



ABSTRACT

This report discusses the results of the total ionizing dose (TID) testing for SN54AC00-SP, Texas Instruments 4.5V to 14V operating input voltage range, 3.5A continuous current, single channel load switch,. The study was done to determine TID effects under low dose rate (LDR) and high dose rate (HDR) up to 100krad(Si). The results show that all samples passed within the specified limits up to 100krad(Si).

Table of Contents

1 Device Information	1
1.1 Product Description.....	1
1.2 Device Details.....	2
2 Total Dose Test Setup	3
2.1 Test Overview.....	3
2.2 Test Description and Facilities.....	3
2.3 Test Setup Details.....	4
2.4 Test Configuration and Conditions.....	5
3 TI Characterization Test Results	6
3.1 TID Characterization Summary Results.....	6
3.2 Specification Compliance Matrix.....	6
4 Applicable and Reference Documents	8
4.1 Applicable Documents.....	8
4.2 Reference Documents.....	8
A Appendix A: Specifications Requiring Clarification	8
B Appendix: HDR TID Report Data	10
C Appendix: LDR TID Report Data	11
D Revision History	12

List of Figures

Figure 1-1. SN54AC00-SP Device Photo.....	2
Figure 2-1. Bias Diagram Used in TID Exposure.....	4

List of Tables

Table 1-1. Device and Exposure Details.....	2
Table 2-1. HDR \geq 50–100-krad(Si)/s Biased and Unbiased Device Information.....	5
Table 2-2. LDR \geq 50–100-krad(Si)/s Biased and Unbiased Device Information.....	5
Table 3-1. SN54AC00-SP Specification Compliance Matrix.....	6
Table A-1. Specifications Requiring Clarification - Set #1.....	8
Table A-2. Specifications Requiring Clarification - Set #2.....	8
Table A-3. Specifications Requiring Clarification - Set #3.....	9

Trademarks

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1 Device Information

1.1 Product Description

The SN54AC00-SP is a single channel load switch that provides reverse current protection, overvoltage protection, and a configurable rise time to minimize inrush current (soft start). The device contains P-channel

MOSFETs that operate over an input voltage range of 4.5V to 14V and supports a maximum continuous current of 3.5A.

The switch is controlled by an on and off input (EN), which is capable of interfacing directly with low-voltage control signals. Overvoltage protection and soft start are programmable with few external components through the OVP and SS pins. The SN54AC00-SP is available in a ceramic package with an exposed thermal pad allowing for improved thermal performance.

1.2 Device Details

Table 1-1 lists the device information used in the initial TID HDR and LDR characterization.

Table 1-1. Device and Exposure Details

TID Exposure Details	
TI Device	SN54AC00-SP
TI Part Name	XTPS7H2211HKR/EM
Package	16-pin CFP (HKR)
Technology	LBC7
Quantity Tested	HDR - 20, LDR - 20
Lot Accept/Reject	All levels tested and passed up to 100 krad(Si) for HDR and LDR
HDR Radiation Facility	Texas Instruments Santa Clara - Santa Clara, CA
HDR Dose Level	50 krad(Si) and 100 krad(Si)
HDR Dose Rate	59.48 rads(Si)/s [53.53 to 65.42 rad(Si)/s]
HDR Radiation Source	Gammacell 220 Excel (GC-220E) Co-60
LDR Radiation Facility	Radiation Test Solutions (RTS) - Colorado Springs, CO
LDR Dose Level	50 krad(Si) and 100 krad(Si)
LDR Dose Rate	0.01 rad(Si)/s
LDR Radiation Source	Gammacell (JLS-81-22) Co-60
Irradiation Temperature	Ambient, room temperature



Figure 1-1. SN54AC00-SP Device Photo

2 Total Dose Test Setup

2.1 Test Overview

The SN54AC00-SP was tested according to MIL-STD-883, Test Method 1019.9. For this testing, Conditions A and D were used. The product was irradiated up to the target radiation level, and then put through full electrical parametric testing on the production Automated Test Equipment (ATE). All devices remained functional passing all parametric test limits.

2.2 Test Description and Facilities

The SN54AC00-SP HDR exposure was performed on biased and unbiased devices in a Co-60 gammacell at TI facility in Santa Clara, California. The un-attenuated dose rate of this cell is 59.48 rad(Si)/s. After exposure, the devices were packed in dry ice (per MIL-STD-883 Method 1019.9 section 3.10) and returned to TI Dallas for a full post-radiation electrical evaluation using Texas Instruments ATE. ATE test limits are set per SMD electrical limits based on qualification and characterization data. Post-radiation measurements were taken within 30 minutes of removing the devices from the dry ice container. The devices were allowed to reach room temperature prior to electrical post-radiation measurements.

The SN54AC00-SP LDR exposure was performed on biased and unbiased devices in a Co-60 gammacell under a 10-mrad(Si)/s exposure rate. The dose rate of the irradiator used in the exposure ranges from < 10 mrad(Si)/s to a maximum of approximately 84 rad(Si)/s, determined by the distance from the source. For the LDR (10 mrad(Si)/s) exposure, the test box was positioned approximately 2 m from the source. The exposure boards are housed in a lead-aluminum box (as specified in MIL-STD-883 TM 1019.9) to harden the gamma spectrum and minimize dose enhancement effects. The irradiator calibration is maintained by Logmire Laboratories using Thermoluminescence Dosimeters (TLDs) traceable to the National Institute of Standards and Technology (NIST) and the dosimetry was verified using TLDs prior to the radiation exposures. After exposure, the devices were packed in dry ice (per MIL-STD-883 Method 1019.9 section 3.10) and returned to TI Dallas for a post radiation electrical evaluation using Texas Instruments production ATE. ATE test limits are set per SMD electrical limits based on qualification and characterization data. Post-radiation measurements were taken within 30 minutes of removing the devices from the dry ice container. The devices were allowed to reach room temperature prior to electrical post-radiation measurements.

2.3 Test Setup Details

The devices under HDR and LDR exposure were tested in two conditions, biased and unbiased, as described in the following sections.

2.3.1 Unbiased

For the unbiased HDR and LDR conditions, the exposure was performed with all pins grounded.

2.3.2 Biased

Figure 2-1 shows the diagram for HDR and LDR exposure with biased condition.

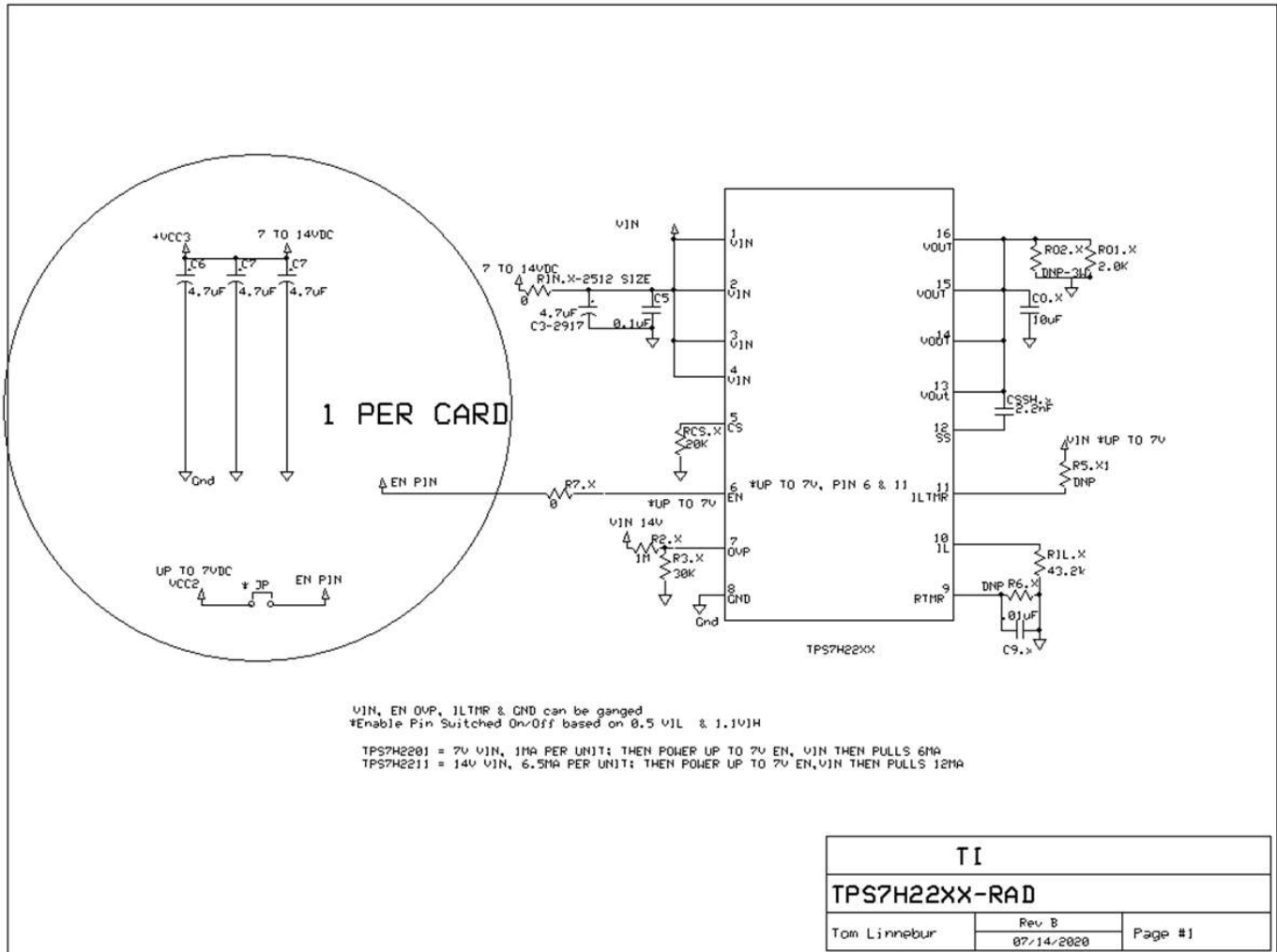


Figure 2-1. Bias Diagram Used in TID Exposure

2.4 Test Configuration and Conditions

HDR devices were stressed at 50krad(Si) and 100krad(Si) for biased and unbiased conditions. LDR devices were stressed at 50krad(Si) and 100krad(Si) for biased and unbiased conditions.

Table 2-1. HDR ≥ 50–100-krad(Si)/s Biased and Unbiased Device Information

Total Samples: 20			
Exposure Levels			
50krad(Si) Biased	50krad(Si) Unbiased	100krad(Si) Biased	100krad(Si) Unbiased
1, 2, 3, 4, 5	6, 7, 8, 11, 12	13, 14, 15, 16, 17	18, 19, 20, 21, 22

Table 2-2. LDR ≥ 50–100-krad(Si)/s Biased and Unbiased Device Information

Total Samples: 20			
Exposure Levels			
50krad(Si) Biased	50krad(Si) Unbiased	100krad(Si) Biased	100krad(Si) Unbiased
1, 2, 3, 4, 5	6, 7, 8, 9, 10	11, 12, 13, 14, 15	16, 17, 18, 19, 20

3 TI Characterization Test Results

3.1 TID Characterization Summary Results

The parametric data for the SN54AC00-SP passed up to 100krad(Si) HDR and 100krad(Si) LDR TID.

The drifts of SMD electrical parameters through HDR and LDR were within the SMD limits.

Overall, the SN54AC00-SP showed a strong degree of hardness to LDR and HDR TID irradiation up to 100krad(Si) for both biased and unbiased exposure conditions. The measurements taken post-irradiation for each sample set showed a marginal shift for most parameters at each dose level for both biased and unbiased devices. The parameters that showed a greater degree of change between pre- and post-irradiation were still within the SMD electrical specification. See [Table 3-1](#) for Specification Compliance Matrix.

See [Appendix A](#) for Specifications Requiring Clarification.

See [Appendix B](#) for HDR report up to 100krad(Si).

See [Appendix C](#) for LDR report up to 100krad(Si).

3.2 Specification Compliance Matrix

Table 3-1. SN54AC00-SP Specification Compliance Matrix

PARAMETER	TEST CONDITION	SN54AC00-SP DATA SHEET (SLVSEW6)				TEST#
		MIN	TYP	MAX	UNIT	
V _{INUVLOR} Internal VIN UVLO rising		3.2	3.4	3.8	V	5.0 __VIN_UVLO_RISING
V _{INUVLOF} Internal VIN UVLO falling		2.6	2.9	3.2	V	5.1 __VIN_UVLO_FALLING
HYST _{VIN-UVLO} Internal VIN UVLO hysteresis			0.55	0.75	V	5.2 __VIN_UVLO_HYSTERESIS
I _Q Quiescent current	I _{OUT} = 0 mA, EN = 7 V		5	10	mA	3.0 __IQ_Vin_4p5V, 3.2 __IQ_Vin_14p0V
I _F VIN to VOUT forward leakage current	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 14 V		1	1.3	mA	4.9 __Forward_Leakage_14p0V
	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 12 V		0.65	0.94	mA	4.7 __Forward_Leakage_12p0V
	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 9 V		0.15	0.49	mA	4.5 __Forward_Leakage_9p0V
	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 4.5 V		0.04	0.23	mA	4.1 __Forward_Leakage_4p5V
I _{SD} VIN off-state supply current	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 14 V		6.9	10	mA	4.8 __ISD_Vin_14p0V
	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 12 V		5.9	9.5	mA	4.6 __ISD_Vin_12p0V
	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 9 V		4.4	8	mA	4.4 __ISD_Vin_9p0V
	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 4.5 V		3.7	7	mA	4.0 __ISD_Vin_4p5V
I _{RCP} Reverse current protection leakage current	EN = 0 V, VOUT = 0 to 14 V and VOUT > VIN		44	250	μA	3.1 __IRCP_EN0p0V_4p5V, 3.3 __IRCP_EN0p0V_14p0V
	EN = 7 V, VIN = 0 V, VOUT = 0 to 14 V		37	240	μA	3.4 __IRCP_EN7p0V_4p5V, 3.5 __IRCP_EN7p0V_14p0V
I _{SS} Soft start charge current			65	83	μA	6.3 __SS_Icharge_4p5V, 6.7 __SS_Icharge_14V
V _{IHEN} EN threshold voltage, rising		0.60	0.63	0.68	V	6.0 __EN_UVLO_RISING_4p5V, 6.4 __EN_UVLO_RISING_14V
V _{ILEN} EN threshold voltage, falling		0.50	0.52	0.57	V	6.1 __EN_UVLO_FALLING_4p5V, 6.5 __EN_UVLO_FALLING_14V

Table 3-1. SN54AC00-SP Specification Compliance Matrix (continued)

PARAMETER	TEST CONDITION	SN54AC00-SP DATA SHEET (SLVSEW6)				TEST#
		MIN	TYP	MAX	UNIT	
HYST _{EN} EN hysteresis voltage		94	109	139	mV	6.2 __EN_UVLO_HYSTERESIS_4p5V, 6.6 __EN_UVLO_HYSTERESIS_14V
I _{EN} EN pin input leakage current	EN = 7 V, VIN = 14 V		2	12	nA	6.8 __EN7p0V_I_Vin14V
V _{OVP} OVP threshold voltage, rising		1.11	1.15	1.18	V	7.0 __OVP_UVLO_RISING_4p5V, 7.3 __OVP_UVLO_RISING_14p0V
V _{OVP} OVP threshold voltage, falling		1.09	1.14	1.17	V	7.1 __OVP_UVLO_FALLING_4p5V, 7.4 __OVP_UVLO_FALLING_14p0V
HYST _{OVP} OVP hysteresis voltage	4.6 V < VIN < 14 V	5	14	40	mV	7.2 __OVP_UVLO_HYSTERESIS_4p5 V, 7.5 __OVP_UVLO_HYSTERESIS_14p0 V
I _{OVP} OVP pin input leakage current	OVP = 7 V		1.5	12	nA	7.6 __OVP_I_Vin7V, 7.7 __OVP_I_Vin5V, 7.8 __OVP_I_Vin3p3V, 7.9 __OVP_I_Vin1p8V, 7.10 __OVP_I_Vin1p5V
R _{ON} On-state resistance, lead length ≈ 2.5 mm	VIN = 14 V, IOU = 3.5 A, 25°C		54	60	mΩ	8.4 __RdsOn_3p50A_14p0V
	VIN = 12 V, IOU = 3.5 A, 25°C		54	60	mΩ	8.3 __RdsOn_3p50A_12p0V
	VIN = 9 V, IOU = 3.5 A, 25°C		54	61	mΩ	8.2 __RdsOn_3p50A_9p0V
	VIN = 6 V, IOU = 3.5 A, 25°C		54	61	mΩ	8.1 __RdsOn_3p50A_6p0V
	VIN = 4.5 V, IOU = 3.5 A, 25°C		59	65	mΩ	8.0 __RdsOn_3p50A_4p5V

4 Applicable and Reference Documents

4.1 Applicable Documents

- Texas Instruments, [SN54AC00-SP Radiation-Hardness-Assured \(RHA\) 14-V, 3.5-A Load Switch data sheet](#)
- Texas Instruments, [TPS7H2211EVM-CVAL Evaluation Module user's guide](#)
- Texas Instruments, [Single-Event-Effects Test Report of the SN54AC00-SP Load Switch radiation report](#)

4.2 Reference Documents

Texas Instruments total ionizing dose radiation (total dose) test procedure follows the standards put forth in MIL-STD-883 TM 1019. The document can be found at the DLA website.

A Appendix A: Specifications Requiring Clarification

Data sheet specifications for which there is no parametric data and, therefore, not in the TID report. Functionality is assured by ATE testing.

Table A-1. Specifications Requiring Clarification - Set #1

PARAMETER	TEST CONDITION	SN54AC00-SP DATA SHEET (SLVSEW6)			
		MIN	TYP	MAX	UNIT
t_{LOW_OFF} EN signal low time during cycling	VOUT falls to < 90%	20			μ s
VIN _{EN} VIN percentage for enable ⁽¹⁾		75%			

(1) VIN must be \geq 75% of its final value before EN is asserted only if VIN_{SR} > VOUT_{SR}.

Data sheet specifications for which no data is available in TID report as specification was verified through bench testing. TID testing is by ATE.

Table A-2. Specifications Requiring Clarification - Set #2

PARAMETER	TEST CONDITION	SN54AC00-SP DATA SHEET (SLVSEW6)			
		MIN	TYP	MAX	UNIT
V _{RCP_ENTER} Reverse current protection enter voltage ⁽¹⁾	EN = 7V, VIN = 4.5V		390		mV
	EN = 7V, VIN = 14V		363		mV
V _{RCP_EXIT} Reverse current protection exit voltage ⁽¹⁾	EN = 7V, VIN = 4.5V		264		mV
	EN = 7V, VIN = 14V		249		mV
t_{RCP} Reverse current protection response time	EN = 7V, VIN = 4.5V		208		μ s
	EN = 7V, VIN = 14V		247		μ s
I _{L_trip} Internal current limit trip point	VIN = 12V, C _{SS} = 2nF		8		A
I _{L_peak} Fast trip off current limit peak	VIN = 12V, 10 Ω to 10m Ω short in 1 μ s, switch inductance = 270nH		25		A
t_{ftr} Fast trip off response time			2.3		μ s
t_{fto} Fast trip off off-time	VIN = 12V, C _{SS} = 2nF		51		μ s
Thermal shutdown			155		$^{\circ}$ C
Thermal shutdown hysteresis			20		$^{\circ}$ C
t_{ON} Turn-on time	VIN = 5V		107		μ s
t_{OFF} Turn-off time	VIN = 5V		56		μ s
t_F VOUT fall time	VIN = 5V		167		μ s
t_{ASSERT} OVP Assert time	VIN = 5V		8		μ s
$t_{DEASSERT}$ OVP deassert time	VIN = 5V		41		μ s
t_{ON} Turn-on time	VIN = 12V		220		μ s
t_{OFF} Turn-off time	VIN = 12V		41		μ s

Table A-2. Specifications Requiring Clarification - Set #2 (continued)

PARAMETER	TEST CONDITION	SN54AC00-SP DATA SHEET (SLVSEW6)			
		MIN	TYP	MAX	UNIT
t_F VOUT fall time	VIN = 12V		139		μs
t_{ASSERT} OVP Assert time	VIN = 12V		6		μs
$t_{DEASSERT}$ OVP deassert time	VIN = 12V		63		μs

(1) This parameter is not referenced to GND; it is referenced from VOUT to VIN.

Data sheet specifications that are not covered in TID report because specification condition is at temperature other than 25°C. TID testing is at 25°C only.

Table A-3. Specifications Requiring Clarification - Set #3

PARAMETER	TEST CONDITION	SN54AC00-SP DATA SHEET (SLVSEW6)			
		MIN	TYP	MAX	UNIT
R_{ON} On-state resistance, lead length \approx 2.5mm	VIN = 14V, IOU = 3.5A, -55°C		41	45	m Ω
	VIN = 14V, IOU = 3.5A, -40°C		43	46	m Ω
	VIN = 14V, IOU = 3.5A, 85°C		65	71	m Ω
	VIN = 14V, IOU = 3.5A, 125°C		72	79	m Ω
	VIN = 12V, IOU = 3.5A, -55°C		41	45	m Ω
	VIN = 12V, IOU = 3.5A, -40°C		43	46	m Ω
	VIN = 12V, IOU = 3.5A, 85°C		65	71	m Ω
	VIN = 12V, IOU = 3.5A, 125°C		72	79	m Ω
	VIN = 9V, IOU = 3.5A, -55°C		41	45	m Ω
	VIN = 9V, IOU = 3.5A, -40°C		43	46	m Ω
	VIN = 9V, IOU = 3.5A, 85°C		65	71	m Ω
	VIN = 9V, IOU = 3.5A, 125°C		72	79	m Ω
	VIN = 6V, IOU = 3.5A, -55°C		41	45	m Ω
	VIN = 6V, IOU = 3.5A, -40°C		43	47	m Ω
	VIN = 6V, IOU = 3.5A, 85°C		65	71	m Ω
	VIN = 6V, IOU = 3.5A, 125°C		72	79	m Ω
	VIN = 4.5V, IOU = 3.5A, -55°C		44	48	m Ω
	VIN = 4.5V, IOU = 3.5A, -40°C		47	50	m Ω
	VIN = 4.5V, IOU = 3.5A, 85°C		71	76	m Ω
	VIN = 4.5V, IOU = 3.5A, 125°C		79	84	m Ω

B Appendix: HDR TID Report Data

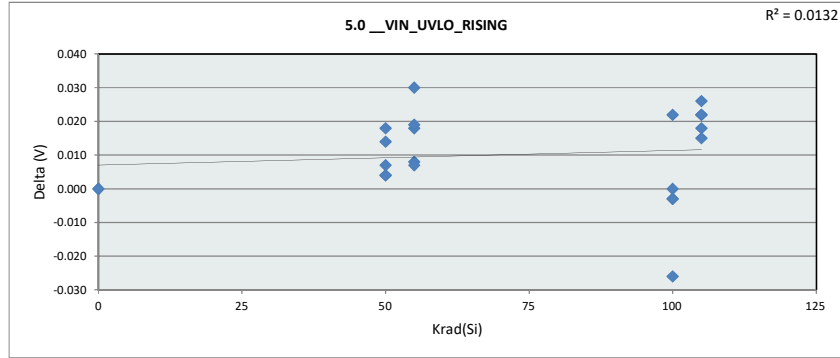
This appendix contains the HDR TID report data.

HDR LOOKAHEAD TID REPORT
TPS7H2211-SP

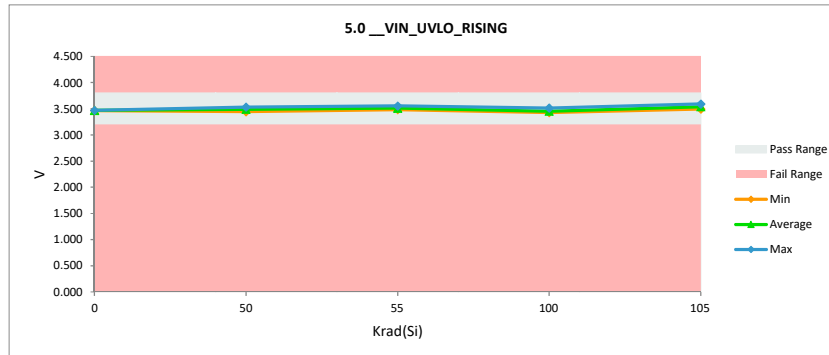
IDENTIFIER	DESCRIPTION
0	Control Unit
50	50 krad(Si) biased
55	50 krad(Si) unbiased
100	100 krad(Si) biased
105	100 krad(Si) unbiased

HDR LOOKAHEAD TID Report TPS7H2211-SP

5.0 __VIN_UVLO_RISING				
Test Site				
Tester				
Test Number				
Unit	V	V		
Max Limit	3.8	3.8		
Min Limit	3.2	3.2		
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	3.468	3.468	0.000
0	24	3.465	3.465	0.000
50	1	3.527	3.531	0.004
50	2	3.468	3.472	0.004
50	3	3.509	3.523	0.014
50	4	3.435	3.442	0.007
50	5	3.465	3.483	0.018
55	6	3.468	3.498	0.030
55	7	3.479	3.487	0.008
55	8	3.520	3.538	0.018
55	11	3.476	3.483	0.007
55	12	3.534	3.553	0.019
100	13	3.490	3.512	0.022
100	14	3.439	3.439	0.000
100	15	3.457	3.454	-0.003
100	16	3.454	3.428	-0.026
100	17	3.442	3.439	-0.003
105	18	3.505	3.520	0.015
105	19	3.468	3.494	0.026
105	20	3.487	3.509	0.022
105	21	3.557	3.575	0.018
105	22	3.568	3.590	0.022
	Max	3.568	3.590	0.030
	Average	3.485	3.496	0.010
	Min	3.435	3.428	-0.026
	Std Dev	0.037	0.045	0.013

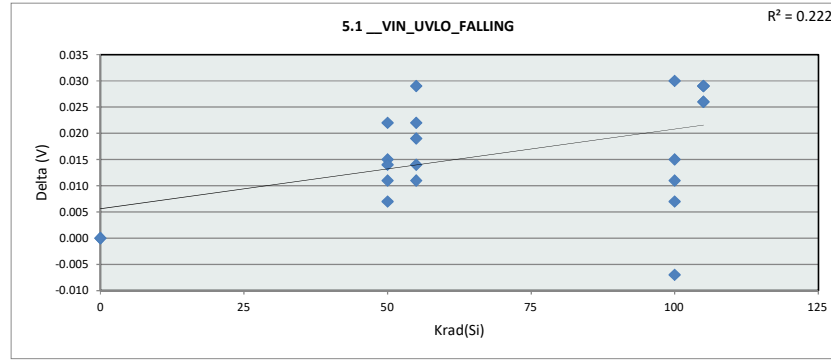


5.0 __VIN_UVLO_RISING					
Test Site					
Tester					
Test Number					
Max Limit	3.8	V			
Min Limit	3.2	V			
Krad(Si)	0	50	55	100	105
LL	3.200	3.200	3.200	3.200	3.200
Min	3.465	3.442	3.483	3.428	3.494
Average	3.467	3.490	3.512	3.454	3.538
Max	3.468	3.531	3.553	3.512	3.590
UL	3.800	3.800	3.800	3.800	3.800

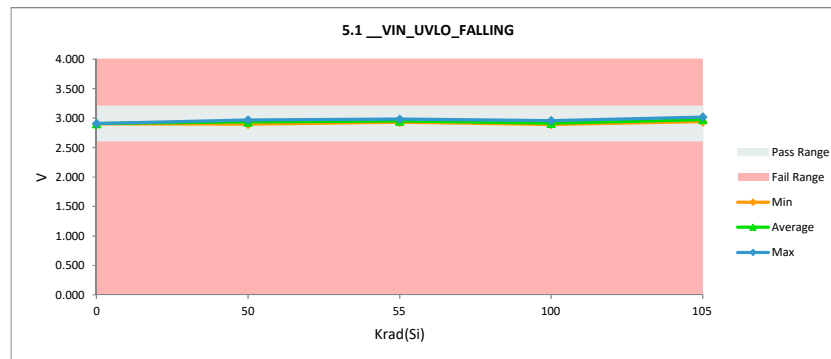


HDR LOOKAHEAD TID Report TPS7H2211-SP

5.1 __VIN_UVLO_FALLING				
Test Site				
Tester				
Test Number				
Unit	V	V		
Max Limit	3.2	3.2		
Min Limit	2.6	2.6		
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	2.909	2.909	0.000
0	24	2.905	2.905	0.000
50	1	2.957	2.968	0.011
50	2	2.909	2.916	0.007
50	3	2.942	2.957	0.015
50	4	2.880	2.894	0.014
50	5	2.905	2.927	0.022
55	6	2.909	2.938	0.029
55	7	2.920	2.931	0.011
55	8	2.946	2.968	0.022
55	11	2.913	2.927	0.014
55	12	2.964	2.983	0.019
100	13	2.927	2.957	0.030
100	14	2.883	2.898	0.015
100	15	2.898	2.909	0.011
100	16	2.898	2.891	-0.007
100	17	2.887	2.894	0.007
105	18	2.935	2.961	0.026
105	19	2.909	2.938	0.029
105	20	2.924	2.953	0.029
105	21	2.979	3.005	0.026
105	22	2.990	3.019	0.029
Max		2.990	3.019	0.030
Average		2.922	2.939	0.016
Min		2.880	2.891	-0.007
Std Dev		0.030	0.036	0.011



5.1 __VIN_UVLO_FALLING					
Test Site					
Tester					
Test Number					
Max Limit	3.2	V			
Min Limit	2.6	V			
Krad(Si)	0	50	55	100	105
LL	2.600	2.600	2.600	2.600	2.600
Min	2.905	2.894	2.927	2.891	2.938
Average	2.907	2.932	2.949	2.910	2.975
Max	2.909	2.968	2.983	2.957	3.019
UL	3.200	3.200	3.200	3.200	3.200

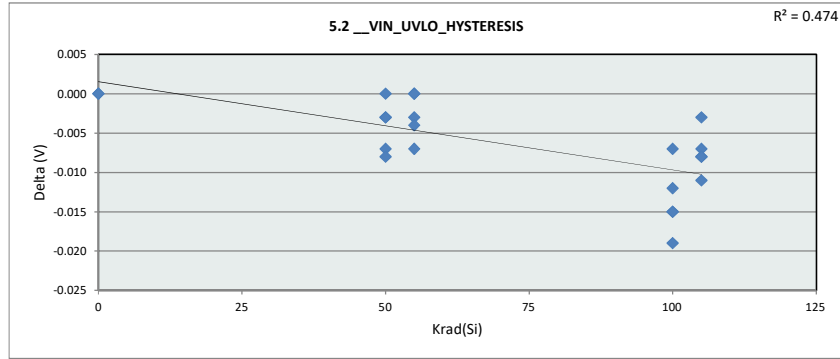


HDR LOOKAHEAD TID Report TPS7H2211-SP

5.2 __VIN_UVLO_HYSTERESIS

Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	0.75	0.75
Min Limit		

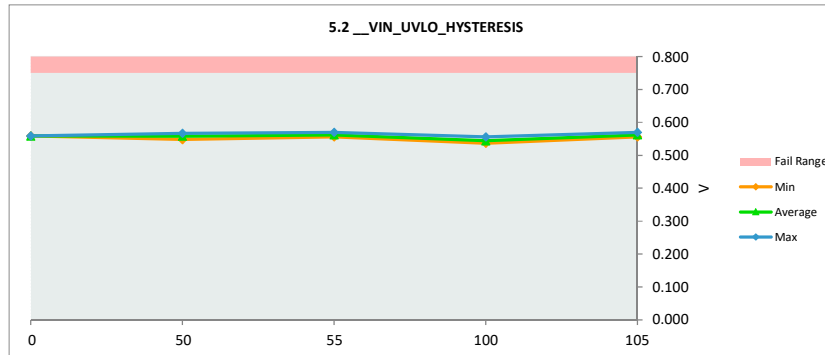
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.559	0.559	0.000
0	24	0.559	0.559	0.000
50	1	0.570	0.563	-0.007
50	2	0.559	0.556	-0.003
50	3	0.567	0.567	0.000
50	4	0.556	0.548	-0.008
50	5	0.559	0.556	-0.003
55	6	0.559	0.559	0.000
55	7	0.559	0.556	-0.003
55	8	0.574	0.570	-0.004
55	11	0.563	0.556	-0.007
55	12	0.570	0.570	0.000
100	13	0.563	0.556	-0.007
100	14	0.556	0.541	-0.015
100	15	0.559	0.544	-0.015
100	16	0.556	0.537	-0.019
100	17	0.556	0.544	-0.012
105	18	0.570	0.559	-0.011
105	19	0.559	0.556	-0.003
105	20	0.563	0.556	-0.007
105	21	0.578	0.570	-0.008
105	22	0.578	0.570	-0.008
Max		0.578	0.570	0.000
Average		0.563	0.557	-0.006
Min		0.556	0.537	-0.019
Std Dev		0.007	0.010	0.005



5.2 __VIN_UVLO_HYSTERESIS

Test Site		
Tester		
Test Number		
Max Limit	0.75	V
Min Limit		V

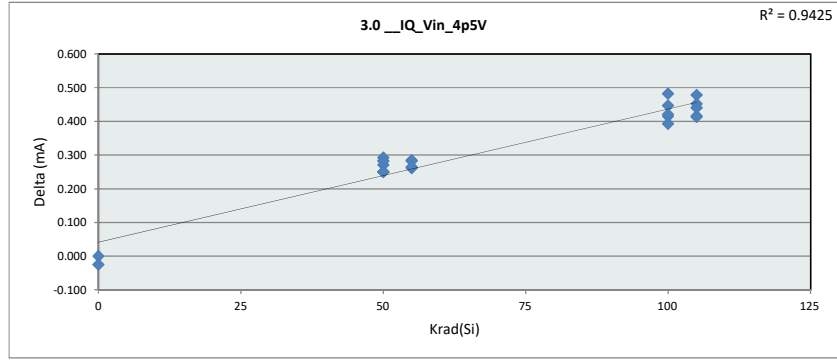
Krad(Si)	0	50	55	100	105
LL					
Min	0.559	0.548	0.556	0.537	0.556
Average	0.559	0.558	0.562	0.544	0.562
Max	0.559	0.567	0.570	0.556	0.570
UL	0.750	0.750	0.750	0.750	0.750



HDR LOOKAHEAD TID Report TPS7H2211-SP

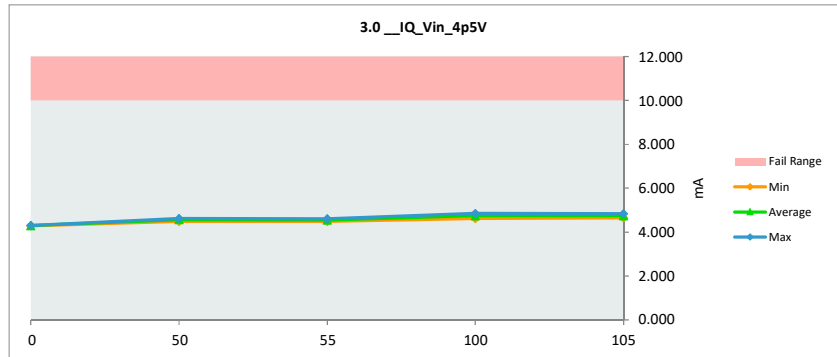
3.0_IQ_Vin_4p5V	
Test Site	
Tester	
Test Number	
Unit	mA mA
Max Limit	10 10
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	4.290	4.290	0.000
0	24	4.327	4.303	-0.025
50	1	4.308	4.601	0.293
50	2	4.238	4.487	0.249
50	3	4.353	4.624	0.271
50	4	4.298	4.581	0.283
50	5	4.301	4.551	0.250
55	6	4.327	4.610	0.283
55	7	4.252	4.514	0.262
55	8	4.205	4.489	0.285
55	11	4.325	4.587	0.263
55	12	4.279	4.544	0.265
100	13	4.321	4.768	0.447
100	14	4.344	4.760	0.415
100	15	4.370	4.852	0.482
100	16	4.342	4.763	0.421
100	17	4.233	4.625	0.393
105	18	4.363	4.842	0.478
105	19	4.337	4.789	0.452
105	20	4.237	4.653	0.416
105	21	4.289	4.703	0.413
105	22	4.327	4.767	0.440
Max		4.370	4.852	0.482
Average		4.303	4.623	0.320
Min		4.205	4.290	-0.025
Std Dev		0.046	0.153	0.136



3.0_IQ_Vin_4p5V	
Test Site	
Tester	
Test Number	
Max Limit	10 mA
Min Limit	

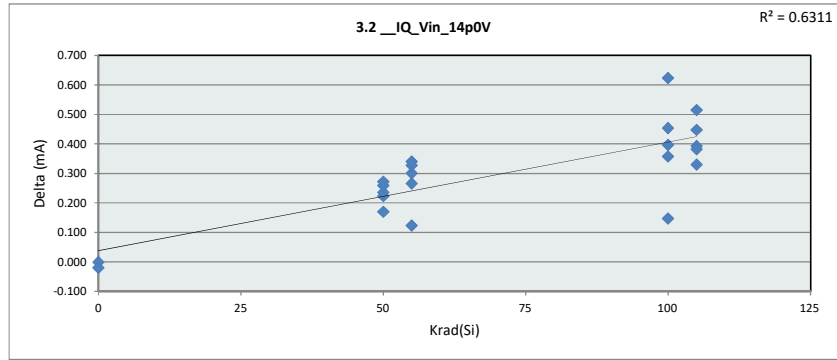
	Krad(Si)	0	50	55	100	105
LL						
Min		4.290	4.487	4.489	4.625	4.653
Average		4.296	4.569	4.549	4.754	4.751
Max		4.303	4.624	4.610	4.852	4.842
UL		10.000	10.000	10.000	10.000	10.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

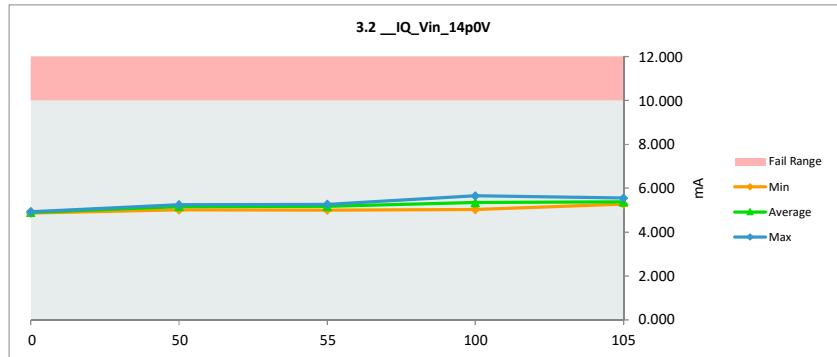
3.2 __IQ_Vin_14p0V	
Test Site	
Tester	
Test Number	
Unit	mA mA
Max Limit	10 10
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	4.869	4.868	-0.001
0	24	4.953	4.933	-0.020
50	1	4.898	5.120	0.223
50	2	4.845	5.015	0.169
50	3	5.015	5.250	0.235
50	4	4.913	5.172	0.259
50	5	4.973	5.245	0.272
55	6	4.969	5.269	0.300
55	7	4.907	5.234	0.327
55	8	4.792	5.132	0.340
55	11	4.957	5.224	0.266
55	12	4.879	5.003	0.123
100	13	4.889	5.036	0.147
100	14	4.967	5.364	0.397
100	15	5.034	5.657	0.623
100	16	4.979	5.432	0.454
100	17	4.878	5.236	0.358
105	18	4.980	5.310	0.330
105	19	5.035	5.550	0.515
105	20	4.880	5.273	0.393
105	21	4.927	5.310	0.382
105	22	4.983	5.430	0.448
Max		5.035	5.657	0.623
Average		4.933	5.230	0.297
Min		4.792	4.868	-0.020
Std Dev		0.063	0.193	0.155



3.2 __IQ_Vin_14p0V	
Test Site	
Tester	
Test Number	
Max Limit	10 mA
Min Limit	

	Krad(Si)	0	50	55	100	105
LL						
Min		4.868	5.015	5.003	5.036	5.273
Average		4.901	5.160	5.172	5.345	5.374
Max		4.933	5.250	5.269	5.657	5.550
UL		10.000	10.000	10.000	10.000	10.000

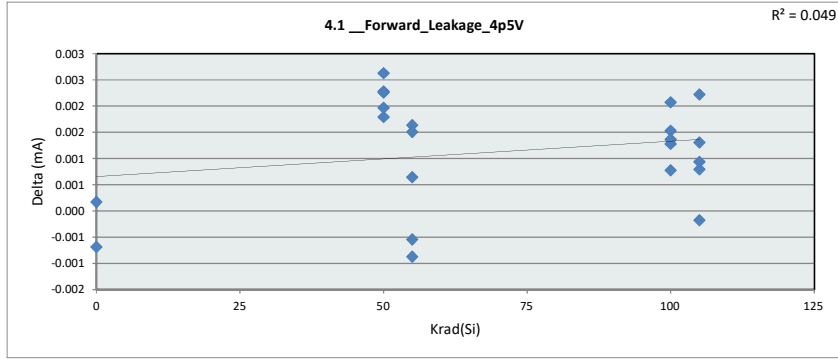


HDR LOOKAHEAD TID Report TPS7H2211-SP

4.1 __ Forward Leakage_4p5V

Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	0.23	0.23
Min Limit		

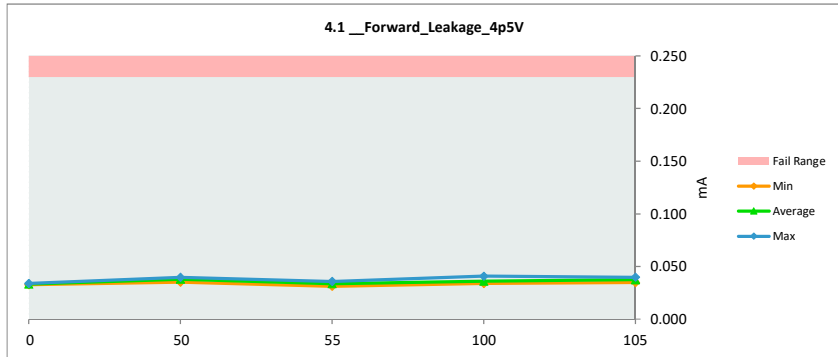
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.032	0.033	0.000
0	24	0.035	0.034	-0.001
50	1	0.034	0.037	0.002
50	2	0.033	0.035	0.002
50	3	0.037	0.039	0.002
50	4	0.037	0.039	0.002
50	5	0.037	0.040	0.003
55	6	0.034	0.036	0.002
55	7	0.032	0.031	-0.001
55	8	0.031	0.032	0.001
55	11	0.033	0.034	0.002
55	12	0.036	0.035	-0.001
100	13	0.033	0.034	0.001
100	14	0.039	0.041	0.002
100	15	0.033	0.036	0.002
100	16	0.034	0.036	0.001
100	17	0.032	0.034	0.001
105	18	0.036	0.037	0.001
105	19	0.036	0.037	0.001
105	20	0.035	0.035	0.000
105	21	0.039	0.040	0.001
105	22	0.036	0.038	0.002
	Max	0.039	0.041	0.003
	Average	0.035	0.036	0.001
	Min	0.031	0.031	-0.001
	Std Dev	0.002	0.003	0.001



4.1 __ Forward Leakage_4p5V

Test Site		
Tester		
Test Number		
Max Limit	0.23	mA
Min Limit		mA

Krad(Si)	0	50	55	100	105
LL					
Min	0.033	0.035	0.031	0.034	0.035
Average	0.033	0.038	0.034	0.036	0.037
Max	0.034	0.040	0.036	0.041	0.040
UL	0.230	0.230	0.230	0.230	0.230

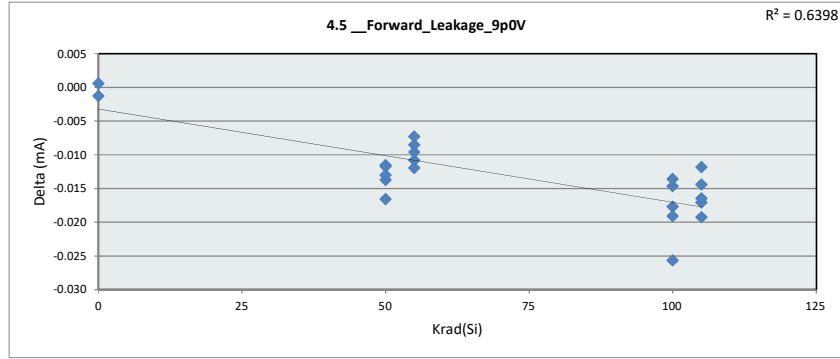


HDR LOOKAHEAD TID Report TPS7H2211-SP

4.5 __ Forward Leakage_9p0V

Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	0.49	0.49
Min Limit		

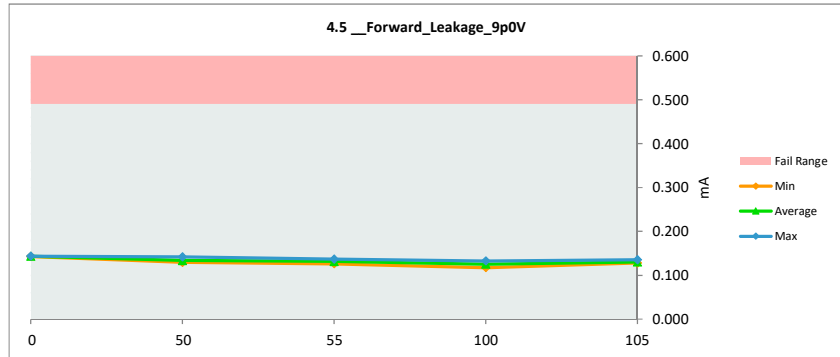
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.143	0.144	0.001
0	24	0.144	0.143	-0.001
50	1	0.145	0.133	-0.012
50	2	0.151	0.134	-0.017
50	3	0.143	0.129	-0.014
50	4	0.144	0.130	-0.013
50	5	0.153	0.142	-0.012
55	6	0.140	0.133	-0.007
55	7	0.147	0.137	-0.011
55	8	0.136	0.126	-0.010
55	11	0.142	0.134	-0.009
55	12	0.139	0.127	-0.012
100	13	0.143	0.117	-0.026
100	14	0.152	0.133	-0.019
100	15	0.138	0.121	-0.018
100	16	0.143	0.128	-0.015
100	17	0.142	0.128	-0.014
105	18	0.148	0.129	-0.019
105	19	0.143	0.129	-0.014
105	20	0.145	0.128	-0.017
105	21	0.152	0.135	-0.016
105	22	0.142	0.130	-0.012
Max		0.153	0.144	0.001
Average		0.144	0.131	-0.013
Min		0.136	0.117	-0.026
Std Dev		0.005	0.006	0.006



4.5 __ Forward Leakage_9p0V

Test Site		
Tester		
Test Number		
Max Limit	0.49	mA
Min Limit		mA

	Krad(Si)	0	50	55	100	105
LL						
Min		0.143	0.129	0.126	0.117	0.128
Average		0.143	0.134	0.131	0.125	0.130
Max		0.144	0.142	0.137	0.133	0.135
UL		0.490	0.490	0.490	0.490	0.490

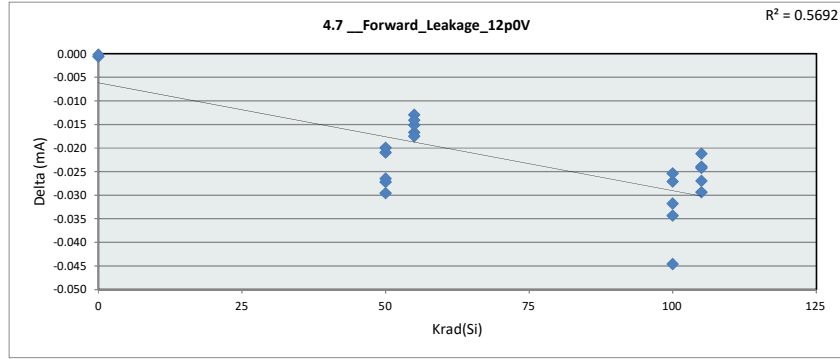


HDR LOOKAHEAD TID Report TPS7H2211-SP

4.7 __ Forward Leakage_12p0V

Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	0.94	0.94
Min Limit		

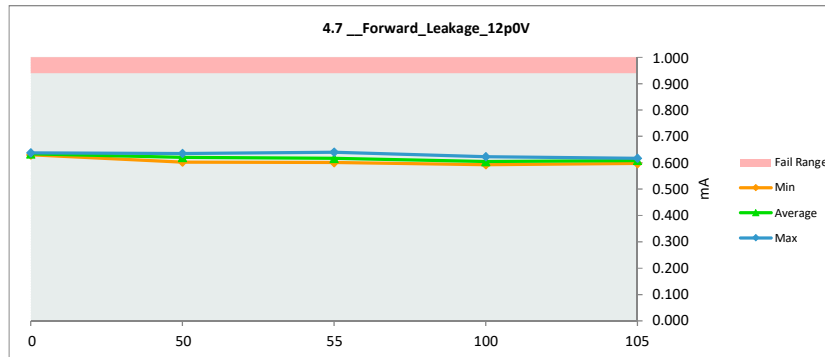
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.638	0.637	-0.001
0	24	0.630	0.630	0.000
50	1	0.646	0.625	-0.021
50	2	0.660	0.630	-0.030
50	3	0.634	0.606	-0.027
50	4	0.629	0.602	-0.026
50	5	0.655	0.635	-0.020
55	6	0.622	0.609	-0.013
55	7	0.657	0.640	-0.017
55	8	0.626	0.611	-0.015
55	11	0.635	0.621	-0.014
55	12	0.618	0.600	-0.017
100	13	0.637	0.592	-0.045
100	14	0.655	0.623	-0.032
100	15	0.629	0.595	-0.034
100	16	0.627	0.600	-0.027
100	17	0.637	0.611	-0.025
105	18	0.645	0.616	-0.029
105	19	0.632	0.608	-0.024
105	20	0.632	0.605	-0.027
105	21	0.641	0.617	-0.024
105	22	0.618	0.597	-0.021
Max		0.660	0.640	0.000
Average		0.636	0.614	-0.022
Min		0.618	0.592	-0.045
Std Dev		0.012	0.014	0.010



4.7 __ Forward Leakage_12p0

Test Site		
Tester		
Test Number		
Max Limit	0.94	mA
Min Limit		mA

	Krad(Si)	0	50	55	100	105
LL						
Min		0.630	0.602	0.600	0.592	0.597
Average		0.634	0.620	0.616	0.604	0.609
Max		0.637	0.635	0.640	0.623	0.617
UL		0.940	0.940	0.940	0.940	0.940

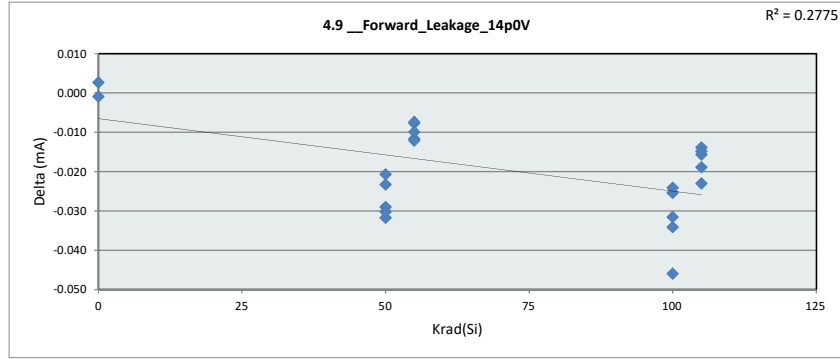


HDR LOOKAHEAD TID Report TPS7H2211-SP

4.9 __ Forward Leakage_14p0V

Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	1.3	1.3
Min Limit		

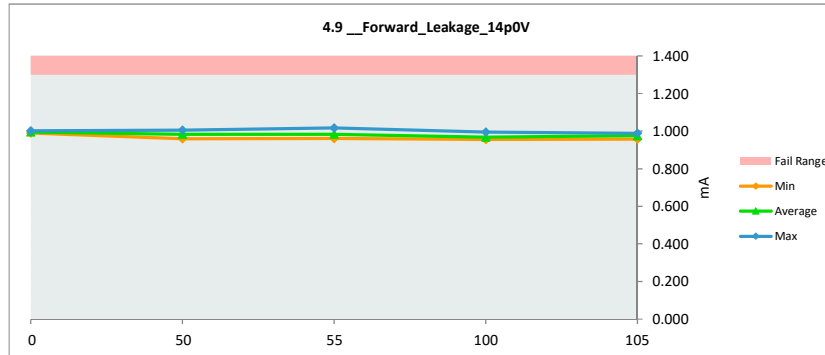
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	1.002	1.001	-0.001
0	24	0.987	0.989	0.003
50	1	1.013	0.990	-0.023
50	2	1.032	1.001	-0.032
50	3	0.994	0.965	-0.029
50	4	0.989	0.959	-0.030
50	5	1.025	1.005	-0.021
55	6	0.978	0.971	-0.008
55	7	1.028	1.016	-0.012
55	8	0.986	0.979	-0.007
55	11	0.999	0.989	-0.010
55	12	0.972	0.960	-0.012
100	13	1.001	0.955	-0.046
100	14	1.026	0.995	-0.032
100	15	0.992	0.958	-0.034
100	16	0.982	0.957	-0.025
100	17	0.997	0.973	-0.024
105	18	1.012	0.989	-0.023
105	19	0.992	0.976	-0.016
105	20	0.987	0.968	-0.019
105	21	1.000	0.986	-0.014
105	22	0.971	0.956	-0.015
Max		1.032	1.016	0.003
Average		0.998	0.979	-0.020
Min		0.971	0.955	-0.046
Std Dev		0.018	0.018	0.012



4.9 __ Forward Leakage_14p0V

Test Site		
Tester		
Test Number		
Max Limit	1.3	mA
Min Limit		mA

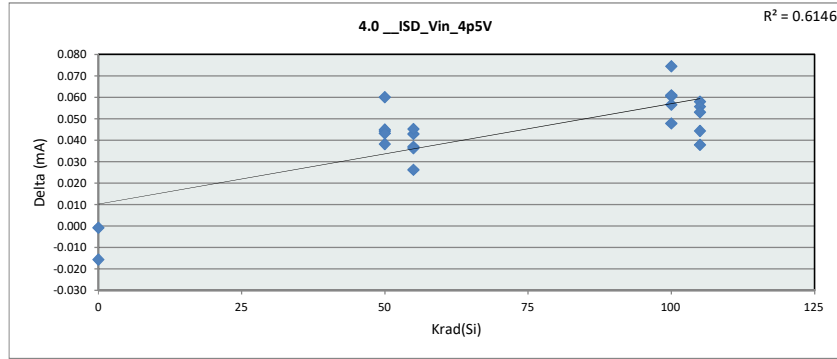
Krad(Si)	0	50	55	100	105
LL					
Min	0.989	0.959	0.960	0.955	0.956
Average	0.995	0.984	0.983	0.968	0.975
Max	1.001	1.005	1.016	0.995	0.989
UL	1.300	1.300	1.300	1.300	1.300



HDR LOOKAHEAD TID Report TPS7H2211-SP

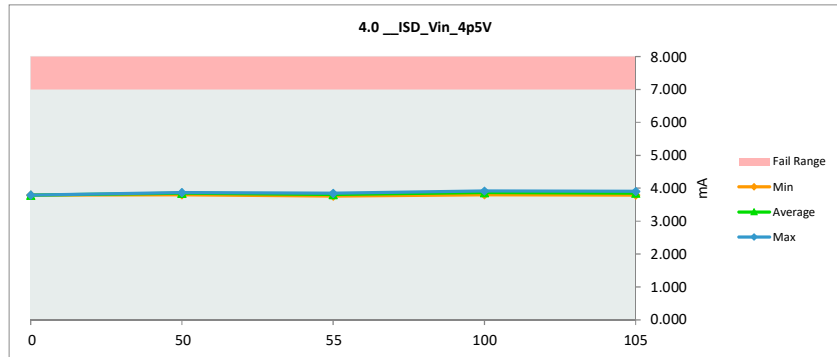
4.0 __ISD_Vin_4p5V	
Test Site	
Tester	
Test Number	
Unit	mA
Max Limit	7
Min Limit	7

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	3.784	3.784	-0.001
0	24	3.809	3.794	-0.016
50	1	3.799	3.859	0.060
50	2	3.760	3.804	0.044
50	3	3.830	3.868	0.038
50	4	3.779	3.824	0.045
50	5	3.812	3.855	0.043
55	6	3.806	3.843	0.037
55	7	3.772	3.815	0.043
55	8	3.718	3.764	0.045
55	11	3.806	3.832	0.026
55	12	3.766	3.802	0.036
100	13	3.798	3.859	0.061
100	14	3.830	3.887	0.057
100	15	3.842	3.917	0.075
100	16	3.816	3.863	0.048
100	17	3.742	3.803	0.061
105	18	3.848	3.906	0.058
105	19	3.812	3.868	0.056
105	20	3.753	3.791	0.038
105	21	3.784	3.829	0.044
105	22	3.794	3.848	0.053
	Max	3.848	3.917	0.075
	Average	3.794	3.837	0.043
	Min	3.718	3.764	-0.016
	Std Dev	0.033	0.040	0.020



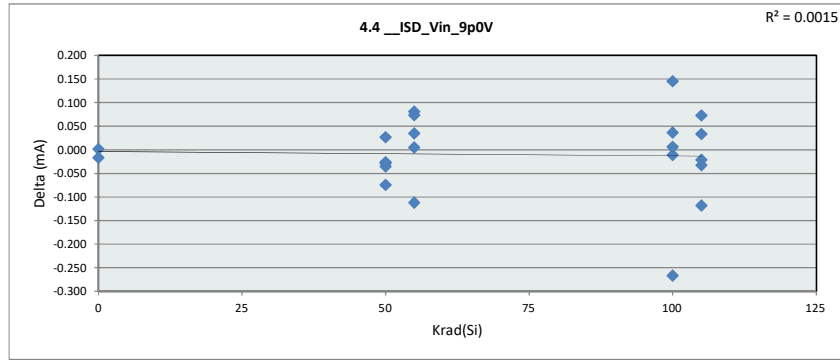
4.0 __ISD_Vin_4p5V	
Test Site	
Tester	
Test Number	
Max Limit	7 mA
Min Limit	7 mA

	Krad(Si) 0	50	55	100	105
LL					
Min	3.784	3.804	3.764	3.803	3.791
Average	3.789	3.842	3.811	3.866	3.848
Max	3.794	3.869	3.843	3.917	3.906
UL	7.000	7.000	7.000	7.000	7.000

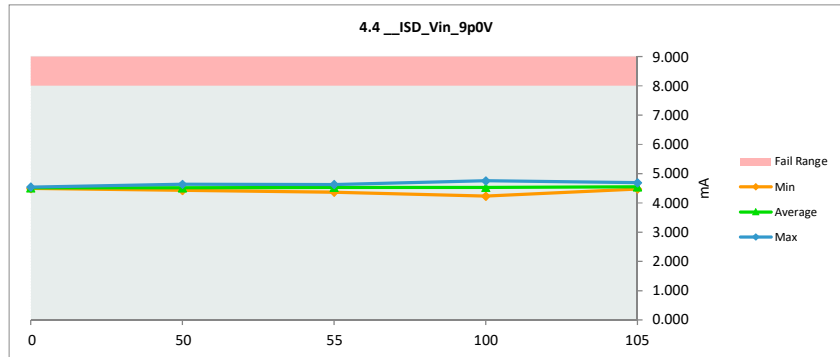


HDR LOOKAHEAD TID Report TPS7H2211-SP

4.4 __ISD_Vin_9p0V				
Test Site				
Tester				
Test Number				
Unit	mA	mA		
Max Limit	8	8		
Min Limit				
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	4.488	4.490	0.002
0	24	4.559	4.542	-0.017
50	1	4.503	4.475	-0.028
50	2	4.500	4.425	-0.075
50	3	4.595	4.560	-0.036
50	4	4.502	4.476	-0.026
50	5	4.607	4.634	0.027
55	6	4.557	4.592	0.035
55	7	4.546	4.627	0.081
55	8	4.423	4.496	0.073
55	11	4.558	4.563	0.005
55	12	4.475	4.362	-0.112
100	13	4.495	4.228	-0.267
100	14	4.563	4.552	-0.011
100	15	4.609	4.754	0.145
100	16	4.572	4.608	0.037
100	17	4.510	4.517	0.007
105	18	4.591	4.473	-0.118
105	19	4.610	4.683	0.073
105	20	4.512	4.480	-0.033
105	21	4.545	4.524	-0.021
105	22	4.559	4.592	0.033
	Max	4.610	4.754	0.145
	Average	4.540	4.530	-0.010
	Min	4.423	4.228	-0.267
	Std Dev	0.050	0.110	0.084



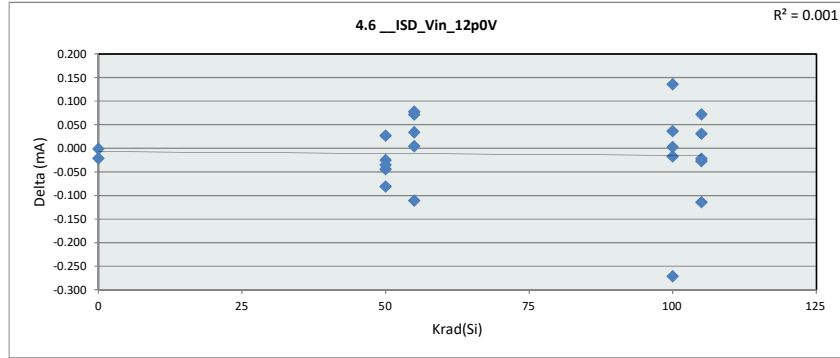
4.4 __ISD_Vin_9p0V					
Test Site					
Tester					
Test Number					
Max Limit	8	mA			
Min Limit		mA			
Krad(Si)	0	50	55	100	105
LL					
Min	4.490	4.425	4.362	4.228	4.473
Average	4.516	4.514	4.528	4.532	4.550
Max	4.542	4.634	4.627	4.754	4.683
UL	8.000	8.000	8.000	8.000	8.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

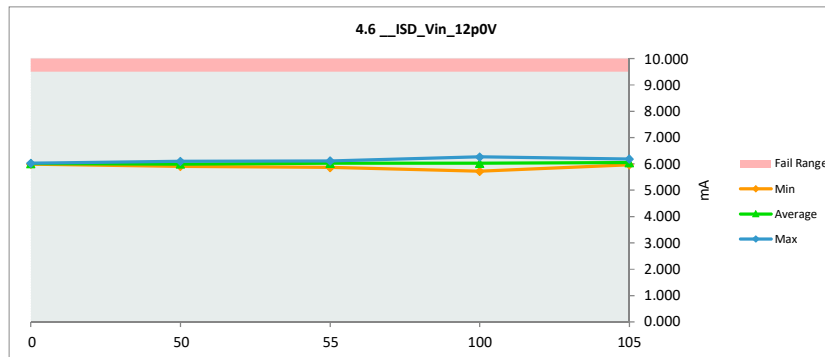
4.6 __ISD_Vin_12p0V	
Test Site	
Tester	
Test Number	
Unit	mA mA
Max Limit	9.5 9.5
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	5.988	5.987	-0.001
0	24	6.048	6.027	-0.021
50	1	5.985	5.960	-0.025
50	2	5.990	5.909	-0.081
50	3	6.087	6.043	-0.045
50	4	5.994	5.959	-0.035
50	5	6.072	6.099	0.027
55	6	6.055	6.089	0.034
55	7	6.035	6.113	0.078
55	8	5.927	5.998	0.071
55	11	6.048	6.053	0.005
55	12	5.974	5.863	-0.111
100	13	5.988	5.717	-0.271
100	14	6.016	5.999	-0.017
100	15	6.130	6.266	0.136
100	16	6.076	6.113	0.037
100	17	6.020	6.023	0.003
105	18	6.079	5.965	-0.114
105	19	6.109	6.181	0.072
105	20	6.010	5.982	-0.027
105	21	6.048	6.026	-0.022
105	22	6.054	6.085	0.031
Max		6.130	6.266	0.136
Average		6.033	6.021	-0.013
Min		5.927	5.717	-0.271
Std Dev		0.049	0.112	0.084



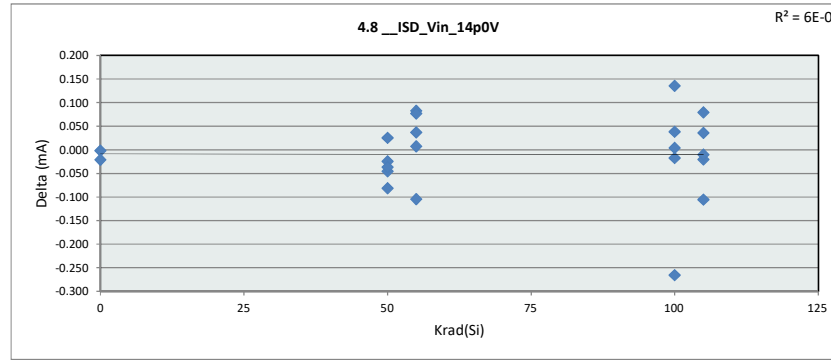
4.6 __ISD_Vin_12p0V	
Test Site	
Tester	
Test Number	
Max Limit	9.5 mA
Min Limit	

Krad(Si)	0	50	55	100	105
LL					
Min	5.987	5.909	5.863	5.717	5.966
Average	6.007	5.994	6.023	6.024	6.048
Max	6.027	6.099	6.113	6.266	6.181
UL	9.500	9.500	9.500	9.500	9.500

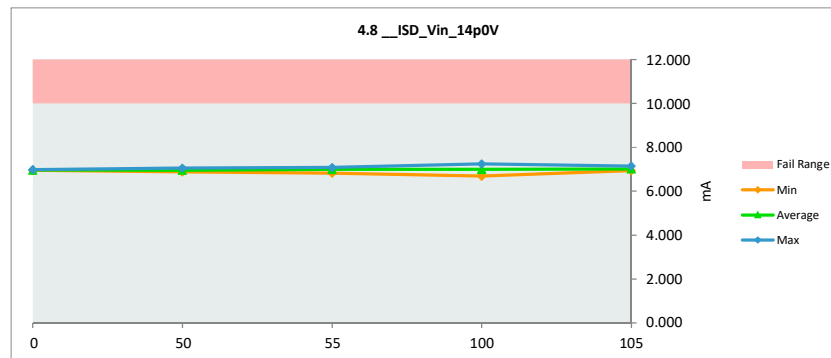


HDR LOOKAHEAD TID Report TPS7H2211-SP

4.8 __ISD_Vin_14p0V				
Test Site				
Tester				
Test Number				
Unit	mA	mA		
Max Limit	10	10		
Min Limit				
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	6.953	6.952	-0.001
0	24	7.007	6.986	-0.021
50	1	6.946	6.921	-0.025
50	2	6.957	6.876	-0.082
50	3	7.047	7.001	-0.045
50	4	6.955	6.919	-0.037
50	5	7.029	7.054	0.025
55	6	7.020	7.057	0.037
55	7	6.997	7.080	0.082
55	8	6.891	6.968	0.077
55	11	7.010	7.017	0.007
55	12	6.935	6.830	-0.105
100	13	6.955	6.689	-0.266
100	14	6.964	6.946	-0.018
100	15	7.107	7.243	0.135
100	16	7.044	7.082	0.038
100	17	6.988	6.992	0.004
105	18	7.041	6.936	-0.105
105	19	7.072	7.151	0.079
105	20	6.971	6.951	-0.021
105	21	7.019	7.009	-0.010
105	22	7.017	7.053	0.036
	Max	7.107	7.243	0.135
	Average	6.997	6.987	-0.010
	Min	6.891	6.689	-0.266
	Std Dev	0.051	0.113	0.083



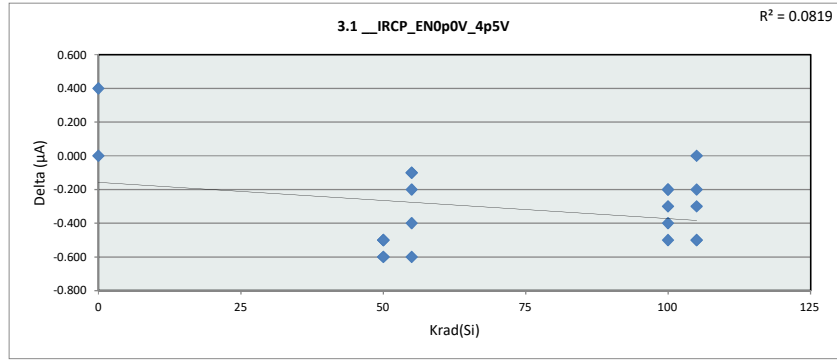
4.8 __ISD_Vin_14p0V					
Test Site					
Tester					
Test Number					
Max Limit	10	mA			
Min Limit					
Krad(Si)	0	50	55	100	105
LL					
Min	6.952	6.876	6.830	6.689	6.936
Average	6.969	6.954	6.990	6.990	7.020
Max	6.986	7.054	7.080	7.243	7.151
UL	10.000	10.000	10.000	10.000	10.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

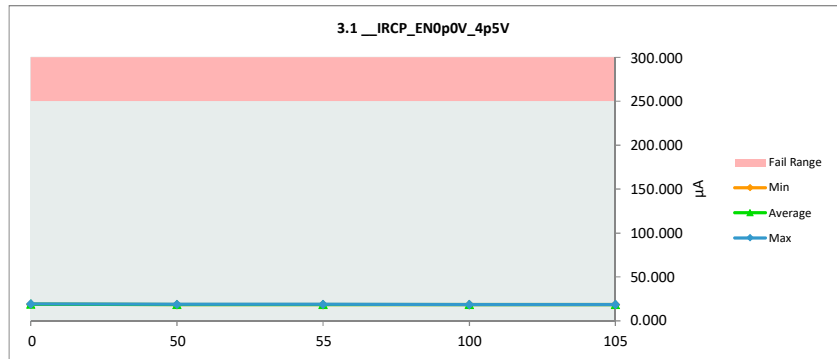
3.1 __IRCP_EN0p0V_4p5V	
Test Site	
Tester	
Test Number	
Unit	μA
Max Limit	250
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	18.800	18.800	0.000
0	24	18.900	19.300	0.400
50	1	19.400	18.900	-0.500
50	2	19.400	18.800	-0.600
50	3	19.000	18.400	-0.600
50	4	19.200	18.700	-0.500
50	5	19.100	18.600	-0.500
55	6	18.900	18.700	-0.200
55	7	19.200	18.600	-0.600
55	8	18.800	18.400	-0.400
55	11	19.000	18.900	-0.100
55	12	18.800	18.700	-0.100
100	13	18.900	18.400	-0.500
100	14	18.800	18.600	-0.200
100	15	18.800	18.600	-0.200
100	16	18.900	18.500	-0.400
100	17	18.800	18.500	-0.300
105	18	18.700	18.700	0.000
105	19	18.800	18.500	-0.300
105	20	18.600	18.400	-0.200
105	21	19.000	18.500	-0.500
105	22	19.000	18.500	-0.500
Max		19.400	19.300	0.400
Average		18.945	18.636	-0.309
Min		18.600	18.400	-0.600
Std Dev		0.209	0.215	0.251



3.1 __IRCP_EN0p0V_4p5V	
Test Site	
Tester	
Test Number	
Max Limit	250 μA
Min Limit	μA

	Krad(Si)	0	50	55	100	105
LL						
Min		18.800	18.400	18.400	18.400	18.400
Average		19.050	18.680	18.660	18.520	18.520
Max		19.300	18.900	18.900	18.600	18.700
UL		250.000	250.000	250.000	250.000	250.000

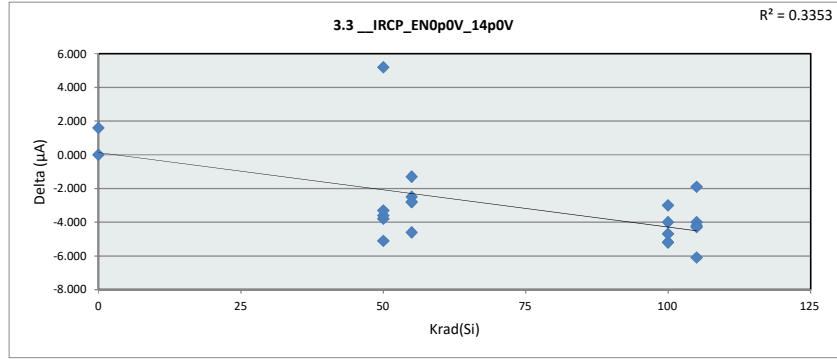


HDR LOOKAHEAD TID Report TPS7H2211-SP

3.3 __IRCP_EN0p0V_14p0V

Test Site		
Tester		
Test Number		
Unit	µA	µA
Max Limit	250	250
Min Limit		

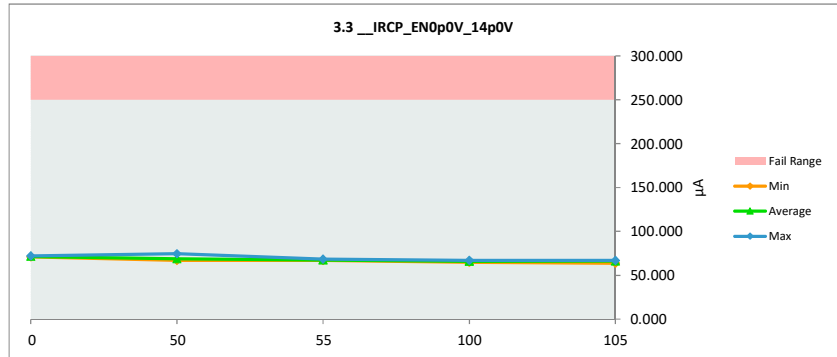
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	71.000	71.000	0.000
0	24	70.400	72.000	1.600
50	1	72.500	67.400	-5.100
50	2	71.900	68.100	-3.800
50	3	70.300	66.700	-3.600
50	4	69.300	74.500	5.200
50	5	70.300	67.000	-3.300
55	6	71.400	66.800	-4.600
55	7	70.500	68.000	-2.500
55	8	69.500	66.700	-2.800
55	11	69.700	68.400	-1.300
55	12	70.500	67.700	-2.800
100	13	71.100	65.900	-5.200
100	14	69.700	65.700	-4.000
100	15	70.000	67.000	-3.000
100	16	71.100	65.900	-5.200
100	17	69.400	64.700	-4.700
105	18	68.300	66.400	-1.900
105	19	70.700	66.700	-4.000
105	20	69.800	63.700	-6.100
105	21	71.000	66.800	-4.200
105	22	71.100	66.800	-4.300
	Max	72.500	74.500	5.200
	Average	70.432	67.450	-2.982
	Min	68.300	63.700	-6.100
	Std Dev	0.948	2.377	2.556



3.3 __IRCP_EN0p0V_14p0V

Test Site		
Tester		
Test Number		
Max Limit	250	µA
Min Limit		µA

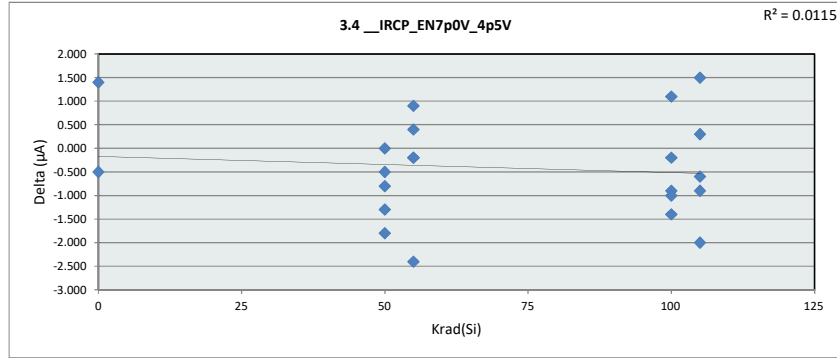
Krad(Si)	0	50	55	100	105
LL					
Min	71.000	66.700	66.700	64.700	63.700
Average	71.500	68.740	67.520	65.840	66.080
Max	72.000	74.500	68.400	67.000	66.800
UL	250.000	250.000	250.000	250.000	250.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

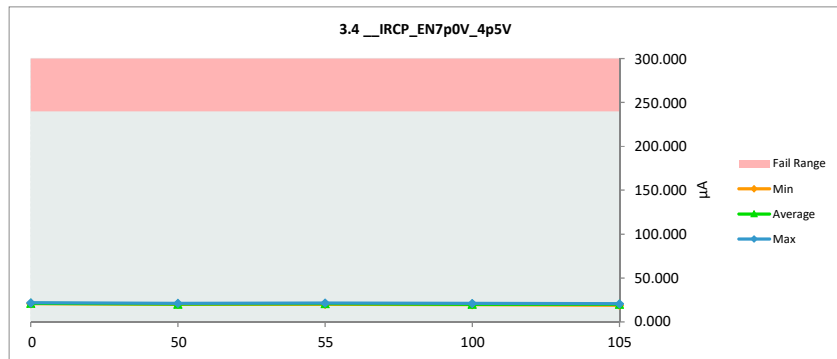
3.4 __IRCP_EN7p0V_4p5V	
Test Site	
Tester	
Test Number	
Unit	µA
Max Limit	240
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	21.300	20.800	-0.500
0	24	20.300	21.700	1.400
50	1	21.900	20.100	-1.800
50	2	21.800	21.300	-0.500
50	3	21.700	20.400	-1.300
50	4	20.300	20.300	0.000
50	5	21.200	20.400	-0.800
55	6	22.300	19.900	-2.400
55	7	20.900	20.700	-0.200
55	8	20.700	21.100	0.400
55	11	20.300	21.200	0.900
55	12	21.600	21.400	-0.200
100	13	21.100	19.700	-1.400
100	14	21.000	20.100	-0.900
100	15	20.000	21.100	1.100
100	16	21.100	20.100	-1.000
100	17	20.100	19.900	-0.200
105	18	18.900	20.400	1.500
105	19	21.000	20.400	-0.600
105	20	20.800	18.800	-2.000
105	21	20.100	20.400	0.300
105	22	21.600	20.700	-0.900
Max		22.300	21.700	1.500
Average		20.909	20.495	-0.414
Min		18.900	18.800	-2.400
Std Dev		0.786	0.658	1.060



3.4 __IRCP_EN7p0V_4p5V	
Test Site	
Tester	
Test Number	
Max Limit	240 µA
Min Limit	µA

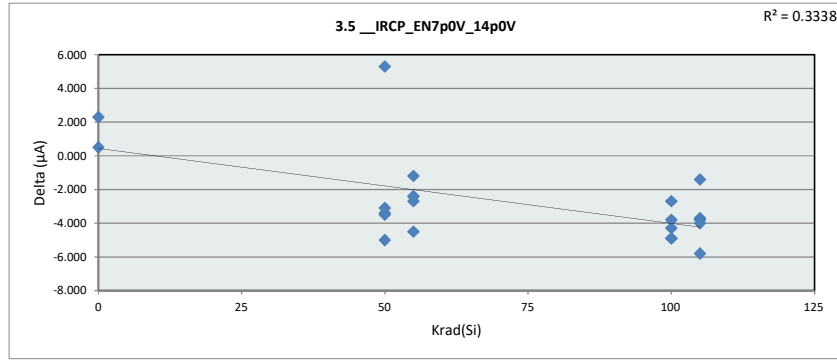
Krad(Si)	0	50	55	100	105
LL					
Min	20.800	20.100	19.900	19.700	18.800
Average	21.250	20.500	20.860	20.180	20.140
Max	21.700	21.300	21.400	21.100	20.700
UL	240.000	240.000	240.000	240.000	240.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

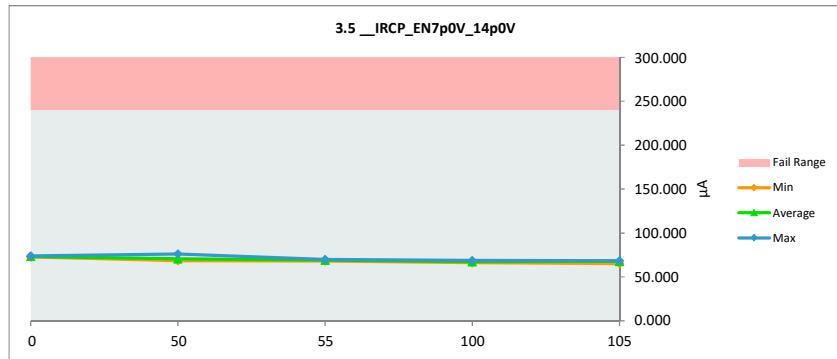
3.5 __IRCP_EN7p0V_14p0V	
Test Site	
Tester	
Test Number	
Unit	μA
Max Limit	240
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	72.300	72.800	0.500
0	24	71.600	73.900	2.300
50	1	74.200	69.200	-5.000
50	2	73.500	70.000	-3.500
50	3	71.900	68.500	-3.400
50	4	71.000	76.300	5.300
50	5	71.800	68.700	-3.100
55	6	72.900	68.400	-4.500
55	7	72.000	69.600	-2.400
55	8	71.000	68.300	-2.700
55	11	71.100	69.900	-1.200
55	12	71.900	69.500	-2.400
100	13	72.400	67.500	-4.900
100	14	71.100	67.300	-3.800
100	15	71.400	68.700	-2.700
100	16	72.400	67.500	-4.900
100	17	70.600	66.300	-4.300
105	18	69.500	68.100	-1.400
105	19	71.900	68.200	-3.700
105	20	71.100	65.300	-5.800
105	21	72.200	68.400	-3.800
105	22	72.400	68.400	-4.000
Max		74.200	76.300	5.300
Average		71.827	69.127	-2.700
Min		69.500	65.300	-5.800
Std Dev		1.002	2.446	2.583



3.5 __IRCP_EN7p0V_14p0V	
Test Site	
Tester	
Test Number	
Max Limit	240 μA
Min Limit	μA

Krad(Si)	0	50	55	100	105
LL					
Min	72.800	68.500	68.300	66.300	65.300
Average	73.350	70.540	69.140	67.460	67.680
Max	73.900	76.300	69.900	68.700	68.400
UL	240.000	240.000	240.000	240.000	240.000

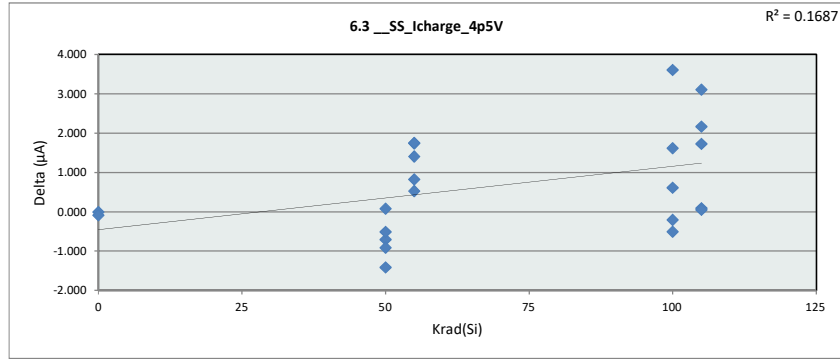


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.3 __SS_Icharge_4p5V

Test Site		
Tester		
Test Number		
Unit	µA	µA
Max Limit	83	83
Min Limit		

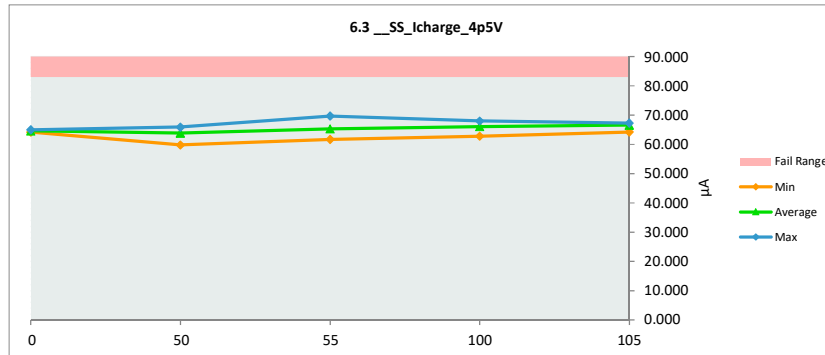
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	64.993	64.988	-0.005
0	24	64.296	64.204	-0.092
50	1	66.608	65.900	-0.708
50	2	59.742	59.818	0.076
50	3	66.345	65.830	-0.515
50	4	65.906	64.992	-0.914
50	5	64.126	62.706	-1.420
55	6	69.168	69.691	0.523
55	7	60.853	61.676	0.823
55	8	63.998	65.735	1.737
55	11	62.178	63.931	1.753
55	12	64.017	65.422	1.405
100	13	66.358	67.971	1.613
100	14	65.972	66.580	0.608
100	15	64.018	67.626	3.608
100	16	66.056	65.546	-0.510
100	17	62.990	62.782	-0.208
105	18	64.148	64.238	0.090
105	19	64.164	67.266	3.102
105	20	65.351	67.077	1.726
105	21	66.999	67.045	0.046
105	22	65.082	67.248	2.166
	Max	69.168	69.691	3.608
	Average	64.699	65.376	0.677
	Min	59.742	59.818	-1.420
	Std Dev	2.083	2.276	1.312



6.3 __SS_Icharge_4p5V

Test Site		
Tester		
Test Number		
Max Limit	83	µA
Min Limit		µA

Krad(Si)	0	50	55	100	105
LL					
Min	64.204	59.818	61.676	62.782	64.238
Average	64.596	63.849	65.291	66.101	66.575
Max	64.988	65.900	69.691	67.971	67.266
UL	83.000	83.000	83.000	83.000	83.000

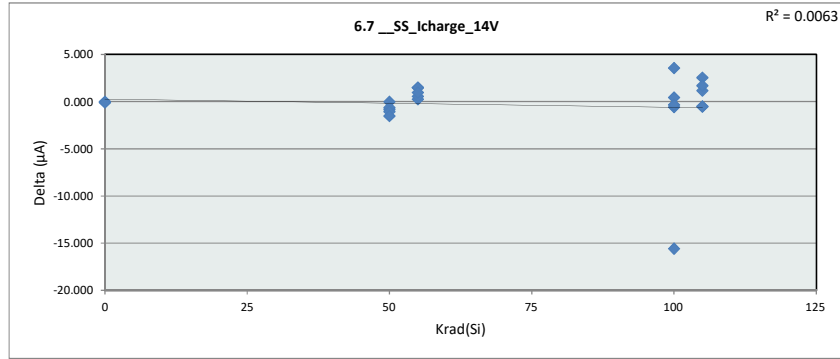


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.7 __SS_Icharge_14V

Test Site		
Tester		
Test Number		
Unit	µA	µA
Max Limit	83	83
Min Limit		

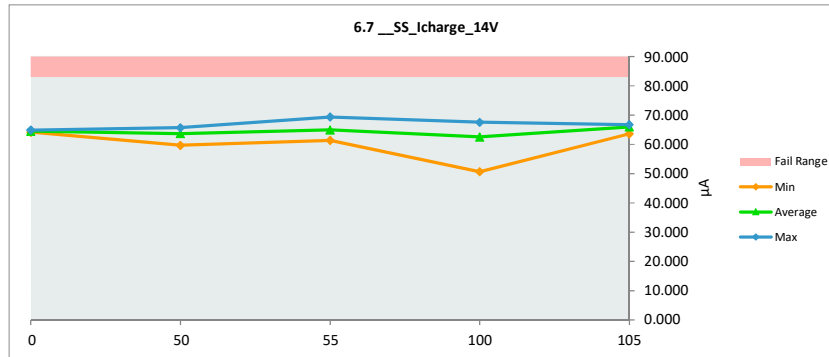
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	64.887	64.882	-0.005
0	24	64.249	64.146	-0.103
50	1	66.516	65.711	-0.805
50	2	59.662	59.640	-0.022
50	3	66.294	65.669	-0.625
50	4	65.807	64.752	-1.055
50	5	64.066	62.534	-1.532
55	6	69.090	69.342	0.252
55	7	60.800	61.343	0.543
55	8	63.927	65.385	1.458
55	11	62.104	63.592	1.488
55	12	63.917	64.883	0.966
100	13	66.240	50.666	-15.574
100	14	65.887	66.318	0.431
100	15	63.963	67.524	3.561
100	16	65.985	65.400	-0.585
100	17	62.941	62.589	-0.352
105	18	64.076	63.571	-0.505
105	19	64.115	66.666	2.551
105	20	65.263	66.420	1.157
105	21	66.928	66.404	-0.524
105	22	65.014	66.713	1.699
Max		69.090	69.342	3.561
Average		64.624	64.280	-0.345
Min		59.662	50.666	-15.574
Std Dev		2.077	3.721	3.617



6.7 __SS_Icharge_14V

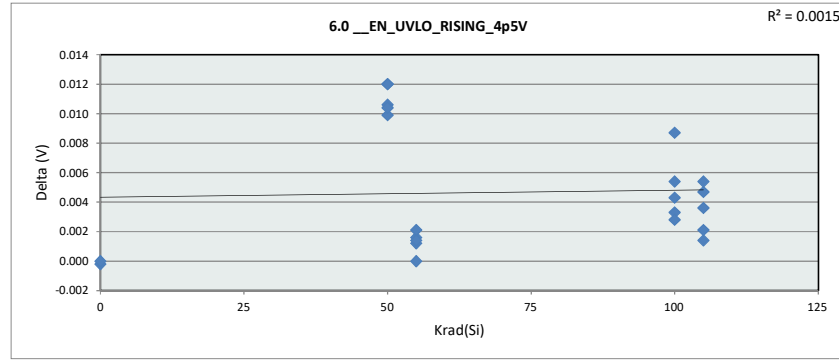
Test Site		
Tester		
Test Number		
Max Limit	83	µA
Min Limit		µA

	Krad(Si)	0	50	55	100	105
LL						
Min		64.146	59.640	61.343	50.666	63.571
Average		64.514	63.661	64.909	62.499	65.955
Max		64.882	65.711	69.342	67.524	66.713
UL		83.000	83.000	83.000	83.000	83.000

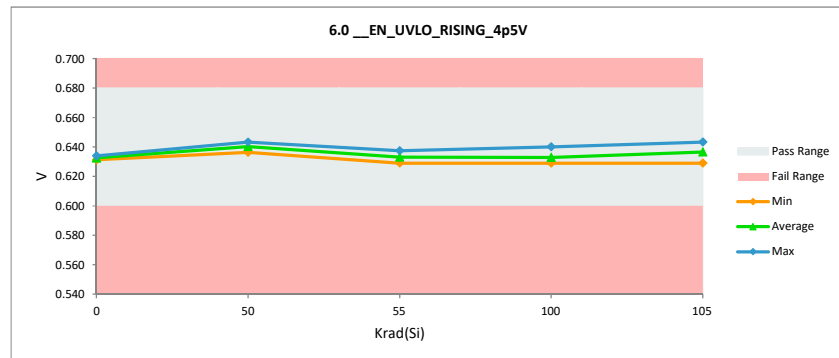


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.0 __EN_UVLO_RISING_4p5V				
Test Site				
Tester				
Test Number				
Unit	V	V		
Max Limit	0.68	0.68		
Min Limit	0.6	0.6		
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.631	0.631	0.000
0	24	0.634	0.634	0.000
50	1	0.631	0.643	0.012
50	2	0.631	0.641	0.011
50	3	0.627	0.639	0.012
50	4	0.626	0.636	0.010
50	5	0.631	0.641	0.010
55	6	0.627	0.629	0.002
55	7	0.636	0.637	0.001
55	8	0.633	0.636	0.002
55	11	0.631	0.632	0.001
55	12	0.631	0.631	0.000
100	13	0.628	0.633	0.004
100	14	0.635	0.640	0.005
100	15	0.628	0.631	0.003
100	16	0.629	0.631	0.003
100	17	0.620	0.629	0.009
105	18	0.633	0.638	0.005
105	19	0.628	0.629	0.001
105	20	0.641	0.643	0.002
105	21	0.629	0.633	0.004
105	22	0.635	0.640	0.005
Max		0.641	0.643	0.012
Average		0.631	0.635	0.005
Min		0.620	0.629	0.000
Std Dev		0.004	0.005	0.004

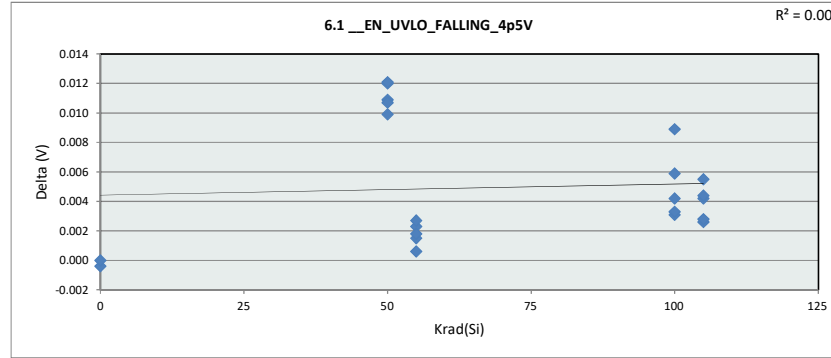


6.0 __EN_UVLO_RISING_4p5V					
Test Site					
Tester					
Test Number					
Max Limit	0.68	V			
Min Limit	0.6	V			
Krad(Si)	0	50	55	100	105
LL	0.600	0.600	0.600	0.600	0.600
Min	0.631	0.636	0.629	0.629	0.629
Average	0.633	0.640	0.633	0.633	0.637
Max	0.634	0.643	0.638	0.640	0.643
UL	0.680	0.680	0.680	0.680	0.680

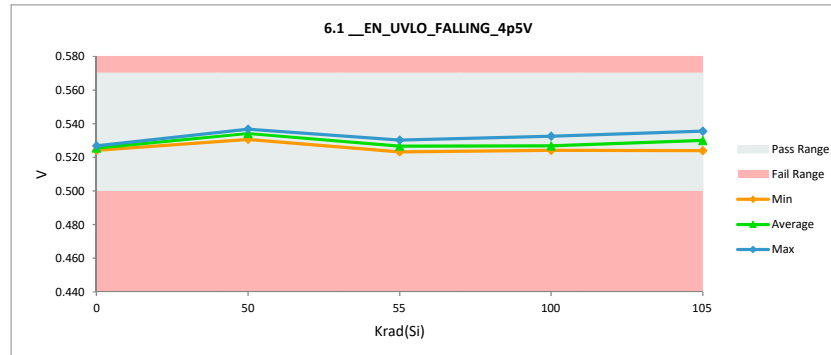


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.1 __EN_UVLO_FALLING_4p5V				
Test Site				
Tester				
Test Number				
Unit	V	V		
Max Limit	0.57	0.57		
Min Limit	0.5	0.5		
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.525	0.524	0.000
0	24	0.527	0.527	0.000
50	1	0.525	0.537	0.012
50	2	0.524	0.535	0.011
50	3	0.521	0.534	0.012
50	4	0.521	0.531	0.010
50	5	0.524	0.535	0.011
55	6	0.521	0.523	0.002
55	7	0.529	0.530	0.002
55	8	0.526	0.529	0.003
55	11	0.524	0.525	0.002
55	12	0.525	0.525	0.001
100	13	0.522	0.526	0.004
100	14	0.527	0.533	0.006
100	15	0.522	0.525	0.003
100	16	0.522	0.525	0.003
100	17	0.515	0.524	0.009
105	18	0.527	0.531	0.004
105	19	0.521	0.524	0.003
105	20	0.533	0.536	0.003
105	21	0.522	0.527	0.004
105	22	0.527	0.533	0.006
Max		0.533	0.537	0.012
Average		0.524	0.529	0.005
Min		0.515	0.523	0.000
Std Dev		0.004	0.004	0.004



6.1 __EN_UVLO_FALLING_4p5V					
Test Site					
Tester					
Test Number					
Max Limit	0.57	V			
Min Limit	0.5	V			
Krad(Si)	0	50	55	100	105
LL	0.500	0.500	0.500	0.500	0.500
Min	0.524	0.531	0.523	0.524	0.524
Average	0.526	0.534	0.527	0.527	0.530
Max	0.527	0.537	0.530	0.533	0.536
UL	0.570	0.570	0.570	0.570	0.570

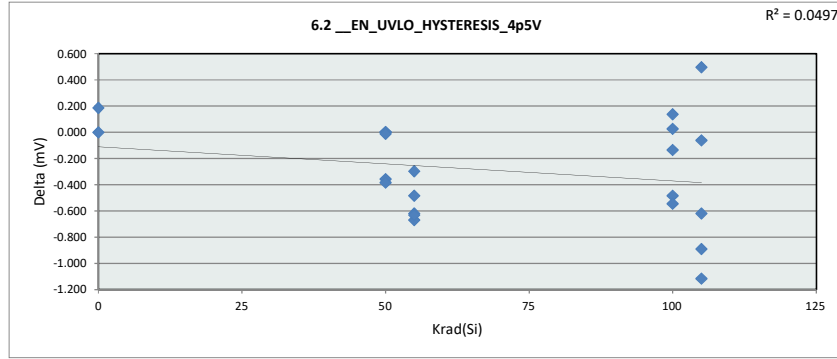


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.2 __EN_UVLO_HYSTERESIS_4p5V

Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	139	139
Min Limit	94	94

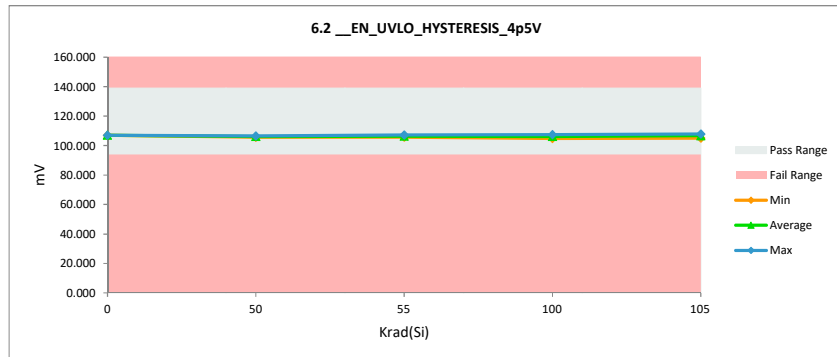
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	106.785	106.971	0.186
0	24	107.058	107.058	0.000
50	1	106.574	106.576	0.002
50	2	106.710	106.352	-0.358
50	3	105.941	105.943	0.002
50	4	105.632	105.620	-0.012
50	5	106.736	106.352	-0.384
55	6	106.363	105.694	-0.669
55	7	107.517	107.220	-0.297
55	8	107.219	106.599	-0.620
55	11	107.132	106.649	-0.483
55	12	106.574	105.942	-0.632
100	13	106.251	106.277	0.026
100	14	107.976	107.493	-0.483
100	15	105.805	105.942	0.137
100	16	106.487	105.942	-0.545
100	17	104.986	104.851	-0.135
105	18	106.798	107.294	0.496
105	19	106.177	105.061	-1.116
105	20	108.460	107.840	-0.620
105	21	106.747	105.856	-0.891
105	22	107.343	107.282	-0.061
	Max	108.460	107.840	0.496
	Average	106.694	106.401	-0.294
	Min	104.986	104.851	-1.116
	Std Dev	0.772	0.783	0.391



6.2 __EN_UVLO_HYSTERESIS

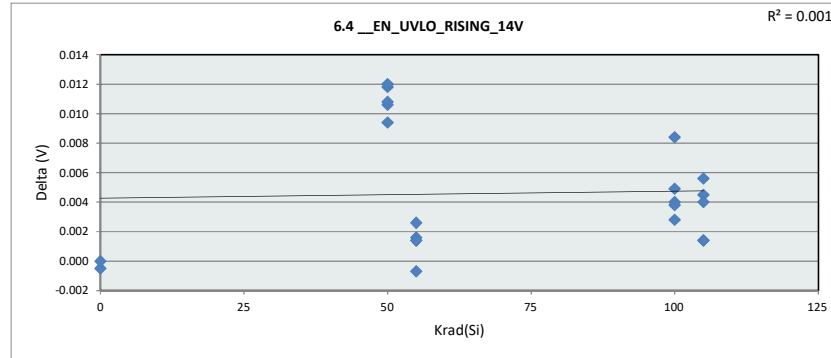
Test Site		
Tester		
Test Number		
Max Limit	139	mV
Min Limit	94	mV

Krad(Si)	0	50	55	100	105
LL	94.000	94.000	94.000	94.000	94.000
Min	106.971	105.620	105.694	104.851	105.061
Average	107.015	106.169	106.421	106.101	106.667
Max	107.058	106.576	107.220	107.493	107.840
UL	139.000	139.000	139.000	139.000	139.000

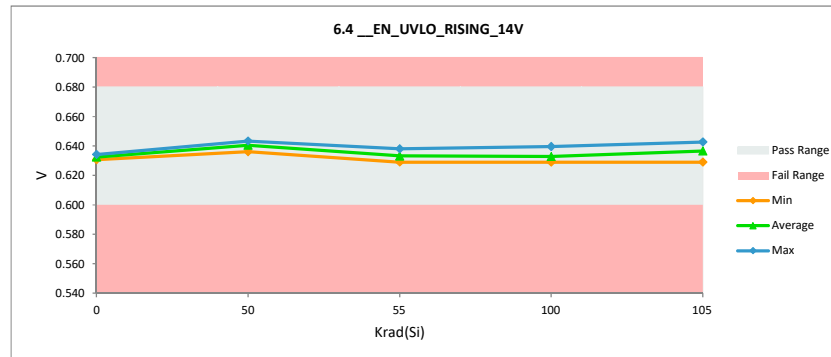


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.4 __EN_UVLO_RISING_14V				
Test Site				
Tester				
Test Number				
Unit	V	V		
Max Limit	0.68	0.68		
Min Limit	0.6	0.6		
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.631	0.631	-0.001
0	24	0.634	0.634	0.000
50	1	0.632	0.643	0.012
50	2	0.631	0.641	0.011
50	3	0.628	0.640	0.012
50	4	0.627	0.636	0.009
50	5	0.631	0.642	0.011
55	6	0.627	0.629	0.002
55	7	0.637	0.638	0.001
55	8	0.633	0.636	0.003
55	11	0.631	0.632	0.001
55	12	0.631	0.631	-0.001
100	13	0.628	0.632	0.004
100	14	0.635	0.640	0.005
100	15	0.628	0.632	0.004
100	16	0.629	0.631	0.003
100	17	0.621	0.629	0.008
105	18	0.633	0.638	0.005
105	19	0.628	0.629	0.001
105	20	0.641	0.643	0.001
105	21	0.629	0.633	0.004
105	22	0.635	0.640	0.006
Max		0.641	0.643	0.012
Average		0.631	0.635	0.005
Min		0.621	0.629	-0.001
Std Dev		0.004	0.005	0.004



6.4 __EN_UVLO_RISING_14V					
Test Site					
Tester					
Test Number					
Max Limit	0.68	V			
Min Limit	0.6	V			
Krad(Si)	0	50	55	100	105
LL	0.600	0.600	0.600	0.600	0.600
Min	0.631	0.636	0.629	0.629	0.629
Average	0.632	0.640	0.633	0.633	0.637
Max	0.634	0.643	0.638	0.640	0.643
UL	0.680	0.680	0.680	0.680	0.680

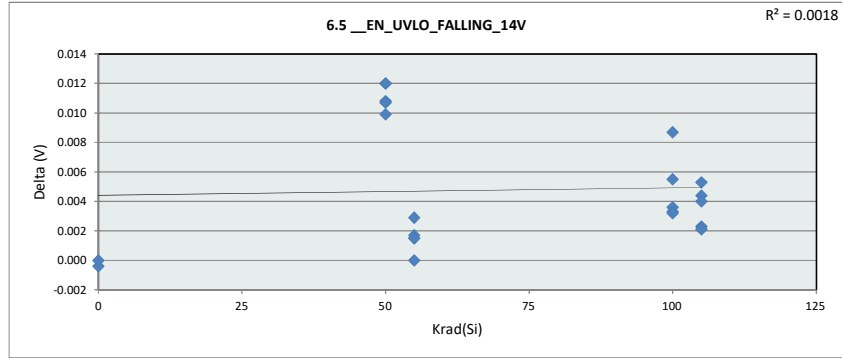


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.5 __EN_UVLO_FALLING_14V

Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	0.57	0.57
Min Limit	0.5	0.5

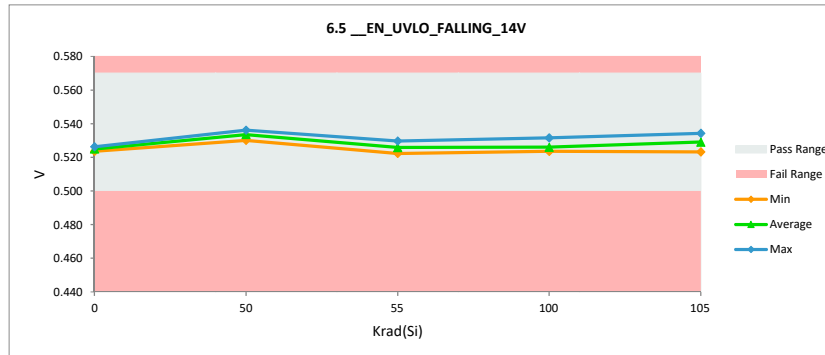
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.524	0.524	0.000
0	24	0.526	0.526	0.000
50	1	0.524	0.536	0.012
50	2	0.523	0.534	0.011
50	3	0.521	0.533	0.012
50	4	0.520	0.530	0.010
50	5	0.524	0.535	0.011
55	6	0.521	0.522	0.002
55	7	0.528	0.530	0.002
55	8	0.526	0.529	0.003
55	11	0.523	0.525	0.002
55	12	0.524	0.524	0.000
100	13	0.521	0.525	0.004
100	14	0.526	0.532	0.006
100	15	0.522	0.525	0.003
100	16	0.521	0.525	0.003
100	17	0.515	0.524	0.009
105	18	0.526	0.530	0.004
105	19	0.521	0.523	0.002
105	20	0.532	0.534	0.002
105	21	0.522	0.526	0.004
105	22	0.527	0.532	0.005
Max		0.532	0.536	0.012
Average		0.524	0.528	0.005
Min		0.515	0.522	0.000
Std Dev		0.003	0.004	0.004



6.5 __EN_UVLO_FALLING_14V

Test Site		
Tester		
Test Number		
Max Limit	0.57	V
Min Limit	0.5	V

Krad(Si)	0	50	55	100	105
LL	0.500	0.500	0.500	0.500	0.500
Min	0.524	0.530	0.522	0.524	0.523
Average	0.525	0.534	0.526	0.526	0.529
Max	0.526	0.536	0.530	0.532	0.534
UL	0.570	0.570	0.570	0.570	0.570

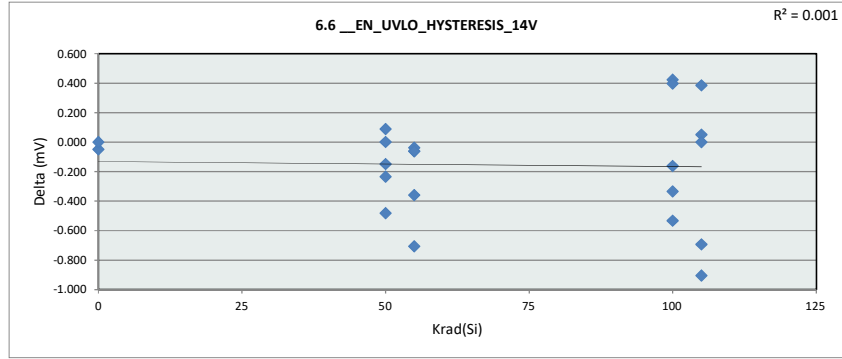


HDR LOOKAHEAD TID Report TPS7H2211-SP

6.6 _EN_UVLO_HYSTERESIS_14V

Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	139	139
Min Limit	94	94

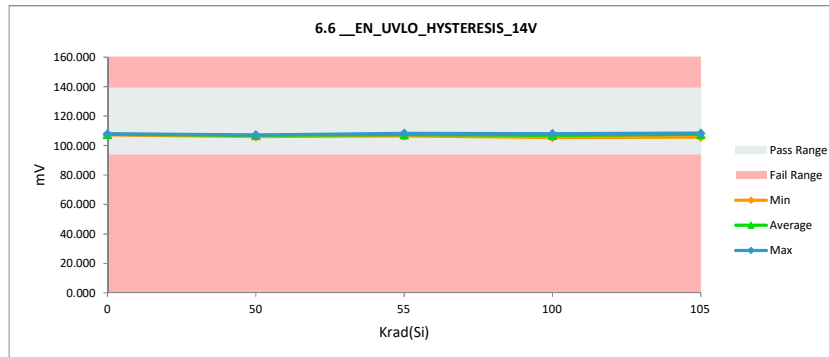
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	107.181	107.132	-0.049
0	24	107.926	107.926	0.000
50	1	107.442	107.208	-0.234
50	2	107.343	107.195	-0.148
50	3	106.810	106.811	0.001
50	4	106.499	106.017	-0.482
50	5	107.181	107.270	0.089
55	6	106.784	106.747	-0.037
55	7	108.384	108.323	-0.061
55	8	107.851	107.492	-0.359
55	11	107.343	107.281	-0.062
55	12	107.207	106.500	-0.707
100	13	106.883	107.306	0.423
100	14	108.608	108.075	-0.533
100	15	106.673	107.071	0.398
100	16	107.119	106.785	-0.334
100	17	105.644	105.483	-0.161
105	18	107.851	107.902	0.051
105	19	106.599	105.694	-0.905
105	20	109.092	108.398	-0.694
105	21	107.380	107.380	0.000
105	22	107.976	108.361	0.385
Max		109.092	108.398	0.423
Average		107.353	107.198	-0.155
Min		105.644	105.483	-0.905
Std Dev		0.773	0.806	0.354



6.6 _EN_UVLO_HYSTERESIS

Test Site		
Tester		
Test Number		
Max Limit	139	mV
Min Limit	94	mV

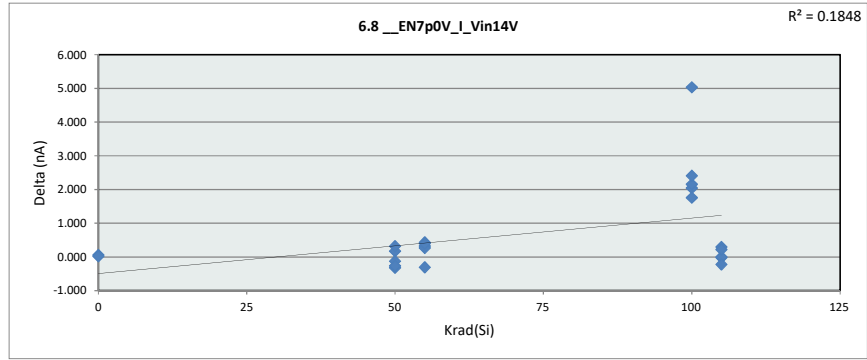
Krad(Si)	0	50	55	100	105
LL	94.000	94.000	94.000	94.000	94.000
Min	107.132	106.017	106.500	105.483	105.694
Average	107.529	106.900	107.269	106.944	107.547
Max	107.926	107.270	108.323	108.075	108.398
UL	139.000	139.000	139.000	139.000	139.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

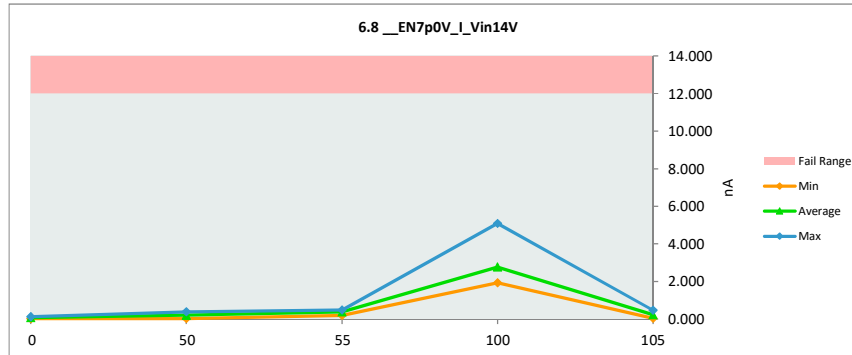
6.8 __EN7p0V_I_Vin14V	
Test Site	
Tester	
Test Number	
Unit	nA nA
Max Limit	12 12
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	0.071	0.127	0.056
0	24	0.005	0.023	0.018
50	1	0.200	0.370	0.170
50	2	0.464	0.143	-0.321
50	3	0.233	0.108	-0.125
50	4	0.298	0.031	-0.267
50	5	0.076	0.390	0.314
55	6	0.086	0.408	0.322
55	7	0.075	0.338	0.263
55	8	0.056	0.487	0.431
55	11	0.512	0.200	-0.312
55	12	0.072	0.466	0.394
100	13	0.085	2.125	2.040
100	14	0.018	2.175	2.157
100	15	0.054	5.090	5.036
100	16	0.116	2.523	2.407
100	17	0.174	1.933	1.759
105	18	0.162	0.136	-0.026
105	19	0.134	0.130	-0.004
105	20	0.272	0.045	-0.227
105	21	0.068	0.364	0.296
105	22	0.256	0.477	0.221
Max		0.512	5.090	5.036
Average		0.159	0.822	0.664
Min		0.005	0.023	-0.321
Std Dev		0.135	1.232	1.282



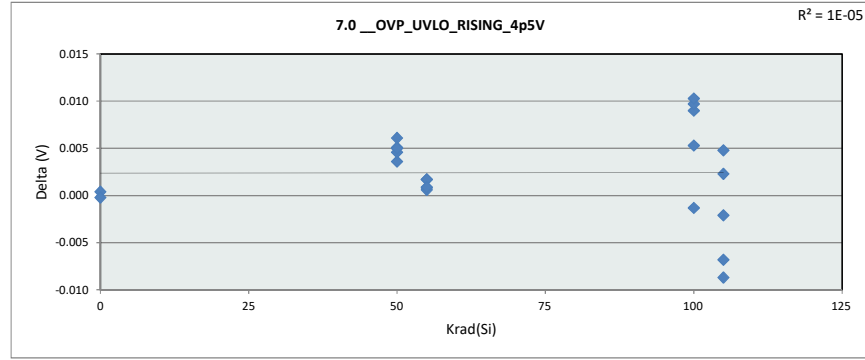
6.8 __EN7p0V_I_Vin14V	
Test Site	
Tester	
Test Number	
Max Limit	12 nA
Min Limit	

	Krad(Si)	0	50	55	100	105
LL						
Min		0.023	0.031	0.200	1.933	0.045
Average		0.075	0.208	0.380	2.769	0.230
Max		0.127	0.390	0.487	5.090	0.477
UL		12.000	12.000	12.000	12.000	12.000

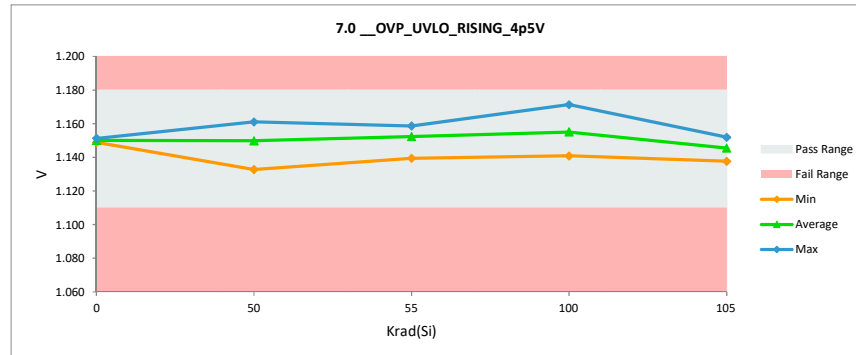


HDR LOOKAHEAD TID Report TPS7H2211-SP

7.0 __OVP_UVLO_RISING_4p5V				
Test Site				
Tester				
Test Number				
Unit	V	V		
Max Limit	1.18	1.18		
Min Limit	1.11	1.11		
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	1.151	1.151	0.000
0	24	1.149	1.149	0.000
50	1	1.150	1.156	0.006
50	2	1.129	1.133	0.004
50	3	1.143	1.148	0.005
50	4	1.146	1.151	0.005
50	5	1.156	1.161	0.005
55	6	1.150	1.151	0.001
55	7	1.156	1.158	0.002
55	8	1.158	1.159	0.001
55	11	1.138	1.140	0.002
55	12	1.153	1.154	0.001
100	13	1.162	1.171	0.009
100	14	1.154	1.159	0.005
100	15	1.149	1.159	0.010
100	16	1.146	1.145	-0.001
100	17	1.130	1.141	0.010
105	18	1.151	1.144	-0.007
105	19	1.161	1.152	-0.009
105	20	1.147	1.151	0.005
105	21	1.140	1.138	-0.002
105	22	1.141	1.143	0.002
Max		1.162	1.171	0.010
Average		1.148	1.151	0.002
Min		1.129	1.133	-0.009
Std Dev		0.009	0.009	0.005



7.0 __OVP_UVLO_RISING_4p5V					
Test Site					
Tester					
Test Number					
Max Limit	1.18	V			
Min Limit	1.11	V			
Krad(Si)	0	50	55	100	105
LL	1.110	1.110	1.110	1.110	1.110
Min	1.149	1.133	1.140	1.141	1.138
Average	1.150	1.150	1.152	1.155	1.146
Max	1.151	1.161	1.159	1.171	1.152
UL	1.180	1.180	1.180	1.180	1.180

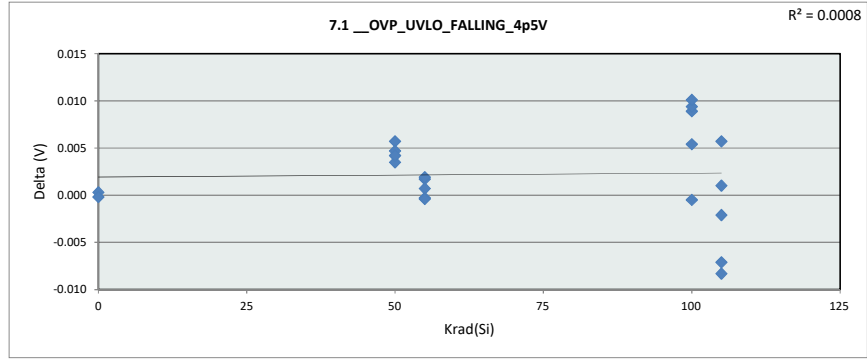


HDR LOOKAHEAD TID Report TPS7H2211-SP

7.1 __OVP_UVLO_FALLING_4p5V

Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.17	1.17
Min Limit	1.09	1.09

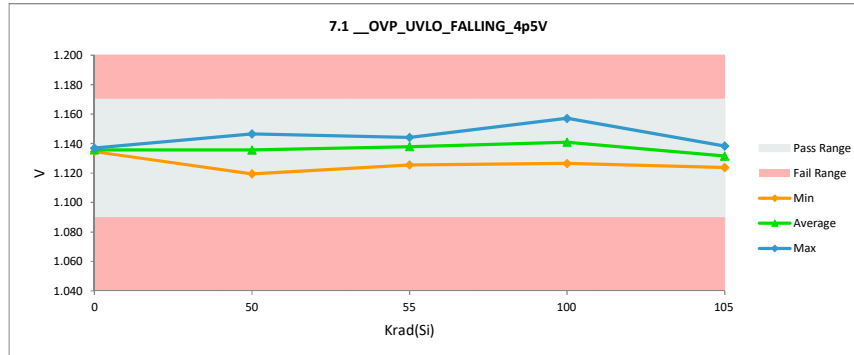
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	1.137	1.137	0.000
0	24	1.135	1.135	0.000
50	1	1.136	1.142	0.006
50	2	1.115	1.119	0.004
50	3	1.129	1.134	0.005
50	4	1.133	1.136	0.003
50	5	1.142	1.146	0.004
55	6	1.137	1.137	0.000
55	7	1.142	1.143	0.002
55	8	1.143	1.144	0.001
55	11	1.124	1.126	0.002
55	12	1.140	1.140	0.000
100	13	1.148	1.157	0.009
100	14	1.139	1.145	0.005
100	15	1.135	1.145	0.009
100	16	1.132	1.132	0.000
100	17	1.116	1.127	0.010
105	18	1.136	1.129	-0.007
105	19	1.146	1.138	-0.008
105	20	1.133	1.138	0.006
105	21	1.126	1.124	-0.002
105	22	1.127	1.128	0.001
	Max	1.148	1.157	0.010
	Average	1.134	1.136	0.002
	Min	1.115	1.119	-0.008
	Std Dev	0.009	0.009	0.005



7.1 __OVP_UVLO_FALLING_4p5V

Test Site		
Tester		
Test Number		
Max Limit	1.17	V
Min Limit	1.09	V

Krad(Si)	0	50	55	100	105
LL	1.090	1.090	1.090	1.090	1.090
Min	1.135	1.119	1.126	1.127	1.124
Average	1.136	1.136	1.138	1.141	1.132
Max	1.137	1.147	1.144	1.157	1.138
UL	1.170	1.170	1.170	1.170	1.170

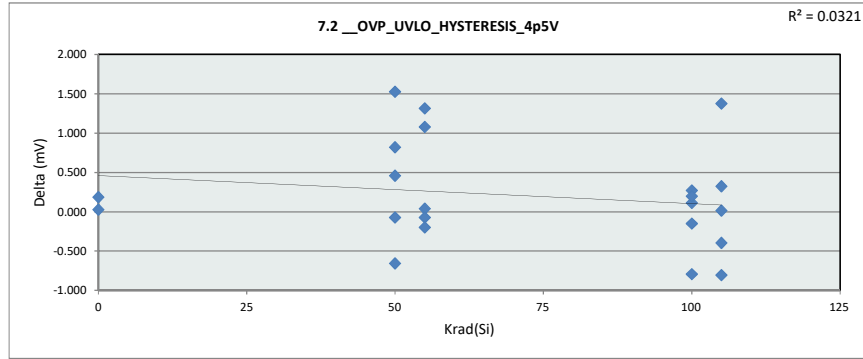


HDR LOOKAHEAD TID Report TPS7H2211-SP

7.2 __OVP_UVLO_HYSTERESIS

Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	40	40
Min Limit	5	5

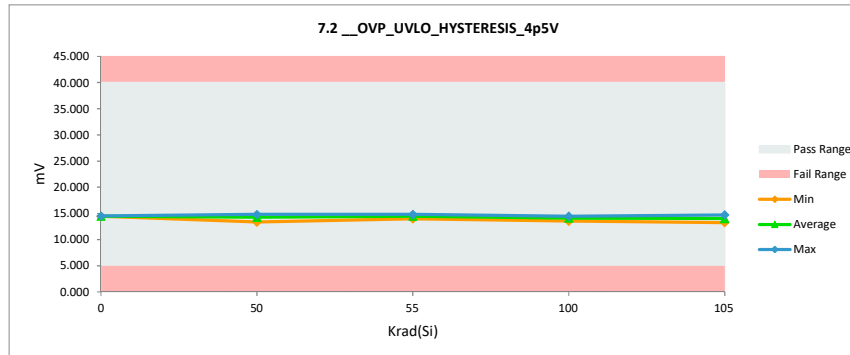
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	14.265	14.450	0.185
0	24	14.463	14.488	0.025
50	1	14.338	14.797	0.459
50	2	13.995	13.336	-0.659
50	3	13.980	13.905	-0.075
50	4	13.186	14.710	1.524
50	5	13.669	14.487	0.818
55	6	13.396	14.475	1.079
55	7	14.561	14.598	0.037
55	8	14.598	14.523	-0.075
55	11	14.154	13.956	-0.198
55	12	13.496	14.810	1.314
100	13	14.102	14.212	0.110
100	14	14.623	14.474	-0.149
100	15	13.757	14.028	0.271
100	16	14.315	13.521	-0.794
100	17	14.081	14.278	0.197
105	18	14.078	14.401	0.323
105	19	14.300	13.904	-0.396
105	20	14.054	13.248	-0.806
105	21	13.931	13.944	0.013
105	22	13.361	14.736	1.375
	Max	14.623	14.810	1.524
	Average	14.032	14.240	0.208
	Min	13.186	13.248	-0.806
	Std Dev	0.411	0.456	0.663



7.2 __OVP_UVLO_HYSTERESIS

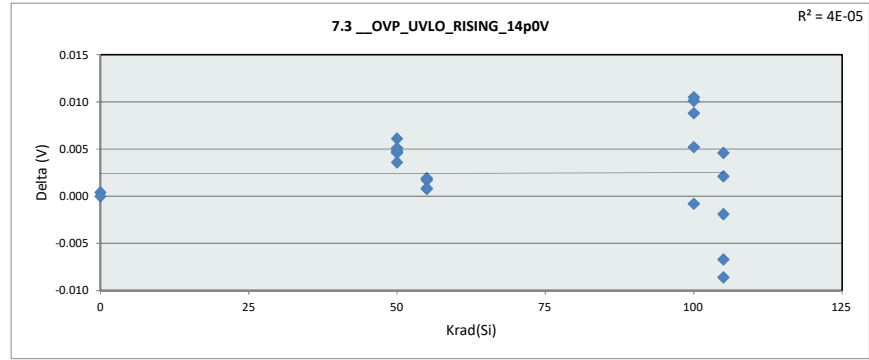
Test Site		
Tester		
Test Number		
Max Limit	40	mV
Min Limit	5	mV

Krad(Si)	0	50	55	100	105
LL	5.000	5.000	5.000	5.000	5.000
Min	14.450	13.336	13.956	13.521	13.248
Average	14.469	14.247	14.472	14.103	14.047
Max	14.488	14.797	14.810	14.474	14.736
UL	40.000	40.000	40.000	40.000	40.000

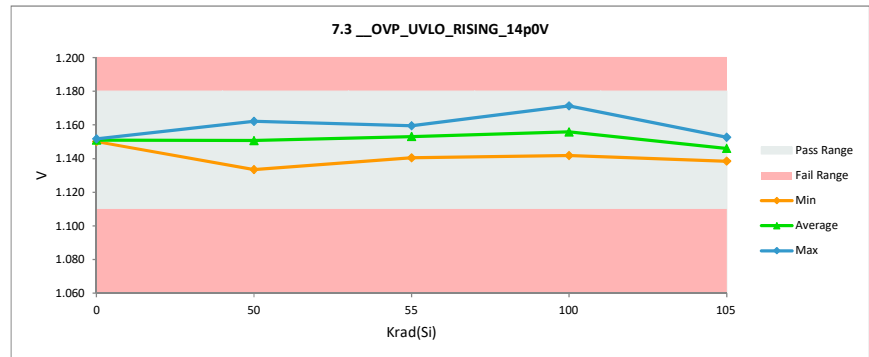


HDR LOOKAHEAD TID Report TPS7H2211-SP

7.3 __OVP_UVLO_RISING_14p0V				
Test Site				
Tester				
Test Number				
Unit	V	V		
Max Limit	1.18	1.18		
Min Limit	1.11	1.11		
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	1.151	1.152	0.000
0	24	1.150	1.150	0.000
50	1	1.151	1.157	0.006
50	2	1.130	1.133	0.004
50	3	1.144	1.149	0.005
50	4	1.147	1.151	0.005
50	5	1.157	1.162	0.005
55	6	1.151	1.152	0.001
55	7	1.157	1.159	0.002
55	8	1.159	1.160	0.001
55	11	1.138	1.140	0.002
55	12	1.154	1.155	0.001
100	13	1.163	1.171	0.009
100	14	1.155	1.160	0.005
100	15	1.150	1.160	0.010
100	16	1.147	1.146	-0.001
100	17	1.131	1.142	0.011
105	18	1.151	1.144	-0.007
105	19	1.161	1.153	-0.009
105	20	1.147	1.151	0.005
105	21	1.140	1.138	-0.002
105	22	1.141	1.143	0.002
	Max	1.163	1.171	0.011
	Average	1.149	1.151	0.002
	Min	1.130	1.133	-0.009
	Std Dev	0.009	0.009	0.005



7.3 __OVP_UVLO_RISING_14p0V					
Test Site					
Tester					
Test Number					
Max Limit	1.18	V			
Min Limit	1.11	V			
Krad(Si)	0	50	55	100	105
LL	1.110	1.110	1.110	1.110	1.110
Min	1.150	1.133	1.140	1.142	1.139
Average	1.151	1.151	1.153	1.156	1.146
Max	1.152	1.162	1.160	1.171	1.153
UL	1.180	1.180	1.180	1.180	1.180

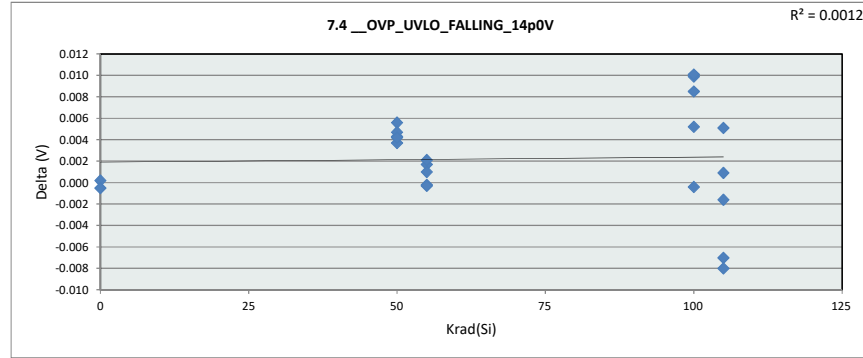


HDR LOOKAHEAD TID Report TPS7H2211-SP

7.4 __OVP_UVLO_FALLING_14p0V

Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.17	1.17
Min Limit	1.09	1.09

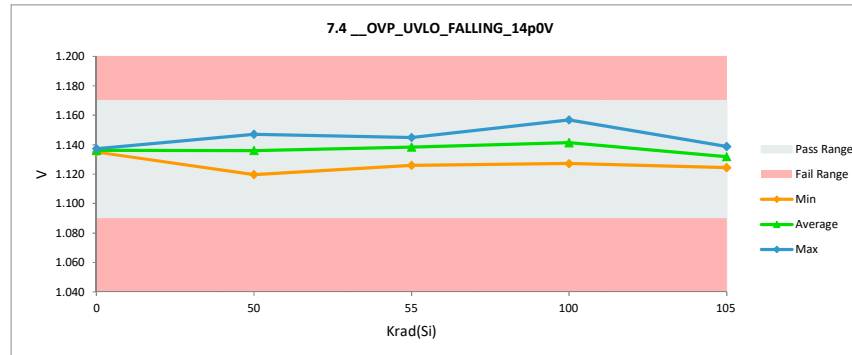
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	1.137	1.137	0.000
0	24	1.135	1.135	0.000
50	1	1.137	1.143	0.006
50	2	1.115	1.120	0.004
50	3	1.130	1.135	0.005
50	4	1.133	1.137	0.004
50	5	1.143	1.147	0.004
55	6	1.137	1.137	0.000
55	7	1.143	1.144	0.002
55	8	1.144	1.145	0.001
55	11	1.124	1.126	0.002
55	12	1.140	1.140	0.000
100	13	1.148	1.157	0.009
100	14	1.140	1.145	0.005
100	15	1.136	1.146	0.010
100	16	1.133	1.132	0.000
100	17	1.117	1.127	0.010
105	18	1.137	1.130	-0.007
105	19	1.147	1.139	-0.008
105	20	1.133	1.138	0.005
105	21	1.126	1.124	-0.002
105	22	1.128	1.129	0.001
	Max	1.148	1.157	0.010
	Average	1.135	1.137	0.002
	Min	1.115	1.120	-0.008
	Std Dev	0.009	0.009	0.005



7.4 __OVP_UVLO_FALLING_14p0V

Test Site		
Tester		
Test Number		
Max Limit	1.17	V
Min Limit	1.09	V

Krad(Si)	0	50	55	100	105
LL	1.090	1.090	1.090	1.090	1.090
Min	1.135	1.120	1.126	1.127	1.124
Average	1.136	1.136	1.138	1.141	1.132
Max	1.137	1.147	1.145	1.157	1.139
UL	1.170	1.170	1.170	1.170	1.170

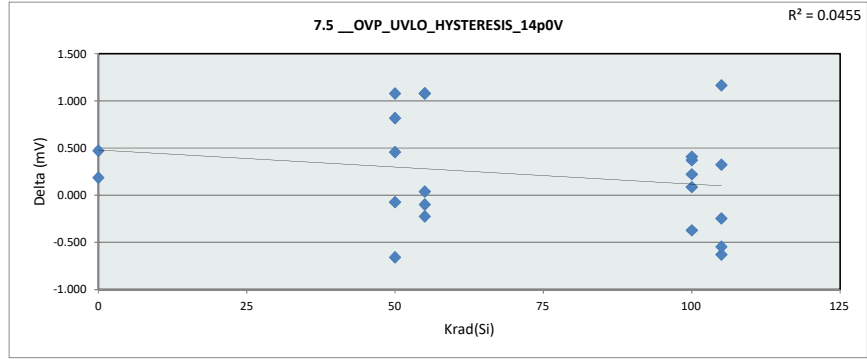


HDR LOOKAHEAD TID Report TPS7H2211-SP

7.5 __OVP_UVLO_HYSTERESIS

Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	40	40
Min Limit	5	5

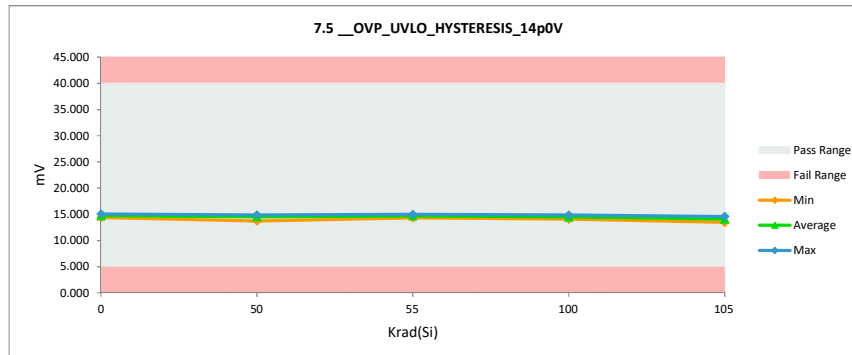
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	14.215	14.401	0.186
0	24	14.600	15.071	0.471
50	1	14.450	14.908	0.458
50	2	14.391	13.734	-0.657
50	3	14.352	14.277	-0.075
50	4	13.819	14.897	1.078
50	5	14.015	14.833	0.818
55	6	13.794	14.872	1.078
55	7	14.697	14.734	0.037
55	8	14.759	14.660	-0.099
55	11	14.552	14.327	-0.225
55	12	13.892	14.971	1.079
100	13	14.077	14.448	0.371
100	14	14.784	14.871	0.087
100	15	14.128	14.350	0.222
100	16	14.475	14.104	-0.371
100	17	14.217	14.626	0.409
105	18	14.265	14.588	0.323
105	19	14.461	13.831	-0.630
105	20	14.029	13.483	-0.546
105	21	14.327	14.080	-0.247
105	22	13.311	14.476	1.165
Max		14.784	15.071	1.165
Average		14.255	14.479	0.224
Min		13.311	13.483	-0.657
Std Dev		0.357	0.429	0.566



7.5 __OVP_UVLO_HYSTERESIS

Test Site		
Tester		
Test Number		
Max Limit	40	mV
Min Limit	5	mV

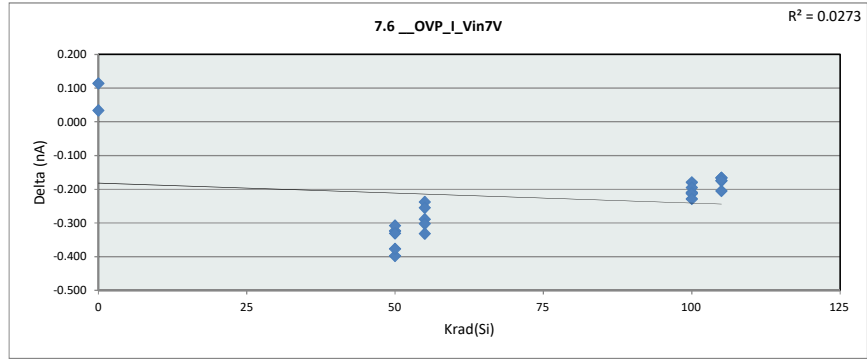
Krad(Si)	0	50	55	100	105
LL	5.000	5.000	5.000	5.000	5.000
Min	14.401	13.734	14.327	14.104	13.483
Average	14.736	14.530	14.713	14.480	14.092
Max	15.071	14.908	14.971	14.871	14.588
UL	40.000	40.000	40.000	40.000	40.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

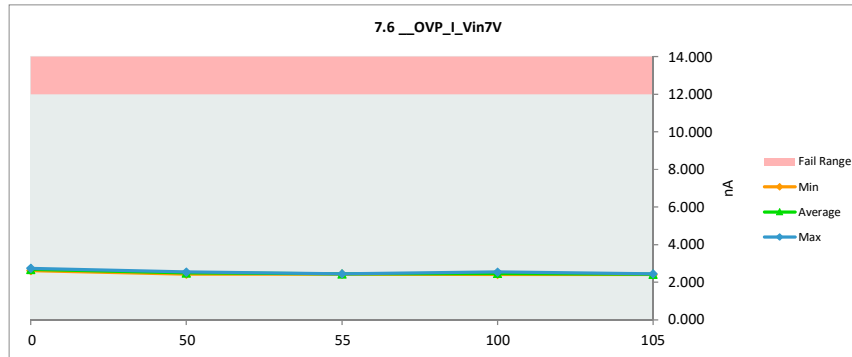
7.6 __OVP_I_Vin7V	
Test Site	
Tester	
Test Number	
Unit	nA nA
Max Limit	12 12
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	2.587	2.621	0.034
0	24	2.633	2.747	0.114
50	1	2.945	2.547	-0.398
50	2	2.851	2.527	-0.324
50	3	2.827	2.519	-0.308
50	4	2.823	2.446	-0.377
50	5	2.762	2.431	-0.331
55	6	2.730	2.441	-0.289
55	7	2.737	2.435	-0.302
55	8	2.687	2.449	-0.238
55	11	2.773	2.441	-0.332
55	12	2.702	2.447	-0.255
100	13	2.721	2.542	-0.179
100	14	2.667	2.472	-0.195
100	15	2.656	2.446	-0.210
100	16	2.727	2.514	-0.213
100	17	2.640	2.411	-0.229
105	18	2.620	2.454	-0.166
105	19	2.609	2.434	-0.175
105	20	2.582	2.416	-0.166
105	21	2.613	2.408	-0.205
105	22	2.631	2.457	-0.174
Max		2.945	2.747	0.114
Average		2.706	2.482	-0.224
Min		2.582	2.408	-0.398
Std Dev		0.095	0.080	0.120



7.6 __OVP_I_Vin7V	
Test Site	
Tester	
Test Number	
Max Limit	12 nA
Min Limit	nA

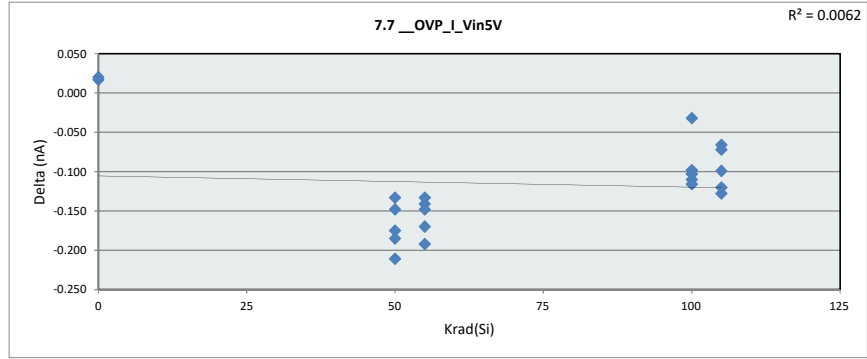
	Krad(Si) 0	50	55	100	105
LL					
Min	2.621	2.431	2.435	2.411	2.408
Average	2.684	2.494	2.443	2.477	2.434
Max	2.747	2.547	2.449	2.542	2.457
UL	12.000	12.000	12.000	12.000	12.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

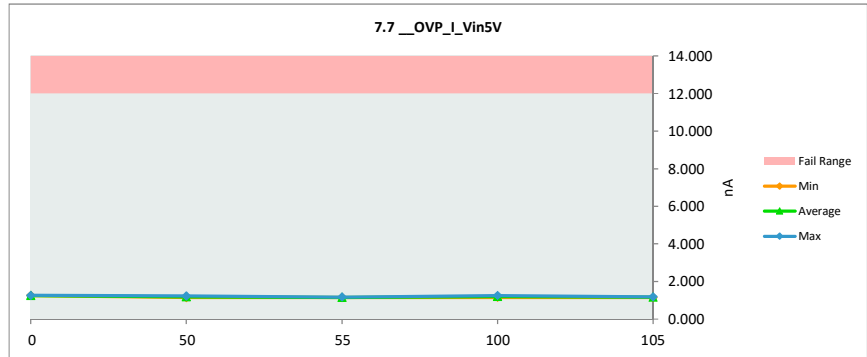
7.7 __OVP_I_Vin5V	
Test Site	
Tester	
Test Number	
Unit	nA nA
Max Limit	12 12
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	1.237	1.254	0.017
0	24	1.241	1.261	0.020
50	1	1.385	1.200	-0.185
50	2	1.353	1.205	-0.148
50	3	1.358	1.225	-0.133
50	4	1.356	1.145	-0.211
50	5	1.332	1.157	-0.175
55	6	1.314	1.173	-0.141
55	7	1.320	1.150	-0.170
55	8	1.291	1.158	-0.133
55	11	1.344	1.152	-0.192
55	12	1.293	1.145	-0.148
100	13	1.287	1.255	-0.032
100	14	1.305	1.195	-0.110
100	15	1.279	1.176	-0.103
100	16	1.340	1.242	-0.098
100	17	1.275	1.159	-0.116
105	18	1.248	1.182	-0.066
105	19	1.284	1.156	-0.128
105	20	1.245	1.146	-0.099
105	21	1.266	1.146	-0.120
105	22	1.251	1.179	-0.072
Max		1.385	1.261	0.020
Average		1.300	1.185	-0.116
Min		1.237	1.145	-0.211
Std Dev		0.044	0.040	0.061



7.7 __OVP_I_Vin5V	
Test Site	
Tester	
Test Number	
Max Limit	12 nA
Min Limit	nA

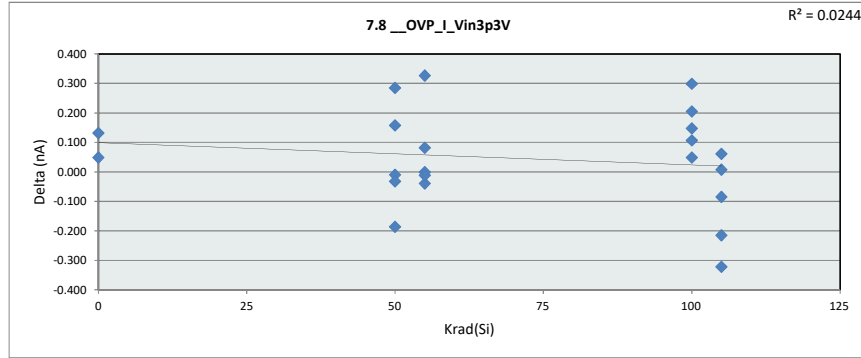
	Krad(Si) 0	50	55	100	105
LL					
Min	1.254	1.145	1.145	1.159	1.146
Average	1.258	1.186	1.156	1.205	1.162
Max	1.261	1.225	1.173	1.255	1.182
UL	12.000	12.000	12.000	12.000	12.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

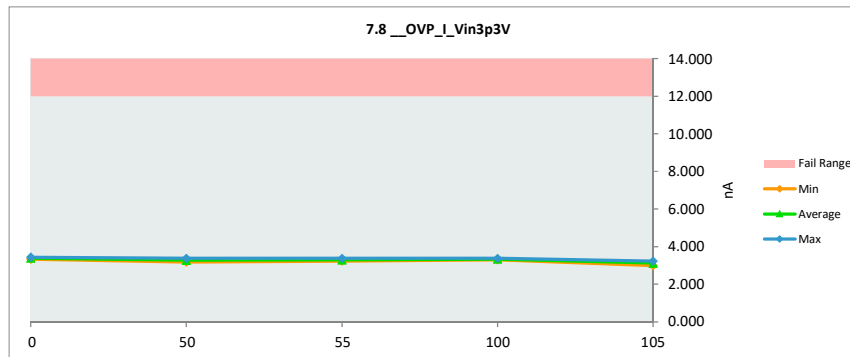
7.8 __OVP_I_Vin3p3V	
Test Site	
Tester	
Test Number	
Unit	nA nA
Max Limit	12 12
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	3.307	3.439	0.132
0	24	3.291	3.340	0.049
50	1	3.275	3.265	-0.010
50	2	3.370	3.184	-0.186
50	3	3.024	3.309	0.285
50	4	3.282	3.250	-0.032
50	5	3.224	3.382	0.158
55	6	3.052	3.379	0.327
55	7	3.272	3.233	-0.039
55	8	3.291	3.290	-0.001
55	11	3.187	3.269	0.082
55	12	3.322	3.311	-0.011
100	13	3.254	3.303	0.049
100	14	3.082	3.381	0.299
100	15	3.223	3.330	0.107
100	16	3.184	3.332	0.148
100	17	3.128	3.333	0.205
105	18	3.241	3.156	-0.085
105	19	3.311	2.989	-0.322
105	20	3.305	3.090	-0.215
105	21	3.112	3.173	0.061
105	22	3.225	3.233	0.008
Max		3.370	3.439	0.327
Average		3.226	3.271	0.046
Min		3.024	2.989	-0.322
Std Dev		0.094	0.105	0.163



7.8 __OVP_I_Vin3p3V	
Test Site	
Tester	
Test Number	
Max Limit	12 nA
Min Limit	

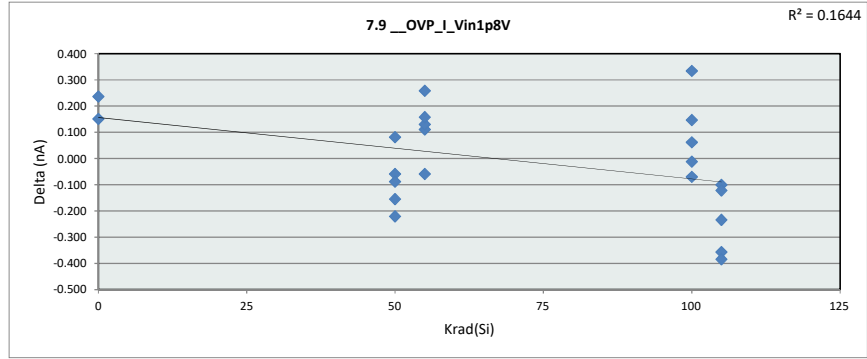
	Krad(Si) 0	50	55	100	105
LL					
Min	3.340	3.184	3.233	3.303	2.989
Average	3.390	3.278	3.296	3.336	3.128
Max	3.439	3.382	3.379	3.381	3.233
UL	12.000	12.000	12.000	12.000	12.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

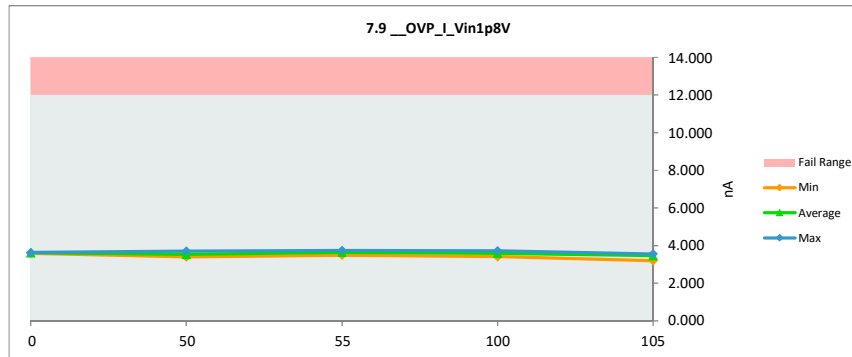
7.9 __OVP_I_Vin1p8V	
Test Site	
Tester	
Test Number	
Unit	nA nA
Max Limit	12 12
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	3.439	3.590	-0.151
0	24	3.396	3.632	0.236
50	1	3.562	3.503	-0.059
50	2	3.689	3.601	-0.088
50	3	3.618	3.700	0.082
50	4	3.620	3.399	-0.221
50	5	3.630	3.475	-0.155
55	6	3.489	3.747	0.258
55	7	3.548	3.489	-0.059
55	8	3.546	3.657	0.111
55	11	3.497	3.627	0.130
55	12	3.520	3.678	0.158
100	13	3.584	3.572	-0.012
100	14	3.393	3.727	0.334
100	15	3.571	3.633	0.062
100	16	3.496	3.643	0.147
100	17	3.478	3.408	-0.070
105	18	3.662	3.561	-0.101
105	19	3.877	3.520	-0.357
105	20	3.741	3.507	-0.234
105	21	3.587	3.203	-0.384
105	22	3.643	3.521	-0.122
Max		3.877	3.747	0.334
Average		3.572	3.563	-0.009
Min		3.393	3.203	-0.384
Std Dev		0.113	0.125	0.194



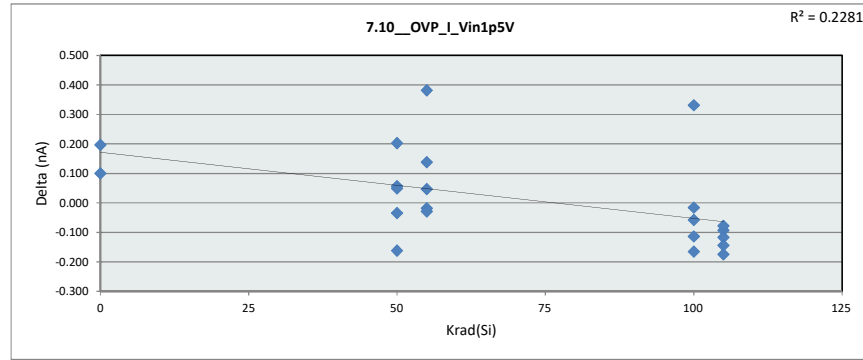
7.9 __OVP_I_Vin1p8V	
Test Site	
Tester	
Test Number	
Max Limit	12 nA
Min Limit	

	Krad(Si)	0	50	55	100	105
LL						
Min		3.590	3.399	3.489	3.408	3.203
Average		3.611	3.536	3.640	3.597	3.462
Max		3.632	3.700	3.747	3.727	3.561
UL		12.000	12.000	12.000	12.000	12.000

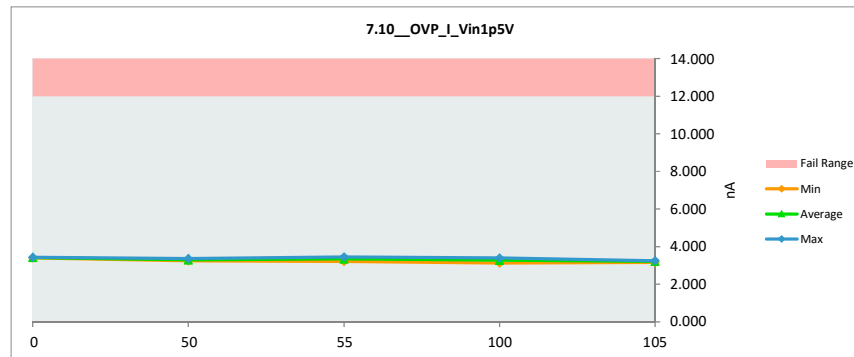


HDR LOOKAHEAD TID Report TPS7H2211-SP

7.10_OVP_I_Vin1p5V				
Test Site				
Tester				
Test Number				
Unit	nA	nA		
Max Limit	12	12		
Min Limit				
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	3.345	3.445	0.100
0	24	3.212	3.409	0.197
50	1	3.228	3.285	0.057
50	2	3.237	3.286	0.049
50	3	3.166	3.369	0.203
50	4	3.280	3.246	-0.034
50	5	3.456	3.294	-0.162
55	6	3.078	3.460	0.382
55	7	3.240	3.222	-0.018
55	8	3.360	3.331	-0.029
55	11	3.265	3.403	0.138
55	12	3.284	3.331	0.047
100	13	3.359	3.245	-0.114
100	14	3.070	3.401	0.331
100	15	3.358	3.300	-0.058
100	16	3.343	3.327	-0.016
100	17	3.287	3.122	-0.165
105	18	3.330	3.237	-0.093
105	19	3.334	3.217	-0.117
105	20	3.361	3.187	-0.174
105	21	3.312	3.168	-0.144
105	22	3.333	3.255	-0.078
Max		3.456	3.460	0.382
Average		3.284	3.297	0.014
Min		3.070	3.122	-0.174
Std Dev		0.093	0.091	0.157



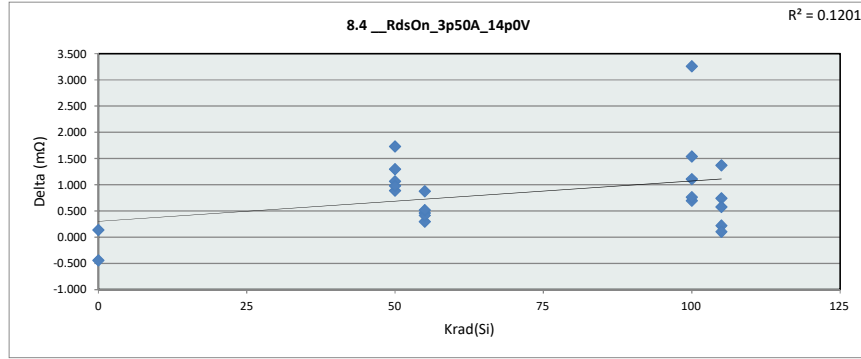
7.10_OVP_I_Vin1p5V					
Test Site					
Tester					
Test Number					
Max Limit	12	nA			
Min Limit		nA			
Krad(Si)	0	50	55	100	105
LL					
Min	3.409	3.246	3.222	3.122	3.168
Average	3.427	3.296	3.349	3.279	3.213
Max	3.445	3.369	3.460	3.401	3.255
UL	12.000	12.000	12.000	12.000	12.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

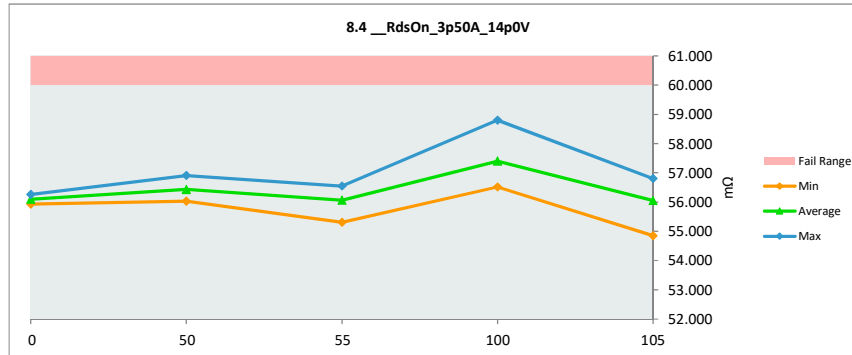
8.4 __RdsOn_3p50A_14p0V	
Test Site	
Tester	
Test Number	
Unit	mΩ mΩ
Max Limit	60 60
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	56.122	56.258	0.136
0	24	56.379	55.935	-0.444
50	1	54.772	56.500	1.728
50	2	55.613	56.908	1.295
50	3	55.402	56.468	1.066
50	4	55.352	56.240	0.888
50	5	55.052	56.029	0.977
55	6	55.806	56.266	0.460
55	7	55.014	55.311	0.297
55	8	56.042	56.456	0.414
55	11	55.220	55.738	0.518
55	12	55.676	56.552	0.876
100	13	55.543	58.801	3.258
100	14	55.785	56.890	1.105
100	15	55.823	56.519	0.696
100	16	56.494	57.256	0.762
100	17	55.999	57.536	1.537
105	18	55.434	56.804	1.370
105	19	56.321	56.541	0.220
105	20	56.044	56.145	0.101
105	21	55.182	55.921	0.739
105	22	54.271	54.848	0.577
Max		56.494	58.801	3.258
Average		55.607	56.451	0.844
Min		54.271	54.848	-0.444
Std Dev		0.553	0.793	0.745



8.4 __RdsOn_3p50A_14p0V	
Test Site	
Tester	
Test Number	
Max Limit	60 mΩ
Min Limit	

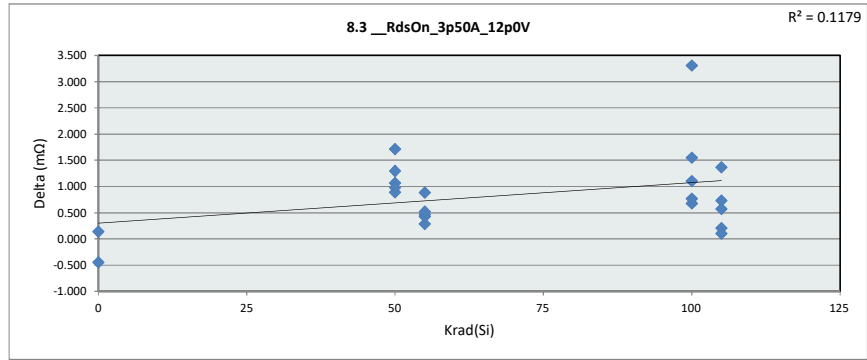
	Krad(Si)	0	50	55	100	105
LL						
Min		55.935	56.029	55.311	56.519	54.848
Average		56.097	56.429	56.065	57.400	56.052
Max		56.258	56.908	56.552	58.801	56.804
UL		60.000	60.000	60.000	60.000	60.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

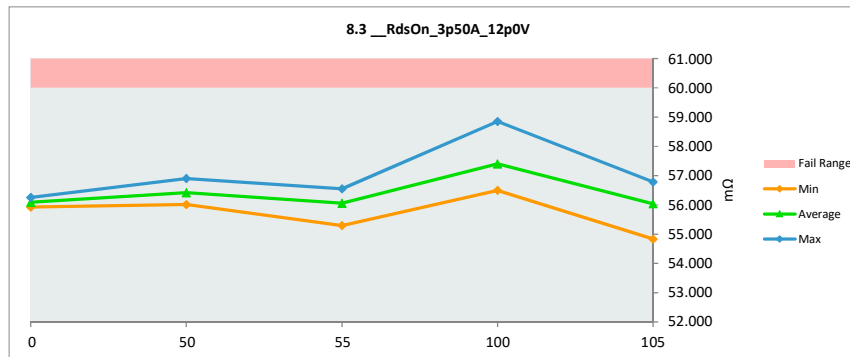
8.3 __RdsOn_3p50A_12p0V	
Test Site	
Tester	
Test Number	
Unit	mΩ mΩ
Max Limit	60 60
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	56.113	56.253	0.140
0	24	56.372	55.926	-0.446
50	1	54.759	56.473	1.714
50	2	55.606	56.903	1.297
50	3	55.392	56.457	1.065
50	4	55.343	56.232	0.889
50	5	55.034	56.011	0.977
55	6	55.799	56.261	0.462
55	7	55.010	55.296	0.286
55	8	56.022	56.446	0.424
55	11	55.201	55.723	0.522
55	12	55.666	56.547	0.881
100	13	55.540	58.849	3.309
100	14	55.766	56.867	1.101
100	15	55.820	56.497	0.677
100	16	56.488	57.258	0.770
100	17	55.987	57.536	1.549
105	18	55.417	56.785	1.368
105	19	56.317	56.521	0.204
105	20	56.034	56.137	0.103
105	21	55.172	55.903	0.731
105	22	54.259	54.832	0.573
Max		56.488	58.849	3.309
Average		55.596	56.442	0.845
Min		54.259	54.832	-0.446
Std Dev		0.555	0.804	0.753



8.3 __RdsOn_3p50A_12p0V	
Test Site	
Tester	
Test Number	
Max Limit	60 mΩ
Min Limit	

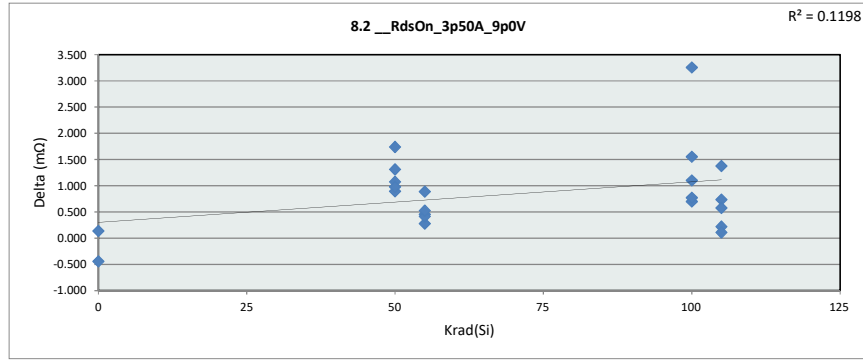
	Krad(Si)	0	50	55	100	105
LL						
Min		55.926	56.011	55.296	56.497	54.832
Average		56.090	56.415	56.055	57.401	56.036
Max		56.253	56.903	56.547	58.849	56.785
UL		60.000	60.000	60.000	60.000	60.000



HDR LOOKAHEAD TID Report TPS7H2211-SP

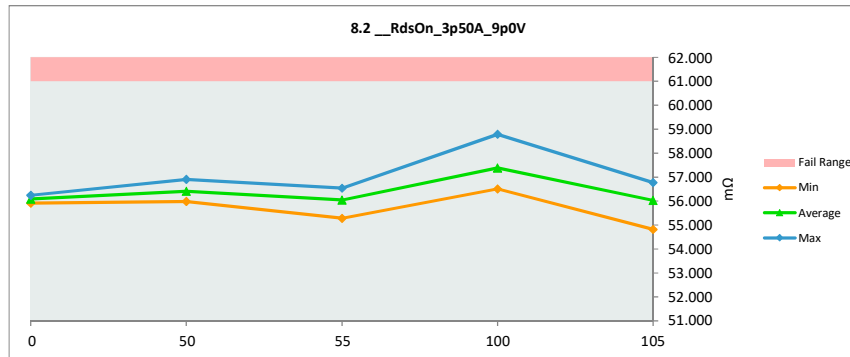
8.2 __RdsOn_3p50A_9p0V	
Test Site	
Tester	
Test Number	
Unit	mΩ mΩ
Max Limit	61 61
Min Limit	

Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	56.107	56.242	0.135
0	24	56.360	55.916	-0.444
50	1	54.737	56.478	1.741
50	2	55.598	56.911	1.313
50	3	55.378	56.450	1.072
50	4	55.328	56.222	0.894
50	5	55.011	55.989	0.978
55	6	55.794	56.249	0.455
55	7	55.005	55.285	0.280
55	8	55.998	56.413	0.415
55	11	55.185	55.710	0.525
55	12	55.658	56.543	0.885
100	13	55.533	58.789	3.256
100	14	55.738	56.841	1.103
100	15	55.811	56.510	0.699
100	16	56.480	57.252	0.772
100	17	55.976	57.528	1.552
105	18	55.394	56.770	1.376
105	19	56.310	56.530	0.220
105	20	56.019	56.130	0.111
105	21	55.157	55.893	0.736
105	22	54.245	54.819	0.574
	Max	56.480	58.789	3.256
	Average	55.583	56.430	0.848
	Min	54.245	54.819	-0.444
	Std Dev	0.557	0.798	0.747



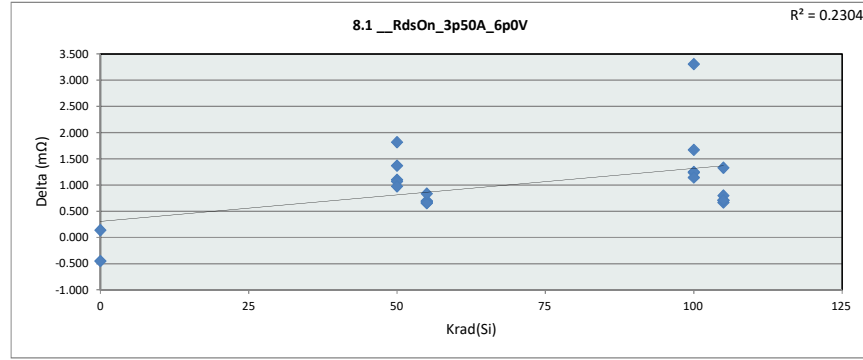
8.2 __RdsOn_3p50A_9p0V	
Test Site	
Tester	
Test Number	
Max Limit	61 mΩ
Min Limit	

	Krad(Si)	0	50	55	100	105
LL						
Min		55.916	55.989	55.285	56.510	54.819
Average		56.079	56.410	56.040	57.384	56.028
Max		56.242	56.911	56.543	58.789	56.770
UL		61.000	61.000	61.000	61.000	61.000

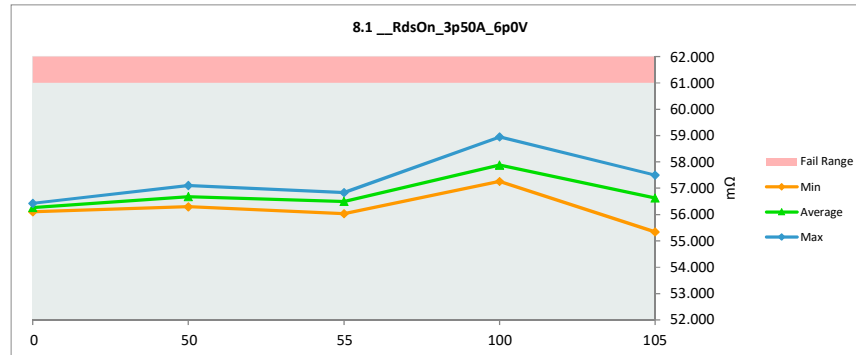


HDR LOOKAHEAD TID Report TPS7H2211-SP

8.1 __RdsOn_3p50A_6p0V				
Test Site				
Tester				
Test Number				
Unit	mΩ		mΩ	
Max Limit	61		61	
Min Limit				
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	56.291	56.429	0.138
0	24	56.556	56.106	-0.450
50	1	54.894	56.710	1.816
50	2	55.736	57.105	1.369
50	3	55.603	56.701	1.098
50	4	55.545	56.610	1.065
50	5	55.323	56.297	0.974
55	6	56.149	56.834	0.685
55	7	55.335	56.031	0.696
55	8	56.094	56.752	0.658
55	11	55.496	56.156	0.660
55	12	55.892	56.726	0.834
100	13	55.637	58.947	3.310
100	14	56.021	57.260	1.239
100	15	56.153	57.402	1.249
100	16	56.763	57.905	1.142
100	17	56.204	57.874	1.670
105	18	55.597	56.928	1.331
105	19	56.787	57.498	0.711
105	20	56.529	57.196	0.667
105	21	55.406	56.204	0.798
105	22	54.628	55.340	0.712
Max		56.787	58.947	3.310
Average		55.847	56.864	1.017
Min		54.628	55.340	-0.450
Std Dev		0.570	0.776	0.706

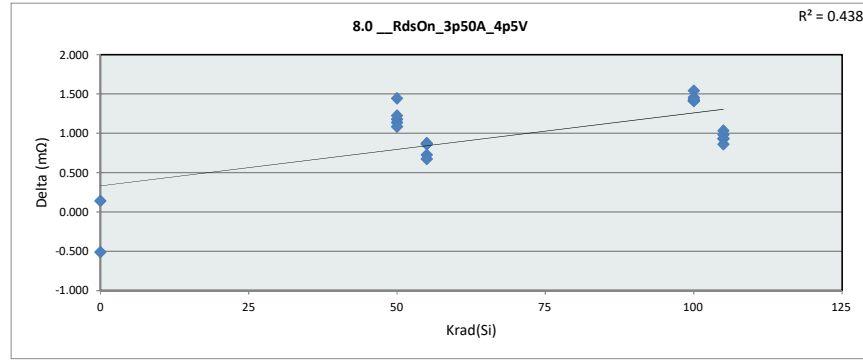


8.1 __RdsOn_3p50A_6p0V					
Test Site					
Tester					
Test Number					
Max Limit	61		mΩ		
Min Limit			mΩ		
Krad(Si)	0	50	55	100	105
LL					
Min	56.106	56.297	56.031	57.260	55.340
Average	56.268	56.685	56.500	57.878	56.633
Max	56.429	57.105	56.834	58.947	57.498
UL	61.000	61.000	61.000	61.000	61.000

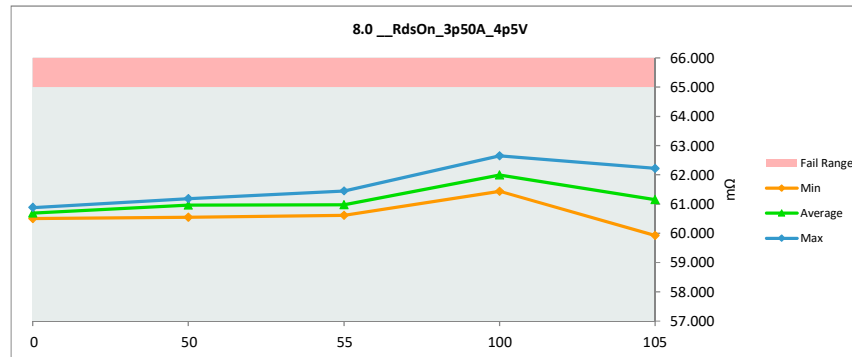


HDR LOOKAHEAD TID Report TPS7H2211-SP

8.0 __RdsOn_3p50A_4p5V				
Test Site				
Tester				
Test Number				
Unit	mΩ	mΩ		
Max Limit	65	65		
Min Limit				
Krad(Si)	Serial #	PRE_HDR	POST_HDR	Delta
0	23	60.744	60.884	0.140
0	24	61.021	60.509	-0.512
50	1	59.105	60.550	1.445
50	2	60.009	61.187	1.178
50	3	59.998	61.135	1.137
50	4	59.935	61.159	1.224
50	5	59.700	60.786	1.086
55	6	60.589	61.451	0.862
55	7	59.739	60.615	0.876
55	8	60.352	61.217	0.865
55	11	59.929	60.656	0.727
55	12	60.282	60.954	0.672
100	13	59.899	61.441	1.542
100	14	60.431	61.842	1.411
100	15	60.576	62.033	1.457
100	16	61.238	62.652	1.414
100	17	60.594	62.024	1.430
105	18	60.017	61.050	1.033
105	19	61.238	62.220	0.982
105	20	60.936	61.866	0.930
105	21	59.778	60.712	0.934
105	22	59.065	59.926	0.861
	Max	61.238	62.652	1.542
	Average	60.235	61.221	0.986
	Min	59.065	59.926	-0.512
	Std Dev	0.603	0.664	0.469



8.0 __RdsOn_3p50A_4p5V					
Test Site					
Tester					
Test Number					
Max Limit	65	mΩ			
Min Limit			mΩ		
Krad(Si)	0	50	55	100	105
LL					
Min	60.509	60.550	60.615	61.441	59.926
Average	60.697	60.963	60.979	61.998	61.155
Max	60.884	61.187	61.451	62.652	62.220
UL	65.000	65.000	65.000	65.000	65.000

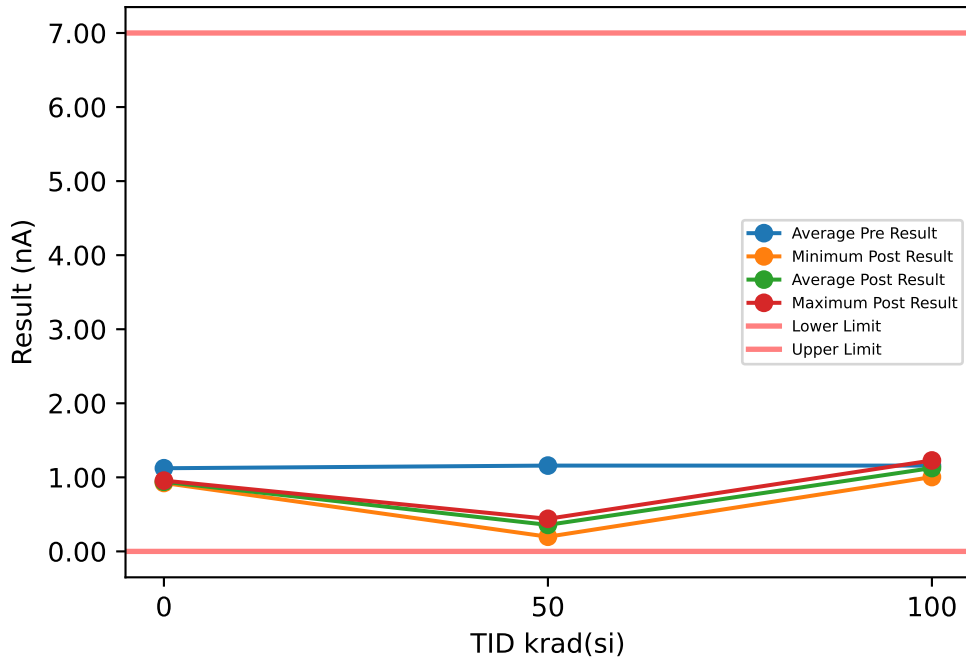


C Appendix: LDR TID Report Data

This appendix contains the LDR TID report data.

Device Test: 2.0 PreLeak_OVP

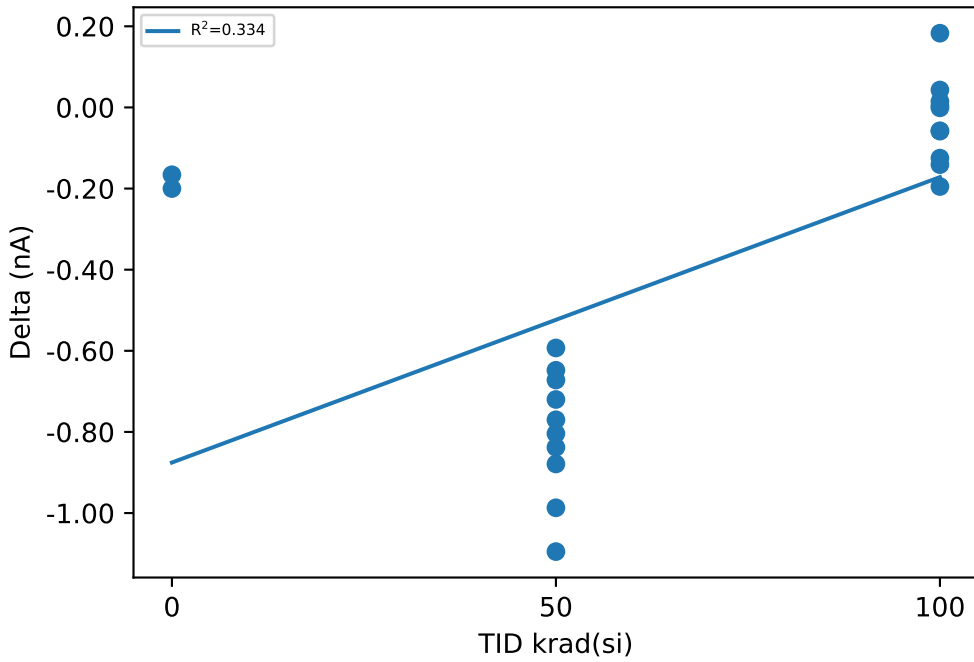
TID vs Result Stats



Test Results (Lower Limit = 0.0, Upper Limit = 7.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.158	0.388	-0.77
36	50	LDR-Biased	1.112	0.44	-0.672
37	50	LDR-Biased	1.198	0.394	-0.804
39	50	LDR-Biased	1.01	0.417	-0.593
40	50	LDR-Biased	1.29	0.411	-0.879
41	50	LDR-Unbiased	1.084	0.436	-0.648
42	50	LDR-Unbiased	1.356	0.261	-1.095
43	50	LDR-Unbiased	1.132	0.294	-0.838
44	50	LDR-Unbiased	1.062	0.342	-0.72
45	50	LDR-Unbiased	1.185	0.198	-0.987
55	100	LDR-Biased	1.158	1.033	-0.125
56	100	LDR-Biased	1.112	1.111	-0.001
57	100	LDR-Biased	1.198	1.14	-0.058
59	100	LDR-Biased	1.01	1.193	0.183
60	100	LDR-Biased	1.29	1.149	-0.141
61	100	LDR-Unbiased	1.084	1.088	0.004
62	100	LDR-Unbiased	1.356	1.161	-0.195
63	100	LDR-Unbiased	1.132	1.147	0.015
64	100	LDR-Unbiased	1.062	1.004	-0.058
65	100	LDR-Unbiased	1.185	1.228	0.043
100	0	Correlation	1.124	0.924	-0.2
101	0	Correlation	1.122	0.956	-0.166

TID vs Post - Pre Exposure Delta

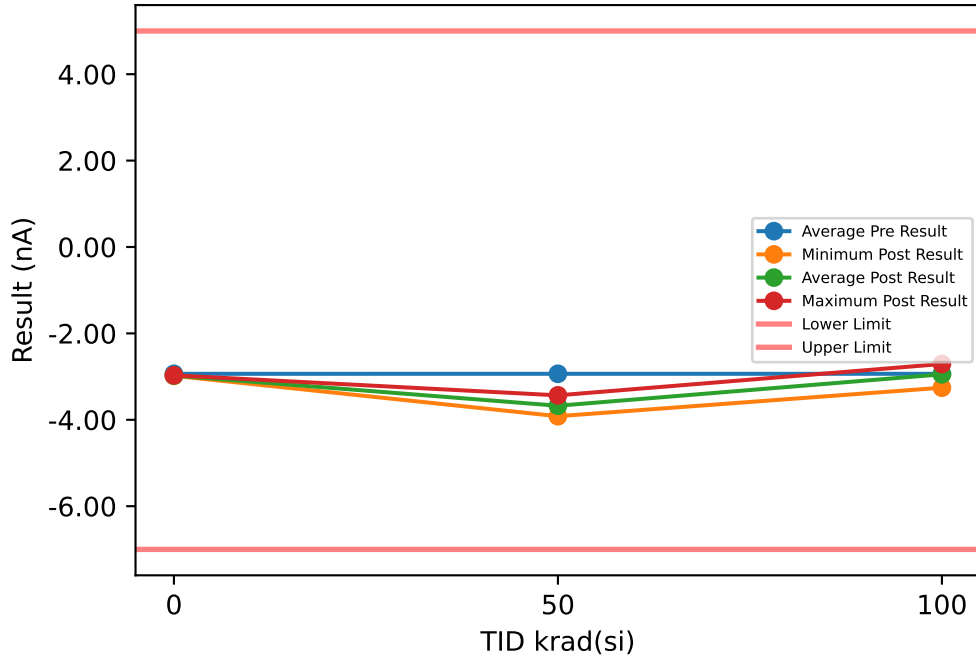


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.122	1.123	1.124	0.0014142	0.924	0.94	0.956	0.022627	-0.2	-0.183	-0.166	0.024042
50	1.01	1.1587	1.356	0.10453	0.198	0.3581	0.44	0.082094	-1.095	-0.8006	-0.593	0.15611
100	1.01	1.1587	1.356	0.10453	1.004	1.1254	1.228	0.068704	-0.195	-0.0333	0.183	0.10788

Device Test: 2.1 PreLeak_EN

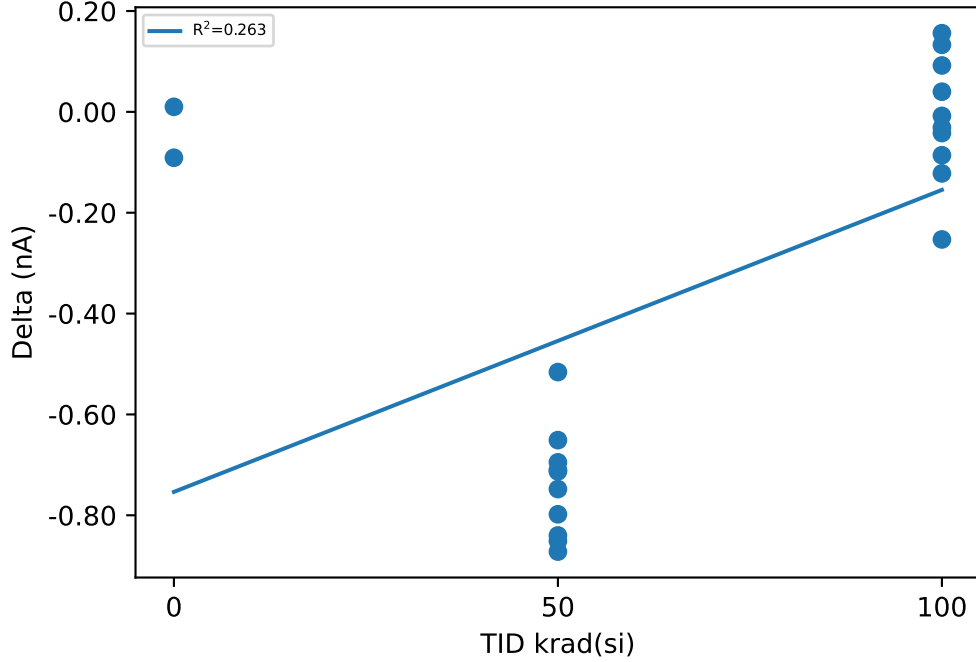
TID vs Result Stats



Test Results (Lower Limit = -7.0, Upper Limit = 5.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	-2.904	-3.614	-0.71
36	50	LDR-Biased	-2.926	-3.577	-0.651
37	50	LDR-Biased	-2.864	-3.715	-0.851
39	50	LDR-Biased	-3.036	-3.731	-0.695
40	50	LDR-Biased	-2.918	-3.434	-0.516
41	50	LDR-Unbiased	-3.071	-3.819	-0.748
42	50	LDR-Unbiased	-2.829	-3.669	-0.84
43	50	LDR-Unbiased	-3.004	-3.717	-0.713
44	50	LDR-Unbiased	-2.756	-3.554	-0.798
45	50	LDR-Unbiased	-3.045	-3.917	-0.872
55	100	LDR-Biased	-2.904	-3.026	-0.122
56	100	LDR-Biased	-2.926	-2.934	-0.008
57	100	LDR-Biased	-2.864	-2.708	0.156
59	100	LDR-Biased	-3.036	-3.067	-0.031
60	100	LDR-Biased	-2.918	-2.878	0.04
61	100	LDR-Unbiased	-3.071	-2.979	0.092
62	100	LDR-Unbiased	-2.829	-2.871	-0.042
63	100	LDR-Unbiased	-3.004	-3.257	-0.253
64	100	LDR-Unbiased	-2.756	-2.842	-0.086
65	100	LDR-Unbiased	-3.045	-2.912	0.133
100	0	Correlation	-2.891	-2.982	-0.091
101	0	Correlation	-2.98	-2.97	0.01

TID vs Post - Pre Exposure Delta

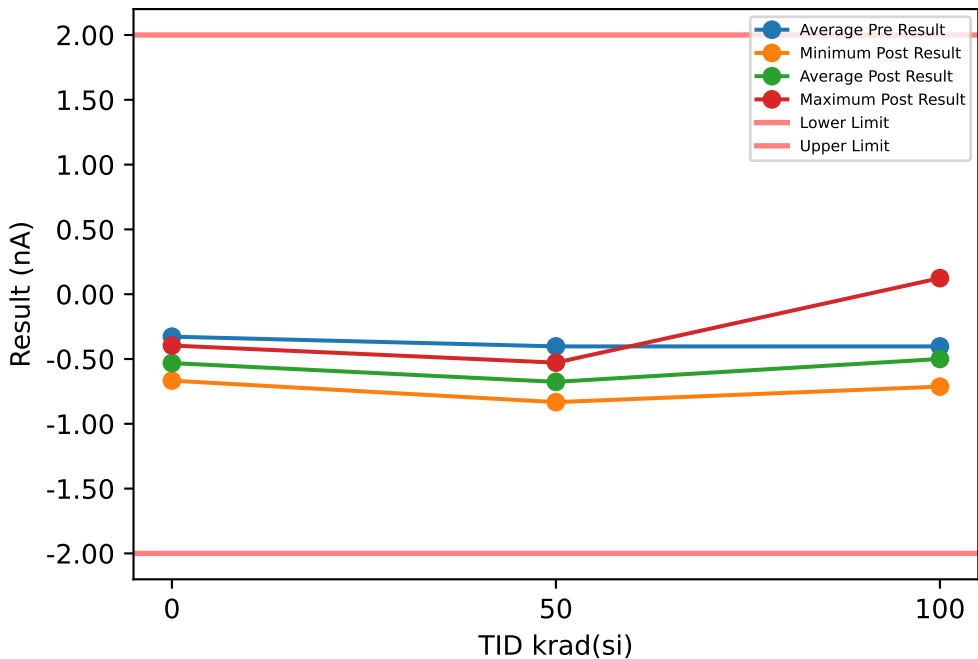


Test Statistics (nA)

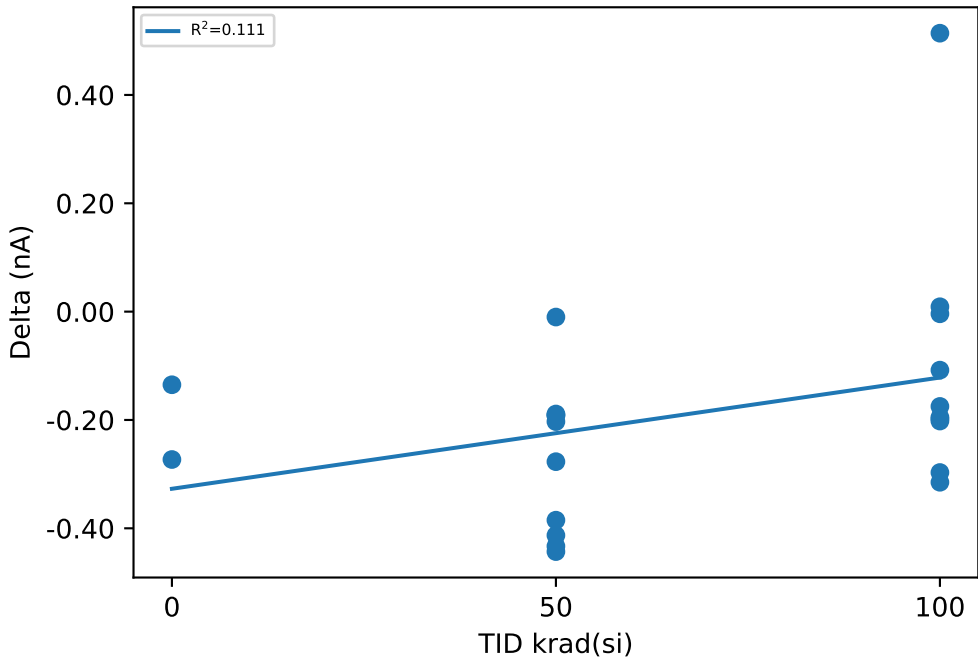
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-2.98	-2.9355	-2.891	0.062933	-2.982	-2.976	-2.97	0.0084853	-0.091	-0.0405	0.01	0.071418
50	-3.071	-2.9353	-2.756	0.10285	-3.917	-3.6747	-3.434	0.1382	-0.872	-0.7394	-0.516	0.10797
100	-3.071	-2.9353	-2.756	0.10285	-3.257	-2.9474	-2.708	0.14826	-0.253	-0.0121	0.156	0.12459

Device Test: 2.2 PreLeak_SS

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -2.0, Upper Limit = 2.0 (nA))

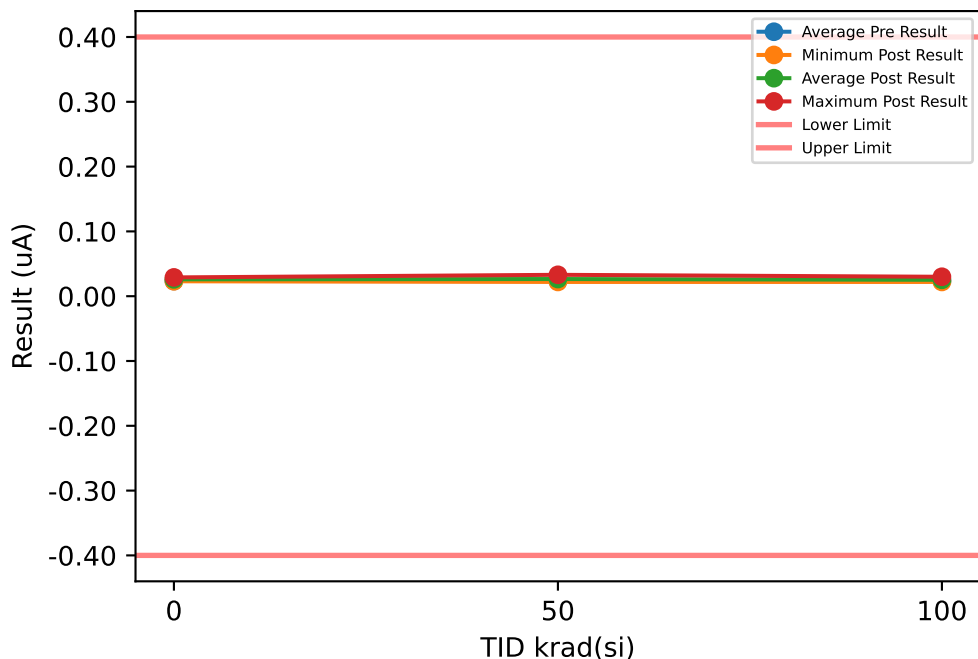
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	-0.444	-0.636	-0.192
36	50	LDR-Biased	-0.384	-0.661	-0.277
37	50	LDR-Biased	-0.544	-0.554	-0.01
39	50	LDR-Biased	-0.326	-0.759	-0.433
40	50	LDR-Biased	-0.262	-0.675	-0.413
41	50	LDR-Unbiased	-0.339	-0.528	-0.189
42	50	LDR-Unbiased	-0.519	-0.722	-0.203
43	50	LDR-Unbiased	-0.511	-0.702	-0.191
44	50	LDR-Unbiased	-0.309	-0.694	-0.385
45	50	LDR-Unbiased	-0.39	-0.833	-0.443
55	100	LDR-Biased	-0.444	-0.639	-0.195
56	100	LDR-Biased	-0.384	-0.375	0.009
57	100	LDR-Biased	-0.544	-0.548	-0.004
59	100	LDR-Biased	-0.326	-0.501	-0.175
60	100	LDR-Biased	-0.262	-0.46	-0.198
61	100	LDR-Unbiased	-0.339	-0.654	-0.315
62	100	LDR-Unbiased	-0.519	-0.627	-0.108
63	100	LDR-Unbiased	-0.511	-0.713	-0.202
64	100	LDR-Unbiased	-0.309	-0.606	-0.297
65	100	LDR-Unbiased	-0.39	0.124	0.514
100	0	Correlation	-0.394	-0.667	-0.273
101	0	Correlation	-0.261	-0.396	-0.135

Test Statistics (nA)

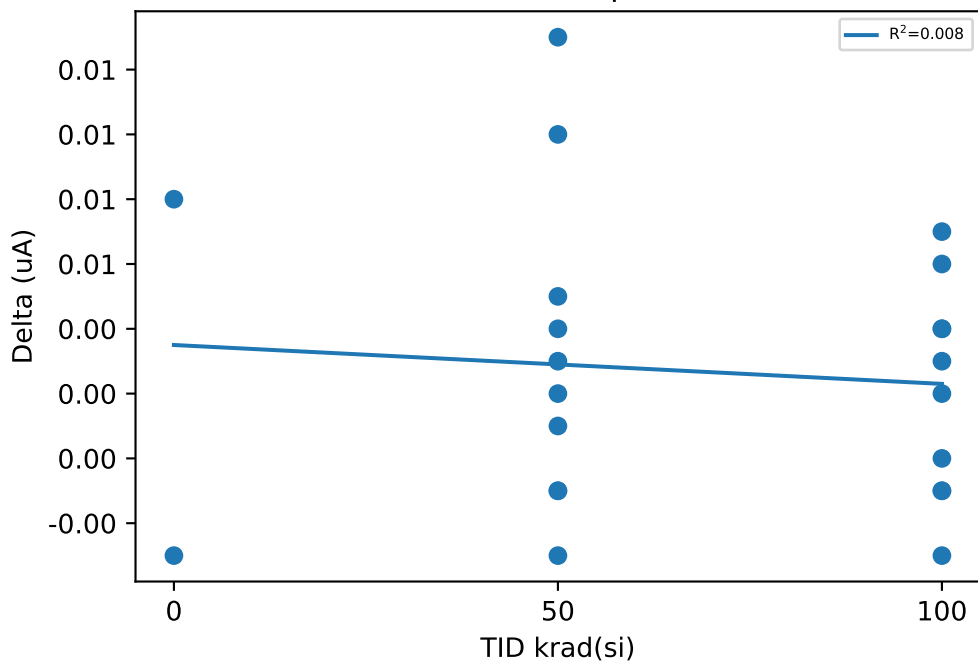
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.394	-0.3275	-0.261	0.094045	-0.667	-0.5315	-0.396	0.19163	-0.273	-0.204	-0.135	0.097581
50	-0.544	-0.4028	-0.262	0.097726	-0.833	-0.6764	-0.528	0.090226	-0.443	-0.2736	-0.01	0.14184
100	-0.544	-0.4028	-0.262	0.097726	-0.713	-0.4999	0.124	0.24145	-0.315	-0.0971	0.514	0.23985

Device Test: 2.3 PreLeak_Vin

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -0.4, Upper Limit = 0.4 (uA))

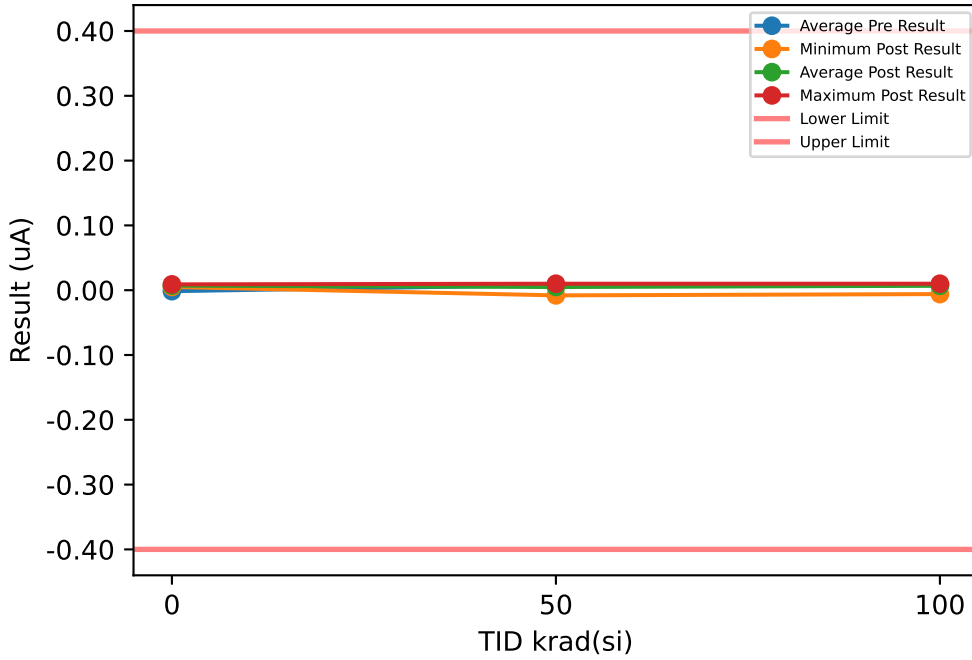
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.028	0.032	0.004
36	50	LDR-Biased	0.018	0.023	0.005
37	50	LDR-Biased	0.025	0.022	-0.003
39	50	LDR-Biased	0.023	0.024	0.001
40	50	LDR-Biased	0.023	0.022	-0.001
41	50	LDR-Unbiased	0.022	0.032	0.01
42	50	LDR-Unbiased	0.02	0.033	0.013
43	50	LDR-Unbiased	0.021	0.023	0.002
44	50	LDR-Unbiased	0.028	0.027	-0.001
45	50	LDR-Unbiased	0.024	0.027	0.003
55	100	LDR-Biased	0.028	0.027	-0.001
56	100	LDR-Biased	0.018	0.022	0.004
57	100	LDR-Biased	0.025	0.022	-0.003
59	100	LDR-Biased	0.023	0.022	-0.001
60	100	LDR-Biased	0.023	0.03	0.007
61	100	LDR-Unbiased	0.022	0.025	0.003
62	100	LDR-Unbiased	0.02	0.026	0.006
63	100	LDR-Unbiased	0.021	0.025	0.004
64	100	LDR-Unbiased	0.028	0.028	0
65	100	LDR-Unbiased	0.024	0.026	0.002
100	0	Correlation	0.026	0.023	-0.003
101	0	Correlation	0.021	0.029	0.008

Test Statistics (uA)

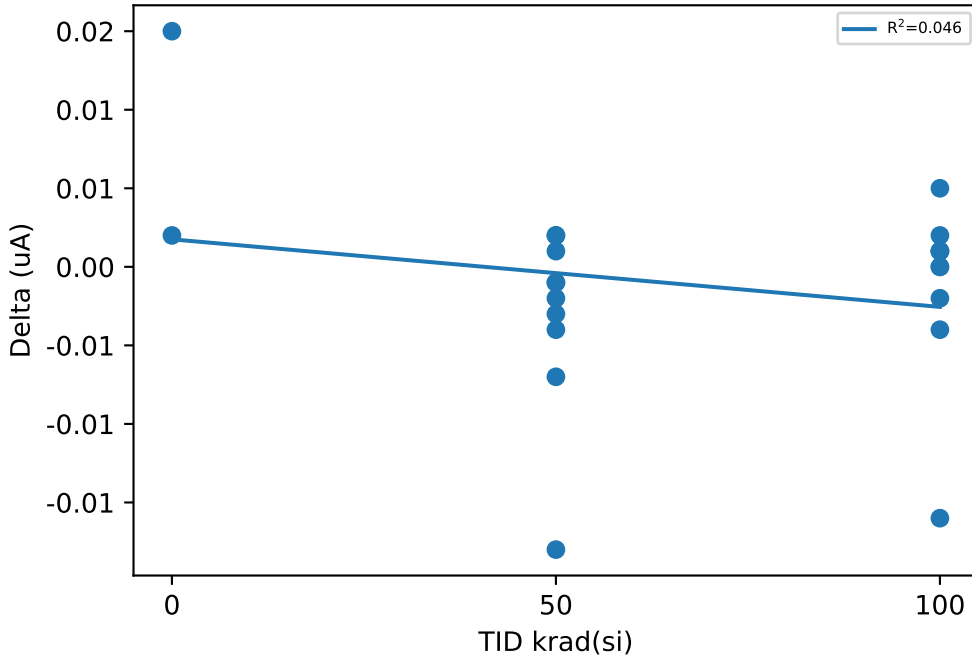
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.021	0.0235	0.026	0.0035355	0.023	0.026	0.029	0.0042426	-0.003	0.0025	0.008	0.0077782
50	0.018	0.0232	0.028	0.0032249	0.022	0.0265	0.033	0.0044033	-0.003	0.0033	0.013	0.0050122
100	0.018	0.0232	0.028	0.0032249	0.022	0.0253	0.03	0.0027101	-0.003	0.0021	0.007	0.0032813

Device Test: 2.4PreLeak_Vout

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -0.4, Upper Limit = 0.4 (uA))

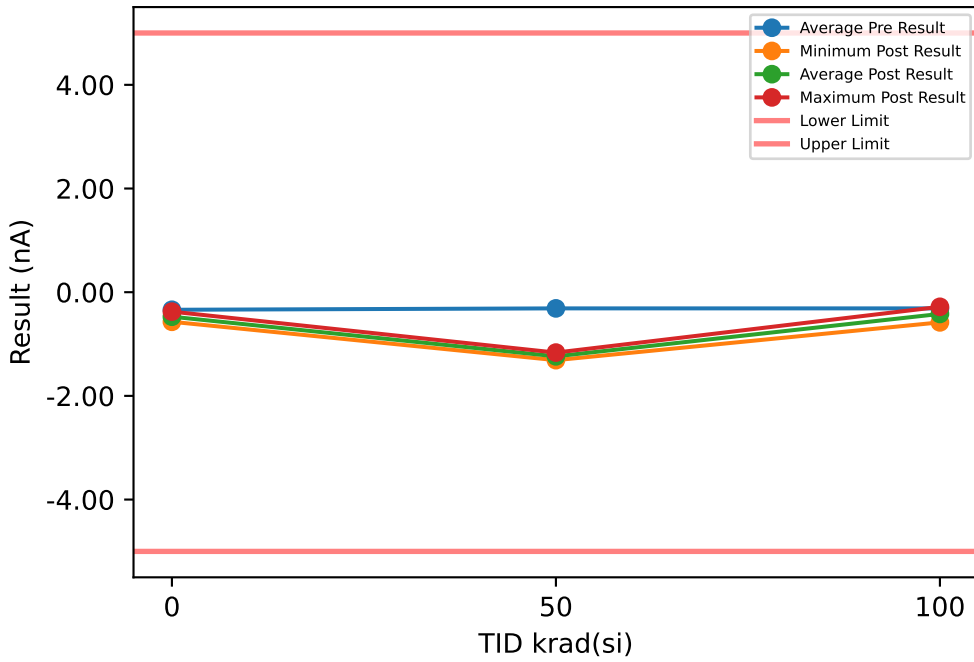
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.006	0.008	0.002
36	50	LDR-Biased	0.003	0.004	0.001
37	50	LDR-Biased	0.008	0.001	-0.007
39	50	LDR-Biased	0.008	0.007	-0.001
40	50	LDR-Biased	0.009	0.005	-0.004
41	50	LDR-Unbiased	0.009	0.008	-0.001
42	50	LDR-Unbiased	0.008	0.01	0.002
43	50	LDR-Unbiased	0.01	0.007	-0.003
44	50	LDR-Unbiased	0.009	0.007	-0.002
45	50	LDR-Unbiased	0.01	-0.008	-0.018
55	100	LDR-Biased	0.006	0.006	0
56	100	LDR-Biased	0.003	0.008	0.005
57	100	LDR-Biased	0.008	0.009	0.001
59	100	LDR-Biased	0.008	0.004	-0.004
60	100	LDR-Biased	0.009	0.01	0.001
61	100	LDR-Unbiased	0.009	0.01	0.001
62	100	LDR-Unbiased	0.008	0.01	0.002
63	100	LDR-Unbiased	0.01	-0.006	-0.016
64	100	LDR-Unbiased	0.009	0.009	0
65	100	LDR-Unbiased	0.01	0.008	-0.002
100	0	Correlation	-0.01	0.005	0.015
101	0	Correlation	0.007	0.009	0.002

Test Statistics (uA)

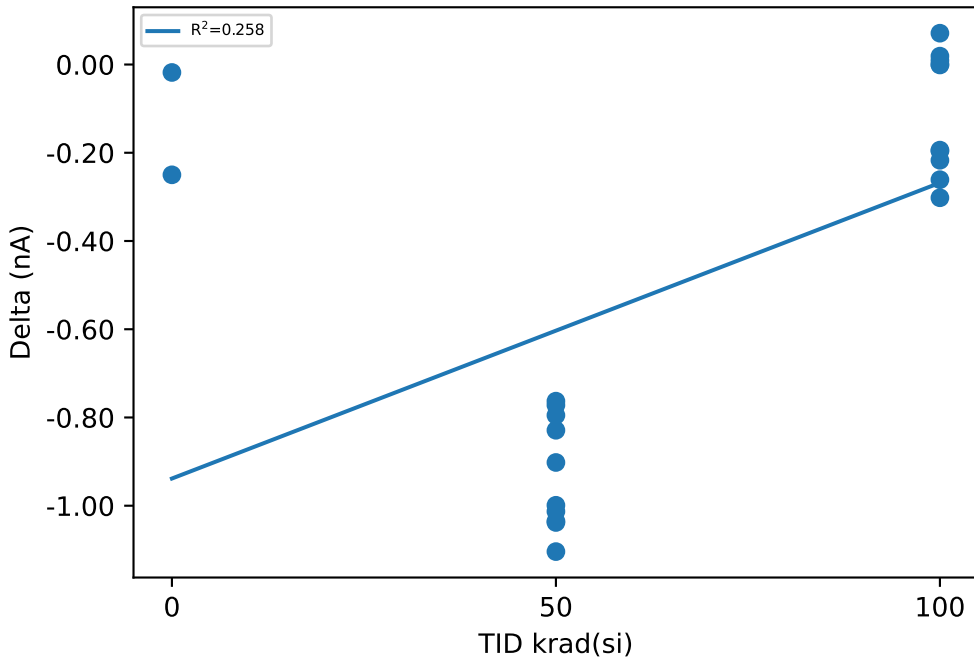
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.01	-0.0015	0.007	0.012021	0.005	0.007	0.009	0.0028284	0.002	0.0085	0.015	0.0091924
50	0.003	0.008	0.01	0.0021082	-0.008	0.0049	0.01	0.0051737	-0.018	-0.0031	0.002	0.0059339
100	0.003	0.008	0.01	0.0021082	-0.006	0.0068	0.01	0.0048944	-0.016	-0.0012	0.005	0.0057116

Device Test: 20.0 PostLeak_OVP

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -5.0, Upper Limit = 5.0 (nA))

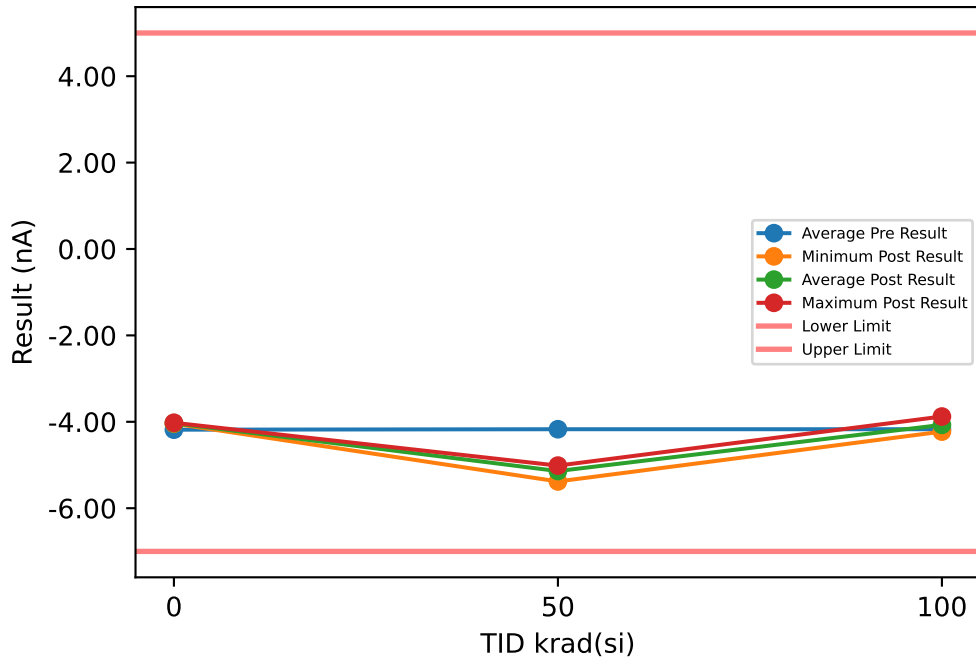
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	-0.27	-1.305	-1.035
36	50	LDR-Biased	-0.28	-1.293	-1.013
37	50	LDR-Biased	-0.415	-1.178	-0.763
39	50	LDR-Biased	-0.223	-1.261	-1.038
40	50	LDR-Biased	-0.282	-1.184	-0.902
41	50	LDR-Unbiased	-0.206	-1.205	-0.999
42	50	LDR-Unbiased	-0.207	-1.311	-1.104
43	50	LDR-Unbiased	-0.336	-1.165	-0.829
44	50	LDR-Unbiased	-0.46	-1.255	-0.795
45	50	LDR-Unbiased	-0.443	-1.215	-0.772
55	100	LDR-Biased	-0.27	-0.487	-0.217
56	100	LDR-Biased	-0.28	-0.582	-0.302
57	100	LDR-Biased	-0.415	-0.406	0.009
59	100	LDR-Biased	-0.223	-0.417	-0.194
60	100	LDR-Biased	-0.282	-0.282	0
61	100	LDR-Unbiased	-0.206	-0.402	-0.196
62	100	LDR-Unbiased	-0.207	-0.468	-0.261
63	100	LDR-Unbiased	-0.336	-0.317	0.019
64	100	LDR-Unbiased	-0.46	-0.461	-0.001
65	100	LDR-Unbiased	-0.443	-0.372	0.071
100	0	Correlation	-0.357	-0.375	-0.018
101	0	Correlation	-0.321	-0.571	-0.25

Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.357	-0.339	-0.321	0.025456	-0.571	-0.473	-0.375	0.13859	-0.25	-0.134	-0.018	0.16405
50	-0.46	-0.3122	-0.206	0.096678	-1.311	-1.2372	-1.165	0.054891	-1.104	-0.925	-0.763	0.12755
100	-0.46	-0.3122	-0.206	0.096678	-0.582	-0.4194	-0.282	0.08641	-0.302	-0.1072	0.071	0.13866

Device Test: 20.1 PostLeak_EN

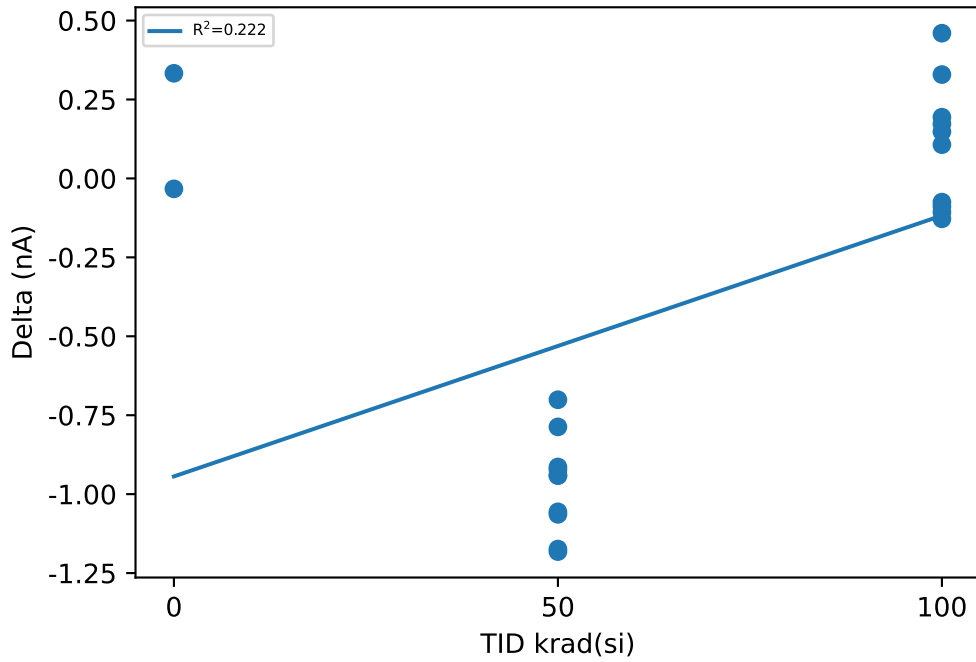
TID vs Result Stats



Test Results (Lower Limit = -7.0, Upper Limit = 5.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	-4.007	-5.071	-1.064
36	50	LDR-Biased	-4.091	-5.014	-0.923
37	50	LDR-Biased	-4.114	-5.055	-0.941
39	50	LDR-Biased	-4.138	-5.194	-1.056
40	50	LDR-Biased	-4.392	-5.179	-0.787
41	50	LDR-Unbiased	-4.15	-5.064	-0.914
42	50	LDR-Unbiased	-4.199	-5.381	-1.182
43	50	LDR-Unbiased	-4.224	-5.165	-0.941
44	50	LDR-Unbiased	-4.338	-5.039	-0.701
45	50	LDR-Unbiased	-4.067	-5.241	-1.174
55	100	LDR-Biased	-4.007	-4.135	-0.128
56	100	LDR-Biased	-4.091	-3.897	0.194
57	100	LDR-Biased	-4.114	-4.189	-0.075
59	100	LDR-Biased	-4.138	-4.227	-0.089
60	100	LDR-Biased	-4.392	-4.063	0.329
61	100	LDR-Unbiased	-4.15	-3.977	0.173
62	100	LDR-Unbiased	-4.199	-4.051	0.148
63	100	LDR-Unbiased	-4.224	-4.117	0.107
64	100	LDR-Unbiased	-4.338	-3.878	0.46
65	100	LDR-Unbiased	-4.067	-4.174	-0.107
100	0	Correlation	-4.376	-4.043	0.333
101	0	Correlation	-3.989	-4.022	-0.033

TID vs Post - Pre Exposure Delta

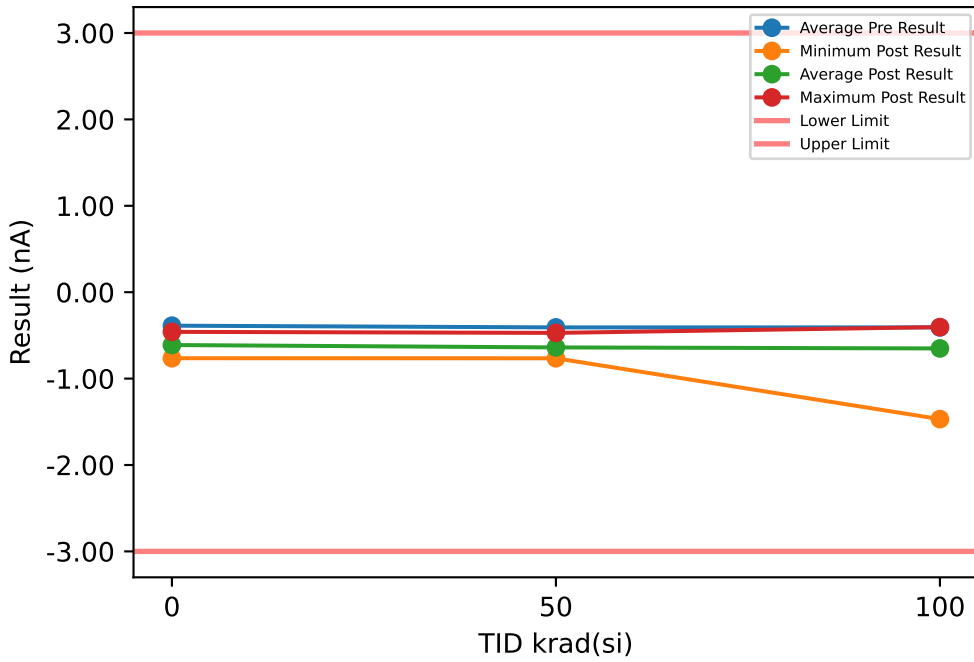


Test Statistics (nA)

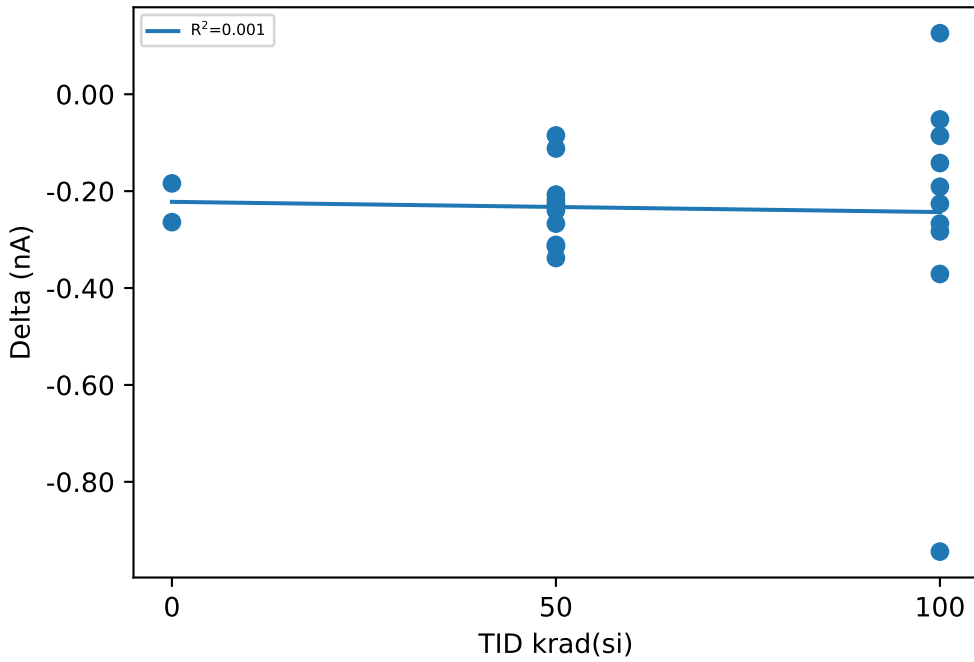
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-4.376	-4.1825	-3.989	0.27365	-4.043	-4.0325	-4.022	0.014849	-0.033	0.15	0.333	0.2588
50	-4.392	-4.172	-4.007	0.11982	-5.381	-5.1403	-5.014	0.11411	-1.182	-0.9683	-0.701	0.15479
100	-4.392	-4.172	-4.007	0.11982	-4.227	-4.0708	-3.878	0.12106	-0.128	0.1012	0.46	0.19992

Device Test: 20.2 PostLeak_SS

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -3.0, Upper Limit = 3.0 (nA))

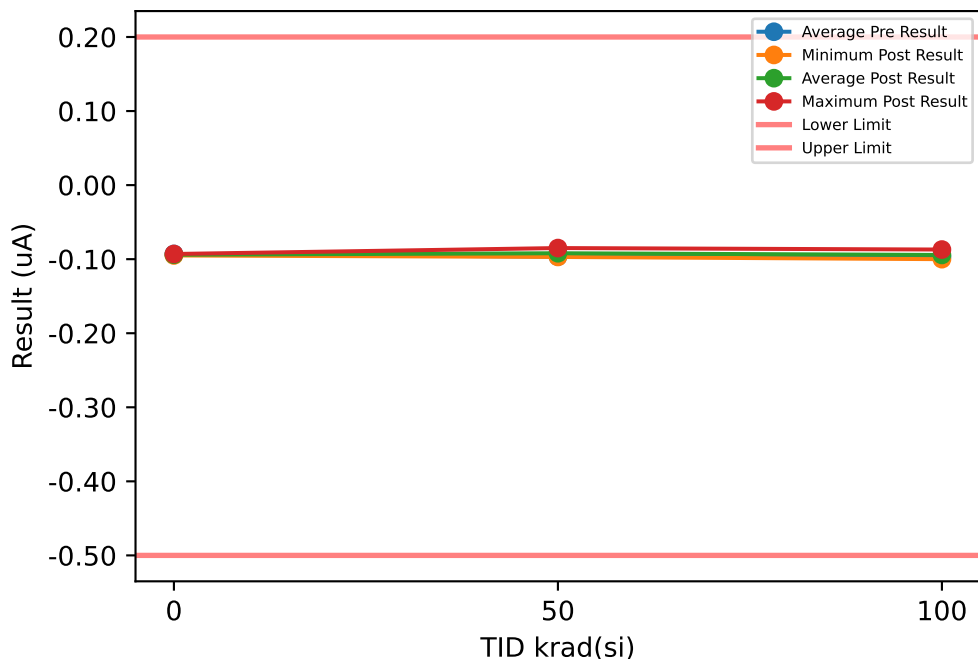
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	-0.32	-0.587	-0.267
36	50	LDR-Biased	-0.262	-0.576	-0.314
37	50	LDR-Biased	-0.444	-0.755	-0.311
39	50	LDR-Biased	-0.5	-0.727	-0.227
40	50	LDR-Biased	-0.406	-0.744	-0.338
41	50	LDR-Unbiased	-0.385	-0.592	-0.207
42	50	LDR-Unbiased	-0.573	-0.685	-0.112
43	50	LDR-Unbiased	-0.386	-0.471	-0.085
44	50	LDR-Unbiased	-0.272	-0.49	-0.218
45	50	LDR-Unbiased	-0.525	-0.765	-0.24
55	100	LDR-Biased	-0.32	-0.587	-0.267
56	100	LDR-Biased	-0.262	-0.404	-0.142
57	100	LDR-Biased	-0.444	-0.635	-0.191
59	100	LDR-Biased	-0.5	-0.586	-0.086
60	100	LDR-Biased	-0.406	-0.632	-0.226
61	100	LDR-Unbiased	-0.385	-0.437	-0.052
62	100	LDR-Unbiased	-0.573	-0.447	0.126
63	100	LDR-Unbiased	-0.386	-0.669	-0.283
64	100	LDR-Unbiased	-0.272	-0.643	-0.371
65	100	LDR-Unbiased	-0.525	-1.469	-0.944
100	0	Correlation	-0.5	-0.764	-0.264
101	0	Correlation	-0.275	-0.459	-0.184

Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.5	-0.3875	-0.275	0.1591	-0.764	-0.6115	-0.459	0.21567	-0.264	-0.224	-0.184	0.056569
50	-0.573	-0.4073	-0.262	0.10501	-0.765	-0.6392	-0.471	0.11031	-0.338	-0.2319	-0.085	0.08323
100	-0.573	-0.4073	-0.262	0.10501	-1.469	-0.6509	-0.404	0.30311	-0.944	-0.2436	0.126	0.28293

Device Test: 20.3 PostLeak_Vin

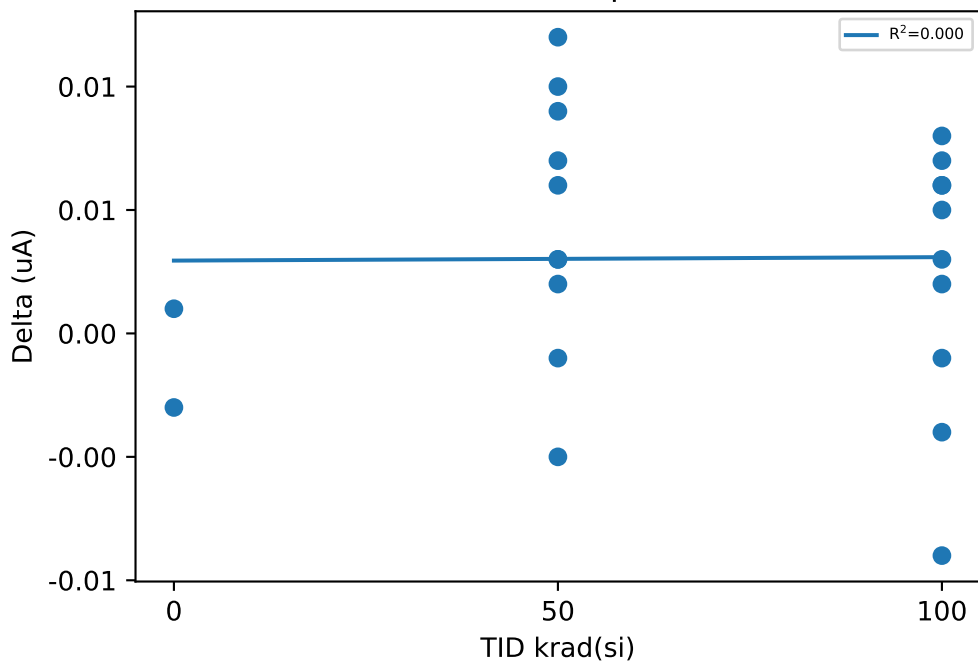
TID vs Result Stats



Test Results (Lower Limit = -0.5, Upper Limit = 0.2 (uA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	-0.095	-0.088	0.007
36	50	LDR-Biased	-0.1	-0.094	0.006
37	50	LDR-Biased	-0.096	-0.094	0.002
39	50	LDR-Biased	-0.1	-0.097	0.003
40	50	LDR-Biased	-0.099	-0.096	0.003
41	50	LDR-Unbiased	-0.1	-0.09	0.01
42	50	LDR-Unbiased	-0.097	-0.085	0.012
43	50	LDR-Unbiased	-0.099	-0.09	0.009
44	50	LDR-Unbiased	-0.089	-0.094	-0.005
45	50	LDR-Unbiased	-0.091	-0.092	-0.001
55	100	LDR-Biased	-0.095	-0.096	-0.001
56	100	LDR-Biased	-0.1	-0.097	0.003
57	100	LDR-Biased	-0.096	-0.1	-0.004
59	100	LDR-Biased	-0.1	-0.092	0.008
60	100	LDR-Biased	-0.099	-0.092	0.007
61	100	LDR-Unbiased	-0.1	-0.094	0.006
62	100	LDR-Unbiased	-0.097	-0.092	0.005
63	100	LDR-Unbiased	-0.099	-0.093	0.006
64	100	LDR-Unbiased	-0.089	-0.087	0.002
65	100	LDR-Unbiased	-0.091	-0.1	-0.009
100	0	Correlation	-0.09	-0.093	-0.003
101	0	Correlation	-0.096	-0.095	0.001

TID vs Post - Pre Exposure Delta

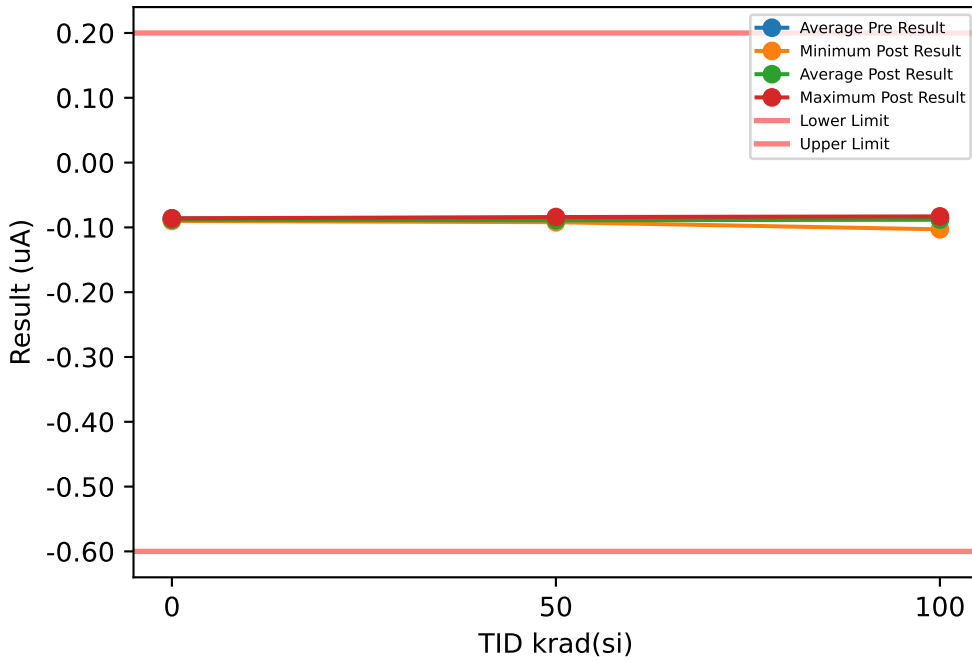


Test Statistics (uA)

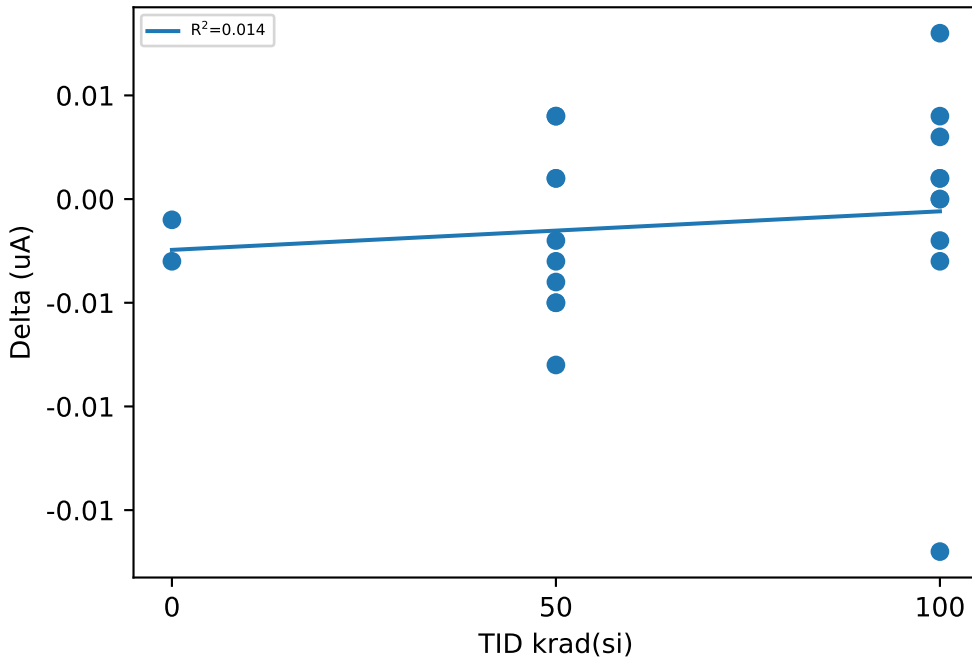
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.096	-0.093	-0.09	0.0042426	-0.095	-0.094	-0.093	0.0014142	-0.003	-0.001	0.001	0.0028284
50	-0.1	-0.0966	-0.089	0.0039215	-0.097	-0.092	-0.085	0.0037417	-0.005	0.0046	0.012	0.0052324
100	-0.1	-0.0966	-0.089	0.0039215	-0.1	-0.0943	-0.087	0.0040291	-0.009	0.0023	0.008	0.0054579

Device Test: 20.4 PostLeak_Vout

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -0.6, Upper Limit = 0.2 (uA))

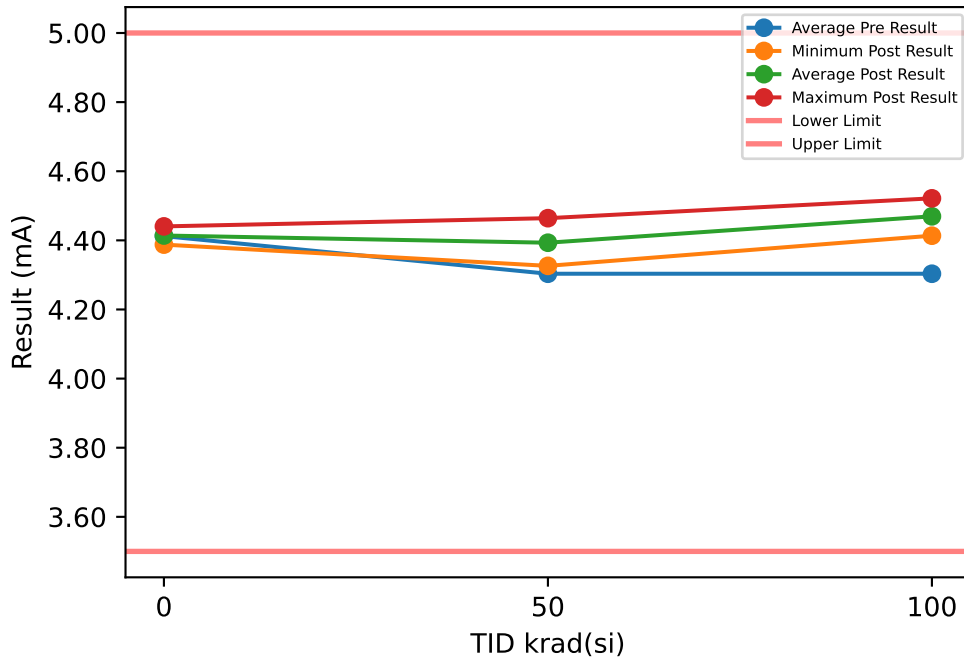
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	-0.085	-0.089	-0.004
36	50	LDR-Biased	-0.089	-0.088	0.001
37	50	LDR-Biased	-0.091	-0.087	0.004
39	50	LDR-Biased	-0.087	-0.092	-0.005
40	50	LDR-Biased	-0.089	-0.092	-0.003
41	50	LDR-Unbiased	-0.088	-0.084	0.004
42	50	LDR-Unbiased	-0.087	-0.089	-0.002
43	50	LDR-Unbiased	-0.089	-0.088	0.001
44	50	LDR-Unbiased	-0.084	-0.092	-0.008
45	50	LDR-Unbiased	-0.086	-0.091	-0.005
55	100	LDR-Biased	-0.085	-0.085	0
56	100	LDR-Biased	-0.089	-0.088	0.001
57	100	LDR-Biased	-0.091	-0.083	0.008
59	100	LDR-Biased	-0.087	-0.09	-0.003
60	100	LDR-Biased	-0.089	-0.085	0.004
61	100	LDR-Unbiased	-0.088	-0.085	0.003
62	100	LDR-Unbiased	-0.087	-0.086	0.001
63	100	LDR-Unbiased	-0.089	-0.089	0
64	100	LDR-Unbiased	-0.084	-0.086	-0.002
65	100	LDR-Unbiased	-0.086	-0.103	-0.017
100	0	Correlation	-0.087	-0.09	-0.003
101	0	Correlation	-0.085	-0.086	-0.001

Test Statistics (uA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.087	-0.086	-0.085	0.0014142	-0.09	-0.088	-0.086	0.0028284	-0.003	-0.002	-0.001	0.0014142
50	-0.091	-0.0875	-0.084	0.0021213	-0.092	-0.0892	-0.084	0.0026162	-0.008	-0.0017	0.004	0.0040565
100	-0.091	-0.0875	-0.084	0.0021213	-0.103	-0.088	-0.083	0.0056765	-0.017	-0.0005	0.008	0.006587

Device Test: 3.0 IQ_Vin_4p5V

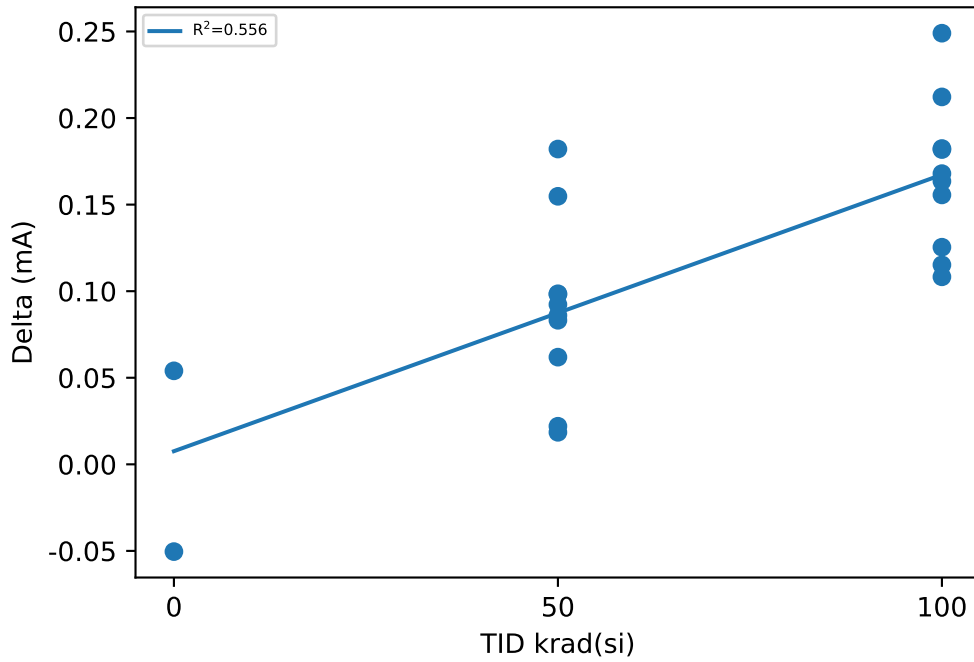
TID vs Result Stats



Test Results (Lower Limit = 3.5, Upper Limit = 5.0 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	4.2569	4.439	0.1821
36	50	LDR-Biased	4.3094	4.4642	0.1548
37	50	LDR-Biased	4.2672	4.3532	0.086
39	50	LDR-Biased	4.3432	4.4264	0.0832
40	50	LDR-Biased	4.2881	4.35	0.0619
41	50	LDR-Unbiased	4.3116	4.4101	0.0985
42	50	LDR-Unbiased	4.3279	4.4261	0.0982
43	50	LDR-Unbiased	4.295	4.3873	0.0923
44	50	LDR-Unbiased	4.3271	4.3491	0.022
45	50	LDR-Unbiased	4.3077	4.3262	0.0185
55	100	LDR-Biased	4.2569	4.5059	0.249
56	100	LDR-Biased	4.3094	4.5216	0.2122
57	100	LDR-Biased	4.2672	4.4307	0.1635
59	100	LDR-Biased	4.3432	4.5111	0.1679
60	100	LDR-Biased	4.2881	4.4135	0.1254
61	100	LDR-Unbiased	4.3116	4.4934	0.1818
62	100	LDR-Unbiased	4.3279	4.5103	0.1824
63	100	LDR-Unbiased	4.295	4.4506	0.1556
64	100	LDR-Unbiased	4.3271	4.4354	0.1083
65	100	LDR-Unbiased	4.3077	4.4229	0.1152
100	0	Correlation	4.4381	4.3877	-0.0504
101	0	Correlation	4.3864	4.4404	0.054

TID vs Post - Pre Exposure Delta

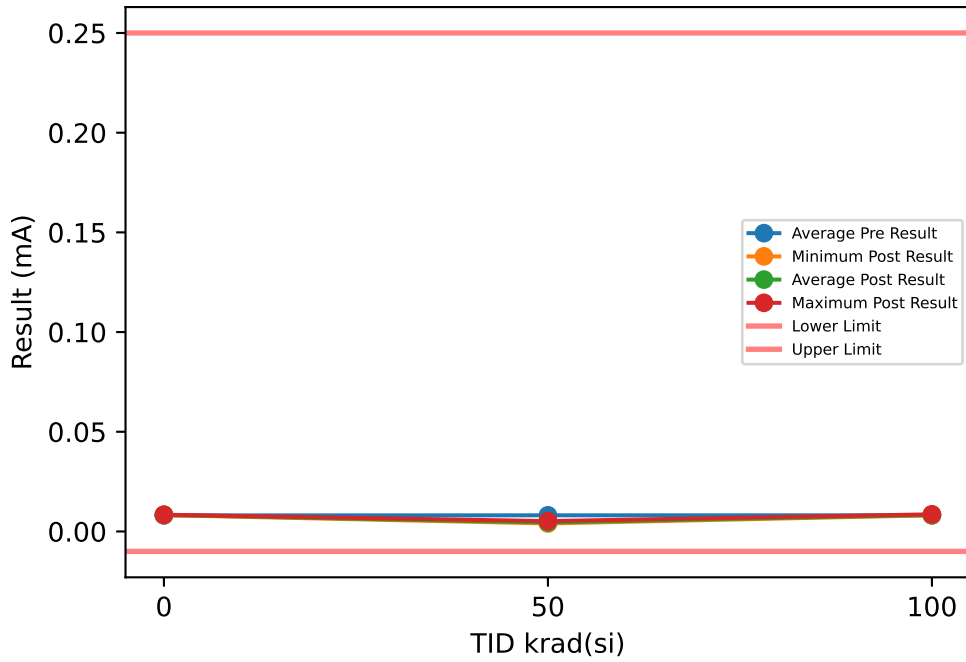


Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	4.3864	4.4123	4.4381	0.036557	4.3877	4.414	4.4404	0.037265	-0.0504	0.0018	0.054	0.073822
50	4.2569	4.3034	4.3432	0.027172	4.3262	4.3932	4.4642	0.0466	0.0185	0.08975	0.1821	0.051005
100	4.2569	4.3034	4.3432	0.027172	4.4135	4.4695	4.5216	0.042608	0.1083	0.16613	0.249	0.043739

Device Test: 3.1 IRCP_EN0p0V_4p5V

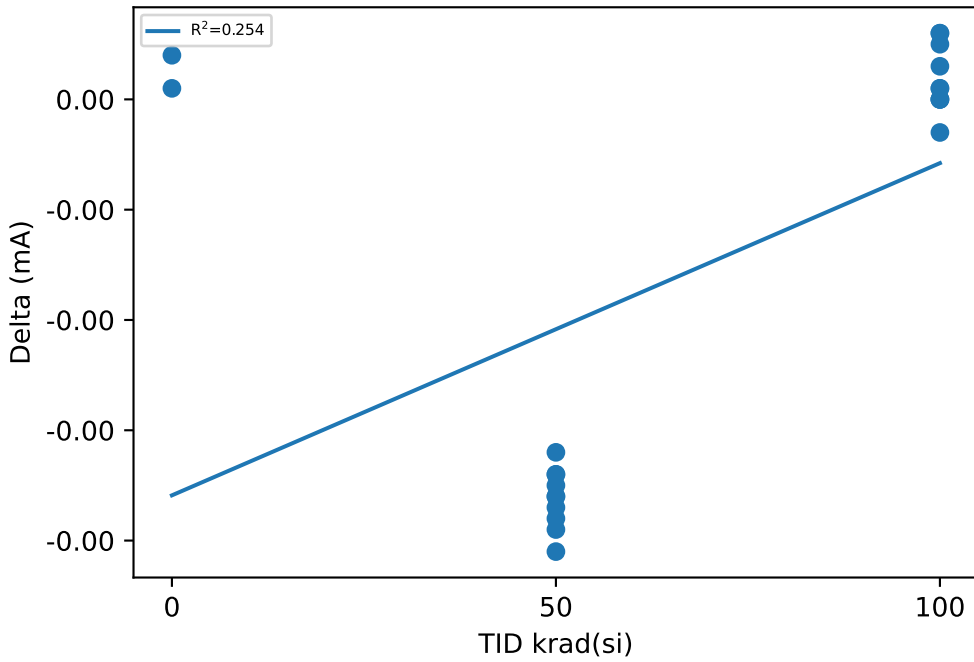
TID vs Result Stats



Test Results (Lower Limit = -0.01, Upper Limit = 0.25 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.008	0.0048	-0.0032
36	50	LDR-Biased	0.0081	0.0044	-0.0037
37	50	LDR-Biased	0.0076	0.0042	-0.0034
39	50	LDR-Biased	0.008	0.0044	-0.0036
40	50	LDR-Biased	0.0081	0.004	-0.0041
41	50	LDR-Unbiased	0.0083	0.0047	-0.0036
42	50	LDR-Unbiased	0.0086	0.0052	-0.0034
43	50	LDR-Unbiased	0.0081	0.0046	-0.0035
44	50	LDR-Unbiased	0.0082	0.0044	-0.0038
45	50	LDR-Unbiased	0.008	0.0041	-0.0039
55	100	LDR-Biased	0.008	0.0083	0.0003
56	100	LDR-Biased	0.0081	0.0082	0.0001
57	100	LDR-Biased	0.0076	0.0082	0.0006
59	100	LDR-Biased	0.008	0.0085	0.0005
60	100	LDR-Biased	0.0081	0.0081	0
61	100	LDR-Unbiased	0.0083	0.0084	0.0001
62	100	LDR-Unbiased	0.0086	0.0083	-0.0003
63	100	LDR-Unbiased	0.0081	0.0081	0
64	100	LDR-Unbiased	0.0082	0.0082	0
65	100	LDR-Unbiased	0.008	0.0086	0.0006
100	0	Correlation	0.0081	0.0082	0.0001
101	0	Correlation	0.008	0.0084	0.0004

TID vs Post - Pre Exposure Delta

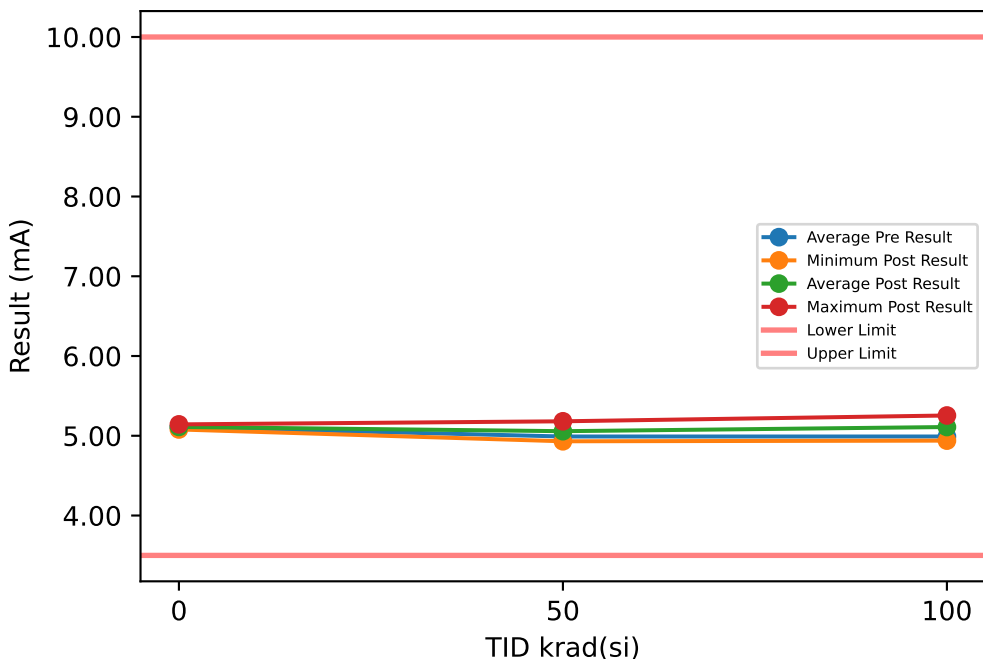


Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.008	0.00805	0.0081	7.0711e-05	0.0082	0.0083	0.0084	0.00014142	0.0001	0.00025	0.0004	0.00021213
50	0.0076	0.0081	0.0086	0.00025386	0.004	0.00448	0.0052	0.00035839	-0.0041	-0.00362	-0.0032	0.00026583
100	0.0076	0.0081	0.0086	0.00025386	0.0081	0.00829	0.0086	0.00016633	-0.0003	0.00019	0.0006	0.00029981

Device Test: 3.2 IQ_Vin_14p0V

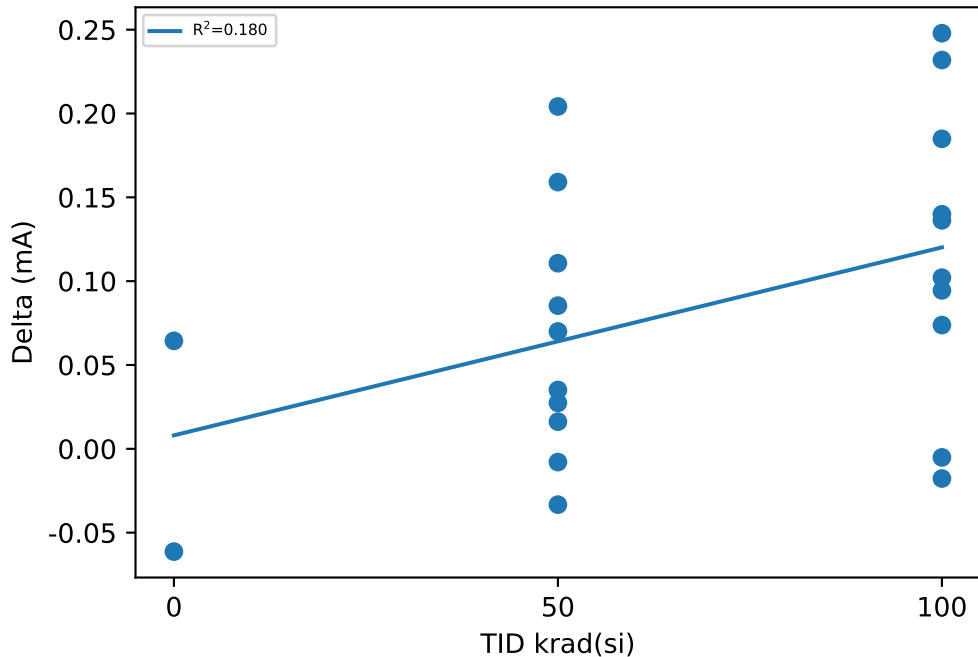
TID vs Result Stats



Test Results (Lower Limit = 3.5, Upper Limit = 10.0 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	4.9186	5.1228	0.2042
36	50	LDR-Biased	5.0223	5.1814	0.1591
37	50	LDR-Biased	4.955	4.9901	0.0351
39	50	LDR-Biased	5.0181	5.0455	0.0274
40	50	LDR-Biased	4.9568	4.9489	-0.0079
41	50	LDR-Unbiased	5.0221	5.1328	0.1107
42	50	LDR-Unbiased	5.0524	5.1224	0.07
43	50	LDR-Unbiased	4.9996	5.085	0.0854
44	50	LDR-Unbiased	4.9641	4.9308	-0.0333
45	50	LDR-Unbiased	4.9984	5.0146	0.0162
55	100	LDR-Biased	4.9186	5.1665	0.2479
56	100	LDR-Biased	5.0223	5.2542	0.2319
57	100	LDR-Biased	4.955	5.0495	0.0945
59	100	LDR-Biased	5.0181	5.0919	0.0738
60	100	LDR-Biased	4.9568	4.9391	-0.0177
61	100	LDR-Unbiased	5.0221	5.207	0.1849
62	100	LDR-Unbiased	5.0524	5.1923	0.1399
63	100	LDR-Unbiased	4.9996	5.1359	0.1363
64	100	LDR-Unbiased	4.9641	4.959	-0.0051
65	100	LDR-Unbiased	4.9984	5.1005	0.1021
100	0	Correlation	5.1403	5.079	-0.0613
101	0	Correlation	5.0784	5.1428	0.0644

TID vs Post - Pre Exposure Delta

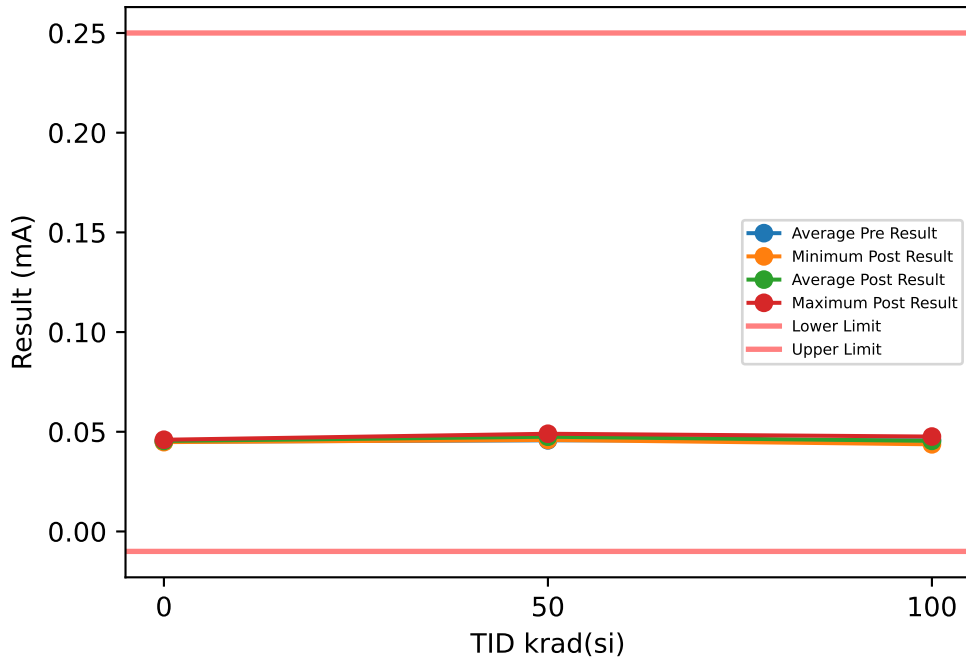


Test Statistics (mA)

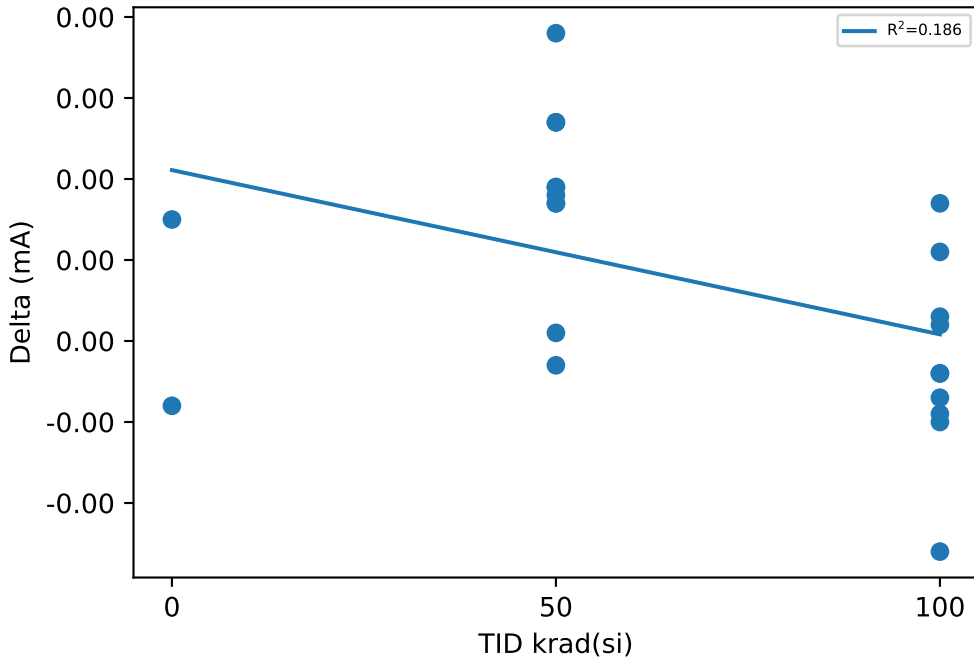
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	5.0784	5.1094	5.1403	0.04377	5.079	5.1109	5.1428	0.045113	-0.0613	0.00155	0.0644	0.088883
50	4.9186	4.9907	5.0524	0.040839	4.9308	5.0574	5.1814	0.08474	-0.0333	0.06669	0.2042	0.074832
100	4.9186	4.9907	5.0524	0.040839	4.9391	5.1096	5.2542	0.10377	-0.0177	0.11885	0.2479	0.089105

Device Test: 3.3 IRCP_EN0p0V_14p0V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -0.01, Upper Limit = 0.25 (mA))

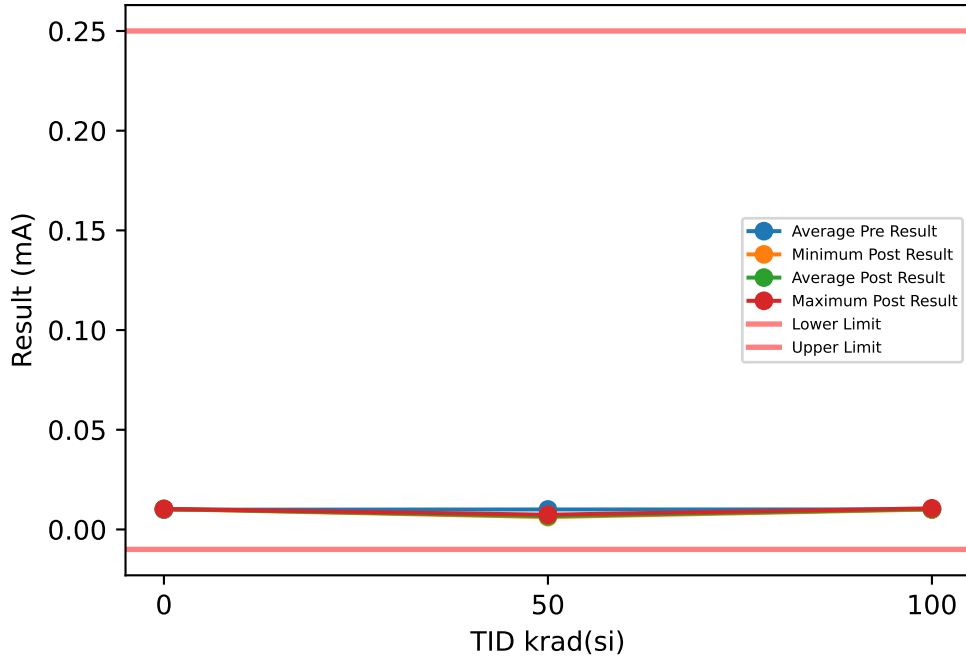
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.0449	0.0487	0.0038
36	50	LDR-Biased	0.0461	0.048	0.0019
37	50	LDR-Biased	0.0441	0.0459	0.0018
39	50	LDR-Biased	0.0462	0.0489	0.0027
40	50	LDR-Biased	0.0446	0.0465	0.0019
41	50	LDR-Unbiased	0.046	0.0487	0.0027
42	50	LDR-Unbiased	0.0473	0.049	0.0017
43	50	LDR-Unbiased	0.0451	0.0468	0.0017
44	50	LDR-Unbiased	0.0469	0.0466	-0.0003
45	50	LDR-Unbiased	0.0459	0.046	0.0001
55	100	LDR-Biased	0.0449	0.046	0.0011
56	100	LDR-Biased	0.0461	0.0454	-0.0007
57	100	LDR-Biased	0.0441	0.0437	-0.0004
59	100	LDR-Biased	0.0462	0.0464	0.0002
60	100	LDR-Biased	0.0446	0.0442	-0.0004
61	100	LDR-Unbiased	0.046	0.0463	0.0003
62	100	LDR-Unbiased	0.0473	0.0464	-0.0009
63	100	LDR-Unbiased	0.0451	0.0441	-0.001
64	100	LDR-Unbiased	0.0469	0.0443	-0.0026
65	100	LDR-Unbiased	0.0459	0.0476	0.0017
100	0	Correlation	0.0456	0.0448	-0.0008
101	0	Correlation	0.0445	0.046	0.0015

Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.0445	0.04505	0.0456	0.00077782	0.0448	0.0454	0.046	0.00084853	-0.0008	0.00035	0.0015	0.0016263
50	0.0441	0.04571	0.0473	0.001017	0.0459	0.04751	0.049	0.0012671	-0.0003	0.0018	0.0038	0.0012
100	0.0441	0.04571	0.0473	0.001017	0.0437	0.04544	0.0476	0.0013006	-0.0026	-0.00027	0.0017	0.0011963

Device Test: 3.4 IRCP_EN7p0V_4p5V

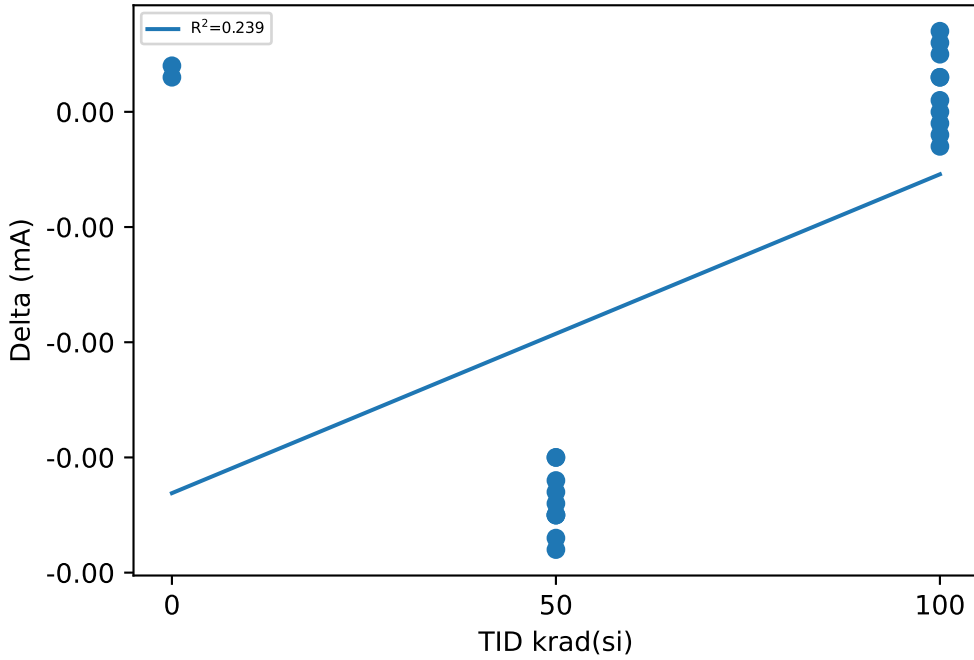
TID vs Result Stats



Test Results (Lower Limit = -0.01, Upper Limit = 0.25 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.0097	0.0067	-0.003
36	50	LDR-Biased	0.0101	0.0067	-0.0034
37	50	LDR-Biased	0.0097	0.0065	-0.0032
39	50	LDR-Biased	0.01	0.0065	-0.0035
40	50	LDR-Biased	0.0098	0.0063	-0.0035
41	50	LDR-Unbiased	0.0102	0.0069	-0.0033
42	50	LDR-Unbiased	0.0104	0.0074	-0.003
43	50	LDR-Unbiased	0.0102	0.0067	-0.0035
44	50	LDR-Unbiased	0.0102	0.0065	-0.0037
45	50	LDR-Unbiased	0.01	0.0062	-0.0038
55	100	LDR-Biased	0.0097	0.0104	0.0007
56	100	LDR-Biased	0.0101	0.0101	0
57	100	LDR-Biased	0.0097	0.0102	0.0005
59	100	LDR-Biased	0.01	0.0103	0.0003
60	100	LDR-Biased	0.0098	0.0101	0.0003
61	100	LDR-Unbiased	0.0102	0.0103	0.0001
62	100	LDR-Unbiased	0.0104	0.0101	-0.0003
63	100	LDR-Unbiased	0.0102	0.0101	-0.0001
64	100	LDR-Unbiased	0.0102	0.01	-0.0002
65	100	LDR-Unbiased	0.01	0.0106	0.0006
100	0	Correlation	0.0099	0.0102	0.0003
101	0	Correlation	0.0099	0.0103	0.0004

TID vs Post - Pre Exposure Delta

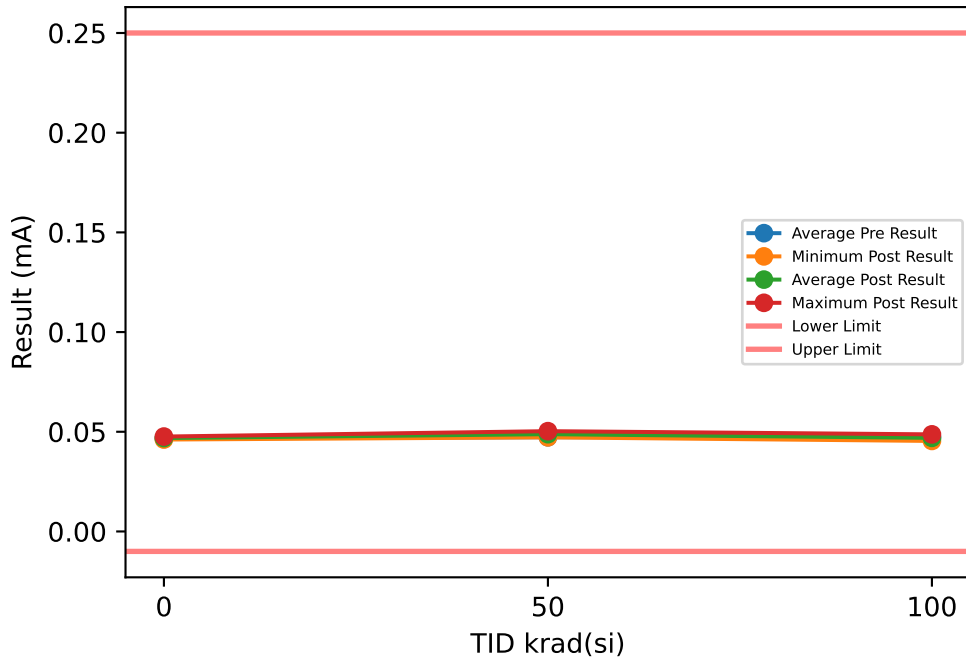


Test Statistics (mA)

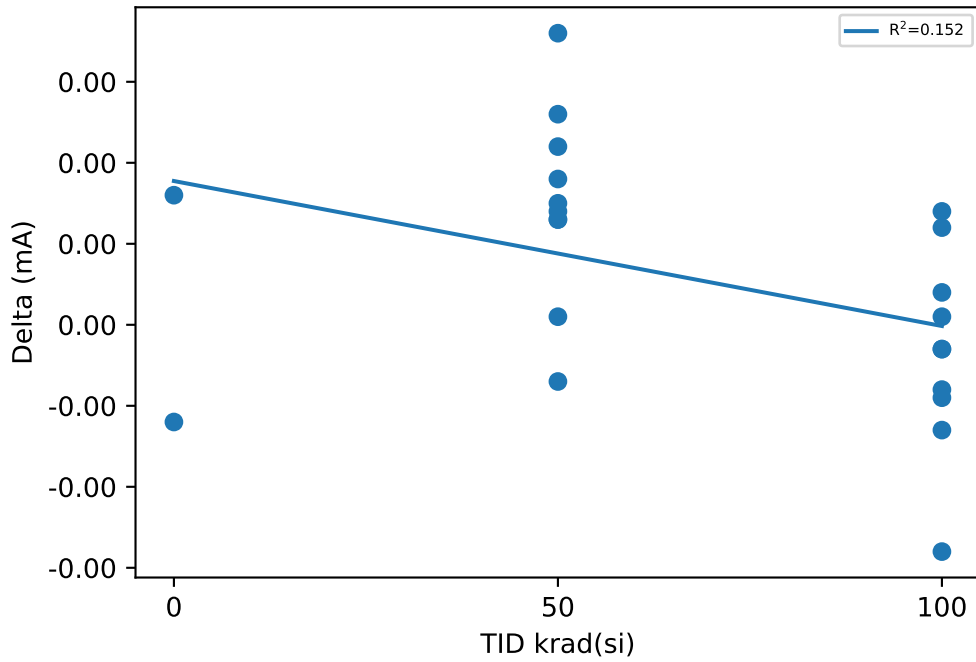
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.0099	0.0099	0.0099	0	0.0102	0.01025	0.0103	7.0711e-05	0.0003	0.00035	0.0004	7.0711e-05
50	0.0097	0.01003	0.0104	0.00023594	0.0062	0.00664	0.0074	0.00033731	-0.0038	-0.00339	-0.003	0.00026854
100	0.0097	0.01003	0.0104	0.00023594	0.01	0.01022	0.0106	0.00018135	-0.0003	0.00019	0.0007	0.00034464

Device Test: 3.5 IRCP_EN7p0V_14p0V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = -0.01, Upper Limit = 0.25 (mA))

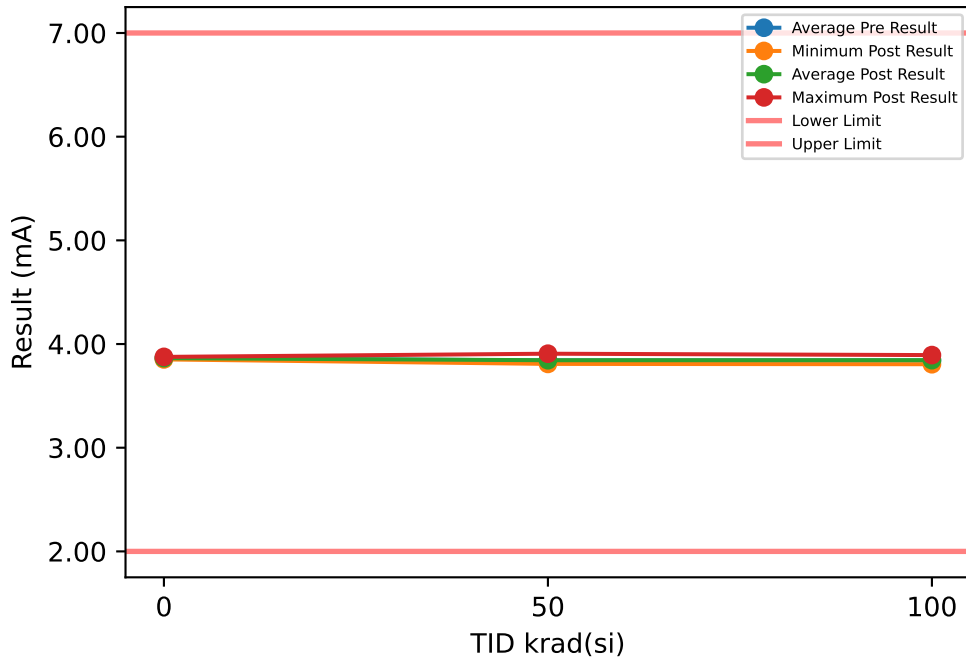
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.0463	0.0499	0.0036
36	50	LDR-Biased	0.0474	0.0492	0.0018
37	50	LDR-Biased	0.0457	0.0472	0.0015
39	50	LDR-Biased	0.048	0.0502	0.0022
40	50	LDR-Biased	0.0463	0.0477	0.0014
41	50	LDR-Unbiased	0.0474	0.05	0.0026
42	50	LDR-Unbiased	0.049	0.0503	0.0013
43	50	LDR-Unbiased	0.0468	0.0481	0.0013
44	50	LDR-Unbiased	0.0486	0.0479	-0.0007
45	50	LDR-Unbiased	0.0473	0.0474	0.0001
55	100	LDR-Biased	0.0463	0.0475	0.0012
56	100	LDR-Biased	0.0474	0.0471	-0.0003
57	100	LDR-Biased	0.0457	0.0454	-0.0003
59	100	LDR-Biased	0.048	0.0481	0.0001
60	100	LDR-Biased	0.0463	0.0455	-0.0008
61	100	LDR-Unbiased	0.0474	0.0478	0.0004
62	100	LDR-Unbiased	0.049	0.0481	-0.0009
63	100	LDR-Unbiased	0.0468	0.0455	-0.0013
64	100	LDR-Unbiased	0.0486	0.0458	-0.0028
65	100	LDR-Unbiased	0.0473	0.0487	0.0014
100	0	Correlation	0.0473	0.0461	-0.0012
101	0	Correlation	0.046	0.0476	0.0016

Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.046	0.04665	0.0473	0.00091924	0.0461	0.04685	0.0476	0.0010607	-0.0012	0.0002	0.0016	0.0019799
50	0.0457	0.04728	0.049	0.0010486	0.0472	0.04879	0.0503	0.0012494	-0.0007	0.00151	0.0036	0.001206
100	0.0457	0.04728	0.049	0.0010486	0.0454	0.04695	0.0487	0.0012774	-0.0028	-0.00033	0.0014	0.0012311

Device Test: 4.0 ISD_Vin_4p5V

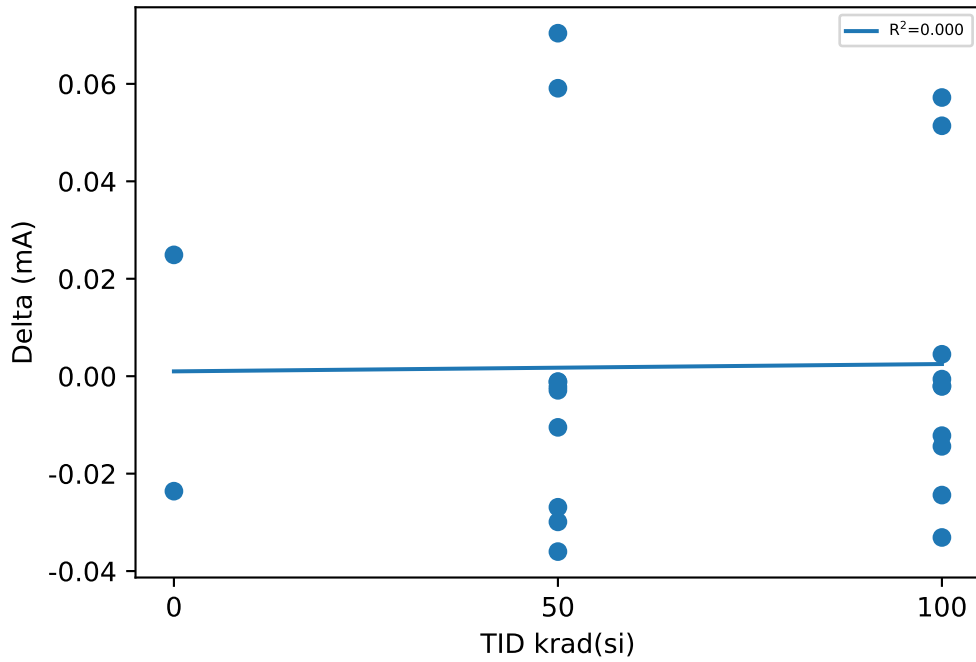
TID vs Result Stats



Test Results (Lower Limit = 2.0, Upper Limit = 7.0 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	3.8124	3.8715	0.0591
36	50	LDR-Biased	3.8363	3.9067	0.0704
37	50	LDR-Biased	3.8224	3.8202	-0.0022
39	50	LDR-Biased	3.8777	3.8672	-0.0105
40	50	LDR-Biased	3.8383	3.8114	-0.0269
41	50	LDR-Unbiased	3.8482	3.8471	-0.0011
42	50	LDR-Unbiased	3.8597	3.8585	-0.0012
43	50	LDR-Unbiased	3.8297	3.8268	-0.0029
44	50	LDR-Unbiased	3.857	3.821	-0.036
45	50	LDR-Unbiased	3.8382	3.8083	-0.0299
55	100	LDR-Biased	3.8124	3.8638	0.0514
56	100	LDR-Biased	3.8363	3.8935	0.0572
57	100	LDR-Biased	3.8224	3.8204	-0.002
59	100	LDR-Biased	3.8777	3.8771	-0.0006
60	100	LDR-Biased	3.8383	3.8052	-0.0331
61	100	LDR-Unbiased	3.8482	3.8527	0.0045
62	100	LDR-Unbiased	3.8597	3.8576	-0.0021
63	100	LDR-Unbiased	3.8297	3.8153	-0.0144
64	100	LDR-Unbiased	3.857	3.8326	-0.0244
65	100	LDR-Unbiased	3.8382	3.826	-0.0122
100	0	Correlation	3.8752	3.8516	-0.0236
101	0	Correlation	3.8512	3.8761	0.0249

TID vs Post - Pre Exposure Delta

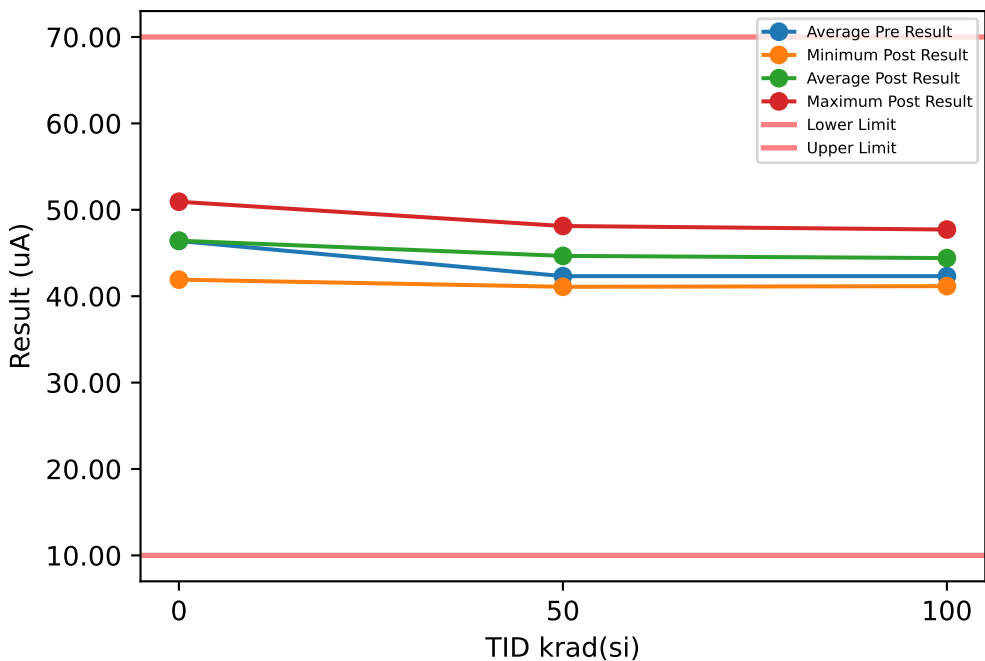


Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	3.8512	3.8632	3.8752	0.016971	3.8516	3.8639	3.8761	0.017324	-0.0236	0.00065	0.0249	0.034295
50	3.8124	3.842	3.8777	0.019216	3.8083	3.8439	3.9067	0.031927	-0.036	0.00188	0.0704	0.035674
100	3.8124	3.842	3.8777	0.019216	3.8052	3.8444	3.8935	0.028938	-0.0331	0.00243	0.0572	0.029685

Device Test: 4.1 Forward_Leakage_4p5V

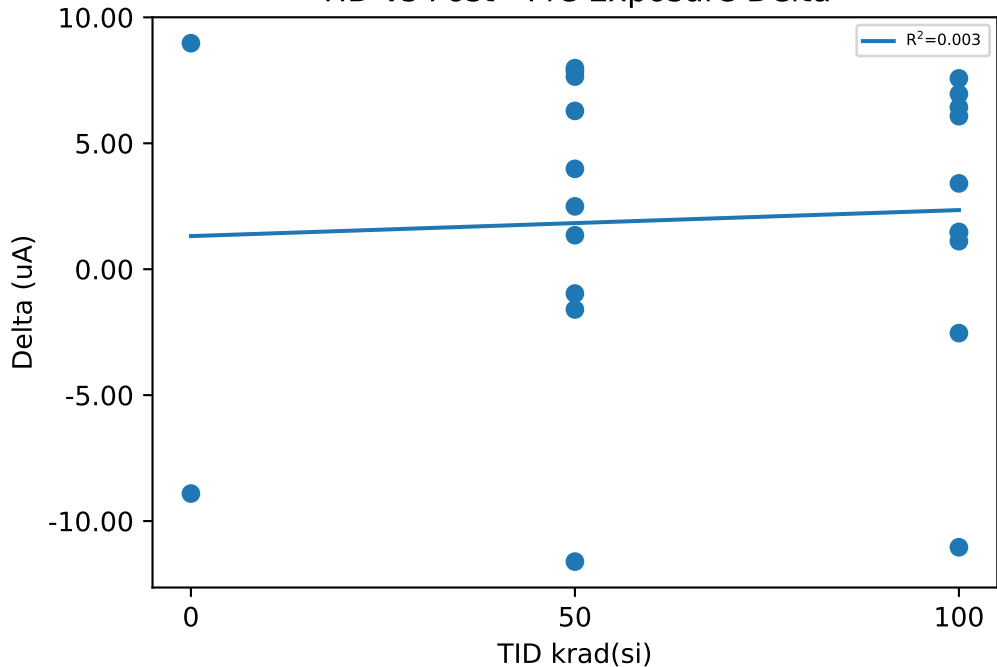
TID vs Result Stats



Test Results (Lower Limit = 10.0, Upper Limit = 70.0 (uA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	38.751	46.399	7.6481
36	50	LDR-Biased	43.959	45.31	1.351
37	50	LDR-Biased	40.14	48.124	7.9835
39	50	LDR-Biased	52.698	41.089	-11.609
40	50	LDR-Biased	39.596	43.58	3.984
41	50	LDR-Unbiased	39.52	45.805	6.2853
42	50	LDR-Unbiased	43.699	42.1	-1.5993
43	50	LDR-Unbiased	40.886	43.382	2.4951
44	50	LDR-Unbiased	39.324	47.184	7.8603
45	50	LDR-Unbiased	44.648	43.682	-0.9658
55	100	LDR-Biased	38.751	45.178	6.4278
56	100	LDR-Biased	43.959	45.441	1.4814
57	100	LDR-Biased	40.14	47.716	7.5758
59	100	LDR-Biased	52.698	41.658	-11.039
60	100	LDR-Biased	39.596	43.003	3.4072
61	100	LDR-Unbiased	39.52	45.596	6.0758
62	100	LDR-Unbiased	43.699	41.162	-2.5373
63	100	LDR-Unbiased	40.886	42.337	1.4502
64	100	LDR-Unbiased	39.324	46.281	6.9567
65	100	LDR-Unbiased	44.648	45.761	1.1132
100	0	Correlation	50.823	41.915	-8.908
101	0	Correlation	41.96	50.934	8.9737

TID vs Post - Pre Exposure Delta

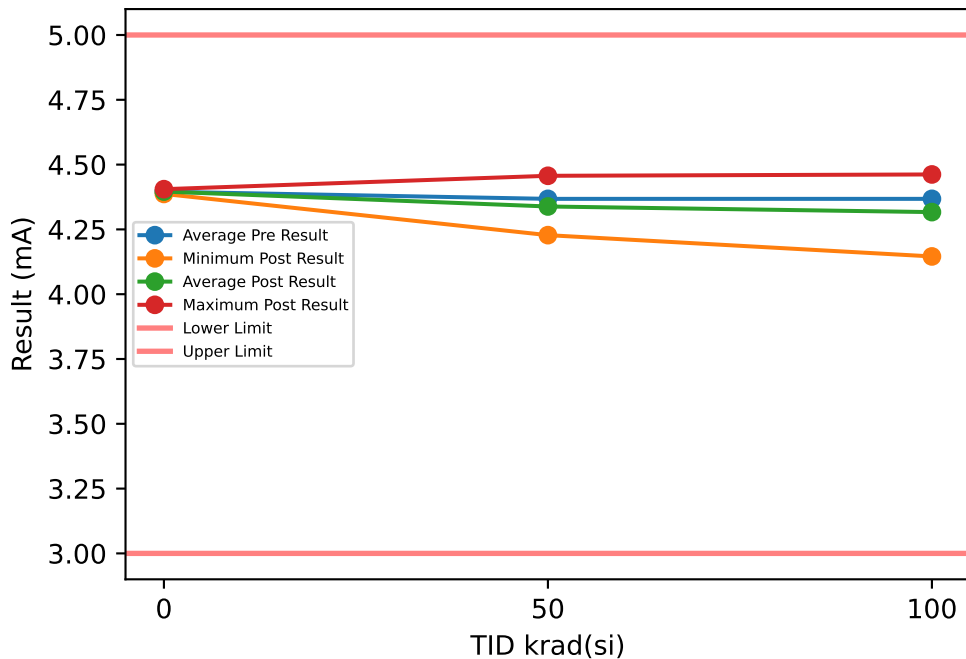


Test Statistics (uA)

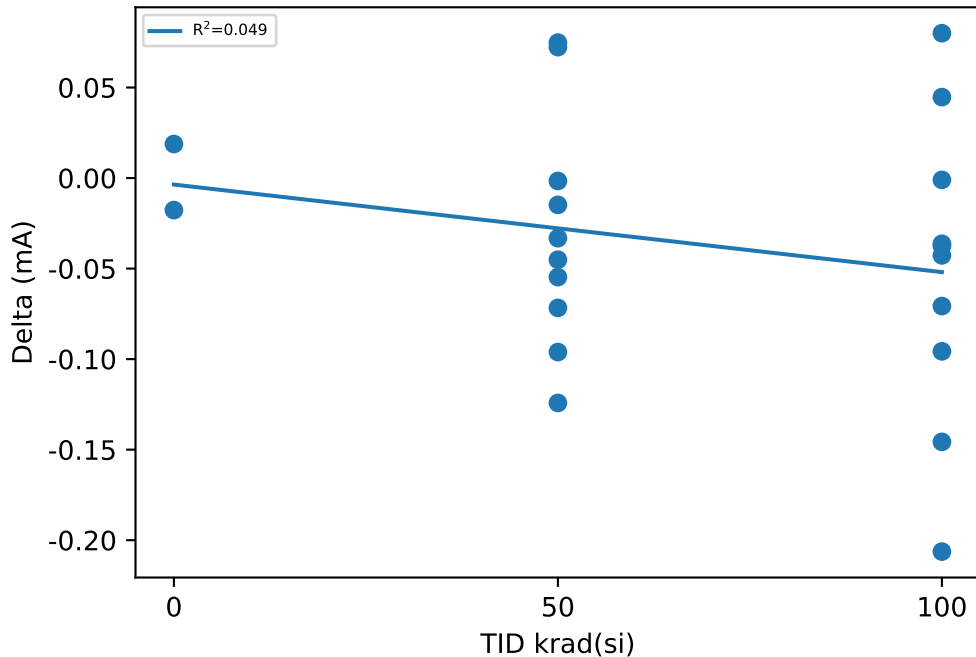
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	41.96	46.392	50.823	6.2669	41.915	46.425	50.934	6.3774	-8.908	0.03285	8.9737	12.644
50	38.751	42.322	52.698	4.2359	41.089	44.665	48.124	2.2656	-11.609	2.3433	7.9835	6.0626
100	38.751	42.322	52.698	4.2359	41.162	44.413	47.716	2.2039	-11.039	2.0912	7.5758	5.6346

Device Test: 4.2 ISD_Vin_7p0V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 3.0, Upper Limit = 5.0 (mA))

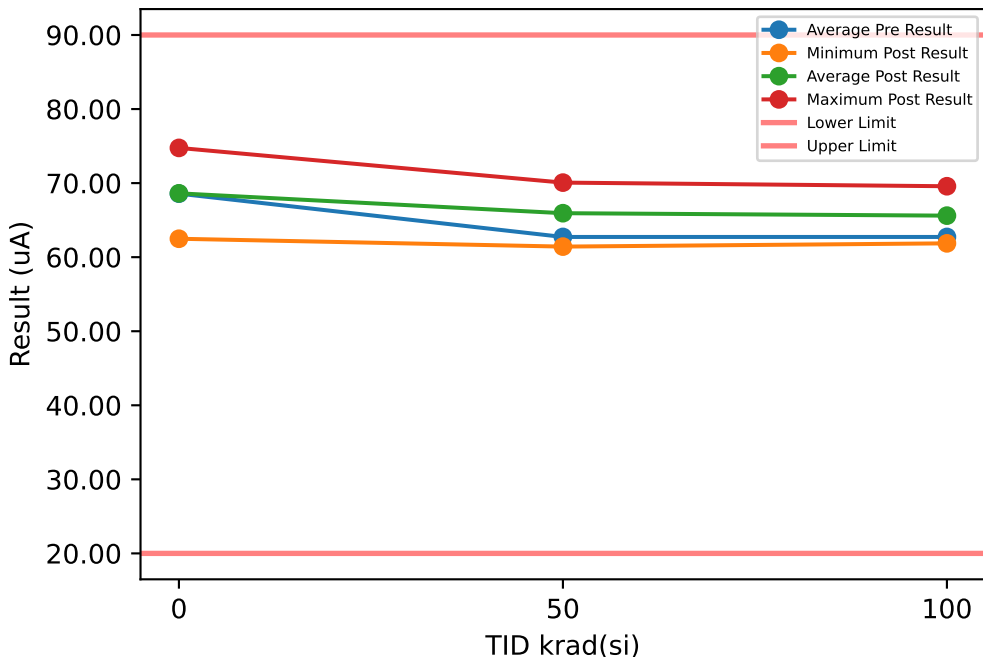
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	4.314	4.3863	0.0723
36	50	LDR-Biased	4.382	4.4568	0.0748
37	50	LDR-Biased	4.3389	4.2842	-0.0547
39	50	LDR-Biased	4.3867	4.315	-0.0717
40	50	LDR-Biased	4.352	4.2278	-0.1242
41	50	LDR-Unbiased	4.399	4.3974	-0.0016
42	50	LDR-Unbiased	4.4191	4.3859	-0.0332
43	50	LDR-Unbiased	4.3727	4.3579	-0.0148
44	50	LDR-Unbiased	4.344	4.2479	-0.0961
45	50	LDR-Unbiased	4.37	4.3249	-0.0451
55	100	LDR-Biased	4.314	4.3587	0.0447
56	100	LDR-Biased	4.382	4.462	0.08
57	100	LDR-Biased	4.3389	4.2682	-0.0707
59	100	LDR-Biased	4.3867	4.291	-0.0957
60	100	LDR-Biased	4.352	4.1457	-0.2063
61	100	LDR-Unbiased	4.399	4.398	-0.001
62	100	LDR-Unbiased	4.4191	4.3764	-0.0427
63	100	LDR-Unbiased	4.3727	4.3352	-0.0375
64	100	LDR-Unbiased	4.344	4.1983	-0.1457
65	100	LDR-Unbiased	4.37	4.3337	-0.0363
100	0	Correlation	4.4045	4.3868	-0.0177
101	0	Correlation	4.3864	4.4052	0.0188

Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	4.3864	4.3955	4.4045	0.012799	4.3868	4.396	4.4052	0.013011	-0.0177	0.00055	0.0188	0.025809
50	4.314	4.3678	4.4191	0.03116	4.2278	4.3384	4.4568	0.071895	-0.1242	-0.02943	0.0748	0.065245
100	4.314	4.3678	4.4191	0.03116	4.1457	4.3167	4.462	0.094253	-0.2063	-0.05112	0.08	0.084826

Device Test: 4.3 Forward_Leakage_7p0V

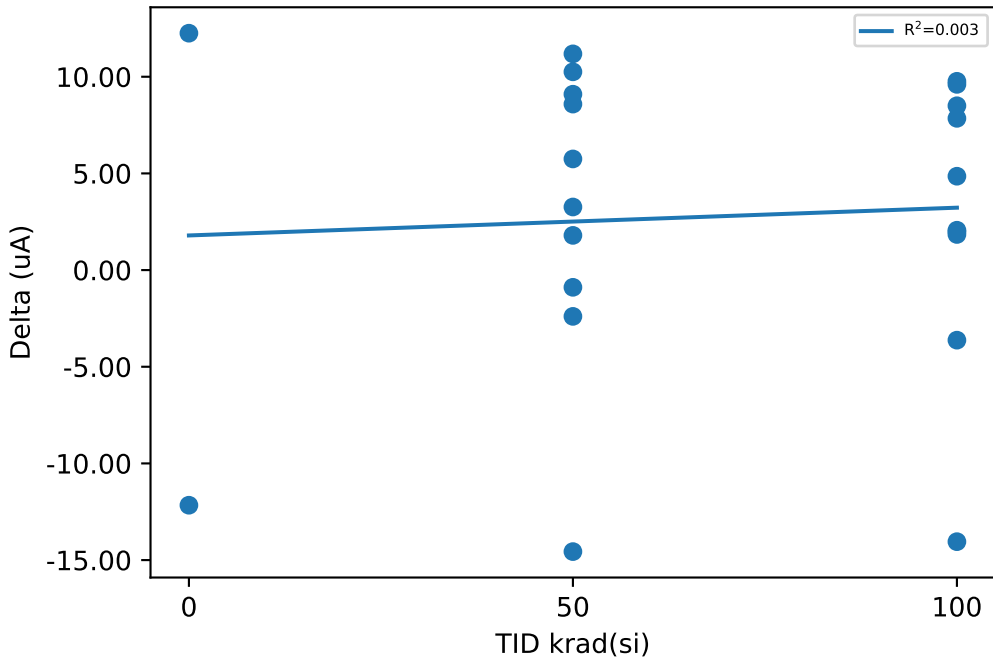
TID vs Result Stats



Test Results (Lower Limit = 20.0, Upper Limit = 90.0 (uA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	57.481	68.665	11.184
36	50	LDR-Biased	65.107	66.901	1.7946
37	50	LDR-Biased	59.813	70.067	10.254
39	50	LDR-Biased	75.988	61.427	-14.561
40	50	LDR-Biased	58.949	64.698	5.7485
41	50	LDR-Unbiased	59.367	67.953	8.5855
42	50	LDR-Unbiased	65.491	63.096	-2.3946
43	50	LDR-Unbiased	60.758	64.022	3.2632
44	50	LDR-Unbiased	58.812	67.908	9.096
45	50	LDR-Unbiased	65.531	64.64	-0.8911
55	100	LDR-Biased	57.481	67.087	9.6058
56	100	LDR-Biased	65.107	67.168	2.0612
57	100	LDR-Biased	59.813	69.578	9.7644
59	100	LDR-Biased	75.988	61.941	-14.047
60	100	LDR-Biased	58.949	63.804	4.8546
61	100	LDR-Unbiased	59.367	67.866	8.4992
62	100	LDR-Unbiased	65.491	61.865	-3.6252
63	100	LDR-Unbiased	60.758	62.74	1.9816
64	100	LDR-Unbiased	58.812	66.661	7.8487
65	100	LDR-Unbiased	65.531	67.374	1.8422
100	0	Correlation	74.65	62.487	-12.162
101	0	Correlation	62.501	74.754	12.252

TID vs Post - Pre Exposure Delta

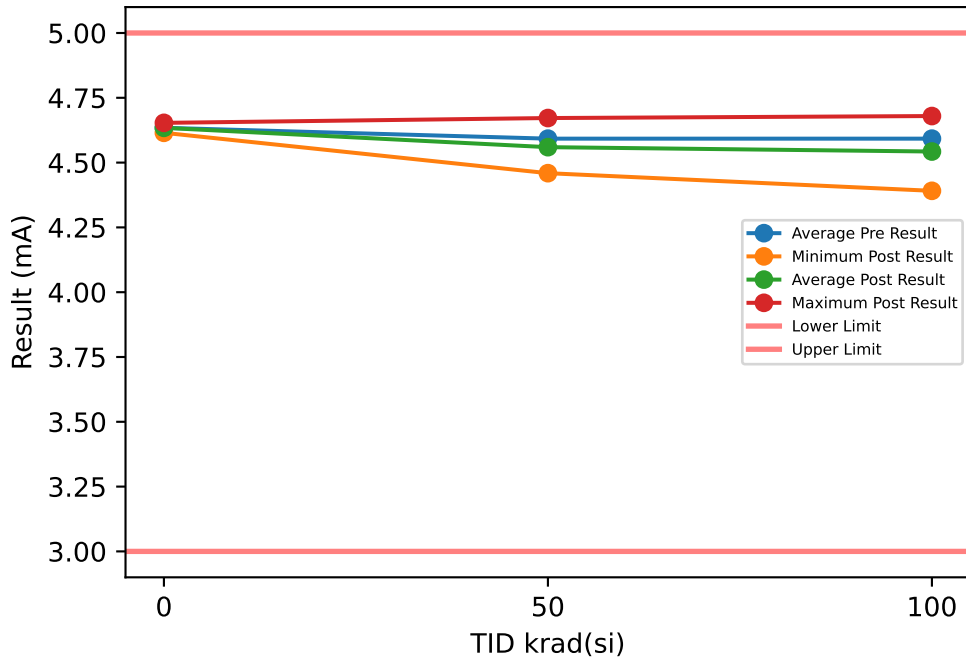


Test Statistics (uA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	62.501	68.576	74.65	8.5902	62.487	68.621	74.754	8.6734	-12.162	0.04505	12.252	17.264
50	57.481	62.73	75.988	5.5556	61.427	65.938	70.067	2.7623	-14.561	3.2079	11.184	7.8118
100	57.481	62.73	75.988	5.5556	61.865	65.608	69.578	2.7617	-14.047	2.8785	9.7644	7.3348

Device Test: 4.4 ISD_Vin_9p0V

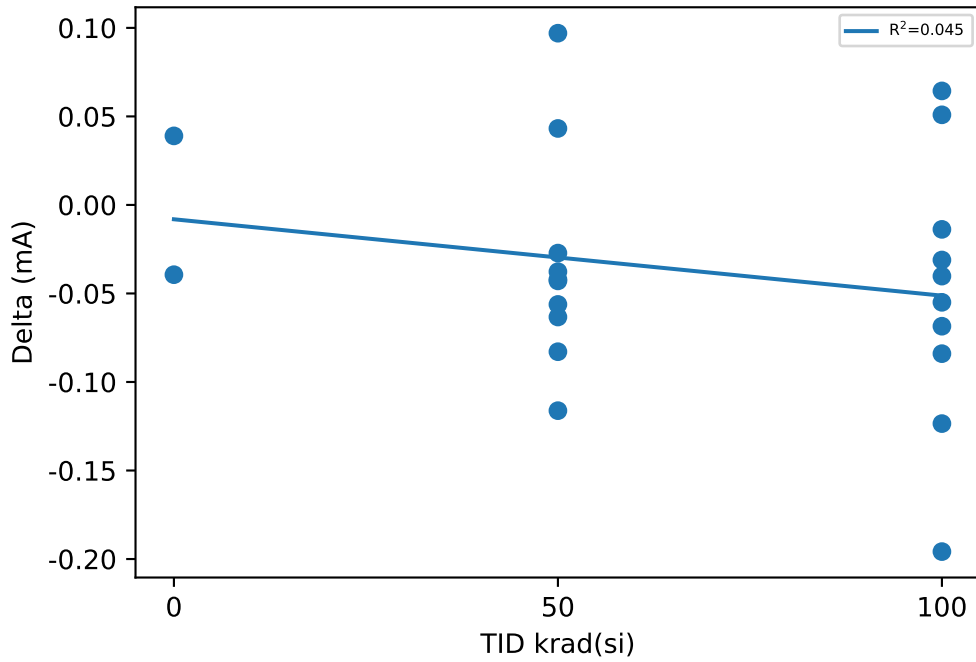
TID vs Result Stats



Test Results (Lower Limit = 3.0, Upper Limit = 5.0 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	4.5378	4.6348	0.097
36	50	LDR-Biased	4.6287	4.6719	0.0432
37	50	LDR-Biased	4.5676	4.5114	-0.0562
39	50	LDR-Biased	4.6016	4.5383	-0.0633
40	50	LDR-Biased	4.5869	4.4707	-0.1162
41	50	LDR-Unbiased	4.6236	4.5964	-0.0272
42	50	LDR-Unbiased	4.6428	4.6051	-0.0377
43	50	LDR-Unbiased	4.6031	4.561	-0.0421
44	50	LDR-Unbiased	4.5421	4.4592	-0.0829
45	50	LDR-Unbiased	4.5896	4.5467	-0.0429
55	100	LDR-Biased	4.5378	4.6022	0.0644
56	100	LDR-Biased	4.6287	4.6796	0.0509
57	100	LDR-Biased	4.5676	4.4991	-0.0685
59	100	LDR-Biased	4.6016	4.5176	-0.084
60	100	LDR-Biased	4.5869	4.3911	-0.1958
61	100	LDR-Unbiased	4.6236	4.6098	-0.0138
62	100	LDR-Unbiased	4.6428	4.6117	-0.0311
63	100	LDR-Unbiased	4.6031	4.5481	-0.055
64	100	LDR-Unbiased	4.5421	4.4186	-0.1235
65	100	LDR-Unbiased	4.5896	4.5494	-0.0402
100	0	Correlation	4.6543	4.6149	-0.0394
101	0	Correlation	4.6143	4.6533	0.039

TID vs Post - Pre Exposure Delta

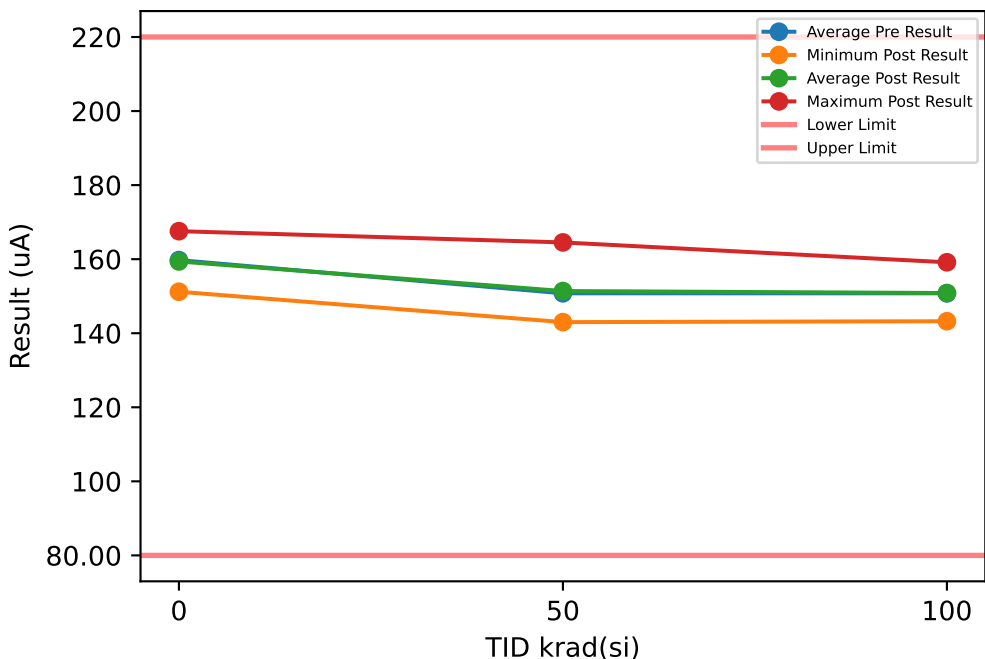


Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	4.6143	4.6343	4.6543	0.028284	4.6149	4.6341	4.6533	0.027153	-0.0394	-0.0002	0.039	0.055437
50	4.5378	4.5924	4.6428	0.035268	4.4592	4.5595	4.6719	0.068815	-0.1162	-0.03283	0.097	0.061293
100	4.5378	4.5924	4.6428	0.035268	4.3911	4.5427	4.6796	0.089774	-0.1958	-0.04966	0.0644	0.076894

Device Test: 4.5 Forward_Leakage_9p0V

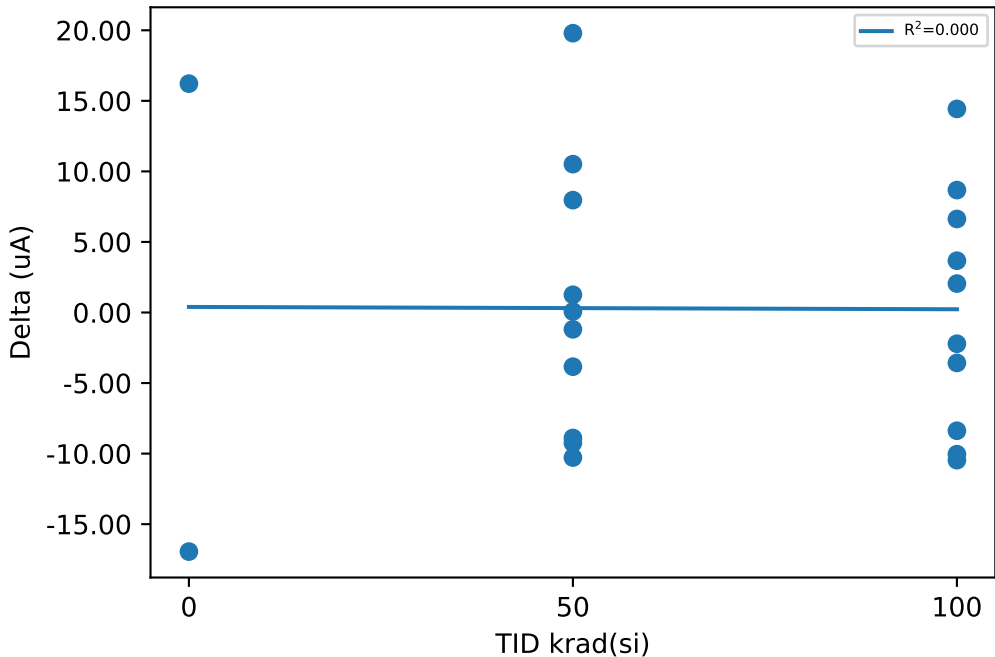
TID vs Result Stats



Test Results (Lower Limit = 80.0, Upper Limit = 220.0 (uA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	144.73	164.52	19.794
36	50	LDR-Biased	160.22	151.33	-8.8925
37	50	LDR-Biased	148.28	156.25	7.9635
39	50	LDR-Biased	157.23	147.98	-9.245
40	50	LDR-Biased	152.98	154.24	1.257
41	50	LDR-Unbiased	148.02	148.09	0.0685
42	50	LDR-Unbiased	152.12	150.93	-1.1925
43	50	LDR-Unbiased	153.28	143	-10.28
44	50	LDR-Unbiased	138.97	149.49	10.514
45	50	LDR-Unbiased	151.94	148.1	-3.8394
55	100	LDR-Biased	144.73	159.16	14.429
56	100	LDR-Biased	160.22	151.84	-8.3794
57	100	LDR-Biased	148.28	154.91	6.6279
59	100	LDR-Biased	157.23	146.76	-10.465
60	100	LDR-Biased	152.98	150.76	-2.2135
61	100	LDR-Unbiased	148.02	151.69	3.6701
62	100	LDR-Unbiased	152.12	154.17	2.0491
63	100	LDR-Unbiased	153.28	143.24	-10.04
64	100	LDR-Unbiased	138.97	147.65	8.6758
65	100	LDR-Unbiased	151.94	148.37	-3.5742
100	0	Correlation	168.15	151.2	-16.945
101	0	Correlation	151.34	167.56	16.219

TID vs Post - Pre Exposure Delta

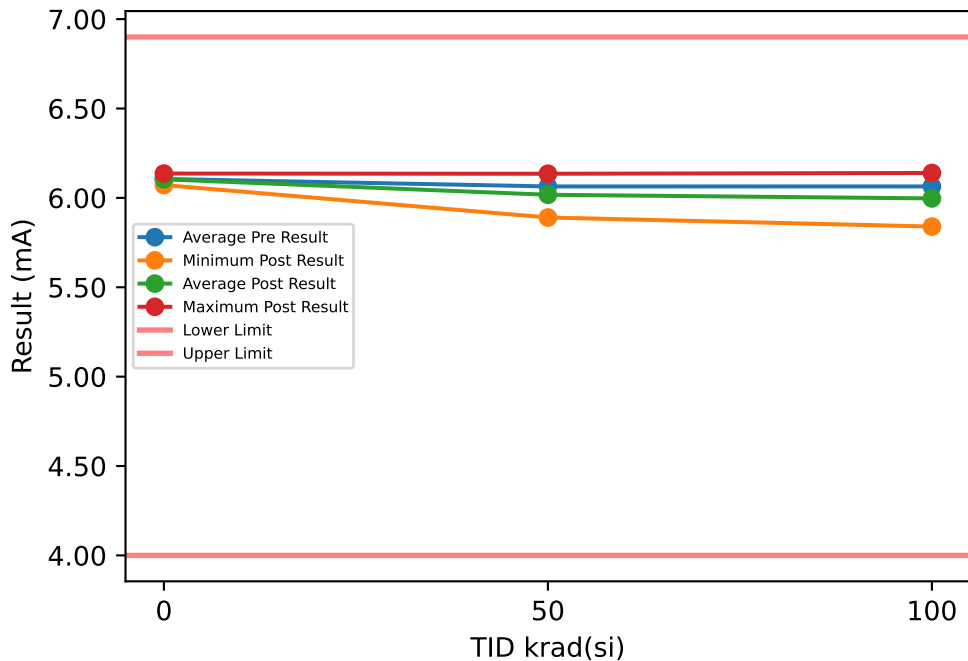


Test Statistics (uA)

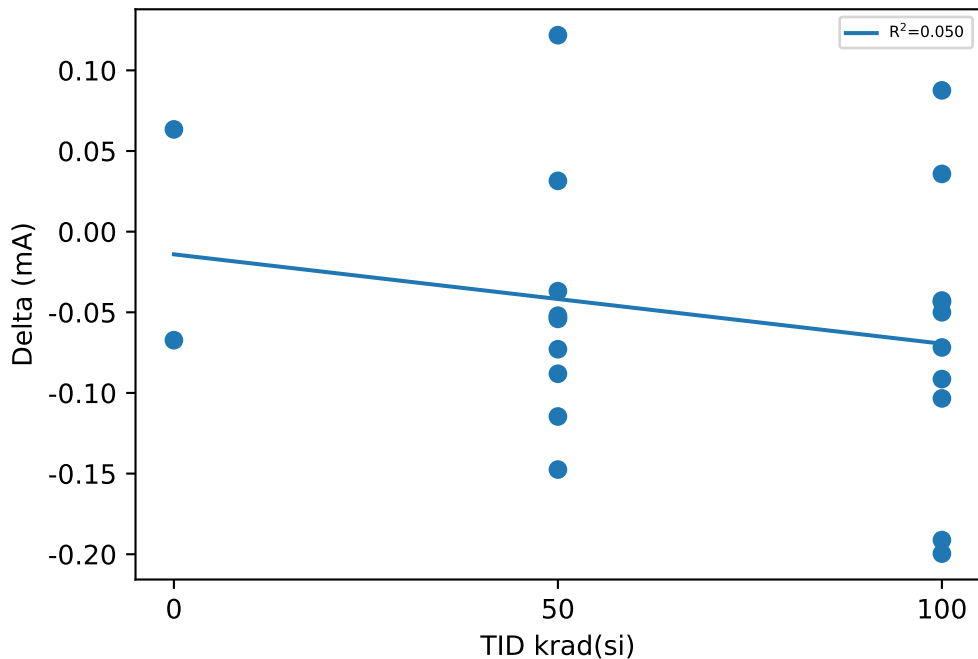
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	151.34	159.75	168.15	11.885	151.2	159.38	167.56	11.566	-16.945	-0.36295	16.219	23.45
50	138.97	150.78	160.22	6.0995	143	151.39	164.52	5.8853	-10.28	0.6148	19.794	9.718
100	138.97	150.78	160.22	6.0995	143.24	150.86	159.16	4.5859	-10.465	0.07793	14.429	8.4539

Device Test: 4.6 ISD_Vin_12p0V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 4.0, Upper Limit = 6.9 (mA))

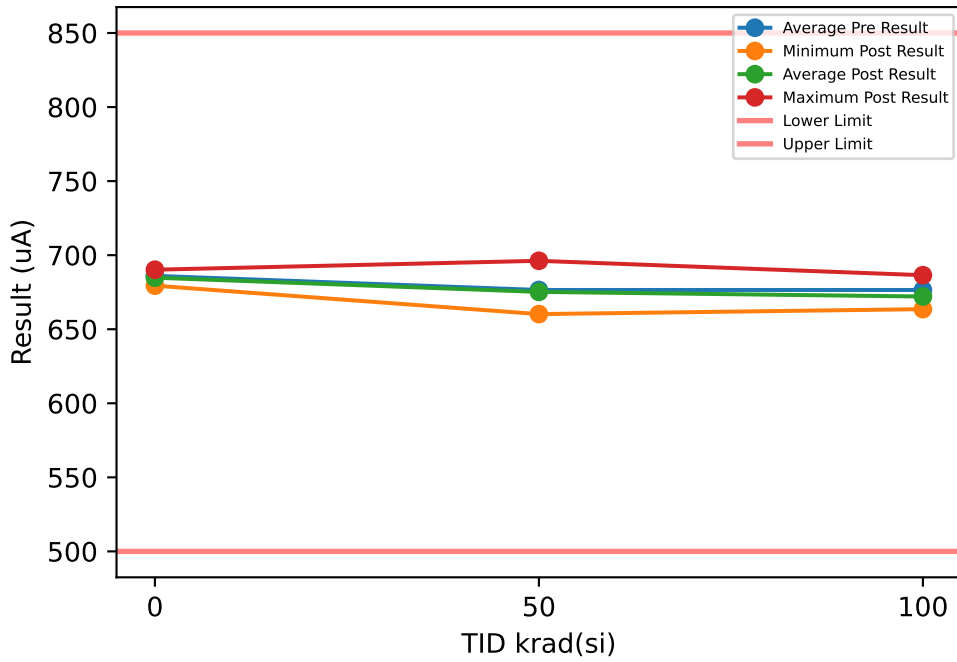
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	5.9897	6.1115	0.1218
36	50	LDR-Biased	6.1035	6.135	0.0315
37	50	LDR-Biased	6.0143	5.9602	-0.0541
39	50	LDR-Biased	6.0987	6.0258	-0.0729
40	50	LDR-Biased	6.0392	5.9246	-0.1146
41	50	LDR-Unbiased	6.1028	6.0496	-0.0532
42	50	LDR-Unbiased	6.1641	6.076	-0.0881
43	50	LDR-Unbiased	6.0381	6.0012	-0.0369
44	50	LDR-Unbiased	6.0378	5.8903	-0.1475
45	50	LDR-Unbiased	6.0522	6.0001	-0.0521
55	100	LDR-Biased	5.9897	6.0773	0.0876
56	100	LDR-Biased	6.1035	6.1393	0.0358
57	100	LDR-Biased	6.0143	5.9425	-0.0718
59	100	LDR-Biased	6.0987	5.9953	-0.1034
60	100	LDR-Biased	6.0392	5.8396	-0.1996
61	100	LDR-Unbiased	6.1028	6.0601	-0.0427
62	100	LDR-Unbiased	6.1641	6.0727	-0.0914
63	100	LDR-Unbiased	6.0381	5.9945	-0.0436
64	100	LDR-Unbiased	6.0378	5.8466	-0.1912
65	100	LDR-Unbiased	6.0522	6.0022	-0.05
100	0	Correlation	6.1392	6.0719	-0.0673
101	0	Correlation	6.0727	6.1361	0.0634

Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	6.0727	6.1059	6.1392	0.047023	6.0719	6.104	6.1361	0.045396	-0.0673	-0.00195	0.0634	0.092419
50	5.9897	6.064	6.1641	0.05206	5.8903	6.0174	6.135	0.078758	-0.1475	-0.04661	0.1218	0.075939
100	5.9897	6.064	6.1641	0.05206	5.8396	5.997	6.1393	0.098212	-0.1996	-0.06703	0.0876	0.088724

Device Test: 4.7 Forward_Leakage_12p0V

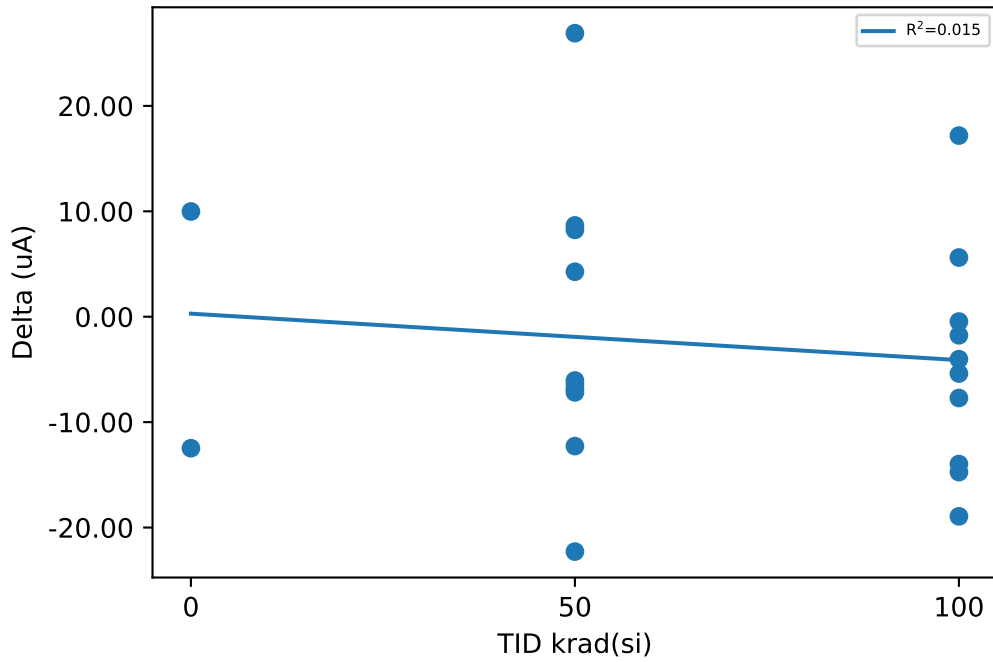
TID vs Result Stats



Test Results (Lower Limit = 500.0, Upper Limit = 850.0 (uA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	669.3	696.19	26.898
36	50	LDR-Biased	684.9	678.51	-6.3921
37	50	LDR-Biased	673.04	677.3	4.2676
39	50	LDR-Biased	671.39	680.05	8.6643
40	50	LDR-Biased	687.45	681.4	-6.0521
41	50	LDR-Unbiased	674.64	667.78	-6.8602
42	50	LDR-Unbiased	687.13	674.85	-12.273
43	50	LDR-Unbiased	682.49	660.21	-22.282
44	50	LDR-Unbiased	660.96	669.2	8.24
45	50	LDR-Unbiased	673.72	666.54	-7.1788
55	100	LDR-Biased	669.3	686.48	17.185
56	100	LDR-Biased	684.9	677.19	-7.7116
57	100	LDR-Biased	673.04	672.58	-0.4587
59	100	LDR-Biased	671.39	669.63	-1.7602
60	100	LDR-Biased	687.45	673.48	-13.976
61	100	LDR-Unbiased	674.64	670.62	-4.0284
62	100	LDR-Unbiased	687.13	672.39	-14.741
63	100	LDR-Unbiased	682.49	663.55	-18.937
64	100	LDR-Unbiased	660.96	666.57	5.6166
65	100	LDR-Unbiased	673.72	668.34	-5.3882
100	0	Correlation	691.88	679.4	-12.474
101	0	Correlation	680.2	690.19	9.9844

TID vs Post - Pre Exposure Delta

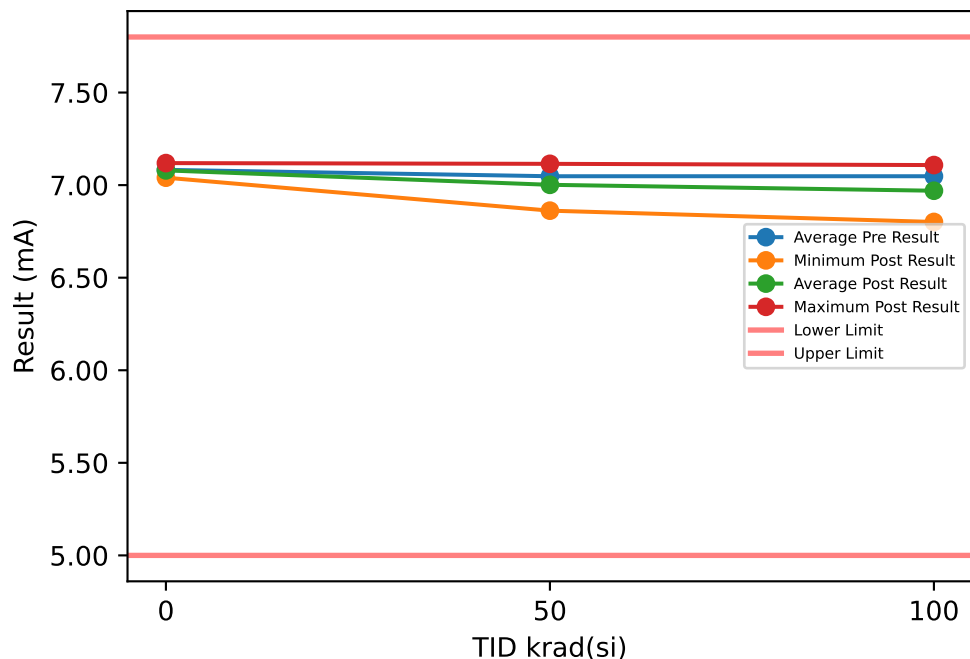


Test Statistics (uA)

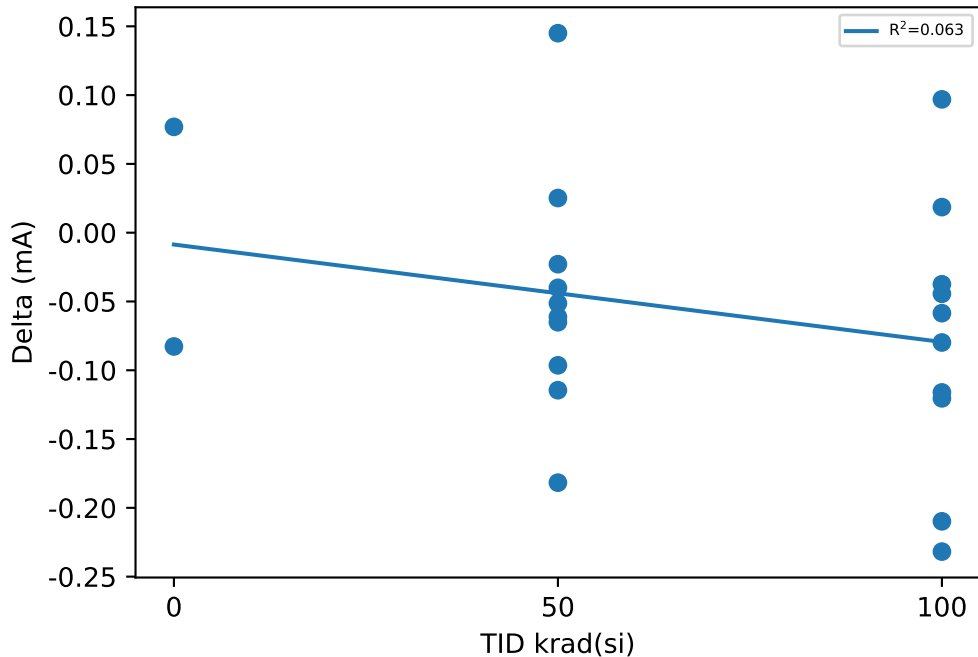
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	680.2	686.04	691.88	8.2538	679.4	684.8	690.19	7.6268	-12.474	-1.2449	9.9844	15.881
50	660.96	676.5	687.45	8.7056	660.21	675.2	696.19	10.049	-22.282	-1.2969	26.898	13.707
100	660.96	676.5	687.45	8.7056	663.55	672.08	686.48	6.3335	-18.937	-4.42	17.185	10.598

Device Test: 4.8 ISD_Vin_14p0V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 5.0, Upper Limit = 7.8 (mA))

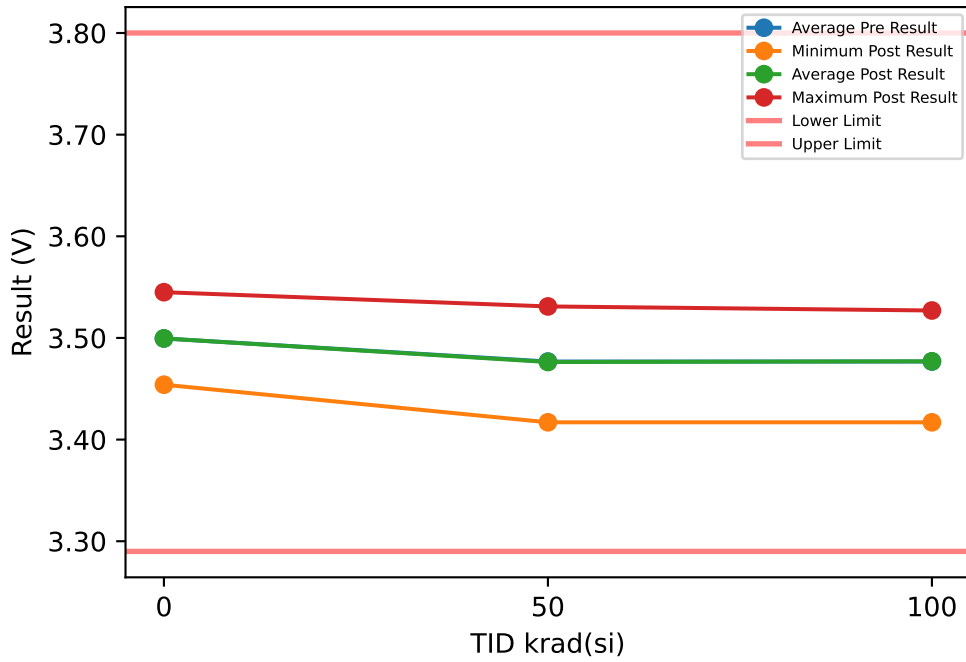
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	6.9655	7.1105	0.145
36	50	LDR-Biased	7.0897	7.1149	0.0252
37	50	LDR-Biased	6.9774	6.9261	-0.0513
39	50	LDR-Biased	7.0998	7.0386	-0.0612
40	50	LDR-Biased	7.0108	6.8963	-0.1145
41	50	LDR-Unbiased	7.0863	7.0462	-0.0401
42	50	LDR-Unbiased	7.1746	7.0782	-0.0964
43	50	LDR-Unbiased	6.9996	6.9767	-0.0229
44	50	LDR-Unbiased	7.0437	6.862	-0.1817
45	50	LDR-Unbiased	7.032	6.9669	-0.0651
55	100	LDR-Biased	6.9655	7.0624	0.0969
56	100	LDR-Biased	7.0897	7.1083	0.0186
57	100	LDR-Biased	6.9774	6.8976	-0.0798
59	100	LDR-Biased	7.0998	6.9837	-0.1161
60	100	LDR-Biased	7.0108	6.801	-0.2098
61	100	LDR-Unbiased	7.0863	7.0419	-0.0444
62	100	LDR-Unbiased	7.1746	7.0542	-0.1204
63	100	LDR-Unbiased	6.9996	6.9621	-0.0375
64	100	LDR-Unbiased	7.0437	6.8119	-0.2318
65	100	LDR-Unbiased	7.032	6.9735	-0.0585
100	0	Correlation	7.1228	7.0401	-0.0827
101	0	Correlation	7.042	7.1189	0.0769

Test Statistics (mA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	7.042	7.0824	7.1228	0.057134	7.0401	7.0795	7.1189	0.05572	-0.0827	-0.0029	0.0769	0.11285
50	6.9655	7.0479	7.1746	0.064729	6.862	7.0016	7.1149	0.089457	-0.1817	-0.0463	0.145	0.087171
100	6.9655	7.0479	7.1746	0.064729	6.801	6.9697	7.1083	0.10487	-0.2318	-0.07828	0.0969	0.098516

Device Test: 5.0 VIN_UVLO_RISING

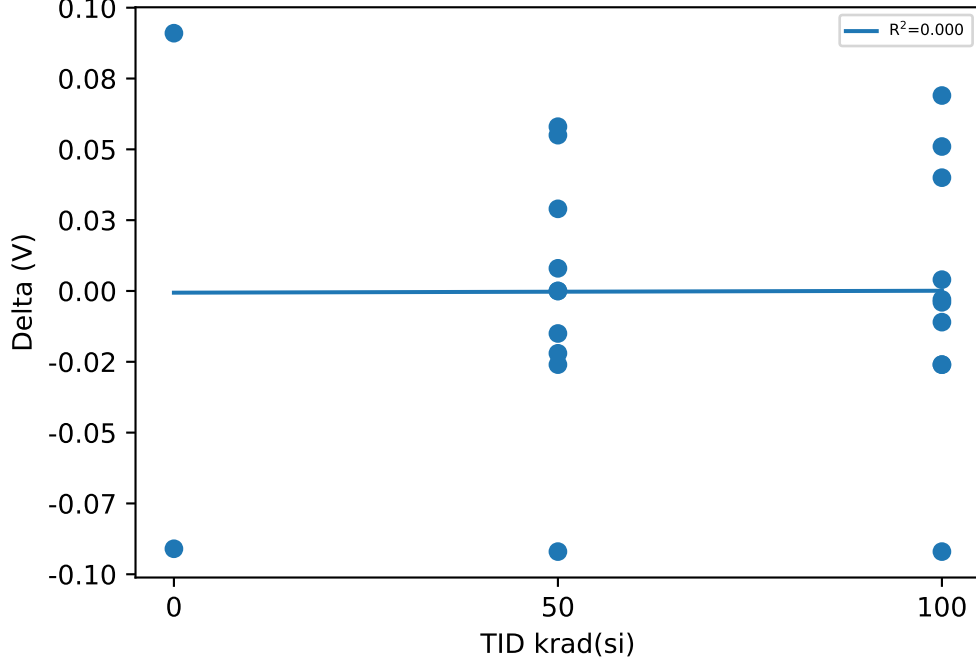
TID vs Result Stats



Test Results (Lower Limit = 3.29, Upper Limit = 3.8 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	3.454	3.512	0.058
36	50	LDR-Biased	3.553	3.531	-0.022
37	50	LDR-Biased	3.472	3.501	0.029
39	50	LDR-Biased	3.479	3.487	0.008
40	50	LDR-Biased	3.487	3.487	0
41	50	LDR-Unbiased	3.472	3.446	-0.026
42	50	LDR-Unbiased	3.442	3.442	0
43	50	LDR-Unbiased	3.439	3.494	0.055
44	50	LDR-Unbiased	3.509	3.417	-0.092
45	50	LDR-Unbiased	3.461	3.446	-0.015
55	100	LDR-Biased	3.454	3.523	0.069
56	100	LDR-Biased	3.553	3.527	-0.026
57	100	LDR-Biased	3.472	3.512	0.04
59	100	LDR-Biased	3.479	3.483	0.004
60	100	LDR-Biased	3.487	3.483	-0.004
61	100	LDR-Unbiased	3.472	3.446	-0.026
62	100	LDR-Unbiased	3.442	3.439	-0.003
63	100	LDR-Unbiased	3.439	3.49	0.051
64	100	LDR-Unbiased	3.509	3.417	-0.092
65	100	LDR-Unbiased	3.461	3.45	-0.011
100	0	Correlation	3.454	3.545	0.091
101	0	Correlation	3.545	3.454	-0.091

TID vs Post - Pre Exposure Delta

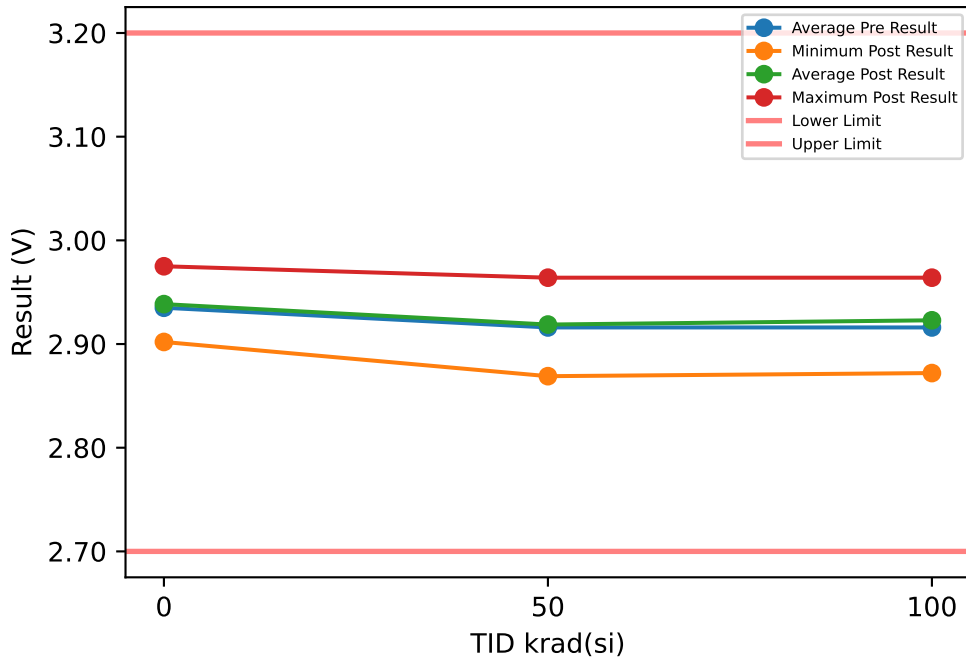


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	3.454	3.4995	3.545	0.064347	3.454	3.4995	3.545	0.064347	-0.091	0	0.091	0.12869
50	3.439	3.4768	3.553	0.034006	3.417	3.4763	3.531	0.036436	-0.092	-0.0005	0.058	0.043641
100	3.439	3.4768	3.553	0.034006	3.417	3.477	3.527	0.037736	-0.092	0.0002	0.069	0.045874

Device Test: 5.1 VIN_UVLO_FALLING

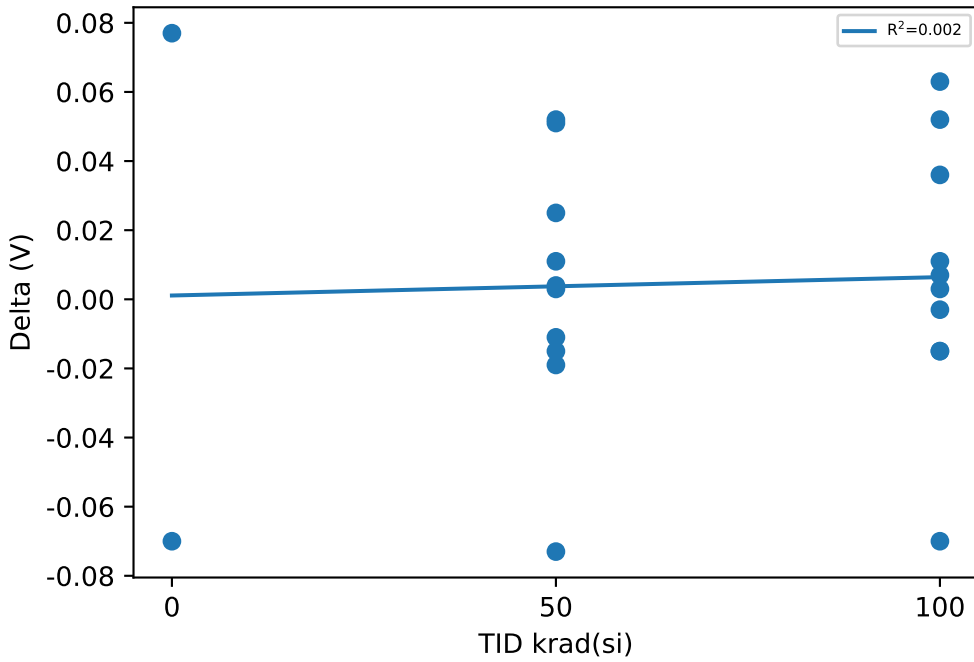
TID vs Result Stats



Test Results (Lower Limit = 2.7, Upper Limit = 3.2 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	2.898	2.949	0.051
36	50	LDR-Biased	2.979	2.964	-0.015
37	50	LDR-Biased	2.913	2.938	0.025
39	50	LDR-Biased	2.916	2.927	0.011
40	50	LDR-Biased	2.924	2.927	0.003
41	50	LDR-Unbiased	2.913	2.894	-0.019
42	50	LDR-Unbiased	2.887	2.891	0.004
43	50	LDR-Unbiased	2.883	2.935	0.052
44	50	LDR-Unbiased	2.942	2.869	-0.073
45	50	LDR-Unbiased	2.905	2.894	-0.011
55	100	LDR-Biased	2.898	2.961	0.063
56	100	LDR-Biased	2.979	2.964	-0.015
57	100	LDR-Biased	2.913	2.949	0.036
59	100	LDR-Biased	2.916	2.927	0.011
60	100	LDR-Biased	2.924	2.927	0.003
61	100	LDR-Unbiased	2.913	2.898	-0.015
62	100	LDR-Unbiased	2.887	2.894	0.007
63	100	LDR-Unbiased	2.883	2.935	0.052
64	100	LDR-Unbiased	2.942	2.872	-0.07
65	100	LDR-Unbiased	2.905	2.902	-0.003
100	0	Correlation	2.898	2.975	0.077
101	0	Correlation	2.972	2.902	-0.07

TID vs Post - Pre Exposure Delta

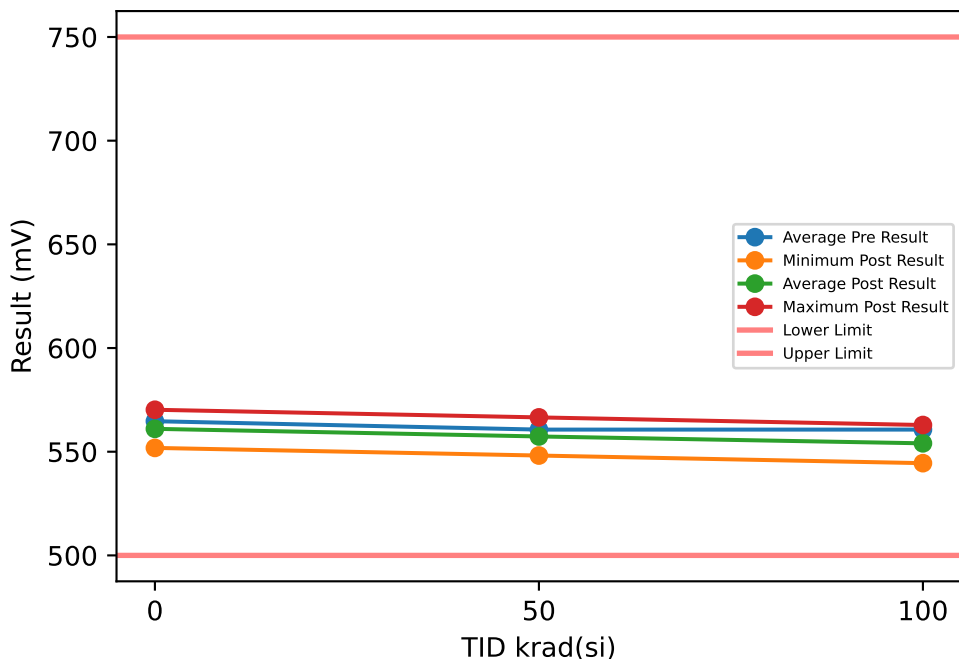


Test Statistics (V)

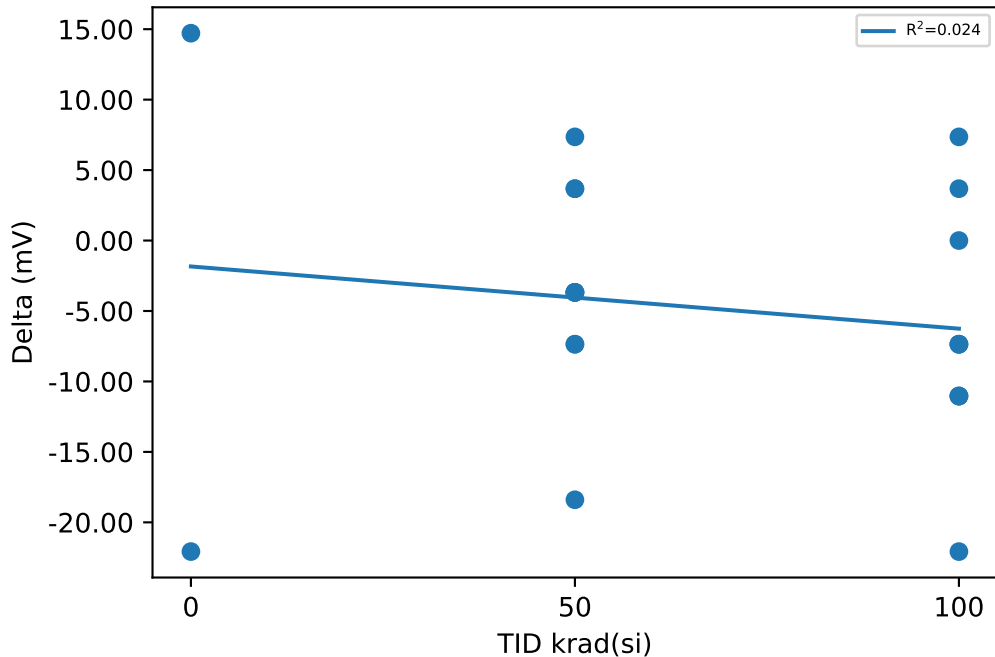
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.898	2.935	2.972	0.052326	2.902	2.9385	2.975	0.051619	-0.07	0.0035	0.077	0.10394
50	2.883	2.916	2.979	0.028091	2.869	2.9188	2.964	0.030191	-0.073	0.0028	0.052	0.036566
100	2.883	2.916	2.979	0.028091	2.872	2.9229	2.964	0.030705	-0.07	0.0069	0.063	0.038051

Device Test: 5.2 VIN_UVLO_HYSTERESIS

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 500.0, Upper Limit = 750.0 (mV))

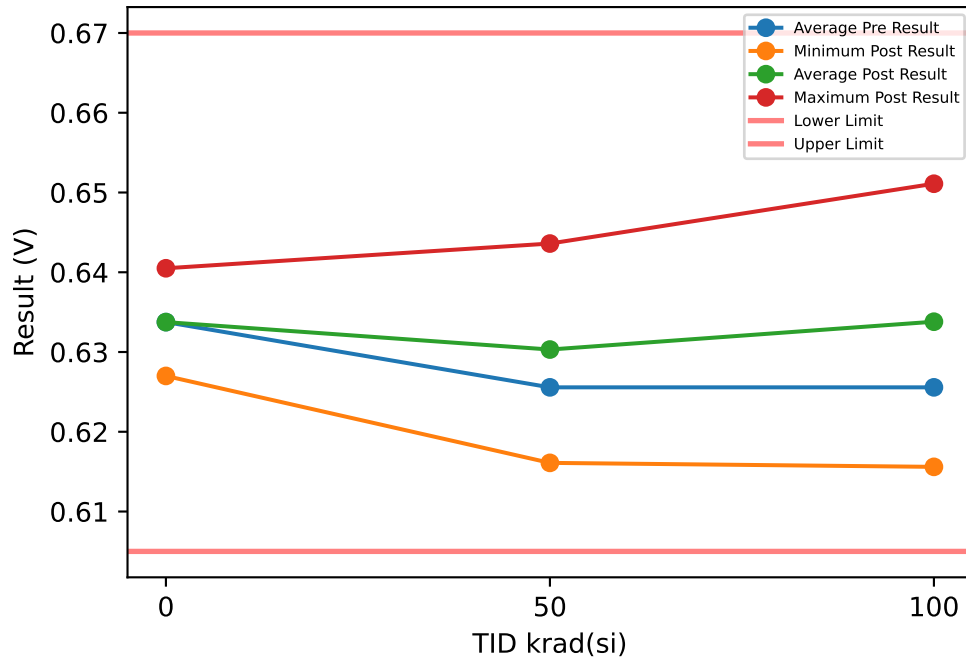
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	555.52	562.88	7.358
36	50	LDR-Biased	573.91	566.55	-7.358
37	50	LDR-Biased	559.2	562.88	3.679
39	50	LDR-Biased	562.88	559.2	-3.679
40	50	LDR-Biased	562.88	559.2	-3.679
41	50	LDR-Unbiased	559.2	551.84	-7.357
42	50	LDR-Unbiased	555.52	551.84	-3.678
43	50	LDR-Unbiased	555.52	559.2	3.679
44	50	LDR-Unbiased	566.56	548.16	-18.396
45	50	LDR-Unbiased	555.52	551.84	-3.679
55	100	LDR-Biased	555.52	562.88	7.357
56	100	LDR-Biased	573.91	562.88	-11.037
57	100	LDR-Biased	559.2	562.88	3.68
59	100	LDR-Biased	562.88	555.52	-7.358
60	100	LDR-Biased	562.88	555.52	-7.358
61	100	LDR-Unbiased	559.2	548.16	-11.036
62	100	LDR-Unbiased	555.52	544.48	-11.036
63	100	LDR-Unbiased	555.52	555.52	0
64	100	LDR-Unbiased	566.56	544.48	-22.075
65	100	LDR-Unbiased	555.52	548.16	-7.358
100	0	Correlation	555.52	570.23	14.715
101	0	Correlation	573.91	551.84	-22.073

Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	555.52	564.72	573.91	13.007	551.84	561.04	570.23	13.007	-22.073	-3.679	14.715	26.013
50	555.52	560.67	573.91	6.0576	548.16	557.36	566.55	6.0698	-18.396	-3.311	7.358	7.2449
100	555.52	560.67	573.91	6.0576	544.48	554.05	562.88	7.3986	-22.075	-6.6221	7.357	8.4608

Device Test: 6.0 EN_UVLO_RISING_4p5V

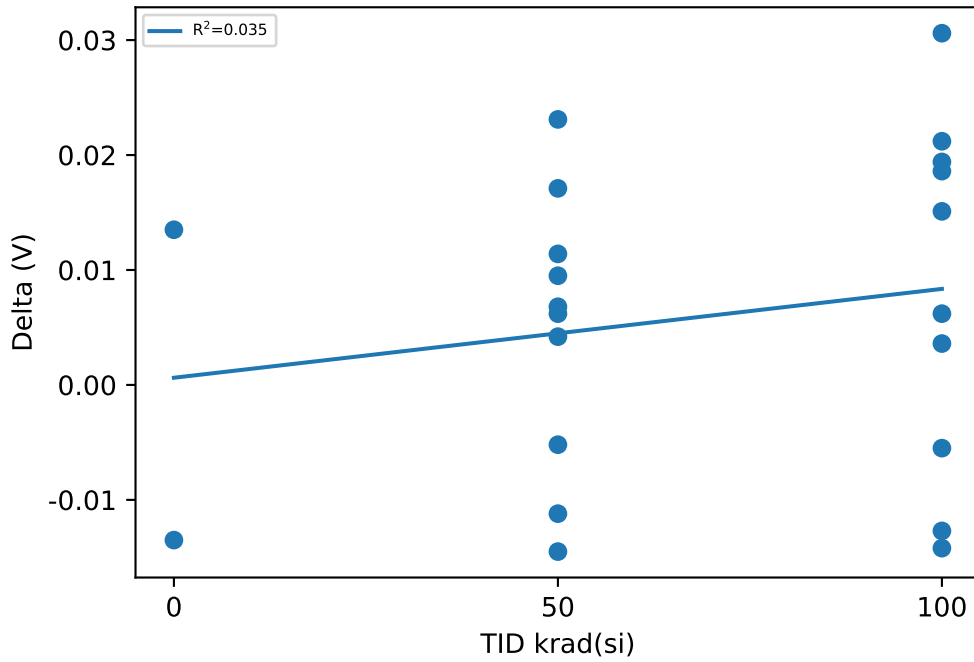
TID vs Result Stats



Test Results (Lower Limit = 0.605, Upper Limit = 0.67 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.6283	0.6397	0.0114
36	50	LDR-Biased	0.6265	0.6436	0.0171
37	50	LDR-Biased	0.6241	0.6309	0.0068
39	50	LDR-Biased	0.6205	0.6436	0.0231
40	50	LDR-Biased	0.6304	0.6399	0.0095
41	50	LDR-Unbiased	0.6283	0.6171	-0.0112
42	50	LDR-Unbiased	0.6247	0.6195	-0.0052
43	50	LDR-Unbiased	0.6187	0.6249	0.0062
44	50	LDR-Unbiased	0.6306	0.6161	-0.0145
45	50	LDR-Unbiased	0.6236	0.6278	0.0042
55	100	LDR-Biased	0.6283	0.6477	0.0194
56	100	LDR-Biased	0.6265	0.6477	0.0212
57	100	LDR-Biased	0.6241	0.6392	0.0151
59	100	LDR-Biased	0.6205	0.6511	0.0306
60	100	LDR-Biased	0.6304	0.649	0.0186
61	100	LDR-Unbiased	0.6283	0.6156	-0.0127
62	100	LDR-Unbiased	0.6247	0.6192	-0.0055
63	100	LDR-Unbiased	0.6187	0.6249	0.0062
64	100	LDR-Unbiased	0.6306	0.6164	-0.0142
65	100	LDR-Unbiased	0.6236	0.6272	0.0036
100	0	Correlation	0.627	0.6405	0.0135
101	0	Correlation	0.6405	0.627	-0.0135

TID vs Post - Pre Exposure Delta

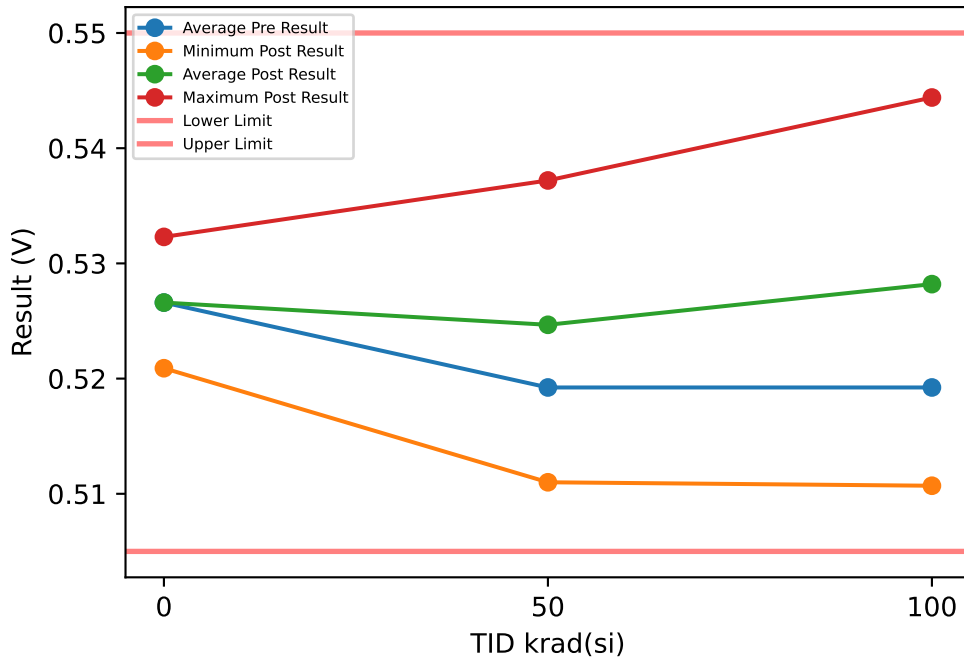


Test Statistics (V)

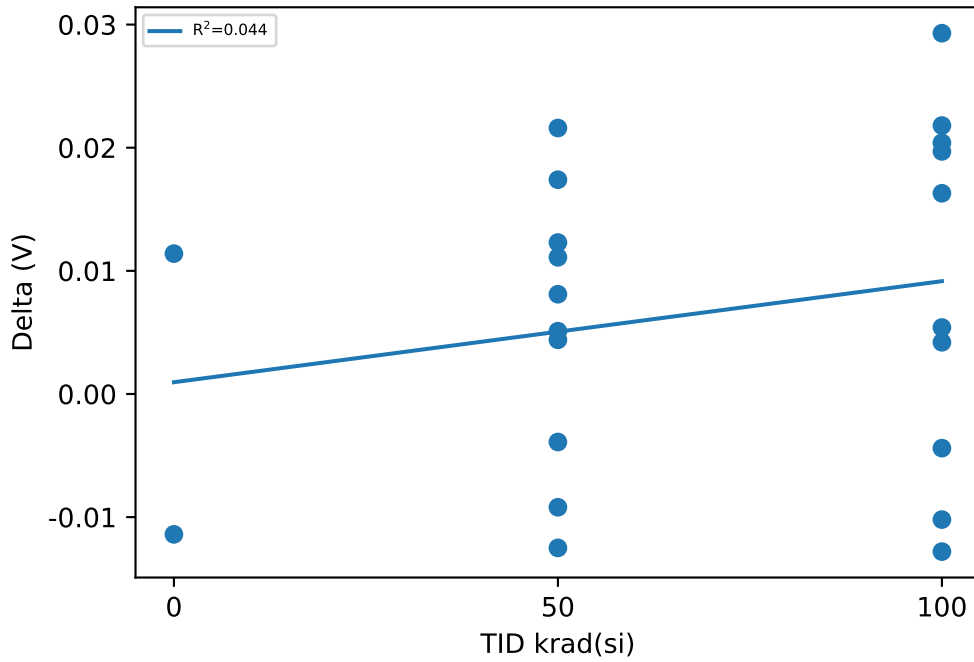
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.627	0.63375	0.6405	0.0095459	0.627	0.63375	0.6405	0.0095459	-0.0135	0	0.0135	0.019092
50	0.6187	0.62557	0.6306	0.0040014	0.6161	0.63031	0.6436	0.010866	-0.0145	0.00474	0.0231	0.011956
100	0.6187	0.62557	0.6306	0.0040014	0.6156	0.6338	0.6511	0.01459	-0.0142	0.00823	0.0306	0.015288

Device Test: 6.1 EN_UVLO_FALLING_4p5V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 0.505, Upper Limit = 0.55 (V))

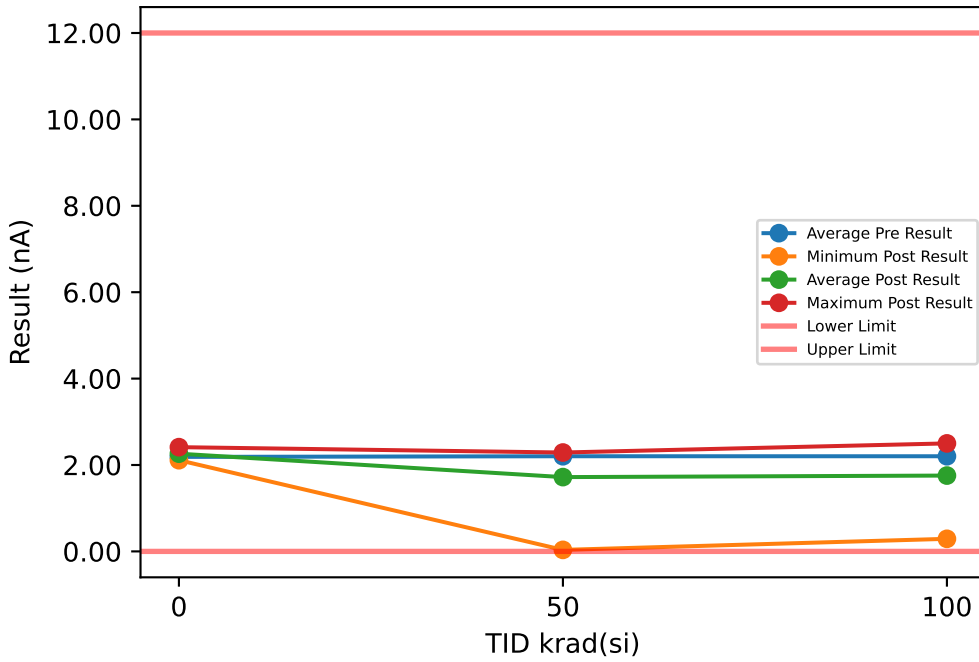
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.5216	0.5339	0.0123
36	50	LDR-Biased	0.5198	0.5372	0.0174
37	50	LDR-Biased	0.5179	0.526	0.0081
39	50	LDR-Biased	0.5151	0.5367	0.0216
40	50	LDR-Biased	0.5235	0.5346	0.0111
41	50	LDR-Unbiased	0.5216	0.5124	-0.0092
42	50	LDR-Unbiased	0.5186	0.5147	-0.0039
43	50	LDR-Unbiased	0.5135	0.5186	0.0051
44	50	LDR-Unbiased	0.5235	0.511	-0.0125
45	50	LDR-Unbiased	0.5172	0.5216	0.0044
55	100	LDR-Biased	0.5216	0.542	0.0204
56	100	LDR-Biased	0.5198	0.5416	0.0218
57	100	LDR-Biased	0.5179	0.5342	0.0163
59	100	LDR-Biased	0.5151	0.5444	0.0293
60	100	LDR-Biased	0.5235	0.5432	0.0197
61	100	LDR-Unbiased	0.5216	0.5114	-0.0102
62	100	LDR-Unbiased	0.5186	0.5142	-0.0044
63	100	LDR-Unbiased	0.5135	0.5189	0.0054
64	100	LDR-Unbiased	0.5235	0.5107	-0.0128
65	100	LDR-Unbiased	0.5172	0.5214	0.0042
100	0	Correlation	0.5209	0.5323	0.0114
101	0	Correlation	0.5323	0.5209	-0.0114

Test Statistics (V)

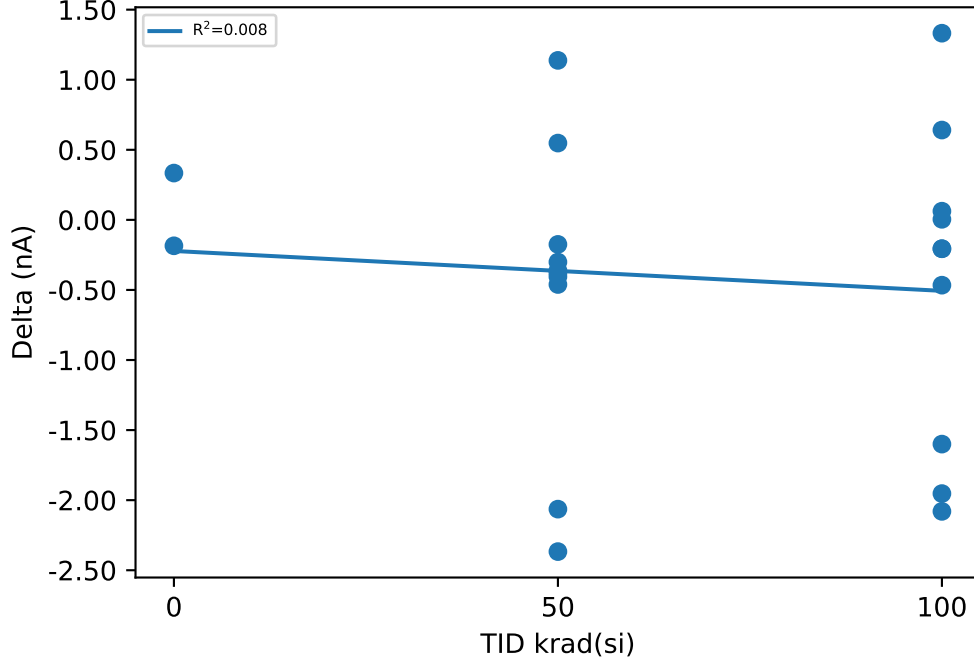
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5209	0.5266	0.5323	0.008061	0.5209	0.5266	0.5323	0.008061	-0.0114	0	0.0114	0.016122
50	0.5135	0.51923	0.5235	0.0034026	0.511	0.52467	0.5372	0.010384	-0.0125	0.00544	0.0216	0.01113
100	0.5135	0.51923	0.5235	0.0034026	0.5107	0.5282	0.5444	0.014184	-0.0128	0.00897	0.0293	0.014656

Device Test: 6.10 EN3p3V_I_Vin14V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

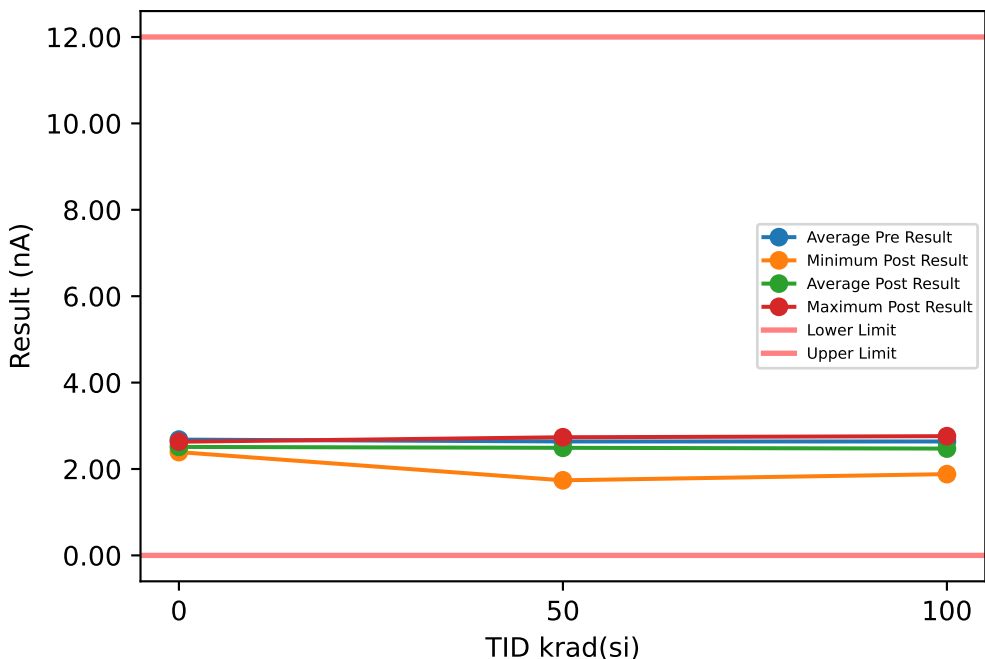
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	2.498	2.119	-0.379
36	50	LDR-Biased	0.999	2.137	1.138
37	50	LDR-Biased	2.479	2.018	-0.461
39	50	LDR-Biased	1.741	2.289	0.548
40	50	LDR-Biased	2.571	2.27	-0.301
41	50	LDR-Unbiased	2.438	2.263	-0.175
42	50	LDR-Unbiased	2.452	2.091	-0.361
43	50	LDR-Unbiased	2.402	0.035	-2.367
44	50	LDR-Unbiased	2.075	1.67	-0.405
45	50	LDR-Unbiased	2.371	0.307	-2.064
55	100	LDR-Biased	2.498	0.898	-1.6
56	100	LDR-Biased	0.999	2.331	1.332
57	100	LDR-Biased	2.479	2.273	-0.206
59	100	LDR-Biased	1.741	2.382	0.641
60	100	LDR-Biased	2.571	2.365	-0.206
61	100	LDR-Unbiased	2.438	2.5	0.062
62	100	LDR-Unbiased	2.452	2.456	0.004
63	100	LDR-Unbiased	2.402	0.449	-1.953
64	100	LDR-Unbiased	2.075	1.609	-0.466
65	100	LDR-Unbiased	2.371	0.291	-2.08
100	0	Correlation	2.296	2.111	-0.185
101	0	Correlation	2.079	2.413	0.334

Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.079	2.1875	2.296	0.15344	2.111	2.262	2.413	0.21355	-0.185	0.0745	0.334	0.36699
50	0.999	2.2026	2.571	0.49025	0.035	1.7199	2.289	0.83792	-2.367	-0.4827	1.138	1.0488
100	0.999	2.2026	2.571	0.49025	0.291	1.7554	2.5	0.88295	-2.08	-0.4472	1.332	1.1151

Device Test: 6.11 EN1p8V_I_Vin14V

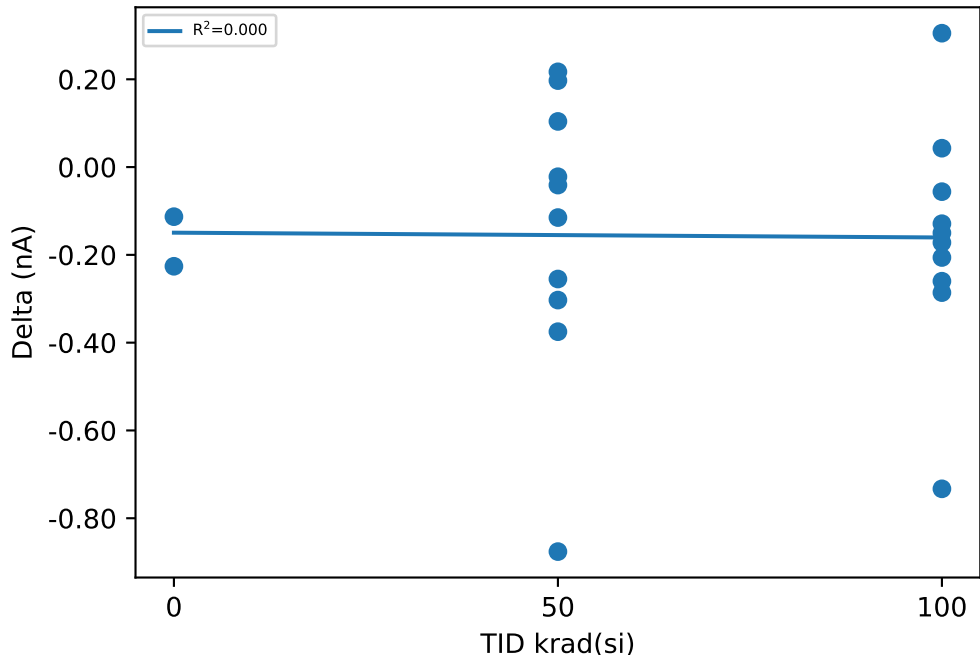
TID vs Result Stats



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	2.614	1.738	-0.876
36	50	LDR-Biased	2.455	2.559	0.104
37	50	LDR-Biased	2.678	2.563	-0.115
39	50	LDR-Biased	2.668	2.646	-0.022
40	50	LDR-Biased	2.693	2.39	-0.303
41	50	LDR-Unbiased	2.691	2.65	-0.041
42	50	LDR-Unbiased	2.861	2.486	-0.375
43	50	LDR-Unbiased	2.758	2.503	-0.255
44	50	LDR-Unbiased	2.538	2.735	0.197
45	50	LDR-Unbiased	2.416	2.633	0.217
55	100	LDR-Biased	2.614	1.881	-0.733
56	100	LDR-Biased	2.455	2.76	0.305
57	100	LDR-Biased	2.678	2.528	-0.15
59	100	LDR-Biased	2.668	2.711	0.043
60	100	LDR-Biased	2.693	2.487	-0.206
61	100	LDR-Unbiased	2.691	2.562	-0.129
62	100	LDR-Unbiased	2.861	2.575	-0.286
63	100	LDR-Unbiased	2.758	2.586	-0.172
64	100	LDR-Unbiased	2.538	2.278	-0.26
65	100	LDR-Unbiased	2.416	2.36	-0.056
100	0	Correlation	2.617	2.391	-0.226
101	0	Correlation	2.744	2.631	-0.113

TID vs Post - Pre Exposure Delta

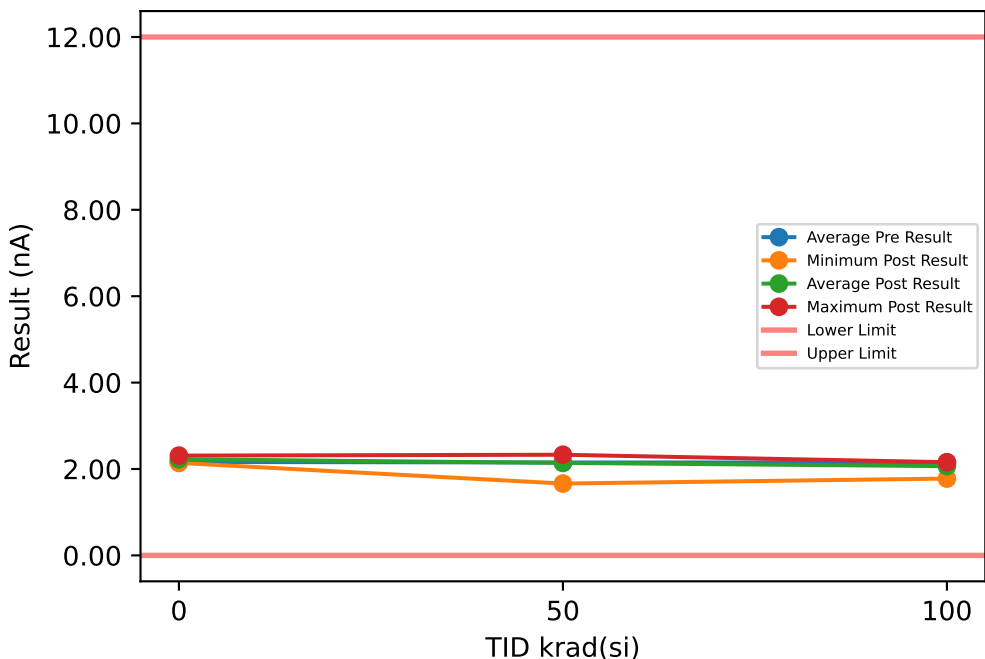


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.617	2.6805	2.744	0.089803	2.391	2.511	2.631	0.16971	-0.226	-0.1695	-0.113	0.079903
50	2.416	2.6372	2.861	0.13573	1.738	2.4903	2.735	0.28209	-0.876	-0.1469	0.217	0.32679
100	2.416	2.6372	2.861	0.13573	1.881	2.4728	2.76	0.25267	-0.733	-0.1644	0.305	0.26365

Device Test: 6.12 EN1p5V_I_Vin14V

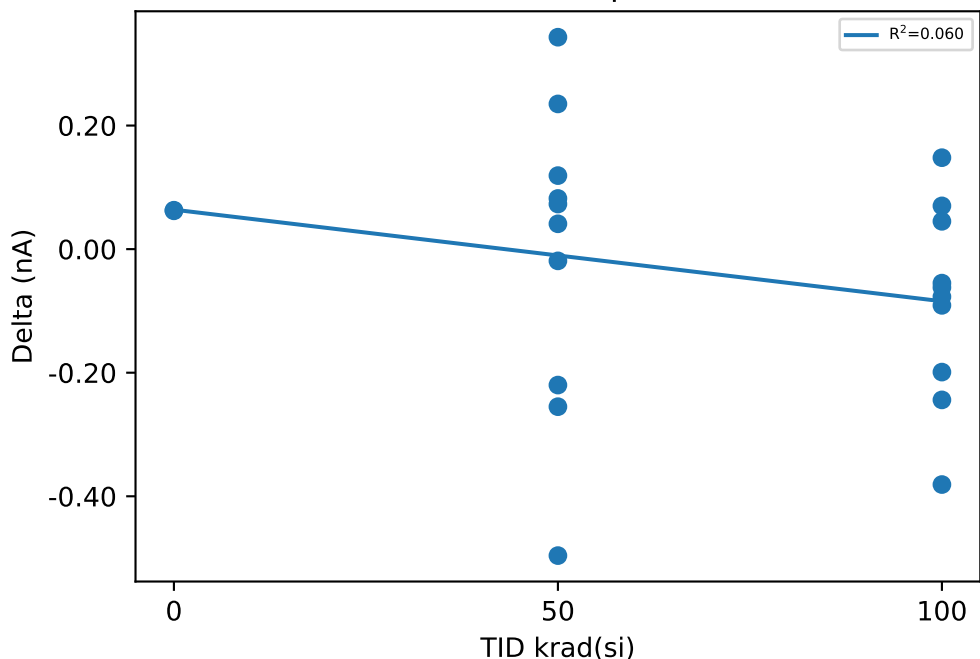
TID vs Result Stats



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	2.159	1.663	-0.496
36	50	LDR-Biased	2.004	2.239	0.235
37	50	LDR-Biased	2.327	2.107	-0.22
39	50	LDR-Biased	2.197	2.279	0.082
40	50	LDR-Biased	2.146	2.127	-0.019
41	50	LDR-Unbiased	2.146	2.219	0.073
42	50	LDR-Unbiased	2.337	2.082	-0.255
43	50	LDR-Unbiased	2.087	2.128	0.041
44	50	LDR-Unbiased	2.116	2.235	0.119
45	50	LDR-Unbiased	1.987	2.33	0.343
55	100	LDR-Biased	2.159	1.778	-0.381
56	100	LDR-Biased	2.004	2.152	0.148
57	100	LDR-Biased	2.327	2.128	-0.199
59	100	LDR-Biased	2.197	2.142	-0.055
60	100	LDR-Biased	2.146	2.084	-0.062
61	100	LDR-Unbiased	2.146	2.055	-0.091
62	100	LDR-Unbiased	2.337	2.093	-0.244
63	100	LDR-Unbiased	2.087	2.157	0.07
64	100	LDR-Unbiased	2.116	2.039	-0.077
65	100	LDR-Unbiased	1.987	2.032	0.045
100	0	Correlation	2.079	2.141	0.062
101	0	Correlation	2.247	2.31	0.063

TID vs Post - Pre Exposure Delta

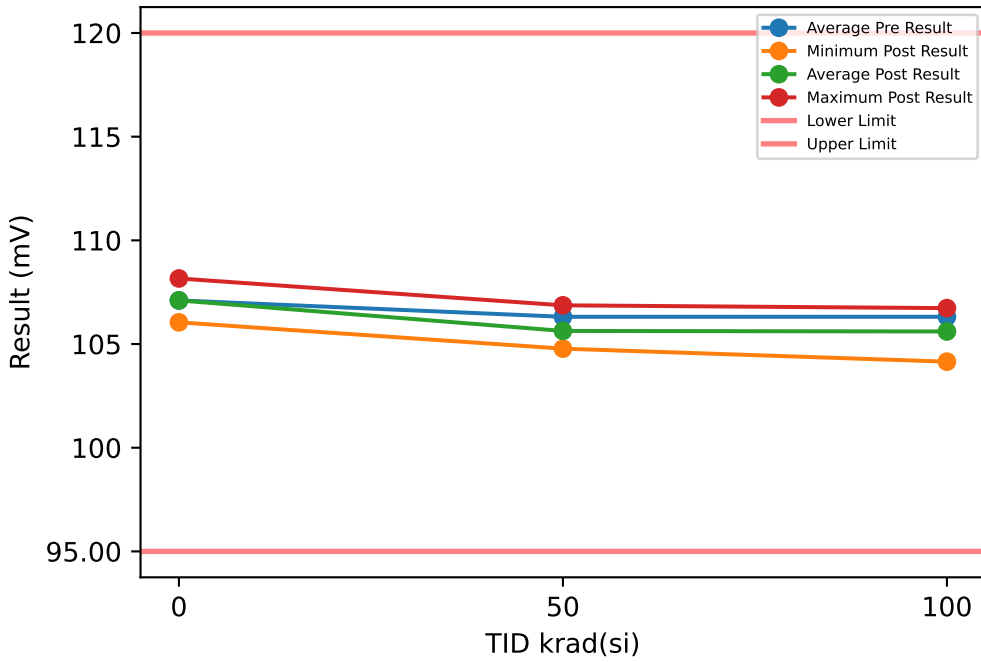


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.079	2.163	2.247	0.11879	2.141	2.2255	2.31	0.1195	0.062	0.0625	0.063	0.00070711
50	1.987	2.1506	2.337	0.11625	1.663	2.1409	2.33	0.18642	-0.496	-0.0097	0.343	0.24936
100	1.987	2.1506	2.337	0.11625	1.778	2.066	2.157	0.11121	-0.381	-0.0846	0.148	0.15728

Device Test: 6.2 EN_UVLO_HYSTERESIS_4p5V

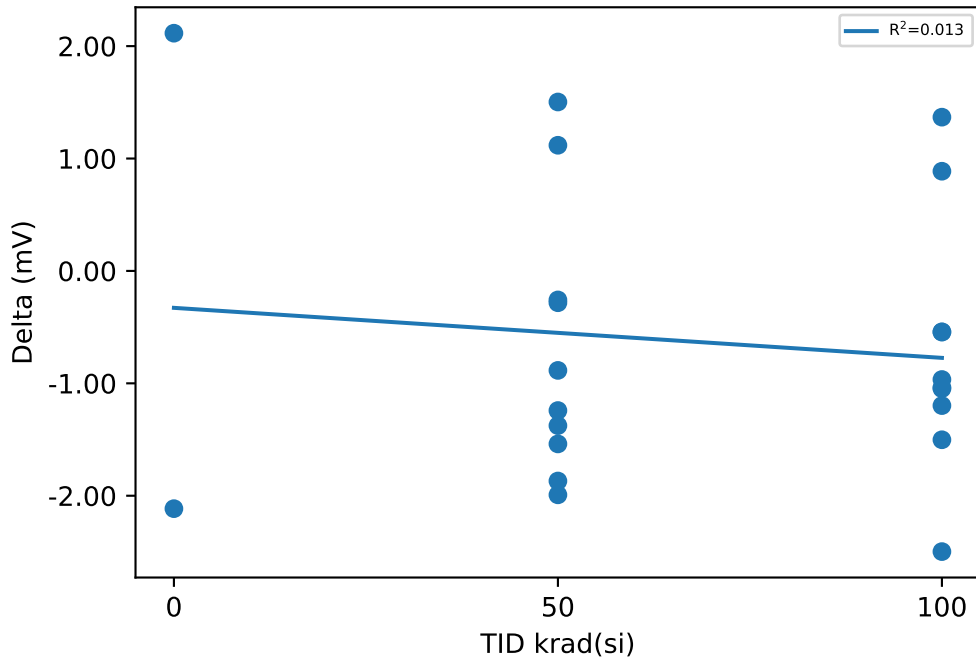
TID vs Result Stats



Test Results (Lower Limit = 95.0, Upper Limit = 120.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	106.65	105.76	-0.885
36	50	LDR-Biased	106.69	106.4	-0.283
37	50	LDR-Biased	106.21	104.83	-1.376
39	50	LDR-Biased	105.36	106.87	1.503
40	50	LDR-Biased	106.86	105.33	-1.539
41	50	LDR-Unbiased	106.65	104.78	-1.869
42	50	LDR-Unbiased	106.03	104.79	-1.242
43	50	LDR-Unbiased	105.17	106.29	1.118
44	50	LDR-Unbiased	107.12	105.13	-1.992
45	50	LDR-Unbiased	106.39	106.13	-0.258
55	100	LDR-Biased	106.65	105.68	-0.966
56	100	LDR-Biased	106.69	106.14	-0.542
57	100	LDR-Biased	106.21	105.01	-1.198
59	100	LDR-Biased	105.36	106.73	1.368
60	100	LDR-Biased	106.86	105.82	-1.047
61	100	LDR-Unbiased	106.65	104.15	-2.497
62	100	LDR-Unbiased	106.03	105	-1.037
63	100	LDR-Unbiased	105.17	106.06	0.887
64	100	LDR-Unbiased	107.12	105.62	-1.502
65	100	LDR-Unbiased	106.39	105.84	-0.544
100	0	Correlation	106.05	108.16	2.115
101	0	Correlation	108.16	106.05	-2.115

TID vs Post - Pre Exposure Delta

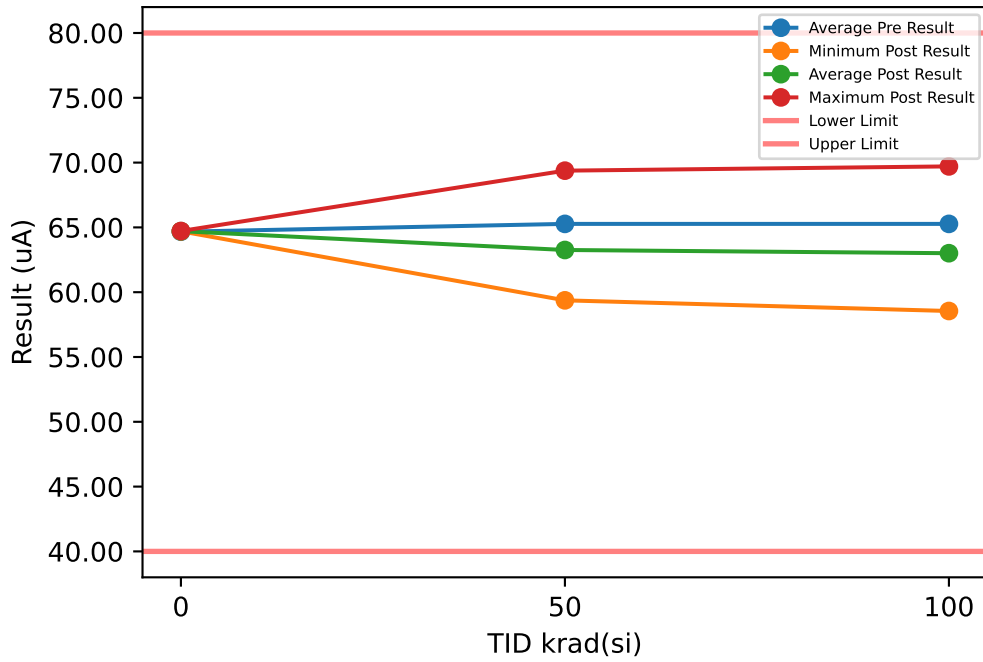


Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	106.05	107.1	108.16	1.4955	106.05	107.1	108.16	1.4955	-2.115	0	2.115	2.9911
50	105.17	106.31	107.12	0.63402	104.78	105.63	106.87	0.76287	-1.992	-0.6823	1.503	1.2041
100	105.17	106.31	107.12	0.63402	104.15	105.61	106.73	0.72398	-2.497	-0.7078	1.368	1.119

Device Test: 6.3 SS_Icharge_4p5V

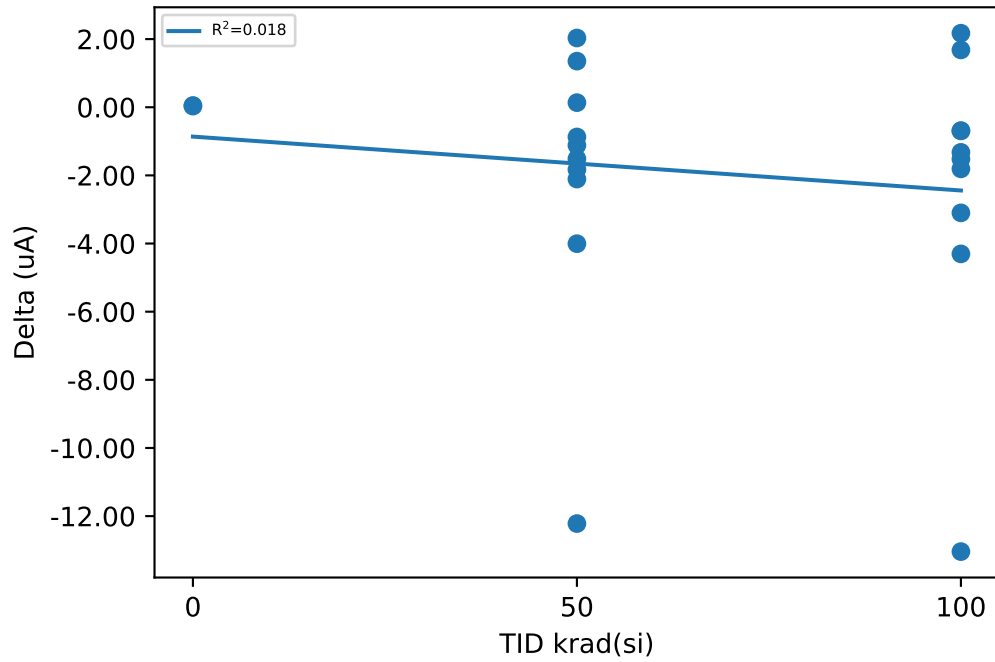
TID vs Result Stats



Test Results (Lower Limit = 40.0, Upper Limit = 80.0 (uA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	65.303	63.475	-1.828
36	50	LDR-Biased	67.289	65.181	-2.108
37	50	LDR-Biased	61.561	63.593	2.032
39	50	LDR-Biased	62.43	61.558	-0.872
40	50	LDR-Biased	64.986	60.982	-4.004
41	50	LDR-Unbiased	64.378	64.513	0.135
42	50	LDR-Unbiased	63.557	62.044	-1.513
43	50	LDR-Unbiased	68.025	69.378	1.353
44	50	LDR-Unbiased	63.588	62.472	-1.116
45	50	LDR-Unbiased	71.59	59.372	-12.218
55	100	LDR-Biased	65.303	63.495	-1.808
56	100	LDR-Biased	67.289	64.189	-3.1
57	100	LDR-Biased	61.561	63.734	2.173
59	100	LDR-Biased	62.43	61.736	-0.694
60	100	LDR-Biased	64.986	60.682	-4.304
61	100	LDR-Unbiased	64.378	62.857	-1.521
62	100	LDR-Unbiased	63.557	62.233	-1.324
63	100	LDR-Unbiased	68.025	69.707	1.682
64	100	LDR-Unbiased	63.588	62.901	-0.687
65	100	LDR-Unbiased	71.59	58.549	-13.041
100	0	Correlation	64.664	64.697	0.033
101	0	Correlation	64.669	64.72	0.051

TID vs Post - Pre Exposure Delta

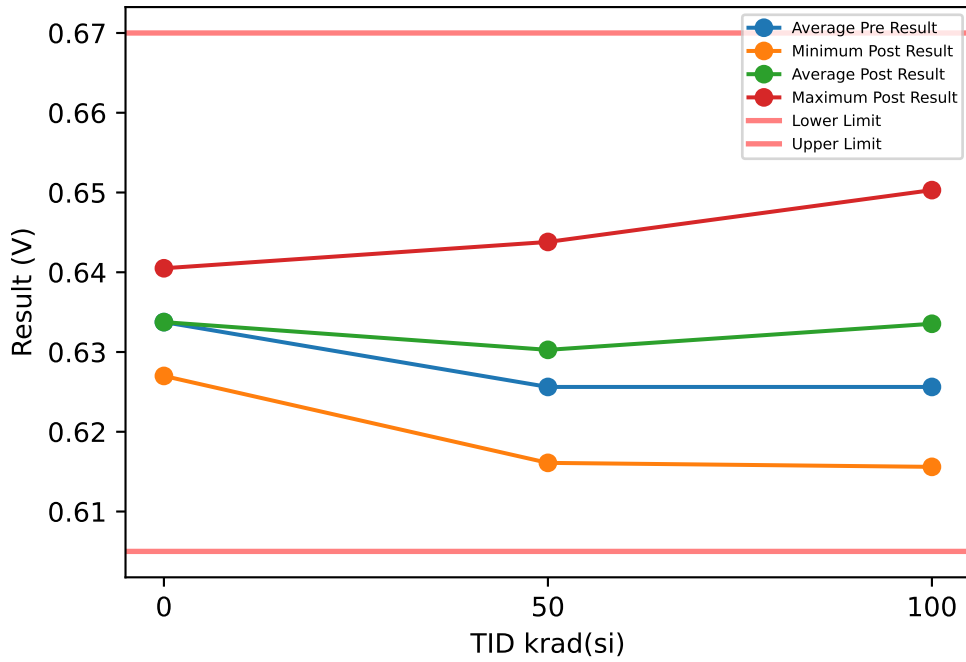


Test Statistics (uA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	64.664	64.666	64.669	0.0035355	64.697	64.709	64.72	0.016263	0.033	0.042	0.051	0.012728
50	61.561	65.271	71.59	2.9828	59.372	63.257	69.378	2.7518	-12.218	-2.0139	2.032	3.9835
100	61.561	65.271	71.59	2.9828	58.549	63.008	69.707	2.8787	-13.041	-2.2624	2.173	4.2539

Device Test: 6.4 EN_UVLO_RISING_14V

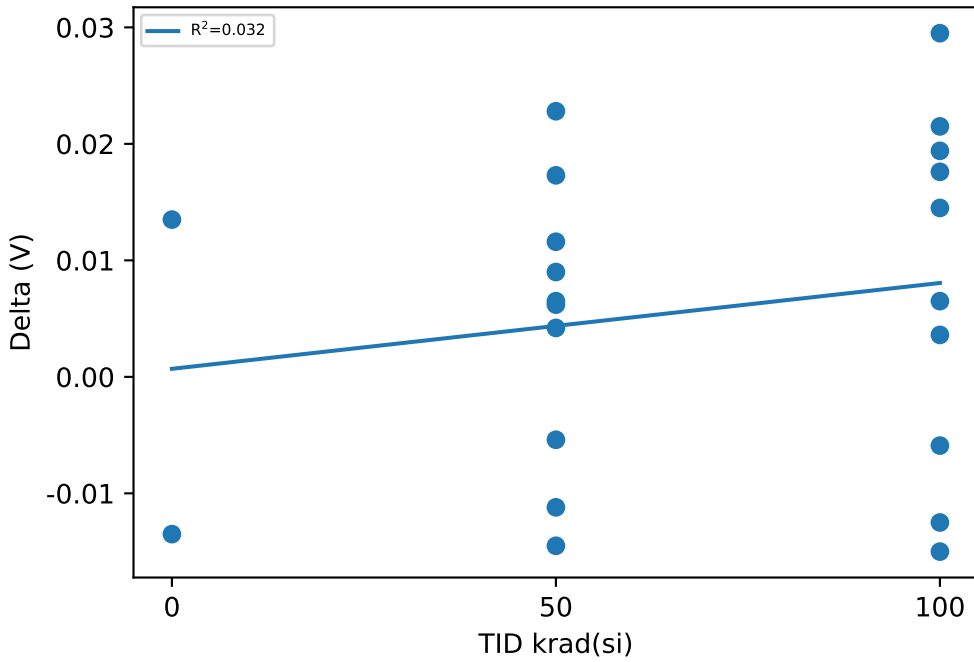
TID vs Result Stats



Test Results (Lower Limit = 0.605, Upper Limit = 0.67 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.6283	0.6399	0.0116
36	50	LDR-Biased	0.6265	0.6438	0.0173
37	50	LDR-Biased	0.6241	0.6306	0.0065
39	50	LDR-Biased	0.6208	0.6436	0.0228
40	50	LDR-Biased	0.6304	0.6394	0.009
41	50	LDR-Unbiased	0.6283	0.6171	-0.0112
42	50	LDR-Unbiased	0.6249	0.6195	-0.0054
43	50	LDR-Unbiased	0.6187	0.6249	0.0062
44	50	LDR-Unbiased	0.6306	0.6161	-0.0145
45	50	LDR-Unbiased	0.6236	0.6278	0.0042
55	100	LDR-Biased	0.6283	0.6477	0.0194
56	100	LDR-Biased	0.6265	0.648	0.0215
57	100	LDR-Biased	0.6241	0.6386	0.0145
59	100	LDR-Biased	0.6208	0.6503	0.0295
60	100	LDR-Biased	0.6304	0.648	0.0176
61	100	LDR-Unbiased	0.6283	0.6158	-0.0125
62	100	LDR-Unbiased	0.6249	0.619	-0.0059
63	100	LDR-Unbiased	0.6187	0.6252	0.0065
64	100	LDR-Unbiased	0.6306	0.6156	-0.015
65	100	LDR-Unbiased	0.6236	0.6272	0.0036
100	0	Correlation	0.627	0.6405	0.0135
101	0	Correlation	0.6405	0.627	-0.0135

TID vs Post - Pre Exposure Delta

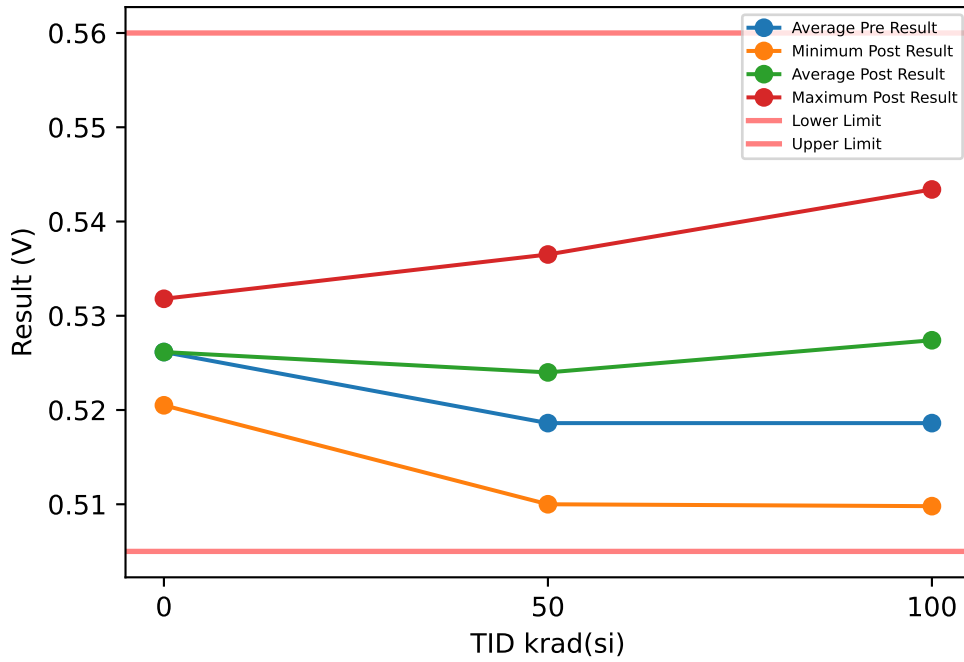


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.627	0.63375	0.6405	0.0095459	0.627	0.63375	0.6405	0.0095459	-0.0135	0	0.0135	0.019092
50	0.6187	0.62562	0.6306	0.0039555	0.6161	0.63027	0.6438	0.010863	-0.0145	0.00465	0.0228	0.011933
100	0.6187	0.62562	0.6306	0.0039555	0.6156	0.63354	0.6503	0.014464	-0.015	0.00792	0.0295	0.015176

Device Test: 6.5 EN_UVLO_FALLING_14V

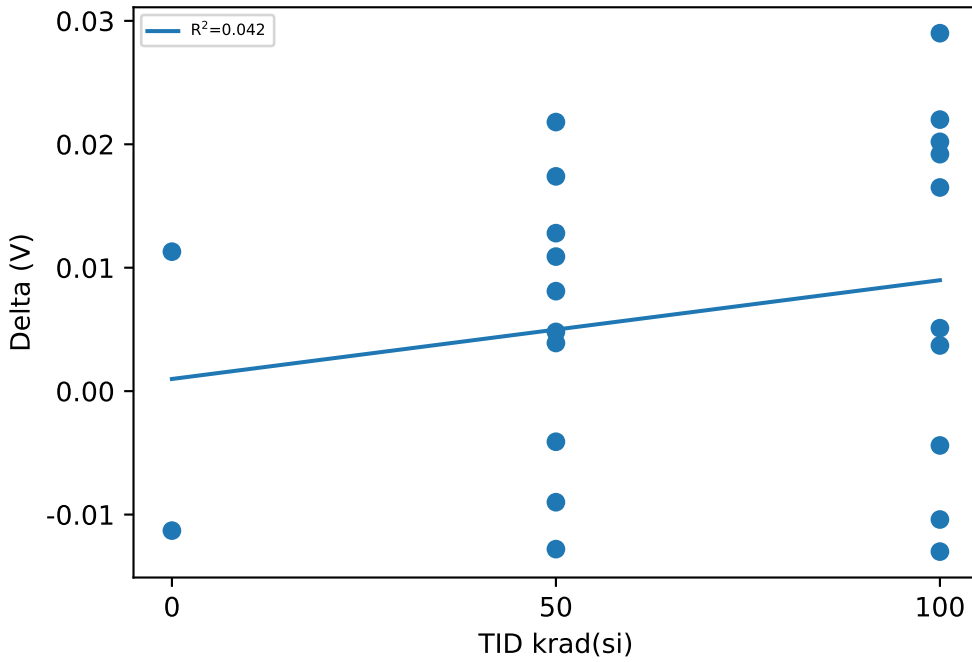
TID vs Result Stats



Test Results (Lower Limit = 0.505, Upper Limit = 0.56 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	0.5209	0.5337	0.0128
36	50	LDR-Biased	0.5191	0.5365	0.0174
37	50	LDR-Biased	0.5172	0.5253	0.0081
39	50	LDR-Biased	0.5144	0.5362	0.0218
40	50	LDR-Biased	0.5228	0.5337	0.0109
41	50	LDR-Unbiased	0.5209	0.5119	-0.009
42	50	LDR-Unbiased	0.5179	0.5138	-0.0041
43	50	LDR-Unbiased	0.5131	0.5179	0.0048
44	50	LDR-Unbiased	0.5228	0.51	-0.0128
45	50	LDR-Unbiased	0.517	0.5209	0.0039
55	100	LDR-Biased	0.5209	0.5411	0.0202
56	100	LDR-Biased	0.5191	0.5411	0.022
57	100	LDR-Biased	0.5172	0.5337	0.0165
59	100	LDR-Biased	0.5144	0.5434	0.029
60	100	LDR-Biased	0.5228	0.542	0.0192
61	100	LDR-Unbiased	0.5209	0.5105	-0.0104
62	100	LDR-Unbiased	0.5179	0.5135	-0.0044
63	100	LDR-Unbiased	0.5131	0.5182	0.0051
64	100	LDR-Unbiased	0.5228	0.5098	-0.013
65	100	LDR-Unbiased	0.517	0.5207	0.0037
100	0	Correlation	0.5205	0.5318	0.0113
101	0	Correlation	0.5318	0.5205	-0.0113

TID vs Post - Pre Exposure Delta

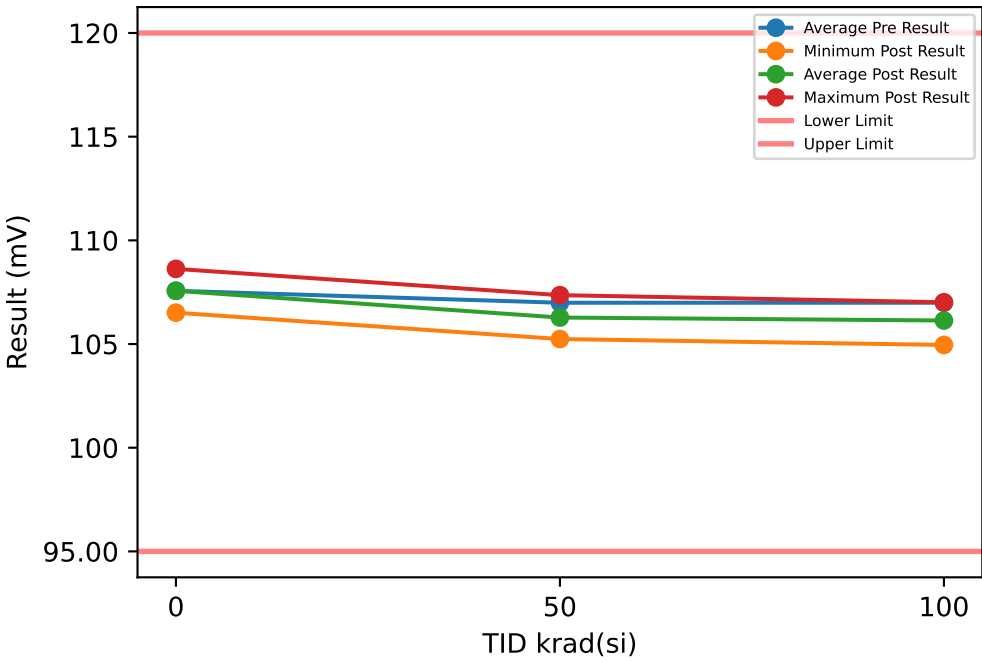


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5205	0.52615	0.5318	0.0079903	0.5205	0.52615	0.5318	0.0079903	-0.0113	0	0.0113	0.015981
50	0.5131	0.51861	0.5228	0.0033168	0.51	0.52399	0.5365	0.010479	-0.0128	0.00538	0.0218	0.011238
100	0.5131	0.51861	0.5228	0.0033168	0.5098	0.5274	0.5434	0.014151	-0.013	0.00879	0.029	0.014672

Device Test: 6.6 EN_UVLO_HYSTERESIS_14V

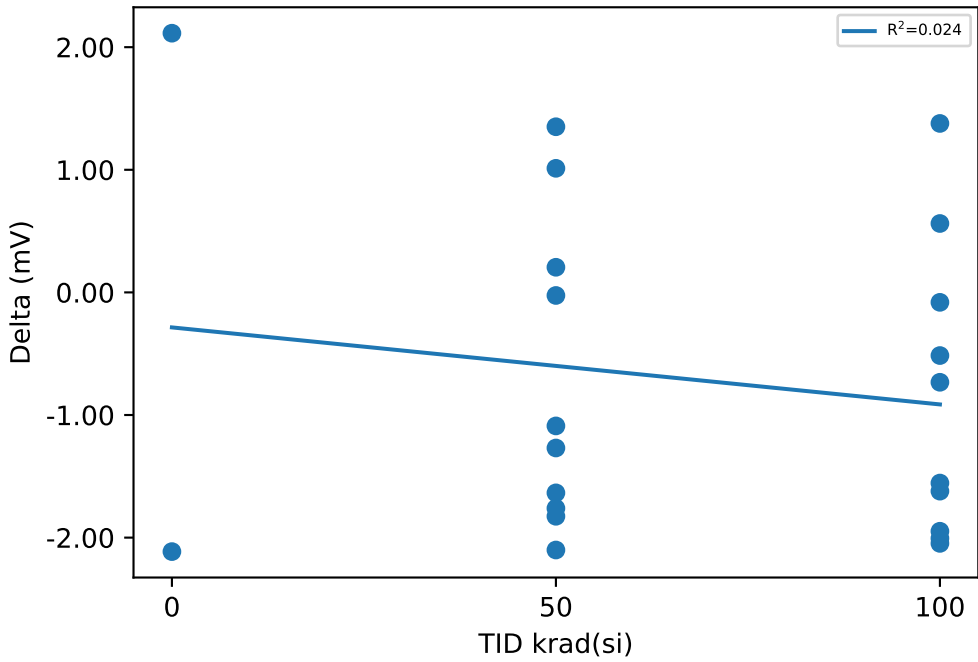
TID vs Result Stats



Test Results (Lower Limit = 95.0, Upper Limit = 120.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	107.34	106.25	-1.089
36	50	LDR-Biased	107.38	107.36	-0.025
37	50	LDR-Biased	106.91	105.27	-1.635
39	50	LDR-Biased	106.32	107.33	1.012
40	50	LDR-Biased	107.56	105.73	-1.826
41	50	LDR-Unbiased	107.34	105.24	-2.101
42	50	LDR-Unbiased	106.99	105.72	-1.269
43	50	LDR-Unbiased	105.64	106.99	1.351
44	50	LDR-Unbiased	107.82	106.06	-1.761
45	50	LDR-Unbiased	106.62	106.82	0.205
55	100	LDR-Biased	107.34	106.61	-0.733
56	100	LDR-Biased	107.38	106.87	-0.515
57	100	LDR-Biased	106.91	104.96	-1.948
59	100	LDR-Biased	106.32	106.88	0.562
60	100	LDR-Biased	107.56	105.94	-1.621
61	100	LDR-Unbiased	107.34	105.34	-2.006
62	100	LDR-Unbiased	106.99	105.43	-1.555
63	100	LDR-Unbiased	105.64	107.02	1.378
64	100	LDR-Unbiased	107.82	105.77	-2.047
65	100	LDR-Unbiased	106.62	106.54	-0.081
100	0	Correlation	106.51	108.62	2.114
101	0	Correlation	108.62	106.51	-2.114

TID vs Post - Pre Exposure Delta

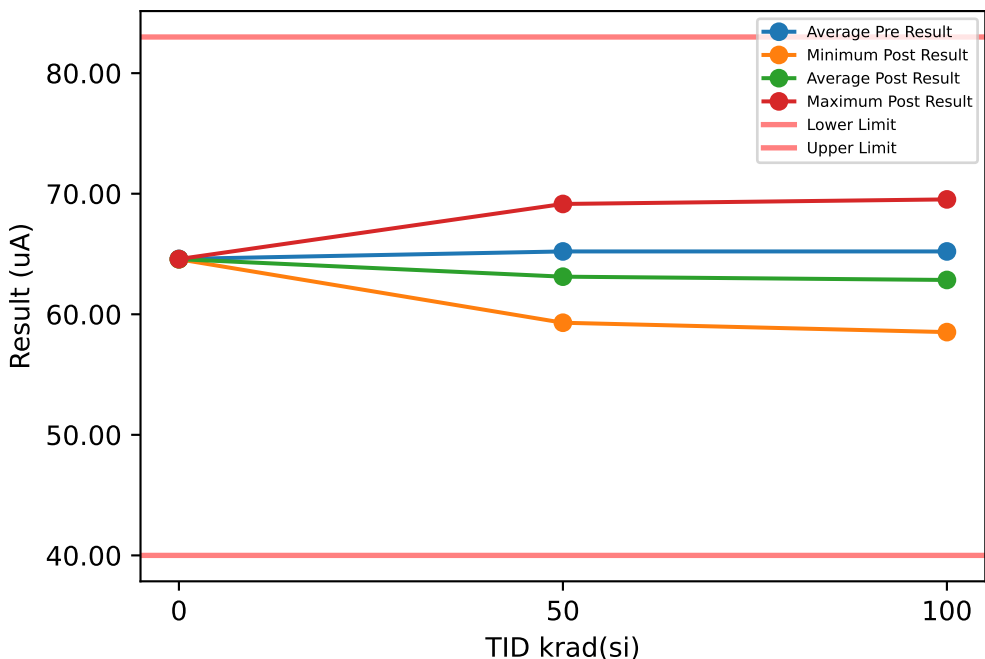


Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	106.51	107.57	108.62	1.4948	106.51	107.57	108.62	1.4948	-2.114	0	2.114	2.9896
50	105.64	106.99	107.82	0.65344	105.24	106.28	107.36	0.80449	-2.101	-0.7138	1.351	1.2524
100	105.64	106.99	107.82	0.65344	104.96	106.13	107.02	0.74111	-2.047	-0.8566	1.378	1.1898

Device Test: 6.7 SS_Icharge_14V

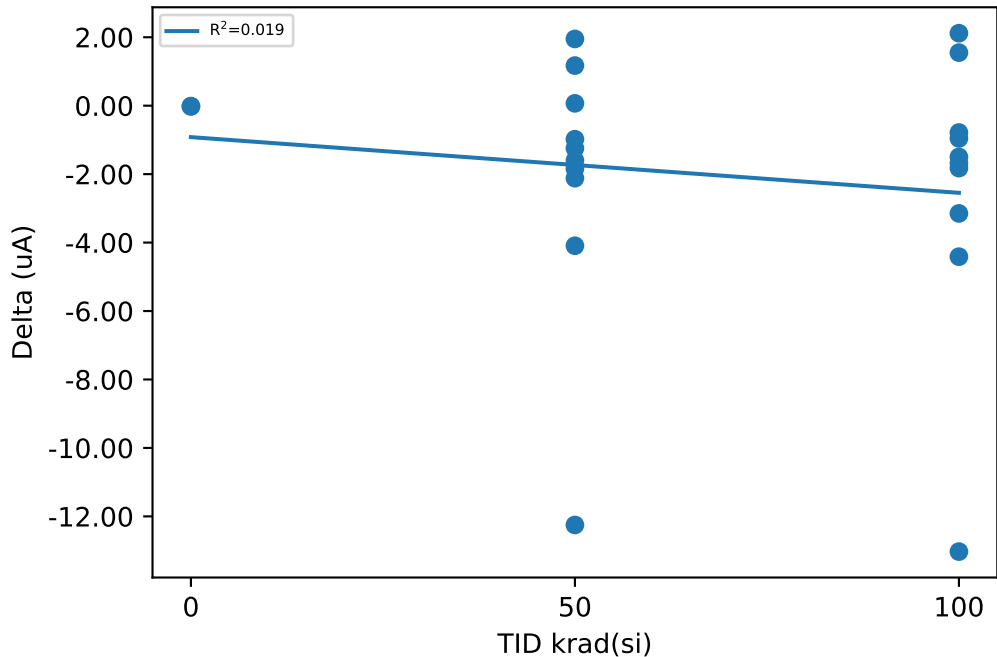
TID vs Result Stats



Test Results (Lower Limit = 40.0, Upper Limit = 83.0 (uA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	65.223	63.383	-1.84
36	50	LDR-Biased	67.242	65.124	-2.118
37	50	LDR-Biased	61.49	63.44	1.95
39	50	LDR-Biased	62.377	61.397	-0.98
40	50	LDR-Biased	64.901	60.809	-4.092
41	50	LDR-Unbiased	64.329	64.397	0.068
42	50	LDR-Unbiased	63.508	61.91	-1.598
43	50	LDR-Unbiased	67.979	69.151	1.172
44	50	LDR-Unbiased	63.53	62.286	-1.244
45	50	LDR-Unbiased	71.55	59.299	-12.251
55	100	LDR-Biased	65.223	63.399	-1.824
56	100	LDR-Biased	67.242	64.094	-3.148
57	100	LDR-Biased	61.49	63.608	2.118
59	100	LDR-Biased	62.377	61.593	-0.784
60	100	LDR-Biased	64.901	60.489	-4.412
61	100	LDR-Unbiased	64.329	62.649	-1.68
62	100	LDR-Unbiased	63.508	62.01	-1.498
63	100	LDR-Unbiased	67.979	69.529	1.55
64	100	LDR-Unbiased	63.53	62.574	-0.956
65	100	LDR-Unbiased	71.55	58.521	-13.029
100	0	Correlation	64.574	64.562	-0.012
101	0	Correlation	64.602	64.58	-0.022

TID vs Post - Pre Exposure Delta

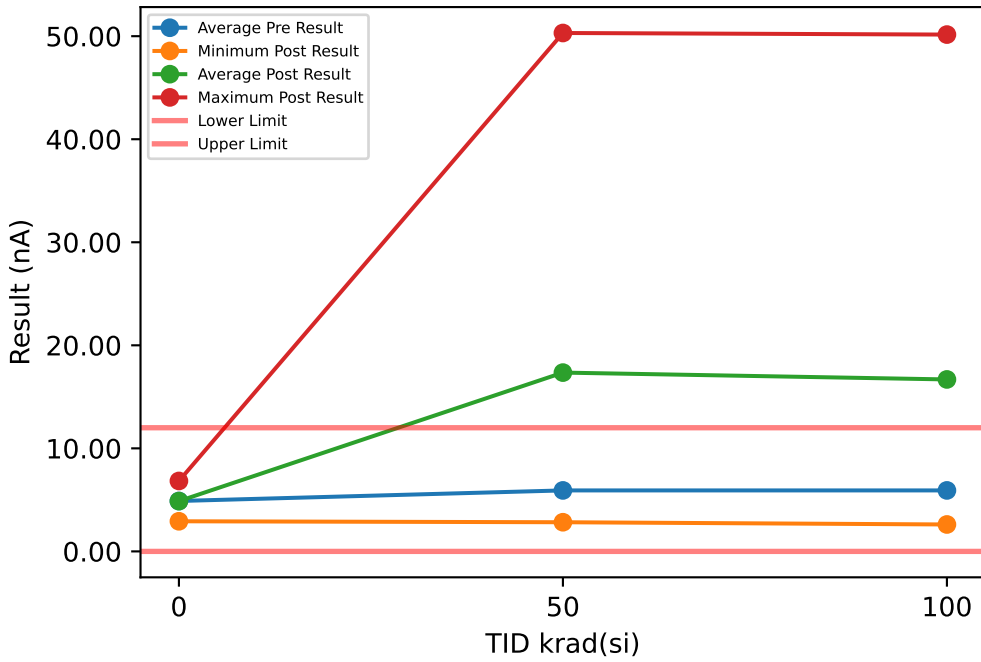


Test Statistics (uA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	64.574	64.588	64.602	0.019799	64.562	64.571	64.58	0.012728	-0.022	-0.017	-0.012	0.0070711
50	61.49	65.213	71.55	2.9897	59.299	63.12	69.151	2.7337	-12.251	-2.0933	1.95	3.9599
100	61.49	65.213	71.55	2.9897	58.521	62.847	69.529	2.8626	-13.029	-2.3663	2.118	4.2157

Device Test: 6.8 EN7p0V_I_Vin14V

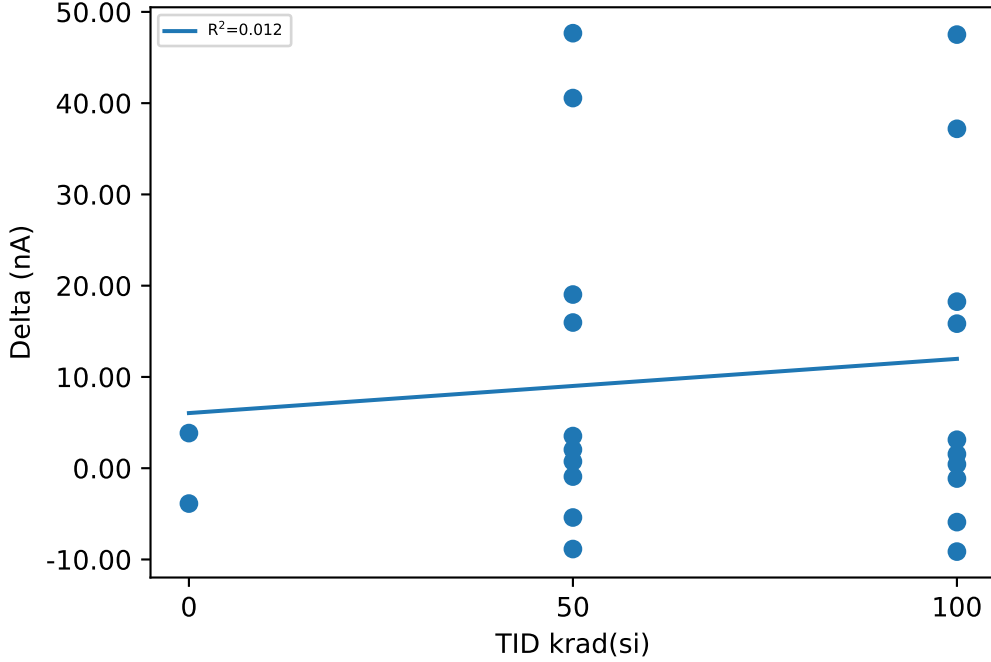
TID vs Result Stats



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	2.679	43.238	40.559
36	50	LDR-Biased	12.585	7.184	-5.401
37	50	LDR-Biased	2.306	18.269	15.963
39	50	LDR-Biased	12.458	3.601	-8.857
40	50	LDR-Biased	3.747	2.83	-0.917
41	50	LDR-Unbiased	2.836	3.572	0.736
42	50	LDR-Unbiased	3.164	5.197	2.033
43	50	LDR-Unbiased	7.105	26.135	19.03
44	50	LDR-Unbiased	9.658	13.18	3.522
45	50	LDR-Unbiased	2.643	50.309	47.666
55	100	LDR-Biased	2.679	39.869	37.19
56	100	LDR-Biased	12.585	6.678	-5.907
57	100	LDR-Biased	2.306	18.146	15.84
59	100	LDR-Biased	12.458	3.321	-9.137
60	100	LDR-Biased	3.747	2.613	-1.134
61	100	LDR-Unbiased	2.836	3.264	0.428
62	100	LDR-Unbiased	3.164	4.708	1.544
63	100	LDR-Unbiased	7.105	25.355	18.25
64	100	LDR-Unbiased	9.658	12.778	3.12
65	100	LDR-Unbiased	2.643	50.156	47.513
100	0	Correlation	2.987	6.835	3.848
101	0	Correlation	6.797	2.923	-3.874

TID vs Post - Pre Exposure Delta

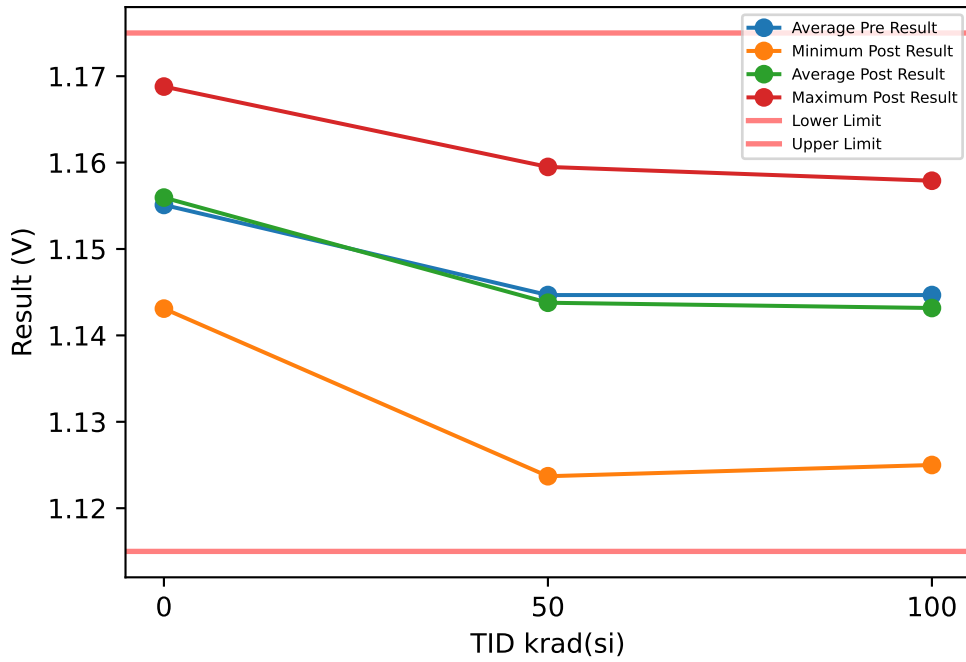


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.987	4.892	6.797	2.6941	2.923	4.879	6.835	2.7662	-3.874	-0.013	3.848	5.4603
50	2.306	5.9181	12.585	4.1989	2.83	17.351	50.309	17.297	-8.857	11.433	47.666	19.3
100	2.306	5.9181	12.585	4.1989	2.613	16.689	50.156	16.835	-9.137	10.771	47.513	18.846

Device Test: 7.0 OVP_UVLO_RISING_4p5V

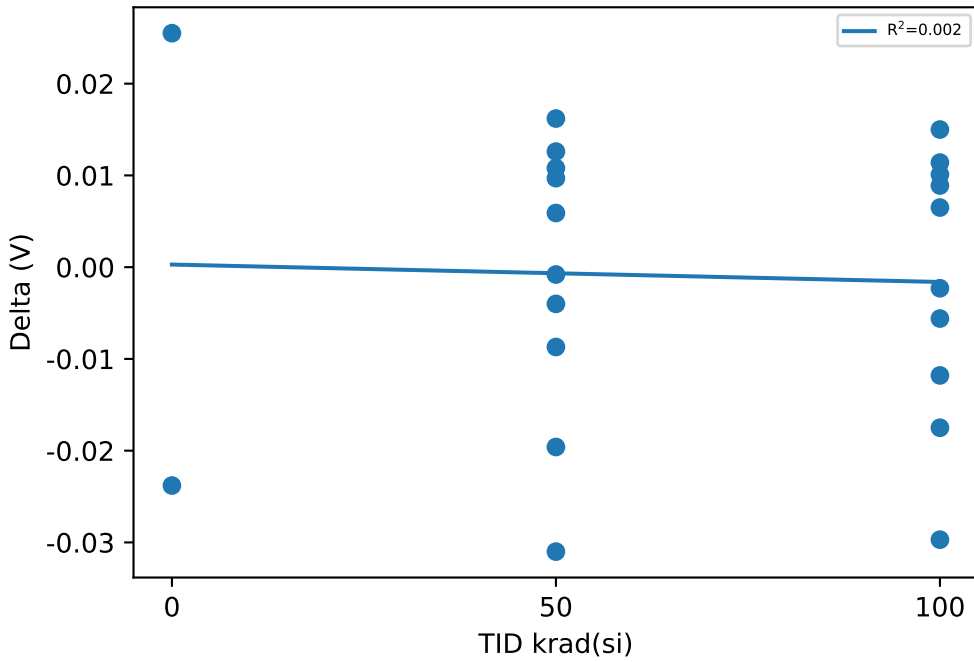
TID vs Result Stats



Test Results (Lower Limit = 1.115, Upper Limit = 1.175 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.1355	1.1517	0.0162
36	50	LDR-Biased	1.1635	1.1595	-0.004
37	50	LDR-Biased	1.1475	1.1279	-0.0196
39	50	LDR-Biased	1.1302	1.141	0.0108
40	50	LDR-Biased	1.1471	1.153	0.0059
41	50	LDR-Unbiased	1.1547	1.1237	-0.031
42	50	LDR-Unbiased	1.1309	1.1435	0.0126
43	50	LDR-Unbiased	1.1484	1.1397	-0.0087
44	50	LDR-Unbiased	1.153	1.1522	-0.0008
45	50	LDR-Unbiased	1.1359	1.1456	0.0097
55	100	LDR-Biased	1.1355	1.1505	0.015
56	100	LDR-Biased	1.1635	1.1579	-0.0056
57	100	LDR-Biased	1.1475	1.13	-0.0175
59	100	LDR-Biased	1.1302	1.1416	0.0114
60	100	LDR-Biased	1.1471	1.1536	0.0065
61	100	LDR-Unbiased	1.1547	1.125	-0.0297
62	100	LDR-Unbiased	1.1309	1.141	0.0101
63	100	LDR-Unbiased	1.1484	1.1366	-0.0118
64	100	LDR-Unbiased	1.153	1.1507	-0.0023
65	100	LDR-Unbiased	1.1359	1.1448	0.0089
100	0	Correlation	1.1433	1.1688	0.0255
101	0	Correlation	1.1669	1.1431	-0.0238

TID vs Post - Pre Exposure Delta

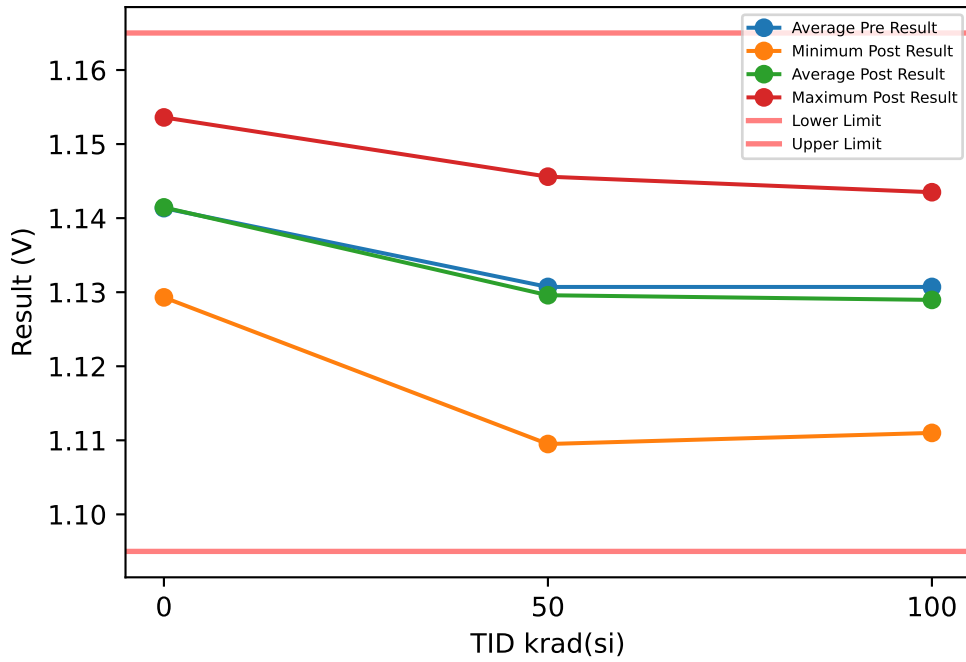


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1433	1.1551	1.1669	0.016688	1.1431	1.156	1.1688	0.018173	-0.0238	0.00085	0.0255	0.03486
50	1.1302	1.1447	1.1635	0.011117	1.1237	1.1438	1.1595	0.011298	-0.031	-0.00089	0.0162	0.015262
100	1.1302	1.1447	1.1635	0.011117	1.125	1.1432	1.1579	0.010503	-0.0297	-0.0015	0.015	0.014607

Device Test: 7.1 OVP_UVLO_FALLING_4p5V

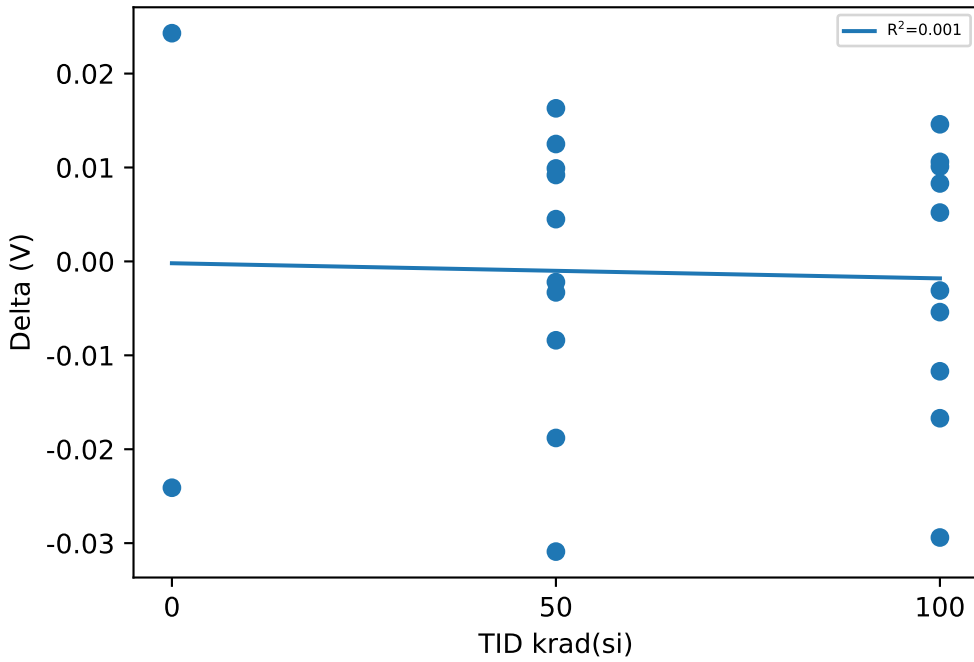
TID vs Result Stats



Test Results (Lower Limit = 1.095, Upper Limit = 1.165 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.1213	1.1376	0.0163
36	50	LDR-Biased	1.1489	1.1456	-0.0033
37	50	LDR-Biased	1.134	1.1152	-0.0188
39	50	LDR-Biased	1.1166	1.1265	0.0099
40	50	LDR-Biased	1.1338	1.1383	0.0045
41	50	LDR-Unbiased	1.1404	1.1095	-0.0309
42	50	LDR-Unbiased	1.1166	1.1291	0.0125
43	50	LDR-Unbiased	1.134	1.1256	-0.0084
44	50	LDR-Unbiased	1.1395	1.1373	-0.0022
45	50	LDR-Unbiased	1.122	1.1312	0.0092
55	100	LDR-Biased	1.1213	1.1359	0.0146
56	100	LDR-Biased	1.1489	1.1435	-0.0054
57	100	LDR-Biased	1.134	1.1173	-0.0167
59	100	LDR-Biased	1.1166	1.1272	0.0106
60	100	LDR-Biased	1.1338	1.139	0.0052
61	100	LDR-Unbiased	1.1404	1.111	-0.0294
62	100	LDR-Unbiased	1.1166	1.1267	0.0101
63	100	LDR-Unbiased	1.134	1.1223	-0.0117
64	100	LDR-Unbiased	1.1395	1.1364	-0.0031
65	100	LDR-Unbiased	1.122	1.1303	0.0083
100	0	Correlation	1.1293	1.1536	0.0243
101	0	Correlation	1.1534	1.1293	-0.0241

TID vs Post - Pre Exposure Delta

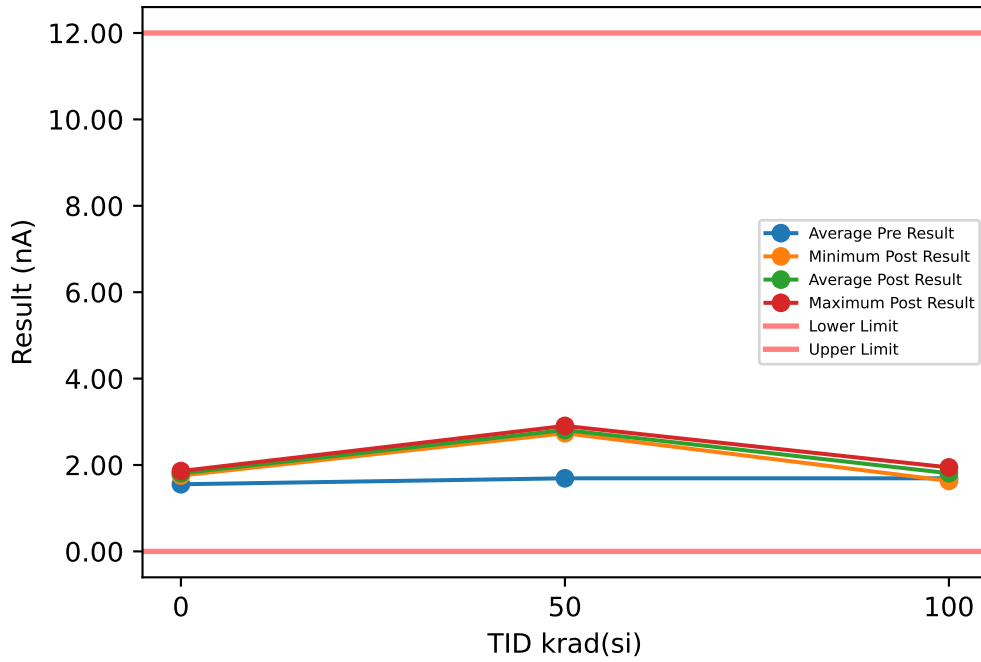


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1293	1.1414	1.1534	0.017041	1.1293	1.1414	1.1536	0.017183	-0.0241	0.0001	0.0243	0.034224
50	1.1166	1.1307	1.1489	0.011034	1.1095	1.1296	1.1456	0.011029	-0.0309	-0.00112	0.0163	0.014933
100	1.1166	1.1307	1.1489	0.011034	1.111	1.129	1.1435	0.010158	-0.0294	-0.00175	0.0146	0.014188

Device Test: 7.10 OVP_I_Vin1p5V

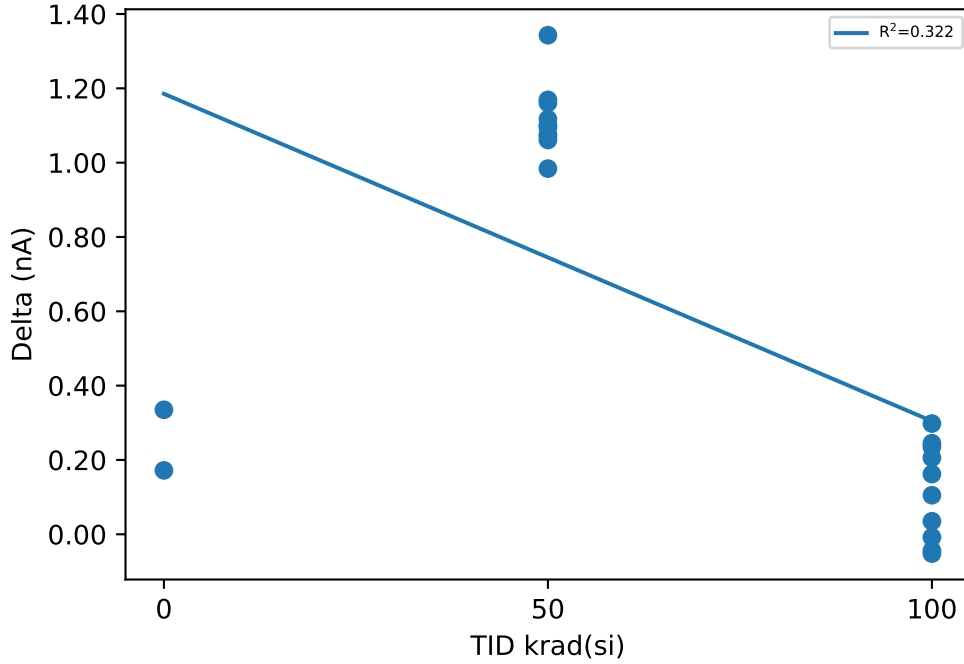
TID vs Result Stats



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.562	2.905	1.343
36	50	LDR-Biased	1.66	2.736	1.076
37	50	LDR-Biased	1.738	2.855	1.117
39	50	LDR-Biased	1.77	2.841	1.071
40	50	LDR-Biased	1.78	2.764	0.984
41	50	LDR-Unbiased	1.71	2.771	1.061
42	50	LDR-Unbiased	1.655	2.75	1.095
43	50	LDR-Unbiased	1.724	2.824	1.1
44	50	LDR-Unbiased	1.68	2.841	1.161
45	50	LDR-Unbiased	1.64	2.809	1.169
55	100	LDR-Biased	1.562	1.86	0.298
56	100	LDR-Biased	1.66	1.905	0.245
57	100	LDR-Biased	1.738	1.944	0.206
59	100	LDR-Biased	1.77	1.805	0.035
60	100	LDR-Biased	1.78	1.728	-0.052
61	100	LDR-Unbiased	1.71	1.872	0.162
62	100	LDR-Unbiased	1.655	1.89	0.235
63	100	LDR-Unbiased	1.724	1.68	-0.044
64	100	LDR-Unbiased	1.68	1.785	0.105
65	100	LDR-Unbiased	1.64	1.632	-0.008
100	0	Correlation	1.525	1.86	0.335
101	0	Correlation	1.583	1.755	0.172

TID vs Post - Pre Exposure Delta

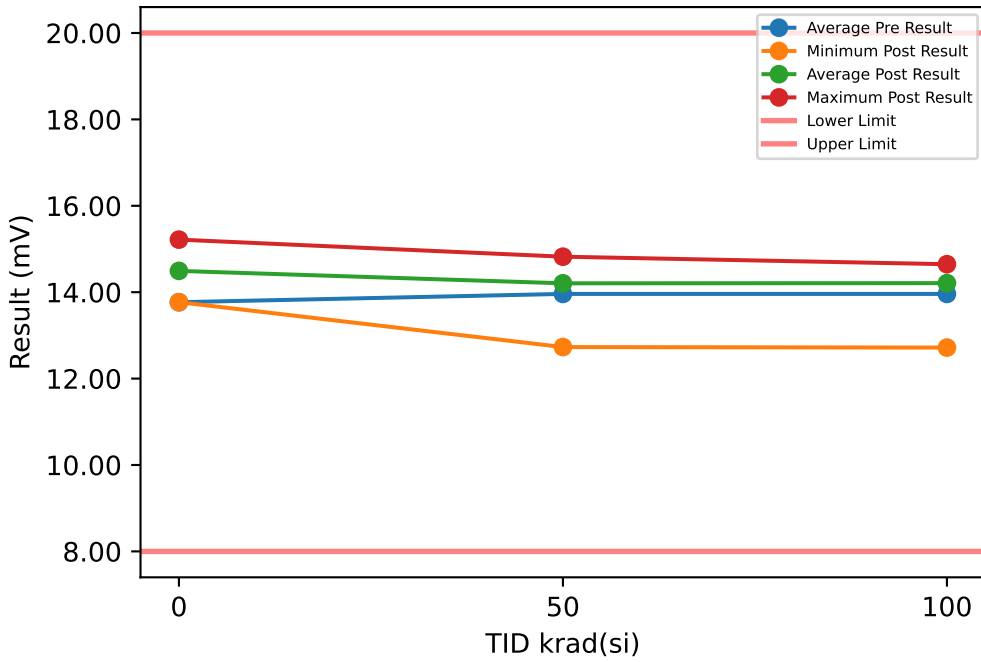


Test Statistics (nA)

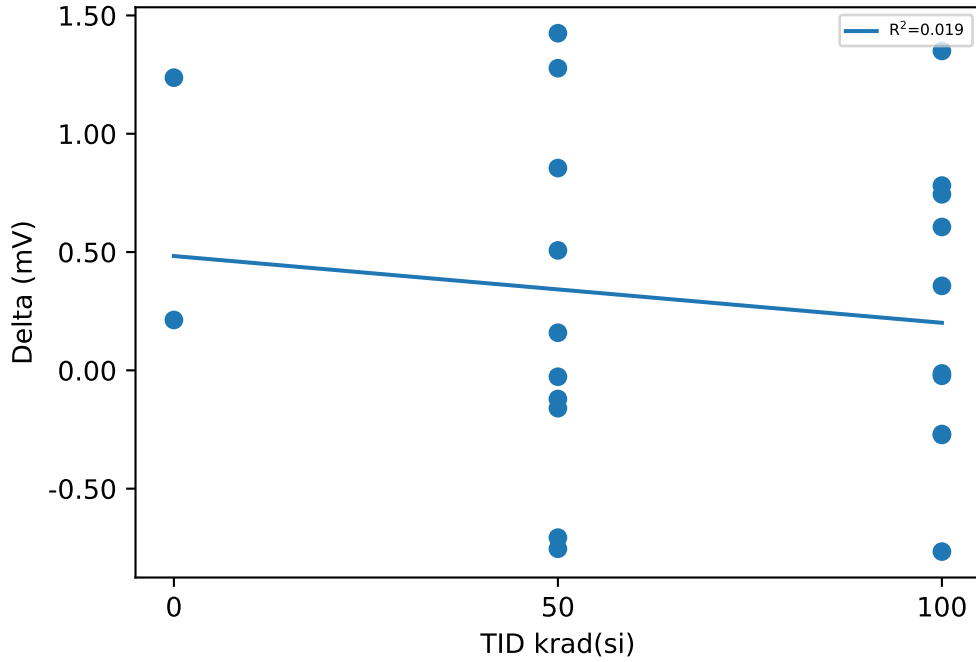
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.525	1.554	1.583	0.041012	1.755	1.8075	1.86	0.074246	0.172	0.2535	0.335	0.11526
50	1.562	1.6919	1.78	0.066192	2.736	2.8096	2.905	0.053625	0.984	1.1177	1.343	0.09493
100	1.562	1.6919	1.78	0.066192	1.632	1.8101	1.944	0.10311	-0.052	0.1182	0.298	0.12909

Device Test: 7.2 OVP_UVLO_HYSTERESIS_4p5V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 8.0, Upper Limit = 20.0 (mV))

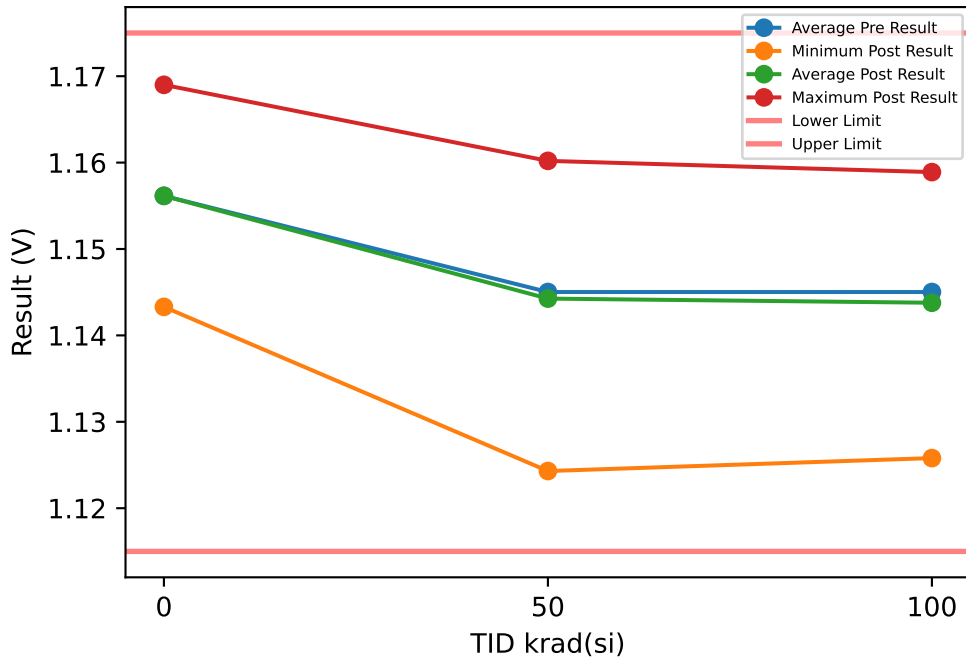
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	14.192	14.165	-0.027
36	50	LDR-Biased	14.66	13.953	-0.707
37	50	LDR-Biased	13.484	12.73	-0.754
39	50	LDR-Biased	13.634	14.489	0.855
40	50	LDR-Biased	13.298	14.723	1.425
41	50	LDR-Unbiased	14.289	14.168	-0.121
42	50	LDR-Unbiased	14.267	14.426	0.159
43	50	LDR-Unbiased	14.327	14.167	-0.16
44	50	LDR-Unbiased	13.545	14.822	1.277
45	50	LDR-Unbiased	13.907	14.414	0.507
55	100	LDR-Biased	14.192	14.549	0.357
56	100	LDR-Biased	14.66	14.387	-0.273
57	100	LDR-Biased	13.484	12.718	-0.766
59	100	LDR-Biased	13.634	14.415	0.781
60	100	LDR-Biased	13.298	14.648	1.35
61	100	LDR-Unbiased	14.289	14.02	-0.269
62	100	LDR-Unbiased	14.267	14.254	-0.013
63	100	LDR-Unbiased	14.327	14.304	-0.023
64	100	LDR-Unbiased	13.545	14.289	0.744
65	100	LDR-Unbiased	13.907	14.513	0.606
100	0	Correlation	13.98	15.217	1.237
101	0	Correlation	13.556	13.769	0.213

Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	13.556	13.768	13.98	0.29981	13.769	14.493	15.217	1.0239	0.213	0.725	1.237	0.72408
50	13.298	13.96	14.66	0.45057	12.73	14.206	14.822	0.58364	-0.754	0.2454	1.425	0.75879
100	13.298	13.96	14.66	0.45057	12.718	14.21	14.648	0.55288	-0.766	0.2494	1.35	0.63184

Device Test: 7.3 OVP_UVLO_RISING_14p0V

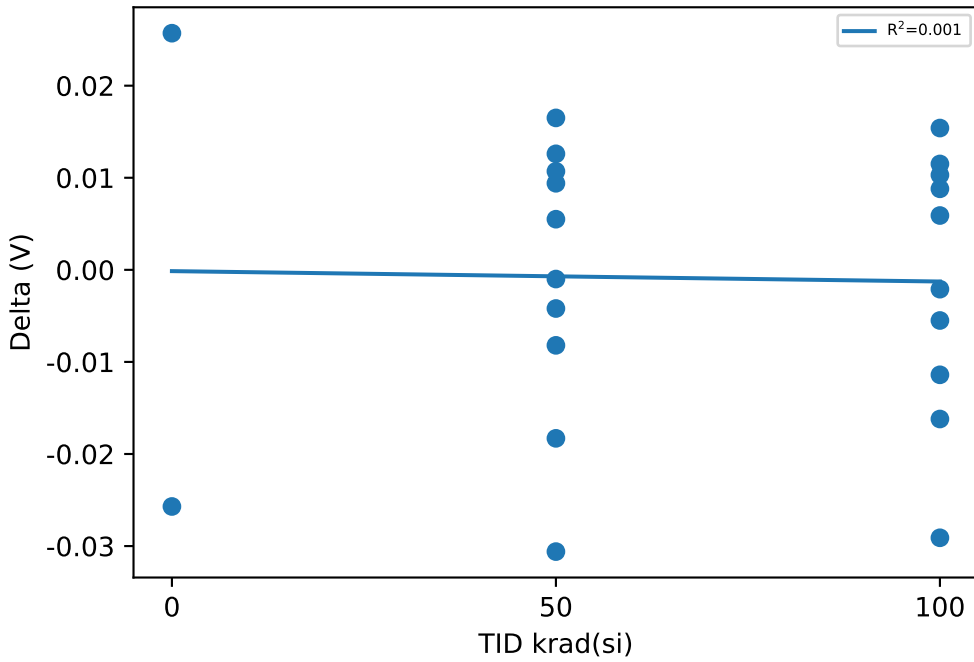
TID vs Result Stats



Test Results (Lower Limit = 1.115, Upper Limit = 1.175 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.1357	1.1522	0.0165
36	50	LDR-Biased	1.1644	1.1602	-0.0042
37	50	LDR-Biased	1.1475	1.1292	-0.0183
39	50	LDR-Biased	1.1305	1.1412	0.0107
40	50	LDR-Biased	1.1473	1.1528	0.0055
41	50	LDR-Unbiased	1.1549	1.1243	-0.0306
42	50	LDR-Unbiased	1.1313	1.1439	0.0126
43	50	LDR-Unbiased	1.1486	1.1404	-0.0082
44	50	LDR-Unbiased	1.1536	1.1526	-0.001
45	50	LDR-Unbiased	1.1364	1.1458	0.0094
55	100	LDR-Biased	1.1357	1.1511	0.0154
56	100	LDR-Biased	1.1644	1.1589	-0.0055
57	100	LDR-Biased	1.1475	1.1313	-0.0162
59	100	LDR-Biased	1.1305	1.142	0.0115
60	100	LDR-Biased	1.1473	1.1532	0.0059
61	100	LDR-Unbiased	1.1549	1.1258	-0.0291
62	100	LDR-Unbiased	1.1313	1.1416	0.0103
63	100	LDR-Unbiased	1.1486	1.1372	-0.0114
64	100	LDR-Unbiased	1.1536	1.1515	-0.0021
65	100	LDR-Unbiased	1.1364	1.1452	0.0088
100	0	Correlation	1.1433	1.169	0.0257
101	0	Correlation	1.169	1.1433	-0.0257

TID vs Post - Pre Exposure Delta

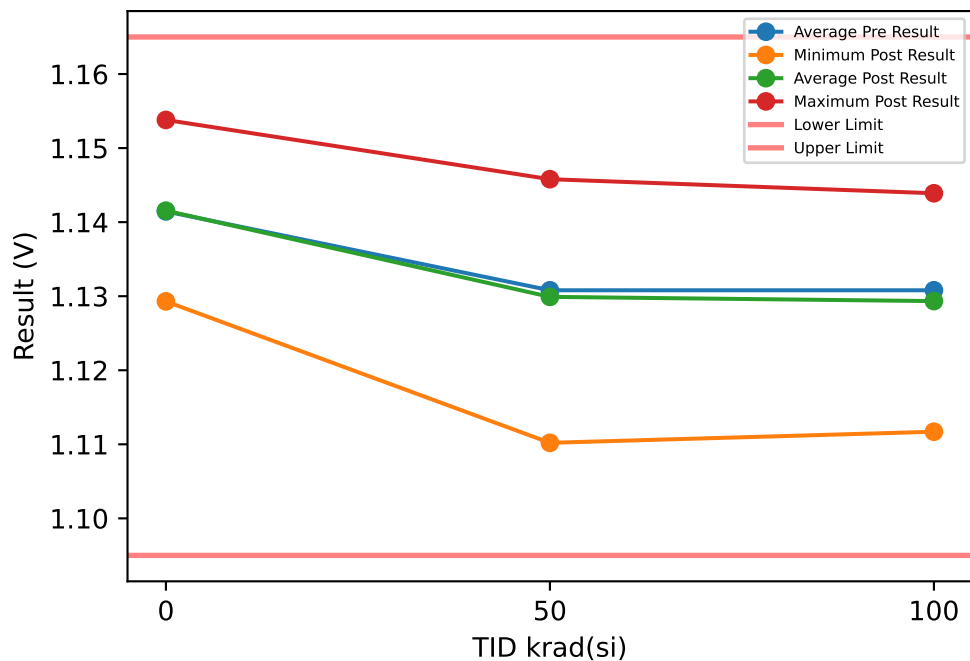


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1433	1.1562	1.169	0.018173	1.1433	1.1562	1.169	0.018173	-0.0257	0	0.0257	0.036345
50	1.1305	1.145	1.1644	0.011211	1.1243	1.1443	1.1602	0.011113	-0.0306	-0.00076	0.0165	0.014965
100	1.1305	1.145	1.1644	0.011211	1.1258	1.1438	1.1589	0.010343	-0.0291	-0.00124	0.0154	0.014323

Device Test: 7.4 OVP_UVLO_FALLING_14p0V

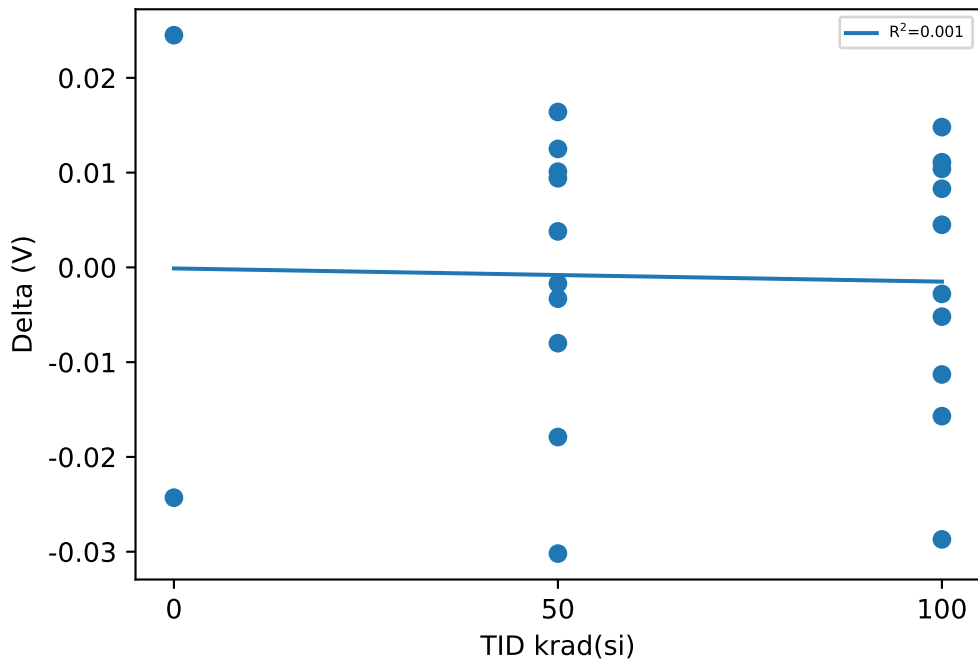
TID vs Result Stats



Test Results (Lower Limit = 1.095, Upper Limit = 1.165 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.1216	1.138	0.0164
36	50	LDR-Biased	1.1491	1.1458	-0.0033
37	50	LDR-Biased	1.134	1.1161	-0.0179
39	50	LDR-Biased	1.1166	1.1267	0.0101
40	50	LDR-Biased	1.1338	1.1376	0.0038
41	50	LDR-Unbiased	1.1404	1.1102	-0.0302
42	50	LDR-Unbiased	1.1168	1.1293	0.0125
43	50	LDR-Unbiased	1.134	1.126	-0.008
44	50	LDR-Unbiased	1.1397	1.138	-0.0017
45	50	LDR-Unbiased	1.122	1.1314	0.0094
55	100	LDR-Biased	1.1216	1.1364	0.0148
56	100	LDR-Biased	1.1491	1.1439	-0.0052
57	100	LDR-Biased	1.134	1.1183	-0.0157
59	100	LDR-Biased	1.1166	1.1277	0.0111
60	100	LDR-Biased	1.1338	1.1383	0.0045
61	100	LDR-Unbiased	1.1404	1.1117	-0.0287
62	100	LDR-Unbiased	1.1168	1.1272	0.0104
63	100	LDR-Unbiased	1.134	1.1227	-0.0113
64	100	LDR-Unbiased	1.1397	1.1369	-0.0028
65	100	LDR-Unbiased	1.122	1.1303	0.0083
100	0	Correlation	1.1293	1.1538	0.0245
101	0	Correlation	1.1536	1.1293	-0.0243

TID vs Post - Pre Exposure Delta

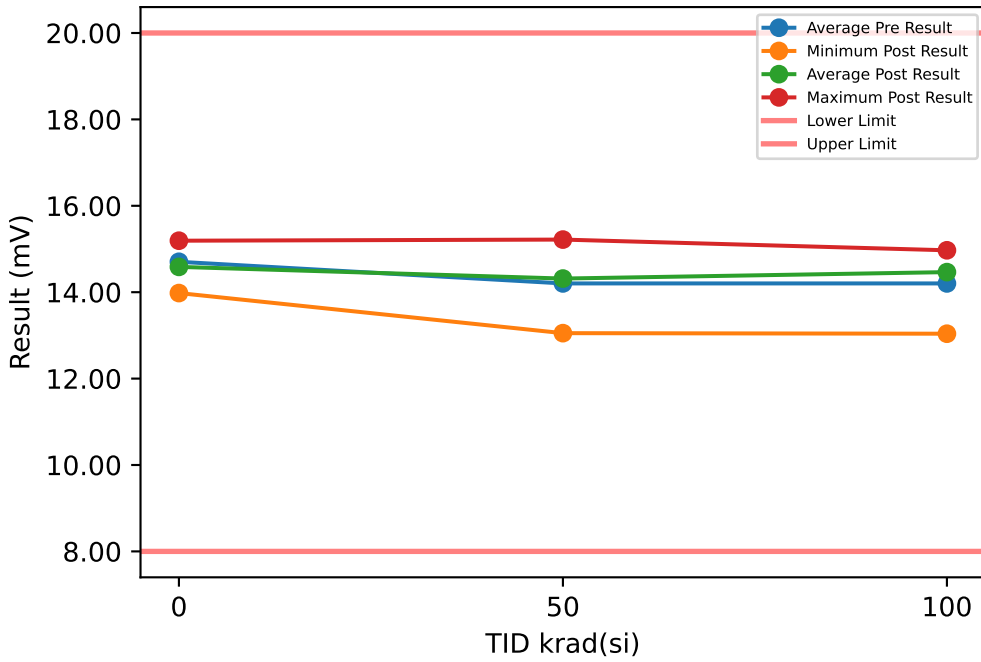


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1293	1.1414	1.1536	0.017183	1.1293	1.1416	1.1538	0.017324	-0.0243	0.0001	0.0245	0.034507
50	1.1166	1.1308	1.1491	0.011033	1.1102	1.1299	1.1458	0.010801	-0.0302	-0.00089	0.0164	0.014653
100	1.1166	1.1308	1.1491	0.011033	1.1117	1.1293	1.1439	0.0099141	-0.0287	-0.00146	0.0148	0.013948

Device Test: 7.5 OVP_UVLO_HYSTERESIS_14p0V

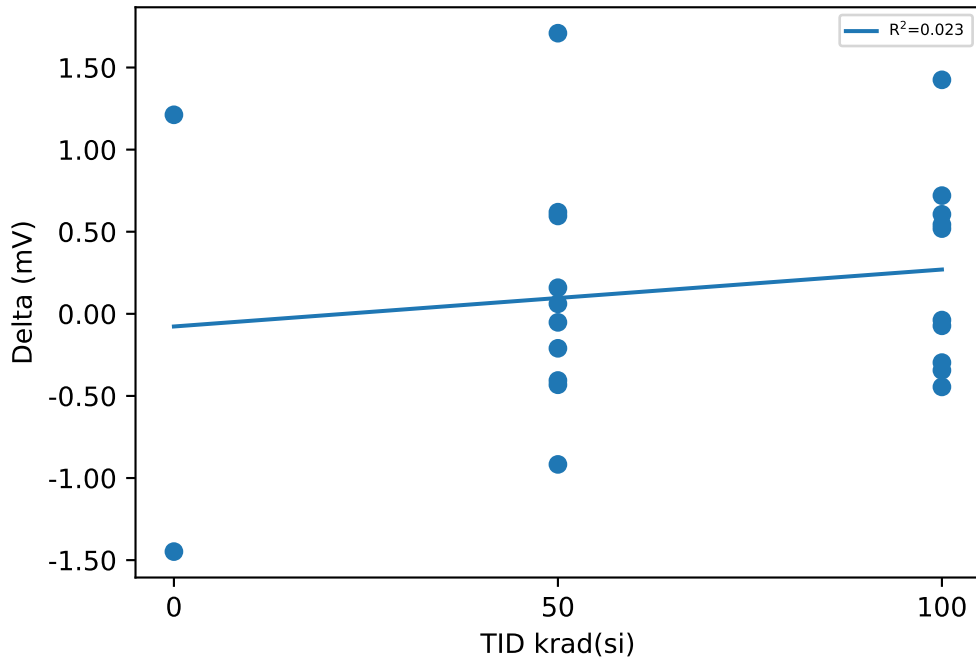
TID vs Result Stats



Test Results (Lower Limit = 8.0, Upper Limit = 20.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	14.167	14.115	-0.052
36	50	LDR-Biased	15.267	14.35	-0.917
37	50	LDR-Biased	13.484	13.052	-0.432
39	50	LDR-Biased	13.845	14.464	0.619
40	50	LDR-Biased	13.509	15.218	1.709
41	50	LDR-Unbiased	14.5	14.094	-0.406
42	50	LDR-Unbiased	14.453	14.612	0.159
43	50	LDR-Unbiased	14.537	14.327	-0.21
44	50	LDR-Unbiased	13.941	14.537	0.596
45	50	LDR-Unbiased	14.328	14.389	0.061
55	100	LDR-Biased	14.167	14.71	0.543
56	100	LDR-Biased	15.267	14.97	-0.297
57	100	LDR-Biased	13.484	13.039	-0.445
59	100	LDR-Biased	13.845	14.364	0.519
60	100	LDR-Biased	13.509	14.934	1.425
61	100	LDR-Unbiased	14.5	14.156	-0.344
62	100	LDR-Unbiased	14.453	14.415	-0.038
63	100	LDR-Unbiased	14.537	14.464	-0.073
64	100	LDR-Unbiased	13.941	14.661	0.72
65	100	LDR-Unbiased	14.328	14.934	0.606
100	0	Correlation	13.98	15.192	1.212
101	0	Correlation	15.428	13.98	-1.448

TID vs Post - Pre Exposure Delta

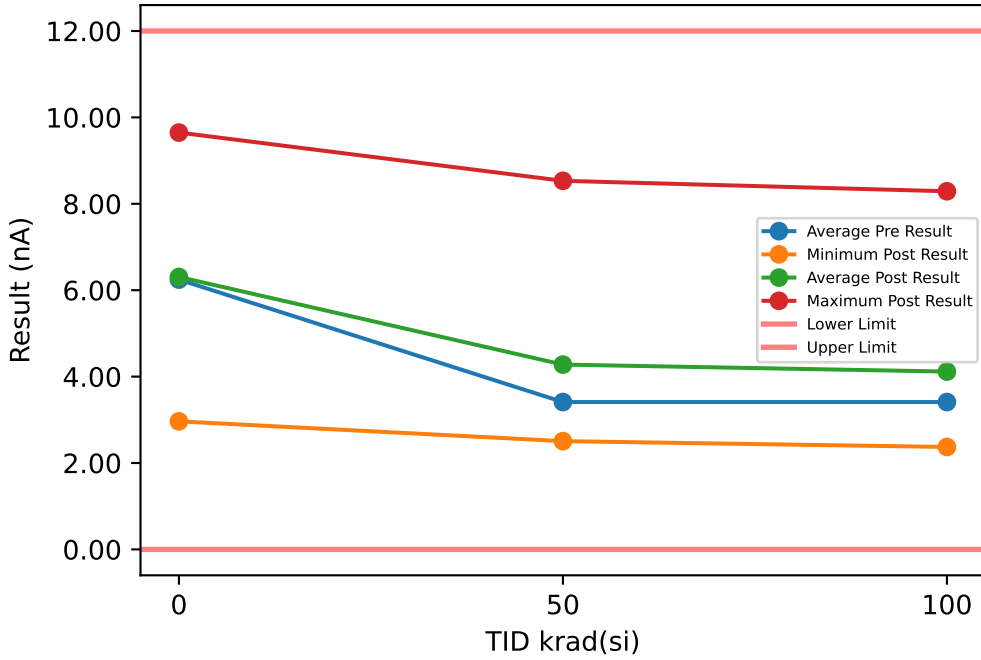


Test Statistics (mV)

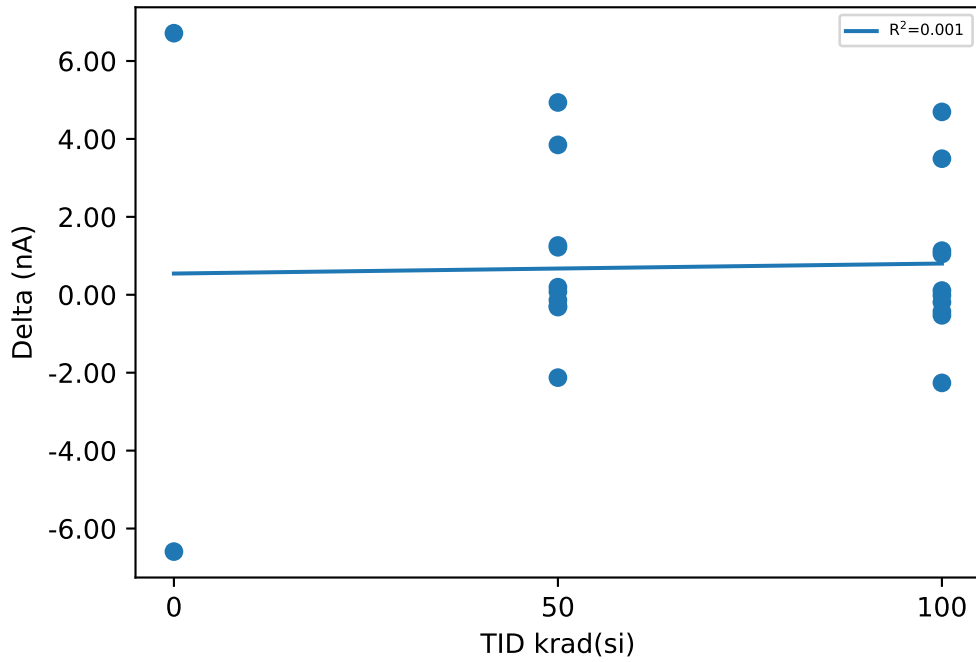
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	13.98	14.704	15.428	1.0239	13.98	14.586	15.192	0.85701	-1.448	-0.118	1.212	1.8809
50	13.484	14.203	15.267	0.53817	13.052	14.316	15.218	0.54426	-0.917	0.1127	1.709	0.73031
100	13.484	14.203	15.267	0.53817	13.039	14.465	14.97	0.57107	-0.445	0.2616	1.425	0.59698

Device Test: 7.6 OVP_I_Vin7V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

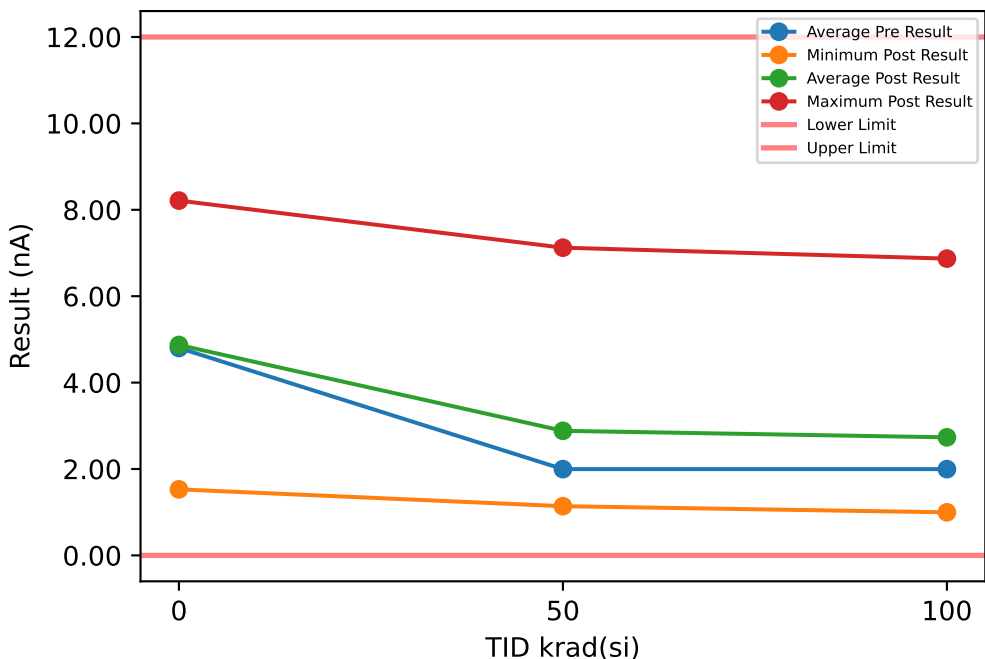
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	3.596	8.532	4.936
36	50	LDR-Biased	5.33	3.203	-2.127
37	50	LDR-Biased	2.451	3.717	1.266
39	50	LDR-Biased	2.988	2.672	-0.316
40	50	LDR-Biased	2.893	3.088	0.195
41	50	LDR-Unbiased	2.899	2.608	-0.291
42	50	LDR-Unbiased	3.43	7.277	3.847
43	50	LDR-Unbiased	2.623	3.842	1.219
44	50	LDR-Unbiased	2.428	2.506	0.078
45	50	LDR-Unbiased	5.472	5.335	-0.137
55	100	LDR-Biased	3.596	8.29	4.694
56	100	LDR-Biased	5.33	3.068	-2.262
57	100	LDR-Biased	2.451	3.584	1.133
59	100	LDR-Biased	2.988	2.559	-0.429
60	100	LDR-Biased	2.893	3.002	0.109
61	100	LDR-Unbiased	2.899	2.371	-0.528
62	100	LDR-Unbiased	3.43	6.923	3.493
63	100	LDR-Unbiased	2.623	3.67	1.047
64	100	LDR-Unbiased	2.428	2.415	-0.013
65	100	LDR-Unbiased	5.472	5.28	-0.192
100	0	Correlation	9.556	2.964	-6.592
101	0	Correlation	2.935	9.649	6.714

Test Statistics (nA)

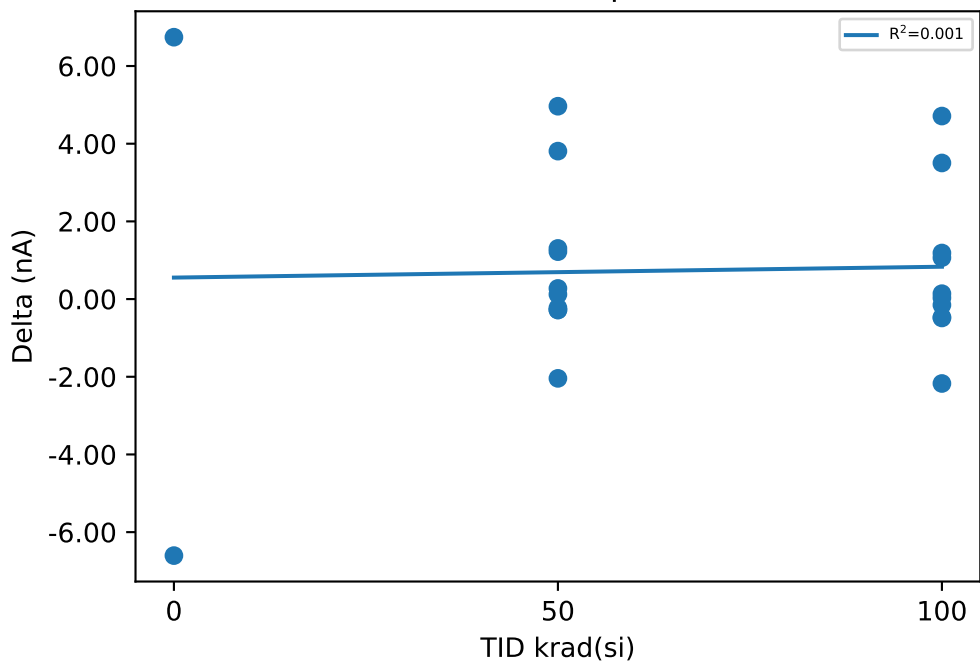
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.935	6.2455	9.556	4.6818	2.964	6.3065	9.649	4.727	-6.592	0.061	6.714	9.4088
50	2.428	3.411	5.472	1.1147	2.506	4.278	8.532	2.1027	-2.127	0.867	4.936	2.0951
100	2.428	3.411	5.472	1.1147	2.371	4.1162	8.29	2.0505	-2.262	0.7052	4.694	2.035

Device Test: 7.7 OVP_I_Vin5V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

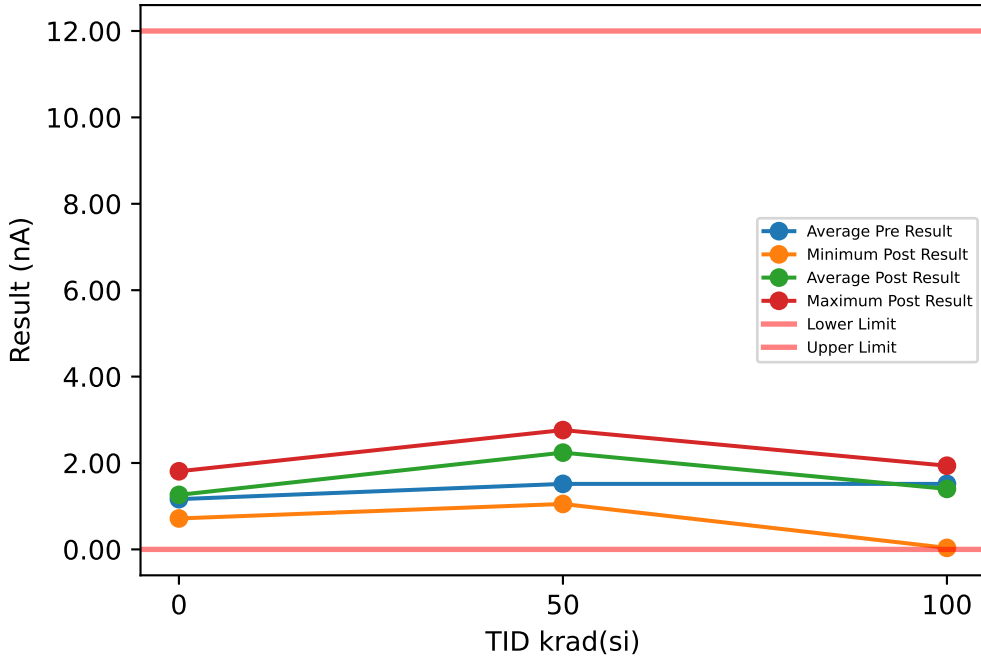
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	2.158	7.123	4.965
36	50	LDR-Biased	3.897	1.856	-2.041
37	50	LDR-Biased	1.055	2.359	1.304
39	50	LDR-Biased	1.57	1.289	-0.281
40	50	LDR-Biased	1.455	1.729	0.274
41	50	LDR-Unbiased	1.483	1.204	-0.279
42	50	LDR-Unbiased	2.021	5.83	3.809
43	50	LDR-Unbiased	1.215	2.436	1.221
44	50	LDR-Unbiased	1.018	1.139	0.121
45	50	LDR-Unbiased	4.097	3.872	-0.225
55	100	LDR-Biased	2.158	6.87	4.712
56	100	LDR-Biased	3.897	1.724	-2.173
57	100	LDR-Biased	1.055	2.241	1.186
59	100	LDR-Biased	1.57	1.103	-0.467
60	100	LDR-Biased	1.455	1.594	0.139
61	100	LDR-Unbiased	1.483	0.997	-0.486
62	100	LDR-Unbiased	2.021	5.525	3.504
63	100	LDR-Unbiased	1.215	2.281	1.066
64	100	LDR-Unbiased	1.018	1.051	0.033
65	100	LDR-Unbiased	4.097	3.945	-0.152
100	0	Correlation	8.133	1.529	-6.604
101	0	Correlation	1.471	8.213	6.742

Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.471	4.802	8.133	4.7107	1.529	4.871	8.213	4.7263	-6.604	0.069	6.742	9.437
50	1.018	1.9969	4.097	1.1177	1.139	2.8837	7.123	2.0791	-2.041	0.8868	4.965	2.0803
100	1.018	1.9969	4.097	1.1177	0.997	2.7331	6.87	2.0451	-2.173	0.7362	4.712	2.0228

Device Test: 7.8 OVP_I_Vin3p3V

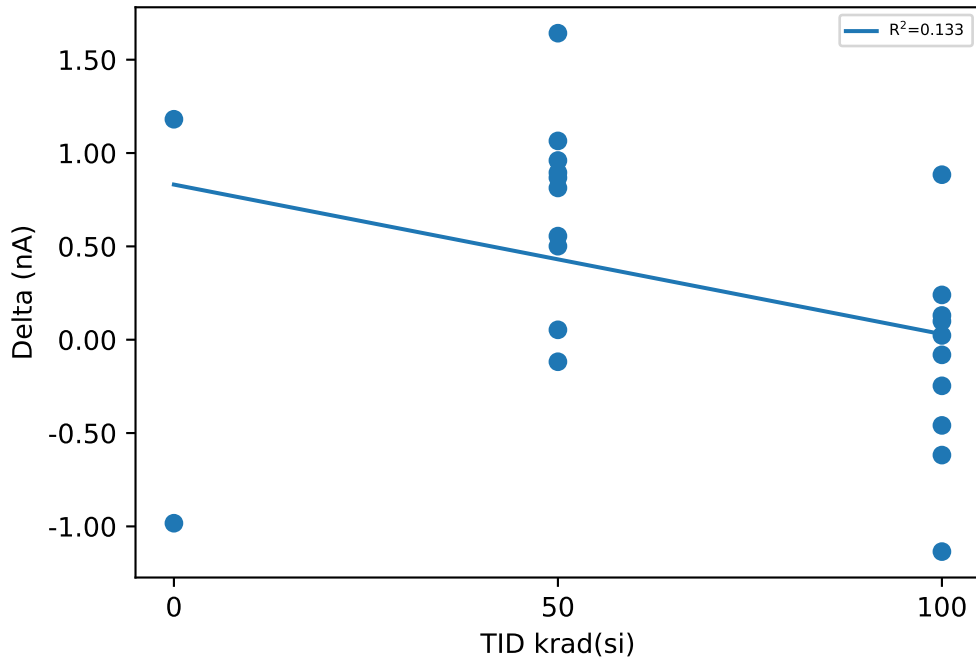
TID vs Result Stats



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.17	1.052	-0.118
36	50	LDR-Biased	0.992	2.634	1.642
37	50	LDR-Biased	1.64	2.535	0.895
39	50	LDR-Biased	1.697	2.762	1.065
40	50	LDR-Biased	1.735	2.603	0.868
41	50	LDR-Unbiased	1.682	2.495	0.813
42	50	LDR-Unbiased	1.215	1.268	0.053
43	50	LDR-Unbiased	1.838	2.339	0.501
44	50	LDR-Unbiased	1.754	2.714	0.96
45	50	LDR-Unbiased	1.442	1.997	0.555
55	100	LDR-Biased	1.17	0.035	-1.135
56	100	LDR-Biased	0.992	1.876	0.884
57	100	LDR-Biased	1.64	1.559	-0.081
59	100	LDR-Biased	1.697	1.937	0.24
60	100	LDR-Biased	1.735	1.758	0.023
61	100	LDR-Unbiased	1.682	1.812	0.13
62	100	LDR-Unbiased	1.215	0.597	-0.618
63	100	LDR-Unbiased	1.838	1.591	-0.247
64	100	LDR-Unbiased	1.754	1.853	0.099
65	100	LDR-Unbiased	1.442	0.983	-0.459
100	0	Correlation	0.627	1.808	1.181
101	0	Correlation	1.699	0.716	-0.983

TID vs Post - Pre Exposure Delta

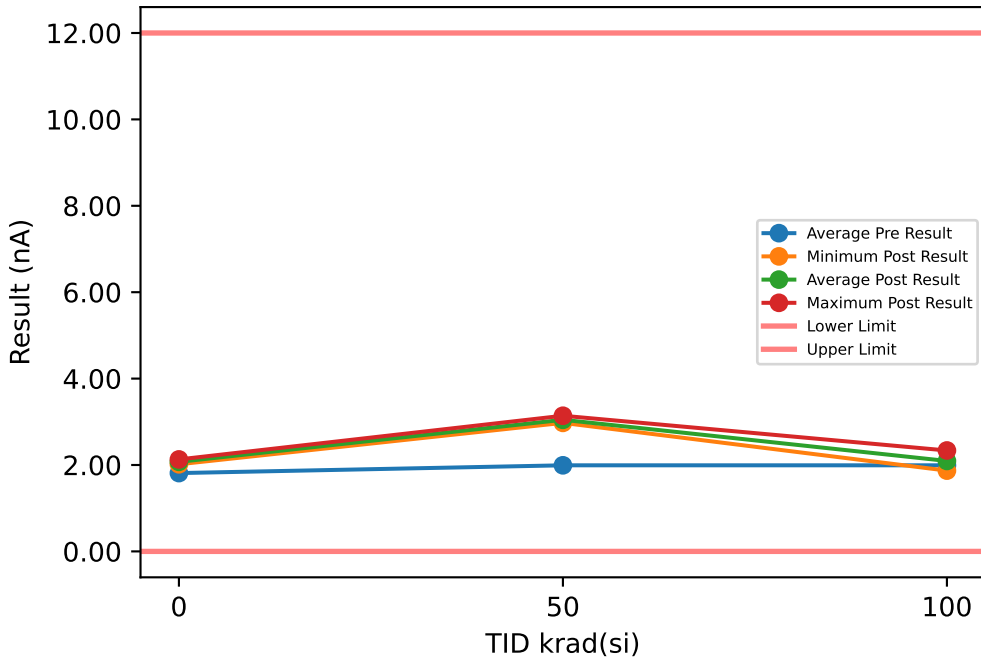


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.627	1.163	1.699	0.75802	0.716	1.262	1.808	0.77216	-0.983	0.099	1.181	1.5302
50	0.992	1.5165	1.838	0.29332	1.052	2.2399	2.762	0.61112	-0.118	0.7234	1.642	0.50663
100	0.992	1.5165	1.838	0.29332	0.035	1.4001	1.937	0.64651	-1.135	-0.1164	0.884	0.54561

Device Test: 7.9 OVP_I_Vin1p8V

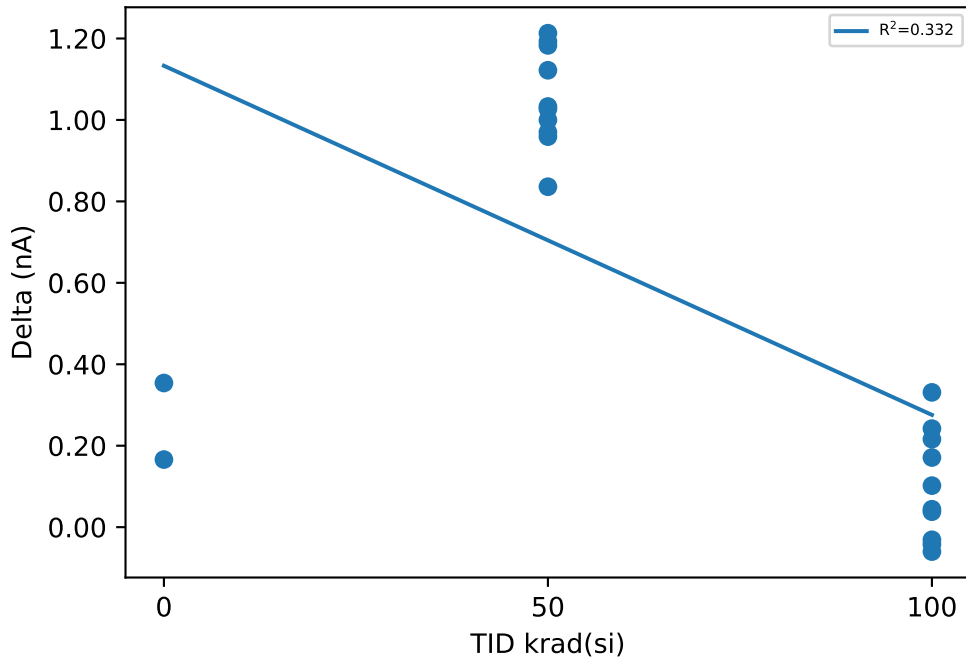
TID vs Result Stats



Test Results (Lower Limit = 0.0, Upper Limit = 12.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	1.821	3.014	1.193
36	50	LDR-Biased	2.005	2.975	0.97
37	50	LDR-Biased	1.908	3.121	1.213
39	50	LDR-Biased	2.272	3.108	0.836
40	50	LDR-Biased	2.05	3.009	0.959
41	50	LDR-Unbiased	1.957	3.14	1.183
42	50	LDR-Unbiased	1.981	3.014	1.033
43	50	LDR-Unbiased	2.055	3.055	1
44	50	LDR-Unbiased	1.967	2.994	1.027
45	50	LDR-Unbiased	1.912	3.034	1.122
55	100	LDR-Biased	1.821	1.992	0.171
56	100	LDR-Biased	2.005	2.336	0.331
57	100	LDR-Biased	1.908	2.15	0.242
59	100	LDR-Biased	2.272	2.212	-0.06
60	100	LDR-Biased	2.05	2.088	0.038
61	100	LDR-Unbiased	1.957	2.173	0.216
62	100	LDR-Unbiased	1.981	1.95	-0.031
63	100	LDR-Unbiased	2.055	2.099	0.044
64	100	LDR-Unbiased	1.967	2.069	0.102
65	100	LDR-Unbiased	1.912	1.87	-0.042
100	0	Correlation	1.775	2.129	0.354
101	0	Correlation	1.851	2.017	0.166

TID vs Post - Pre Exposure Delta

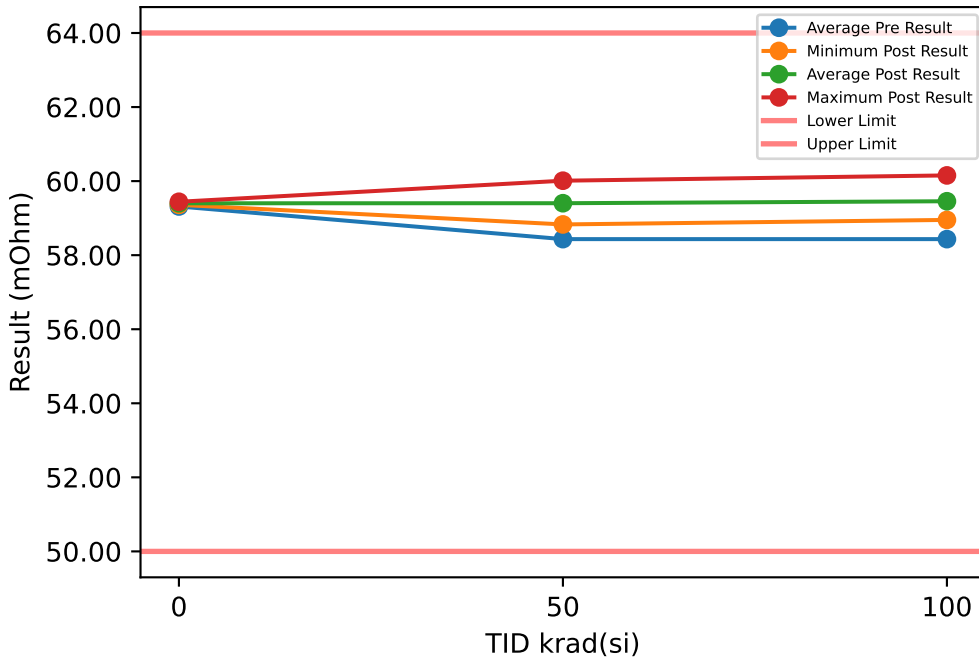


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.775	1.813	1.851	0.05374	2.017	2.073	2.129	0.079196	0.166	0.26	0.354	0.13294
50	1.821	1.9928	2.272	0.12045	2.975	3.0464	3.14	0.057436	0.836	1.0536	1.213	0.12182
100	1.821	1.9928	2.272	0.12045	1.87	2.0939	2.336	0.13493	-0.06	0.1011	0.331	0.13413

Device Test: 8.1 RdsOn_3p50A_4p5V

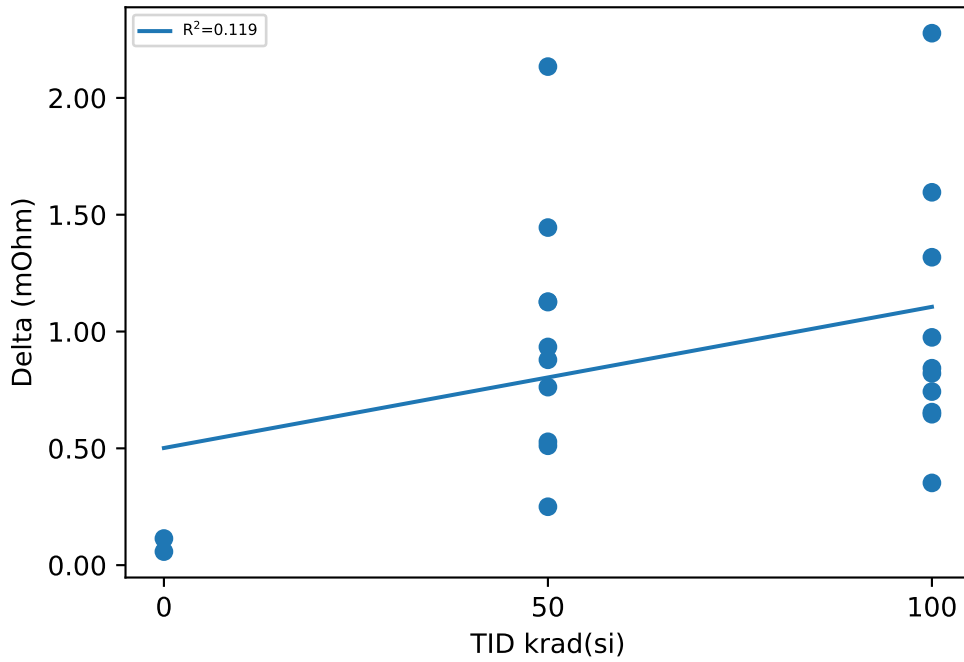
TID vs Result Stats



Test Results (Lower Limit = 50.0, Upper Limit = 64.0 (mOhm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	57.877	60.011	2.134
36	50	LDR-Biased	58.62	59.499	0.879
37	50	LDR-Biased	58.536	59.664	1.128
39	50	LDR-Biased	58.513	59.639	1.126
40	50	LDR-Biased	58.77	59.704	0.934
41	50	LDR-Unbiased	58.216	59.661	1.445
42	50	LDR-Unbiased	58.378	58.906	0.528
43	50	LDR-Unbiased	58.244	59.006	0.762
44	50	LDR-Unbiased	58.6	59.111	0.511
45	50	LDR-Unbiased	58.58	58.83	0.25
55	100	LDR-Biased	57.877	60.154	2.277
56	100	LDR-Biased	58.62	59.441	0.821
57	100	LDR-Biased	58.536	59.854	1.318
59	100	LDR-Biased	58.513	59.488	0.975
60	100	LDR-Biased	58.77	59.613	0.843
61	100	LDR-Unbiased	58.216	59.812	1.596
62	100	LDR-Unbiased	58.378	59.033	0.655
63	100	LDR-Unbiased	58.244	58.987	0.743
64	100	LDR-Unbiased	58.6	58.952	0.352
65	100	LDR-Unbiased	58.58	59.226	0.646
100	0	Correlation	59.384	59.442	0.058
101	0	Correlation	59.246	59.36	0.114

TID vs Post - Pre Exposure Delta

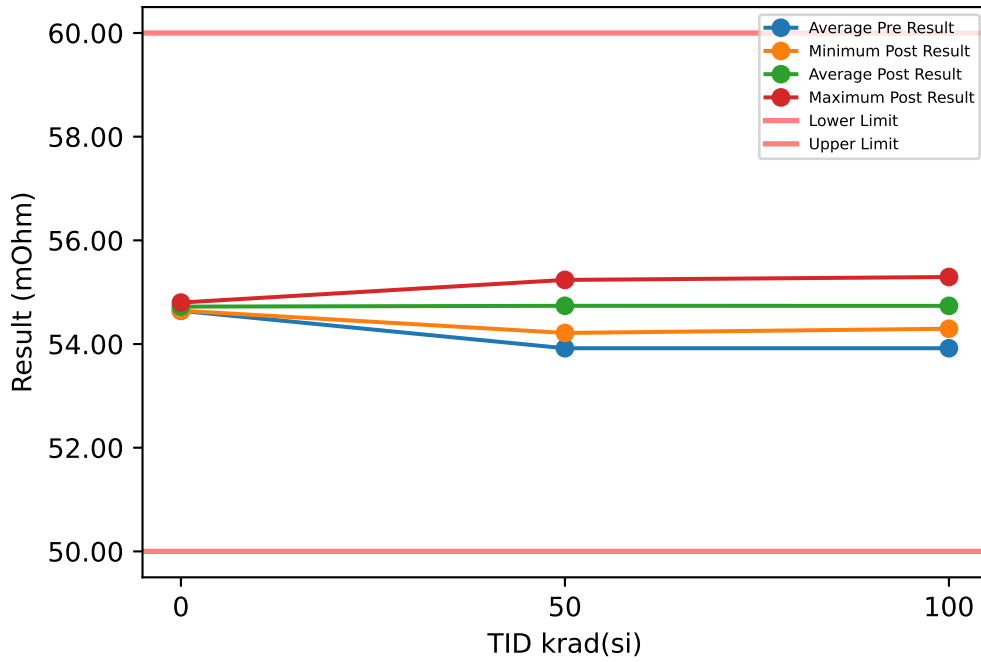


Test Statistics (mOhm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	59.246	59.315	59.384	0.097581	59.36	59.401	59.442	0.057983	0.058	0.086	0.114	0.039598
50	57.877	58.433	58.77	0.26034	58.83	59.403	60.011	0.40525	0.25	0.9697	2.134	0.53822
100	57.877	58.433	58.77	0.26034	58.952	59.456	60.154	0.4088	0.352	1.0226	2.277	0.56466

Device Test: 8.2 RdsOn_3p50A_6p0V

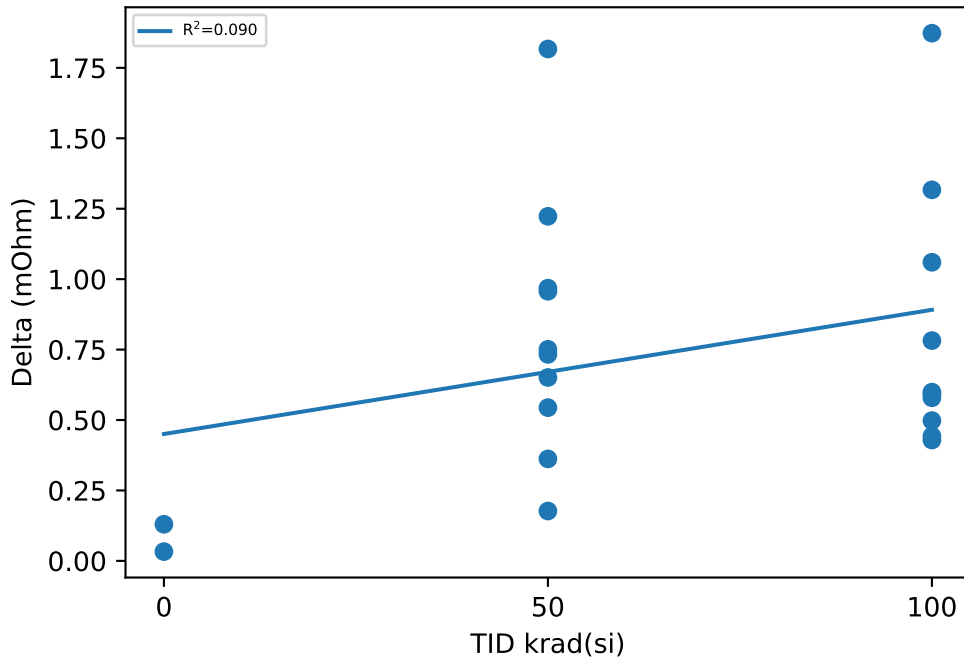
TID vs Result Stats



Test Results (Lower Limit = 50.0, Upper Limit = 60.0 (mOhm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	53.42	55.237	1.817
36	50	LDR-Biased	54.095	54.828	0.733
37	50	LDR-Biased	54.032	54.989	0.957
39	50	LDR-Biased	53.955	54.923	0.968
40	50	LDR-Biased	54.258	55.009	0.751
41	50	LDR-Unbiased	53.712	54.935	1.223
42	50	LDR-Unbiased	53.852	54.214	0.362
43	50	LDR-Unbiased	53.72	54.371	0.651
44	50	LDR-Unbiased	54.093	54.637	0.544
45	50	LDR-Unbiased	54.052	54.229	0.177
55	100	LDR-Biased	53.42	55.293	1.873
56	100	LDR-Biased	54.095	54.689	0.594
57	100	LDR-Biased	54.032	55.092	1.06
59	100	LDR-Biased	53.955	54.737	0.782
60	100	LDR-Biased	54.258	54.837	0.579
61	100	LDR-Unbiased	53.712	55.029	1.317
62	100	LDR-Unbiased	53.852	54.295	0.443
63	100	LDR-Unbiased	53.72	54.319	0.599
64	100	LDR-Unbiased	54.093	54.522	0.429
65	100	LDR-Unbiased	54.052	54.55	0.498
100	0	Correlation	54.67	54.8	0.13
101	0	Correlation	54.611	54.644	0.033

TID vs Post - Pre Exposure Delta

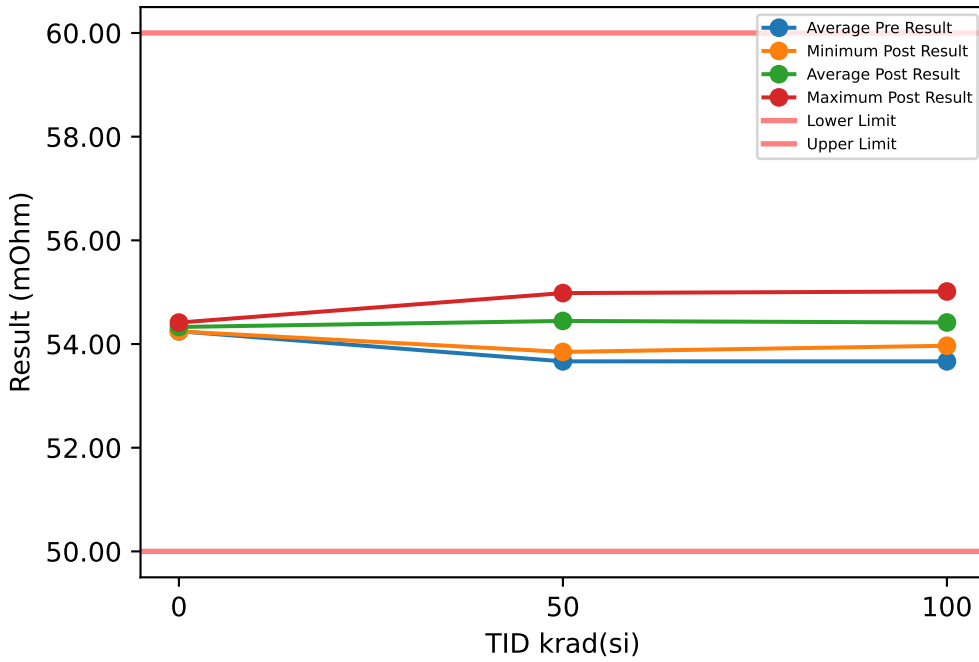


Test Statistics (mOhm)

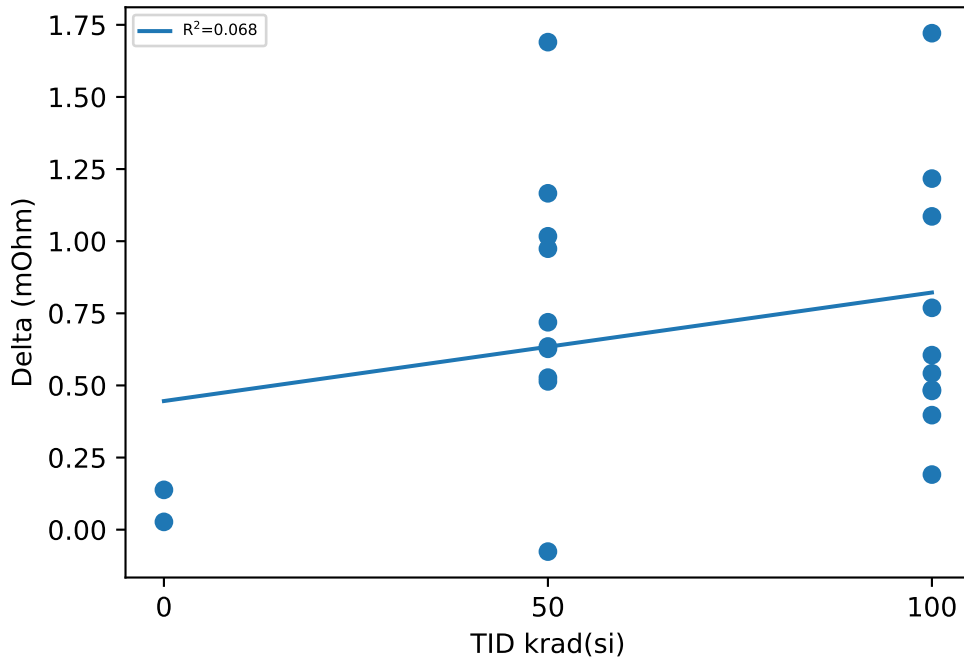
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	54.611	54.641	54.67	0.041719	54.644	54.722	54.8	0.11031	0.033	0.0815	0.13	0.068589
50	53.42	53.919	54.258	0.24582	54.214	54.737	55.237	0.3567	0.177	0.8183	1.817	0.46396
100	53.42	53.919	54.258	0.24582	54.295	54.736	55.293	0.33066	0.429	0.8174	1.873	0.46803

Device Test: 8.3 RdsOn_3p50A_9p0V

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 50.0, Upper Limit = 60.0 (mOhm))

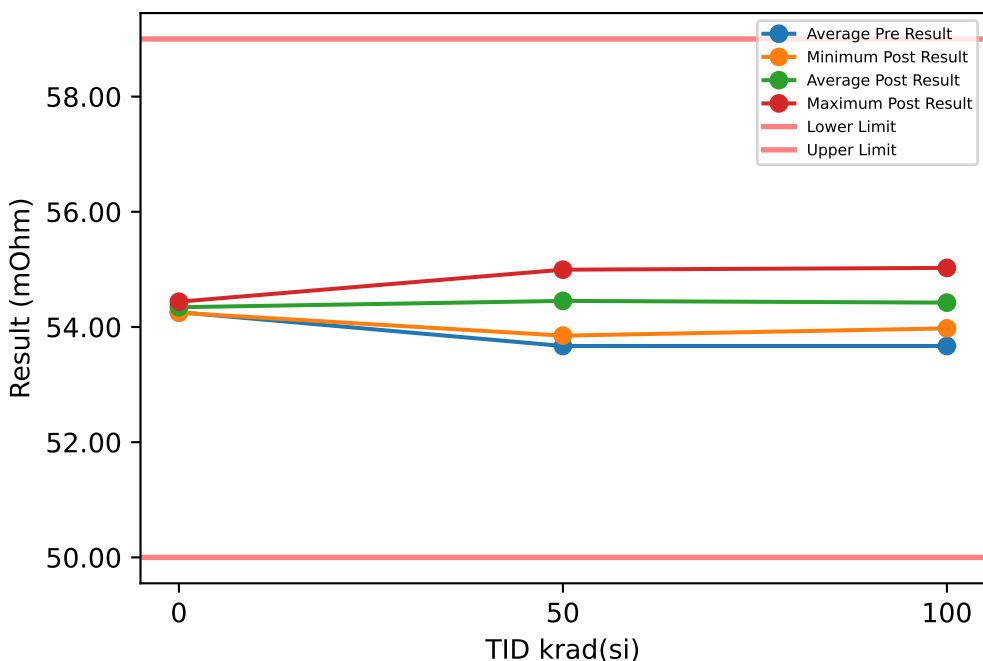
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	53.293	54.983	1.69
36	50	LDR-Biased	53.79	54.509	0.719
37	50	LDR-Biased	53.579	54.596	1.017
39	50	LDR-Biased	53.793	54.767	0.974
40	50	LDR-Biased	54.04	54.667	0.627
41	50	LDR-Unbiased	53.342	54.508	1.166
42	50	LDR-Unbiased	53.416	53.93	0.514
43	50	LDR-Unbiased	53.425	54.06	0.635
44	50	LDR-Unbiased	54.06	54.587	0.527
45	50	LDR-Unbiased	53.924	53.848	-0.076
55	100	LDR-Biased	53.293	55.014	1.721
56	100	LDR-Biased	53.79	54.271	0.481
57	100	LDR-Biased	53.579	54.665	1.086
59	100	LDR-Biased	53.793	54.562	0.769
60	100	LDR-Biased	54.04	54.525	0.485
61	100	LDR-Unbiased	53.342	54.559	1.217
62	100	LDR-Unbiased	53.416	54.021	0.605
63	100	LDR-Unbiased	53.425	53.967	0.542
64	100	LDR-Unbiased	54.06	54.457	0.397
65	100	LDR-Unbiased	53.924	54.115	0.191
100	0	Correlation	54.276	54.414	0.138
101	0	Correlation	54.217	54.244	0.027

Test Statistics (mOhm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	54.217	54.246	54.276	0.041719	54.244	54.329	54.414	0.12021	0.027	0.0825	0.138	0.078489
50	53.293	53.666	54.06	0.29163	53.848	54.446	54.983	0.37466	-0.076	0.7793	1.69	0.46982
100	53.293	53.666	54.06	0.29163	53.967	54.416	55.014	0.3239	0.191	0.7494	1.721	0.46166

Device Test: 8.4 RdsOn_3p50A_12p0V

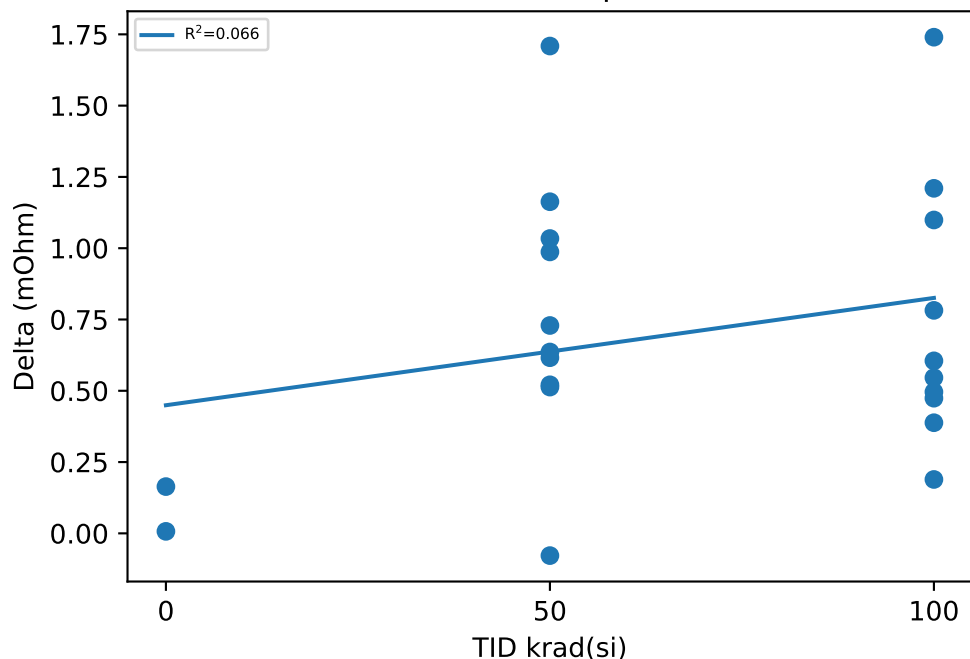
TID vs Result Stats



Test Results (Lower Limit = 50.0, Upper Limit = 59.0 (mOhm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	53.286	54.995	1.709
36	50	LDR-Biased	53.791	54.52	0.729
37	50	LDR-Biased	53.571	54.605	1.034
39	50	LDR-Biased	53.782	54.769	0.987
40	50	LDR-Biased	54.045	54.661	0.616
41	50	LDR-Unbiased	53.365	54.528	1.163
42	50	LDR-Unbiased	53.427	53.94	0.513
43	50	LDR-Unbiased	53.43	54.066	0.636
44	50	LDR-Unbiased	54.076	54.597	0.521
45	50	LDR-Unbiased	53.928	53.85	-0.078
55	100	LDR-Biased	53.286	55.026	1.74
56	100	LDR-Biased	53.791	54.287	0.496
57	100	LDR-Biased	53.571	54.67	1.099
59	100	LDR-Biased	53.782	54.564	0.782
60	100	LDR-Biased	54.045	54.519	0.474
61	100	LDR-Unbiased	53.365	54.575	1.21
62	100	LDR-Unbiased	53.427	54.032	0.605
63	100	LDR-Unbiased	53.43	53.976	0.546
64	100	LDR-Unbiased	54.076	54.464	0.388
65	100	LDR-Unbiased	53.928	54.117	0.189
100	0	Correlation	54.275	54.439	0.164
101	0	Correlation	54.24	54.247	0.007

TID vs Post - Pre Exposure Delta

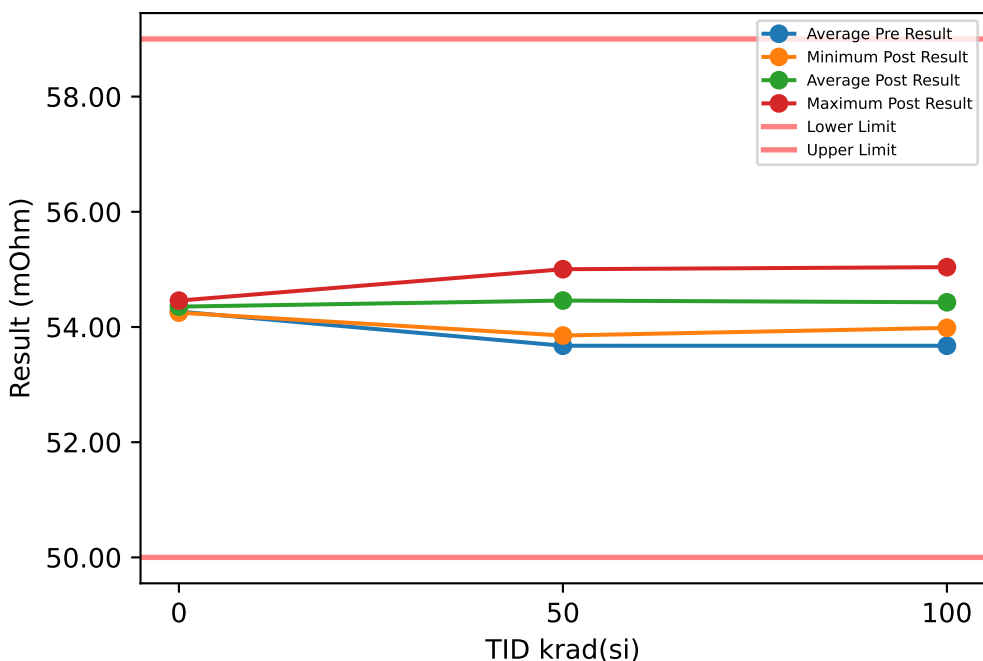


Test Statistics (mOhm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	54.24	54.258	54.275	0.024749	54.247	54.343	54.439	0.13576	0.007	0.0855	0.164	0.11102
50	53.286	53.67	54.076	0.29176	53.85	54.453	54.995	0.37526	-0.078	0.783	1.709	0.4763
100	53.286	53.67	54.076	0.29176	53.976	54.423	55.026	0.32375	0.189	0.7529	1.74	0.46709

Device Test: 8.5 RdsOn_3p50A_14p0V

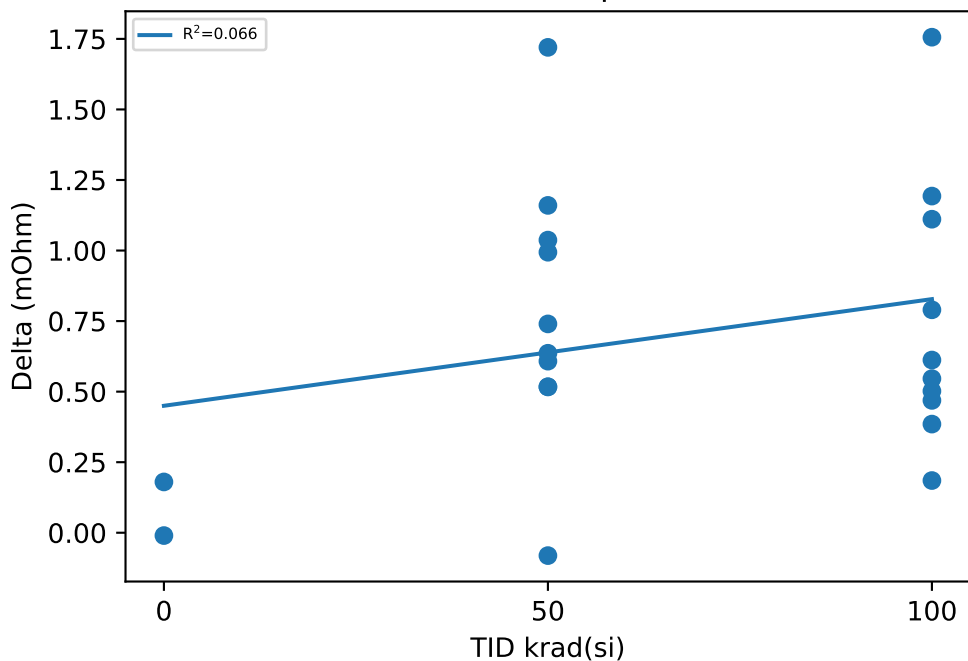
TID vs Result Stats



Test Results (Lower Limit = 50.0, Upper Limit = 59.0 (mOhm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
35	50	LDR-Biased	53.283	55.003	1.72
36	50	LDR-Biased	53.791	54.531	0.74
37	50	LDR-Biased	53.568	54.605	1.037
39	50	LDR-Biased	53.776	54.77	0.994
40	50	LDR-Biased	54.052	54.66	0.608
41	50	LDR-Unbiased	53.378	54.538	1.16
42	50	LDR-Unbiased	53.434	53.951	0.517
43	50	LDR-Unbiased	53.439	54.075	0.636
44	50	LDR-Unbiased	54.089	54.606	0.517
45	50	LDR-Unbiased	53.933	53.852	-0.081
55	100	LDR-Biased	53.283	55.039	1.756
56	100	LDR-Biased	53.791	54.293	0.502
57	100	LDR-Biased	53.568	54.679	1.111
59	100	LDR-Biased	53.776	54.566	0.79
60	100	LDR-Biased	54.052	54.521	0.469
61	100	LDR-Unbiased	53.378	54.571	1.193
62	100	LDR-Unbiased	53.434	54.046	0.612
63	100	LDR-Unbiased	53.439	53.985	0.546
64	100	LDR-Unbiased	54.089	54.474	0.385
65	100	LDR-Unbiased	53.933	54.118	0.185
100	0	Correlation	54.278	54.458	0.18
101	0	Correlation	54.259	54.249	-0.01

TID vs Post - Pre Exposure Delta



Test Statistics (mOhm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	54.259	54.269	54.278	0.013435	54.249	54.353	54.458	0.14779	-0.01	0.085	0.18	0.13435
50	53.283	53.674	54.089	0.29266	53.852	54.459	55.003	0.37437	-0.081	0.7848	1.72	0.47972
100	53.283	53.674	54.089	0.29266	53.985	54.429	55.039	0.3237	0.185	0.7549	1.756	0.47064

8 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Revision A (March 2022) to Revision B (June 2026)	Page
• Updated Appendix C data.....	11

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