Radiation Report

TPS7H2211-SEP Total Ionizing Dose (TID) Radiation Report

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1 Device Information

1.1 Product Description

The TPS7H2211-SEP is a radiation-tolerant single channel eFuse (integrated FET load switch with additional features) 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 4.5 V to 14 V and supports a maximum continuous current of 3.5 A

The TPS7H2211-SEP 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 TPS7H2211 is available in a ceramic and plastic package with an exposed thermal pad allowing for improved thermal performance. A standard microcircuit drawing (SMD) is available for the QML 5962R1822001VXC. A vendor item drawing (VID) is available for the -SEP variant, V62/23609.

1.2 Device Details

Table 1-1 lists the device information used in the lookahead TID HDR characterization.

Table 1-1. Device and Exposure Details

TID HDR and LDR Details: up to 50 krad(Si)	
TI Device Number	TPS7H2211-QLMP (TPS7H2211MDAPTSEP)
Package	32-pin HTSSOP (DAP)
Technology	Linear BiCMOS 7 (LBC7)
Die Lot Number	1203077
A/T Lot Number and Date Code	3531001 and 35C4KDK
Quantity Tested	30 irradiated units
Lot Accept or Reject	All levels tested and passed up to 50 krad(Si)
HDR Radiation Facility	DCLAB - Texas Instruments, Dallas, TX
HDR Dose Level	20 krad(Si), 30 krad(Si) and 50 krad (Si)
HDR Dose Rate	200 rad/s
HDR Radiation Source	Gammacell 220 Excel (GC-220E) Co-60
Irradiation Temperature	Ambient, room temperature

Figure 1-1. Device Used in Exposure

2 Total Dose Test Setup

2.1 Test Overview

The TPS7H2211-SEP was tested according to MIL-STD-883, Test Method 1019.9. For this testing, Condition A was used. For Condition A, the product was irradiated up to target radiation level and then put through full electrical parametric testing on the production Automated Test Equipment (ATE). All devices were fully functional, and passed all electrical parametric tests with the readings within the data-sheet electrical specification limits.

2.2 Test Description and Facilities

The TPS7H2211-SEP HDR exposure was performed on biased and unbiased devices in a Co-60 gamma cell at TI facility in Dallas CLAB (DCLAB), Texas. The un-attenuated dose rate of this cell is 200 rads(Si)/s. After exposure, the devices were packed in dry ice (per MIL-STD-883 Method 1019.9 section 3.10) and brought to Junkins lab in TI Dallas for full post-radiation electrical evaluation using Texas Instruments ATE. ATE test limits are set per data sheet electrical limits based on preliminary 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

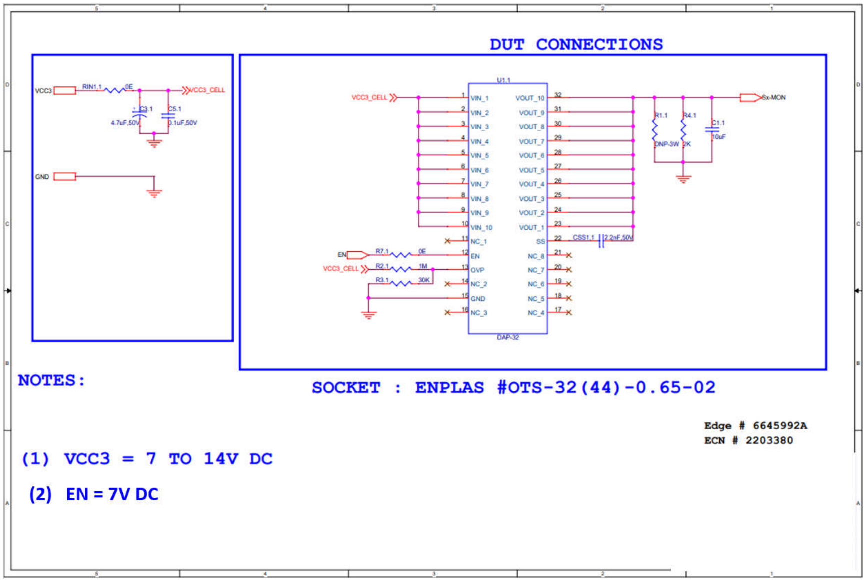
The devices under HDR exposure were tested in biased and unbiased conditions as described as follows.

2.3.1 Unbiased

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

2.3.2 Biased

The TPS7H2211-SEP was biased with 14 V on the Vin pins, and 7 V on the enable pin. Figure 2-1 shows the biased diagram that was used for HDR exposure.



Sequence = VCC3, VCC2. Bulk capacitors added to all PS.

Figure 2-1. Bias Diagram Used in TID Exposure

Table 2-1. Biased Configuration

VCC3 (V)	VCC3 (mA/device)	VCC2 (V)	VCC2 (mA/device)
14	12	7	6.5

2.4 Test Configuration and Condition

HDR devices were stressed at 20 krad(Si), 30 krad(Si) and 50 krad(Si) for biased and unbiased conditions.

Table 2-2. HDR 20 krad(Si), 30 krad(Si) and 50 krad(Si) Biased Device Information

Total Samples: 15		
Exposure Levels		
20 krad(Si)	30 krad(Si)	50 krad(Si)
6, 7, 8, 9, 10	16, 17, 18, 19, 20	26, 27, 28, 29, 30

Table 2-3. HDR 20 krad(Si), 30 krad(Si) and 50 krad(Si) Unbiased Device Information

Total Samples: 15		
Exposure Levels		
20 krad(Si)	30 krad(Si)	50 krad(Si)
1, 2, 3, 4, 5	11, 12, 13, 14, 15	21, 22, 23, 24, 25

3 TID Characterization Test Results

3.1 TID Characterization Summary Results

The parametric data for the TPS7H2211-SEP passes up to 50-krad(Si) HDR TID irradiation. The drifts of the electrical parameters through HDR were within the data sheet limits.

Overall, the TPS7H2211-SEP showed a strong degree of hardness to HDR TID irradiation up to 50 krad(Si) for biased exposure conditions. The measurements taken post-irradiation for each sample set showed a marginal shift for most parameters at each dose level. The parameters that did show a greater degree of change between pre- and post-irradiation were still within the electrical performance characteristics specified in the data sheet electrical parameters. See Section 3.2 below for parameters and associated tests.

See Appendix A for HDR report up to 50 krad(Si).

3.2 TPS7H2211-SEP Specification Compliance Matrix

Parameter	Test Conditions	MIN	TYP	MAX	Unit	SPECID	Test Number
POWER SUPPLIES AND CURRENTS							
VIN_{UVLOR}		3.2	3.4	3.8	V	VIN_UVLO_RISE	5
VIN_{UVLOF}		2.6	2.9	3.2	V	VIN_UVLO_FALL	5.1
$HYST_{VIN\text{-}UVLO}$			0.55	0.75	V	VIN_UVLO_HYST	5.2
I_Q	IOUT = 0 mA, EN = 7 V, IOUT = 0 mA, EN = 7 V		5	10	mA	IQ_VIN	3
I_F	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 14 V		1	1.3	mA	FORWARD_LEAKAGE	4.9
I_F	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 12 V		0.65	0.94	mA	FORWARD_LEAKAGE_12V	4.7
I_F	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 9 V		0.15	0.49	mA	FORWARD_LEAKAGE_9V	4.5
I_F	EN = 0 V, VOUT = 0 V, measured VOUT current, VIN = 4.5 V		0.04	0.23	mA	FORWARD_LEAKAGE_4p5V	4.1
I_{SD} VIN	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 14 V		6.9	10	mA	ISD_VIN_14V	4.8
I_{SD} VIN	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 12 V		5.9	9.5	mA	ISD_VIN_12V	4.6
I_{SD} VIN	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 9 V		4.4	8	mA	ISD_VIN_9V	4.4
I_{SD} VIN	EN = 0 V, VOUT = 0 V, measured VIN current, VIN = 4.5 V		3.7	7	mA	ISD_VIN_4p5V	4
V_{RCP_ENTER}	EN = 7 V, VIN = 4.5 V		390		mV	NS92N7_1	
V_{RCP_ENTER}	EN = 7 V, VIN = 14 V		363		mV	NSPQQO_1	
V_{RCP_EXIT}	EN = 7 V, VIN = 4.5 V		264		mV	NSMFME_1	
V_{RCP_EXIT}	EN = 7 V, VIN = 14 V		249		mV	NSY0QQ_1	
t_{RCP}	EN = 7 V, VIN = 4.5 V		208		µs	NS8C9O_1	
t_{RCP}	EN = 7 V, VIN = 14 V		247		µs	NSOWO7_1	

Parameter	Test Conditions	MIN	TYP	MAX	Unit	SPECID	Test Number
I_{RCP}	EN = 0 V, VOUT = 0 to 14 V and VOUT > VIN, EN = 0 V, VOUT = 0 to 14 V and VOUT > VIN		44	250	µA	IRCP_EN_0V	3.1, 3.3
I_{RCP}	EN = 7 V, VIN = 0 V, VOUT = 0 to 14 V, EN = 7 V, VIN = 0 V, VOUT = 0 to 14 V		37	240	µA	IRCP_EN_7V	3.4, 3.5
SOFT START							
I_{SS}			65	83	µA	SS_I_Charge	6.3, 6.7
ENABLE (EN) INPUT							
V_{IHEN}		0.59	0.63	0.67	V	EN_VTH_RISING_PLASTIC	6, 6.4
V_{ILEN}		0.49	0.52	0.55	V	EN_VTH_FALLING_PLASTIC	6.1, 6.5
$HYST_{EN}$		95	106	1	mV	EN_HYST_PLASTIC	6.2, 6.6
t_{LOW}	RTIMER = 0 V, RTIMER = 0 V	20			µs	EN_LOW_TIME_SHORT_RETRY	
t_{LOW_OFF}	VOUT falls to < 90%	47			µs	EN_LOW_TIME_CYCLING_PLASTIC	
VIN_{EN}		75%				VIN_EN_PERCENTAGE	
I_{EN}	EN = 7 V, VIN = 14 V, EN = 7 V, VIN = 14 V		2	12	nA	IEN_VIN	6.8, 6.9
OVERVOLTAGE PROTECTION (OVP)							
V_{OVPR}		1.07	1.15	1.22	V	OVP_VTH_Rising_PLASTIC	7, 7.3
V_{OVPF}		1.04	1.12	1.19	V	OVP_VTH_Falling_PLASTIC	7.1, 7.4
$HYST_{OVP}$	4.6 V < VIN < 14 V, 4.6 V < VIN < 14 V	24	28	33	mV	OVP_HYST_PLASTIC	7.2, 7.5
I_{OVP}	OVP = 7 V, OVP = 7 V		1.5	12	nA	OVP_ILEAK	7.6, 7.7
CURRENT LIMIT							
I_{L_trip}	VIN = 12 V, CSS = 2 nF, VIN = 12 V, CSS = 2 nF		8		A	NSFVE3_1	
I_{L_peak}	VIN = 12 V, 10 Ω to 10 mΩ short in 1 µs, switch inductance = 270 nH, VIN = 12 V, 10 Ω to 10 mΩ short in 1 µs, switch inductance = 270 nH		25		A	FTO_Current_Limit	
t_{ftr}	VIN = 12 V, 10 Ω to 10 mΩ short in 1 µs, switch inductance = 270 nH, VIN = 12 V, 10 Ω to 10 mΩ short in 1 µs, switch inductance = 270 nH		2.3		µs	Current_Limit_Timer	
t_{fto}	VIN = 12 V, CSS = 2 nF, VIN = 12 V, CSS = 2 nF		51		µs	FTO_OFF_TIME	
THERMAL SHUTDOWN							
Thermal shutdown			155		°C	Thermal_SHDN	
Thermal shutdown hysteresis			20		°C	Thermal_SHDN_Hyst	

Parameter	**Test Conditions**	**MIN**	**TYP**	**MAX**	**Unit**	**SPECID**	**Test Number**
RESISTANCE CHARACTERISTICS							
R_{ON}	VIN = 14 V, I_{out} = 3.5 A		44.3	46	mΩ	RON_VIN_14V_25_Plastic	8.4
R_{ON}	VIN = 12 V, I_{out} = 3.5 A		44	46	mΩ	RON_VIN_12V_25_Plastic	8.3
R_{ON}	VIN = 9 V, I_{out} = 3.5 A		43.6	45	mΩ	RON_VIN_9V_25_Plastic	8.2
R_{ON}	VIN = 6 V, I_{out} = 3.5 A		43.5	45	mΩ	RON_VIN_6V_25_Plastic	8.1
R_{ON}	VIN = 4.5 V, I_{out} = 3.5 A		47.6	49	mΩ	RON_VIN_4P5V_25_Plastic	8.0

4 Applicable and Reference Documents

4.1 Applicable Documents

- Texas Instruments, *TPS7H2211-SEP Radiation-Tolerant 14-V, 3.5-A eFuse*, data sheet.
- Texas Instruments, *Single Event Effects Report of the TPS7H2211-SEP Sink and Source DDR Termination LDO Regulator*, radiation report.
- Texas Instruments, *TPS7H2211-SEP DDR Termination Evaluation Module*, EVM user's guide.

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.

5 Revision History

Changes from Revision A (August 2023) to Revision B (September 2023) **Page**

- Updated device image and lot information.. 2
- Added unbiased section... 4
- Added unbiased table, updated biased and unbiased serial numbers to reflect new data................................ 4
- Updated specification compliance matrix with new plastic limits...5
- Updated data report with new production device data, including 15 biased units, 15 unbiased units, and five correlation units... 10

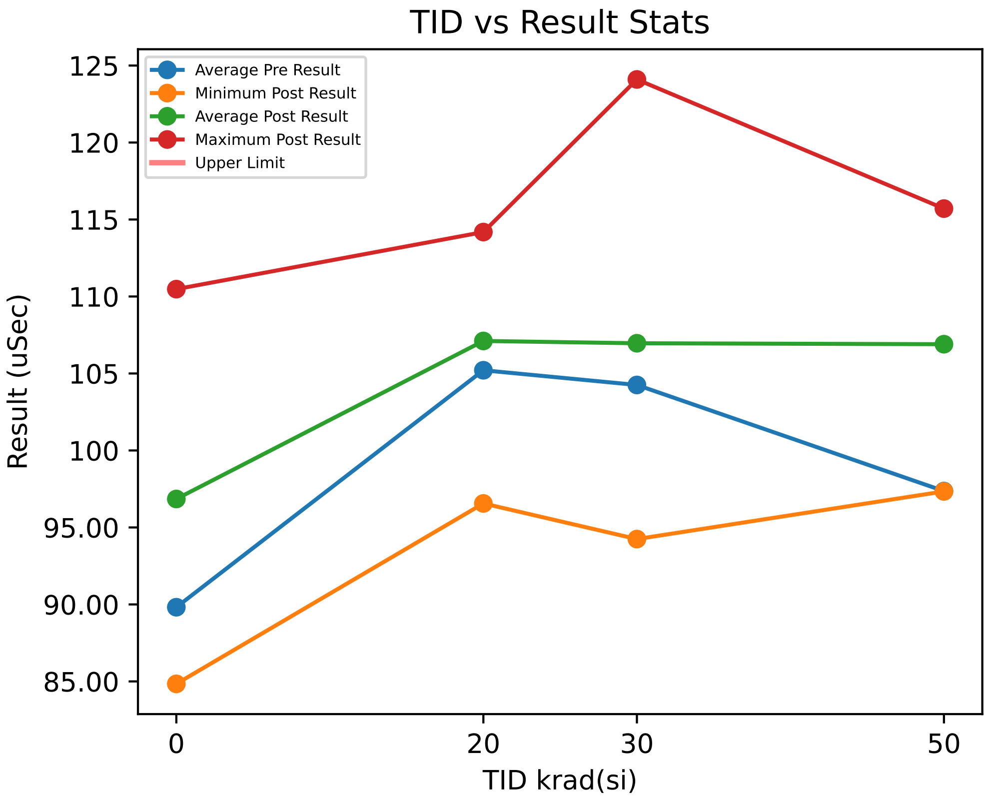
Changes from Revision * (August 2023) to Revision A (August 2023) **Page**

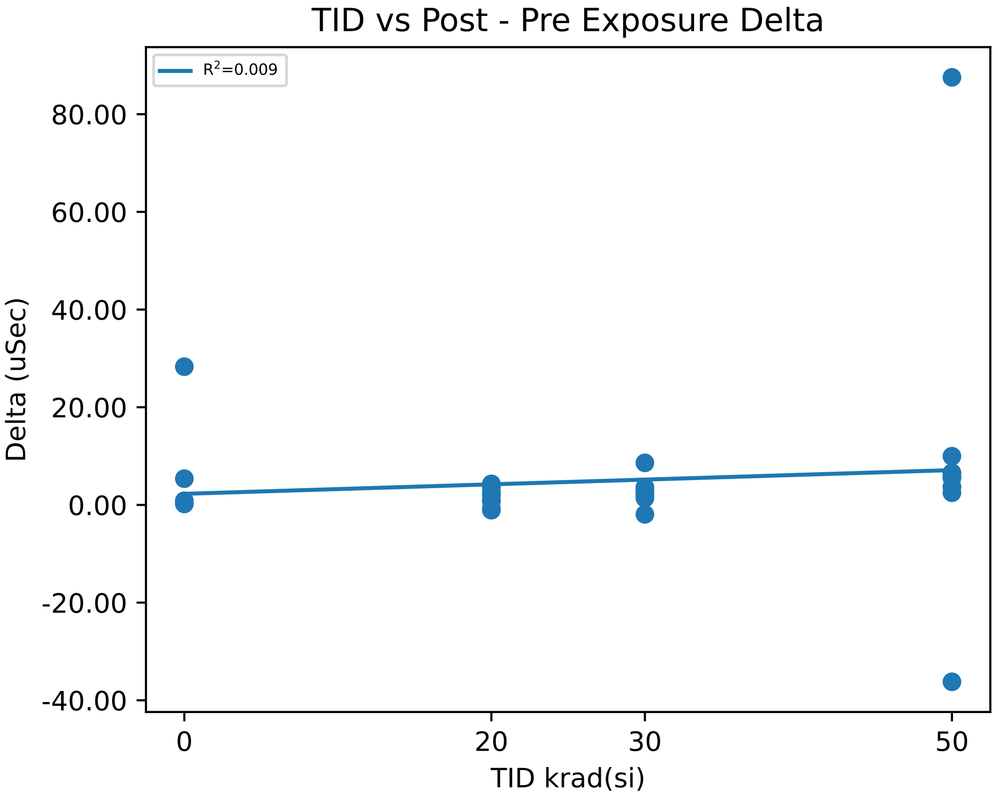
- Changed forward leakage test measurement unit from mA to uA 10
- Changed Vin_uvlo_Hysteresis test measurement unit from V to mV... 10

A Appendix: HDR TID Report Data

This appendix contains the HDR TID report data.

Device Test: 11.0 tON_VIN(TON_5p0V)





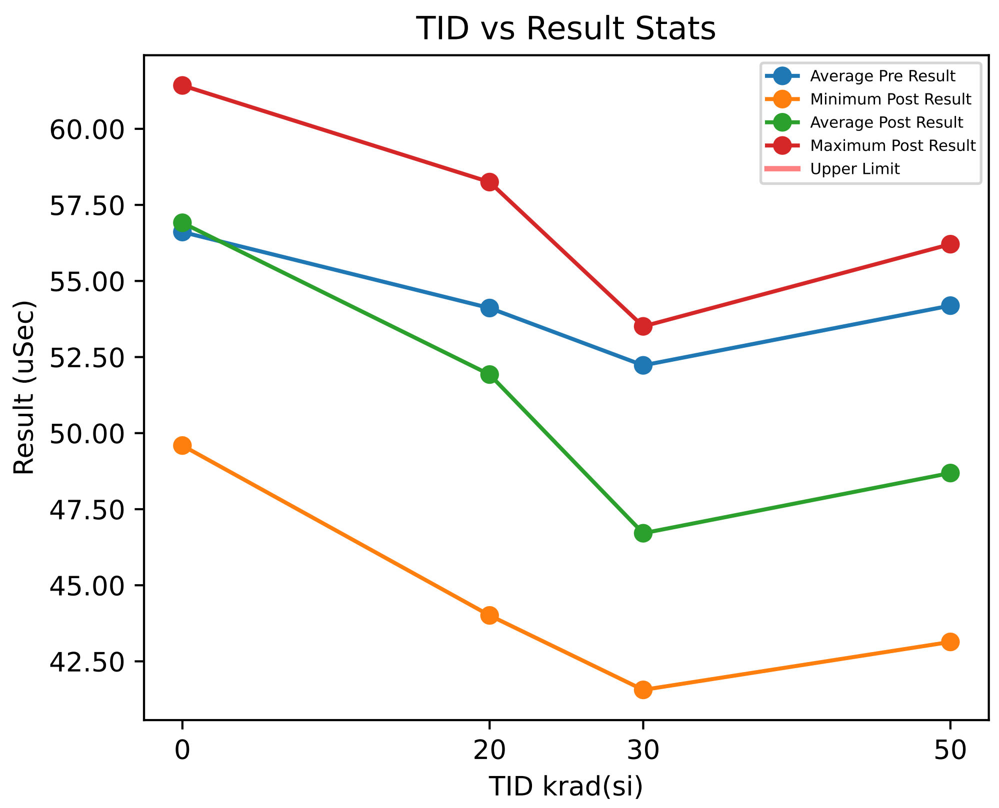
Test Results (No Limits Specified (uSec))

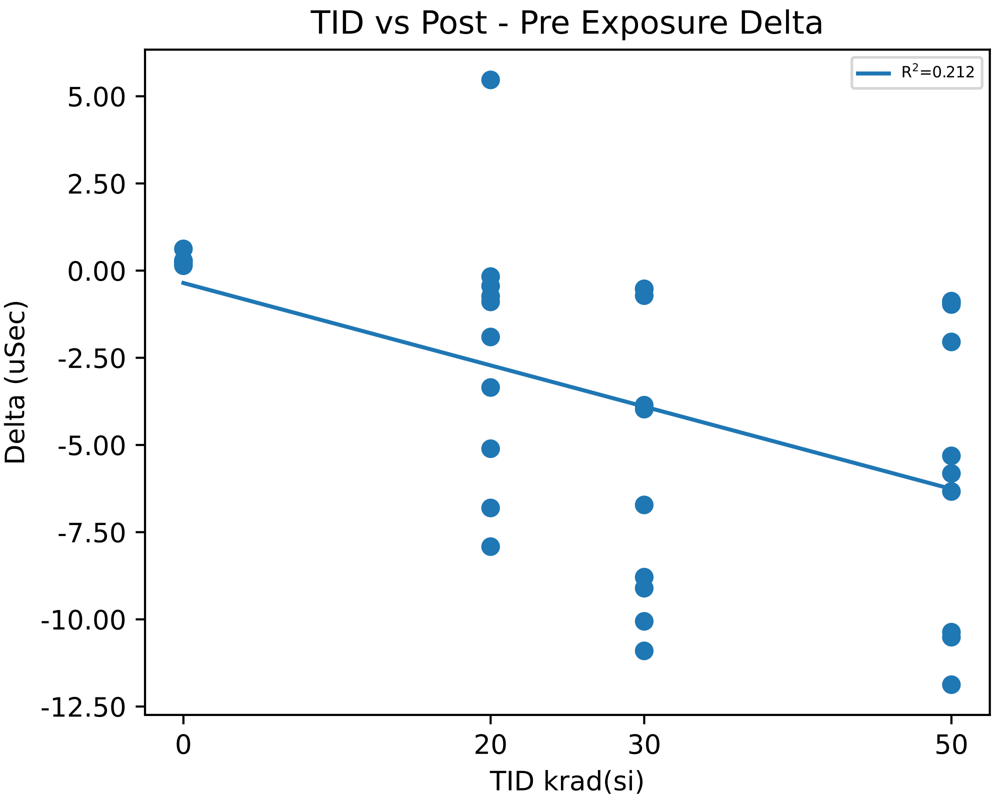
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	107.22	108.01	0.795
2	20	Unbiased	106.78	105.7	-1.08
3	20	Unbiased	105.99	106.96	0.968
4	20	Unbiased	109.87	114.19	4.312
5	20	Unbiased	105.13	104.44	-0.686
6	20	14V Biased	106.56	110.53	3.964
7	20	14V Biased	100.12	102.97	2.856
8	20	14V Biased	108.03	111.77	3.742
9	20	14V Biased	107.73	109.99	2.26
10	20	14V Biased	94.663	96.559	1.896
11	30	Unbiased	108.33	111.25	2.927
12	30	Unbiased	96.17	94.244	-1.926
13	30	Unbiased	102.36	105.8	3.44
14	30	Unbiased	106.99	109.04	2.046
15	30	Unbiased	106.31	107.97	1.66
16	30	14V Biased	107.78	109.17	1.39
17	30	14V Biased	99.815	102.54	2.725
18	30	14V Biased	115.48	124.1	8.614
19	30	14V Biased	102.55	106.18	3.624
20	30	14V Biased	96.746	99.334	2.588
21	50	Unbiased	103.09	108.6	5.514
22	50	Unbiased	103.16	109.54	6.38
23	50	Unbiased	101.55	107.3	5.752
24	50	Unbiased	104.71	108.34	3.633
25	50	Unbiased	93.629	97.34	3.711
26	50	14V Biased	96.766	103.35	6.587
27	50	14V Biased	106.28	108.77	2.496
28	50	14V Biased	141.75	105.54	-36.207
29	50	14V Biased	16.982	104.52	87.541
30	50	14V Biased	105.73	115.71	9.98
31	0	Correlation	88.869	89.29	0.421
32	0	Correlation	99.733	100.58	0.852
33	0	Correlation	79.467	84.84	5.373
34	0	Correlation	82.176	110.48	28.302
35	0	Correlation	98.845	99.048	0.203

Test Statistics (uSec)

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	79.467	89.818	99.733	9.3037	84.84	96.848	110.48	10.073	0.203	7.0302	28.302	12.08
20	94.663	105.21	109.87	4.4988	96.559	107.11	114.19	5.0564	-1.08	1.9027	4.312	1.8907
30	96.17	104.25	115.48	5.9136	94.244	106.96	124.1	7.9139	-1.926	2.7088	8.614	2.6048
50	16.982	97.363	141.75	31.149	97.34	106.9	115.71	4.7688	-36.207	9.5387	87.541	30.45

Device Test: 11.1 tOFF_VIN(TOFF_5p0V)





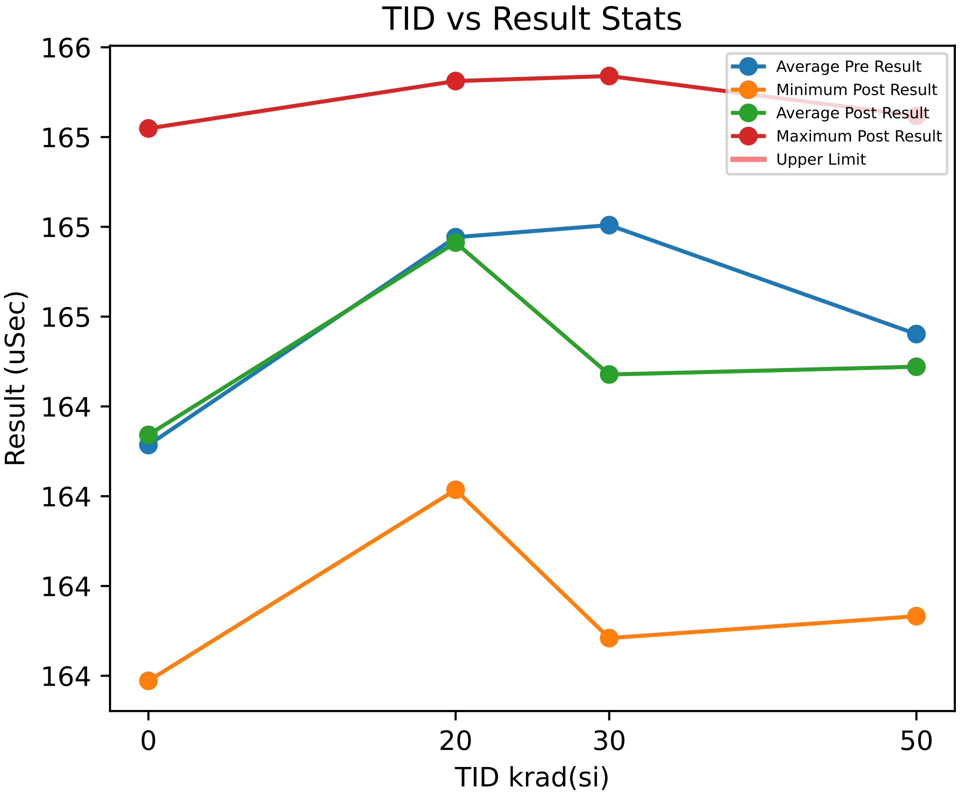
Test Results (No Limits Specified (uSec))

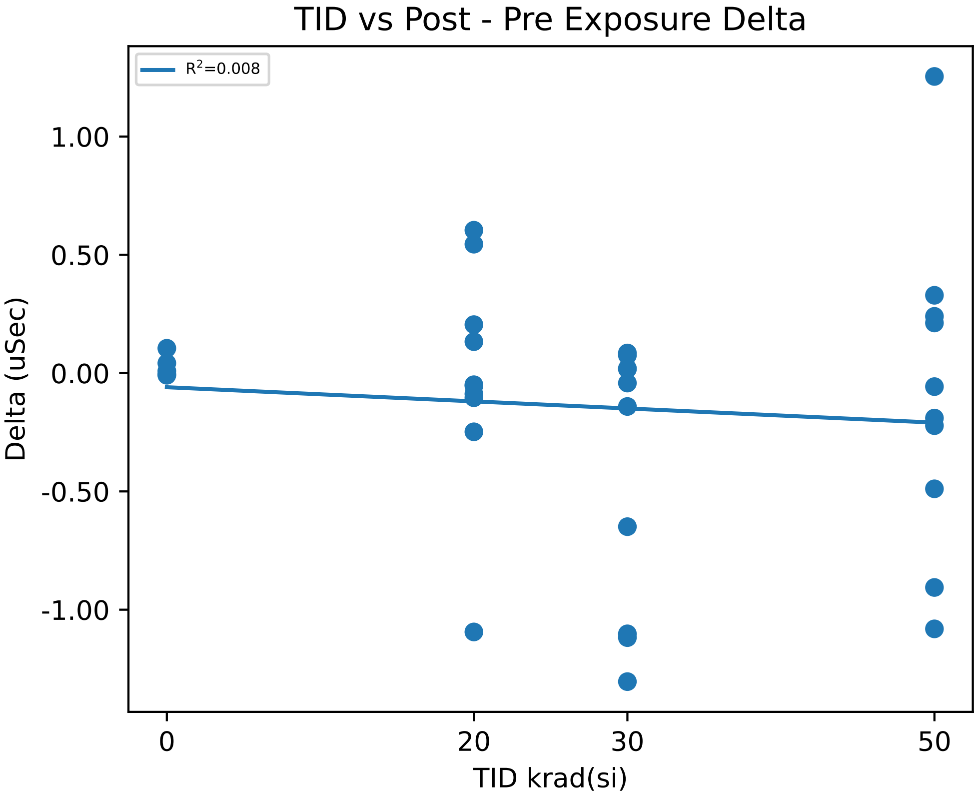
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	49.487	54.956	5.469
2	20	Unbiased	55.308	54.572	-0.736
3	20	Unbiased	55.199	54.302	-0.897
4	20	Unbiased	45.998	45.555	-0.443
5	20	Unbiased	54.518	54.347	-0.171
6	20	14V Biased	49.116	44.009	-5.107
7	20	14V Biased	60.153	58.25	-1.903
8	20	14V Biased	56.679	48.764	-7.915
9	20	14V Biased	55.886	49.08	-6.806
10	20	14V Biased	58.766	55.414	-3.352
11	30	Unbiased	55.394	48.675	-6.719
12	30	Unbiased	48.365	47.647	-0.718
13	30	Unbiased	54.922	50.95	-3.972
14	30	Unbiased	54.031	53.508	-0.523
15	30	Unbiased	46.144	45.616	-0.528
16	30	14V Biased	45.421	41.562	-3.859
17	30	14V Biased	53.428	44.638	-8.79
18	30	14V Biased	53.044	43.937	-9.107
19	30	14V Biased	54.319	43.415	-10.904
20	30	14V Biased	57.205	47.148	-10.057
21	50	Unbiased	57.084	56.209	-0.875
22	50	Unbiased	54.96	49.143	-5.817
23	50	Unbiased	46.665	44.62	-2.045
24	50	Unbiased	56.654	55.682	-0.972
25	50	Unbiased	46.845	45.935	-0.91
26	50	14V Biased	57.069	46.557	-10.512
27	50	14V Biased	50.035	43.701	-6.334
28	50	14V Biased	59.918	54.606	-5.312
29	50	14V Biased	57.658	47.291	-10.367
30	50	14V Biased	55.012	43.138	-11.874
31	0	Correlation	58.502	58.7	0.198
32	0	Correlation	55.159	55.453	0.294
33	0	Correlation	61.163	61.426	0.263
34	0	Correlation	59.253	59.393	0.14
35	0	Correlation	48.969	49.592	0.623

Test Statistics (uSec)

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	48.969	56.609	61.163	4.7902	49.592	56.913	61.426	4.6217	0.14	0.3036	0.623	0.1882
20	45.998	54.111	60.153	4.5075	44.009	51.925	58.25	4.7283	-7.915	-2.1861	5.469	3.8528
30	45.421	52.227	57.205	4.0832	41.562	46.71	53.508	3.6463	-10.904	-5.5177	-0.523	4.1187
50	46.665	54.19	59.918	4.6747	43.138	48.688	56.209	5.0222	-11.874	-5.5018	-0.875	4.2839

Device Test: 11.2 tF_VIN_EN(TFALL_5p0V)





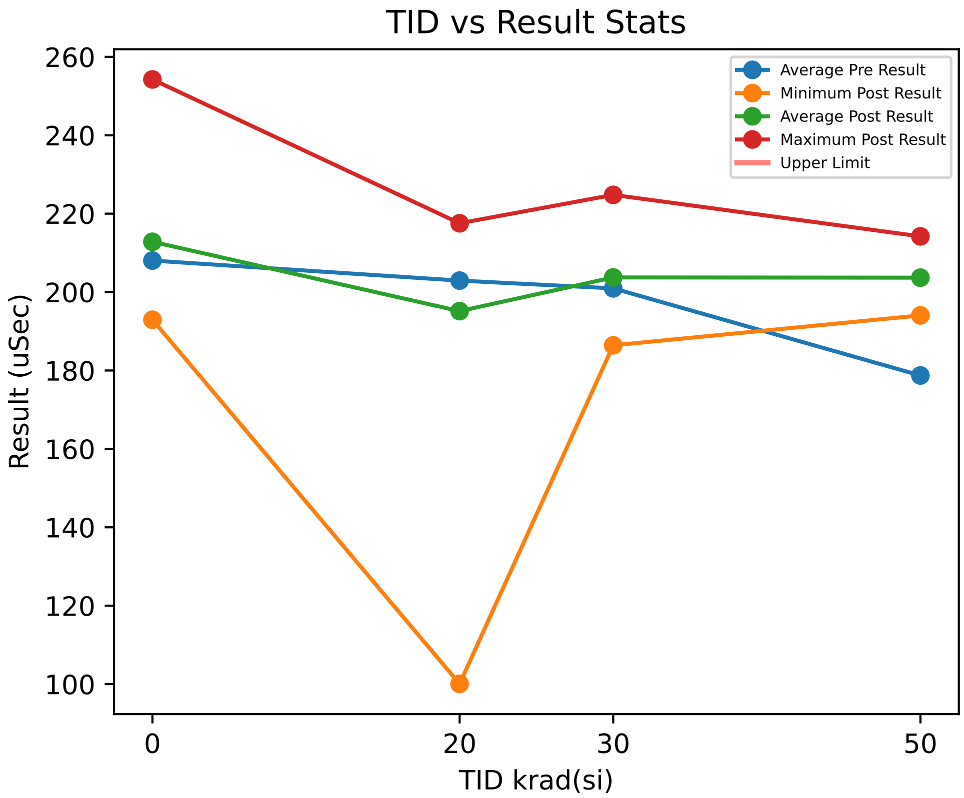
Test Results (No Limits Specified (uSec))

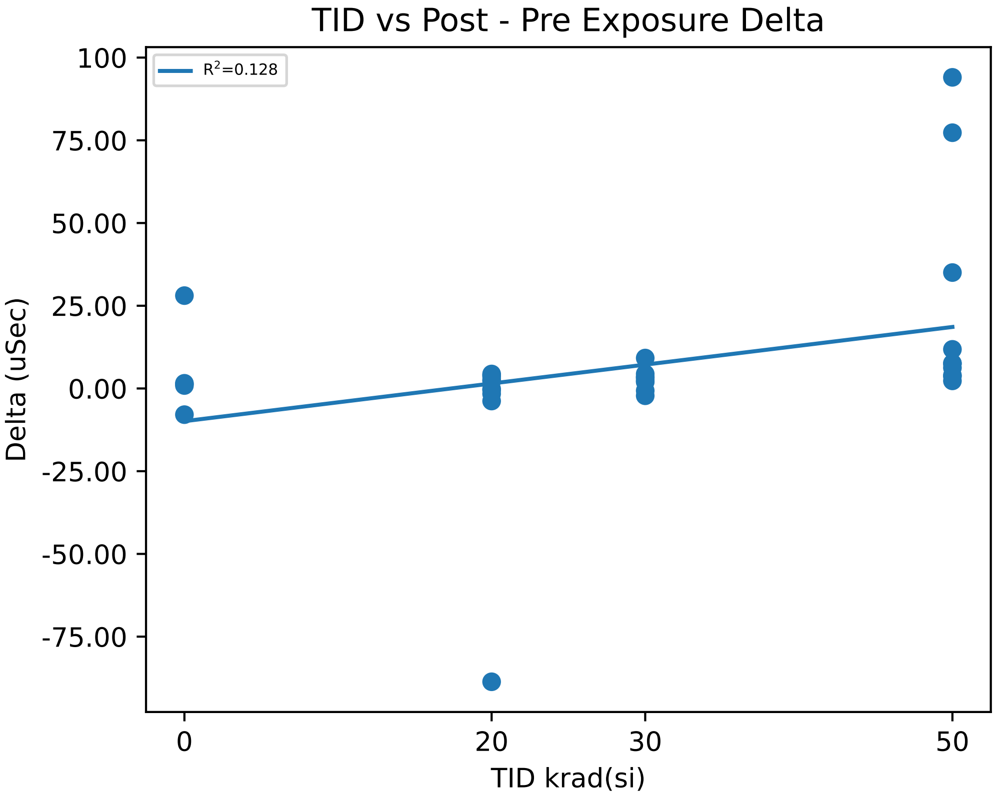
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	165.46	165.41	-0.049
2	20	Unbiased	165.08	164.98	-0.104
3	20	Unbiased	165.36	165.3	-0.054
4	20	Unbiased	164.71	164.46	-0.248
5	20	Unbiased	165.07	164.98	-0.088
6	20	14V Biased	165.36	164.27	-1.094
7	20	14V Biased	164.25	164.8	0.545
8	20	14V Biased	164.66	164.8	0.133
9	20	14V Biased	165.06	165.26	0.205
10	20	14V Biased	164.71	165.31	0.604
11	30	Unbiased	164.92	164.88	-0.042
12	30	Unbiased	165.2	165.21	0.017
13	30	Unbiased	165.34	165.42	0.075
14	30	Unbiased	165.03	165.04	0.02
15	30	Unbiased	164.85	164.71	-0.141
16	30	14V Biased	164.5	163.85	-0.649
17	30	14V Biased	165.04	163.94	-1.102
18	30	14V Biased	165.34	164.22	-1.118
19	30	14V Biased	165.4	164.09	-1.304
20	30	14V Biased	164.44	164.52	0.085
21	50	Unbiased	164.71	164.92	0.212
22	50	Unbiased	165.34	165.15	-0.19
23	50	Unbiased	164.41	163.92	-0.489
24	50	Unbiased	164.8	165.04	0.24
25	50	Unbiased	164.79	164.56	-0.222
26	50	14V Biased	164.42	164.36	-0.057
27	50	14V Biased	165.3	164.22	-1.081
28	50	14V Biased	164.06	165.31	1.254
29	50	14V Biased	164.19	164.51	0.329
30	50	14V Biased	165.02	164.12	-0.906
31	0	Correlation	164.55	164.54	-0.005
32	0	Correlation	164.79	164.78	-0.009
33	0	Correlation	163.73	163.77	0.042
34	0	Correlation	163.73	163.74	0.009
35	0	Correlation	165.17	165.27	0.105

Test Statistics (uSec)

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	163.73	164.39	165.17	0.64647	163.74	164.42	165.27	0.66467	-0.009	0.0284	0.105	0.047284
20	164.25	164.97	165.46	0.38265	164.27	164.96	165.41	0.38166	-1.094	-0.015	0.604	0.47158
30	164.44	165	165.4	0.33773	163.85	164.59	165.42	0.55165	-1.304	-0.4159	0.085	0.5668
50	164.06	164.7	165.34	0.43882	163.92	164.61	165.31	0.47185	-1.081	-0.091	1.254	0.66814

Device Test: 11.3 tON_VIN_EN_1p5V(TON_12p0V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

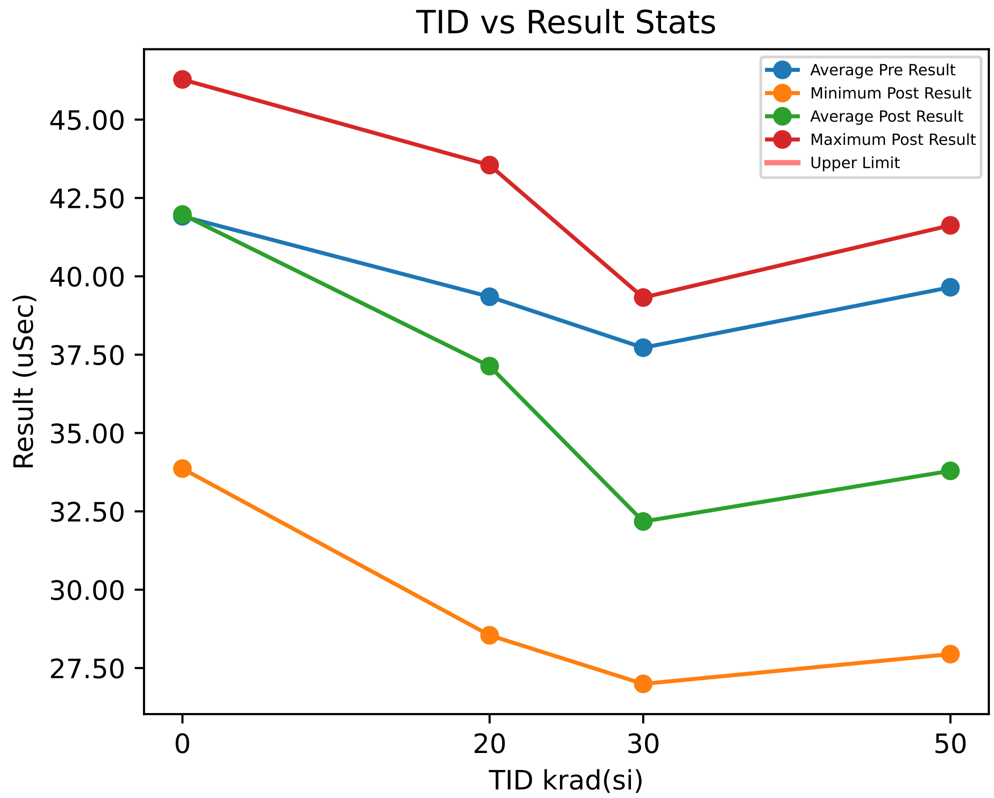
Test Results (No Limits Specified (uSec))

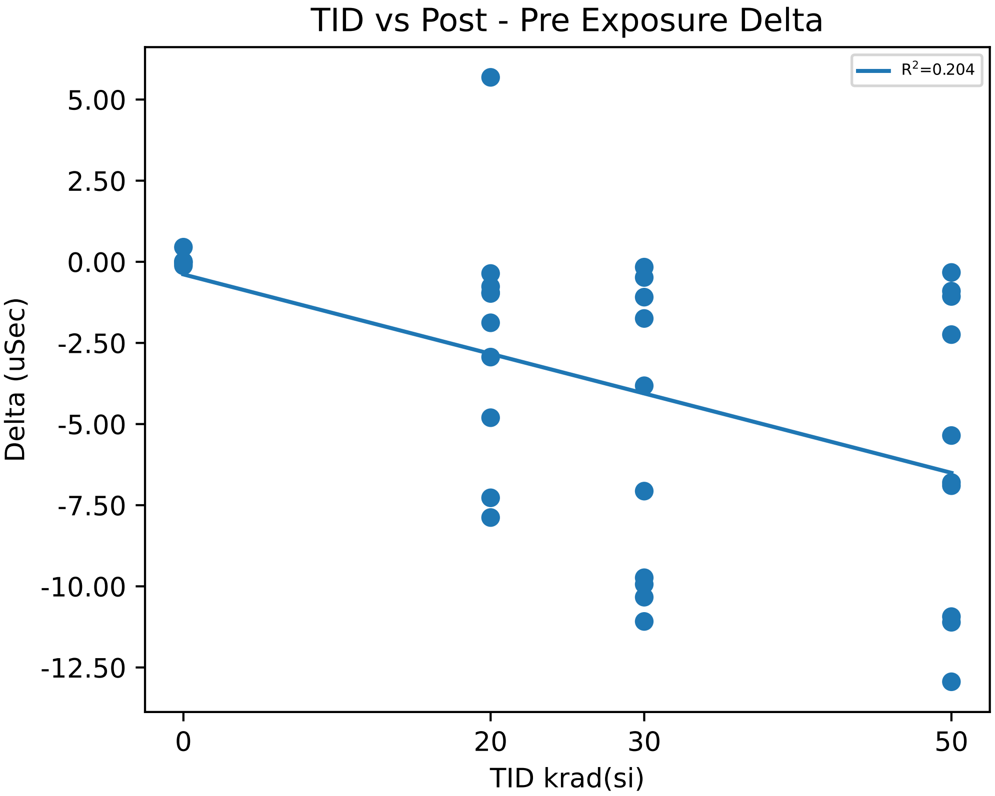
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	210.61	210.47	-0.144
2	20	Unbiased	204.81	201.01	-3.795
3	20	Unbiased	204.15	203.63	-0.522
4	20	Unbiased	213.5	217.55	4.05
5	20	Unbiased	201.38	199.76	-1.617
6	20	14V Biased	202.98	207.35	4.378
7	20	14V Biased	188.7	100.06	-88.642
8	20	14V Biased	205.16	208.77	3.612
9	20	14V Biased	205.61	207.8	2.192
10	20	14V Biased	192.37	195.04	2.674
11	30	Unbiased	204.57	207.88	3.306
12	30	Unbiased	188.62	186.42	-2.203
13	30	Unbiased	202.81	206.51	3.702
14	30	Unbiased	203.16	205.82	2.664
15	30	Unbiased	201.99	203.98	1.987
16	30	14V Biased	209.4	208.74	-0.662
17	30	14V Biased	192.58	194.78	2.196
18	30	14V Biased	215.6	224.79	9.197
19	30	14V Biased	201.94	206.33	4.396
20	30	14V Biased	188.82	192.08	3.261
21	50	Unbiased	197.47	204.96	7.496
22	50	Unbiased	203.69	211.3	7.617
23	50	Unbiased	195.03	201.29	6.264
24	50	Unbiased	200.65	204.62	3.976
25	50	Unbiased	190.35	194.04	3.691
26	50	14V Biased	119.53	196.83	77.296
27	50	14V Biased	202.16	204.46	2.296
28	50	14V Biased	112.32	206.35	94.027
29	50	14V Biased	163.67	198.71	35.031
30	50	14V Biased	202.39	214.21	11.821
31	0	Correlation	187.71	215.77	28.062
32	0	Correlation	192.65	194	1.353
33	0	Correlation	262.15	254.24	-7.912
34	0	Correlation	205.62	207.19	1.563
35	0	Correlation	192.06	192.95	0.891

Test Statistics (uSec)

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	187.71	208.04	262.15	30.983	192.95	212.83	254.24	25.026	-7.912	4.7914	28.062	13.605
20	188.7	202.93	213.5	7.4872	100.06	195.14	217.55	33.996	-88.642	-7.7814	4.378	28.538
30	188.62	200.95	215.6	8.684	186.42	203.73	224.79	10.649	-2.203	2.7844	9.197	3.0333
50	112.32	178.73	203.69	35.126	194.04	203.68	214.21	6.2321	2.296	24.951	94.027	33.574

Device Test: 11.4 tOFF_VIN_EN_1p5V(TOFF_12p0V)





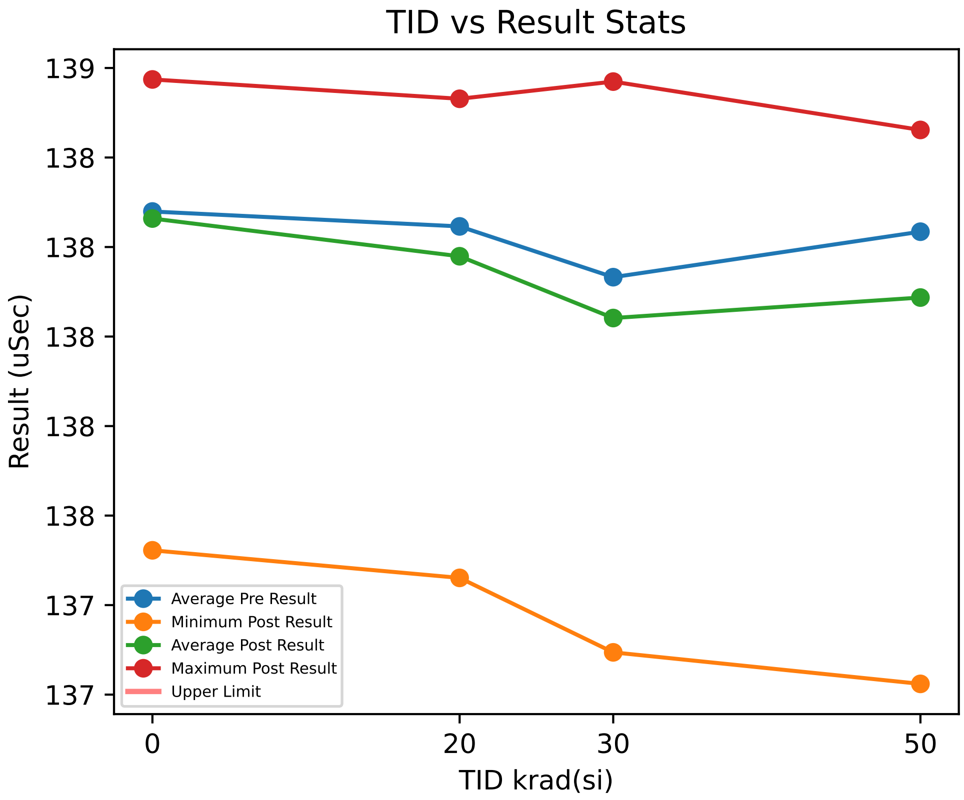
Test Results (No Limits Specified (uSec))

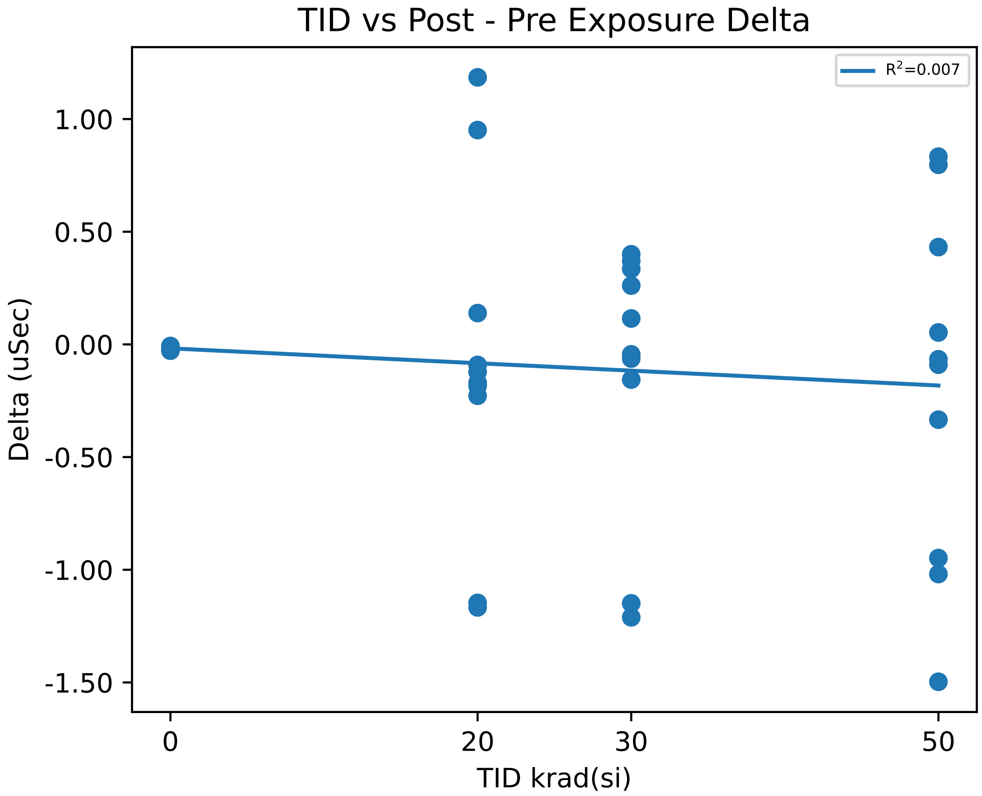
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	34.455	40.139	5.684
2	20	Unbiased	41.116	40.353	-0.763
3	20	Unbiased	40.547	39.6	-0.947
4	20	Unbiased	30.815	29.839	-0.976
5	20	Unbiased	40.121	39.761	-0.36
6	20	14V Biased	33.35	28.546	-4.804
7	20	14V Biased	45.428	43.549	-1.879
8	20	14V Biased	42.375	34.495	-7.88
9	20	14V Biased	41.327	34.055	-7.272
10	20	14V Biased	43.944	41.008	-2.936
11	30	Unbiased	40.547	33.481	-7.066
12	30	Unbiased	33.343	33.179	-0.164
13	30	Unbiased	41.069	39.323	-1.746
14	30	Unbiased	39.633	39.15	-0.483
15	30	Unbiased	31.679	30.59	-1.089
16	30	14V Biased	30.814	26.995	-3.819
17	30	14V Biased	39.411	29.676	-9.735
18	30	14V Biased	38.945	29.006	-9.939
19	30	14V Biased	39.311	28.229	-11.082
20	30	14V Biased	42.47	32.135	-10.335
21	50	Unbiased	41.954	41.626	-0.328
22	50	Unbiased	40.151	33.252	-6.899
23	50	Unbiased	31.936	29.693	-2.243
24	50	Unbiased	41.897	40.993	-0.904
25	50	Unbiased	32.024	30.956	-1.068
26	50	14V Biased	42.719	31.786	-10.933
27	50	14V Biased	35.63	28.829	-6.801
28	50	14V Biased	45.553	40.2	-5.353
29	50	14V Biased	43.752	32.644	-11.108
30	50	14V Biased	40.885	27.944	-12.941
31	0	Correlation	43.637	44.088	0.451
32	0	Correlation	40.837	40.849	0.012
33	0	Correlation	46.334	46.282	-0.052
34	0	Correlation	44.78	44.779	-0.001
35	0	Correlation	33.987	33.865	-0.122

Test Statistics (uSec)

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	33.987	41.915	46.334	4.8661	33.865	41.973	46.282	4.9477	-0.122	0.0576	0.451	0.22613
20	30.815	39.348	45.428	4.8196	28.546	37.135	43.549	5.0766	-7.88	-2.2133	5.684	3.8886
30	30.814	37.722	42.47	4.1589	26.995	32.176	39.323	4.2644	-11.082	-5.5458	-0.164	4.5292
50	31.936	39.65	45.553	4.7964	27.944	33.792	41.626	5.2025	-12.941	-5.8578	-0.328	4.6768

Device Test: 11.5 tF_VIN_EN_1p5V(TFALL_12p0V)





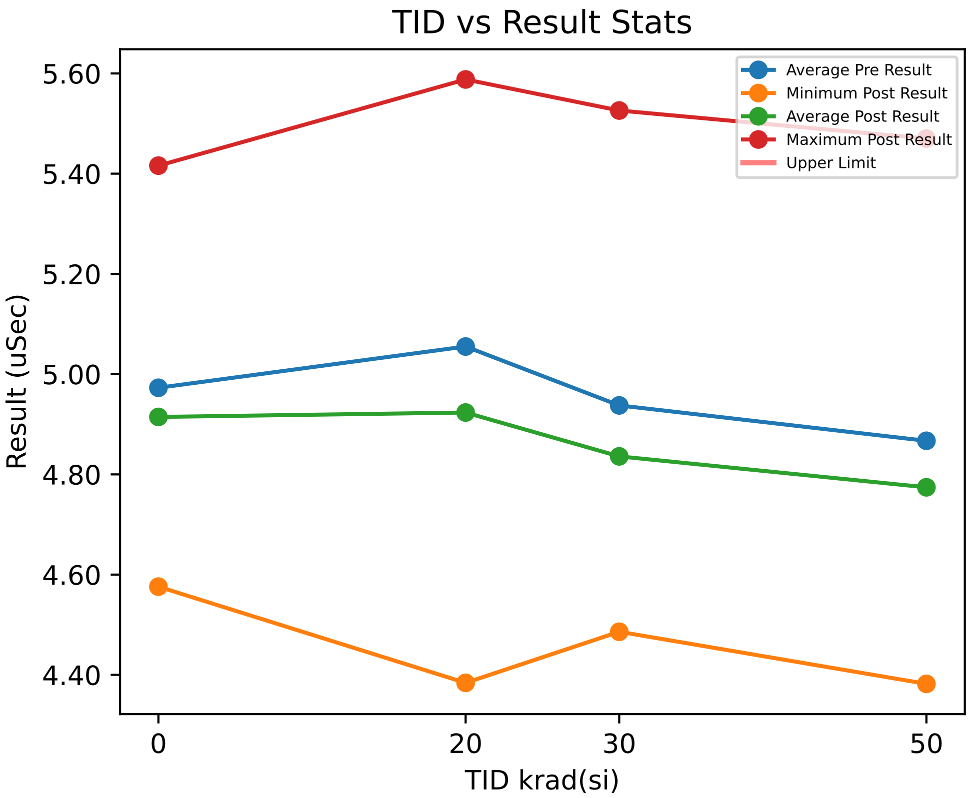
Test Results (No Limits Specified (uSec))

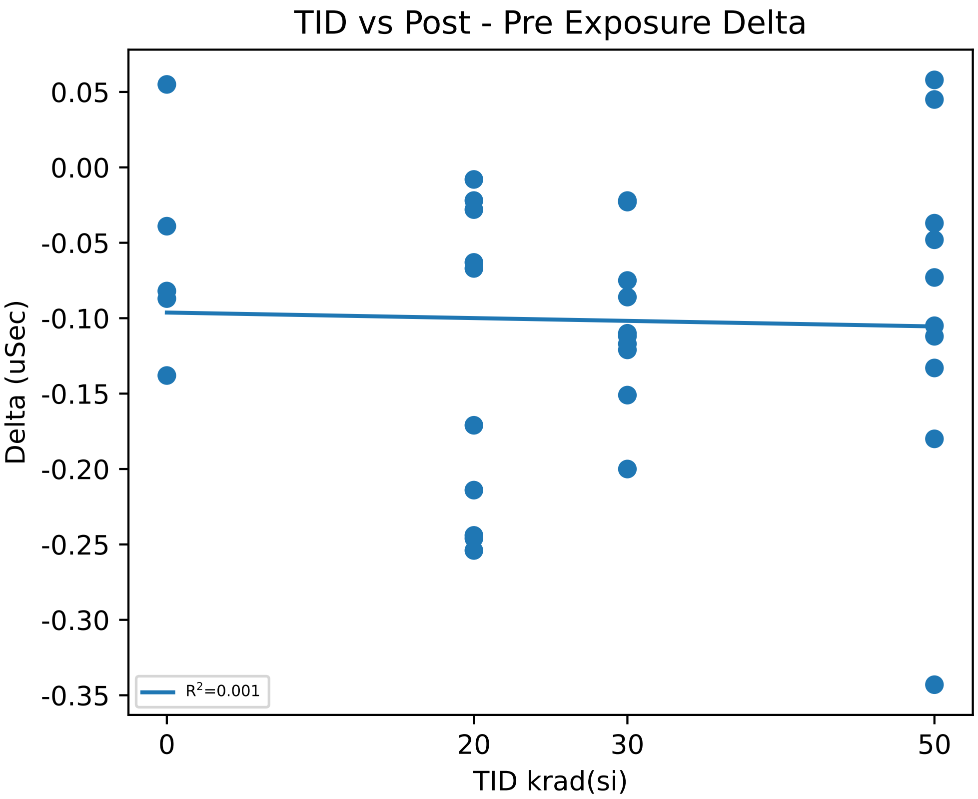
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	137.42	138.37	0.951
2	20	Unbiased	138.44	138.26	-0.184
3	20	Unbiased	138.57	138.41	-0.17
4	20	Unbiased	138.38	138.52	0.139
5	20	Unbiased	138.31	138.22	-0.091
6	20	14V Biased	137.36	138.54	1.185
7	20	14V Biased	138.79	138.66	-0.122
8	20	14V Biased	138.49	137.33	-1.167
9	20	14V Biased	138.59	137.45	-1.147
10	20	14V Biased	138.72	138.49	-0.228
11	30	Unbiased	138.33	137.12	-1.211
12	30	Unbiased	137.31	137.27	-0.044
13	30	Unbiased	138.46	138.31	-0.156
14	30	Unbiased	138.2	138.14	-0.063
15	30	Unbiased	137.71	138.11	0.4
16	30	14V Biased	138.38	138.71	0.335
17	30	14V Biased	138.18	138.3	0.115
18	30	14V Biased	138.3	138.56	0.261
19	30	14V Biased	138.3	138.67	0.371
20	30	14V Biased	138.49	137.34	-1.149
21	50	Unbiased	138.64	138.58	-0.066
22	50	Unbiased	138.33	137.31	-1.019
23	50	Unbiased	137.46	138.29	0.833
24	50	Unbiased	138.6	138.51	-0.09
25	50	Unbiased	137.88	138.32	0.432
26	50	14V Biased	138.49	137.55	-0.948
27	50	14V Biased	137.76	138.55	0.797
28	50	14V Biased	138.73	138.4	-0.334
29	50	14V Biased	138.53	137.03	-1.497
30	50	14V Biased	138.51	138.56	0.053
31	0	Correlation	138.7	138.67	-0.024
32	0	Correlation	138.33	138.32	-0.013
33	0	Correlation	138.74	138.72	-0.026
34	0	Correlation	138.54	138.54	-0.007
35	0	Correlation	137.43	137.4	-0.028

Test Statistics (uSec)

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	137.43	138.35	138.74	0.53784	137.4	138.33	138.72	0.54069	-0.028	-0.0196	-0.007	0.0091269
20	137.36	138.31	138.79	0.50513	137.33	138.22	138.66	0.46215	-1.167	-0.0834	1.185	0.75084
30	137.31	138.17	138.49	0.3718	137.12	138.05	138.71	0.5965	-1.211	-0.1141	0.4	0.59423
50	137.46	138.29	138.73	0.4361	137.03	138.11	138.58	0.58373	-1.497	-0.1839	0.833	0.78049

Device Test: 12.0 OVP_Assert(T_ASSERT_5p0V)





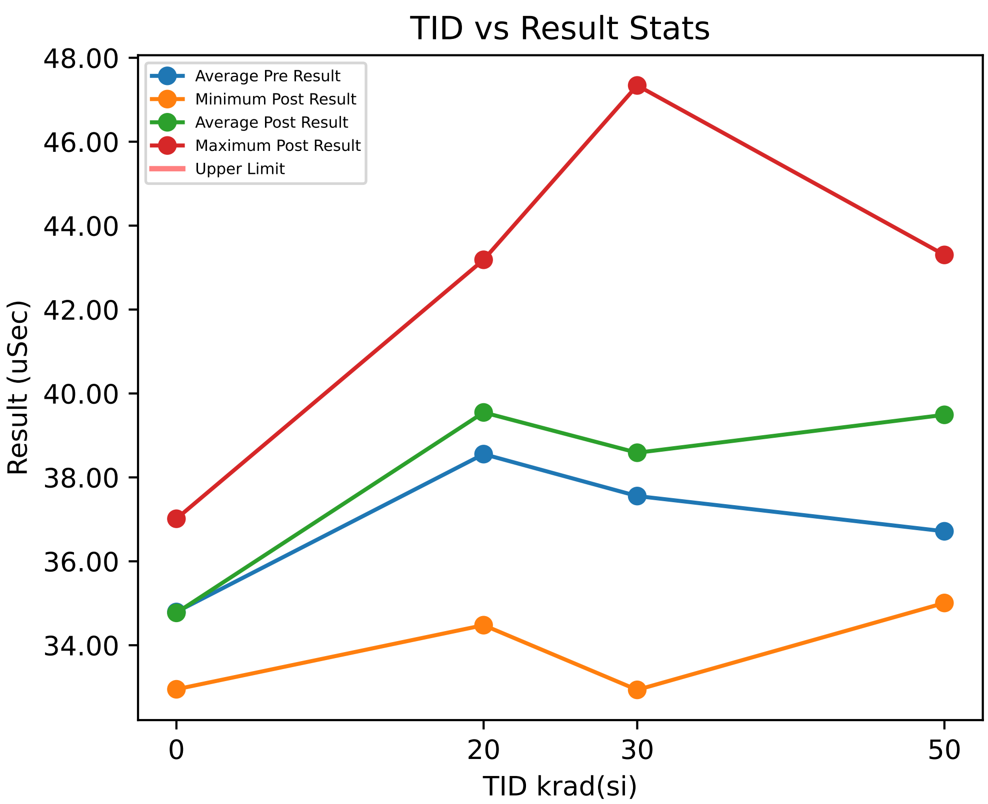
Test Results (No Limits Specified (uSec))

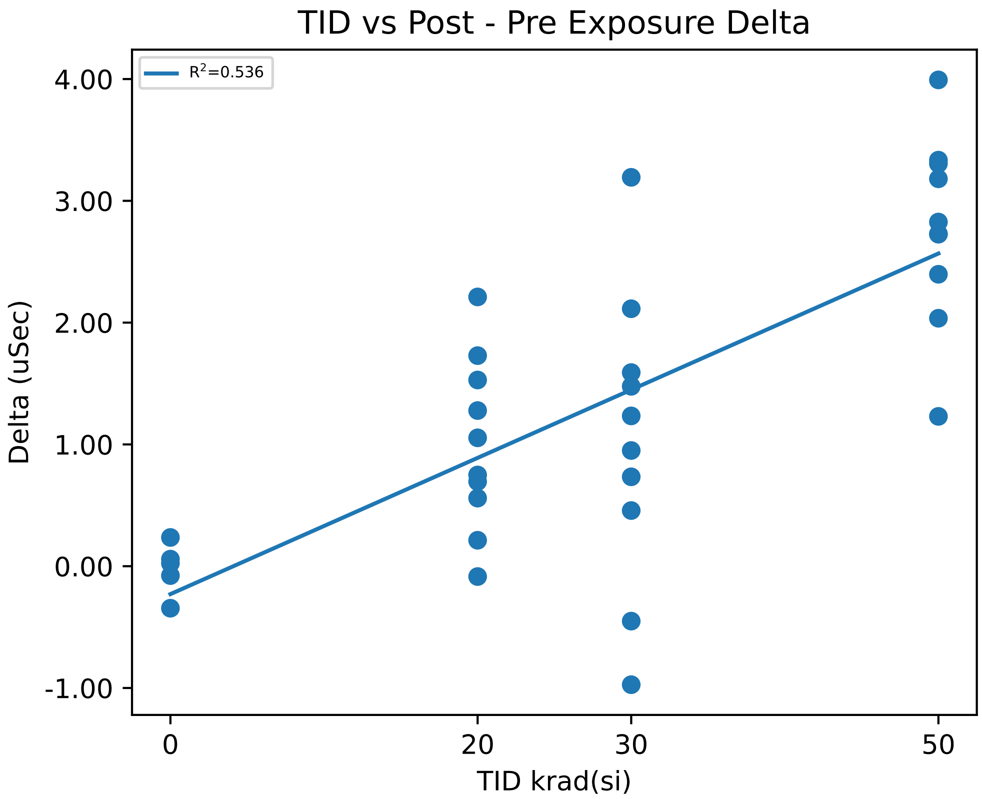
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	5.696	5.482	-0.214
2	20	Unbiased	4.773	4.529	-0.244
3	20	Unbiased	4.62	4.598	-0.022
4	20	Unbiased	5.488	5.48	-0.008
5	20	Unbiased	4.67	4.607	-0.063
6	20	14V Biased	4.695	4.449	-0.246
7	20	14V Biased	5.616	5.588	-0.028
8	20	14V Biased	4.755	4.584	-0.171
9	20	14V Biased	4.638	4.384	-0.254
10	20	14V Biased	5.6	5.533	-0.067
11	30	Unbiased	4.711	4.56	-0.151
12	30	Unbiased	4.647	4.537	-0.11
13	30	Unbiased	5.647	5.526	-0.121
14	30	Unbiased	4.69	4.667	-0.023
15	30	Unbiased	4.633	4.521	-0.112
16	30	14V Biased	5.527	5.441	-0.086
17	30	14V Biased	4.657	4.635	-0.022
18	30	14V Biased	4.596	4.521	-0.075
19	30	14V Biased	5.582	5.465	-0.117
20	30	14V Biased	4.686	4.486	-0.2
21	50	Unbiased	4.592	4.519	-0.073
22	50	Unbiased	5.412	5.47	0.058
23	50	Unbiased	4.616	4.504	-0.112
24	50	Unbiased	4.562	4.382	-0.18
25	50	Unbiased	5.497	5.364	-0.133
26	50	14V Biased	4.665	4.617	-0.048
27	50	14V Biased	4.522	4.567	0.045
28	50	14V Biased	5.427	5.39	-0.037
29	50	14V Biased	4.633	4.528	-0.105
30	50	14V Biased	4.744	4.401	-0.343
31	0	Correlation	5.503	5.416	-0.087
32	0	Correlation	4.615	4.576	-0.039
33	0	Correlation	5.457	5.375	-0.082
34	0	Correlation	4.714	4.576	-0.138
35	0	Correlation	4.575	4.63	0.055

Test Statistics (uSec)

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	4.575	4.9728	5.503	0.46605	4.576	4.9146	5.416	0.43979	-0.138	-0.0582	0.055	0.072365
20	4.62	5.0551	5.696	0.47382	4.384	4.9234	5.588	0.51939	-0.254	-0.1317	-0.008	0.10325
30	4.596	4.9376	5.647	0.44901	4.486	4.8359	5.526	0.44637	-0.2	-0.1017	-0.022	0.05414
50	4.522	4.867	5.497	0.40399	4.382	4.7742	5.47	0.44356	-0.343	-0.0928	0.058	0.11527

Device Test: 12.1 OVP_Deassert(T_DEASSERT_5p0V)





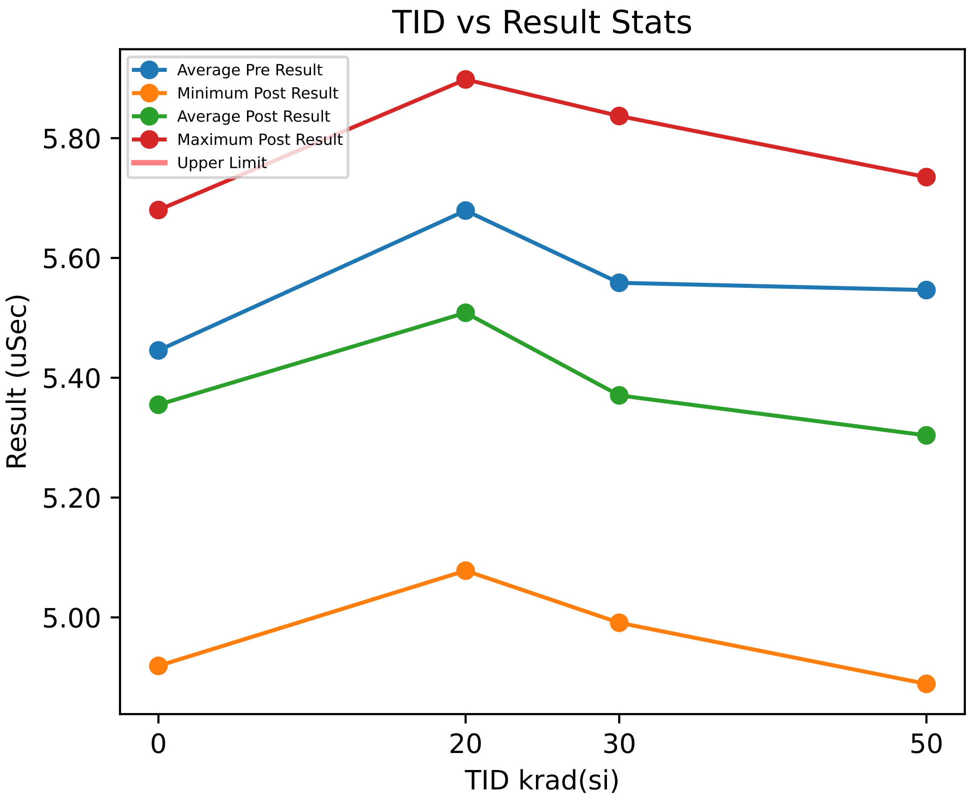
Test Results (No Limits Specified (uSec))

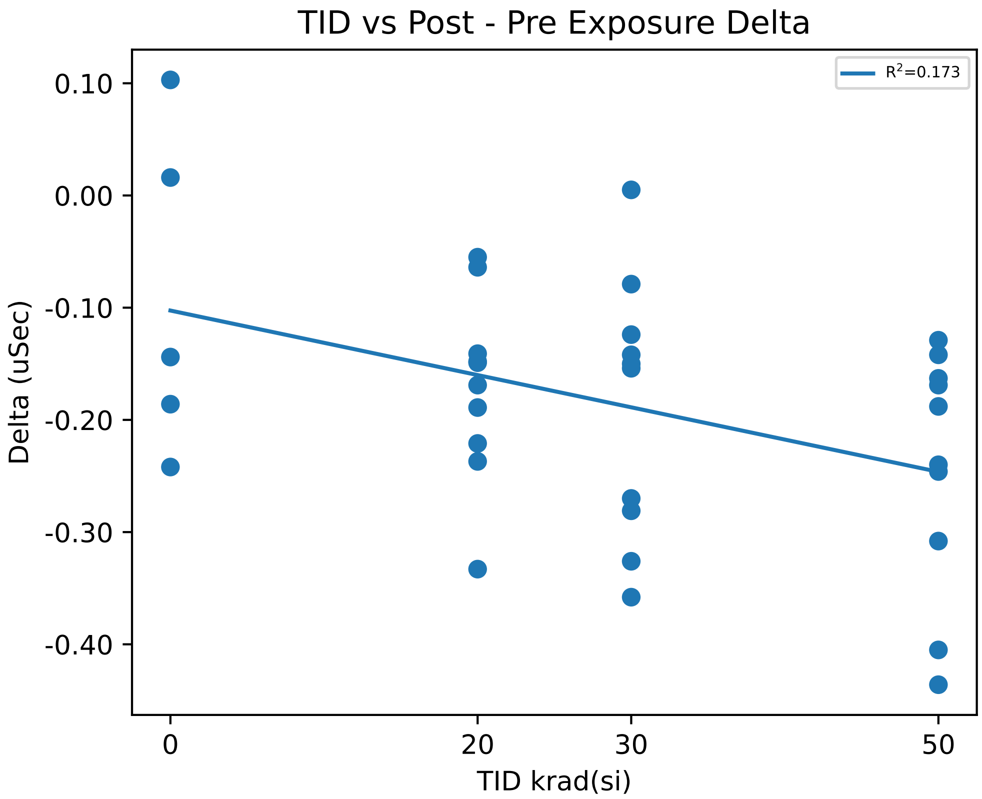
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	39.567	40.316	0.749
2	20	Unbiased	38.476	38.689	0.213
3	20	Unbiased	38.698	39.752	1.054
4	20	Unbiased	40.975	43.186	2.211
5	20	Unbiased	37.417	37.976	0.559
6	20	14V Biased	38.168	39.897	1.729
7	20	14V Biased	38.398	39.676	1.278
8	20	14V Biased	39.152	40.681	1.529
9	20	14V Biased	40.134	40.829	0.695
10	20	14V Biased	34.563	34.478	-0.085
11	30	Unbiased	38.786	40.376	1.59
12	30	Unbiased	33.387	32.936	-0.451
13	30	Unbiased	37.767	39.244	1.477
14	30	Unbiased	38.301	40.415	2.114
15	30	Unbiased	37.795	39.029	1.234
16	30	14V Biased	39.897	38.924	-0.973
17	30	14V Biased	33.967	34.917	0.95
18	30	14V Biased	44.148	47.341	3.193
19	30	14V Biased	37.25	37.984	0.734
20	30	14V Biased	34.255	34.712	0.457
21	50	Unbiased	37.69	40.516	2.826
22	50	Unbiased	38.443	41.777	3.334
23	50	Unbiased	35.232	38.537	3.305
24	50	Unbiased	38.622	41.019	2.397
25	50	Unbiased	32.971	35.007	2.036
26	50	14V Biased	34.113	36.842	2.729
27	50	14V Biased	38.593	39.823	1.23
28	50	14V Biased	37.5	40.226	2.726
29	50	14V Biased	34.68	37.861	3.181
30	50	14V Biased	39.309	43.302	3.993
31	0	Correlation	32.926	32.95	0.024
32	0	Correlation	35.37	35.606	0.236
33	0	Correlation	37.359	37.014	-0.345
34	0	Correlation	33.163	33.221	0.058
35	0	Correlation	35.144	35.067	-0.077

Test Statistics (uSec)

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	32.926	34.792	37.359	1.8154	32.95	34.772	37.014	1.6981	-0.345	-0.0208	0.236	0.21356
20	34.563	38.555	40.975	1.7373	34.478	39.548	43.186	2.2569	-0.085	0.9932	2.211	0.70747
30	33.387	37.555	44.148	3.2034	32.936	38.588	47.341	4.0097	-0.973	1.0325	3.193	1.2035
50	32.971	36.715	39.309	2.2503	35.007	39.491	43.302	2.4603	1.23	2.7757	3.993	0.76919

Device Test: 12.2 OVP_Assert_1p5V(T_ASSERT_12p0V)





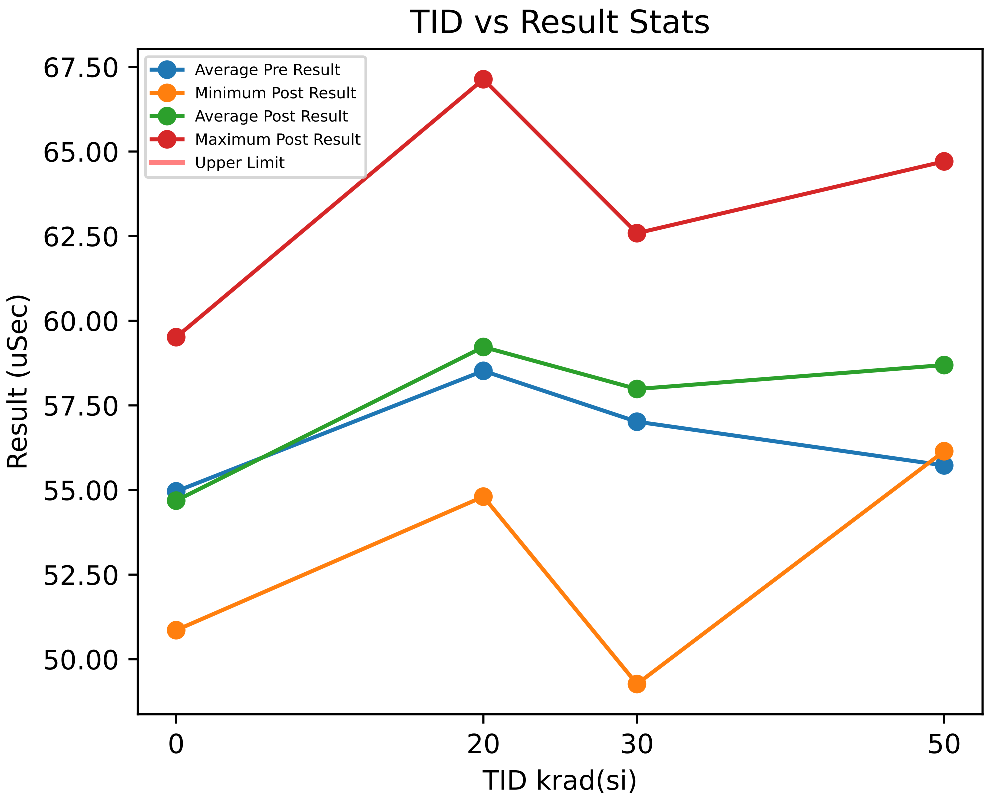
Test Results (No Limits Specified (uSec))

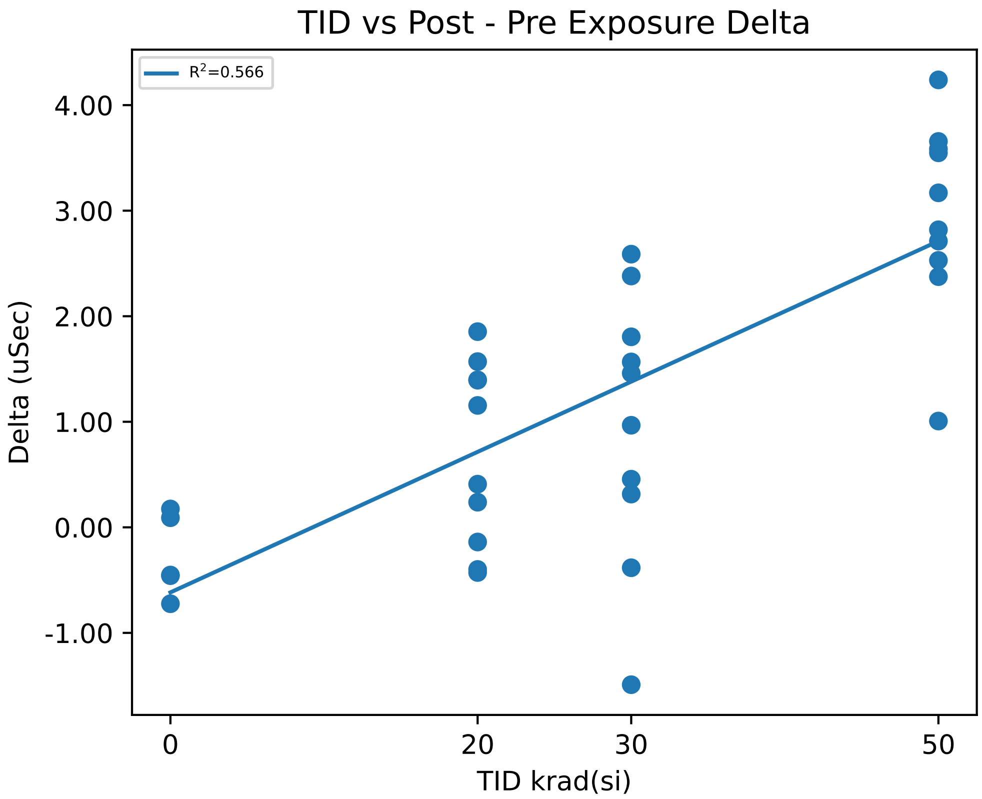
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	6.087	5.898	-0.189
2	20	Unbiased	5.219	5.078	-0.141
3	20	Unbiased	5.605	5.368	-0.237
4	20	Unbiased	5.939	5.79	-0.149
5	20	Unbiased	5.265	5.096	-0.169
6	20	14V Biased	5.586	5.365	-0.221
7	20	14V Biased	6.18	5.847	-0.333
8	20	14V Biased	5.217	5.162	-0.055
9	20	14V Biased	5.66	5.596	-0.064
10	20	14V Biased	6.033	5.885	-0.148
11	30	Unbiased	5.278	5.128	-0.15
12	30	Unbiased	5.588	5.23	-0.358
13	30	Unbiased	6.071	5.801	-0.27
14	30	Unbiased	5.217	5.138	-0.079
15	30	Unbiased	5.548	5.394	-0.154
16	30	14V Biased	5.979	5.837	-0.142
17	30	14V Biased	5.374	5.048	-0.326
18	30	14V Biased	5.343	5.348	0.005
19	30	14V Biased	6.072	5.791	-0.281
20	30	14V Biased	5.115	4.991	-0.124
21	50	Unbiased	5.465	5.219	-0.246
22	50	Unbiased	5.84	5.677	-0.163
23	50	Unbiased	5.197	4.889	-0.308
24	50	Unbiased	5.61	5.205	-0.405
25	50	Unbiased	5.84	5.711	-0.129
26	50	14V Biased	5.364	4.928	-0.436
27	50	14V Biased	5.551	5.382	-0.169
28	50	14V Biased	5.877	5.735	-0.142
29	50	14V Biased	5.237	5.049	-0.188
30	50	14V Biased	5.483	5.243	-0.24
31	0	Correlation	5.845	5.603	-0.242
32	0	Correlation	5.111	5.127	0.016
33	0	Correlation	5.866	5.68	-0.186
34	0	Correlation	5.063	4.919	-0.144
35	0	Correlation	5.343	5.446	0.103

Test Statistics (uSec)

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	5.063	5.4456	5.866	0.38895	4.919	5.355	5.68	0.32307	-0.242	-0.0906	0.103	0.14467
20	5.217	5.6791	6.18	0.36838	5.078	5.5085	5.898	0.33513	-0.333	-0.1706	-0.055	0.081816
30	5.115	5.5585	6.072	0.36157	4.991	5.3706	5.837	0.32685	-0.358	-0.1879	0.005	0.11607
50	5.197	5.5464	5.877	0.24664	4.889	5.3038	5.735	0.31552	-0.436	-0.2426	-0.129	0.10844

Device Test: 12.3 OVP_Deassert_1p5V(T_DEASSERT_12p0V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

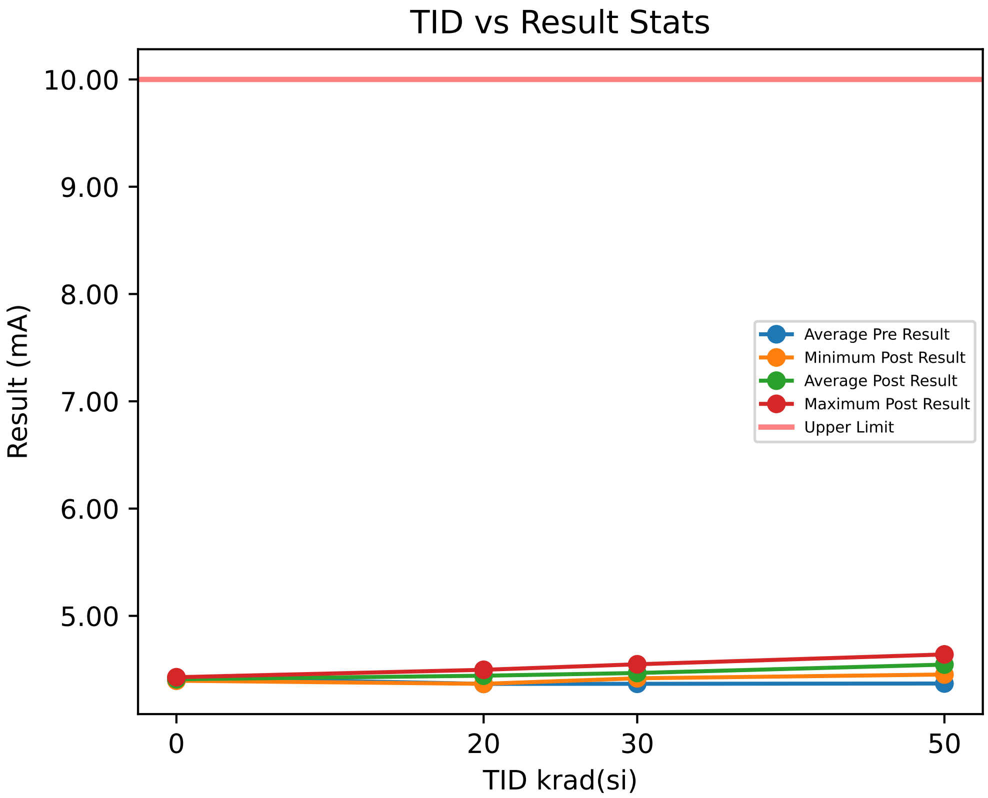
Test Results (No Limits Specified (uSec))

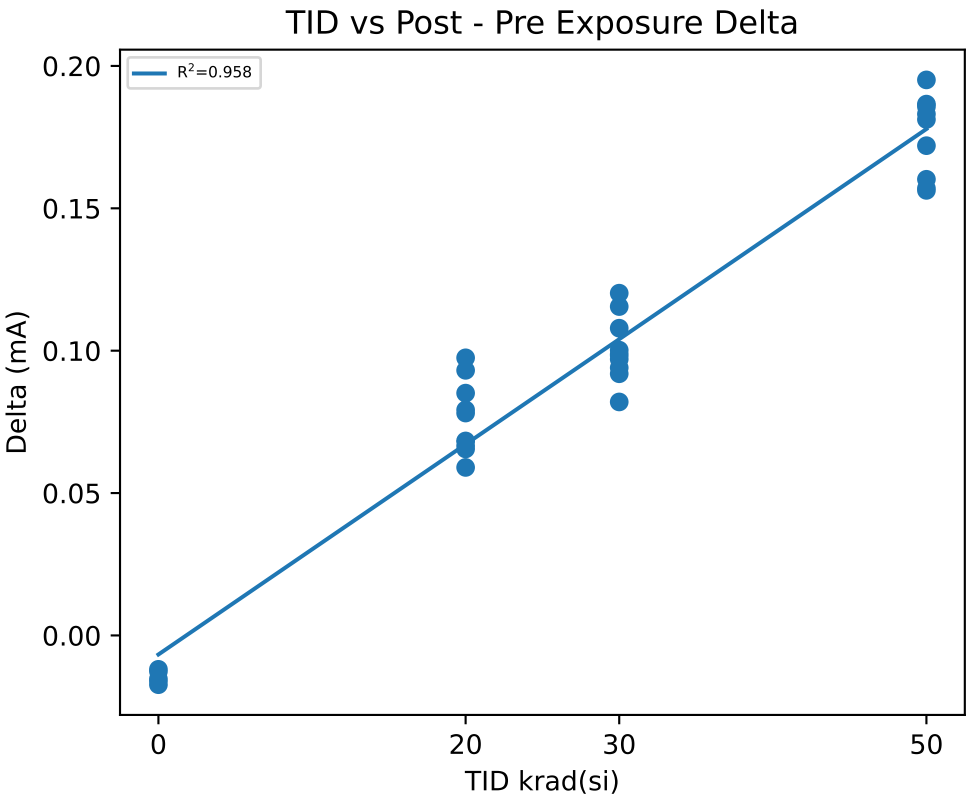
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	63.126	63.535	0.409
2	20	Unbiased	58.631	58.203	-0.428
3	20	Unbiased	55.49	55.091	-0.399
4	20	Unbiased	65.281	67.135	1.854
5	20	Unbiased	57.065	57.303	0.238
6	20	14V Biased	53.235	54.805	1.57
7	20	14V Biased	61.515	62.912	1.397
8	20	14V Biased	57.706	58.861	1.155
9	20	14V Biased	54.858	56.252	1.394
10	20	14V Biased	58.299	58.16	-0.139
11	30	Unbiased	58.6	60.167	1.567
12	30	Unbiased	49.651	49.268	-0.383
13	30	Unbiased	61.002	62.462	1.46
14	30	Unbiased	57.15	59.531	2.381
15	30	Unbiased	52.051	53.856	1.805
16	30	14V Biased	64.078	62.587	-1.491
17	30	14V Biased	53.586	54.553	0.967
18	30	14V Biased	59.583	62.171	2.588
19	30	14V Biased	60.237	60.552	0.315
20	30	14V Biased	54.238	54.694	0.456
21	50	Unbiased	52.965	56.513	3.548
22	50	Unbiased	61.539	64.708	3.169
23	50	Unbiased	53.533	57.118	3.585
24	50	Unbiased	54.069	56.598	2.529
25	50	Unbiased	56.692	59.067	2.375
26	50	14V Biased	53.438	56.257	2.819
27	50	14V Biased	55.139	56.146	1.007
28	50	14V Biased	61.439	64.151	2.712
29	50	14V Biased	53.669	57.325	3.656
30	50	14V Biased	54.792	59.031	4.239
31	0	Correlation	56.654	55.93	-0.724
32	0	Correlation	54.658	54.832	0.174
33	0	Correlation	59.973	59.515	-0.458
34	0	Correlation	52.206	52.297	0.091
35	0	Correlation	51.311	50.859	-0.452

Test Statistics (uSec)

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	51.311	54.96	59.973	3.4997	50.859	54.687	59.515	3.3631	-0.724	-0.2738	0.174	0.38793
20	53.235	58.521	65.281	3.7897	54.805	59.226	67.135	4.0306	-0.428	0.7051	1.854	0.86571
30	49.651	57.018	64.078	4.517	49.268	57.984	62.587	4.572	-1.491	0.9665	2.588	1.2685
50	52.965	55.727	61.539	3.2184	56.146	58.691	64.708	3.1996	1.007	2.9639	4.239	0.90208

Device Test: 3.0 IQ_VIN(IQ_Vin_4p5V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

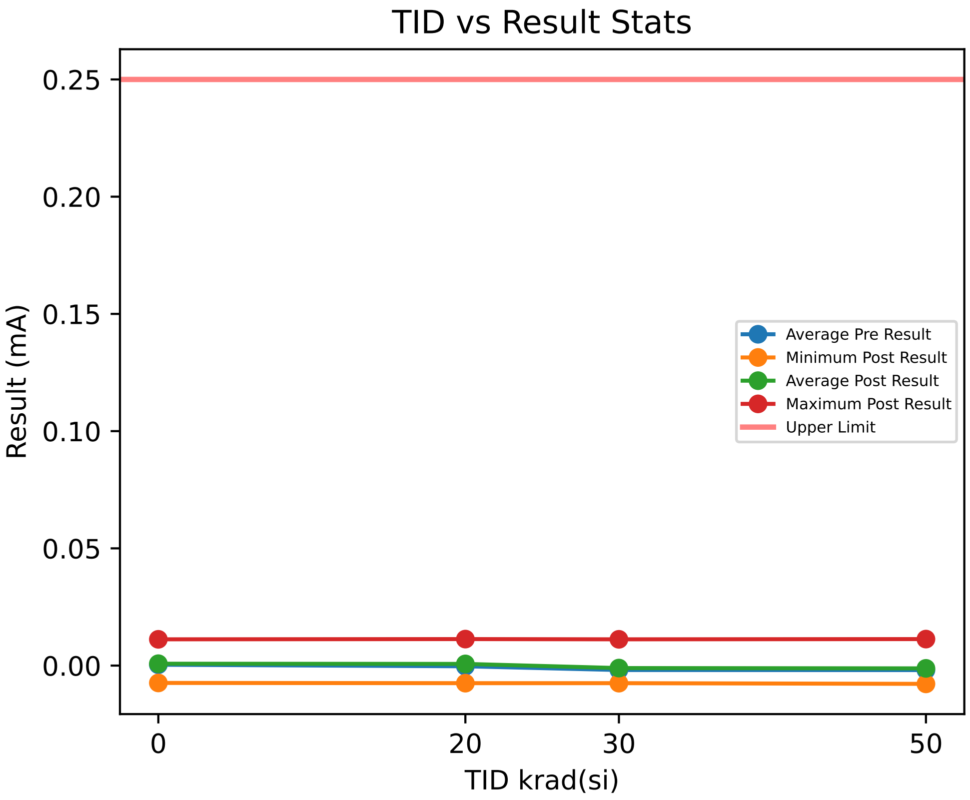
Test Results (Upper Limit = 10.0 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	4.3697	4.4548	0.0851
2	20	Unbiased	4.4041	4.4972	0.0931
3	20	Unbiased	4.3638	4.4613	0.0975
4	20	Unbiased	4.4288	4.4943	0.0655
5	20	Unbiased	4.3852	4.4644	0.0792
6	20	14V Biased	4.3168	4.3851	0.0683
7	20	14V Biased	4.3725	4.4315	0.059
8	20	14V Biased	4.2982	4.3664	0.0682
9	20	14V Biased	4.3654	4.4435	0.0781
10	20	14V Biased	4.3563	4.4229	0.0666
11	30	Unbiased	4.3552	4.4492	0.094
12	30	Unbiased	4.4285	4.5487	0.1202
13	30	Unbiased	4.3361	4.4181	0.082
14	30	Unbiased	4.3591	4.4579	0.0988
15	30	Unbiased	4.3435	4.4437	0.1002
16	30	14V Biased	4.3923	4.5002	0.1079
17	30	14V Biased	4.3654	4.4624	0.097
18	30	14V Biased	4.3461	4.4444	0.0983
19	30	14V Biased	4.3295	4.4214	0.0919
20	30	14V Biased	4.4121	4.5276	0.1155
21	50	Unbiased	4.2962	4.4532	0.157
22	50	Unbiased	4.365	4.537	0.172
23	50	Unbiased	4.3355	4.5219	0.1864
24	50	Unbiased	4.3531	4.5482	0.1951
25	50	Unbiased	4.4548	4.6405	0.1857
26	50	14V Biased	4.3649	4.5515	0.1866
27	50	14V Biased	4.389	4.5721	0.1831
28	50	14V Biased	4.3539	4.5141	0.1602
29	50	14V Biased	4.3854	4.5666	0.1812
30	50	14V Biased	4.3959	4.5522	0.1563
31	0	Correlation	4.444	4.4279	-0.0161
32	0	Correlation	4.4139	4.402	-0.0119
33	0	Correlation	4.4127	4.3954	-0.0173
34	0	Correlation	4.4349	4.4223	-0.0126
35	0	Correlation	4.414	4.3987	-0.0153

Test Statistics (mA)

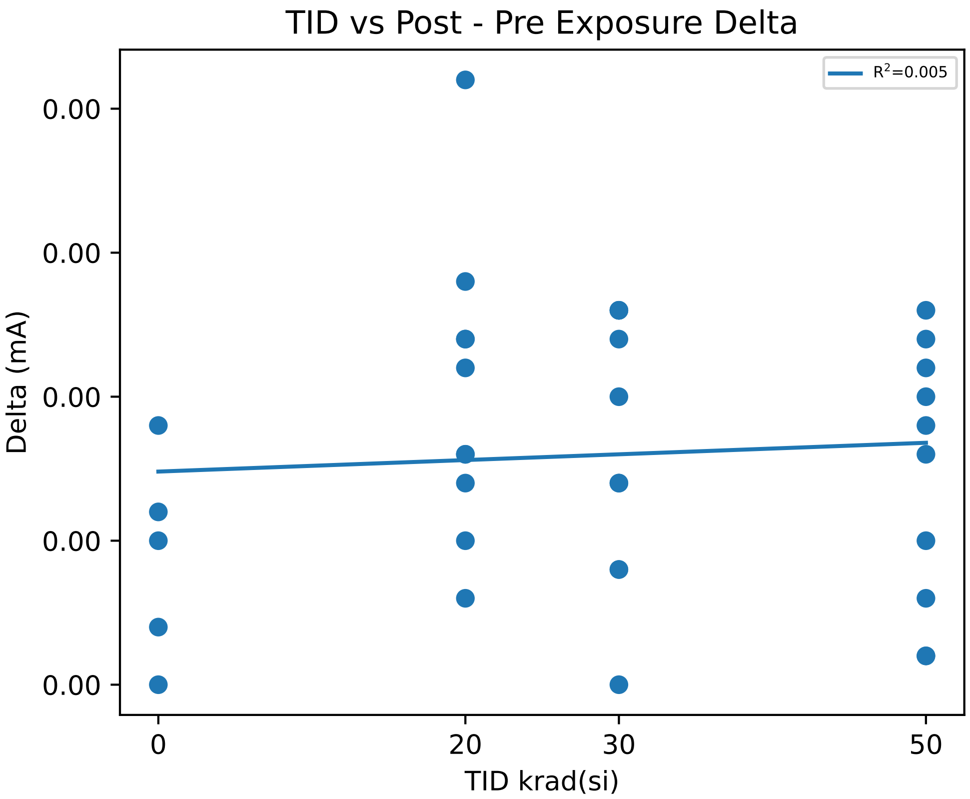
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	4.4127	4.4239	4.444	0.014564	4.3954	4.4093	4.4279	0.01478	-0.0173	-0.01464	-0.0119	0.0023082
20	4.2982	4.3661	4.4288	0.037913	4.3664	4.4421	4.4972	0.042492	0.059	0.07606	0.0975	0.012736
30	4.3295	4.3668	4.4285	0.03335	4.4181	4.4674	4.5487	0.043961	0.082	0.10058	0.1202	0.011286
50	4.2962	4.3694	4.4548	0.041751	4.4532	4.5457	4.6405	0.047609	0.1563	0.17636	0.1951	0.014025

Device Test: 3.1 IRCP_EN_0V(IRCP_EN0p0V_4p5V)



Test Results (Upper Limit = 0.25 (mA))

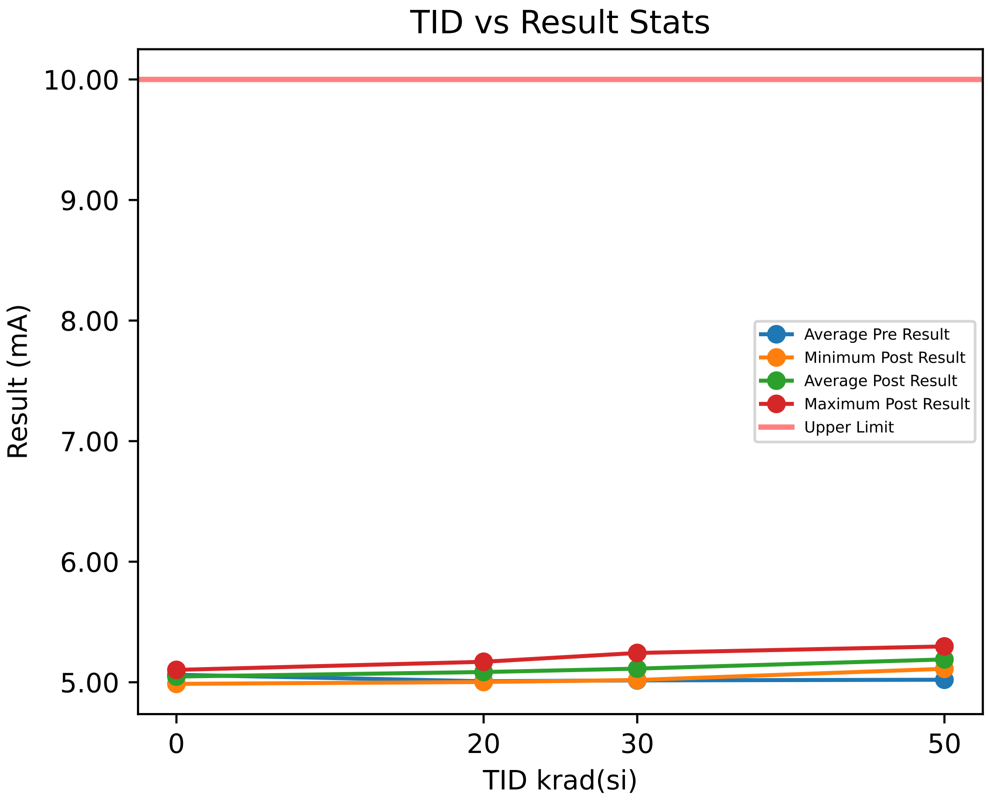
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.0103	0.0111	0.0008
2	20	Unbiased	-0.0055	-0.0048	0.0007
3	20	Unbiased	-0.0086	-0.0065	0.0021
4	20	Unbiased	0.0101	0.0113	0.0012
5	20	Unbiased	-0.0057	-0.0054	0.0003
6	20	14V Biased	-0.0087	-0.0073	0.0014
7	20	14V Biased	0.0099	0.011	0.0011
8	20	14V Biased	-0.0061	-0.0056	0.0005
9	20	14V Biased	-0.0087	-0.0075	0.0012
10	20	14V Biased	0.01	0.0108	0.0008
11	30	Unbiased	-0.0056	-0.0056	0
12	30	Unbiased	-0.0084	-0.0074	0.001
13	30	Unbiased	0.0102	0.0109	0.0007
14	30	Unbiased	-0.0058	-0.0054	0.0004
15	30	Unbiased	-0.0087	-0.0075	0.0012
16	30	14V Biased	0.0099	0.0112	0.0013
17	30	14V Biased	-0.0059	-0.0055	0.0004
18	30	14V Biased	-0.0087	-0.0074	0.0013
19	30	14V Biased	0.0098	0.0111	0.0013
20	30	14V Biased	-0.0057	-0.005	0.0007
21	50	Unbiased	-0.0088	-0.0078	0.001
22	50	Unbiased	0.0101	0.0113	0.0012
23	50	Unbiased	-0.0055	-0.0054	0.0001
24	50	Unbiased	-0.0081	-0.0068	0.0013
25	50	Unbiased	0.0103	0.0112	0.0009
26	50	14V Biased	-0.0055	-0.0054	0.0001
27	50	14V Biased	-0.0082	-0.0074	0.0008
28	50	14V Biased	0.0101	0.0112	0.0011
29	50	14V Biased	-0.0057	-0.0054	0.0003
30	50	14V Biased	-0.0079	-0.0074	0.0005
31	0	Correlation	0.0103	0.0109	0.0006
32	0	Correlation	-0.0055	-0.0053	0.0002
33	0	Correlation	0.0103	0.0112	0.0009
34	0	Correlation	-0.0054	-0.0054	0
35	0	Correlation	-0.0079	-0.0074	0.0005



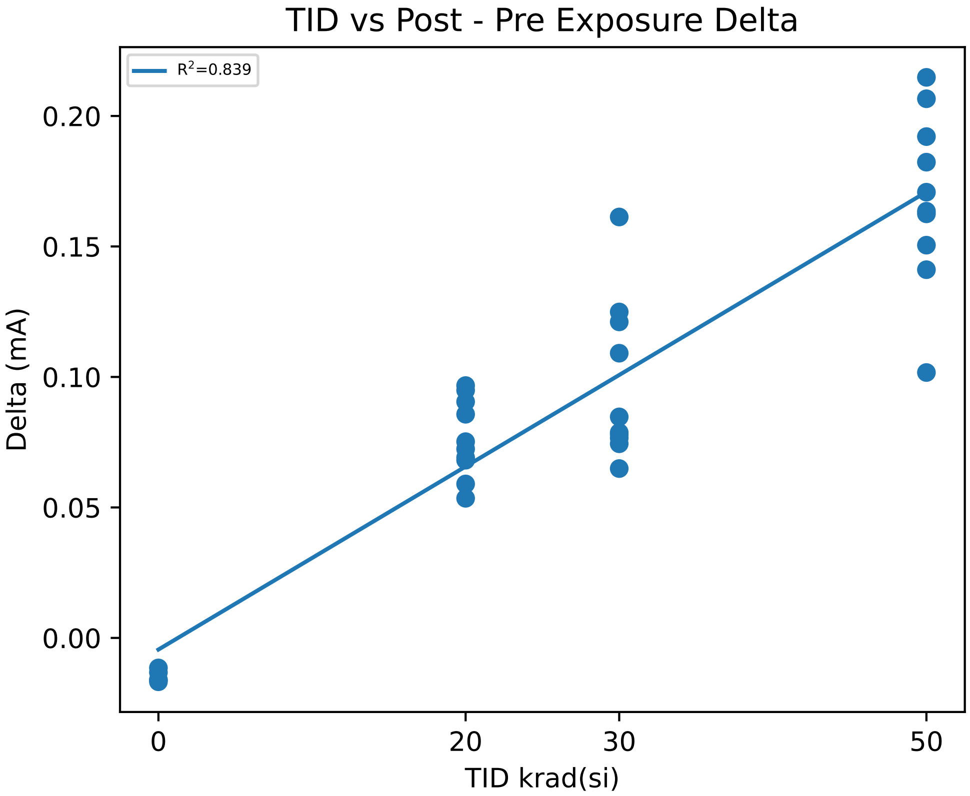
Test Statistics (mA)

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	-0.0079	0.00036	0.0103	0.009129	-0.0074	0.0008	0.0112	0.0093949	0	0.00044	0.0009	0.00035071
20	-0.0087	-0.0003	0.0103	0.0090093	-0.0075	0.00071	0.0113	0.0089371	0.0003	0.00101	0.0021	0.00051305
30	-0.0087	-0.00189	0.0102	0.0082772	-0.0075	-0.00106	0.0112	0.008418	0	0.00083	0.0013	0.000462
50	-0.0088	-0.00192	0.0103	0.0084257	-0.0078	-0.00119	0.0113	0.0086184	0.0001	0.00073	0.0013	0.00044981

Device Test: 3.2 IQ_VIN(IQ_Vin_14p0V)



TID vs Result Stats



TID vs Post - Pre Exposure Delta

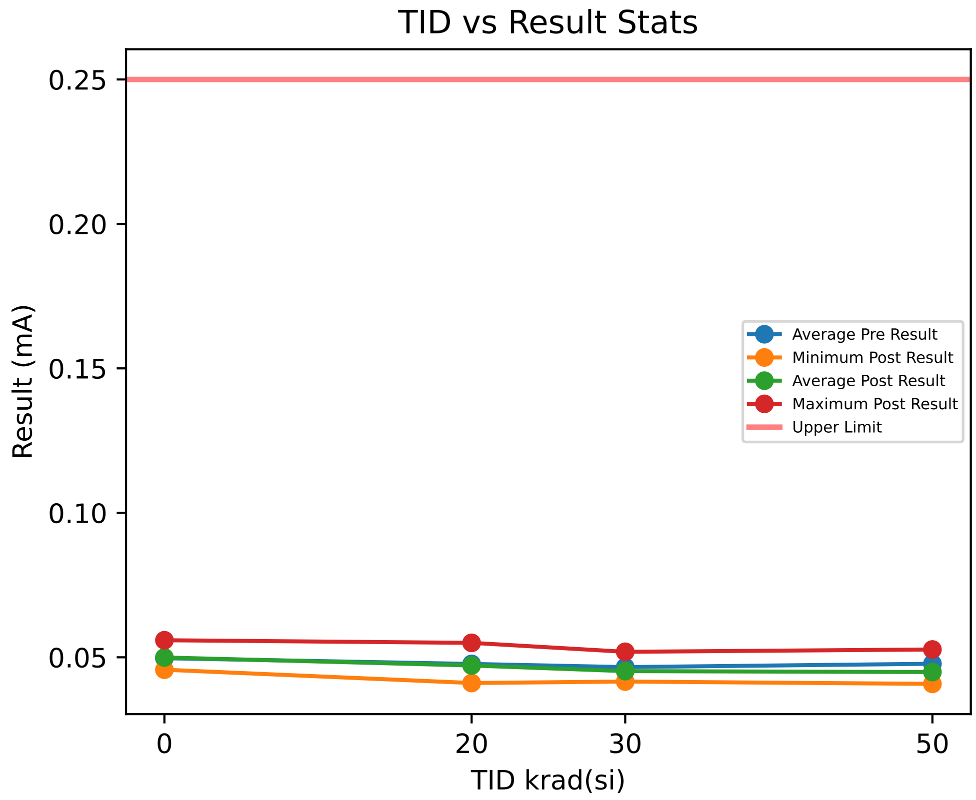
Test Results (Upper Limit = 10.0 (mA))

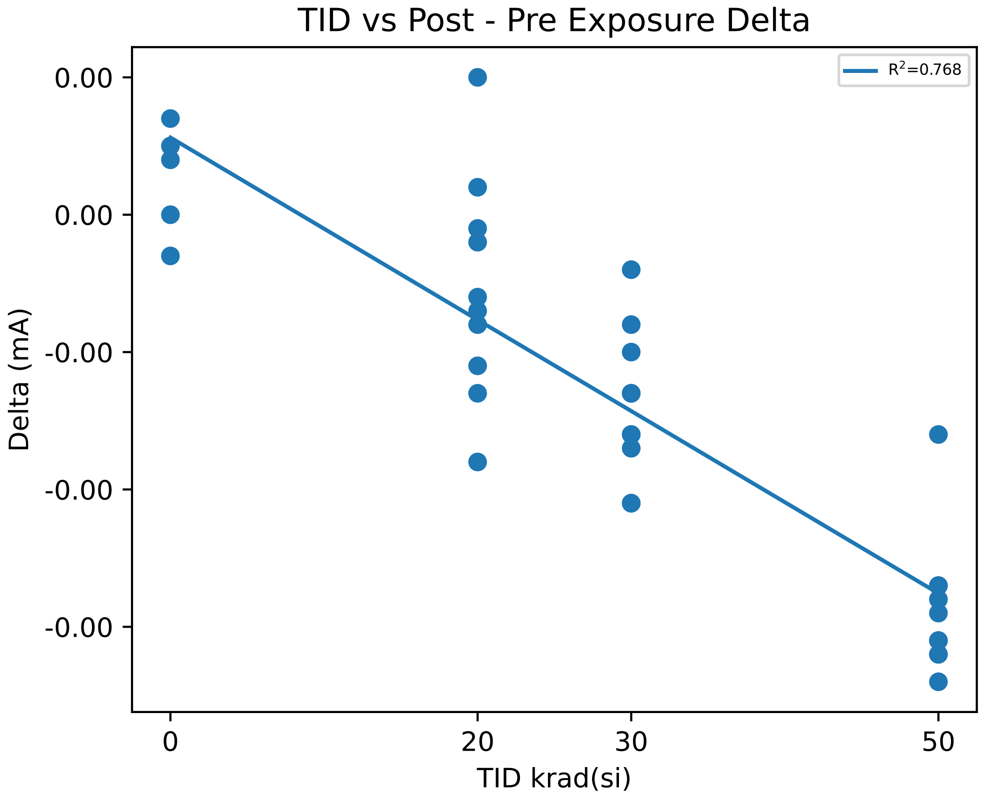
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	4.9729	5.0678	0.0949
2	20	Unbiased	5.0731	5.1698	0.0967
3	20	Unbiased	4.9855	5.0712	0.0857
4	20	Unbiased	5.0589	5.1179	0.059
5	20	Unbiased	5.0222	5.0974	0.0752
6	20	14V Biased	5.0242	5.1147	0.0905
7	20	14V Biased	5.012	5.0655	0.0535
8	20	14V Biased	4.9329	5.002	0.0691
9	20	14V Biased	4.9884	5.0608	0.0724
10	20	14V Biased	5.0131	5.0812	0.0681
11	30	Unbiased	5.0593	5.2206	0.1613
12	30	Unbiased	5.1219	5.243	0.1211
13	30	Unbiased	4.9407	5.0187	0.078
14	30	Unbiased	5.0275	5.1366	0.1091
15	30	Unbiased	4.9835	5.0601	0.0766
16	30	14V Biased	4.9733	5.0382	0.0649
17	30	14V Biased	5.0228	5.1075	0.0847
18	30	14V Biased	4.9758	5.0545	0.0787
19	30	14V Biased	4.974	5.0484	0.0744
20	30	14V Biased	5.0763	5.2012	0.1249
21	50	Unbiased	4.9611	5.1116	0.1505
22	50	Unbiased	5.0279	5.2102	0.1823
23	50	Unbiased	5.0422	5.257	0.2148
24	50	Unbiased	5.0029	5.195	0.1921
25	50	Unbiased	5.0906	5.2972	0.2066
26	50	14V Biased	5.0038	5.1663	0.1625
27	50	14V Biased	5.0347	5.2055	0.1708
28	50	14V Biased	5.0041	5.1676	0.1635
29	50	14V Biased	5.0142	5.1553	0.1411
30	50	14V Biased	5.0268	5.1285	0.1017
31	0	Correlation	5.0791	5.0629	-0.0162
32	0	Correlation	5.0574	5.0459	-0.0115
33	0	Correlation	5.0034	4.9866	-0.0168
34	0	Correlation	5.1158	5.1026	-0.0132
35	0	Correlation	5.0552	5.0392	-0.016

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	5.0034	5.0622	5.1158	0.04089	4.9866	5.0474	5.1026	0.041992	-0.0168	-0.01474	-0.0115	0.0022821
20	4.9329	5.0083	5.0731	0.040956	5.002	5.0848	5.1698	0.044303	0.0535	0.07651	0.0967	0.014931
30	4.9407	5.0155	5.1219	0.0566	5.0187	5.1129	5.243	0.082815	0.0649	0.09737	0.1613	0.030629
50	4.9611	5.0208	5.0906	0.033509	5.1116	5.1894	5.2972	0.056615	0.1017	0.16859	0.2148	0.033243

Device Test: 3.3 IRCP_EN_0V(IRCP_EN0p0V_14p0V)





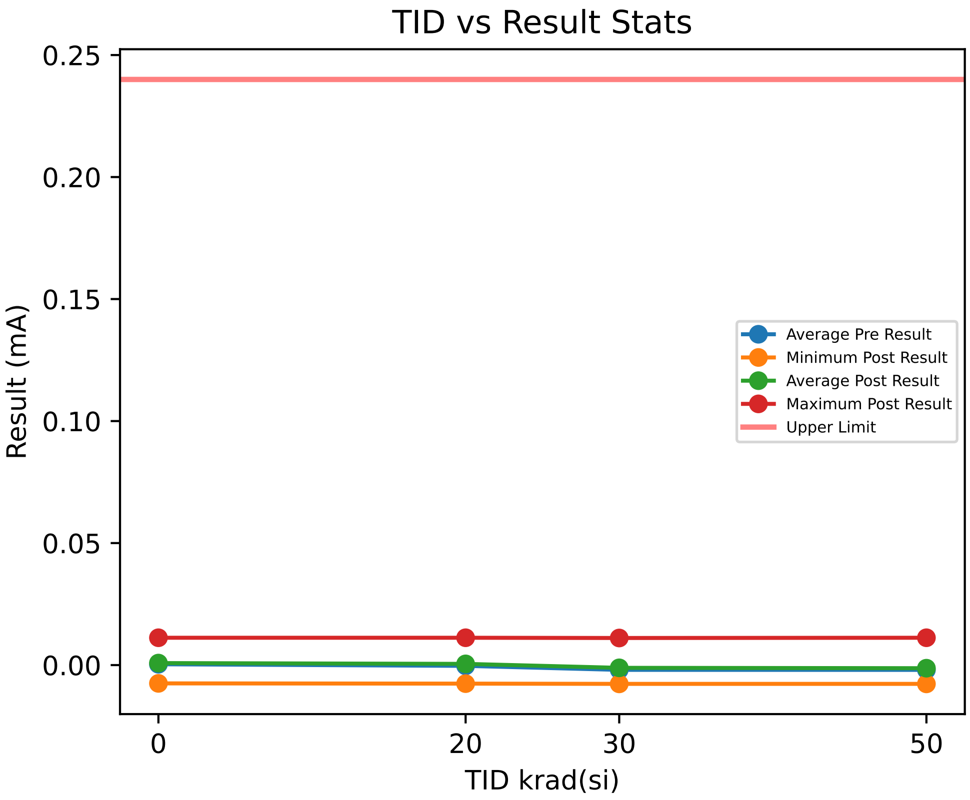
Test Results (Upper Limit = 0.25 (mA))

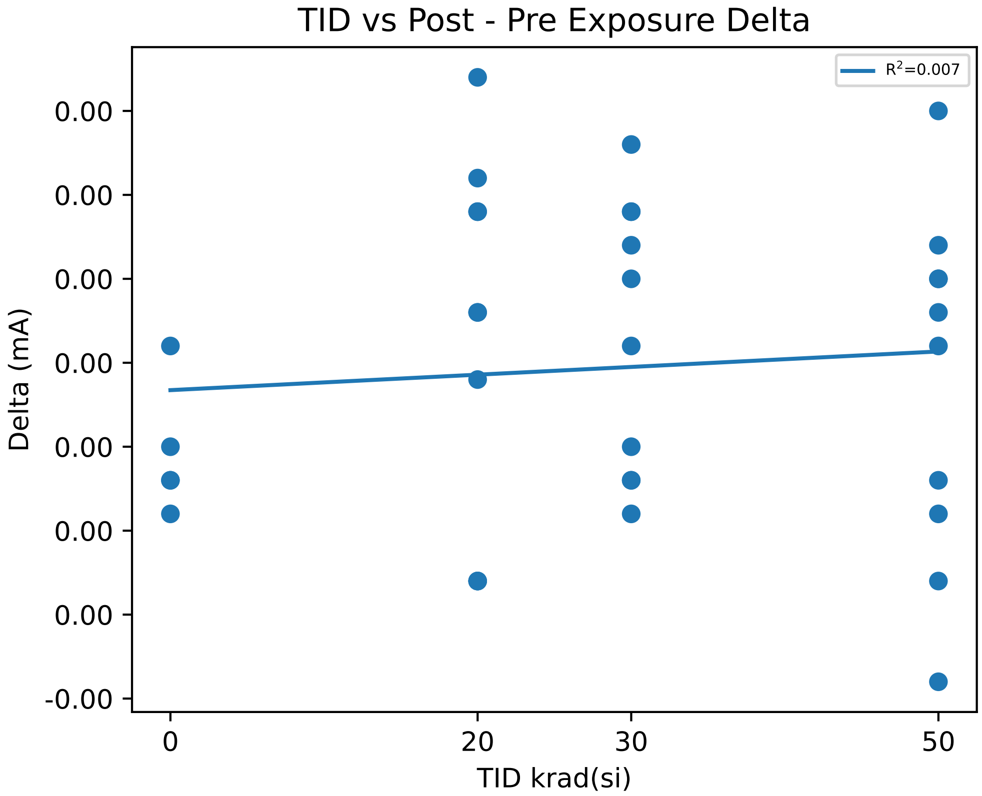
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.0545	0.0538	-0.0007
2	20	Unbiased	0.0439	0.0438	-0.0001
3	20	Unbiased	0.0434	0.0444	0.001
4	20	Unbiased	0.0561	0.055	-0.0011
5	20	Unbiased	0.0442	0.0436	-0.0006
6	20	14V Biased	0.0417	0.0419	0.0002
7	20	14V Biased	0.0534	0.0521	-0.0013
8	20	14V Biased	0.0419	0.0411	-0.0008
9	20	14V Biased	0.0433	0.0431	-0.0002
10	20	14V Biased	0.0546	0.0528	-0.0018
11	30	Unbiased	0.0439	0.0426	-0.0013
12	30	Unbiased	0.0437	0.0429	-0.0008
13	30	Unbiased	0.054	0.0519	-0.0021
14	30	Unbiased	0.0436	0.0423	-0.0013
15	30	Unbiased	0.042	0.0416	-0.0004
16	30	14V Biased	0.0533	0.0517	-0.0016
17	30	14V Biased	0.044	0.0424	-0.0016
18	30	14V Biased	0.0433	0.0423	-0.001
19	30	14V Biased	0.0536	0.0515	-0.0021
20	30	14V Biased	0.0446	0.0429	-0.0017
21	50	Unbiased	0.0424	0.0408	-0.0016
22	50	Unbiased	0.0542	0.0515	-0.0027
23	50	Unbiased	0.045	0.0422	-0.0028
24	50	Unbiased	0.0459	0.0432	-0.0027
25	50	Unbiased	0.0561	0.0527	-0.0034
26	50	14V Biased	0.0452	0.0421	-0.0031
27	50	14V Biased	0.045	0.0419	-0.0031
28	50	14V Biased	0.0549	0.0517	-0.0032
29	50	14V Biased	0.0444	0.0415	-0.0029
30	50	14V Biased	0.0445	0.0413	-0.0032
31	0	Correlation	0.0552	0.0549	-0.0003
32	0	Correlation	0.0466	0.0473	0.0007
33	0	Correlation	0.0559	0.0559	0
34	0	Correlation	0.0453	0.0457	0.0004
35	0	Correlation	0.0454	0.0459	0.0005

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	0.0453	0.04968	0.0559	0.0053886	0.0457	0.04994	0.0559	0.0050347	-0.0003	0.00026	0.0007	0.00040373
20	0.0417	0.0477	0.0561	0.0060652	0.0411	0.04716	0.055	0.0055199	-0.0018	-0.00054	0.001	0.00080305
30	0.042	0.0466	0.054	0.0049008	0.0416	0.04521	0.0519	0.0044943	-0.0021	-0.00139	-0.0004	0.00054661
50	0.0424	0.04776	0.0561	0.0051414	0.0408	0.04489	0.0527	0.0049328	-0.0034	-0.00287	-0.0016	0.00050343

Device Test: 3.4 IRCP_EN_7V(IRCP_EN7p0V_4p5V)





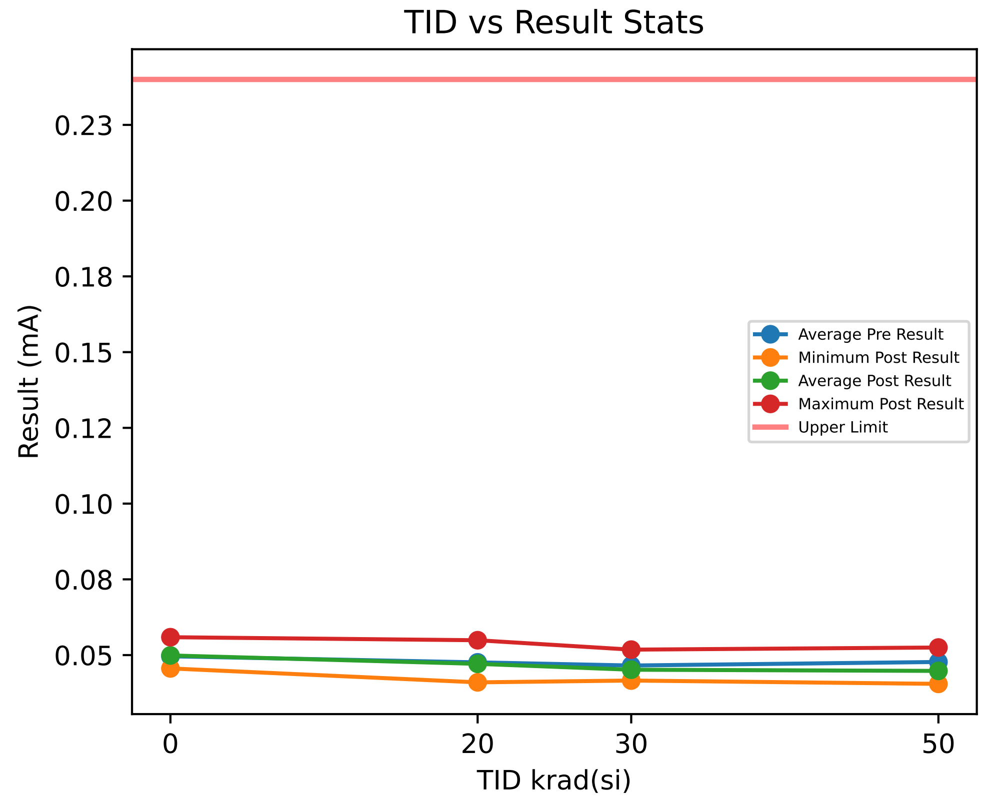
Test Results (Upper Limit = 0.24 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.0102	0.0109	0.0007
2	20	Unbiased	-0.0054	-0.0053	0.0001
3	20	Unbiased	-0.0086	-0.0073	0.0013
4	20	Unbiased	0.01	0.0112	0.0012
5	20	Unbiased	-0.0056	-0.0055	0.0001
6	20	14V Biased	-0.0089	-0.0073	0.0016
7	20	14V Biased	0.0099	0.0108	0.0009
8	20	14V Biased	-0.0059	-0.0058	0.0001
9	20	14V Biased	-0.0088	-0.0076	0.0012
10	20	14V Biased	0.0099	0.0108	0.0009
11	30	Unbiased	-0.0058	-0.0054	0.0004
12	30	Unbiased	-0.0088	-0.0074	0.0014
13	30	Unbiased	0.01	0.0108	0.0008
14	30	Unbiased	-0.0058	-0.0055	0.0003
15	30	Unbiased	-0.0089	-0.0077	0.0012
16	30	14V Biased	0.0101	0.0111	0.001
17	30	14V Biased	-0.0059	-0.0055	0.0004
18	30	14V Biased	-0.0087	-0.0076	0.0011
19	30	14V Biased	0.0098	0.011	0.0012
20	30	14V Biased	-0.0056	-0.0051	0.0005
21	50	Unbiased	-0.009	-0.0075	0.0015
22	50	Unbiased	0.0102	0.0112	0.001
23	50	Unbiased	-0.0054	-0.0056	-0.0002
24	50	Unbiased	-0.0083	-0.0073	0.001
25	50	Unbiased	0.0102	0.0111	0.0009
26	50	14V Biased	-0.0056	-0.0055	0.0001
27	50	14V Biased	-0.0082	-0.0074	0.0008
28	50	14V Biased	0.0101	0.0112	0.0011
29	50	14V Biased	-0.0056	-0.0053	0.0003
30	50	14V Biased	-0.0081	-0.0077	0.0004
31	0	Correlation	0.0104	0.0109	0.0005
32	0	Correlation	-0.0054	-0.0051	0.0003
33	0	Correlation	0.0104	0.0112	0.0008
34	0	Correlation	-0.0058	-0.0054	0.0004
35	0	Correlation	-0.0079	-0.0075	0.0004

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	-0.0079	0.00034	0.0104	0.0092324	-0.0075	0.00082	0.0112	0.0093849	0.0003	0.00048	0.0008	0.00019235
20	-0.0089	-0.00032	0.0102	0.0089751	-0.0076	0.00049	0.0112	0.0090151	0.0001	0.00081	0.0016	0.00054863
30	-0.0089	-0.00196	0.0101	0.0083362	-0.0077	-0.00113	0.0111	0.0084034	0.0003	0.00083	0.0014	0.00040291
50	-0.009	-0.00197	0.0102	0.0084715	-0.0077	-0.00128	0.0112	0.0086345	-0.0002	0.00069	0.0015	0.00052164

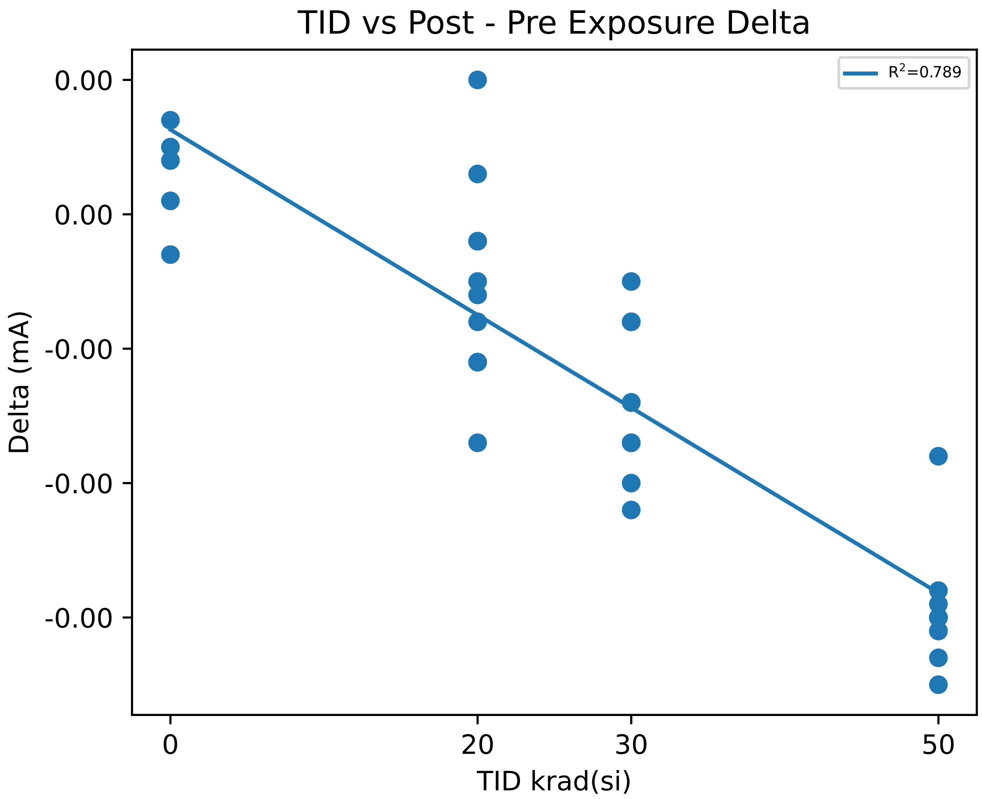
Device Test: 3.5 IRCP_EN_7V(IRCP_EN7p0V_14p0V)



TID vs Result Stats

Test Results (Upper Limit = 0.24 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.0544	0.0538	-0.0006
2	20	Unbiased	0.0439	0.0437	-0.0002
3	20	Unbiased	0.0432	0.0442	0.001
4	20	Unbiased	0.056	0.0549	-0.0011
5	20	Unbiased	0.0441	0.0436	-0.0005
6	20	14V Biased	0.0417	0.042	0.0003
7	20	14V Biased	0.0532	0.0521	-0.0011
8	20	14V Biased	0.0418	0.041	-0.0008
9	20	14V Biased	0.0432	0.043	-0.0002
10	20	14V Biased	0.0545	0.0528	-0.0017
11	30	Unbiased	0.0439	0.0425	-0.0014
12	30	Unbiased	0.0436	0.0428	-0.0008
13	30	Unbiased	0.054	0.0518	-0.0022
14	30	Unbiased	0.0436	0.0422	-0.0014
15	30	Unbiased	0.0421	0.0416	-0.0005
16	30	14V Biased	0.0533	0.0516	-0.0017
17	30	14V Biased	0.0438	0.0424	-0.0014
18	30	14V Biased	0.0432	0.0424	-0.0008
19	30	14V Biased	0.0536	0.0516	-0.002
20	30	14V Biased	0.0445	0.0428	-0.0017
21	50	Unbiased	0.0423	0.0405	-0.0018
22	50	Unbiased	0.0542	0.0514	-0.0028
23	50	Unbiased	0.0451	0.0421	-0.003
24	50	Unbiased	0.046	0.043	-0.003
25	50	Unbiased	0.056	0.0525	-0.0035
26	50	14V Biased	0.0453	0.042	-0.0033
27	50	14V Biased	0.045	0.042	-0.003
28	50	14V Biased	0.0547	0.0516	-0.0031
29	50	14V Biased	0.0443	0.0414	-0.0029
30	50	14V Biased	0.0444	0.0413	-0.0031
31	0	Correlation	0.0551	0.0548	-0.0003
32	0	Correlation	0.0466	0.0473	0.0007
33	0	Correlation	0.0558	0.0559	0.0001
34	0	Correlation	0.0451	0.0456	0.0005
35	0	Correlation	0.0454	0.0458	0.0004

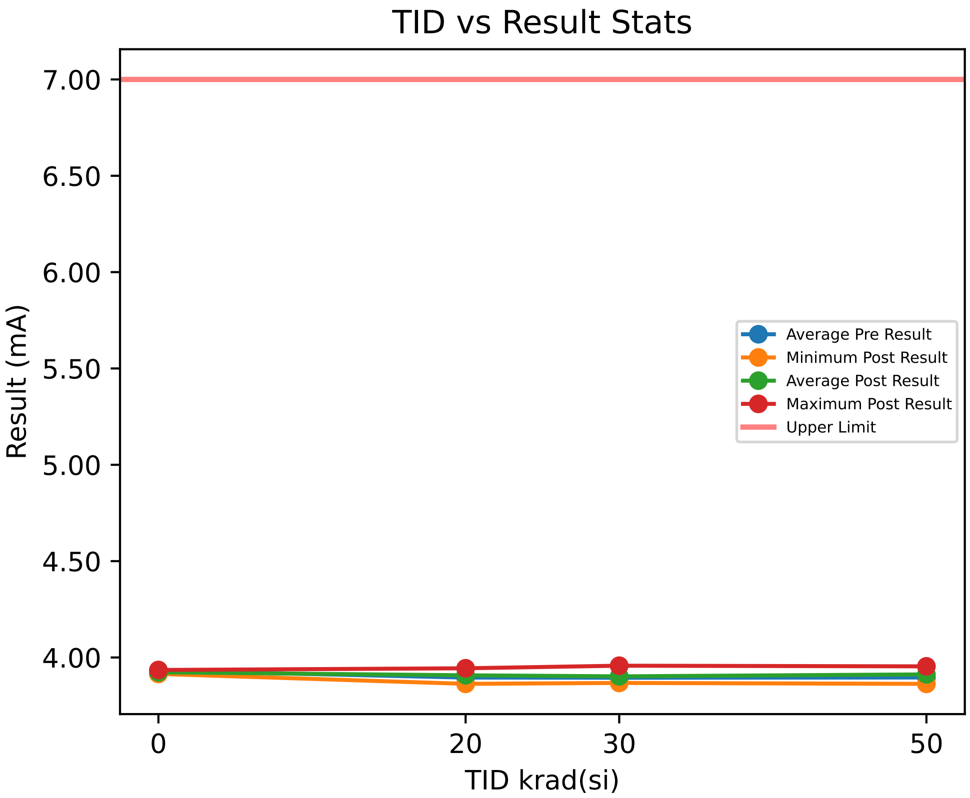


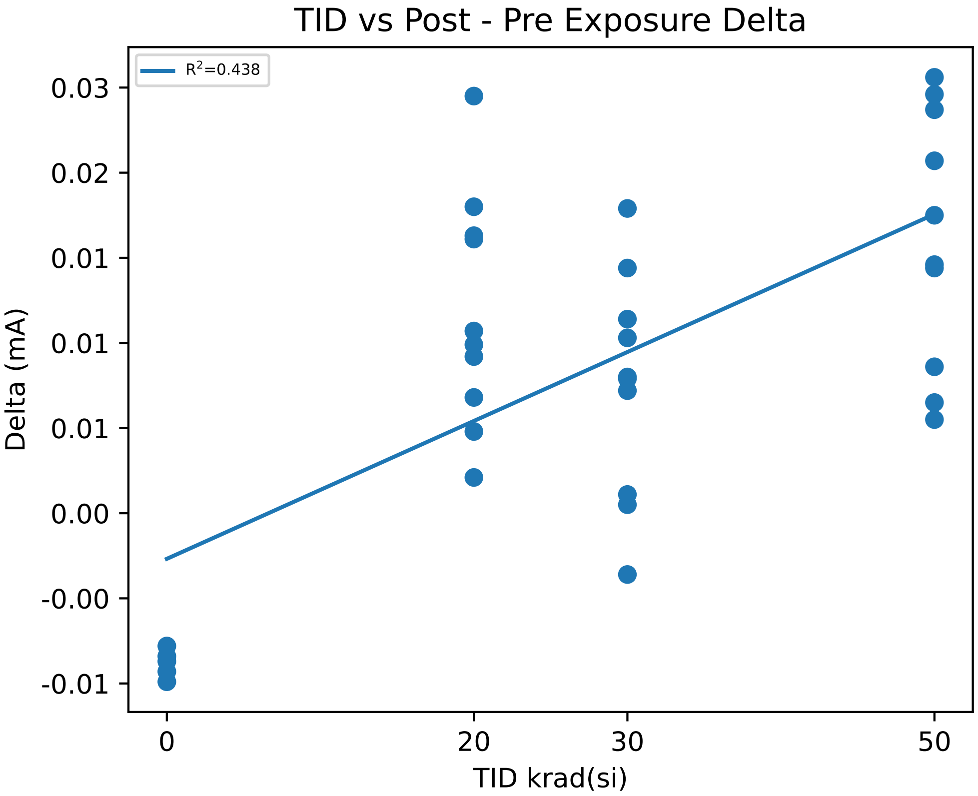
TID vs Post - Pre Exposure Delta

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	0.0451	0.0496	0.0558	0.0053754	0.0456	0.04988	0.0559	0.0050514	-0.0003	0.00028	0.0007	0.00038987
20	0.0417	0.0476	0.056	0.006045	0.041	0.04711	0.0549	0.0055324	-0.0017	-0.00049	0.001	0.00076949
30	0.0421	0.04656	0.054	0.0049214	0.0416	0.04517	0.0518	0.0044959	-0.0022	-0.00139	-0.0005	0.00054863
50	0.0423	0.04773	0.056	0.0051038	0.0405	0.04478	0.0525	0.004917	-0.0035	-0.00295	-0.0018	0.00045031

Device Test: 4.0 ISD_VIN_4p5V(ISD_Vin_4p5V)





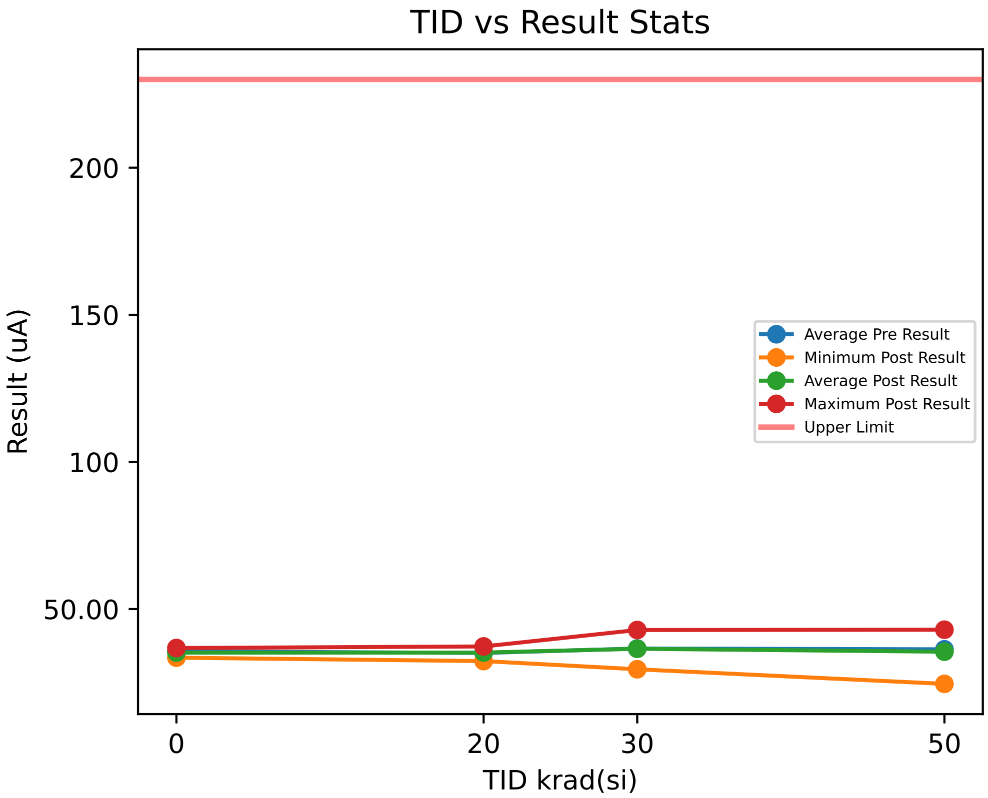
Test Results (Upper Limit = 7.0 (mA))

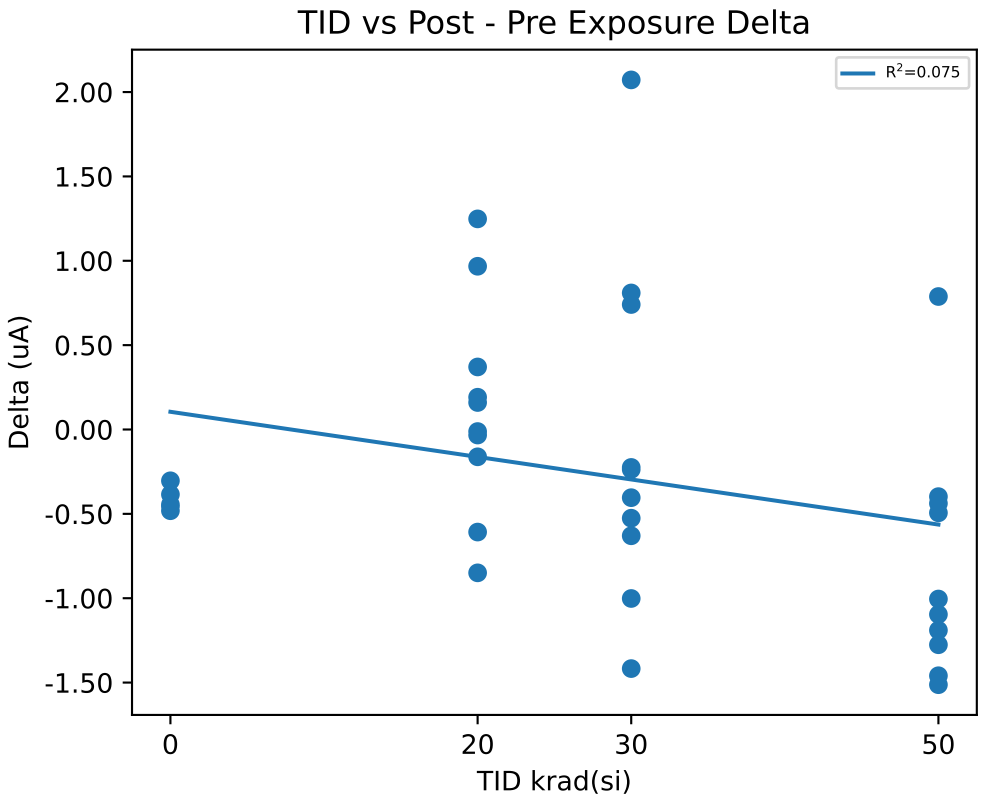
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	3.8988	3.9168	0.018
2	20	Unbiased	3.9276	3.9439	0.0163
3	20	Unbiased	3.895	3.9195	0.0245
4	20	Unbiased	3.9318	3.9339	0.0021
5	20	Unbiased	3.9083	3.9175	0.0092
6	20	14V Biased	3.8632	3.8731	0.0099
7	20	14V Biased	3.917	3.9238	0.0068
8	20	14V Biased	3.8586	3.8693	0.0107
9	20	14V Biased	3.8977	3.9138	0.0161
10	20	14V Biased	3.8583	3.8631	0.0048
11	30	Unbiased	3.88	3.8811	0.0011
12	30	Unbiased	3.9394	3.9573	0.0179
13	30	Unbiased	3.8714	3.8678	-0.0036
14	30	Unbiased	3.9019	3.9099	0.008
15	30	Unbiased	3.8874	3.9018	0.0144
16	30	14V Biased	3.8989	3.9092	0.0103
17	30	14V Biased	3.8842	3.8847	0.0005
18	30	14V Biased	3.8825	3.8897	0.0072
19	30	14V Biased	3.8727	3.8806	0.0079
20	30	14V Biased	3.9276	3.939	0.0114
21	50	Unbiased	3.8486	3.863	0.0144
22	50	Unbiased	3.8932	3.9078	0.0146
23	50	Unbiased	3.8776	3.8983	0.0207
24	50	Unbiased	3.8761	3.8998	0.0237
25	50	Unbiased	3.9453	3.9539	0.0086
26	50	14V Biased	3.8887	3.9143	0.0256
27	50	14V Biased	3.908	3.9255	0.0175
28	50	14V Biased	3.8806	3.8871	0.0065
29	50	14V Biased	3.915	3.9396	0.0246
30	50	14V Biased	3.9273	3.9328	0.0055
31	0	Correlation	3.9438	3.9351	-0.0087
32	0	Correlation	3.9255	3.9177	-0.0078
33	0	Correlation	3.9253	3.9154	-0.0099
34	0	Correlation	3.9408	3.9324	-0.0084
35	0	Correlation	3.9239	3.9146	-0.0093

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	3.9239	3.9319	3.9438	0.009609	3.9146	3.923	3.9351	0.009889	-0.0099	-0.00882	-0.0078	0.00081056
20	3.8583	3.8956	3.9318	0.027444	3.8631	3.9075	3.9439	0.028425	0.0021	0.01184	0.0245	0.006816
30	3.8714	3.8946	3.9394	0.022865	3.8678	3.9021	3.9573	0.028	-0.0036	0.00751	0.0179	0.0066038
50	3.8486	3.896	3.9453	0.028274	3.863	3.9122	3.9539	0.0269	0.0055	0.01617	0.0256	0.0075221

Device Test: 4.1 FORWARD_LEAKAGE_4p5V(Forward_Leakage_4p5V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

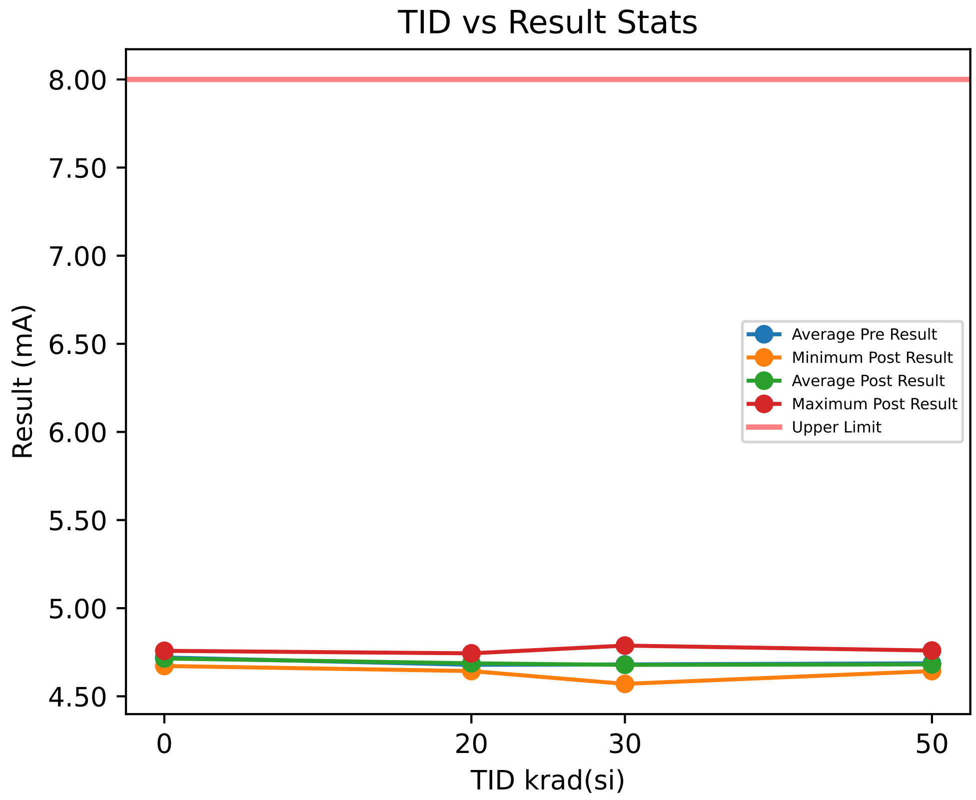
Test Results (Upper Limit = 230.0 (uA))

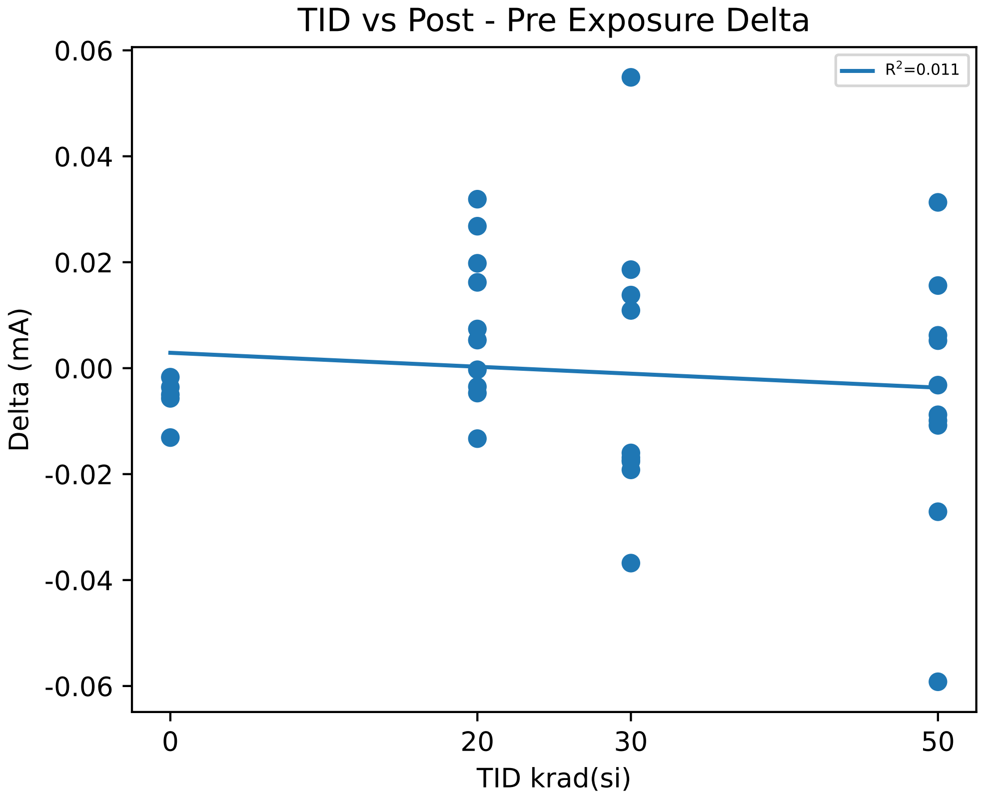
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	37.356	37.195	-0.1619
2	20	Unbiased	34.312	34.504	0.1913
3	20	Unbiased	33.395	33.555	0.16
4	20	Unbiased	35.279	35.267	-0.0121
5	20	Unbiased	33.17	32.321	-0.8496
6	20	14V Biased	32.598	32.969	0.3707
7	20	14V Biased	34.712	35.96	1.2483
8	20	14V Biased	37.286	37.253	-0.0328
9	20	14V Biased	34.84	35.807	0.9675
10	20	14V Biased	37.903	37.295	-0.6079
11	30	Unbiased	35.17	34.945	-0.2248
12	30	Unbiased	34.74	33.738	-1.0016
13	30	Unbiased	36.612	35.195	-1.4171
14	30	Unbiased	38.123	37.493	-0.6299
15	30	Unbiased	37.153	37.962	0.8094
16	30	14V Biased	29.94	29.536	-0.4041
17	30	14V Biased	43.408	42.882	-0.5257
18	30	14V Biased	39.045	41.117	2.0721
19	30	14V Biased	35.084	34.847	-0.2367
20	30	14V Biased	36.554	37.294	0.7408
21	50	Unbiased	37.45	35.99	-1.4595
22	50	Unbiased	38.51	37.234	-1.2758
23	50	Unbiased	37.761	36.757	-1.0047
24	50	Unbiased	33.934	32.421	-1.5126
25	50	Unbiased	38.645	37.455	-1.19
26	50	14V Biased	36.297	37.085	0.7882
27	50	14V Biased	35.976	35.578	-0.3979
28	50	14V Biased	25.07	24.576	-0.4939
29	50	14V Biased	35.476	35.038	-0.4381
30	50	14V Biased	44.077	42.981	-1.096
31	0	Correlation	34.167	33.711	-0.4561
32	0	Correlation	33.778	33.474	-0.304
33	0	Correlation	36.055	35.574	-0.4815
34	0	Correlation	36.861	36.477	-0.3849
35	0	Correlation	37.207	36.762	-0.445

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	33.778	35.614	37.207	1.5616	33.474	35.199	36.762	1.5335	-0.4815	-0.4143	-0.304	0.071127
20	32.598	35.085	37.903	1.8703	32.321	35.213	37.295	1.8254	-0.8496	0.12735	1.2483	0.63688
30	29.94	36.583	43.408	3.4498	29.536	36.501	42.882	3.7828	-1.4171	-0.08176	2.0721	1.0212
50	25.07	36.32	44.077	4.7939	24.576	35.512	42.981	4.6687	-1.5126	-0.80803	0.7882	0.69593

Device Test: 4.4 ISD_VIN_9V(ISD_Vin_9p0V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

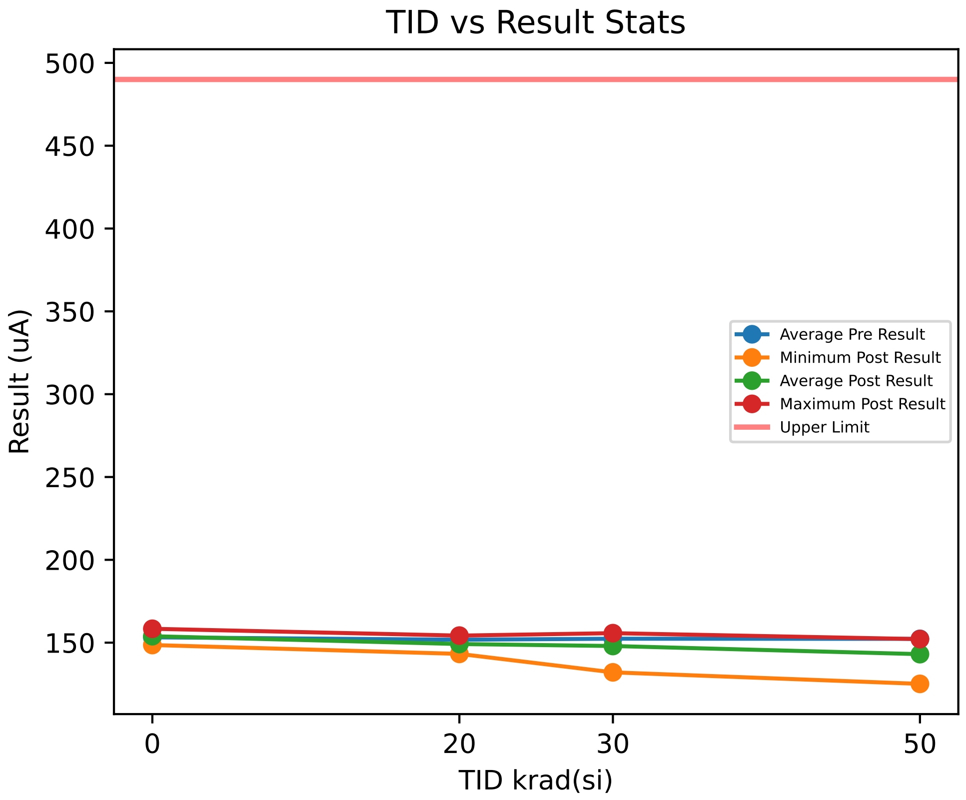
Test Results (Upper Limit = 8.0 (mA))

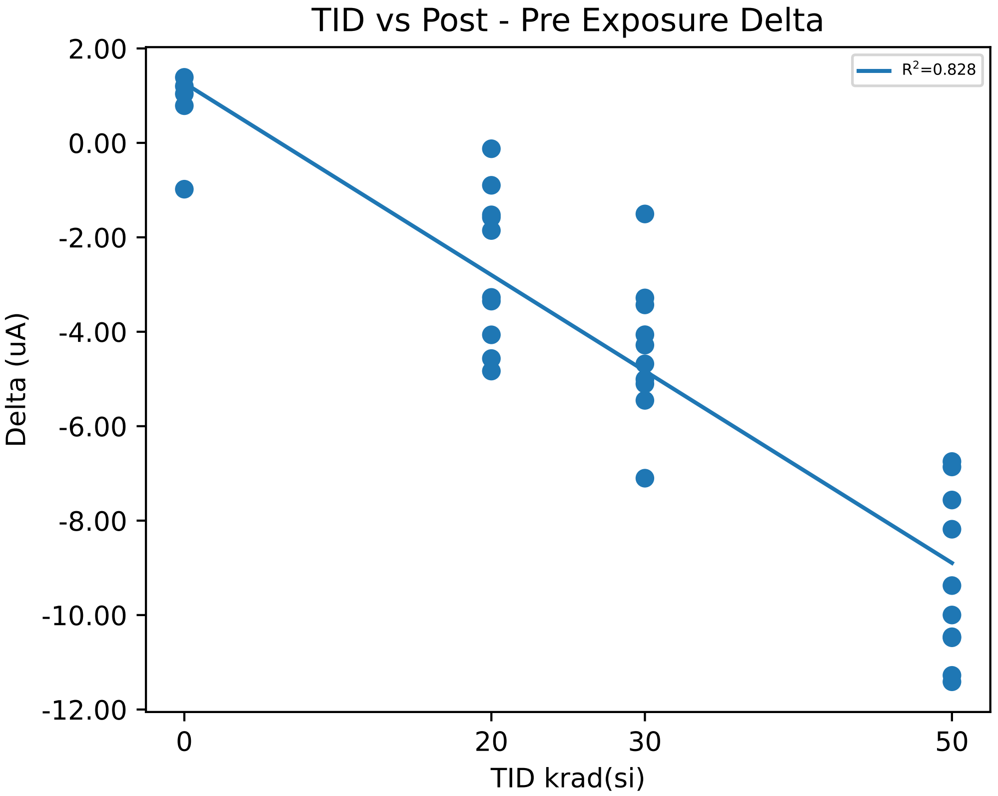
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	4.6423	4.6742	0.0319
2	20	Unbiased	4.717	4.7438	0.0268
3	20	Unbiased	4.66	4.6798	0.0198
4	20	Unbiased	4.7102	4.6969	-0.0133
5	20	Unbiased	4.6893	4.6858	-0.0035
6	20	14V Biased	4.718	4.7342	0.0162
7	20	14V Biased	4.6977	4.693	-0.0047
8	20	14V Biased	4.6379	4.6432	0.0053
9	20	14V Biased	4.6574	4.6648	0.0074
10	20	14V Biased	4.6563	4.656	-0.0003
11	30	Unbiased	4.7143	4.7692	0.0549
12	30	Unbiased	4.7691	4.7877	0.0186
13	30	Unbiased	4.6179	4.6005	-0.0174
14	30	Unbiased	4.7031	4.714	0.0109
15	30	Unbiased	4.675	4.659	-0.016
16	30	14V Biased	4.6073	4.5705	-0.0368
17	30	14V Biased	4.6774	4.6582	-0.0192
18	30	14V Biased	4.6528	4.6359	-0.0169
19	30	14V Biased	4.6684	4.6508	-0.0176
20	30	14V Biased	4.7228	4.7366	0.0138
21	50	Unbiased	4.6605	4.6517	-0.0088
22	50	Unbiased	4.6885	4.6947	0.0062
23	50	Unbiased	4.7283	4.7596	0.0313
24	50	Unbiased	4.6561	4.6613	0.0052
25	50	Unbiased	4.7347	4.7503	0.0156
26	50	14V Biased	4.6797	4.6689	-0.0108
27	50	14V Biased	4.6902	4.687	-0.0032
28	50	14V Biased	4.6577	4.6478	-0.0099
29	50	14V Biased	4.6727	4.6456	-0.0271
30	50	14V Biased	4.7022	4.643	-0.0592
31	0	Correlation	4.7211	4.7175	-0.0036
32	0	Correlation	4.713	4.7113	-0.0017
33	0	Correlation	4.6852	4.6721	-0.0131
34	0	Correlation	4.763	4.758	-0.005
35	0	Correlation	4.7191	4.7134	-0.0057

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	4.6852	4.7203	4.763	0.027887	4.6721	4.7145	4.758	0.030457	-0.0131	-0.00582	-0.0017	0.0043471
20	4.6379	4.6786	4.718	0.031219	4.6432	4.6872	4.7438	0.031933	-0.0133	0.00856	0.0319	0.014726
30	4.6073	4.6808	4.7691	0.048901	4.5705	4.6782	4.7877	0.071421	-0.0368	-0.00257	0.0549	0.026833
50	4.6561	4.6871	4.7347	0.027884	4.643	4.681	4.7596	0.042683	-0.0592	-0.00607	0.0313	0.024634

Device Test: 4.5 FORWARD_LEAKAGE_9V(Forward_Leakage_9p0V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

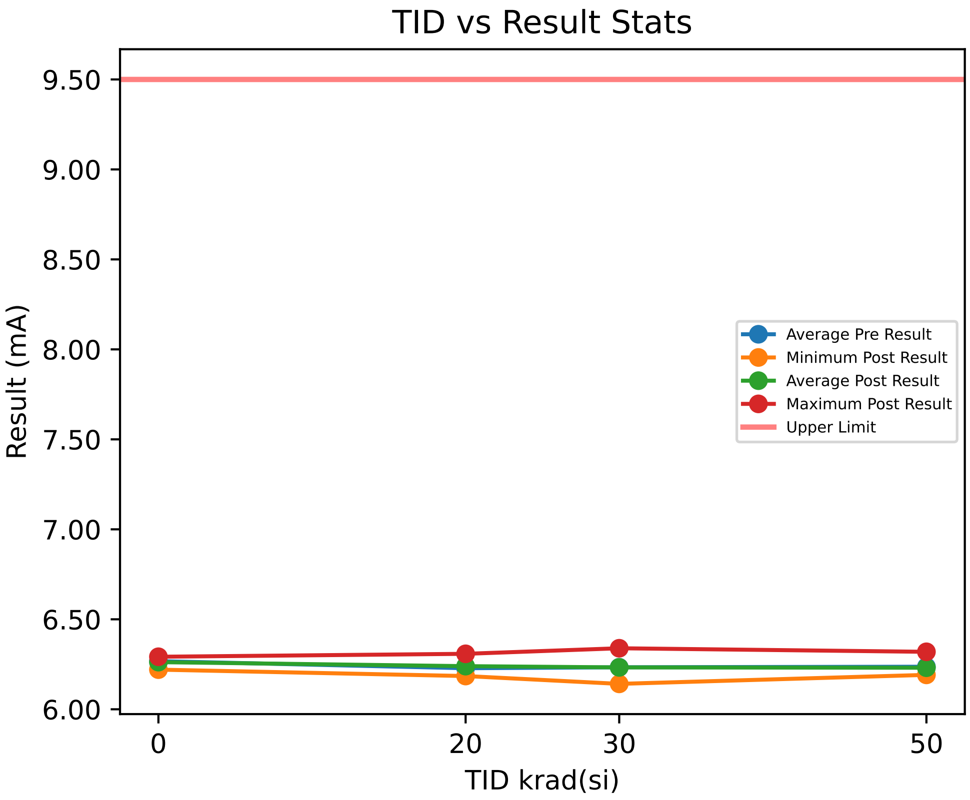
Test Results (Upper Limit = 490.0 (uA))

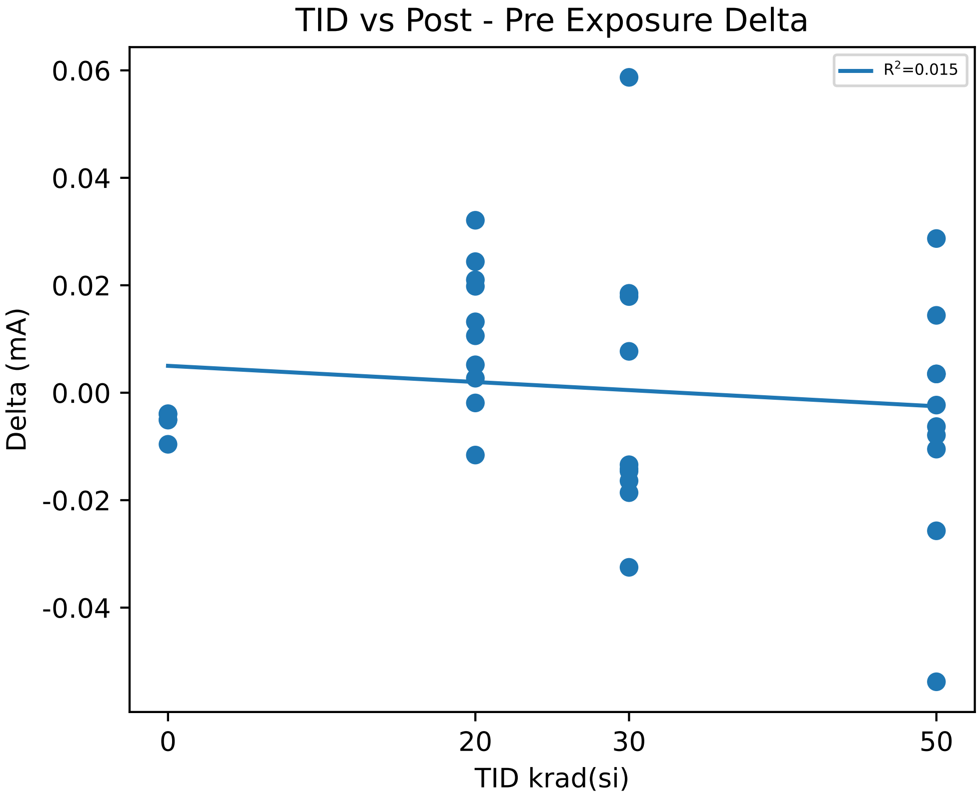
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	154.5	152.65	-1.8556
2	20	Unbiased	143.34	143.21	-0.1241
3	20	Unbiased	148.11	147.22	-0.8985
4	20	Unbiased	147.87	143.8	-4.0648
5	20	Unbiased	152.2	147.37	-4.8325
6	20	14V Biased	155.99	151.42	-4.5673
7	20	14V Biased	151.17	149.59	-1.5773
8	20	14V Biased	157.61	154.26	-3.3511
9	20	14V Biased	152.39	150.86	-1.5241
10	20	14V Biased	154.55	151.28	-3.2725
11	30	Unbiased	148.8	145.37	-3.4309
12	30	Unbiased	153.56	149.5	-4.0625
13	30	Unbiased	152.92	145.82	-7.1014
14	30	Unbiased	153.62	148.17	-5.4529
15	30	Unbiased	160.01	155.73	-4.2824
16	30	14V Biased	136.75	132.07	-4.6804
17	30	14V Biased	156.25	151.14	-5.1035
18	30	14V Biased	154.54	153.03	-1.5055
19	30	14V Biased	158	152.99	-5.0069
20	30	14V Biased	149.25	145.96	-3.2837
21	50	Unbiased	158.73	147.46	-11.277
22	50	Unbiased	155.42	145.42	-9.9983
23	50	Unbiased	163.56	152.15	-11.413
24	50	Unbiased	147.68	137.22	-10.46
25	50	Unbiased	154.04	143.56	-10.481
26	50	14V Biased	154.82	147.26	-7.5631
27	50	14V Biased	147.59	140.84	-6.7482
28	50	14V Biased	133.3	125.12	-8.1822
29	50	14V Biased	146.8	139.94	-6.8629
30	50	14V Biased	161.01	151.64	-9.3754
31	0	Correlation	148.93	150.13	1.2007
32	0	Correlation	147.18	148.57	1.3878
33	0	Correlation	159.36	158.38	-0.9807
34	0	Correlation	154.87	155.91	1.038
35	0	Correlation	155.71	156.5	0.7873

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	147.18	153.21	159.36	5.0364	148.57	153.9	158.38	4.285	-0.9807	0.68662	1.3878	0.9578
20	143.34	151.77	157.61	4.3165	143.21	149.17	154.26	3.6795	-4.8325	-2.6068	-0.1241	1.6261
30	136.75	152.37	160.01	6.4938	132.07	147.98	155.73	6.597	-7.1014	-4.391	-1.5055	1.4921
50	133.3	152.3	163.56	8.8072	125.12	143.06	152.15	7.9562	-11.413	-9.236	-6.7482	1.7726

Device Test: 4.6 ISD_VIN_12V(ISD_Vin_12p0V)





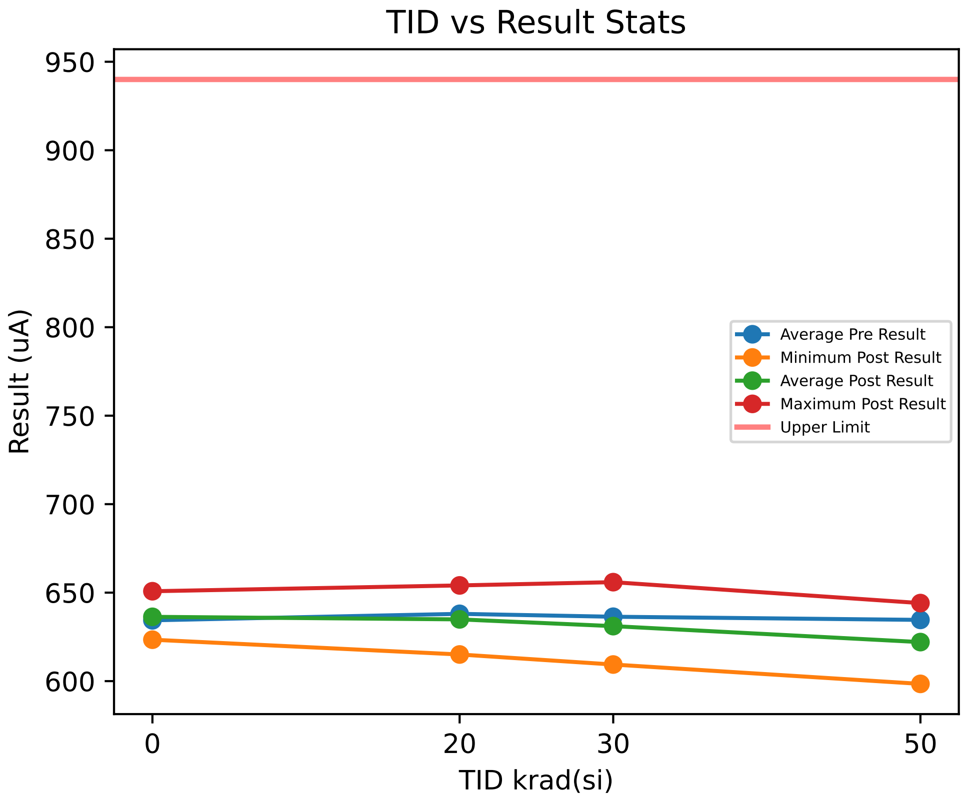
Test Results (Upper Limit = 9.5 (mA))

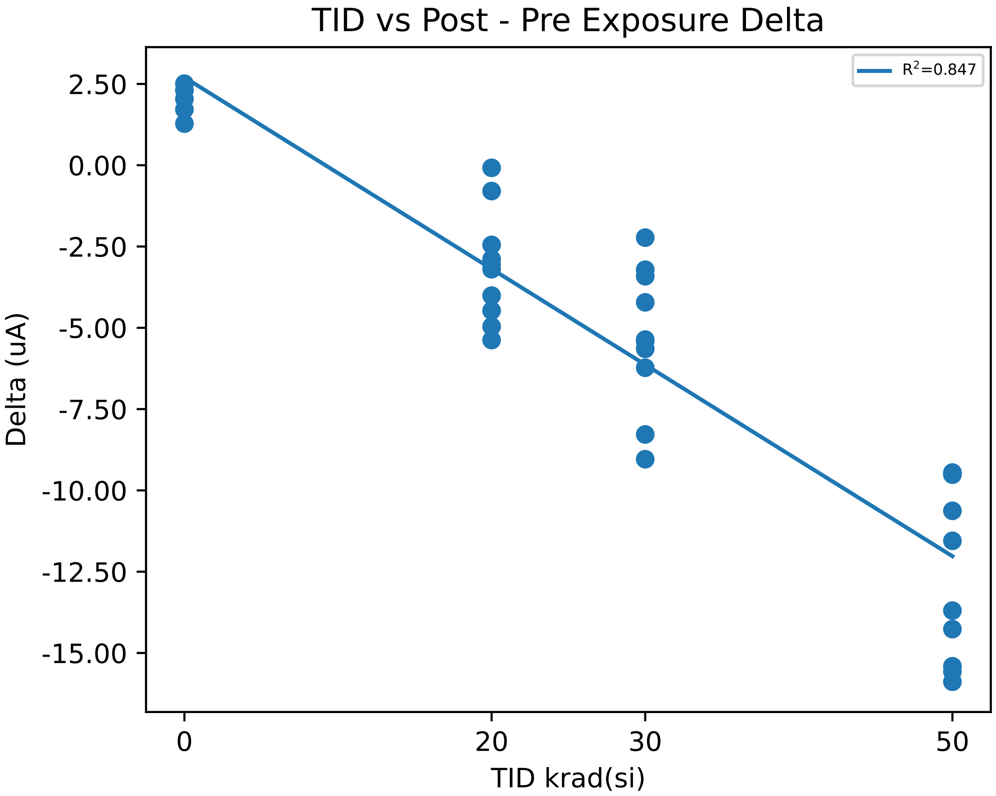
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	6.1673	6.1994	0.0321
2	20	Unbiased	6.2838	6.3082	0.0244
3	20	Unbiased	6.2395	6.2593	0.0198
4	20	Unbiased	6.284	6.2724	-0.0116
5	20	Unbiased	6.2289	6.227	-0.0019
6	20	14V Biased	6.2491	6.2701	0.021
7	20	14V Biased	6.2405	6.2432	0.0027
8	20	14V Biased	6.1741	6.1847	0.0106
9	20	14V Biased	6.2045	6.2177	0.0132
10	20	14V Biased	6.2094	6.2146	0.0052
11	30	Unbiased	6.2737	6.3324	0.0587
12	30	Unbiased	6.3206	6.3391	0.0185
13	30	Unbiased	6.1599	6.1413	-0.0186
14	30	Unbiased	6.2506	6.2583	0.0077
15	30	Unbiased	6.2333	6.2169	-0.0164
16	30	14V Biased	6.1737	6.1412	-0.0325
17	30	14V Biased	6.2366	6.2224	-0.0142
18	30	14V Biased	6.2095	6.1961	-0.0134
19	30	14V Biased	6.2169	6.2023	-0.0146
20	30	14V Biased	6.2596	6.2775	0.0179
21	50	Unbiased	6.2017	6.1912	-0.0105
22	50	Unbiased	6.2309	6.2344	0.0035
23	50	Unbiased	6.2491	6.2778	0.0287
24	50	Unbiased	6.2134	6.2169	0.0035
25	50	Unbiased	6.305	6.3194	0.0144
26	50	14V Biased	6.2268	6.2205	-0.0063
27	50	14V Biased	6.2338	6.2315	-0.0023
28	50	14V Biased	6.1991	6.1912	-0.0079
29	50	14V Biased	6.2336	6.2079	-0.0257
30	50	14V Biased	6.2717	6.2179	-0.0538
31	0	Correlation	6.2743	6.2704	-0.0039
32	0	Correlation	6.2677	6.2637	-0.004
33	0	Correlation	6.2299	6.2203	-0.0096
34	0	Correlation	6.2969	6.2919	-0.005
35	0	Correlation	6.2686	6.2635	-0.0051

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	6.2299	6.2675	6.2969	0.024112	6.2203	6.262	6.2919	0.026022	-0.0096	-0.00552	-0.0039	0.0023467
20	6.1673	6.2281	6.284	0.0401	6.1847	6.2397	6.3082	0.038015	-0.0116	0.01155	0.0321	0.013266
30	6.1599	6.2334	6.3206	0.047176	6.1412	6.2328	6.3391	0.069337	-0.0325	-0.00069	0.0587	0.026726
50	6.1991	6.2365	6.305	0.032274	6.1912	6.2309	6.3194	0.03972	-0.0538	-0.00564	0.0287	0.022386

Device Test: 4.7 FORWARD_LEAKAGE_12V(Forward_Leakage_12p0V)





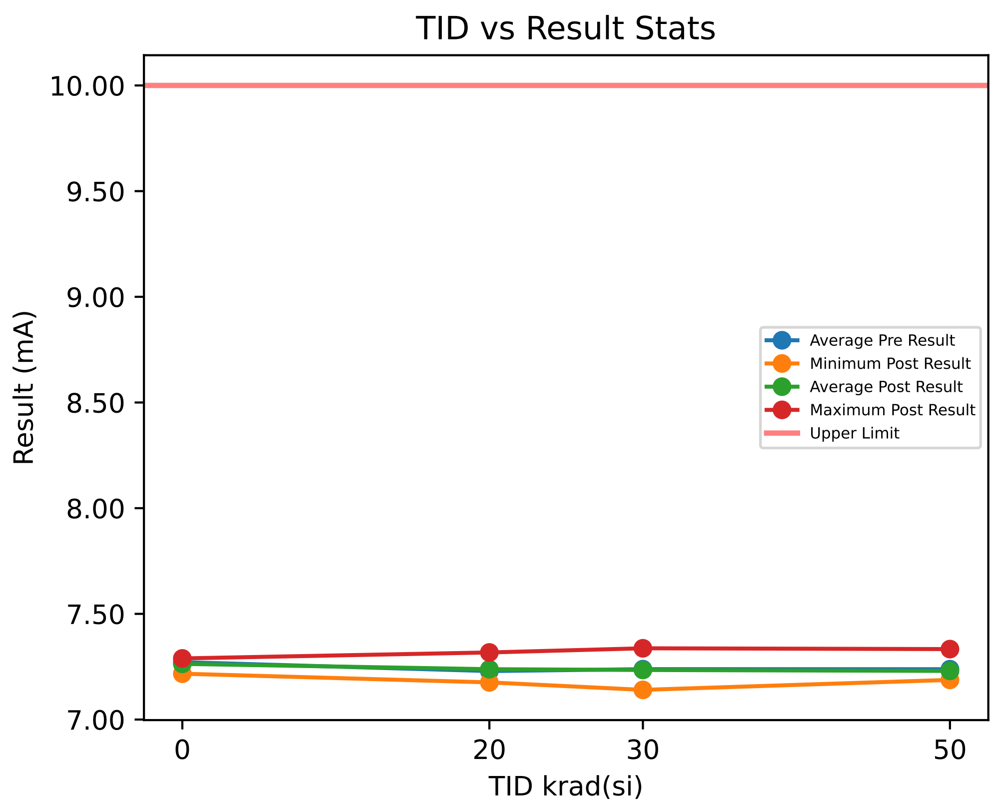
Test Results (Upper Limit = 940.0 (uA))

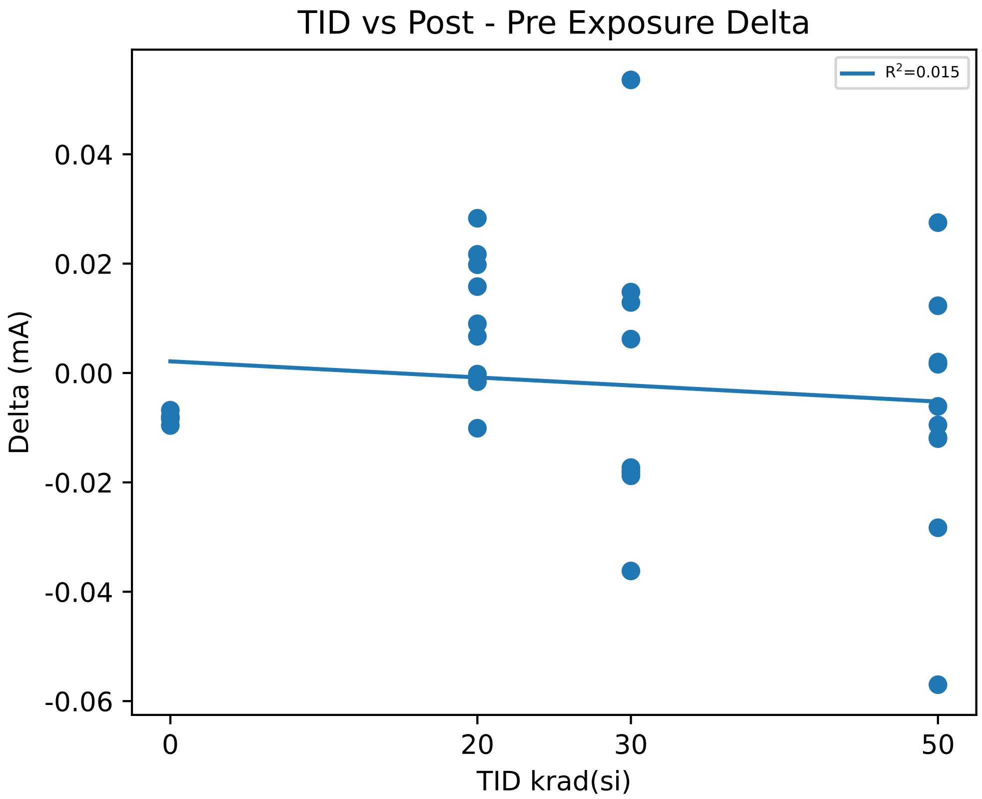
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	641.64	637.63	-4.0095
2	20	Unbiased	623.67	620.62	-3.0527
3	20	Unbiased	628.3	625.41	-2.8899
4	20	Unbiased	619.52	615.05	-4.4734
5	20	Unbiased	637.18	631.81	-5.3768
6	20	14V Biased	653.26	648.3	-4.9597
7	20	14V Biased	644.36	644.28	-0.0805
8	20	14V Biased	657.28	654.08	-3.1996
9	20	14V Biased	642.41	641.62	-0.794
10	20	14V Biased	632.54	630.09	-2.4496
11	30	Unbiased	622.07	618.86	-3.2133
12	30	Unbiased	641.03	636.81	-4.217
13	30	Unbiased	644.8	635.76	-9.0409
14	30	Unbiased	641.44	633.16	-8.2797
15	30	Unbiased	658.79	652.57	-6.2281
16	30	14V Biased	614.79	609.38	-5.4126
17	30	14V Biased	628.07	622.71	-5.3629
18	30	14V Biased	631.68	629.45	-2.2269
19	30	14V Biased	661.57	655.92	-5.6465
20	30	14V Biased	619.57	616.16	-3.4136
21	50	Unbiased	643.99	628.58	-15.408
22	50	Unbiased	646.94	633.24	-13.697
23	50	Unbiased	659.98	644.1	-15.885
24	50	Unbiased	634.34	618.77	-15.573
25	50	Unbiased	626.17	611.9	-14.266
26	50	14V Biased	634.91	625.39	-9.5161
27	50	14V Biased	618.64	609.17	-9.467
28	50	14V Biased	609.07	598.45	-10.629
29	50	14V Biased	631.92	622.47	-9.4502
30	50	14V Biased	640.06	628.51	-11.551
31	0	Correlation	635.23	637.73	2.5082
32	0	Correlation	621.69	623.41	1.7136
33	0	Correlation	649.51	650.79	1.28
34	0	Correlation	631.84	633.88	2.0394
35	0	Correlation	633.53	635.83	2.3031

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	621.69	634.36	649.51	9.972	623.41	636.33	650.79	9.8021	1.28	1.9689	2.5082	0.48664
20	619.52	638.02	657.28	12.243	615.05	634.89	654.08	12.511	-5.3768	-3.1286	-0.0805	1.7082
30	614.79	636.38	661.57	15.984	609.38	631.08	655.92	15.106	-9.0409	-5.3041	-2.2269	2.1705
50	609.07	634.6	659.98	14.527	598.45	622.06	644.1	13.097	-15.885	-12.544	-9.4502	2.7019

Device Test: 4.8 ISD_VIN_14V(ISD_Vin_14p0V)





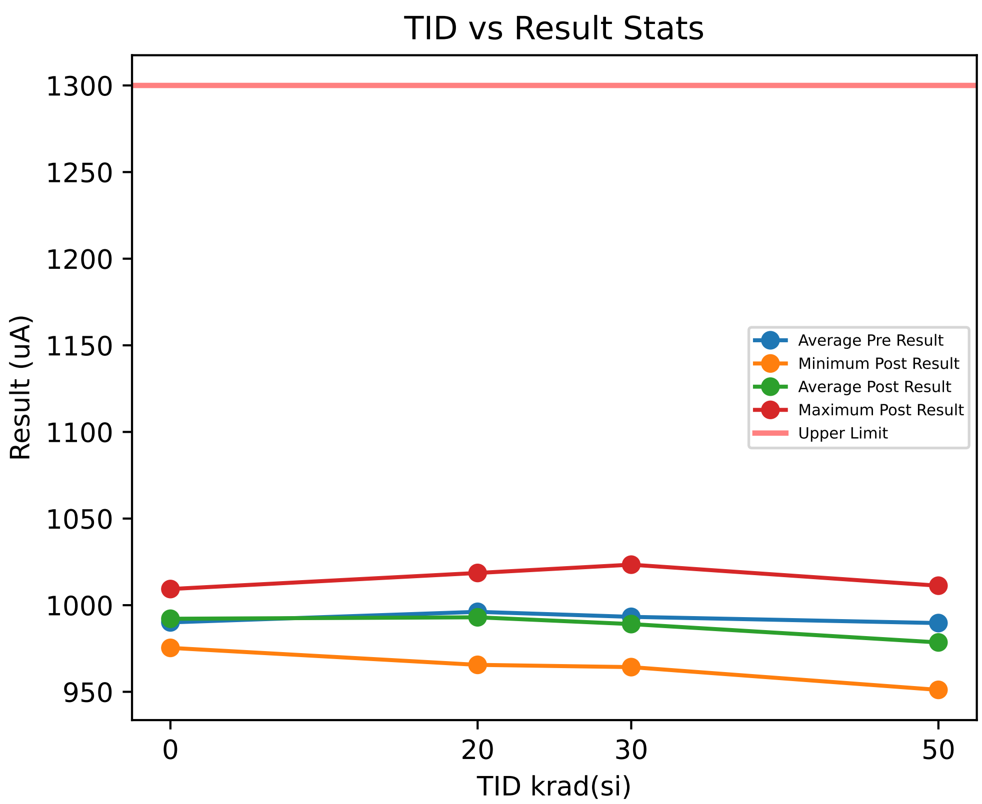
Test Results (Upper Limit = 10.0 (mA))

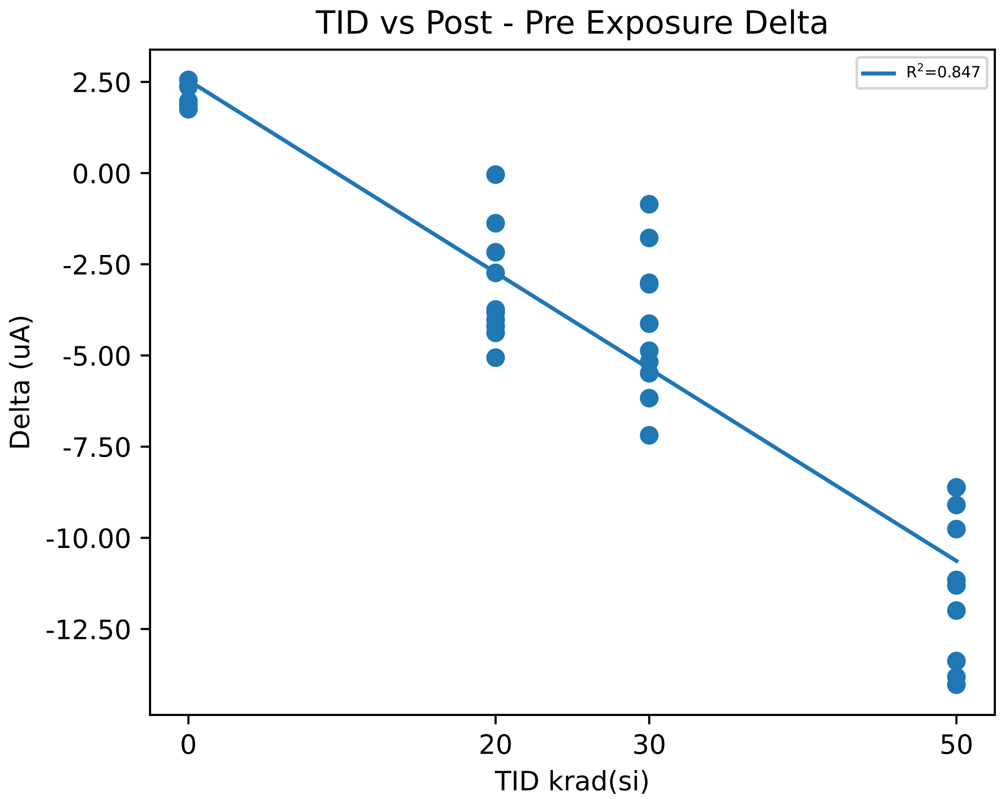
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	7.1549	7.1832	0.0283
2	20	Unbiased	7.2976	7.3174	0.0198
3	20	Unbiased	7.2608	7.2766	0.0158
4	20	Unbiased	7.2953	7.2852	-0.0101
5	20	Unbiased	7.225	7.2234	-0.0016
6	20	14V Biased	7.2319	7.2536	0.0217
7	20	14V Biased	7.2434	7.2425	-0.0009
8	20	14V Biased	7.1691	7.1758	0.0067
9	20	14V Biased	7.2036	7.2126	0.009
10	20	14V Biased	7.2123	7.2121	-0.0002
11	30	Unbiased	7.2835	7.3371	0.0536
12	30	Unbiased	7.3201	7.3349	0.0148
13	30	Unbiased	7.1592	7.1404	-0.0188
14	30	Unbiased	7.2516	7.2578	0.0062
15	30	Unbiased	7.2411	7.2238	-0.0173
16	30	14V Biased	7.188	7.1518	-0.0362
17	30	14V Biased	7.2427	7.2247	-0.018
18	30	14V Biased	7.2179	7.2001	-0.0178
19	30	14V Biased	7.2204	7.2022	-0.0182
20	30	14V Biased	7.2594	7.2723	0.0129
21	50	Unbiased	7.2036	7.1918	-0.0118
22	50	Unbiased	7.2283	7.2303	0.002
23	50	Unbiased	7.2375	7.265	0.0275
24	50	Unbiased	7.2115	7.2131	0.0016
25	50	Unbiased	7.321	7.3333	0.0123
26	50	14V Biased	7.2258	7.2163	-0.0095
27	50	14V Biased	7.2317	7.2256	-0.0061
28	50	14V Biased	7.1996	7.1876	-0.012
29	50	14V Biased	7.237	7.2087	-0.0283
30	50	14V Biased	7.2863	7.2293	-0.057
31	0	Correlation	7.2836	7.2756	-0.008
32	0	Correlation	7.2736	7.2668	-0.0068
33	0	Correlation	7.2265	7.2169	-0.0096
34	0	Correlation	7.2973	7.2892	-0.0081
35	0	Correlation	7.2767	7.2683	-0.0084

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	7.2265	7.2715	7.2973	0.026779	7.2169	7.2634	7.2892	0.027442	-0.0096	-0.00818	-0.0068	0.001001
20	7.1549	7.2294	7.2976	0.047546	7.1758	7.2382	7.3174	0.045566	-0.0101	0.00885	0.0283	0.0123
30	7.1592	7.2384	7.3201	0.045834	7.1404	7.2345	7.3371	0.067256	-0.0362	-0.00388	0.0536	0.025995
50	7.1996	7.2382	7.321	0.037809	7.1876	7.2301	7.3333	0.042295	-0.057	-0.00813	0.0275	0.022886

Device Test: 4.9 FORWARD_LEAKAGE(Forward_Leakage_14p0V)





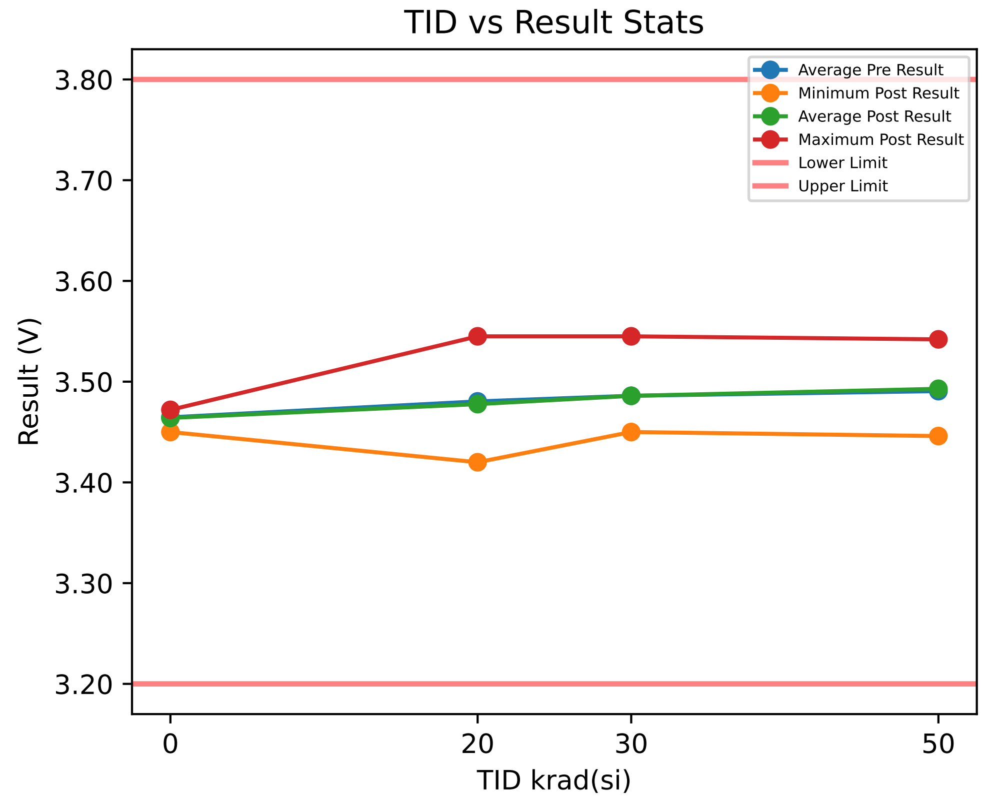
Test Results (Upper Limit = 1300.0 (uA))

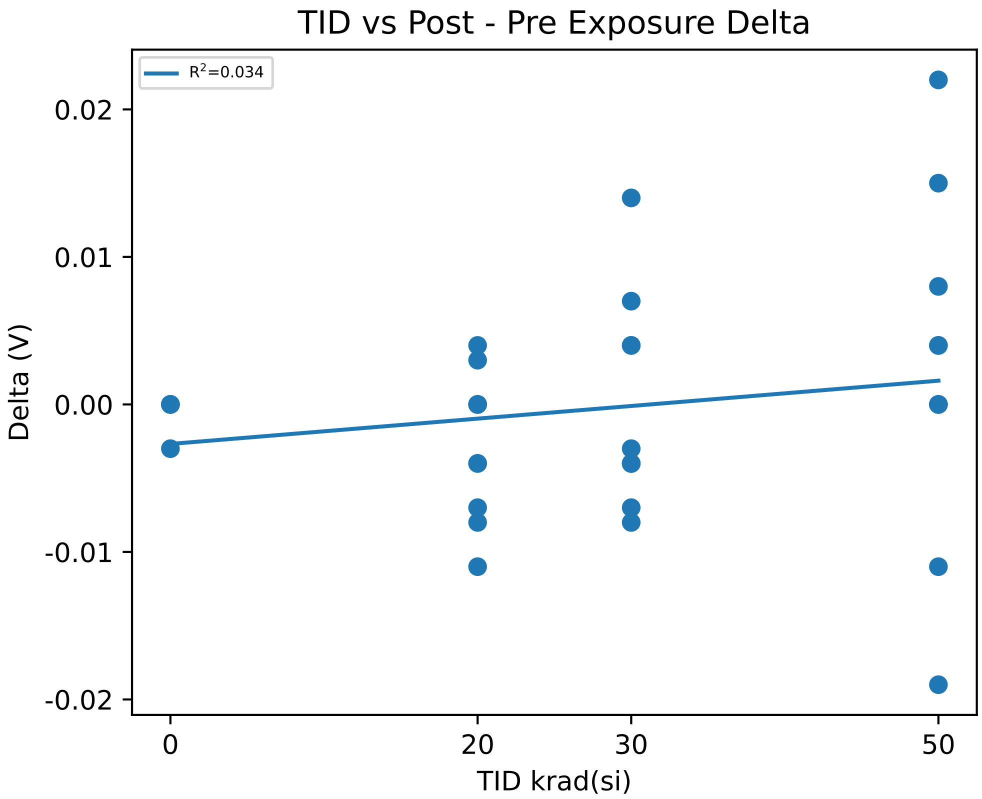
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	1002.1	997.06	-5.0599
2	20	Unbiased	982.2	978	-4.2011
3	20	Unbiased	984.58	980.2	-4.3803
4	20	Unbiased	968.29	965.56	-2.736
5	20	Unbiased	993.51	989.68	-3.8321
6	20	14V Biased	1014.3	1010.3	-4.023
7	20	14V Biased	1008.7	1008.6	-0.0415
8	20	14V Biased	1022.3	1018.6	-3.7392
9	20	14V Biased	1001.6	1000.2	-1.3744
10	20	14V Biased	984	981.83	-2.17
11	30	Unbiased	973.63	972.77	-0.8542
12	30	Unbiased	997.36	994.35	-3.0079
13	30	Unbiased	1006.7	1000.6	-6.171
14	30	Unbiased	1000.2	993.03	-7.1897
15	30	Unbiased	1023.6	1019.5	-4.1284
16	30	14V Biased	969.12	964.25	-4.8716
17	30	14V Biased	977.47	971.99	-5.4866
18	30	14V Biased	986.2	984.43	-1.7775
19	30	14V Biased	1028.6	1023.4	-5.1758
20	30	14V Biased	969.79	966.74	-3.0496
21	50	Unbiased	1000	986.24	-13.813
22	50	Unbiased	1008.6	997.44	-11.154
23	50	Unbiased	1024.6	1011.3	-13.379
24	50	Unbiased	989.41	975.39	-14.026
25	50	Unbiased	976.65	964.66	-11.993
26	50	14V Biased	987.16	978.06	-9.099
27	50	14V Biased	967.66	959.04	-8.6184
28	50	14V Biased	960.88	951.12	-9.7607
29	50	14V Biased	987.85	979.23	-8.6204
30	50	14V Biased	993.94	982.63	-11.306
31	0	Correlation	995.99	998.54	2.5552
32	0	Correlation	973.61	975.36	1.7511
33	0	Correlation	1007.5	1009.3	1.858
34	0	Correlation	986.37	988.35	1.9738
35	0	Correlation	986.92	989.28	2.3671

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	973.61	990.07	1007.5	12.572	975.36	992.17	1009.3	12.654	1.7511	2.101	2.5552	0.34452
20	968.29	996.16	1022.3	16.656	965.56	993.01	1018.6	16.815	-5.0599	-3.1558	-0.0415	1.5559
30	969.12	993.27	1028.6	21.682	964.25	989.1	1023.4	21.005	-7.1897	-4.1712	-0.8542	1.9913
50	960.88	989.68	1024.6	18.852	951.12	978.51	1011.3	17.759	-14.026	-11.177	-8.6184	2.1083

Device Test: 5.0 VIN_UVLO_RISE(VIN_UVLO_RISING)





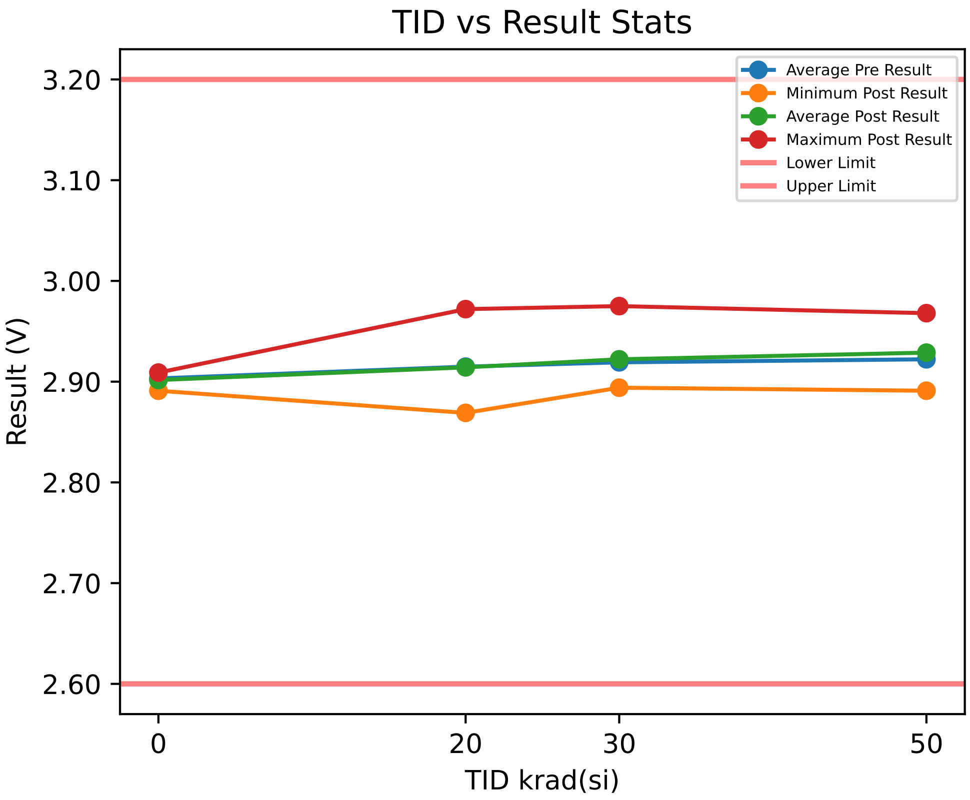
Test Results (Lower Limit = 3.2, Upper Limit = 3.8 (V))

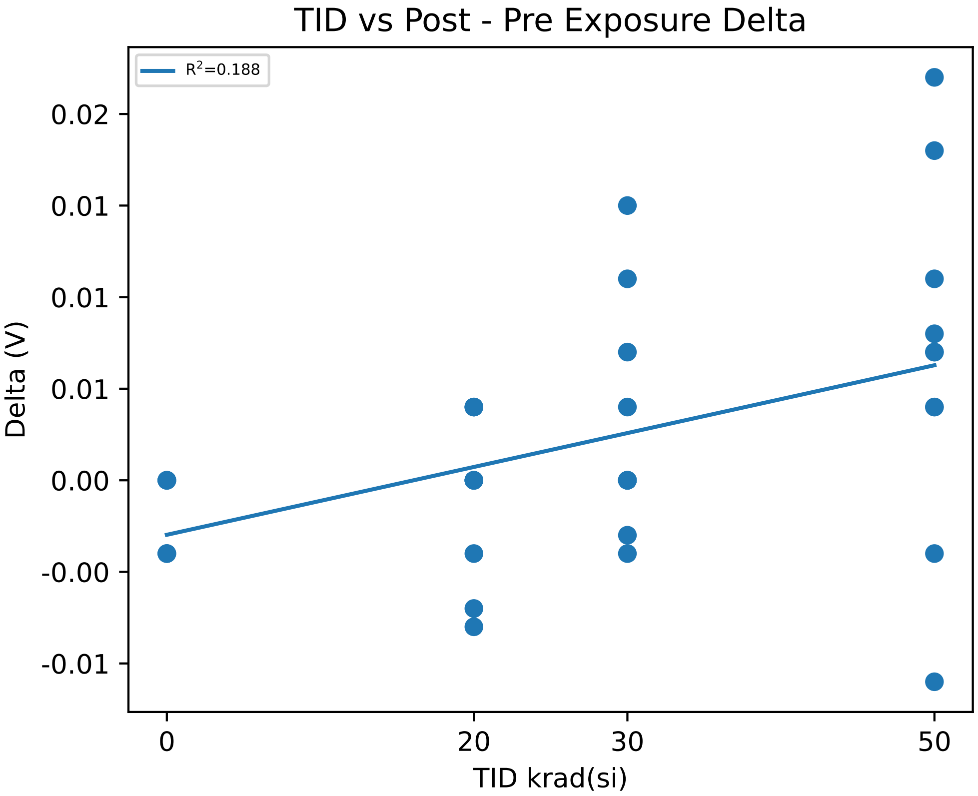
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	3.501	3.49	-0.011
2	20	Unbiased	3.501	3.501	0
3	20	Unbiased	3.542	3.545	0.003
4	20	Unbiased	3.498	3.498	0
5	20	Unbiased	3.461	3.457	-0.004
6	20	14V Biased	3.461	3.454	-0.007
7	20	14V Biased	3.476	3.468	-0.008
8	20	14V Biased	3.498	3.498	0
9	20	14V Biased	3.424	3.42	-0.004
10	20	14V Biased	3.442	3.446	0.004
11	30	Unbiased	3.494	3.498	0.004
12	30	Unbiased	3.483	3.476	-0.007
13	30	Unbiased	3.476	3.49	0.014
14	30	Unbiased	3.465	3.461	-0.004
15	30	Unbiased	3.454	3.45	-0.004
16	30	14V Biased	3.538	3.545	0.007
17	30	14V Biased	3.476	3.468	-0.008
18	30	14V Biased	3.505	3.501	-0.004
19	30	14V Biased	3.501	3.505	0.004
20	30	14V Biased	3.468	3.465	-0.003
21	50	Unbiased	3.49	3.494	0.004
22	50	Unbiased	3.52	3.542	0.022
23	50	Unbiased	3.512	3.52	0.008
24	50	Unbiased	3.461	3.461	0
25	50	Unbiased	3.49	3.505	0.015
26	50	14V Biased	3.487	3.487	0
27	50	14V Biased	3.545	3.534	-0.011
28	50	14V Biased	3.476	3.457	-0.019
29	50	14V Biased	3.442	3.446	0.004
30	50	14V Biased	3.483	3.483	0
31	0	Correlation	3.472	3.472	0
32	0	Correlation	3.472	3.472	0
33	0	Correlation	3.468	3.465	-0.003
34	0	Correlation	3.45	3.45	0
35	0	Correlation	3.461	3.461	0

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	3.45	3.4646	3.472	0.0093167	3.45	3.464	3.472	0.0091378	-0.003	-0.0006	0	0.0013416
20	3.424	3.4804	3.542	0.034465	3.42	3.4777	3.545	0.035693	-0.011	-0.0027	0.004	0.0049227
30	3.454	3.486	3.538	0.024386	3.45	3.4859	3.545	0.027914	-0.008	-0.0001	0.014	0.0070467
50	3.442	3.4906	3.545	0.029448	3.446	3.4929	3.542	0.032695	-0.019	0.0023	0.022	0.01171

Device Test: 5.1 VIN_UVLO_FALL(VIN_UVLO_FALLING)





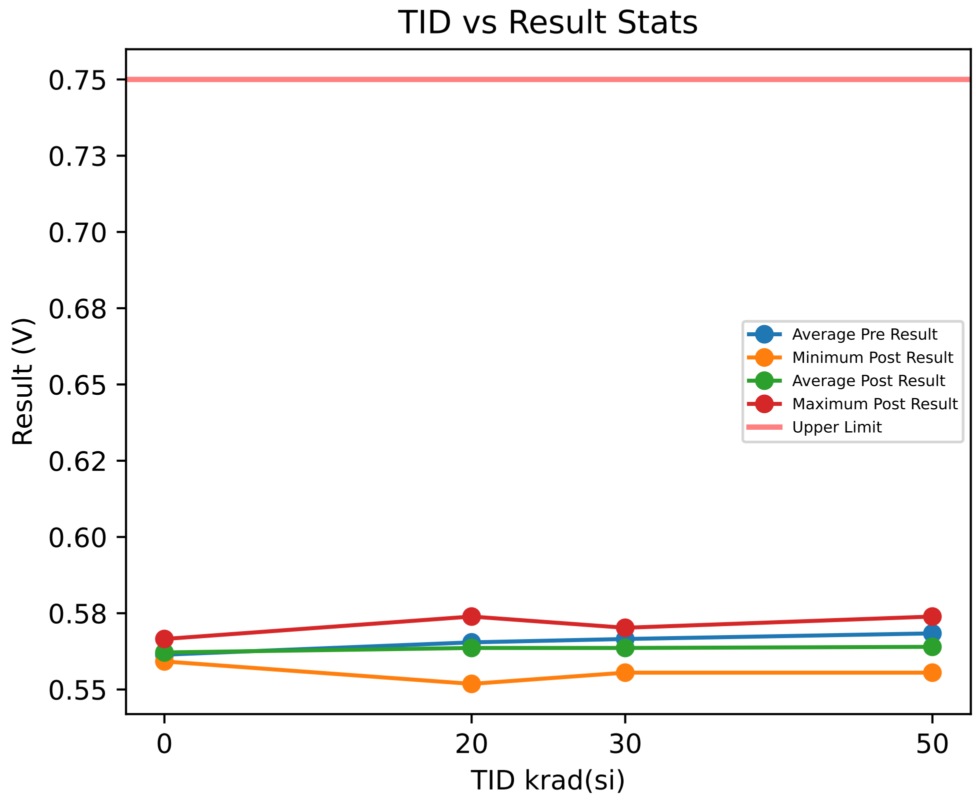
Test Results (Lower Limit = 2.6, Upper Limit = 3.2 (V))

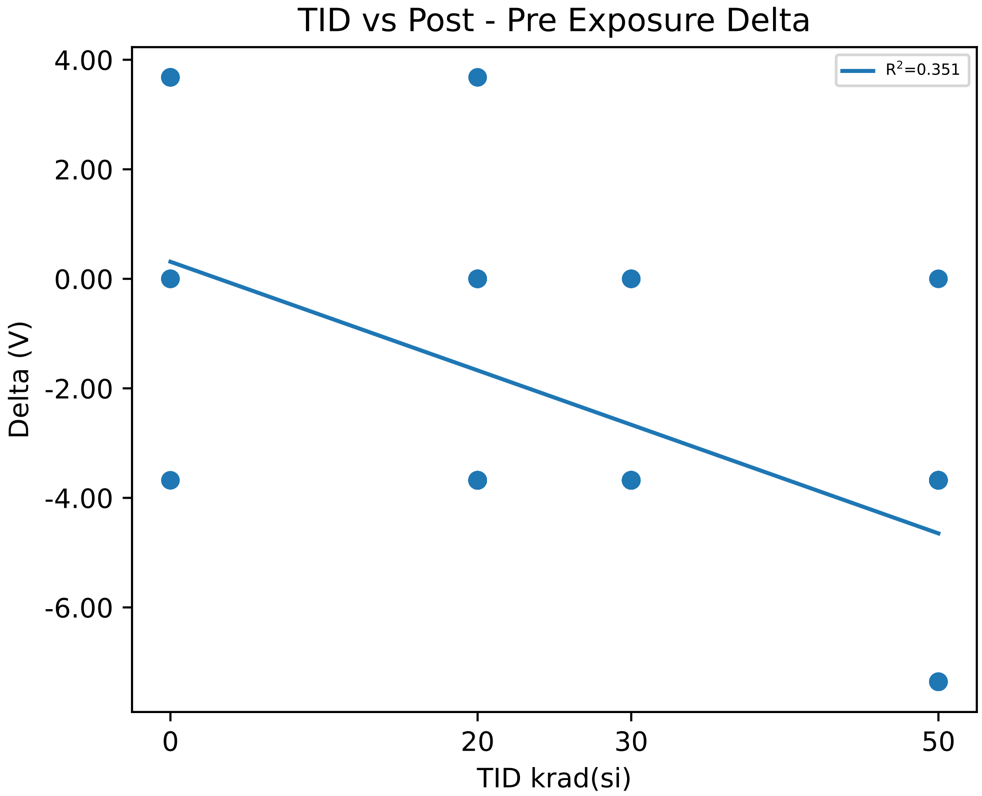
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	2.931	2.924	-0.007
2	20	Unbiased	2.931	2.935	0.004
3	20	Unbiased	2.968	2.972	0.004
4	20	Unbiased	2.927	2.931	0.004
5	20	Unbiased	2.898	2.898	0
6	20	14V Biased	2.902	2.894	-0.008
7	20	14V Biased	2.909	2.905	-0.004
8	20	14V Biased	2.927	2.927	0
9	20	14V Biased	2.869	2.869	0
10	20	14V Biased	2.887	2.887	0
11	30	Unbiased	2.927	2.931	0.004
12	30	Unbiased	2.916	2.913	-0.003
13	30	Unbiased	2.909	2.924	0.015
14	30	Unbiased	2.902	2.902	0
15	30	Unbiased	2.894	2.894	0
16	30	14V Biased	2.964	2.975	0.011
17	30	14V Biased	2.909	2.905	-0.004
18	30	14V Biased	2.935	2.935	0
19	30	14V Biased	2.931	2.938	0.007
20	30	14V Biased	2.905	2.905	0
21	50	Unbiased	2.92	2.927	0.007
22	50	Unbiased	2.946	2.968	0.022
23	50	Unbiased	2.938	2.949	0.011
24	50	Unbiased	2.898	2.905	0.007
25	50	Unbiased	2.924	2.942	0.018
26	50	14V Biased	2.916	2.92	0.004
27	50	14V Biased	2.968	2.964	-0.004
28	50	14V Biased	2.913	2.902	-0.011
29	50	14V Biased	2.883	2.891	0.008
30	50	14V Biased	2.916	2.92	0.004
31	0	Correlation	2.909	2.909	0
32	0	Correlation	2.909	2.905	-0.004
33	0	Correlation	2.905	2.905	0
34	0	Correlation	2.891	2.891	0
35	0	Correlation	2.902	2.898	-0.004

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	2.891	2.9032	2.909	0.0074297	2.891	2.9016	2.909	0.0071274	-0.004	-0.0016	0	0.0021909
20	2.869	2.9149	2.968	0.027894	2.869	2.9142	2.972	0.02954	-0.008	-0.0007	0.004	0.0043729
30	2.894	2.9192	2.964	0.020569	2.894	2.9222	2.975	0.023948	-0.004	0.003	0.015	0.0062004
50	2.883	2.9222	2.968	0.02405	2.891	2.9288	2.968	0.026309	-0.011	0.0066	0.022	0.0095708

Device Test: 5.2 VIN_UVLO_HYST(VIN_UVLO_HYSTERESIS)





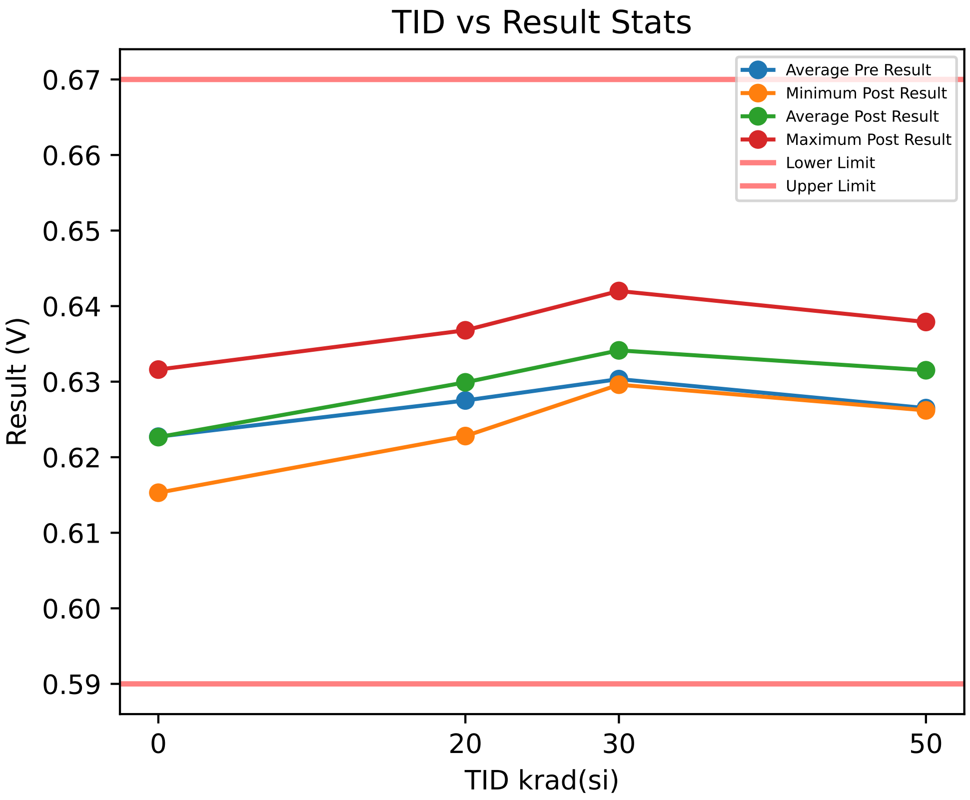
Test Results (Upper Limit = 0.75 (V))

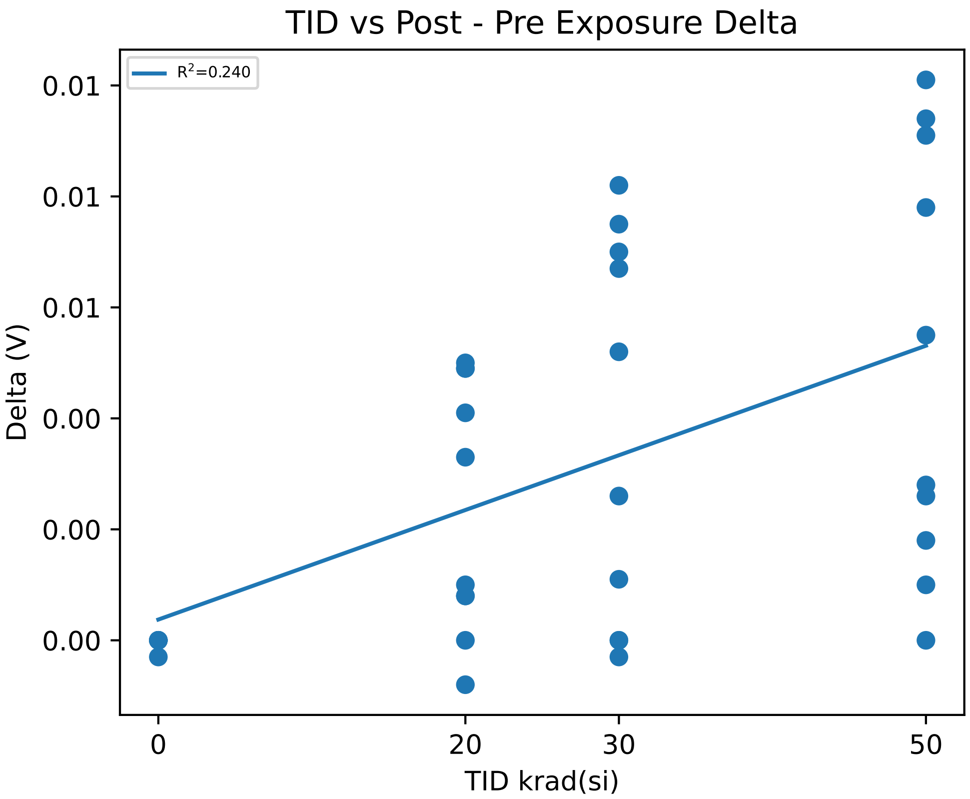
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.57023	0.56655	-3.679
2	20	Unbiased	0.57023	0.56655	-3.679
3	20	Unbiased	0.57391	0.57391	0
4	20	Unbiased	0.57023	0.56655	-3.679
5	20	Unbiased	0.56288	0.5592	-3.679
6	20	14V Biased	0.5592	0.5592	0
7	20	14V Biased	0.56655	0.56288	-3.679
8	20	14V Biased	0.57023	0.57023	0
9	20	14V Biased	0.55552	0.55184	-3.679
10	20	14V Biased	0.55552	0.5592	3.679
11	30	Unbiased	0.56655	0.56655	0
12	30	Unbiased	0.56655	0.56288	-3.679
13	30	Unbiased	0.56655	0.56655	0
14	30	Unbiased	0.56288	0.5592	-3.678
15	30	Unbiased	0.5592	0.55552	-3.679
16	30	14V Biased	0.57391	0.57023	-3.679
17	30	14V Biased	0.56655	0.56288	-3.679
18	30	14V Biased	0.57023	0.56655	-3.679
19	30	14V Biased	0.57023	0.56655	-3.679
20	30	14V Biased	0.56288	0.5592	-3.679
21	50	Unbiased	0.57023	0.56655	-3.679
22	50	Unbiased	0.57391	0.57391	0
23	50	Unbiased	0.57391	0.57023	-3.679
24	50	Unbiased	0.56288	0.55552	-7.358
25	50	Unbiased	0.56655	0.56288	-3.678
26	50	14V Biased	0.57023	0.56655	-3.679
27	50	14V Biased	0.57759	0.57023	-7.358
28	50	14V Biased	0.56288	0.55552	-7.357
29	50	14V Biased	0.5592	0.55552	-3.678
30	50	14V Biased	0.56655	0.56288	-3.679
31	0	Correlation	0.56288	0.56288	0
32	0	Correlation	0.56288	0.56655	3.679
33	0	Correlation	0.56288	0.5592	-3.679
34	0	Correlation	0.5592	0.5592	0
35	0	Correlation	0.5592	0.56288	3.679

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	0.5592	0.5614	0.56288	0.0020145	0.5592	0.56214	0.56655	0.0030779	-3.679	0.7358	3.679	3.0781
20	0.55552	0.56545	0.57391	0.0067279	0.55184	0.56361	0.57391	0.0064425	-3.679	-1.8395	3.679	2.6014
30	0.5592	0.56656	0.57391	0.004248	0.55552	0.56361	0.57023	0.0045222	-3.679	-2.9431	0	1.5511
50	0.5592	0.56839	0.57759	0.0058169	0.55552	0.56398	0.57391	0.0067277	-7.358	-4.4145	0	2.3267

Device Test: 6.0 EN_VTH_RISING_PLASTIC(EN_UVLO_RISING_4p5V)





Test Results (Lower Limit = 0.59, Upper Limit = 0.67 (V))

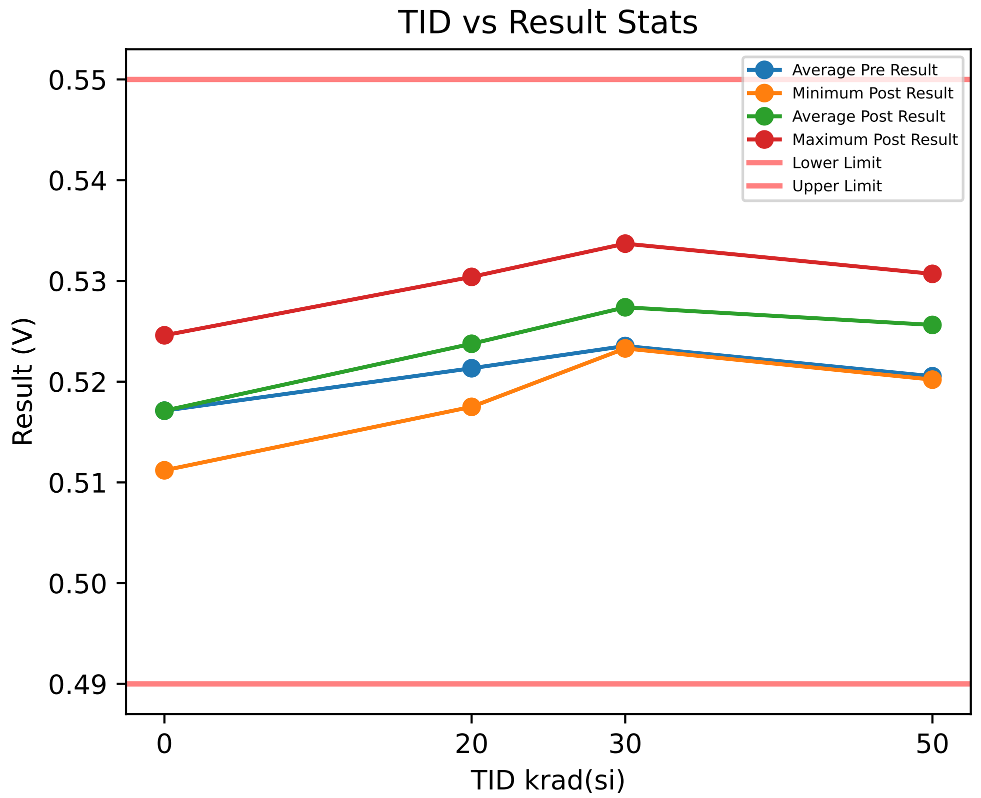
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.6304	0.6296	-0.0008
2	20	Unbiased	0.627	0.6278	0.0008
3	20	Unbiased	0.6278	0.6288	0.001
4	20	Unbiased	0.6345	0.6353	0.0008
5	20	Unbiased	0.6288	0.6288	0
6	20	14V Biased	0.6319	0.6368	0.0049
7	20	14V Biased	0.6195	0.6228	0.0033
8	20	14V Biased	0.6259	0.6309	0.005
9	20	14V Biased	0.627	0.6311	0.0041
10	20	14V Biased	0.6223	0.6272	0.0049
11	30	Unbiased	0.6283	0.6309	0.0026
12	30	Unbiased	0.6319	0.6316	-0.0003
13	30	Unbiased	0.6304	0.6304	0
14	30	Unbiased	0.6296	0.6296	0
15	30	Unbiased	0.6342	0.6353	0.0011
16	30	14V Biased	0.6353	0.642	0.0067
17	30	14V Biased	0.6301	0.6353	0.0052
18	30	14V Biased	0.6298	0.6368	0.007
19	30	14V Biased	0.6304	0.6386	0.0082
20	30	14V Biased	0.6234	0.6309	0.0075
21	50	Unbiased	0.6244	0.6262	0.0018
22	50	Unbiased	0.6304	0.6304	0
23	50	Unbiased	0.6332	0.6358	0.0026
24	50	Unbiased	0.6252	0.6262	0.001
25	50	Unbiased	0.6304	0.6332	0.0028
26	50	14V Biased	0.6231	0.6309	0.0078
27	50	14V Biased	0.6311	0.6366	0.0055
28	50	14V Biased	0.6184	0.6278	0.0094
29	50	14V Biased	0.621	0.6301	0.0091
30	50	14V Biased	0.6278	0.6379	0.0101
31	0	Correlation	0.6213	0.6213	0
32	0	Correlation	0.6267	0.6267	0
33	0	Correlation	0.6153	0.6153	0
34	0	Correlation	0.6184	0.6184	0
35	0	Correlation	0.6319	0.6316	-0.0003

Test Statistics (V)

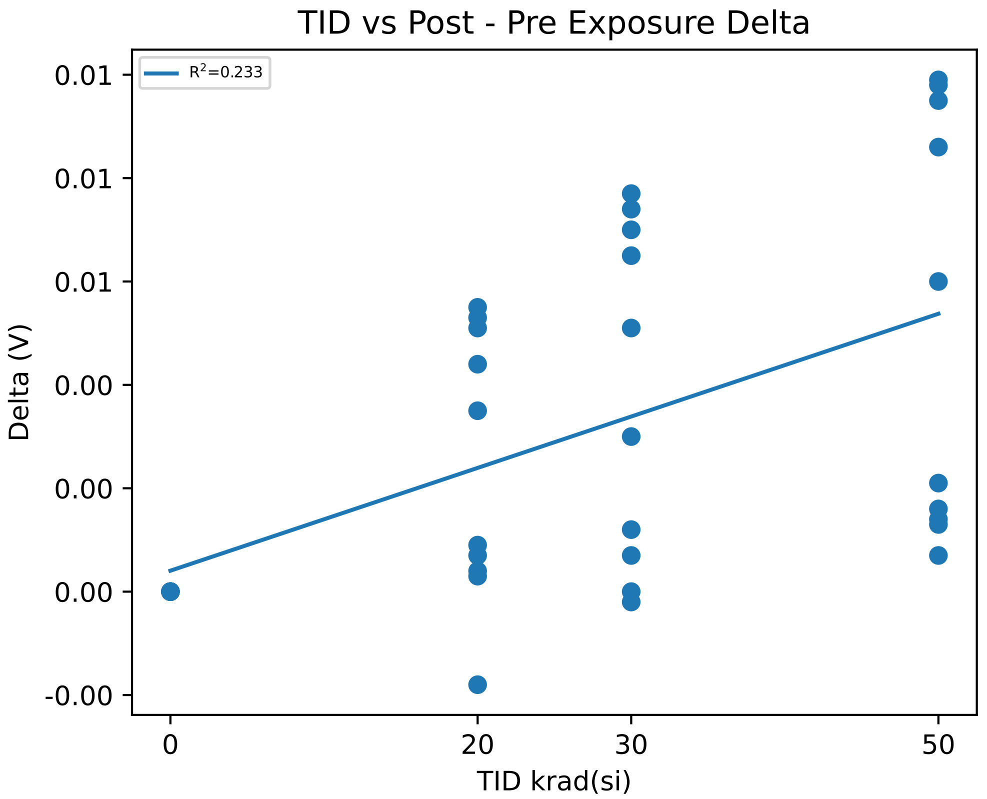
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.6153	0.62272	0.6319	0.0066304	0.6153	0.62266	0.6316	0.0065271	-0.0003	-6e-05	0	0.00013416
20	0.6195	0.62751	0.6345	0.0043799	0.6228	0.62991	0.6368	0.0039976	-0.0008	0.0024	0.005	0.0022618
30	0.6234	0.63034	0.6353	0.0032517	0.6296	0.63414	0.642	0.0041296	-0.0003	0.0038	0.0082	0.0034654
50	0.6184	0.6265	0.6332	0.0048497	0.6262	0.63151	0.6379	0.0042394	0	0.00501	0.0101	0.0038313

Device Test: 6.1 EN_VTH_FALLING_PLASTIC(EN_UVLO_FALLING_4p5V)

TID vs Result Stats



TID vs Post - Pre Exposure Delta



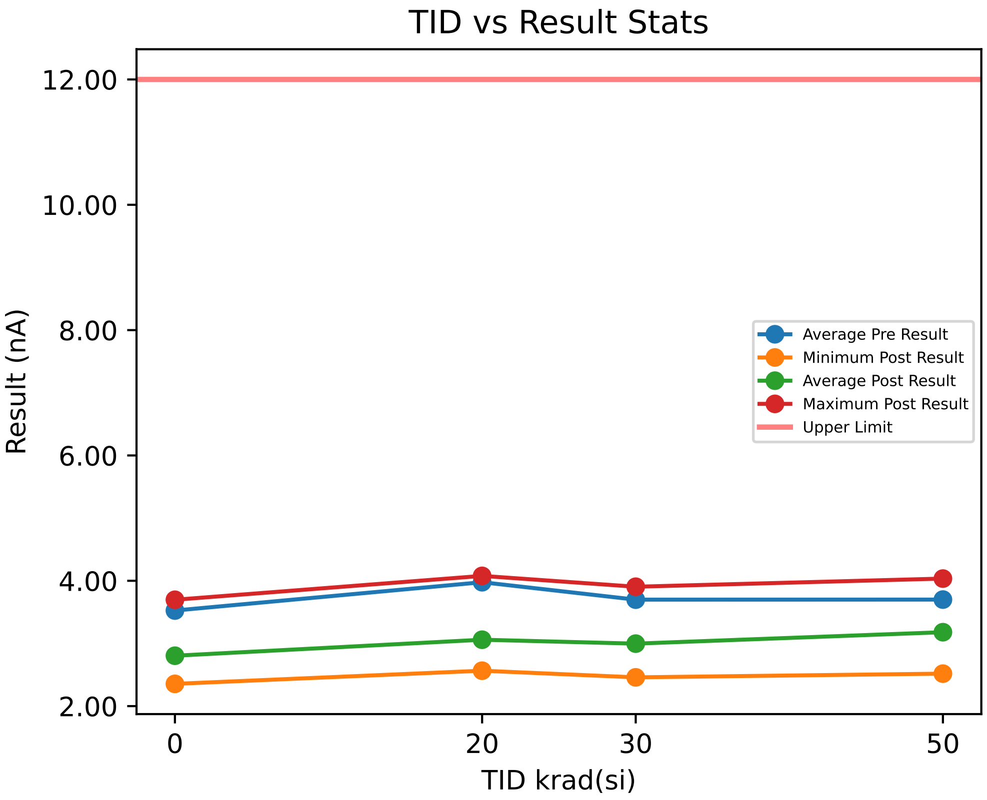
Test Results (Lower Limit = 0.49, Upper Limit = 0.55 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.5251	0.5233	-0.0018
2	20	Unbiased	0.5214	0.5223	0.0009
3	20	Unbiased	0.5219	0.5223	0.0004
4	20	Unbiased	0.5272	0.5279	0.0007
5	20	Unbiased	0.5223	0.5226	0.0003
6	20	14V Biased	0.5249	0.5304	0.0055
7	20	14V Biased	0.514	0.5175	0.0035
8	20	14V Biased	0.5195	0.5246	0.0051
9	20	14V Biased	0.5202	0.5246	0.0044
10	20	14V Biased	0.5168	0.5221	0.0053
11	30	Unbiased	0.5216	0.5246	0.003
12	30	Unbiased	0.5251	0.5249	-0.0002
13	30	Unbiased	0.523	0.5242	0.0012
14	30	Unbiased	0.5233	0.5233	0
15	30	Unbiased	0.527	0.5277	0.0007
16	30	14V Biased	0.5272	0.5337	0.0065
17	30	14V Biased	0.5233	0.5284	0.0051
18	30	14V Biased	0.523	0.53	0.007
19	30	14V Biased	0.524	0.5314	0.0074
20	30	14V Biased	0.5179	0.5256	0.0077
21	50	Unbiased	0.5189	0.5202	0.0013
22	50	Unbiased	0.5235	0.5249	0.0014
23	50	Unbiased	0.526	0.5281	0.0021
24	50	Unbiased	0.5193	0.5209	0.0016
25	50	Unbiased	0.526	0.5267	0.0007
26	50	14V Biased	0.5177	0.5263	0.0086
27	50	14V Biased	0.5242	0.5302	0.006
28	50	14V Biased	0.5131	0.523	0.0099
29	50	14V Biased	0.5158	0.5253	0.0095
30	50	14V Biased	0.5209	0.5307	0.0098
31	0	Correlation	0.5158	0.5158	0
32	0	Correlation	0.5207	0.5207	0
33	0	Correlation	0.5112	0.5112	0
34	0	Correlation	0.5133	0.5133	0
35	0	Correlation	0.5246	0.5246	0

Test Statistics (V)

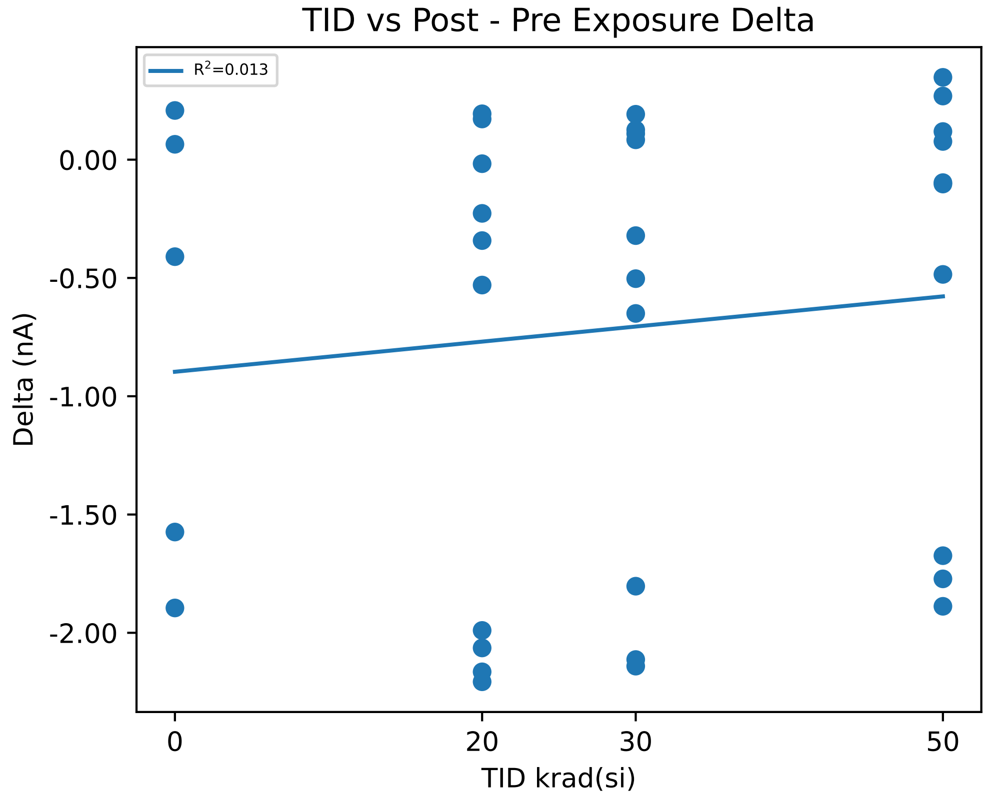
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5112	0.51712	0.5246	0.0054806	0.5112	0.51712	0.5246	0.0054806	0	0	0	0
20	0.514	0.52133	0.5272	0.003966	0.5175	0.52376	0.5304	0.0035024	-0.0018	0.00243	0.0055	0.0026183
30	0.5179	0.52354	0.5272	0.0026726	0.5233	0.52738	0.5337	0.0034628	-0.0002	0.00384	0.0077	0.0032459
50	0.5131	0.52054	0.526	0.0043719	0.5202	0.52563	0.5307	0.0035544	0.0007	0.00509	0.0099	0.0040317

Device Test: 6.10 IEN_VIN(EN3p3V_I_Vin14V)



Test Results (Upper Limit = 12.0 (nA))

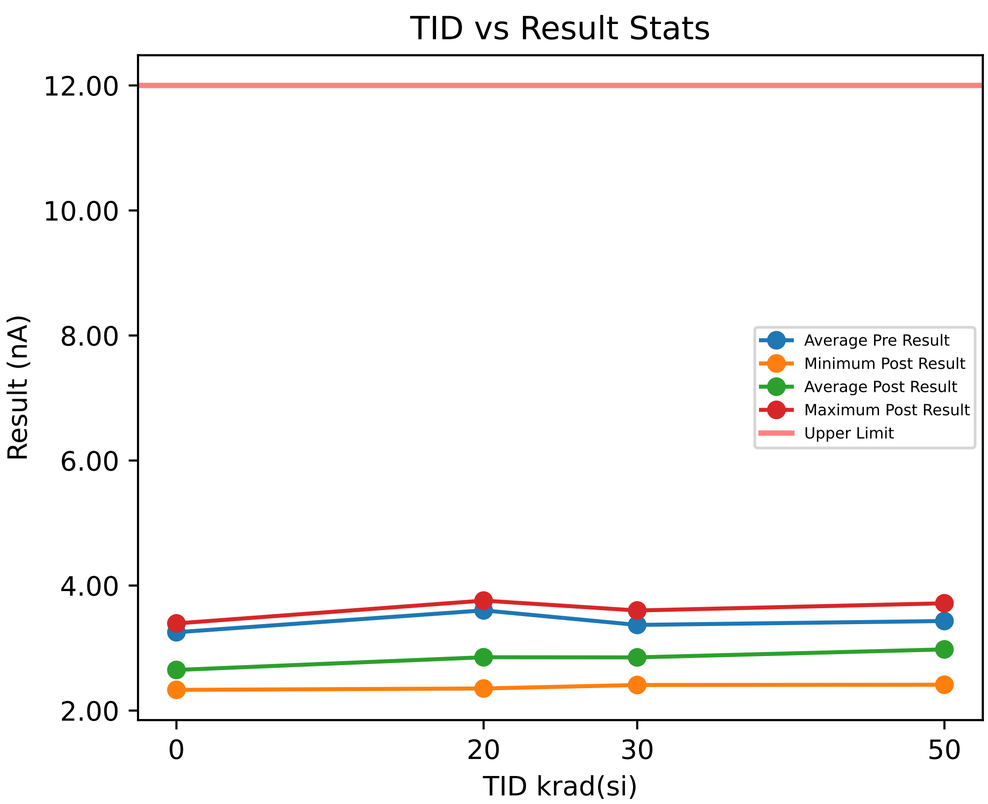
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	4.883	2.718	-2.165
2	20	Unbiased	2.688	2.671	-0.017
3	20	Unbiased	4.459	3.929	-0.53
4	20	Unbiased	4.629	2.565	-2.064
5	20	Unbiased	2.54	2.712	0.172
6	20	14V Biased	4.248	3.906	-0.342
7	20	14V Biased	4.785	2.795	-1.99
8	20	14V Biased	2.407	2.601	0.194
9	20	14V Biased	4.305	4.078	-0.227
10	20	14V Biased	4.826	2.619	-2.207
11	30	Unbiased	2.474	2.558	0.084
12	30	Unbiased	4.184	3.863	-0.321
13	30	Unbiased	4.535	2.732	-1.803
14	30	Unbiased	2.507	2.633	0.126
15	30	Unbiased	4.379	3.876	-0.503
16	30	14V Biased	4.774	2.633	-2.141
17	30	14V Biased	2.472	2.664	0.192
18	30	14V Biased	4.555	3.905	-0.65
19	30	14V Biased	4.76	2.647	-2.113
20	30	14V Biased	2.349	2.459	0.11
21	50	Unbiased	4.27	3.785	-0.485
22	50	Unbiased	4.696	2.808	-1.888
23	50	Unbiased	2.399	2.518	0.119
24	50	Unbiased	4.045	3.948	-0.097
25	50	Unbiased	4.546	2.774	-1.772
26	50	14V Biased	2.316	2.664	0.348
27	50	14V Biased	4.138	4.035	-0.103
28	50	14V Biased	4.398	2.724	-1.674
29	50	14V Biased	2.25	2.519	0.269
30	50	14V Biased	3.942	4.019	0.077
31	0	Correlation	4.597	2.702	-1.895
32	0	Correlation	2.313	2.521	0.208
33	0	Correlation	4.319	2.745	-1.574
34	0	Correlation	2.29	2.355	0.065
35	0	Correlation	4.107	3.697	-0.41

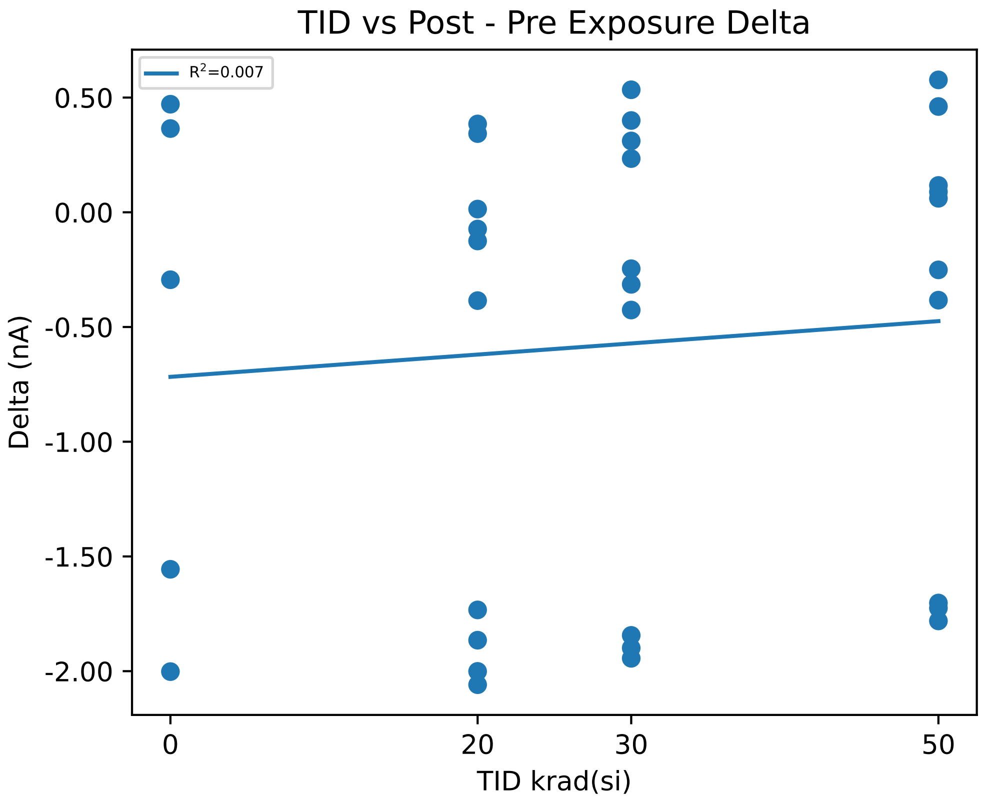


Test Statistics (nA)

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	2.29	3.5252	4.597	1.1305	2.355	2.804	3.697	0.52274	-1.895	-0.7212	0.208	0.95961
20	2.407	3.977	4.883	1.0124	2.565	3.0594	4.078	0.63395	-2.207	-0.9176	0.194	1.0475
30	2.349	3.6989	4.774	1.0883	2.459	2.997	3.905	0.61444	-2.141	-0.7019	0.192	0.95587
50	2.25	3.7	4.696	0.97752	2.518	3.1794	4.035	0.67027	-1.888	-0.5206	0.348	0.89848

Device Test: 6.11 IEN_VIN(EN1p8V_I_Vin14V)





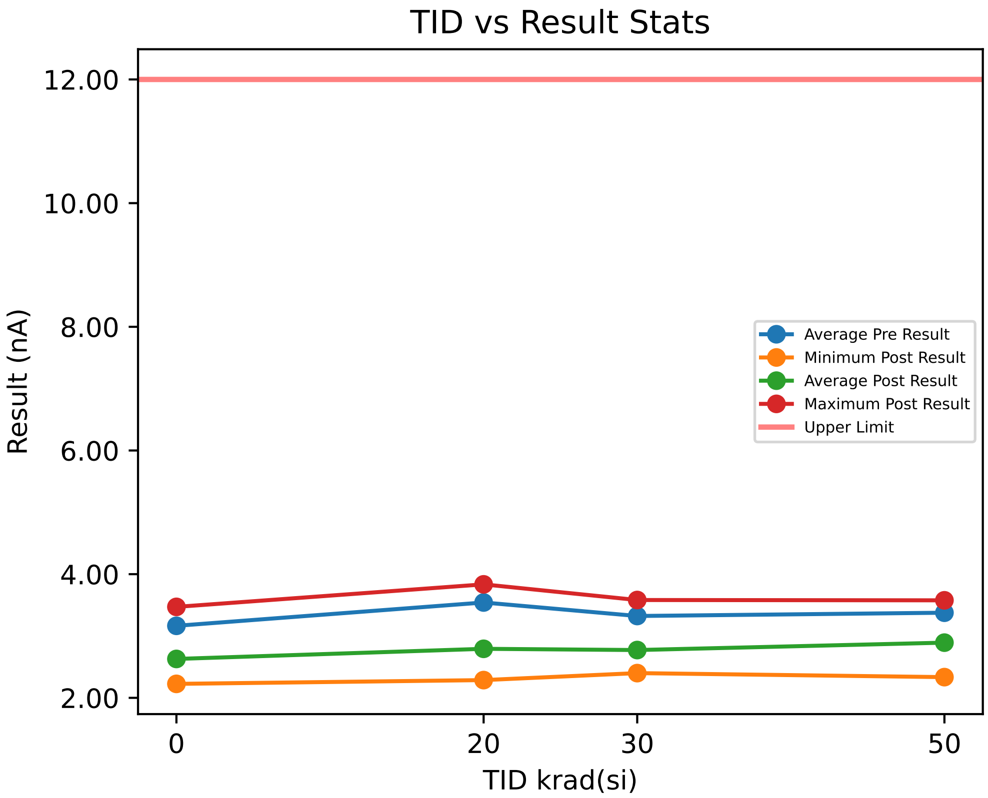
Test Results (Upper Limit = 12.0 (nA))

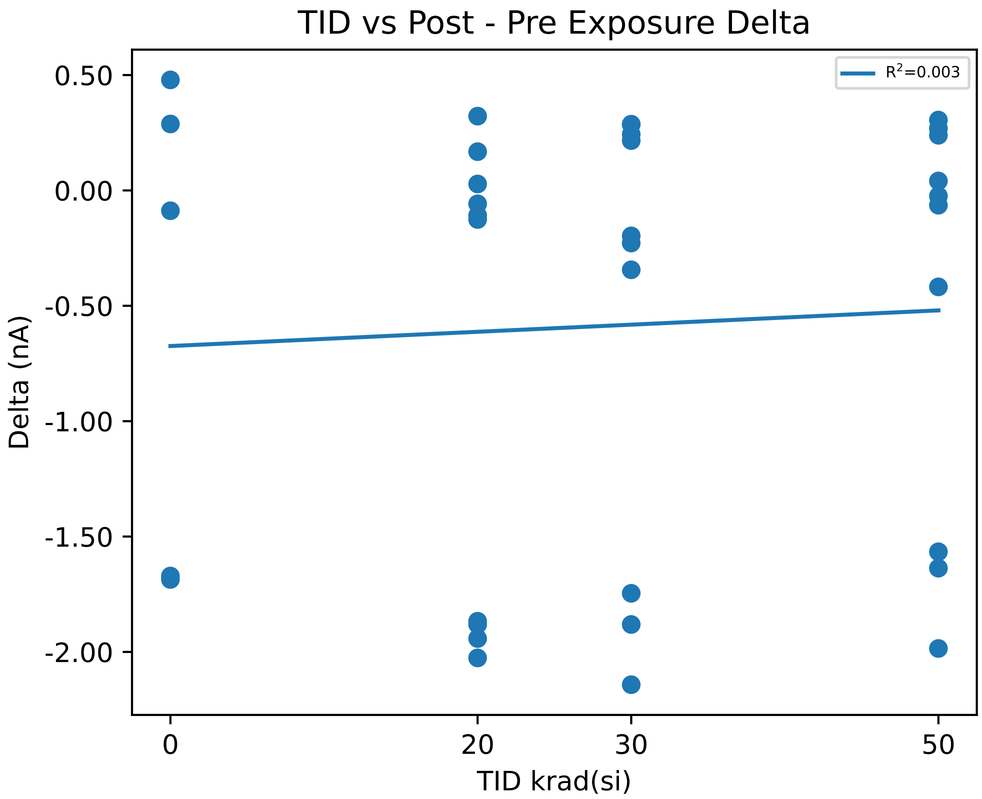
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	4.48	2.421	-2.059
2	20	Unbiased	2.279	2.664	0.385
3	20	Unbiased	3.962	3.577	-0.385
4	20	Unbiased	4.444	2.443	-2.001
5	20	Unbiased	2.339	2.353	0.014
6	20	14V Biased	3.884	3.759	-0.125
7	20	14V Biased	4.436	2.571	-1.865
8	20	14V Biased	2.086	2.429	0.343
9	20	14V Biased	3.738	3.665	-0.073
10	20	14V Biased	4.377	2.644	-1.733
11	30	Unbiased	2.175	2.575	0.4
12	30	Unbiased	3.843	3.417	-0.426
13	30	Unbiased	4.44	2.596	-1.844
14	30	Unbiased	2.134	2.668	0.534
15	30	Unbiased	3.915	3.601	-0.314
16	30	14V Biased	4.353	2.409	-1.944
17	30	14V Biased	2.32	2.554	0.234
18	30	14V Biased	3.822	3.576	-0.246
19	30	14V Biased	4.473	2.574	-1.899
20	30	14V Biased	2.225	2.536	0.311
21	50	Unbiased	3.837	3.454	-0.383
22	50	Unbiased	4.407	2.704	-1.703
23	50	Unbiased	2.296	2.413	0.117
24	50	Unbiased	3.809	3.558	-0.251
25	50	Unbiased	4.315	2.534	-1.781
26	50	14V Biased	2.13	2.591	0.461
27	50	14V Biased	3.519	3.58	0.061
28	50	14V Biased	4.318	2.593	-1.725
29	50	14V Biased	2.064	2.641	0.577
30	50	14V Biased	3.627	3.716	0.089
31	0	Correlation	4.459	2.457	-2.002
32	0	Correlation	2.103	2.468	0.365
33	0	Correlation	4.154	2.598	-1.556
34	0	Correlation	1.86	2.331	0.471
35	0	Correlation	3.688	3.394	-0.294

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	1.86	3.2528	4.459	1.1957	2.331	2.6496	3.394	0.42672	-2.002	-0.6032	0.471	1.1238
20	2.086	3.6025	4.48	0.98022	2.353	2.8526	3.759	0.5723	-2.059	-0.7499	0.385	1.0294
30	2.134	3.37	4.473	1.0232	2.409	2.8506	3.601	0.47641	-1.944	-0.5194	0.534	1.0014
50	2.064	3.4322	4.407	0.92641	2.413	2.9784	3.716	0.52419	-1.781	-0.4538	0.577	0.92909

Device Test: 6.12 IEN_VIN(EN1p5V_I_Vin14V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

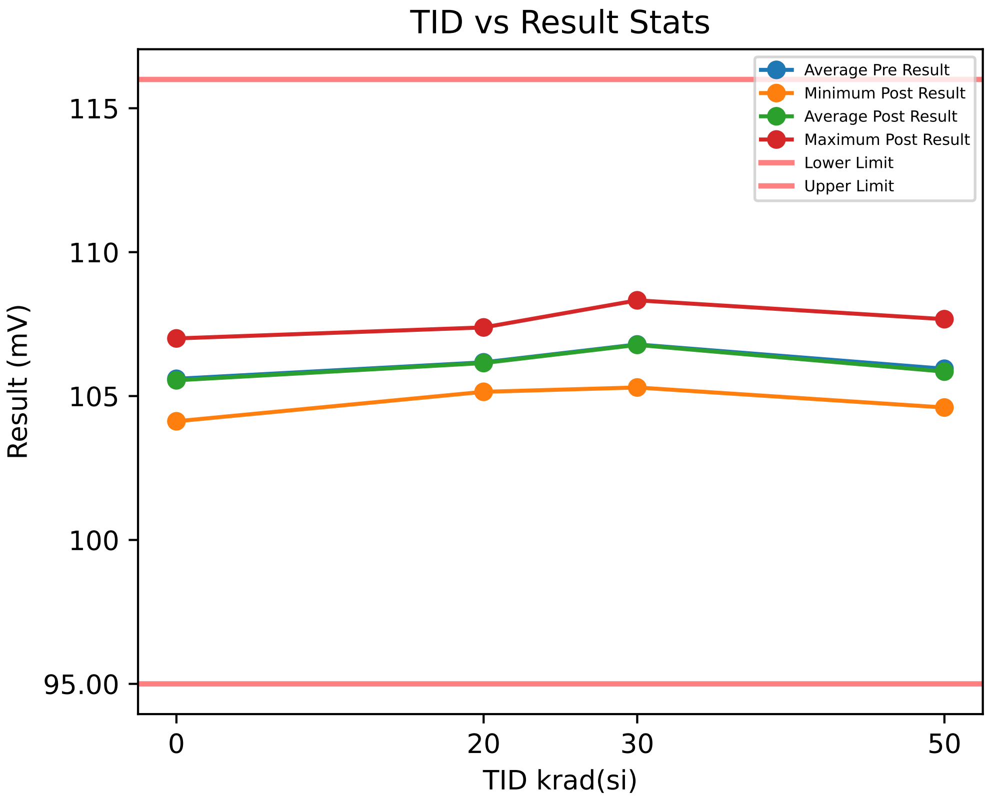
Test Results (Upper Limit = 12.0 (nA))

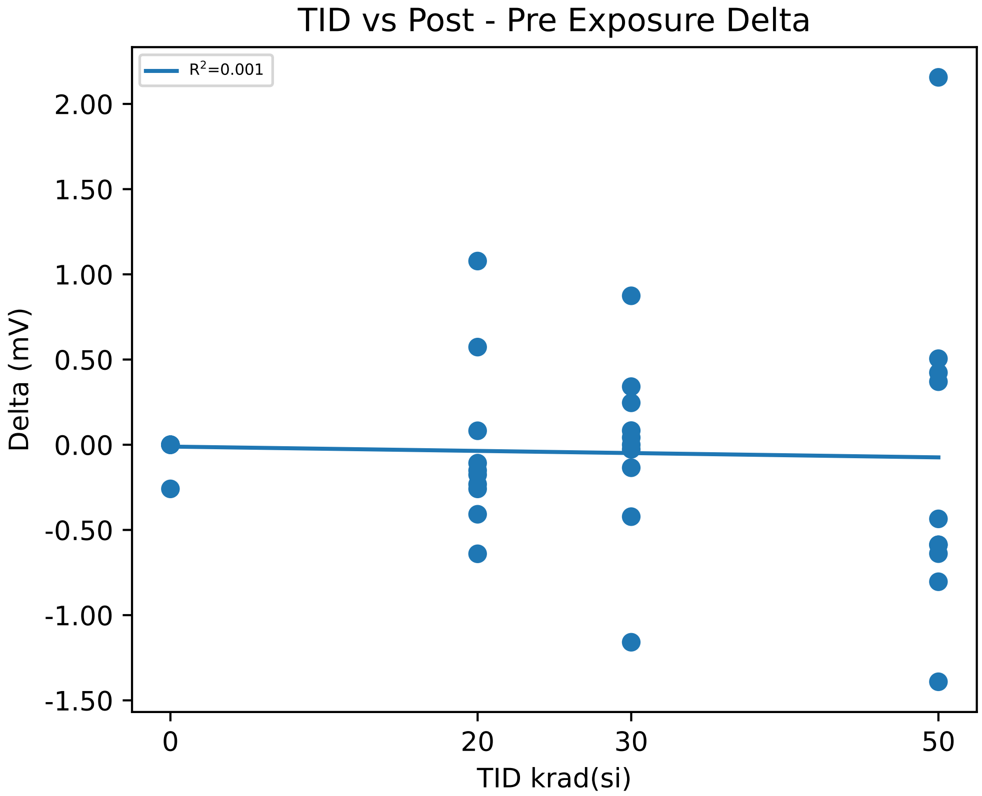
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	4.421	2.54	-1.881
2	20	Unbiased	2.375	2.543	0.168
3	20	Unbiased	3.893	3.835	-0.058
4	20	Unbiased	4.249	2.307	-1.942
5	20	Unbiased	2.259	2.287	0.028
6	20	14V Biased	3.681	3.555	-0.126
7	20	14V Biased	4.546	2.52	-2.026
8	20	14V Biased	2.042	2.364	0.322
9	20	14V Biased	3.627	3.519	-0.108
10	20	14V Biased	4.326	2.459	-1.867
11	30	Unbiased	2.287	2.503	0.216
12	30	Unbiased	3.639	3.442	-0.197
13	30	Unbiased	4.363	2.482	-1.881
14	30	Unbiased	2.232	2.518	0.286
15	30	Unbiased	3.81	3.582	-0.228
16	30	14V Biased	4.543	2.401	-2.142
17	30	14V Biased	2.186	2.473	0.287
18	30	14V Biased	3.748	3.404	-0.344
19	30	14V Biased	4.271	2.525	-1.746
20	30	14V Biased	2.157	2.4	0.243
21	50	Unbiased	3.766	3.348	-0.418
22	50	Unbiased	4.241	2.604	-1.637
23	50	Unbiased	2.11	2.379	0.269
24	50	Unbiased	3.641	3.577	-0.064
25	50	Unbiased	4.506	2.521	-1.985
26	50	14V Biased	2.096	2.335	0.239
27	50	14V Biased	3.513	3.489	-0.024
28	50	14V Biased	4.162	2.596	-1.566
29	50	14V Biased	2.208	2.513	0.305
30	50	14V Biased	3.523	3.564	0.041
31	0	Correlation	4.248	2.562	-1.686
32	0	Correlation	1.955	2.434	0.479
33	0	Correlation	4.124	2.453	-1.671
34	0	Correlation	1.938	2.226	0.288
35	0	Correlation	3.559	3.471	-0.088

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	1.938	3.1648	4.248	1.1421	2.226	2.6292	3.471	0.48602	-1.686	-0.5356	0.479	1.0631
20	2.042	3.5419	4.546	0.96049	2.287	2.7929	3.835	0.59464	-2.026	-0.749	0.322	1.0249
30	2.157	3.3236	4.543	0.99455	2.4	2.773	3.582	0.48897	-2.142	-0.5506	0.287	0.97879
50	2.096	3.3766	4.506	0.91354	2.335	2.8926	3.577	0.52814	-1.985	-0.484	0.305	0.89028

Device Test: 6.2 EN_HYST_PLASTIC(EN_UVLO_HYSTERESIS_4p5V)





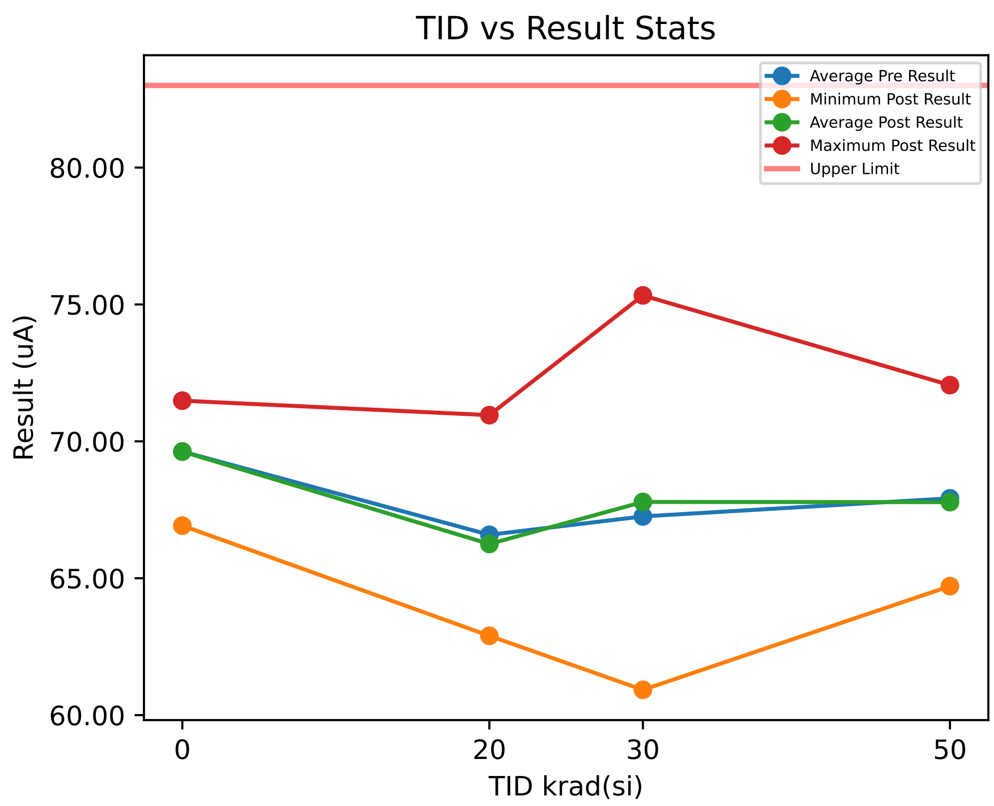
Test Results (Lower Limit = 95.0, Upper Limit = 116.0 (mV))

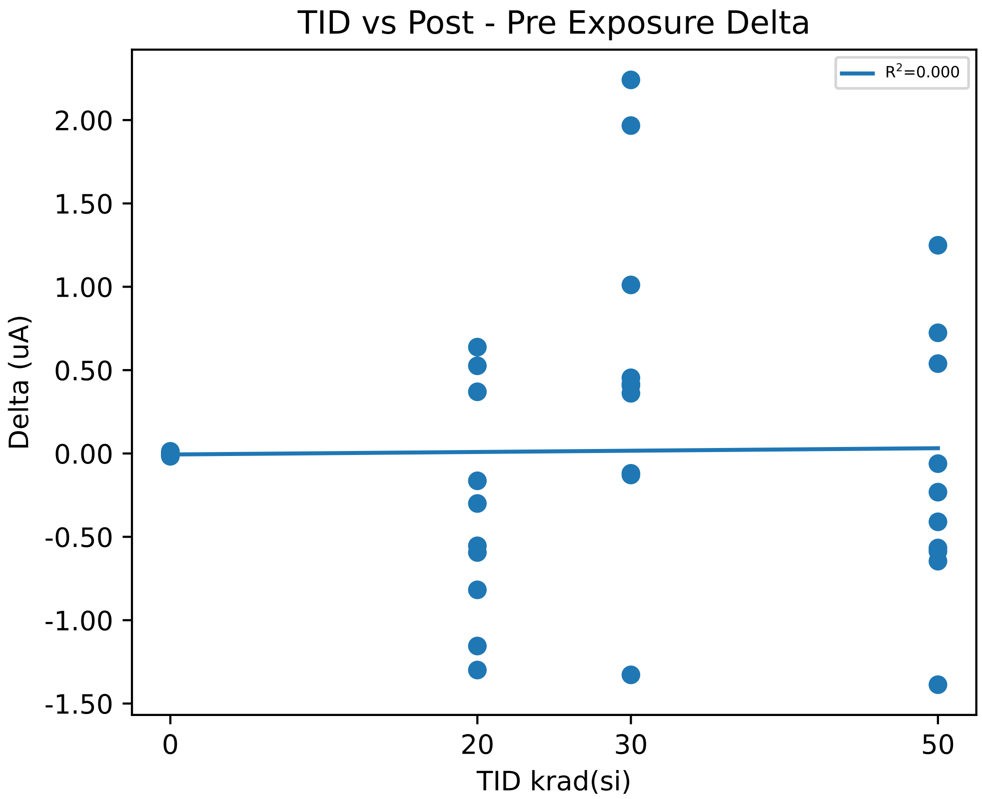
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	105.24	106.32	1.078
2	20	Unbiased	105.58	105.43	-0.151
3	20	Unbiased	105.9	106.47	0.573
4	20	Unbiased	107.3	107.38	0.082
5	20	Unbiased	106.47	106.24	-0.232
6	20	14V Biased	107.03	106.39	-0.64
7	20	14V Biased	105.49	105.38	-0.108
8	20	14V Biased	106.4	106.22	-0.176
9	20	14V Biased	106.74	106.48	-0.259
10	20	14V Biased	105.56	105.15	-0.408
11	30	Unbiased	106.65	106.22	-0.422
12	30	Unbiased	106.8	106.77	-0.027
13	30	Unbiased	107.33	106.17	-1.159
14	30	Unbiased	106.32	106.32	0
15	30	Unbiased	107.28	107.62	0.341
16	30	14V Biased	108.08	108.33	0.246
17	30	14V Biased	106.84	106.92	0.083
18	30	14V Biased	106.81	106.85	0.042
19	30	14V Biased	106.4	107.28	0.874
20	30	14V Biased	105.43	105.3	-0.135
21	50	Unbiased	105.54	105.97	0.423
22	50	Unbiased	106.86	105.47	-1.391
23	50	Unbiased	107.17	107.67	0.505
24	50	Unbiased	105.86	105.27	-0.587
25	50	Unbiased	104.31	106.47	2.156
26	50	14V Biased	105.41	104.6	-0.804
27	50	14V Biased	106.95	106.36	-0.587
28	50	14V Biased	105.38	104.74	-0.639
29	50	14V Biased	105.19	104.75	-0.435
30	50	14V Biased	106.82	107.19	0.37
31	0	Correlation	105.45	105.45	0
32	0	Correlation	106.02	106.02	0
33	0	Correlation	104.12	104.12	0
34	0	Correlation	105.14	105.14	0
35	0	Correlation	107.26	107	-0.259

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	104.12	105.6	107.26	1.1562	104.12	105.55	107	1.0654	-0.259	-0.0518	0	0.11583
20	105.24	106.17	107.3	0.71607	105.15	106.15	107.38	0.66253	-0.64	-0.0241	1.078	0.50042
30	105.43	106.79	108.08	0.70132	105.3	106.78	108.33	0.84639	-1.159	-0.0157	0.874	0.52569
50	104.31	105.95	107.17	0.95048	104.6	105.85	107.67	1.0678	-1.391	-0.0989	2.156	0.99941

Device Test: 6.3 SS_I_Charge(SS_Icharge_4p5V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

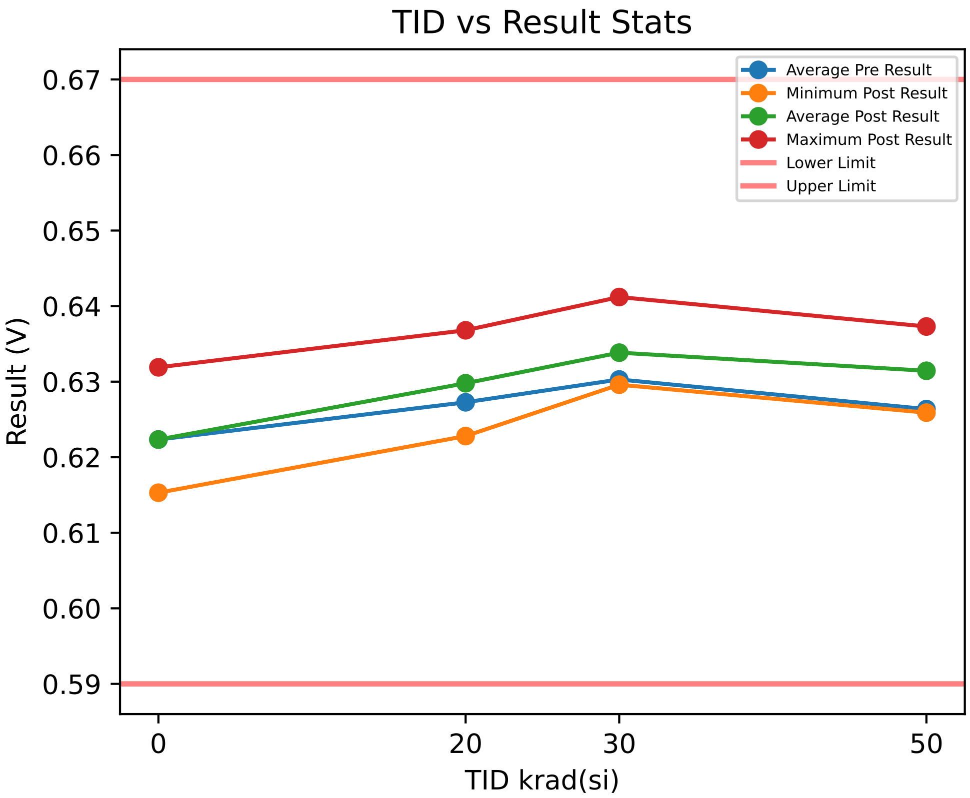
Test Results (Upper Limit = 83.0 (uA))

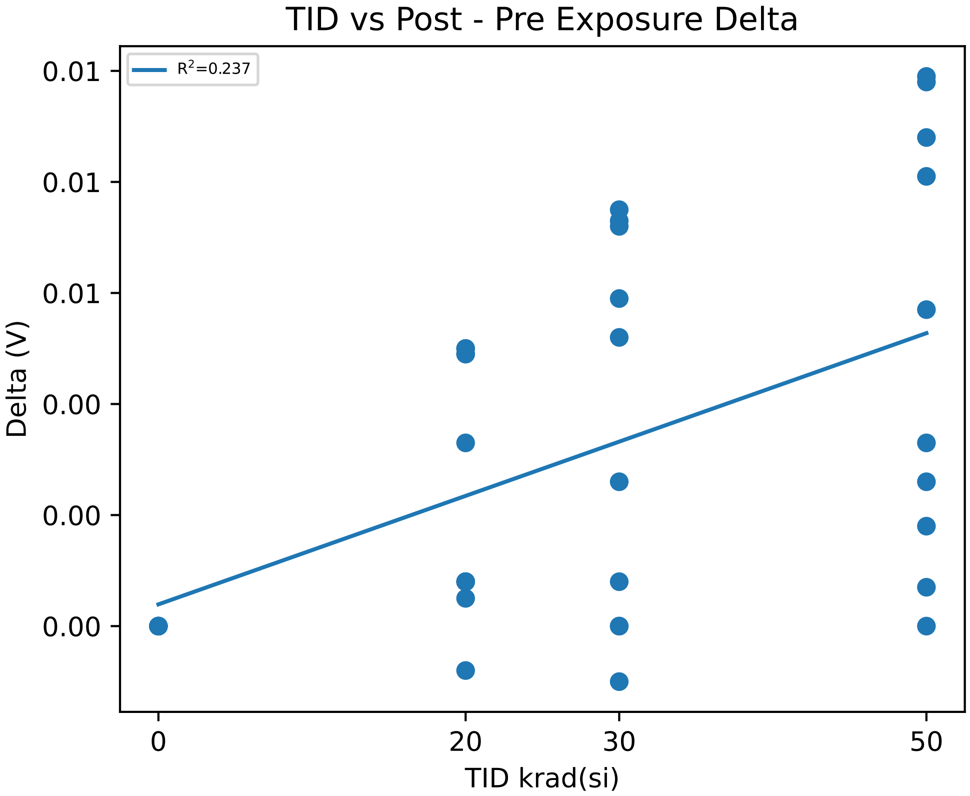
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	65.471	64.917	-0.554
2	20	Unbiased	66.365	66.735	0.37
3	20	Unbiased	68.06	67.76	-0.3
4	20	Unbiased	64.196	62.897	-1.299
5	20	Unbiased	66.776	67.302	0.526
6	20	14V Biased	67.99	66.835	-1.155
7	20	14V Biased	66.123	65.305	-0.818
8	20	14V Biased	64.681	64.087	-0.594
9	20	14V Biased	65.886	65.722	-0.164
10	20	14V Biased	70.319	70.957	0.638
11	30	Unbiased	65.533	65.894	0.361
12	30	Unbiased	73.09	75.331	2.241
13	30	Unbiased	66.636	66.507	-0.129
14	30	Unbiased	65.195	65.076	-0.119
15	30	Unbiased	67.756	68.164	0.408
16	30	14V Biased	65.358	67.325	1.967
17	30	14V Biased	70.252	70.706	0.454
18	30	14V Biased	62.25	60.922	-1.328
19	30	14V Biased	66.976	67.393	0.417
20	30	14V Biased	69.532	70.543	1.011
21	50	Unbiased	67.898	67.837	-0.061
22	50	Unbiased	65.663	65.076	-0.587
23	50	Unbiased	68.341	68.109	-0.232
24	50	Unbiased	67.195	67.919	0.724
25	50	Unbiased	71.514	72.053	0.539
26	50	14V Biased	69.796	69.386	-0.41
27	50	14V Biased	67.169	68.418	1.249
28	50	14V Biased	66.704	66.137	-0.567
29	50	14V Biased	68.803	68.157	-0.646
30	50	14V Biased	66.097	64.71	-1.387
31	0	Correlation	71.473	71.486	0.013
32	0	Correlation	68.285	68.268	-0.017
33	0	Correlation	66.931	66.922	-0.009
34	0	Correlation	70.669	70.669	0
35	0	Correlation	70.784	70.784	0

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	66.931	69.628	71.473	1.9301	66.922	69.626	71.486	1.9393	-0.017	-0.0026	0.013	0.011238
20	64.196	66.587	70.319	1.809	62.897	66.252	70.957	2.2358	-1.299	-0.335	0.638	0.68032
30	62.25	67.258	73.09	3.0693	60.922	67.786	75.331	3.8476	-1.328	0.5283	2.241	1.0324
50	65.663	67.918	71.514	1.7757	64.71	67.78	72.053	2.1332	-1.387	-0.1378	1.249	0.77586

Device Test: 6.4 EN_VTH_RISING_PLASTIC(EN_UVLO_RISING_14V)





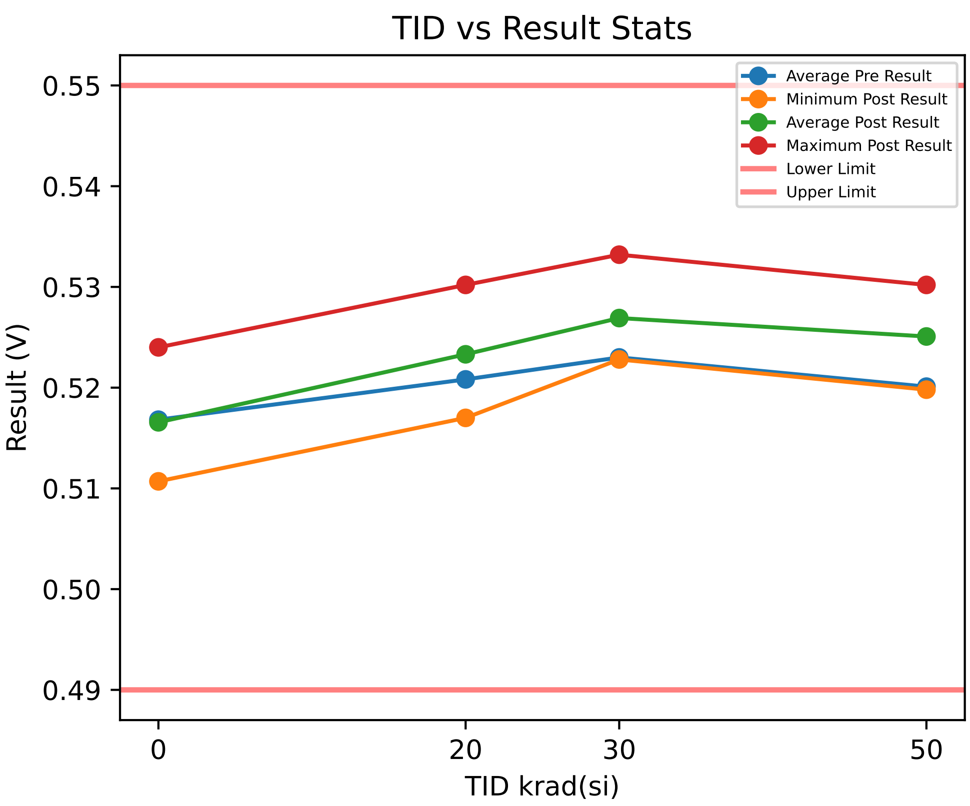
Test Results (Lower Limit = 0.59, Upper Limit = 0.67 (V))

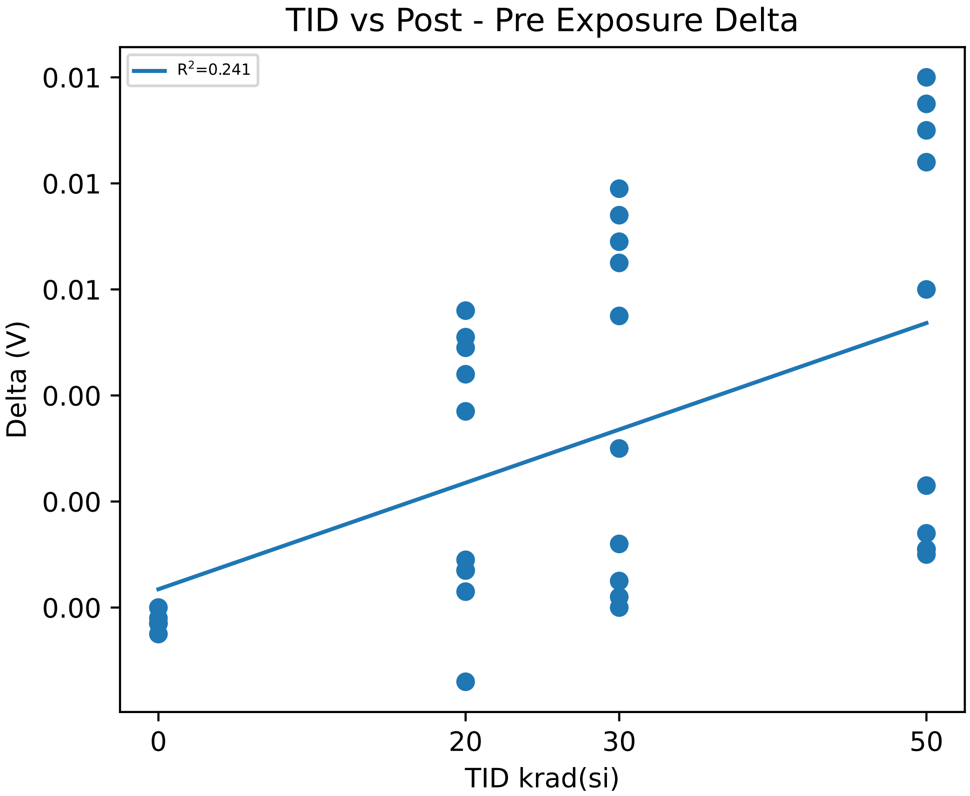
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.6304	0.6296	-0.0008
2	20	Unbiased	0.627	0.6278	0.0008
3	20	Unbiased	0.627	0.6278	0.0008
4	20	Unbiased	0.6345	0.6353	0.0008
5	20	Unbiased	0.6283	0.6288	0.0005
6	20	14V Biased	0.6319	0.6368	0.0049
7	20	14V Biased	0.6195	0.6228	0.0033
8	20	14V Biased	0.6259	0.6309	0.005
9	20	14V Biased	0.6259	0.6309	0.005
10	20	14V Biased	0.6223	0.6272	0.0049
11	30	Unbiased	0.6283	0.6309	0.0026
12	30	Unbiased	0.6319	0.6309	-0.001
13	30	Unbiased	0.6304	0.6304	0
14	30	Unbiased	0.6296	0.6296	0
15	30	Unbiased	0.6342	0.635	0.0008
16	30	14V Biased	0.6353	0.6412	0.0059
17	30	14V Biased	0.6301	0.6353	0.0052
18	30	14V Biased	0.6293	0.6366	0.0073
19	30	14V Biased	0.6304	0.6376	0.0072
20	30	14V Biased	0.6234	0.6309	0.0075
21	50	Unbiased	0.6244	0.6262	0.0018
22	50	Unbiased	0.6304	0.6304	0
23	50	Unbiased	0.6332	0.6358	0.0026
24	50	Unbiased	0.6252	0.6259	0.0007
25	50	Unbiased	0.6304	0.6337	0.0033
26	50	14V Biased	0.6228	0.6309	0.0081
27	50	14V Biased	0.6311	0.6368	0.0057
28	50	14V Biased	0.6179	0.6278	0.0099
29	50	14V Biased	0.6208	0.6296	0.0088
30	50	14V Biased	0.6275	0.6373	0.0098
31	0	Correlation	0.6202	0.6202	0
32	0	Correlation	0.6259	0.6259	0
33	0	Correlation	0.6153	0.6153	0
34	0	Correlation	0.6184	0.6184	0
35	0	Correlation	0.6319	0.6319	0

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	0.6153	0.62234	0.6319	0.0065904	0.6153	0.62234	0.6319	0.0065904	0	0	0	0
20	0.6195	0.62727	0.6345	0.0043912	0.6228	0.62979	0.6368	0.0040341	-0.0008	0.00252	0.005	0.0023146
30	0.6234	0.63029	0.6353	0.0032648	0.6296	0.63384	0.6412	0.003875	-0.001	0.00355	0.0075	0.0034255
50	0.6179	0.62637	0.6332	0.0049838	0.6259	0.63144	0.6373	0.0042602	0	0.00507	0.0099	0.0038575

Device Test: 6.5 EN_VTH_FALLING_PLASTIC(EN_UVLO_FALLING_14V)





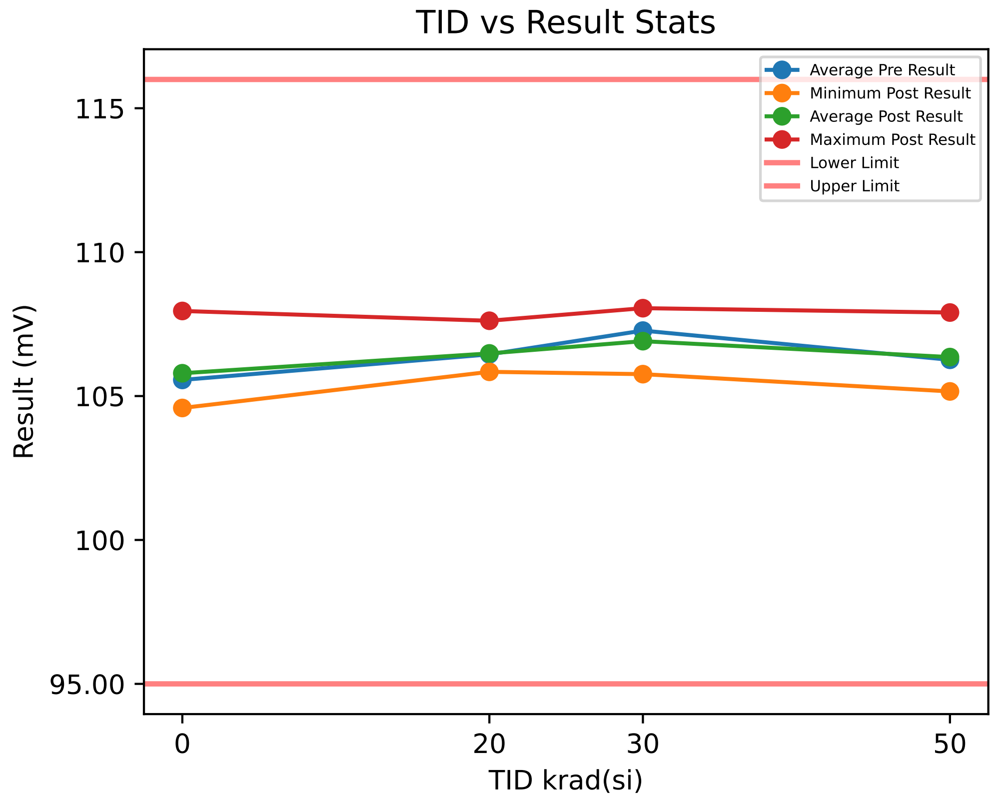
Test Results (Lower Limit = 0.49, Upper Limit = 0.55 (V))

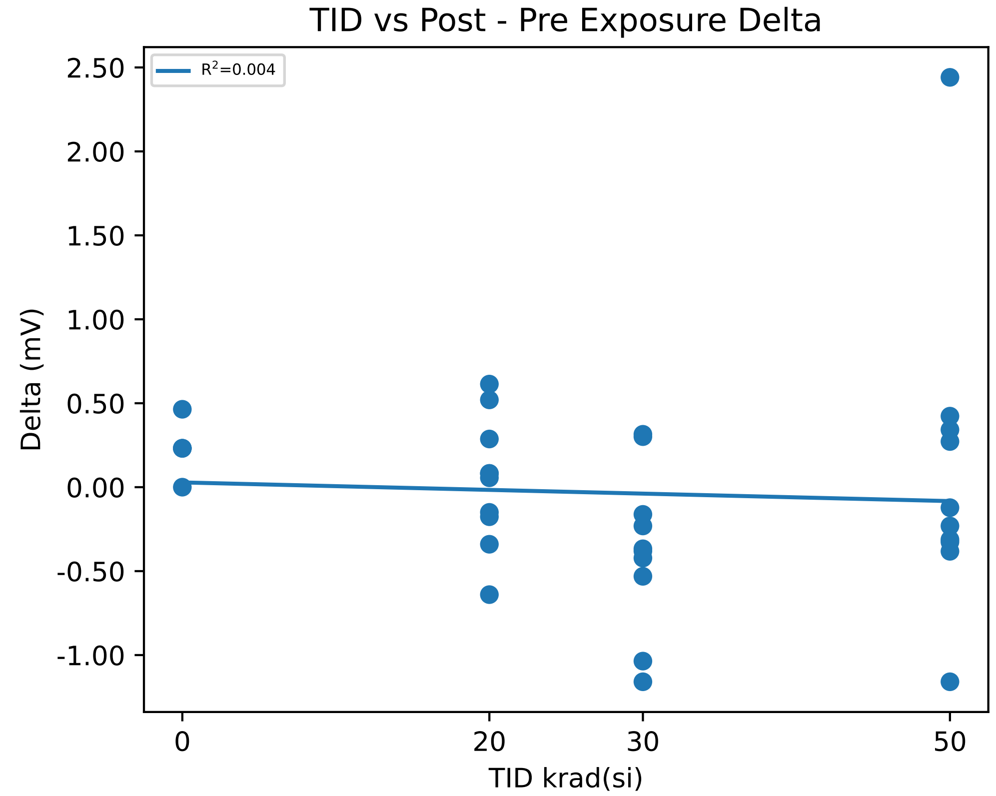
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.5244	0.523	-0.0014
2	20	Unbiased	0.5207	0.5216	0.0009
3	20	Unbiased	0.5212	0.5219	0.0007
4	20	Unbiased	0.527	0.5277	0.0007
5	20	Unbiased	0.5216	0.5219	0.0003
6	20	14V Biased	0.5246	0.5302	0.0056
7	20	14V Biased	0.5133	0.517	0.0037
8	20	14V Biased	0.5191	0.5242	0.0051
9	20	14V Biased	0.5198	0.5242	0.0044
10	20	14V Biased	0.5165	0.5214	0.0049
11	30	Unbiased	0.5214	0.5244	0.003
12	30	Unbiased	0.5246	0.5246	0
13	30	Unbiased	0.5223	0.5235	0.0012
14	30	Unbiased	0.5226	0.5228	0.0002
15	30	Unbiased	0.5265	0.527	0.0005
16	30	14V Biased	0.5267	0.5332	0.0065
17	30	14V Biased	0.5226	0.5281	0.0055
18	30	14V Biased	0.5226	0.5295	0.0069
19	30	14V Biased	0.5235	0.5309	0.0074
20	30	14V Biased	0.5172	0.5251	0.0079
21	50	Unbiased	0.5184	0.5198	0.0014
22	50	Unbiased	0.5233	0.5244	0.0011
23	50	Unbiased	0.5256	0.5279	0.0023
24	50	Unbiased	0.5191	0.5202	0.0011
25	50	Unbiased	0.5253	0.5263	0.001
26	50	14V Biased	0.5172	0.5256	0.0084
27	50	14V Biased	0.5237	0.5297	0.006
28	50	14V Biased	0.5128	0.5223	0.0095
29	50	14V Biased	0.5154	0.5244	0.009
30	50	14V Biased	0.5202	0.5302	0.01
31	0	Correlation	0.5156	0.5151	-0.0005
32	0	Correlation	0.5205	0.5202	-0.0003
33	0	Correlation	0.5107	0.5107	0
34	0	Correlation	0.5131	0.5128	-0.0003
35	0	Correlation	0.5242	0.524	-0.0002

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	0.5107	0.51682	0.5242	0.0054952	0.5107	0.51656	0.524	0.0054592	-0.0005	-0.00026	0	0.00018166
20	0.5133	0.52082	0.527	0.0040177	0.517	0.52331	0.5302	0.003633	-0.0014	0.00249	0.0056	0.0025004
30	0.5172	0.523	0.5267	0.0027064	0.5228	0.52691	0.5332	0.0034488	0	0.00391	0.0079	0.0032511
50	0.5128	0.5201	0.5256	0.0043228	0.5198	0.52508	0.5302	0.003615	0.001	0.00498	0.01	0.0039508

Device Test: 6.6 EN_HYST_PLASTIC(EN_UVLO_HYSTERESIS_14V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

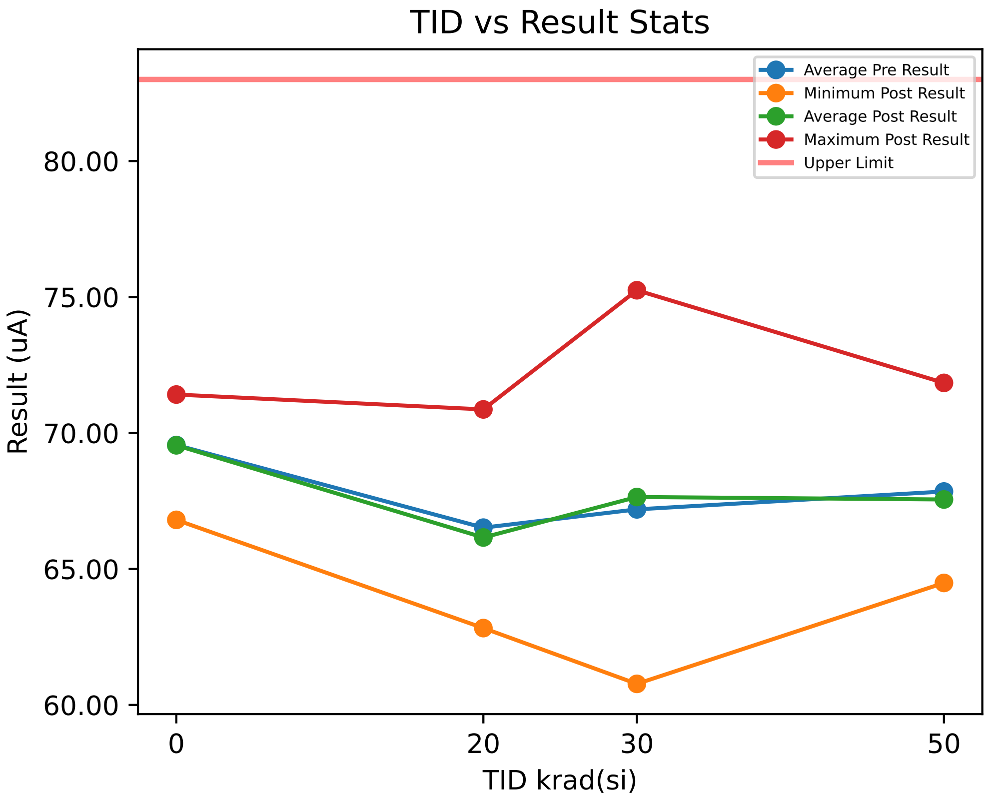
Test Results (Lower Limit = 95.0, Upper Limit = 116.0 (mV))

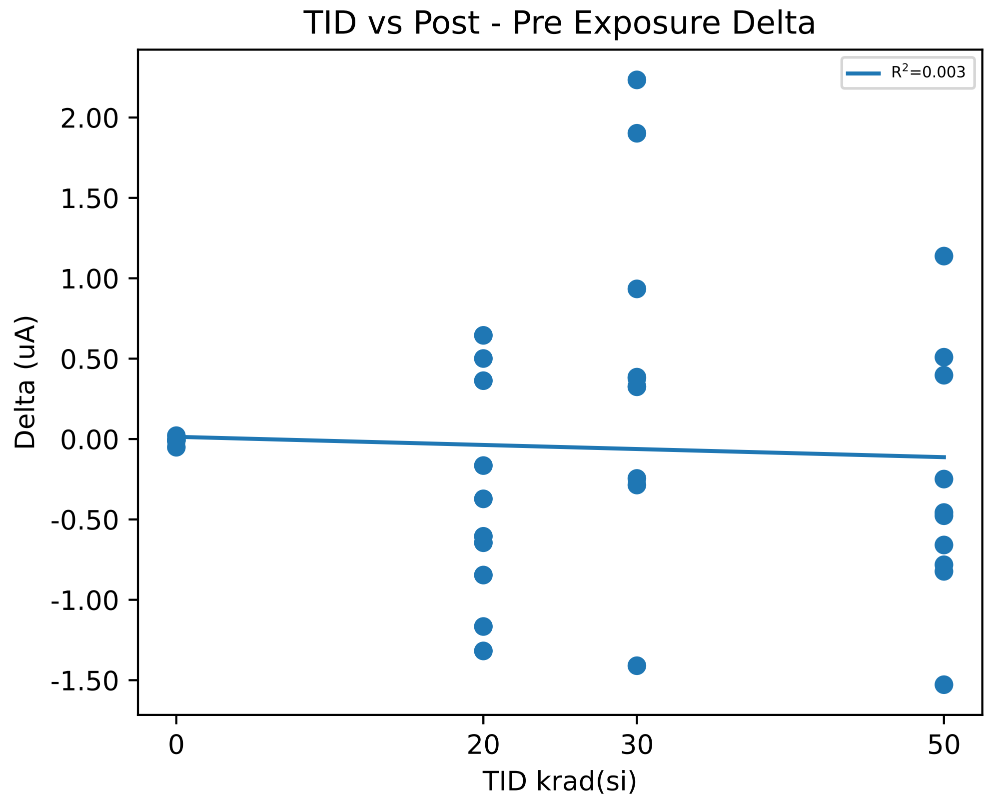
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	105.94	106.55	0.614
2	20	Unbiased	106.28	106.13	-0.15
3	20	Unbiased	105.81	105.9	0.082
4	20	Unbiased	107.53	107.62	0.082
5	20	Unbiased	106.65	106.93	0.287
6	20	14V Biased	107.26	106.62	-0.64
7	20	14V Biased	106.18	105.84	-0.34
8	20	14V Biased	106.86	106.69	-0.176
9	20	14V Biased	106.17	106.69	0.52
10	20	14V Biased	105.79	105.84	0.056
11	30	Unbiased	106.88	106.46	-0.422
12	30	Unbiased	107.26	106.22	-1.036
13	30	Unbiased	108.02	106.86	-1.159
14	30	Unbiased	107.02	106.78	-0.231
15	30	Unbiased	107.74	108.05	0.315
16	30	14V Biased	108.54	108.01	-0.531
17	30	14V Biased	107.53	107.15	-0.38
18	30	14V Biased	106.76	107.06	0.301
19	30	14V Biased	106.86	106.7	-0.162
20	30	14V Biased	106.13	105.76	-0.367
21	50	Unbiased	106	106.43	0.423
22	50	Unbiased	107.1	105.94	-1.159
23	50	Unbiased	107.63	107.9	0.272
24	50	Unbiased	106.09	105.71	-0.382
25	50	Unbiased	105.01	107.45	2.441
26	50	14V Biased	105.61	105.3	-0.312
27	50	14V Biased	107.41	107.08	-0.326
28	50	14V Biased	105.09	105.43	0.342
29	50	14V Biased	105.39	105.16	-0.231
30	50	14V Biased	107.26	107.14	-0.122
31	0	Correlation	104.64	105.11	0.464
32	0	Correlation	105.47	105.71	0.232
33	0	Correlation	104.59	104.59	0
34	0	Correlation	105.38	105.61	0.232
35	0	Correlation	107.72	107.96	0.231

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	104.59	105.56	107.72	1.2768	104.59	105.79	107.96	1.2894	0	0.2318	0.464	0.16405
20	105.79	106.45	107.53	0.60816	105.84	106.48	107.62	0.56617	-0.64	0.0335	0.614	0.38207
30	106.13	107.27	108.54	0.70158	105.76	106.91	108.05	0.71949	-1.159	-0.3672	0.315	0.48037
50	105.01	106.26	107.63	1.0056	105.16	106.35	107.9	0.98531	-1.159	0.0946	2.441	0.94281

Device Test: 6.7 SS_I_Charge(SS_Icharge_14V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

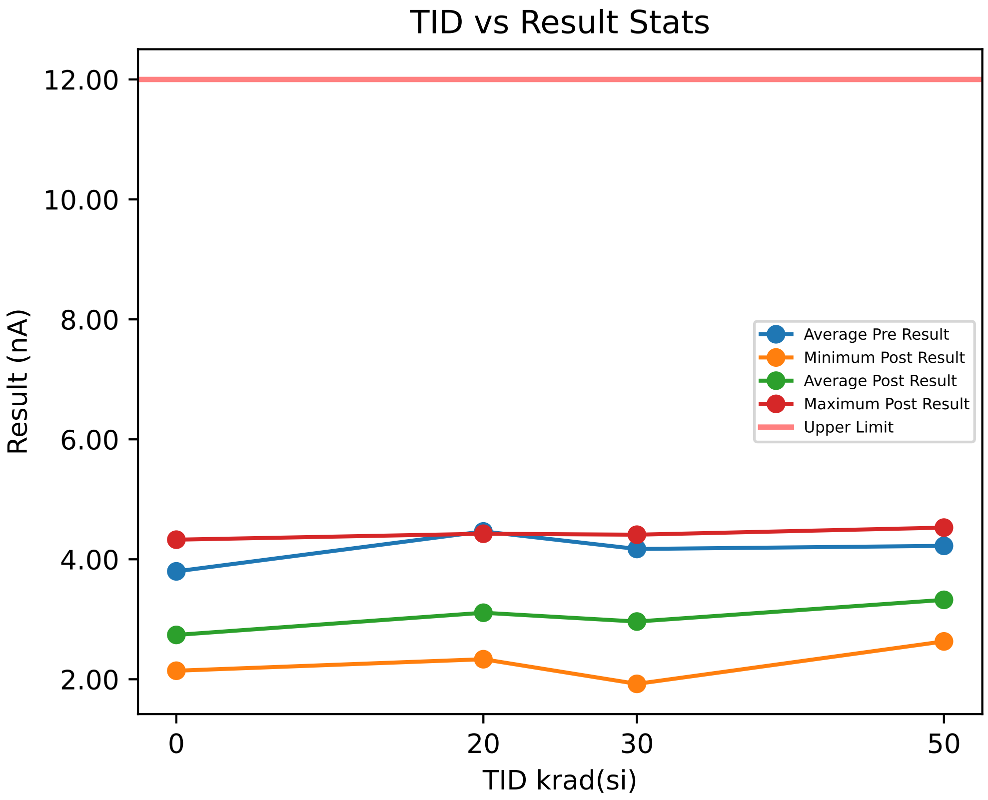
Test Results (Upper Limit = 83.0 (uA))

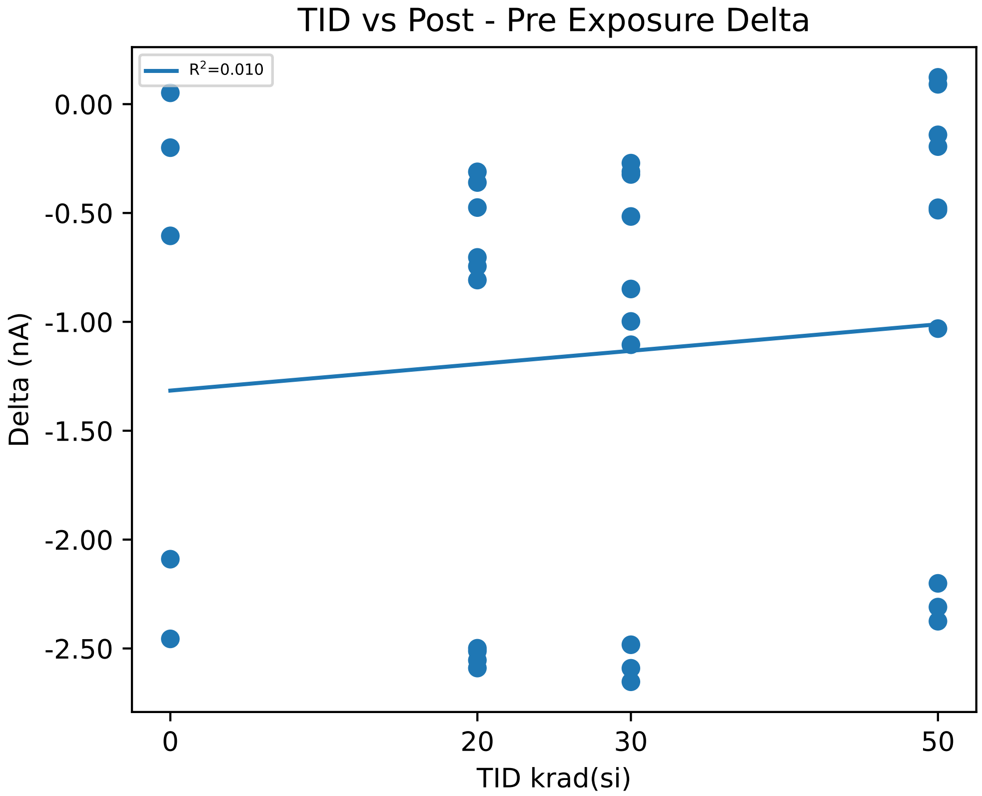
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	65.418	64.813	-0.605
2	20	Unbiased	66.305	66.668	0.363
3	20	Unbiased	67.979	67.607	-0.372
4	20	Unbiased	64.144	62.826	-1.318
5	20	Unbiased	66.692	67.193	0.501
6	20	14V Biased	67.943	66.777	-1.166
7	20	14V Biased	66.059	65.213	-0.846
8	20	14V Biased	64.633	63.988	-0.645
9	20	14V Biased	65.79	65.625	-0.165
10	20	14V Biased	70.222	70.867	0.645
11	30	Unbiased	65.485	65.863	0.378
12	30	Unbiased	73.015	75.249	2.234
13	30	Unbiased	66.56	66.274	-0.286
14	30	Unbiased	65.145	64.9	-0.245
15	30	Unbiased	67.666	67.993	0.327
16	30	14V Biased	65.284	67.186	1.902
17	30	14V Biased	70.172	70.557	0.385
18	30	14V Biased	62.185	60.775	-1.41
19	30	14V Biased	66.923	67.248	0.325
20	30	14V Biased	69.481	70.415	0.934
21	50	Unbiased	67.834	67.585	-0.249
22	50	Unbiased	65.623	64.841	-0.782
23	50	Unbiased	68.299	67.842	-0.457
24	50	Unbiased	67.121	67.63	0.509
25	50	Unbiased	71.445	71.842	0.397
26	50	14V Biased	69.7	69.223	-0.477
27	50	14V Biased	67.086	68.224	1.138
28	50	14V Biased	66.65	65.991	-0.659
29	50	14V Biased	68.71	67.887	-0.823
30	50	14V Biased	66.014	64.486	-1.528
31	0	Correlation	71.393	71.414	0.021
32	0	Correlation	68.23	68.221	-0.009
33	0	Correlation	66.856	66.805	-0.051
34	0	Correlation	70.592	70.589	-0.003
35	0	Correlation	70.717	70.707	-0.01

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	66.856	69.558	71.393	1.9264	66.805	69.547	71.414	1.949	-0.051	-0.0104	0.021	0.025938
20	64.144	66.518	70.222	1.7982	62.826	66.158	70.867	2.2307	-1.318	-0.3608	0.645	0.68776
30	62.185	67.192	73.015	3.0648	60.775	67.646	75.249	3.8622	-1.41	0.4544	2.234	1.0567
50	65.623	67.848	71.445	1.7693	64.486	67.555	71.842	2.1354	-1.528	-0.2931	1.138	0.77524

Device Test: 6.8 IEN_VIN(EN7p0V_I_Vin14V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

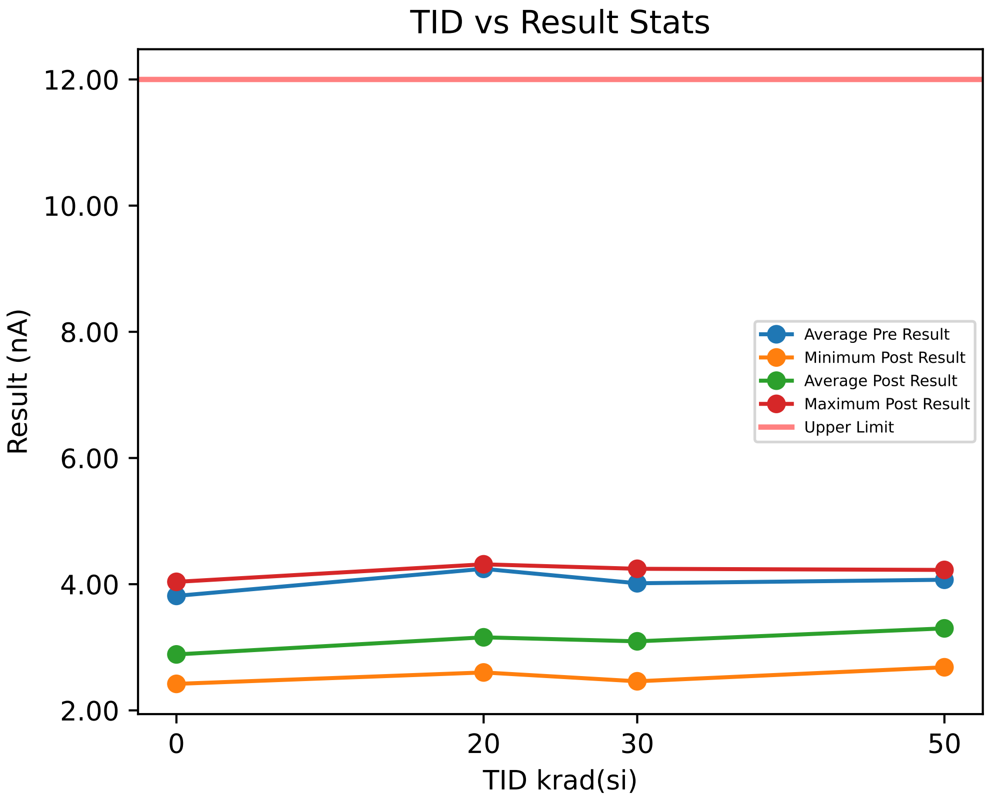
Test Results (Upper Limit = 12.0 (nA))

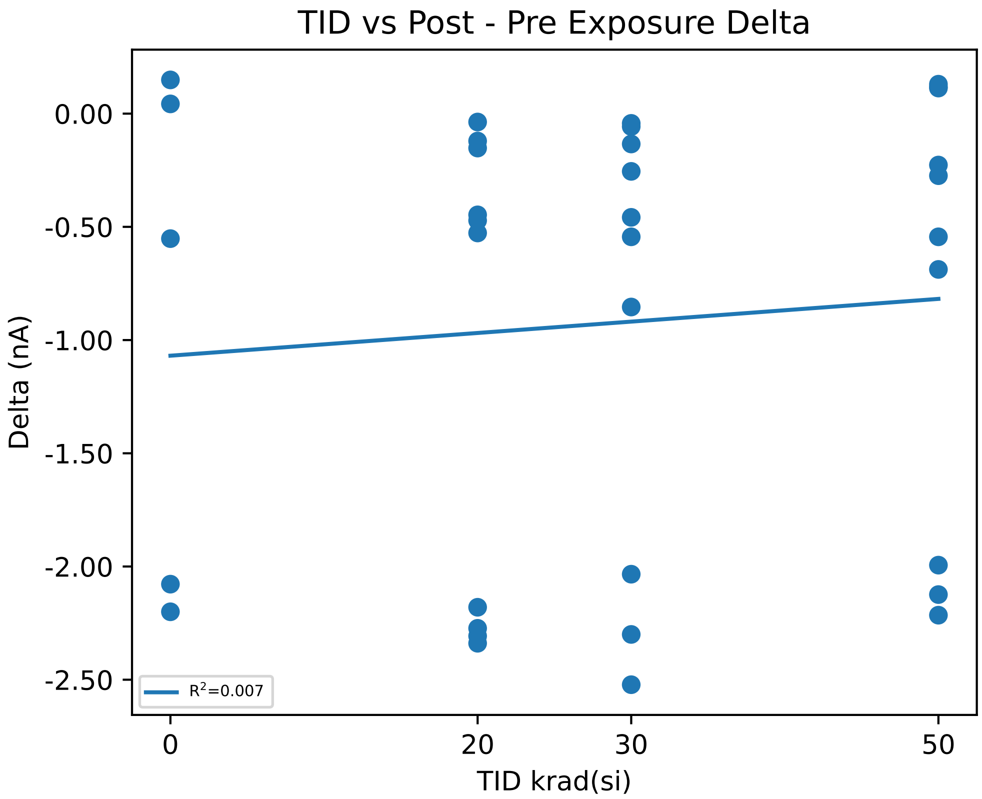
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	5.183	2.629	-2.554
2	20	Unbiased	2.92	2.609	-0.311
3	20	Unbiased	5.223	4.415	-0.808
4	20	Unbiased	5.12	2.608	-2.512
5	20	Unbiased	2.855	2.38	-0.475
6	20	14V Biased	5.09	4.386	-0.704
7	20	14V Biased	4.924	2.334	-2.59
8	20	14V Biased	2.903	2.543	-0.36
9	20	14V Biased	5.171	4.426	-0.745
10	20	14V Biased	5.257	2.758	-2.499
11	30	Unbiased	3.009	2.686	-0.323
12	30	Unbiased	5.153	4.048	-1.105
13	30	Unbiased	5.096	2.613	-2.483
14	30	Unbiased	2.934	2.663	-0.271
15	30	Unbiased	5.258	4.26	-0.998
16	30	14V Biased	4.756	2.103	-2.653
17	30	14V Biased	2.233	1.923	-0.31
18	30	14V Biased	5.259	4.41	-0.849
19	30	14V Biased	5.018	2.427	-2.591
20	30	14V Biased	3.004	2.488	-0.516
21	50	Unbiased	5.25	4.219	-1.031
22	50	Unbiased	5.137	2.827	-2.31
23	50	Unbiased	2.869	2.728	-0.141
24	50	Unbiased	4.885	4.398	-0.487
25	50	Unbiased	5.022	2.647	-2.375
26	50	14V Biased	2.606	2.729	0.123
27	50	14V Biased	4.723	4.528	-0.195
28	50	14V Biased	4.969	2.768	-2.201
29	50	14V Biased	2.54	2.631	0.091
30	50	14V Biased	4.237	3.761	-0.476
31	0	Correlation	5	2.544	-2.456
32	0	Correlation	2.273	2.325	0.052
33	0	Correlation	4.232	2.142	-2.09
34	0	Correlation	2.557	2.357	-0.2
35	0	Correlation	4.932	4.327	-0.605

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	2.273	3.7988	5	1.3024	2.142	2.739	4.327	0.8991	-2.456	-1.0598	0.052	1.1394
20	2.855	4.4646	5.257	1.0886	2.334	3.1088	4.426	0.90541	-2.59	-1.3558	-0.311	1.0306
30	2.233	4.172	5.259	1.213	1.923	2.9621	4.41	0.91752	-2.653	-1.2099	-0.271	0.98637
50	2.54	4.2238	5.25	1.1083	2.631	3.3236	4.528	0.80271	-2.375	-0.9002	0.123	1.0179

Device Test: 6.9 IEN_VIN(EN5p0V_I_Vin14V)





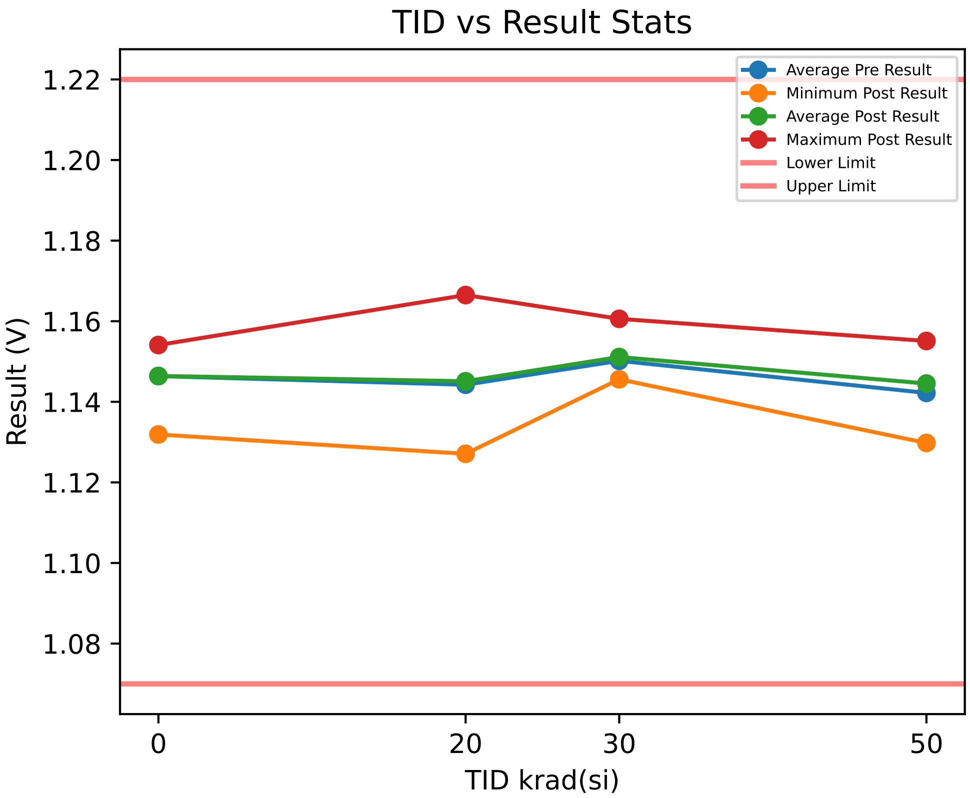
Test Results (Upper Limit = 12.0 (nA))

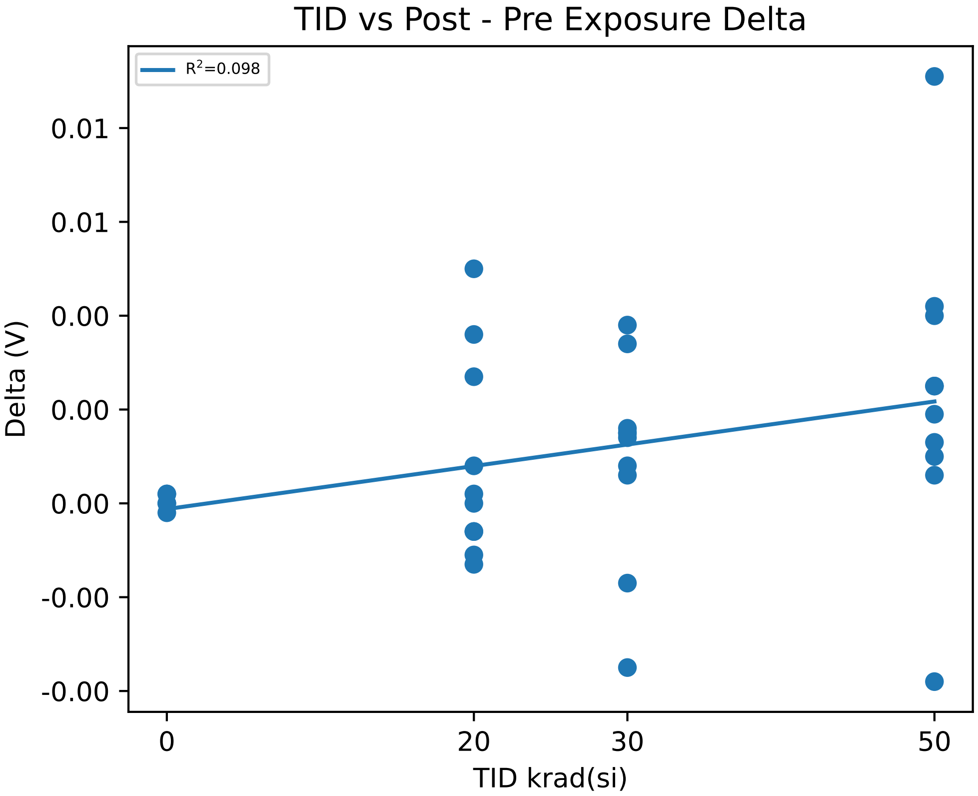
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	5.06	2.753	-2.307
2	20	Unbiased	2.793	2.641	-0.152
3	20	Unbiased	4.762	4.315	-0.447
4	20	Unbiased	4.843	2.663	-2.18
5	20	Unbiased	2.722	2.601	-0.121
6	20	14V Biased	4.791	4.264	-0.527
7	20	14V Biased	5.015	2.742	-2.273
8	20	14V Biased	2.711	2.674	-0.037
9	20	14V Biased	4.716	4.244	-0.472
10	20	14V Biased	5.02	2.681	-2.339
11	30	Unbiased	2.8	2.666	-0.134
12	30	Unbiased	4.623	4.079	-0.544
13	30	Unbiased	4.828	2.794	-2.034
14	30	Unbiased	2.796	2.753	-0.043
15	30	Unbiased	4.907	4.053	-0.854
16	30	14V Biased	4.983	2.461	-2.522
17	30	14V Biased	2.62	2.563	-0.057
18	30	14V Biased	4.702	4.244	-0.458
19	30	14V Biased	5.033	2.733	-2.3
20	30	14V Biased	2.853	2.598	-0.255
21	50	Unbiased	4.766	4.078	-0.688
22	50	Unbiased	5.021	2.806	-2.215
23	50	Unbiased	2.582	2.695	0.113
24	50	Unbiased	4.412	4.138	-0.274
25	50	Unbiased	4.717	2.723	-1.994
26	50	14V Biased	2.565	2.683	0.118
27	50	14V Biased	4.686	4.142	-0.544
28	50	14V Biased	4.902	2.778	-2.124
29	50	14V Biased	2.597	2.727	0.13
30	50	14V Biased	4.453	4.226	-0.227
31	0	Correlation	4.853	2.775	-2.078
32	0	Correlation	2.625	2.774	0.149
33	0	Correlation	4.62	2.42	-2.2
34	0	Correlation	2.385	2.428	0.043
35	0	Correlation	4.589	4.037	-0.552

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	2.385	3.8144	4.853	1.2027	2.42	2.8868	4.037	0.66644	-2.2	-0.9276	0.149	1.1385
20	2.711	4.2433	5.06	1.0426	2.601	3.1578	4.315	0.77192	-2.339	-1.0855	-0.037	1.0365
30	2.62	4.0145	5.033	1.0817	2.461	3.0944	4.244	0.71963	-2.522	-0.9201	-0.043	0.98007
50	2.565	4.0701	5.021	1.0431	2.683	3.2996	4.226	0.73018	-2.215	-0.7705	0.13	0.96589

Device Test: 7.0 OVP_VTH_Rising_PLASTIC(OVP_UVLO_RISING_4p5V)





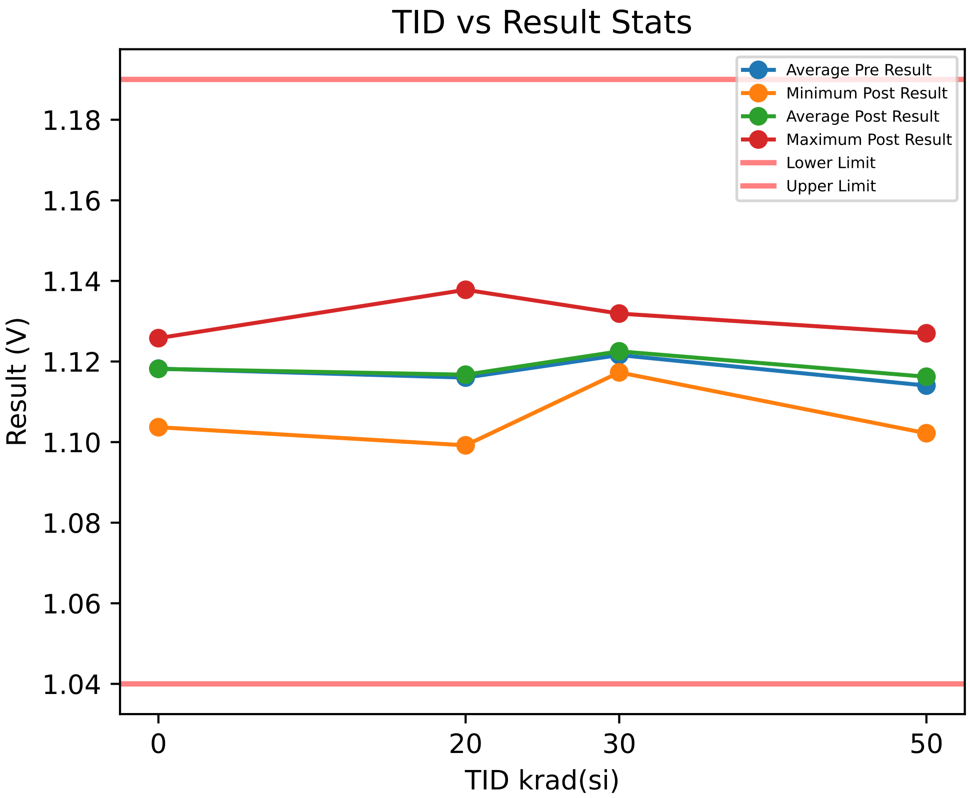
Test Results (Lower Limit = 1.07, Upper Limit = 1.22 (V))

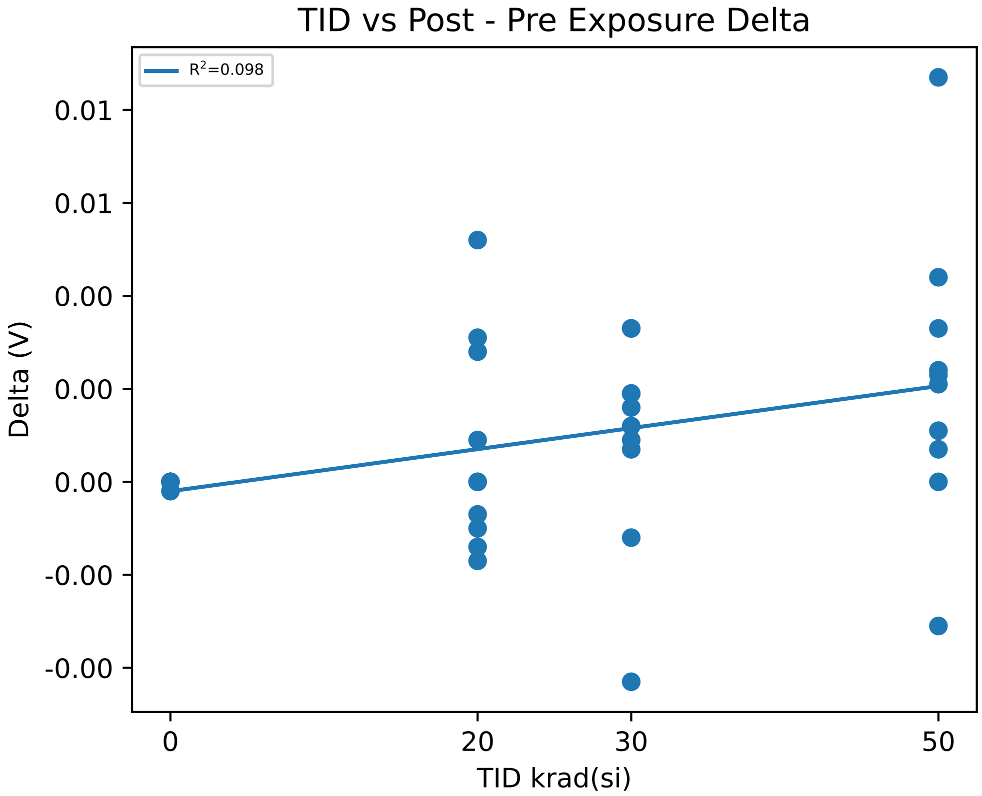
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	1.1269	1.1271	0.0002
2	20	Unbiased	1.1393	1.1387	-0.0006
3	20	Unbiased	1.1471	1.1498	0.0027
4	20	Unbiased	1.1517	1.1511	-0.0006
5	20	Unbiased	1.1477	1.1477	0
6	20	14V Biased	1.1353	1.1342	-0.0011
7	20	14V Biased	1.1678	1.1665	-0.0013
8	20	14V Biased	1.1397	1.1433	0.0036
9	20	14V Biased	1.1364	1.1372	0.0008
10	20	14V Biased	1.1505	1.1555	0.005
11	30	Unbiased	1.1488	1.1496	0.0008
12	30	Unbiased	1.157	1.1585	0.0015
13	30	Unbiased	1.1456	1.1471	0.0015
14	30	Unbiased	1.1473	1.1456	-0.0017
15	30	Unbiased	1.1498	1.1463	-0.0035
16	30	14V Biased	1.145	1.1484	0.0034
17	30	14V Biased	1.1501	1.1515	0.0014
18	30	14V Biased	1.1541	1.1557	0.0016
19	30	14V Biased	1.1473	1.1479	0.0006
20	30	14V Biased	1.1568	1.1606	0.0038
21	50	Unbiased	1.1526	1.1551	0.0025
22	50	Unbiased	1.1486	1.1448	-0.0038
23	50	Unbiased	1.1486	1.1496	0.001
24	50	Unbiased	1.1317	1.1323	0.0006
25	50	Unbiased	1.146	1.1473	0.0013
26	50	14V Biased	1.1397	1.1488	0.0091
27	50	14V Biased	1.1446	1.1486	0.004
28	50	14V Biased	1.1328	1.1353	0.0025
29	50	14V Biased	1.1279	1.1298	0.0019
30	50	14V Biased	1.1496	1.1538	0.0042
31	0	Correlation	1.1509	1.1511	0.0002
32	0	Correlation	1.1496	1.1496	0
33	0	Correlation	1.1321	1.1319	-0.0002
34	0	Correlation	1.1452	1.1454	0.0002
35	0	Correlation	1.1541	1.1541	0

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	1.1321	1.1464	1.1541	0.0085981	1.1319	1.1464	1.1541	0.0087016	-0.0002	4e-05	0.0002	0.00016733
20	1.1269	1.1442	1.1678	0.011339	1.1271	1.1451	1.1665	0.011452	-0.0013	0.00087	0.005	0.0021598
30	1.145	1.1502	1.157	0.0043736	1.1456	1.1511	1.1606	0.005327	-0.0035	0.00094	0.0038	0.0021686
50	1.1279	1.1422	1.1526	0.0086563	1.1298	1.1445	1.1551	0.0089296	-0.0038	0.00233	0.0091	0.0032619

Device Test: 7.1 OVP_VTH_Falling_PLASTIC(OVP_UVLO_FALLING_4p5V)





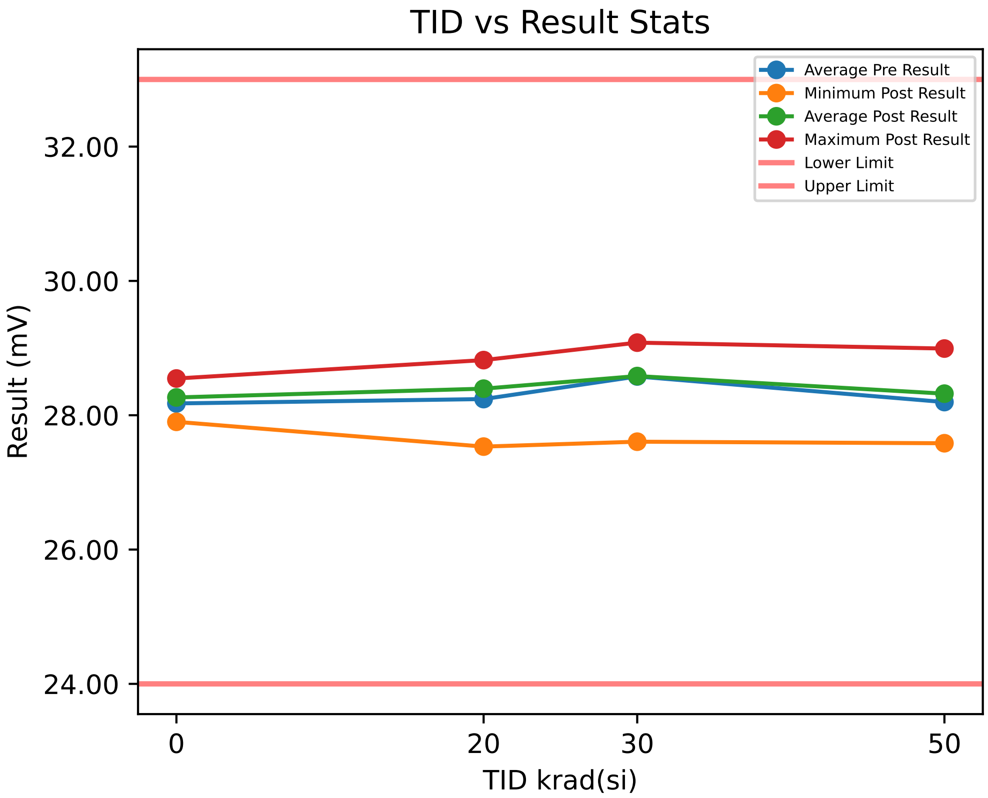
Test Results (Lower Limit = 1.04, Upper Limit = 1.19 (V))

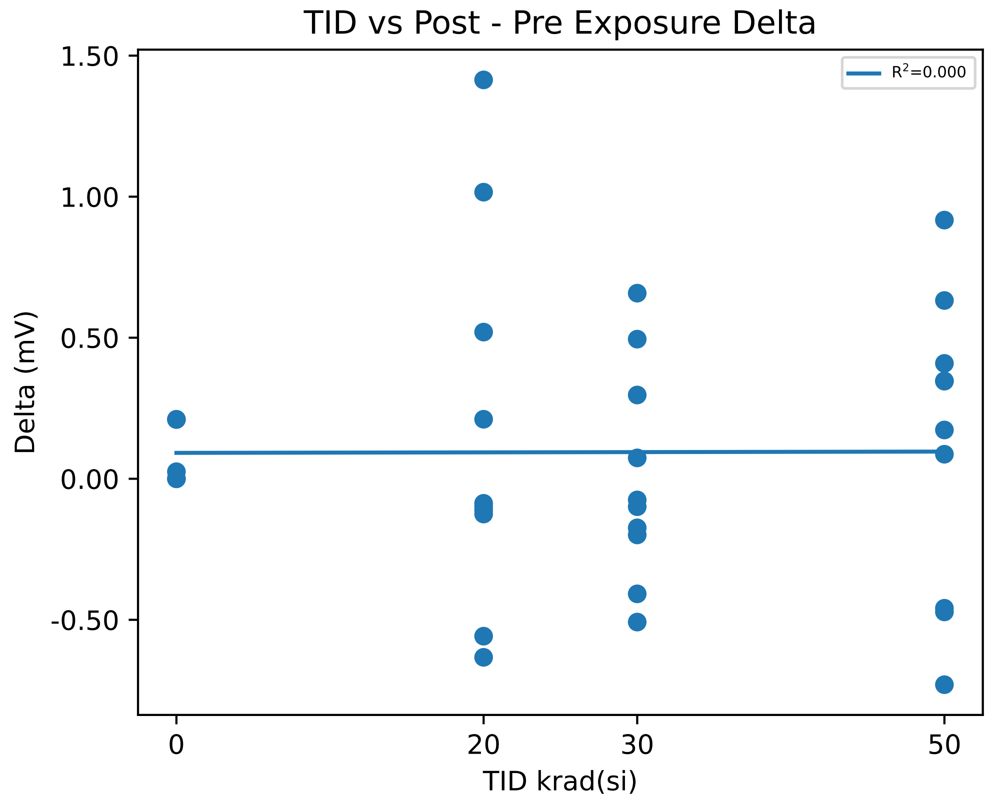
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	1.0992	1.0992	0
2	20	Unbiased	1.1117	1.11	-0.0017
3	20	Unbiased	1.1185	1.1213	0.0028
4	20	Unbiased	1.123	1.123	0
5	20	Unbiased	1.1204	1.119	-0.0014
6	20	14V Biased	1.1077	1.1067	-0.001
7	20	14V Biased	1.1385	1.1378	-0.0007
8	20	14V Biased	1.1114	1.1145	0.0031
9	20	14V Biased	1.1079	1.1088	0.0009
10	20	14V Biased	1.1218	1.127	0.0052
11	30	Unbiased	1.1199	1.1208	0.0009
12	30	Unbiased	1.1286	1.1305	0.0019
13	30	Unbiased	1.1168	1.118	0.0012
14	30	Unbiased	1.1192	1.118	-0.0012
15	30	Unbiased	1.1216	1.1173	-0.0043
16	30	14V Biased	1.1161	1.1194	0.0033
17	30	14V Biased	1.1216	1.1232	0.0016
18	30	14V Biased	1.1251	1.127	0.0019
19	30	14V Biased	1.1185	1.1192	0.0007
20	30	14V Biased	1.1286	1.1319	0.0033
21	50	Unbiased	1.1246	1.127	0.0024
22	50	Unbiased	1.1199	1.1168	-0.0031
23	50	Unbiased	1.1206	1.1213	0.0007
24	50	Unbiased	1.1037	1.1037	0
25	50	Unbiased	1.1176	1.1187	0.0011
26	50	14V Biased	1.1114	1.1201	0.0087
27	50	14V Biased	1.1164	1.1208	0.0044
28	50	14V Biased	1.1046	1.1067	0.0021
29	50	14V Biased	1.0999	1.1022	0.0023
30	50	14V Biased	1.1216	1.1249	0.0033
31	0	Correlation	1.1232	1.1232	0
32	0	Correlation	1.1211	1.1211	0
33	0	Correlation	1.1039	1.1037	-0.0002
34	0	Correlation	1.1171	1.1171	0
35	0	Correlation	1.1258	1.1258	0

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	1.1039	1.1182	1.1258	0.0086149	1.1037	1.1182	1.1258	0.0086981	-0.0002	-4e-05	0	8.9443e-05
20	1.0992	1.116	1.1385	0.010908	1.0992	1.1167	1.1378	0.011234	-0.0017	0.00072	0.0052	0.002272
30	1.1161	1.1216	1.1286	0.0044944	1.1173	1.1225	1.1319	0.0054162	-0.0043	0.00093	0.0033	0.0022505
50	1.0999	1.114	1.1246	0.0086102	1.1022	1.1162	1.127	0.0088432	-0.0031	0.00219	0.0087	0.0030686

Device Test: 7.2 OVP_HYST_PLASTIC(OVP_UVLO_HYSTERESIS_4p5V)





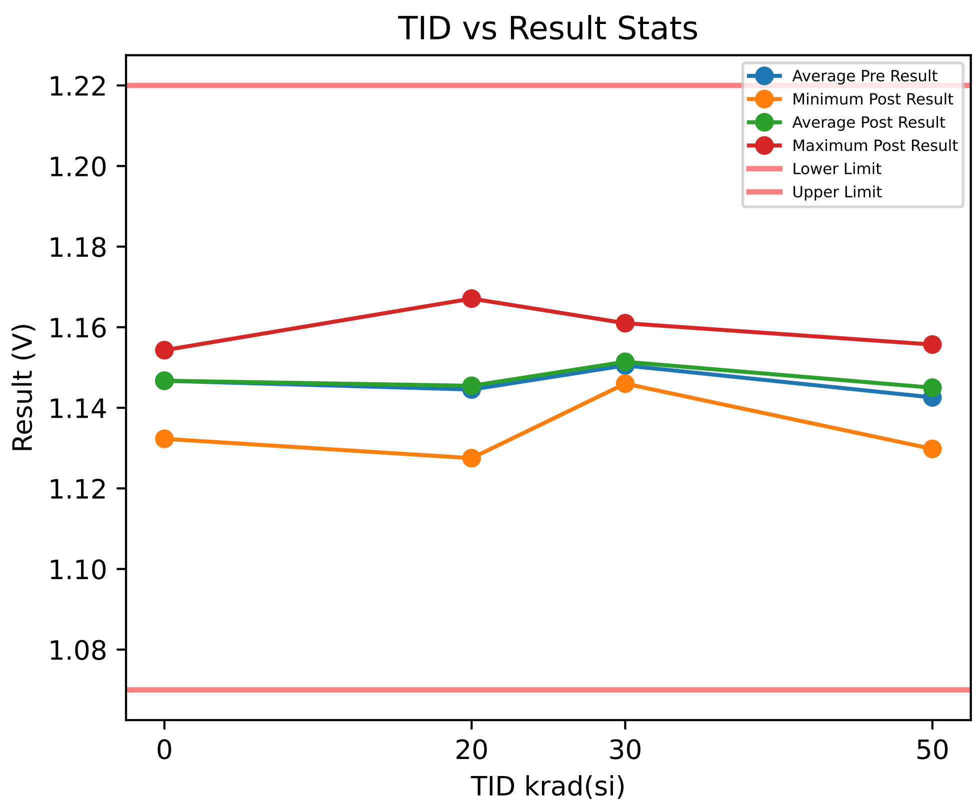
Test Results (Lower Limit = 24.0, Upper Limit = 33.0 (mV))

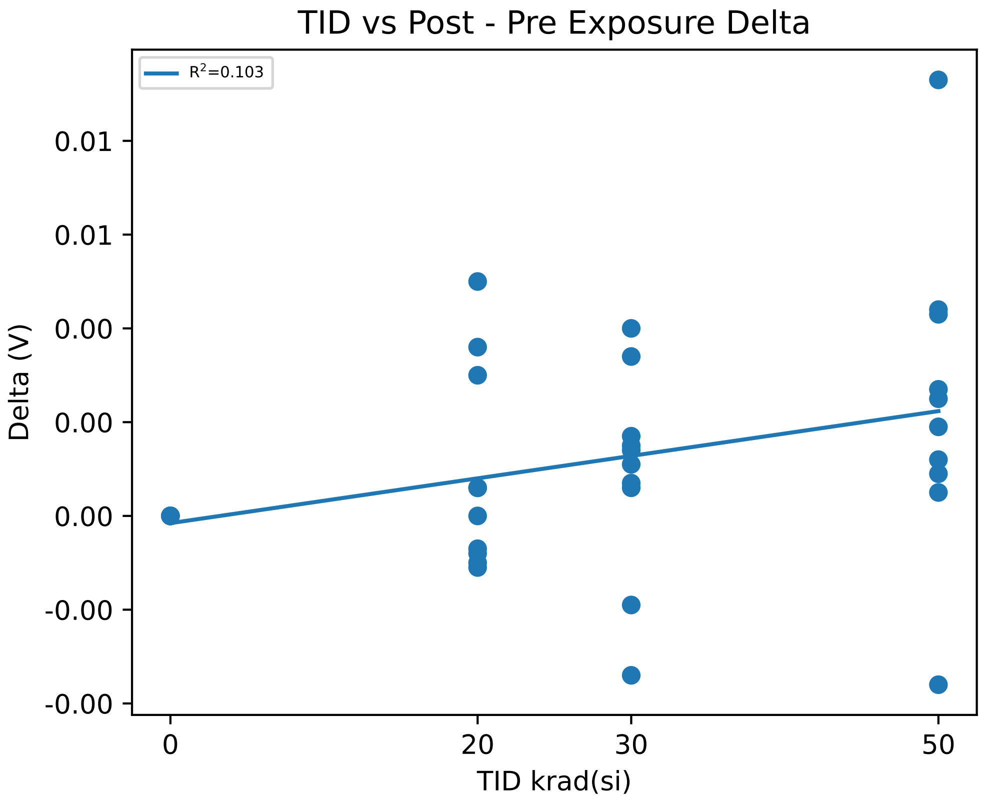
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	27.694	27.905	0.211
2	20	Unbiased	27.644	28.66	1.016
3	20	Unbiased	28.61	28.523	-0.087
4	20	Unbiased	28.771	28.138	-0.633
5	20	Unbiased	27.357	28.771	1.414
6	20	14V Biased	27.644	27.533	-0.111
7	20	14V Biased	29.24	28.682	-0.558
8	20	14V Biased	28.301	28.821	0.52
9	20	14V Biased	28.462	28.363	-0.099
10	20	14V Biased	28.684	28.559	-0.125
11	30	Unbiased	28.882	28.783	-0.099
12	30	Unbiased	28.385	27.977	-0.408
13	30	Unbiased	28.784	29.081	0.297
14	30	Unbiased	28.114	27.606	-0.508
15	30	Unbiased	28.287	28.945	0.658
16	30	14V Biased	28.858	28.932	0.074
17	30	14V Biased	28.498	28.324	-0.174
18	30	14V Biased	28.969	28.77	-0.199
19	30	14V Biased	28.821	28.746	-0.075
20	30	14V Biased	28.175	28.67	0.495
21	50	Unbiased	27.965	28.138	0.173
22	50	Unbiased	28.671	27.941	-0.73
23	50	Unbiased	27.965	28.312	0.347
24	50	Unbiased	28.067	28.699	0.632
25	50	Unbiased	28.498	28.585	0.087
26	50	14V Biased	28.301	28.647	0.346
27	50	14V Biased	28.201	27.729	-0.472
28	50	14V Biased	28.177	28.586	0.409
29	50	14V Biased	28.042	27.583	-0.459
30	50	14V Biased	28.076	28.993	0.917
31	0	Correlation	27.692	27.902	0.21
32	0	Correlation	28.547	28.547	0
33	0	Correlation	28.252	28.277	0.025
34	0	Correlation	28.126	28.337	0.211
35	0	Correlation	28.262	28.262	0

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	27.692	28.176	28.547	0.31128	27.902	28.265	28.547	0.23272	0	0.0892	0.211	0.1112
20	27.357	28.241	29.24	0.61979	27.533	28.395	28.821	0.41752	-0.633	0.1548	1.414	0.65526
30	28.114	28.577	28.969	0.32166	27.606	28.583	29.081	0.47126	-0.508	0.0061	0.658	0.37729
50	27.965	28.196	28.671	0.23327	27.583	28.321	28.993	0.46113	-0.73	0.125	0.917	0.52655

Device Test: 7.3 OVP_VTH_Rising_PLASTIC(OVP_UVLO_RISING_14p0V)





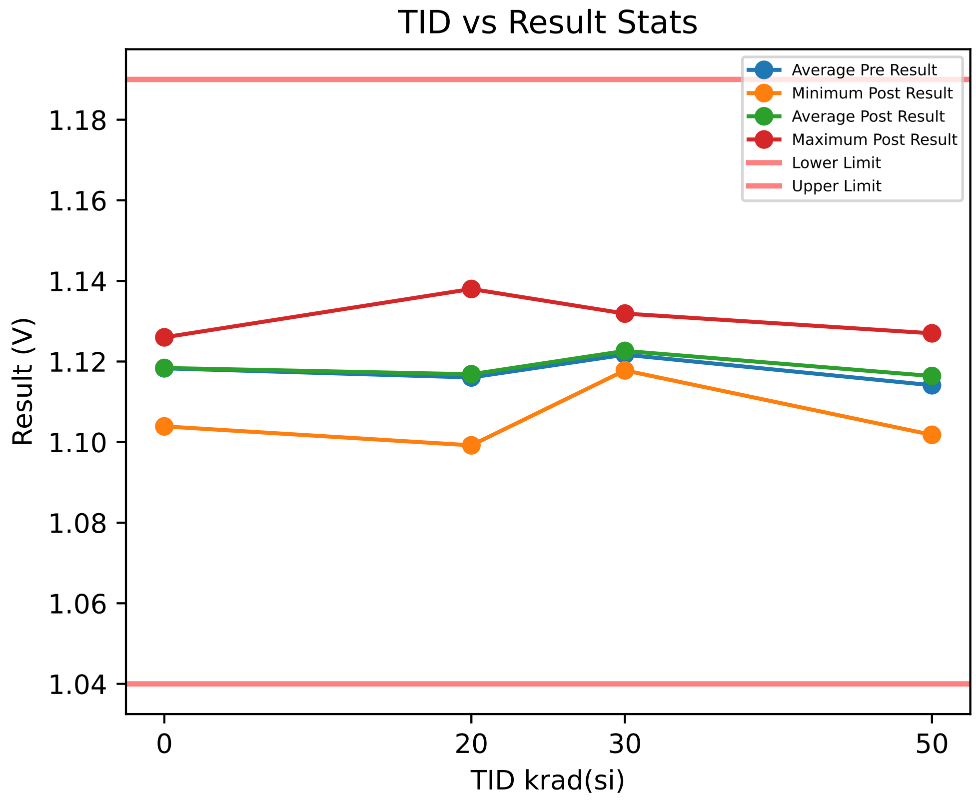
Test Results (Lower Limit = 1.07, Upper Limit = 1.22 (V))

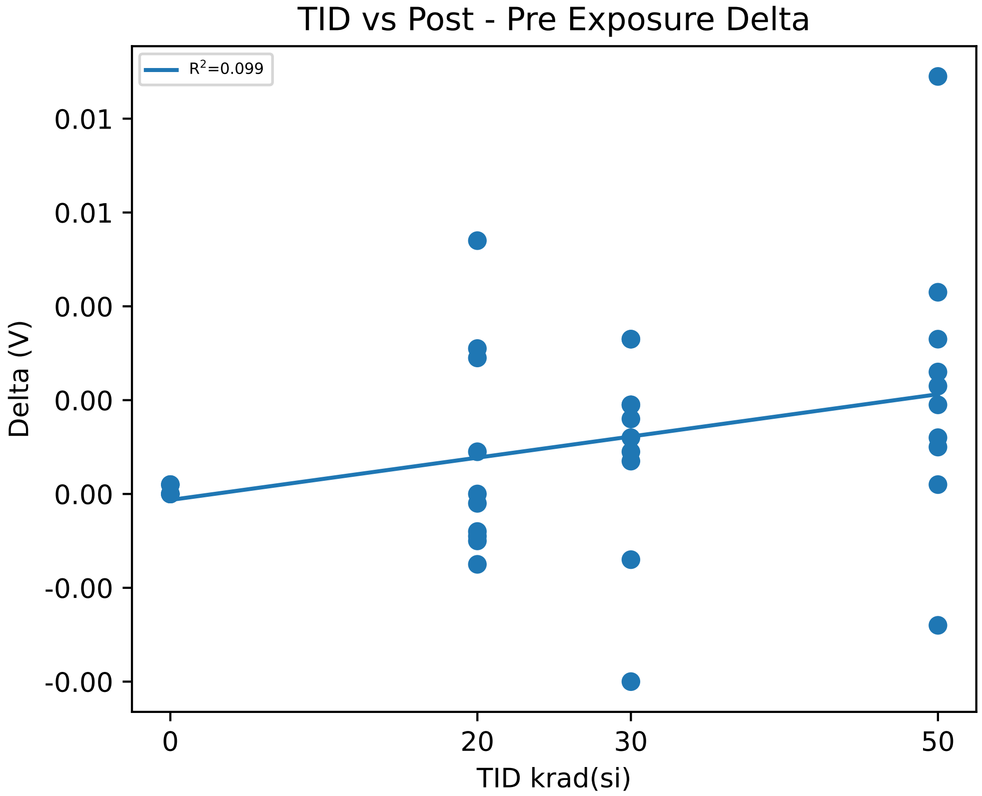
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	1.1269	1.1275	0.0006
2	20	Unbiased	1.1397	1.1389	-0.0008
3	20	Unbiased	1.1475	1.1505	0.003
4	20	Unbiased	1.1524	1.1517	-0.0007
5	20	Unbiased	1.1482	1.1482	0
6	20	14V Biased	1.1357	1.1347	-0.001
7	20	14V Biased	1.1682	1.1671	-0.0011
8	20	14V Biased	1.1397	1.1433	0.0036
9	20	14V Biased	1.1366	1.1372	0.0006
10	20	14V Biased	1.1505	1.1555	0.005
11	30	Unbiased	1.1492	1.1498	0.0006
12	30	Unbiased	1.157	1.1587	0.0017
13	30	Unbiased	1.1458	1.1469	0.0011
14	30	Unbiased	1.1479	1.146	-0.0019
15	30	Unbiased	1.1503	1.1469	-0.0034
16	30	14V Biased	1.1454	1.1488	0.0034
17	30	14V Biased	1.1503	1.1517	0.0014
18	30	14V Biased	1.1545	1.156	0.0015
19	30	14V Biased	1.1477	1.1484	0.0007
20	30	14V Biased	1.157	1.161	0.004
21	50	Unbiased	1.1532	1.1557	0.0025
22	50	Unbiased	1.1492	1.1456	-0.0036
23	50	Unbiased	1.1492	1.1501	0.0009
24	50	Unbiased	1.1323	1.1328	0.0005
25	50	Unbiased	1.1467	1.1479	0.0012
26	50	14V Biased	1.1397	1.149	0.0093
27	50	14V Biased	1.1448	1.1492	0.0044
28	50	14V Biased	1.133	1.1357	0.0027
29	50	14V Biased	1.1279	1.1298	0.0019
30	50	14V Biased	1.1498	1.1541	0.0043
31	0	Correlation	1.1509	1.1509	0
32	0	Correlation	1.1501	1.1501	0
33	0	Correlation	1.1323	1.1323	0
34	0	Correlation	1.146	1.146	0
35	0	Correlation	1.1543	1.1543	0

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	1.1323	1.1467	1.1543	0.008585	1.1323	1.1467	1.1543	0.008585	0	0	0	0
20	1.1269	1.1445	1.1682	0.011443	1.1275	1.1455	1.1671	0.011524	-0.0011	0.00092	0.005	0.0021745
30	1.1454	1.1505	1.157	0.0042813	1.146	1.1514	1.161	0.0053195	-0.0034	0.00091	0.004	0.0022012
50	1.1279	1.1426	1.1532	0.0087921	1.1298	1.145	1.1557	0.009019	-0.0036	0.00241	0.0093	0.0033144

Device Test: 7.4 OVP_VTH_Falling_PLASTIC(OVP_UVLO_FALLING_14p0V)





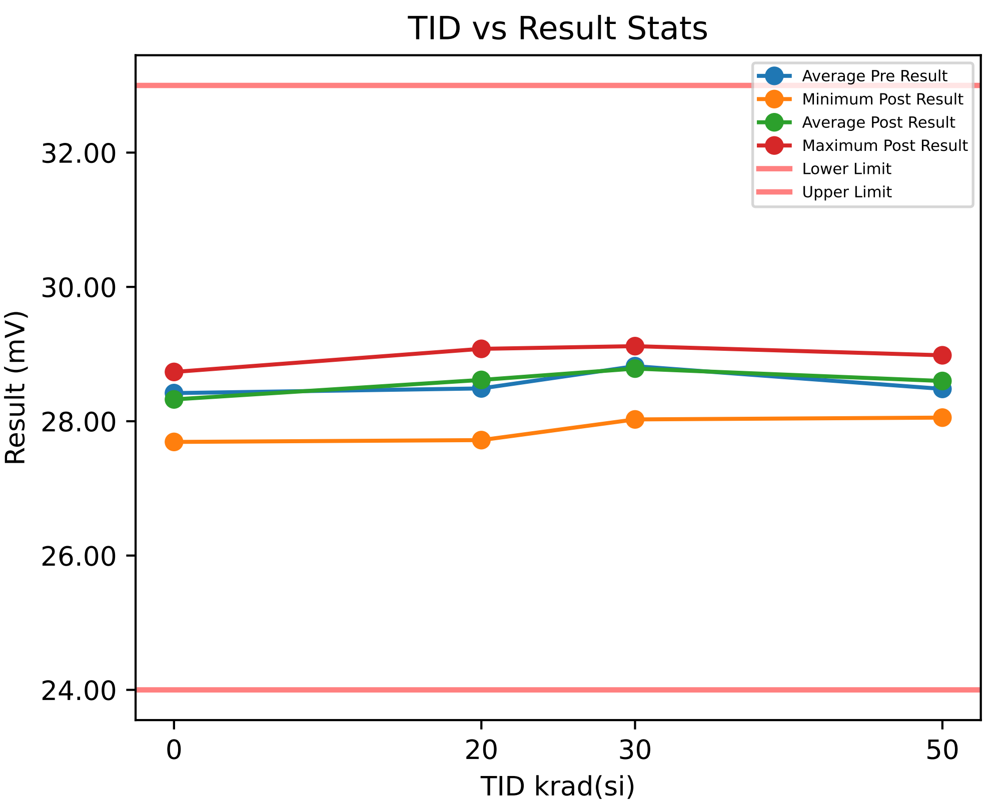
Test Results (Lower Limit = 1.04, Upper Limit = 1.19 (V))

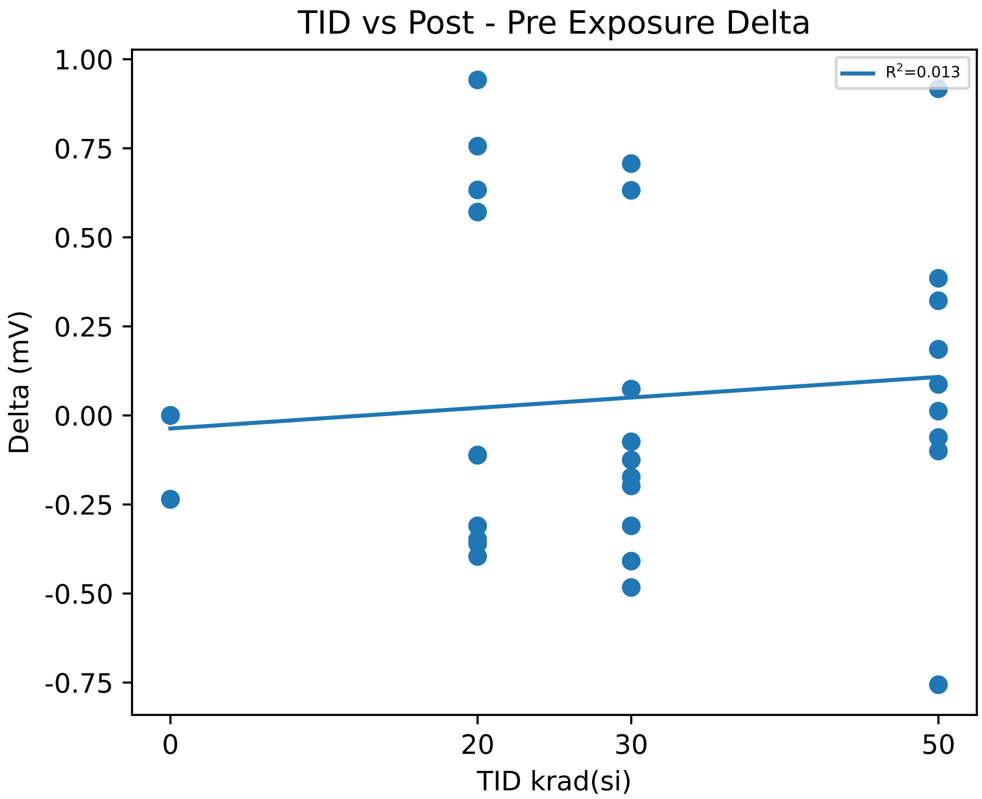
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	1.0992	1.0992	0
2	20	Unbiased	1.1117	1.1102	-0.0015
3	20	Unbiased	1.1187	1.1218	0.0031
4	20	Unbiased	1.1232	1.123	-0.0002
5	20	Unbiased	1.1201	1.1192	-0.0009
6	20	14V Biased	1.1079	1.1069	-0.001
7	20	14V Biased	1.1388	1.138	-0.0008
8	20	14V Biased	1.1114	1.1143	0.0029
9	20	14V Biased	1.1079	1.1088	0.0009
10	20	14V Biased	1.1216	1.127	0.0054
11	30	Unbiased	1.1199	1.1208	0.0009
12	30	Unbiased	1.1286	1.1305	0.0019
13	30	Unbiased	1.1168	1.118	0.0012
14	30	Unbiased	1.1194	1.118	-0.0014
15	30	Unbiased	1.1218	1.1178	-0.004
16	30	14V Biased	1.1164	1.1197	0.0033
17	30	14V Biased	1.1216	1.1232	0.0016
18	30	14V Biased	1.1251	1.127	0.0019
19	30	14V Biased	1.1187	1.1194	0.0007
20	30	14V Biased	1.1286	1.1319	0.0033
21	50	Unbiased	1.1244	1.127	0.0026
22	50	Unbiased	1.1201	1.1173	-0.0028
23	50	Unbiased	1.1206	1.1216	0.001
24	50	Unbiased	1.1039	1.1041	0.0002
25	50	Unbiased	1.1178	1.119	0.0012
26	50	14V Biased	1.1112	1.1201	0.0089
27	50	14V Biased	1.1168	1.1211	0.0043
28	50	14V Biased	1.1046	1.1069	0.0023
29	50	14V Biased	1.0999	1.1018	0.0019
30	50	14V Biased	1.1218	1.1251	0.0033
31	0	Correlation	1.123	1.1232	0.0002
32	0	Correlation	1.1211	1.1213	0.0002
33	0	Correlation	1.1039	1.1039	0
34	0	Correlation	1.1176	1.1176	0
35	0	Correlation	1.126	1.126	0

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	1.1039	1.1183	1.126	0.0086178	1.1039	1.1184	1.126	0.0086617	0	8e-05	0.0002	0.00010954
20	1.0992	1.116	1.1388	0.010956	1.0992	1.1168	1.138	0.011276	-0.0015	0.00079	0.0054	0.0022728
30	1.1164	1.1217	1.1286	0.0044276	1.1178	1.1226	1.1319	0.0053319	-0.004	0.00094	0.0033	0.0021966
50	1.0999	1.1141	1.1244	0.0086213	1.1018	1.1164	1.127	0.0089016	-0.0028	0.00229	0.0089	0.0030208

Device Test: 7.5 OVP_HYST_PLASTIC(OVP_UVLO_HYSTERESIS_14p0V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

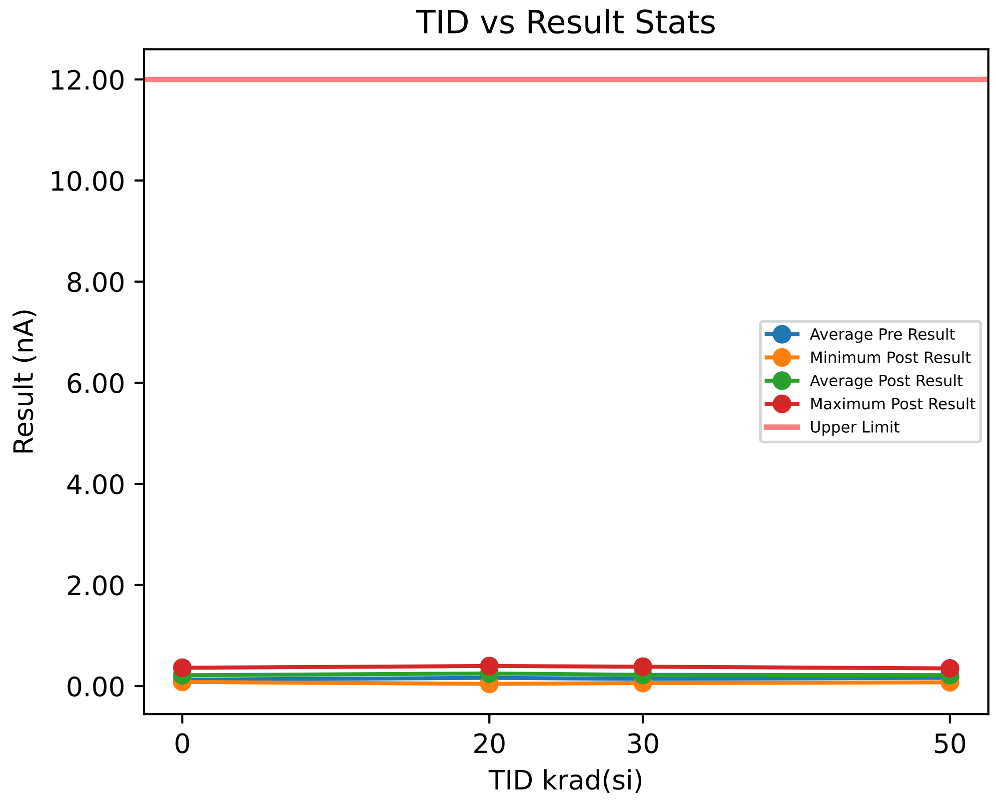
Test Results (Lower Limit = 24.0, Upper Limit = 33.0 (mV))

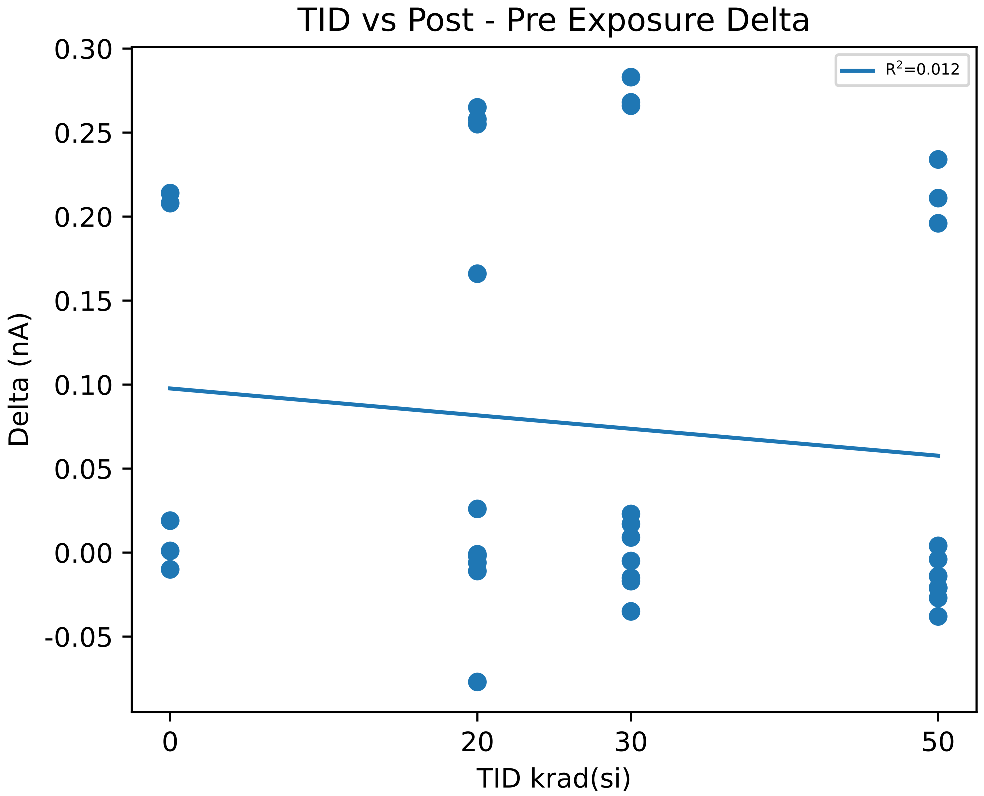
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	27.694	28.327	0.633
2	20	Unbiased	28.065	28.636	0.571
3	20	Unbiased	28.796	28.684	-0.112
4	20	Unbiased	29.167	28.771	-0.396
5	20	Unbiased	28.015	28.957	0.942
6	20	14V Biased	27.83	27.719	-0.111
7	20	14V Biased	29.426	29.078	-0.348
8	20	14V Biased	28.301	29.057	0.756
9	20	14V Biased	28.673	28.363	-0.31
10	20	14V Biased	28.919	28.559	-0.36
11	30	Unbiased	29.304	28.994	-0.31
12	30	Unbiased	28.385	28.187	-0.198
13	30	Unbiased	28.995	28.87	-0.125
14	30	Unbiased	28.51	28.027	-0.483
15	30	Unbiased	28.473	29.105	0.632
16	30	14V Biased	29.044	29.118	0.074
17	30	14V Biased	28.708	28.535	-0.173
18	30	14V Biased	29.39	28.981	-0.409
19	30	14V Biased	29.006	28.932	-0.074
20	30	14V Biased	28.385	29.092	0.707
21	50	Unbiased	28.832	28.77	-0.062
22	50	Unbiased	29.069	28.313	-0.756
23	50	Unbiased	28.598	28.498	-0.1
24	50	Unbiased	28.463	28.649	0.186
25	50	Unbiased	28.895	28.982	0.087
26	50	14V Biased	28.536	28.858	0.322
27	50	14V Biased	27.941	28.126	0.185
28	50	14V Biased	28.388	28.773	0.385
29	50	14V Biased	28.042	28.054	0.012
30	50	14V Biased	28.052	28.969	0.917
31	0	Correlation	27.928	27.692	-0.236
32	0	Correlation	28.969	28.734	-0.235
33	0	Correlation	28.463	28.463	0
34	0	Correlation	28.498	28.498	0
35	0	Correlation	28.237	28.237	0

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	27.928	28.419	28.969	0.38239	27.692	28.325	28.734	0.39519	-0.236	-0.0942	0	0.12899
20	27.694	28.489	29.426	0.59224	27.719	28.615	29.078	0.40942	-0.396	0.1265	0.942	0.53272
30	28.385	28.82	29.39	0.37743	28.027	28.784	29.118	0.39625	-0.483	-0.0359	0.707	0.40535
50	27.941	28.482	29.069	0.38505	28.054	28.599	28.982	0.33755	-0.756	0.1176	0.917	0.42379

Device Test: 7.6 OVP_ILEAK(OVP_I_Vin7V)





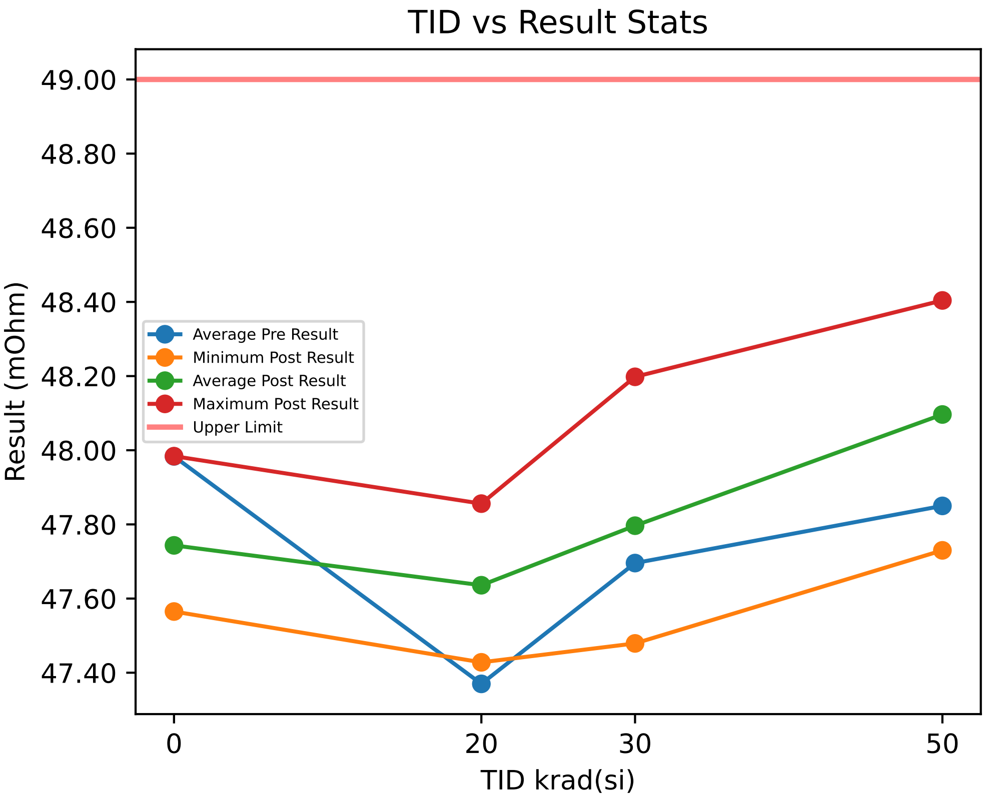
Test Results (Upper Limit = 12.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	0.226	0.392	0.166
2	20	Unbiased	0.077	0.071	-0.006
3	20	Unbiased	0.325	0.248	-0.077
4	20	Unbiased	0.132	0.397	0.265
5	20	Unbiased	0.055	0.044	-0.011
6	20	14V Biased	0.236	0.234	-0.002
7	20	14V Biased	0.127	0.385	0.258
8	20	14V Biased	0.08	0.106	0.026
9	20	14V Biased	0.228	0.227	-0.001
10	20	14V Biased	0.14	0.395	0.255
11	30	Unbiased	0.065	0.074	0.009
12	30	Unbiased	0.242	0.265	0.023
13	30	Unbiased	0.118	0.384	0.266
14	30	Unbiased	0.238	0.233	-0.005
15	30	Unbiased	0.168	0.185	0.017
16	30	14V Biased	0.094	0.362	0.268
17	30	14V Biased	0.08	0.063	-0.017
18	30	14V Biased	0.238	0.223	-0.015
19	30	14V Biased	0.092	0.375	0.283
20	30	14V Biased	0.095	0.06	-0.035
21	50	Unbiased	0.227	0.206	-0.021
22	50	Unbiased	0.154	0.35	0.196
23	50	Unbiased	0.096	0.075	-0.021
24	50	Unbiased	0.251	0.247	-0.004
25	50	Unbiased	0.109	0.343	0.234
26	50	14V Biased	0.105	0.078	-0.027
27	50	14V Biased	0.247	0.209	-0.038
28	50	14V Biased	0.136	0.347	0.211
29	50	14V Biased	0.097	0.101	0.004
30	50	14V Biased	0.218	0.204	-0.014
31	0	Correlation	0.149	0.363	0.214
32	0	Correlation	0.081	0.082	0.001
33	0	Correlation	0.095	0.303	0.208
34	0	Correlation	0.106	0.096	-0.01
35	0	Correlation	0.208	0.227	0.019

Test Statistics (nA)

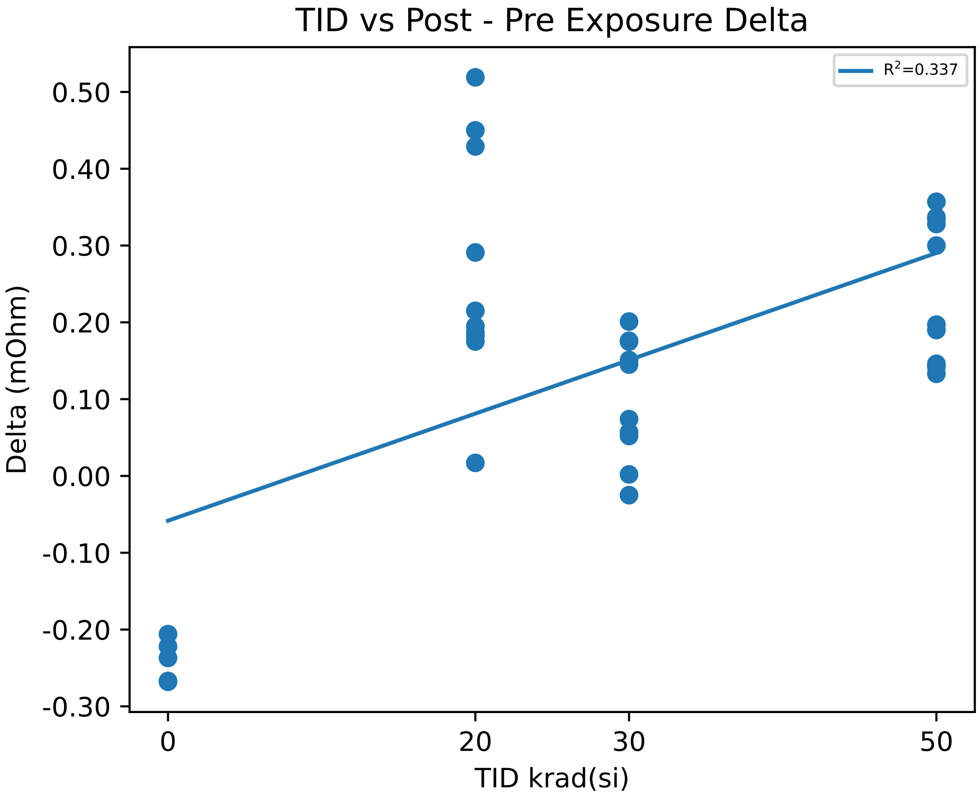
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.081	0.1278	0.208	0.051533	0.082	0.2142	0.363	0.12414	-0.01	0.0864	0.214	0.11423
20	0.055	0.1626	0.325	0.087242	0.044	0.2499	0.397	0.14025	-0.077	0.0873	0.265	0.1333
30	0.065	0.143	0.242	0.071849	0.06	0.2224	0.384	0.12738	-0.035	0.0794	0.283	0.13428
50	0.096	0.164	0.251	0.064847	0.075	0.216	0.35	0.10783	-0.038	0.052	0.234	0.11251

Device Test: 8.0 RON_VIN_4P5V_25_PLASTIC(RdsOn_3p50A_4p5V)



Test Results (Upper Limit = 49.0 (mOhm))

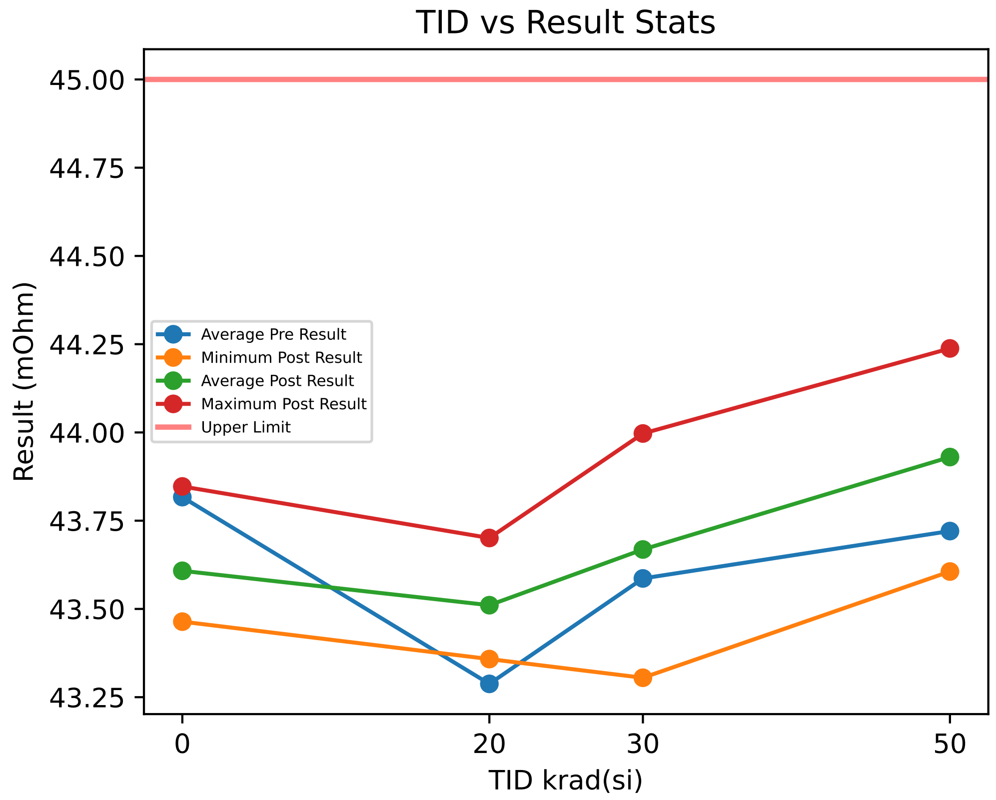
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	47.106	47.535	0.429
2	20	Unbiased	47.164	47.614	0.45
3	20	Unbiased	47.337	47.856	0.519
4	20	Unbiased	47.253	47.428	0.175
5	20	Unbiased	47.54	47.722	0.182
6	20	14V Biased	47.461	47.752	0.291
7	20	14V Biased	47.405	47.6	0.195
8	20	14V Biased	47.345	47.56	0.215
9	20	14V Biased	47.61	47.797	0.187
10	20	14V Biased	47.478	47.495	0.017
11	30	Unbiased	47.504	47.479	-0.025
12	30	Unbiased	47.842	47.844	0.002
13	30	Unbiased	47.648	47.7	0.052
14	30	Unbiased	47.546	47.62	0.074
15	30	Unbiased	47.552	47.609	0.057
16	30	14V Biased	47.663	47.839	0.176
17	30	14V Biased	47.622	47.797	0.175
18	30	14V Biased	47.997	48.198	0.201
19	30	14V Biased	47.578	47.729	0.151
20	30	14V Biased	48.005	48.15	0.145
21	50	Unbiased	47.582	47.772	0.19
22	50	Unbiased	47.847	47.98	0.133
23	50	Unbiased	47.881	48.023	0.142
24	50	Unbiased	47.955	48.152	0.197
25	50	Unbiased	47.584	47.73	0.146
26	50	14V Biased	48.014	48.342	0.328
27	50	14V Biased	48.047	48.404	0.357
28	50	14V Biased	47.99	48.325	0.335
29	50	14V Biased	47.892	48.192	0.3
30	50	14V Biased	47.707	48.044	0.337
31	0	Correlation	47.8	47.594	-0.206
32	0	Correlation	48.056	47.834	-0.222
33	0	Correlation	47.833	47.565	-0.268
34	0	Correlation	47.977	47.74	-0.237
35	0	Correlation	48.251	47.984	-0.267

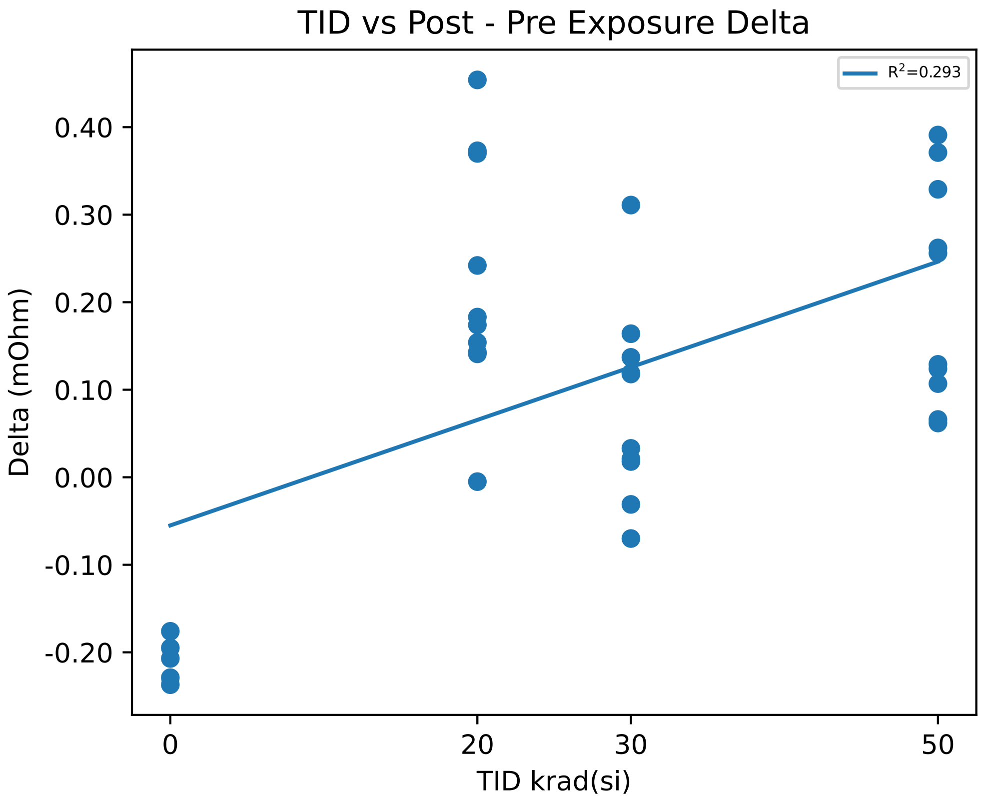


Test Statistics (mOhm)

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	47.8	47.983	48.251	0.18247	47.565	47.743	47.984	0.17339	-0.268	-0.24	-0.206	0.027395
20	47.106	47.37	47.61	0.16166	47.428	47.636	47.856	0.13987	0.017	0.266	0.519	0.15502
30	47.504	47.696	48.005	0.18568	47.479	47.796	48.198	0.22882	-0.025	0.1008	0.201	0.079078
50	47.582	47.85	48.047	0.17065	47.73	48.096	48.404	0.23108	0.133	0.2465	0.357	0.092666

Device Test: 8.1 RON_VIN_6V_25_PLASTIC(RdsOn_3p50A_6p0V)





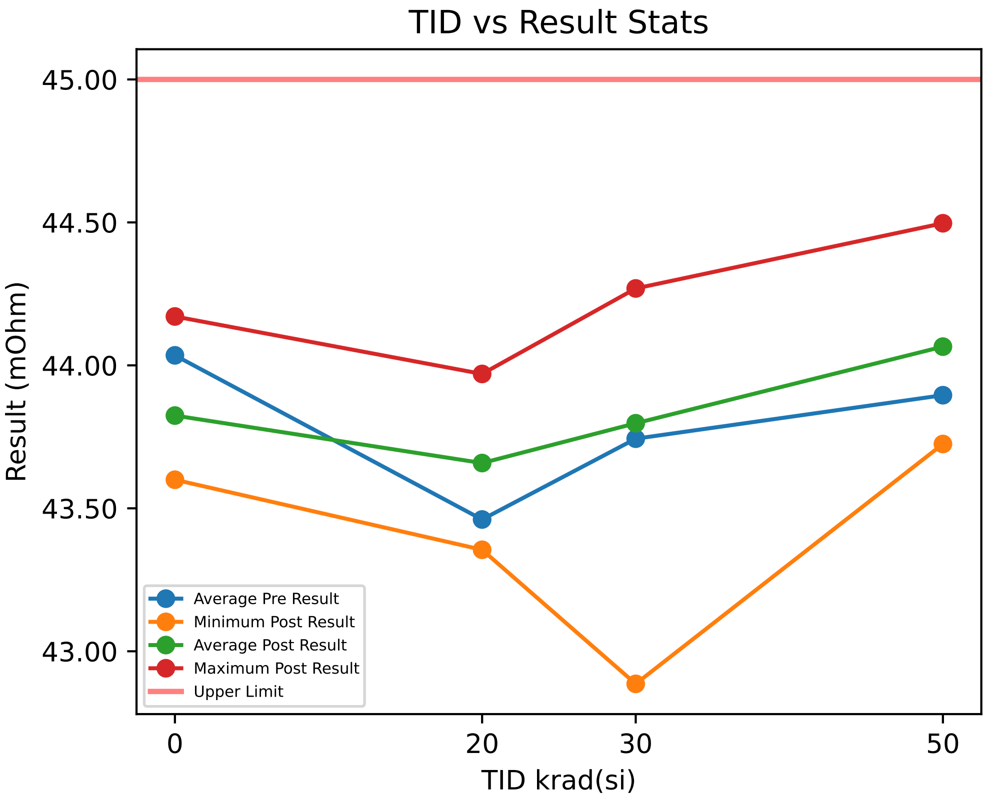
Test Results (Upper Limit = 45.0 (mOhm))

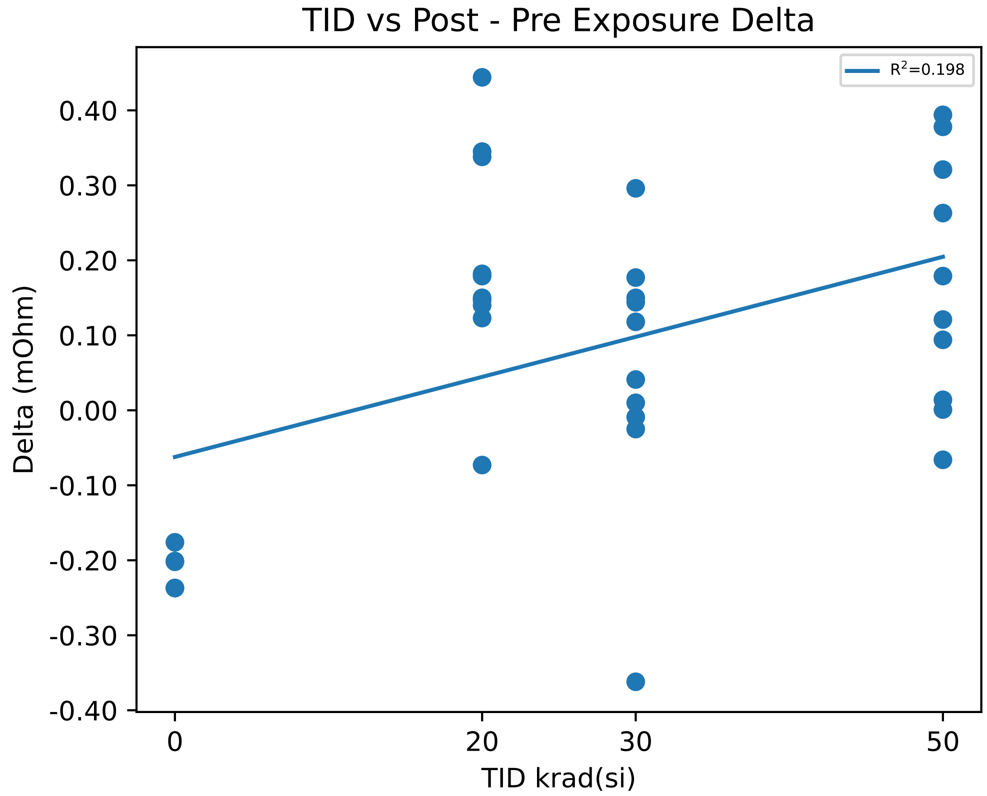
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	43.1	43.473	0.373
2	20	Unbiased	43.068	43.438	0.37
3	20	Unbiased	43.247	43.701	0.454
4	20	Unbiased	43.204	43.358	0.154
5	20	Unbiased	43.419	43.56	0.141
6	20	14V Biased	43.38	43.622	0.242
7	20	14V Biased	43.306	43.48	0.174
8	20	14V Biased	43.274	43.457	0.183
9	20	14V Biased	43.507	43.65	0.143
10	20	14V Biased	43.372	43.367	-0.005
11	30	Unbiased	43.375	43.305	-0.07
12	30	Unbiased	43.689	43.658	-0.031
13	30	Unbiased	43.547	43.565	0.018
14	30	Unbiased	43.486	43.519	0.033
15	30	Unbiased	43.458	43.479	0.021
16	30	14V Biased	43.657	43.968	0.311
17	30	14V Biased	43.487	43.624	0.137
18	30	14V Biased	43.833	43.997	0.164
19	30	14V Biased	43.482	43.6	0.118
20	30	14V Biased	43.85	43.969	0.119
21	50	Unbiased	43.482	43.606	0.124
22	50	Unbiased	43.724	43.786	0.062
23	50	Unbiased	43.736	43.802	0.066
24	50	Unbiased	43.803	43.91	0.107
25	50	Unbiased	43.494	43.623	0.129
26	50	14V Biased	43.867	44.238	0.371
27	50	14V Biased	43.897	44.226	0.329
28	50	14V Biased	43.829	44.085	0.256
29	50	14V Biased	43.75	44.012	0.262
30	50	14V Biased	43.624	44.015	0.391
31	0	Correlation	43.653	43.477	-0.176
32	0	Correlation	43.875	43.68	-0.195
33	0	Correlation	43.693	43.464	-0.229
34	0	Correlation	43.779	43.572	-0.207
35	0	Correlation	44.084	43.847	-0.237

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	43.653	43.817	44.084	0.17202	43.464	43.608	43.847	0.15929	-0.237	-0.2088	-0.176	0.024864
20	43.068	43.288	43.507	0.1389	43.358	43.511	43.701	0.11782	-0.005	0.2229	0.454	0.13812
30	43.375	43.586	43.85	0.16309	43.305	43.668	43.997	0.23471	-0.07	0.082	0.311	0.11103
50	43.482	43.721	43.897	0.14522	43.606	43.93	44.238	0.22539	0.062	0.2097	0.391	0.12687

Device Test: 8.2 RON_VIN_9V_25_PLASTIC(RdsOn_3p50A_9p0V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

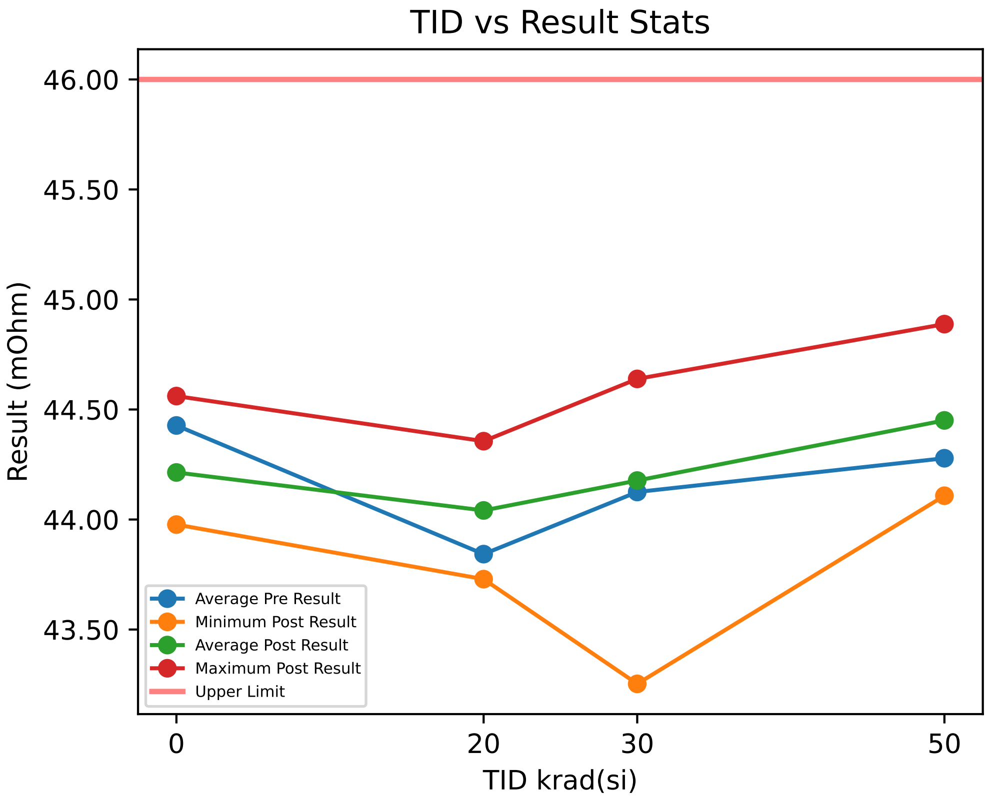
Test Results (Upper Limit = 45.0 (mOhm))

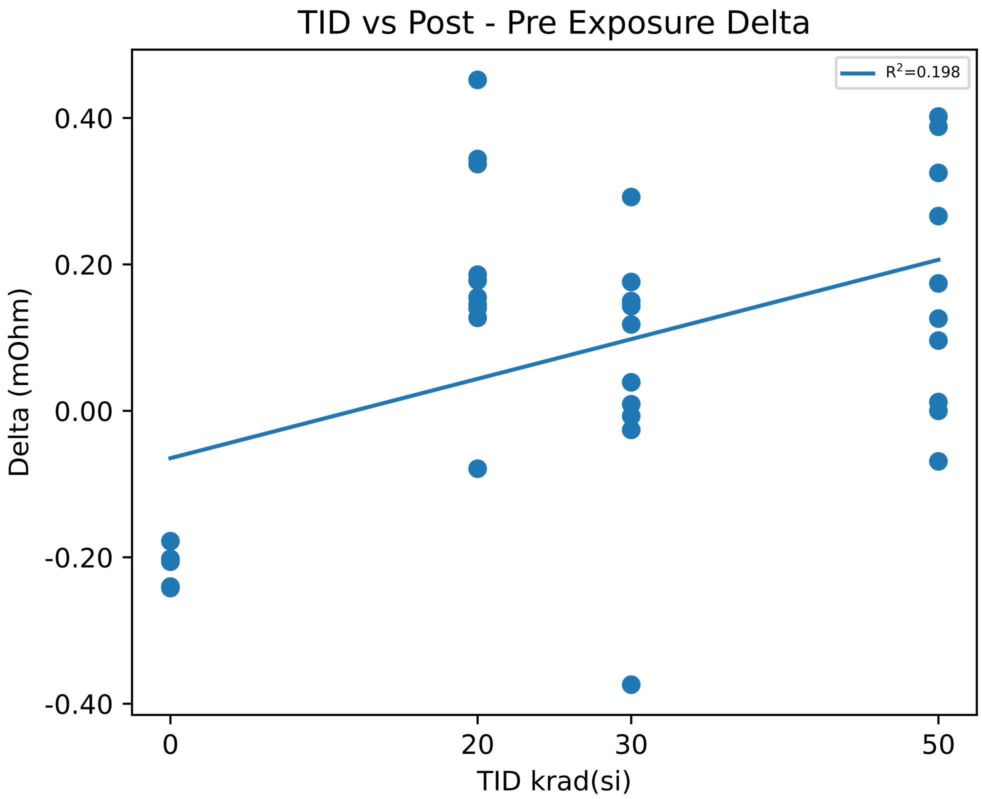
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	43.385	43.73	0.345
2	20	Unbiased	43.184	43.522	0.338
3	20	Unbiased	43.526	43.97	0.444
4	20	Unbiased	43.485	43.632	0.147
5	20	Unbiased	43.541	43.681	0.14
6	20	14V Biased	43.274	43.453	0.179
7	20	14V Biased	43.55	43.732	0.182
8	20	14V Biased	43.491	43.641	0.15
9	20	14V Biased	43.745	43.868	0.123
10	20	14V Biased	43.428	43.355	-0.073
11	30	Unbiased	43.248	42.886	-0.362
12	30	Unbiased	43.711	43.686	-0.025
13	30	Unbiased	43.85	43.86	0.01
14	30	Unbiased	43.696	43.687	-0.009
15	30	Unbiased	43.605	43.646	0.041
16	30	14V Biased	43.973	44.269	0.296
17	30	14V Biased	43.669	43.819	0.15
18	30	14V Biased	44.006	44.183	0.177
19	30	14V Biased	43.632	43.776	0.144
20	30	14V Biased	44.045	44.163	0.118
21	50	Unbiased	43.645	43.766	0.121
22	50	Unbiased	43.839	43.773	-0.066
23	50	Unbiased	43.711	43.725	0.014
24	50	Unbiased	43.961	43.962	0.001
25	50	Unbiased	43.781	43.875	0.094
26	50	14V Biased	44.119	44.497	0.378
27	50	14V Biased	44.103	44.424	0.321
28	50	14V Biased	43.944	44.123	0.179
29	50	14V Biased	43.978	44.241	0.263
30	50	14V Biased	43.875	44.269	0.394
31	0	Correlation	43.874	43.698	-0.176
32	0	Correlation	44.118	43.916	-0.202
33	0	Correlation	43.974	43.737	-0.237
34	0	Correlation	43.801	43.6	-0.201
35	0	Correlation	44.408	44.171	-0.237

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	43.801	44.035	44.408	0.24001	43.6	43.824	44.171	0.225	-0.237	-0.2106	-0.176	0.026255
20	43.184	43.461	43.745	0.15608	43.355	43.658	43.97	0.18437	-0.073	0.1975	0.444	0.14517
30	43.248	43.743	44.045	0.23801	42.886	43.797	44.269	0.39268	-0.362	0.054	0.296	0.17653
50	43.645	43.896	44.119	0.15634	43.725	44.066	44.497	0.28449	-0.066	0.1699	0.394	0.16389

Device Test: 8.3 RON_VIN_12V_25_PLASTIC(RdsOn_3p50A_12p0V)


TID vs Result Stats


TID vs Post - Pre Exposure Delta

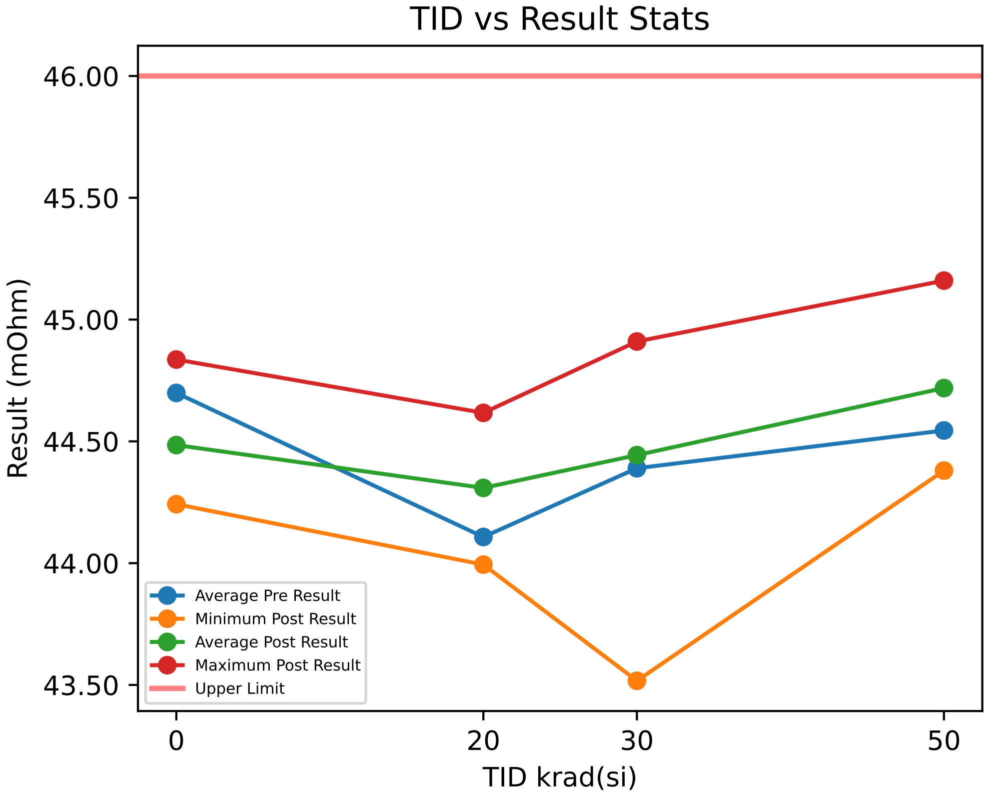
Test Results (Upper Limit = 46.0 (mOhm))

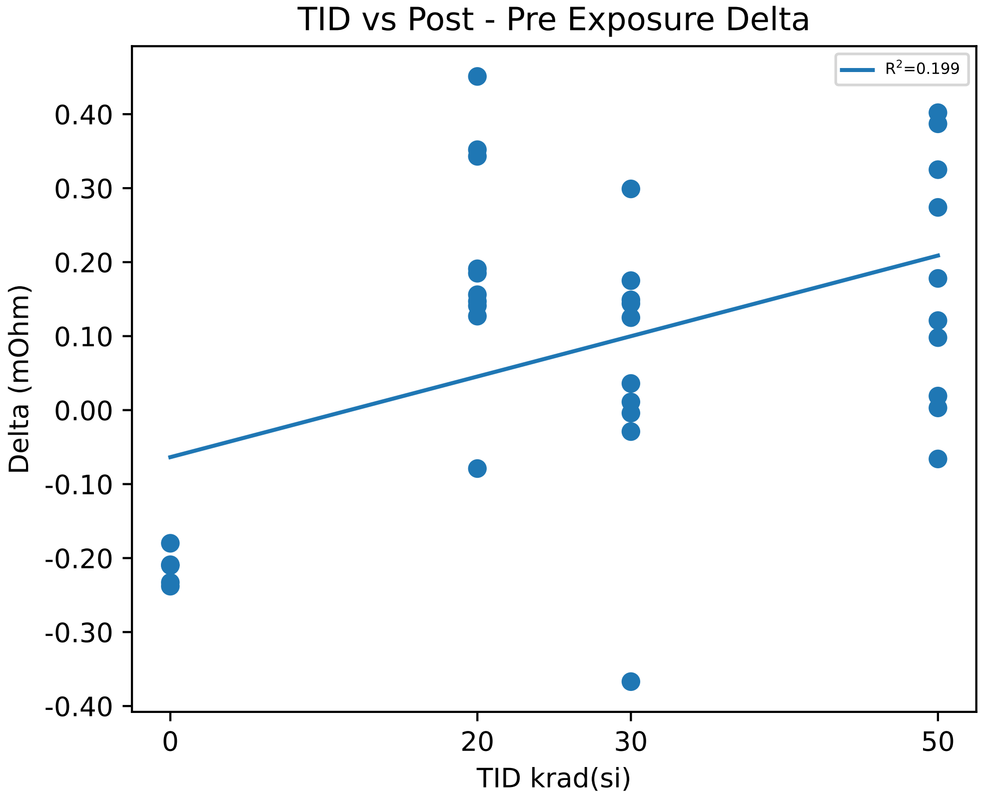
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	43.78	44.124	0.344
2	20	Unbiased	43.568	43.905	0.337
3	20	Unbiased	43.904	44.356	0.452
4	20	Unbiased	43.855	44	0.145
5	20	Unbiased	43.911	44.051	0.14
6	20	14V Biased	43.664	43.842	0.178
7	20	14V Biased	43.94	44.126	0.186
8	20	14V Biased	43.878	44.033	0.155
9	20	14V Biased	44.119	44.246	0.127
10	20	14V Biased	43.808	43.729	-0.079
11	30	Unbiased	43.627	43.253	-0.374
12	30	Unbiased	44.1	44.074	-0.026
13	30	Unbiased	44.241	44.25	0.009
14	30	Unbiased	44.08	44.073	-0.007
15	30	Unbiased	43.98	44.019	0.039
16	30	14V Biased	44.347	44.639	0.292
17	30	14V Biased	44.046	44.196	0.15
18	30	14V Biased	44.395	44.571	0.176
19	30	14V Biased	44.017	44.16	0.143
20	30	14V Biased	44.418	44.536	0.118
21	50	Unbiased	44.013	44.139	0.126
22	50	Unbiased	44.226	44.157	-0.069
23	50	Unbiased	44.096	44.108	0.012
24	50	Unbiased	44.349	44.349	0
25	50	Unbiased	44.158	44.254	0.096
26	50	14V Biased	44.5	44.888	0.388
27	50	14V Biased	44.492	44.817	0.325
28	50	14V Biased	44.327	44.501	0.174
29	50	14V Biased	44.36	44.626	0.266
30	50	14V Biased	44.263	44.665	0.402
31	0	Correlation	44.278	44.1	-0.178
32	0	Correlation	44.498	44.296	-0.202
33	0	Correlation	44.375	44.135	-0.24
34	0	Correlation	44.183	43.977	-0.206
35	0	Correlation	44.803	44.561	-0.242

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	44.183	44.427	44.803	0.24024	43.977	44.214	44.561	0.22502	-0.242	-0.2136	-0.178	0.027218
20	43.568	43.843	44.119	0.15208	43.729	44.041	44.356	0.18638	-0.079	0.1985	0.452	0.14738
30	43.627	44.125	44.418	0.2383	43.253	44.177	44.639	0.39493	-0.374	0.052	0.292	0.17897
50	44.013	44.278	44.5	0.15983	44.108	44.45	44.888	0.28954	-0.069	0.172	0.402	0.16765

Device Test: 8.4 RON_VIN_14V_25_PLASTIC(RdsOn_3p50A_14p0V)





Test Results (Upper Limit = 46.0 (mOhm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	20	Unbiased	44.042	44.394	0.352
2	20	Unbiased	43.831	44.174	0.343
3	20	Unbiased	44.166	44.617	0.451
4	20	Unbiased	44.114	44.261	0.147
5	20	Unbiased	44.173	44.314	0.141
6	20	14V Biased	43.933	44.118	0.185
7	20	14V Biased	44.209	44.4	0.191
8	20	14V Biased	44.152	44.308	0.156
9	20	14V Biased	44.382	44.509	0.127
10	20	14V Biased	44.073	43.994	-0.079
11	30	Unbiased	43.884	43.517	-0.367
12	30	Unbiased	44.369	44.34	-0.029
13	30	Unbiased	44.507	44.518	0.011
14	30	Unbiased	44.342	44.338	-0.004
15	30	Unbiased	44.245	44.281	0.036
16	30	14V Biased	44.611	44.91	0.299
17	30	14V Biased	44.313	44.462	0.149
18	30	14V Biased	44.662	44.837	0.175
19	30	14V Biased	44.29	44.434	0.144
20	30	14V Biased	44.674	44.799	0.125
21	50	Unbiased	44.271	44.392	0.121
22	50	Unbiased	44.489	44.423	-0.066
23	50	Unbiased	44.361	44.38	0.019
24	50	Unbiased	44.611	44.614	0.003
25	50	Unbiased	44.423	44.521	0.098
26	50	14V Biased	44.773	45.16	0.387
27	50	14V Biased	44.765	45.09	0.325
28	50	14V Biased	44.594	44.772	0.178
29	50	14V Biased	44.626	44.9	0.274
30	50	14V Biased	44.534	44.936	0.402
31	0	Correlation	44.557	44.377	-0.18
32	0	Correlation	44.769	44.559	-0.21
33	0	Correlation	44.643	44.41	-0.233
34	0	Correlation	44.451	44.242	-0.209
35	0	Correlation	45.074	44.836	-0.238

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	44.451	44.699	45.074	0.23996	44.242	44.485	44.836	0.22639	-0.238	-0.214	-0.18	0.023098
20	43.831	44.108	44.382	0.15194	43.994	44.309	44.617	0.18458	-0.079	0.2014	0.451	0.14841
30	43.884	44.39	44.674	0.23872	43.517	44.444	44.91	0.39602	-0.367	0.0539	0.299	0.17842
50	44.271	44.545	44.773	0.16356	44.38	44.719	45.16	0.29335	-0.066	0.1741	0.402	0.16654

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