

# TPS7H4011-SEP Preliminary Total Ionizing Dose (TID) Radiation Report



## ABSTRACT

This report discusses the results of the TID testing for the Texas Instruments TPS7H4011-SEP 4.5V to 14V input, 12A radiation hardened synchronous buck converter.

The study was done to determine TID effects under high dose rate (HDR) up to 50krad(Si) after 84h anneal at room temperature (resulting in an effective dose rate of 165mrad(Si)/s).

The results show that all samples passed within the specified limits up to 50krad(Si).

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## 1 Device Information

### 1.1 Product Description

The TPS7H4011-SEP is a 14V, 12A synchronous buck converter optimized for use in a space environment. High efficiency and reduced component count are achieved through peak current mode control.

The wide voltage range of the TPS7H4011-SEP enables the device to be used as a point of load regulator to convert directly from a 12V or 5V rail. The output voltage start-up ramp is controlled by the SS\_TR pin. Power sequencing is possible with the EN and PWRGD pins. The device can be configured with up to four devices in parallel without an external clock for increased current capabilities. Additionally, various features are included such as differential remote sensing, selectable current limit, a flexible fault input pin, and configurable compensation.

### 1.2 Device Details

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

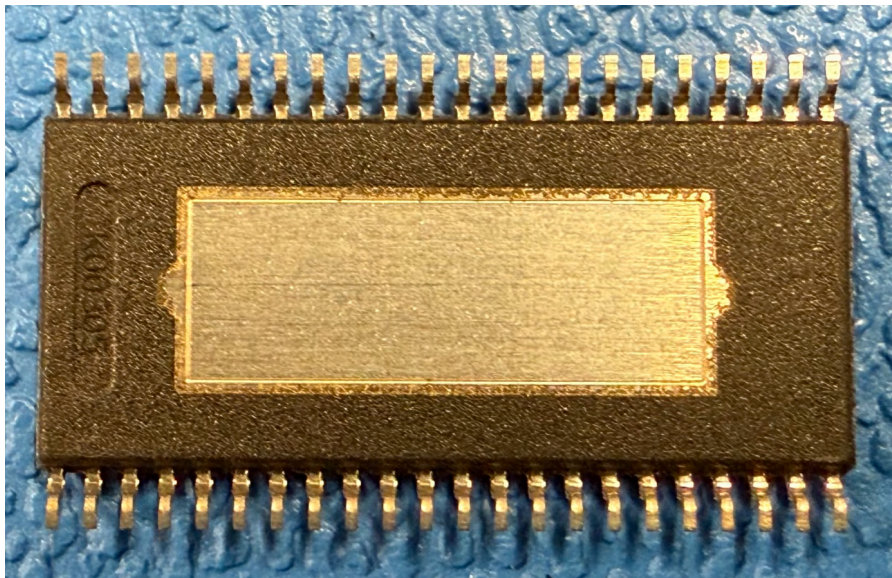
**Table 1-1. Device and Exposure Details**

TID Exposure Details	
TI Device	TPS7H4011-SEP
Package	44-pin HTSSOP (DDW)
TI Part Name	PTPS7H4011MDDWSEP
Technology	LBC7 (Linear BiCMOS 7)
Assembly Lot Number	5047591ML5
Quantity Tested	HDR: 10 Devices <ul style="list-style-type: none"> <li>• Five biased and five unbiased units at 50krad (Si) levels</li> <li>• six control/correlation units with no exposure</li> </ul>
HDR Radiation Facility	Texas Instruments, Dallas, TX
HDR Dose Level	50krad(Si)
HDR Dose Rate	168.65 rads(Si)/s ionizing radiation dose rate
HDR Radiation Source	Gamma cell Co-60
Irradiation Temperature	Ambient, room temperature controlled to 25°C (±6°C) per MIL-STD-883 and MIL-STD-750.

50krad biased and unbiased devices were annealed for 84 hours at room temperature with their respective bias condition resulting in an effective dose rate of 165mrad(Si)/s.



**Figure 1-1. TPS7H4011-SEP Device Used in Exposure (Front)**



**Figure 1-2. TPS7H4011-SEP Device Used in Exposure (Back)**

## 2 Total Dose Test Setup

### 2.1 Test Overview

The TPS7H4011-SEP was tested according to MIL-STD-883, Test Method 1019.9. For this testing, Condition A was used. The product was irradiated up to the target radiation level, and then put through full electrical parametric testing on the production Automated Test Equipment (ATE). All devices remained functional passing all parametric test limits.

### 2.2 Test Description and Facilities

The TPS7H4011-SEP HDR exposure was performed on biased and unbiased devices in a Co-60 gamma cell at TI facility in Dallas, Texas. The unattenuated dose rate of this cell was 168.65 rads(Si)/s. The 50krad(Si) biased devices were annealed with the respective biased condition for 84 hours and retested. The effective dose rate for these devices was 165 mrad(Si)/s. ATE test limits are set per data sheet electrical limits based on qualification and characterization data.

### 2.3 Test Setup Details

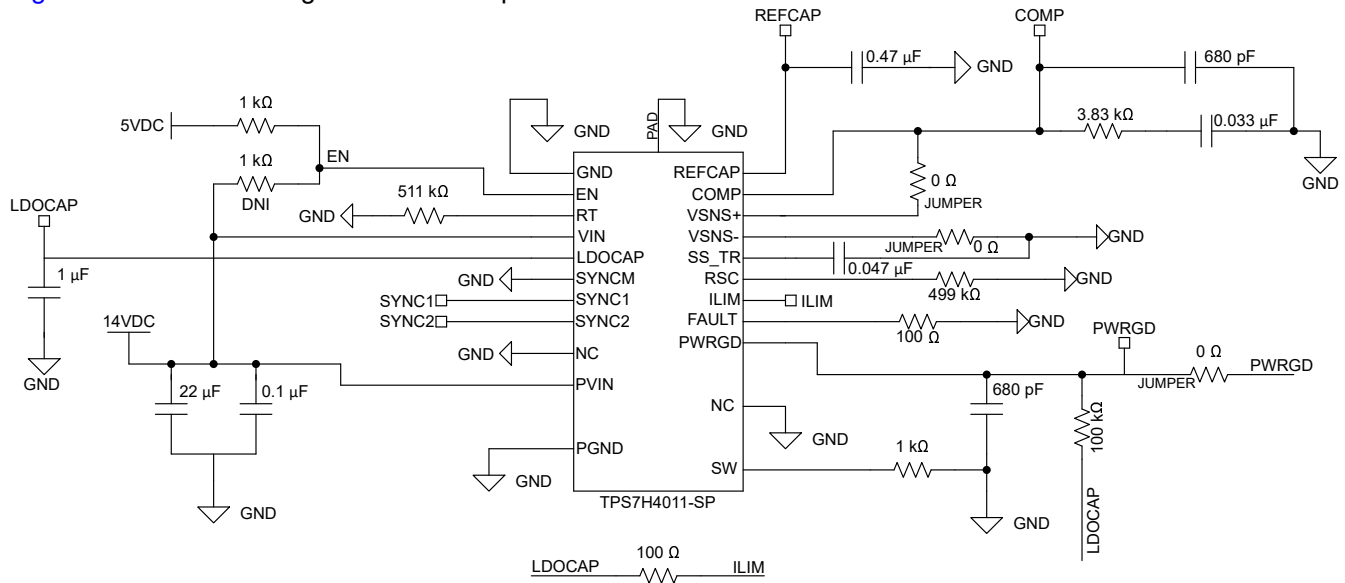
The devices under HDR exposure was tested in two conditions, biased and unbiased, as described in the following sections

#### 2.3.1 Unbiased

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

#### 2.3.2 Biased

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



**Figure 2-1. TPS7H4011-SEP Bias Diagram**

## 2.4 Biased Test Configuration and Condition

HDR devices were stressed up to 50 krad(Si) for biased and unbiased conditions.

**Table 2-1. HDR: Biased Device Information**

<b>Total Samples: 5</b>
<b>Exposure Levels</b>
50 krad(Si)
#1, #4, #6, #8, #9

**Table 2-2. HDR: Unbiased Device Information**

<b>Total Samples: 5</b>
<b>Exposure Levels</b>
50 krad(Si)
#10, #11, #12, #13, #14

### 3 TID Characterization Test Results

#### 3.1 TID Characterization Summary Results

The parametric data for the TPS7H4011-SEP passes up to 50krad(Si) HDR TID irradiation. The drifts of the electrical parameters through HDR were within the data sheet limits.

Overall, the TPS7H4011-SEP showed a strong degree of hardness to HDR TID irradiation up to 50krad(Si) for both biased and unbiased exposure conditions. The measurements taken post-irradiation for each sample set showed a marginal shift for most parameters at each dose level for both biased and unbiased. The parameters that did show a greater degree of change pre- and post- irradiation were still within the electrical performance characteristics specified in the data sheet electrical parameters. See [Table 3-1](#) for electrical parameters. Test numbers are listed only for parameters tested for TID.

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

#### 3.2 Data Sheet Electrical Parameter Characteristics

Over  $4.5V \leq V_{IN} \leq 14V$ ,  $PV_{IN} = V_{IN}$ ,  $VSNS- = 0V$ , open loop configuration,  $I_{OUT} = 0A$ ,  $T_A = 25^\circ C$ , unless otherwise noted.

**Table 3-1. Data Sheet Electrical Parameter Characteristics**

PARAMETER		TEST CONDITIONS		SUB-GROUP	MIN	TYP	MAX	UNIT	TEST NUMBERS
<b>POWER SUPPLIES AND CURRENTS</b>									
$V_{UVLOR\_PVIN}$	PVIN internal UVLO rising threshold			1, 2, 3	3.2	3.4	3.6	V	14.1, 14.7, 14.13, 14.19
$V_{UVLOHYST\_PVIN}$	PVIN internal UVLO hysteresis			1, 2, 3	425	450	500	mV	14.3, 14.9, 14.15, 14.21
$V_{UVLOR\_VIN}$	VIN internal UVLO rising threshold			1, 2, 3	3.4	3.6	3.8	V	14.4, 14.10, 14.16, 14.22
$V_{UVLOHYST\_VIN}$	VIN internal UVLO hysteresis			1, 2, 3	140	155	170	mV	14.6, 14.12, 14.18, 14.24
$I_{SHDN\_VIN}$	VIN shutdown supply current	$V_{EN} = 0V$	VIN = 4.5V	1, 2, 3		2	2.9	mA	12.1
			VIN = 14V						1, 2, 3
$I_{SHDN\_PVIN}$	PVIN shutdown supply current	$V_{EN} = 0V$	PVIN = 4.5V	1, 2, 3		2.6	3.5	mA	12.2
			PVIN = 14V						1, 2, 3
$I_{Q\_VIN}$	VIN operating quiescent current (non switching)	$V_{EN} = 7V$ , $V_{SENSE} = 1V$		1, 2, 3		2.6	5	mA	12.3, 12.8, 12.13, 12.18
<b>ENABLE AND FAULT</b>									
$V_{EN(rising)}$	Enable rising threshold (turn-on)			1, 2, 3	0.555	0.61	0.655	V	15.3, 15.6, 15.9, 15.12
$V_{EN(falling)}$	Enable falling threshold (turn-off)			1, 2, 3	0.455	0.51	0.554		15.4, 15.7, 15.10, 15.13
$t_{EN(delay)}$	Enable propagation delay	EN high to SW high, SS pin open		1, 2, 3		52	100	$\mu s$	24.32, 24.72, 24.112, 24.152
$I_{EN(LKG)}$	Enable input leakage current	$V_{EN} = 7V$		1, 2, 3		2	100	nA	15.1, 15.15
$V_{FAULT(rising)}$	FAULT threshold rising (turn-off)			1, 2, 3	0.555	0.6	0.635	V	16.1, 16.5, 16.9, 16.13
$V_{FAULT(falling)}$	FAULT threshold falling (turn-on)			1, 2, 3	0.455	0.5	0.535		16.2, 16.6, 16.10, 16.14
$V_{FAULT(HYS)}$	FAULT hysteresis voltage			1, 2, 3	90	100	110	mV	16.3, 16.7, 16.11, 16.15
$I_{FAULT(LKG)}$	Fault input leakage current	$V_{FAULT} = 7V$		1, 2, 3		3	5	$\mu A$	16.4, 16.8, 16.12, 16.16
$t_{FAULT(min)}$	FAULT minimum pulse width			9, 10, 11	0.4		1.4	$\mu s$	24.39, 24.79, 24.119, 24.159

**Table 3-1. Data Sheet Electrical Parameter Characteristics (continued)**

PARAMETER		TEST CONDITIONS		SUB-GROUP	MIN	TYP	MAX	UNIT	TEST NUMBERS
$t_{\text{FAULT}(\text{delay})}$	FAULT delay duration			9, 10, 11	26	31	44	$(1/f_{\text{sw}})$ s	24.34, 24.36, 24.38, 24.74, 24.76, 24.78, 24.114, 24.116, 24.118, 24.154, 24.156, 24.158
<b>VOLTAGE REFERENCE AND REMOTE SENSE</b>									
$V_{\text{REF}}$	Internal voltage reference (including error amplifier $V_{\text{IO}}$ )	See data sheet for more info	$T_A = -55^\circ\text{C}$	3	0.595	0.598	0.603	V	17.3, 17.11, 17.19, 17.27
			$T_A = 25^\circ\text{C}$	1	0.596	0.6	0.603		
			$T_A = 125^\circ\text{C}$	2	0.597	0.599	0.605		
$V_{\text{REF}(\text{internal})}$	Internal voltage reference (without error amplifier included)	$V_{\text{REF}(\text{internal})} = V_{\text{SS\_TR}} - \text{VSNS-}$		1, 2, 3	0.593	0.6	0.607	V	17.1, 17.9, 17.17, 17.25
$V_{\text{BG}}$	Bandgap voltage (voltage at the REFCAP pin)	$C_{\text{REFCAP}} = 470\text{nF}$		1, 2, 3	1.184	1.2	1.222	V	12.5, 12.10, 12.15, 12.20
$I_{\text{VSNS+}(\text{LKG})}$	VSNS+ input leakage current	$\text{VSNS+} = 0.6\text{V}$		1, 2, 3		10	30	nA	17.5, 17.13, 17.21, 17.29
$I_{\text{VSNS-}}$	VSNS- output current			1, 2, 3	8	10	12	$\mu\text{A}$	17.4, 17.12, 17.20, 17.28
<b>ERROR AMPLIFIER</b>									
$V_{\text{IO}}$	Error amplifier input offset voltage	$\text{VSENSE} = 0.6\text{V}$		1, 2, 3	-2.3		2.9	mV	17.2, 17.10, 17.18, 17.26
$g_{\text{mEA}}$	Error amplifier transconductance	$-10\mu\text{A} < I_{\text{COMP}} < 10\mu\text{A}$ , $V_{\text{COMP}} = 1\text{V}$	$T_A = -55^\circ\text{C}$	11	1400	2050	2700	$\mu\text{S}$	18.2, 18.7, 18.12, 18.17
			$T_A = 25^\circ\text{C}$	9	1200	1650	2100		
			$T_A = 125^\circ\text{C}$	10	1000	1250	1500		
$\text{EA}_{\text{DC}}$	Error amplifier DC gain	$\text{VSENSE} = 0.6\text{V}$				11500		V/V	
$\text{EA}_{\text{ISRC}}$	Error amplifier source	$V_{\text{COMP}} = 1\text{V}$ , 100mV input overdrive		1, 2, 3	90	125	200	$\mu\text{A}$	18.3, 18.8, 18.13, 18.18
$\text{EA}_{\text{ISNK}}$	Error amplifier sink				90	125	200		
$\text{EA}_{\text{Ro}}$	Error amplifier output resistance					7		M $\Omega$	
$\text{EA}_{\text{BW}}$	Error amplifier bandwidth					9		MHz	
$g_{\text{mps}}$	Power stage transconductance, 18.3A (typ) current limit	$I_{\text{OUT}} = 12$ , $\text{ILM} = \text{AVDD}$	$T_A = -55^\circ\text{C}$	3	14.4	19.4	24.8	S	20.12, 20.55, 20.98, 20.141
			$T_A = 25^\circ\text{C}$	1	15.2	20.1	26.1		
			$T_A = 125^\circ\text{C}$	2	15.7	20.2	26.2		
$g_{\text{mps}}$	Power stage transconductance, 13.4A (typ) current limit	$I_{\text{OUT}} = 9\text{A}$ , $R_{\text{ILIM\_TOP}} = 49.9\text{k}\Omega$ , $R_{\text{ILIM\_BOT}} = 100\text{k}\Omega$	$T_A = -55^\circ\text{C}$	3	9.3	13.3	17	S	20.13, 20.56, 20.99, 20.142
			$T_A = 25^\circ\text{C}$	1	9.5	13.5	17.5		
			$T_A = 125^\circ\text{C}$	2	9	13.2	17.7		
$g_{\text{mps}}$	Power stage transconductance, 18.3A (typ) current limit	$V_{\text{COMP}} = 0.6\text{V}$ , $\text{ILIM} = \text{AVDD}$		1, 2, 3	17.8	22.4	28.3	S	20.18, 20.61, 20.104, 20.147
$g_{\text{mps}}$	Power stage transconductance, 13.4A (typ) current limit	$V_{\text{COMP}} = 0.65\text{V}$ , $R_{\text{ILIM\_TOP}} = 49.9\text{k}\Omega$ , $R_{\text{ILIM\_BOT}} = 100\text{k}\Omega$		1, 2, 3	12.8	16.1	20.6	S	20.19, 20.62, 20.105, 20.148
$g_{\text{mps}}$	Power stage transconductance, 9A (typ) current limit	$V_{\text{COMP}} = 0.65\text{V}$ , $R_{\text{ILIM\_TOP}} = 100\text{k}\Omega$ , $R_{\text{ILIM\_BOT}} = 49.9\text{k}\Omega$		1, 2, 3	8	11	15.5	S	20.20, 20.63, 20.106, 20.149
$g_{\text{mps}}$	Power stage transconductance, 5.6A (typ) current limit	$V_{\text{COMP}} = 0.75\text{V}$ , $\text{ILIM} = \text{GND}$		1, 2, 3	4.6	7.2	9.2	S	20.21, 20.64, 20.104, 20.150

**Table 3-1. Data Sheet Electrical Parameter Characteristics (continued)**

PARAMETER		TEST CONDITIONS		SUB-GROUP	MIN	TYP	MAX	UNIT	TEST NUMBERS
<b>OVERCURRENT PROTECTION</b>									
$I_{OC\_HS1}$	High-side switch current limit threshold 1	$R_{SHORT} = 100m\Omega$	ILIM = GND	1, 2, 3		5.3	7.4	A	20.4, 20.47, 20.90, 20.133
			$R_{ILIM\_T} = 100k\Omega$ , $R_{ILIM\_B} = 49.9k\Omega$	1, 2, 3		8.6	11.7		20.5, 20.48, 20.91, 20.134
			$R_{ILIM\_T} = 49.9k\Omega$ , $R_{ILIM\_B} = 100k\Omega$	1, 2, 3		12.8	17.4		20.6, 20.49, 20.92, 20.135
			ILIM = AVDD	1, 2, 3		17.5	24.3		20.7, 20.50, 20.93, 20.136
$I_{OC\_HS2}$	High-side switch current limit threshold 2	$V_{IN} = 12V$ , $R_{SHORT} \approx 4m\Omega$	ILIM = GND			6.6		A	20.8, 20.51, 20.94, 20.137
			$R_{ILIM\_T} = 100k\Omega$ , $R_{ILIM\_B} = 49.9k\Omega$			11.1			20.9, 20.52, 20.95, 20.138
			$R_{ILIM\_T} = 49.9k\Omega$ , $R_{ILIM\_B} = 100k\Omega$			17			20.10, 20.53, 20.96, 20.139
			ILIM = AVDD			23.9			20.11, 20.54, 20.97, 20.140
$I_{OC\_LS(sink)}$	Low-side switch sinking overcurrent threshold		$T_A = -55^\circ C$	3	1.6	2.3	3.6	A	
			$T_A = 25^\circ C$	1	1.5	2.2	3.3		19.2, 19.5, 19.8, 19.11
			$T_A = 125^\circ C$	2	1.4	2	2.8		
$I_{ILIM(Ikg)}$	ILIM input leakage current	ILIM = 7V		1, 2, 3		2	100	nA	15.2, 15.16
COMP <sub>SHDN</sub>	COMP shutdown voltage			1, 2, 3	1.7	1.9	2.1	V	22.1, 22.7, 22.13, 22.19
$t_{COMP(delay)}$	COMP shutdown delay					30		$\mu s$	
<b>SOFT START AND TRACKING</b>									
$t_{SS}$	Soft start time	$V_{SS\_TR}$ from 10% to 90%, $V_{SNS} = GND$ , $V_{OUT(set)} = 3.3V$	$C_{SS} = 5.6nF$			1.5		ms	22.4, 22.10, 22.16, 22.22
			$C_{SS} = 22nF$	9, 10, 11	4.7	5.8	7.3		22.5, 22.11, 22.17, 22.23
			$C_{SS} = 100nF$			24.7			22.6, 22.12, 22.18, 22.24
$R_{SS(discharge)}$	Soft start discharge pull-down resistor			1, 2, 3	200	442	700	$\Omega$	22.2, 22.8, 22.14, 22.20
$SS_{startup}$	Maximum voltage on SS before startup (5)					20		mV	22.3, 22.9, 22.15, 22.21



**Table 3-1. Data Sheet Electrical Parameter Characteristics (continued)**

PARAMETER		TEST CONDITIONS		SUB-GROUP	MIN	TYP	MAX	UNIT	TEST NUMBERS
<b>SLOPE COMPENSATION</b>									
SC	Slope compensation with 18.3A (typ) current limit	$f_{SW} = 100\text{kHz}$ , $ILIM = AVDD$	$R_{SC} = 1.1\text{M}\Omega$			-0.7		A/ $\mu\text{s}$	
			$R_{SC} = 80.6\text{k}\Omega$			-8.8			
		$f_{SW} = 500\text{kHz}$ , $ILIM = AVDD$	$R_{SC} = 196\text{k}\Omega$			-4.2			
			$R_{SC} = 1.1\text{M}\Omega$			-1.2			
		$f_{SW} = 1000\text{kHz}$ , $ILIM = AVDD$	$R_{SC} = 80.6\text{k}\Omega$			-10.5			
			$R_{SC} = 196\text{k}\Omega$			-5.1			
	Slope compensation with 13.4A (typ) current limit	$f_{SW} = 500\text{kHz}$ , $R_{ILIM\_TOP} = 49.9\text{k}\Omega$ , $R_{ILIM\_BOT} = 100\text{k}\Omega$	$R_{SC} = 196\text{k}\Omega$			-3.2		A/ $\mu\text{s}$	
Slope compensation with 9A (typ) current limit	$f_{SW} = 500\text{kHz}$ , $R_{ILIM\_TOP} = 100\text{k}\Omega$ , $R_{ILIM\_BOT} = 49.9\text{k}\Omega$	$R_{SC} = 196\text{k}\Omega$			-2.4		A/ $\mu\text{s}$		
Slope compensation with 5.6A (typ) current limit	$f_{SW} = 500\text{kHz}$ , $ILIM = GND$	$R_{SC} = 196\text{k}\Omega$			-1.8		A/ $\mu\text{s}$		
<b>MINIMUM ON TIME AND DEAD TIME</b>									
$t_{on(min)}$	Minimum on time	50% to 50% of $V_{IN}$ , $I_{SW} = 2\text{A}$	$V_{IN} = 4.5\text{V}$	9, 10, 11		210	235	ns	24.31
			$V_{IN} = 5\text{V}$	9, 10, 11		213	250		24.71
			$V_{IN} = 12\text{V}$	9, 10, 11		199	250		24.111
			$V_{IN} = 14\text{V}$	9, 10, 11		199	250		24.151
$t_{off(min)}$	Minimum off time	$I_{SW} = 2\text{A}$				306		ns	
$t_{dead}$	Dead time					70		ns	24.4, 24.8, 24.12, 24.16
<b>SWITCHING FREQUENCY AND SYNCHRONIZATION</b>									
$f_{sw}$	RT programmed switching frequency	$R_{RT} = 511\text{k}\Omega$		4, 5, 6	90	100	120	kHz	24.14, 24.15, 24.54, 24.55, 24.94, 24.95, 24.134, 24.135
				4, 5, 6	450	500	550		24.26, 24.27, 24.66, 24.67, 24.106, 24.107, 24.146, 24.147
		$R_{RT} = 40.2\text{k}\Omega$	$V_{IN} = 4.5\text{V}$	4, 5, 6	850	1000	1150		24.28, 24.29
			$5\text{V} \leq V_{IN} \leq 14\text{V}$	4, 5, 6	870	1000	1170		24.68, 24.69, 24.108, 24.109, 24.148, 24.149
$t_{SYNC\_R}$	SYNC1 out low-to-high rise time (10% to 90%)	Load = 25pF, see see SYNCx Rise and Fall Time		9, 10, 11		10	21	ns	24.18, 24.19, 24.58, 24.59, 24.98, 24.99, 24.138, 24.139
$t_{SYNC\_F}$	SYNC1 out high-to-low fall time (90% to 10%)	Load = 25pF, see SYNCx Rise and Fall Time		9, 10, 11		10	21	ns	24.20, 24.21, 24.60, 24.61, 24.100, 24.101, 24.140, 24.141
$SYNC_{PH\_2\_1}$	SYNC2 to SYNC1 rising edge phase shift	SYNCM = GND		9, 10, 11	82	90	98	°	24.17, 24.57, 24.97, 24.137

**Table 3-1. Data Sheet Electrical Parameter Characteristics (continued)**

PARAMETER		TEST CONDITIONS		SUB-GROUP	MIN	TYP	MAX	UNIT	TEST NUMBERS
$t_{\text{SYNC}_D}$	SYNC1 to SW delay	Non-inverted SYNC1 input (SYNC2 = AVDD, SYNCM = AVDD)	VIN = 4.5V	9, 10, 11	140	225	350	ns	24.2
			$5V \leq V_{\text{IN}} \leq 14V$	9, 10, 11	120	210	270		24.42, 24.82, 24.122
			VIN = 12V, IOU = 12A			224			
		Inverted SYNC1 input (SYNC2 = GND, SYNCM = AVDD)	VIN = 4.5V	9, 10, 11	150	256	390	ns	24.3
			$5V \leq V_{\text{IN}} \leq 14V$	9, 10, 11	140	240	300		24.43, 24.83, 24.123
			VIN = 12V, IOU = 12A			246			
SYNC1 output (SYNCM = GND)	VIN = 4.5V	9, 10, 11	110	180	280	ns	24.16		
	$5V \leq V_{\text{IN}} \leq 14V$	9, 10, 11	90	175	250		24.56, 24.96, 24.136		
	VIN = 12V, IOU = 12A			184					
$V_{\text{SYNC}(OH)}$	SYNC1, SYNC2 output high	SNYCM = GND, IOH = 2mA	$4.5V \leq V_{\text{IN}} \leq 5V$	1, 2, 3	VIN-0.3			V	24.22, 24.23, 24.62, 24.63
			VIN > 5V	1, 2, 3	4.5	5	5.2		24.102, 24.103, 24.142, 24.143
$V_{\text{SYNC}(OL)}$	SYNC1, SYNC2 output low	SYNCM = GND, IO <sub>L</sub> = 2mA		1, 2, 3			0.4	V	24.24, 24.25, 24.64, 24.65, 24.104, 24.105, 24.144, 24.145
$V_{\text{SYNC}(IH)}$	SYNC1 input high threshold	SYNCM = AVDD		1, 2, 3			1.7	V	24.4, 24.44, 24.84, 24.124
$V_{\text{SYNC}(IL)}$	SYNC1 input low threshold	SYNCM = AVDD		1, 2, 3	0.7				24.5, 24.45, 24.85, 24.125
$f_{\text{SYNC}}$	SYNC1 input frequency range	SYNCM = AVDD		4, 5, 6	100		1000	kHz	24.1, 24.8, 24.9, 24.41, 24.48, 24.49, 24.81, 24.88, 24.89, 24.121, 24.128, 24.129
$D_{\text{SYNC}}$	SYNC1 input duty cycle range	SYNCM = AVDD, external clock duty cycle		4, 5, 6	40%		60%		24.10, 24.11, 24.50, 24.51, 24.90, 24.91, 24.130, 24.131
$t_{\text{CLK}_E_I}$	External clock to internal clock detection time	SYNCM = AVDD, RT populated		9, 10, 11		2	5	(1/f <sub>sw</sub> ) s	24.12, 24.52, 24.92, 24.132
$t_{\text{CLK}_I_E}$	Internal clock to external clock detection time	SYNCM = AVDD, RT populated		9, 10, 11		1	2	(1/f <sub>sw</sub> ) s	24.13, 24.53, 24.93, 24.133
<b>POWER GOOD AND THERMAL SHUTDOWN</b>									
$PWRGD_{\text{LOW}_F}$	PWRGD falling threshold (fault), low	Threshold for PWRGD (VSENSE as percent of VREF), VSNS = 0V	VSENSE falling	1, 2, 3	90%	92%	95%		23.2, 23.9, 23.16, 23.23
$PWRGD_{\text{LOW}_R}$	PWRGD rising threshold (good), low		VSENSE rising	1, 2, 3	93%	95%	98%		23.3, 23.10, 23.17, 23.24
$PWRGD_{\text{HIGH}_R}$	PWRGD rising threshold (fault), high		VSENSE rising	1, 2, 3	106%	108%	112%		23.4, 23.11, 23.18, 23.25
$PWRGD_{\text{HIGH}_F}$	PWRGD falling threshold (good), high		VSENSE falling	1, 2, 3	103%	105%	109%		23.5, 23.12, 23.19, 23.26
$I_{\text{PWRGD}(LKG)}$	Output high leakage	VSENSE = VREF, VPWRGD = 7V		1, 2, 3		50	500	nA	23.6, 23.13, 23.20, 23.27
$V_{\text{PWRGD}(OL)}$	Power good output low	IPWRGD (SINK) = 0mA to 2mA		1, 2, 3		250	300	mV	23.7, 23.14, 23.21, 23.28
$V_{\text{IN}_{\text{MIN}}_{\text{PWRGD}}}$	Minimum VIN for valid PWRGD output	Measured when VPWRGD ≤ 0.5V at 100μA		1, 2, 3		1	2	V	23.1

**Table 3-1. Data Sheet Electrical Parameter Characteristics (continued)**

PARAMETER		TEST CONDITIONS	SUB-GROUP	MIN	TYP	MAX	UNIT	TEST NUMBERS	
$T_{SD(enter)}$	Thermal shutdown enter temperature				170		°C		
$T_{SD(exit)}$	Thermal shutdown exit temperature				135				
$T_{SD(HYS)}$	Thermal shutdown hysteresis				35				
<b>MOSFET</b>									
$R_{DS\_ON\_HS}$	High-side switch resistance at $I_{HS} = 12A$ (lead length $\approx 3mm$ )	$P_{VIN} = V_{IN} = 4.5V$	$T_A = -55^\circ C$	3		29	44	mΩ	
			$T_A = 25^\circ C$	1		37	50		20.2, 20.3
			$T_A = 125^\circ C$	2		47	65		
		$P_{VIN} = V_{IN} = 5V$	$T_A = -55^\circ C$	3		27	39		20.45, 20.46
			$T_A = 25^\circ C$	1		35	47		
			$T_A = 125^\circ C$	2		44	58		
		$P_{VIN} = V_{IN} = 12V$	$T_A = -55^\circ C$	3		24	35		20.88, 20.89
			$T_A = 25^\circ C$	1		31	43		
			$T_A = 125^\circ C$	2		39	53		
		$P_{VIN} = V_{IN} = 14V$	$T_A = -55^\circ C$	3		24	35		20.131, 20.132
			$T_A = 25^\circ C$	1		31	43		
			$T_A = 125^\circ C$	2		39	53		
$R_{DS\_ON\_LS}$	Low-side switch resistance at $I_{LS} = 12A$ (lead length $\approx 3mm$ )	$P_{VIN} = V_{IN} = 4.5V$	$T_A = -55^\circ C$	3		25	40	mΩ	
			$T_A = 25^\circ C$	1		35	51		21.2, 21.3
			$T_A = 125^\circ C$	2		51	61		
		$P_{VIN} = V_{IN} = 5V$	$T_A = -55^\circ C$	3		23	35		21.8, 21.9
			$T_A = 25^\circ C$	1		33	45		
			$T_A = 125^\circ C$	2		48	56		
		$P_{VIN} = V_{IN} = 12V$	$T_A = -55^\circ C$	3		23	32		21.14, 21.15
			$T_A = 25^\circ C$	1		33	42		
			$T_A = 125^\circ C$	2		47	55		
		$P_{VIN} = V_{IN} = 14V$	$T_A = -55^\circ C$	3		23	32		21.20, 21.21
			$T_A = 25^\circ C$	1		33	42		
			$T_A = 125^\circ C$	2		47	55		

## 4 Applicable and Reference Documents

### 4.1 Applicable Documents

- Texas Instruments, [TPS7H4011-SP and TPS7H4011-SEP 4.5V to 14V Input 12A Radiation Hardened Synchronous Buck Converter](#), data sheet.
- Texas Instruments, [TPS7H4011-SP \(TPS7H4011EVM-CVAL\) Evaluation Module User's Guide](#), user's guide.

### 4.2 Reference Documents

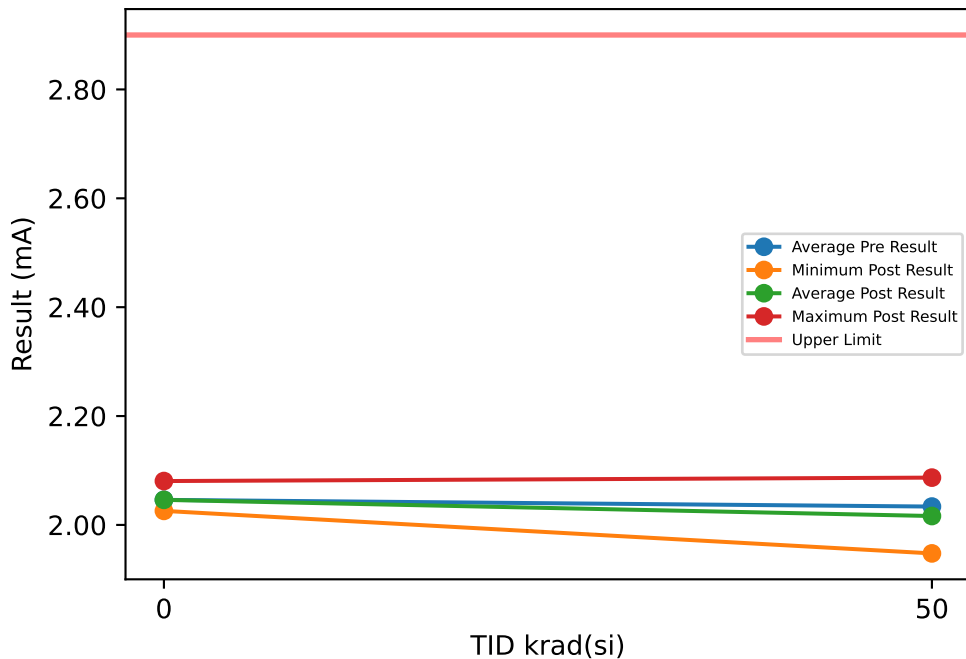
Texas Instruments total ionizing dose radiation (total dose) test procedure follows the standards put forth in MIL-STD-883 TM 1019. The document can be found at the DLA website.

## A Appendix A: HDR Results

This appendix contains the HDR TID report data.

Device Test: 12.1 VIN\_SHDN\_CURR\_4V(\_IDD|STATIC/VIN/4.5////@VIN\_SHDN\_CURR\_4V )

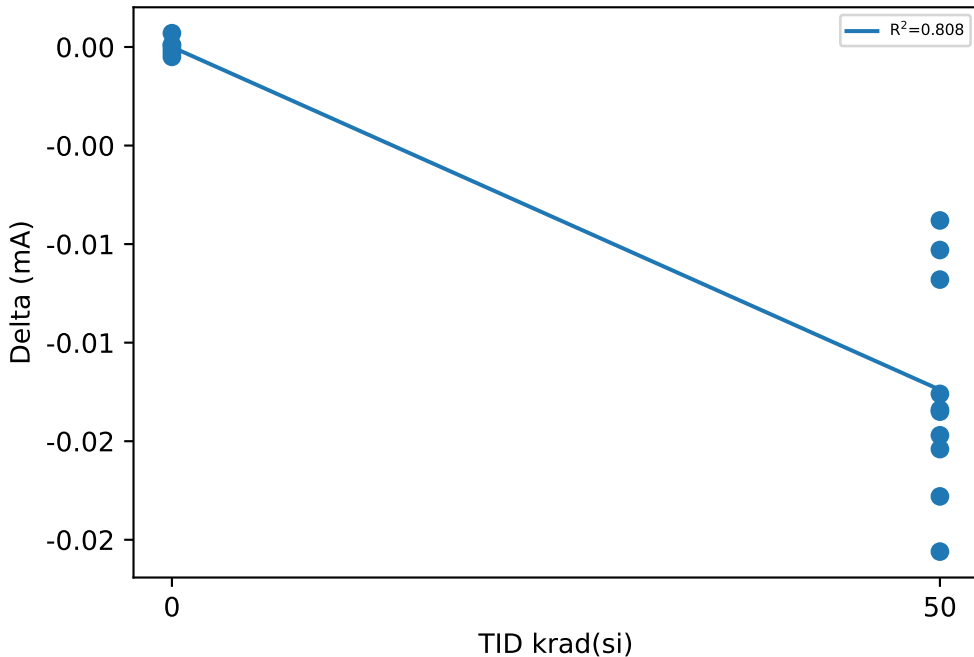
TID vs Result Stats



Test Results (Upper Limit = 2.9 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.021	2.0006	-0.0204
4	50	HDR Biased w/ 84hr anneal	2.0729	2.0611	-0.0118
6	50	HDR Biased w/ 84hr anneal	2.0261	2.0158	-0.0103
8	50	HDR Biased w/ 84hr anneal	2.036	2.0272	-0.0088
9	50	HDR Biased w/ 84hr anneal	2.1066	2.0869	-0.0197
10	50	HDR unbiased	2.0377	2.0193	-0.0184
11	50	HDR unbiased	1.9799	1.9571	-0.0228
12	50	HDR unbiased	2.058	2.0404	-0.0176
13	50	HDR unbiased	2.0331	2.0075	-0.0256
14	50	HDR unbiased	1.9662	1.9477	-0.0185
26	0	Correlation	2.0438	2.0435	-0.0003
27	0	Correlation	2.0398	2.0399	0.0001
28	0	Correlation	2.0811	2.0806	-0.0005
29	0	Correlation	2.0579	2.0578	-0.0001
30	0	Correlation	2.0279	2.0286	0.0007
32	0	Correlation	2.0257	2.0258	0.0001

TID vs Post - Pre Exposure Delta

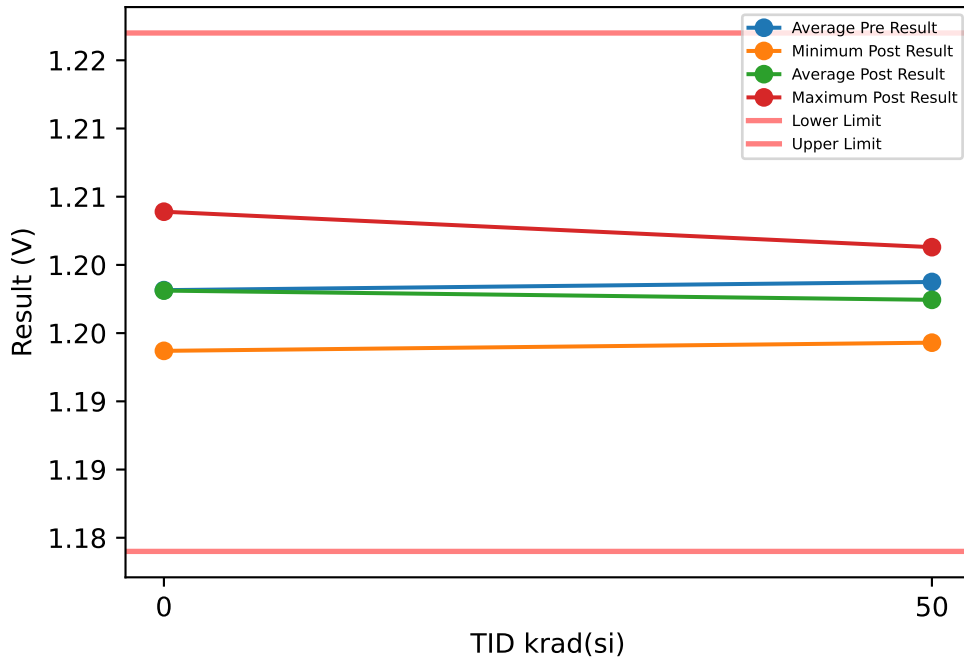


Test Statistics (mA)

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	2.0257	2.046	2.0811	0.020768	2.0258	2.046	2.0806	0.020448	-0.0005	-1.4803e-16	0.0007	0.00041473
50	1.9662	2.0337	2.1066	0.041005	1.9477	2.0164	2.0869	0.042472	-0.0256	-0.01739	-0.0088	0.0054637

# Device Test: 12.10 VBANDGAP(\_LEVEL|STATIC/REFCAP/5////@VBANDGAP )

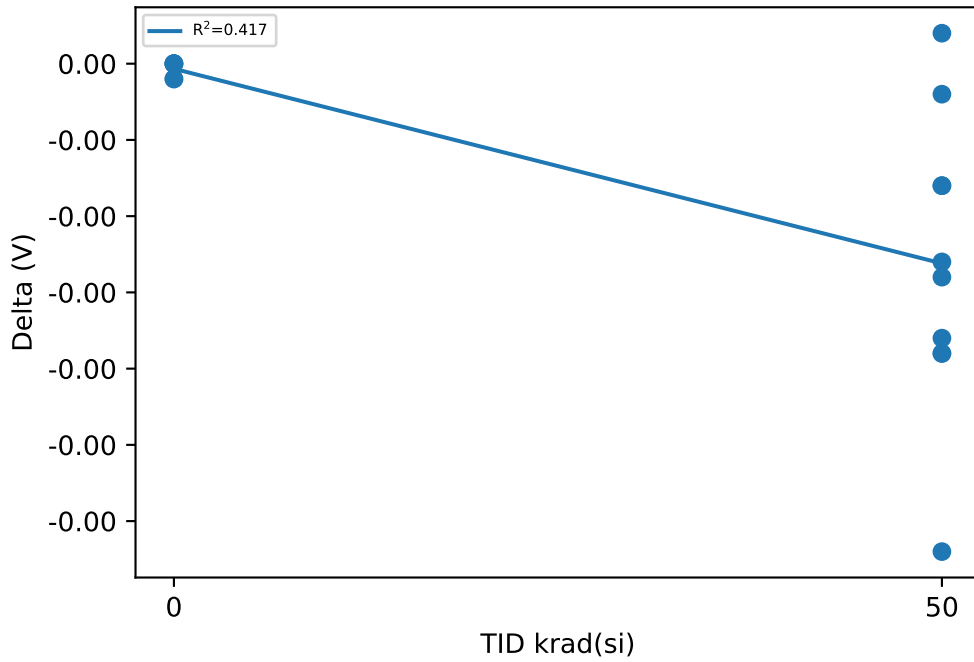
## TID vs Result Stats



## Test Results (Lower Limit = 1.184, Upper Limit = 1.222 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.2059	1.2027	-0.0032
4	50	HDR Biased w/ 84hr anneal	1.2021	1.2002	-0.0019
6	50	HDR Biased w/ 84hr anneal	1.2054	1.2046	-0.0008
8	50	HDR Biased w/ 84hr anneal	1.2061	1.2063	0.0002
9	50	HDR Biased w/ 84hr anneal	1.2028	1.202	-0.0008
10	50	HDR unbiased	1.206	1.2046	-0.0014
11	50	HDR unbiased	1.2037	1.2018	-0.0019
12	50	HDR unbiased	1.2038	1.202	-0.0018
13	50	HDR unbiased	1.2022	1.2009	-0.0013
14	50	HDR unbiased	1.1995	1.1993	-0.0002
26	0	Correlation	1.209	1.2089	-0.0001
27	0	Correlation	1.1999	1.1999	0
28	0	Correlation	1.2062	1.2061	-0.0001
29	0	Correlation	1.1987	1.1987	0
30	0	Correlation	1.2027	1.2027	0
32	0	Correlation	1.2024	1.2024	0

## TID vs Post - Pre Exposure Delta

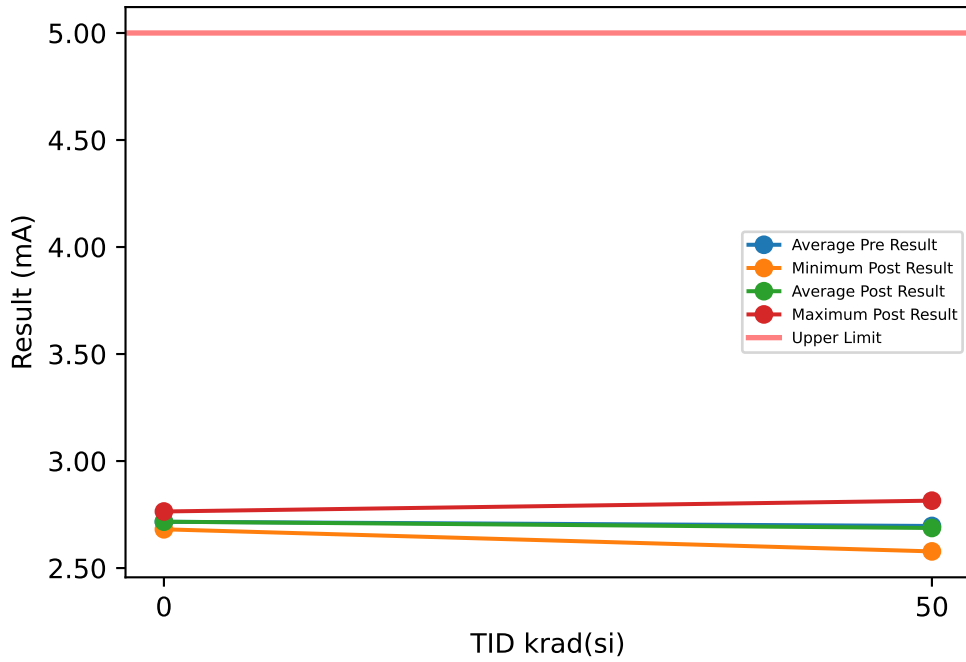


## Test Statistics (V)

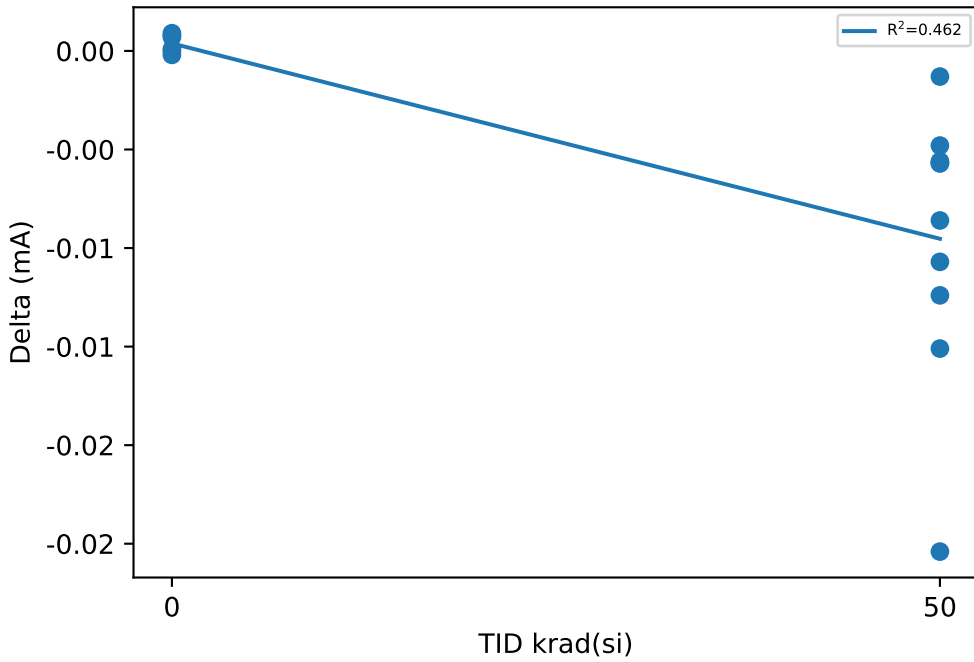
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1987	1.2031	1.209	0.0038641	1.1987	1.2031	1.2089	0.0038181	-0.0001	-3.3333e-05	0	5.164e-05
50	1.1995	1.2037	1.2061	0.0021609	1.1993	1.2024	1.2063	0.0021691	-0.0032	-0.00131	0.0002	0.00097462

# Device Test: 12.13 IQ\_VIN(IQ|STATIC/VIN/12////@IQ\_VIN )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (Upper Limit = 5.0 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.6561	2.6307	-0.0254
4	50	HDR Biased w/ 84hr anneal	2.7873	2.7816	-0.0057
6	50	HDR Biased w/ 84hr anneal	2.7035	2.7022	-0.0013
8	50	HDR Biased w/ 84hr anneal	2.6768	2.6711	-0.0057
9	50	HDR Biased w/ 84hr anneal	2.8256	2.8149	-0.0107
10	50	HDR unbiased	2.7048	2.7	-0.0048
11	50	HDR unbiased	2.6107	2.5983	-0.0124
12	50	HDR unbiased	2.7318	2.7232	-0.0086
13	50	HDR unbiased	2.6879	2.6728	-0.0151
14	50	HDR unbiased	2.5835	2.5779	-0.0056
26	0	Correlation	2.7089	2.7097	0.0008
27	0	Correlation	2.7126	2.7135	0.0009
28	0	Correlation	2.7646	2.7644	-0.0002
29	0	Correlation	2.7314	2.7315	0.0001
30	0	Correlation	2.6804	2.6811	0.0007
32	0	Correlation	2.7	2.7	0

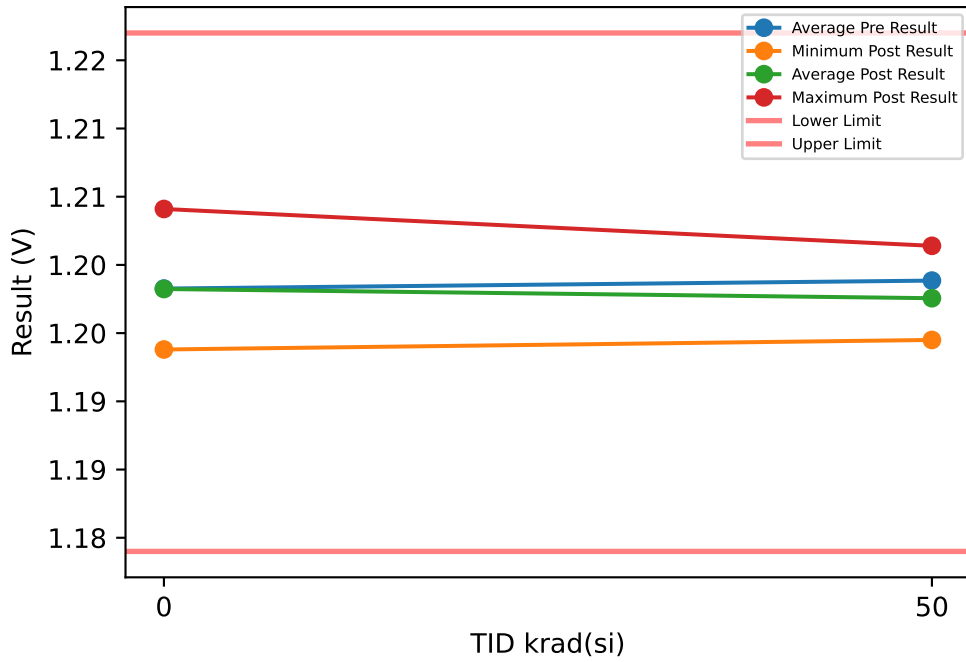
## Test Statistics (mA)

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	2.6804	2.7163	2.7646	0.028927	2.6811	2.7167	2.7644	0.028635	-0.0002	0.00038333	0.0009	0.00047081
50	2.5835	2.6968	2.8256	0.073409	2.5779	2.6873	2.8149	0.074842	-0.0254	-0.00953	-0.0013	0.006898



Device Test: 12.15 VBANDGAP(\_LEVEL|STATIC/REFCAP/12////@VBANDGAP )

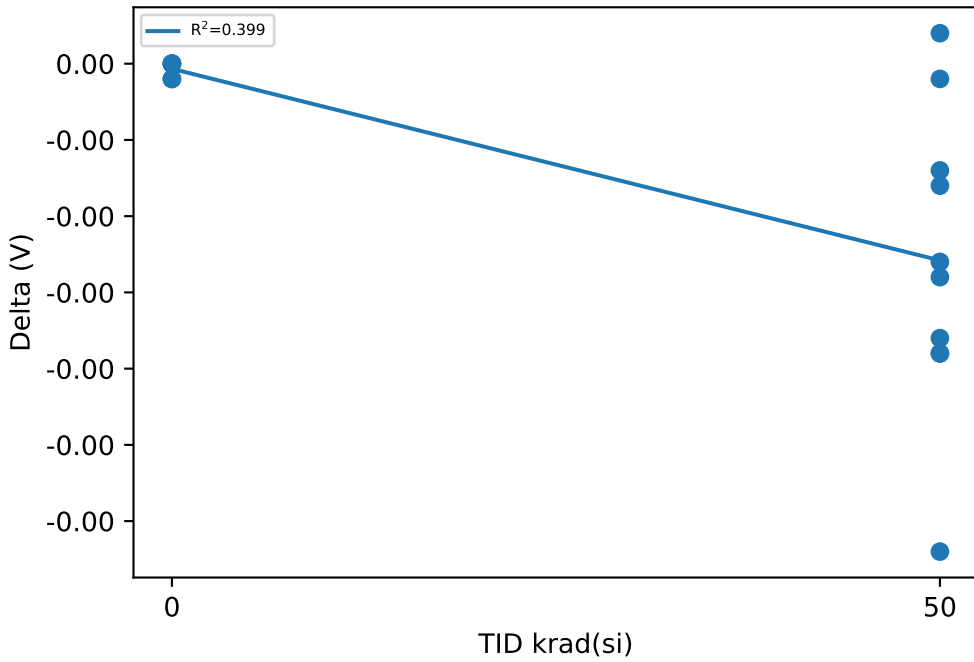
TID vs Result Stats



Test Results (Lower Limit = 1.184, Upper Limit = 1.222 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.206	1.2028	-0.0032
4	50	HDR Biased w/ 84hr anneal	1.2022	1.2003	-0.0019
6	50	HDR Biased w/ 84hr anneal	1.2055	1.2048	-0.0007
8	50	HDR Biased w/ 84hr anneal	1.2062	1.2064	0.0002
9	50	HDR Biased w/ 84hr anneal	1.2029	1.2021	-0.0008
10	50	HDR unbiased	1.2061	1.2047	-0.0014
11	50	HDR unbiased	1.2038	1.2019	-0.0019
12	50	HDR unbiased	1.2039	1.2021	-0.0018
13	50	HDR unbiased	1.2023	1.201	-0.0013
14	50	HDR unbiased	1.1996	1.1995	-0.0001
26	0	Correlation	1.2091	1.2091	0
27	0	Correlation	1.2	1.2	0
28	0	Correlation	1.2063	1.2063	0
29	0	Correlation	1.1989	1.1988	-0.0001
30	0	Correlation	1.2028	1.2027	-0.0001
32	0	Correlation	1.2025	1.2025	0

TID vs Post - Pre Exposure Delta

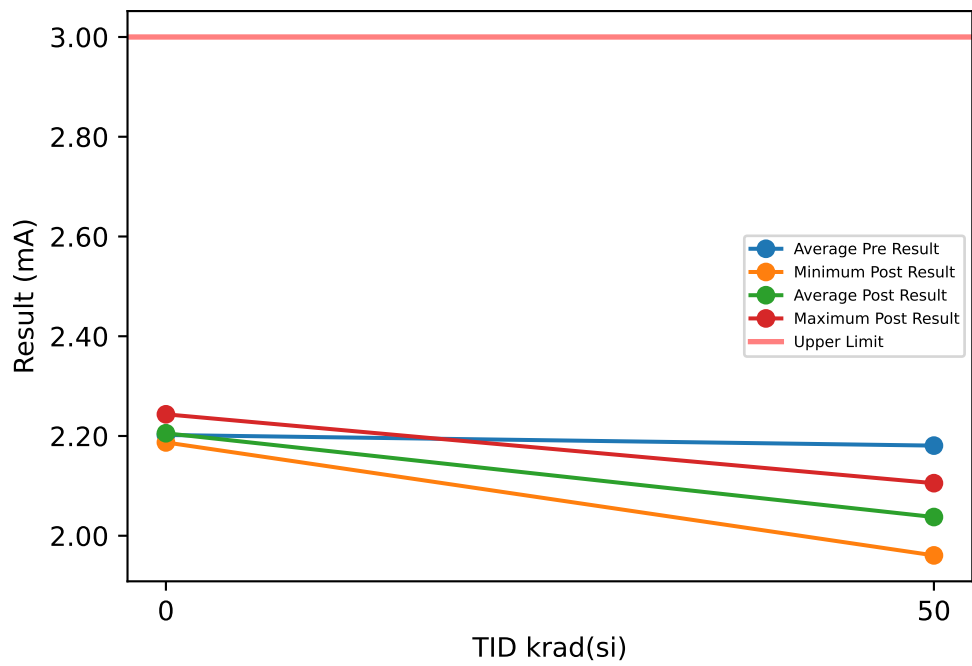


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1989	1.2033	1.2091	0.0038412	1.1988	1.2032	1.2091	0.0038666	-0.0001	-3.3333e-05	0	5.164e-05
50	1.1996	1.2038	1.2062	0.0021609	1.1995	1.2026	1.2064	0.0021645	-0.0032	-0.00129	0.0002	0.00099381

Device Test: 12.16 VIN\_SHDN\_CURR\_14V( \_IDD|STATIC/VIN/14////@VIN\_SHDN\_CURR\_14V )

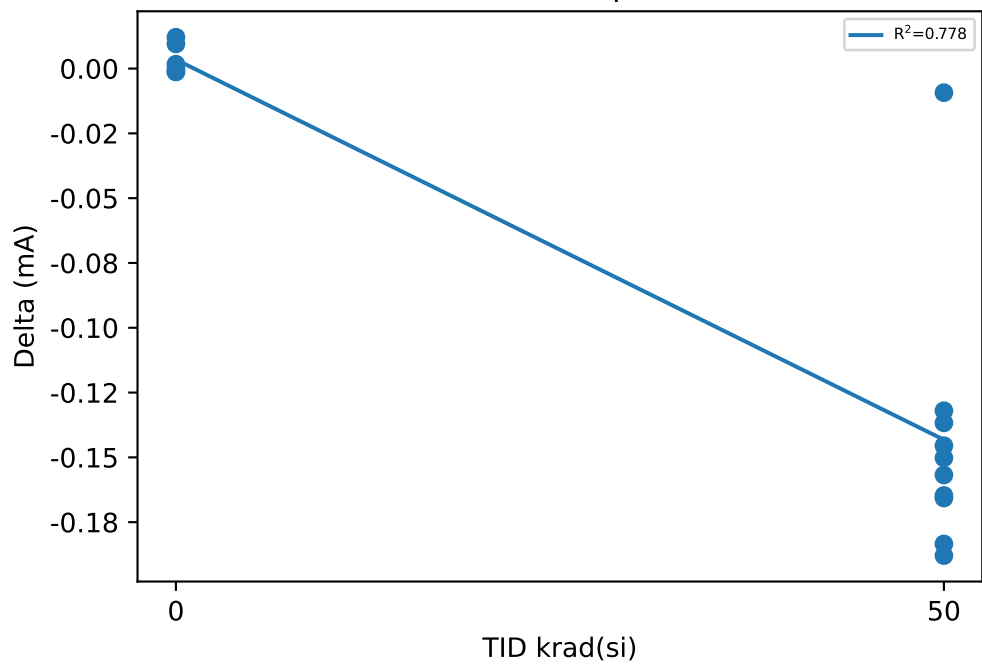
TID vs Result Stats



Test Results (Upper Limit = 3.0 (mA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.1852	2.0284	-0.1568
4	50	HDR Biased w/ 84hr anneal	2.2295	2.0928	-0.1367
6	50	HDR Biased w/ 84hr anneal	2.1897	2.0442	-0.1455
8	50	HDR Biased w/ 84hr anneal	2.1867	2.022	-0.1647
9	50	HDR Biased w/ 84hr anneal	2.1147	2.1054	-0.0093
10	50	HDR unbiased	2.2041	2.0207	-0.1834
11	50	HDR unbiased	2.1485	1.9606	-0.1879
12	50	HDR unbiased	2.2218	2.0898	-0.132
13	50	HDR unbiased	2.194	2.0283	-0.1657
14	50	HDR unbiased	2.1331	1.9829	-0.1502
26	0	Correlation	2.197	2.1957	-0.0013
27	0	Correlation	2.1948	2.1936	-0.0012
28	0	Correlation	2.2435	2.2435	0
29	0	Correlation	2.2105	2.22	0.0095
30	0	Correlation	2.1914	2.1931	0.0017
32	0	Correlation	2.175	2.1871	0.0121

TID vs Post - Pre Exposure Delta

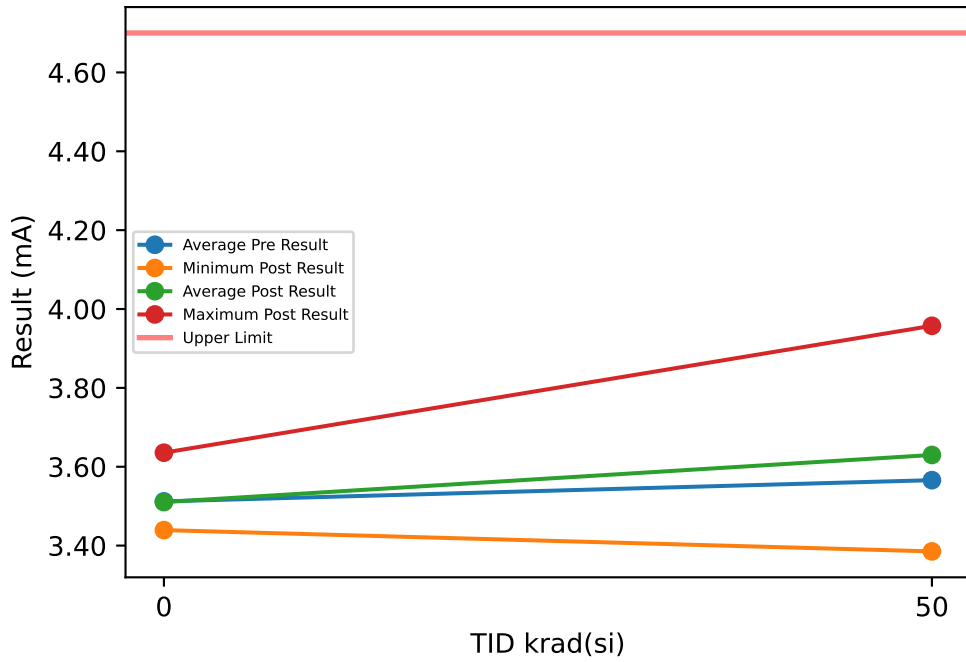


Test Statistics (mA)

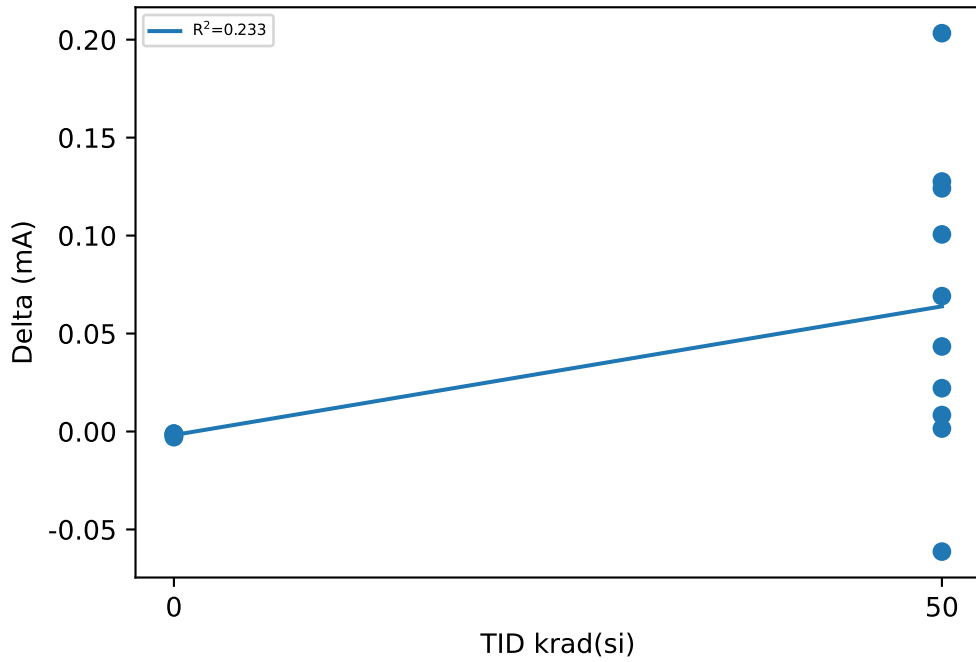
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.175	2.202	2.2435	0.023292	2.1871	2.2055	2.2435	0.021837	-0.0013	0.0034667	0.0121	0.0058408
50	2.1147	2.1807	2.2295	0.037403	1.9606	2.0375	2.1054	0.04718	-0.1879	-0.14322	-0.0093	0.050463

# Device Test: 12.17 PVIN\_SHDN\_CURR\_14V(\_IDD|STATIC/PVIN/14////@PVIN\_SHDN\_CURR\_14V )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Upper Limit = 4.7 (mA))

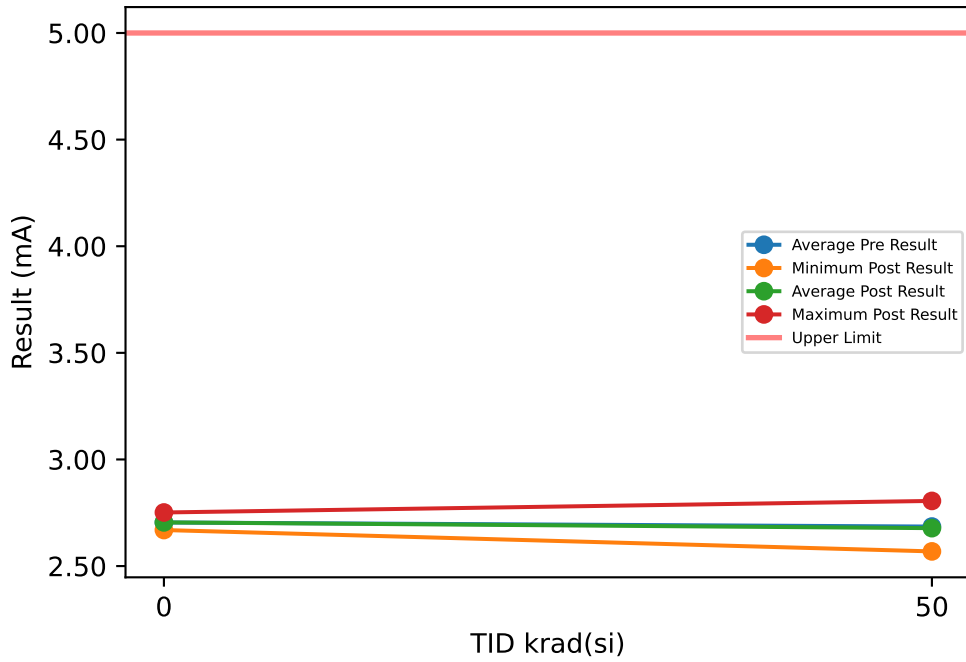
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.4466	3.3853	-0.0613
4	50	HDR Biased w/ 84hr anneal	3.5926	3.7167	0.1241
6	50	HDR Biased w/ 84hr anneal	3.5307	3.5741	0.0434
8	50	HDR Biased w/ 84hr anneal	3.4955	3.497	0.0015
9	50	HDR Biased w/ 84hr anneal	3.477	3.4854	0.0084
10	50	HDR unbiased	3.5608	3.6614	0.1006
11	50	HDR unbiased	3.5615	3.6891	0.1276
12	50	HDR unbiased	3.7541	3.9574	0.2033
13	50	HDR unbiased	3.6615	3.7306	0.0691
14	50	HDR unbiased	3.5792	3.6013	0.0221
26	0	Correlation	3.5276	3.525	-0.0026
27	0	Correlation	3.6385	3.6356	-0.0029
28	0	Correlation	3.5269	3.5258	-0.0011
29	0	Correlation	3.4406	3.4393	-0.0013
30	0	Correlation	3.457	3.4559	-0.0011
32	0	Correlation	3.4821	3.4803	-0.0018

### Test Statistics (mA)

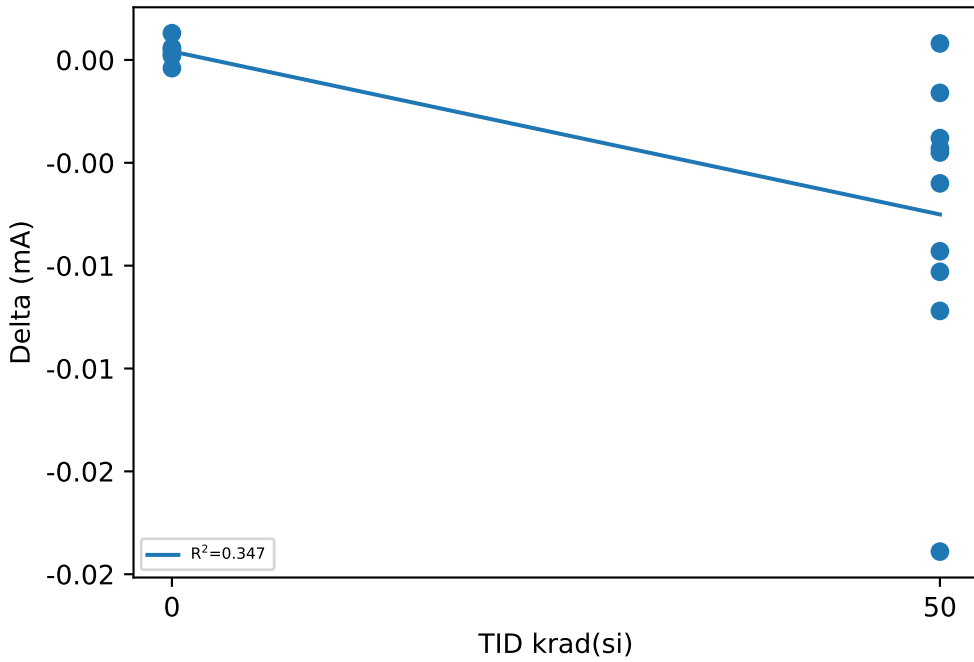
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	3.4406	3.5121	3.6385	0.071393	3.4393	3.5103	3.6356	0.070791	-0.0029	-0.0018	-0.0011	0.00078486
50	3.4466	3.5659	3.7541	0.090569	3.3853	3.6298	3.9574	0.16046	-0.0613	0.06388	0.2033	0.076959

# Device Test: 12.18 IQ\_VIN(IQ|STATIC/VIN/14////@IQ\_VIN )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (Upper Limit = 5.0 (mA))

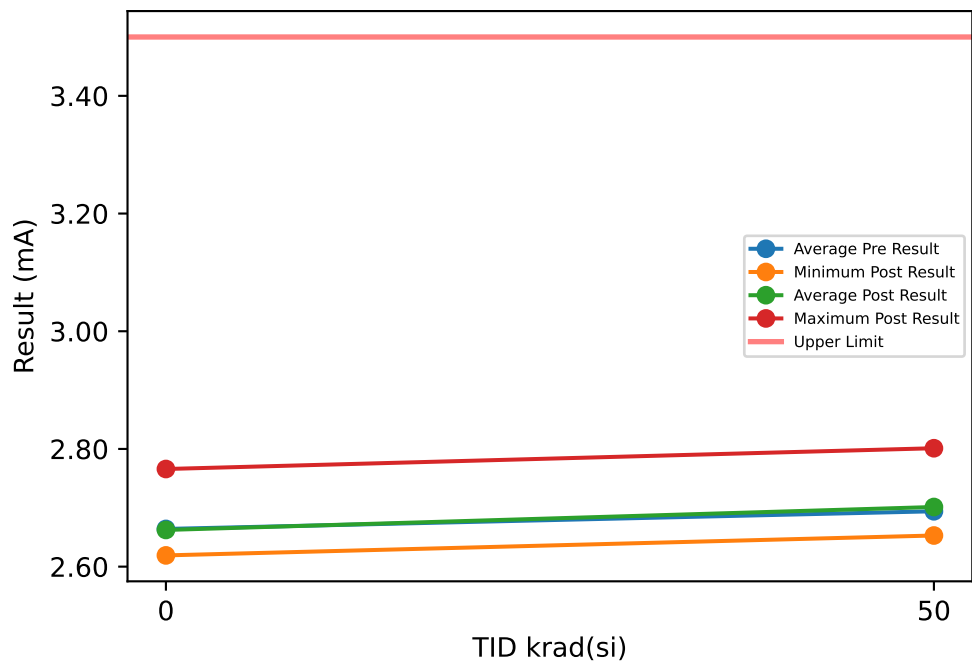
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.6453	2.6214	-0.0239
4	50	HDR Biased w/ 84hr anneal	2.7763	2.772	-0.0043
6	50	HDR Biased w/ 84hr anneal	2.6915	2.6923	0.0008
8	50	HDR Biased w/ 84hr anneal	2.6641	2.6603	-0.0038
9	50	HDR Biased w/ 84hr anneal	2.8148	2.8055	-0.0093
10	50	HDR unbiased	2.6922	2.6906	-0.0016
11	50	HDR unbiased	2.5998	2.5895	-0.0103
12	50	HDR unbiased	2.7202	2.7142	-0.006
13	50	HDR unbiased	2.6758	2.6636	-0.0122
14	50	HDR unbiased	2.5733	2.5688	-0.0045
26	0	Correlation	2.6969	2.6972	0.0003
27	0	Correlation	2.7017	2.703	0.0013
28	0	Correlation	2.7517	2.7513	-0.0004
29	0	Correlation	2.7201	2.7203	0.0002
30	0	Correlation	2.6684	2.669	0.0006
32	0	Correlation	2.6878	2.6883	0.0005

## Test Statistics (mA)

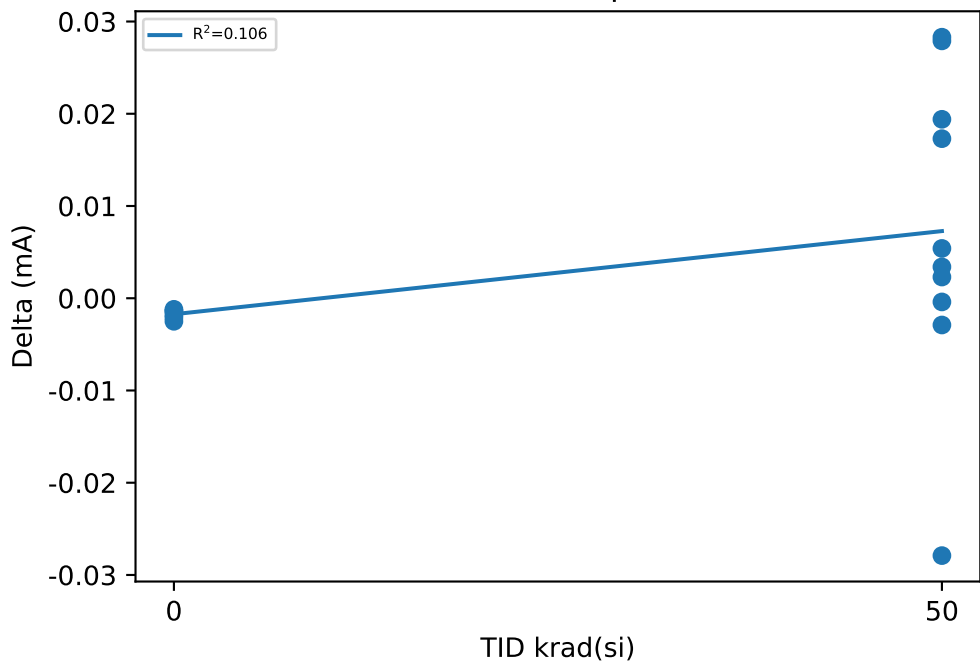
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	2.6684	2.7044	2.7517	0.028701	2.669	2.7048	2.7513	0.028346	-0.0004	0.00041667	0.0013	0.00055648
50	2.5733	2.6853	2.8148	0.073295	2.5688	2.6778	2.8055	0.074719	-0.0239	-0.00751	0.0008	0.0070001

Device Test: 12.2 PVIN\_SHDN\_CURR\_4V(\_IDD|STATIC/PVIN/4.5////@PVIN\_SHDN\_CURR\_4V )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 3.5 (mA))

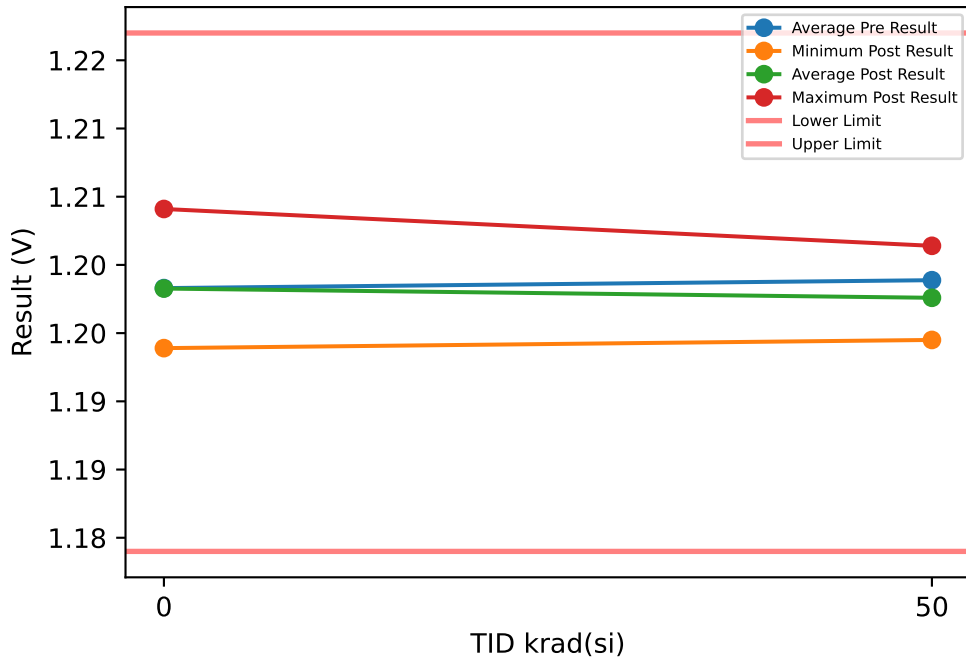
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.6506	2.6529	0.0023
4	50	HDR Biased w/ 84hr anneal	2.6745	2.6799	0.0054
6	50	HDR Biased w/ 84hr anneal	2.6895	2.7089	0.0194
8	50	HDR Biased w/ 84hr anneal	2.6558	2.6592	0.0034
9	50	HDR Biased w/ 84hr anneal	2.6535	2.6818	0.0283
10	50	HDR unbiased	2.6829	2.68	-0.0029
11	50	HDR unbiased	2.7091	2.737	0.0279
12	50	HDR unbiased	2.7619	2.734	-0.0279
13	50	HDR unbiased	2.7839	2.8012	0.0173
14	50	HDR unbiased	2.6789	2.6785	-0.0004
26	0	Correlation	2.6657	2.6632	-0.0025
27	0	Correlation	2.768	2.7659	-0.0021
28	0	Correlation	2.6434	2.6416	-0.0018
29	0	Correlation	2.6205	2.6191	-0.0014
30	0	Correlation	2.6307	2.6295	-0.0012
32	0	Correlation	2.6561	2.6547	-0.0014

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	2.6205	2.6641	2.768	0.053492	2.6191	2.6623	2.7659	0.05322	-0.0025	-0.0017333	-0.0012	0.00049666
50	2.6506	2.6941	2.7839	0.045528	2.6529	2.7013	2.8012	0.045103	-0.0279	0.00728	0.0283	0.016859

Device Test: 12.20 VBANDGAP(\_LEVEL|STATIC/REFCAP/14////@VBANDGAP )

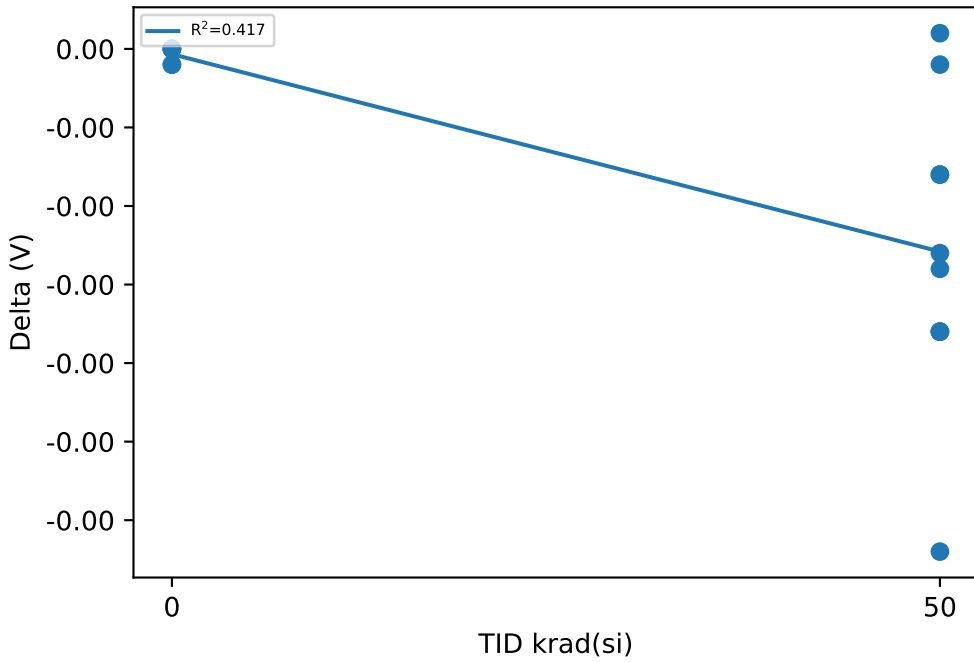
TID vs Result Stats



Test Results (Lower Limit = 1.184, Upper Limit = 1.222 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.206	1.2028	-0.0032
4	50	HDR Biased w/ 84hr anneal	1.2022	1.2004	-0.0018
6	50	HDR Biased w/ 84hr anneal	1.2056	1.2048	-0.0008
8	50	HDR Biased w/ 84hr anneal	1.2063	1.2064	0.0001
9	50	HDR Biased w/ 84hr anneal	1.2029	1.2021	-0.0008
10	50	HDR unbiased	1.2061	1.2047	-0.0014
11	50	HDR unbiased	1.2038	1.202	-0.0018
12	50	HDR unbiased	1.2039	1.2021	-0.0018
13	50	HDR unbiased	1.2024	1.2011	-0.0013
14	50	HDR unbiased	1.1996	1.1995	-0.0001
26	0	Correlation	1.2091	1.2091	0
27	0	Correlation	1.2001	1.2	-0.0001
28	0	Correlation	1.2064	1.2063	-0.0001
29	0	Correlation	1.1989	1.1989	0
30	0	Correlation	1.2028	1.2028	0
32	0	Correlation	1.2025	1.2025	0

TID vs Post - Pre Exposure Delta

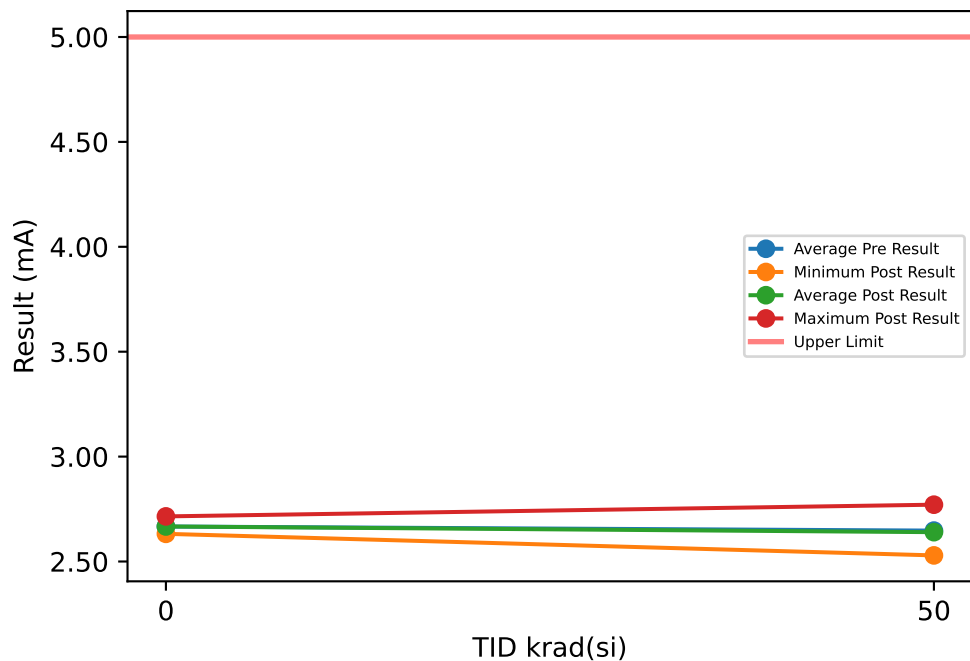


Test Statistics (V)

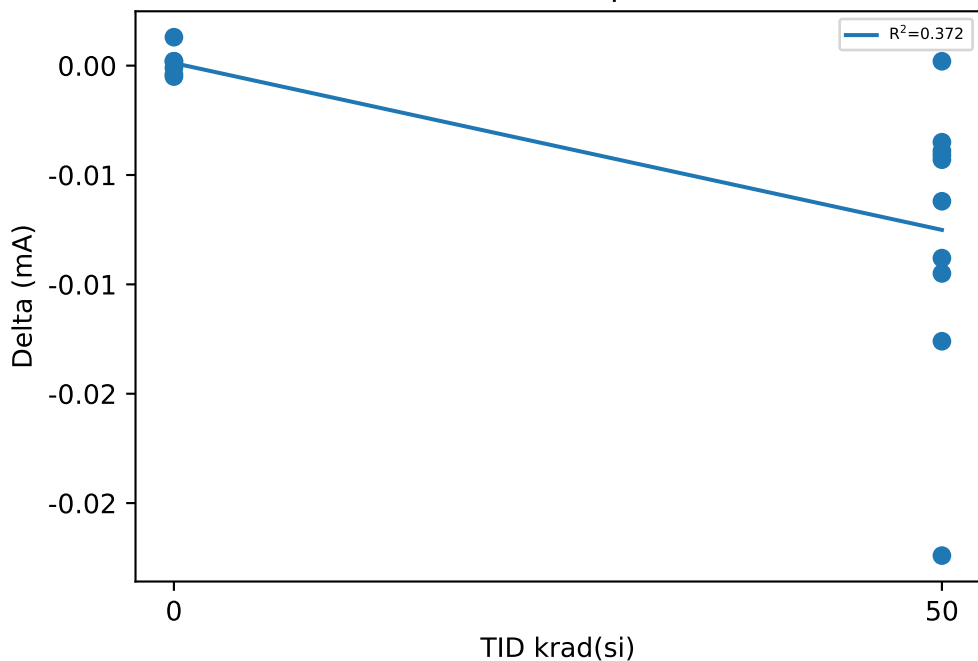
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1989	1.2033	1.2091	0.0038403	1.1989	1.2033	1.2091	0.0038412	-0.0001	-3.3333e-05	0	5.164e-05
50	1.1996	1.2039	1.2063	0.002174	1.1995	1.2026	1.2064	0.0021419	-0.0032	-0.00129	0.0001	0.00095853

# Device Test: 12.3 IQ\_VIN( IQ|STATIC/VIN/4.5////@IQ\_VIN )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (Upper Limit = 5.0 (mA))

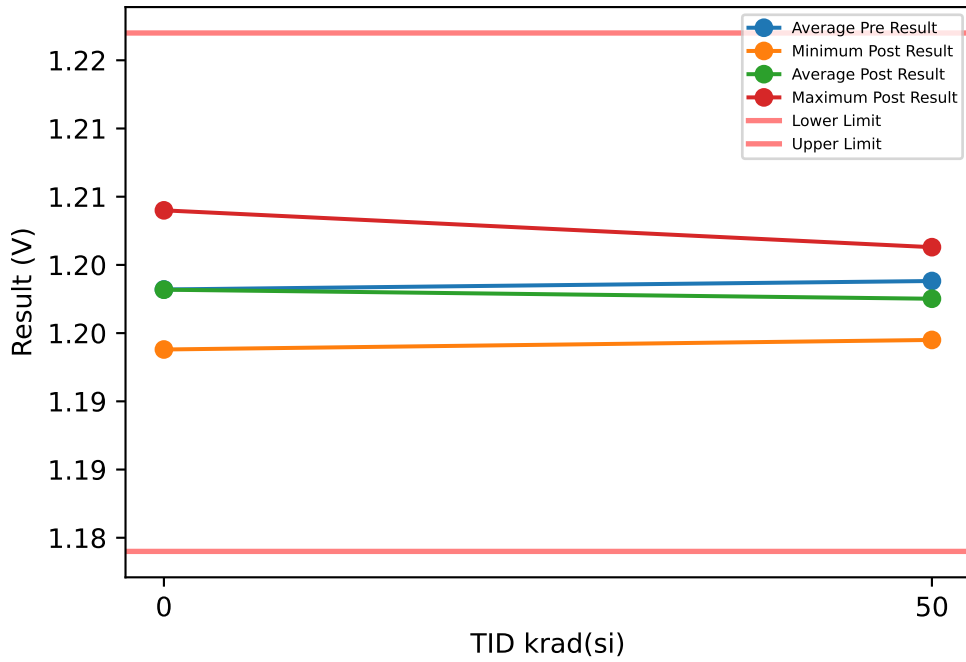
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.6054	2.583	-0.0224
4	50	HDR Biased w/ 84hr anneal	2.7353	2.7314	-0.0039
6	50	HDR Biased w/ 84hr anneal	2.6524	2.6526	0.0002
8	50	HDR Biased w/ 84hr anneal	2.6276	2.6235	-0.0041
9	50	HDR Biased w/ 84hr anneal	2.7796	2.7708	-0.0088
10	50	HDR unbiased	2.655	2.6515	-0.0035
11	50	HDR unbiased	2.5606	2.5511	-0.0095
12	50	HDR unbiased	2.6842	2.678	-0.0062
13	50	HDR unbiased	2.6397	2.6271	-0.0126
14	50	HDR unbiased	2.5334	2.5291	-0.0043
26	0	Correlation	2.6587	2.6582	-0.0005
27	0	Correlation	2.6632	2.6634	0.0002
28	0	Correlation	2.7154	2.715	-0.0004
29	0	Correlation	2.6803	2.6802	-0.0001
30	0	Correlation	2.6306	2.6319	0.0013
32	0	Correlation	2.6528	2.653	0.0002

## 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	2.6306	2.6668	2.7154	0.028737	2.6319	2.6669	2.715	0.028272	-0.0005	0.00011667	0.0013	0.00064936
50	2.5334	2.6473	2.7796	0.074076	2.5291	2.6398	2.7708	0.075341	-0.0224	-0.00751	0.0002	0.0063722

Device Test: 12.5 VBANDGAP(\_LEVEL|STATIC/REFCAP/4.5////@VBANDGAP )

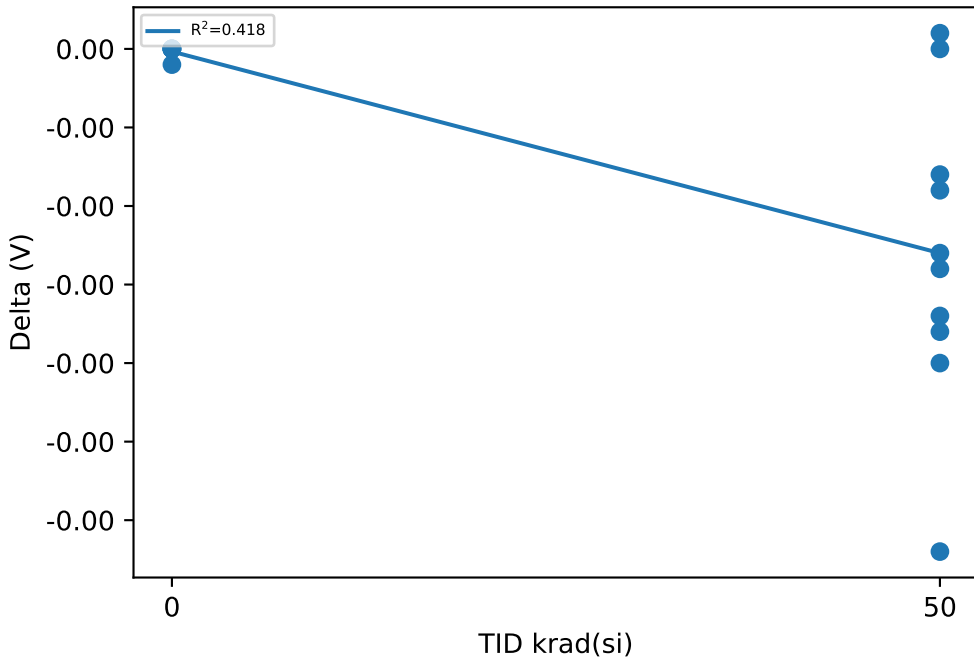
TID vs Result Stats



Test Results (Lower Limit = 1.184, Upper Limit = 1.222 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.2059	1.2027	-0.0032
4	50	HDR Biased w/ 84hr anneal	1.2022	1.2002	-0.002
6	50	HDR Biased w/ 84hr anneal	1.2055	1.2046	-0.0009
8	50	HDR Biased w/ 84hr anneal	1.2062	1.2063	0.0001
9	50	HDR Biased w/ 84hr anneal	1.2028	1.202	-0.0008
10	50	HDR unbiased	1.2061	1.2047	-0.0014
11	50	HDR unbiased	1.2038	1.202	-0.0018
12	50	HDR unbiased	1.2039	1.2022	-0.0017
13	50	HDR unbiased	1.2023	1.201	-0.0013
14	50	HDR unbiased	1.1995	1.1995	0
26	0	Correlation	1.2091	1.209	-0.0001
27	0	Correlation	1.1999	1.1999	0
28	0	Correlation	1.2063	1.2063	0
29	0	Correlation	1.1988	1.1988	0
30	0	Correlation	1.2027	1.2027	0
32	0	Correlation	1.2024	1.2024	0

TID vs Post - Pre Exposure Delta



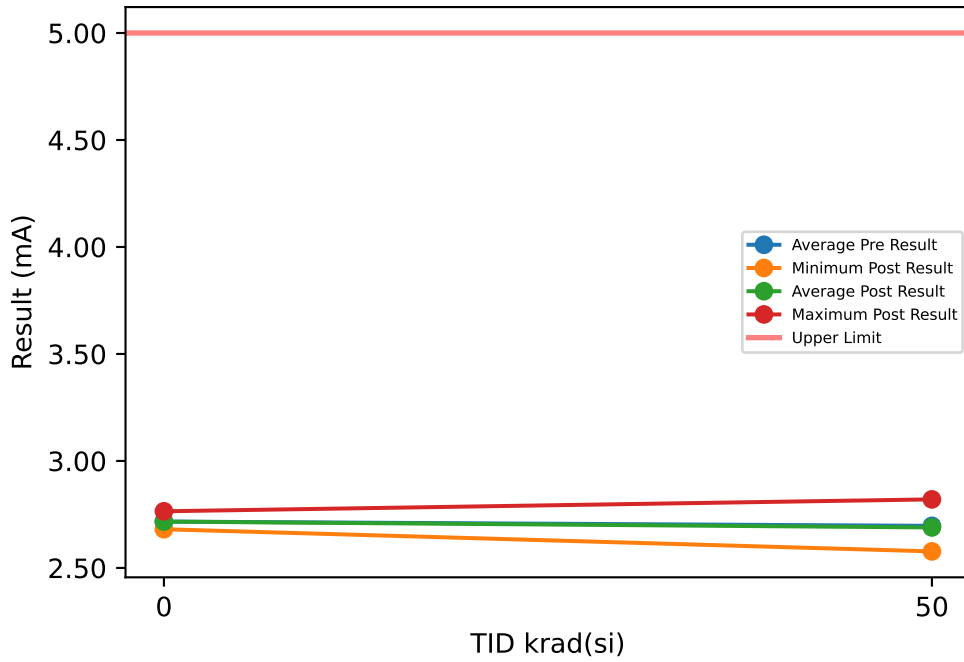
Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.1988	1.2032	1.2091	0.0038874	1.1988	1.2032	1.209	0.0038572	-0.0001	-1.6667e-05	0	4.0825e-05
50	1.1995	1.2038	1.2062	0.0021771	1.1995	1.2025	1.2063	0.0021306	-0.0032	-0.0013	0.0001	0.00097639

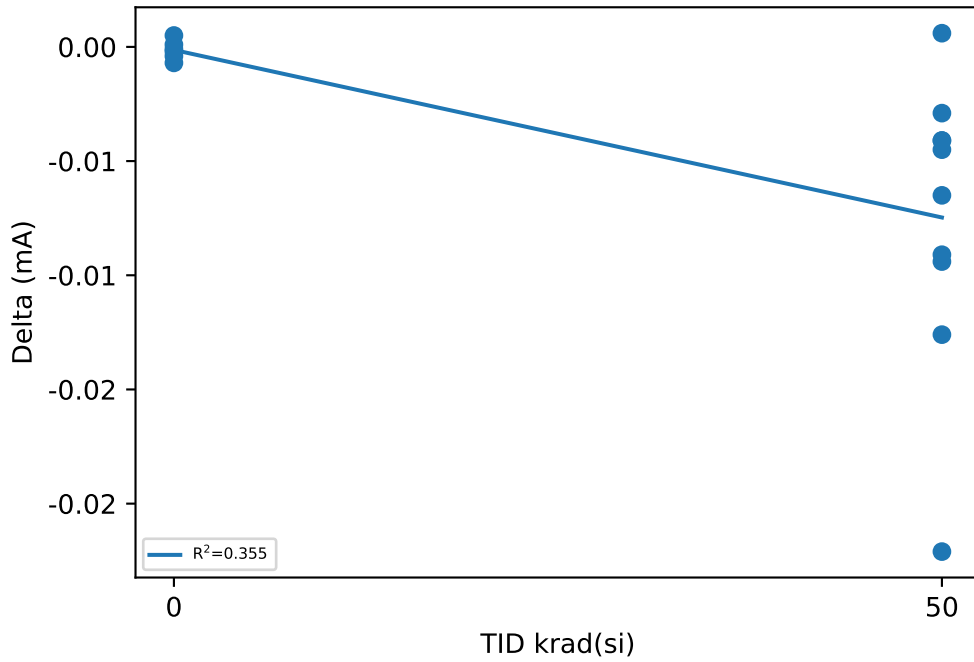


# Device Test: 12.8 IQ\_VIN(IQ|STATIC/VIN/5////@IQ\_VIN )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (Upper Limit = 5.0 (mA))

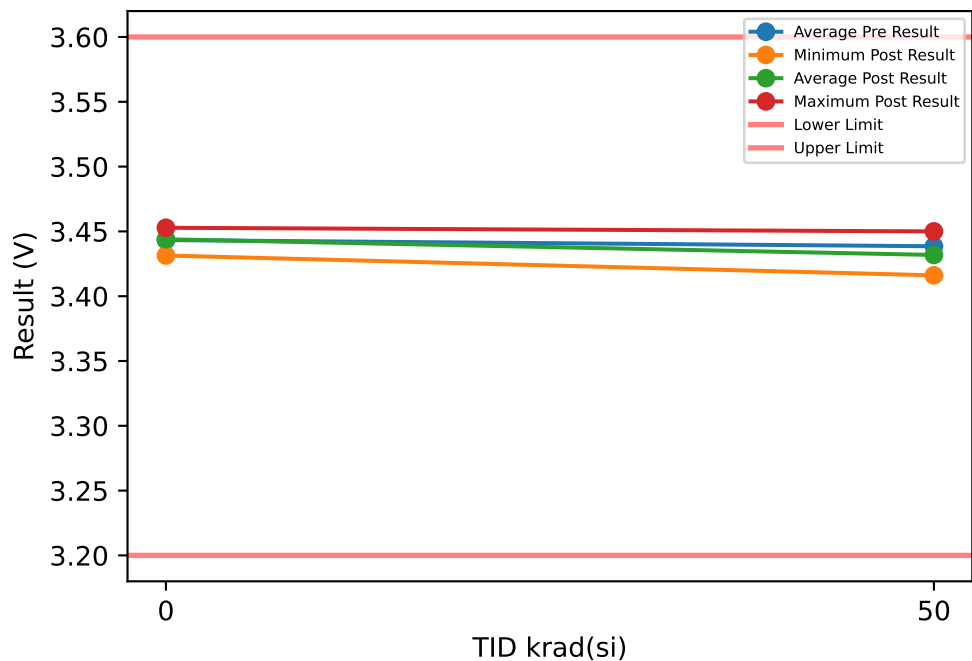
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.6548	2.6327	-0.0221
4	50	HDR Biased w/ 84hr anneal	2.7847	2.7806	-0.0041
6	50	HDR Biased w/ 84hr anneal	2.7013	2.7019	0.0006
8	50	HDR Biased w/ 84hr anneal	2.6765	2.6724	-0.0041
9	50	HDR Biased w/ 84hr anneal	2.8295	2.8204	-0.0091
10	50	HDR unbiased	2.7047	2.7018	-0.0029
11	50	HDR unbiased	2.6103	2.6009	-0.0094
12	50	HDR unbiased	2.7341	2.7276	-0.0065
13	50	HDR unbiased	2.6894	2.6768	-0.0126
14	50	HDR unbiased	2.5818	2.5773	-0.0045
26	0	Correlation	2.7085	2.7078	-0.0007
27	0	Correlation	2.7128	2.7129	0.0001
28	0	Correlation	2.7652	2.7648	-0.0004
29	0	Correlation	2.7301	2.73	-0.0001
30	0	Correlation	2.6804	2.6809	0.0005
32	0	Correlation	2.7032	2.703	-0.0002

## 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	2.6804	2.7167	2.7652	0.028685	2.6809	2.7166	2.7648	0.028472	-0.0007	-0.00013333	0.0005	0.00041312
50	2.5818	2.6967	2.8295	0.074347	2.5773	2.6892	2.8204	0.075505	-0.0221	-0.00747	0.0006	0.0063703

# Device Test: 14.1 UVLO\_RISE\_PVIN(\_THRESHOLD|RISE/PVIN/4.5////@UVLO\_RISE\_PVIN )

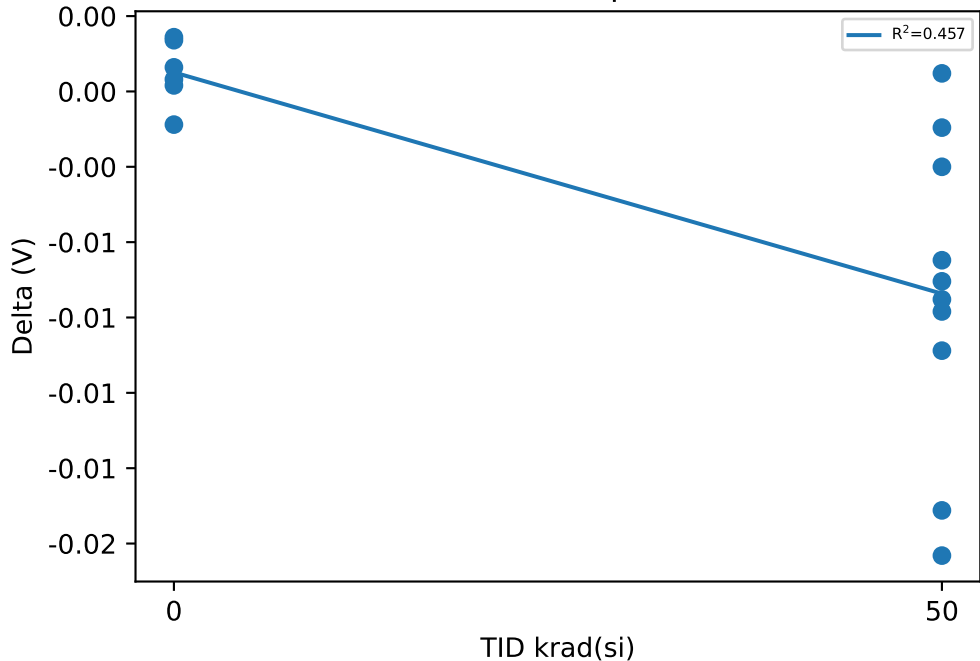
### TID vs Result Stats



### Test Results (Lower Limit = 3.2, Upper Limit = 3.6 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.4397	3.4243	-0.0154
4	50	HDR Biased w/ 84hr anneal	3.4475	3.4406	-0.0069
6	50	HDR Biased w/ 84hr anneal	3.4573	3.45	-0.0073
8	50	HDR Biased w/ 84hr anneal	3.4358	3.4302	-0.0056
9	50	HDR Biased w/ 84hr anneal	3.4254	3.426	0.0006
10	50	HDR unbiased	3.43	3.4161	-0.0139
11	50	HDR unbiased	3.4472	3.4447	-0.0025
12	50	HDR unbiased	3.44	3.4314	-0.0086
13	50	HDR unbiased	3.4374	3.4311	-0.0063
14	50	HDR unbiased	3.4251	3.4239	-0.0012
26	0	Correlation	3.4511	3.4528	0.0017
27	0	Correlation	3.4404	3.4422	0.0018
28	0	Correlation	3.4517	3.4519	0.0002
29	0	Correlation	3.4391	3.438	-0.0011
30	0	Correlation	3.4465	3.4473	0.0008
32	0	Correlation	3.431	3.4314	0.0004

### TID vs Post - Pre Exposure Delta

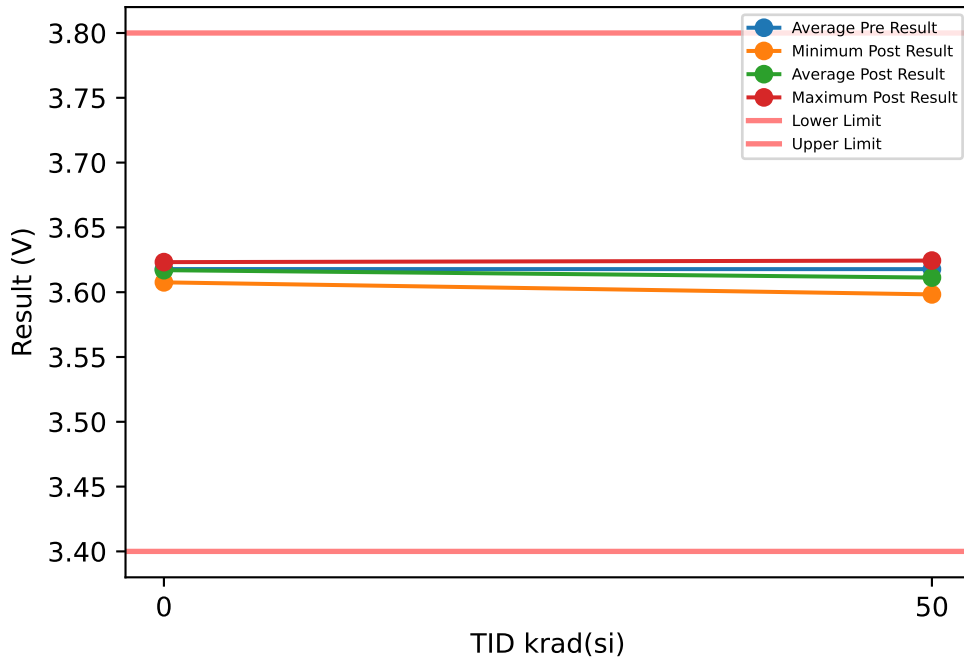


### Test Statistics (V)

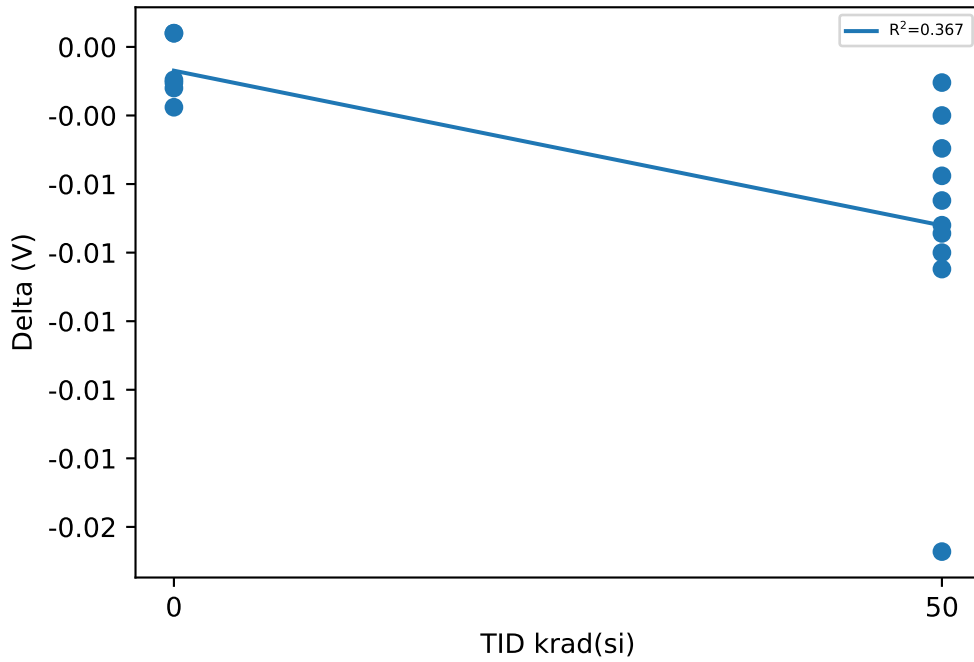
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	3.431	3.4433	3.4517	0.0079872	3.4314	3.4439	3.4528	0.0083512	-0.0011	0.00063333	0.0018	0.0010746
50	3.4251	3.4385	3.4573	0.010251	3.4161	3.4318	3.45	0.010419	-0.0154	-0.00671	0.0006	0.0051

# Device Test: 14.10 UVLO\_RISE\_VIN(\_THRESHOLD|RISE/VIN/5////@UVLO\_RISE\_VIN )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (Lower Limit = 3.4, Upper Limit = 3.8 (V))

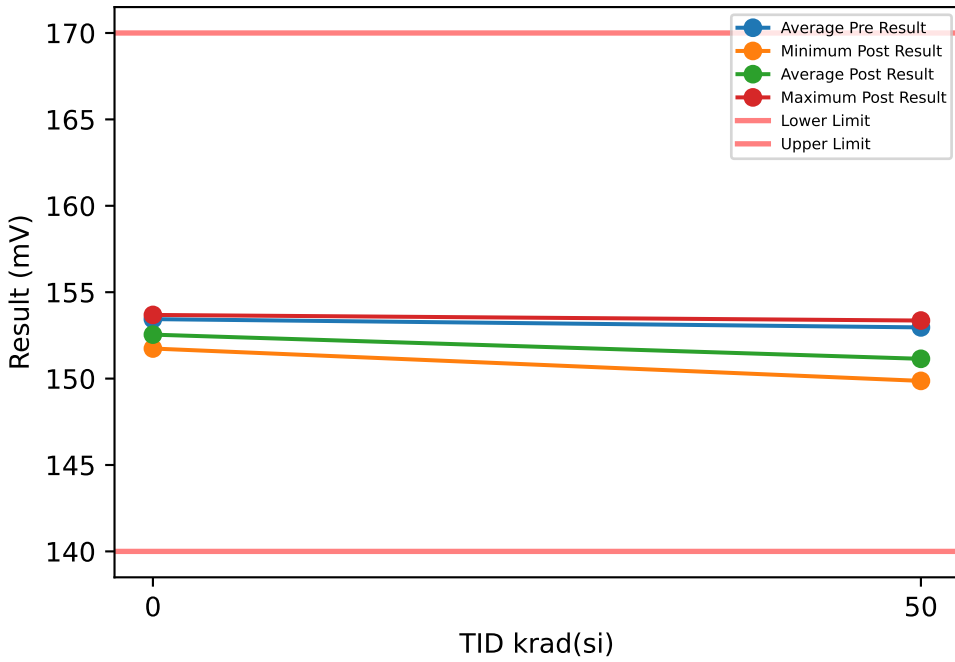
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.6304	3.6239	-0.0065
4	50	HDR Biased w/ 84hr anneal	3.6204	3.6157	-0.0047
6	50	HDR Biased w/ 84hr anneal	3.6288	3.622	-0.0068
8	50	HDR Biased w/ 84hr anneal	3.6182	3.6101	-0.0081
9	50	HDR Biased w/ 84hr anneal	3.602	3.5983	-0.0037
10	50	HDR unbiased	3.6098	3.6085	-0.0013
11	50	HDR unbiased	3.6235	3.6051	-0.0184
12	50	HDR unbiased	3.6066	3.601	-0.0056
13	50	HDR unbiased	3.6113	3.6038	-0.0075
14	50	HDR unbiased	3.6269	3.6244	-0.0025
26	0	Correlation	3.6244	3.6232	-0.0012
27	0	Correlation	3.6198	3.6203	0.0005
28	0	Correlation	3.6148	3.6135	-0.0013
29	0	Correlation	3.622	3.6225	0.0005
30	0	Correlation	3.6163	3.6148	-0.0015
32	0	Correlation	3.6098	3.6076	-0.0022

## 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	3.6098	3.6179	3.6244	0.0052997	3.6076	3.617	3.6232	0.0060832	-0.0022	-0.00086667	0.0005	0.0011147
50	3.602	3.6178	3.6304	0.0099068	3.5983	3.6113	3.6244	0.0096797	-0.0184	-0.00651	-0.0013	0.0047163

# Device Test: 14.12 UVLO\_HYST\_VIN(\_THRESHOLD|HYST/VIN/5////@UVLO\_HYST\_VIN )

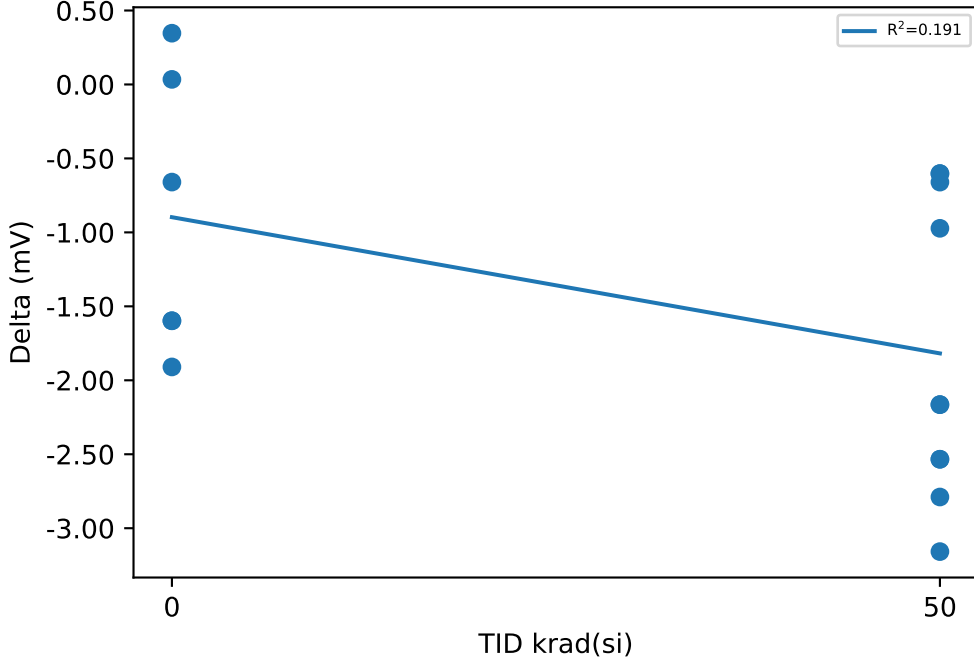
### TID vs Result Stats



### Test Results (Lower Limit = 140.0, Upper Limit = 170.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	153.96	153.36	-0.6025
4	50	HDR Biased w/ 84hr anneal	153.96	153.36	-0.6029
6	50	HDR Biased w/ 84hr anneal	152.4	150.24	-2.1643
8	50	HDR Biased w/ 84hr anneal	153.34	151.17	-2.1646
9	50	HDR Biased w/ 84hr anneal	153.34	150.55	-2.789
10	50	HDR unbiased	151.78	150.8	-0.9725
11	50	HDR unbiased	153.03	149.87	-3.1581
12	50	HDR unbiased	151.46	150.8	-0.6602
13	50	HDR unbiased	152.4	149.87	-2.5337
14	50	HDR unbiased	153.96	151.43	-2.5337
26	0	Correlation	152.4	151.74	-0.6599
27	0	Correlation	153.65	153.68	0.0344
28	0	Correlation	153.34	151.74	-1.5972
29	0	Correlation	151.78	152.12	0.3466
30	0	Correlation	154.9	153.3	-1.5979
32	0	Correlation	154.59	152.68	-1.9097

### TID vs Post - Pre Exposure Delta

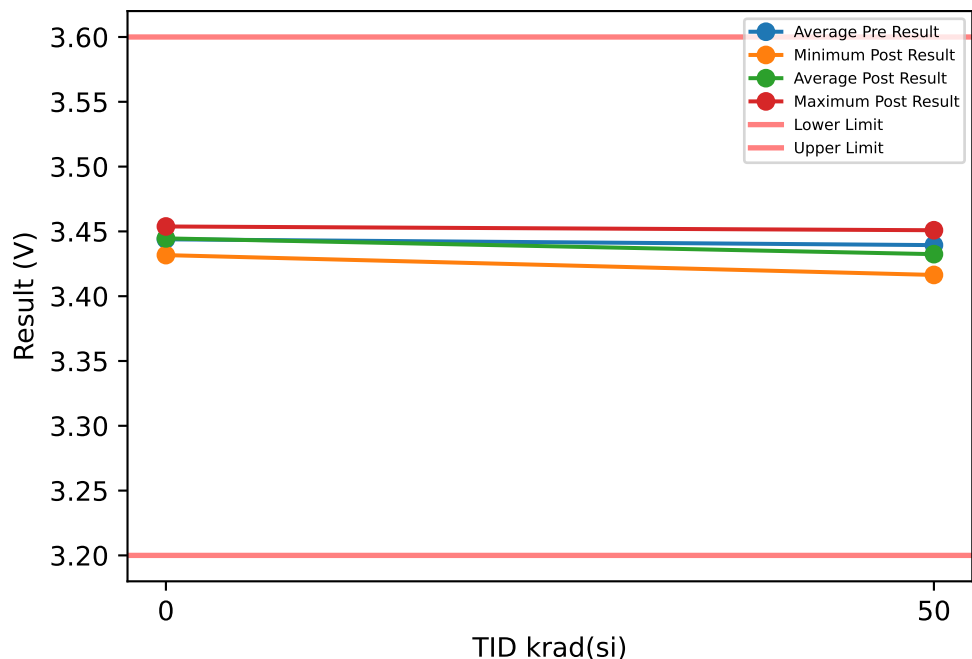


### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	151.78	153.44	154.9	1.2124	151.74	152.54	153.68	0.81977	-1.9097	-0.89728	0.3466	0.94629
50	151.46	152.96	153.96	0.91702	149.87	151.14	153.36	1.2724	-3.1581	-1.8182	-0.6025	1.0007

# Device Test: 14.13 UVLO\_RISE\_PVIN(\_THRESHOLD|RISE/PVIN/12////@UVLO\_RISE\_PVIN )

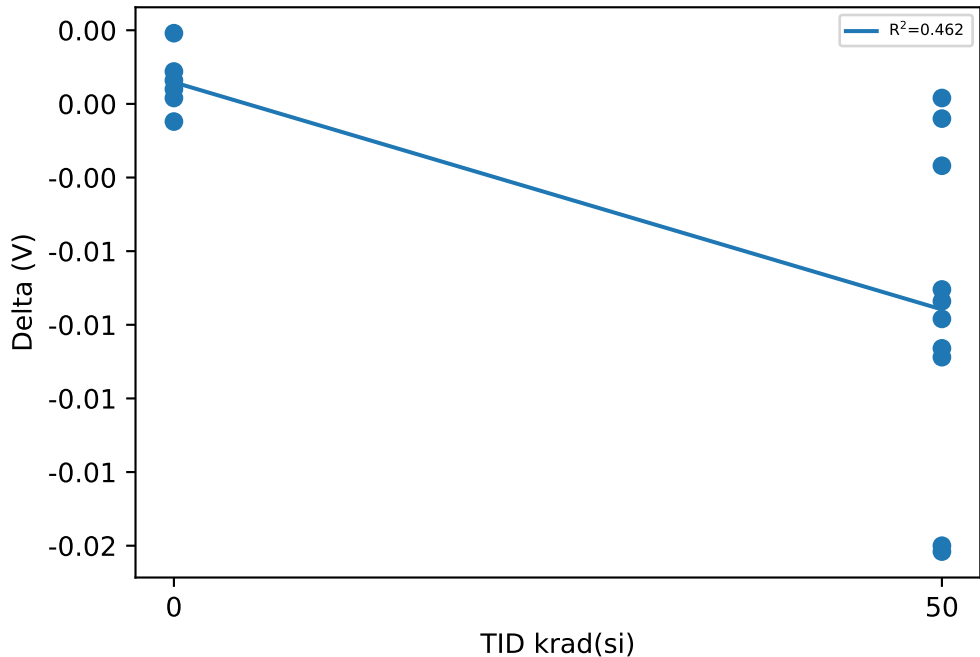
### TID vs Result Stats



### Test Results (Lower Limit = 3.2, Upper Limit = 3.6 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.4397	3.4247	-0.015
4	50	HDR Biased w/ 84hr anneal	3.4475	3.4402	-0.0073
6	50	HDR Biased w/ 84hr anneal	3.4576	3.4509	-0.0067
8	50	HDR Biased w/ 84hr anneal	3.4371	3.4308	-0.0063
9	50	HDR Biased w/ 84hr anneal	3.4258	3.426	0.0002
10	50	HDR unbiased	3.4316	3.4164	-0.0152
11	50	HDR unbiased	3.4478	3.4457	-0.0021
12	50	HDR unbiased	3.4413	3.4327	-0.0086
13	50	HDR unbiased	3.4394	3.4311	-0.0083
14	50	HDR unbiased	3.4264	3.4259	-0.0005
26	0	Correlation	3.4517	3.4525	0.0008
27	0	Correlation	3.4404	3.4428	0.0024
28	0	Correlation	3.4527	3.4538	0.0011
29	0	Correlation	3.4384	3.4389	0.0005
30	0	Correlation	3.4478	3.448	0.0002
32	0	Correlation	3.4323	3.4317	-0.0006

### TID vs Post - Pre Exposure Delta

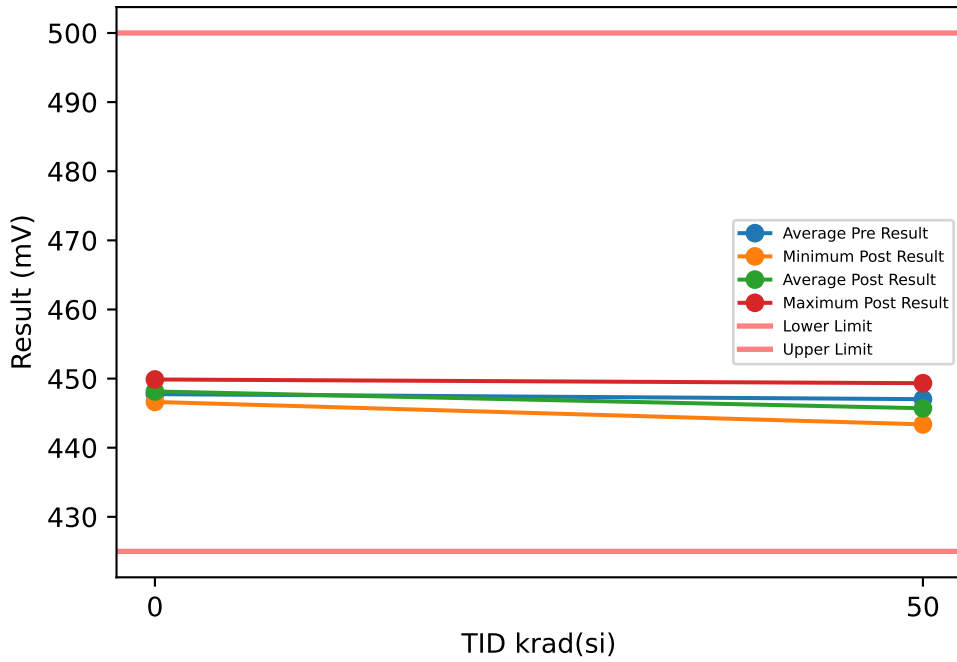


### Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	3.4323	3.4439	3.4527	0.0081308	3.4317	3.4446	3.4538	0.0084941	-0.0006	0.00073333	0.0024	0.0010033
50	3.4258	3.4394	3.4576	0.009951	3.4164	3.4324	3.4509	0.01045	-0.0152	-0.00698	0.0002	0.0053151

Device Test: 14.15 UVLO\_HYST\_PVIN(\_THRESHOLD|HYST/PVIN/12////@UVLO\_HYST\_PVIN )

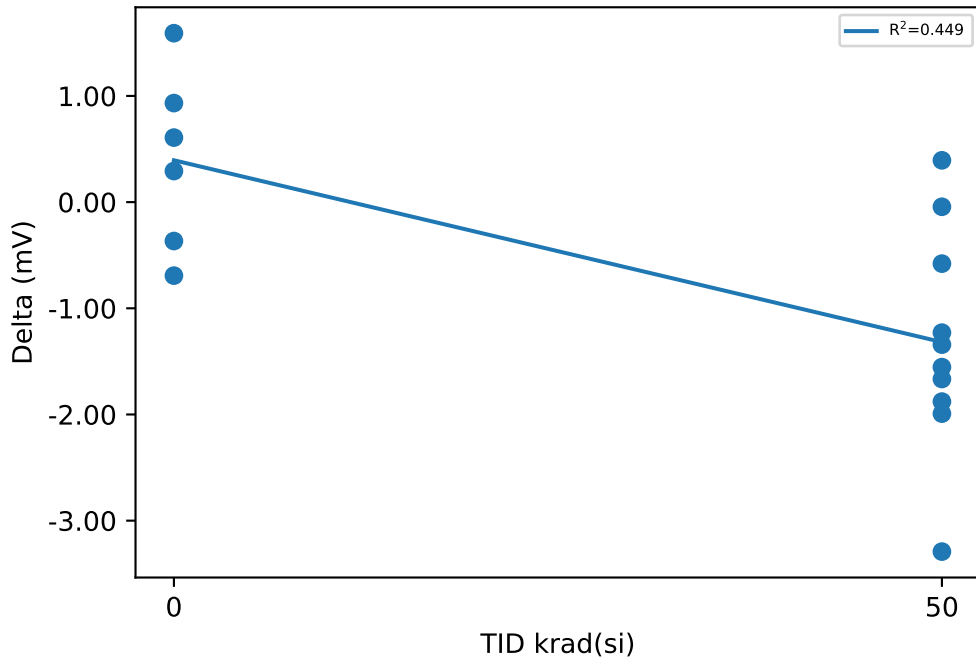
TID vs Result Stats



Test Results (Lower Limit = 425.0, Upper Limit = 500.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	446.67	445.44	-1.2293
4	50	HDR Biased w/ 84hr anneal	447.32	445.44	-1.8787
6	50	HDR Biased w/ 84hr anneal	449.91	449.33	-0.5793
8	50	HDR Biased w/ 84hr anneal	446.67	445.11	-1.554
9	50	HDR Biased w/ 84hr anneal	444.07	444.46	0.3937
10	50	HDR unbiased	446.67	443.38	-3.2914
11	50	HDR unbiased	448.62	446.95	-1.666
12	50	HDR unbiased	446.99	445	-1.9919
13	50	HDR unbiased	447.32	445.98	-1.342
14	50	HDR unbiased	446.02	445.97	-0.0438
26	0	Correlation	448.94	448.57	-0.3665
27	0	Correlation	446.02	447.61	1.5909
28	0	Correlation	448.94	449.87	0.9327
29	0	Correlation	446.67	446.96	0.2925
30	0	Correlation	448.62	449.22	0.6077
32	0	Correlation	447.32	446.62	-0.6923

TID vs Post - Pre Exposure Delta

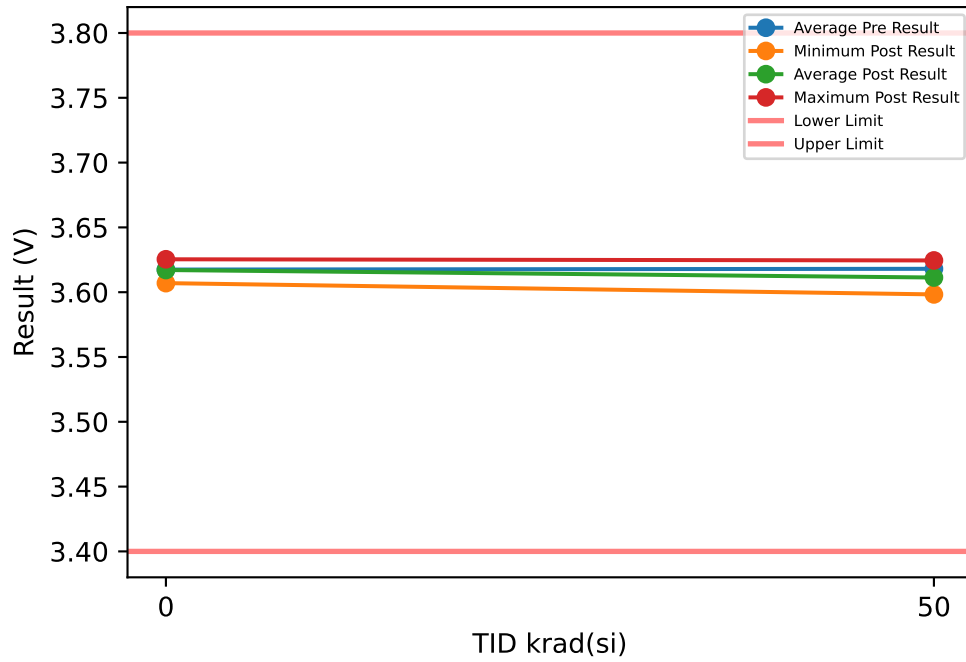


Test Statistics (mV)

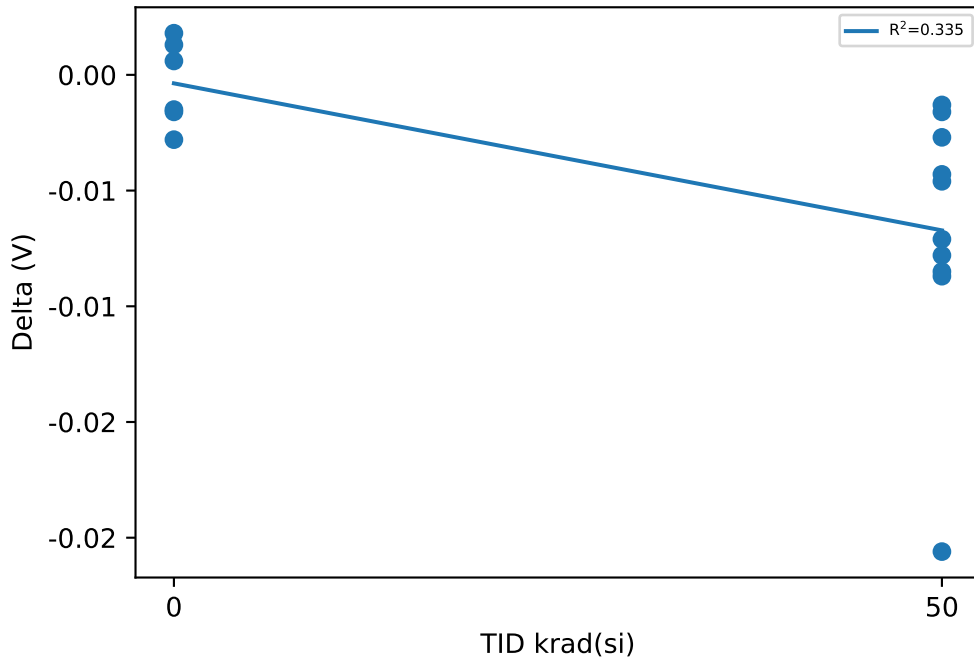
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	446.02	447.75	448.94	1.2599	446.62	448.14	449.87	1.2909	-0.6923	0.39417	1.5909	0.84109
50	444.07	447.02	449.91	1.5336	443.38	445.71	449.33	1.5922	-3.2914	-1.3183	0.3937	1.0513

# Device Test: 14.16 UVLO\_RISE\_VIN(\_THRESHOLD|RISE/VIN/12////@UVLO\_RISE\_VIN )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Lower Limit = 3.4, Upper Limit = 3.8 (V))

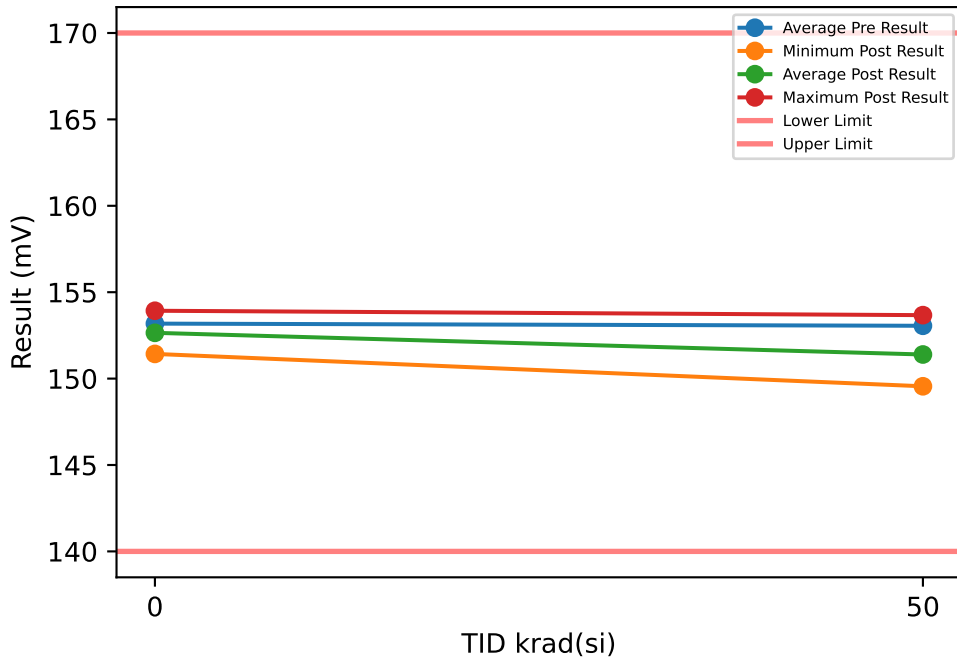
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.631	3.6239	-0.0071
4	50	HDR Biased w/ 84hr anneal	3.6207	3.6161	-0.0046
6	50	HDR Biased w/ 84hr anneal	3.6288	3.6245	-0.0043
8	50	HDR Biased w/ 84hr anneal	3.6179	3.6092	-0.0087
9	50	HDR Biased w/ 84hr anneal	3.601	3.5983	-0.0027
10	50	HDR unbiased	3.6101	3.6085	-0.0016
11	50	HDR unbiased	3.6254	3.6048	-0.0206
12	50	HDR unbiased	3.6082	3.6004	-0.0078
13	50	HDR unbiased	3.612	3.6035	-0.0085
14	50	HDR unbiased	3.6254	3.6241	-0.0013
26	0	Correlation	3.6241	3.6254	0.0013
27	0	Correlation	3.6182	3.62	0.0018
28	0	Correlation	3.6148	3.6132	-0.0016
29	0	Correlation	3.6216	3.6222	0.0006
30	0	Correlation	3.6163	3.6148	-0.0015
32	0	Correlation	3.6098	3.607	-0.0028

### 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	3.6098	3.6175	3.6241	0.0050769	3.607	3.6171	3.6254	0.0067204	-0.0028	-0.00036667	0.0018	0.0018511
50	3.601	3.6181	3.631	0.0099213	3.5983	3.6113	3.6245	0.010127	-0.0206	-0.00672	-0.0013	0.0056091

# Device Test: 14.18 UVLO\_HYST\_VIN(\_THRESHOLD|HYST/VIN/12////@UVLO\_HYST\_VIN )

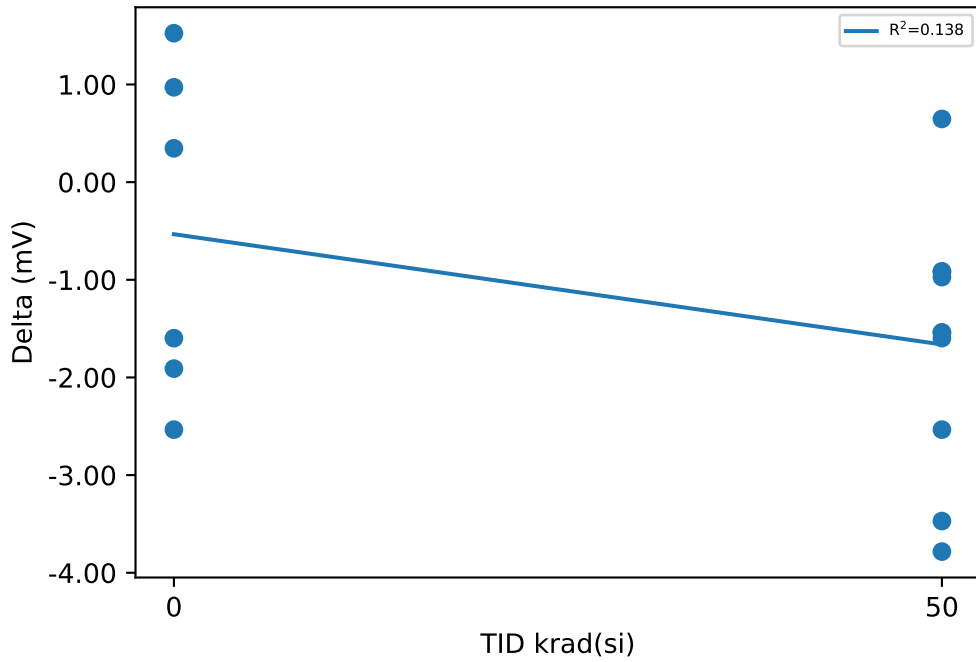
### TID vs Result Stats



### Test Results (Lower Limit = 140.0, Upper Limit = 170.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	153.96	153.05	-0.915
4	50	HDR Biased w/ 84hr anneal	154.59	153.67	-0.9148
6	50	HDR Biased w/ 84hr anneal	152.4	153.05	0.6471
8	50	HDR Biased w/ 84hr anneal	153.03	151.49	-1.5397
9	50	HDR Biased w/ 84hr anneal	152.09	150.55	-1.5399
10	50	HDR unbiased	152.4	150.8	-1.5974
11	50	HDR unbiased	153.65	149.87	-3.7832
12	50	HDR unbiased	153.03	150.49	-2.5344
13	50	HDR unbiased	153.03	149.56	-3.4704
14	50	HDR unbiased	152.4	151.43	-0.9725
26	0	Correlation	152.4	153.93	1.5251
27	0	Correlation	152.4	153.37	0.9711
28	0	Correlation	153.34	151.43	-1.9095
29	0	Correlation	151.46	151.81	0.3465
30	0	Correlation	154.9	153.3	-1.5979
32	0	Correlation	154.59	152.05	-2.5344

### TID vs Post - Pre Exposure Delta



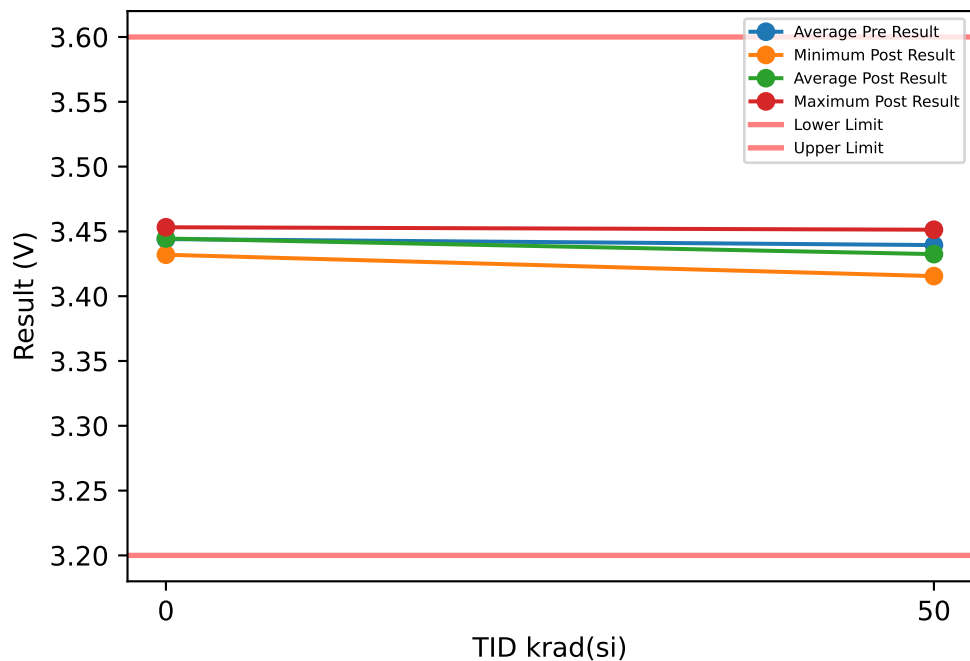
### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	151.46	153.18	154.9	1.3506	151.43	152.65	153.93	1.0128	-2.5344	-0.53318	1.5251	1.6915
50	152.09	153.06	154.59	0.79895	149.56	151.39	153.67	1.4244	-3.7832	-1.662	0.6471	1.3119

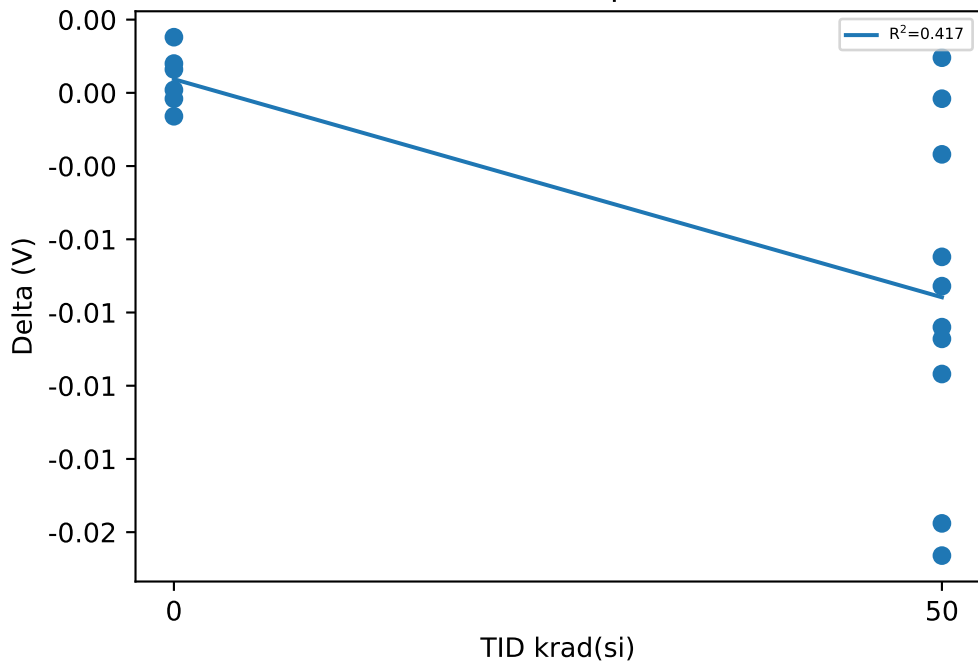


# Device Test: 14.19 UVLO\_RISE\_PVIN(\_THRESHOLD|RISE/PVIN/14////@UVLO\_RISE\_PVIN )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Lower Limit = 3.2, Upper Limit = 3.6 (V))

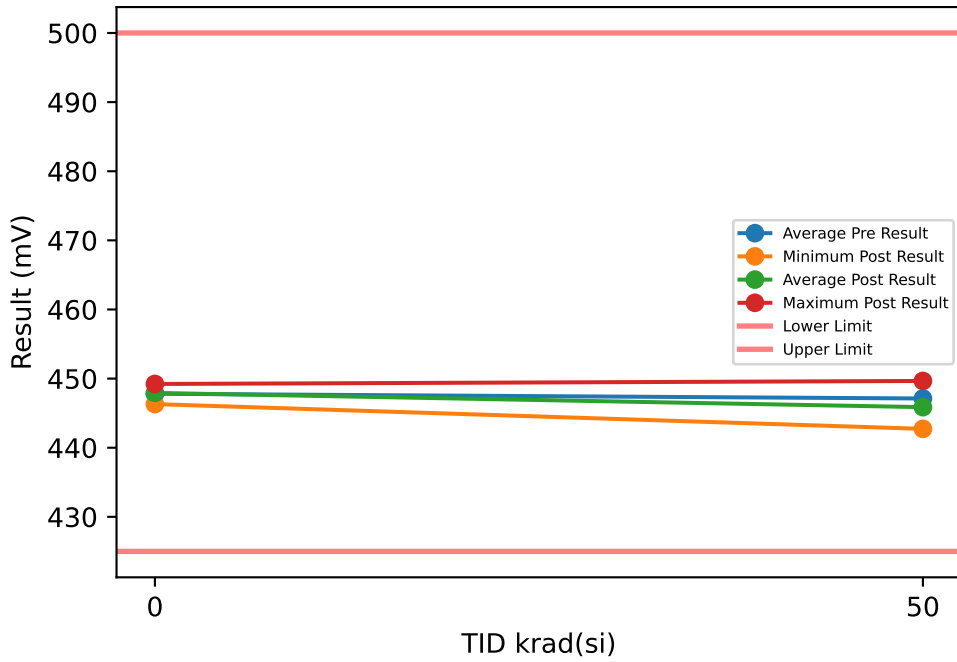
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.44	3.4253	-0.0147
4	50	HDR Biased w/ 84hr anneal	3.4482	3.4402	-0.008
6	50	HDR Biased w/ 84hr anneal	3.4579	3.4513	-0.0066
8	50	HDR Biased w/ 84hr anneal	3.4374	3.4318	-0.0056
9	50	HDR Biased w/ 84hr anneal	3.4254	3.4266	0.0012
10	50	HDR unbiased	3.4313	3.4155	-0.0158
11	50	HDR unbiased	3.4475	3.4454	-0.0021
12	50	HDR unbiased	3.4413	3.4317	-0.0096
13	50	HDR unbiased	3.4391	3.4307	-0.0084
14	50	HDR unbiased	3.4264	3.4262	-0.0002
26	0	Correlation	3.4524	3.4532	0.0008
27	0	Correlation	3.4413	3.4432	0.0019
28	0	Correlation	3.453	3.4528	-0.0002
29	0	Correlation	3.4391	3.4383	-0.0008
30	0	Correlation	3.4475	3.4476	0.0001
32	0	Correlation	3.431	3.432	0.001

### 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	3.431	3.4441	3.453	0.0085334	3.432	3.4445	3.4532	0.0083734	-0.0008	0.00046667	0.0019	0.00096264
50	3.4254	3.4394	3.4579	0.010132	3.4155	3.4325	3.4513	0.010535	-0.0158	-0.00698	0.0012	0.0056377

Device Test: 14.21 UVLO\_HYST\_PVIN(\_THRESHOLD|HYST/PVIN/14////@UVLO\_HYST\_PVIN )

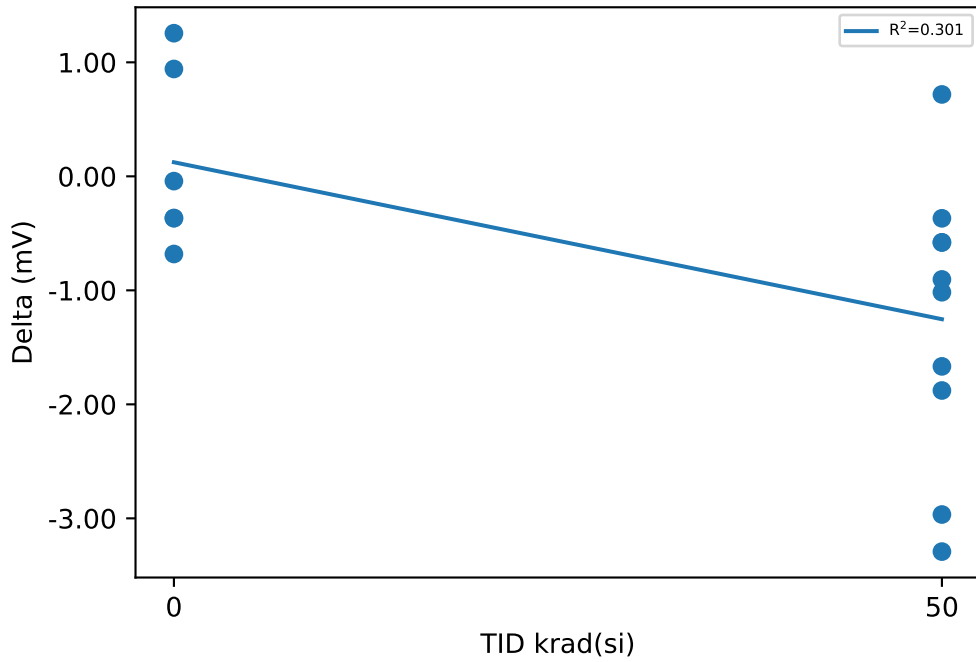
TID vs Result Stats



Test Results (Lower Limit = 425.0, Upper Limit = 500.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	446.99	446.09	-0.9043
4	50	HDR Biased w/ 84hr anneal	447.64	445.76	-1.8785
6	50	HDR Biased w/ 84hr anneal	450.24	449.66	-0.5793
8	50	HDR Biased w/ 84hr anneal	446.99	446.41	-0.5798
9	50	HDR Biased w/ 84hr anneal	444.07	444.79	0.7184
10	50	HDR unbiased	446.02	442.73	-3.2916
11	50	HDR unbiased	448.62	447.6	-1.0166
12	50	HDR unbiased	446.99	444.03	-2.9663
13	50	HDR unbiased	447.32	445.65	-1.6669
14	50	HDR unbiased	446.34	445.98	-0.3682
26	0	Correlation	449.59	449.22	-0.3662
27	0	Correlation	446.99	447.93	0.9417
28	0	Correlation	448.94	448.57	-0.3667
29	0	Correlation	446.99	446.31	-0.6812
30	0	Correlation	448.62	448.57	-0.0419
32	0	Correlation	445.69	446.95	1.2555

TID vs Post - Pre Exposure Delta

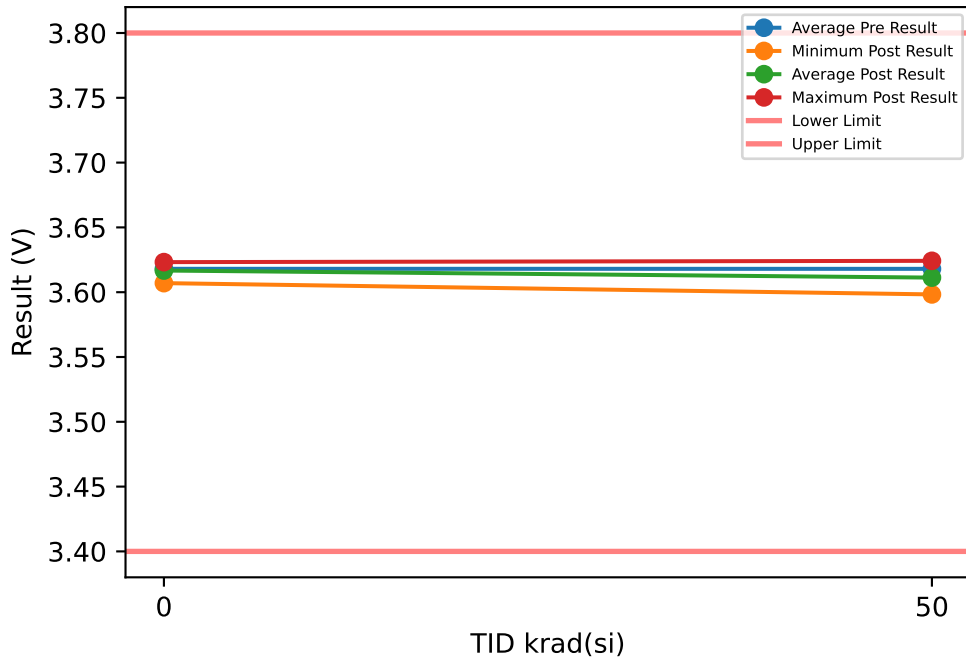


Test Statistics (mV)

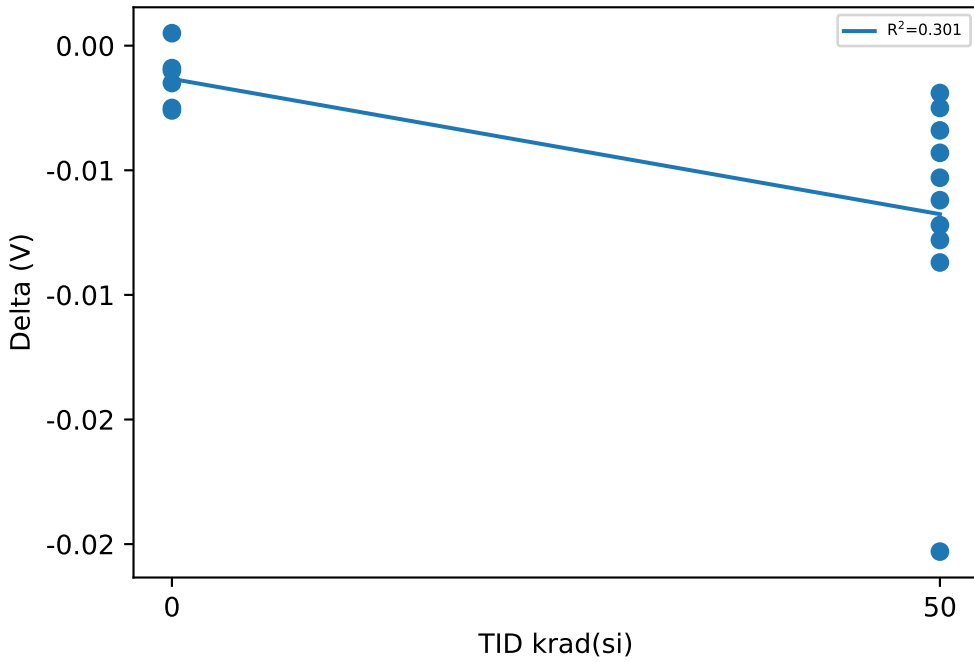
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	445.69	447.8	449.59	1.4769	446.31	447.93	449.22	1.1029	-0.6812	0.12353	1.2555	0.78815
50	444.07	447.12	450.24	1.6137	442.73	445.87	449.66	1.8917	-3.2916	-1.2533	0.7184	1.2206

# Device Test: 14.22 UVLO\_RISE\_VIN(\_THRESHOLD|RISE/VIN/14////@UVLO\_RISE\_VIN )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Lower Limit = 3.4, Upper Limit = 3.8 (V))

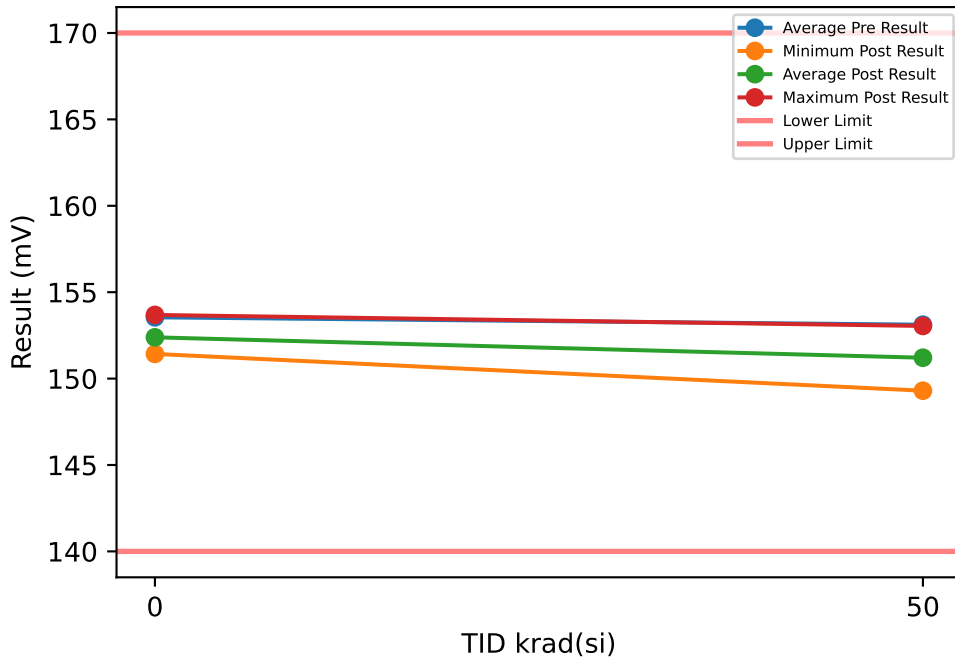
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.6307	3.6229	-0.0078
4	50	HDR Biased w/ 84hr anneal	3.6204	3.6151	-0.0053
6	50	HDR Biased w/ 84hr anneal	3.6285	3.6242	-0.0043
8	50	HDR Biased w/ 84hr anneal	3.6182	3.6095	-0.0087
9	50	HDR Biased w/ 84hr anneal	3.6017	3.5983	-0.0034
10	50	HDR unbiased	3.6098	3.6079	-0.0019
11	50	HDR unbiased	3.626	3.6057	-0.0203
12	50	HDR unbiased	3.6063	3.6001	-0.0062
13	50	HDR unbiased	3.612	3.6048	-0.0072
14	50	HDR unbiased	3.6266	3.6241	-0.0025
26	0	Correlation	3.6241	3.6232	-0.0009
27	0	Correlation	3.6195	3.62	0.0005
28	0	Correlation	3.6145	3.6135	-0.001
29	0	Correlation	3.6244	3.6218	-0.0026
30	0	Correlation	3.6163	3.6148	-0.0015
32	0	Correlation	3.6095	3.607	-0.0025

### 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	3.6095	3.6181	3.6244	0.005793	3.607	3.6167	3.6232	0.006117	-0.0026	-0.0013333	0.0005	0.0011535
50	3.6017	3.618	3.6307	0.010117	3.5983	3.6113	3.6242	0.0097871	-0.0203	-0.00676	-0.0019	0.0052697

# Device Test: 14.24 UVLO\_HYST\_VIN(\_THRESHOLD|HYST/VIN/14////@UVLO\_HYST\_VIN )

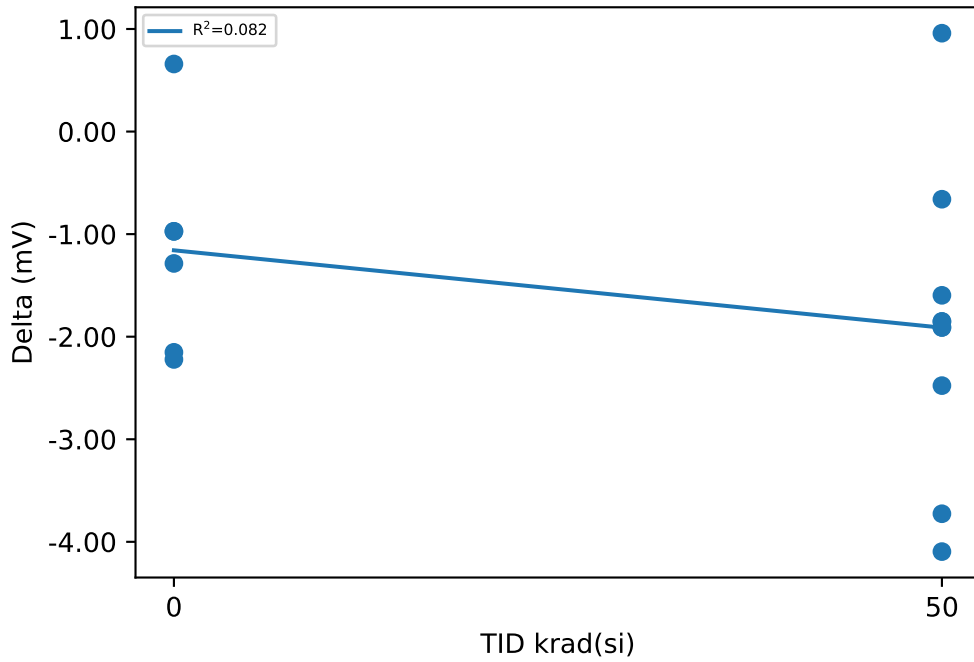
### TID vs Result Stats



### Test Results (Lower Limit = 140.0, Upper Limit = 170.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	154.27	152.42	-1.8518
4	50	HDR Biased w/ 84hr anneal	154.27	152.42	-1.8518
6	50	HDR Biased w/ 84hr anneal	152.09	153.05	0.959
8	50	HDR Biased w/ 84hr anneal	153.34	150.86	-2.477
9	50	HDR Biased w/ 84hr anneal	153.03	149.3	-3.7262
10	50	HDR unbiased	152.09	150.49	-1.5966
11	50	HDR unbiased	154.27	150.18	-4.0953
12	50	HDR unbiased	151.15	150.49	-0.6597
13	50	HDR unbiased	153.03	151.12	-1.9095
14	50	HDR unbiased	153.65	151.74	-1.9097
26	0	Correlation	152.4	151.43	-0.9725
27	0	Correlation	153.03	153.68	0.6587
28	0	Correlation	153.03	152.05	-0.973
29	0	Correlation	153.96	151.81	-2.1522
30	0	Correlation	154.9	153.61	-1.2858
32	0	Correlation	153.96	151.74	-2.2218

### TID vs Post - Pre Exposure Delta

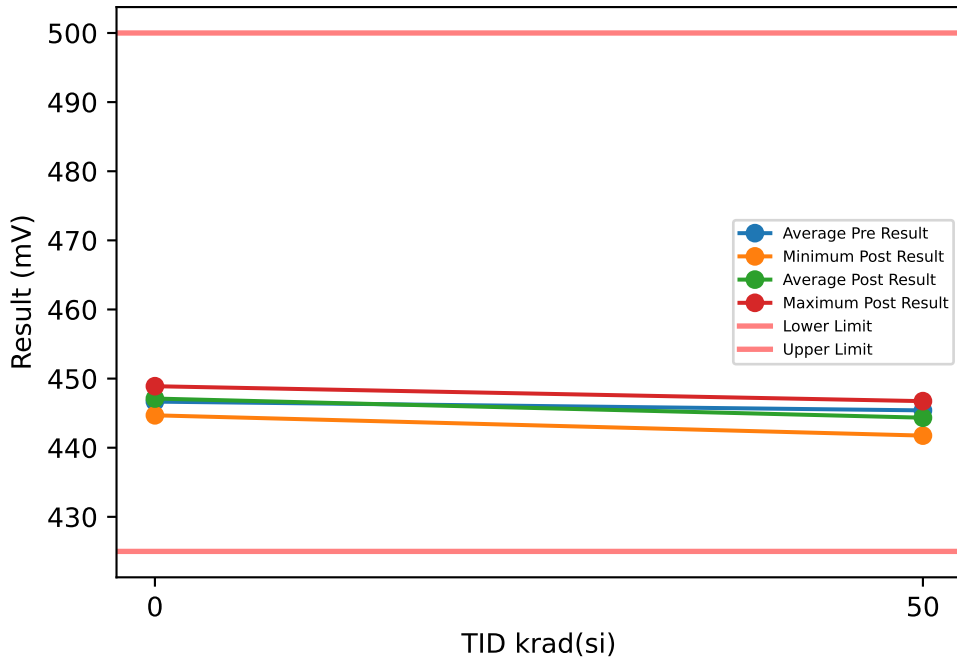


### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	152.4	153.55	154.9	0.89789	151.43	152.39	153.68	0.99696	-2.2218	-1.1578	0.6587	1.0493
50	151.15	153.12	154.27	1.0723	149.3	151.21	153.05	1.1773	-4.0953	-1.9119	0.959	1.4258

Device Test: 14.3 UVLO\_HYST\_PVIN(\_THRESHOLD|HYST/PVIN/4.5////@UVLO\_HYST\_PVIN )

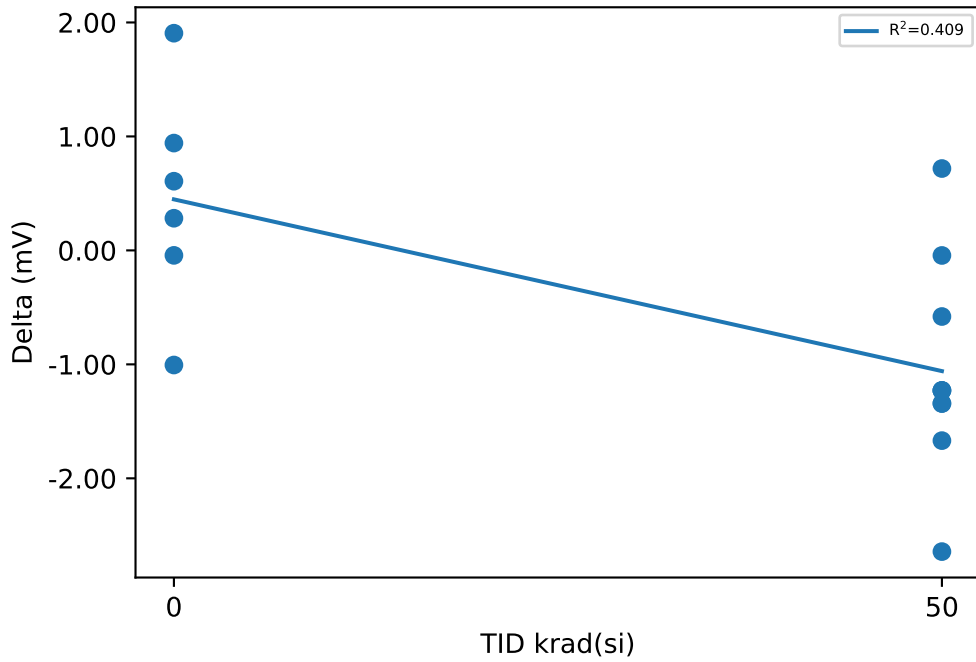
TID vs Result Stats



Test Results (Lower Limit = 425.0, Upper Limit = 500.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	446.34	445.11	-1.2293
4	50	HDR Biased w/ 84hr anneal	446.02	444.79	-1.2295
6	50	HDR Biased w/ 84hr anneal	447.97	446.74	-1.2292
8	50	HDR Biased w/ 84hr anneal	445.37	444.79	-0.5801
9	50	HDR Biased w/ 84hr anneal	443.75	444.46	0.7184
10	50	HDR unbiased	443.42	441.75	-1.6691
11	50	HDR unbiased	446.99	445.65	-1.3422
12	50	HDR unbiased	444.72	442.08	-2.6429
13	50	HDR unbiased	444.4	444.35	-0.0444
14	50	HDR unbiased	445.05	443.7	-1.3436
26	0	Correlation	446.99	448.9	1.9058
27	0	Correlation	446.02	446.96	0.9417
28	0	Correlation	447.64	447.92	0.2822
29	0	Correlation	445.69	444.69	-1.0057
30	0	Correlation	447.64	448.25	0.607
32	0	Correlation	446.02	445.98	-0.0436

TID vs Post - Pre Exposure Delta

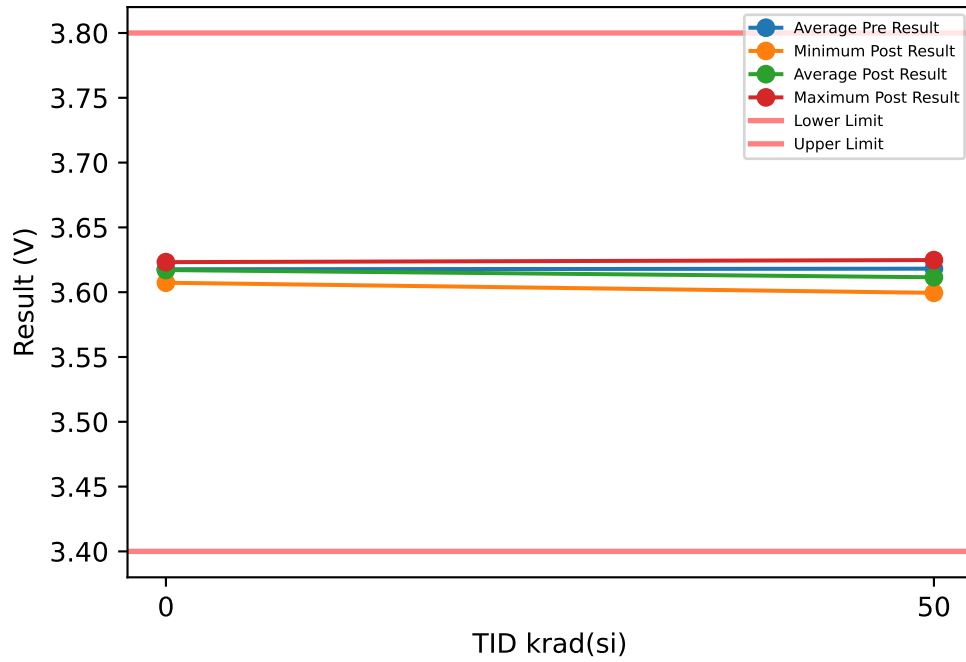


Test Statistics (mV)

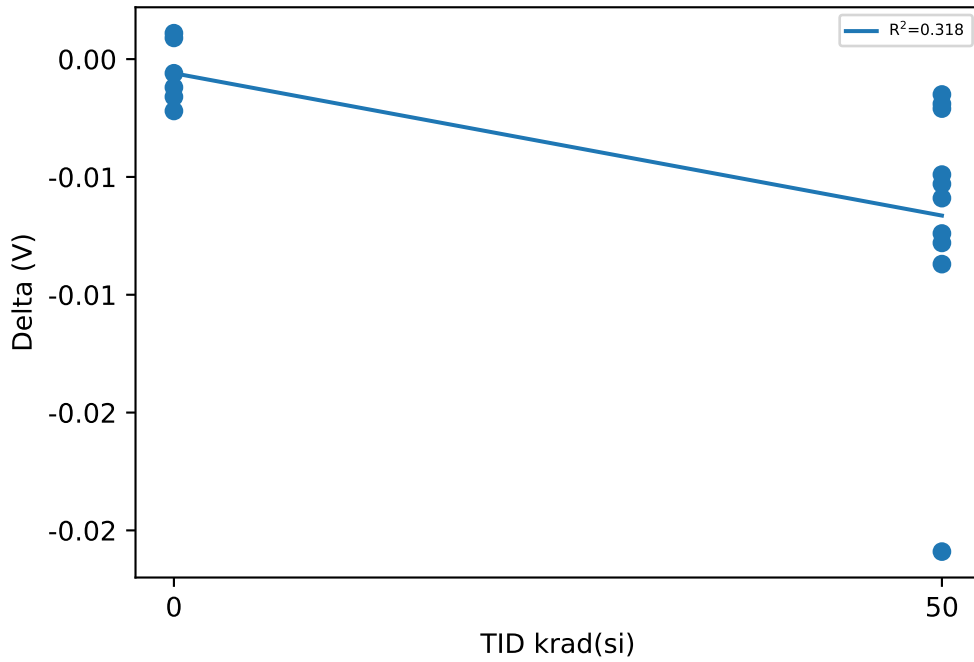
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	445.69	446.67	447.64	0.87096	444.69	447.12	448.9	1.5704	-1.0057	0.4479	1.9058	0.97741
50	443.42	445.4	447.97	1.4392	441.75	444.34	446.74	1.5167	-2.6429	-1.0592	0.7184	0.91573

# Device Test: 14.4 UVLO\_RISE\_VIN(\_THRESHOLD|RISE/VIN/4.5////@UVLO\_RISE\_VIN )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Lower Limit = 3.4, Upper Limit = 3.8 (V))

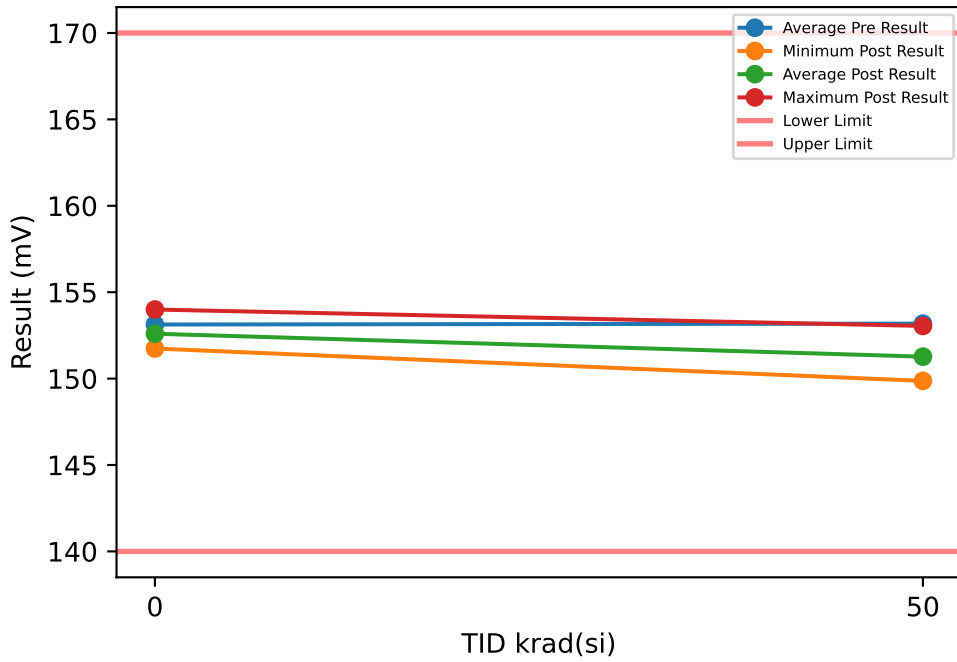
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.631	3.6236	-0.0074
4	50	HDR Biased w/ 84hr anneal	3.6204	3.6151	-0.0053
6	50	HDR Biased w/ 84hr anneal	3.6288	3.6239	-0.0049
8	50	HDR Biased w/ 84hr anneal	3.6182	3.6095	-0.0087
9	50	HDR Biased w/ 84hr anneal	3.601	3.5995	-0.0015
10	50	HDR unbiased	3.6107	3.6088	-0.0019
11	50	HDR unbiased	3.6263	3.6054	-0.0209
12	50	HDR unbiased	3.6066	3.6007	-0.0059
13	50	HDR unbiased	3.6116	3.6038	-0.0078
14	50	HDR unbiased	3.6269	3.6248	-0.0021
26	0	Correlation	3.6244	3.6232	-0.0012
27	0	Correlation	3.6198	3.6209	0.0011
28	0	Correlation	3.6148	3.6132	-0.0016
29	0	Correlation	3.6216	3.6225	0.0009
30	0	Correlation	3.616	3.6154	-0.0006
32	0	Correlation	3.6095	3.6073	-0.0022

### 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	3.6095	3.6177	3.6244	0.0053488	3.6073	3.6171	3.6232	0.0062442	-0.0022	-0.0006	0.0011	0.0013461
50	3.601	3.6181	3.631	0.010288	3.5995	3.6115	3.6248	0.0097664	-0.0209	-0.00664	-0.0015	0.0056212

Device Test: 14.6 UVLO\_HYST\_VIN(\_THRESHOLD|HYST/VIN/4.5////@UVLO\_HYST\_VIN )

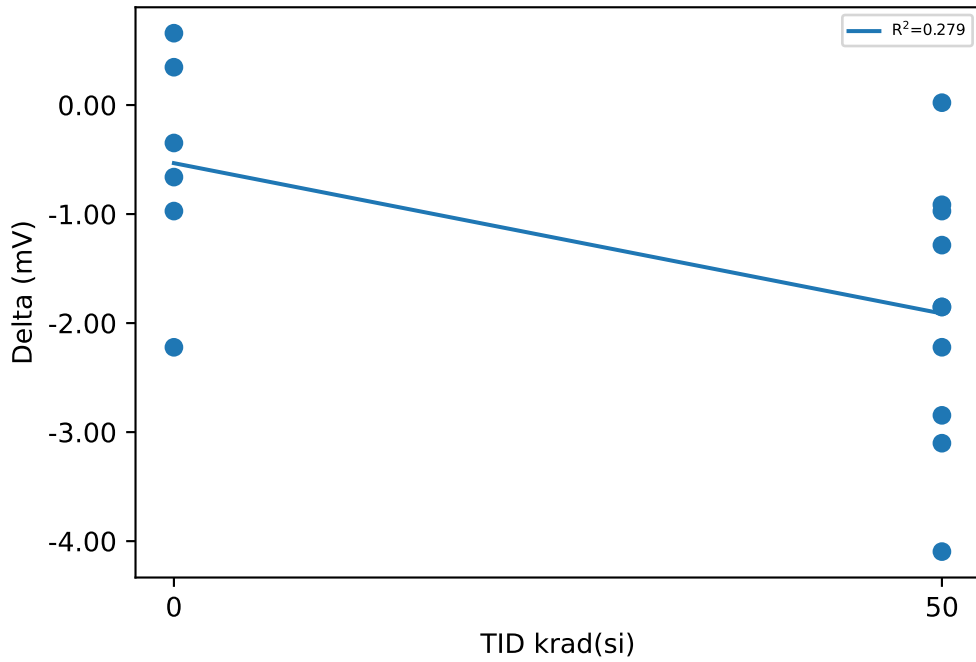
TID vs Result Stats



Test Results (Lower Limit = 140.0, Upper Limit = 170.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	154.59	152.74	-1.852
4	50	HDR Biased w/ 84hr anneal	153.96	153.05	-0.9148
6	50	HDR Biased w/ 84hr anneal	152.09	152.11	0.0217
8	50	HDR Biased w/ 84hr anneal	153.34	150.24	-3.1016
9	50	HDR Biased w/ 84hr anneal	152.4	150.55	-1.8521
10	50	HDR unbiased	152.71	151.43	-1.2848
11	50	HDR unbiased	154.59	150.49	-4.0958
12	50	HDR unbiased	151.46	150.49	-0.9725
13	50	HDR unbiased	152.71	149.87	-2.846
14	50	HDR unbiased	153.96	151.74	-2.2216
26	0	Correlation	152.71	151.74	-0.9725
27	0	Correlation	153.65	154	0.3469
28	0	Correlation	152.09	151.74	-0.348
29	0	Correlation	151.46	152.12	0.659
30	0	Correlation	154.59	153.93	-0.6609
32	0	Correlation	154.27	152.05	-2.222

TID vs Post - Pre Exposure Delta

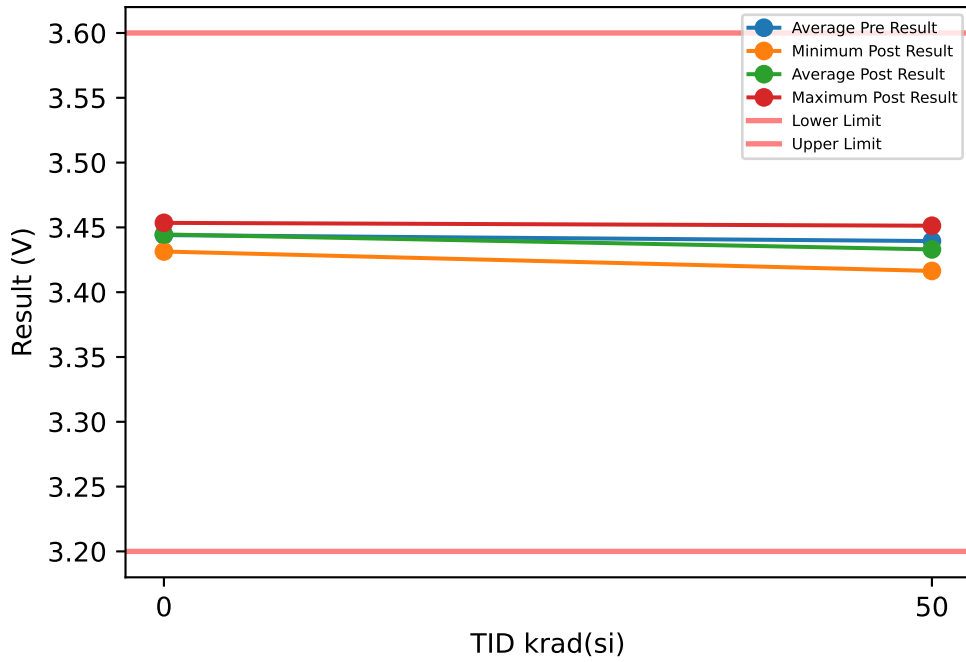


Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	151.46	153.13	154.59	1.2442	151.74	152.6	154	1.0691	-2.222	-0.53292	0.659	1.0287
50	151.46	153.18	154.59	1.0743	149.87	151.27	153.05	1.1069	-4.0958	-1.912	0.0217	1.2096

Device Test: 14.7 UVLO\_RISE\_PVIN(\_THRESHOLD|RISE/PVIN/5////@UVLO\_RISE\_PVIN )

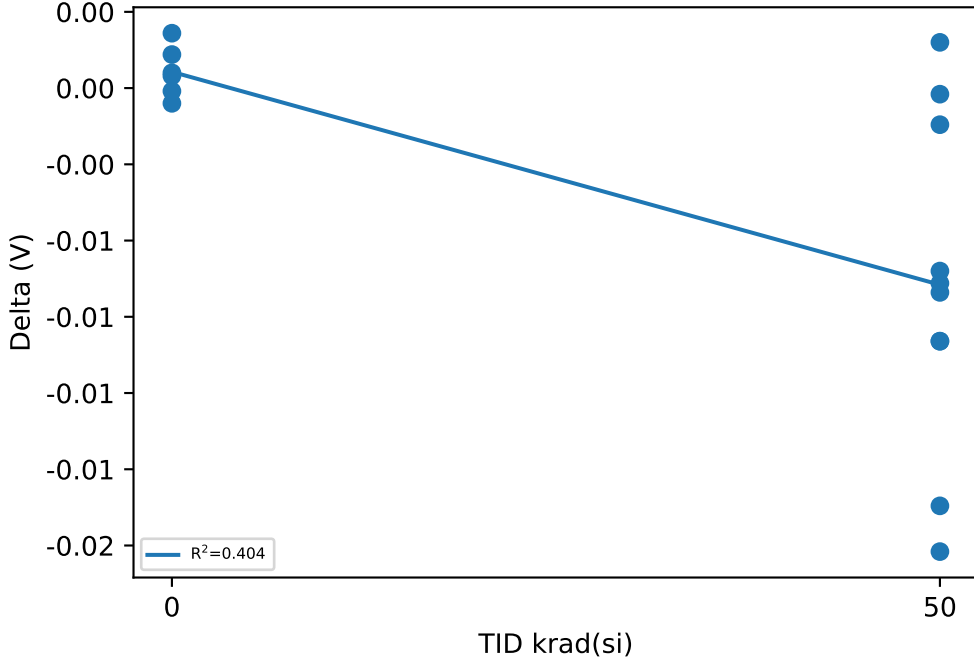
TID vs Result Stats



Test Results (Lower Limit = 3.2, Upper Limit = 3.6 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.4397	3.426	-0.0137
4	50	HDR Biased w/ 84hr anneal	3.4485	3.4402	-0.0083
6	50	HDR Biased w/ 84hr anneal	3.4573	3.4513	-0.006
8	50	HDR Biased w/ 84hr anneal	3.4378	3.4311	-0.0067
9	50	HDR Biased w/ 84hr anneal	3.4254	3.4269	0.0015
10	50	HDR unbiased	3.4316	3.4164	-0.0152
11	50	HDR unbiased	3.4475	3.4463	-0.0012
12	50	HDR unbiased	3.441	3.4327	-0.0083
13	50	HDR unbiased	3.4391	3.4327	-0.0064
14	50	HDR unbiased	3.4267	3.4265	-0.0002
26	0	Correlation	3.4521	3.4525	0.0004
27	0	Correlation	3.441	3.4428	0.0018
28	0	Correlation	3.4524	3.4535	0.0011
29	0	Correlation	3.4394	3.4393	-0.0001
30	0	Correlation	3.4475	3.448	0.0005
32	0	Correlation	3.4319	3.4314	-0.0005

TID vs Post - Pre Exposure Delta



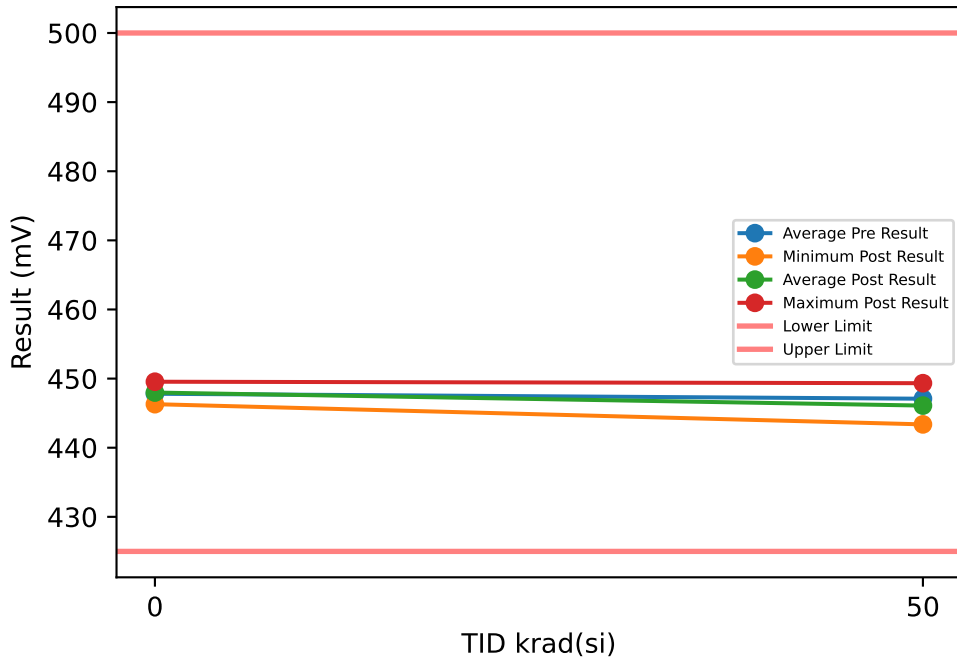
Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	3.4319	3.4441	3.4524	0.0080619	3.4314	3.4446	3.4535	0.0084705	-0.0005	0.00053333	0.0018	0.00082624
50	3.4254	3.4395	3.4573	0.0099567	3.4164	3.433	3.4513	0.010389	-0.0152	-0.00645	0.0015	0.0054372

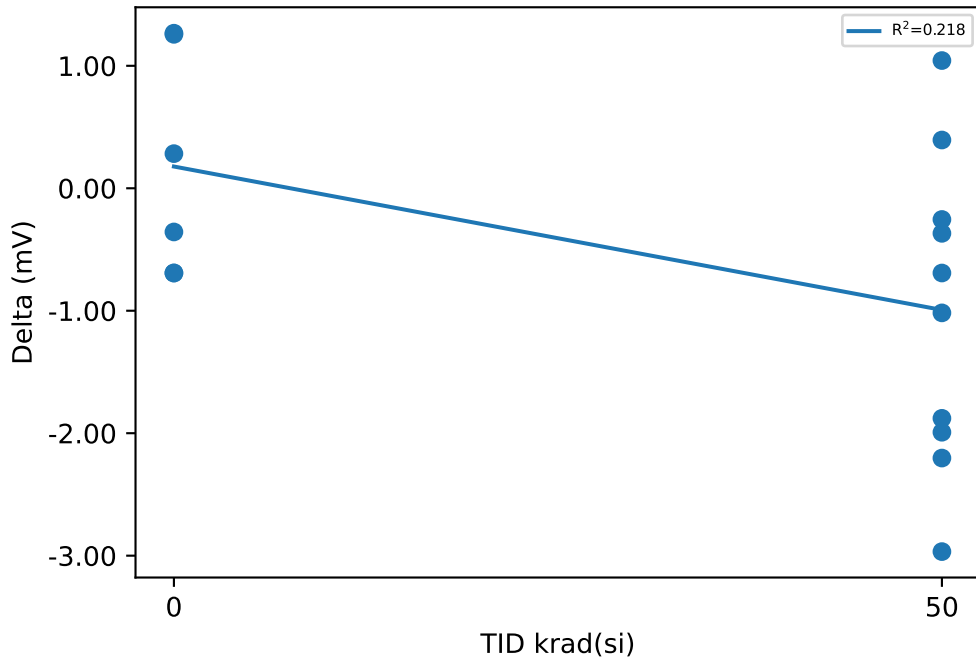


Device Test: 14.9 UVLO\_HYST\_PVIN(\_THRESHOLD|HYST/PVIN/5////@UVLO\_HYST\_PVIN )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 425.0, Upper Limit = 500.0 (mV))

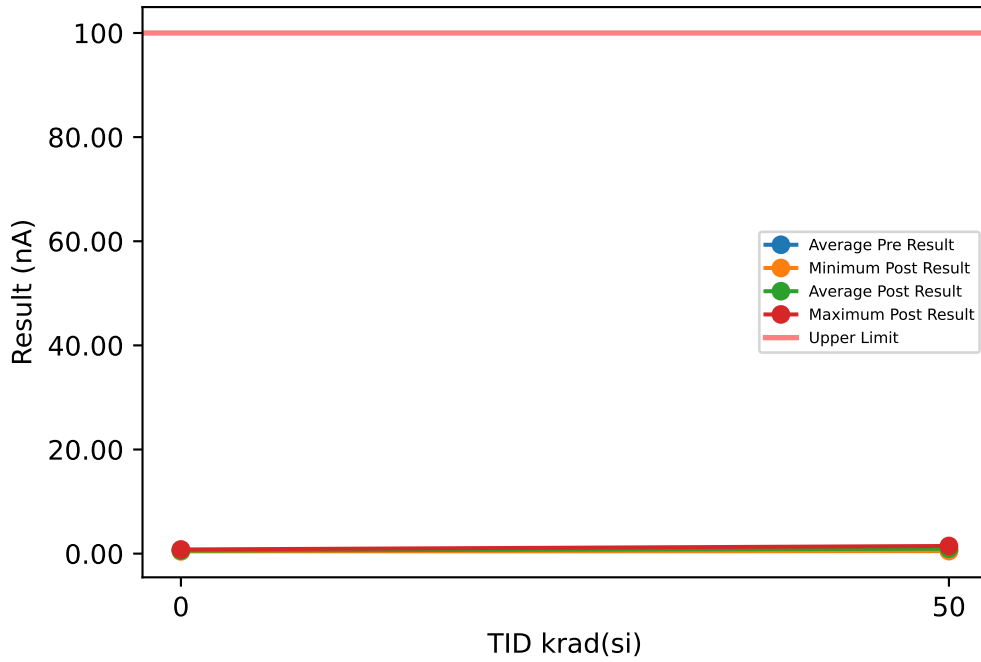
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	446.67	447.06	0.3941
4	50	HDR Biased w/ 84hr anneal	448.29	446.09	-2.2029
6	50	HDR Biased w/ 84hr anneal	449.59	449.33	-0.2548
8	50	HDR Biased w/ 84hr anneal	447.32	445.44	-1.8785
9	50	HDR Biased w/ 84hr anneal	444.07	445.11	1.0429
10	50	HDR unbiased	446.34	443.38	-2.9667
11	50	HDR unbiased	448.29	447.6	-0.6919
12	50	HDR unbiased	446.67	444.68	-1.9921
13	50	HDR unbiased	446.99	445.98	-1.0175
14	50	HDR unbiased	446.67	446.3	-0.368
26	0	Correlation	449.26	448.57	-0.6912
27	0	Correlation	446.34	447.61	1.2662
28	0	Correlation	448.29	449.55	1.2569
29	0	Correlation	447.32	446.96	-0.3567
30	0	Correlation	448.62	448.9	0.2828
32	0	Correlation	446.99	446.3	-0.6925

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	446.34	447.8	449.26	1.1008	446.3	447.98	449.55	1.2372	-0.6925	0.17758	1.2662	0.91196
50	444.07	447.09	449.59	1.4682	443.38	446.1	449.33	1.6515	-2.9667	-0.99354	1.0429	1.2578

# Device Test: 15.1 EN\_LKG\_CURR(\_LEAK|UNPOWERED/EN/0/////@EN\_LKG\_CURR )

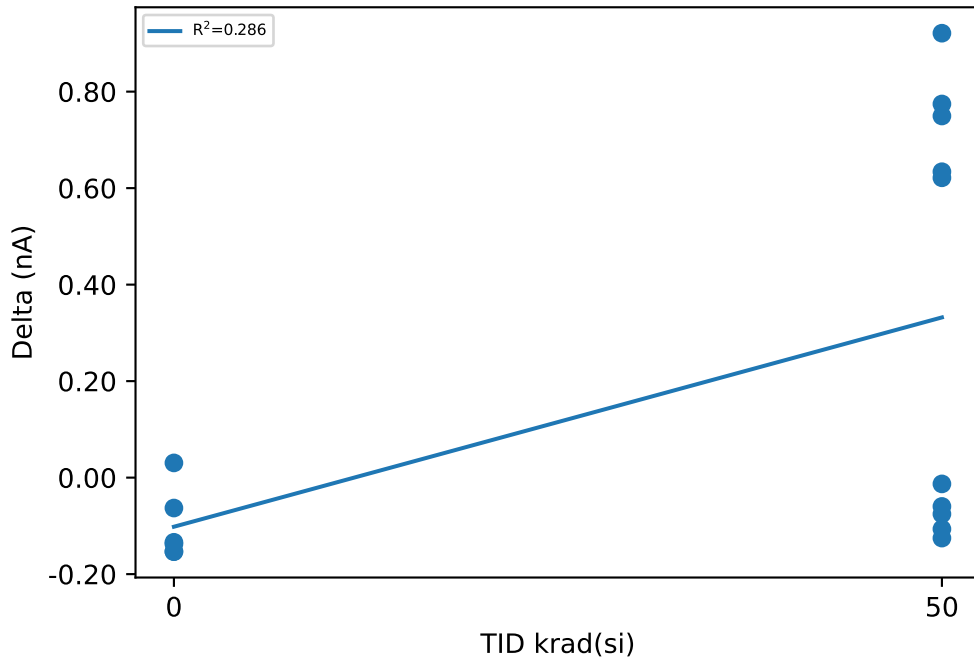
## TID vs Result Stats



## Test Results (Upper Limit = 100.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5391	1.4602	0.9211
4	50	HDR Biased w/ 84hr anneal	0.589	1.223	0.634
6	50	HDR Biased w/ 84hr anneal	0.5797	1.3541	0.7744
8	50	HDR Biased w/ 84hr anneal	0.5172	1.2667	0.7495
9	50	HDR Biased w/ 84hr anneal	0.8513	1.4727	0.6214
10	50	HDR unbiased	0.6733	0.6603	-0.013
11	50	HDR unbiased	0.5828	0.5074	-0.0754
12	50	HDR unbiased	0.6078	0.4825	-0.1253
13	50	HDR unbiased	0.6015	0.5418	-0.0597
14	50	HDR unbiased	0.589	0.4825	-0.1065
26	0	Correlation	0.6296	0.4763	-0.1533
27	0	Correlation	0.5641	0.4301	-0.134
28	0	Correlation	0.614	0.4607	-0.1533
29	0	Correlation	0.7295	0.592	-0.1375
30	0	Correlation	0.7701	0.8006	0.0305
32	0	Correlation	0.7638	0.7008	-0.063

## TID vs Post - Pre Exposure Delta

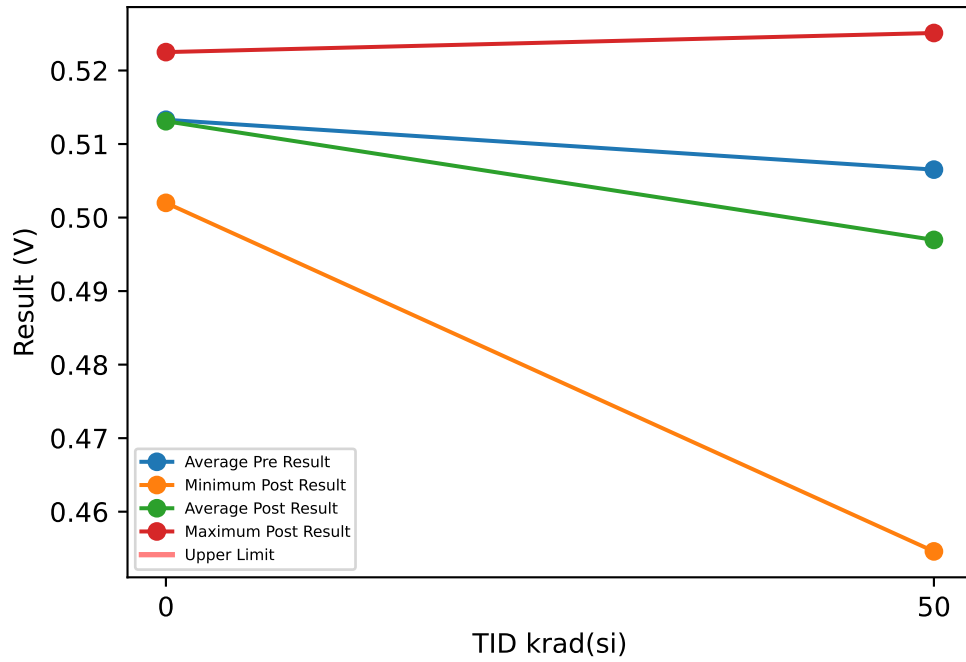


## Test Statistics (nA)

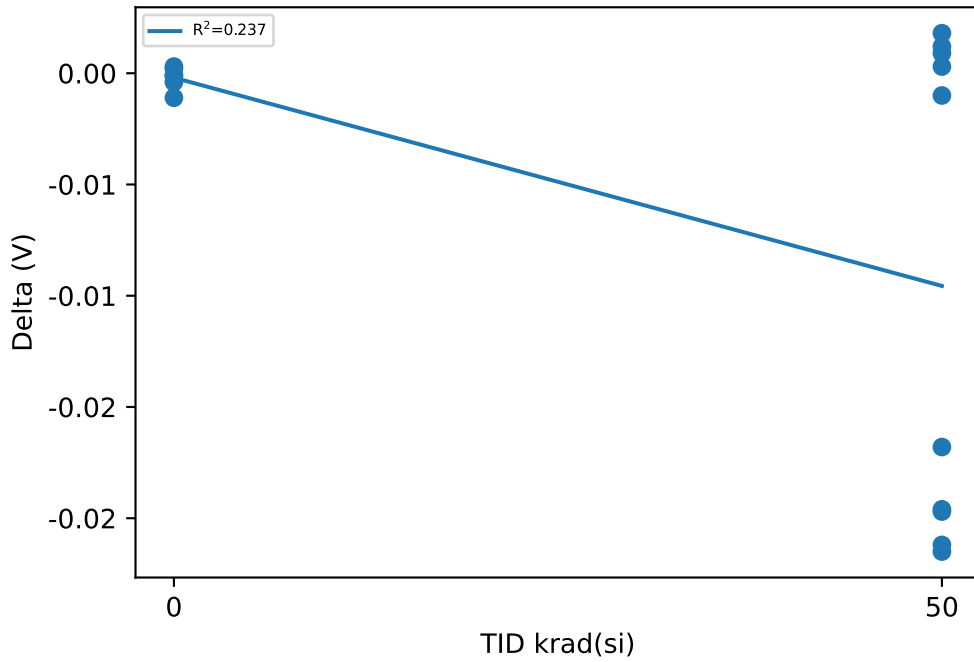
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5641	0.67852	0.7701	0.087071	0.4301	0.57675	0.8006	0.14886	-0.1533	-0.10177	0.0305	0.072972
50	0.5172	0.61307	0.8513	0.09333	0.4825	0.94512	1.4727	0.44158	-0.1253	0.33205	0.9211	0.43867

# Device Test: 15.10 EN\_VTH\_FALLING(\_THRESHOLD|FALL/EN/12////@EN\_VTH\_FALLING )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (No Limits Specified (V))

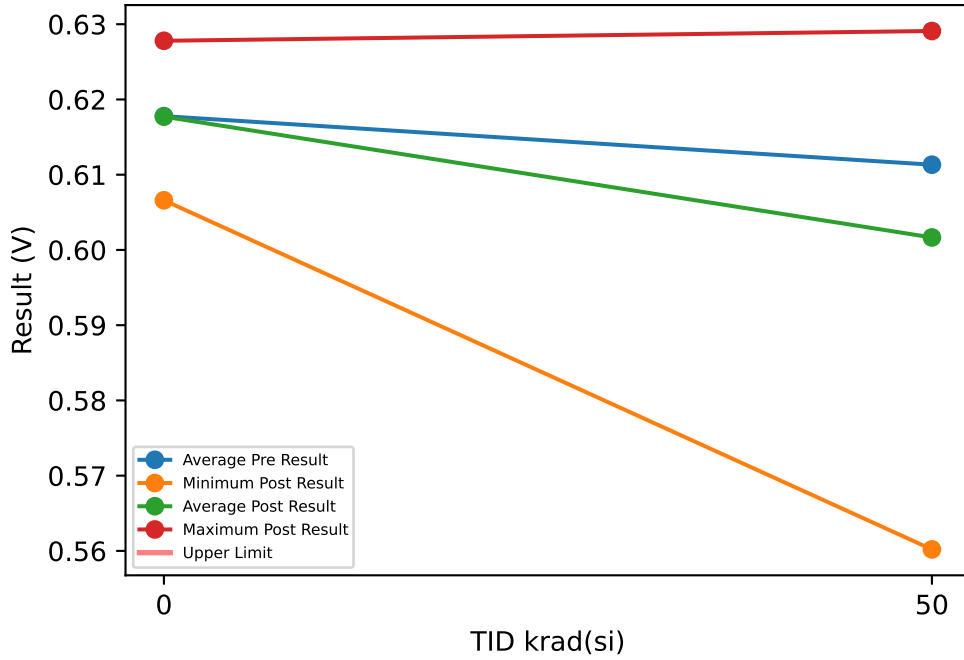
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5205	0.4993	-0.0212
4	50	HDR Biased w/ 84hr anneal	0.5086	0.4871	-0.0215
6	50	HDR Biased w/ 84hr anneal	0.5139	0.4943	-0.0196
8	50	HDR Biased w/ 84hr anneal	0.502	0.4852	-0.0168
9	50	HDR Biased w/ 84hr anneal	0.4743	0.4546	-0.0197
10	50	HDR unbiased	0.4977	0.4967	-0.001
11	50	HDR unbiased	0.5233	0.5251	0.0018
12	50	HDR unbiased	0.513	0.5139	0.0009
13	50	HDR unbiased	0.5049	0.5061	0.0012
14	50	HDR unbiased	0.507	0.5073	0.0003
26	0	Correlation	0.518	0.5179	-0.0001
27	0	Correlation	0.5236	0.5225	-0.0011
28	0	Correlation	0.508	0.5082	0.0002
29	0	Correlation	0.5142	0.5141	-0.0001
30	0	Correlation	0.5024	0.502	-0.0004
32	0	Correlation	0.5136	0.5139	0.0003

### Test Statistics (V)

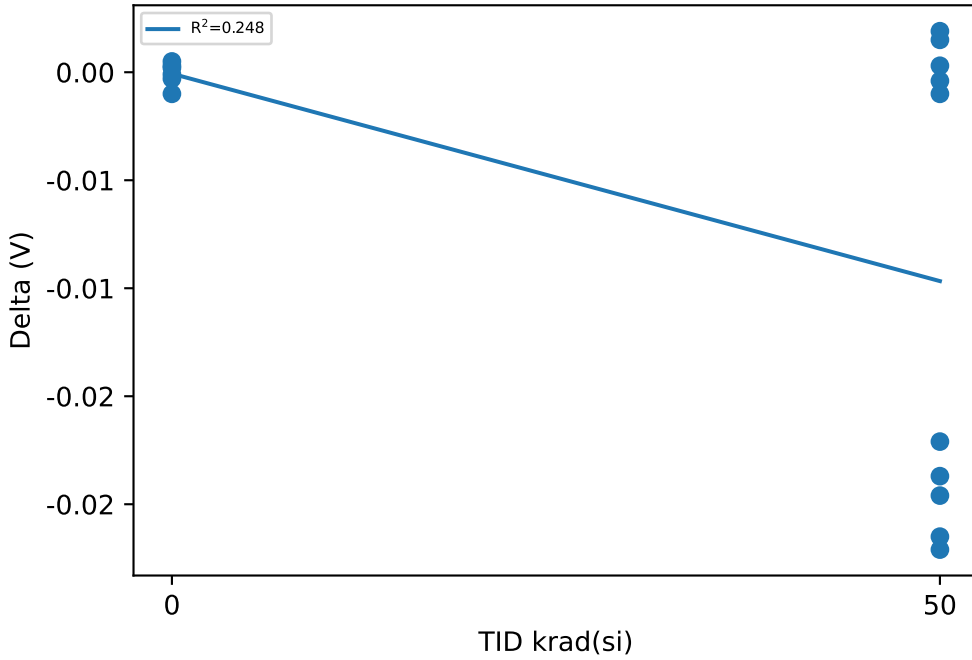
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5024	0.5133	0.5236	0.0074294	0.502	0.5131	0.5225	0.0072147	-0.0011	-0.0002	0.0003	0.00050596
50	0.4743	0.50652	0.5233	0.013812	0.4546	0.49696	0.5251	0.019183	-0.0215	-0.00956	0.0018	0.010847

# Device Test: 15.12 EN\_VTH\_RISING(\_THRESHOLD|RISE/EN/14////@EN\_VTH\_RISING )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (No Limits Specified (V))

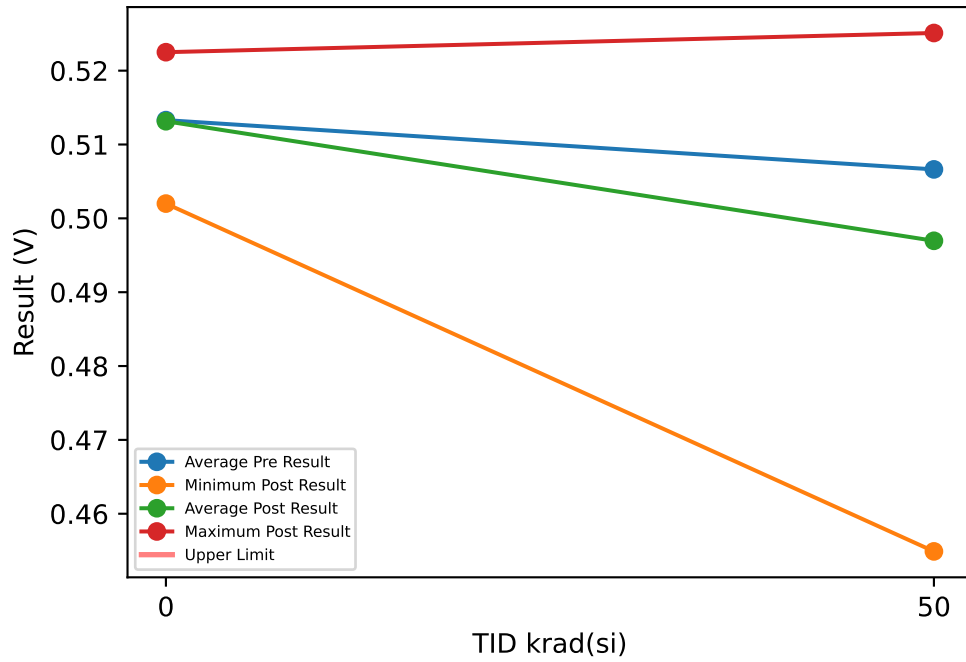
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.6257	0.6036	-0.0221
4	50	HDR Biased w/ 84hr anneal	0.6132	0.5917	-0.0215
6	50	HDR Biased w/ 84hr anneal	0.6188	0.5992	-0.0196
8	50	HDR Biased w/ 84hr anneal	0.6073	0.5902	-0.0171
9	50	HDR Biased w/ 84hr anneal	0.5789	0.5602	-0.0187
10	50	HDR unbiased	0.6026	0.6016	-0.001
11	50	HDR unbiased	0.6288	0.6291	0.0003
12	50	HDR unbiased	0.6179	0.6175	-0.0004
13	50	HDR unbiased	0.6094	0.6113	0.0019
14	50	HDR unbiased	0.6107	0.6122	0.0015
26	0	Correlation	0.6235	0.6225	-0.001
27	0	Correlation	0.6276	0.6278	0.0002
28	0	Correlation	0.6123	0.6122	-0.0001
29	0	Correlation	0.6182	0.6187	0.0005
30	0	Correlation	0.6063	0.6066	0.0003
32	0	Correlation	0.6188	0.6185	-0.0003

### Test Statistics (V)

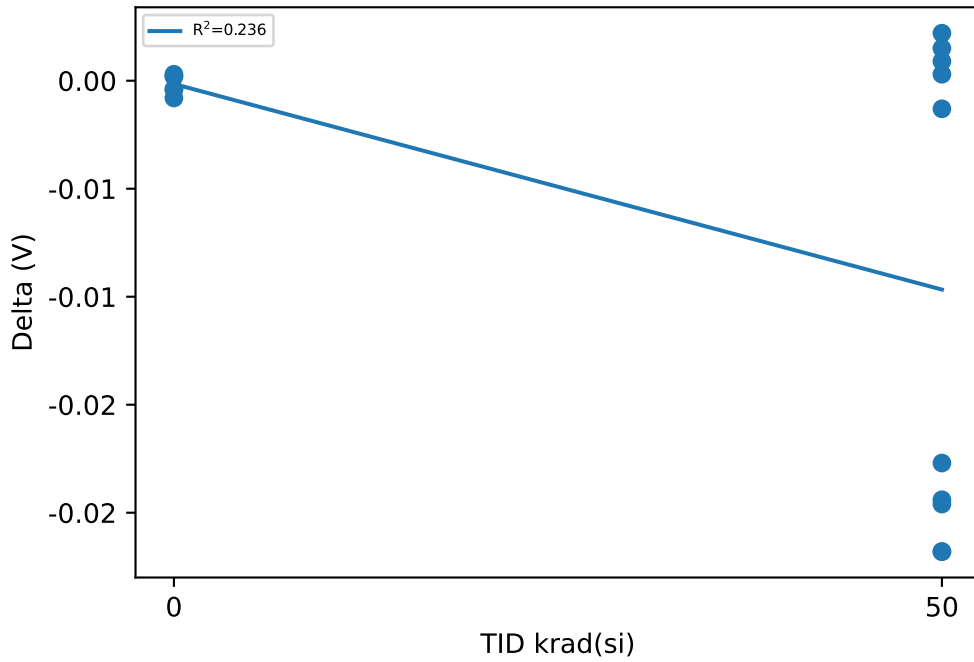
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.6063	0.61778	0.6276	0.0076445	0.6066	0.61772	0.6278	0.0074853	-0.001	-6.6667e-05	0.0005	0.00053914
50	0.5789	0.61133	0.6288	0.013994	0.5602	0.60166	0.6291	0.018759	-0.0221	-0.00967	0.0019	0.010796

# Device Test: 15.13 EN\_VTH\_FALLING(\_THRESHOLD|FALL/EN/14////@EN\_VTH\_FALLING )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (No Limits Specified (V))

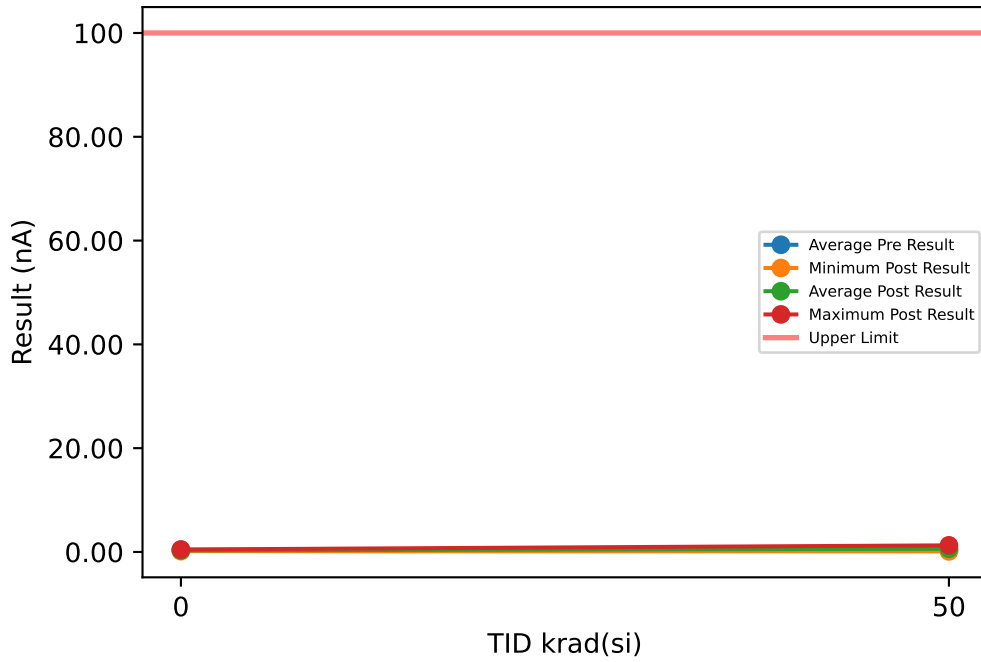
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5211	0.4993	-0.0218
4	50	HDR Biased w/ 84hr anneal	0.5086	0.4868	-0.0218
6	50	HDR Biased w/ 84hr anneal	0.5136	0.494	-0.0196
8	50	HDR Biased w/ 84hr anneal	0.502	0.4843	-0.0177
9	50	HDR Biased w/ 84hr anneal	0.4743	0.4549	-0.0194
10	50	HDR unbiased	0.4983	0.497	-0.0013
11	50	HDR unbiased	0.5236	0.5251	0.0015
12	50	HDR unbiased	0.5136	0.5139	0.0003
13	50	HDR unbiased	0.5045	0.5067	0.0022
14	50	HDR unbiased	0.5067	0.5076	0.0009
26	0	Correlation	0.5177	0.5179	0.0002
27	0	Correlation	0.5233	0.5225	-0.0008
28	0	Correlation	0.5077	0.5079	0.0002
29	0	Correlation	0.5148	0.5144	-0.0004
30	0	Correlation	0.5024	0.502	-0.0004
32	0	Correlation	0.5139	0.5142	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	0.5024	0.5133	0.5233	0.0073775	0.502	0.51315	0.5225	0.0072737	-0.0008	-0.00015	0.0003	0.00044609
50	0.4743	0.50663	0.5236	0.0139	0.4549	0.49696	0.5251	0.019246	-0.0218	-0.00967	0.0022	0.01105

# Device Test: 15.15 EN\_LKG\_CURR(\_LEAK|POWERED/EN/14////@EN\_LKG\_CURR )

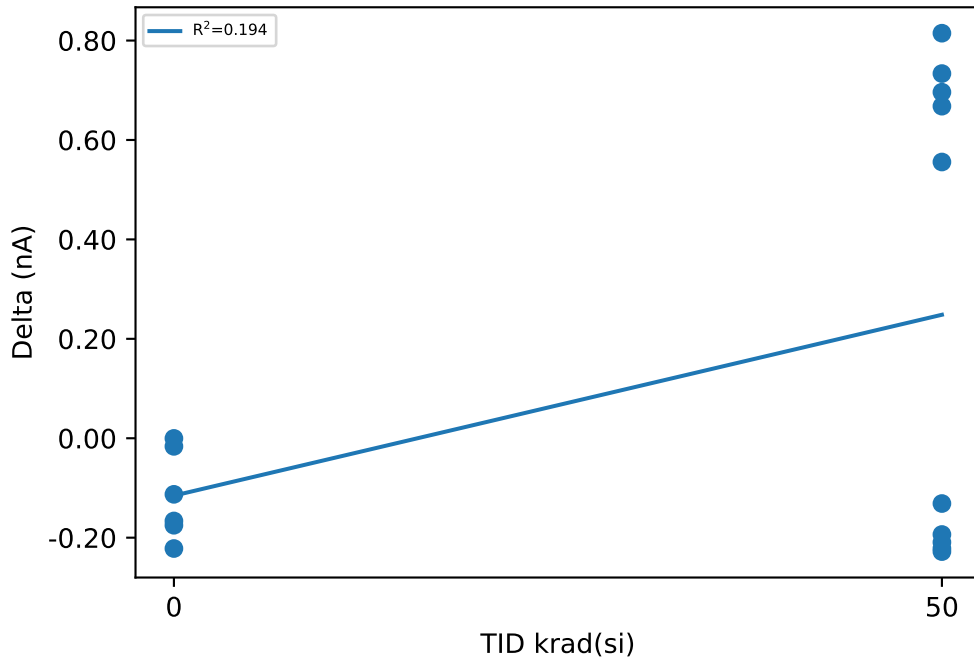
## TID vs Result Stats



## Test Results (Upper Limit = 100.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.3059	1.002	0.6961
4	50	HDR Biased w/ 84hr anneal	0.359	1.0926	0.7336
6	50	HDR Biased w/ 84hr anneal	0.309	1.1238	0.8148
8	50	HDR Biased w/ 84hr anneal	0.3371	0.8928	0.5557
9	50	HDR Biased w/ 84hr anneal	0.6087	1.2767	0.668
10	50	HDR unbiased	0.3933	0.262	-0.1313
11	50	HDR unbiased	0.3403	0.1123	-0.228
12	50	HDR unbiased	0.309	0.1154	-0.1936
13	50	HDR unbiased	0.3559	0.1466	-0.2093
14	50	HDR unbiased	0.3309	0.1092	-0.2217
26	0	Correlation	0.3715	0.1497	-0.2218
27	0	Correlation	0.2653	0.249	-0.0163
28	0	Correlation	0.3434	0.1684	-0.175
29	0	Correlation	0.4995	0.3331	-0.1664
30	0	Correlation	0.59	0.4772	-0.1128
32	0	Correlation	0.4027	0.4024	-0.0003

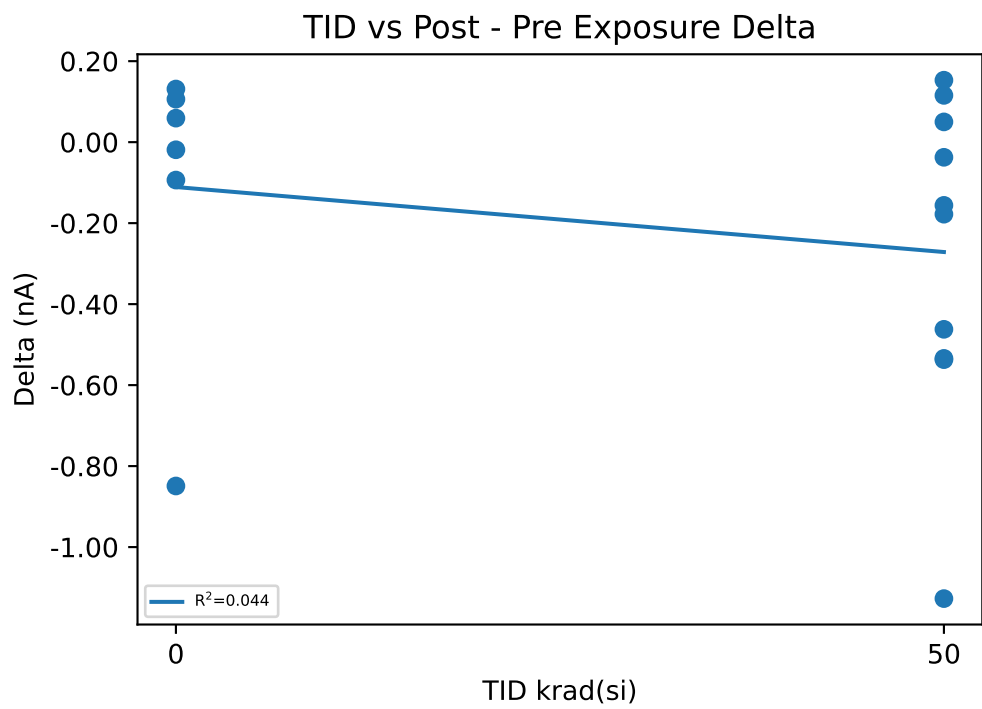
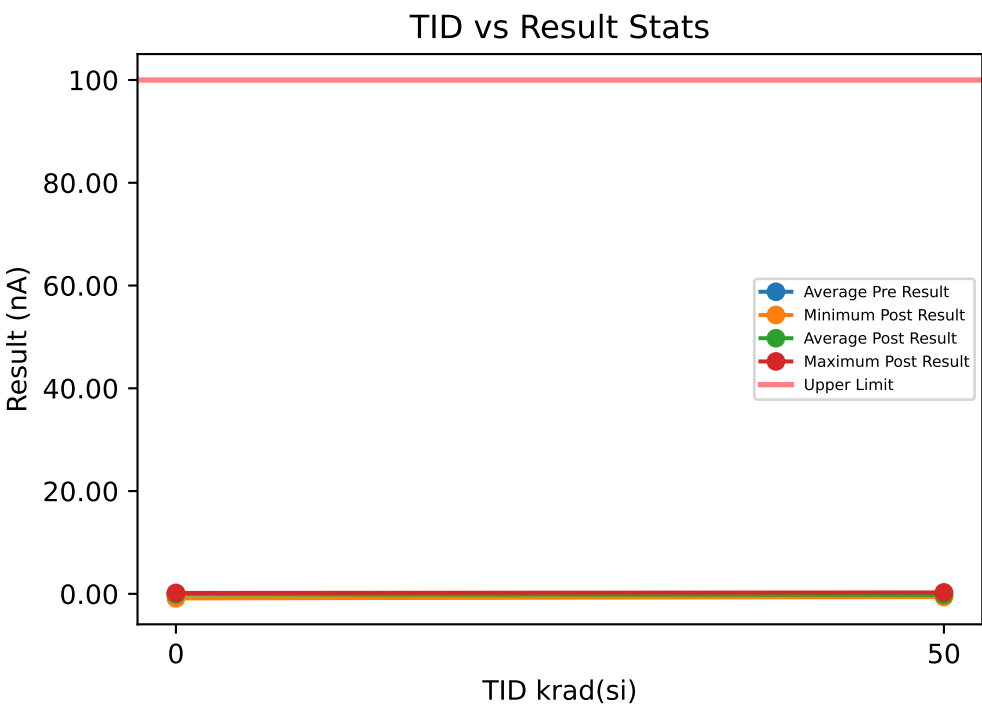
## TID vs Post - Pre Exposure Delta



## Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.2653	0.41207	0.59	0.11601	0.1497	0.29663	0.4772	0.13071	-0.2218	-0.11543	-0.0003	0.090055
50	0.3059	0.36491	0.6087	0.08983	0.1092	0.61334	1.2767	0.50043	-0.228	0.24843	0.8148	0.47424

# Device Test: 15.16 ILIM\_LKG\_CURR(\_LEAK|POWERED/ILIM/14////@ILIM\_LKG\_CURR )



### Test Results (Upper Limit = 100.0 (nA))

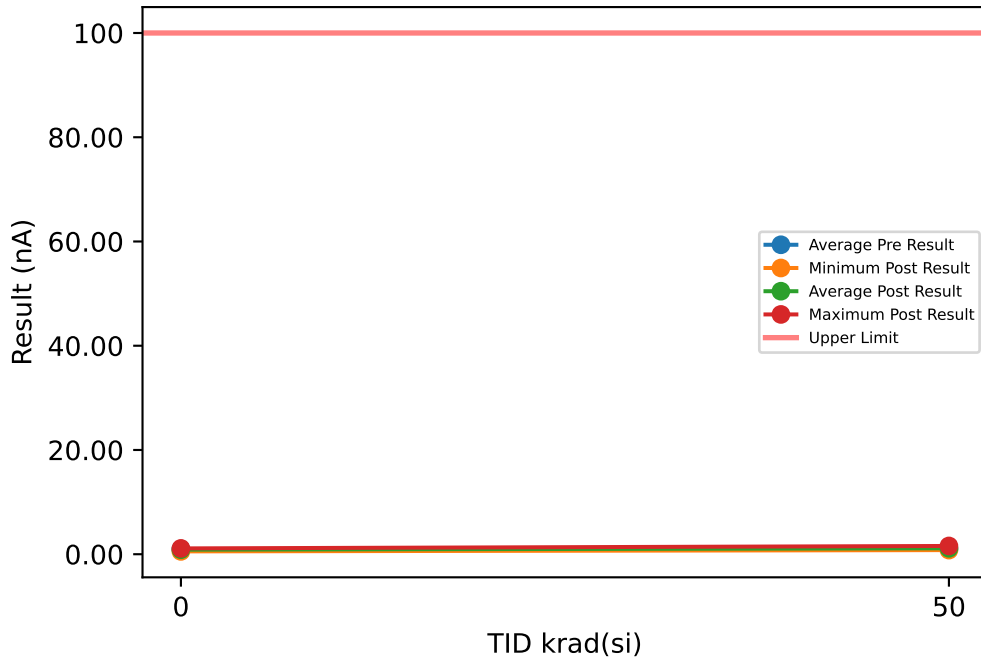
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5026	-0.6246	-1.1272
4	50	HDR Biased w/ 84hr anneal	0.0718	-0.4653	-0.5371
6	50	HDR Biased w/ 84hr anneal	-0.0406	-0.1967	-0.1561
8	50	HDR Biased w/ 84hr anneal	-0.0312	-0.4934	-0.4622
9	50	HDR Biased w/ 84hr anneal	0.128	-0.406	-0.534
10	50	HDR unbiased	0.1249	0.2779	0.153
11	50	HDR unbiased	0.1717	-0.0062	-0.1779
12	50	HDR unbiased	-0.0281	0.0219	0.05
13	50	HDR unbiased	-0.0094	-0.0468	-0.0374
14	50	HDR unbiased	-0.1124	0.0031	0.1155
26	0	Correlation	-0.0437	0.0156	0.0593
27	0	Correlation	-0.0187	0.0874	0.1061
28	0	Correlation	-0.1405	-0.1593	-0.0188
29	0	Correlation	-0.0375	-0.8866	-0.8491
30	0	Correlation	0.2716	0.178	-0.0936
32	0	Correlation	-0.0968	0.0344	0.1312

### 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	-0.1405	-0.010933	0.2716	0.14548	-0.8866	-0.12175	0.178	0.3907	-0.8491	-0.11082	0.1312	0.37105
50	-0.1124	0.07773	0.5026	0.17478	-0.6246	-0.19361	0.2779	0.29034	-1.1272	-0.27134	0.153	0.39697

Device Test: 15.2 ILIM\_LKG\_CURR(\_LEAK|UNPOWERED/ILIM/0////@ILIM\_LKG\_CURR )

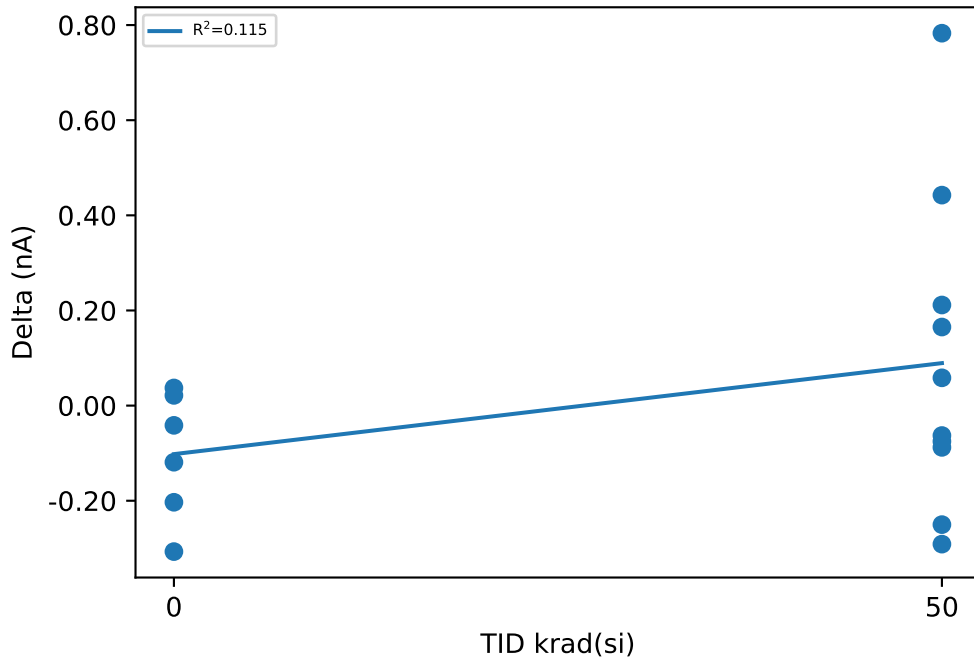
TID vs Result Stats



Test Results (Upper Limit = 100.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.3635	1.0723	-0.2912
4	50	HDR Biased w/ 84hr anneal	1.042	1.1004	0.0584
6	50	HDR Biased w/ 84hr anneal	0.8016	1.5845	0.7829
8	50	HDR Biased w/ 84hr anneal	0.9484	1.3909	0.4425
9	50	HDR Biased w/ 84hr anneal	1.1481	1.3596	0.2115
10	50	HDR unbiased	1.1388	1.304	0.1652
11	50	HDR unbiased	1.0389	0.7887	-0.2502
12	50	HDR unbiased	0.9421	0.8543	-0.0878
13	50	HDR unbiased	0.9484	0.8855	-0.0629
14	50	HDR unbiased	1.0888	1.0136	-0.0752
26	0	Correlation	1.0108	0.8918	-0.119
27	0	Correlation	0.8485	0.5416	-0.3069
28	0	Correlation	0.8172	0.8543	0.0371
29	0	Correlation	0.9421	0.9006	-0.0415
30	0	Correlation	1.3198	1.1166	-0.2032
32	0	Correlation	0.9265	0.948	0.0215

TID vs Post - Pre Exposure Delta



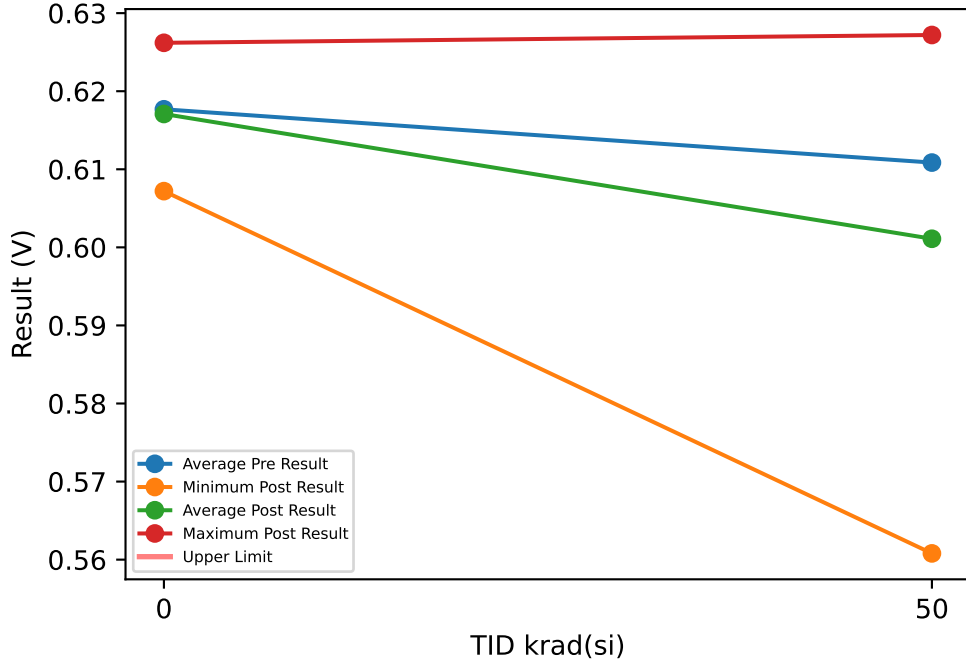
Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.8172	0.97748	1.3198	0.18137	0.5416	0.87548	1.1166	0.18773	-0.3069	-0.102	0.0371	0.13474
50	0.8016	1.0461	1.3635	0.15323	0.7887	1.1354	1.5845	0.26402	-0.2912	0.08932	0.7829	0.32814

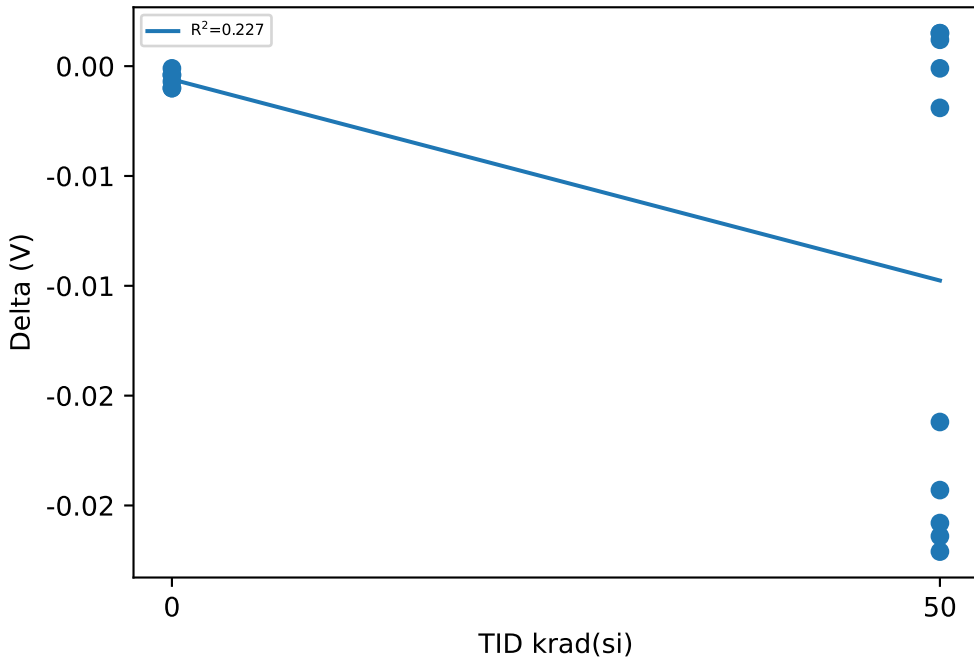


Device Test: 15.3 EN\_VTH\_RISING(\_THRESHOLD|RISE/EN/4.5////@EN\_VTH\_RISING )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (No Limits Specified (V))

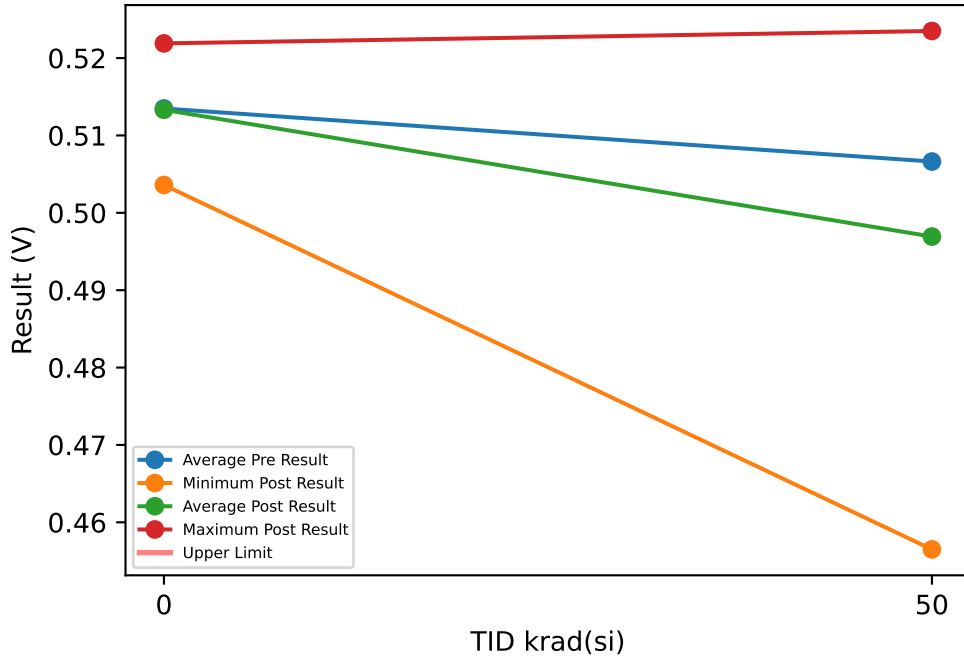
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.6247	0.6033	-0.0214
4	50	HDR Biased w/ 84hr anneal	0.6126	0.5905	-0.0221
6	50	HDR Biased w/ 84hr anneal	0.6185	0.5977	-0.0208
8	50	HDR Biased w/ 84hr anneal	0.6079	0.5917	-0.0162
9	50	HDR Biased w/ 84hr anneal	0.5801	0.5608	-0.0193
10	50	HDR unbiased	0.6032	0.6013	-0.0019
11	50	HDR unbiased	0.6257	0.6272	0.0015
12	50	HDR unbiased	0.6157	0.6172	0.0015
13	50	HDR unbiased	0.6101	0.6113	0.0012
14	50	HDR unbiased	0.6101	0.61	-0.0001
26	0	Correlation	0.6229	0.6222	-0.0007
27	0	Correlation	0.6272	0.6262	-0.001
28	0	Correlation	0.6126	0.6122	-0.0004
29	0	Correlation	0.6179	0.6175	-0.0004
30	0	Correlation	0.6073	0.6072	-0.0001
32	0	Correlation	0.6182	0.6172	-0.001

Test Statistics (V)

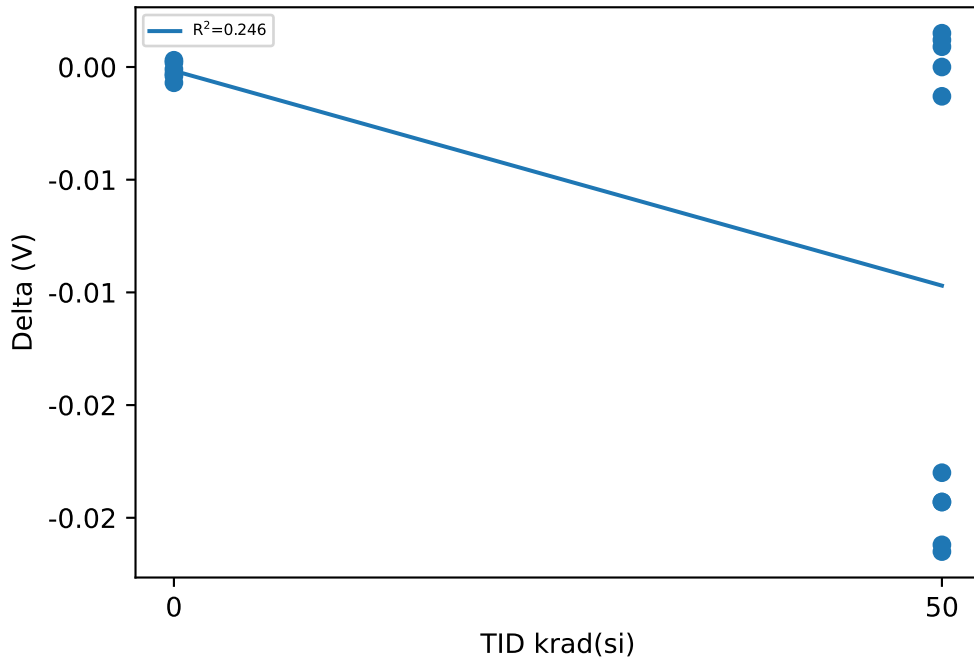
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.6073	0.61768	0.6272	0.0070957	0.6072	0.61708	0.6262	0.0067972	-0.001	-0.0006	-0.0001	0.00036332
50	0.5801	0.61086	0.6257	0.012959	0.5608	0.6011	0.6272	0.01815	-0.0221	-0.00976	0.0015	0.010908

Device Test: 15.4 EN\_VTH\_FALLING(\_THRESHOLD|FALL/EN/4.5/////@EN\_VTH\_FALLING )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (No Limits Specified (V))

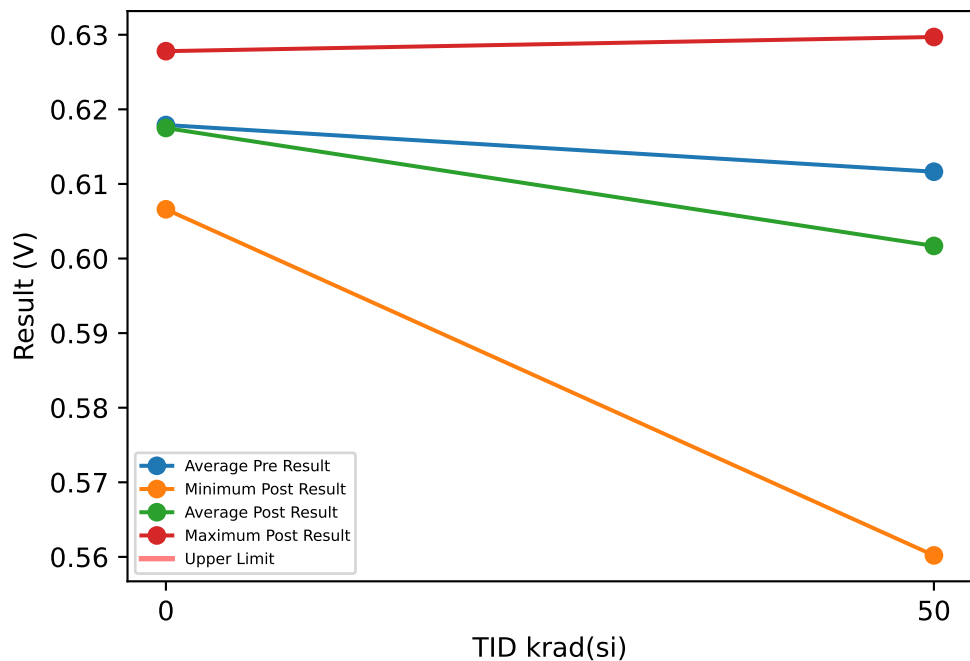
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5205	0.4993	-0.0212
4	50	HDR Biased w/ 84hr anneal	0.5077	0.4862	-0.0215
6	50	HDR Biased w/ 84hr anneal	0.5139	0.4946	-0.0193
8	50	HDR Biased w/ 84hr anneal	0.5042	0.4862	-0.018
9	50	HDR Biased w/ 84hr anneal	0.4758	0.4565	-0.0193
10	50	HDR unbiased	0.4983	0.497	-0.0013
11	50	HDR unbiased	0.5223	0.5235	0.0012
12	50	HDR unbiased	0.512	0.5129	0.0009
13	50	HDR unbiased	0.5055	0.507	0.0015
14	50	HDR unbiased	0.5061	0.5061	0
26	0	Correlation	0.5192	0.5189	-0.0003
27	0	Correlation	0.5226	0.5219	-0.0007
28	0	Correlation	0.508	0.5082	0.0002
29	0	Correlation	0.5139	0.5138	-0.0001
30	0	Correlation	0.5033	0.5036	0.0003
32	0	Correlation	0.5139	0.5135	-0.0004

Test Statistics (V)

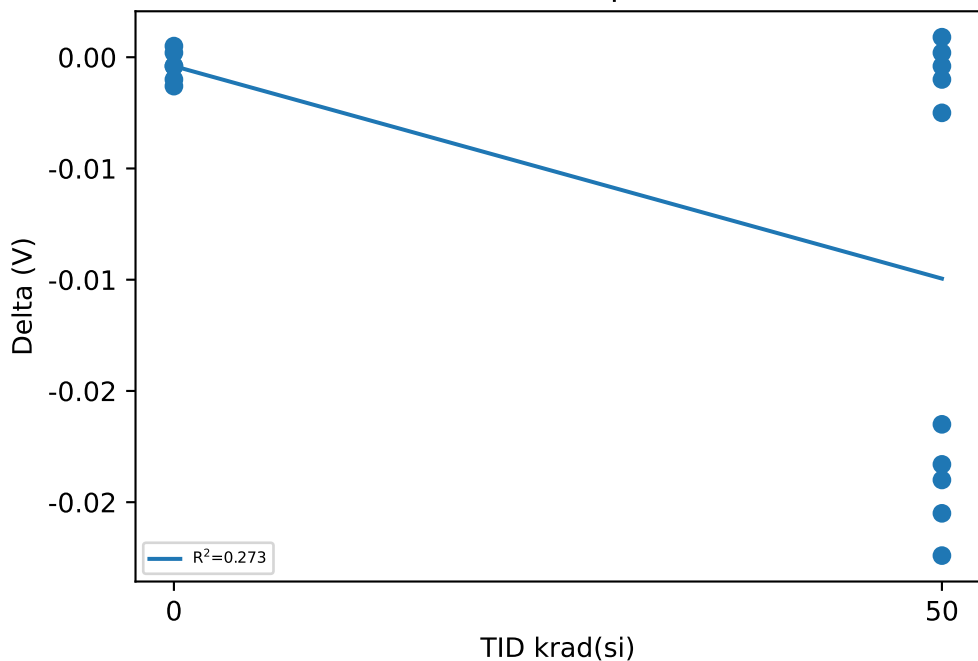
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5033	0.51348	0.5226	0.0070698	0.5036	0.51332	0.5219	0.0067188	-0.0007	-0.00016667	0.0003	0.00037771
50	0.4758	0.50663	0.5223	0.013115	0.4565	0.49693	0.5235	0.018325	-0.0215	-0.0097	0.0015	0.01078

Device Test: 15.6 EN\_VTH\_RISING(\_THRESHOLD|RISE/EN/5////@EN\_VTH\_RISING )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (No Limits Specified (V))

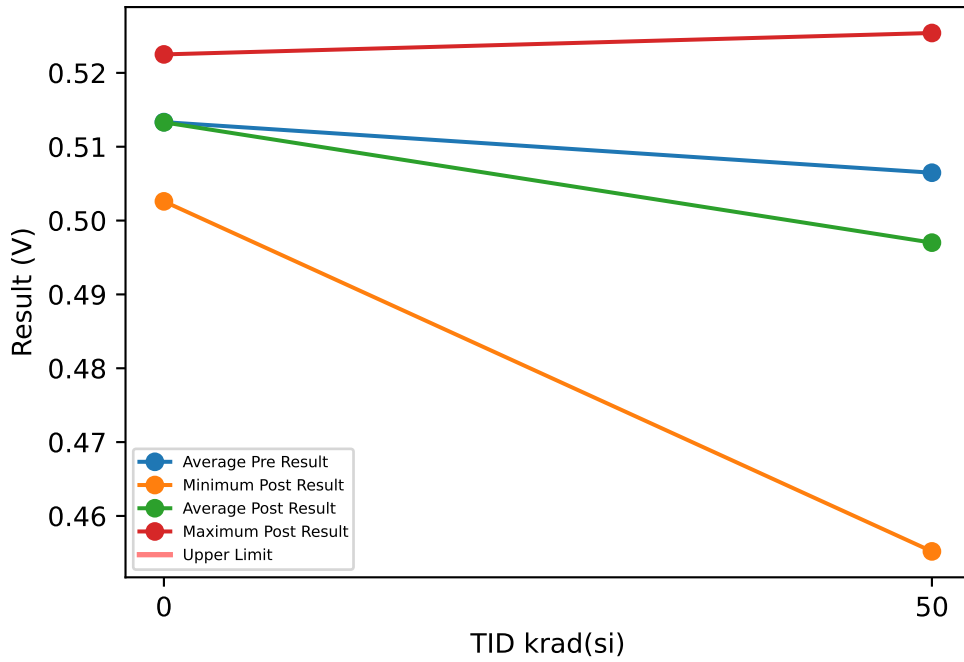
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.6257	0.6033	-0.0224
4	50	HDR Biased w/ 84hr anneal	0.6132	0.5927	-0.0205
6	50	HDR Biased w/ 84hr anneal	0.6188	0.5998	-0.019
8	50	HDR Biased w/ 84hr anneal	0.6073	0.5908	-0.0165
9	50	HDR Biased w/ 84hr anneal	0.5785	0.5602	-0.0183
10	50	HDR unbiased	0.6038	0.6013	-0.0025
11	50	HDR unbiased	0.6288	0.6297	0.0009
12	50	HDR unbiased	0.6182	0.6172	-0.001
13	50	HDR unbiased	0.6098	0.61	0.0002
14	50	HDR unbiased	0.6123	0.6119	-0.0004
26	0	Correlation	0.6232	0.6222	-0.001
27	0	Correlation	0.6282	0.6278	-0.0004
28	0	Correlation	0.6123	0.6125	0.0002
29	0	Correlation	0.6182	0.6187	0.0005
30	0	Correlation	0.607	0.6066	-0.0004
32	0	Correlation	0.6185	0.6172	-0.0013

Test Statistics (V)

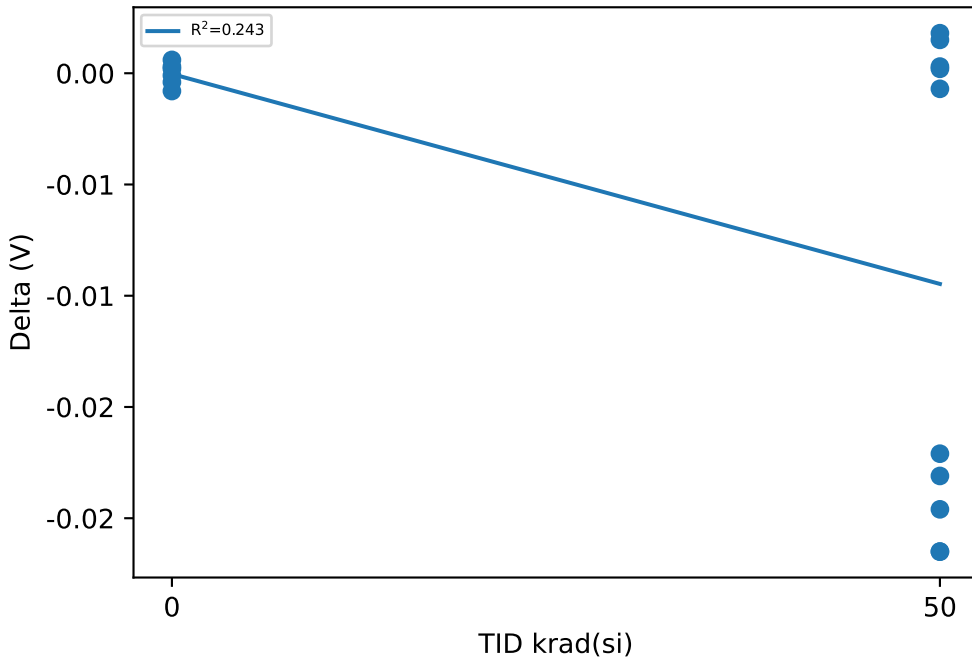
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.607	0.6179	0.6282	0.0075472	0.6066	0.6175	0.6278	0.0073962	-0.0013	-0.0004	0.0005	0.00068411
50	0.5785	0.61164	0.6288	0.014029	0.5602	0.60169	0.6297	0.018636	-0.0224	-0.00995	0.0009	0.010046

Device Test: 15.7 EN\_VTH\_FALLING(\_THRESHOLD|FALL/EN/5////@EN\_VTH\_FALLING )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (No Limits Specified (V))

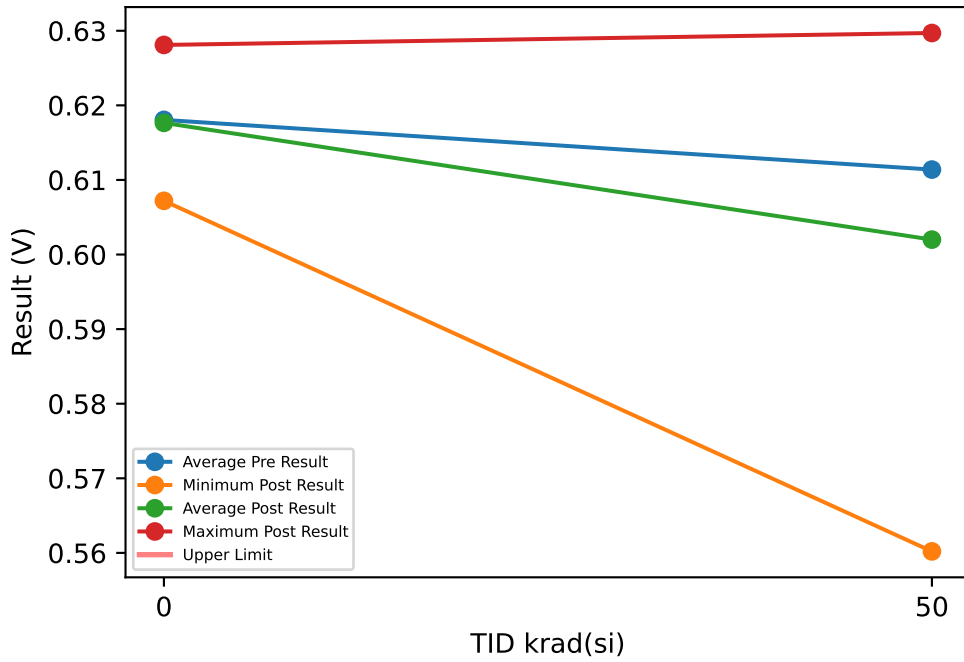
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5208	0.4993	-0.0215
4	50	HDR Biased w/ 84hr anneal	0.5083	0.4868	-0.0215
6	50	HDR Biased w/ 84hr anneal	0.5139	0.4943	-0.0196
8	50	HDR Biased w/ 84hr anneal	0.502	0.4849	-0.0171
9	50	HDR Biased w/ 84hr anneal	0.4733	0.4552	-0.0181
10	50	HDR unbiased	0.4977	0.497	-0.0007
11	50	HDR unbiased	0.5236	0.5254	0.0018
12	50	HDR unbiased	0.5133	0.5135	0.0002
13	50	HDR unbiased	0.5052	0.5067	0.0015
14	50	HDR unbiased	0.5067	0.507	0.0003
26	0	Correlation	0.5183	0.5182	-0.0001
27	0	Correlation	0.5233	0.5225	-0.0008
28	0	Correlation	0.5077	0.5079	0.0002
29	0	Correlation	0.5148	0.5144	-0.0004
30	0	Correlation	0.502	0.5026	0.0006
32	0	Correlation	0.5139	0.5142	0.0003

Test Statistics (V)

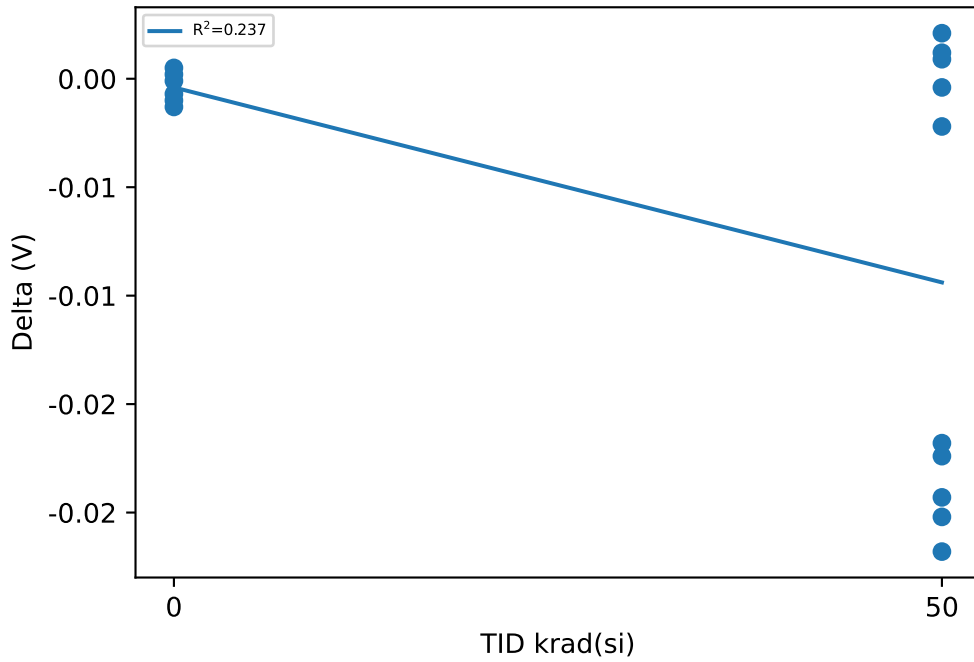
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.502	0.51333	0.5233	0.0075717	0.5026	0.5133	0.5225	0.0071319	-0.0008	-3.3333e-05	0.0006	0.00050859
50	0.4733	0.50648	0.5236	0.014153	0.4552	0.49701	0.5254	0.0191	-0.0215	-0.00947	0.0018	0.010739

Device Test: 15.9 EN\_VTH\_RISING(\_THRESHOLD|RISE/EN/12////@EN\_VTH\_RISING )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (No Limits Specified (V))

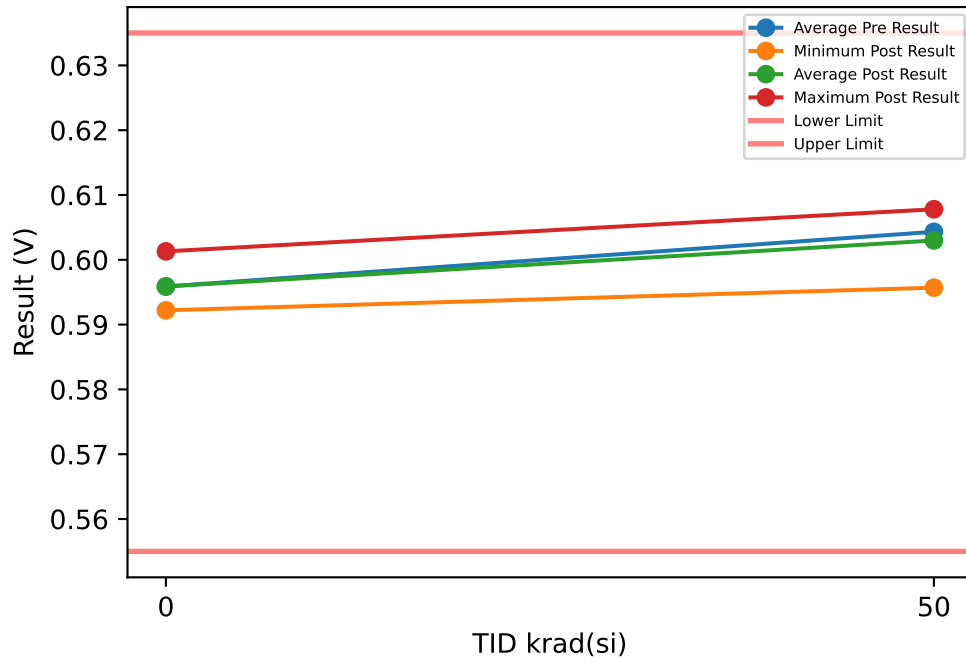
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.6257	0.6039	-0.0218
4	50	HDR Biased w/ 84hr anneal	0.6132	0.593	-0.0202
6	50	HDR Biased w/ 84hr anneal	0.6188	0.5995	-0.0193
8	50	HDR Biased w/ 84hr anneal	0.607	0.5902	-0.0168
9	50	HDR Biased w/ 84hr anneal	0.5776	0.5602	-0.0174
10	50	HDR unbiased	0.6038	0.6016	-0.0022
11	50	HDR unbiased	0.6288	0.6297	0.0009
12	50	HDR unbiased	0.6182	0.6178	-0.0004
13	50	HDR unbiased	0.6098	0.6119	0.0021
14	50	HDR unbiased	0.611	0.6122	0.0012
26	0	Correlation	0.6232	0.6225	-0.0007
27	0	Correlation	0.6279	0.6281	0.0002
28	0	Correlation	0.6132	0.6119	-0.0013
29	0	Correlation	0.6182	0.6187	0.0005
30	0	Correlation	0.6073	0.6072	-0.0001
32	0	Correlation	0.6185	0.6175	-0.001

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	0.6073	0.61805	0.6279	0.0072506	0.6072	0.61765	0.6281	0.0074312	-0.0013	-0.0004	0.0005	0.00070993
50	0.5776	0.61139	0.6288	0.014274	0.5602	0.602	0.6297	0.018846	-0.0218	-0.00939	0.0021	0.010385

Device Test: 16.1 FAULT\_VTH\_RISING(\_THRESHOLD|RISE/FAULT/4.5////@FAULT\_VTH\_RISING )

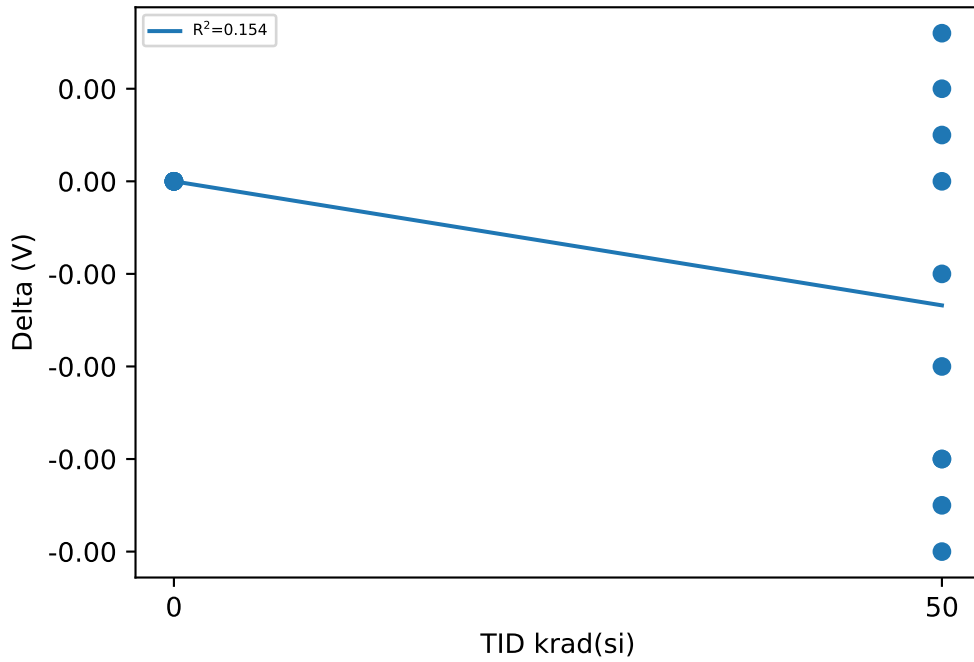
TID vs Result Stats



Test Results (Lower Limit = 0.555, Upper Limit = 0.635 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5987	0.5957	-0.003
4	50	HDR Biased w/ 84hr anneal	0.6002	0.6018	0.0016
6	50	HDR Biased w/ 84hr anneal	0.6088	0.6078	-0.001
8	50	HDR Biased w/ 84hr anneal	0.6033	0.6033	0
9	50	HDR Biased w/ 84hr anneal	0.6068	0.6078	0.001
10	50	HDR unbiased	0.6023	0.6028	0.0005
11	50	HDR unbiased	0.6098	0.6063	-0.0035
12	50	HDR unbiased	0.6002	0.5982	-0.002
13	50	HDR unbiased	0.6053	0.6023	-0.003
14	50	HDR unbiased	0.6078	0.6038	-0.004
26	0	Correlation	0.5967	0.5967	0
27	0	Correlation	0.6013	0.6013	0
28	0	Correlation	0.5947	0.5947	0
29	0	Correlation	0.5972	0.5972	0
30	0	Correlation	0.5922	0.5922	0
32	0	Correlation	0.5932	0.5932	0

TID vs Post - Pre Exposure Delta

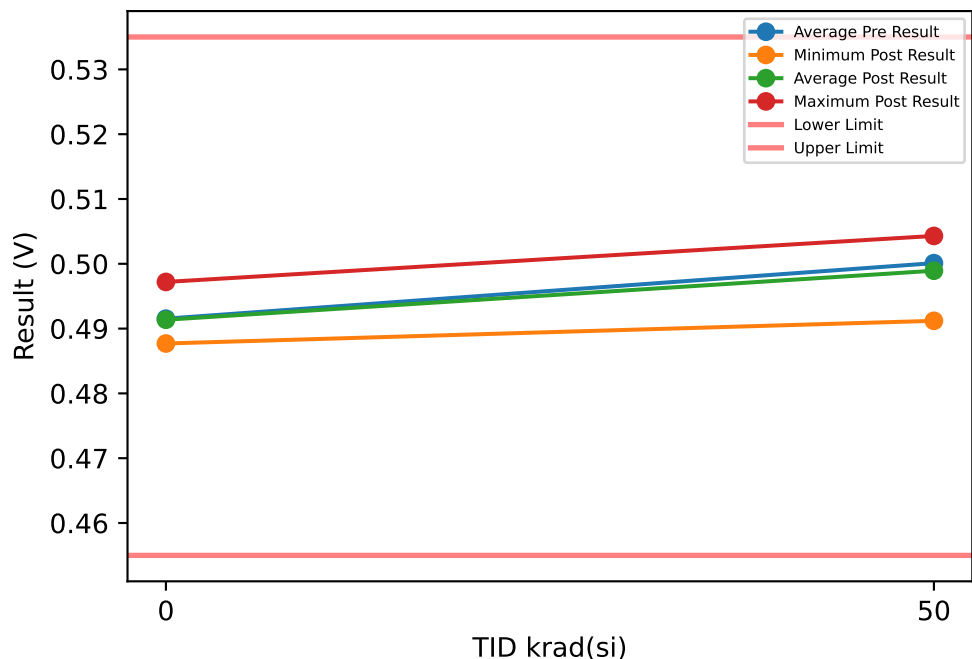


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5922	0.59588	0.6013	0.0032835	0.5922	0.59588	0.6013	0.0032835	0	0	0	0
50	0.5987	0.60432	0.6098	0.0039437	0.5957	0.60298	0.6078	0.0038872	-0.004	-0.00134	0.0016	0.0020304

Device Test: 16.10 FAULT\_VTH\_FALLING(\_THRESHOLD|FALL/FAULT/12////@FAULT\_VTH\_FALLING )

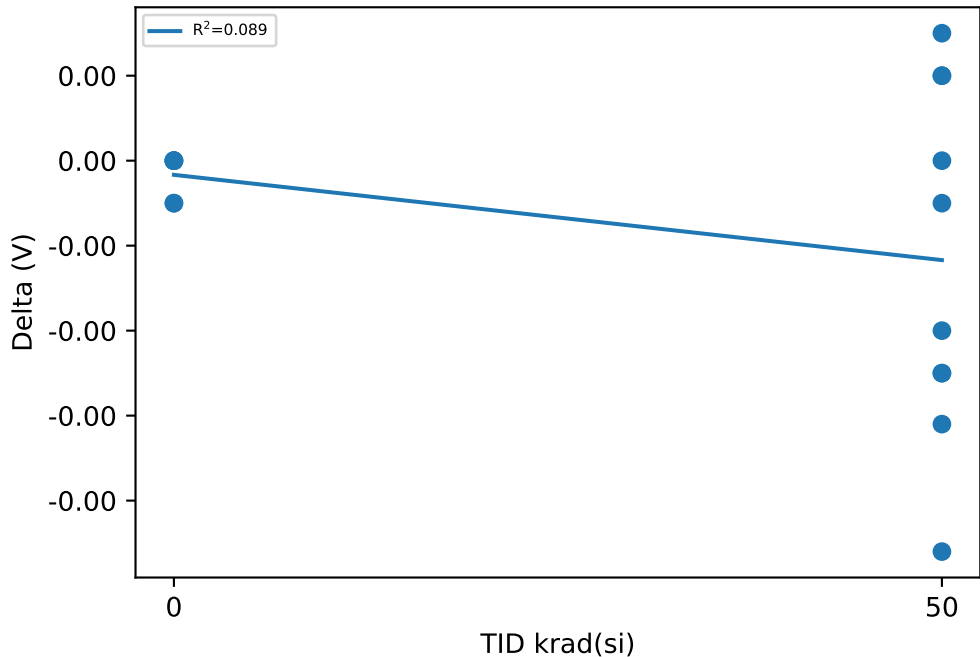
TID vs Result Stats



Test Results (Lower Limit = 0.455, Upper Limit = 0.535 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.4937	0.4912	-0.0025
4	50	HDR Biased w/ 84hr anneal	0.4962	0.4972	0.001
6	50	HDR Biased w/ 84hr anneal	0.5048	0.5043	-0.0005
8	50	HDR Biased w/ 84hr anneal	0.4982	0.4982	0
9	50	HDR Biased w/ 84hr anneal	0.5013	0.5028	0.0015
10	50	HDR unbiased	0.4972	0.4982	0.001
11	50	HDR unbiased	0.5058	0.5033	-0.0025
12	50	HDR unbiased	0.4967	0.4947	-0.002
13	50	HDR unbiased	0.5023	0.4992	-0.0031
14	50	HDR unbiased	0.5048	0.5002	-0.0046
26	0	Correlation	0.4917	0.4912	-0.0005
27	0	Correlation	0.4972	0.4972	0
28	0	Correlation	0.4897	0.4897	0
29	0	Correlation	0.4937	0.4932	-0.0005
30	0	Correlation	0.4877	0.4877	0
32	0	Correlation	0.4892	0.4892	0

TID vs Post - Pre Exposure Delta

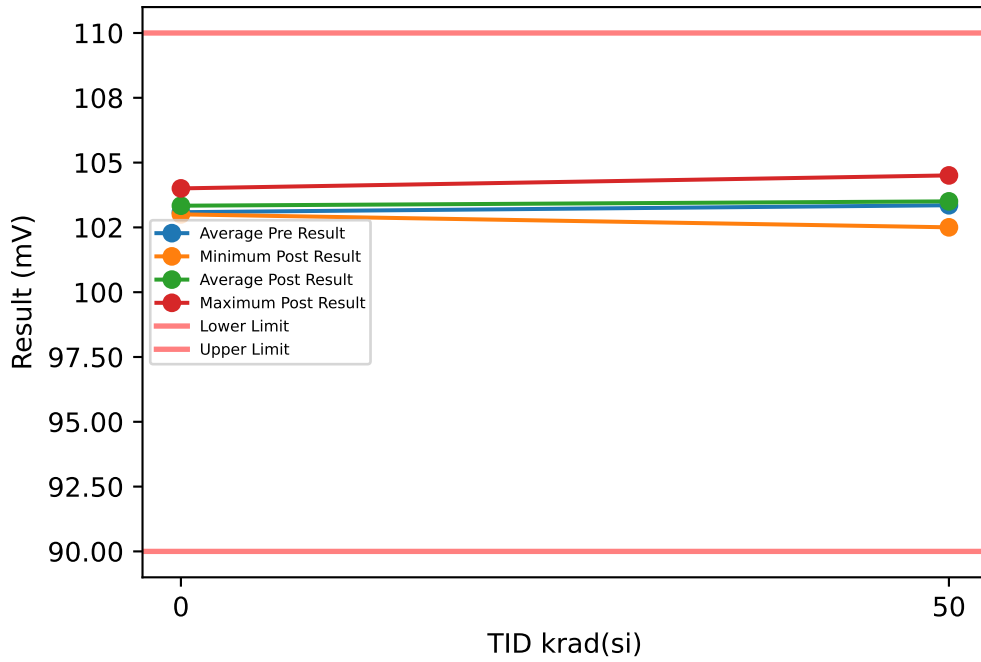


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.4877	0.49153	0.4972	0.0034737	0.4877	0.49137	0.4972	0.0034157	-0.0005	-0.00016667	0	0.0002582
50	0.4937	0.5001	0.5058	0.0042518	0.4912	0.49893	0.5043	0.0040318	-0.0046	-0.00117	0.0015	0.002057

# Device Test: 16.11 FAULT\_VTH\_HYST(\_THRESHOLD|HYST/FAULT/12////@FAULT\_VTH\_HYST )

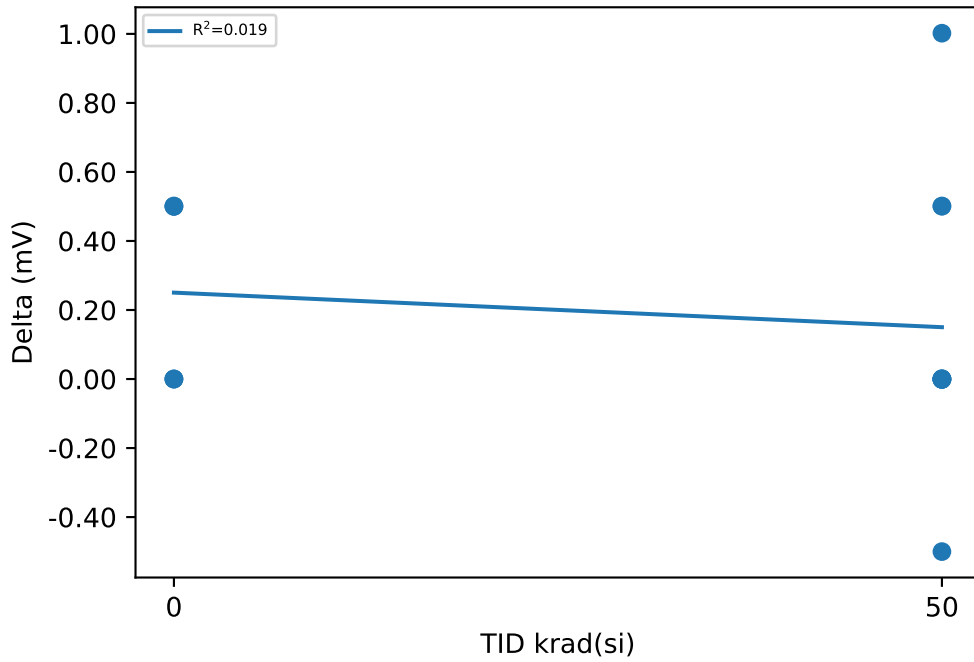
### TID vs Result Stats



### Test Results (Lower Limit = 90.0, Upper Limit = 110.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	103.5	103.5	-0.001
4	50	HDR Biased w/ 84hr anneal	103.5	103.5	-0.001
6	50	HDR Biased w/ 84hr anneal	103	103.5	0.501
8	50	HDR Biased w/ 84hr anneal	104	104	0
9	50	HDR Biased w/ 84hr anneal	104.5	104.51	0.001
10	50	HDR unbiased	103.5	103	-0.5
11	50	HDR unbiased	103.5	103.5	-0.001
12	50	HDR unbiased	103	103.5	0.501
13	50	HDR unbiased	102.5	102.5	0
14	50	HDR unbiased	102.5	103.5	1.002
26	0	Correlation	103.5	104	0.501
27	0	Correlation	103	103	0
28	0	Correlation	103.5	103.5	0
29	0	Correlation	102.5	103	0.5
30	0	Correlation	103	103.5	0.501
32	0	Correlation	103	103	0

### TID vs Post - Pre Exposure Delta



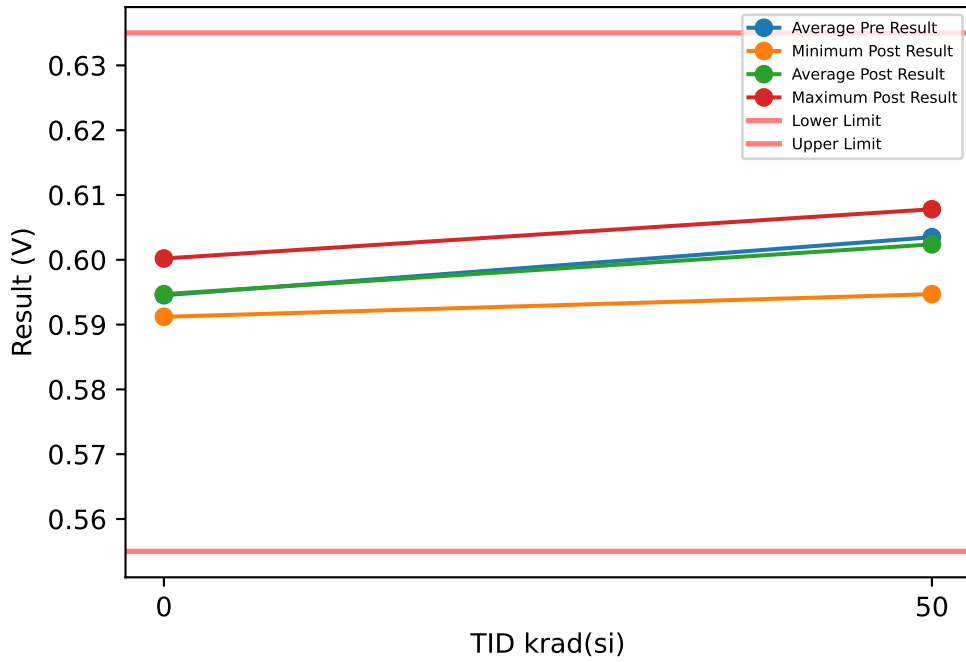
### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	102.5	103.09	103.5	0.37705	103	103.34	104	0.40915	0	0.25033	0.501	0.27423
50	102.5	103.35	104.5	0.62653	102.5	103.5	104.51	0.52778	-0.5	0.1502	1.002	0.41237



Device Test: 16.13 FAULT\_VTH\_RISING(\_THRESHOLD|RISE/FAULT/14////@FAULT\_VTH\_RISING )

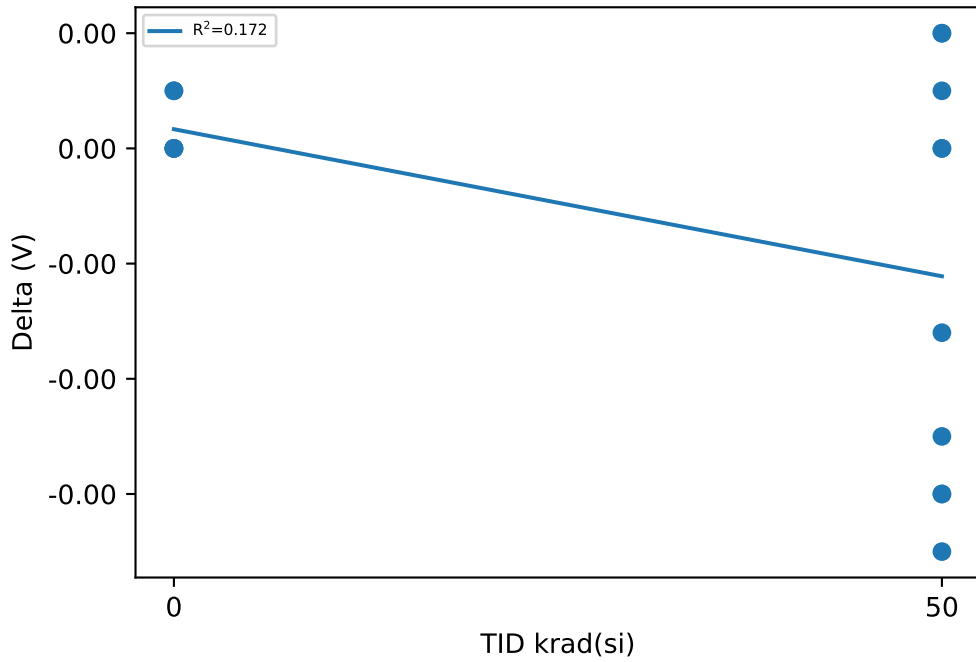
TID vs Result Stats



Test Results (Lower Limit = 0.555, Upper Limit = 0.635 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5972	0.5947	-0.0025
4	50	HDR Biased w/ 84hr anneal	0.5998	0.6008	0.001
6	50	HDR Biased w/ 84hr anneal	0.6078	0.6078	0
8	50	HDR Biased w/ 84hr anneal	0.6023	0.6023	0
9	50	HDR Biased w/ 84hr anneal	0.6058	0.6068	0.001
10	50	HDR unbiased	0.6008	0.6013	0.0005
11	50	HDR unbiased	0.6093	0.6063	-0.003
12	50	HDR unbiased	0.5998	0.5982	-0.0016
13	50	HDR unbiased	0.6048	0.6018	-0.003
14	50	HDR unbiased	0.6073	0.6038	-0.0035
26	0	Correlation	0.5952	0.5952	0
27	0	Correlation	0.6002	0.6002	0
28	0	Correlation	0.5932	0.5932	0
29	0	Correlation	0.5957	0.5962	0.0005
30	0	Correlation	0.5907	0.5912	0.0005
32	0	Correlation	0.5922	0.5922	0

TID vs Post - Pre Exposure Delta

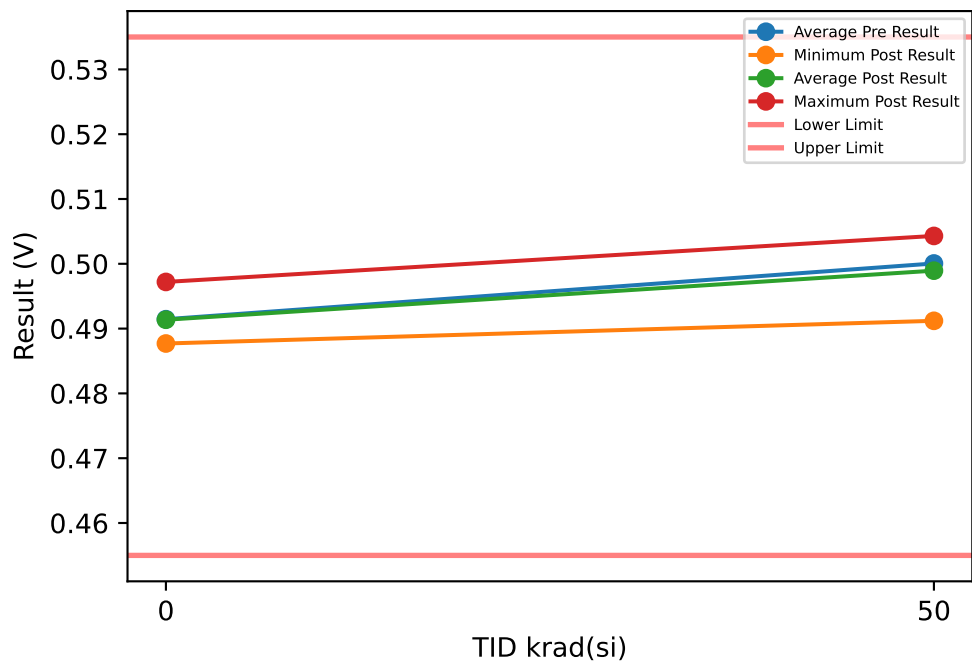


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5907	0.59453	0.6002	0.0033417	0.5912	0.5947	0.6002	0.0032711	0	0.00016667	0.0005	0.0002582
50	0.5972	0.60349	0.6093	0.0040736	0.5947	0.60238	0.6078	0.0040381	-0.0035	-0.00111	0.001	0.0017947

Device Test: 16.14 FAULT\_VTH\_FALLING(\_THRESHOLD|FALL/FAULT/14////@FAULT\_VTH\_FALLING )

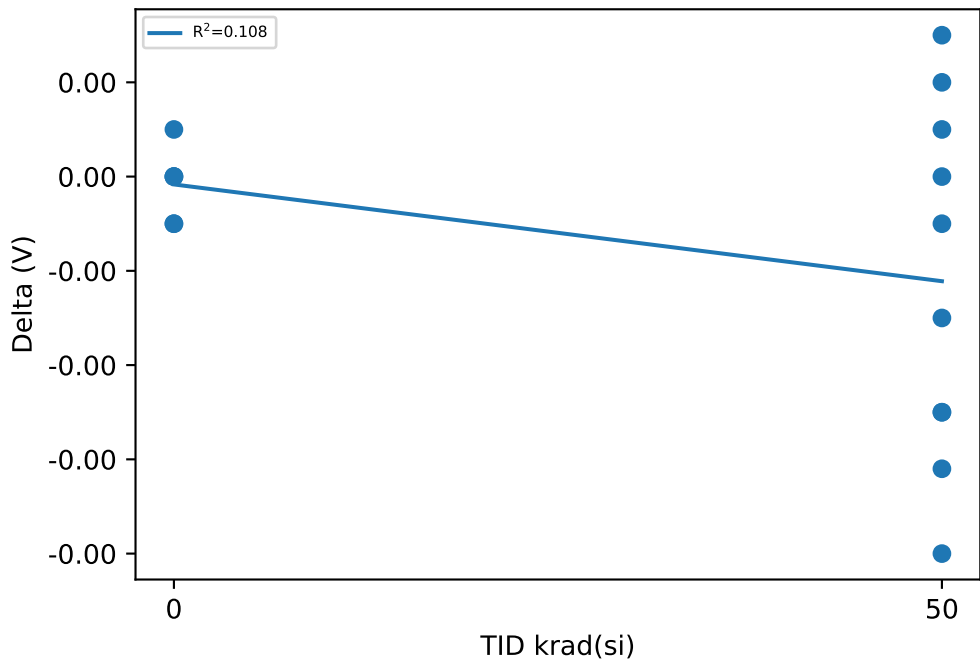
TID vs Result Stats



Test Results (Lower Limit = 0.455, Upper Limit = 0.535 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.4937	0.4912	-0.0025
4	50	HDR Biased w/ 84hr anneal	0.4962	0.4972	0.001
6	50	HDR Biased w/ 84hr anneal	0.5048	0.5043	-0.0005
8	50	HDR Biased w/ 84hr anneal	0.4982	0.4982	0
9	50	HDR Biased w/ 84hr anneal	0.5013	0.5028	0.0015
10	50	HDR unbiased	0.4972	0.4977	0.0005
11	50	HDR unbiased	0.5058	0.5033	-0.0025
12	50	HDR unbiased	0.4962	0.4947	-0.0015
13	50	HDR unbiased	0.5023	0.4992	-0.0031
14	50	HDR unbiased	0.5048	0.5008	-0.004
26	0	Correlation	0.4917	0.4912	-0.0005
27	0	Correlation	0.4967	0.4972	0.0005
28	0	Correlation	0.4897	0.4897	0
29	0	Correlation	0.4937	0.4932	-0.0005
30	0	Correlation	0.4877	0.4877	0
32	0	Correlation	0.4892	0.4892	0

TID vs Post - Pre Exposure Delta

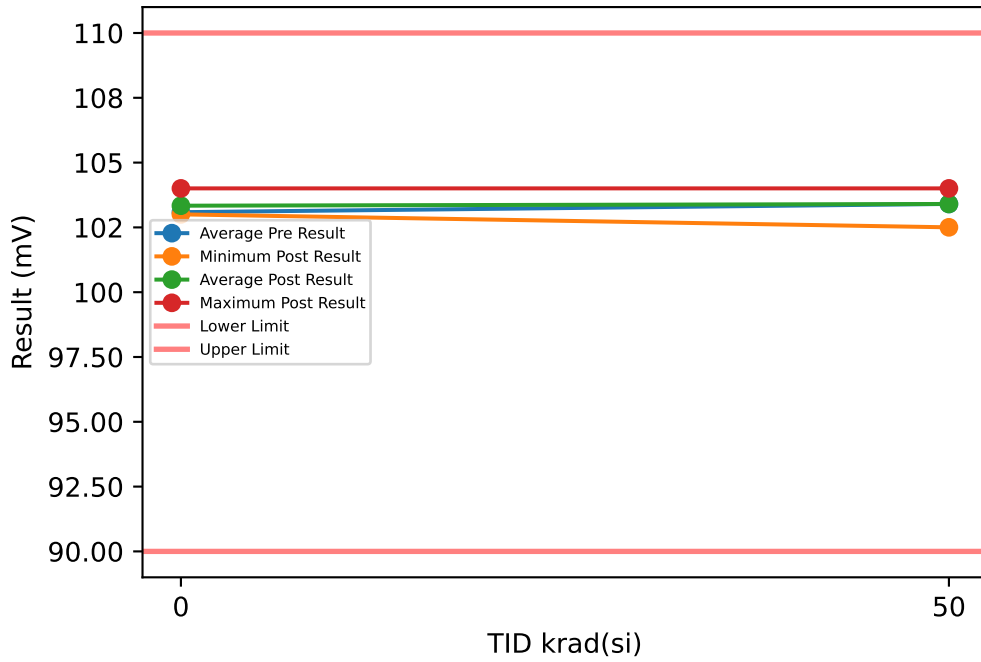


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.4877	0.49145	0.4967	0.0033129	0.4877	0.49137	0.4972	0.0034157	-0.0005	-8.3333e-05	0.0005	0.00037639
50	0.4937	0.50005	0.5058	0.0042989	0.4912	0.49894	0.5043	0.0040711	-0.004	-0.00111	0.0015	0.0018794

# Device Test: 16.15 FAULT\_VTH\_HYST(\_THRESHOLD|HYST/FAULT/14////@FAULT\_VTH\_HYST )

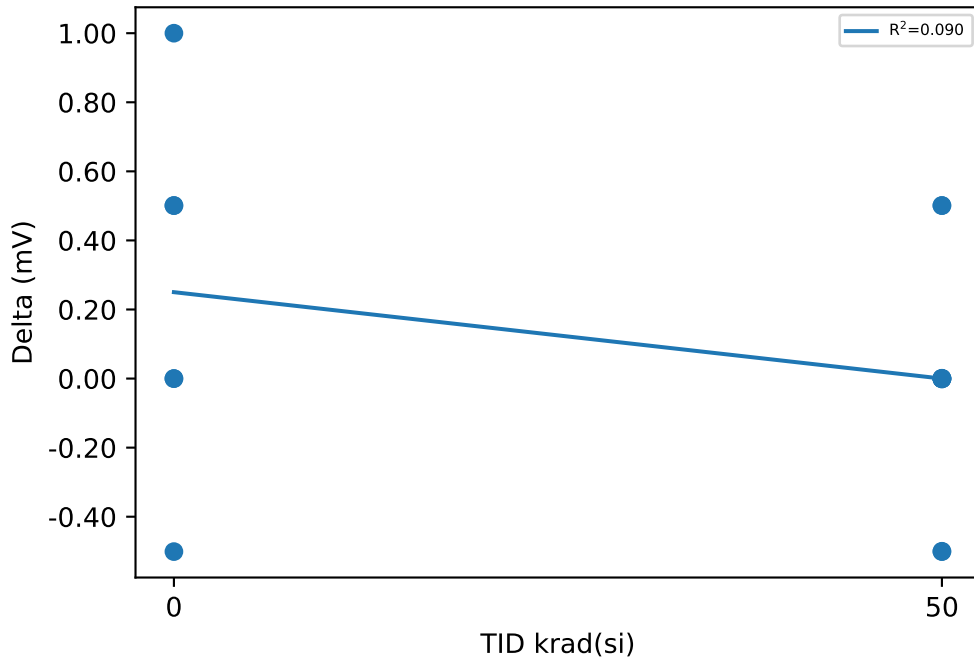
### TID vs Result Stats



### Test Results (Lower Limit = 90.0, Upper Limit = 110.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	103.5	103.5	-0.001
4	50	HDR Biased w/ 84hr anneal	103.5	103.5	-0.001
6	50	HDR Biased w/ 84hr anneal	103	103.5	0.501
8	50	HDR Biased w/ 84hr anneal	104	104	0
9	50	HDR Biased w/ 84hr anneal	104.5	104	-0.5
10	50	HDR unbiased	103.5	103.5	0.001
11	50	HDR unbiased	103.5	103	-0.501
12	50	HDR unbiased	103.5	103.5	0
13	50	HDR unbiased	102.5	102.5	0
14	50	HDR unbiased	102.5	103	0.501
26	0	Correlation	103.5	104	0.501
27	0	Correlation	103.5	103	-0.501
28	0	Correlation	103.5	103.5	0
29	0	Correlation	102	103	1
30	0	Correlation	103	103.5	0.501
32	0	Correlation	103	103	0

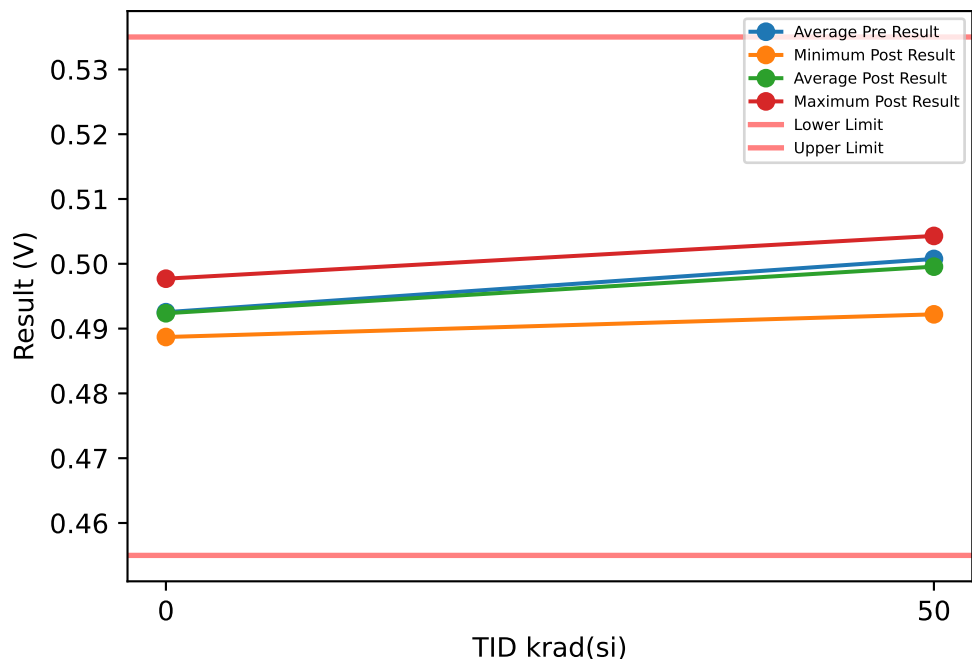
### TID vs Post - Pre Exposure Delta



### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	102	103.09	103.5	0.58509	103	103.34	104	0.40915	-0.501	0.25017	1	0.52488
50	102.5	103.4	104.5	0.61534	102.5	103.4	104	0.46005	-0.501	1.4211e-15	0.501	0.33383

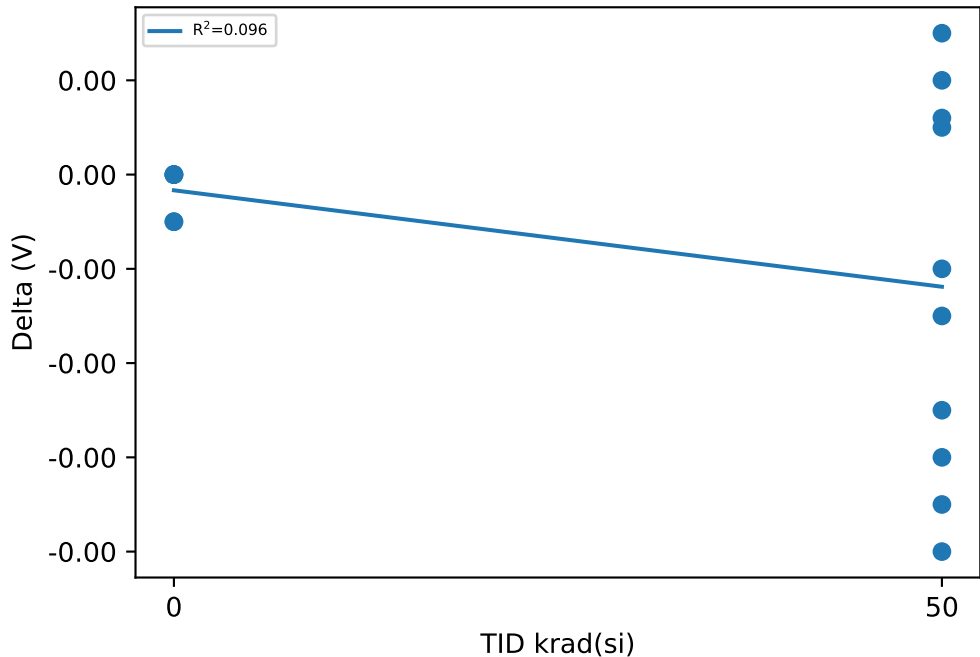
TID vs Result Stats



Test Results (Lower Limit = 0.455, Upper Limit = 0.535 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.4947	0.4922	-0.0025
4	50	HDR Biased w/ 84hr anneal	0.4967	0.4982	0.0015
6	50	HDR Biased w/ 84hr anneal	0.5053	0.5043	-0.001
8	50	HDR Biased w/ 84hr anneal	0.4992	0.4998	0.0006
9	50	HDR Biased w/ 84hr anneal	0.5023	0.5033	0.001
10	50	HDR unbiased	0.4987	0.4992	0.0005
11	50	HDR unbiased	0.5063	0.5028	-0.0035
12	50	HDR unbiased	0.4967	0.4952	-0.0015
13	50	HDR unbiased	0.5028	0.4998	-0.003
14	50	HDR unbiased	0.5048	0.5008	-0.004
26	0	Correlation	0.4927	0.4922	-0.0005
27	0	Correlation	0.4977	0.4977	0
28	0	Correlation	0.4912	0.4912	0
29	0	Correlation	0.4942	0.4942	0
30	0	Correlation	0.4892	0.4887	-0.0005
32	0	Correlation	0.4902	0.4902	0

TID vs Post - Pre Exposure Delta

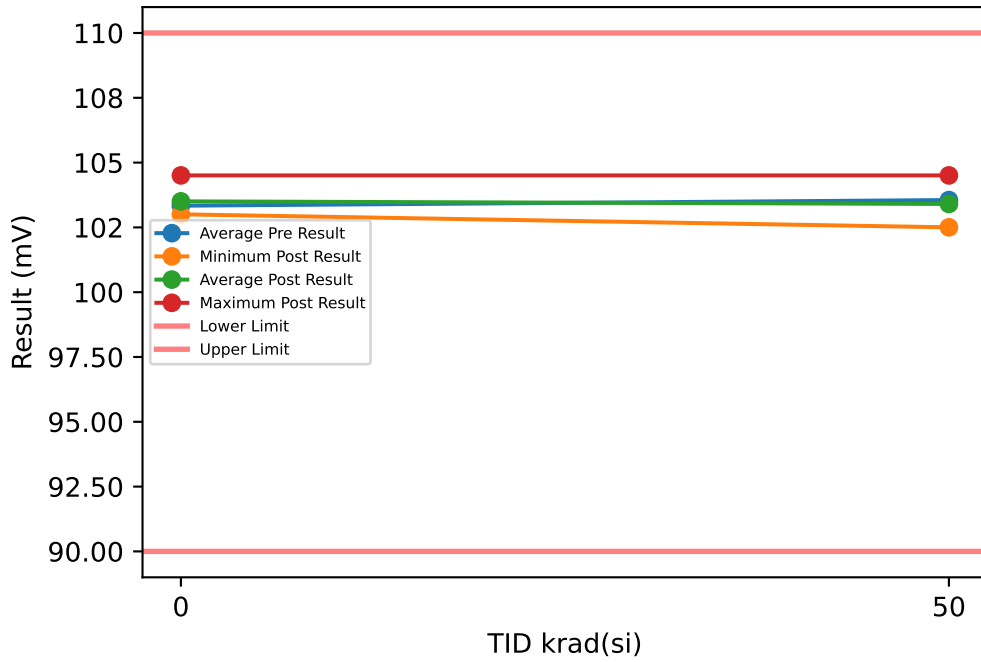


Test Statistics (V)

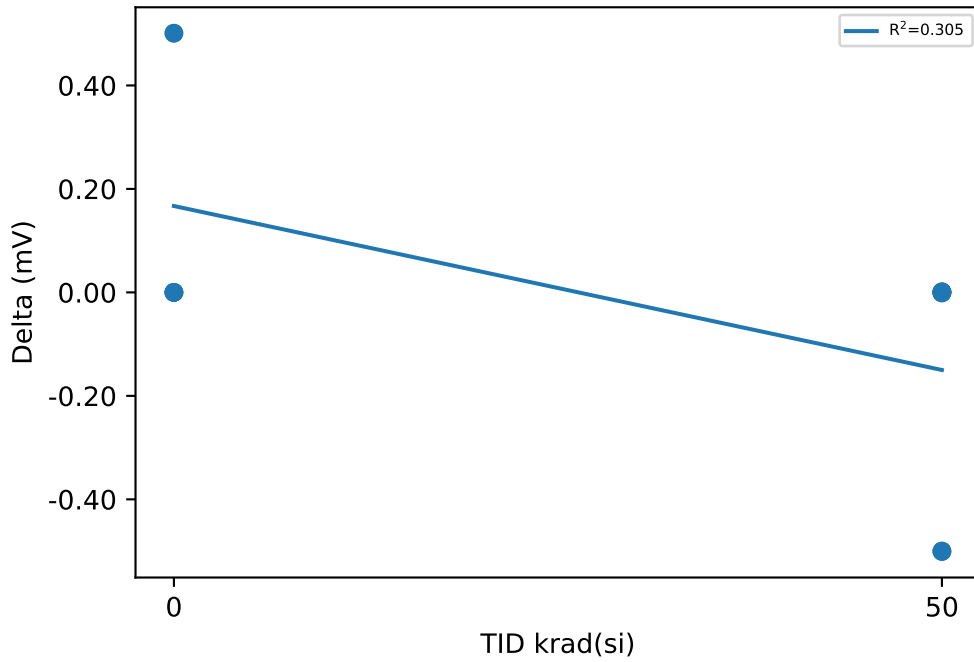
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.4892	0.49253	0.4977	0.003093	0.4887	0.49237	0.4977	0.0032042	-0.0005	-0.00016667	0	0.0002582
50	0.4947	0.50075	0.5063	0.0040896	0.4922	0.49956	0.5043	0.0037083	-0.004	-0.00119	0.0015	0.0020124

# Device Test: 16.3 FAULT\_VTH\_HYST(\_THRESHOLD|HYST/FAULT/4.5/////@FAULT\_VTH\_HYST )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Lower Limit = 90.0, Upper Limit = 110.0 (mV))

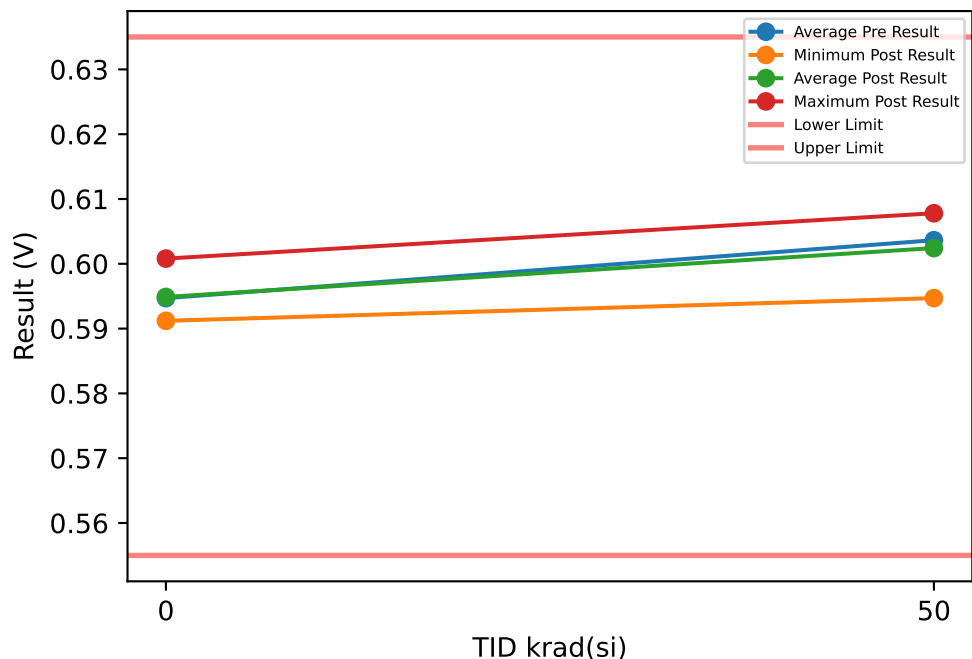
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	104	103.5	-0.5
4	50	HDR Biased w/ 84hr anneal	103.5	103.5	0
6	50	HDR Biased w/ 84hr anneal	103.5	103.5	0.001
8	50	HDR Biased w/ 84hr anneal	104	103.5	-0.501
9	50	HDR Biased w/ 84hr anneal	104.5	104.51	0.001
10	50	HDR unbiased	103.5	103.5	-0.001
11	50	HDR unbiased	103.5	103.5	0.001
12	50	HDR unbiased	103.5	103	-0.5
13	50	HDR unbiased	102.5	102.5	-0.001
14	50	HDR unbiased	103	103	0
26	0	Correlation	104	104.51	0.501
27	0	Correlation	103.5	103.5	0
28	0	Correlation	103.5	103.5	0
29	0	Correlation	103	103	0
30	0	Correlation	103	103.5	0.501
32	0	Correlation	103	103	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	103	103.34	104	0.40882	103	103.5	104.51	0.54845	0	0.167	0.501	0.25872
50	102.5	103.55	104.5	0.55062	102.5	103.4	104.51	0.51713	-0.501	-0.15	0.001	0.24175

Device Test: 16.5 FAULT\_VTH\_RISING(\_THRESHOLD|RISE/FAULT/5////@FAULT\_VTH\_RISING )

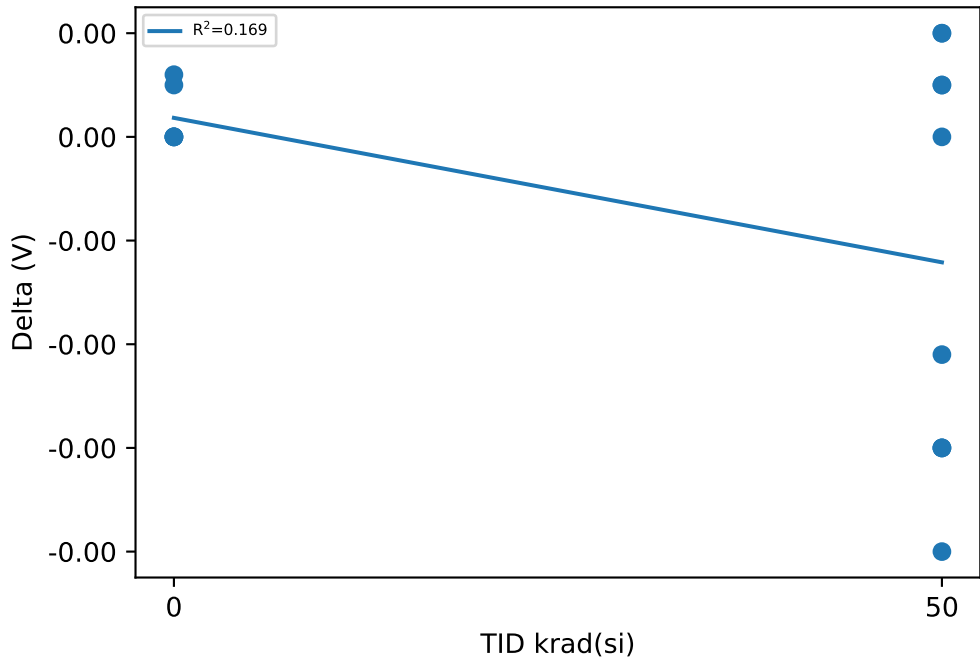
TID vs Result Stats



Test Results (Lower Limit = 0.555, Upper Limit = 0.635 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5977	0.5947	-0.003
4	50	HDR Biased w/ 84hr anneal	0.5998	0.6008	0.001
6	50	HDR Biased w/ 84hr anneal	0.6078	0.6078	0
8	50	HDR Biased w/ 84hr anneal	0.6023	0.6028	0.0005
9	50	HDR Biased w/ 84hr anneal	0.6058	0.6068	0.001
10	50	HDR unbiased	0.6008	0.6013	0.0005
11	50	HDR unbiased	0.6098	0.6068	-0.003
12	50	HDR unbiased	0.5998	0.5977	-0.0021
13	50	HDR unbiased	0.6048	0.6018	-0.003
14	50	HDR unbiased	0.6078	0.6038	-0.004
26	0	Correlation	0.5952	0.5957	0.0005
27	0	Correlation	0.6002	0.6008	0.0006
28	0	Correlation	0.5932	0.5932	0
29	0	Correlation	0.5962	0.5962	0
30	0	Correlation	0.5912	0.5912	0
32	0	Correlation	0.5922	0.5922	0

TID vs Post - Pre Exposure Delta

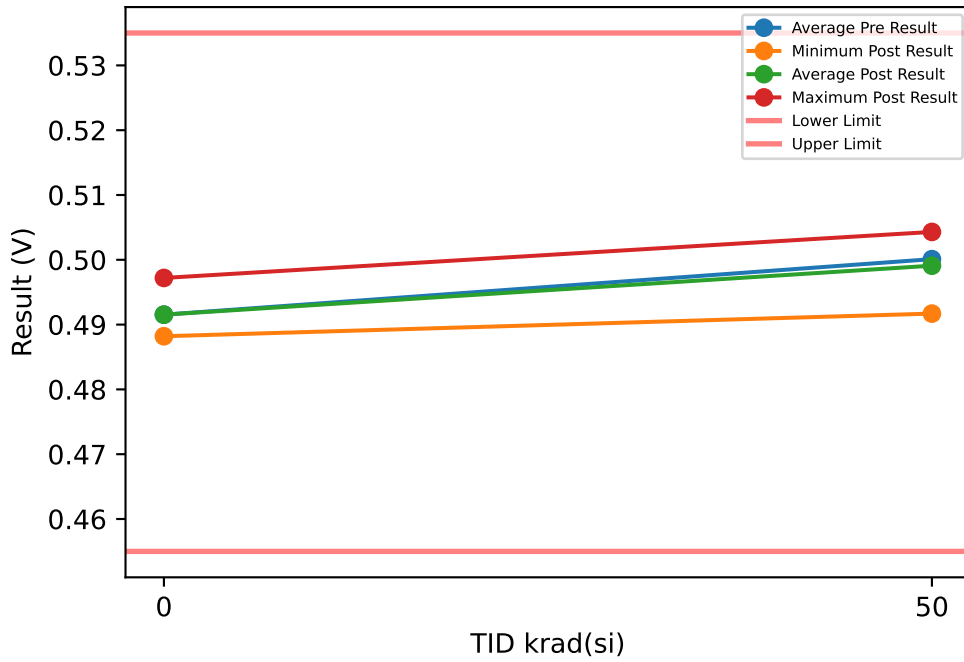


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5912	0.5947	0.6002	0.0032711	0.5912	0.59488	0.6008	0.0034931	0	0.00018333	0.0006	0.00028577
50	0.5977	0.60364	0.6098	0.0041259	0.5947	0.60243	0.6078	0.0041567	-0.004	-0.00121	0.001	0.0019796

Device Test: 16.6 FAULT\_VTH\_FALLING(\_THRESHOLD|FALL/FAULT/5////@FAULT\_VTH\_FALLING )

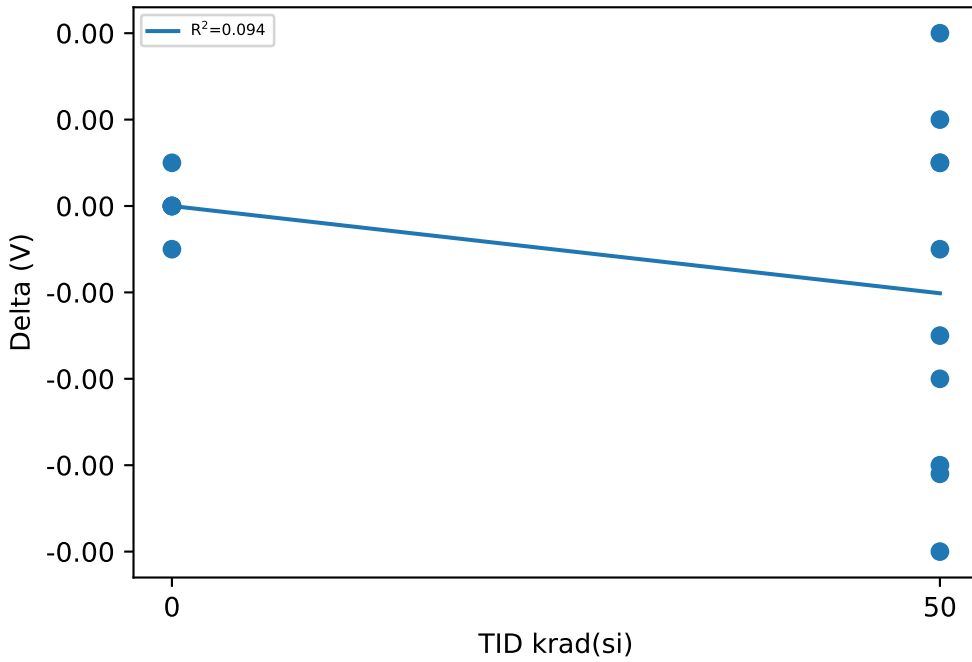
TID vs Result Stats



Test Results (Lower Limit = 0.455, Upper Limit = 0.535 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.4937	0.4917	-0.002
4	50	HDR Biased w/ 84hr anneal	0.4962	0.4972	0.001
6	50	HDR Biased w/ 84hr anneal	0.5048	0.5043	-0.0005
8	50	HDR Biased w/ 84hr anneal	0.4982	0.4987	0.0005
9	50	HDR Biased w/ 84hr anneal	0.5013	0.5033	0.002
10	50	HDR unbiased	0.4977	0.4982	0.0005
11	50	HDR unbiased	0.5058	0.5028	-0.003
12	50	HDR unbiased	0.4962	0.4947	-0.0015
13	50	HDR unbiased	0.5023	0.4992	-0.0031
14	50	HDR unbiased	0.5048	0.5008	-0.004
26	0	Correlation	0.4917	0.4912	-0.0005
27	0	Correlation	0.4972	0.4972	0
28	0	Correlation	0.4897	0.4897	0
29	0	Correlation	0.4937	0.4937	0
30	0	Correlation	0.4877	0.4882	0.0005
32	0	Correlation	0.4892	0.4892	0

TID vs Post - Pre Exposure Delta

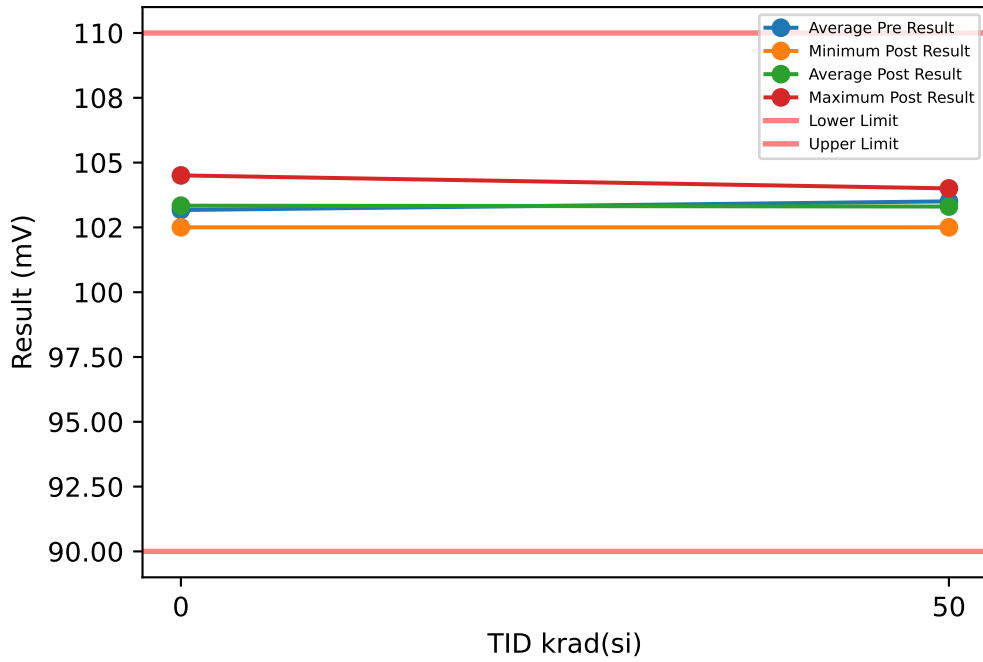


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.4877	0.49153	0.4972	0.0034737	0.4882	0.49153	0.4972	0.0033714	-0.0005	0	0.0005	0.00031623
50	0.4937	0.5001	0.5058	0.0042648	0.4917	0.49909	0.5043	0.0039436	-0.004	-0.00101	0.002	0.0020113

Device Test: 16.7 FAULT\_VTH\_HYST(\_THRESHOLD|HYST/FAULT/5////@FAULT\_VTH\_HYST )

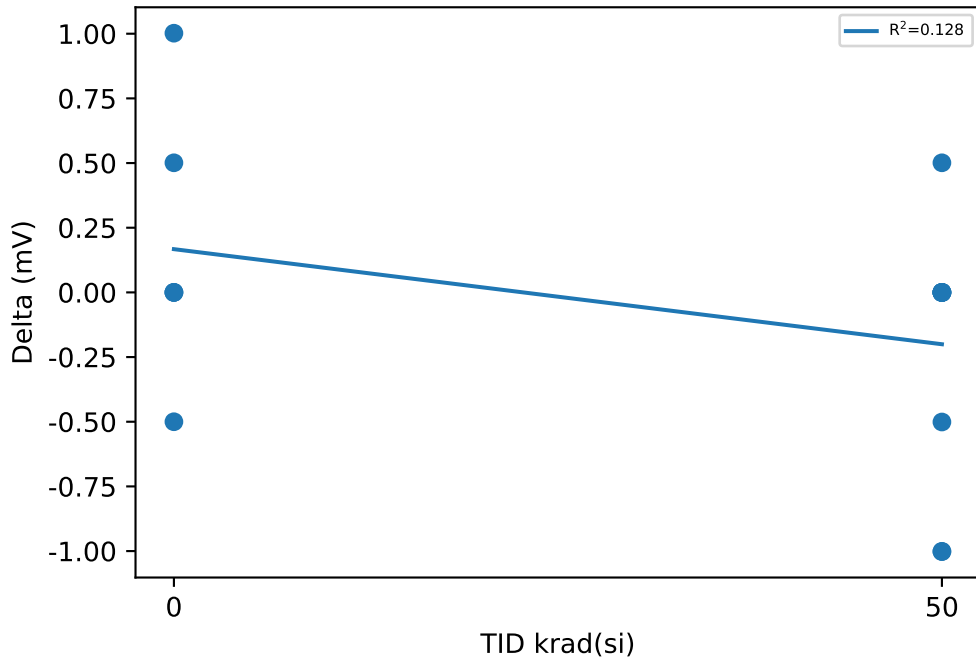
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 110.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	104	103	-1.002
4	50	HDR Biased w/ 84hr anneal	103.5	103.5	-0.001
6	50	HDR Biased w/ 84hr anneal	103	103.5	0.501
8	50	HDR Biased w/ 84hr anneal	104	104	0
9	50	HDR Biased w/ 84hr anneal	104.5	103.5	-1.001
10	50	HDR unbiased	103	103	0
11	50	HDR unbiased	104	104	0
12	50	HDR unbiased	103.5	103	-0.501
13	50	HDR unbiased	102.5	102.5	0
14	50	HDR unbiased	103	103	0
26	0	Correlation	103.5	104.51	1.002
27	0	Correlation	103	103.5	0.501
28	0	Correlation	103.5	103.5	0
29	0	Correlation	102.5	102.5	0
30	0	Correlation	103.5	103	-0.5
32	0	Correlation	103	103	0

TID vs Post - Pre Exposure Delta



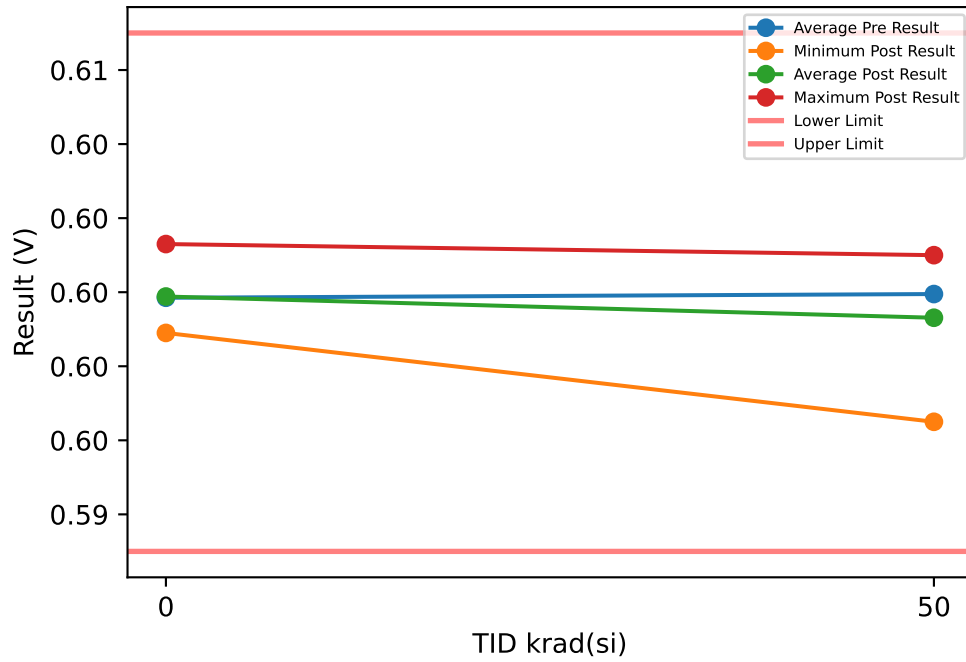
Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	102.5	103.17	103.5	0.4089	102.5	103.34	104.51	0.6842	-0.5	0.16717	1.002	0.51717
50	102.5	103.5	104.5	0.62423	102.5	103.3	104	0.48367	-1.002	-0.2004	0.501	0.48378





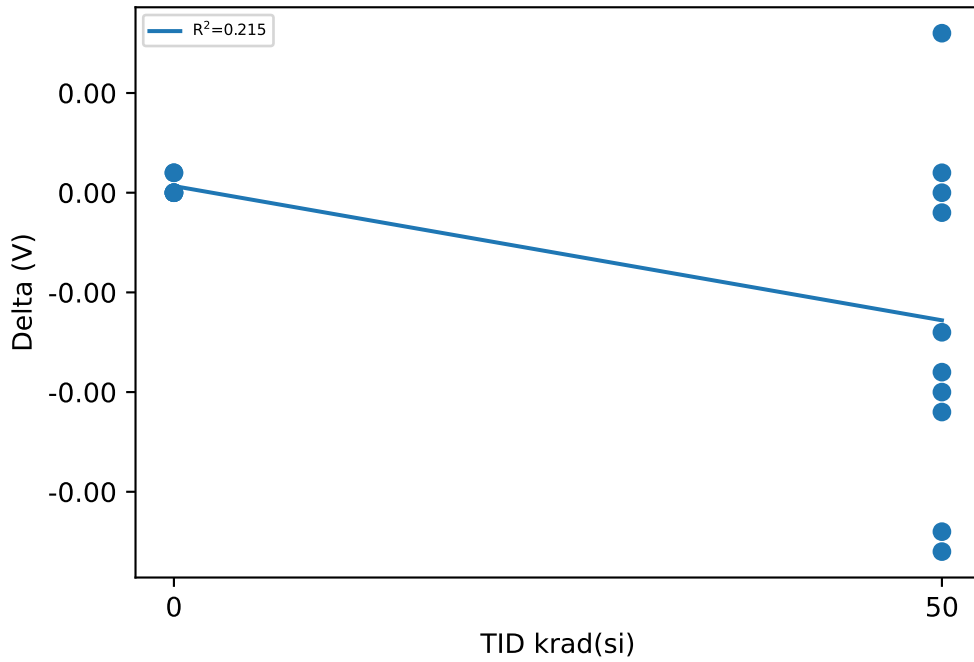
TID vs Result Stats



Test Results (Lower Limit = 0.593, Upper Limit = 0.607 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5982	0.5965	-0.0017
4	50	HDR Biased w/ 84hr anneal	0.5989	0.598	-0.0009
6	50	HDR Biased w/ 84hr anneal	0.6003	0.5992	-0.0011
8	50	HDR Biased w/ 84hr anneal	0.6008	0.6009	0.0001
9	50	HDR Biased w/ 84hr anneal	0.599	0.5998	0.0008
10	50	HDR unbiased	0.6005	0.5995	-0.001
11	50	HDR unbiased	0.6012	0.6005	-0.0007
12	50	HDR unbiased	0.5995	0.5977	-0.0018
13	50	HDR unbiased	0.6001	0.6	-0.0001
14	50	HDR unbiased	0.601	0.601	0
26	0	Correlation	0.6013	0.6013	0
27	0	Correlation	0.5991	0.5992	0.0001
28	0	Correlation	0.6009	0.6009	0
29	0	Correlation	0.5989	0.5989	0
30	0	Correlation	0.5992	0.5993	0.0001
32	0	Correlation	0.5997	0.5997	0

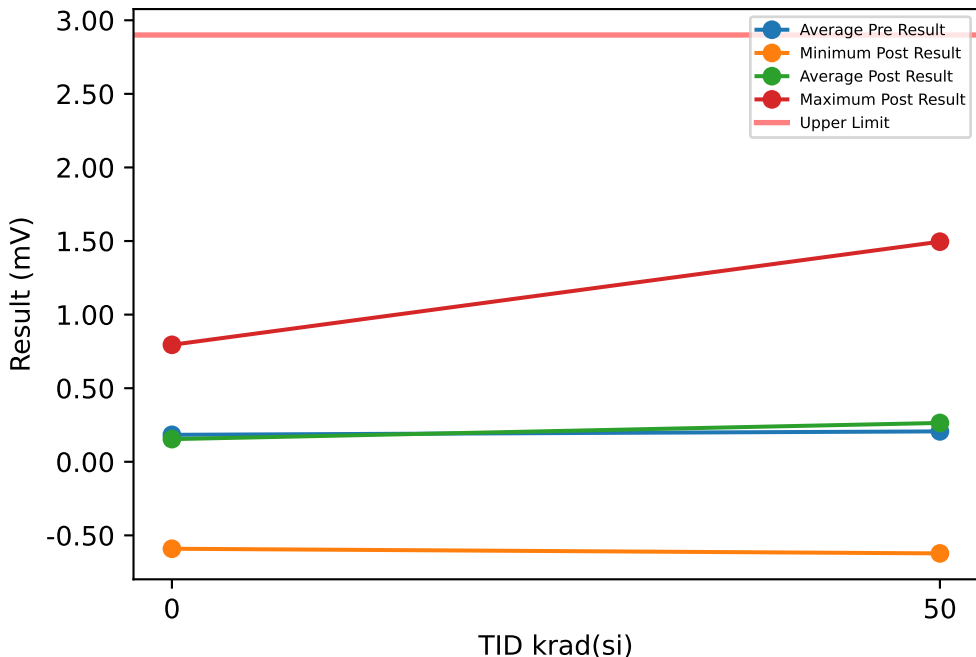
TID vs Post - Pre Exposure Delta



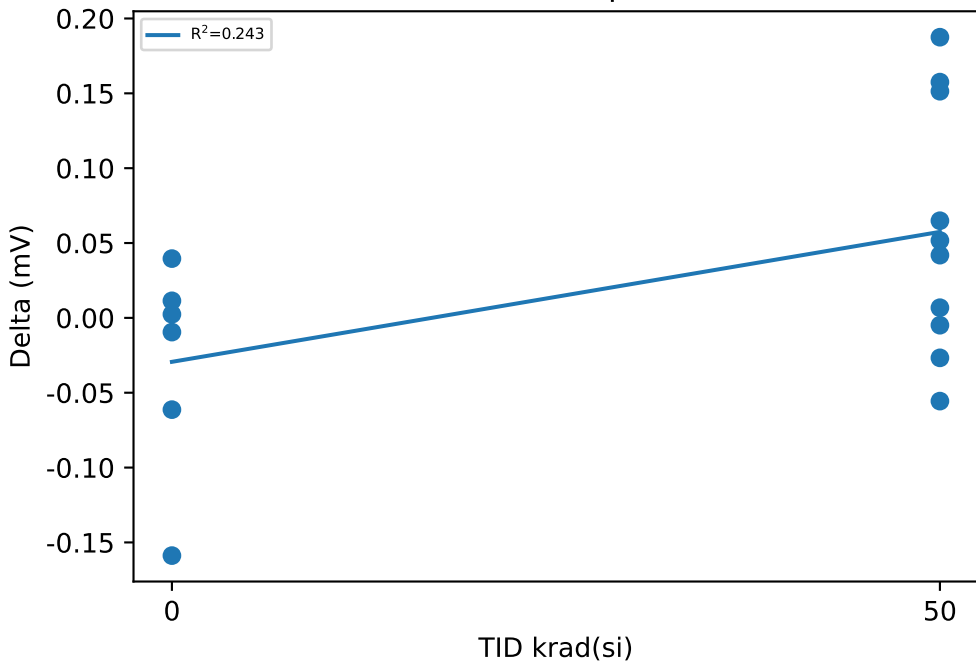
Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5989	0.59985	0.6013	0.0010114	0.5989	0.59988	0.6013	0.00098472	0	3.3333e-05	0.0001	5.164e-05
50	0.5982	0.59995	0.6012	0.0010058	0.5965	0.59931	0.601	0.0014821	-0.0018	-0.00064	0.0008	0.00083026

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 2.9 (mV))

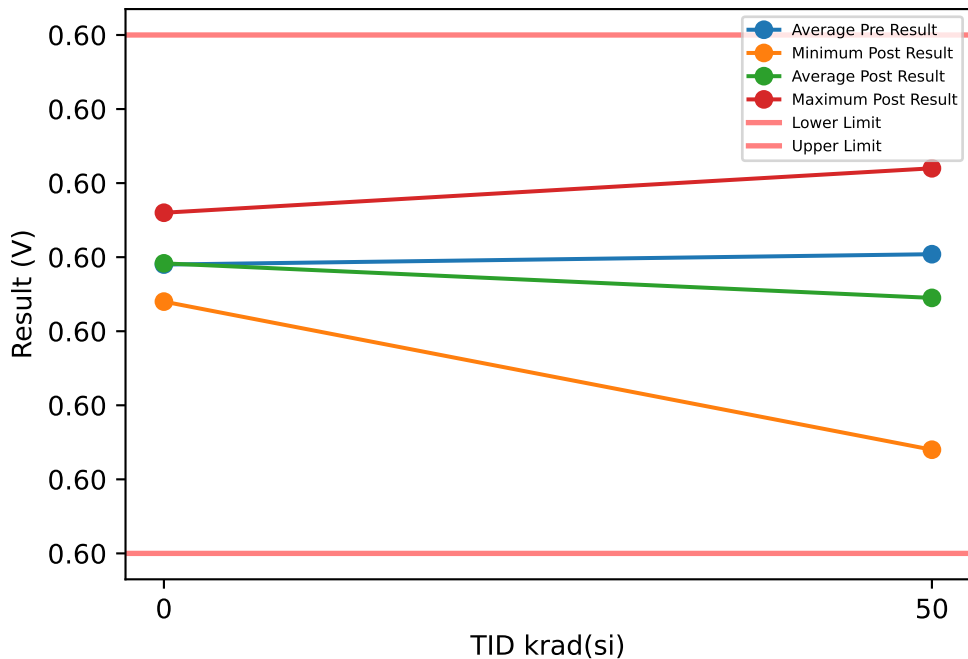
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.2337	1.2756	0.0419
4	50	HDR Biased w/ 84hr anneal	0.681	0.7459	0.0649
6	50	HDR Biased w/ 84hr anneal	0.0747	0.2322	0.1575
8	50	HDR Biased w/ 84hr anneal	-0.3673	-0.2159	0.1514
9	50	HDR Biased w/ 84hr anneal	1.3081	1.4956	0.1875
10	50	HDR unbiased	0.1992	0.1436	-0.0556
11	50	HDR unbiased	-0.5958	-0.6225	-0.0267
12	50	HDR unbiased	-0.0881	-0.093	-0.0049
13	50	HDR unbiased	-0.201	-0.1493	0.0517
14	50	HDR unbiased	-0.1796	-0.1728	0.0068
26	0	Correlation	-0.6023	-0.5909	0.0114
27	0	Correlation	0.8561	0.7948	-0.0613
28	0	Correlation	-0.526	-0.4864	0.0396
29	0	Correlation	0.8948	0.736	-0.1588
30	0	Correlation	0.3106	0.3011	-0.0095
32	0	Correlation	0.1666	0.169	0.0024

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	-0.6023	0.1833	0.8948	0.6474	-0.5909	0.15393	0.7948	0.58927	-0.1588	-0.029367	0.0396	0.071547
50	-0.5958	0.20649	1.3081	0.65711	-0.6225	0.26394	1.4956	0.69066	-0.0556	0.05745	0.1875	0.083263

Device Test: 17.11 VREF\_25C(\_LEVEL|STATIC/SS\_TR/5////@VREF\_25C )

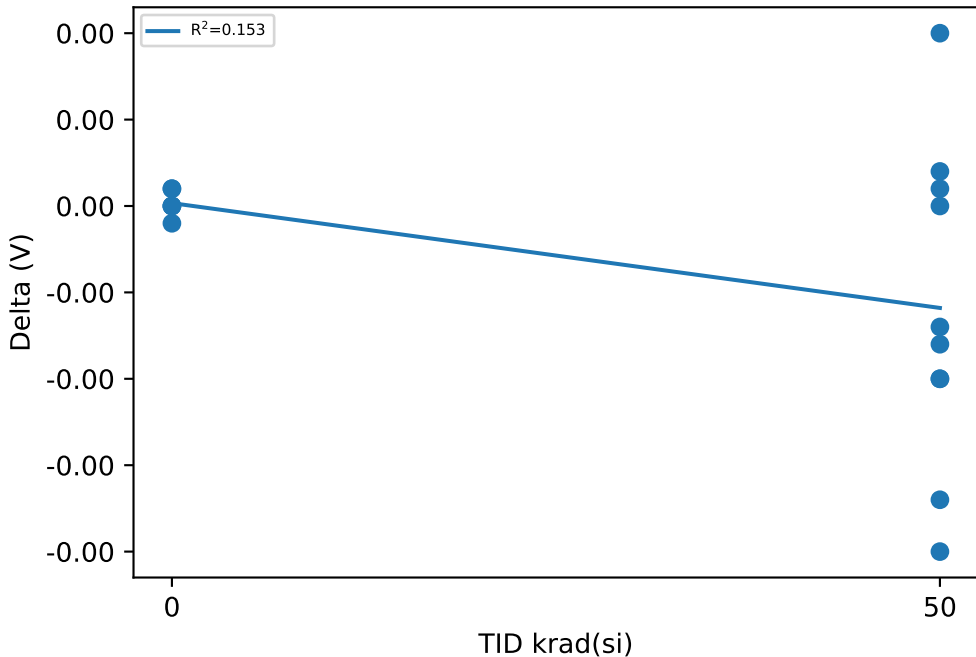
TID vs Result Stats



Test Results (Lower Limit = 0.596, Upper Limit = 0.603 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5993	0.5976	-0.0017
4	50	HDR Biased w/ 84hr anneal	0.5995	0.5988	-0.0007
6	50	HDR Biased w/ 84hr anneal	0.6003	0.5993	-0.001
8	50	HDR Biased w/ 84hr anneal	0.6003	0.6005	0.0002
9	50	HDR Biased w/ 84hr anneal	0.6002	0.6012	0.001
10	50	HDR unbiased	0.6005	0.5995	-0.001
11	50	HDR unbiased	0.6005	0.5997	-0.0008
12	50	HDR unbiased	0.5994	0.5974	-0.002
13	50	HDR unbiased	0.5997	0.5998	0.0001
14	50	HDR unbiased	0.6007	0.6007	0
26	0	Correlation	0.6005	0.6006	0.0001
27	0	Correlation	0.5998	0.5998	0
28	0	Correlation	0.6002	0.6003	0.0001
29	0	Correlation	0.5997	0.5997	0
30	0	Correlation	0.5995	0.5994	-0.0001
32	0	Correlation	0.5997	0.5997	0

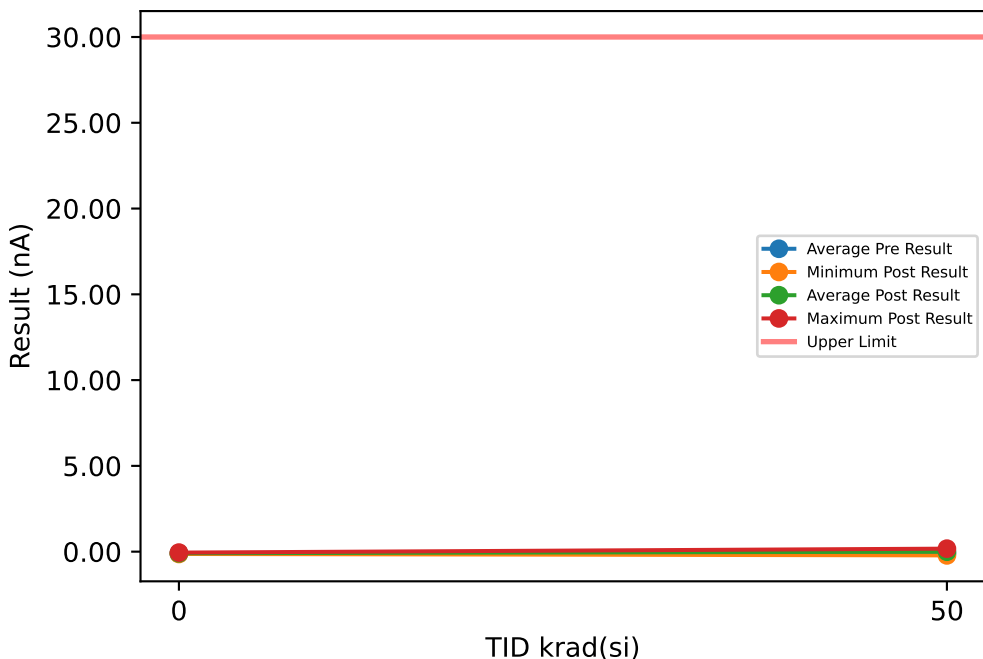
TID vs Post - Pre Exposure Delta



Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5995	0.5999	0.6005	0.00037417	0.5994	0.59992	0.6006	0.0004446	-0.0001	1.6667e-05	0.0001	7.5277e-05
50	0.5993	0.60004	0.6007	0.00051467	0.5974	0.59945	0.6012	0.0012466	-0.002	-0.00059	0.001	0.00091827

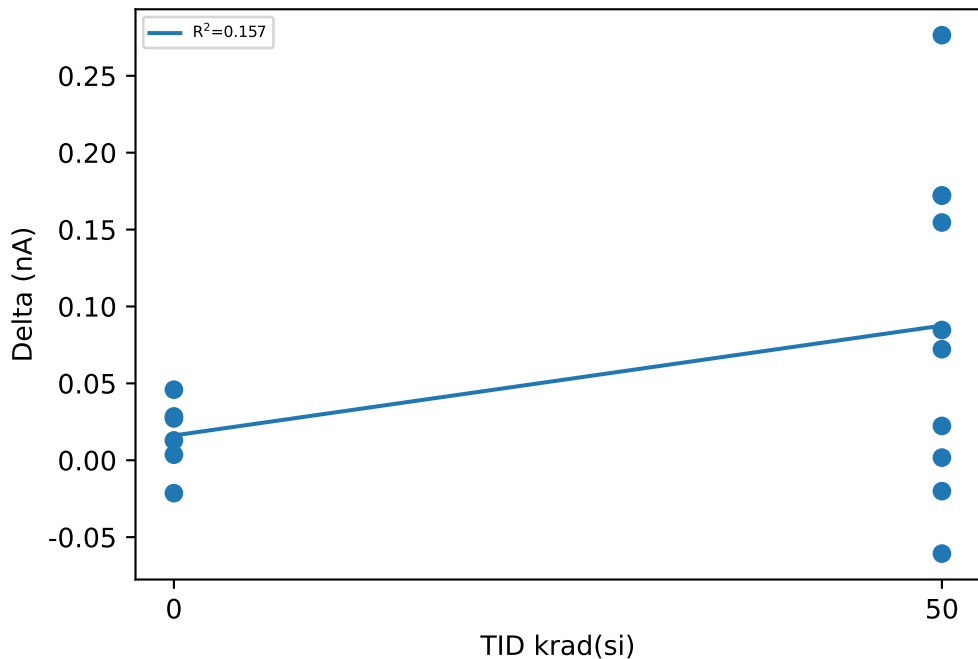
TID vs Result Stats



Test Results (Upper Limit = 30.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	-0.1137	-0.112	0.0017
4	50	HDR Biased w/ 84hr anneal	-0.0419	0.1127	0.1546
6	50	HDR Biased w/ 84hr anneal	-0.0076	-0.0277	-0.0201
8	50	HDR Biased w/ 84hr anneal	-0.1012	0.1752	0.2764
9	50	HDR Biased w/ 84hr anneal	-0.1574	-0.2181	-0.0607
10	50	HDR unbiased	-0.0981	-0.0259	0.0722
11	50	HDR unbiased	-0.0731	-0.0508	0.0223
12	50	HDR unbiased	-0.0731	0.0116	0.0847
13	50	HDR unbiased	-0.1199	0.0522	0.1721
14	50	HDR unbiased	-0.1262	0.046	0.1722
26	0	Correlation	-0.0825	-0.0789	0.0036
27	0	Correlation	-0.1792	-0.1333	0.0459
28	0	Correlation	-0.1137	-0.1351	-0.0214
29	0	Correlation	-0.1262	-0.099	0.0272
30	0	Correlation	-0.0825	-0.054	0.0285
32	0	Correlation	-0.0762	-0.0633	0.0129

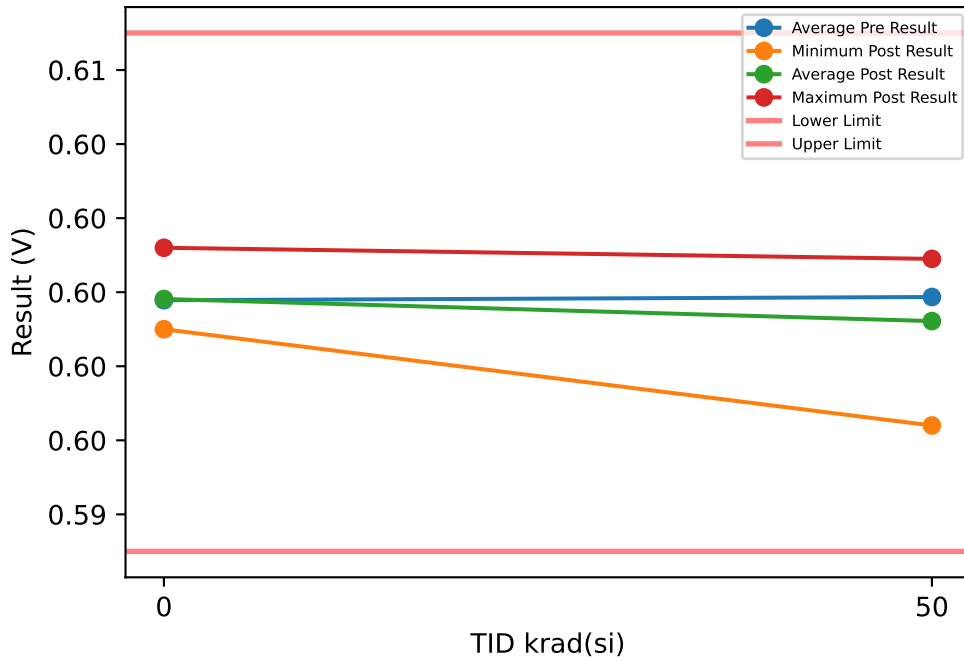
TID vs Post - Pre Exposure Delta



Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.1792	-0.11005	-0.0762	0.039293	-0.1351	-0.093933	-0.054	0.034725	-0.0214	0.016117	0.0459	0.0234
50	-0.1574	-0.09122	-0.0076	0.043665	-0.2181	-0.00368	0.1752	0.11174	-0.0607	0.08754	0.2764	0.10536

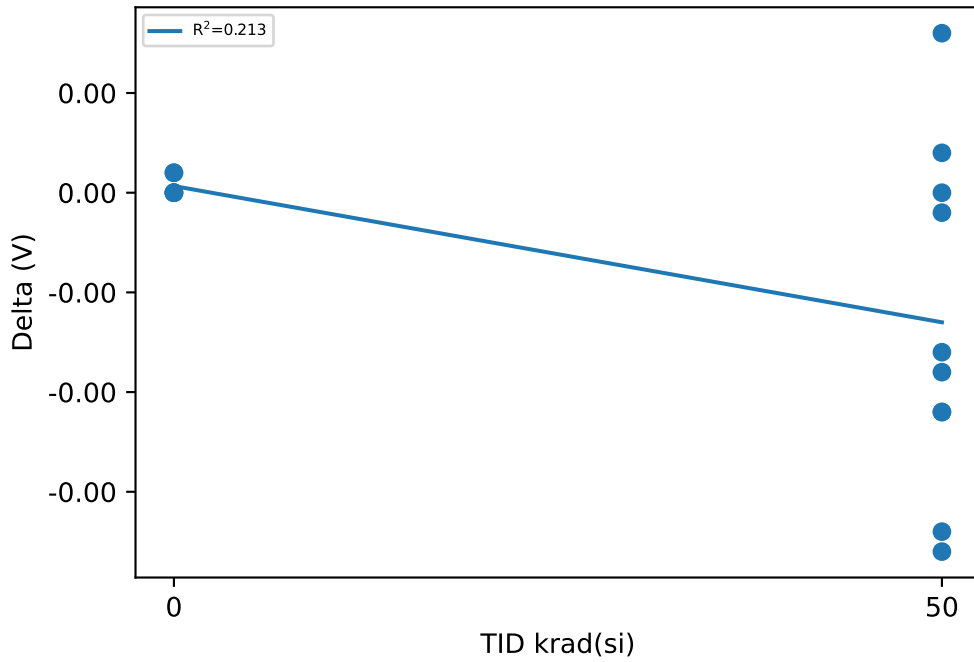
TID vs Result Stats



Test Results (Lower Limit = 0.593, Upper Limit = 0.607 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5981	0.5964	-0.0017
4	50	HDR Biased w/ 84hr anneal	0.5988	0.5979	-0.0009
6	50	HDR Biased w/ 84hr anneal	0.6002	0.5991	-0.0011
8	50	HDR Biased w/ 84hr anneal	0.6007	0.6009	0.0002
9	50	HDR Biased w/ 84hr anneal	0.599	0.5998	0.0008
10	50	HDR unbiased	0.6004	0.5993	-0.0011
11	50	HDR unbiased	0.6012	0.6004	-0.0008
12	50	HDR unbiased	0.5994	0.5976	-0.0018
13	50	HDR unbiased	0.6	0.5999	-0.0001
14	50	HDR unbiased	0.6009	0.6009	0
26	0	Correlation	0.6012	0.6012	0
27	0	Correlation	0.599	0.5991	0.0001
28	0	Correlation	0.6008	0.6008	0
29	0	Correlation	0.5989	0.599	0.0001
30	0	Correlation	0.5992	0.5992	0
32	0	Correlation	0.5996	0.5996	0

TID vs Post - Pre Exposure Delta

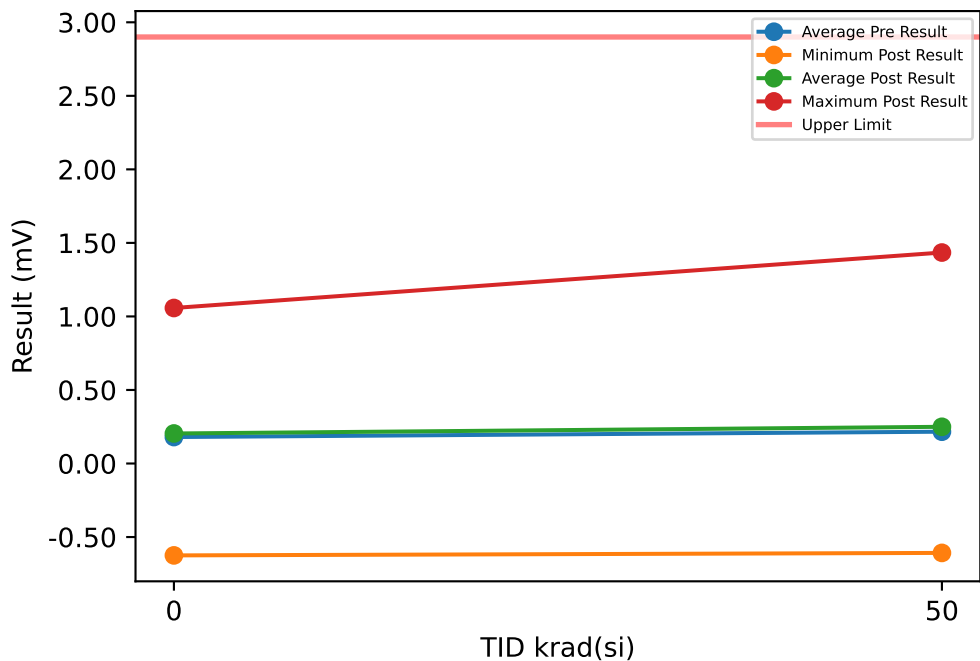


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5989	0.59978	0.6012	0.00098065	0.599	0.59982	0.6012	0.00094745	0	3.3333e-05	0.0001	5.164e-05
50	0.5981	0.59987	0.6012	0.00101	0.5964	0.59922	0.6009	0.0014973	-0.0018	-0.00065	0.0008	0.00084755

# Device Test: 17.18 EA\_INPUT\_OFFSET\_V(\_LEVEL|STATIC/VSNSP/12////@EA\_INPUT\_OFFSET\_V )

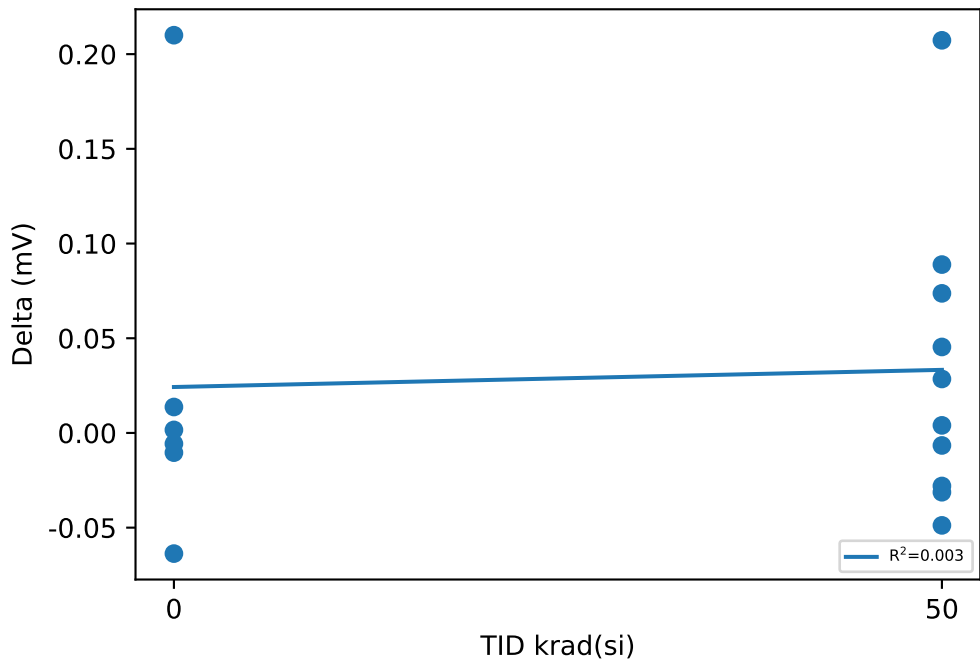
### TID vs Result Stats



### Test Results (Upper Limit = 2.9 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.2081	1.2535	0.0454
4	50	HDR Biased w/ 84hr anneal	0.7159	0.9232	0.2073
6	50	HDR Biased w/ 84hr anneal	0.0861	0.0581	-0.028
8	50	HDR Biased w/ 84hr anneal	-0.3827	-0.309	0.0737
9	50	HDR Biased w/ 84hr anneal	1.3456	1.4345	0.0889
10	50	HDR unbiased	0.1752	0.1439	-0.0313
11	50	HDR unbiased	-0.5591	-0.6079	-0.0488
12	50	HDR unbiased	-0.0861	-0.0927	-0.0066
13	50	HDR unbiased	-0.1873	-0.1588	0.0285
14	50	HDR unbiased	-0.1533	-0.1493	0.004
26	0	Correlation	-0.6191	-0.6248	-0.0057
27	0	Correlation	0.8474	1.0574	0.21
28	0	Correlation	-0.4902	-0.4765	0.0137
29	0	Correlation	0.8544	0.7907	-0.0637
30	0	Correlation	0.3284	0.318	-0.0104
32	0	Correlation	0.1586	0.1602	0.0016

### TID vs Post - Pre Exposure Delta

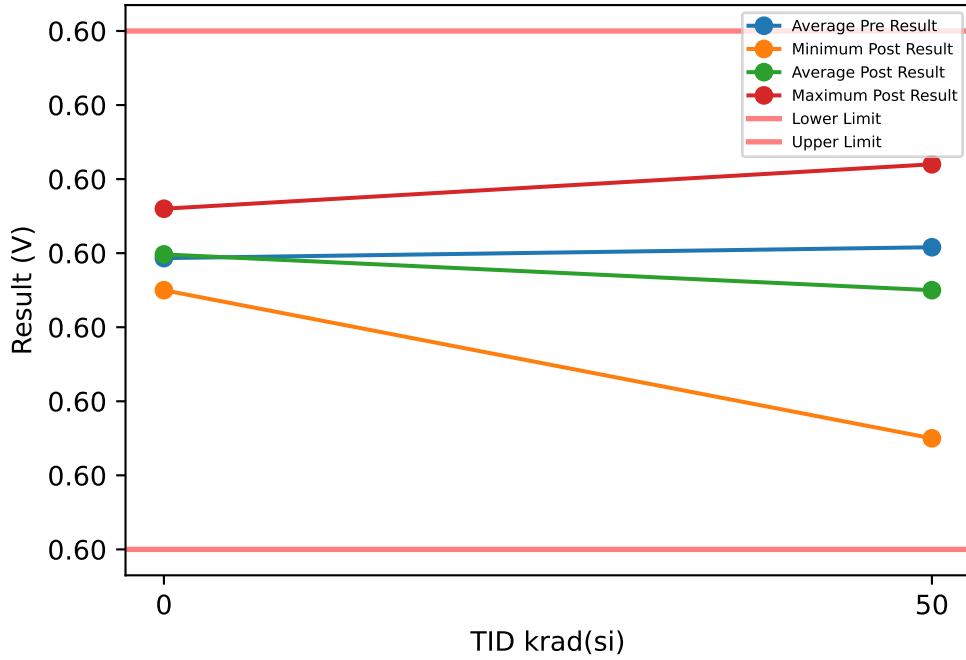


### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.6191	0.17992	0.8544	0.63411	-0.6248	0.20417	1.0574	0.66894	-0.0637	0.02425	0.21	0.094826
50	-0.5591	0.21624	1.3456	0.65644	-0.6079	0.24955	1.4345	0.69951	-0.0488	0.03331	0.2073	0.076224

Device Test: 17.19 VREF\_25C(\_LEVEL|STATIC/SS\_TR/12////@VREF\_25C )

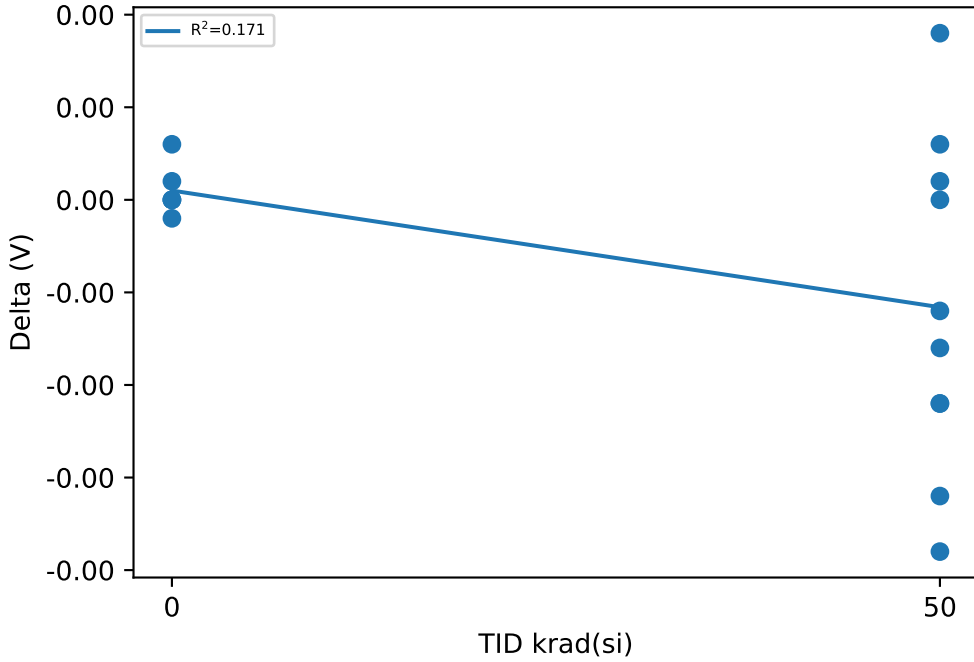
TID vs Result Stats



Test Results (Lower Limit = 0.596, Upper Limit = 0.603 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5993	0.5977	-0.0016
4	50	HDR Biased w/ 84hr anneal	0.5995	0.5989	-0.0006
6	50	HDR Biased w/ 84hr anneal	0.6003	0.5992	-0.0011
8	50	HDR Biased w/ 84hr anneal	0.6003	0.6006	0.0003
9	50	HDR Biased w/ 84hr anneal	0.6003	0.6012	0.0009
10	50	HDR unbiased	0.6006	0.5995	-0.0011
11	50	HDR unbiased	0.6006	0.5998	-0.0008
12	50	HDR unbiased	0.5994	0.5975	-0.0019
13	50	HDR unbiased	0.5998	0.5998	0
14	50	HDR unbiased	0.6007	0.6008	0.0001
26	0	Correlation	0.6006	0.6006	0
27	0	Correlation	0.5998	0.6001	0.0003
28	0	Correlation	0.6003	0.6003	0
29	0	Correlation	0.5997	0.5996	-0.0001
30	0	Correlation	0.5995	0.5995	0
32	0	Correlation	0.5997	0.5998	0.0001

TID vs Post - Pre Exposure Delta

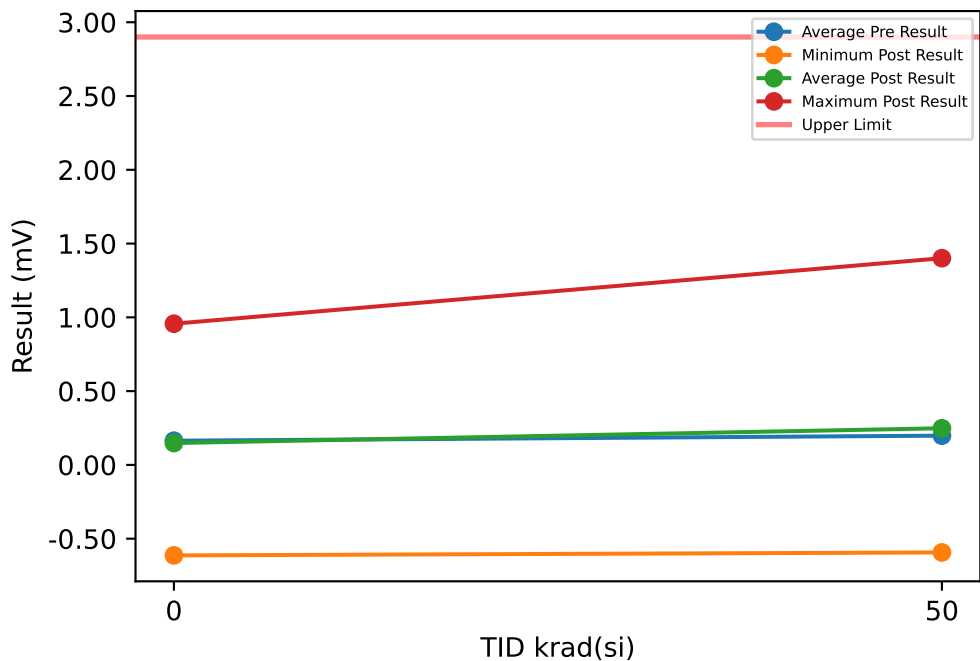


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5995	0.59993	0.6006	0.00042269	0.5995	0.59998	0.6006	0.00042622	-0.0001	5e-05	0.0003	0.00013784
50	0.5993	0.60008	0.6007	0.00053292	0.5975	0.5995	0.6012	0.001232	-0.0019	-0.00058	0.0009	0.00089044



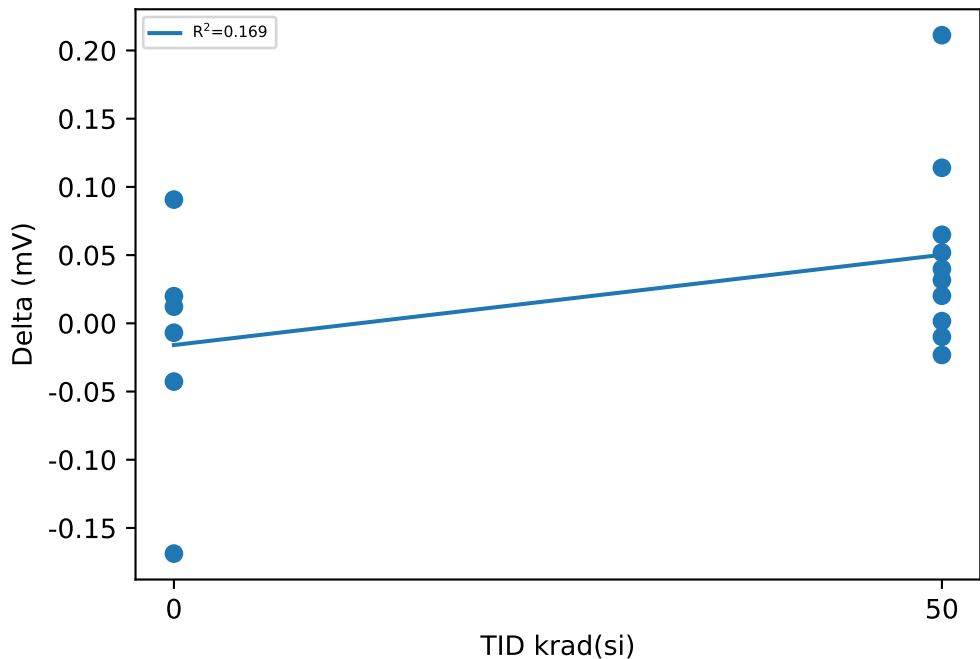
TID vs Result Stats



Test Results (Upper Limit = 2.9 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.2478	1.2997	0.0519
4	50	HDR Biased w/ 84hr anneal	0.7041	0.9153	0.2112
6	50	HDR Biased w/ 84hr anneal	0.0577	0.1226	0.0649
8	50	HDR Biased w/ 84hr anneal	-0.3547	-0.3779	-0.0232
9	50	HDR Biased w/ 84hr anneal	1.2869	1.4009	0.114
10	50	HDR unbiased	0.1508	0.1409	-0.0099
11	50	HDR unbiased	-0.625	-0.5933	0.0317
12	50	HDR unbiased	-0.1258	-0.1056	0.0202
13	50	HDR unbiased	-0.1869	-0.147	0.0399
14	50	HDR unbiased	-0.1737	-0.1721	0.0016
26	0	Correlation	-0.6332	-0.6133	0.0199
27	0	Correlation	0.8125	0.6437	-0.1688
28	0	Correlation	-0.5197	-0.5624	-0.0427
29	0	Correlation	0.8661	0.9568	0.0907
30	0	Correlation	0.3143	0.3265	0.0122
32	0	Correlation	0.144	0.1371	-0.0069

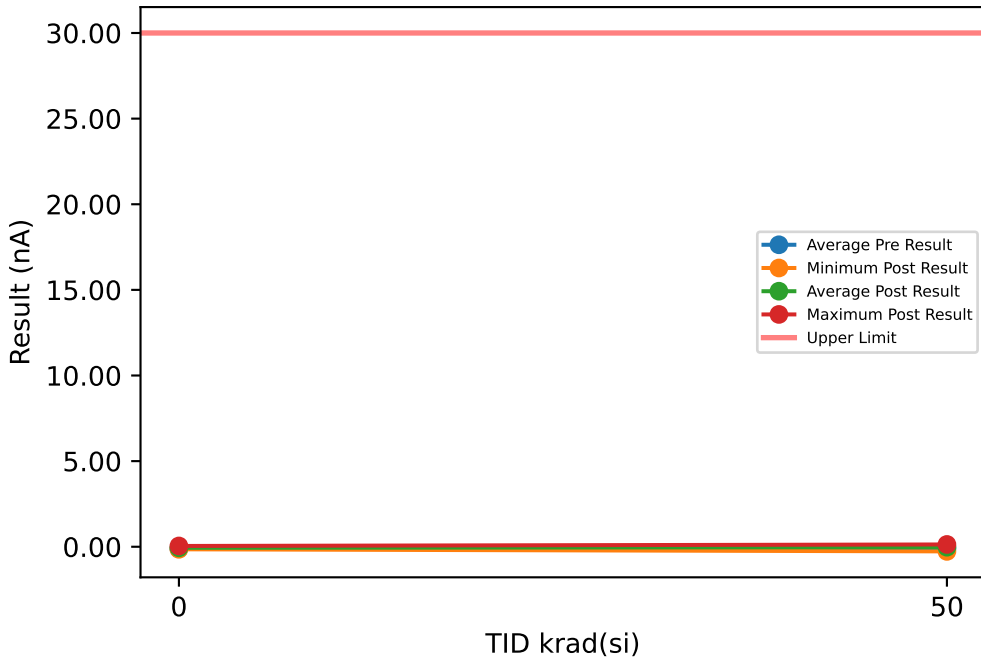
TID vs Post - Pre Exposure Delta



Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.6332	0.164	0.8661	0.63866	-0.6133	0.14807	0.9568	0.635	-0.1688	-0.015933	0.0907	0.086732
50	-0.625	0.19812	1.2869	0.66163	-0.5933	0.24835	1.4009	0.70434	-0.0232	0.05023	0.2112	0.069057

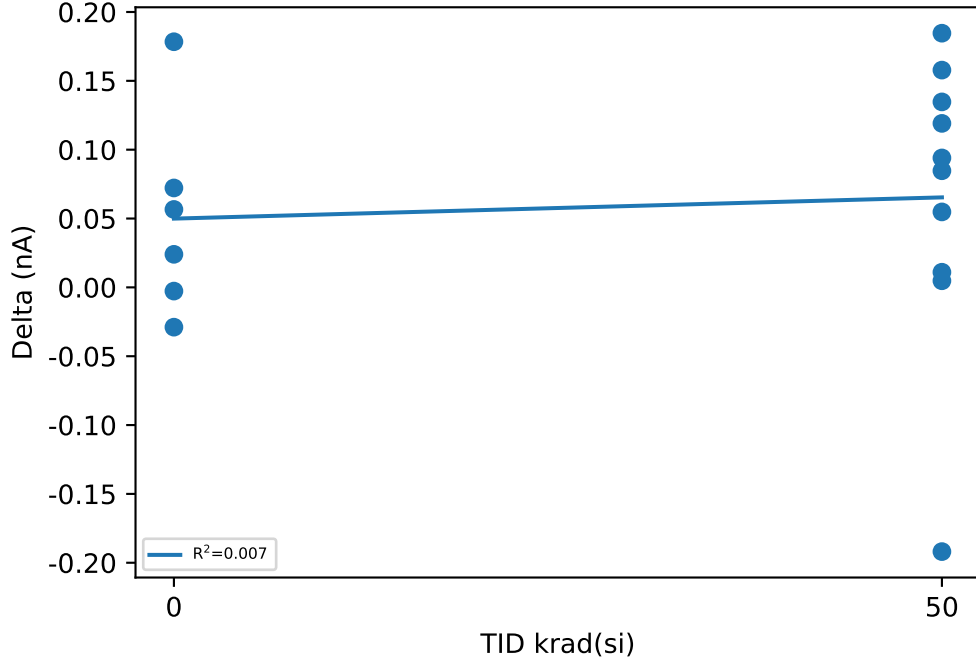
TID vs Result Stats



Test Results (Upper Limit = 30.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	-0.1262	-0.0714	0.0548
4	50	HDR Biased w/ 84hr anneal	-0.0793	-0.2712	-0.1919
6	50	HDR Biased w/ 84hr anneal	-0.0731	-0.0683	0.0048
8	50	HDR Biased w/ 84hr anneal	-0.1511	-0.1401	0.011
9	50	HDR Biased w/ 84hr anneal	-0.0232	0.1346	0.1578
10	50	HDR unbiased	-0.0762	0.0178	0.094
11	50	HDR unbiased	-0.07	0.0491	0.1191
12	50	HDR unbiased	-0.1012	0.0335	0.1347
13	50	HDR unbiased	-0.1324	0.0522	0.1846
14	50	HDR unbiased	-0.0825	0.0022	0.0847
26	0	Correlation	-0.0669	-0.0696	-0.0027
27	0	Correlation	-0.1199	-0.1488	-0.0289
28	0	Correlation	-0.1293	-0.0727	0.0566
29	0	Correlation	-0.1168	-0.0928	0.024
30	0	Correlation	-0.1324	0.046	0.1784
32	0	Correlation	-0.1012	-0.029	0.0722

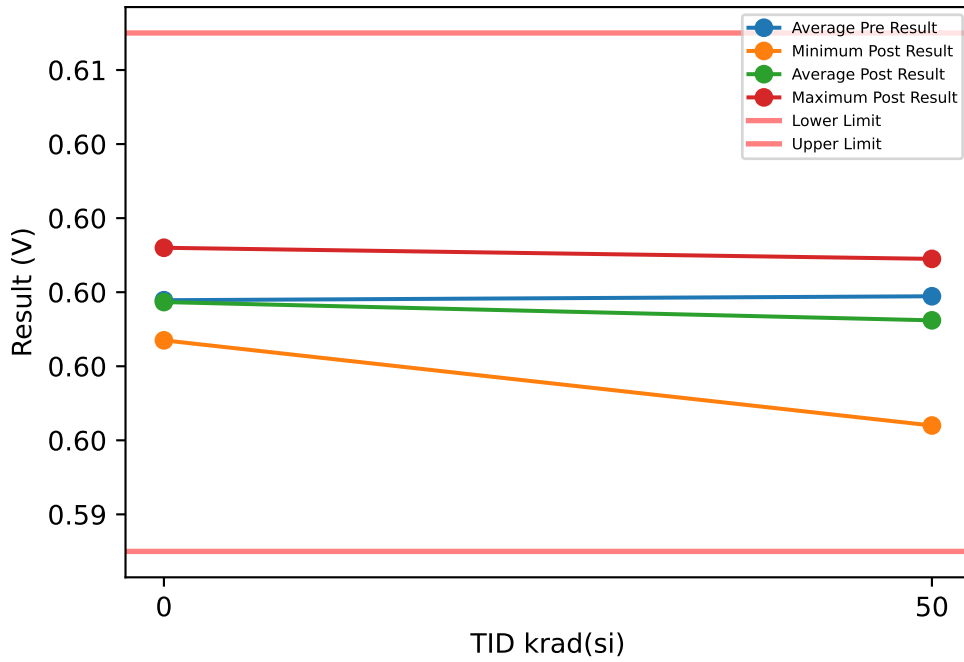
TID vs Post - Pre Exposure Delta



Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.1324	-0.11108	-0.0669	0.024276	-0.1488	-0.06115	0.046	0.065428	-0.0289	0.049933	0.1784	0.073077
50	-0.1511	-0.09152	-0.0232	0.037197	-0.2712	-0.02616	0.1346	0.11585	-0.1919	0.06536	0.1846	0.10779

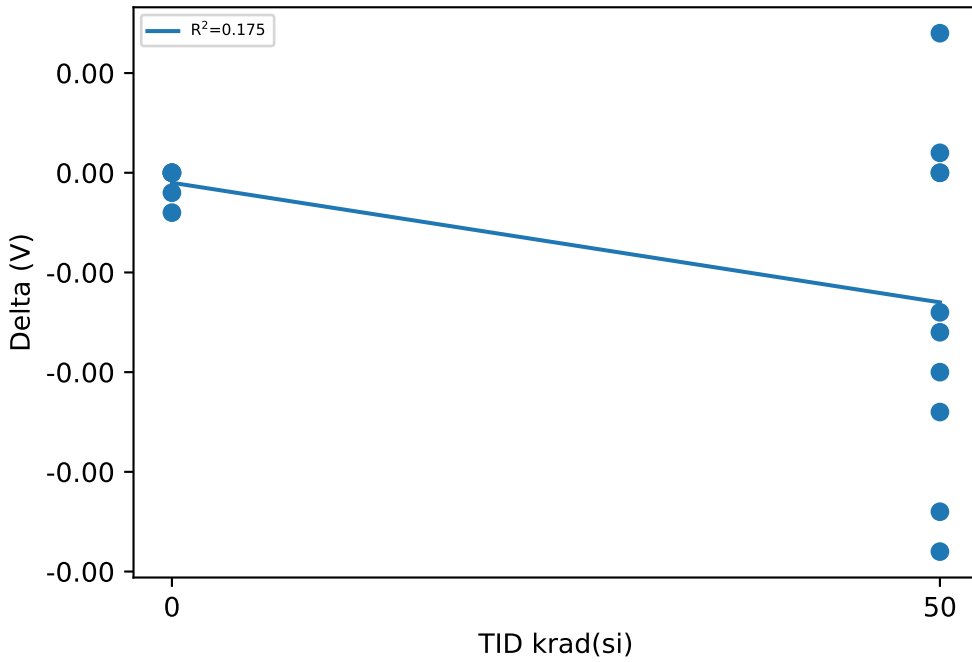
TID vs Result Stats



Test Results (Lower Limit = 0.593, Upper Limit = 0.607 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5981	0.5964	-0.0017
4	50	HDR Biased w/ 84hr anneal	0.5988	0.5981	-0.0007
6	50	HDR Biased w/ 84hr anneal	0.6003	0.5991	-0.0012
8	50	HDR Biased w/ 84hr anneal	0.6007	0.6008	0.0001
9	50	HDR Biased w/ 84hr anneal	0.599	0.5997	0.0007
10	50	HDR unbiased	0.6004	0.5994	-0.001
11	50	HDR unbiased	0.6012	0.6004	-0.0008
12	50	HDR unbiased	0.5995	0.5976	-0.0019
13	50	HDR unbiased	0.6	0.6	0
14	50	HDR unbiased	0.6009	0.6009	0
26	0	Correlation	0.6012	0.6012	0
27	0	Correlation	0.599	0.5989	-0.0001
28	0	Correlation	0.6008	0.6008	0
29	0	Correlation	0.5989	0.5987	-0.0002
30	0	Correlation	0.5992	0.5992	0
32	0	Correlation	0.5996	0.5996	0

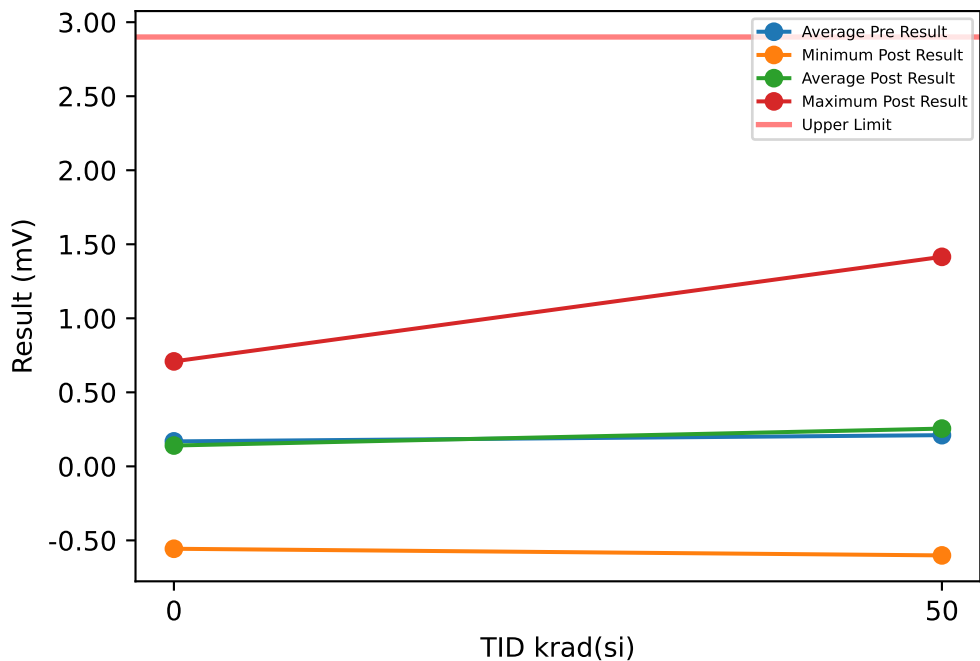
TID vs Post - Pre Exposure Delta



Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5989	0.59978	0.6012	0.00098065	0.5987	0.59973	0.6012	0.0010347	-0.0002	-5e-05	0	8.3666e-05
50	0.5981	0.59989	0.6012	0.0010093	0.5964	0.59924	0.6009	0.0014691	-0.0019	-0.00065	0.0007	0.00083964

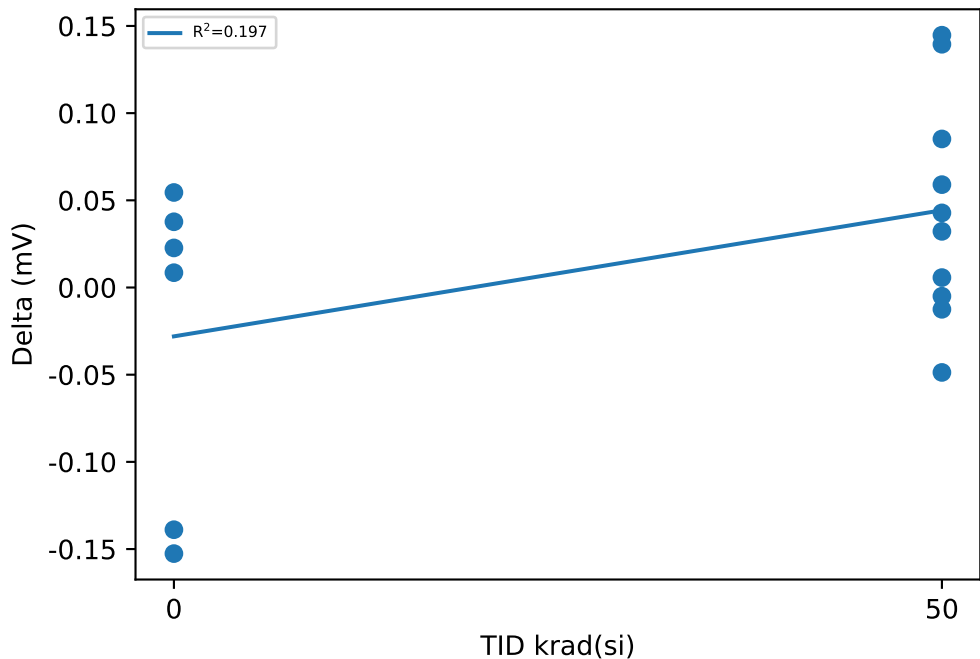
TID vs Result Stats



Test Results (Upper Limit = 2.9 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.25	1.2375	-0.0125
4	50	HDR Biased w/ 84hr anneal	0.7018	0.8413	0.1395
6	50	HDR Biased w/ 84hr anneal	0.0876	0.1728	0.0852
8	50	HDR Biased w/ 84hr anneal	-0.3537	-0.2947	0.059
9	50	HDR Biased w/ 84hr anneal	1.2704	1.4151	0.1447
10	50	HDR unbiased	0.1744	0.1694	-0.005
11	50	HDR unbiased	-0.5527	-0.6014	-0.0487
12	50	HDR unbiased	-0.1141	-0.0713	0.0428
13	50	HDR unbiased	-0.1819	-0.1497	0.0322
14	50	HDR unbiased	-0.1747	-0.169	0.0057
26	0	Correlation	-0.6111	-0.5566	0.0545
27	0	Correlation	0.8058	0.6532	-0.1526
28	0	Correlation	-0.4871	-0.4786	0.0085
29	0	Correlation	0.8478	0.7089	-0.1389
30	0	Correlation	0.298	0.3207	0.0227
32	0	Correlation	0.1588	0.1965	0.0377

TID vs Post - Pre Exposure Delta

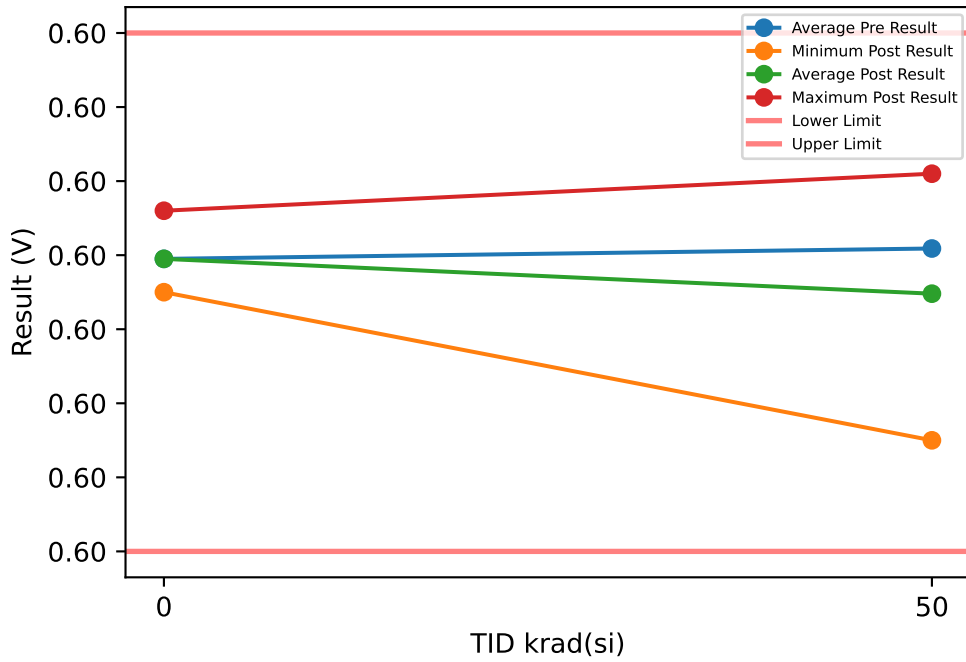


Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.6111	0.1687	0.8478	0.62001	-0.5566	0.14068	0.7089	0.54604	-0.1526	-0.028017	0.0545	0.092574
50	-0.5527	0.21071	1.2704	0.64724	-0.6014	0.255	1.4151	0.67943	-0.0487	0.04429	0.1447	0.064098

Device Test: 17.27 VREF\_25C(\_LEVEL|STATIC/SS\_TR/14////@VREF\_25C )

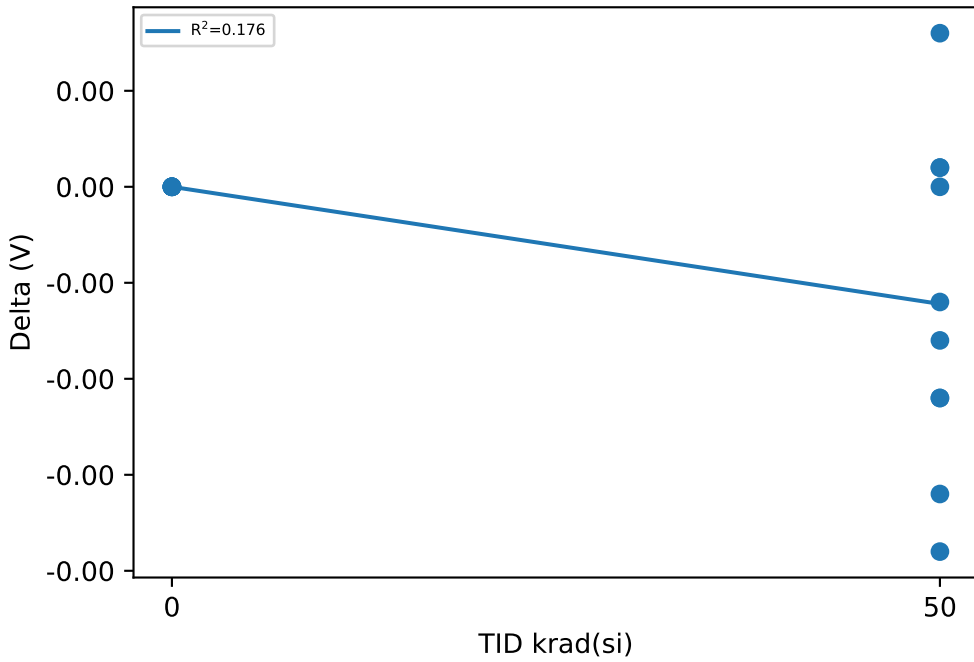
TID vs Result Stats



Test Results (Lower Limit = 0.596, Upper Limit = 0.603 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5993	0.5977	-0.0016
4	50	HDR Biased w/ 84hr anneal	0.5995	0.5989	-0.0006
6	50	HDR Biased w/ 84hr anneal	0.6003	0.5992	-0.0011
8	50	HDR Biased w/ 84hr anneal	0.6004	0.6005	0.0001
9	50	HDR Biased w/ 84hr anneal	0.6003	0.6011	0.0008
10	50	HDR unbiased	0.6006	0.5995	-0.0011
11	50	HDR unbiased	0.6006	0.5998	-0.0008
12	50	HDR unbiased	0.5994	0.5975	-0.0019
13	50	HDR unbiased	0.5998	0.5998	0
14	50	HDR unbiased	0.6007	0.6008	0.0001
26	0	Correlation	0.6006	0.6006	0
27	0	Correlation	0.5998	0.5998	0
28	0	Correlation	0.6003	0.6003	0
29	0	Correlation	0.5997	0.5997	0
30	0	Correlation	0.5995	0.5995	0
32	0	Correlation	0.5998	0.5998	0

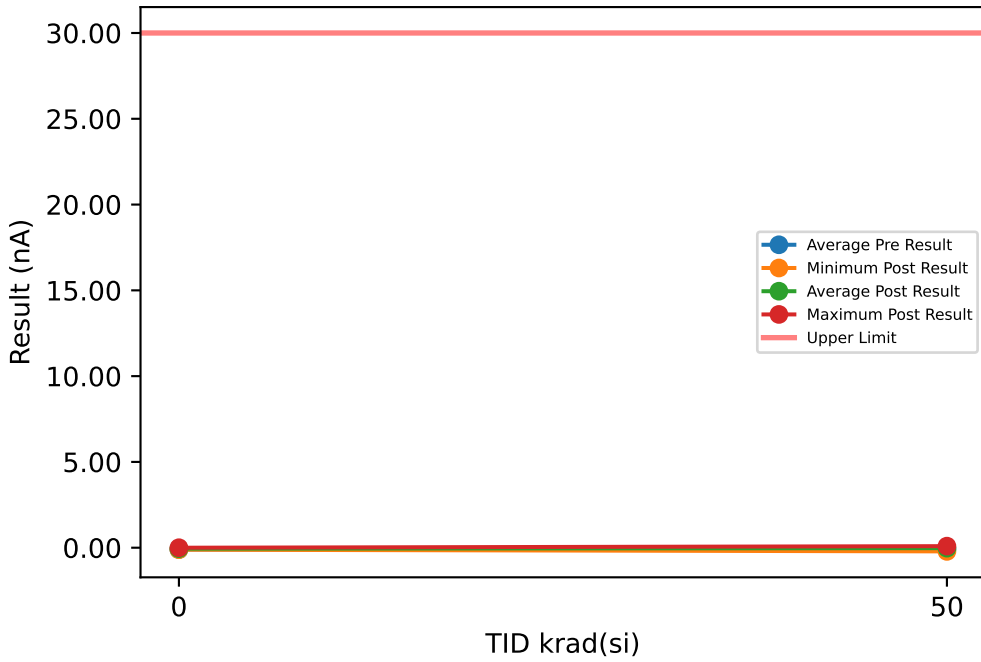
TID vs Post - Pre Exposure Delta



Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5995	0.59995	0.6006	0.00041352	0.5995	0.59995	0.6006	0.00041352	0	0	0	0
50	0.5993	0.60009	0.6007	0.00053841	0.5975	0.59948	0.6011	0.0012072	-0.0019	-0.00061	0.0008	0.00085173

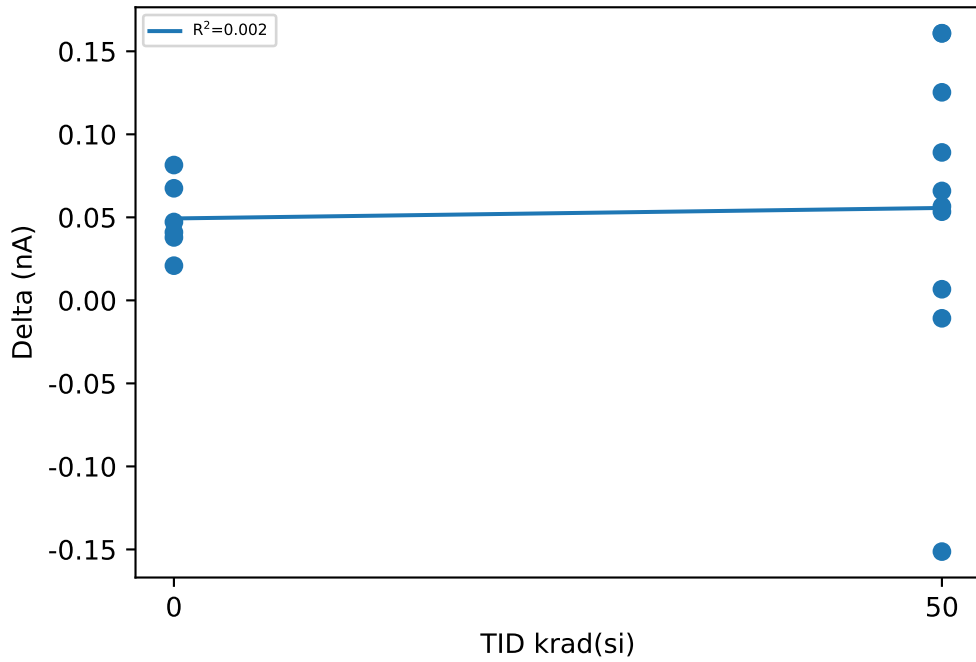
TID vs Result Stats



Test Results (Upper Limit = 30.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	-0.1293	-0.0402	0.0891
4	50	HDR Biased w/ 84hr anneal	-0.1355	0.0253	0.1608
6	50	HDR Biased w/ 84hr anneal	-0.07	0.0909	0.1609
8	50	HDR Biased w/ 84hr anneal	-0.1262	-0.137	-0.0108
9	50	HDR Biased w/ 84hr anneal	-0.0637	-0.215	-0.1513
10	50	HDR unbiased	-0.0637	0.0022	0.0659
11	50	HDR unbiased	-0.0356	0.0178	0.0534
12	50	HDR unbiased	-0.0981	0.0272	0.1253
13	50	HDR unbiased	-0.0481	0.0085	0.0566
14	50	HDR unbiased	-0.0513	-0.0446	0.0067
26	0	Correlation	-0.1074	-0.0602	0.0472
27	0	Correlation	-0.1168	-0.0493	0.0675
28	0	Correlation	-0.0388	-0.0009	0.0379
29	0	Correlation	-0.1355	-0.1146	0.0209
30	0	Correlation	-0.0825	-0.0415	0.041
32	0	Correlation	-0.148	-0.0665	0.0815

TID vs Post - Pre Exposure Delta

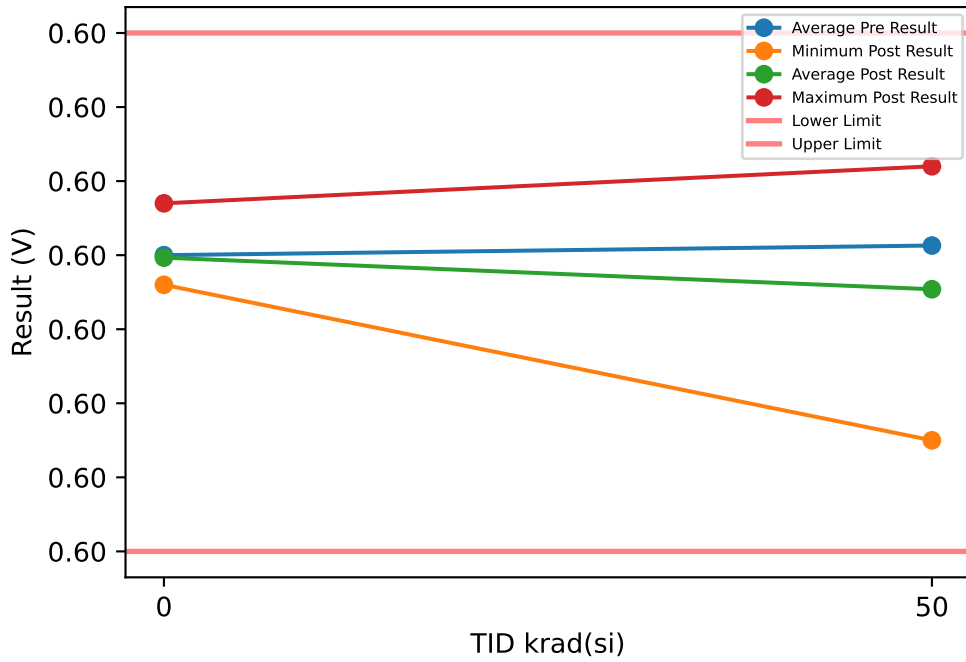


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.148	-0.10483	-0.0388	0.039529	-0.1146	-0.0555	-0.0009	0.037018	0.0209	0.049333	0.0815	0.021808
50	-0.1355	-0.08215	-0.0356	0.037074	-0.215	-0.02649	0.0909	0.089206	-0.1513	0.05566	0.1609	0.093008

Device Test: 17.3 VREF\_25C(\_LEVEL|STATIC/SS\_TR/4.5////@VREF\_25C )

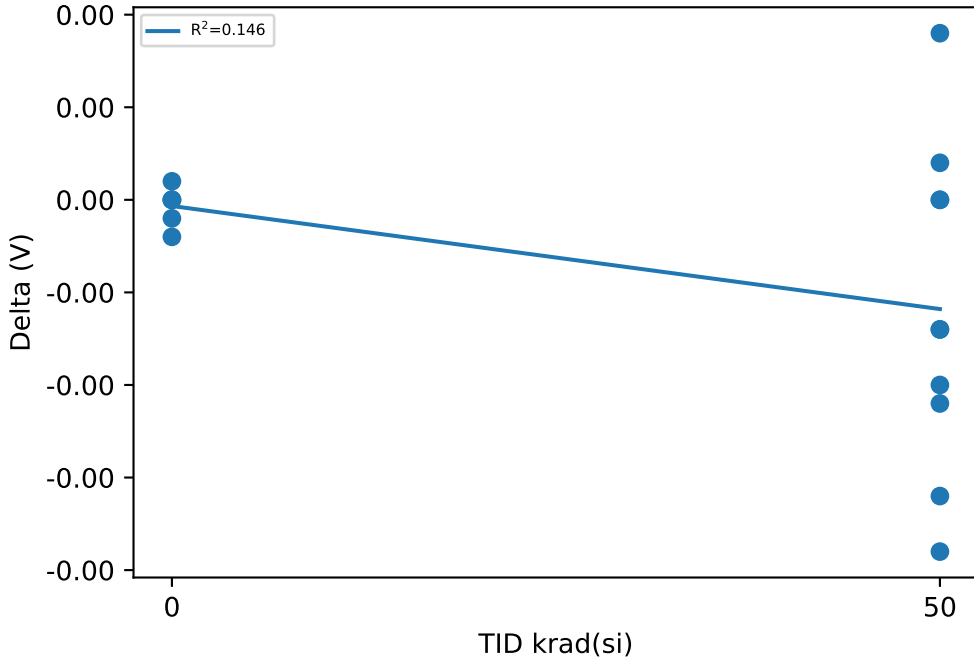
TID vs Result Stats



Test Results (Lower Limit = 0.596, Upper Limit = 0.603 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5994	0.5978	-0.0016
4	50	HDR Biased w/ 84hr anneal	0.5996	0.5989	-0.0007
6	50	HDR Biased w/ 84hr anneal	0.6004	0.5993	-0.0011
8	50	HDR Biased w/ 84hr anneal	0.6004	0.6006	0.0002
9	50	HDR Biased w/ 84hr anneal	0.6003	0.6012	0.0009
10	50	HDR unbiased	0.6006	0.5996	-0.001
11	50	HDR unbiased	0.6006	0.5999	-0.0007
12	50	HDR unbiased	0.5994	0.5975	-0.0019
13	50	HDR unbiased	0.5998	0.5998	0
14	50	HDR unbiased	0.6008	0.6008	0
26	0	Correlation	0.6006	0.6007	0.0001
27	0	Correlation	0.5999	0.5997	-0.0002
28	0	Correlation	0.6003	0.6003	0
29	0	Correlation	0.5998	0.5997	-0.0001
30	0	Correlation	0.5996	0.5996	0
32	0	Correlation	0.5998	0.5998	0

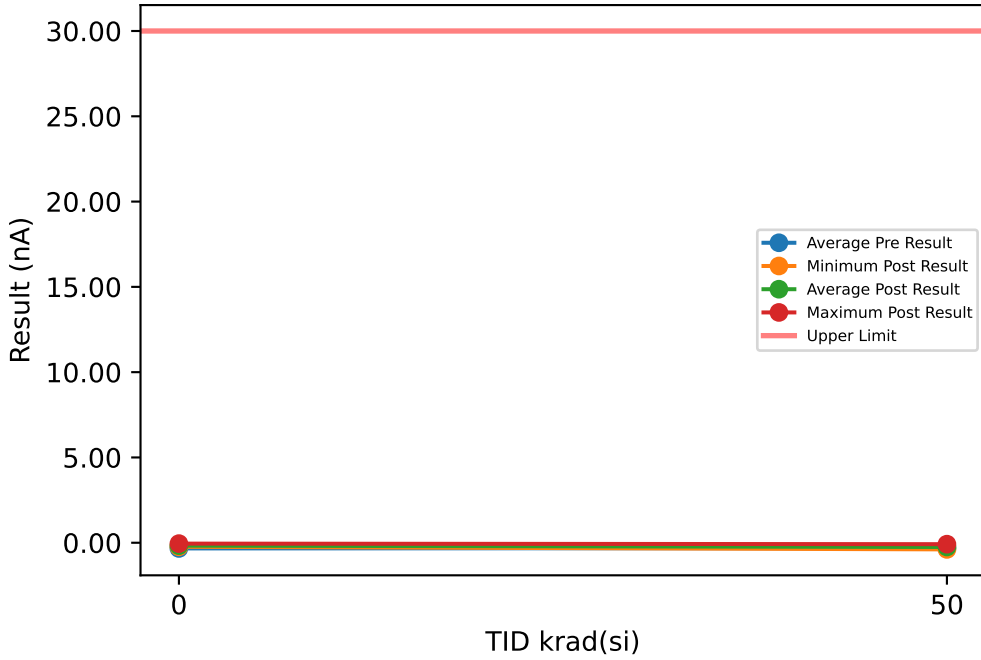
TID vs Post - Pre Exposure Delta



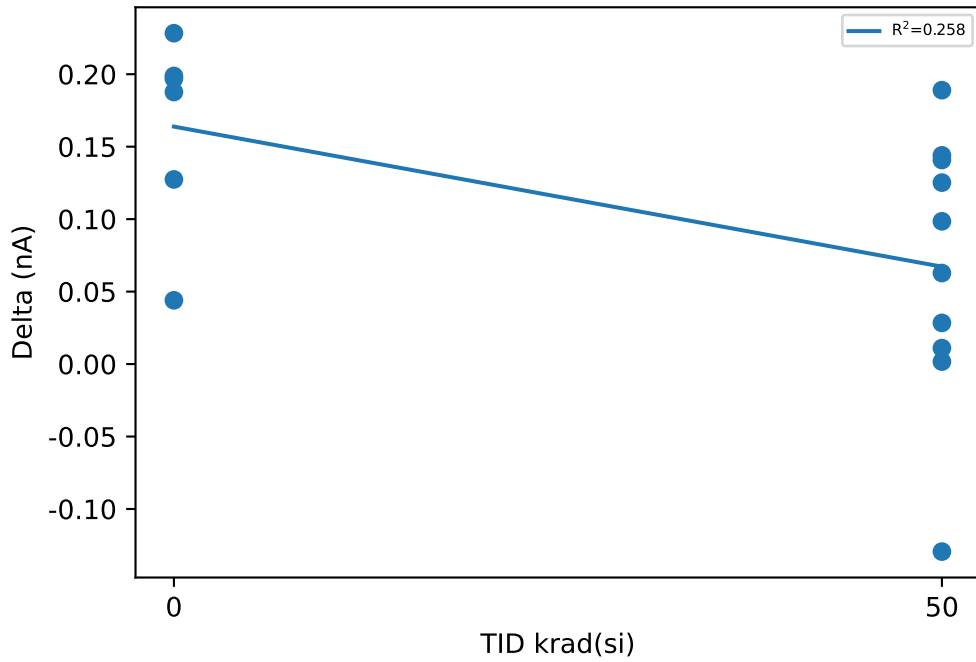
Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5996	0.6	0.6006	0.00037417	0.5996	0.59997	0.6007	0.00043665	-0.0002	-3.3333e-05	0.0001	0.00010328
50	0.5994	0.60013	0.6008	0.00052926	0.5975	0.59954	0.6012	0.0012167	-0.0019	-0.00059	0.0009	0.00086468

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 30.0 (nA))

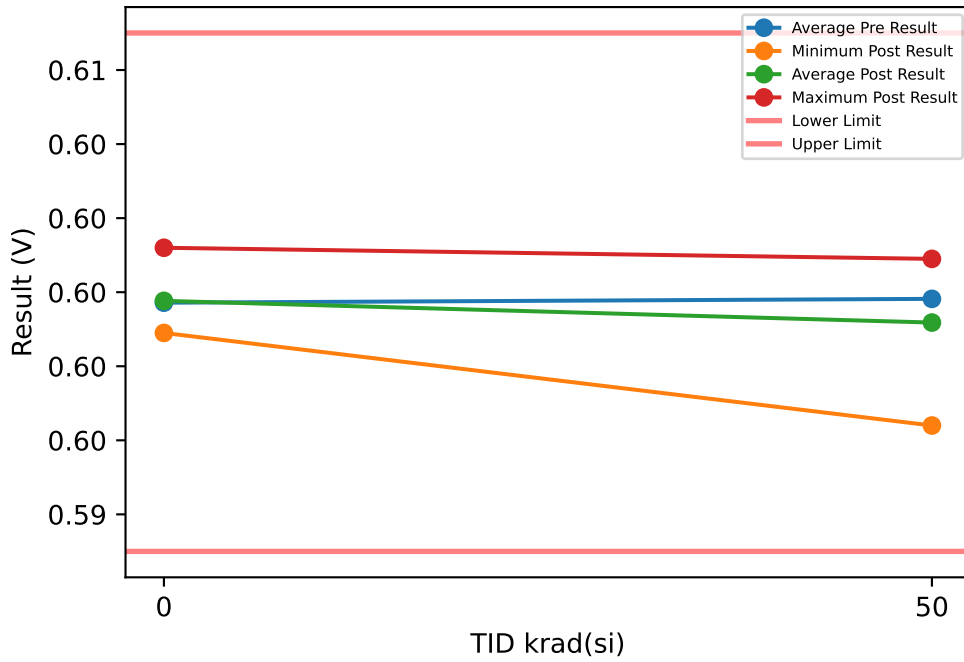
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	-0.1792	-0.3086	-0.1294
4	50	HDR Biased w/ 84hr anneal	-0.3915	-0.3898	0.0017
6	50	HDR Biased w/ 84hr anneal	-0.3478	-0.2493	0.0985
8	50	HDR Biased w/ 84hr anneal	-0.3696	-0.3586	0.011
9	50	HDR Biased w/ 84hr anneal	-0.2729	-0.0839	0.189
10	50	HDR unbiased	-0.2885	-0.2257	0.0628
11	50	HDR unbiased	-0.2697	-0.2413	0.0284
12	50	HDR unbiased	-0.3727	-0.2319	0.1408
13	50	HDR unbiased	-0.3103	-0.1851	0.1252
14	50	HDR unbiased	-0.3478	-0.2038	0.144
26	0	Correlation	-0.2791	-0.0508	0.2283
27	0	Correlation	-0.301	-0.1022	0.1988
28	0	Correlation	-0.3883	-0.1914	0.1969
29	0	Correlation	-0.3478	-0.2204	0.1274
30	0	Correlation	-0.2822	-0.2382	0.044
32	0	Correlation	-0.404	-0.2163	0.1877

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	-0.404	-0.33373	-0.2791	0.054451	-0.2382	-0.16988	-0.0508	0.075629	0.044	0.16385	0.2283	0.067423
50	-0.3915	-0.315	-0.1792	0.064382	-0.3898	-0.2478	-0.0839	0.087973	-0.1294	0.0672	0.189	0.093166



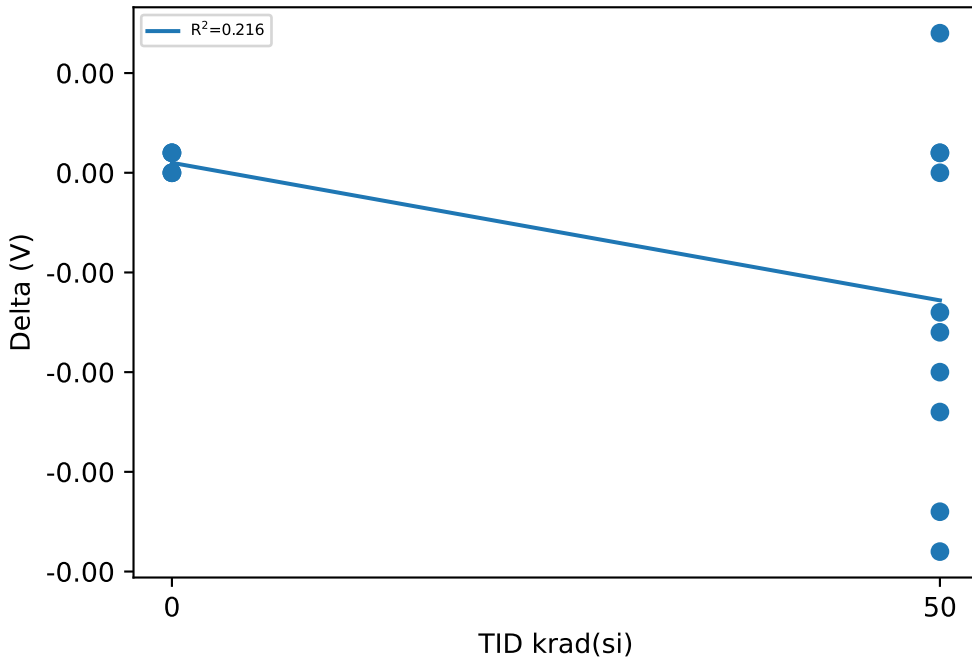
TID vs Result Stats



Test Results (Lower Limit = 0.593, Upper Limit = 0.607 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.5981	0.5964	-0.0017
4	50	HDR Biased w/ 84hr anneal	0.5988	0.598	-0.0008
6	50	HDR Biased w/ 84hr anneal	0.6002	0.599	-0.0012
8	50	HDR Biased w/ 84hr anneal	0.6007	0.6008	0.0001
9	50	HDR Biased w/ 84hr anneal	0.5989	0.5996	0.0007
10	50	HDR unbiased	0.6003	0.5993	-0.001
11	50	HDR unbiased	0.6011	0.6004	-0.0007
12	50	HDR unbiased	0.5994	0.5975	-0.0019
13	50	HDR unbiased	0.5999	0.5999	0
14	50	HDR unbiased	0.6008	0.6009	0.0001
26	0	Correlation	0.6012	0.6012	0
27	0	Correlation	0.599	0.599	0
28	0	Correlation	0.6007	0.6008	0.0001
29	0	Correlation	0.5988	0.5989	0.0001
30	0	Correlation	0.5991	0.5991	0
32	0	Correlation	0.5995	0.5996	0.0001

TID vs Post - Pre Exposure Delta

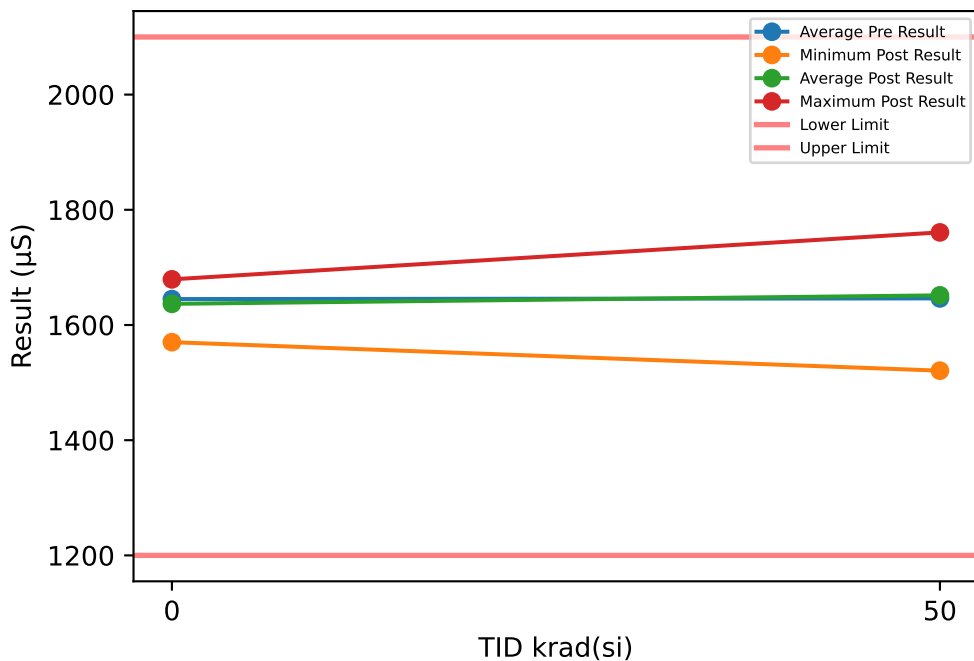


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5988	0.59972	0.6012	0.00099482	0.5989	0.59977	0.6012	0.00099331	0	5e-05	0.0001	5.4772e-05
50	0.5981	0.59982	0.6011	0.00098748	0.5964	0.59918	0.6009	0.0014816	-0.0019	-0.00064	0.0007	0.00084879

# Device Test: 18.12 EA\_GM( EA|STATIC/COMP/12////@EA\_GM )

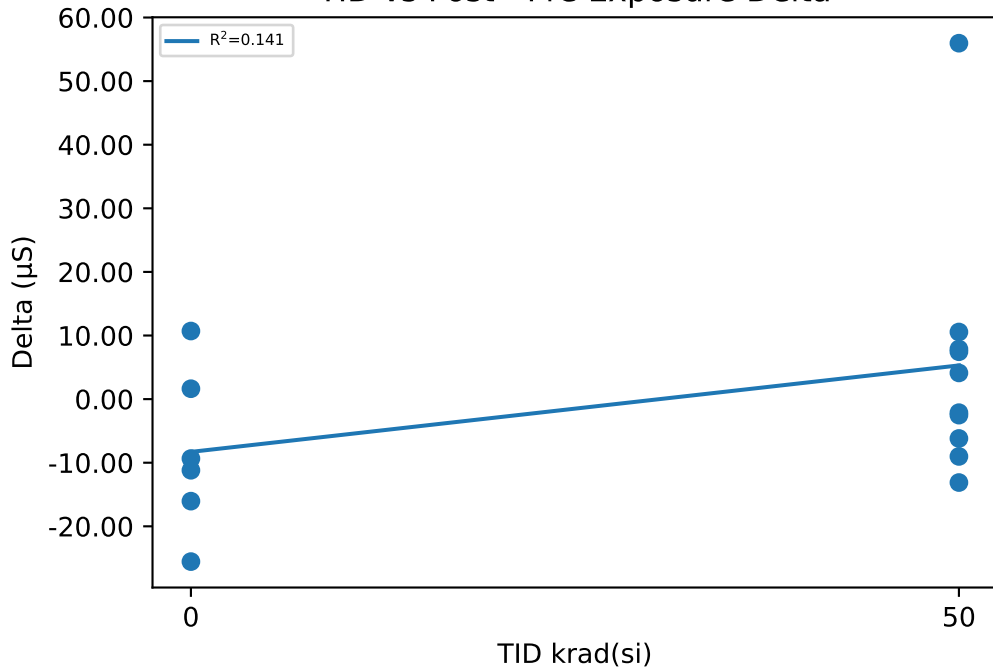
## TID vs Result Stats



## Test Results (Lower Limit = 1200.0, Upper Limit = 2100.0 (µS))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1576	1569.8	-6.186
4	50	HDR Biased w/ 84hr anneal	1750.2	1760.8	10.553
6	50	HDR Biased w/ 84hr anneal	1639.2	1646.6	7.4485
8	50	HDR Biased w/ 84hr anneal	1666.3	1657.3	-9.0115
9	50	HDR Biased w/ 84hr anneal	1760.7	1758.1	-2.5185
10	50	HDR unbiased	1583.2	1639.1	55.962
11	50	HDR unbiased	1665.8	1663.7	-2.1309
12	50	HDR unbiased	1665.6	1652.5	-13.116
13	50	HDR unbiased	1642.1	1646.2	4.1169
14	50	HDR unbiased	1512.8	1520.7	7.8711
26	0	Correlation	1663.7	1665.3	1.6348
27	0	Correlation	1559.5	1570.2	10.706
28	0	Correlation	1667.2	1641.7	-25.547
29	0	Correlation	1695.3	1679.2	-16.044
30	0	Correlation	1679.3	1668.2	-11.188
32	0	Correlation	1605.2	1595.8	-9.3443

## TID vs Post - Pre Exposure Delta

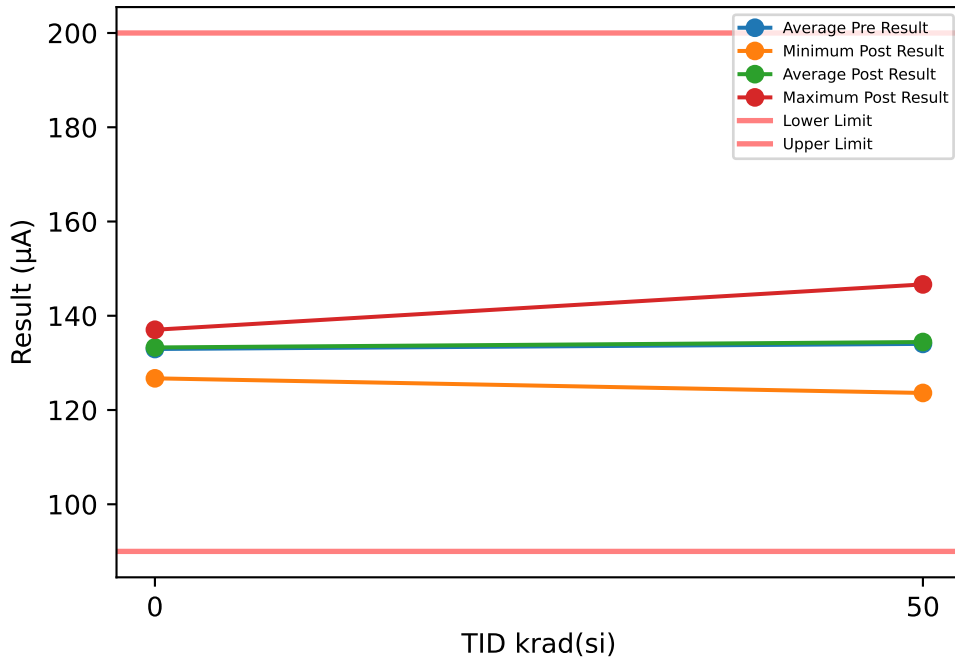


## Test Statistics (µS)

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	1559.5	1645	1695.3	51.86	1570.2	1636.7	1679.2	44.124	-25.547	-8.297	10.706	12.859
50	1512.8	1646.2	1760.7	75.894	1520.7	1651.5	1760.8	72.634	-13.116	5.2988	55.962	19.434

# Device Test: 18.13 EA\_SOURCE(\_ERROR\_AMP|STATIC/COMP/12////@EA\_SOURCE )

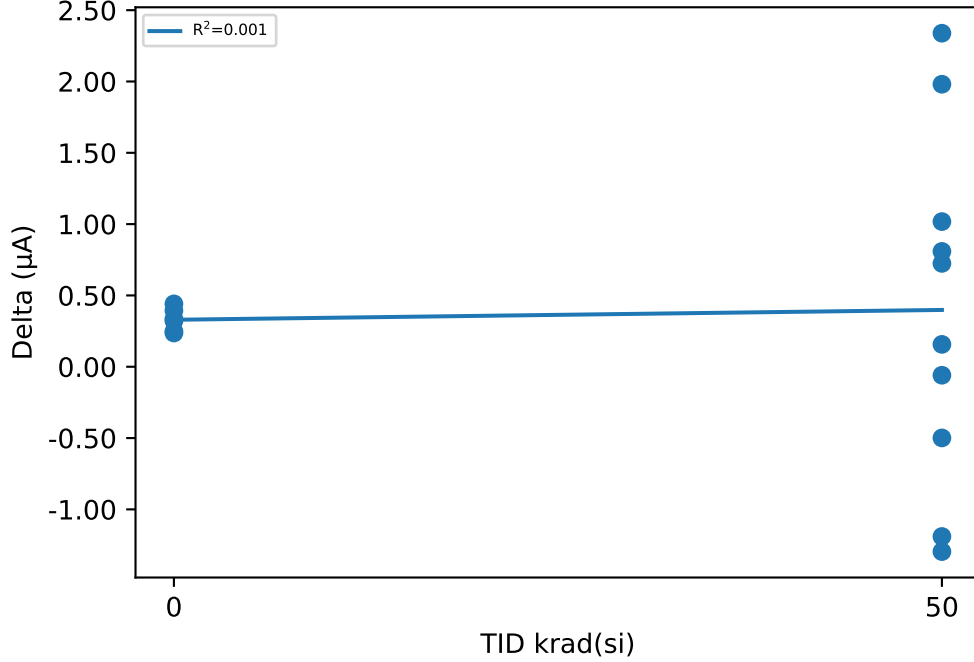
## TID vs Result Stats



## Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	127.22	126.03	-1.1901
4	50	HDR Biased w/ 84hr anneal	142.34	143.15	0.8087
6	50	HDR Biased w/ 84hr anneal	133.36	133.3	-0.0595
8	50	HDR Biased w/ 84hr anneal	136.49	137.22	0.7247
9	50	HDR Biased w/ 84hr anneal	146.49	146.65	0.1568
10	50	HDR unbiased	129.94	132.28	2.3386
11	50	HDR unbiased	134.53	135.54	1.0178
12	50	HDR unbiased	134.14	132.84	-1.296
13	50	HDR unbiased	134.15	133.65	-0.499
14	50	HDR unbiased	121.64	123.62	1.9808
26	0	Correlation	134.67	134.9	0.2365
27	0	Correlation	126.48	126.72	0.2488
28	0	Correlation	135.38	135.78	0.394
29	0	Correlation	136.7	137.03	0.3352
30	0	Correlation	135.35	135.79	0.4409
32	0	Correlation	129.1	129.42	0.321

## TID vs Post - Pre Exposure Delta

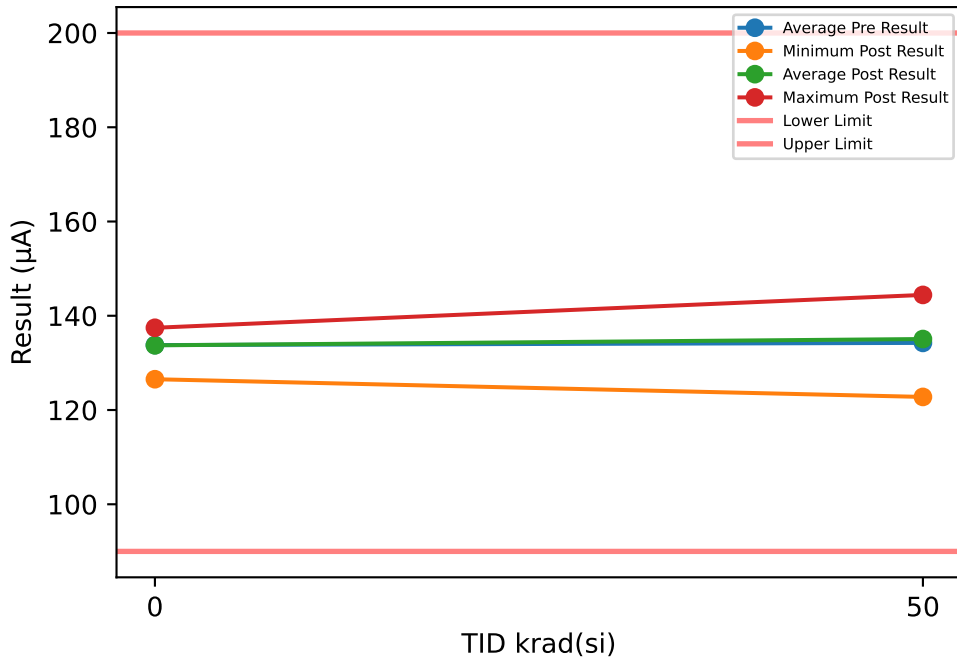


## Test Statistics (µA)

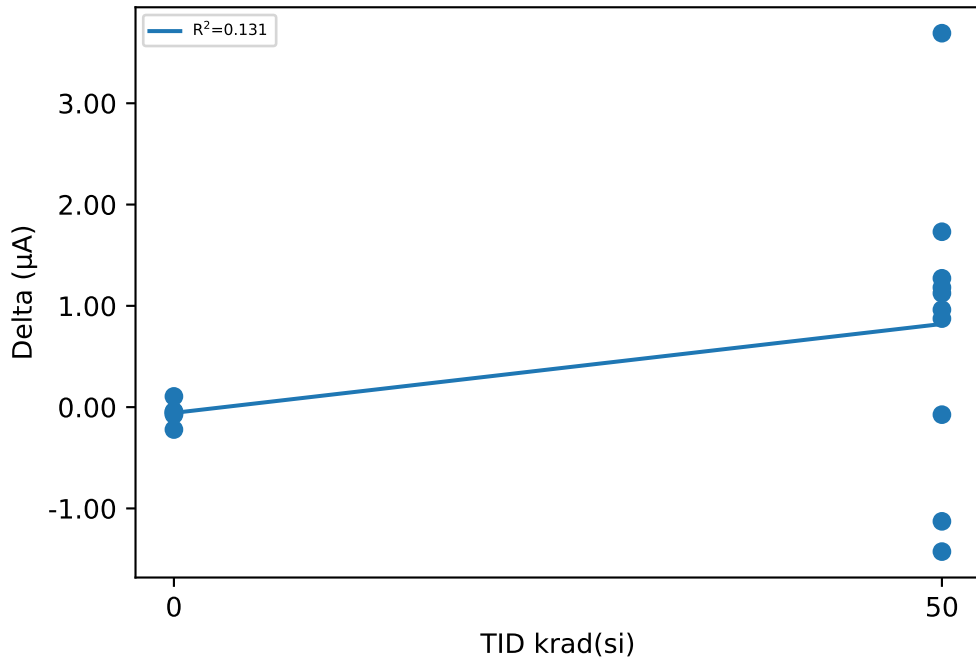
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	126.48	132.95	136.7	4.134	126.72	133.27	137.03	4.1753	0.2365	0.3294	0.4409	0.079795
50	121.64	134.03	146.49	7.0543	123.62	134.43	146.65	6.919	-1.296	0.39828	2.3386	1.22

# Device Test: 18.14 EA\_SINK(\_ERROR\_AMP|STATIC/COMP/12////@EA\_SINK )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

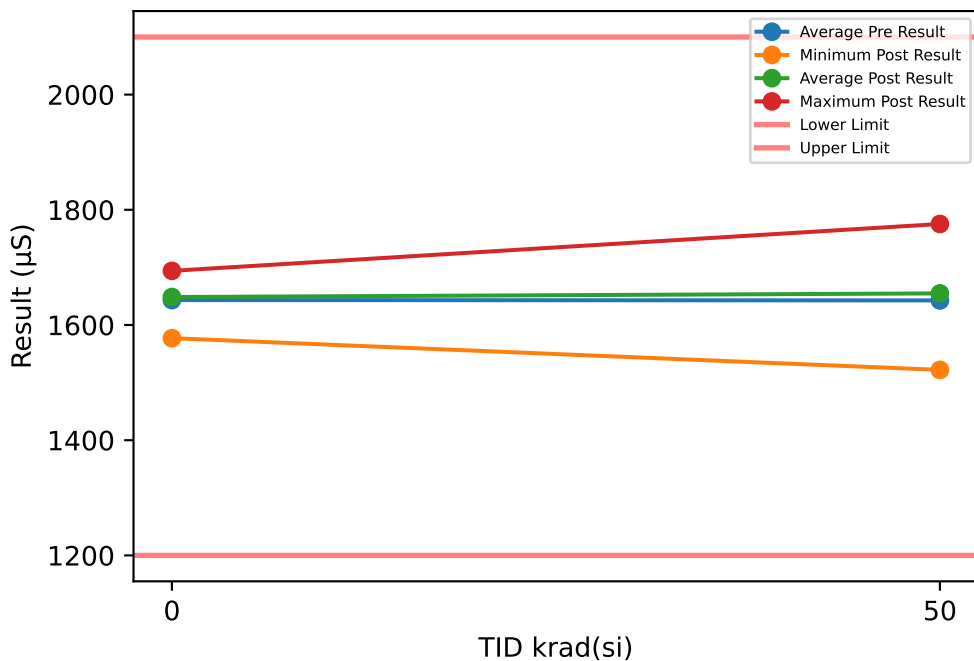
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	127.5	128.46	0.962
4	50	HDR Biased w/ 84hr anneal	143.24	144.42	1.1809
6	50	HDR Biased w/ 84hr anneal	133.13	134	0.874
8	50	HDR Biased w/ 84hr anneal	137.56	137.49	-0.0743
9	50	HDR Biased w/ 84hr anneal	144.54	143.11	-1.4262
10	50	HDR unbiased	129.04	132.73	3.6917
11	50	HDR unbiased	134.55	136.28	1.7316
12	50	HDR unbiased	136.14	137.27	1.1247
13	50	HDR unbiased	135.21	134.08	-1.1275
14	50	HDR unbiased	121.51	122.78	1.272
26	0	Correlation	135.02	134.8	-0.2213
27	0	Correlation	126.61	126.53	-0.0746
28	0	Correlation	136.44	136.38	-0.0626
29	0	Correlation	137.34	137.45	0.1059
30	0	Correlation	136.89	136.84	-0.0462
32	0	Correlation	130.38	130.34	-0.0415

## Test Statistics (µA)

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	126.61	133.78	137.34	4.3345	126.53	133.72	137.45	4.3573	-0.2213	-0.056717	0.1059	0.10414
50	121.51	134.24	144.54	6.9807	122.78	135.06	144.42	6.3823	-1.4262	0.82089	3.6917	1.4593

# Device Test: 18.17 EA\_GM( EA|STATIC/COMP/14////@EA\_GM )

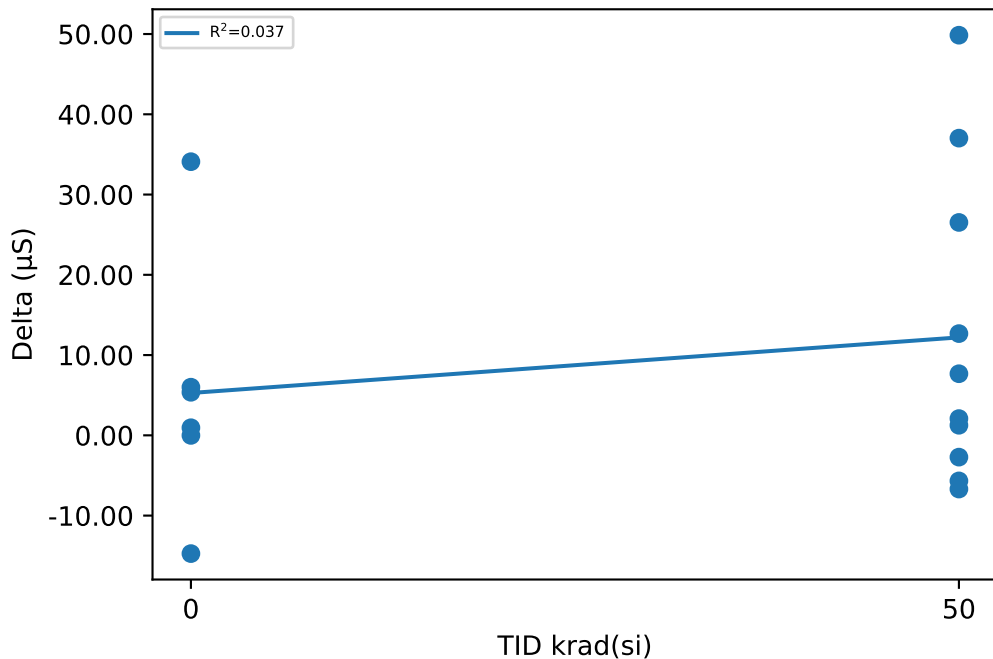
## TID vs Result Stats



## Test Results (Lower Limit = 1200.0, Upper Limit = 2100.0 (µS))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1569	1576.7	7.6753
4	50	HDR Biased w/ 84hr anneal	1738.3	1775.4	37.029
6	50	HDR Biased w/ 84hr anneal	1641.9	1643.1	1.2543
8	50	HDR Biased w/ 84hr anneal	1673.1	1670.4	-2.7153
9	50	HDR Biased w/ 84hr anneal	1764.4	1758.7	-5.678
10	50	HDR unbiased	1591.1	1641	49.854
11	50	HDR unbiased	1659.7	1661.8	2.0878
12	50	HDR unbiased	1650.2	1643.5	-6.6922
13	50	HDR unbiased	1643.3	1655.9	12.675
14	50	HDR unbiased	1495.5	1522.1	26.525
26	0	Correlation	1664.6	1664.6	-0.0082
27	0	Correlation	1571.8	1577.1	5.3635
28	0	Correlation	1653.9	1688	34.094
29	0	Correlation	1688	1694	5.9993
30	0	Correlation	1675.7	1676.7	0.9462
32	0	Correlation	1605.9	1591.1	-14.735

## TID vs Post - Pre Exposure Delta

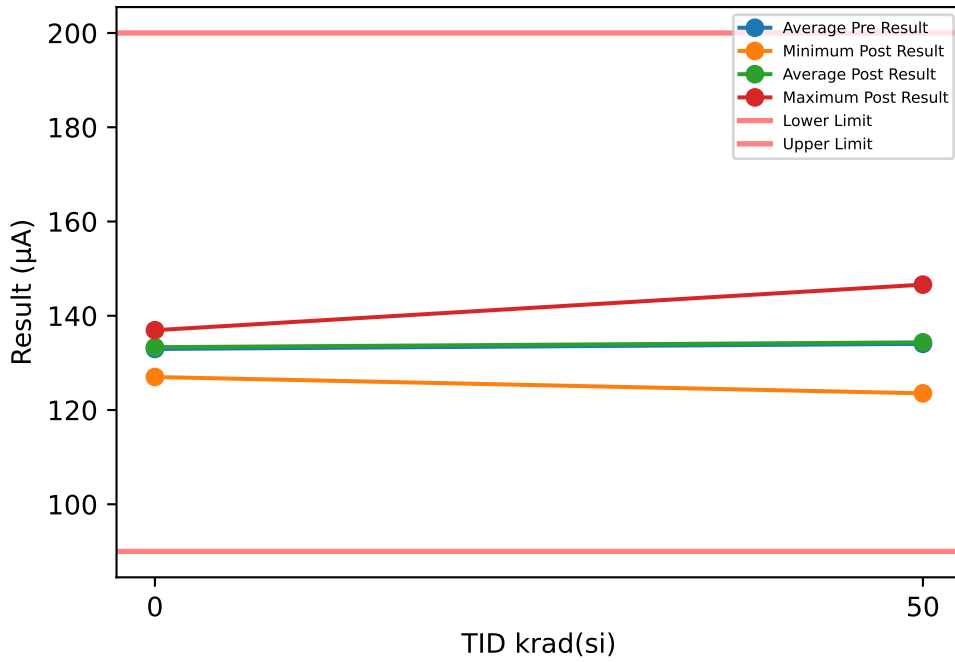


## Test Statistics (µS)

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	1571.8	1643.3	1688	45.021	1577.1	1648.6	1694	51.119	-14.735	5.2768	34.094	15.988
50	1495.5	1642.7	1764.4	78.146	1522.1	1654.9	1775.4	74.378	-6.6922	12.202	49.854	19.383

# Device Test: 18.18 EA\_SOURCE(\_ERROR\_AMP|STATIC/COMP/14////@EA\_SOURCE )

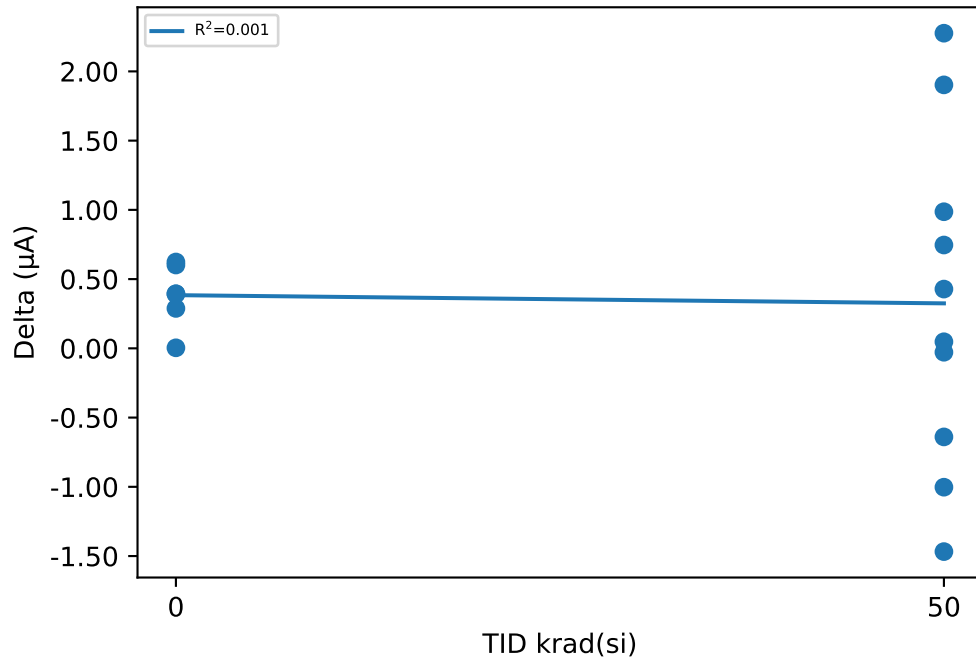
## TID vs Result Stats



## Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	127.21	126.21	-1.0027
4	50	HDR Biased w/ 84hr anneal	142.34	143.09	0.7462
6	50	HDR Biased w/ 84hr anneal	133.34	133.31	-0.0282
8	50	HDR Biased w/ 84hr anneal	136.63	137.06	0.428
9	50	HDR Biased w/ 84hr anneal	146.56	146.6	0.0475
10	50	HDR unbiased	129.74	132.01	2.2758
11	50	HDR unbiased	134.51	135.5	0.9865
12	50	HDR unbiased	134.25	132.78	-1.4678
13	50	HDR unbiased	134.15	133.51	-0.6396
14	50	HDR unbiased	121.64	123.54	1.9026
26	0	Correlation	134.76	135.15	0.393
27	0	Correlation	126.38	127.01	0.6235
28	0	Correlation	135.68	135.69	0.0038
29	0	Correlation	136.65	136.94	0.2883
30	0	Correlation	135.42	135.81	0.3941
32	0	Correlation	128.82	129.42	0.6018

## TID vs Post - Pre Exposure Delta

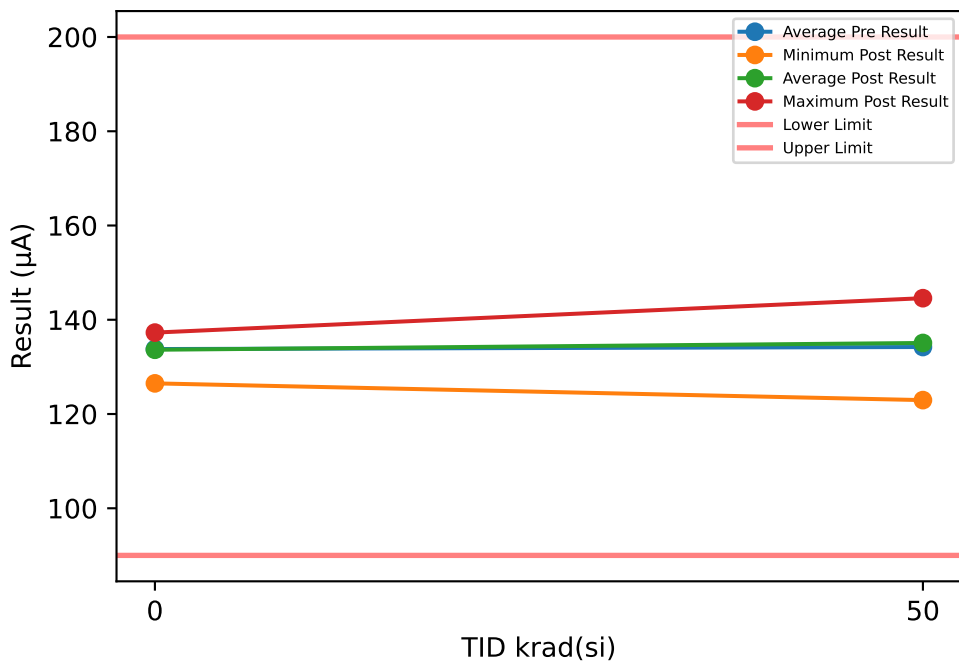


## Test Statistics (µA)

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	126.38	132.95	136.65	4.2599	127.01	133.33	136.94	4.0827	0.0038	0.38408	0.6235	0.22746
50	121.64	134.04	146.56	7.0875	123.54	134.36	146.6	6.8968	-1.4678	0.32483	2.2758	1.2032

# Device Test: 18.19 EA\_SINK(\_ERROR\_AMP|STATIC/COMP/14////@EA\_SINK )

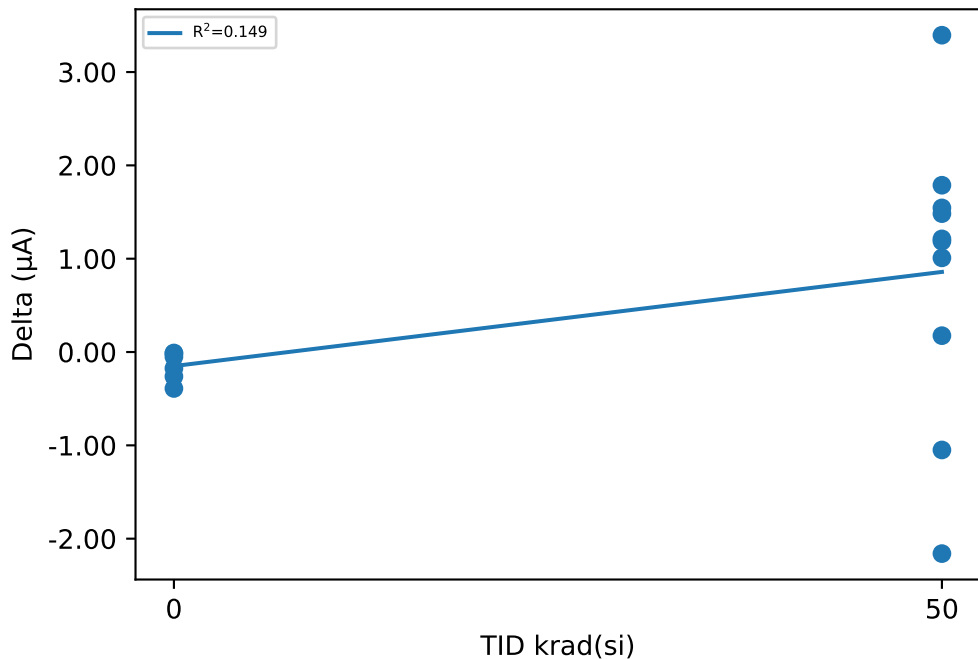
## TID vs Result Stats



## Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	127.42	128.43	1.0088
4	50	HDR Biased w/ 84hr anneal	143.37	144.58	1.2123
6	50	HDR Biased w/ 84hr anneal	132.91	134.4	1.4829
8	50	HDR Biased w/ 84hr anneal	137.31	137.49	0.1753
9	50	HDR Biased w/ 84hr anneal	144.85	142.69	-2.1599
10	50	HDR unbiased	129.17	132.56	3.3949
11	50	HDR unbiased	134.72	136.27	1.5443
12	50	HDR unbiased	136.14	137.33	1.1872
13	50	HDR unbiased	135.11	134.06	-1.0494
14	50	HDR unbiased	121.16	122.95	1.7873
26	0	Correlation	134.89	134.72	-0.1746
27	0	Correlation	126.76	126.5	-0.2618
28	0	Correlation	136.64	136.25	-0.3905
29	0	Correlation	137.33	137.28	-0.0503
30	0	Correlation	136.74	136.72	-0.0152
32	0	Correlation	130.35	130.34	-0.0103

## TID vs Post - Pre Exposure Delta

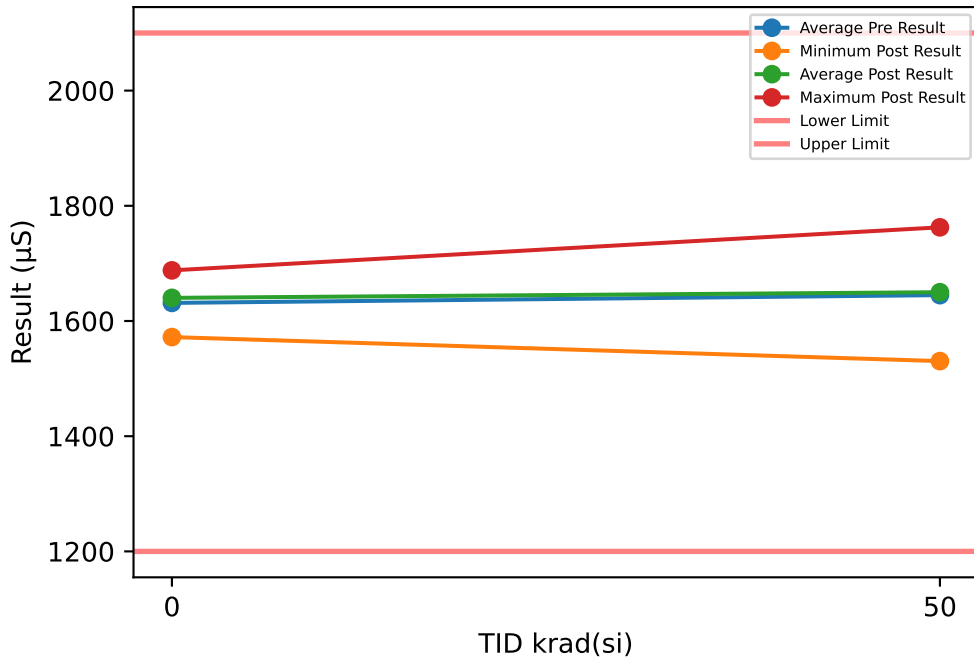


## Test Statistics (µA)

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	126.76	133.79	137.33	4.2827	126.5	133.64	137.28	4.3014	-0.3905	-0.15045	-0.0103	0.15399
50	121.16	134.22	144.85	7.1094	122.95	135.07	144.58	6.321	-2.1599	0.85837	3.3949	1.5503

Device Test: 18.2 EA\_GM(EA|STATIC/COMP/4.5////@EA\_GM )

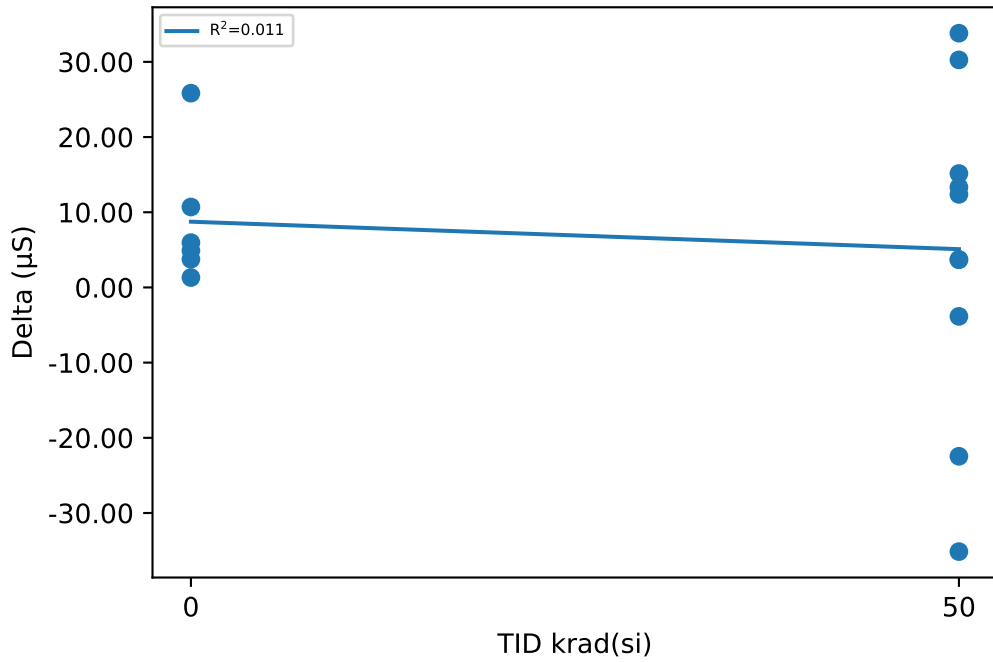
TID vs Result Stats



Test Results (Lower Limit = 1200.0, Upper Limit = 2100.0 (µS))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1560.7	1575.9	15.151
4	50	HDR Biased w/ 84hr anneal	1740.4	1744.1	3.727
6	50	HDR Biased w/ 84hr anneal	1631.4	1644.8	13.331
8	50	HDR Biased w/ 84hr anneal	1692.1	1669.7	-22.457
9	50	HDR Biased w/ 84hr anneal	1766.5	1762.6	-3.8509
10	50	HDR unbiased	1591.5	1625.3	33.812
11	50	HDR unbiased	1652.7	1665.1	12.376
12	50	HDR unbiased	1650.6	1654.3	3.6784
13	50	HDR unbiased	1662.7	1627.6	-35.132
14	50	HDR unbiased	1500.1	1530.4	30.261
26	0	Correlation	1636.6	1662.5	25.835
27	0	Correlation	1566.1	1572.1	5.9581
28	0	Correlation	1656.9	1660.6	3.7474
29	0	Correlation	1677.2	1687.9	10.698
30	0	Correlation	1662.3	1667.2	4.906
32	0	Correlation	1589.4	1590.7	1.3186

TID vs Post - Pre Exposure Delta



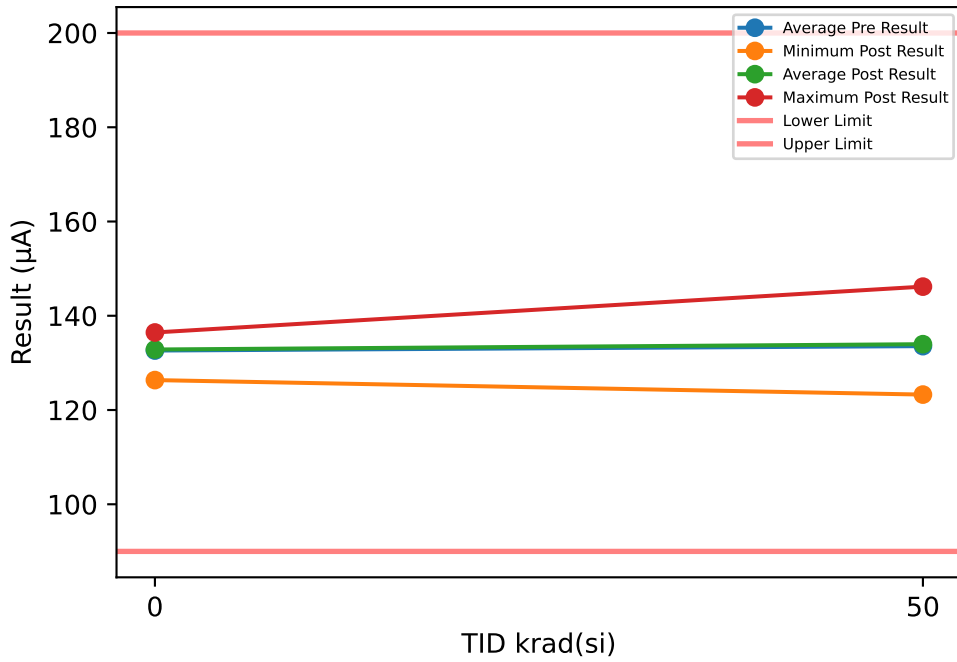
Test Statistics (µS)

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	1566.1	1631.4	1677.2	44.171	1572.1	1640.2	1687.9	46.923	1.3186	8.7438	25.835	8.9276
50	1500.1	1644.9	1766.5	80.012	1530.4	1650	1762.6	69.212	-35.132	5.0897	33.812	21.451



Device Test: 18.3 EA\_SOURCE(\_ERROR\_AMP|STATIC/COMP/4.5////@EA\_SOURCE )

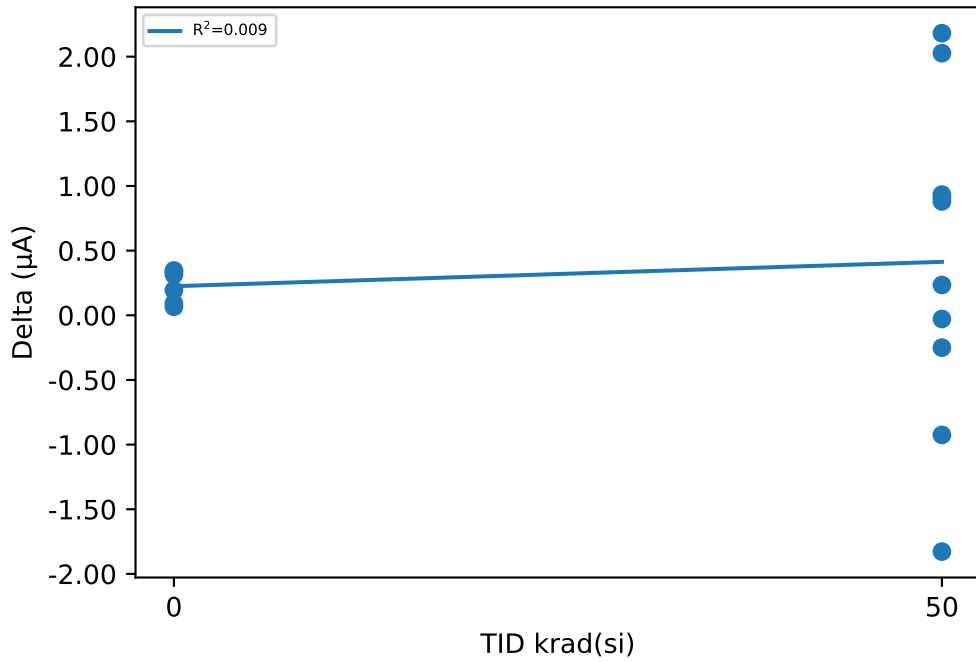
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	126.63	125.71	-0.9252
4	50	HDR Biased w/ 84hr anneal	142	142.93	0.9332
6	50	HDR Biased w/ 84hr anneal	132.67	132.64	-0.0288
8	50	HDR Biased w/ 84hr anneal	135.99	136.87	0.8804
9	50	HDR Biased w/ 84hr anneal	145.95	146.18	0.2343
10	50	HDR unbiased	129.41	131.59	2.1814
11	50	HDR unbiased	134.11	135.01	0.9077
12	50	HDR unbiased	134.09	132.26	-1.8275
13	50	HDR unbiased	133.43	133.18	-0.25
14	50	HDR unbiased	121.25	123.28	2.027
26	0	Correlation	134.29	134.61	0.314
27	0	Correlation	126.26	126.35	0.0925
28	0	Correlation	134.98	135.33	0.3465
29	0	Correlation	136.26	136.45	0.1943
30	0	Correlation	135.34	135.4	0.0657
32	0	Correlation	128.58	128.92	0.3357

TID vs Post - Pre Exposure Delta

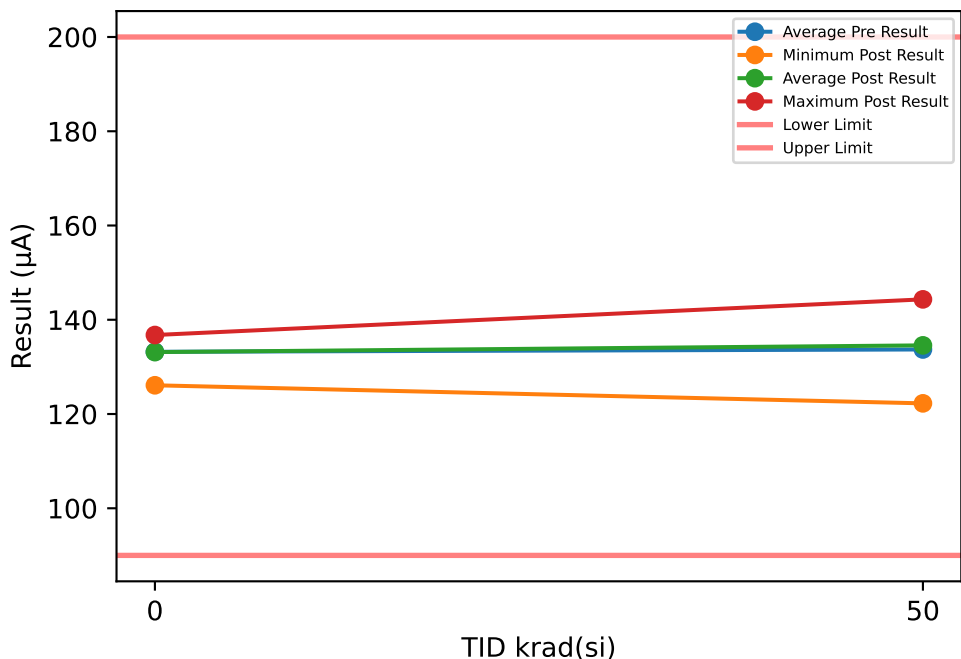


Test Statistics (µA)

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	126.26	132.62	136.26	4.1421	126.35	132.84	136.45	4.1578	0.0657	0.22478	0.3465	0.12555
50	121.25	133.55	145.95	7.0619	123.28	133.97	146.18	6.9334	-1.8275	0.41325	2.1814	1.2447

Device Test: 18.4 EA\_SINK(\_ERROR\_AMP|STATIC/COMP/4.5////@EA\_SINK )

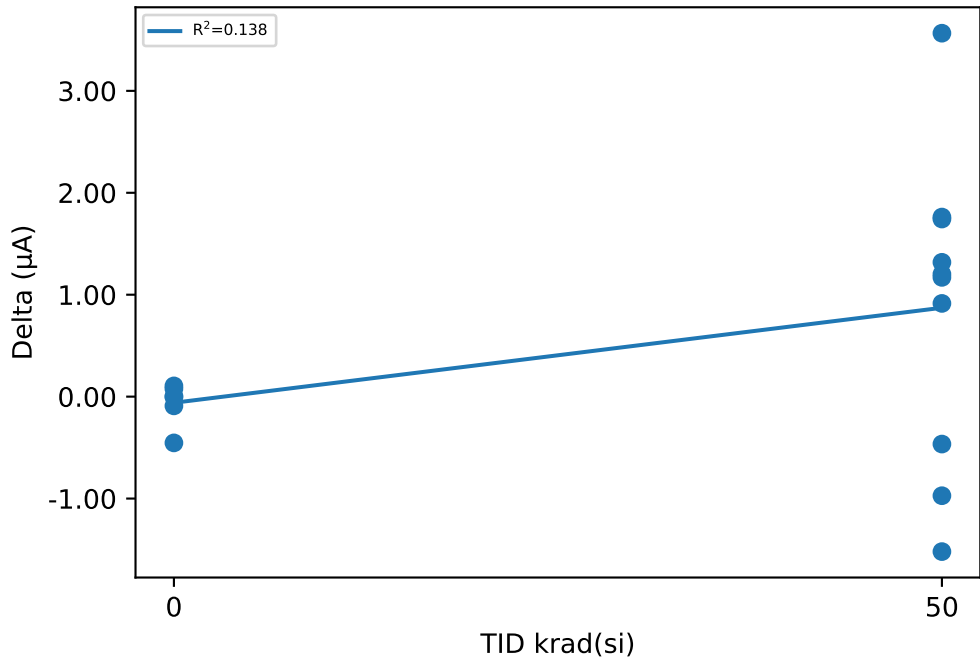
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	126.95	127.87	0.9146
4	50	HDR Biased w/ 84hr anneal	142.59	144.33	1.7425
6	50	HDR Biased w/ 84hr anneal	132.49	133.66	1.1701
8	50	HDR Biased w/ 84hr anneal	137.13	136.66	-0.4653
9	50	HDR Biased w/ 84hr anneal	144.05	142.53	-1.5204
10	50	HDR unbiased	128.53	132.09	3.5658
11	50	HDR unbiased	133.99	135.75	1.7619
12	50	HDR unbiased	135.6	136.8	1.202
13	50	HDR unbiased	134.69	133.72	-0.9721
14	50	HDR unbiased	120.94	122.26	1.318
26	0	Correlation	134.33	134.33	-0.0036
27	0	Correlation	126.19	126.1	-0.0906
28	0	Correlation	136.1	135.64	-0.4539
29	0	Correlation	136.66	136.76	0.1053
30	0	Correlation	136.31	136.39	0.0778
32	0	Correlation	129.62	129.62	0.0041

TID vs Post - Pre Exposure Delta

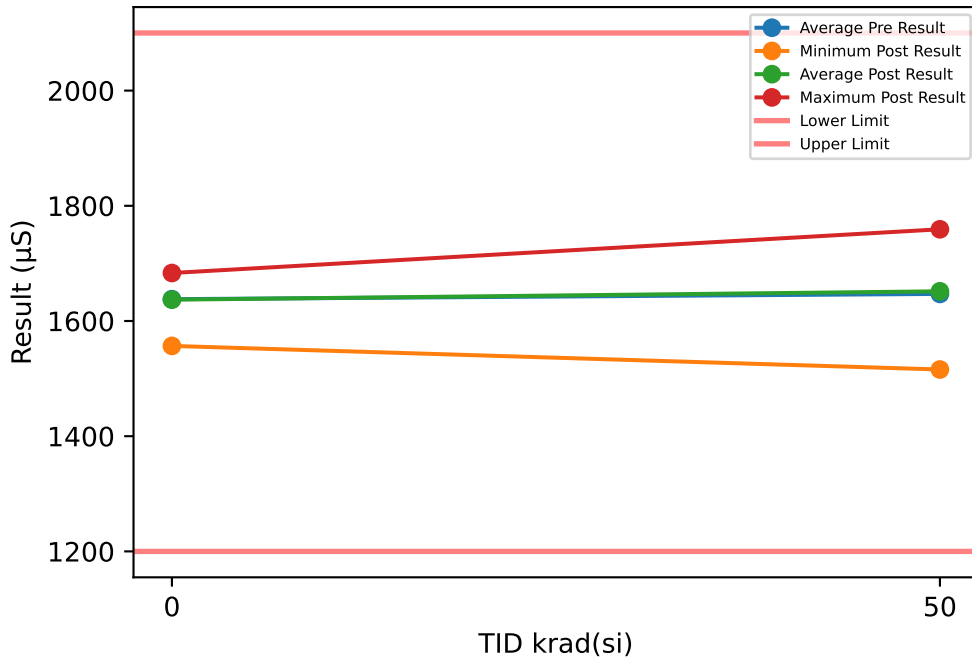


Test Statistics (µA)

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	126.19	133.2	136.66	4.3199	126.1	133.14	136.76	4.3205	-0.4539	-0.06015	0.1053	0.20479
50	120.94	133.7	144.05	6.984	122.26	134.57	144.33	6.4416	-1.5204	0.87171	3.5658	1.4951

# Device Test: 18.7 EA\_GM(EA|STATIC/COMP/5////@EA\_GM )

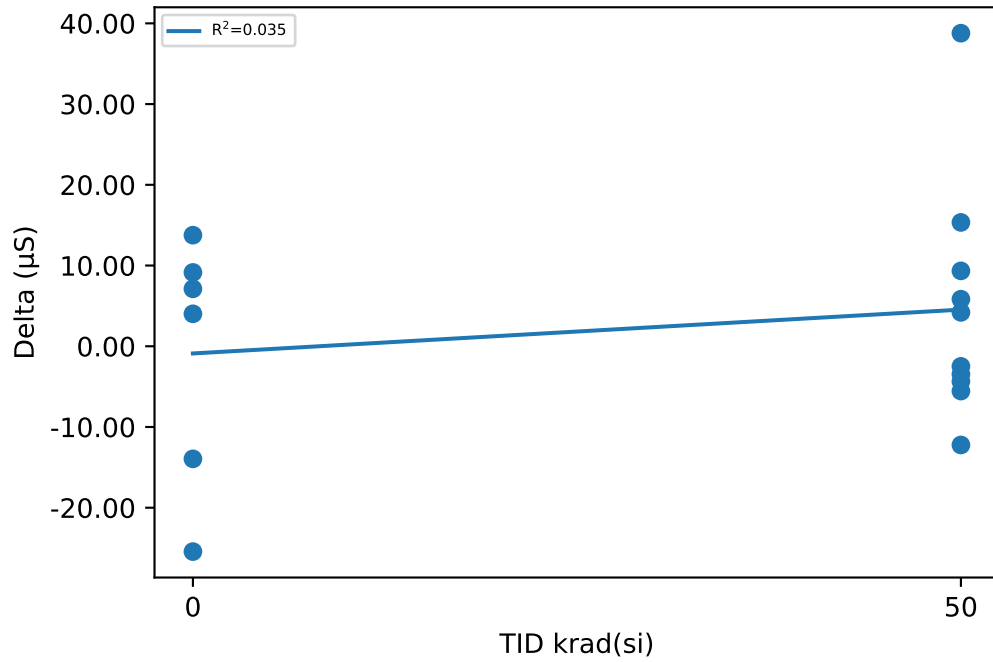
## TID vs Result Stats



## Test Results (Lower Limit = 1200.0, Upper Limit = 2100.0 (µS))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1577.7	1574.2	-3.4713
4	50	HDR Biased w/ 84hr anneal	1757.8	1755.3	-2.4919
6	50	HDR Biased w/ 84hr anneal	1628.5	1643.8	15.342
8	50	HDR Biased w/ 84hr anneal	1671.2	1677.1	5.8303
9	50	HDR Biased w/ 84hr anneal	1763.6	1759.2	-4.3641
10	50	HDR unbiased	1582.3	1621.1	38.781
11	50	HDR unbiased	1663	1667.2	4.1975
12	50	HDR unbiased	1667.7	1655.5	-12.227
13	50	HDR unbiased	1651.8	1646.2	-5.5513
14	50	HDR unbiased	1506.5	1515.8	9.3369
26	0	Correlation	1660.9	1646.9	-13.948
27	0	Correlation	1552.7	1556.7	4.0197
28	0	Correlation	1657.3	1666.5	9.1447
29	0	Correlation	1676.2	1683.3	7.1141
30	0	Correlation	1666	1679.8	13.762
32	0	Correlation	1614.2	1588.8	-25.436

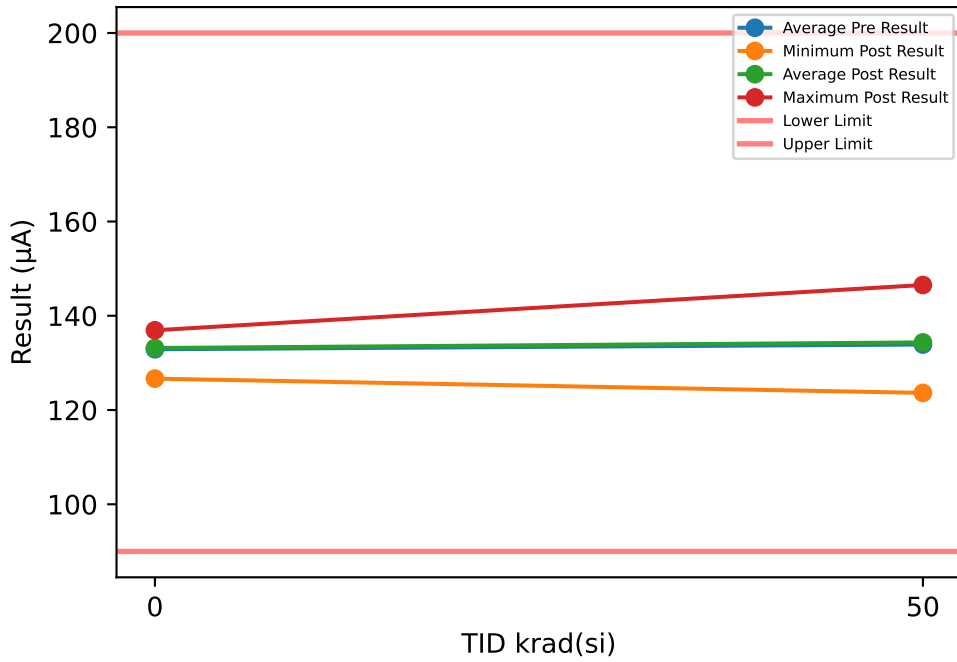
## TID vs Post - Pre Exposure Delta



## Test Statistics (µS)

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	1552.7	1637.9	1676.2	46.868	1556.7	1637	1683.3	52.371	-25.436	-0.89068	13.762	15.34
50	1506.5	1647	1763.6	79.046	1515.8	1651.5	1759.2	73.549	-12.227	4.5382	38.781	14.491

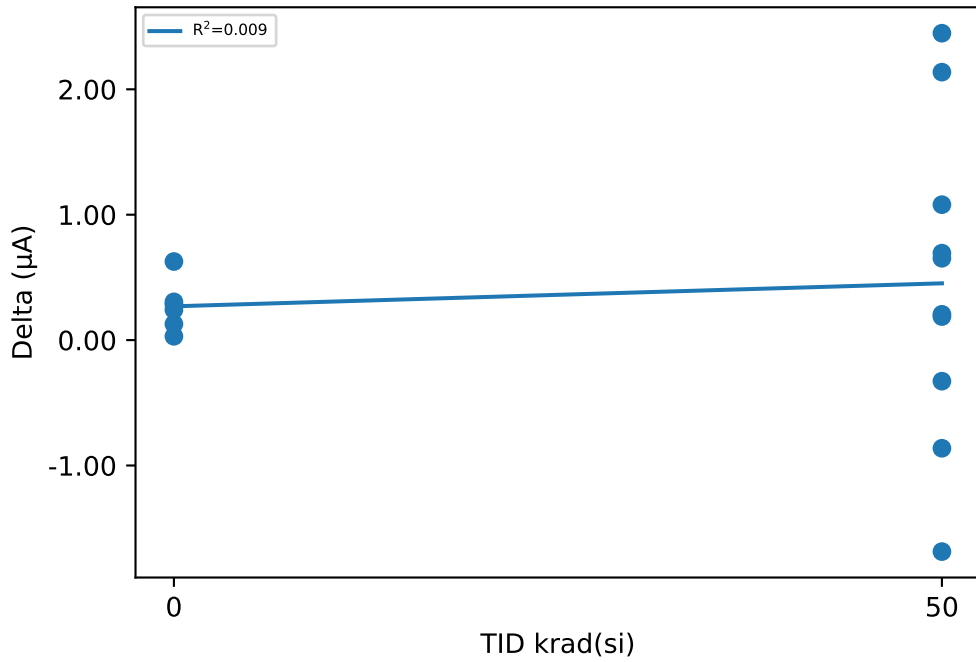
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	126.83	125.97	-0.8625
4	50	HDR Biased w/ 84hr anneal	142.5	143.15	0.6526
6	50	HDR Biased w/ 84hr anneal	133.03	133.23	0.2058
8	50	HDR Biased w/ 84hr anneal	136.52	137.22	0.6935
9	50	HDR Biased w/ 84hr anneal	146.34	146.53	0.1879
10	50	HDR unbiased	129.61	132.06	2.4474
11	50	HDR unbiased	134.43	135.51	1.0801
12	50	HDR unbiased	134.31	132.62	-1.6865
13	50	HDR unbiased	133.87	133.54	-0.3275
14	50	HDR unbiased	121.5	123.63	2.1368
26	0	Correlation	134.34	134.97	0.6267
27	0	Correlation	126.63	126.66	0.0303
28	0	Correlation	135.31	135.59	0.2845
29	0	Correlation	136.68	136.92	0.2415
30	0	Correlation	135.48	135.61	0.1285
32	0	Correlation	128.91	129.21	0.305

TID vs Post - Pre Exposure Delta

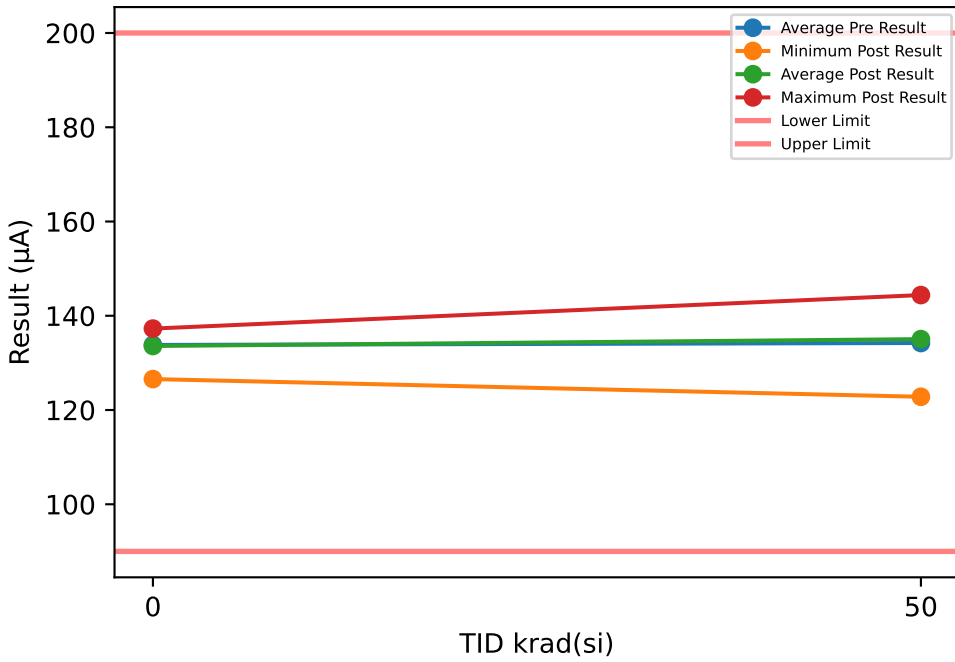


Test Statistics (µA)

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	126.63	132.89	136.68	4.0993	126.66	133.16	136.92	4.1738	0.0303	0.26942	0.6267	0.20345
50	121.5	133.89	146.34	7.1406	123.63	134.35	146.53	6.9158	-1.6865	0.45276	2.4474	1.2628

Device Test: 18.9 EA\_SINK(\_ERROR\_AMP|STATIC/COMP/5////@EA\_SINK )

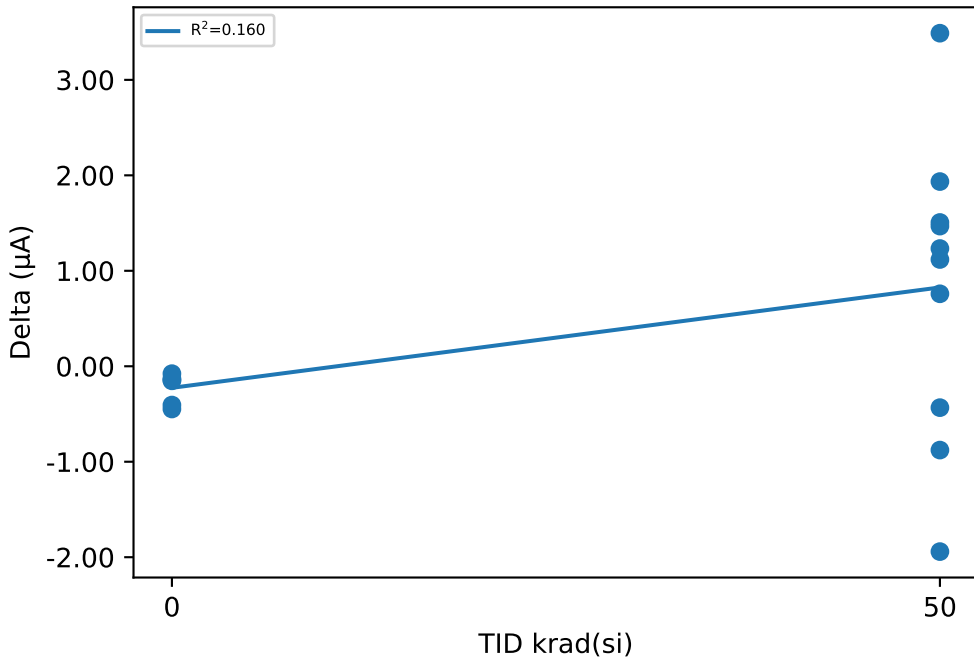
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 200.0 (µA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	127.54	128.3	0.7591
4	50	HDR Biased w/ 84hr anneal	143.27	144.39	1.1185
6	50	HDR Biased w/ 84hr anneal	133.04	134.27	1.2332
8	50	HDR Biased w/ 84hr anneal	137.72	137.28	-0.4334
9	50	HDR Biased w/ 84hr anneal	144.79	142.84	-1.9413
10	50	HDR unbiased	129.18	132.67	3.4888
11	50	HDR unbiased	134.53	136.47	1.9348
12	50	HDR unbiased	135.88	137.34	1.4681
13	50	HDR unbiased	134.91	134.03	-0.8779
14	50	HDR unbiased	121.3	122.81	1.5062
26	0	Correlation	134.74	134.61	-0.128
27	0	Correlation	126.72	126.57	-0.1526
28	0	Correlation	136.55	136.14	-0.4062
29	0	Correlation	137.42	137.28	-0.1439
30	0	Correlation	136.92	136.84	-0.0774
32	0	Correlation	130.52	130.08	-0.4476

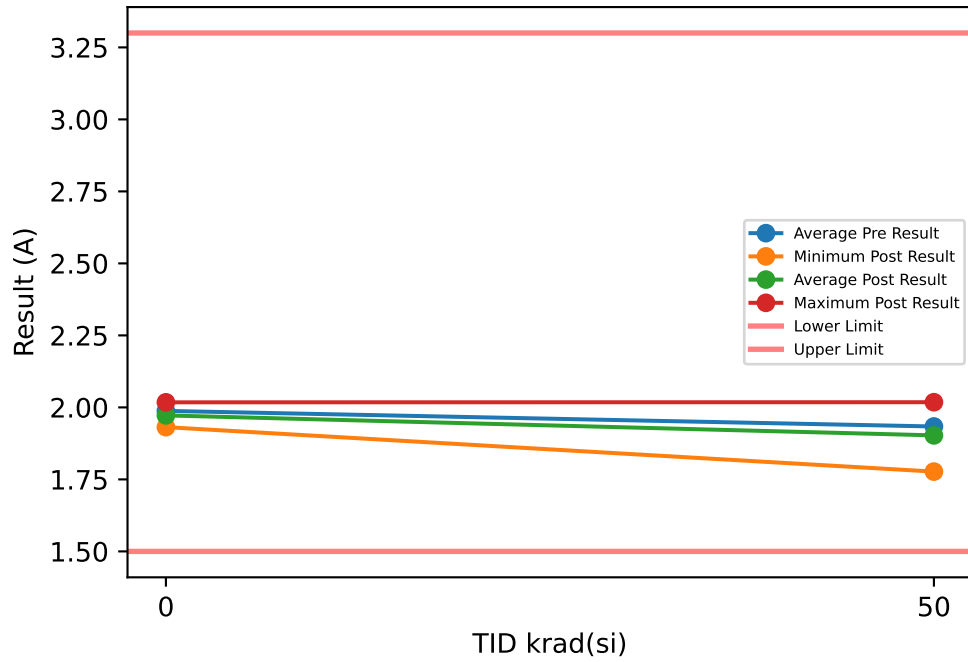
TID vs Post - Pre Exposure Delta



Test Statistics (µA)

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	126.72	133.81	137.42	4.2936	126.57	133.59	137.28	4.3227	-0.4476	-0.22595	-0.0774	0.15836
50	121.3	134.22	144.79	7.05	122.81	135.04	144.39	6.3503	-1.9413	0.82561	3.4888	1.5491

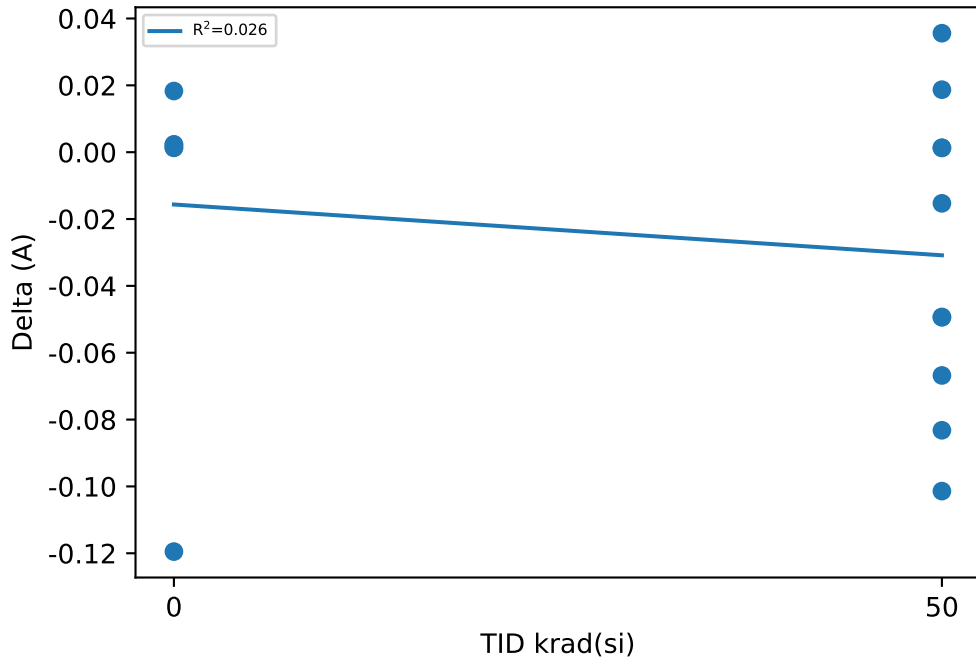
TID vs Result Stats



Test Results (Lower Limit = 1.5, Upper Limit = 3.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.0332	1.9318	-0.1014
4	50	HDR Biased w/ 84hr anneal	1.9985	1.9492	-0.0493
6	50	HDR Biased w/ 84hr anneal	1.8784	1.829	-0.0494
8	50	HDR Biased w/ 84hr anneal	1.9306	1.8638	-0.0668
9	50	HDR Biased w/ 84hr anneal	2.0332	1.95	-0.0832
10	50	HDR unbiased	1.8619	1.8975	0.0356
11	50	HDR unbiased	1.9132	1.8979	-0.0153
12	50	HDR unbiased	1.9132	1.9145	0.0013
13	50	HDR unbiased	1.9993	2.018	0.0187
14	50	HDR unbiased	1.7758	1.7771	0.0013
26	0	Correlation	1.9132	1.9315	0.0183
27	0	Correlation	1.9306	1.9329	0.0023
28	0	Correlation	2.1371	2.0176	-0.1195
29	0	Correlation	1.9993	2.0016	0.0023
30	0	Correlation	1.9306	1.9319	0.0013
32	0	Correlation	2.0162	2.0176	0.0014

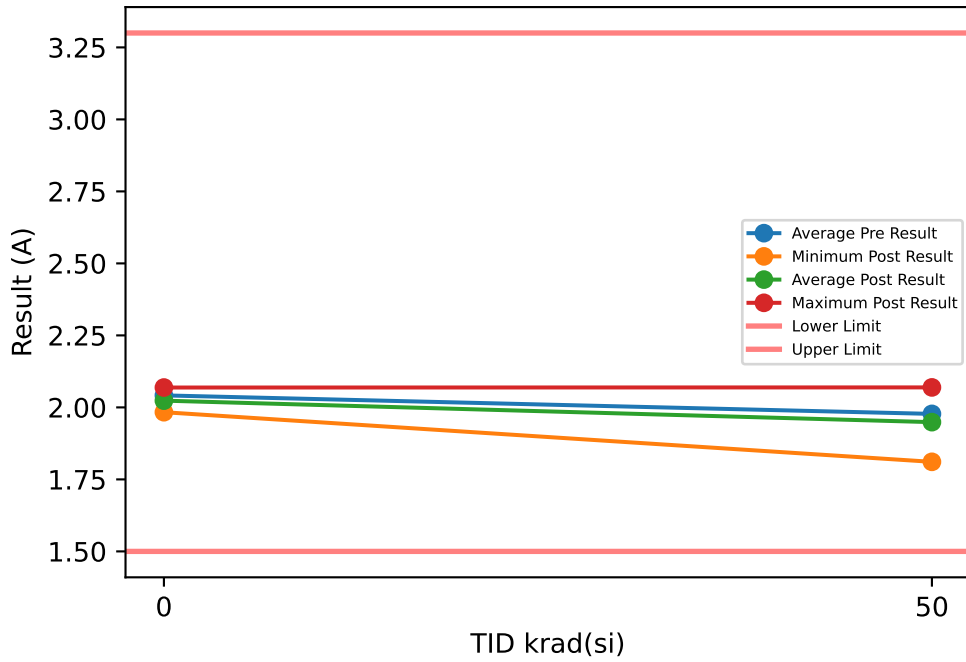
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	1.9132	1.9878	2.1371	0.084069	1.9315	1.9722	2.0176	0.044298	-0.1195	-0.01565	0.0183	0.051303
50	1.7758	1.9337	2.0332	0.083199	1.7771	1.9029	2.018	0.067864	-0.1014	-0.03085	0.0356	0.045795

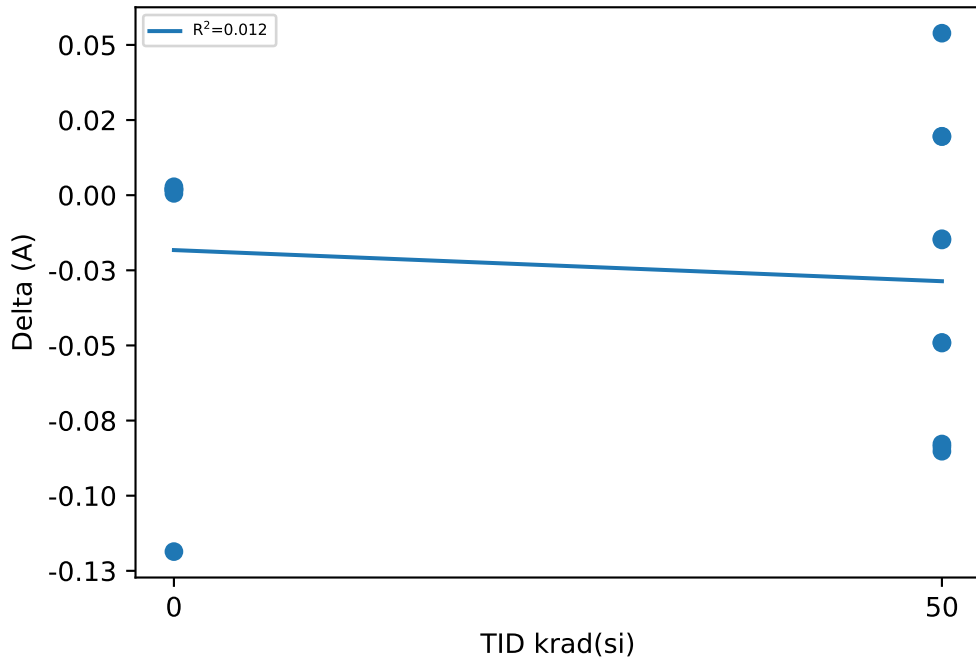
TID vs Result Stats



Test Results (Lower Limit = 1.5, Upper Limit = 3.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.0664	1.9836	-0.0828
4	50	HDR Biased w/ 84hr anneal	2.0498	2.0006	-0.0492
6	50	HDR Biased w/ 84hr anneal	1.929	1.88	-0.049
8	50	HDR Biased w/ 84hr anneal	1.9981	1.9144	-0.0837
9	50	HDR Biased w/ 84hr anneal	2.0676	1.9824	-0.0852
10	50	HDR unbiased	1.895	1.9489	0.0539
11	50	HDR unbiased	1.9464	1.9319	-0.0145
12	50	HDR unbiased	1.9464	1.9659	0.0195
13	50	HDR unbiased	2.0498	2.0694	0.0196
14	50	HDR unbiased	1.8259	1.811	-0.0149
26	0	Correlation	1.9985	2.0003	0.0018
27	0	Correlation	1.9811	1.9839	0.0028
28	0	Correlation	2.1876	2.069	-0.1186
29	0	Correlation	2.0502	2.0522	0.002
30	0	Correlation	1.9827	1.9833	0.0006
32	0	Correlation	2.0502	2.052	0.0018

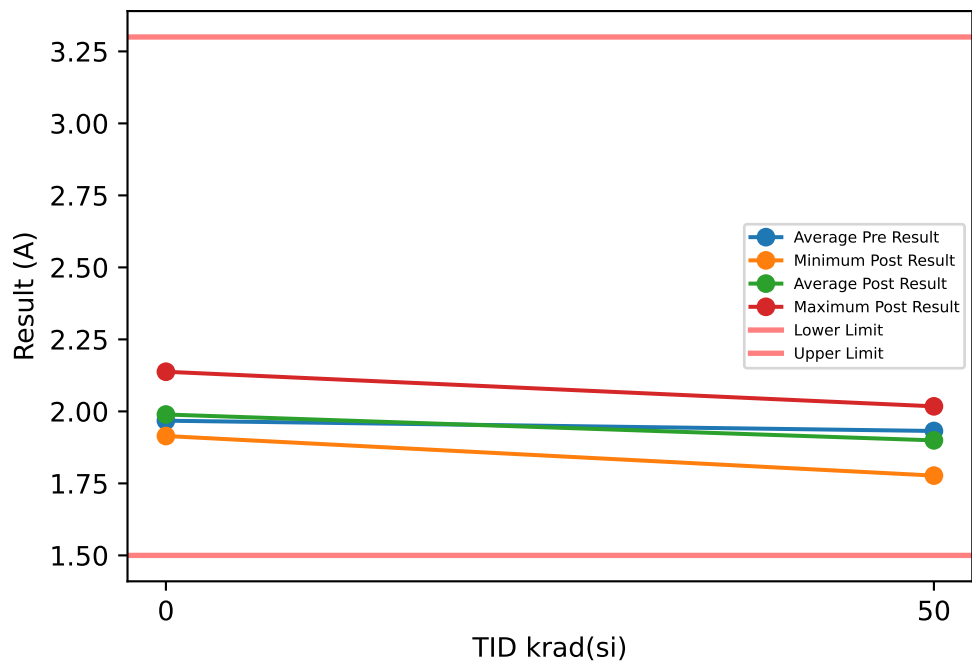
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	1.9811	2.0417	2.1876	0.07804	1.9833	2.0234	2.069	0.038545	-0.1186	-0.018267	0.0028	0.049158
50	1.8259	1.9774	2.0676	0.082311	1.811	1.9488	2.0694	0.070751	-0.0852	-0.02863	0.0539	0.049269

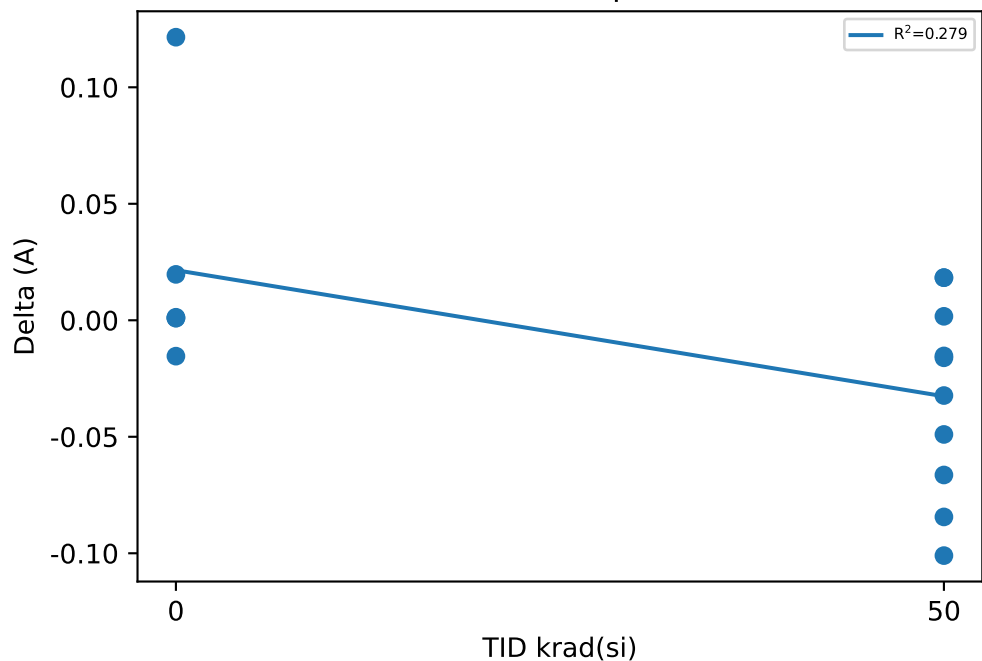
TID vs Result Stats



Test Results (Lower Limit = 1.5, Upper Limit = 3.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.0332	1.9322	-0.101
4	50	HDR Biased w/ 84hr anneal	1.9815	1.9492	-0.0323
6	50	HDR Biased w/ 84hr anneal	1.8784	1.8294	-0.049
8	50	HDR Biased w/ 84hr anneal	1.9302	1.8638	-0.0664
9	50	HDR Biased w/ 84hr anneal	2.0336	1.9492	-0.0844
10	50	HDR unbiased	1.8619	1.8636	0.0017
11	50	HDR unbiased	1.9128	1.8975	-0.0153
12	50	HDR unbiased	1.8962	1.9145	0.0183
13	50	HDR unbiased	1.9993	2.0176	0.0183
14	50	HDR unbiased	1.7932	1.7771	-0.0161
26	0	Correlation	1.9136	1.9145	0.0009
27	0	Correlation	1.9479	1.9325	-0.0154
28	0	Correlation	2.0162	2.1377	0.1215
29	0	Correlation	1.9993	2.019	0.0197
30	0	Correlation	1.9302	1.9315	0.0013
32	0	Correlation	1.9993	2.0003	0.001

TID vs Post - Pre Exposure Delta

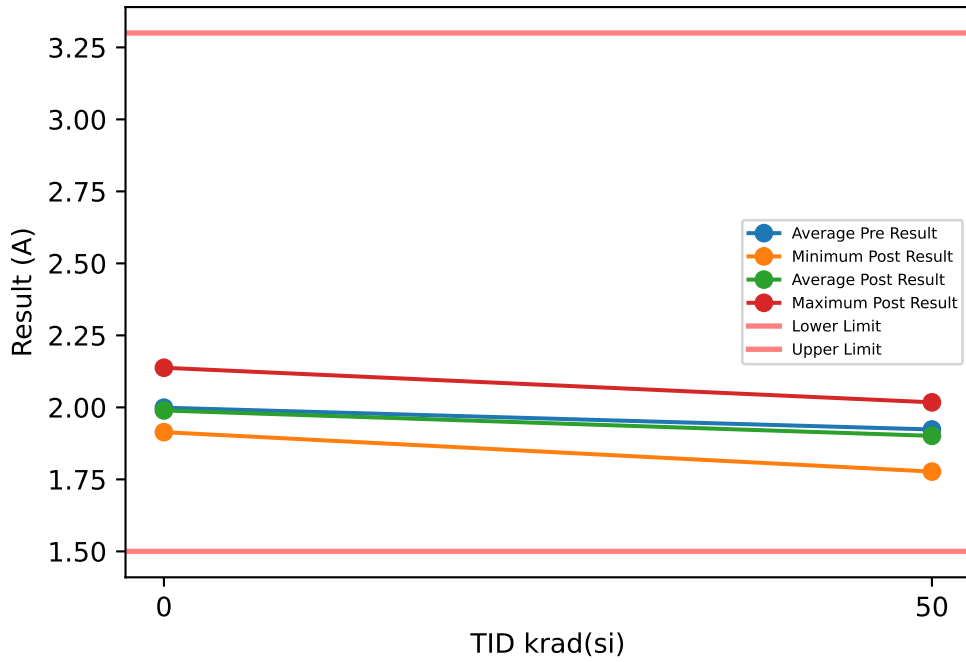


Test Statistics (A)

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	1.9136	1.9677	2.0162	0.042602	1.9145	1.9893	2.1377	0.08389	-0.0154	0.0215	0.1215	0.050234
50	1.7932	1.932	2.0336	0.079057	1.7771	1.8994	2.0176	0.068836	-0.101	-0.03262	0.0183	0.04177



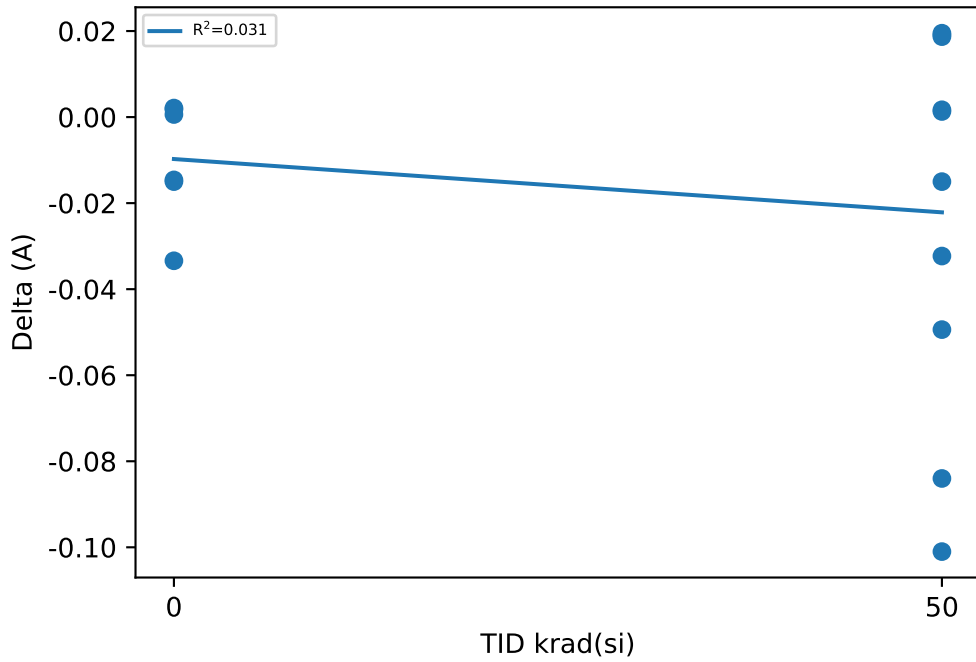
TID vs Result Stats



Test Results (Lower Limit = 1.5, Upper Limit = 3.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	2.0332	1.9322	-0.101
4	50	HDR Biased w/ 84hr anneal	1.9989	1.9666	-0.0323
6	50	HDR Biased w/ 84hr anneal	1.8788	1.8294	-0.0494
8	50	HDR Biased w/ 84hr anneal	1.8788	1.8638	-0.015
9	50	HDR Biased w/ 84hr anneal	2.0332	1.9492	-0.084
10	50	HDR unbiased	1.8445	1.864	0.0195
11	50	HDR unbiased	1.8958	1.8975	0.0017
12	50	HDR unbiased	1.8958	1.9149	0.0191
13	50	HDR unbiased	1.9989	2.0176	0.0187
14	50	HDR unbiased	1.7758	1.7771	0.0013
26	0	Correlation	1.9475	1.9141	-0.0334
27	0	Correlation	1.9471	1.9325	-0.0146
28	0	Correlation	2.1371	2.1377	0.0006
29	0	Correlation	2.0166	2.0016	-0.015
30	0	Correlation	1.9302	1.9323	0.0021
32	0	Correlation	2.0162	2.018	0.0018

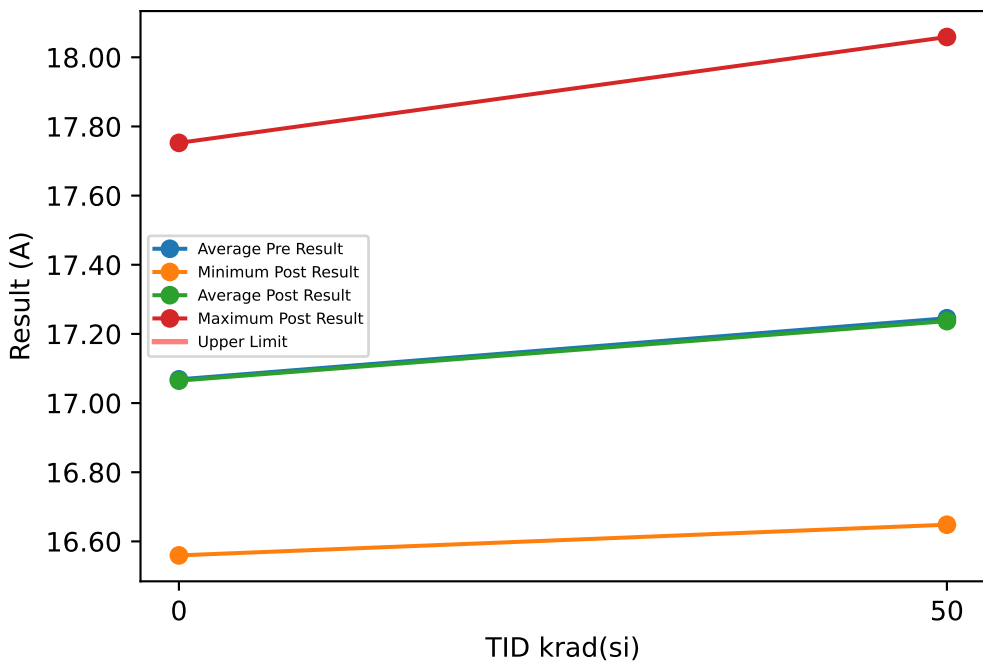
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	1.9302	1.9991	2.1371	0.077145	1.9141	1.9894	2.1377	0.083819	-0.0334	-0.00975	0.0021	0.014081
50	1.7758	1.9234	2.0332	0.087576	1.7771	1.9012	2.0176	0.07042	-0.101	-0.02214	0.0195	0.043669

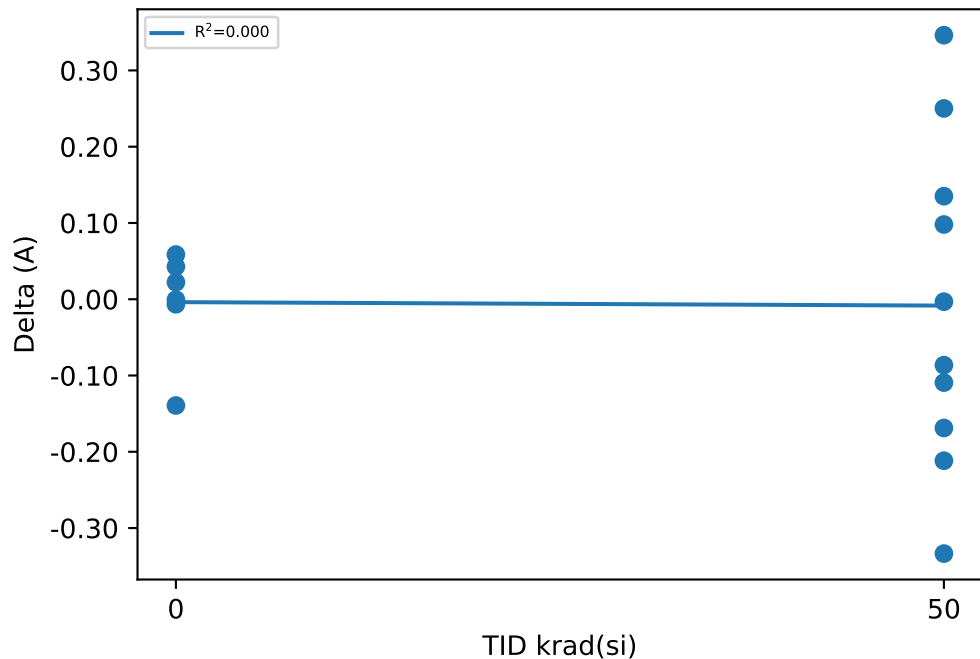
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	17.058	16.889	-0.1688
4	50	HDR Biased w/ 84hr anneal	17.832	17.722	-0.1093
6	50	HDR Biased w/ 84hr anneal	17.525	17.192	-0.3335
8	50	HDR Biased w/ 84hr anneal	16.398	16.648	0.2502
9	50	HDR Biased w/ 84hr anneal	16.515	16.65	0.1351
10	50	HDR unbiased	17.712	18.059	0.3462
11	50	HDR unbiased	17.491	17.28	-0.2117
12	50	HDR unbiased	17.882	17.795	-0.0864
13	50	HDR unbiased	16.742	16.739	-0.0032
14	50	HDR unbiased	17.298	17.396	0.098
26	0	Correlation	17.692	17.553	-0.1393
27	0	Correlation	16.857	16.9	0.0428
28	0	Correlation	16.633	16.627	-0.0066
29	0	Correlation	16.998	16.998	-0.0006
30	0	Correlation	16.537	16.559	0.0223
32	0	Correlation	17.694	17.753	0.0586

TID vs Post - Pre Exposure Delta

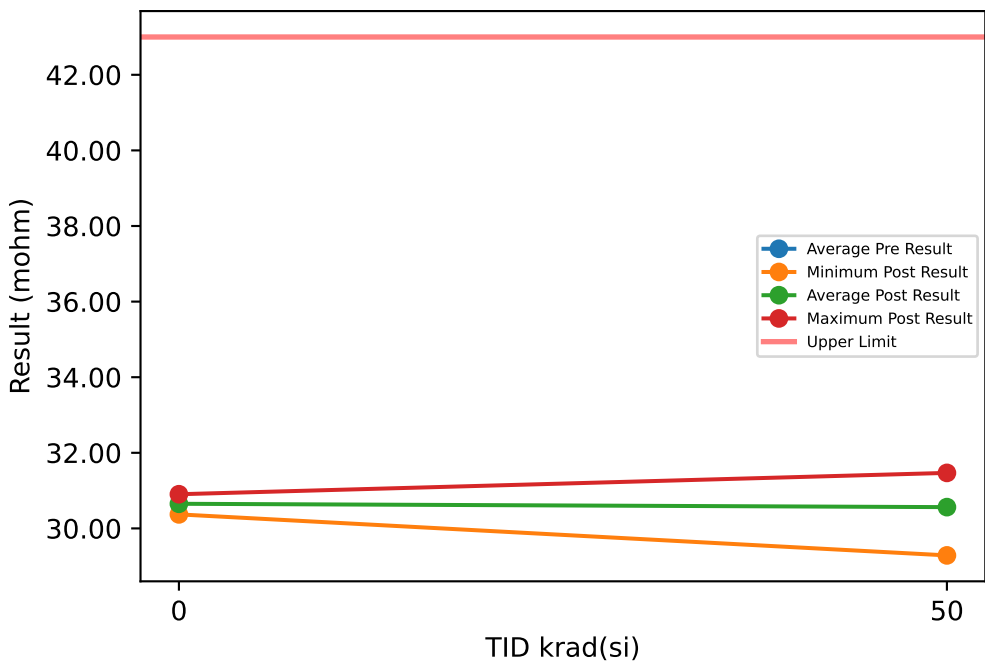


Test Statistics (A)

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	16.537	17.069	17.694	0.51029	16.559	17.065	17.753	0.48797	-0.1393	-0.0038	0.0586	0.070887
50	16.398	17.245	17.882	0.54242	16.648	17.237	18.059	0.50681	-0.3335	-0.00834	0.3462	0.21436

# Device Test: 20.101 R\_HIGHSIDE\_14V\_25C(\_LEVEL|HIGHSIDE/SW/14/2///@R\_HIGHSIDE\_14V\_25C )

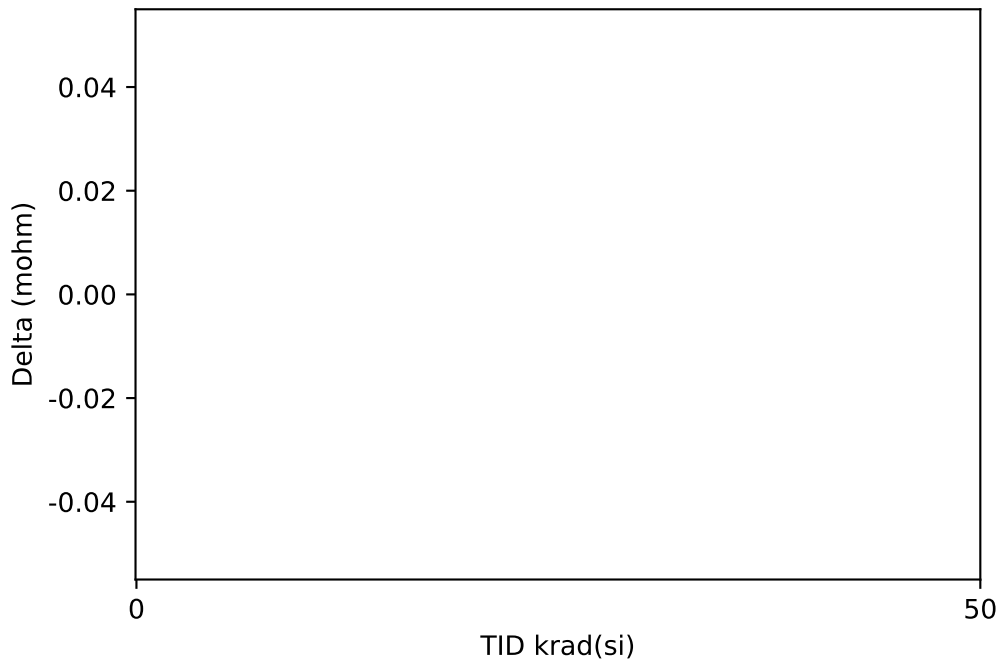
## TID vs Result Stats



## Test Results (Upper Limit = 43.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		31.468	
4	50	HDR Biased w/ 84hr anneal		30.277	
6	50	HDR Biased w/ 84hr anneal		30.925	
8	50	HDR Biased w/ 84hr anneal		30.925	
9	50	HDR Biased w/ 84hr anneal		31.469	
10	50	HDR unbiased		30.158	
11	50	HDR unbiased		30.37	
12	50	HDR unbiased		29.286	
13	50	HDR unbiased		30.371	
14	50	HDR unbiased		30.381	
26	0	Correlation		30.637	
27	0	Correlation		30.863	
28	0	Correlation		30.371	
29	0	Correlation		30.904	
30	0	Correlation		30.423	
32	0	Correlation		30.71	

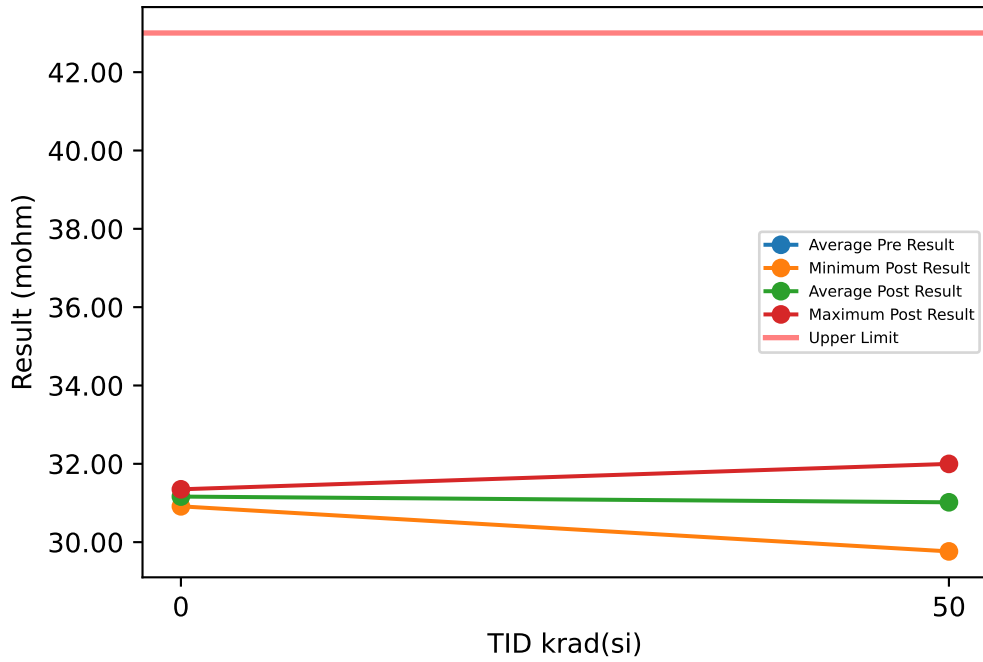
## TID vs Post - Pre Exposure Delta



## Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					30.371	30.652	30.904	0.22041				
50					29.286	30.563	31.469	0.65699				

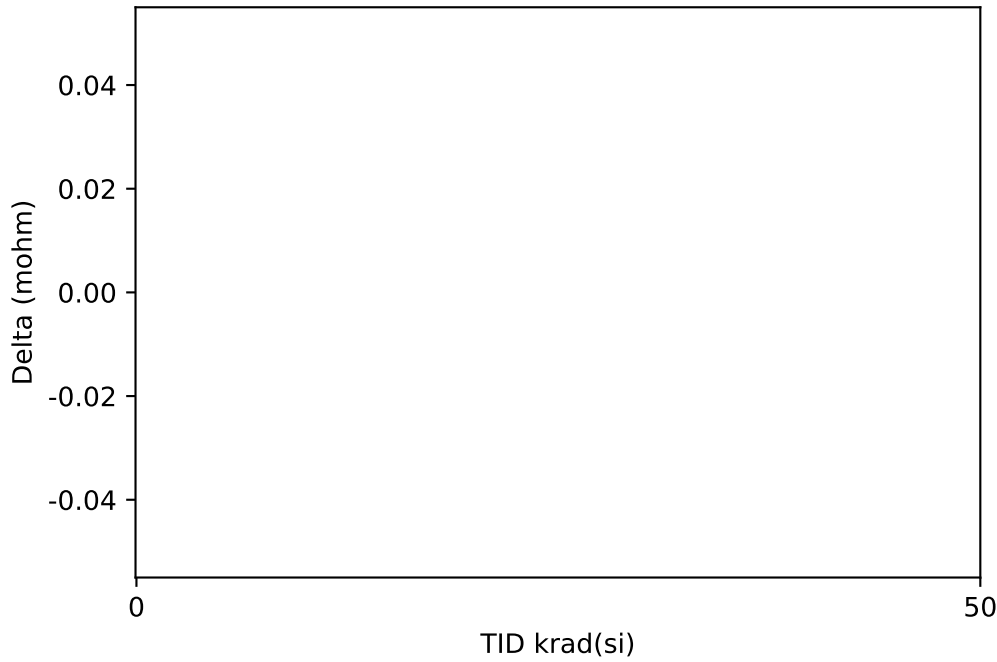
TID vs Result Stats



Test Results (Upper Limit = 43.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		31.998	
4	50	HDR Biased w/ 84hr anneal		30.507	
6	50	HDR Biased w/ 84hr anneal		31.255	
8	50	HDR Biased w/ 84hr anneal		31.287	
9	50	HDR Biased w/ 84hr anneal		31.936	
10	50	HDR unbiased		30.666	
11	50	HDR unbiased		30.934	
12	50	HDR unbiased		29.764	
13	50	HDR unbiased		30.847	
14	50	HDR unbiased		30.983	
26	0	Correlation		31.154	
27	0	Correlation		31.176	
28	0	Correlation		30.915	
29	0	Correlation		31.349	
30	0	Correlation		31.133	
32	0	Correlation		31.255	

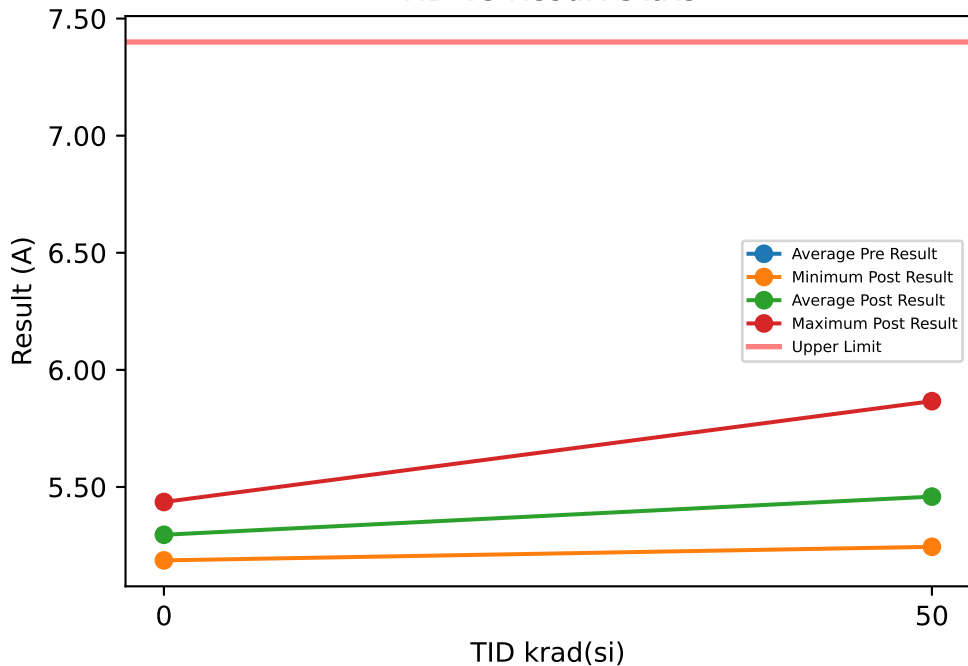
TID vs Post - Pre Exposure Delta



Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					30.915	31.164	31.349	0.1456				
50					29.764	31.018	31.998	0.6605				

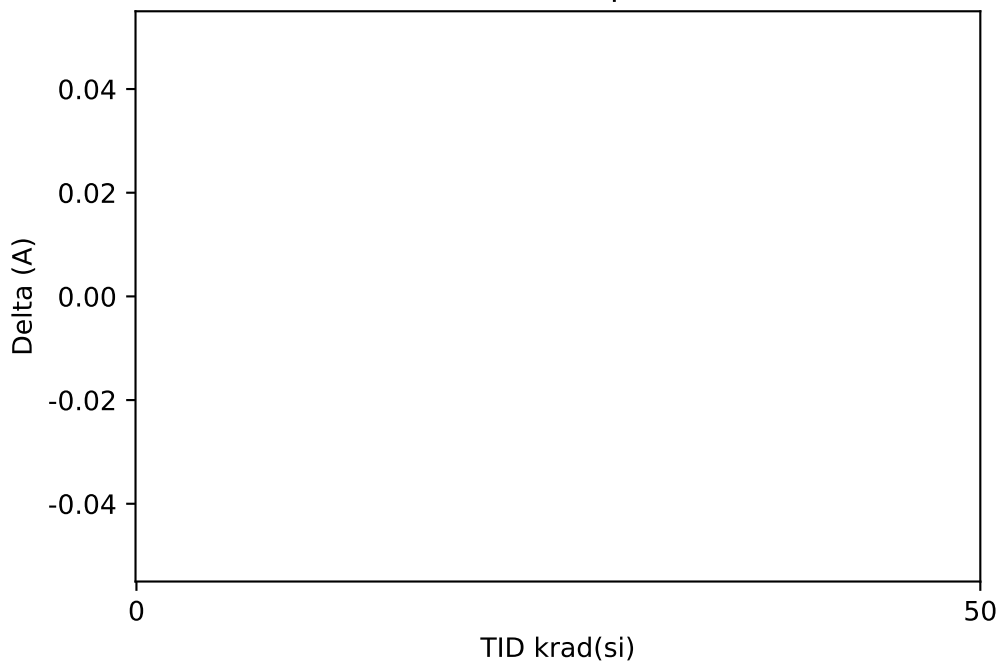
TID vs Result Stats



Test Results (Upper Limit = 7.4 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		5.5024	
4	50	HDR Biased w/ 84hr anneal		5.5346	
6	50	HDR Biased w/ 84hr anneal		5.5107	
8	50	HDR Biased w/ 84hr anneal		5.2445	
9	50	HDR Biased w/ 84hr anneal		5.5242	
10	50	HDR unbiased		5.3974	
11	50	HDR unbiased		5.8664	
12	50	HDR unbiased		5.3349	
13	50	HDR unbiased		5.2509	
14	50	HDR unbiased		5.4219	
26	0	Correlation		5.1865	
27	0	Correlation		5.283	
28	0	Correlation		5.3504	
29	0	Correlation		5.2404	
30	0	Correlation		5.2793	
32	0	Correlation		5.4359	

TID vs Post - Pre Exposure Delta

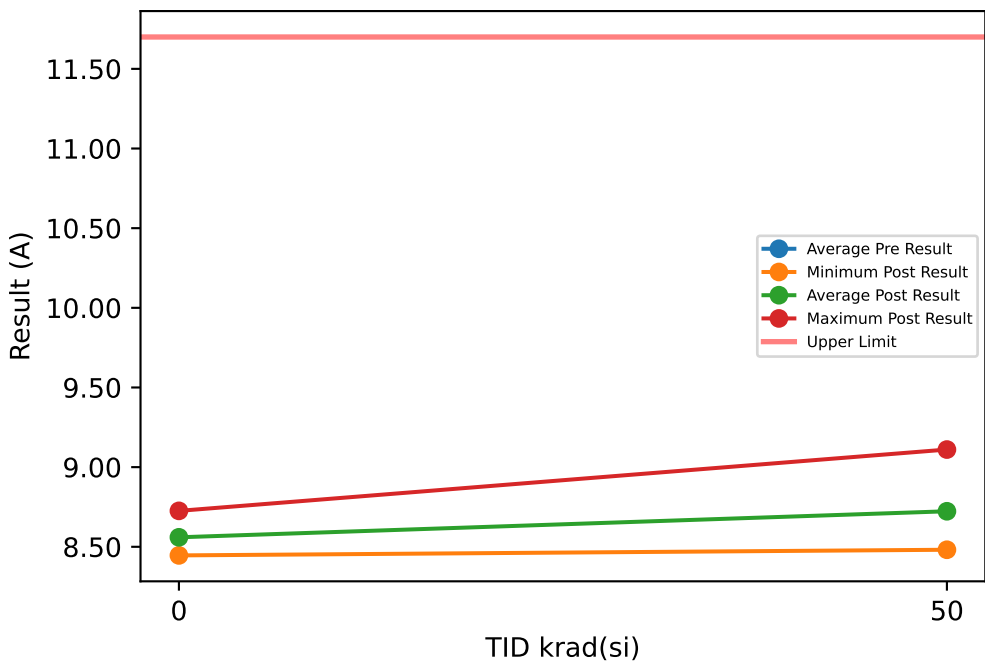


Test Statistics (A)

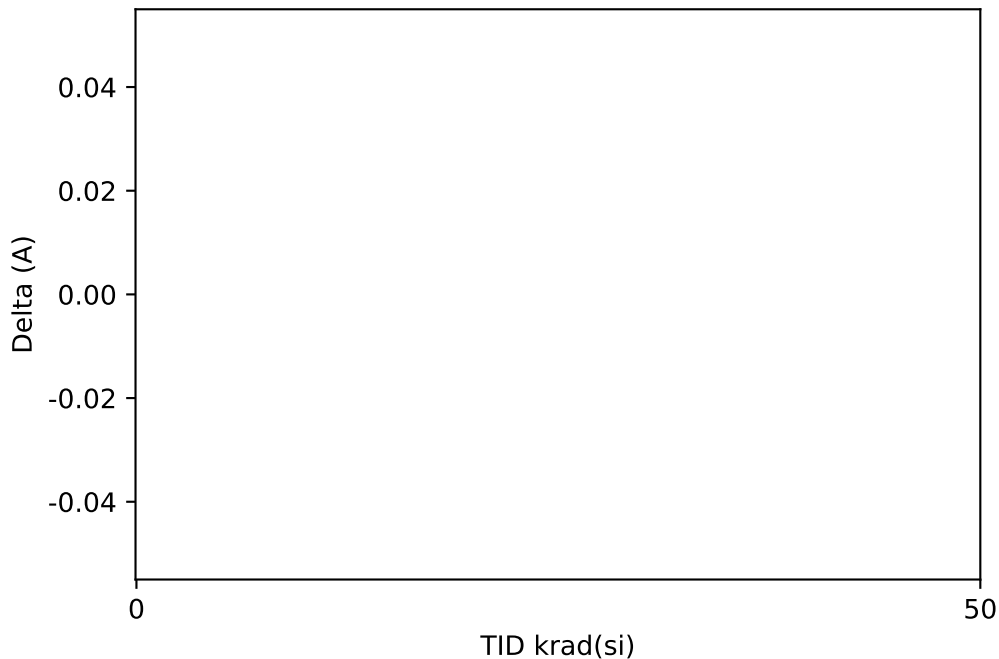
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					5.1865	5.2959	5.4359	0.087248				
50					5.2445	5.4588	5.8664	0.17962				



TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 11.7 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		8.8068	
4	50	HDR Biased w/ 84hr anneal		8.8809	
6	50	HDR Biased w/ 84hr anneal		8.7323	
8	50	HDR Biased w/ 84hr anneal		8.5726	
9	50	HDR Biased w/ 84hr anneal		8.8378	
10	50	HDR unbiased		8.5457	
11	50	HDR unbiased		9.1104	
12	50	HDR unbiased		8.6561	
13	50	HDR unbiased		8.4814	
14	50	HDR unbiased		8.6055	
26	0	Correlation		8.4555	
27	0	Correlation		8.446	
28	0	Correlation		8.7255	
29	0	Correlation		8.5407	
30	0	Correlation		8.4661	
32	0	Correlation		8.7236	

Test Statistics (A)

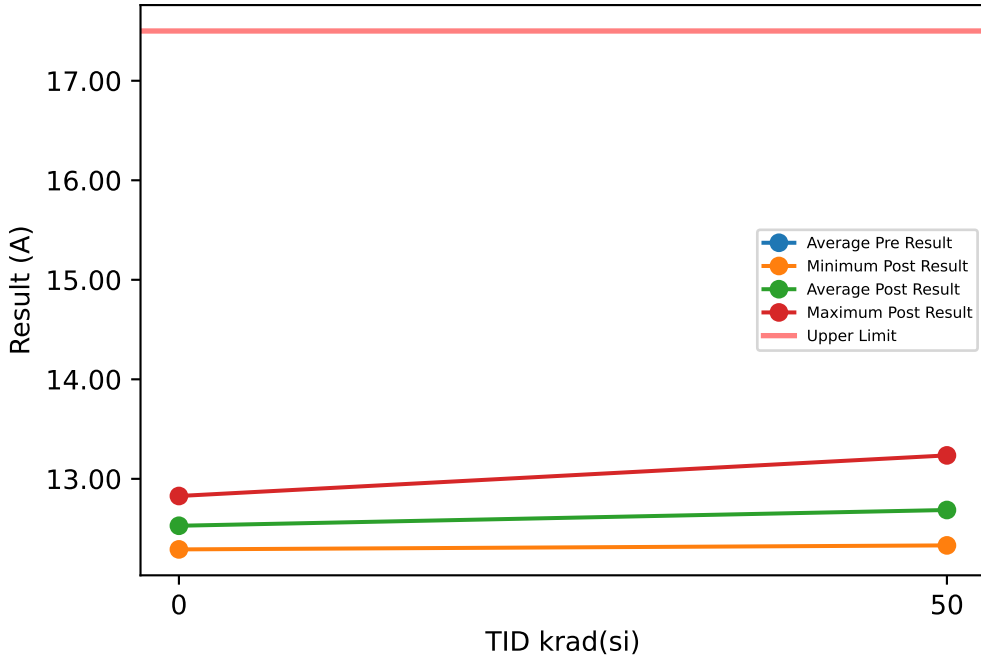
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					8.446	8.5596	8.7255	0.13211				
50					8.4814	8.723	9.1104	0.19032				





Device Test: 20.105 HIGHSIDE\_CURR\_LIM\_13A(\_THRESHOLD|RISE/SW/14////@HIGHSIDE\_CURR\_LIM\_13A )

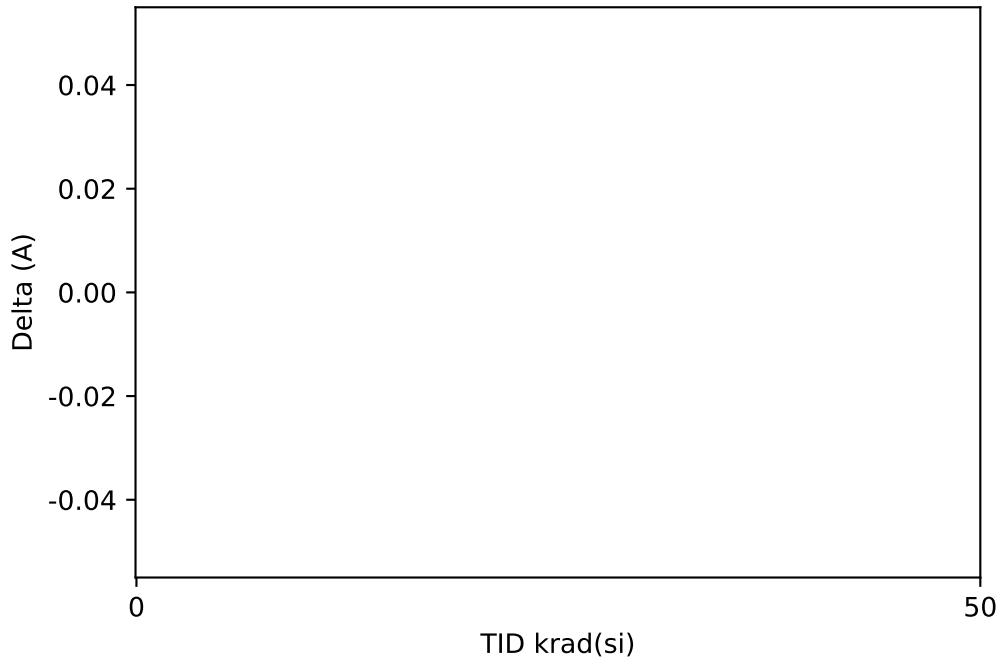
TID vs Result Stats



Test Results (Upper Limit = 17.5 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		12.771	
4	50	HDR Biased w/ 84hr anneal		12.799	
6	50	HDR Biased w/ 84hr anneal		12.646	
8	50	HDR Biased w/ 84hr anneal		12.481	
9	50	HDR Biased w/ 84hr anneal		12.894	
10	50	HDR unbiased		12.331	
11	50	HDR unbiased		13.236	
12	50	HDR unbiased		12.641	
13	50	HDR unbiased		12.452	
14	50	HDR unbiased		12.617	
26	0	Correlation		12.291	
27	0	Correlation		12.38	
28	0	Correlation		12.828	
29	0	Correlation		12.526	
30	0	Correlation		12.377	
32	0	Correlation		12.769	

TID vs Post - Pre Exposure Delta

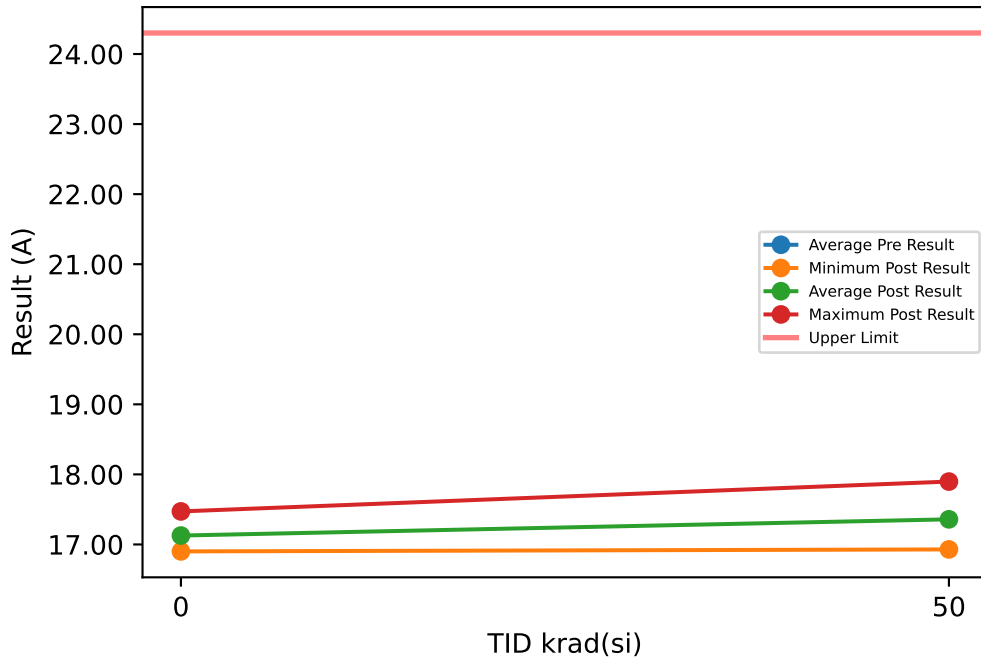


Test Statistics (A)

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					12.291	12.529	12.828	0.22306				
50					12.331	12.687	13.236	0.25745				



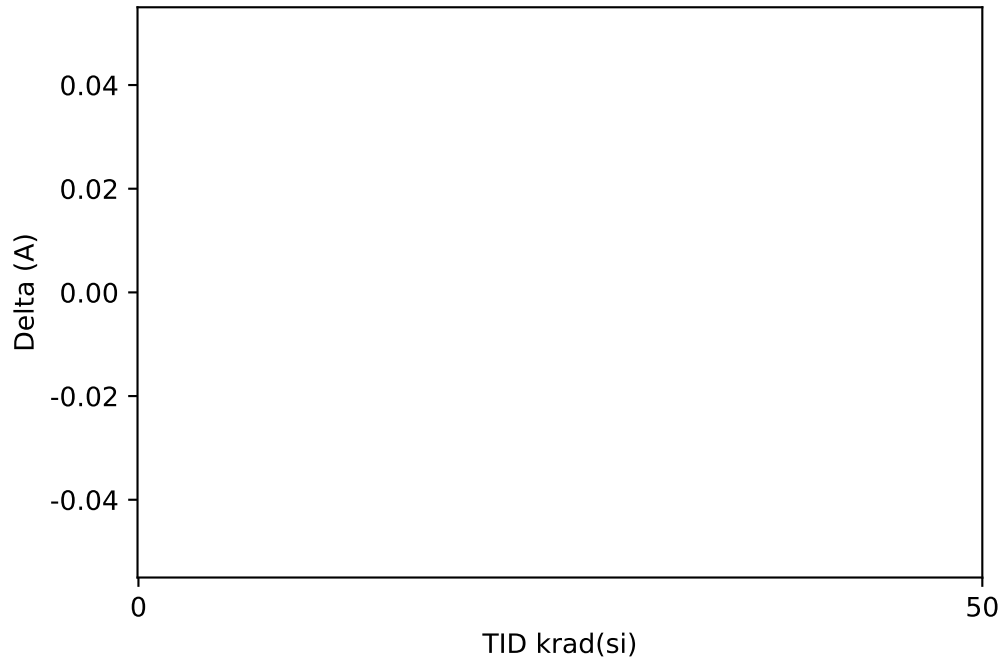
TID vs Result Stats



Test Results (Upper Limit = 24.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		17.614	
4	50	HDR Biased w/ 84hr anneal		17.463	
6	50	HDR Biased w/ 84hr anneal		17.319	
8	50	HDR Biased w/ 84hr anneal		17.136	
9	50	HDR Biased w/ 84hr anneal		17.663	
10	50	HDR unbiased		16.929	
11	50	HDR unbiased		17.898	
12	50	HDR unbiased		17.179	
13	50	HDR unbiased		17.131	
14	50	HDR unbiased		17.253	
26	0	Correlation		16.901	
27	0	Correlation		16.939	
28	0	Correlation		17.471	
29	0	Correlation		17.037	
30	0	Correlation		16.99	
32	0	Correlation		17.424	

TID vs Post - Pre Exposure Delta

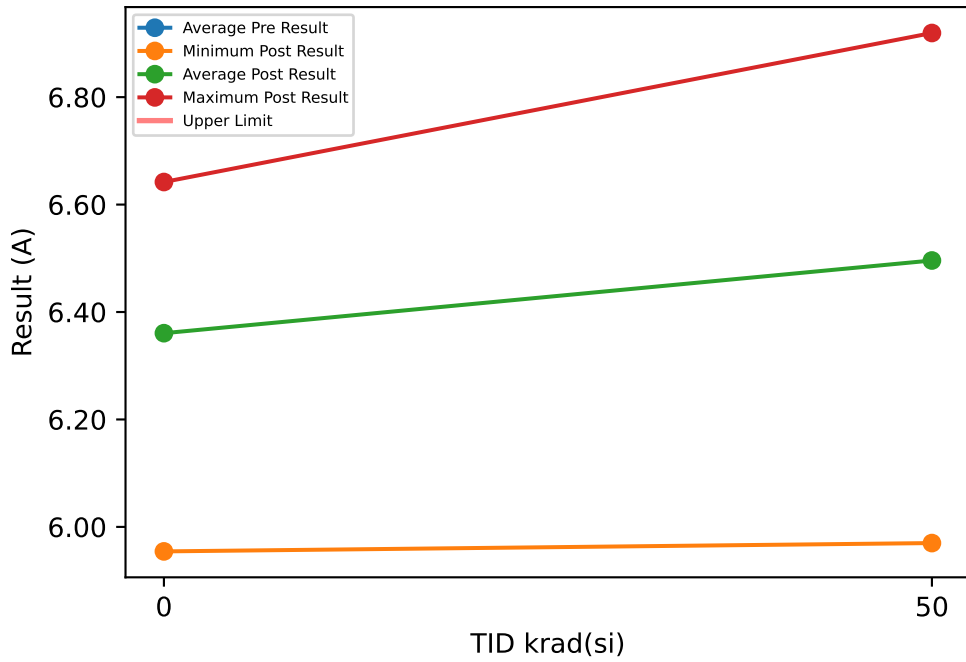


Test Statistics (A)

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					16.901	17.127	17.471	0.25296				
50					16.929	17.359	17.898	0.2963				



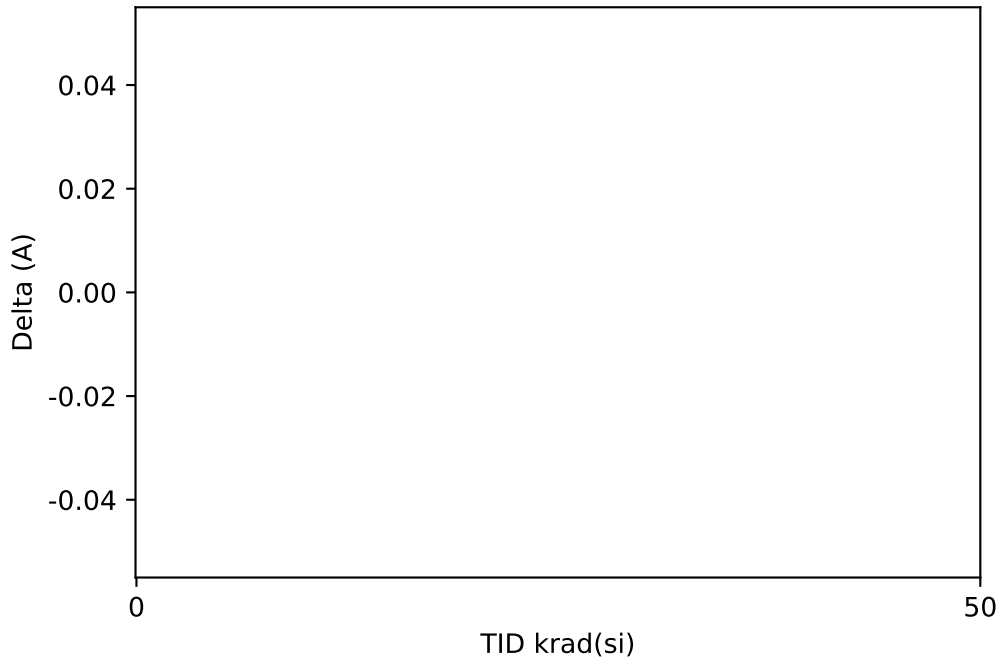
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		6.3566	
4	50	HDR Biased w/ 84hr anneal		6.4864	
6	50	HDR Biased w/ 84hr anneal		5.9699	
8	50	HDR Biased w/ 84hr anneal		6.4666	
9	50	HDR Biased w/ 84hr anneal		6.5466	
10	50	HDR unbiased		6.8472	
11	50	HDR unbiased		6.6601	
12	50	HDR unbiased		6.4677	
13	50	HDR unbiased		6.2387	
14	50	HDR unbiased		6.9194	
26	0	Correlation		6.432	
27	0	Correlation		6.527	
28	0	Correlation		5.9544	
29	0	Correlation		6.4576	
30	0	Correlation		6.1506	
32	0	Correlation		6.642	

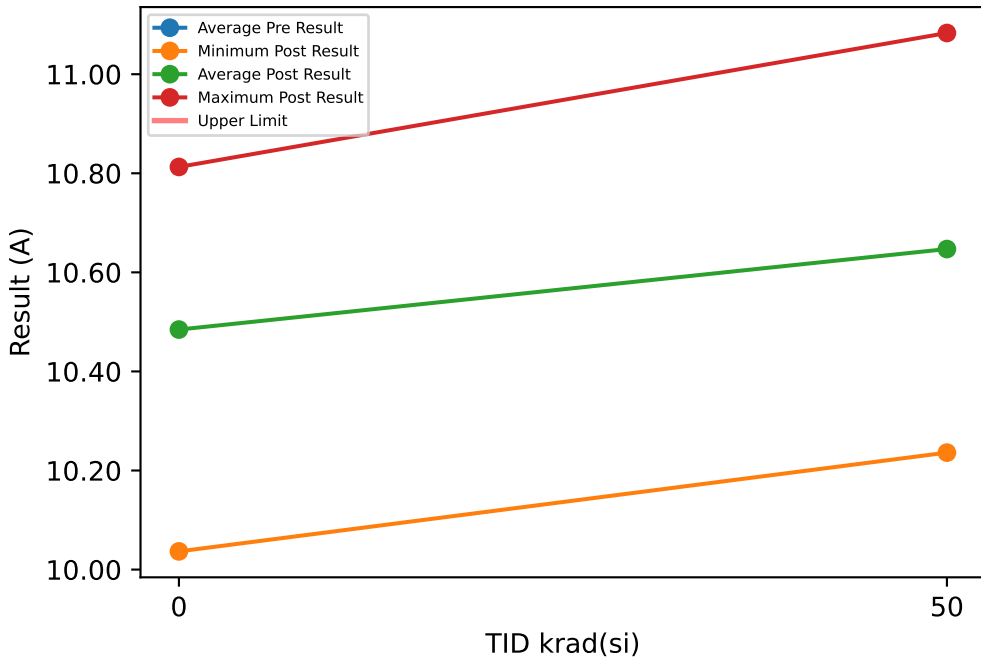
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					5.9544	6.3606	6.642	0.25709				
50					5.9699	6.4959	6.9194	0.27814				

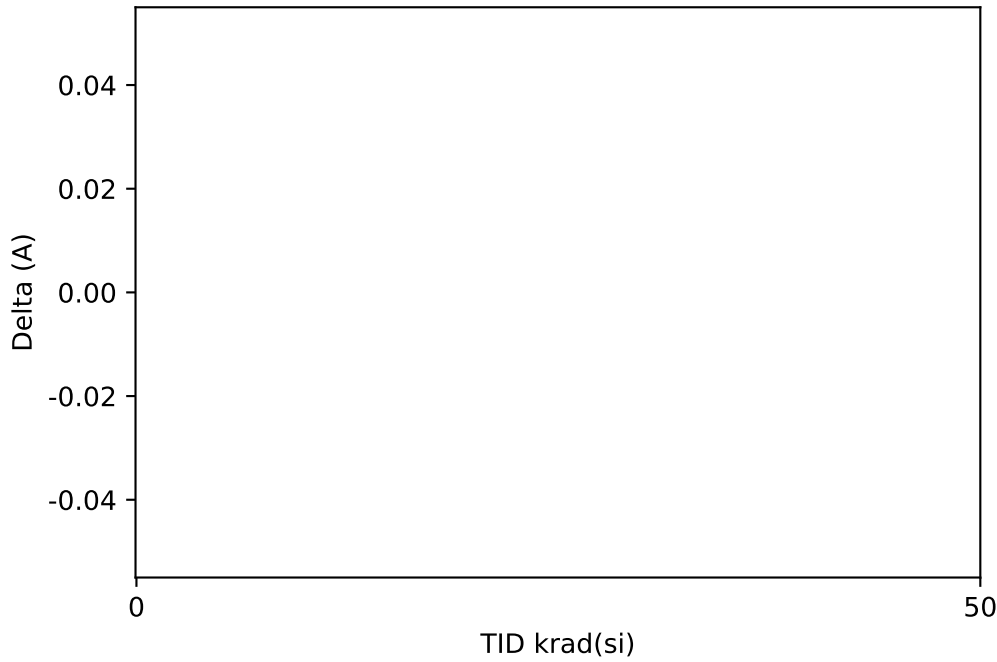
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	10.485	10.63	0.145
4	50	HDR Biased w/ 84hr anneal	10.485	10.68	0.195
6	50	HDR Biased w/ 84hr anneal	10.485	10.632	0.147
8	50	HDR Biased w/ 84hr anneal	10.485	10.309	-0.176
9	50	HDR Biased w/ 84hr anneal	10.485	10.59	0.105
10	50	HDR unbiased	10.485	11.083	0.598
11	50	HDR unbiased	10.485	10.777	0.292
12	50	HDR unbiased	10.485	10.602	0.117
13	50	HDR unbiased	10.485	10.236	-0.249
14	50	HDR unbiased	10.485	10.93	0.445
26	0	Correlation	10.485	10.761	0.276
27	0	Correlation	10.485	10.669	0.184
28	0	Correlation	10.485	10.037	-0.448
29	0	Correlation	10.485	10.509	0.024
30	0	Correlation	10.485	10.118	-0.367
32	0	Correlation	10.485	10.813	0.328

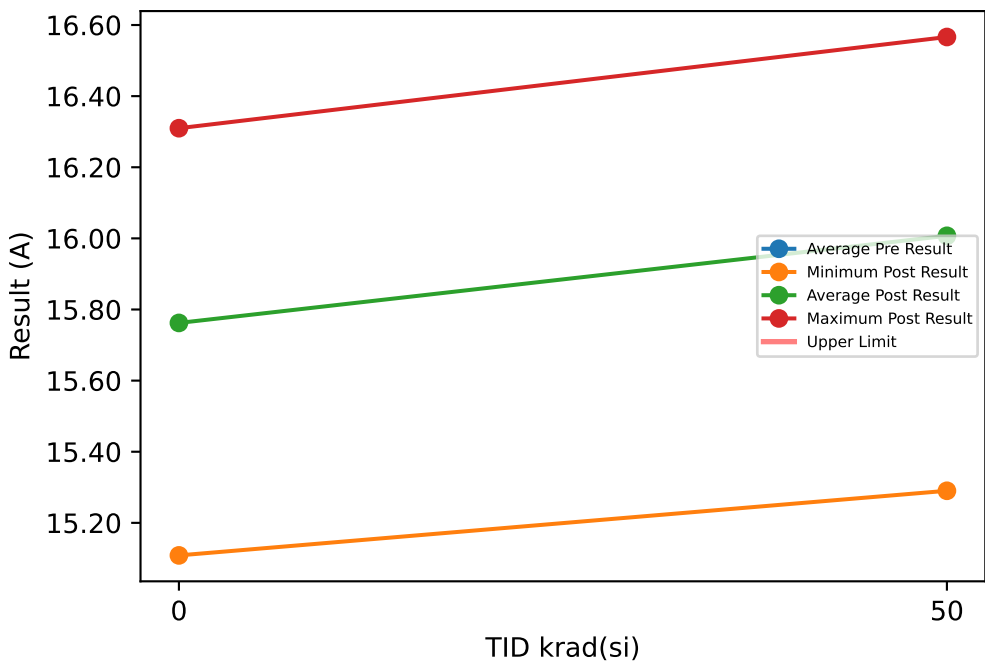
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	10.037	10.485	10.813	0.333	10.037	10.485	10.813	0.333	0.033	0.033	0.033	0.033
50	10.236	10.647	11.083	0.25325	10.236	10.647	11.083	0.25325	0.033	0.25325	0.598	0.25325

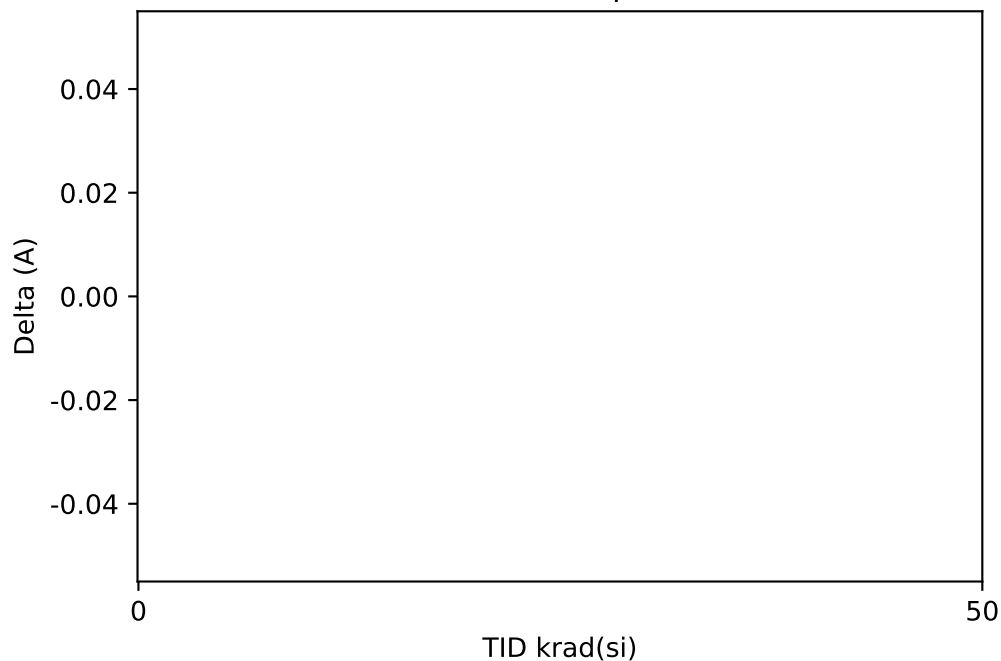
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		16.092	
4	50	HDR Biased w/ 84hr anneal		16.236	
6	50	HDR Biased w/ 84hr anneal		16.111	
8	50	HDR Biased w/ 84hr anneal		15.59	
9	50	HDR Biased w/ 84hr anneal		15.684	
10	50	HDR unbiased		16.566	
11	50	HDR unbiased		16.167	
12	50	HDR unbiased		15.921	
13	50	HDR unbiased		15.29	
14	50	HDR unbiased		16.415	
26	0	Correlation		16.31	
27	0	Correlation		15.881	
28	0	Correlation		15.257	
29	0	Correlation		15.771	
30	0	Correlation		15.108	
32	0	Correlation		16.247	

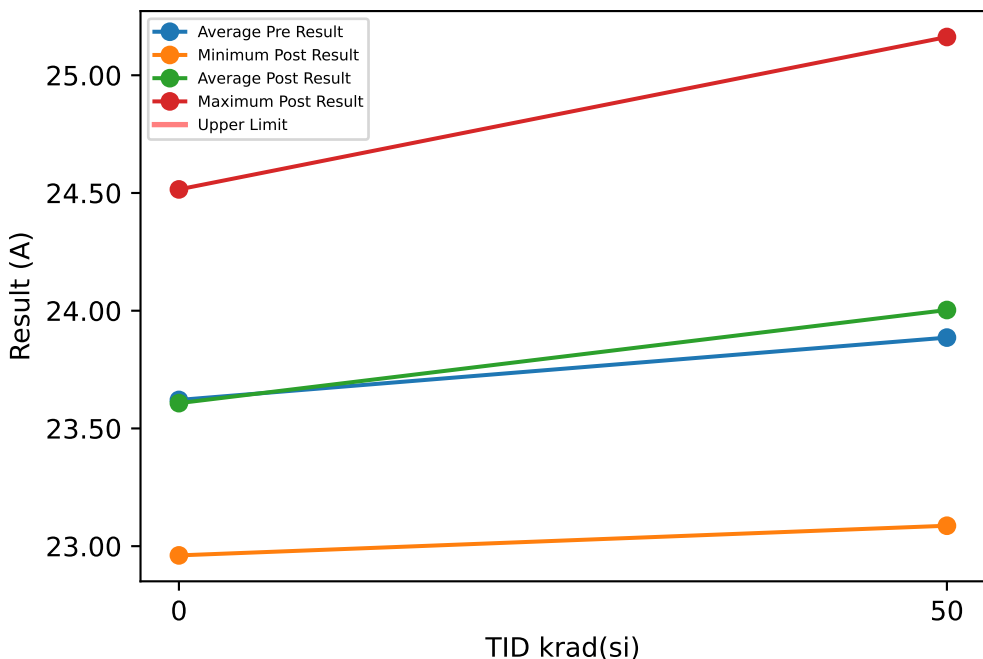
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					15.108	15.762	16.31	0.4963				
50					15.29	16.007	16.566	0.39079				

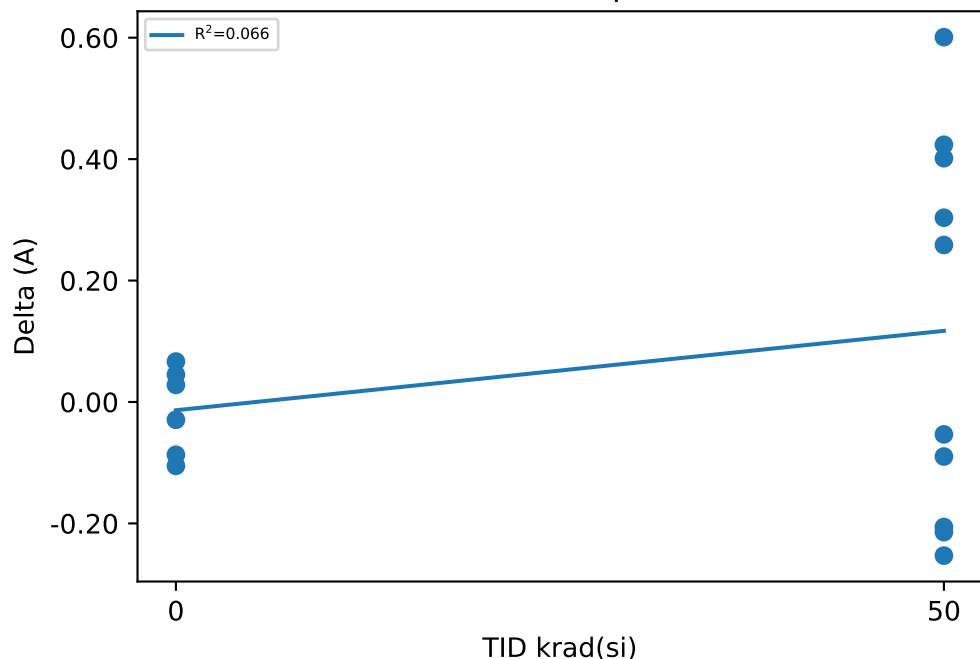
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	23.71	23.496	-0.2144
4	50	HDR Biased w/ 84hr anneal	24.779	24.725	-0.0534
6	50	HDR Biased w/ 84hr anneal	24.482	24.276	-0.2059
8	50	HDR Biased w/ 84hr anneal	22.663	23.087	0.4236
9	50	HDR Biased w/ 84hr anneal	22.72	23.122	0.4015
10	50	HDR unbiased	24.562	25.163	0.6008
11	50	HDR unbiased	24.127	24.037	-0.0898
12	50	HDR unbiased	24.984	24.731	-0.253
13	50	HDR unbiased	23.173	23.477	0.3035
14	50	HDR unbiased	23.659	23.917	0.2586
26	0	Correlation	24.544	24.515	-0.0293
27	0	Correlation	23.203	23.232	0.0281
28	0	Correlation	23.237	23.304	0.0666
29	0	Correlation	23.477	23.372	-0.1052
30	0	Correlation	22.916	22.961	0.0451
32	0	Correlation	24.349	24.262	-0.0869

TID vs Post - Pre Exposure Delta

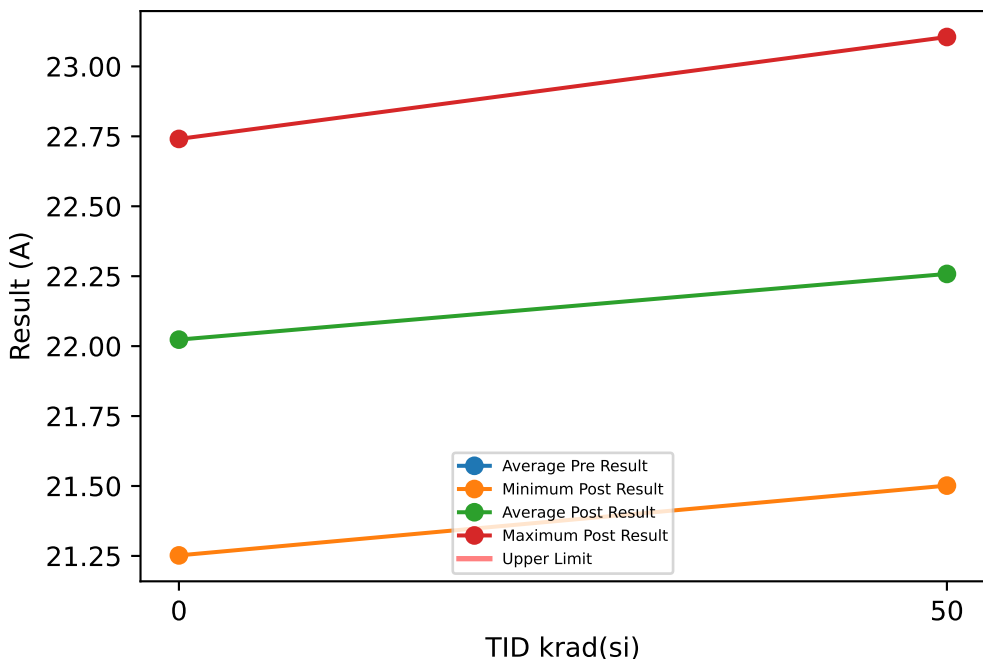


Test Statistics (A)

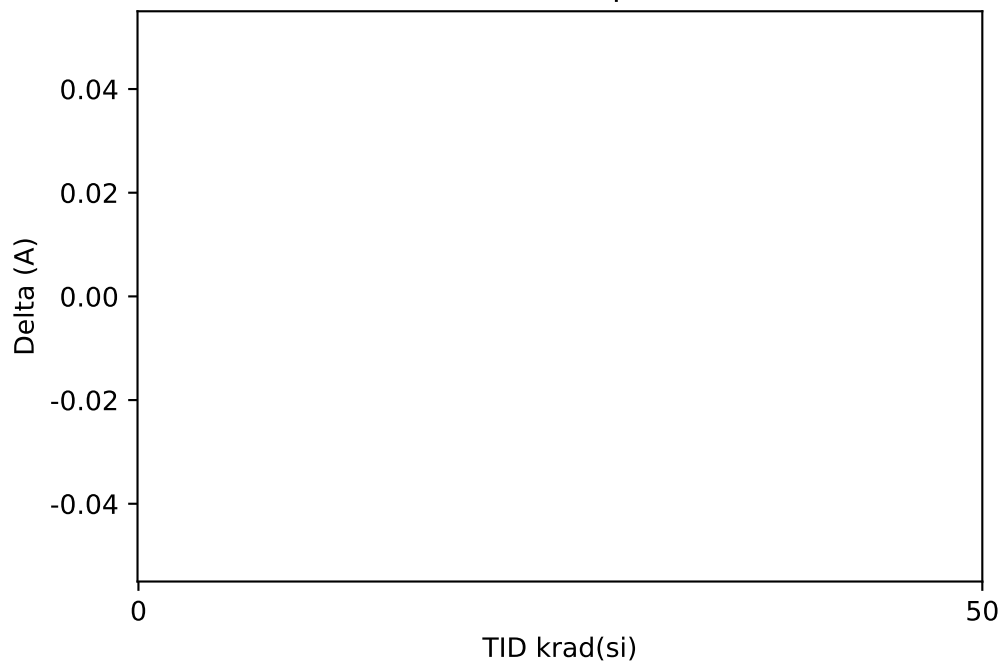
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	22.916	23.621	24.544	0.66669	22.961	23.607	24.515	0.62603	-0.1052	-0.0136	0.0666	0.071591
50	22.663	23.886	24.984	0.83773	23.087	24.003	25.163	0.71715	-0.253	0.11715	0.6008	0.31387



TID vs Result Stats



TID vs Post - Pre Exposure Delta



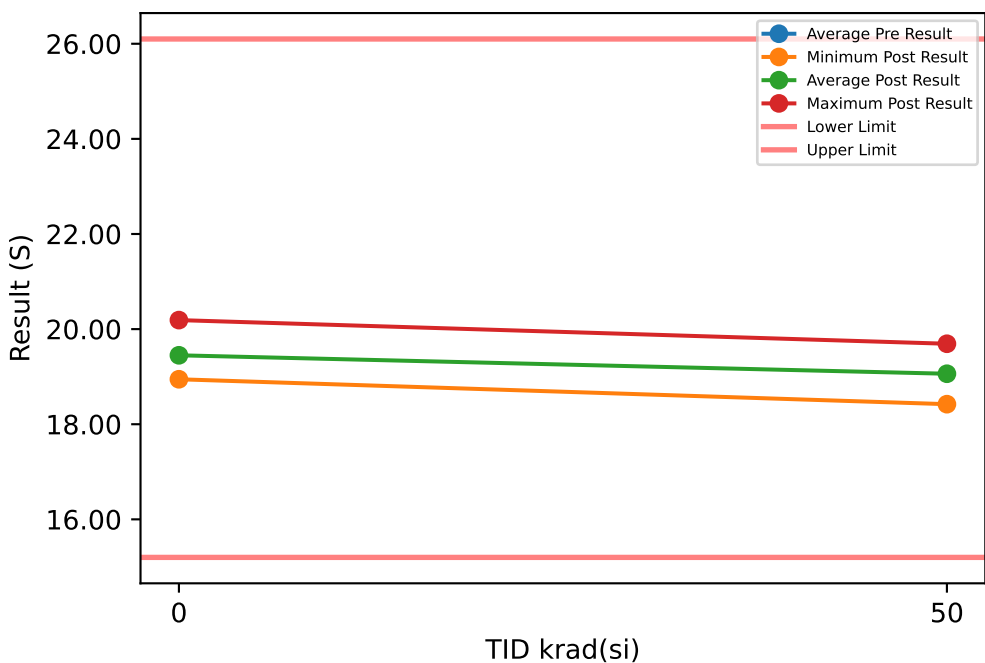
Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		22.223	
4	50	HDR Biased w/ 84hr anneal		22.679	
6	50	HDR Biased w/ 84hr anneal		22.595	
8	50	HDR Biased w/ 84hr anneal		21.517	
9	50	HDR Biased w/ 84hr anneal		21.782	
10	50	HDR unbiased		23.105	
11	50	HDR unbiased		22.47	
12	50	HDR unbiased		22.067	
13	50	HDR unbiased		21.501	
14	50	HDR unbiased		22.642	
26	0	Correlation		22.741	
27	0	Correlation		22.068	
28	0	Correlation		21.451	
29	0	Correlation		22.074	
30	0	Correlation		21.252	
32	0	Correlation		22.553	

Test Statistics (A)

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					21.252	22.023	22.741	0.58703				
50					21.501	22.258	23.105	0.53608				

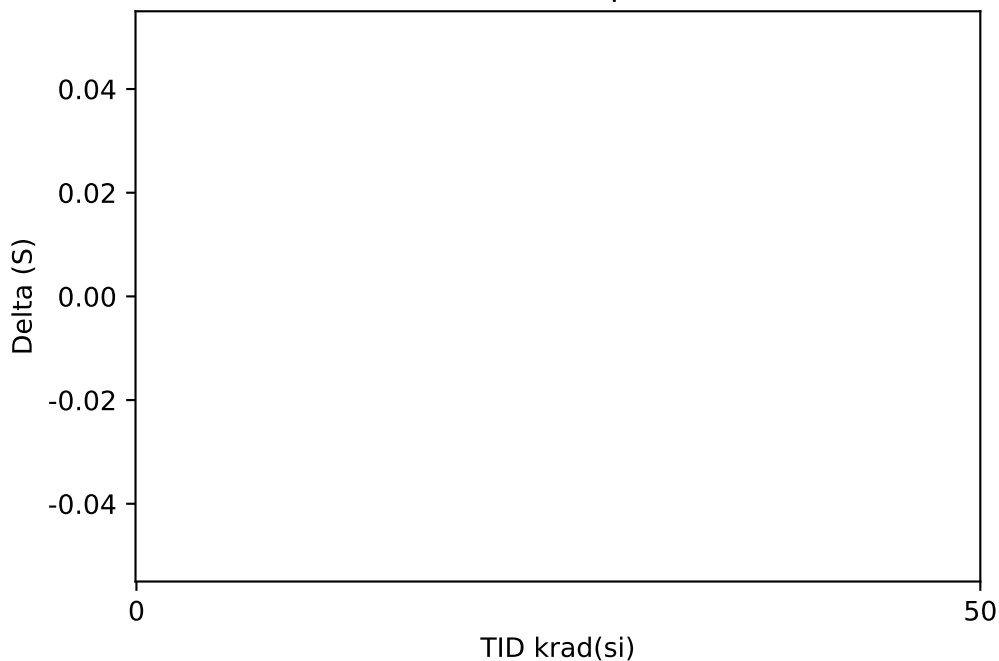
TID vs Result Stats



Test Results (Lower Limit = 15.2, Upper Limit = 26.1 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		19.692	
4	50	HDR Biased w/ 84hr anneal		19.219	
6	50	HDR Biased w/ 84hr anneal		18.507	
8	50	HDR Biased w/ 84hr anneal		19.127	
9	50	HDR Biased w/ 84hr anneal		19.127	
10	50	HDR unbiased		18.945	
11	50	HDR unbiased		19.596	
12	50	HDR unbiased		18.945	
13	50	HDR unbiased		19.036	
14	50	HDR unbiased		18.422	
26	0	Correlation		19.036	
27	0	Correlation		18.945	
28	0	Correlation		20.189	
29	0	Correlation		19.312	
30	0	Correlation		19.127	
32	0	Correlation		20.088	

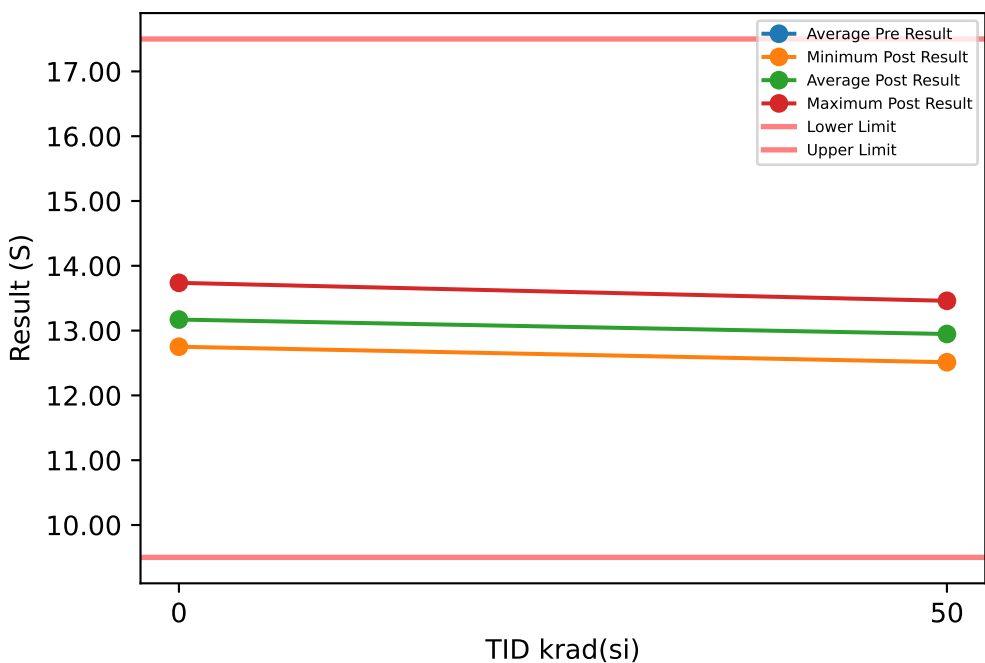
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					18.945	19.449	20.189	0.54834				
50					18.422	19.062	19.692	0.40288				

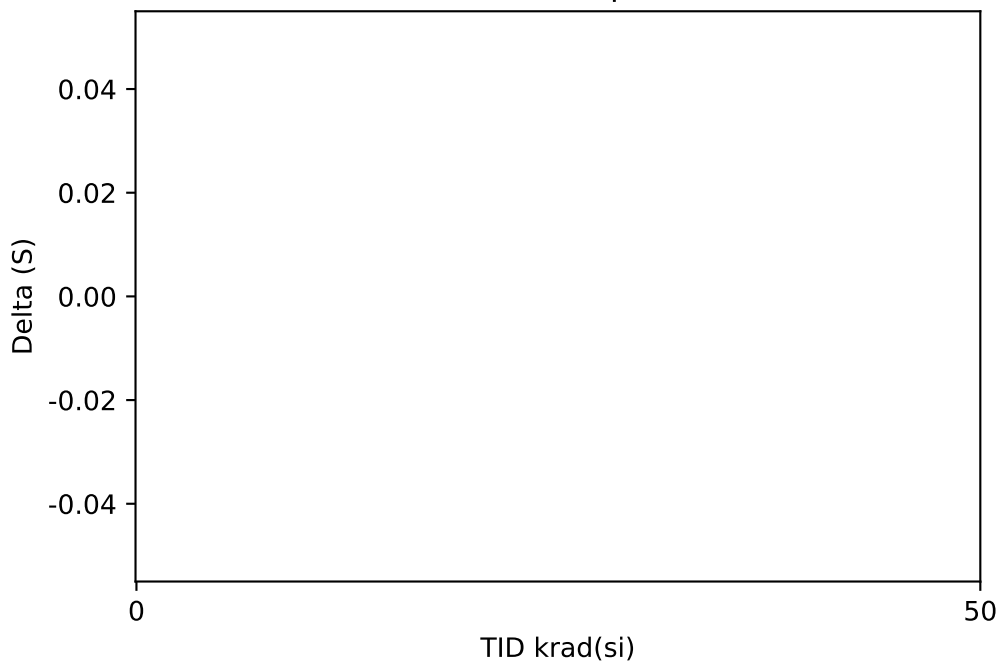
TID vs Result Stats



Test Results (Lower Limit = 9.5, Upper Limit = 17.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		13.46	
4	50	HDR Biased w/ 84hr anneal		13.46	
6	50	HDR Biased w/ 84hr anneal		12.874	
8	50	HDR Biased w/ 84hr anneal		12.512	
9	50	HDR Biased w/ 84hr anneal		13.259	
10	50	HDR unbiased		12.812	
11	50	HDR unbiased		13.325	
12	50	HDR unbiased		12.691	
13	50	HDR unbiased		12.571	
14	50	HDR unbiased		12.512	
26	0	Correlation		12.812	
27	0	Correlation		12.751	
28	0	Correlation		13.737	
29	0	Correlation		13.128	
30	0	Correlation		13.064	
32	0	Correlation		13.528	

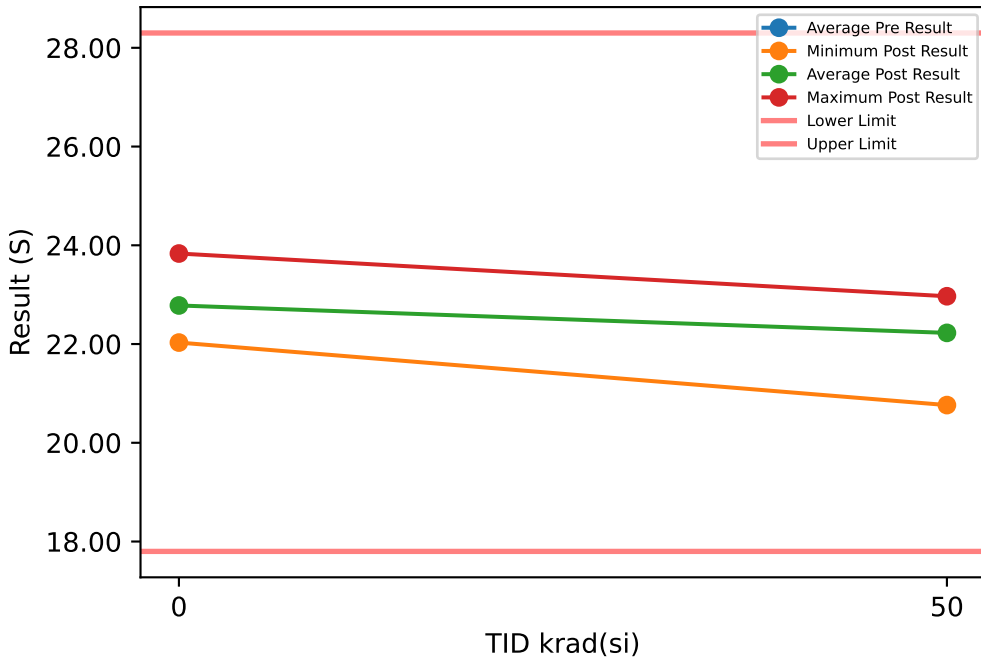
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					12.751	13.17	13.737	0.39139				
50					12.512	12.947	13.46	0.3909				

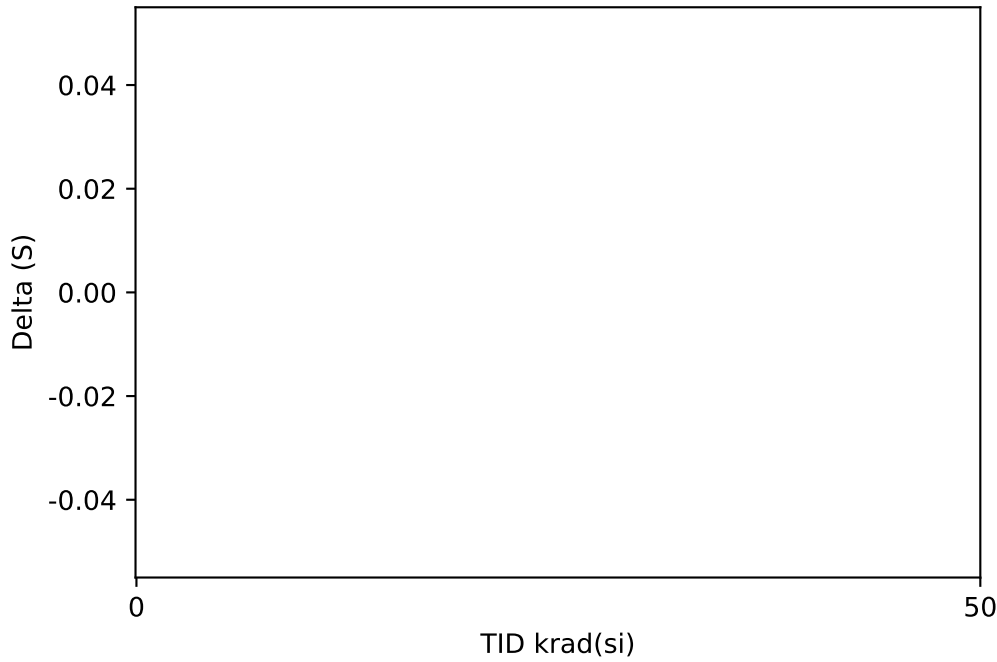
TID vs Result Stats



Test Results (Lower Limit = 17.8, Upper Limit = 28.3 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		22.278	
4	50	HDR Biased w/ 84hr anneal		22.26	
6	50	HDR Biased w/ 84hr anneal		21.028	
8	50	HDR Biased w/ 84hr anneal		22.81	
9	50	HDR Biased w/ 84hr anneal		22.387	
10	50	HDR unbiased		22.543	
11	50	HDR unbiased		22.886	
12	50	HDR unbiased		22.337	
13	50	HDR unbiased		22.968	
14	50	HDR unbiased		20.764	
26	0	Correlation		22.535	
27	0	Correlation		22.03	
28	0	Correlation		23.092	
29	0	Correlation		22.64	
30	0	Correlation		22.557	
32	0	Correlation		23.833	

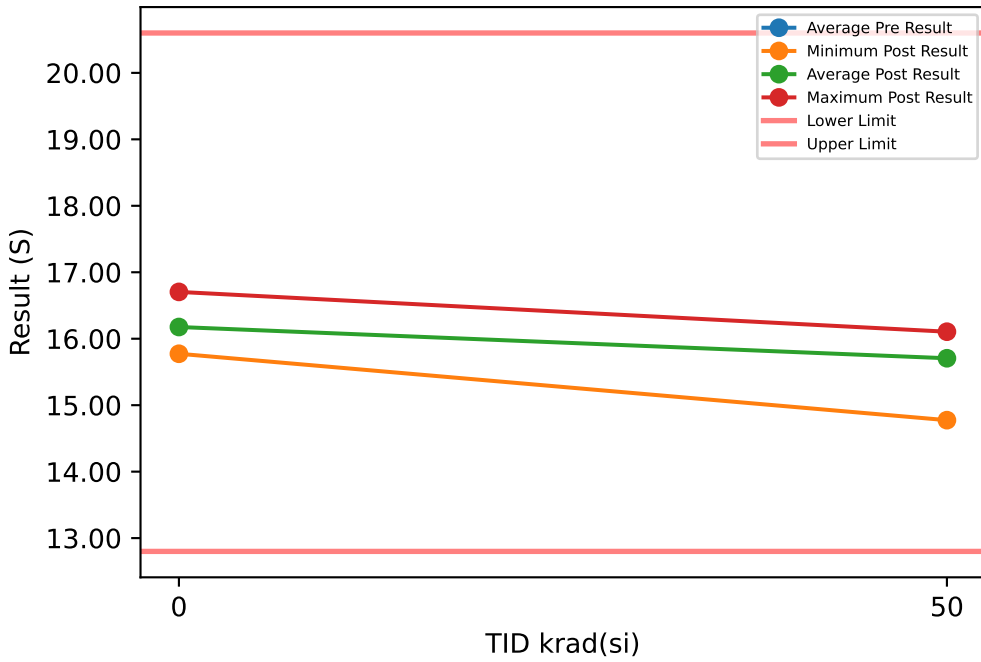
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					22.03	22.781	23.833	0.61625				
50					20.764	22.226	22.968	0.74863				

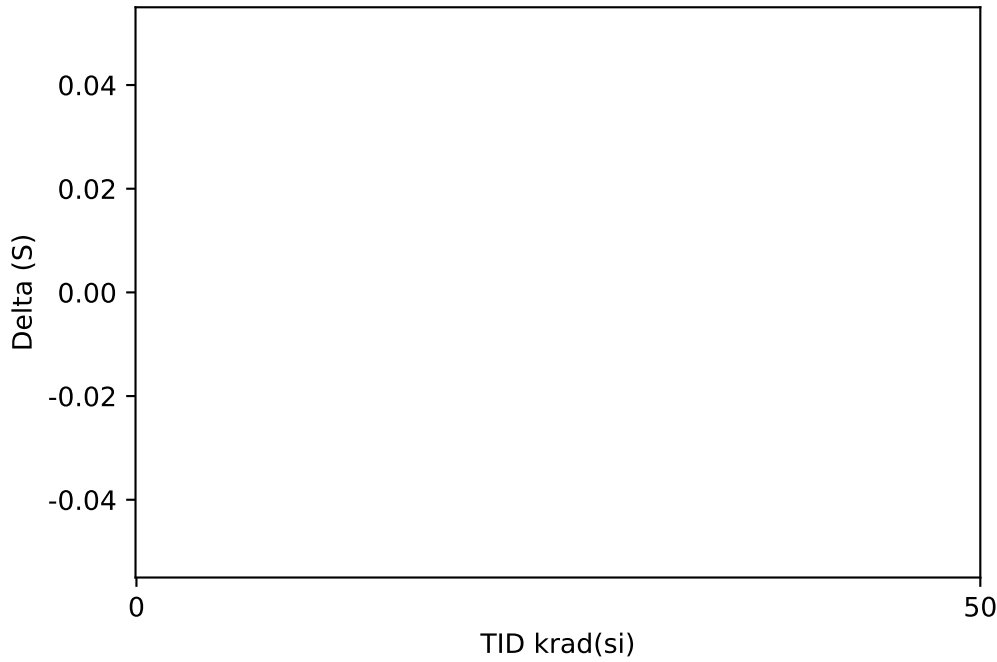
TID vs Result Stats



Test Results (Lower Limit = 12.8, Upper Limit = 20.6 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		16.035	
4	50	HDR Biased w/ 84hr anneal		15.779	
6	50	HDR Biased w/ 84hr anneal		15.205	
8	50	HDR Biased w/ 84hr anneal		16.106	
9	50	HDR Biased w/ 84hr anneal		15.703	
10	50	HDR unbiased		15.663	
11	50	HDR unbiased		15.891	
12	50	HDR unbiased		15.807	
13	50	HDR unbiased		16.098	
14	50	HDR unbiased		14.774	
26	0	Correlation		16.085	
27	0	Correlation		15.774	
28	0	Correlation		16.294	
29	0	Correlation		16.246	
30	0	Correlation		15.955	
32	0	Correlation		16.704	

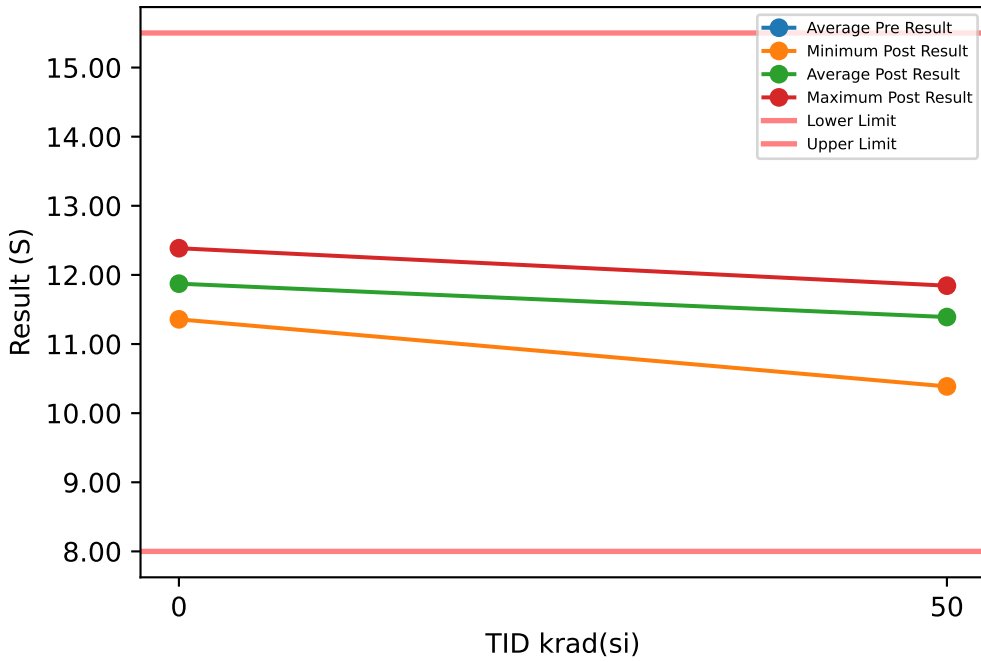
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					15.774	16.176	16.704	0.3215				
50					14.774	15.706	16.106	0.4205				

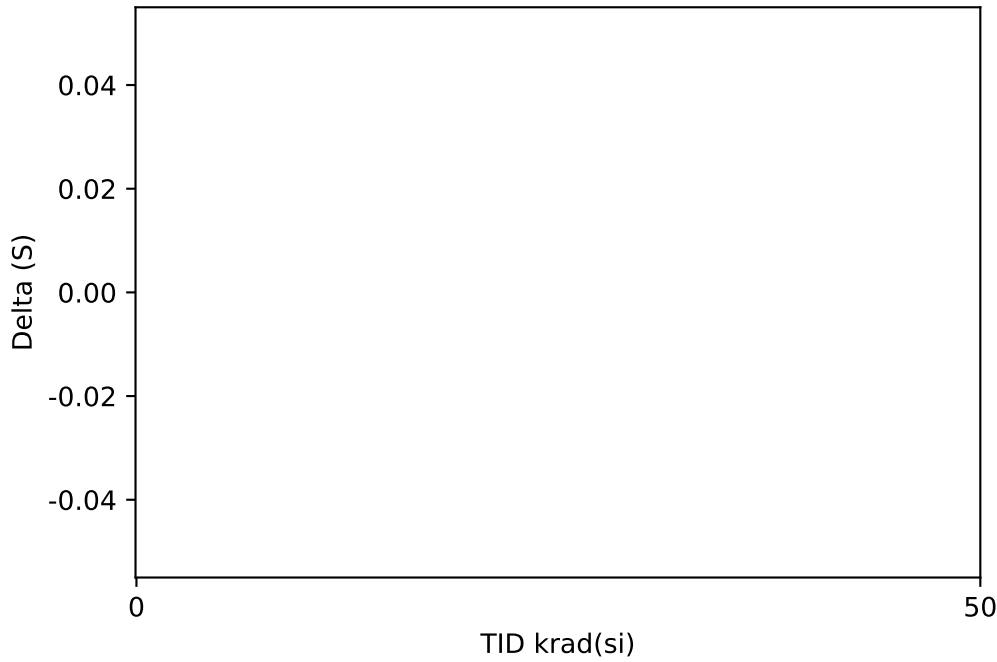
TID vs Result Stats



Test Results (Lower Limit = 8.0, Upper Limit = 15.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		11.588	
4	50	HDR Biased w/ 84hr anneal		11.5	
6	50	HDR Biased w/ 84hr anneal		11.121	
8	50	HDR Biased w/ 84hr anneal		11.844	
9	50	HDR Biased w/ 84hr anneal		11.267	
10	50	HDR unbiased		11.514	
11	50	HDR unbiased		11.435	
12	50	HDR unbiased		11.496	
13	50	HDR unbiased		11.753	
14	50	HDR unbiased		10.387	
26	0	Correlation		11.797	
27	0	Correlation		11.357	
28	0	Correlation		12.033	
29	0	Correlation		11.748	
30	0	Correlation		11.919	
32	0	Correlation		12.386	

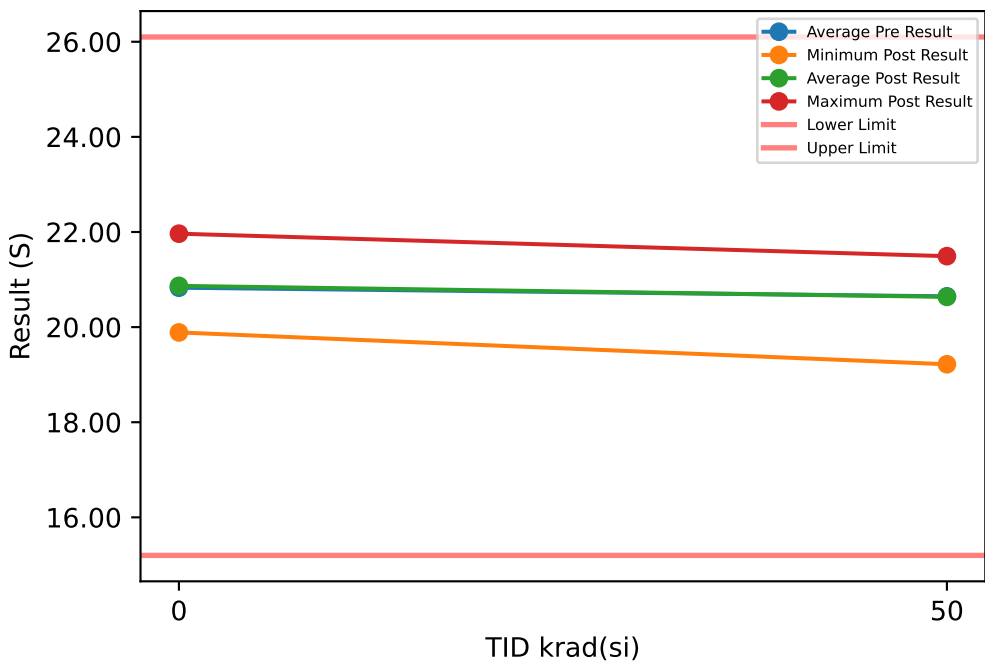
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					11.357	11.873	12.386	0.34021				
50					10.387	11.391	11.844	0.40983				

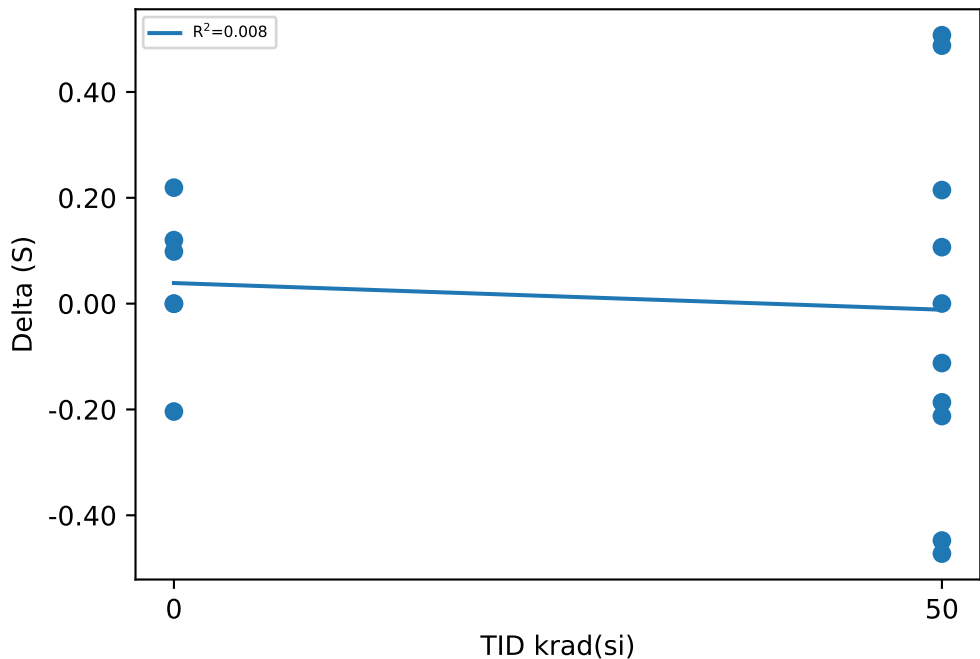
TID vs Result Stats



Test Results (Lower Limit = 15.2, Upper Limit = 26.1 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	20.712	20.5	-0.2125
4	50	HDR Biased w/ 84hr anneal	20.606	20.82	0.2146
6	50	HDR Biased w/ 84hr anneal	19.5	19.988	0.4875
8	50	HDR Biased w/ 84hr anneal	21.377	20.929	-0.4477
9	50	HDR Biased w/ 84hr anneal	19.888	20.395	0.5073
10	50	HDR unbiased	20.606	20.712	0.1067
11	50	HDR unbiased	21.263	21.151	-0.1123
12	50	HDR unbiased	21.151	21.151	0.0002
13	50	HDR unbiased	21.964	21.492	-0.4724
14	50	HDR unbiased	19.405	19.219	-0.1865
26	0	Correlation	20.5	20.5	0
27	0	Correlation	19.79	19.888	0.0985
28	0	Correlation	21.726	21.725	-0.0002
29	0	Correlation	20.292	20.088	-0.2039
30	0	Correlation	20.82	21.04	0.2192
32	0	Correlation	21.844	21.964	0.12

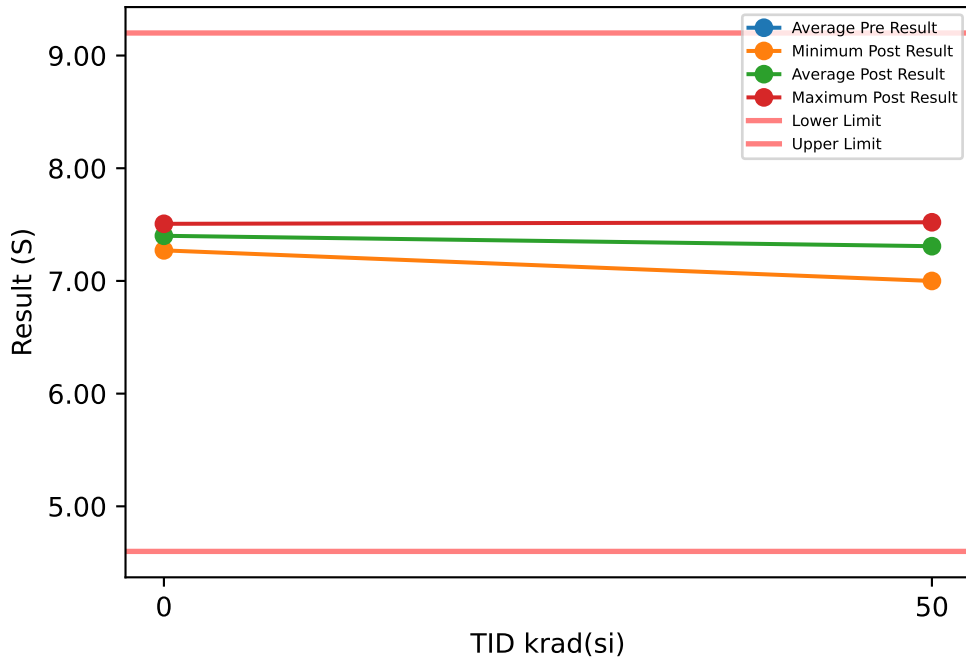
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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	19.79	20.829	21.844	0.81384	19.888	20.868	21.964	0.85677	-0.2039	0.038933	0.2192	0.14466
50	19.405	20.647	21.964	0.83947	19.219	20.636	21.492	0.65776	-0.4724	-0.01151	0.5073	0.34436

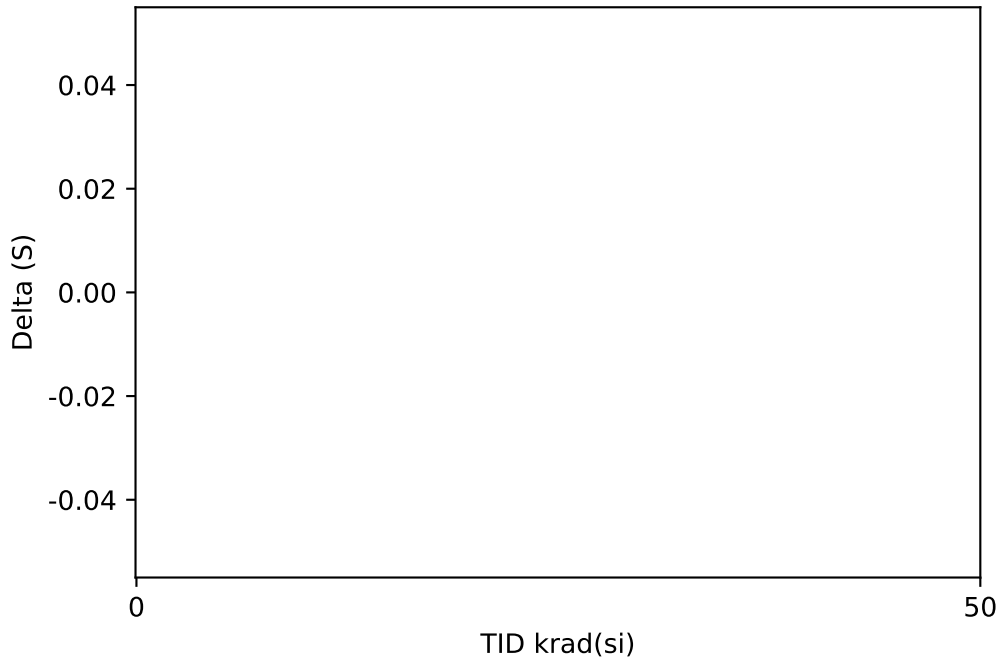
TID vs Result Stats



Test Results (Lower Limit = 4.6, Upper Limit = 9.2 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		7.2271	
4	50	HDR Biased w/ 84hr anneal		7.5205	
6	50	HDR Biased w/ 84hr anneal		7.1435	
8	50	HDR Biased w/ 84hr anneal		7.2982	
9	50	HDR Biased w/ 84hr anneal		7.3106	
10	50	HDR unbiased		7.3363	
11	50	HDR unbiased		7.4768	
12	50	HDR unbiased		7.4908	
13	50	HDR unbiased		7.2785	
14	50	HDR unbiased		6.9997	
26	0	Correlation		7.5068	
27	0	Correlation		7.2712	
28	0	Correlation		7.479	
29	0	Correlation		7.3253	
30	0	Correlation		7.3466	
32	0	Correlation		7.4744	

TID vs Post - Pre Exposure Delta

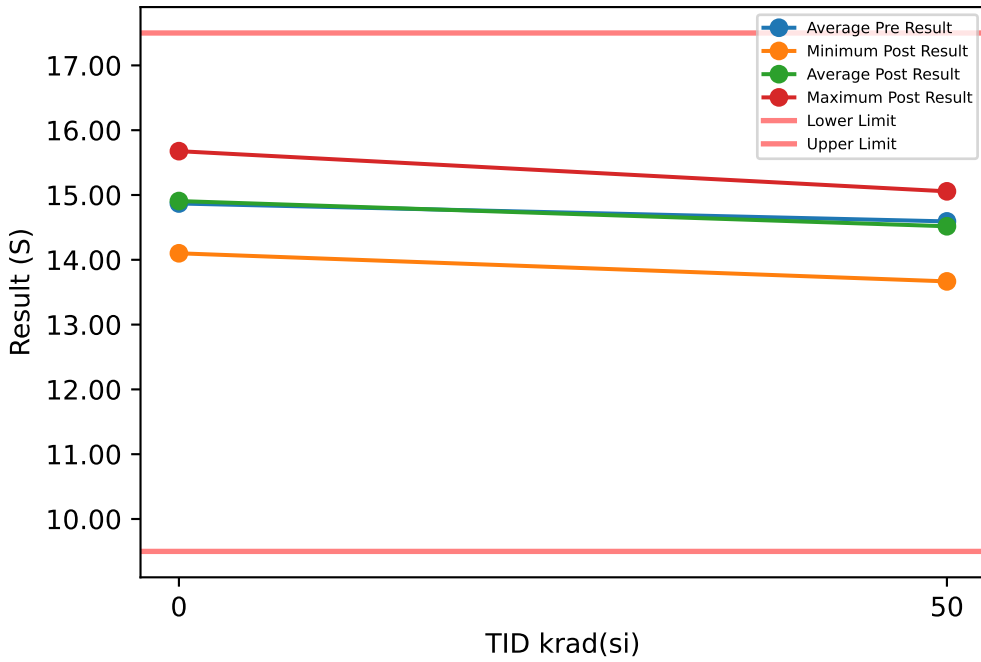


Test Statistics (S)

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					7.2712	7.4005	7.5068	0.098185				
50					6.9997	7.3082	7.5205	0.16244				



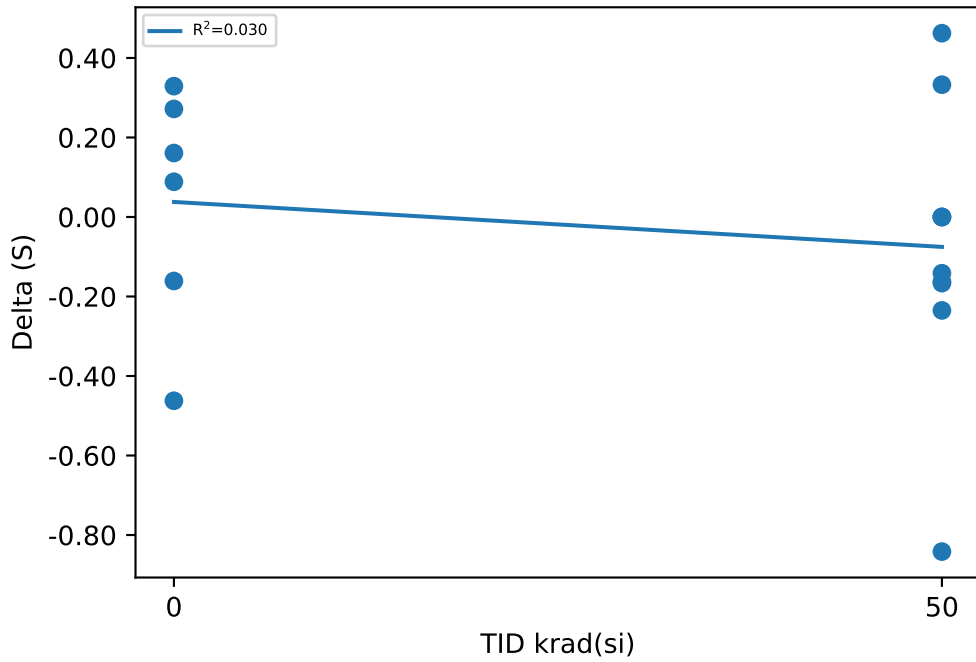
TID vs Result Stats



Test Results (Lower Limit = 9.5, Upper Limit = 17.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	14.643	14.643	0
4	50	HDR Biased w/ 84hr anneal	14.724	15.056	0.3328
6	50	HDR Biased w/ 84hr anneal	14.101	14.101	-0.0001
8	50	HDR Biased w/ 84hr anneal	14.806	14.643	-0.1628
9	50	HDR Biased w/ 84hr anneal	14.101	14.563	0.4623
10	50	HDR unbiased	14.563	14.328	-0.235
11	50	HDR unbiased	14.806	14.806	0
12	50	HDR unbiased	14.972	14.806	-0.1664
13	50	HDR unbiased	15.405	14.563	-0.8417
14	50	HDR unbiased	13.808	13.667	-0.1415
26	0	Correlation	14.724	14.563	-0.161
27	0	Correlation	14.563	14.101	-0.4623
28	0	Correlation	15.316	15.405	0.0886
29	0	Correlation	14.563	14.724	0.1609
30	0	Correlation	14.643	14.972	0.3291
32	0	Correlation	15.405	15.676	0.2718

TID vs Post - Pre Exposure Delta



Test Statistics (S)

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	14.563	14.869	15.405	0.38636	14.101	14.907	15.676	0.5738	-0.4623	0.03785	0.3291	0.29899
50	13.808	14.593	15.405	0.47305	13.667	14.517	15.056	0.39801	-0.8417	-0.07524	0.4623	0.35052





























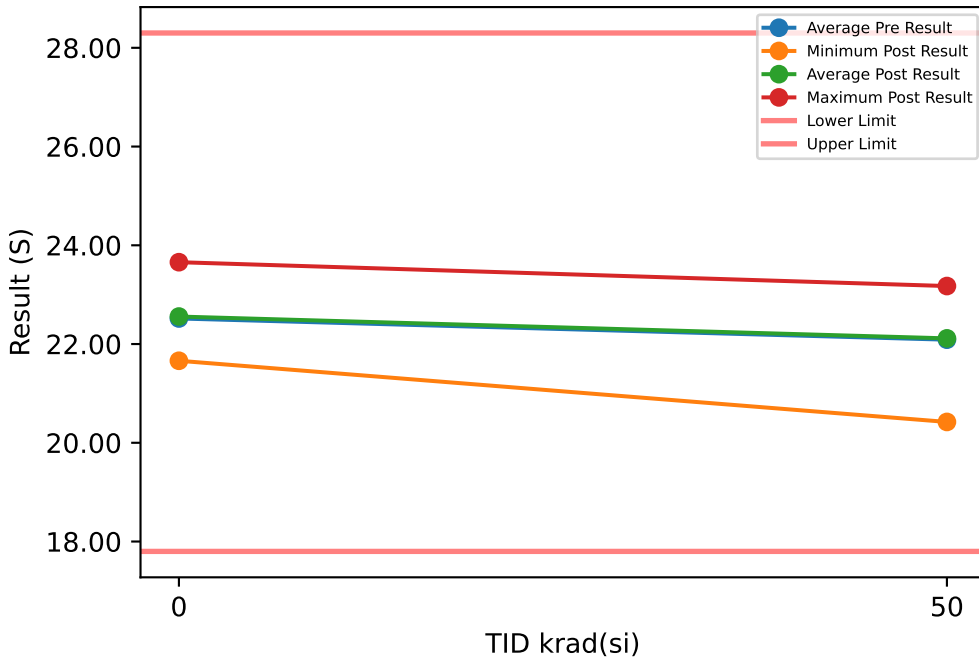








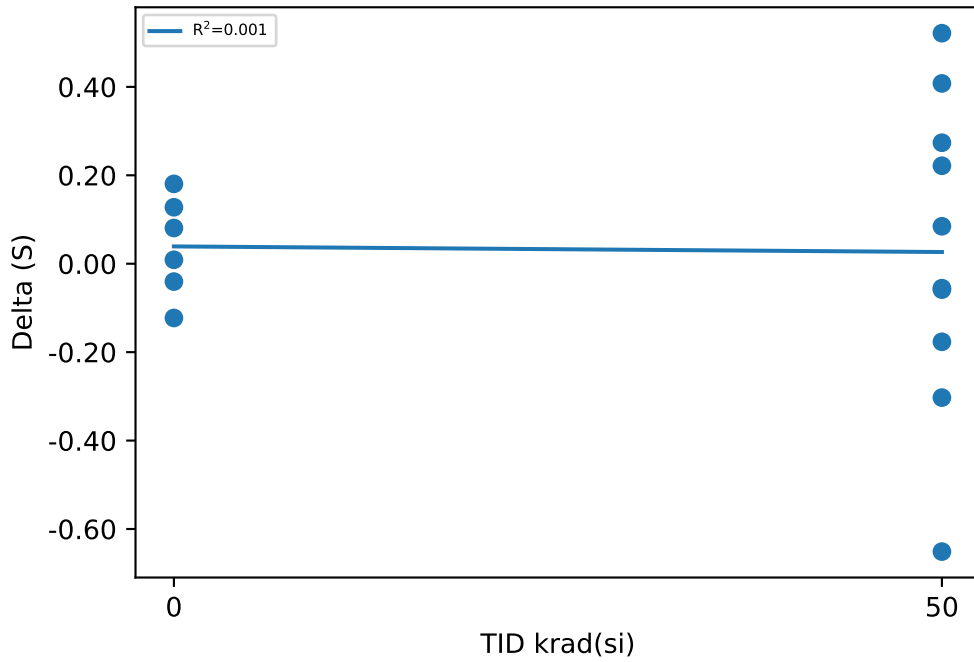
TID vs Result Stats



Test Results (Lower Limit = 17.8, Upper Limit = 28.3 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	22.027	21.971	-0.0553
4	50	HDR Biased w/ 84hr anneal	22.223	22.308	0.0847
6	50	HDR Biased w/ 84hr anneal	21	20.823	-0.1766
8	50	HDR Biased w/ 84hr anneal	22.336	22.857	0.5214
9	50	HDR Biased w/ 84hr anneal	21.618	22.026	0.4078
10	50	HDR unbiased	22.16	22.434	0.2737
11	50	HDR unbiased	22.466	22.688	0.2216
12	50	HDR unbiased	22.502	22.444	-0.0586
13	50	HDR unbiased	23.826	23.175	-0.6511
14	50	HDR unbiased	20.725	20.422	-0.3028
26	0	Correlation	22.215	22.395	0.1806
27	0	Correlation	21.784	21.661	-0.1227
28	0	Correlation	22.781	22.909	0.1277
29	0	Correlation	22.177	22.186	0.0089
30	0	Correlation	22.451	22.532	0.0808
32	0	Correlation	23.698	23.658	-0.0404

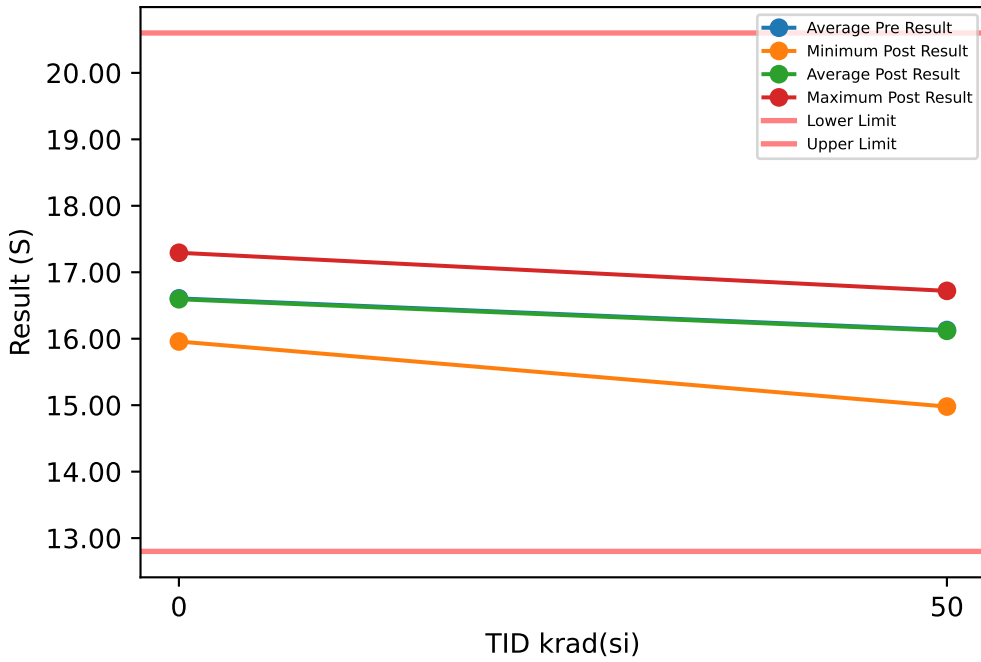
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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	21.784	22.518	23.698	0.66536	21.661	22.557	23.658	0.67858	-0.1227	0.03915	0.1806	0.11227
50	20.725	22.088	23.826	0.86194	20.422	22.115	23.175	0.87001	-0.6511	0.02648	0.5214	0.35208

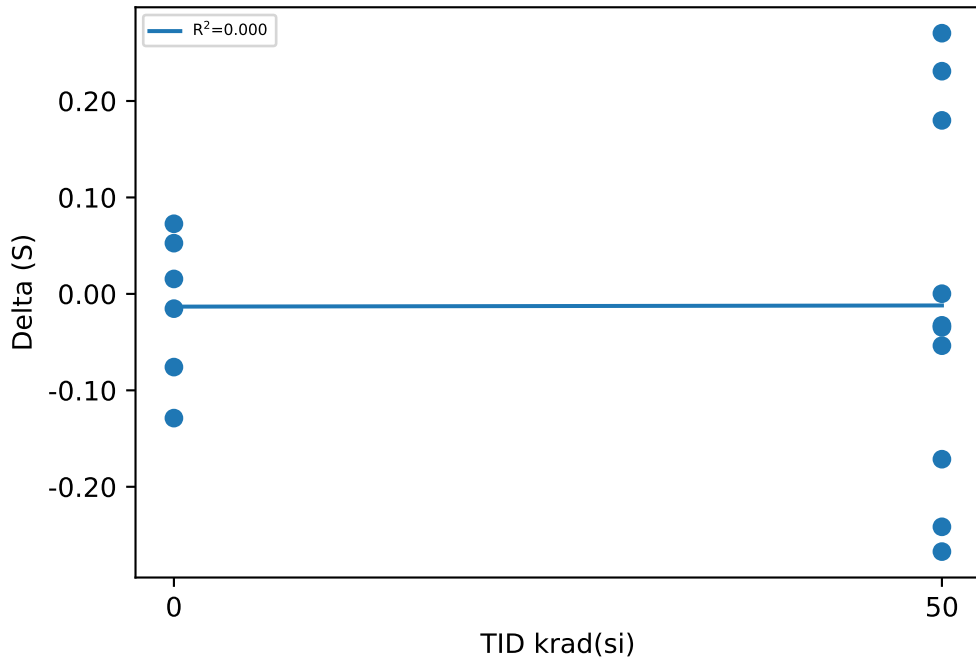
TID vs Result Stats



Test Results (Lower Limit = 12.8, Upper Limit = 20.6 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	16.158	16.123	-0.0347
4	50	HDR Biased w/ 84hr anneal	16.27	16.27	0.0002
6	50	HDR Biased w/ 84hr anneal	15.537	15.365	-0.1714
8	50	HDR Biased w/ 84hr anneal	16.32	16.59	0.2703
9	50	HDR Biased w/ 84hr anneal	15.89	16.07	0.1799
10	50	HDR unbiased	16.207	16.154	-0.0537
11	50	HDR unbiased	16.264	16.495	0.2309
12	50	HDR unbiased	16.455	16.422	-0.0326
13	50	HDR unbiased	16.962	16.72	-0.2415
14	50	HDR unbiased	15.246	14.979	-0.2672
26	0	Correlation	16.467	16.52	0.0526
27	0	Correlation	16.087	15.958	-0.1288
28	0	Correlation	16.857	16.782	-0.0759
29	0	Correlation	16.436	16.452	0.0155
30	0	Correlation	16.487	16.559	0.0727
32	0	Correlation	17.308	17.293	-0.0153

TID vs Post - Pre Exposure Delta

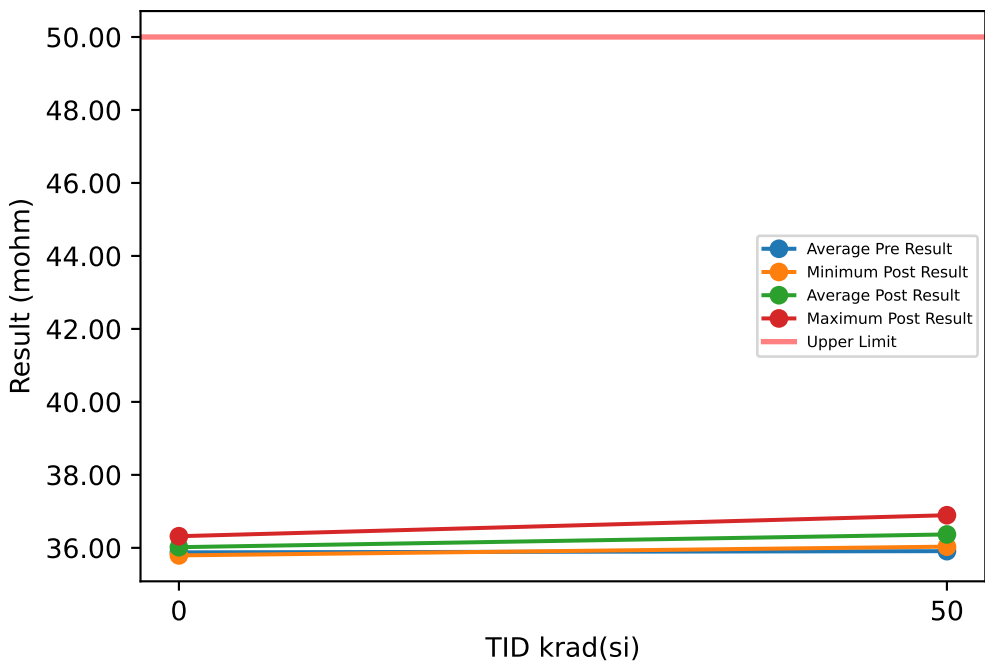


Test Statistics (S)

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	16.087	16.607	17.308	0.42152	15.958	16.594	17.293	0.43709	-0.1288	-0.0132	0.0727	0.077241
50	15.246	16.131	16.962	0.47937	14.979	16.119	16.72	0.54881	-0.2672	-0.01198	0.2703	0.18902

Device Test: 20.2 R\_HIGHSIDE\_4V\_25C(\_LEVEL|HIGHSIDE/SW/4.5/2///@R\_HIGHSIDE\_4V\_25C )

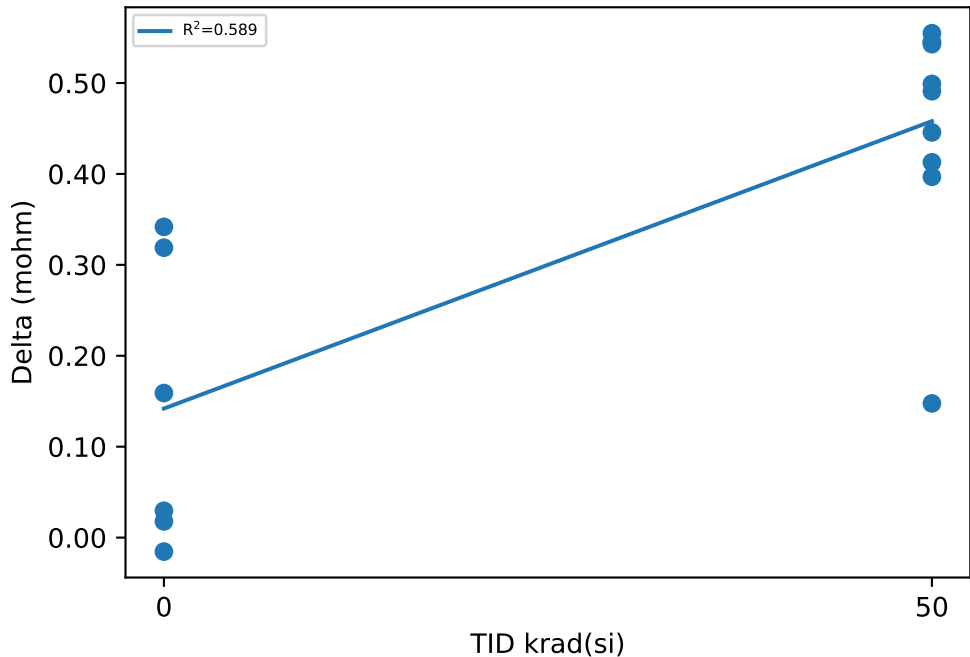
TID vs Result Stats



Test Results (Upper Limit = 50.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	35.806	36.351	0.5452
4	50	HDR Biased w/ 84hr anneal	35.871	36.362	0.491
6	50	HDR Biased w/ 84hr anneal	35.796	36.351	0.5548
8	50	HDR Biased w/ 84hr anneal	35.636	36.033	0.3969
9	50	HDR Biased w/ 84hr anneal	36.349	36.894	0.545
10	50	HDR unbiased	35.794	36.337	0.5427
11	50	HDR unbiased	35.924	36.337	0.4128
12	50	HDR unbiased	35.891	36.336	0.4457
13	50	HDR unbiased	35.838	36.337	0.499
14	50	HDR unbiased	36.189	36.337	0.1476
26	0	Correlation	36.104	36.263	0.159
27	0	Correlation	35.977	36.319	0.3418
28	0	Correlation	35.796	35.826	0.0295
29	0	Correlation	35.797	36.115	0.3189
30	0	Correlation	35.776	35.794	0.0178
32	0	Correlation	35.809	35.793	-0.0154

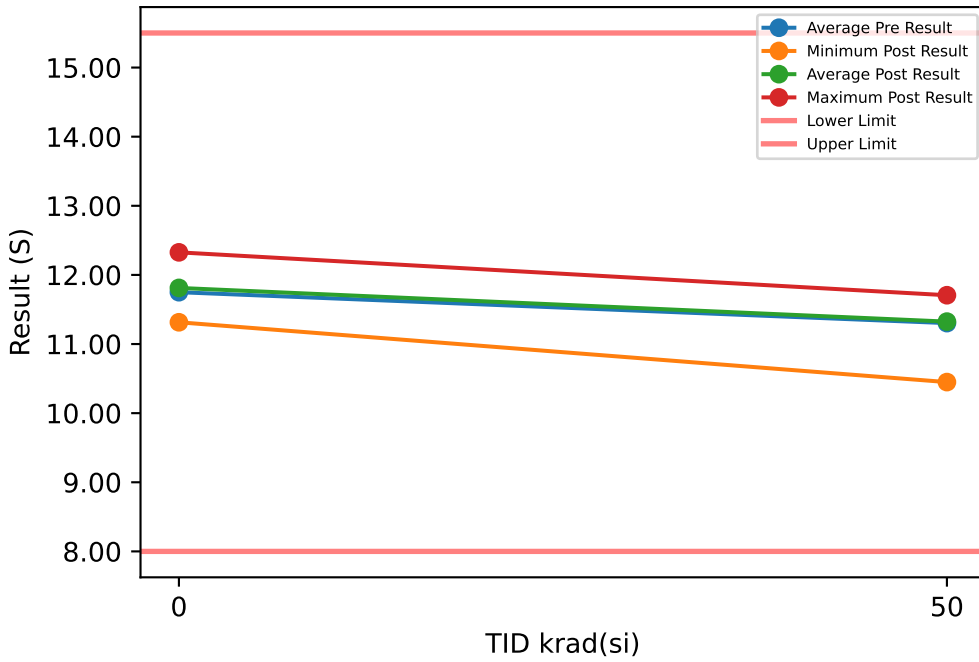
TID vs Post - Pre Exposure Delta



Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	35.776	35.876	36.104	0.13372	35.793	36.018	36.319	0.24408	-0.0154	0.14193	0.3418	0.15771
50	35.636	35.909	36.349	0.20822	36.033	36.367	36.894	0.20941	0.1476	0.45807	0.5548	0.12327

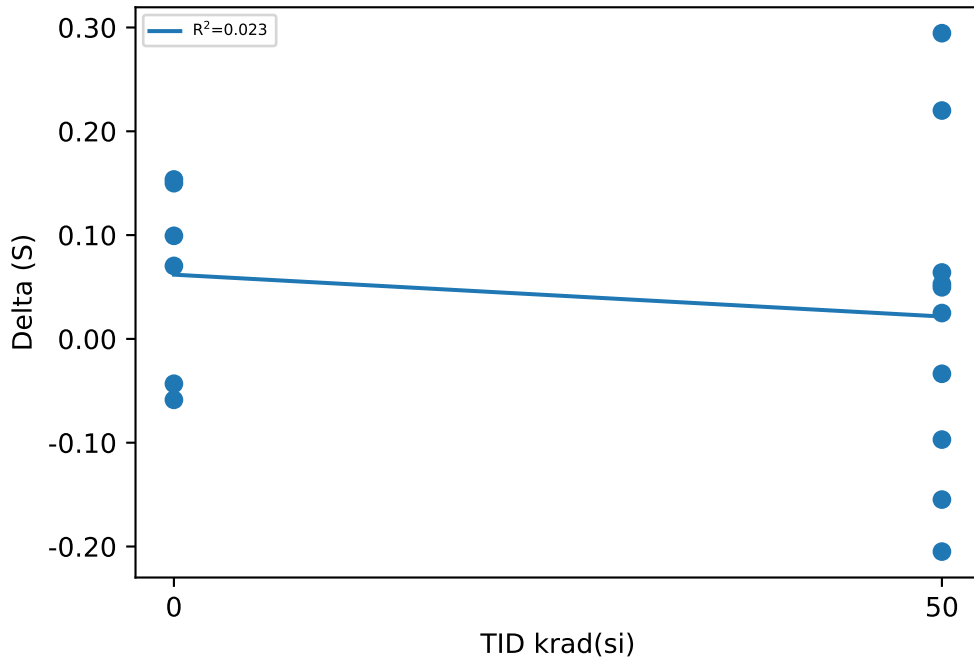
TID vs Result Stats



Test Results (Lower Limit = 8.0, Upper Limit = 15.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	11.418	11.471	0.0529
4	50	HDR Biased w/ 84hr anneal	11.388	11.683	0.2945
6	50	HDR Biased w/ 84hr anneal	10.84	10.743	-0.097
8	50	HDR Biased w/ 84hr anneal	11.641	11.691	0.0497
9	50	HDR Biased w/ 84hr anneal	10.96	11.18	0.22
10	50	HDR unbiased	11.457	11.423	-0.0336
11	50	HDR unbiased	11.344	11.408	0.064
12	50	HDR unbiased	11.466	11.49	0.0249
13	50	HDR unbiased	11.911	11.706	-0.2049
14	50	HDR unbiased	10.604	10.45	-0.1548
26	0	Correlation	11.855	11.812	-0.0432
27	0	Correlation	11.245	11.315	0.0703
28	0	Correlation	11.894	12.048	0.1536
29	0	Correlation	11.591	11.533	-0.0587
30	0	Correlation	11.688	11.838	0.15
32	0	Correlation	12.227	12.326	0.0993

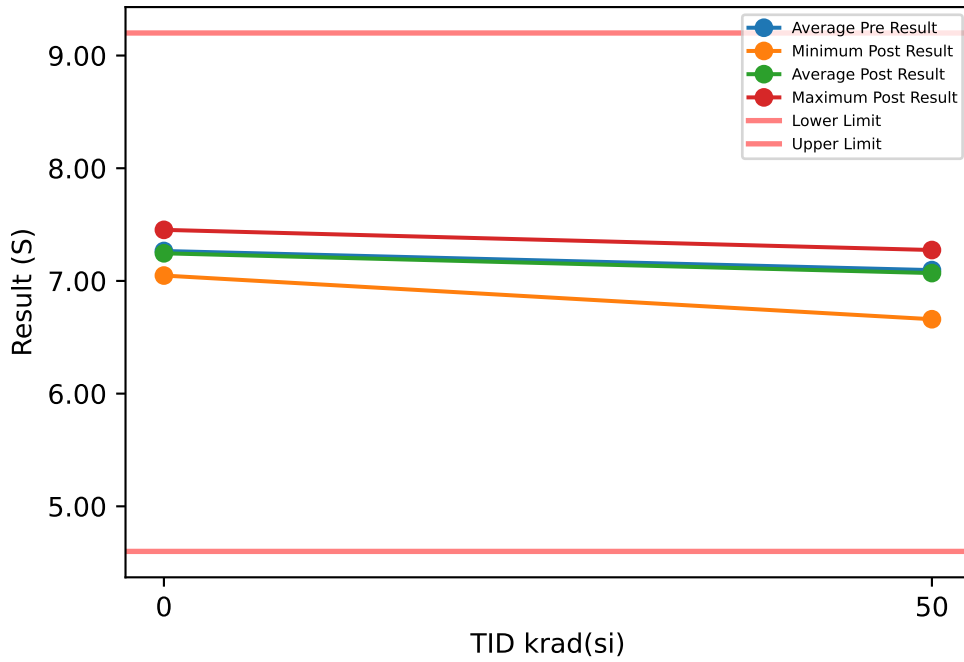
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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	11.245	11.75	12.227	0.32988	11.315	11.812	12.326	0.35946	-0.0587	0.061883	0.1536	0.092984
50	10.604	11.303	11.911	0.39107	10.45	11.324	11.706	0.42139	-0.2049	0.02157	0.2945	0.15526

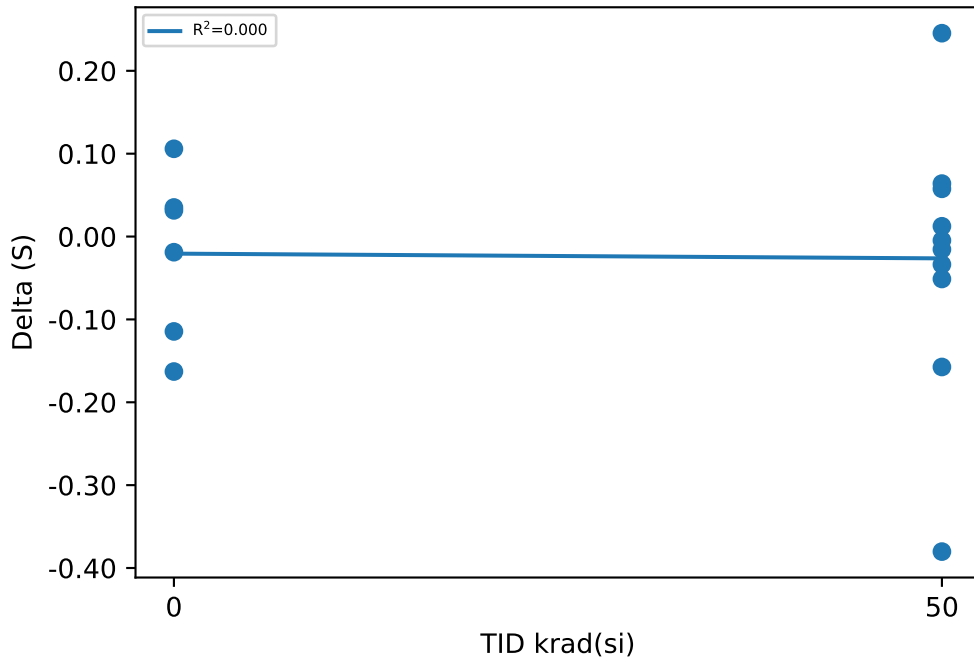
TID vs Result Stats



Test Results (Lower Limit = 4.6, Upper Limit = 9.2 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.2174	7.06	-0.1574
4	50	HDR Biased w/ 84hr anneal	7.1982	7.2106	0.0124
6	50	HDR Biased w/ 84hr anneal	6.957	7.0209	0.0639
8	50	HDR Biased w/ 84hr anneal	7.0746	7.1322	0.0576
9	50	HDR Biased w/ 84hr anneal	6.8358	7.0812	0.2454
10	50	HDR unbiased	7.0703	7.0548	-0.0155
11	50	HDR unbiased	7.3254	7.2742	-0.0512
12	50	HDR unbiased	7.1523	7.1476	-0.0047
13	50	HDR unbiased	7.4351	7.0549	-0.3802
14	50	HDR unbiased	6.6938	6.6601	-0.0337
26	0	Correlation	7.2259	7.207	-0.0189
27	0	Correlation	7.0127	7.0478	0.0351
28	0	Correlation	7.3473	7.4532	0.1059
29	0	Correlation	7.1812	7.2128	0.0316
30	0	Correlation	7.3309	7.2164	-0.1145
32	0	Correlation	7.4964	7.3335	-0.1629

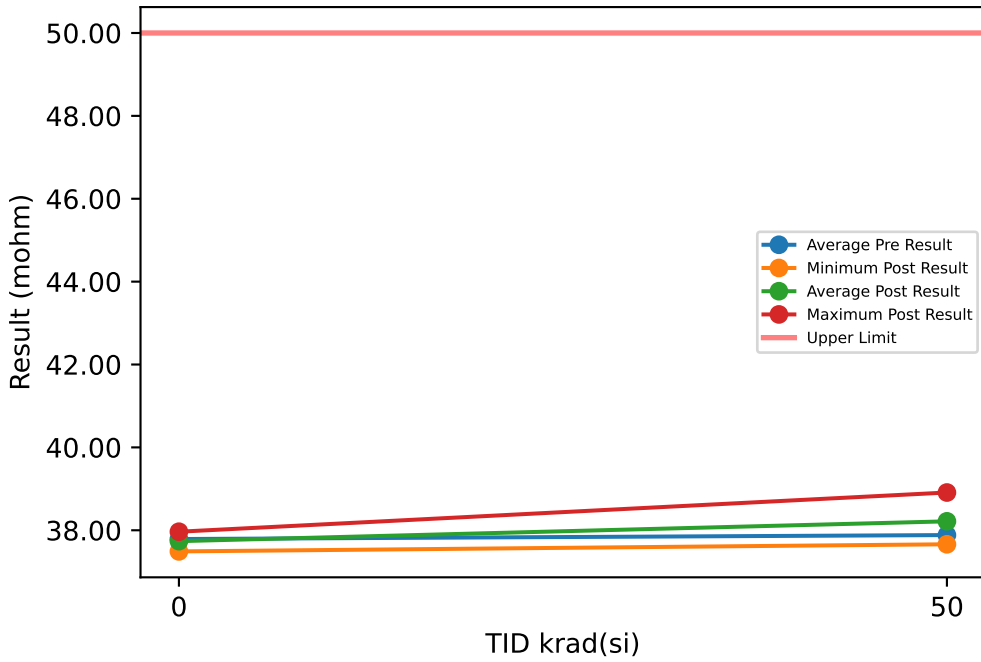
TID vs Post - Pre Exposure Delta



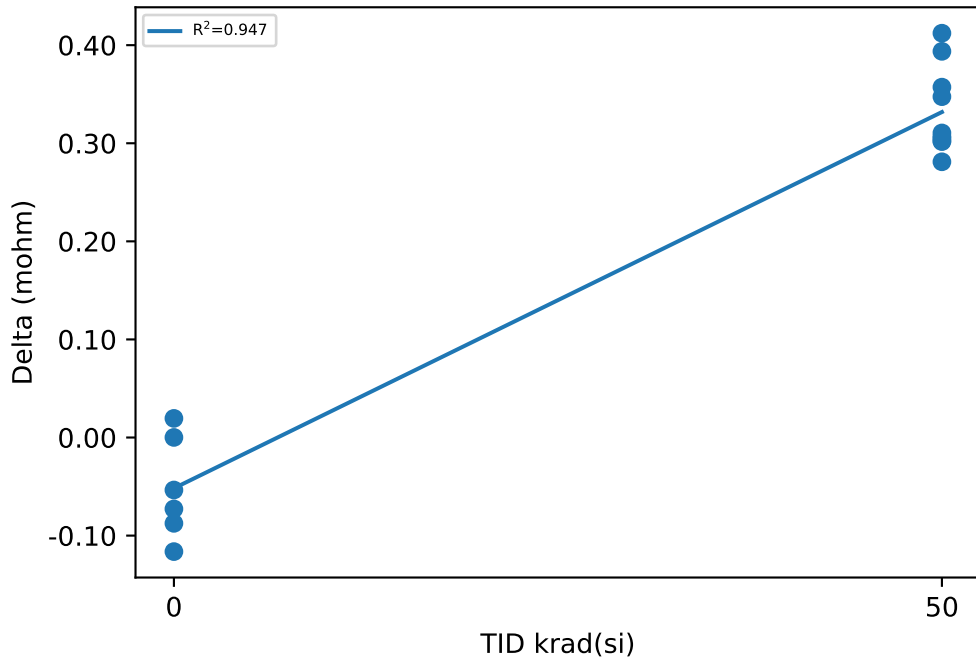
Test Statistics (S)

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	7.0127	7.2657	7.4964	0.16545	7.0478	7.2451	7.4532	0.13665	-0.1629	-0.020617	0.1059	0.10089
50	6.6938	7.096	7.4351	0.22258	6.6601	7.0697	7.2742	0.16414	-0.3802	-0.02634	0.2454	0.16131

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 50.0 (mohm))

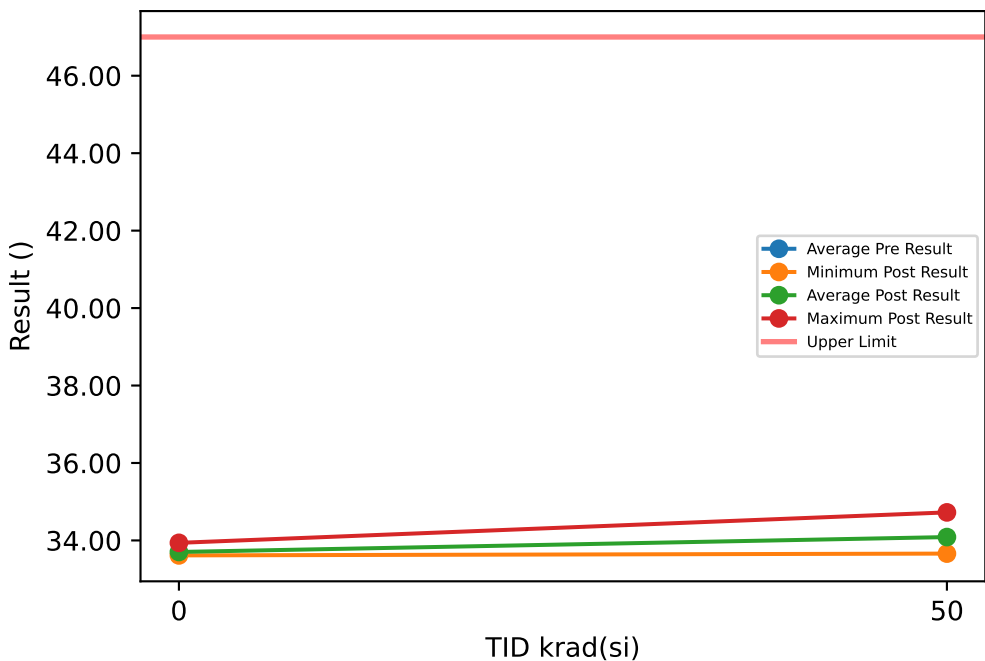
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	37.815	38.117	0.3024
4	50	HDR Biased w/ 84hr anneal	37.901	38.206	0.3051
6	50	HDR Biased w/ 84hr anneal	37.833	38.114	0.2811
8	50	HDR Biased w/ 84hr anneal	37.355	37.662	0.3067
9	50	HDR Biased w/ 84hr anneal	38.499	38.911	0.4122
10	50	HDR unbiased	37.724	38.118	0.3937
11	50	HDR unbiased	37.917	38.274	0.3572
12	50	HDR unbiased	37.917	38.264	0.3475
13	50	HDR unbiased	37.837	38.139	0.3017
14	50	HDR unbiased	38.041	38.352	0.3105
26	0	Correlation	37.969	37.852	-0.1163
27	0	Correlation	37.965	37.965	0.0001
28	0	Correlation	37.668	37.58	-0.0875
29	0	Correlation	37.807	37.827	0.0195
30	0	Correlation	37.563	37.49	-0.0728
32	0	Correlation	37.762	37.708	-0.0535

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	37.563	37.789	37.969	0.1613	37.49	37.737	37.965	0.17872	-0.1163	-0.05175	0.0195	0.052261
50	37.355	37.884	38.499	0.28286	37.662	38.216	38.911	0.30736	0.2811	0.33181	0.4122	0.043875

Device Test: 20.35 R\_HIGHSIDE\_5V\_25C(\_LEVEL|HIGHSIDE/SW/5/2///@R\_HIGHSIDE\_5V\_25C )

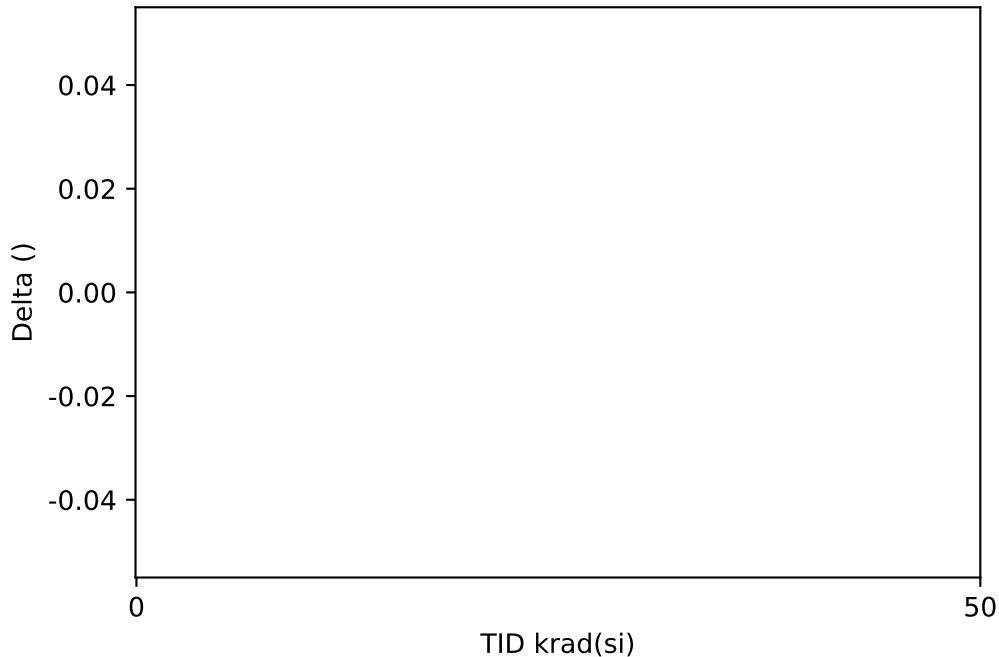
TID vs Result Stats



Test Results (Upper Limit = 47.0 (rad))

Serial #	krad(si)	Exposure Conditions	Pre Result (rad)	Post Result (rad)	Delta (rad)
1	50	HDR Biased w/ 84hr anneal	33.702	34.18	0.478
4	50	HDR Biased w/ 84hr anneal	33.702	34.183	0.481
6	50	HDR Biased w/ 84hr anneal	33.702	34.169	0.467
8	50	HDR Biased w/ 84hr anneal	33.702	33.66	-0.042
9	50	HDR Biased w/ 84hr anneal	33.702	34.724	1.022
10	50	HDR unbiased	33.702	33.763	0.061
11	50	HDR unbiased	33.702	34.145	0.443
12	50	HDR unbiased	33.702	34.071	0.369
13	50	HDR unbiased	33.702	33.828	0.126
14	50	HDR unbiased	33.702	34.145	0.443
26	0	Correlation	33.702	33.667	-0.035
27	0	Correlation	33.702	33.938	0.236
28	0	Correlation	33.702	33.624	-0.078
29	0	Correlation	33.702	33.745	0.043
30	0	Correlation	33.702	33.614	-0.088
32	0	Correlation	33.702	33.624	-0.078

TID vs Post - Pre Exposure Delta

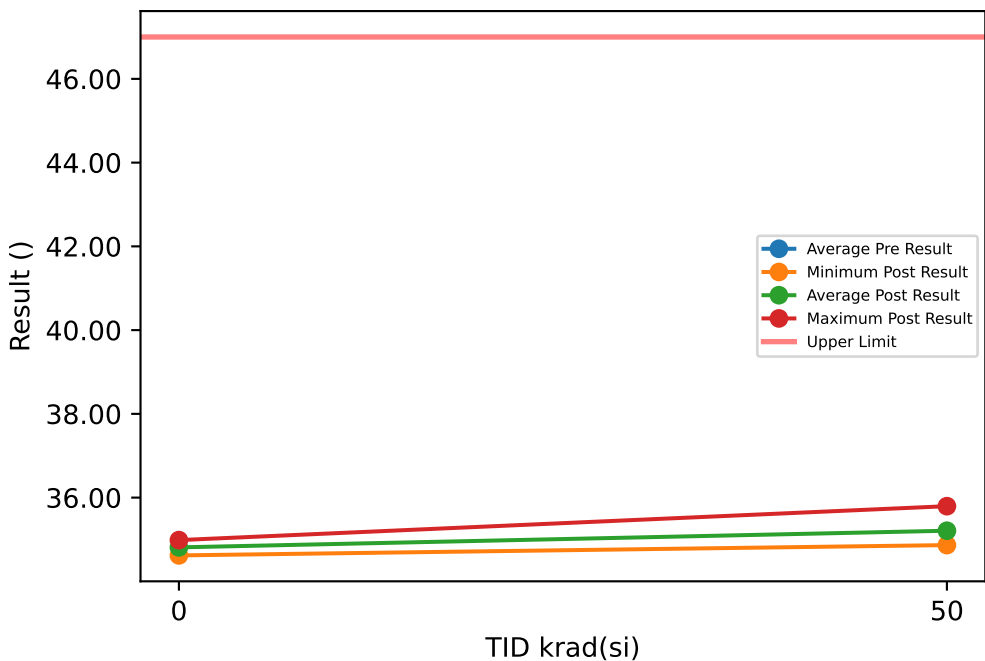


Test Statistics (rad)

krad(si)	Pre Exposure Min (rad)	Pre Exposure Avg (rad)	Pre Exposure Max (rad)	Pre Exposure Std (rad)	Post Exposure Min (rad)	Post Exposure Avg (rad)	Post Exposure Max (rad)	Post Exposure Std (rad)	Min Delta (rad)	Avg Delta (rad)	Max Delta (rad)	Std Delta (rad)
0	33.614	33.702	33.938	0.12519	33.614	33.702	33.938	0.12519	-0.088	0.000	0.443	0.12519
50	33.667	34.087	34.724	0.29661	33.66	34.087	34.724	0.29661	-0.042	0.000	1.022	0.29661



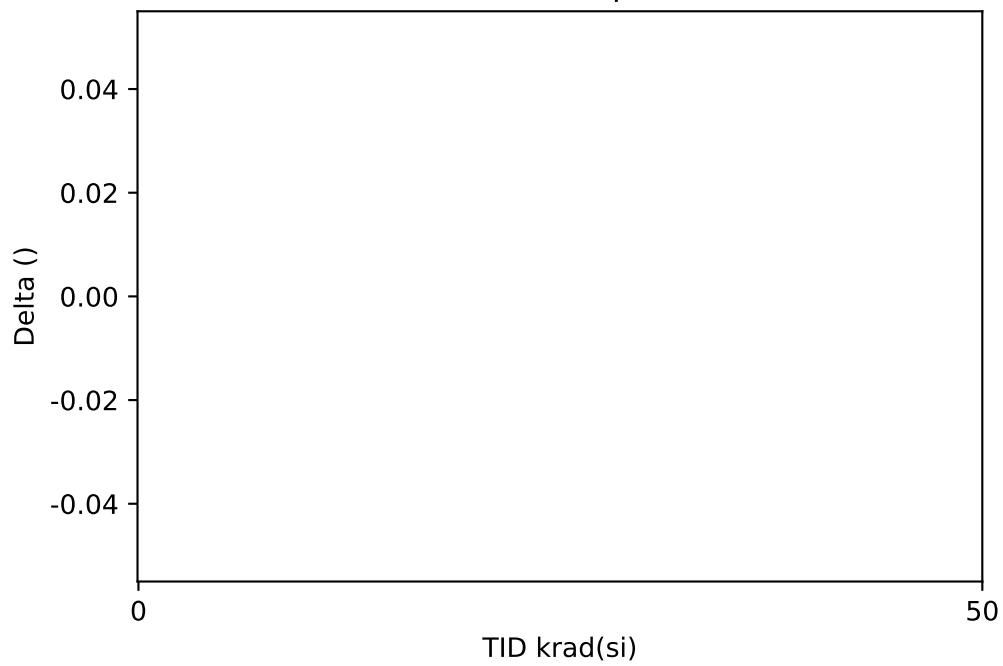
TID vs Result Stats



Test Results (Upper Limit = 47.0 (rad))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		35.184	
4	50	HDR Biased w/ 84hr anneal		35.251	
6	50	HDR Biased w/ 84hr anneal		35.164	
8	50	HDR Biased w/ 84hr anneal		34.866	
9	50	HDR Biased w/ 84hr anneal		35.795	
10	50	HDR unbiased		35.085	
11	50	HDR unbiased		35.213	
12	50	HDR unbiased		35.182	
13	50	HDR unbiased		35.092	
14	50	HDR unbiased		35.259	
26	0	Correlation		34.899	
27	0	Correlation		34.985	
28	0	Correlation		34.7	
29	0	Correlation		34.877	
30	0	Correlation		34.62	
32	0	Correlation		34.787	

TID vs Post - Pre Exposure Delta

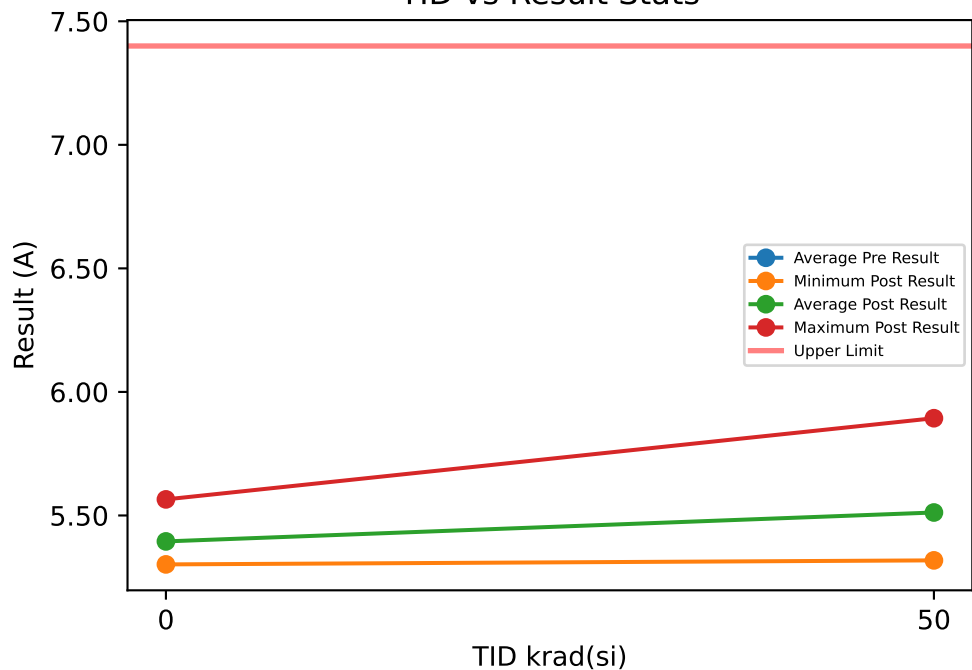


Test Statistics (rad)

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					34.62	34.811	34.985	0.13551				
50					34.866	35.209	35.795	0.23521				

Device Test: 20.37 HIGHSIDE\_CURR\_LIM\_6A(\_THRESHOLD|RISE/SW/5////@HIGHSIDE\_CURR\_LIM\_6A )

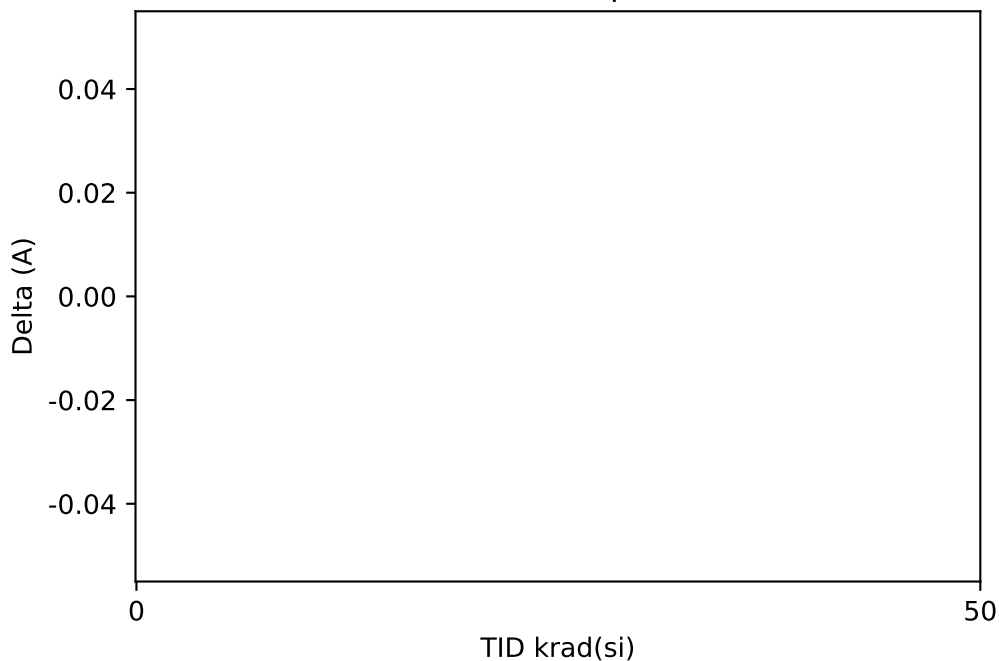
TID vs Result Stats



Test Results (Upper Limit = 7.4 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		5.4644	
4	50	HDR Biased w/ 84hr anneal		5.6771	
6	50	HDR Biased w/ 84hr anneal		5.5414	
8	50	HDR Biased w/ 84hr anneal		5.3183	
9	50	HDR Biased w/ 84hr anneal		5.4937	
10	50	HDR unbiased		5.4107	
11	50	HDR unbiased		5.8936	
12	50	HDR unbiased		5.5184	
13	50	HDR unbiased		5.3846	
14	50	HDR unbiased		5.4184	
26	0	Correlation		5.3067	
27	0	Correlation		5.302	
28	0	Correlation		5.5651	
29	0	Correlation		5.325	
30	0	Correlation		5.3531	
32	0	Correlation		5.5183	

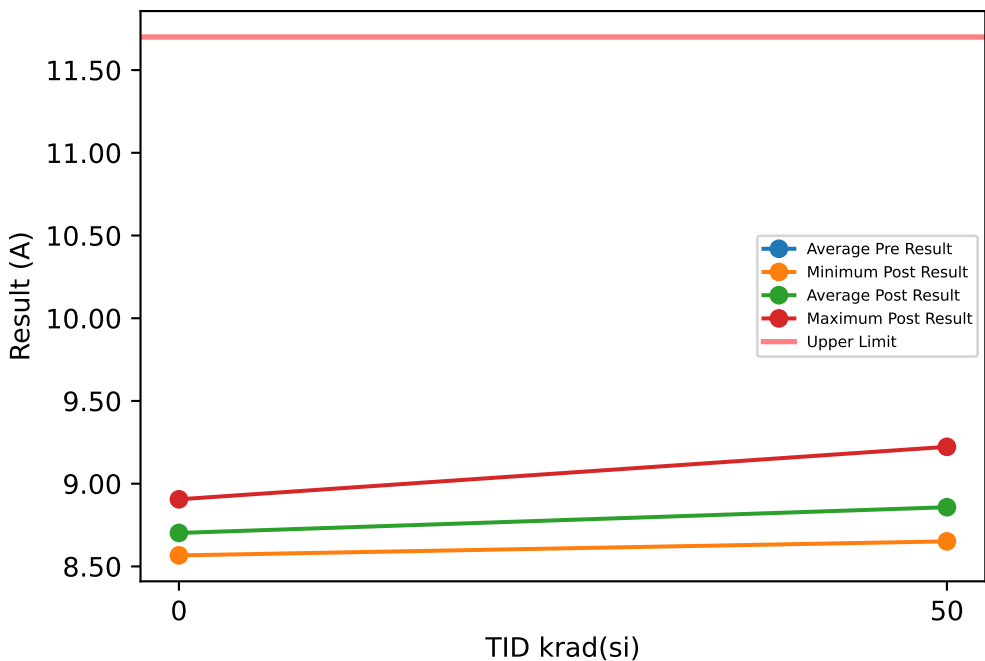
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					5.302	5.395	5.5651	0.11596				
50					5.3183	5.5121	5.8936	0.16638				

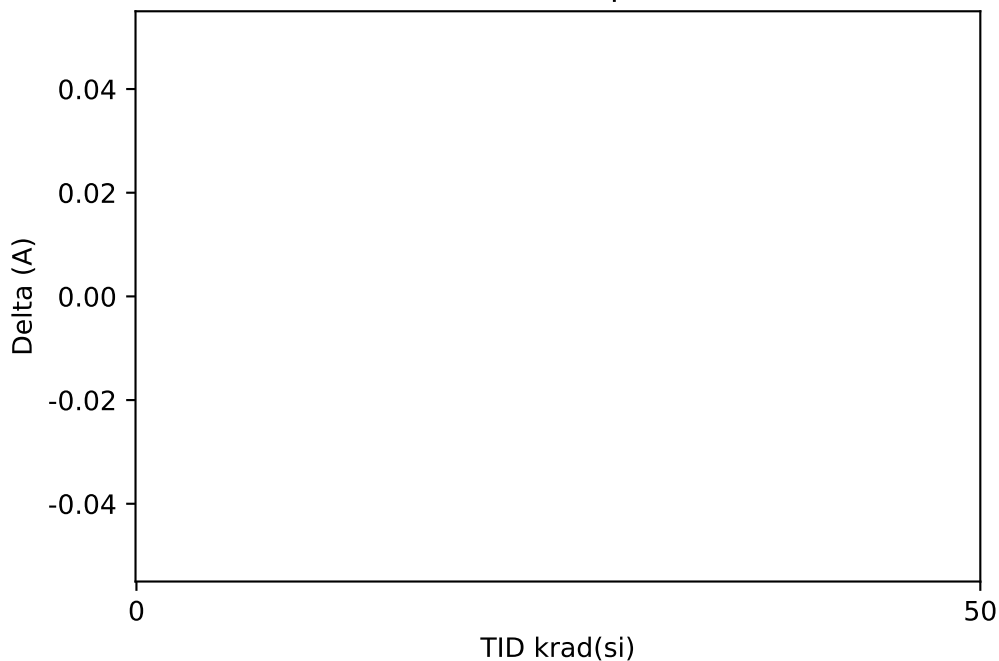
TID vs Result Stats



Test Results (Upper Limit = 11.7 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		8.8186	
4	50	HDR Biased w/ 84hr anneal		9.0937	
6	50	HDR Biased w/ 84hr anneal		8.7604	
8	50	HDR Biased w/ 84hr anneal		8.6515	
9	50	HDR Biased w/ 84hr anneal		8.8392	
10	50	HDR unbiased		8.7107	
11	50	HDR unbiased		9.2228	
12	50	HDR unbiased		9.0301	
13	50	HDR unbiased		8.7267	
14	50	HDR unbiased		8.7243	
26	0	Correlation		8.5666	
27	0	Correlation		8.6317	
28	0	Correlation		8.9056	
29	0	Correlation		8.5723	
30	0	Correlation		8.6596	
32	0	Correlation		8.8777	

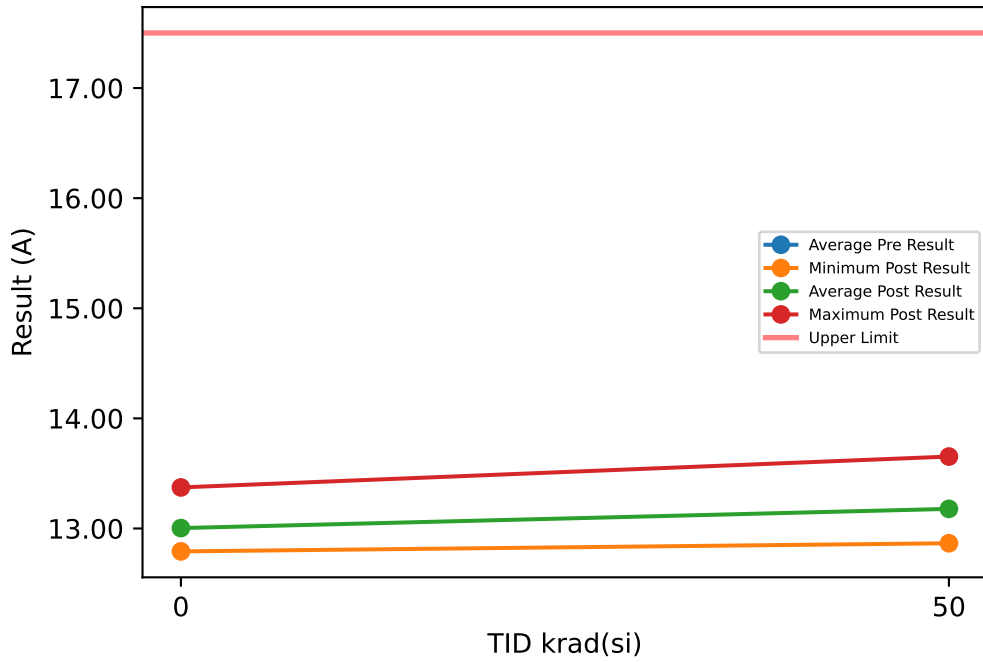
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					8.5666	8.7022	8.9056	0.15114				
50					8.6515	8.8578	9.2228	0.19124				

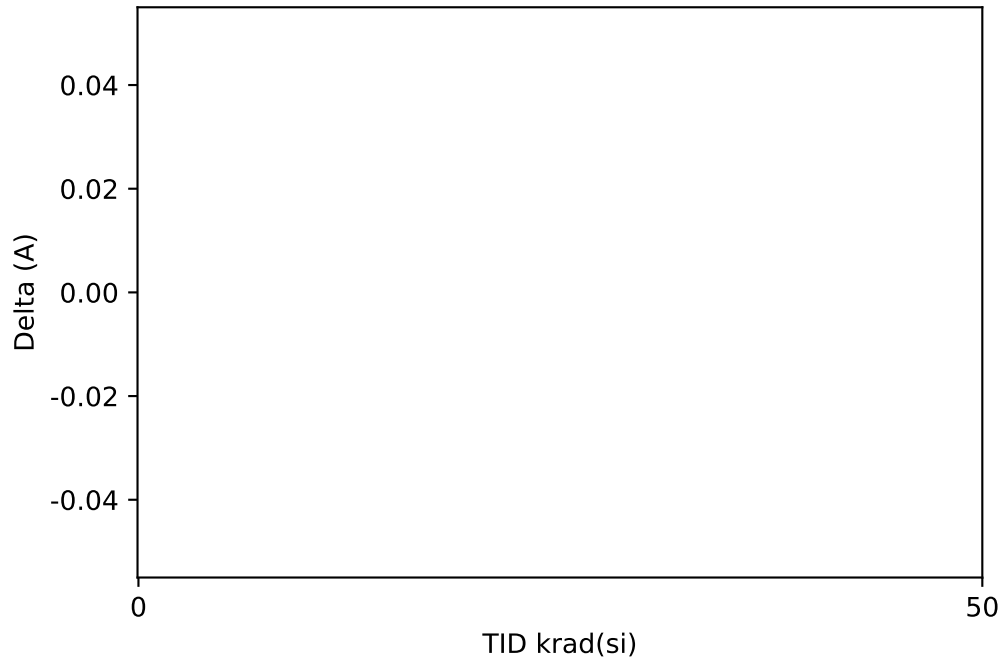
TID vs Result Stats



Test Results (Upper Limit = 17.5 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		13.104	
4	50	HDR Biased w/ 84hr anneal		13.465	
6	50	HDR Biased w/ 84hr anneal		13.053	
8	50	HDR Biased w/ 84hr anneal		12.92	
9	50	HDR Biased w/ 84hr anneal		13.281	
10	50	HDR unbiased		12.866	
11	50	HDR unbiased		13.653	
12	50	HDR unbiased		13.402	
13	50	HDR unbiased		13.057	
14	50	HDR unbiased		12.979	
26	0	Correlation		12.809	
27	0	Correlation		12.792	
28	0	Correlation		13.373	
29	0	Correlation		12.841	
30	0	Correlation		12.938	
32	0	Correlation		13.27	

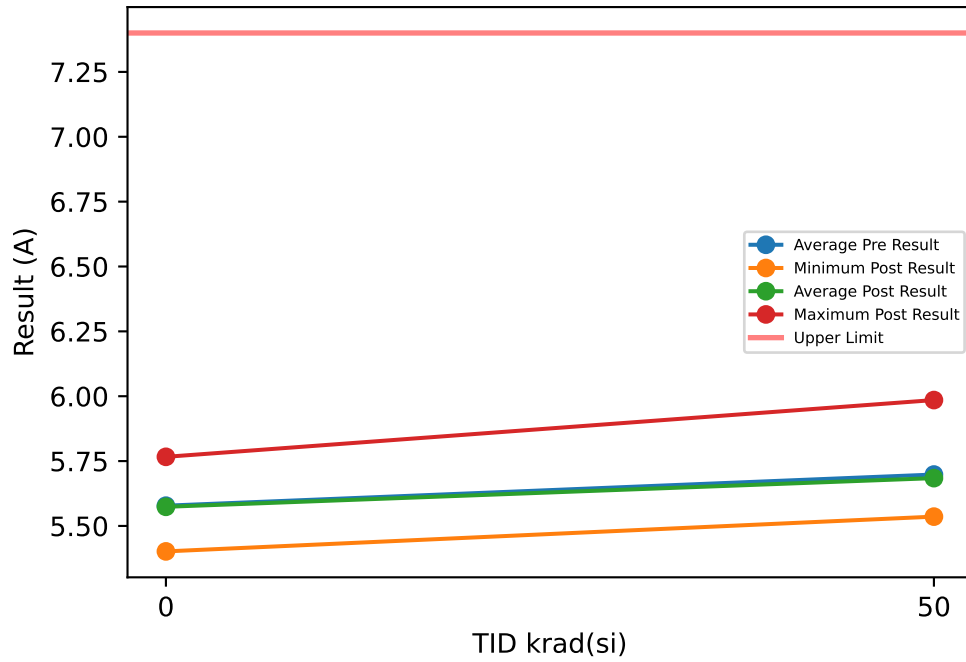
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					12.792	13.004	13.373	0.25319				
50					12.866	13.178	13.653	0.26003				

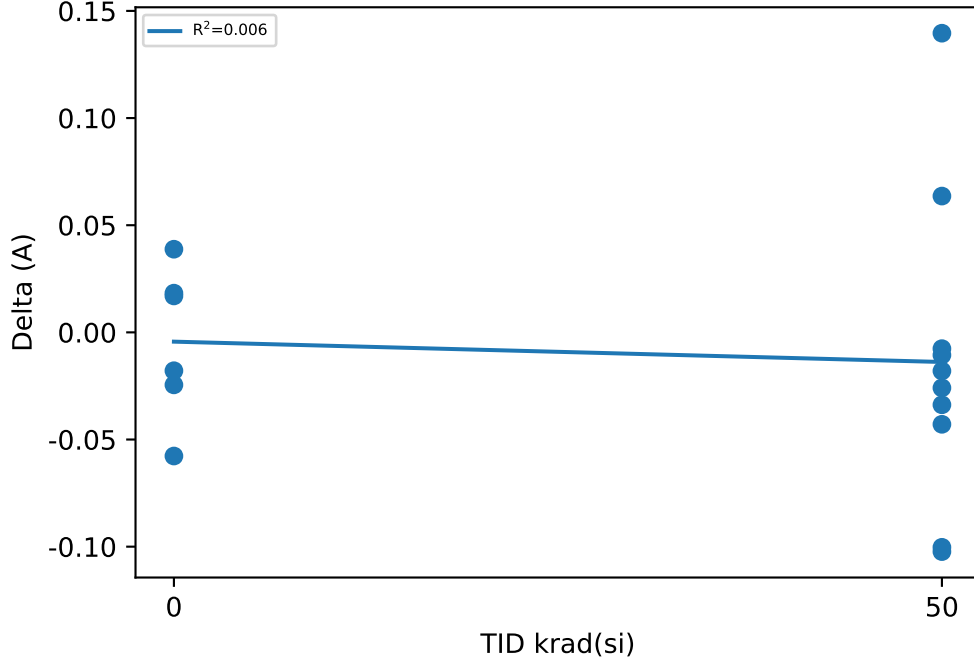
TID vs Result Stats



Test Results (Upper Limit = 7.4 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5.6788	5.6608	-0.018
4	50	HDR Biased w/ 84hr anneal	5.806	5.7984	-0.0076
6	50	HDR Biased w/ 84hr anneal	5.6002	5.6638	0.0636
8	50	HDR Biased w/ 84hr anneal	5.4444	5.584	0.1396
9	50	HDR Biased w/ 84hr anneal	5.6839	5.6733	-0.0106
10	50	HDR unbiased	5.6996	5.6567	-0.0429
11	50	HDR unbiased	6.0111	5.9852	-0.0259
12	50	HDR unbiased	5.7391	5.7053	-0.0338
13	50	HDR unbiased	5.6801	5.5798	-0.1003
14	50	HDR unbiased	5.6382	5.5359	-0.1023
26	0	Correlation	5.4581	5.4764	0.0183
27	0	Correlation	5.4596	5.4019	-0.0577
28	0	Correlation	5.7909	5.7664	-0.0245
29	0	Correlation	5.4768	5.4938	0.017
30	0	Correlation	5.5244	5.5632	0.0388
32	0	Correlation	5.7588	5.7409	-0.0179

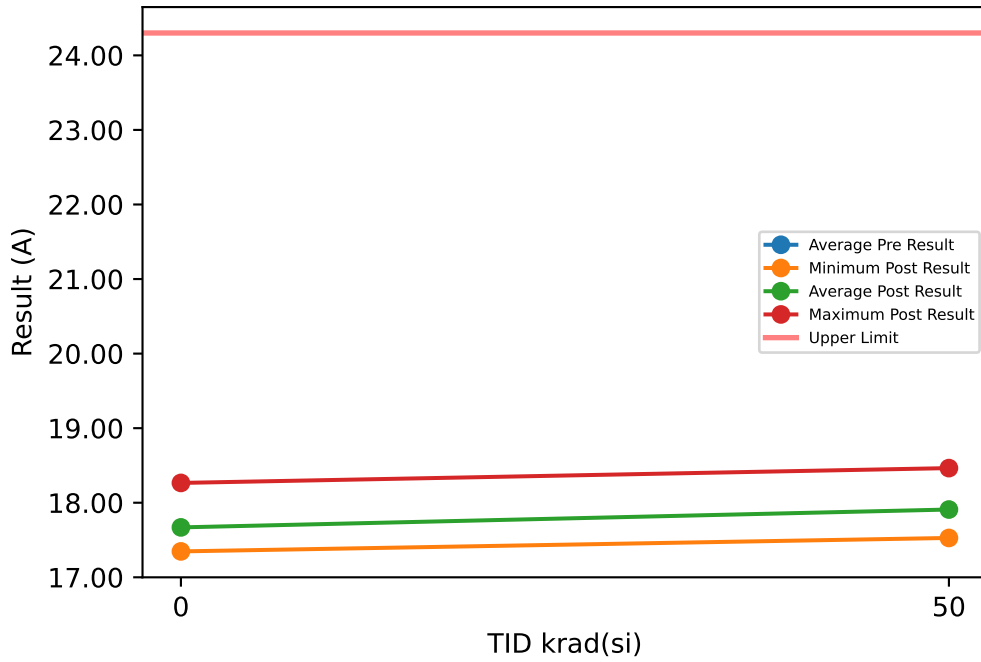
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	5.4581	5.5781	5.7909	0.15461	5.4019	5.5738	5.7664	0.14871	-0.0577	-0.0043333	0.0388	0.035402
50	5.4444	5.6981	6.0111	0.14519	5.5359	5.6843	5.9852	0.12861	-0.1023	-0.01382	0.1396	0.071722

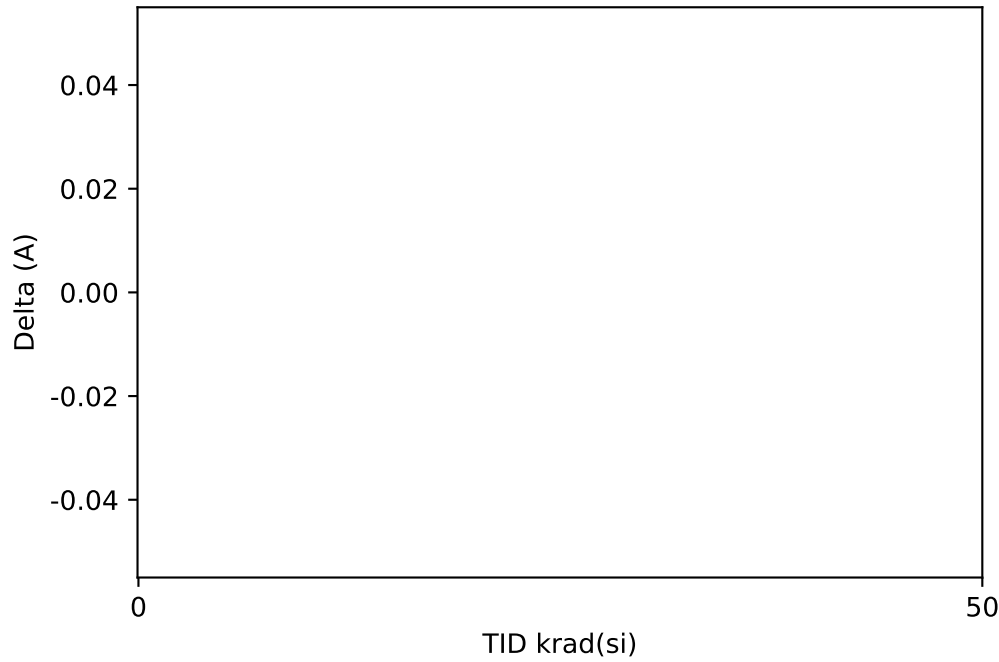
TID vs Result Stats



Test Results (Upper Limit = 24.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		17.865	
4	50	HDR Biased w/ 84hr anneal		18.264	
6	50	HDR Biased w/ 84hr anneal		17.623	
8	50	HDR Biased w/ 84hr anneal		17.615	
9	50	HDR Biased w/ 84hr anneal		18.011	
10	50	HDR unbiased		17.528	
11	50	HDR unbiased		18.464	
12	50	HDR unbiased		18.214	
13	50	HDR unbiased		17.833	
14	50	HDR unbiased		17.67	
26	0	Correlation		17.404	
27	0	Correlation		17.347	
28	0	Correlation		18.266	
29	0	Correlation		17.412	
30	0	Correlation		17.56	
32	0	Correlation		18.027	

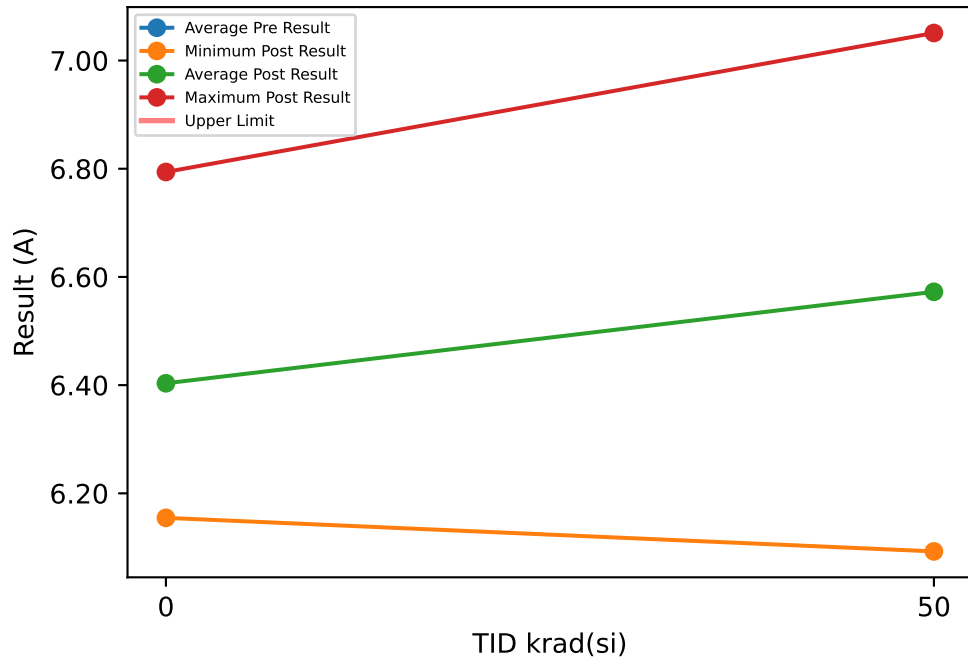
TID vs Post - Pre Exposure Delta



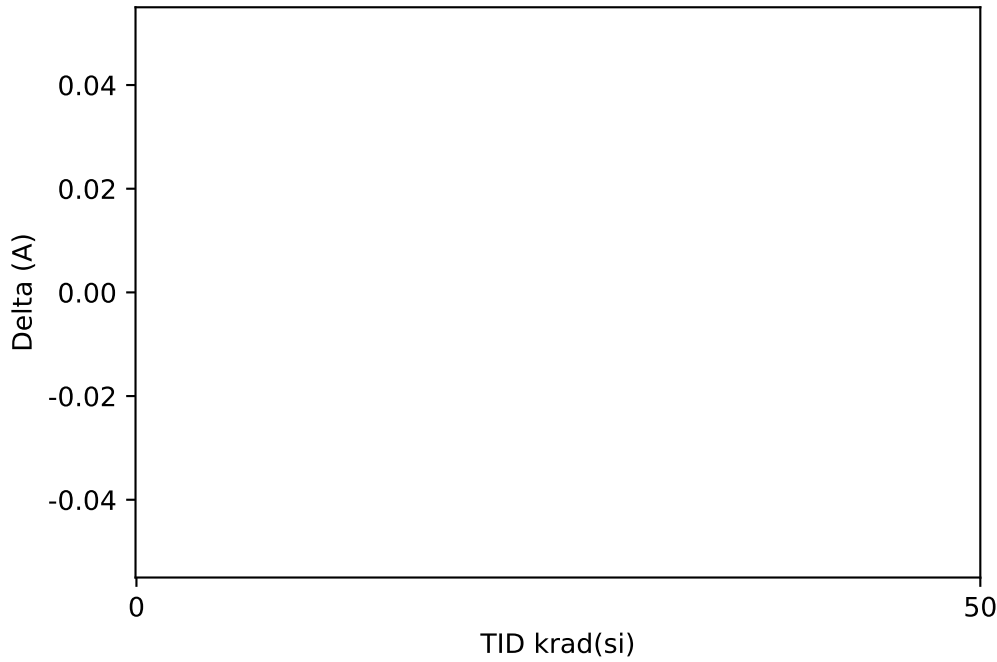
Test Statistics (A)

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					17.347	17.669	18.266	0.38374				
50					17.528	17.909	18.464	0.31903				

TID vs Result Stats



TID vs Post - Pre Exposure Delta



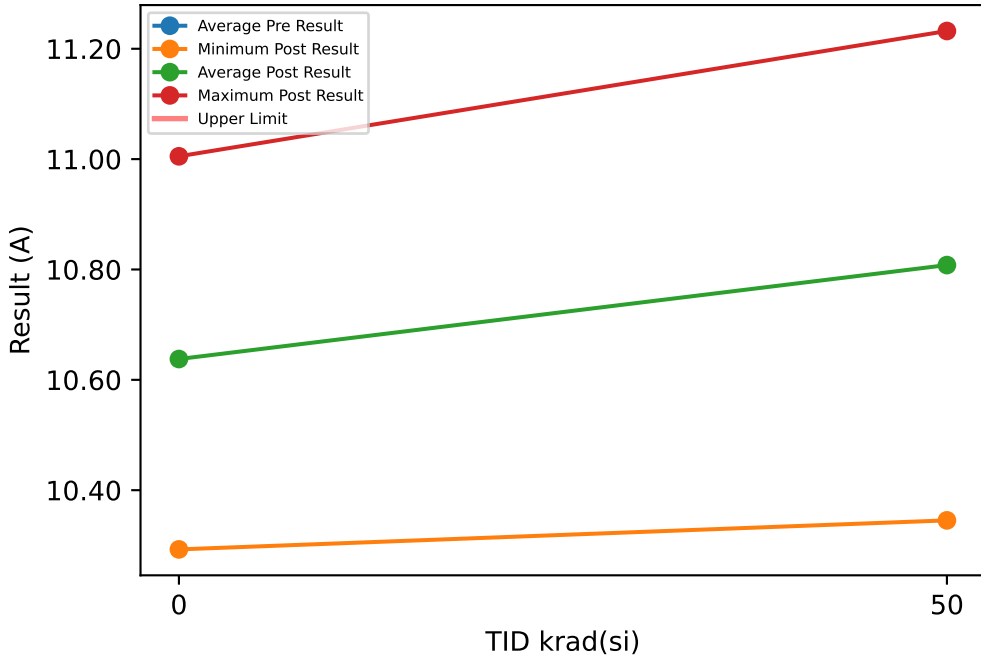
Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		6.3116	
4	50	HDR Biased w/ 84hr anneal		6.7618	
6	50	HDR Biased w/ 84hr anneal		6.0927	
8	50	HDR Biased w/ 84hr anneal		6.4763	
9	50	HDR Biased w/ 84hr anneal		6.6807	
10	50	HDR unbiased		6.8554	
11	50	HDR unbiased		6.5422	
12	50	HDR unbiased		6.6192	
13	50	HDR unbiased		6.334	
14	50	HDR unbiased		7.0509	
26	0	Correlation		6.291	
27	0	Correlation		6.6097	
28	0	Correlation		6.1547	
29	0	Correlation		6.41	
30	0	Correlation		6.1612	
32	0	Correlation		6.794	

Test Statistics (A)

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					6.1547	6.4034	6.794	0.25625				
50					6.0927	6.5725	7.0509	0.28362				

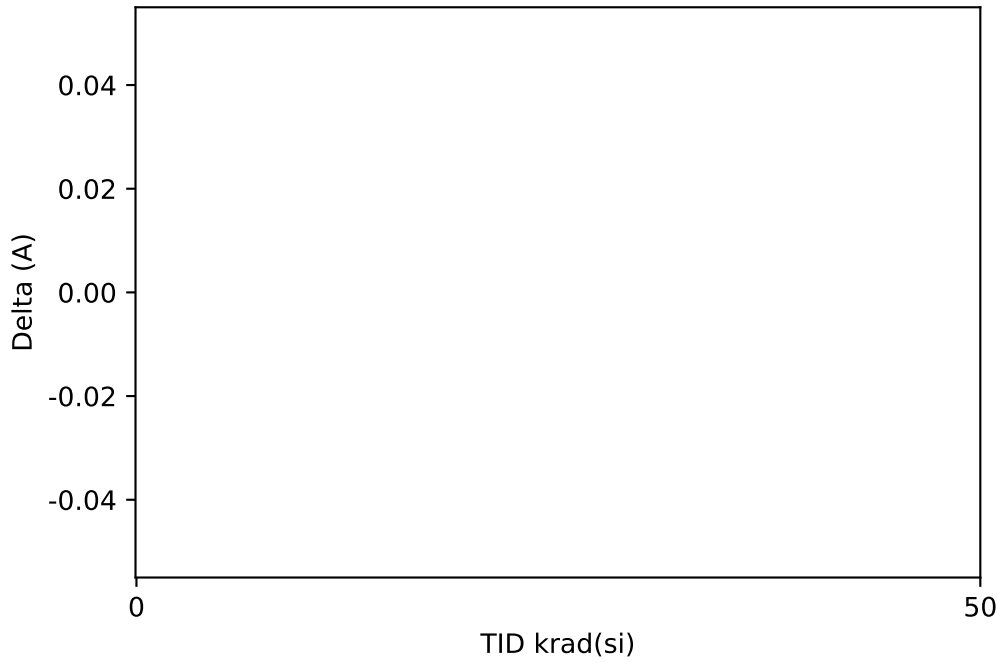
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		10.526	
4	50	HDR Biased w/ 84hr anneal		11.106	
6	50	HDR Biased w/ 84hr anneal		10.456	
8	50	HDR Biased w/ 84hr anneal		10.57	
9	50	HDR Biased w/ 84hr anneal		10.641	
10	50	HDR unbiased		11.232	
11	50	HDR unbiased		10.995	
12	50	HDR unbiased		10.992	
13	50	HDR unbiased		10.345	
14	50	HDR unbiased		11.217	
26	0	Correlation		10.888	
27	0	Correlation		10.661	
28	0	Correlation		10.342	
29	0	Correlation		10.637	
30	0	Correlation		10.293	
32	0	Correlation		11.005	

TID vs Post - Pre Exposure Delta

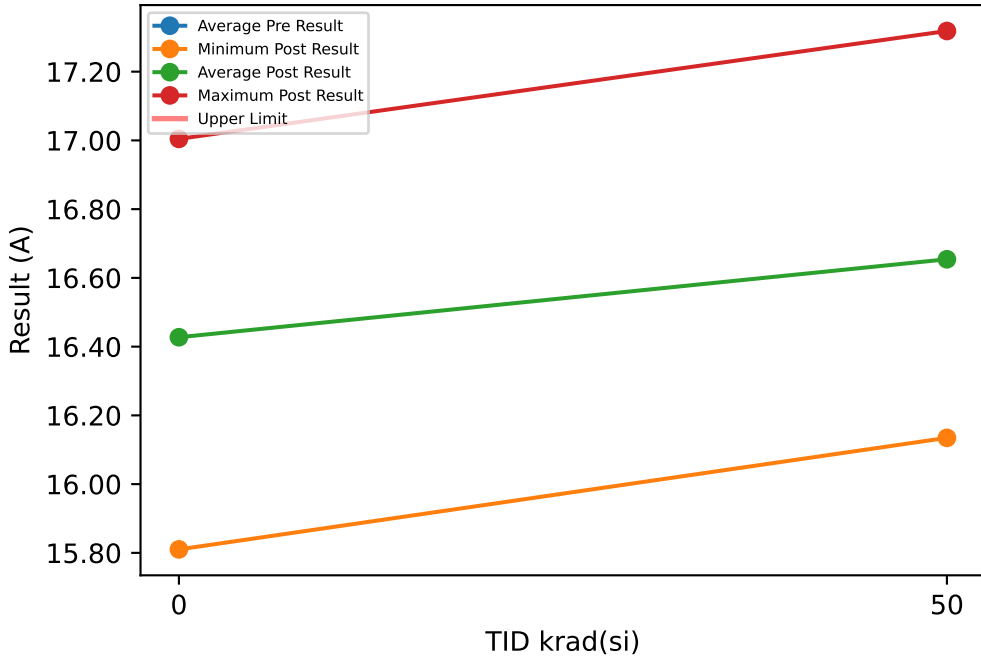


Test Statistics (A)

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					10.293	10.638	11.005	0.28452				
50					10.345	10.808	11.232	0.33446				



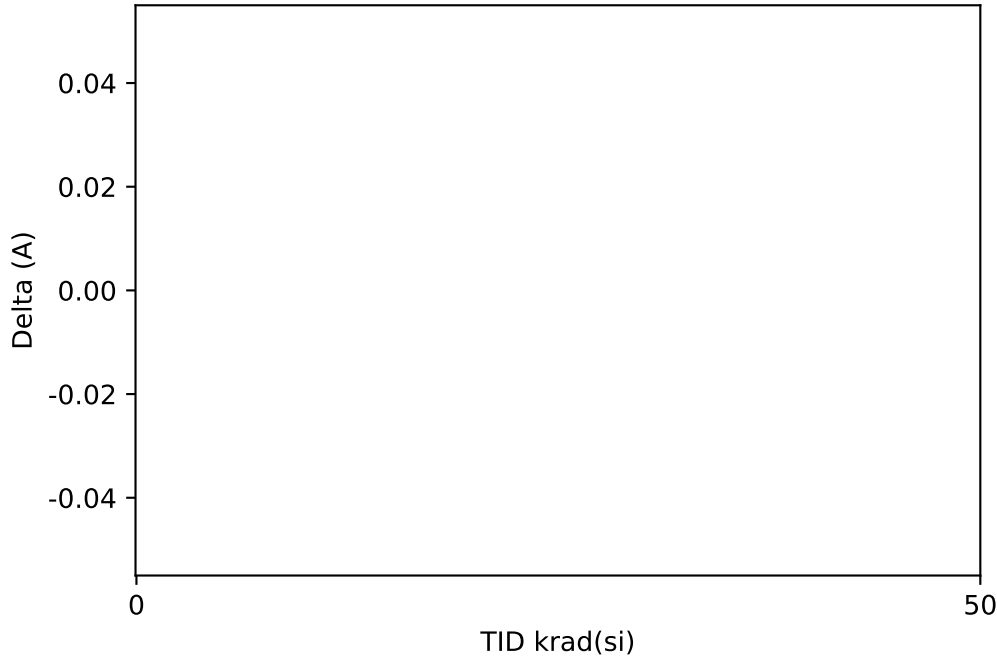
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		16.425	
4	50	HDR Biased w/ 84hr anneal		17.091	
6	50	HDR Biased w/ 84hr anneal		16.641	
8	50	HDR Biased w/ 84hr anneal		16.15	
9	50	HDR Biased w/ 84hr anneal		16.288	
10	50	HDR unbiased		17.318	
11	50	HDR unbiased		16.768	
12	50	HDR unbiased		16.985	
13	50	HDR unbiased		16.135	
14	50	HDR unbiased		16.741	
26	0	Correlation		16.947	
27	0	Correlation		16.36	
28	0	Correlation		16.032	
29	0	Correlation		16.41	
30	0	Correlation		15.81	
32	0	Correlation		17.004	

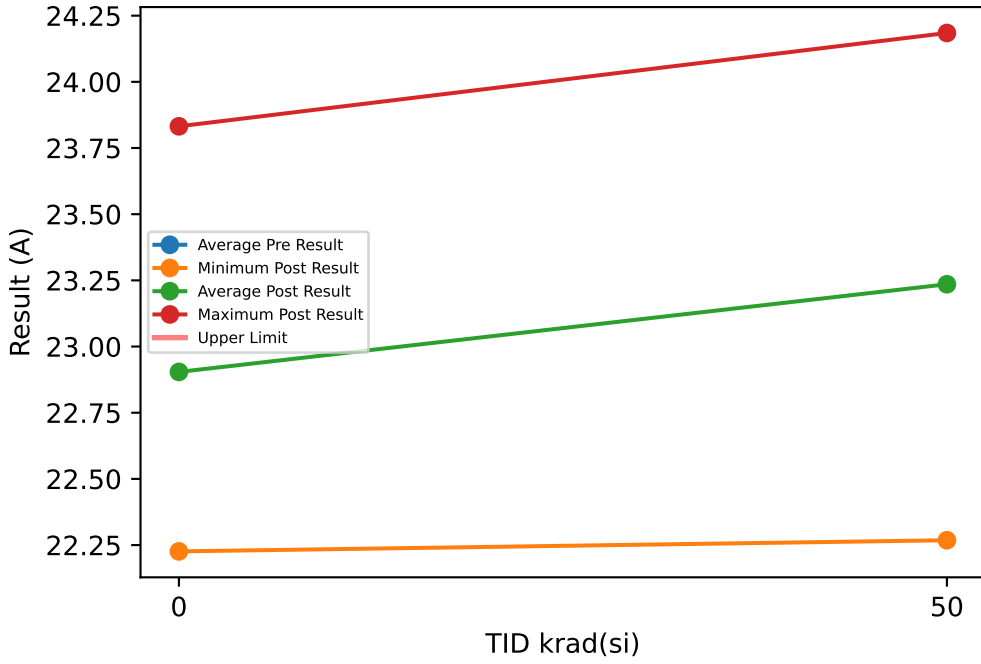
TID vs Post - Pre Exposure Delta



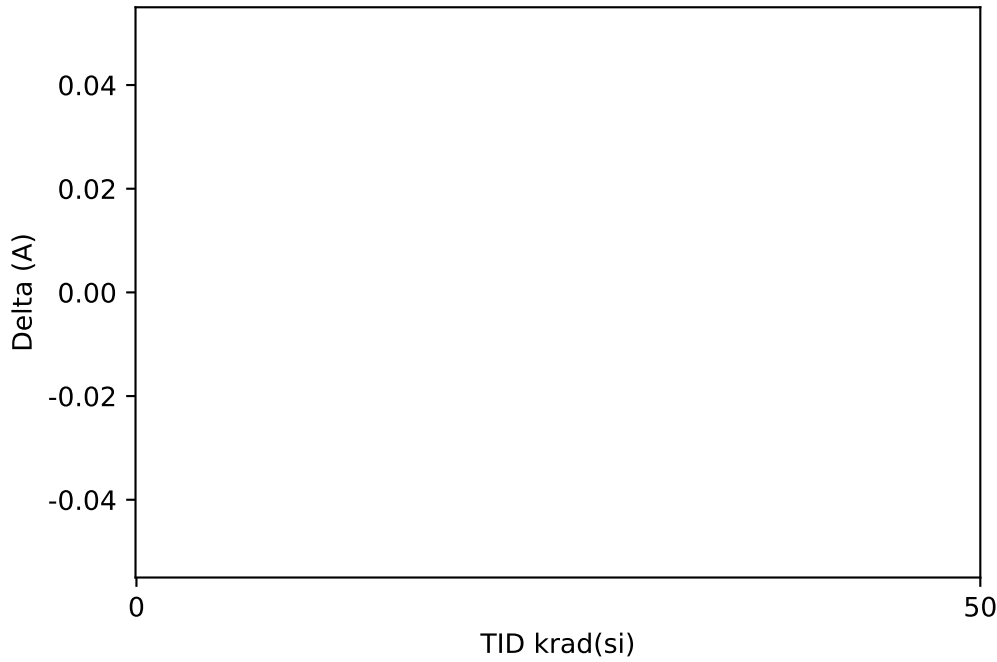
Test Statistics (A)

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					15.81	16.427	17.004	0.4786				
50					16.135	16.654	17.318	0.40471				

TID vs Result Stats



TID vs Post - Pre Exposure Delta



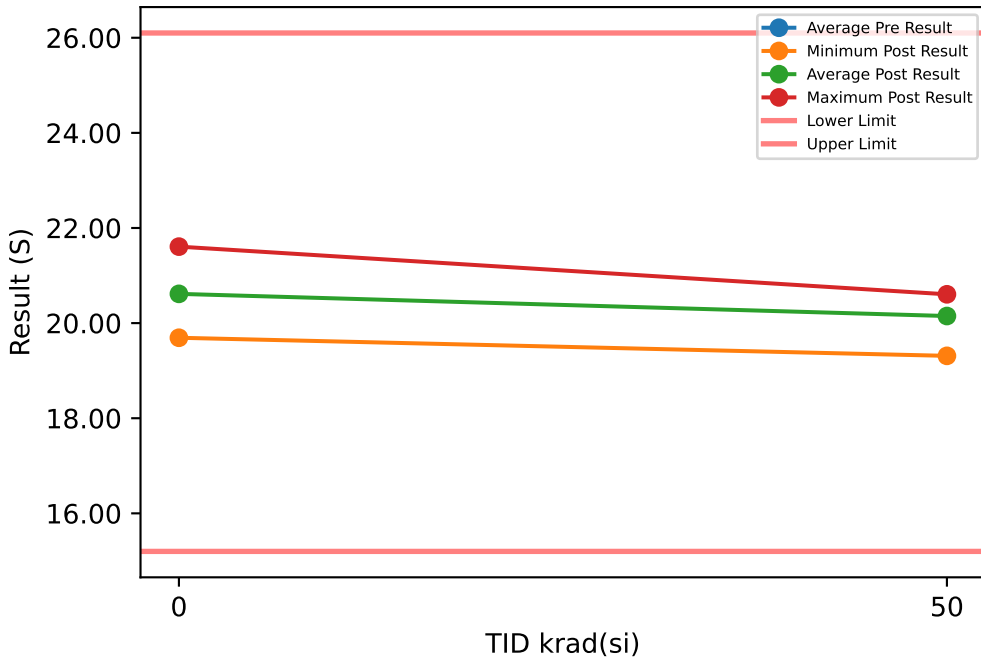
Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		22.992	
4	50	HDR Biased w/ 84hr anneal		23.817	
6	50	HDR Biased w/ 84hr anneal		23.51	
8	50	HDR Biased w/ 84hr anneal		22.268	
9	50	HDR Biased w/ 84hr anneal		22.595	
10	50	HDR unbiased		24.184	
11	50	HDR unbiased		23.318	
12	50	HDR unbiased		23.778	
13	50	HDR unbiased		22.608	
14	50	HDR unbiased		23.281	
26	0	Correlation		23.832	
27	0	Correlation		22.701	
28	0	Correlation		22.498	
29	0	Correlation		22.773	
30	0	Correlation		22.226	
32	0	Correlation		23.395	

Test Statistics (A)

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					22.226	22.904	23.832	0.5975				
50					22.268	23.235	24.184	0.61616				

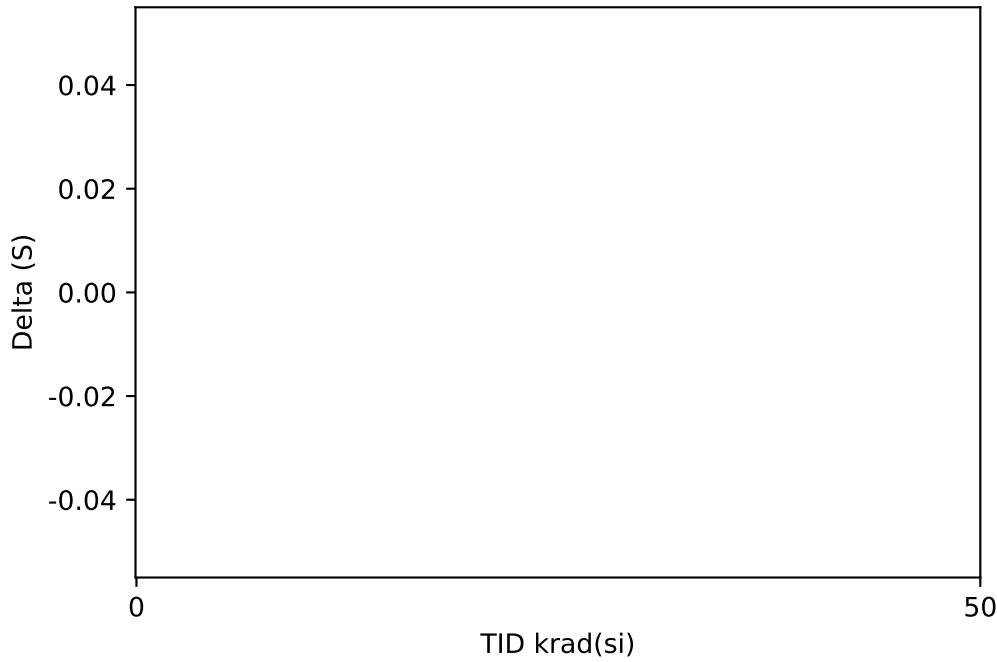
TID vs Result Stats



Test Results (Lower Limit = 15.2, Upper Limit = 26.1 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		20.395	
4	50	HDR Biased w/ 84hr anneal		20.606	
6	50	HDR Biased w/ 84hr anneal		19.405	
8	50	HDR Biased w/ 84hr anneal		20.088	
9	50	HDR Biased w/ 84hr anneal		19.79	
10	50	HDR unbiased		20.395	
11	50	HDR unbiased		20.5	
12	50	HDR unbiased		20.5	
13	50	HDR unbiased		20.5	
14	50	HDR unbiased		19.312	
26	0	Correlation		20.088	
27	0	Correlation		19.692	
28	0	Correlation		21.608	
29	0	Correlation		20.088	
30	0	Correlation		20.606	
32	0	Correlation		21.608	

TID vs Post - Pre Exposure Delta

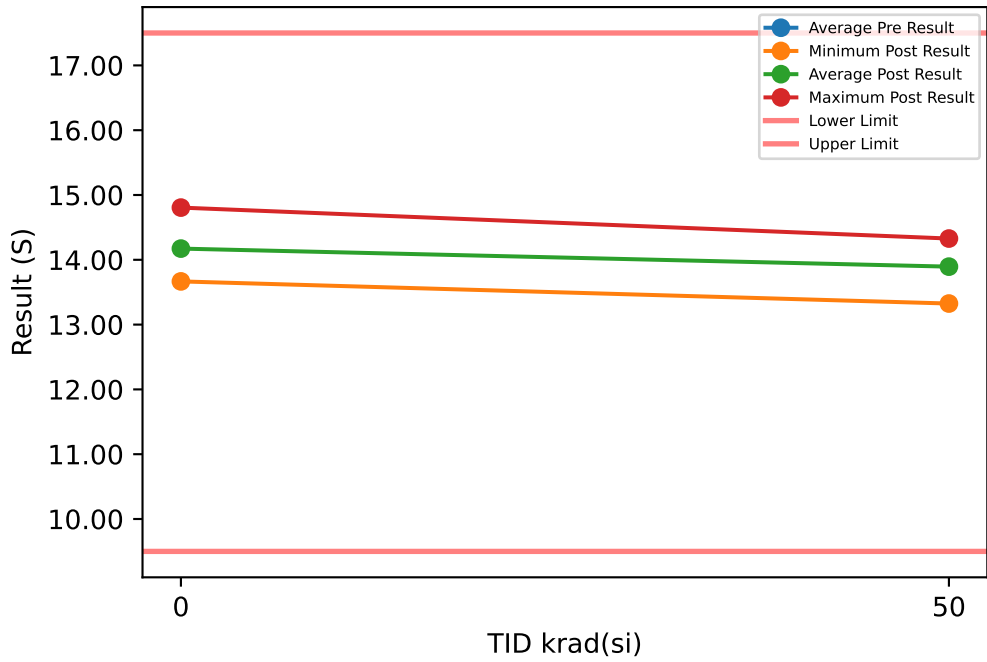


Test Statistics (S)

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					19.692	20.615	21.608	0.8222				
50					19.312	20.149	20.606	0.4815				



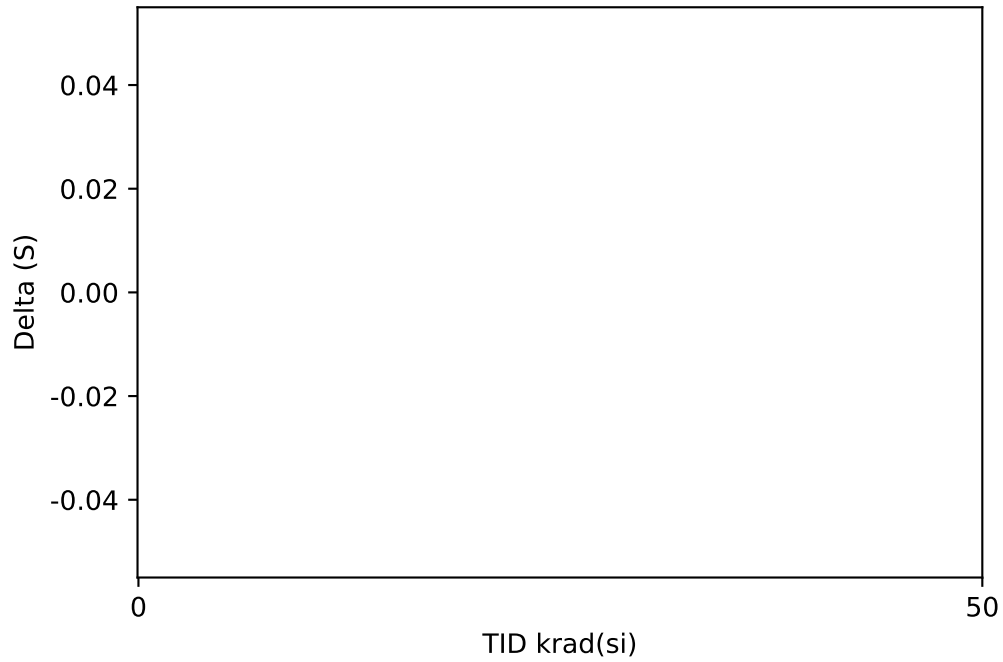
TID vs Result Stats



Test Results (Lower Limit = 9.5, Upper Limit = 17.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		14.176	
4	50	HDR Biased w/ 84hr anneal		14.328	
6	50	HDR Biased w/ 84hr anneal		13.597	
8	50	HDR Biased w/ 84hr anneal		13.667	
9	50	HDR Biased w/ 84hr anneal		13.88	
10	50	HDR unbiased		13.808	
11	50	HDR unbiased		14.175	
12	50	HDR unbiased		14.251	
13	50	HDR unbiased		13.737	
14	50	HDR unbiased		13.325	
26	0	Correlation		13.88	
27	0	Correlation		13.667	
28	0	Correlation		14.806	
29	0	Correlation		14.101	
30	0	Correlation		14.101	
32	0	Correlation		14.484	

TID vs Post - Pre Exposure Delta



Test Statistics (S)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					13.667	14.173	14.806	0.41216				
50					13.325	13.894	14.328	0.32836				



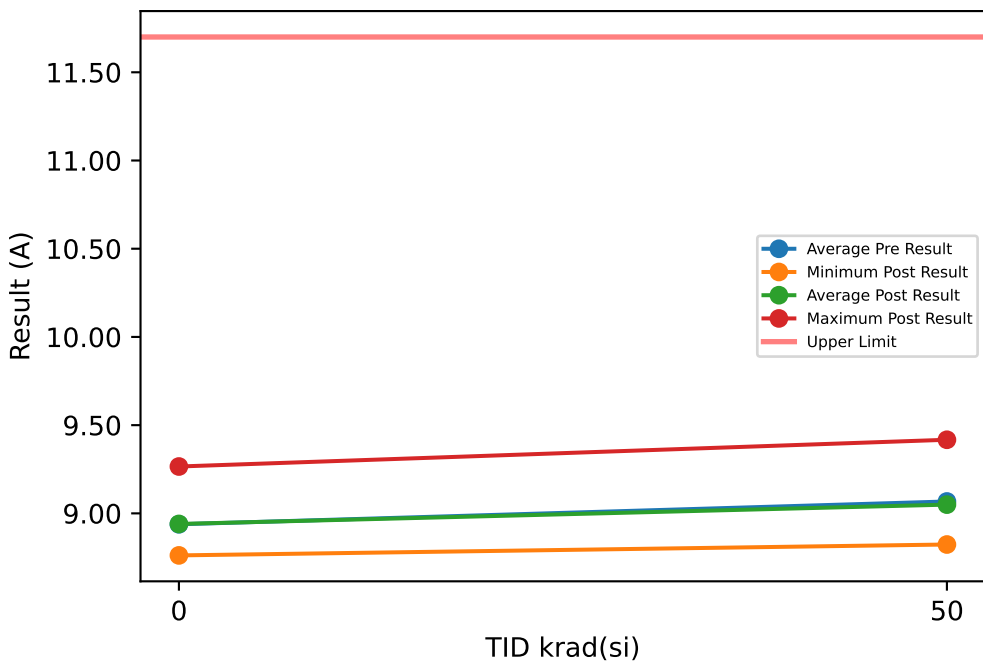








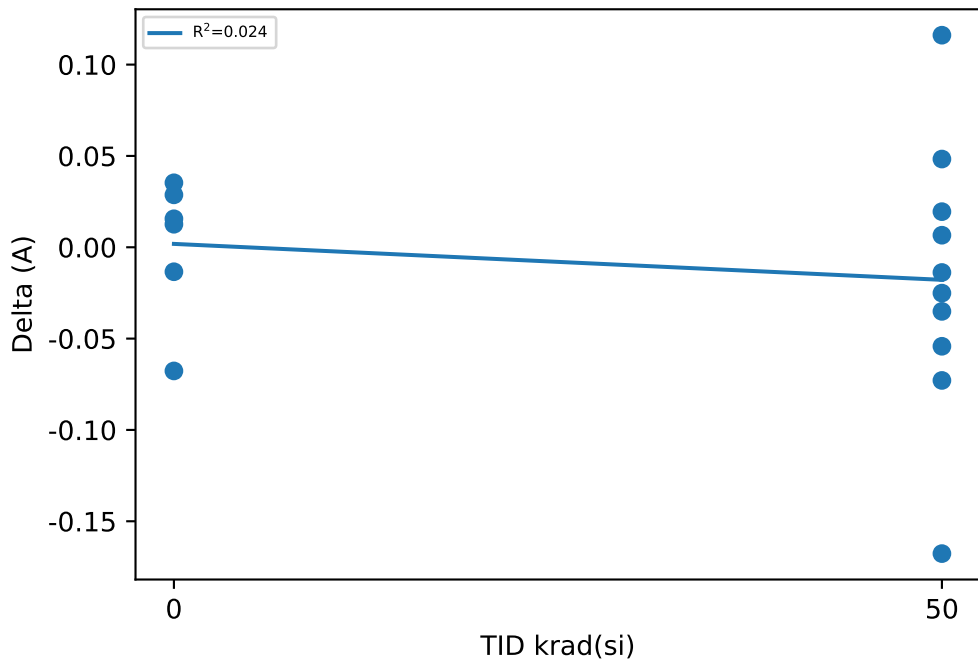
TID vs Result Stats



Test Results (Upper Limit = 11.7 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	9.0562	9.0424	-0.0138
4	50	HDR Biased w/ 84hr anneal	9.2293	9.2488	0.0195
6	50	HDR Biased w/ 84hr anneal	8.857	8.9731	0.1161
8	50	HDR Biased w/ 84hr anneal	8.8623	8.9106	0.0483
9	50	HDR Biased w/ 84hr anneal	9.105	9.0508	-0.0542
10	50	HDR unbiased	8.9635	8.8906	-0.0729
11	50	HDR unbiased	9.4106	9.4172	0.0066
12	50	HDR unbiased	9.2133	9.1882	-0.0251
13	50	HDR unbiased	9.1181	8.9504	-0.1677
14	50	HDR unbiased	8.8586	8.8235	-0.0351
26	0	Correlation	8.7564	8.7851	0.0287
27	0	Correlation	8.7462	8.7618	0.0156
28	0	Correlation	9.2303	9.2656	0.0353
29	0	Correlation	8.8046	8.7912	-0.0134
30	0	Correlation	8.9521	8.8844	-0.0677
32	0	Correlation	9.1395	9.1521	0.0126

TID vs Post - Pre Exposure Delta

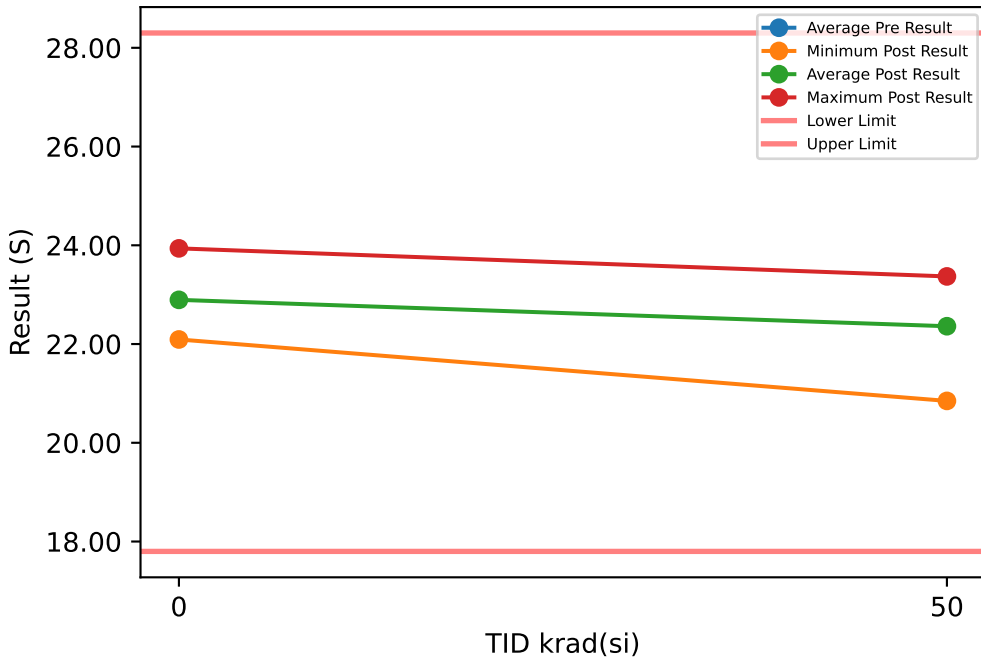


Test Statistics (A)

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	8.7462	8.9382	9.2303	0.20679	8.7618	8.94	9.2656	0.2154	-0.0677	0.00185	0.0353	0.037985
50	8.857	9.0674	9.4106	0.18563	8.8235	9.0496	9.4172	0.18424	-0.1677	-0.01783	0.1161	0.075634



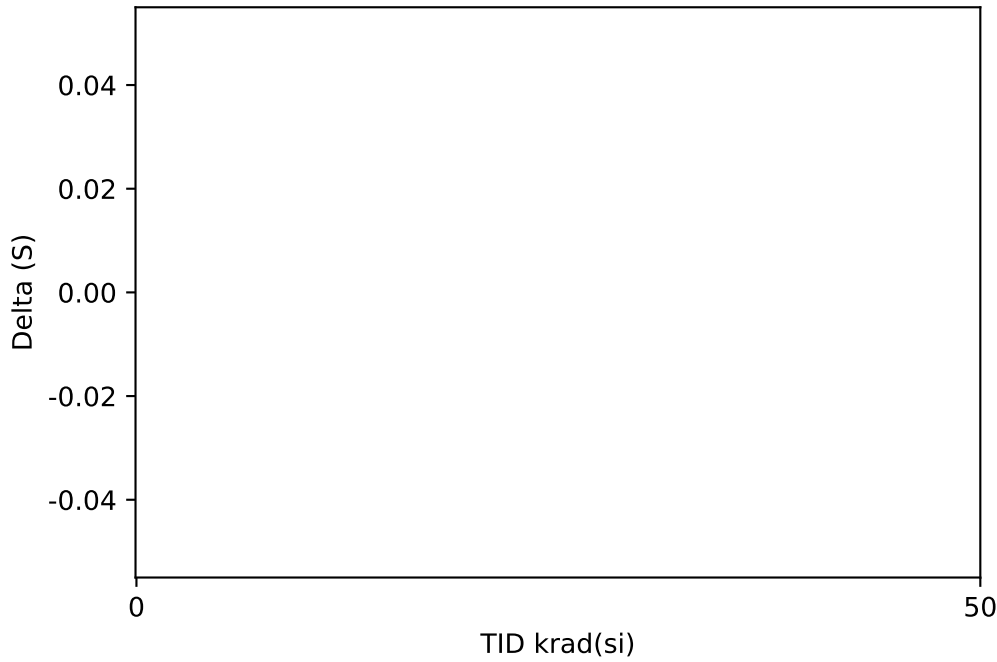
TID vs Result Stats



Test Results (Lower Limit = 17.8, Upper Limit = 28.3 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		22.245	
4	50	HDR Biased w/ 84hr anneal		22.481	
6	50	HDR Biased w/ 84hr anneal		21.004	
8	50	HDR Biased w/ 84hr anneal		23.101	
9	50	HDR Biased w/ 84hr anneal		22.002	
10	50	HDR unbiased		22.637	
11	50	HDR unbiased		23.03	
12	50	HDR unbiased		22.889	
13	50	HDR unbiased		23.37	
14	50	HDR unbiased		20.848	
26	0	Correlation		22.738	
27	0	Correlation		22.093	
28	0	Correlation		23.183	
29	0	Correlation		22.584	
30	0	Correlation		22.834	
32	0	Correlation		23.938	

TID vs Post - Pre Exposure Delta

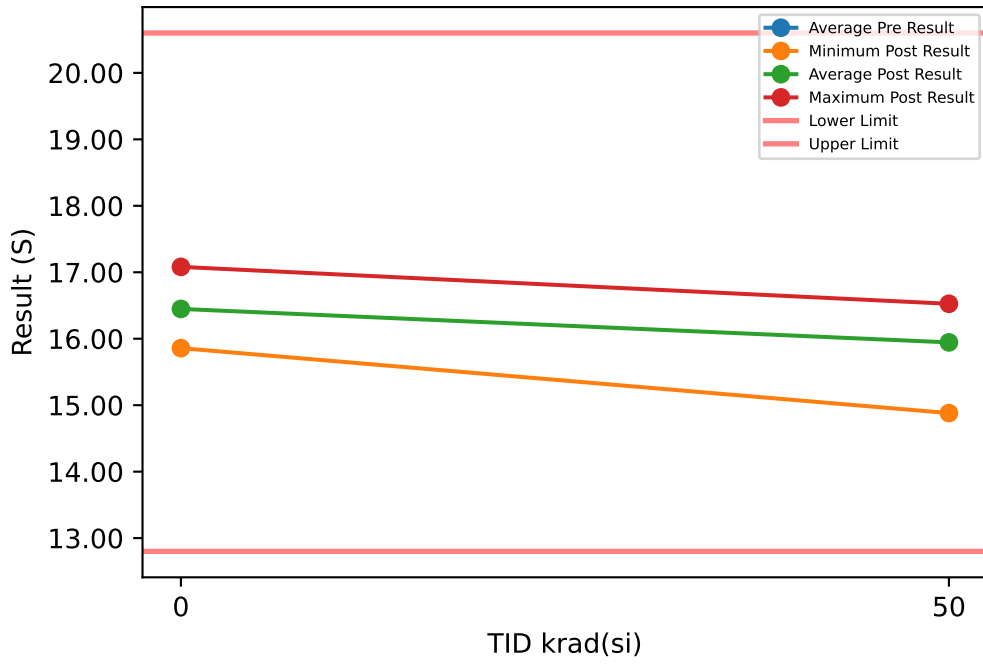


Test Statistics (S)

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					22.093	22.895	23.938	0.62276				
50					20.848	22.361	23.37	0.85995				



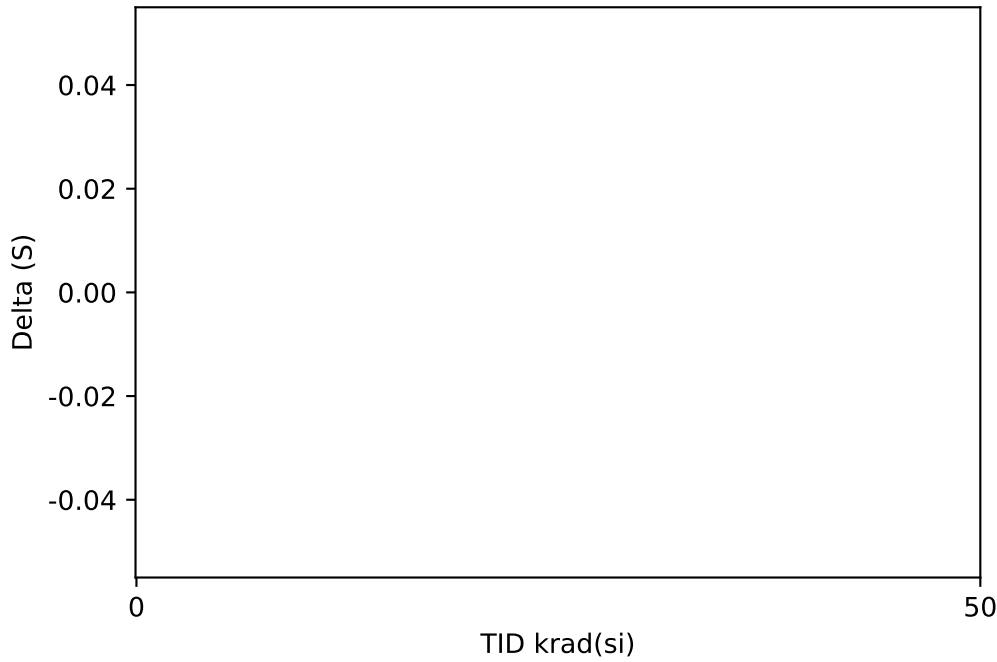
TID vs Result Stats



Test Results (Lower Limit = 12.8, Upper Limit = 20.6 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		15.972	
4	50	HDR Biased w/ 84hr anneal		16.104	
6	50	HDR Biased w/ 84hr anneal		15.231	
8	50	HDR Biased w/ 84hr anneal		16.319	
9	50	HDR Biased w/ 84hr anneal		15.934	
10	50	HDR unbiased		16.061	
11	50	HDR unbiased		16.203	
12	50	HDR unbiased		16.218	
13	50	HDR unbiased		16.526	
14	50	HDR unbiased		14.881	
26	0	Correlation		16.376	
27	0	Correlation		15.858	
28	0	Correlation		16.663	
29	0	Correlation		16.342	
30	0	Correlation		16.37	
32	0	Correlation		17.081	

TID vs Post - Pre Exposure Delta

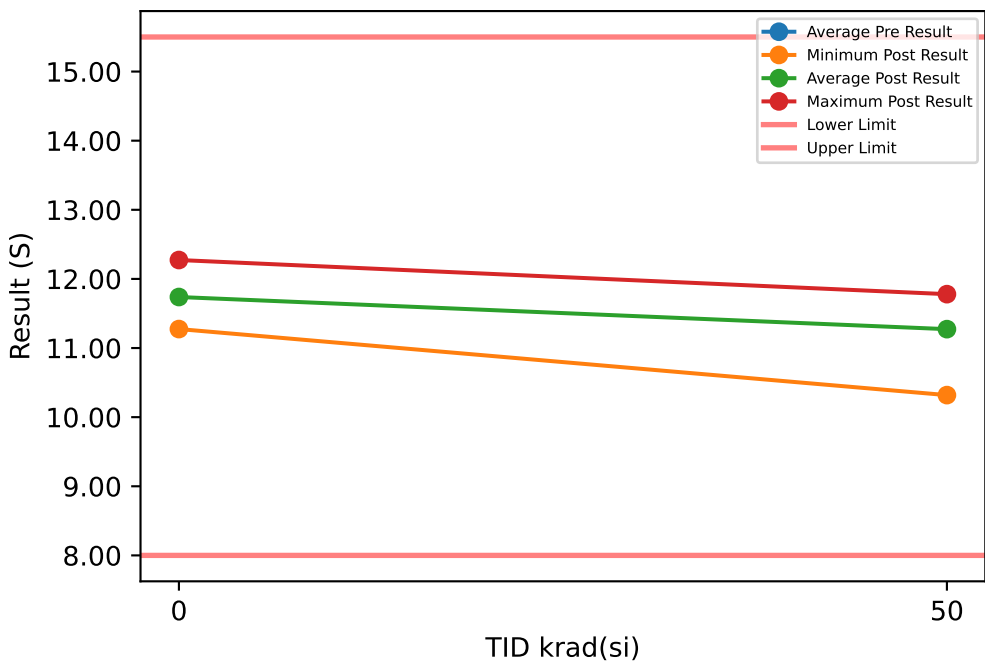


Test Statistics (S)

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					15.858	16.448	17.081	0.40426				
50					14.881	15.945	16.526	0.50561				



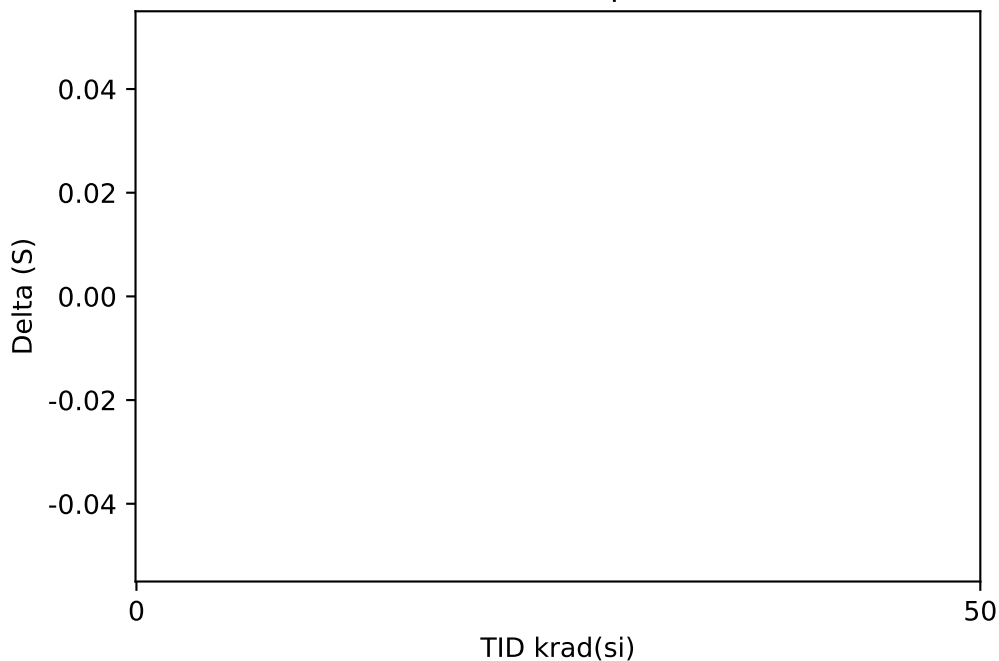
TID vs Result Stats



Test Results (Lower Limit = 8.0, Upper Limit = 15.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		11.471	
4	50	HDR Biased w/ 84hr anneal		11.535	
6	50	HDR Biased w/ 84hr anneal		10.81	
8	50	HDR Biased w/ 84hr anneal		11.653	
9	50	HDR Biased w/ 84hr anneal		11.049	
10	50	HDR unbiased		11.372	
11	50	HDR unbiased		11.366	
12	50	HDR unbiased		11.377	
13	50	HDR unbiased		11.78	
14	50	HDR unbiased		10.319	
26	0	Correlation		11.766	
27	0	Correlation		11.274	
28	0	Correlation		11.81	
29	0	Correlation		11.457	
30	0	Correlation		11.848	
32	0	Correlation		12.273	

TID vs Post - Pre Exposure Delta



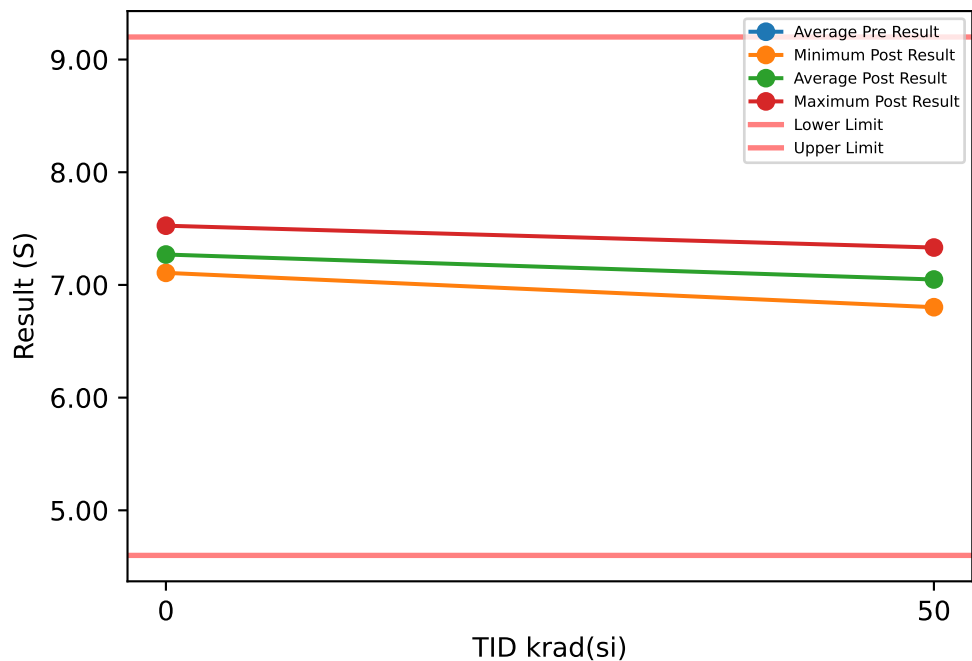
Test Statistics (S)

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					11.274	11.738	12.273	0.34601				
50					10.319	11.273	11.78	0.43622				





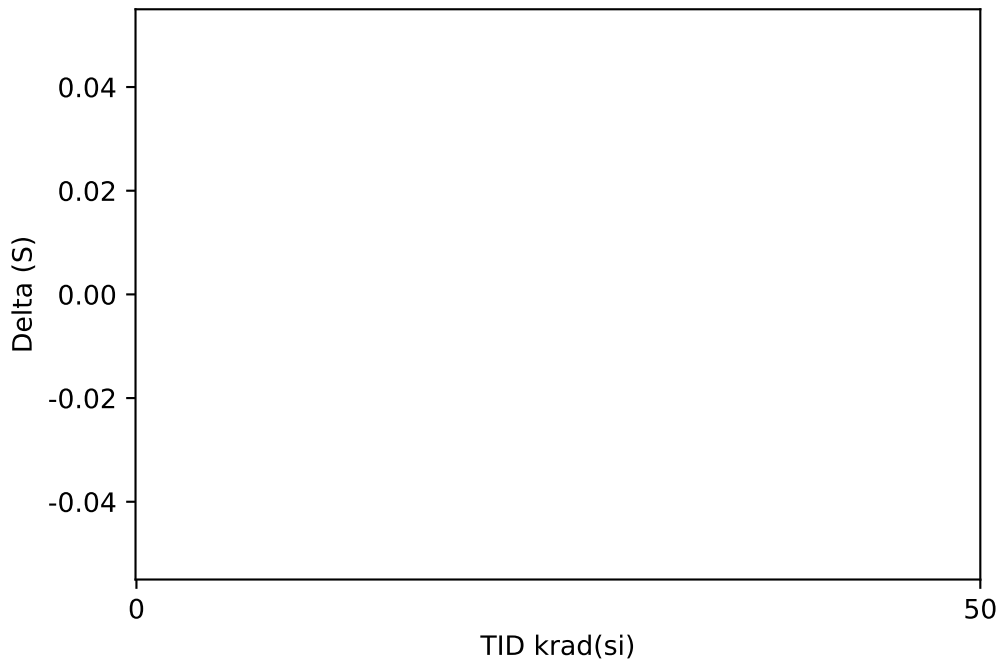
TID vs Result Stats



Test Results (Lower Limit = 4.6, Upper Limit = 9.2 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		7.0129	
4	50	HDR Biased w/ 84hr anneal		7.1844	
6	50	HDR Biased w/ 84hr anneal		6.8325	
8	50	HDR Biased w/ 84hr anneal		7.0053	
9	50	HDR Biased w/ 84hr anneal		6.9476	
10	50	HDR unbiased		7.2709	
11	50	HDR unbiased		7.3318	
12	50	HDR unbiased		7.1038	
13	50	HDR unbiased		6.9906	
14	50	HDR unbiased		6.8023	
26	0	Correlation		7.1802	
27	0	Correlation		7.1072	
28	0	Correlation		7.5256	
29	0	Correlation		7.1381	
30	0	Correlation		7.2145	
32	0	Correlation		7.4533	

TID vs Post - Pre Exposure Delta



Test Statistics (S)

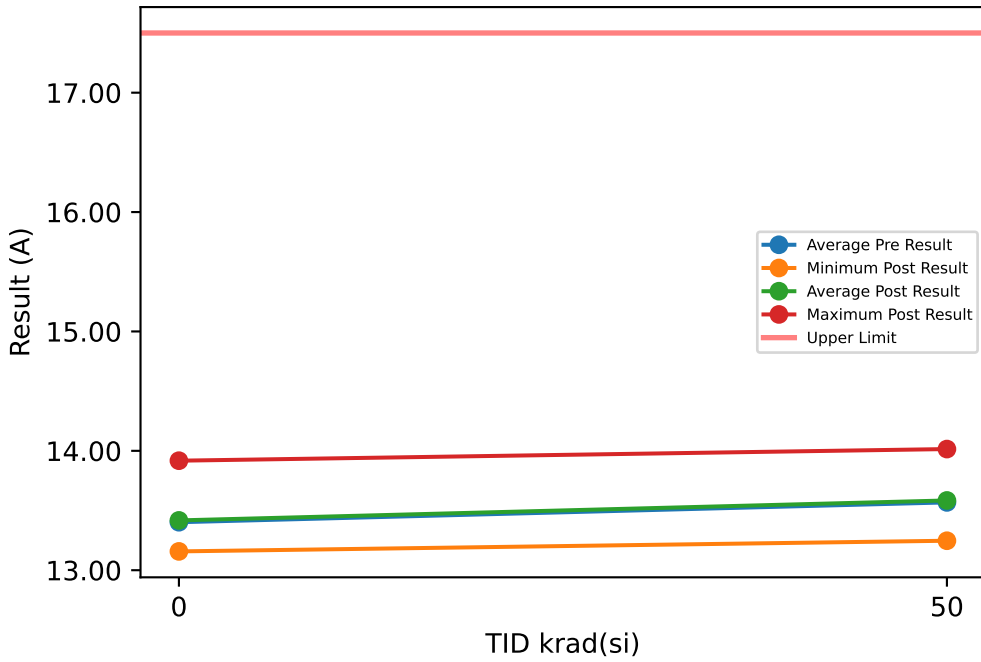
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					7.1072	7.2698	7.5256	0.17549				
50					6.8023	7.0482	7.3318	0.17486				







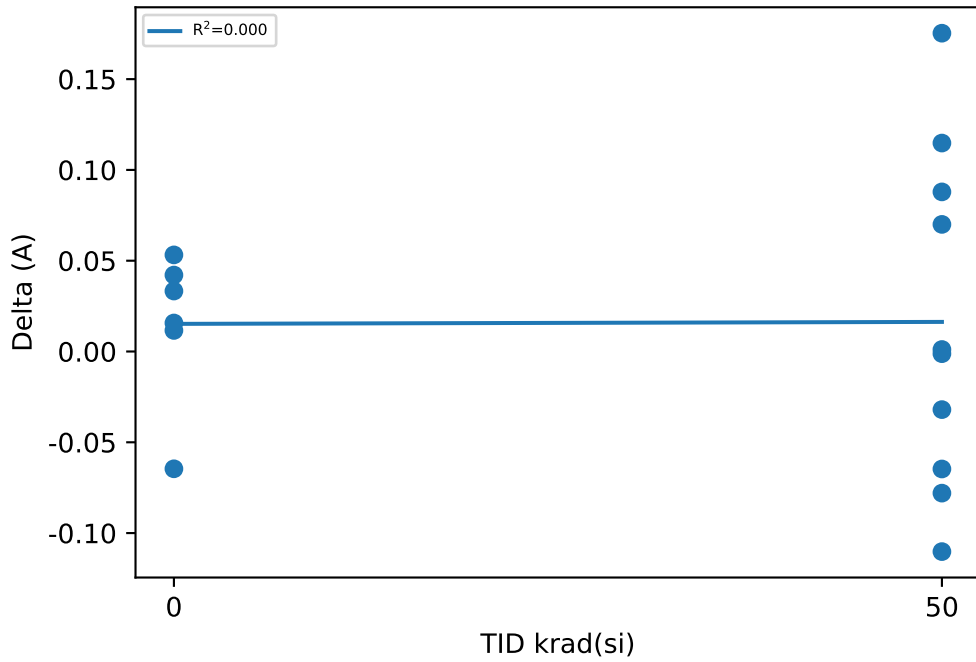
TID vs Result Stats



Test Results (Upper Limit = 17.5 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	13.515	13.516	0.0011
4	50	HDR Biased w/ 84hr anneal	13.803	13.89	0.0879
6	50	HDR Biased w/ 84hr anneal	13.279	13.394	0.1148
8	50	HDR Biased w/ 84hr anneal	13.294	13.469	0.1753
9	50	HDR Biased w/ 84hr anneal	13.589	13.659	0.07
10	50	HDR unbiased	13.325	13.247	-0.078
11	50	HDR unbiased	14.016	14.015	-0.0012
12	50	HDR unbiased	13.9	13.836	-0.0647
13	50	HDR unbiased	13.65	13.54	-0.1102
14	50	HDR unbiased	13.309	13.277	-0.032
26	0	Correlation	13.154	13.197	0.0421
27	0	Correlation	13.157	13.168	0.0116
28	0	Correlation	13.884	13.917	0.0333
29	0	Correlation	13.222	13.158	-0.0646
30	0	Correlation	13.325	13.341	0.0157
32	0	Correlation	13.669	13.723	0.0532

TID vs Post - Pre Exposure Delta



Test Statistics (A)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	13.154	13.402	13.884	0.30449	13.158	13.417	13.917	0.32474	-0.0646	0.015217	0.0532	0.042134
50	13.279	13.568	14.016	0.27099	13.247	13.584	14.015	0.26085	-0.1102	0.0163	0.1753	0.092688





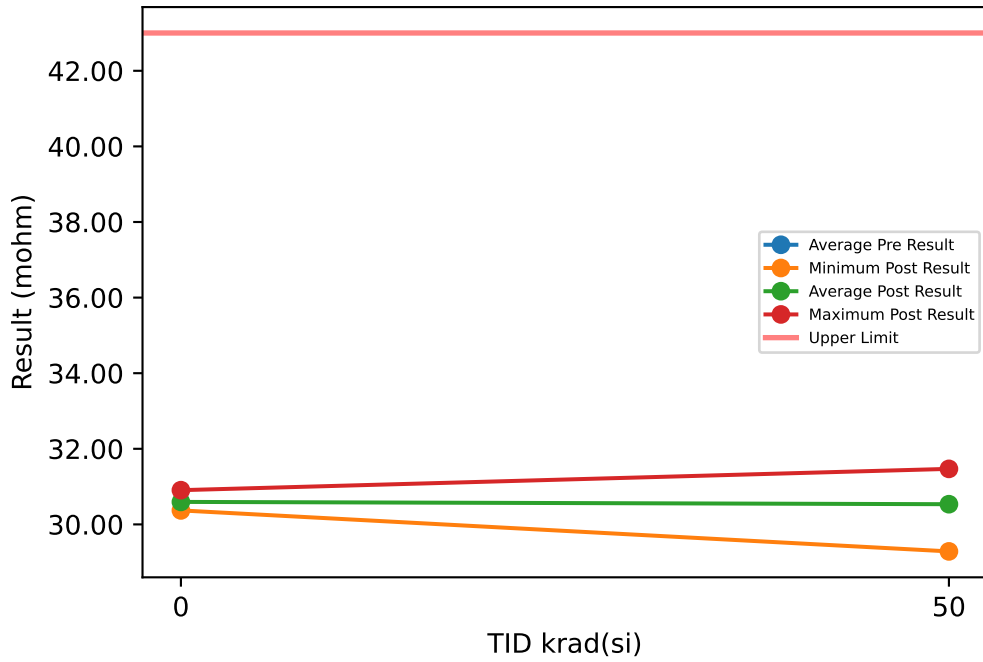






Device Test: 20.68 R\_HIGHSIDE\_12V\_25C(\_LEVEL|HIGHSIDE/SW/12/2///@R\_HIGHSIDE\_12V\_25C )

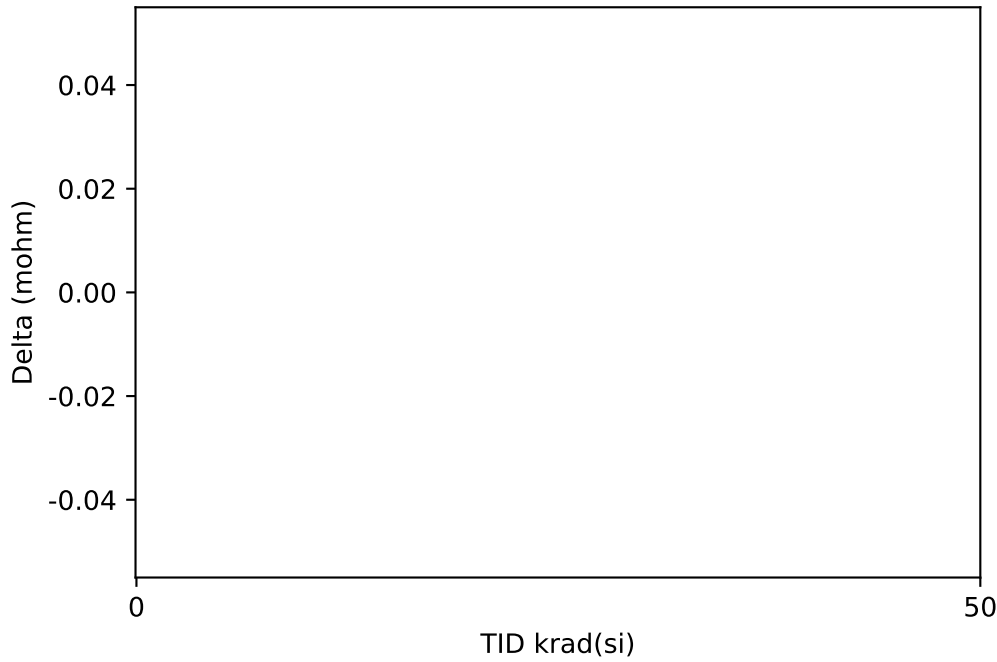
TID vs Result Stats



Test Results (Upper Limit = 43.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		31.468	
4	50	HDR Biased w/ 84hr anneal		30.118	
6	50	HDR Biased w/ 84hr anneal		30.893	
8	50	HDR Biased w/ 84hr anneal		30.916	
9	50	HDR Biased w/ 84hr anneal		31.469	
10	50	HDR unbiased		30.126	
11	50	HDR unbiased		30.37	
12	50	HDR unbiased		29.286	
13	50	HDR unbiased		30.328	
14	50	HDR unbiased		30.369	
26	0	Correlation		30.552	
27	0	Correlation		30.812	
28	0	Correlation		30.37	
29	0	Correlation		30.905	
30	0	Correlation		30.37	
32	0	Correlation		30.561	

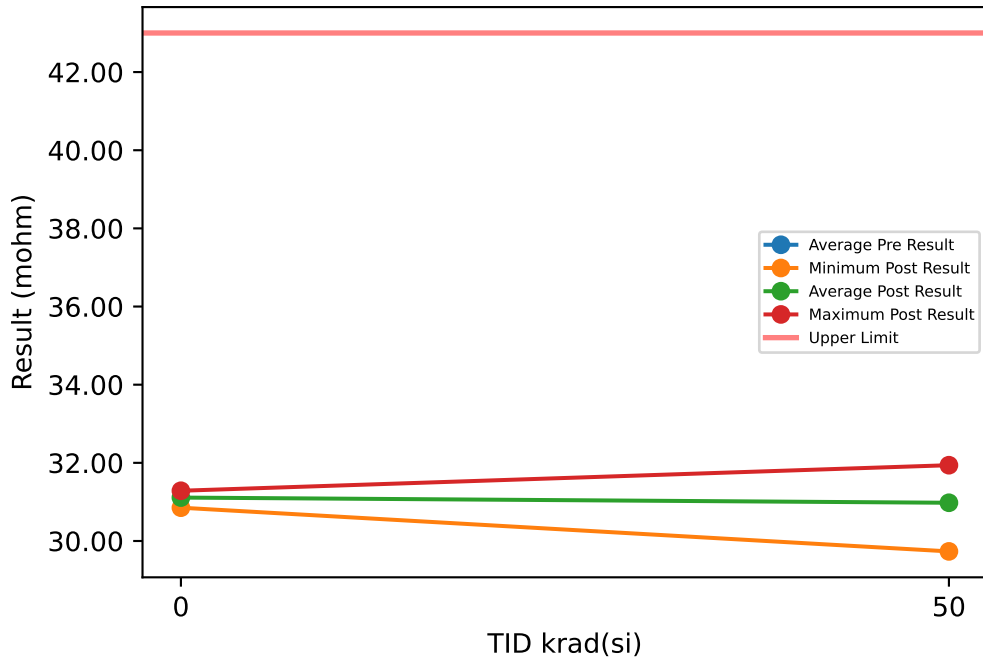
TID vs Post - Pre Exposure Delta



Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					30.37	30.595	30.905	0.22239				
50					29.286	30.534	31.469	0.66783				

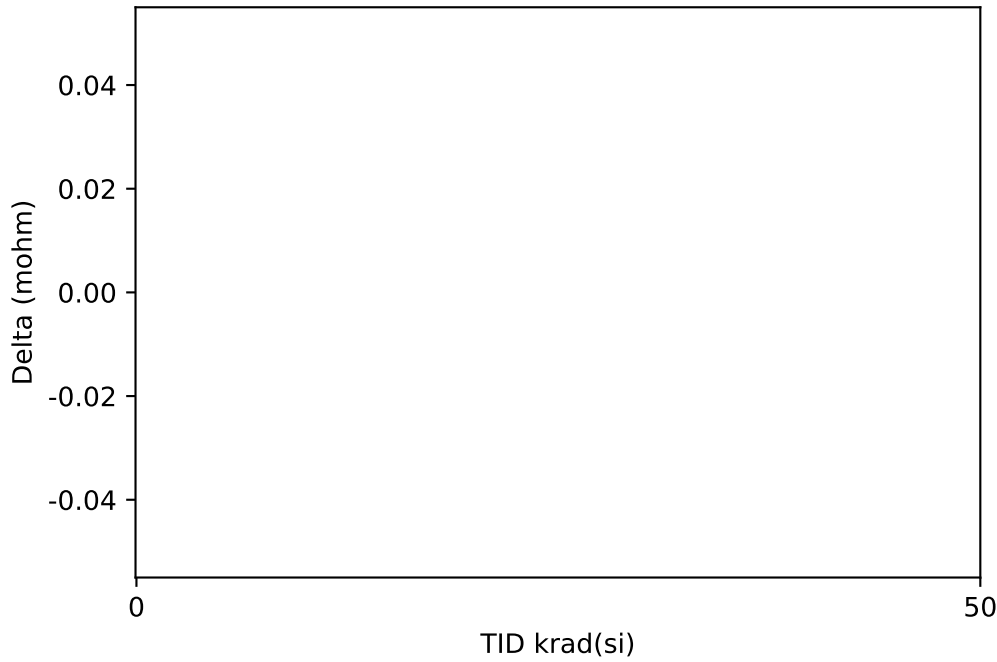
TID vs Result Stats



Test Results (Upper Limit = 43.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		31.939	
4	50	HDR Biased w/ 84hr anneal		30.465	
6	50	HDR Biased w/ 84hr anneal		31.203	
8	50	HDR Biased w/ 84hr anneal		31.247	
9	50	HDR Biased w/ 84hr anneal		31.893	
10	50	HDR unbiased		30.643	
11	50	HDR unbiased		30.902	
12	50	HDR unbiased		29.734	
13	50	HDR unbiased		30.815	
14	50	HDR unbiased		30.943	
26	0	Correlation		31.105	
27	0	Correlation		31.137	
28	0	Correlation		30.852	
29	0	Correlation		31.286	
30	0	Correlation		31.072	
32	0	Correlation		31.215	

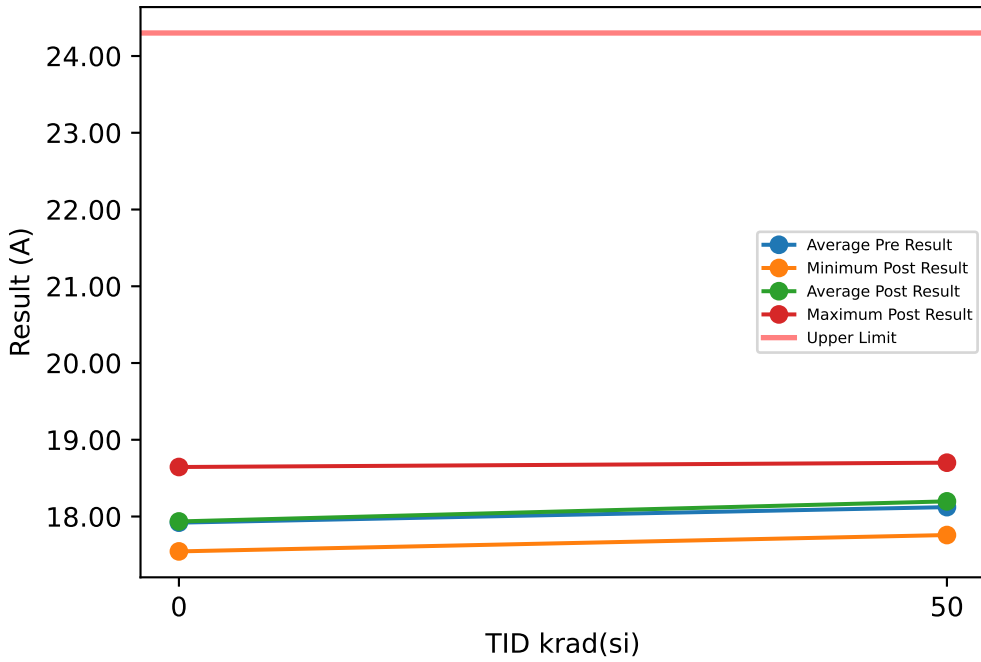
TID vs Post - Pre Exposure Delta



Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					30.852	31.111	31.286	0.14873				
50					29.734	30.978	31.939	0.65346				

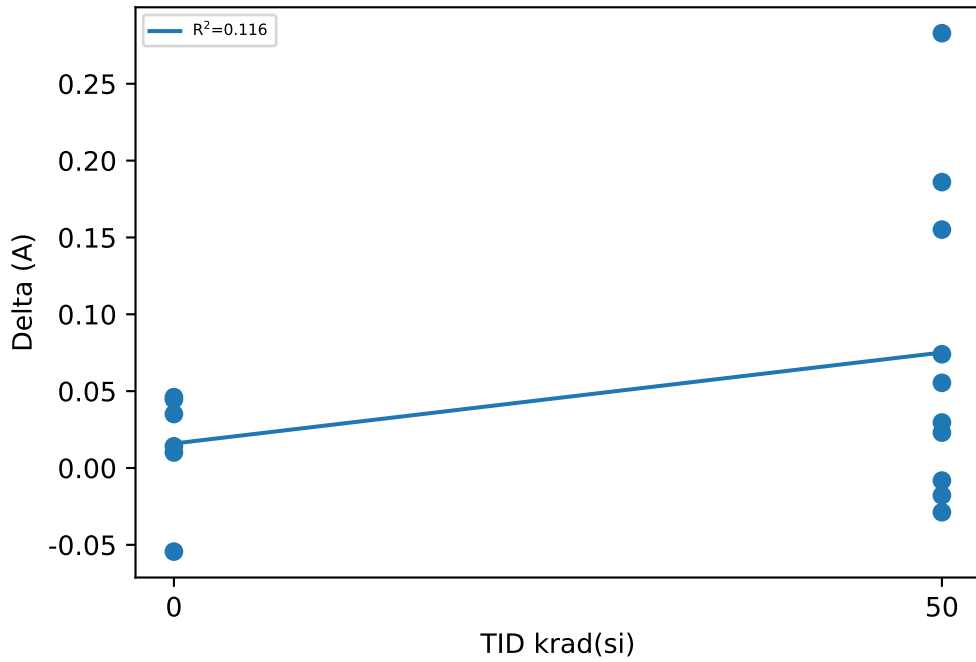
TID vs Result Stats



Test Results (Upper Limit = 24.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	18.06	18.134	0.074
4	50	HDR Biased w/ 84hr anneal	18.416	18.571	0.1551
6	50	HDR Biased w/ 84hr anneal	17.659	17.845	0.186
8	50	HDR Biased w/ 84hr anneal	17.806	18.089	0.2829
9	50	HDR Biased w/ 84hr anneal	18.198	18.253	0.0554
10	50	HDR unbiased	17.783	17.774	-0.0082
11	50	HDR unbiased	18.678	18.701	0.023
12	50	HDR unbiased	18.559	18.588	0.0296
13	50	HDR unbiased	18.277	18.259	-0.0178
14	50	HDR unbiased	17.787	17.759	-0.0288
26	0	Correlation	17.587	17.634	0.0461
27	0	Correlation	17.535	17.546	0.0101
28	0	Correlation	18.601	18.645	0.0446
29	0	Correlation	17.608	17.553	-0.0544
30	0	Correlation	17.87	17.905	0.0351
32	0	Correlation	18.319	18.333	0.0141

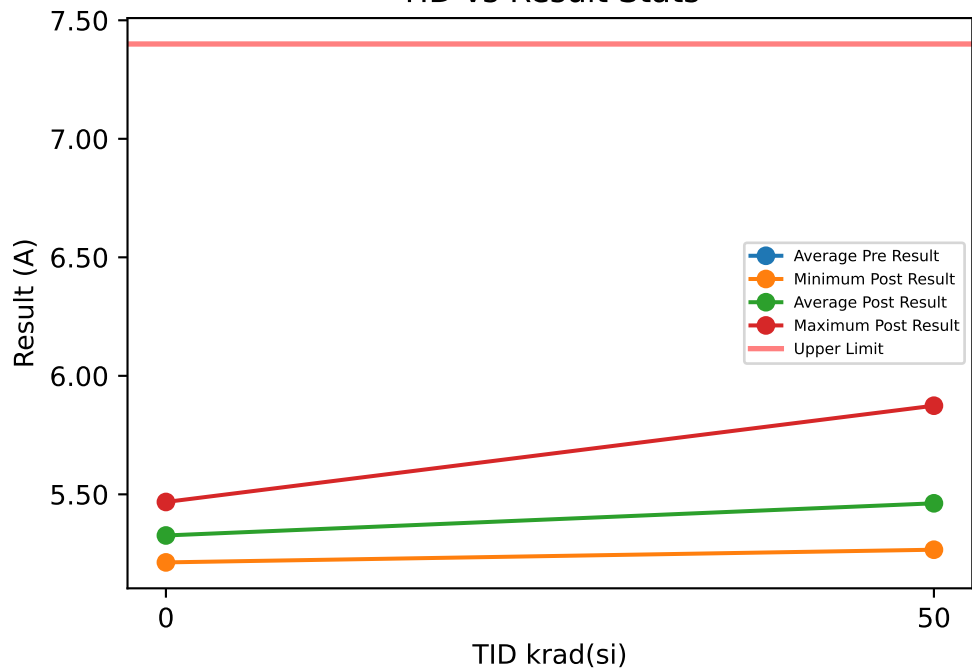
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	17.535	17.92	18.601	0.44288	17.546	17.936	18.645	0.45865	-0.0544	0.015933	0.0461	0.037639
50	17.659	18.122	18.678	0.35922	17.759	18.197	18.701	0.34391	-0.0288	0.07512	0.2829	0.10188

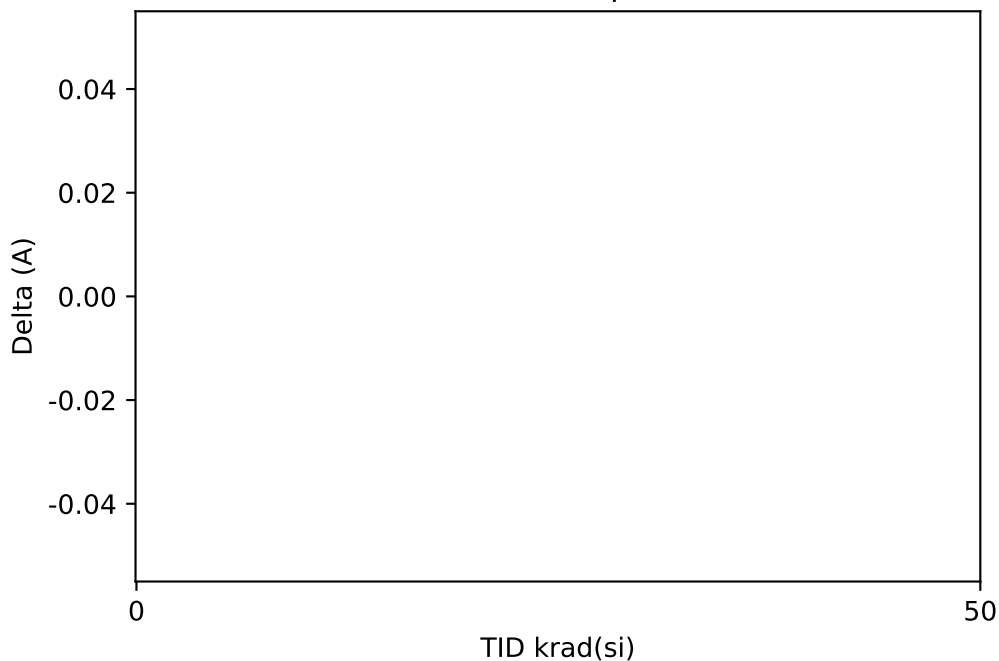
TID vs Result Stats



Test Results (Upper Limit = 7.4 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		5.5316	
4	50	HDR Biased w/ 84hr anneal		5.5611	
6	50	HDR Biased w/ 84hr anneal		5.6413	
8	50	HDR Biased w/ 84hr anneal		5.2683	
9	50	HDR Biased w/ 84hr anneal		5.5491	
10	50	HDR unbiased		5.3132	
11	50	HDR unbiased		5.874	
12	50	HDR unbiased		5.2664	
13	50	HDR unbiased		5.2736	
14	50	HDR unbiased		5.3433	
26	0	Correlation		5.2129	
27	0	Correlation		5.2212	
28	0	Correlation		5.4678	
29	0	Correlation		5.2872	
30	0	Correlation		5.309	
32	0	Correlation		5.4607	

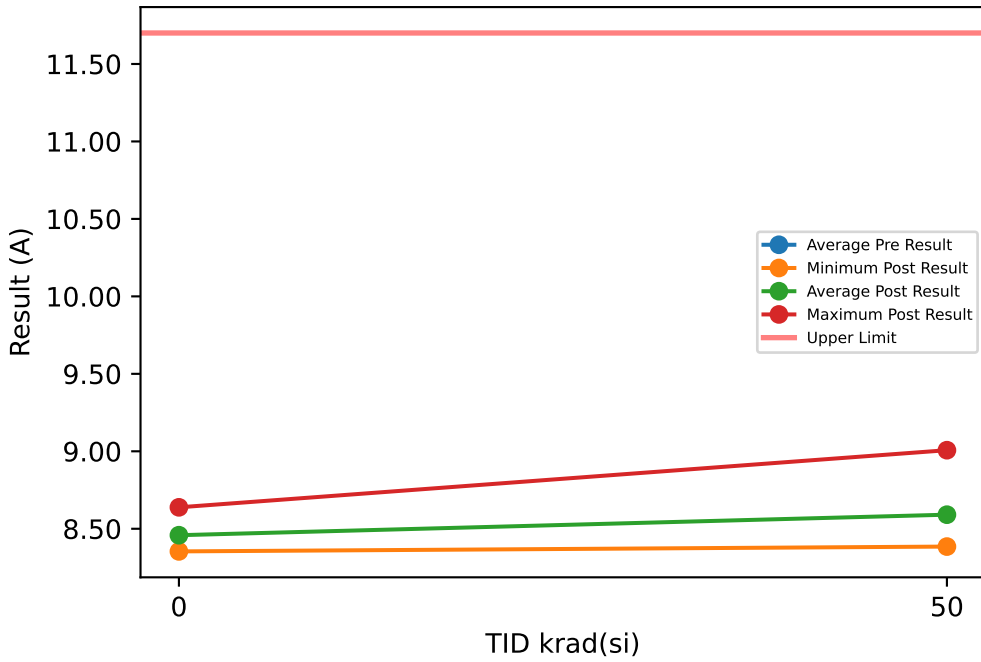
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					5.2129	5.3265	5.4678	0.11298				
50					5.2664	5.4622	5.874	0.20321				

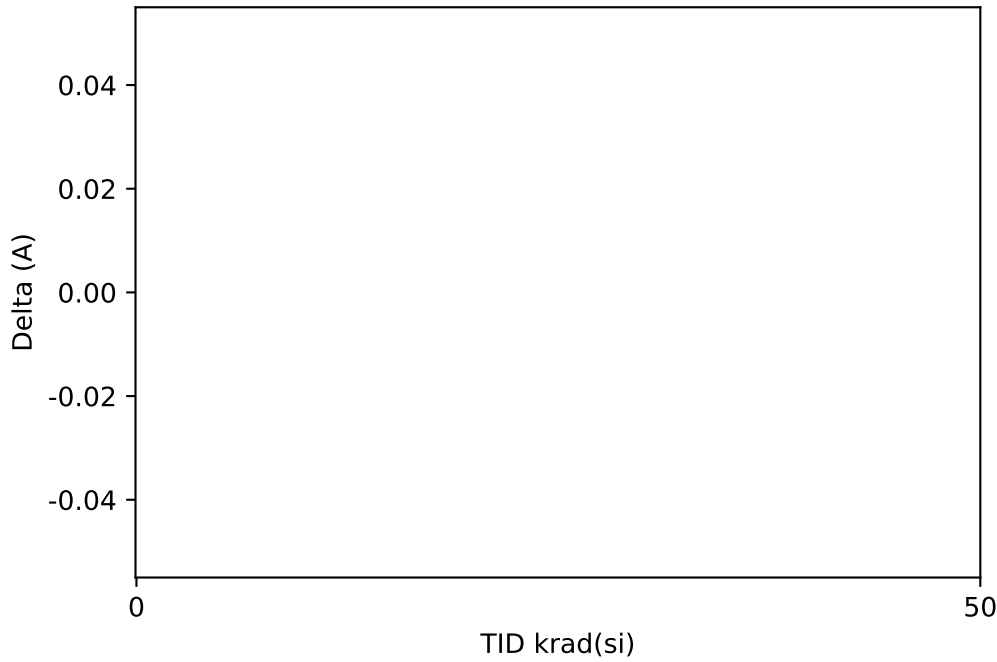
TID vs Result Stats



Test Results (Upper Limit = 11.7 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		8.6296	
4	50	HDR Biased w/ 84hr anneal		8.7002	
6	50	HDR Biased w/ 84hr anneal		8.6415	
8	50	HDR Biased w/ 84hr anneal		8.4007	
9	50	HDR Biased w/ 84hr anneal		8.653	
10	50	HDR unbiased		8.4446	
11	50	HDR unbiased		9.0071	
12	50	HDR unbiased		8.5516	
13	50	HDR unbiased		8.385	
14	50	HDR unbiased		8.4954	
26	0	Correlation		8.3676	
27	0	Correlation		8.3539	
28	0	Correlation		8.6384	
29	0	Correlation		8.3791	
30	0	Correlation		8.382	
32	0	Correlation		8.6293	

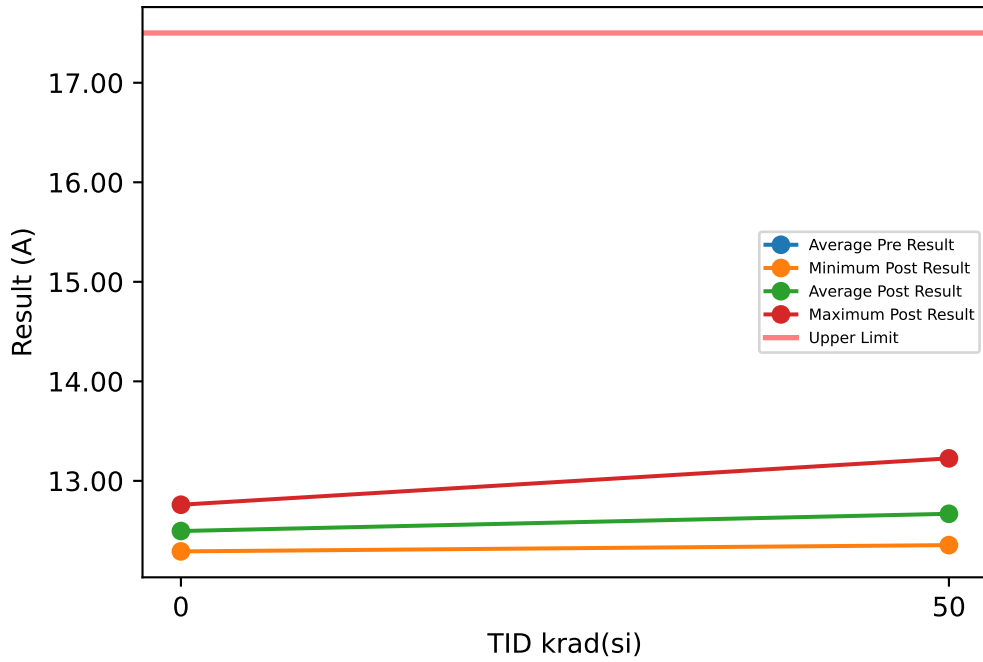
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					8.3539	8.4584	8.6384	0.13631				
50					8.385	8.5909	9.0071	0.1837				

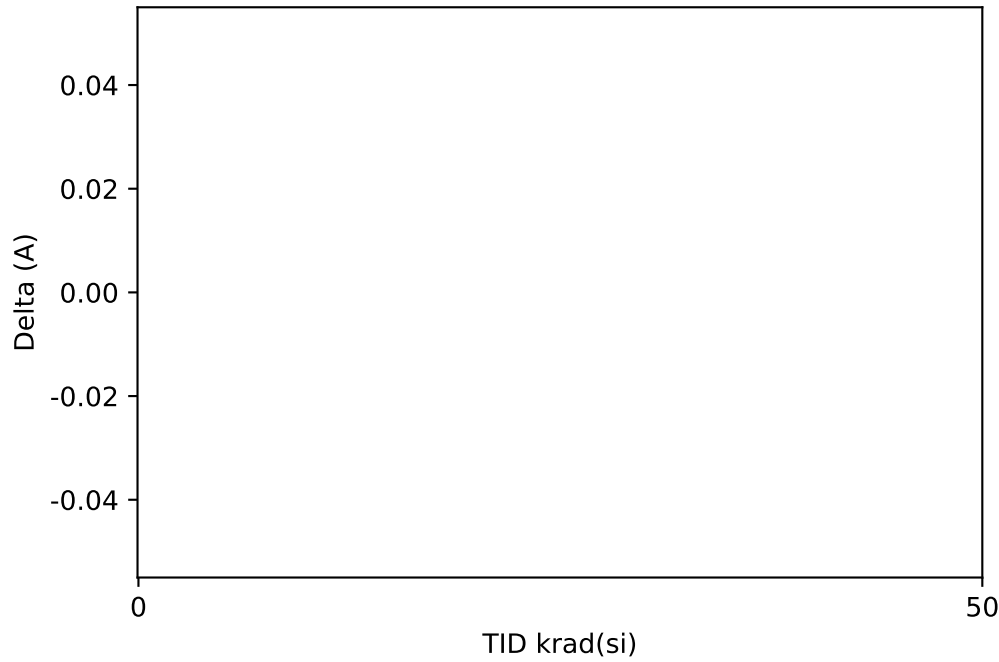
TID vs Result Stats



Test Results (Upper Limit = 17.5 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		12.776	
4	50	HDR Biased w/ 84hr anneal		12.81	
6	50	HDR Biased w/ 84hr anneal		12.72	
8	50	HDR Biased w/ 84hr anneal		12.403	
9	50	HDR Biased w/ 84hr anneal		12.891	
10	50	HDR unbiased		12.363	
11	50	HDR unbiased		13.226	
12	50	HDR unbiased		12.537	
13	50	HDR unbiased		12.354	
14	50	HDR unbiased		12.613	
26	0	Correlation		12.291	
27	0	Correlation		12.389	
28	0	Correlation		12.76	
29	0	Correlation		12.446	
30	0	Correlation		12.383	
32	0	Correlation		12.706	

TID vs Post - Pre Exposure Delta

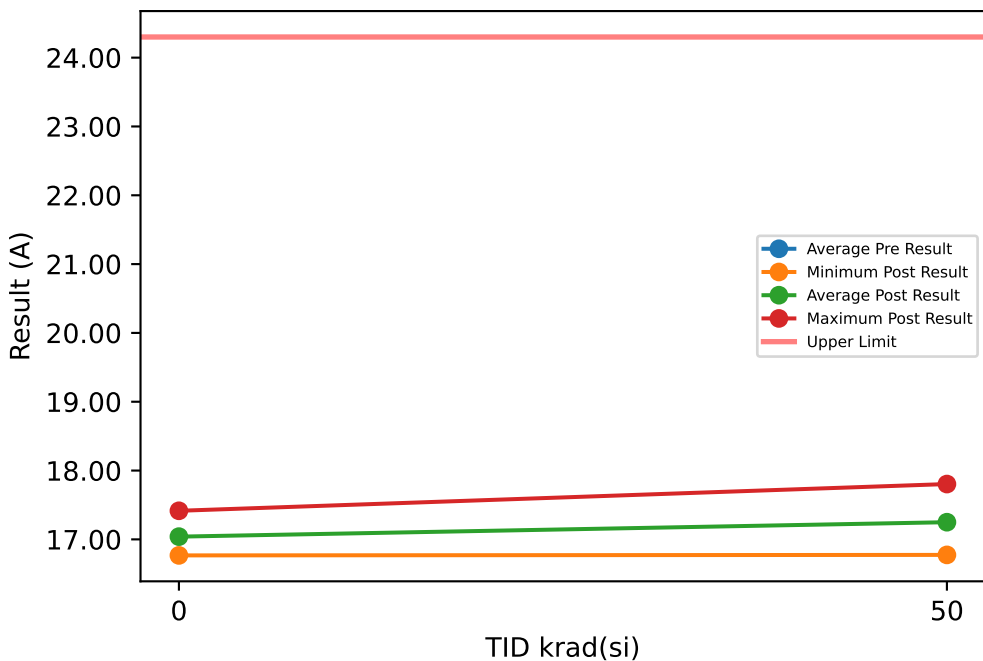


Test Statistics (A)

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					12.291	12.496	12.76	0.19098				
50					12.354	12.669	13.226	0.27444				



TID vs Result Stats



Test Results (Upper Limit = 24.3 (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		17.557	
4	50	HDR Biased w/ 84hr anneal		17.392	
6	50	HDR Biased w/ 84hr anneal		17.185	
8	50	HDR Biased w/ 84hr anneal		16.995	
9	50	HDR Biased w/ 84hr anneal		17.596	
10	50	HDR unbiased		16.774	
11	50	HDR unbiased		17.804	
12	50	HDR unbiased		17.113	
13	50	HDR unbiased		16.969	
14	50	HDR unbiased		17.111	
26	0	Correlation		16.767	
27	0	Correlation		16.869	
28	0	Correlation		17.415	
29	0	Correlation		16.971	
30	0	Correlation		16.863	
32	0	Correlation		17.353	

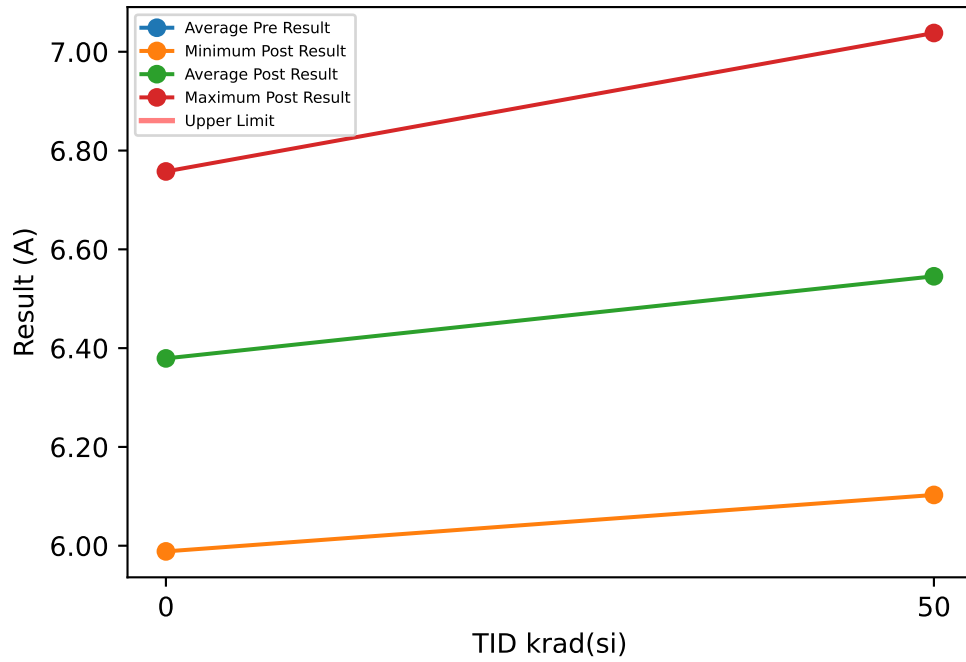
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					16.767	17.04	17.415	0.27506				
50					16.774	17.25	17.804	0.32549				

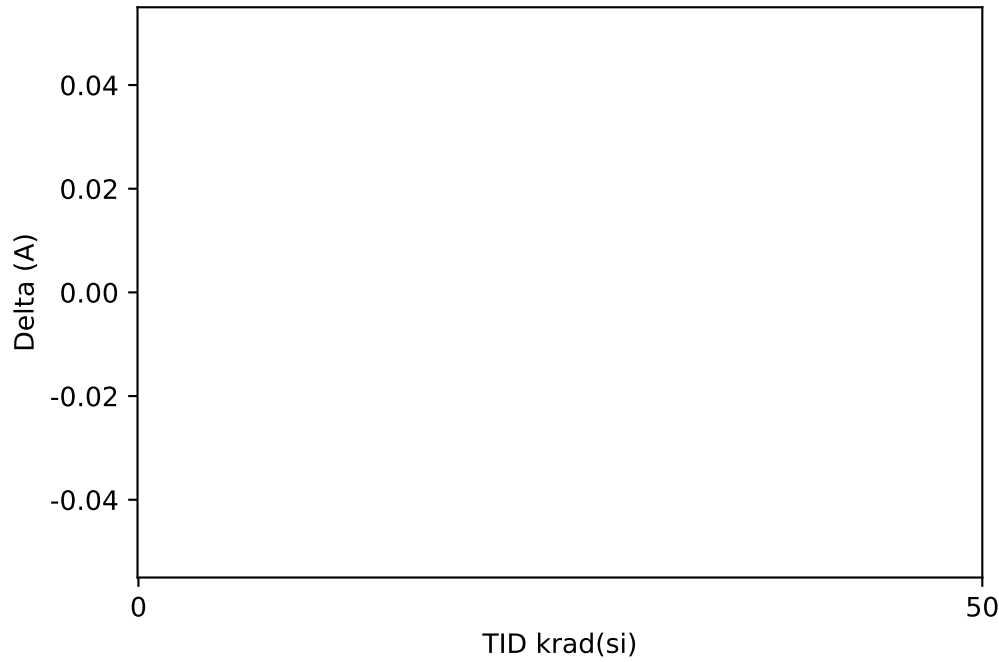
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	6.3792	6.3902	0.0110
4	50	HDR Biased w/ 84hr anneal	6.3792	6.6769	0.2977
6	50	HDR Biased w/ 84hr anneal	6.3792	6.1028	-0.2764
8	50	HDR Biased w/ 84hr anneal	6.3792	6.5129	0.1337
9	50	HDR Biased w/ 84hr anneal	6.3792	6.7584	0.3792
10	50	HDR unbiased	6.3792	6.5932	0.2140
11	50	HDR unbiased	6.3792	6.6884	0.3092
12	50	HDR unbiased	6.3792	6.5325	0.1533
13	50	HDR unbiased	6.3792	6.1612	-0.2180
14	50	HDR unbiased	6.3792	7.038	0.6588
26	0	Correlation	6.3792	6.2932	-0.0860
27	0	Correlation	6.3792	6.5394	0.1602
28	0	Correlation	6.3792	5.9885	-0.3907
29	0	Correlation	6.3792	6.5113	0.1321
30	0	Correlation	6.3792	6.1852	-0.1940
32	0	Correlation	6.3792	6.7577	0.3785

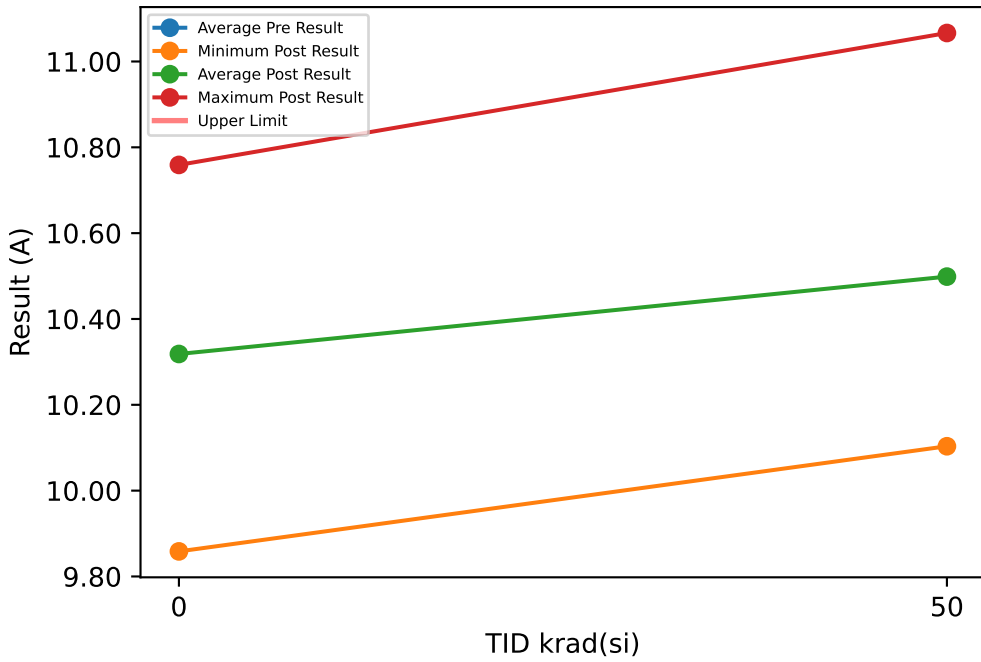
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	6.3792	6.3792	6.3792	0.0000	5.9885	6.3792	6.7577	0.27715	6.3792	6.3792	6.7577	0.27715
50	6.3792	6.3792	6.3792	0.0000	6.1028	6.5454	7.038	0.27826	6.1028	6.5454	7.038	0.27826

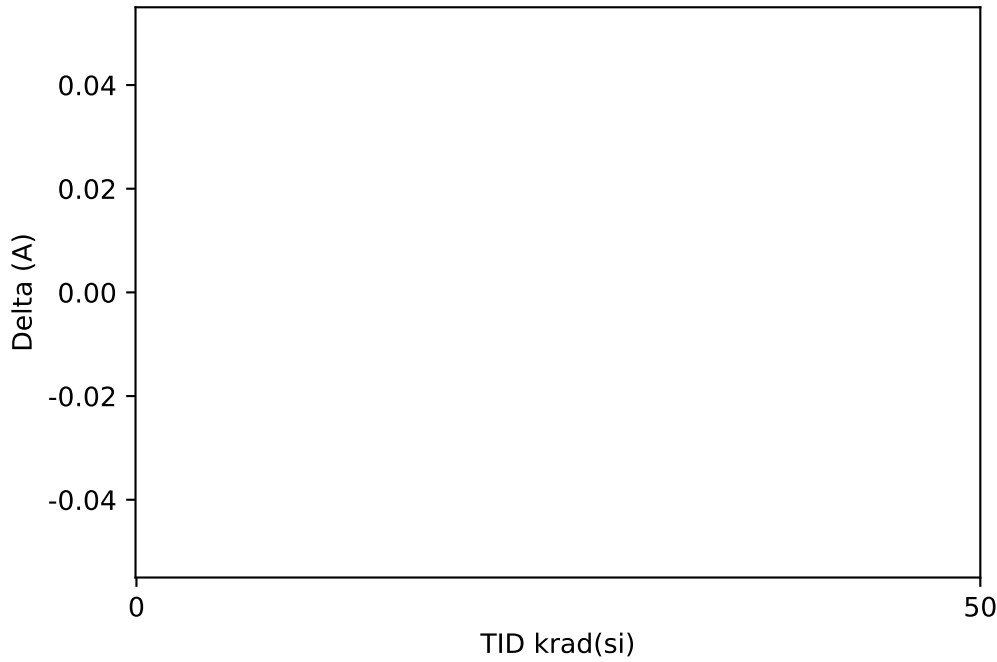
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	10.374	10.374	0.000
4	50	HDR Biased w/ 84hr anneal	10.561	10.561	0.000
6	50	HDR Biased w/ 84hr anneal	10.443	10.443	0.000
8	50	HDR Biased w/ 84hr anneal	10.119	10.119	0.000
9	50	HDR Biased w/ 84hr anneal	10.402	10.402	0.000
10	50	HDR unbiased	10.952	10.952	0.000
11	50	HDR unbiased	10.751	10.751	0.000
12	50	HDR unbiased	10.103	10.103	0.000
13	50	HDR unbiased	10.216	10.216	0.000
14	50	HDR unbiased	11.066	11.066	0.000
26	0	Correlation	10.46	10.46	0.000
27	0	Correlation	10.474	10.474	0.000
28	0	Correlation	9.9526	9.9526	0.000
29	0	Correlation	10.407	10.407	0.000
30	0	Correlation	9.8584	9.8584	0.000
32	0	Correlation	10.759	10.759	0.000

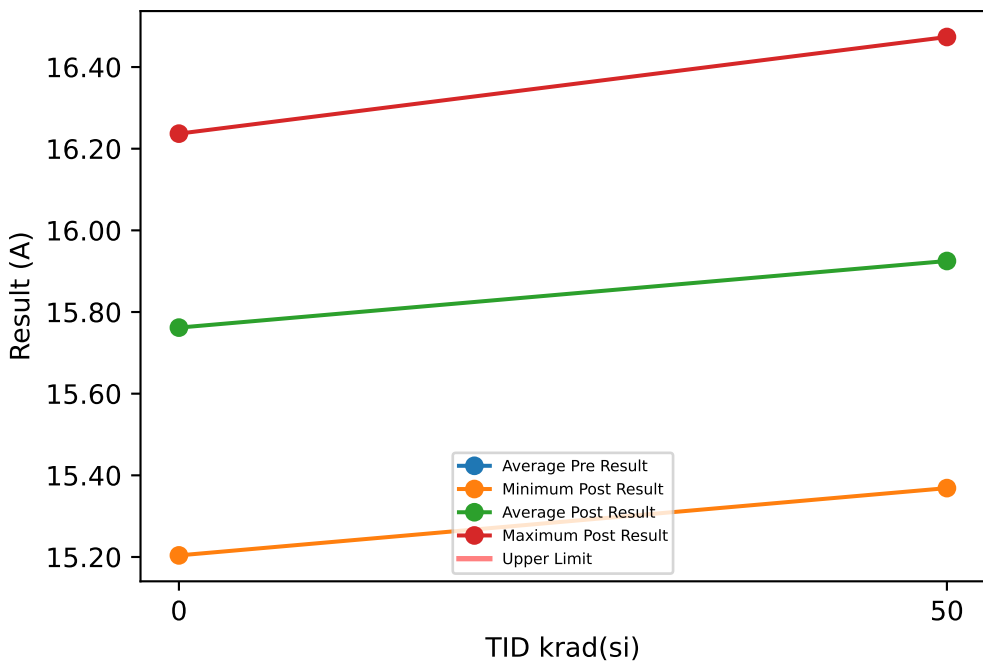
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	9.8584	10.318	10.759	0.34395	9.8584	10.318	10.759	0.34395	0.000	0.000	0.000	0.000
50	10.103	10.499	11.066	0.33397	10.103	10.499	11.066	0.33397	0.000	0.000	0.000	0.000

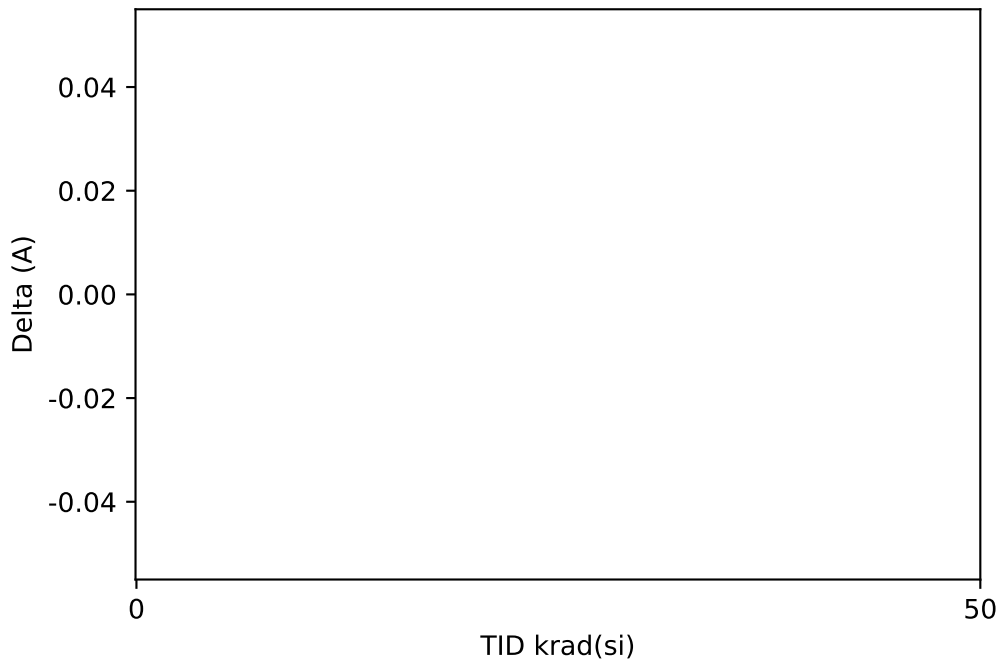
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		16.041	
4	50	HDR Biased w/ 84hr anneal		16.231	
6	50	HDR Biased w/ 84hr anneal		15.922	
8	50	HDR Biased w/ 84hr anneal		15.496	
9	50	HDR Biased w/ 84hr anneal		15.608	
10	50	HDR unbiased		16.474	
11	50	HDR unbiased		16.17	
12	50	HDR unbiased		15.737	
13	50	HDR unbiased		15.369	
14	50	HDR unbiased		16.202	
26	0	Correlation		16.237	
27	0	Correlation		15.86	
28	0	Correlation		15.265	
29	0	Correlation		15.78	
30	0	Correlation		15.204	
32	0	Correlation		16.226	

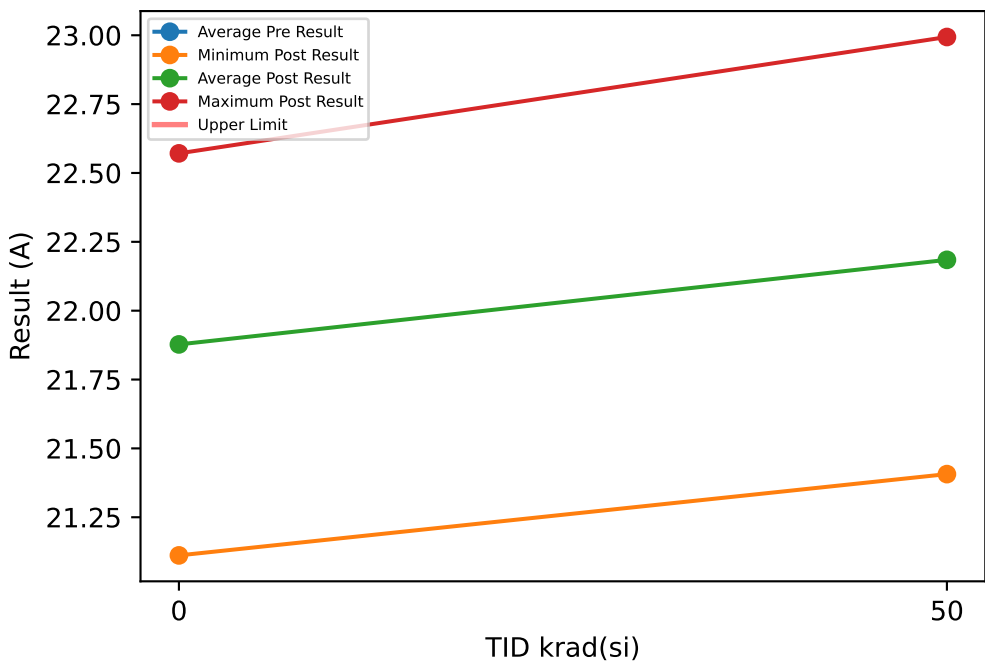
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					15.204	15.762	16.237	0.44924				
50					15.369	15.925	16.474	0.36113				

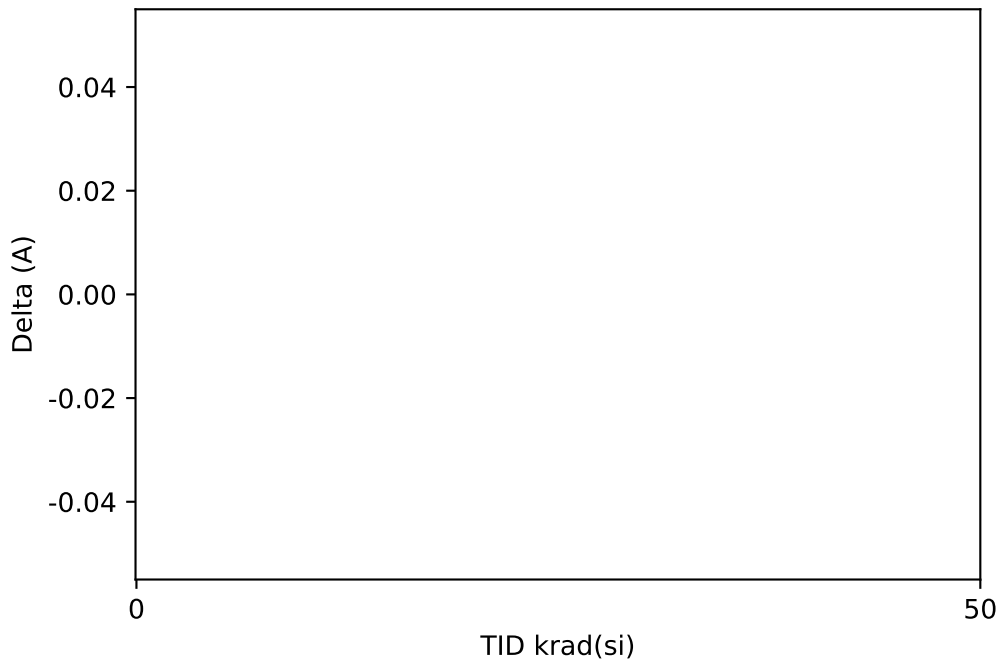
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		22.29	
4	50	HDR Biased w/ 84hr anneal		22.424	
6	50	HDR Biased w/ 84hr anneal		22.671	
8	50	HDR Biased w/ 84hr anneal		21.429	
9	50	HDR Biased w/ 84hr anneal		21.907	
10	50	HDR unbiased		22.994	
11	50	HDR unbiased		22.298	
12	50	HDR unbiased		21.963	
13	50	HDR unbiased		21.407	
14	50	HDR unbiased		22.463	
26	0	Correlation		22.571	
27	0	Correlation		21.977	
28	0	Correlation		21.208	
29	0	Correlation		21.921	
30	0	Correlation		21.111	
32	0	Correlation		22.476	

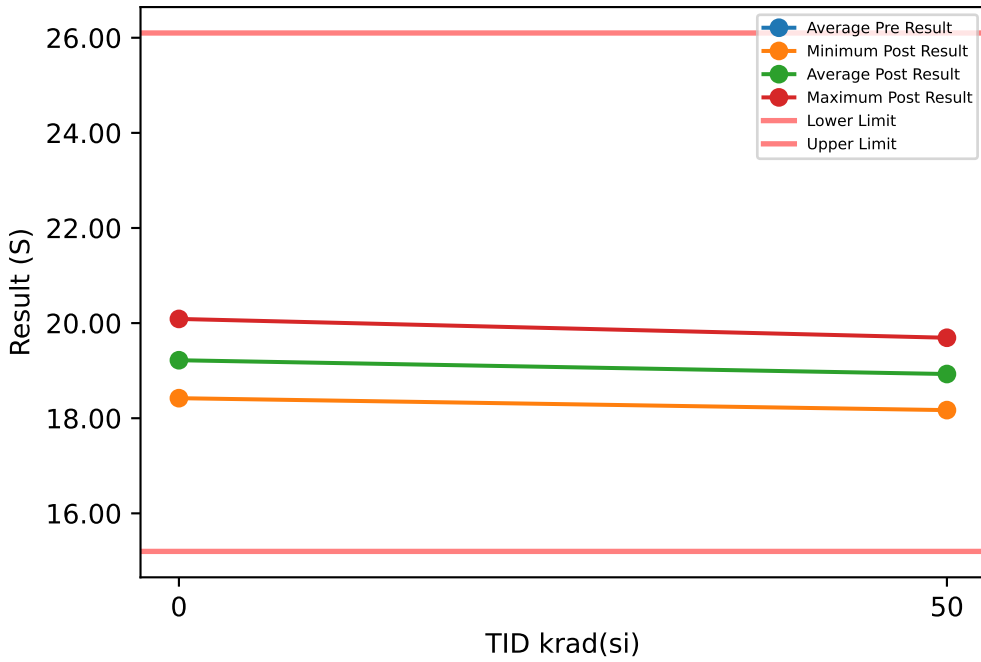
TID vs Post - Pre Exposure Delta



Test Statistics (A)

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					21.111	21.878	22.571	0.61417				
50					21.407	22.185	22.994	0.51126				

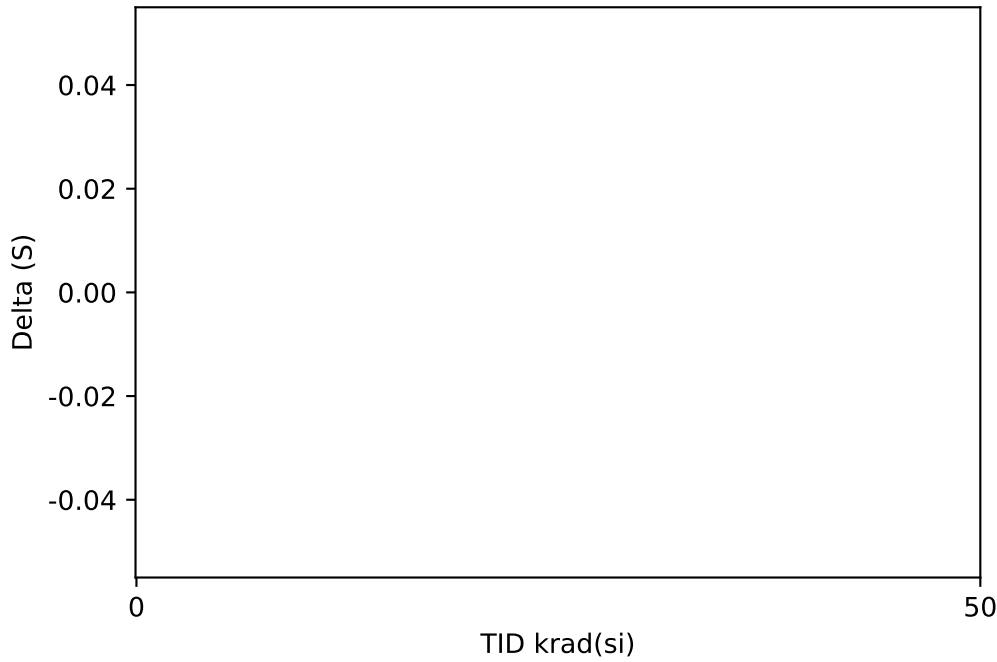
TID vs Result Stats



Test Results (Lower Limit = 15.2, Upper Limit = 26.1 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		19.692	
4	50	HDR Biased w/ 84hr anneal		19.219	
6	50	HDR Biased w/ 84hr anneal		18.337	
8	50	HDR Biased w/ 84hr anneal		18.945	
9	50	HDR Biased w/ 84hr anneal		19.312	
10	50	HDR unbiased		18.768	
11	50	HDR unbiased		19.405	
12	50	HDR unbiased		18.768	
13	50	HDR unbiased		18.68	
14	50	HDR unbiased		18.171	
26	0	Correlation		18.945	
27	0	Correlation		18.422	
28	0	Correlation		19.79	
29	0	Correlation		18.945	
30	0	Correlation		19.127	
32	0	Correlation		20.088	

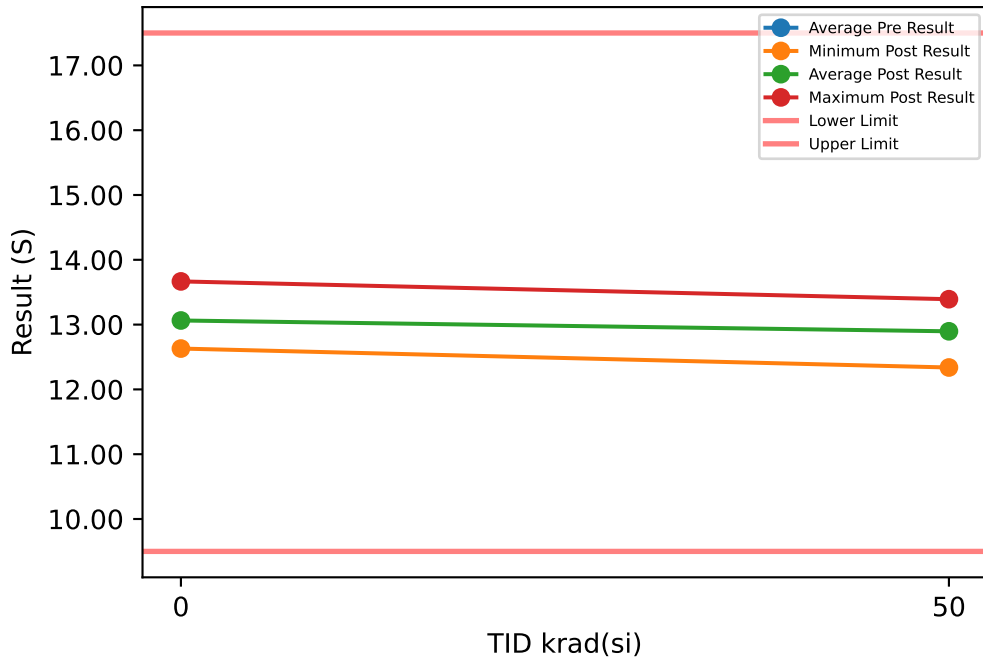
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					18.422	19.22	20.088	0.61232				
50					18.171	18.93	19.692	0.48068				

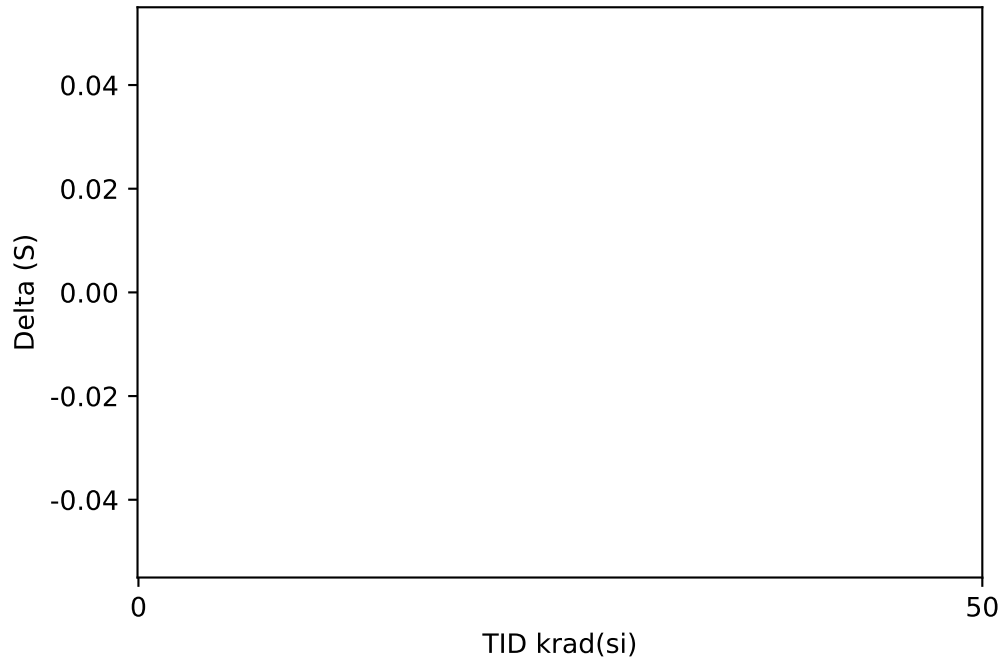
TID vs Result Stats



Test Results (Lower Limit = 9.5, Upper Limit = 17.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		13.392	
4	50	HDR Biased w/ 84hr anneal		13.259	
6	50	HDR Biased w/ 84hr anneal		12.937	
8	50	HDR Biased w/ 84hr anneal		12.512	
9	50	HDR Biased w/ 84hr anneal		13.259	
10	50	HDR unbiased		12.63	
11	50	HDR unbiased		13.128	
12	50	HDR unbiased		13	
13	50	HDR unbiased		12.338	
14	50	HDR unbiased		12.512	
26	0	Correlation		12.63	
27	0	Correlation		12.751	
28	0	Correlation		13.667	
29	0	Correlation		13.128	
30	0	Correlation		12.812	
32	0	Correlation		13.392	

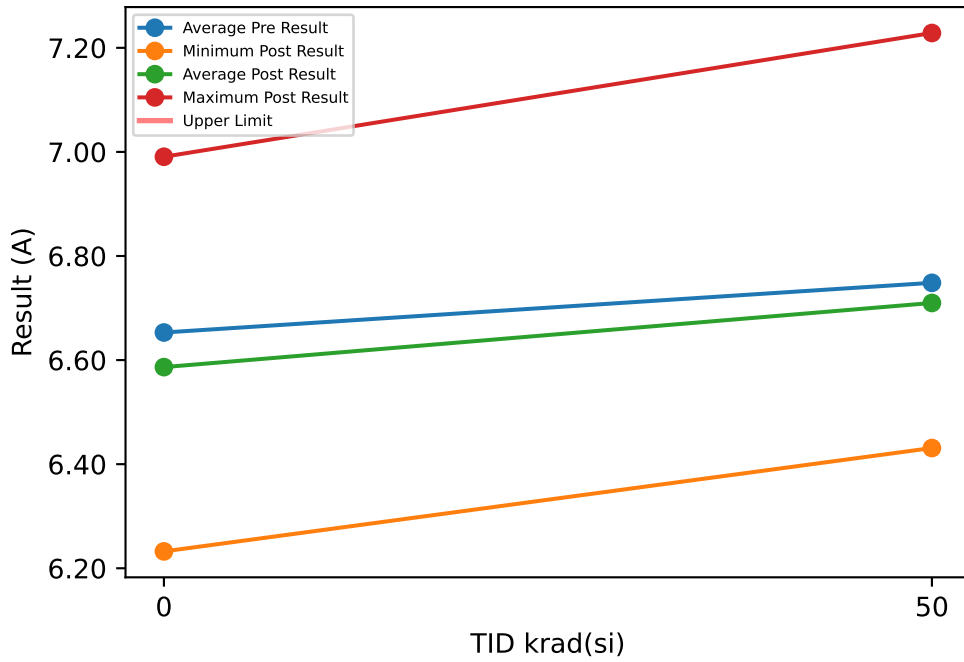
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					12.63	13.063	13.667	0.40596				
50					12.338	12.897	13.392	0.37307				

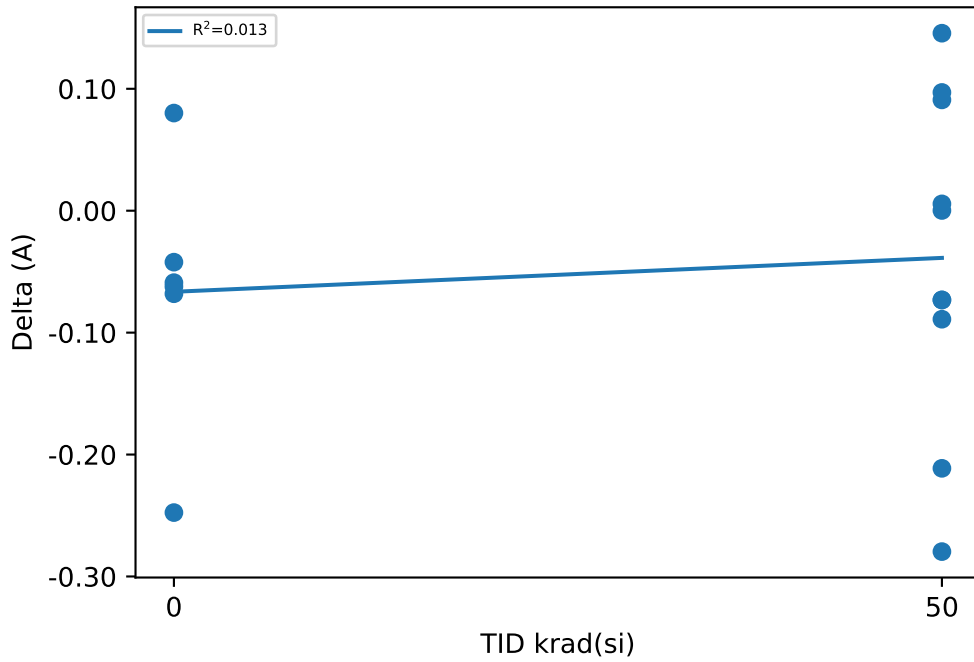
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	6.4308	6.431	0.0002
4	50	HDR Biased w/ 84hr anneal	6.9569	6.7456	-0.2113
6	50	HDR Biased w/ 84hr anneal	6.5076	6.4344	-0.0732
8	50	HDR Biased w/ 84hr anneal	6.3803	6.4712	0.0909
9	50	HDR Biased w/ 84hr anneal	6.6712	6.598	-0.0732
10	50	HDR unbiased	6.8708	7.0164	0.1456
11	50	HDR unbiased	6.9548	6.8658	-0.089
12	50	HDR unbiased	7.0188	6.7392	-0.2796
13	50	HDR unbiased	6.5619	6.5675	0.0056
14	50	HDR unbiased	7.1315	7.2285	0.097
26	0	Correlation	6.7356	6.6934	-0.0422
27	0	Correlation	6.6728	6.6138	-0.059
28	0	Correlation	6.4039	6.3417	-0.0622
29	0	Correlation	6.5669	6.647	0.0801
30	0	Correlation	6.48	6.2324	-0.2476
32	0	Correlation	7.0588	6.9907	-0.0681

TID vs Post - Pre Exposure Delta

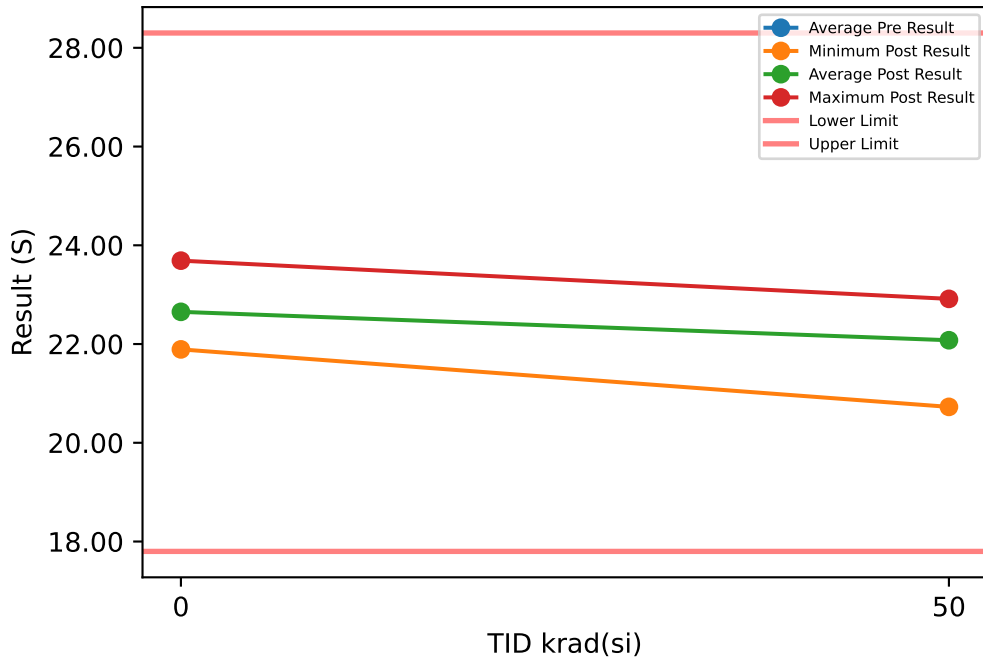


Test Statistics (A)

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	6.4039	6.653	7.0588	0.23293	6.2324	6.5865	6.9907	0.27001	-0.2476	-0.0665	0.0801	0.10484
50	6.3803	6.7485	7.1315	0.26999	6.431	6.7098	7.2285	0.26516	-0.2796	-0.0387	0.1456	0.13556



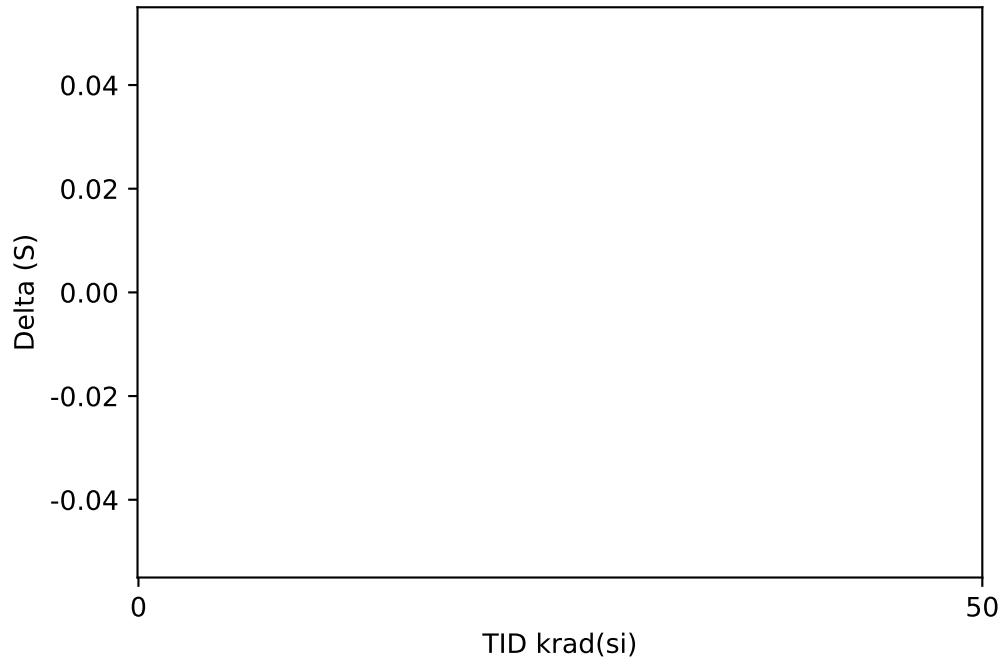
TID vs Result Stats



Test Results (Lower Limit = 17.8, Upper Limit = 28.3 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		22.16	
4	50	HDR Biased w/ 84hr anneal		22.218	
6	50	HDR Biased w/ 84hr anneal		21	
8	50	HDR Biased w/ 84hr anneal		22.622	
9	50	HDR Biased w/ 84hr anneal		21.977	
10	50	HDR unbiased		22.239	
11	50	HDR unbiased		22.833	
12	50	HDR unbiased		22.079	
13	50	HDR unbiased		22.915	
14	50	HDR unbiased		20.727	
26	0	Correlation		22.595	
27	0	Correlation		21.892	
28	0	Correlation		22.825	
29	0	Correlation		22.476	
30	0	Correlation		22.437	
32	0	Correlation		23.689	

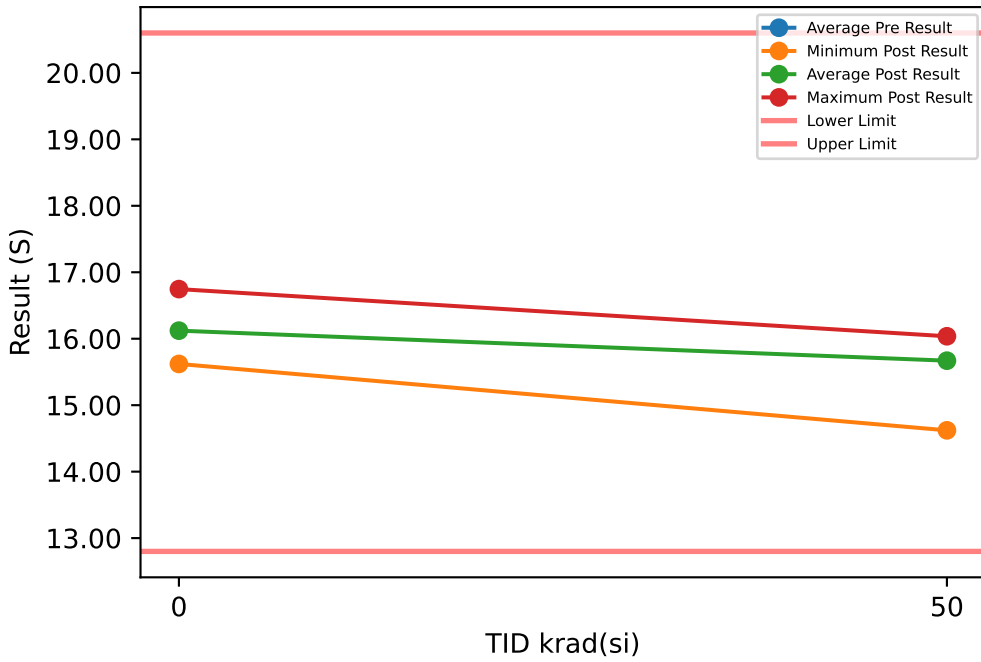
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					21.892	22.652	23.689	0.594				
50					20.727	22.077	22.915	0.7162				

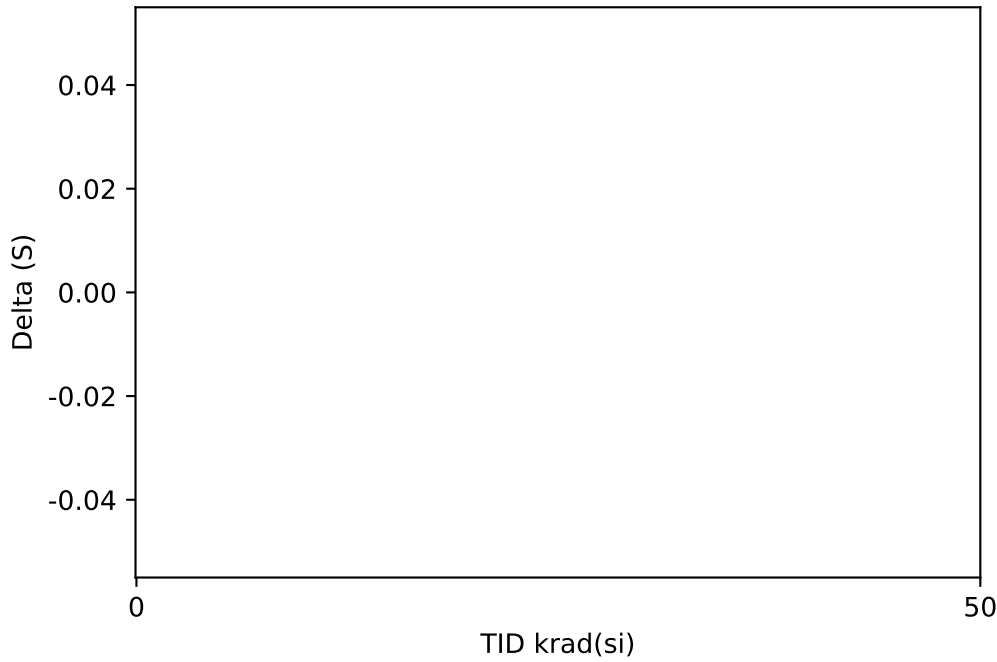
TID vs Result Stats



Test Results (Lower Limit = 12.8, Upper Limit = 20.6 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		15.946	
4	50	HDR Biased w/ 84hr anneal		15.774	
6	50	HDR Biased w/ 84hr anneal		15.255	
8	50	HDR Biased w/ 84hr anneal		16.002	
9	50	HDR Biased w/ 84hr anneal		15.746	
10	50	HDR unbiased		15.746	
11	50	HDR unbiased		15.879	
12	50	HDR unbiased		15.69	
13	50	HDR unbiased		16.037	
14	50	HDR unbiased		14.621	
26	0	Correlation		15.988	
27	0	Correlation		15.62	
28	0	Correlation		16.253	
29	0	Correlation		16.207	
30	0	Correlation		15.914	
32	0	Correlation		16.747	

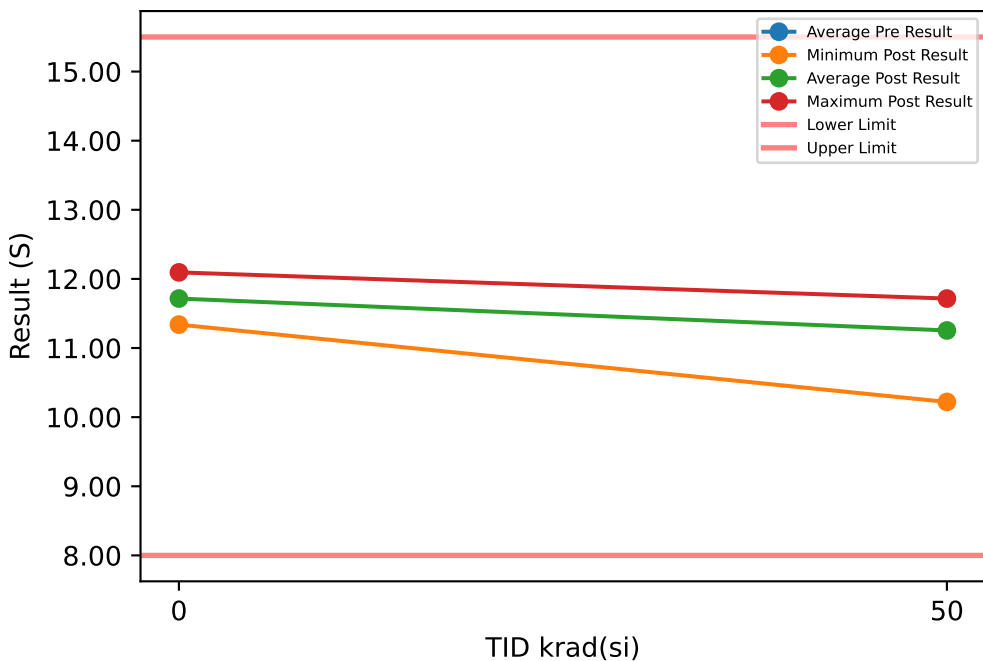
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					15.62	16.121	16.747	0.38143				
50					14.621	15.67	16.037	0.42937				

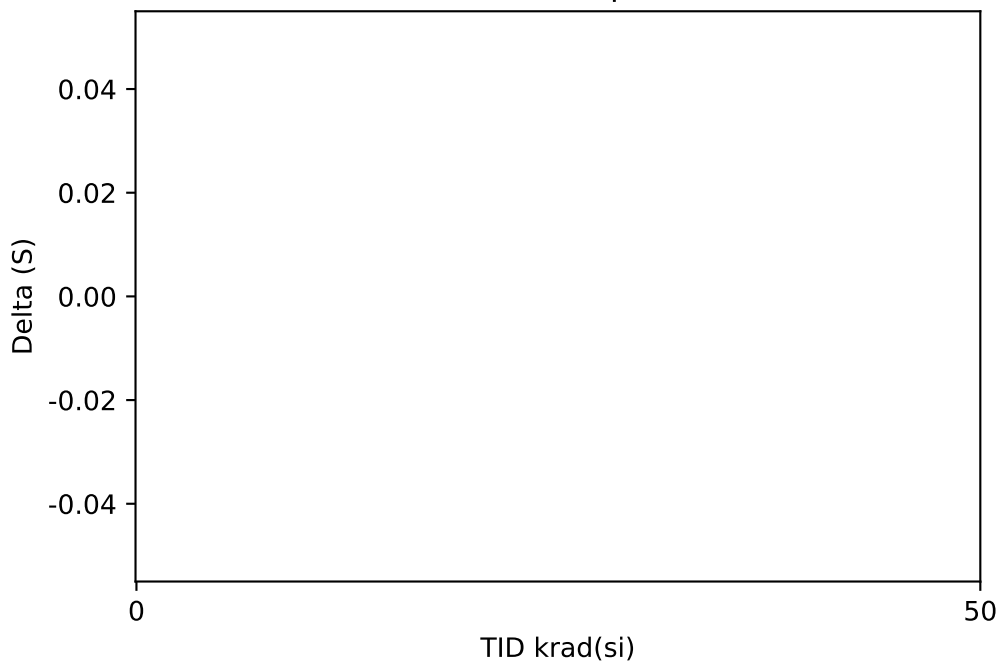
TID vs Result Stats



Test Results (Lower Limit = 8.0, Upper Limit = 15.5 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		11.425	
4	50	HDR Biased w/ 84hr anneal		11.535	
6	50	HDR Biased w/ 84hr anneal		10.848	
8	50	HDR Biased w/ 84hr anneal		11.716	
9	50	HDR Biased w/ 84hr anneal		11.251	
10	50	HDR unbiased		11.378	
11	50	HDR unbiased		11.306	
12	50	HDR unbiased		11.301	
13	50	HDR unbiased		11.566	
14	50	HDR unbiased		10.22	
26	0	Correlation		11.622	
27	0	Correlation		11.339	
28	0	Correlation		11.913	
29	0	Correlation		11.581	
30	0	Correlation		11.748	
32	0	Correlation		12.095	

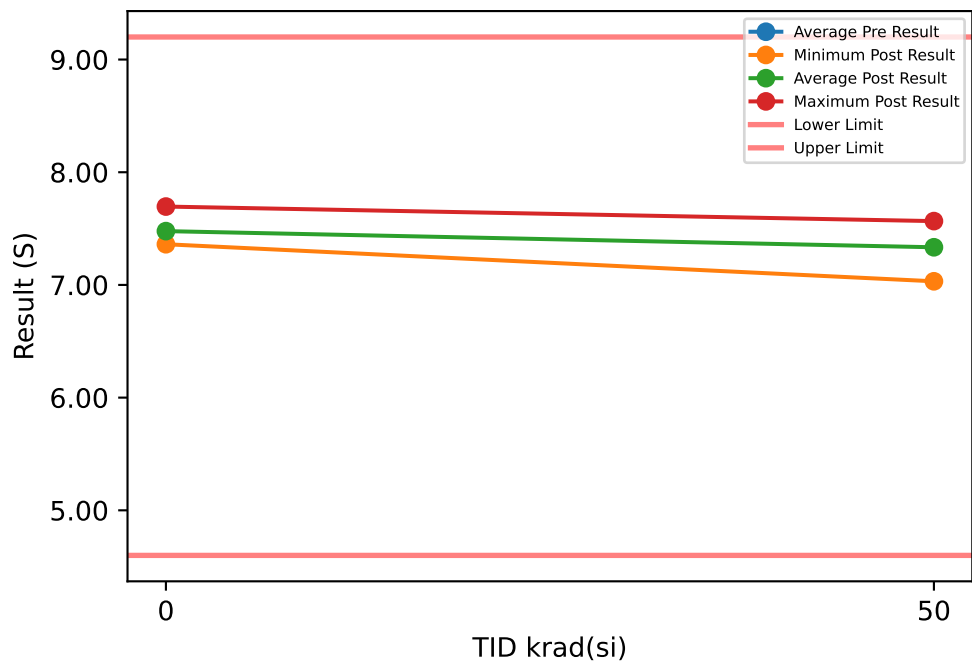
TID vs Post - Pre Exposure Delta



Test Statistics (S)

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					11.339	11.716	12.095	0.26553				
50					10.22	11.254	11.716	0.43109				

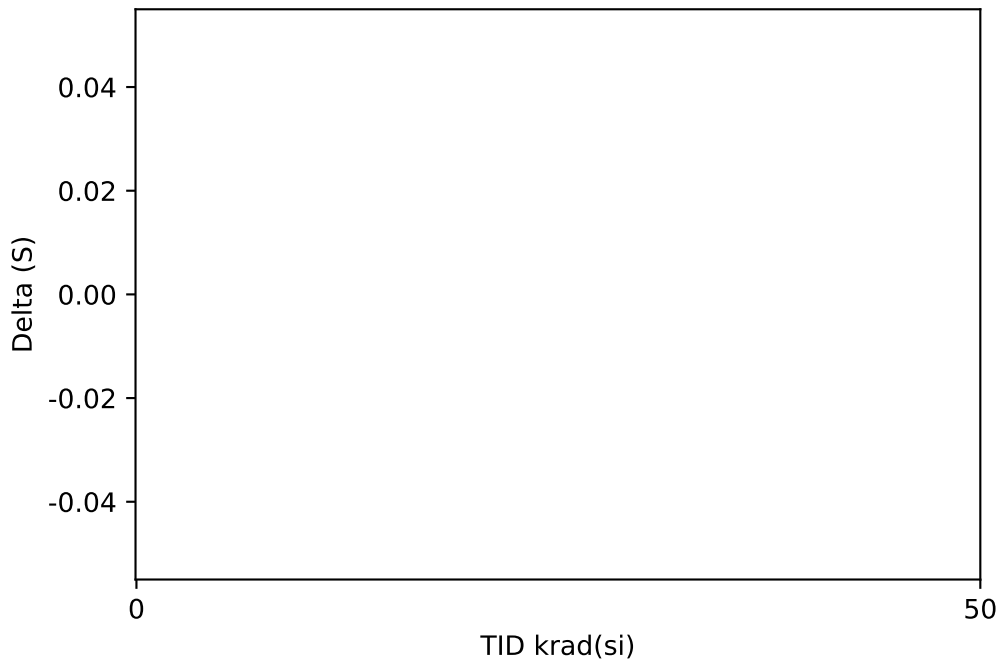
TID vs Result Stats



Test Results (Lower Limit = 4.6, Upper Limit = 9.2 (S))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		7.3754	
4	50	HDR Biased w/ 84hr anneal		7.4975	
6	50	HDR Biased w/ 84hr anneal		7.1798	
8	50	HDR Biased w/ 84hr anneal		7.2744	
9	50	HDR Biased w/ 84hr anneal		7.4541	
10	50	HDR unbiased		7.1894	
11	50	HDR unbiased		7.5663	
12	50	HDR unbiased		7.4622	
13	50	HDR unbiased		7.3099	
14	50	HDR unbiased		7.0322	
26	0	Correlation		7.4306	
27	0	Correlation		7.3611	
28	0	Correlation		7.6954	
29	0	Correlation		7.4237	
30	0	Correlation		7.4452	
32	0	Correlation		7.5085	

TID vs Post - Pre Exposure Delta



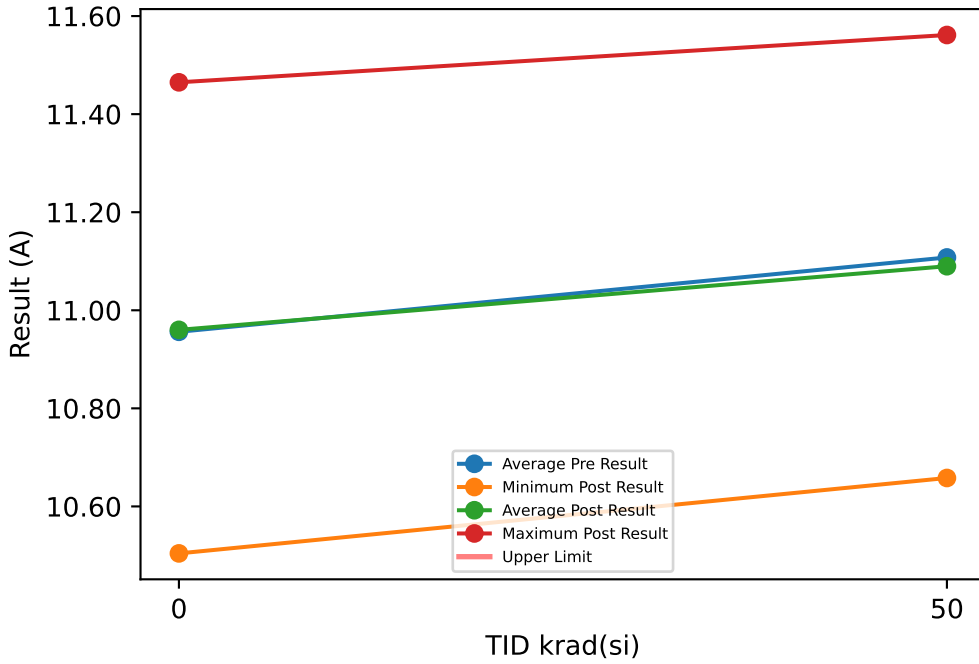
Test Statistics (S)

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					7.3611	7.4774	7.6954	0.11673				
50					7.0322	7.3341	7.5663	0.16772				





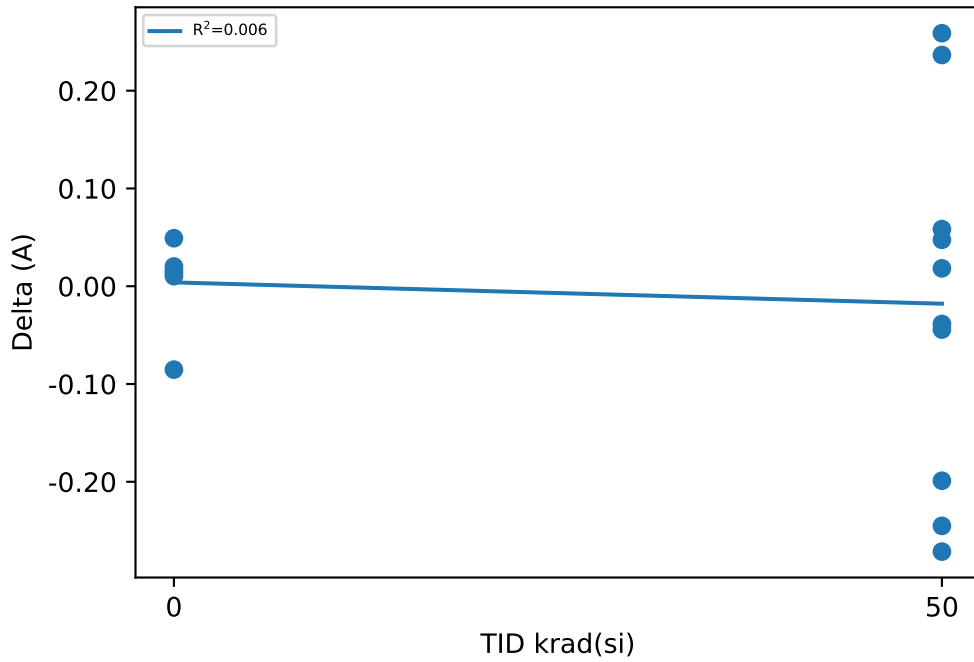
TID vs Result Stats



Test Results (No Limits Specified (A))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	10.954	10.909	-0.0443
4	50	HDR Biased w/ 84hr anneal	11.441	11.403	-0.0386
6	50	HDR Biased w/ 84hr anneal	11.013	10.768	-0.2451
8	50	HDR Biased w/ 84hr anneal	10.64	10.658	0.0183
9	50	HDR Biased w/ 84hr anneal	10.707	10.966	0.2588
10	50	HDR unbiased	11.325	11.561	0.2365
11	50	HDR unbiased	11.315	11.043	-0.2714
12	50	HDR unbiased	11.572	11.373	-0.1989
13	50	HDR unbiased	10.708	10.755	0.0475
14	50	HDR unbiased	11.404	11.462	0.0584
26	0	Correlation	11.234	11.283	0.0491
27	0	Correlation	10.905	10.919	0.0135
28	0	Correlation	10.705	10.619	-0.0853
29	0	Correlation	10.95	10.97	0.0202
30	0	Correlation	10.494	10.504	0.0103
32	0	Correlation	11.449	11.465	0.0158

TID vs Post - Pre Exposure Delta



Test Statistics (A)

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	10.494	10.956	11.449	0.34629	10.504	10.96	11.465	0.37006	-0.0853	0.0039333	0.0491	0.045913
50	10.64	11.108	11.572	0.34594	10.658	11.09	11.561	0.33192	-0.2714	-0.01788	0.2588	0.18332

















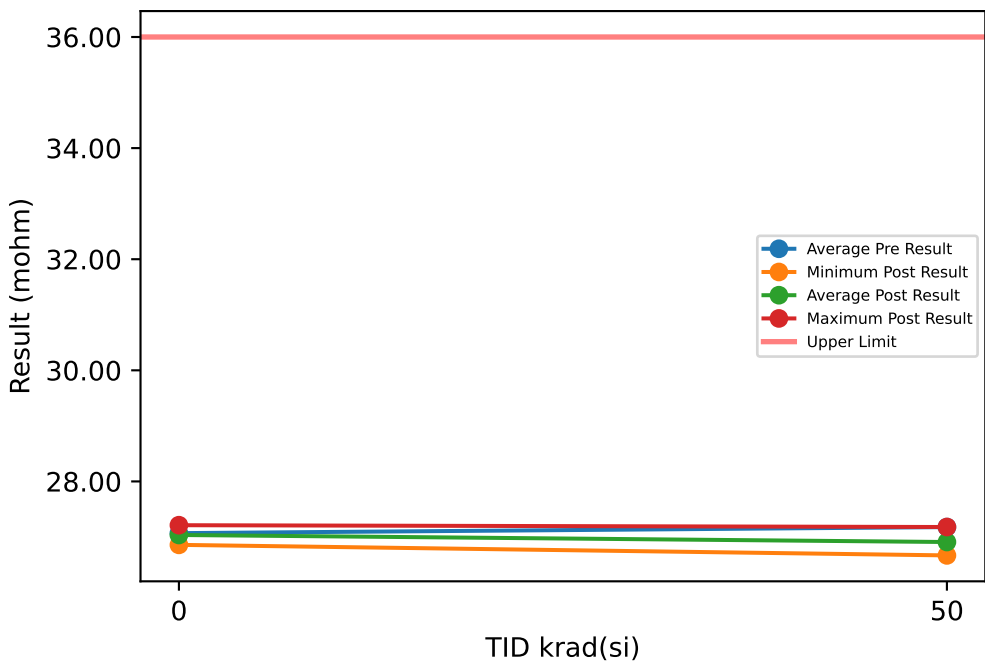




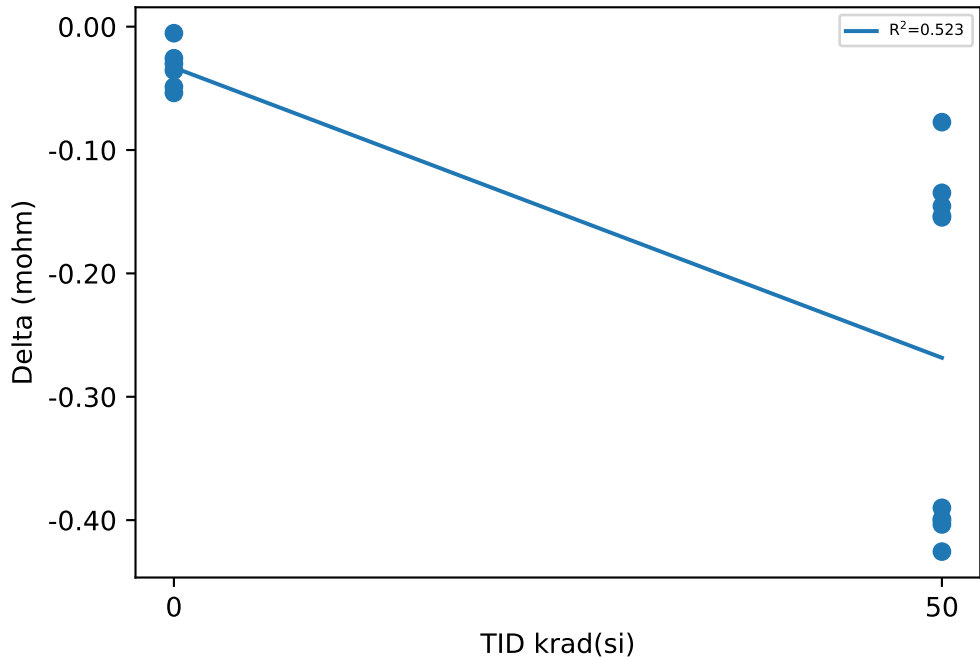




TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 36.0 (mohm))

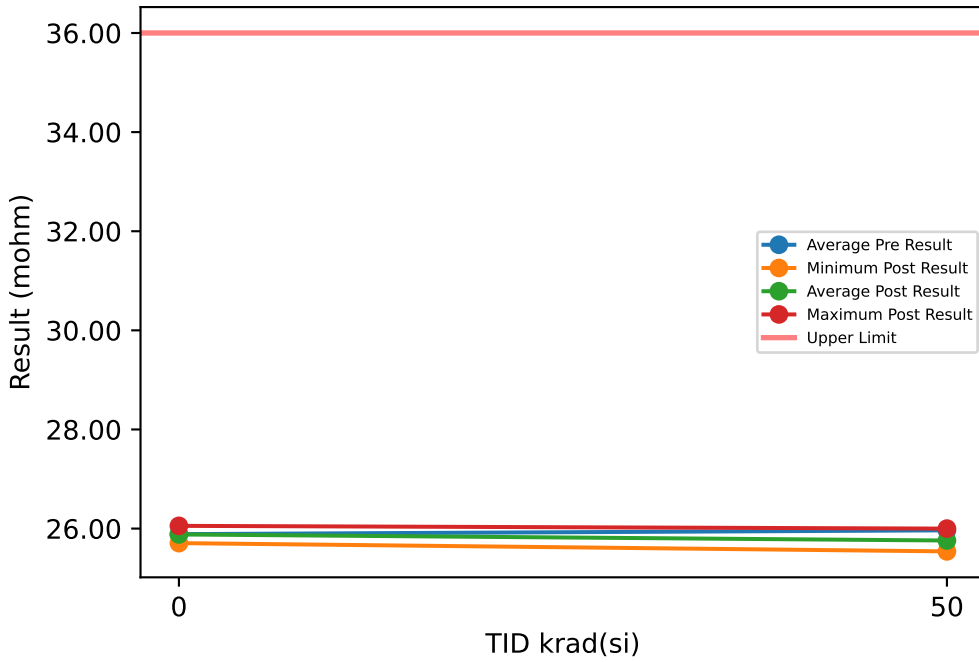
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	27.159	27.024	-0.1347
4	50	HDR Biased w/ 84hr anneal	26.991	26.836	-0.1546
6	50	HDR Biased w/ 84hr anneal	26.925	26.779	-0.1455
8	50	HDR Biased w/ 84hr anneal	27.333	27.18	-0.1533
9	50	HDR Biased w/ 84hr anneal	27.236	27.158	-0.0774
10	50	HDR unbiased	27.074	26.674	-0.4003
11	50	HDR unbiased	27.387	26.988	-0.399
12	50	HDR unbiased	27.267	26.841	-0.4255
13	50	HDR unbiased	27.349	26.946	-0.4035
14	50	HDR unbiased	27.058	26.669	-0.39
26	0	Correlation	27.11	27.062	-0.0488
27	0	Correlation	27.016	26.962	-0.0537
28	0	Correlation	27.053	27.027	-0.0256
29	0	Correlation	26.894	26.858	-0.0355
30	0	Correlation	27.217	27.212	-0.0053
32	0	Correlation	27.124	27.094	-0.03

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	26.894	27.069	27.217	0.11001	26.858	27.036	27.212	0.12008	-0.0537	-0.03315	-0.0053	0.017409
50	26.925	27.178	27.387	0.16092	26.669	26.909	27.18	0.1814	-0.4255	-0.26838	-0.0774	0.14447

# Device Test: 21.15 R\_LOWSIDE\_12V\_25C(\_LEVEL|LOWSIDE/SW/12/12///@R\_LOWSIDE\_12V\_25C )

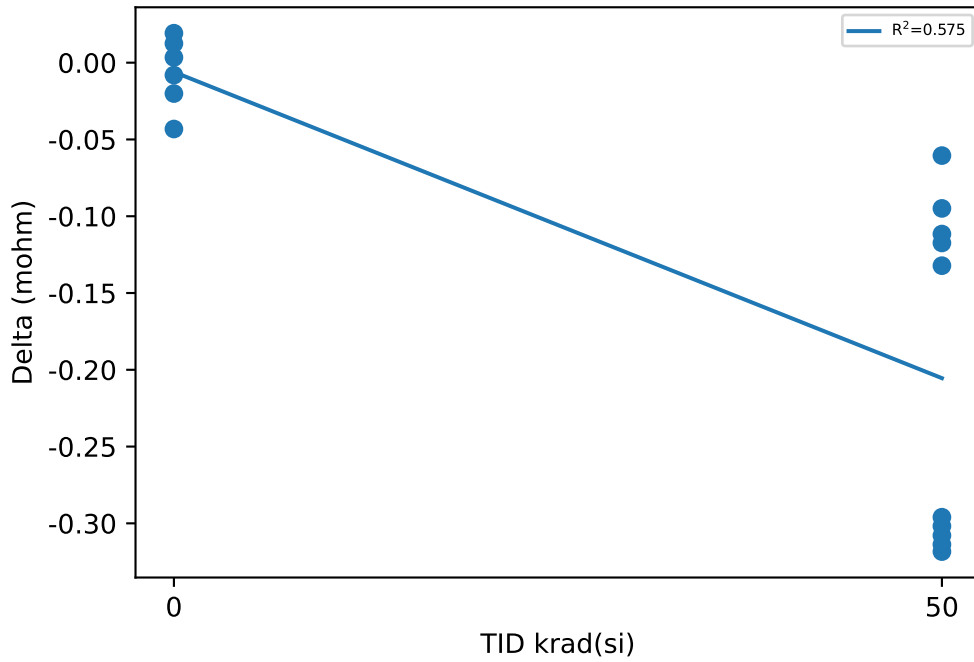
### TID vs Result Stats



### Test Results (Upper Limit = 36.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	25.949	25.854	-0.0949
4	50	HDR Biased w/ 84hr anneal	25.776	25.665	-0.1116
6	50	HDR Biased w/ 84hr anneal	25.752	25.635	-0.1174
8	50	HDR Biased w/ 84hr anneal	26.132	25.999	-0.1322
9	50	HDR Biased w/ 84hr anneal	26.014	25.953	-0.0605
10	50	HDR unbiased	25.878	25.576	-0.3018
11	50	HDR unbiased	26.173	25.865	-0.3079
12	50	HDR unbiased	26.036	25.718	-0.3184
13	50	HDR unbiased	26.082	25.786	-0.296
14	50	HDR unbiased	25.853	25.54	-0.3138
26	0	Correlation	25.924	25.916	-0.0081
27	0	Correlation	25.827	25.784	-0.0432
28	0	Correlation	25.863	25.875	0.0125
29	0	Correlation	25.727	25.706	-0.0201
30	0	Correlation	26.036	26.055	0.0192
32	0	Correlation	25.951	25.954	0.0034

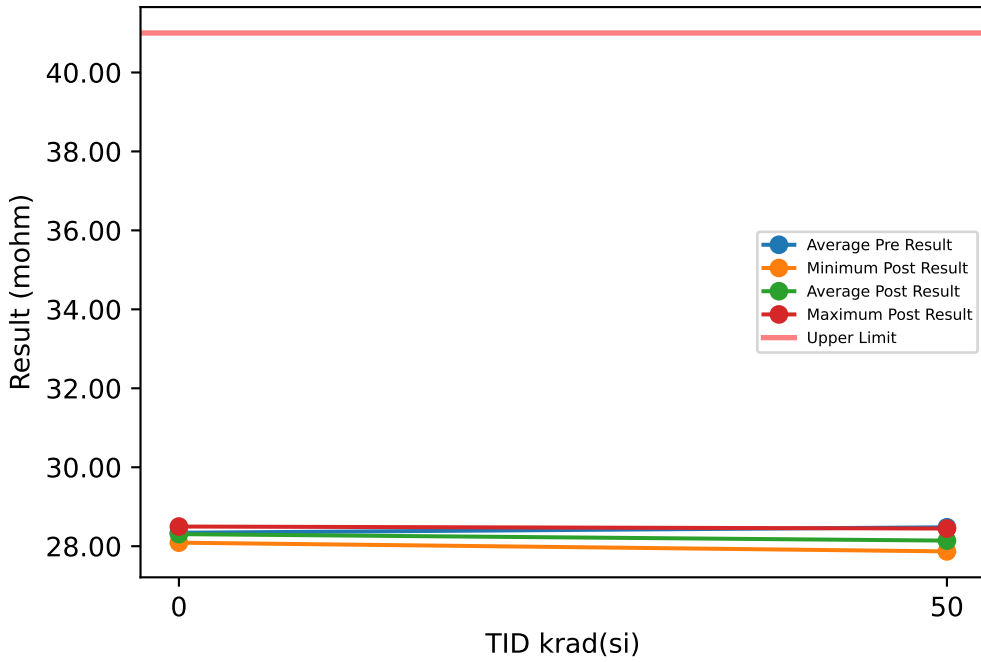
### TID vs Post - Pre Exposure Delta



### Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	25.727	25.888	26.036	0.10723	25.706	25.882	26.055	0.12394	-0.0432	-0.00605	0.0192	0.023033
50	25.752	25.965	26.173	0.14656	25.54	25.759	25.999	0.15779	-0.3184	-0.20545	-0.0605	0.10936

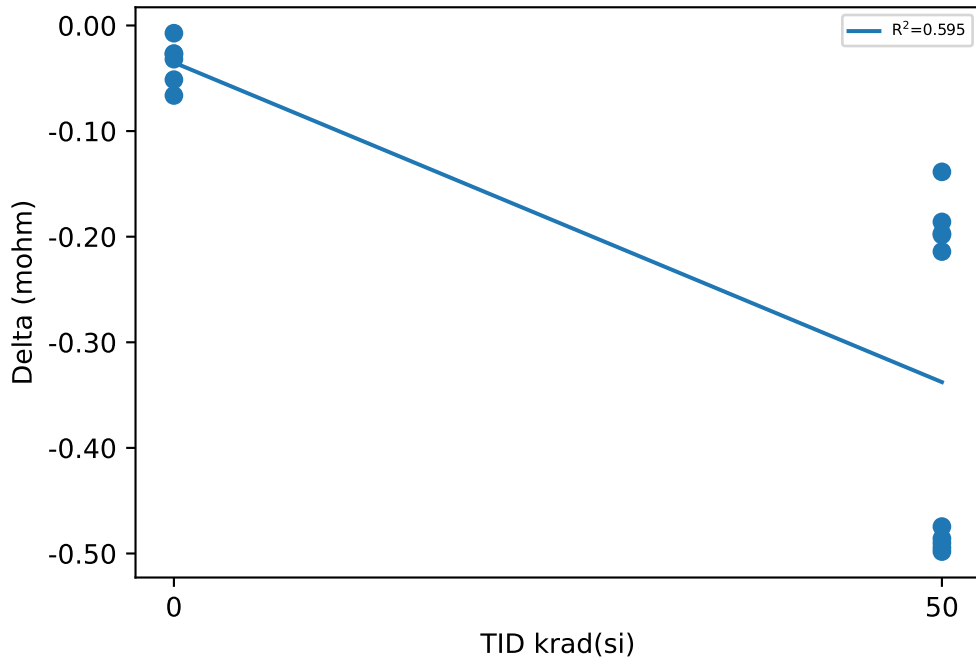
TID vs Result Stats



Test Results (Upper Limit = 41.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	28.455	28.269	-0.186
4	50	HDR Biased w/ 84hr anneal	28.318	28.104	-0.2141
6	50	HDR Biased w/ 84hr anneal	28.205	28.008	-0.197
8	50	HDR Biased w/ 84hr anneal	28.645	28.447	-0.1983
9	50	HDR Biased w/ 84hr anneal	28.53	28.391	-0.1386
10	50	HDR unbiased	28.376	27.882	-0.4945
11	50	HDR unbiased	28.662	28.176	-0.4858
12	50	HDR unbiased	28.535	28.045	-0.49
13	50	HDR unbiased	28.723	28.225	-0.4982
14	50	HDR unbiased	28.343	27.868	-0.4745
26	0	Correlation	28.403	28.352	-0.0513
27	0	Correlation	28.263	28.197	-0.0663
28	0	Correlation	28.373	28.346	-0.027
29	0	Correlation	28.121	28.089	-0.0319
30	0	Correlation	28.506	28.498	-0.0073
32	0	Correlation	28.379	28.353	-0.0266

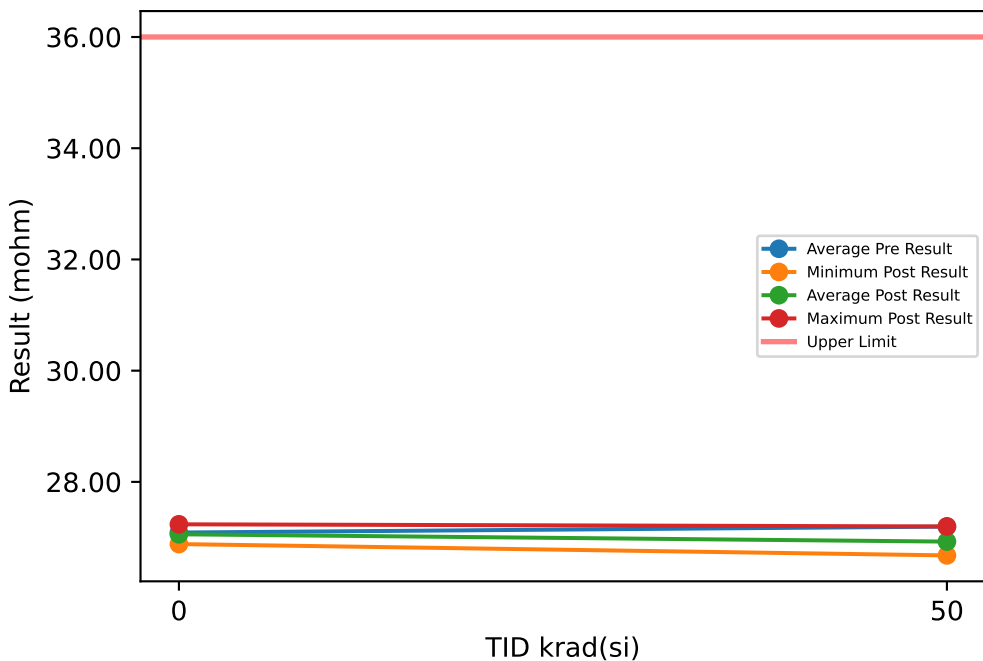
TID vs Post - Pre Exposure Delta



Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	28.121	28.341	28.506	0.13257	28.089	28.306	28.498	0.14268	-0.0663	-0.035067	-0.0073	0.020769
50	28.205	28.479	28.723	0.169	27.868	28.142	28.447	0.19745	-0.4982	-0.3377	-0.1386	0.16033

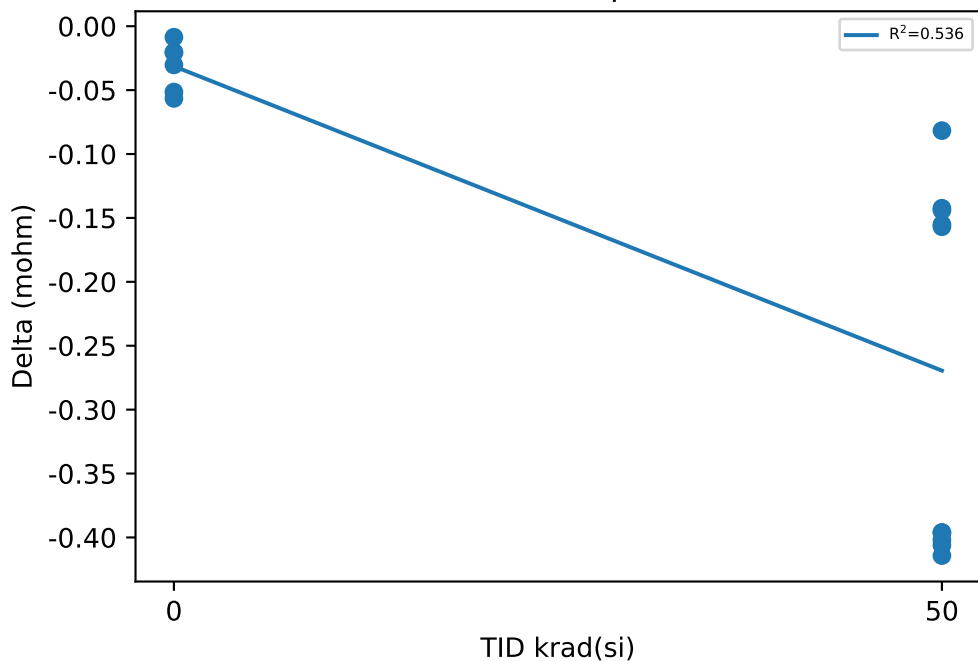
TID vs Result Stats



Test Results (Upper Limit = 36.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	27.177	27.033	-0.144
4	50	HDR Biased w/ 84hr anneal	27.009	26.854	-0.1551
6	50	HDR Biased w/ 84hr anneal	26.942	26.8	-0.1424
8	50	HDR Biased w/ 84hr anneal	27.356	27.199	-0.1569
9	50	HDR Biased w/ 84hr anneal	27.257	27.176	-0.0817
10	50	HDR unbiased	27.091	26.695	-0.3961
11	50	HDR unbiased	27.404	27.002	-0.4019
12	50	HDR unbiased	27.276	26.862	-0.4142
13	50	HDR unbiased	27.372	26.966	-0.4061
14	50	HDR unbiased	27.075	26.678	-0.3963
26	0	Correlation	27.132	27.076	-0.0565
27	0	Correlation	27.035	26.983	-0.0515
28	0	Correlation	27.067	27.047	-0.0204
29	0	Correlation	26.912	26.882	-0.0303
30	0	Correlation	27.246	27.237	-0.0086
32	0	Correlation	27.143	27.122	-0.0206

TID vs Post - Pre Exposure Delta

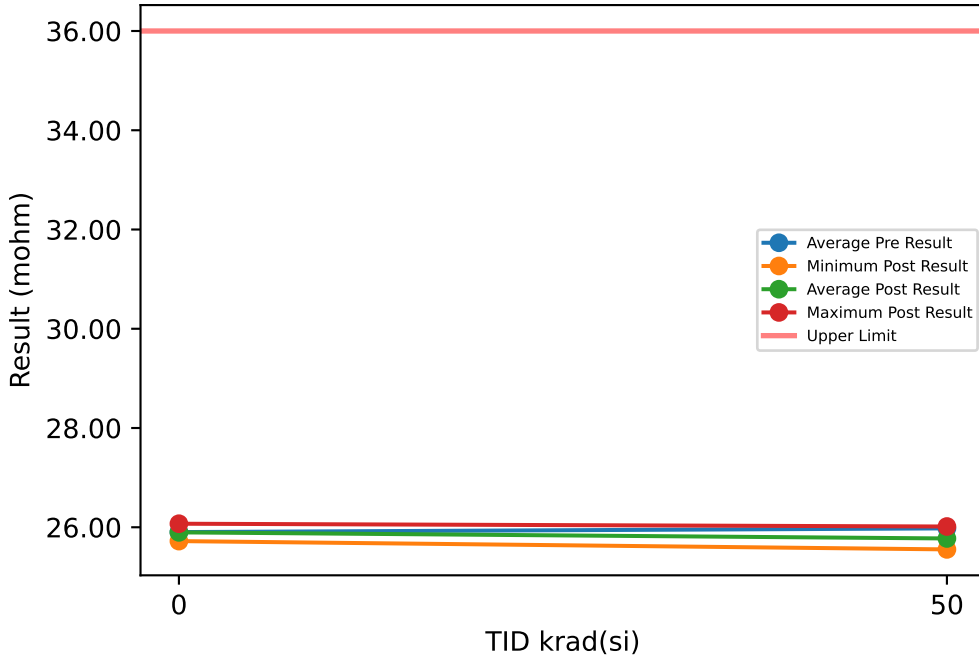


Test Statistics (mohm)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	26.912	27.089	27.246	0.11324	26.882	27.058	27.237	0.12113	-0.0565	-0.031317	-0.0086	0.018935
50	26.942	27.196	27.404	0.16179	26.678	26.926	27.199	0.1812	-0.4142	-0.26947	-0.0817	0.14227

Device Test: 21.21 R\_LOWSIDE\_14V\_25C(\_LEVEL|LOWSIDE/SW/14/12///@R\_LOWSIDE\_14V\_25C )

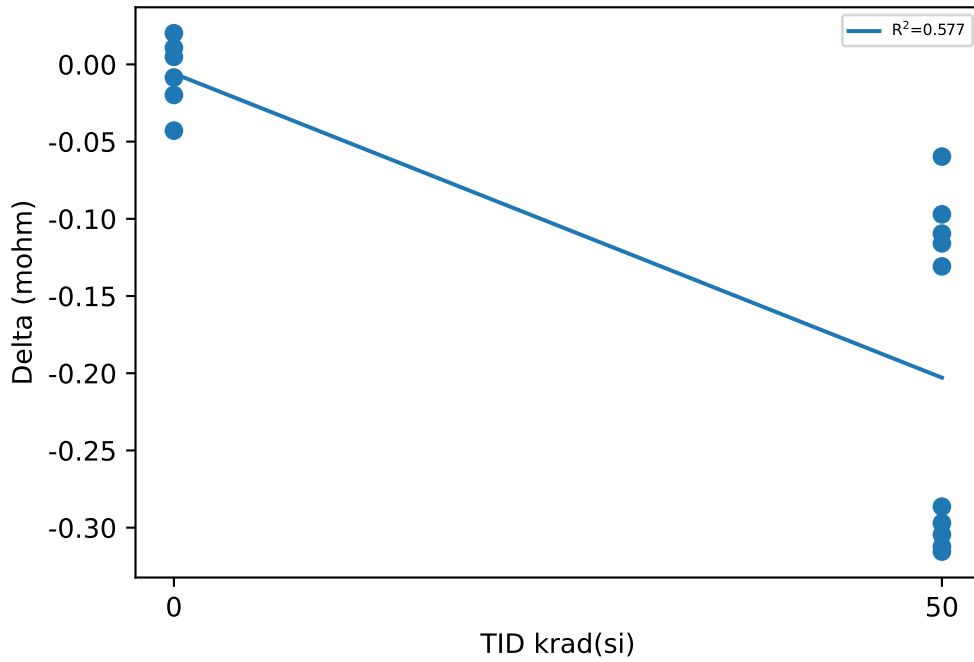
TID vs Result Stats



Test Results (Upper Limit = 36.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	25.965	25.868	-0.0971
4	50	HDR Biased w/ 84hr anneal	25.79	25.68	-0.1096
6	50	HDR Biased w/ 84hr anneal	25.766	25.651	-0.1159
8	50	HDR Biased w/ 84hr anneal	26.146	26.015	-0.1308
9	50	HDR Biased w/ 84hr anneal	26.028	25.969	-0.0597
10	50	HDR unbiased	25.877	25.591	-0.2864
11	50	HDR unbiased	26.187	25.882	-0.3045
12	50	HDR unbiased	26.05	25.734	-0.3155
13	50	HDR unbiased	26.099	25.802	-0.297
14	50	HDR unbiased	25.866	25.554	-0.3122
26	0	Correlation	25.941	25.933	-0.0085
27	0	Correlation	25.841	25.798	-0.0429
28	0	Correlation	25.88	25.891	0.0107
29	0	Correlation	25.741	25.721	-0.0198
30	0	Correlation	26.051	26.071	0.0202
32	0	Correlation	25.965	25.969	0.0049

TID vs Post - Pre Exposure Delta

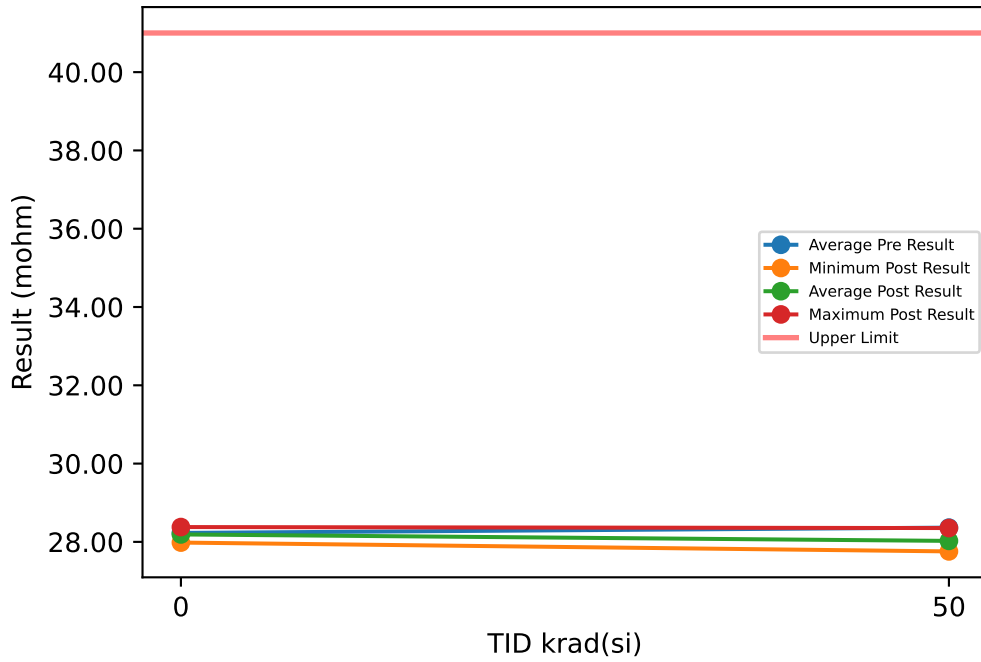


Test Statistics (mohm)

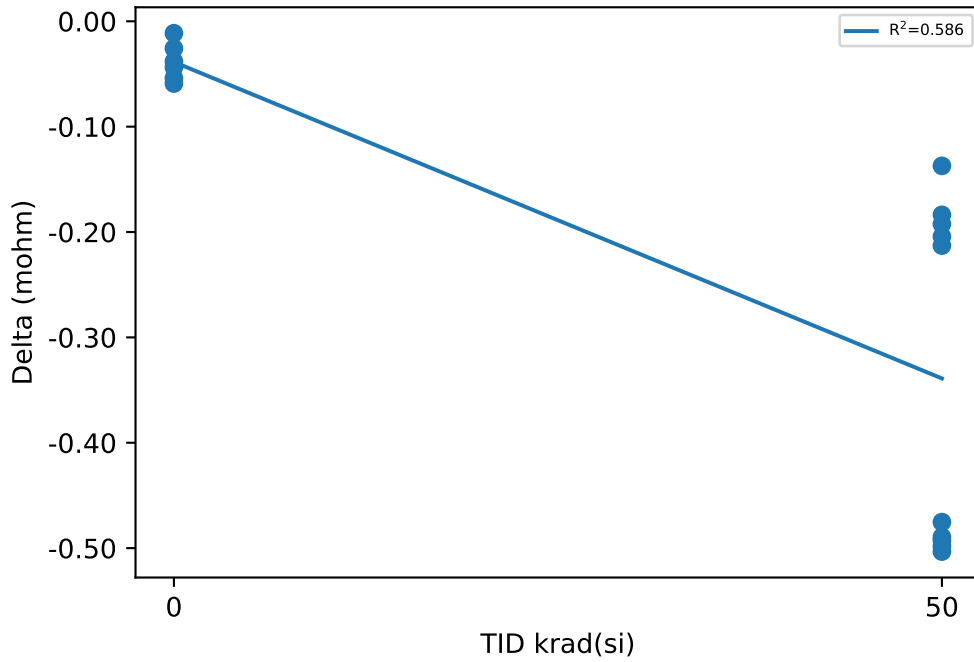
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	25.741	25.903	26.051	0.10759	25.721	25.897	26.071	0.12469	-0.0429	-0.0059	0.0202	0.022989
50	25.766	25.977	26.187	0.14798	25.554	25.774	26.015	0.15811	-0.3155	-0.20287	-0.0597	0.10747

Device Test: 21.3 R\_LOWSIDE\_4V\_25C(\_LEVEL|LOWSIDE/SW/4.5/12///@R\_LOWSIDE\_4V\_25C )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



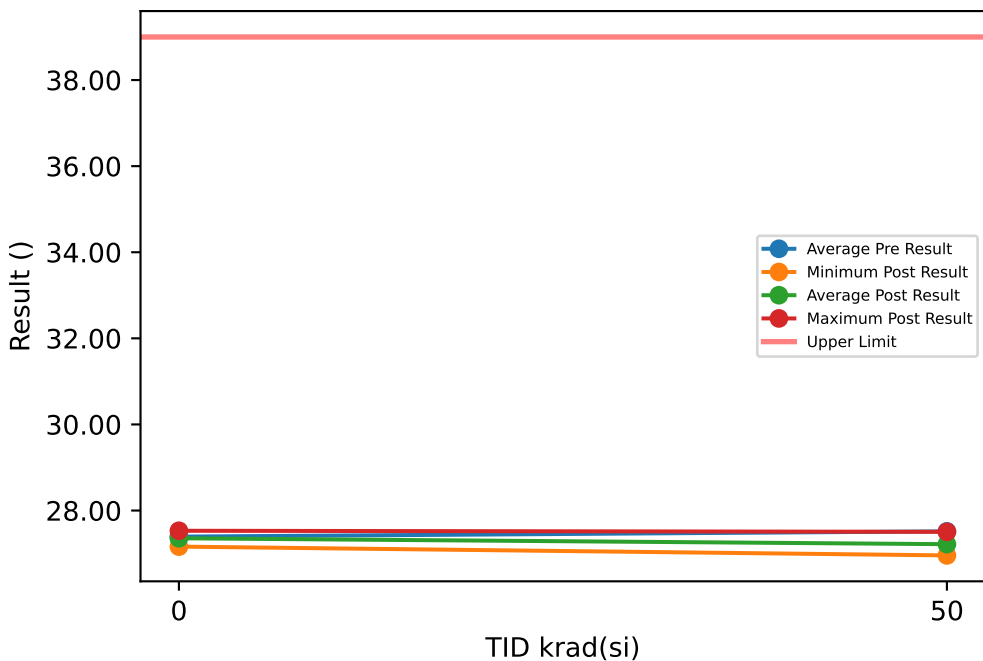
Test Results (Upper Limit = 41.0 (mohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	28.347	28.143	-0.2042
4	50	HDR Biased w/ 84hr anneal	28.189	27.976	-0.2129
6	50	HDR Biased w/ 84hr anneal	28.093	27.901	-0.1924
8	50	HDR Biased w/ 84hr anneal	28.537	28.353	-0.1837
9	50	HDR Biased w/ 84hr anneal	28.419	28.282	-0.1372
10	50	HDR unbiased	28.268	27.769	-0.4983
11	50	HDR unbiased	28.549	28.06	-0.4894
12	50	HDR unbiased	28.417	27.924	-0.4929
13	50	HDR unbiased	28.591	28.087	-0.5033
14	50	HDR unbiased	28.232	27.757	-0.4753
26	0	Correlation	28.29	28.236	-0.054
27	0	Correlation	28.141	28.082	-0.0591
28	0	Correlation	28.269	28.225	-0.0437
29	0	Correlation	28.02	27.982	-0.038
30	0	Correlation	28.39	28.379	-0.0113
32	0	Correlation	28.263	28.237	-0.0257

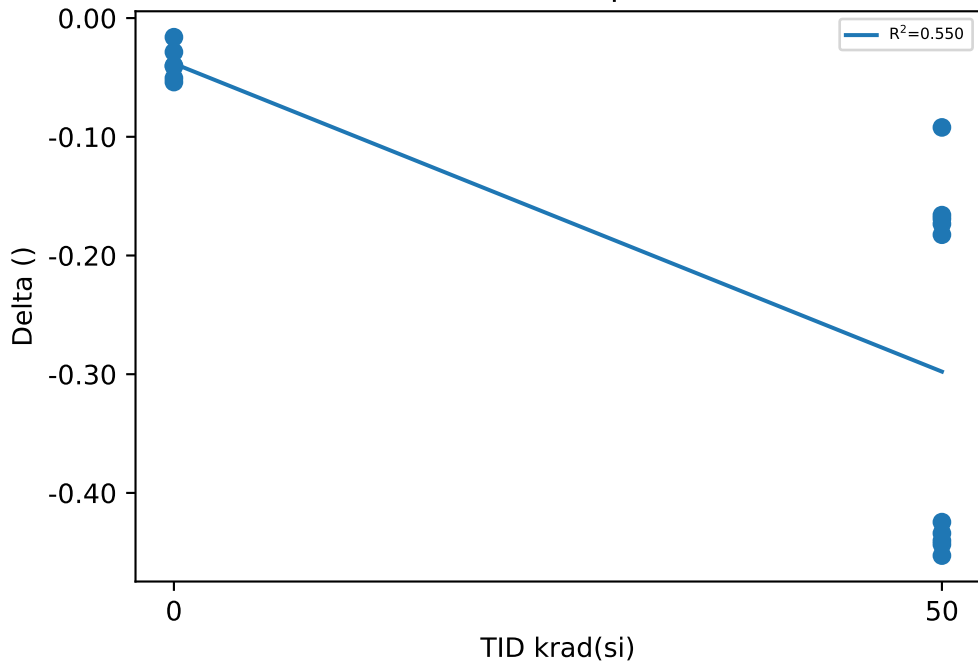
Test Statistics (mohm)

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	28.02	28.229	28.39	0.12944	27.982	28.19	28.379	0.13864	-0.0591	-0.038633	-0.0113	0.017863
50	28.093	28.364	28.591	0.16754	27.757	28.025	28.353	0.19946	-0.5033	-0.33896	-0.1372	0.1625

TID vs Result Stats



TID vs Post - Pre Exposure Delta



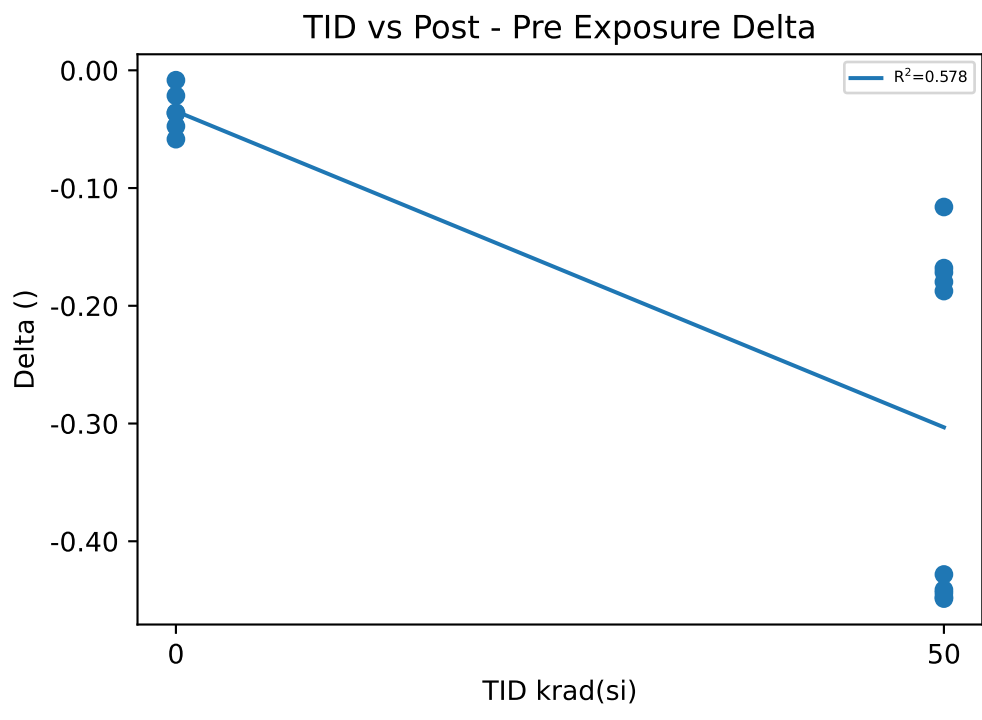
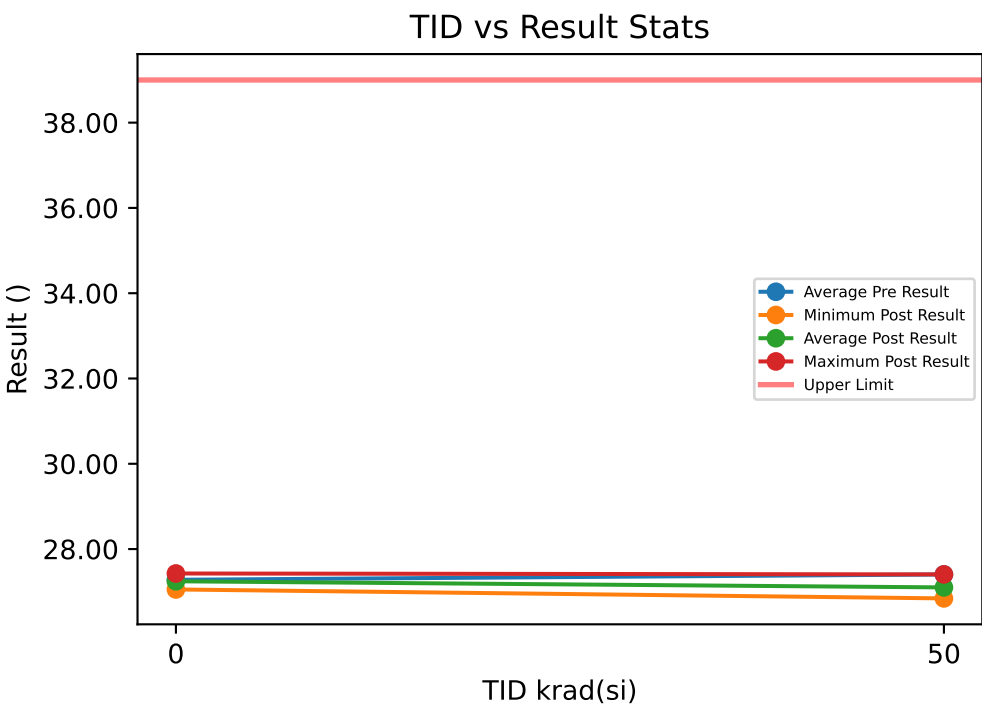
Test Results (Upper Limit = 39.0 (rad))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	27.494	27.328	-0.166
4	50	HDR Biased w/ 84hr anneal	27.337	27.168	-0.169
6	50	HDR Biased w/ 84hr anneal	27.269	27.096	-0.1734
8	50	HDR Biased w/ 84hr anneal	27.688	27.505	-0.1825
9	50	HDR Biased w/ 84hr anneal	27.557	27.465	-0.0921
10	50	HDR unbiased	27.433	26.99	-0.4434
11	50	HDR unbiased	27.717	27.276	-0.4403
12	50	HDR unbiased	27.573	27.139	-0.434
13	50	HDR unbiased	27.714	27.261	-0.4528
14	50	HDR unbiased	27.383	26.958	-0.4246
26	0	Correlation	27.452	27.398	-0.0539
27	0	Correlation	27.312	27.262	-0.0506
28	0	Correlation	27.412	27.372	-0.0401
29	0	Correlation	27.203	27.162	-0.0406
30	0	Correlation	27.546	27.53	-0.0161
32	0	Correlation	27.439	27.411	-0.0286

Test Statistics (rad)

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	27.203	27.394	27.546	0.12018	27.162	27.356	27.53	0.12797	-0.0539	-0.038317	-0.0161	0.014072
50	27.269	27.516	27.717	0.16062	26.958	27.219	27.505	0.18403	-0.4528	-0.29781	-0.0921	0.151





**Test Results (Upper Limit = 39.0 ( ))**

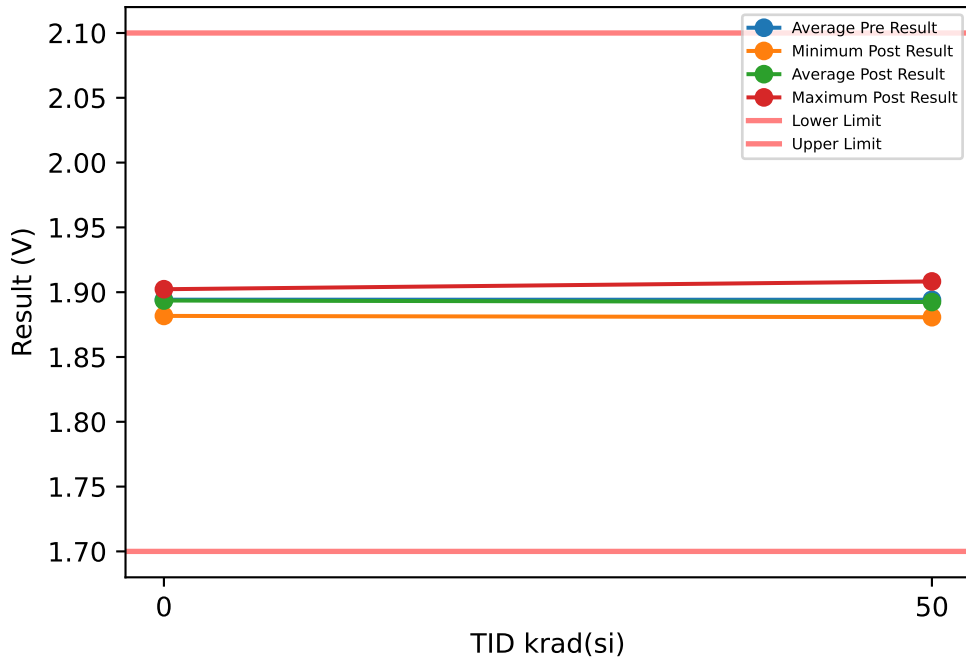
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	27.389	27.21	-0.1797
4	50	HDR Biased w/ 84hr anneal	27.221	27.034	-0.1875
6	50	HDR Biased w/ 84hr anneal	27.163	26.991	-0.1716
8	50	HDR Biased w/ 84hr anneal	27.574	27.406	-0.168
9	50	HDR Biased w/ 84hr anneal	27.455	27.339	-0.1161
10	50	HDR unbiased	27.324	26.876	-0.4474
11	50	HDR unbiased	27.599	27.158	-0.4412
12	50	HDR unbiased	27.458	27.015	-0.4438
13	50	HDR unbiased	27.587	27.138	-0.4487
14	50	HDR unbiased	27.271	26.843	-0.4282
26	0	Correlation	27.336	27.288	-0.0475
27	0	Correlation	27.194	27.136	-0.0585
28	0	Correlation	27.302	27.265	-0.036
29	0	Correlation	27.089	27.053	-0.0364
30	0	Correlation	27.436	27.427	-0.0084
32	0	Correlation	27.32	27.299	-0.0216

**Test Statistics ( )**

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	27.089	27.279	27.436	0.12101	27.053	27.245	27.427	0.13215	-0.0585	-0.034733	-0.0084	0.017878
50	27.163	27.404	27.599	0.15705	26.843	27.101	27.406	0.18478	-0.4487	-0.30322	-0.1161	0.14744

Device Test: 22.1 V\_COMP\_SD(\_LEVEL|RISE/COMP/4.5////@V\_COMP\_SD )

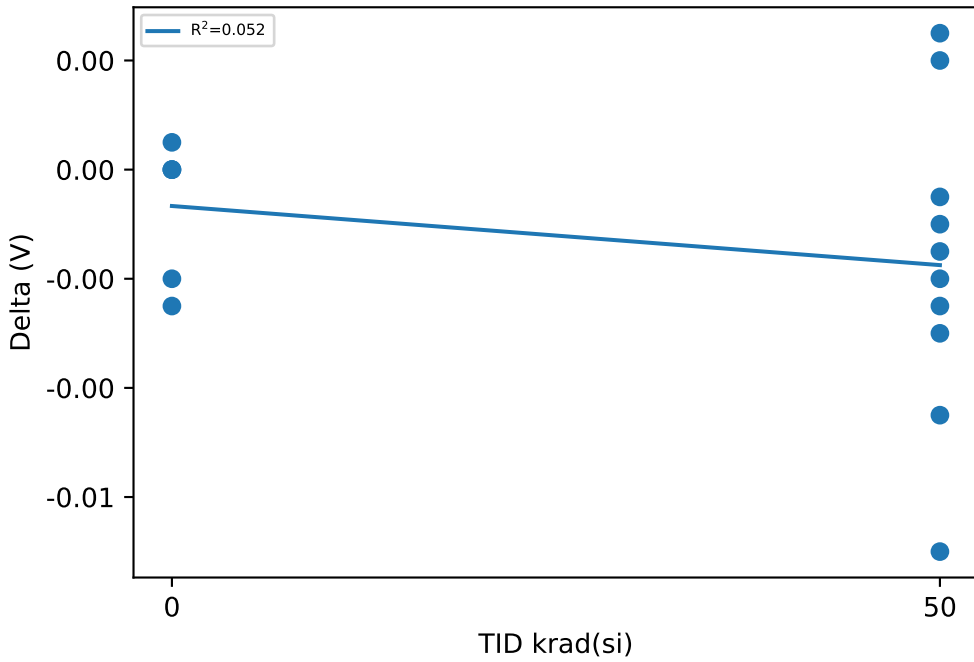
TID vs Result Stats



Test Results (Lower Limit = 1.7, Upper Limit = 2.1 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.8952	1.8882	-0.007
4	50	HDR Biased w/ 84hr anneal	1.8957	1.8932	-0.0025
6	50	HDR Biased w/ 84hr anneal	1.9053	1.9043	-0.001
8	50	HDR Biased w/ 84hr anneal	1.8812	1.8807	-0.0005
9	50	HDR Biased w/ 84hr anneal	1.9128	1.9083	-0.0045
10	50	HDR unbiased	1.8932	1.8902	-0.003
11	50	HDR unbiased	1.8927	1.8912	-0.0015
12	50	HDR unbiased	1.8907	1.8887	-0.002
13	50	HDR unbiased	1.8907	1.8927	0.002
14	50	HDR unbiased	1.8842	1.8867	0.0025
26	0	Correlation	1.9018	1.9023	0.0005
27	0	Correlation	1.8957	1.8937	-0.002
28	0	Correlation	1.8952	1.8927	-0.0025
29	0	Correlation	1.9018	1.9018	0
30	0	Correlation	1.8817	1.8817	0
32	0	Correlation	1.8892	1.8892	0

TID vs Post - Pre Exposure Delta

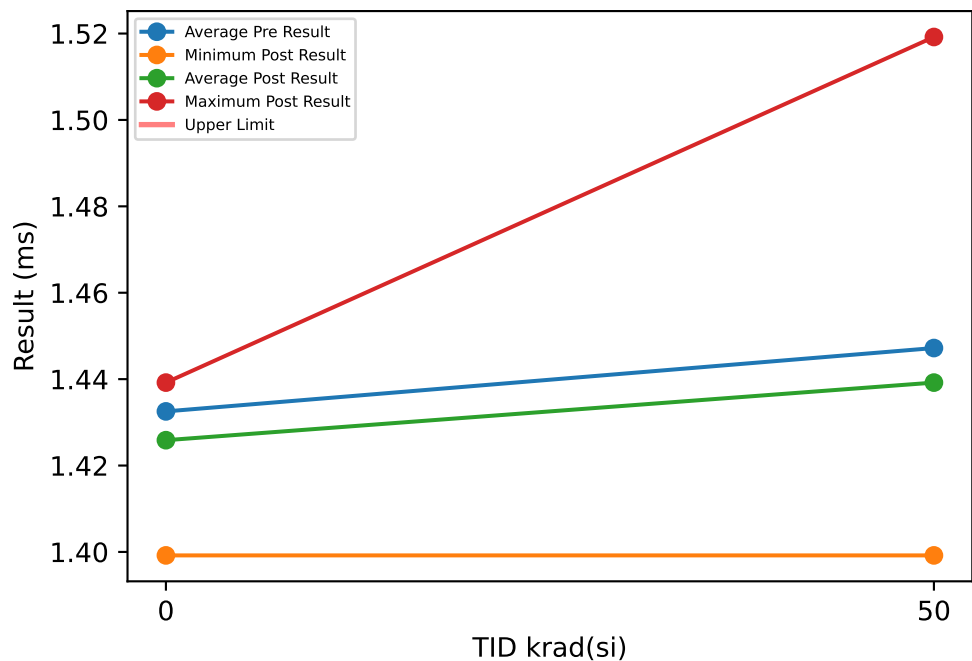


Test Statistics (V)

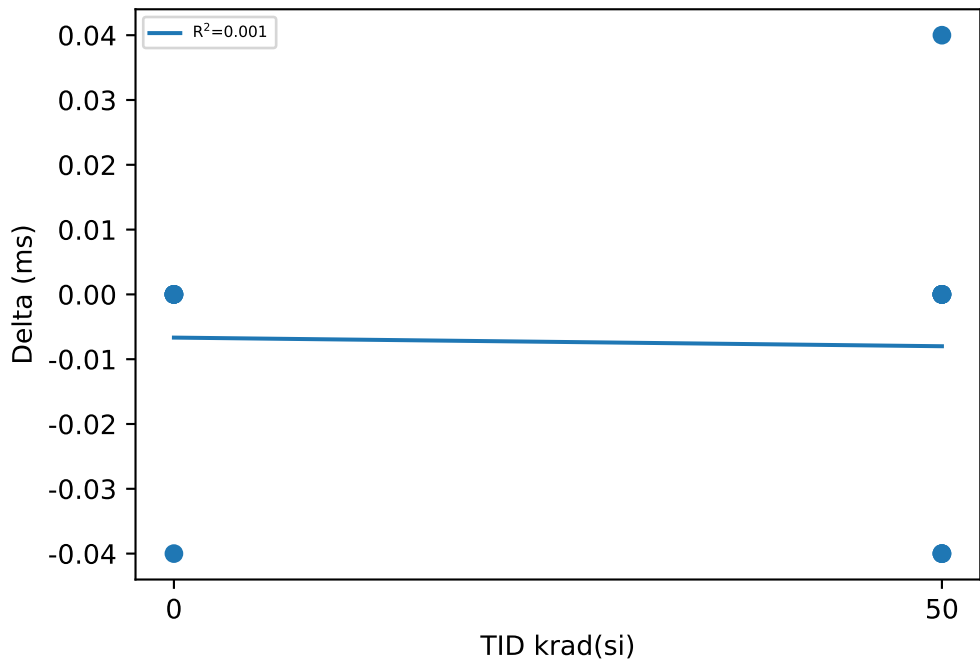
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.8817	1.8942	1.9018	0.0077461	1.8817	1.8936	1.9023	0.0078066	-0.0025	-0.00066667	0.0005	0.0012517
50	1.8812	1.8942	1.9128	0.0092446	1.8807	1.8924	1.9083	0.0081795	-0.007	-0.00175	0.0025	0.0028211

Device Test: 22.10 T\_SS\_5P6NF(\_TIMING|STARTUP/SS\_TR/5////@T\_SS\_5P6NF )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (No Limits Specified (ms))

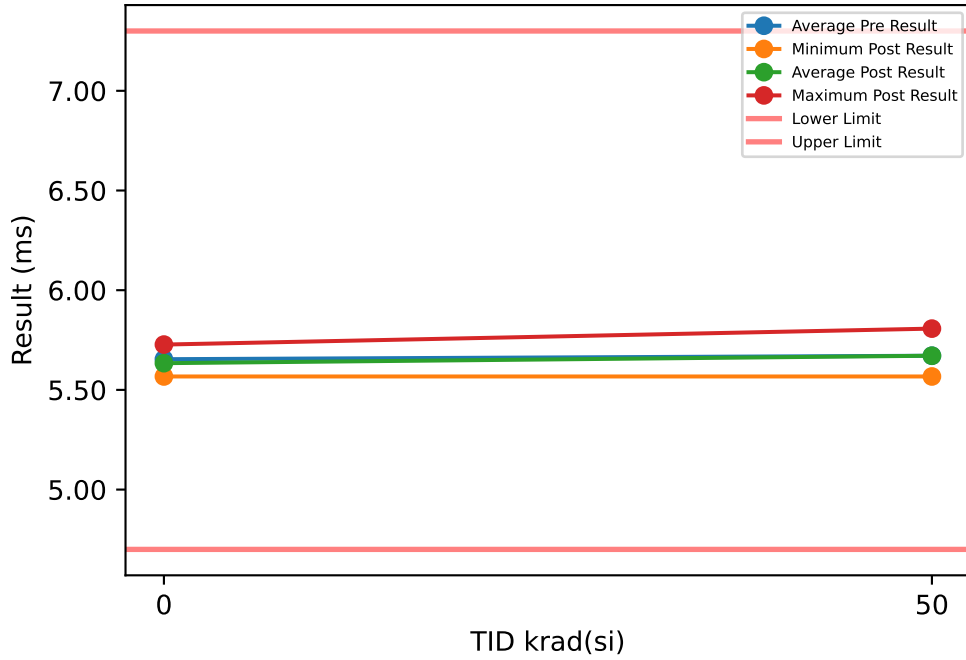
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.4392	1.4792	0.04
4	50	HDR Biased w/ 84hr anneal	1.4792	1.4392	-0.04
6	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
8	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
9	50	HDR Biased w/ 84hr anneal	1.5192	1.5192	0
10	50	HDR unbiased	1.4392	1.4392	0
11	50	HDR unbiased	1.3992	1.3992	0
12	50	HDR unbiased	1.4392	1.4392	0
13	50	HDR unbiased	1.4392	1.3992	-0.04
14	50	HDR unbiased	1.4392	1.3992	-0.04
26	0	Correlation	1.3992	1.3992	0
27	0	Correlation	1.4392	1.4392	0
28	0	Correlation	1.4392	1.4392	0
29	0	Correlation	1.4392	1.4392	0
30	0	Correlation	1.4392	1.4392	0
32	0	Correlation	1.4392	1.3992	-0.04

Test Statistics (ms)

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	1.3992	1.4325	1.4392	0.01633	1.3992	1.4259	1.4392	0.020656	-0.04	-0.0066667	0	0.01633
50	1.3992	1.4472	1.5192	0.031552	1.3992	1.4392	1.5192	0.037712	-0.04	-0.008	0.04	0.025298

Device Test: 22.11 T\_SS\_22NF(\_TIMING|STARTUP/SS\_TR/5////@T\_SS\_22NF)

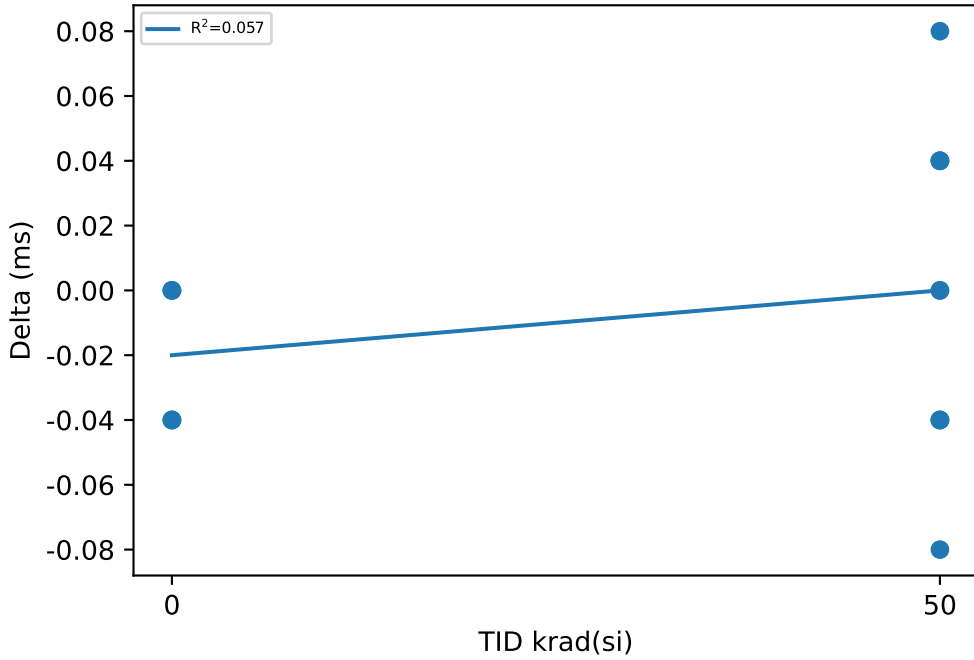
TID vs Result Stats



Test Results (Lower Limit = 4.7, Upper Limit = 7.3 (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5.7273	5.8073	0.08
4	50	HDR Biased w/ 84hr anneal	5.6873	5.7273	0.04
6	50	HDR Biased w/ 84hr anneal	5.6473	5.6873	0.04
8	50	HDR Biased w/ 84hr anneal	5.6473	5.6873	0.04
9	50	HDR Biased w/ 84hr anneal	5.8073	5.7673	-0.04
10	50	HDR unbiased	5.6473	5.6073	-0.04
11	50	HDR unbiased	5.6073	5.6073	0
12	50	HDR unbiased	5.6873	5.6873	0
13	50	HDR unbiased	5.6473	5.5673	-0.08
14	50	HDR unbiased	5.6073	5.5673	-0.04
26	0	Correlation	5.5673	5.5673	0
27	0	Correlation	5.6873	5.6873	0
28	0	Correlation	5.6073	5.5673	-0.04
29	0	Correlation	5.7273	5.7273	0
30	0	Correlation	5.6873	5.6473	-0.04
32	0	Correlation	5.6473	5.6073	-0.04

TID vs Post - Pre Exposure Delta

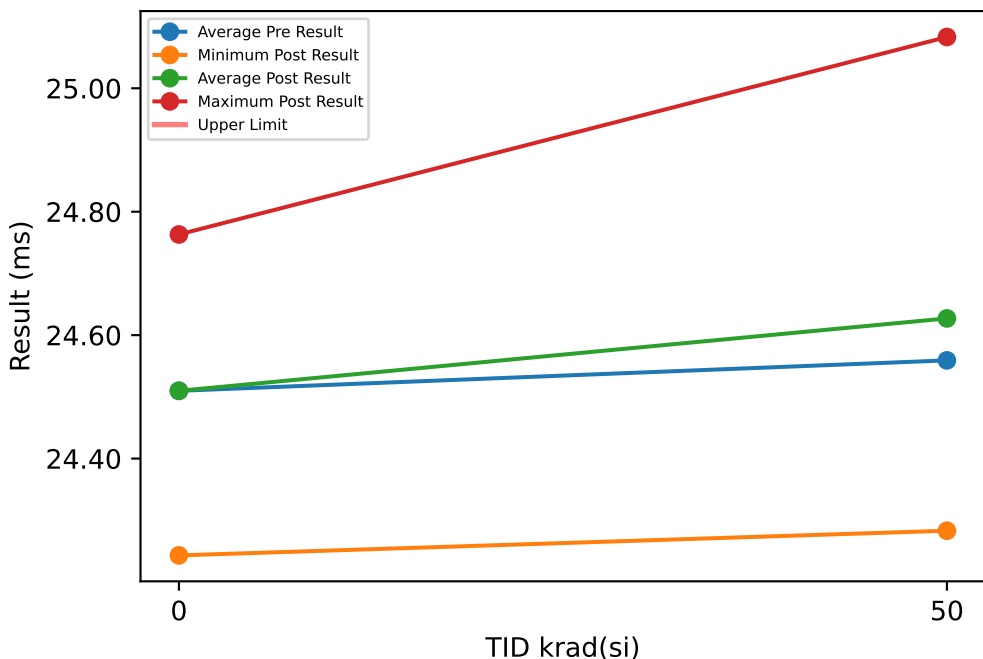


Test Statistics (ms)

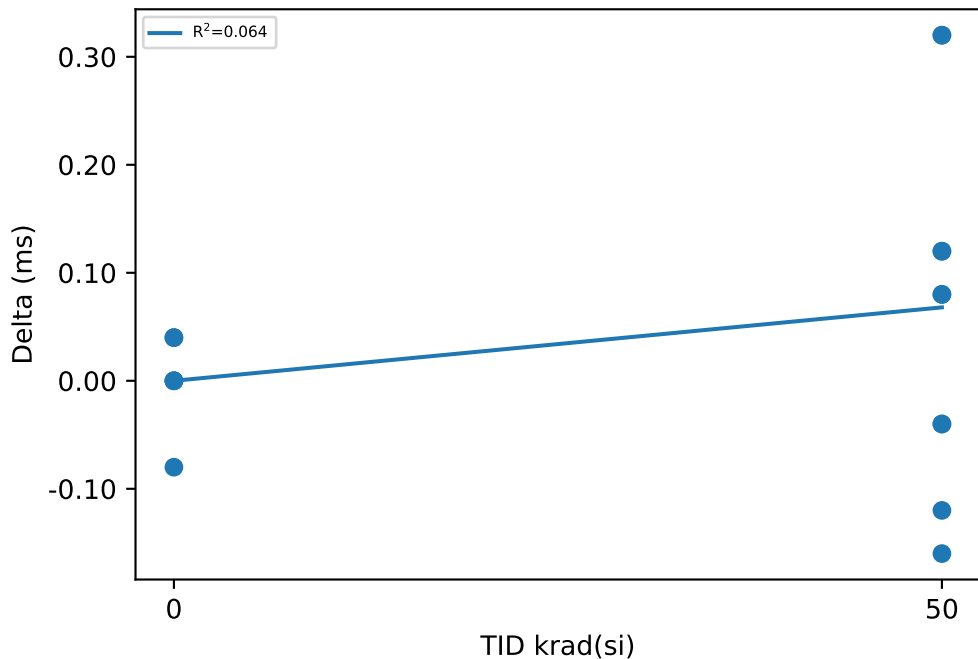
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	5.5673	5.654	5.7273	0.058878	5.5673	5.634	5.7273	0.06532	-0.04	-0.02	0	0.021909
50	5.6073	5.6713	5.8073	0.060222	5.5673	5.6713	5.8073	0.082624	-0.08	-1.7764e-16	0.08	0.049889

Device Test: 22.12 T\_SS\_100NF(\_TIMING|STARTUP/SS\_TR/5////@T\_SS\_100NF )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (No Limits Specified (ms))

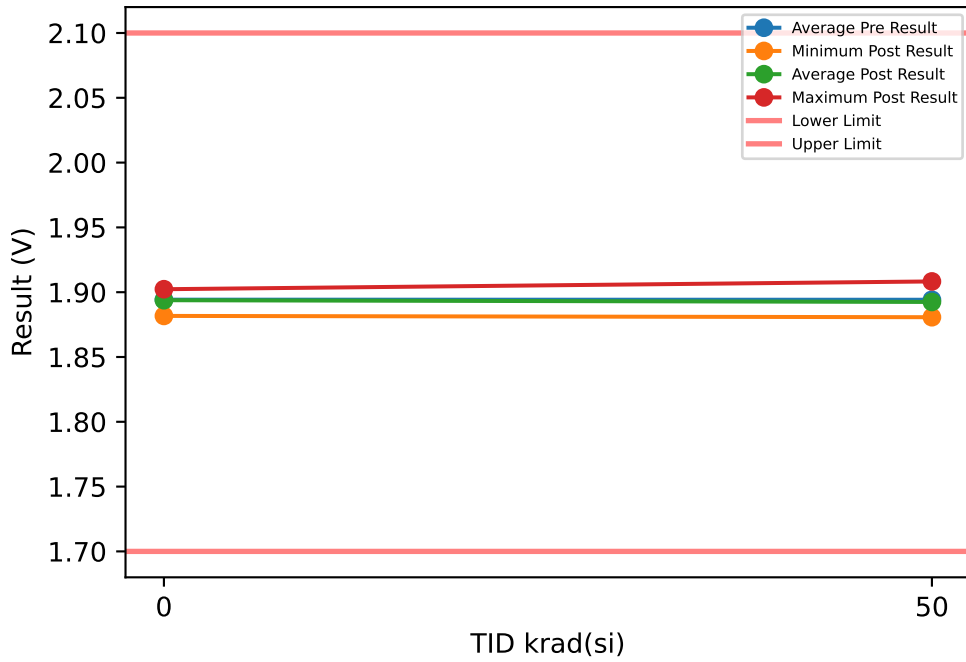
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	24.723	25.043	0.32
4	50	HDR Biased w/ 84hr anneal	24.643	24.763	0.12
6	50	HDR Biased w/ 84hr anneal	24.483	24.563	0.08
8	50	HDR Biased w/ 84hr anneal	24.563	24.523	-0.04
9	50	HDR Biased w/ 84hr anneal	25.243	25.083	-0.16
10	50	HDR unbiased	24.403	24.483	0.08
11	50	HDR unbiased	24.203	24.323	0.12
12	50	HDR unbiased	24.523	24.843	0.32
13	50	HDR unbiased	24.403	24.283	-0.12
14	50	HDR unbiased	24.403	24.363	-0.04
26	0	Correlation	24.243	24.243	0
27	0	Correlation	24.643	24.683	0.04
28	0	Correlation	24.363	24.283	-0.08
29	0	Correlation	24.723	24.763	0.04
30	0	Correlation	24.643	24.643	0
32	0	Correlation	24.443	24.443	0

Test Statistics (ms)

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	24.243	24.51	24.723	0.18875	24.243	24.51	24.763	0.2186	-0.08	5.9212e-16	0.04	0.043818
50	24.203	24.559	25.243	0.2806	24.283	24.627	25.083	0.29102	-0.16	0.068	0.32	0.16444

# Device Test: 22.13 V\_COMP\_SD(\_LEVEL|RISE/COMP/12////@V\_COMP\_SD )

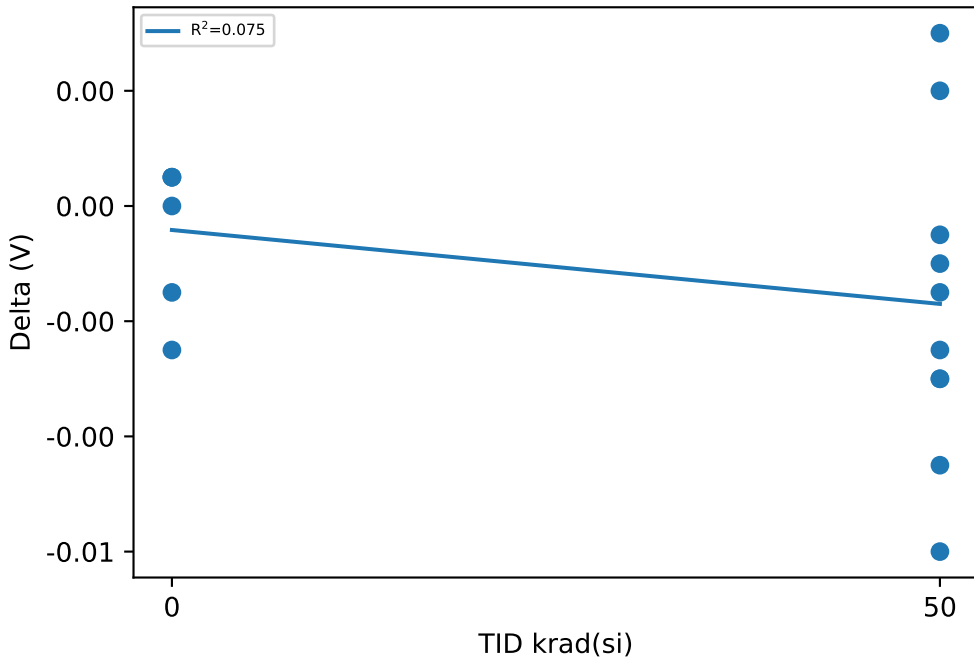
## TID vs Result Stats



## Test Results (Lower Limit = 1.7, Upper Limit = 2.1 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.8947	1.8887	-0.006
4	50	HDR Biased w/ 84hr anneal	1.8957	1.8932	-0.0025
6	50	HDR Biased w/ 84hr anneal	1.9058	1.9048	-0.001
8	50	HDR Biased w/ 84hr anneal	1.8812	1.8807	-0.0005
9	50	HDR Biased w/ 84hr anneal	1.9128	1.9083	-0.0045
10	50	HDR unbiased	1.8932	1.8902	-0.003
11	50	HDR unbiased	1.8927	1.8912	-0.0015
12	50	HDR unbiased	1.8907	1.8877	-0.003
13	50	HDR unbiased	1.8907	1.8927	0.002
14	50	HDR unbiased	1.8842	1.8872	0.003
26	0	Correlation	1.9018	1.9023	0.0005
27	0	Correlation	1.8957	1.8942	-0.0015
28	0	Correlation	1.8952	1.8927	-0.0025
29	0	Correlation	1.9018	1.9023	0.0005
30	0	Correlation	1.8817	1.8817	0
32	0	Correlation	1.8892	1.8897	0.0005

## TID vs Post - Pre Exposure Delta

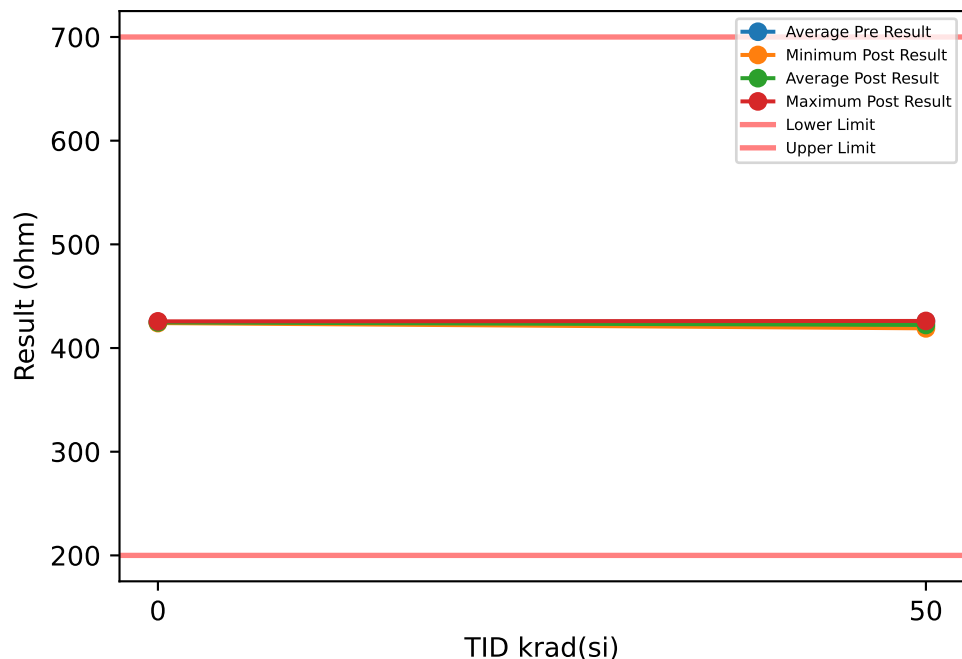


## Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.8817	1.8942	1.9018	0.0077461	1.8817	1.8938	1.9023	0.0078624	-0.0025	-0.00041667	0.0005	0.0012813
50	1.8812	1.8942	1.9128	0.0093081	1.8807	1.8925	1.9083	0.0082546	-0.006	-0.0017	0.003	0.0027508

Device Test: 22.14 R\_SS\_DISCHARGE(\_LEVEL|SINK/SS\_TR/12////@R\_SS\_DISCHARGE )

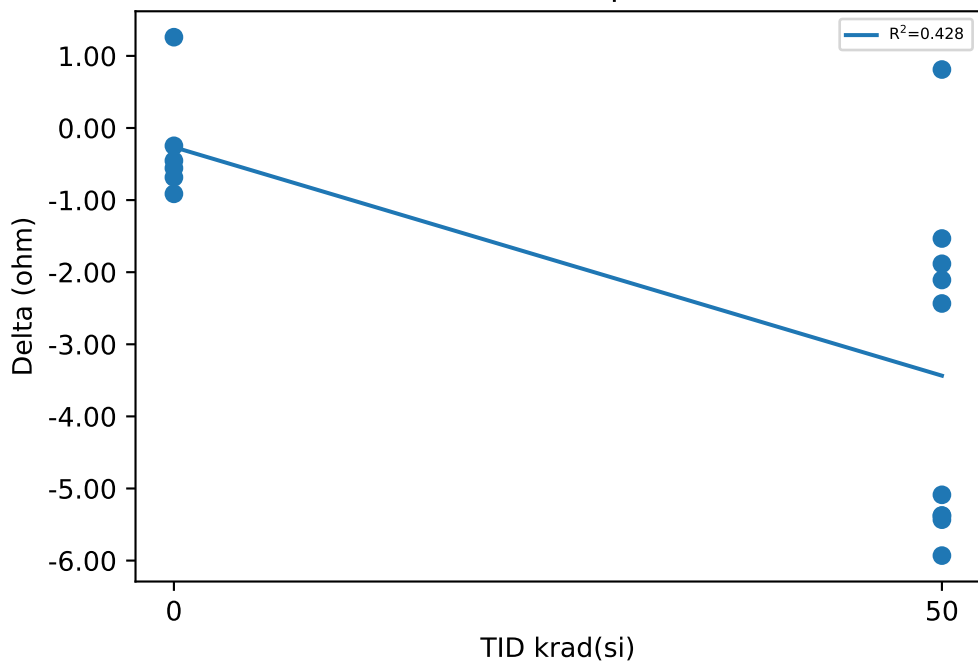
TID vs Result Stats



Test Results (Lower Limit = 200.0, Upper Limit = 700.0 (ohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	424.63	425.44	0.8109
4	50	HDR Biased w/ 84hr anneal	426.04	424.16	-1.8835
6	50	HDR Biased w/ 84hr anneal	423.49	421.38	-2.1079
8	50	HDR Biased w/ 84hr anneal	428.56	426.13	-2.434
9	50	HDR Biased w/ 84hr anneal	425.45	423.92	-1.5328
10	50	HDR unbiased	426.29	420.91	-5.3744
11	50	HDR unbiased	424.06	418.98	-5.0878
12	50	HDR unbiased	425.19	419.81	-5.3799
13	50	HDR unbiased	427.17	421.73	-5.4326
14	50	HDR unbiased	425.91	419.98	-5.9308
26	0	Correlation	424.99	424.08	-0.9132
27	0	Correlation	424.48	425.74	1.2593
28	0	Correlation	424.76	424.21	-0.5566
29	0	Correlation	426.16	425.47	-0.6846
30	0	Correlation	424.91	424.67	-0.2472
32	0	Correlation	424.5	424.05	-0.4531

TID vs Post - Pre Exposure Delta

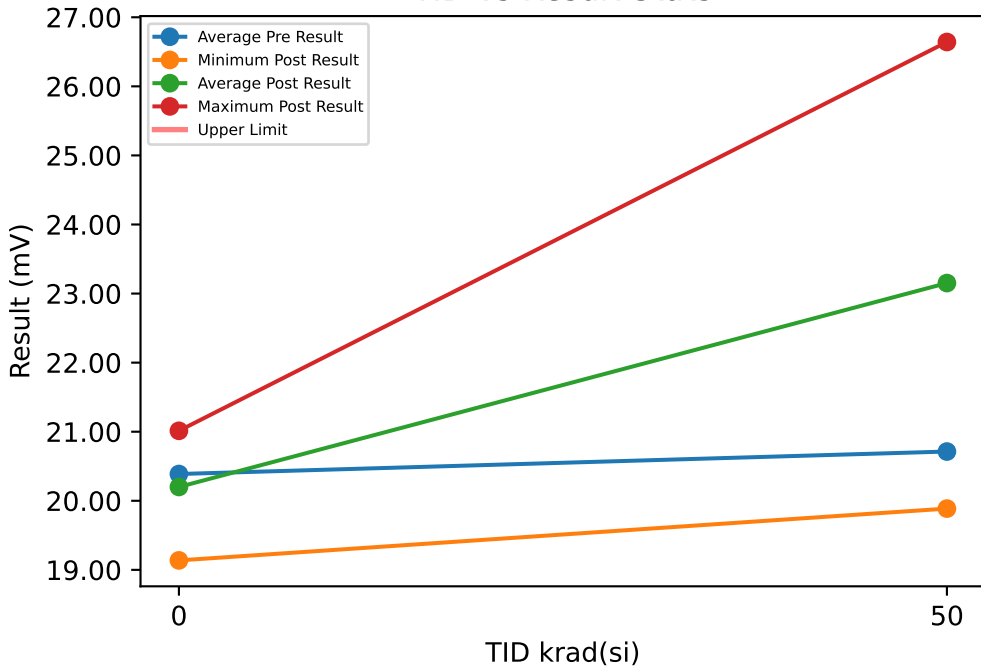


Test Statistics (ohm)

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	424.48	424.97	426.16	0.61874	424.05	424.7	425.74	0.73962	-0.9132	-0.2659	1.2593	0.7798
50	423.49	425.68	428.56	1.4858	418.98	422.24	426.13	2.501	-5.9308	-3.4353	0.8109	2.2928

# Device Test: 22.15 V\_SS\_START( \_LEVEL|STATIC/SS\_TR/12////@V\_SS\_START )

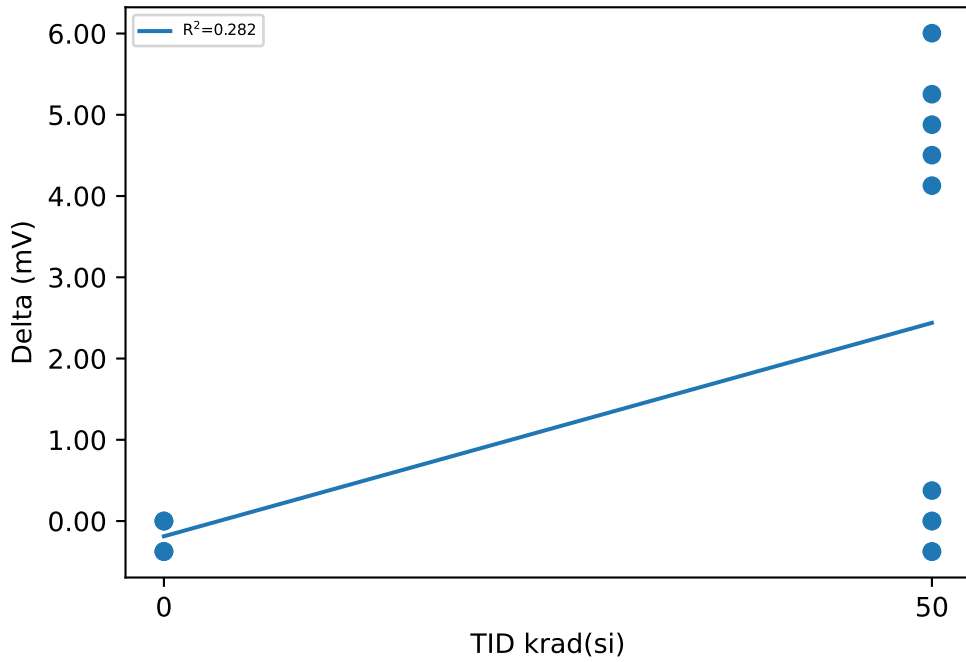
### TID vs Result Stats



### Test Results (No Limits Specified (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	18.762	23.64	4.878
4	50	HDR Biased w/ 84hr anneal	19.512	24.765	5.253
6	50	HDR Biased w/ 84hr anneal	20.638	25.141	4.503
8	50	HDR Biased w/ 84hr anneal	20.638	26.642	6.004
9	50	HDR Biased w/ 84hr anneal	22.514	26.642	4.128
10	50	HDR unbiased	21.764	21.764	0
11	50	HDR unbiased	21.388	21.388	0
12	50	HDR unbiased	20.638	20.263	-0.375
13	50	HDR unbiased	21.764	21.388	-0.376
14	50	HDR unbiased	19.512	19.887	0.375
26	0	Correlation	19.887	19.512	-0.375
27	0	Correlation	20.638	20.638	0
28	0	Correlation	19.512	19.137	-0.375
29	0	Correlation	20.263	20.263	0
30	0	Correlation	21.013	21.013	0
32	0	Correlation	21.013	20.638	-0.375

### TID vs Post - Pre Exposure Delta



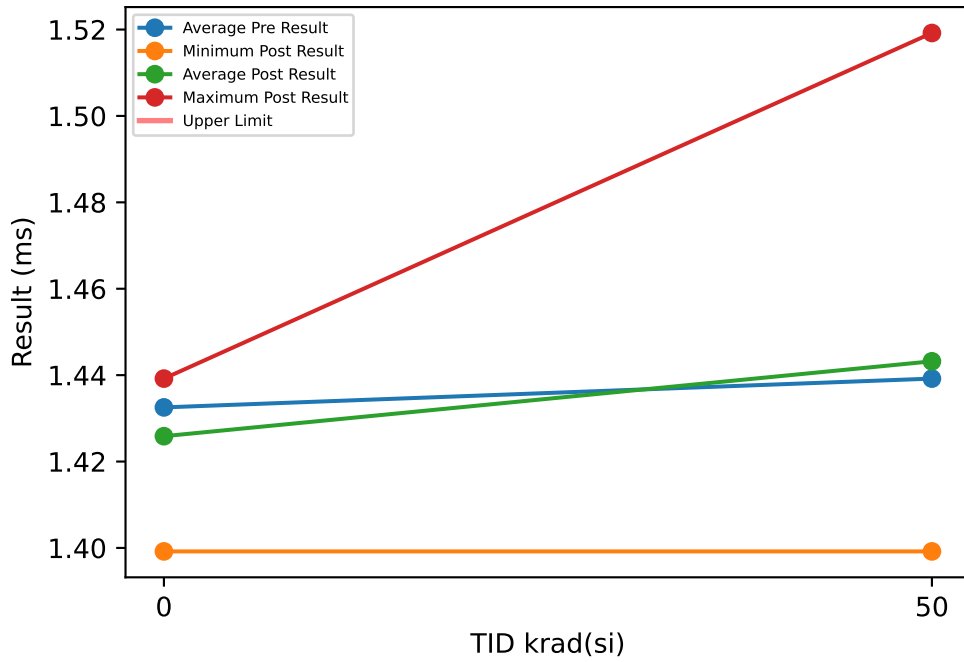
### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	19.512	20.388	21.013	0.61282	19.137	20.2	21.013	0.72828	-0.375	-0.1875	0	0.2054
50	18.762	20.713	22.514	1.184	19.887	23.152	26.642	2.5454	-0.376	2.439	6.004	2.7016



# Device Test: 22.16 T\_SS\_5P6NF(\_TIMING|STARTUP/SS\_TR/12////@T\_SS\_5P6NF )

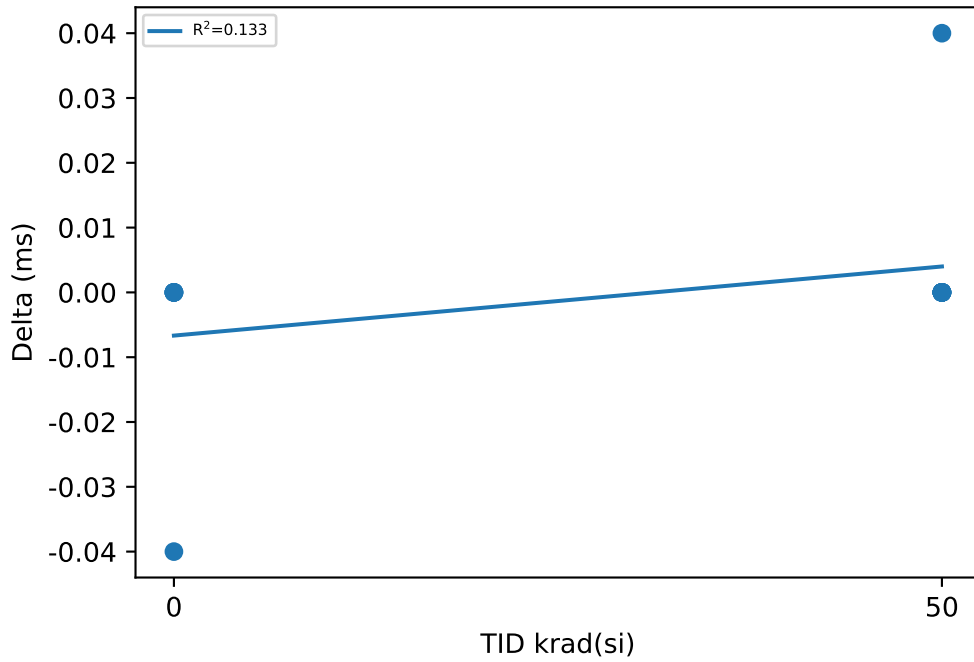
## TID vs Result Stats



## Test Results (No Limits Specified (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.4392	1.4792	0.04
4	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
6	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
8	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
9	50	HDR Biased w/ 84hr anneal	1.5192	1.5192	0
10	50	HDR unbiased	1.4392	1.4392	0
11	50	HDR unbiased	1.3992	1.3992	0
12	50	HDR unbiased	1.4392	1.4392	0
13	50	HDR unbiased	1.3992	1.3992	0
14	50	HDR unbiased	1.4392	1.4392	0
26	0	Correlation	1.3992	1.3992	0
27	0	Correlation	1.4392	1.4392	0
28	0	Correlation	1.4392	1.4392	0
29	0	Correlation	1.4392	1.4392	0
30	0	Correlation	1.4392	1.4392	0
32	0	Correlation	1.4392	1.3992	-0.04

## TID vs Post - Pre Exposure Delta

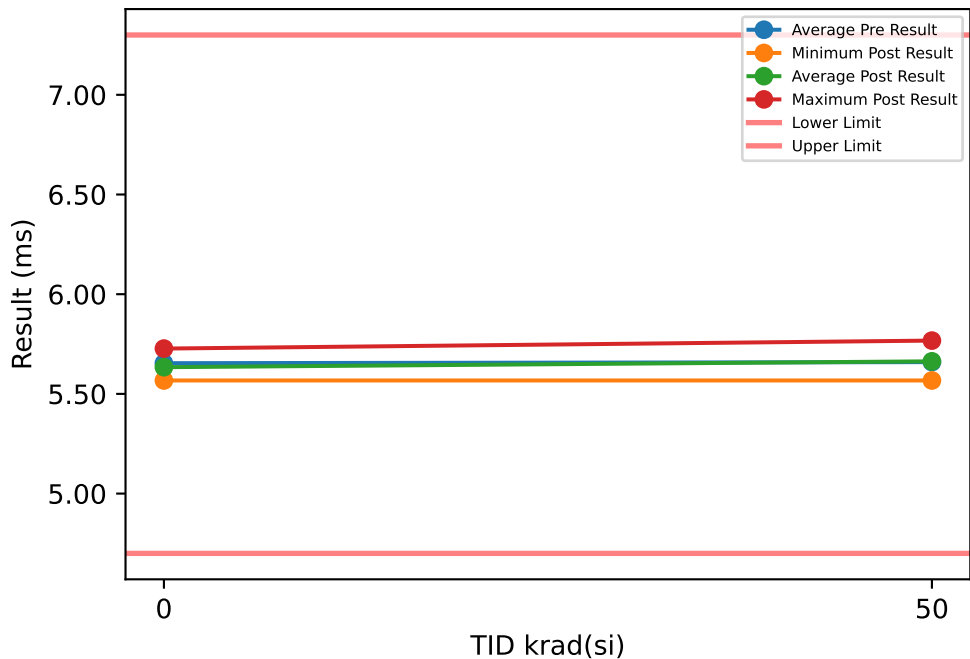


## Test Statistics (ms)

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	1.3992	1.4325	1.4392	0.01633	1.3992	1.4259	1.4392	0.020656	-0.04	-0.0066667	0	0.01633
50	1.3992	1.4392	1.5192	0.03266	1.3992	1.4432	1.5192	0.035024	0	0.004	0.04	0.012649

Device Test: 22.17 T\_SS\_22NF(\_TIMING|STARTUP/SS\_TR/12////@T\_SS\_22NF )

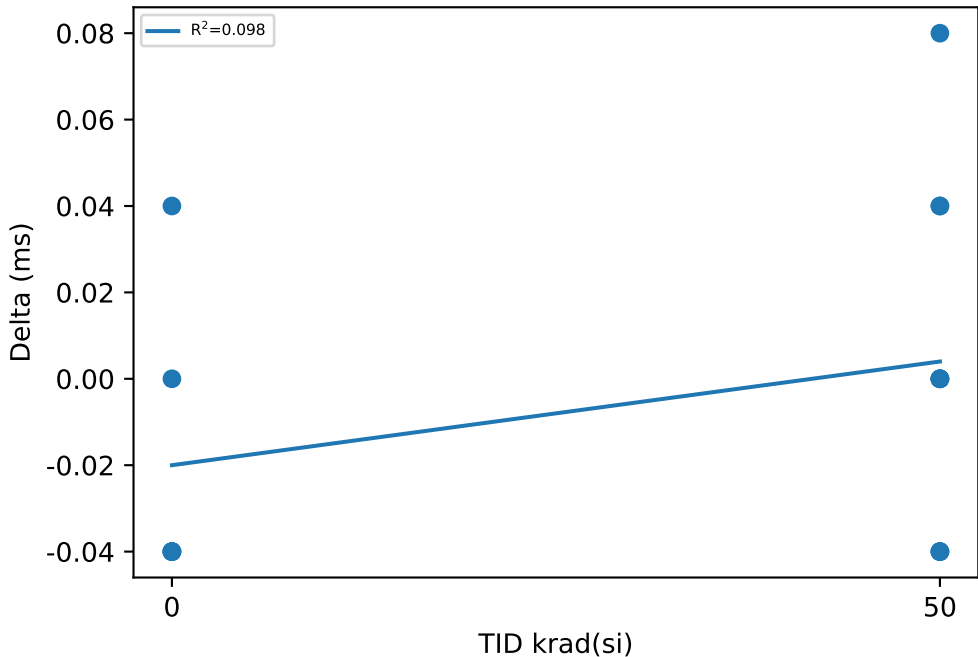
TID vs Result Stats



Test Results (Lower Limit = 4.7, Upper Limit = 7.3 (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5.6873	5.7673	0.08
4	50	HDR Biased w/ 84hr anneal	5.6873	5.7273	0.04
6	50	HDR Biased w/ 84hr anneal	5.6473	5.6873	0.04
8	50	HDR Biased w/ 84hr anneal	5.6873	5.6873	0
9	50	HDR Biased w/ 84hr anneal	5.8073	5.7673	-0.04
10	50	HDR unbiased	5.6073	5.6073	0
11	50	HDR unbiased	5.5673	5.5673	0
12	50	HDR unbiased	5.6873	5.6873	0
13	50	HDR unbiased	5.6073	5.5673	-0.04
14	50	HDR unbiased	5.6073	5.5673	-0.04
26	0	Correlation	5.6073	5.5673	-0.04
27	0	Correlation	5.6873	5.6873	0
28	0	Correlation	5.6073	5.5673	-0.04
29	0	Correlation	5.6873	5.7273	0.04
30	0	Correlation	5.6873	5.6473	-0.04
32	0	Correlation	5.6473	5.6073	-0.04

TID vs Post - Pre Exposure Delta

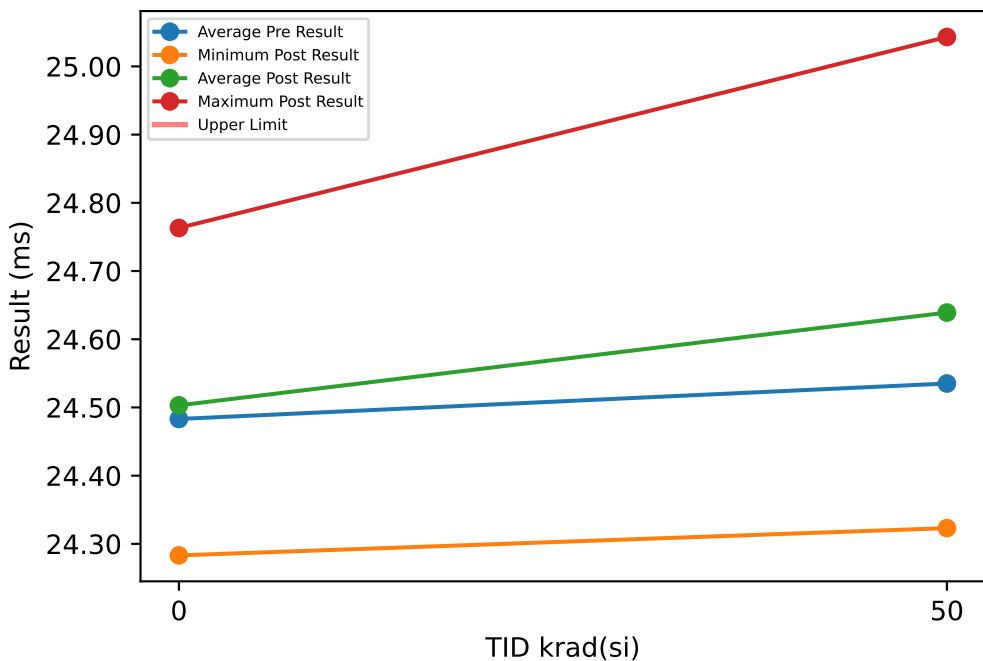


Test Statistics (ms)

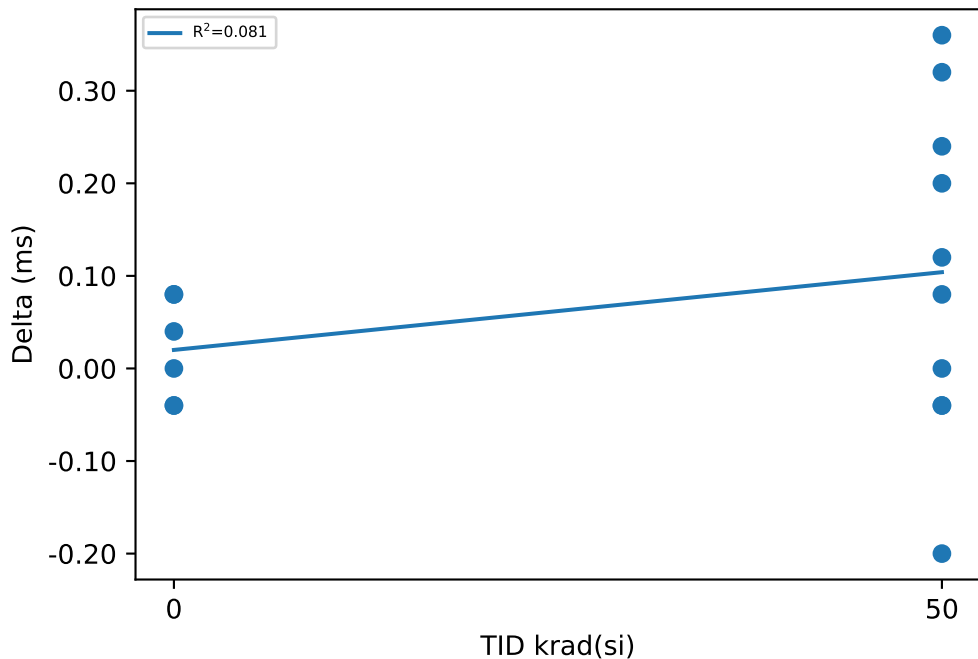
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	5.6073	5.654	5.6873	0.039328	5.5673	5.634	5.7273	0.06532	-0.04	-0.02	0.04	0.033466
50	5.5673	5.6593	5.8073	0.068118	5.5673	5.6633	5.7673	0.080443	-0.04	0.004	0.08	0.039777

# Device Test: 22.18 T\_SS\_100NF(\_TIMING|STARTUP/SS\_TR/12////@T\_SS\_100NF )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (No Limits Specified (ms))

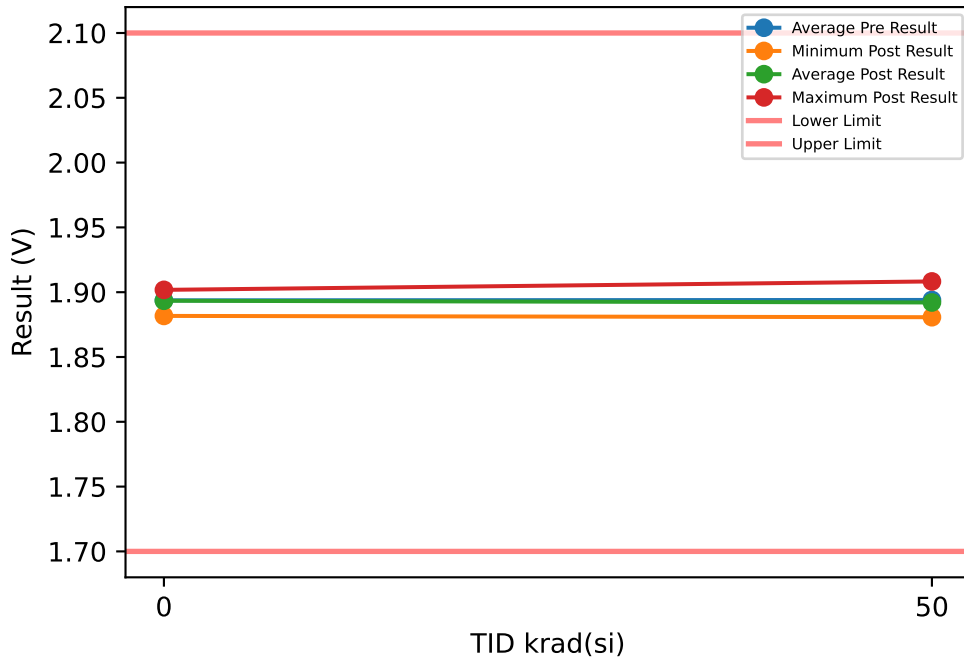
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	24.683	25.043	0.36
4	50	HDR Biased w/ 84hr anneal	24.563	24.803	0.24
6	50	HDR Biased w/ 84hr anneal	24.403	24.603	0.2
8	50	HDR Biased w/ 84hr anneal	24.603	24.563	-0.04
9	50	HDR Biased w/ 84hr anneal	25.243	25.043	-0.2
10	50	HDR unbiased	24.363	24.443	0.08
11	50	HDR unbiased	24.203	24.323	0.12
12	50	HDR unbiased	24.523	24.843	0.32
13	50	HDR unbiased	24.323	24.323	0
14	50	HDR unbiased	24.443	24.403	-0.04
26	0	Correlation	24.243	24.283	0.04
27	0	Correlation	24.523	24.603	0.08
28	0	Correlation	24.323	24.283	-0.04
29	0	Correlation	24.683	24.763	0.08
30	0	Correlation	24.643	24.643	0
32	0	Correlation	24.483	24.443	-0.04

## Test Statistics (ms)

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	24.243	24.483	24.683	0.17344	24.283	24.503	24.763	0.1988	-0.04	0.02	0.08	0.055136
50	24.203	24.535	25.243	0.28662	24.323	24.639	25.043	0.27806	-0.2	0.104	0.36	0.17809

# Device Test: 22.19 V\_COMP\_SD(\_LEVEL|RISE/COMP/14////@V\_COMP\_SD )

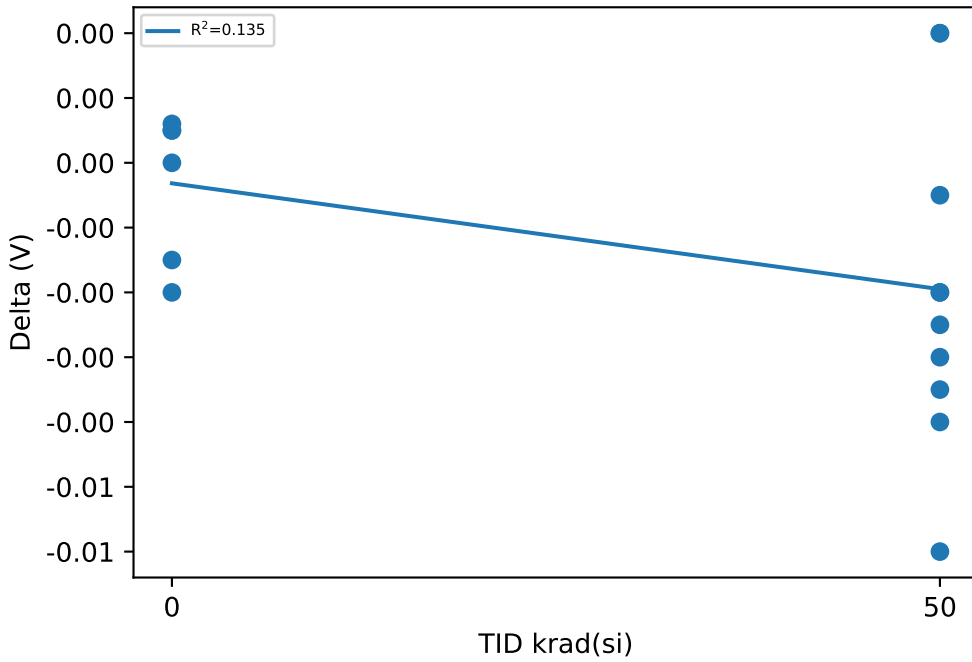
## TID vs Result Stats



## Test Results (Lower Limit = 1.7, Upper Limit = 2.1 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.8947	1.8887	-0.006
4	50	HDR Biased w/ 84hr anneal	1.8957	1.8932	-0.0025
6	50	HDR Biased w/ 84hr anneal	1.9053	1.9033	-0.002
8	50	HDR Biased w/ 84hr anneal	1.8812	1.8807	-0.0005
9	50	HDR Biased w/ 84hr anneal	1.9123	1.9083	-0.004
10	50	HDR unbiased	1.8932	1.8897	-0.0035
11	50	HDR unbiased	1.8922	1.8902	-0.002
12	50	HDR unbiased	1.8907	1.8877	-0.003
13	50	HDR unbiased	1.8907	1.8927	0.002
14	50	HDR unbiased	1.8842	1.8862	0.002
26	0	Correlation	1.9013	1.9018	0.0005
27	0	Correlation	1.8957	1.8942	-0.0015
28	0	Correlation	1.8947	1.8927	-0.002
29	0	Correlation	1.9007	1.9013	0.0006
30	0	Correlation	1.8812	1.8817	0.0005
32	0	Correlation	1.8887	1.8887	0

## TID vs Post - Pre Exposure Delta

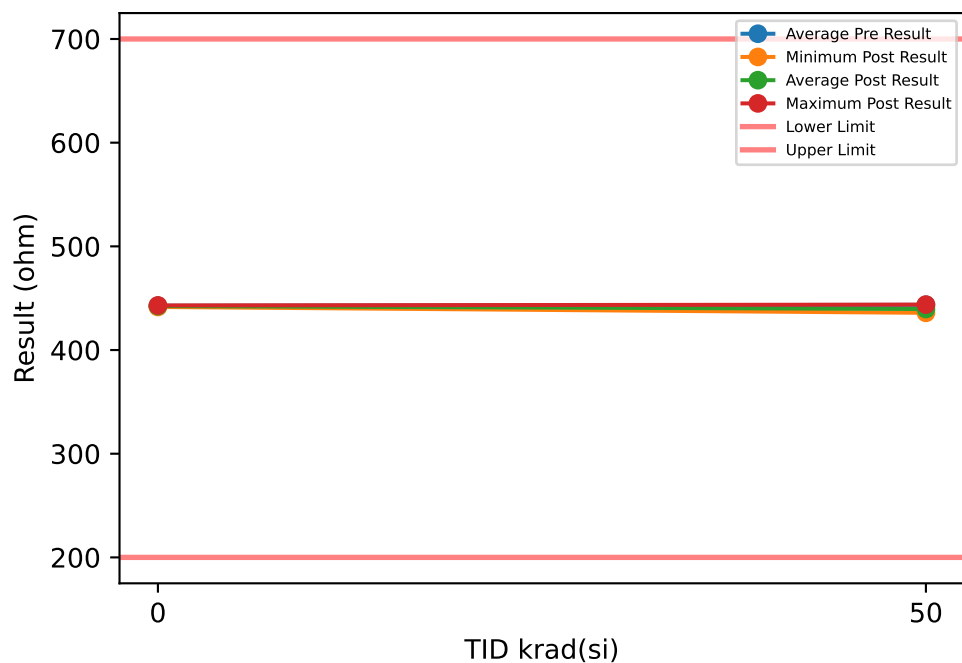


## Test Statistics (V)

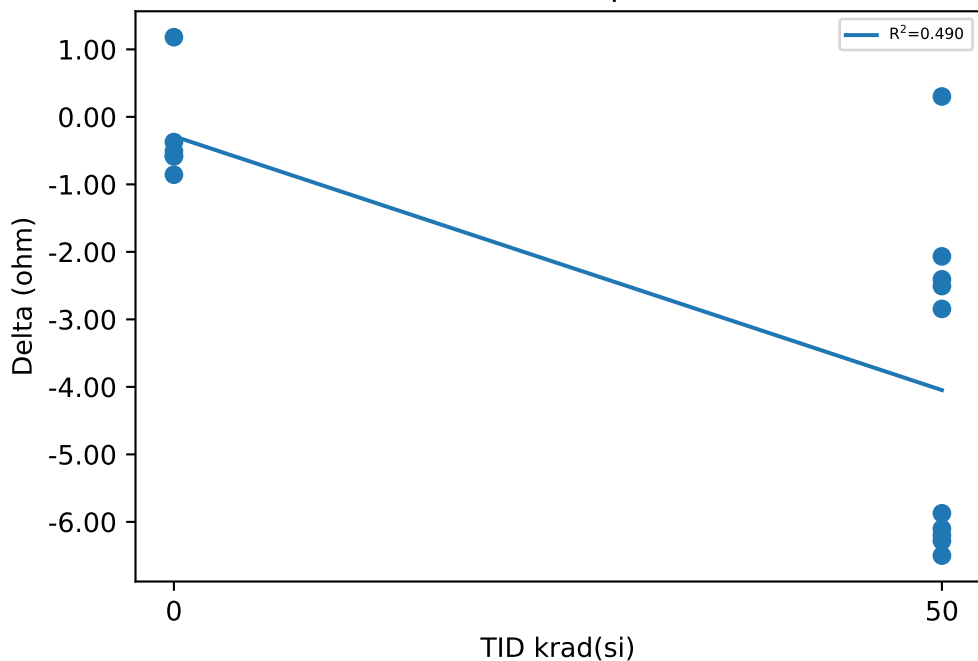
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.8812	1.8937	1.9013	0.0076552	1.8817	1.8934	1.9018	0.0076561	-0.002	-0.00031667	0.0006	0.0011409
50	1.8812	1.894	1.9123	0.0091378	1.8807	1.8921	1.9083	0.0081275	-0.006	-0.00195	0.002	0.0025326

Device Test: 22.2 R\_SS\_DISCHARGE(\_LEVEL|SINK/SS\_TR/4.5////@R\_SS\_DISCHARGE )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 200.0, Upper Limit = 700.0 (ohm))

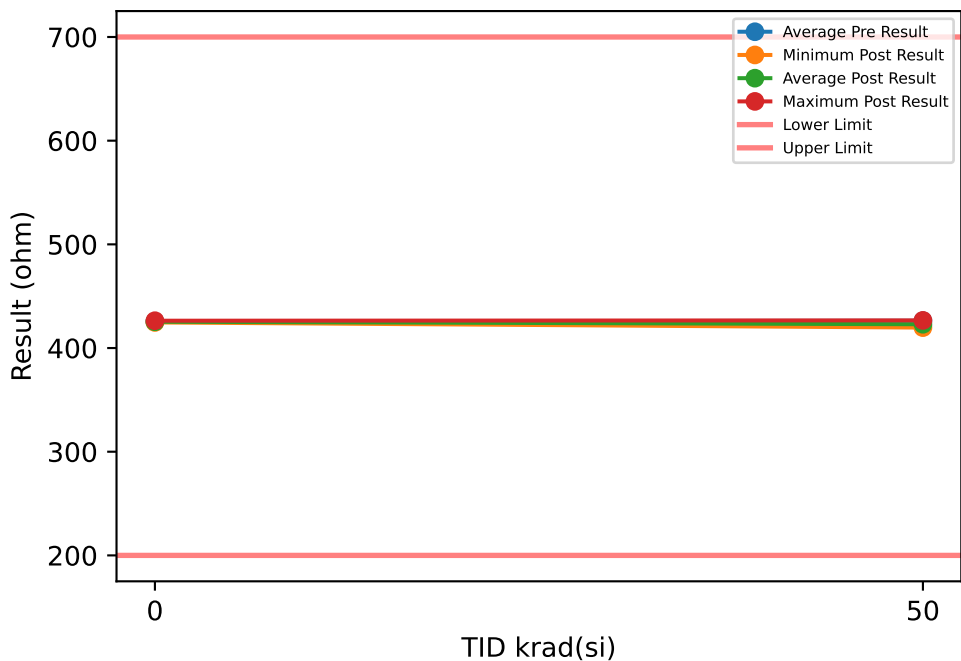
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	442.64	442.94	0.3018
4	50	HDR Biased w/ 84hr anneal	443.9	441.49	-2.4065
6	50	HDR Biased w/ 84hr anneal	441.4	438.89	-2.5068
8	50	HDR Biased w/ 84hr anneal	446.67	443.82	-2.8451
9	50	HDR Biased w/ 84hr anneal	442.76	440.69	-2.0667
10	50	HDR unbiased	445.14	438.94	-6.2
11	50	HDR unbiased	441.75	435.88	-5.8726
12	50	HDR unbiased	442.76	436.66	-6.102
13	50	HDR unbiased	445.38	439.1	-6.282
14	50	HDR unbiased	443.49	436.99	-6.4994
26	0	Correlation	442.89	442.03	-0.8569
27	0	Correlation	441.61	442.79	1.1802
28	0	Correlation	443.16	442.58	-0.5824
29	0	Correlation	443.6	443.02	-0.5826
30	0	Correlation	442.82	442.45	-0.373
32	0	Correlation	442.04	441.53	-0.5095

Test Statistics (ohm)

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	441.61	442.69	443.6	0.73558	441.53	442.4	443.02	0.54227	-0.8569	-0.28737	1.1802	0.73607
50	441.4	443.59	446.67	1.6871	435.88	439.54	443.82	2.671	-6.4994	-4.0479	0.3018	2.4162

Device Test: 22.20 R\_SS\_DISCHARGE(\_LEVEL|SINK/SS\_TR/14////@R\_SS\_DISCHARGE )

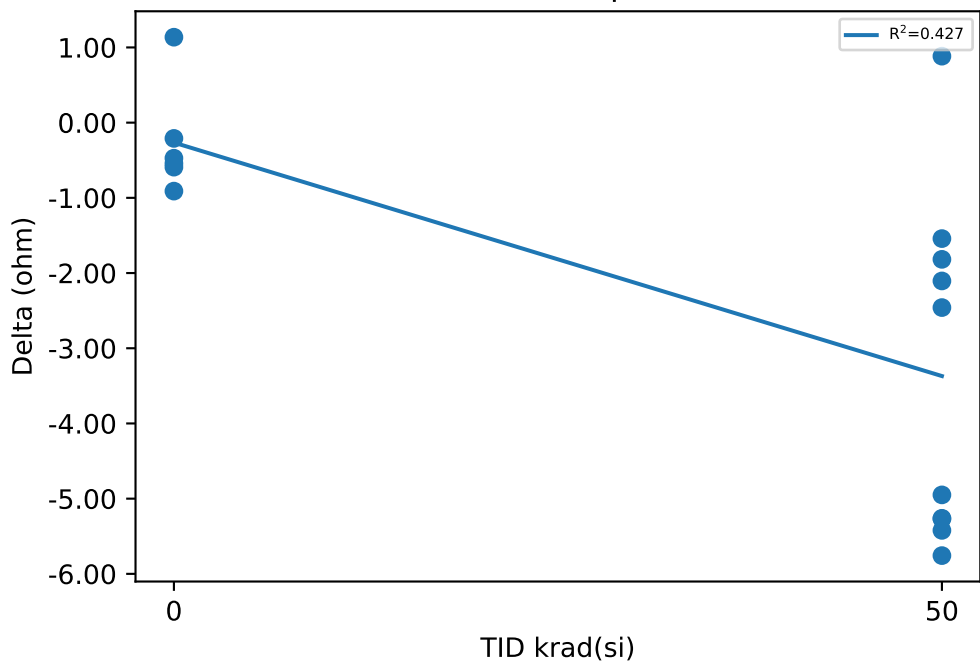
TID vs Result Stats



Test Results (Lower Limit = 200.0, Upper Limit = 700.0 (ohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	425.12	426	0.8839
4	50	HDR Biased w/ 84hr anneal	426.64	424.82	-1.8178
6	50	HDR Biased w/ 84hr anneal	424.17	422.06	-2.105
8	50	HDR Biased w/ 84hr anneal	429.14	426.68	-2.4591
9	50	HDR Biased w/ 84hr anneal	426.13	424.59	-1.5418
10	50	HDR unbiased	426.98	421.71	-5.2614
11	50	HDR unbiased	424.65	419.7	-4.95
12	50	HDR unbiased	425.88	420.61	-5.2679
13	50	HDR unbiased	427.86	422.44	-5.4218
14	50	HDR unbiased	426.48	420.72	-5.7572
26	0	Correlation	425.6	424.68	-0.9105
27	0	Correlation	425.22	426.36	1.1362
28	0	Correlation	425.42	424.88	-0.5436
29	0	Correlation	426.77	426.17	-0.5918
30	0	Correlation	425.55	425.34	-0.2096
32	0	Correlation	425.19	424.72	-0.4727

TID vs Post - Pre Exposure Delta

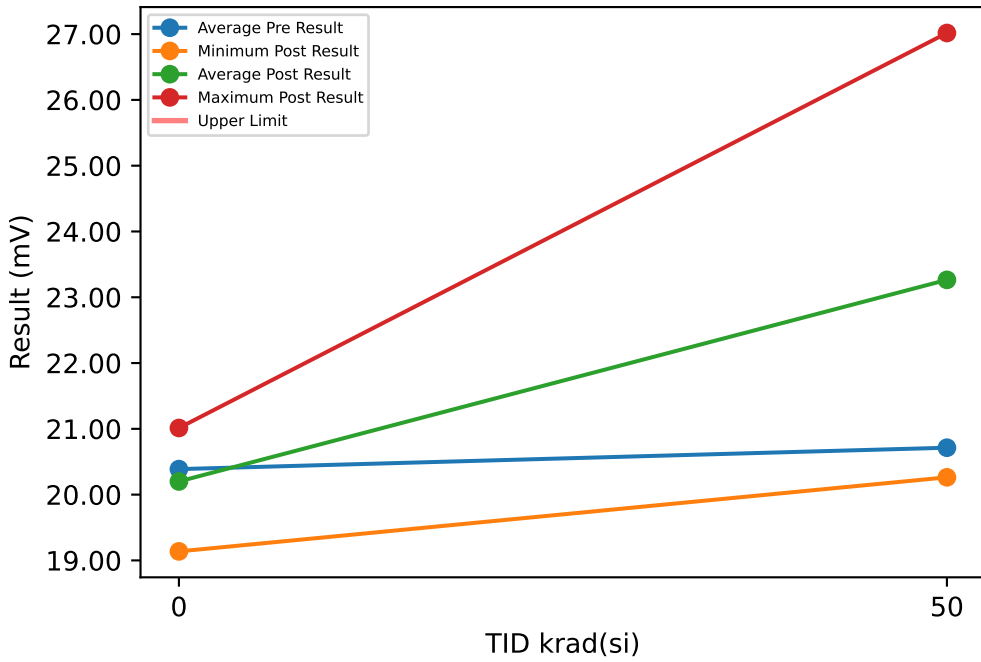


Test Statistics (ohm)

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	425.19	425.62	426.77	0.58286	424.68	425.36	426.36	0.74291	-0.9105	-0.26533	1.1362	0.72259
50	424.17	426.3	429.14	1.4899	419.7	422.93	426.68	2.4261	-5.7572	-3.3698	0.8839	2.2574

# Device Test: 22.21 V\_SS\_START(\_LEVEL|STATIC/SS\_TR/14////@V\_SS\_START )

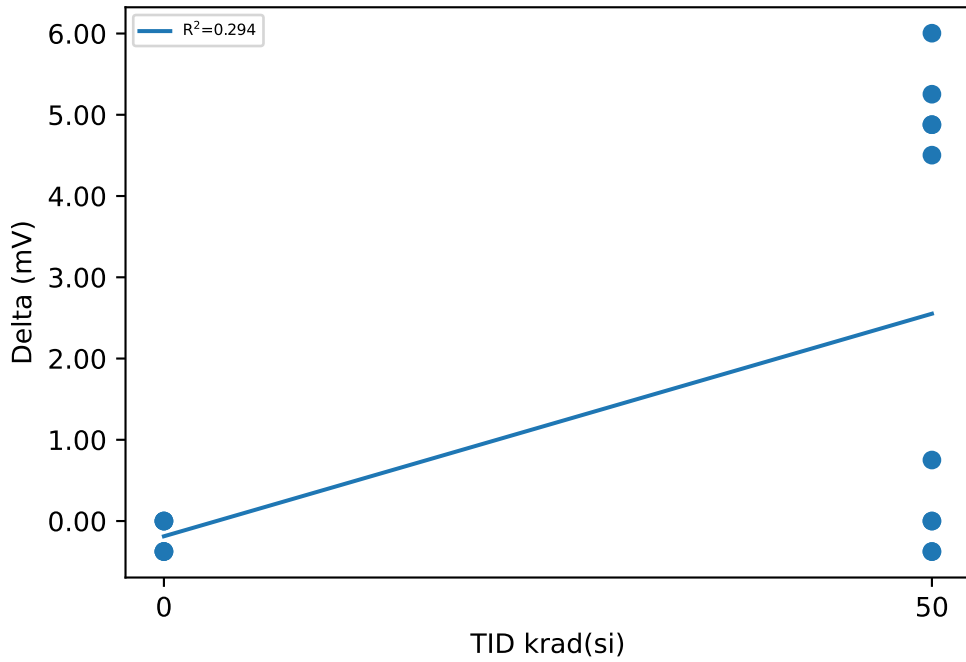
## TID vs Result Stats



## Test Results (No Limits Specified (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	18.762	23.64	4.878
4	50	HDR Biased w/ 84hr anneal	19.512	24.765	5.253
6	50	HDR Biased w/ 84hr anneal	20.638	25.516	4.878
8	50	HDR Biased w/ 84hr anneal	20.638	26.642	6.004
9	50	HDR Biased w/ 84hr anneal	22.514	27.017	4.503
10	50	HDR unbiased	21.764	21.764	0
11	50	HDR unbiased	21.388	21.388	0
12	50	HDR unbiased	20.638	20.263	-0.375
13	50	HDR unbiased	21.764	21.388	-0.376
14	50	HDR unbiased	19.512	20.263	0.751
26	0	Correlation	19.887	19.512	-0.375
27	0	Correlation	20.638	20.638	0
28	0	Correlation	19.512	19.137	-0.375
29	0	Correlation	20.263	20.263	0
30	0	Correlation	21.013	21.013	0
32	0	Correlation	21.013	20.638	-0.375

## TID vs Post - Pre Exposure Delta

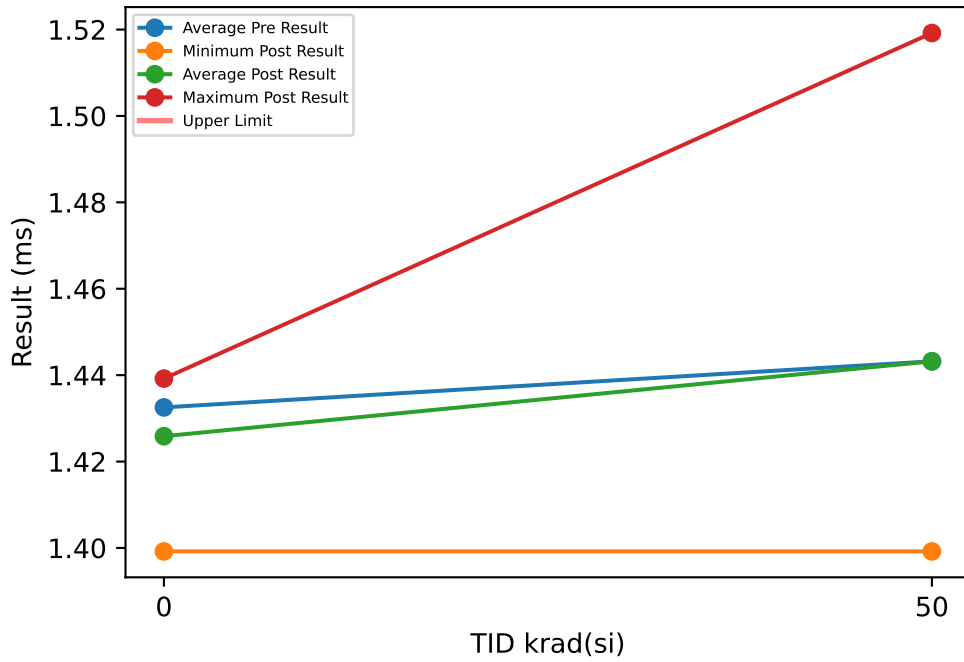


## Test Statistics (mV)

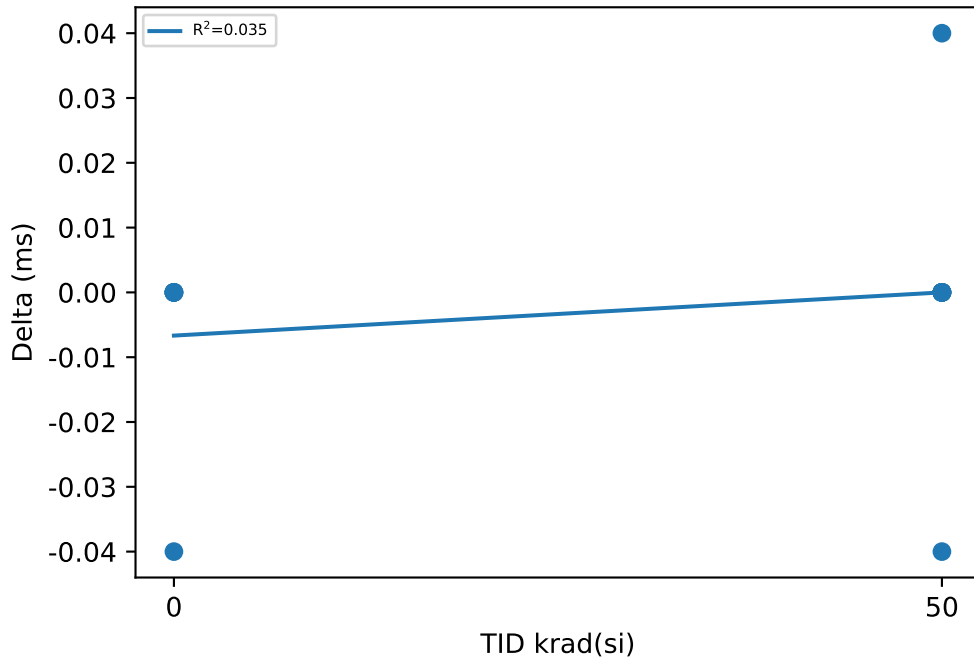
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	19.512	20.388	21.013	0.61282	19.137	20.2	21.013	0.72828	-0.375	-0.1875	0	0.2054
50	18.762	20.713	22.514	1.184	20.263	23.265	27.017	2.5876	-0.376	2.5516	6.004	2.7335

# Device Test: 22.22 T\_SS\_5P6NF(\_TIMING|STARTUP/SS\_TR/14////@T\_SS\_5P6NF )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (No Limits Specified (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.4392	1.4792	0.04
4	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
6	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
8	50	HDR Biased w/ 84hr anneal	1.4392	1.4392	0
9	50	HDR Biased w/ 84hr anneal	1.5192	1.5192	0
10	50	HDR unbiased	1.4392	1.4392	0
11	50	HDR unbiased	1.3992	1.3992	0
12	50	HDR unbiased	1.4392	1.4392	0
13	50	HDR unbiased	1.4392	1.3992	-0.04
14	50	HDR unbiased	1.4392	1.4392	0
26	0	Correlation	1.3992	1.3992	0
27	0	Correlation	1.4392	1.4392	0
28	0	Correlation	1.4392	1.4392	0
29	0	Correlation	1.4392	1.4392	0
30	0	Correlation	1.4392	1.4392	0
32	0	Correlation	1.4392	1.3992	-0.04

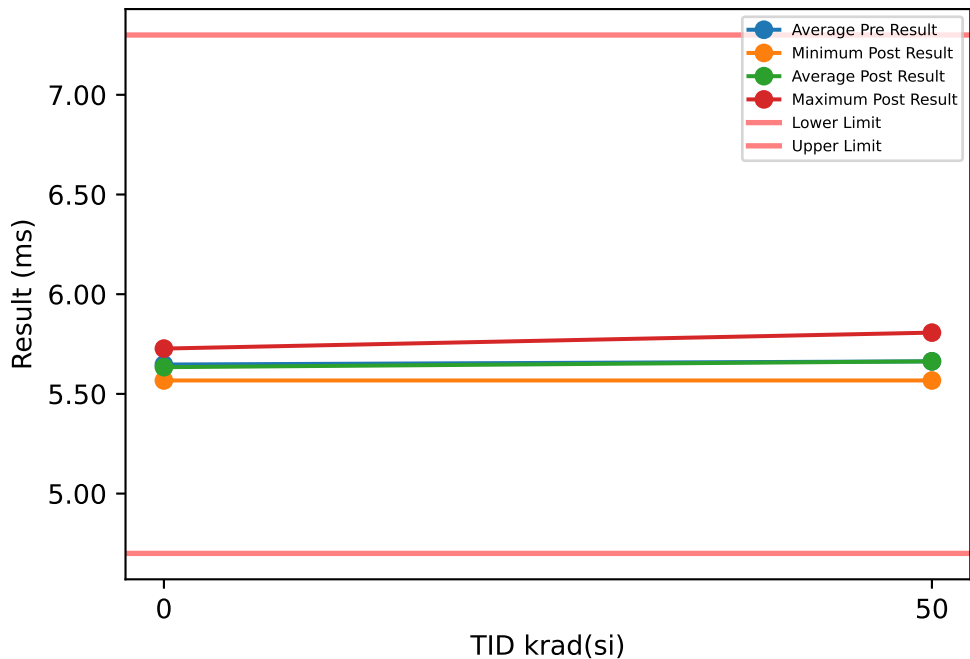
## Test Statistics (ms)

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	1.3992	1.4325	1.4392	0.01633	1.3992	1.4259	1.4392	0.020656	-0.04	-0.0066667	0	0.01633
50	1.3992	1.4432	1.5192	0.029515	1.3992	1.4432	1.5192	0.035024	-0.04	0	0.04	0.018856



Device Test: 22.23 T\_SS\_22NF(\_TIMING|STARTUP/SS\_TR/14////@T\_SS\_22NF )

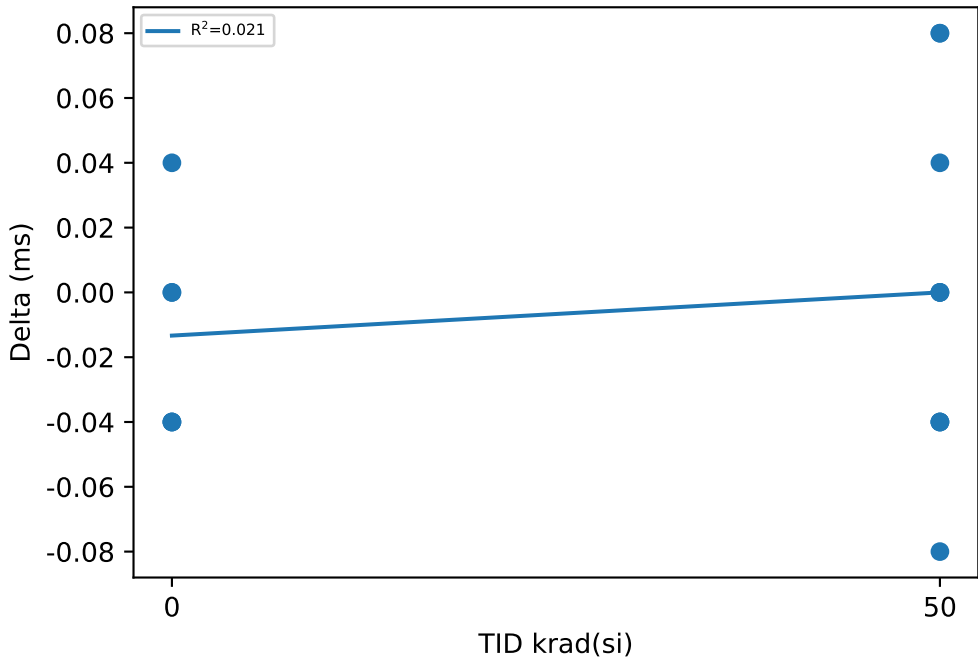
TID vs Result Stats



Test Results (Lower Limit = 4.7, Upper Limit = 7.3 (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5.7273	5.8073	0.08
4	50	HDR Biased w/ 84hr anneal	5.6873	5.6873	0
6	50	HDR Biased w/ 84hr anneal	5.6473	5.6873	0.04
8	50	HDR Biased w/ 84hr anneal	5.6873	5.6473	-0.04
9	50	HDR Biased w/ 84hr anneal	5.8473	5.7673	-0.08
10	50	HDR unbiased	5.6073	5.6073	0
11	50	HDR unbiased	5.5673	5.5673	0
12	50	HDR unbiased	5.6473	5.7273	0.08
13	50	HDR unbiased	5.6073	5.5673	-0.04
14	50	HDR unbiased	5.6073	5.5673	-0.04
26	0	Correlation	5.5673	5.5673	0
27	0	Correlation	5.6873	5.6873	0
28	0	Correlation	5.6073	5.5673	-0.04
29	0	Correlation	5.6873	5.7273	0.04
30	0	Correlation	5.6873	5.6473	-0.04
32	0	Correlation	5.6473	5.6073	-0.04

TID vs Post - Pre Exposure Delta

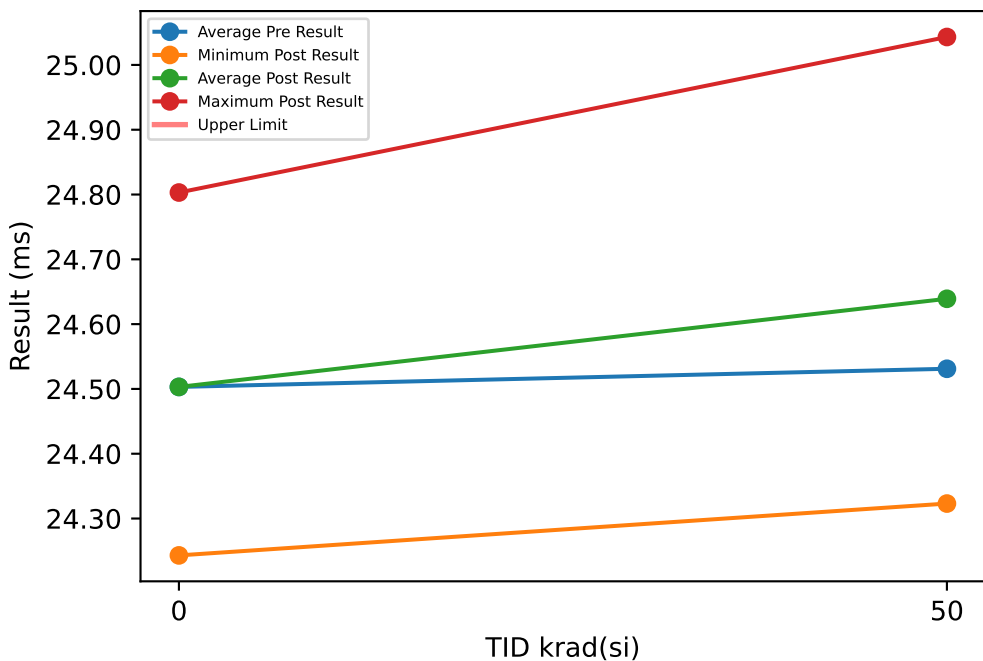


Test Statistics (ms)

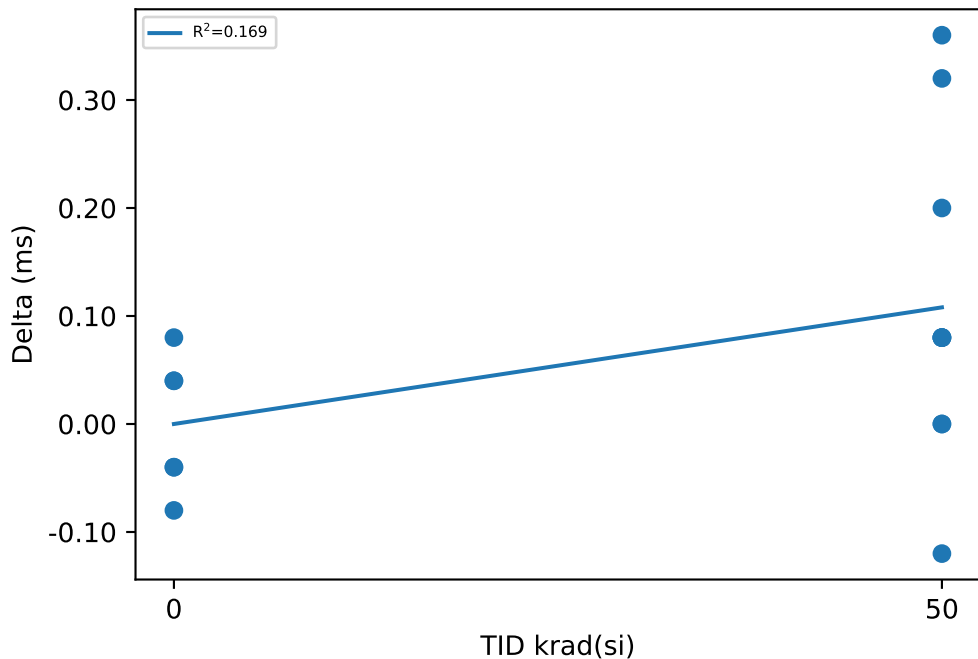
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	5.5673	5.6473	5.6873	0.050596	5.5673	5.634	5.7273	0.06532	-0.04	-0.013333	0.04	0.03266
50	5.5673	5.6633	5.8473	0.080443	5.5673	5.6633	5.8073	0.08682	-0.08	-8.8818e-17	0.08	0.053333

# Device Test: 22.24 T\_SS\_100NF(\_TIMING|STARTUP/SS\_TR/14////@T\_SS\_100NF )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (No Limits Specified (ms))

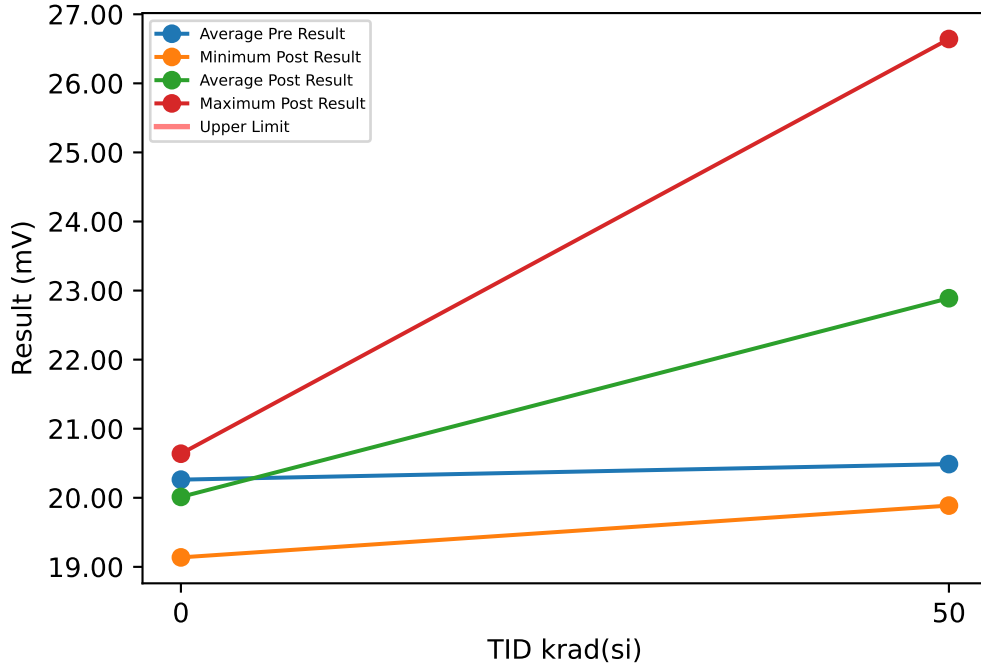
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	24.683	25.043	0.36
4	50	HDR Biased w/ 84hr anneal	24.643	24.723	0.08
6	50	HDR Biased w/ 84hr anneal	24.403	24.603	0.2
8	50	HDR Biased w/ 84hr anneal	24.563	24.563	0
9	50	HDR Biased w/ 84hr anneal	25.163	25.043	-0.12
10	50	HDR unbiased	24.363	24.443	0.08
11	50	HDR unbiased	24.243	24.323	0.08
12	50	HDR unbiased	24.563	24.883	0.32
13	50	HDR unbiased	24.283	24.363	0.08
14	50	HDR unbiased	24.403	24.403	0
26	0	Correlation	24.283	24.243	-0.04
27	0	Correlation	24.563	24.643	0.08
28	0	Correlation	24.323	24.243	-0.08
29	0	Correlation	24.763	24.803	0.04
30	0	Correlation	24.603	24.643	0.04
32	0	Correlation	24.483	24.443	-0.04

### Test Statistics (ms)

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	24.283	24.503	24.763	0.18022	24.243	24.503	24.803	0.23152	-0.08	-5.9212e-16	0.08	0.061968
50	24.243	24.531	25.163	0.2672	24.323	24.639	25.043	0.27289	-0.12	0.108	0.36	0.14733

# Device Test: 22.3 V\_SS\_START(\_LEVEL|STATIC/SS\_TR/4.5////@V\_SS\_START )

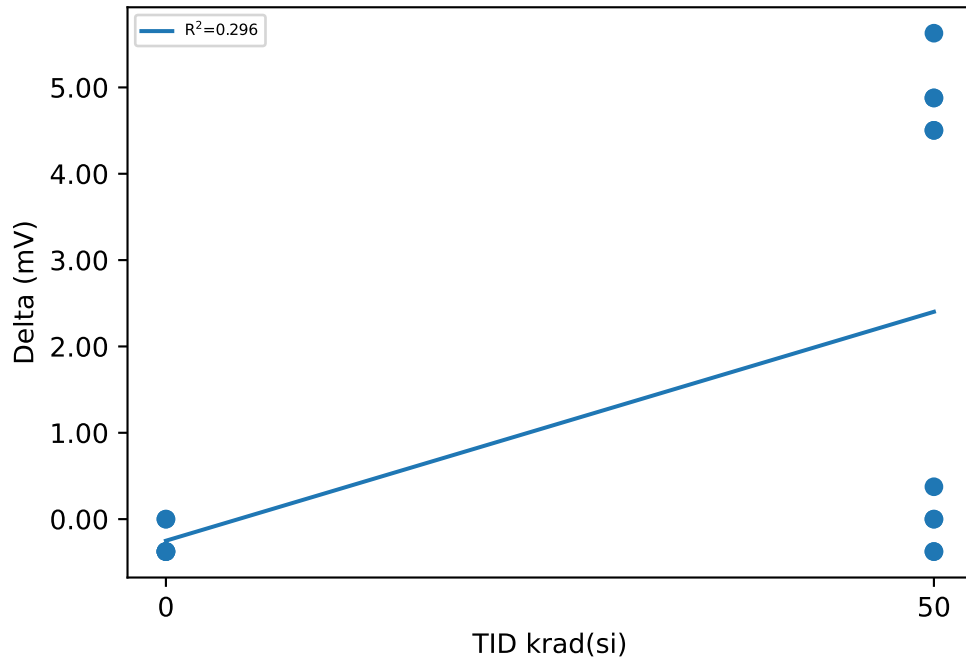
## TID vs Result Stats



## Test Results (No Limits Specified (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	18.762	23.265	4.503
4	50	HDR Biased w/ 84hr anneal	19.512	24.39	4.878
6	50	HDR Biased w/ 84hr anneal	20.263	25.141	4.878
8	50	HDR Biased w/ 84hr anneal	20.638	26.266	5.628
9	50	HDR Biased w/ 84hr anneal	22.139	26.642	4.503
10	50	HDR unbiased	21.388	21.388	0
11	50	HDR unbiased	21.013	21.013	0
12	50	HDR unbiased	20.263	19.887	-0.376
13	50	HDR unbiased	21.388	21.013	-0.375
14	50	HDR unbiased	19.512	19.887	0.375
26	0	Correlation	19.512	19.512	0
27	0	Correlation	20.638	20.263	-0.375
28	0	Correlation	19.512	19.137	-0.375
29	0	Correlation	20.263	19.887	-0.376
30	0	Correlation	21.013	20.638	-0.375
32	0	Correlation	20.638	20.638	0

## TID vs Post - Pre Exposure Delta

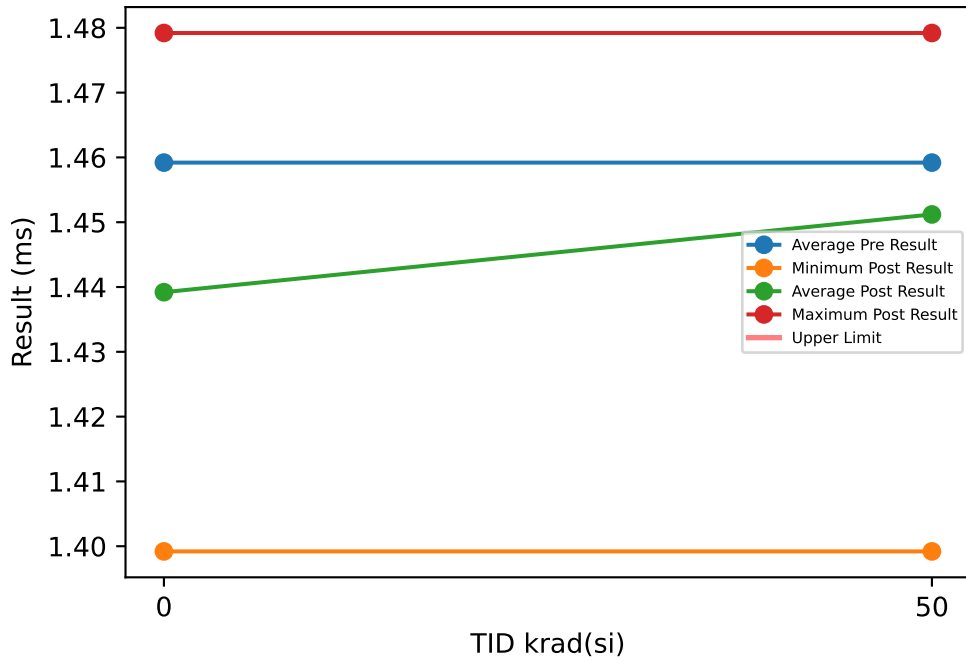


## Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	19.512	20.263	21.013	0.62797	19.137	20.012	20.638	0.61286	-0.376	-0.25017	0	0.19378
50	18.762	20.488	22.139	1.0344	19.887	22.889	26.642	2.5878	-0.376	2.4014	5.628	2.6368

Device Test: 22.4 T\_SS\_5P6NF(\_TIMING|STARTUP/SS\_TR/4.5////@T\_SS\_5P6NF )

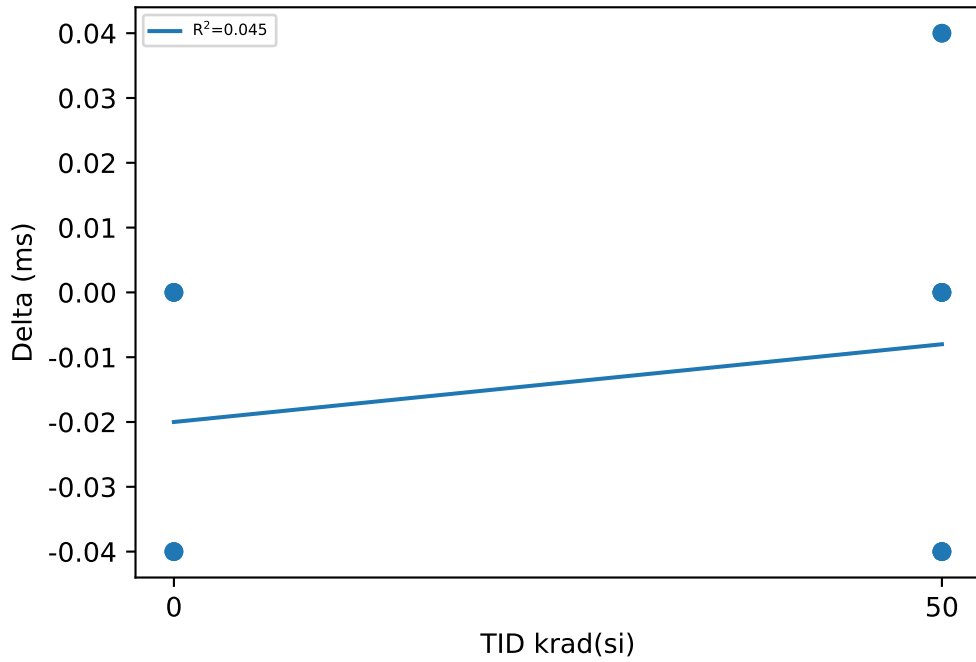
TID vs Result Stats



Test Results (No Limits Specified (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.4392	1.4792	0.04
4	50	HDR Biased w/ 84hr anneal	1.4792	1.4792	0
6	50	HDR Biased w/ 84hr anneal	1.4392	1.4792	0.04
8	50	HDR Biased w/ 84hr anneal	1.4792	1.4792	0
9	50	HDR Biased w/ 84hr anneal	1.5192	1.4792	-0.04
10	50	HDR unbiased	1.4392	1.4392	0
11	50	HDR unbiased	1.4392	1.3992	-0.04
12	50	HDR unbiased	1.4792	1.4392	-0.04
13	50	HDR unbiased	1.4392	1.4392	0
14	50	HDR unbiased	1.4392	1.3992	-0.04
26	0	Correlation	1.4392	1.4392	0
27	0	Correlation	1.4792	1.4392	-0.04
28	0	Correlation	1.4392	1.4392	0
29	0	Correlation	1.4792	1.4792	0
30	0	Correlation	1.4792	1.4392	-0.04
32	0	Correlation	1.4392	1.3992	-0.04

TID vs Post - Pre Exposure Delta

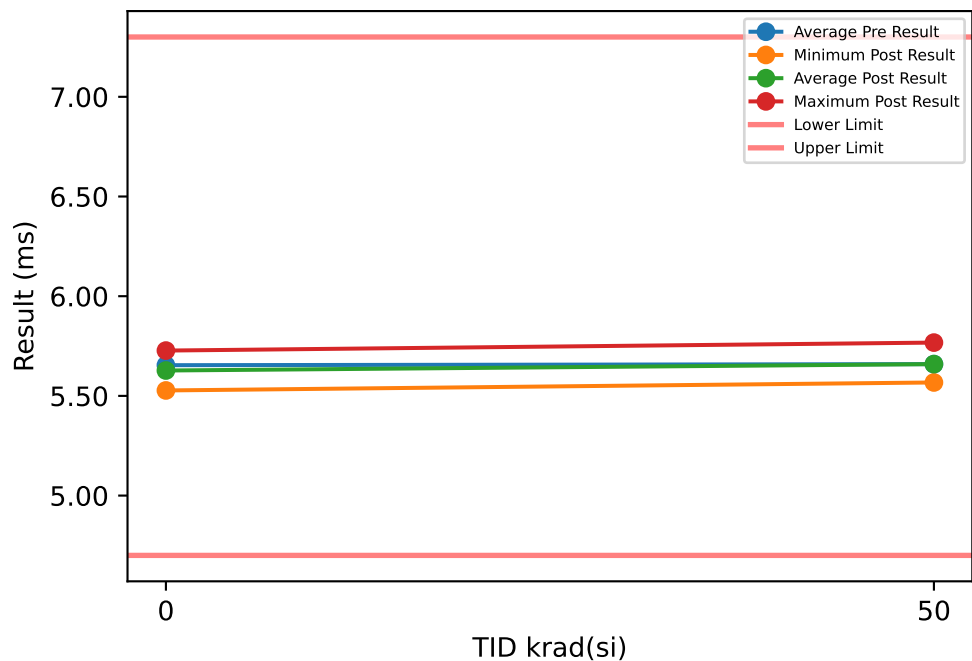


Test Statistics (ms)

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	1.4392	1.4592	1.4792	0.021909	1.3992	1.4392	1.4792	0.025298	-0.04	-0.02	0	0.021909
50	1.4392	1.4592	1.5192	0.028284	1.3992	1.4512	1.4792	0.032931	-0.04	-0.008	0.04	0.031552

Device Test: 22.5 T\_SS\_22NF(\_TIMING|STARTUP/SS\_TR/4.5////@T\_SS\_22NF )

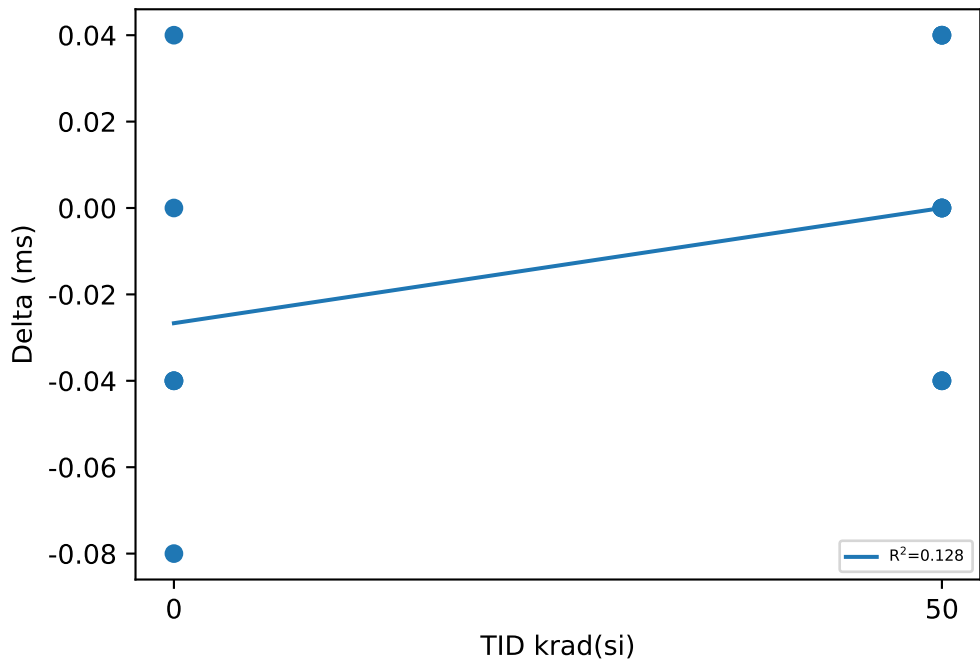
TID vs Result Stats



Test Results (Lower Limit = 4.7, Upper Limit = 7.3 (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5.7273	5.7673	0.04
4	50	HDR Biased w/ 84hr anneal	5.6873	5.6873	0
6	50	HDR Biased w/ 84hr anneal	5.6473	5.6873	0.04
8	50	HDR Biased w/ 84hr anneal	5.6473	5.6473	0
9	50	HDR Biased w/ 84hr anneal	5.8073	5.7673	-0.04
10	50	HDR unbiased	5.6073	5.6073	0
11	50	HDR unbiased	5.6073	5.5673	-0.04
12	50	HDR unbiased	5.6473	5.6873	0.04
13	50	HDR unbiased	5.6073	5.5673	-0.04
14	50	HDR unbiased	5.6073	5.6073	0
26	0	Correlation	5.6073	5.5273	-0.08
27	0	Correlation	5.6473	5.6873	0.04
28	0	Correlation	5.6073	5.5673	-0.04
29	0	Correlation	5.7273	5.7273	0
30	0	Correlation	5.6873	5.6473	-0.04
32	0	Correlation	5.6473	5.6073	-0.04

TID vs Post - Pre Exposure Delta

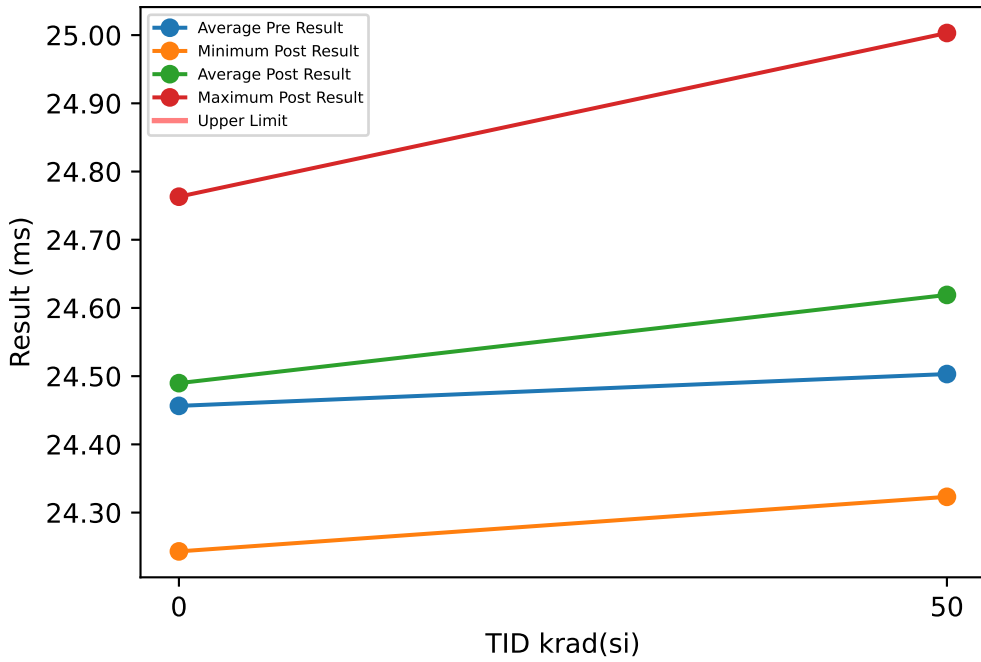


Test Statistics (ms)

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	5.6073	5.654	5.7273	0.046762	5.5273	5.6273	5.7273	0.074833	-0.08	-0.026667	0.04	0.041312
50	5.6073	5.6593	5.8073	0.065456	5.5673	5.6593	5.7673	0.073151	-0.04	-1.7764e-16	0.04	0.03266

Device Test: 22.6 T\_SS\_100NF(\_TIMING|STARTUP/SS\_TR/4.5////@T\_SS\_100NF )

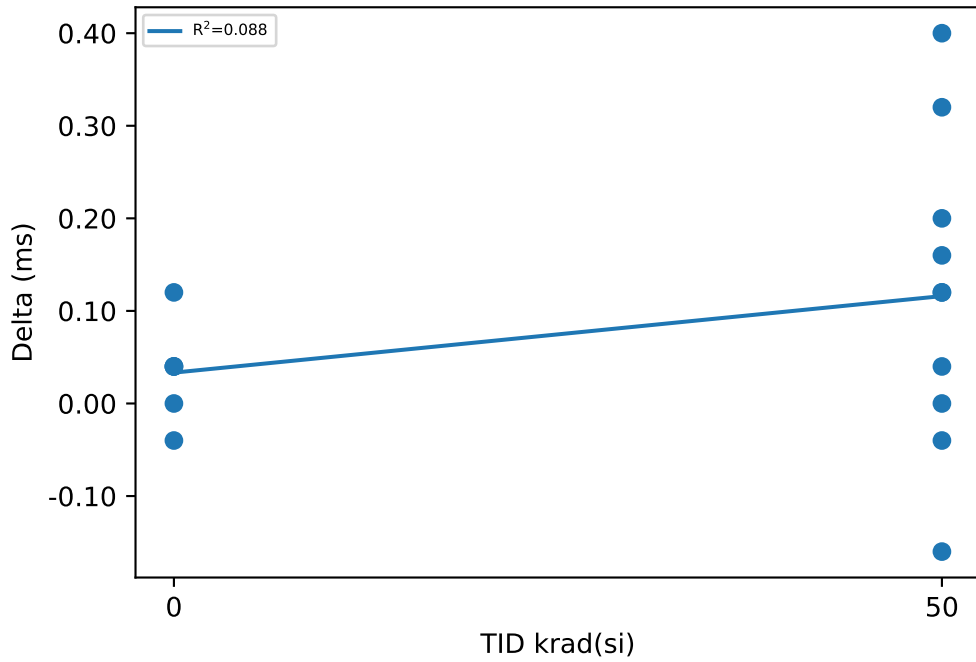
TID vs Result Stats



Test Results (No Limits Specified (ms))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	24.683	25.003	0.32
4	50	HDR Biased w/ 84hr anneal	24.603	24.723	0.12
6	50	HDR Biased w/ 84hr anneal	24.403	24.603	0.2
8	50	HDR Biased w/ 84hr anneal	24.563	24.523	-0.04
9	50	HDR Biased w/ 84hr anneal	25.163	25.003	-0.16
10	50	HDR unbiased	24.323	24.483	0.16
11	50	HDR unbiased	24.203	24.323	0.12
12	50	HDR unbiased	24.443	24.843	0.4
13	50	HDR unbiased	24.323	24.323	0
14	50	HDR unbiased	24.323	24.363	0.04
26	0	Correlation	24.243	24.243	0
27	0	Correlation	24.603	24.643	0.04
28	0	Correlation	24.203	24.243	0.04
29	0	Correlation	24.643	24.763	0.12
30	0	Correlation	24.563	24.603	0.04
32	0	Correlation	24.483	24.443	-0.04

TID vs Post - Pre Exposure Delta

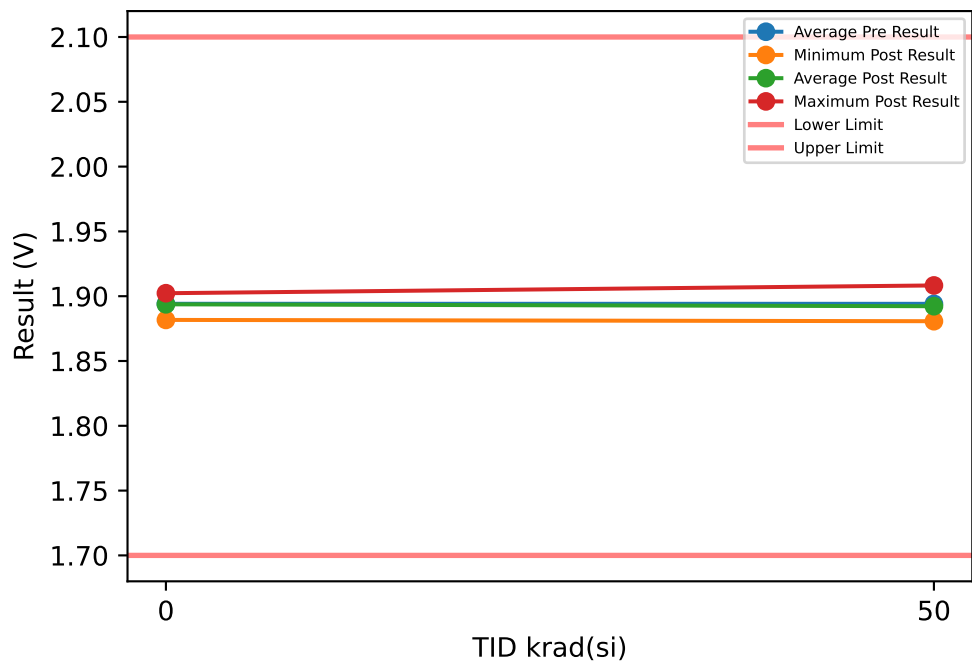


Test Statistics (ms)

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	24.203	24.456	24.643	0.18875	24.243	24.49	24.763	0.21676	-0.04	0.033333	0.12	0.053166
50	24.203	24.503	25.163	0.27536	24.323	24.619	25.003	0.26345	-0.16	0.116	0.4	0.16701

Device Test: 22.7 V\_COMP\_SD(\_LEVEL|RISE/COMP/5////@V\_COMP\_SD )

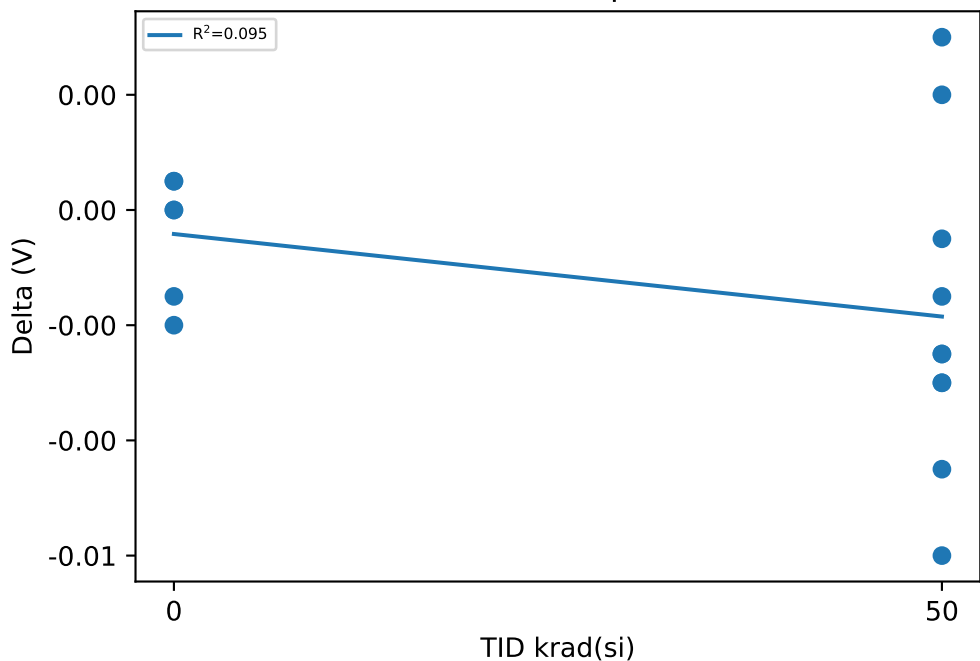
TID vs Result Stats



Test Results (Lower Limit = 1.7, Upper Limit = 2.1 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.8947	1.8887	-0.006
4	50	HDR Biased w/ 84hr anneal	1.8957	1.8932	-0.0025
6	50	HDR Biased w/ 84hr anneal	1.9053	1.9038	-0.0015
8	50	HDR Biased w/ 84hr anneal	1.8812	1.8807	-0.0005
9	50	HDR Biased w/ 84hr anneal	1.9128	1.9083	-0.0045
10	50	HDR unbiased	1.8932	1.8902	-0.003
11	50	HDR unbiased	1.8927	1.8902	-0.0025
12	50	HDR unbiased	1.8907	1.8877	-0.003
13	50	HDR unbiased	1.8907	1.8927	0.002
14	50	HDR unbiased	1.8842	1.8872	0.003
26	0	Correlation	1.9018	1.9023	0.0005
27	0	Correlation	1.8957	1.8942	-0.0015
28	0	Correlation	1.8947	1.8927	-0.002
29	0	Correlation	1.9018	1.9018	0
30	0	Correlation	1.8817	1.8817	0
32	0	Correlation	1.8892	1.8897	0.0005

TID vs Post - Pre Exposure Delta

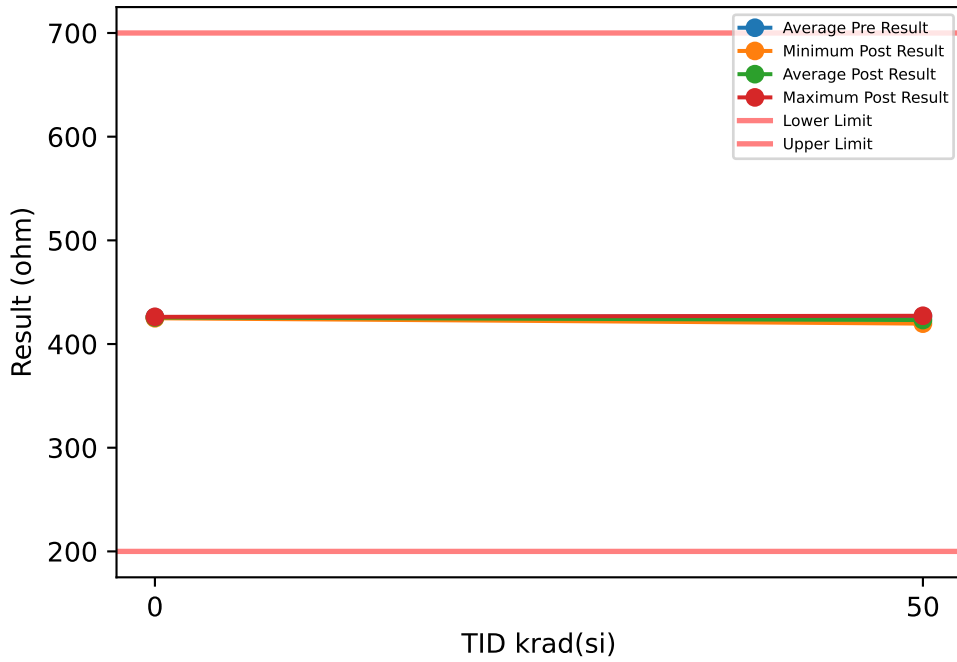


Test Statistics (V)

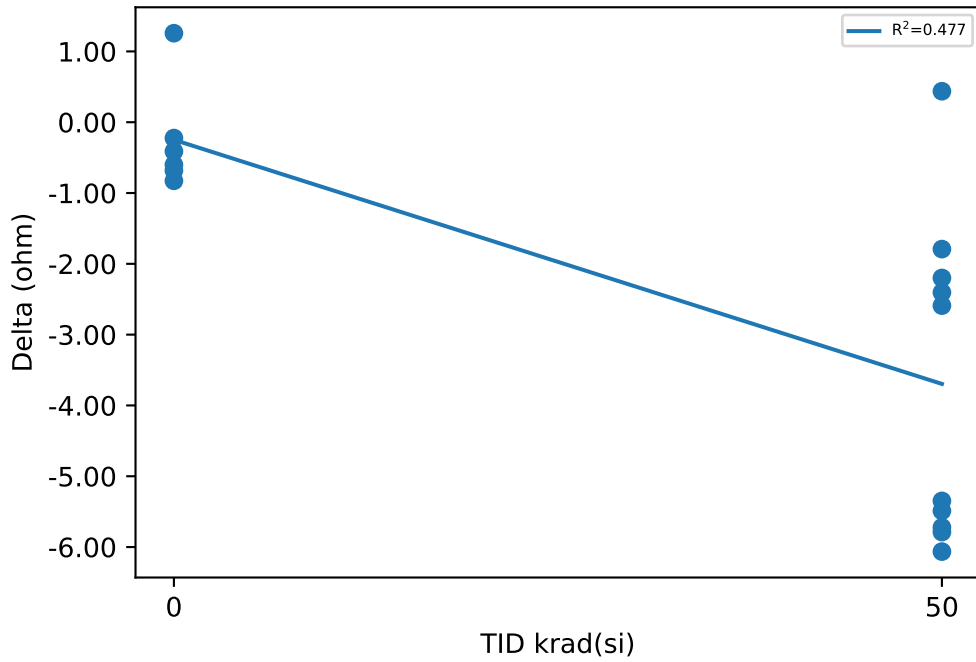
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.8817	1.8942	1.9018	0.0077363	1.8817	1.8937	1.9023	0.0077565	-0.002	-0.00041667	0.0005	0.0010685
50	1.8812	1.8941	1.9128	0.0092397	1.8807	1.8923	1.9083	0.0081153	-0.006	-0.00185	0.003	0.0027492

Device Test: 22.8 R\_SS\_DISCHARGE(\_LEVEL|SINK/SS\_TR/5////@R\_SS\_DISCHARGE )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 200.0, Upper Limit = 700.0 (ohm))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	425.82	426.25	0.4376
4	50	HDR Biased w/ 84hr anneal	427.32	425.12	-2.1999
6	50	HDR Biased w/ 84hr anneal	424.87	422.46	-2.4043
8	50	HDR Biased w/ 84hr anneal	429.85	427.26	-2.5903
9	50	HDR Biased w/ 84hr anneal	426.34	424.55	-1.792
10	50	HDR unbiased	427.99	422.27	-5.7222
11	50	HDR unbiased	425.02	419.67	-5.3483
12	50	HDR unbiased	425.86	420.37	-5.4883
13	50	HDR unbiased	428.39	422.6	-5.7883
14	50	HDR unbiased	426.76	420.69	-6.0643
26	0	Correlation	426.16	425.33	-0.8276
27	0	Correlation	424.92	426.17	1.2573
28	0	Correlation	426.2	425.6	-0.6014
29	0	Correlation	426.91	426.23	-0.682
30	0	Correlation	425.99	425.77	-0.2237
32	0	Correlation	425.25	424.84	-0.4118

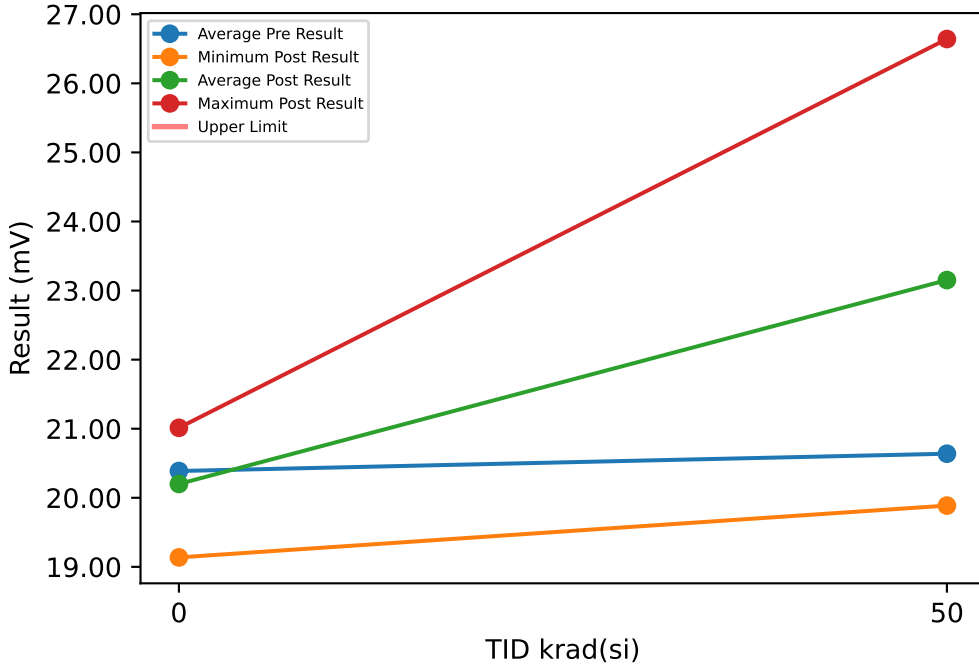
Test Statistics (ohm)

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	424.92	425.9	426.91	0.71785	424.84	425.66	426.23	0.52728	-0.8276	-0.2482	1.2573	0.76714
50	424.87	426.82	429.85	1.5817	419.67	423.13	427.26	2.5775	-6.0643	-3.696	0.4376	2.2577



# Device Test: 22.9 V\_SS\_START(\_LEVEL|STATIC/SS\_TR/5////@V\_SS\_START )

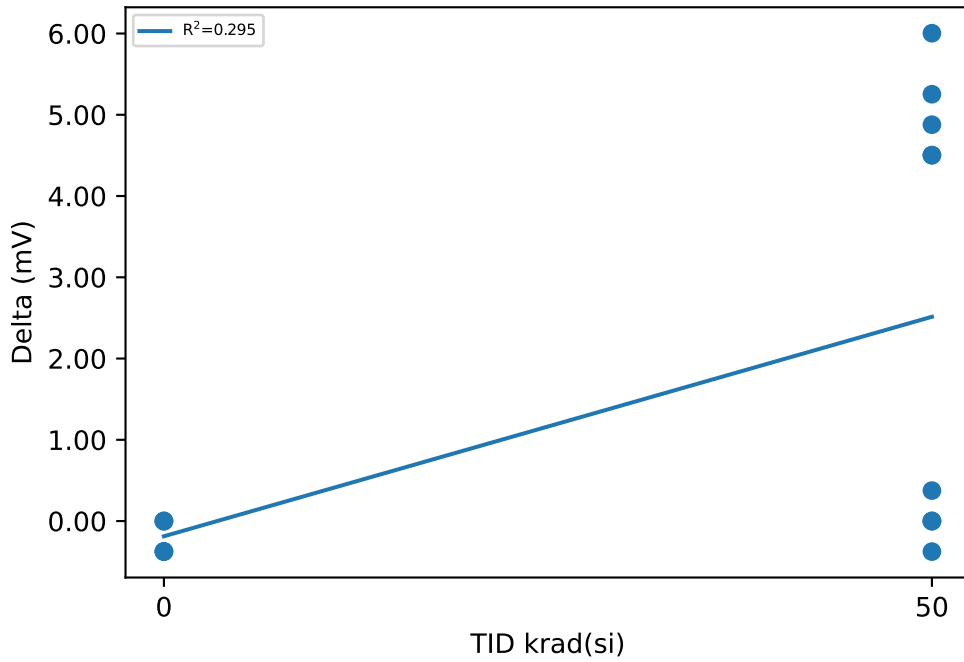
### TID vs Result Stats



### Test Results (No Limits Specified (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	18.762	23.64	4.878
4	50	HDR Biased w/ 84hr anneal	19.512	24.765	5.253
6	50	HDR Biased w/ 84hr anneal	20.638	25.141	4.503
8	50	HDR Biased w/ 84hr anneal	20.638	26.642	6.004
9	50	HDR Biased w/ 84hr anneal	22.139	26.642	4.503
10	50	HDR unbiased	21.764	21.764	0
11	50	HDR unbiased	21.388	21.388	0
12	50	HDR unbiased	20.263	20.263	0
13	50	HDR unbiased	21.764	21.388	-0.376
14	50	HDR unbiased	19.512	19.887	0.375
26	0	Correlation	19.887	19.512	-0.375
27	0	Correlation	20.638	20.638	0
28	0	Correlation	19.512	19.137	-0.375
29	0	Correlation	20.263	20.263	0
30	0	Correlation	21.013	21.013	0
32	0	Correlation	21.013	20.638	-0.375

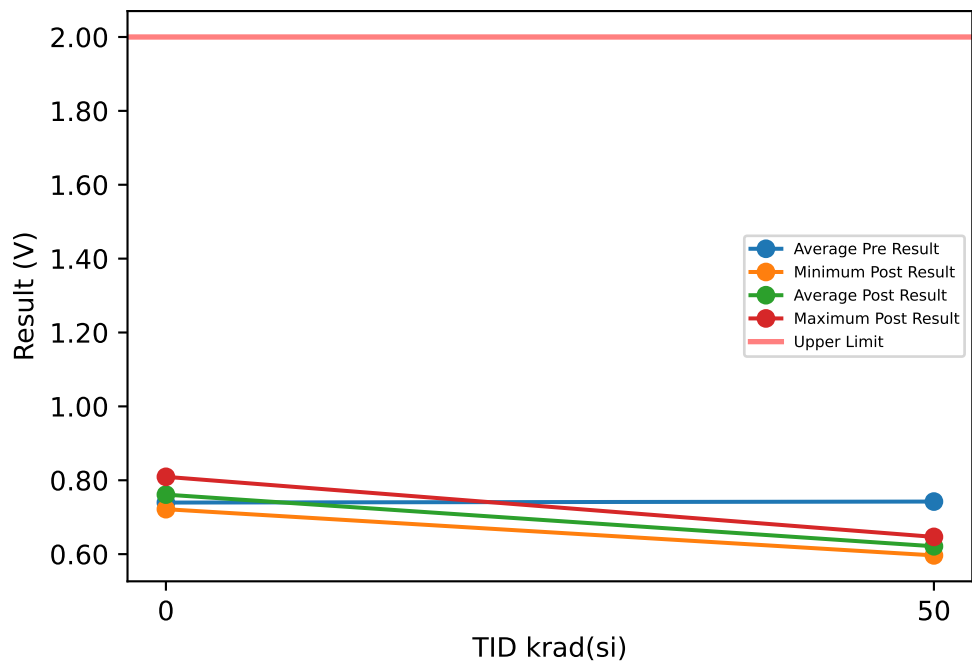
### TID vs Post - Pre Exposure Delta



### Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	19.512	20.388	21.013	0.61282	19.137	20.2	21.013	0.72828	-0.375	-0.1875	0	0.2054
50	18.762	20.638	22.139	1.1327	19.887	23.152	26.642	2.5454	-0.376	2.514	6.004	2.6889

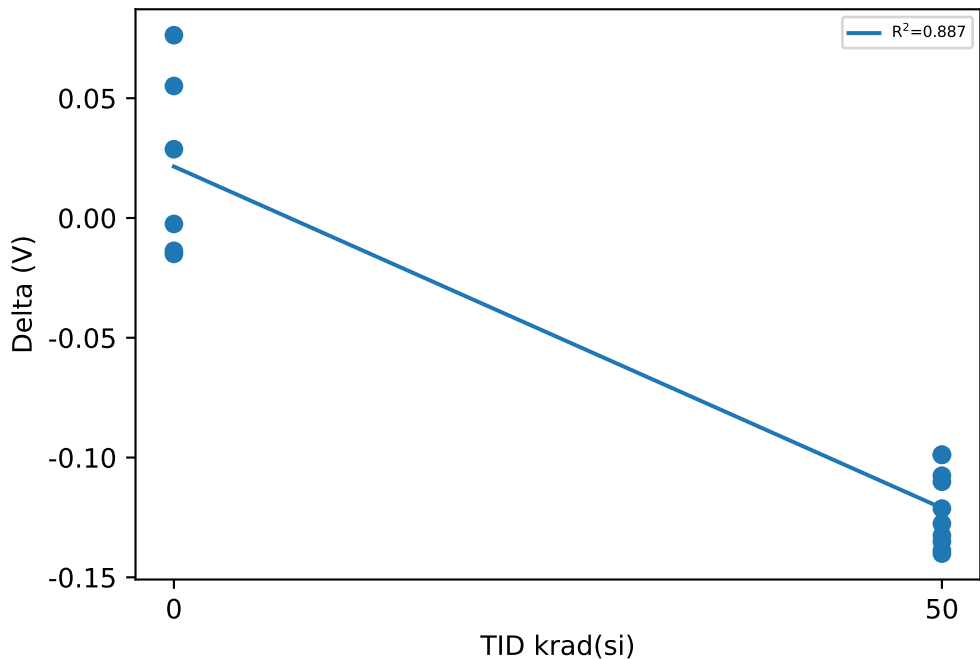
TID vs Result Stats



Test Results (Upper Limit = 2.0 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.768	0.6467	-0.1213
4	50	HDR Biased w/ 84hr anneal	0.7342	0.6266	-0.1076
6	50	HDR Biased w/ 84hr anneal	0.738	0.6279	-0.1101
8	50	HDR Biased w/ 84hr anneal	0.7392	0.6404	-0.0988
9	50	HDR Biased w/ 84hr anneal	0.7255	0.6266	-0.0989
10	50	HDR unbiased	0.7517	0.6129	-0.1388
11	50	HDR unbiased	0.7242	0.5966	-0.1276
12	50	HDR unbiased	0.7405	0.6054	-0.1351
13	50	HDR unbiased	0.748	0.6079	-0.1401
14	50	HDR unbiased	0.7542	0.6216	-0.1326
26	0	Correlation	0.733	0.8093	0.0763
27	0	Correlation	0.7517	0.8068	0.0551
28	0	Correlation	0.7442	0.7305	-0.0137
29	0	Correlation	0.7367	0.7342	-0.0025
30	0	Correlation	0.7355	0.7642	0.0287
32	0	Correlation	0.7367	0.7217	-0.015

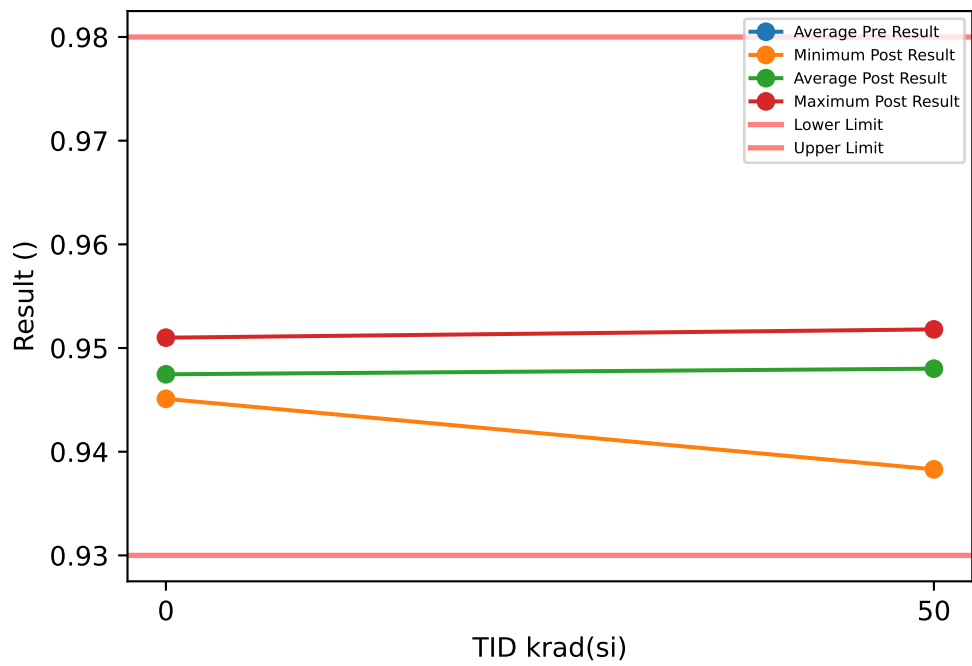
TID vs Post - Pre Exposure Delta



Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.733	0.73963	0.7517	0.0069965	0.7217	0.76112	0.8093	0.039073	-0.015	0.021483	0.0763	0.038291
50	0.7242	0.74235	0.768	0.013457	0.5966	0.62126	0.6467	0.015716	-0.1401	-0.12109	-0.0988	0.016118

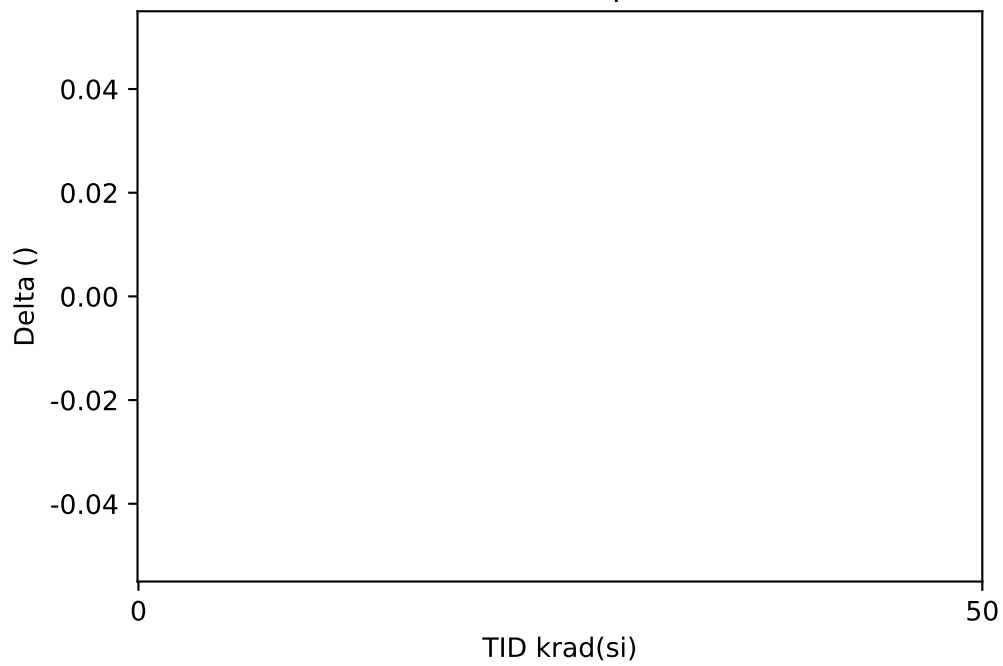
TID vs Result Stats



Test Results (Lower Limit = 0.93, Upper Limit = 0.98 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.9493	
4	50	HDR Biased w/ 84hr anneal		0.9485	
6	50	HDR Biased w/ 84hr anneal		0.9469	
8	50	HDR Biased w/ 84hr anneal		0.9517	
9	50	HDR Biased w/ 84hr anneal		0.9518	
10	50	HDR unbiased		0.944	
11	50	HDR unbiased		0.9498	
12	50	HDR unbiased		0.9486	
13	50	HDR unbiased		0.9383	
14	50	HDR unbiased		0.9512	
26	0	Correlation		0.9495	
27	0	Correlation		0.951	
28	0	Correlation		0.9471	
29	0	Correlation		0.9451	
30	0	Correlation		0.9467	
32	0	Correlation		0.9454	

TID vs Post - Pre Exposure Delta

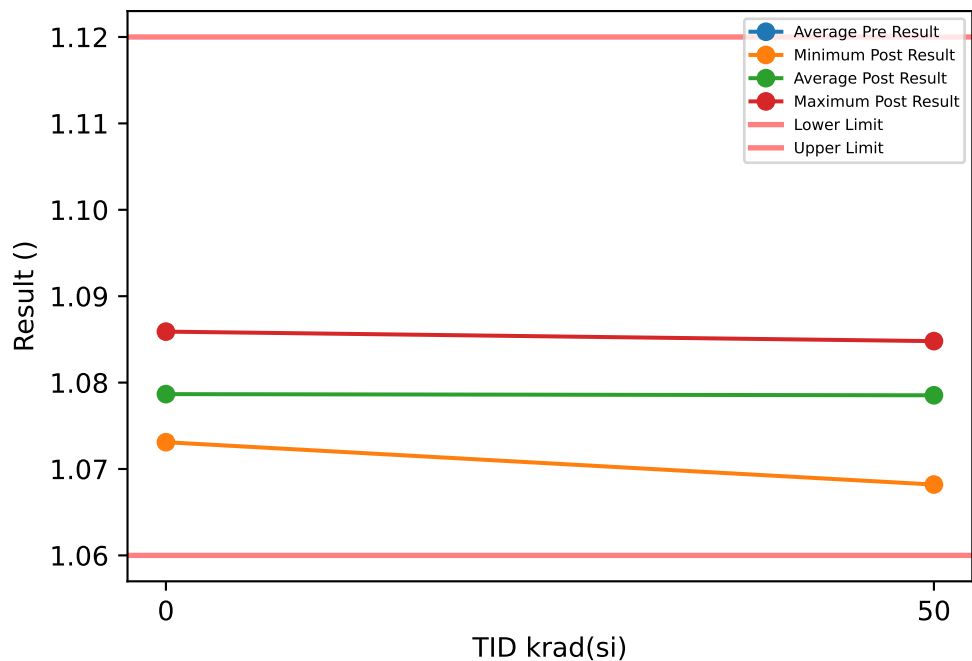


Test Statistics ( )

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					0.9451	0.94747	0.951	0.002333				
50					0.9383	0.94801	0.9518	0.0041528				



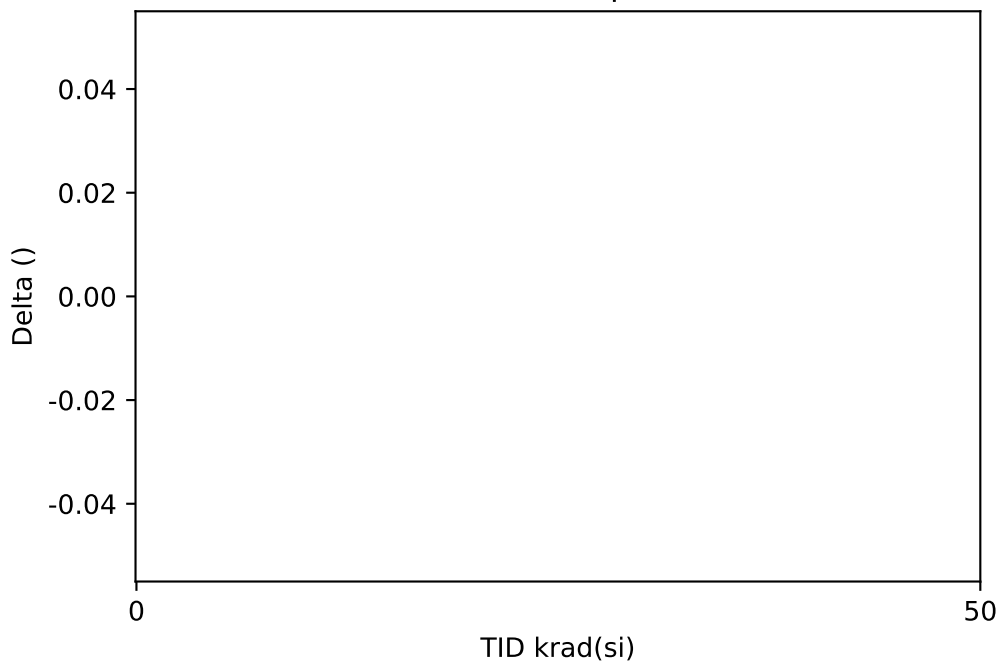
TID vs Result Stats



Test Results (Lower Limit = 1.06, Upper Limit = 1.12 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result (V)	Post Result (V)	Delta (V)
1	50	HDR Biased w/ 84hr anneal	1.0812	1.0812	0.0000
4	50	HDR Biased w/ 84hr anneal	1.0772	1.0772	0.0000
6	50	HDR Biased w/ 84hr anneal	1.079	1.079	0.0000
8	50	HDR Biased w/ 84hr anneal	1.0848	1.0848	0.0000
9	50	HDR Biased w/ 84hr anneal	1.0812	1.0812	0.0000
10	50	HDR unbiased	1.0731	1.0731	0.0000
11	50	HDR unbiased	1.0834	1.0834	0.0000
12	50	HDR unbiased	1.0761	1.0761	0.0000
13	50	HDR unbiased	1.0682	1.0682	0.0000
14	50	HDR unbiased	1.0811	1.0811	0.0000
26	0	Correlation	1.0801	1.0801	0.0000
27	0	Correlation	1.0859	1.0859	0.0000
28	0	Correlation	1.0794	1.0794	0.0000
29	0	Correlation	1.0731	1.0731	0.0000
30	0	Correlation	1.0773	1.0773	0.0000
32	0	Correlation	1.0762	1.0762	0.0000

TID vs Post - Pre Exposure Delta

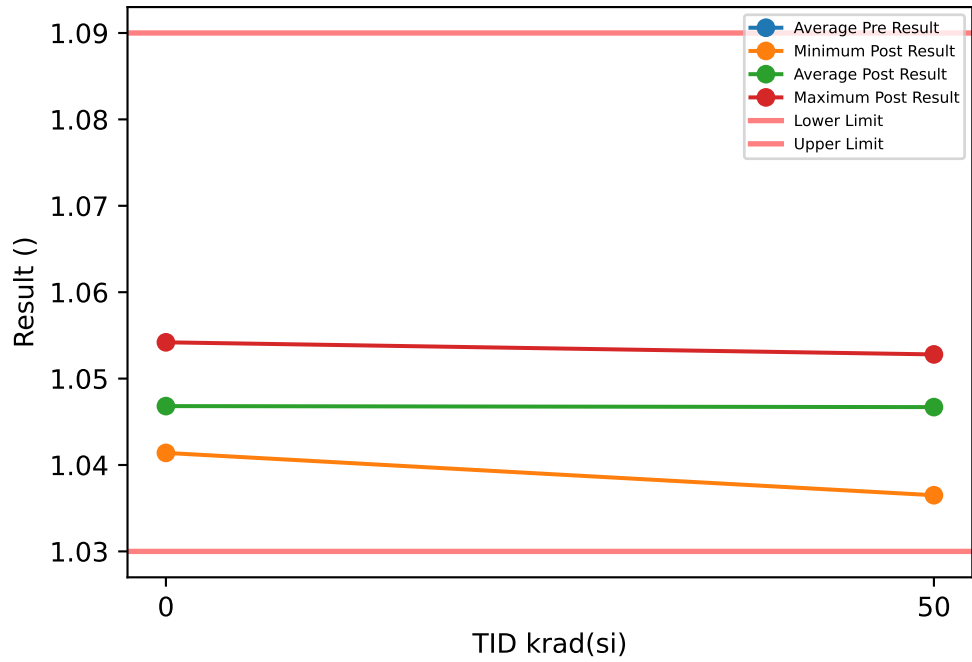


Test Statistics (V)

krad(si)	Pre Exposure Min (V)	Pre Exposure Avg (V)	Pre Exposure Max (V)	Pre Exposure Std (V)	Post Exposure Min (V)	Post Exposure Avg (V)	Post Exposure Max (V)	Post Exposure Std (V)	Min Delta (V)	Avg Delta (V)	Max Delta (V)	Std Delta (V)
0	1.060	1.0787	1.086	0.0043325	1.0731	1.0787	1.0859	0.0043325	0.0000	0.0000	0.0000	0.0000
50	1.060	1.0785	1.086	0.005033	1.0682	1.0785	1.0848	0.005033	0.0000	0.0000	0.0000	0.0000



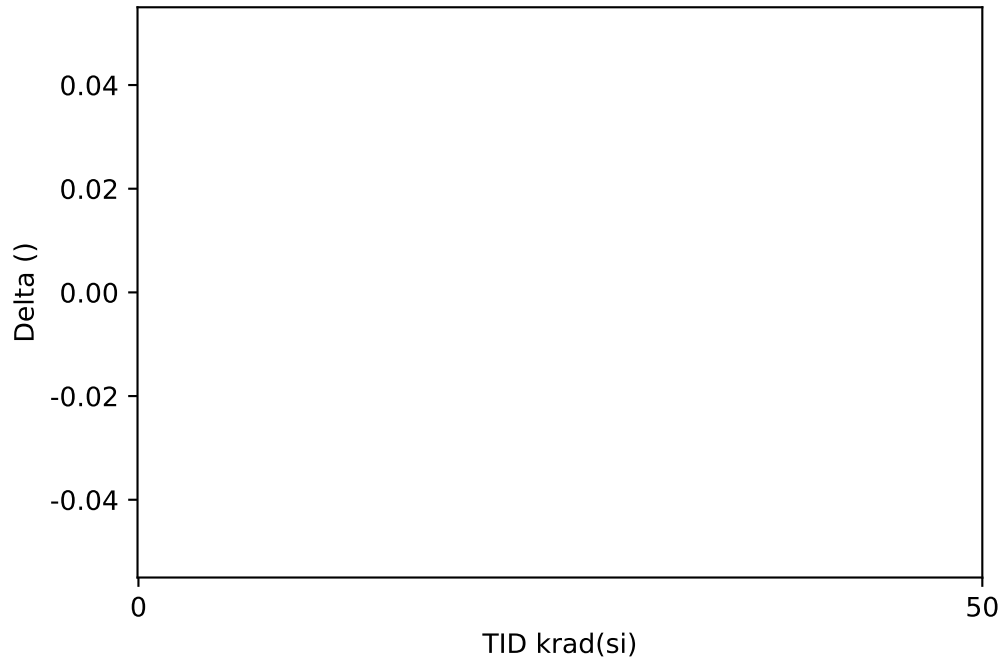
TID vs Result Stats



Test Results (Lower Limit = 1.03, Upper Limit = 1.09 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result (V)	Post Result (V)	Delta (V)
1	50	HDR Biased w/ 84hr anneal	1.0468	1.0494	0.0026
4	50	HDR Biased w/ 84hr anneal	1.0468	1.0456	-0.0012
6	50	HDR Biased w/ 84hr anneal	1.0468	1.0471	0.0003
8	50	HDR Biased w/ 84hr anneal	1.0468	1.0528	0.0060
9	50	HDR Biased w/ 84hr anneal	1.0468	1.0494	0.0026
10	50	HDR unbiased	1.0468	1.0414	-0.0054
11	50	HDR unbiased	1.0468	1.0513	0.0045
12	50	HDR unbiased	1.0468	1.0445	-0.0023
13	50	HDR unbiased	1.0468	1.0365	-0.0103
14	50	HDR unbiased	1.0468	1.049	0.0022
26	0	Correlation	1.0468	1.0482	0.0014
27	0	Correlation	1.0468	1.0542	0.0074
28	0	Correlation	1.0468	1.0477	0.0009
29	0	Correlation	1.0468	1.0414	-0.0054
30	0	Correlation	1.0468	1.0454	-0.0014
32	0	Correlation	1.0468	1.044	-0.0028

TID vs Post - Pre Exposure Delta



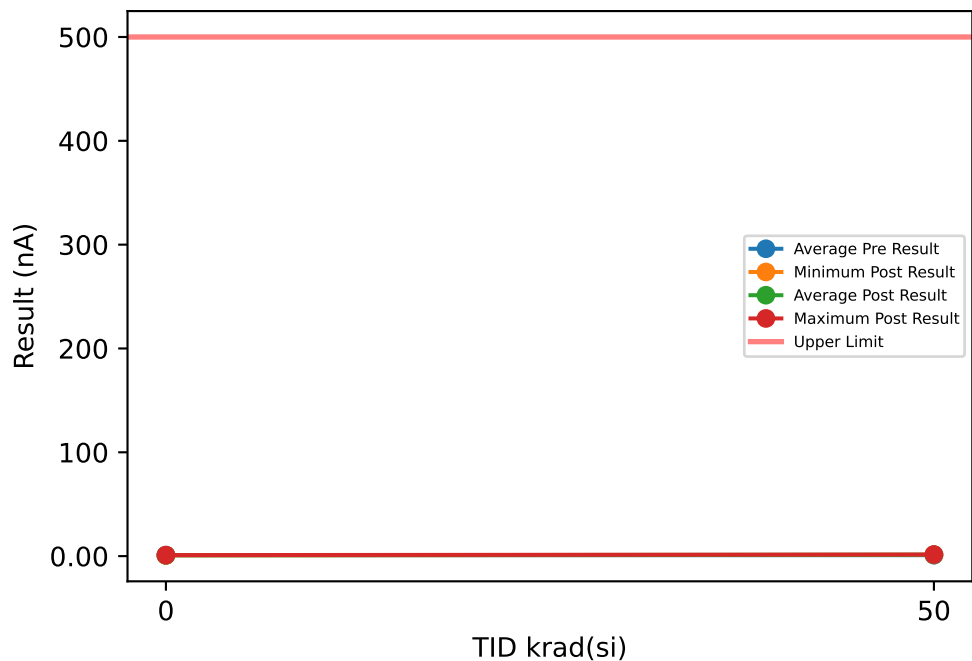
Test Statistics (V)

krad(si)	Pre Exposure Min (V)	Pre Exposure Avg (V)	Pre Exposure Max (V)	Pre Exposure Std (V)	Post Exposure Min (V)	Post Exposure Avg (V)	Post Exposure Max (V)	Post Exposure Std (V)	Min Delta (V)	Avg Delta (V)	Max Delta (V)	Std Delta (V)
0	1.0300	1.0468	1.0542	0.0043929	1.0414	1.0468	1.0542	0.0043929	1.0300	1.0468	1.0542	0.0043929
50	1.0300	1.0467	1.0528	0.0049056	1.0365	1.0467	1.0528	0.0049056	1.0300	1.0467	1.0528	0.0049056





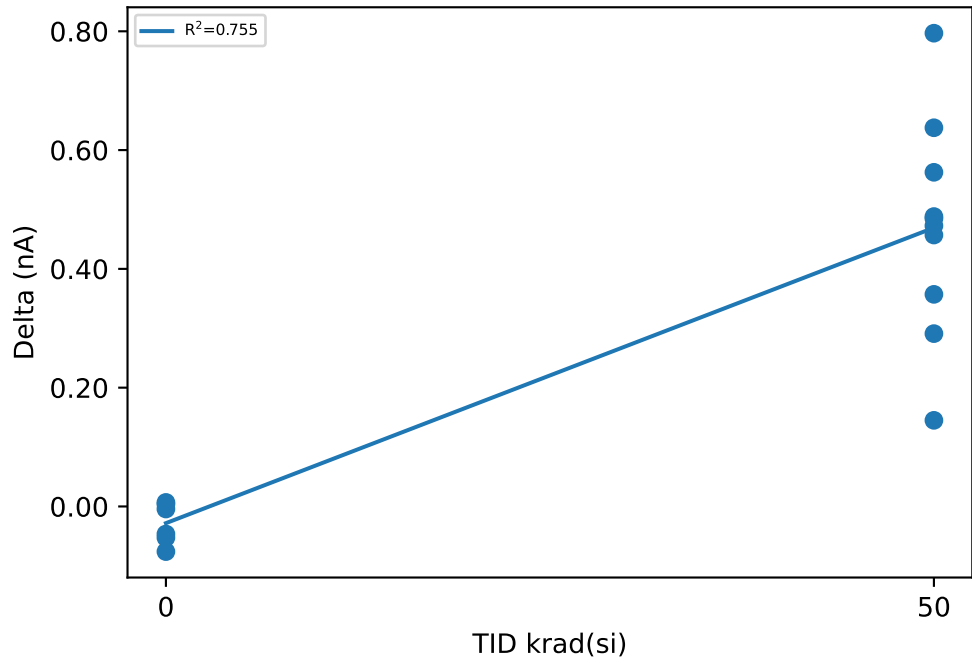
TID vs Result Stats



Test Results (Upper Limit = 500.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.9745	1.3316	0.3571
4	50	HDR Biased w/ 84hr anneal	0.8372	1.3098	0.4726
6	50	HDR Biased w/ 84hr anneal	1.3053	1.4503	0.145
8	50	HDR Biased w/ 84hr anneal	0.7311	1.2192	0.4881
9	50	HDR Biased w/ 84hr anneal	0.9402	1.3972	0.457
10	50	HDR unbiased	0.7529	1.3155	0.5626
11	50	HDR unbiased	0.7404	1.5372	0.7968
12	50	HDR unbiased	0.8122	1.4498	0.6376
13	50	HDR unbiased	1.0057	1.4904	0.4847
14	50	HDR unbiased	0.937	1.228	0.291
26	0	Correlation	0.7654	0.719	-0.0464
27	0	Correlation	0.703	0.6987	-0.0043
28	0	Correlation	1.0494	0.9969	-0.0525
29	0	Correlation	0.9589	0.8829	-0.076
30	0	Correlation	0.8465	0.8533	0.0068
32	0	Correlation	0.9058	0.9095	0.0037

TID vs Post - Pre Exposure Delta

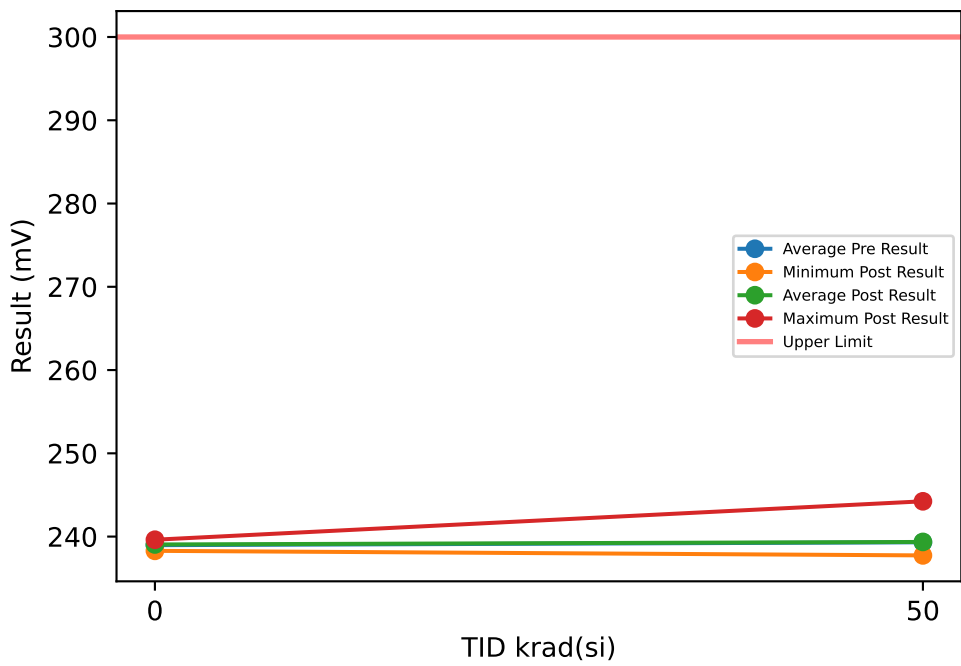


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.703	0.8715	1.0494	0.12707	0.6987	0.84338	0.9969	0.11489	-0.076	-0.028117	0.0068	0.0347
50	0.7311	0.90365	1.3053	0.17357	1.2192	1.3729	1.5372	0.10898	0.145	0.46925	0.7968	0.18092

Device Test: 23.14 PWRGD\_OUTPUT\_LOW(\_VOL|2mA/PWRGD/5////@PWRGD\_OUTPUT\_LOW )

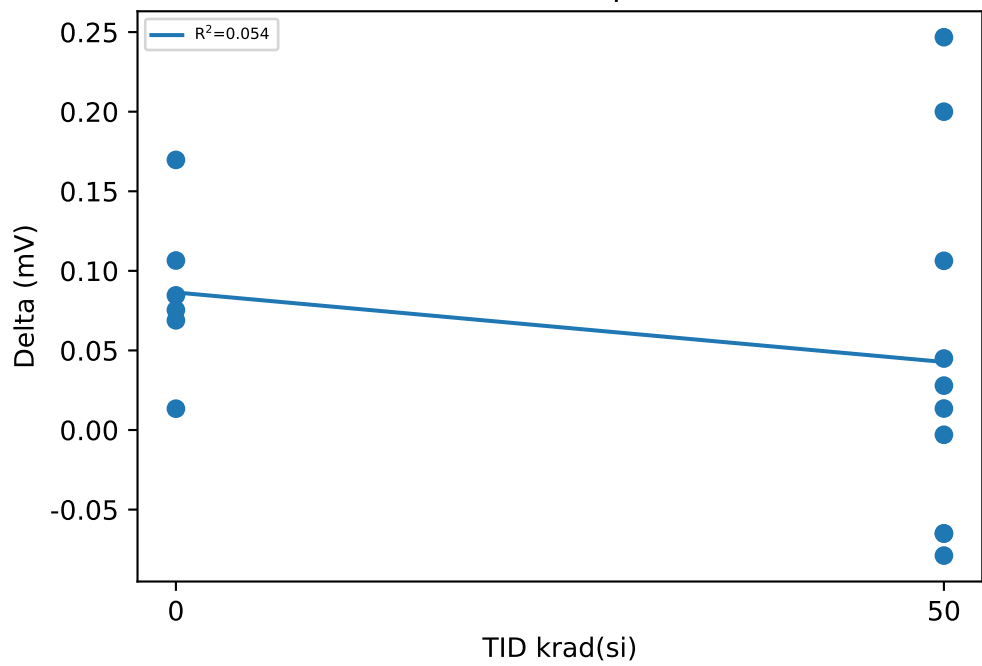
TID vs Result Stats



Test Results (Upper Limit = 300.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	237.71	237.74	0.0279
4	50	HDR Biased w/ 84hr anneal	238.66	238.66	-0.003
6	50	HDR Biased w/ 84hr anneal	239.55	239.49	-0.0651
8	50	HDR Biased w/ 84hr anneal	241.36	241.41	0.0449
9	50	HDR Biased w/ 84hr anneal	244.31	244.24	-0.0789
10	50	HDR unbiased	237.7	237.9	0.2
11	50	HDR unbiased	237.81	237.91	0.1063
12	50	HDR unbiased	238.99	238.93	-0.0649
13	50	HDR unbiased	237.74	237.99	0.2468
14	50	HDR unbiased	239.29	239.3	0.0135
26	0	Correlation	239.35	239.36	0.0134
27	0	Correlation	238.96	239.03	0.0689
28	0	Correlation	238.32	238.4	0.0754
29	0	Correlation	239.54	239.62	0.0846
30	0	Correlation	239.44	239.61	0.1697
32	0	Correlation	238.18	238.29	0.1065

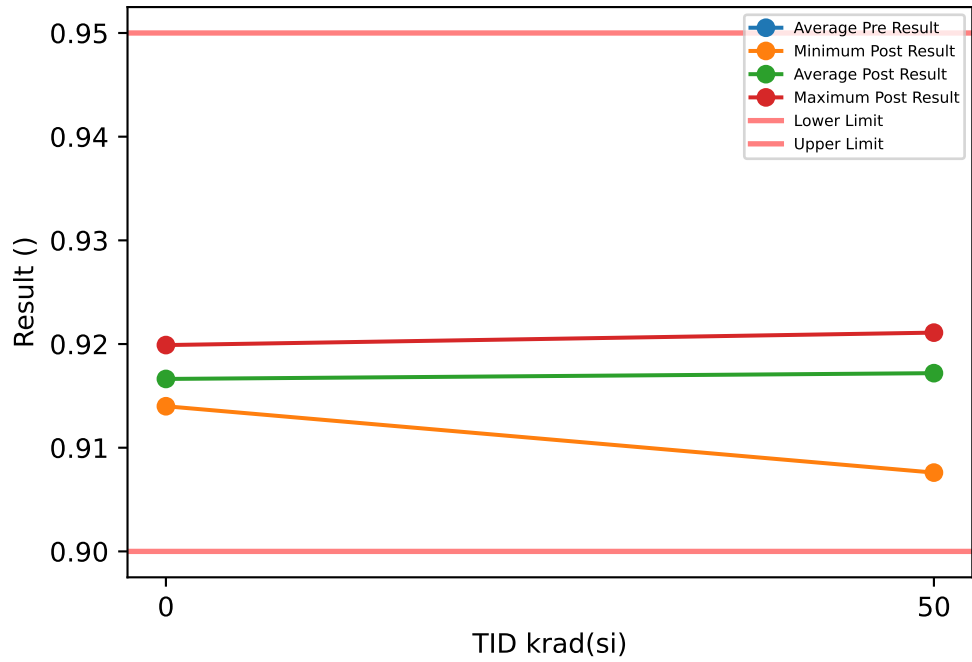
TID vs Post - Pre Exposure Delta



Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	238.18	238.97	239.54	0.58965	238.29	239.05	239.62	0.59259	0.0134	0.086417	0.1697	0.051191
50	237.7	239.31	244.31	2.1008	237.74	239.36	244.24	2.0387	-0.0789	0.04275	0.2468	0.11135

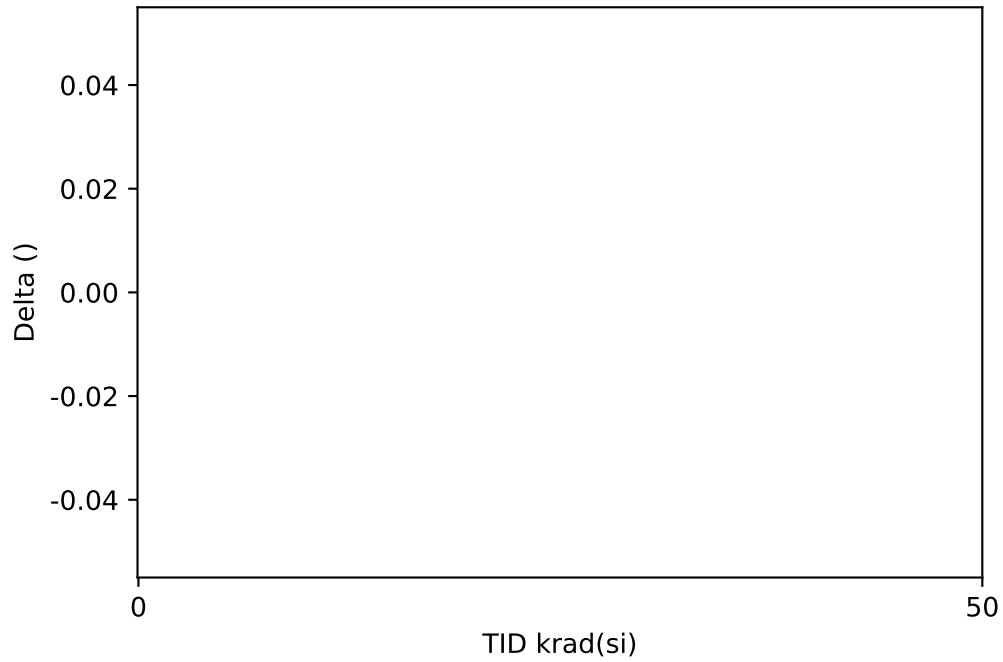
TID vs Result Stats



Test Results (Lower Limit = 0.9, Upper Limit = 0.95 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.9188	
4	50	HDR Biased w/ 84hr anneal		0.9176	
6	50	HDR Biased w/ 84hr anneal		0.916	
8	50	HDR Biased w/ 84hr anneal		0.9211	
9	50	HDR Biased w/ 84hr anneal		0.9208	
10	50	HDR unbiased		0.9133	
11	50	HDR unbiased		0.9189	
12	50	HDR unbiased		0.9179	
13	50	HDR unbiased		0.9076	
14	50	HDR unbiased		0.9199	
26	0	Correlation		0.9187	
27	0	Correlation		0.9199	
28	0	Correlation		0.9167	
29	0	Correlation		0.914	
30	0	Correlation		0.9158	
32	0	Correlation		0.9147	

TID vs Post - Pre Exposure Delta

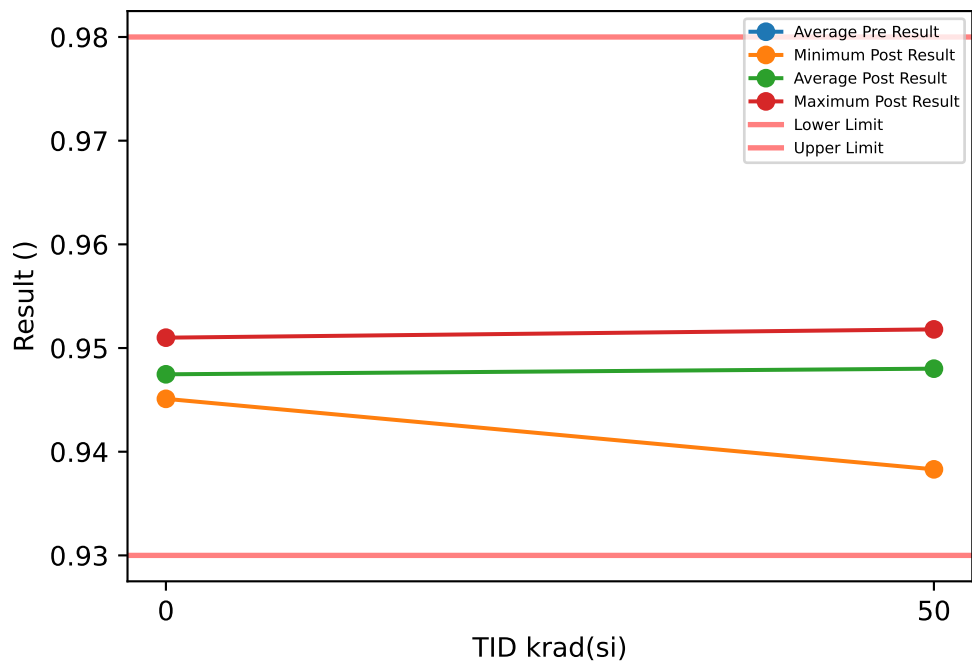


Test Statistics ( )

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					0.914	0.91663	0.9199	0.0022941				
50					0.9076	0.91719	0.9211	0.0040875				



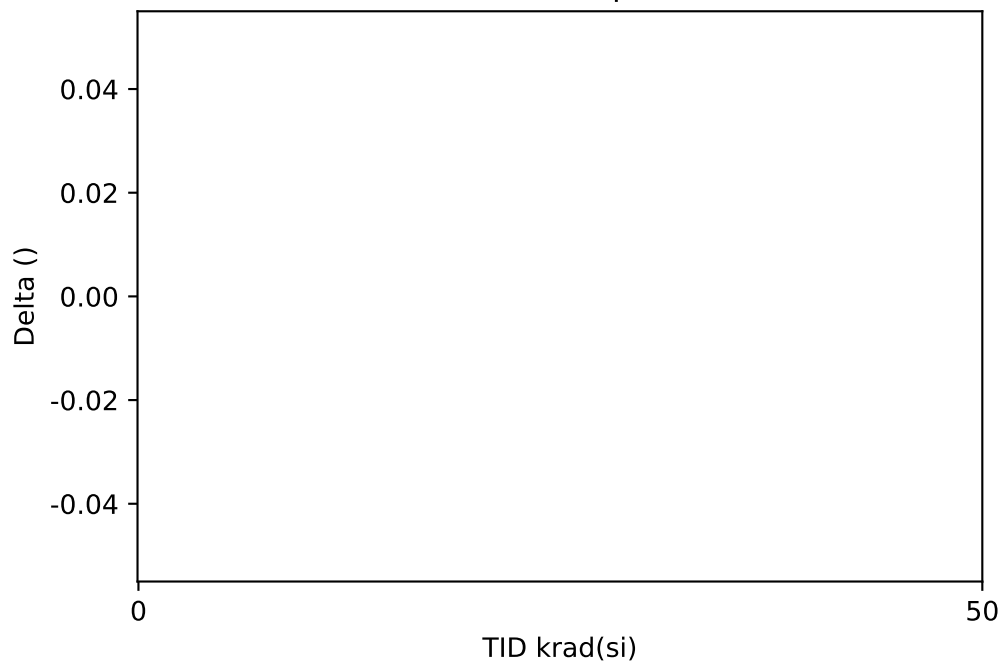
TID vs Result Stats



Test Results (Lower Limit = 0.93, Upper Limit = 0.98 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.9493	
4	50	HDR Biased w/ 84hr anneal		0.9485	
6	50	HDR Biased w/ 84hr anneal		0.9469	
8	50	HDR Biased w/ 84hr anneal		0.9517	
9	50	HDR Biased w/ 84hr anneal		0.9518	
10	50	HDR unbiased		0.944	
11	50	HDR unbiased		0.9498	
12	50	HDR unbiased		0.9486	
13	50	HDR unbiased		0.9383	
14	50	HDR unbiased		0.9512	
26	0	Correlation		0.9495	
27	0	Correlation		0.951	
28	0	Correlation		0.9475	
29	0	Correlation		0.9451	
30	0	Correlation		0.9463	
32	0	Correlation		0.9454	

TID vs Post - Pre Exposure Delta

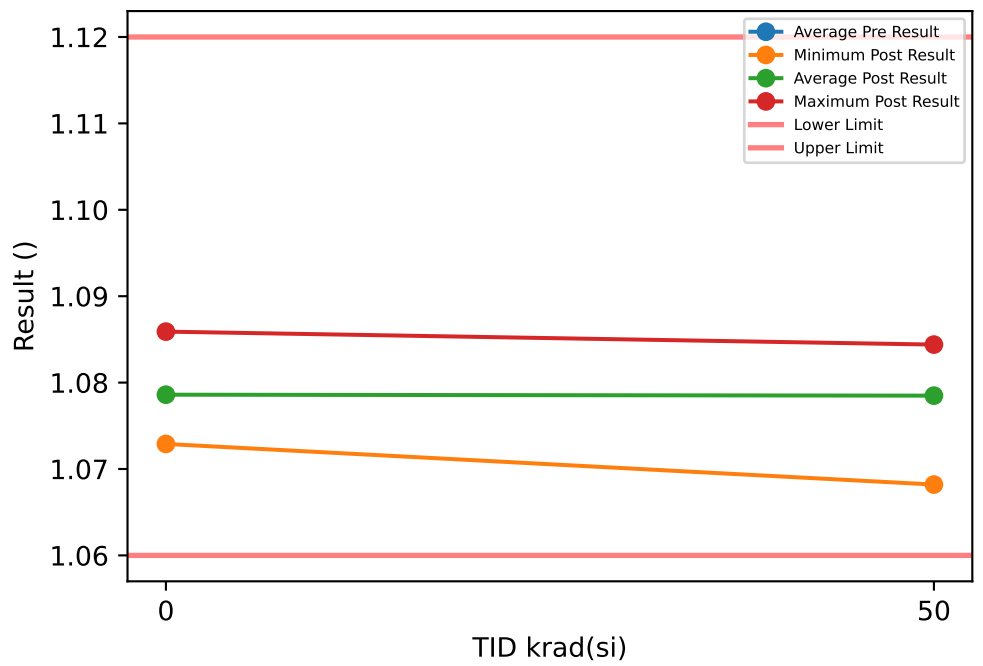


Test Statistics ( )

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					0.9451	0.94747	0.951	0.0023602				
50					0.9383	0.94801	0.9518	0.0041528				



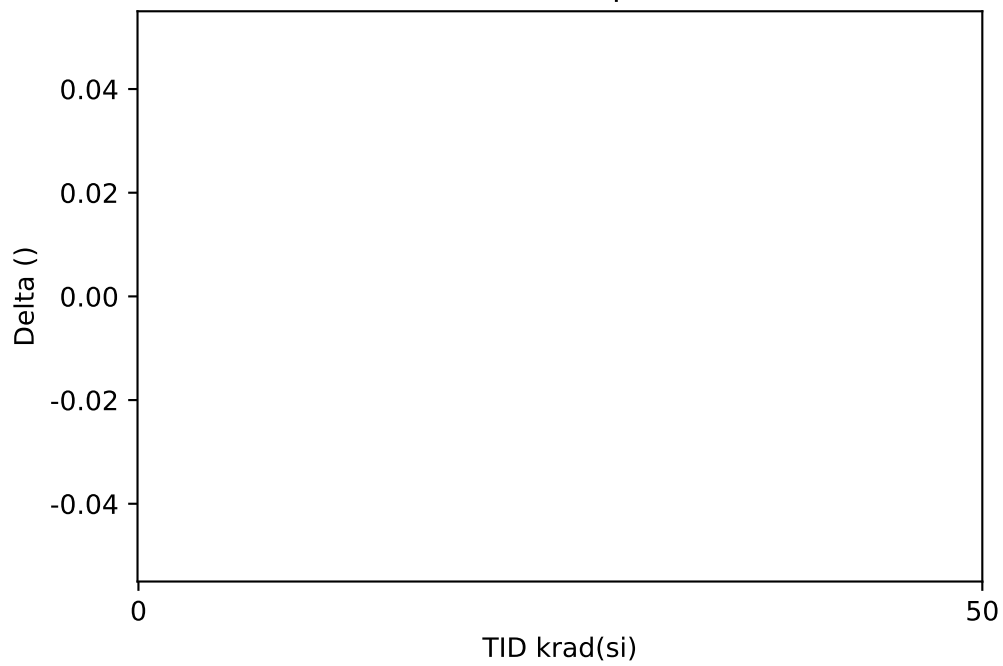
TID vs Result Stats



Test Results (Lower Limit = 1.06, Upper Limit = 1.12 ())

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		1.0812	
4	50	HDR Biased w/ 84hr anneal		1.0772	
6	50	HDR Biased w/ 84hr anneal		1.079	
8	50	HDR Biased w/ 84hr anneal		1.0844	
9	50	HDR Biased w/ 84hr anneal		1.0812	
10	50	HDR unbiased		1.0731	
11	50	HDR unbiased		1.0834	
12	50	HDR unbiased		1.0761	
13	50	HDR unbiased		1.0682	
14	50	HDR unbiased		1.0811	
26	0	Correlation		1.0801	
27	0	Correlation		1.0859	
28	0	Correlation		1.0794	
29	0	Correlation		1.0729	
30	0	Correlation		1.0771	
32	0	Correlation		1.0762	

TID vs Post - Pre Exposure Delta



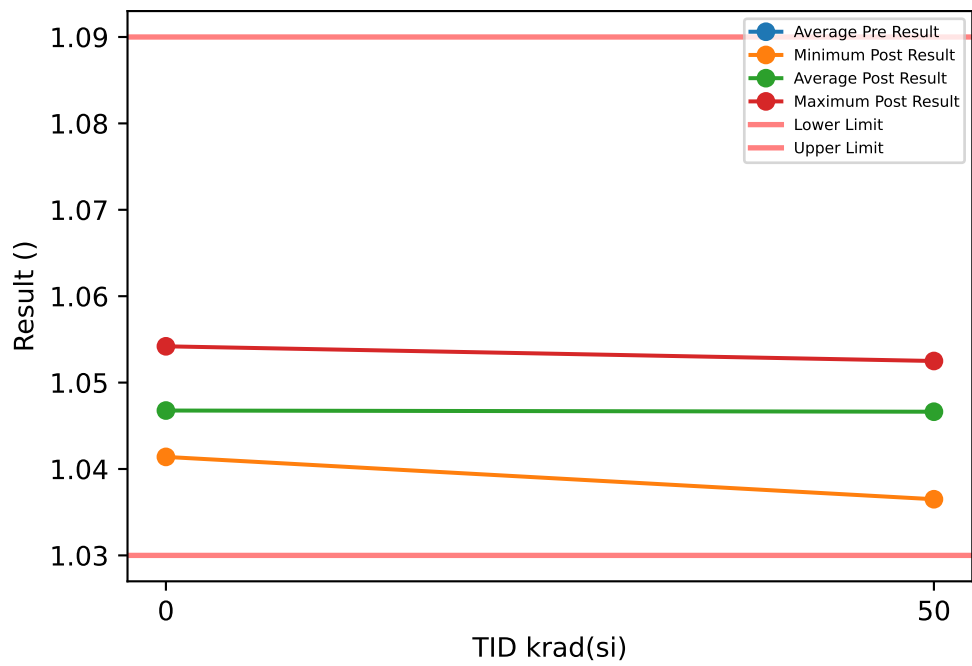
Test Statistics ( )

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					1.0729	1.0786	1.0859	0.0043973				
50					1.0682	1.0785	1.0844	0.0049789				





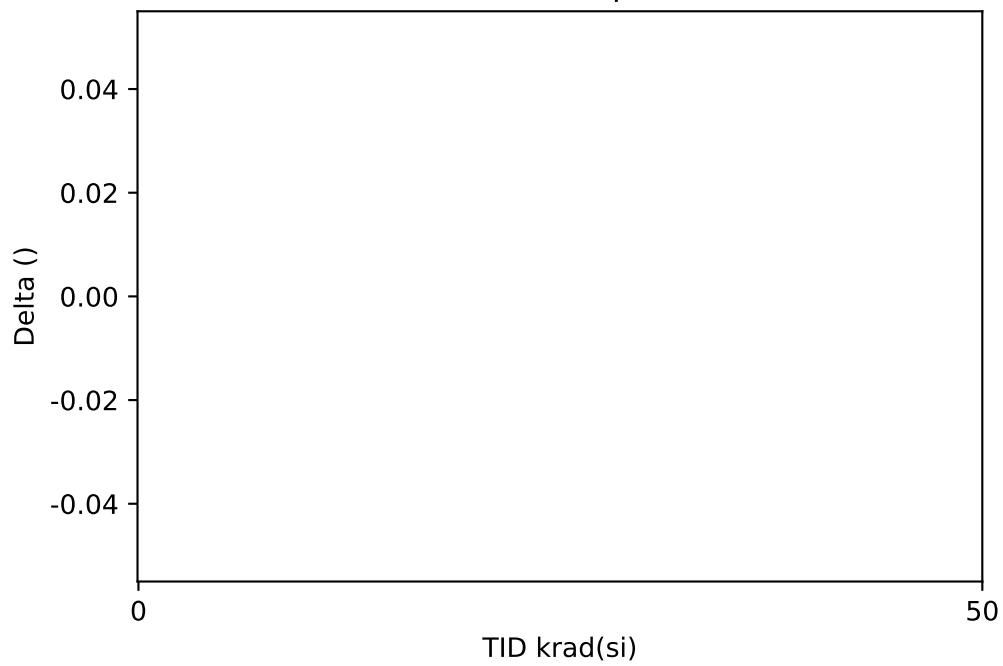
TID vs Result Stats



Test Results (Lower Limit = 1.03, Upper Limit = 1.09 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		1.0492	
4	50	HDR Biased w/ 84hr anneal		1.0456	
6	50	HDR Biased w/ 84hr anneal		1.0471	
8	50	HDR Biased w/ 84hr anneal		1.0525	
9	50	HDR Biased w/ 84hr anneal		1.0494	
10	50	HDR unbiased		1.0414	
11	50	HDR unbiased		1.0513	
12	50	HDR unbiased		1.0443	
13	50	HDR unbiased		1.0365	
14	50	HDR unbiased		1.049	
26	0	Correlation		1.0482	
27	0	Correlation		1.0542	
28	0	Correlation		1.0477	
29	0	Correlation		1.0414	
30	0	Correlation		1.0451	
32	0	Correlation		1.044	

TID vs Post - Pre Exposure Delta

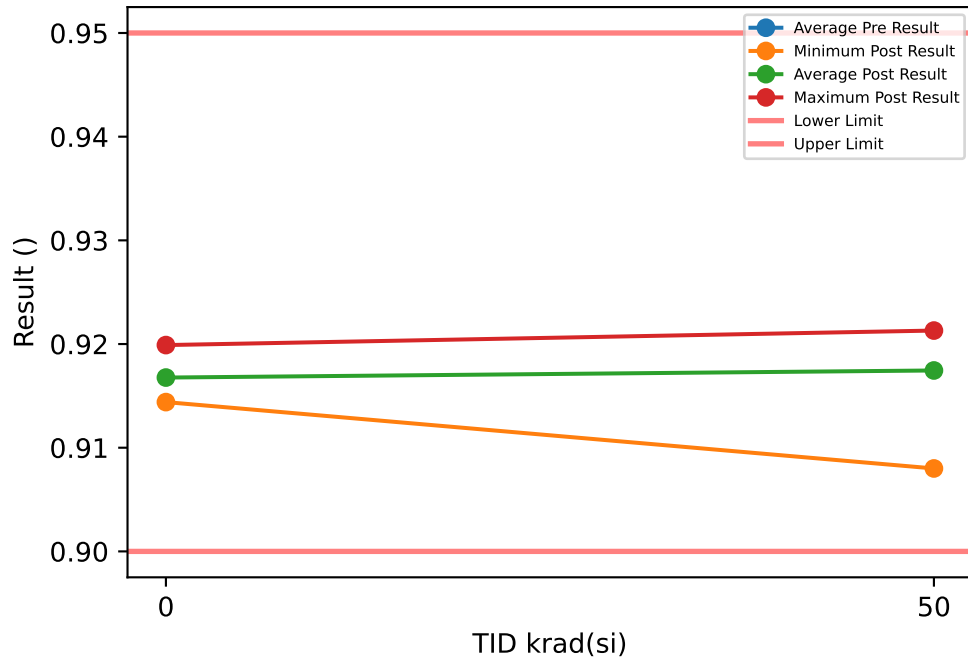


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					1.0414	1.0468	1.0542	0.0044139				
50					1.0365	1.0466	1.0525	0.004863				



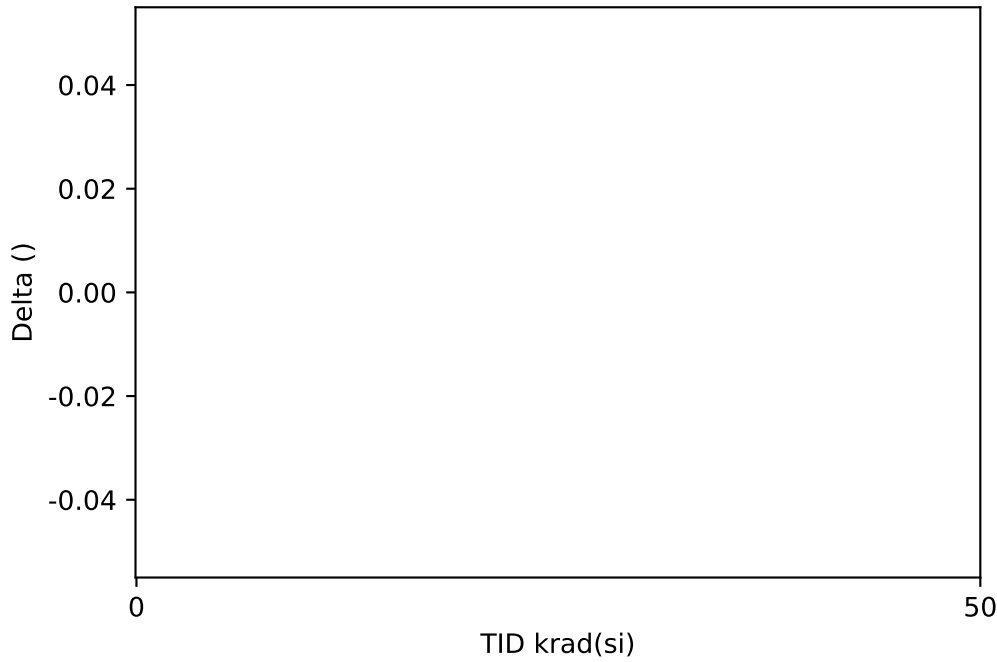
TID vs Result Stats



Test Results (Lower Limit = 0.9, Upper Limit = 0.95 ())

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.919	
4	50	HDR Biased w/ 84hr anneal		0.918	
6	50	HDR Biased w/ 84hr anneal		0.9164	
8	50	HDR Biased w/ 84hr anneal		0.9213	
9	50	HDR Biased w/ 84hr anneal		0.9212	
10	50	HDR unbiased		0.9133	
11	50	HDR unbiased		0.9193	
12	50	HDR unbiased		0.9179	
13	50	HDR unbiased		0.908	
14	50	HDR unbiased		0.9201	
26	0	Correlation		0.9187	
27	0	Correlation		0.9199	
28	0	Correlation		0.9171	
29	0	Correlation		0.9144	
30	0	Correlation		0.9158	
32	0	Correlation		0.9147	

TID vs Post - Pre Exposure Delta

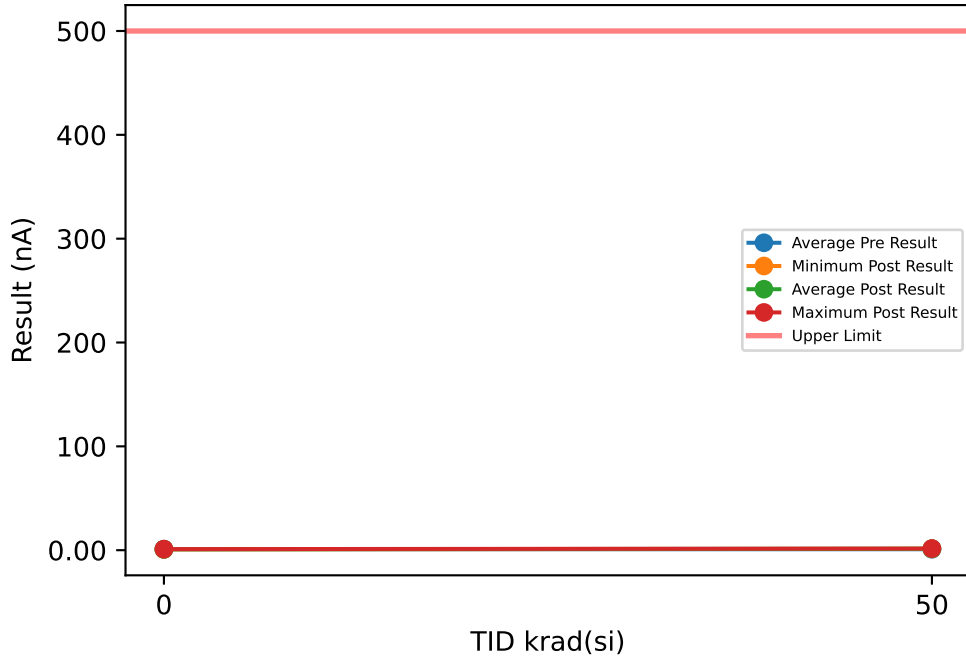


Test Statistics (0)

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					0.9144	0.91677	0.9199	0.0022124				
50					0.908	0.91745	0.9213	0.0040806				



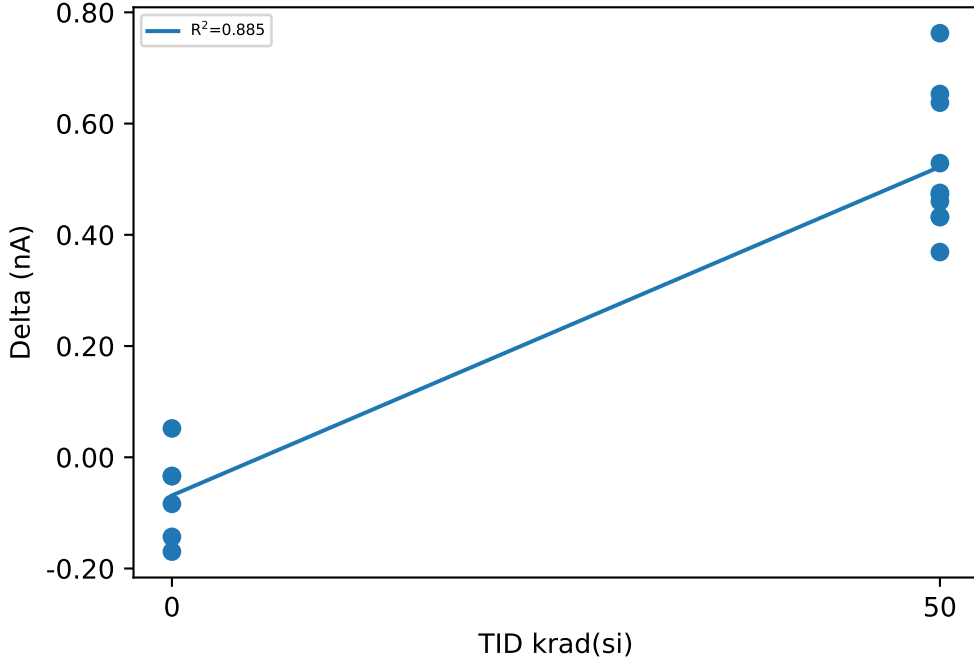
TID vs Result Stats



Test Results (Upper Limit = 500.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.9433	1.3753	0.432
4	50	HDR Biased w/ 84hr anneal	0.8777	1.4066	0.5289
6	50	HDR Biased w/ 84hr anneal	1.1337	1.5658	0.4321
8	50	HDR Biased w/ 84hr anneal	0.8216	1.2817	0.4601
9	50	HDR Biased w/ 84hr anneal	1.0088	1.4815	0.4727
10	50	HDR unbiased	0.6998	1.3374	0.6376
11	50	HDR unbiased	0.8372	1.5997	0.7625
12	50	HDR unbiased	0.8497	1.5029	0.6532
13	50	HDR unbiased	0.9995	1.4748	0.4753
14	50	HDR unbiased	0.909	1.278	0.369
26	0	Correlation	0.909	0.7659	-0.1431
27	0	Correlation	0.7654	0.8173	0.0519
28	0	Correlation	1.0588	1.0251	-0.0337
29	0	Correlation	0.9901	0.8205	-0.1696
30	0	Correlation	0.8933	0.8595	-0.0338
32	0	Correlation	1.0338	0.9501	-0.0837

TID vs Post - Pre Exposure Delta

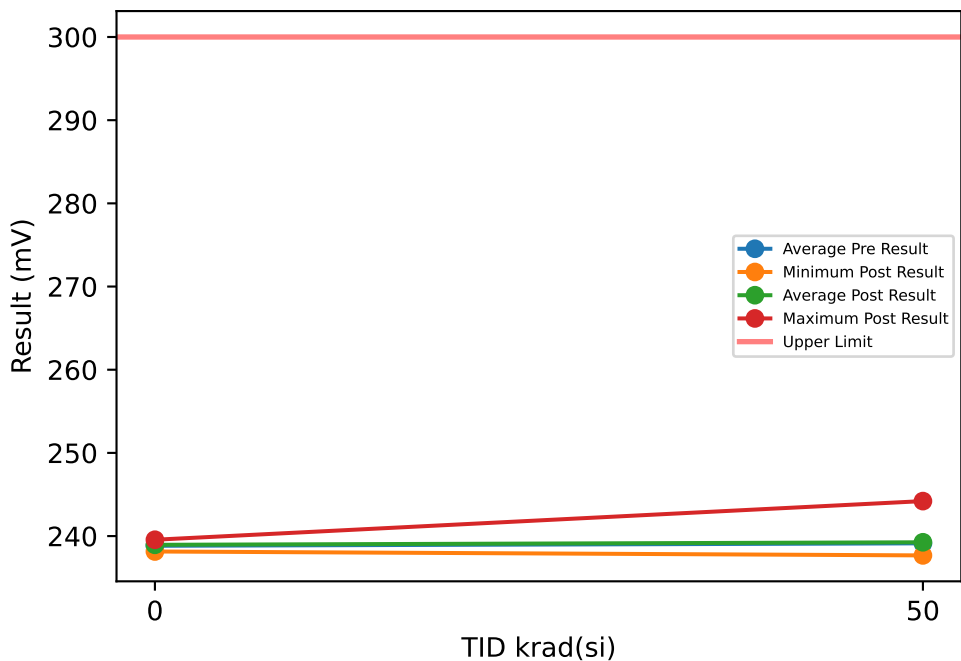


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.7654	0.94173	1.0588	0.10866	0.7659	0.87307	1.0251	0.09653	-0.1696	-0.068667	0.0519	0.081152
50	0.6998	0.90803	1.1337	0.12058	1.278	1.4304	1.5997	0.11276	0.369	0.52234	0.7625	0.12315

Device Test: 23.21 PWRGD\_OUTPUT\_LOW(\_VOL|2mA/PWRGD/12////@PWRGD\_OUTPUT\_LOW )

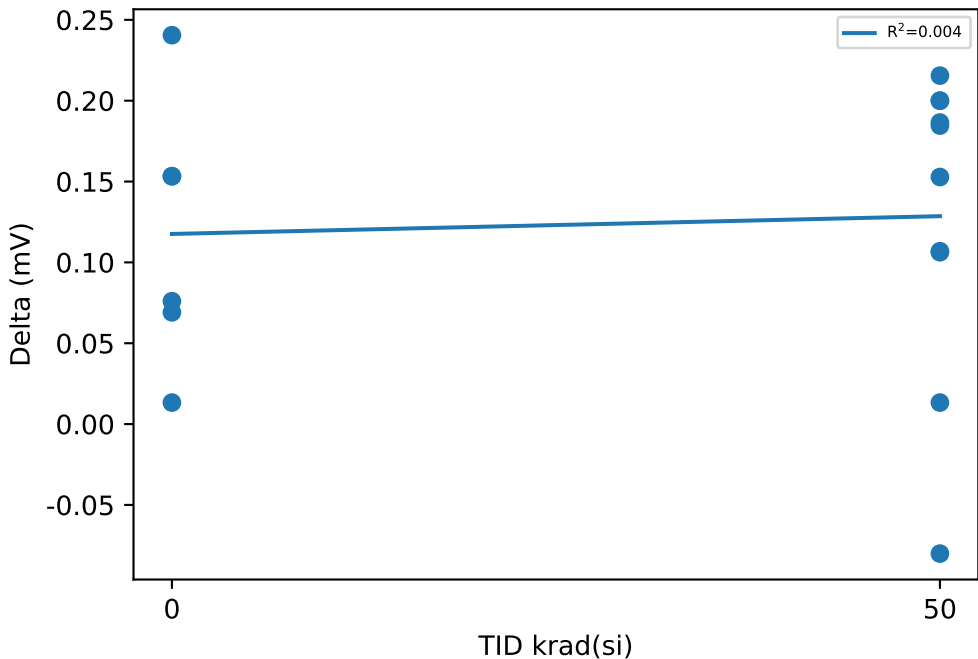
TID vs Result Stats



Test Results (Upper Limit = 300.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	237.53	237.68	0.1528
4	50	HDR Biased w/ 84hr anneal	238.31	238.52	0.2155
6	50	HDR Biased w/ 84hr anneal	239.23	239.41	0.1846
8	50	HDR Biased w/ 84hr anneal	241.3	241.22	-0.0801
9	50	HDR Biased w/ 84hr anneal	244.02	244.2	0.1865
10	50	HDR unbiased	237.68	237.79	0.1063
11	50	HDR unbiased	237.7	237.9	0.2
12	50	HDR unbiased	238.74	238.85	0.1069
13	50	HDR unbiased	237.68	237.88	0.2
14	50	HDR unbiased	239.09	239.1	0.0133
26	0	Correlation	239.18	239.19	0.0133
27	0	Correlation	238.82	239.06	0.2405
28	0	Correlation	238.12	238.27	0.1533
29	0	Correlation	239.49	239.56	0.0691
30	0	Correlation	239.4	239.47	0.076
32	0	Correlation	237.99	238.15	0.1533

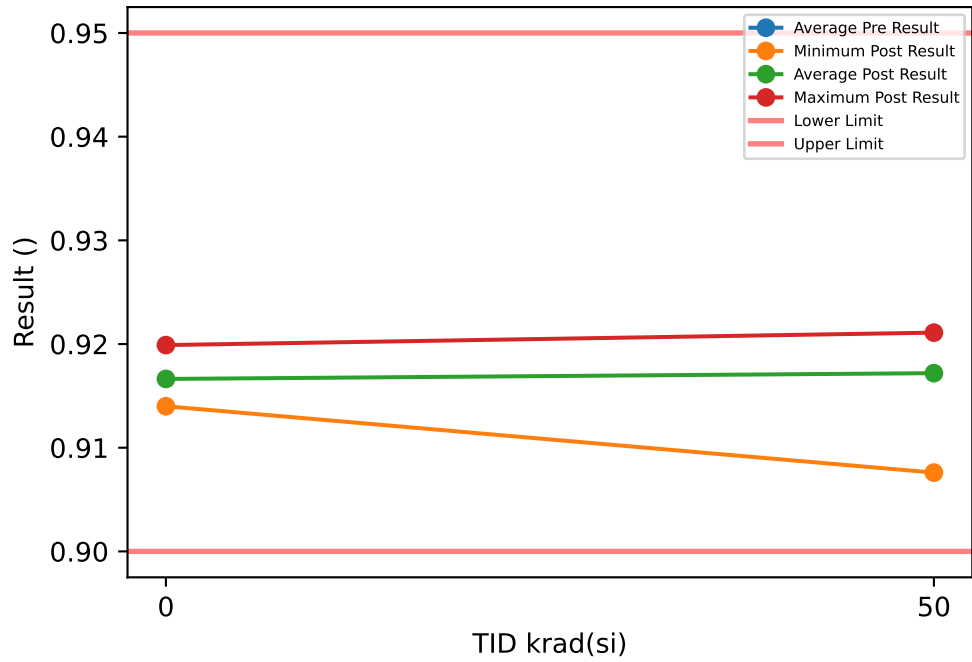
TID vs Post - Pre Exposure Delta



Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	237.99	238.83	239.49	0.64646	238.15	238.95	239.56	0.60414	0.0133	0.11758	0.2405	0.080765
50	237.53	239.13	244.02	2.0625	237.68	239.26	244.2	2.0412	-0.0801	0.12858	0.2155	0.095824

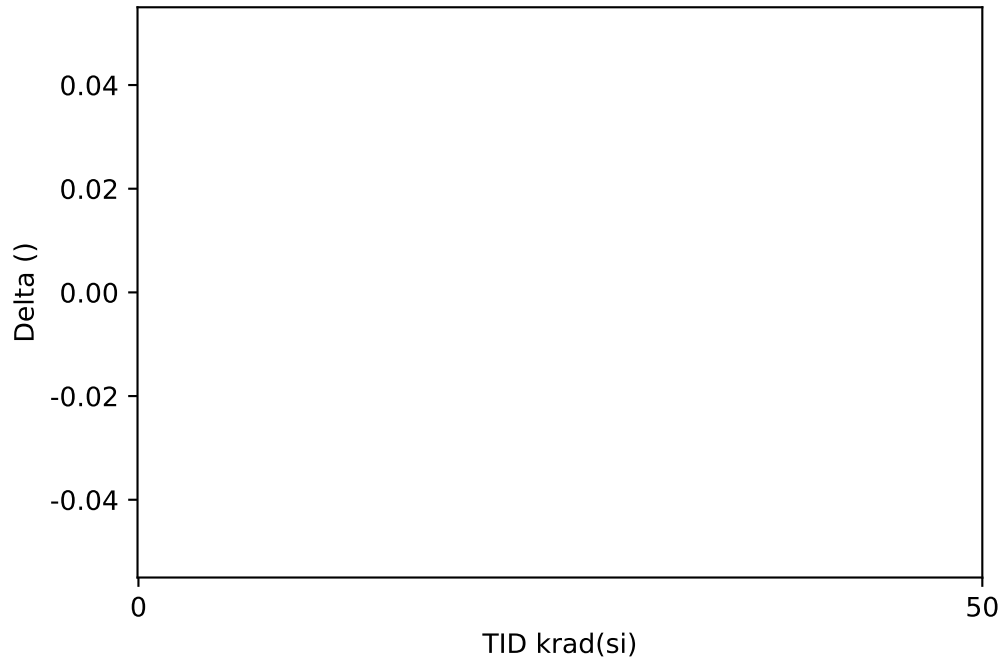
TID vs Result Stats



Test Results (Lower Limit = 0.9, Upper Limit = 0.95 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.9188	
4	50	HDR Biased w/ 84hr anneal		0.9176	
6	50	HDR Biased w/ 84hr anneal		0.916	
8	50	HDR Biased w/ 84hr anneal		0.9211	
9	50	HDR Biased w/ 84hr anneal		0.9208	
10	50	HDR unbiased		0.9133	
11	50	HDR unbiased		0.9189	
12	50	HDR unbiased		0.9179	
13	50	HDR unbiased		0.9076	
14	50	HDR unbiased		0.9199	
26	0	Correlation		0.9187	
27	0	Correlation		0.9199	
28	0	Correlation		0.9167	
29	0	Correlation		0.914	
30	0	Correlation		0.9158	
32	0	Correlation		0.9147	

TID vs Post - Pre Exposure Delta



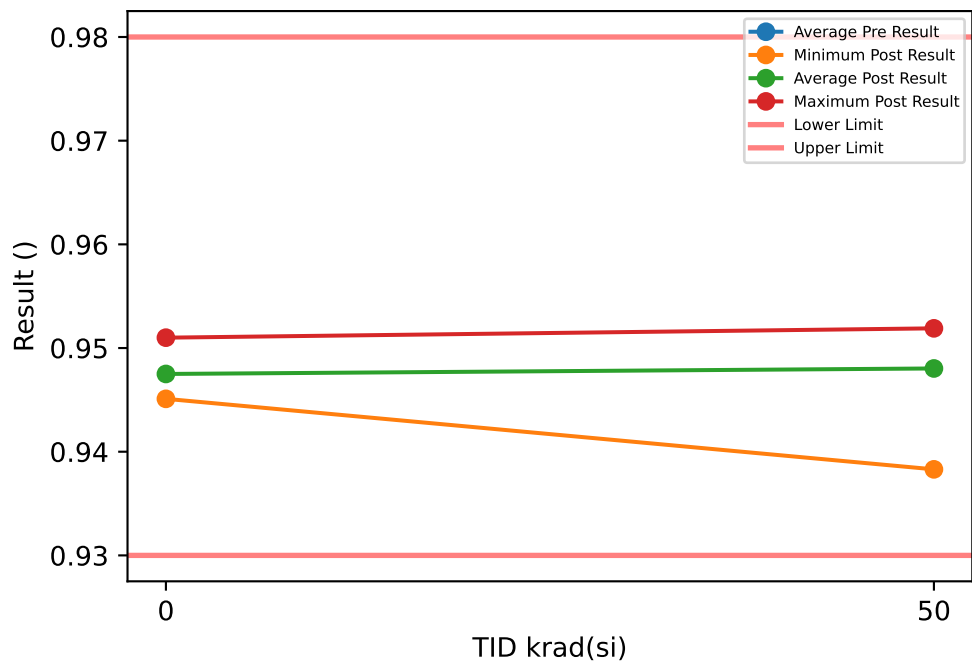
Test Statistics ( )

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					0.914	0.91663	0.9199	0.0022941				
50					0.9076	0.91719	0.9211	0.0040875				





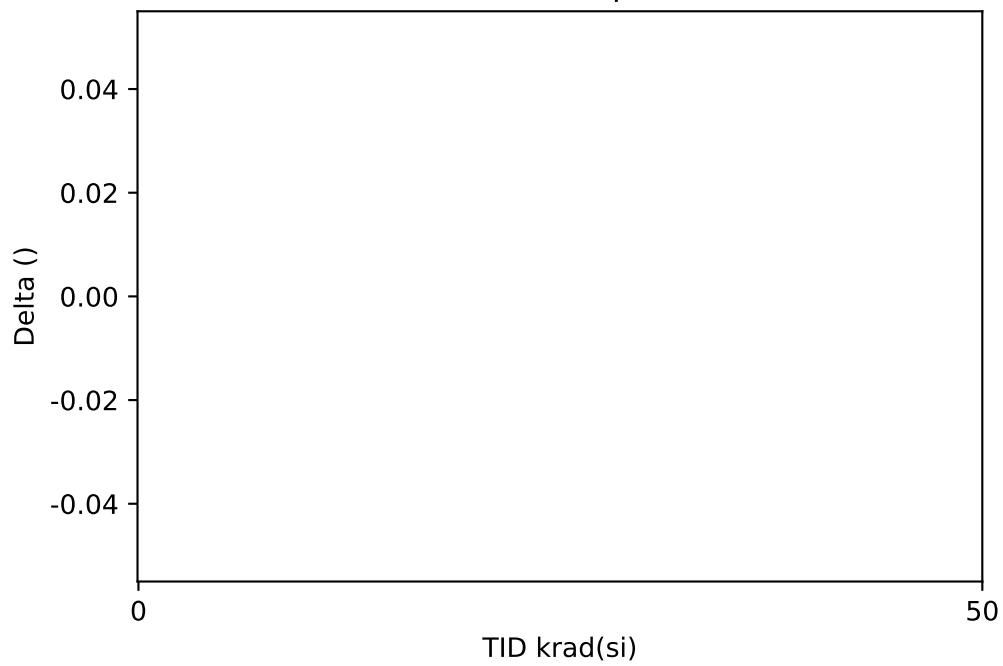
TID vs Result Stats



Test Results (Lower Limit = 0.93, Upper Limit = 0.98 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.9493	
4	50	HDR Biased w/ 84hr anneal		0.9485	
6	50	HDR Biased w/ 84hr anneal		0.9469	
8	50	HDR Biased w/ 84hr anneal		0.9519	
9	50	HDR Biased w/ 84hr anneal		0.9518	
10	50	HDR unbiased		0.944	
11	50	HDR unbiased		0.9498	
12	50	HDR unbiased		0.9486	
13	50	HDR unbiased		0.9383	
14	50	HDR unbiased		0.9512	
26	0	Correlation		0.9495	
27	0	Correlation		0.951	
28	0	Correlation		0.9475	
29	0	Correlation		0.9451	
30	0	Correlation		0.9465	
32	0	Correlation		0.9454	

TID vs Post - Pre Exposure Delta

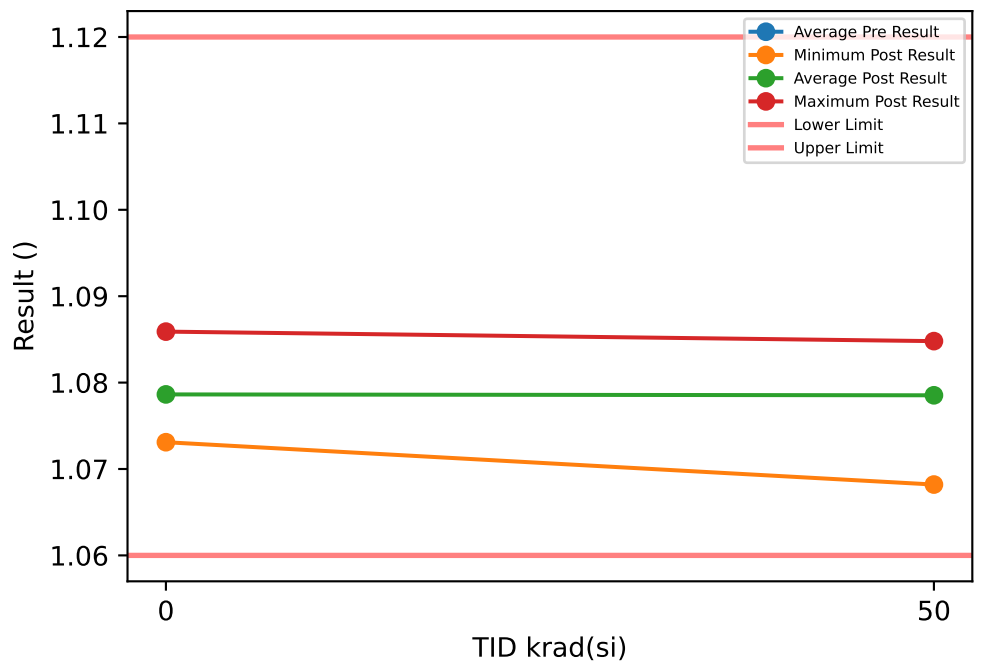


Test Statistics ( )

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					0.9451	0.9475	0.951	0.0023418				
50					0.9383	0.94803	0.9519	0.0041729				



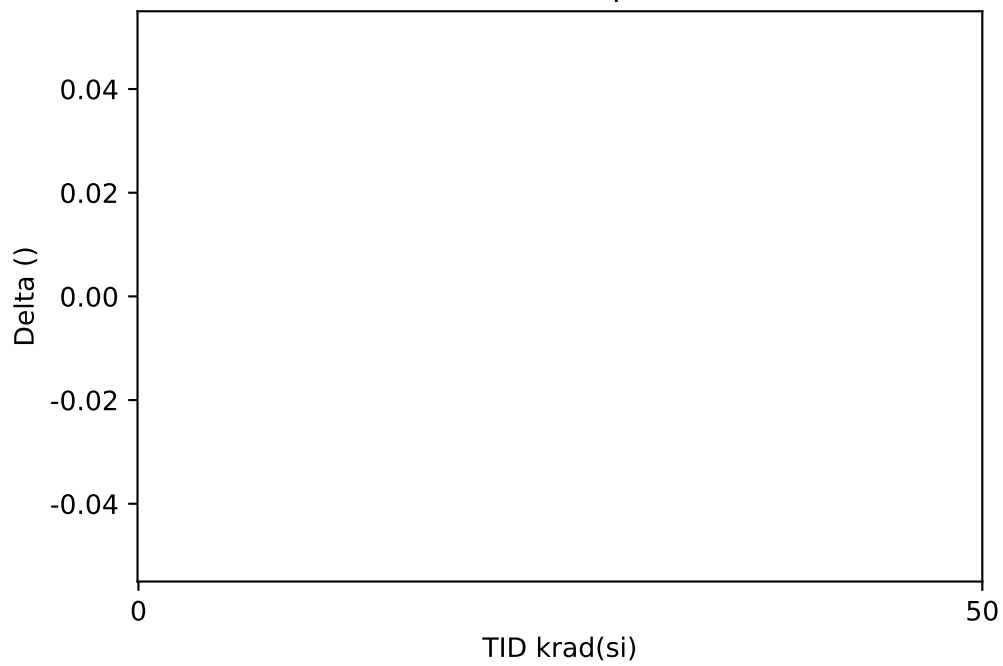
TID vs Result Stats



Test Results (Lower Limit = 1.06, Upper Limit = 1.12 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result (V)	Post Result (V)	Delta (V)
1	50	HDR Biased w/ 84hr anneal	1.0812	1.0812	0.0000
4	50	HDR Biased w/ 84hr anneal	1.0772	1.0772	0.0000
6	50	HDR Biased w/ 84hr anneal	1.079	1.079	0.0000
8	50	HDR Biased w/ 84hr anneal	1.0848	1.0848	0.0000
9	50	HDR Biased w/ 84hr anneal	1.0812	1.0812	0.0000
10	50	HDR unbiased	1.0731	1.0731	0.0000
11	50	HDR unbiased	1.0834	1.0834	0.0000
12	50	HDR unbiased	1.0761	1.0761	0.0000
13	50	HDR unbiased	1.0682	1.0682	0.0000
14	50	HDR unbiased	1.0811	1.0811	0.0000
26	0	Correlation	1.0801	1.0801	0.0000
27	0	Correlation	1.0859	1.0859	0.0000
28	0	Correlation	1.0794	1.0794	0.0000
29	0	Correlation	1.0731	1.0731	0.0000
30	0	Correlation	1.0771	1.0771	0.0000
32	0	Correlation	1.0762	1.0762	0.0000

TID vs Post - Pre Exposure Delta

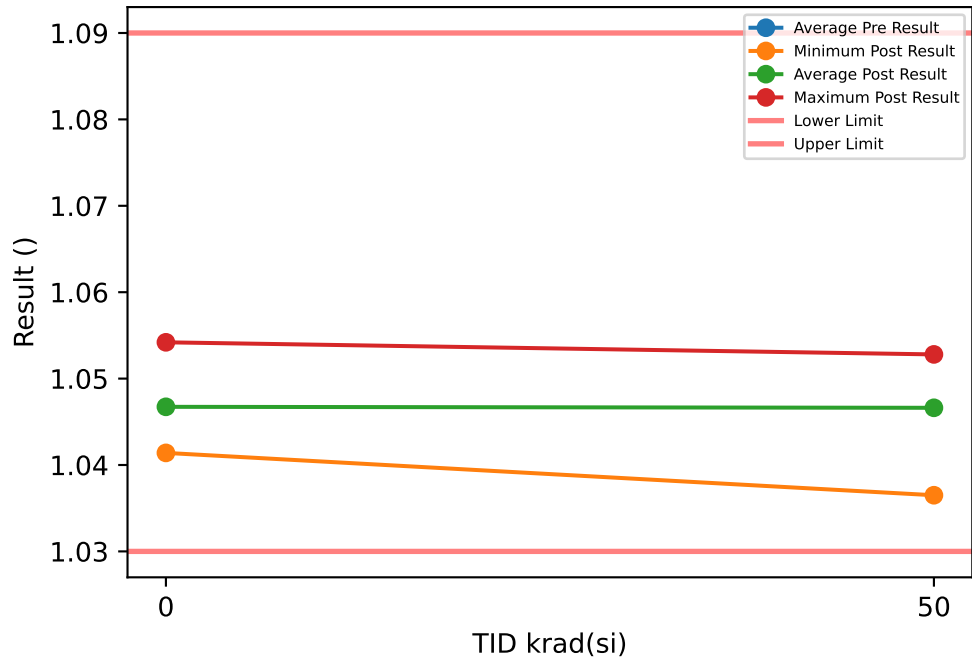


Test Statistics (V)

krad(si)	Pre Exposure Min (V)	Pre Exposure Avg (V)	Pre Exposure Max (V)	Pre Exposure Std (V)	Post Exposure Min (V)	Post Exposure Avg (V)	Post Exposure Max (V)	Post Exposure Std (V)	Min Delta (V)	Avg Delta (V)	Max Delta (V)	Std Delta (V)
0	1.0731	1.0786	1.0859	0.0043459	1.0731	1.0786	1.0859	0.0043459	0.0000	0.0000	0.0000	0.0000
50	1.0682	1.0785	1.0848	0.005033	1.0682	1.0785	1.0848	0.005033	0.0000	0.0000	0.0000	0.0000



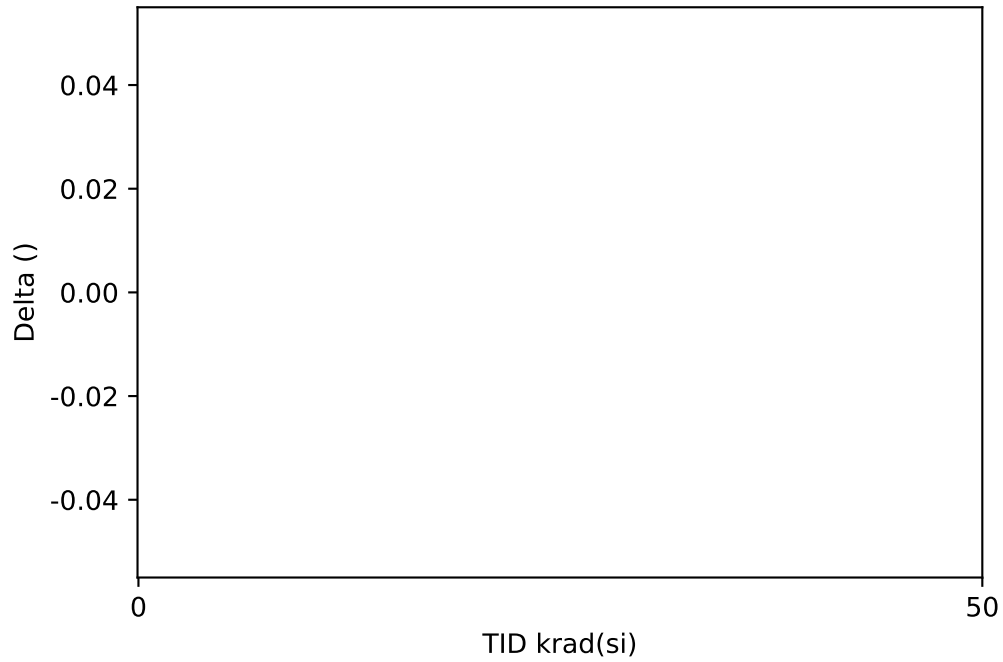
TID vs Result Stats



Test Results (Lower Limit = 1.03, Upper Limit = 1.09 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		1.0492	
4	50	HDR Biased w/ 84hr anneal		1.0454	
6	50	HDR Biased w/ 84hr anneal		1.0471	
8	50	HDR Biased w/ 84hr anneal		1.0528	
9	50	HDR Biased w/ 84hr anneal		1.0494	
10	50	HDR unbiased		1.0414	
11	50	HDR unbiased		1.0511	
12	50	HDR unbiased		1.0443	
13	50	HDR unbiased		1.0365	
14	50	HDR unbiased		1.049	
26	0	Correlation		1.0482	
27	0	Correlation		1.0542	
28	0	Correlation		1.0475	
29	0	Correlation		1.0414	
30	0	Correlation		1.0451	
32	0	Correlation		1.044	

TID vs Post - Pre Exposure Delta

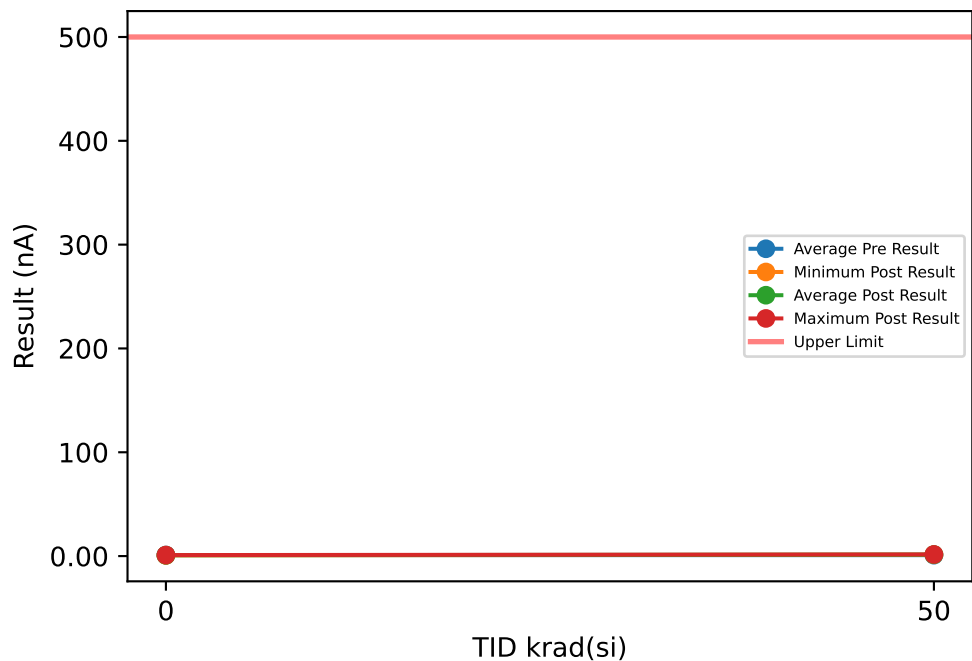


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0					1.0414	1.0467	1.0542	0.0044062				
50					1.0365	1.0466	1.0528	0.0048885				



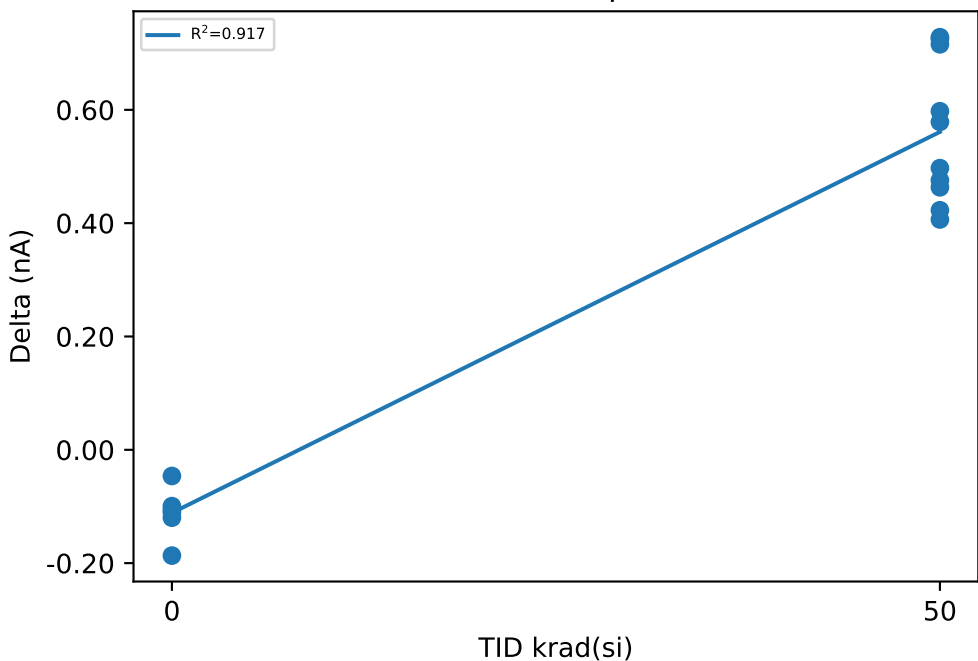
TID vs Result Stats



Test Results (Upper Limit = 500.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.9152	1.3785	0.4633
4	50	HDR Biased w/ 84hr anneal	0.8091	1.4066	0.5975
6	50	HDR Biased w/ 84hr anneal	1.1649	1.5877	0.4228
8	50	HDR Biased w/ 84hr anneal	0.7092	1.2879	0.5787
9	50	HDR Biased w/ 84hr anneal	1.0369	1.5127	0.4758
10	50	HDR unbiased	0.7123	1.4279	0.7156
11	50	HDR unbiased	0.8184	1.5466	0.7282
12	50	HDR unbiased	0.8122	1.5372	0.725
13	50	HDR unbiased	0.9589	1.456	0.4971
14	50	HDR unbiased	0.8996	1.3061	0.4065
26	0	Correlation	0.8777	0.7721	-0.1056
27	0	Correlation	0.781	0.6612	-0.1198
28	0	Correlation	1.0307	0.9845	-0.0462
29	0	Correlation	0.987	0.8766	-0.1104
30	0	Correlation	0.9027	0.8033	-0.0994
32	0	Correlation	1.1274	0.9407	-0.1867

TID vs Post - Pre Exposure Delta

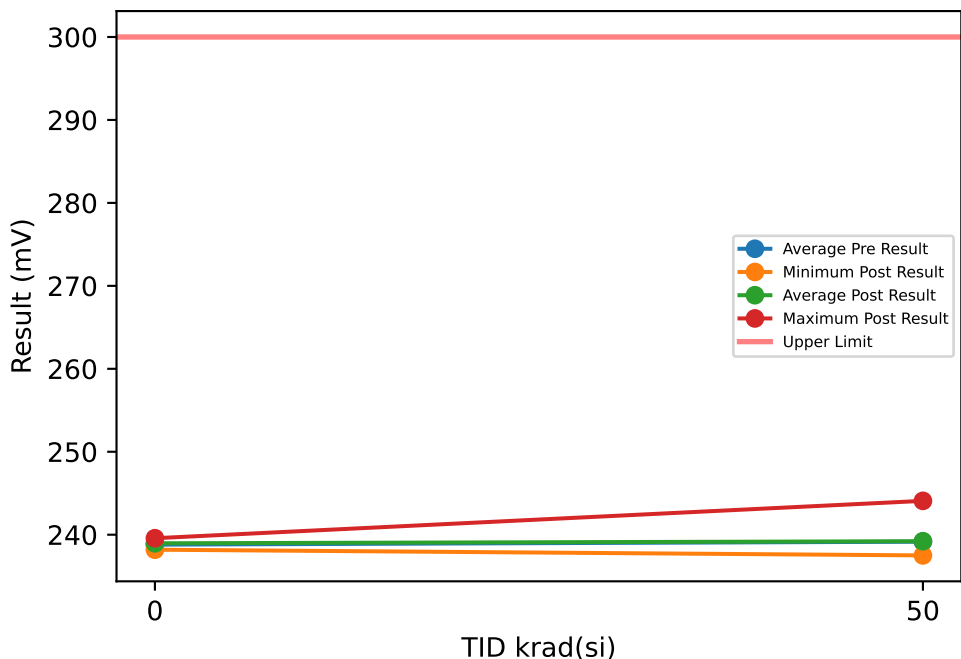


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.781	0.95108	1.1274	0.12278	0.6612	0.83973	0.9845	0.11856	-0.1867	-0.11135	-0.0462	0.045101
50	0.7092	0.88367	1.1649	0.14307	1.2879	1.4447	1.5877	0.10223	0.4065	0.56105	0.7282	0.1266

Device Test: 23.28 PWRGD\_OUTPUT\_LOW(\_VOL|2mA/PWRGD/14////@PWRGD\_OUTPUT\_LOW )

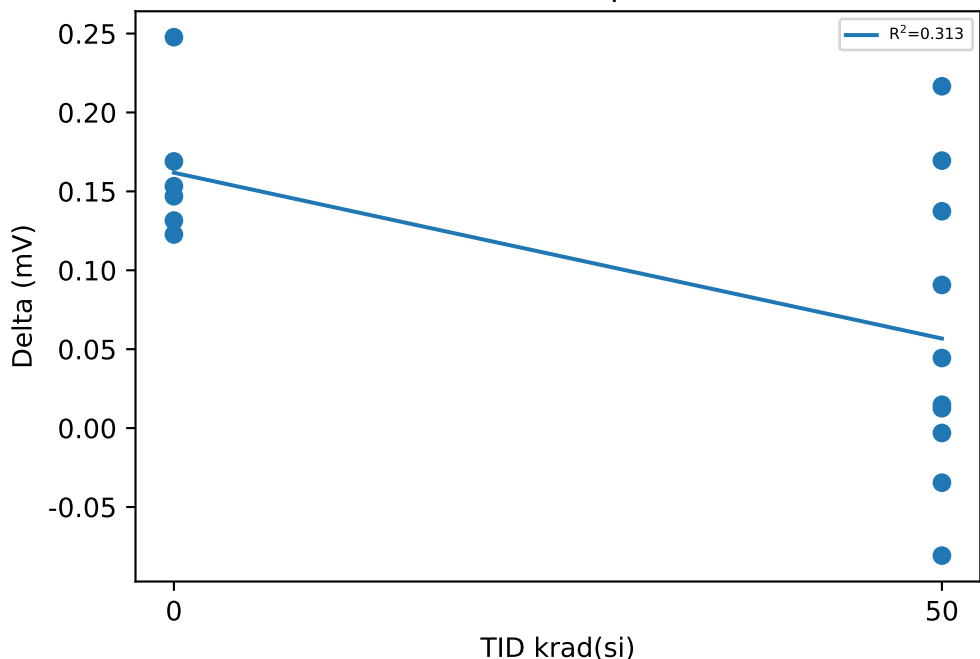
TID vs Result Stats



Test Results (Upper Limit = 300.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	237.54	237.51	-0.0346
4	50	HDR Biased w/ 84hr anneal	238.24	238.38	0.1374
6	50	HDR Biased w/ 84hr anneal	239.4	239.32	-0.0808
8	50	HDR Biased w/ 84hr anneal	241.16	241.38	0.2166
9	50	HDR Biased w/ 84hr anneal	244.07	244.08	0.0148
10	50	HDR unbiased	237.74	237.74	-0.0031
11	50	HDR unbiased	237.76	237.85	0.0907
12	50	HDR unbiased	238.76	238.8	0.0444
13	50	HDR unbiased	237.82	237.83	0.0126
14	50	HDR unbiased	239.09	239.26	0.1695
26	0	Correlation	239.09	239.21	0.1227
27	0	Correlation	238.85	239	0.1469
28	0	Correlation	238.09	238.26	0.169
29	0	Correlation	239.44	239.58	0.1315
30	0	Correlation	239.3	239.55	0.2477
32	0	Correlation	238.04	238.19	0.1533

TID vs Post - Pre Exposure Delta

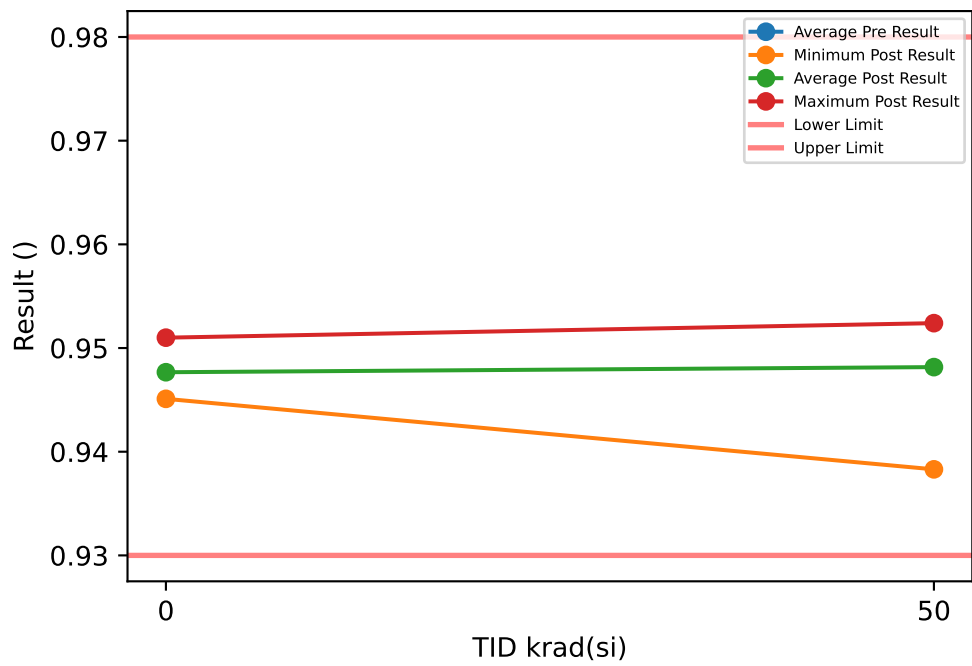


Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	238.04	238.8	239.44	0.60674	238.19	238.96	239.58	0.61272	0.1227	0.16185	0.2477	0.045104
50	237.54	239.16	244.07	2.0416	237.51	239.21	244.08	2.0573	-0.0808	0.05675	0.2166	0.094651



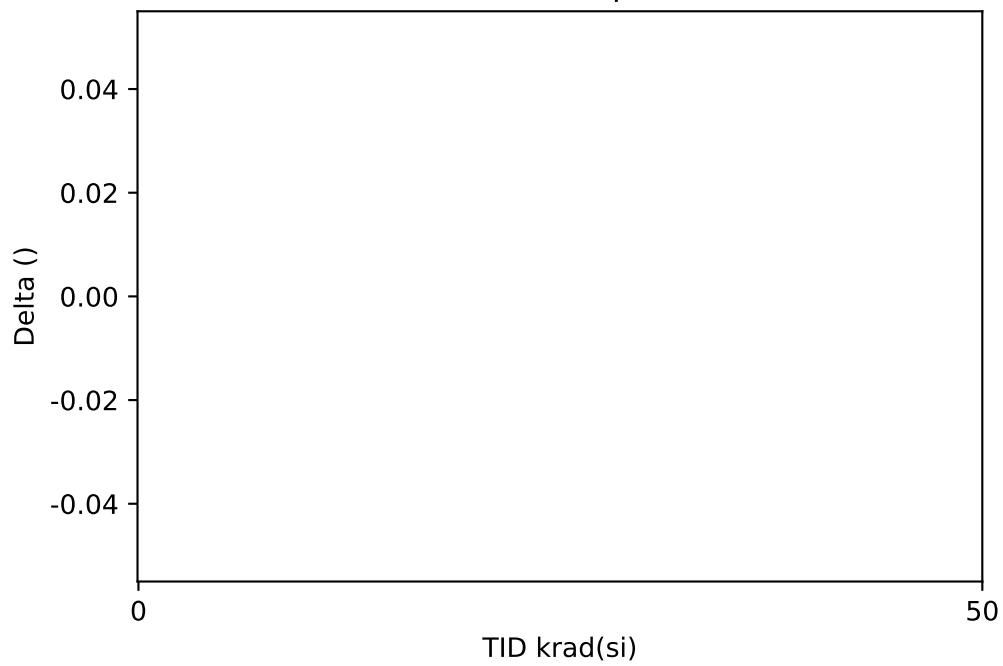
TID vs Result Stats



Test Results (Lower Limit = 0.93, Upper Limit = 0.98 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.9493	
4	50	HDR Biased w/ 84hr anneal		0.9487	
6	50	HDR Biased w/ 84hr anneal		0.9469	
8	50	HDR Biased w/ 84hr anneal		0.9524	
9	50	HDR Biased w/ 84hr anneal		0.9518	
10	50	HDR unbiased		0.9442	
11	50	HDR unbiased		0.95	
12	50	HDR unbiased		0.9488	
13	50	HDR unbiased		0.9383	
14	50	HDR unbiased		0.9512	
26	0	Correlation		0.9497	
27	0	Correlation		0.951	
28	0	Correlation		0.9477	
29	0	Correlation		0.9451	
30	0	Correlation		0.9467	
32	0	Correlation		0.9458	

TID vs Post - Pre Exposure Delta

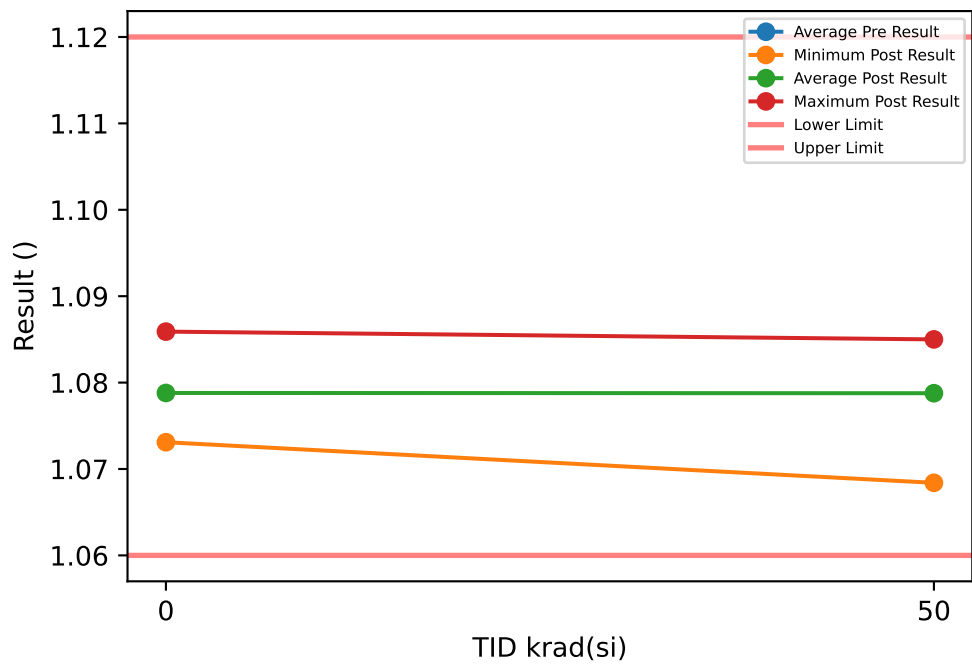


Test Statistics ( )

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					0.9451	0.94767	0.951	0.0022914				
50					0.9383	0.94816	0.9524	0.0042209				



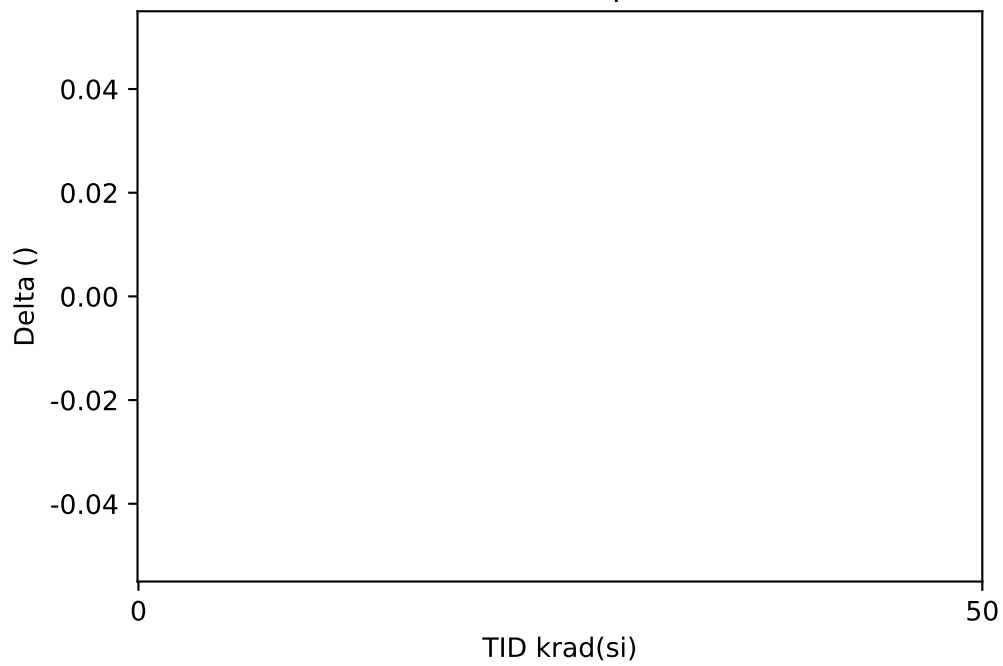
TID vs Result Stats



Test Results (Lower Limit = 1.06, Upper Limit = 1.12 ())

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		1.0814	
4	50	HDR Biased w/ 84hr anneal		1.0776	
6	50	HDR Biased w/ 84hr anneal		1.079	
8	50	HDR Biased w/ 84hr anneal		1.085	
9	50	HDR Biased w/ 84hr anneal		1.0818	
10	50	HDR unbiased		1.0733	
11	50	HDR unbiased		1.0834	
12	50	HDR unbiased		1.0765	
13	50	HDR unbiased		1.0684	
14	50	HDR unbiased		1.0813	
26	0	Correlation		1.0803	
27	0	Correlation		1.0859	
28	0	Correlation		1.0798	
29	0	Correlation		1.0731	
30	0	Correlation		1.0775	
32	0	Correlation		1.0762	

TID vs Post - Pre Exposure Delta

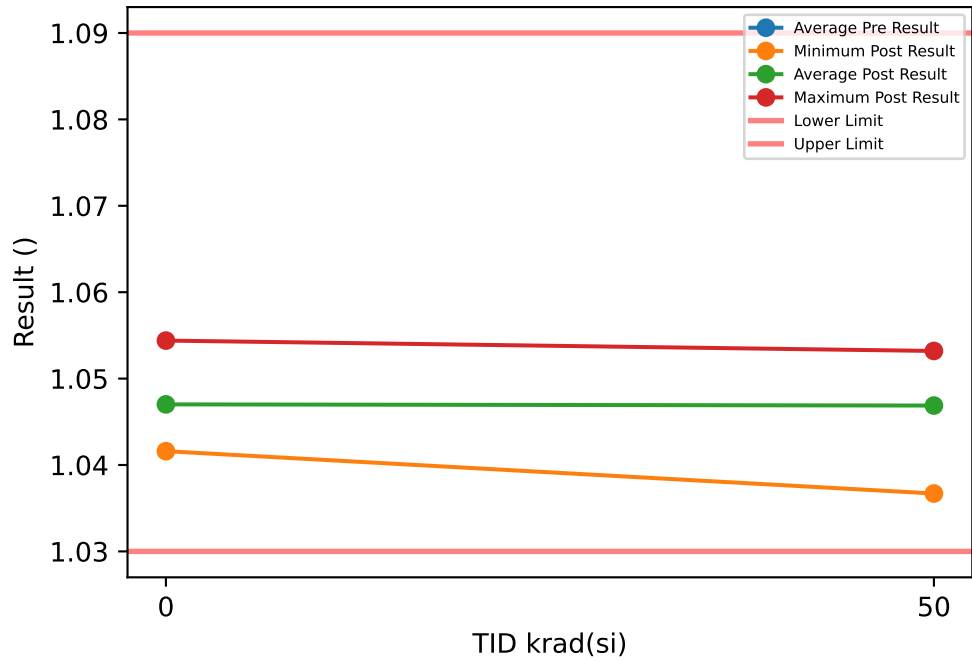


Test Statistics (0)

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					1.0731	1.0788	1.0859	0.0043497				
50					1.0684	1.0788	1.085	0.0050197				



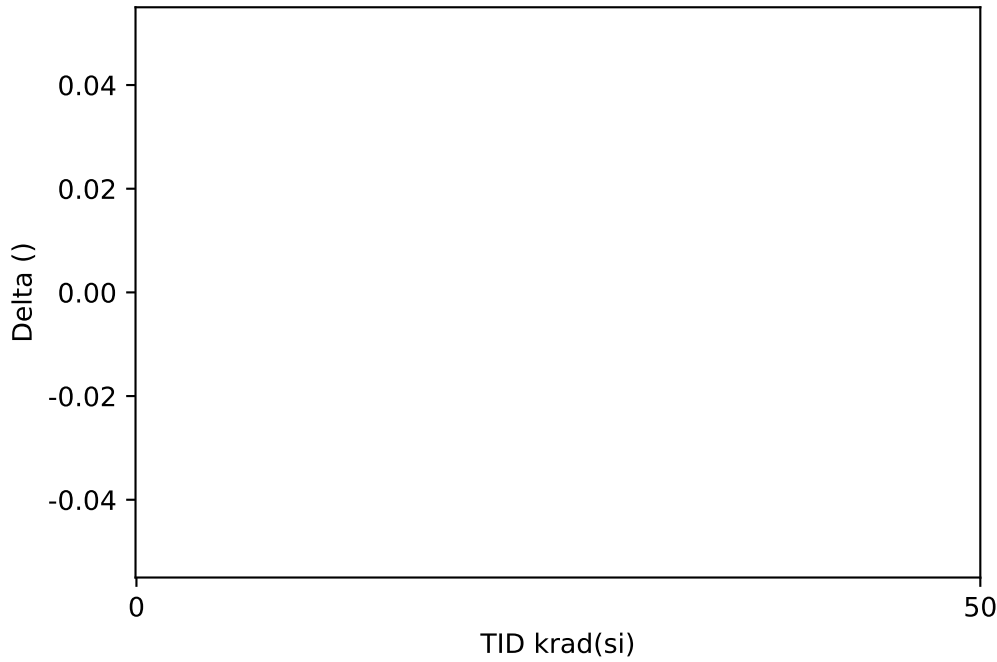
TID vs Result Stats



Test Results (Lower Limit = 1.03, Upper Limit = 1.09 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result (V)	Post Result (V)	Delta (V)
1	50	HDR Biased w/ 84hr anneal	1.0496	1.0496	0.0000
4	50	HDR Biased w/ 84hr anneal	1.0458	1.0458	0.0000
6	50	HDR Biased w/ 84hr anneal	1.0473	1.0473	0.0000
8	50	HDR Biased w/ 84hr anneal	1.0532	1.0532	0.0000
9	50	HDR Biased w/ 84hr anneal	1.0496	1.0496	0.0000
10	50	HDR unbiased	1.0414	1.0414	0.0000
11	50	HDR unbiased	1.0515	1.0515	0.0000
12	50	HDR unbiased	1.0445	1.0445	0.0000
13	50	HDR unbiased	1.0367	1.0367	0.0000
14	50	HDR unbiased	1.0492	1.0492	0.0000
26	0	Correlation	1.0484	1.0484	0.0000
27	0	Correlation	1.0544	1.0544	0.0000
28	0	Correlation	1.0479	1.0479	0.0000
29	0	Correlation	1.0416	1.0416	0.0000
30	0	Correlation	1.0456	1.0456	0.0000
32	0	Correlation	1.0442	1.0442	0.0000

TID vs Post - Pre Exposure Delta

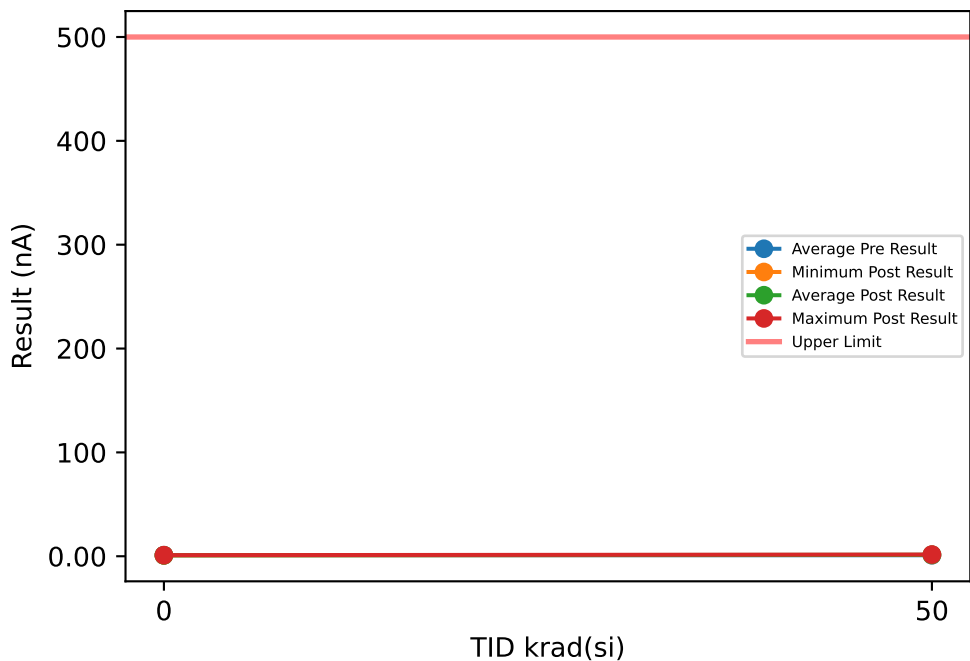


Test Statistics (V)

krad(si)	Pre Exposure Min (V)	Pre Exposure Avg (V)	Pre Exposure Max (V)	Pre Exposure Std (V)	Post Exposure Min (V)	Post Exposure Avg (V)	Post Exposure Max (V)	Post Exposure Std (V)	Min Delta (V)	Avg Delta (V)	Max Delta (V)	Std Delta (V)
0	1.0416	1.047	1.0544	0.0043929	1.0416	1.047	1.0544	0.0043929	0.0000	0.0000	0.0000	0.0000
50	1.0367	1.0469	1.0532	0.0049681	1.0367	1.0469	1.0532	0.0049681	0.0000	0.0000	0.0000	0.0000



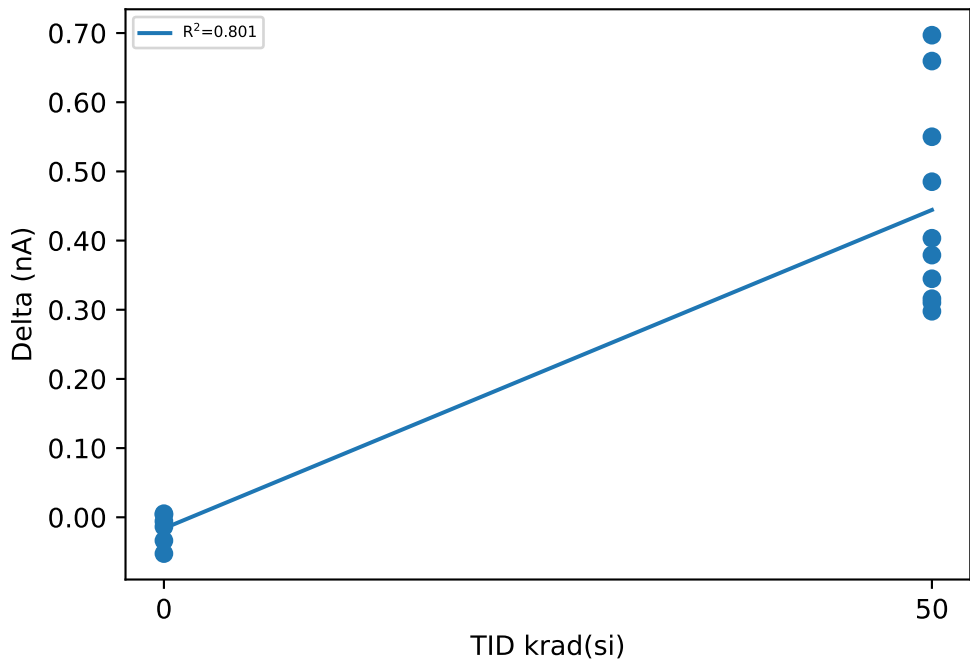
TID vs Result Stats



Test Results (Upper Limit = 500.0 (nA))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.0119	1.3909	0.379
4	50	HDR Biased w/ 84hr anneal	0.9807	1.2785	0.2978
6	50	HDR Biased w/ 84hr anneal	1.296	1.6408	0.3448
8	50	HDR Biased w/ 84hr anneal	0.8309	1.316	0.4851
9	50	HDR Biased w/ 84hr anneal	1.0681	1.3785	0.3104
10	50	HDR unbiased	0.781	1.3311	0.5501
11	50	HDR unbiased	0.8777	1.5372	0.6595
12	50	HDR unbiased	0.8528	1.5497	0.6969
13	50	HDR unbiased	0.9246	1.328	0.4034
14	50	HDR unbiased	0.9277	1.2437	0.316
26	0	Correlation	0.8216	0.8158	-0.0058
27	0	Correlation	0.8403	0.8267	-0.0136
28	0	Correlation	1.0494	1.0532	0.0038
29	0	Correlation	1.0057	1.0109	0.0052
30	0	Correlation	0.937	0.9033	-0.0337
32	0	Correlation	1.0307	0.9782	-0.0525

TID vs Post - Pre Exposure Delta

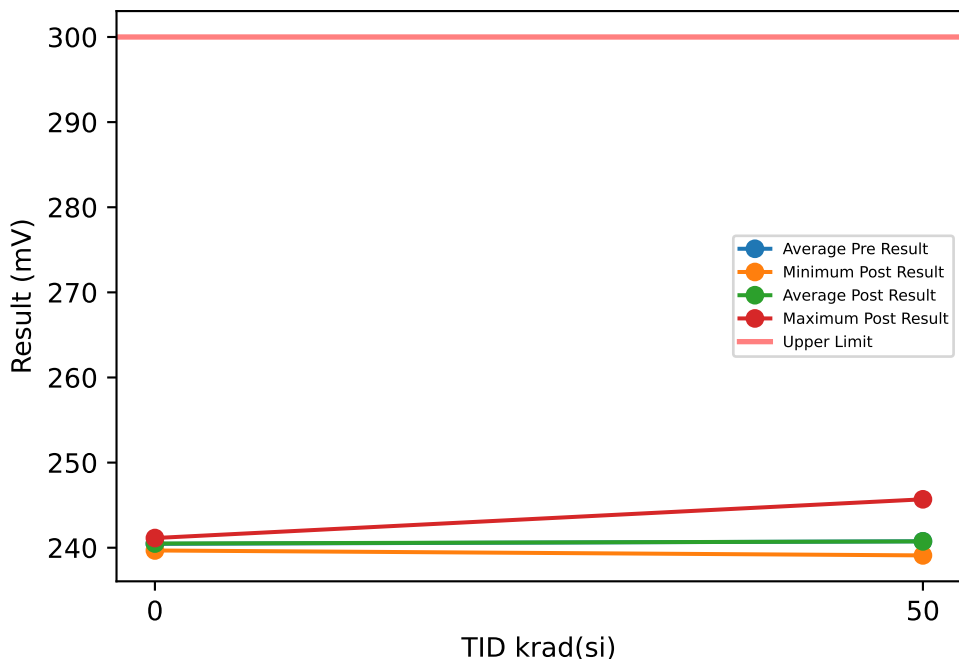


Test Statistics (nA)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.8216	0.94745	1.0494	0.098128	0.8158	0.93135	1.0532	0.098449	-0.0525	-0.0161	0.0052	0.022789
50	0.781	0.95514	1.296	0.14785	1.2437	1.3994	1.6408	0.13163	0.2978	0.4443	0.6969	0.14707

Device Test: 23.7 PWRGD\_OUTPUT\_LOW(\_VOL|2mA/PWRGD/4.5////@PWRGD\_OUTPUT\_LOW )

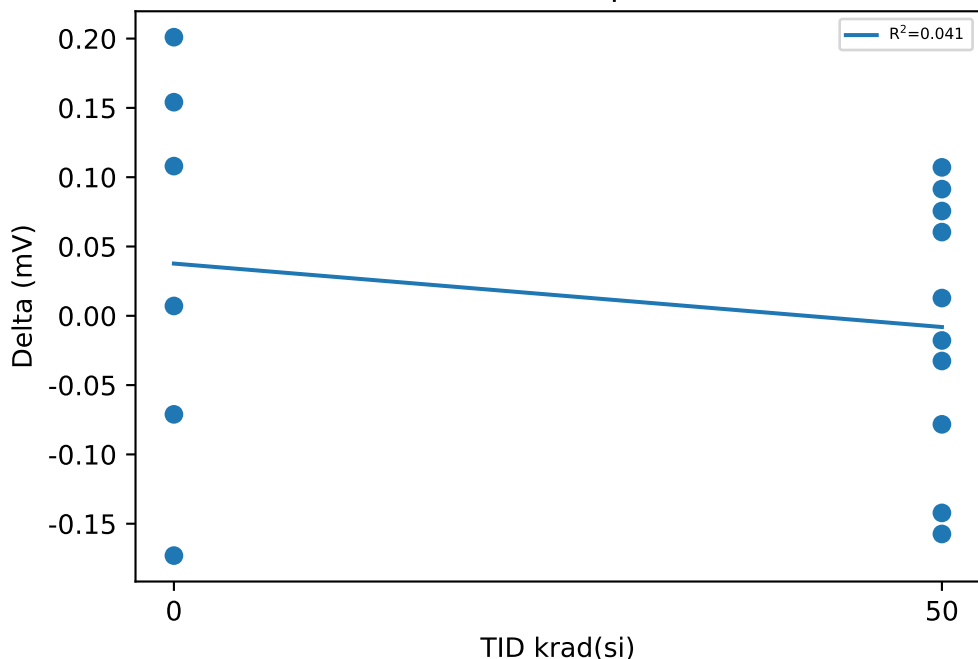
TID vs Result Stats



Test Results (Upper Limit = 300.0 (mV))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	239.09	239.1	0.0128
4	50	HDR Biased w/ 84hr anneal	239.96	240.04	0.0756
6	50	HDR Biased w/ 84hr anneal	240.87	240.93	0.0604
8	50	HDR Biased w/ 84hr anneal	243.02	242.86	-0.1574
9	50	HDR Biased w/ 84hr anneal	245.77	245.69	-0.0783
10	50	HDR unbiased	239.18	239.27	0.0914
11	50	HDR unbiased	239.26	239.36	0.1071
12	50	HDR unbiased	240.32	240.18	-0.1422
13	50	HDR unbiased	239.4	239.38	-0.0178
14	50	HDR unbiased	240.69	240.66	-0.0326
26	0	Correlation	240.72	240.83	0.108
27	0	Correlation	240.57	240.5	-0.0711
28	0	Correlation	239.69	239.9	0.201
29	0	Correlation	241.13	241.14	0.0071
30	0	Correlation	241.08	240.91	-0.173
32	0	Correlation	239.52	239.68	0.1541

TID vs Post - Pre Exposure Delta

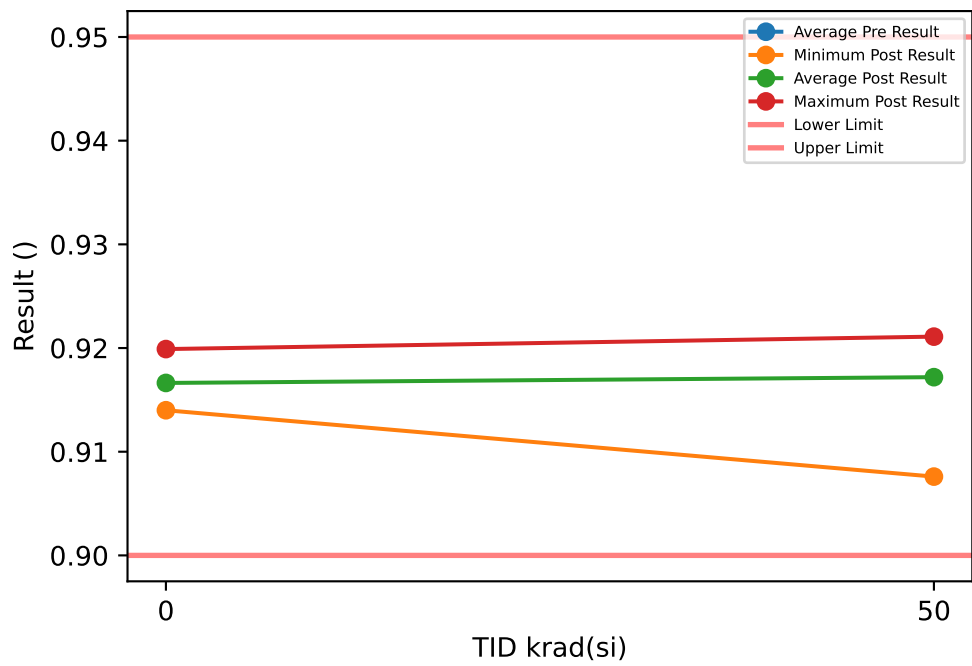


Test Statistics (mV)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	239.52	240.45	241.13	0.69056	239.68	240.49	241.14	0.58792	-0.173	0.037683	0.201	0.14306
50	239.09	240.75	245.77	2.1195	239.1	240.75	245.69	2.0665	-0.1574	-0.0081	0.1071	0.094986



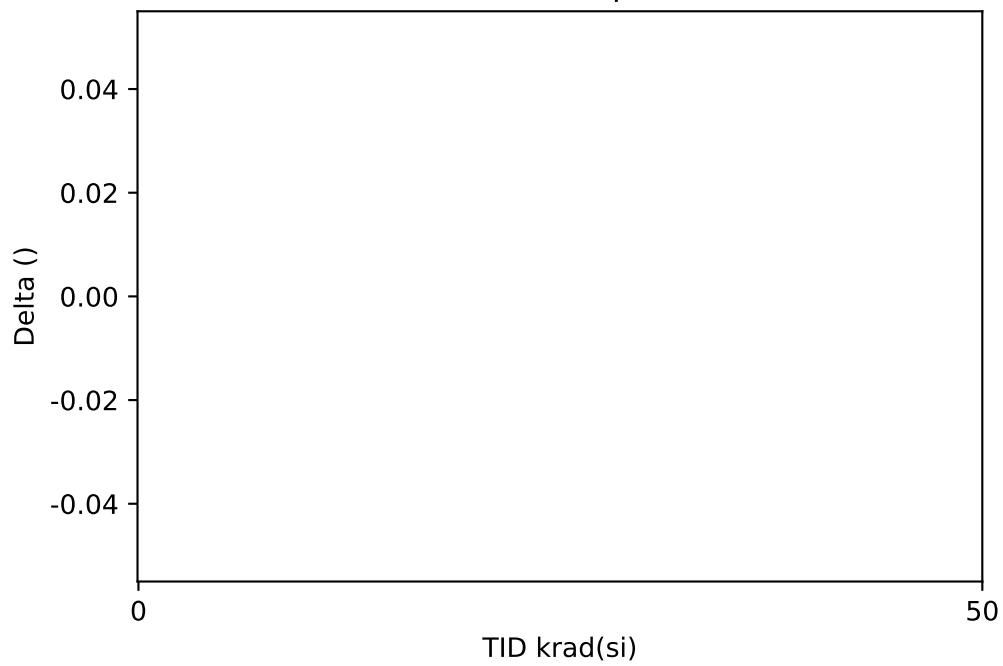
TID vs Result Stats



Test Results (Lower Limit = 0.9, Upper Limit = 0.95 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.9188	
4	50	HDR Biased w/ 84hr anneal		0.9176	
6	50	HDR Biased w/ 84hr anneal		0.916	
8	50	HDR Biased w/ 84hr anneal		0.9211	
9	50	HDR Biased w/ 84hr anneal		0.9208	
10	50	HDR unbiased		0.9133	
11	50	HDR unbiased		0.9189	
12	50	HDR unbiased		0.9179	
13	50	HDR unbiased		0.9076	
14	50	HDR unbiased		0.9199	
26	0	Correlation		0.9187	
27	0	Correlation		0.9199	
28	0	Correlation		0.9167	
29	0	Correlation		0.914	
30	0	Correlation		0.9158	
32	0	Correlation		0.9147	

TID vs Post - Pre Exposure Delta



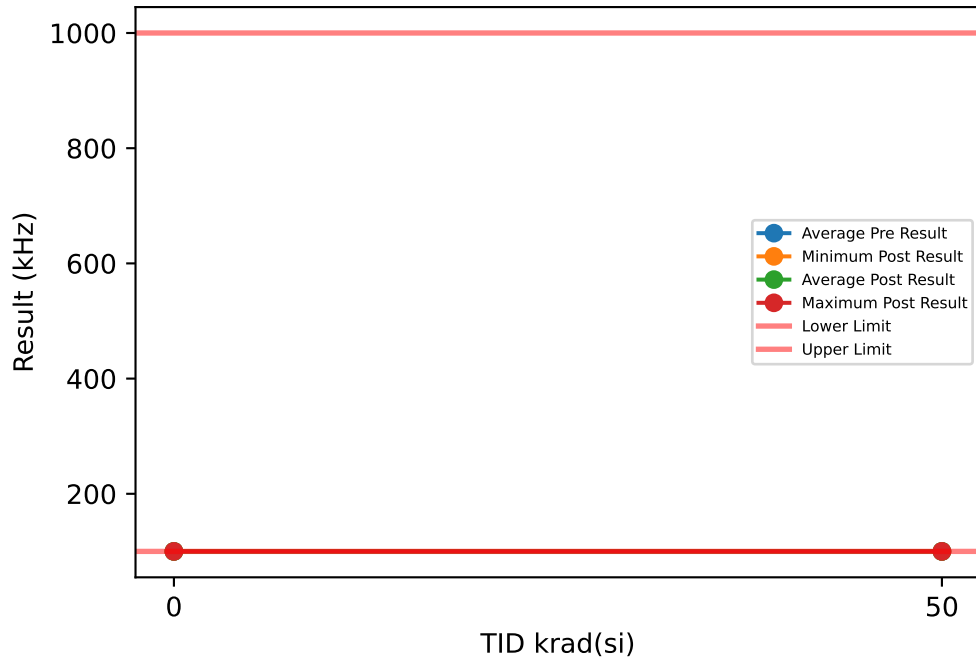
Test Statistics ( )

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					0.914	0.91663	0.9199	0.0022941				
50					0.9076	0.91719	0.9211	0.0040875				



Device Test: 24.1 SYNC\_FREQ\_RANGE(\_FREQ|100kHz/SYNC1/4.5//OPEN//@SYNC\_FREQ\_RANGE )

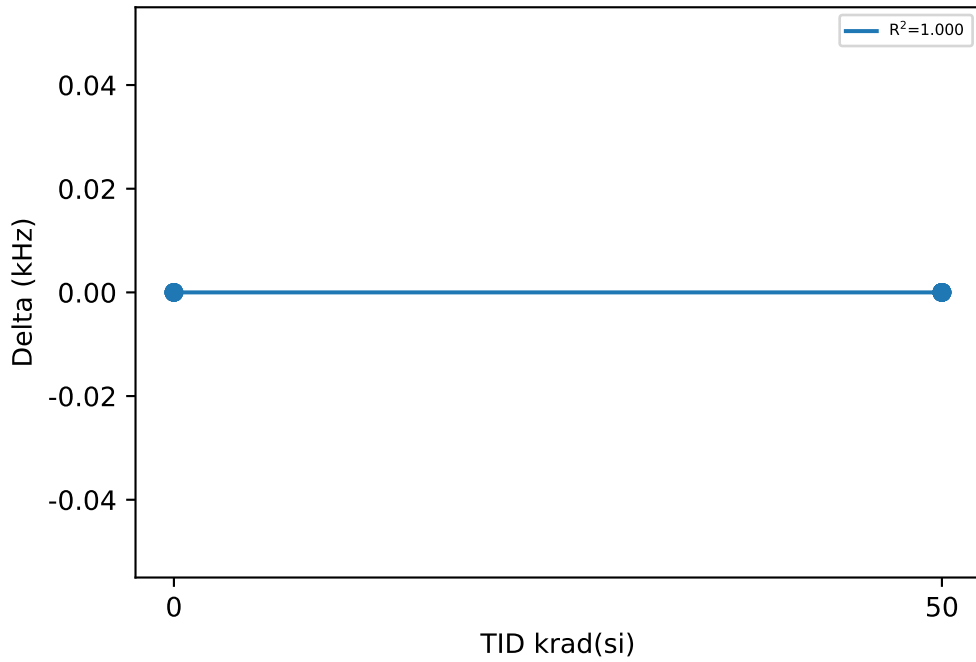
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	100	100	0
4	50	HDR Biased w/ 84hr anneal	100	100	0
6	50	HDR Biased w/ 84hr anneal	100	100	0
8	50	HDR Biased w/ 84hr anneal	100	100	0
9	50	HDR Biased w/ 84hr anneal	100	100	0
10	50	HDR unbiased	100	100	0
11	50	HDR unbiased	100	100	0
12	50	HDR unbiased	100	100	0
13	50	HDR unbiased	100	100	0
14	50	HDR unbiased	100	100	0
26	0	Correlation	100	100	0
27	0	Correlation	100	100	0
28	0	Correlation	100	100	0
29	0	Correlation	100	100	0
30	0	Correlation	100	100	0
32	0	Correlation	100	100	0

TID vs Post - Pre Exposure Delta

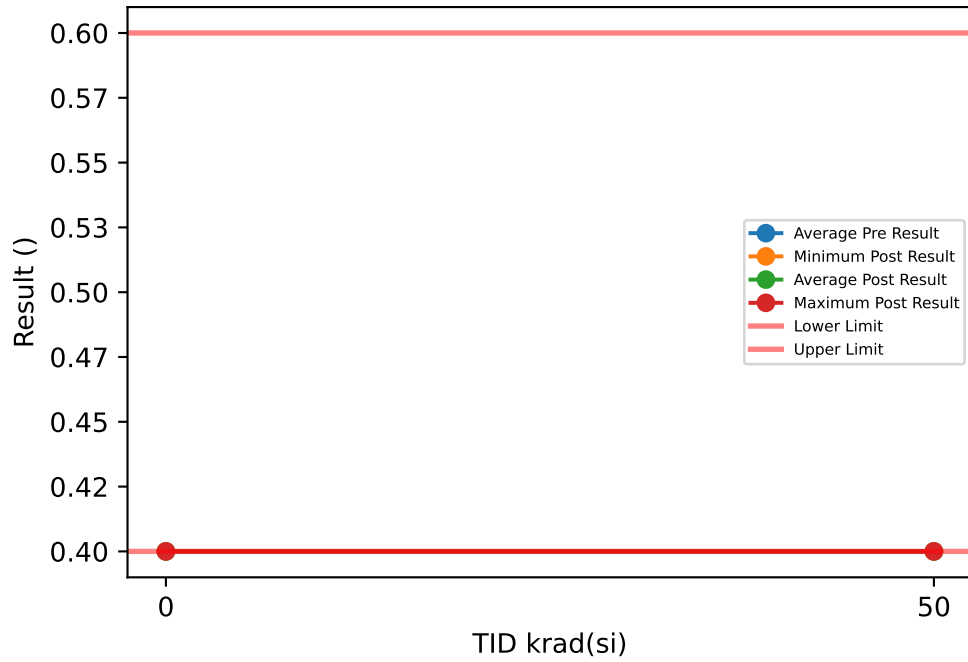


Test Statistics (kHz)

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	100	100	100	0	100	100	100	0	0	0	0	0
50	100	100	100	0	100	100	100	0	0	0	0	0



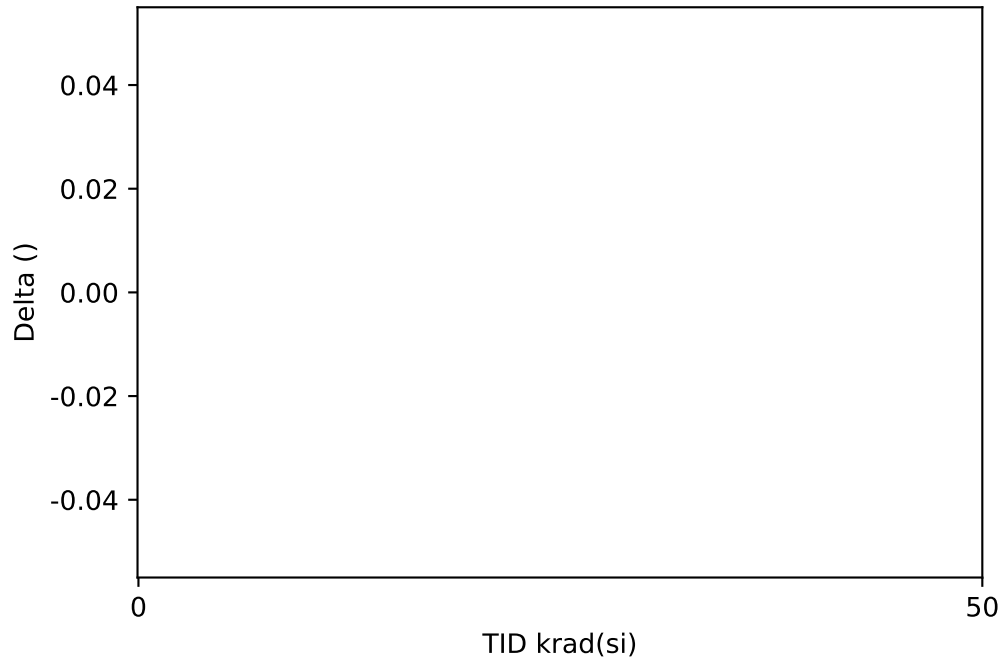
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.4	
4	50	HDR Biased w/ 84hr anneal		0.4	
6	50	HDR Biased w/ 84hr anneal		0.4	
8	50	HDR Biased w/ 84hr anneal		0.4	
9	50	HDR Biased w/ 84hr anneal		0.4	
10	50	HDR unbiased		0.4	
11	50	HDR unbiased		0.4	
12	50	HDR unbiased		0.4	
13	50	HDR unbiased		0.4	
14	50	HDR unbiased		0.4	
26	0	Correlation		0.4	
27	0	Correlation		0.4	
28	0	Correlation		0.4	
29	0	Correlation		0.4	
30	0	Correlation		0.4	
32	0	Correlation		0.4	

TID vs Post - Pre Exposure Delta

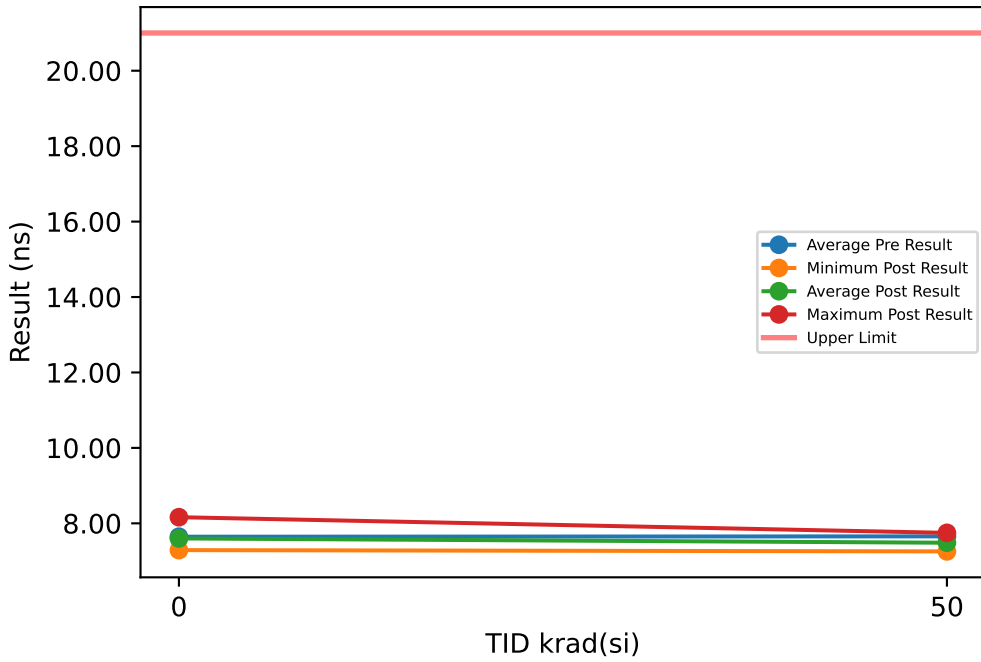


Test Statistics ( )

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					0.4	0.4	0.4	0				
50					0.4	0.4	0.4	0				

Device Test: 24.100 SYNC\_HL\_FALL\_TIME(\_TIMING|FALL/SYNC1/12//511k//@SYNC\_HL\_FALL\_TIME )

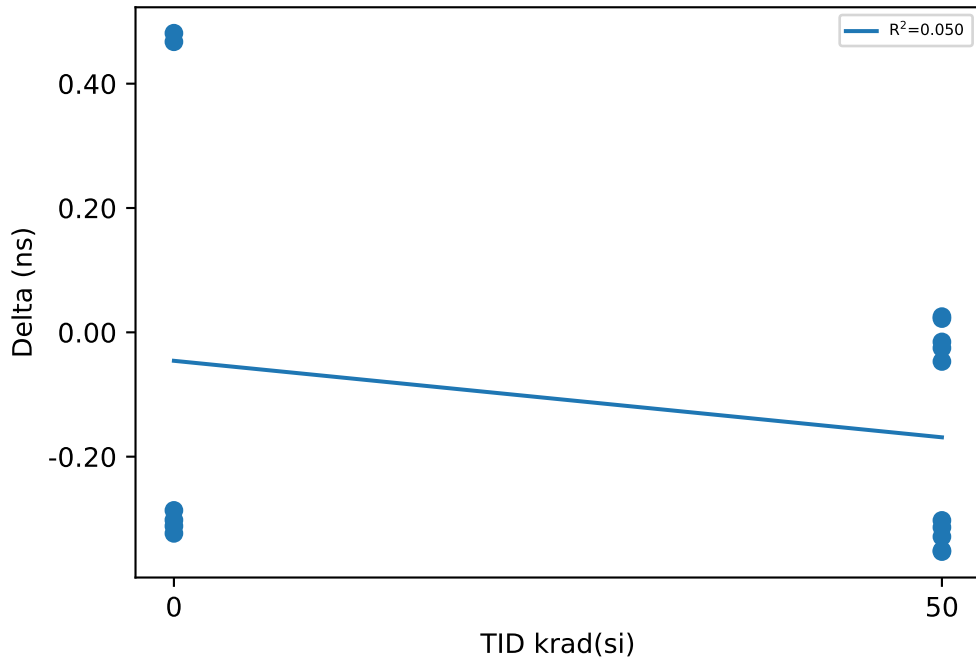
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.6394	7.6615	0.0221
4	50	HDR Biased w/ 84hr anneal	7.6462	7.5993	-0.0469
6	50	HDR Biased w/ 84hr anneal	7.6941	7.6787	-0.0154
8	50	HDR Biased w/ 84hr anneal	7.7057	7.6805	-0.0252
9	50	HDR Biased w/ 84hr anneal	7.7224	7.7477	0.0253
10	50	HDR unbiased	7.6651	7.3141	-0.351
11	50	HDR unbiased	7.6241	7.3216	-0.3025
12	50	HDR unbiased	7.6285	7.2998	-0.3287
13	50	HDR unbiased	7.5698	7.2561	-0.3137
14	50	HDR unbiased	7.6522	7.2995	-0.3527
26	0	Correlation	7.5764	7.29	-0.2864
27	0	Correlation	7.6478	8.129	0.4812
28	0	Correlation	7.6149	7.3033	-0.3116
29	0	Correlation	7.6953	8.1627	0.4674
30	0	Correlation	7.6775	7.3756	-0.3019
32	0	Correlation	7.6608	7.3374	-0.3234

TID vs Post - Pre Exposure Delta

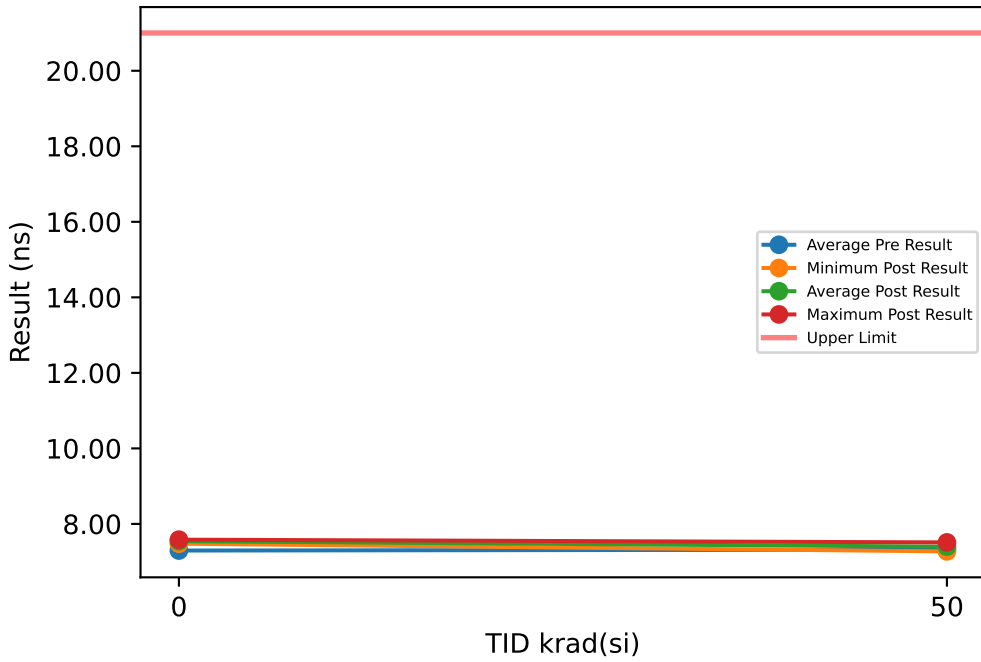


Test Statistics (ns)

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	7.5764	7.6455	7.6953	0.043485	7.29	7.5997	8.1627	0.42424	-0.3234	-0.045783	0.4812	0.40306
50	7.5698	7.6547	7.7224	0.044707	7.2561	7.4859	7.7477	0.20165	-0.3527	-0.16887	0.0253	0.17146

Device Test: 24.101 SYNC\_HL\_FALL\_TIME(\_TIMING|FALL/SYNC2/12//511k//@SYNC\_HL\_FALL\_TIME )

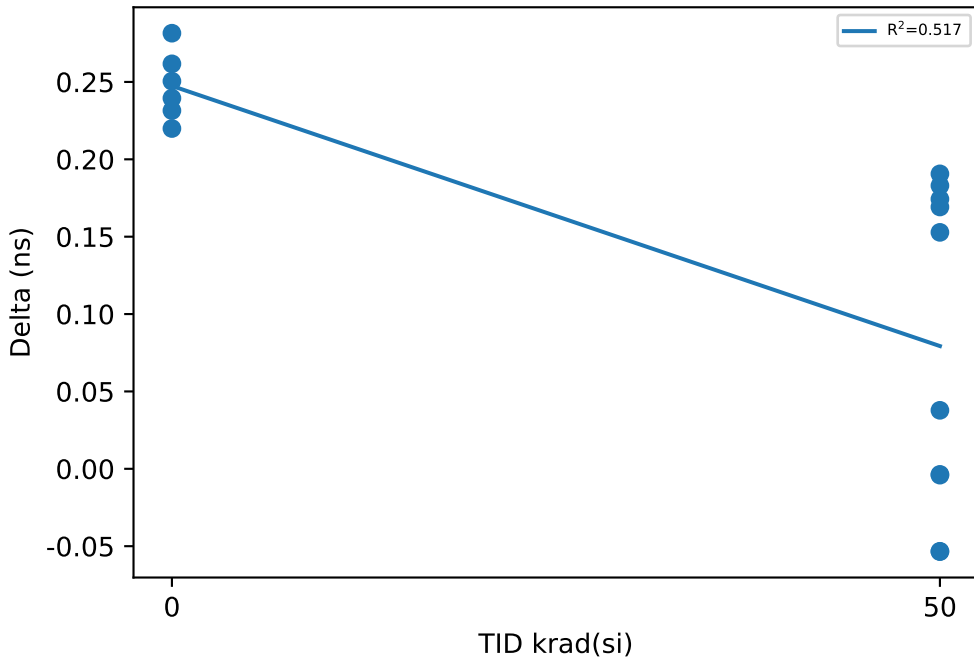
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.2764	7.2728	-0.0036
4	50	HDR Biased w/ 84hr anneal	7.2445	7.2823	0.0378
6	50	HDR Biased w/ 84hr anneal	7.35	7.2967	-0.0533
8	50	HDR Biased w/ 84hr anneal	7.3404	7.3363	-0.0041
9	50	HDR Biased w/ 84hr anneal	7.4159	7.3624	-0.0535
10	50	HDR unbiased	7.342	7.5112	0.1692
11	50	HDR unbiased	7.3063	7.4806	0.1743
12	50	HDR unbiased	7.3234	7.4762	0.1528
13	50	HDR unbiased	7.2876	7.4782	0.1906
14	50	HDR unbiased	7.3028	7.4858	0.183
26	0	Correlation	7.2454	7.4769	0.2315
27	0	Correlation	7.2924	7.5429	0.2505
28	0	Correlation	7.3204	7.5599	0.2395
29	0	Correlation	7.3247	7.5446	0.2199
30	0	Correlation	7.302	7.5835	0.2815
32	0	Correlation	7.2885	7.5502	0.2617

TID vs Post - Pre Exposure Delta

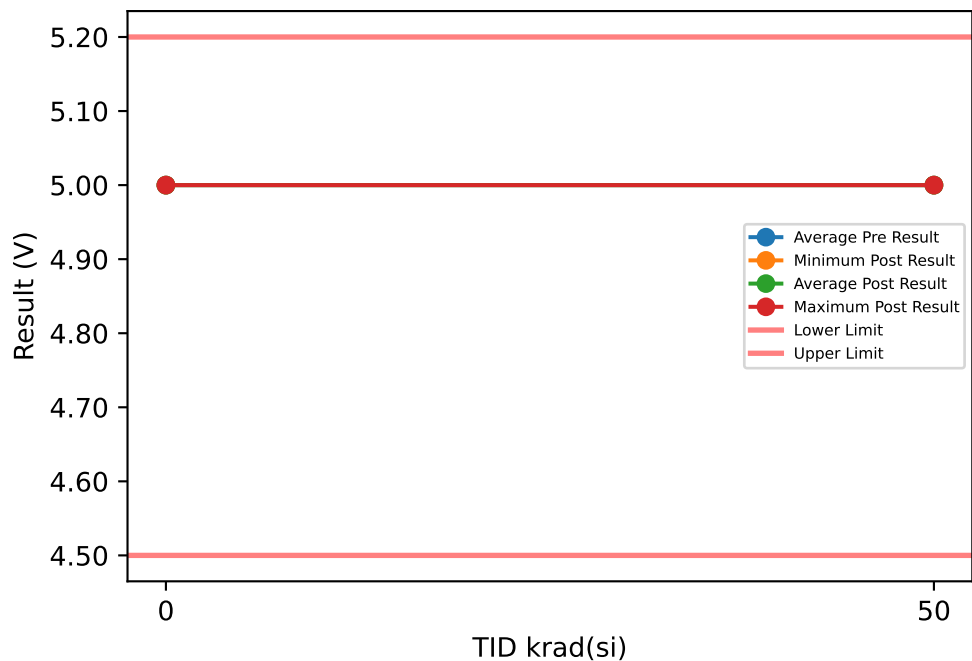


Test Statistics (ns)

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	7.2454	7.2956	7.3247	0.028578	7.4769	7.543	7.5835	0.035636	0.2199	0.24743	0.2815	0.022129
50	7.2445	7.3189	7.4159	0.047295	7.2728	7.3982	7.5112	0.096776	-0.0535	0.07932	0.1906	0.1035

# Device Test: 24.102 SYNC\_OUT\_HIGH\_7V( \_LEVELS|VOH/SYNC1/12//511k//@SYNC\_OUT\_HIGH\_7V )

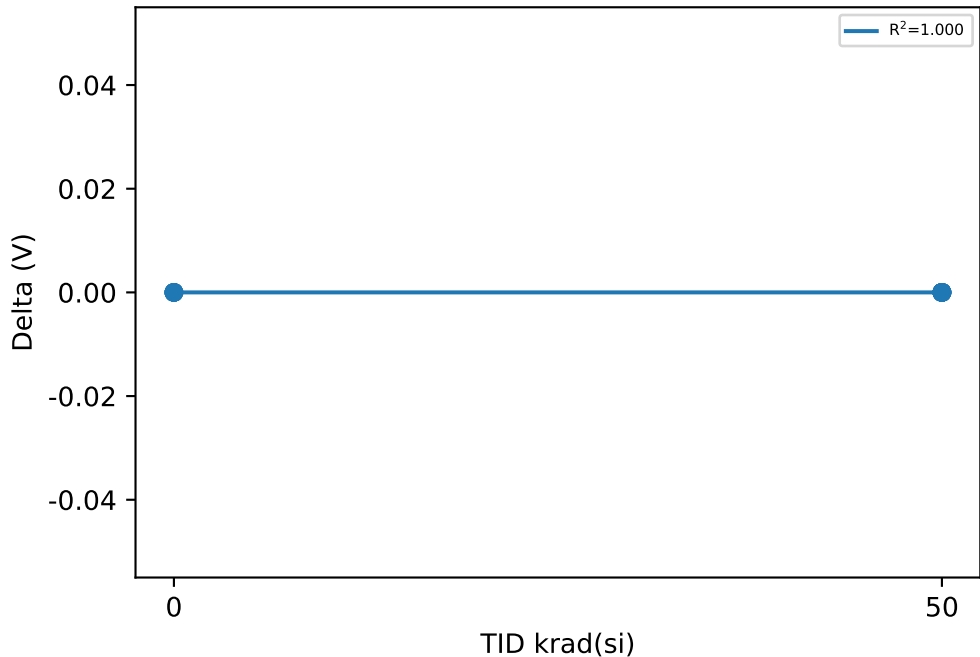
### TID vs Result Stats



### Test Results (Lower Limit = 4.5, Upper Limit = 5.2 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5	5	0
4	50	HDR Biased w/ 84hr anneal	5	5	0
6	50	HDR Biased w/ 84hr anneal	5	5	0
8	50	HDR Biased w/ 84hr anneal	5	5	0
9	50	HDR Biased w/ 84hr anneal	5	5	0
10	50	HDR unbiased	5	5	0
11	50	HDR unbiased	5	5	0
12	50	HDR unbiased	5	5	0
13	50	HDR unbiased	5	5	0
14	50	HDR unbiased	5	5	0
26	0	Correlation	5	5	0
27	0	Correlation	5	5	0
28	0	Correlation	5	5	0
29	0	Correlation	5	5	0
30	0	Correlation	5	5	0
32	0	Correlation	5	5	0

### TID vs Post - Pre Exposure Delta



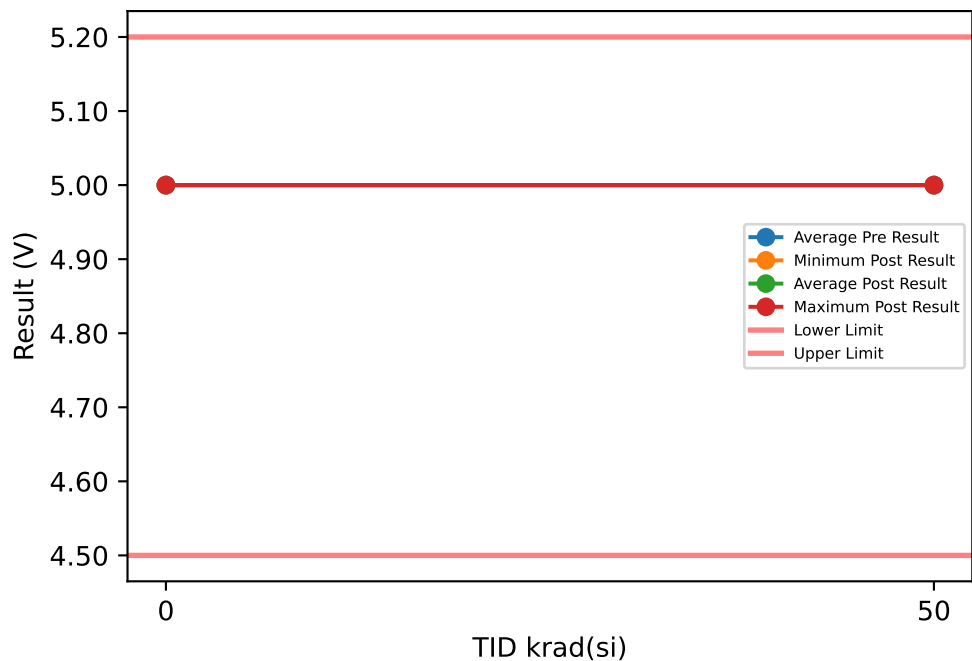
### Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	5	5	5	0	5	5	5	0	0	0	0	0
50	5	5	5	0	5	5	5	0	0	0	0	0

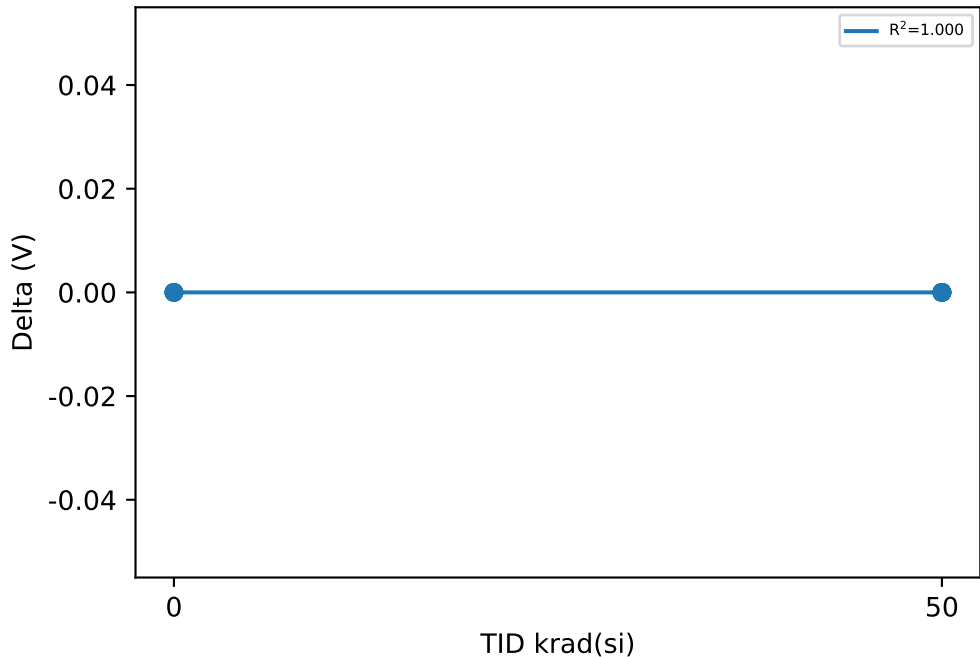


# Device Test: 24.103 SYNC\_OUT\_HIGH\_7V( \_LEVELS|VOH/SYNC2/12//511k//@SYNC\_OUT\_HIGH\_7V )

## TID vs Result Stats



## TID vs Post - Pre Exposure Delta



## Test Results (Lower Limit = 4.5, Upper Limit = 5.2 (V))

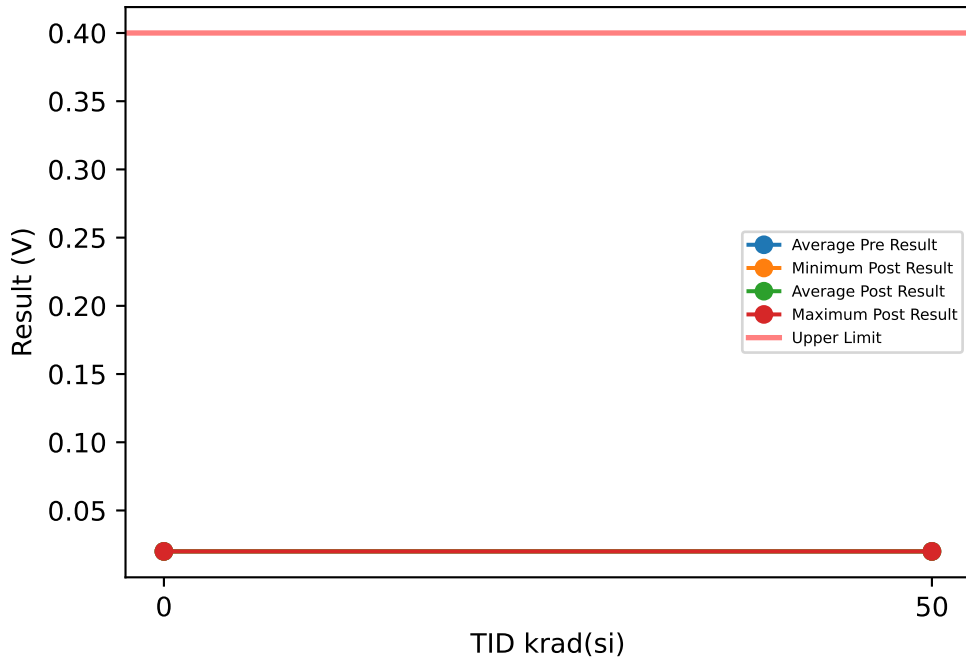
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5	5	0
4	50	HDR Biased w/ 84hr anneal	5	5	0
6	50	HDR Biased w/ 84hr anneal	5	5	0
8	50	HDR Biased w/ 84hr anneal	5	5	0
9	50	HDR Biased w/ 84hr anneal	5	5	0
10	50	HDR unbiased	5	5	0
11	50	HDR unbiased	5	5	0
12	50	HDR unbiased	5	5	0
13	50	HDR unbiased	5	5	0
14	50	HDR unbiased	5	5	0
26	0	Correlation	5	5	0
27	0	Correlation	5	5	0
28	0	Correlation	5	5	0
29	0	Correlation	5	5	0
30	0	Correlation	5	5	0
32	0	Correlation	5	5	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	5	5	5	0	5	5	5	0	0	0	0	0
50	5	5	5	0	5	5	5	0	0	0	0	0

Device Test: 24.104 SYNC\_OUT\_LOW( \_LEVELS|VOL/SYNC1/12//511k//@SYNC\_OUT\_LOW )

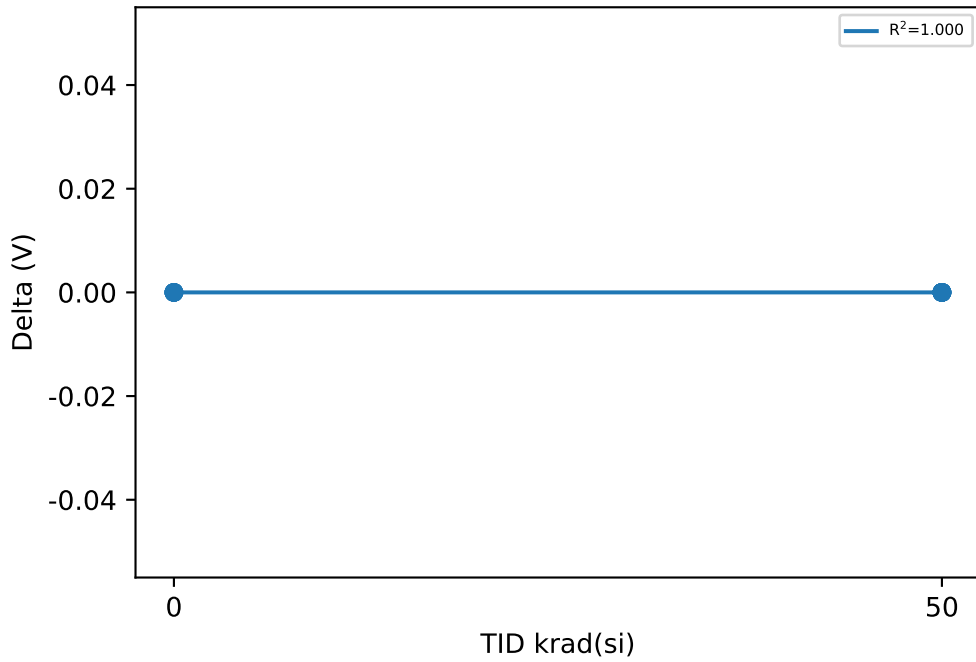
TID vs Result Stats



Test Results (Upper Limit = 0.4 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	0

TID vs Post - Pre Exposure Delta

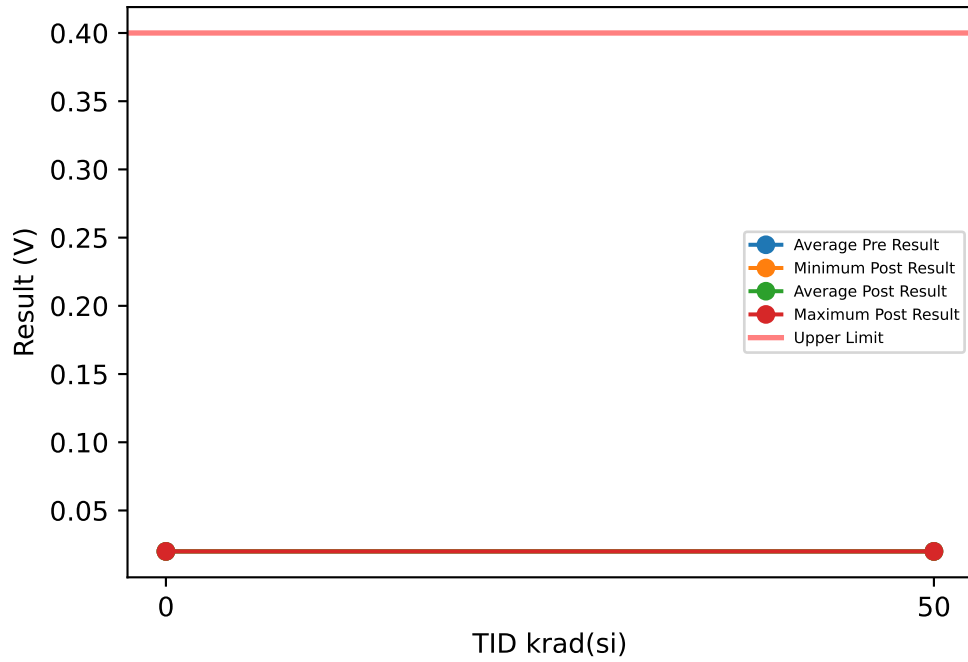


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0

Device Test: 24.105 SYNC\_OUT\_LOW( \_LEVELS|VOL/SYNC2/12//511k//@SYNC\_OUT\_LOW )

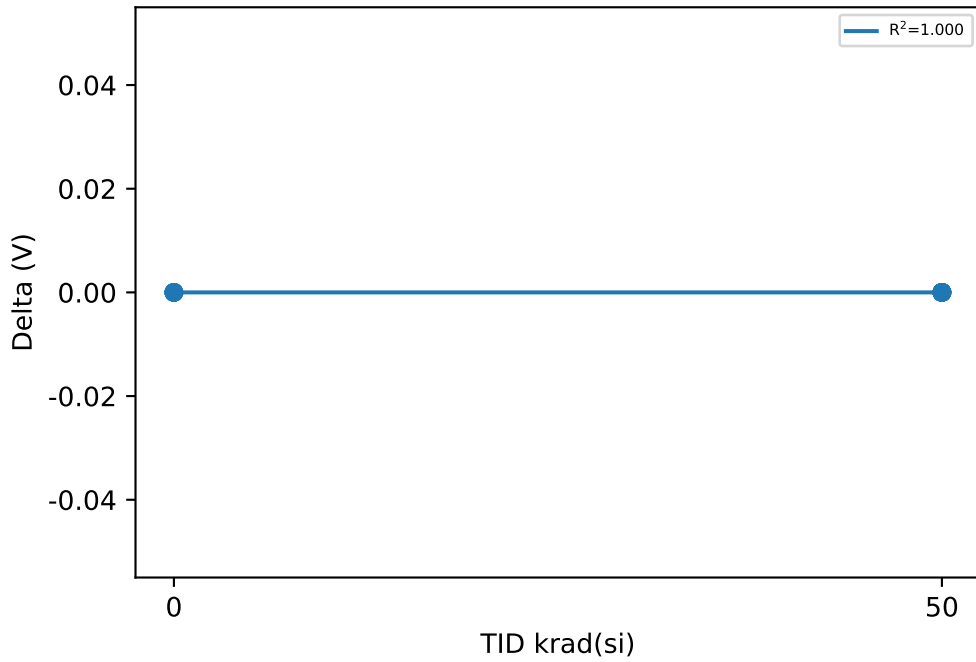
TID vs Result Stats



Test Results (Upper Limit = 0.4 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	0

TID vs Post - Pre Exposure Delta

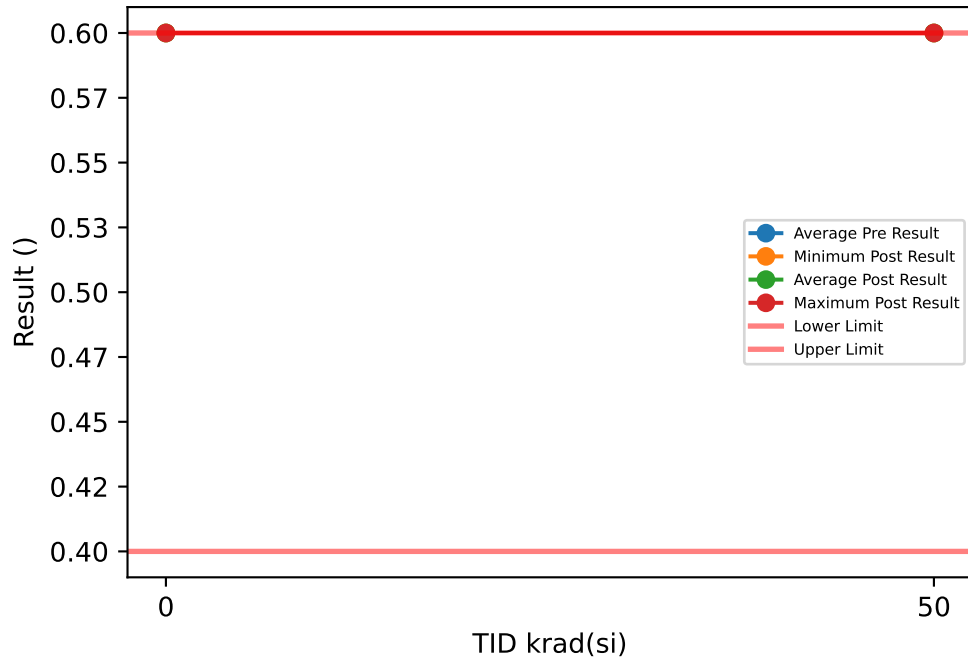


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0



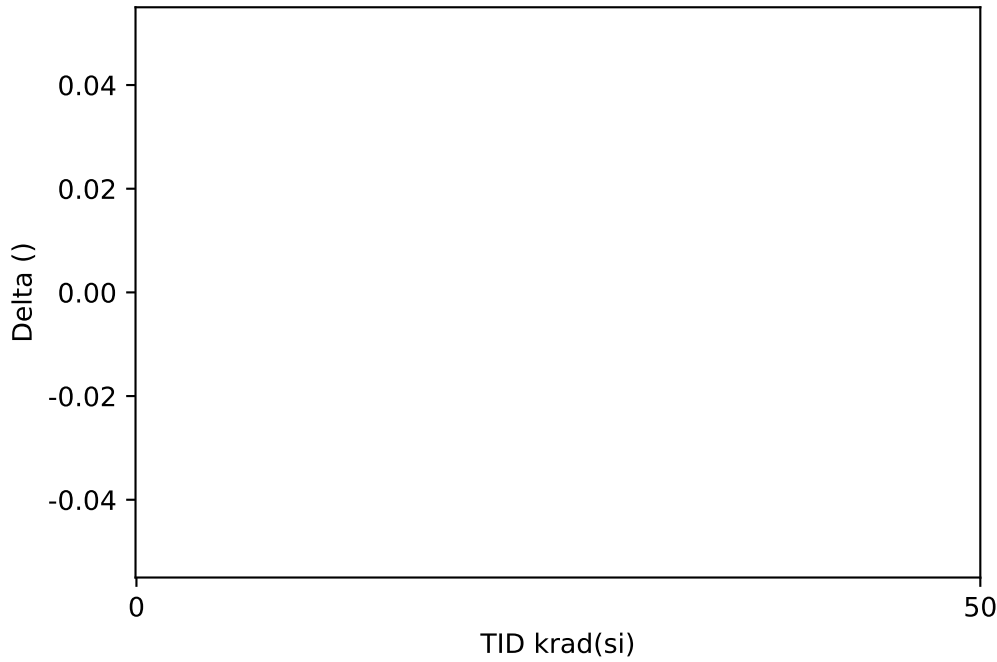
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.6	
4	50	HDR Biased w/ 84hr anneal		0.6	
6	50	HDR Biased w/ 84hr anneal		0.6	
8	50	HDR Biased w/ 84hr anneal		0.6	
9	50	HDR Biased w/ 84hr anneal		0.6	
10	50	HDR unbiased		0.6	
11	50	HDR unbiased		0.6	
12	50	HDR unbiased		0.6	
13	50	HDR unbiased		0.6	
14	50	HDR unbiased		0.6	
26	0	Correlation		0.6	
27	0	Correlation		0.6	
28	0	Correlation		0.6	
29	0	Correlation		0.6	
30	0	Correlation		0.6	
32	0	Correlation		0.6	

TID vs Post - Pre Exposure Delta

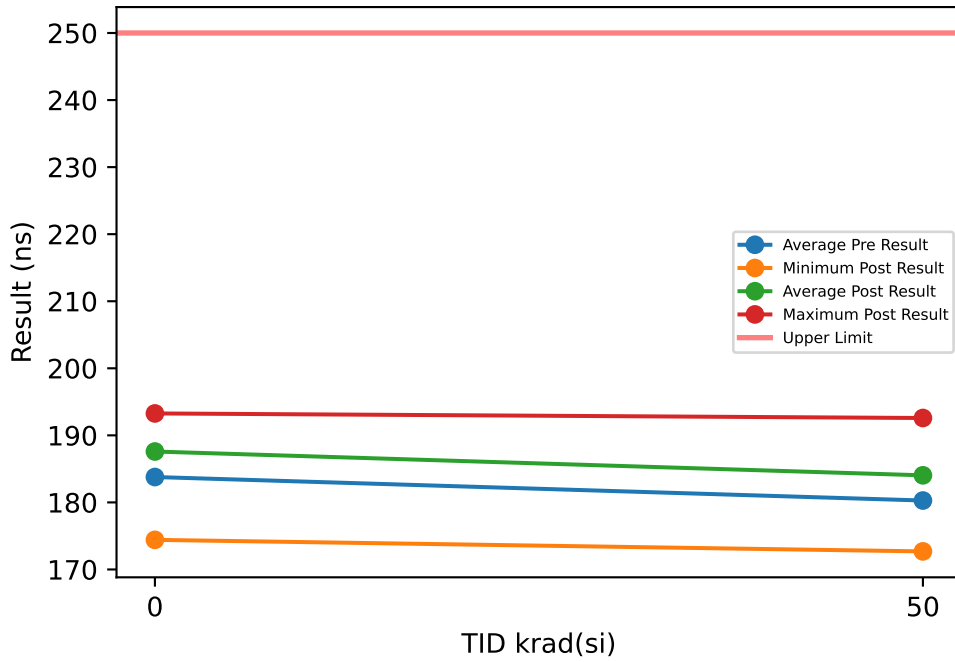


Test Statistics ( )

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					0.6	0.6	0.6	0				
50					0.6	0.6	0.6	0				

# Device Test: 24.111 ON\_TIME\_MIN\_12V(\_TIMING|MINON/SW/12//511k//@ON\_TIME\_MIN\_12V )

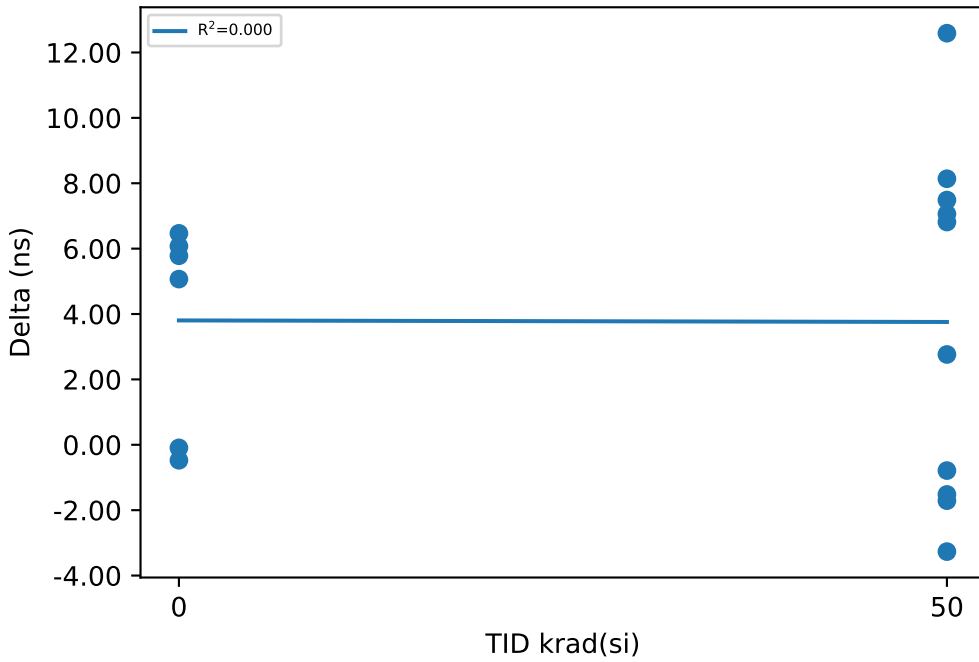
### TID vs Result Stats



### Test Results (Upper Limit = 250.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	181.43	179.72	-1.7091
4	50	HDR Biased w/ 84hr anneal	183	185.77	2.7628
6	50	HDR Biased w/ 84hr anneal	180.91	180.12	-0.7889
8	50	HDR Biased w/ 84hr anneal	183.76	182.24	-1.5192
9	50	HDR Biased w/ 84hr anneal	175.96	172.69	-3.2672
10	50	HDR unbiased	182.06	189.55	7.486
11	50	HDR unbiased	178.43	186.57	8.1378
12	50	HDR unbiased	180	192.59	12.59
13	50	HDR unbiased	177.83	184.89	7.0599
14	50	HDR unbiased	179.43	186.25	6.8139
26	0	Correlation	183.36	189.82	6.4677
27	0	Correlation	174.89	174.42	-0.4739
28	0	Correlation	186.82	191.89	5.0685
29	0	Correlation	186.91	186.82	-0.0944
30	0	Correlation	187.19	193.27	6.0741
32	0	Correlation	183.54	189.33	5.7821

### TID vs Post - Pre Exposure Delta

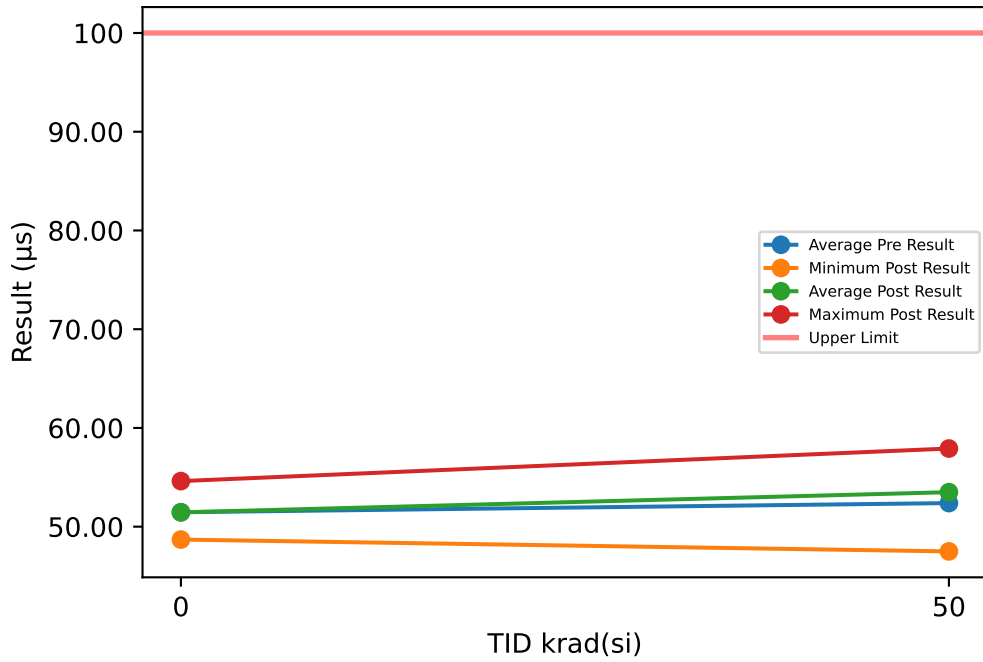


### Test Statistics (ns)

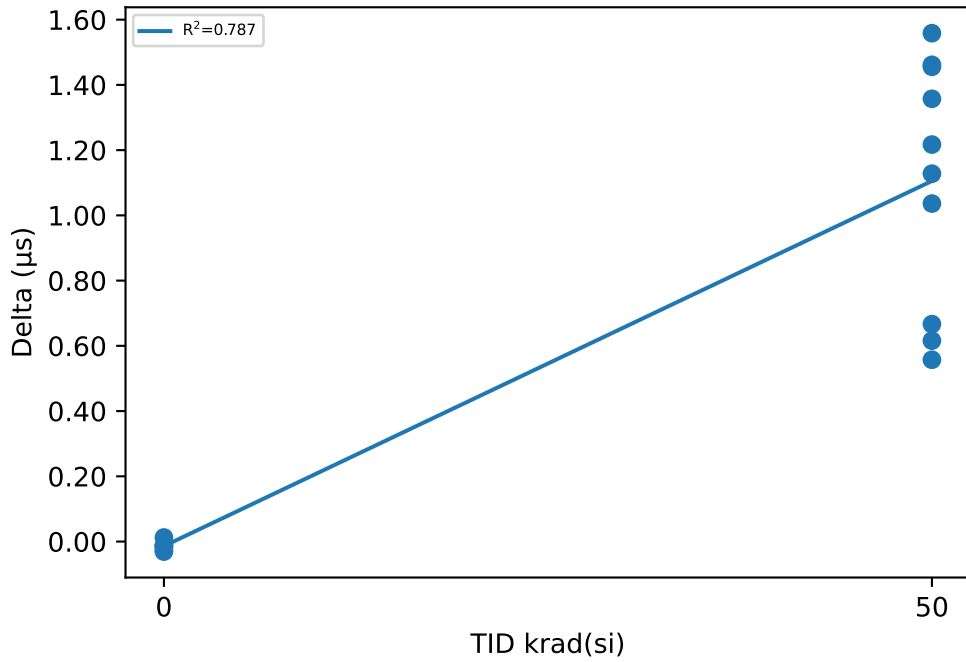
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	174.89	183.79	187.19	4.6894	174.42	187.59	193.27	6.8239	-0.4739	3.804	6.4677	3.2018
50	175.96	180.28	183.76	2.4324	172.69	184.04	192.59	5.6211	-3.2672	3.7566	12.59	5.3757

# Device Test: 24.112 T\_EN\_DELAY(\_TIMING|DELAY/EN/12//511k//@T\_EN\_DELAY )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



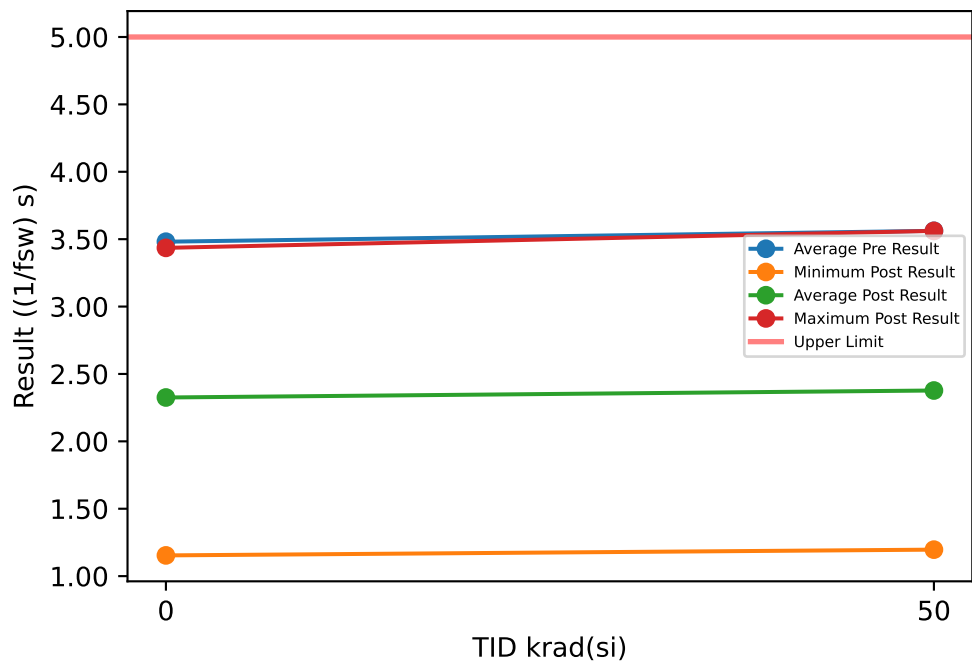
### Test Results (Upper Limit = 100.0 (µs))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	55.321	56.678	1.3574
4	50	HDR Biased w/ 84hr anneal	50.247	50.862	0.6159
6	50	HDR Biased w/ 84hr anneal	52.742	53.299	0.5574
8	50	HDR Biased w/ 84hr anneal	51.68	52.717	1.0362
9	50	HDR Biased w/ 84hr anneal	46.829	47.495	0.6666
10	50	HDR unbiased	52.428	53.556	1.1278
11	50	HDR unbiased	52.697	54.256	1.5585
12	50	HDR unbiased	53.5	54.955	1.4555
13	50	HDR unbiased	51.743	53.205	1.4616
14	50	HDR unbiased	56.697	57.914	1.2171
26	0	Correlation	50.421	50.408	-0.0129
27	0	Correlation	52.005	52.017	0.0125
28	0	Correlation	48.723	48.692	-0.0308
29	0	Correlation	51.122	51.096	-0.0263
30	0	Correlation	51.876	51.863	-0.0127
32	0	Correlation	54.629	54.616	-0.0135

### Test Statistics (µs)

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	48.723	51.463	54.629	1.9595	48.692	51.449	54.616	1.9662	-0.0308	-0.01395	0.0125	0.015092
50	46.829	52.388	56.697	2.688	47.495	53.494	57.914	2.9064	0.5574	1.1054	1.5585	0.37542

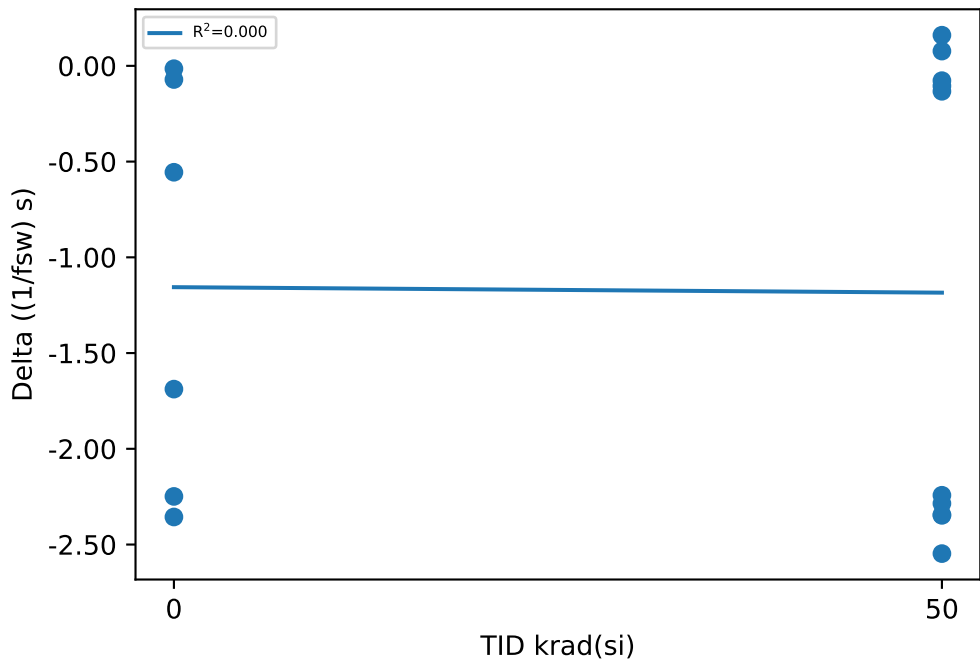
TID vs Result Stats



Test Results (Upper Limit = 5.0 ((1/fsw) s))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.5833	3.506	-0.0773
4	50	HDR Biased w/ 84hr anneal	3.4603	3.5374	0.0771
6	50	HDR Biased w/ 84hr anneal	3.5783	3.4734	-0.1049
8	50	HDR Biased w/ 84hr anneal	3.4014	3.5615	0.1601
9	50	HDR Biased w/ 84hr anneal	3.599	3.4661	-0.1329
10	50	HDR unbiased	3.5436	1.1992	-2.3444
11	50	HDR unbiased	3.7438	1.1965	-2.5473
12	50	HDR unbiased	3.5836	1.2361	-2.3475
13	50	HDR unbiased	3.48	1.2374	-2.2426
14	50	HDR unbiased	3.644	1.3584	-2.2856
26	0	Correlation	3.5224	2.9667	-0.5557
27	0	Correlation	3.4392	3.4243	-0.0149
28	0	Correlation	3.4261	1.7378	-1.6883
29	0	Correlation	3.5068	3.4355	-0.0713
30	0	Correlation	3.5099	1.1538	-2.3561
32	0	Correlation	3.4828	1.2341	-2.2487

TID vs Post - Pre Exposure Delta



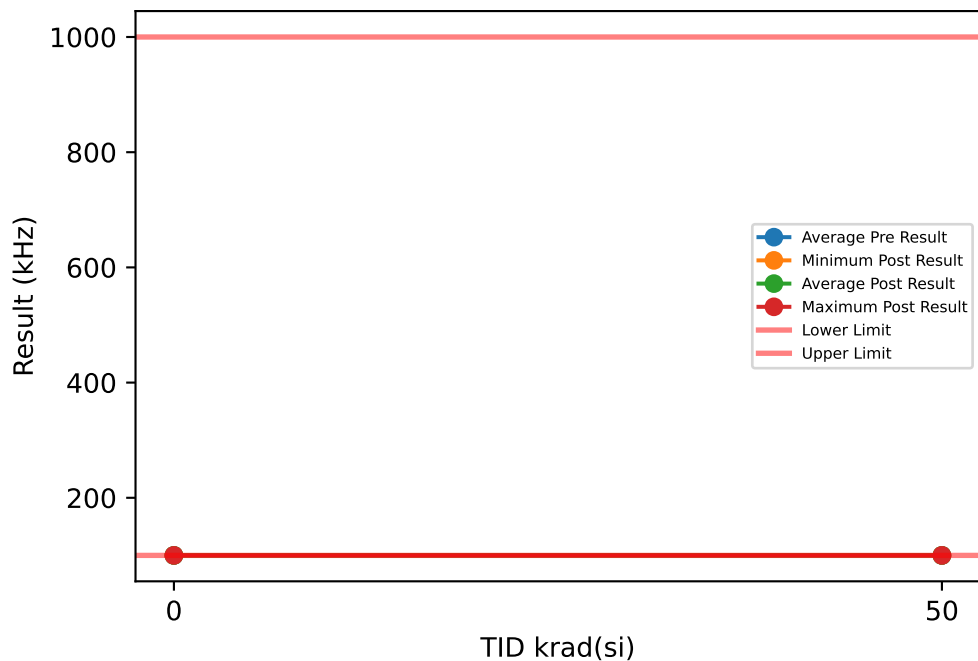
Test Statistics ((1/fsw) s)

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	3.4261	3.4812	3.5224	0.039948	1.1538	2.3254	3.4355	1.0733	-2.3561	-1.1558	-0.0149	1.073
50	3.4014	3.5617	3.7438	0.097483	1.1965	2.3772	3.5615	1.194	-2.5473	-1.1845	0.1601	1.2376



Device Test: 24.121 SYNC\_FREQ\_RANGE(\_FREQ|100kHz/SYNC1/14//OPEN//@SYNC\_FREQ\_RANGE )

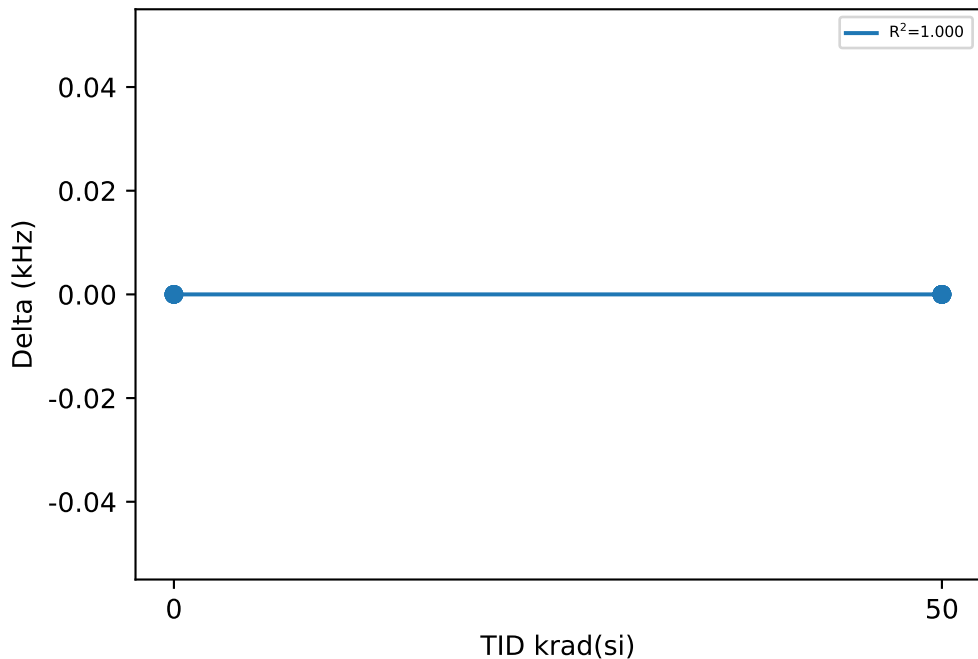
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	100	100	0
4	50	HDR Biased w/ 84hr anneal	100	100	0
6	50	HDR Biased w/ 84hr anneal	100	100	0
8	50	HDR Biased w/ 84hr anneal	100	100	0
9	50	HDR Biased w/ 84hr anneal	100	100	0
10	50	HDR unbiased	100	100	0
11	50	HDR unbiased	100	100	0
12	50	HDR unbiased	100	100	0
13	50	HDR unbiased	100	100	0
14	50	HDR unbiased	100	100	0
26	0	Correlation	100	100	0
27	0	Correlation	100	100	0
28	0	Correlation	100	100	0
29	0	Correlation	100	100	0
30	0	Correlation	100	100	0
32	0	Correlation	100	100	0

TID vs Post - Pre Exposure Delta

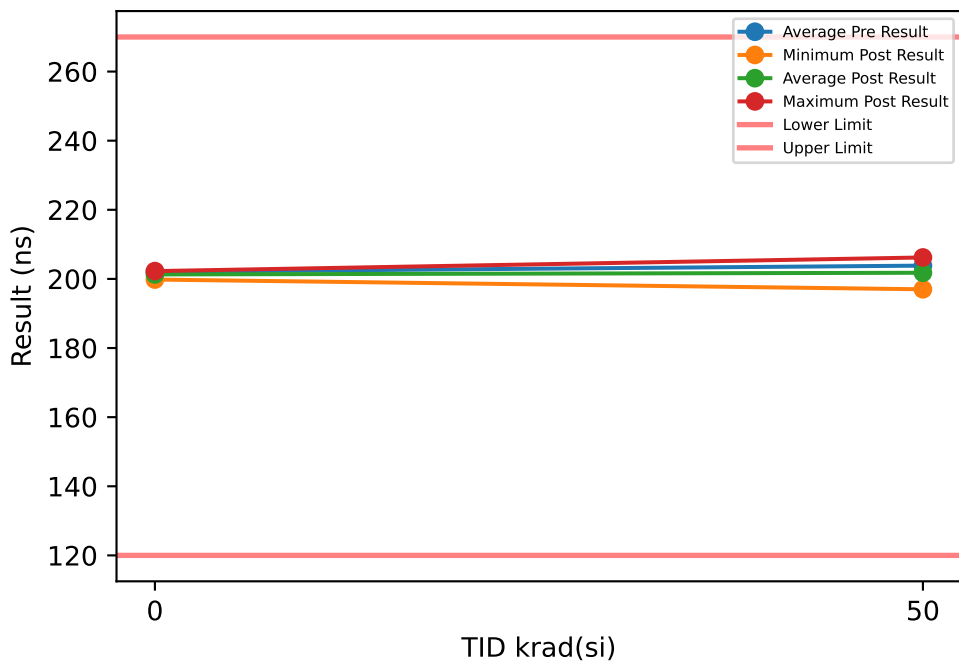


Test Statistics (kHz)

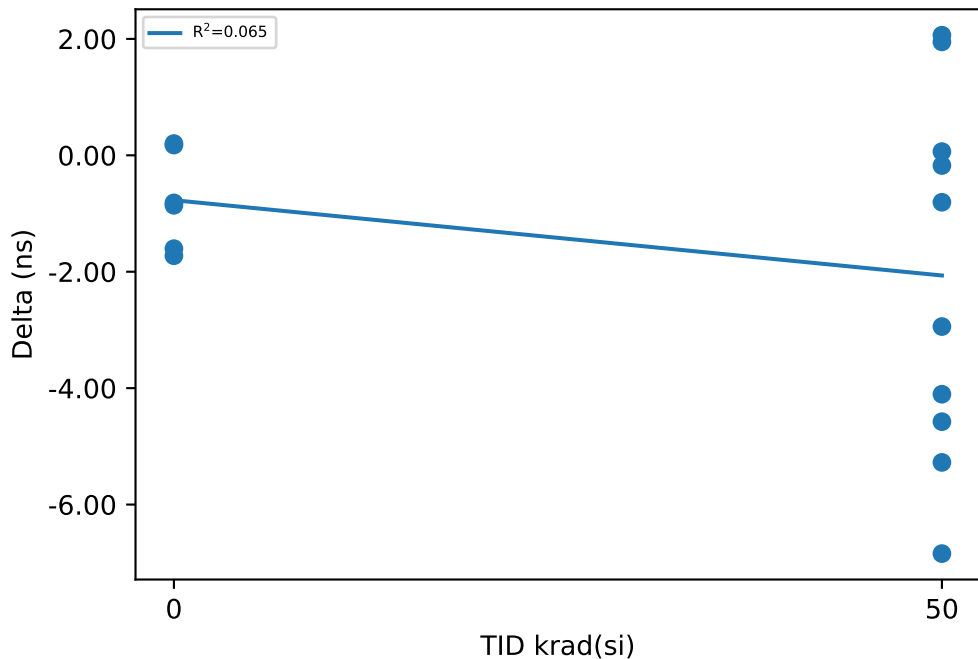
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	100	100	100	0	100	100	100	0	0	0	0	0
50	100	100	100	0	100	100	100	0	0	0	0	0

Device Test: 24.122 SYNC1\_SW\_DELAY(\_TIMING|DELAY/SYNC1/14//OPEN//@SYNC1\_SW\_DELAY )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 120.0, Upper Limit = 270.0 (ns))

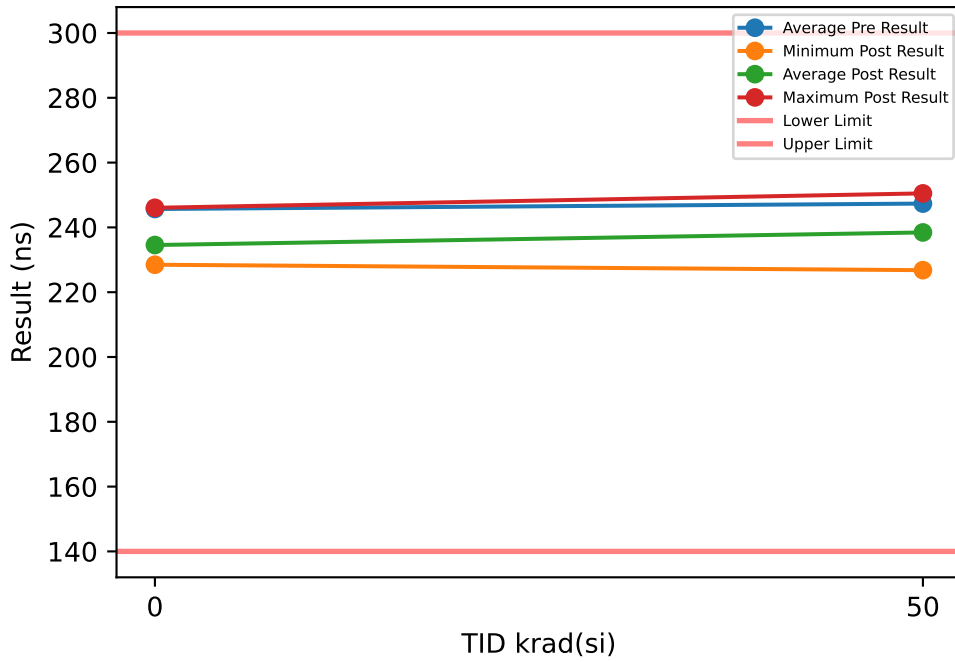
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	204.26	206.21	1.9482
4	50	HDR Biased w/ 84hr anneal	201.73	201.56	-0.1752
6	50	HDR Biased w/ 84hr anneal	204.56	203.75	-0.8064
8	50	HDR Biased w/ 84hr anneal	196.94	197	0.064
9	50	HDR Biased w/ 84hr anneal	197.15	199.21	2.0636
10	50	HDR unbiased	208.78	205.84	-2.9419
11	50	HDR unbiased	208.9	204.33	-4.576
12	50	HDR unbiased	204.6	197.75	-6.8425
13	50	HDR unbiased	207.01	202.91	-4.1042
14	50	HDR unbiased	204.53	199.25	-5.2757
26	0	Correlation	203.45	201.85	-1.6038
27	0	Correlation	200.96	201.14	0.1756
28	0	Correlation	201.54	199.81	-1.7253
29	0	Correlation	202.06	202.26	0.2022
30	0	Correlation	201.95	201.13	-0.8173
32	0	Correlation	202.45	201.59	-0.8589

Test Statistics (ns)

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	200.96	202.07	203.45	0.84484	199.81	201.3	202.26	0.84493	-1.7253	-0.77125	0.2022	0.83154
50	196.94	203.85	208.9	4.1997	197	201.78	206.21	3.3303	-6.8425	-2.0646	2.0636	3.1128

Device Test: 24.123 SYNC1\_SW\_DELAY\_INV(\_TIMING|DELAY/SYNC1/14//OPEN//@SYNC1\_SW\_DELAY\_INV )

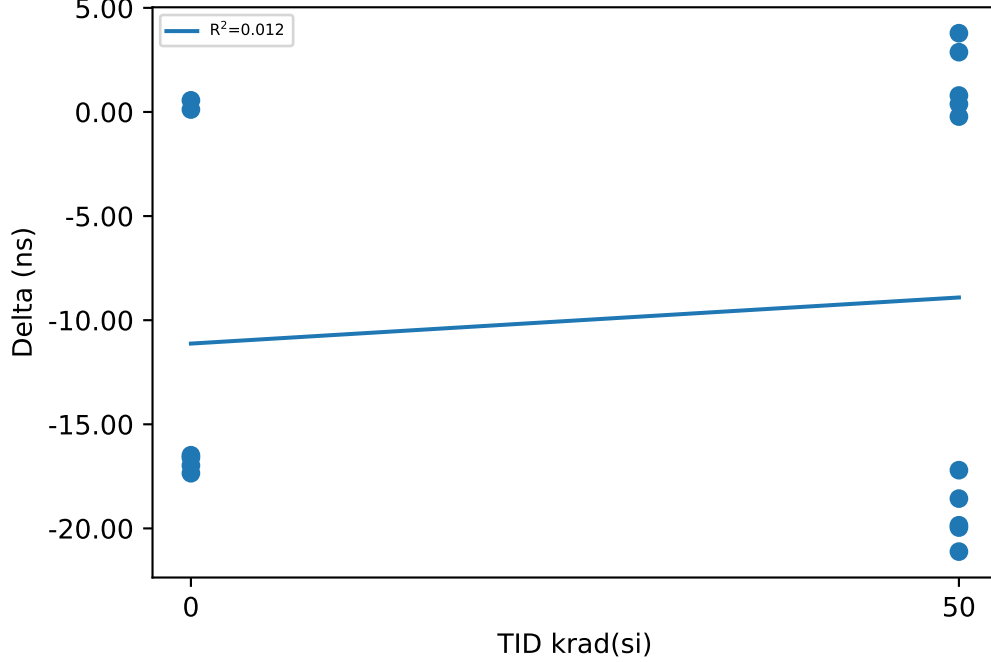
TID vs Result Stats



Test Results (Lower Limit = 140.0, Upper Limit = 300.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	246.72	250.5	3.7833
4	50	HDR Biased w/ 84hr anneal	245.01	245.39	0.3792
6	50	HDR Biased w/ 84hr anneal	248.26	248.03	-0.2218
8	50	HDR Biased w/ 84hr anneal	241.16	241.95	0.791
9	50	HDR Biased w/ 84hr anneal	240.79	243.66	2.8718
10	50	HDR unbiased	252.37	235.17	-17.203
11	50	HDR unbiased	252.29	232.33	-19.96
12	50	HDR unbiased	247.92	226.8	-21.114
13	50	HDR unbiased	250.74	232.17	-18.569
14	50	HDR unbiased	248.27	228.42	-19.848
26	0	Correlation	247.3	229.95	-17.35
27	0	Correlation	243.89	244.45	0.5591
28	0	Correlation	244.97	228.48	-16.485
29	0	Correlation	245.93	246.05	0.1165
30	0	Correlation	245.95	228.97	-16.98
32	0	Correlation	246.05	229.45	-16.602

TID vs Post - Pre Exposure Delta

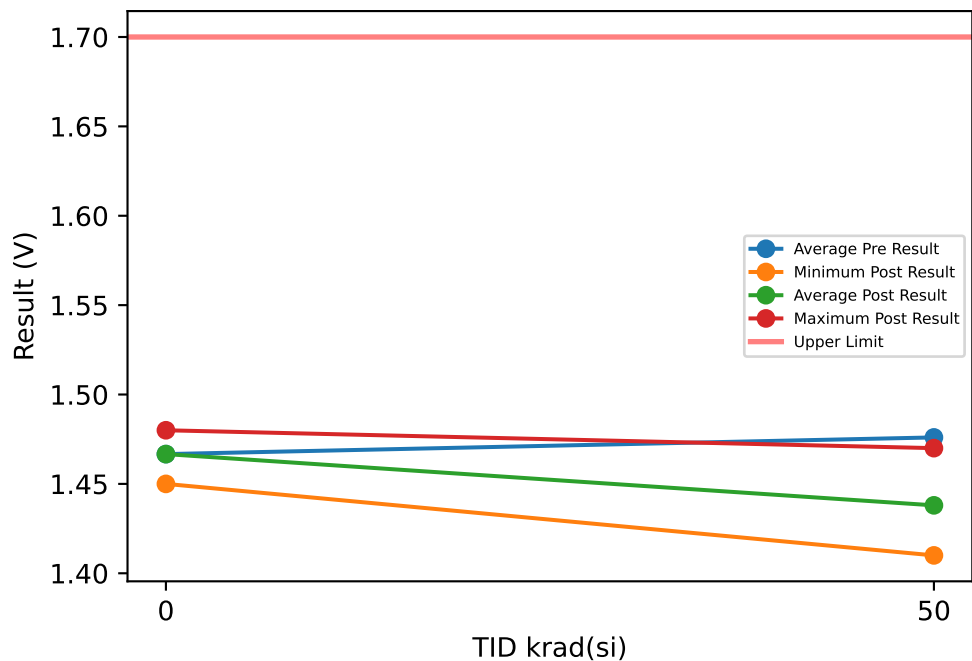


Test Statistics (ns)

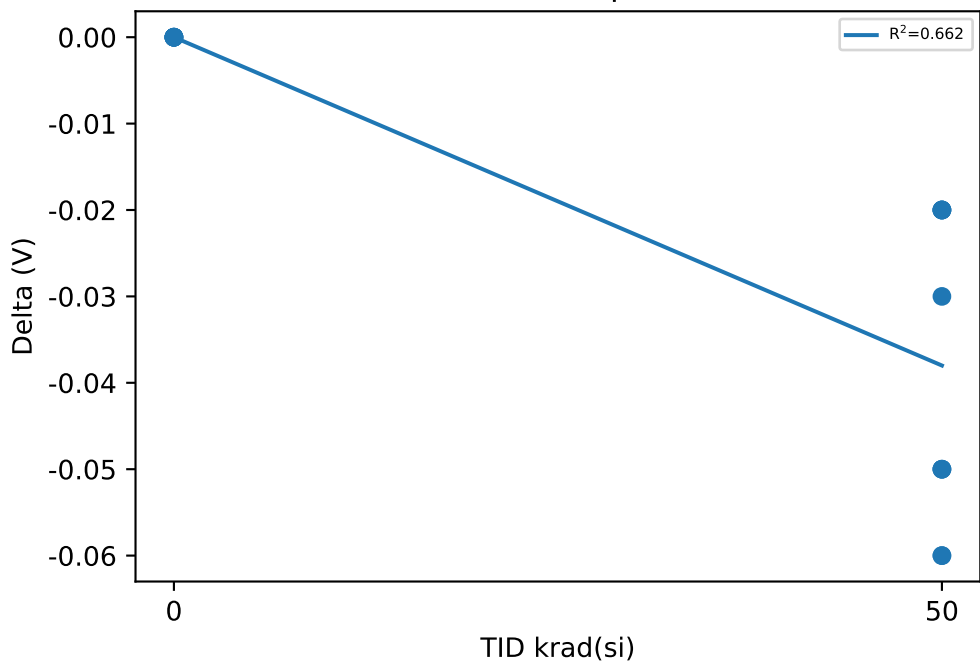
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	243.89	245.68	247.3	1.1488	228.48	234.56	246.05	8.3125	-17.35	-11.124	0.5591	8.8843
50	240.79	247.35	252.37	4.0859	226.8	238.44	250.5	8.4888	-21.114	-8.909	3.7833	11.098

Device Test: 24.124 SYNC1\_VIH(\_THRESHOLD|RISE/SYNC1/14//OPEN//@SYNC1\_VIH )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 1.7 (V))

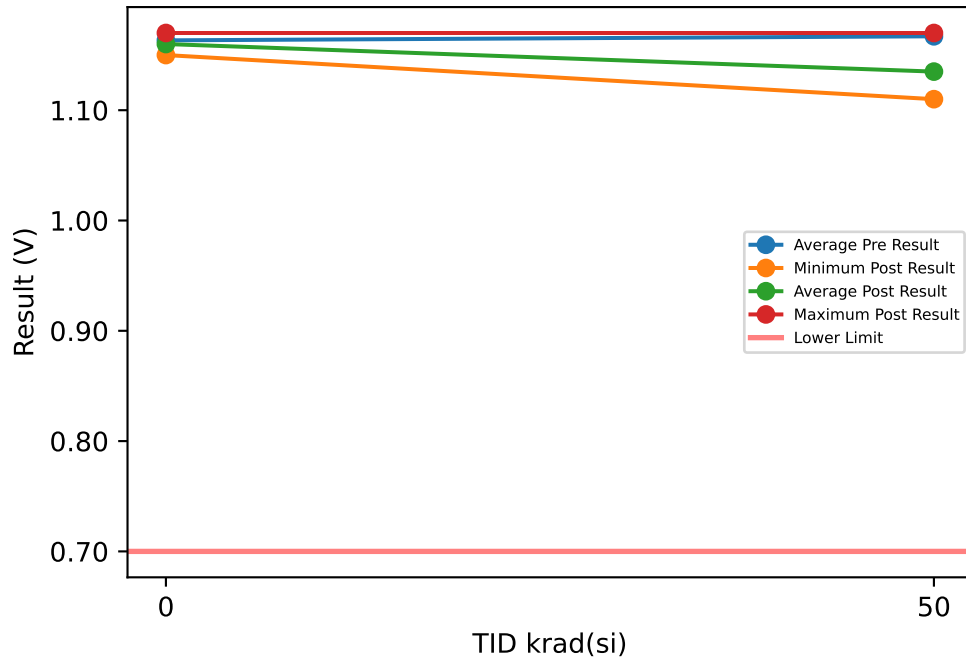
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.48	1.46	-0.02
4	50	HDR Biased w/ 84hr anneal	1.49	1.47	-0.02
6	50	HDR Biased w/ 84hr anneal	1.48	1.46	-0.02
8	50	HDR Biased w/ 84hr anneal	1.46	1.44	-0.02
9	50	HDR Biased w/ 84hr anneal	1.47	1.44	-0.03
10	50	HDR unbiased	1.47	1.41	-0.06
11	50	HDR unbiased	1.48	1.42	-0.06
12	50	HDR unbiased	1.48	1.43	-0.05
13	50	HDR unbiased	1.47	1.42	-0.05
14	50	HDR unbiased	1.48	1.43	-0.05
26	0	Correlation	1.47	1.47	0
27	0	Correlation	1.48	1.48	0
28	0	Correlation	1.47	1.47	0
29	0	Correlation	1.47	1.47	0
30	0	Correlation	1.46	1.46	0
32	0	Correlation	1.45	1.45	0

Test Statistics (V)

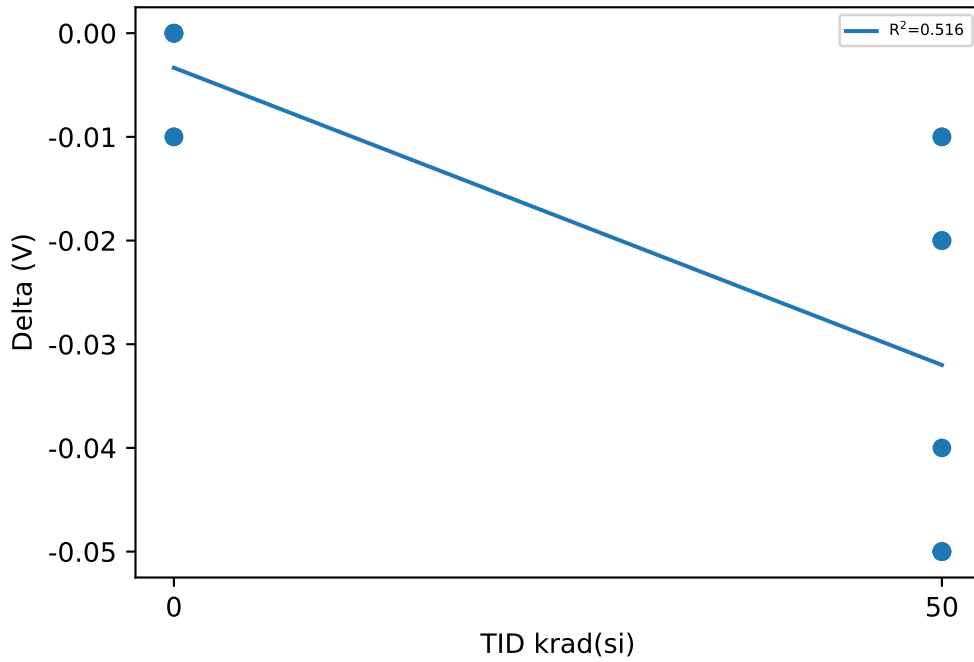
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.45	1.4667	1.48	0.010328	1.45	1.4667	1.48	0.010328	0	0	0	0
50	1.46	1.476	1.49	0.0084327	1.41	1.438	1.47	0.019889	-0.06	-0.038	-0.02	0.017512

# Device Test: 24.125 SYNC1\_VIL(\_THRESHOLD|FALL/SYNC1/14//OPEN//@SYNC1\_VIL )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Lower Limit = 0.7 (V))

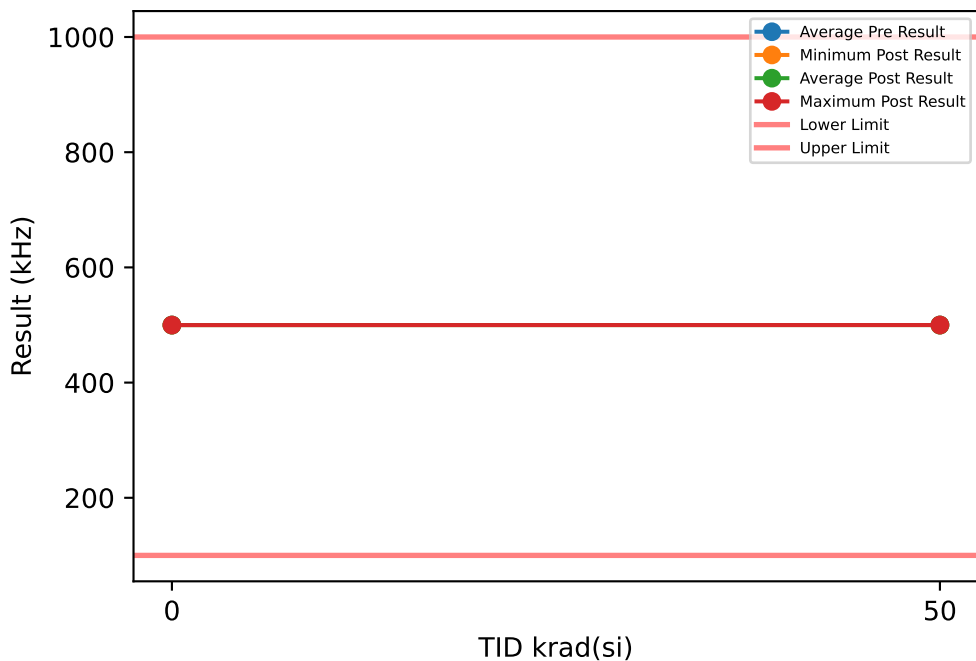
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
4	50	HDR Biased w/ 84hr anneal	1.18	1.17	-0.01
6	50	HDR Biased w/ 84hr anneal	1.17	1.16	-0.01
8	50	HDR Biased w/ 84hr anneal	1.15	1.13	-0.02
9	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
10	50	HDR unbiased	1.16	1.11	-0.05
11	50	HDR unbiased	1.17	1.12	-0.05
12	50	HDR unbiased	1.17	1.12	-0.05
13	50	HDR unbiased	1.16	1.11	-0.05
14	50	HDR unbiased	1.17	1.13	-0.04
26	0	Correlation	1.16	1.16	0
27	0	Correlation	1.18	1.17	-0.01
28	0	Correlation	1.16	1.16	0
29	0	Correlation	1.18	1.17	-0.01
30	0	Correlation	1.15	1.15	0
32	0	Correlation	1.15	1.15	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	1.15	1.1633	1.18	0.013663	1.15	1.16	1.17	0.0089443	-0.01	-0.0033333	0	0.005164
50	1.15	1.167	1.18	0.0082327	1.11	1.135	1.17	0.021213	-0.05	-0.032	-0.01	0.017512

# Device Test: 24.128 SYNC\_FREQ\_RANGE(\_FREQ|500kHz/SYNC1/14//OPEN//@SYNC\_FREQ\_RANGE )

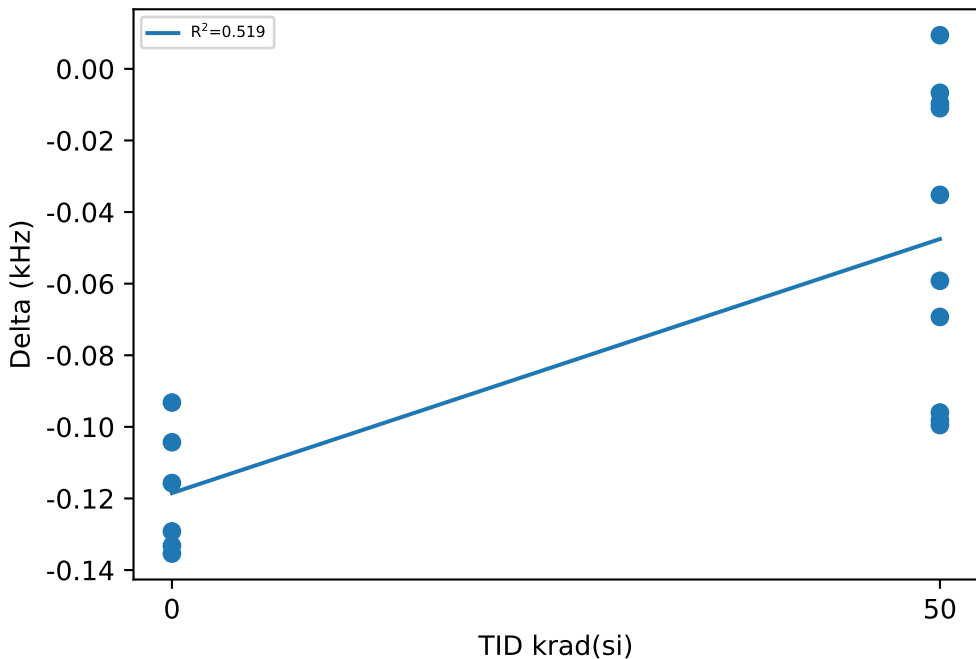
### TID vs Result Stats



### Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	499.97	499.94	-0.0352
4	50	HDR Biased w/ 84hr anneal	499.97	499.96	-0.0067
6	50	HDR Biased w/ 84hr anneal	499.95	499.94	-0.0097
8	50	HDR Biased w/ 84hr anneal	499.95	499.96	0.0094
9	50	HDR Biased w/ 84hr anneal	499.95	499.94	-0.011
10	50	HDR unbiased	499.95	499.86	-0.0995
11	50	HDR unbiased	499.94	499.87	-0.0693
12	50	HDR unbiased	499.95	499.86	-0.0981
13	50	HDR unbiased	499.95	499.89	-0.0592
14	50	HDR unbiased	499.96	499.87	-0.096
26	0	Correlation	499.97	499.86	-0.1043
27	0	Correlation	499.97	499.84	-0.1354
28	0	Correlation	499.96	499.84	-0.1157
29	0	Correlation	499.97	499.84	-0.1332
30	0	Correlation	499.99	499.86	-0.1292
32	0	Correlation	499.95	499.86	-0.0932

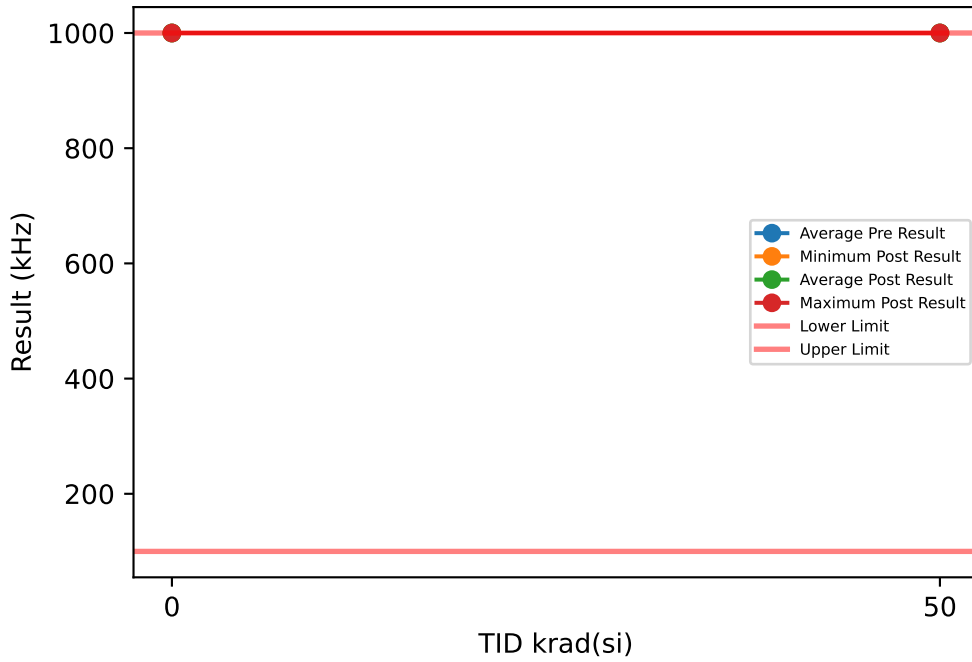
### TID vs Post - Pre Exposure Delta



### Test Statistics (kHz)

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	499.95	499.97	499.99	0.014013	499.84	499.85	499.86	0.012637	-0.1354	-0.1185	-0.0932	0.017122
50	499.94	499.96	499.97	0.0094567	499.86	499.91	499.96	0.044235	-0.0995	-0.04753	0.0094	0.042221

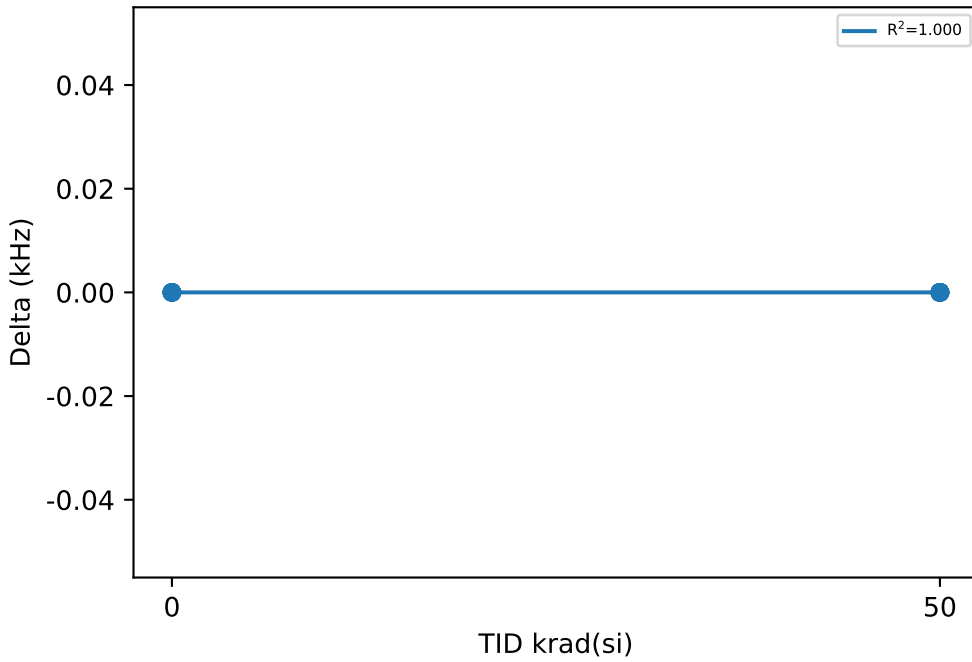
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1000	1000	0
4	50	HDR Biased w/ 84hr anneal	1000	1000	0
6	50	HDR Biased w/ 84hr anneal	1000	1000	0
8	50	HDR Biased w/ 84hr anneal	1000	1000	0
9	50	HDR Biased w/ 84hr anneal	1000	1000	0
10	50	HDR unbiased	1000	1000	0
11	50	HDR unbiased	1000	1000	0
12	50	HDR unbiased	1000	1000	0
13	50	HDR unbiased	1000	1000	0
14	50	HDR unbiased	1000	1000	0
26	0	Correlation	1000	1000	0
27	0	Correlation	1000	1000	0
28	0	Correlation	1000	1000	0
29	0	Correlation	1000	1000	0
30	0	Correlation	1000	1000	0
32	0	Correlation	1000	1000	0

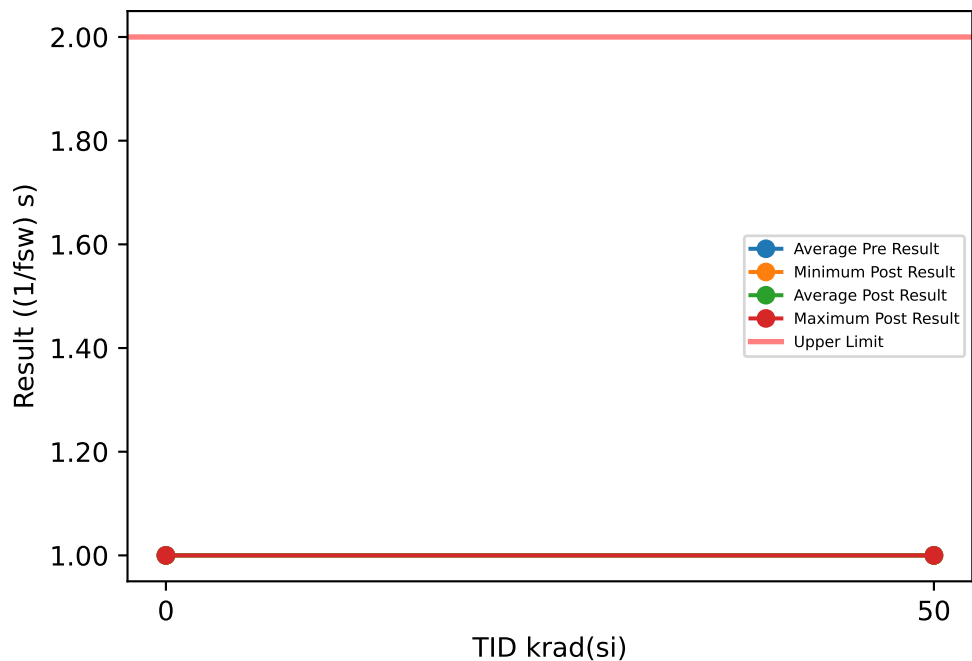
TID vs Post - Pre Exposure Delta



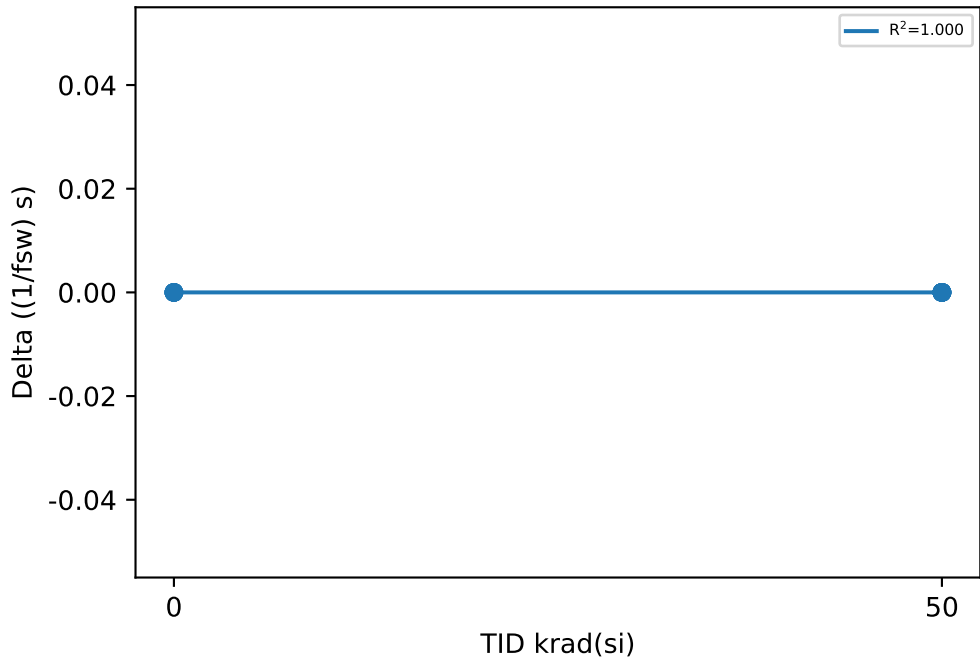
Test Statistics (kHz)

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	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0
50	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 2.0 ((1/fsw) s))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1	1	0
4	50	HDR Biased w/ 84hr anneal	1	1	0
6	50	HDR Biased w/ 84hr anneal	1	1	0
8	50	HDR Biased w/ 84hr anneal	1	1	0
9	50	HDR Biased w/ 84hr anneal	1	1	0
10	50	HDR unbiased	1	1	0
11	50	HDR unbiased	1	1	0
12	50	HDR unbiased	1	1	0
13	50	HDR unbiased	1	1	0
14	50	HDR unbiased	1	1	0
26	0	Correlation	1	1	0
27	0	Correlation	1	1	0
28	0	Correlation	1	1	0
29	0	Correlation	1	1	0
30	0	Correlation	1	1	0
32	0	Correlation	1	1	0

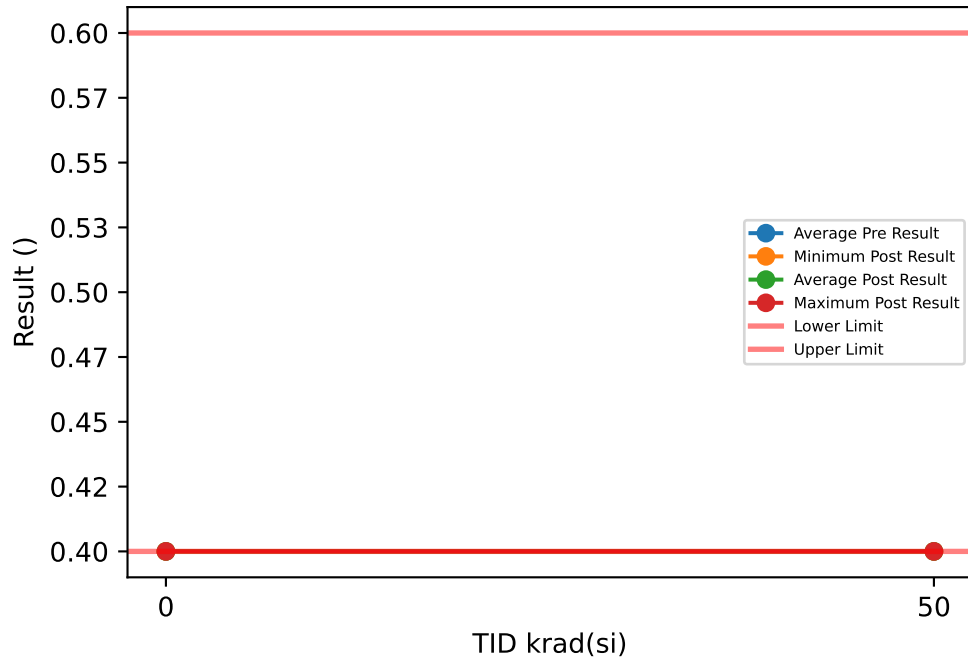
Test Statistics ((1/fsw) s)

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	1	1	0	1	1	1	0	0	0	0	0
50	1	1	1	0	1	1	1	0	0	0	0	0





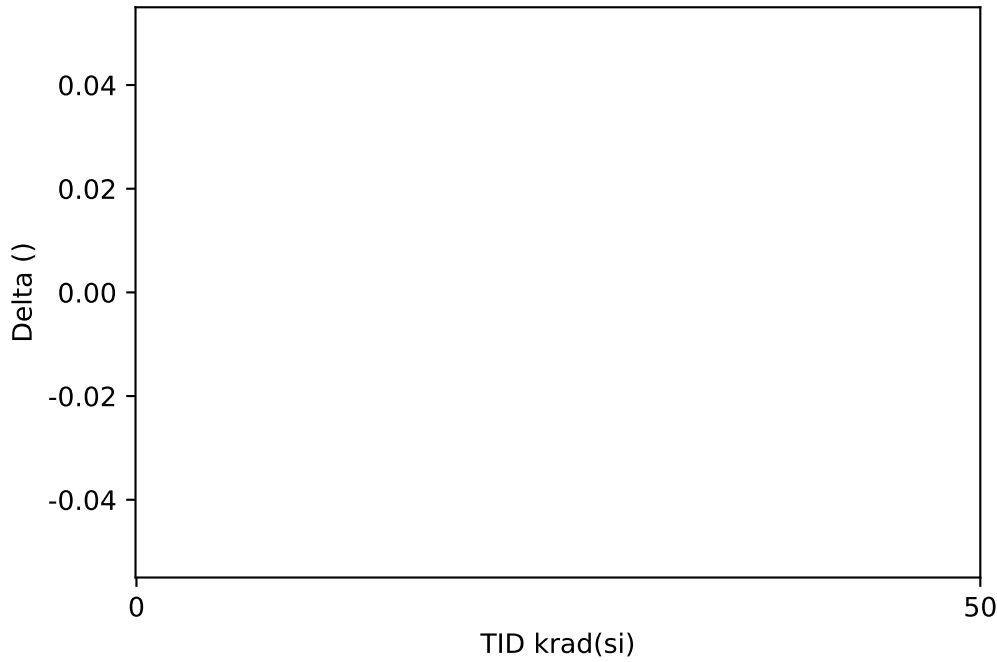
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.4	
4	50	HDR Biased w/ 84hr anneal		0.4	
6	50	HDR Biased w/ 84hr anneal		0.4	
8	50	HDR Biased w/ 84hr anneal		0.4	
9	50	HDR Biased w/ 84hr anneal		0.4	
10	50	HDR unbiased		0.4	
11	50	HDR unbiased		0.4	
12	50	HDR unbiased		0.4	
13	50	HDR unbiased		0.4	
14	50	HDR unbiased		0.4	
26	0	Correlation		0.4	
27	0	Correlation		0.4	
28	0	Correlation		0.4	
29	0	Correlation		0.4	
30	0	Correlation		0.4	
32	0	Correlation		0.4	

TID vs Post - Pre Exposure Delta

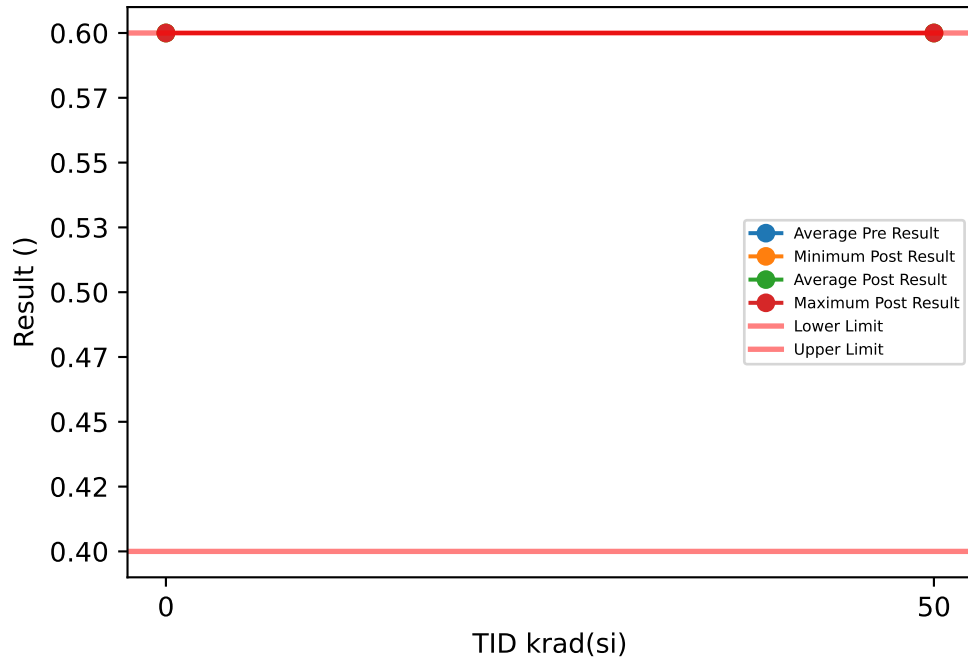


Test Statistics ( )

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					0.4	0.4	0.4	0				
50					0.4	0.4	0.4	0				



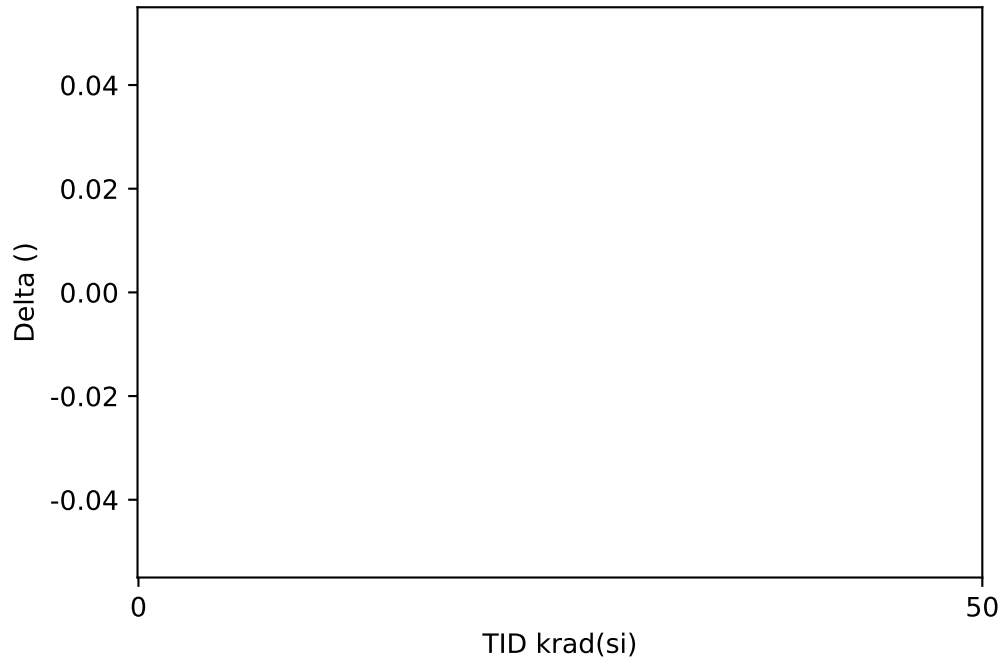
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.6	
4	50	HDR Biased w/ 84hr anneal		0.6	
6	50	HDR Biased w/ 84hr anneal		0.6	
8	50	HDR Biased w/ 84hr anneal		0.6	
9	50	HDR Biased w/ 84hr anneal		0.6	
10	50	HDR unbiased		0.6	
11	50	HDR unbiased		0.6	
12	50	HDR unbiased		0.6	
13	50	HDR unbiased		0.6	
14	50	HDR unbiased		0.6	
26	0	Correlation		0.6	
27	0	Correlation		0.6	
28	0	Correlation		0.6	
29	0	Correlation		0.6	
30	0	Correlation		0.6	
32	0	Correlation		0.6	

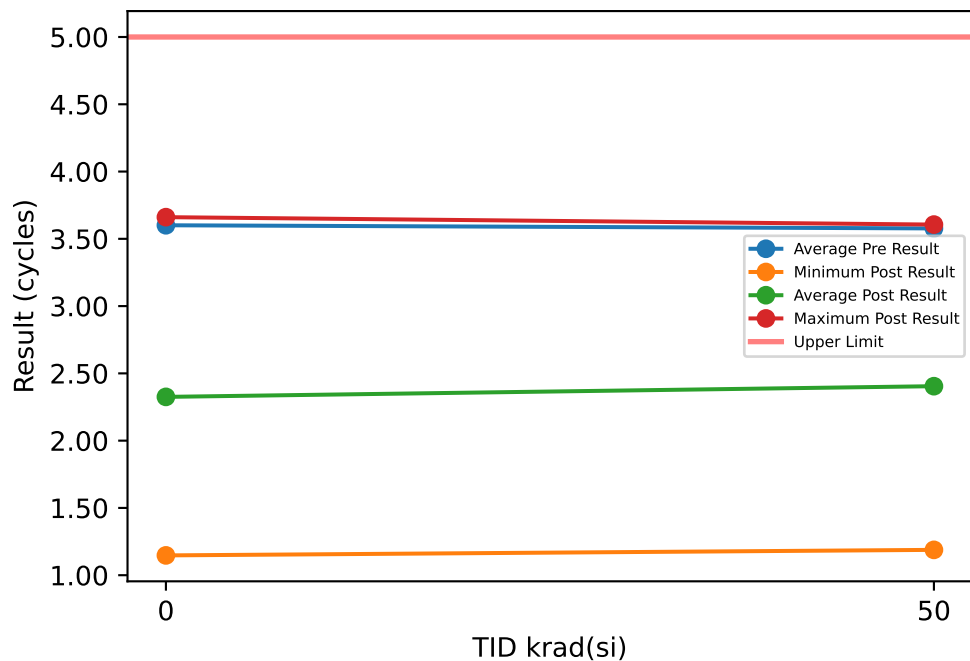
TID vs Post - Pre Exposure Delta



Test Statistics ( )

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					0.6	0.6	0.6	0				
50					0.6	0.6	0.6	0				

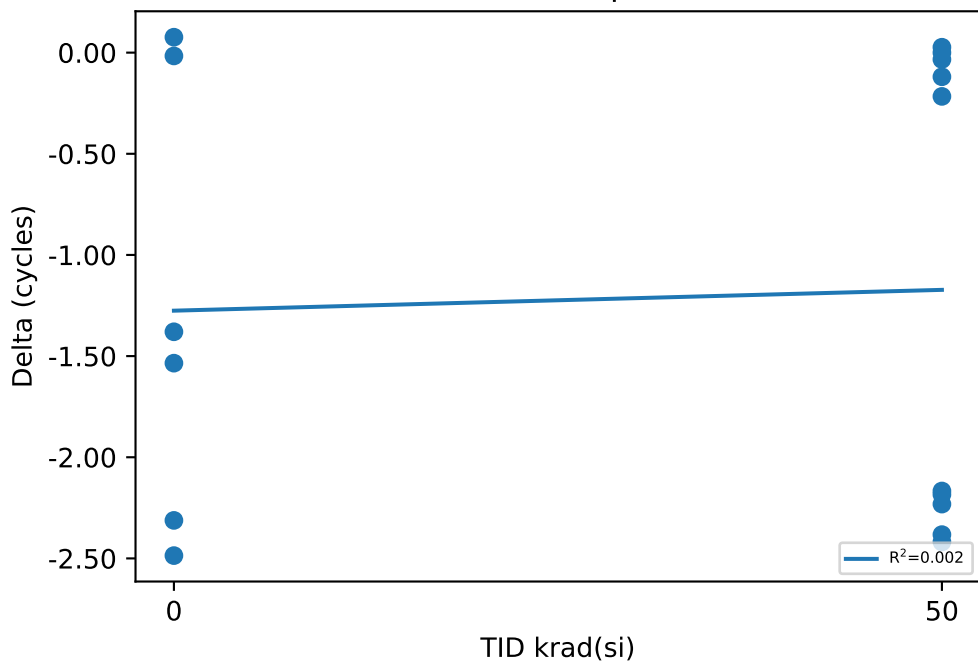
TID vs Result Stats



Test Results (Upper Limit = 5.0 (cycles))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.6434	3.4271	-0.2163
4	50	HDR Biased w/ 84hr anneal	3.5792	3.6059	0.0267
6	50	HDR Biased w/ 84hr anneal	3.5488	3.5152	-0.0336
8	50	HDR Biased w/ 84hr anneal	3.559	3.5589	-0.0001
9	50	HDR Biased w/ 84hr anneal	3.5987	3.4794	-0.1193
10	50	HDR unbiased	3.5007	1.2692	-2.2315
11	50	HDR unbiased	3.5565	1.3897	-2.1668
12	50	HDR unbiased	3.6478	1.2654	-2.3824
13	50	HDR unbiased	3.6068	1.1883	-2.4185
14	50	HDR unbiased	3.5325	1.3484	-2.1841
26	0	Correlation	3.7777	2.2428	-1.5349
27	0	Correlation	3.5847	3.661	0.0763
28	0	Correlation	3.521	2.1412	-1.3798
29	0	Correlation	3.5882	3.5719	-0.0163
30	0	Correlation	3.4593	1.1472	-2.3121
32	0	Correlation	3.6738	1.1877	-2.4861

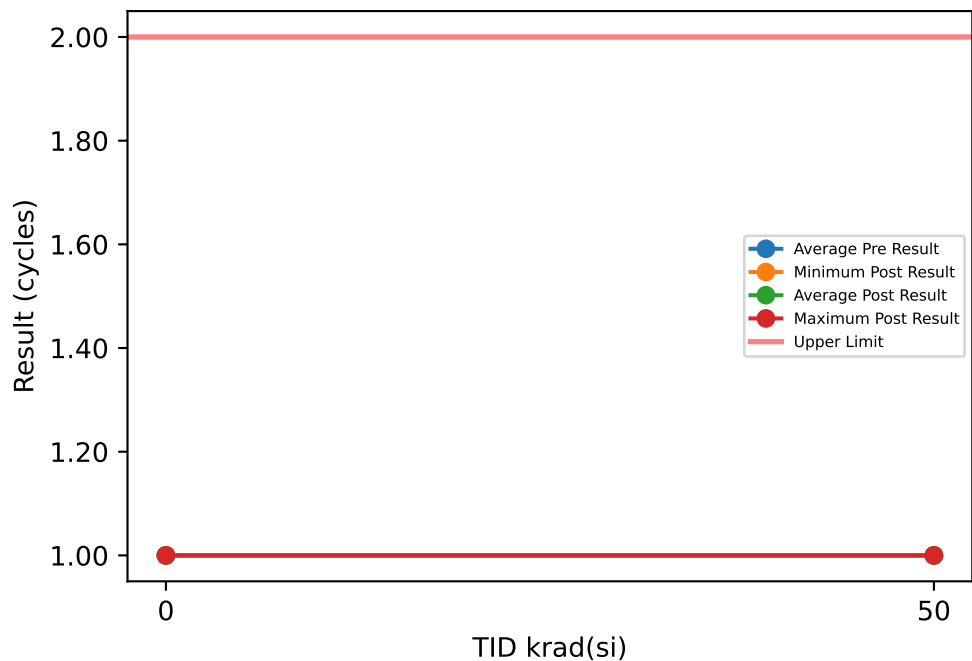
TID vs Post - Pre Exposure Delta



Test Statistics (cycles)

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	3.4593	3.6008	3.7777	0.11263	1.1472	2.3253	3.661	1.101	-2.4861	-1.2755	0.0763	1.0983
50	3.5007	3.5773	3.6478	0.047288	1.1883	2.4047	3.6059	1.1748	-2.4185	-1.1726	0.0267	1.1682

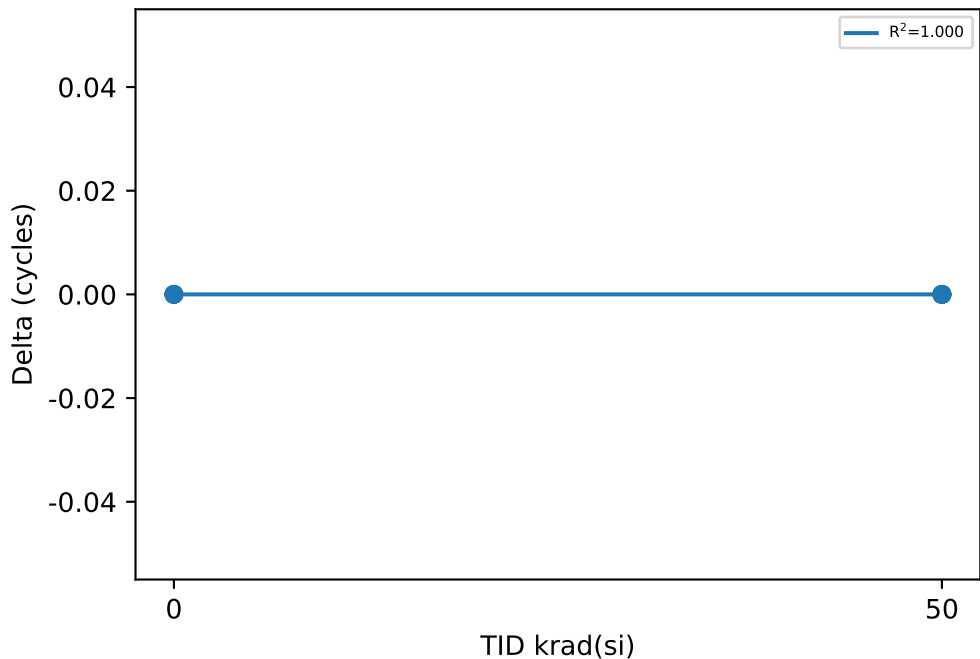
TID vs Result Stats



Test Results (Upper Limit = 2.0 (cycles))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1	1	0
4	50	HDR Biased w/ 84hr anneal	1	1	0
6	50	HDR Biased w/ 84hr anneal	1	1	0
8	50	HDR Biased w/ 84hr anneal	1	1	0
9	50	HDR Biased w/ 84hr anneal	1	1	0
10	50	HDR unbiased	1	1	0
11	50	HDR unbiased	1	1	0
12	50	HDR unbiased	1	1	0
13	50	HDR unbiased	1	1	0
14	50	HDR unbiased	1	1	0
26	0	Correlation	1	1	0
27	0	Correlation	1	1	0
28	0	Correlation	1	1	0
29	0	Correlation	1	1	0
30	0	Correlation	1	1	0
32	0	Correlation	1	1	0

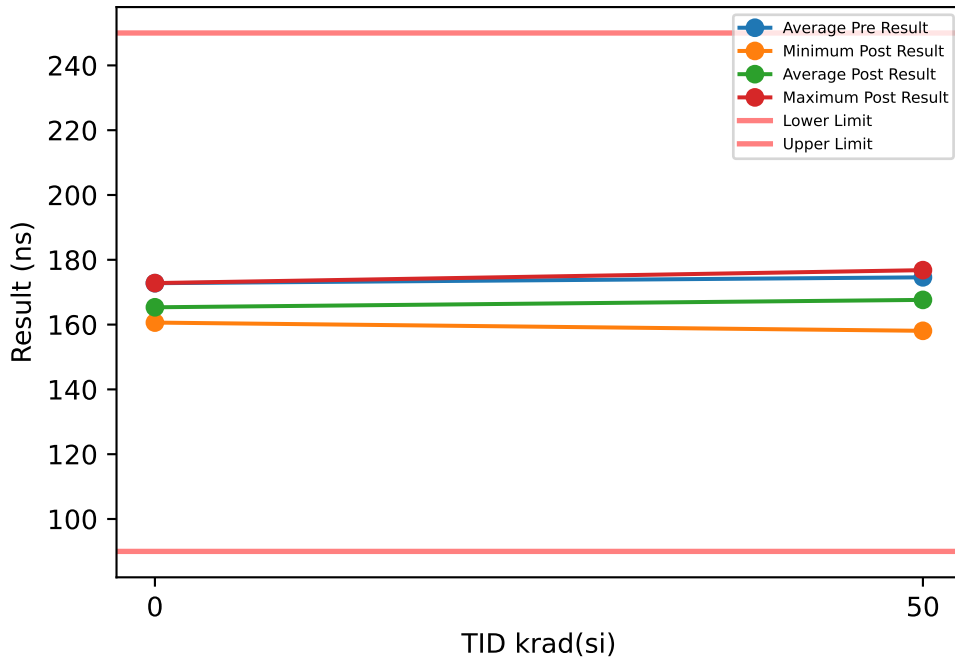
TID vs Post - Pre Exposure Delta



Test Statistics (cycles)

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	1	1	0	1	1	1	0	0	0	0	0
50	1	1	1	0	1	1	1	0	0	0	0	0

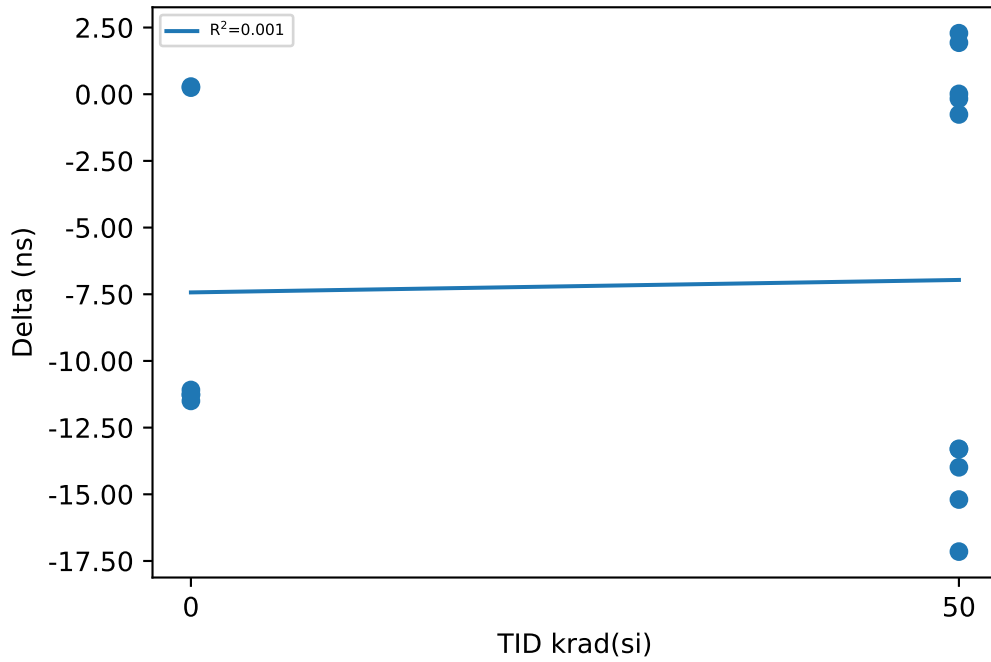
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 250.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	174.52	176.8	2.2876
4	50	HDR Biased w/ 84hr anneal	172.74	172.57	-0.1669
6	50	HDR Biased w/ 84hr anneal	175.42	174.66	-0.7595
8	50	HDR Biased w/ 84hr anneal	167.67	167.68	0.0126
9	50	HDR Biased w/ 84hr anneal	167.86	169.79	1.9307
10	50	HDR unbiased	179.29	165.98	-13.309
11	50	HDR unbiased	180.09	164.9	-15.197
12	50	HDR unbiased	175.23	158.08	-17.148
13	50	HDR unbiased	177.94	164.65	-13.295
14	50	HDR unbiased	175.12	161.13	-13.988
26	0	Correlation	174.15	162.88	-11.27
27	0	Correlation	171.77	172.02	0.2462
28	0	Correlation	172.12	160.62	-11.499
29	0	Correlation	172.53	172.81	0.2862
30	0	Correlation	173.09	161.83	-11.26
32	0	Correlation	172.98	161.89	-11.089

TID vs Post - Pre Exposure Delta

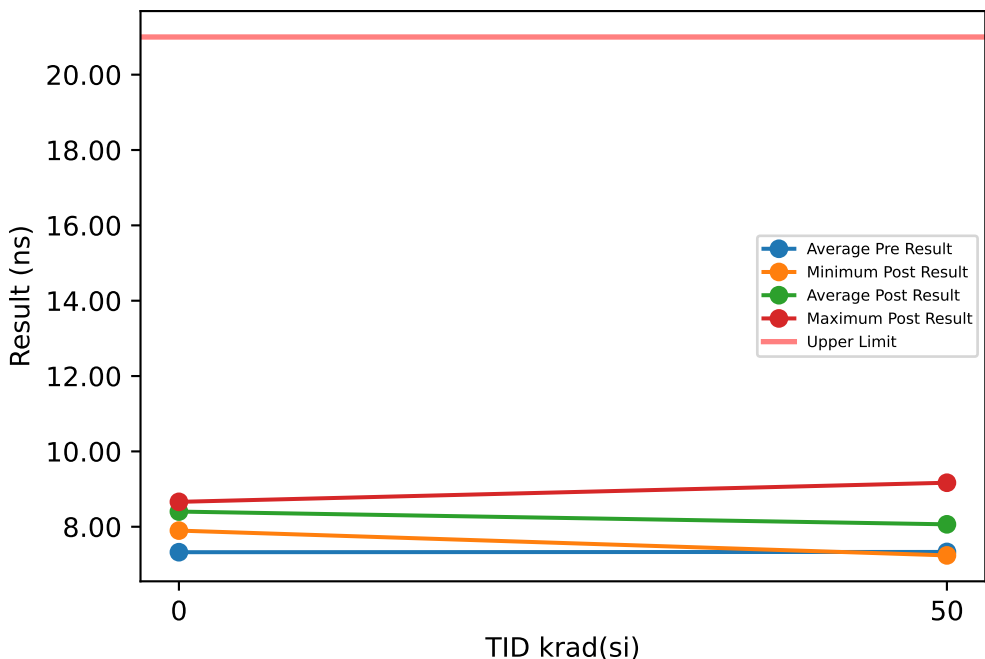


Test Statistics (ns)

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	171.77	172.77	174.15	0.83987	160.62	165.34	172.81	5.5308	-11.499	-7.4309	0.2862	5.9636
50	167.67	174.59	180.09	4.2376	158.08	167.62	176.8	5.9185	-17.148	-6.9633	2.2876	8.16

Device Test: 24.138 SYNC\_LH\_RISE\_TIME(\_TIMING|RISE/SYNC1/14//511k//@SYNC\_LH\_RISE\_TIME )

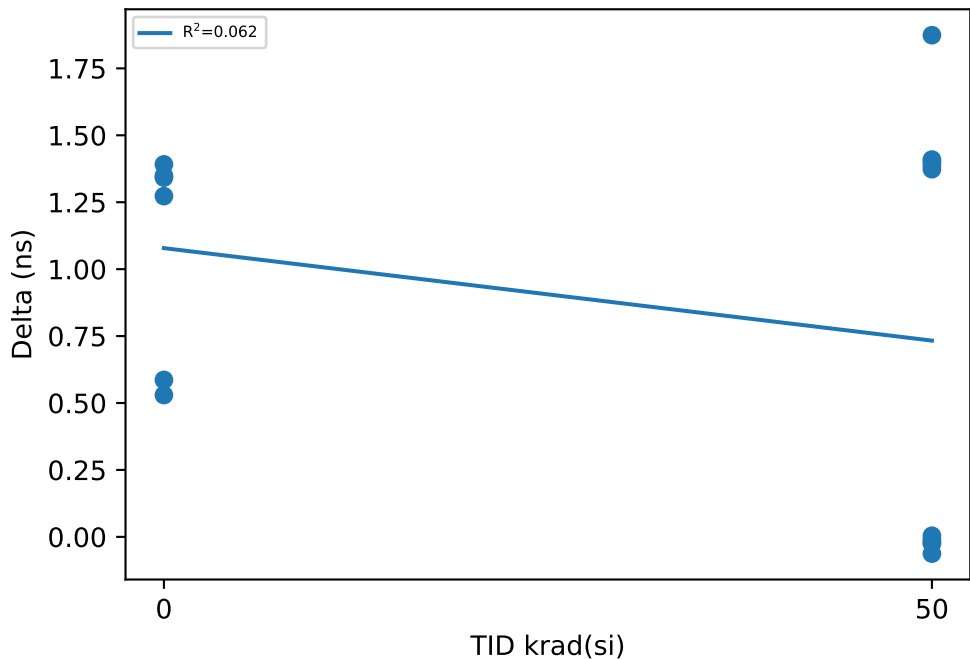
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.305	7.3091	0.0041
4	50	HDR Biased w/ 84hr anneal	7.2772	7.2539	-0.0233
6	50	HDR Biased w/ 84hr anneal	7.3022	7.2397	-0.0625
8	50	HDR Biased w/ 84hr anneal	7.3756	7.3653	-0.0103
9	50	HDR Biased w/ 84hr anneal	7.4013	7.3774	-0.0239
10	50	HDR unbiased	7.3289	8.7022	1.3733
11	50	HDR unbiased	7.2946	9.1685	1.8739
12	50	HDR unbiased	7.3915	8.7939	1.4024
13	50	HDR unbiased	7.3025	8.7118	1.4093
14	50	HDR unbiased	7.3362	8.7243	1.3881
26	0	Correlation	7.2683	8.6597	1.3914
27	0	Correlation	7.3118	7.8981	0.5863
28	0	Correlation	7.3529	8.6257	1.2728
29	0	Correlation	7.3839	7.9136	0.5297
30	0	Correlation	7.3118	8.6609	1.3491
32	0	Correlation	7.3177	8.6597	1.342

TID vs Post - Pre Exposure Delta



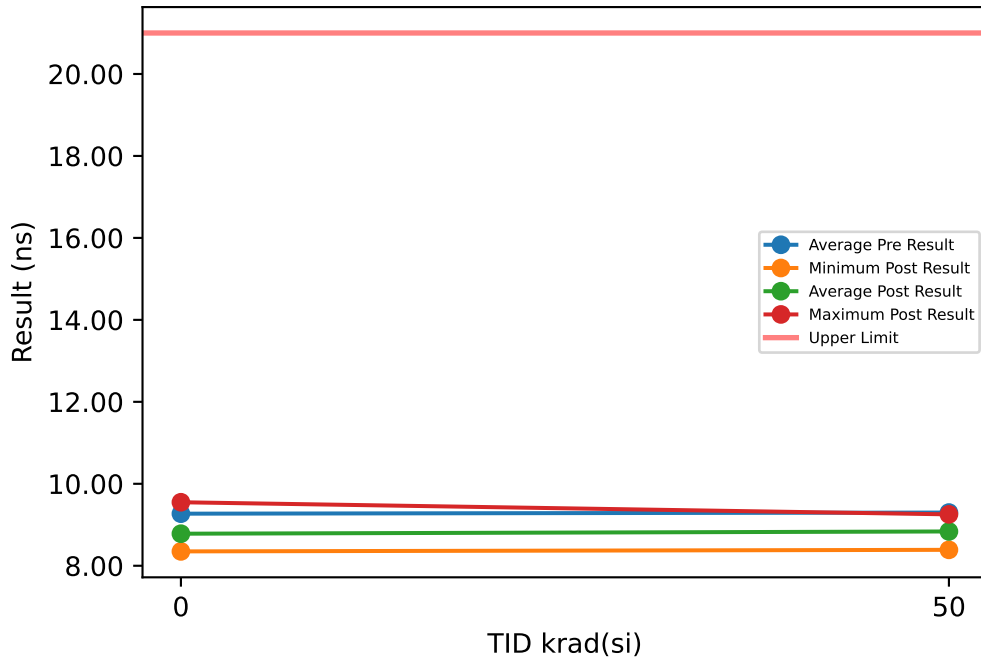
Test Statistics (ns)

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	7.2683	7.3244	7.3839	0.039654	7.8981	8.403	8.6609	0.38531	0.5297	1.0786	1.3914	0.4054
50	7.2772	7.3315	7.4013	0.043662	7.2397	8.0646	9.1685	0.80835	-0.0625	0.73311	1.8739	0.8102



# Device Test: 24.139 SYNC\_LH\_RISE\_TIME(\_TIMING|RISE/SYNC2/14//511k//@SYNC\_LH\_RISE\_TIME )

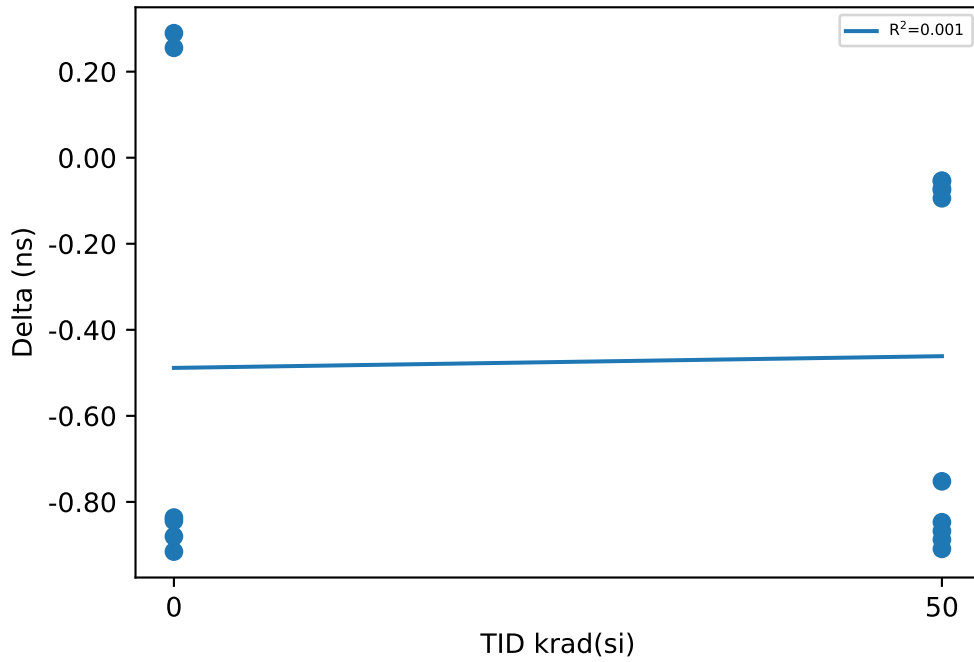
### TID vs Result Stats



### Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	9.3077	9.2542	-0.0535
4	50	HDR Biased w/ 84hr anneal	9.2577	9.1858	-0.0719
6	50	HDR Biased w/ 84hr anneal	9.2654	9.2113	-0.0541
8	50	HDR Biased w/ 84hr anneal	9.3257	9.2505	-0.0752
9	50	HDR Biased w/ 84hr anneal	9.3436	9.2493	-0.0943
10	50	HDR unbiased	9.2977	8.3885	-0.9092
11	50	HDR unbiased	9.2862	8.439	-0.8472
12	50	HDR unbiased	9.364	8.4765	-0.8875
13	50	HDR unbiased	9.2363	8.4841	-0.7522
14	50	HDR unbiased	9.2989	8.431	-0.8679
26	0	Correlation	9.2548	8.4184	-0.8364
27	0	Correlation	9.2925	9.5479	0.2554
28	0	Correlation	9.2742	8.4303	-0.8439
29	0	Correlation	9.2602	9.5496	0.2894
30	0	Correlation	9.2307	8.3504	-0.8803
32	0	Correlation	9.3119	8.3964	-0.9155

### TID vs Post - Pre Exposure Delta

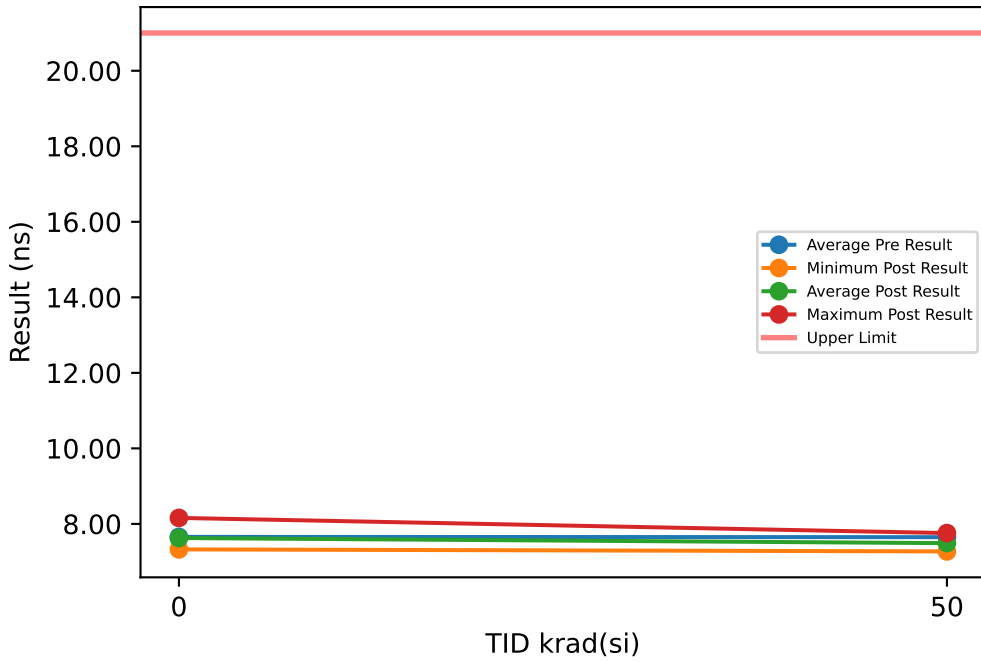


### Test Statistics (ns)

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	9.2307	9.2707	9.3119	0.028803	8.3504	8.7822	9.5496	0.59442	-0.9155	-0.48855	0.2894	0.5902
50	9.2363	9.2983	9.364	0.039341	8.3885	8.837	9.2542	0.41576	-0.9092	-0.4613	-0.0535	0.41481

Device Test: 24.140 SYNC\_HL\_FALL\_TIME(\_TIMING|FALL/SYNC1/14//511k//@SYNC\_HL\_FALL\_TIME )

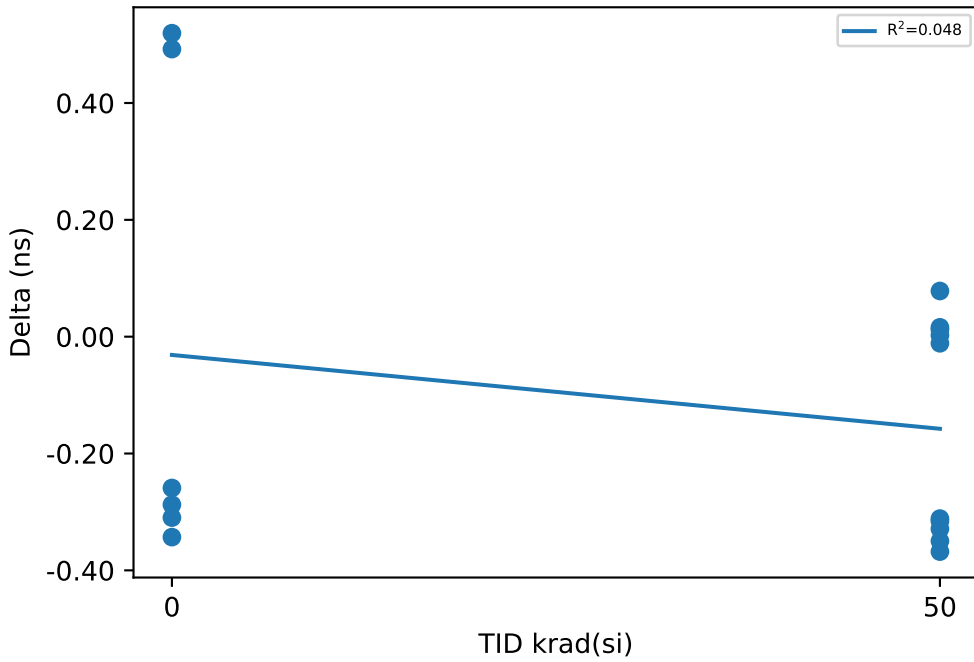
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.5955	7.6737	0.0782
4	50	HDR Biased w/ 84hr anneal	7.6145	7.6305	0.016
6	50	HDR Biased w/ 84hr anneal	7.6821	7.6941	0.012
8	50	HDR Biased w/ 84hr anneal	7.6757	7.6644	-0.0113
9	50	HDR Biased w/ 84hr anneal	7.7552	7.7575	0.0023
10	50	HDR unbiased	7.6719	7.304	-0.3679
11	50	HDR unbiased	7.6414	7.3124	-0.329
12	50	HDR unbiased	7.6098	7.294	-0.3158
13	50	HDR unbiased	7.622	7.2722	-0.3498
14	50	HDR unbiased	7.6182	7.3068	-0.3114
26	0	Correlation	7.5843	7.3253	-0.259
27	0	Correlation	7.6333	8.1528	0.5195
28	0	Correlation	7.6881	7.345	-0.3431
29	0	Correlation	7.6669	8.1592	0.4923
30	0	Correlation	7.688	7.4004	-0.2876
32	0	Correlation	7.6821	7.3724	-0.3097

TID vs Post - Pre Exposure Delta

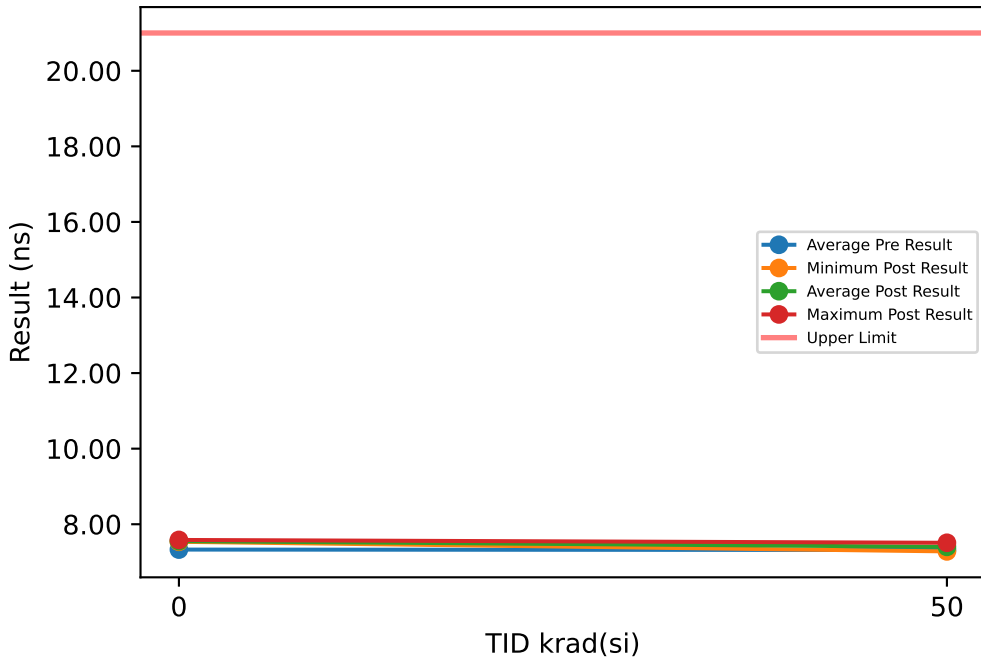


Test Statistics (ns)

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	7.5843	7.6571	7.6881	0.041239	7.3253	7.6258	8.1592	0.41144	-0.3431	-0.031267	0.5195	0.41709
50	7.5955	7.6486	7.7552	0.048229	7.2722	7.491	7.7575	0.2062	-0.3679	-0.15767	0.0782	0.18877

Device Test: 24.141 SYNC\_HL\_FALL\_TIME(\_TIMING|FALL/SYNC2/14//511k//@SYNC\_HL\_FALL\_TIME )

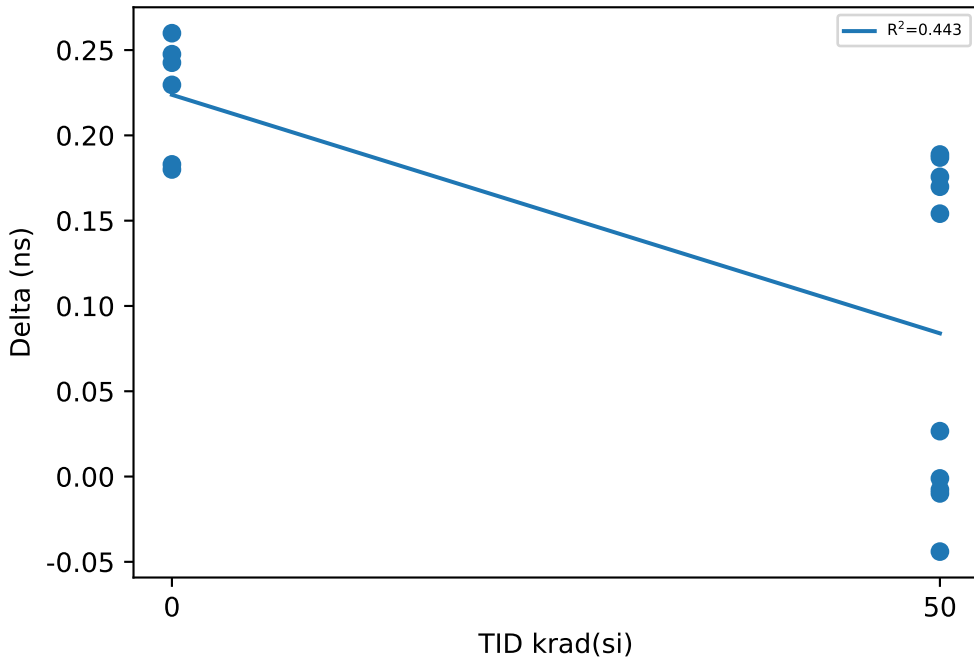
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.2911	7.2812	-0.0099
4	50	HDR Biased w/ 84hr anneal	7.2553	7.2819	0.0266
6	50	HDR Biased w/ 84hr anneal	7.3375	7.2935	-0.044
8	50	HDR Biased w/ 84hr anneal	7.3375	7.3364	-0.0011
9	50	HDR Biased w/ 84hr anneal	7.3807	7.373	-0.0077
10	50	HDR unbiased	7.3335	7.5092	0.1757
11	50	HDR unbiased	7.3177	7.5065	0.1888
12	50	HDR unbiased	7.3342	7.4883	0.1541
13	50	HDR unbiased	7.262	7.449	0.187
14	50	HDR unbiased	7.3265	7.4964	0.1699
26	0	Correlation	7.2754	7.5353	0.2599
27	0	Correlation	7.3185	7.5481	0.2296
28	0	Correlation	7.3592	7.5392	0.18
29	0	Correlation	7.3258	7.5734	0.2476
30	0	Correlation	7.3418	7.5844	0.2426
32	0	Correlation	7.3546	7.5376	0.183

TID vs Post - Pre Exposure Delta

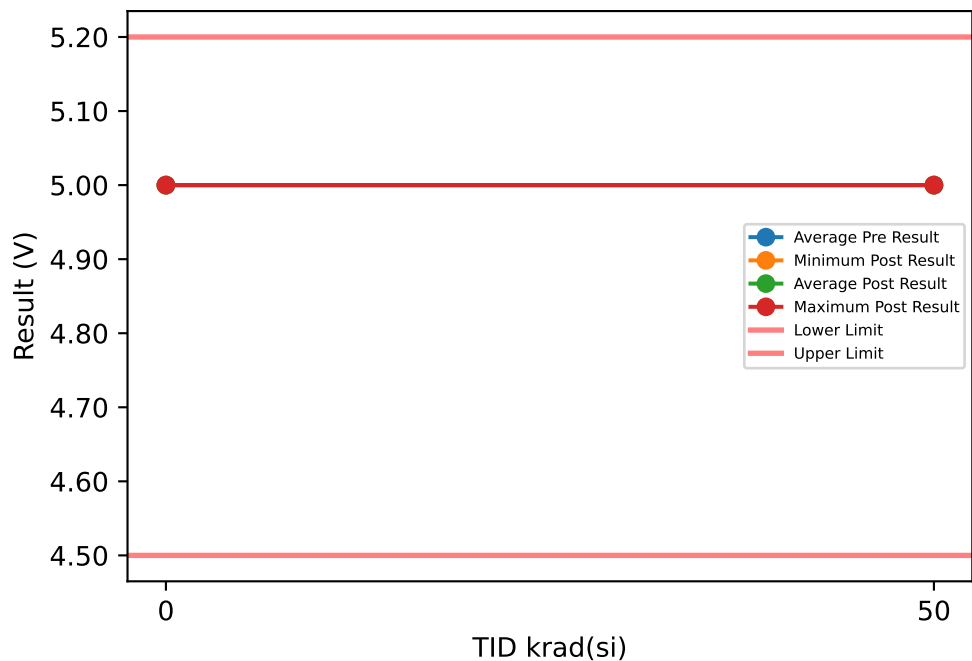


Test Statistics (ns)

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	7.2754	7.3292	7.3592	0.030739	7.5353	7.553	7.5844	0.020818	0.18	0.22378	0.2599	0.034175
50	7.2553	7.3176	7.3807	0.038088	7.2812	7.4015	7.5092	0.098269	-0.044	0.08394	0.1888	0.098003

Device Test: 24.142 SYNC\_OUT\_HIGH\_7V( \_LEVELS|VOH/SYNC1/14//511k//@SYNC\_OUT\_HIGH\_7V )

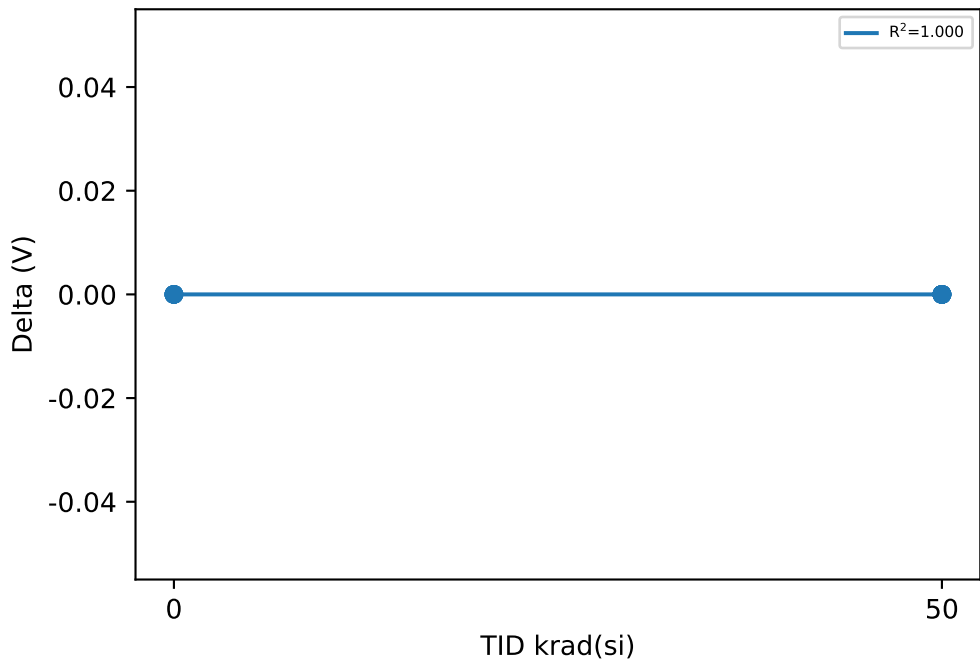
TID vs Result Stats



Test Results (Lower Limit = 4.5, Upper Limit = 5.2 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5	5	0
4	50	HDR Biased w/ 84hr anneal	5	5	0
6	50	HDR Biased w/ 84hr anneal	5	5	0
8	50	HDR Biased w/ 84hr anneal	5	5	0
9	50	HDR Biased w/ 84hr anneal	5	5	0
10	50	HDR unbiased	5	5	0
11	50	HDR unbiased	5	5	0
12	50	HDR unbiased	5	5	0
13	50	HDR unbiased	5	5	0
14	50	HDR unbiased	5	5	0
26	0	Correlation	5	5	0
27	0	Correlation	5	5	0
28	0	Correlation	5	5	0
29	0	Correlation	5	5	0
30	0	Correlation	5	5	0
32	0	Correlation	5	5	0

TID vs Post - Pre Exposure Delta

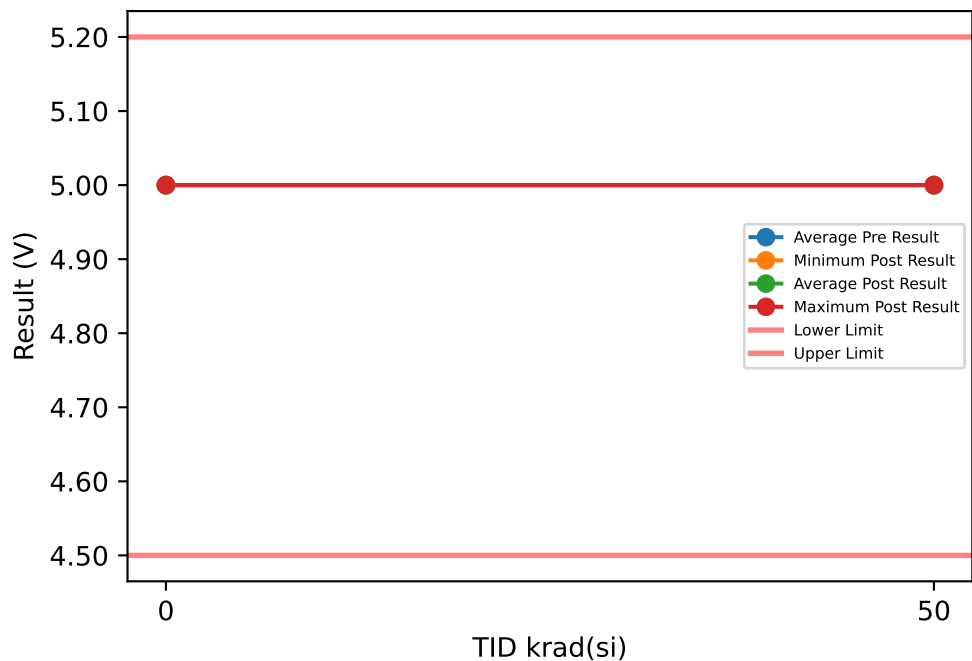


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	5	5	5	0	5	5	5	0	0	0	0	0
50	5	5	5	0	5	5	5	0	0	0	0	0

Device Test: 24.143 SYNC\_OUT\_HIGH\_7V(\_LEVELS|VOH/SYNC2/14//511k//@SYNC\_OUT\_HIGH\_7V )

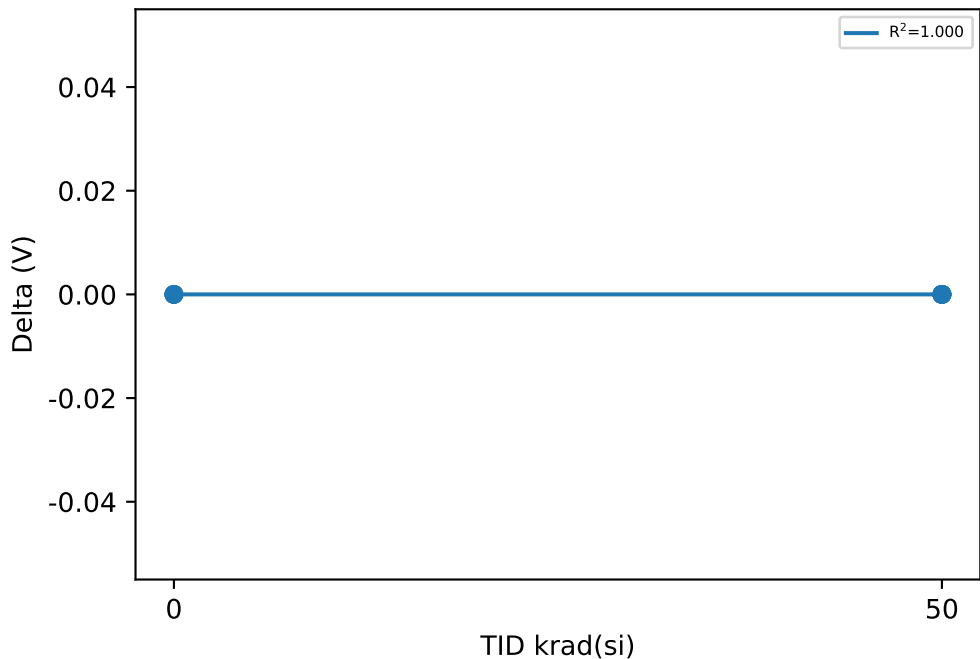
TID vs Result Stats



Test Results (Lower Limit = 4.5, Upper Limit = 5.2 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	5	5	0
4	50	HDR Biased w/ 84hr anneal	5	5	0
6	50	HDR Biased w/ 84hr anneal	5	5	0
8	50	HDR Biased w/ 84hr anneal	5	5	0
9	50	HDR Biased w/ 84hr anneal	5	5	0
10	50	HDR unbiased	5	5	0
11	50	HDR unbiased	5	5	0
12	50	HDR unbiased	5	5	0
13	50	HDR unbiased	5	5	0
14	50	HDR unbiased	5	5	0
26	0	Correlation	5	5	0
27	0	Correlation	5	5	0
28	0	Correlation	5	5	0
29	0	Correlation	5	5	0
30	0	Correlation	5	5	0
32	0	Correlation	5	5	0

TID vs Post - Pre Exposure Delta

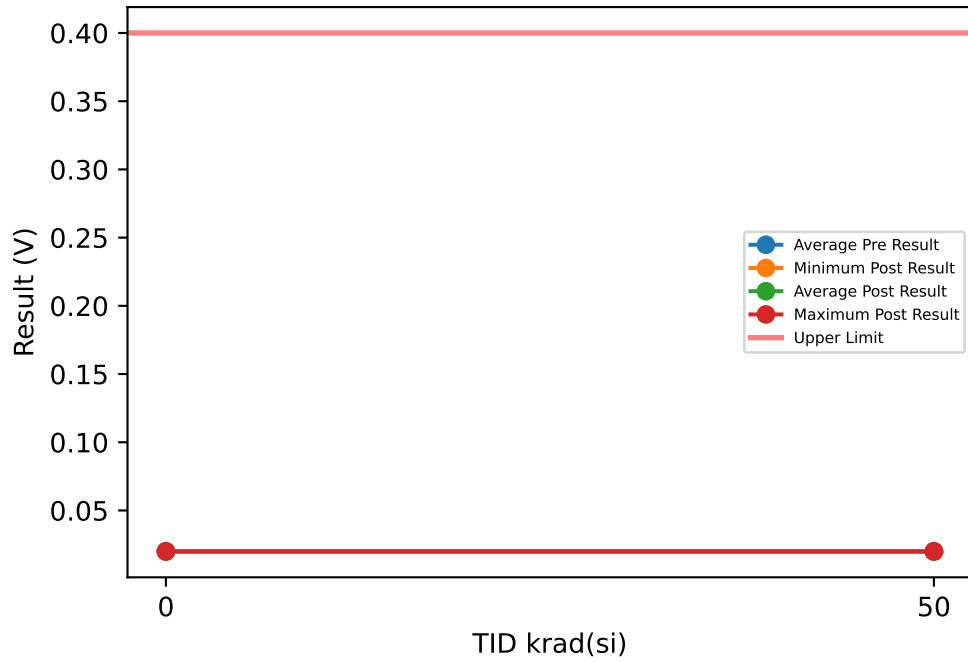


Test Statistics (V)

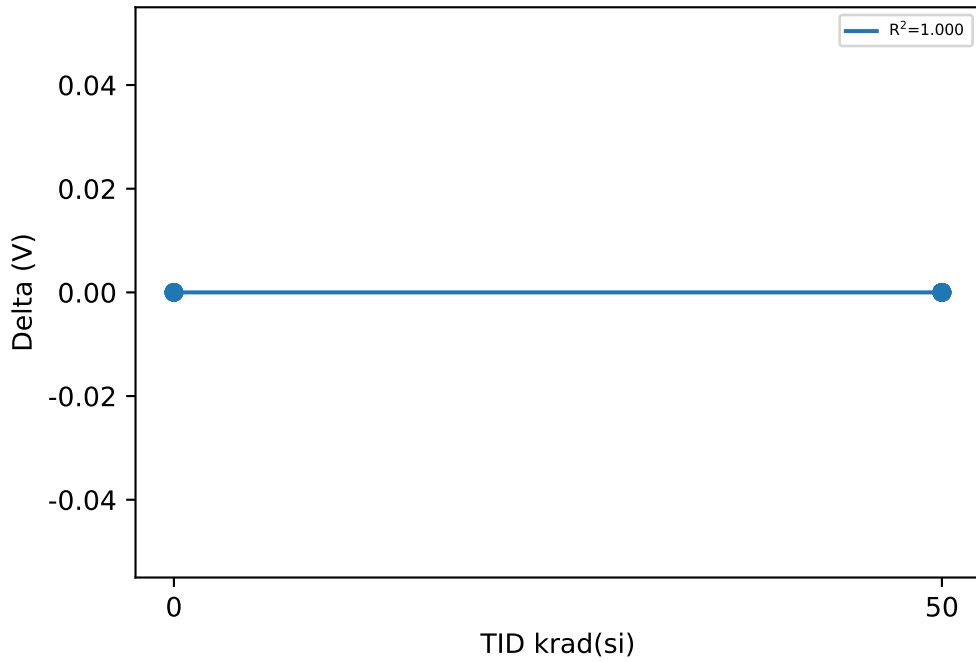
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	5	5	5	0	5	5	5	0	0	0	0	0
50	5	5	5	0	5	5	5	0	0	0	0	0

# Device Test: 24.144 SYNC\_OUT\_LOW( \_LEVELS|VOL/SYNC1/14//511k//@SYNC\_OUT\_LOW )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Upper Limit = 0.4 (V))

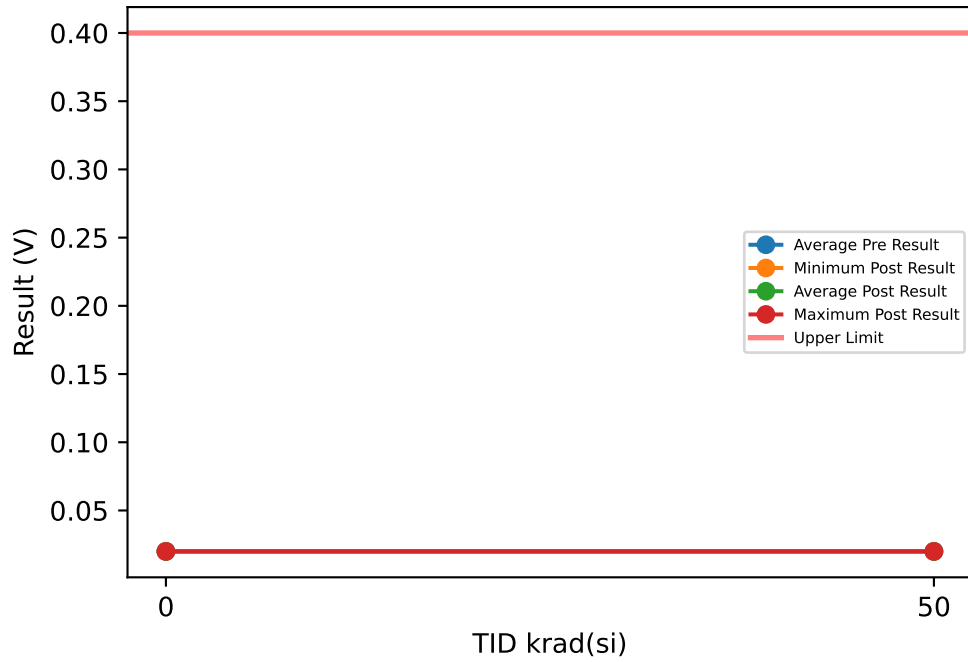
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	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	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0

Device Test: 24.145 SYNC\_OUT\_LOW( \_LEVELS|VOL/SYNC2/14//511k//@SYNC\_OUT\_LOW )

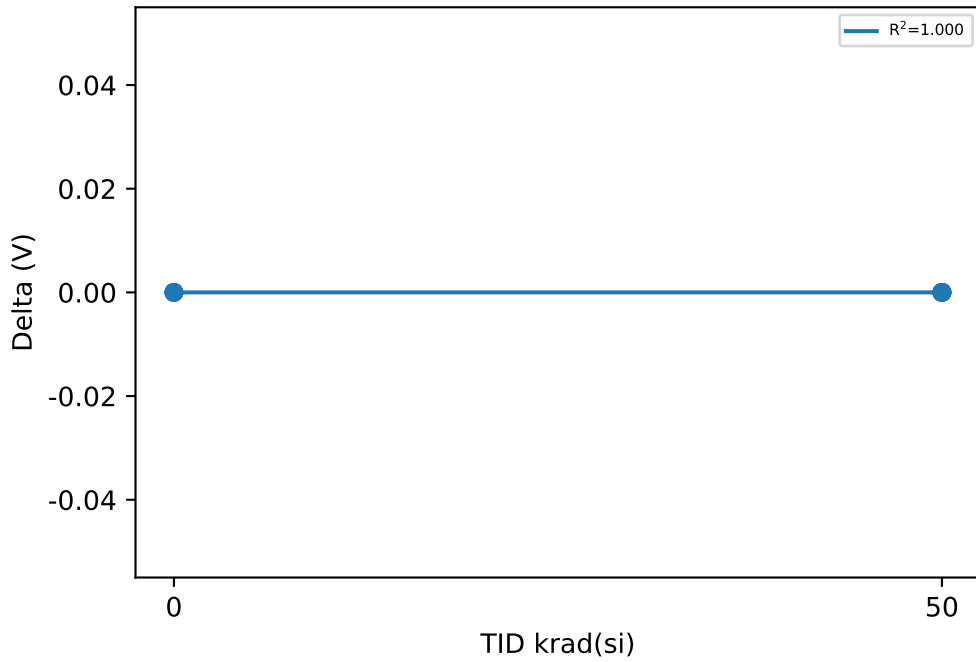
TID vs Result Stats



Test Results (Upper Limit = 0.4 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	0

TID vs Post - Pre Exposure Delta

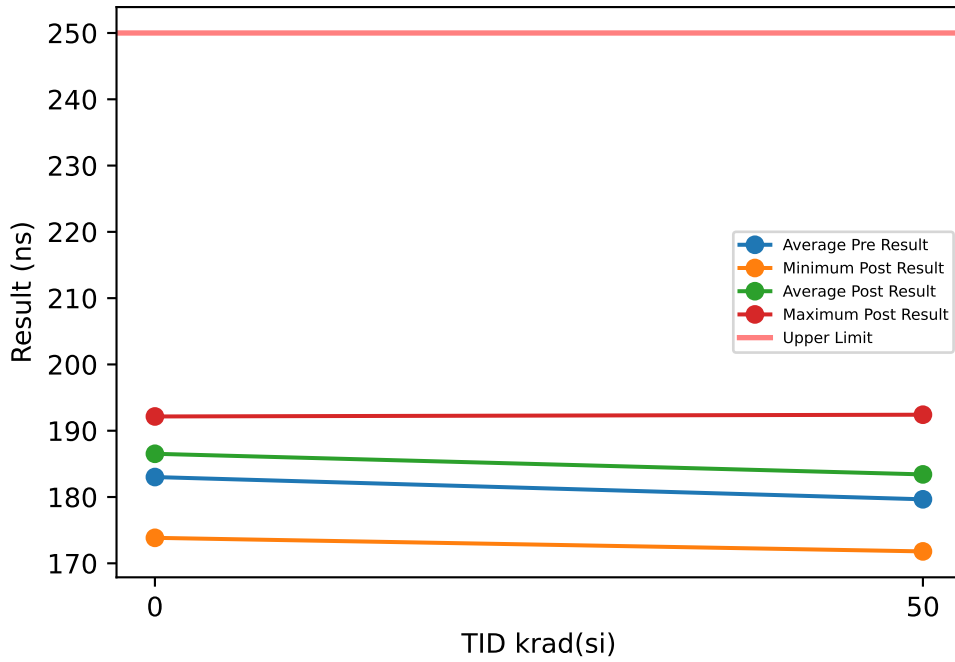


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0

Device Test: 24.151 ON\_TIME\_MIN\_14V(\_TIMING|MINON/SW/14//511k//@ON\_TIME\_MIN\_14V )

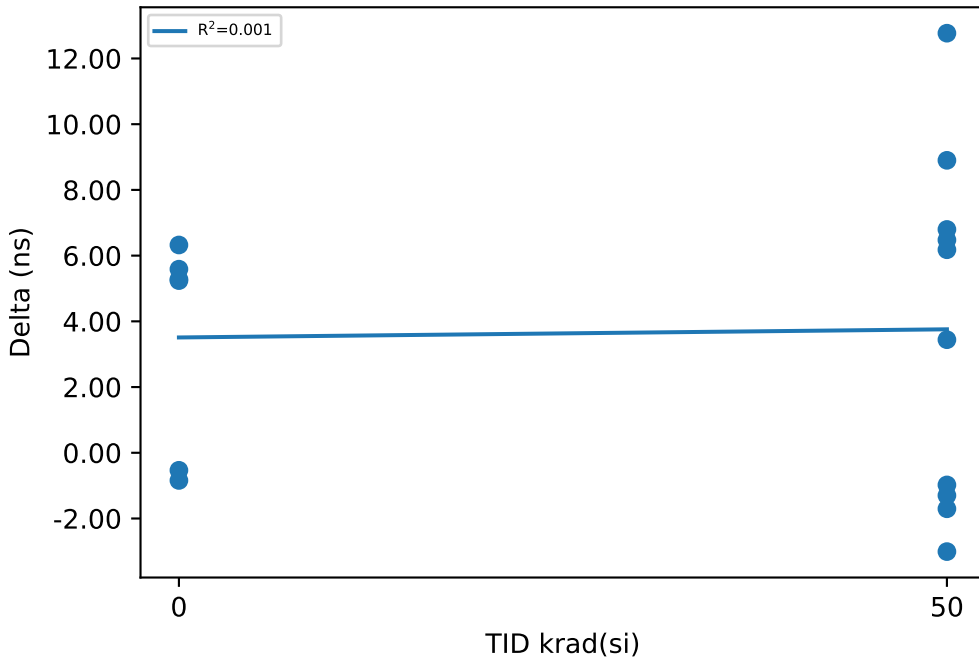
TID vs Result Stats



Test Results (Upper Limit = 250.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	180.82	179.12	-1.7042
4	50	HDR Biased w/ 84hr anneal	182.18	185.62	3.4413
6	50	HDR Biased w/ 84hr anneal	180.62	179.64	-0.9781
8	50	HDR Biased w/ 84hr anneal	182.69	181.39	-1.2984
9	50	HDR Biased w/ 84hr anneal	174.8	171.8	-3.0073
10	50	HDR unbiased	181.1	190	8.9001
11	50	HDR unbiased	177.84	184.02	6.179
12	50	HDR unbiased	179.65	192.42	12.769
13	50	HDR unbiased	177.6	184.07	6.4768
14	50	HDR unbiased	179.26	186.05	6.7967
26	0	Correlation	182.21	187.49	5.28
27	0	Correlation	174.38	173.84	-0.5329
28	0	Correlation	185.83	192.15	6.3239
29	0	Correlation	186.2	185.36	-0.8419
30	0	Correlation	186.17	191.41	5.2398
32	0	Correlation	183.3	188.89	5.5875

TID vs Post - Pre Exposure Delta



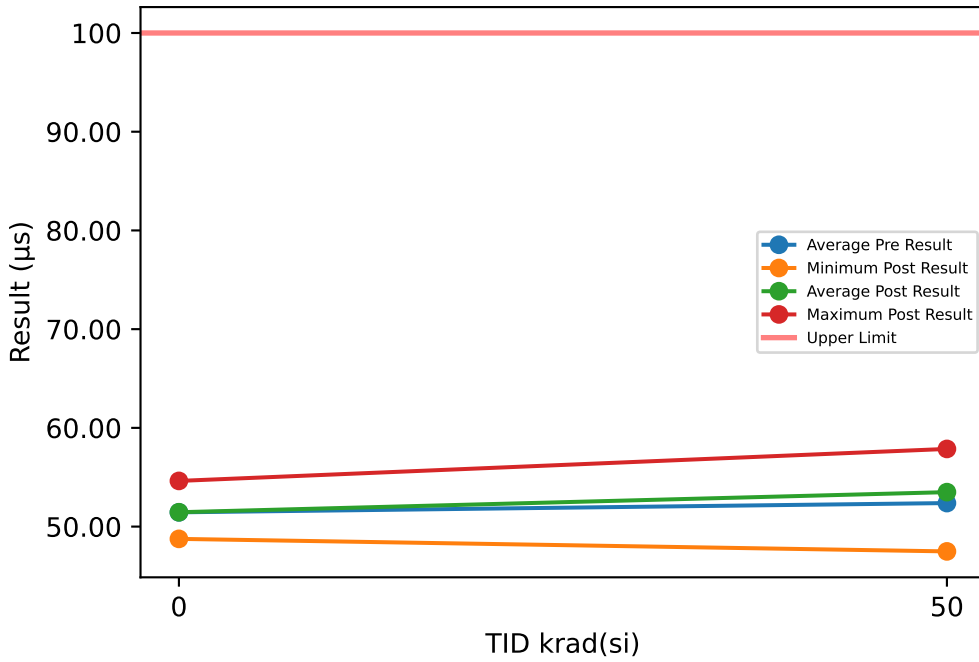
Test Statistics (ns)

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	174.38	183.01	186.2	4.5465	173.84	186.52	192.15	6.6961	-0.8419	3.5094	6.3239	3.2755
50	174.8	179.66	182.69	2.3847	171.8	183.41	192.42	5.8582	-3.0073	3.7575	12.769	5.3107



# Device Test: 24.152 T\_EN\_DELAY(\_TIMING|DELAY/EN/14//511k//@T\_EN\_DELAY )

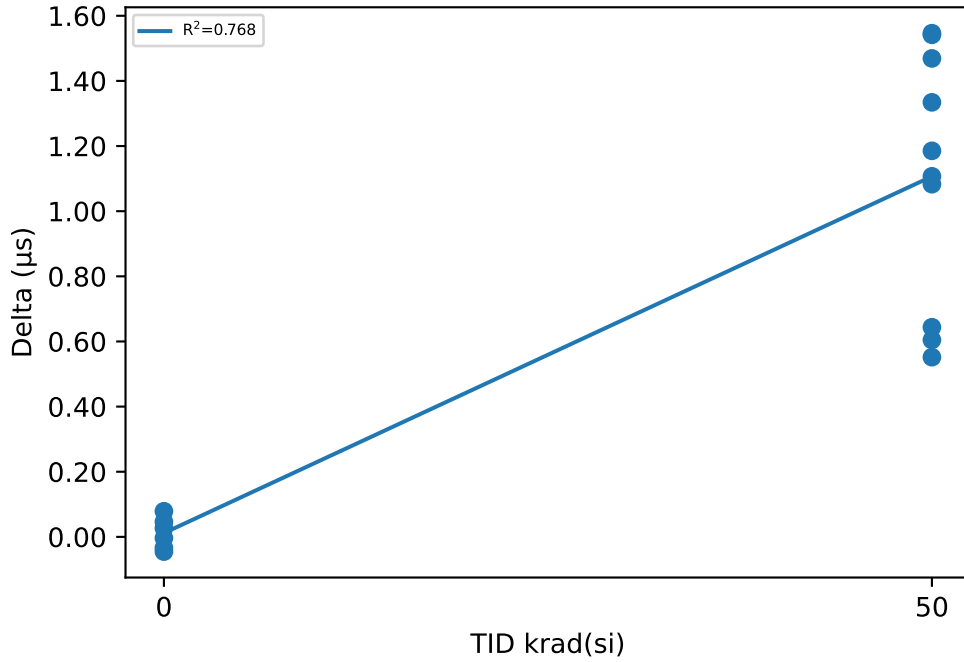
## TID vs Result Stats



## Test Results (Upper Limit = 100.0 (µs))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	55.309	56.644	1.3342
4	50	HDR Biased w/ 84hr anneal	50.253	50.857	0.6047
6	50	HDR Biased w/ 84hr anneal	52.736	53.288	0.5518
8	50	HDR Biased w/ 84hr anneal	51.666	52.749	1.0829
9	50	HDR Biased w/ 84hr anneal	46.843	47.487	0.6437
10	50	HDR unbiased	52.43	53.537	1.1071
11	50	HDR unbiased	52.703	54.245	1.5416
12	50	HDR unbiased	53.472	55.019	1.5465
13	50	HDR unbiased	51.733	53.203	1.4691
14	50	HDR unbiased	56.682	57.867	1.1853
26	0	Correlation	50.439	50.394	-0.0452
27	0	Correlation	51.992	51.959	-0.0336
28	0	Correlation	48.677	48.756	0.0787
29	0	Correlation	51.081	51.108	0.0268
30	0	Correlation	51.84	51.886	0.0464
32	0	Correlation	54.63	54.627	-0.0036

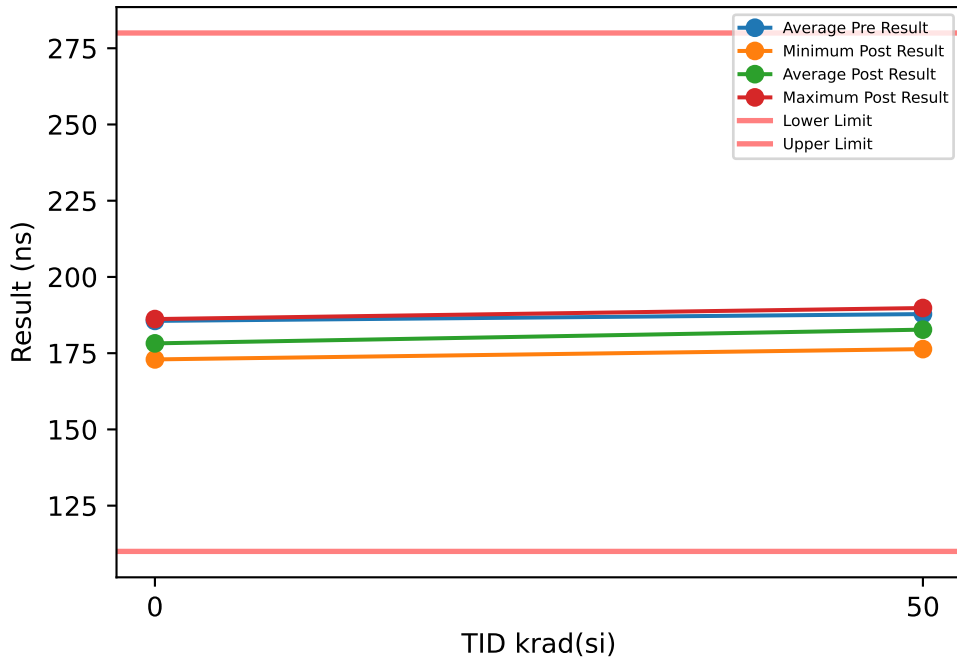
## TID vs Post - Pre Exposure Delta



## Test Statistics (µs)

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	48.677	51.443	54.63	1.9701	48.756	51.455	54.627	1.951	-0.0452	0.011583	0.0787	0.047843
50	46.843	52.383	56.682	2.6795	47.487	53.489	57.867	2.8992	0.5518	1.1067	1.5465	0.38682

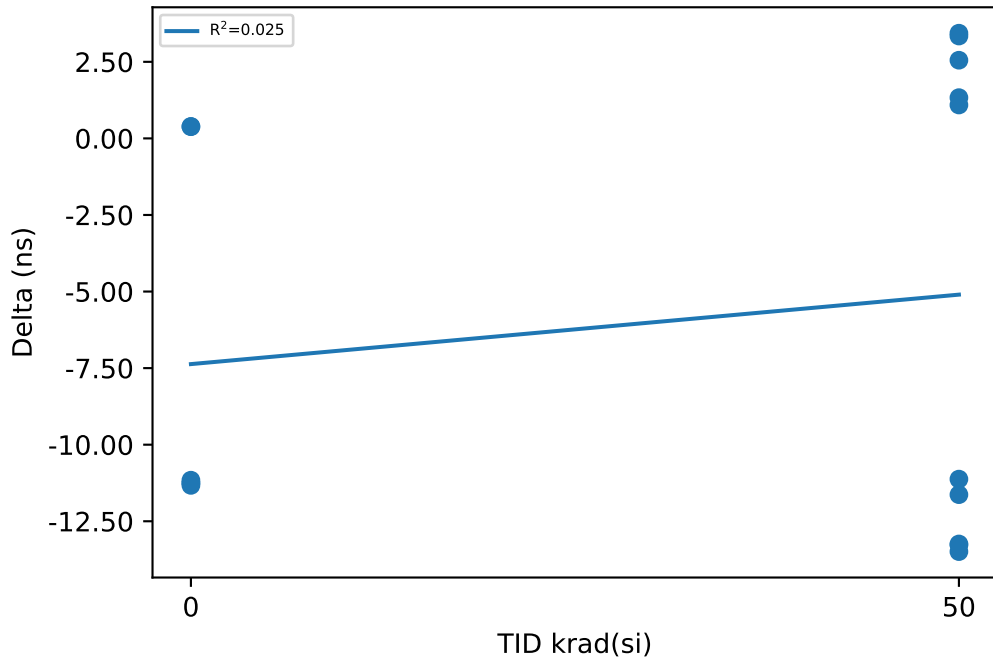
TID vs Result Stats



Test Results (Lower Limit = 110.0, Upper Limit = 280.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	187.03	189.58	2.5526
4	50	HDR Biased w/ 84hr anneal	186.38	189.81	3.4347
6	50	HDR Biased w/ 84hr anneal	187.77	188.86	1.0908
8	50	HDR Biased w/ 84hr anneal	179.81	181.14	1.3308
9	50	HDR Biased w/ 84hr anneal	180.4	183.74	3.3422
10	50	HDR unbiased	192.87	181.75	-11.124
11	50	HDR unbiased	192.21	178.94	-13.274
12	50	HDR unbiased	190.43	176.94	-13.49
13	50	HDR unbiased	191.75	180.12	-11.631
14	50	HDR unbiased	189.58	176.34	-13.241
26	0	Correlation	187.83	176.5	-11.328
27	0	Correlation	185.81	186.19	0.3819
28	0	Correlation	186.12	174.88	-11.243
29	0	Correlation	185.2	185.59	0.3905
30	0	Correlation	184.12	172.96	-11.159
32	0	Correlation	184.45	173.2	-11.256

TID vs Post - Pre Exposure Delta

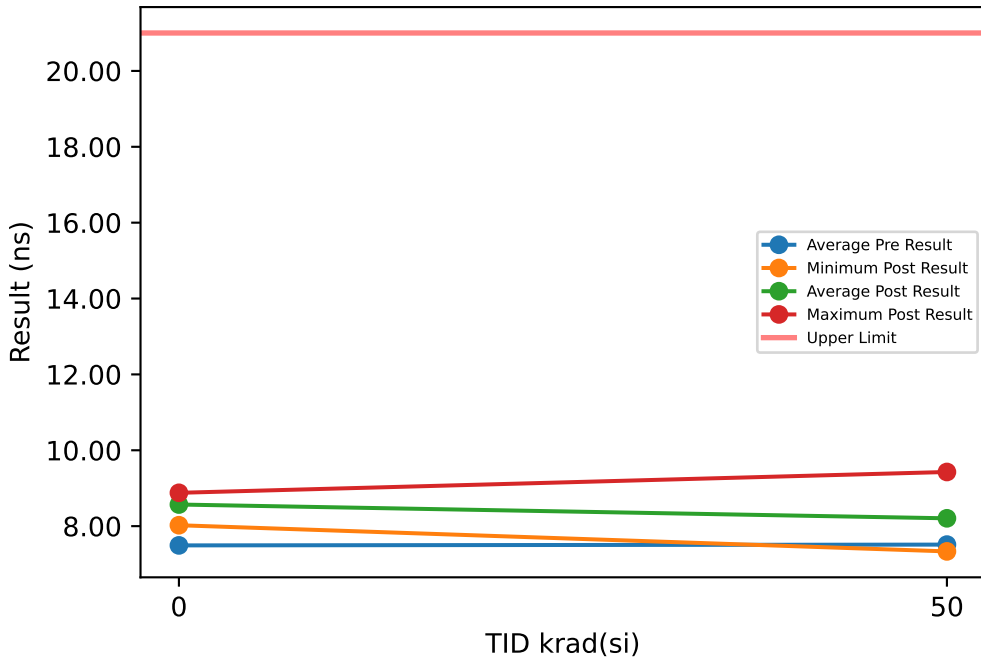


Test Statistics (ns)

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	184.12	185.59	187.83	1.3365	172.96	178.22	186.19	6.0812	-11.328	-7.369	0.3905	6.0074
50	179.81	187.82	192.87	4.6209	176.34	182.72	189.81	5.1072	-13.49	-5.101	3.4347	7.9218

Device Test: 24.18 SYNC\_LH\_RISE\_TIME(\_TIMING|RISE/SYNC1/4.5//511k//@SYNC\_LH\_RISE\_TIME )

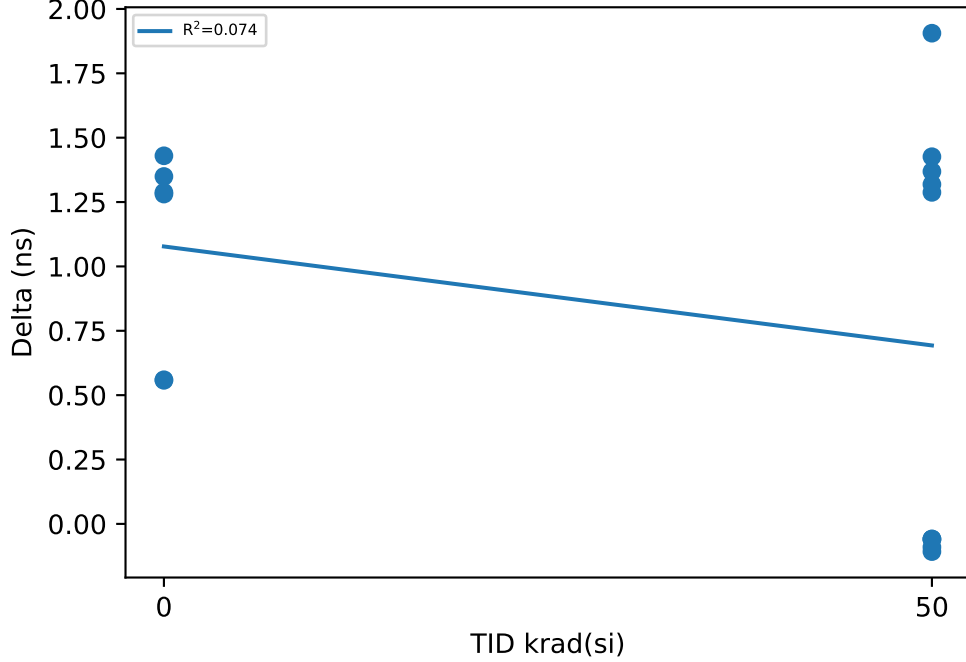
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.4946	7.4355	-0.0591
4	50	HDR Biased w/ 84hr anneal	7.4418	7.3342	-0.1076
6	50	HDR Biased w/ 84hr anneal	7.479	7.4205	-0.0585
8	50	HDR Biased w/ 84hr anneal	7.5245	7.4642	-0.0603
9	50	HDR Biased w/ 84hr anneal	7.5597	7.4694	-0.0903
10	50	HDR unbiased	7.5496	8.8372	1.2876
11	50	HDR unbiased	7.5219	9.4277	1.9058
12	50	HDR unbiased	7.5128	8.9389	1.4261
13	50	HDR unbiased	7.4931	8.8617	1.3686
14	50	HDR unbiased	7.5569	8.8756	1.3187
26	0	Correlation	7.4916	8.8409	1.3493
27	0	Correlation	7.4797	8.0373	0.5576
28	0	Correlation	7.5318	8.8128	1.281
29	0	Correlation	7.4641	8.0239	0.5598
30	0	Correlation	7.4487	8.8784	1.4297
32	0	Correlation	7.5385	8.8262	1.2877

TID vs Post - Pre Exposure Delta

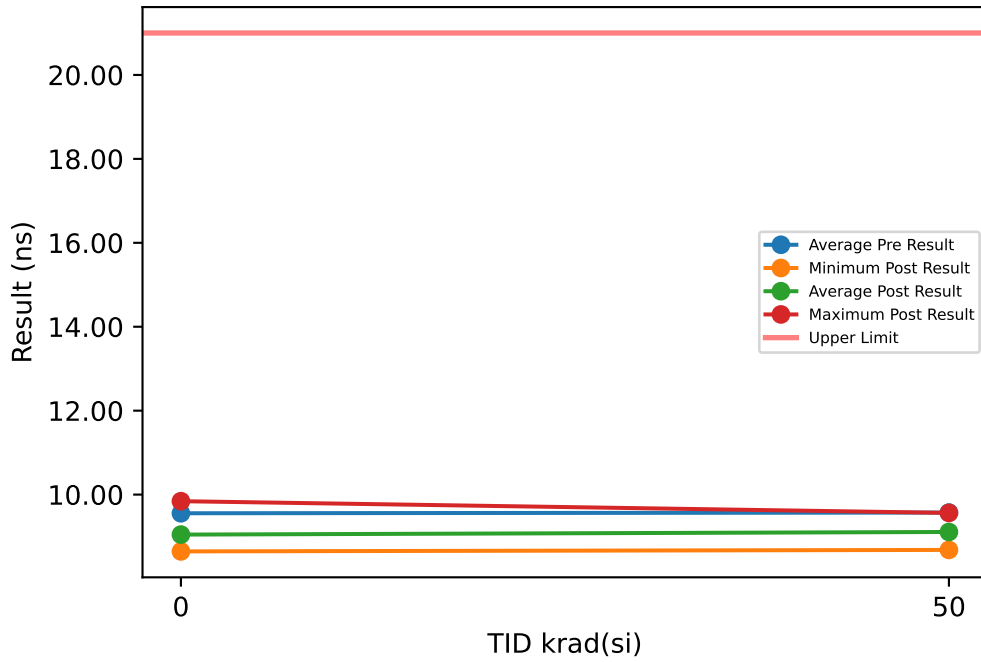


Test Statistics (ns)

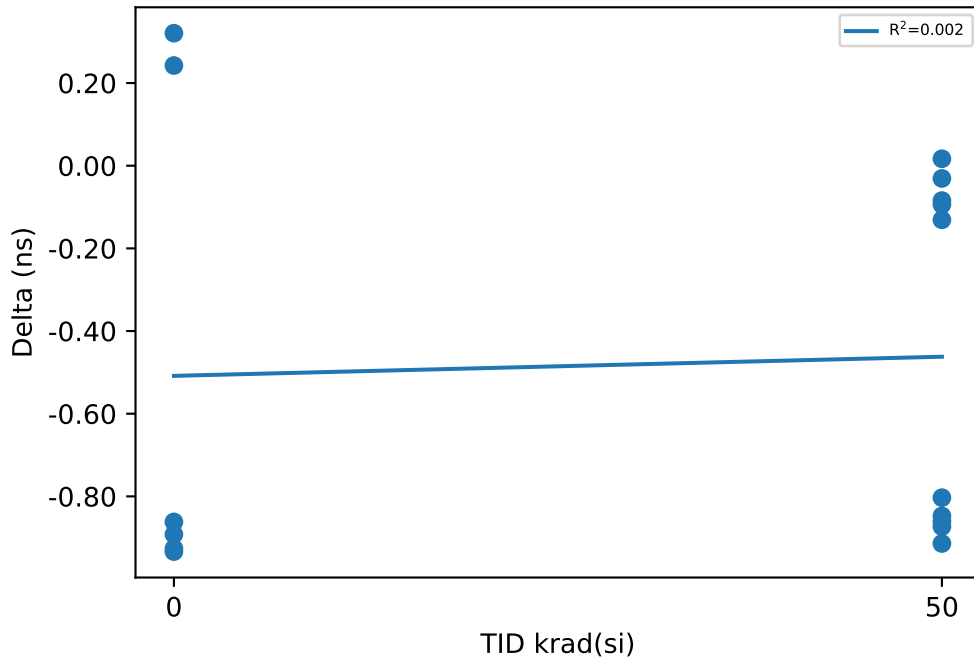
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	7.4487	7.4924	7.5385	0.036194	8.0239	8.5699	8.8784	0.41835	0.5576	1.0775	1.4297	0.40542
50	7.4418	7.5134	7.5597	0.037443	7.3342	8.2065	9.4277	0.84129	-0.1076	0.6931	1.9058	0.82746

# Device Test: 24.19 SYNC\_LH\_RISE\_TIME(\_TIMING|RISE/SYNC2/4.5//511k//@SYNC\_LH\_RISE\_TIME )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



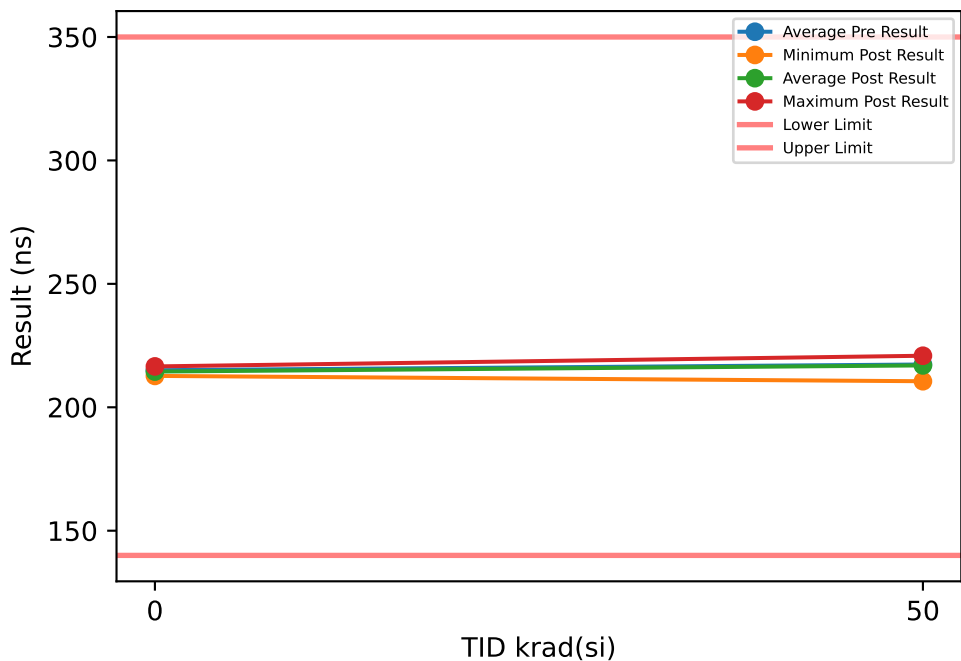
### Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	9.5847	9.5004	-0.0843
4	50	HDR Biased w/ 84hr anneal	9.5468	9.5636	0.0168
6	50	HDR Biased w/ 84hr anneal	9.5593	9.4284	-0.1309
8	50	HDR Biased w/ 84hr anneal	9.581	9.5502	-0.0308
9	50	HDR Biased w/ 84hr anneal	9.638	9.5441	-0.0939
10	50	HDR unbiased	9.5423	8.6816	-0.8607
11	50	HDR unbiased	9.5362	8.6889	-0.8473
12	50	HDR unbiased	9.5379	8.7348	-0.8031
13	50	HDR unbiased	9.5716	8.6986	-0.873
14	50	HDR unbiased	9.6155	8.7015	-0.914
26	0	Correlation	9.6187	8.6924	-0.9263
27	0	Correlation	9.5467	9.7891	0.2424
28	0	Correlation	9.5382	8.6463	-0.8919
29	0	Correlation	9.5221	9.8427	0.3206
30	0	Correlation	9.5217	8.6599	-0.8618
32	0	Correlation	9.5836	8.65	-0.9336

### Test Statistics (ns)

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	9.5217	9.5552	9.6187	0.038517	8.6463	9.0467	9.8427	0.59626	-0.9336	-0.50843	0.3206	0.61292
50	9.5362	9.5713	9.638	0.034333	8.6816	9.1092	9.5636	0.43199	-0.914	-0.46212	0.0168	0.42163

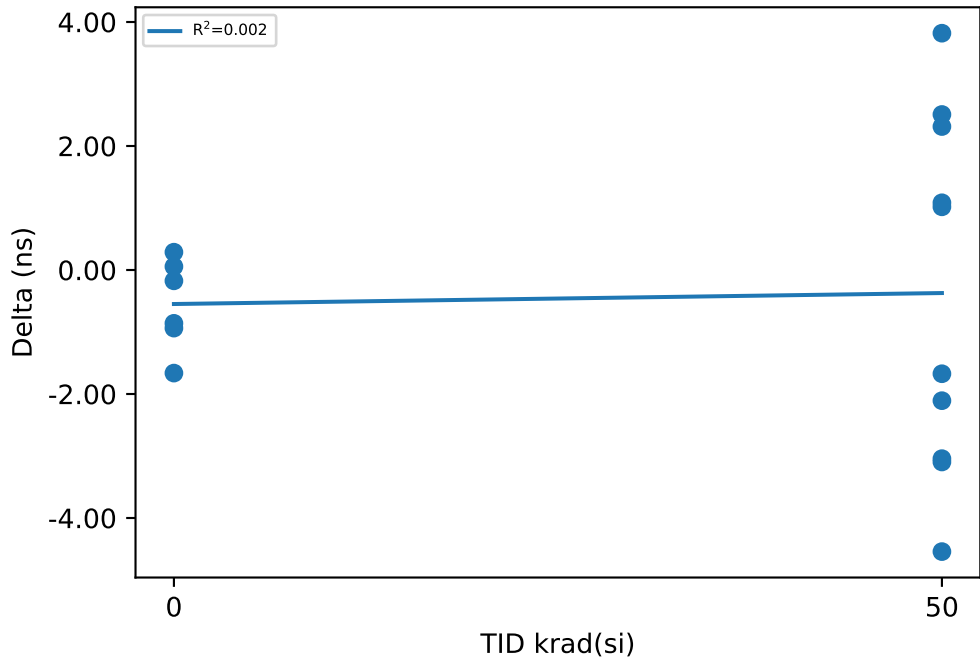
TID vs Result Stats



Test Results (Lower Limit = 140.0, Upper Limit = 350.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	216.54	218.86	2.3142
4	50	HDR Biased w/ 84hr anneal	215.42	219.24	3.8195
6	50	HDR Biased w/ 84hr anneal	217.15	218.23	1.0843
8	50	HDR Biased w/ 84hr anneal	209.53	210.55	1.0191
9	50	HDR Biased w/ 84hr anneal	209.9	212.41	2.5084
10	50	HDR unbiased	222.55	220.88	-1.6732
11	50	HDR unbiased	221.39	218.35	-3.043
12	50	HDR unbiased	219.77	216.68	-3.0964
13	50	HDR unbiased	221.41	219.3	-2.1077
14	50	HDR unbiased	219.66	215.12	-4.5419
26	0	Correlation	217.49	216.55	-0.9372
27	0	Correlation	215.22	215.28	0.0559
28	0	Correlation	215.53	213.86	-1.6627
29	0	Correlation	215.18	215.47	0.2874
30	0	Correlation	213.1	212.92	-0.1747
32	0	Correlation	213.57	212.71	-0.86

TID vs Post - Pre Exposure Delta

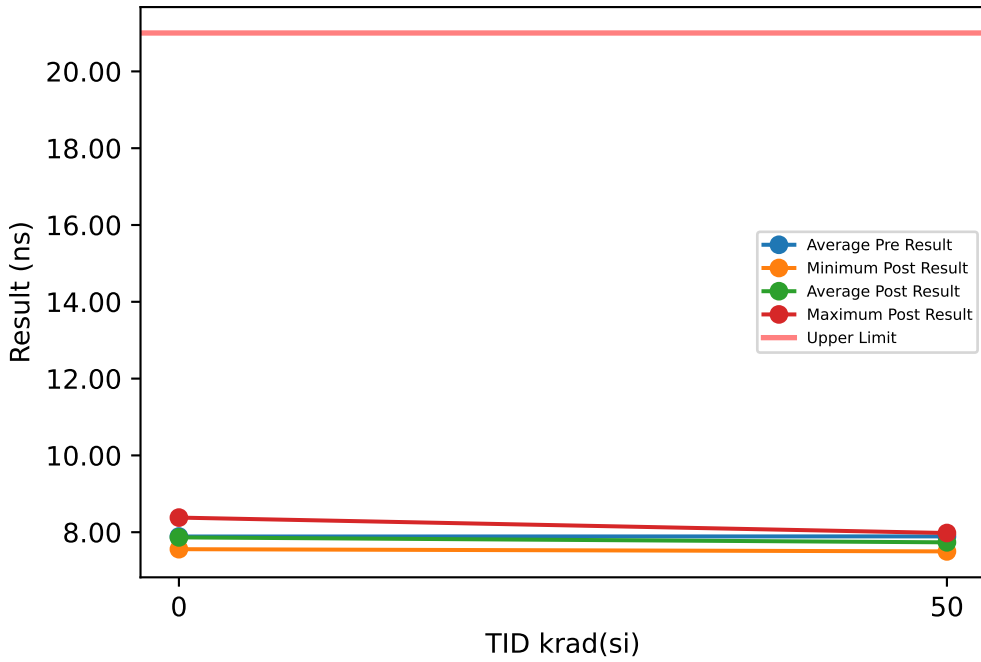


Test Statistics (ns)

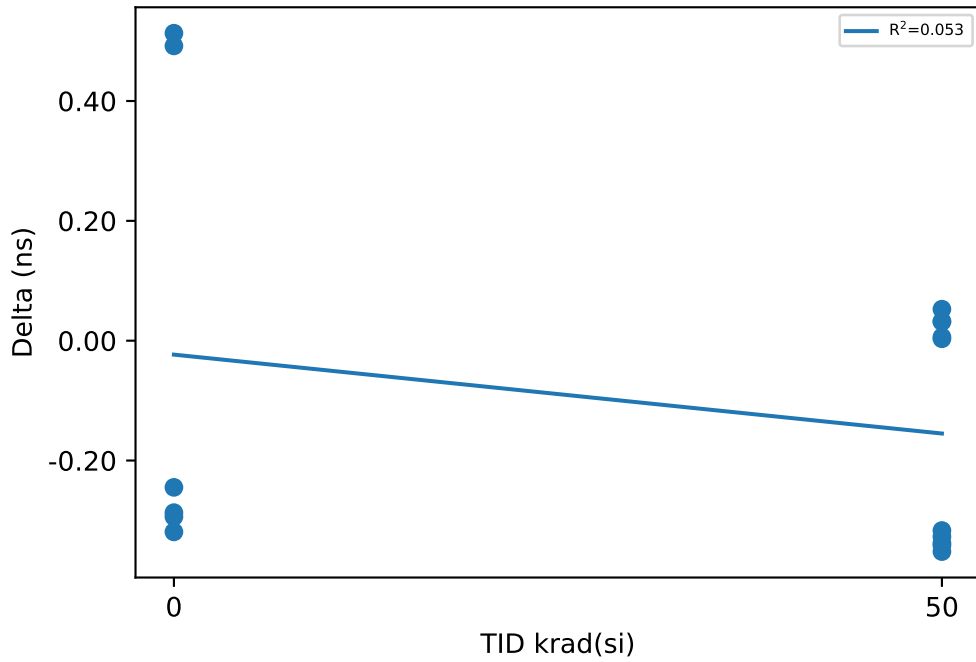
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	213.1	215.01	217.49	1.5643	212.71	214.47	216.55	1.54	-1.6627	-0.54855	0.2874	0.73394
50	209.53	217.33	222.55	4.6186	210.55	216.96	220.88	3.3056	-4.5419	-0.37167	3.8195	2.8633

Device Test: 24.20 SYNC\_HL\_FALL\_TIME(\_TIMING|FALL/SYNC1/4.5//511k//@SYNC\_HL\_FALL\_TIME )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 21.0 (ns))

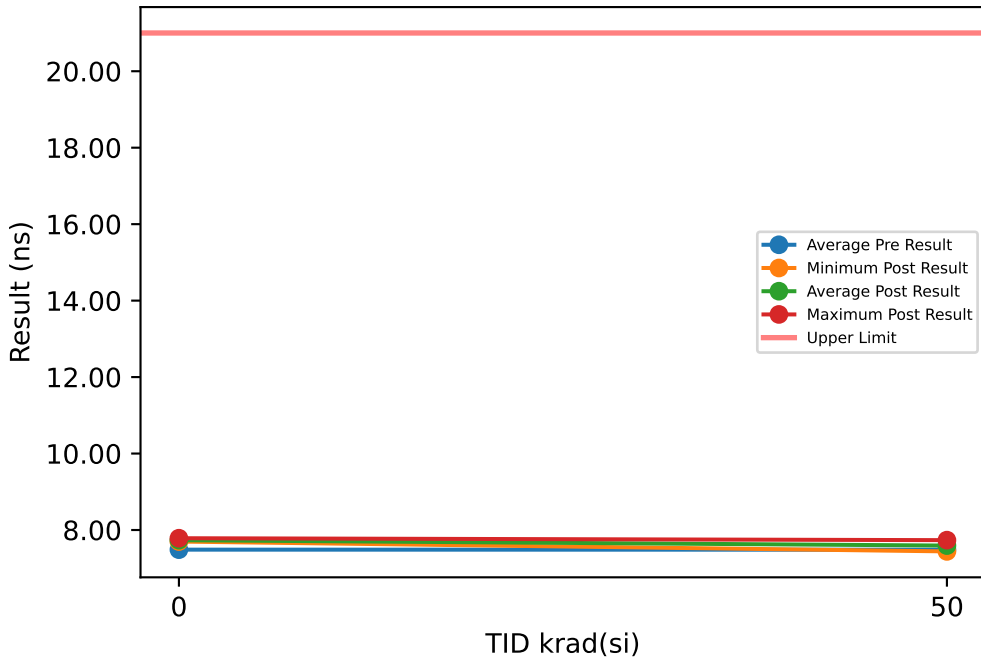
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.8525	7.9051	0.0526
4	50	HDR Biased w/ 84hr anneal	7.8404	7.8465	0.0061
6	50	HDR Biased w/ 84hr anneal	7.921	7.9532	0.0322
8	50	HDR Biased w/ 84hr anneal	7.9306	7.9338	0.0032
9	50	HDR Biased w/ 84hr anneal	7.9473	7.9791	0.0318
10	50	HDR unbiased	7.9256	7.5839	-0.3417
11	50	HDR unbiased	7.9132	7.5612	-0.352
12	50	HDR unbiased	7.8433	7.5265	-0.3168
13	50	HDR unbiased	7.8381	7.5004	-0.3377
14	50	HDR unbiased	7.9007	7.5736	-0.3271
26	0	Correlation	7.845	7.558	-0.287
27	0	Correlation	7.8538	8.367	0.5132
28	0	Correlation	7.9404	7.6213	-0.3191
29	0	Correlation	7.8888	8.3808	0.492
30	0	Correlation	7.9098	7.665	-0.2448
32	0	Correlation	7.893	7.5992	-0.2938

Test Statistics (ns)

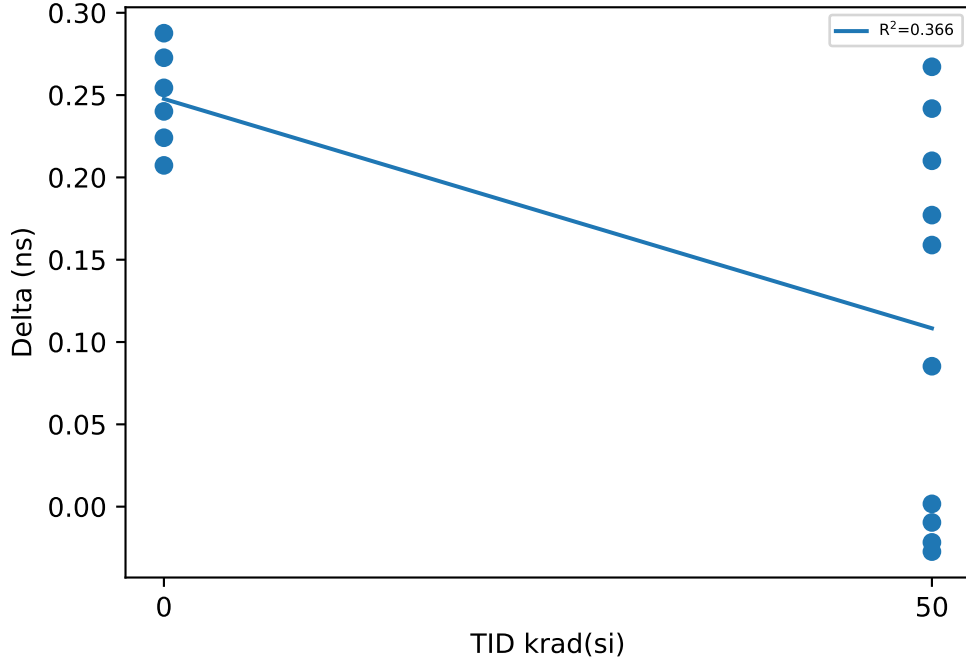
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	7.845	7.8885	7.9404	0.035395	7.558	7.8652	8.3808	0.39556	-0.3191	-0.02325	0.5132	0.40808
50	7.8381	7.8913	7.9473	0.042866	7.5004	7.7363	7.9791	0.20157	-0.352	-0.15494	0.0526	0.19057

Device Test: 24.21 SYNC\_HL\_FALL\_TIME(\_TIMING|FALL/SYNC2/4.5//511k//@SYNC\_HL\_FALL\_TIME )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.4862	7.4589	-0.0273
4	50	HDR Biased w/ 84hr anneal	7.4623	7.4406	-0.0217
6	50	HDR Biased w/ 84hr anneal	7.5069	7.4973	-0.0096
8	50	HDR Biased w/ 84hr anneal	7.4787	7.564	0.0853
9	50	HDR Biased w/ 84hr anneal	7.5532	7.5549	0.0017
10	50	HDR unbiased	7.4676	7.7348	0.2672
11	50	HDR unbiased	7.4953	7.6724	0.1771
12	50	HDR unbiased	7.4641	7.6742	0.2101
13	50	HDR unbiased	7.424	7.6658	0.2418
14	50	HDR unbiased	7.5086	7.6675	0.1589
26	0	Correlation	7.4492	7.7036	0.2544
27	0	Correlation	7.4579	7.698	0.2401
28	0	Correlation	7.5276	7.7349	0.2073
29	0	Correlation	7.4871	7.7598	0.2727
30	0	Correlation	7.4978	7.7854	0.2876
32	0	Correlation	7.4977	7.7218	0.2241

Test Statistics (ns)

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	7.4492	7.4862	7.5276	0.028815	7.698	7.7339	7.7854	0.033697	0.2073	0.2477	0.2876	0.030029
50	7.424	7.4847	7.5532	0.034657	7.4406	7.593	7.7348	0.10356	-0.0273	0.10835	0.2672	0.11634

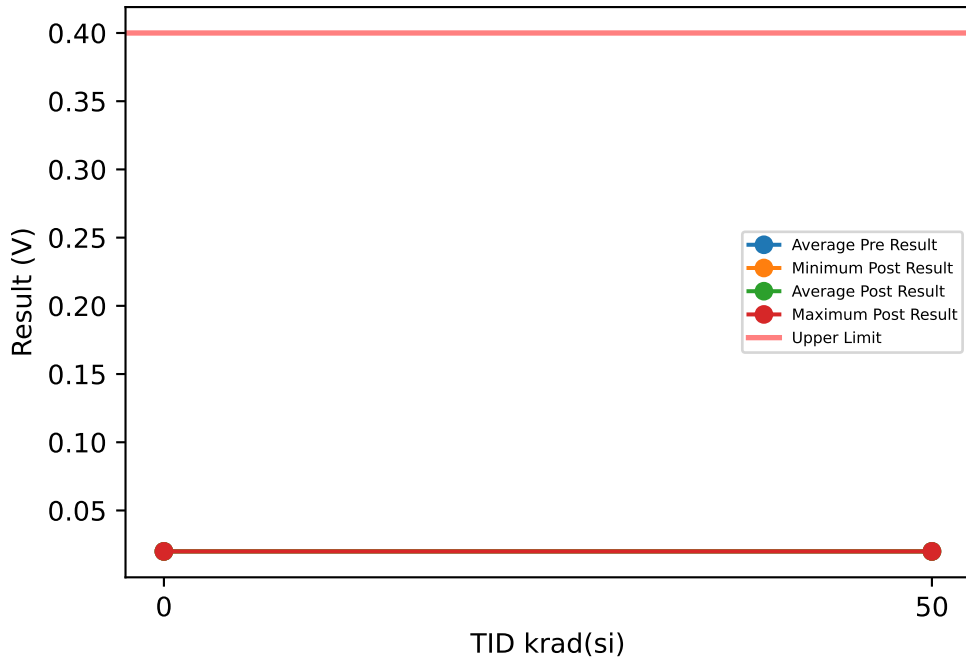






Device Test: 24.24 SYNC\_OUT\_LOW(\_LEVELS|VOL/SYNC1/4.5//511k//@SYNC\_OUT\_LOW )

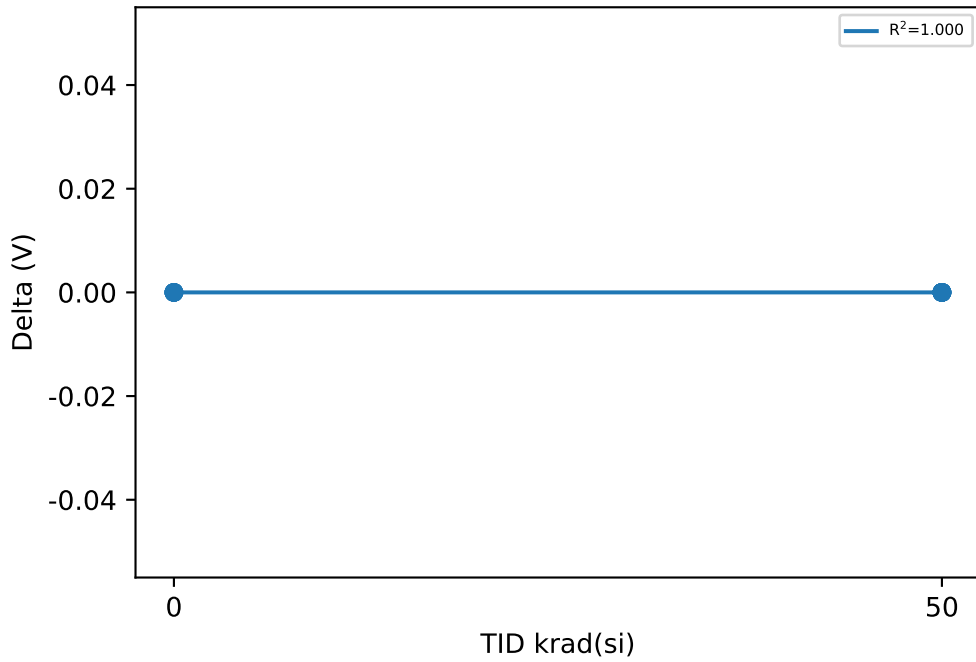
TID vs Result Stats



Test Results (Upper Limit = 0.4 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	0

TID vs Post - Pre Exposure Delta

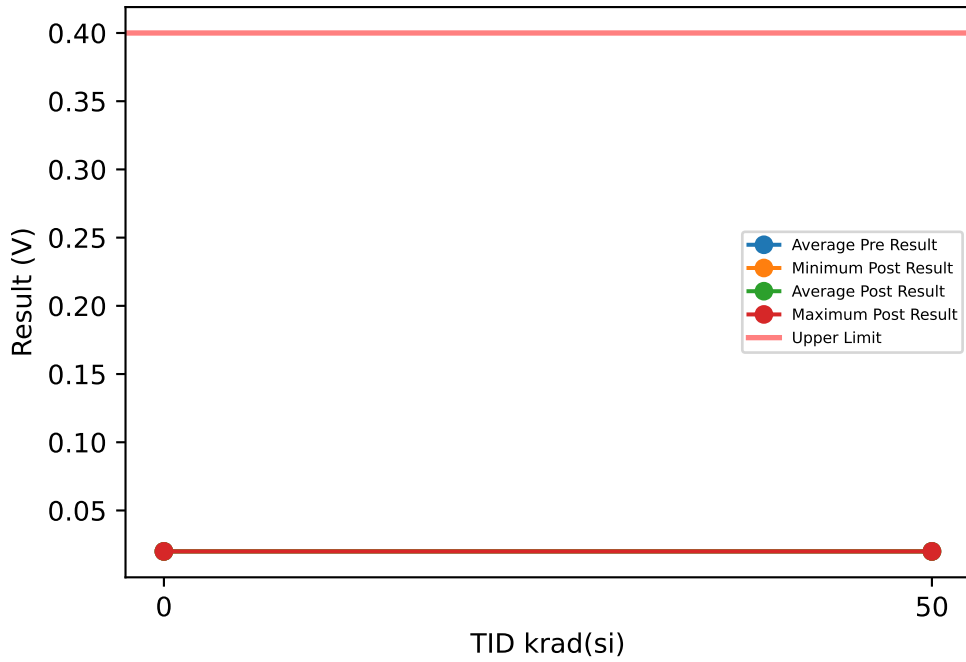


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0

Device Test: 24.25 SYNC\_OUT\_LOW(\_LEVELS|VOL/SYNC2/4.5//511k//@SYNC\_OUT\_LOW )

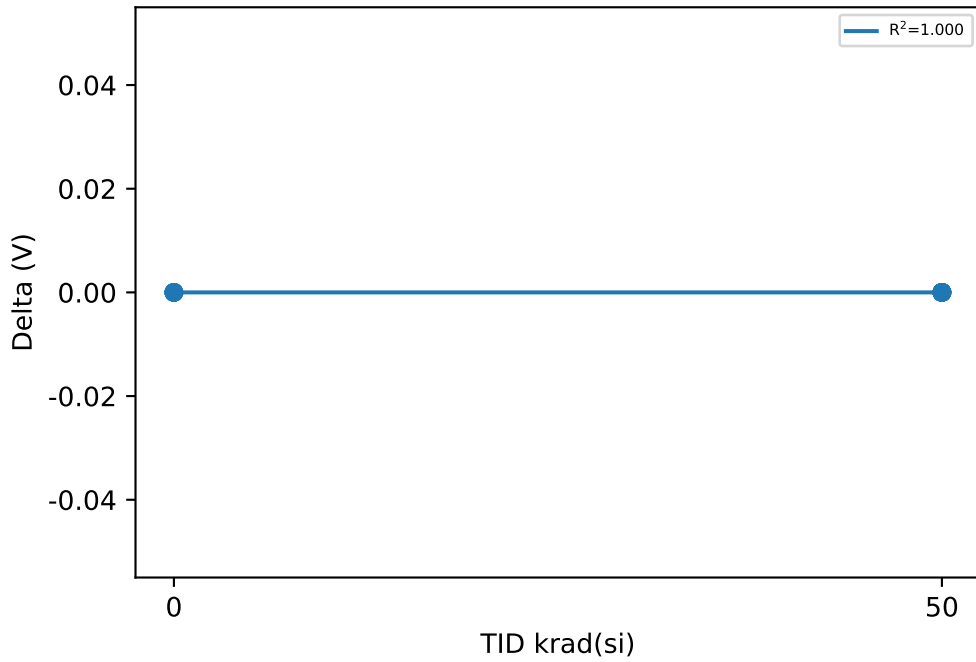
TID vs Result Stats



Test Results (Upper Limit = 0.4 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	0

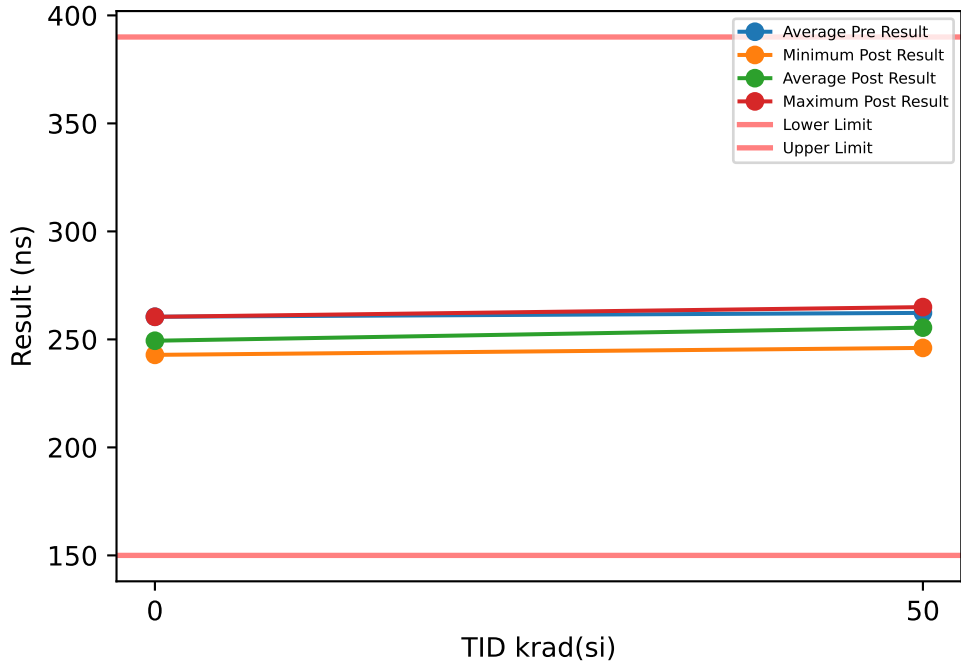
TID vs Post - Pre Exposure Delta



Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0

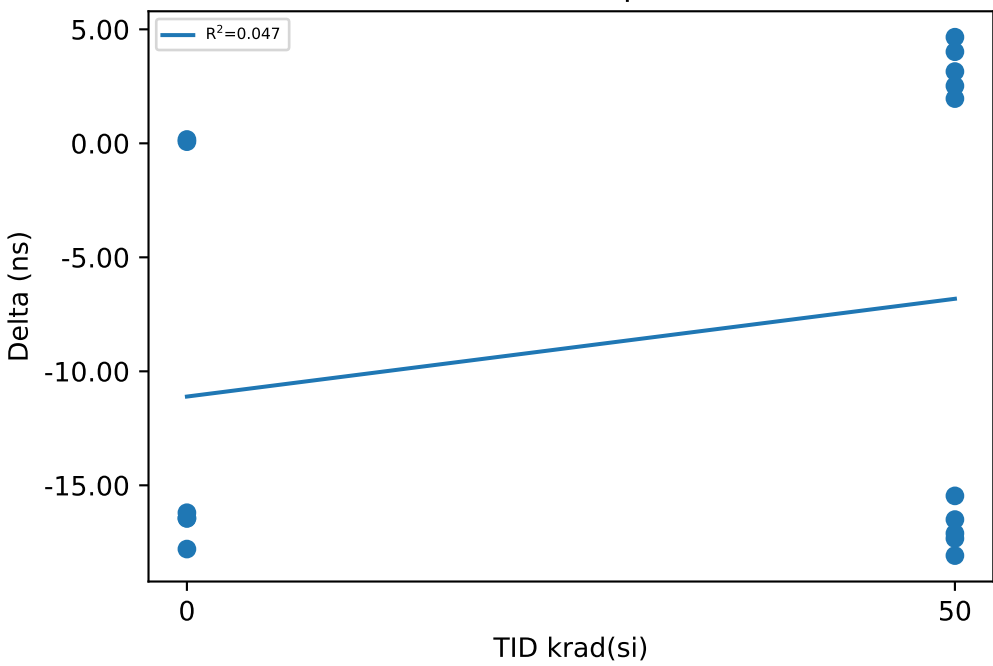
TID vs Result Stats



Test Results (Lower Limit = 150.0, Upper Limit = 390.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	261.15	264.3	3.1492
4	50	HDR Biased w/ 84hr anneal	260.3	264.95	4.6551
6	50	HDR Biased w/ 84hr anneal	262.23	264.19	1.9618
8	50	HDR Biased w/ 84hr anneal	254.83	257.35	2.5176
9	50	HDR Biased w/ 84hr anneal	255.09	259.11	4.018
10	50	HDR unbiased	268.13	251.63	-16.502
11	50	HDR unbiased	266.02	248.69	-17.331
12	50	HDR unbiased	264.34	247.23	-17.107
13	50	HDR unbiased	266.47	251	-15.463
14	50	HDR unbiased	264.14	246.06	-18.083
26	0	Correlation	262.91	246.47	-16.436
27	0	Correlation	260.01	260.17	0.1692
28	0	Correlation	261.17	243.37	-17.796
29	0	Correlation	260.37	260.45	0.0726
30	0	Correlation	259.17	242.97	-16.202
32	0	Correlation	259.29	242.84	-16.454

TID vs Post - Pre Exposure Delta

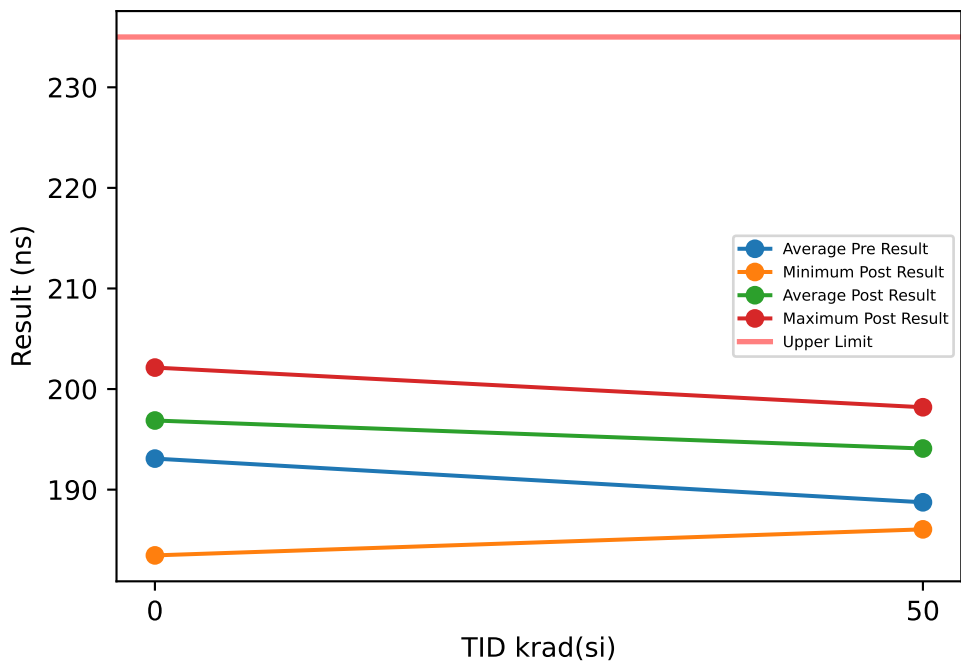


Test Statistics (ns)

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	259.17	260.49	262.91	1.3955	242.84	249.38	260.45	8.5719	-17.796	-11.108	0.1692	8.7157
50	254.83	262.27	268.13	4.5445	246.06	255.45	264.95	7.437	-18.083	-6.8185	4.6551	10.669

Device Test: 24.31 ON\_TIME\_MIN\_4V(\_TIMING|MINON/SW/4.5//511k//@ON\_TIME\_MIN\_4V )

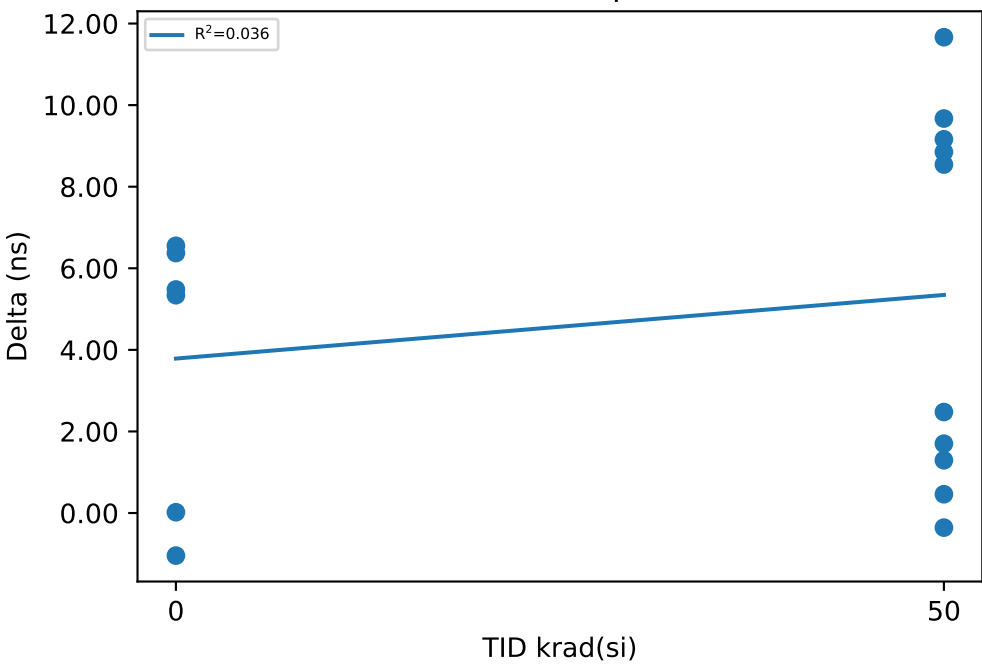
TID vs Result Stats



Test Results (Upper Limit = 235.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	192.31	194.01	1.6999
4	50	HDR Biased w/ 84hr anneal	190.88	193.35	2.4759
6	50	HDR Biased w/ 84hr anneal	190.8	191.26	0.4608
8	50	HDR Biased w/ 84hr anneal	192.83	194.12	1.2937
9	50	HDR Biased w/ 84hr anneal	186.41	186.05	-0.3581
10	50	HDR unbiased	189.34	198.19	8.8517
11	50	HDR unbiased	186.74	195.9	9.1619
12	50	HDR unbiased	185.18	196.84	11.665
13	50	HDR unbiased	186.2	195.88	9.6714
14	50	HDR unbiased	186.74	195.29	8.5434
26	0	Correlation	192.51	198.88	6.3737
27	0	Correlation	183.44	183.46	0.019
28	0	Correlation	195.58	202.14	6.5507
29	0	Correlation	197.01	195.97	-1.0438
30	0	Correlation	196.37	201.85	5.4801
32	0	Correlation	193.61	198.95	5.3399

TID vs Post - Pre Exposure Delta

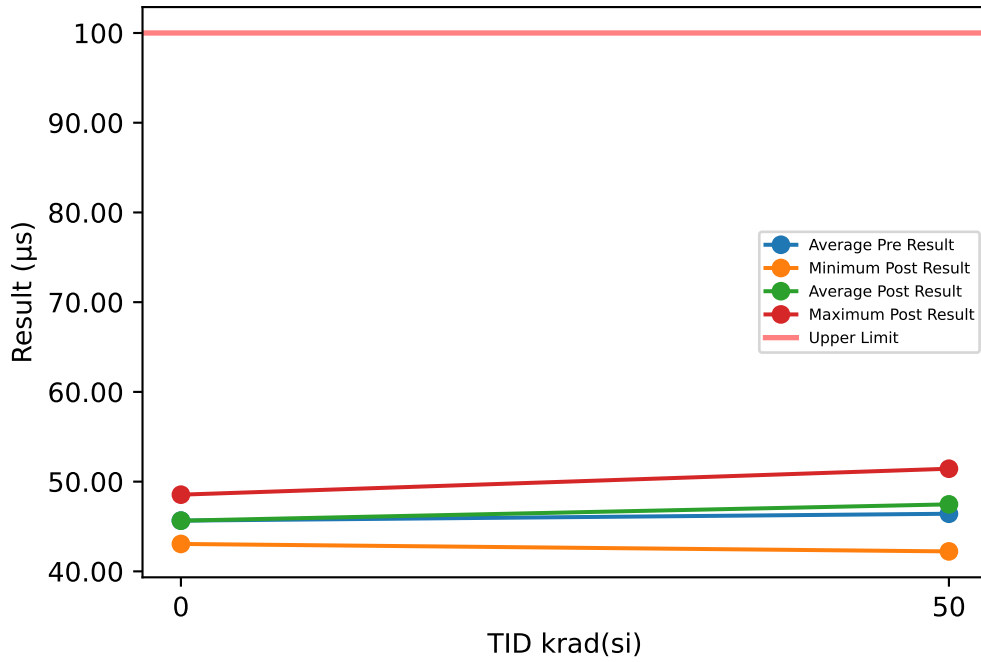


Test Statistics (ns)

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	183.44	193.09	197.01	5.0195	183.46	196.87	202.14	6.9484	-1.0438	3.7866	6.5507	3.3806
50	185.18	188.74	192.83	2.8121	186.05	194.09	198.19	3.4225	-0.3581	5.3466	11.665	4.5955

# Device Test: 24.32 T\_EN\_DELAY(\_TIMING|DELAY/EN/4.5//511k//@T\_EN\_DELAY )

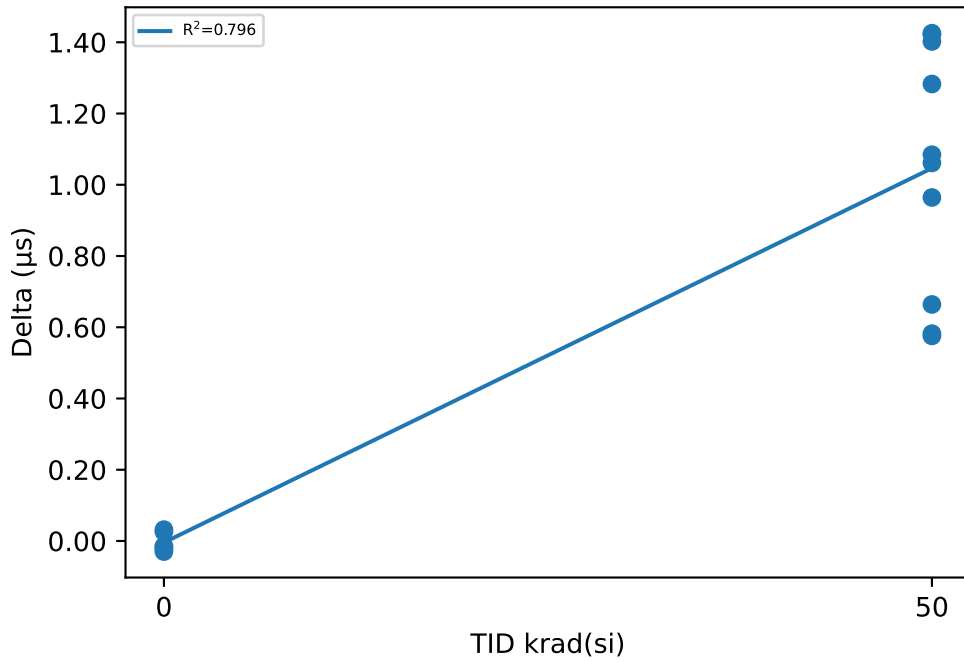
## TID vs Result Stats



## Test Results (Upper Limit = 100.0 (µs))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	49.053	50.474	1.422
4	50	HDR Biased w/ 84hr anneal	44.483	45.065	0.582
6	50	HDR Biased w/ 84hr anneal	46.65	47.226	0.5757
8	50	HDR Biased w/ 84hr anneal	45.785	46.75	0.9643
9	50	HDR Biased w/ 84hr anneal	41.56	42.224	0.664
10	50	HDR unbiased	46.275	47.337	1.0613
11	50	HDR unbiased	46.748	48.173	1.4255
12	50	HDR unbiased	47.476	48.759	1.2829
13	50	HDR unbiased	45.817	47.219	1.4023
14	50	HDR unbiased	50.354	51.438	1.0844
26	0	Correlation	44.594	44.579	-0.0149
27	0	Correlation	46.271	46.297	0.026
28	0	Correlation	43.023	43.055	0.0319
29	0	Correlation	45.415	45.399	-0.0158
30	0	Correlation	46.037	46.013	-0.0235
32	0	Correlation	48.576	48.546	-0.0298

## TID vs Post - Pre Exposure Delta

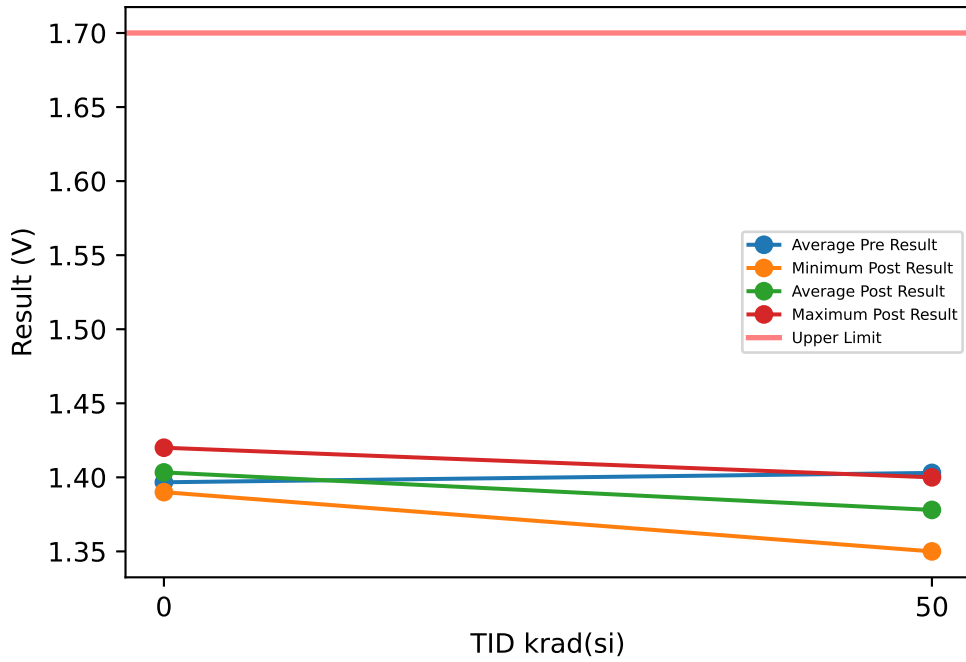


## Test Statistics (µs)

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	43.023	45.653	48.576	1.8528	43.055	45.648	48.546	1.8374	-0.0298	-0.00435	0.0319	0.026427
50	41.56	46.42	50.354	2.3999	42.224	47.466	51.438	2.6011	0.5757	1.0464	1.4255	0.34307

Device Test: 24.4 SYNC1\_VIH(\_THRESHOLD|RISE/SYNC1/4.5//OPEN//@SYNC1\_VIH )

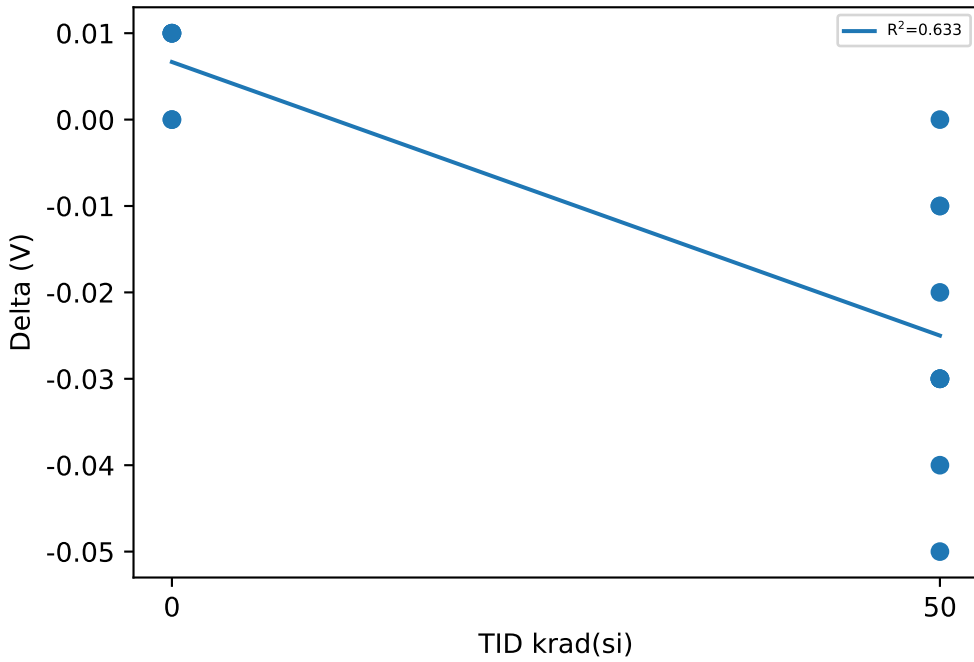
TID vs Result Stats



Test Results (Upper Limit = 1.7 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.42	1.4	-0.02
4	50	HDR Biased w/ 84hr anneal	1.41	1.4	-0.01
6	50	HDR Biased w/ 84hr anneal	1.41	1.4	-0.01
8	50	HDR Biased w/ 84hr anneal	1.4	1.37	-0.03
9	50	HDR Biased w/ 84hr anneal	1.39	1.39	0
10	50	HDR unbiased	1.39	1.35	-0.04
11	50	HDR unbiased	1.4	1.37	-0.03
12	50	HDR unbiased	1.42	1.37	-0.05
13	50	HDR unbiased	1.39	1.36	-0.03
14	50	HDR unbiased	1.4	1.37	-0.03
26	0	Correlation	1.39	1.4	0.01
27	0	Correlation	1.42	1.42	0
28	0	Correlation	1.4	1.4	0
29	0	Correlation	1.4	1.41	0.01
30	0	Correlation	1.39	1.4	0.01
32	0	Correlation	1.38	1.39	0.01

TID vs Post - Pre Exposure Delta

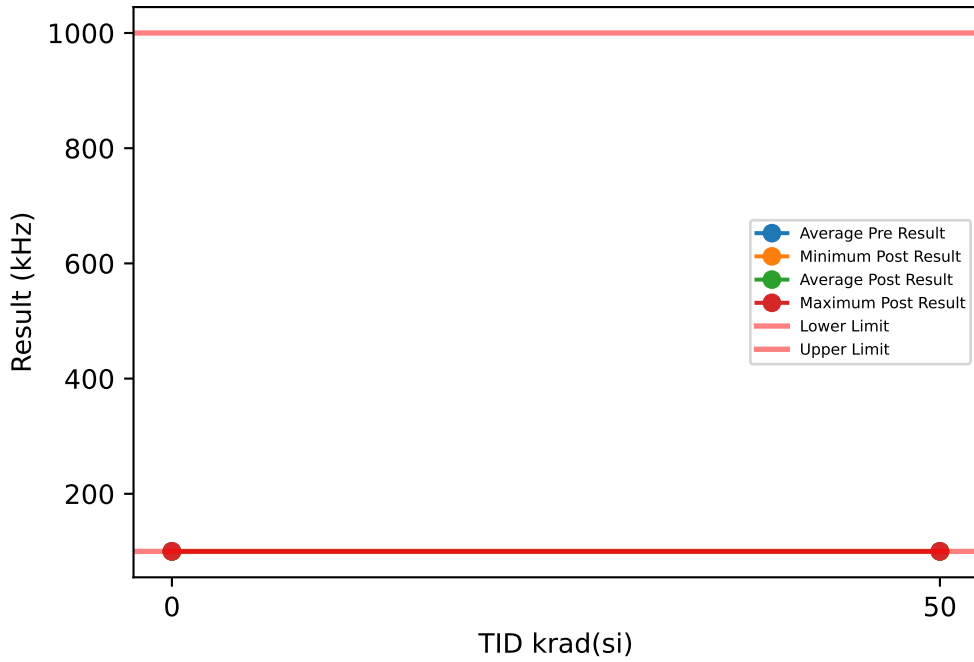


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.38	1.3967	1.42	0.013663	1.39	1.4033	1.42	0.010328	0	0.0066667	0.01	0.005164
50	1.39	1.403	1.42	0.011595	1.35	1.378	1.4	0.018135	-0.05	-0.025	0	0.015092

Device Test: 24.41 SYNC\_FREQ\_RANGE(\_FREQ|100kHz/SYNC1/5//OPEN//@SYNC\_FREQ\_RANGE )

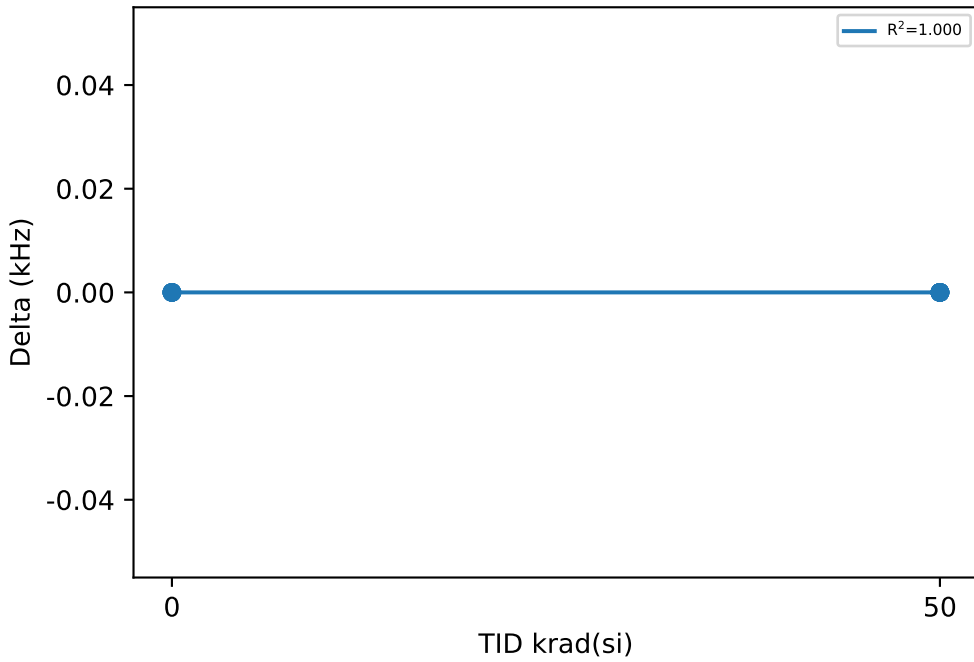
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	100	100	0
4	50	HDR Biased w/ 84hr anneal	100	100	0
6	50	HDR Biased w/ 84hr anneal	100	100	0
8	50	HDR Biased w/ 84hr anneal	100	100	0
9	50	HDR Biased w/ 84hr anneal	100	100	0
10	50	HDR unbiased	100	100	0
11	50	HDR unbiased	100	100	0
12	50	HDR unbiased	100	100	0
13	50	HDR unbiased	100	100	0
14	50	HDR unbiased	100	100	0
26	0	Correlation	100	100	0
27	0	Correlation	100	100	0
28	0	Correlation	100	100	0
29	0	Correlation	100	100	0
30	0	Correlation	100	100	0
32	0	Correlation	100	100	0

TID vs Post - Pre Exposure Delta



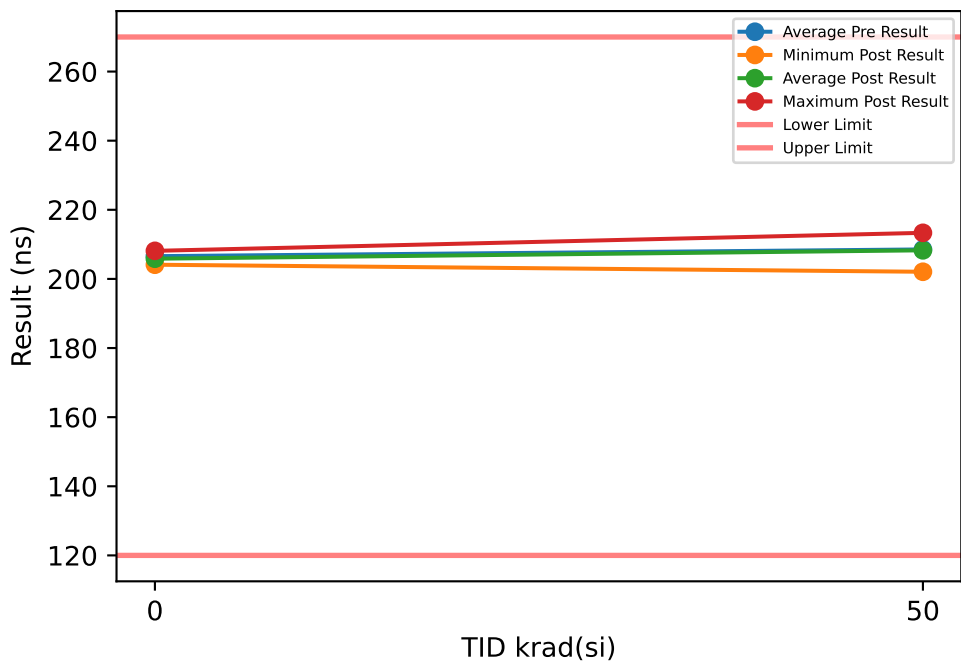
Test Statistics (kHz)

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	100	100	100	0	100	100	100	0	0	0	0	0
50	100	100	100	0	100	100	100	0	0	0	0	0



Device Test: 24.42 SYNC1\_SW\_DELAY(\_TIMING|DELAY/SYNC1/5//OPEN//@SYNC1\_SW\_DELAY )

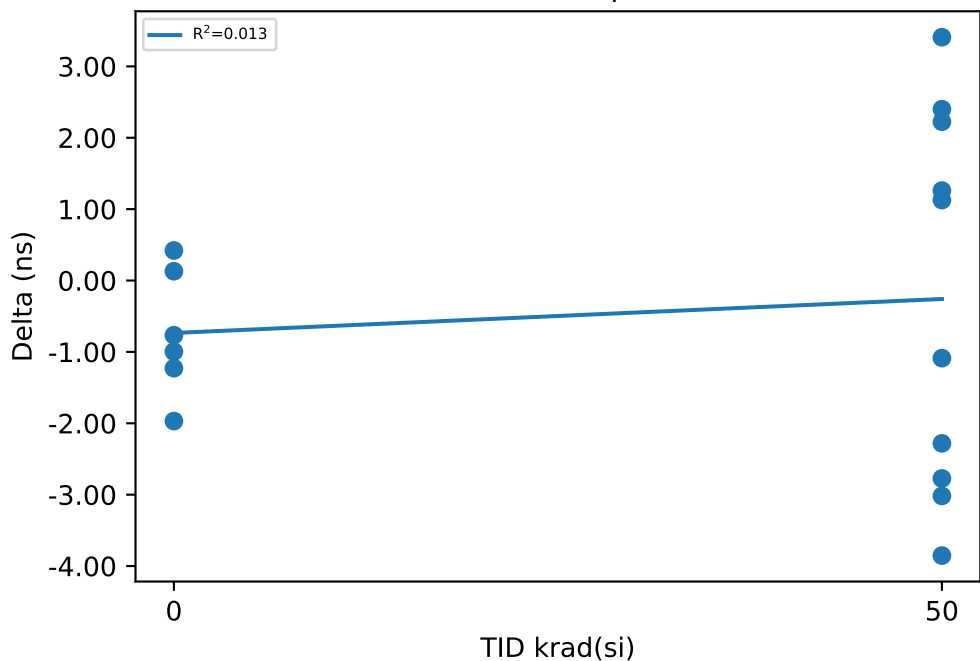
TID vs Result Stats



Test Results (Lower Limit = 120.0, Upper Limit = 270.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	207.56	209.78	2.2254
4	50	HDR Biased w/ 84hr anneal	206.84	210.25	3.4088
6	50	HDR Biased w/ 84hr anneal	208	209.13	1.1274
8	50	HDR Biased w/ 84hr anneal	200.81	202.07	1.2603
9	50	HDR Biased w/ 84hr anneal	200.94	203.34	2.4006
10	50	HDR unbiased	214.42	213.33	-1.0874
11	50	HDR unbiased	213.07	210.3	-2.7723
12	50	HDR unbiased	210.67	206.81	-3.8535
13	50	HDR unbiased	212.76	210.48	-2.2813
14	50	HDR unbiased	210.27	207.25	-3.0176
26	0	Correlation	209.12	208.12	-0.9956
27	0	Correlation	206.62	206.75	0.1302
28	0	Correlation	206.96	204.99	-1.9688
29	0	Correlation	206.03	206.45	0.4208
30	0	Correlation	205.34	204.11	-1.2285
32	0	Correlation	205.43	204.66	-0.766

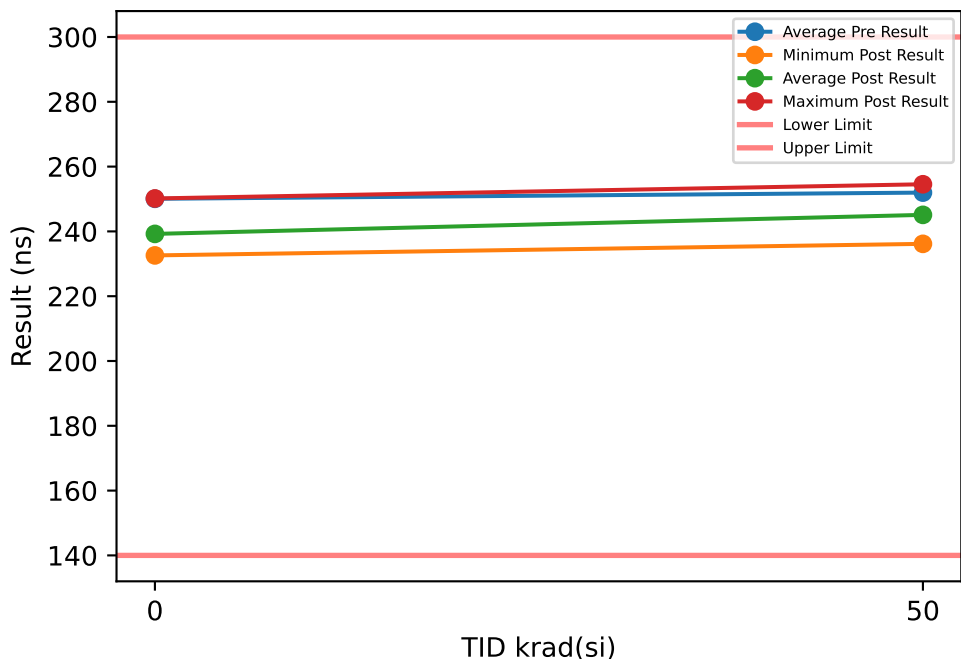
TID vs Post - Pre Exposure Delta



Test Statistics (ns)

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	205.34	206.58	209.12	1.396	204.11	205.85	208.12	1.517	-1.9688	-0.73465	0.4208	0.88534
50	200.81	208.53	214.42	4.7402	202.07	208.28	213.33	3.4566	-3.8535	-0.25896	3.4088	2.6363

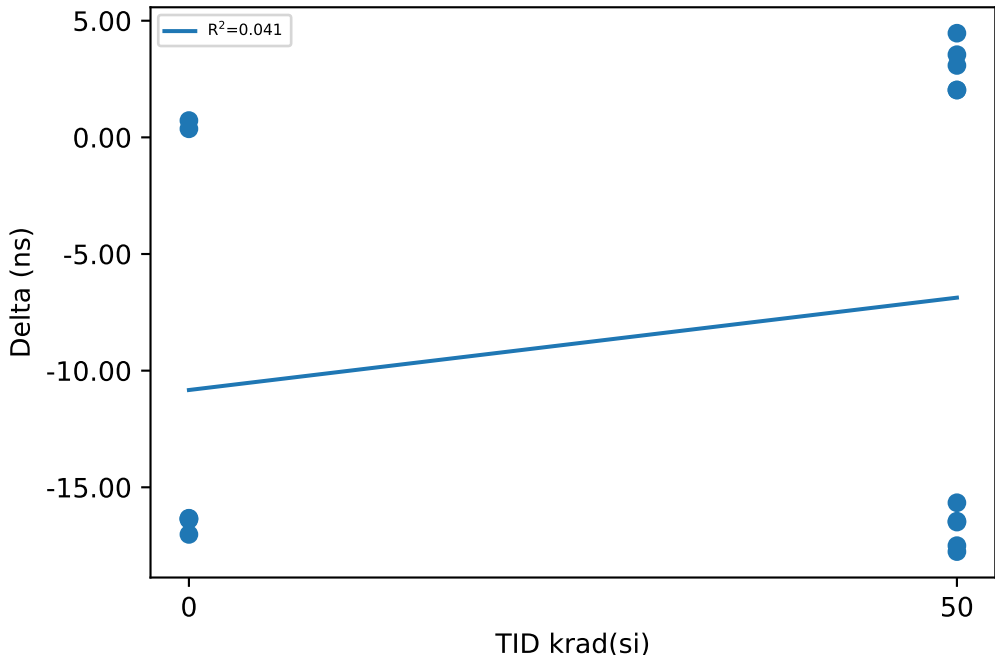
TID vs Result Stats



Test Results (Lower Limit = 140.0, Upper Limit = 300.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	250.69	253.77	3.0823
4	50	HDR Biased w/ 84hr anneal	250.08	254.55	4.4652
6	50	HDR Biased w/ 84hr anneal	251.79	253.82	2.0281
8	50	HDR Biased w/ 84hr anneal	245.09	247.12	2.0315
9	50	HDR Biased w/ 84hr anneal	244.82	248.37	3.545
10	50	HDR unbiased	257.94	242.28	-15.661
11	50	HDR unbiased	255.88	239.38	-16.491
12	50	HDR unbiased	253.66	236.16	-17.501
13	50	HDR unbiased	255.74	239.29	-16.453
14	50	HDR unbiased	254.03	236.28	-17.756
26	0	Correlation	252.43	236.09	-16.34
27	0	Correlation	249.51	249.87	0.3665
28	0	Correlation	249.93	233.54	-16.384
29	0	Correlation	249.44	250.17	0.7216
30	0	Correlation	249.43	233.11	-16.326
32	0	Correlation	249.61	232.59	-17.02

TID vs Post - Pre Exposure Delta

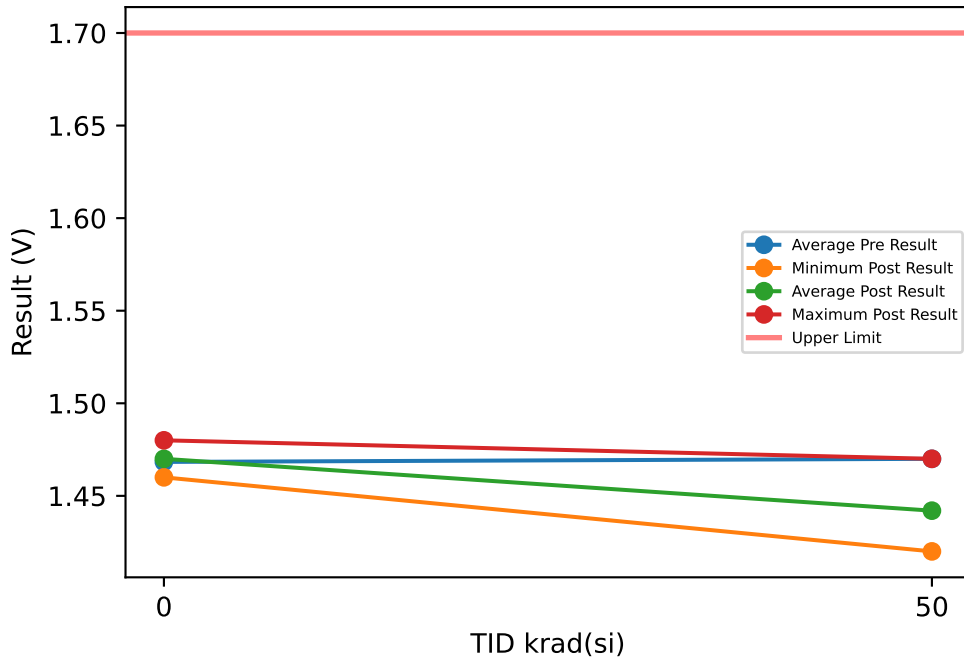


Test Statistics (ns)

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	249.43	250.06	252.43	1.1743	232.59	239.23	250.17	8.4464	-17.02	-10.83	0.7216	8.8151
50	244.82	251.97	257.94	4.4192	236.16	245.1	254.55	7.3596	-17.756	-6.8711	4.4652	10.476

Device Test: 24.44 SYNC1\_VIH(\_THRESHOLD|RISE/SYNC1/5//OPEN//@SYNC1\_VIH )

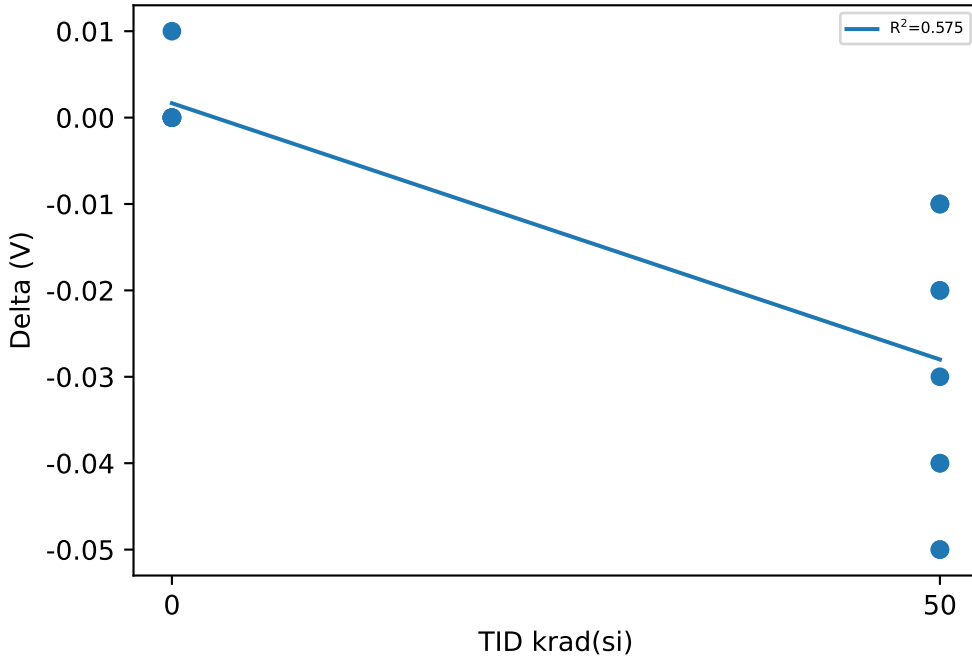
TID vs Result Stats



Test Results (Upper Limit = 1.7 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.47	1.46	-0.01
4	50	HDR Biased w/ 84hr anneal	1.48	1.47	-0.01
6	50	HDR Biased w/ 84hr anneal	1.47	1.46	-0.01
8	50	HDR Biased w/ 84hr anneal	1.46	1.44	-0.02
9	50	HDR Biased w/ 84hr anneal	1.47	1.45	-0.02
10	50	HDR unbiased	1.45	1.42	-0.03
11	50	HDR unbiased	1.48	1.43	-0.05
12	50	HDR unbiased	1.47	1.43	-0.04
13	50	HDR unbiased	1.47	1.42	-0.05
14	50	HDR unbiased	1.48	1.44	-0.04
26	0	Correlation	1.47	1.47	0
27	0	Correlation	1.48	1.48	0
28	0	Correlation	1.46	1.47	0.01
29	0	Correlation	1.48	1.48	0
30	0	Correlation	1.46	1.46	0
32	0	Correlation	1.46	1.46	0

TID vs Post - Pre Exposure Delta

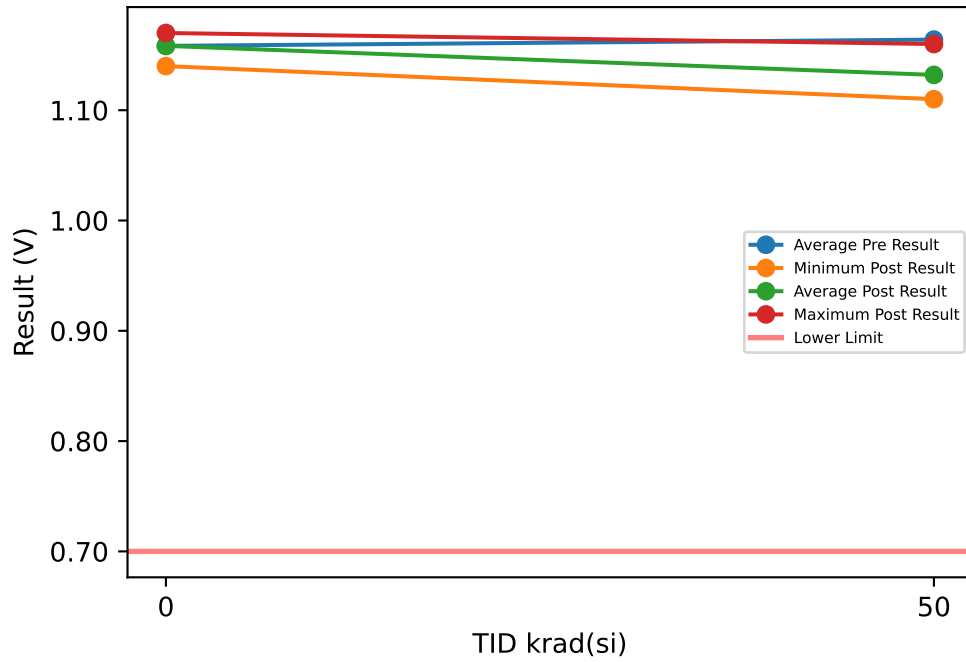


Test Statistics (V)

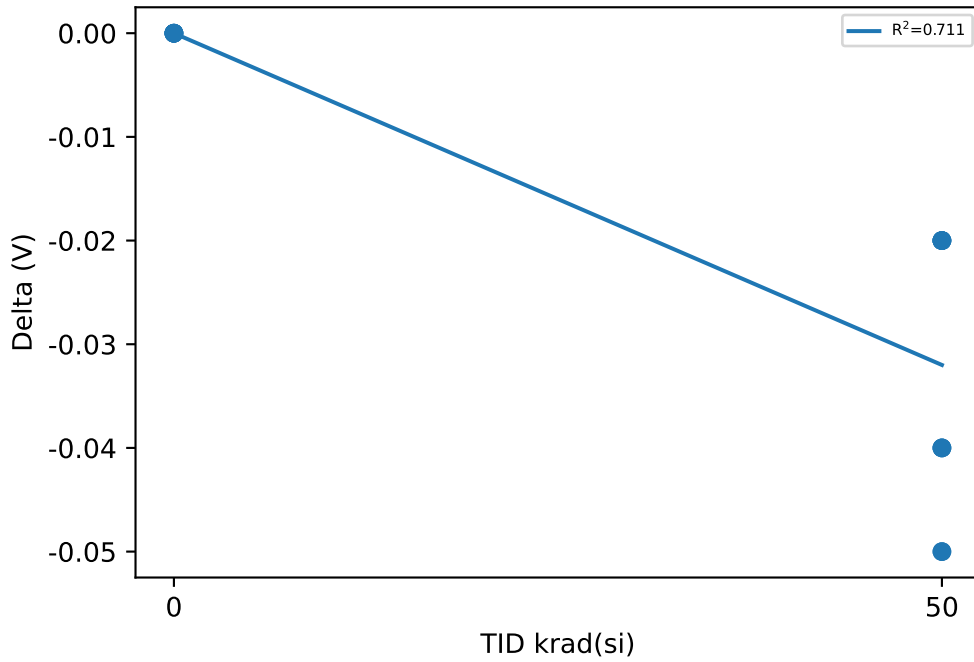
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.46	1.4683	1.48	0.0098319	1.46	1.47	1.48	0.0089443	0	0.0016667	0.01	0.0040825
50	1.45	1.47	1.48	0.0094281	1.42	1.442	1.47	0.017512	-0.05	-0.028	-0.01	0.016193

Device Test: 24.45 SYNC1\_VIL(\_THRESHOLD|FALL/SYNC1/5//OPEN//@SYNC1\_VIL )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



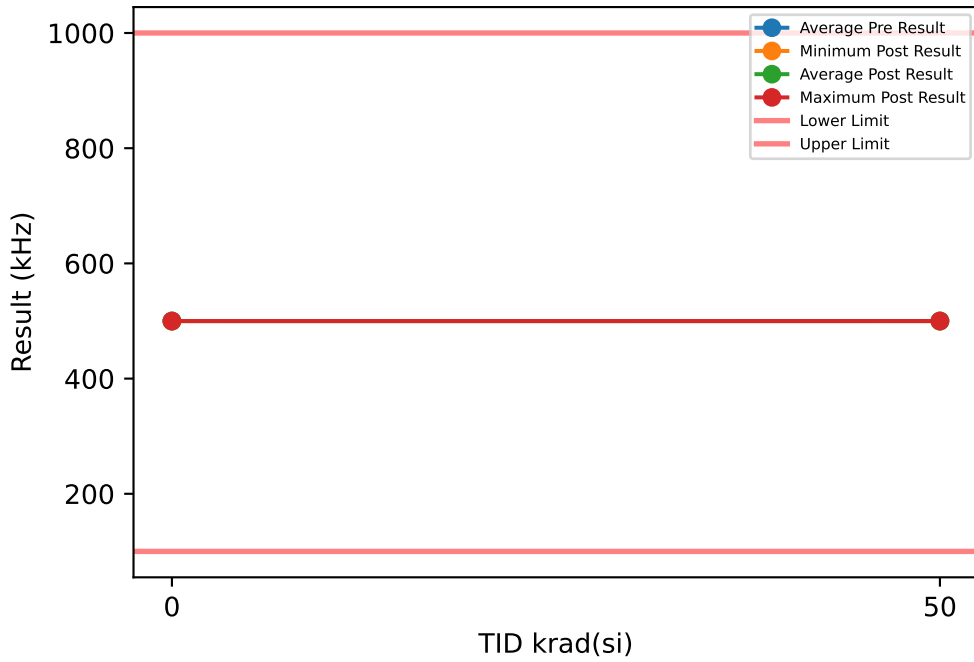
Test Results (Lower Limit = 0.7 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
4	50	HDR Biased w/ 84hr anneal	1.18	1.16	-0.02
6	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
8	50	HDR Biased w/ 84hr anneal	1.14	1.12	-0.02
9	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
10	50	HDR unbiased	1.15	1.11	-0.04
11	50	HDR unbiased	1.17	1.12	-0.05
12	50	HDR unbiased	1.17	1.12	-0.05
13	50	HDR unbiased	1.15	1.11	-0.04
14	50	HDR unbiased	1.17	1.13	-0.04
26	0	Correlation	1.16	1.16	0
27	0	Correlation	1.17	1.17	0
28	0	Correlation	1.16	1.16	0
29	0	Correlation	1.17	1.17	0
30	0	Correlation	1.14	1.14	0
32	0	Correlation	1.15	1.15	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	1.14	1.1583	1.17	0.01169	1.14	1.1583	1.17	0.01169	0	0	0	0
50	1.14	1.164	1.18	0.012649	1.11	1.132	1.16	0.018738	-0.05	-0.032	-0.02	0.013166

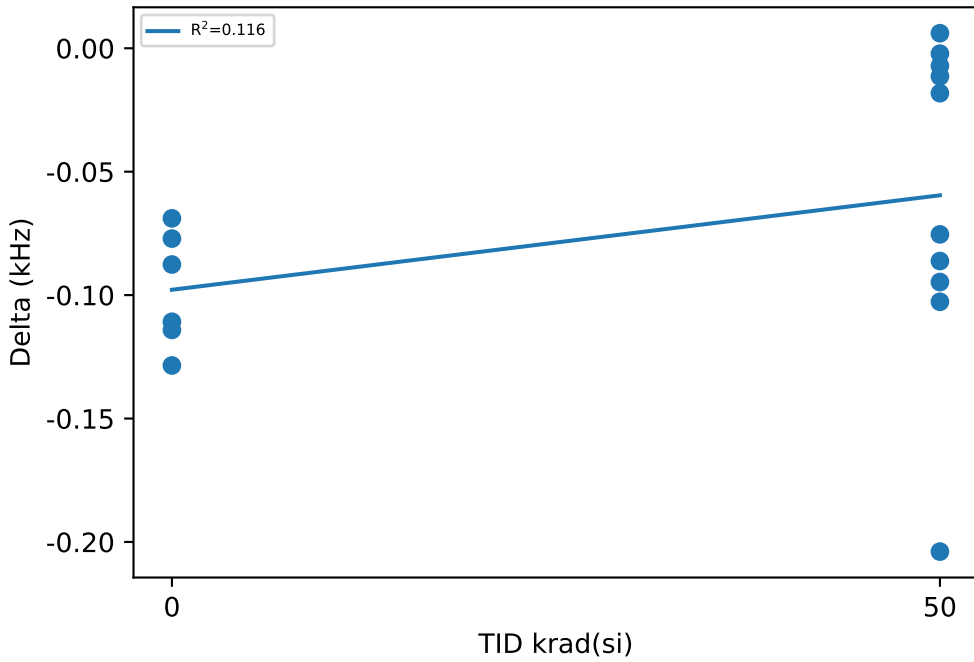
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	499.95	499.95	-0.0022
4	50	HDR Biased w/ 84hr anneal	499.97	499.95	-0.0182
6	50	HDR Biased w/ 84hr anneal	499.95	499.94	-0.0071
8	50	HDR Biased w/ 84hr anneal	499.96	499.96	0.0061
9	50	HDR Biased w/ 84hr anneal	499.96	499.95	-0.0114
10	50	HDR unbiased	499.97	499.87	-0.1027
11	50	HDR unbiased	499.95	499.86	-0.0862
12	50	HDR unbiased	499.96	499.89	-0.0754
13	50	HDR unbiased	499.95	499.74	-0.2039
14	50	HDR unbiased	499.96	499.87	-0.0947
26	0	Correlation	499.96	499.88	-0.0771
27	0	Correlation	499.95	499.84	-0.1141
28	0	Correlation	499.96	499.89	-0.0689
29	0	Correlation	499.96	499.84	-0.1285
30	0	Correlation	499.98	499.87	-0.1108
32	0	Correlation	499.95	499.86	-0.0876

TID vs Post - Pre Exposure Delta

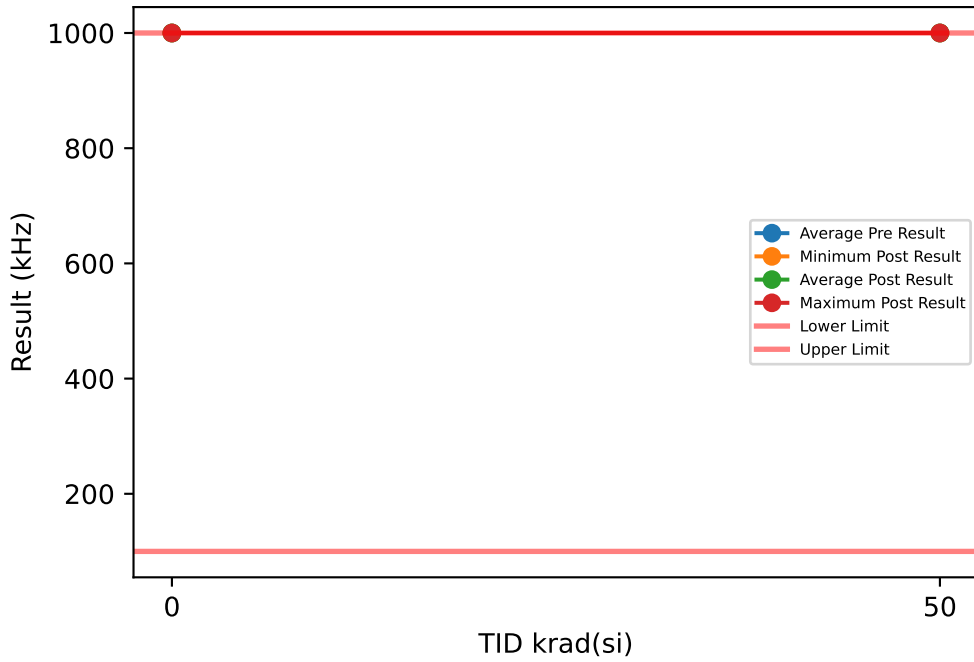


Test Statistics (kHz)

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	499.95	499.96	499.98	0.010518	499.84	499.86	499.89	0.022943	-0.1285	-0.097833	-0.0689	0.02343
50	499.95	499.96	499.97	0.0088173	499.74	499.9	499.96	0.067598	-0.2039	-0.05957	0.0061	0.066059

Device Test: 24.49 SYNC\_FREQ\_RANGE(\_FREQ|1000kHz/SYNC1/5//OPEN//@SYNC\_FREQ\_RANGE )

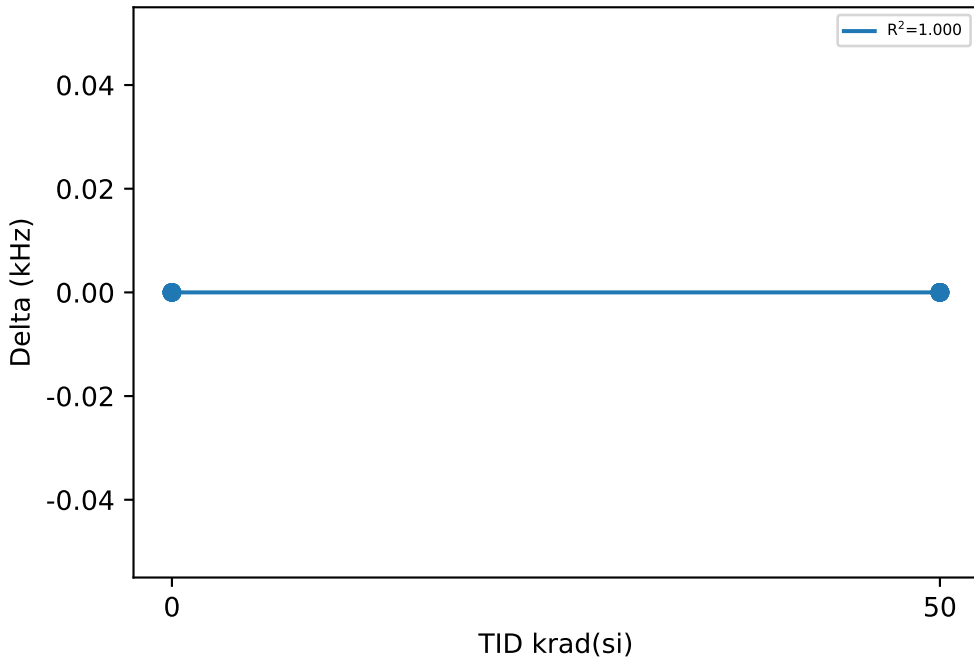
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1000	1000	0
4	50	HDR Biased w/ 84hr anneal	1000	1000	0
6	50	HDR Biased w/ 84hr anneal	1000	1000	0
8	50	HDR Biased w/ 84hr anneal	1000	1000	0
9	50	HDR Biased w/ 84hr anneal	1000	1000	0
10	50	HDR unbiased	1000	1000	0
11	50	HDR unbiased	1000	1000	0
12	50	HDR unbiased	1000	1000	0
13	50	HDR unbiased	1000	1000	0
14	50	HDR unbiased	1000	1000	0
26	0	Correlation	1000	1000	0
27	0	Correlation	1000	1000	0
28	0	Correlation	1000	1000	0
29	0	Correlation	1000	1000	0
30	0	Correlation	1000	1000	0
32	0	Correlation	1000	1000	0

TID vs Post - Pre Exposure Delta

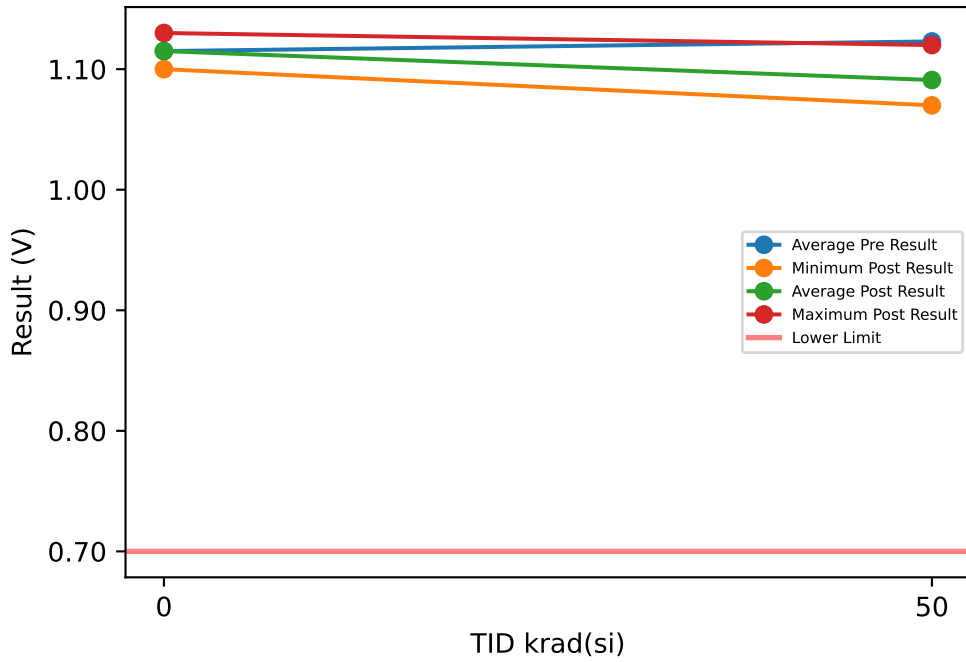


Test Statistics (kHz)

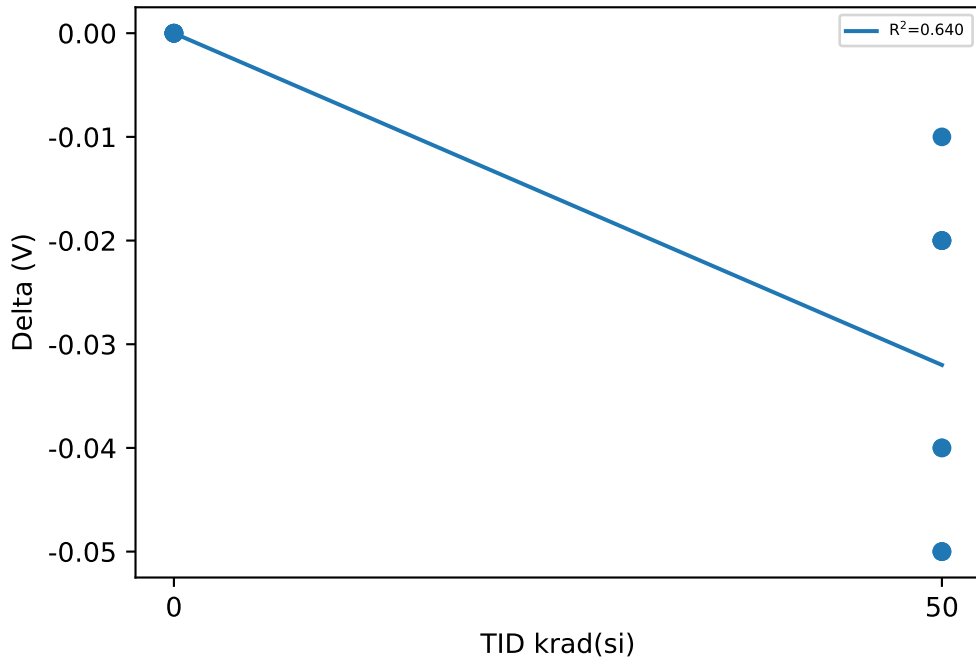
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0
50	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0

# Device Test: 24.5 SYNC1\_VIL(\_THRESHOLD|FALL/SYNC1/4.5//OPEN//@SYNC1\_VIL )

### TID vs Result Stats



### TID vs Post - Pre Exposure Delta



### Test Results (Lower Limit = 0.7 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.12	1.11	-0.01
4	50	HDR Biased w/ 84hr anneal	1.14	1.12	-0.02
6	50	HDR Biased w/ 84hr anneal	1.13	1.11	-0.02
8	50	HDR Biased w/ 84hr anneal	1.1	1.08	-0.02
9	50	HDR Biased w/ 84hr anneal	1.13	1.11	-0.02
10	50	HDR unbiased	1.11	1.07	-0.04
11	50	HDR unbiased	1.13	1.08	-0.05
12	50	HDR unbiased	1.13	1.08	-0.05
13	50	HDR unbiased	1.11	1.07	-0.04
14	50	HDR unbiased	1.13	1.08	-0.05
26	0	Correlation	1.11	1.11	0
27	0	Correlation	1.13	1.13	0
28	0	Correlation	1.12	1.12	0
29	0	Correlation	1.13	1.13	0
30	0	Correlation	1.1	1.1	0
32	0	Correlation	1.1	1.1	0

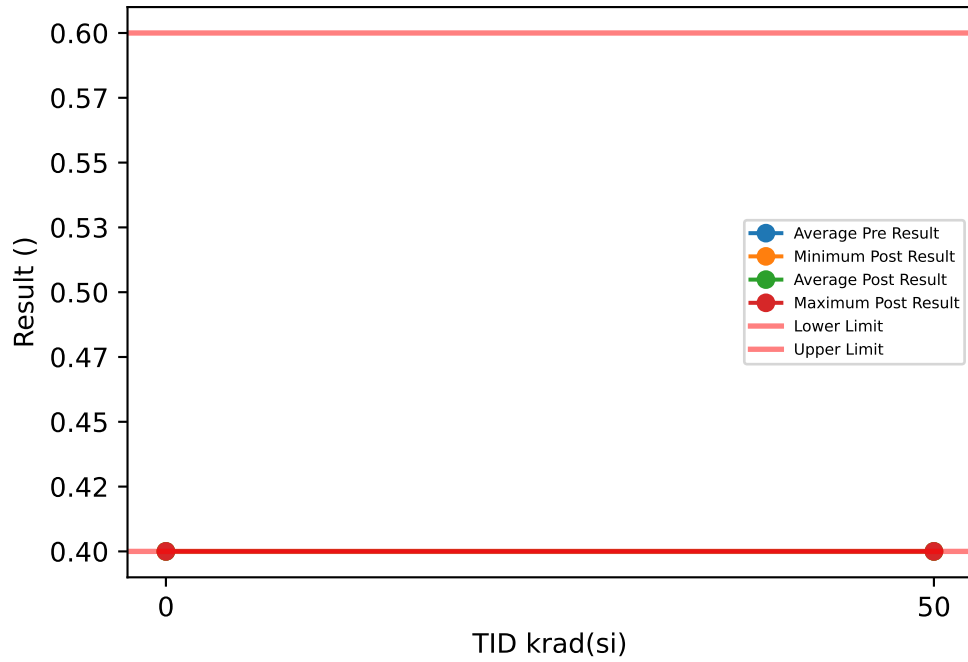
### Test Statistics (V)

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	1.1	1.115	1.13	0.013784	1.1	1.115	1.13	0.013784	0	0	0	0
50	1.1	1.123	1.14	0.012517	1.07	1.091	1.12	0.01912	-0.05	-0.032	-0.01	0.015492





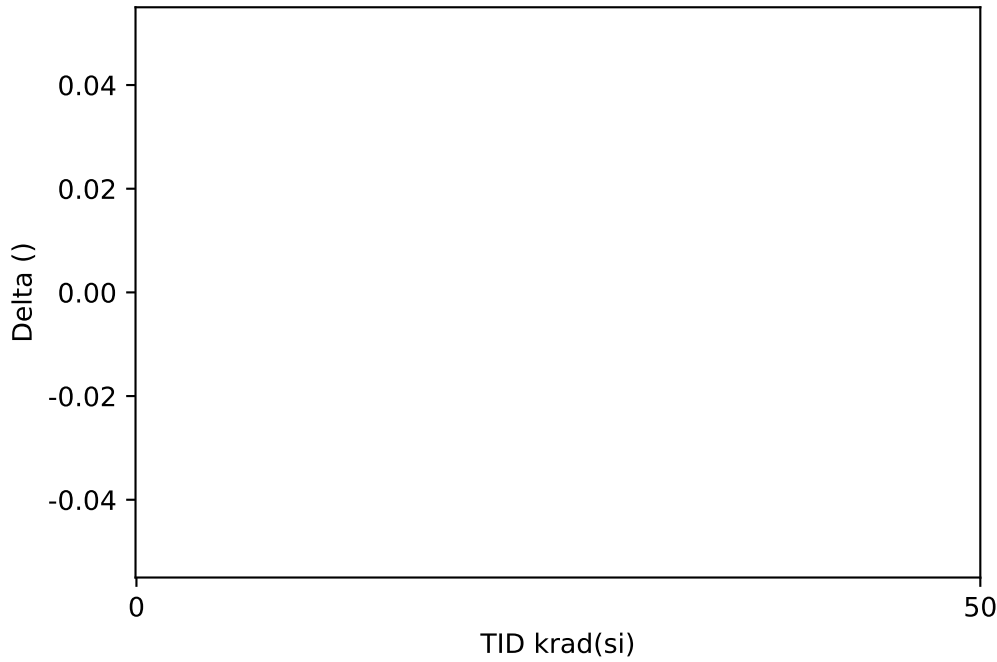
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.4	
4	50	HDR Biased w/ 84hr anneal		0.4	
6	50	HDR Biased w/ 84hr anneal		0.4	
8	50	HDR Biased w/ 84hr anneal		0.4	
9	50	HDR Biased w/ 84hr anneal		0.4	
10	50	HDR unbiased		0.4	
11	50	HDR unbiased		0.4	
12	50	HDR unbiased		0.4	
13	50	HDR unbiased		0.4	
14	50	HDR unbiased		0.4	
26	0	Correlation		0.4	
27	0	Correlation		0.4	
28	0	Correlation		0.4	
29	0	Correlation		0.4	
30	0	Correlation		0.4	
32	0	Correlation		0.4	

TID vs Post - Pre Exposure Delta

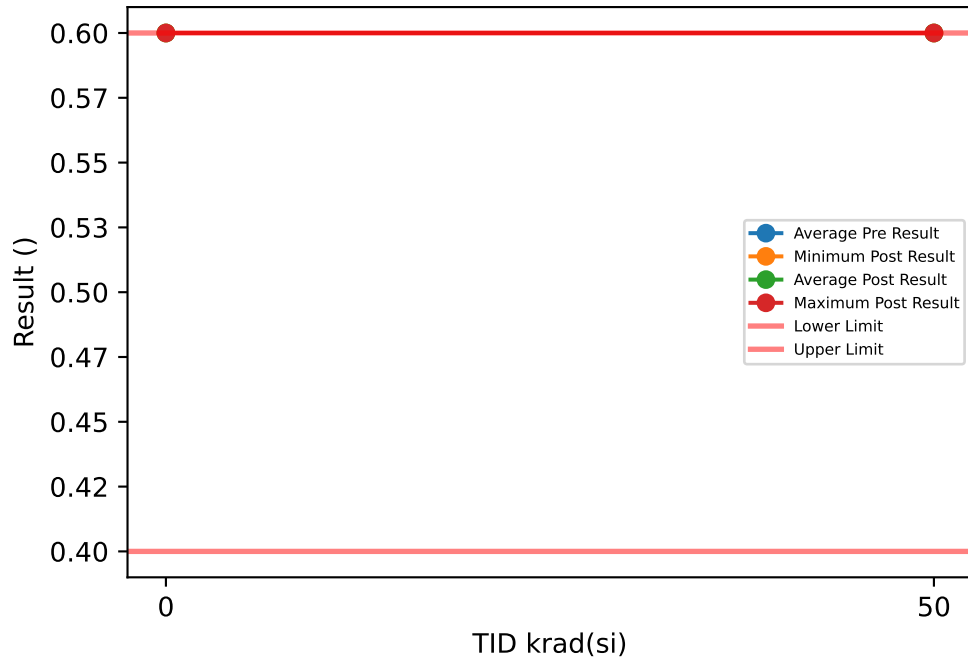


Test Statistics ( )

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					0.4	0.4	0.4	0				
50					0.4	0.4	0.4	0				



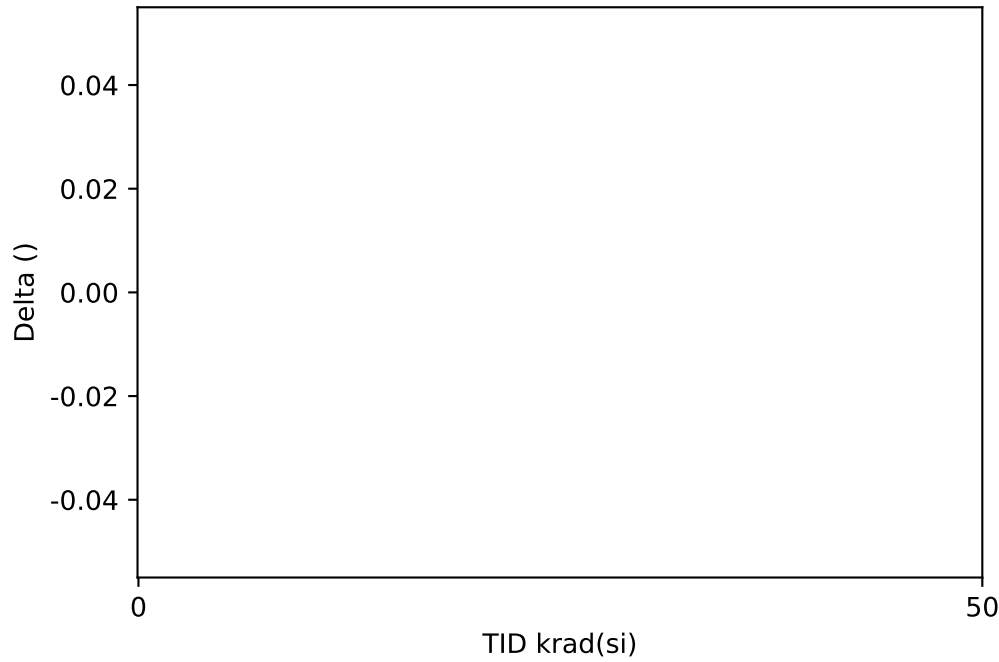
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.6	
4	50	HDR Biased w/ 84hr anneal		0.6	
6	50	HDR Biased w/ 84hr anneal		0.6	
8	50	HDR Biased w/ 84hr anneal		0.6	
9	50	HDR Biased w/ 84hr anneal		0.6	
10	50	HDR unbiased		0.6	
11	50	HDR unbiased		0.6	
12	50	HDR unbiased		0.6	
13	50	HDR unbiased		0.6	
14	50	HDR unbiased		0.6	
26	0	Correlation		0.6	
27	0	Correlation		0.6	
28	0	Correlation		0.6	
29	0	Correlation		0.6	
30	0	Correlation		0.6	
32	0	Correlation		0.6	

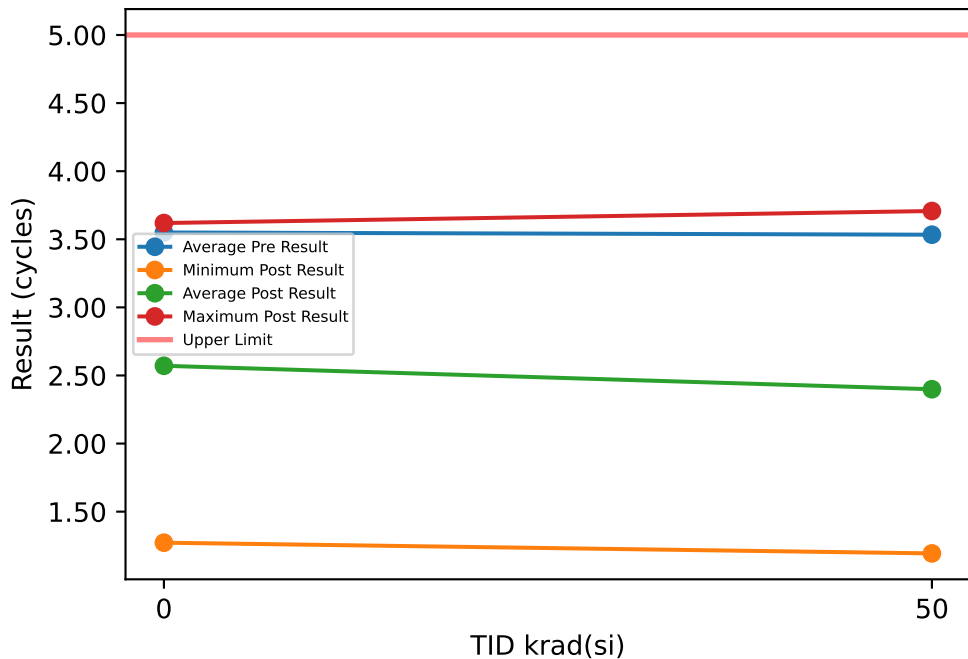
TID vs Post - Pre Exposure Delta



Test Statistics ( )

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					0.6	0.6	0.6	0				
50					0.6	0.6	0.6	0				

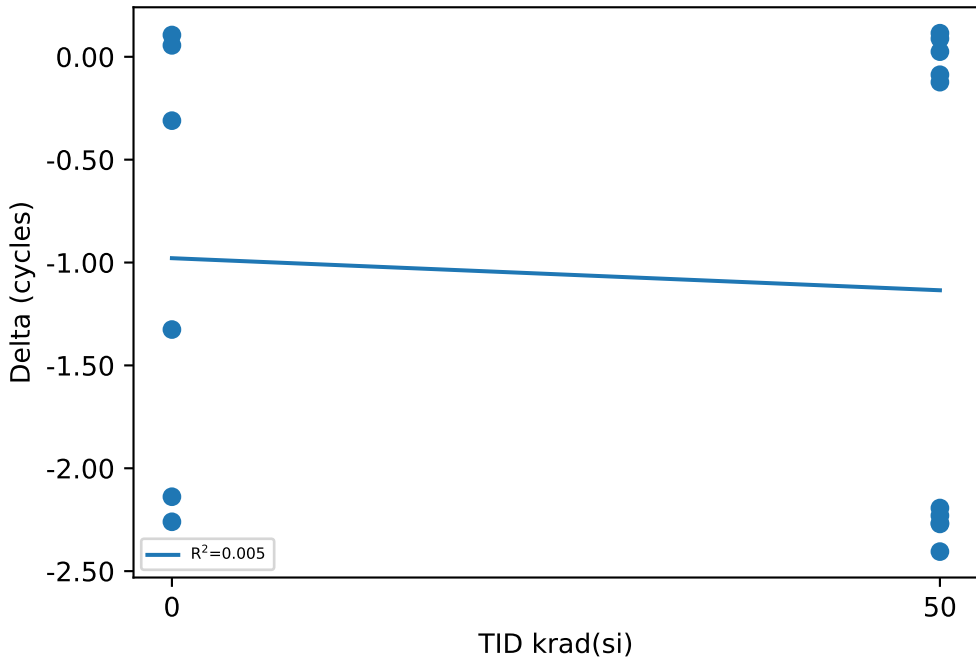
TID vs Result Stats



Test Results (Upper Limit = 5.0 (cycles))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.5928	3.7075	0.1147
4	50	HDR Biased w/ 84hr anneal	3.5609	3.5859	0.025
6	50	HDR Biased w/ 84hr anneal	3.4584	3.3351	-0.1233
8	50	HDR Biased w/ 84hr anneal	3.5741	3.4869	-0.0872
9	50	HDR Biased w/ 84hr anneal	3.4943	3.5828	0.0885
10	50	HDR unbiased	3.5834	1.3164	-2.267
11	50	HDR unbiased	3.3867	1.1935	-2.1932
12	50	HDR unbiased	3.6777	1.2727	-2.405
13	50	HDR unbiased	3.4652	1.1948	-2.2704
14	50	HDR unbiased	3.543	1.313	-2.23
26	0	Correlation	3.6295	3.3191	-0.3104
27	0	Correlation	3.5134	3.6193	0.1059
28	0	Correlation	3.5775	2.2518	-1.3257
29	0	Correlation	3.4561	3.5117	0.0556
30	0	Correlation	3.5912	1.4529	-2.1383
32	0	Correlation	3.5322	1.2721	-2.2601

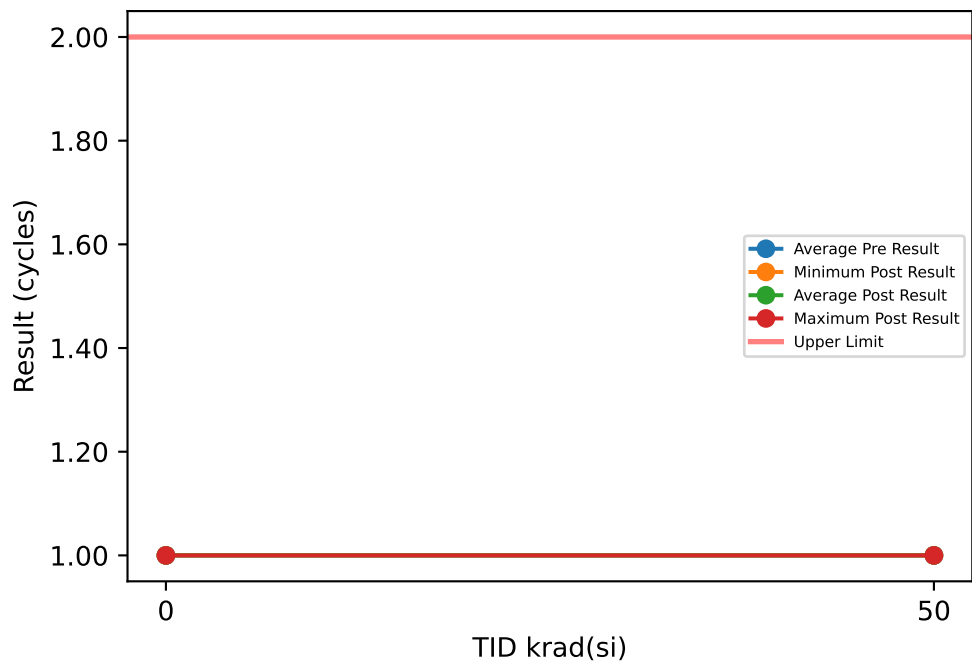
TID vs Post - Pre Exposure Delta



Test Statistics (cycles)

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	3.4561	3.55	3.6295	0.062044	1.2721	2.5711	3.6193	1.0567	-2.2601	-0.97883	0.1059	1.077
50	3.3867	3.5337	3.6777	0.083454	1.1935	2.3989	3.7075	1.2067	-2.405	-1.1348	0.1147	1.2031

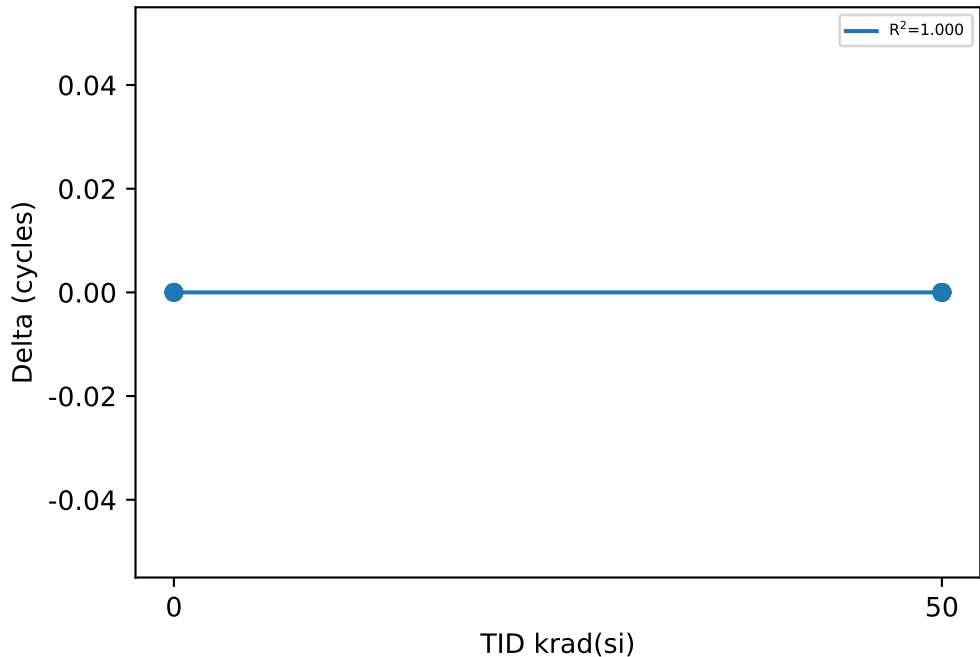
TID vs Result Stats



Test Results (Upper Limit = 2.0 (cycles))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1	1	0
4	50	HDR Biased w/ 84hr anneal	1	1	0
6	50	HDR Biased w/ 84hr anneal	1	1	0
8	50	HDR Biased w/ 84hr anneal	1	1	0
9	50	HDR Biased w/ 84hr anneal	1	1	0
10	50	HDR unbiased	1	1	0
11	50	HDR unbiased	1	1	0
12	50	HDR unbiased	1	1	0
13	50	HDR unbiased	1	1	0
14	50	HDR unbiased	1	1	0
26	0	Correlation	1	1	0
27	0	Correlation	1	1	0
28	0	Correlation	1	1	0
29	0	Correlation	1	1	0
30	0	Correlation	1	1	0
32	0	Correlation	1	1	0

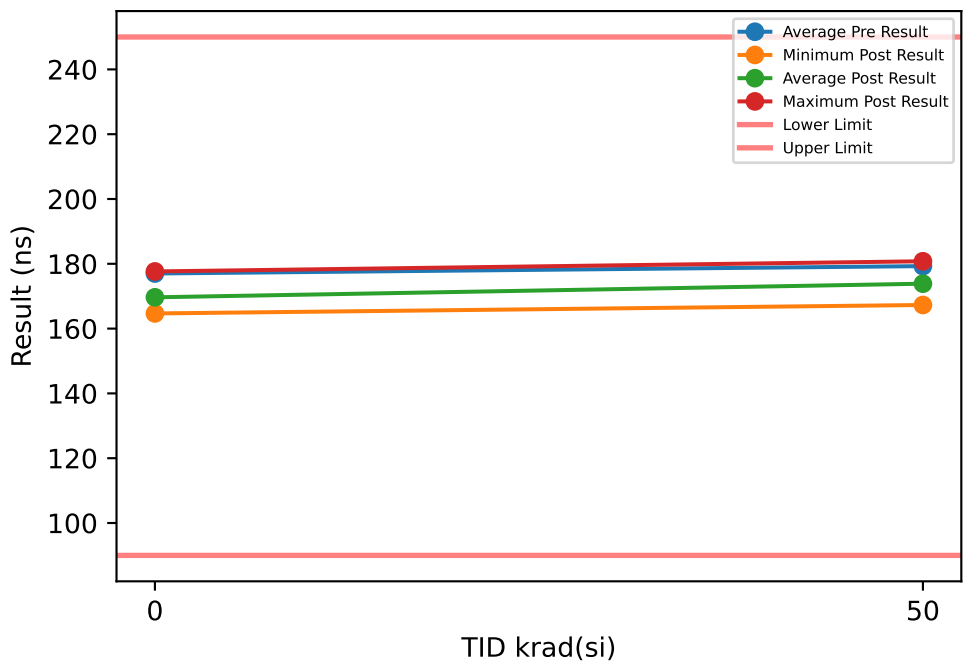
TID vs Post - Pre Exposure Delta



Test Statistics (cycles)

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	1	1	0	1	1	1	0	0	0	0	0
50	1	1	1	0	1	1	1	0	0	0	0	0

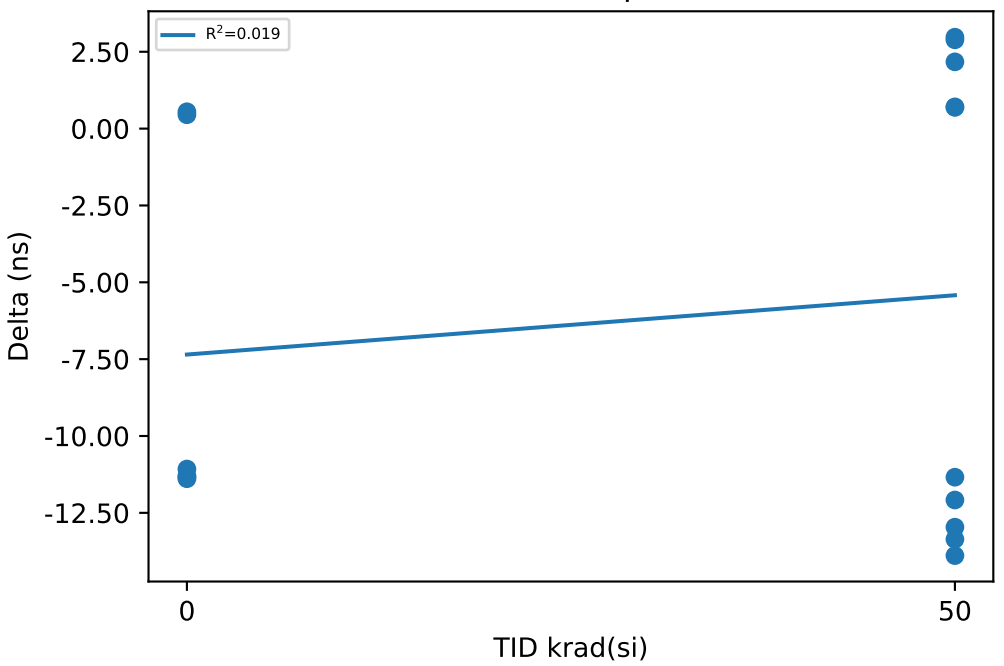
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 250.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	178.16	180.33	2.1718
4	50	HDR Biased w/ 84hr anneal	177.81	180.78	2.9739
6	50	HDR Biased w/ 84hr anneal	179.22	179.91	0.6913
8	50	HDR Biased w/ 84hr anneal	172.04	172.74	0.7069
9	50	HDR Biased w/ 84hr anneal	171.67	174.56	2.8886
10	50	HDR unbiased	184.81	173.47	-11.341
11	50	HDR unbiased	183.58	170.62	-12.966
12	50	HDR unbiased	181.68	167.79	-13.891
13	50	HDR unbiased	183.18	171.1	-12.082
14	50	HDR unbiased	180.64	167.28	-13.359
26	0	Correlation	179.02	167.94	-11.075
27	0	Correlation	177.1	177.64	0.5483
28	0	Correlation	177.5	166.11	-11.389
29	0	Correlation	176.2	176.65	0.4515
30	0	Correlation	175.97	164.67	-11.295
32	0	Correlation	176.25	164.91	-11.341

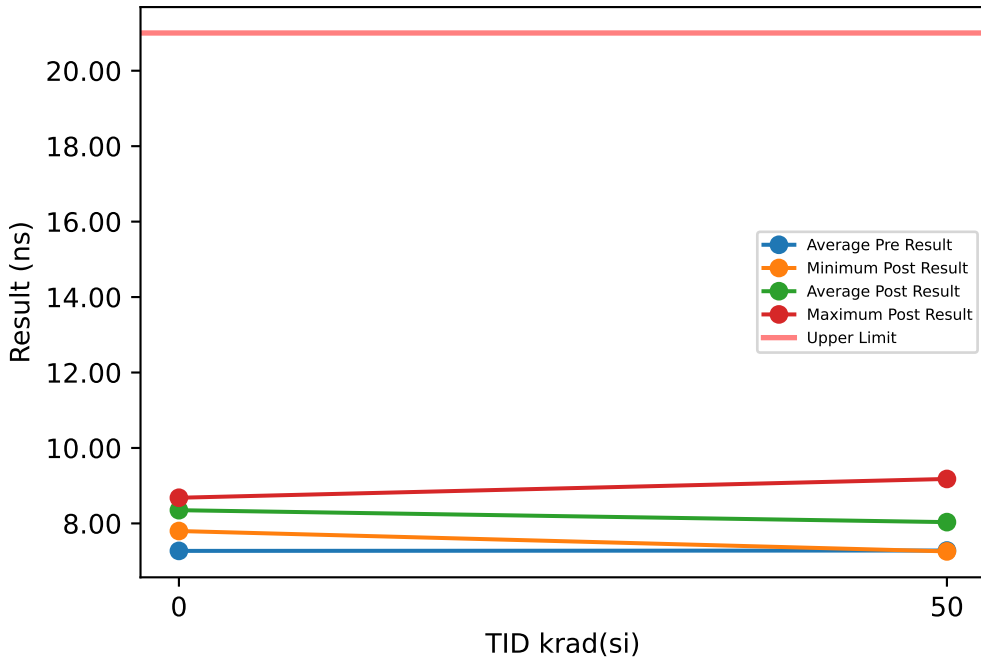
TID vs Post - Pre Exposure Delta



Test Statistics (ns)

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	175.97	177.01	179.02	1.1486	164.67	169.66	177.64	5.926	-11.389	-7.3501	0.5483	6.0816
50	171.67	179.28	184.81	4.5432	167.28	173.86	180.78	5.0165	-13.891	-5.4207	2.9739	7.7688

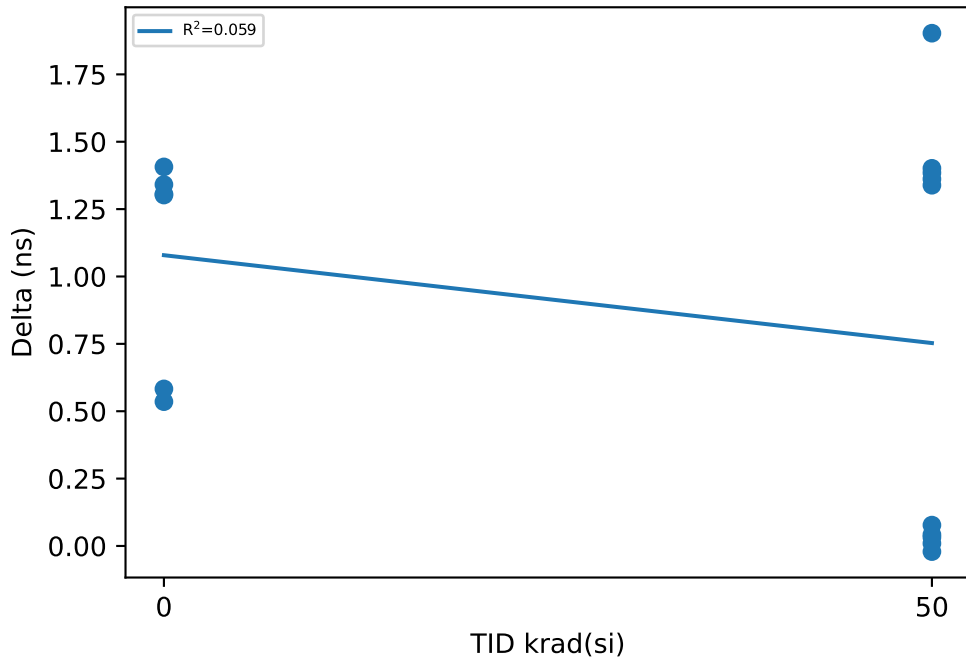
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.2296	7.2617	0.0321
4	50	HDR Biased w/ 84hr anneal	7.2792	7.2583	-0.0209
6	50	HDR Biased w/ 84hr anneal	7.2195	7.2969	0.0774
8	50	HDR Biased w/ 84hr anneal	7.272	7.3141	0.0421
9	50	HDR Biased w/ 84hr anneal	7.2961	7.3055	0.0094
10	50	HDR unbiased	7.3467	8.7084	1.3617
11	50	HDR unbiased	7.2759	9.1787	1.9028
12	50	HDR unbiased	7.3237	8.7085	1.3848
13	50	HDR unbiased	7.3177	8.6563	1.3386
14	50	HDR unbiased	7.2528	8.6542	1.4014
26	0	Correlation	7.2746	8.5768	1.3022
27	0	Correlation	7.2629	7.7984	0.5355
28	0	Correlation	7.3028	8.6086	1.3058
29	0	Correlation	7.2478	7.8306	0.5828
30	0	Correlation	7.2681	8.6092	1.3411
32	0	Correlation	7.2737	8.6803	1.4066

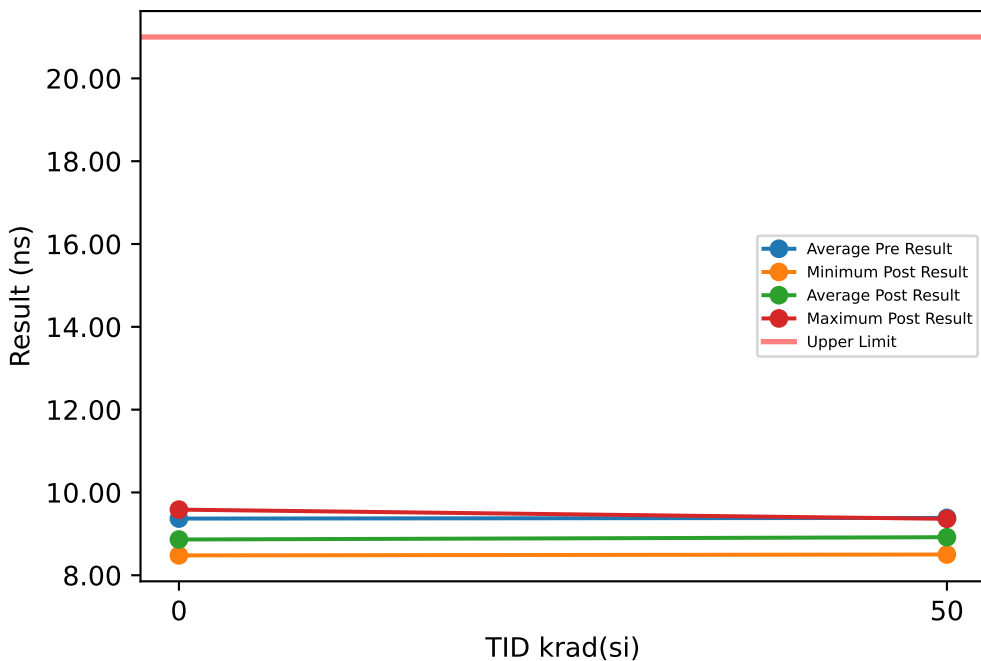
TID vs Post - Pre Exposure Delta



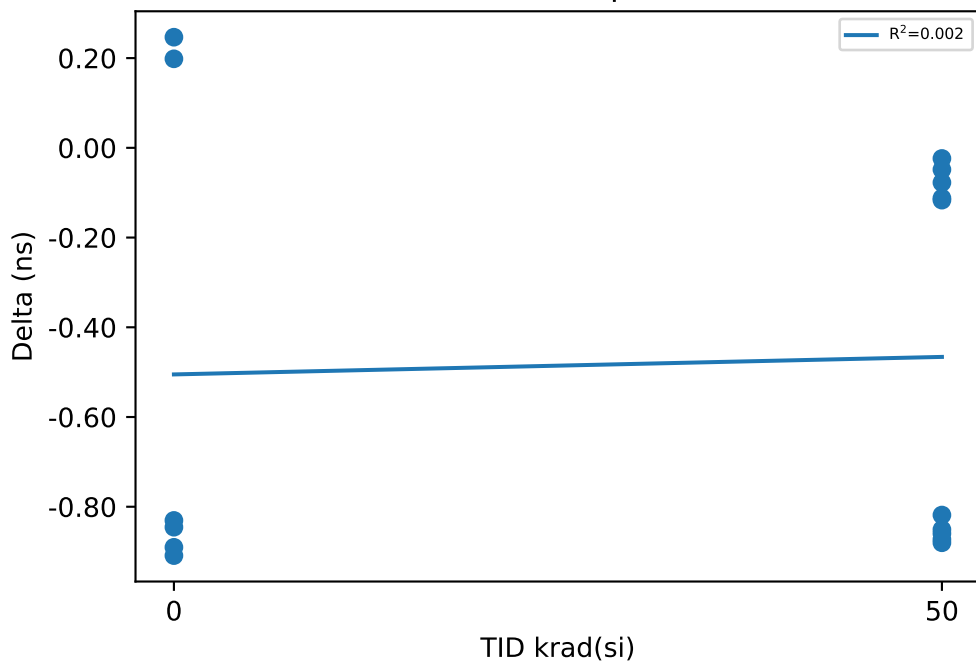
Test Statistics (ns)

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	7.2478	7.2717	7.3028	0.018117	7.7984	8.3506	8.6803	0.4168	0.5355	1.079	1.4066	0.40469
50	7.2195	7.2813	7.3467	0.040884	7.2583	8.0343	9.1787	0.80156	-0.0209	0.75294	1.9028	0.78091

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 21.0 (ns))

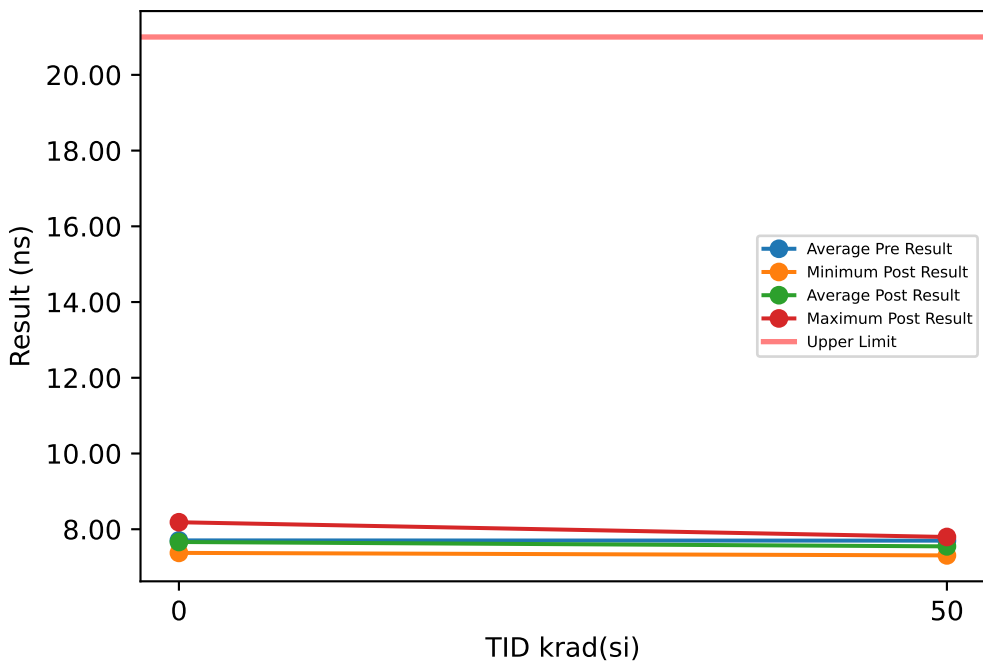
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	9.3667	9.3183	-0.0484
4	50	HDR Biased w/ 84hr anneal	9.3957	9.2791	-0.1166
6	50	HDR Biased w/ 84hr anneal	9.3303	9.2182	-0.1121
8	50	HDR Biased w/ 84hr anneal	9.3571	9.3334	-0.0237
9	50	HDR Biased w/ 84hr anneal	9.4401	9.3627	-0.0774
10	50	HDR unbiased	9.4021	8.5836	-0.8185
11	50	HDR unbiased	9.4037	8.5234	-0.8803
12	50	HDR unbiased	9.4128	8.54	-0.8728
13	50	HDR unbiased	9.3517	8.5009	-0.8508
14	50	HDR unbiased	9.3877	8.5281	-0.8596
26	0	Correlation	9.3615	8.5159	-0.8456
27	0	Correlation	9.3865	9.5849	0.1984
28	0	Correlation	9.3884	8.4795	-0.9089
29	0	Correlation	9.3379	9.5845	0.2466
30	0	Correlation	9.3923	8.5019	-0.8904
32	0	Correlation	9.345	8.5145	-0.8305

Test Statistics (ns)

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	9.3379	9.3686	9.3923	0.023766	8.4795	8.8635	9.5849	0.55877	-0.9089	-0.50507	0.2466	0.5645
50	9.3303	9.3848	9.4401	0.032976	8.5009	8.9188	9.3627	0.40654	-0.8803	-0.46602	-0.0237	0.41268



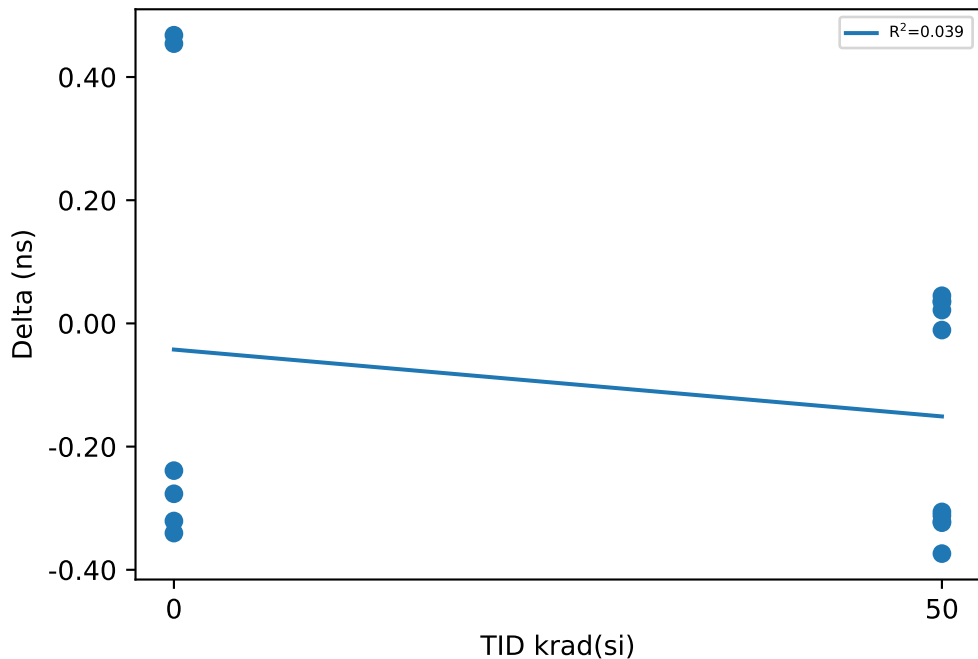
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.6911	7.7127	0.0216
4	50	HDR Biased w/ 84hr anneal	7.6787	7.6679	-0.0108
6	50	HDR Biased w/ 84hr anneal	7.7282	7.7628	0.0346
8	50	HDR Biased w/ 84hr anneal	7.7091	7.754	0.0449
9	50	HDR Biased w/ 84hr anneal	7.7592	7.7955	0.0363
10	50	HDR unbiased	7.716	7.3944	-0.3216
11	50	HDR unbiased	7.6637	7.3577	-0.306
12	50	HDR unbiased	7.6828	7.3091	-0.3737
13	50	HDR unbiased	7.6771	7.3652	-0.3119
14	50	HDR unbiased	7.6807	7.3572	-0.3235
26	0	Correlation	7.6145	7.3755	-0.239
27	0	Correlation	7.7081	8.1623	0.4542
28	0	Correlation	7.7281	7.4515	-0.2766
29	0	Correlation	7.7168	8.1847	0.4679
30	0	Correlation	7.7656	7.4252	-0.3404
32	0	Correlation	7.6984	7.3776	-0.3208

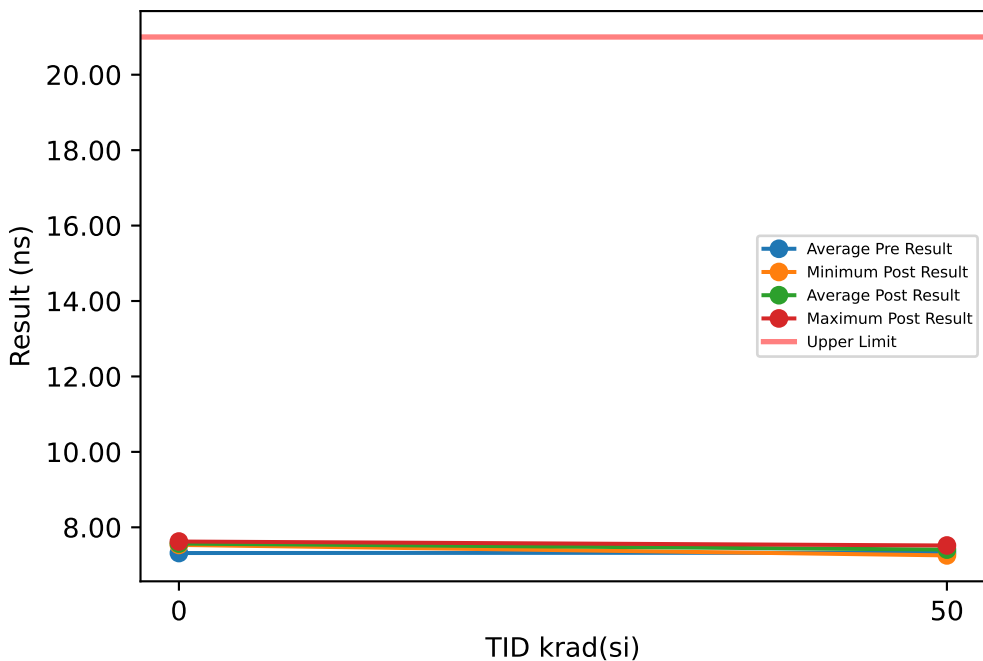
TID vs Post - Pre Exposure Delta



Test Statistics (ns)

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	7.6145	7.7052	7.7656	0.050176	7.3755	7.6628	8.1847	0.3967	-0.3404	-0.04245	0.4679	0.39162
50	7.6637	7.6987	7.7592	0.029182	7.3091	7.5476	7.7955	0.20495	-0.3737	-0.15101	0.0449	0.1873

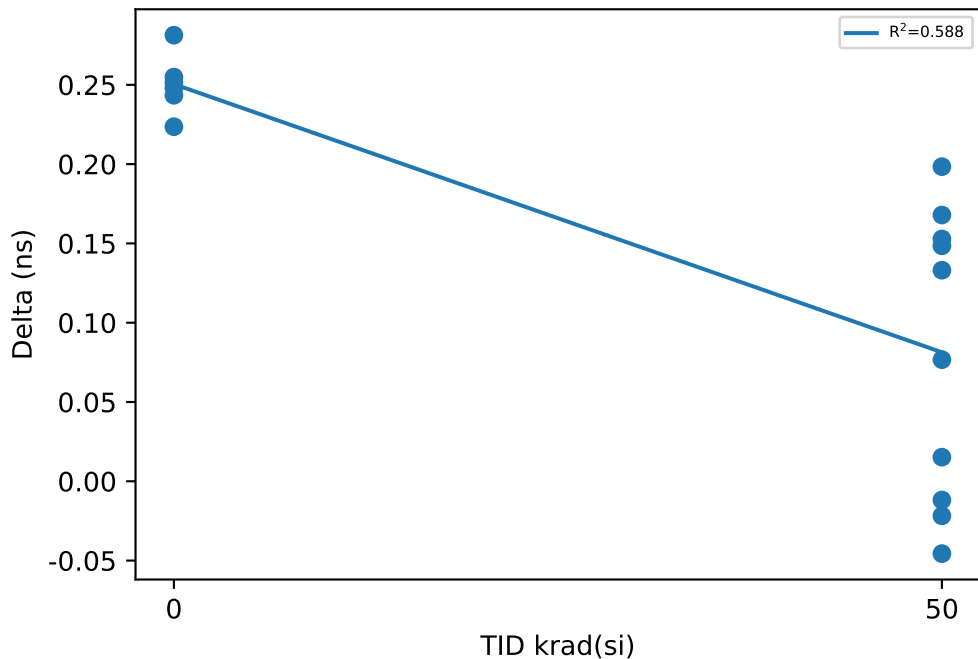
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.2931	7.3083	0.0152
4	50	HDR Biased w/ 84hr anneal	7.2672	7.2554	-0.0118
6	50	HDR Biased w/ 84hr anneal	7.3745	7.3289	-0.0456
8	50	HDR Biased w/ 84hr anneal	7.2956	7.3723	0.0767
9	50	HDR Biased w/ 84hr anneal	7.3954	7.3736	-0.0218
10	50	HDR unbiased	7.3698	7.5183	0.1485
11	50	HDR unbiased	7.2978	7.4962	0.1984
12	50	HDR unbiased	7.3145	7.4824	0.1679
13	50	HDR unbiased	7.3172	7.47	0.1528
14	50	HDR unbiased	7.352	7.4851	0.1331
26	0	Correlation	7.2696	7.5509	0.2813
27	0	Correlation	7.2951	7.55	0.2549
28	0	Correlation	7.3202	7.5716	0.2514
29	0	Correlation	7.3344	7.5825	0.2481
30	0	Correlation	7.3799	7.6233	0.2434
32	0	Correlation	7.3092	7.5328	0.2236

TID vs Post - Pre Exposure Delta



Test Statistics (ns)

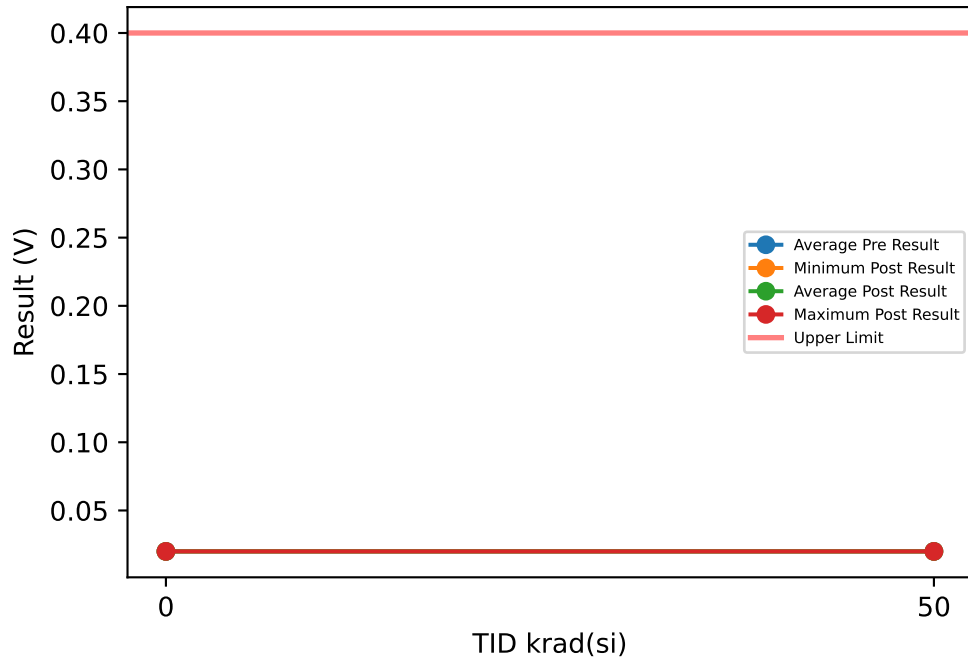
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	7.2696	7.3181	7.3799	0.037549	7.5328	7.5685	7.6233	0.032047	0.2236	0.25045	0.2813	0.018701
50	7.2672	7.3277	7.3954	0.04243	7.2554	7.4091	7.5183	0.092616	-0.0456	0.08134	0.1984	0.090255





Device Test: 24.64 SYNC\_OUT\_LOW(\_LEVELS|VOL/SYNC1/5//511k//@SYNC\_OUT\_LOW )

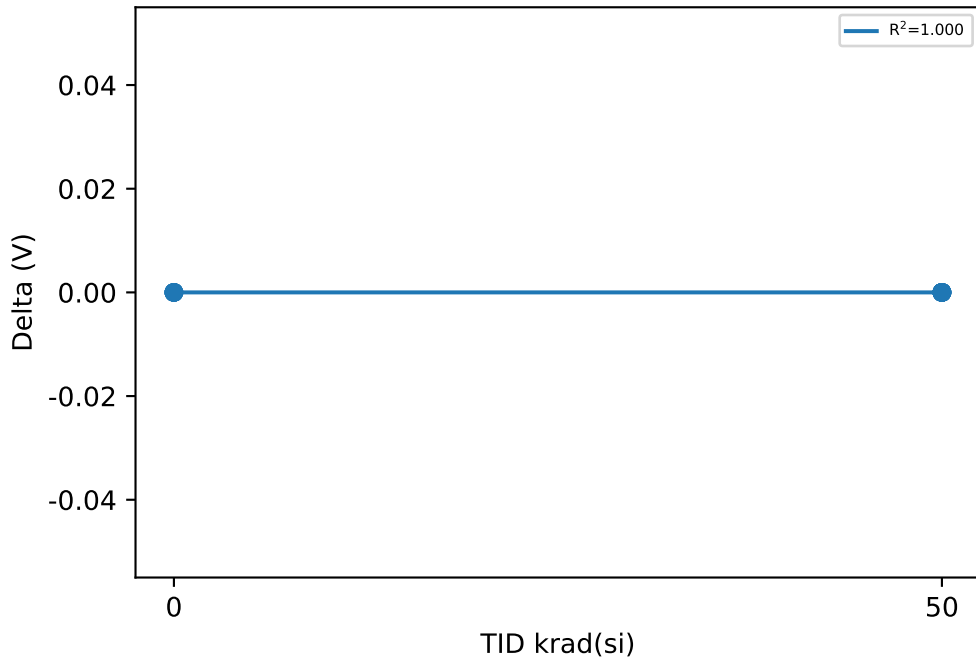
TID vs Result Stats



Test Results (Upper Limit = 0.4 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	0

TID vs Post - Pre Exposure Delta

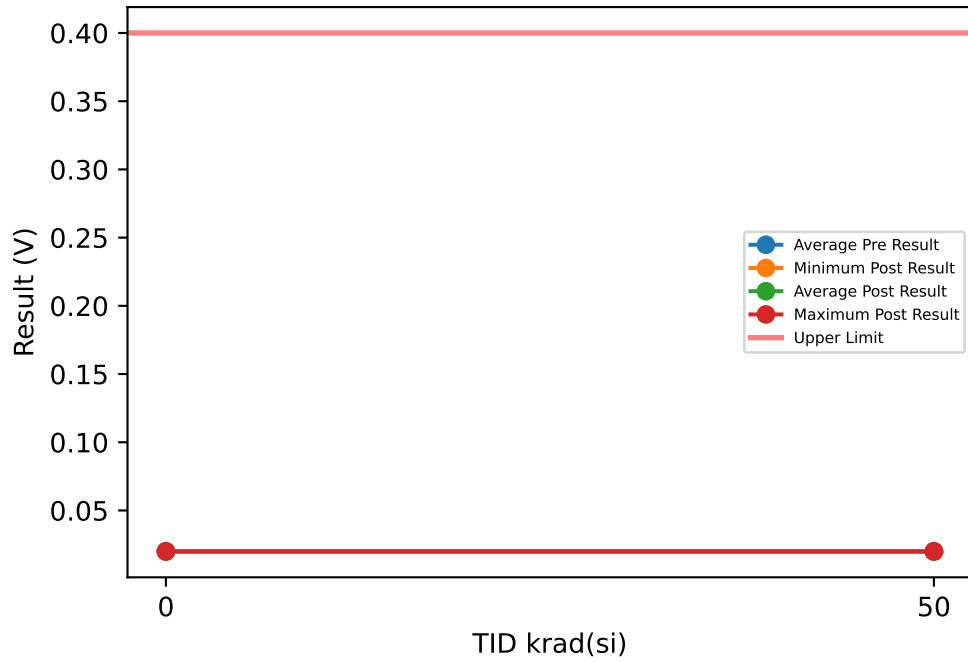


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0

Device Test: 24.65 SYNC\_OUT\_LOW(\_LEVELS|VOL/SYNC2/5//511k//@SYNC\_OUT\_LOW )

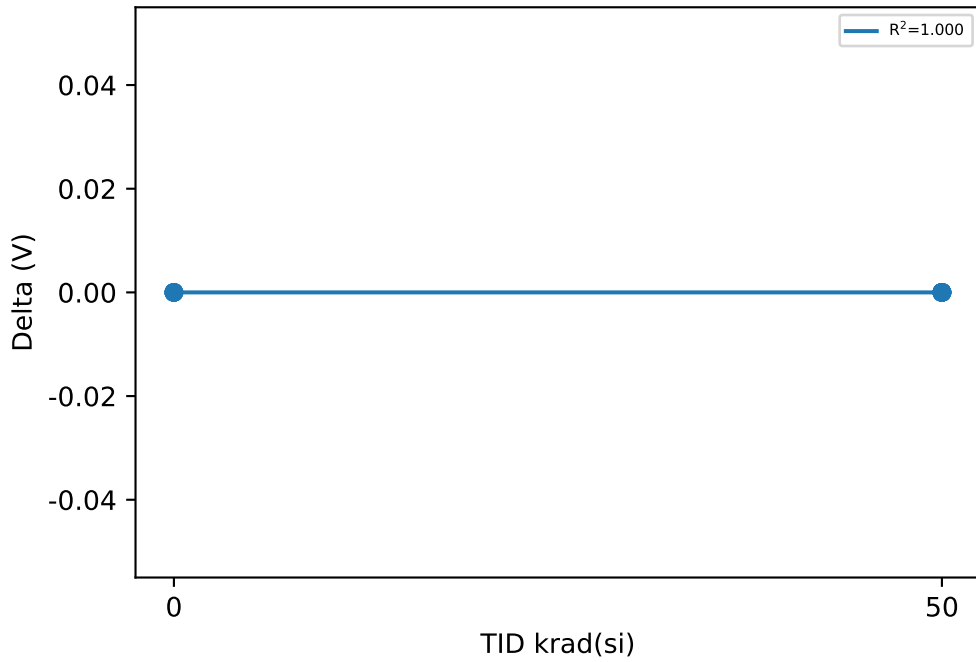
TID vs Result Stats



Test Results (Upper Limit = 0.4 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
4	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
6	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
8	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
9	50	HDR Biased w/ 84hr anneal	0.02	0.02	0
10	50	HDR unbiased	0.02	0.02	0
11	50	HDR unbiased	0.02	0.02	0
12	50	HDR unbiased	0.02	0.02	0
13	50	HDR unbiased	0.02	0.02	0
14	50	HDR unbiased	0.02	0.02	0
26	0	Correlation	0.02	0.02	0
27	0	Correlation	0.02	0.02	0
28	0	Correlation	0.02	0.02	0
29	0	Correlation	0.02	0.02	0
30	0	Correlation	0.02	0.02	0
32	0	Correlation	0.02	0.02	0

TID vs Post - Pre Exposure Delta

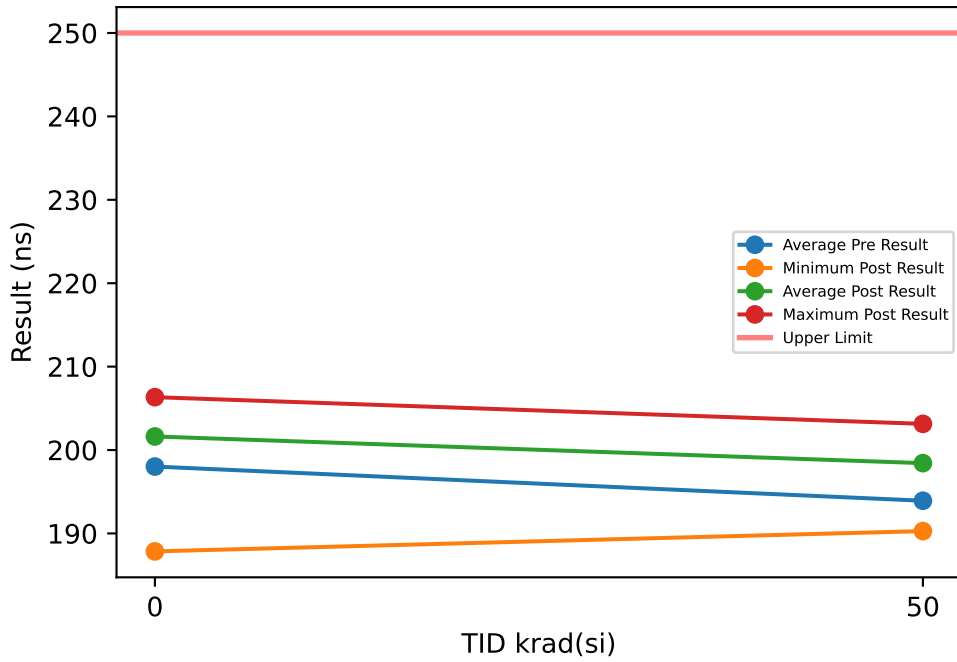


Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0
50	0.02	0.02	0.02	0	0.02	0.02	0.02	0	0	0	0	0

Device Test: 24.71 ON\_TIME\_MIN\_5V(\_TIMING|MINON/SW/5//511k//@ON\_TIME\_MIN\_5V )

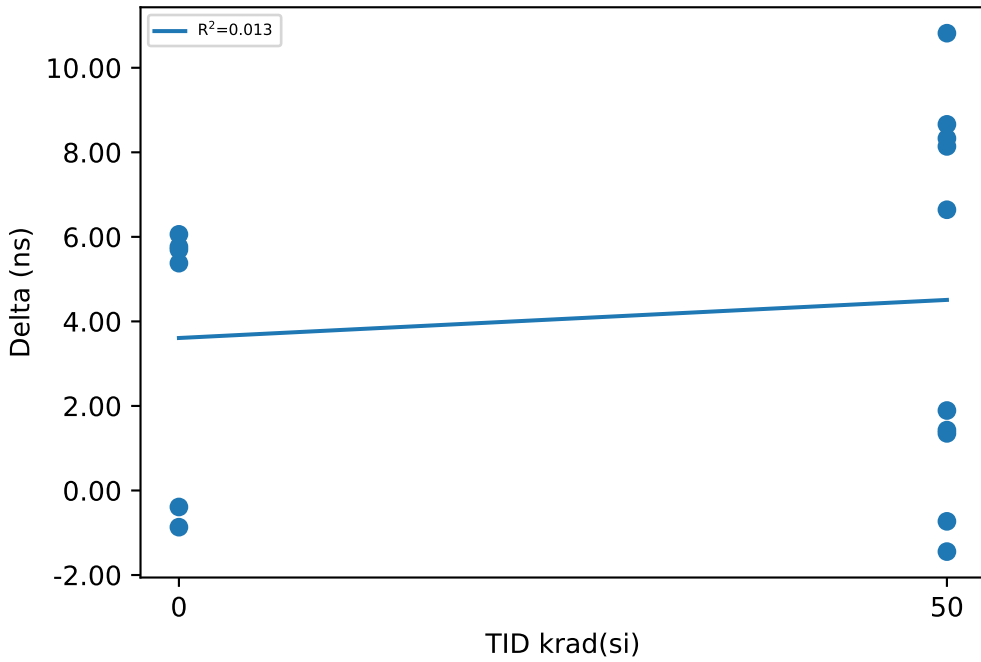
TID vs Result Stats



Test Results (Upper Limit = 250.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	197.04	198.93	1.8919
4	50	HDR Biased w/ 84hr anneal	196.11	197.54	1.4286
6	50	HDR Biased w/ 84hr anneal	195.76	195.03	-0.7301
8	50	HDR Biased w/ 84hr anneal	197.69	199.04	1.3509
9	50	HDR Biased w/ 84hr anneal	191.73	190.28	-1.4457
10	50	HDR unbiased	194.48	203.14	8.6616
11	50	HDR unbiased	192.31	198.95	6.6414
12	50	HDR unbiased	190.52	201.34	10.818
13	50	HDR unbiased	191.4	199.73	8.3295
14	50	HDR unbiased	192.18	200.32	8.1397
26	0	Correlation	197.26	202.96	5.6978
27	0	Correlation	188.71	187.85	-0.8679
28	0	Correlation	200.33	206.1	5.7669
29	0	Correlation	201.81	201.42	-0.3902
30	0	Correlation	200.96	206.34	5.3772
32	0	Correlation	199.03	205.09	6.0598

TID vs Post - Pre Exposure Delta



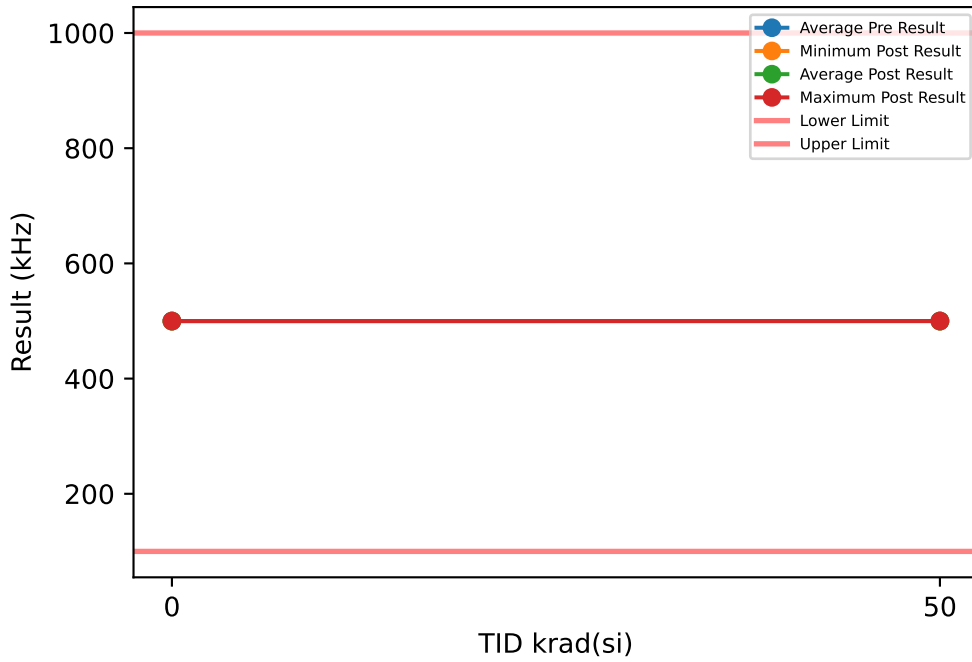
Test Statistics (ns)

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	188.71	198.02	201.81	4.8284	187.85	201.63	206.34	7.0126	-0.8679	3.6073	6.0598	3.2921
50	190.52	193.92	197.69	2.5982	190.28	198.43	203.14	3.5837	-1.4457	4.5086	10.818	4.4546





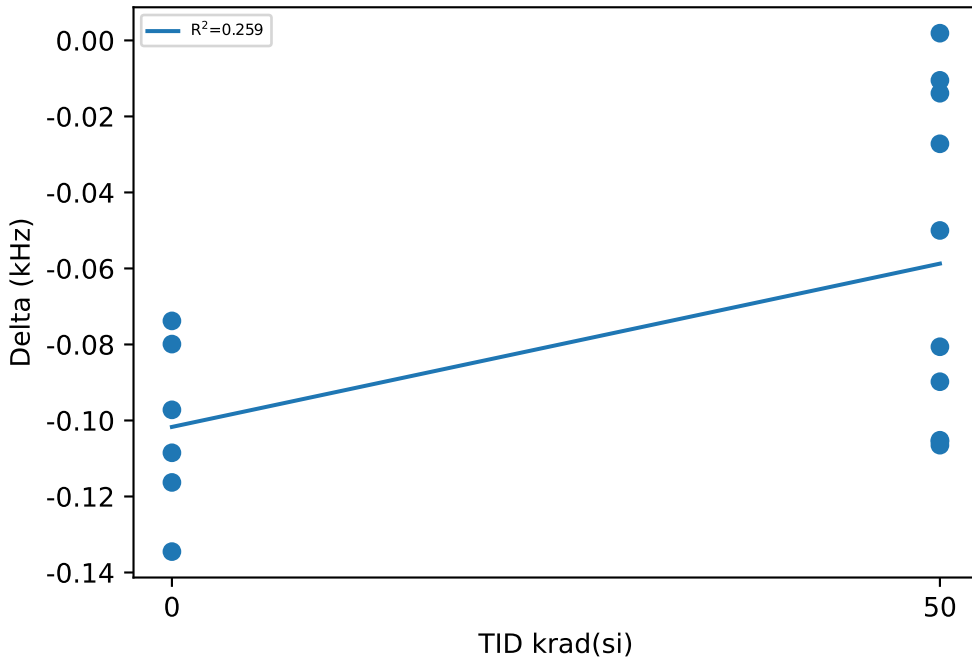
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	499.98	499.95	-0.0272
4	50	HDR Biased w/ 84hr anneal	499.96	499.95	-0.0105
6	50	HDR Biased w/ 84hr anneal	499.97	499.95	-0.0139
8	50	HDR Biased w/ 84hr anneal	499.94	499.94	0.0019
9	50	HDR Biased w/ 84hr anneal	499.98	499.93	-0.05
10	50	HDR unbiased	499.97	499.87	-0.1055
11	50	HDR unbiased	499.96	499.85	-0.1052
12	50	HDR unbiased	499.97	499.86	-0.1065
13	50	HDR unbiased	499.95	499.86	-0.0898
14	50	HDR unbiased	499.94	499.86	-0.0806
26	0	Correlation	499.96	499.86	-0.0972
27	0	Correlation	499.96	499.82	-0.1345
28	0	Correlation	499.98	499.87	-0.1085
29	0	Correlation	499.97	499.85	-0.1163
30	0	Correlation	499.96	499.88	-0.0738
32	0	Correlation	499.95	499.87	-0.0799

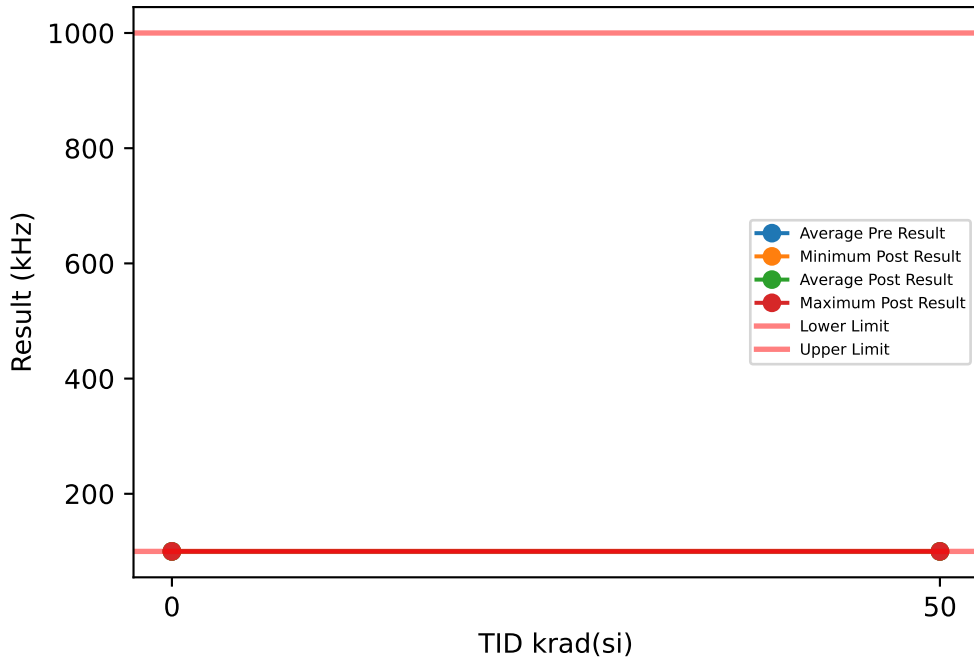
TID vs Post - Pre Exposure Delta



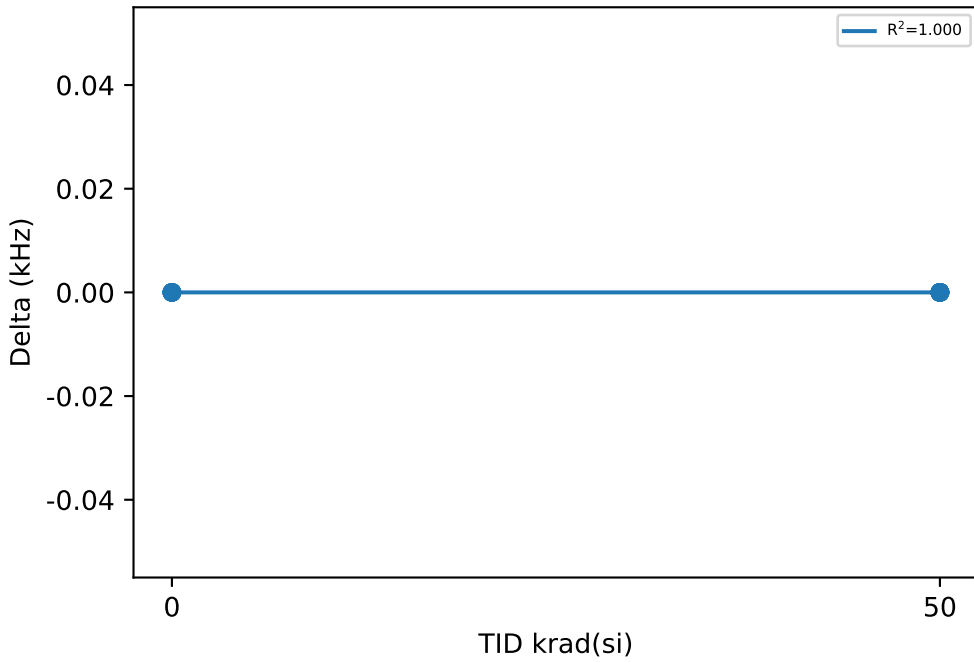
Test Statistics (kHz)

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	499.95	499.96	499.98	0.0089649	499.82	499.86	499.88	0.019976	-0.1345	-0.1017	-0.0738	0.022844
50	499.94	499.96	499.98	0.014109	499.85	499.9	499.95	0.045634	-0.1065	-0.05873	0.0019	0.043659

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

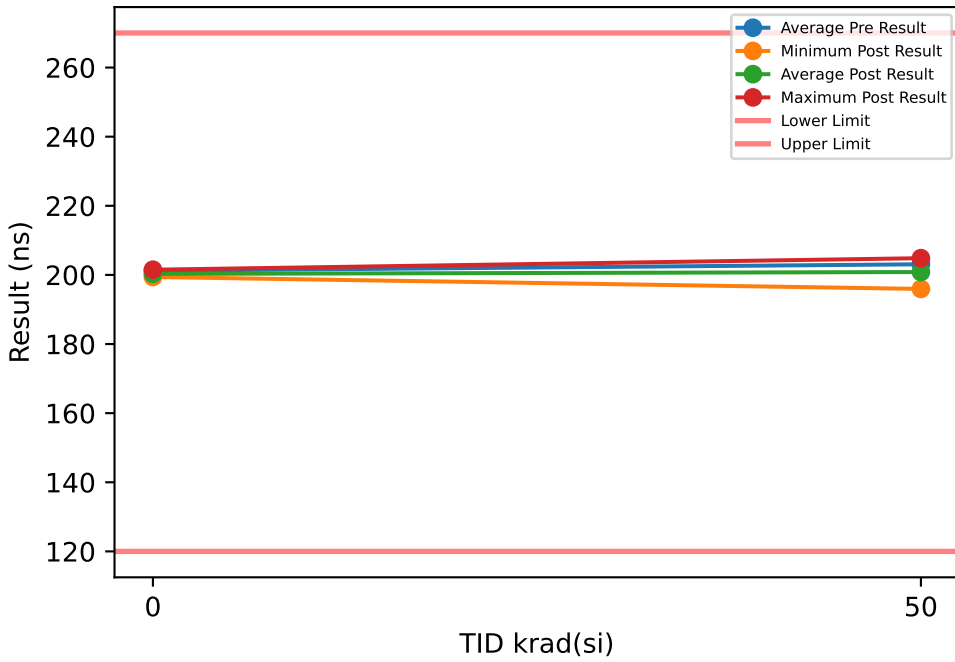
Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	100	100	0
4	50	HDR Biased w/ 84hr anneal	100	100	0
6	50	HDR Biased w/ 84hr anneal	100	100	0
8	50	HDR Biased w/ 84hr anneal	100	100	0
9	50	HDR Biased w/ 84hr anneal	100	100	0
10	50	HDR unbiased	100	100	0
11	50	HDR unbiased	100	100	0
12	50	HDR unbiased	100	100	0
13	50	HDR unbiased	100	100	0
14	50	HDR unbiased	100	100	0
26	0	Correlation	100	100	0
27	0	Correlation	100	100	0
28	0	Correlation	100	100	0
29	0	Correlation	100	100	0
30	0	Correlation	100	100	0
32	0	Correlation	100	100	0

Test Statistics (kHz)

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	100	100	100	0	100	100	100	0	0	0	0	0
50	100	100	100	0	100	100	100	0	0	0	0	0

Device Test: 24.82 SYNC1\_SW\_DELAY(\_TIMING|DELAY/SYNC1/12//OPEN//@SYNC1\_SW\_DELAY )

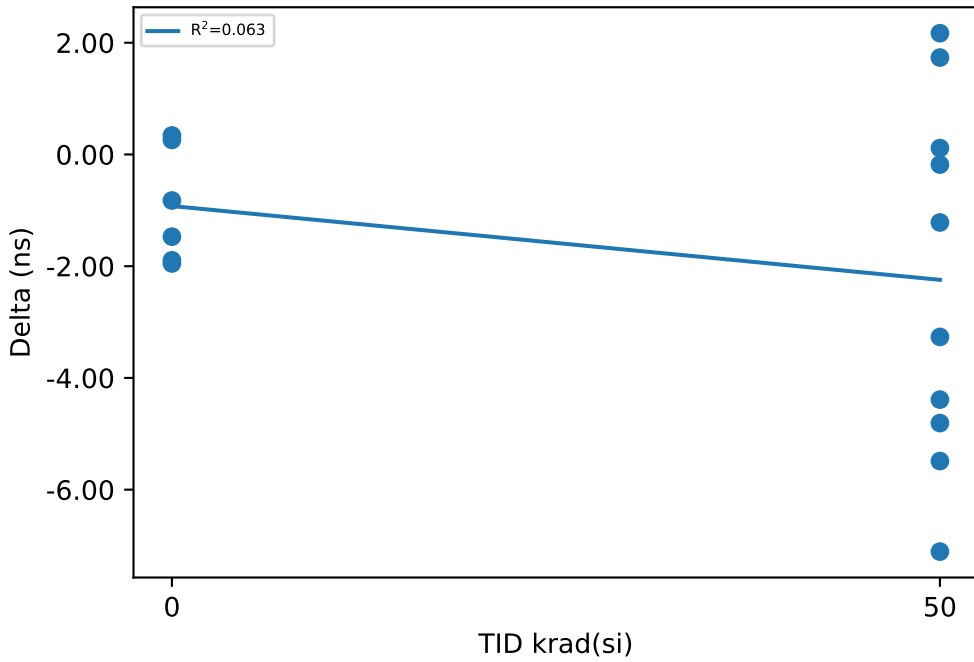
TID vs Result Stats



Test Results (Lower Limit = 120.0, Upper Limit = 270.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	203.11	204.84	1.7347
4	50	HDR Biased w/ 84hr anneal	201.15	200.96	-0.1813
6	50	HDR Biased w/ 84hr anneal	203.7	202.49	-1.2175
8	50	HDR Biased w/ 84hr anneal	195.83	195.94	0.1135
9	50	HDR Biased w/ 84hr anneal	196.08	198.25	2.1706
10	50	HDR unbiased	208.7	204.31	-4.3884
11	50	HDR unbiased	207.91	202.43	-5.4879
12	50	HDR unbiased	203.67	196.56	-7.1086
13	50	HDR unbiased	206.62	203.36	-3.2662
14	50	HDR unbiased	204.01	199.2	-4.8081
26	0	Correlation	202.98	201.08	-1.8946
27	0	Correlation	200.34	200.6	0.2606
28	0	Correlation	200.28	199.46	-0.8239
29	0	Correlation	201.17	201.51	0.3404
30	0	Correlation	200.87	199.4	-1.4712
32	0	Correlation	201.64	199.69	-1.9512

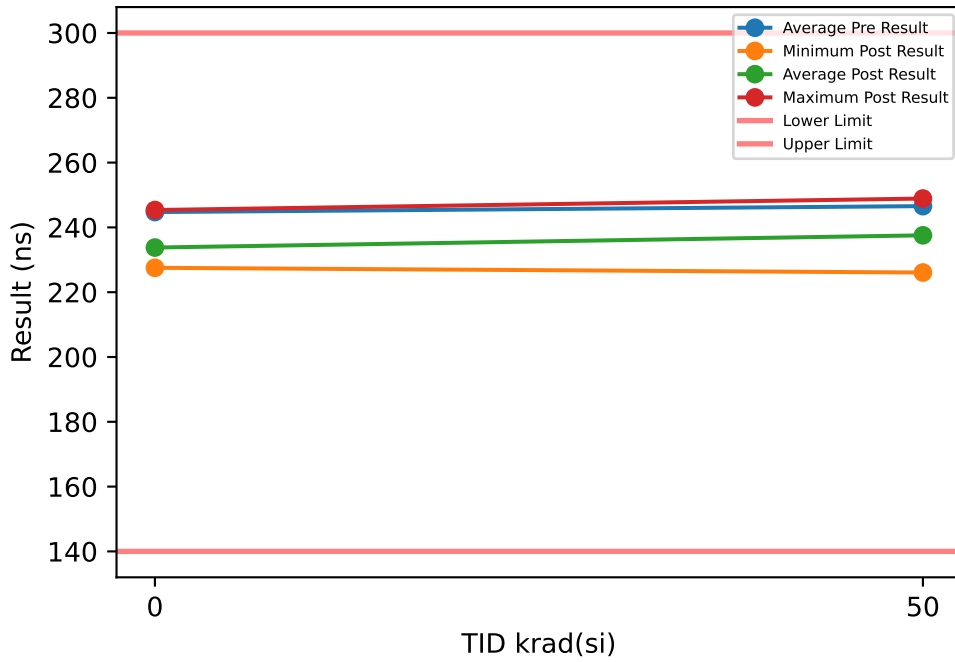
TID vs Post - Pre Exposure Delta



Test Statistics (ns)

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	200.28	201.21	202.98	1.0054	199.4	200.29	201.51	0.90146	-1.9512	-0.92332	0.3404	1.0304
50	195.83	203.08	208.7	4.4018	195.94	200.83	204.84	3.1846	-7.1086	-2.2439	2.1706	3.2075

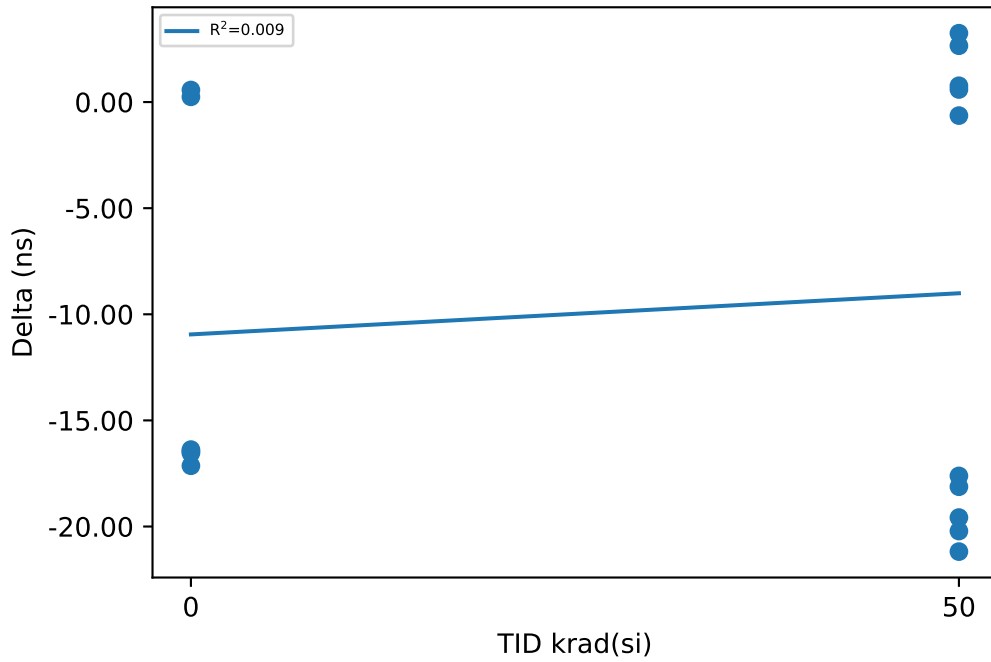
TID vs Result Stats



Test Results (Lower Limit = 140.0, Upper Limit = 300.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	246.25	248.91	2.6537
4	50	HDR Biased w/ 84hr anneal	244.17	244.77	0.5917
6	50	HDR Biased w/ 84hr anneal	247.5	246.86	-0.6378
8	50	HDR Biased w/ 84hr anneal	240.31	241.08	0.7682
9	50	HDR Biased w/ 84hr anneal	239.9	243.15	3.2447
10	50	HDR unbiased	251.66	233.54	-18.125
11	50	HDR unbiased	251.62	231.41	-20.214
12	50	HDR unbiased	247.26	226.07	-21.182
13	50	HDR unbiased	249.53	231.91	-17.616
14	50	HDR unbiased	247.4	227.82	-19.577
26	0	Correlation	246.25	229.79	-16.456
27	0	Correlation	243.09	243.34	0.2458
28	0	Correlation	243.91	227.53	-16.375
29	0	Correlation	244.79	245.36	0.5687
30	0	Correlation	245.27	228.13	-17.137
32	0	Correlation	245.08	228.54	-16.538

TID vs Post - Pre Exposure Delta

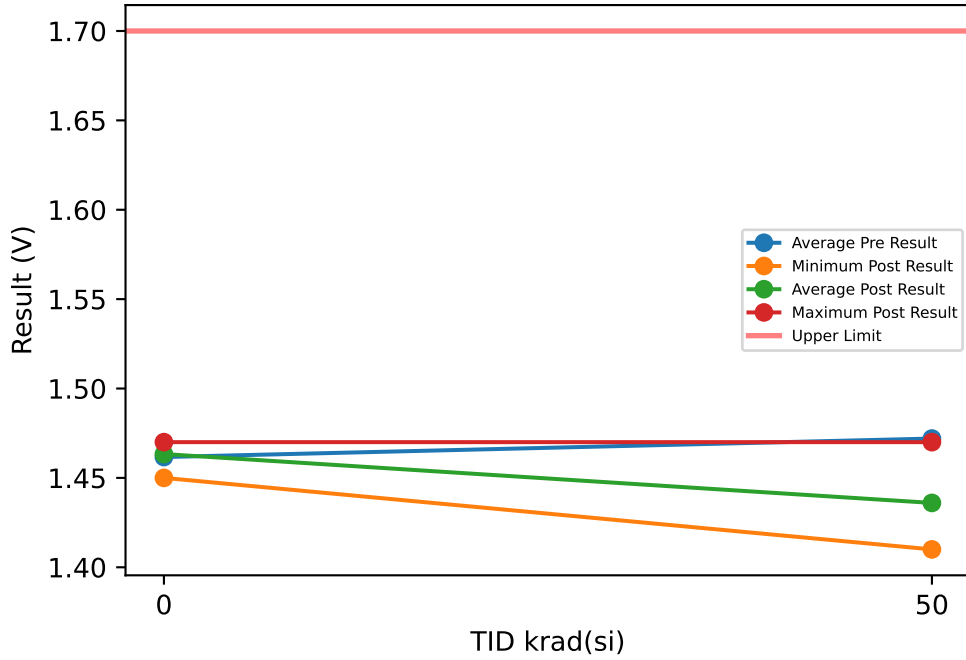


Test Statistics (ns)

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	243.09	244.73	246.25	1.103	227.53	233.78	245.36	8.2435	-17.137	-10.949	0.5687	8.8008
50	239.9	246.56	251.66	4.1049	226.07	237.55	248.91	8.3228	-21.182	-9.0093	3.2447	10.988

# Device Test: 24.84 SYNC1\_VIH(\_THRESHOLD|RISE/SYNC1/12//OPEN//@SYNC1\_VIH )

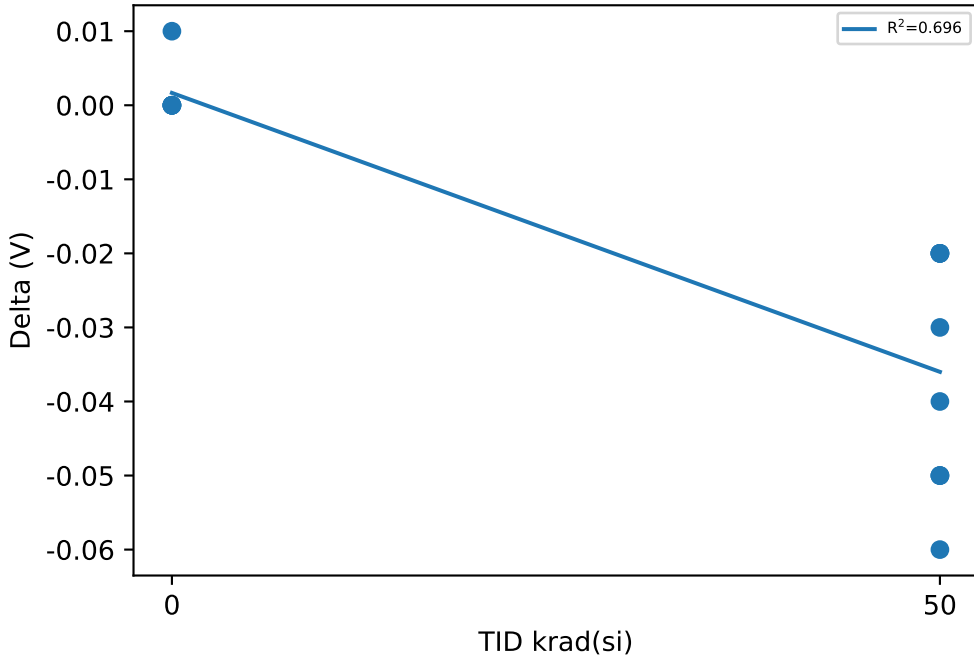
### TID vs Result Stats



### Test Results (Upper Limit = 1.7 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.48	1.46	-0.02
4	50	HDR Biased w/ 84hr anneal	1.49	1.47	-0.02
6	50	HDR Biased w/ 84hr anneal	1.48	1.46	-0.02
8	50	HDR Biased w/ 84hr anneal	1.45	1.43	-0.02
9	50	HDR Biased w/ 84hr anneal	1.47	1.44	-0.03
10	50	HDR unbiased	1.46	1.41	-0.05
11	50	HDR unbiased	1.47	1.42	-0.05
12	50	HDR unbiased	1.48	1.42	-0.06
13	50	HDR unbiased	1.47	1.42	-0.05
14	50	HDR unbiased	1.47	1.43	-0.04
26	0	Correlation	1.46	1.46	0
27	0	Correlation	1.47	1.47	0
28	0	Correlation	1.47	1.47	0
29	0	Correlation	1.47	1.47	0
30	0	Correlation	1.45	1.46	0.01
32	0	Correlation	1.45	1.45	0

### TID vs Post - Pre Exposure Delta

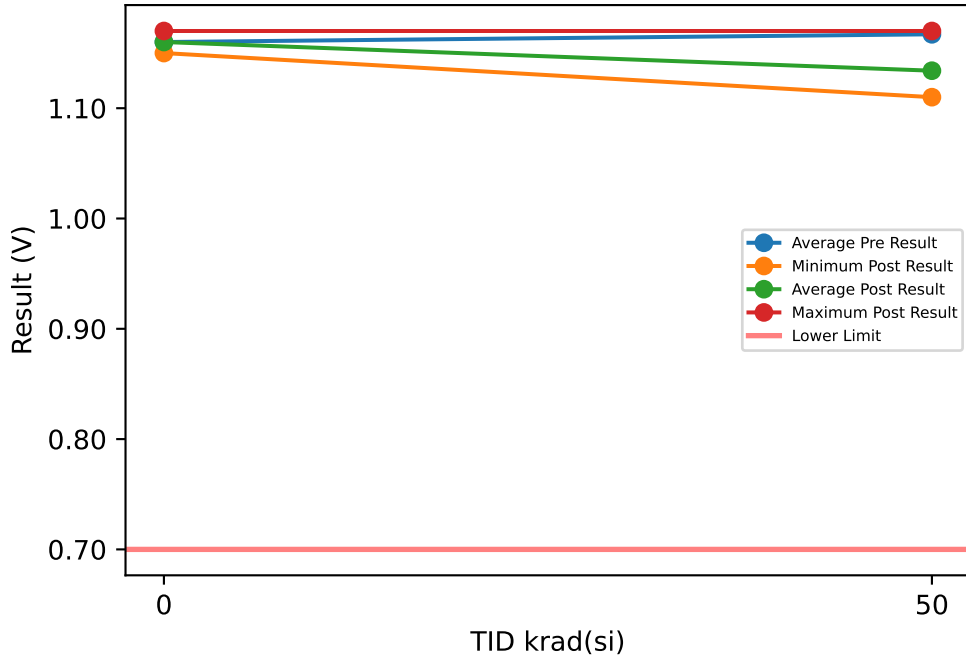


### Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.45	1.4617	1.47	0.0098319	1.45	1.4633	1.47	0.008165	0	0.0016667	0.01	0.0040825
50	1.45	1.472	1.49	0.011353	1.41	1.436	1.47	0.020656	-0.06	-0.036	-0.02	0.015776

Device Test: 24.85 SYNC1\_VIL(\_THRESHOLD|FALL/SYNC1/12//OPEN//@SYNC1\_VIL )

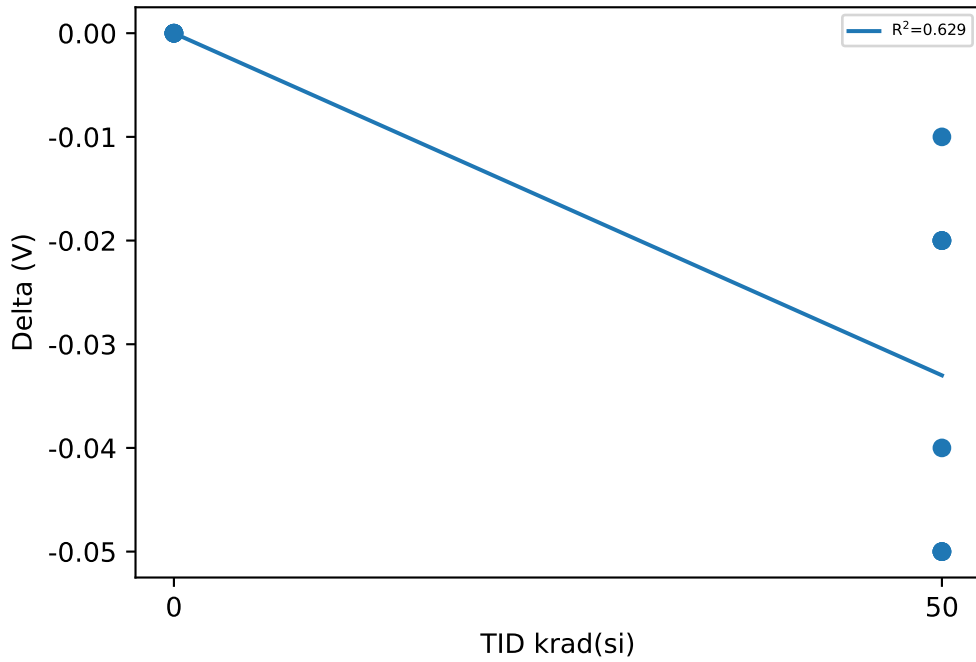
TID vs Result Stats



Test Results (Lower Limit = 0.7 (V))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
4	50	HDR Biased w/ 84hr anneal	1.18	1.17	-0.01
6	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
8	50	HDR Biased w/ 84hr anneal	1.15	1.13	-0.02
9	50	HDR Biased w/ 84hr anneal	1.17	1.15	-0.02
10	50	HDR unbiased	1.16	1.11	-0.05
11	50	HDR unbiased	1.17	1.12	-0.05
12	50	HDR unbiased	1.17	1.12	-0.05
13	50	HDR unbiased	1.16	1.11	-0.05
14	50	HDR unbiased	1.17	1.13	-0.04
26	0	Correlation	1.16	1.16	0
27	0	Correlation	1.17	1.17	0
28	0	Correlation	1.16	1.16	0
29	0	Correlation	1.17	1.17	0
30	0	Correlation	1.15	1.15	0
32	0	Correlation	1.15	1.15	0

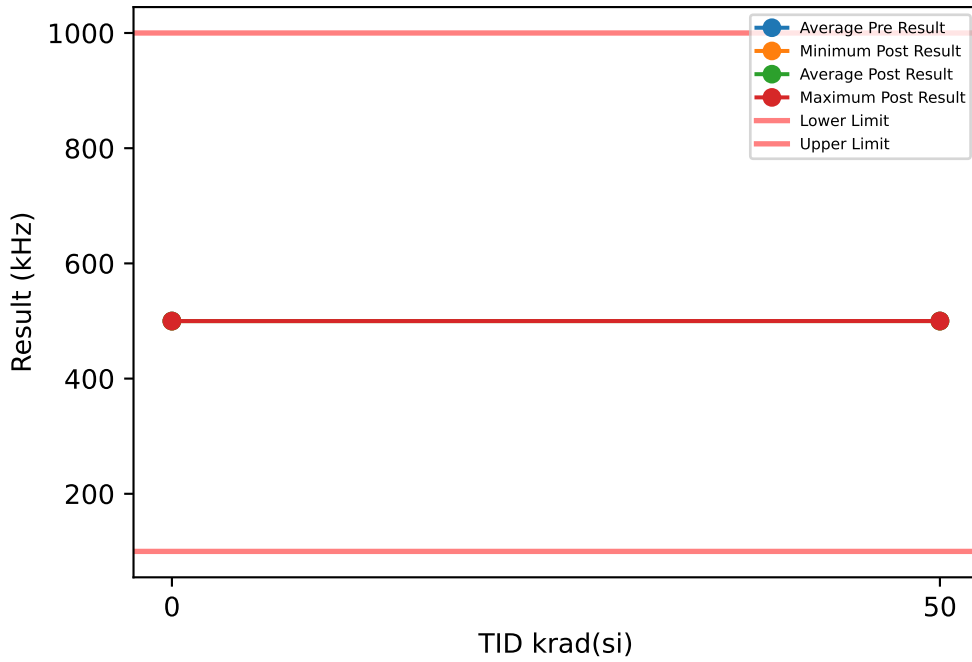
TID vs Post - Pre Exposure Delta



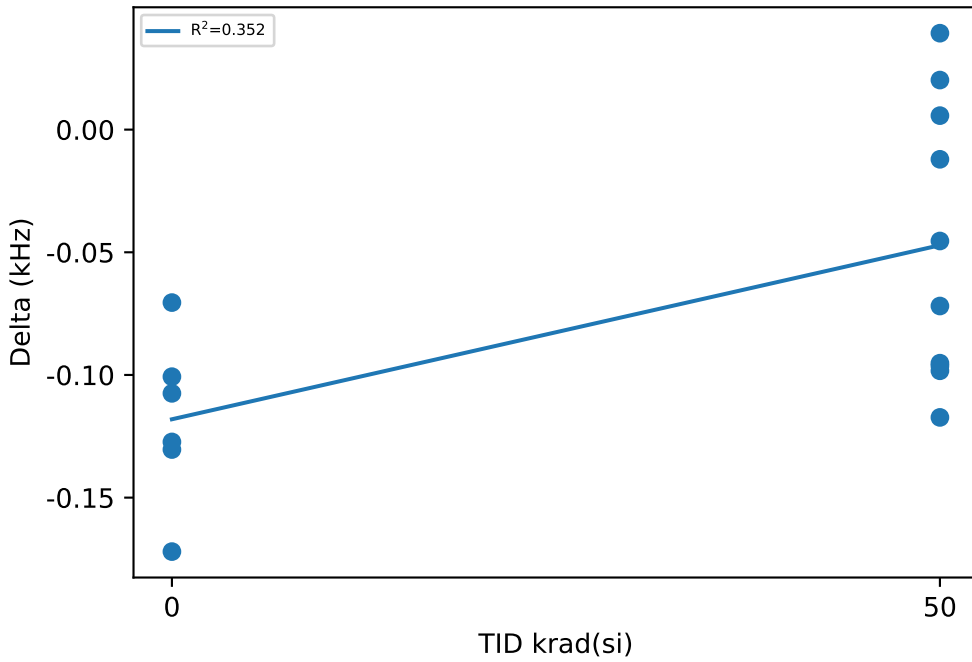
Test Statistics (V)

krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.15	1.16	1.17	0.0089443	1.15	1.16	1.17	0.0089443	0	0	0	0
50	1.15	1.167	1.18	0.0082327	1.11	1.134	1.17	0.020111	-0.05	-0.033	-0.01	0.016364

TID vs Result Stats



TID vs Post - Pre Exposure Delta



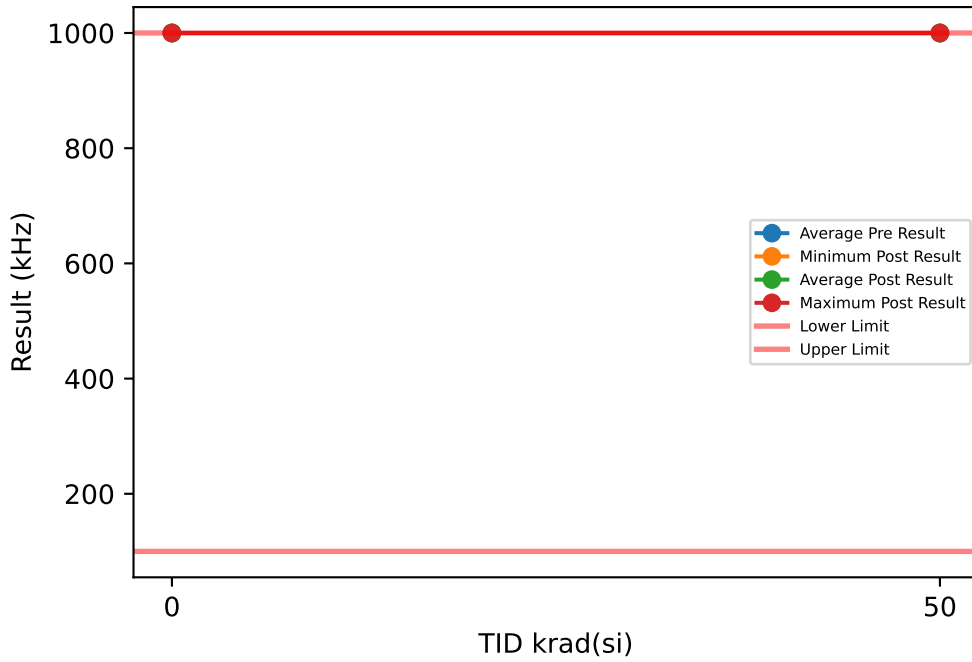
Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	499.95	499.95	0.0057
4	50	HDR Biased w/ 84hr anneal	499.94	499.96	0.0202
6	50	HDR Biased w/ 84hr anneal	499.98	499.93	-0.0454
8	50	HDR Biased w/ 84hr anneal	499.94	499.98	0.0393
9	50	HDR Biased w/ 84hr anneal	499.96	499.95	-0.0121
10	50	HDR unbiased	499.96	499.86	-0.0983
11	50	HDR unbiased	499.94	499.86	-0.0719
12	50	HDR unbiased	499.97	499.85	-0.1173
13	50	HDR unbiased	499.96	499.87	-0.0963
14	50	HDR unbiased	499.95	499.86	-0.0952
26	0	Correlation	499.97	499.86	-0.1075
27	0	Correlation	499.97	499.84	-0.1273
28	0	Correlation	499.97	499.84	-0.1304
29	0	Correlation	500	499.83	-0.172
30	0	Correlation	499.96	499.86	-0.1007
32	0	Correlation	499.96	499.89	-0.0705

Test Statistics (kHz)

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	499.96	499.97	500	0.016788	499.83	499.85	499.89	0.02042	-0.172	-0.11807	-0.0705	0.034123
50	499.94	499.95	499.98	0.014738	499.85	499.91	499.98	0.050462	-0.1173	-0.04713	0.0393	0.056675

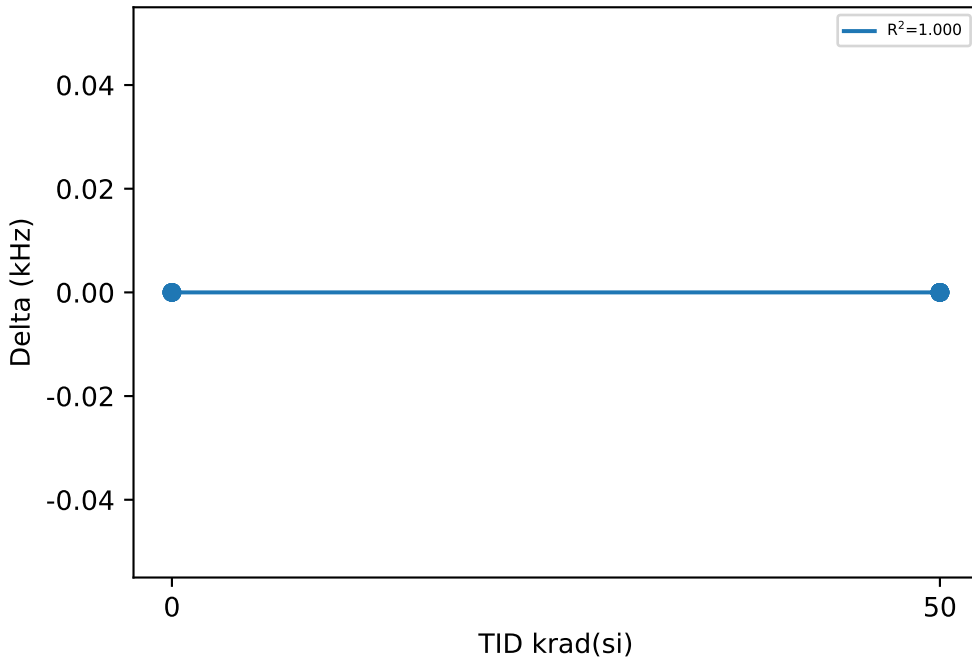
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1000	1000	0
4	50	HDR Biased w/ 84hr anneal	1000	1000	0
6	50	HDR Biased w/ 84hr anneal	1000	1000	0
8	50	HDR Biased w/ 84hr anneal	1000	1000	0
9	50	HDR Biased w/ 84hr anneal	1000	1000	0
10	50	HDR unbiased	1000	1000	0
11	50	HDR unbiased	1000	1000	0
12	50	HDR unbiased	1000	1000	0
13	50	HDR unbiased	1000	1000	0
14	50	HDR unbiased	1000	1000	0
26	0	Correlation	1000	1000	0
27	0	Correlation	1000	1000	0
28	0	Correlation	1000	1000	0
29	0	Correlation	1000	1000	0
30	0	Correlation	1000	1000	0
32	0	Correlation	1000	1000	0

TID vs Post - Pre Exposure Delta

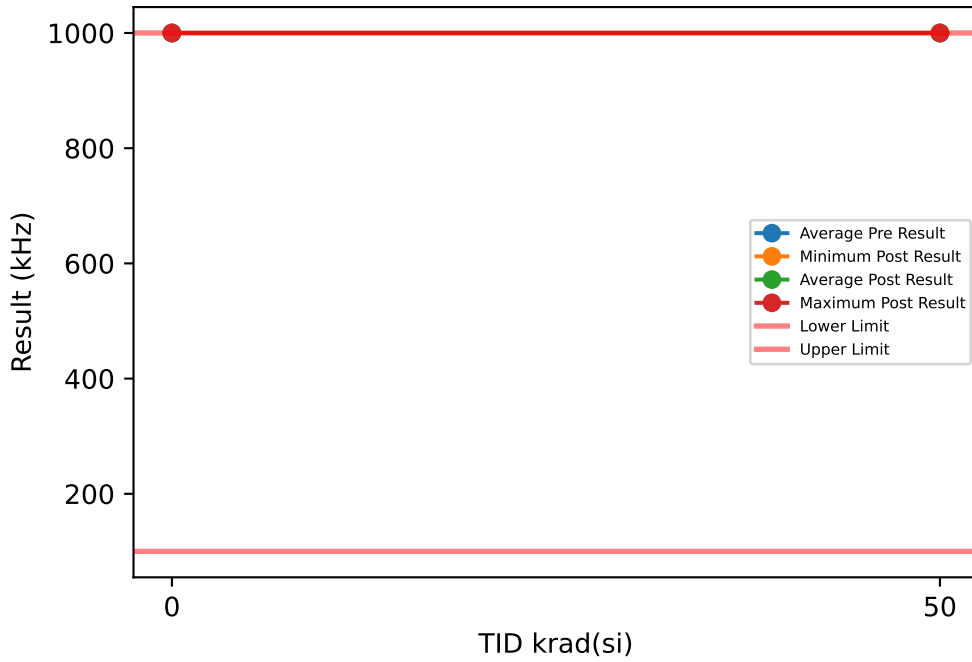


Test Statistics (kHz)

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	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0
50	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0



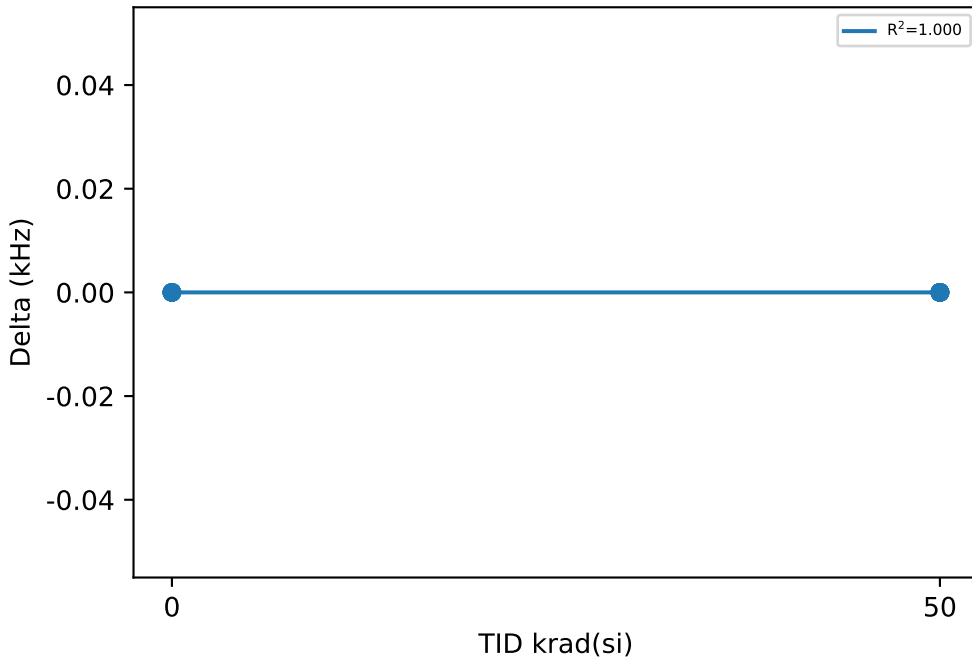
TID vs Result Stats



Test Results (Lower Limit = 100.0, Upper Limit = 1000.0 (kHz))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1000	1000	0
4	50	HDR Biased w/ 84hr anneal	1000	1000	0
6	50	HDR Biased w/ 84hr anneal	1000	1000	0
8	50	HDR Biased w/ 84hr anneal	1000	1000	0
9	50	HDR Biased w/ 84hr anneal	1000	1000	0
10	50	HDR unbiased	1000	1000	0
11	50	HDR unbiased	1000	1000	0
12	50	HDR unbiased	1000	1000	0
13	50	HDR unbiased	1000	1000	0
14	50	HDR unbiased	1000	1000	0
26	0	Correlation	1000	1000	0
27	0	Correlation	1000	1000	0
28	0	Correlation	1000	1000	0
29	0	Correlation	1000	1000	0
30	0	Correlation	1000	1000	0
32	0	Correlation	1000	1000	0

TID vs Post - Pre Exposure Delta

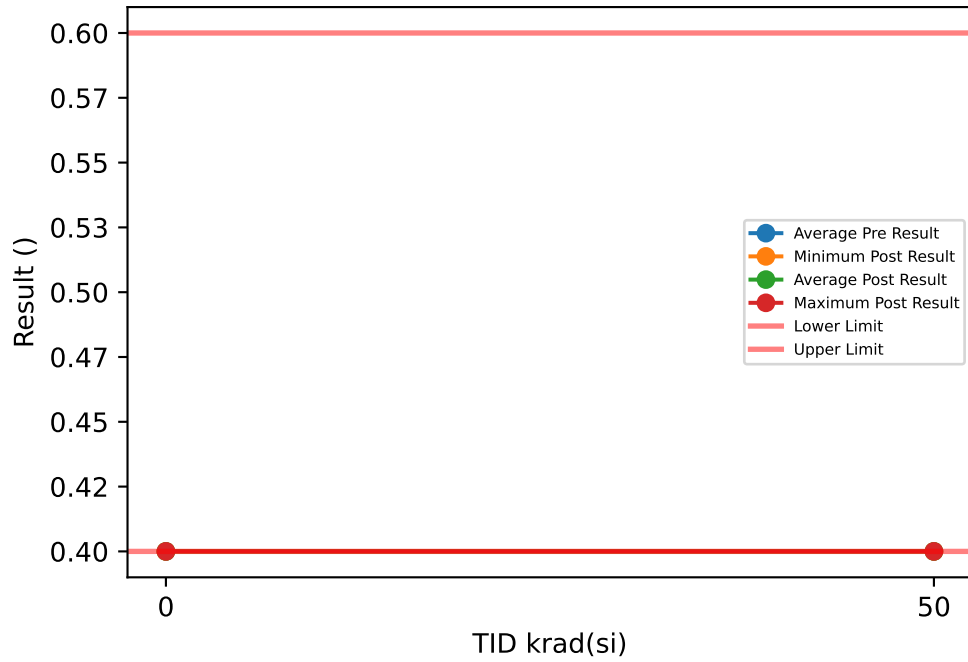


Test Statistics (kHz)

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	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0
50	1000	1000	1000	0	1000	1000	1000	0	0	0	0	0



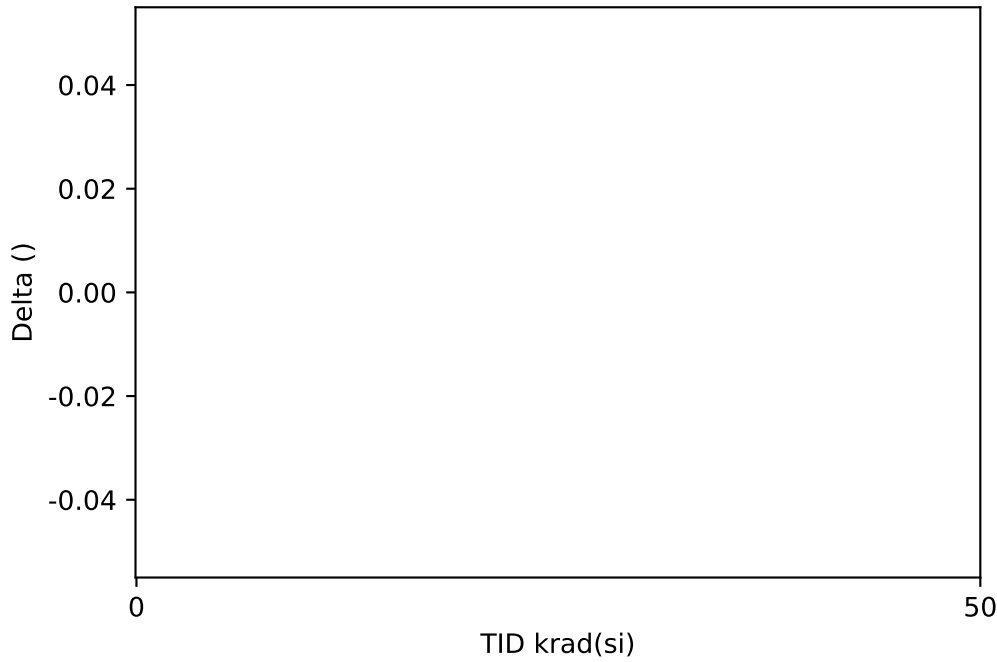
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ( ))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.4	
4	50	HDR Biased w/ 84hr anneal		0.4	
6	50	HDR Biased w/ 84hr anneal		0.4	
8	50	HDR Biased w/ 84hr anneal		0.4	
9	50	HDR Biased w/ 84hr anneal		0.4	
10	50	HDR unbiased		0.4	
11	50	HDR unbiased		0.4	
12	50	HDR unbiased		0.4	
13	50	HDR unbiased		0.4	
14	50	HDR unbiased		0.4	
26	0	Correlation		0.4	
27	0	Correlation		0.4	
28	0	Correlation		0.4	
29	0	Correlation		0.4	
30	0	Correlation		0.4	
32	0	Correlation		0.4	

TID vs Post - Pre Exposure Delta

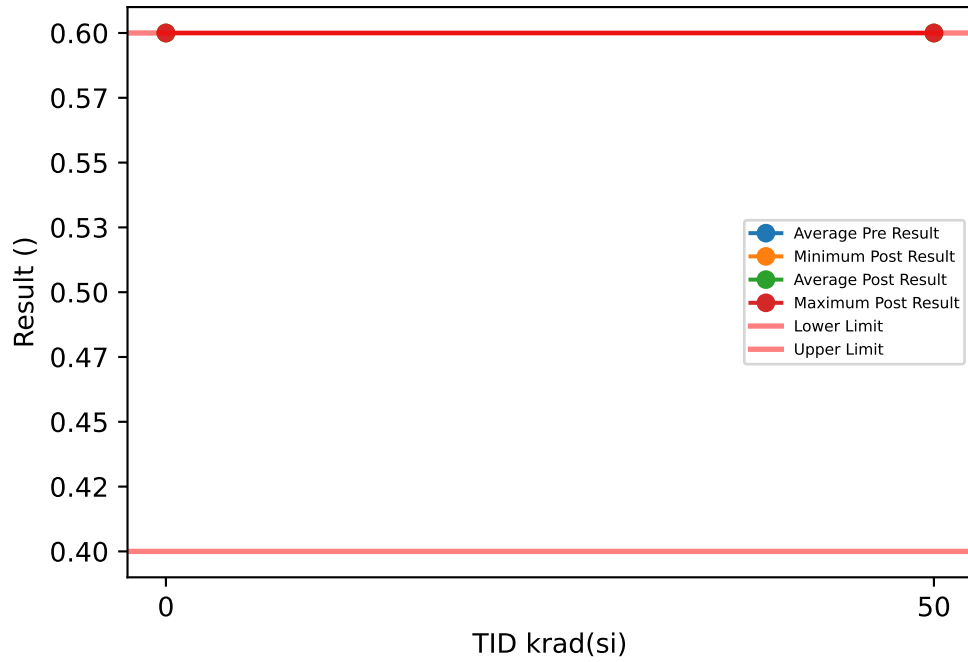


Test Statistics ( )

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					0.4	0.4	0.4	0				
50					0.4	0.4	0.4	0				



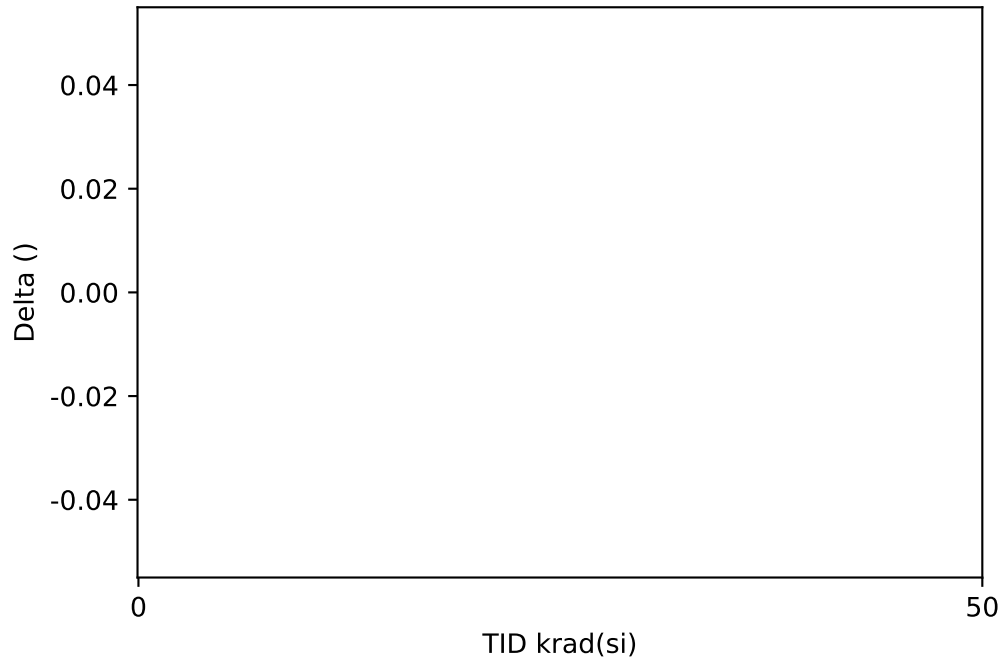
TID vs Result Stats



Test Results (Lower Limit = 0.4, Upper Limit = 0.6 ())

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal		0.6	
4	50	HDR Biased w/ 84hr anneal		0.6	
6	50	HDR Biased w/ 84hr anneal		0.6	
8	50	HDR Biased w/ 84hr anneal		0.6	
9	50	HDR Biased w/ 84hr anneal		0.6	
10	50	HDR unbiased		0.6	
11	50	HDR unbiased		0.6	
12	50	HDR unbiased		0.6	
13	50	HDR unbiased		0.6	
14	50	HDR unbiased		0.6	
26	0	Correlation		0.6	
27	0	Correlation		0.6	
28	0	Correlation		0.6	
29	0	Correlation		0.6	
30	0	Correlation		0.6	
32	0	Correlation		0.6	

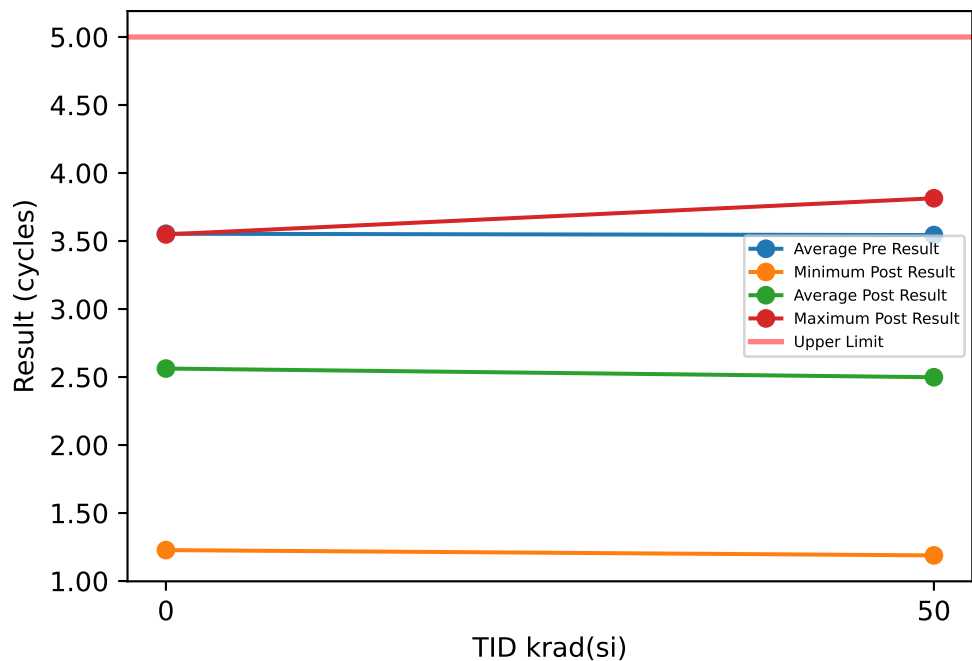
TID vs Post - Pre Exposure Delta



Test Statistics ()

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					0.6	0.6	0.6	0				
50					0.6	0.6	0.6	0				

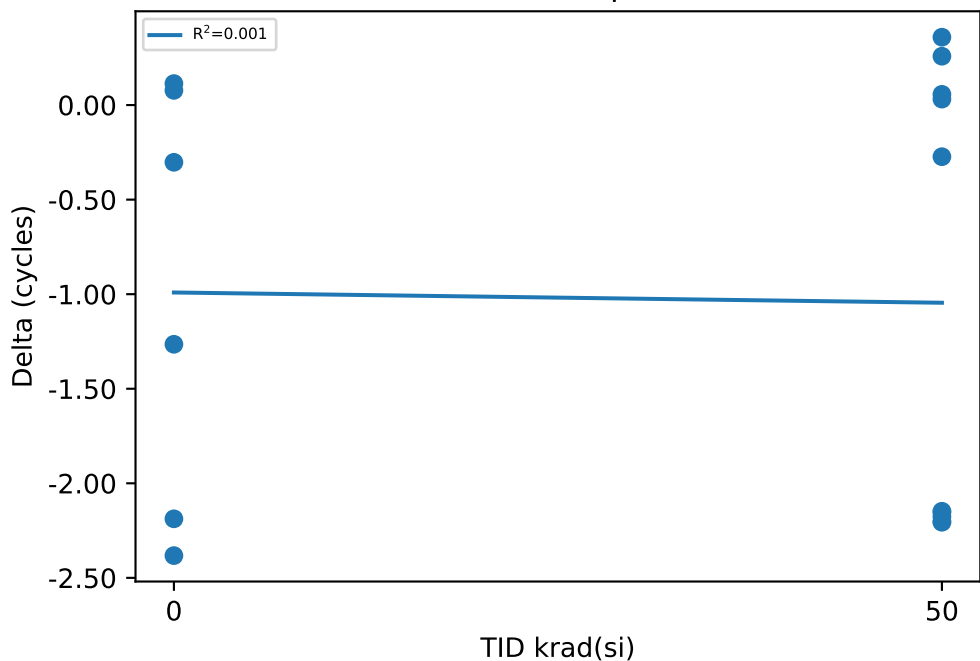
TID vs Result Stats



Test Results (Upper Limit = 5.0 (cycles))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	3.4554	3.8143	0.3589
4	50	HDR Biased w/ 84hr anneal	3.6176	3.6743	0.0567
6	50	HDR Biased w/ 84hr anneal	3.7524	3.4794	-0.273
8	50	HDR Biased w/ 84hr anneal	3.4638	3.7221	0.2583
9	50	HDR Biased w/ 84hr anneal	3.4971	3.5285	0.0314
10	50	HDR unbiased	3.3945	1.1886	-2.2059
11	50	HDR unbiased	3.5016	1.3493	-2.1523
12	50	HDR unbiased	3.5624	1.386	-2.1764
13	50	HDR unbiased	3.6818	1.534	-2.1478
14	50	HDR unbiased	3.5107	1.3079	-2.2028
26	0	Correlation	3.4224	3.5001	0.0777
27	0	Correlation	3.4347	3.5484	0.1137
28	0	Correlation	3.5832	2.3183	-1.2649
29	0	Correlation	3.7344	3.4318	-0.3026
30	0	Correlation	3.5362	1.3484	-2.1878
32	0	Correlation	3.6098	1.2275	-2.3823

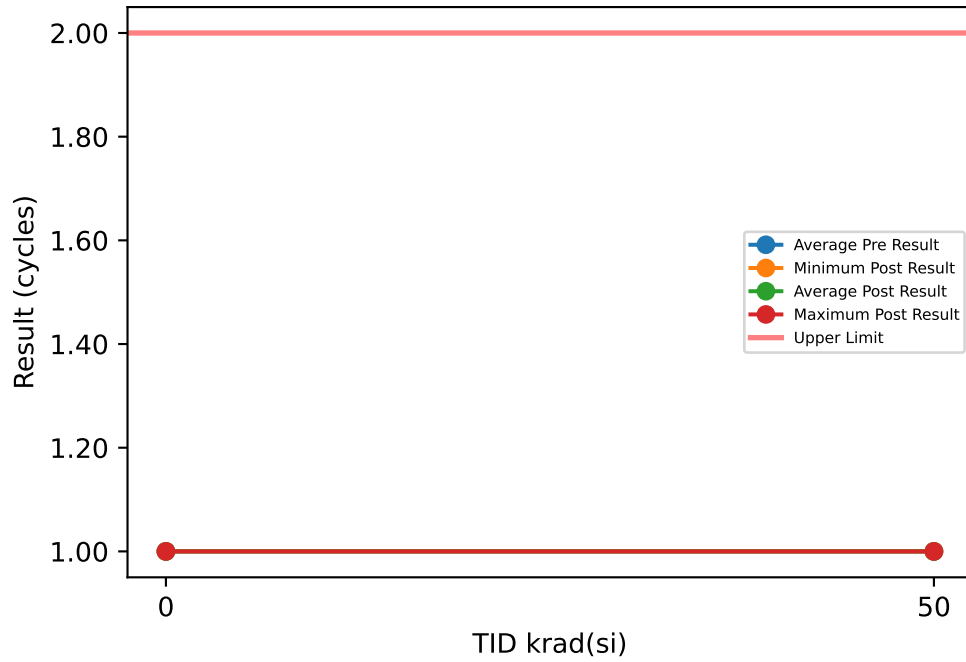
TID vs Post - Pre Exposure Delta



Test Statistics (cycles)

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	3.4224	3.5534	3.7344	0.11694	1.2275	2.5624	3.5484	1.0884	-2.3823	-0.99103	0.1137	1.1207
50	3.3945	3.5437	3.7524	0.11051	1.1886	2.4984	3.8143	1.2136	-2.2059	-1.0453	0.3589	1.2041

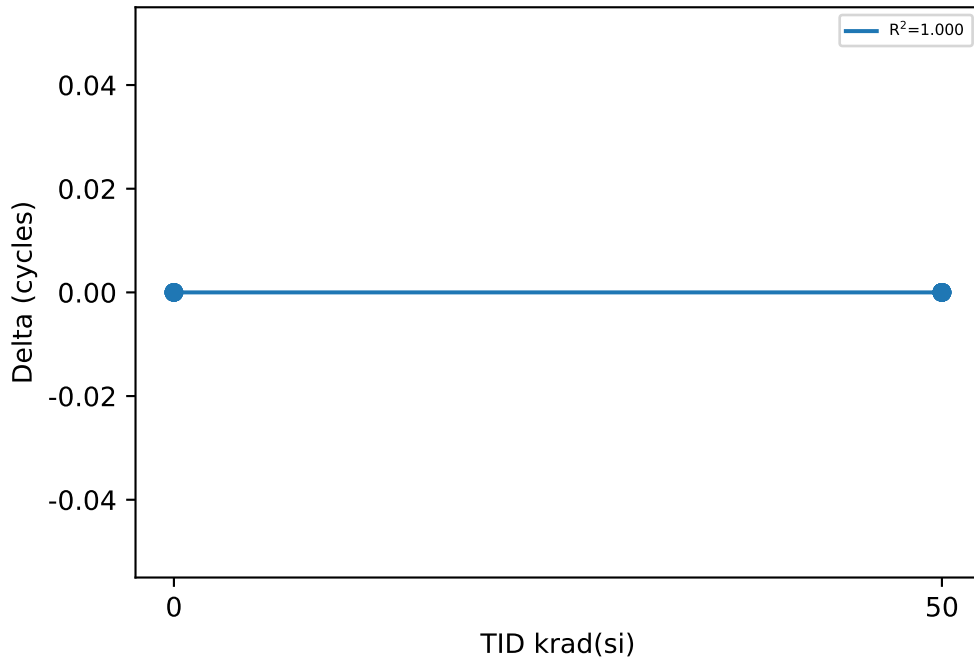
TID vs Result Stats



Test Results (Upper Limit = 2.0 (cycles))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	1	1	0
4	50	HDR Biased w/ 84hr anneal	1	1	0
6	50	HDR Biased w/ 84hr anneal	1	1	0
8	50	HDR Biased w/ 84hr anneal	1	1	0
9	50	HDR Biased w/ 84hr anneal	1	1	0
10	50	HDR unbiased	1	1	0
11	50	HDR unbiased	1	1	0
12	50	HDR unbiased	1	1	0
13	50	HDR unbiased	1	1	0
14	50	HDR unbiased	1	1	0
26	0	Correlation	1	1	0
27	0	Correlation	1	1	0
28	0	Correlation	1	1	0
29	0	Correlation	1	1	0
30	0	Correlation	1	1	0
32	0	Correlation	1	1	0

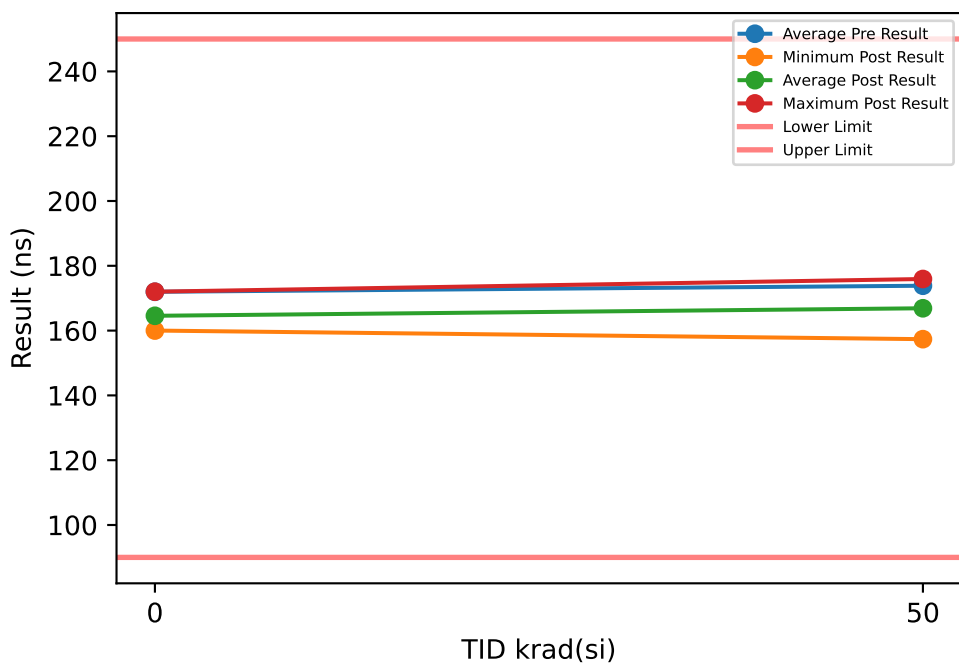
TID vs Post - Pre Exposure Delta



Test Statistics (cycles)

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	1	1	0	1	1	1	0	0	0	0	0
50	1	1	1	0	1	1	1	0	0	0	0	0

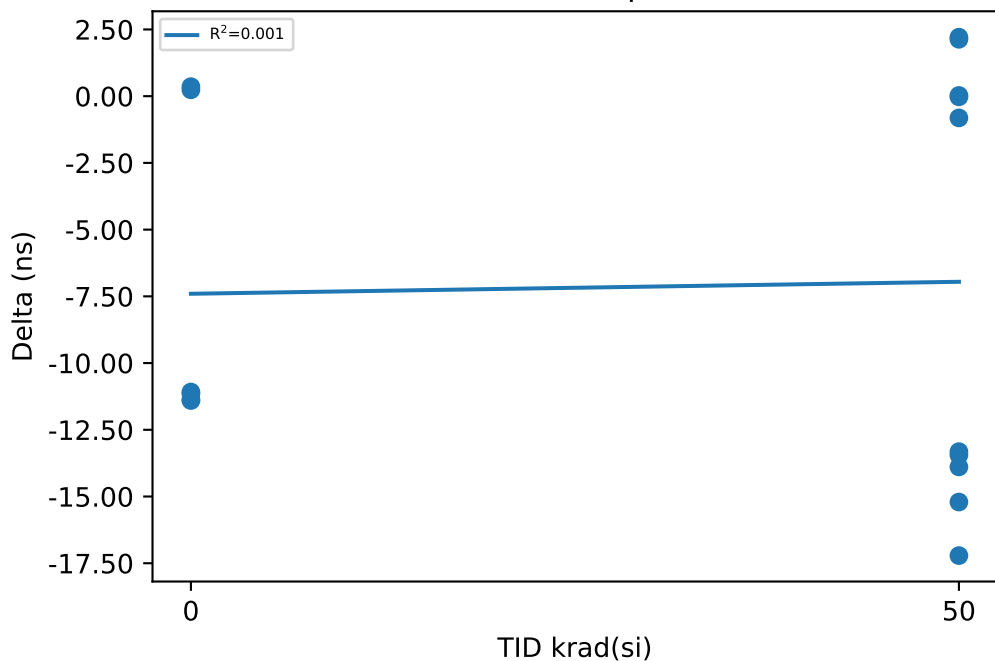
TID vs Result Stats



Test Results (Lower Limit = 90.0, Upper Limit = 250.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	173.79	175.92	2.1315
4	50	HDR Biased w/ 84hr anneal	171.92	171.9	-0.0243
6	50	HDR Biased w/ 84hr anneal	174.84	174.03	-0.814
8	50	HDR Biased w/ 84hr anneal	166.81	166.83	0.0265
9	50	HDR Biased w/ 84hr anneal	167.01	169.22	2.21
10	50	HDR unbiased	178.65	165.33	-13.319
11	50	HDR unbiased	179.36	164.15	-15.207
12	50	HDR unbiased	174.57	157.36	-17.214
13	50	HDR unbiased	177.19	163.75	-13.445
14	50	HDR unbiased	174.32	160.43	-13.891
26	0	Correlation	173.32	162.24	-11.085
27	0	Correlation	170.88	171.23	0.3566
28	0	Correlation	171.39	160.01	-11.374
29	0	Correlation	171.77	172.01	0.2383
30	0	Correlation	172.16	161.01	-11.153
32	0	Correlation	172.34	160.94	-11.403

TID vs Post - Pre Exposure Delta



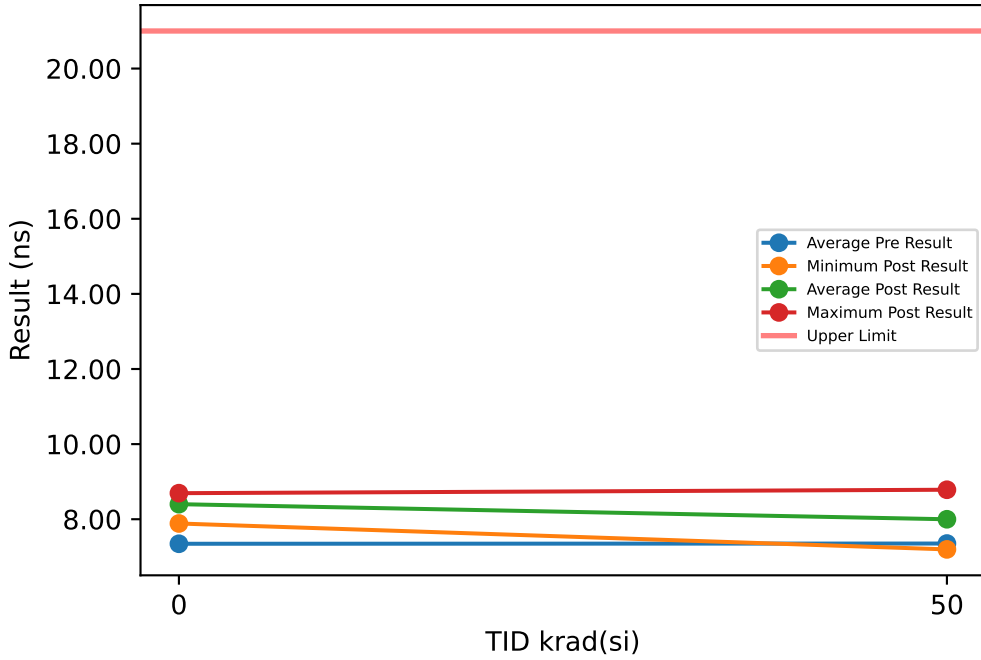
Test Statistics (ns)

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	170.88	171.98	173.32	0.84557	160.01	164.57	172.01	5.5111	-11.403	-7.4033	0.3566	5.9664
50	166.81	173.85	179.36	4.3002	157.36	166.89	175.92	5.9209	-17.214	-6.9546	2.21	8.1997



Device Test: 24.98 SYNC\_LH\_RISE\_TIME(\_TIMING|RISE/SYNC1/12//511k//@SYNC\_LH\_RISE\_TIME )

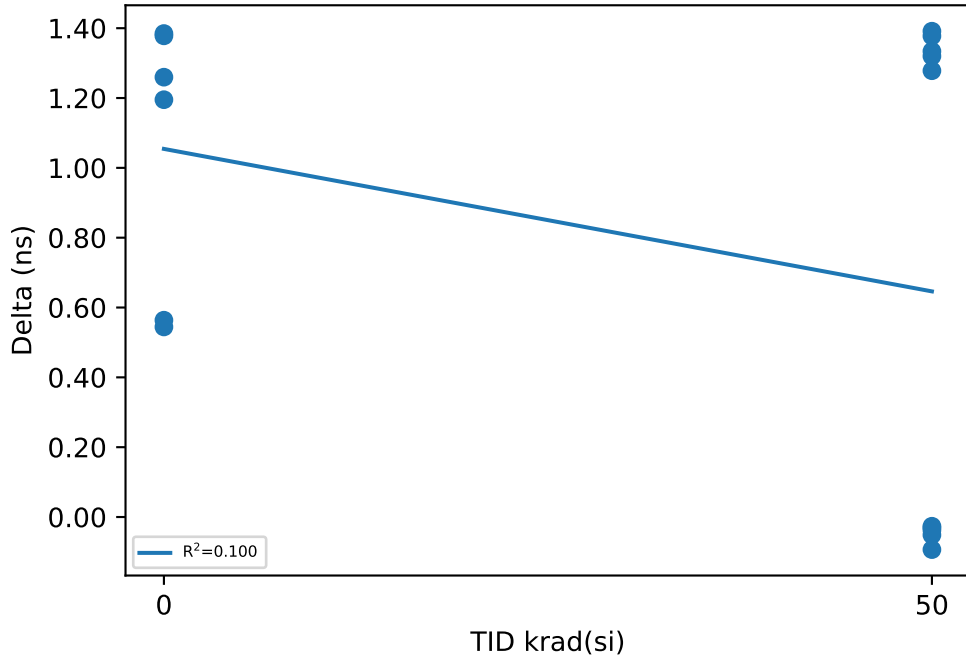
TID vs Result Stats



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	7.3631	7.2698	-0.0933
4	50	HDR Biased w/ 84hr anneal	7.248	7.1966	-0.0514
6	50	HDR Biased w/ 84hr anneal	7.3353	7.298	-0.0373
8	50	HDR Biased w/ 84hr anneal	7.3479	7.3174	-0.0305
9	50	HDR Biased w/ 84hr anneal	7.3603	7.3339	-0.0264
10	50	HDR unbiased	7.3503	8.6842	1.3339
11	50	HDR unbiased	7.4358	8.714	1.2782
12	50	HDR unbiased	7.4073	8.7849	1.3776
13	50	HDR unbiased	7.3233	8.7147	1.3914
14	50	HDR unbiased	7.3566	8.6766	1.32
26	0	Correlation	7.3649	8.6246	1.2597
27	0	Correlation	7.3718	7.9162	0.5444
28	0	Correlation	7.4074	8.6026	1.1952
29	0	Correlation	7.3228	7.8865	0.5637
30	0	Correlation	7.3032	8.6813	1.3781
32	0	Correlation	7.309	8.6937	1.3847

TID vs Post - Pre Exposure Delta

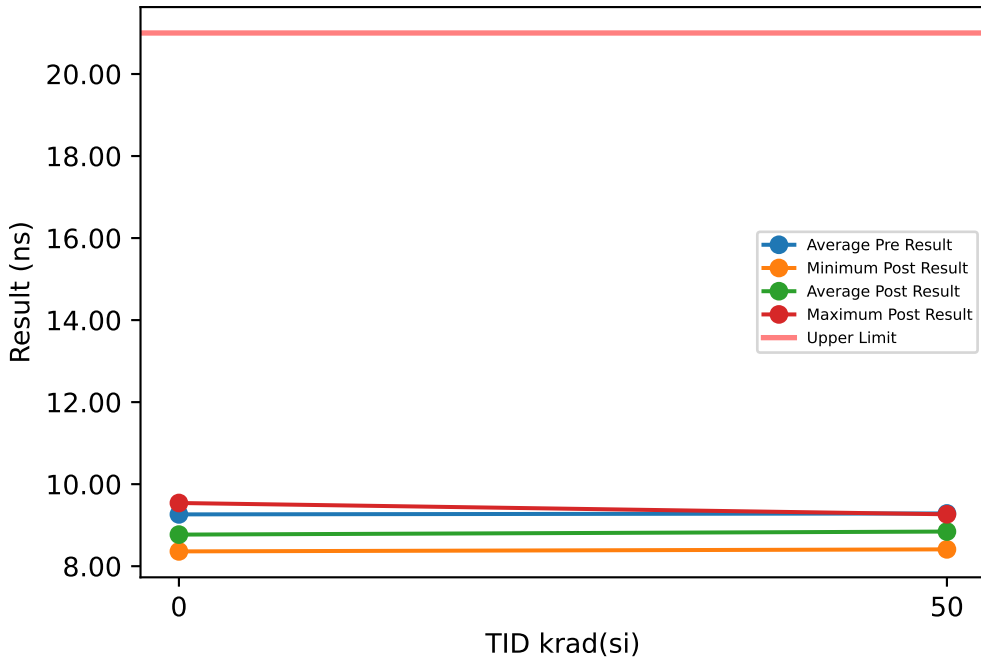


Test Statistics (ns)

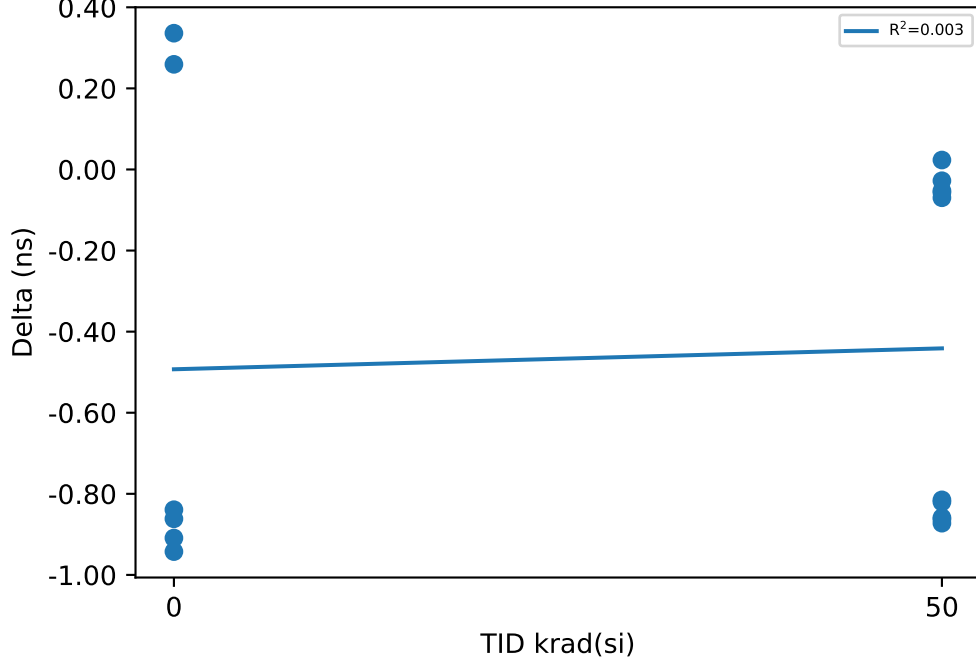
krad(si)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	7.3032	7.3465	7.4074	0.041304	7.8865	8.4008	8.6937	0.38849	0.5444	1.0543	1.3847	0.39414
50	7.248	7.3528	7.4358	0.049694	7.1966	7.999	8.7849	0.75599	-0.0933	0.64622	1.3914	0.7324

Device Test: 24.99 SYNC\_LH\_RISE\_TIME(\_TIMING|RISE/SYNC2/12//511k//@SYNC\_LH\_RISE\_TIME )

TID vs Result Stats



TID vs Post - Pre Exposure Delta



Test Results (Upper Limit = 21.0 (ns))

Serial #	krad(si)	Exposure Conditions	Pre Result	Post Result	Delta
1	50	HDR Biased w/ 84hr anneal	9.2237	9.247	0.0233
4	50	HDR Biased w/ 84hr anneal	9.268	9.2156	-0.0524
6	50	HDR Biased w/ 84hr anneal	9.2263	9.1985	-0.0278
8	50	HDR Biased w/ 84hr anneal	9.3132	9.2563	-0.0569
9	50	HDR Biased w/ 84hr anneal	9.3351	9.2653	-0.0698
10	50	HDR unbiased	9.3057	8.4333	-0.8724
11	50	HDR unbiased	9.307	8.4869	-0.8201
12	50	HDR unbiased	9.3335	8.4748	-0.8587
13	50	HDR unbiased	9.2732	8.4105	-0.8627
14	50	HDR unbiased	9.2734	8.4585	-0.8149
26	0	Correlation	9.2699	8.3609	-0.909
27	0	Correlation	9.2817	9.541	0.2593
28	0	Correlation	9.3132	8.3707	-0.9425
29	0	Correlation	9.203	9.5391	0.3361
30	0	Correlation	9.2261	8.3869	-0.8392
32	0	Correlation	9.2857	8.4241	-0.8616

Test Statistics (ns)

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	9.203	9.2633	9.3132	0.040973	8.3609	8.7705	9.541	0.59652	-0.9425	-0.49282	0.3361	0.61387
50	9.2237	9.2859	9.3351	0.0399	8.4105	8.8447	9.2653	0.41402	-0.8724	-0.44124	0.0233	0.42747

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