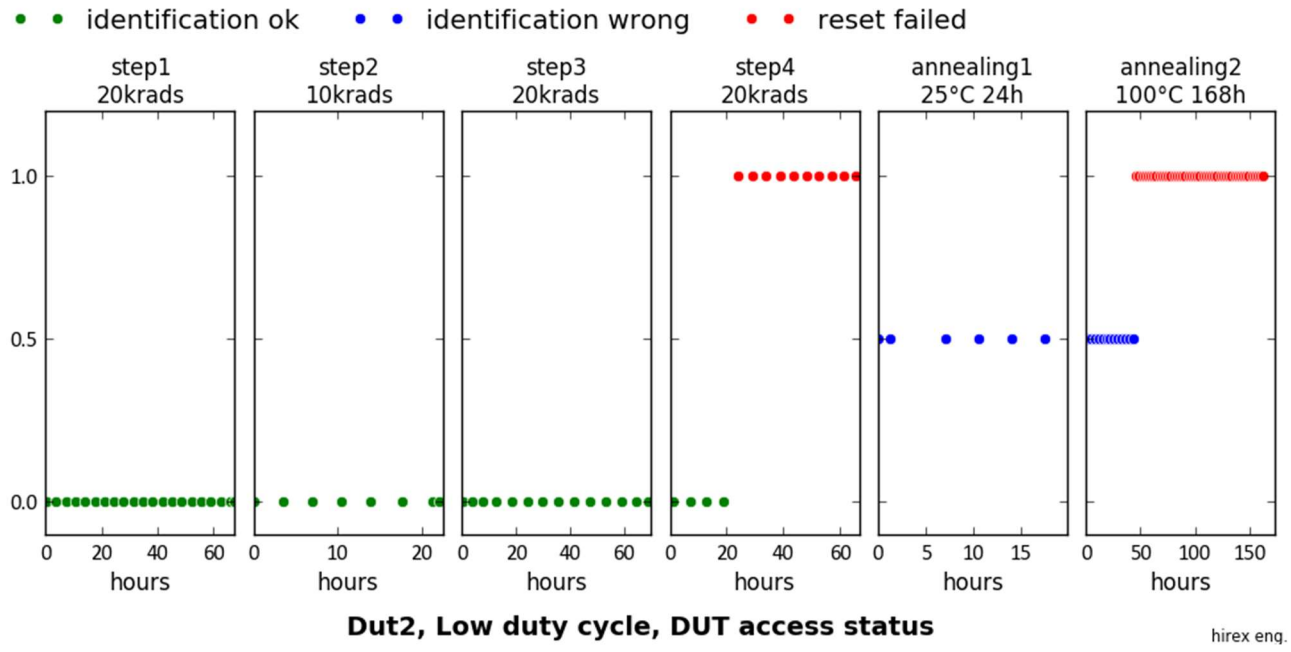


12.17.5 DUT2, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



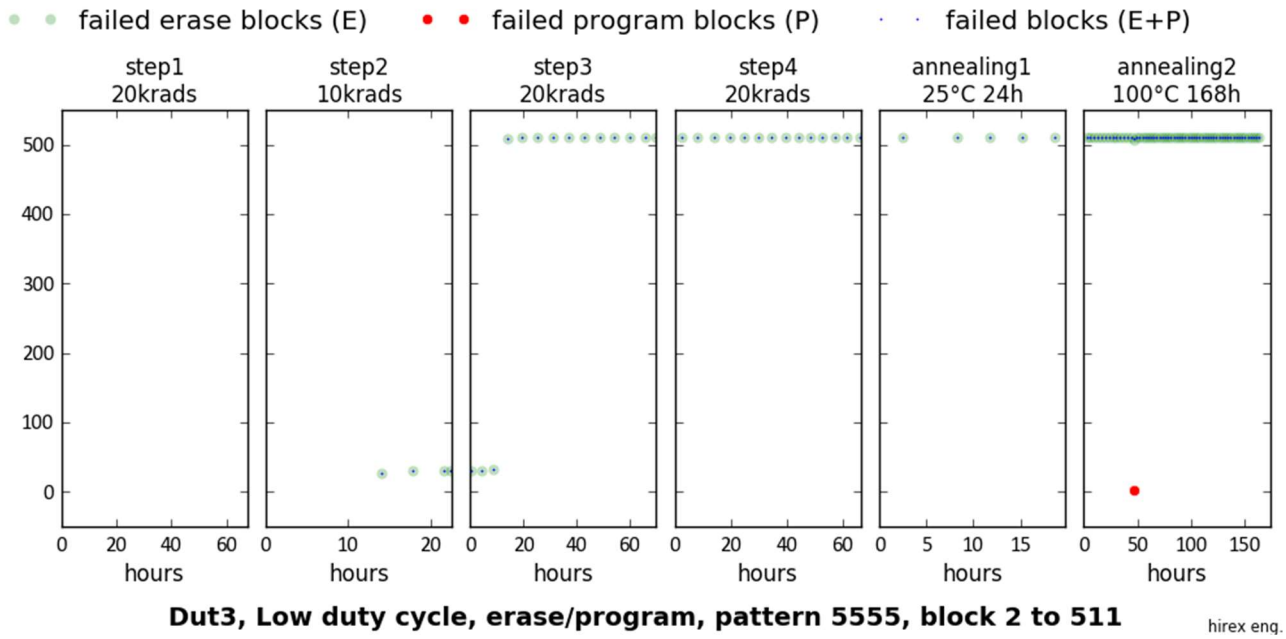


12.17.6 DUT2, Low Duty Cycle, DUT access status

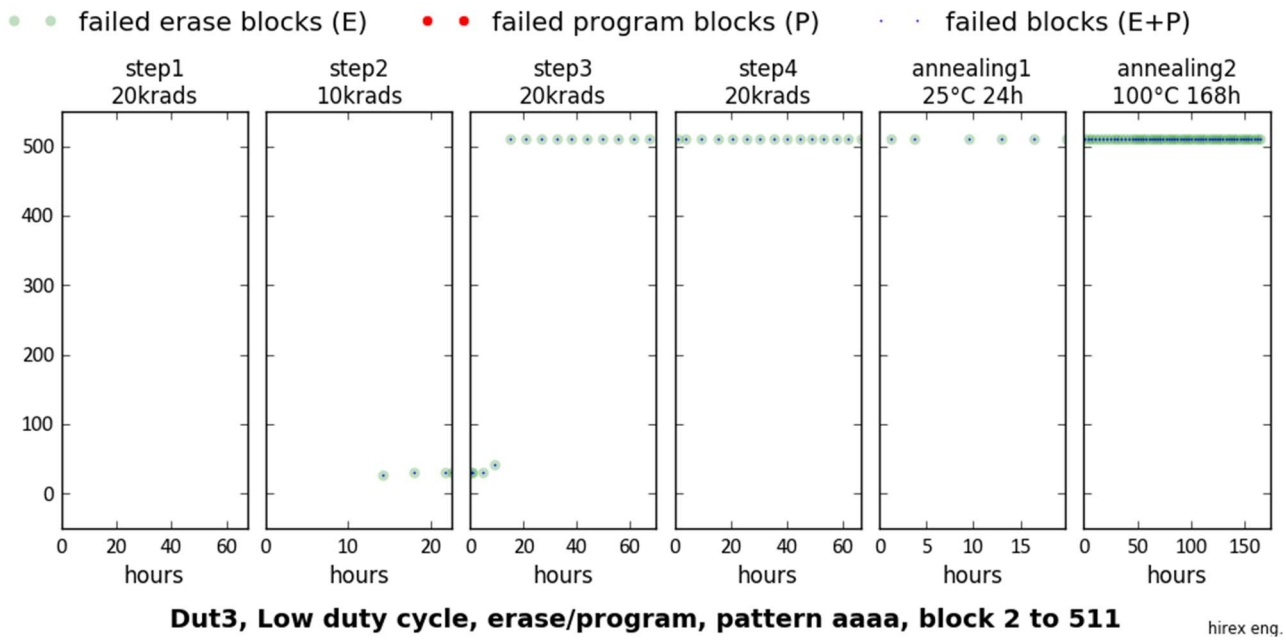


12.18 DUT3 (Board 2), Low duty cycle

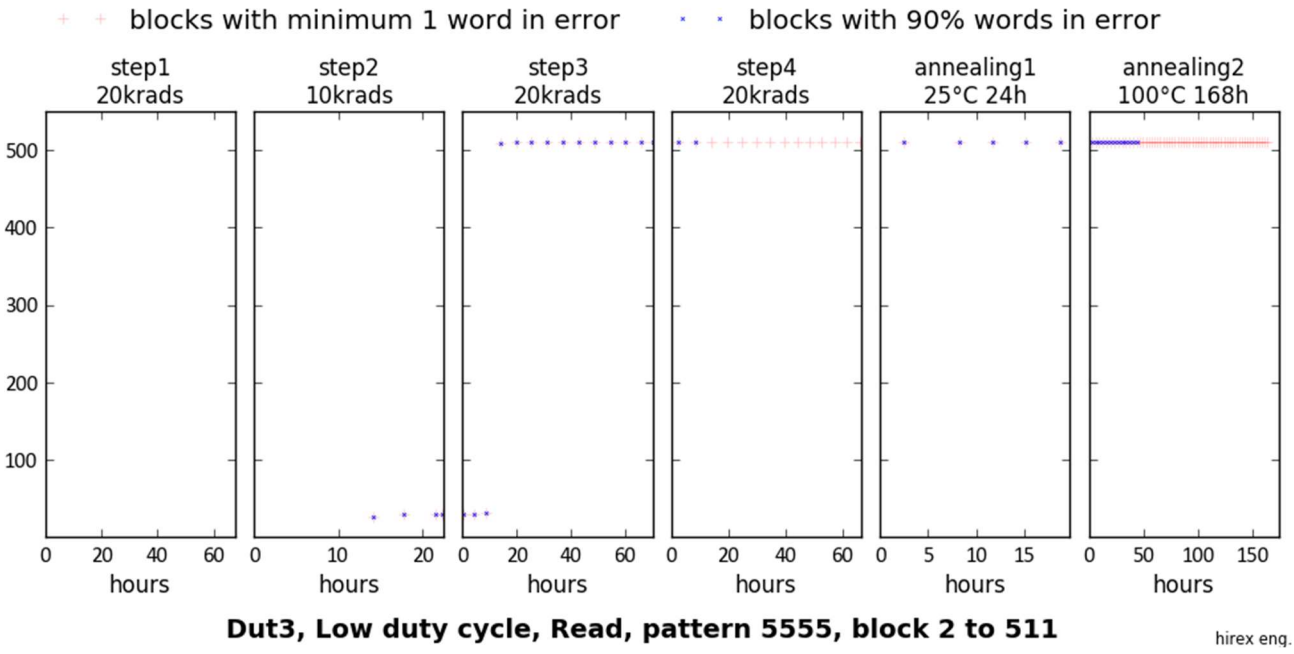
12.18.1 DUT3, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

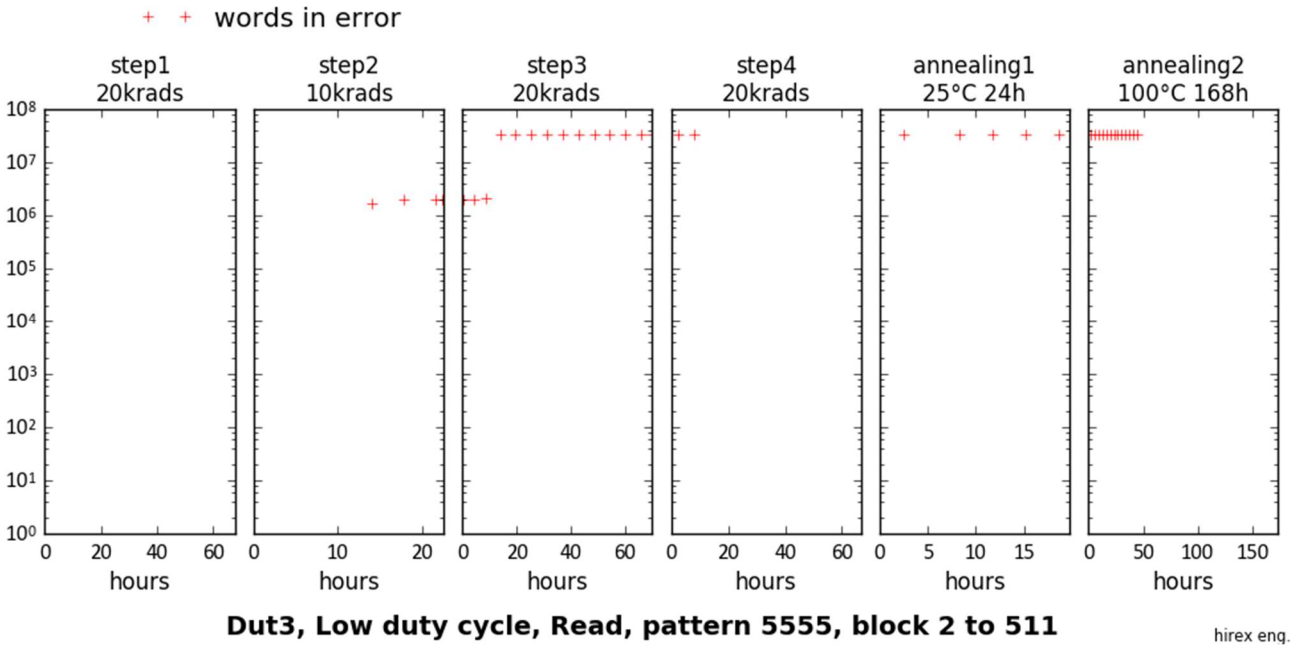


12.18.2 DUT3, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

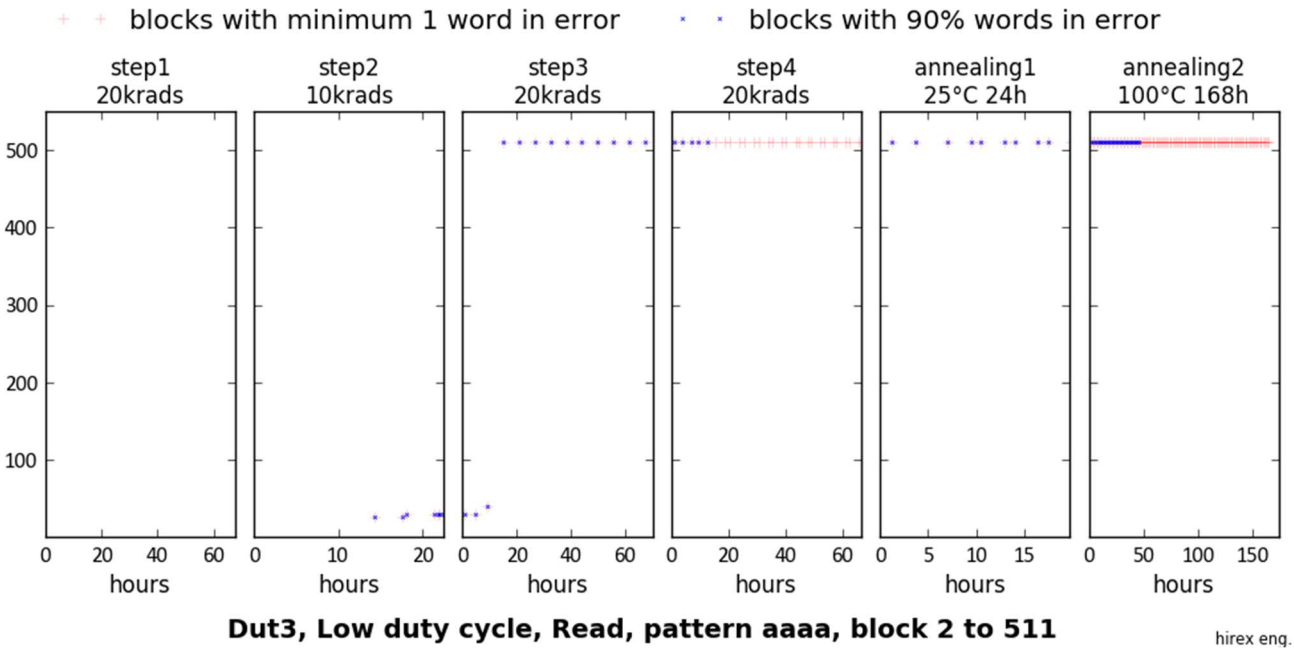


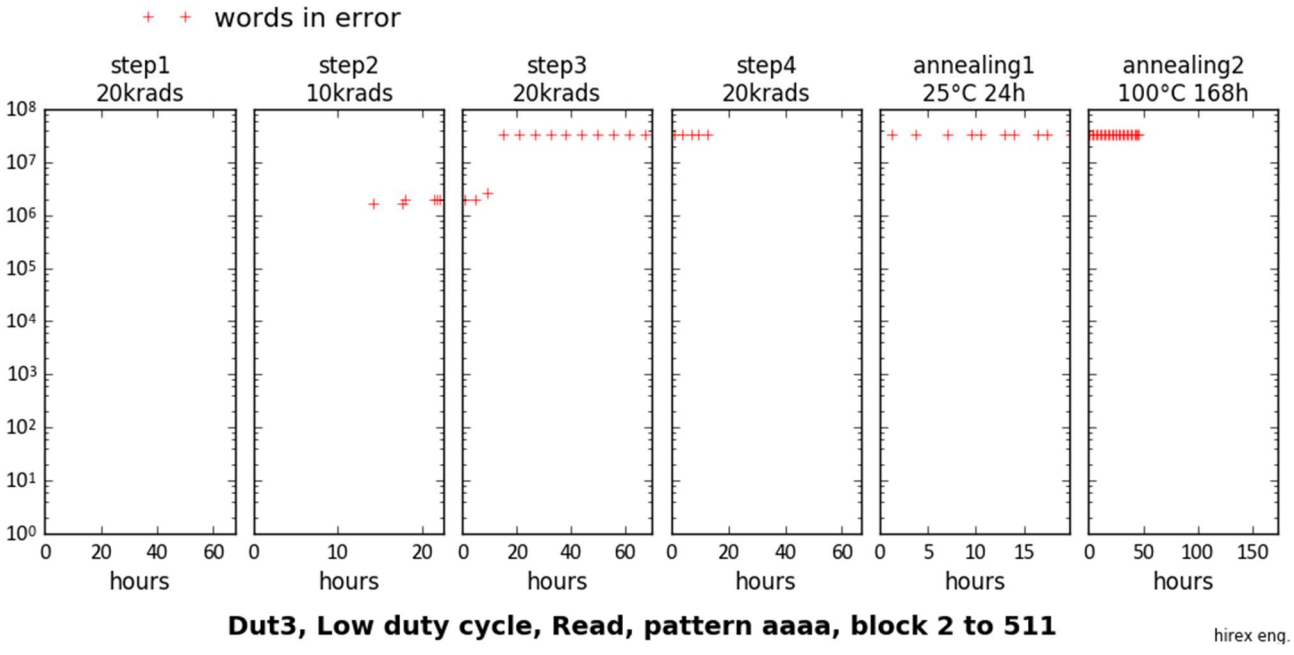
12.18.3 DUT3, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



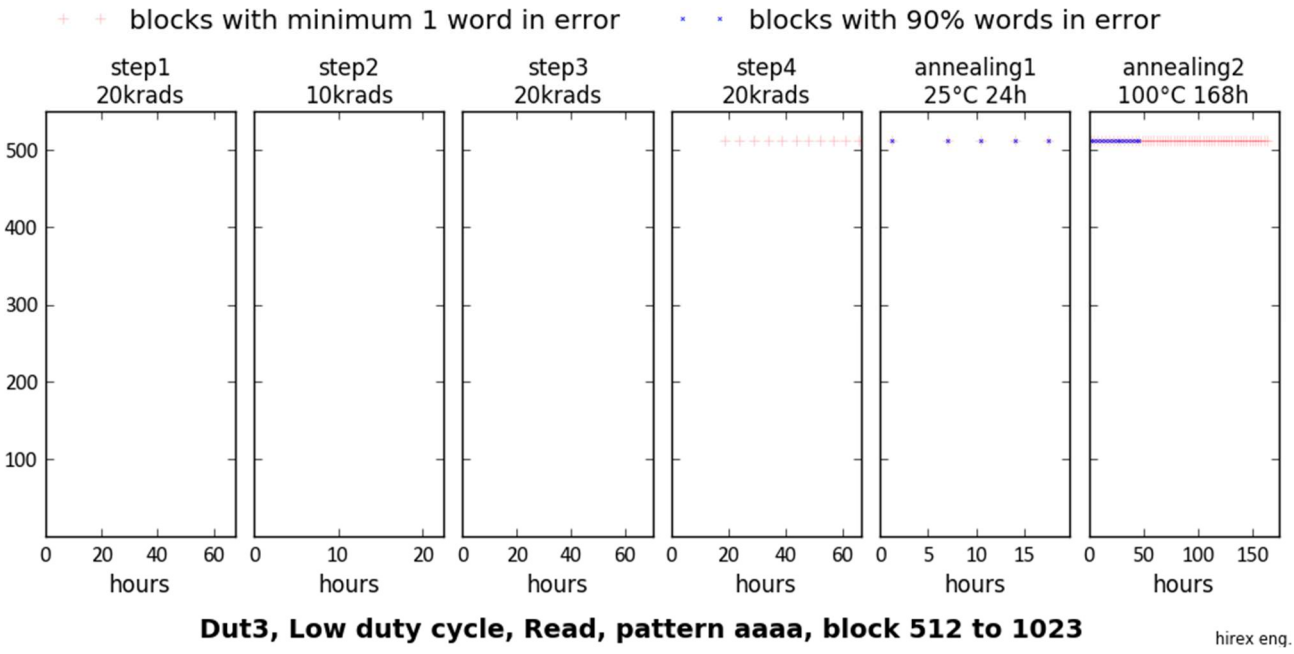


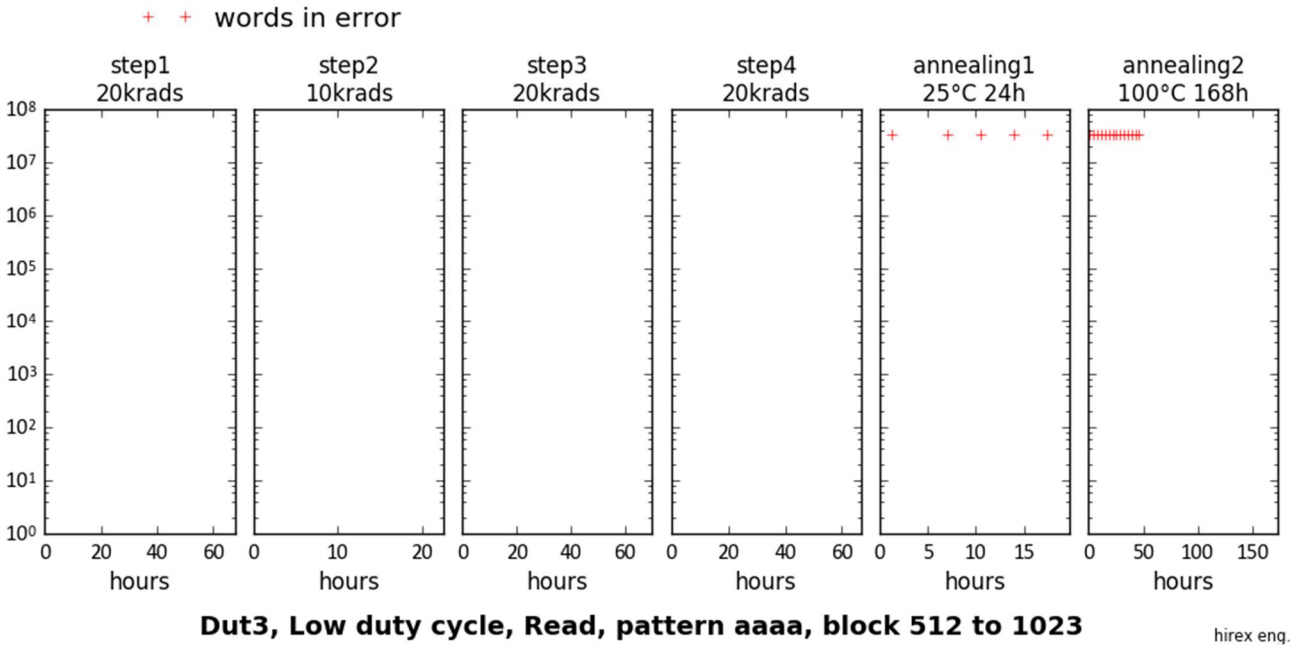
12.18.4 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



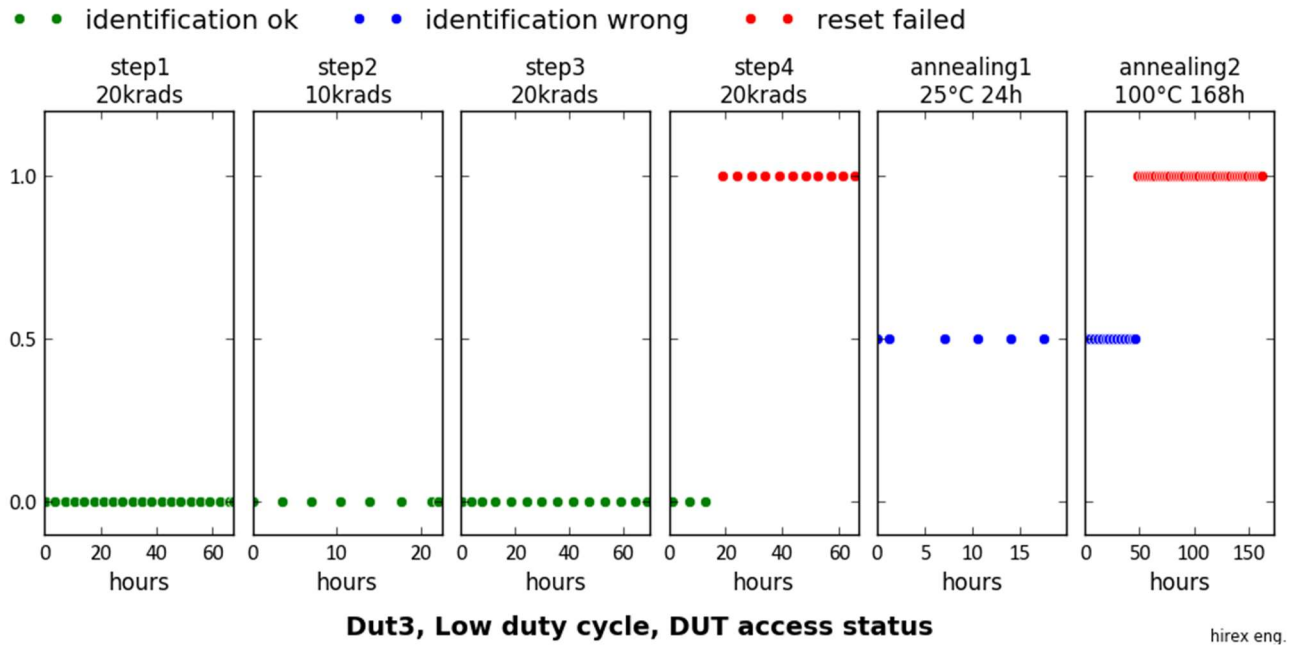


12.18.5 DUT3, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



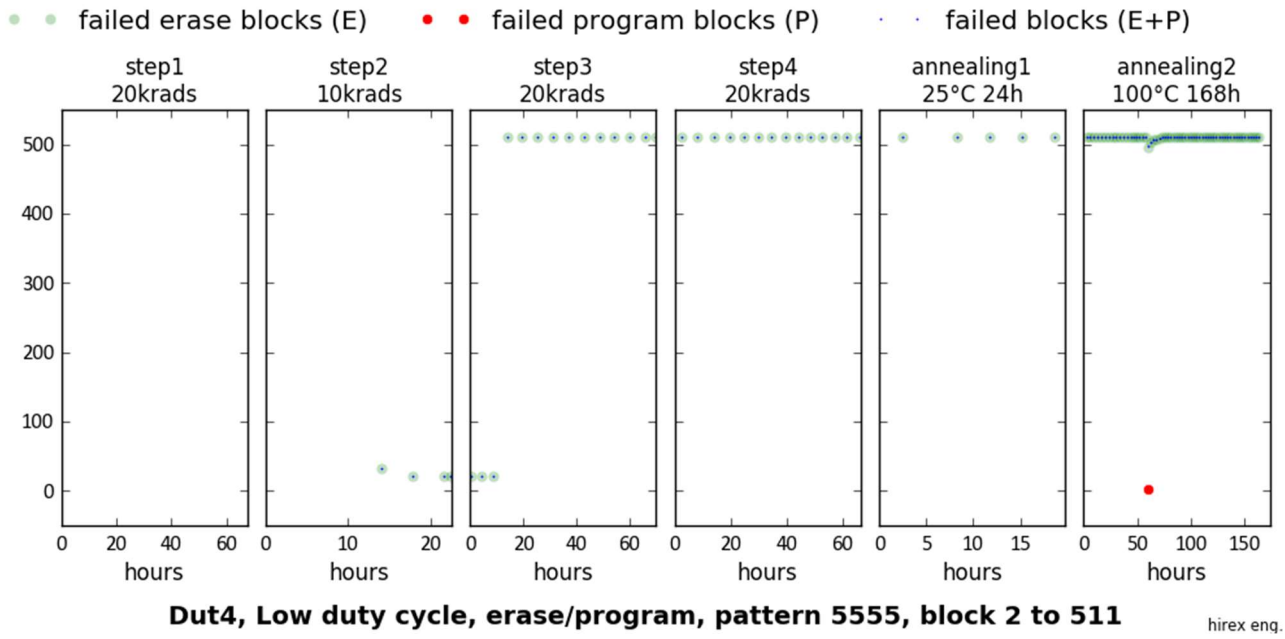


12.18.6 DUT3, Low Duty Cycle, DUT access status

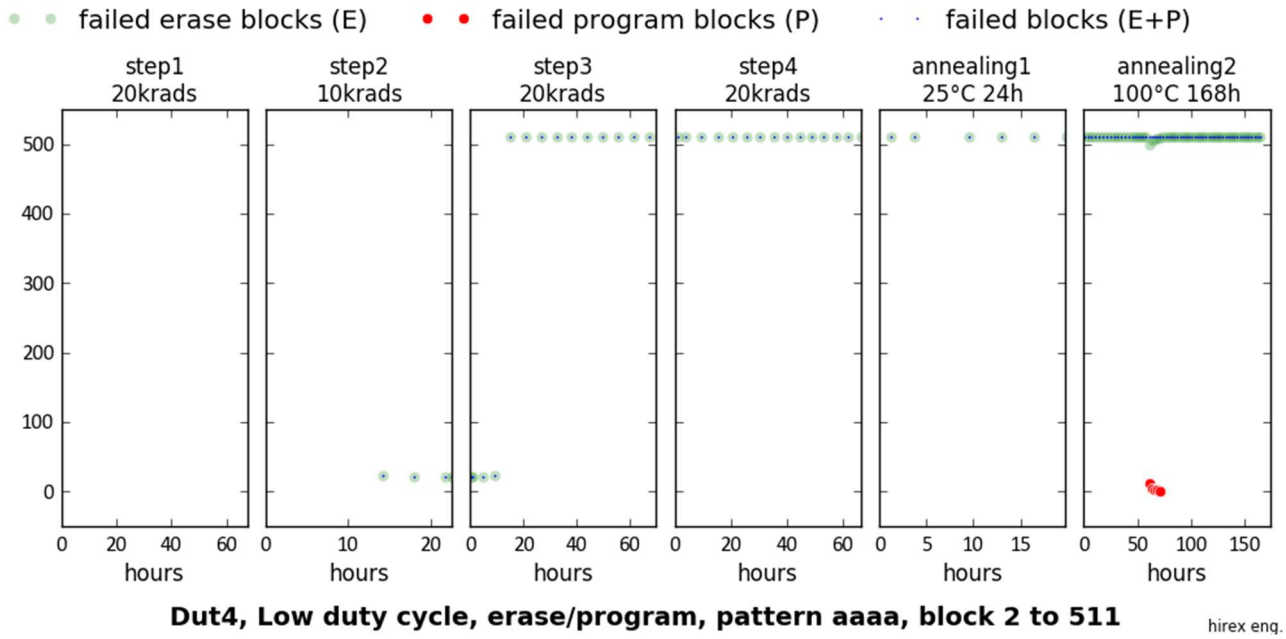


12.19 DUT4 (Board 2), Low duty cycle

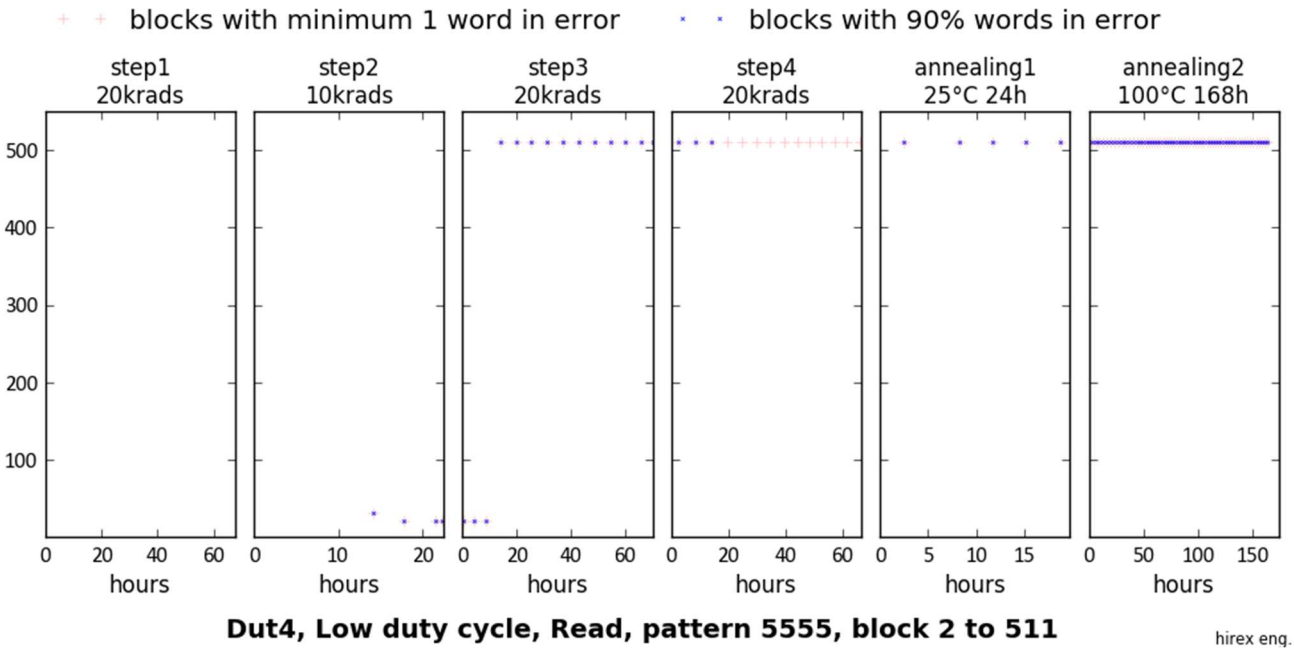
12.19.1 DUT4, Low Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

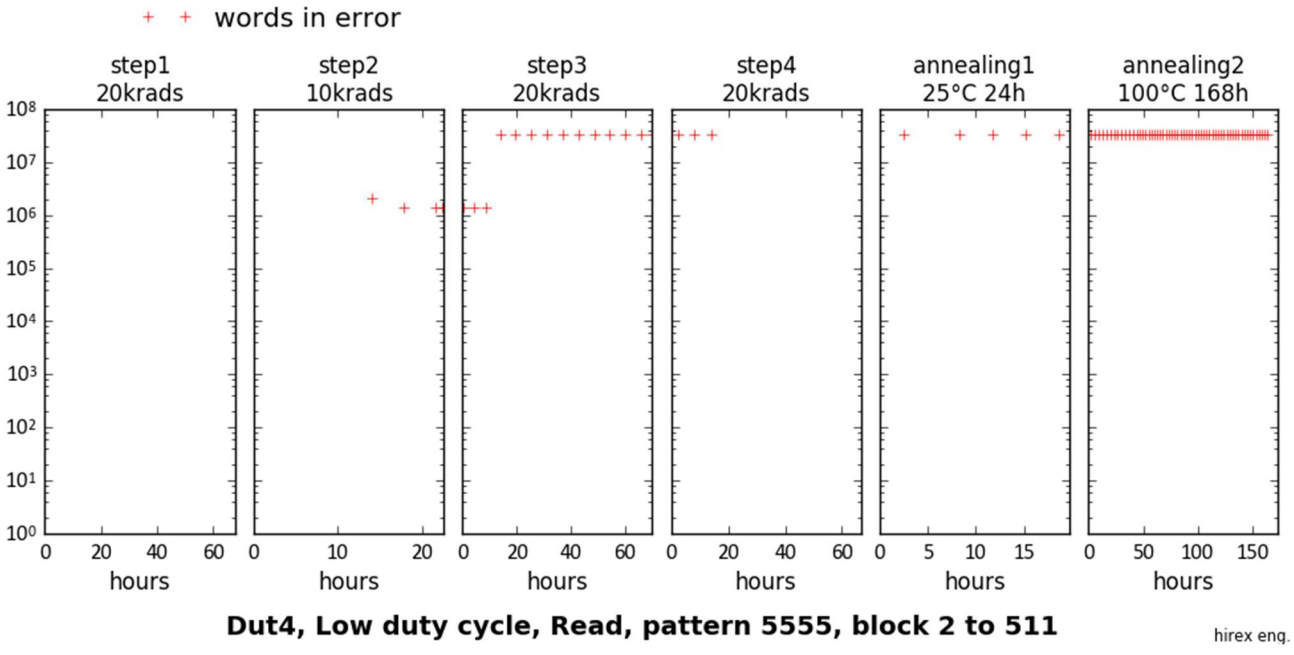


12.19.2 DUT4, Low Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

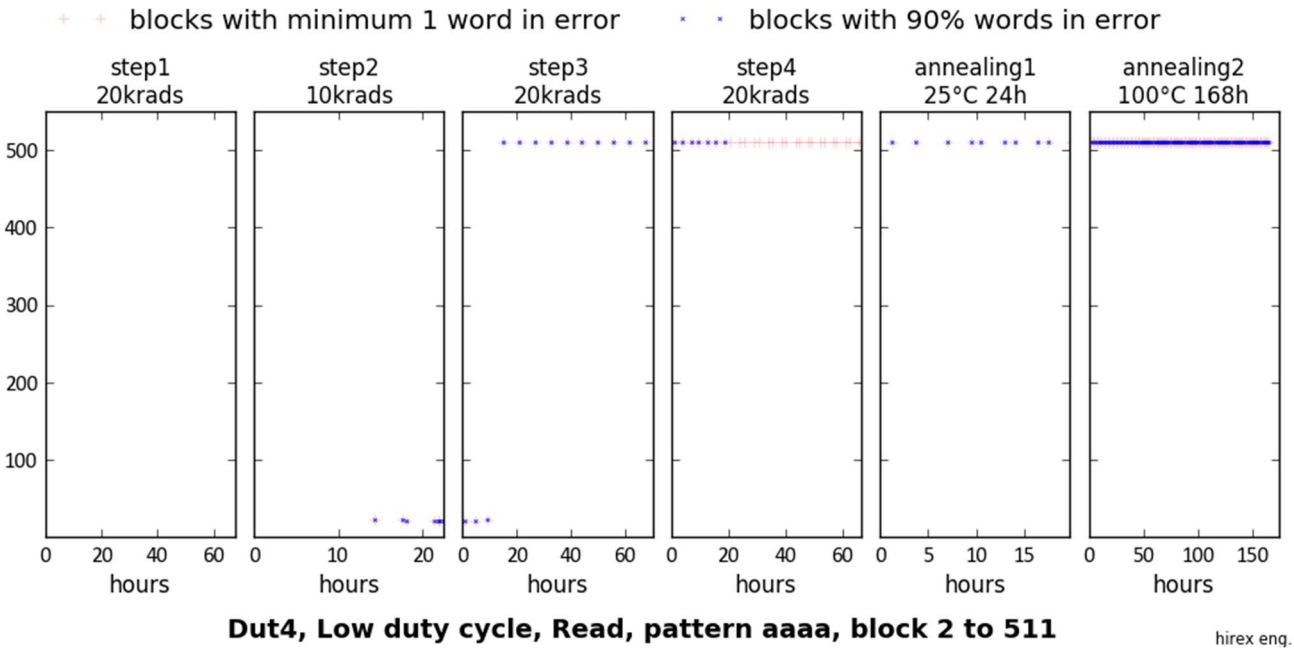


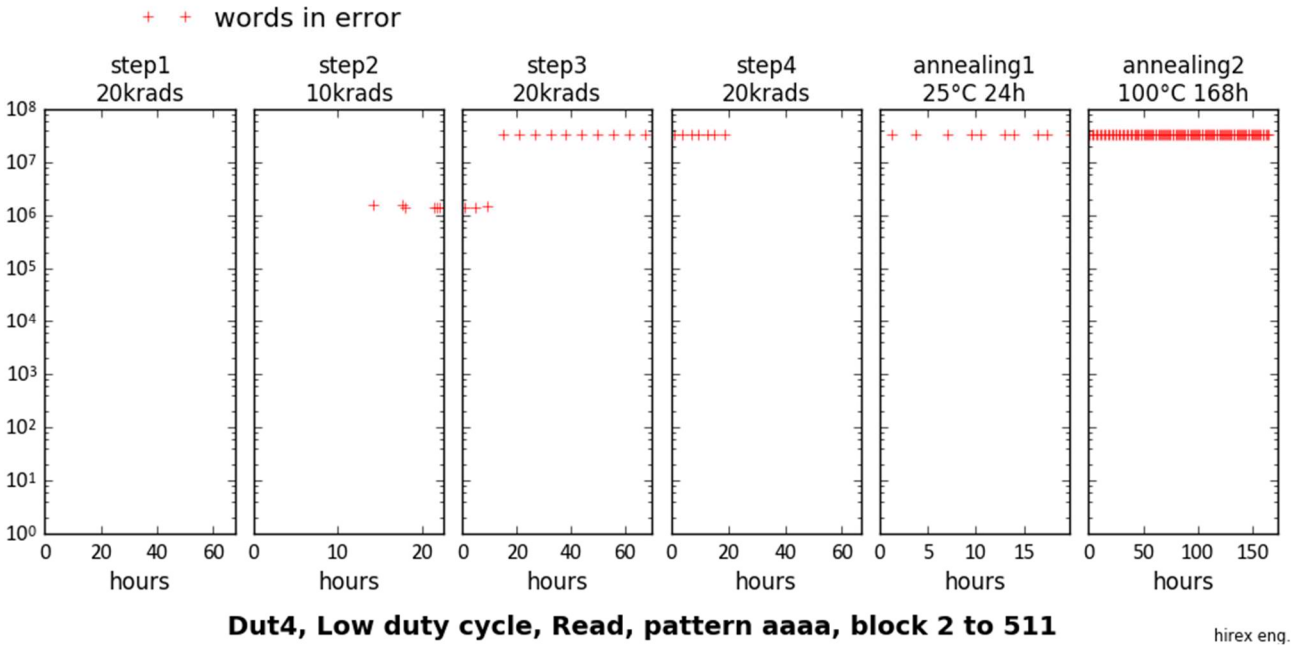
12.19.3 DUT4, Low Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



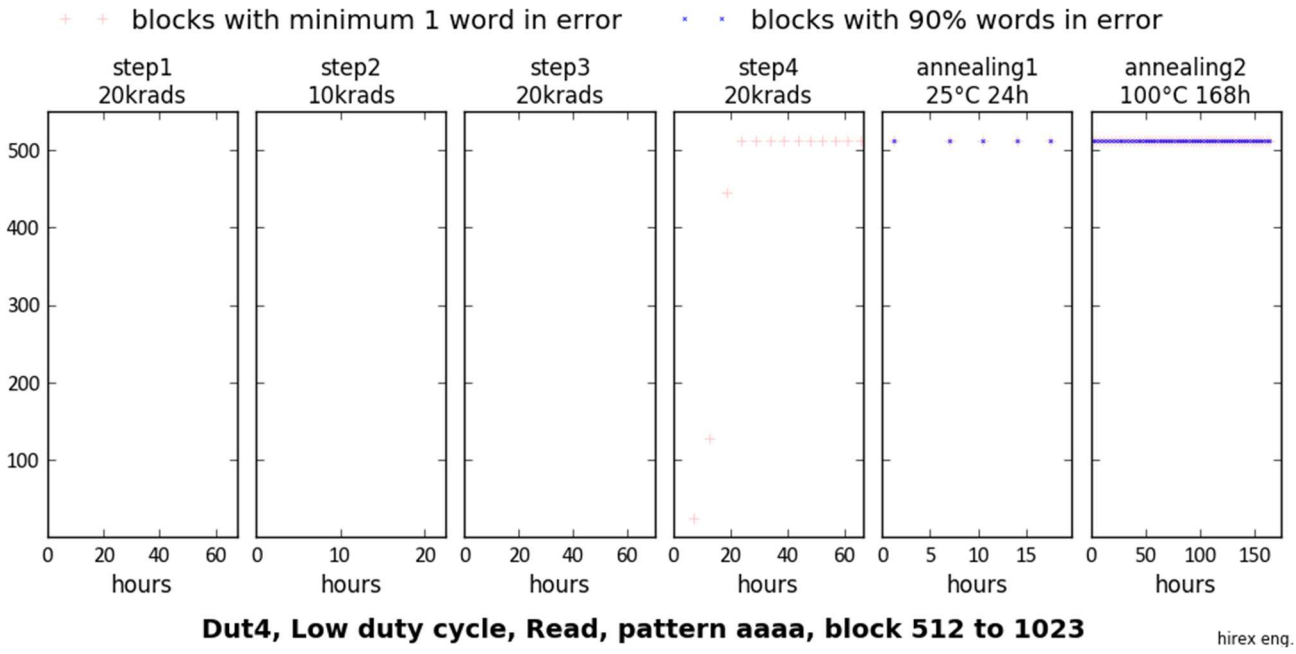


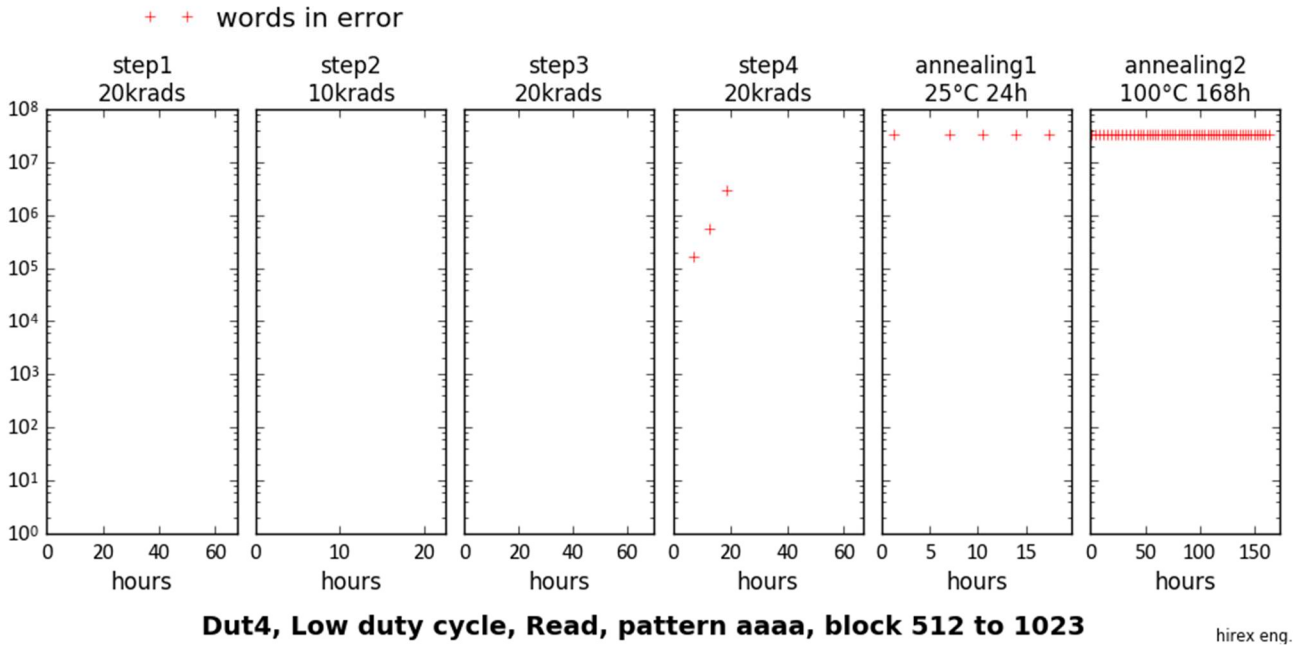
12.19.4 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



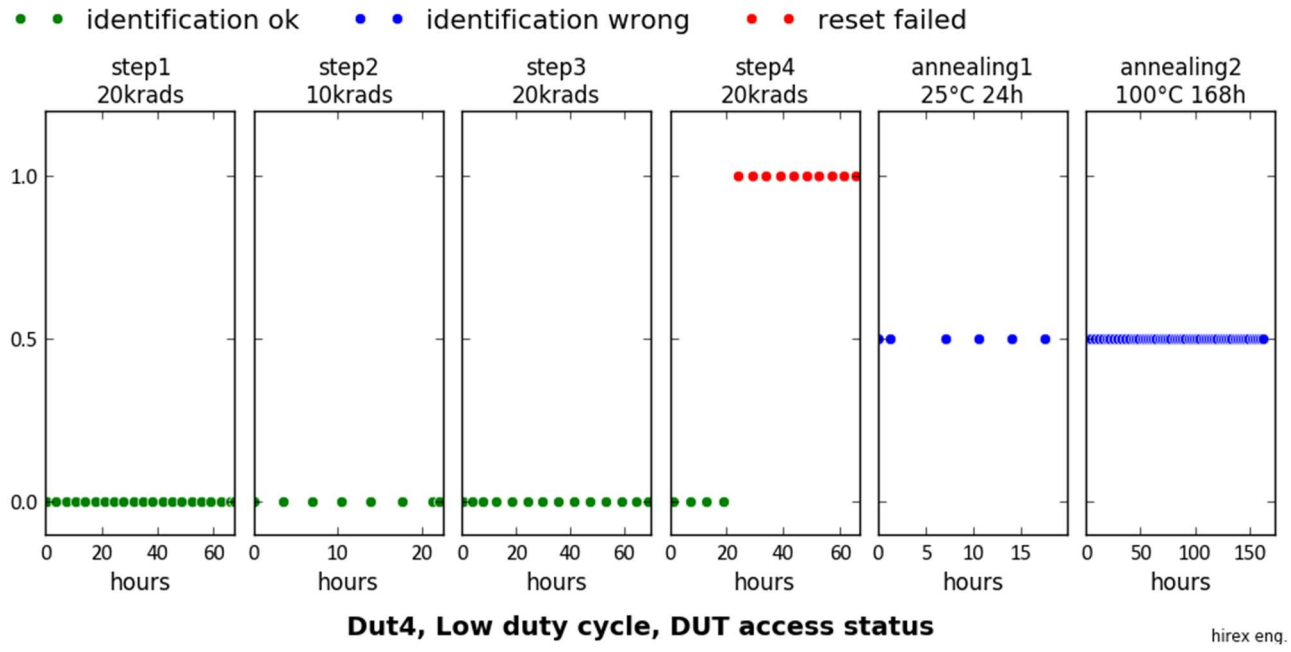


12.19.5 DUT4, Low Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



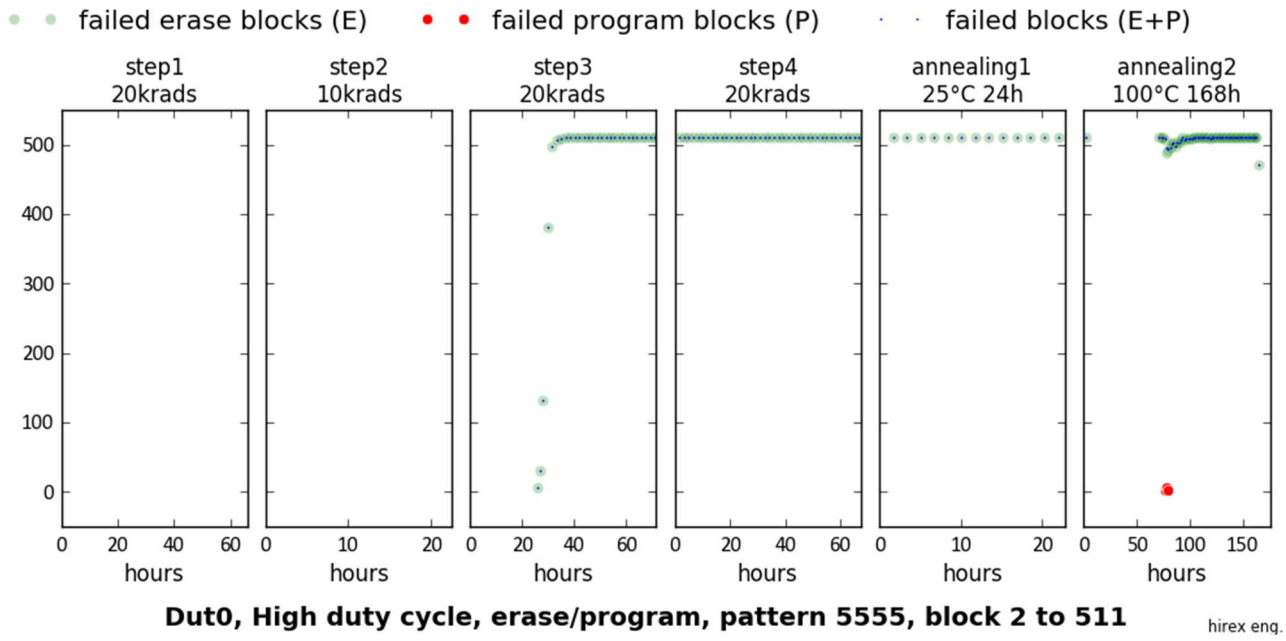


12.19.6 DUT4, Low Duty Cycle, DUT access status

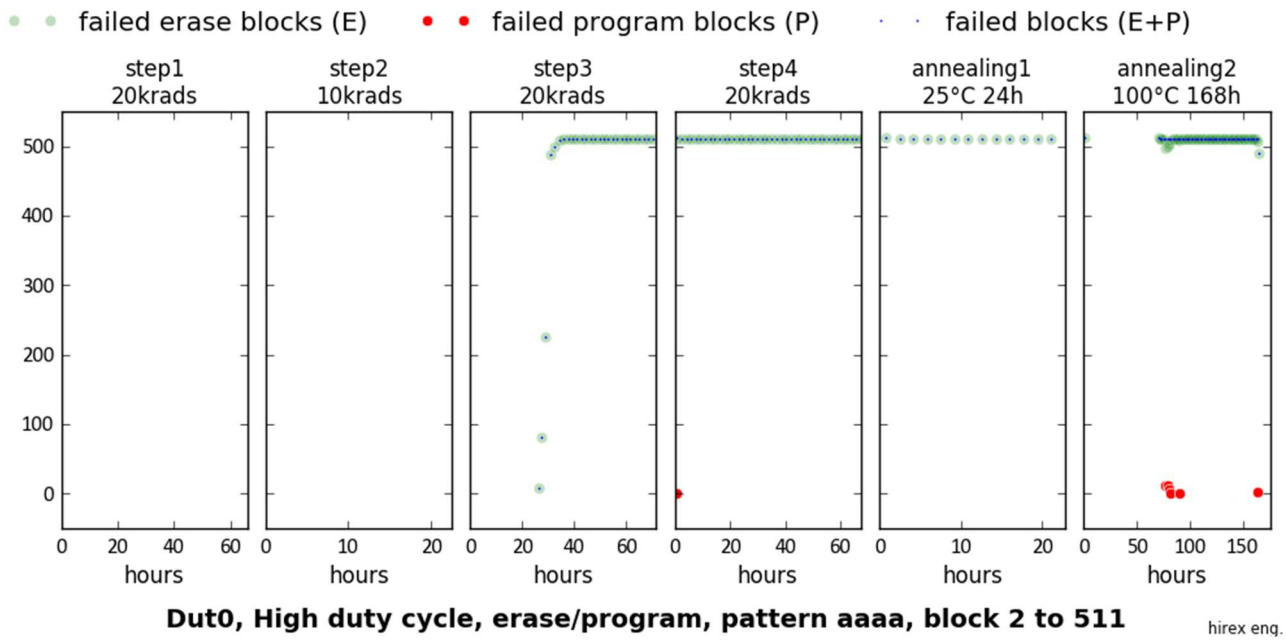


12.20 DUT0 (Board 3), High duty cycle

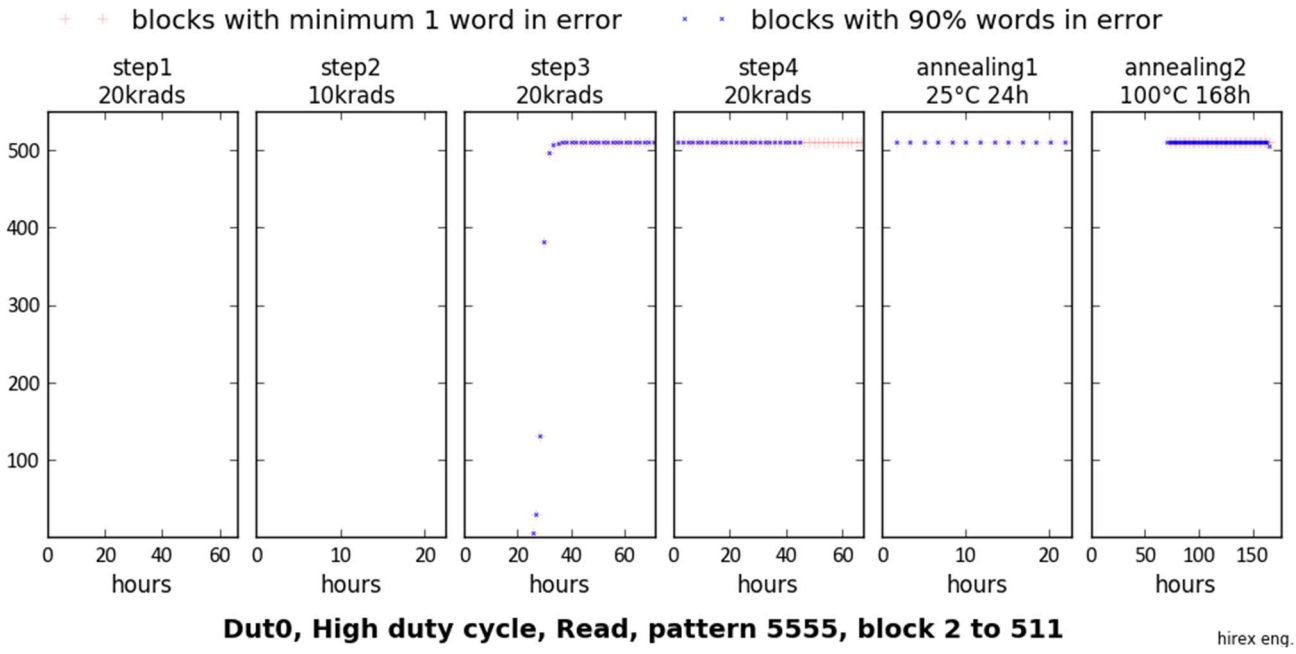
12.20.1 DUT0, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

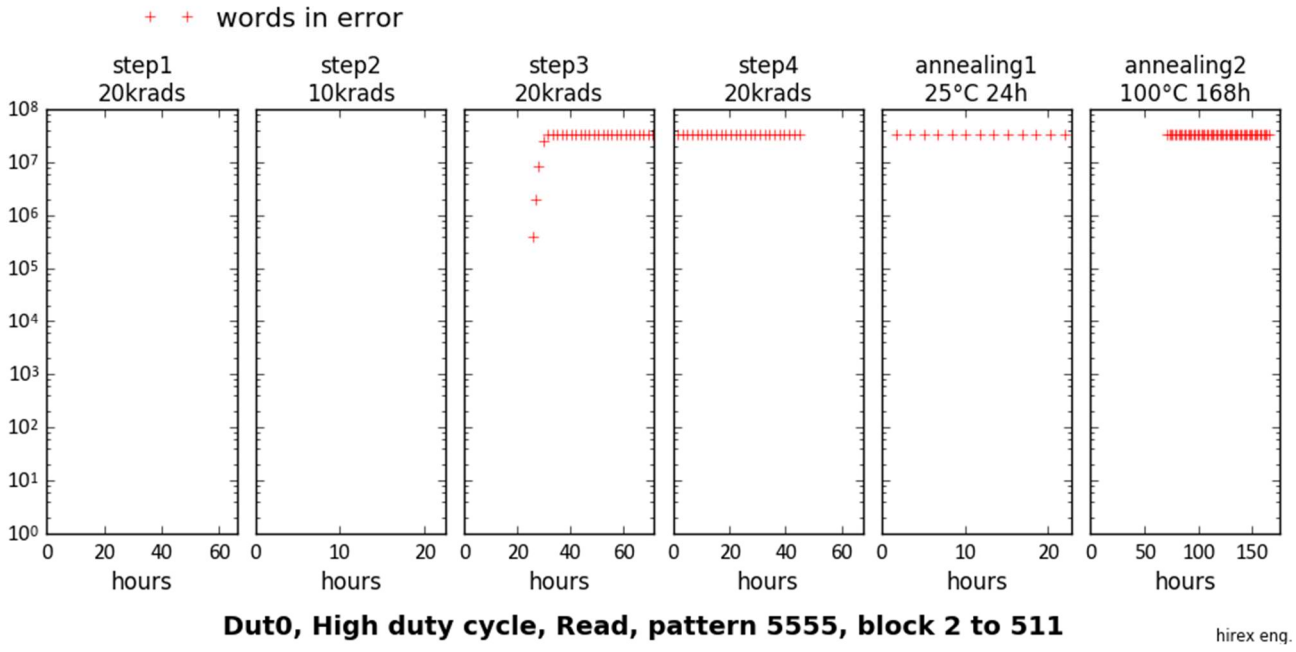


12.20.2 DUT0, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

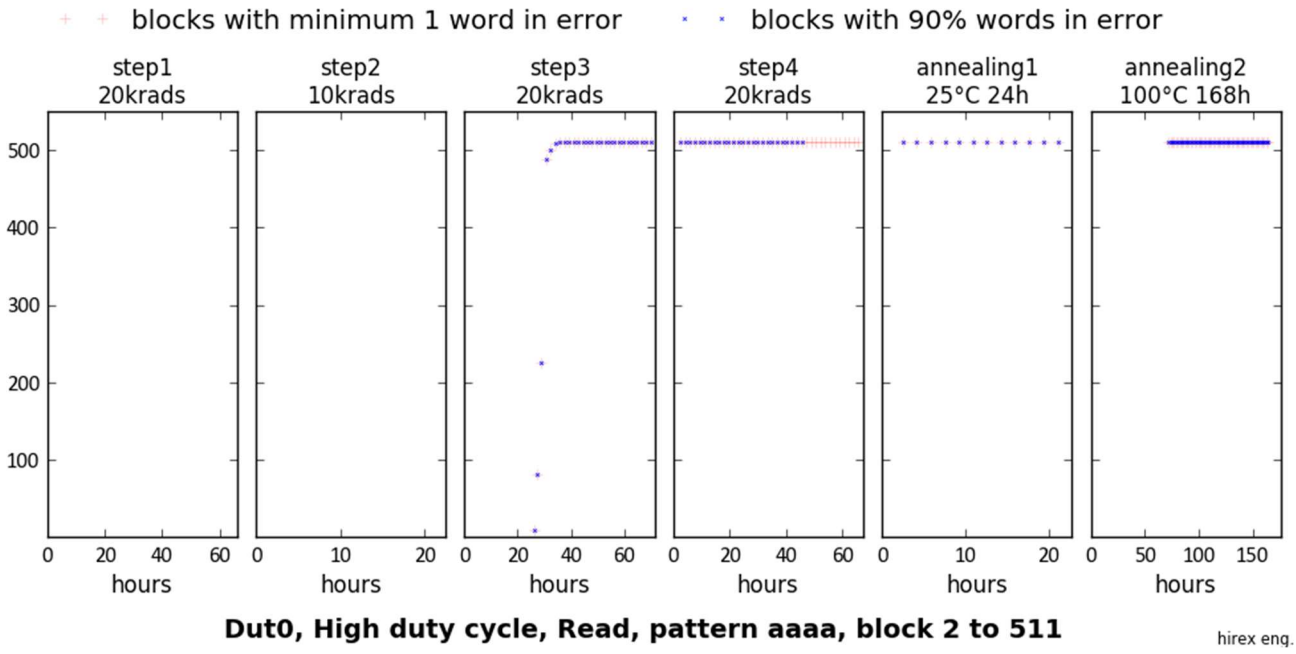


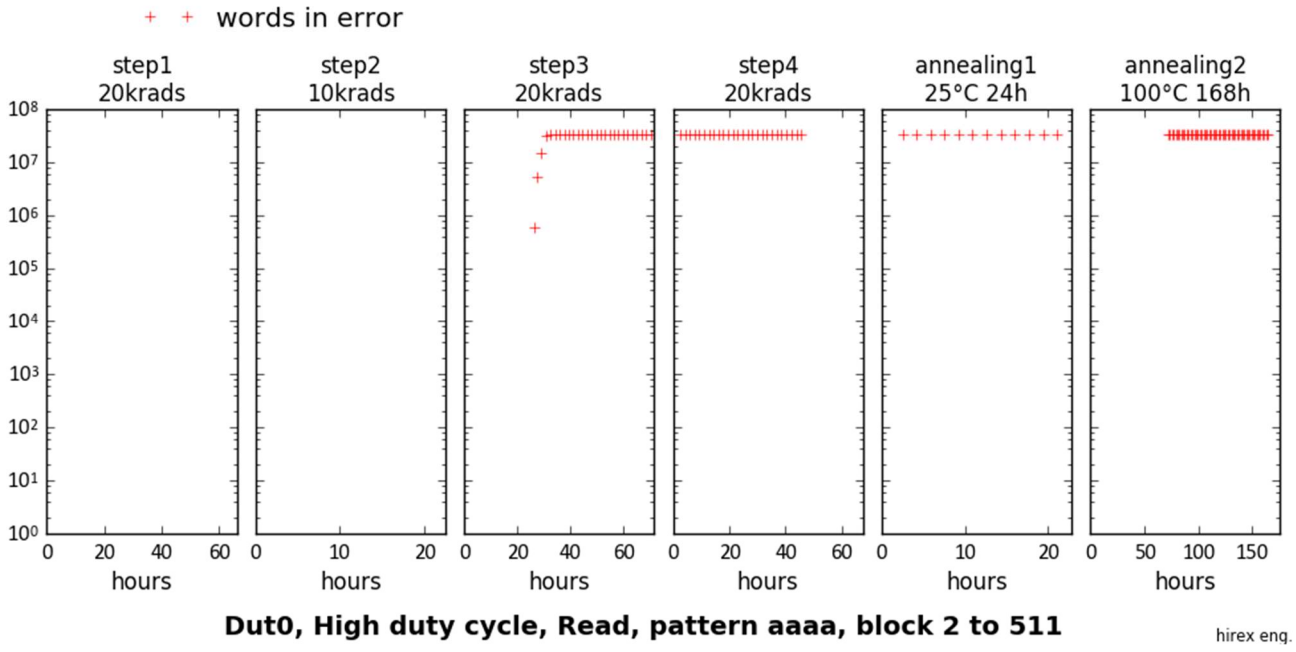
12.20.3 DUT0, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



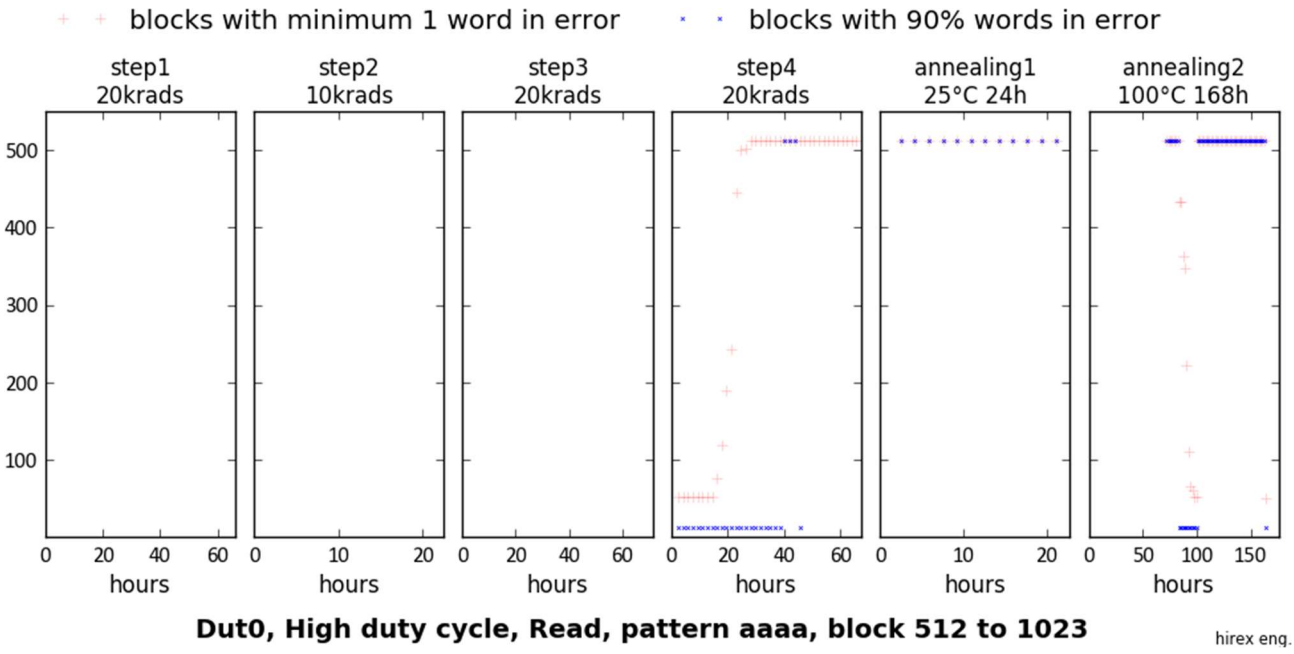


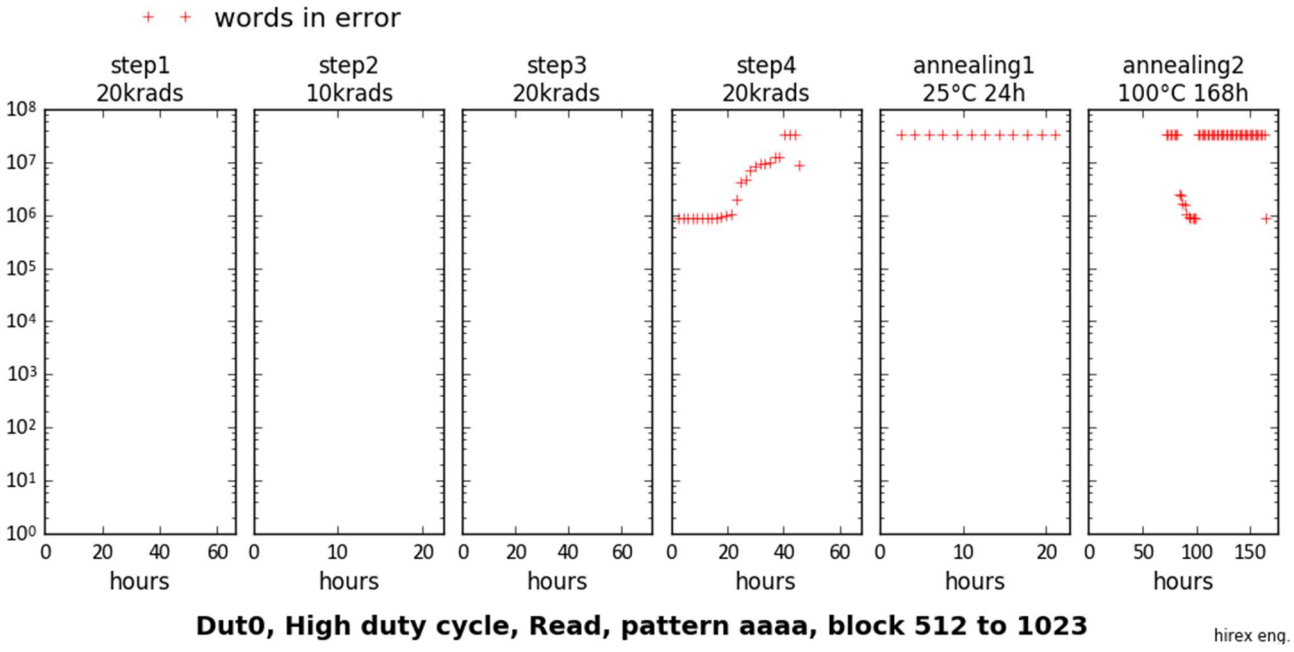
12.20.4 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



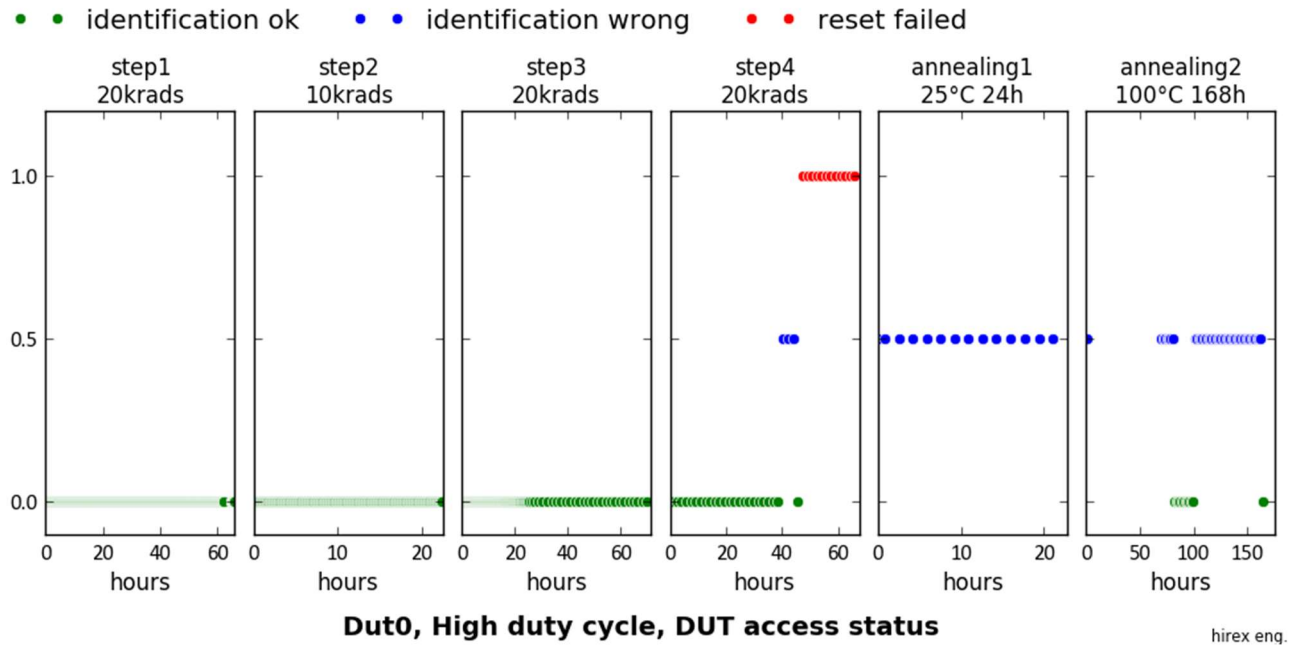


12.20.5 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



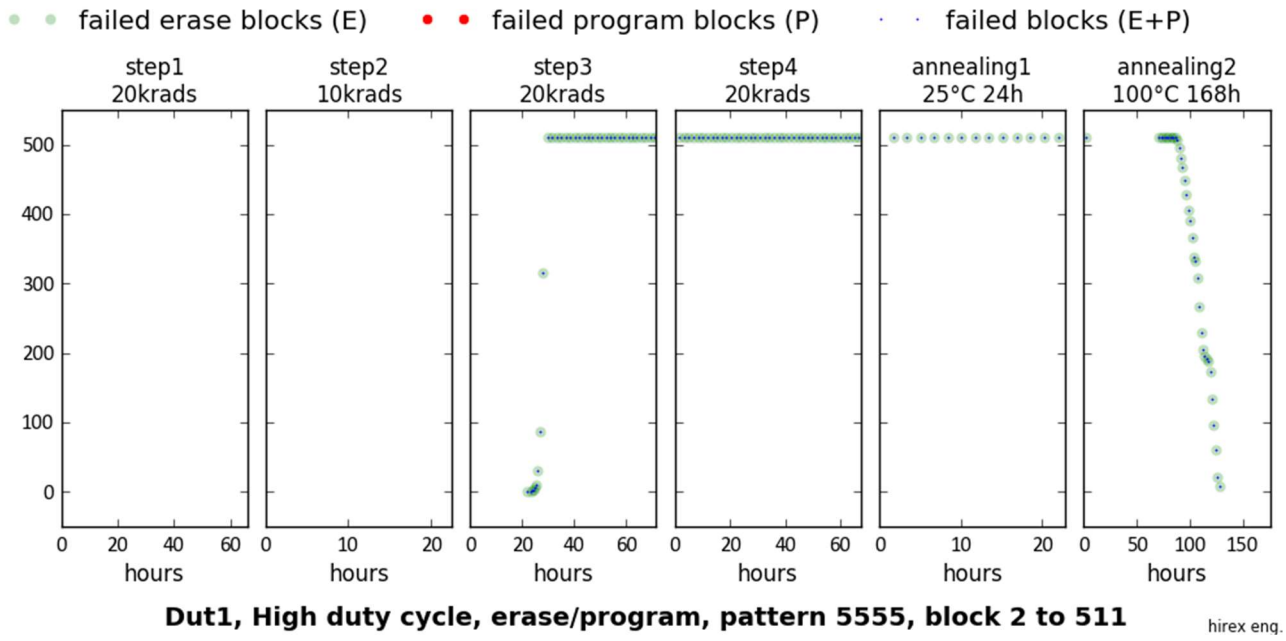


12.20.6 DUT0, High Duty Cycle, DUT access status

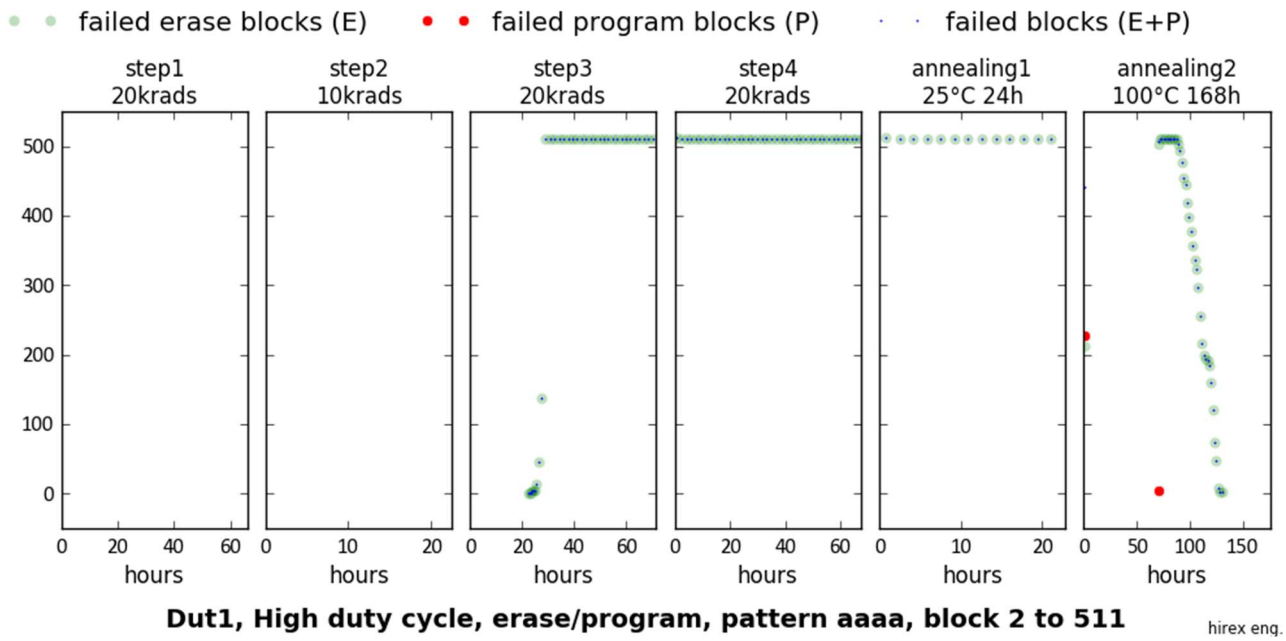


12.21 DUT1 (Board 3), High duty cycle

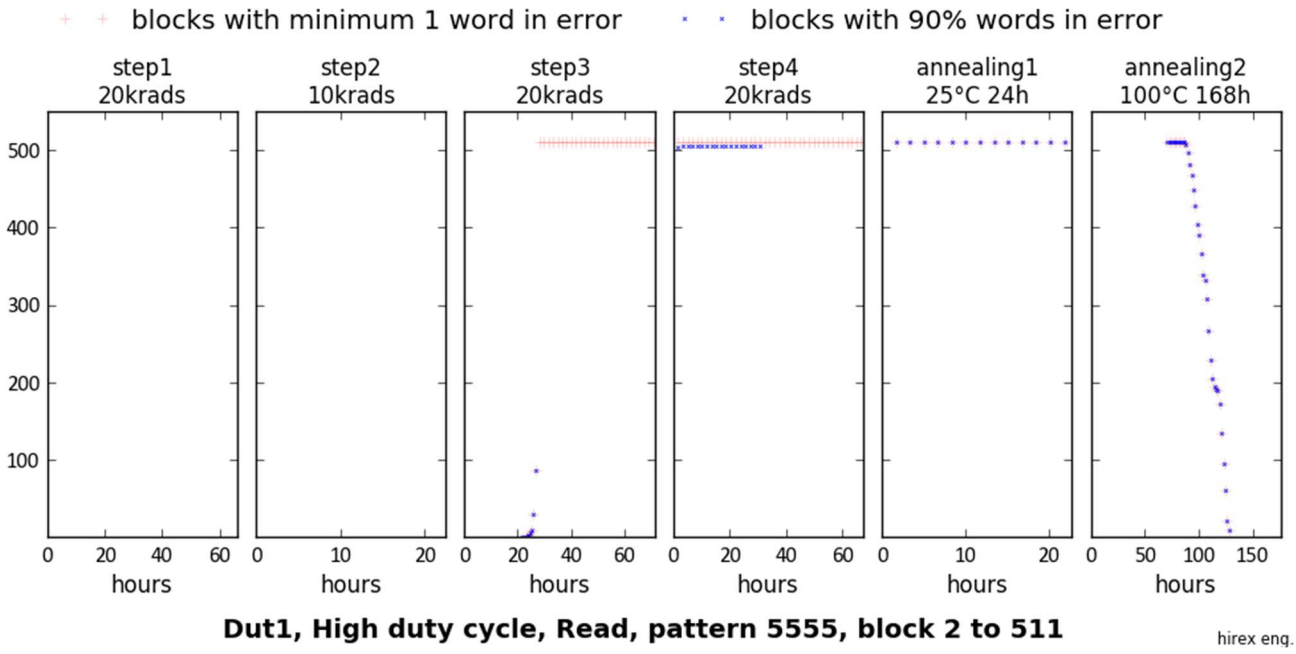
12.21.1 DUT1, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

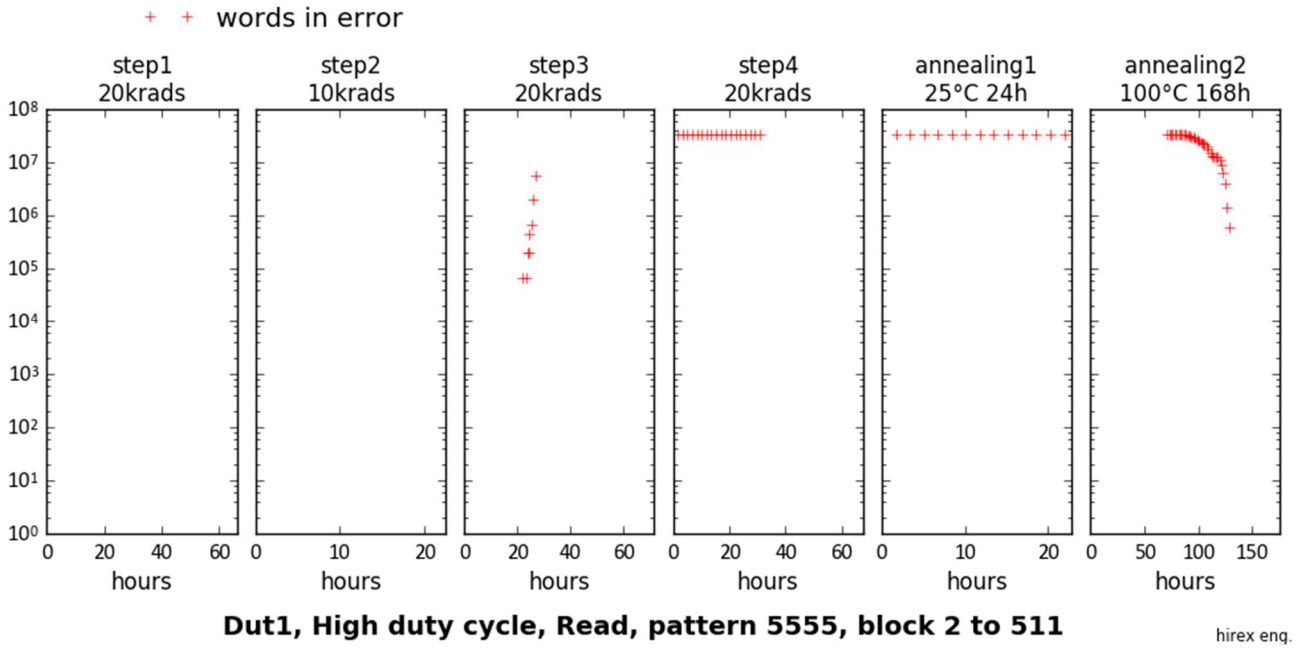


12.21.2 DUT1, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

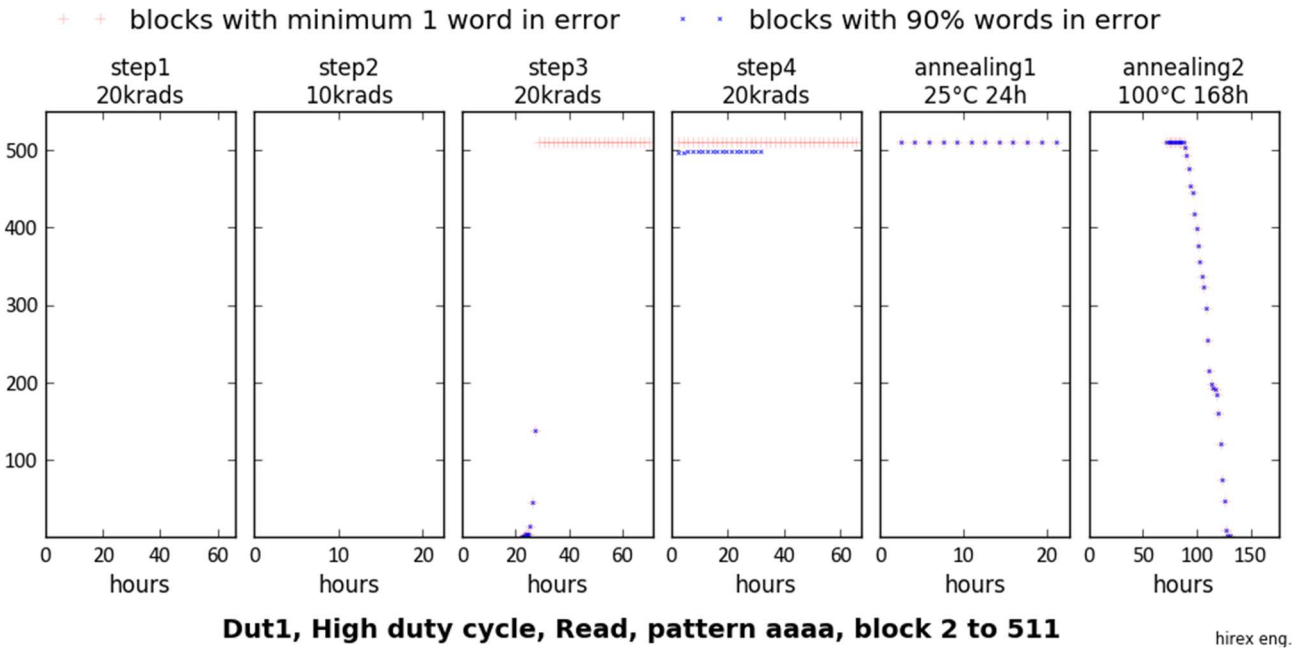


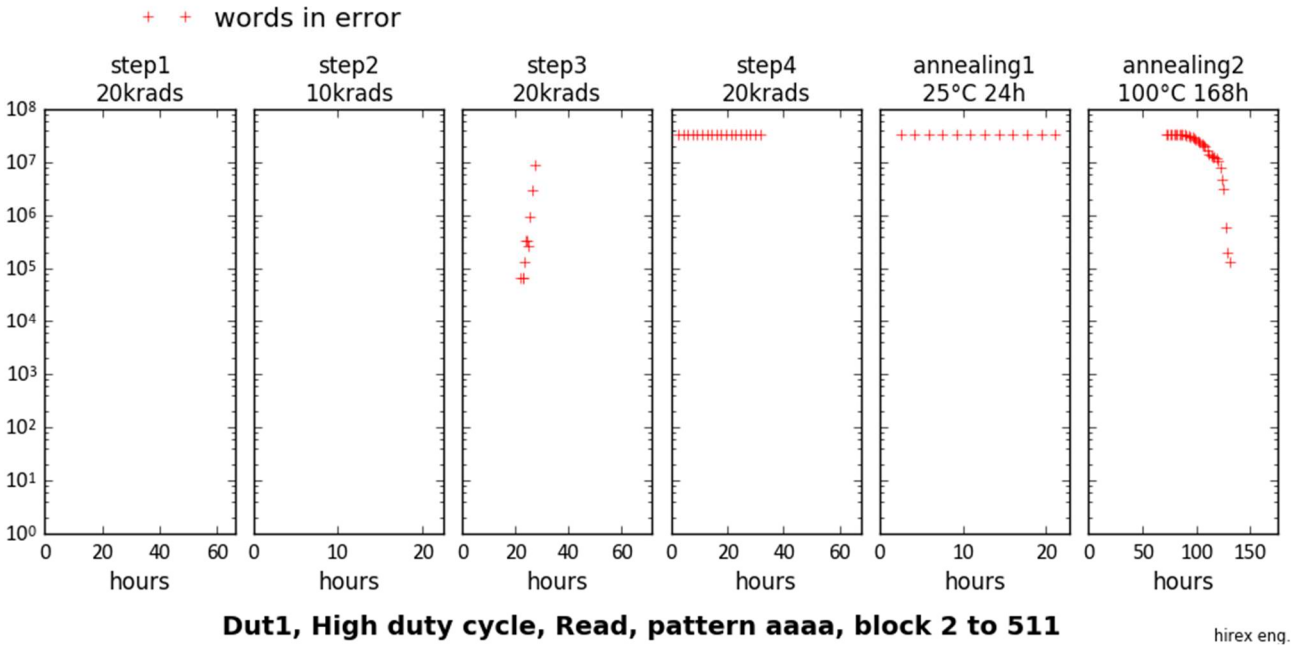
12.21.3 DUT1, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



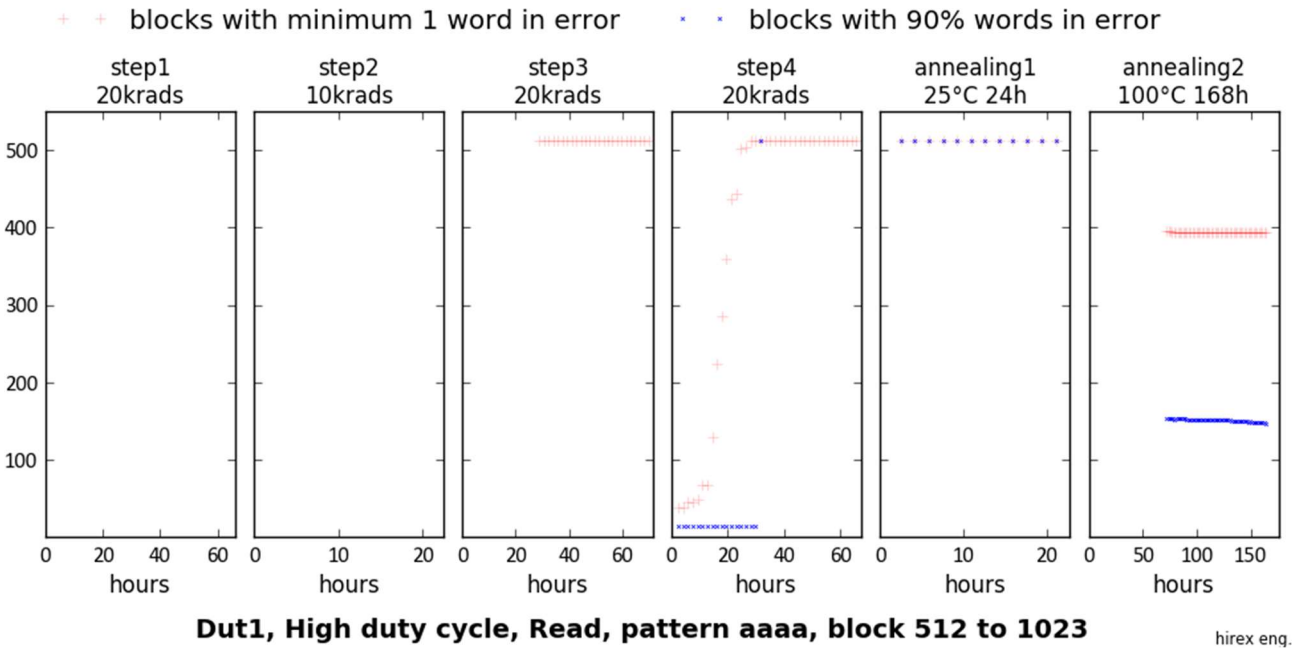


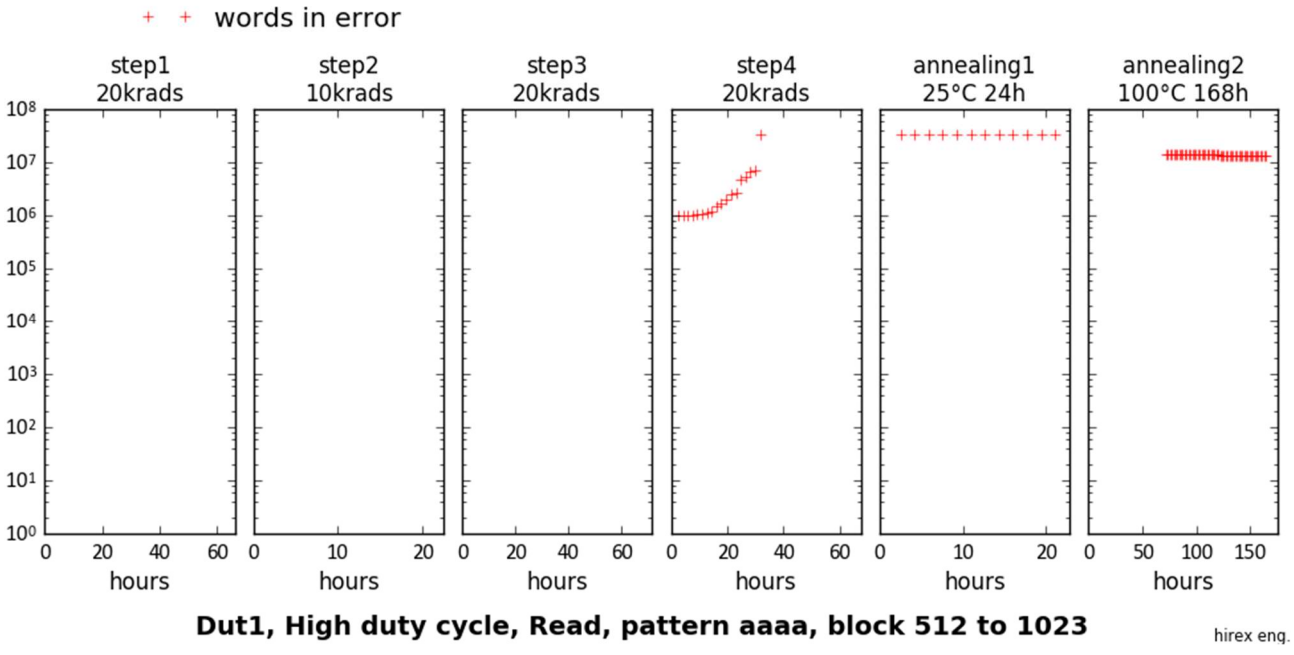
12.21.4 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



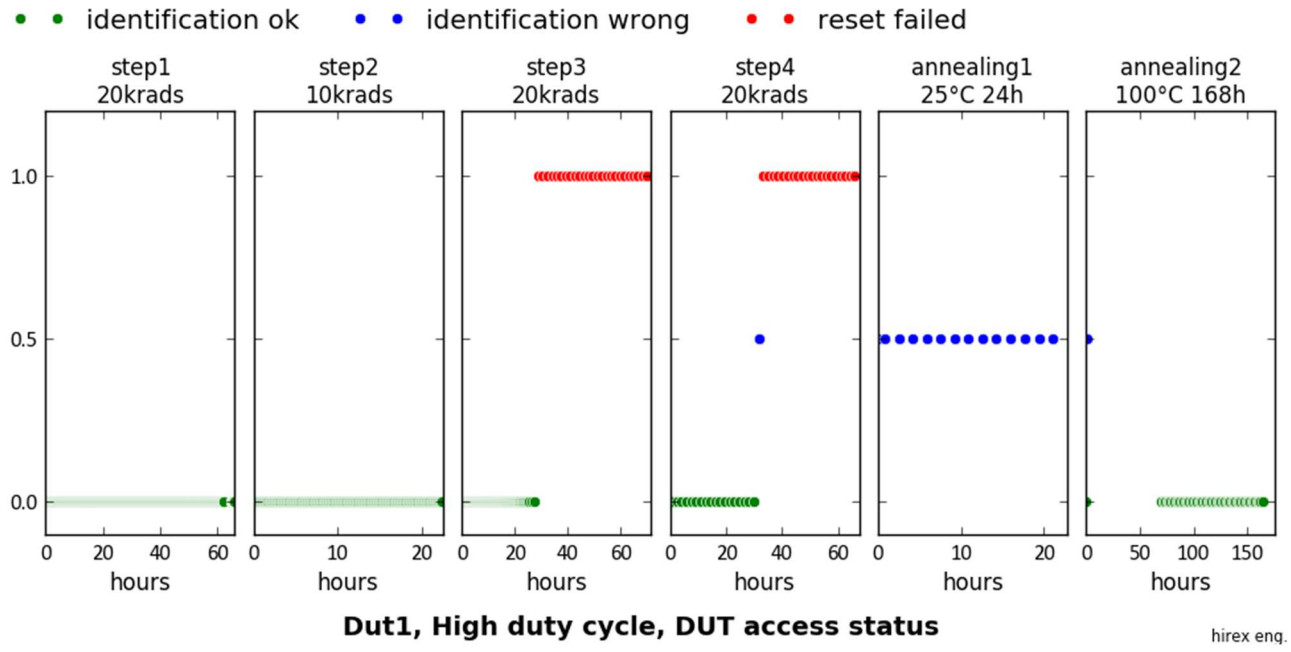


12.21.5 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023





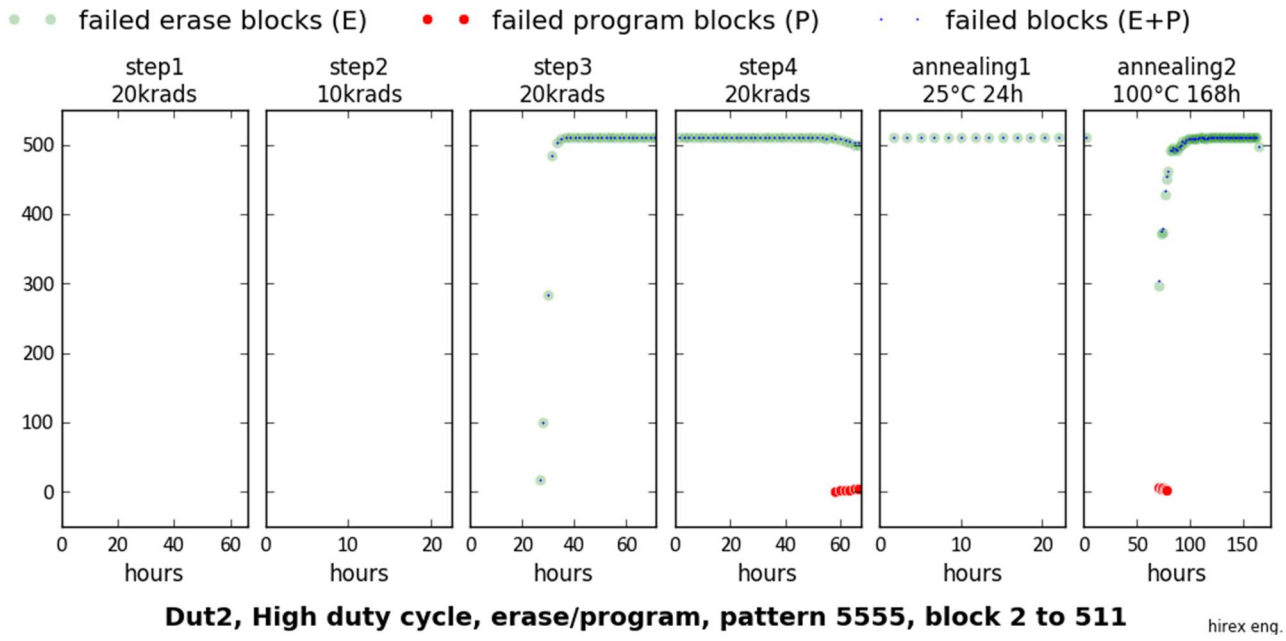
12.21.6 DUT1, High Duty Cycle, DUT access status



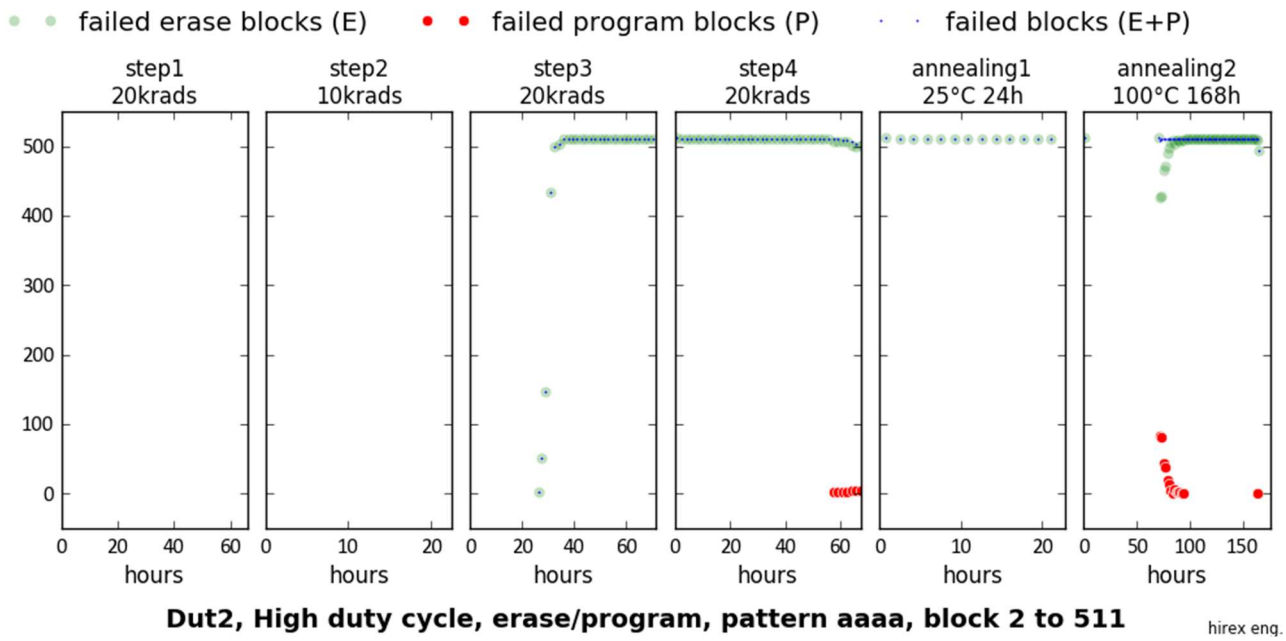
ALTER TECHNOLOGY TÜV NORD S.A.U., AN ISO 9001, EN 9100 ISO/IECE 17025:025 AND DLA SUITABILITY CERTIFIED COMPANY
c/ Tomas Alba Edison, 4, Parque Científico y Tecnológico Cartuja - 41092 Seville, SPAIN. T: 34-95-446 70 50, Fax: 34-95-446 73 39, E-Mail: info@altertechnology.com

12.22 DUT2 (Board 3), High duty cycle

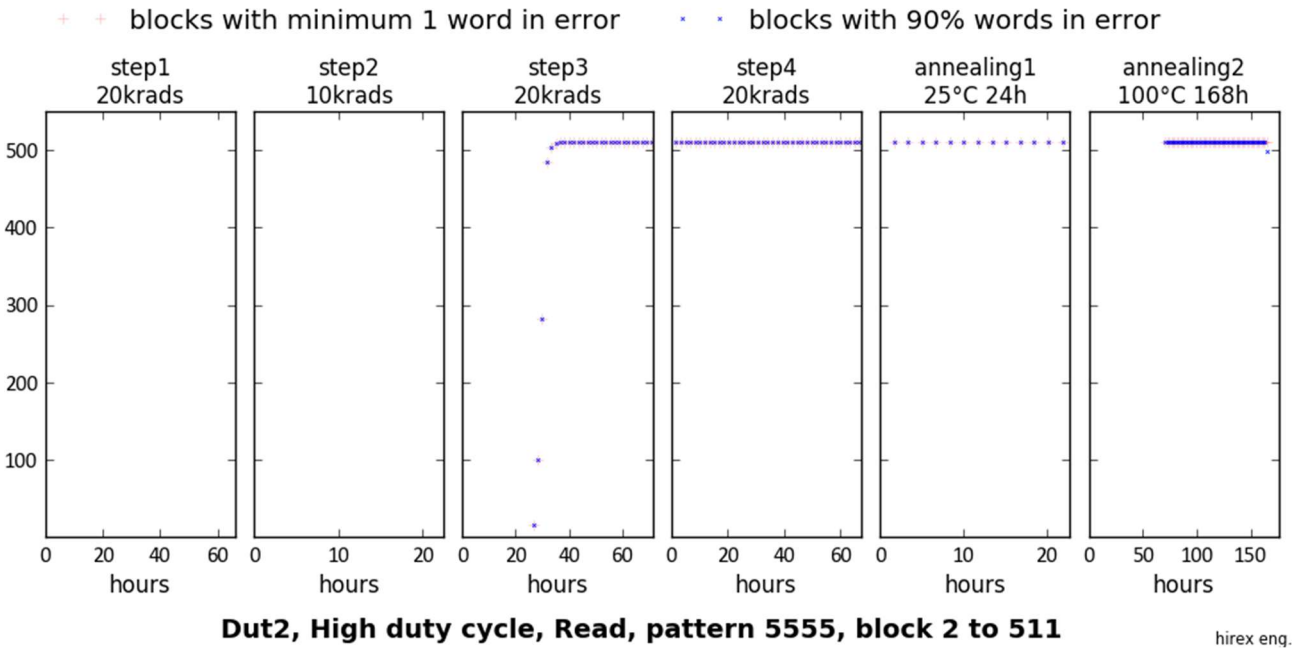
12.22.1 DUT2, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

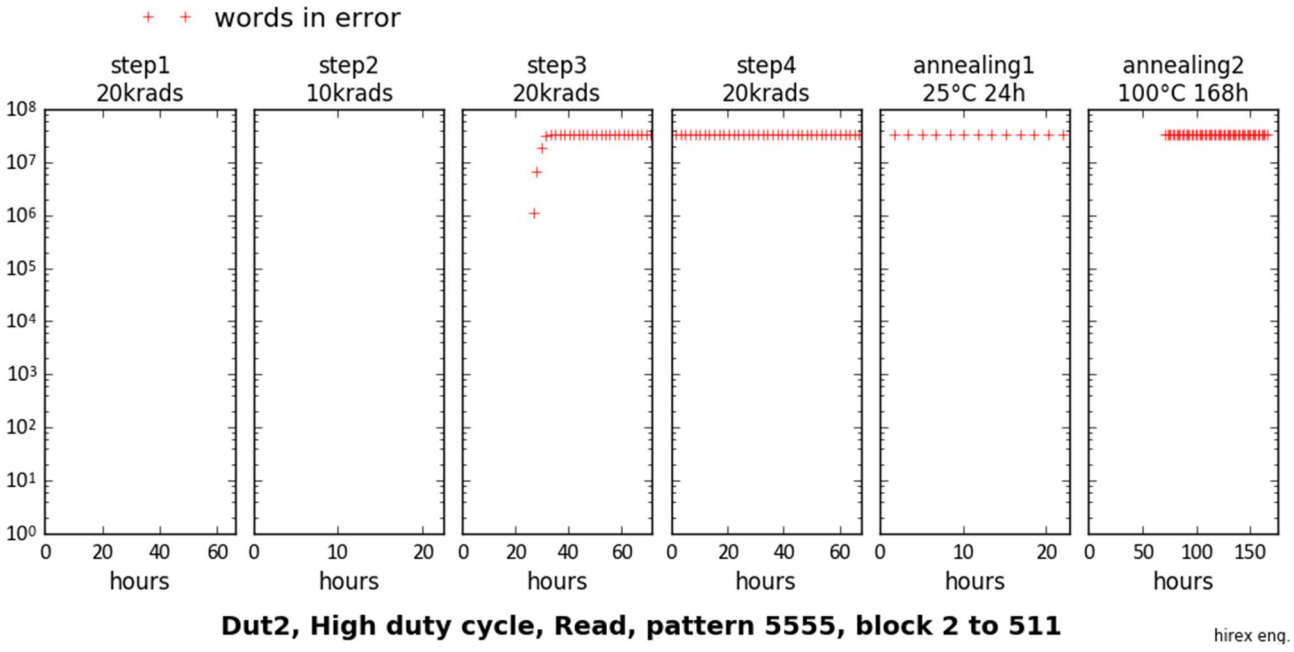


12.22.2 DUT2, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

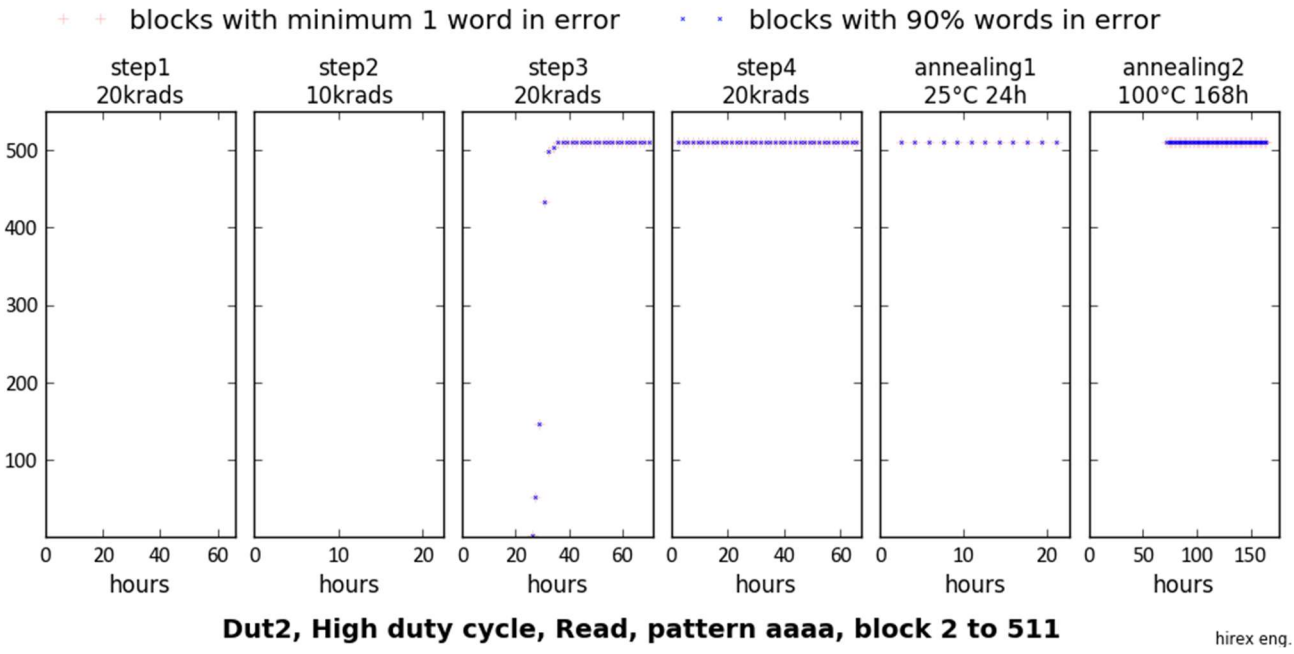


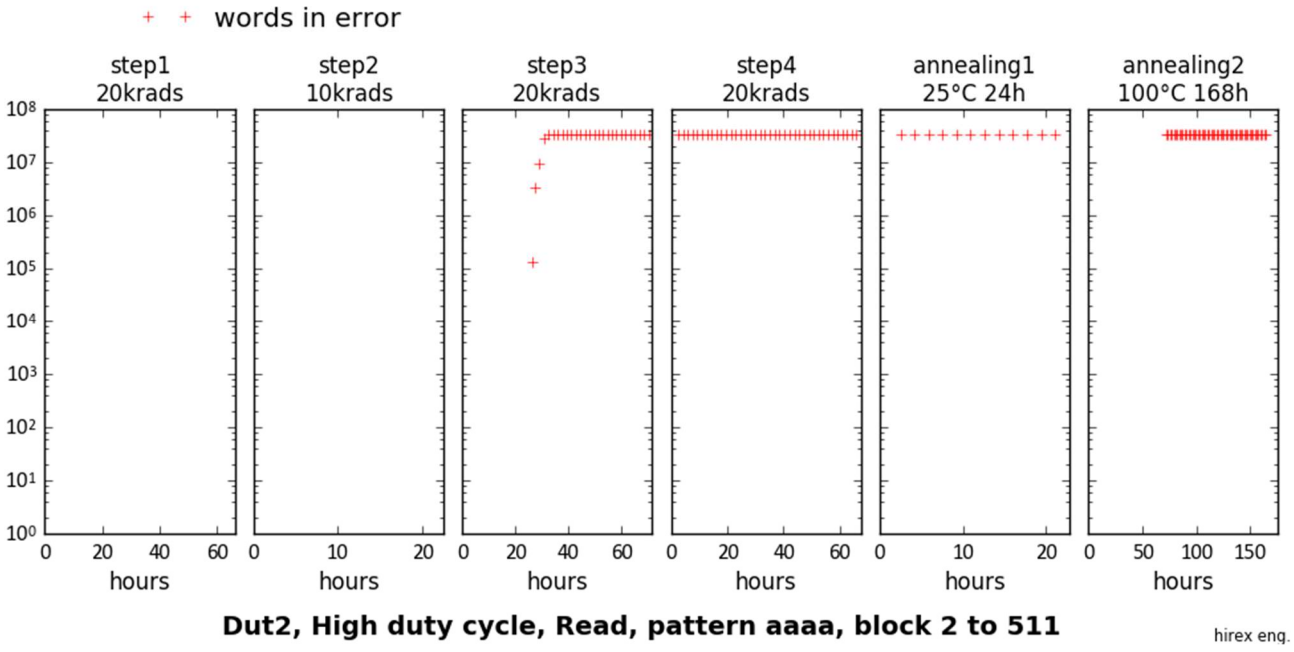
12.22.3 DUT2, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



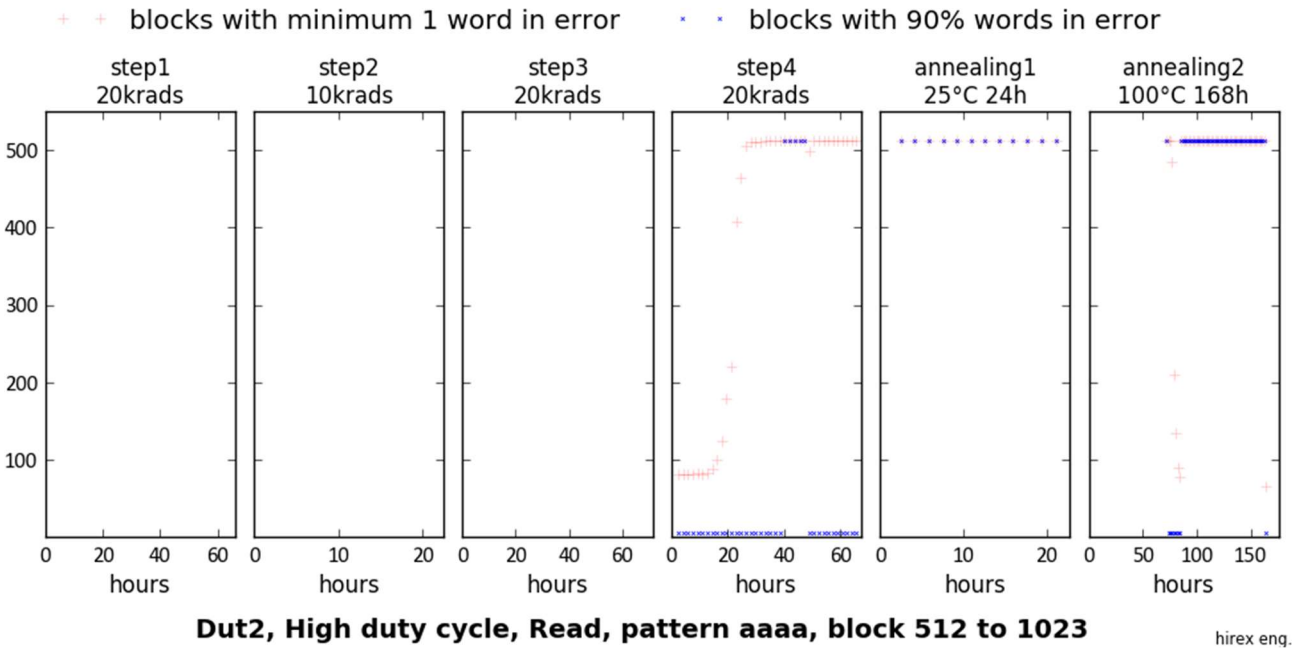


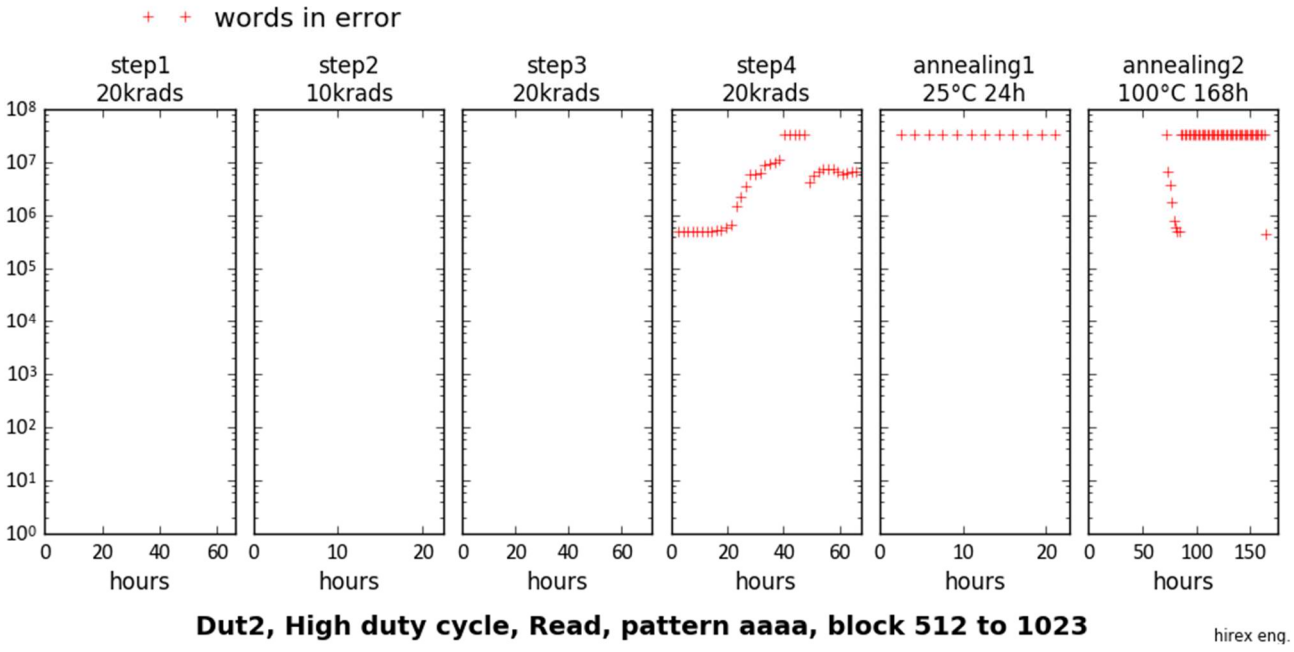
12.22.4 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



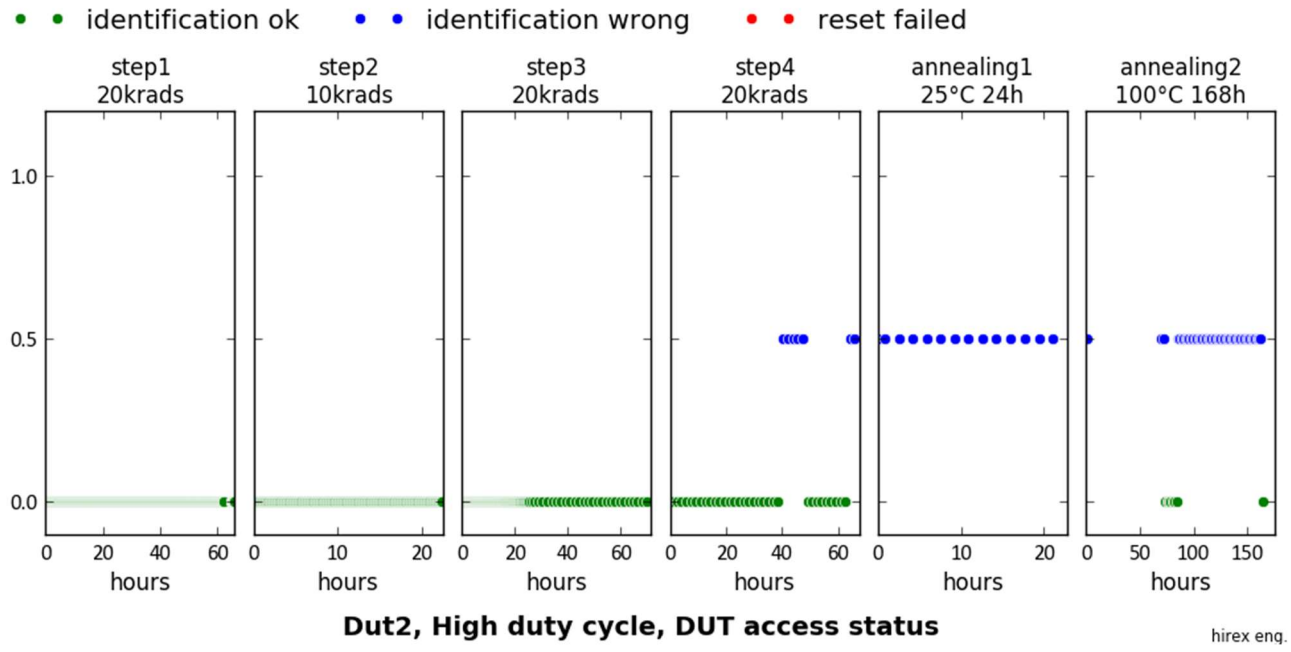


12.22.5 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



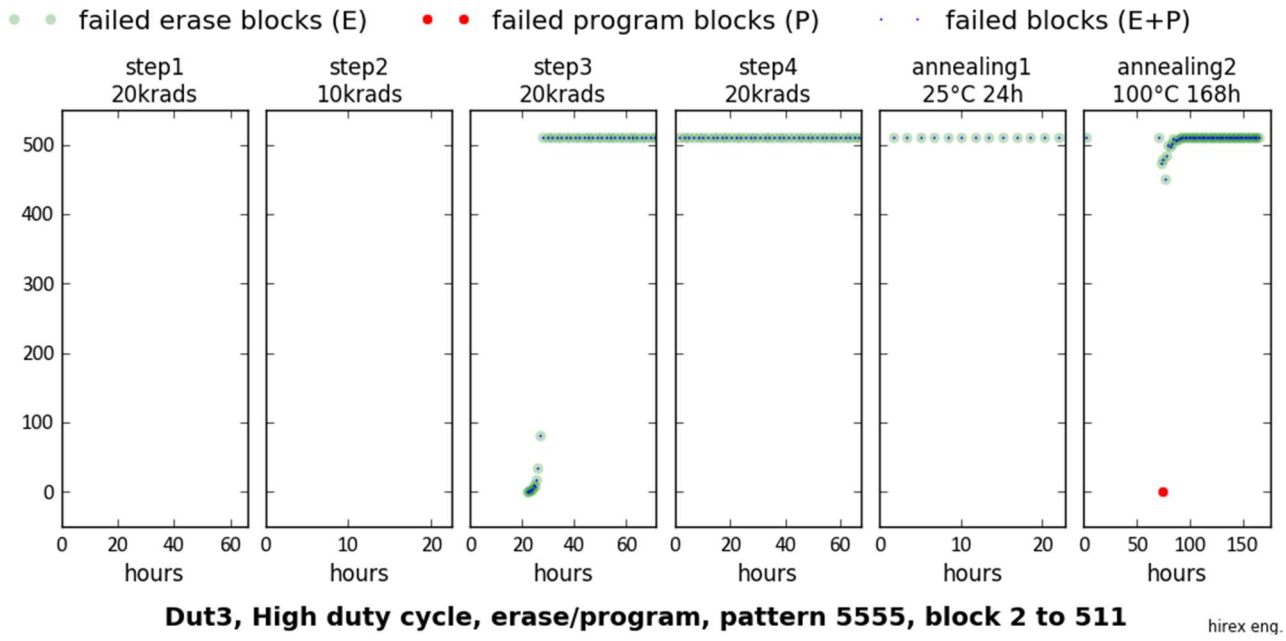


12.22.6 DUT2, High Duty Cycle, DUT access status

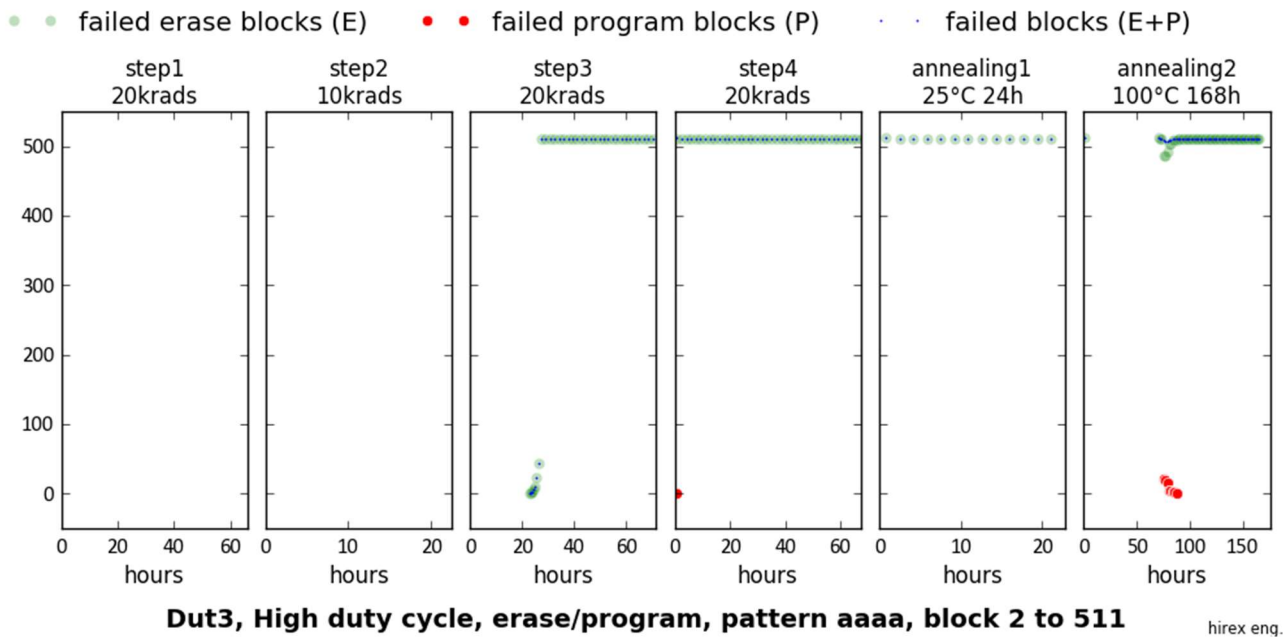


12.23 DUT3 (Board 3), High duty cycle

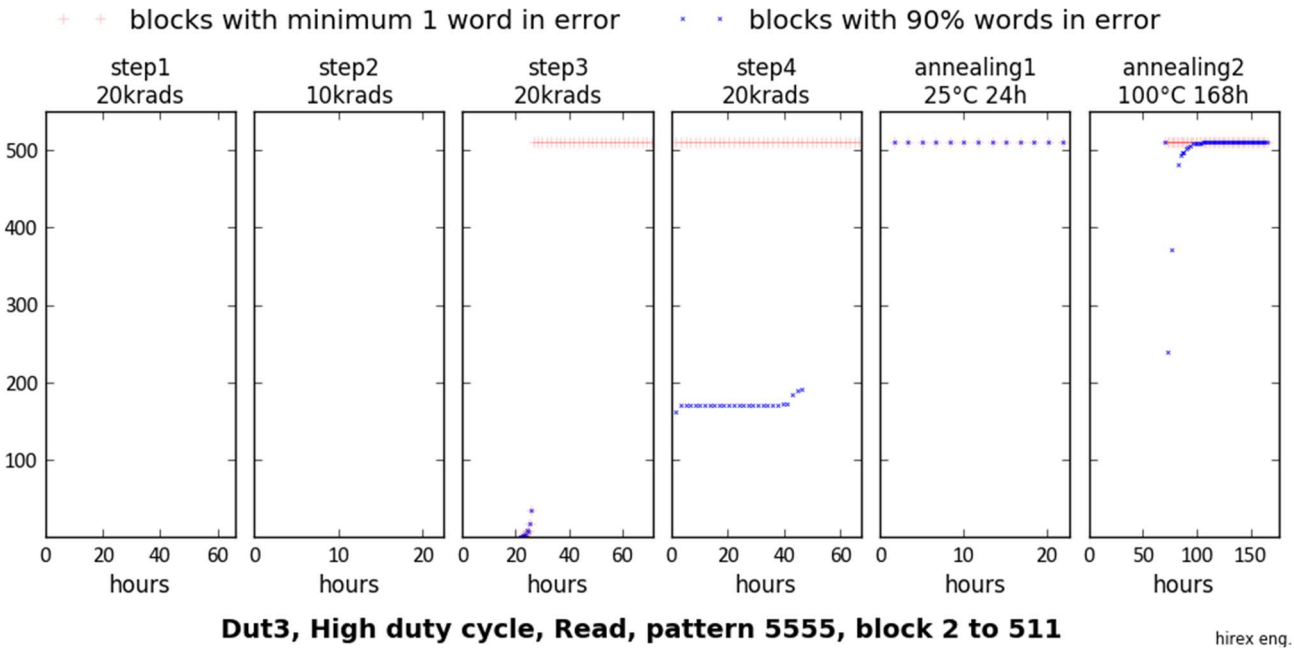
12.23.1 DUT3, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

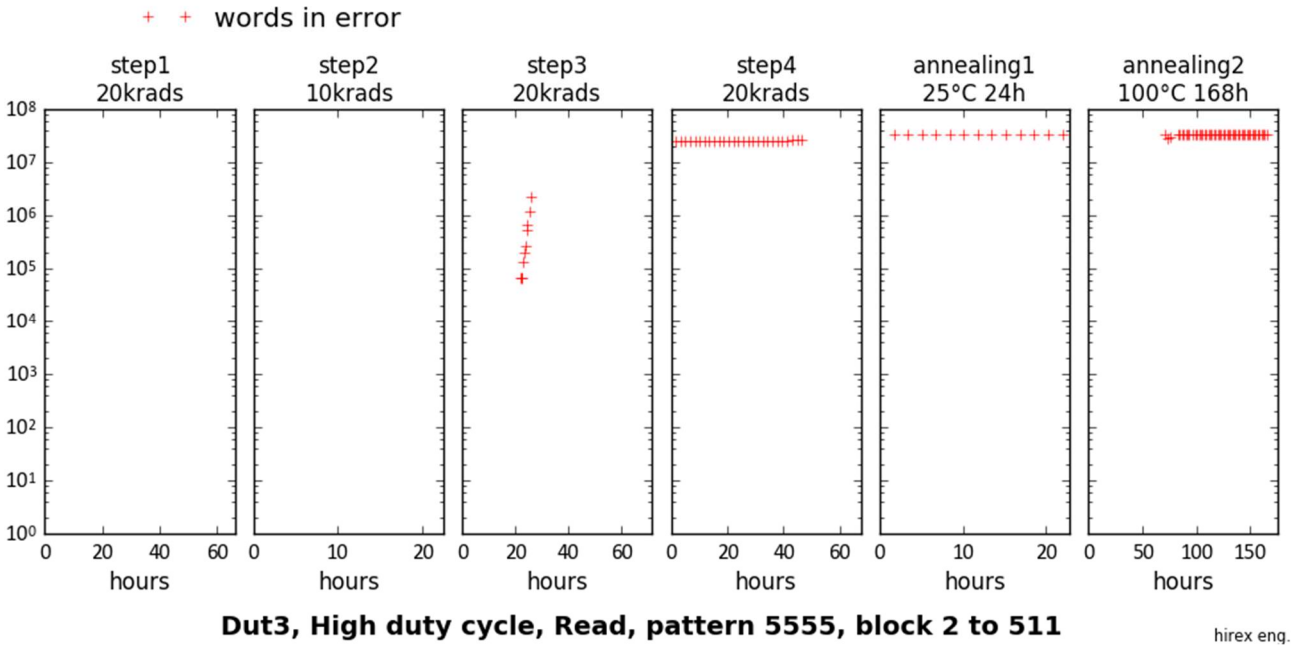


12.23.2 DUT3, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

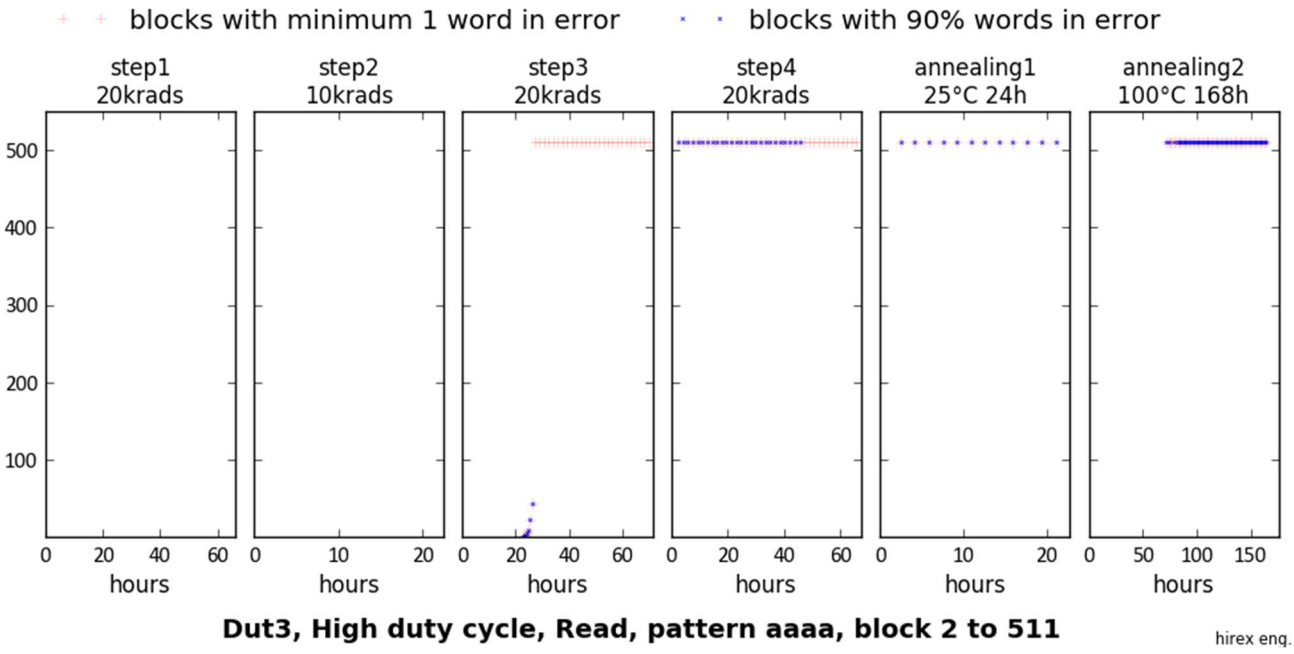


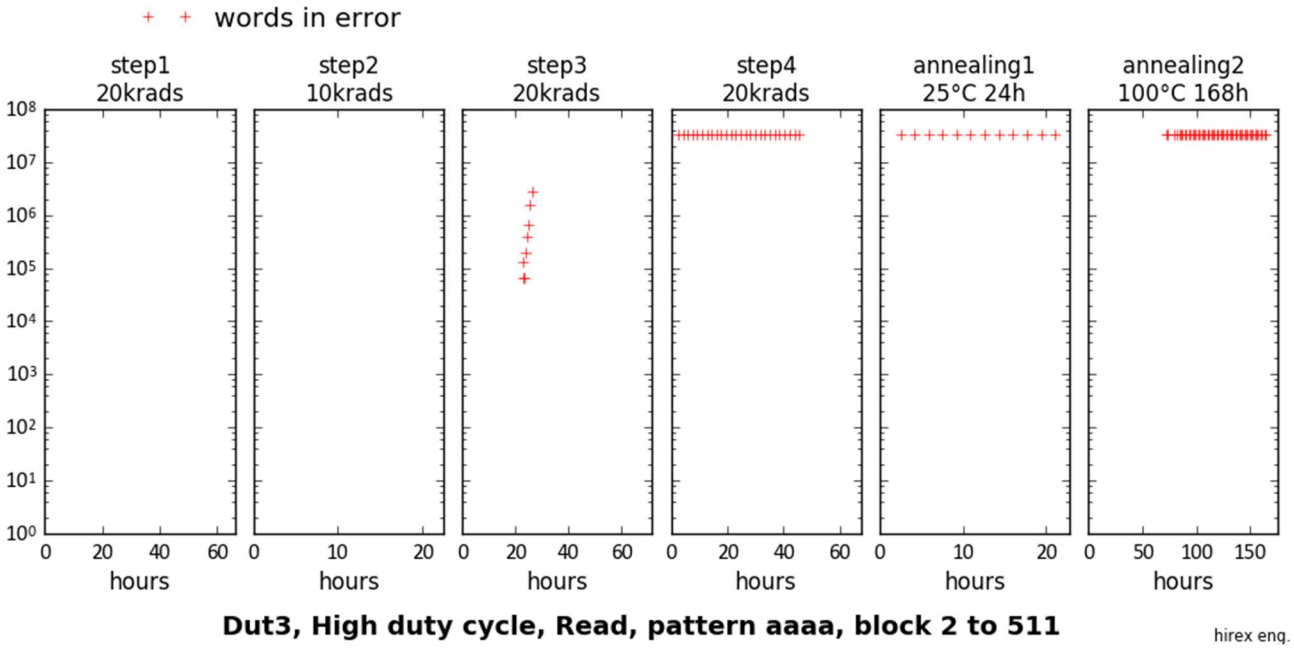
12.23.3 DUT3, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



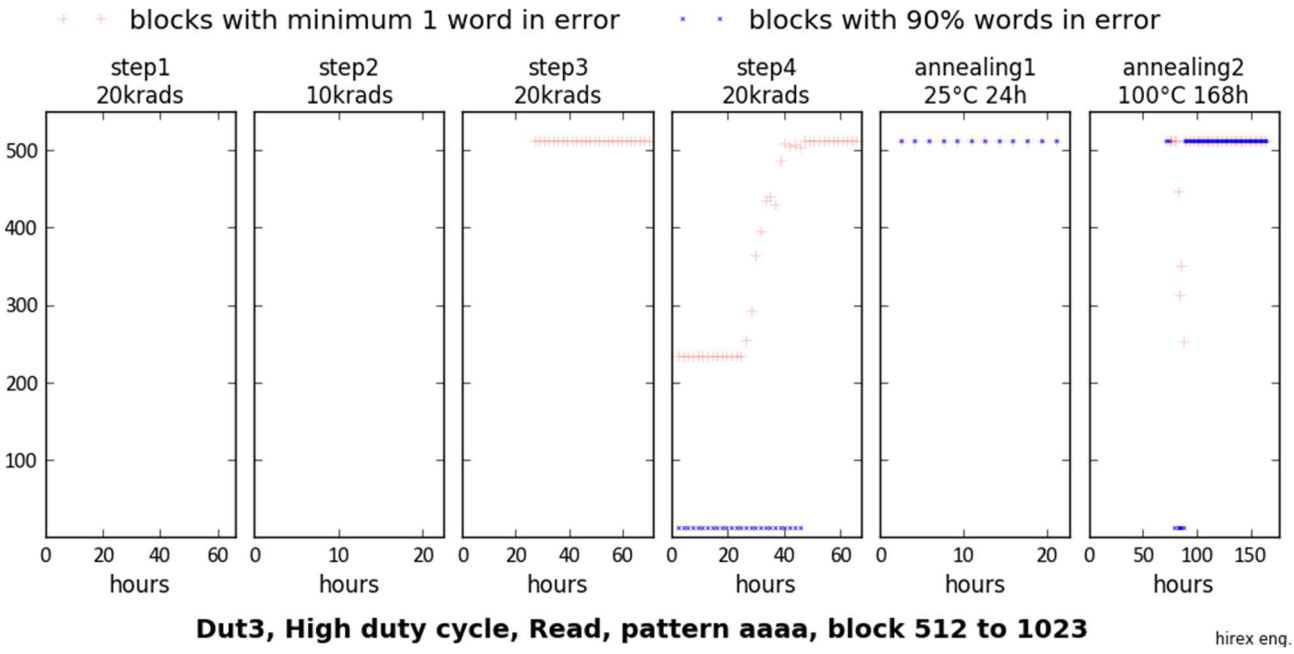


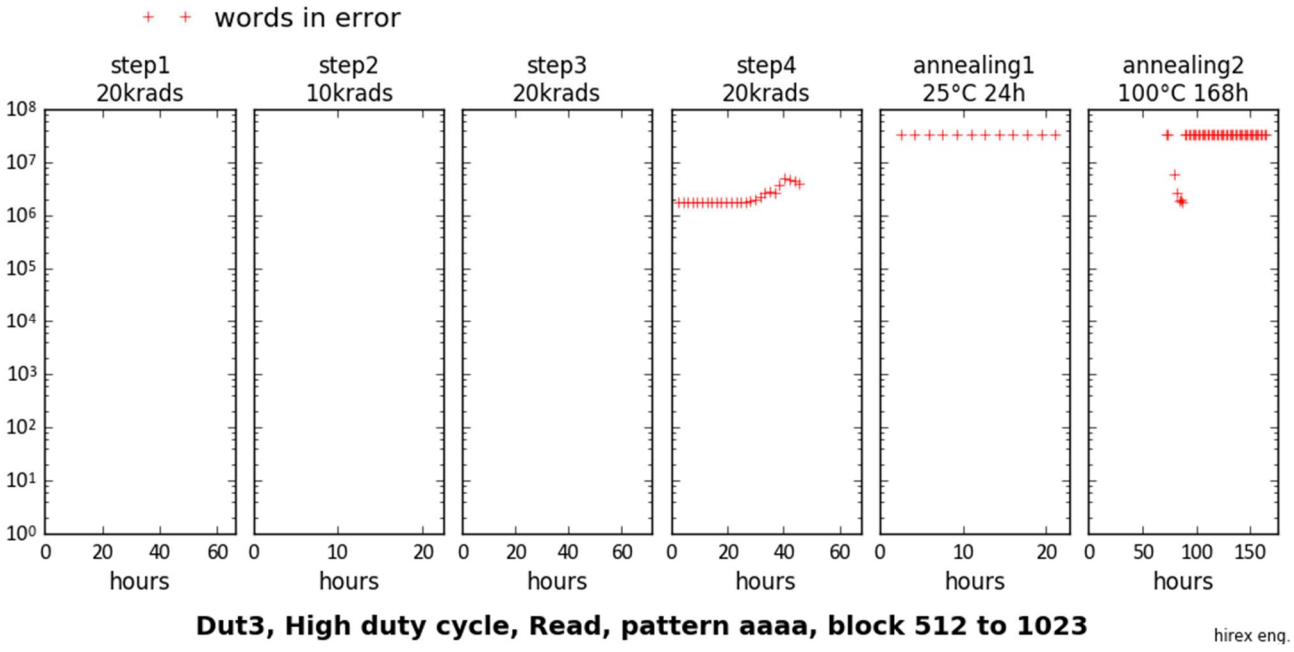
12.23.4 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



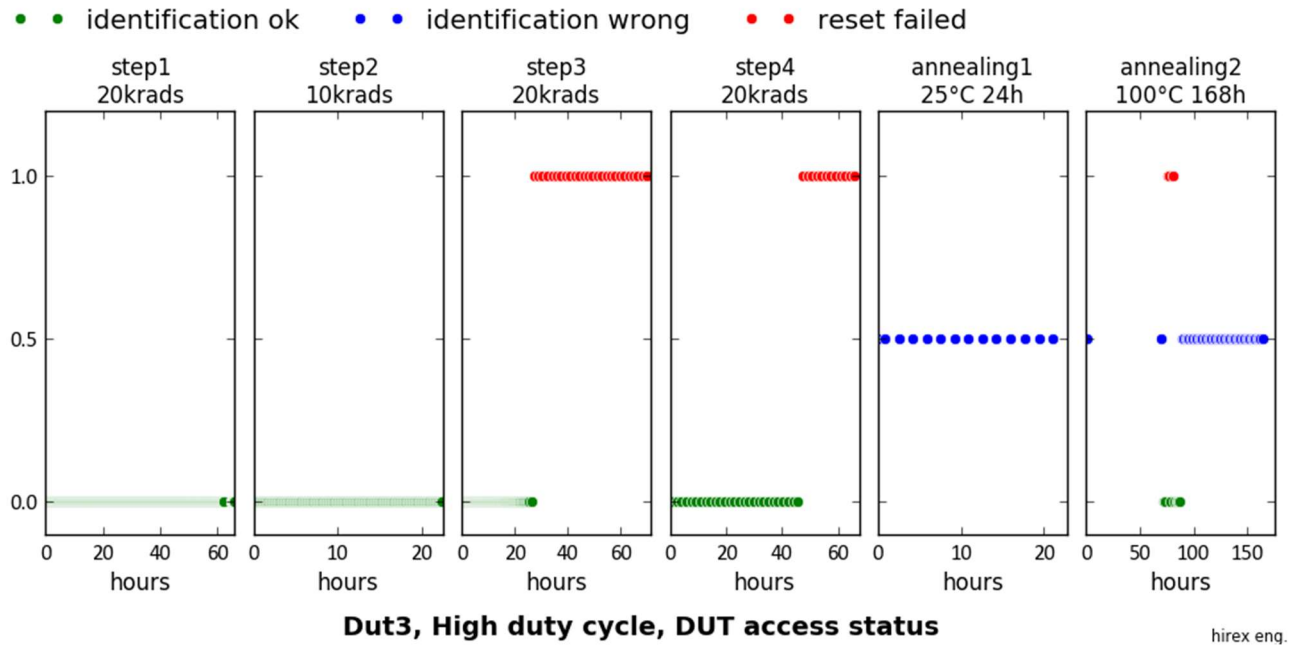


12.23.5 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



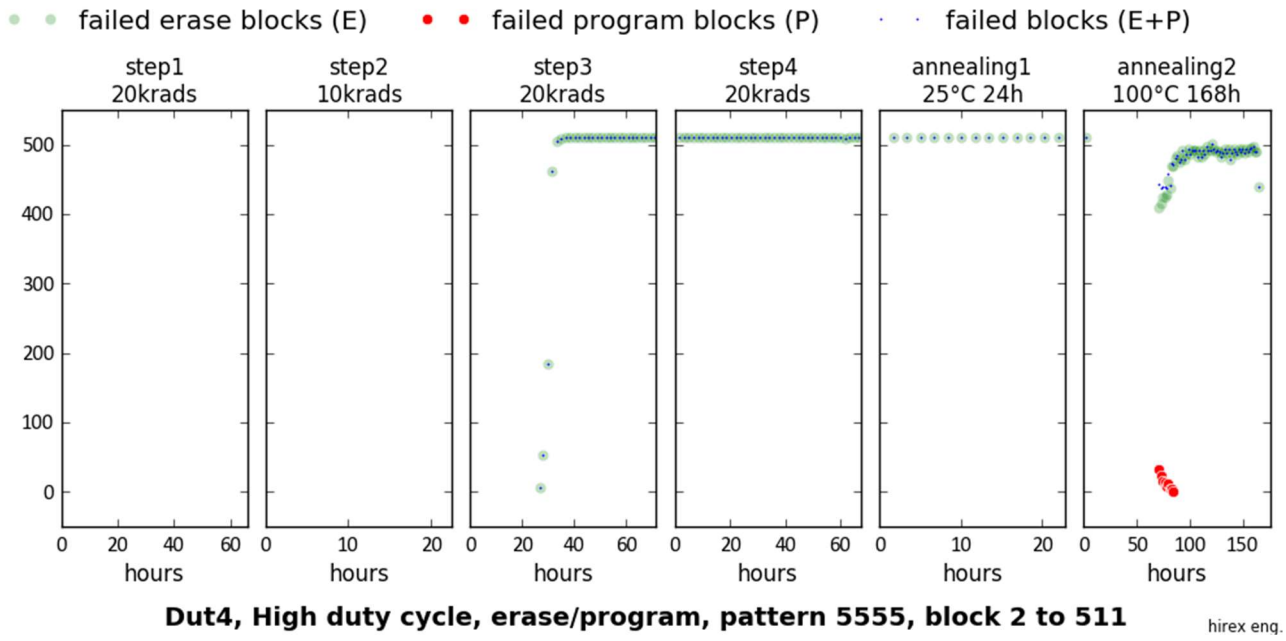


12.23.6 DUT3, High Duty Cycle, DUT access status

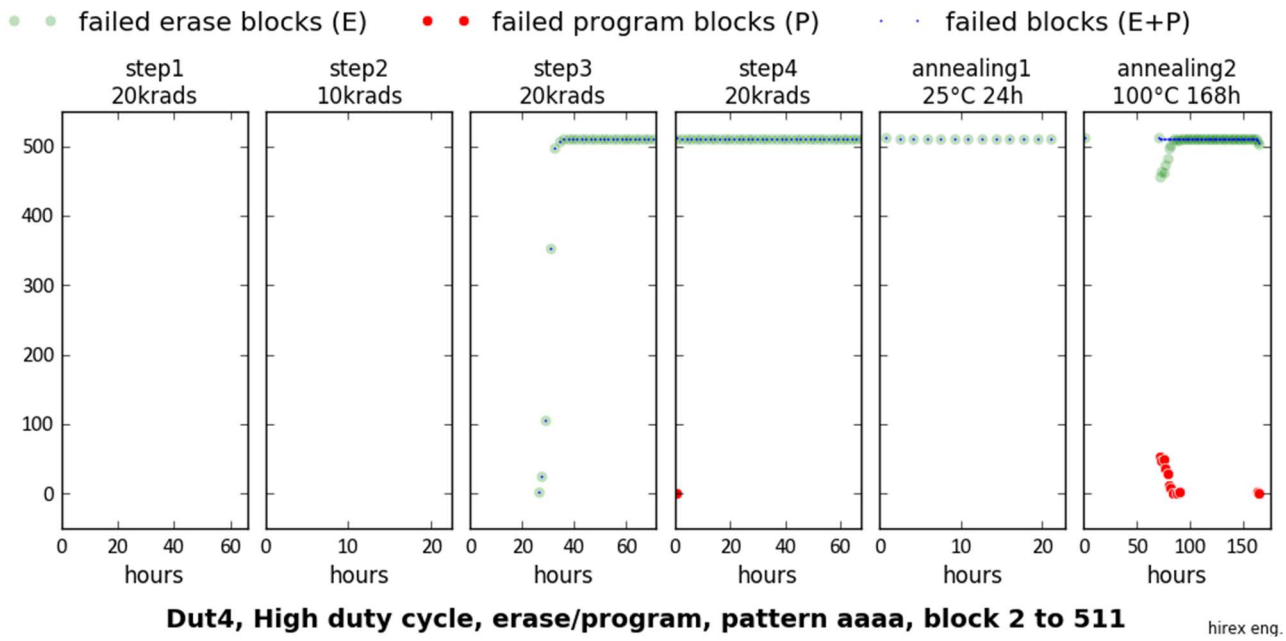


12.24 DUT4 (Board 3), High duty cycle

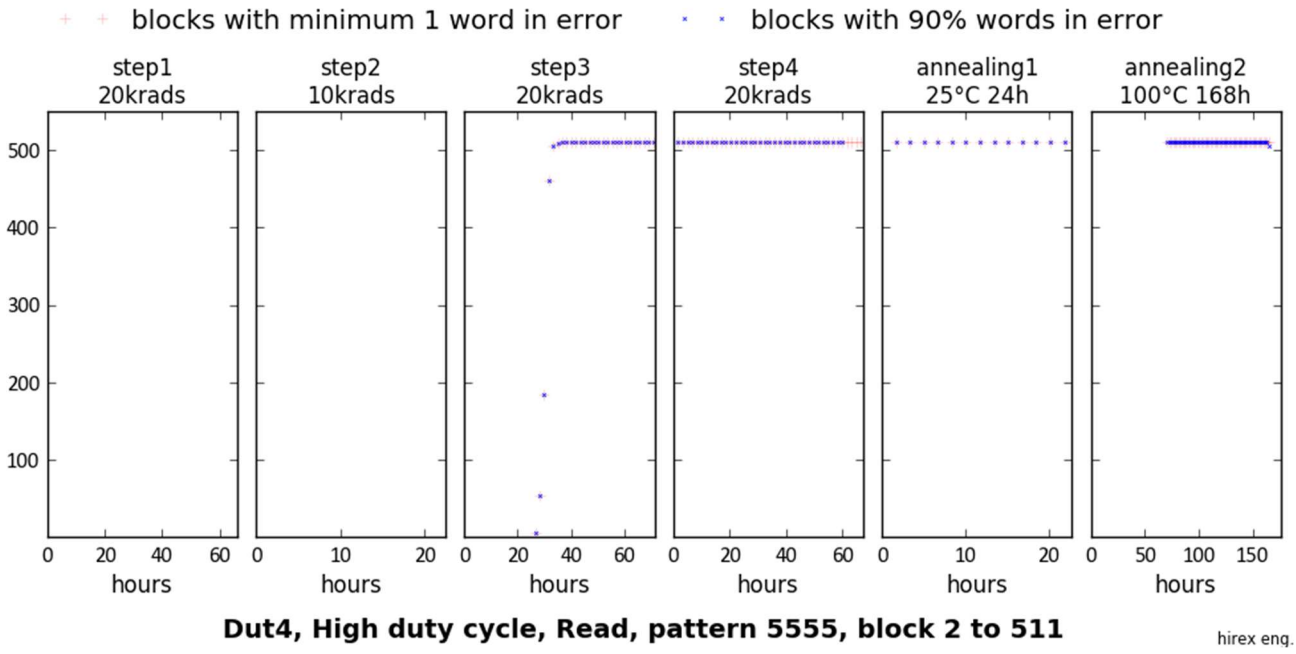
12.24.1 DUT4, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

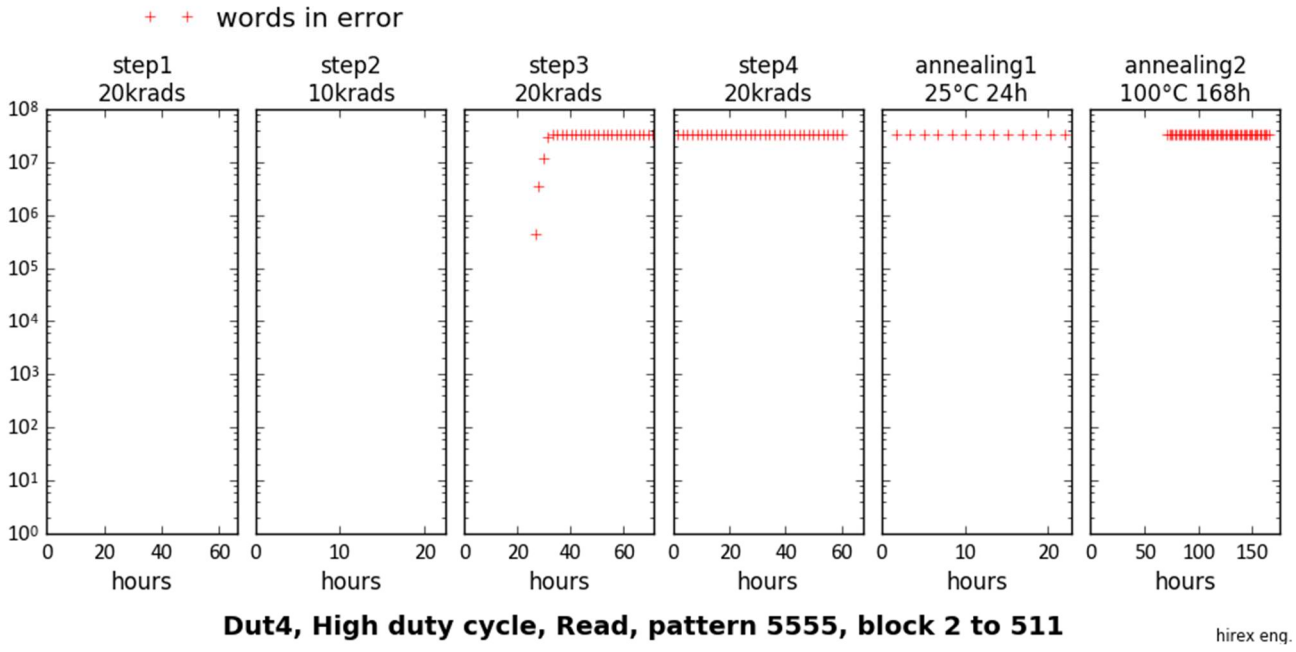


12.24.2 DUT4, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

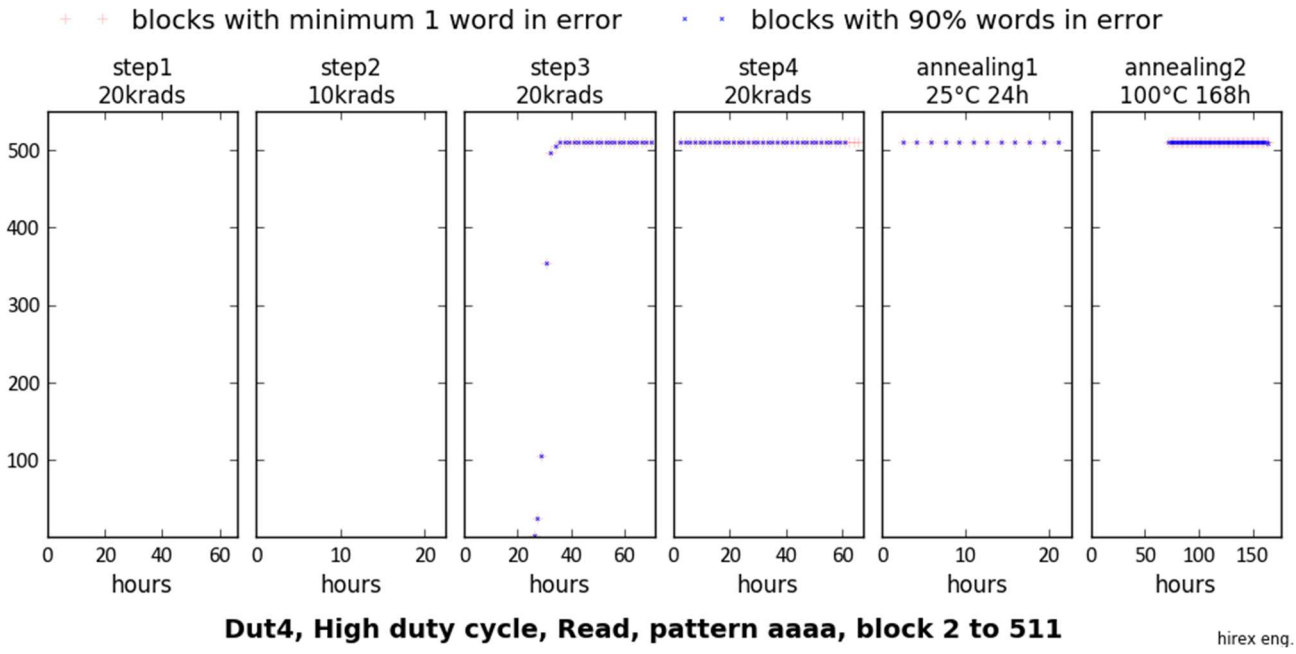


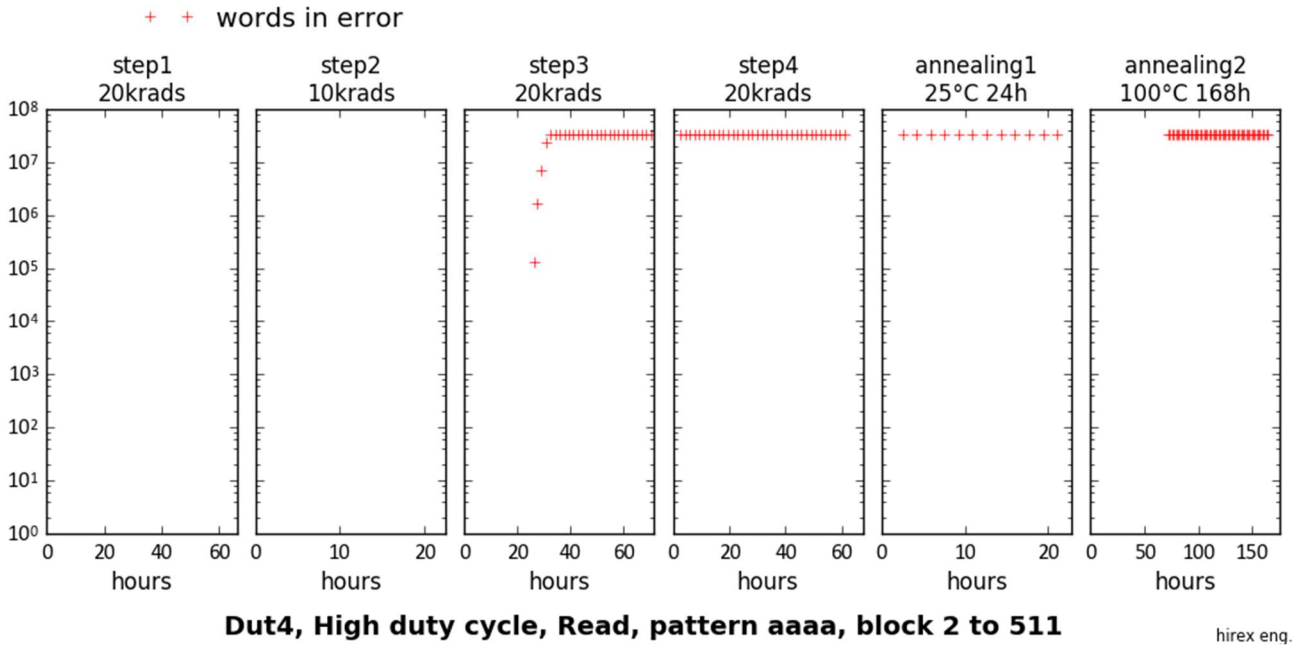
12.24.3 DUT4, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



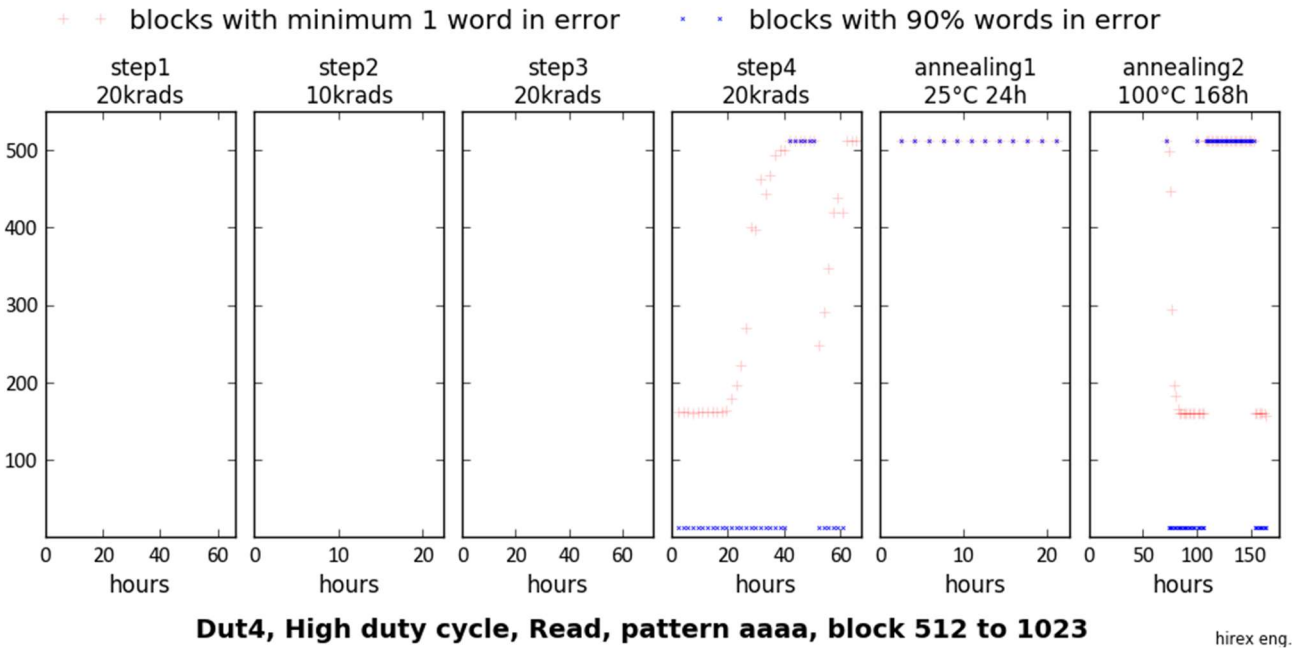


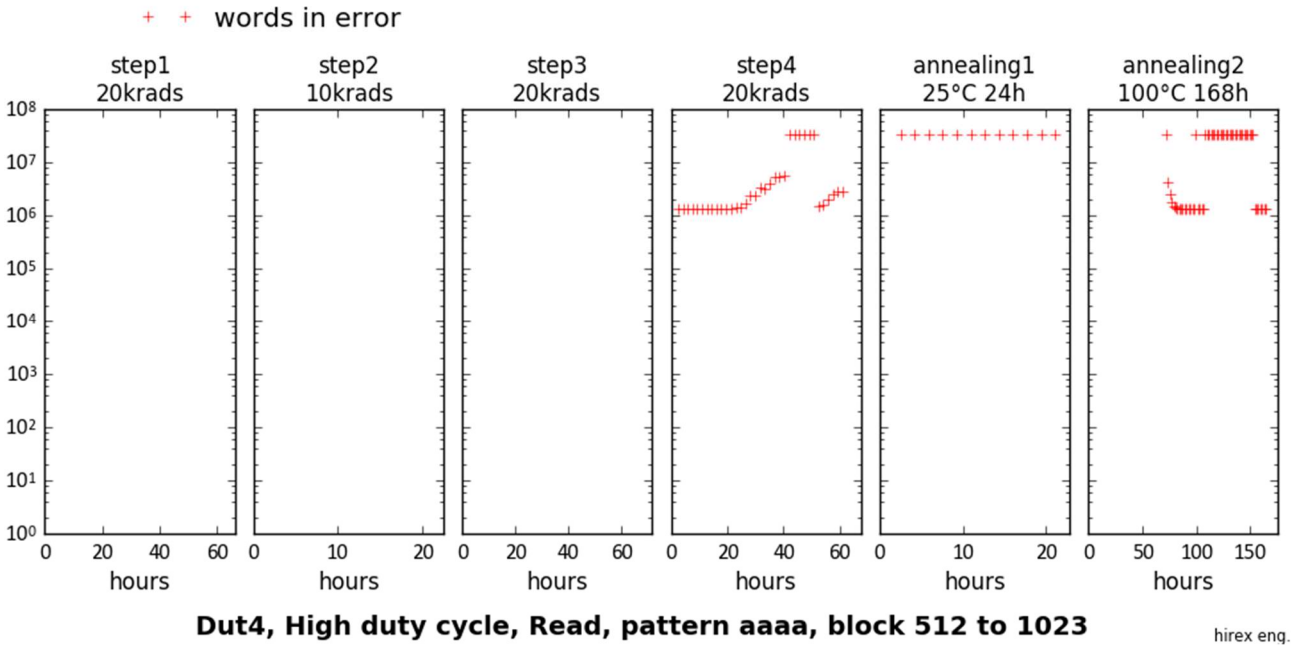
12.24.4 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



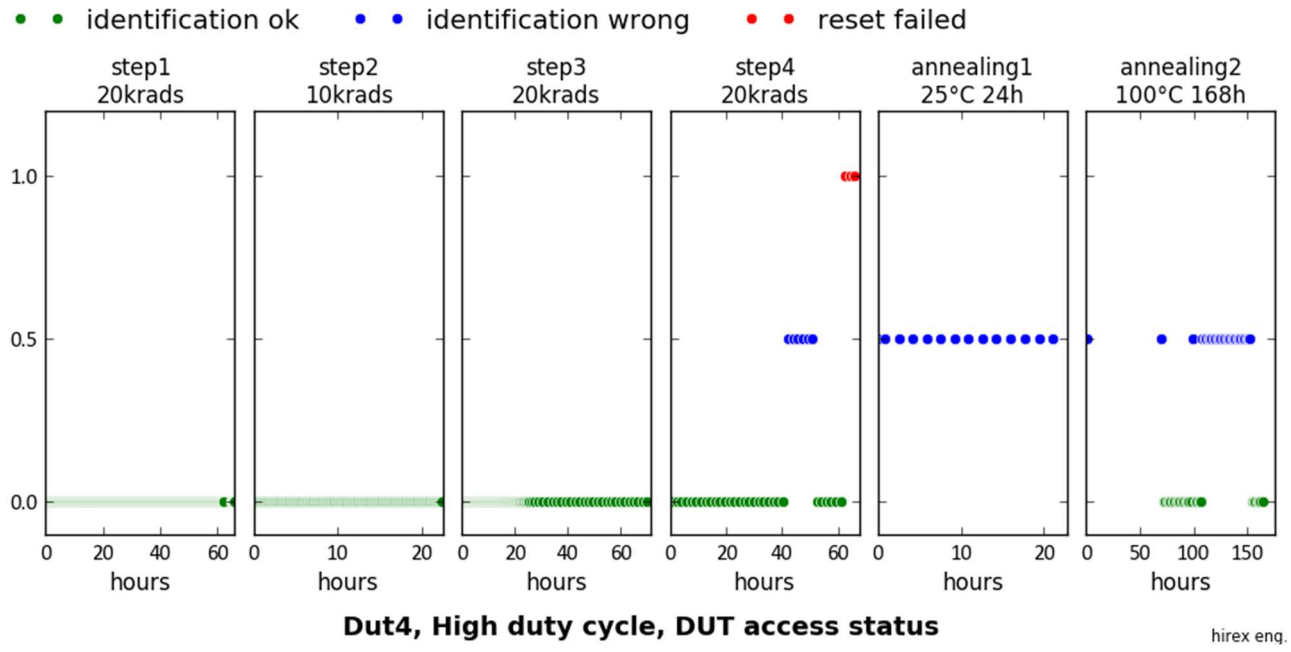


12.24.5 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



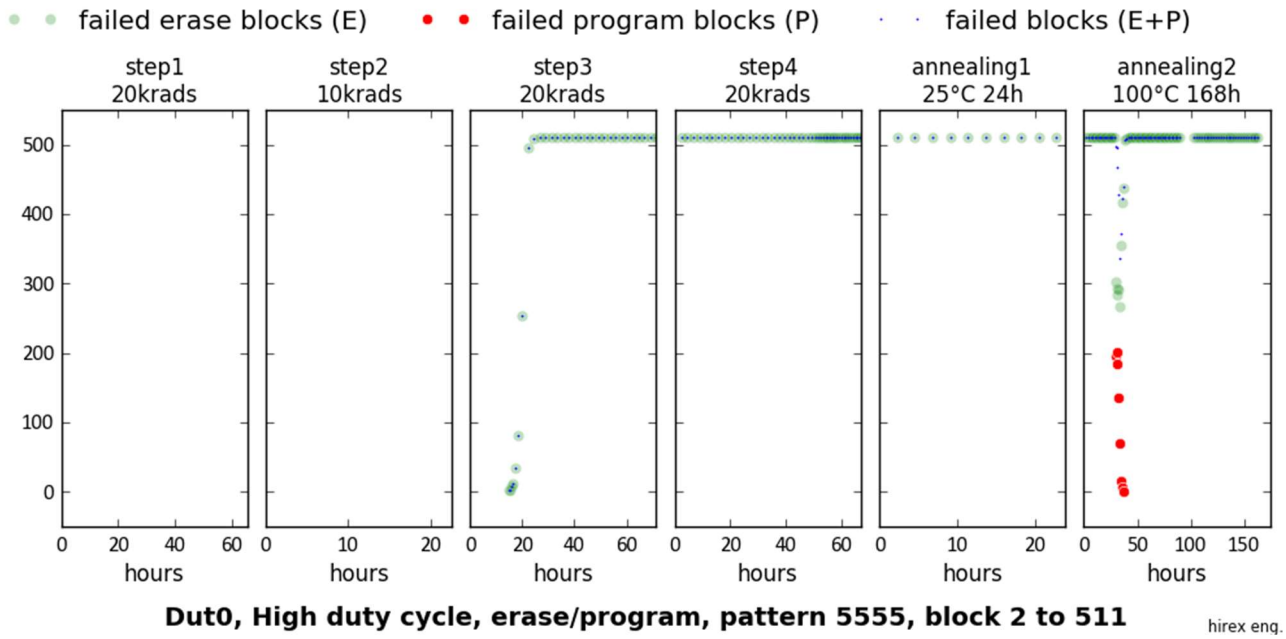


12.24.6 DUT4, High Duty Cycle, DUT access status

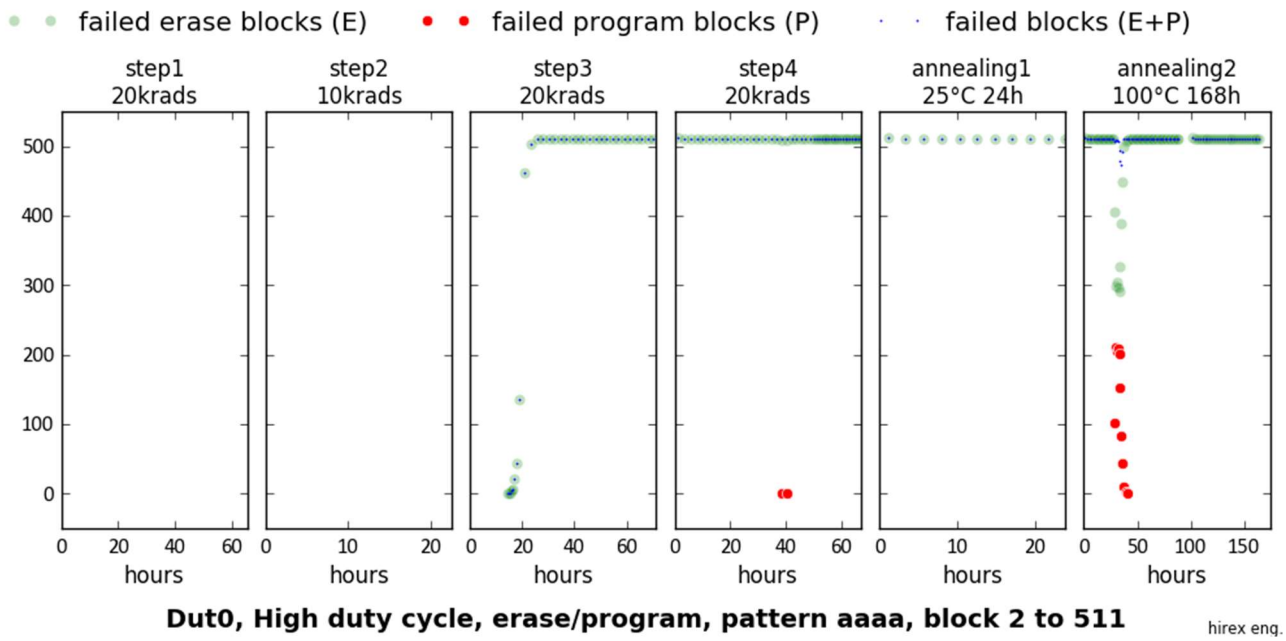


12.25 DUT0 (Board 4), High duty cycle

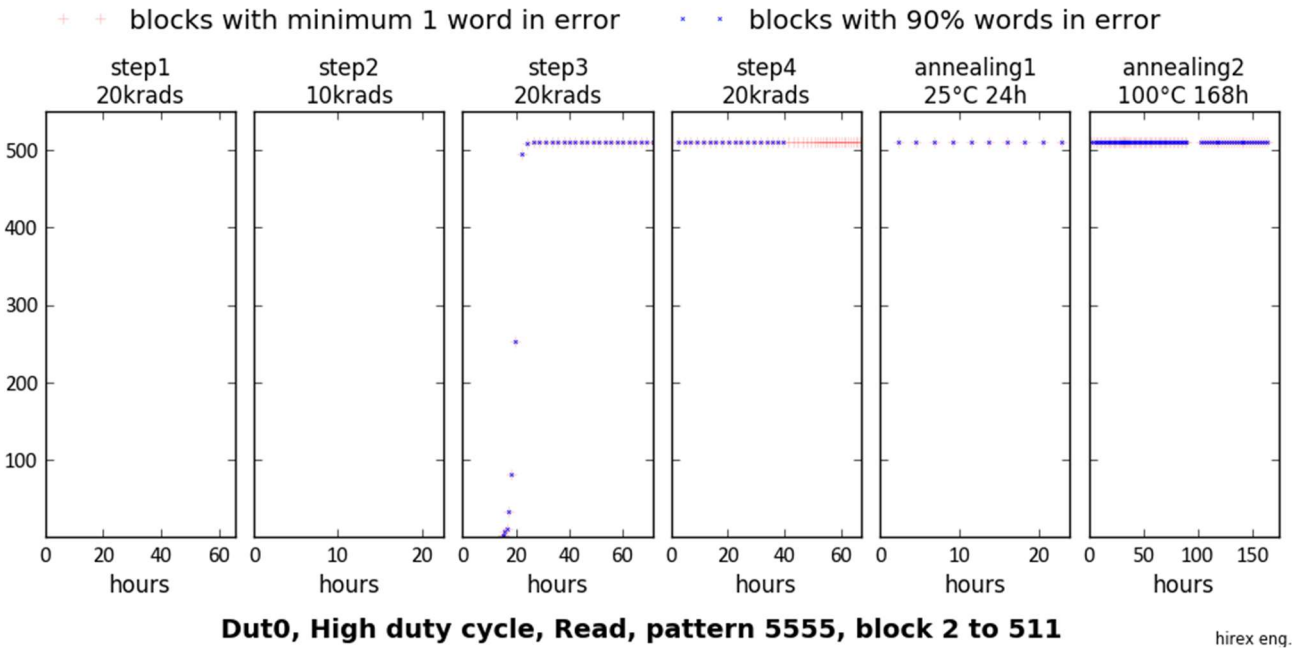
12.25.1 DUT0, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

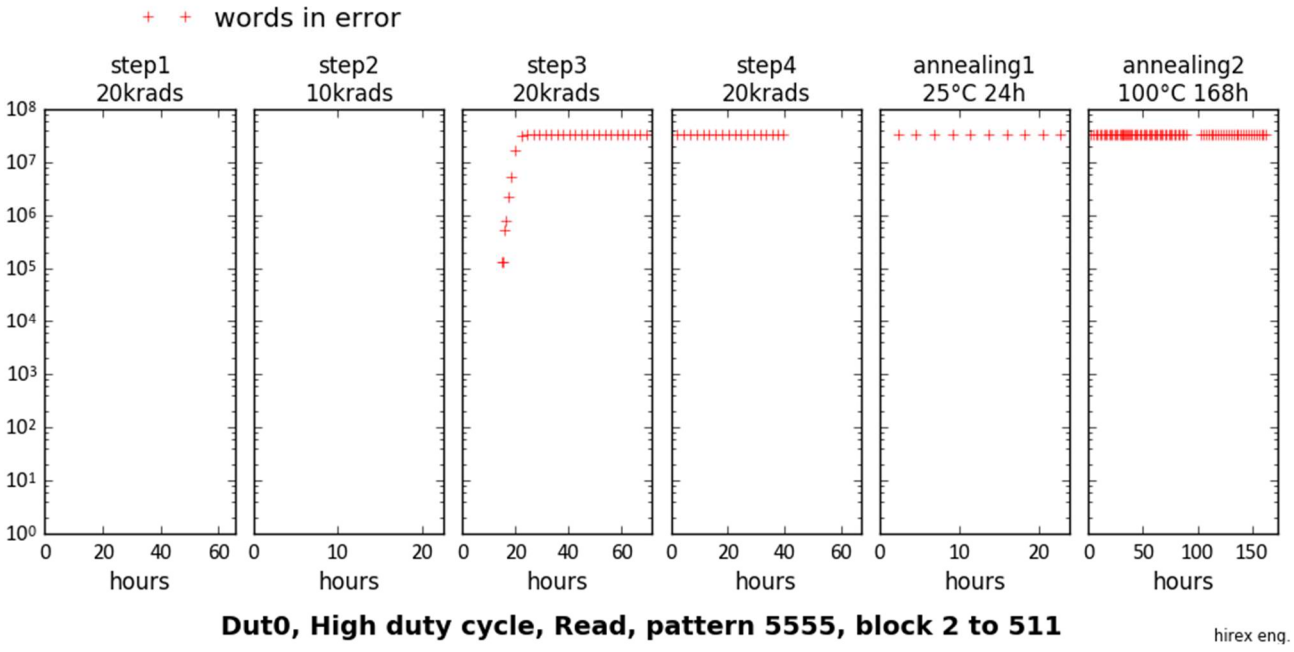


12.25.2 DUT0, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

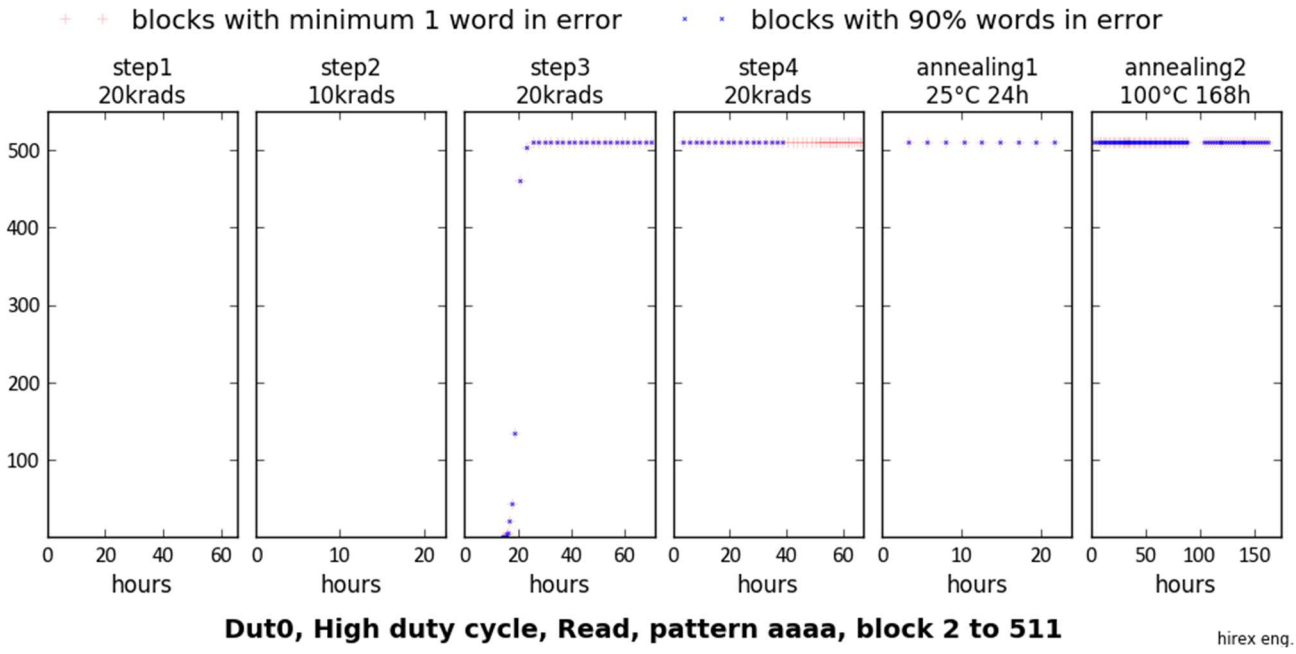


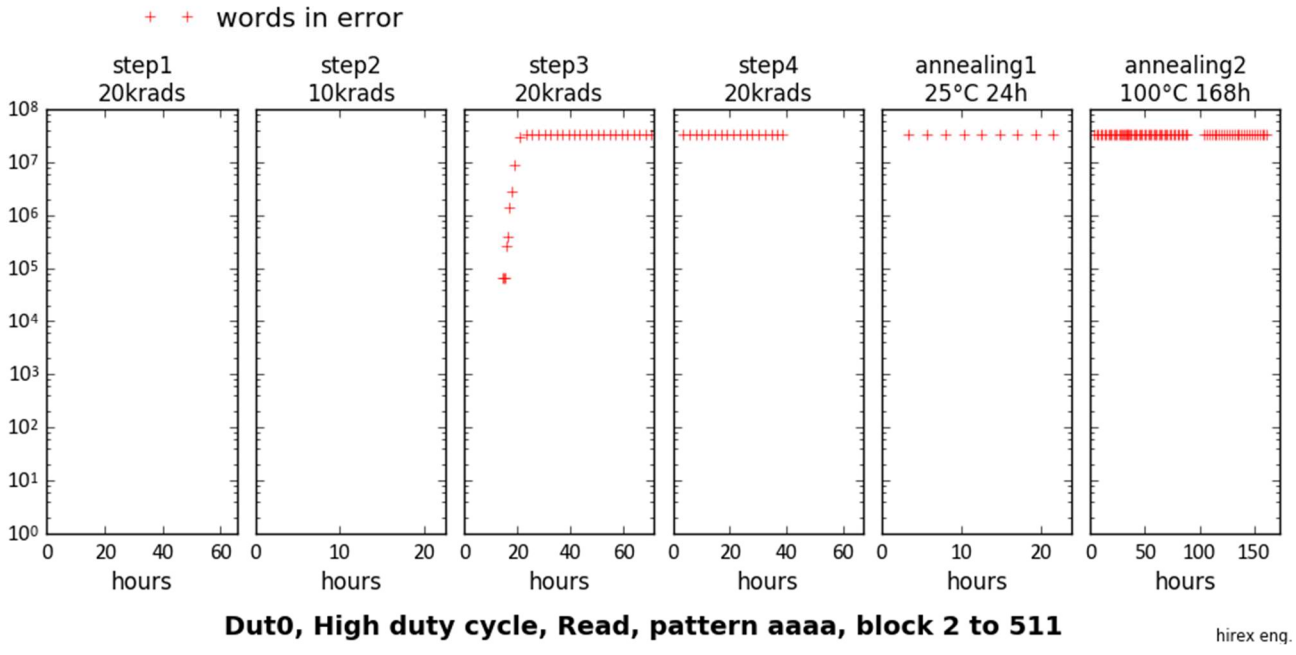
12.25.3 DUT0, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



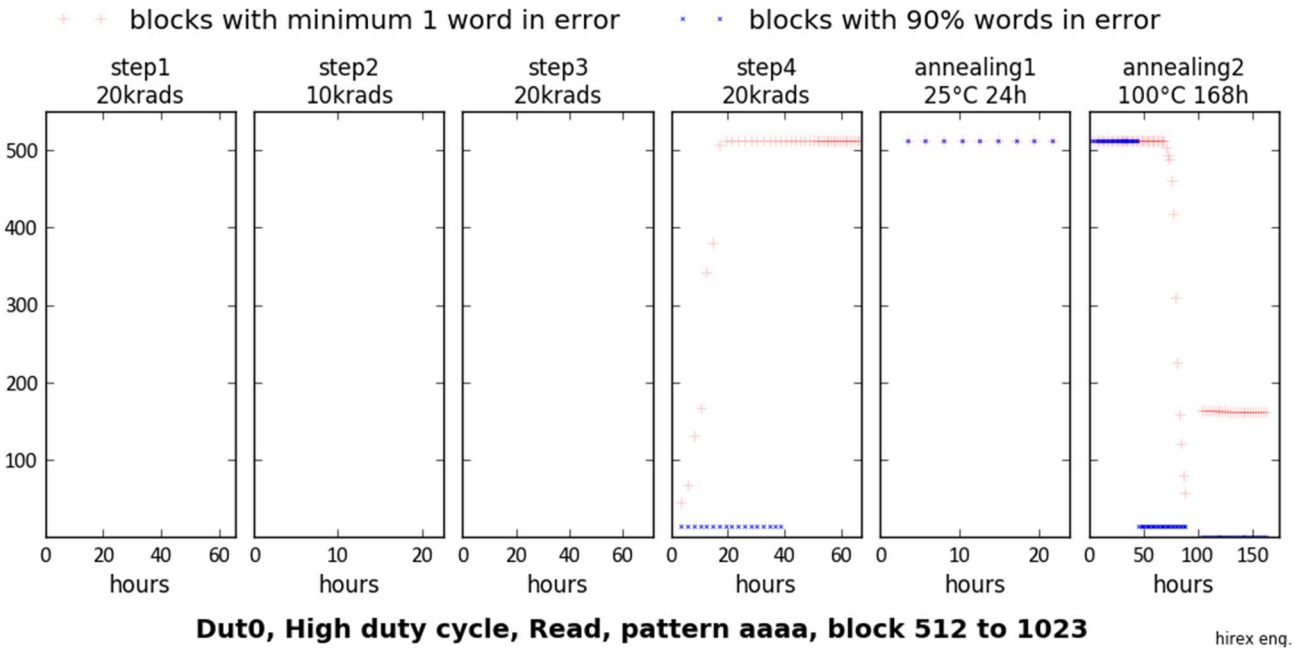


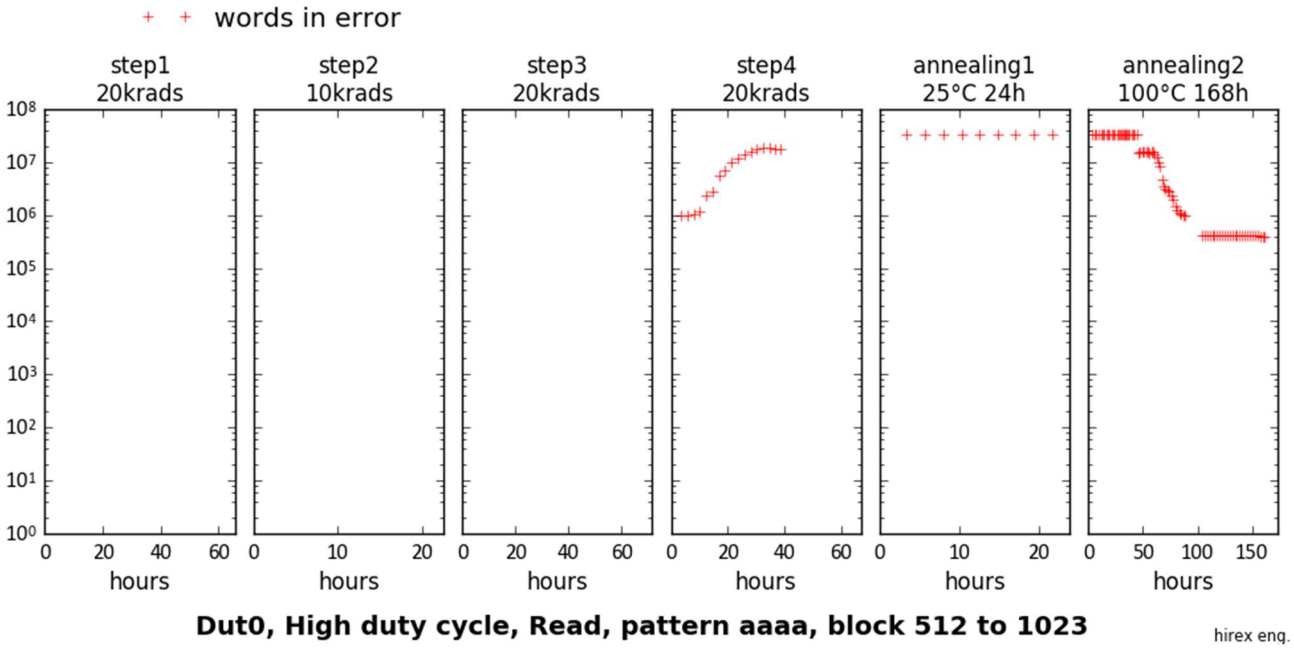
12.25.4 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



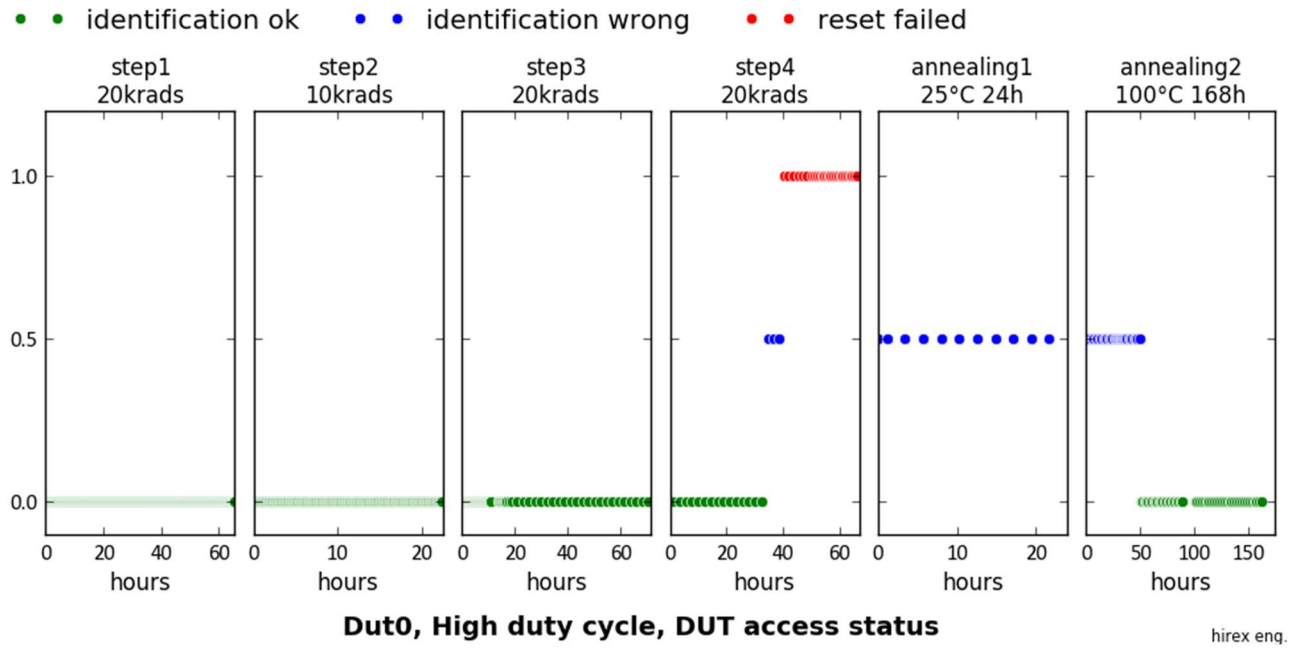


12.25.5 DUT0, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



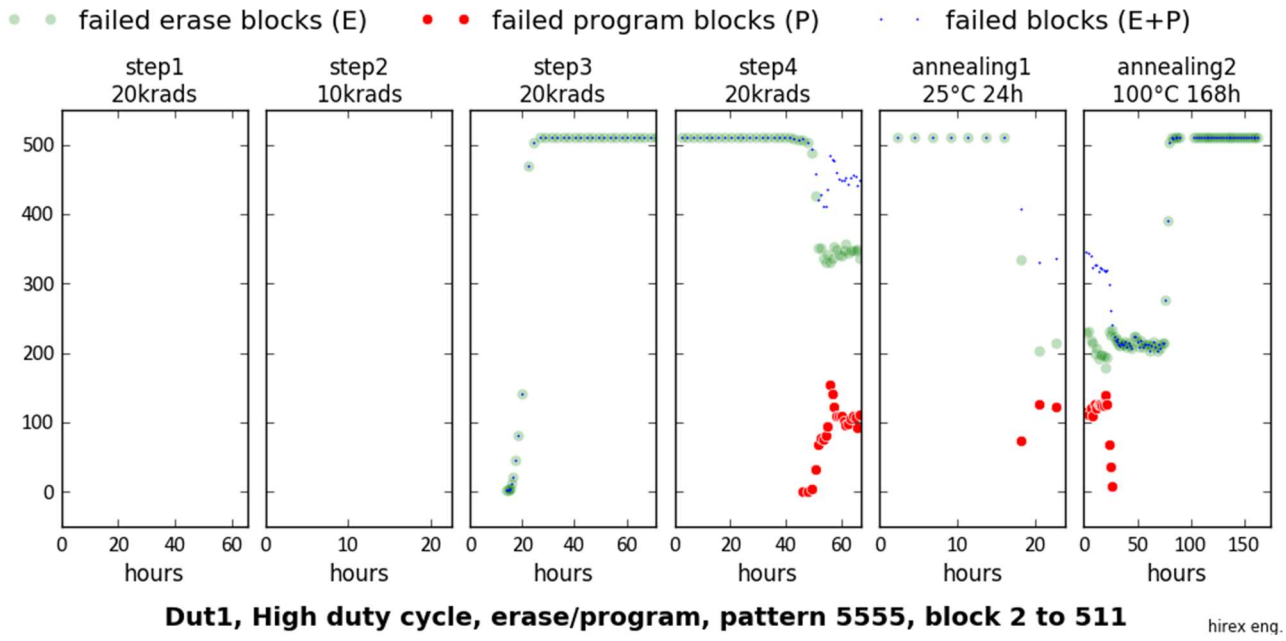


12.25.6 DUT0, High Duty Cycle, DUT access status

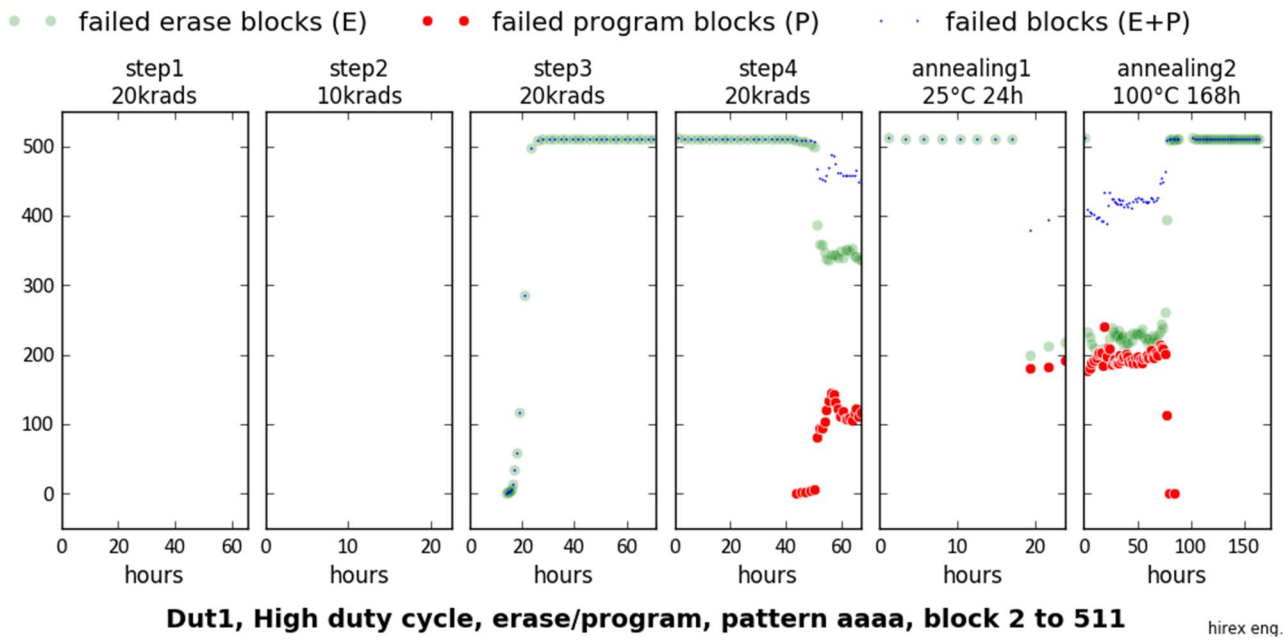


12.26 DUT1 (Board 4), High duty cycle

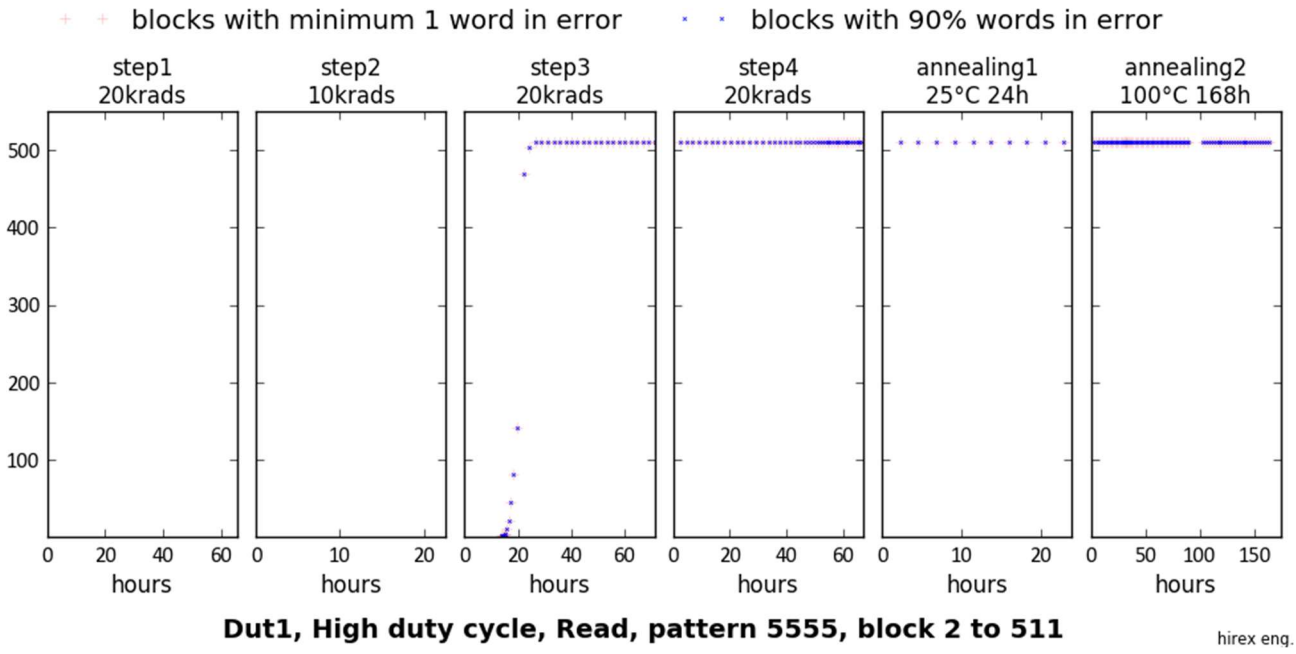
12.26.1 DUT1, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

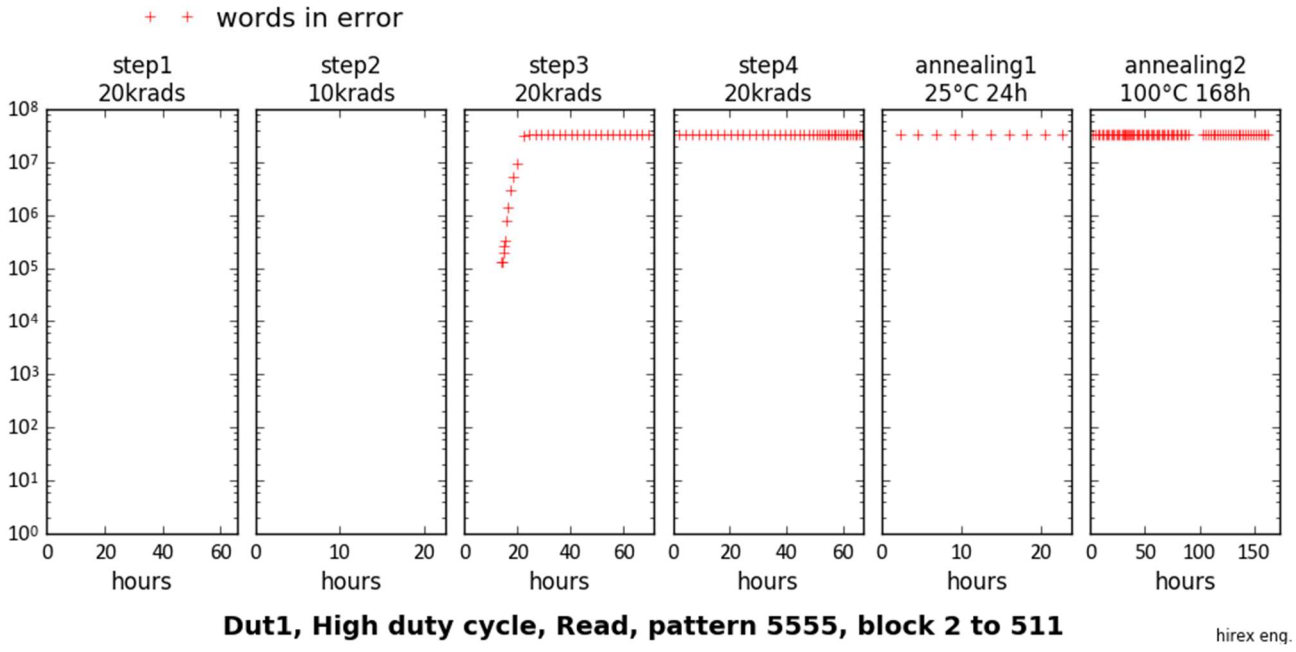


12.26.2 DUT1, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

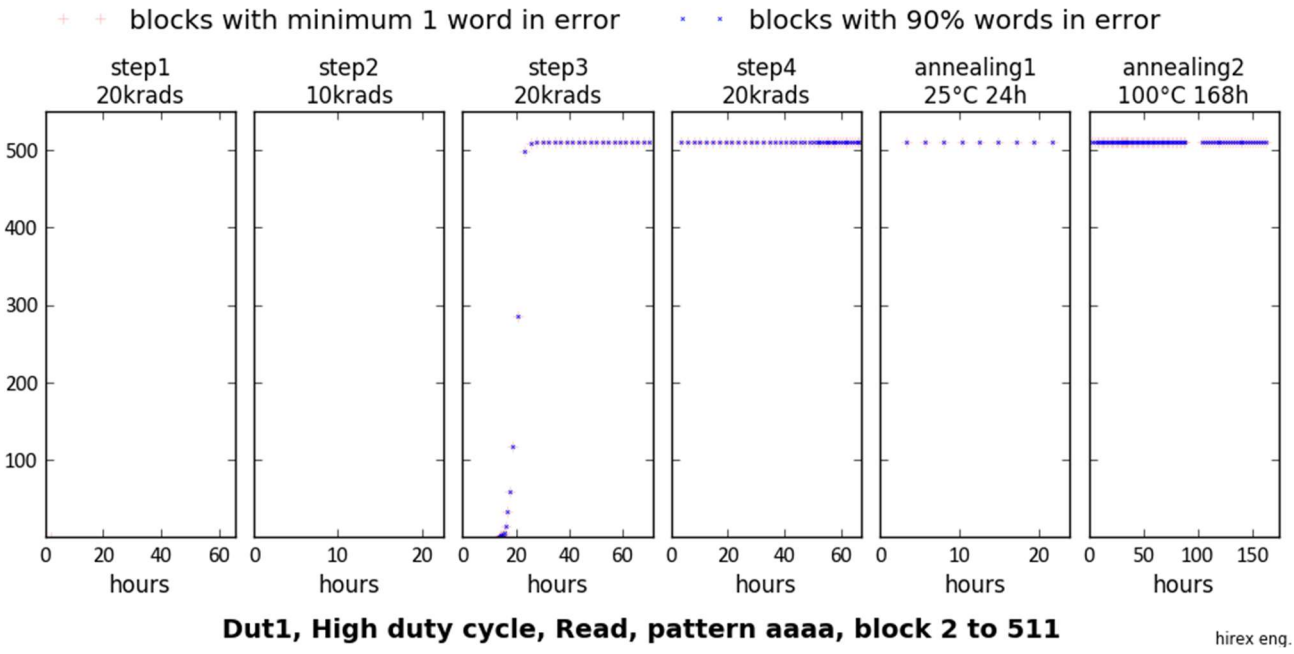


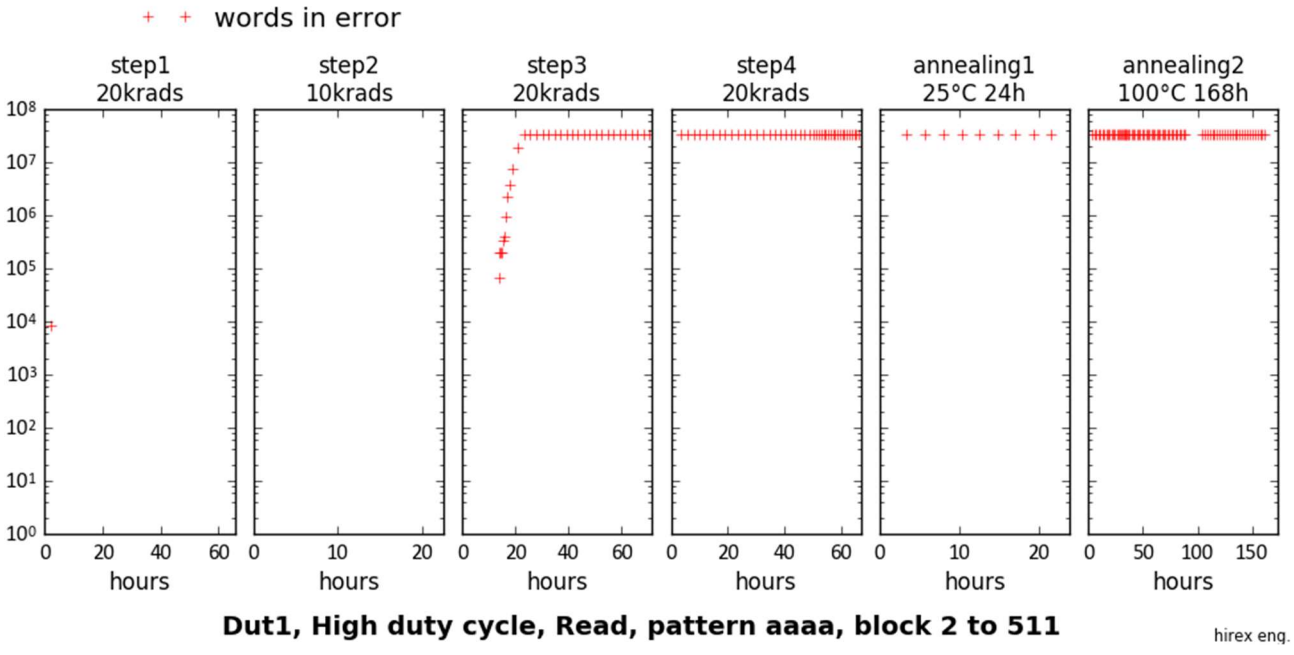
12.26.3 DUT1, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



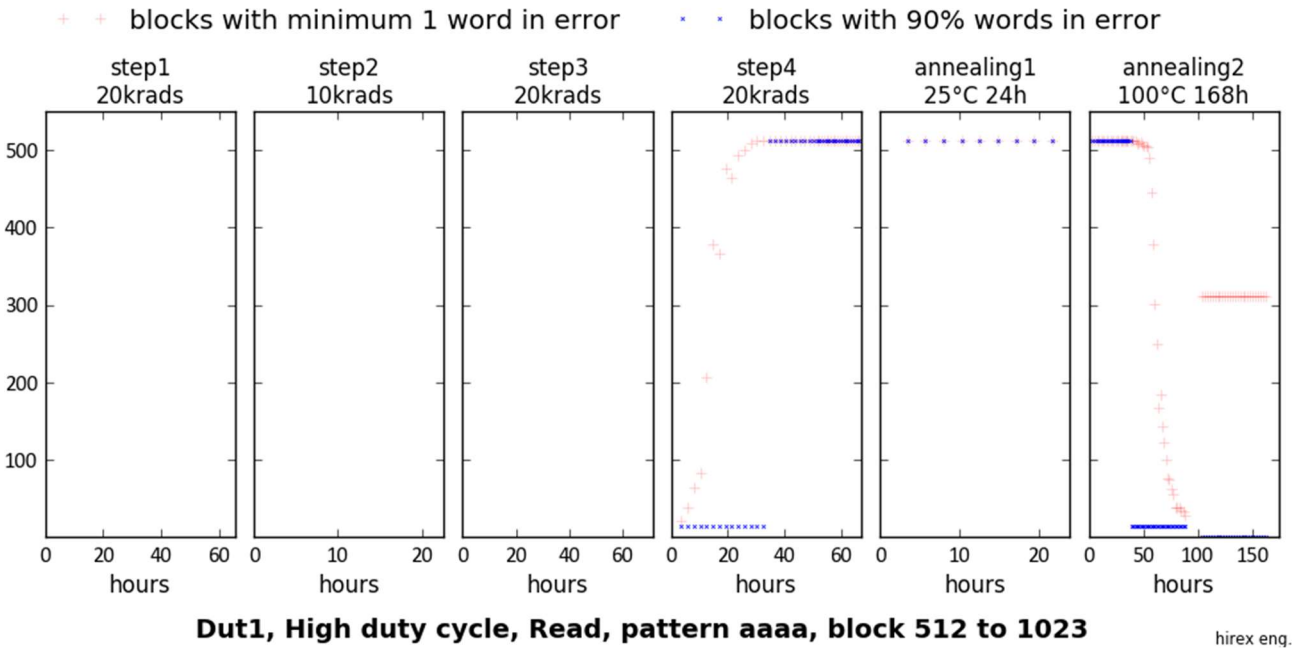


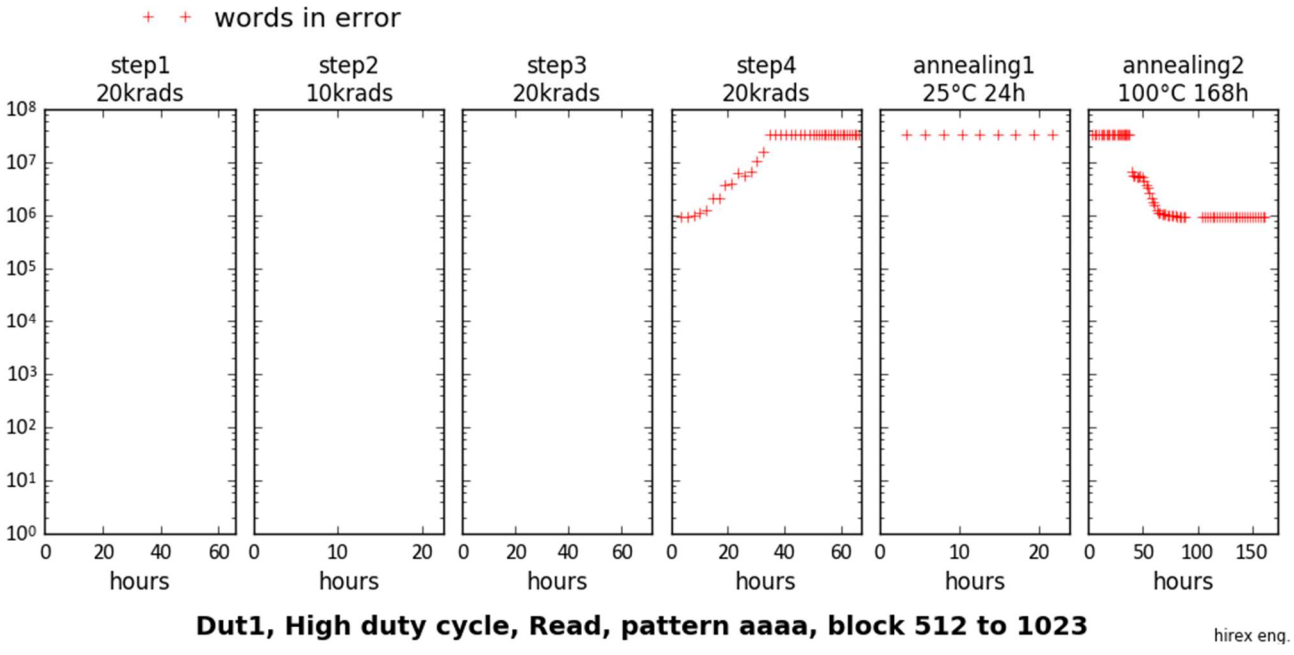
12.26.4 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



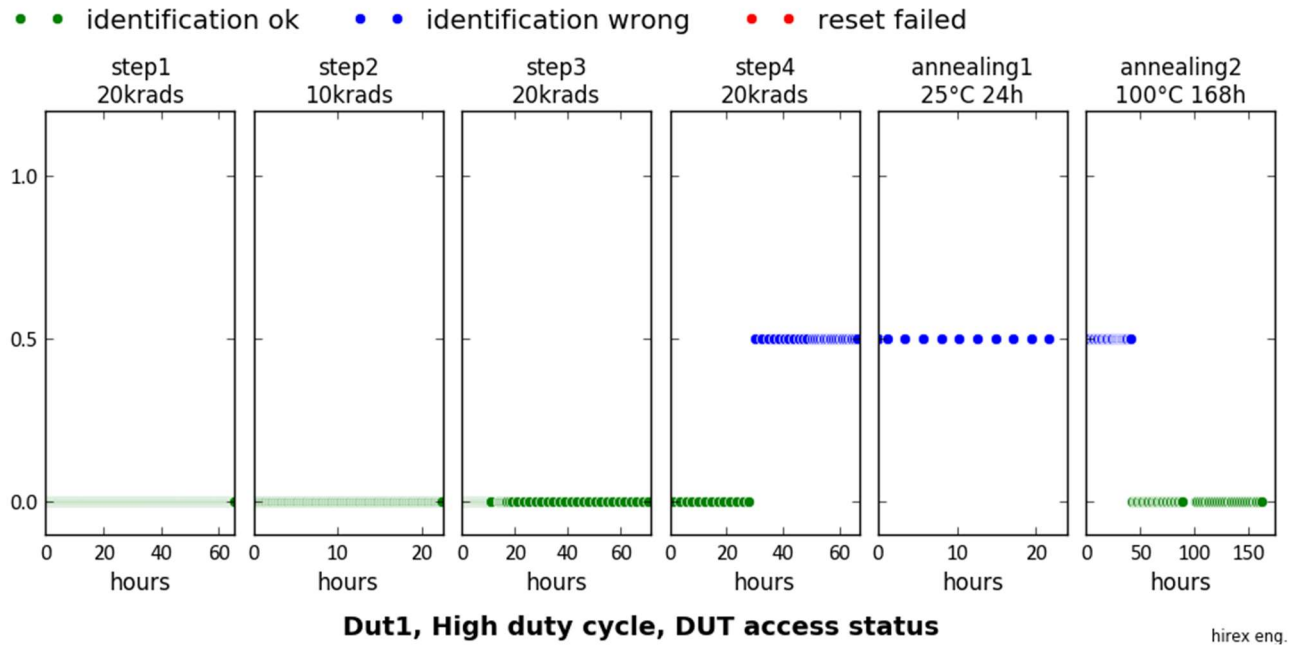


12.26.5 DUT1, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



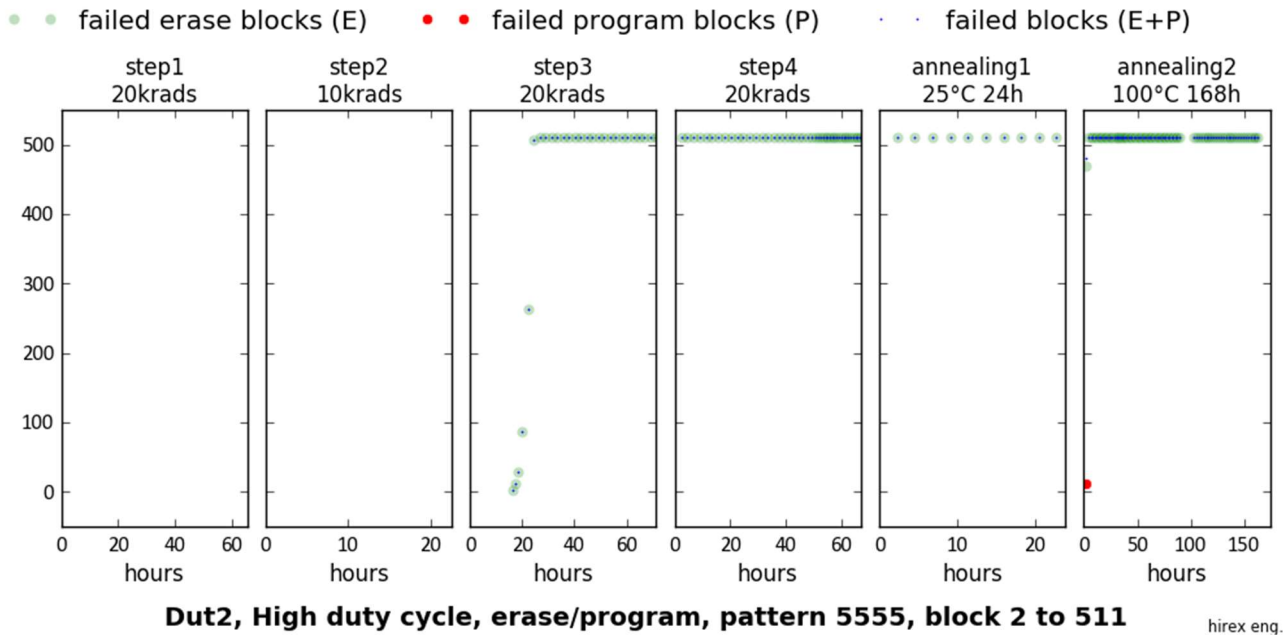


12.26.6 DUT1, High Duty Cycle, DUT access status

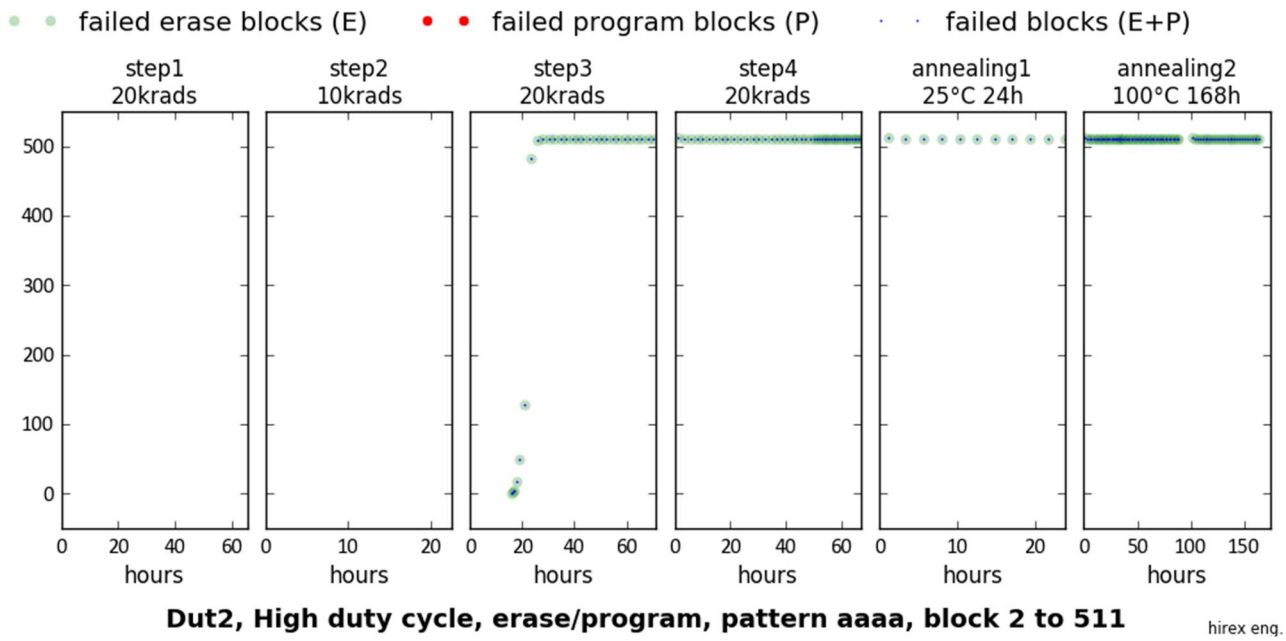


12.27 DUT2 (Board 4), High duty cycle

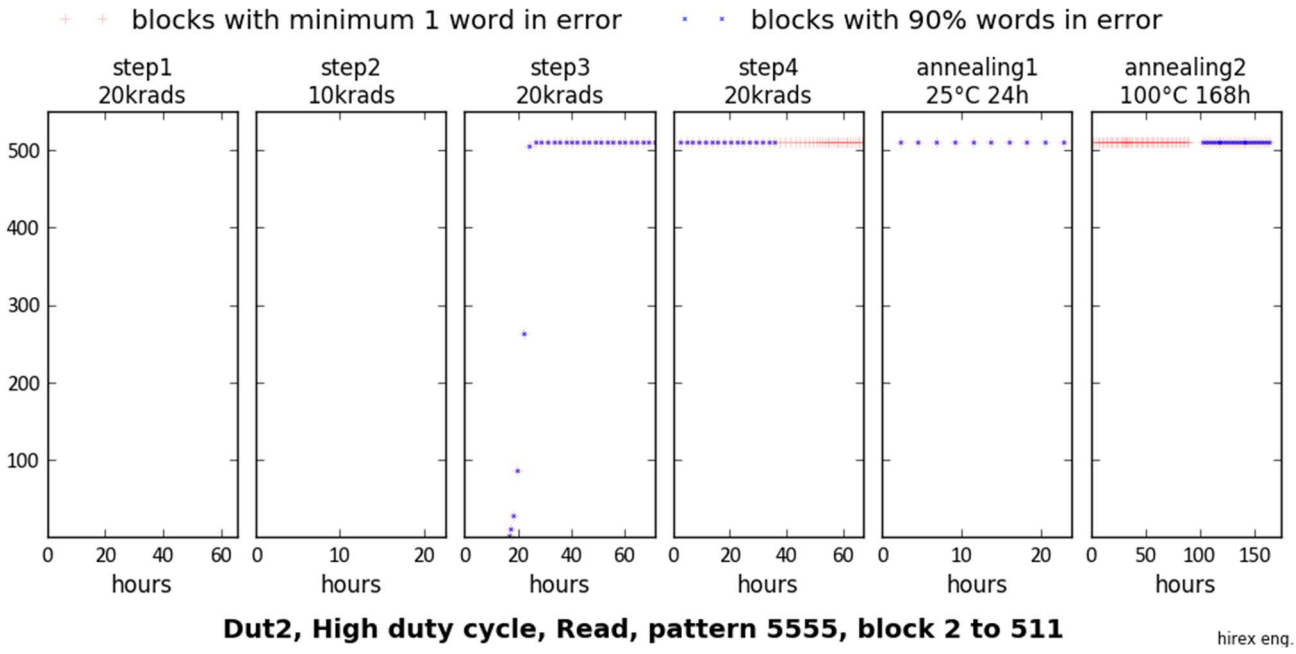
12.27.1 DUT2, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

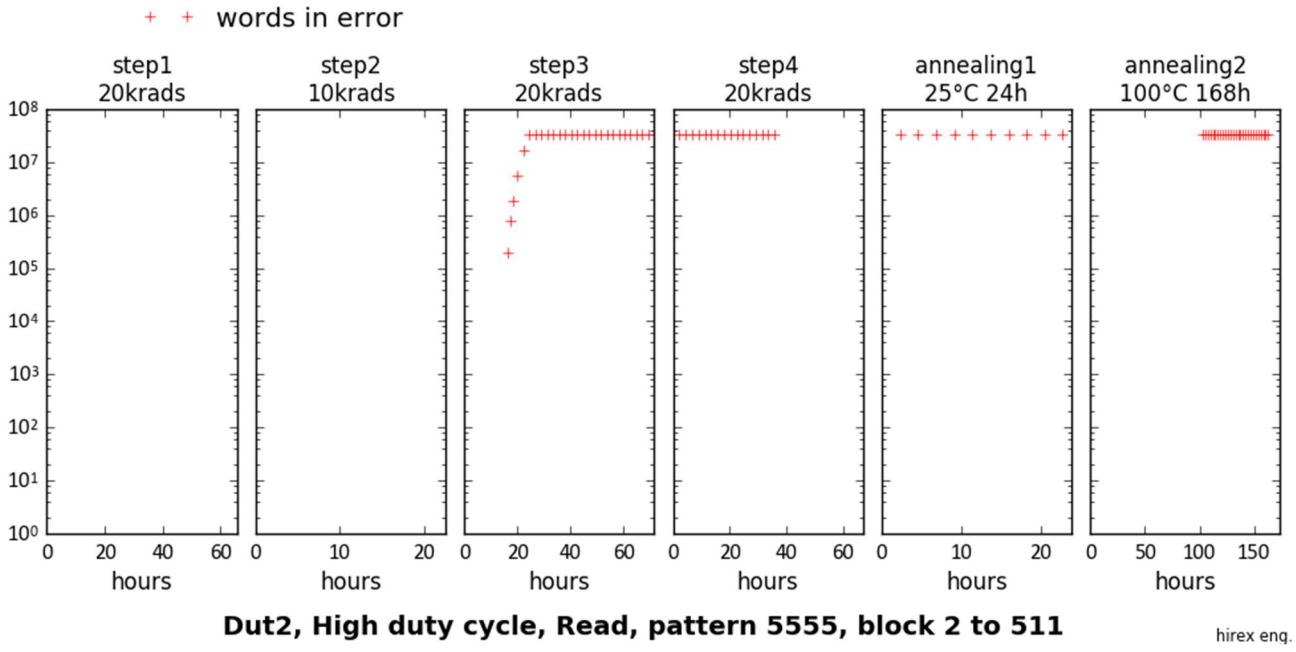


12.27.2 DUT2, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

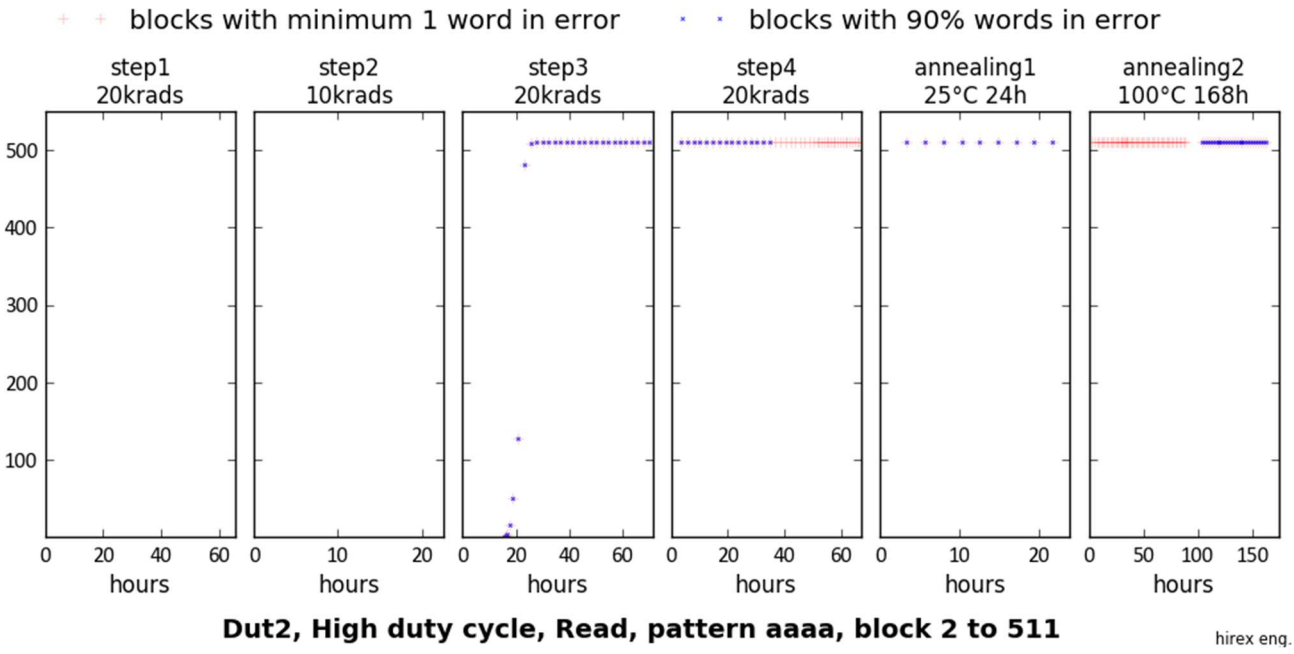


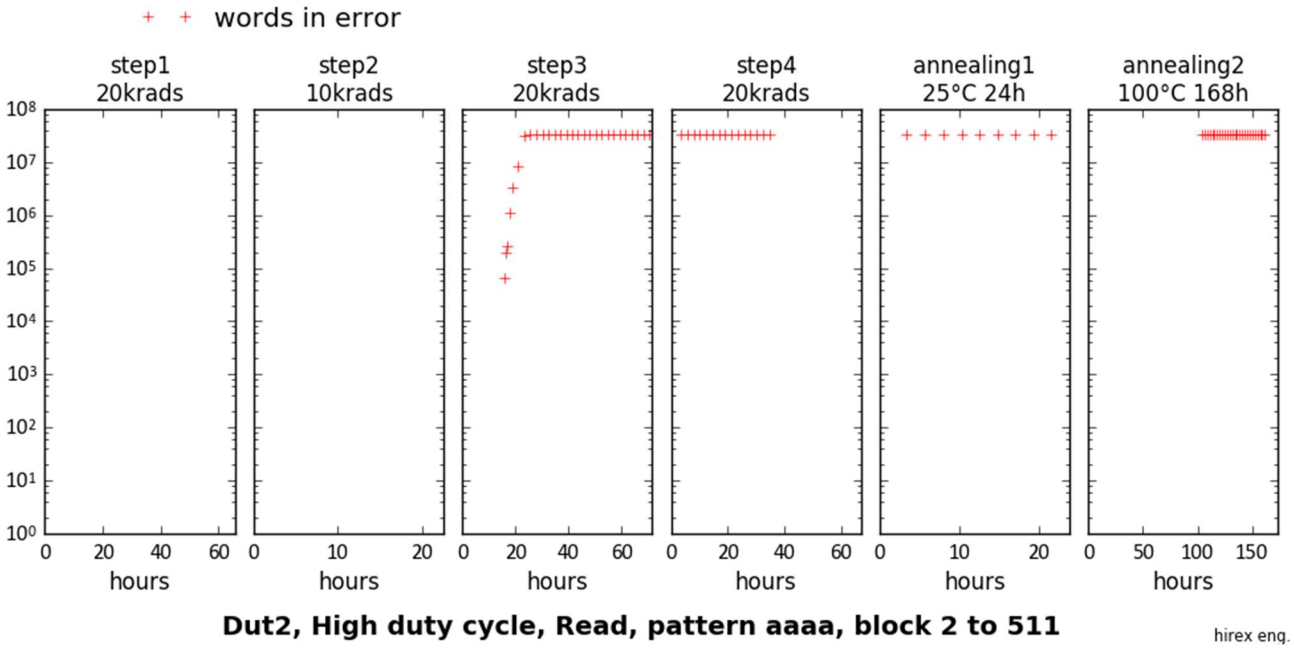
12.27.3 DUT2, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



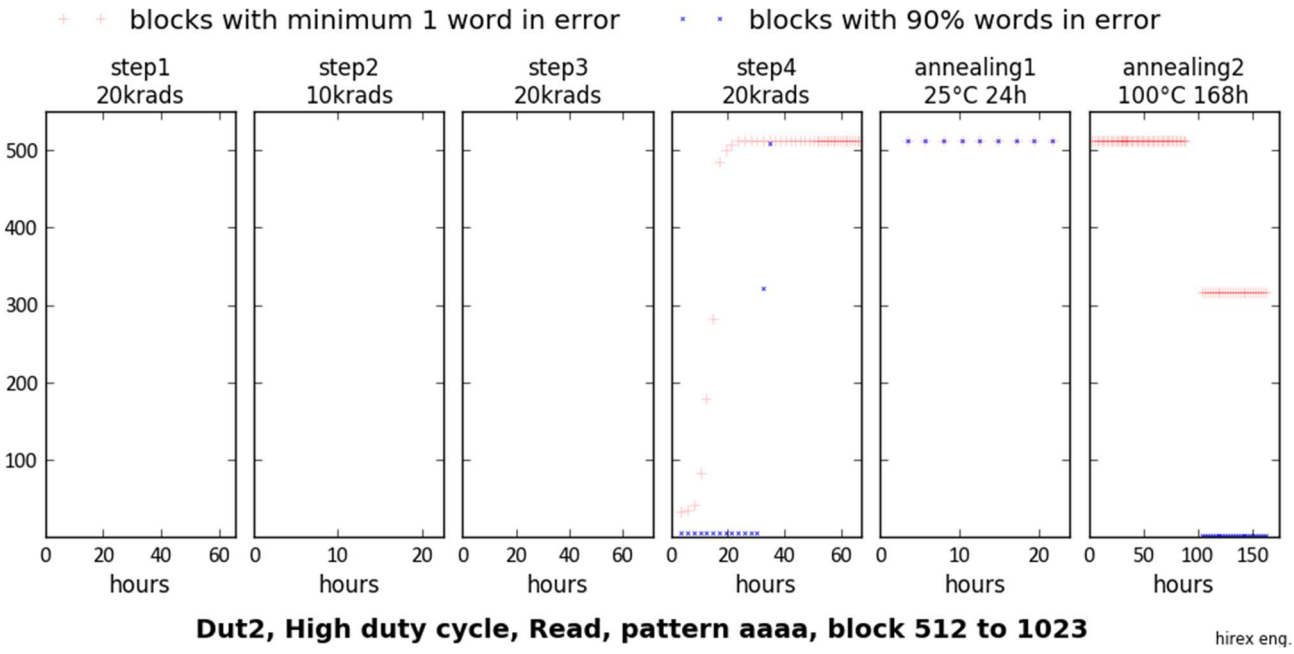


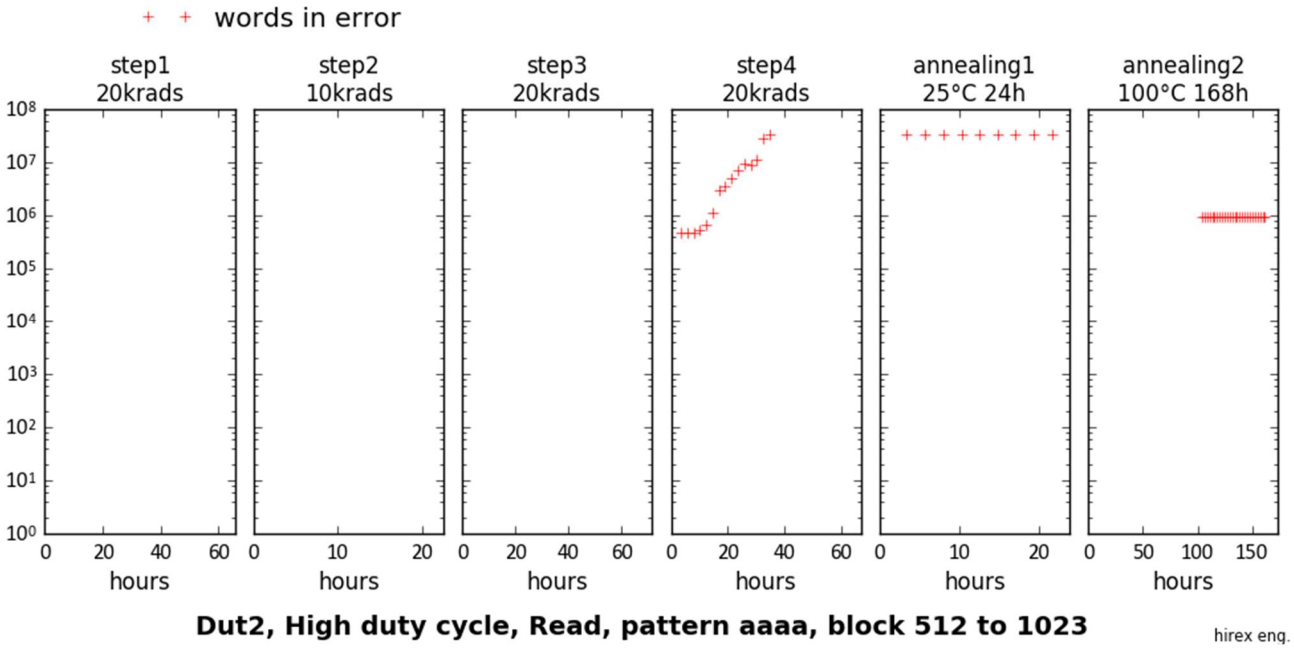
12.27.4 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



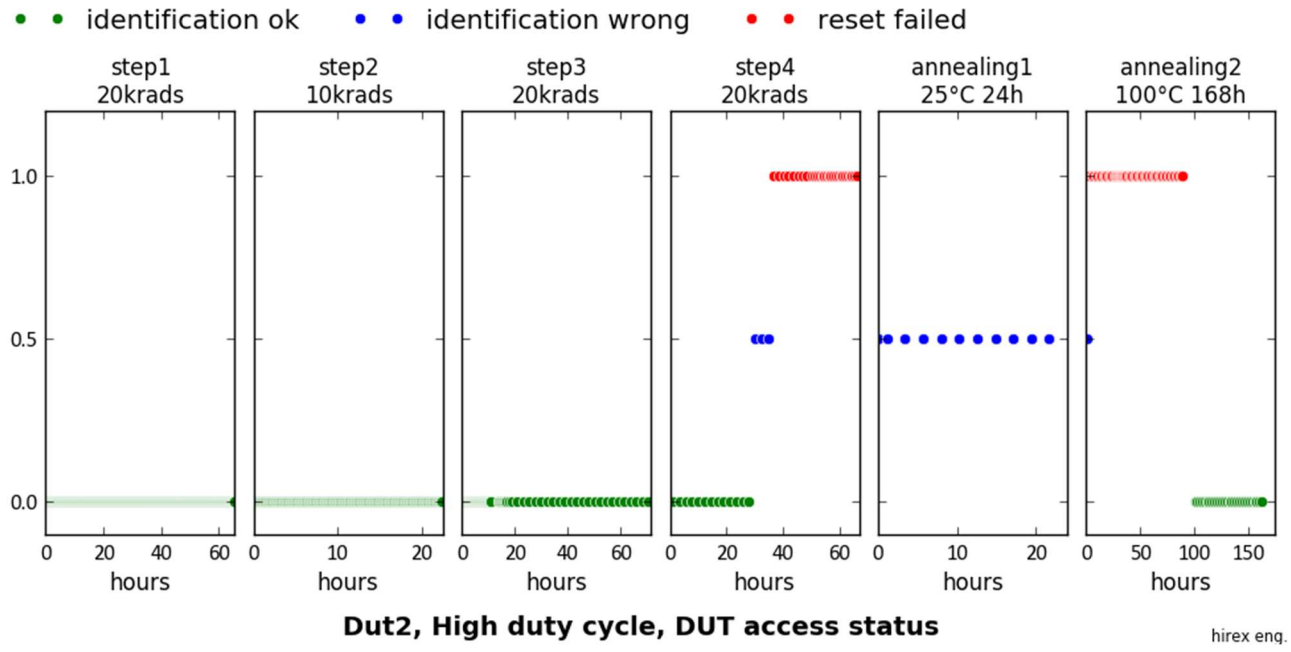


12.27.5 DUT2, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



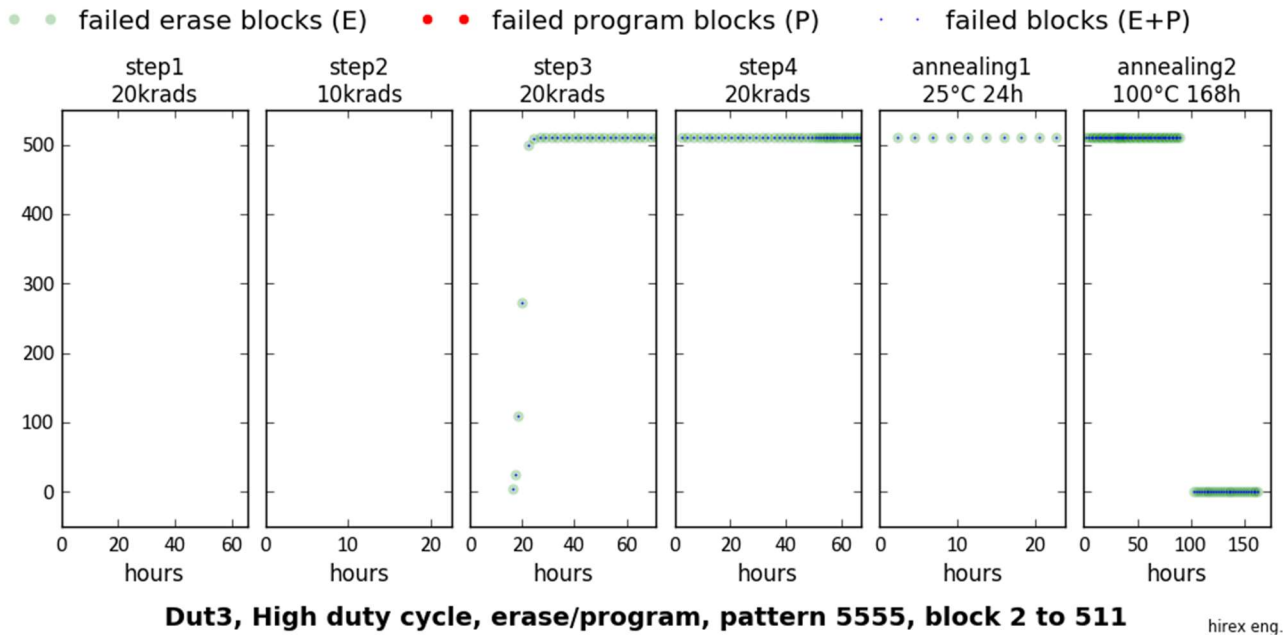


12.27.6 DUT2, High Duty Cycle, DUT access status

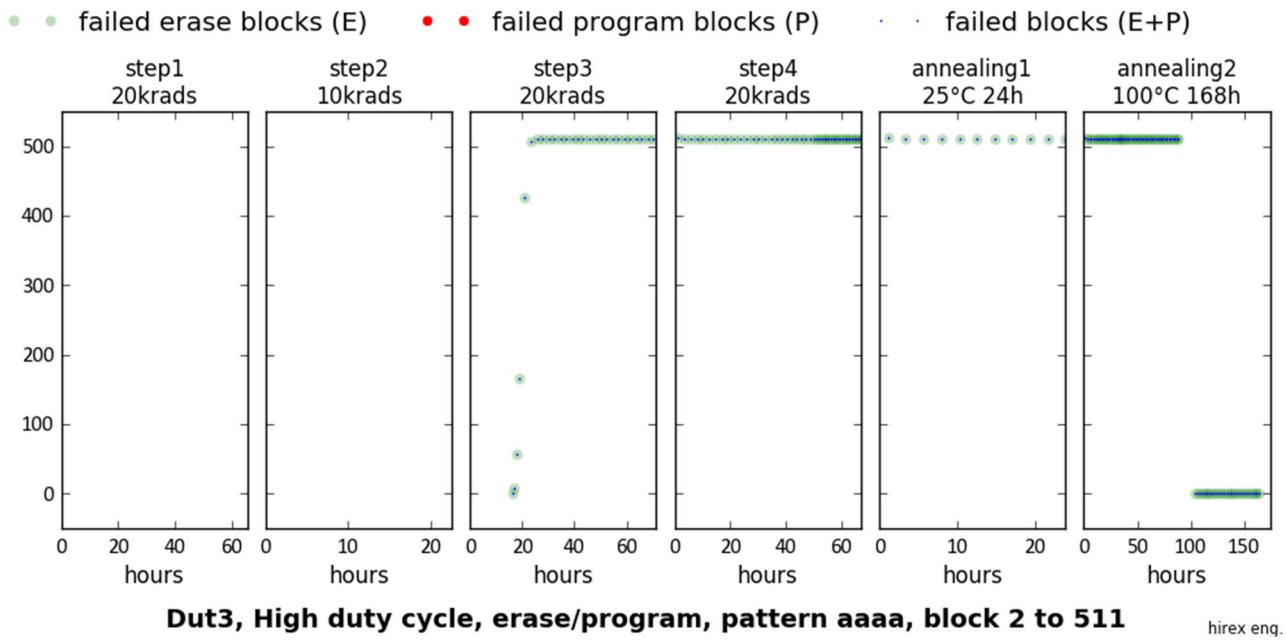


12.28 DUT3 (Board 4), High duty cycle

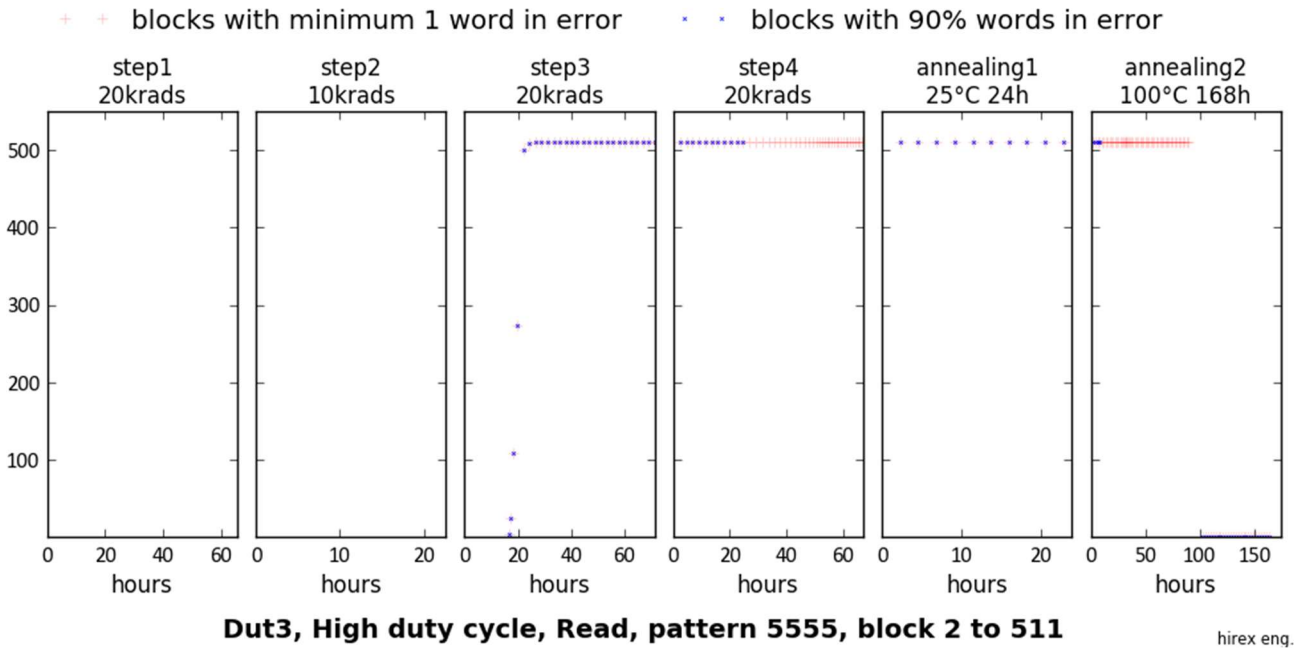
12.28.1 DUT3, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

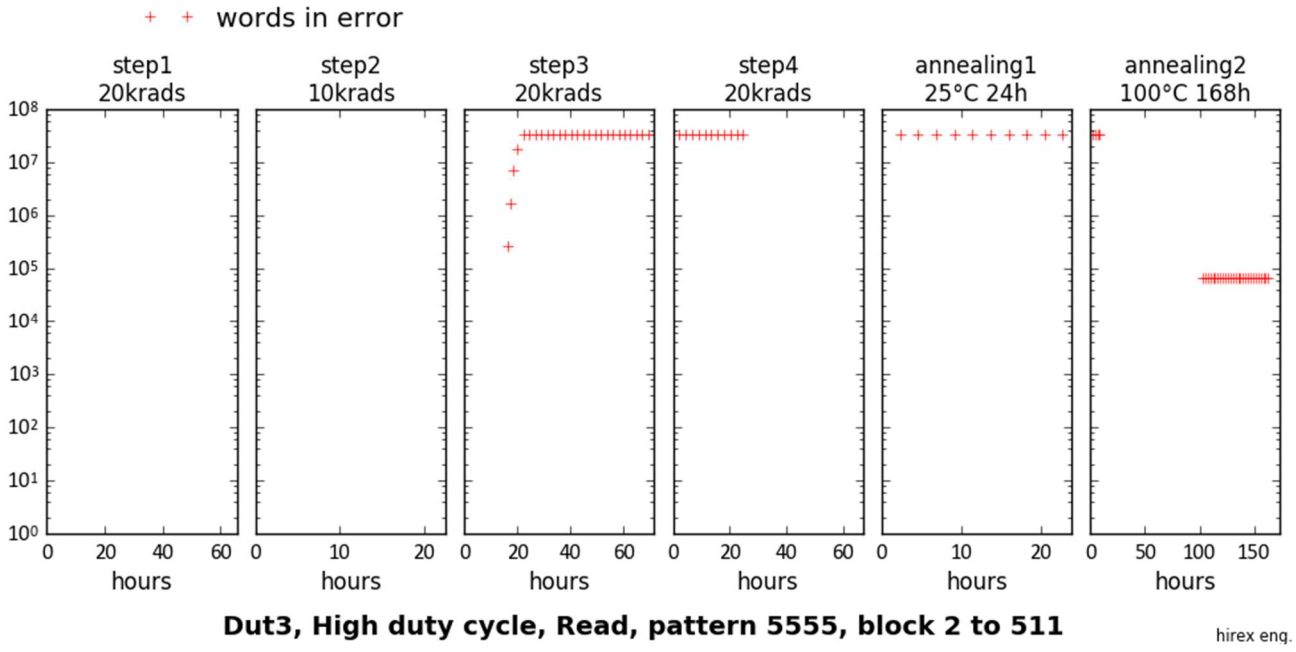


12.28.2 DUT3, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

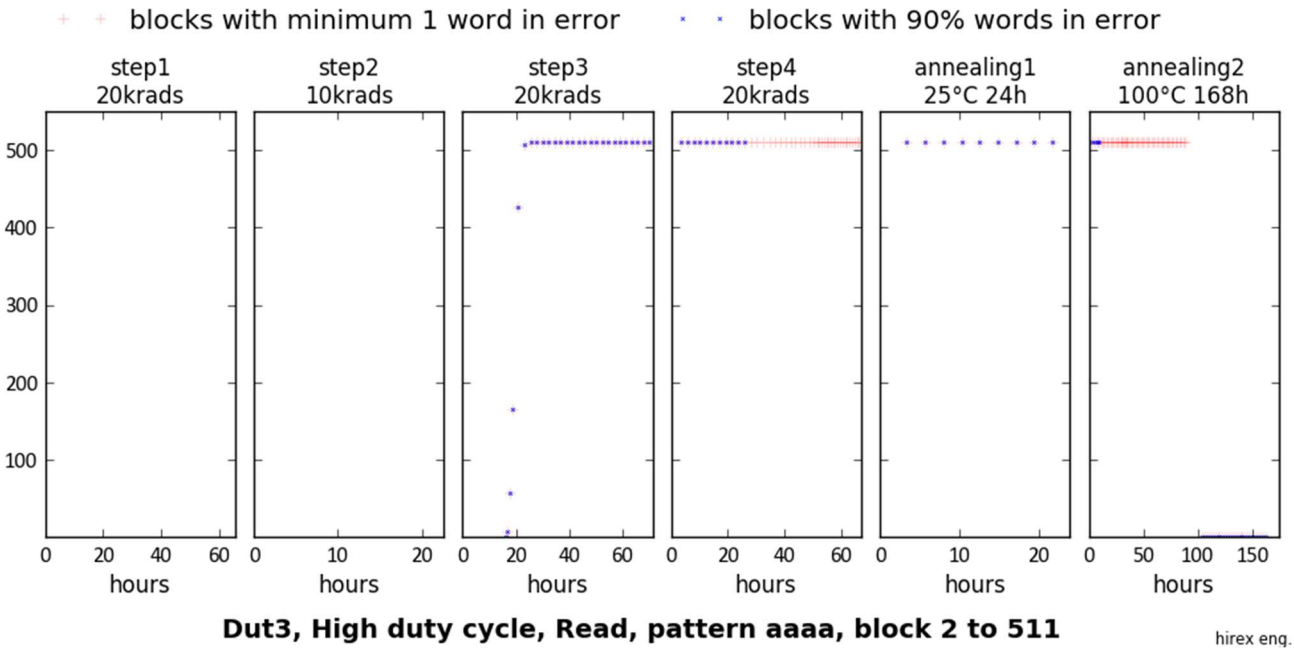


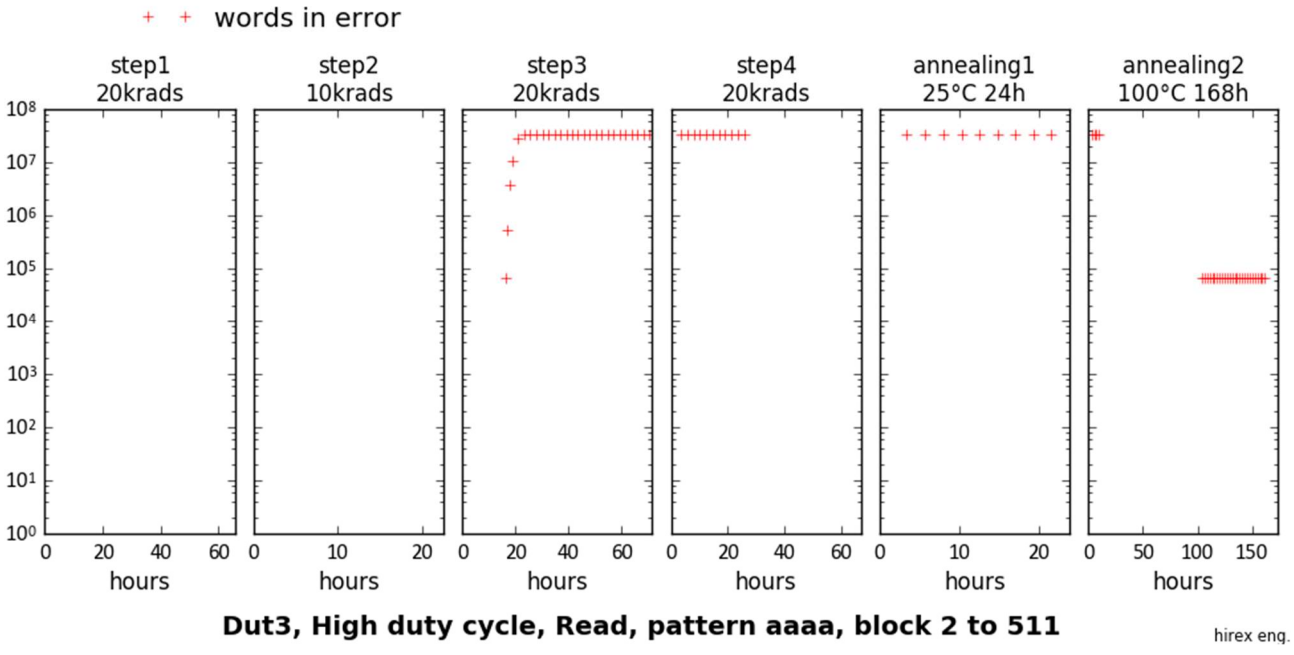
12.28.3 DUT3, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



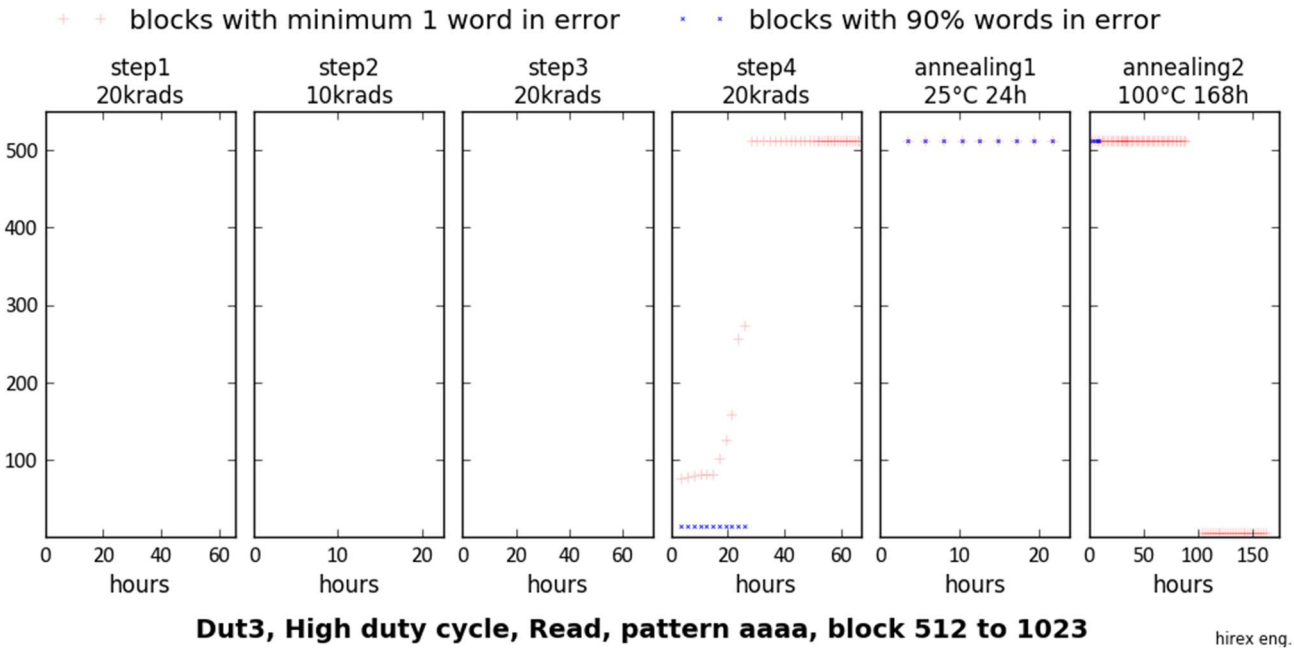


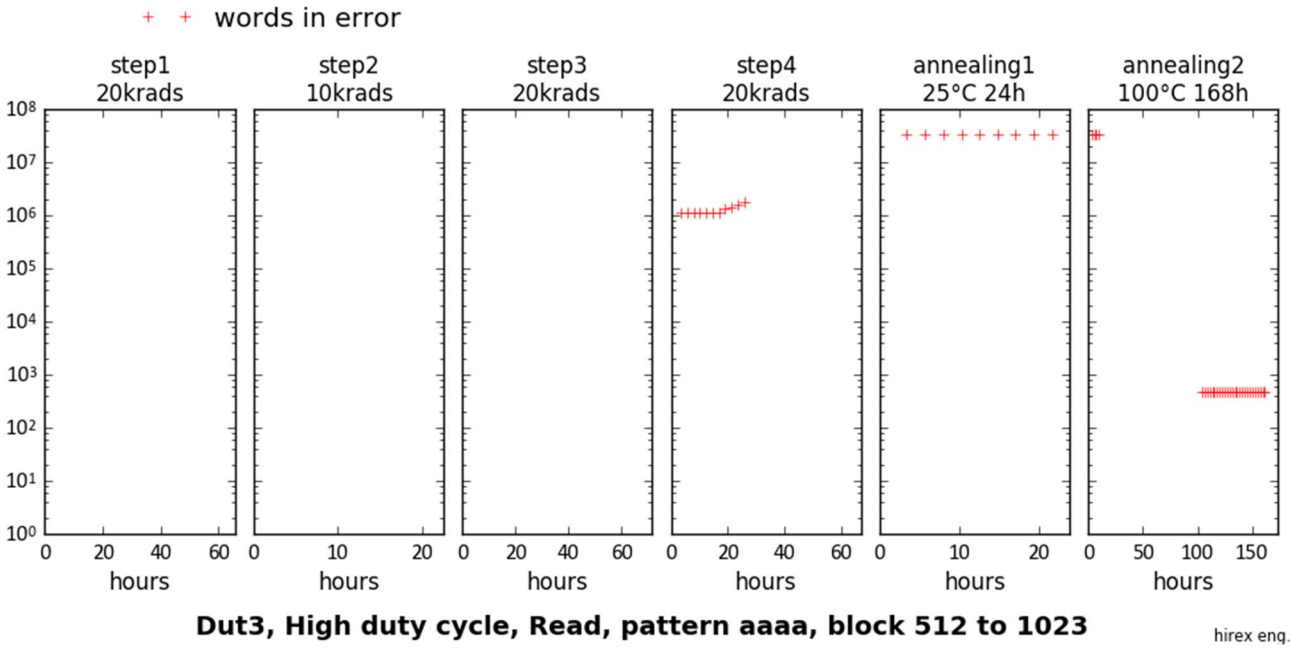
12.28.4 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



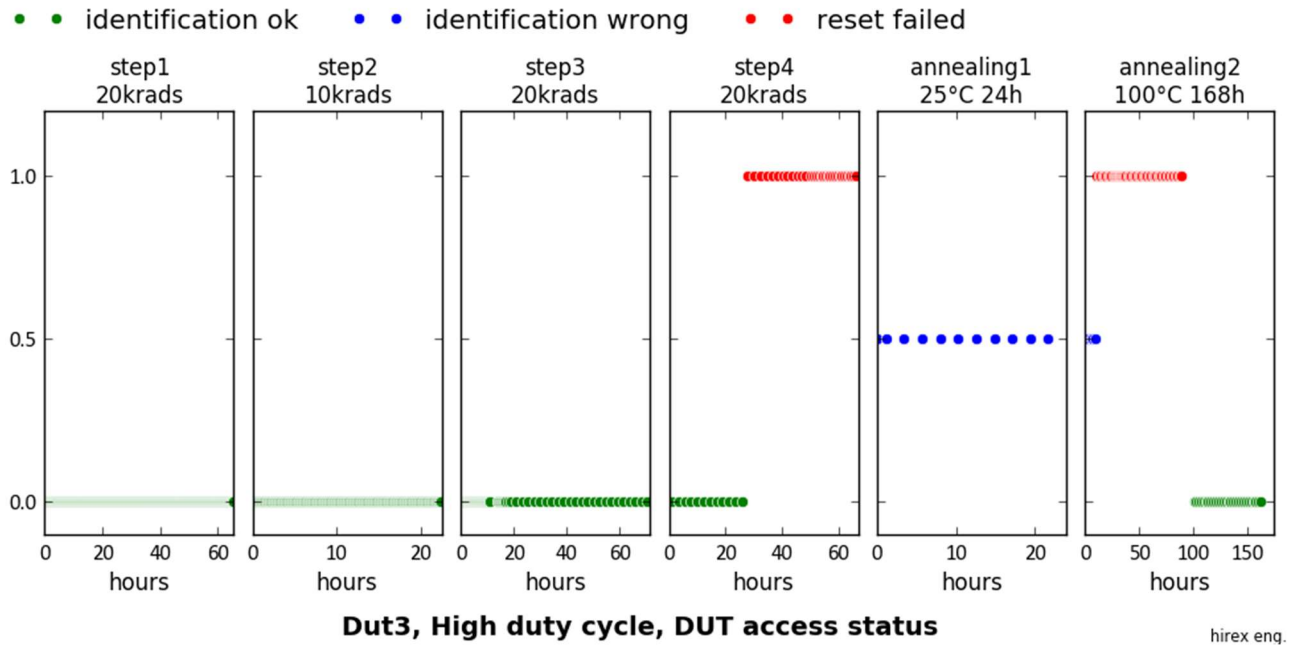


12.28.5 DUT3, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023



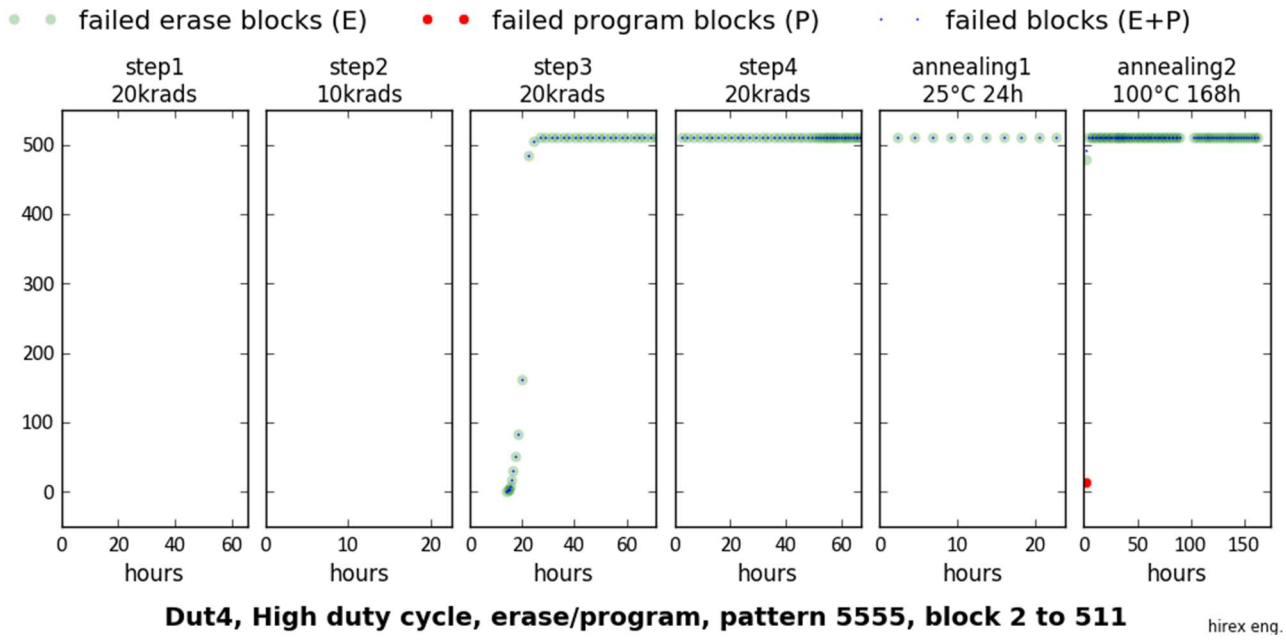


12.28.6 DUT3, High Duty Cycle, DUT access status

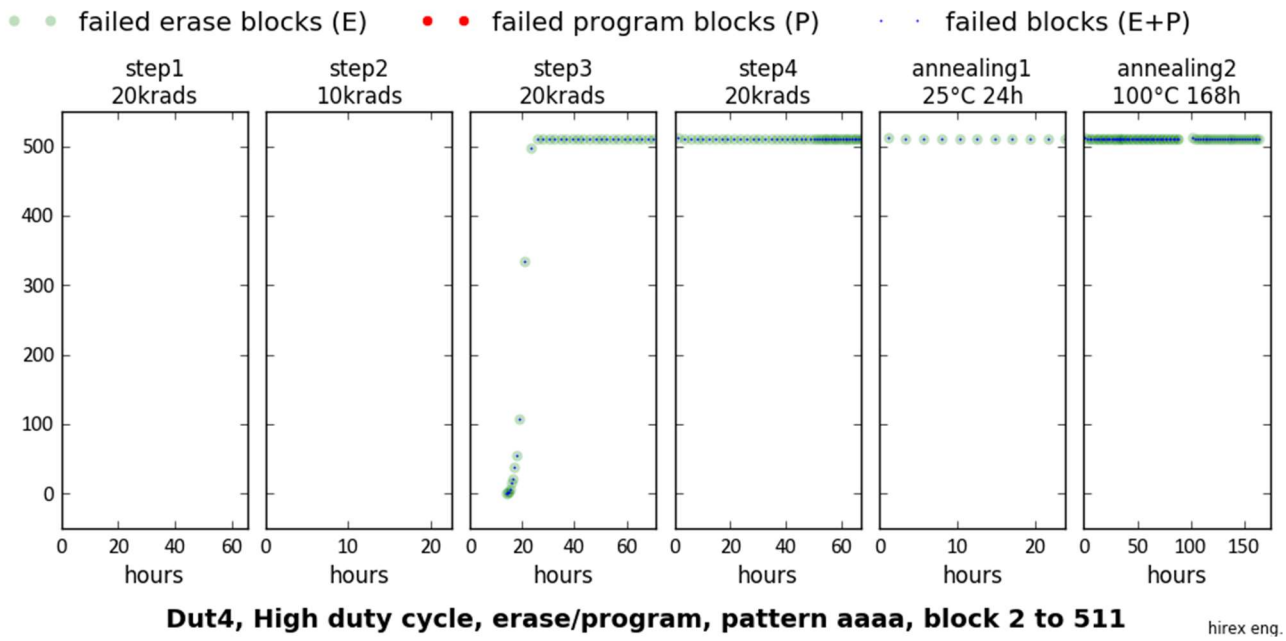


12.29 DUT4 (Board 4), High duty cycle

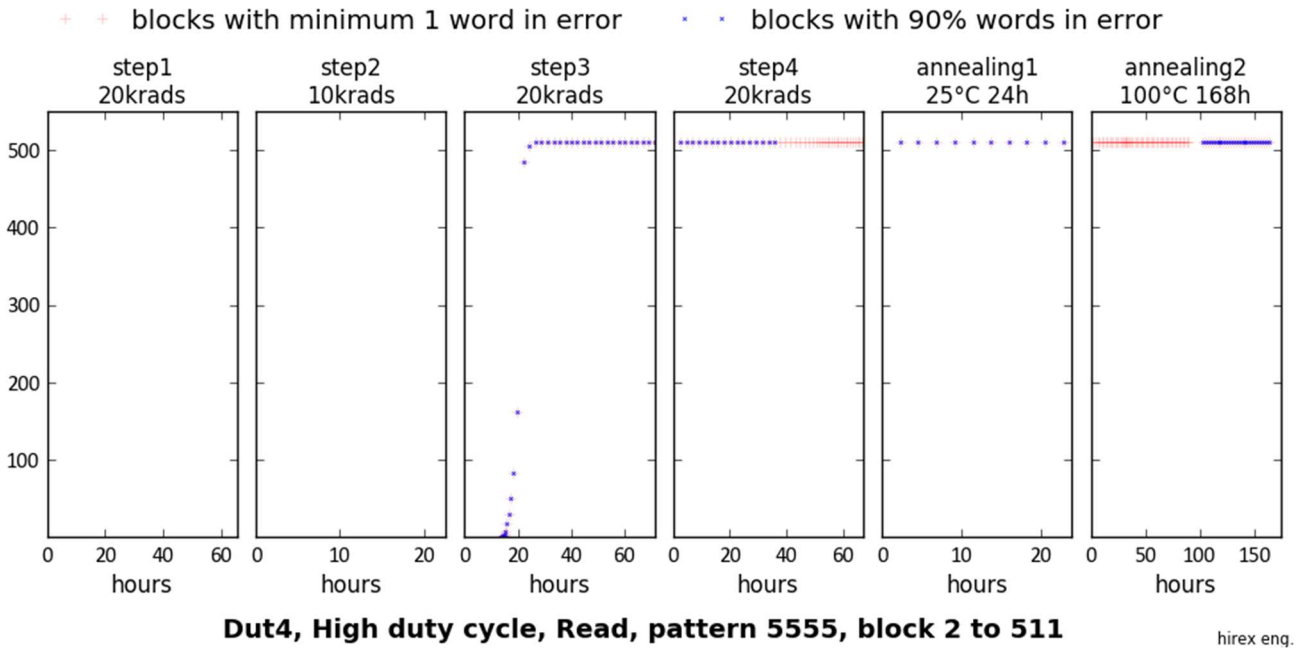
12.29.1 DUT4, High Duty Cycle, Erase/Program, pattern =0x5555, blocks 2 to 511

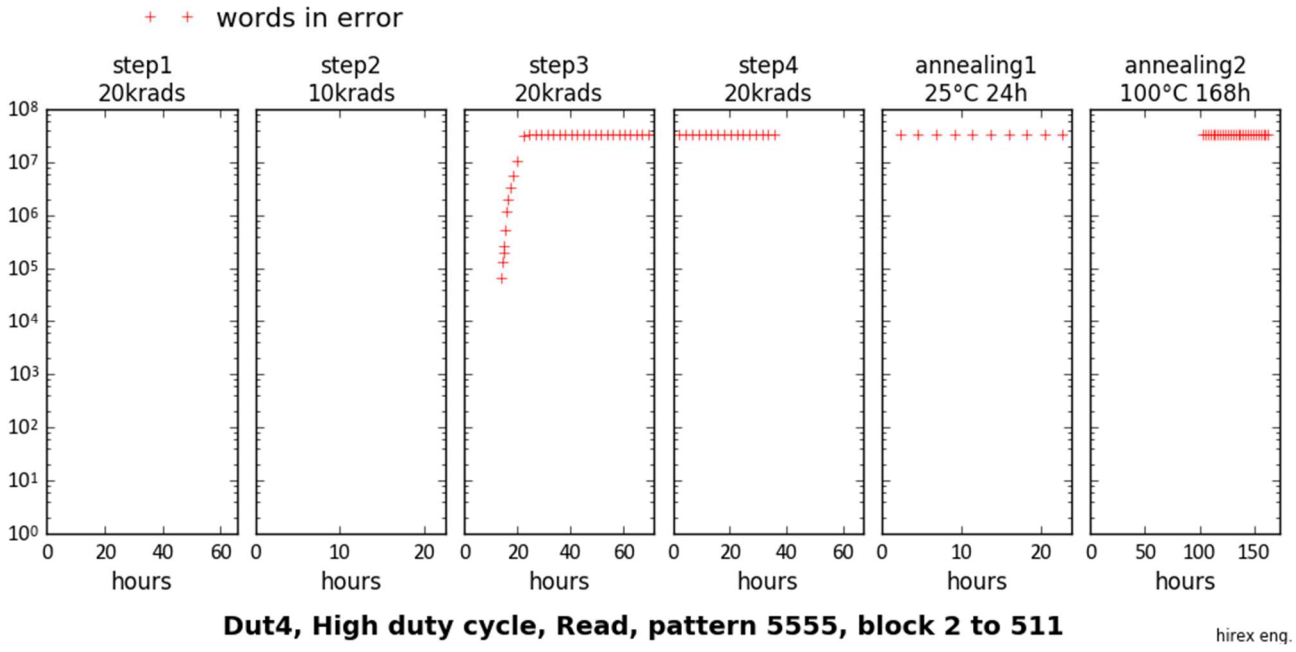


12.29.2 DUT4, High Duty Cycle, Erase/Program, pattern = 0xAAAA, blocks 2 to 511

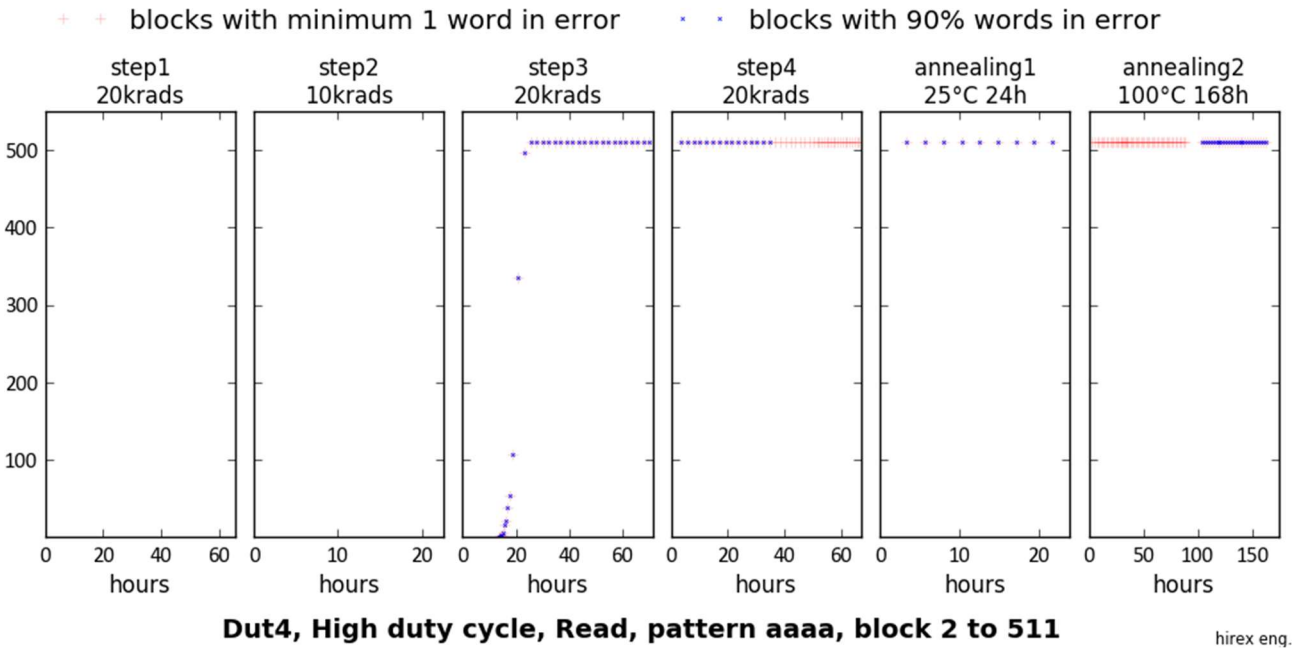


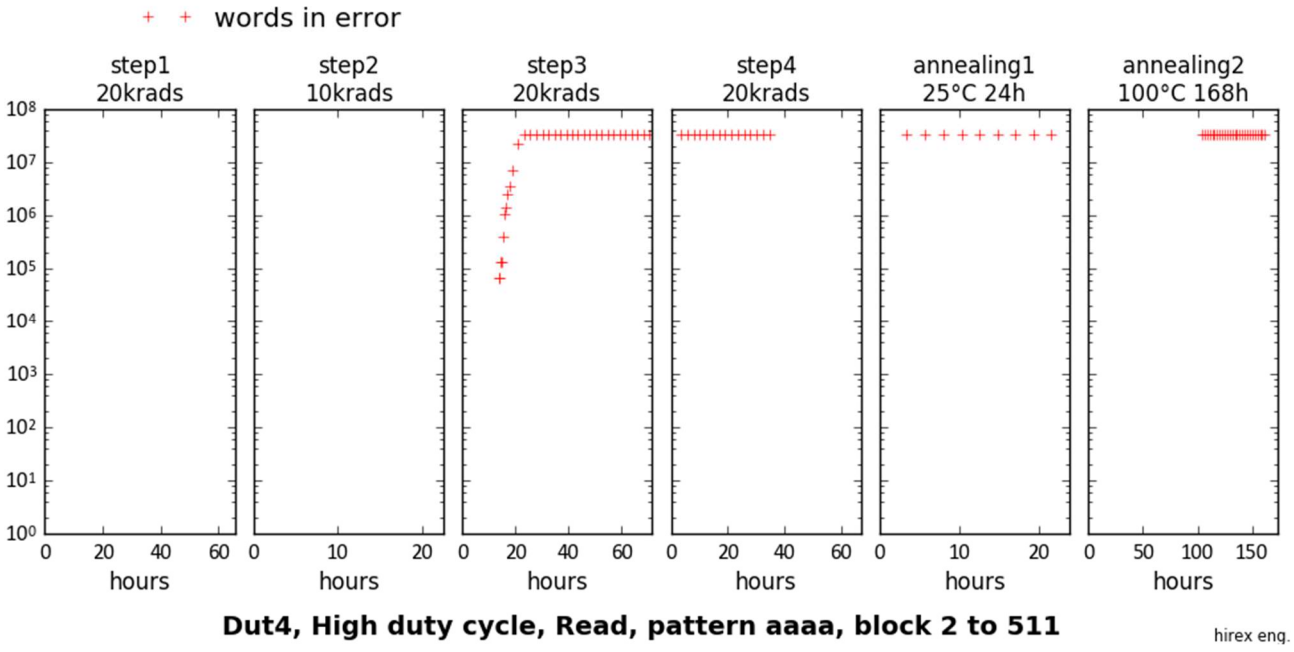
12.29.3 DUT4, High Duty Cycle, Read, pattern = 0x5555, blocks 2 to 511



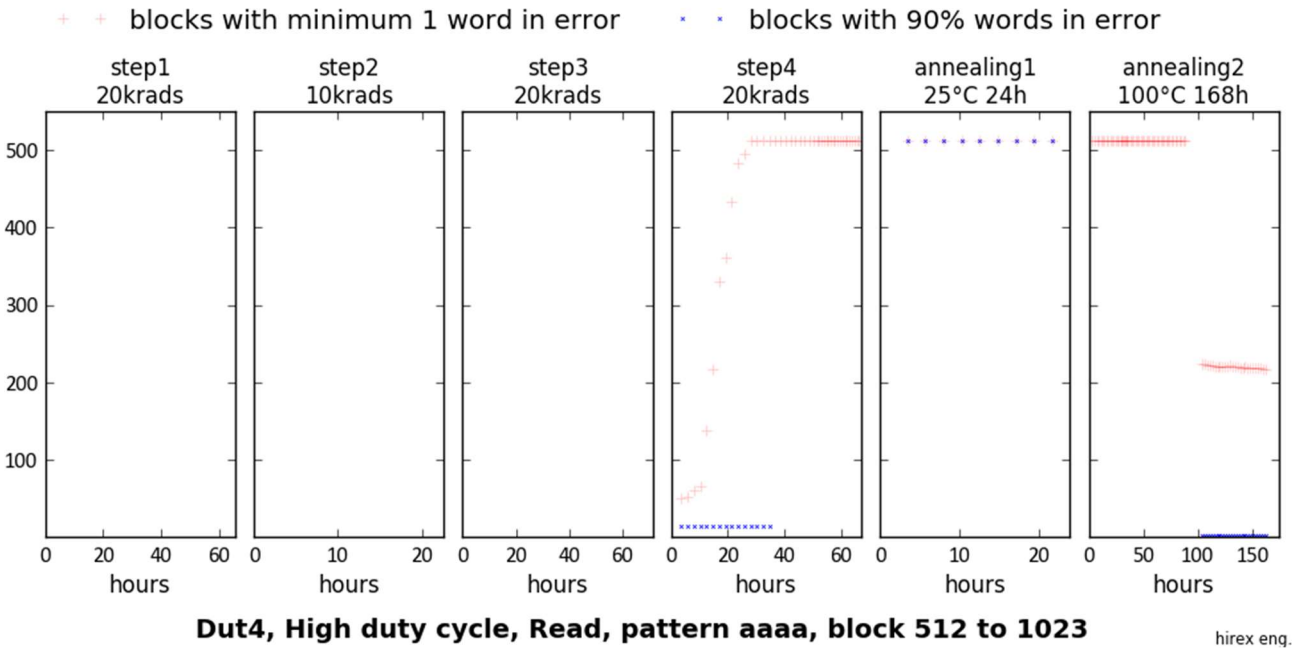


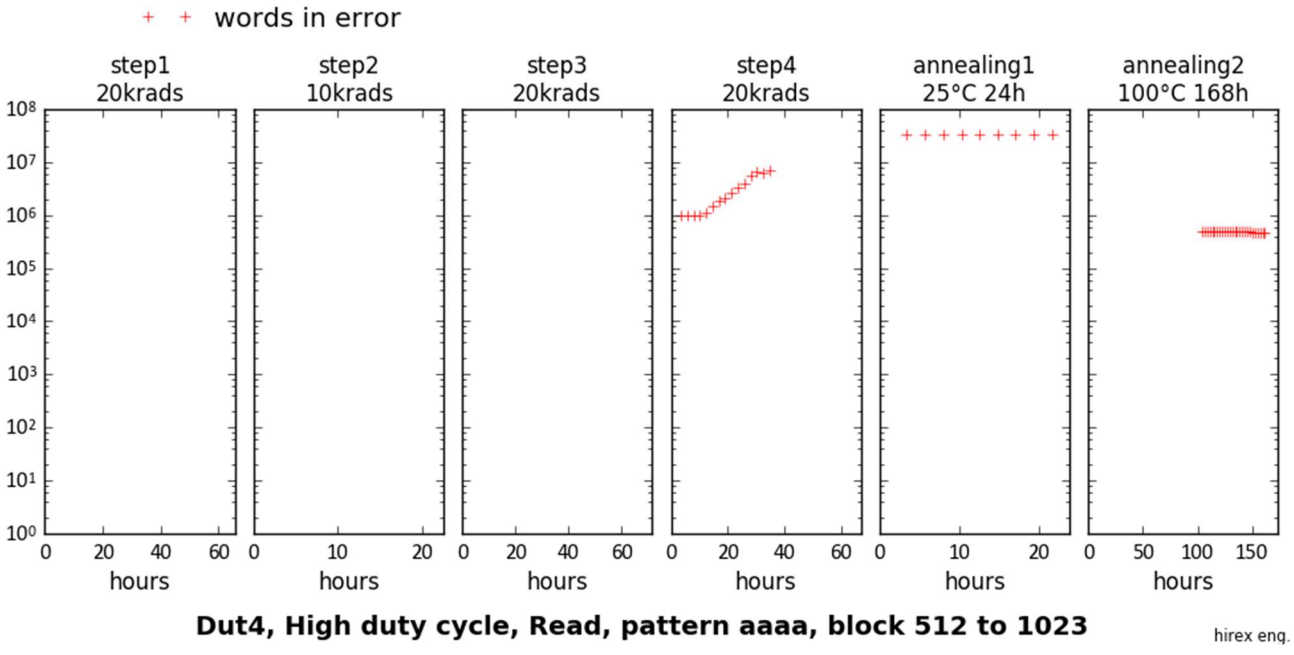
12.29.4 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 2 to 511



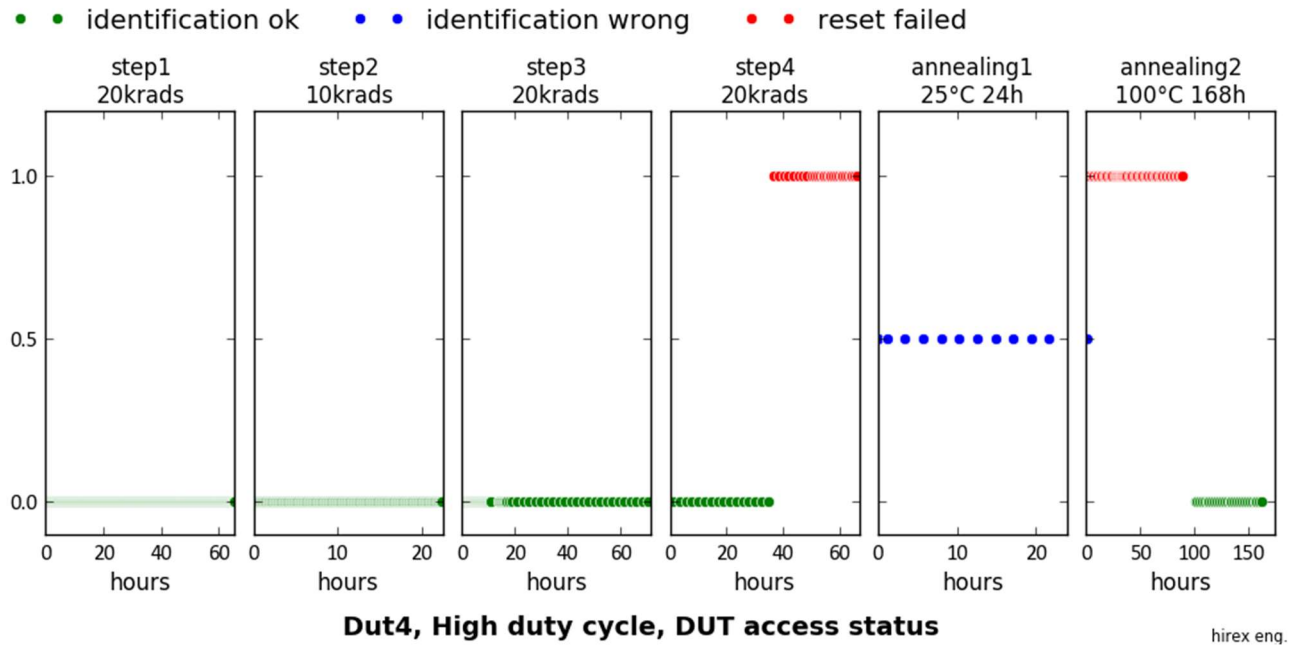


12.29.5 DUT4, High Duty Cycle, Read, pattern = 0xAAAA, blocks 512 to 1023





12.29.6 DUT4, High Duty Cycle, DUT access status



ANNEX I: TEST PLAN

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

Component No. MX68GL1G0GHXFI-10G	**Component Designation:** MX68GL1G0GHXFI-10G	**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 Single Voltage 3V Only Flash Memory	**Package:** 64 BGA
Manuf. Name: MACRONIX INTERNATIONAL Co., LTD **Address:** TAIWAN	**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			

DOCUMENT CONTROL CHANGE

Edition / Revision	Date	Affected Edition / Revision	Affected Paragraph / Modification
ATN-RP-210 Draft A	2015/01/12	--	Draft edition of this document.
ATN-RP-210 Draft B	2015/02/20	ATN-RP-210 Draft A	- 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-210 Draft C	2015/05/07	ATN-RP-210 Draft B	- 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-210 Draft D	2017/03/27	ATN-RP-210 Draft C	-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-210 Draft E	2017/05/25	ATN-RP-210 Draft D	-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-210 Draft F	2017/06/14	ATN-RP-210 Draft E	-Figure 1. The circuit for the high and low duty cycle radiation circuit has been included.

FIGURE 1 – HIGH AND LOW DUTY CYCLE RADIATION CIRCUIT

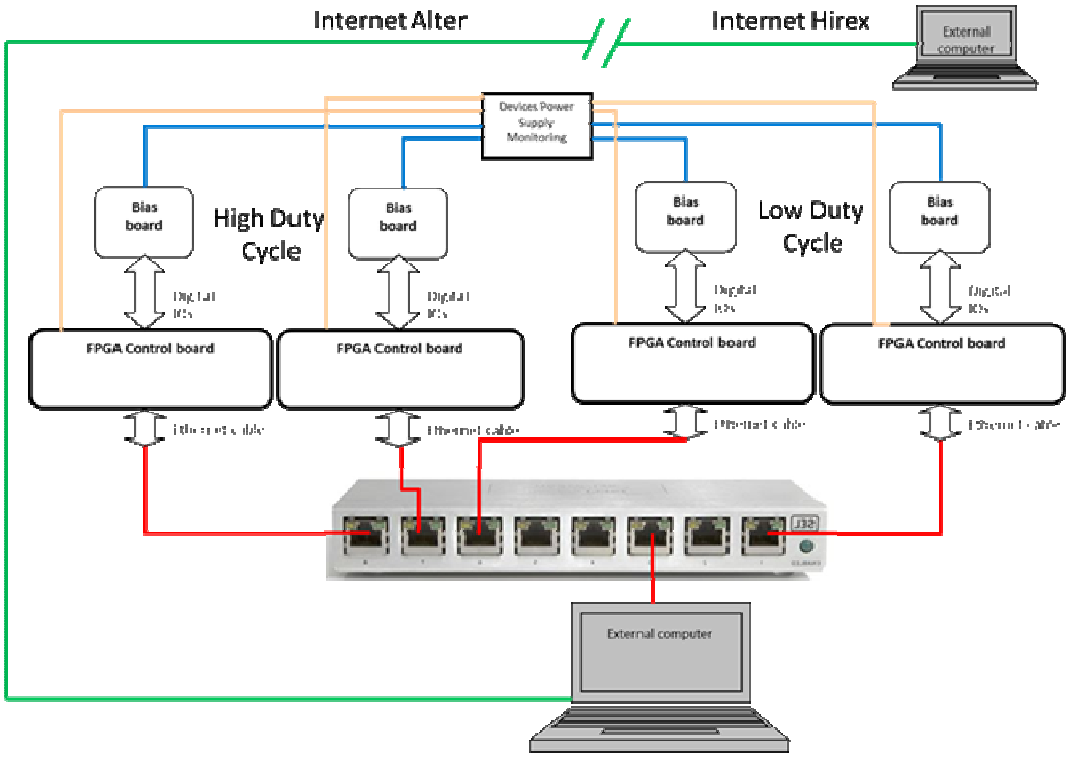
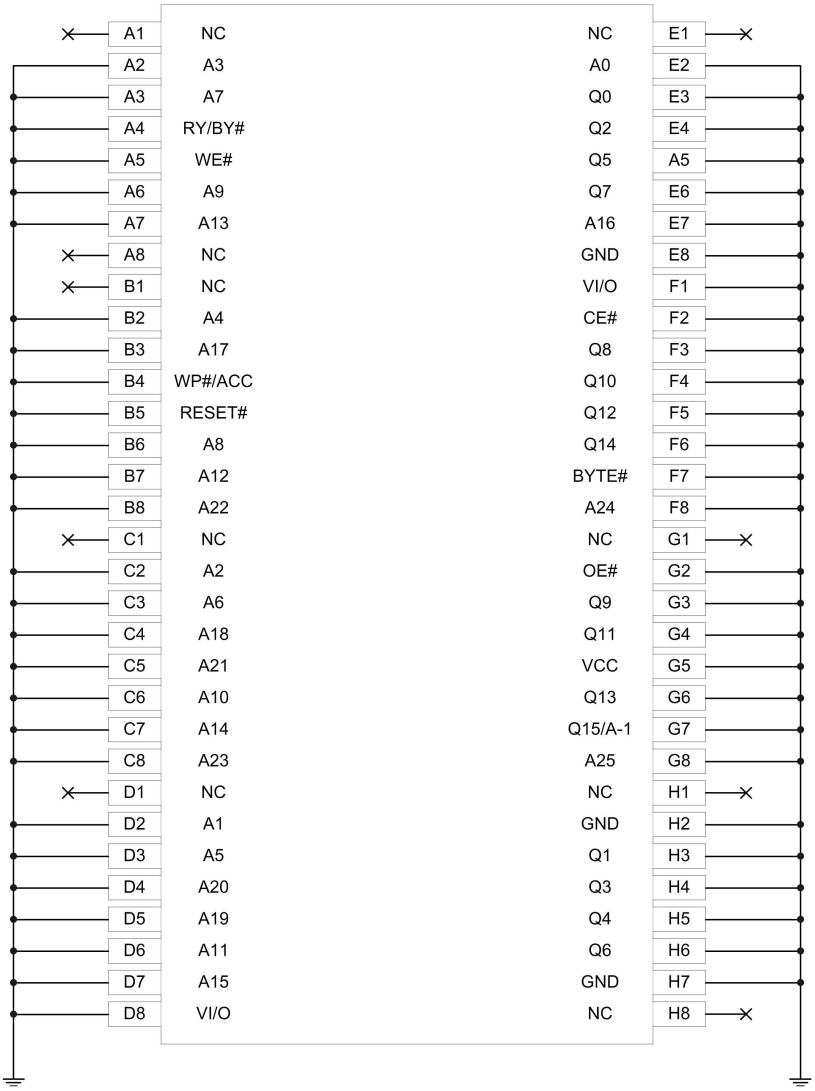


FIGURE 2 - UNBIASED RADIATION CIRCUIT



Notes:

Socket information of circuit is shown in fig.3

TABLE I.- ELECTRICAL MEASUREMENTS MACRONIX NOR FLASH

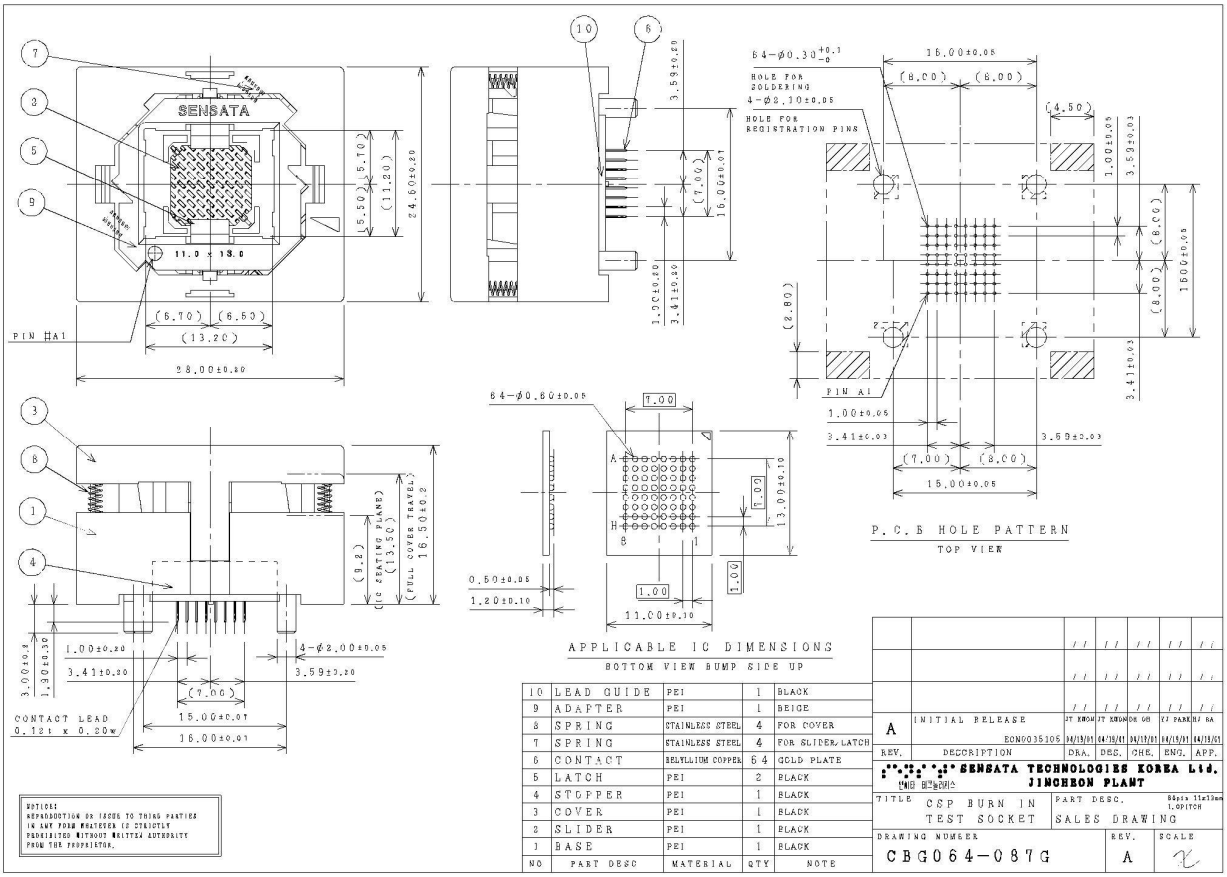
Nº	SYMBOL	TEST	CONDITIONS (Note 1) (T_{AMB}=22±3ºC)	LIMITS		UNIT
				MIN.	MAX.	
DC						
1	Cont	Continuity Test	--	--	--	V
2	I_{ilk}	Input Leakage Current	--	--	±2.0 (Note 2)	µA
3	I_{olk}	Output Leakage Current	--	--	±1.0 (Note 3)	µA
4	V_{ol}	Output Low voltage	Iol=100uA	--	0.45 (Note 3)	V
5	V_{oh}	Output High voltage	Ioh=-100uA	0.85xVI/O (Note 3)	--	V
6	V_{il}	Input Low voltage	--	-0.1V (Note 3)	0.3xVI/O (Note 3)	V
7	V_{ih}	Input High voltage	--	0.7xVI/O (Note 3)	VI/O+0.3V (Note 3)	V
POWER SUPPLY						
8	Icr1	V_{CC} Read Current	CE#=Vil, OE#=Vih, VCC=VCCmax; f=5MHz	--	35	mA
9	Icr2	Vcc Page Read Current	CE#=Vil, OE#=Vih, VCC=VCCmax; f=10MHz	--	15	mA
10	Icw	V_{CC} Write Current	CE#=Vil, OE#=Vih, WE#=Vil	--	55	mA
AC						
11	Tcs	Chip Enable Setup Time	--	0 (Note 4)(Note 5)	--	ns
12	Tch	Chip Enable Hold Time	--	0 (Note 4)(Note 5)	--	ns
13	Tds	Data Setup Time	--	30 (Note 4)(Note 5)	--	ns
14	Tdh	Data Hold Time	--	0 (Note 4)(Note 5)	--	ns
15	Twp	WE# Pulse Width	--	35 (Note 4)(Note 5)	--	ns
16	Twph	WE# Pulse Width High	--	30 (Note 4)(Note 5)	--	ns
FUNCTIONAL BLOCK						
17	Func_CHK	Pattern FCT Checkerboard.	Erase, write and read with pattern Checkerboard in block 0	(Note 6)	(Note 6)	--
18	Func_/CHK	Pattern FCT Inverted Checkerboard	Erase, write and read with pattern Checkerboard Inverted in block 0	(Note 6)	(Note 6)	--

Nº	SYMBOL	TEST	CONDITIONS (Note 1) (T_{AMB}=22±3ºC)	LIMITS		UNIT
				MIN.	MAX.	
19	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)	--
20	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}= VI/O =3.3V unless otherwise noted in Table I.
2. Performed in A25-A0.
3. Performed in Q15-Q0.
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 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.

ANNEX I



NO	PART DESC	MATERIAL	QTY	NOTE
10	LEAD GUIDE	PEI	1	BLACK
9	ADAPTER	PEI	1	BEIGE
8	SPRING	STAINLESS STEEL	4	FOR COVER
7	SPRING	STAINLESS STEEL	4	FOR SLIDER, LATCH
6	CONTACT	BELYLLIUM COPPER	64	GOLD PLATE
5	LATCH	PEI	2	BLACK
4	STOPPER	PEI	1	BLACK
3	COVER	PEI	1	BLACK
2	SLIDER	PEI	1	BLACK
1	BASE	PEI	1	BLACK

FIGURE 3. Radiation Circuit Socket

ANNEX II: DOSIMETRY REPORT

PRE-IRRADIATION TEST REPORT

CNA DATA	
Reception date of the samples: N/A	Irradiation Test Report Number: 20170612_ GR10_Updated_To_20170712

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

PRE-IRRADIATION TEST REPORT

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			

DOSIMETRY DATA	
New Test Date	12/07/2017
Average Dose Rate(3) [rad(Si)/h]	297.1
Uncertainty(2)(%)	4.7

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.

PRE-IRRADIATION TEST REPORT

CNA DATA	
Reception date of the samples: N/A	Irradiation Test Report Number: 20170612_ GRD12_Updated_To_20170712

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

PRE-IRRADIATION TEST REPORT

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			

DOSIMETRY DATA	
New Test Date	12/07/2017
Average Dose Rate(3) [rad(Si)/h]	297.7
Uncertainty(2)(%)	4.7

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.

PRE-IRRADIATION TEST REPORT

CNA DATA	
Reception date of the samples: N/A	Irradiation Test Report Number: 20170612_ GRU12_Updated_To_20170712

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

PRE-IRRADIATION TEST REPORT

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			

DOSIMETRY DATA	
New Test Date	12/07/2017
Average Dose Rate(3) [rad(Si)/h]	297.2
Uncertainty(2)(%)	4.7

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.

ANNEX III: COMPETENCES AND WARRANTIES

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

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 ***Electrical, electronic, electromechanical and opto electronics components for aerospace and defence application***		
Dispositivos semiconductores, incluyendo dispositivos discretos y circuitos integrados *Semiconductor devices, including discrete devices and integrated circuits*	Radiación ionizante dosis total *Total dose steady-state irradiation (TID)*	ESCC 22900, iss. 4: 2010
Dispositivos microelectrónicos *Microelectronic devices*	Radiación ionizante dosis total *Ionizing radiation total dose (TID)*	MIL-STD-883H 26 February 2010 MIL-STD-883J 7 June 2013 Método 1019.8
Dispositivos semiconductores *Semiconductor devices*	Radiación ionizante dosis total *Steady - state total dose irradiation (TID)*	MIL–STD–750E 20 November 2006 MIL–STD–750F 3 January 2012 Método 1019.5
Dispositivos eléctricos, electrónicos y electromecánicos *Electrical, electronical and electromechanical devices*	Dosimetría para ensayos de dosis absorbida *Dosimetry for absorbed dose testing*	Procedimiento interno / *In-house procedure* ATN-Q-IO-21-73

END OF DOCUMENT

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