TOTAL DOSE RADIATION TEST REPORT

ESA N° : ESA_QEC1007T_C

Part Type : HM5257805BTD75

Package : TSOP-54

Description : 512-Mbit SDRAM

Manufacturer : Elpida Memories

Date Code: 0329BC5

ESA ESTEC Purchase Order N° COO2 Contract 22327/09/NL/SFe dated 09/30/2009

ESA ESTEC Technical Officer: Fredrik Sturesson

Hirex reference :	HRX/TID/0746	Issue : 03	Date :	February 19th, 2010
Written by :	Y. GRIGGIO	Technician		
Verified by :	O.PERROTIN	Study Manager		
Authorized by:	J.F. PASCAL	Technical Manager		

CHANGE RECORD

ISSUE	DATE	PAGE	DESCRIPTION OF CHANGES
01	January 5th, 2010	All	Original Issue
02	February 12th, 2010	4 6 11	Change Final Dose. Add ESCC specification Add dosimetry resolution and uniformity information Add information in conclusion section
03	February 19th, 2010	1	Adding of ESA number reference

TOTAL DOSE RADIATION TEST REPORT on HM5257805BTD75 512-Mbit SDRAM From Elpida Memories

TABLE OF CONTENTS

List of figures:

List of Tables:

1 Introduction

A total dose radiation verification test of the Elpida Memories HM5257805BTD75, 512-Mbit SDRAM has been performed with an accumulated dose of about 40 Krad(Si) at a dose rate of 225 rad(Si)/hour, in response to ESA ESTEC purchase order reference COO2 Contract 22327/09/NL/SFe.

The purpose of this test was to evaluate total dose withstanding of this component, to investigate its suitability for being used in space applications. This test was conducted on samples provided by ESA ESTEC.
Test has been performed in accordance with Hirex Engineering proposal reference HRX/PRO/2739 Issue 02 dated June 17th 2009.

A complete set of electrical measurements together with graphical representation of measured parameters with respect to total dose received, are provided for all samples.

2 Applicable and Reference Documents

2.1 Applicable Documents

- Hirex Engineering proposal: HRX/PRO/2739 Issue 02 dated June 17th 2009
- ESCC Specification N° 22900

2.2 Reference Documents

- Manufacturer Datasheet HM5225165B dated January 31st 2001.

3 Test Samples

5 samples of the HM5257805BTD75 device were tested (3 samples ON + 1 sample OFF + 1 control sample).

Samples were allocated into the bias conditions during exposures and annealing as provided in the following table.

Serial Number	Allocation
2	Control
584	Biased ON – Auto-refresh
585	Biased ON – Auto-refresh
586	Biased ON – Auto-refresh
587	Biased OFF

Identification of the HM5257805BTD75 is given below:

Part Number: HM5257805BTD75

Top Marking: ELPIDA JAPAN 5257805BTD75
0329BC5GSNN

Manuf Lot Number: 200329---A_11

Date Code: 0329BC5

Identification of the component including external marking and any die identification is provided on the following photos.

Photo 1 – Device marking

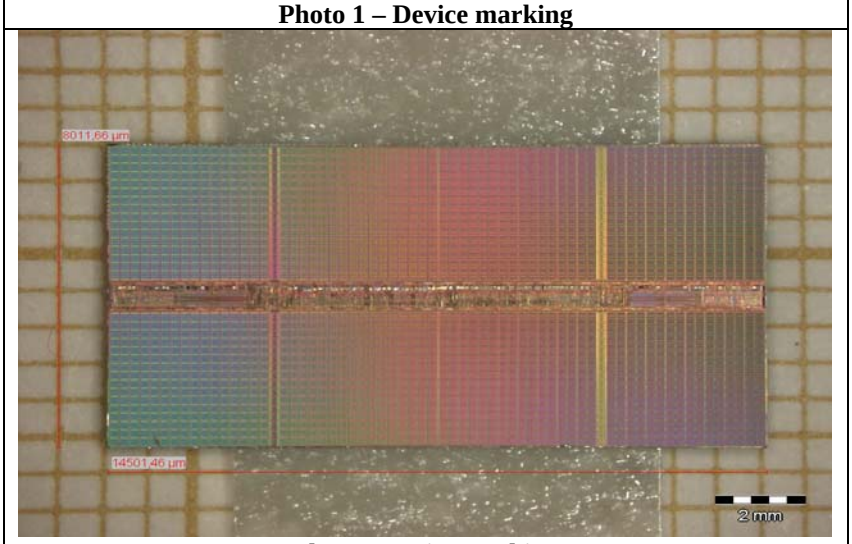


Photo 2 – Die, Marking

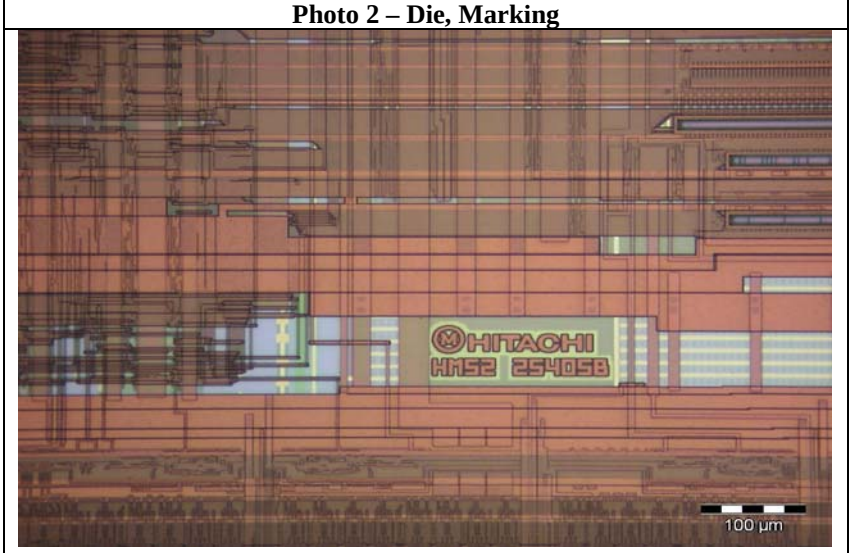


Photo 3 – Die, Marking

4 Experimental Conditions

4.1 Radiation Source Dose Rate and Annealing

The dose exposures were performed at ENEA in the Calliope plant located at the CASACCIA research centre in ROME (Italy).
The γ irradiation plant is a pool-type irradiation facility equipped with a ^{60}Co gamma source in a large shielded panoramic room. The storage water pool, that houses the source, has dimensions of 2x4.4x8 m^3.
The emitted radiation has two photons of 1.173 and 1.332 MeV working in coincidence with a mean photon's energy of 1.25 MeV.
It is possible to vary the dose rate by simply adjusting the distance of devices under test to the source in a range of a few rad/H up to 2 Mrad/H.
The main Calliope features are reported in the table and Figure 1 below.

Source:	^{60}Co
Geometry:	Cylindrical rack with radioisotope pencils placed on two levels of external rack surface
Emitted radiation:	2 γ photons emitted in coincidence
Photons Energy:	1.173 and 1.332 MeV (average 1.25 MeV)
Max licensed activity:	$3.7x10^{15}$ Bq (100 kCi)
Dose rate range:	Few rad/h up to 2 Mrad/h
Resolution:	< 10%
Uniformity:	< 10%

Table 1 : Calliope main features

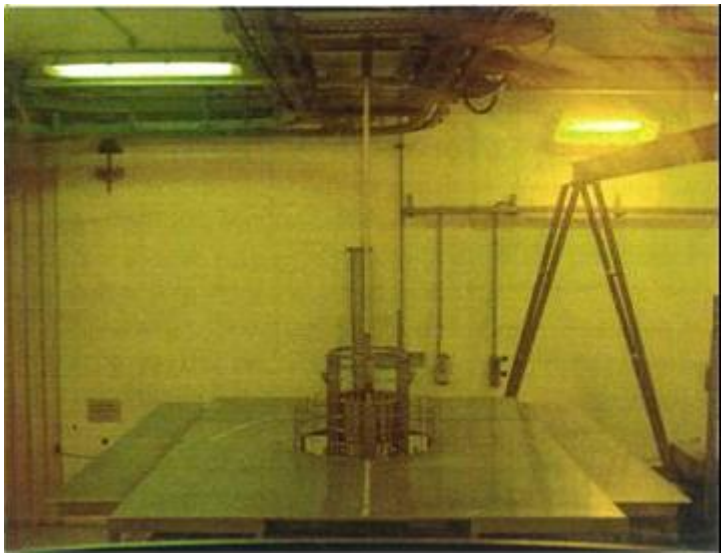


Figure 1 : View of the ^{60}Co γ source through the yellow lead window of the control room

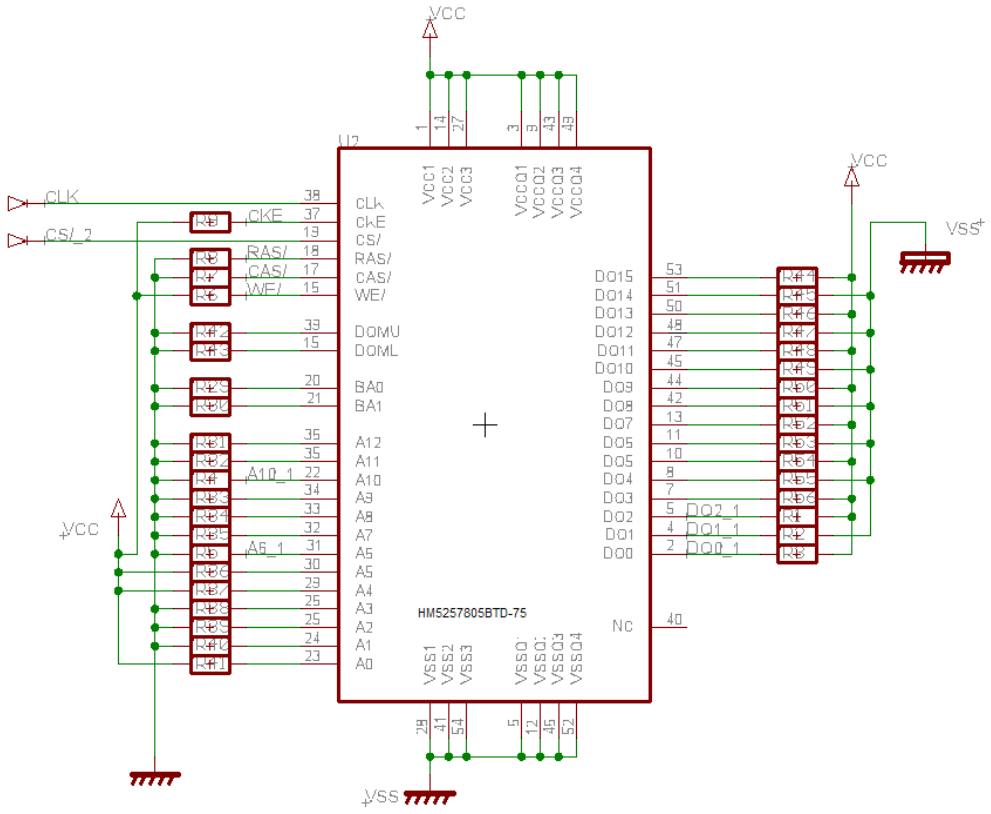
The irradiation conditions used for this test are provided in the following table:

Irradiation Steps	Dose rate	Annealing steps	Temperature
krads	rads/h	Hours	°C
0			
4.7	225		Room
9.7	225		Room
14.7	225		Room
19.7	225		Room
29.9	225		Room
40.2	225		Room
		24	Room
		168	100

4.2 Bias during Dose Exposures and Measurements conditions

4.2.1 Bias conditions

During exposures test board allowed to bias 3 samples in accordance with the electrical circuit provided in Figure 1.
1 other sample was biased OFF with all pins connected to ground.
During annealing steps the same stress conditions were applied at 25°C and 100°C temperatures.



Notes:
VCC= 3.3V,
Samples in Autorefresh mode
CLK Signal F = 5MHz and CS/_2 Signal F=5Mhz
CAS latency = 3,
Mode : Sequential
Burst length = 2 (Burst read and Burst Write)

Figure 2 : Bias Conditions during Irradiation Exposures and Annealing

4.3 Electrical Measurements

Electrical parameters test program principle for HM5257805BTD75 is provided in Figure 2.

An Electra ATE and 2 SMU Keithley 2400 were used to perform required measurements.

A dedicated test fixture was designed to ensure proper measurement conditions.

Test results were automatically loaded in an Excel worksheet and compared in real time to specification limits.

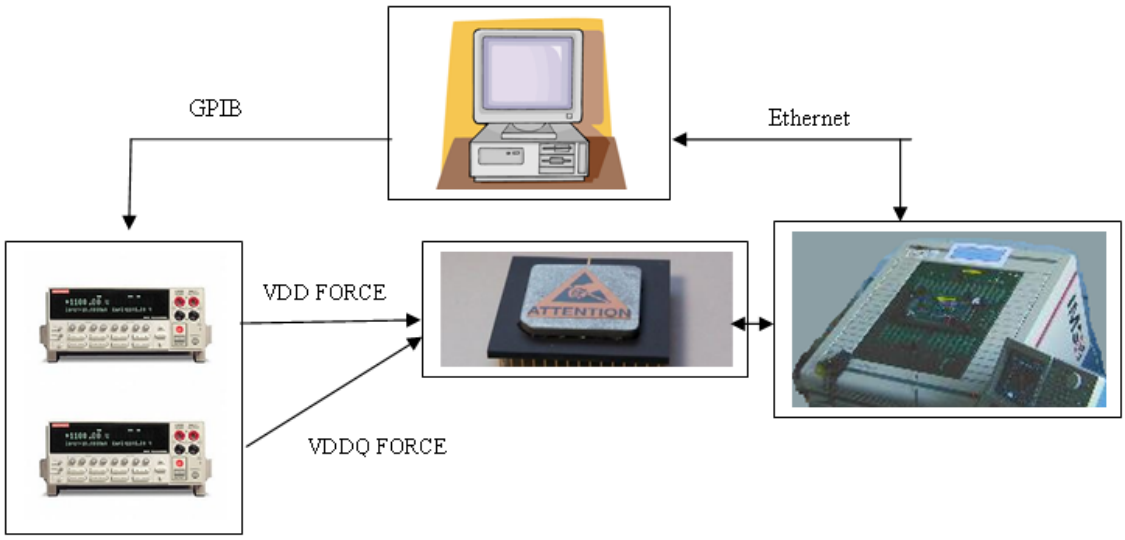


Figure 3 : HM5257805BTD75 test program principle

Electrical parameters test conditions and limits used for performing this test are given in the following table.

PARAMETERS	SYMBOLS	TEST CONDITIONS Vdd,VddQ =3.3V unless otherwise specified	MIN	MAX	UNITS
Continuity	Continuity	I=100µA			V
Output Low Voltage	VOL	IOL=4mA		400.0E-03	V
Output High Voltage	VOH	IOH=-4mA	2.40		V
Input Leakage Current Low	ILIL	Vin=0V VDD=VDDQ=3.6V	-1.0E-06		A
Input Leakage Current High	ILIH	Vin=0V VDD=VDDQ=3.6V		1.0E-06	A
Output Leakage Current Low	ILOL	Vout=0V . Vcc = 3.6V	-1.5E-06		A
Output Leakage Current High	ILOH	Vout=VDDmax. Vcc = 3.6V		1.5E-06	A
Operating Current CAS/ 3	ICC1_CAS_3	Burst length = 1 Trc= min. CAS/=3		220.0E-03	A
Operating Current CAS/ 2	ICC1_CAS_2	Burst length = 1 Trc= min CAS/=2		220.0E-03	A
Standby current in power down (input signal stable)	ICC2PS	CKE = ViL Tck=∞		4.0E-03	A
Standby current in power down	ICC2P	CKE = ViL Tck=12ns		6.0E-03	A
Standby current in non power down (input signal stable)	ICC2NS	CKE = ViH Tck=∞		18.0E-03	A
Standby current in non power down	ICC2N	CKE.CS/ = ViH Tck=12ns		40.0E-03	A
Active Standby current in power down (input signal stable)	ICC3PS	CKE = ViL Tck=∞		6.0E-03	A
Active Standby current in power down	ICC3P	CKE = ViL Tck=12ns		8.0E-03	A
Active Standby current in non power down (input signal stable)	ICC3NS	CKE = ViH Tck=∞		30.0E-03	A
Active Standby current in non power down	ICC3N	CKE.CS/ = ViH Tck=12ns		60.0E-03	A
Burst operating Current CAS/ 2	ICC4_CAS_2	Tck=min Burst Length=4 CAS/=2		190.0E-03	A
Operating Current CAS/ 3	ICC4_CAS_3	Tck=min Burst Length=4 CAS/=3		260.0E-03	A
Refresh Current	ICC5	Trc=min		330.0E-03	A
Self Refresh Current	ICC6	VIH = VCC – 0.2 V Vil = 0.2 V		6.0E-03	A

PARAMETERS	SYMBOLS	TEST CONDITIONS Vdd,VddQ =3.3V unless otherwise specified	MIN	MAX	UNITS
ALL 0	ALL 0	Write and verify ALL 0 in all memory			
ALL 1	ALL 1	Write and verify ALL 1 in all memory			
Checkerboard	Checkerboard	Write and verify Checkerboard in all memory			
/Checkerboard	/Checkerboard	Write and verify /Checkerboard in all memory			
Access Time from CLK CAS 2	TAC_CAS_2_LH			6.0E-09	s
Access Time from CLK CAS 2	TAC_CAS_2_HL			6.0E-09	s
Access Time from CLK CAS 3	TAC_CAS_3_LH			5.4E-09	s
Access Time from CLK CAS 3	TAC_CAS_3_HL			5.4E-09	s
Input Setup Time Address	TAS_Addr			1.5E-09	s
Input Setup Time Bank	TAS_BANK			1.5E-09	s
Input Hold Time Address	TAH_Addr			0.8E-09	s
Input Hold Time Bank	TAH_BANK			0.8E-09	s
Refresh Period	Trefresh		64.0E-03		s

Table 2 : Measured electrical parameters

5 Conclusion

A Total Ionizing Dose verification test was carried out by Hirex Engineering under ESA ESTEC contract on the Elpida Memories HM5257805BTD75 512-Mbit SDRAM in TSOP-54 package.
4 samples plus one control sample were used during testing. They were exposed to radiation using a dose rate of 225 rad(Si)/hour at room temperature.

All parameters remained within specification limits after a final dose of 40 Krad(Si) and after annealing sequence.

Some drift has been observed for the following parameters that all remain within specification limits at any step of testing:

- Stand-By currents (ICC2P, ICC3PS, ICC3P)
- Self-refresh current (ICC6)
- Output leakage currents High level (ILOH)

A complete set of electrical measurements together with graphical representation of measured parameters with respect to total dose received, are provided for all samples in section 6.

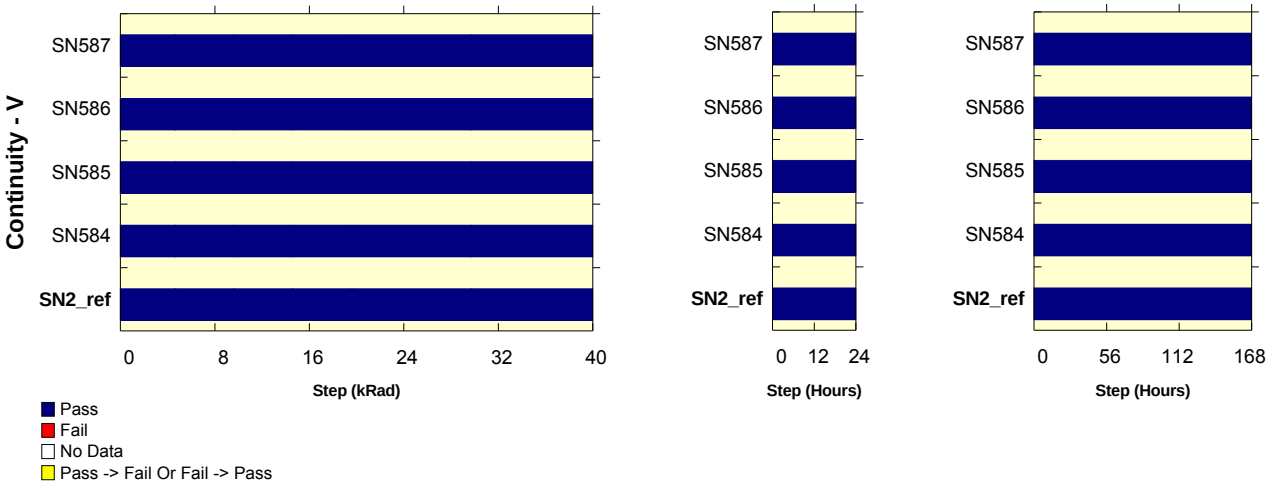
6 Test Result

Test results including tables and graphics are provided in this section for each measured parameter.

Statistics are provided separately for bias ON and bias OFF samples.

Failed values (if any) with respect to specified limits are highlighted in bold red font in the tables.

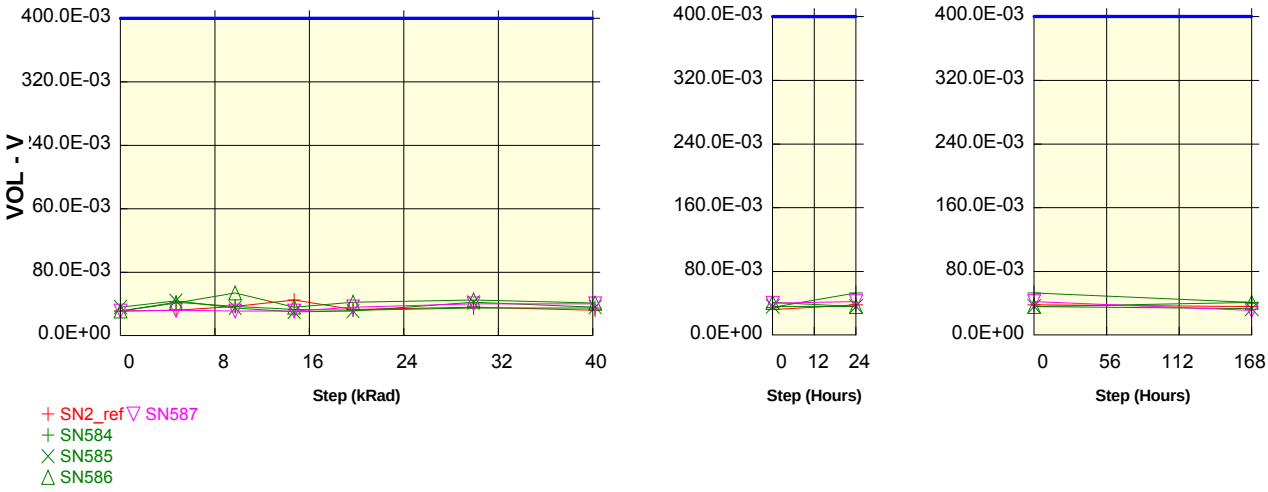
Test conditions : TID
Parameter : Continuity : Continuity
I=100µA
Unit : V
Spec Limit Min : 200.0E-03
Spec Limit Max : 900.0E-03
Spec limits are represented in bold lines on the graphic.



Continuity	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
ON samples									
SN584	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
SN585	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
SN586	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Continuity	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
OFF samples									
SN587	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

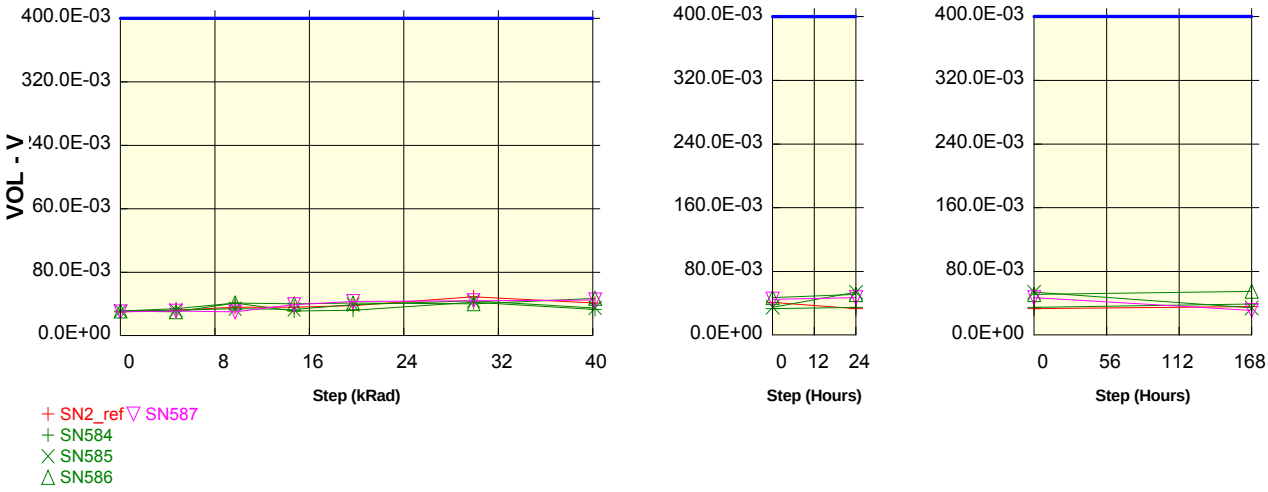
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ7
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	32.0E-03	37.0E-03	45.0E-03	33.0E-03	36.0E-03	32.0E-03	38.0E-03	36.0E-03
ON samples									
SN584	31.0E-03	42.0E-03	37.0E-03	33.0E-03	32.0E-03	35.0E-03	35.0E-03	53.0E-03	41.0E-03
SN585	36.0E-03	44.0E-03	35.0E-03	30.0E-03	31.0E-03	42.0E-03	36.0E-03	36.0E-03	33.0E-03
SN586	31.0E-03	41.0E-03	54.0E-03	36.0E-03	42.0E-03	45.0E-03	41.0E-03	36.0E-03	41.0E-03
Statistics									
Min	31.0E-03	41.0E-03	35.0E-03	30.0E-03	31.0E-03	35.0E-03	35.0E-03	36.0E-03	33.0E-03
Max	36.0E-03	44.0E-03	54.0E-03	36.0E-03	42.0E-03	45.0E-03	41.0E-03	53.0E-03	41.0E-03
Average	32.7E-03	42.3E-03	42.0E-03	33.0E-03	35.0E-03	40.7E-03	37.3E-03	41.7E-03	38.3E-03
Sigma	2.4E-03	1.2E-03	8.5E-03	2.4E-03	5.0E-03	4.2E-03	2.6E-03	8.0E-03	3.8E-03

VOLDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	32.0E-03	37.0E-03	45.0E-03	33.0E-03	36.0E-03	32.0E-03	38.0E-03	36.0E-03
OFF samples									
SN587	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	40.0E-03	40.0E-03	42.0E-03	31.0E-03
Statistics									
Min	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	40.0E-03	40.0E-03	42.0E-03	31.0E-03
Max	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	40.0E-03	40.0E-03	42.0E-03	31.0E-03
Average	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	40.0E-03	40.0E-03	42.0E-03	31.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

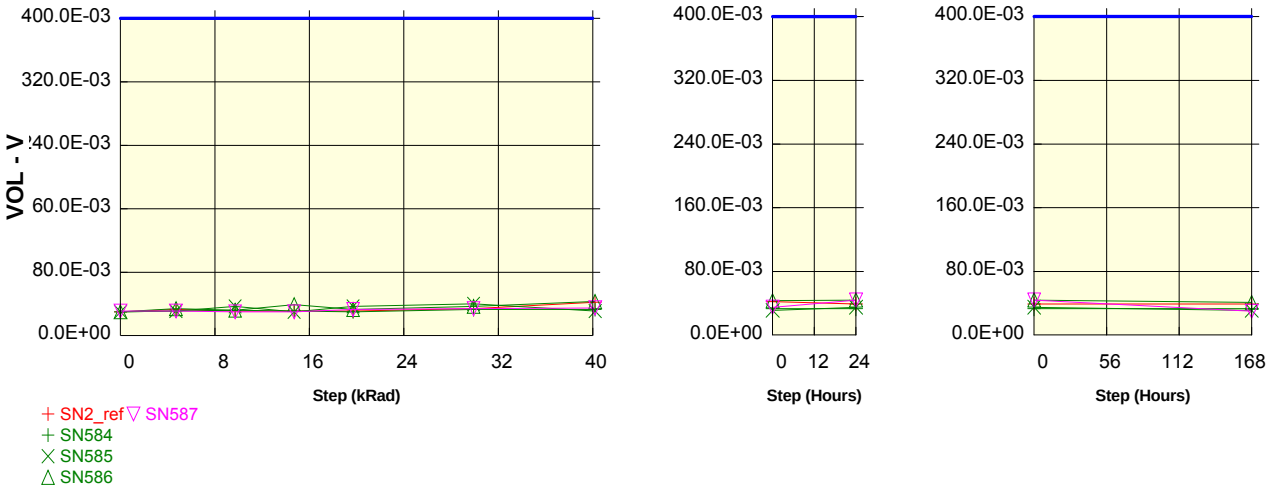
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ6
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	30.0E-03	32.0E-03	36.0E-03	36.0E-03	38.0E-03	49.0E-03	41.0E-03	33.0E-03	36.0E-03
ON samples									
SN584	31.0E-03	34.0E-03	41.0E-03	31.0E-03	32.0E-03	42.0E-03	33.0E-03	35.0E-03	39.0E-03
SN585	31.0E-03	32.0E-03	34.0E-03	33.0E-03	39.0E-03	44.0E-03	35.0E-03	54.0E-03	34.0E-03
SN586	31.0E-03	30.0E-03	41.0E-03	40.0E-03	41.0E-03	40.0E-03	47.0E-03	51.0E-03	55.0E-03
Statistics									
Min	31.0E-03	30.0E-03	34.0E-03	31.0E-03	32.0E-03	40.0E-03	33.0E-03	35.0E-03	34.0E-03
Max	31.0E-03	34.0E-03	41.0E-03	40.0E-03	41.0E-03	44.0E-03	47.0E-03	54.0E-03	55.0E-03
Average	31.0E-03	32.0E-03	38.7E-03	34.7E-03	37.3E-03	42.0E-03	38.3E-03	46.7E-03	42.7E-03
Sigma	190.1E-12	1.6E-03	3.3E-03	3.9E-03	3.9E-03	1.6E-03	6.2E-03	8.3E-03	9.0E-03

VOLDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	30.0E-03	32.0E-03	36.0E-03	36.0E-03	38.0E-03	49.0E-03	41.0E-03	33.0E-03	36.0E-03
OFF samples									
SN587	30.0E-03	31.0E-03	30.0E-03	39.0E-03	43.0E-03	44.0E-03	45.0E-03	47.0E-03	31.0E-03
Statistics									
Min	30.0E-03	31.0E-03	30.0E-03	39.0E-03	43.0E-03	44.0E-03	45.0E-03	47.0E-03	31.0E-03
Max	30.0E-03	31.0E-03	30.0E-03	39.0E-03	43.0E-03	44.0E-03	45.0E-03	47.0E-03	31.0E-03
Average	30.0E-03	31.0E-03	30.0E-03	39.0E-03	43.0E-03	44.0E-03	45.0E-03	47.0E-03	31.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

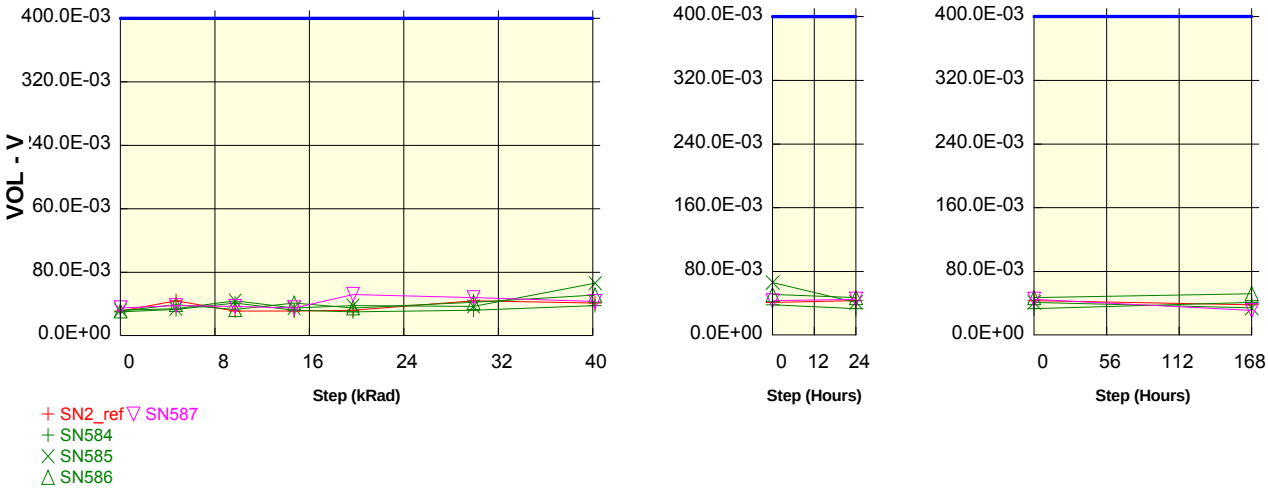
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ5
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	30.0E-03	33.0E-03	31.0E-03	31.0E-03	31.0E-03	34.0E-03	42.0E-03	39.0E-03	39.0E-03
ON samples									
SN584	30.0E-03	31.0E-03	32.0E-03	31.0E-03	30.0E-03	33.0E-03	33.0E-03	33.0E-03	33.0E-03
SN585	30.0E-03	31.0E-03	37.0E-03	30.0E-03	37.0E-03	40.0E-03	31.0E-03	35.0E-03	31.0E-03
SN586	30.0E-03	34.0E-03	32.0E-03	39.0E-03	33.0E-03	37.0E-03	43.0E-03	44.0E-03	41.0E-03
Statistics									
Min	30.0E-03	31.0E-03	32.0E-03	30.0E-03	30.0E-03	33.0E-03	31.0E-03	33.0E-03	31.0E-03
Max	30.0E-03	34.0E-03	37.0E-03	39.0E-03	37.0E-03	40.0E-03	43.0E-03	44.0E-03	41.0E-03
Average	30.0E-03	32.0E-03	33.7E-03	33.3E-03	33.3E-03	36.7E-03	35.7E-03	37.3E-03	35.0E-03
Sigma	268.8E-12	1.4E-03	2.4E-03	4.0E-03	2.9E-03	2.9E-03	5.2E-03	4.8E-03	4.3E-03

VOLDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	30.0E-03	33.0E-03	31.0E-03	31.0E-03	31.0E-03	34.0E-03	42.0E-03	39.0E-03	39.0E-03
OFF samples									
SN587	31.0E-03	31.0E-03	30.0E-03	30.0E-03	33.0E-03	34.0E-03	35.0E-03	44.0E-03	30.0E-03
Statistics									
Min	31.0E-03	31.0E-03	30.0E-03	30.0E-03	33.0E-03	34.0E-03	35.0E-03	44.0E-03	30.0E-03
Max	31.0E-03	31.0E-03	30.0E-03	30.0E-03	33.0E-03	34.0E-03	35.0E-03	44.0E-03	30.0E-03
Average	31.0E-03	31.0E-03	30.0E-03	30.0E-03	33.0E-03	34.0E-03	35.0E-03	44.0E-03	30.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

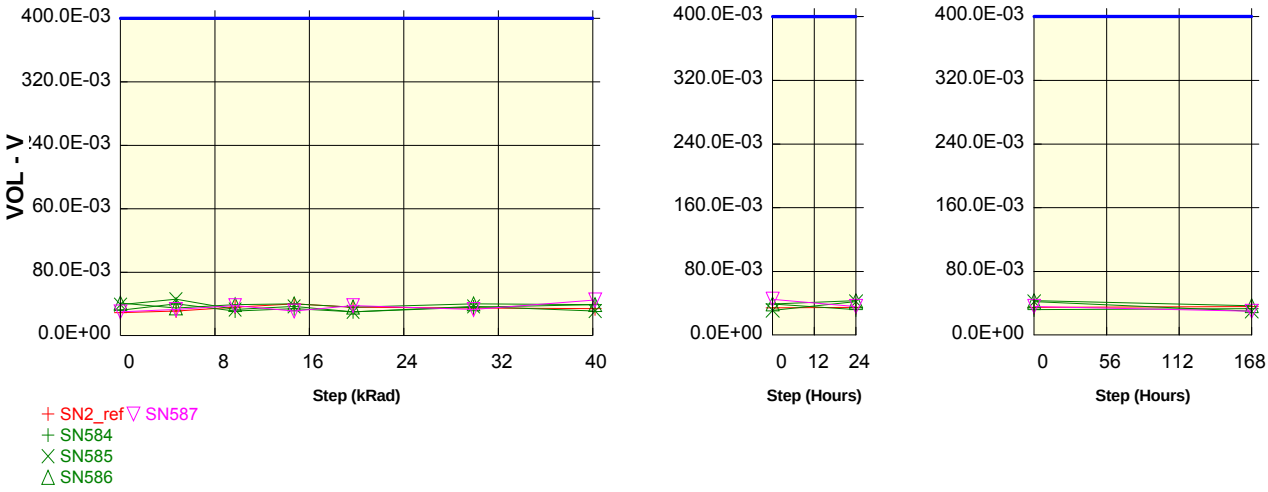
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ4
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	44.0E-03	31.0E-03	31.0E-03	32.0E-03	44.0E-03	41.0E-03	43.0E-03	38.0E-03
ON samples									
SN584	30.0E-03	33.0E-03	41.0E-03	32.0E-03	30.0E-03	32.0E-03	38.0E-03	33.0E-03	41.0E-03
SN585	32.0E-03	34.0E-03	44.0E-03	35.0E-03	38.0E-03	37.0E-03	66.0E-03	41.0E-03	34.0E-03
SN586	31.0E-03	39.0E-03	33.0E-03	41.0E-03	35.0E-03	42.0E-03	51.0E-03	47.0E-03	52.0E-03
Statistics									
Min	30.0E-03	33.0E-03	33.0E-03	32.0E-03	30.0E-03	32.0E-03	38.0E-03	33.0E-03	34.0E-03
Max	32.0E-03	39.0E-03	44.0E-03	41.0E-03	38.0E-03	42.0E-03	66.0E-03	47.0E-03	52.0E-03
Average	31.0E-03	35.3E-03	39.3E-03	36.0E-03	34.3E-03	37.0E-03	51.7E-03	40.3E-03	42.3E-03
Sigma	816.5E-06	2.6E-03	4.6E-03	3.7E-03	3.3E-03	4.1E-03	11.4E-03	5.7E-03	7.4E-03

VOLDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	44.0E-03	31.0E-03	31.0E-03	32.0E-03	44.0E-03	41.0E-03	43.0E-03	38.0E-03
OFF samples									
SN587	35.0E-03	38.0E-03	37.0E-03	35.0E-03	52.0E-03	48.0E-03	43.0E-03	45.0E-03	31.0E-03
Statistics									
Min	35.0E-03	38.0E-03	37.0E-03	35.0E-03	52.0E-03	48.0E-03	43.0E-03	45.0E-03	31.0E-03
Max	35.0E-03	38.0E-03	37.0E-03	35.0E-03	52.0E-03	48.0E-03	43.0E-03	45.0E-03	31.0E-03
Average	35.0E-03	38.0E-03	37.0E-03	35.0E-03	52.0E-03	48.0E-03	43.0E-03	45.0E-03	31.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

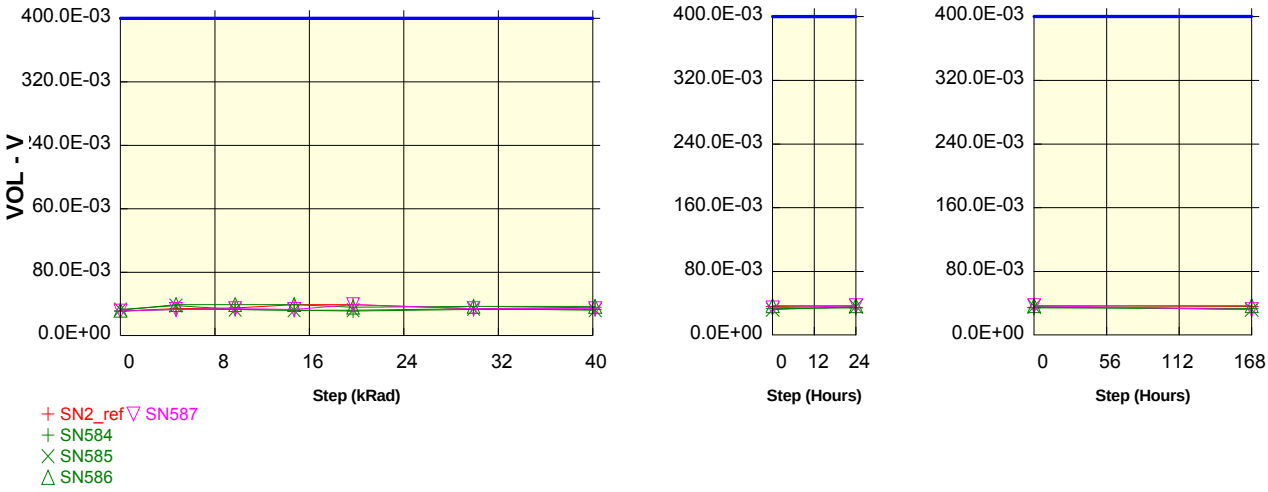
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ3
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	29.0E-03	31.0E-03	36.0E-03	40.0E-03	36.0E-03	35.0E-03	34.0E-03	35.0E-03	36.0E-03
ON samples									
SN584	32.0E-03	40.0E-03	31.0E-03	34.0E-03	30.0E-03	36.0E-03	39.0E-03	32.0E-03	33.0E-03
SN585	39.0E-03	46.0E-03	33.0E-03	37.0E-03	30.0E-03	37.0E-03	31.0E-03	42.0E-03	30.0E-03
SN586	41.0E-03	35.0E-03	39.0E-03	40.0E-03	36.0E-03	40.0E-03	39.0E-03	43.0E-03	37.0E-03
Statistics									
Min	32.0E-03	35.0E-03	31.0E-03	34.0E-03	30.0E-03	36.0E-03	31.0E-03	32.0E-03	30.0E-03
Max	41.0E-03	46.0E-03	39.0E-03	40.0E-03	36.0E-03	40.0E-03	39.0E-03	43.0E-03	37.0E-03
Average	37.3E-03	40.3E-03	34.3E-03	37.0E-03	32.0E-03	37.7E-03	36.3E-03	39.0E-03	33.3E-03
Sigma	3.9E-03	4.5E-03	3.4E-03	2.4E-03	2.8E-03	1.7E-03	3.8E-03	5.0E-03	2.9E-03

VOLDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	29.0E-03	31.0E-03	36.0E-03	40.0E-03	36.0E-03	35.0E-03	34.0E-03	35.0E-03	36.0E-03
OFF samples									
SN587	30.0E-03	33.0E-03	38.0E-03	31.0E-03	38.0E-03	33.0E-03	45.0E-03	36.0E-03	30.0E-03
Statistics									
Min	30.0E-03	33.0E-03	38.0E-03	31.0E-03	38.0E-03	33.0E-03	45.0E-03	36.0E-03	30.0E-03
Max	30.0E-03	33.0E-03	38.0E-03	31.0E-03	38.0E-03	33.0E-03	45.0E-03	36.0E-03	30.0E-03
Average	30.0E-03	33.0E-03	38.0E-03	31.0E-03	38.0E-03	33.0E-03	45.0E-03	36.0E-03	30.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

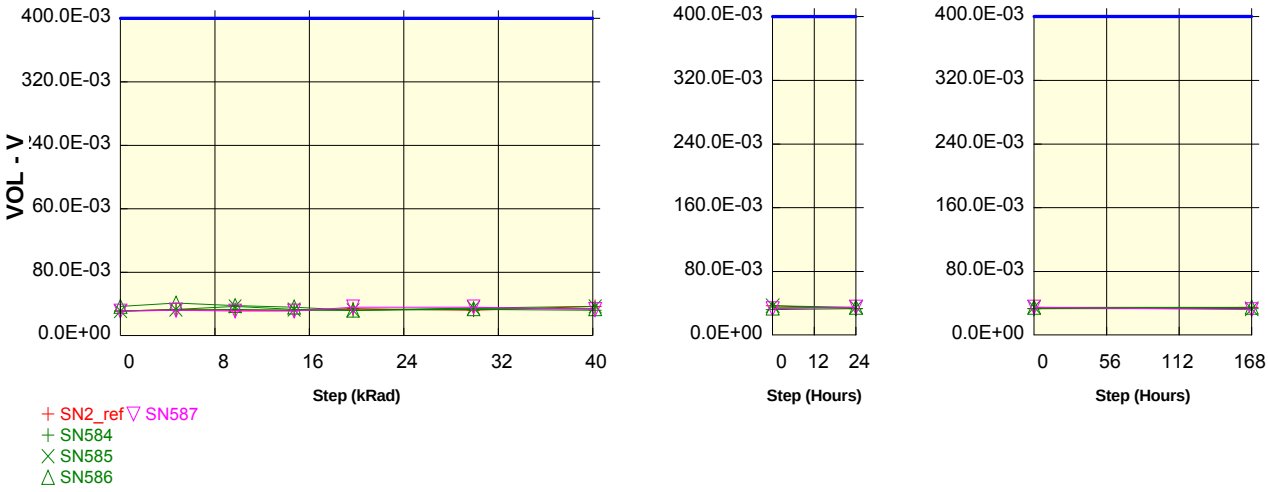
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ2
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	34.0E-03	35.0E-03	39.0E-03	39.0E-03	34.0E-03	36.0E-03	35.0E-03	36.0E-03
ON samples									
SN584	31.0E-03	33.0E-03	33.0E-03	32.0E-03	31.0E-03	33.0E-03	33.0E-03	34.0E-03	33.0E-03
SN585	33.0E-03	38.0E-03	33.0E-03	32.0E-03	32.0E-03	34.0E-03	32.0E-03	36.0E-03	32.0E-03
SN586	32.0E-03	39.0E-03	39.0E-03	39.0E-03	36.0E-03	37.0E-03	37.0E-03	37.0E-03	37.0E-03
Statistics									
Min	31.0E-03	33.0E-03	33.0E-03	32.0E-03	31.0E-03	33.0E-03	32.0E-03	34.0E-03	32.0E-03
Max	33.0E-03	39.0E-03	39.0E-03	39.0E-03	36.0E-03	37.0E-03	37.0E-03	37.0E-03	37.0E-03
Average	32.0E-03	36.7E-03	35.0E-03	34.3E-03	33.0E-03	34.7E-03	34.0E-03	35.7E-03	34.0E-03
Sigma	816.5E-06	2.6E-03	2.8E-03	3.3E-03	2.2E-03	1.7E-03	2.2E-03	1.2E-03	2.2E-03

VOLDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	34.0E-03	35.0E-03	39.0E-03	39.0E-03	34.0E-03	36.0E-03	35.0E-03	36.0E-03
OFF samples									
SN587	31.0E-03	33.0E-03	34.0E-03	33.0E-03	39.0E-03	34.0E-03	34.0E-03	37.0E-03	32.0E-03
Statistics									
Min	31.0E-03	33.0E-03	34.0E-03	33.0E-03	39.0E-03	34.0E-03	34.0E-03	37.0E-03	32.0E-03
Max	31.0E-03	33.0E-03	34.0E-03	33.0E-03	39.0E-03	34.0E-03	34.0E-03	37.0E-03	32.0E-03
Average	31.0E-03	33.0E-03	34.0E-03	33.0E-03	39.0E-03	34.0E-03	34.0E-03	37.0E-03	32.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

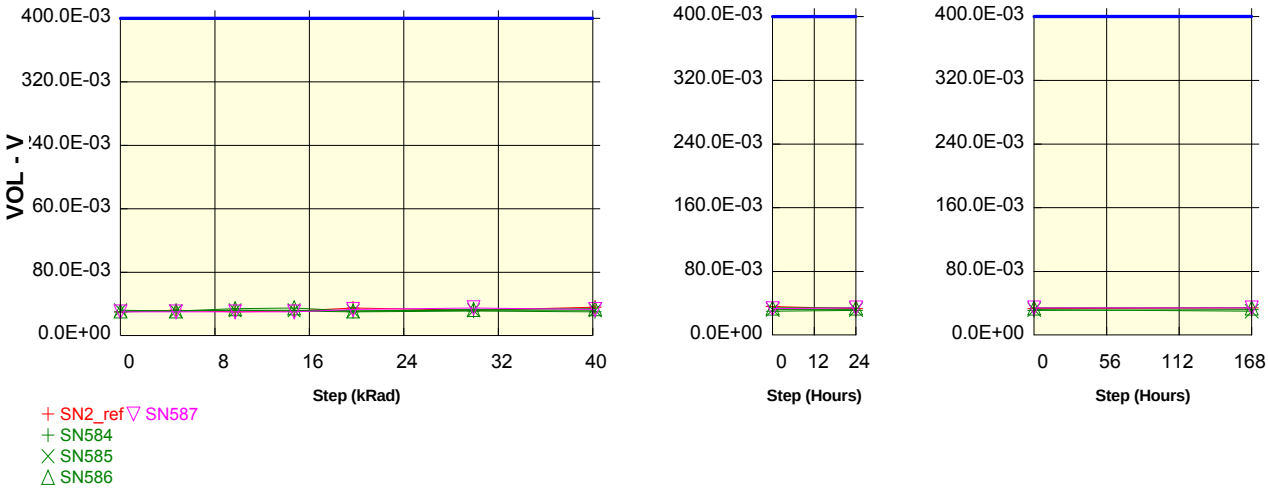
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ1
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	33.0E-03	32.0E-03	32.0E-03	34.0E-03	32.0E-03	37.0E-03	33.0E-03	35.0E-03
ON samples									
SN584	31.0E-03	32.0E-03	33.0E-03	32.0E-03	32.0E-03	33.0E-03	32.0E-03	33.0E-03	33.0E-03
SN585	31.0E-03	33.0E-03	37.0E-03	33.0E-03	32.0E-03	35.0E-03	37.0E-03	35.0E-03	33.0E-03
SN586	37.0E-03	41.0E-03	38.0E-03	36.0E-03	32.0E-03	34.0E-03	34.0E-03	35.0E-03	35.0E-03
Statistics									
Min	31.0E-03	32.0E-03	33.0E-03	32.0E-03	32.0E-03	33.0E-03	32.0E-03	33.0E-03	33.0E-03
Max	37.0E-03	41.0E-03	38.0E-03	36.0E-03	32.0E-03	35.0E-03	37.0E-03	35.0E-03	35.0E-03
Average	33.0E-03	35.3E-03	36.0E-03	33.7E-03	32.0E-03	34.0E-03	34.3E-03	34.3E-03	33.7E-03
Sigma	2.8E-03	4.0E-03	2.2E-03	1.7E-03	268.8E-12	816.5E-06	2.1E-03	942.8E-06	942.8E-06

VOLDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	31.0E-03	33.0E-03	32.0E-03	32.0E-03	34.0E-03	32.0E-03	37.0E-03	33.0E-03	35.0E-03
OFF samples									
SN587	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	36.0E-03	33.0E-03	35.0E-03	32.0E-03
Statistics									
Min	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	36.0E-03	33.0E-03	35.0E-03	32.0E-03
Max	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	36.0E-03	33.0E-03	35.0E-03	32.0E-03
Average	31.0E-03	32.0E-03	31.0E-03	31.0E-03	36.0E-03	36.0E-03	33.0E-03	35.0E-03	32.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

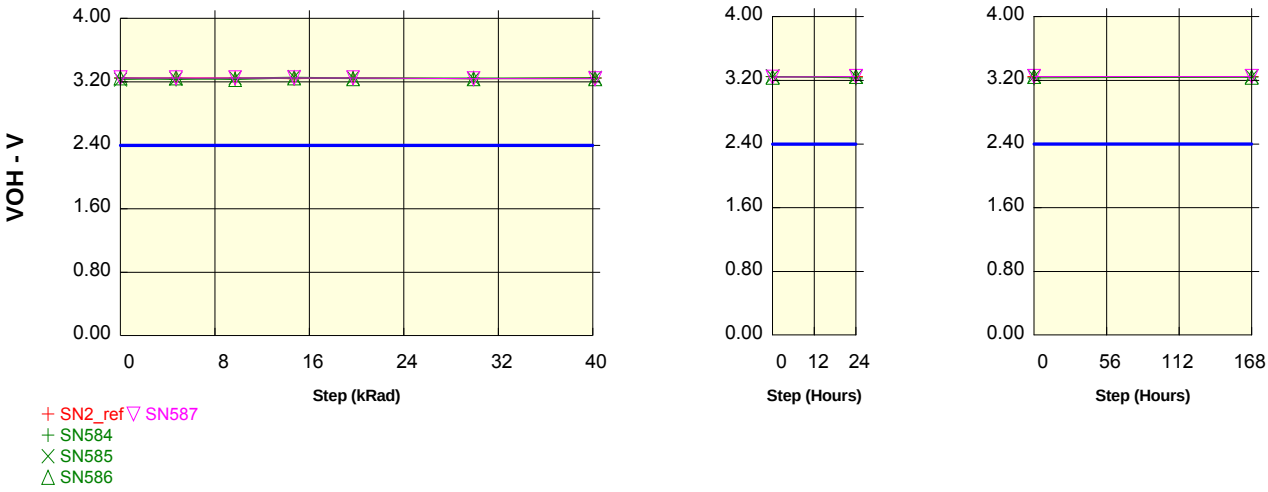
Test conditions : TID
Parameter : Output Low Voltage : VOLDQ0
IOL=4mA.VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Max : 400.0E-03
Spec limits are represented in bold lines on the graphic.



VOLDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	30.0E-03	32.0E-03	30.0E-03	31.0E-03	35.0E-03	32.0E-03	36.0E-03	33.0E-03	34.0E-03
ON samples									
SN584	30.0E-03	31.0E-03	32.0E-03	31.0E-03	30.0E-03	31.0E-03	30.0E-03	31.0E-03	32.0E-03
SN585	32.0E-03	31.0E-03	32.0E-03	32.0E-03	31.0E-03	32.0E-03	32.0E-03	32.0E-03	30.0E-03
SN586	31.0E-03	31.0E-03	34.0E-03	35.0E-03	31.0E-03	33.0E-03	34.0E-03	34.0E-03	34.0E-03
Statistics									
Min	30.0E-03	31.0E-03	32.0E-03	31.0E-03	30.0E-03	31.0E-03	30.0E-03	31.0E-03	30.0E-03
Max	32.0E-03	31.0E-03	34.0E-03	35.0E-03	31.0E-03	33.0E-03	34.0E-03	34.0E-03	34.0E-03
Average	31.0E-03	31.0E-03	32.7E-03	32.7E-03	30.7E-03	32.0E-03	32.0E-03	32.3E-03	32.0E-03
Sigma	816.5E-06	190.1E-12	942.8E-06	1.7E-03	471.4E-06	816.5E-06	1.6E-03	1.2E-03	1.6E-03

VOLDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	30.0E-03	32.0E-03	30.0E-03	31.0E-03	35.0E-03	32.0E-03	36.0E-03	33.0E-03	34.0E-03
OFF samples									
SN587	30.0E-03	30.0E-03	30.0E-03	30.0E-03	33.0E-03	35.0E-03	33.0E-03	34.0E-03	34.0E-03
Statistics									
Min	30.0E-03	30.0E-03	30.0E-03	30.0E-03	33.0E-03	35.0E-03	33.0E-03	34.0E-03	34.0E-03
Max	30.0E-03	30.0E-03	30.0E-03	30.0E-03	33.0E-03	35.0E-03	33.0E-03	34.0E-03	34.0E-03
Average	30.0E-03	30.0E-03	30.0E-03	30.0E-03	33.0E-03	35.0E-03	33.0E-03	34.0E-03	34.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

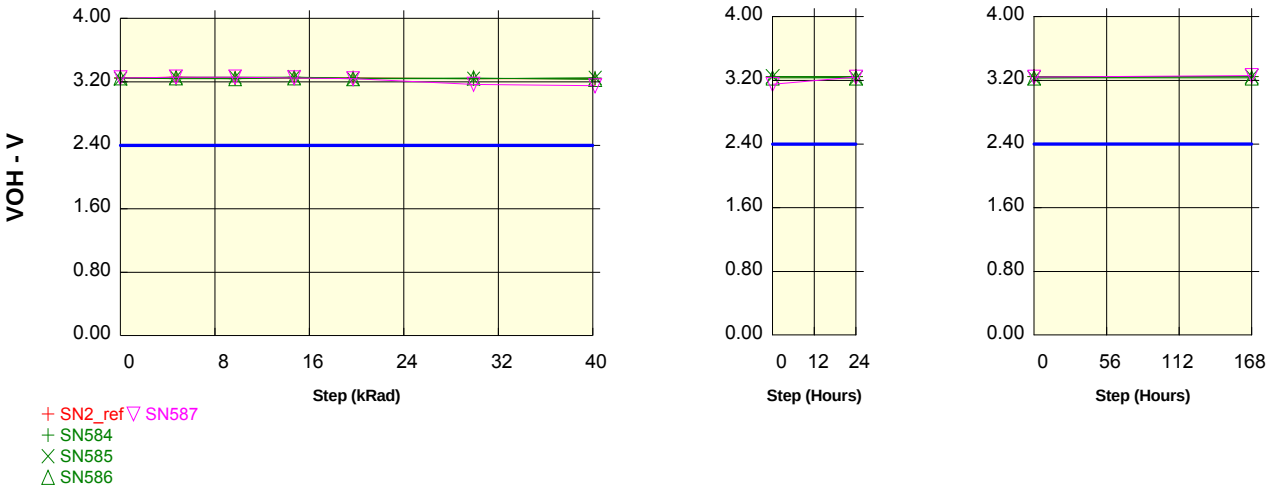
Test conditions : TID
Parameter : Output High Voltage : VOHDQ7
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.24	3.25	3.24	3.25	3.25	3.25
ON samples									
SN584	3.25	3.23	3.24	3.25	3.25	3.25	3.25	3.23	3.24
SN585	3.23	3.24	3.25	3.26	3.25	3.24	3.25	3.25	3.25
SN586	3.25	3.25	3.23	3.25	3.24	3.24	3.24	3.25	3.24
Statistics									
Min	3.23	3.23	3.23	3.25	3.24	3.24	3.24	3.23	3.24
Max	3.25	3.25	3.25	3.26	3.25	3.25	3.25	3.25	3.25
Average	3.243	3.24	3.24	3.253	3.247	3.243	3.247	3.243	3.243
Sigma	0.009	0.008	0.008	0.005	0.005	0.005	0.005	0.009	0.005

VOHDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.24	3.25	3.24	3.25	3.25	3.25
OFF samples									
SN587	3.25	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.25
Statistics									
Min	3.25	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.25
Max	3.25	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.25
Average	3.25	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.25
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

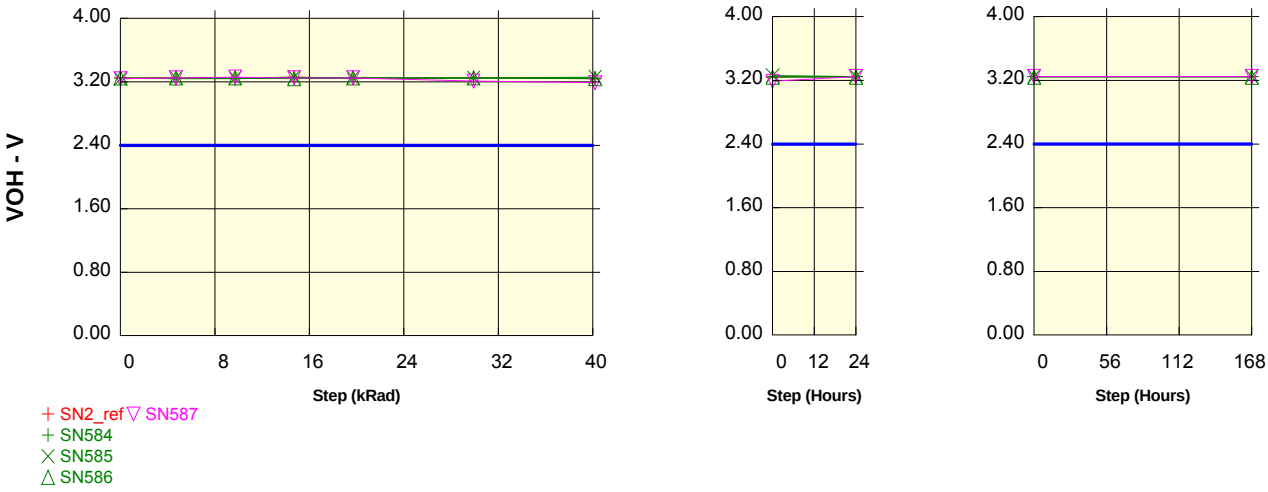
Test conditions : TID
Parameter : Output High Voltage : VOHDQ6
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.26	3.25	3.25	3.25	3.24	3.24	3.25	3.25
ON samples									
SN584	3.25	3.24	3.24	3.26	3.25	3.24	3.25	3.25	3.25
SN585	3.24	3.26	3.26	3.26	3.24	3.24	3.25	3.23	3.25
SN586	3.25	3.25	3.24	3.25	3.24	3.25	3.23	3.23	3.23
Statistics									
Min	3.24	3.24	3.24	3.25	3.24	3.24	3.23	3.23	3.23
Max	3.25	3.26	3.26	3.26	3.25	3.25	3.25	3.25	3.25
Average	3.247	3.25	3.247	3.257	3.243	3.243	3.243	3.237	3.243
Sigma	0.005	0.008	0.009	0.005	0.005	0.005	0.009	0.009	0.009

VOHDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.26	3.25	3.25	3.25	3.24	3.24	3.25	3.25
OFF samples									
SN587	3.25	3.26	3.26	3.25	3.24	3.17	3.15	3.24	3.26
Statistics									
Min	3.25	3.26	3.26	3.25	3.24	3.17	3.15	3.24	3.26
Max	3.25	3.26	3.26	3.25	3.24	3.17	3.15	3.24	3.26
Average	3.25	3.26	3.26	3.25	3.24	3.17	3.15	3.24	3.26
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

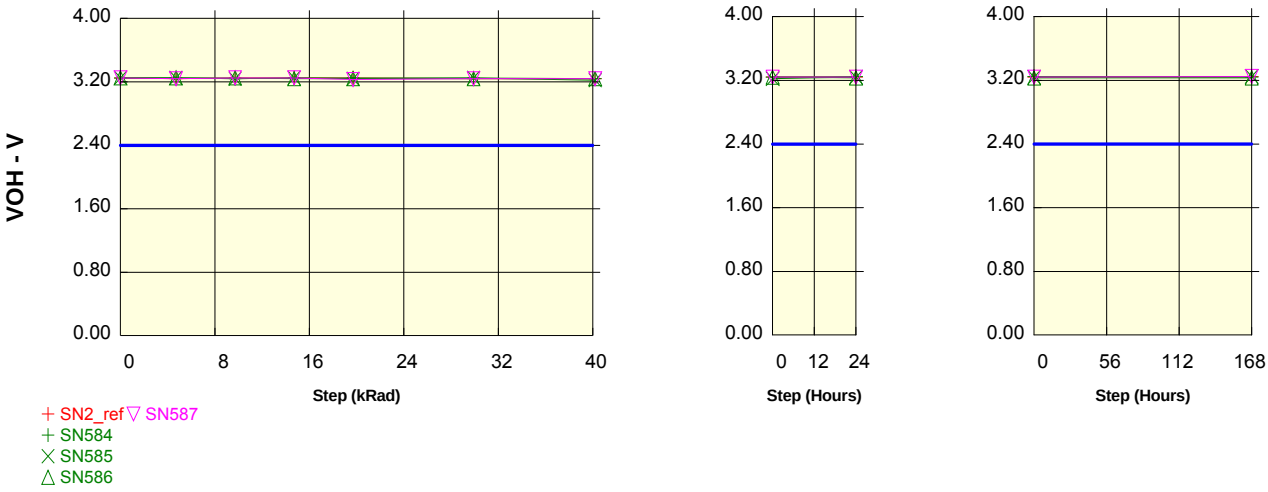
Test conditions : TID
Parameter : Output High Voltage : VOHDQ5
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.26	3.25	3.25	3.24	3.25	3.25
ON samples									
SN584	3.25	3.24	3.24	3.25	3.25	3.25	3.25	3.25	3.25
SN585	3.24	3.25	3.25	3.26	3.25	3.25	3.26	3.25	3.25
SN586	3.25	3.25	3.25	3.24	3.25	3.25	3.24	3.24	3.24
Statistics									
Min	3.24	3.24	3.24	3.24	3.25	3.25	3.24	3.24	3.24
Max	3.25	3.25	3.25	3.26	3.25	3.25	3.26	3.25	3.25
Average	3.247	3.247	3.247	3.25	3.25	3.25	3.25	3.247	3.247
Sigma	0.005	0.005	0.005	0.008	0.00	0.00	0.008	0.005	0.005

VOHDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.26	3.25	3.25	3.24	3.25	3.25
OFF samples									
SN587	3.24	3.25	3.26	3.25	3.25	3.21	3.19	3.25	3.25
Statistics									
Min	3.24	3.25	3.26	3.25	3.25	3.21	3.19	3.25	3.25
Max	3.24	3.25	3.26	3.25	3.25	3.21	3.19	3.25	3.25
Average	3.24	3.25	3.26	3.25	3.25	3.21	3.19	3.25	3.25
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

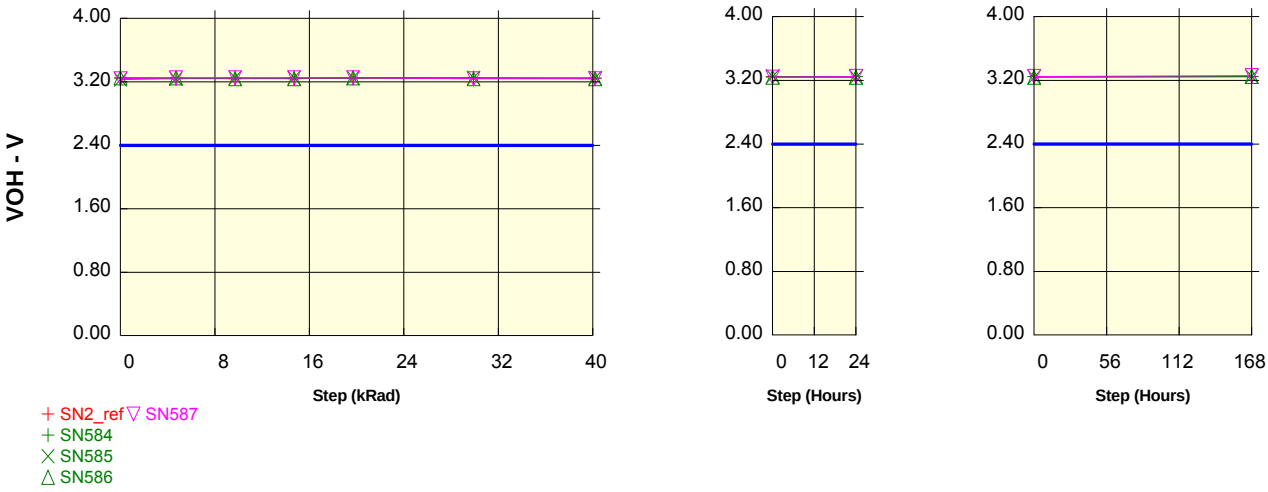
Test conditions : TID
Parameter : Output High Voltage : VOHDQ4
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.24	3.25	3.25	3.25	3.24	3.24	3.24	3.25
ON samples									
SN584	3.25	3.25	3.24	3.25	3.25	3.25	3.24	3.25	3.24
SN585	3.25	3.25	3.24	3.25	3.24	3.25	3.22	3.24	3.25
SN586	3.25	3.25	3.25	3.24	3.24	3.24	3.24	3.23	3.23
Statistics									
Min	3.25	3.25	3.24	3.24	3.24	3.24	3.22	3.23	3.23
Max	3.25	3.25	3.25	3.25	3.25	3.25	3.24	3.25	3.25
Average	3.25	3.25	3.243	3.247	3.243	3.247	3.233	3.24	3.24
Sigma	0.00	0.00	0.005	0.005	0.005	0.005	0.009	0.008	0.008

VOHDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.24	3.25	3.25	3.25	3.24	3.24	3.24	3.25
OFF samples									
SN587	3.25	3.24	3.25	3.25	3.23	3.24	3.24	3.24	3.25
Statistics									
Min	3.25	3.24	3.25	3.25	3.23	3.24	3.24	3.24	3.25
Max	3.25	3.24	3.25	3.25	3.23	3.24	3.24	3.24	3.25
Average	3.25	3.24	3.25	3.25	3.23	3.24	3.24	3.24	3.25
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

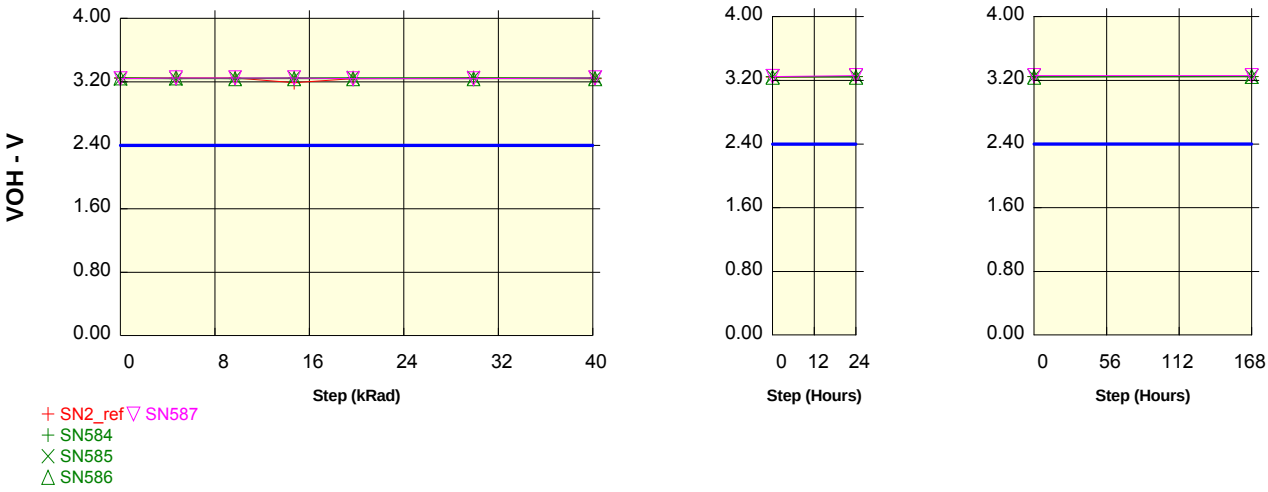
Test conditions : TID
Parameter : Output High Voltage : VOHDQ3
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.24	3.25	3.25	3.25	3.25	3.25
ON samples									
SN584	3.25	3.24	3.24	3.25	3.25	3.25	3.24	3.25	3.25
SN585	3.23	3.24	3.25	3.25	3.25	3.25	3.25	3.24	3.25
SN586	3.25	3.25	3.24	3.24	3.25	3.24	3.24	3.24	3.25
Statistics									
Min	3.23	3.24	3.24	3.24	3.25	3.24	3.24	3.24	3.25
Max	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Average	3.243	3.243	3.243	3.247	3.25	3.247	3.243	3.243	3.25
Sigma	0.009	0.005	0.005	0.005	0.00	0.005	0.005	0.005	0.00

VOHDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.24	3.25	3.25	3.25	3.25	3.25
OFF samples									
SN587	3.24	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.26
Statistics									
Min	3.24	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.26
Max	3.24	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.26
Average	3.24	3.25	3.25	3.25	3.25	3.24	3.24	3.25	3.26
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

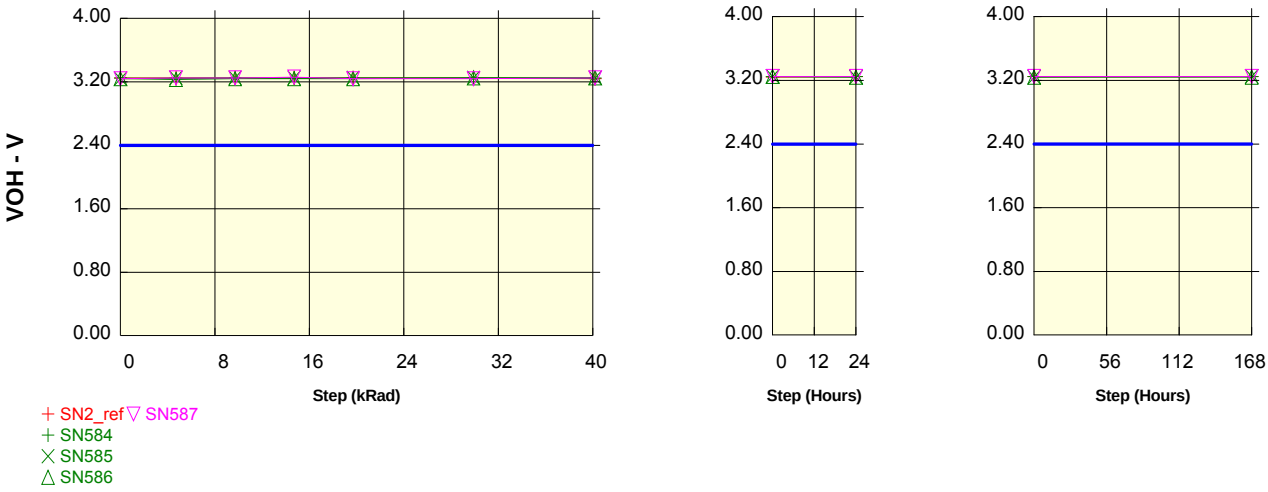
Test conditions : TID
Parameter : Output High Voltage : VOHDQ2
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.19	3.24	3.25	3.24	3.25	3.25
ON samples									
SN584	3.25	3.24	3.24	3.25	3.25	3.25	3.25	3.25	3.25
SN585	3.24	3.24	3.25	3.25	3.25	3.25	3.25	3.25	3.25
SN586	3.25	3.25	3.24	3.24	3.24	3.24	3.24	3.24	3.25
Statistics									
Min	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.25
Max	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Average	3.247	3.243	3.243	3.247	3.247	3.247	3.247	3.247	3.25
Sigma	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.00

VOHDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.19	3.24	3.25	3.24	3.25	3.25
OFF samples									
SN587	3.24	3.25	3.25	3.25	3.24	3.24	3.25	3.26	3.26
Statistics									
Min	3.24	3.25	3.25	3.25	3.24	3.24	3.25	3.26	3.26
Max	3.24	3.25	3.25	3.25	3.24	3.24	3.25	3.26	3.26
Average	3.24	3.25	3.25	3.25	3.24	3.24	3.25	3.26	3.26
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

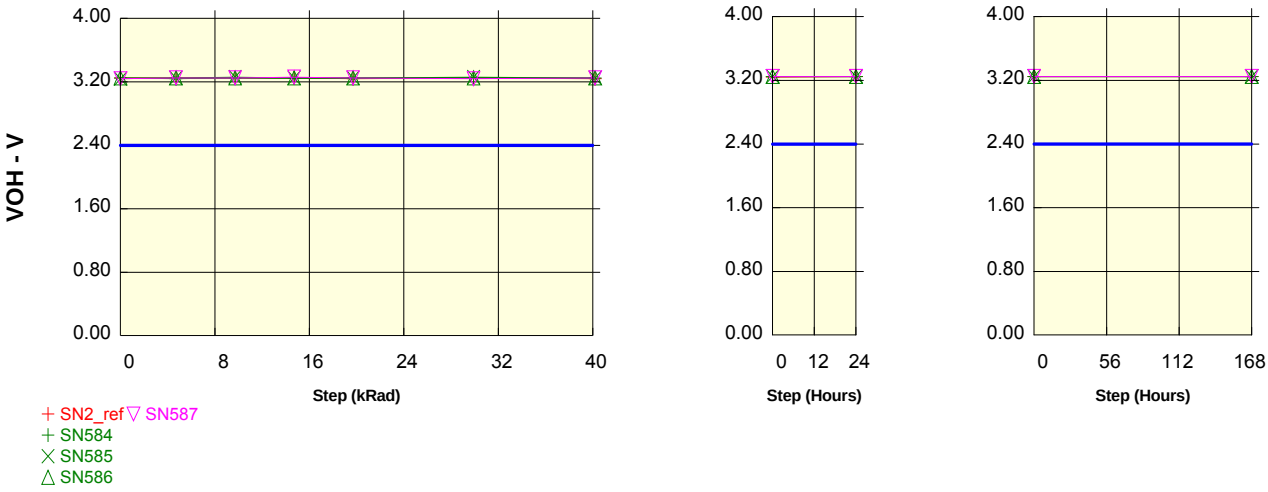
Test conditions : TID
Parameter : Output High Voltage : VOHDQ1
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.25	3.25	3.25	3.24	3.25	3.25
ON samples									
SN584	3.25	3.24	3.25	3.25	3.25	3.25	3.25	3.25	3.25
SN585	3.24	3.25	3.25	3.25	3.25	3.25	3.25	3.24	3.25
SN586	3.24	3.23	3.24	3.24	3.24	3.25	3.25	3.24	3.24
Statistics									
Min	3.24	3.23	3.24	3.24	3.24	3.25	3.25	3.24	3.24
Max	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Average	3.243	3.24	3.247	3.247	3.247	3.25	3.25	3.243	3.247
Sigma	0.005	0.008	0.005	0.005	0.005	0.00	0.00	0.005	0.005

VOHDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.25	3.25	3.25	3.24	3.25	3.25
OFF samples									
SN587	3.24	3.25	3.25	3.26	3.24	3.24	3.25	3.25	3.25
Statistics									
Min	3.24	3.25	3.25	3.26	3.24	3.24	3.25	3.25	3.25
Max	3.24	3.25	3.25	3.26	3.24	3.24	3.25	3.25	3.25
Average	3.24	3.25	3.25	3.26	3.24	3.24	3.25	3.25	3.25
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

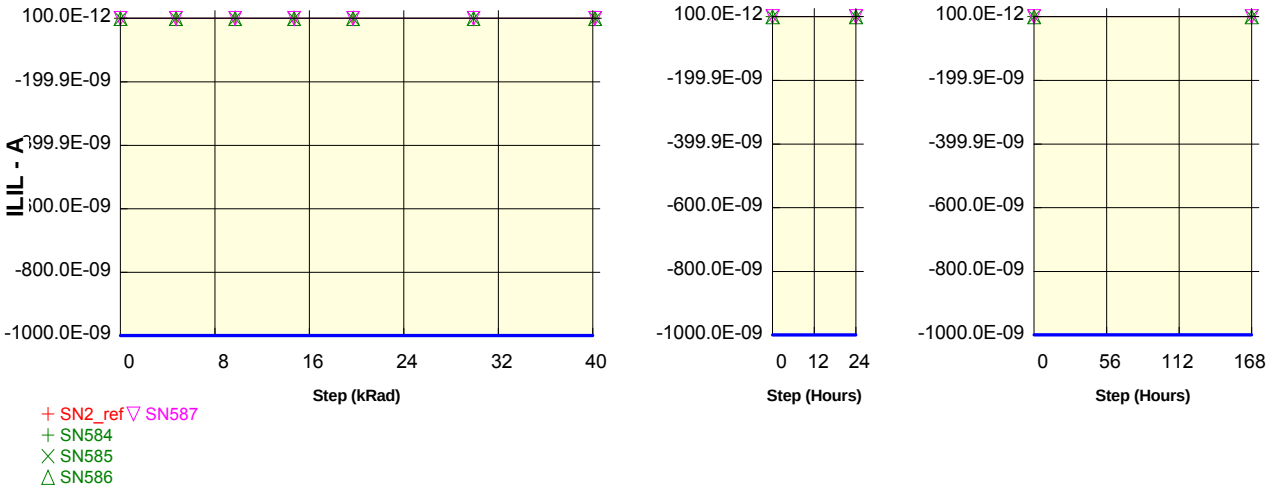
Test conditions : TID
Parameter : Output High Voltage : VOHDQ0
IOH=-4mA. VDD = 3.3V. VDDQ=3.3V
Unit : V
Spec Limit Min : 2.40
Spec limits are represented in bold lines on the graphic.



VOHDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.25	3.24	3.25	3.24	3.25	3.25
ON samples									
SN584	3.25	3.24	3.25	3.25	3.25	3.25	3.25	3.25	3.25
SN585	3.24	3.25	3.26	3.25	3.25	3.26	3.25	3.25	3.25
SN586	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Statistics									
Min	3.24	3.24	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Max	3.25	3.25	3.26	3.25	3.25	3.26	3.25	3.25	3.25
Average	3.247	3.247	3.253	3.25	3.25	3.253	3.25	3.25	3.25
Sigma	0.005	0.005	0.005	0.00	0.00	0.005	0.00	0.00	0.00

VOHDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.25	3.25	3.25	3.25	3.24	3.25	3.24	3.25	3.25
OFF samples									
SN587	3.24	3.25	3.25	3.26	3.25	3.24	3.25	3.25	3.25
Statistics									
Min	3.24	3.25	3.25	3.26	3.25	3.24	3.25	3.25	3.25
Max	3.24	3.25	3.25	3.26	3.25	3.24	3.25	3.25	3.25
Average	3.24	3.25	3.25	3.26	3.25	3.24	3.25	3.25	3.25
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

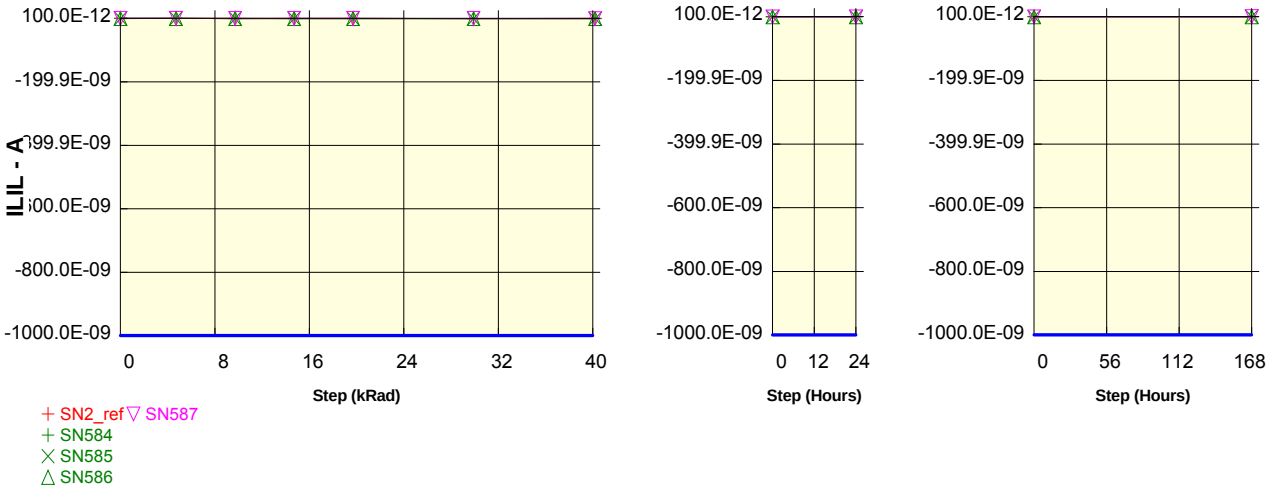
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA12
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA12	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	0.0E+00	50.0E-12	200.0E-12	0.0E+00	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12
ON samples									
SN584	50.0E-12	-50.0E-12	100.0E-12	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	50.0E-12	-50.0E-12
SN585	-50.0E-12	0.0E+00	0.0E+00	50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	-50.0E-12	50.0E-12
SN586	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	50.0E-12	50.0E-12	-50.0E-12	-50.0E-12	0.0E+00
Statistics									
Min	-50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12
Max	50.0E-12	0.0E+00	100.0E-12	50.0E-12	50.0E-12	50.0E-12	0.0E+00	50.0E-12	50.0E-12
Average	0.0E+00	-16.7E-12	33.3E-12	0.0E+00	16.7E-12	-16.7E-12	-33.3E-12	-16.7E-12	0.0E+00
Sigma	40.8E-12	23.6E-12	47.1E-12	40.8E-12	23.6E-12	47.1E-12	23.6E-12	47.1E-12	40.8E-12

ILILA12	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	0.0E+00	50.0E-12	200.0E-12	0.0E+00	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12
OFF samples									
SN587	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	50.0E-12	0.0E+00	100.0E-12	-50.0E-12	0.0E+00
Statistics									
Min	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	50.0E-12	0.0E+00	100.0E-12	-50.0E-12	0.0E+00
Max	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	50.0E-12	0.0E+00	100.0E-12	-50.0E-12	0.0E+00
Average	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	50.0E-12	0.0E+00	100.0E-12	-50.0E-12	0.0E+00
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

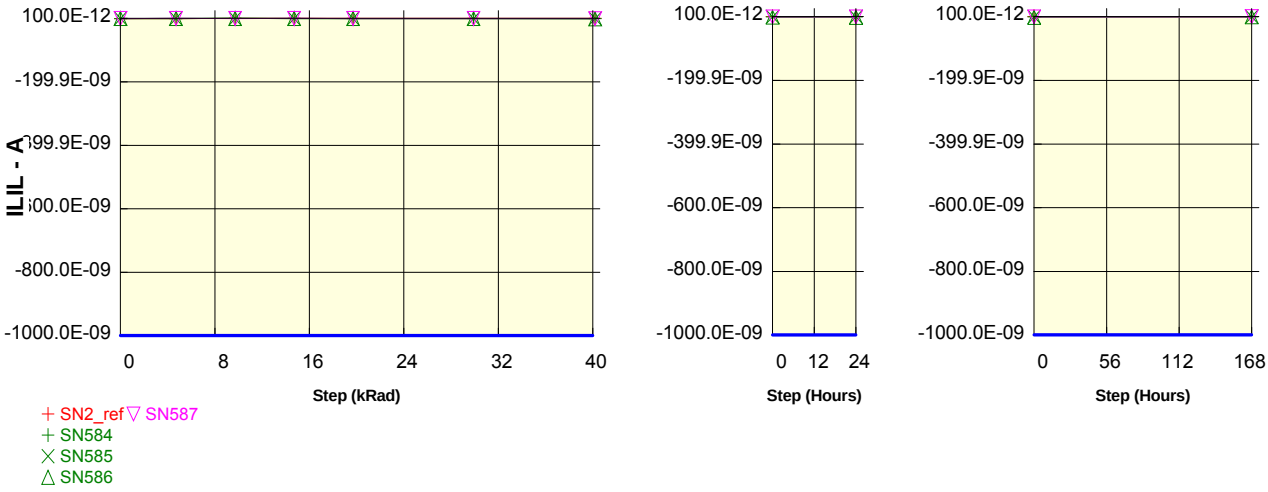
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA11
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA11	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12
ON samples									
SN584	0.0E+00	0.0E+00	-150.0E-12	-150.0E-12	-150.0E-12	-200.0E-12	-400.0E-12	-300.0E-12	-100.0E-12
SN585	-150.0E-12	-50.0E-12	-100.0E-12	-250.0E-12	-250.0E-12	-450.0E-12	-600.0E-12	-650.0E-12	-200.0E-12
SN586	0.0E+00	0.0E+00	-50.0E-12	-150.0E-12	-100.0E-12	-300.0E-12	-400.0E-12	-500.0E-12	-100.0E-12
Statistics									
Min	-150.0E-12	-50.0E-12	-150.0E-12	-250.0E-12	-250.0E-12	-450.0E-12	-600.0E-12	-650.0E-12	-200.0E-12
Max	0.0E+00	0.0E+00	-50.0E-12	-150.0E-12	-100.0E-12	-200.0E-12	-400.0E-12	-300.0E-12	-100.0E-12
Average	-50.0E-12	-16.7E-12	-100.0E-12	-183.3E-12	-166.7E-12	-316.7E-12	-466.7E-12	-483.3E-12	-133.3E-12
Sigma	70.7E-12	23.6E-12	40.8E-12	47.1E-12	62.4E-12	102.7E-12	94.3E-12	143.4E-12	47.1E-12

ILILA11	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12
OFF samples									
SN587	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	0.0E+00	-200.0E-12	-550.0E-12	-550.0E-12	-250.0E-12
Statistics									
Min	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	0.0E+00	-200.0E-12	-550.0E-12	-550.0E-12	-250.0E-12
Max	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	0.0E+00	-200.0E-12	-550.0E-12	-550.0E-12	-250.0E-12
Average	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	0.0E+00	-200.0E-12	-550.0E-12	-550.0E-12	-250.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

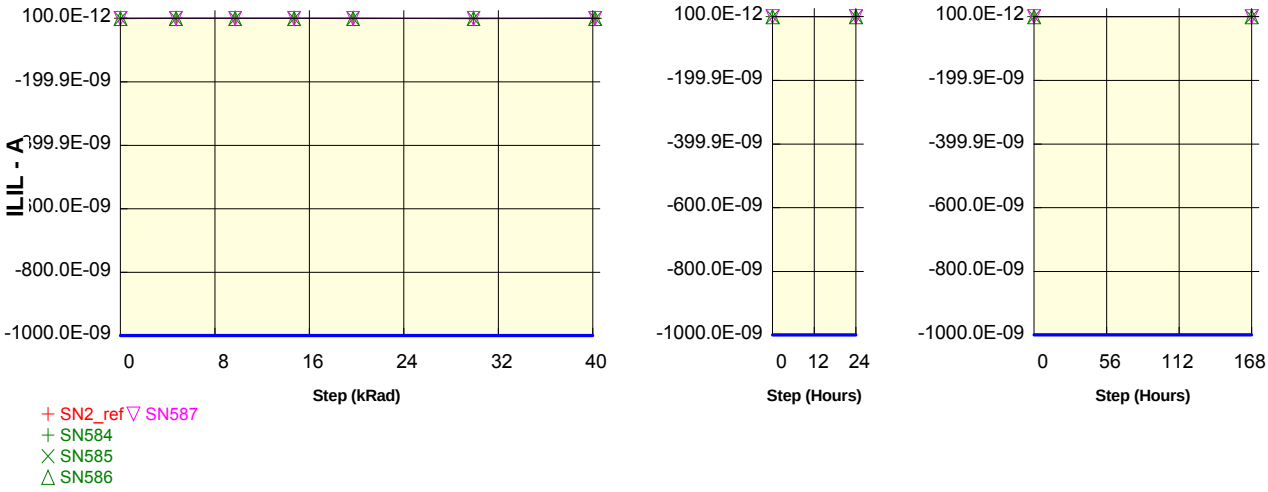
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA10
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA10	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-200.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	50.0E-12	0.0E+00
ON samples									
SN584	-150.0E-12	-100.0E-12	0.0E+00	0.0E+00	-200.0E-12	-250.0E-12	-300.0E-12	-400.0E-12	-250.0E-12
SN585	-100.0E-12	-50.0E-12	-50.0E-12	-150.0E-12	-200.0E-12	-350.0E-12	-650.0E-12	-450.0E-12	-200.0E-12
SN586	-100.0E-12	-150.0E-12	0.0E+00	-250.0E-12	-200.0E-12	-500.0E-12	-1.2E-09	-1.7E-09	-450.0E-12
Statistics									
Min	-150.0E-12	-150.0E-12	-50.0E-12	-250.0E-12	-200.0E-12	-500.0E-12	-1.2E-09	-1.7E-09	-450.0E-12
Max	-100.0E-12	-50.0E-12	0.0E+00	0.0E+00	-200.0E-12	-250.0E-12	-300.0E-12	-400.0E-12	-200.0E-12
Average	-116.7E-12	-100.0E-12	-16.7E-12	-133.3E-12	-200.0E-12	-366.7E-12	-716.7E-12	-833.3E-12	-300.0E-12
Sigma	23.6E-12	40.8E-12	23.6E-12	102.7E-12	0.0E+00	102.7E-12	370.4E-12	577.8E-12	108.0E-12

ILILA10	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-200.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	50.0E-12	0.0E+00
OFF samples									
SN587	-100.0E-12	0.0E+00	-150.0E-12	0.0E+00	-200.0E-12	-200.0E-12	-350.0E-12	-450.0E-12	-150.0E-12
Statistics									
Min	-100.0E-12	0.0E+00	-150.0E-12	0.0E+00	-200.0E-12	-200.0E-12	-350.0E-12	-450.0E-12	-150.0E-12
Max	-100.0E-12	0.0E+00	-150.0E-12	0.0E+00	-200.0E-12	-200.0E-12	-350.0E-12	-450.0E-12	-150.0E-12
Average	-100.0E-12	0.0E+00	-150.0E-12	0.0E+00	-200.0E-12	-200.0E-12	-350.0E-12	-450.0E-12	-150.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

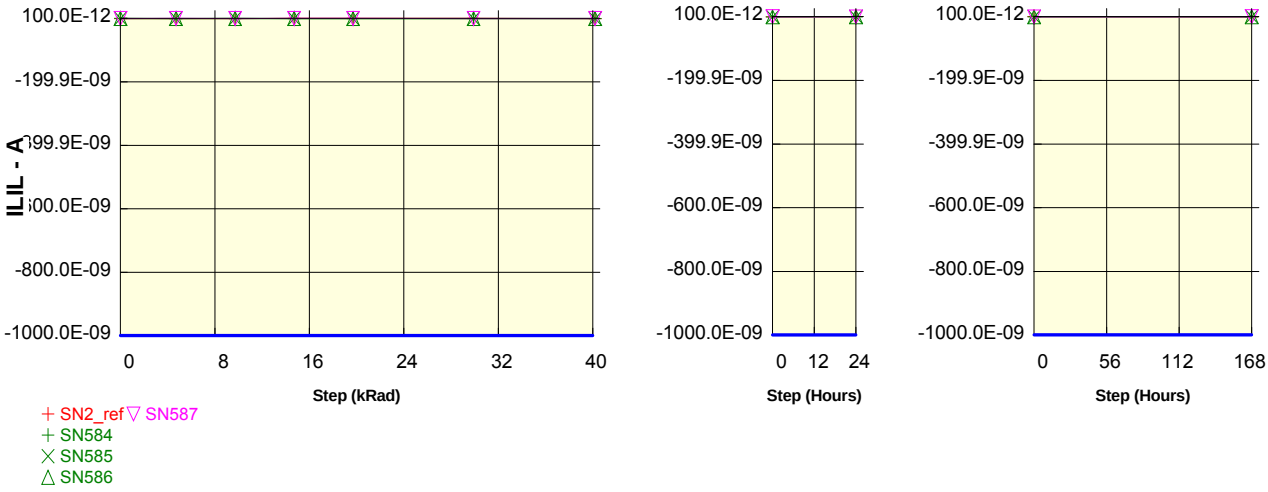
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA9
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA9	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
ON samples									
SN584	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	100.0E-12	0.0E+00
SN585	0.0E+00	-50.0E-12	-50.0E-12	50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	50.0E-12
SN586	-150.0E-12	0.0E+00	50.0E-12	0.0E+00	0.0E+00	-100.0E-12	0.0E+00	-100.0E-12	-50.0E-12
Statistics									
Min	-150.0E-12	-50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	-100.0E-12	-50.0E-12
Max	0.0E+00	0.0E+00	50.0E-12	50.0E-12	0.0E+00	0.0E+00	0.0E+00	100.0E-12	50.0E-12
Average	-50.0E-12	-16.7E-12	0.0E+00	16.7E-12	-33.3E-12	-66.7E-12	-33.3E-12	0.0E+00	0.0E+00
Sigma	70.7E-12	23.6E-12	40.8E-12	23.6E-12	23.6E-12	47.1E-12	23.6E-12	81.6E-12	40.8E-12

ILILA9	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
OFF samples									
SN587	-100.0E-12	-50.0E-12	0.0E+00	50.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00
Statistics									
Min	-100.0E-12	-50.0E-12	0.0E+00	50.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00
Max	-100.0E-12	-50.0E-12	0.0E+00	50.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00
Average	-100.0E-12	-50.0E-12	0.0E+00	50.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

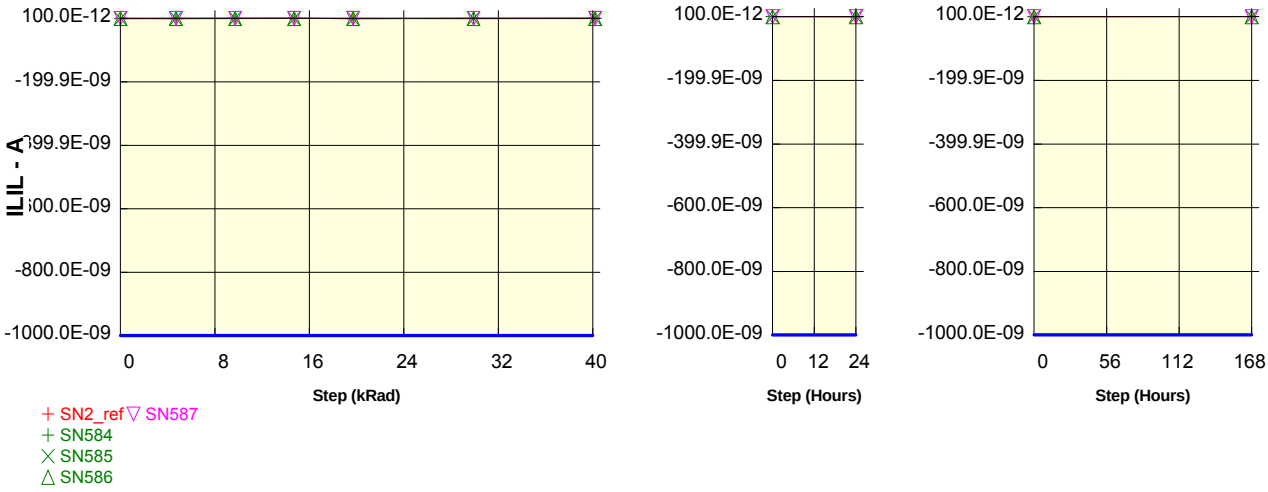
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA8
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA8	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-400.0E-12	-250.0E-12	-150.0E-12	-50.0E-12	0.0E+00	0.0E+00	-100.0E-12	0.0E+00	-150.0E-12
ON samples									
SN584	-50.0E-12	-250.0E-12	-200.0E-12	-200.0E-12	-400.0E-12	-650.0E-12	-900.0E-12	-900.0E-12	-250.0E-12
SN585	-250.0E-12	-200.0E-12	-150.0E-12	-100.0E-12	-100.0E-12	-450.0E-12	-650.0E-12	-650.0E-12	-250.0E-12
SN586	-200.0E-12	-150.0E-12	0.0E+00	-150.0E-12	-300.0E-12	-400.0E-12	-650.0E-12	-650.0E-12	-250.0E-12
Statistics									
Min	-250.0E-12	-250.0E-12	-200.0E-12	-200.0E-12	-400.0E-12	-650.0E-12	-900.0E-12	-900.0E-12	-250.0E-12
Max	-50.0E-12	-150.0E-12	0.0E+00	-100.0E-12	-100.0E-12	-400.0E-12	-650.0E-12	-650.0E-12	-250.0E-12
Average	-166.7E-12	-200.0E-12	-116.7E-12	-150.0E-12	-266.7E-12	-500.0E-12	-733.3E-12	-733.3E-12	-250.0E-12
Sigma	85.0E-12	40.8E-12	85.0E-12	40.8E-12	124.7E-12	108.0E-12	117.9E-12	117.9E-12	0.0E+00

ILILA8	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-400.0E-12	-250.0E-12	-150.0E-12	-50.0E-12	0.0E+00	0.0E+00	-100.0E-12	0.0E+00	-150.0E-12
OFF samples									
SN587	-200.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-250.0E-12	-250.0E-12	-350.0E-12	-150.0E-12
Statistics									
Min	-200.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-250.0E-12	-250.0E-12	-350.0E-12	-150.0E-12
Max	-200.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-250.0E-12	-250.0E-12	-350.0E-12	-150.0E-12
Average	-200.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-250.0E-12	-250.0E-12	-350.0E-12	-150.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

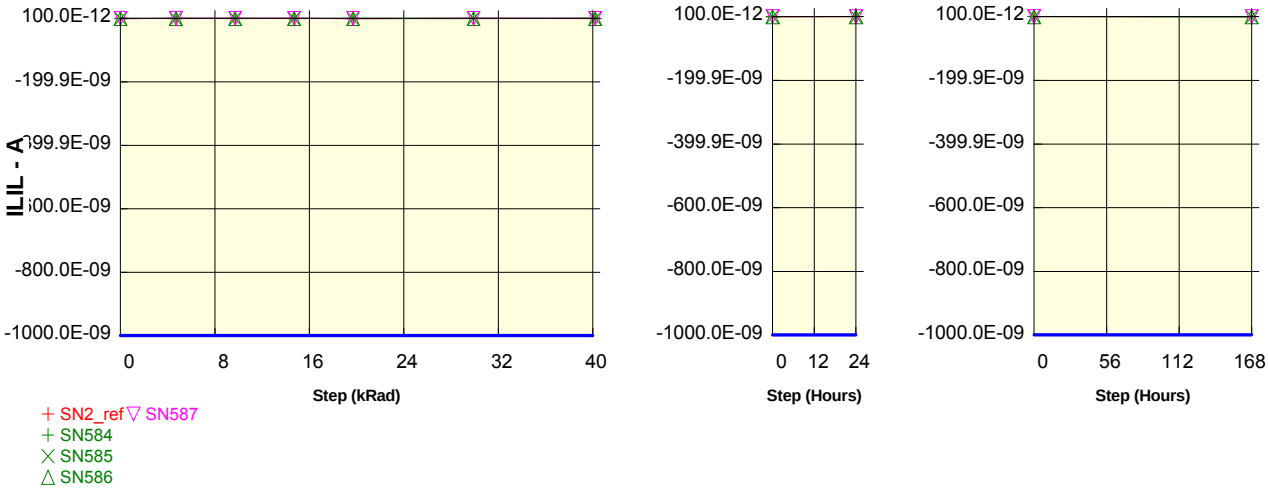
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA7
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-200.0E-12	-200.0E-12	0.0E+00	-50.0E-12	-150.0E-12	-50.0E-12	0.0E+00	-100.0E-12	-50.0E-12
ON samples									
SN584	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12	-150.0E-12	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12
SN585	0.0E+00	-100.0E-12	-150.0E-12	0.0E+00	-150.0E-12	-100.0E-12	0.0E+00	-50.0E-12	-50.0E-12
SN586	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00
Statistics									
Min	-150.0E-12	-100.0E-12	-150.0E-12	-50.0E-12	-150.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-50.0E-12
Max	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Average	-50.0E-12	-50.0E-12	-50.0E-12	-33.3E-12	-116.7E-12	-50.0E-12	-16.7E-12	-16.7E-12	-33.3E-12
Sigma	70.7E-12	40.8E-12	70.7E-12	23.6E-12	47.1E-12	40.8E-12	23.6E-12	23.6E-12	23.6E-12

ILILA7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-200.0E-12	-200.0E-12	0.0E+00	-50.0E-12	-150.0E-12	-50.0E-12	0.0E+00	-100.0E-12	-50.0E-12
OFF samples									
SN587	-100.0E-12	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-150.0E-12	-100.0E-12	0.0E+00	0.0E+00
Statistics									
Min	-100.0E-12	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-150.0E-12	-100.0E-12	0.0E+00	0.0E+00
Max	-100.0E-12	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-150.0E-12	-100.0E-12	0.0E+00	0.0E+00
Average	-100.0E-12	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-150.0E-12	-100.0E-12	0.0E+00	0.0E+00
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

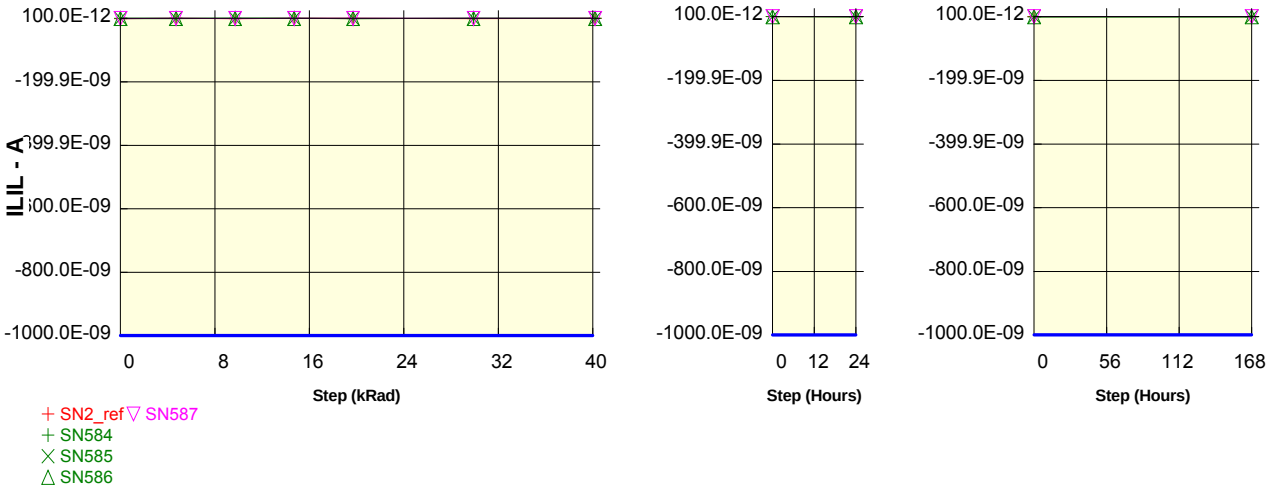
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA6
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-250.0E-12	-50.0E-12	-50.0E-12	0.0E+00	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	100.0E-12
ON samples									
SN584	0.0E+00	-150.0E-12	-50.0E-12	-100.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12
SN585	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	-100.0E-12
SN586	-150.0E-12	0.0E+00	-150.0E-12	-50.0E-12	-200.0E-12	-100.0E-12	0.0E+00	0.0E+00	-100.0E-12
Statistics									
Min	-150.0E-12	-150.0E-12	-150.0E-12	-100.0E-12	-200.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-100.0E-12
Max	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12
Average	-50.0E-12	-66.7E-12	-66.7E-12	-66.7E-12	-66.7E-12	-33.3E-12	-16.7E-12	-16.7E-12	-83.3E-12
Sigma	70.7E-12	62.4E-12	62.4E-12	23.6E-12	94.3E-12	47.1E-12	23.6E-12	23.6E-12	23.6E-12

ILILA6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-250.0E-12	-50.0E-12	-50.0E-12	0.0E+00	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	100.0E-12
OFF samples									
SN587	-250.0E-12	0.0E+00	0.0E+00	0.0E+00	-100.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00
Statistics									
Min	-250.0E-12	0.0E+00	0.0E+00	0.0E+00	-100.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00
Max	-250.0E-12	0.0E+00	0.0E+00	0.0E+00	-100.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00
Average	-250.0E-12	0.0E+00	0.0E+00	0.0E+00	-100.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

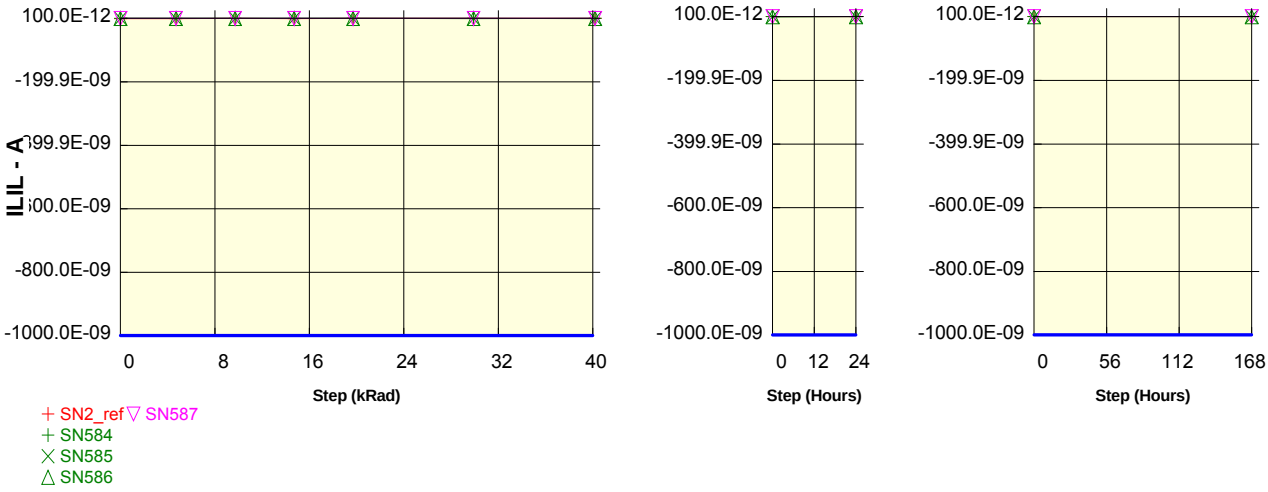
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA5
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-250.0E-12	0.0E+00	-100.0E-12	0.0E+00	0.0E+00	-100.0E-12	0.0E+00	-50.0E-12	0.0E+00
ON samples									
SN584	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	-150.0E-12	-50.0E-12	0.0E+00	-100.0E-12	-150.0E-12
SN585	-150.0E-12	-100.0E-12	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	-50.0E-12
SN586	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-150.0E-12	-100.0E-12
Statistics									
Min	-150.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-150.0E-12	-50.0E-12	-50.0E-12	-150.0E-12	-150.0E-12
Max	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	-50.0E-12
Average	-66.7E-12	-50.0E-12	-16.7E-12	-33.3E-12	-83.3E-12	-50.0E-12	-16.7E-12	-83.3E-12	-100.0E-12
Sigma	62.4E-12	40.8E-12	23.6E-12	23.6E-12	62.4E-12	0.0E+00	23.6E-12	62.4E-12	40.8E-12

ILILA5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-250.0E-12	0.0E+00	-100.0E-12	0.0E+00	0.0E+00	-100.0E-12	0.0E+00	-50.0E-12	0.0E+00
OFF samples									
SN587	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-50.0E-12
Statistics									
Min	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-50.0E-12
Max	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-50.0E-12
Average	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-50.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

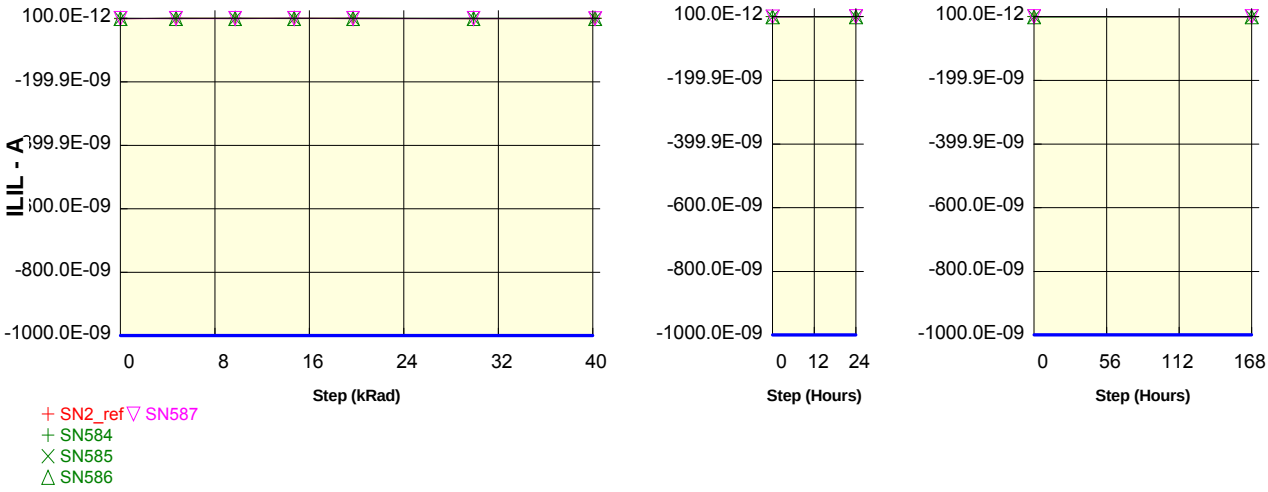
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA4
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-100.0E-12	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	-50.0E-12
ON samples									
SN584	0.0E+00	0.0E+00	0.0E+00	50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12
SN585	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	0.0E+00
SN586	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-150.0E-12	-50.0E-12	-50.0E-12
Statistics									
Min	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12	-50.0E-12	-100.0E-12	-150.0E-12	-50.0E-12	-50.0E-12
Max	0.0E+00	0.0E+00	0.0E+00	50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00
Average	-16.7E-12	-16.7E-12	-16.7E-12	-16.7E-12	-50.0E-12	-33.3E-12	-83.3E-12	-33.3E-12	-33.3E-12
Sigma	23.6E-12	23.6E-12	23.6E-12	47.1E-12	0.0E+00	47.1E-12	47.1E-12	23.6E-12	23.6E-12

ILILA4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-100.0E-12	-150.0E-12	0.0E+00	-150.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	-50.0E-12
OFF samples									
SN587	-50.0E-12	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	50.0E-12	0.0E+00	50.0E-12	-50.0E-12
Statistics									
Min	-50.0E-12	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	50.0E-12	0.0E+00	50.0E-12	-50.0E-12
Max	-50.0E-12	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	50.0E-12	0.0E+00	50.0E-12	-50.0E-12
Average	-50.0E-12	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	50.0E-12	0.0E+00	50.0E-12	-50.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

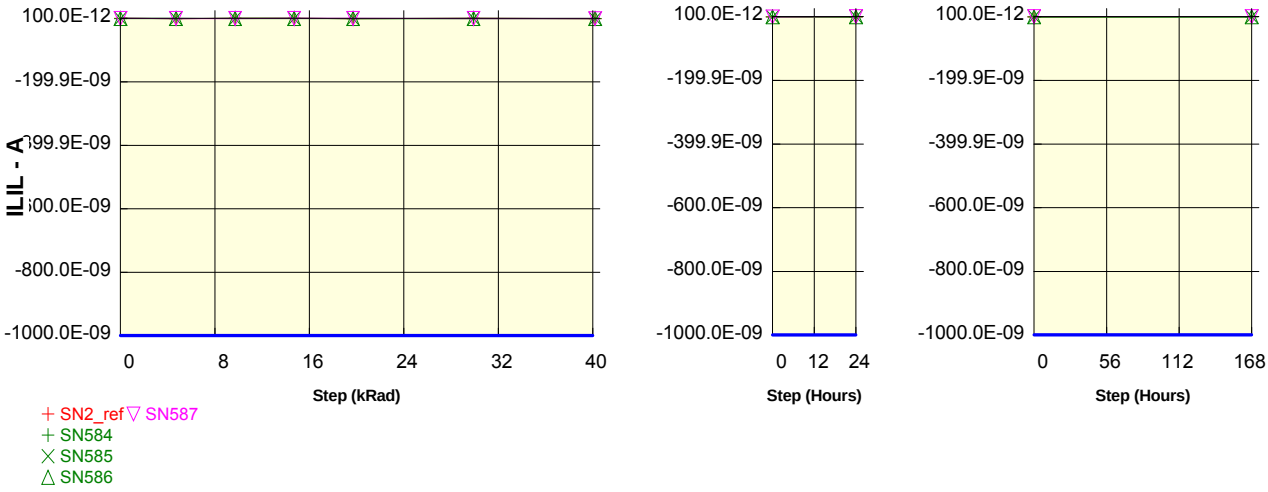
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA3
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	-250.0E-12	-50.0E-12	-50.0E-12	0.0E+00
ON samples									
SN584	0.0E+00	-100.0E-12	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	-150.0E-12
SN585	-100.0E-12	0.0E+00	-100.0E-12	-50.0E-12	-150.0E-12	-150.0E-12	-400.0E-12	-200.0E-12	0.0E+00
SN586	-150.0E-12	-50.0E-12	-50.0E-12	-100.0E-12	0.0E+00	-200.0E-12	-250.0E-12	-650.0E-12	-150.0E-12
Statistics									
Min	-150.0E-12	-100.0E-12	-100.0E-12	-100.0E-12	-150.0E-12	-200.0E-12	-400.0E-12	-650.0E-12	-150.0E-12
Max	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	0.0E+00
Average	-83.3E-12	-50.0E-12	-50.0E-12	-50.0E-12	-66.7E-12	-133.3E-12	-216.7E-12	-283.3E-12	-100.0E-12
Sigma	62.4E-12	40.8E-12	40.8E-12	40.8E-12	62.4E-12	62.4E-12	165.0E-12	271.8E-12	70.7E-12

ILILA3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	-250.0E-12	-50.0E-12	-50.0E-12	0.0E+00
OFF samples									
SN587	-150.0E-12	-100.0E-12	-100.0E-12	-50.0E-12	-100.0E-12	-200.0E-12	-350.0E-12	0.0E+00	-150.0E-12
Statistics									
Min	-150.0E-12	-100.0E-12	-100.0E-12	-50.0E-12	-100.0E-12	-200.0E-12	-350.0E-12	0.0E+00	-150.0E-12
Max	-150.0E-12	-100.0E-12	-100.0E-12	-50.0E-12	-100.0E-12	-200.0E-12	-350.0E-12	0.0E+00	-150.0E-12
Average	-150.0E-12	-100.0E-12	-100.0E-12	-50.0E-12	-100.0E-12	-200.0E-12	-350.0E-12	0.0E+00	-150.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

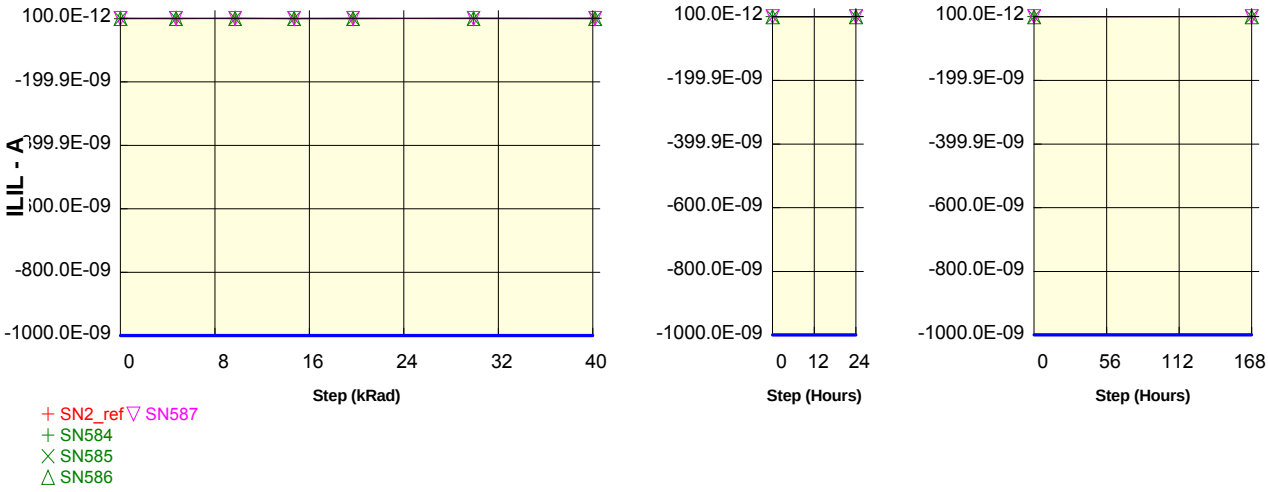
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA2
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	0.0E+00	-100.0E-12	-50.0E-12	0.0E+00	-100.0E-12	0.0E+00	-200.0E-12	-150.0E-12	0.0E+00
ON samples									
SN584	-100.0E-12	-100.0E-12	-50.0E-12	-50.0E-12	-150.0E-12	-50.0E-12	-150.0E-12	-150.0E-12	-200.0E-12
SN585	0.0E+00	-100.0E-12	-50.0E-12	-50.0E-12	-100.0E-12	-200.0E-12	-400.0E-12	-150.0E-12	-100.0E-12
SN586	-50.0E-12	-50.0E-12	-150.0E-12	-150.0E-12	-100.0E-12	-250.0E-12	-250.0E-12	-600.0E-12	-100.0E-12
Statistics									
Min	-100.0E-12	-100.0E-12	-150.0E-12	-150.0E-12	-150.0E-12	-250.0E-12	-400.0E-12	-600.0E-12	-200.0E-12
Max	0.0E+00	-50.0E-12	-50.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	-150.0E-12	-150.0E-12	-100.0E-12
Average	-50.0E-12	-83.3E-12	-83.3E-12	-83.3E-12	-116.7E-12	-166.7E-12	-266.7E-12	-300.0E-12	-133.3E-12
Sigma	40.8E-12	23.6E-12	47.1E-12	47.1E-12	23.6E-12	85.0E-12	102.7E-12	212.1E-12	47.1E-12

ILILA2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	0.0E+00	-100.0E-12	-50.0E-12	0.0E+00	-100.0E-12	0.0E+00	-200.0E-12	-150.0E-12	0.0E+00
OFF samples									
SN587	0.0E+00	-150.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-150.0E-12	-300.0E-12	0.0E+00	0.0E+00
Statistics									
Min	0.0E+00	-150.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-150.0E-12	-300.0E-12	0.0E+00	0.0E+00
Max	0.0E+00	-150.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-150.0E-12	-300.0E-12	0.0E+00	0.0E+00
Average	0.0E+00	-150.0E-12	-150.0E-12	0.0E+00	-50.0E-12	-150.0E-12	-300.0E-12	0.0E+00	0.0E+00
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

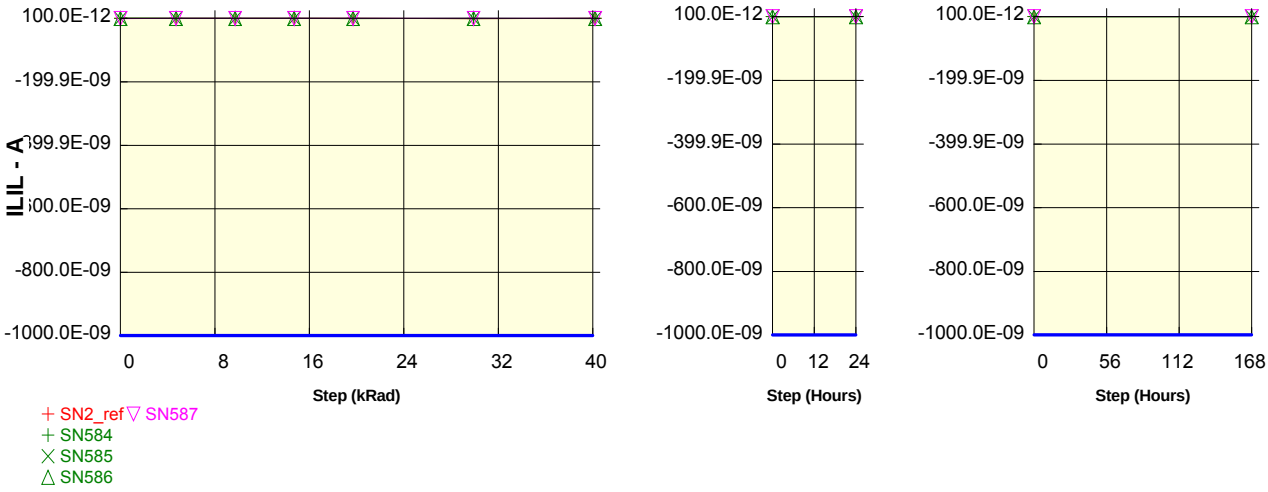
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA1
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	-100.0E-12	-100.0E-12	-150.0E-12	-150.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00
ON samples									
SN584	-200.0E-12	-100.0E-12	-50.0E-12	-100.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12
SN585	-200.0E-12	0.0E+00	-100.0E-12	-150.0E-12	-200.0E-12	-150.0E-12	-200.0E-12	-200.0E-12	0.0E+00
SN586	-50.0E-12	-150.0E-12	0.0E+00	-150.0E-12	-100.0E-12	-50.0E-12	-250.0E-12	-250.0E-12	0.0E+00
Statistics									
Min	-200.0E-12	-150.0E-12	-100.0E-12	-150.0E-12	-200.0E-12	-150.0E-12	-250.0E-12	-250.0E-12	-50.0E-12
Max	-50.0E-12	0.0E+00	0.0E+00	-100.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Average	-150.0E-12	-83.3E-12	-50.0E-12	-133.3E-12	-100.0E-12	-66.7E-12	-150.0E-12	-150.0E-12	-16.7E-12
Sigma	70.7E-12	62.4E-12	40.8E-12	23.6E-12	81.6E-12	62.4E-12	108.0E-12	108.0E-12	23.6E-12

ILILA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	-100.0E-12	-100.0E-12	-150.0E-12	-150.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00
OFF samples									
SN587	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	-150.0E-12	-250.0E-12	-100.0E-12	0.0E+00
Statistics									
Min	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	-150.0E-12	-250.0E-12	-100.0E-12	0.0E+00
Max	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	-150.0E-12	-250.0E-12	-100.0E-12	0.0E+00
Average	0.0E+00	0.0E+00	0.0E+00	-50.0E-12	-50.0E-12	-150.0E-12	-250.0E-12	-100.0E-12	0.0E+00
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

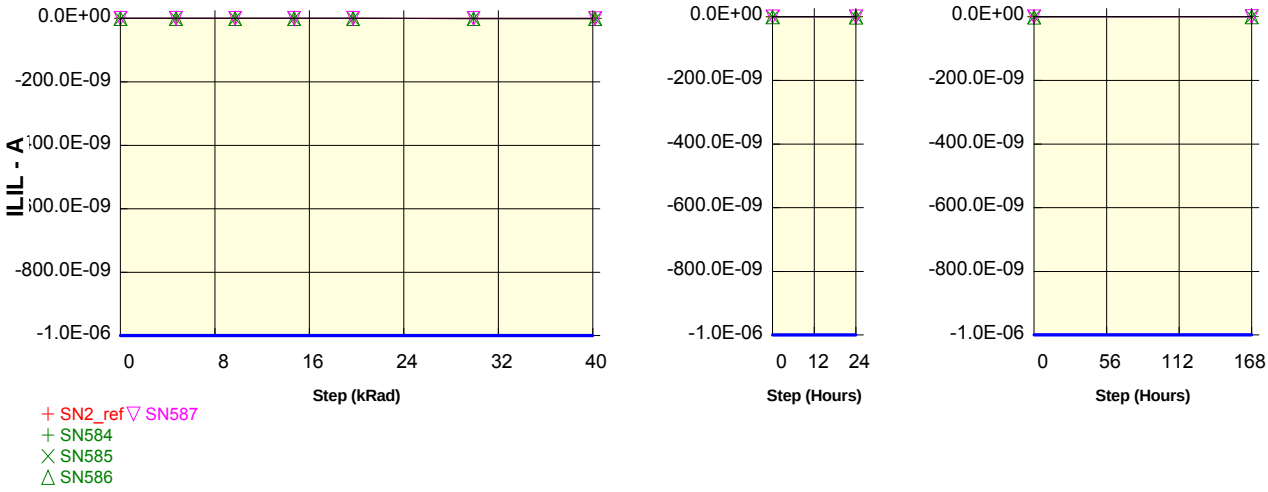
Test conditions : TID
Parameter : Input Leakage Current Low : ILILA0
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	50.0E-12	0.0E+00
ON samples									
SN584	50.0E-12	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12
SN585	0.0E+00	0.0E+00	0.0E+00	50.0E-12	-100.0E-12	-50.0E-12	-250.0E-12	0.0E+00	0.0E+00
SN586	-50.0E-12	50.0E-12	50.0E-12	-50.0E-12	0.0E+00	-150.0E-12	-50.0E-12	-300.0E-12	-100.0E-12
Statistics									
Min	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	-100.0E-12	-150.0E-12	-250.0E-12	-300.0E-12	-100.0E-12
Max	50.0E-12	50.0E-12	50.0E-12	50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00	0.0E+00
Average	0.0E+00	16.7E-12	0.0E+00	0.0E+00	-50.0E-12	-83.3E-12	-100.0E-12	-116.7E-12	-50.0E-12
Sigma	40.8E-12	23.6E-12	40.8E-12	40.8E-12	40.8E-12	47.1E-12	108.0E-12	131.2E-12	40.8E-12

ILILA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	50.0E-12	-50.0E-12	0.0E+00	-50.0E-12	-50.0E-12	-100.0E-12	-50.0E-12	50.0E-12	0.0E+00
OFF samples									
SN587	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12
Statistics									
Min	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12
Max	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12
Average	-150.0E-12	0.0E+00	-50.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-50.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

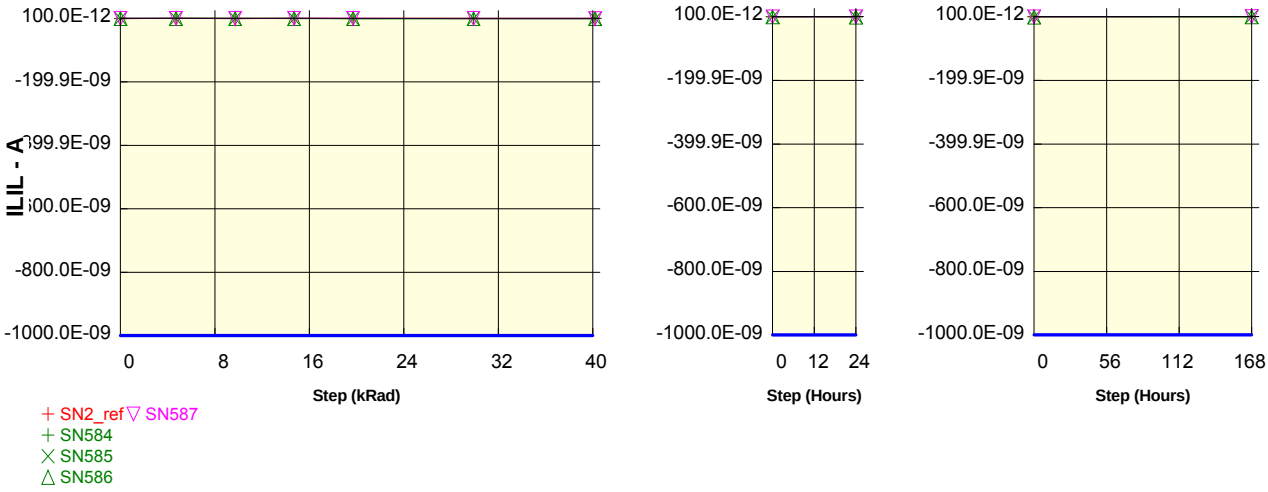
Test conditions : TID
Parameter : Input Leakage Current Low : ILILBA1
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILBA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	-50.0E-12	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00
ON samples									
SN584	-50.0E-12	-50.0E-12	0.0E+00	-150.0E-12	-150.0E-12	-200.0E-12	-450.0E-12	-400.0E-12	0.0E+00
SN585	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	-150.0E-12	-300.0E-12	-500.0E-12	-450.0E-12	0.0E+00
SN586	0.0E+00	-100.0E-12	0.0E+00	-50.0E-12	-100.0E-12	-450.0E-12	-650.0E-12	-850.0E-12	-200.0E-12
Statistics									
Min	-50.0E-12	-100.0E-12	-50.0E-12	-150.0E-12	-150.0E-12	-450.0E-12	-650.0E-12	-850.0E-12	-200.0E-12
Max	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-100.0E-12	-200.0E-12	-450.0E-12	-400.0E-12	0.0E+00
Average	-33.3E-12	-50.0E-12	-16.7E-12	-66.7E-12	-133.3E-12	-316.7E-12	-533.3E-12	-566.7E-12	-66.7E-12
Sigma	23.6E-12	40.8E-12	23.6E-12	62.4E-12	23.6E-12	102.7E-12	85.0E-12	201.4E-12	94.3E-12

ILILBA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	-50.0E-12	0.0E+00	0.0E+00	-50.0E-12	0.0E+00	-50.0E-12	0.0E+00	0.0E+00
OFF samples									
SN587	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	-150.0E-12	-350.0E-12	-500.0E-12	-450.0E-12	-250.0E-12
Statistics									
Min	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	-150.0E-12	-350.0E-12	-500.0E-12	-450.0E-12	-250.0E-12
Max	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	-150.0E-12	-350.0E-12	-500.0E-12	-450.0E-12	-250.0E-12
Average	0.0E+00	-50.0E-12	-100.0E-12	-50.0E-12	-150.0E-12	-350.0E-12	-500.0E-12	-450.0E-12	-250.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

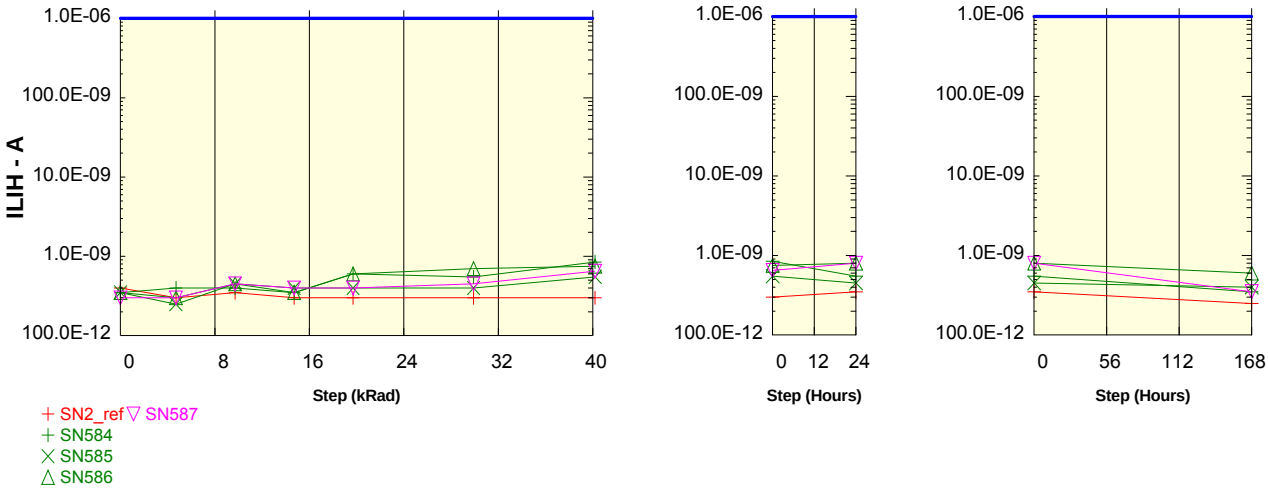
Test conditions : TID
Parameter : Input Leakage Current Low : ILILBA0
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Min : -1.0E-06
Spec limits are represented in bold lines on the graphic.



ILILBA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
ON samples									
SN584	0.0E+00	-50.0E-12	-100.0E-12	0.0E+00	-100.0E-12	-100.0E-12	-250.0E-12	-200.0E-12	-50.0E-12
SN585	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	-150.0E-12	-200.0E-12	-400.0E-12	-400.0E-12	-100.0E-12
SN586	-150.0E-12	-50.0E-12	0.0E+00	-100.0E-12	-200.0E-12	-350.0E-12	-550.0E-12	-850.0E-12	-200.0E-12
Statistics									
Min	-150.0E-12	-50.0E-12	-100.0E-12	-100.0E-12	-200.0E-12	-350.0E-12	-550.0E-12	-850.0E-12	-200.0E-12
Max	0.0E+00	0.0E+00	0.0E+00	0.0E+00	-100.0E-12	-100.0E-12	-250.0E-12	-200.0E-12	-50.0E-12
Average	-66.7E-12	-33.3E-12	-33.3E-12	-33.3E-12	-150.0E-12	-216.7E-12	-400.0E-12	-483.3E-12	-116.7E-12
Sigma	62.4E-12	23.6E-12	47.1E-12	47.1E-12	40.8E-12	102.7E-12	122.5E-12	271.8E-12	62.4E-12

ILILBA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-150.0E-12	-50.0E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
OFF samples									
SN587	0.0E+00	50.0E-12	-150.0E-12	-50.0E-12	0.0E+00	-250.0E-12	-450.0E-12	-450.0E-12	0.0E+00
Statistics									
Min	0.0E+00	50.0E-12	-150.0E-12	-50.0E-12	0.0E+00	-250.0E-12	-450.0E-12	-450.0E-12	0.0E+00
Max	0.0E+00	50.0E-12	-150.0E-12	-50.0E-12	0.0E+00	-250.0E-12	-450.0E-12	-450.0E-12	0.0E+00
Average	0.0E+00	50.0E-12	-150.0E-12	-50.0E-12	0.0E+00	-250.0E-12	-450.0E-12	-450.0E-12	0.0E+00
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

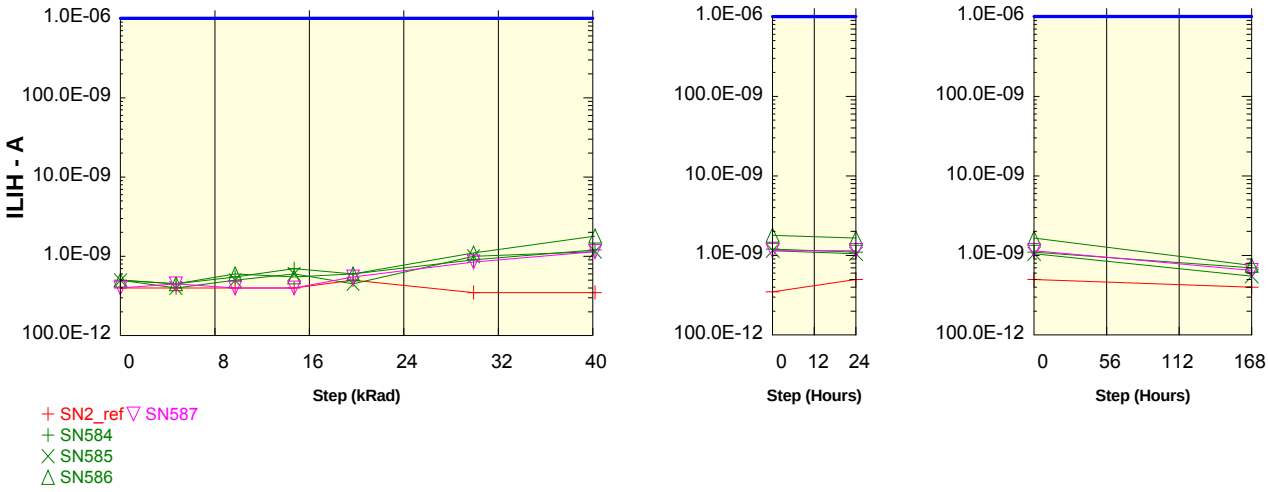
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA12
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA12	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	300.0E-12	350.0E-12	300.0E-12	300.0E-12	300.0E-12	300.0E-12	350.0E-12	250.0E-12
ON samples									
SN584	350.0E-12	400.0E-12	400.0E-12	350.0E-12	600.0E-12	550.0E-12	850.0E-12	550.0E-12	350.0E-12
SN585	350.0E-12	250.0E-12	450.0E-12	400.0E-12	400.0E-12	400.0E-12	550.0E-12	450.0E-12	400.0E-12
SN586	350.0E-12	300.0E-12	450.0E-12	350.0E-12	600.0E-12	700.0E-12	750.0E-12	800.0E-12	600.0E-12
Statistics									
Min	350.0E-12	250.0E-12	400.0E-12	350.0E-12	400.0E-12	400.0E-12	550.0E-12	450.0E-12	350.0E-12
Max	350.0E-12	400.0E-12	450.0E-12	400.0E-12	600.0E-12	700.0E-12	850.0E-12	800.0E-12	600.0E-12
Average	350.0E-12	316.7E-12	433.3E-12	366.7E-12	533.3E-12	550.0E-12	716.7E-12	600.0E-12	450.0E-12
Sigma	2.8E-18	62.4E-12	23.6E-12	23.6E-12	94.3E-12	122.5E-12	124.7E-12	147.2E-12	108.0E-12

ILIHA12	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	300.0E-12	350.0E-12	300.0E-12	300.0E-12	300.0E-12	300.0E-12	350.0E-12	250.0E-12
OFF samples									
SN587	300.0E-12	300.0E-12	450.0E-12	400.0E-12	400.0E-12	450.0E-12	650.0E-12	800.0E-12	350.0E-12
Statistics									
Min	300.0E-12	300.0E-12	450.0E-12	400.0E-12	400.0E-12	450.0E-12	650.0E-12	800.0E-12	350.0E-12
Max	300.0E-12	300.0E-12	450.0E-12	400.0E-12	400.0E-12	450.0E-12	650.0E-12	800.0E-12	350.0E-12
Average	300.0E-12	300.0E-12	450.0E-12	400.0E-12	400.0E-12	450.0E-12	650.0E-12	800.0E-12	350.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

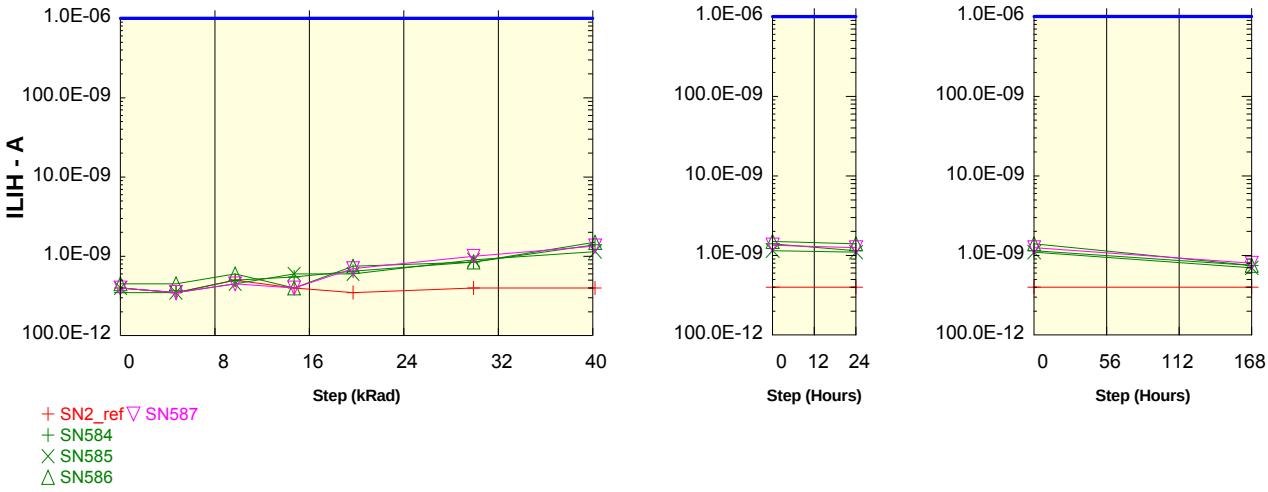
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA11
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA11	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	400.0E-12	400.0E-12	400.0E-12	500.0E-12	350.0E-12	350.0E-12	500.0E-12	400.0E-12
ON samples									
SN584	500.0E-12	450.0E-12	550.0E-12	700.0E-12	600.0E-12	900.0E-12	1.2E-09	1.1E-09	700.0E-12
SN585	500.0E-12	400.0E-12	500.0E-12	600.0E-12	450.0E-12	1.0E-09	1.2E-09	1.1E-09	550.0E-12
SN586	500.0E-12	450.0E-12	600.0E-12	550.0E-12	600.0E-12	1.1E-09	1.8E-09	1.7E-09	750.0E-12
Statistics									
Min	500.0E-12	400.0E-12	500.0E-12	550.0E-12	450.0E-12	900.0E-12	1.2E-09	1.1E-09	550.0E-12
Max	500.0E-12	450.0E-12	600.0E-12	700.0E-12	600.0E-12	1.1E-09	1.8E-09	1.7E-09	750.0E-12
Average	500.0E-12	433.3E-12	550.0E-12	616.7E-12	550.0E-12	1.0E-09	1.4E-09	1.3E-09	666.7E-12
Sigma	0.0E+00	23.6E-12	40.8E-12	62.4E-12	70.7E-12	81.6E-12	295.3E-12	271.8E-12	85.0E-12

ILIHA11	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	400.0E-12	400.0E-12	400.0E-12	500.0E-12	350.0E-12	350.0E-12	500.0E-12	400.0E-12
OFF samples									
SN587	400.0E-12	450.0E-12	400.0E-12	400.0E-12	550.0E-12	850.0E-12	1.2E-09	1.2E-09	650.0E-12
Statistics									
Min	400.0E-12	450.0E-12	400.0E-12	400.0E-12	550.0E-12	850.0E-12	1.2E-09	1.2E-09	650.0E-12
Max	400.0E-12	450.0E-12	400.0E-12	400.0E-12	550.0E-12	850.0E-12	1.2E-09	1.2E-09	650.0E-12
Average	400.0E-12	450.0E-12	400.0E-12	400.0E-12	550.0E-12	850.0E-12	1.2E-09	1.2E-09	650.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

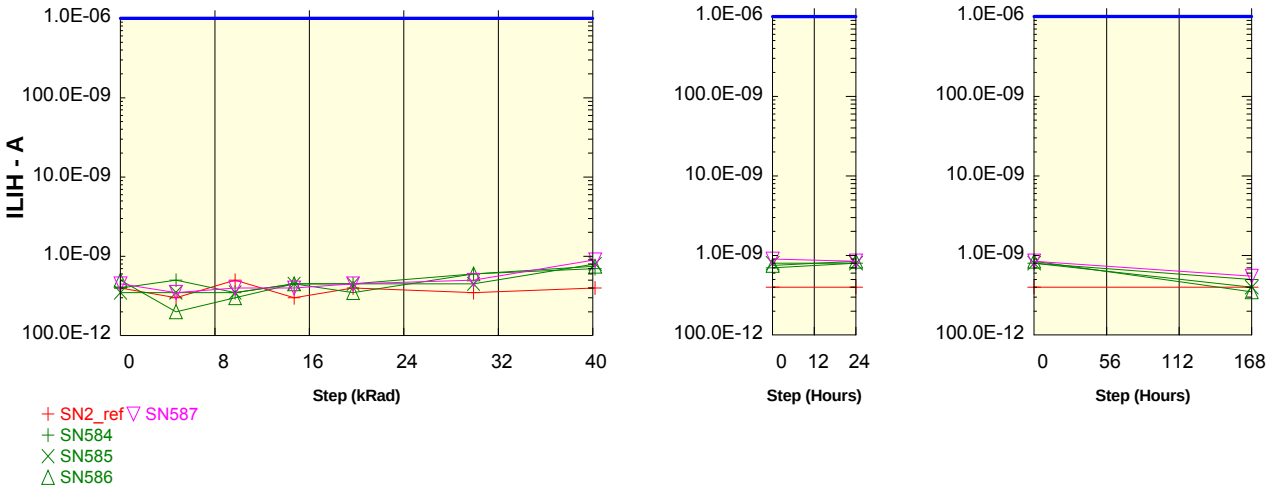
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA10
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA10	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	350.0E-12	500.0E-12	400.0E-12	350.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12
ON samples									
SN584	350.0E-12	350.0E-12	500.0E-12	550.0E-12	650.0E-12	850.0E-12	1.4E-09	1.2E-09	750.0E-12
SN585	400.0E-12	350.0E-12	450.0E-12	600.0E-12	600.0E-12	900.0E-12	1.2E-09	1.1E-09	700.0E-12
SN586	450.0E-12	450.0E-12	600.0E-12	400.0E-12	750.0E-12	850.0E-12	1.5E-09	1.4E-09	750.0E-12
Statistics									
Min	350.0E-12	350.0E-12	450.0E-12	400.0E-12	600.0E-12	850.0E-12	1.2E-09	1.1E-09	700.0E-12
Max	450.0E-12	450.0E-12	600.0E-12	600.0E-12	750.0E-12	900.0E-12	1.5E-09	1.4E-09	750.0E-12
Average	400.0E-12	383.3E-12	516.7E-12	516.7E-12	666.7E-12	866.7E-12	1.4E-09	1.2E-09	733.3E-12
Sigma	40.8E-12	47.1E-12	62.4E-12	85.0E-12	62.4E-12	23.6E-12	147.2E-12	131.2E-12	23.6E-12

ILIHA10	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	350.0E-12	500.0E-12	400.0E-12	350.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12
OFF samples									
SN587	400.0E-12	350.0E-12	450.0E-12	400.0E-12	700.0E-12	1.0E-09	1.4E-09	1.3E-09	800.0E-12
Statistics									
Min	400.0E-12	350.0E-12	450.0E-12	400.0E-12	700.0E-12	1.0E-09	1.4E-09	1.3E-09	800.0E-12
Max	400.0E-12	350.0E-12	450.0E-12	400.0E-12	700.0E-12	1.0E-09	1.4E-09	1.3E-09	800.0E-12
Average	400.0E-12	350.0E-12	450.0E-12	400.0E-12	700.0E-12	1.0E-09	1.4E-09	1.3E-09	800.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

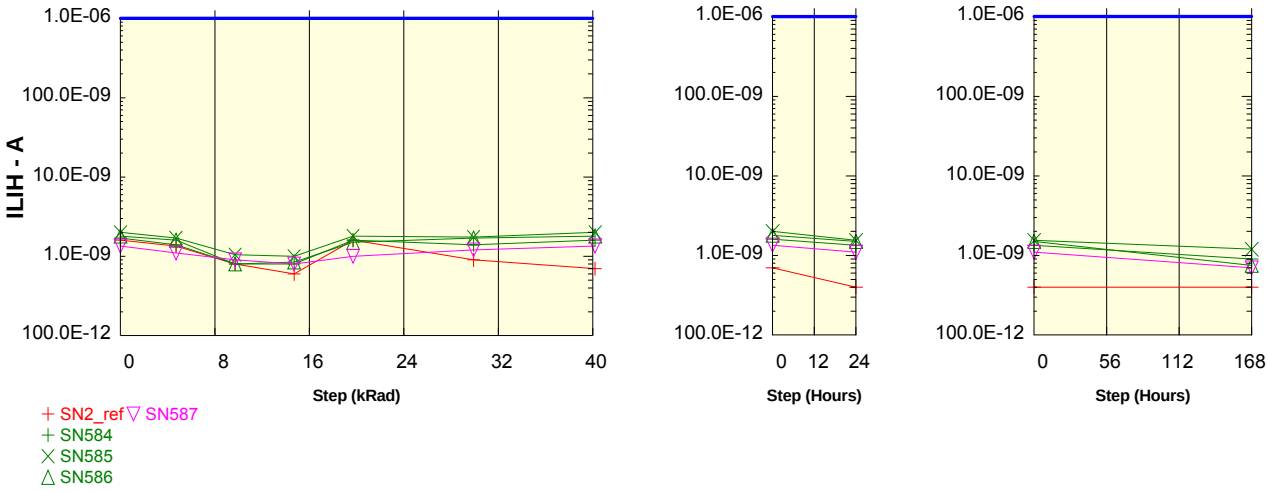
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA9
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA9	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	300.0E-12	500.0E-12	300.0E-12	400.0E-12	350.0E-12	400.0E-12	400.0E-12	400.0E-12
ON samples									
SN584	400.0E-12	500.0E-12	350.0E-12	450.0E-12	450.0E-12	600.0E-12	700.0E-12	800.0E-12	500.0E-12
SN585	350.0E-12	350.0E-12	350.0E-12	450.0E-12	450.0E-12	450.0E-12	800.0E-12	800.0E-12	400.0E-12
SN586	500.0E-12	200.0E-12	300.0E-12	450.0E-12	350.0E-12	600.0E-12	750.0E-12	850.0E-12	350.0E-12
Statistics									
Min	350.0E-12	200.0E-12	300.0E-12	450.0E-12	350.0E-12	450.0E-12	700.0E-12	800.0E-12	350.0E-12
Max	500.0E-12	500.0E-12	350.0E-12	450.0E-12	450.0E-12	600.0E-12	800.0E-12	850.0E-12	500.0E-12
Average	416.7E-12	350.0E-12	333.3E-12	450.0E-12	416.7E-12	550.0E-12	750.0E-12	816.7E-12	416.7E-12
Sigma	62.4E-12	122.5E-12	23.6E-12	6.3E-18	47.1E-12	70.7E-12	40.8E-12	23.6E-12	62.4E-12

ILIHA9	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	300.0E-12	500.0E-12	300.0E-12	400.0E-12	350.0E-12	400.0E-12	400.0E-12	400.0E-12
OFF samples									
SN587	450.0E-12	350.0E-12	400.0E-12	400.0E-12	450.0E-12	500.0E-12	900.0E-12	850.0E-12	550.0E-12
Statistics									
Min	450.0E-12	350.0E-12	400.0E-12	400.0E-12	450.0E-12	500.0E-12	900.0E-12	850.0E-12	550.0E-12
Max	450.0E-12	350.0E-12	400.0E-12	400.0E-12	450.0E-12	500.0E-12	900.0E-12	850.0E-12	550.0E-12
Average	450.0E-12	350.0E-12	400.0E-12	400.0E-12	450.0E-12	500.0E-12	900.0E-12	850.0E-12	550.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

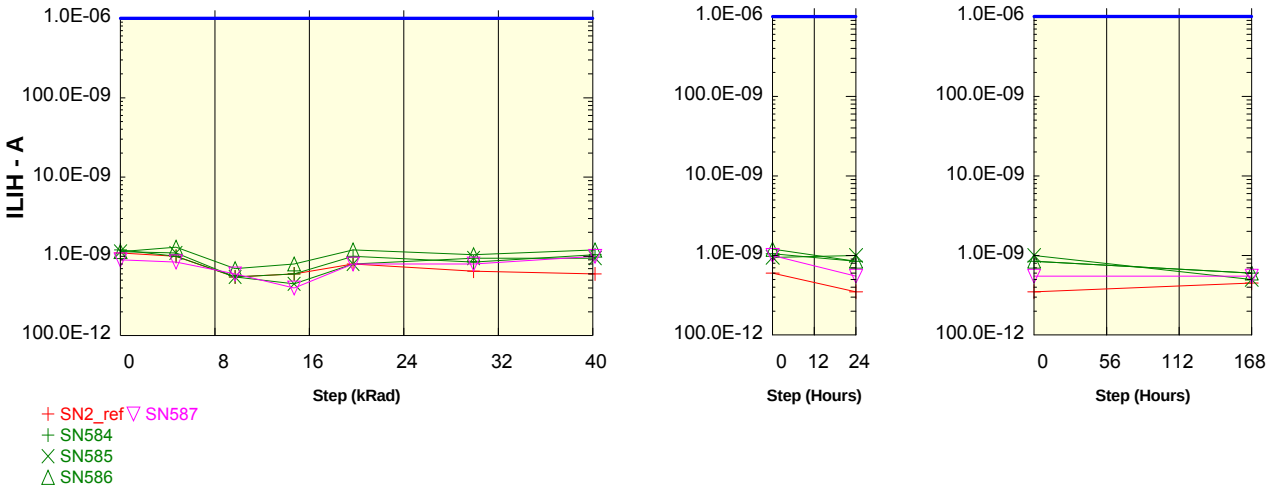
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA8
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA8	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.6E-09	1.4E-09	800.0E-12	600.0E-12	1.6E-09	900.0E-12	700.0E-12	400.0E-12	400.0E-12
ON samples									
SN584	1.7E-09	1.4E-09	800.0E-12	800.0E-12	1.6E-09	1.4E-09	1.6E-09	1.4E-09	900.0E-12
SN585	2.0E-09	1.7E-09	1.1E-09	1.0E-09	1.8E-09	1.8E-09	2.0E-09	1.6E-09	1.2E-09
SN586	1.8E-09	1.6E-09	800.0E-12	850.0E-12	1.5E-09	1.7E-09	1.8E-09	1.5E-09	750.0E-12
Statistics									
Min	1.7E-09	1.4E-09	800.0E-12	800.0E-12	1.5E-09	1.4E-09	1.6E-09	1.4E-09	750.0E-12
Max	2.0E-09	1.7E-09	1.1E-09	1.0E-09	1.8E-09	1.8E-09	2.0E-09	1.6E-09	1.2E-09
Average	1.8E-09	1.6E-09	883.3E-12	883.3E-12	1.6E-09	1.6E-09	1.8E-09	1.5E-09	950.0E-12
Sigma	124.7E-12	124.7E-12	117.9E-12	85.0E-12	124.7E-12	154.6E-12	163.3E-12	85.0E-12	187.1E-12

ILIHA8	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.6E-09	1.4E-09	800.0E-12	600.0E-12	1.6E-09	900.0E-12	700.0E-12	400.0E-12	400.0E-12
OFF samples									
SN587	1.4E-09	1.1E-09	900.0E-12	800.0E-12	1.0E-09	1.2E-09	1.4E-09	1.1E-09	700.0E-12
Statistics									
Min	1.4E-09	1.1E-09	900.0E-12	800.0E-12	1.0E-09	1.2E-09	1.4E-09	1.1E-09	700.0E-12
Max	1.4E-09	1.1E-09	900.0E-12	800.0E-12	1.0E-09	1.2E-09	1.4E-09	1.1E-09	700.0E-12
Average	1.4E-09	1.1E-09	900.0E-12	800.0E-12	1.0E-09	1.2E-09	1.4E-09	1.1E-09	700.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

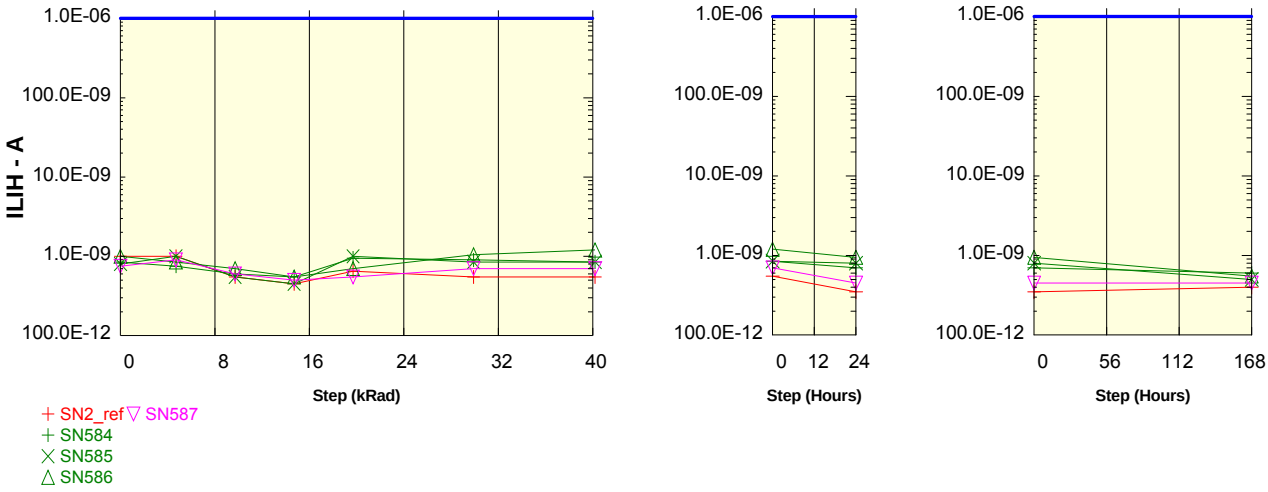
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA7
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.1E-09	1.0E-09	550.0E-12	600.0E-12	800.0E-12	650.0E-12	600.0E-12	350.0E-12	450.0E-12
ON samples									
SN584	1.2E-09	1.0E-09	550.0E-12	600.0E-12	1.0E-09	850.0E-12	1.1E-09	850.0E-12	600.0E-12
SN585	1.2E-09	1.1E-09	550.0E-12	450.0E-12	800.0E-12	950.0E-12	950.0E-12	1.0E-09	500.0E-12
SN586	1.2E-09	1.3E-09	700.0E-12	800.0E-12	1.2E-09	1.1E-09	1.2E-09	850.0E-12	600.0E-12
Statistics									
Min	1.2E-09	1.0E-09	550.0E-12	450.0E-12	800.0E-12	850.0E-12	950.0E-12	850.0E-12	500.0E-12
Max	1.2E-09	1.3E-09	700.0E-12	800.0E-12	1.2E-09	1.1E-09	1.2E-09	1.0E-09	600.0E-12
Average	1.2E-09	1.1E-09	600.0E-12	616.7E-12	1.0E-09	950.0E-12	1.1E-09	900.0E-12	566.7E-12
Sigma	23.6E-12	124.7E-12	70.7E-12	143.4E-12	163.3E-12	81.6E-12	102.7E-12	70.7E-12	47.1E-12

ILIHA7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.1E-09	1.0E-09	550.0E-12	600.0E-12	800.0E-12	650.0E-12	600.0E-12	350.0E-12	450.0E-12
OFF samples									
SN587	900.0E-12	850.0E-12	600.0E-12	400.0E-12	800.0E-12	800.0E-12	1.0E-09	550.0E-12	550.0E-12
Statistics									
Min	900.0E-12	850.0E-12	600.0E-12	400.0E-12	800.0E-12	800.0E-12	1.0E-09	550.0E-12	550.0E-12
Max	900.0E-12	850.0E-12	600.0E-12	400.0E-12	800.0E-12	800.0E-12	1.0E-09	550.0E-12	550.0E-12
Average	900.0E-12	850.0E-12	600.0E-12	400.0E-12	800.0E-12	800.0E-12	1.0E-09	550.0E-12	550.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

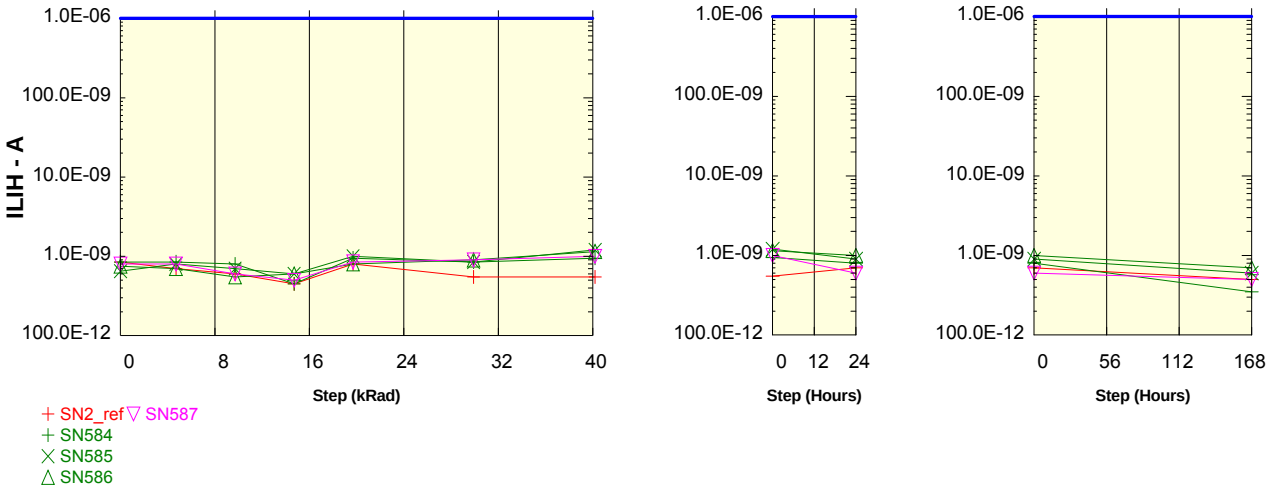
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA6
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.0E-09	1.0E-09	550.0E-12	450.0E-12	650.0E-12	550.0E-12	550.0E-12	350.0E-12	400.0E-12
ON samples									
SN584	850.0E-12	750.0E-12	600.0E-12	550.0E-12	950.0E-12	900.0E-12	850.0E-12	700.0E-12	600.0E-12
SN585	800.0E-12	1.0E-09	550.0E-12	450.0E-12	1.0E-09	850.0E-12	850.0E-12	800.0E-12	500.0E-12
SN586	1.0E-09	850.0E-12	700.0E-12	550.0E-12	700.0E-12	1.1E-09	1.2E-09	950.0E-12	550.0E-12
Statistics									
Min	800.0E-12	750.0E-12	550.0E-12	450.0E-12	700.0E-12	850.0E-12	850.0E-12	700.0E-12	500.0E-12
Max	1.0E-09	1.0E-09	700.0E-12	550.0E-12	1.0E-09	1.1E-09	1.2E-09	950.0E-12	600.0E-12
Average	883.3E-12	866.7E-12	616.7E-12	516.7E-12	883.3E-12	933.3E-12	966.7E-12	816.7E-12	550.0E-12
Sigma	85.0E-12	102.7E-12	62.4E-12	47.1E-12	131.2E-12	85.0E-12	165.0E-12	102.7E-12	40.8E-12

ILIHA6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.0E-09	1.0E-09	550.0E-12	450.0E-12	650.0E-12	550.0E-12	550.0E-12	350.0E-12	400.0E-12
OFF samples									
SN587	750.0E-12	900.0E-12	600.0E-12	500.0E-12	550.0E-12	700.0E-12	700.0E-12	450.0E-12	450.0E-12
Statistics									
Min	750.0E-12	900.0E-12	600.0E-12	500.0E-12	550.0E-12	700.0E-12	700.0E-12	450.0E-12	450.0E-12
Max	750.0E-12	900.0E-12	600.0E-12	500.0E-12	550.0E-12	700.0E-12	700.0E-12	450.0E-12	450.0E-12
Average	750.0E-12	900.0E-12	600.0E-12	500.0E-12	550.0E-12	700.0E-12	700.0E-12	450.0E-12	450.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

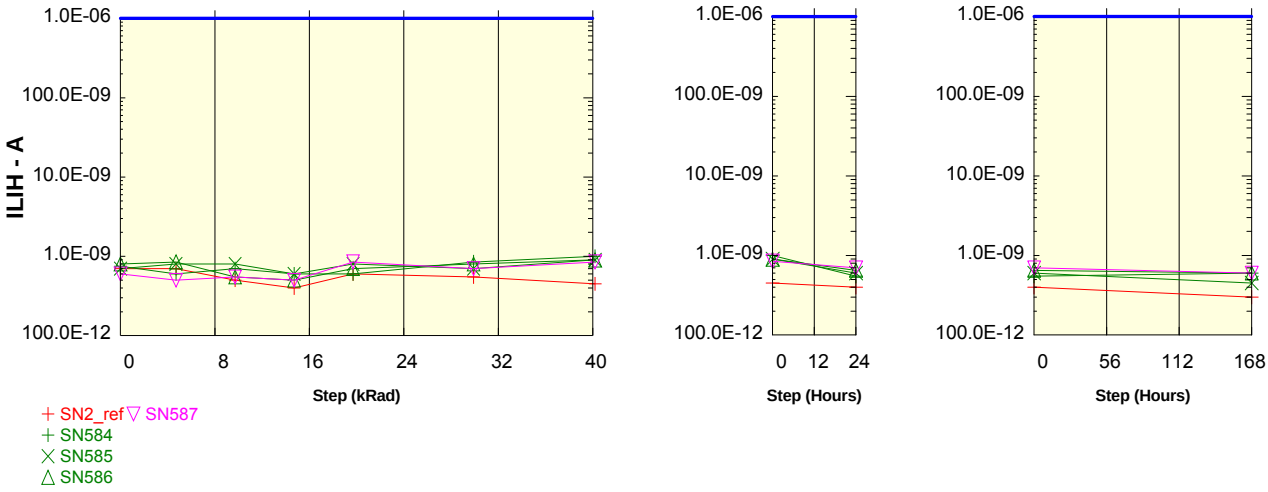
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA5
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	850.0E-12	700.0E-12	600.0E-12	450.0E-12	800.0E-12	550.0E-12	550.0E-12	700.0E-12	500.0E-12
ON samples									
SN584	850.0E-12	850.0E-12	800.0E-12	450.0E-12	950.0E-12	850.0E-12	950.0E-12	800.0E-12	350.0E-12
SN585	650.0E-12	800.0E-12	700.0E-12	600.0E-12	1.0E-09	850.0E-12	1.2E-09	900.0E-12	600.0E-12
SN586	750.0E-12	700.0E-12	550.0E-12	600.0E-12	800.0E-12	900.0E-12	1.2E-09	1.0E-09	700.0E-12
Statistics									
Min	650.0E-12	700.0E-12	550.0E-12	450.0E-12	800.0E-12	850.0E-12	950.0E-12	800.0E-12	350.0E-12
Max	850.0E-12	850.0E-12	800.0E-12	600.0E-12	1.0E-09	900.0E-12	1.2E-09	1.0E-09	700.0E-12
Average	750.0E-12	783.3E-12	683.3E-12	550.0E-12	916.7E-12	866.7E-12	1.1E-09	900.0E-12	550.0E-12
Sigma	81.6E-12	62.4E-12	102.7E-12	70.7E-12	85.0E-12	23.6E-12	108.0E-12	81.6E-12	147.2E-12

ILIHA5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	850.0E-12	700.0E-12	600.0E-12	450.0E-12	800.0E-12	550.0E-12	550.0E-12	700.0E-12	500.0E-12
OFF samples									
SN587	800.0E-12	800.0E-12	600.0E-12	500.0E-12	850.0E-12	900.0E-12	1.0E-09	600.0E-12	500.0E-12
Statistics									
Min	800.0E-12	800.0E-12	600.0E-12	500.0E-12	850.0E-12	900.0E-12	1.0E-09	600.0E-12	500.0E-12
Max	800.0E-12	800.0E-12	600.0E-12	500.0E-12	850.0E-12	900.0E-12	1.0E-09	600.0E-12	500.0E-12
Average	800.0E-12	800.0E-12	600.0E-12	500.0E-12	850.0E-12	900.0E-12	1.0E-09	600.0E-12	500.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

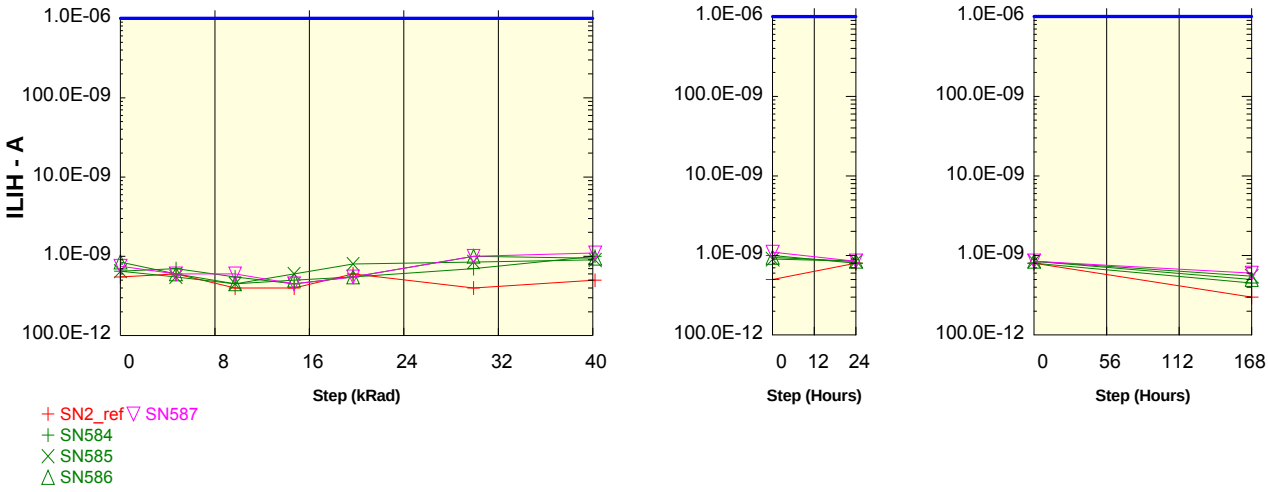
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA4
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	700.0E-12	700.0E-12	500.0E-12	400.0E-12	600.0E-12	550.0E-12	450.0E-12	400.0E-12	300.0E-12
ON samples									
SN584	750.0E-12	600.0E-12	700.0E-12	600.0E-12	600.0E-12	850.0E-12	1.0E-09	550.0E-12	600.0E-12
SN585	700.0E-12	800.0E-12	800.0E-12	600.0E-12	800.0E-12	700.0E-12	900.0E-12	600.0E-12	450.0E-12
SN586	800.0E-12	850.0E-12	550.0E-12	500.0E-12	700.0E-12	800.0E-12	900.0E-12	650.0E-12	600.0E-12
Statistics									
Min	700.0E-12	600.0E-12	550.0E-12	500.0E-12	600.0E-12	700.0E-12	900.0E-12	550.0E-12	450.0E-12
Max	800.0E-12	850.0E-12	800.0E-12	600.0E-12	800.0E-12	850.0E-12	1.0E-09	650.0E-12	600.0E-12
Average	750.0E-12	750.0E-12	683.3E-12	566.7E-12	700.0E-12	783.3E-12	933.3E-12	600.0E-12	550.0E-12
Sigma	40.8E-12	108.0E-12	102.7E-12	47.1E-12	81.6E-12	62.4E-12	47.1E-12	40.8E-12	70.7E-12

ILIHA4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	700.0E-12	700.0E-12	500.0E-12	400.0E-12	600.0E-12	550.0E-12	450.0E-12	400.0E-12	300.0E-12
OFF samples									
SN587	600.0E-12	500.0E-12	550.0E-12	500.0E-12	850.0E-12	700.0E-12	850.0E-12	700.0E-12	600.0E-12
Statistics									
Min	600.0E-12	500.0E-12	550.0E-12	500.0E-12	850.0E-12	700.0E-12	850.0E-12	700.0E-12	600.0E-12
Max	600.0E-12	500.0E-12	550.0E-12	500.0E-12	850.0E-12	700.0E-12	850.0E-12	700.0E-12	600.0E-12
Average	600.0E-12	500.0E-12	550.0E-12	500.0E-12	850.0E-12	700.0E-12	850.0E-12	700.0E-12	600.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

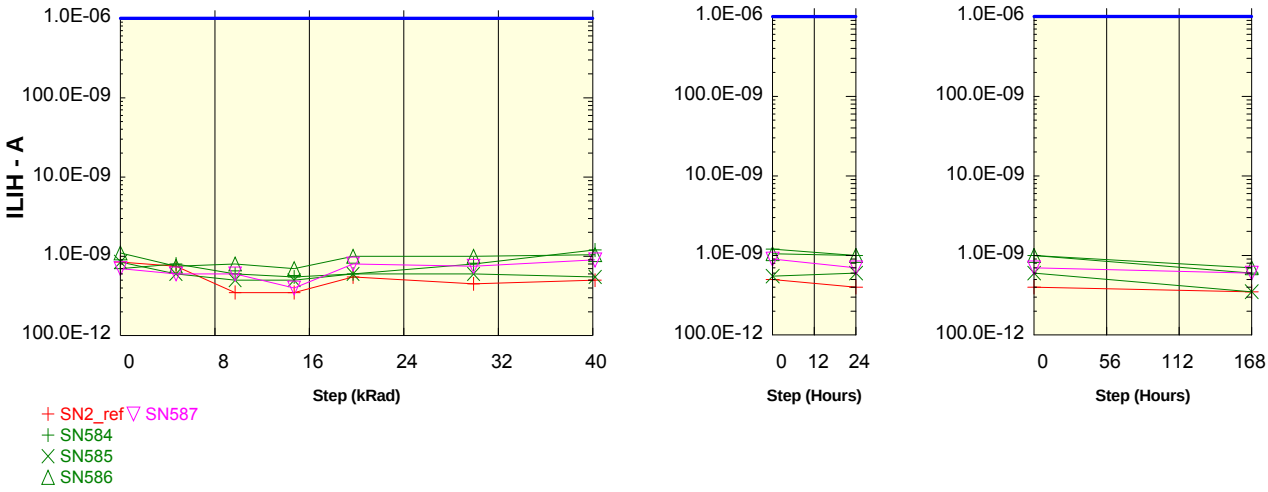
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA3
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	550.0E-12	600.0E-12	400.0E-12	400.0E-12	600.0E-12	400.0E-12	500.0E-12	800.0E-12	300.0E-12
ON samples									
SN584	650.0E-12	700.0E-12	550.0E-12	450.0E-12	550.0E-12	700.0E-12	1.0E-09	800.0E-12	450.0E-12
SN585	650.0E-12	550.0E-12	450.0E-12	600.0E-12	800.0E-12	850.0E-12	900.0E-12	850.0E-12	550.0E-12
SN586	850.0E-12	600.0E-12	450.0E-12	500.0E-12	550.0E-12	1.0E-09	950.0E-12	850.0E-12	500.0E-12
Statistics									
Min	650.0E-12	550.0E-12	450.0E-12	450.0E-12	550.0E-12	700.0E-12	900.0E-12	800.0E-12	450.0E-12
Max	850.0E-12	700.0E-12	550.0E-12	600.0E-12	800.0E-12	1.0E-09	1.0E-09	850.0E-12	550.0E-12
Average	716.7E-12	616.7E-12	483.3E-12	516.7E-12	633.3E-12	850.0E-12	950.0E-12	833.3E-12	500.0E-12
Sigma	94.3E-12	62.4E-12	47.1E-12	62.4E-12	117.9E-12	122.5E-12	40.8E-12	23.6E-12	40.8E-12

ILIHA3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	550.0E-12	600.0E-12	400.0E-12	400.0E-12	600.0E-12	400.0E-12	500.0E-12	800.0E-12	300.0E-12
OFF samples									
SN587	750.0E-12	600.0E-12	600.0E-12	450.0E-12	550.0E-12	1.0E-09	1.1E-09	850.0E-12	600.0E-12
Statistics									
Min	750.0E-12	600.0E-12	600.0E-12	450.0E-12	550.0E-12	1.0E-09	1.1E-09	850.0E-12	600.0E-12
Max	750.0E-12	600.0E-12	600.0E-12	450.0E-12	550.0E-12	1.0E-09	1.1E-09	850.0E-12	600.0E-12
Average	750.0E-12	600.0E-12	600.0E-12	450.0E-12	550.0E-12	1.0E-09	1.1E-09	850.0E-12	600.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

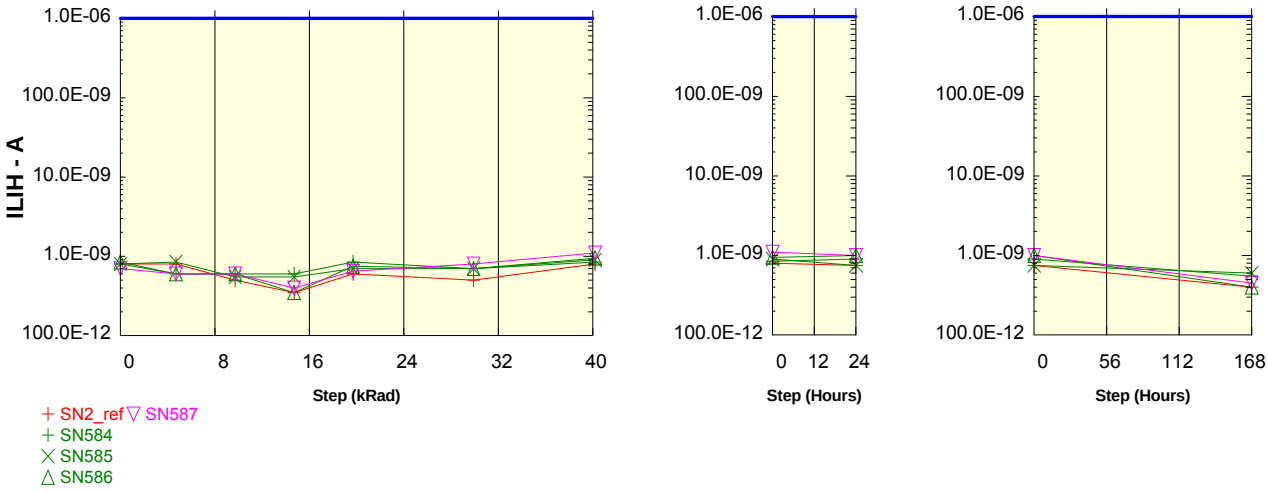
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA2
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	850.0E-12	750.0E-12	350.0E-12	350.0E-12	550.0E-12	450.0E-12	500.0E-12	400.0E-12	350.0E-12
ON samples									
SN584	700.0E-12	800.0E-12	600.0E-12	550.0E-12	600.0E-12	800.0E-12	1.2E-09	1.0E-09	600.0E-12
SN585	850.0E-12	600.0E-12	500.0E-12	500.0E-12	600.0E-12	600.0E-12	550.0E-12	600.0E-12	350.0E-12
SN586	1.1E-09	750.0E-12	800.0E-12	700.0E-12	1.0E-09	1.0E-09	1.1E-09	1.0E-09	700.0E-12
Statistics									
Min	700.0E-12	600.0E-12	500.0E-12	500.0E-12	600.0E-12	600.0E-12	550.0E-12	600.0E-12	350.0E-12
Max	1.1E-09	800.0E-12	800.0E-12	700.0E-12	1.0E-09	1.0E-09	1.2E-09	1.0E-09	700.0E-12
Average	883.3E-12	716.7E-12	633.3E-12	583.3E-12	733.3E-12	800.0E-12	933.3E-12	866.7E-12	550.0E-12
Sigma	165.0E-12	85.0E-12	124.7E-12	85.0E-12	188.6E-12	163.3E-12	277.9E-12	188.6E-12	147.2E-12

ILIHA2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	850.0E-12	750.0E-12	350.0E-12	350.0E-12	550.0E-12	450.0E-12	500.0E-12	400.0E-12	350.0E-12
OFF samples									
SN587	700.0E-12	600.0E-12	600.0E-12	400.0E-12	800.0E-12	750.0E-12	900.0E-12	700.0E-12	600.0E-12
Statistics									
Min	700.0E-12	600.0E-12	600.0E-12	400.0E-12	800.0E-12	750.0E-12	900.0E-12	700.0E-12	600.0E-12
Max	700.0E-12	600.0E-12	600.0E-12	400.0E-12	800.0E-12	750.0E-12	900.0E-12	700.0E-12	600.0E-12
Average	700.0E-12	600.0E-12	600.0E-12	400.0E-12	800.0E-12	750.0E-12	900.0E-12	700.0E-12	600.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

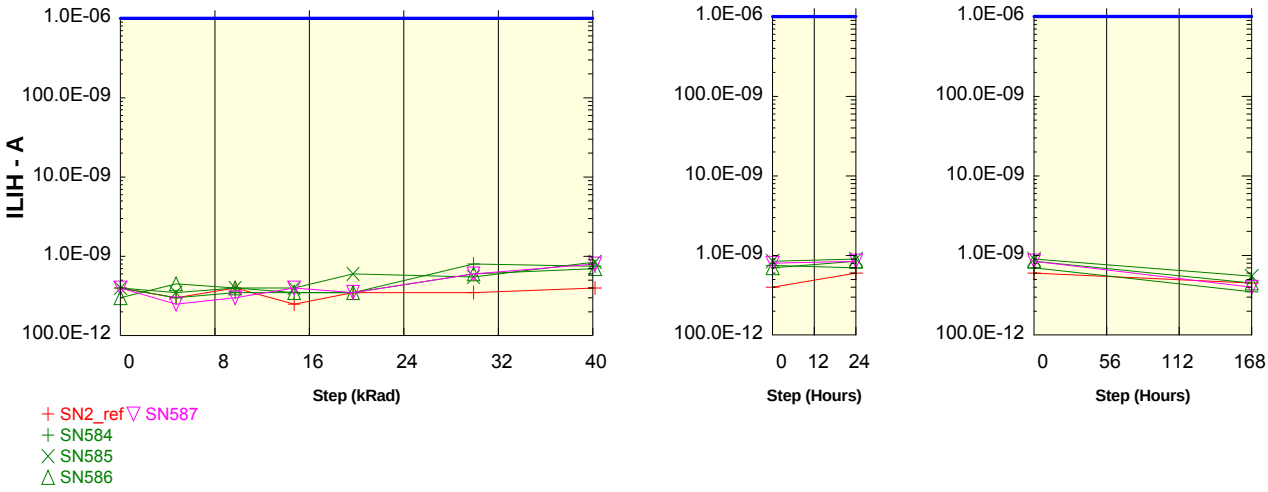
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA1
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	800.0E-12	800.0E-12	500.0E-12	350.0E-12	600.0E-12	500.0E-12	800.0E-12	750.0E-12	400.0E-12
ON samples									
SN584	800.0E-12	600.0E-12	600.0E-12	600.0E-12	850.0E-12	700.0E-12	850.0E-12	900.0E-12	550.0E-12
SN585	800.0E-12	850.0E-12	550.0E-12	550.0E-12	700.0E-12	700.0E-12	900.0E-12	750.0E-12	600.0E-12
SN586	850.0E-12	600.0E-12	600.0E-12	350.0E-12	750.0E-12	700.0E-12	950.0E-12	1.0E-09	400.0E-12
Statistics									
Min	800.0E-12	600.0E-12	550.0E-12	350.0E-12	700.0E-12	700.0E-12	850.0E-12	750.0E-12	400.0E-12
Max	850.0E-12	850.0E-12	600.0E-12	600.0E-12	850.0E-12	700.0E-12	950.0E-12	1.0E-09	600.0E-12
Average	816.7E-12	683.3E-12	583.3E-12	500.0E-12	766.7E-12	700.0E-12	900.0E-12	883.3E-12	516.7E-12
Sigma	23.6E-12	117.9E-12	23.6E-12	108.0E-12	62.4E-12	5.7E-18	40.8E-12	102.7E-12	85.0E-12

ILIHA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	800.0E-12	800.0E-12	500.0E-12	350.0E-12	600.0E-12	500.0E-12	800.0E-12	750.0E-12	400.0E-12
OFF samples									
SN587	700.0E-12	600.0E-12	600.0E-12	400.0E-12	650.0E-12	800.0E-12	1.1E-09	1.0E-09	450.0E-12
Statistics									
Min	700.0E-12	600.0E-12	600.0E-12	400.0E-12	650.0E-12	800.0E-12	1.1E-09	1.0E-09	450.0E-12
Max	700.0E-12	600.0E-12	600.0E-12	400.0E-12	650.0E-12	800.0E-12	1.1E-09	1.0E-09	450.0E-12
Average	700.0E-12	600.0E-12	600.0E-12	400.0E-12	650.0E-12	800.0E-12	1.1E-09	1.0E-09	450.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

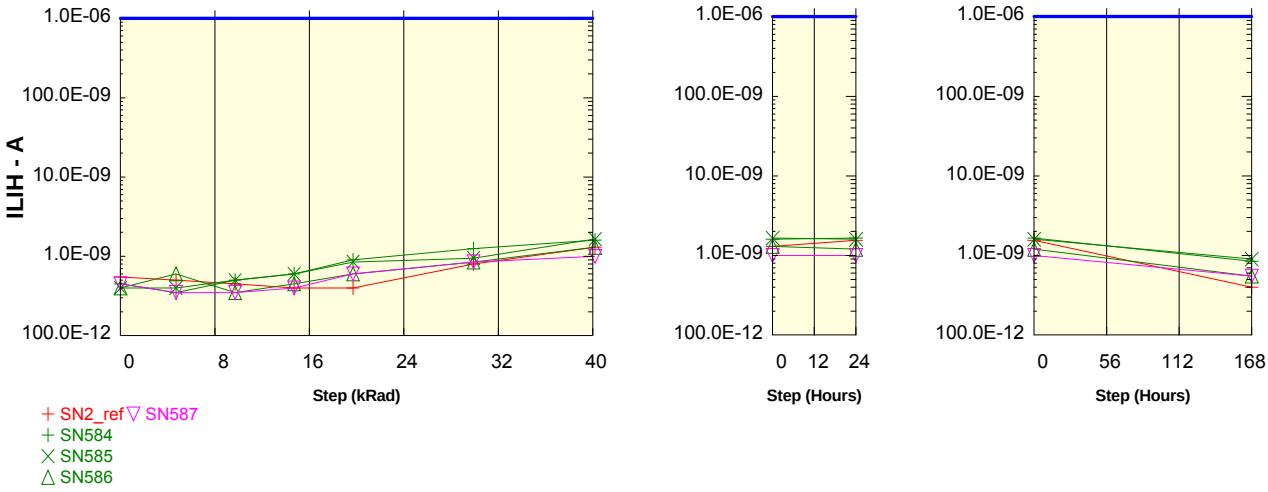
Test conditions : TID
Parameter : Input Leakage Current High : ILIHA0
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	300.0E-12	400.0E-12	250.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	450.0E-12
ON samples									
SN584	400.0E-12	300.0E-12	350.0E-12	350.0E-12	350.0E-12	800.0E-12	750.0E-12	700.0E-12	350.0E-12
SN585	400.0E-12	350.0E-12	400.0E-12	400.0E-12	600.0E-12	550.0E-12	850.0E-12	900.0E-12	550.0E-12
SN586	300.0E-12	450.0E-12	400.0E-12	350.0E-12	350.0E-12	600.0E-12	700.0E-12	850.0E-12	450.0E-12
Statistics									
Min	300.0E-12	300.0E-12	350.0E-12	350.0E-12	350.0E-12	550.0E-12	700.0E-12	700.0E-12	350.0E-12
Max	400.0E-12	450.0E-12	400.0E-12	400.0E-12	600.0E-12	800.0E-12	850.0E-12	900.0E-12	550.0E-12
Average	366.7E-12	366.7E-12	383.3E-12	366.7E-12	433.3E-12	650.0E-12	766.7E-12	816.7E-12	450.0E-12
Sigma	47.1E-12	62.4E-12	23.6E-12	23.6E-12	117.9E-12	108.0E-12	62.4E-12	85.0E-12	81.6E-12

ILIHA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	400.0E-12	300.0E-12	400.0E-12	250.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	450.0E-12
OFF samples									
SN587	400.0E-12	250.0E-12	300.0E-12	400.0E-12	350.0E-12	600.0E-12	800.0E-12	850.0E-12	400.0E-12
Statistics									
Min	400.0E-12	250.0E-12	300.0E-12	400.0E-12	350.0E-12	600.0E-12	800.0E-12	850.0E-12	400.0E-12
Max	400.0E-12	250.0E-12	300.0E-12	400.0E-12	350.0E-12	600.0E-12	800.0E-12	850.0E-12	400.0E-12
Average	400.0E-12	250.0E-12	300.0E-12	400.0E-12	350.0E-12	600.0E-12	800.0E-12	850.0E-12	400.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

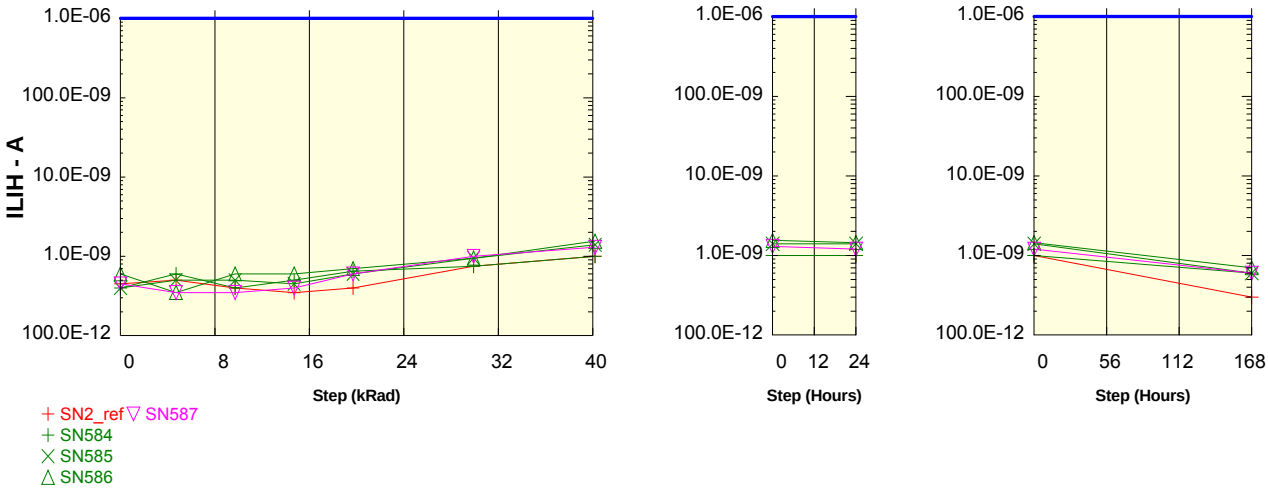
Test conditions : TID
Parameter : Input Leakage Current High : ILIHBA1
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHBA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	550.0E-12	500.0E-12	450.0E-12	400.0E-12	400.0E-12	800.0E-12	1.3E-09	1.6E-09	400.0E-12
ON samples									
SN584	450.0E-12	350.0E-12	500.0E-12	600.0E-12	900.0E-12	1.3E-09	1.6E-09	1.7E-09	850.0E-12
SN585	400.0E-12	400.0E-12	500.0E-12	600.0E-12	850.0E-12	950.0E-12	1.7E-09	1.6E-09	900.0E-12
SN586	400.0E-12	600.0E-12	350.0E-12	450.0E-12	600.0E-12	850.0E-12	1.3E-09	1.2E-09	550.0E-12
Statistics									
Min	400.0E-12	350.0E-12	350.0E-12	450.0E-12	600.0E-12	850.0E-12	1.3E-09	1.2E-09	550.0E-12
Max	450.0E-12	600.0E-12	500.0E-12	600.0E-12	900.0E-12	1.3E-09	1.7E-09	1.7E-09	900.0E-12
Average	416.7E-12	450.0E-12	450.0E-12	550.0E-12	783.3E-12	1.0E-09	1.5E-09	1.5E-09	766.7E-12
Sigma	23.6E-12	108.0E-12	70.7E-12	70.7E-12	131.2E-12	170.0E-12	154.6E-12	201.4E-12	154.6E-12

ILIHBA1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	550.0E-12	500.0E-12	450.0E-12	400.0E-12	400.0E-12	800.0E-12	1.3E-09	1.6E-09	400.0E-12
OFF samples									
SN587	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	850.0E-12	1.0E-09	1.0E-09	550.0E-12
Statistics									
Min	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	850.0E-12	1.0E-09	1.0E-09	550.0E-12
Max	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	850.0E-12	1.0E-09	1.0E-09	550.0E-12
Average	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	850.0E-12	1.0E-09	1.0E-09	550.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

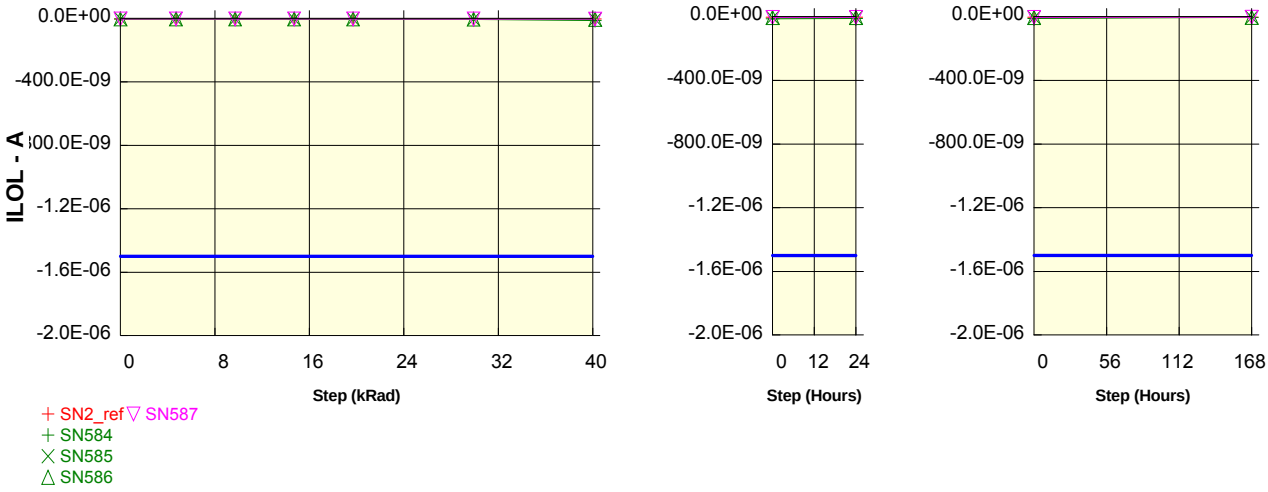
Test conditions : TID
Parameter : Input Leakage Current High : ILIHBA0
Vin=0V VDD=VDDQ=3.6V
Unit : A
Spec Limit Max : 1.0E-06
Spec limits are represented in bold lines on the graphic.



ILIHBA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	450.0E-12	500.0E-12	400.0E-12	350.0E-12	400.0E-12	750.0E-12	1.0E-09	1.0E-09	300.0E-12
ON samples									
SN584	400.0E-12	600.0E-12	400.0E-12	500.0E-12	650.0E-12	750.0E-12	1.0E-09	1.0E-09	600.0E-12
SN585	400.0E-12	500.0E-12	500.0E-12	450.0E-12	600.0E-12	950.0E-12	1.4E-09	1.4E-09	600.0E-12
SN586	600.0E-12	350.0E-12	600.0E-12	600.0E-12	700.0E-12	950.0E-12	1.6E-09	1.5E-09	700.0E-12
Statistics									
Min	400.0E-12	350.0E-12	400.0E-12	450.0E-12	600.0E-12	750.0E-12	1.0E-09	1.0E-09	600.0E-12
Max	600.0E-12	600.0E-12	600.0E-12	600.0E-12	700.0E-12	950.0E-12	1.6E-09	1.5E-09	700.0E-12
Average	466.7E-12	483.3E-12	500.0E-12	516.7E-12	650.0E-12	883.3E-12	1.3E-09	1.3E-09	633.3E-12
Sigma	94.3E-12	102.7E-12	81.6E-12	62.4E-12	40.8E-12	94.3E-12	232.1E-12	201.4E-12	47.1E-12

ILIHBA0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	450.0E-12	500.0E-12	400.0E-12	350.0E-12	400.0E-12	750.0E-12	1.0E-09	1.0E-09	300.0E-12
OFF samples									
SN587	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	1.0E-09	1.3E-09	1.2E-09	600.0E-12
Statistics									
Min	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	1.0E-09	1.3E-09	1.2E-09	600.0E-12
Max	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	1.0E-09	1.3E-09	1.2E-09	600.0E-12
Average	450.0E-12	350.0E-12	350.0E-12	400.0E-12	600.0E-12	1.0E-09	1.3E-09	1.2E-09	600.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

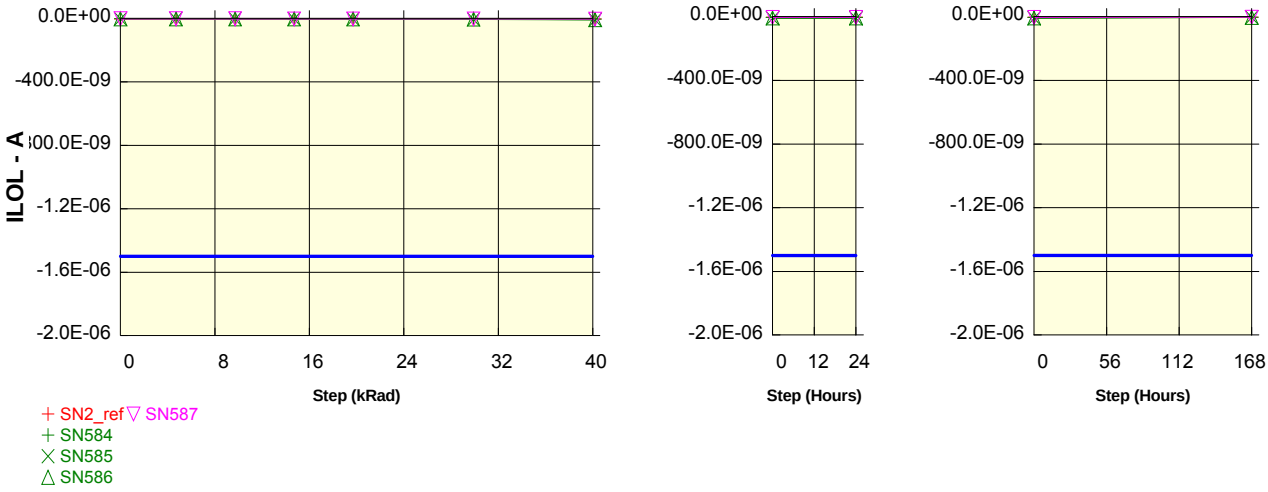
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ7
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.6E-09	-2.6E-09	-2.6E-09	-2.7E-09	-2.7E-09	-2.7E-09	-2.6E-09	-2.7E-09	-2.6E-09
ON samples									
SN584	-2.4E-09	-2.5E-09	-2.8E-09	-3.1E-09	-3.9E-09	-7.0E-09	-12.9E-09	-11.2E-09	-4.2E-09
SN585	-2.4E-09	-2.5E-09	-2.6E-09	-2.9E-09	-3.0E-09	-4.3E-09	-6.4E-09	-6.2E-09	-4.4E-09
SN586	-2.5E-09	-2.5E-09	-2.6E-09	-2.9E-09	-3.2E-09	-4.3E-09	-5.7E-09	-5.6E-09	-3.5E-09
Statistics									
Min	-2.5E-09	-2.5E-09	-2.8E-09	-3.1E-09	-3.9E-09	-7.0E-09	-12.9E-09	-11.2E-09	-4.4E-09
Max	-2.4E-09	-2.5E-09	-2.6E-09	-2.9E-09	-3.0E-09	-4.3E-09	-5.7E-09	-5.6E-09	-3.5E-09
Average	-2.4E-09	-2.5E-09	-2.7E-09	-3.0E-09	-3.4E-09	-5.2E-09	-8.3E-09	-7.7E-09	-4.0E-09
Sigma	70.7E-12	23.6E-12	70.7E-12	108.0E-12	362.9E-12	1.3E-09	3.3E-09	2.5E-09	393.7E-12

ILOLDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.6E-09	-2.6E-09	-2.6E-09	-2.7E-09	-2.7E-09	-2.7E-09	-2.6E-09	-2.7E-09	-2.6E-09
OFF samples									
SN587	-2.5E-09	-2.5E-09	-2.5E-09	-2.8E-09	-2.9E-09	-3.9E-09	-4.3E-09	-4.7E-09	-2.8E-09
Statistics									
Min	-2.5E-09	-2.5E-09	-2.5E-09	-2.8E-09	-2.9E-09	-3.9E-09	-4.3E-09	-4.7E-09	-2.8E-09
Max	-2.5E-09	-2.5E-09	-2.5E-09	-2.8E-09	-2.9E-09	-3.9E-09	-4.3E-09	-4.7E-09	-2.8E-09
Average	-2.5E-09	-2.5E-09	-2.5E-09	-2.8E-09	-2.9E-09	-3.9E-09	-4.3E-09	-4.7E-09	-2.8E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

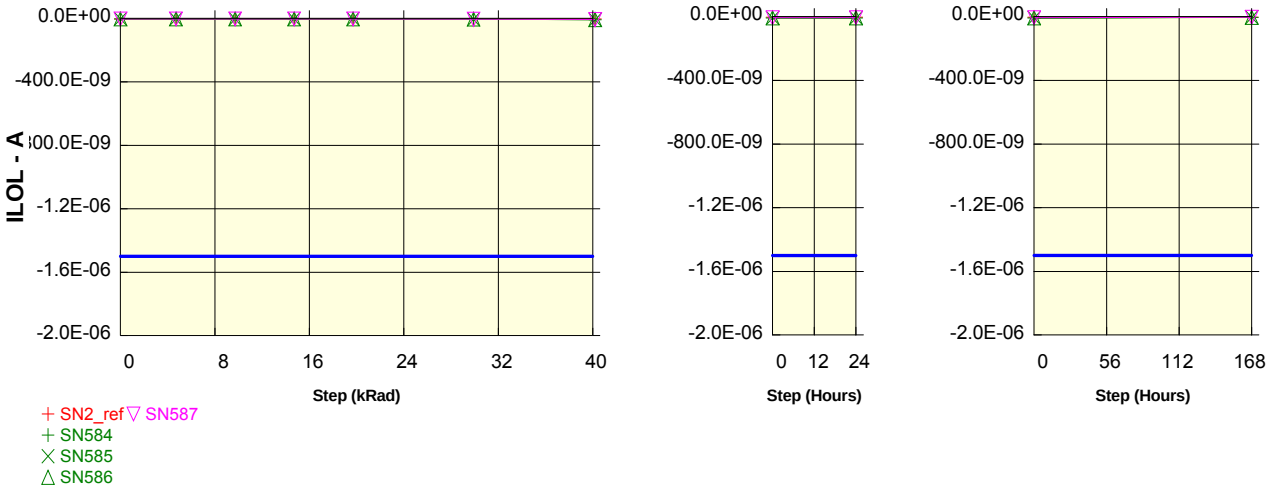
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ6
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.9E-09	-2.9E-09	-2.8E-09	-2.8E-09	-2.8E-09	-2.9E-09	-2.9E-09	-2.8E-09	-2.9E-09
ON samples									
SN584	-2.0E-09	-2.1E-09	-2.2E-09	-2.2E-09	-2.5E-09	-3.4E-09	-5.0E-09	-4.9E-09	-2.6E-09
SN585	-2.5E-09	-2.6E-09	-3.0E-09	-3.3E-09	-4.2E-09	-6.8E-09	-10.2E-09	-10.0E-09	-4.8E-09
SN586	-2.4E-09	-2.5E-09	-2.6E-09	-2.7E-09	-3.2E-09	-4.5E-09	-7.7E-09	-8.0E-09	-4.2E-09
Statistics									
Min	-2.5E-09	-2.6E-09	-3.0E-09	-3.3E-09	-4.2E-09	-6.8E-09	-10.2E-09	-10.0E-09	-4.8E-09
Max	-2.0E-09	-2.1E-09	-2.2E-09	-2.2E-09	-2.5E-09	-3.4E-09	-5.0E-09	-4.9E-09	-2.6E-09
Average	-2.3E-09	-2.4E-09	-2.6E-09	-2.7E-09	-3.3E-09	-4.9E-09	-7.6E-09	-7.6E-09	-3.9E-09
Sigma	216.0E-12	239.2E-12	326.6E-12	449.7E-12	697.6E-12	1.4E-09	2.1E-09	2.1E-09	912.0E-12

ILOLDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.9E-09	-2.9E-09	-2.8E-09	-2.8E-09	-2.8E-09	-2.9E-09	-2.9E-09	-2.8E-09	-2.9E-09
OFF samples									
SN587	-2.3E-09	-2.4E-09	-2.4E-09	-2.6E-09	-2.7E-09	-3.1E-09	-5.1E-09	-5.2E-09	-2.8E-09
Statistics									
Min	-2.3E-09	-2.4E-09	-2.4E-09	-2.6E-09	-2.7E-09	-3.1E-09	-5.1E-09	-5.2E-09	-2.8E-09
Max	-2.3E-09	-2.4E-09	-2.4E-09	-2.6E-09	-2.7E-09	-3.1E-09	-5.1E-09	-5.2E-09	-2.8E-09
Average	-2.3E-09	-2.4E-09	-2.4E-09	-2.6E-09	-2.7E-09	-3.1E-09	-5.1E-09	-5.2E-09	-2.8E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

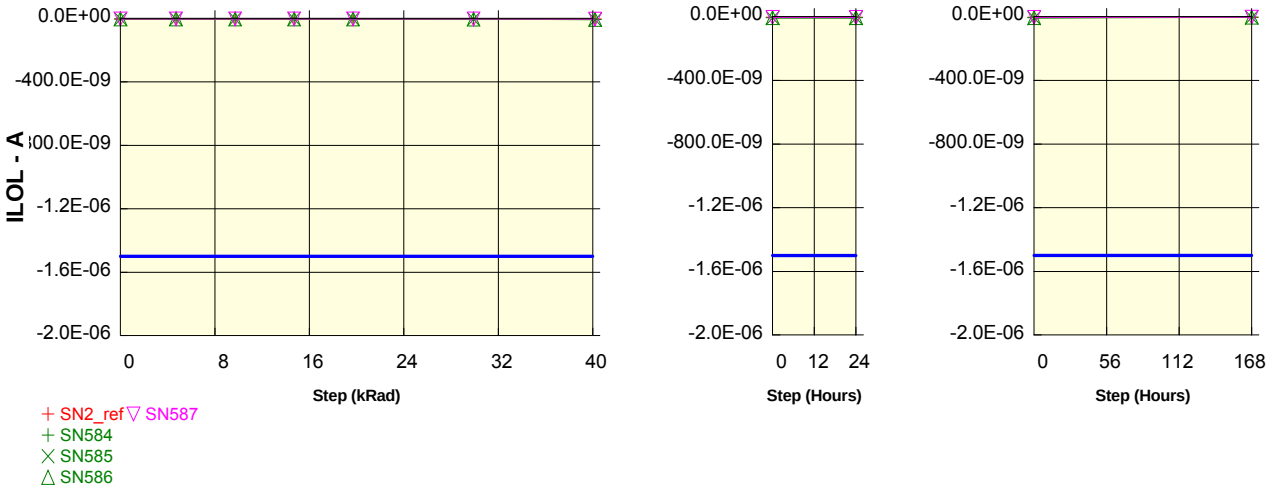
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ5
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.6E-09	-2.6E-09	-2.7E-09	-2.7E-09	-2.7E-09	-2.8E-09	-2.6E-09	-2.8E-09	-2.7E-09
ON samples									
SN584	-2.4E-09	-2.5E-09	-2.7E-09	-3.2E-09	-3.5E-09	-5.5E-09	-8.2E-09	-8.3E-09	-4.3E-09
SN585	-2.5E-09	-2.5E-09	-2.7E-09	-2.8E-09	-3.3E-09	-5.2E-09	-8.6E-09	-8.4E-09	-3.5E-09
SN586	-2.5E-09	-2.5E-09	-2.7E-09	-2.9E-09	-3.3E-09	-5.0E-09	-7.1E-09	-7.4E-09	-4.0E-09
Statistics									
Min	-2.5E-09	-2.5E-09	-2.7E-09	-3.2E-09	-3.5E-09	-5.5E-09	-8.6E-09	-8.4E-09	-4.3E-09
Max	-2.4E-09	-2.5E-09	-2.7E-09	-2.8E-09	-3.3E-09	-5.0E-09	-7.1E-09	-7.4E-09	-3.5E-09
Average	-2.4E-09	-2.5E-09	-2.7E-09	-2.9E-09	-3.4E-09	-5.2E-09	-7.9E-09	-8.0E-09	-3.9E-09
Sigma	47.1E-12	35.8E-18	23.6E-12	154.6E-12	108.0E-12	187.1E-12	640.7E-12	426.2E-12	352.0E-12

ILOLDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.6E-09	-2.6E-09	-2.7E-09	-2.7E-09	-2.7E-09	-2.8E-09	-2.6E-09	-2.8E-09	-2.7E-09
OFF samples									
SN587	-2.6E-09	-2.6E-09	-2.9E-09	-3.0E-09	-3.3E-09	-5.4E-09	-6.9E-09	-6.8E-09	-3.7E-09
Statistics									
Min	-2.6E-09	-2.6E-09	-2.9E-09	-3.0E-09	-3.3E-09	-5.4E-09	-6.9E-09	-6.8E-09	-3.7E-09
Max	-2.6E-09	-2.6E-09	-2.9E-09	-3.0E-09	-3.3E-09	-5.4E-09	-6.9E-09	-6.8E-09	-3.7E-09
Average	-2.6E-09	-2.6E-09	-2.9E-09	-3.0E-09	-3.3E-09	-5.4E-09	-6.9E-09	-6.8E-09	-3.7E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

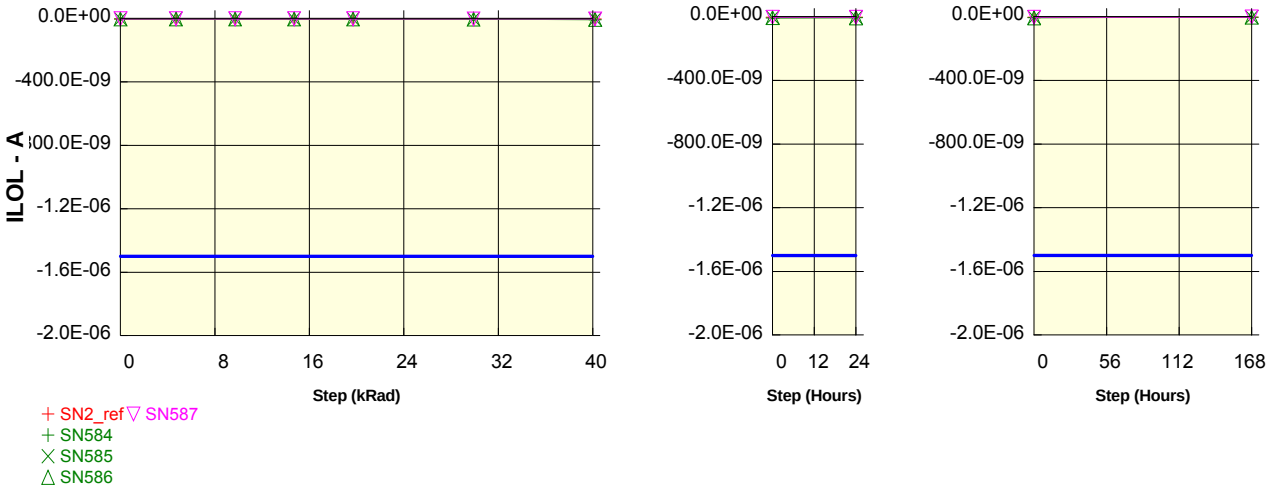
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ4
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.9E-09	-3.0E-09	-3.0E-09	-2.9E-09	-2.9E-09	-3.0E-09	-3.0E-09	-2.9E-09	-2.8E-09
ON samples									
SN584	-2.1E-09	-2.2E-09	-2.3E-09	-2.3E-09	-2.6E-09	-3.9E-09	-7.3E-09	-6.7E-09	-3.0E-09
SN585	-2.5E-09	-2.5E-09	-2.8E-09	-2.8E-09	-3.4E-09	-4.8E-09	-8.2E-09	-8.2E-09	-4.5E-09
SN586	-2.3E-09	-2.4E-09	-2.6E-09	-2.9E-09	-3.1E-09	-4.1E-09	-6.6E-09	-6.7E-09	-3.4E-09
Statistics									
Min	-2.5E-09	-2.5E-09	-2.8E-09	-2.9E-09	-3.4E-09	-4.8E-09	-8.2E-09	-8.2E-09	-4.5E-09
Max	-2.1E-09	-2.2E-09	-2.3E-09	-2.3E-09	-2.6E-09	-3.9E-09	-6.6E-09	-6.7E-09	-3.0E-09
Average	-2.3E-09	-2.4E-09	-2.5E-09	-2.6E-09	-3.0E-09	-4.3E-09	-7.3E-09	-7.2E-09	-3.6E-09
Sigma	143.4E-12	122.5E-12	205.5E-12	271.8E-12	330.0E-12	393.7E-12	654.9E-12	730.7E-12	611.5E-12

ILOLDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.9E-09	-3.0E-09	-3.0E-09	-2.9E-09	-2.9E-09	-3.0E-09	-3.0E-09	-2.9E-09	-2.8E-09
OFF samples									
SN587	-2.5E-09	-2.5E-09	-2.6E-09	-2.8E-09	-2.9E-09	-3.5E-09	-4.5E-09	-4.5E-09	-2.9E-09
Statistics									
Min	-2.5E-09	-2.5E-09	-2.6E-09	-2.8E-09	-2.9E-09	-3.5E-09	-4.5E-09	-4.5E-09	-2.9E-09
Max	-2.5E-09	-2.5E-09	-2.6E-09	-2.8E-09	-2.9E-09	-3.5E-09	-4.5E-09	-4.5E-09	-2.9E-09
Average	-2.5E-09	-2.5E-09	-2.6E-09	-2.8E-09	-2.9E-09	-3.5E-09	-4.5E-09	-4.5E-09	-2.9E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

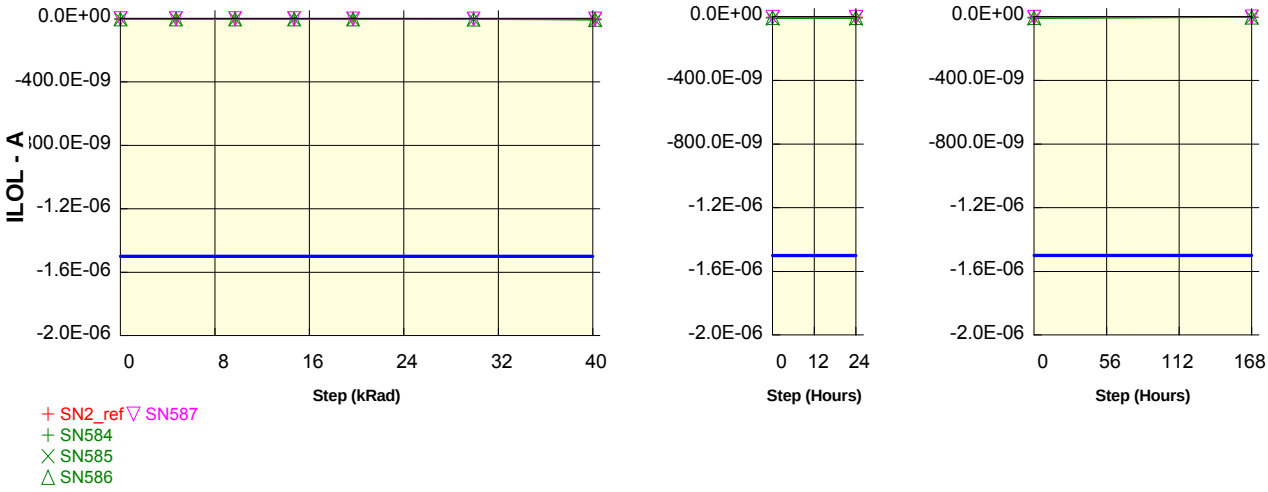
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ3
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.6E-09	-2.5E-09	-2.6E-09	-2.6E-09	-2.5E-09	-2.6E-09	-2.6E-09	-2.6E-09	-2.5E-09
ON samples									
SN584	-2.8E-09	-2.9E-09	-2.9E-09	-2.8E-09	-3.3E-09	-4.1E-09	-7.6E-09	-6.4E-09	-3.1E-09
SN585	-2.6E-09	-2.7E-09	-2.8E-09	-2.8E-09	-3.0E-09	-3.6E-09	-4.3E-09	-4.5E-09	-2.9E-09
SN586	-2.6E-09	-2.7E-09	-2.7E-09	-2.7E-09	-2.8E-09	-4.2E-09	-6.3E-09	-7.2E-09	-3.3E-09
Statistics									
Min	-2.8E-09	-2.9E-09	-2.9E-09	-2.8E-09	-3.3E-09	-4.2E-09	-7.6E-09	-7.2E-09	-3.3E-09
Max	-2.6E-09	-2.7E-09	-2.7E-09	-2.7E-09	-2.8E-09	-3.6E-09	-4.3E-09	-4.5E-09	-2.9E-09
Average	-2.7E-09	-2.7E-09	-2.8E-09	-2.8E-09	-3.0E-09	-4.0E-09	-6.1E-09	-6.0E-09	-3.1E-09
Sigma	94.3E-12	94.3E-12	102.7E-12	70.7E-12	187.1E-12	255.0E-12	1.4E-09	1.1E-09	143.4E-12

ILOLDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.6E-09	-2.5E-09	-2.6E-09	-2.6E-09	-2.5E-09	-2.6E-09	-2.6E-09	-2.6E-09	-2.5E-09
OFF samples									
SN587	-2.2E-09	-2.1E-09	-2.2E-09	-2.2E-09	-2.4E-09	-2.6E-09	-3.3E-09	-3.7E-09	-2.2E-09
Statistics									
Min	-2.2E-09	-2.1E-09	-2.2E-09	-2.2E-09	-2.4E-09	-2.6E-09	-3.3E-09	-3.7E-09	-2.2E-09
Max	-2.2E-09	-2.1E-09	-2.2E-09	-2.2E-09	-2.4E-09	-2.6E-09	-3.3E-09	-3.7E-09	-2.2E-09
Average	-2.2E-09	-2.1E-09	-2.2E-09	-2.2E-09	-2.4E-09	-2.6E-09	-3.3E-09	-3.7E-09	-2.2E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

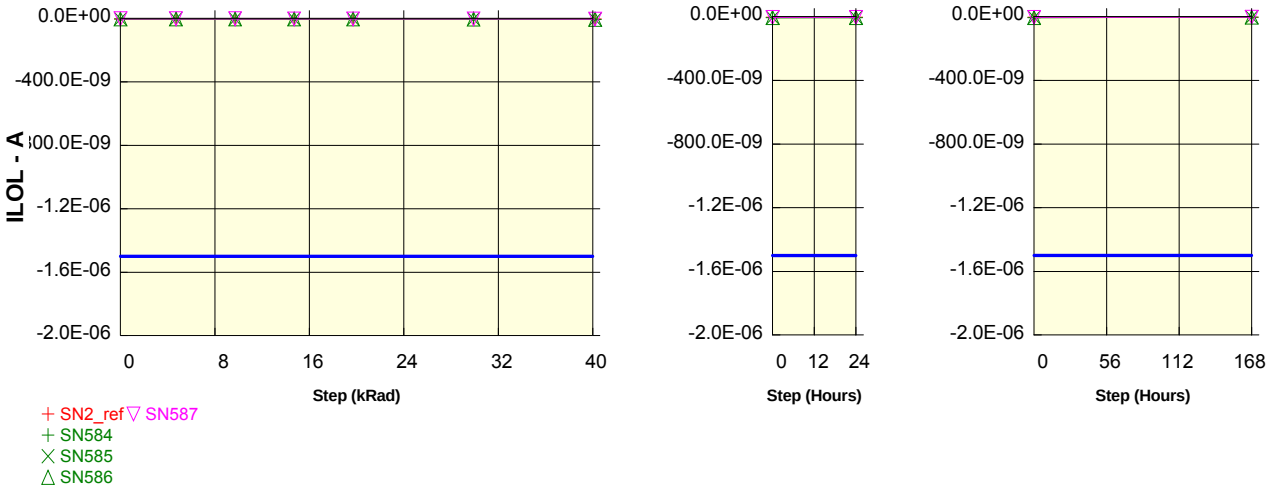
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ2
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.2E-09	-2.3E-09	-2.2E-09	-2.2E-09	-2.2E-09	-2.3E-09	-2.5E-09	-2.2E-09	-2.4E-09
ON samples									
SN584	-2.9E-09	-2.9E-09	-3.3E-09	-3.4E-09	-3.6E-09	-4.9E-09	-7.7E-09	-7.7E-09	-3.7E-09
SN585	-2.7E-09	-2.8E-09	-3.1E-09	-3.3E-09	-3.9E-09	-6.6E-09	-10.7E-09	-10.4E-09	-4.2E-09
SN586	-2.7E-09	-2.6E-09	-2.8E-09	-3.0E-09	-3.1E-09	-4.2E-09	-5.6E-09	-6.2E-09	-3.0E-09
Statistics									
Min	-2.9E-09	-2.9E-09	-3.3E-09	-3.4E-09	-3.9E-09	-6.6E-09	-10.7E-09	-10.4E-09	-4.2E-09
Max	-2.7E-09	-2.6E-09	-2.8E-09	-3.0E-09	-3.1E-09	-4.2E-09	-5.6E-09	-6.2E-09	-3.0E-09
Average	-2.7E-09	-2.8E-09	-3.0E-09	-3.2E-09	-3.5E-09	-5.2E-09	-8.0E-09	-8.1E-09	-3.6E-09
Sigma	94.3E-12	124.7E-12	205.5E-12	187.1E-12	330.0E-12	1.0E-09	2.1E-09	1.7E-09	470.8E-12

ILOLDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.2E-09	-2.3E-09	-2.2E-09	-2.2E-09	-2.2E-09	-2.3E-09	-2.5E-09	-2.2E-09	-2.4E-09
OFF samples									
SN587	-2.2E-09	-2.2E-09	-2.2E-09	-2.3E-09	-2.5E-09	-2.8E-09	-3.6E-09	-3.9E-09	-2.4E-09
Statistics									
Min	-2.2E-09	-2.2E-09	-2.2E-09	-2.3E-09	-2.5E-09	-2.8E-09	-3.6E-09	-3.9E-09	-2.4E-09
Max	-2.2E-09	-2.2E-09	-2.2E-09	-2.3E-09	-2.5E-09	-2.8E-09	-3.6E-09	-3.9E-09	-2.4E-09
Average	-2.2E-09	-2.2E-09	-2.2E-09	-2.3E-09	-2.5E-09	-2.8E-09	-3.6E-09	-3.9E-09	-2.4E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

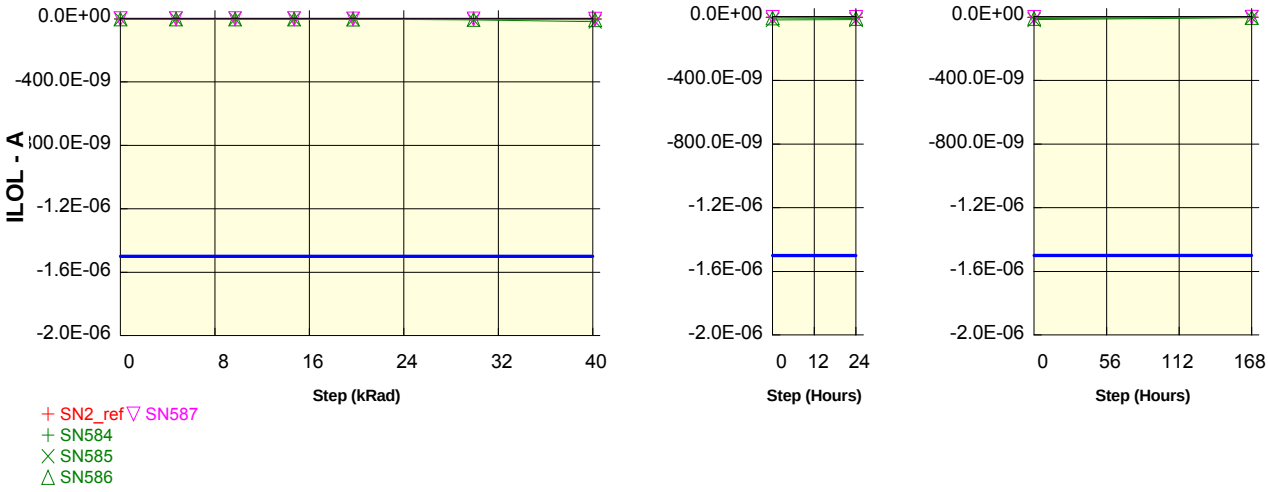
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ1
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.7E-09	-2.5E-09	-2.4E-09	-2.5E-09	-2.5E-09	-2.6E-09	-2.5E-09	-2.5E-09	-2.4E-09
ON samples									
SN584	-2.9E-09	-2.8E-09	-2.9E-09	-3.1E-09	-3.3E-09	-3.8E-09	-6.5E-09	-6.0E-09	-3.4E-09
SN585	-2.5E-09	-2.5E-09	-2.6E-09	-2.6E-09	-2.7E-09	-3.4E-09	-6.1E-09	-5.4E-09	-2.7E-09
SN586	-2.8E-09	-2.9E-09	-2.9E-09	-3.0E-09	-3.1E-09	-4.1E-09	-5.8E-09	-6.3E-09	-3.2E-09
Statistics									
Min	-2.9E-09	-2.9E-09	-2.9E-09	-3.1E-09	-3.3E-09	-4.1E-09	-6.5E-09	-6.3E-09	-3.4E-09
Max	-2.5E-09	-2.5E-09	-2.6E-09	-2.6E-09	-2.7E-09	-3.4E-09	-5.8E-09	-5.4E-09	-2.7E-09
Average	-2.7E-09	-2.7E-09	-2.8E-09	-2.9E-09	-3.0E-09	-3.7E-09	-6.1E-09	-5.9E-09	-3.1E-09
Sigma	178.0E-12	154.6E-12	131.2E-12	216.0E-12	227.3E-12	306.4E-12	265.6E-12	396.5E-12	294.4E-12

ILOLDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.7E-09	-2.5E-09	-2.4E-09	-2.5E-09	-2.5E-09	-2.6E-09	-2.5E-09	-2.5E-09	-2.4E-09
OFF samples									
SN587	-2.4E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.9E-09	-3.4E-09	-4.2E-09	-4.3E-09	-2.6E-09
Statistics									
Min	-2.4E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.9E-09	-3.4E-09	-4.2E-09	-4.3E-09	-2.6E-09
Max	-2.4E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.9E-09	-3.4E-09	-4.2E-09	-4.3E-09	-2.6E-09
Average	-2.4E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.9E-09	-3.4E-09	-4.2E-09	-4.3E-09	-2.6E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

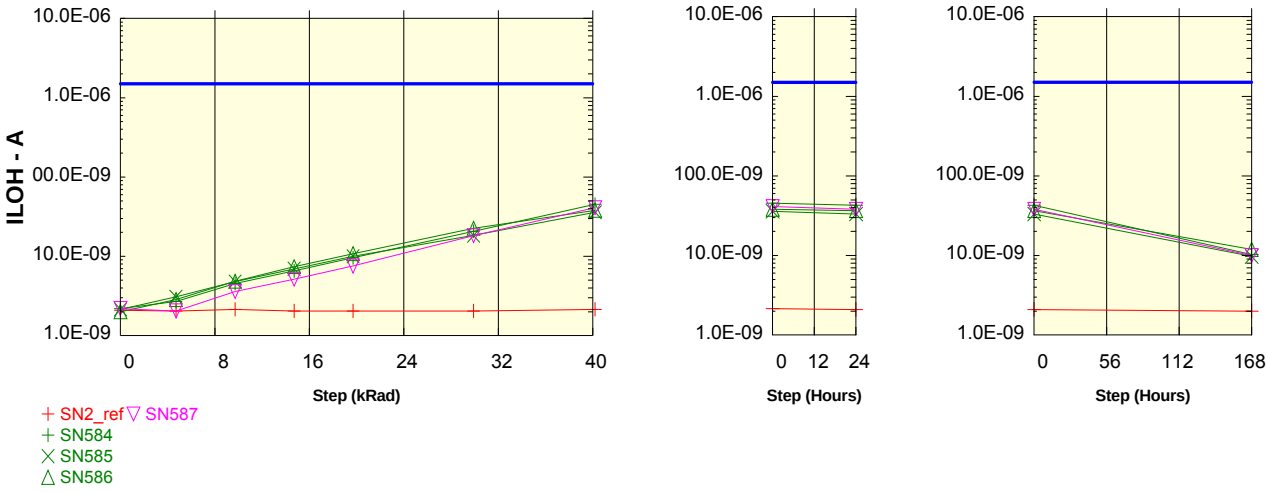
Test conditions : TID
Parameter : Output Leakage Current Low : ILOLDQ0
Vout=0V . Vcc = 3.6V
Unit : A
Spec Limit Min : -1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOLDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.4E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.5E-09	-2.5E-09
ON samples									
SN584	-2.8E-09	-2.8E-09	-2.8E-09	-2.9E-09	-3.1E-09	-3.7E-09	-4.6E-09	-4.5E-09	-3.2E-09
SN585	-2.8E-09	-2.9E-09	-3.4E-09	-4.1E-09	-5.0E-09	-10.1E-09	-19.5E-09	-19.2E-09	-6.4E-09
SN586	-2.7E-09	-2.8E-09	-2.9E-09	-3.3E-09	-3.8E-09	-5.4E-09	-8.2E-09	-11.0E-09	-4.4E-09
Statistics									
Min	-2.8E-09	-2.9E-09	-3.4E-09	-4.1E-09	-5.0E-09	-10.1E-09	-19.5E-09	-19.2E-09	-6.4E-09
Max	-2.7E-09	-2.8E-09	-2.8E-09	-2.9E-09	-3.1E-09	-3.7E-09	-4.6E-09	-4.5E-09	-3.2E-09
Average	-2.7E-09	-2.8E-09	-3.0E-09	-3.4E-09	-3.9E-09	-6.4E-09	-10.7E-09	-11.6E-09	-4.7E-09
Sigma	62.4E-12	40.8E-12	239.2E-12	495.0E-12	784.6E-12	2.7E-09	6.3E-09	6.0E-09	1.3E-09

ILOLDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	-2.4E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.3E-09	-2.4E-09	-2.5E-09	-2.5E-09	-2.5E-09
OFF samples									
SN587	-2.1E-09	-2.0E-09	-2.1E-09	-2.3E-09	-2.5E-09	-3.1E-09	-4.4E-09	-5.2E-09	-2.5E-09
Statistics									
Min	-2.1E-09	-2.0E-09	-2.1E-09	-2.3E-09	-2.5E-09	-3.1E-09	-4.4E-09	-5.2E-09	-2.5E-09
Max	-2.1E-09	-2.0E-09	-2.1E-09	-2.3E-09	-2.5E-09	-3.1E-09	-4.4E-09	-5.2E-09	-2.5E-09
Average	-2.1E-09	-2.0E-09	-2.1E-09	-2.3E-09	-2.5E-09	-3.1E-09	-4.4E-09	-5.2E-09	-2.5E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

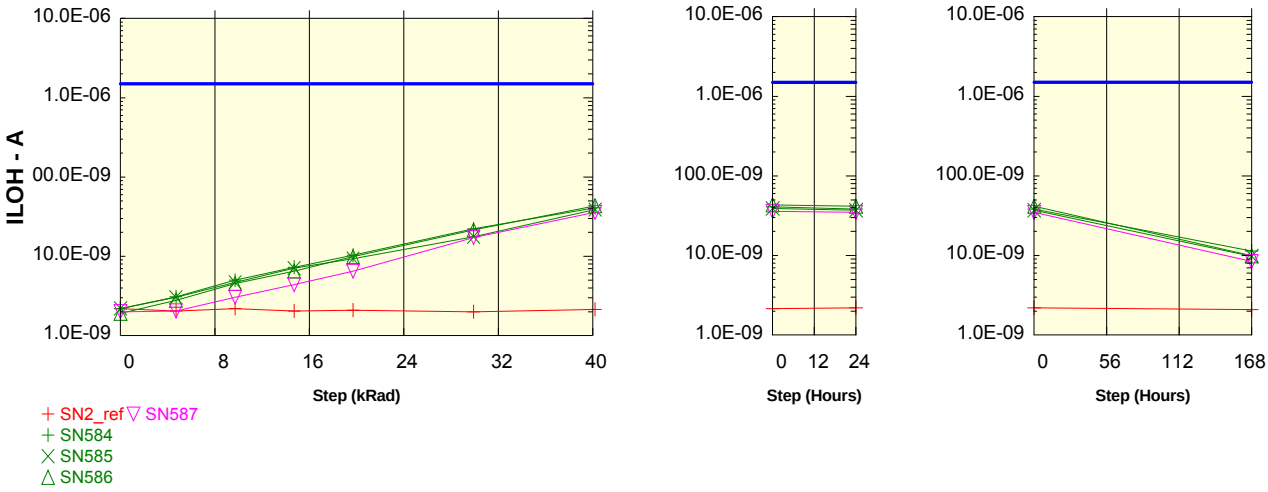
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ7
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.1E-09	2.1E-09	2.2E-09	2.1E-09	2.1E-09	2.1E-09	2.2E-09	2.1E-09	2.0E-09
ON samples									
SN584	2.2E-09	2.7E-09	4.6E-09	6.6E-09	9.6E-09	20.7E-09	45.4E-09	43.0E-09	10.3E-09
SN585	2.2E-09	3.1E-09	4.8E-09	7.0E-09	10.0E-09	18.3E-09	36.0E-09	33.2E-09	9.8E-09
SN586	2.0E-09	2.9E-09	4.9E-09	7.4E-09	10.8E-09	22.7E-09	38.1E-09	36.6E-09	11.9E-09
Statistics									
Min	2.0E-09	2.7E-09	4.6E-09	6.6E-09	9.6E-09	18.3E-09	36.0E-09	33.2E-09	9.8E-09
Max	2.2E-09	3.1E-09	4.9E-09	7.4E-09	10.8E-09	22.7E-09	45.4E-09	43.0E-09	11.9E-09
Average	2.1E-09	2.9E-09	4.7E-09	7.0E-09	10.1E-09	20.6E-09	39.8E-09	37.6E-09	10.6E-09
Sigma	85.0E-12	165.0E-12	131.2E-12	347.2E-12	498.9E-12	1.8E-09	4.0E-09	4.1E-09	918.6E-12

ILOHDQ7	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.1E-09	2.1E-09	2.2E-09	2.1E-09	2.1E-09	2.1E-09	2.2E-09	2.1E-09	2.0E-09
OFF samples									
SN587	2.2E-09	2.1E-09	3.6E-09	5.2E-09	7.6E-09	18.2E-09	41.3E-09	38.1E-09	10.0E-09
Statistics									
Min	2.2E-09	2.1E-09	3.6E-09	5.2E-09	7.6E-09	18.2E-09	41.3E-09	38.1E-09	10.0E-09
Max	2.2E-09	2.1E-09	3.6E-09	5.2E-09	7.6E-09	18.2E-09	41.3E-09	38.1E-09	10.0E-09
Average	2.2E-09	2.1E-09	3.6E-09	5.2E-09	7.6E-09	18.2E-09	41.3E-09	38.1E-09	10.0E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

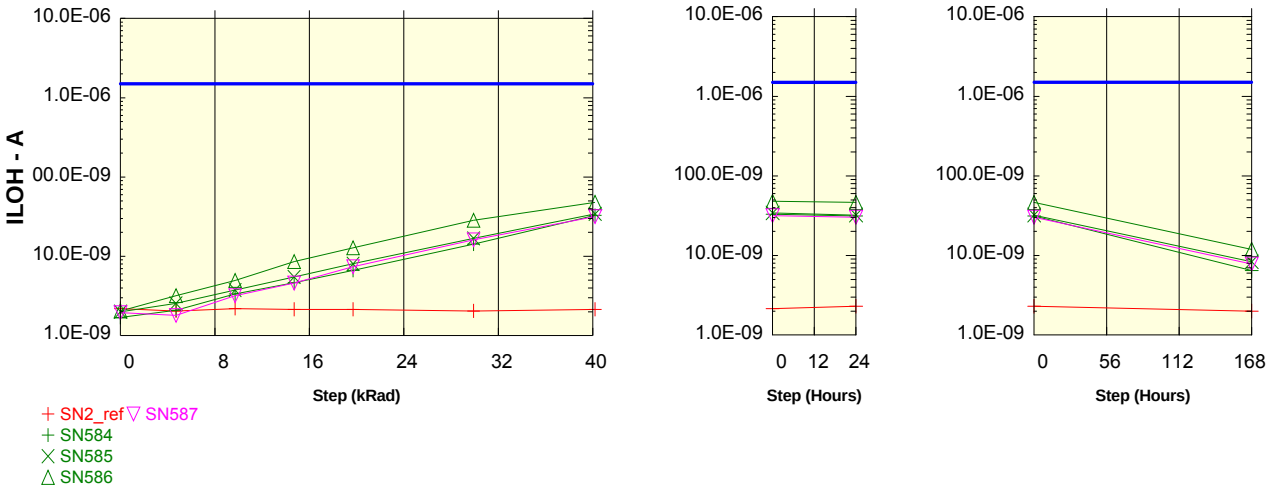
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ6
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.1E-09	2.2E-09	2.1E-09	2.1E-09	2.0E-09	2.2E-09	2.2E-09	2.1E-09
ON samples									
SN584	2.2E-09	3.1E-09	5.0E-09	7.3E-09	10.3E-09	22.2E-09	41.0E-09	38.2E-09	11.4E-09
SN585	2.2E-09	3.1E-09	4.7E-09	7.1E-09	9.4E-09	17.7E-09	38.9E-09	37.0E-09	9.8E-09
SN586	1.9E-09	2.8E-09	4.6E-09	6.5E-09	9.9E-09	21.6E-09	43.4E-09	41.6E-09	9.9E-09
Statistics									
Min	1.9E-09	2.8E-09	4.6E-09	6.5E-09	9.4E-09	17.7E-09	38.9E-09	37.0E-09	9.8E-09
Max	2.2E-09	3.1E-09	5.0E-09	7.3E-09	10.3E-09	22.2E-09	43.4E-09	41.6E-09	11.4E-09
Average	2.1E-09	3.0E-09	4.8E-09	7.0E-09	9.9E-09	20.5E-09	41.1E-09	38.9E-09	10.4E-09
Sigma	141.4E-12	131.2E-12	187.1E-12	339.9E-12	389.4E-12	2.0E-09	1.8E-09	1.9E-09	708.3E-12

ILOHDQ6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.1E-09	2.2E-09	2.1E-09	2.1E-09	2.0E-09	2.2E-09	2.2E-09	2.1E-09
OFF samples									
SN587	2.0E-09	2.1E-09	3.1E-09	4.4E-09	6.5E-09	17.3E-09	36.0E-09	34.8E-09	8.4E-09
Statistics									
Min	2.0E-09	2.1E-09	3.1E-09	4.4E-09	6.5E-09	17.3E-09	36.0E-09	34.8E-09	8.4E-09
Max	2.0E-09	2.1E-09	3.1E-09	4.4E-09	6.5E-09	17.3E-09	36.0E-09	34.8E-09	8.4E-09
Average	2.0E-09	2.1E-09	3.1E-09	4.4E-09	6.5E-09	17.3E-09	36.0E-09	34.8E-09	8.4E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

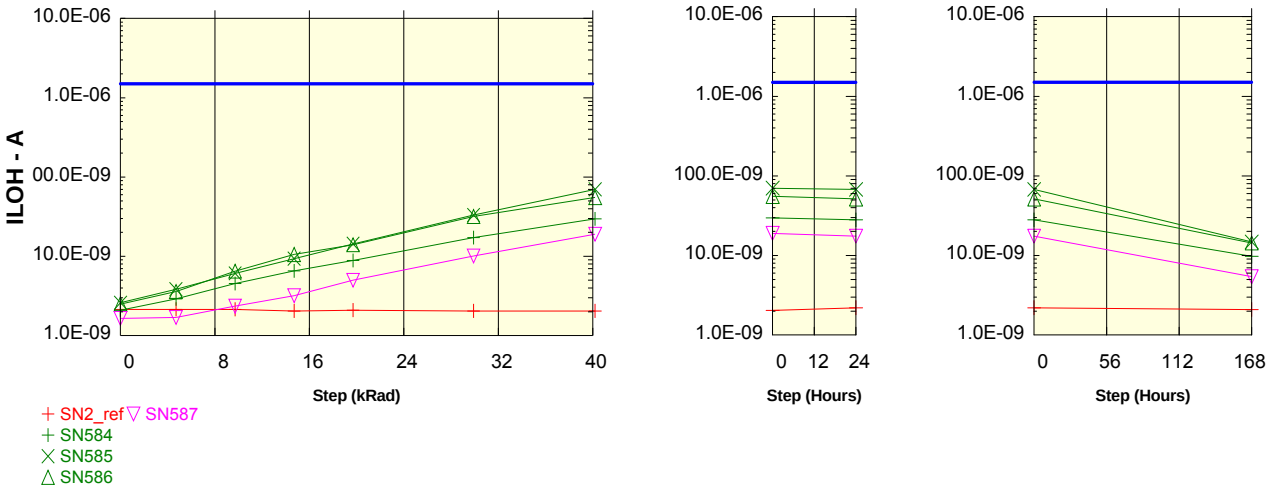
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ5
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.1E-09	2.2E-09	2.2E-09	2.2E-09	2.1E-09	2.2E-09	2.3E-09	2.0E-09
ON samples									
SN584	1.7E-09	2.1E-09	3.4E-09	4.7E-09	6.7E-09	14.3E-09	32.9E-09	31.3E-09	6.5E-09
SN585	2.0E-09	2.6E-09	3.8E-09	5.5E-09	8.1E-09	16.9E-09	34.2E-09	32.3E-09	8.4E-09
SN586	2.1E-09	3.2E-09	5.0E-09	8.6E-09	12.9E-09	28.6E-09	47.8E-09	46.3E-09	11.9E-09
Statistics									
Min	1.7E-09	2.1E-09	3.4E-09	4.7E-09	6.7E-09	14.3E-09	32.9E-09	31.3E-09	6.5E-09
Max	2.1E-09	3.2E-09	5.0E-09	8.6E-09	12.9E-09	28.6E-09	47.8E-09	46.3E-09	11.9E-09
Average	1.9E-09	2.6E-09	4.0E-09	6.3E-09	9.2E-09	19.9E-09	38.3E-09	36.6E-09	8.9E-09
Sigma	154.6E-12	451.5E-12	679.9E-12	1.7E-09	2.7E-09	6.2E-09	6.7E-09	6.8E-09	2.3E-09

ILOHDQ5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.1E-09	2.2E-09	2.2E-09	2.2E-09	2.1E-09	2.2E-09	2.3E-09	2.0E-09
OFF samples									
SN587	2.0E-09	1.8E-09	3.2E-09	4.6E-09	7.4E-09	16.2E-09	31.6E-09	30.3E-09	7.8E-09
Statistics									
Min	2.0E-09	1.8E-09	3.2E-09	4.6E-09	7.4E-09	16.2E-09	31.6E-09	30.3E-09	7.8E-09
Max	2.0E-09	1.8E-09	3.2E-09	4.6E-09	7.4E-09	16.2E-09	31.6E-09	30.3E-09	7.8E-09
Average	2.0E-09	1.8E-09	3.2E-09	4.6E-09	7.4E-09	16.2E-09	31.6E-09	30.3E-09	7.8E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	444.1E-18	0.0E+00	0.0E+00

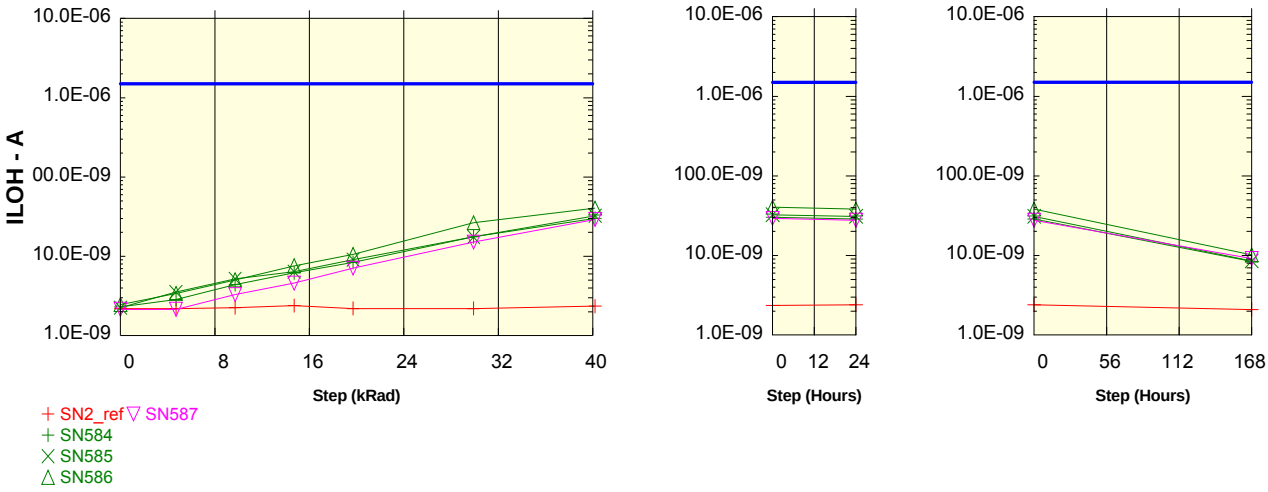
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ4
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.2E-09	2.2E-09	2.1E-09	2.1E-09	2.1E-09	2.1E-09	2.2E-09	2.1E-09
ON samples									
SN584	2.1E-09	2.9E-09	4.6E-09	6.6E-09	8.9E-09	17.3E-09	29.7E-09	28.1E-09	9.8E-09
SN585	2.6E-09	3.9E-09	6.1E-09	9.4E-09	14.4E-09	33.3E-09	70.0E-09	67.6E-09	14.8E-09
SN586	2.5E-09	3.6E-09	6.5E-09	10.6E-09	14.0E-09	31.8E-09	55.1E-09	51.4E-09	14.4E-09
Statistics									
Min	2.1E-09	2.9E-09	4.6E-09	6.6E-09	8.9E-09	17.3E-09	29.7E-09	28.1E-09	9.8E-09
Max	2.6E-09	3.9E-09	6.5E-09	10.6E-09	14.4E-09	33.3E-09	70.0E-09	67.6E-09	14.8E-09
Average	2.4E-09	3.5E-09	5.7E-09	8.8E-09	12.4E-09	27.4E-09	51.6E-09	49.0E-09	13.0E-09
Sigma	216.0E-12	402.1E-12	841.0E-12	1.7E-09	2.5E-09	7.2E-09	16.6E-09	16.2E-09	2.3E-09

ILOHDQ4	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.2E-09	2.2E-09	2.1E-09	2.1E-09	2.1E-09	2.1E-09	2.2E-09	2.1E-09
OFF samples									
SN587	1.7E-09	1.7E-09	2.4E-09	3.2E-09	5.0E-09	10.1E-09	19.0E-09	17.6E-09	5.4E-09
Statistics									
Min	1.7E-09	1.7E-09	2.4E-09	3.2E-09	5.0E-09	10.1E-09	19.0E-09	17.6E-09	5.4E-09
Max	1.7E-09	1.7E-09	2.4E-09	3.2E-09	5.0E-09	10.1E-09	19.0E-09	17.6E-09	5.4E-09
Average	1.7E-09	1.7E-09	2.4E-09	3.2E-09	5.0E-09	10.1E-09	19.0E-09	17.6E-09	5.4E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

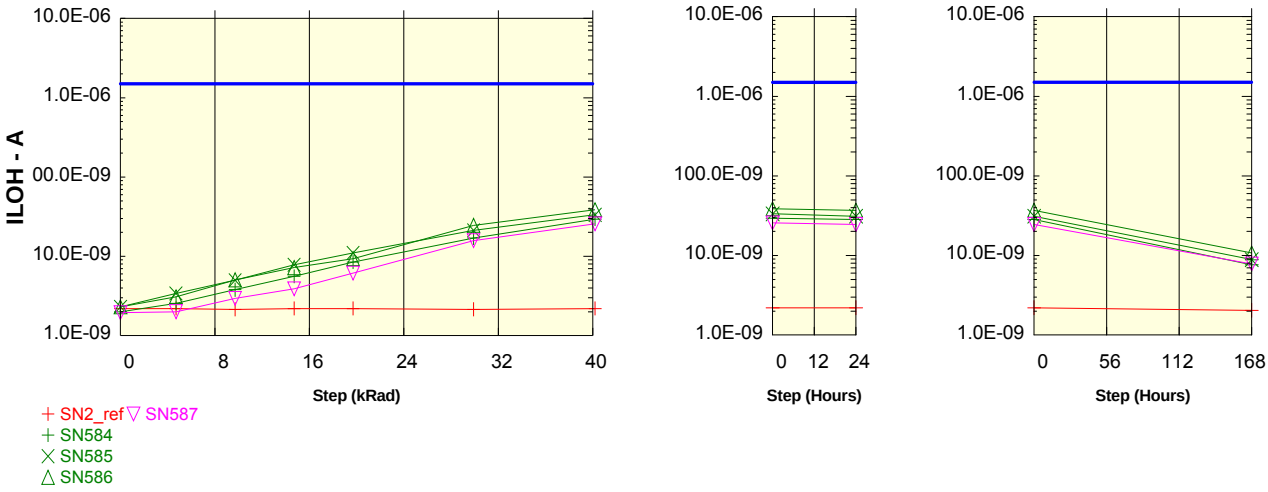
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ3
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.2E-09	2.3E-09	2.4E-09	2.2E-09	2.2E-09	2.4E-09	2.4E-09	2.1E-09
ON samples									
SN584	2.3E-09	2.9E-09	4.4E-09	6.2E-09	8.4E-09	17.7E-09	30.1E-09	28.8E-09	8.4E-09
SN585	2.3E-09	3.6E-09	5.2E-09	6.4E-09	9.1E-09	17.6E-09	32.5E-09	31.0E-09	8.6E-09
SN586	2.5E-09	3.4E-09	5.1E-09	7.6E-09	10.6E-09	26.5E-09	40.6E-09	38.4E-09	10.2E-09
Statistics									
Min	2.3E-09	2.9E-09	4.4E-09	6.2E-09	8.4E-09	17.6E-09	30.1E-09	28.8E-09	8.4E-09
Max	2.5E-09	3.6E-09	5.2E-09	7.6E-09	10.6E-09	26.5E-09	40.6E-09	38.4E-09	10.2E-09
Average	2.3E-09	3.3E-09	4.9E-09	6.7E-09	9.4E-09	20.6E-09	34.4E-09	32.7E-09	9.0E-09
Sigma	85.0E-12	300.9E-12	347.2E-12	618.2E-12	917.7E-12	4.2E-09	4.5E-09	4.1E-09	792.0E-12

ILOHDQ3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.2E-09	2.3E-09	2.4E-09	2.2E-09	2.2E-09	2.4E-09	2.4E-09	2.1E-09
OFF samples									
SN587	2.2E-09	2.2E-09	3.3E-09	4.6E-09	7.1E-09	15.2E-09	29.2E-09	27.7E-09	9.2E-09
Statistics									
Min	2.2E-09	2.2E-09	3.3E-09	4.6E-09	7.1E-09	15.2E-09	29.2E-09	27.7E-09	9.2E-09
Max	2.2E-09	2.2E-09	3.3E-09	4.6E-09	7.1E-09	15.2E-09	29.2E-09	27.7E-09	9.2E-09
Average	2.2E-09	2.2E-09	3.3E-09	4.6E-09	7.1E-09	15.2E-09	29.2E-09	27.7E-09	9.2E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

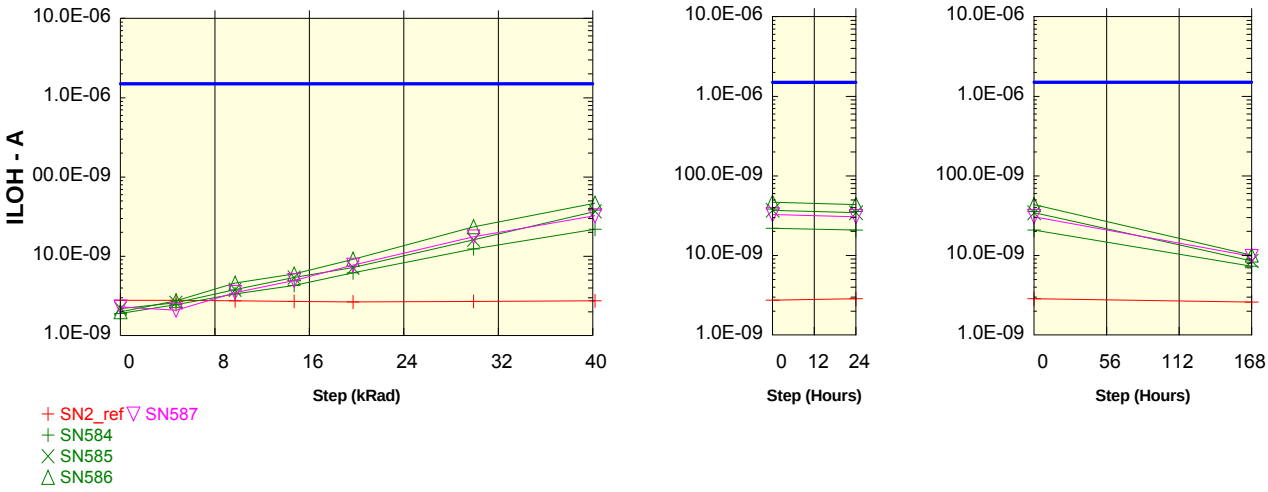
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ2
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.1E-09
ON samples									
SN584	2.0E-09	2.6E-09	3.8E-09	5.6E-09	8.5E-09	17.0E-09	29.4E-09	28.2E-09	7.7E-09
SN585	2.3E-09	3.4E-09	5.0E-09	7.8E-09	11.0E-09	21.2E-09	33.4E-09	31.2E-09	8.9E-09
SN586	2.3E-09	3.1E-09	5.1E-09	7.2E-09	9.4E-09	24.6E-09	38.7E-09	36.9E-09	10.8E-09
Statistics									
Min	2.0E-09	2.6E-09	3.8E-09	5.6E-09	8.5E-09	17.0E-09	29.4E-09	28.2E-09	7.7E-09
Max	2.3E-09	3.4E-09	5.1E-09	7.8E-09	11.0E-09	24.6E-09	38.7E-09	36.9E-09	10.8E-09
Average	2.2E-09	3.0E-09	4.6E-09	6.9E-09	9.6E-09	20.9E-09	33.8E-09	32.1E-09	9.1E-09
Sigma	141.4E-12	352.0E-12	577.8E-12	928.6E-12	1.0E-09	3.1E-09	3.8E-09	3.6E-09	1.3E-09

ILOHDQ2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.1E-09
OFF samples									
SN587	2.0E-09	2.0E-09	3.0E-09	3.9E-09	6.2E-09	15.8E-09	25.7E-09	24.4E-09	7.8E-09
Statistics									
Min	2.0E-09	2.0E-09	3.0E-09	3.9E-09	6.2E-09	15.8E-09	25.7E-09	24.4E-09	7.8E-09
Max	2.0E-09	2.0E-09	3.0E-09	3.9E-09	6.2E-09	15.8E-09	25.7E-09	24.4E-09	7.8E-09
Average	2.0E-09	2.0E-09	3.0E-09	3.9E-09	6.2E-09	15.8E-09	25.7E-09	24.4E-09	7.8E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	222.0E-18	0.0E+00	0.0E+00	0.0E+00

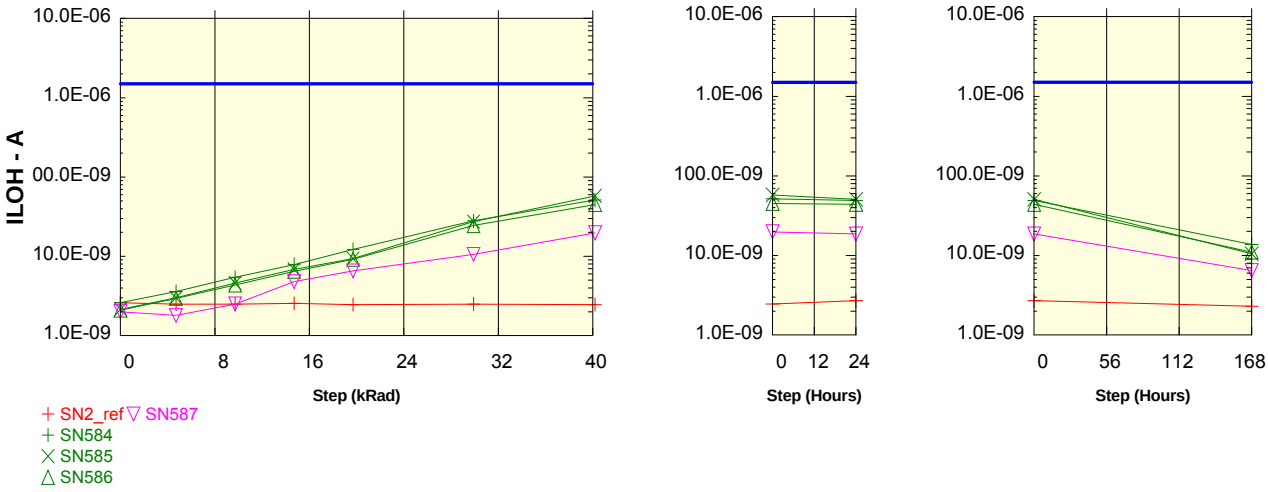
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ1
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.8E-09	2.8E-09	2.8E-09	2.7E-09	2.7E-09	2.7E-09	2.8E-09	2.9E-09	2.6E-09
ON samples									
SN584	1.9E-09	2.5E-09	3.4E-09	4.3E-09	6.2E-09	12.4E-09	22.0E-09	21.0E-09	7.4E-09
SN585	2.2E-09	2.6E-09	3.8E-09	5.4E-09	7.2E-09	16.2E-09	36.9E-09	34.4E-09	8.6E-09
SN586	2.0E-09	2.8E-09	4.6E-09	6.0E-09	9.2E-09	23.6E-09	46.8E-09	43.7E-09	10.1E-09
Statistics									
Min	1.9E-09	2.5E-09	3.4E-09	4.3E-09	6.2E-09	12.4E-09	22.0E-09	21.0E-09	7.4E-09
Max	2.2E-09	2.8E-09	4.6E-09	6.0E-09	9.2E-09	23.6E-09	46.8E-09	43.7E-09	10.1E-09
Average	2.0E-09	2.6E-09	3.9E-09	5.2E-09	7.5E-09	17.4E-09	35.2E-09	33.0E-09	8.7E-09
Sigma	124.7E-12	122.5E-12	516.9E-12	704.0E-12	1.2E-09	4.7E-09	10.2E-09	9.3E-09	1.1E-09

ILOHDQ1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.8E-09	2.8E-09	2.8E-09	2.7E-09	2.7E-09	2.7E-09	2.8E-09	2.9E-09	2.6E-09
OFF samples									
SN587	2.3E-09	2.1E-09	3.5E-09	5.0E-09	7.8E-09	17.7E-09	32.6E-09	30.8E-09	9.8E-09
Statistics									
Min	2.3E-09	2.1E-09	3.5E-09	5.0E-09	7.8E-09	17.7E-09	32.6E-09	30.8E-09	9.8E-09
Max	2.3E-09	2.1E-09	3.5E-09	5.0E-09	7.8E-09	17.7E-09	32.6E-09	30.8E-09	9.8E-09
Average	2.3E-09	2.1E-09	3.5E-09	5.0E-09	7.8E-09	17.7E-09	32.6E-09	30.8E-09	9.8E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

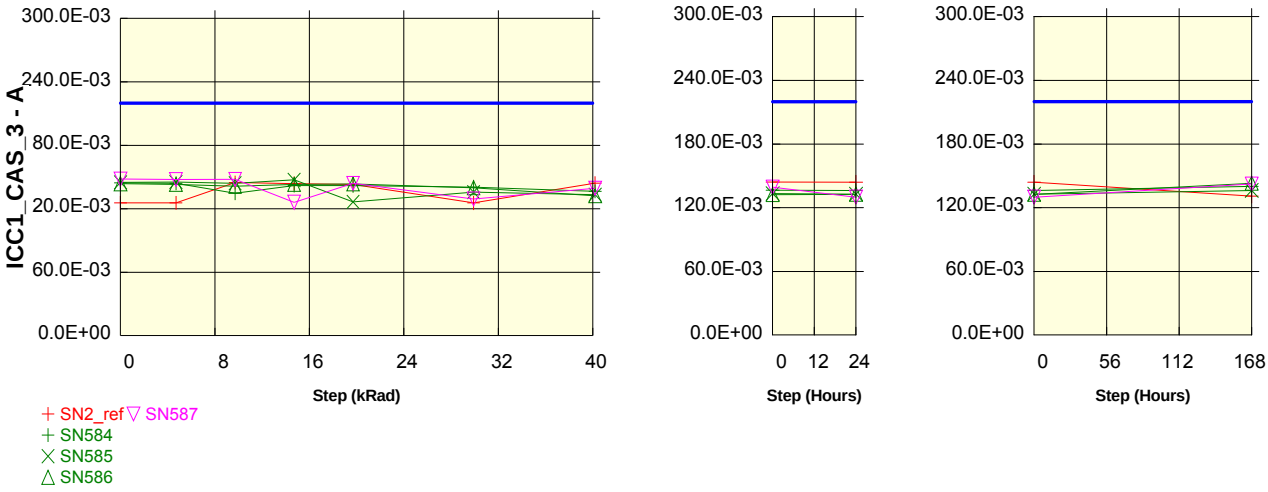
Test conditions : TID
Parameter : Output Leakage Current High : ILOHDQ0
Vout=VDDmax. Vcc = 3.6V
Unit : A
Spec Limit Max : 1.5E-06
Spec limits are represented in bold lines on the graphic.



ILOHDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.6E-09	2.5E-09	2.5E-09	2.6E-09	2.5E-09	2.5E-09	2.5E-09	2.7E-09	2.3E-09
ON samples									
SN584	2.6E-09	3.6E-09	5.5E-09	7.9E-09	12.2E-09	28.0E-09	51.4E-09	48.9E-09	13.8E-09
SN585	2.2E-09	3.0E-09	4.6E-09	6.9E-09	9.4E-09	27.4E-09	57.8E-09	50.6E-09	10.5E-09
SN586	2.1E-09	3.0E-09	4.4E-09	6.5E-09	9.2E-09	24.4E-09	45.1E-09	43.9E-09	11.0E-09
Statistics									
Min	2.1E-09	3.0E-09	4.4E-09	6.5E-09	9.2E-09	24.4E-09	45.1E-09	43.9E-09	10.5E-09
Max	2.6E-09	3.6E-09	5.5E-09	7.9E-09	12.2E-09	28.0E-09	57.8E-09	50.6E-09	13.8E-09
Average	2.3E-09	3.2E-09	4.8E-09	7.1E-09	10.3E-09	26.6E-09	51.4E-09	47.8E-09	11.8E-09
Sigma	224.8E-12	295.3E-12	470.8E-12	611.5E-12	1.4E-09	1.6E-09	5.2E-09	2.8E-09	1.5E-09

ILOHDQ0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.6E-09	2.5E-09	2.5E-09	2.6E-09	2.5E-09	2.5E-09	2.5E-09	2.7E-09	2.3E-09
OFF samples									
SN587	2.0E-09	1.8E-09	2.5E-09	4.8E-09	6.6E-09	10.6E-09	19.8E-09	18.6E-09	6.5E-09
Statistics									
Min	2.0E-09	1.8E-09	2.5E-09	4.8E-09	6.6E-09	10.6E-09	19.8E-09	18.6E-09	6.5E-09
Max	2.0E-09	1.8E-09	2.5E-09	4.8E-09	6.6E-09	10.6E-09	19.8E-09	18.6E-09	6.5E-09
Average	2.0E-09	1.8E-09	2.5E-09	4.8E-09	6.6E-09	10.6E-09	19.8E-09	18.6E-09	6.5E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

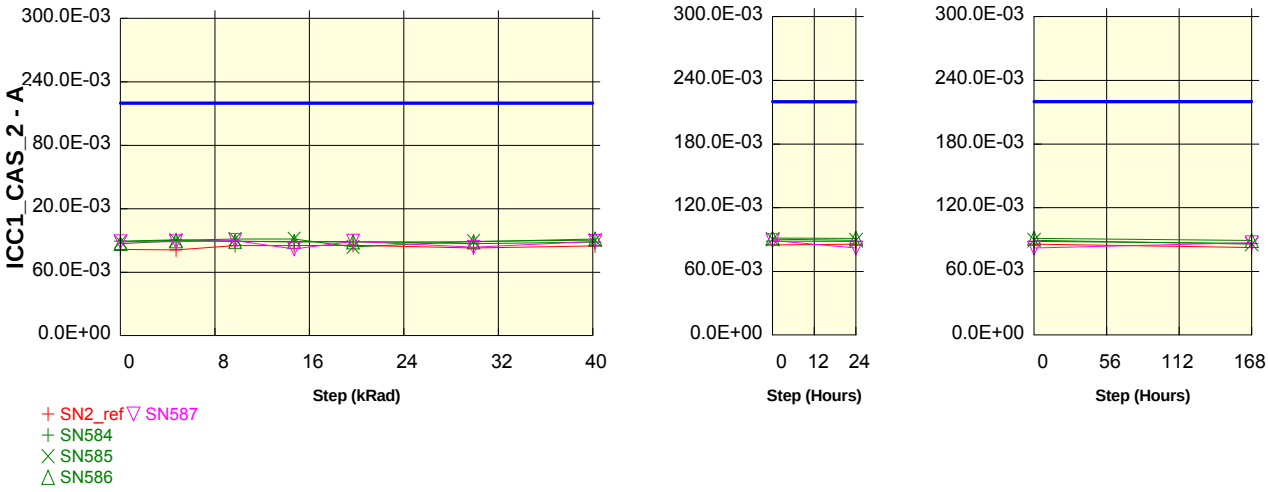
Test conditions : TID
Parameter : Operating Current CAS/ 3 : ICC1_CAS_3
Burst length = 1 Trc= min. CAS/=3
Unit : A
Spec Limit Max : 220.0E-03
Spec limits are represented in bold lines on the graphic.



ICC1_CAS_3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	125.4E-03	125.5E-03	144.8E-03	143.8E-03	143.1E-03	125.4E-03	144.1E-03	143.9E-03	131.0E-03
ON samples									
SN584	144.6E-03	144.1E-03	134.6E-03	141.9E-03	141.8E-03	140.5E-03	136.5E-03	136.2E-03	140.0E-03
SN585	145.1E-03	145.3E-03	144.1E-03	147.2E-03	126.5E-03	135.6E-03	133.4E-03	132.8E-03	136.3E-03
SN586	143.6E-03	142.9E-03	141.5E-03	143.1E-03	143.5E-03	139.9E-03	132.3E-03	132.6E-03	143.1E-03
Statistics									
Min	143.6E-03	142.9E-03	134.6E-03	141.9E-03	126.5E-03	135.6E-03	132.3E-03	132.6E-03	136.3E-03
Max	145.1E-03	145.3E-03	144.1E-03	147.2E-03	143.5E-03	140.5E-03	136.5E-03	136.2E-03	143.1E-03
Average	144.4E-03	144.1E-03	140.0E-03	144.1E-03	137.3E-03	138.7E-03	134.1E-03	133.9E-03	139.8E-03
Sigma	596.9E-06	959.3E-06	4.0E-03	2.3E-03	7.6E-03	2.2E-03	1.8E-03	1.7E-03	2.8E-03

ICC1_CAS_3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	125.4E-03	125.5E-03	144.8E-03	143.8E-03	143.1E-03	125.4E-03	144.1E-03	143.9E-03	131.0E-03
OFF samples									
SN587	148.1E-03	147.7E-03	147.8E-03	126.2E-03	144.0E-03	129.3E-03	139.4E-03	130.1E-03	142.5E-03
Statistics									
Min	148.1E-03	147.7E-03	147.8E-03	126.2E-03	144.0E-03	129.3E-03	139.4E-03	130.1E-03	142.5E-03
Max	148.1E-03	147.7E-03	147.8E-03	126.2E-03	144.0E-03	129.3E-03	139.4E-03	130.1E-03	142.5E-03
Average	148.1E-03	147.7E-03	147.8E-03	126.2E-03	144.0E-03	129.3E-03	139.4E-03	130.1E-03	142.5E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

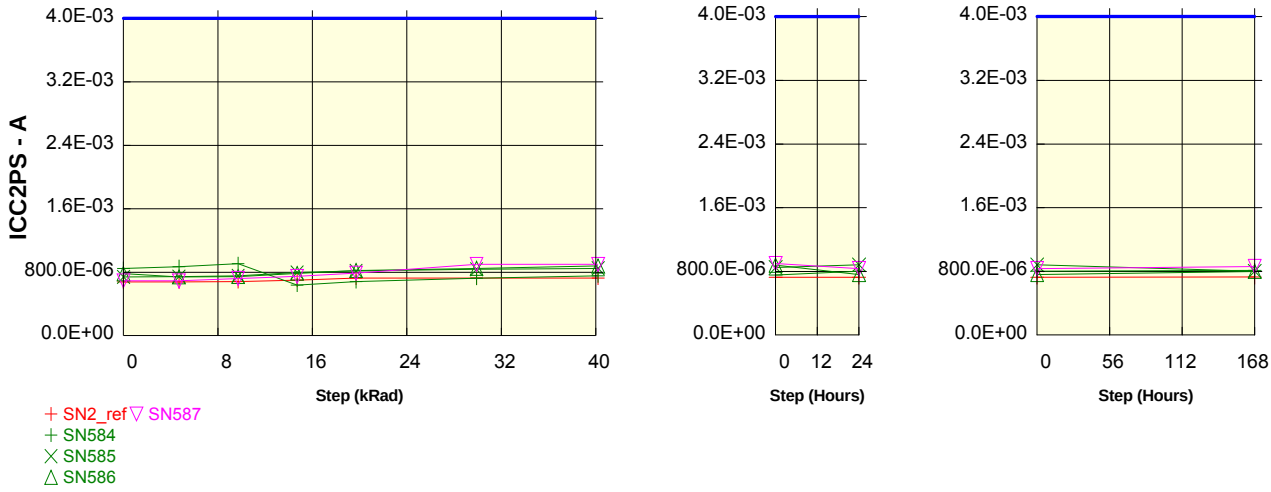
Test conditions : TID
Parameter : Operating Current CAS/ 2 : ICC1_CAS_2
Burst length = 1 Trc= min CAS/=2
Unit : A
Spec Limit Max : 220.0E-03
Spec limits are represented in bold lines on the graphic.



ICC1_CAS_2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	81.6E-03	81.0E-03	85.1E-03	85.3E-03	85.3E-03	82.9E-03	85.1E-03	85.6E-03	82.6E-03
ON samples									
SN584	89.4E-03	90.5E-03	89.3E-03	88.6E-03	89.2E-03	87.1E-03	88.5E-03	88.4E-03	86.5E-03
SN585	88.8E-03	90.2E-03	91.4E-03	91.6E-03	83.9E-03	89.2E-03	90.4E-03	89.4E-03	85.7E-03
SN586	87.1E-03	89.7E-03	89.1E-03	89.0E-03	88.7E-03	88.7E-03	91.4E-03	91.1E-03	89.0E-03
Statistics									
Min	87.1E-03	89.7E-03	89.1E-03	88.6E-03	83.9E-03	87.1E-03	88.5E-03	88.4E-03	85.7E-03
Max	89.4E-03	90.5E-03	91.4E-03	91.6E-03	89.2E-03	89.2E-03	91.4E-03	91.1E-03	89.0E-03
Average	88.4E-03	90.1E-03	90.0E-03	89.7E-03	87.2E-03	88.3E-03	90.1E-03	89.7E-03	87.1E-03
Sigma	995.6E-06	348.6E-06	1.0E-03	1.3E-03	2.4E-03	903.6E-06	1.2E-03	1.1E-03	1.4E-03

ICC1_CAS_2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	81.6E-03	81.0E-03	85.1E-03	85.3E-03	85.3E-03	82.9E-03	85.1E-03	85.6E-03	82.6E-03
OFF samples									
SN587	88.9E-03	88.8E-03	90.0E-03	82.1E-03	89.2E-03	83.6E-03	89.1E-03	82.1E-03	87.0E-03
Statistics									
Min	88.9E-03	88.8E-03	90.0E-03	82.1E-03	89.2E-03	83.6E-03	89.1E-03	82.1E-03	87.0E-03
Max	88.9E-03	88.8E-03	90.0E-03	82.1E-03	89.2E-03	83.6E-03	89.1E-03	82.1E-03	87.0E-03
Average	88.9E-03	88.8E-03	90.0E-03	82.1E-03	89.2E-03	83.6E-03	89.1E-03	82.1E-03	87.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

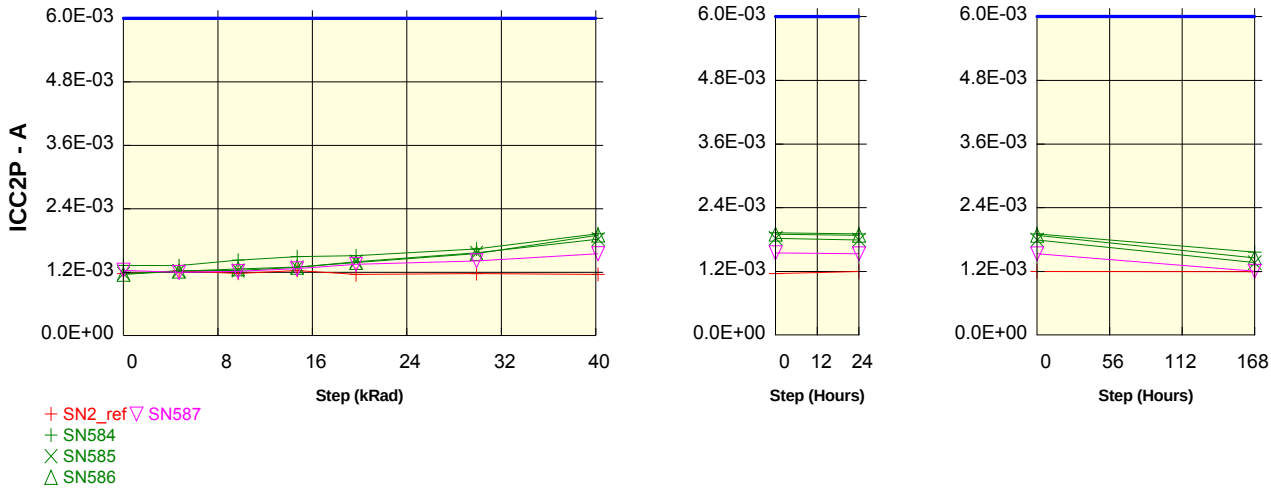
Test conditions : TID
Parameter : Standby current in power down (input signal stable) : ICC2PS
CKE = ViL Tck=8
Unit : A
Spec Limit Max : 4.0E-03
Spec limits are represented in bold lines on the graphic.



ICC2PS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	677.1E-06	677.3E-06	682.9E-06	699.0E-06	728.0E-06	728.0E-06	727.0E-06	726.0E-06	729.0E-06
ON samples									
SN584	846.9E-06	870.0E-06	907.3E-06	638.0E-06	683.0E-06	723.0E-06	754.0E-06	802.0E-06	812.0E-06
SN585	741.0E-06	743.0E-06	754.0E-06	795.0E-06	816.0E-06	838.0E-06	849.0E-06	883.0E-06	802.0E-06
SN586	781.0E-06	740.4E-06	743.0E-06	785.0E-06	821.6E-06	849.0E-06	877.7E-06	760.0E-06	800.0E-06
Statistics									
Min	741.0E-06	740.4E-06	743.0E-06	638.0E-06	683.0E-06	723.0E-06	754.0E-06	760.0E-06	800.0E-06
Max	846.9E-06	870.0E-06	907.3E-06	795.0E-06	821.6E-06	849.0E-06	877.7E-06	883.0E-06	812.0E-06
Average	789.6E-06	784.5E-06	801.4E-06	739.3E-06	773.5E-06	803.3E-06	826.9E-06	815.0E-06	804.7E-06
Sigma	43.6E-06	60.5E-06	75.0E-06	71.8E-06	64.1E-06	57.0E-06	52.9E-06	51.0E-06	5.2E-06

ICC2PS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	677.1E-06	677.3E-06	682.9E-06	699.0E-06	728.0E-06	728.0E-06	727.0E-06	726.0E-06	729.0E-06
OFF samples									
SN587	692.5E-06	690.5E-06	720.8E-06	748.2E-06	788.8E-06	899.2E-06	899.4E-06	835.0E-06	863.0E-06
Statistics									
Min	692.5E-06	690.5E-06	720.8E-06	748.2E-06	788.8E-06	899.2E-06	899.4E-06	835.0E-06	863.0E-06
Max	692.5E-06	690.5E-06	720.8E-06	748.2E-06	788.8E-06	899.2E-06	899.4E-06	835.0E-06	863.0E-06
Average	692.5E-06	690.5E-06	720.8E-06	748.2E-06	788.8E-06	899.2E-06	899.4E-06	835.0E-06	863.0E-06
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

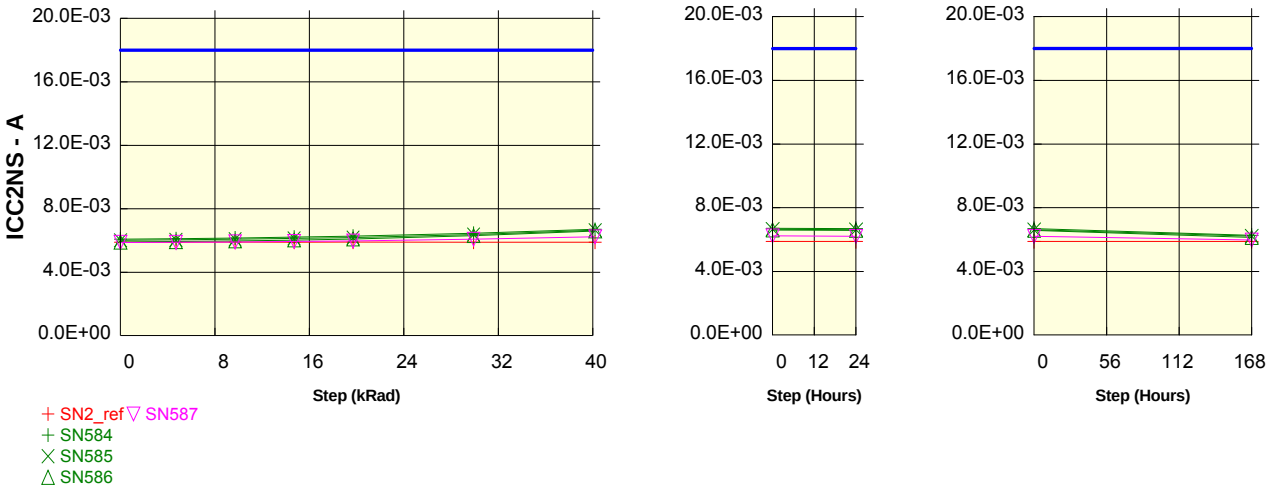
Test conditions : TID
Parameter : Standby current in power down : ICC2P
CKE = ViL Tck=12ns
Unit : A
Spec Limit Max : 6.0E-03
Spec limits are represented in bold lines on the graphic.



ICC2P	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03
ON samples									
SN584	1.3E-03	1.3E-03	1.4E-03	1.5E-03	1.5E-03	1.6E-03	1.9E-03	1.9E-03	1.6E-03
SN585	1.2E-03	1.2E-03	1.2E-03	1.3E-03	1.4E-03	1.6E-03	1.8E-03	1.8E-03	1.4E-03
SN586	1.2E-03	1.2E-03	1.3E-03	1.3E-03	1.4E-03	1.6E-03	1.9E-03	1.9E-03	1.5E-03
Statistics									
Min	1.2E-03	1.2E-03	1.2E-03	1.3E-03	1.4E-03	1.6E-03	1.8E-03	1.8E-03	1.4E-03
Max	1.3E-03	1.3E-03	1.4E-03	1.5E-03	1.5E-03	1.6E-03	1.9E-03	1.9E-03	1.6E-03
Average	1.2E-03	1.3E-03	1.3E-03	1.4E-03	1.4E-03	1.6E-03	1.9E-03	1.9E-03	1.5E-03
Sigma	76.8E-06	48.8E-06	85.0E-06	96.0E-06	56.8E-06	37.1E-06	44.3E-06	50.6E-06	82.2E-06

ICC2P	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03	1.2E-03
OFF samples									
SN587	1.2E-03	1.2E-03	1.2E-03	1.3E-03	1.3E-03	1.4E-03	1.6E-03	1.5E-03	1.2E-03
Statistics									
Min	1.2E-03	1.2E-03	1.2E-03	1.3E-03	1.3E-03	1.4E-03	1.6E-03	1.5E-03	1.2E-03
Max	1.2E-03	1.2E-03	1.2E-03	1.3E-03	1.3E-03	1.4E-03	1.6E-03	1.5E-03	1.2E-03
Average	1.2E-03	1.2E-03	1.2E-03	1.3E-03	1.3E-03	1.4E-03	1.6E-03	1.5E-03	1.2E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

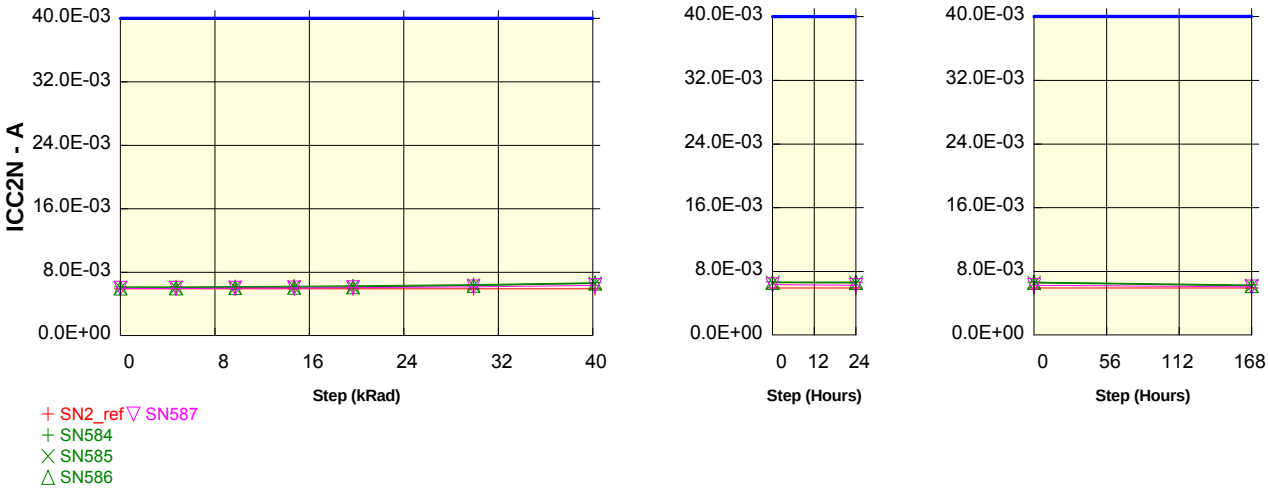
Test conditions : TID
Parameter : Standby current in non power down (input signal stable) : ICC2NS
CKE = ViH Tck=8
Unit : A
Spec Limit Max : 18.0E-03
Spec limits are represented in bold lines on the graphic.



ICC2NS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03
ON samples									
SN584	6.1E-03	6.1E-03	6.2E-03	6.2E-03	6.3E-03	6.5E-03	6.7E-03	6.7E-03	6.3E-03
SN585	6.0E-03	6.0E-03	6.1E-03	6.1E-03	6.2E-03	6.4E-03	6.6E-03	6.6E-03	6.2E-03
SN586	5.9E-03	5.9E-03	6.0E-03	6.0E-03	6.1E-03	6.3E-03	6.6E-03	6.6E-03	6.1E-03
Statistics									
Min	5.9E-03	5.9E-03	6.0E-03	6.0E-03	6.1E-03	6.3E-03	6.6E-03	6.6E-03	6.1E-03
Max	6.1E-03	6.1E-03	6.2E-03	6.2E-03	6.3E-03	6.5E-03	6.7E-03	6.7E-03	6.3E-03
Average	6.0E-03	6.0E-03	6.1E-03	6.1E-03	6.2E-03	6.4E-03	6.7E-03	6.6E-03	6.2E-03
Sigma	75.6E-06	75.1E-06	71.5E-06	74.4E-06	70.3E-06	60.5E-06	38.5E-06	40.0E-06	58.5E-06

ICC2NS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03
OFF samples									
SN587	5.9E-03	5.9E-03	5.9E-03	5.9E-03	6.0E-03	6.1E-03	6.2E-03	6.2E-03	6.0E-03
Statistics									
Min	5.9E-03	5.9E-03	5.9E-03	5.9E-03	6.0E-03	6.1E-03	6.2E-03	6.2E-03	6.0E-03
Max	5.9E-03	5.9E-03	5.9E-03	5.9E-03	6.0E-03	6.1E-03	6.2E-03	6.2E-03	6.0E-03
Average	5.9E-03	5.9E-03	5.9E-03	5.9E-03	6.0E-03	6.1E-03	6.2E-03	6.2E-03	6.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

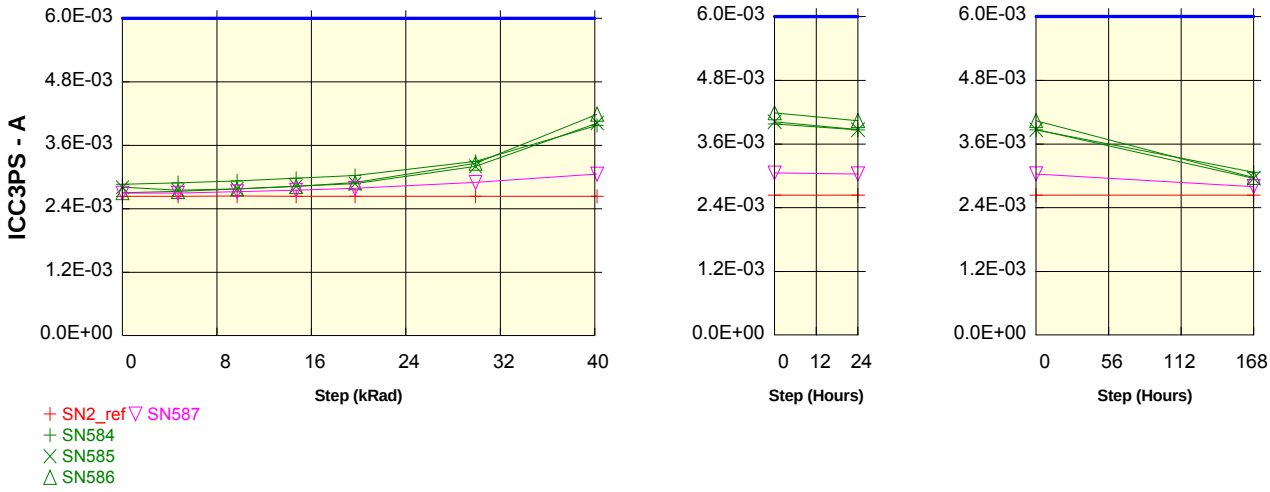
Test conditions : TID
Parameter : Standby current in non power down : ICC2N
CKE.CS/ = ViH Tck=12ns
Unit : A
Spec Limit Max : 40.0E-03
Spec limits are represented in bold lines on the graphic.



ICC2N	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03
ON samples									
SN584	6.1E-03	6.2E-03	6.2E-03	6.2E-03	6.3E-03	6.4E-03	6.7E-03	6.7E-03	6.3E-03
SN585	6.0E-03	6.0E-03	6.1E-03	6.1E-03	6.1E-03	6.3E-03	6.6E-03	6.5E-03	6.2E-03
SN586	6.0E-03	6.0E-03	6.1E-03	6.1E-03	6.1E-03	6.3E-03	6.6E-03	6.6E-03	6.2E-03
Statistics									
Min	6.0E-03	6.0E-03	6.1E-03	6.1E-03	6.1E-03	6.3E-03	6.6E-03	6.5E-03	6.2E-03
Max	6.1E-03	6.2E-03	6.2E-03	6.2E-03	6.3E-03	6.4E-03	6.7E-03	6.7E-03	6.3E-03
Average	6.1E-03	6.1E-03	6.1E-03	6.1E-03	6.2E-03	6.4E-03	6.6E-03	6.6E-03	6.2E-03
Sigma	62.3E-06	63.3E-06	63.3E-06	64.2E-06	64.5E-06	55.8E-06	41.7E-06	48.0E-06	46.9E-06

ICC2N	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03	5.9E-03
OFF samples									
SN587	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.1E-03	6.3E-03	6.3E-03	6.0E-03
Statistics									
Min	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.1E-03	6.3E-03	6.3E-03	6.0E-03
Max	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.1E-03	6.3E-03	6.3E-03	6.0E-03
Average	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.0E-03	6.1E-03	6.3E-03	6.3E-03	6.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

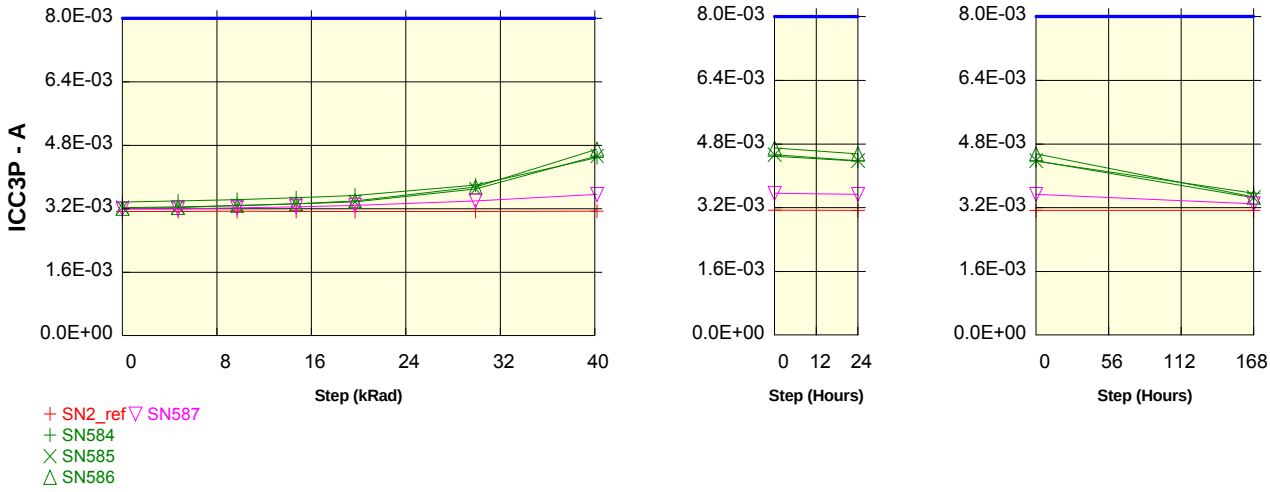
Test conditions : TID
Parameter : Active Standby current in power down (input signal stable) : ICC3PS
CKE = ViL Tck=8
Unit : A
Spec Limit Max : 6.0E-03
Spec limits are represented in bold lines on the graphic.



ICC3PS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03
ON samples									
SN584	2.9E-03	2.9E-03	2.9E-03	3.0E-03	3.0E-03	3.3E-03	4.0E-03	3.9E-03	3.1E-03
SN585	2.8E-03	2.8E-03	2.8E-03	2.8E-03	2.9E-03	3.2E-03	4.0E-03	3.9E-03	3.0E-03
SN586	2.7E-03	2.7E-03	2.8E-03	2.8E-03	2.9E-03	3.3E-03	4.2E-03	4.0E-03	3.0E-03
Statistics									
Min	2.7E-03	2.7E-03	2.8E-03	2.8E-03	2.9E-03	3.2E-03	4.0E-03	3.9E-03	3.0E-03
Max	2.9E-03	2.9E-03	2.9E-03	3.0E-03	3.0E-03	3.3E-03	4.2E-03	4.0E-03	3.1E-03
Average	2.8E-03	2.8E-03	2.8E-03	2.9E-03	2.9E-03	3.3E-03	4.1E-03	3.9E-03	3.0E-03
Sigma	67.0E-06	72.8E-06	71.2E-06	72.4E-06	69.7E-06	39.2E-06	91.5E-06	80.9E-06	49.8E-06

ICC3PS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03	2.6E-03
OFF samples									
SN587	2.7E-03	2.7E-03	2.7E-03	2.8E-03	2.8E-03	2.9E-03	3.1E-03	3.0E-03	2.8E-03
Statistics									
Min	2.7E-03	2.7E-03	2.7E-03	2.8E-03	2.8E-03	2.9E-03	3.1E-03	3.0E-03	2.8E-03
Max	2.7E-03	2.7E-03	2.7E-03	2.8E-03	2.8E-03	2.9E-03	3.1E-03	3.0E-03	2.8E-03
Average	2.7E-03	2.7E-03	2.7E-03	2.8E-03	2.8E-03	2.9E-03	3.1E-03	3.0E-03	2.8E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

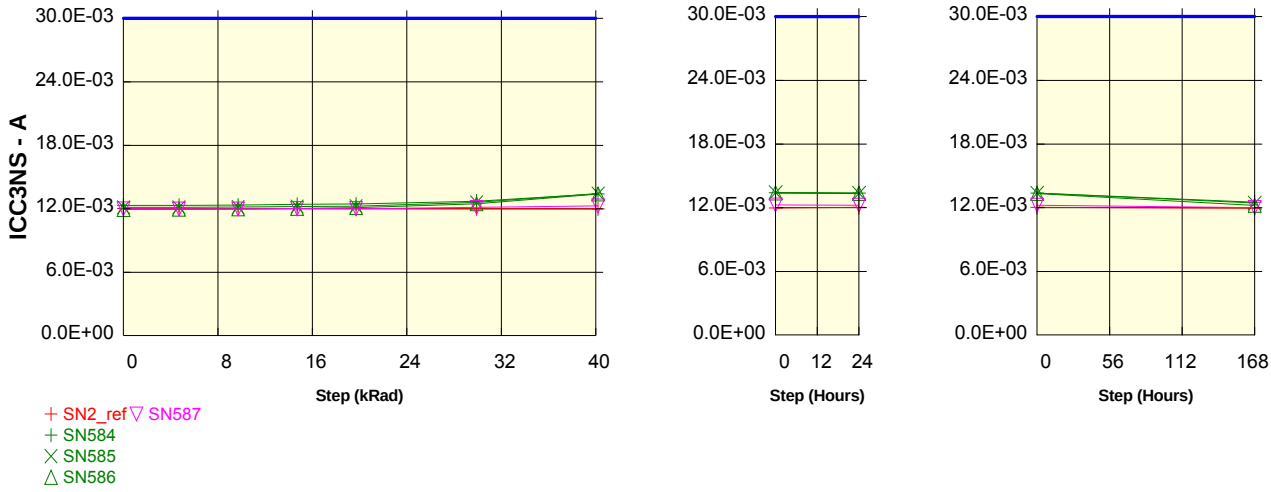
Test conditions : TID
Parameter : Active Standby current in power down : ICC3P
CKE = ViL Tck=12ns
Unit : A
Spec Limit Max : 8.0E-03
Spec limits are represented in bold lines on the graphic.



ICC3P	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03
ON samples									
SN584	3.4E-03	3.4E-03	3.4E-03	3.5E-03	3.5E-03	3.8E-03	4.5E-03	4.4E-03	3.6E-03
SN585	3.2E-03	3.3E-03	3.3E-03	3.3E-03	3.4E-03	3.7E-03	4.5E-03	4.4E-03	3.5E-03
SN586	3.2E-03	3.2E-03	3.3E-03	3.3E-03	3.4E-03	3.8E-03	4.7E-03	4.6E-03	3.5E-03
Statistics									
Min	3.2E-03	3.2E-03	3.3E-03	3.3E-03	3.4E-03	3.7E-03	4.5E-03	4.4E-03	3.5E-03
Max	3.4E-03	3.4E-03	3.4E-03	3.5E-03	3.5E-03	3.8E-03	4.7E-03	4.6E-03	3.6E-03
Average	3.3E-03	3.3E-03	3.3E-03	3.4E-03	3.4E-03	3.8E-03	4.6E-03	4.4E-03	3.5E-03
Sigma	70.2E-06	73.7E-06	71.7E-06	72.8E-06	71.9E-06	40.4E-06	89.8E-06	82.8E-06	46.8E-06

ICC3P	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03	3.1E-03
OFF samples									
SN587	3.2E-03	3.2E-03	3.2E-03	3.3E-03	3.3E-03	3.4E-03	3.6E-03	3.5E-03	3.3E-03
Statistics									
Min	3.2E-03	3.2E-03	3.2E-03	3.3E-03	3.3E-03	3.4E-03	3.6E-03	3.5E-03	3.3E-03
Max	3.2E-03	3.2E-03	3.2E-03	3.3E-03	3.3E-03	3.4E-03	3.6E-03	3.5E-03	3.3E-03
Average	3.2E-03	3.2E-03	3.2E-03	3.3E-03	3.3E-03	3.4E-03	3.6E-03	3.5E-03	3.3E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	41.2E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

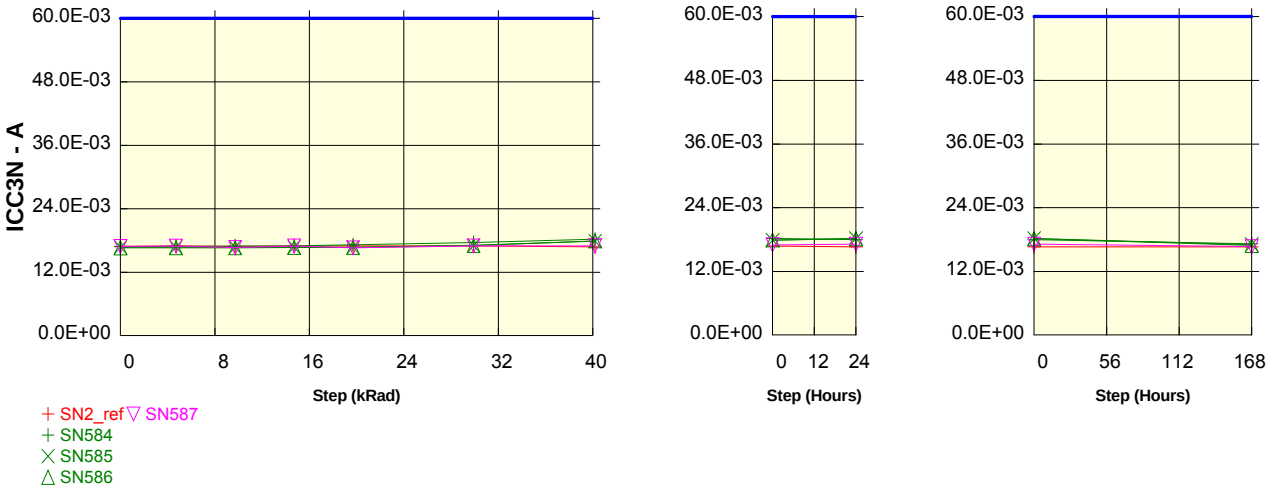
Test conditions : TID
Parameter : Active Standby current in non power down (input signal stable) : ICC3NS
CKE = ViH Tck=8
Unit : A
Spec Limit Max : 30.0E-03
Spec limits are represented in bold lines on the graphic.



ICC3NS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03
ON samples									
SN584	12.3E-03	12.3E-03	12.3E-03	12.4E-03	12.4E-03	12.7E-03	13.4E-03	13.4E-03	12.5E-03
SN585	12.1E-03	12.1E-03	12.2E-03	12.2E-03	12.2E-03	12.6E-03	13.4E-03	13.4E-03	12.5E-03
SN586	11.9E-03	12.0E-03	12.0E-03	12.0E-03	12.1E-03	12.5E-03	13.4E-03	13.3E-03	12.2E-03
Statistics									
Min	11.9E-03	12.0E-03	12.0E-03	12.0E-03	12.1E-03	12.5E-03	13.4E-03	13.3E-03	12.2E-03
Max	12.3E-03	12.3E-03	12.3E-03	12.4E-03	12.4E-03	12.7E-03	13.4E-03	13.4E-03	12.5E-03
Average	12.1E-03	12.1E-03	12.2E-03	12.2E-03	12.3E-03	12.6E-03	13.4E-03	13.4E-03	12.4E-03
Sigma	156.0E-06	149.8E-06	147.5E-06	154.1E-06	137.7E-06	99.6E-06	13.6E-06	17.2E-06	136.8E-06

ICC3NS	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03
OFF samples									
SN587	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.1E-03	12.3E-03	12.2E-03	12.0E-03
Statistics									
Min	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.1E-03	12.3E-03	12.2E-03	12.0E-03
Max	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.1E-03	12.3E-03	12.2E-03	12.0E-03
Average	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.0E-03	12.1E-03	12.3E-03	12.2E-03	12.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

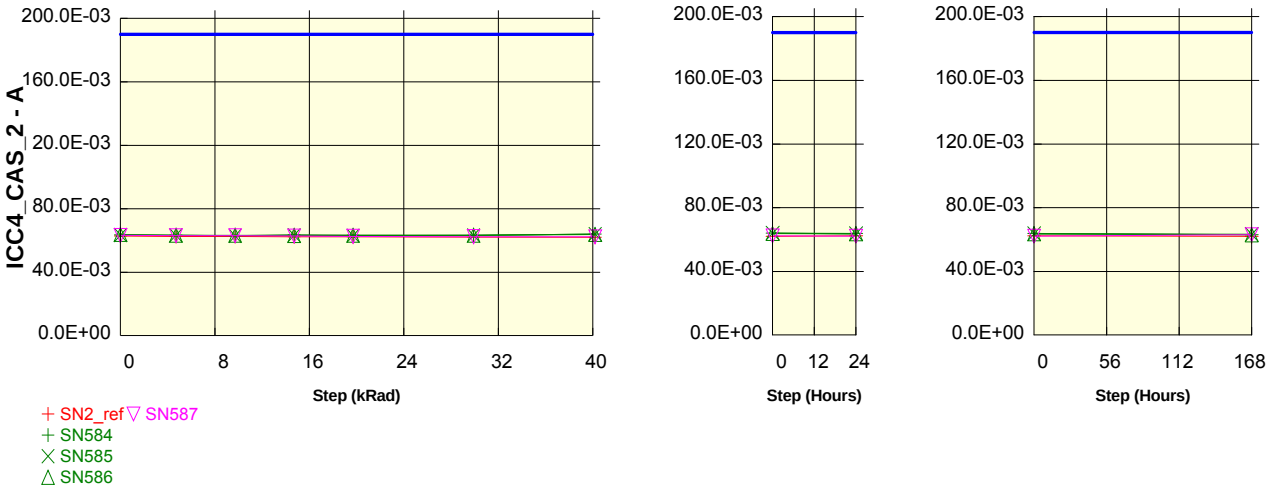
Test conditions : TID
Parameter : Active Standby current in non power down : ICC3N
CKE.CS/ = ViH Tck=12ns
Unit : A
Spec Limit Max : 60.0E-03
Spec limits are represented in bold lines on the graphic.



ICC3N	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	16.9E-03	17.0E-03	16.9E-03	17.0E-03	17.0E-03	17.0E-03	16.8E-03	16.6E-03	16.6E-03
ON samples									
SN584	16.8E-03	16.9E-03	17.0E-03	17.0E-03	17.2E-03	17.6E-03	18.2E-03	18.0E-03	17.2E-03
SN585	16.7E-03	16.7E-03	16.7E-03	16.7E-03	16.7E-03	17.1E-03	17.9E-03	18.2E-03	17.1E-03
SN586	16.6E-03	16.6E-03	16.6E-03	16.7E-03	16.7E-03	17.0E-03	17.9E-03	18.2E-03	16.9E-03
Statistics									
Min	16.6E-03	16.6E-03	16.6E-03	16.7E-03	16.7E-03	17.0E-03	17.9E-03	18.0E-03	16.9E-03
Max	16.8E-03	16.9E-03	17.0E-03	17.0E-03	17.2E-03	17.6E-03	18.2E-03	18.2E-03	17.2E-03
Average	16.7E-03	16.8E-03	16.8E-03	16.8E-03	16.9E-03	17.2E-03	18.0E-03	18.1E-03	17.0E-03
Sigma	92.1E-06	110.1E-06	144.0E-06	128.9E-06	221.2E-06	255.8E-06	164.2E-06	101.0E-06	121.1E-06

ICC3N	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	16.9E-03	17.0E-03	16.9E-03	17.0E-03	17.0E-03	17.0E-03	16.8E-03	16.6E-03	16.6E-03
OFF samples									
SN587	16.9E-03	16.9E-03	16.6E-03	17.0E-03	16.6E-03	17.0E-03	17.0E-03	17.2E-03	16.7E-03
Statistics									
Min	16.9E-03	16.9E-03	16.6E-03	17.0E-03	16.6E-03	17.0E-03	17.0E-03	17.2E-03	16.7E-03
Max	16.9E-03	16.9E-03	16.6E-03	17.0E-03	16.6E-03	17.0E-03	17.0E-03	17.2E-03	16.7E-03
Average	16.9E-03	16.9E-03	16.6E-03	17.0E-03	16.6E-03	17.0E-03	17.0E-03	17.2E-03	16.7E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

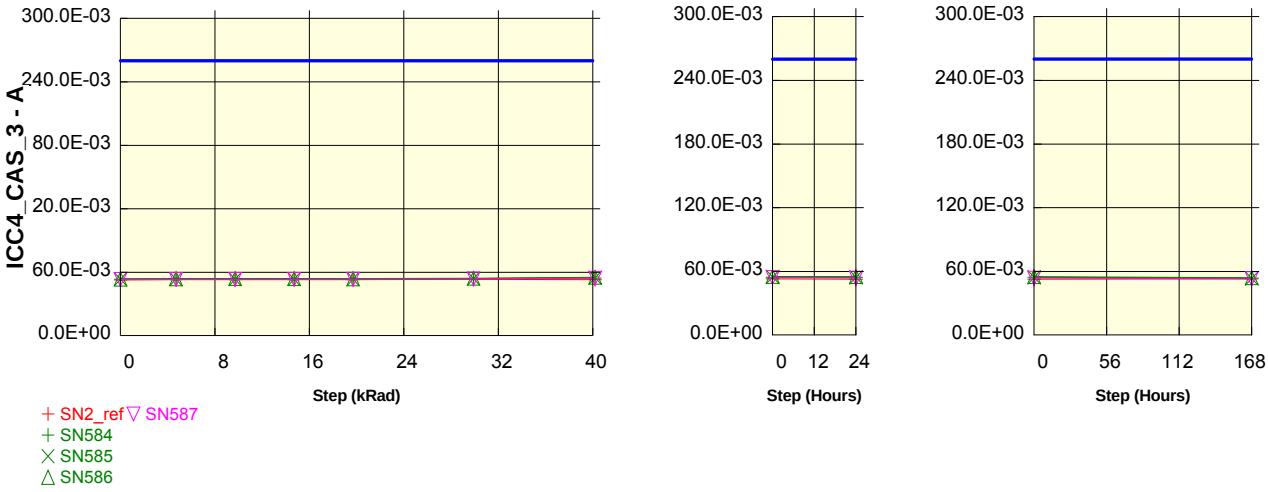
Test conditions : TID
Parameter : Burst operating Current CAS/ 2 : ICC4_CAS_2
Tck=min Burst Length=4 CAS/=2
Unit : A
Spec Limit Max : 190.0E-03
Spec limits are represented in bold lines on the graphic.



ICC4_CAS_2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	62.8E-03	62.6E-03	62.6E-03	62.4E-03	62.4E-03	62.2E-03	62.0E-03	62.3E-03	62.0E-03
ON samples									
SN584	63.6E-03	63.4E-03	63.1E-03	63.5E-03	63.4E-03	63.3E-03	64.0E-03	63.9E-03	63.1E-03
SN585	63.4E-03	63.3E-03	63.0E-03	63.3E-03	63.0E-03	63.2E-03	64.0E-03	63.6E-03	63.3E-03
SN586	63.7E-03	63.3E-03	63.3E-03	63.1E-03	63.2E-03	63.3E-03	63.7E-03	63.6E-03	63.0E-03
Statistics									
Min	63.4E-03	63.3E-03	63.0E-03	63.1E-03	63.0E-03	63.2E-03	63.7E-03	63.6E-03	63.0E-03
Max	63.7E-03	63.4E-03	63.3E-03	63.5E-03	63.4E-03	63.3E-03	64.0E-03	63.9E-03	63.3E-03
Average	63.6E-03	63.3E-03	63.1E-03	63.3E-03	63.2E-03	63.3E-03	63.9E-03	63.7E-03	63.1E-03
Sigma	101.3E-06	67.1E-06	122.2E-06	140.6E-06	149.8E-06	33.9E-06	154.4E-06	143.9E-06	144.6E-06

ICC4_CAS_2	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	62.8E-03	62.6E-03	62.6E-03	62.4E-03	62.4E-03	62.2E-03	62.0E-03	62.3E-03	62.0E-03
OFF samples									
SN587	63.1E-03	63.0E-03	63.1E-03	62.9E-03	62.6E-03	62.4E-03	62.4E-03	62.1E-03	63.0E-03
Statistics									
Min	63.1E-03	63.0E-03	63.1E-03	62.9E-03	62.6E-03	62.4E-03	62.4E-03	62.1E-03	63.0E-03
Max	63.1E-03	63.0E-03	63.1E-03	62.9E-03	62.6E-03	62.4E-03	62.4E-03	62.1E-03	63.0E-03
Average	63.1E-03	63.0E-03	63.1E-03	62.9E-03	62.6E-03	62.4E-03	62.4E-03	62.1E-03	63.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

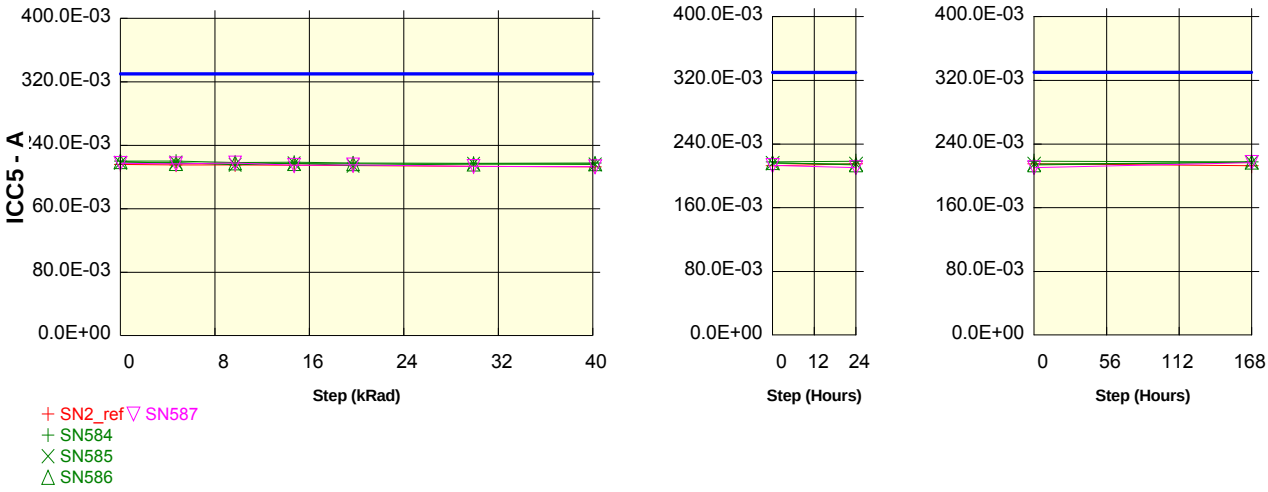
Test conditions : TID
Parameter : Operating Current CAS/ 3 : ICC4_CAS_3
Tck=min Burst Length=4 CAS/=3
Unit : A
Spec Limit Max : 260.0E-03
Spec limits are represented in bold lines on the graphic.



ICC4_CAS_3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	52.7E-03	52.8E-03	52.8E-03	53.0E-03	52.9E-03	53.1E-03	52.9E-03	52.8E-03	52.9E-03
ON samples									
SN584	53.5E-03	53.7E-03	53.7E-03	53.5E-03	53.5E-03	53.9E-03	54.5E-03	54.4E-03	53.6E-03
SN585	53.5E-03	53.6E-03	53.4E-03	53.4E-03	53.5E-03	54.0E-03	54.8E-03	54.4E-03	53.5E-03
SN586	53.6E-03	53.9E-03	53.9E-03	53.9E-03	53.9E-03	54.2E-03	55.3E-03	55.1E-03	53.9E-03
Statistics									
Min	53.5E-03	53.6E-03	53.4E-03	53.4E-03	53.5E-03	53.9E-03	54.5E-03	54.4E-03	53.5E-03
Max	53.6E-03	53.9E-03	53.9E-03	53.9E-03	53.9E-03	54.2E-03	55.3E-03	55.1E-03	53.9E-03
Average	53.5E-03	53.7E-03	53.7E-03	53.6E-03	53.6E-03	54.0E-03	54.9E-03	54.7E-03	53.7E-03
Sigma	70.4E-06	93.9E-06	205.3E-06	236.2E-06	169.0E-06	134.9E-06	338.5E-06	318.9E-06	174.0E-06

ICC4_CAS_3	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	52.7E-03	52.8E-03	52.8E-03	53.0E-03	52.9E-03	53.1E-03	52.9E-03	52.8E-03	52.9E-03
OFF samples									
SN587	53.1E-03	53.2E-03	53.2E-03	53.2E-03	53.4E-03	53.7E-03	54.2E-03	53.6E-03	53.0E-03
Statistics									
Min	53.1E-03	53.2E-03	53.2E-03	53.2E-03	53.4E-03	53.7E-03	54.2E-03	53.6E-03	53.0E-03
Max	53.1E-03	53.2E-03	53.2E-03	53.2E-03	53.4E-03	53.7E-03	54.2E-03	53.6E-03	53.0E-03
Average	53.1E-03	53.2E-03	53.2E-03	53.2E-03	53.4E-03	53.7E-03	54.2E-03	53.6E-03	53.0E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

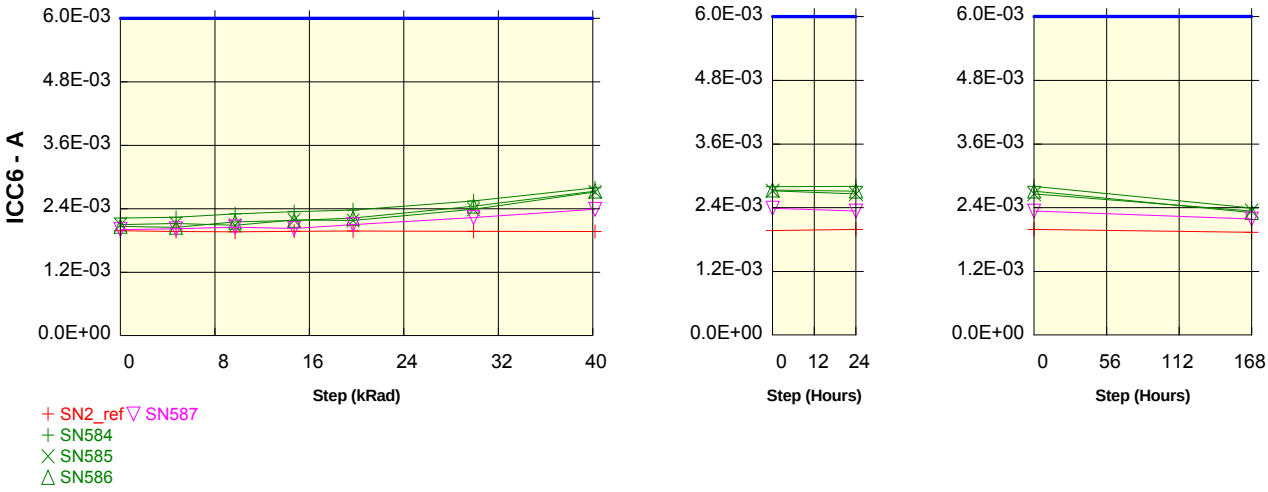
Test conditions : TID
Parameter : Refresh Current : ICC5
Trc=min
Unit : A
Spec Limit Max : 330.0E-03
Spec limits are represented in bold lines on the graphic.



ICC5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	215.8E-03	215.1E-03	215.3E-03	214.7E-03	214.4E-03	213.3E-03	212.8E-03	215.2E-03	212.7E-03
ON samples									
SN584	220.2E-03	220.1E-03	218.4E-03	218.5E-03	217.8E-03	217.3E-03	217.6E-03	218.5E-03	217.5E-03
SN585	217.9E-03	218.3E-03	215.6E-03	217.3E-03	214.4E-03	216.5E-03	215.9E-03	214.9E-03	216.9E-03
SN586	219.6E-03	217.0E-03	217.8E-03	216.9E-03	216.7E-03	216.3E-03	216.7E-03	213.8E-03	217.4E-03
Statistics									
Min	217.9E-03	217.0E-03	215.6E-03	216.9E-03	214.4E-03	216.3E-03	215.9E-03	213.8E-03	216.9E-03
Max	220.2E-03	220.1E-03	218.4E-03	218.5E-03	217.8E-03	217.3E-03	217.6E-03	218.5E-03	217.5E-03
Average	219.2E-03	218.5E-03	217.3E-03	217.6E-03	216.3E-03	216.7E-03	216.7E-03	215.7E-03	217.3E-03
Sigma	959.4E-06	1.2E-03	1.2E-03	686.7E-06	1.4E-03	400.9E-06	691.9E-06	2.0E-03	257.9E-06

ICC5	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	215.8E-03	215.1E-03	215.3E-03	214.7E-03	214.4E-03	213.3E-03	212.8E-03	215.2E-03	212.7E-03
OFF samples									
SN587	217.3E-03	216.5E-03	217.7E-03	214.8E-03	215.1E-03	213.6E-03	213.0E-03	210.3E-03	216.7E-03
Statistics									
Min	217.3E-03	216.5E-03	217.7E-03	214.8E-03	215.1E-03	213.6E-03	213.0E-03	210.3E-03	216.7E-03
Max	217.3E-03	216.5E-03	217.7E-03	214.8E-03	215.1E-03	213.6E-03	213.0E-03	210.3E-03	216.7E-03
Average	217.3E-03	216.5E-03	217.7E-03	214.8E-03	215.1E-03	213.6E-03	213.0E-03	210.3E-03	216.7E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

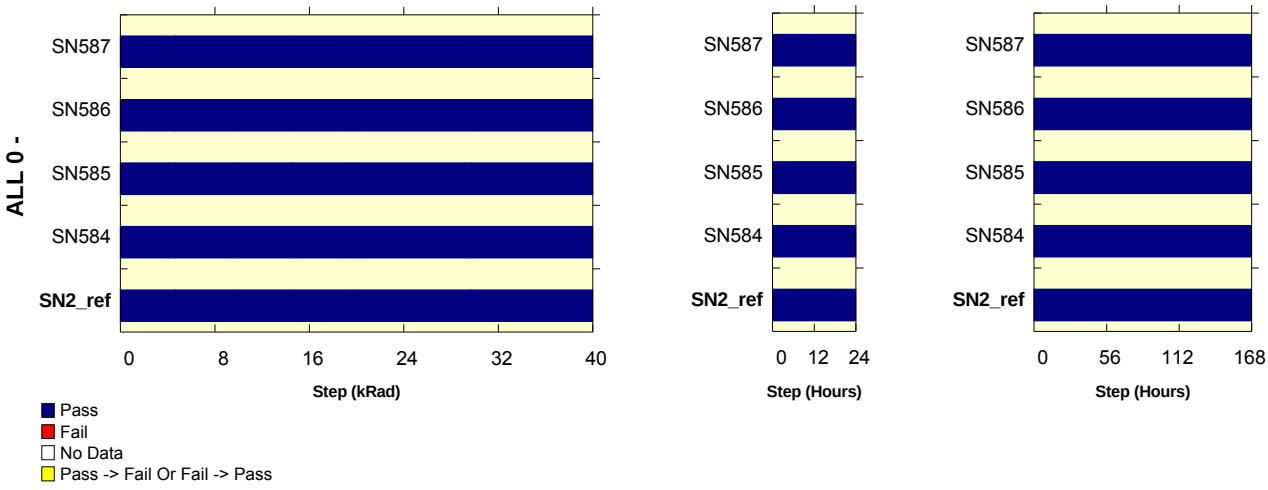
Test conditions : TID
Parameter : Self Refresh Current : ICC6
VIH = VCC – 0.2 V Vil = 0.2 V
Unit : A
Spec Limit Max : 6.0E-03
Spec limits are represented in bold lines on the graphic.



ICC6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	1.9E-03
ON samples									
SN584	2.2E-03	2.2E-03	2.3E-03	2.3E-03	2.4E-03	2.5E-03	2.8E-03	2.8E-03	2.4E-03
SN585	2.1E-03	2.1E-03	2.1E-03	2.2E-03	2.2E-03	2.4E-03	2.7E-03	2.7E-03	2.3E-03
SN586	2.1E-03	2.0E-03	2.1E-03	2.2E-03	2.2E-03	2.5E-03	2.7E-03	2.7E-03	2.3E-03
Statistics									
Min	2.1E-03	2.0E-03	2.1E-03	2.2E-03	2.2E-03	2.4E-03	2.7E-03	2.7E-03	2.3E-03
Max	2.2E-03	2.2E-03	2.3E-03	2.3E-03	2.4E-03	2.5E-03	2.8E-03	2.8E-03	2.4E-03
Average	2.1E-03	2.1E-03	2.2E-03	2.2E-03	2.3E-03	2.5E-03	2.8E-03	2.7E-03	2.3E-03
Sigma	66.7E-06	79.2E-06	90.2E-06	77.6E-06	86.0E-06	64.8E-06	33.0E-06	58.7E-06	36.4E-06

ICC6	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	2.0E-03	1.9E-03
OFF samples									
SN587	2.0E-03	2.0E-03	2.1E-03	2.0E-03	2.1E-03	2.2E-03	2.4E-03	2.3E-03	2.2E-03
Statistics									
Min	2.0E-03	2.0E-03	2.1E-03	2.0E-03	2.1E-03	2.2E-03	2.4E-03	2.3E-03	2.2E-03
Max	2.0E-03	2.0E-03	2.1E-03	2.0E-03	2.1E-03	2.2E-03	2.4E-03	2.3E-03	2.2E-03
Average	2.0E-03	2.0E-03	2.1E-03	2.0E-03	2.1E-03	2.2E-03	2.4E-03	2.3E-03	2.2E-03
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

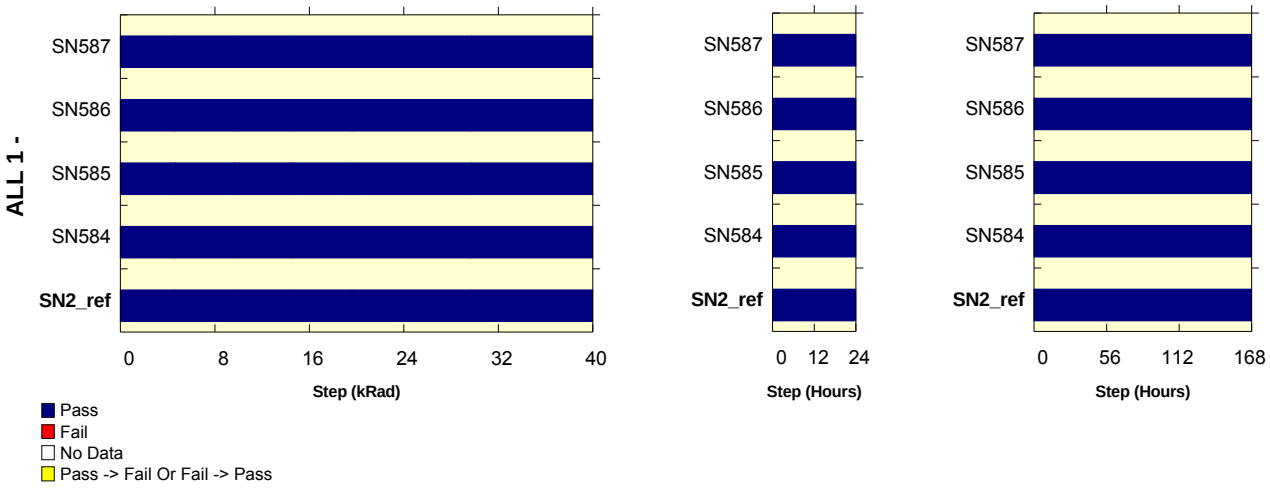
Test conditions : TID
Parameter : ALL 0 : ALL 0
Write and verify ALL 0 in all memory
Unit :
No spec limit specified.



ALL 0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
ON samples									
SN584	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN585	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN586	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

ALL 0	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
OFF samples									
SN587	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

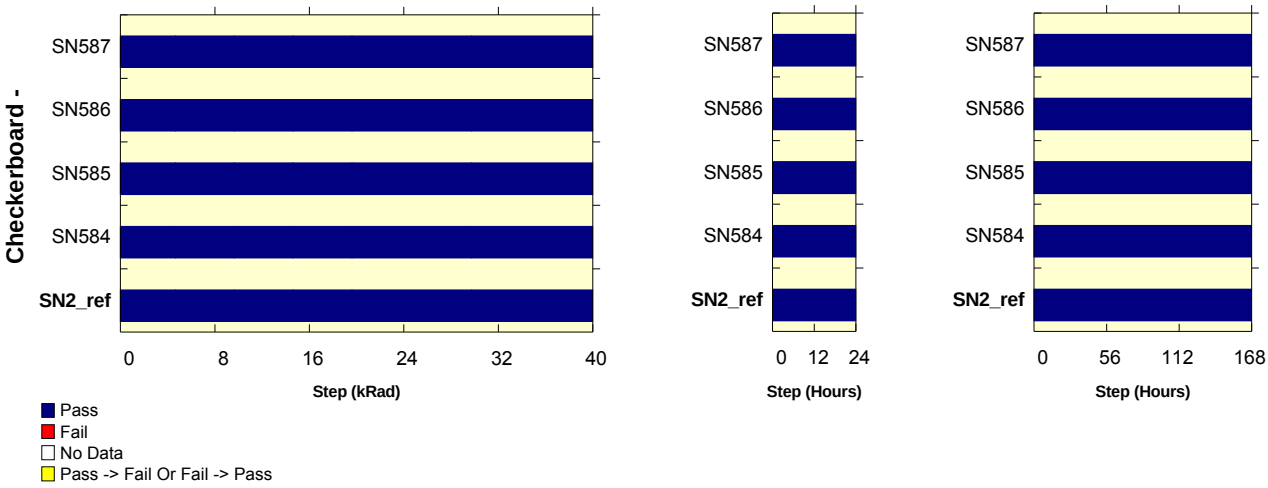
Test conditions : TID
Parameter : ALL 1 : ALL 1
Write and verify ALL 1 in all memory
Unit :
No spec limit specified.



ALL 1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
ON samples									
SN584	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN585	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN586	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

ALL 1	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
OFF samples									
SN587	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

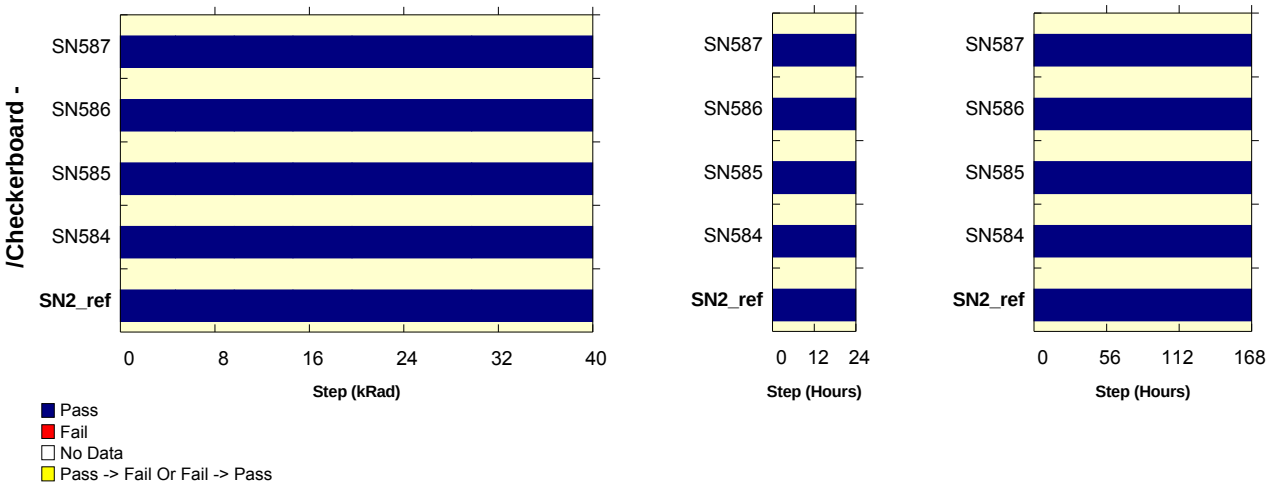
Test conditions : TID
Parameter : Checkerboard : Checkerboard
Write and verify Checkerboard in all memory
Unit :
No spec limit specified.



Checkerboard	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
ON samples									
SN584	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN585	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN586	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

Checkerboard	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
OFF samples									
SN587	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

Test conditions : TID
Parameter : /Checkerboard : /Checkerboard
Write and verify /Checkerboard in all memory
Unit :
No spec limit specified.

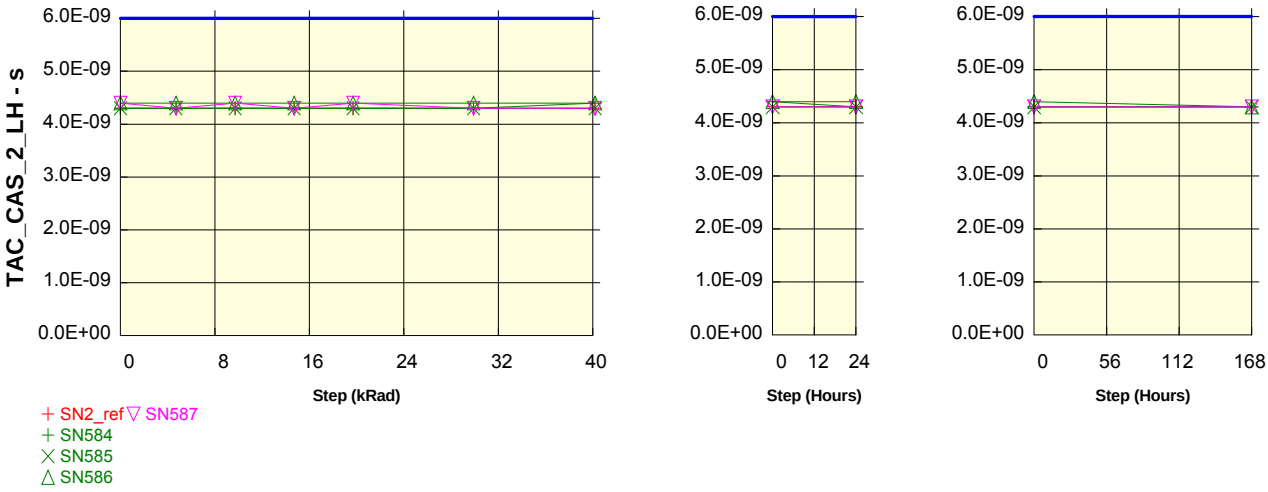


/Checkerboard	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
ON samples									
SN584	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN585	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
SN586	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

/Checkerboard	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED
OFF samples									
SN587	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED

Test conditions : TID
Parameter : Access Time from CLK CAS 2 : TAC_CAS_2_LH

Unit : s
Spec Limit Max : 6.0E-09
Spec limits are represented in bold lines on the graphic.

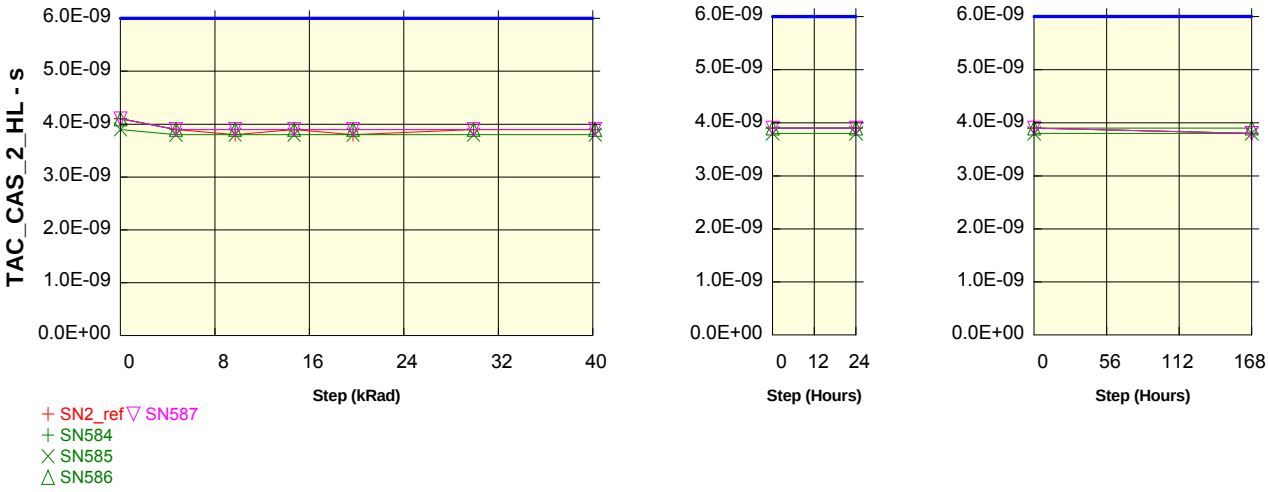


TAC_CAS_2_LH	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
ON samples									
SN584	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09
SN585	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
SN586	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.3E-09
Statistics									
Min	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Max	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.3E-09
Average	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09
Sigma	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	32.0E-18

TAC_CAS_2_LH	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
OFF samples									
SN587	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Statistics									
Min	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Max	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Average	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Access Time from CLK CAS 2 : TAC_CAS_2_HL

Unit : s
Spec Limit Max : 6.0E-09
Spec limits are represented in bold lines on the graphic.

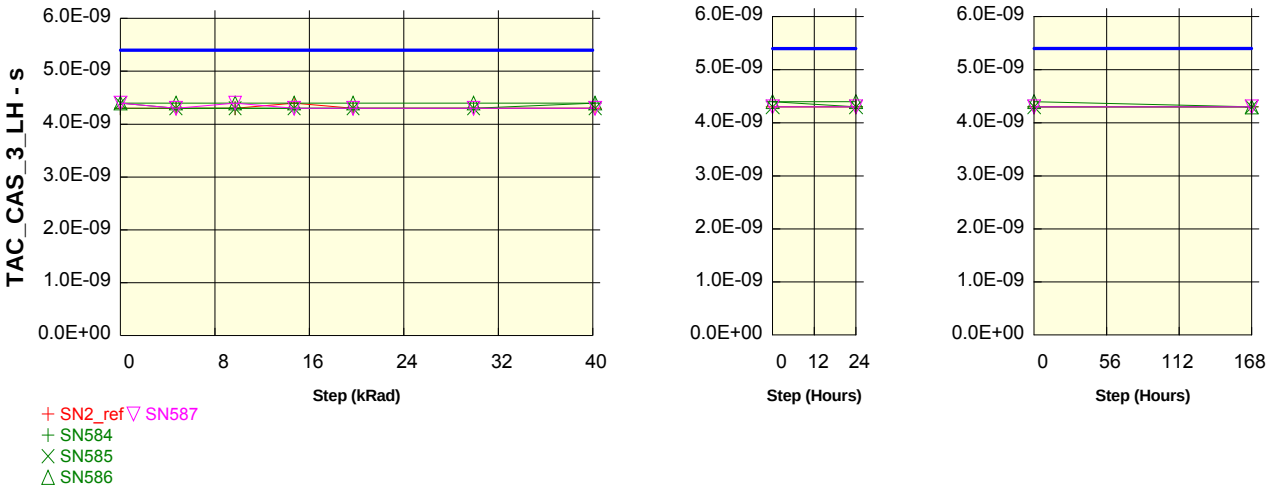


TAC_CAS_2_HL	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.1E-09	3.9E-09	3.8E-09	3.9E-09	3.8E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
ON samples									
SN584	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
SN585	3.9E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09
SN586	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09
Statistics									
Min	3.9E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09
Max	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09
Average	4.0E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Sigma	94.3E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12

TAC_CAS_2_HL	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.1E-09	3.9E-09	3.8E-09	3.9E-09	3.8E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
OFF samples									
SN587	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Statistics									
Min	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Max	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Average	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Access Time from CLK CAS 3 : TAC_CAS_3_LH

Unit : s
Spec Limit Max : 5.4E-09
Spec limits are represented in bold lines on the graphic.

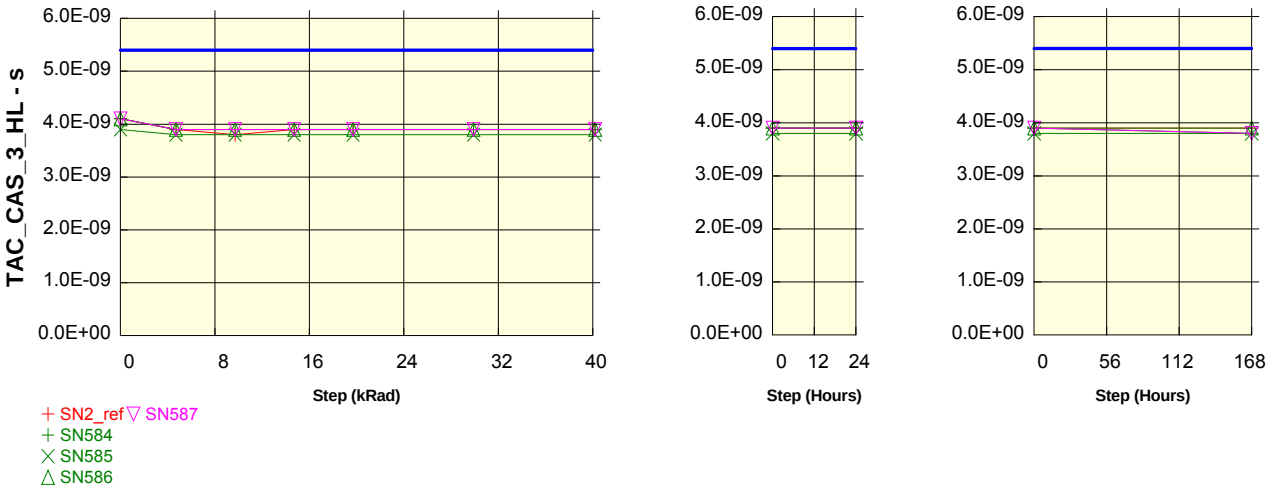


TAC_CAS_3_LH	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.3E-09	4.3E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
ON samples									
SN584	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09
SN585	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
SN586	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.3E-09
Statistics									
Min	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Max	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.4E-09	4.3E-09
Average	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09
Sigma	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	32.0E-18

TAC_CAS_3_LH	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.3E-09	4.3E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
OFF samples									
SN587	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Statistics									
Min	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Max	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Average	4.4E-09	4.3E-09	4.4E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09	4.3E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Access Time from CLK CAS 3 : TAC_CAS_3_HL

Unit : s
Spec Limit Max : 5.4E-09
Spec limits are represented in bold lines on the graphic.

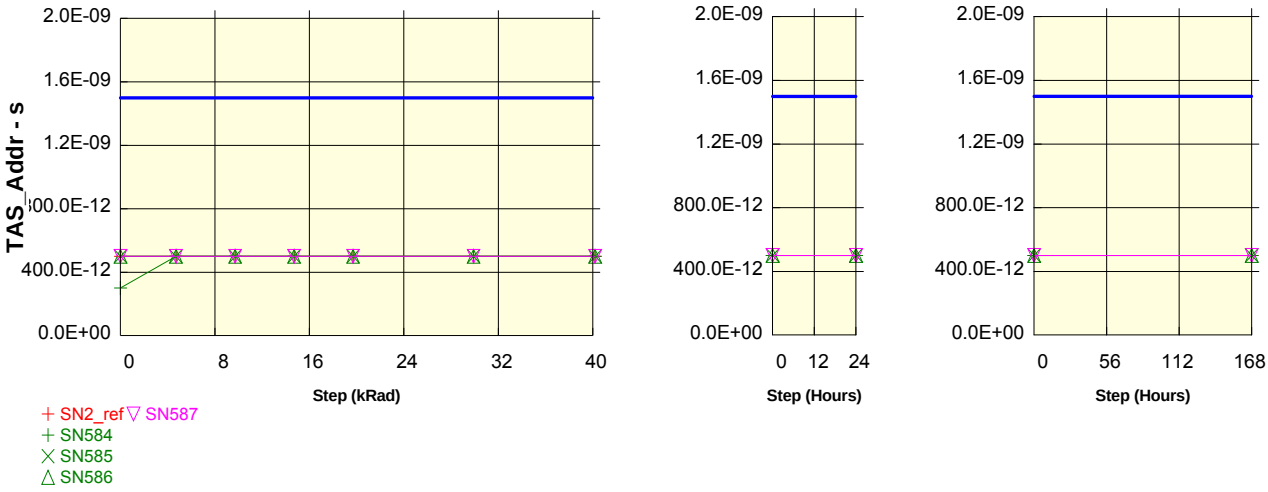


TAC_CAS_3_HL	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.1E-09	3.9E-09	3.8E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09
ON samples									
SN584	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
SN585	3.9E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09
SN586	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09
Statistics									
Min	3.9E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09	3.8E-09
Max	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09
Average	4.0E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Sigma	94.3E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12	47.1E-12

TAC_CAS_3_HL	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	4.1E-09	3.9E-09	3.8E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09
OFF samples									
SN587	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Statistics									
Min	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Max	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Average	4.1E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.9E-09	3.8E-09
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Input Setup Time Address : TAS_Addr

Unit : s
Spec Limit Max : 1.5E-09
Spec limits are represented in bold lines on the graphic.

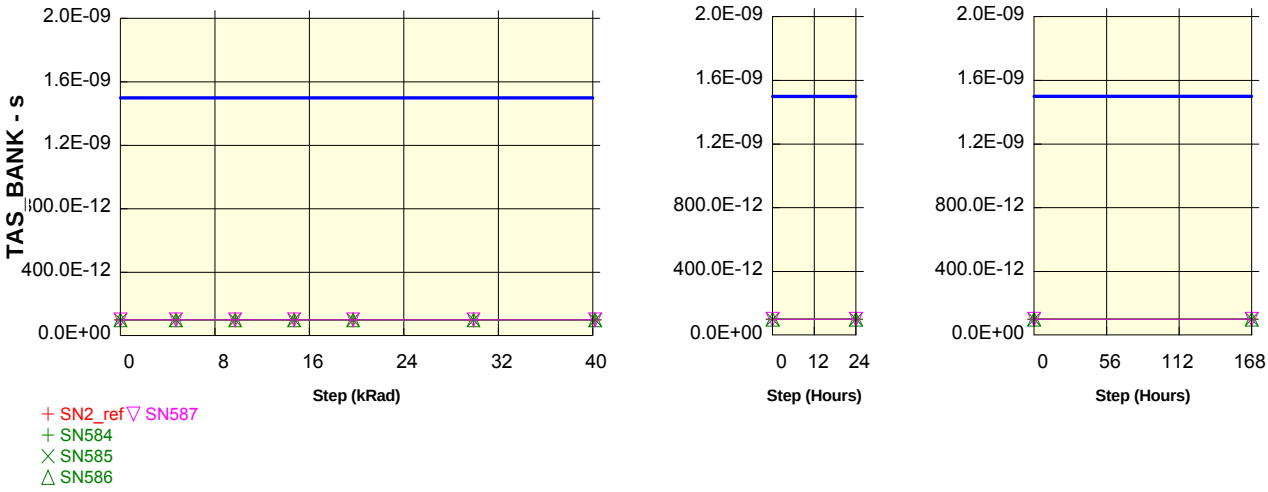


TAS_Addr	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
ON samples									
SN584	300.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
SN585	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
SN586	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Statistics									
Min	300.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Max	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Average	433.3E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Sigma	94.3E-12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

TAS_Addr	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
OFF samples									
SN587	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Statistics									
Min	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Max	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Average	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Input Setup Time Bank : TAS_BANK

Unit : s
Spec Limit Max : 1.5E-09
Spec limits are represented in bold lines on the graphic.

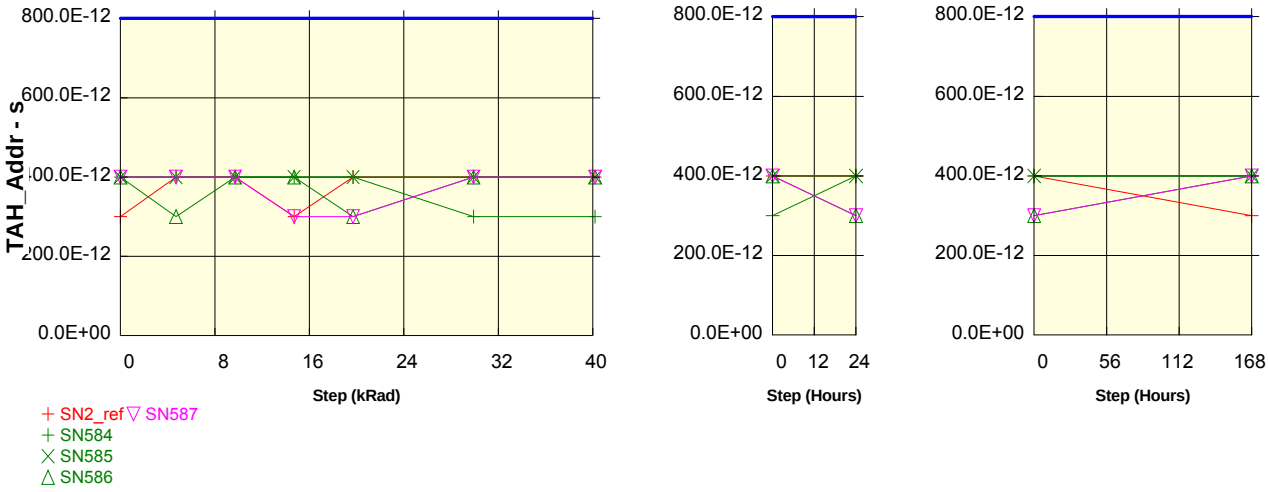


TAS_BANK	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
ON samples									
SN584	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
SN585	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
SN586	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Statistics									
Min	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Max	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Average	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

TAS_BANK	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
OFF samples									
SN587	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Statistics									
Min	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Max	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Average	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12	100.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Input Hold Time Address : TAH_Addr

Unit : s
Spec Limit Max : 800.0E-12
Spec limits are represented in bold lines on the graphic.

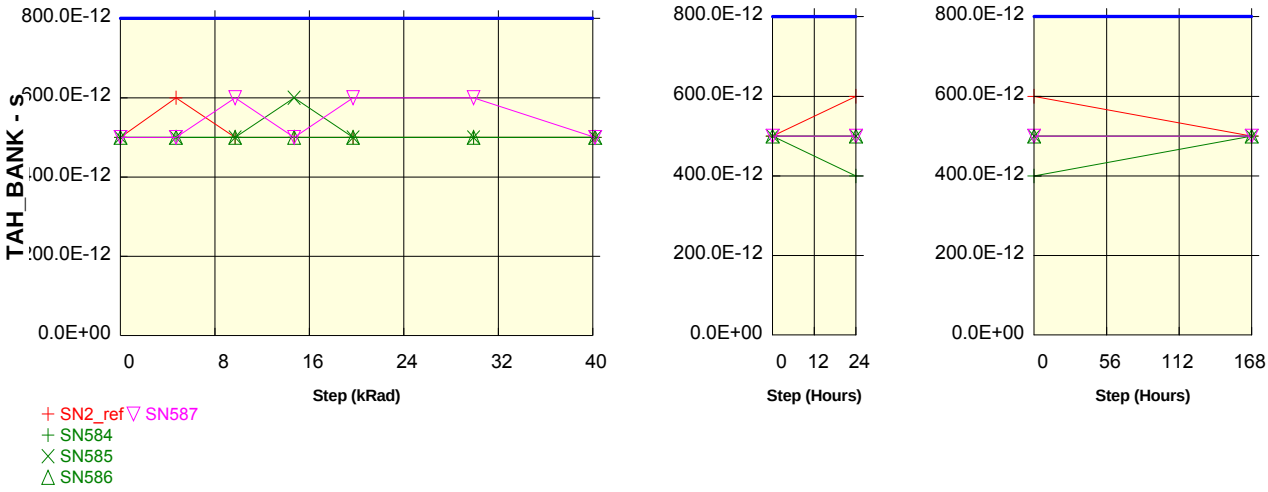


TAH_Addr	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	300.0E-12
ON samples									
SN584	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	300.0E-12	300.0E-12	400.0E-12	400.0E-12
SN585	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12
SN586	400.0E-12	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12
Statistics									
Min	400.0E-12	300.0E-12	400.0E-12	400.0E-12	300.0E-12	300.0E-12	300.0E-12	300.0E-12	400.0E-12
Max	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12
Average	400.0E-12	366.7E-12	400.0E-12	400.0E-12	366.7E-12	366.7E-12	366.7E-12	366.7E-12	400.0E-12
Sigma	0.0E+00	47.1E-12	0.0E+00	0.0E+00	47.1E-12	47.1E-12	47.1E-12	47.1E-12	0.0E+00

TAH_Addr	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12	400.0E-12	400.0E-12	400.0E-12	300.0E-12
OFF samples									
SN587	400.0E-12	400.0E-12	400.0E-12	300.0E-12	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12
Statistics									
Min	400.0E-12	400.0E-12	400.0E-12	300.0E-12	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12
Max	400.0E-12	400.0E-12	400.0E-12	300.0E-12	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12
Average	400.0E-12	400.0E-12	400.0E-12	300.0E-12	300.0E-12	400.0E-12	400.0E-12	300.0E-12	400.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Input Hold Time Bank : TAH_BANK

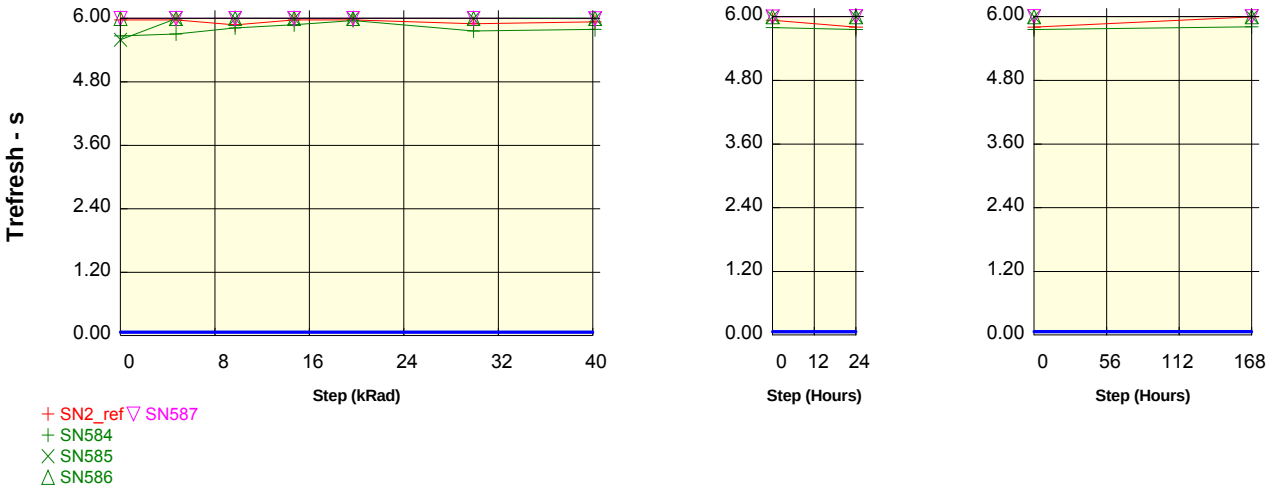
Unit : s
Spec Limit Max : 800.0E-12
Spec limits are represented in bold lines on the graphic.



TAH_BANK	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	500.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	600.0E-12	500.0E-12
ON samples									
SN584	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	400.0E-12	500.0E-12
SN585	500.0E-12	500.0E-12	500.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
SN586	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Statistics									
Min	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	400.0E-12	500.0E-12
Max	500.0E-12	500.0E-12	500.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12
Average	500.0E-12	500.0E-12	500.0E-12	533.3E-12	500.0E-12	500.0E-12	500.0E-12	466.7E-12	500.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	47.1E-12	0.0E+00	0.0E+00	0.0E+00	47.1E-12	0.0E+00

TAH_BANK	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	500.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	500.0E-12	600.0E-12	500.0E-12
OFF samples									
SN587	500.0E-12	500.0E-12	600.0E-12	500.0E-12	600.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12
Statistics									
Min	500.0E-12	500.0E-12	600.0E-12	500.0E-12	600.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12
Max	500.0E-12	500.0E-12	600.0E-12	500.0E-12	600.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12
Average	500.0E-12	500.0E-12	600.0E-12	500.0E-12	600.0E-12	600.0E-12	500.0E-12	500.0E-12	500.0E-12
Sigma	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Test conditions : TID
Parameter : Refresh Period : Trefresh
Measurement limited to 6s max
Unit : s
Spec Limit Min : 0.06
Spec limits are represented in bold lines on the graphic.



Trefresh	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	5.97	5.97	5.88	5.97	5.97	5.90	5.94	5.81	5.99
ON samples									
SN584	5.67	5.71	5.82	5.88	5.96	5.76	5.79	5.76	5.81
SN585	5.60	5.99	6.00	6.00	6.00	6.00	6.00	6.00	6.00
SN586	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Statistics									
Min	5.60	5.71	5.82	5.88	5.96	5.76	5.79	5.76	5.81
Max	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Average	5.76	5.90	5.94	5.96	5.99	5.92	5.93	5.92	5.94
Sigma	0.18	0.14	0.08	0.06	0.02	0.11	0.10	0.12	0.09

Trefresh	0 kRad	4.7 kRad	9.7 kRad	14.7 kRad	19.7 kRad	29.9 kRad	40.2 kRad	24 Hours	168 Hours
SN2_ref_REF	5.97	5.97	5.88	5.97	5.97	5.90	5.94	5.81	5.99
OFF samples									
SN587	6.00	6.00	6.00	6.00	6.00	6.00	5.99	6.00	6.00
Statistics									
Min	6.00	6.00	6.00	6.00	6.00	6.00	5.99	6.00	6.00
Max	6.00	6.00	6.00	6.00	6.00	6.00	5.99	6.00	6.00
Average	6.00	6.00	6.00	6.00	6.00	6.00	5.99	6.00	6.00
Sigma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00