Radiation Report

TPS7H1302-SP Neutron Displacement Damage (NDD) Characterization Report

Abstract

This report presents the effect of neutron displacement damage (NDD) on the TPS7H1302-SP, a charge pump positive-to-negative voltage inverters with an integrated negative low dropout regulator (LDO). The device accepts a positive input supply voltage range of 3V to 6.3V and deliver up to 400mA of output current, with integrated enable and power-good functionality.

The TPS7H1302-SP showed a strong degree of hardness to neutron irradiation up to fluence level 1×10^{13} n/cm^2 . The neutron irradiation test is a destructive test. Test procedure follows MIL-STD-883 Method 1017 as guidance. The purpose of this test is to determine the device susceptibility to non-ionizing energy loss (NIEL) degradation. Objectives of the test are, to detect and measure the degradation of critical device parameters as a function of neutron fluence and to determine if these parameters are within specified limits after exposure to a specified level of neutron fluence.

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1 Device Information

1.1 Product Description

The TPS7H1302-SP is a charge pump positive-to-negative voltage inverters with an integrated negative low dropout regulator (LDO). Both devices accept a positive input supply voltage range of 3V to 6.3V and deliver up to 400mA of output current, with integrated enable and power-good functionality.

The TPS7H1302 delivers a fixed –1.8V output voltage with a 1MHz (typical) charge pump switching frequency. By eliminating the need for external feedback resistors, the TPS7H1302 reduces both external component count and overall design size.

The TPS7H1302-SP is packaged in a 14-pin HBL ceramic flat package. A standard microcircuit drawing (SMD) is 5962R2421502VXC.

1.2 Device Details

Table 1-1 lists the device information used in this NDD characterization.

Table 1-1. Device and Exposure Details

NDD Exposure Details	
TI Device	TPS7H1302-SP
TI Part Name	5962R2421502VXC
Package	14-pin HBL (CFP)
Technology	LBC7
Quantity Tested	12 + 3 control units
Exposure Facility	Fast Neutron Irradiation (FNI) Facility of University of Massachusetts Lowell Research Reactor (UMLRR)
Neutron Fluence (1-MeV equivalent) Level	1×10^{12}, 5×10^{12}, 1×10^{13} n/cm^2
Irradiation Temperature	Ambient room temperature

2 Total Dose Test Setup

2.1 Test Overview

The TPS7H1302-SP was tested according to MIL-STD-883, Method 1017 as a guide for neutron irradiation. The TPS7H1302-SP was electrically tested using the production automated test equipment (ATE) program at an ambient room temperature of 25°C before and after neutron irradiation. All devices remained functional passing all parametric test limits.

2.2 Test Description and Facilities

The utilized test facility is the Fast Neutron Irradiation (FNI) Facility of University of Massachusetts Lowell Research Reactor. The neutron fluence for this irradiation was measured utilizing ASTM E-265 “Measuring Reaction Rates and Fast Neutron Fluence by Radioactivation of Sulfur-32” and correlated to the measured reactor power level. All irradiation conditions required under ASTM 722 were met, this includes: neutron fluence, distribution and uncertainty. The Average Integrated Neutron Fluence, 1-MeV(Si) equivalent, reflects these factors. Detailed information of the radiation facility is available at the following link:

UNIVERSITY OF MASSACHUSETTS LOWELL RESEARCH REACTOR

2.3 Test Setup Details

Devices were irradiated at three fluence levels in unbiased conditions: 1.0×10^{12} n/cm^2 , 5.0×10^{12} n/cm^2 and 1.0×10^{13} n/cm^2. See the details in Table 2-1.

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2.4 Test Configuration and Conditions

Table 2-1. Neutron Irradiation Conditions

GROUP	SAMPLE QTY	NEUTRON FLUENCE (n/cm^2)	BIAS
A	4	1.0×10^{12}	Unbias
B	4	5.0×10^{12}	Unbias
C	4	1.0×10^{13}	Unbias
Control Units	3	N/A	N/A

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3 NDD Characterization Test Results

3.1 NDD Characterization Summary

The results show that all devices were fully functional and within specification limits. A sample size of twelve units was exposed for neutron irradiation and an additional unirradiated control units were used as correlation.

Overall, the TPS7H1302-SP showed a strong degree of hardness to Neutron irradiation up to fluence level 1 × 10^{13}n/cm^2 . The measurements taken post-irradiation for each sample set showed a marginal shift for most parameters at each fluence level. The parameters that showed a greater degree of change between pre- and post- irradiation were still within the Electrical Performance Characteristics specified in the datasheet Electrical Parameters table. See Table 3-1 for the Data Sheet Electrical Parameters and Associated Tests. Electrical testing is done for pre- and post- neutron irradiation by ATE. ATE electrical test is done at an ambient room temperature of 25°C. See Section Appendix A: NDD Report Data for NDD report up to 1.0 × 10^{13}n/cm^2 .

The parameters post-irradiation were still within the electrical performance characteristics specified in the datasheet electrical parameters.

See *TPS7H130X-SP 3V to 6.3V Input, 400mA, -6V to -0.6V Radiation Hardened Switched Capacitor Voltage Inverter with Integrated Low Dropout Regulator* for the data sheet electrical parameters and associated tests.

See Section Appendix A: NDD Report Data for NDD report up to 1 × 10^{13} n/cm^2.

3.2 Specification Compliance Matrix

Over 3V ≤ V_{IN} ≤ 6.3V, V_{OUT} (set) = –1.8V, I_{OUT} = 10mA, C_{REF} = 47nF, over operating temperature range (TA = –55°C to 125°C); unless otherwise specified in the Test Conditions column. Typical values are at T_A = 25°C, unless otherwise noted; includes RLAT at T_A = 25°C.

Table 3-1. Specification Compliance Matrix

PARAMETER		TEST CONDITIONS		MIN	TYP	MAX	UNIT	Test No
POWER SUPPLIES and CURRENTS								
I_Q	Quiescent Current	I = 0A, V_{EN} = 7V			12	48	mA	31.2, 31.4, 205.2, 205.4
I_{SHDN}	Shutdown Current	V_{EN} = 0V, I_{OUT} = 0A			0.8	1.5	mA	31.1, 31.3, 205.1, 205.3
ENABLE								
$V_{EN(rising)}$	Enable rising threshold (turn-on)			0.57	0.6	0.625	V	65.2, 65.6
$V_{EN(falling)}$	Enable falling threshold (turn-off)			0.445	0.5	0.555	V	65.3, 65.7
$t_{EN(delay)}$	EN propagation delay,	EN high to PG high at V_{IN} = 5V V_{IN} = -1.8V			14	18	ms	65.4, 65.8
$I_{EN(LKG)}$	Enable leakage current	V_{EN} = 7V			25	330	nA	65.1, 65.5
POWER GOOD								
$V_{PG(rise)}$	Power good rising threshold as a percent of V_{OUT}	SR VOUT = 10V/s		91.8%	94.8%	98.05 %		71.2, 71.5
$V_{PG(fall)}$	Power good falling threshold as a percent of V_{OUT}	SR VOUT = 10V/s		86.25 %	90%	94.1%		71.3, 71.6
$V_{PG(OL)}$	Power good output low	$I_{PG(SINK)}$ = 2mA			90	190	mV	70.3, 70.4
$V_{IN(MIN_PG)}$	Minimum V_{IN} for valid PG (V_{PG} < 0.5V)	$I_{PG(sink)}$ = 0.5mA			0.8	1	V	71.1,
$I_{PG(LKG)}$	Power good leakage	V_{PG} = 7V, V_{FB} = -1.8V			0.05	2	µA	70.1, 70.2
CHARGE PUMP								
f_{SW}	Switching frequency			800	1000	1200	kHz	35.1 to 35.6

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Table 3-1. Specification Compliance Matrix (continued)

PARAMETER		TEST CONDITIONS		MIN	TYP	MAX	UNIT	Test No
$R_{DS(ON1)}$	Switch array MOSFET1 drain source resistance	I_{RDSON} = 100mA V_{IN} = 5V			300	480	mΩ	40.2
$R_{DS(ON2)}$	Switch array MOSFET2 drain source resistance				175	345		40.5
$R_{DS(ON3)}$	Switch array MOSFET3 drain source resistance				235	300		40.3
$R_{DS(ON4)}$	Switch array MOSFET4 drain source resistance				220	370		40.6
DROPOUT								
I_{DO}	Dropout current	$V_{OUT(set)}$ = -1.8V $I_{OUT(meas.)}$ = 98% × $V_{OUT(NOM)}$	V_{IN} = 3	75	125		mA	44.1
			V_{IN} = 3.3	100	150			44.2
			V_{IN} = 4	200	300			44.3
			V_{IN} = 5	400				44.4
			V_{IN} = 6	400				44.5
ACCURACY								
V_{ACC}	Output voltage accuracy	–5V ≤ V_{OUT} ≤ $V_{CP(OUT)}$ - V_{DO} 1mA ≤ IOUT ≤ 250mA		-1.5%		1.5%		50.1 - 50.4, 50.6
		400mA		-1.5%		2.0%		50.5, 50.7
$\Delta V_{OUT}/\Delta V_{IN}$	Line regulation	3.3V ≤ V_{IN} ≤ 6.3VInternal reference voltage	ΔV = 3V I_{OUT} = 150mA		100	1300	µV/V	55.1, 55.2
$\Delta V_{OUT}/\Delta I_{OUT}$	Load regulation	10mA ≤ I_{OUT} ≤400mA V_{IN} = 5V, V_{OUT} = -1.8V			24	90	mV/A	55.3
V_{REF}	Internal reference voltage			-0.610	-0.6	-0.593	V	30.1-30.3

4 Applicable and Reference Documents

4.1 Applicable Documents

- Texas Instruments, *TPS7H130X-SP 3V to 6.3V Input, 400mA, -6V to -0.6V Radiation Hardened Switched Capacitor Voltage Inverter with Integrated Low Dropout Regulator*, data sheet

4.2 Reference Documents

Texas Instruments neutron irradiation test follow the guideline from MIL-STD-883 TM 1017. The document is available in Defense Logistic Agency's website.

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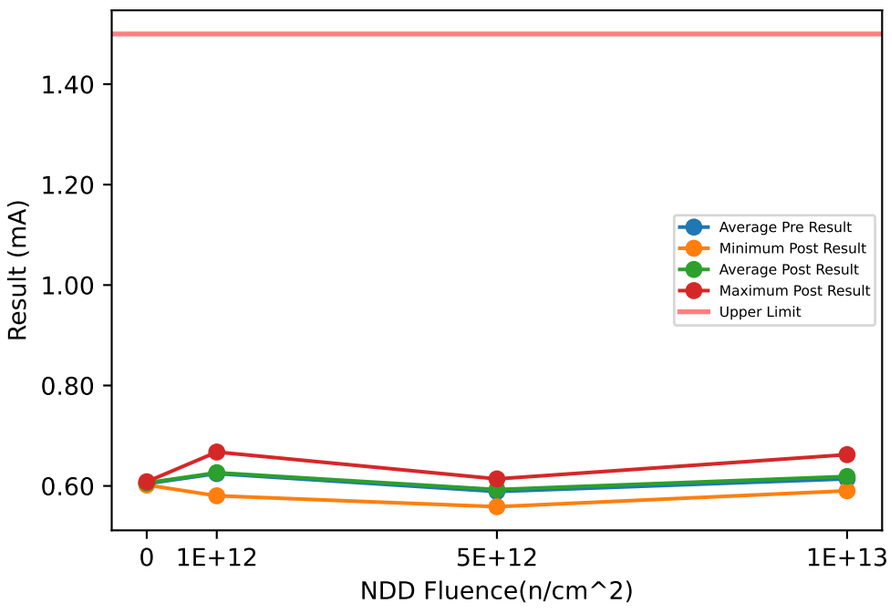
Appendix A: NDD Report Data

This appendix contains the NDD report data.

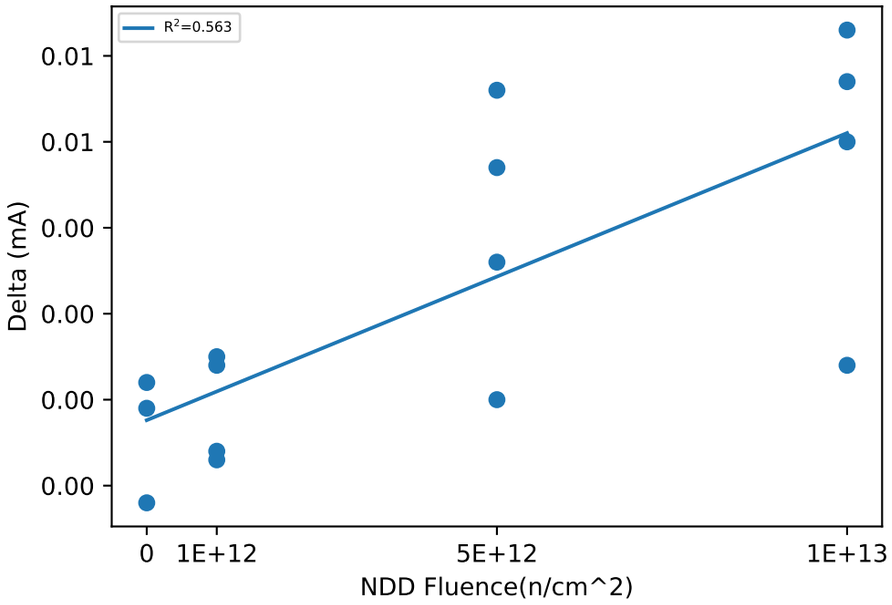
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Device Test: 205.1 SUPPLY_CURRENT|POST/VIN/SHUTDOWN///3/@I_SHDN

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



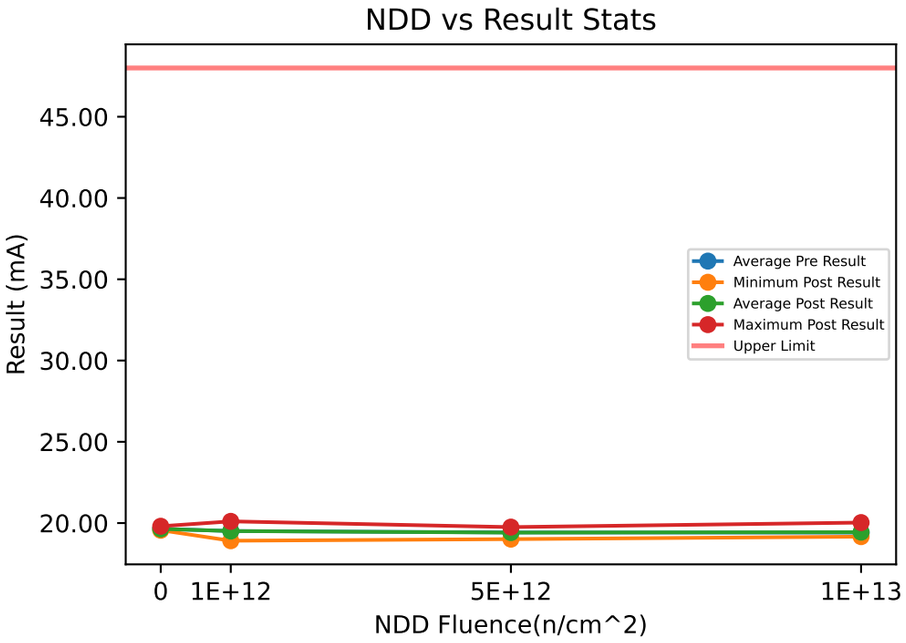
Test Results (Upper Limit = 1.5 (mA))

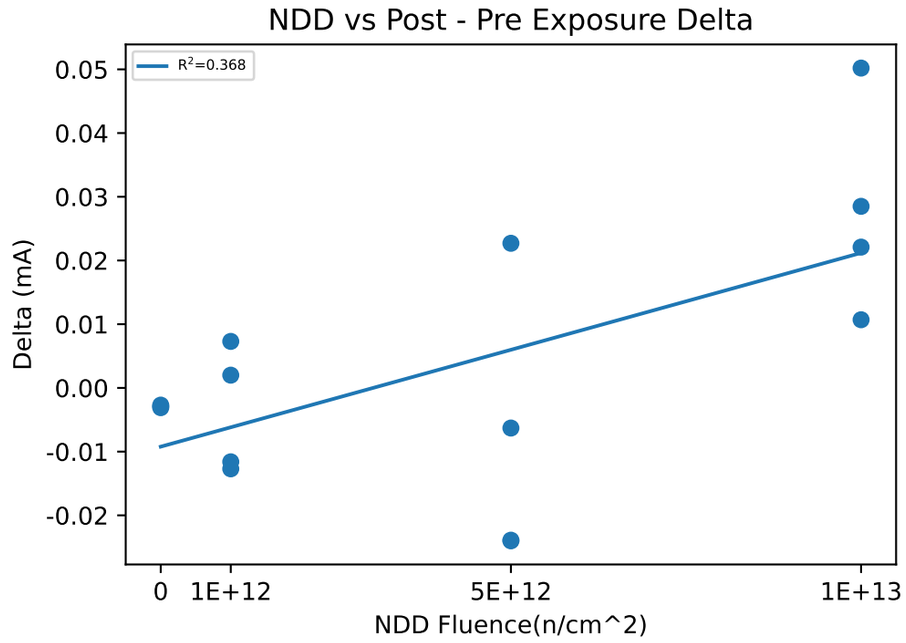
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.6011	0.6019	0.0008
2	0	CU2	0.6062	0.6081	0.0019
3	0	CU3	0.6061	0.6083	0.0022
60	1e+12	1E12n/cm2	0.6181	0.6195	0.0014
61	1e+12	1E12n/cm2	0.6358	0.6382	0.0024
62	1e+12	1E12n/cm2	0.5791	0.5804	0.0013
63	1e+12	1E12n/cm2	0.665	0.6675	0.0025
64	5e+12	5E12n/cm2	0.5812	0.5859	0.0047
65	5e+12	5E12n/cm2	0.6092	0.6128	0.0036
66	5e+12	5E12n/cm2	0.612	0.614	0.002
67	5e+12	5E12n/cm2	0.553	0.5586	0.0056
68	1e+13	1E13n/cm2	0.6566	0.6623	0.0057
69	1e+13	1E13n/cm2	0.612	0.6183	0.0063
70	1e+13	1E13n/cm2	0.5853	0.5903	0.005
71	1e+13	1E13n/cm2	0.6022	0.6046	0.0024

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.6011	0.60447	0.6062	0.002916	0.6019	0.6061	0.6083	0.0036387	0.0008	0.0016333	0.0022	0.00073711
1e+12	0.5791	0.6245	0.665	0.035917	0.5804	0.6264	0.6675	0.036479	0.0013	0.0019	0.0025	0.0006377
5e+12	0.553	0.58885	0.612	0.027651	0.5586	0.59282	0.614	0.026247	0.002	0.003975	0.0056	0.00155
1e+13	0.5853	0.61403	0.6566	0.03045	0.5903	0.61887	0.6623	0.031125	0.0024	0.00485	0.0063	0.0017176

Device Test: 205.2 SUPPLY_CURRENT|POST/VIN/QUIESCENT///3/@IQ_VIN_1302





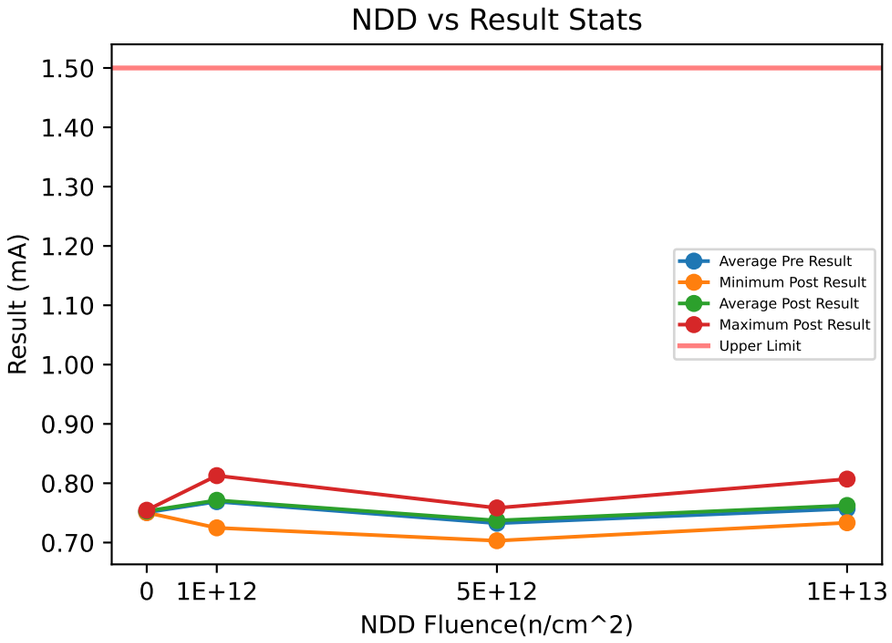
Test Results (Upper Limit = 48.0 (mA))

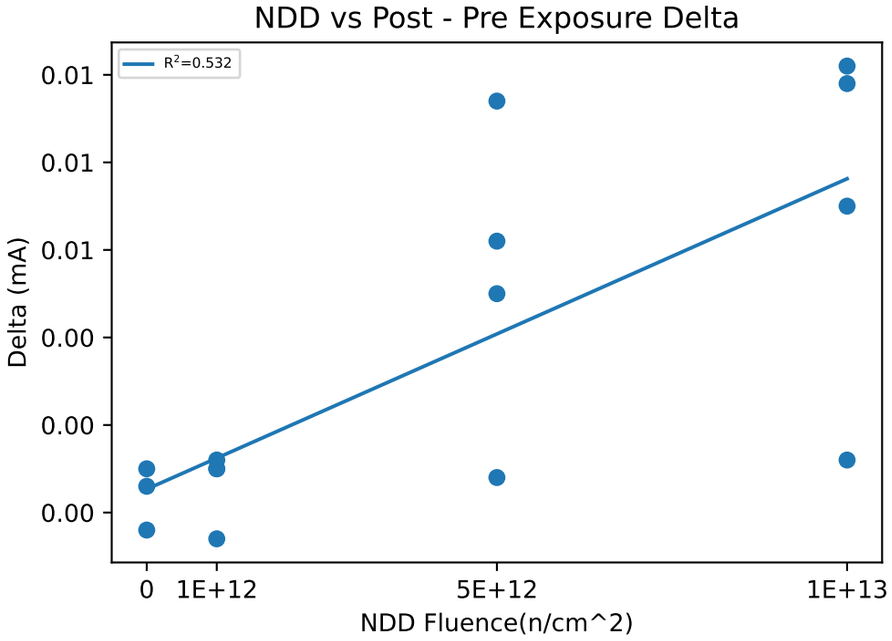
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	19.564	19.561	-0.0029
2	0	CU2	19.806	19.803	-0.0031
3	0	CU3	19.562	19.559	-0.0027
60	1e+12	1E12n/cm2	18.906	18.913	0.0073
61	1e+12	1E12n/cm2	20.116	20.104	-0.0116
62	1e+12	1E12n/cm2	19.299	19.301	0.002
63	1e+12	1E12n/cm2	19.724	19.712	-0.0127
64	5e+12	5E12n/cm2	19.775	19.751	-0.024
65	5e+12	5E12n/cm2	19.414	19.39	-0.0239
66	5e+12	5E12n/cm2	19.017	19.011	-0.0063
67	5e+12	5E12n/cm2	19.481	19.503	0.0227
68	1e+13	1E13n/cm2	19.162	19.212	0.0502
69	1e+13	1E13n/cm2	19.154	19.164	0.0107
70	1e+13	1E13n/cm2	20	20.029	0.0285
71	1e+13	1E13n/cm2	19.33	19.352	0.0221

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	19.562	19.644	19.806	0.1405	19.559	19.641	19.803	0.14033	-0.0031	-0.0029	-0.0027	0.0002
1e+12	18.906	19.511	20.116	0.52346	18.913	19.508	20.104	0.51421	-0.0127	-0.00375	0.0073	0.009948
5e+12	19.017	19.422	19.775	0.31173	19.011	19.414	19.751	0.30778	-0.024	-0.007875	0.0227	0.022016
1e+13	19.154	19.411	20	0.40087	19.164	19.439	20.029	0.40096	0.0107	0.027875	0.0502	0.016604

Device Test: 205.3 SUPPLY_CURRENT|POST/VIN/SHUTDOWN///6.3/@I_SHDN





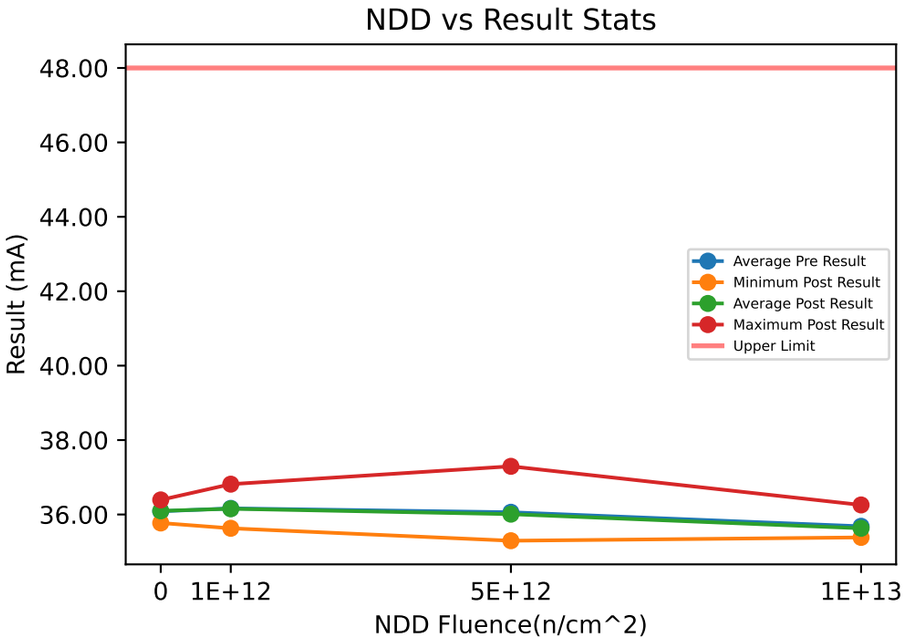
Test Results (Upper Limit = 1.5 (mA))

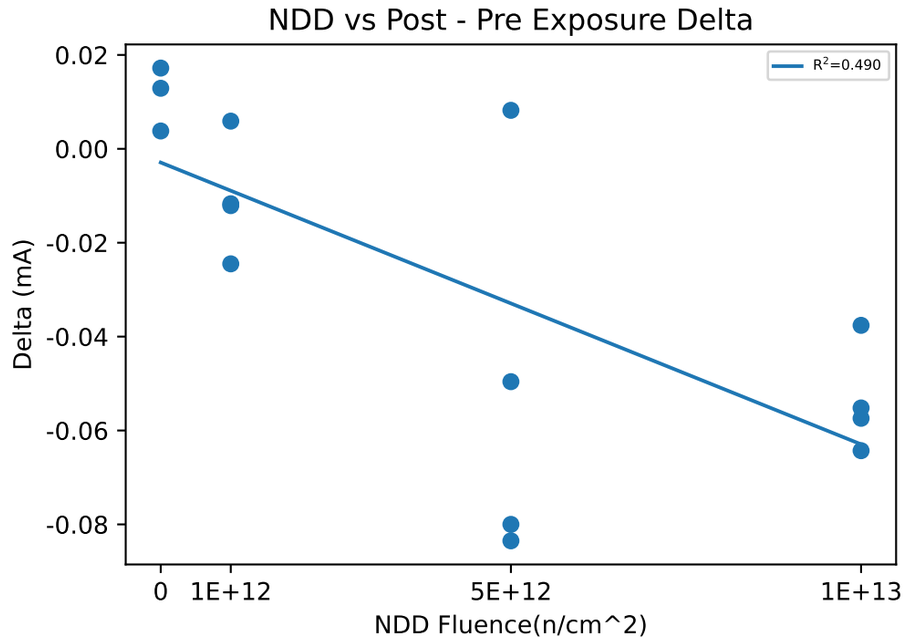
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.7486	0.7504	0.0018
2	0	CU2	0.7522	0.7545	0.0023
3	0	CU3	0.7517	0.7542	0.0025
60	1e+12	1E12n/cm2	0.7629	0.7646	0.0017
61	1e+12	1E12n/cm2	0.7803	0.7828	0.0025
62	1e+12	1E12n/cm2	0.7223	0.7248	0.0025
63	1e+12	1E12n/cm2	0.8102	0.8128	0.0026
64	5e+12	5E12n/cm2	0.7248	0.7299	0.0051
65	5e+12	5E12n/cm2	0.7529	0.7574	0.0045
66	5e+12	5E12n/cm2	0.756	0.7584	0.0024
67	5e+12	5E12n/cm2	0.6964	0.7031	0.0067
68	1e+13	1E13n/cm2	0.8001	0.807	0.0069
69	1e+13	1E13n/cm2	0.7551	0.7622	0.0071
70	1e+13	1E13n/cm2	0.7279	0.7334	0.0055
71	1e+13	1E13n/cm2	0.7448	0.7474	0.0026

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.7486	0.75083	0.7522	0.0019502	0.7504	0.75303	0.7545	0.0022855	0.0018	0.0022	0.0025	0.00036056
1e+12	0.7223	0.76892	0.8102	0.036712	0.7248	0.77125	0.8128	0.036795	0.0017	0.002325	0.0026	0.00041932
5e+12	0.6964	0.73252	0.756	0.027874	0.7031	0.7372	0.7584	0.026291	0.0024	0.004675	0.0067	0.0017783
1e+13	0.7279	0.75697	0.8001	0.030859	0.7334	0.7625	0.807	0.031912	0.0026	0.005525	0.0071	0.0020759

Device Test: 205.4 SUPPLY_CURRENT|POST/VIN/QUIESCENT///6.3/@IQ_VIN_1302





Test Results (Upper Limit = 48.0 (mA))

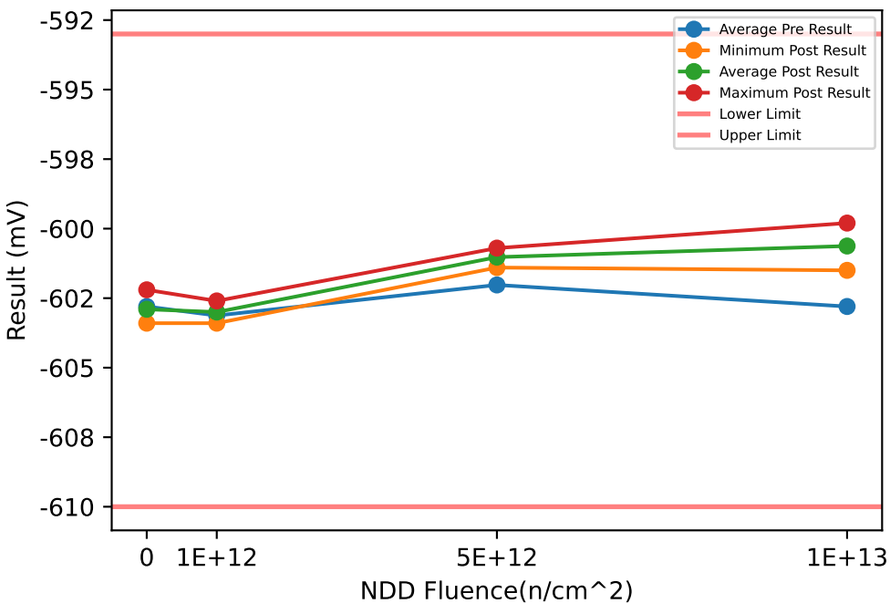
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	36.111	36.129	0.0172
2	0	CU2	36.388	36.392	0.0038
3	0	CU3	35.759	35.772	0.0129
60	1e+12	1E12n/cm2	35.641	35.629	-0.0121
61	1e+12	1E12n/cm2	36.84	36.815	-0.0245
62	1e+12	1E12n/cm2	35.779	35.784	0.0059
63	1e+12	1E12n/cm2	36.398	36.386	-0.0117
64	5e+12	5E12n/cm2	37.374	37.294	-0.08
65	5e+12	5E12n/cm2	35.79	35.707	-0.0835
66	5e+12	5E12n/cm2	35.345	35.295	-0.0496
67	5e+12	5E12n/cm2	35.731	35.74	0.0082
68	1e+13	1E13n/cm2	35.441	35.384	-0.0574
69	1e+13	1E13n/cm2	35.51	35.455	-0.0552
70	1e+13	1E13n/cm2	36.294	36.257	-0.0376
71	1e+13	1E13n/cm2	35.486	35.422	-0.0643

Test Statistics (mA)

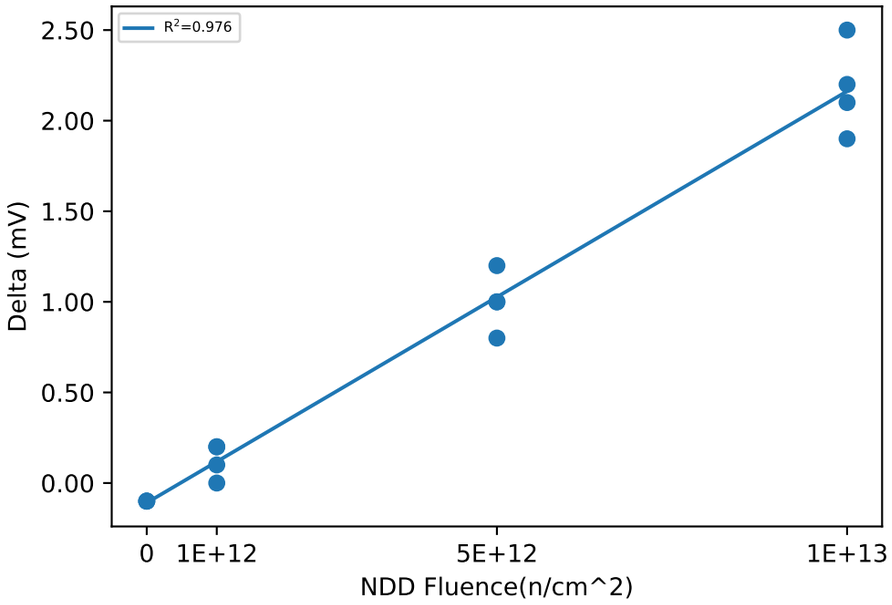
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	35.759	36.086	36.388	0.31556	35.772	36.097	36.392	0.31142	0.0038	0.0113	0.0172	0.0068418
1e+12	35.641	36.164	36.84	0.55776	35.629	36.154	36.815	0.54873	-0.0245	-0.0106	0.0059	0.012502
5e+12	35.345	36.06	37.374	0.8982	35.295	36.009	37.294	0.88055	-0.0835	-0.051225	0.0082	0.042441
1e+13	35.441	35.683	36.294	0.40847	35.384	35.629	36.257	0.41916	-0.0643	-0.053625	-0.0376	0.011365

Device Test: 30.1 VREF|/VREF//1N8V//3/@VREF

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = -610.0, Upper Limit = -593.0 (mV))

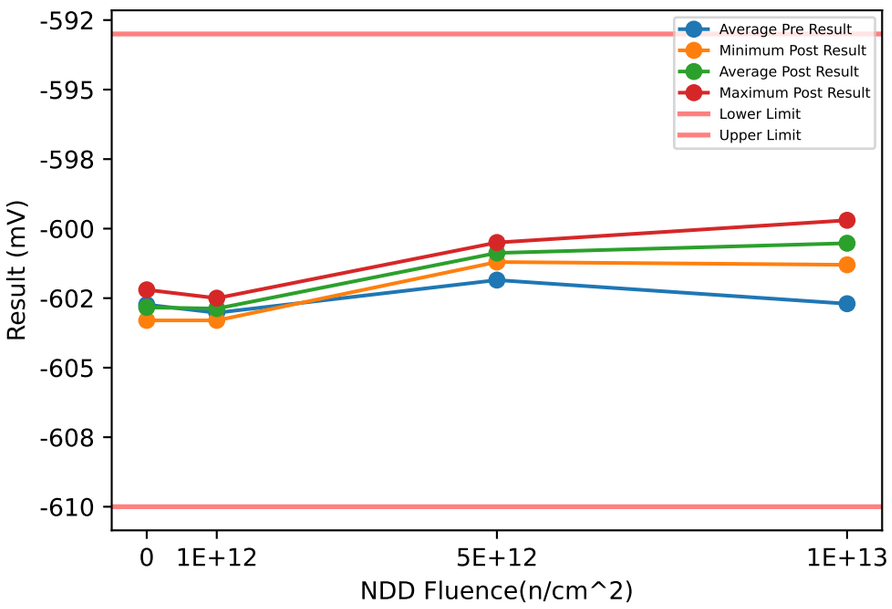
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	-603	-603.1	-0.1
2	0	CU2	-602.1	-602.2	-0.1
3	0	CU3	-603.3	-603.4	-0.1
60	1e+12	1E12n/cm2	-603.6	-603.4	0.2
61	1e+12	1E12n/cm2	-603.1	-603	0.1
62	1e+12	1E12n/cm2	-603	-603	0
63	1e+12	1E12n/cm2	-602.8	-602.6	0.2
64	5e+12	5E12n/cm2	-601.6	-600.8	0.8
65	5e+12	5E12n/cm2	-602.4	-601.4	1
66	5e+12	5E12n/cm2	-602.2	-601.2	1
67	5e+12	5E12n/cm2	-601.9	-600.7	1.2
68	1e+13	1E13n/cm2	-602.5	-600.6	1.9
69	1e+13	1E13n/cm2	-604	-601.5	2.5
70	1e+13	1E13n/cm2	-602	-599.8	2.2
71	1e+13	1E13n/cm2	-602.7	-600.6	2.1

Test Statistics (mV)

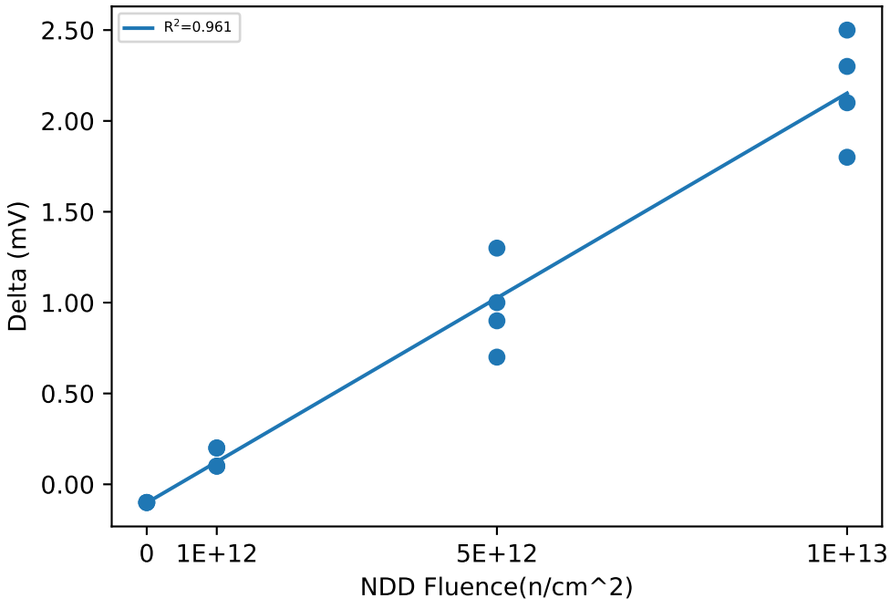
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-603.3	-602.8	-602.1	0.6245	-603.4	-602.9	-602.2	0.6245	-0.1	-0.1	-0.1	1.1369e-13
1e+12	-603.6	-603.12	-602.8	0.34034	-603.4	-603	-602.6	0.3266	0	0.125	0.2	0.095743
5e+12	-602.4	-602.02	-601.6	0.35	-601.4	-601.02	-600.7	0.3304	0.8	1	1.2	0.1633
1e+13	-604	-602.8	-602	0.85245	-601.5	-600.62	-599.8	0.69462	1.9	2.175	2.5	0.25

Device Test: 30.2 VREF|/VREF//1N8V//5/@VREF

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = -610.0, Upper Limit = -593.0 (mV))

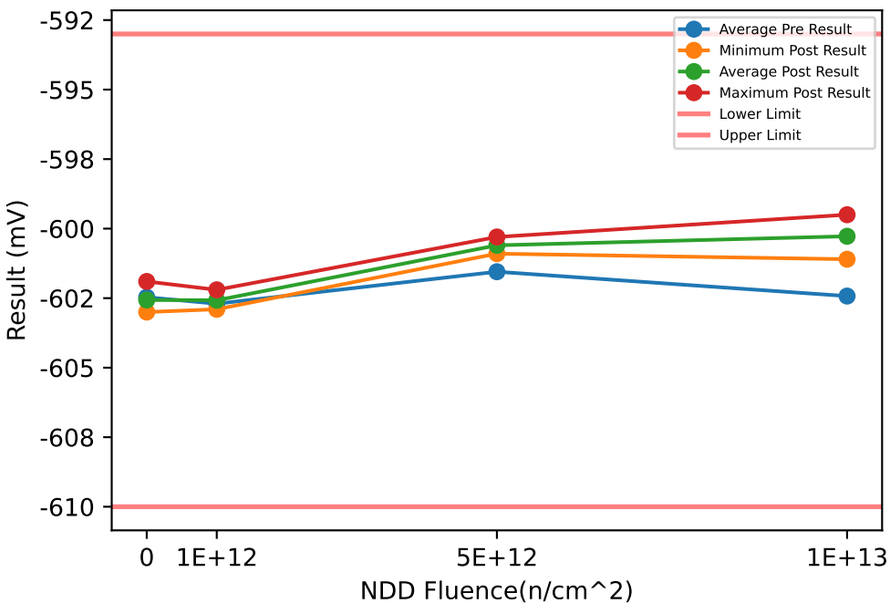
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	-602.9	-603	-0.1
2	0	CU2	-602.1	-602.2	-0.1
3	0	CU3	-603.2	-603.3	-0.1
60	1e+12	1E12n/cm2	-603.5	-603.3	0.2
61	1e+12	1E12n/cm2	-603	-602.9	0.1
62	1e+12	1E12n/cm2	-602.9	-602.8	0.1
63	1e+12	1E12n/cm2	-602.7	-602.5	0.2
64	5e+12	5E12n/cm2	-601.5	-600.8	0.7
65	5e+12	5E12n/cm2	-602.2	-601.2	1
66	5e+12	5E12n/cm2	-601.9	-601	0.9
67	5e+12	5E12n/cm2	-601.8	-600.5	1.3
68	1e+13	1E13n/cm2	-602.4	-600.6	1.8
69	1e+13	1E13n/cm2	-603.8	-601.3	2.5
70	1e+13	1E13n/cm2	-602	-599.7	2.3
71	1e+13	1E13n/cm2	-602.6	-600.5	2.1

Test Statistics (mV)

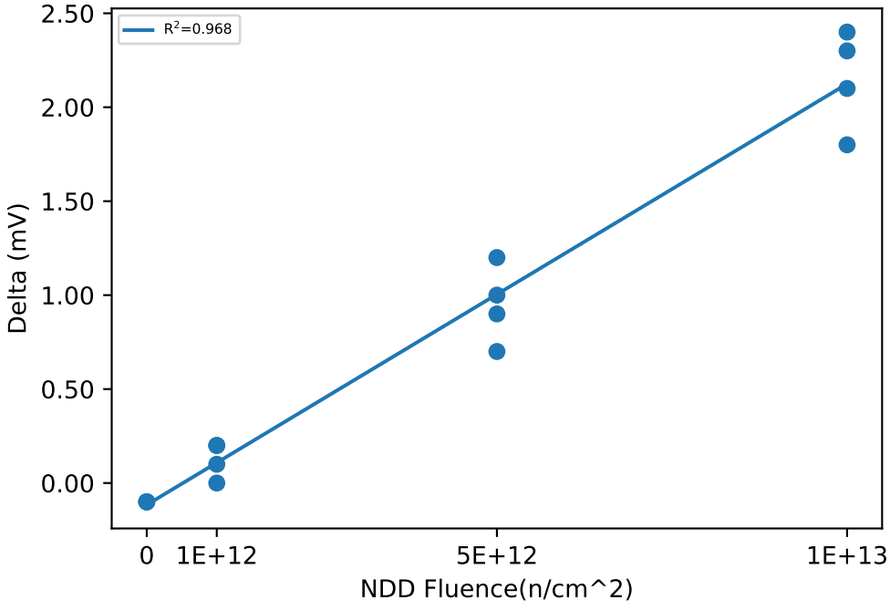
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-603.2	-602.73	-602.1	0.56862	-603.3	-602.83	-602.2	0.56862	-0.1	-0.1	-0.1	6.5638e-14
1e+12	-603.5	-603.02	-602.7	0.34034	-603.3	-602.88	-602.5	0.3304	0.1	0.15	0.2	0.057735
5e+12	-602.2	-601.85	-601.5	0.28868	-601.2	-600.88	-600.5	0.29861	0.7	0.975	1.3	0.25
1e+13	-603.8	-602.7	-602	0.7746	-601.3	-600.52	-599.7	0.65511	1.8	2.175	2.5	0.29861

Device Test: 30.3 VREF|/VREF//1N8V//6.3/@VREF

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = -610.0, Upper Limit = -593.0 (mV))

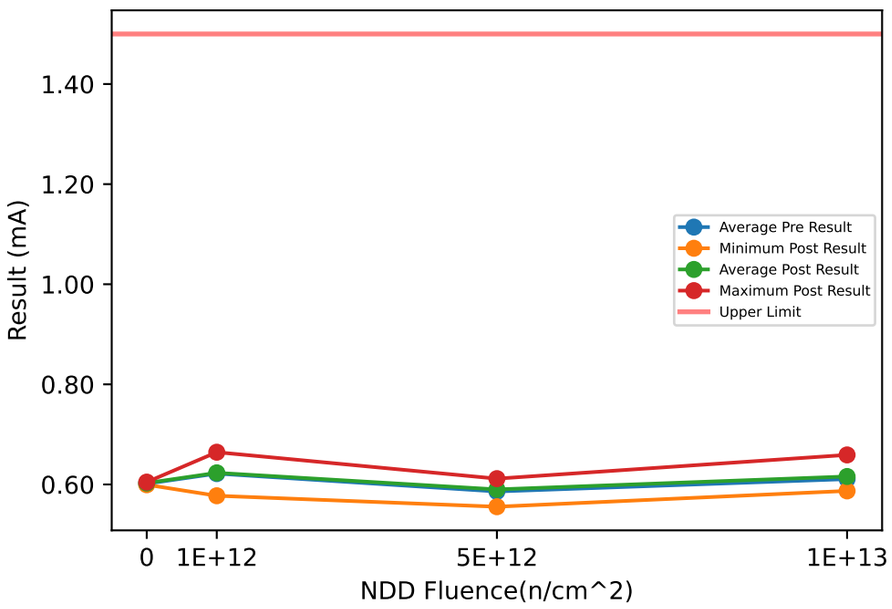
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	-602.7	-602.8	-0.1
2	0	CU2	-601.8	-601.9	-0.1
3	0	CU3	-602.9	-603	-0.1
60	1e+12	1E12n/cm2	-603.1	-602.9	0.2
61	1e+12	1E12n/cm2	-602.7	-602.6	0.1
62	1e+12	1E12n/cm2	-602.6	-602.6	0
63	1e+12	1E12n/cm2	-602.4	-602.2	0.2
64	5e+12	5E12n/cm2	-601.2	-600.5	0.7
65	5e+12	5E12n/cm2	-601.9	-600.9	1
66	5e+12	5E12n/cm2	-601.6	-600.7	0.9
67	5e+12	5E12n/cm2	-601.5	-600.3	1.2
68	1e+13	1E13n/cm2	-602	-600.2	1.8
69	1e+13	1E13n/cm2	-603.5	-601.1	2.4
70	1e+13	1E13n/cm2	-601.8	-599.5	2.3
71	1e+13	1E13n/cm2	-602.4	-600.3	2.1

Test Statistics (mV)

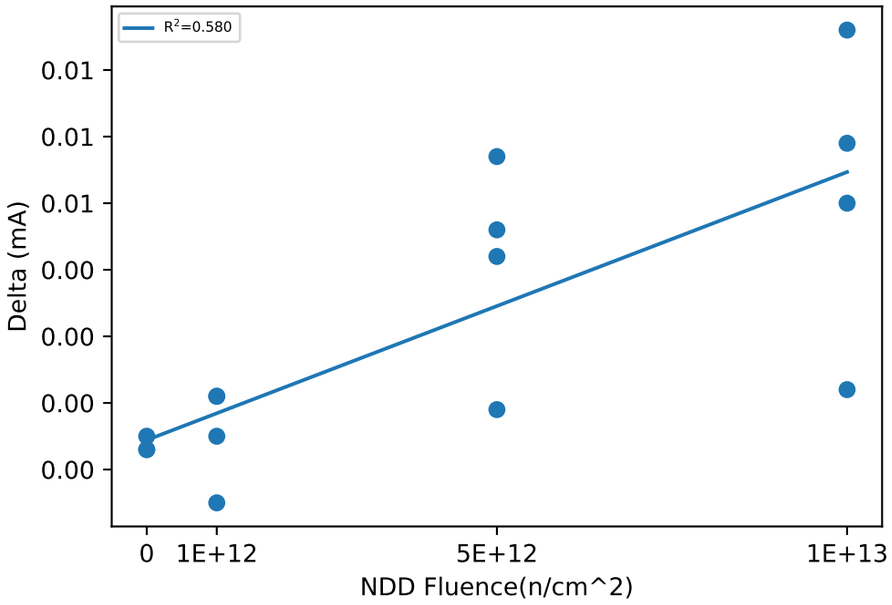
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-602.9	-602.47	-601.8	0.58595	-603	-602.57	-601.9	0.58595	-0.1	-0.1	-0.1	6.5638e-14
1e+12	-603.1	-602.7	-602.4	0.29439	-602.9	-602.58	-602.2	0.28723	0	0.125	0.2	0.095743
5e+12	-601.9	-601.55	-601.2	0.28868	-600.9	-600.6	-600.3	0.2582	0.7	0.95	1.2	0.20817
1e+13	-603.5	-602.42	-601.8	0.75884	-601.1	-600.27	-599.5	0.65511	1.8	2.15	2.4	0.26458

Device Test: 31.1 SUPPLY_CURRENT|PRE/VIN/SHUTDOWN///3/@I_SHDN

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Upper Limit = 1.5 (mA))

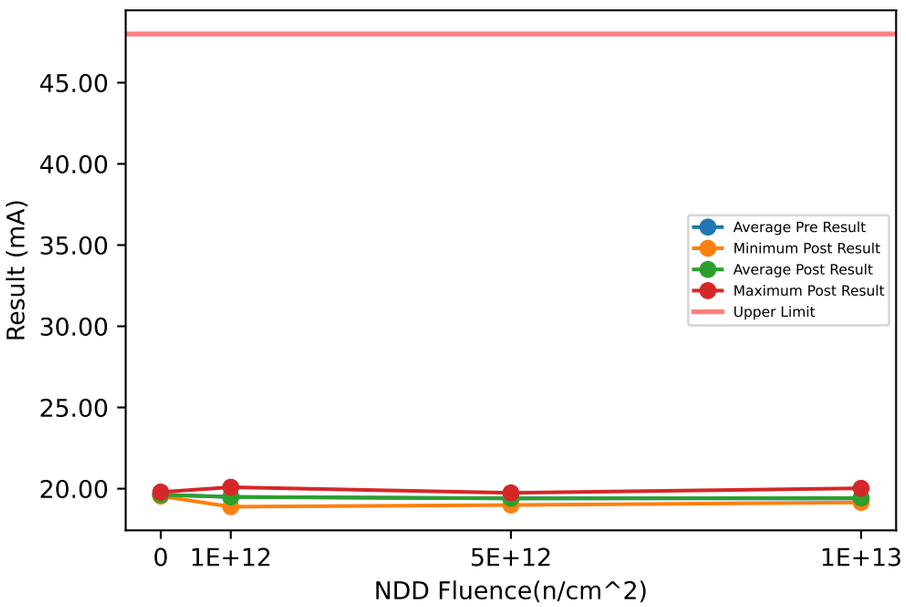
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.5981	0.5994	0.0013
2	0	CU2	0.6034	0.6047	0.0013
3	0	CU3	0.603	0.6045	0.0015
60	1e+12	1E12n/cm2	0.6152	0.6157	0.0005
61	1e+12	1E12n/cm2	0.6333	0.6354	0.0021
62	1e+12	1E12n/cm2	0.5753	0.5774	0.0021
63	1e+12	1E12n/cm2	0.6629	0.6644	0.0015
64	5e+12	5E12n/cm2	0.5787	0.5833	0.0046
65	5e+12	5E12n/cm2	0.6057	0.6099	0.0042
66	5e+12	5E12n/cm2	0.6097	0.6116	0.0019
67	5e+12	5E12n/cm2	0.5498	0.5555	0.0057
68	1e+13	1E13n/cm2	0.6531	0.659	0.0059
69	1e+13	1E13n/cm2	0.6087	0.6163	0.0076
70	1e+13	1E13n/cm2	0.5821	0.5871	0.005
71	1e+13	1E13n/cm2	0.5989	0.6011	0.0022

Test Statistics (mA)

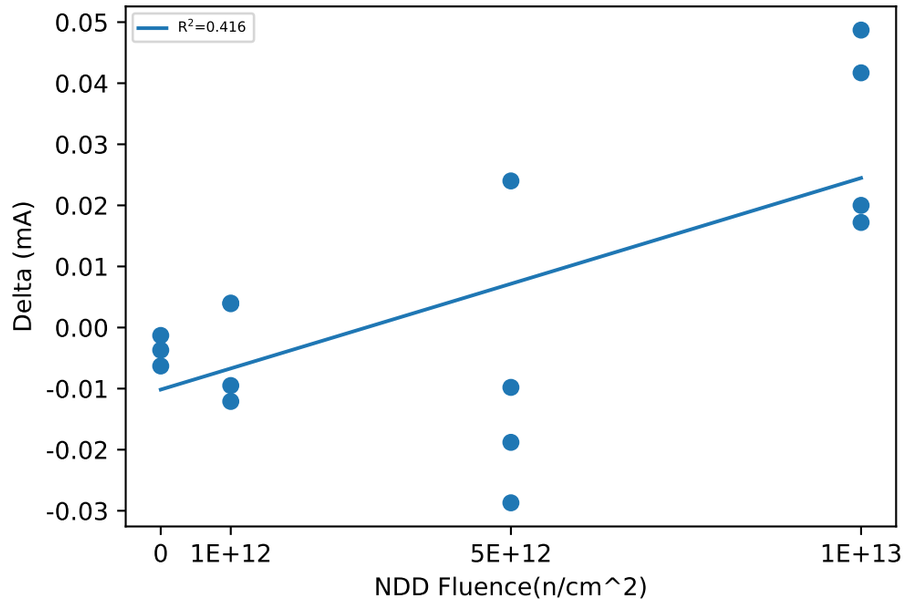
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5981	0.6015	0.6034	0.0029513	0.5994	0.60287	0.6047	0.0030039	0.0013	0.0013667	0.0015	0.00011547
1e+12	0.5753	0.62167	0.6629	0.036639	0.5774	0.62323	0.6644	0.036516	0.0005	0.00155	0.0021	0.00075498
5e+12	0.5498	0.58598	0.6097	0.02777	0.5555	0.59008	0.6116	0.026443	0.0019	0.0041	0.0057	0.0015979
1e+13	0.5821	0.6107	0.6531	0.030326	0.5871	0.61587	0.659	0.031125	0.0022	0.005175	0.0076	0.0022574

Device Test: 31.2 SUPPLY_CURRENT|PRE/VIN/QUIESCENT///3/@IQ_VIN_1302

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Upper Limit = 48.0 (mA))

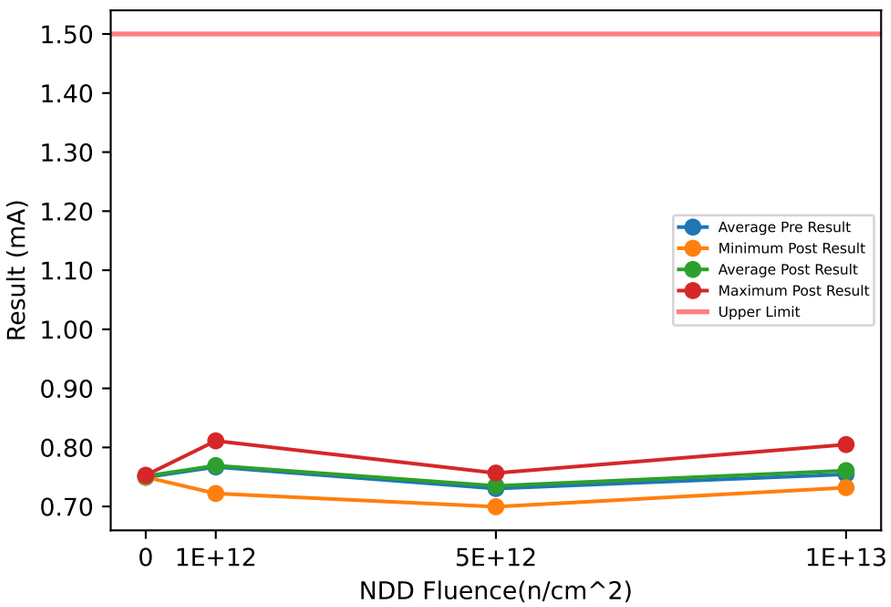
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	19.545	19.544	-0.0013
2	0	CU2	19.797	19.79	-0.0063
3	0	CU3	19.545	19.541	-0.0037
60	1e+12	1E12n/cm2	18.884	18.888	0.004
61	1e+12	1E12n/cm2	20.1	20.088	-0.0121
62	1e+12	1E12n/cm2	19.273	19.277	0.0039
63	1e+12	1E12n/cm2	19.704	19.695	-0.0095
64	5e+12	5E12n/cm2	19.76	19.741	-0.0188
65	5e+12	5E12n/cm2	19.393	19.364	-0.0287
66	5e+12	5E12n/cm2	19.002	18.992	-0.0098
67	5e+12	5E12n/cm2	19.464	19.488	0.024
68	1e+13	1E13n/cm2	19.142	19.191	0.0487
69	1e+13	1E13n/cm2	19.134	19.151	0.0172
70	1e+13	1E13n/cm2	19.982	20.023	0.0417
71	1e+13	1E13n/cm2	19.313	19.333	0.02

Test Statistics (mA)

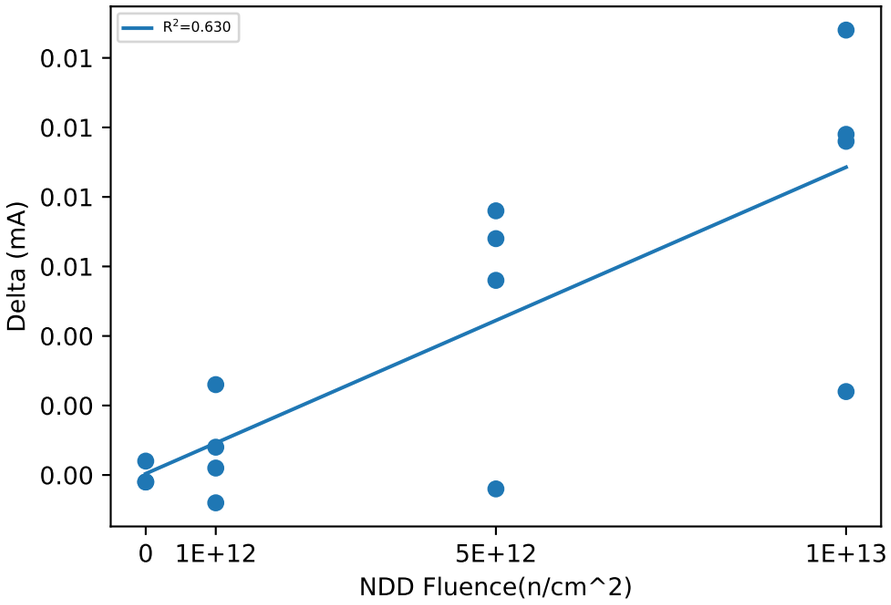
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	19.545	19.629	19.797	0.1452	19.541	19.625	19.79	0.14301	-0.0063	-0.0037667	-0.0013	0.0025007
1e+12	18.884	19.49	20.1	0.52683	18.888	19.487	20.088	0.51882	-0.0121	-0.003425	0.004	0.0085819
5e+12	19.002	19.405	19.76	0.31216	18.992	19.396	19.741	0.31195	-0.0287	-0.008325	0.024	0.022891
1e+13	19.134	19.393	19.982	0.40123	19.151	19.425	20.023	0.40675	0.0172	0.0319	0.0487	0.015663

Device Test: 31.3 SUPPLY_CURRENT|PRE/VIN/SHUTDOWN///6.3/@I_SHDN

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



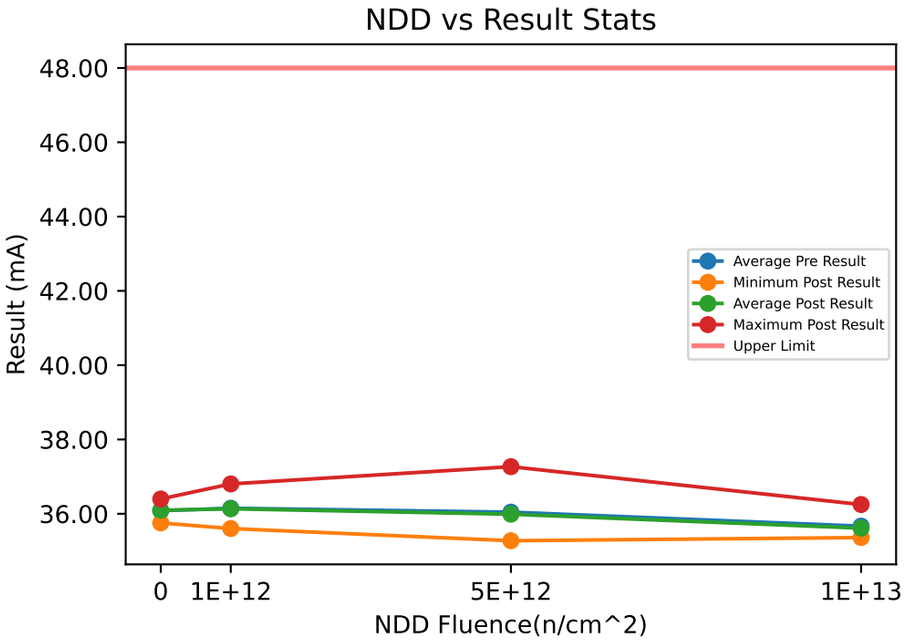
Test Results (Upper Limit = 1.5 (mA))

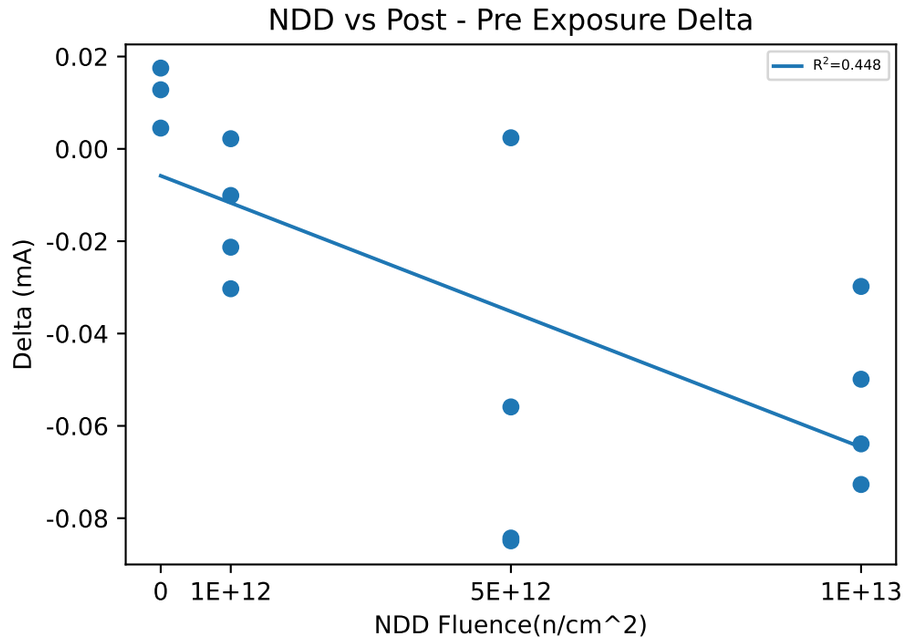
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.7476	0.7498	0.0022
2	0	CU2	0.751	0.7529	0.0019
3	0	CU3	0.7495	0.7514	0.0019
60	1e+12	1E12n/cm2	0.7614	0.763	0.0016
61	1e+12	1E12n/cm2	0.7785	0.7809	0.0024
62	1e+12	1E12n/cm2	0.7199	0.722	0.0021
63	1e+12	1E12n/cm2	0.8078	0.8111	0.0033
64	5e+12	5E12n/cm2	0.7235	0.7283	0.0048
65	5e+12	5E12n/cm2	0.7491	0.7549	0.0058
66	5e+12	5E12n/cm2	0.7548	0.7566	0.0018
67	5e+12	5E12n/cm2	0.6942	0.6996	0.0054
68	1e+13	1E13n/cm2	0.7979	0.8048	0.0069
69	1e+13	1E13n/cm2	0.7525	0.7609	0.0084
70	1e+13	1E13n/cm2	0.7251	0.7319	0.0068
71	1e+13	1E13n/cm2	0.7422	0.7454	0.0032

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.7476	0.74937	0.751	0.0017039	0.7498	0.75137	0.7529	0.0015503	0.0019	0.002	0.0022	0.00017321
1e+12	0.7199	0.7669	0.8078	0.036727	0.722	0.76925	0.8111	0.037232	0.0016	0.00235	0.0033	0.00071414
5e+12	0.6942	0.7304	0.7548	0.027707	0.6996	0.73485	0.7566	0.026836	0.0018	0.00445	0.0058	0.0018138
1e+13	0.7251	0.75443	0.7979	0.031108	0.7319	0.76075	0.8048	0.031667	0.0032	0.006325	0.0084	0.0022081

Device Test: 31.4 SUPPLY_CURRENT|PRE/VIN/QUIESCENT///6.3/@IQ_VIN_1302





Test Results (Upper Limit = 48.0 (mA))

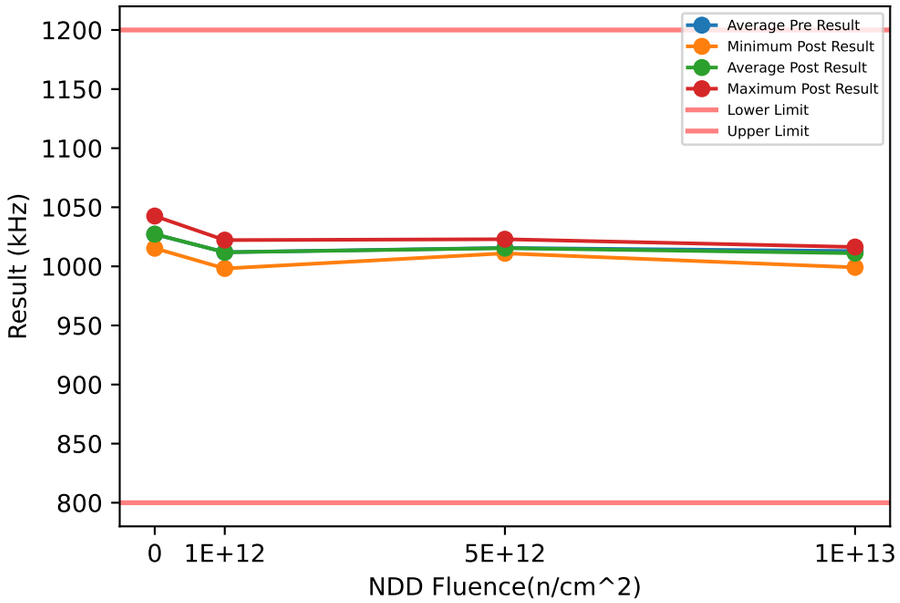
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	36.112	36.129	0.0175
2	0	CU2	36.394	36.398	0.0045
3	0	CU3	35.741	35.754	0.0128
60	1e+12	1E12n/cm2	35.624	35.602	-0.0213
61	1e+12	1E12n/cm2	36.833	36.803	-0.0303
62	1e+12	1E12n/cm2	35.758	35.76	0.0022
63	1e+12	1E12n/cm2	36.38	36.369	-0.0101
64	5e+12	5E12n/cm2	37.352	37.267	-0.0849
65	5e+12	5E12n/cm2	35.774	35.69	-0.0843
66	5e+12	5E12n/cm2	35.331	35.275	-0.0559
67	5e+12	5E12n/cm2	35.719	35.721	0.0024
68	1e+13	1E13n/cm2	35.423	35.36	-0.0639
69	1e+13	1E13n/cm2	35.493	35.443	-0.0499
70	1e+13	1E13n/cm2	36.279	36.249	-0.0298
71	1e+13	1E13n/cm2	35.473	35.4	-0.0727

Test Statistics (mA)

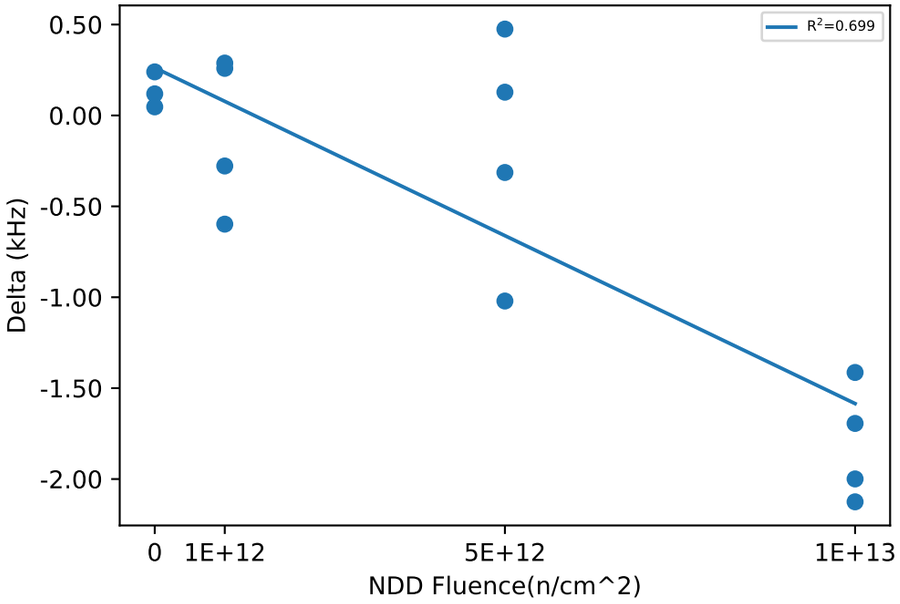
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	35.741	36.082	36.394	0.3272	35.754	36.094	36.398	0.32351	0.0045	0.0116	0.0175	0.0065826
1e+12	35.624	36.149	36.833	0.56276	35.602	36.134	36.803	0.55533	-0.0303	-0.014875	0.0022	0.014066
5e+12	35.331	36.044	37.352	0.89427	35.275	35.988	37.267	0.87669	-0.0849	-0.055675	0.0024	0.041013
1e+13	35.423	35.667	36.279	0.40889	35.36	35.613	36.249	0.4254	-0.0727	-0.054075	-0.0298	0.018709

Device Test: 35.1 SWITCHING_FREQ|/CFLYP///0mA/3/@F_SW_1302

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 800.0, Upper Limit = 1200.0 (kHz))

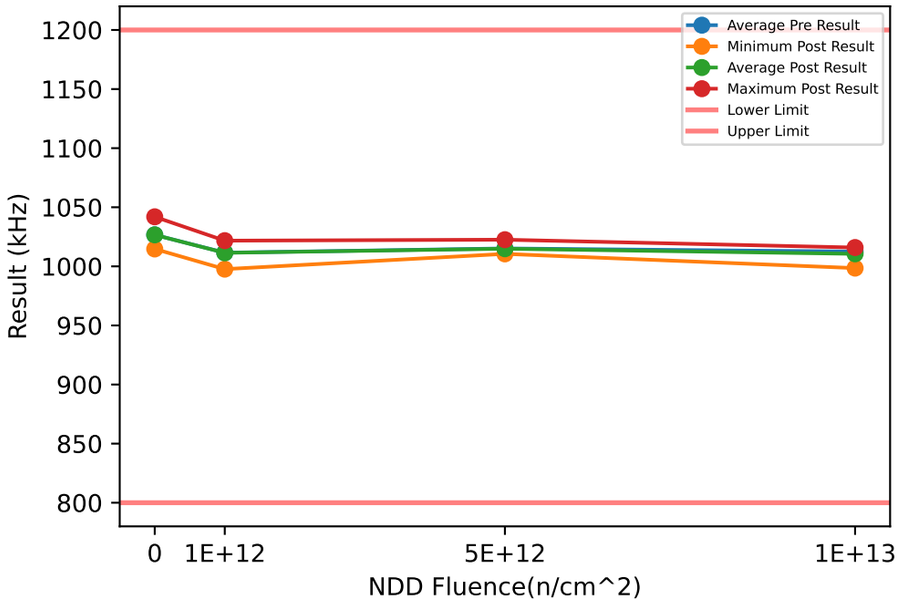
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1042.3	1042.6	0.2397
2	0	CU2	1023.8	1023.9	0.1189
3	0	CU3	1015.2	1015.3	0.0472
60	1e+12	1E12n/cm2	1022.8	1022.2	-0.5979
61	1e+12	1E12n/cm2	1012.3	1012.6	0.2881
62	1e+12	1E12n/cm2	997.92	998.18	0.259
63	1e+12	1E12n/cm2	1014.9	1014.6	-0.278
64	5e+12	5E12n/cm2	1023.3	1022.9	-0.3138
65	5e+12	5E12n/cm2	1012.6	1012.7	0.128
66	5e+12	5E12n/cm2	1012	1011	-1.0208
67	5e+12	5E12n/cm2	1014.4	1014.9	0.4751
68	1e+13	1E13n/cm2	1015.8	1013.8	-1.9994
69	1e+13	1E13n/cm2	1000.8	999.12	-1.6941
70	1e+13	1E13n/cm2	1016.6	1015.2	-1.4138
71	1e+13	1E13n/cm2	1018.5	1016.4	-2.1253

Test Statistics (kHz)

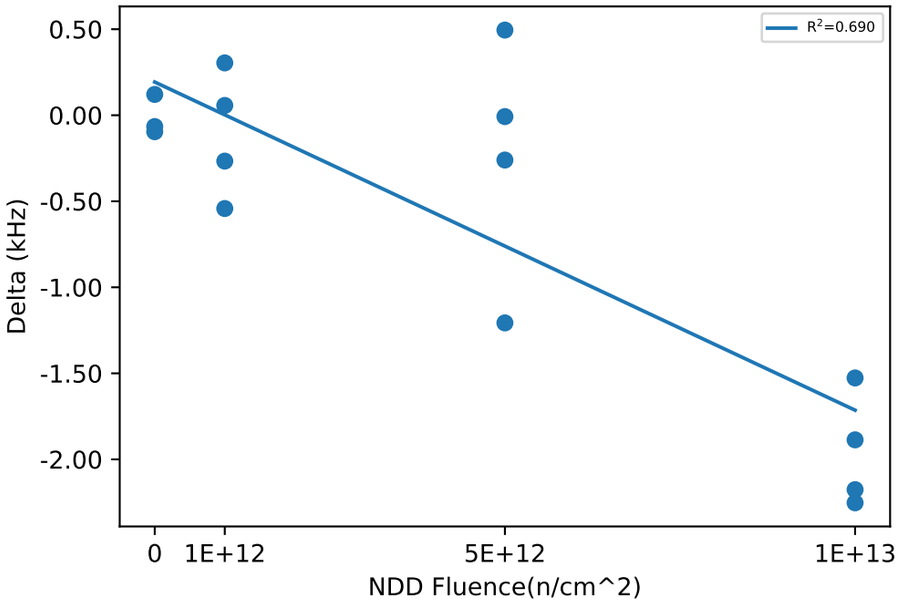
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1015.2	1027.1	1042.3	13.845	1015.3	1027.3	1042.6	13.942	0.0472	0.13527	0.2397	0.097288
1e+12	997.92	1012	1022.8	10.383	998.18	1011.9	1022.2	10.039	-0.5979	-0.0822	0.2881	0.43121
5e+12	1012	1015.6	1023.3	5.2282	1011	1015.4	1022.9	5.2855	-1.0208	-0.18287	0.4751	0.6452
1e+13	1000.8	1012.9	1018.5	8.1538	999.12	1011.1	1016.4	8.0677	-2.1253	-1.8082	-1.4138	0.31921

Device Test: 35.2 SWITCHING_FREQ|/CFLYP///10mA/3/@F_SW_1302

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 800.0, Upper Limit = 1200.0 (kHz))

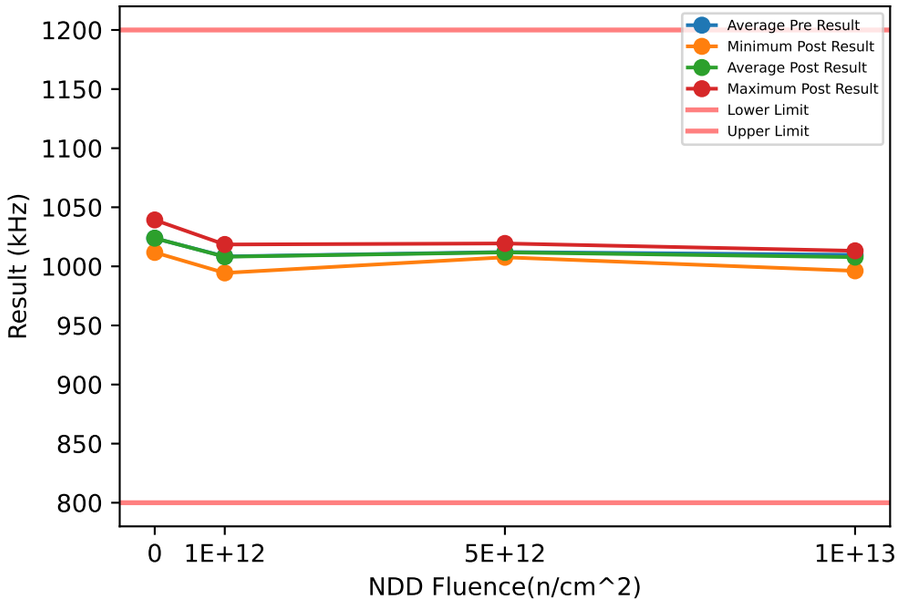
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1042	1041.9	-0.0958
2	0	CU2	1023.3	1023.3	-0.0658
3	0	CU3	1014.6	1014.7	0.1209
60	1e+12	1E12n/cm2	1022.3	1021.7	-0.5423
61	1e+12	1E12n/cm2	1012	1012.3	0.3041
62	1e+12	1E12n/cm2	997.59	997.65	0.0568
63	1e+12	1E12n/cm2	1014.4	1014.1	-0.2667
64	5e+12	5E12n/cm2	1022.8	1022.5	-0.2604
65	5e+12	5E12n/cm2	1012.2	1012.2	-0.0079
66	5e+12	5E12n/cm2	1011.8	1010.6	-1.207
67	5e+12	5E12n/cm2	1013.8	1014.3	0.4949
68	1e+13	1E13n/cm2	1015.4	1013.2	-2.2526
69	1e+13	1E13n/cm2	1000.4	998.51	-1.8866
70	1e+13	1E13n/cm2	1016.2	1014.7	-1.5269
71	1e+13	1E13n/cm2	1018.1	1015.9	-2.176

Test Statistics (kHz)

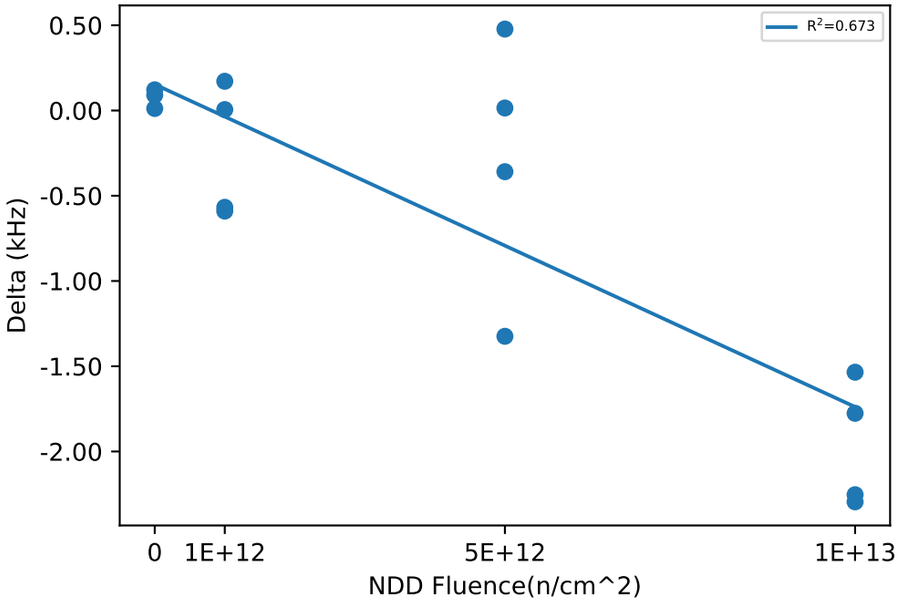
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1014.6	1026.6	1042	14.009	1014.7	1026.6	1041.9	13.913	-0.0958	-0.013567	0.1209	0.11741
1e+12	997.59	1011.6	1022.3	10.3	997.65	1011.4	1021.7	10.07	-0.5423	-0.11202	0.3041	0.37001
5e+12	1011.8	1015.1	1022.8	5.1845	1010.6	1014.9	1022.5	5.3251	-1.207	-0.2451	0.4949	0.71399
1e+13	1000.4	1012.5	1018.1	8.1643	998.51	1010.6	1015.9	8.1155	-2.2526	-1.9605	-1.5269	0.32926

Device Test: 35.3 SWITCHING_FREQ|/CFLYP///150mA/3/@F_SW_1302

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 800.0, Upper Limit = 1200.0 (kHz))

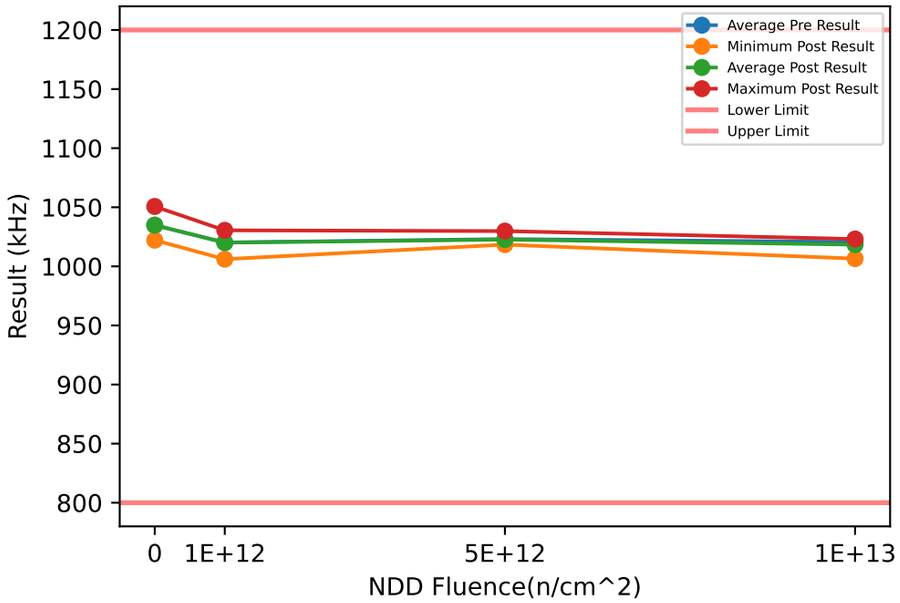
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1039.2	1039.3	0.0904
2	0	CU2	1020.3	1020.4	0.1215
3	0	CU3	1011.8	1011.8	0.0119
60	1e+12	1E12n/cm2	1019.1	1018.5	-0.5677
61	1e+12	1E12n/cm2	1008.7	1008.8	0.1715
62	1e+12	1E12n/cm2	994.44	994.44	0.0055
63	1e+12	1E12n/cm2	1011.3	1010.8	-0.5899
64	5e+12	5E12n/cm2	1019.7	1019.4	-0.3589
65	5e+12	5E12n/cm2	1009.2	1009.2	0.0147
66	5e+12	5E12n/cm2	1009	1007.7	-1.3244
67	5e+12	5E12n/cm2	1010.6	1011.1	0.4777
68	1e+13	1E13n/cm2	1012.4	1010.1	-2.2953
69	1e+13	1E13n/cm2	997.97	996.19	-1.7761
70	1e+13	1E13n/cm2	1013.2	1011.7	-1.5351
71	1e+13	1E13n/cm2	1015.4	1013.2	-2.2536

Test Statistics (kHz)

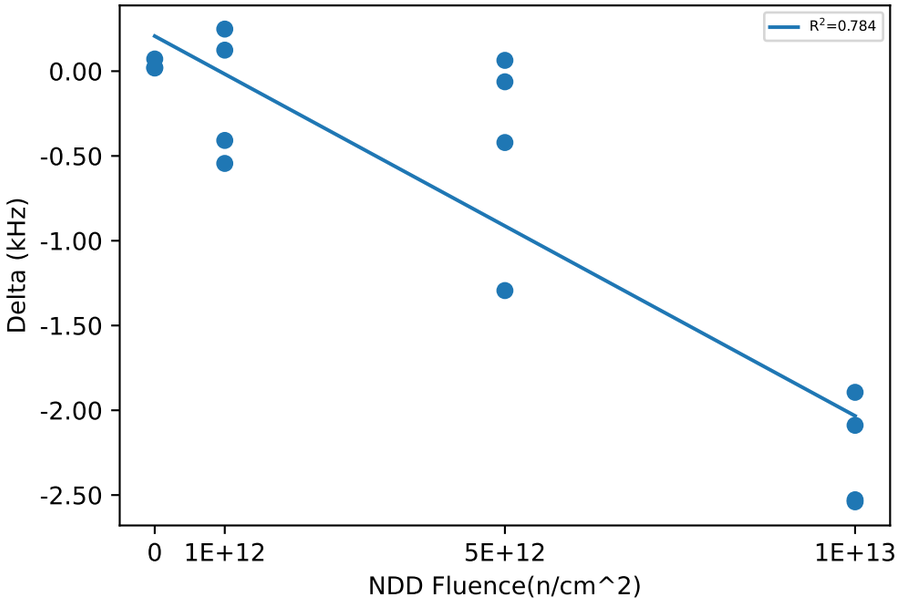
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1011.8	1023.7	1039.2	14.016	1011.8	1023.8	1039.3	14.046	0.0119	0.0746	0.1215	0.056482
1e+12	994.44	1008.4	1019.1	10.288	994.44	1008.1	1018.5	10.038	-0.5899	-0.24515	0.1715	0.39129
5e+12	1009	1012.1	1019.7	5.1109	1007.7	1011.8	1019.4	5.2095	-1.3244	-0.29773	0.4777	0.76522
1e+13	997.97	1009.8	1015.4	7.9584	996.19	1007.8	1013.2	7.8307	-2.2953	-1.965	-1.5351	0.37098

Device Test: 35.4 SWITCHING_FREQ|/CFLYP///0mA/6.3/@F_SW_1302

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 800.0, Upper Limit = 1200.0 (kHz))

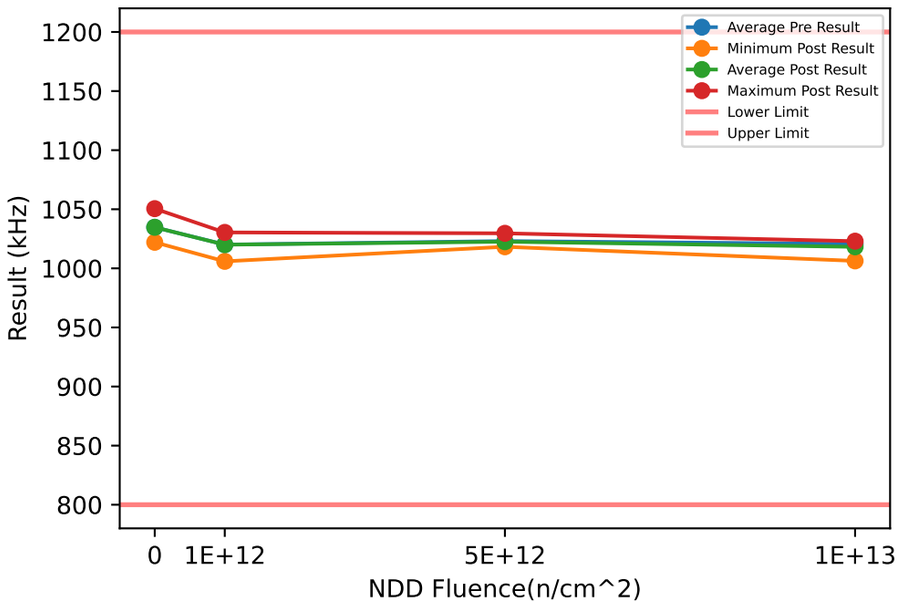
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1050.7	1050.7	0.0186
2	0	CU2	1031.7	1031.8	0.0718
3	0	CU3	1022.1	1022.1	0.0215
60	1e+12	1E12n/cm2	1031	1030.5	-0.5441
61	1e+12	1E12n/cm2	1021.1	1021.4	0.2483
62	1e+12	1E12n/cm2	1005.9	1006.1	0.1241
63	1e+12	1E12n/cm2	1022.7	1022.3	-0.4085
64	5e+12	5E12n/cm2	1030.3	1029.8	-0.4208
65	5e+12	5E12n/cm2	1020.9	1020.8	-0.0626
66	5e+12	5E12n/cm2	1019.7	1018.4	-1.294
67	5e+12	5E12n/cm2	1021.5	1021.5	0.0638
68	1e+13	1E13n/cm2	1023.7	1021.2	-2.5399
69	1e+13	1E13n/cm2	1008.6	1006.5	-2.0887
70	1e+13	1E13n/cm2	1024.5	1022.6	-1.8941
71	1e+13	1E13n/cm2	1025.7	1023.1	-2.5277

Test Statistics (kHz)

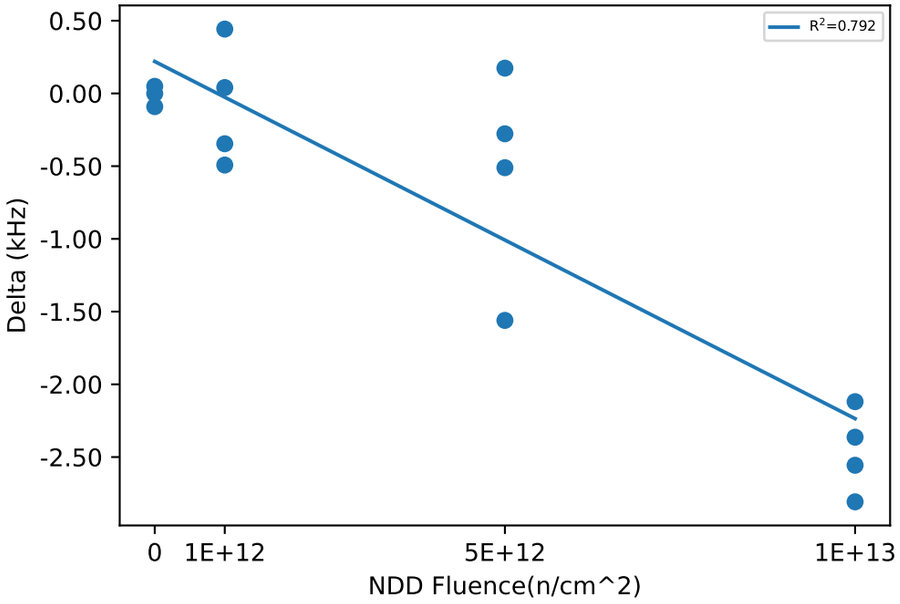
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1022.1	1034.8	1050.7	14.521	1022.1	1034.9	1050.7	14.514	0.0186	0.0373	0.0718	0.029913
1e+12	1005.9	1020.2	1031	10.455	1006.1	1020.1	1030.5	10.189	-0.5441	-0.14505	0.2483	0.38979
5e+12	1019.7	1023.1	1030.3	4.852	1018.4	1022.6	1029.8	4.9838	-1.294	-0.4284	0.0638	0.61248
1e+13	1008.6	1020.6	1025.7	8.0412	1006.5	1018.4	1023.1	7.9277	-2.5399	-2.2626	-1.8941	0.32311

Device Test: 35.5 SWITCHING_FREQ|/CFLYP///10mA/6.3/@F_SW_1302

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 800.0, Upper Limit = 1200.0 (kHz))

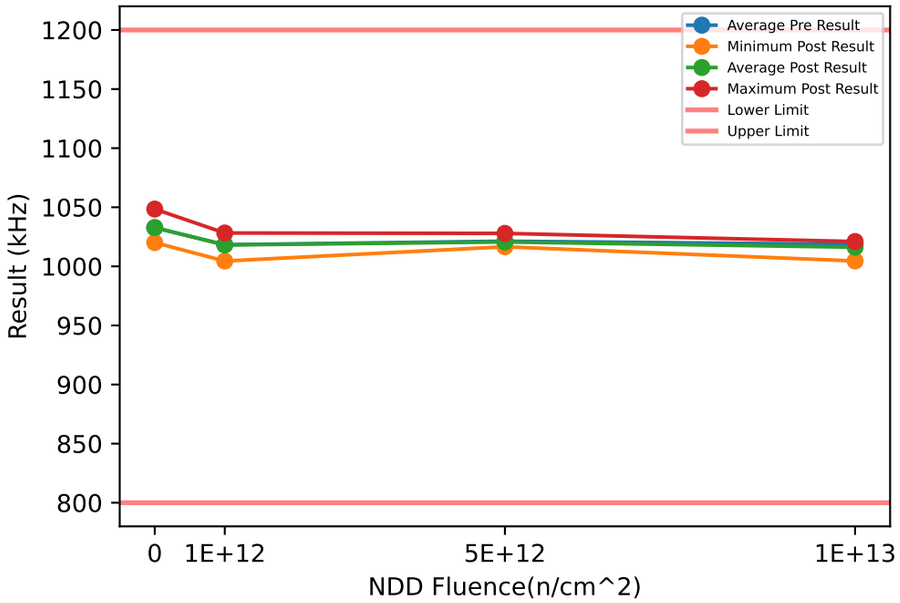
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1050.6	1050.5	-0.0909
2	0	CU2	1031.6	1031.6	-0.0008
3	0	CU3	1022	1022.1	0.0488
60	1e+12	1E12n/cm2	1030.9	1030.4	-0.4923
61	1e+12	1E12n/cm2	1021	1021.4	0.4424
62	1e+12	1E12n/cm2	1005.9	1005.9	0.0403
63	1e+12	1E12n/cm2	1022.7	1022.3	-0.3459
64	5e+12	5E12n/cm2	1030.1	1029.6	-0.5106
65	5e+12	5E12n/cm2	1021	1020.7	-0.2775
66	5e+12	5E12n/cm2	1019.8	1018.2	-1.5605
67	5e+12	5E12n/cm2	1021.4	1021.6	0.1738
68	1e+13	1E13n/cm2	1023.6	1021	-2.5564
69	1e+13	1E13n/cm2	1008.7	1006.3	-2.3634
70	1e+13	1E13n/cm2	1024.6	1022.5	-2.1192
71	1e+13	1E13n/cm2	1025.8	1023	-2.8077

Test Statistics (kHz)

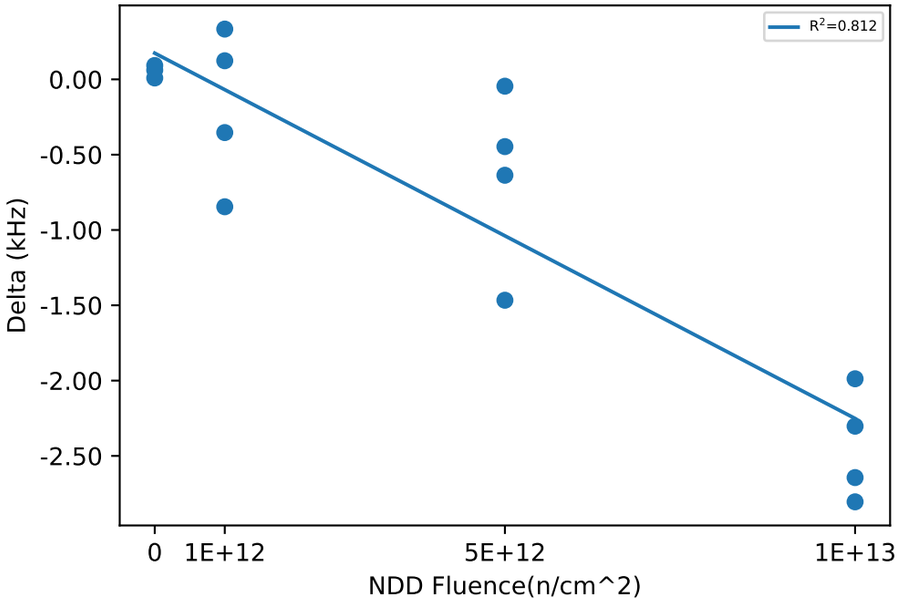
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1022	1034.7	1050.6	14.551	1022.1	1034.7	1050.5	14.48	-0.0909	-0.0143	0.0488	0.070822
1e+12	1005.9	1020.1	1030.9	10.42	1005.9	1020	1030.4	10.222	-0.4923	-0.088875	0.4424	0.41943
5e+12	1019.8	1023.1	1030.1	4.756	1018.2	1022.5	1029.6	4.9353	-1.5605	-0.5437	0.1738	0.73499
1e+13	1008.7	1020.7	1025.8	8.0414	1006.3	1018.2	1023	7.9684	-2.8077	-2.4617	-2.1192	0.29192

Device Test: 35.6 SWITCHING_FREQ|/CFLYP///400mA/6.3/@F_SW_1302

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



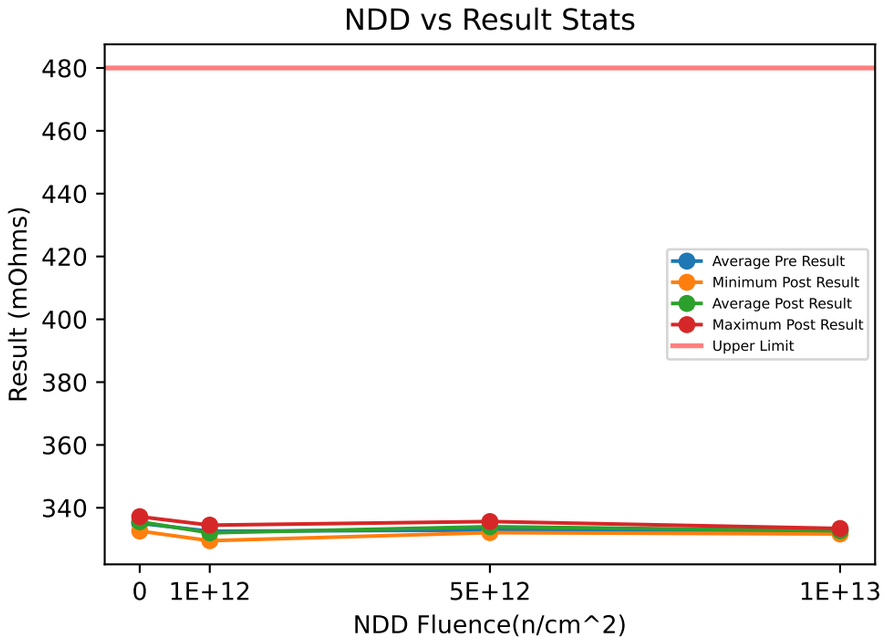
Test Results (Lower Limit = 800.0, Upper Limit = 1200.0 (kHz))

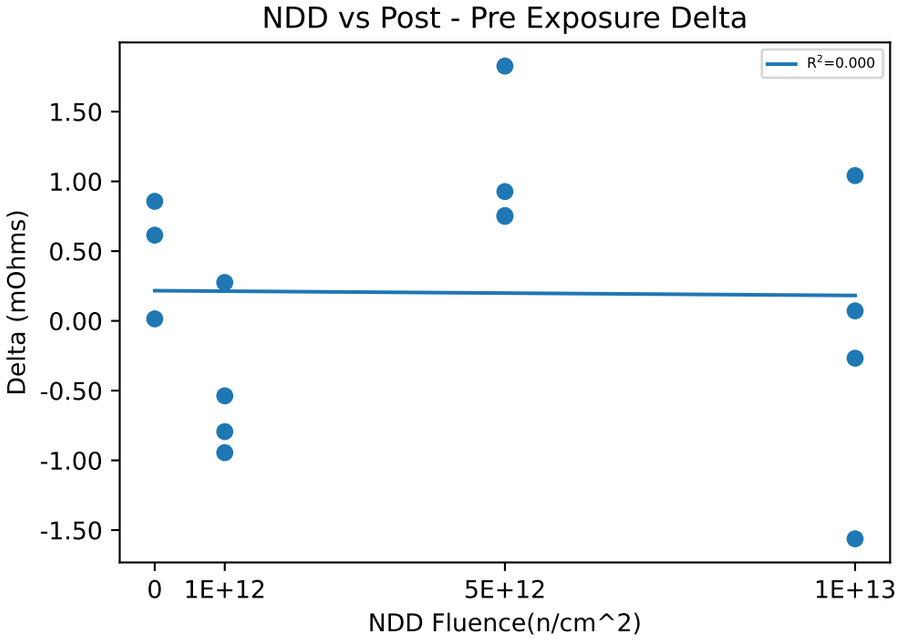
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1048.4	1048.5	0.0921
2	0	CU2	1029.7	1029.7	0.0615
3	0	CU3	1020.1	1020.1	0.0093
60	1e+12	1E12n/cm2	1029.1	1028.2	-0.8458
61	1e+12	1E12n/cm2	1019.1	1019.4	0.3339
62	1e+12	1E12n/cm2	1004.4	1004.5	0.1236
63	1e+12	1E12n/cm2	1020.6	1020.3	-0.3533
64	5e+12	5E12n/cm2	1028.5	1027.9	-0.6366
65	5e+12	5E12n/cm2	1019	1018.5	-0.4464
66	5e+12	5E12n/cm2	1018	1016.6	-1.4664
67	5e+12	5E12n/cm2	1019.6	1019.6	-0.0453
68	1e+13	1E13n/cm2	1021.5	1018.8	-2.6439
69	1e+13	1E13n/cm2	1006.9	1004.6	-2.3027
70	1e+13	1E13n/cm2	1022.3	1020.3	-1.9879
71	1e+13	1E13n/cm2	1023.8	1021	-2.8048

Test Statistics (kHz)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1020.1	1032.7	1048.4	14.383	1020.1	1032.8	1048.5	14.423	0.0093	0.0543	0.0921	0.041867
1e+12	1004.4	1018.3	1029.1	10.262	1004.5	1018.1	1028.2	9.8988	-0.8458	-0.1854	0.3339	0.52582
5e+12	1018	1021.3	1028.5	4.8754	1016.6	1020.6	1027.9	4.9978	-1.4664	-0.64867	-0.0453	0.59827
1e+13	1006.9	1018.6	1023.8	7.8862	1004.6	1016.2	1021	7.7915	-2.8048	-2.4348	-1.9879	0.36414

Device Test: 40.2 RDSON|//SW1///5/@SW1_RDSON





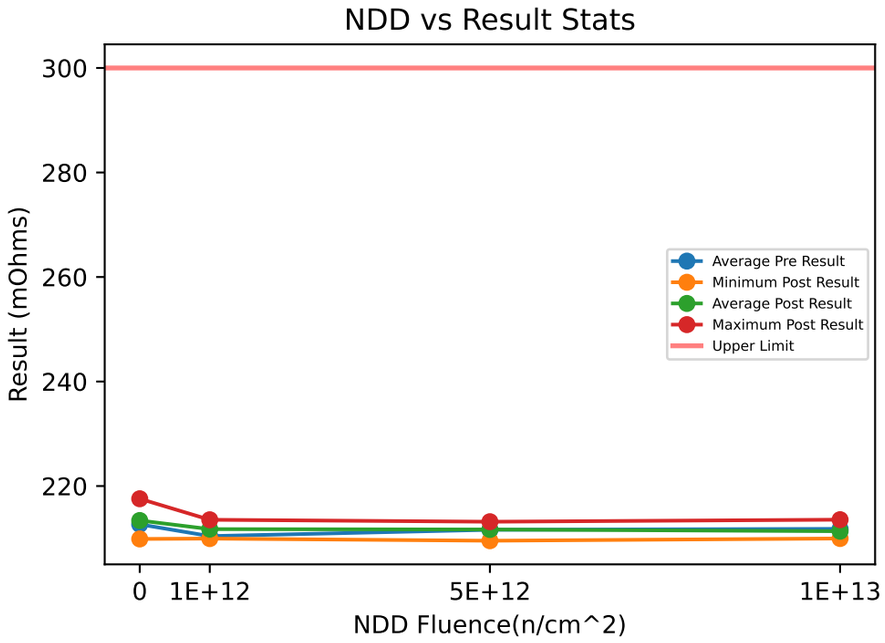
Test Results (Upper Limit = 480.0 (mOhms))

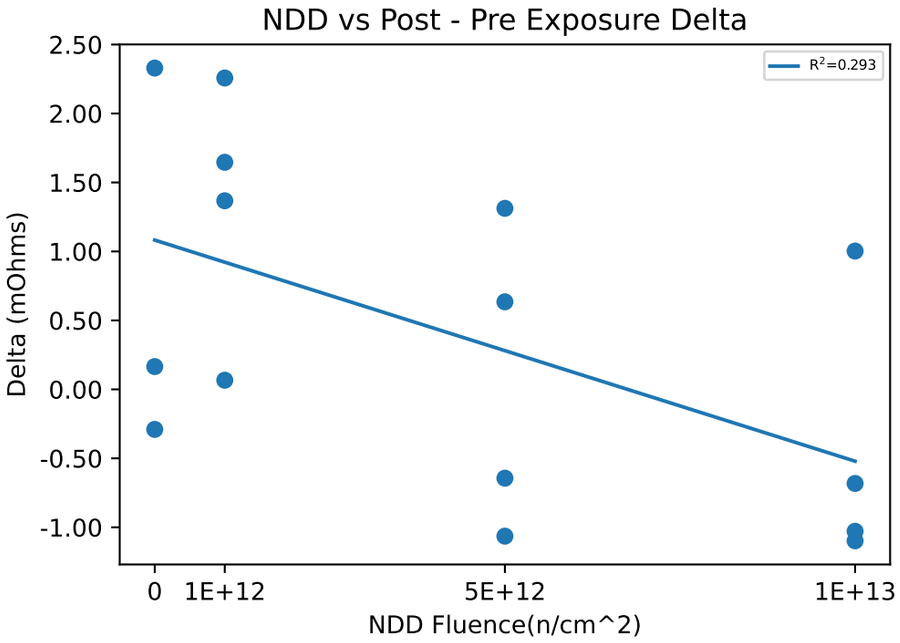
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	336.55	337.17	0.6145
2	0	CU2	331.74	332.59	0.857
3	0	CU3	336.89	336.91	0.0145
60	1e+12	1E12n/cm2	332.03	331.09	-0.9447
61	1e+12	1E12n/cm2	330.31	329.52	-0.7939
62	1e+12	1E12n/cm2	334.2	334.47	0.2751
63	1e+12	1E12n/cm2	333.58	333.04	-0.5374
64	5e+12	5E12n/cm2	331.34	332.09	0.7491
65	5e+12	5E12n/cm2	332.94	333.87	0.927
66	5e+12	5E12n/cm2	333.79	335.62	1.8267
67	5e+12	5E12n/cm2	333.55	334.31	0.755
68	1e+13	1E13n/cm2	332.37	333.41	1.0415
69	1e+13	1E13n/cm2	334.95	333.38	-1.5625
70	1e+13	1E13n/cm2	332.49	332.22	-0.2678
71	1e+13	1E13n/cm2	331.59	331.66	0.0717

Test Statistics (mOhms)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	331.74	335.06	336.89	2.8848	332.59	335.56	337.17	2.57	0.0145	0.49533	0.857	0.43371
1e+12	330.31	332.53	334.2	1.7373	329.52	332.03	334.47	2.1751	-0.9447	-0.50023	0.2751	0.54354
5e+12	331.34	332.91	333.79	1.1036	332.09	333.97	335.62	1.4581	0.7491	1.0644	1.8267	0.51482
1e+13	331.59	332.85	334.95	1.4547	331.66	332.67	333.41	0.87141	-1.5625	-0.17928	1.0415	1.0762

Device Test: 40.3 RDSON|//SW3///5/@SW3_RDSON





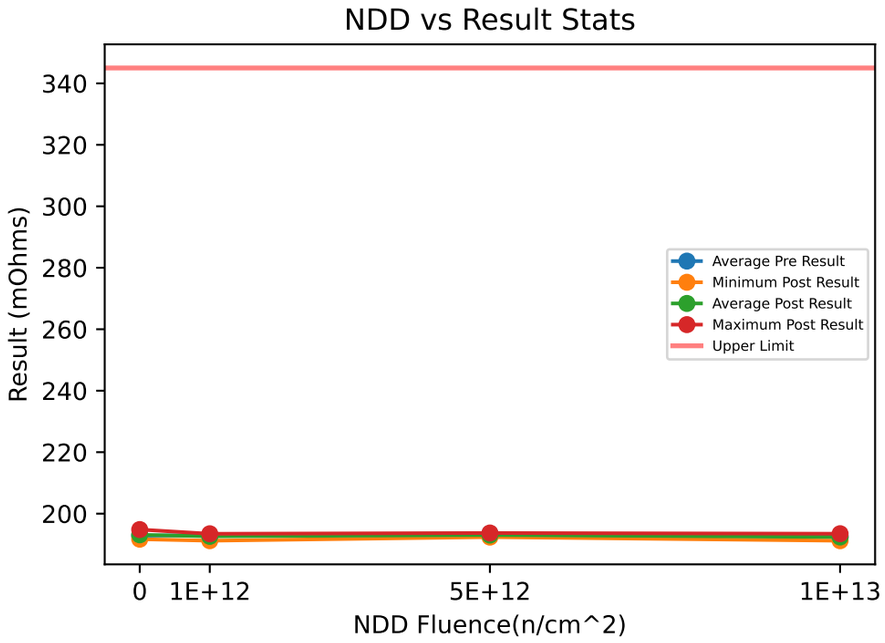
Test Results (Upper Limit = 300.0 (mOhms))

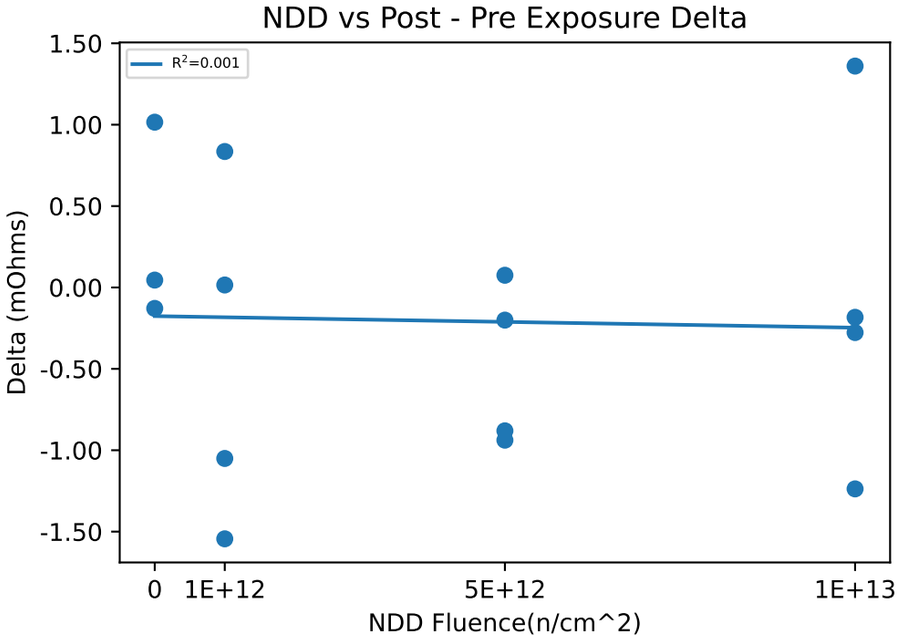
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	215.24	217.57	2.3293
2	0	CU2	210.17	209.88	-0.2902
3	0	CU3	212.6	212.77	0.1651
60	1e+12	1E12n/cm2	209.88	209.95	0.0663
61	1e+12	1E12n/cm2	209.13	210.5	1.3673
62	1e+12	1E12n/cm2	211.29	213.55	2.2572
63	1e+12	1E12n/cm2	211.39	213.04	1.6462
64	5e+12	5E12n/cm2	210.6	209.54	-1.0641
65	5e+12	5E12n/cm2	213.34	212.69	-0.6439
66	5e+12	5E12n/cm2	211.86	213.17	1.3123
67	5e+12	5E12n/cm2	210.71	211.34	0.6347
68	1e+13	1E13n/cm2	212.56	213.56	1.0026
69	1e+13	1E13n/cm2	211.16	210.14	-1.0287
70	1e+13	1E13n/cm2	210.65	209.96	-0.6821
71	1e+13	1E13n/cm2	212.86	211.76	-1.098

Test Statistics (mOhms)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	210.17	212.67	215.24	2.5361	209.88	213.4	217.57	3.8847	-0.2902	0.73473	2.3293	1.3996
1e+12	209.13	210.42	211.39	1.1025	209.95	211.76	213.55	1.7978	0.0663	1.3343	2.2572	0.92339
5e+12	210.6	211.63	213.34	1.2752	209.54	211.69	213.17	1.6289	-1.0641	0.05975	1.3123	1.1042
1e+13	210.65	211.81	212.86	1.0716	209.96	211.36	213.56	1.6805	-1.098	-0.45155	1.0026	0.98636

Device Test: 40.5 RDSON|//SW2///5/@SW2_RDSON





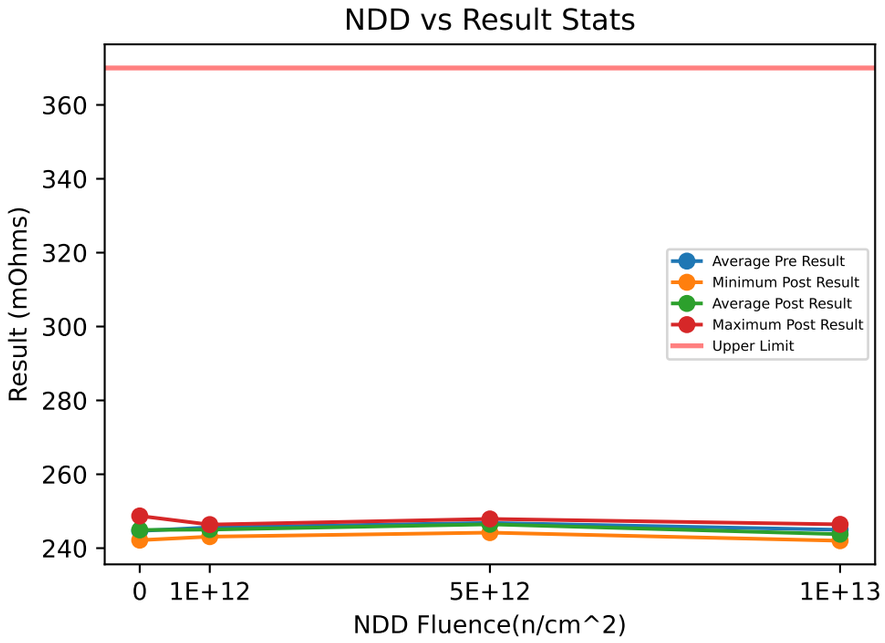
Test Results (Upper Limit = 345.0 (mOhms))

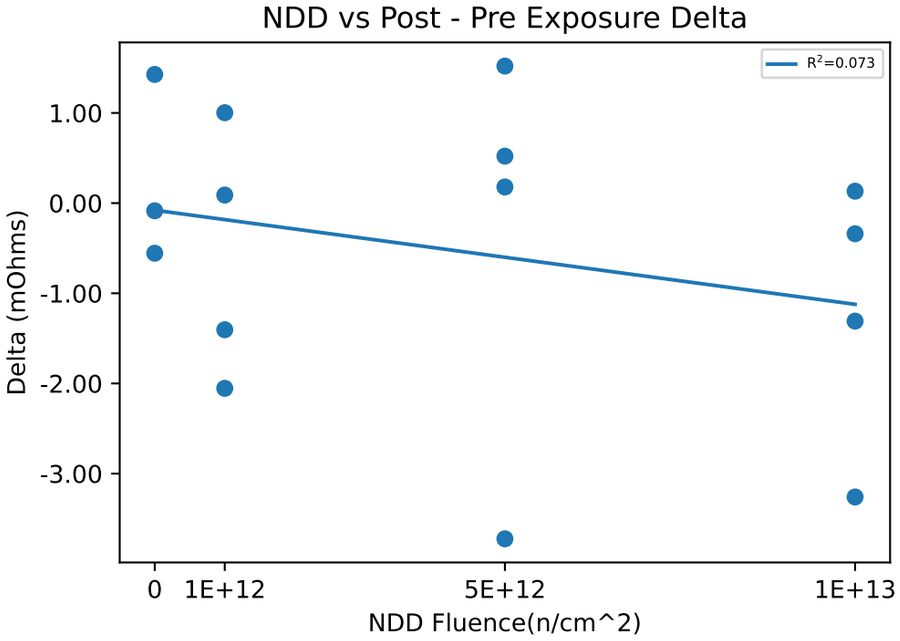
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	193.81	194.83	1.0154
2	0	CU2	191.82	191.69	-0.1287
3	0	CU3	192.8	192.84	0.0453
60	1e+12	1E12n/cm2	192.25	191.2	-1.0505
61	1e+12	1E12n/cm2	191.81	192.65	0.8352
62	1e+12	1E12n/cm2	193.44	193.46	0.0152
63	1e+12	1E12n/cm2	194.71	193.17	-1.5442
64	5e+12	5E12n/cm2	193.22	193.29	0.075
65	5e+12	5E12n/cm2	193.9	193.7	-0.2006
66	5e+12	5E12n/cm2	193.25	192.37	-0.8807
67	5e+12	5E12n/cm2	193.77	192.83	-0.9381
68	1e+13	1E13n/cm2	192.11	193.47	1.3601
69	1e+13	1E13n/cm2	194.56	193.32	-1.2374
70	1e+13	1E13n/cm2	191.47	191.2	-0.277
71	1e+13	1E13n/cm2	191.81	191.63	-0.1834

Test Statistics (mOhms)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	191.82	192.81	193.81	0.99512	191.69	193.12	194.83	1.5856	-0.1287	0.31067	1.0154	0.61649
1e+12	191.81	193.05	194.71	1.301	191.2	192.62	193.46	1.0018	-1.5442	-0.43607	0.8352	1.0685
5e+12	193.22	193.53	193.9	0.34956	192.37	193.05	193.7	0.5747	-0.9381	-0.4861	0.075	0.50211
1e+13	191.47	192.49	194.56	1.4056	191.2	192.4	193.47	1.1624	-1.2374	-0.084425	1.3601	1.0744

Device Test: 40.6 RDSON|//SW4///5/@SW4_RDSON





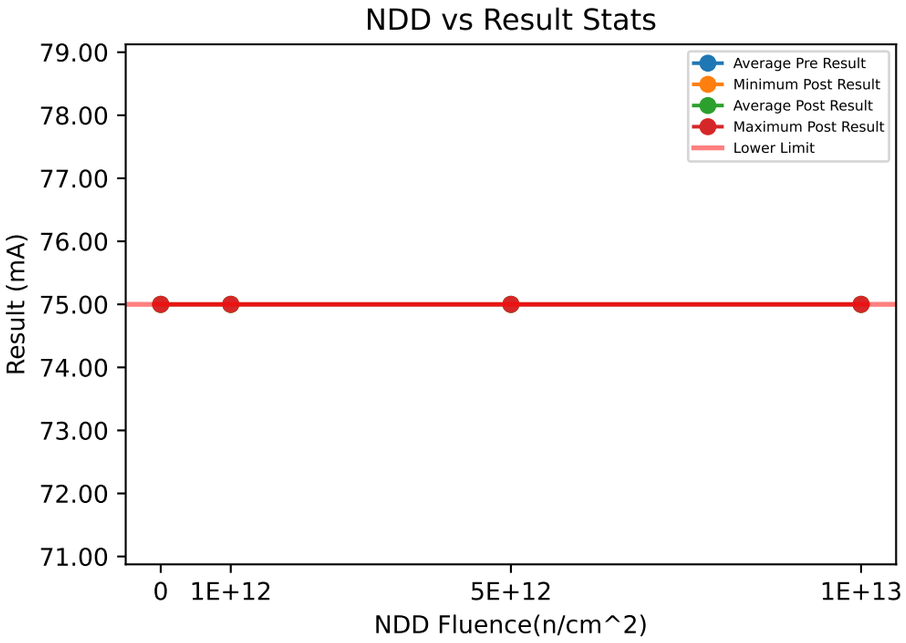
Test Results (Upper Limit = 370.0 (mOhms))

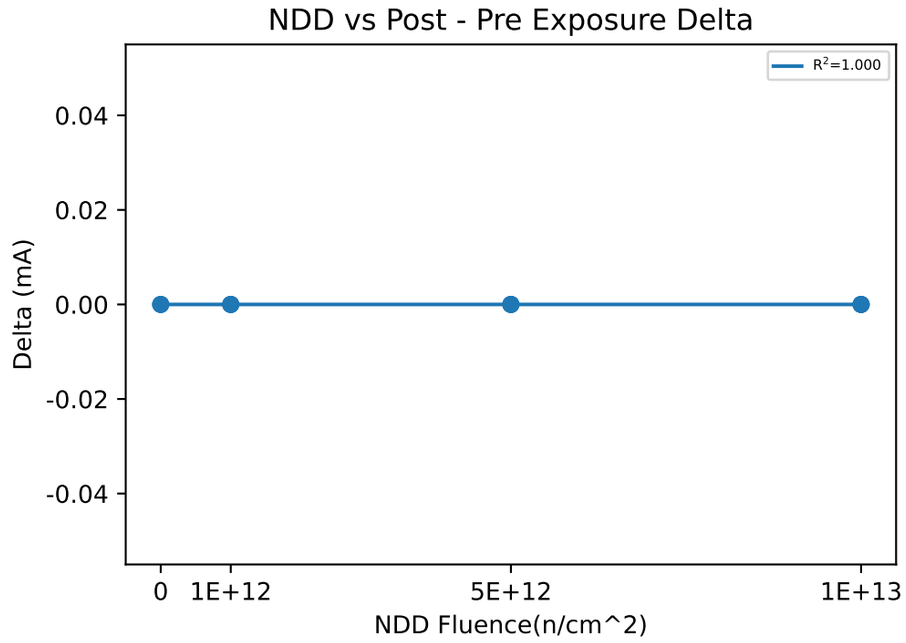
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	247.29	248.72	1.4271
2	0	CU2	242.72	242.16	-0.5557
3	0	CU3	243.98	243.9	-0.0852
60	1e+12	1E12n/cm2	244.52	243.12	-1.4044
61	1e+12	1E12n/cm2	243.37	244.37	1.0027
62	1e+12	1E12n/cm2	246.29	246.38	0.0895
63	1e+12	1E12n/cm2	248.29	246.24	-2.0541
64	5e+12	5E12n/cm2	244.71	246.23	1.52
65	5e+12	5E12n/cm2	247.73	247.91	0.1792
66	5e+12	5E12n/cm2	247.93	244.21	-3.7232
67	5e+12	5E12n/cm2	246.97	247.49	0.521
68	1e+13	1E13n/cm2	246.78	246.44	-0.3398
69	1e+13	1E13n/cm2	245.27	242.01	-3.2593
70	1e+13	1E13n/cm2	243.91	242.6	-1.3088
71	1e+13	1E13n/cm2	243.92	244.05	0.1323

Test Statistics (mOhms)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	242.72	244.66	247.29	2.3604	242.16	244.93	248.72	3.3958	-0.5557	0.26207	1.4271	1.036
1e+12	243.37	245.62	248.29	2.1493	243.12	245.02	246.38	1.5674	-2.0541	-0.59157	1.0027	1.3911
5e+12	244.71	246.83	247.93	1.477	244.21	246.46	247.91	1.6623	-3.7232	-0.37575	1.52	2.303
1e+13	243.91	244.97	246.78	1.366	242.01	243.78	246.44	1.9713	-3.2593	-1.1939	0.1323	1.5019

Device Test: 44.1 DROPOUT_CURRENT|//GO_NOGO/1N8V/40mA/5.5/@I_DO_VIN_5P5V_VOUT_1N8_1302





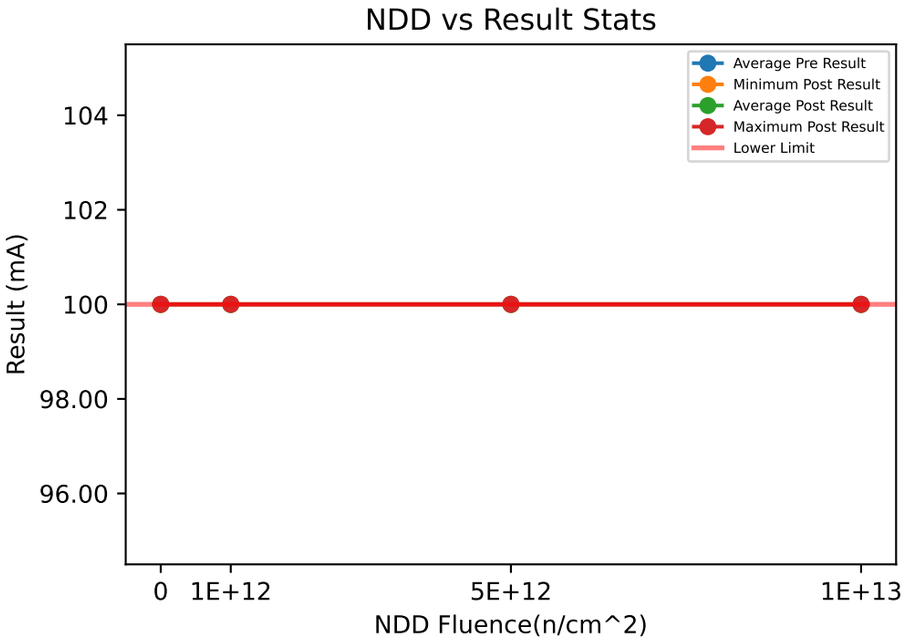
Test Results (Lower Limit = 75.0 (mA))

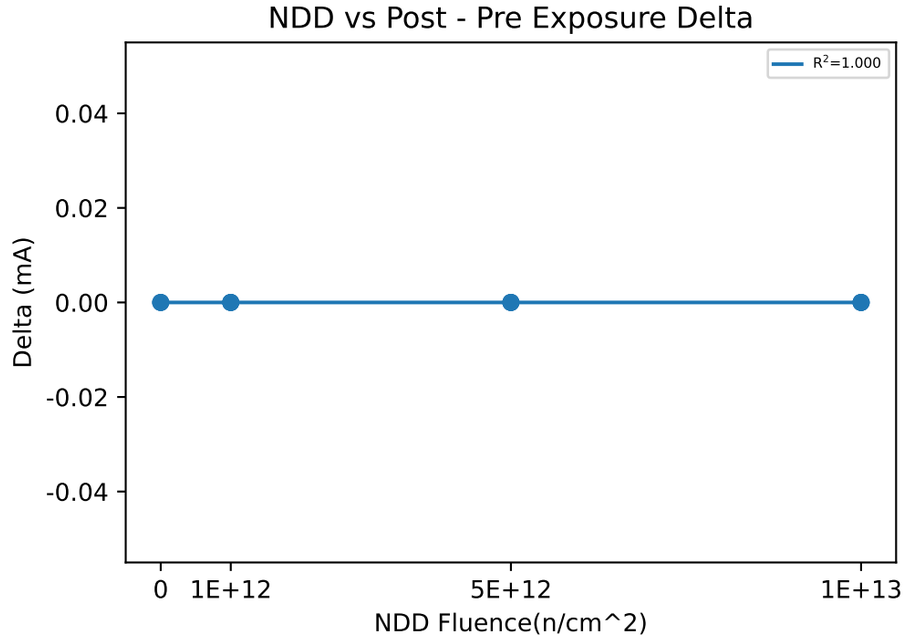
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	75	75	0
2	0	CU2	75	75	0
3	0	CU3	75	75	0
60	1e+12	1E12n/cm2	75	75	0
61	1e+12	1E12n/cm2	75	75	0
62	1e+12	1E12n/cm2	75	75	0
63	1e+12	1E12n/cm2	75	75	0
64	5e+12	5E12n/cm2	75	75	0
65	5e+12	5E12n/cm2	75	75	0
66	5e+12	5E12n/cm2	75	75	0
67	5e+12	5E12n/cm2	75	75	0
68	1e+13	1E13n/cm2	75	75	0
69	1e+13	1E13n/cm2	75	75	0
70	1e+13	1E13n/cm2	75	75	0
71	1e+13	1E13n/cm2	75	75	0

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	75	75	75	0	75	75	75	0	0	0	0	0
1e+12	75	75	75	0	75	75	75	0	0	0	0	0
5e+12	75	75	75	0	75	75	75	0	0	0	0	0
1e+13	75	75	75	0	75	75	75	0	0	0	0	0

Device Test: 44.2 DROPOUT_CURRENT|//GO_NOGO/1N8V/250mA/6/@I_DO_VIN_6V_VOUT_1N8_1302





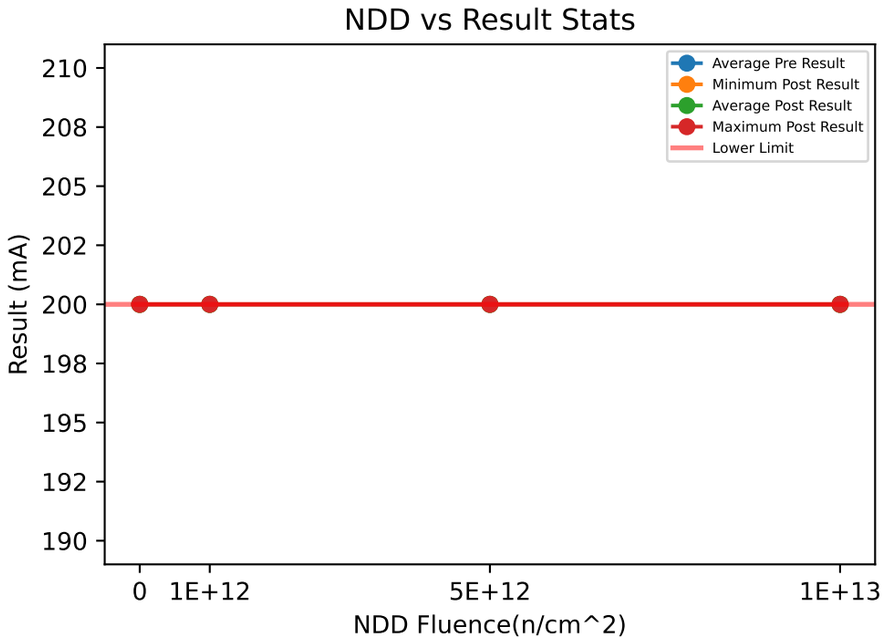
Test Results (Lower Limit = 100.0 (mA))

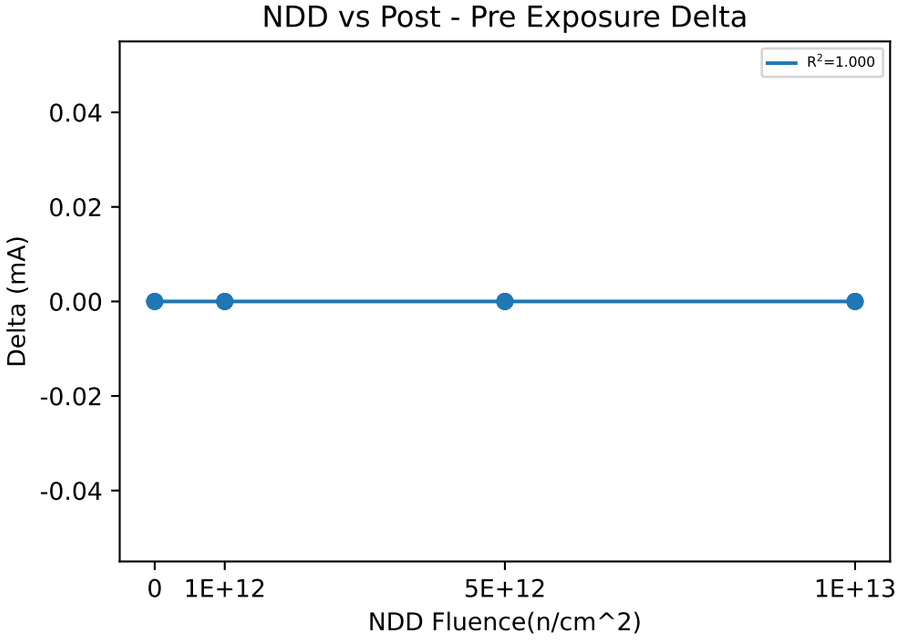
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	100	100	0
2	0	CU2	100	100	0
3	0	CU3	100	100	0
60	1e+12	1E12n/cm2	100	100	0
61	1e+12	1E12n/cm2	100	100	0
62	1e+12	1E12n/cm2	100	100	0
63	1e+12	1E12n/cm2	100	100	0
64	5e+12	5E12n/cm2	100	100	0
65	5e+12	5E12n/cm2	100	100	0
66	5e+12	5E12n/cm2	100	100	0
67	5e+12	5E12n/cm2	100	100	0
68	1e+13	1E13n/cm2	100	100	0
69	1e+13	1E13n/cm2	100	100	0
70	1e+13	1E13n/cm2	100	100	0
71	1e+13	1E13n/cm2	100	100	0

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	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
1e+12	100	100	100	0	100	100	100	0	0	0	0	0
5e+12	100	100	100	0	100	100	100	0	0	0	0	0
1e+13	100	100	100	0	100	100	100	0	0	0	0	0

Device Test: 44.3 DROPOUT_CURRENT|//GO_NOGO/1N8V/200mA/4/@I_DO_VIN_4V_VOUT_1N8_1302





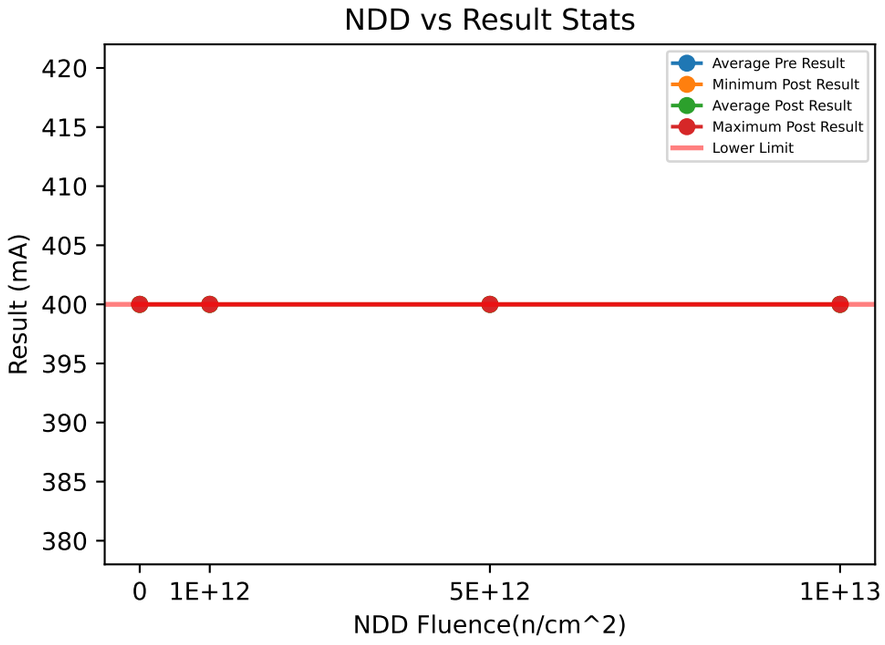
Test Results (Lower Limit = 200.0 (mA))

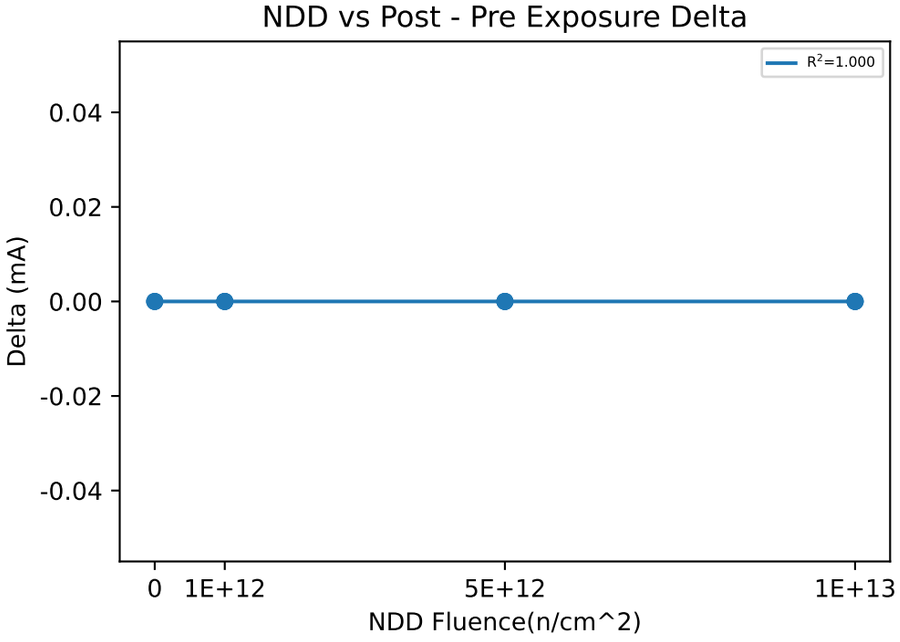
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	200	200	0
2	0	CU2	200	200	0
3	0	CU3	200	200	0
60	1e+12	1E12n/cm2	200	200	0
61	1e+12	1E12n/cm2	200	200	0
62	1e+12	1E12n/cm2	200	200	0
63	1e+12	1E12n/cm2	200	200	0
64	5e+12	5E12n/cm2	200	200	0
65	5e+12	5E12n/cm2	200	200	0
66	5e+12	5E12n/cm2	200	200	0
67	5e+12	5E12n/cm2	200	200	0
68	1e+13	1E13n/cm2	200	200	0
69	1e+13	1E13n/cm2	200	200	0
70	1e+13	1E13n/cm2	200	200	0
71	1e+13	1E13n/cm2	200	200	0

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	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	200	200	0	200	200	200	0	0	0	0	0
1e+12	200	200	200	0	200	200	200	0	0	0	0	0
5e+12	200	200	200	0	200	200	200	0	0	0	0	0
1e+13	200	200	200	0	200	200	200	0	0	0	0	0

Device Test: 44.4 DROPOUT_CURRENT|//GO_NOGO/1N8V/400mA/5/@I_DO_VIN_5V_VOUT_1N8_1302





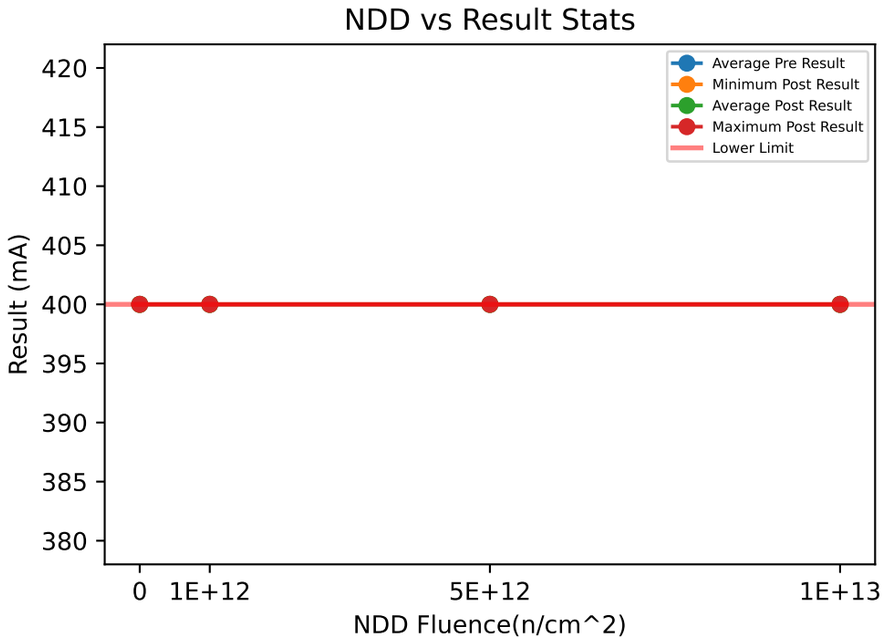
Test Results (Lower Limit = 400.0 (mA))

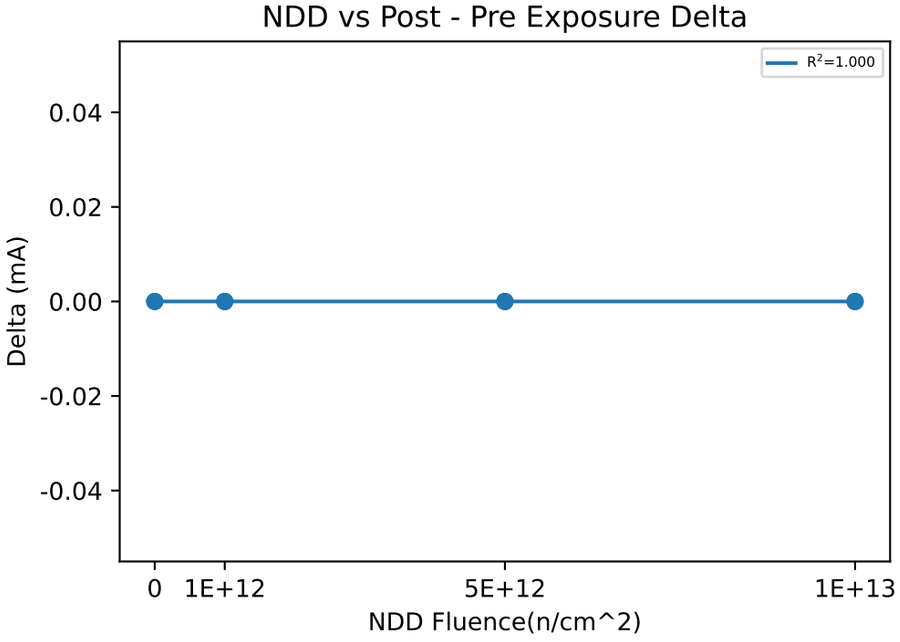
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	400	400	0
2	0	CU2	400	400	0
3	0	CU3	400	400	0
60	1e+12	1E12n/cm2	400	400	0
61	1e+12	1E12n/cm2	400	400	0
62	1e+12	1E12n/cm2	400	400	0
63	1e+12	1E12n/cm2	400	400	0
64	5e+12	5E12n/cm2	400	400	0
65	5e+12	5E12n/cm2	400	400	0
66	5e+12	5E12n/cm2	400	400	0
67	5e+12	5E12n/cm2	400	400	0
68	1e+13	1E13n/cm2	400	400	0
69	1e+13	1E13n/cm2	400	400	0
70	1e+13	1E13n/cm2	400	400	0
71	1e+13	1E13n/cm2	400	400	0

Test Statistics (mA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	400	400	400	0	400	400	400	0	0	0	0	0
1e+12	400	400	400	0	400	400	400	0	0	0	0	0
5e+12	400	400	400	0	400	400	400	0	0	0	0	0
1e+13	400	400	400	0	400	400	400	0	0	0	0	0

Device Test: 44.5 DROPOUT_CURRENT|//GO_NOGO/1N8V/400mA/6/@I_DO_VIN_6p0V_VOUT_1N8_1302





Test Results (Lower Limit = 400.0 (mA))

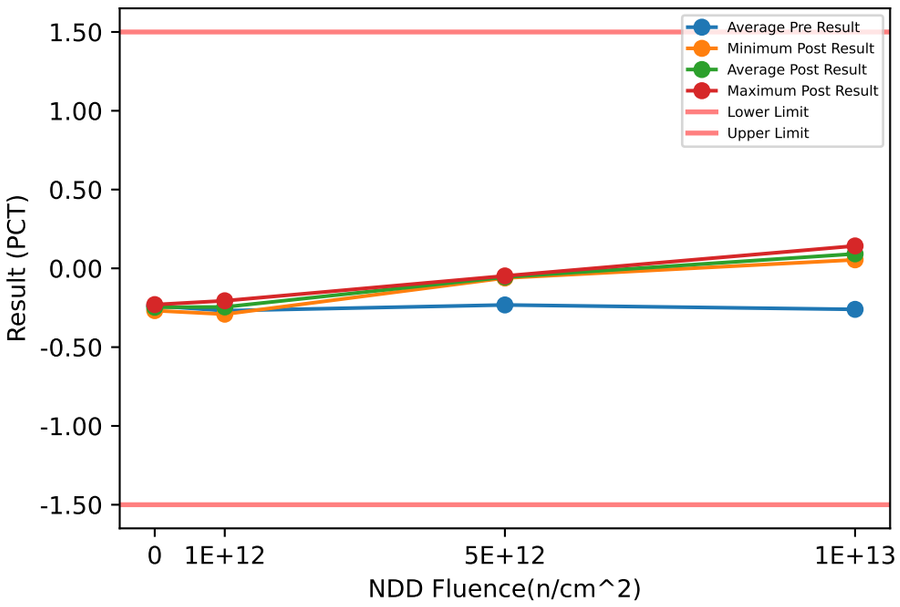
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	400	400	0
2	0	CU2	400	400	0
3	0	CU3	400	400	0
60	1e+12	1E12n/cm2	400	400	0
61	1e+12	1E12n/cm2	400	400	0
62	1e+12	1E12n/cm2	400	400	0
63	1e+12	1E12n/cm2	400	400	0
64	5e+12	5E12n/cm2	400	400	0
65	5e+12	5E12n/cm2	400	400	0
66	5e+12	5E12n/cm2	400	400	0
67	5e+12	5E12n/cm2	400	400	0
68	1e+13	1E13n/cm2	400	400	0
69	1e+13	1E13n/cm2	400	400	0
70	1e+13	1E13n/cm2	400	400	0
71	1e+13	1E13n/cm2	400	400	0

Test Statistics (mA)

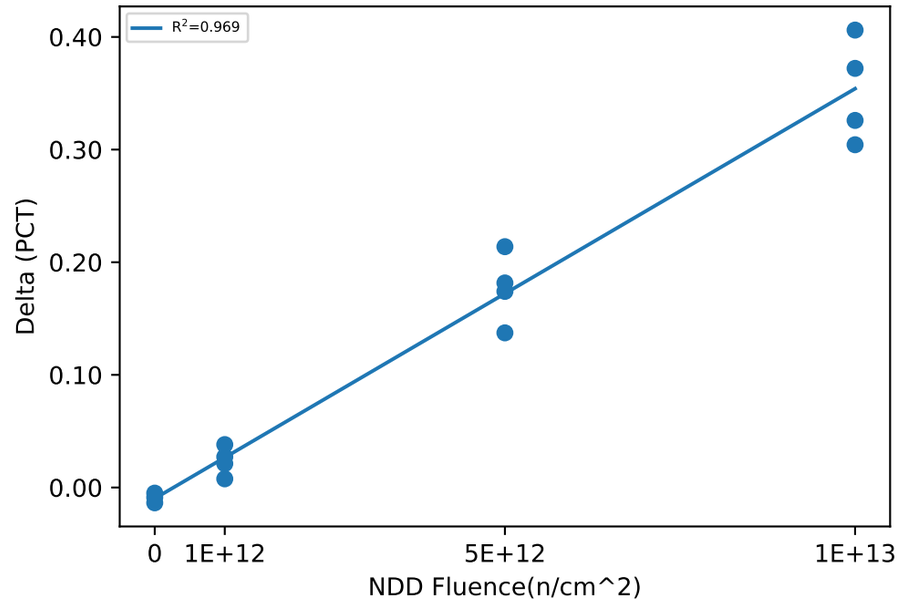
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	400	400	400	0	400	400	400	0	0	0	0	0
1e+12	400	400	400	0	400	400	400	0	0	0	0	0
5e+12	400	400	400	0	400	400	400	0	0	0	0	0
1e+13	400	400	400	0	400	400	400	0	0	0	0	0

Device Test: 50.1 ACCURACY|//VOUT/1N8V/10mA/3/@ACC_VIN_3P0_VOUT_1N8_1MA

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = -1.5, Upper Limit = 1.5 (PCT))

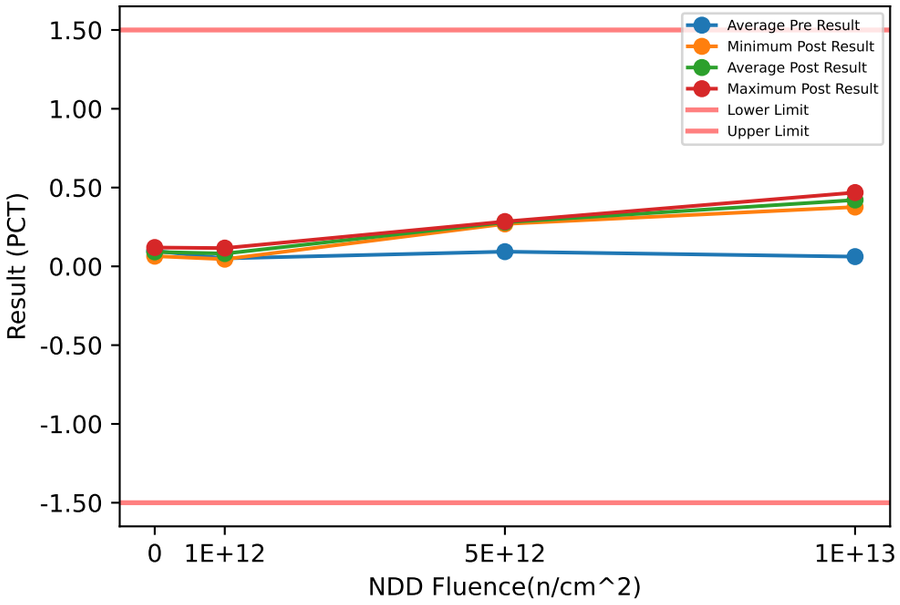
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	-0.2288	-0.2424	-0.0136
2	0	CU2	-0.2213	-0.2301	-0.0088
3	0	CU3	-0.2633	-0.2683	-0.005
60	1e+12	1E12n/cm2	-0.2439	-0.2058	0.0381
61	1e+12	1E12n/cm2	-0.3121	-0.2909	0.0212
62	1e+12	1E12n/cm2	-0.2463	-0.2386	0.0077
63	1e+12	1E12n/cm2	-0.2723	-0.2451	0.0272
64	5e+12	5E12n/cm2	-0.1985	-0.0612	0.1373
65	5e+12	5E12n/cm2	-0.2297	-0.0481	0.1816
66	5e+12	5E12n/cm2	-0.2275	-0.0534	0.1741
67	5e+12	5E12n/cm2	-0.2734	-0.0596	0.2138
68	1e+13	1E13n/cm2	-0.2502	0.0541	0.3043
69	1e+13	1E13n/cm2	-0.2638	0.1423	0.4061
70	1e+13	1E13n/cm2	-0.274	0.0981	0.3721
71	1e+13	1E13n/cm2	-0.253	0.0729	0.3259

Test Statistics (PCT)

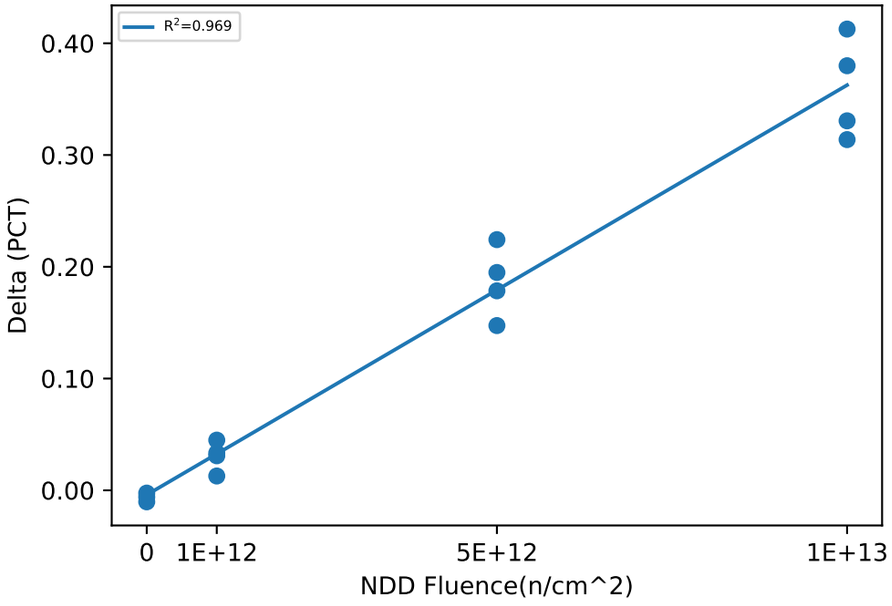
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.2633	-0.2378	-0.2213	0.0224	-0.2683	-0.24693	-0.2301	0.019499	-0.0136	-0.0091333	-0.005	0.0043097
1e+12	-0.3121	-0.26865	-0.2439	0.031693	-0.2909	-0.2451	-0.2058	0.035045	0.0077	0.02355	0.0381	0.012672
5e+12	-0.2734	-0.23228	-0.1985	0.030884	-0.0612	-0.055575	-0.0481	0.0060124	0.1373	0.1767	0.2138	0.031409
1e+13	-0.274	-0.26025	-0.2502	0.010882	0.0541	0.09185	0.1423	0.038159	0.3043	0.3521	0.4061	0.045779

Device Test: 50.2 ACCURACY|//VOUT/1N8V/150mA/3/@ACC_VIN_3P0_VOUT_1N8_150MA

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



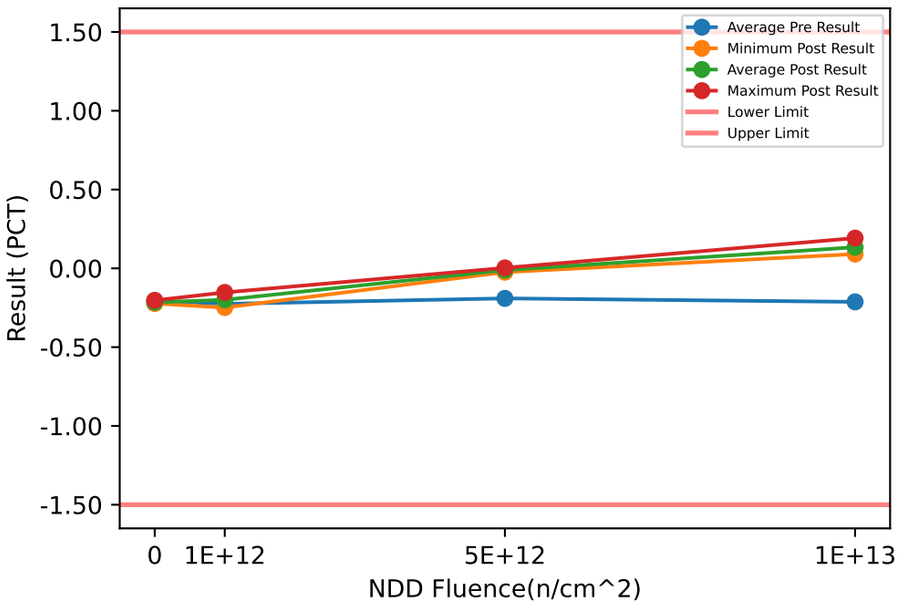
Test Results (Lower Limit = -1.5, Upper Limit = 1.5 (PCT))

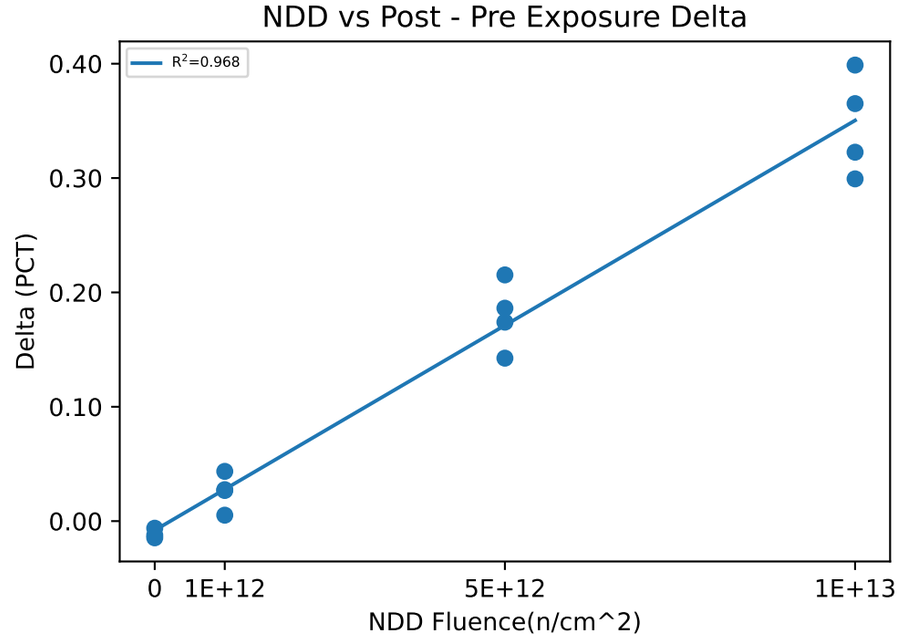
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.1015	0.0912	-0.0103
2	0	CU2	0.1254	0.1194	-0.006
3	0	CU3	0.067	0.0645	-0.0025
60	1e+12	1E12n/cm2	0.071	0.1159	0.0449
61	1e+12	1E12n/cm2	0.012	0.0454	0.0334
62	1e+12	1E12n/cm2	0.0793	0.0921	0.0128
63	1e+12	1E12n/cm2	0.0394	0.0703	0.0309
64	5e+12	5E12n/cm2	0.1326	0.28	0.1474
65	5e+12	5E12n/cm2	0.0893	0.2842	0.1949
66	5e+12	5E12n/cm2	0.0907	0.2692	0.1785
67	5e+12	5E12n/cm2	0.06	0.2843	0.2243
68	1e+13	1E13n/cm2	0.0625	0.3763	0.3138
69	1e+13	1E13n/cm2	0.0556	0.4683	0.4127
70	1e+13	1E13n/cm2	0.0453	0.4252	0.3799
71	1e+13	1E13n/cm2	0.0832	0.4138	0.3306

Test Statistics (PCT)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.067	0.097967	0.1254	0.02936	0.0645	0.0917	0.1194	0.027453	-0.0103	-0.0062667	-0.0025	0.0039068
1e+12	0.012	0.050425	0.0793	0.03085	0.0454	0.080925	0.1159	0.030128	0.0128	0.0305	0.0449	0.013282
5e+12	0.06	0.09315	0.1326	0.029867	0.2692	0.27943	0.2843	0.0071051	0.1474	0.18627	0.2243	0.032104
1e+13	0.0453	0.06165	0.0832	0.016011	0.3763	0.4209	0.4683	0.037881	0.3138	0.35925	0.4127	0.04535

Device Test: 50.3 ACCURACY|//VOUT/1N8V/10mA/5/@ACC_VIN_5P0_VOUT_1N8_10MA





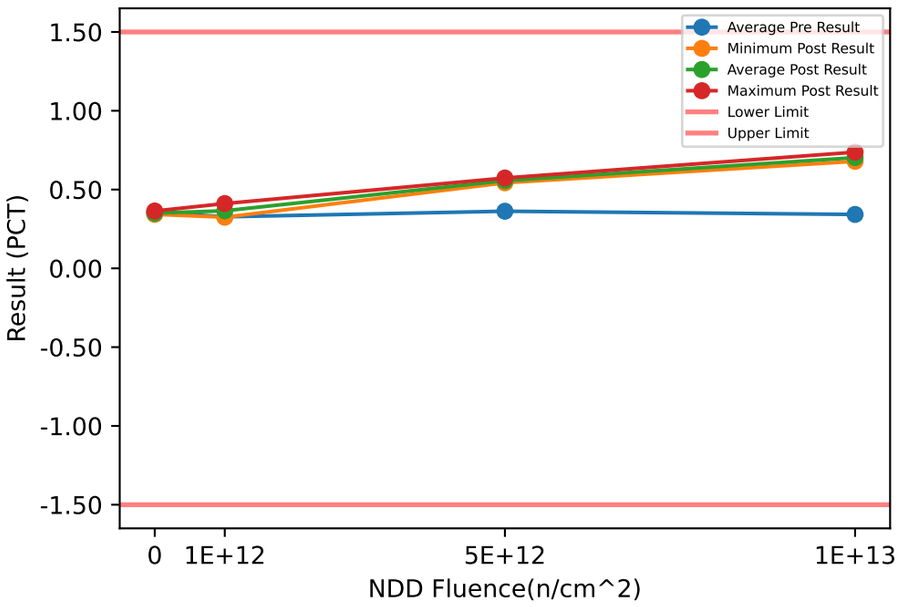
Test Results (Lower Limit = -1.5, Upper Limit = 1.5 (PCT))

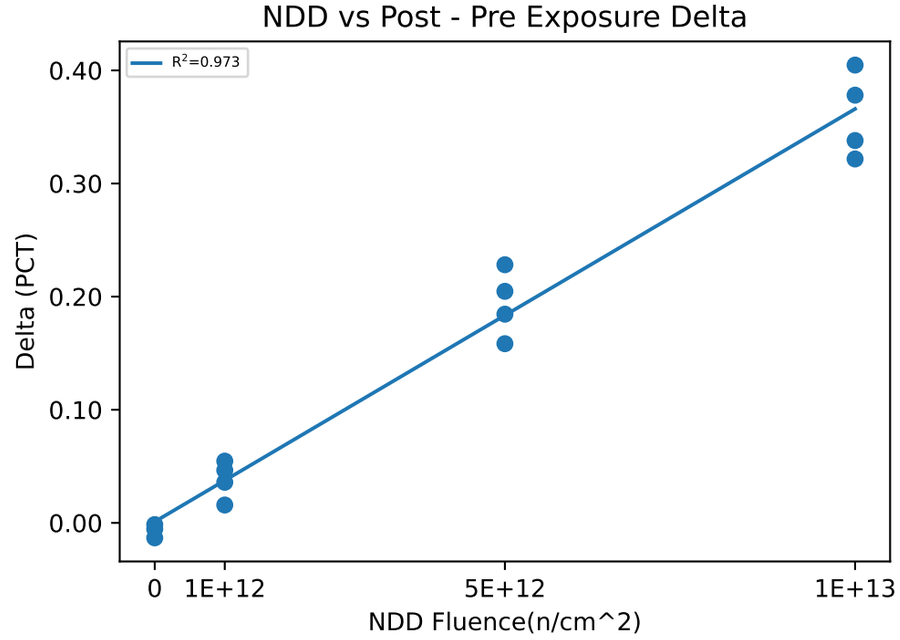
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	-0.2062	-0.2208	-0.0146
2	0	CU2	-0.1908	-0.2031	-0.0123
3	0	CU3	-0.2171	-0.2233	-0.0062
60	1e+12	1E12n/cm2	-0.1965	-0.153	0.0435
61	1e+12	1E12n/cm2	-0.2757	-0.2489	0.0268
62	1e+12	1E12n/cm2	-0.1986	-0.1934	0.0052
63	1e+12	1E12n/cm2	-0.2308	-0.2033	0.0275
64	5e+12	5E12n/cm2	-0.1654	-0.0229	0.1425
65	5e+12	5E12n/cm2	-0.1866	-0.0004	0.1862
66	5e+12	5E12n/cm2	-0.1711	0.0029	0.174
67	5e+12	5E12n/cm2	-0.2396	-0.0243	0.2153
68	1e+13	1E13n/cm2	-0.2086	0.0907	0.2993
69	1e+13	1E13n/cm2	-0.2069	0.1919	0.3988
70	1e+13	1E13n/cm2	-0.2334	0.1317	0.3651
71	1e+13	1E13n/cm2	-0.2018	0.1208	0.3226

Test Statistics (PCT)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.2171	-0.2047	-0.1908	0.013214	-0.2233	-0.21573	-0.2031	0.011012	-0.0146	-0.011033	-0.0062	0.0043409
1e+12	-0.2757	-0.2254	-0.1965	0.037026	-0.2489	-0.19965	-0.153	0.039388	0.0052	0.02575	0.0435	0.015722
5e+12	-0.2396	-0.19068	-0.1654	0.033824	-0.0243	-0.011175	0.0029	0.014422	0.1425	0.1795	0.2153	0.030143
1e+13	-0.2334	-0.21268	-0.2018	0.014116	0.0907	0.13378	0.1919	0.042452	0.2993	0.34645	0.3988	0.044273

Device Test: 50.4 ACCURACY|//VOUT/1N8V/250mA/5/@ACC_VIN_5P0_VOUT_1N8_250MA





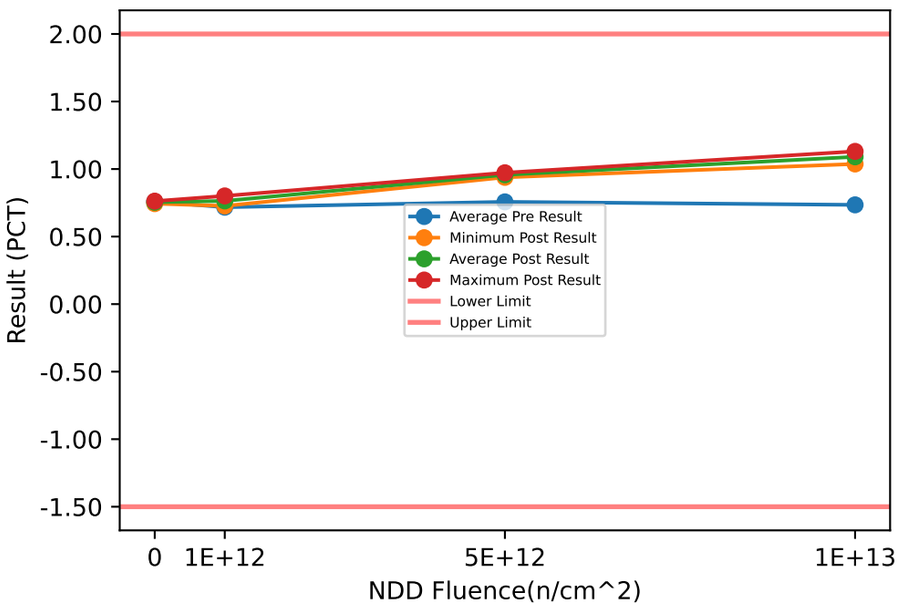
Test Results (Lower Limit = -1.5, Upper Limit = 1.5 (PCT))

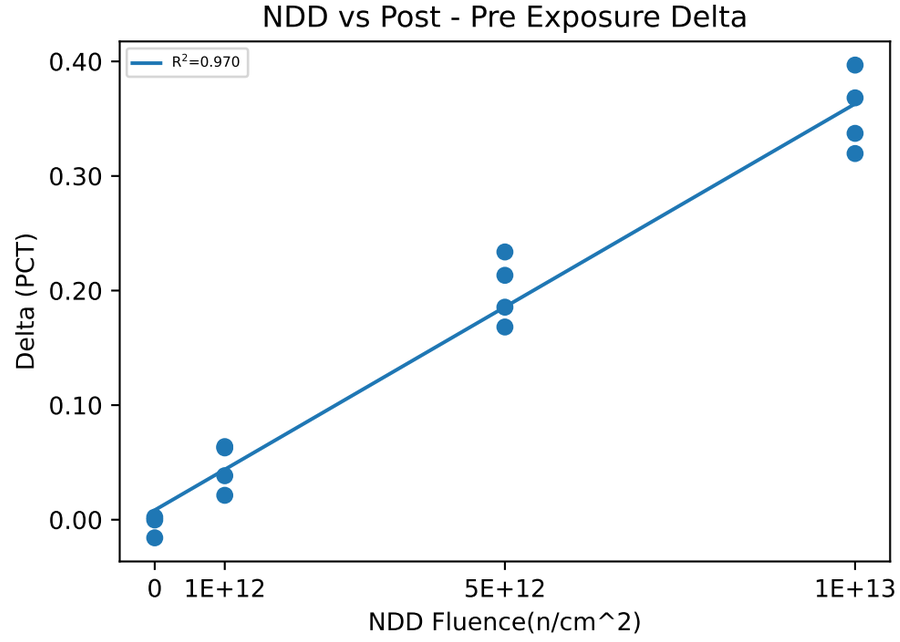
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.3574	0.3442	-0.0132
2	0	CU2	0.3694	0.3639	-0.0055
3	0	CU3	0.3442	0.3427	-0.0015
60	1e+12	1E12n/cm2	0.3565	0.4111	0.0546
61	1e+12	1E12n/cm2	0.278	0.3245	0.0465
62	1e+12	1E12n/cm2	0.3486	0.3644	0.0158
63	1e+12	1E12n/cm2	0.3252	0.3611	0.0359
64	5e+12	5E12n/cm2	0.3844	0.5428	0.1584
65	5e+12	5E12n/cm2	0.3686	0.5733	0.2047
66	5e+12	5E12n/cm2	0.3711	0.5556	0.1845
67	5e+12	5E12n/cm2	0.3258	0.554	0.2282
68	1e+13	1E13n/cm2	0.3574	0.6791	0.3217
69	1e+13	1E13n/cm2	0.3325	0.7372	0.4047
70	1e+13	1E13n/cm2	0.3109	0.689	0.3781
71	1e+13	1E13n/cm2	0.3675	0.7055	0.338

Test Statistics (PCT)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.3442	0.357	0.3694	0.012605	0.3427	0.35027	0.3639	0.011831	-0.0132	-0.0067333	-0.0015	0.0059467
1e+12	0.278	0.32708	0.3565	0.035313	0.3245	0.36527	0.4111	0.0355	0.0158	0.0382	0.0546	0.016782
5e+12	0.3258	0.36247	0.3844	0.025414	0.5428	0.55642	0.5733	0.012609	0.1584	0.19395	0.2282	0.029675
1e+13	0.3109	0.34208	0.3675	0.025461	0.6791	0.7027	0.7372	0.025448	0.3217	0.36063	0.4047	0.037749

Device Test: 50.5 ACCURACY|//VOUT/1N8V/400mA/5/@ACC_VIN_5P0_VOUT_1N8_400MA





Test Results (Lower Limit = -1.5, Upper Limit = 2.0 (PCT))

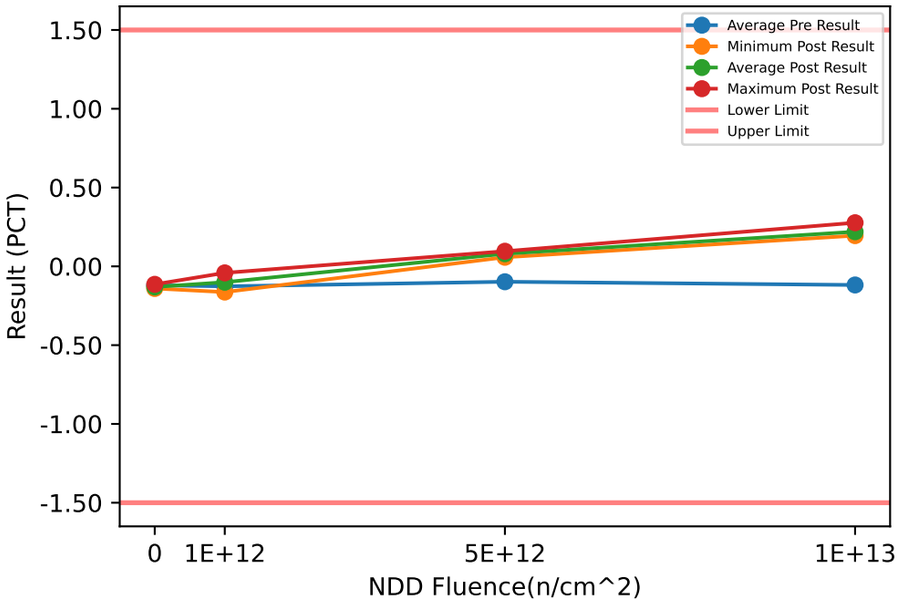
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.7782	0.7624	-0.0158
2	0	CU2	0.7569	0.7567	-0.0002
3	0	CU3	0.7417	0.7439	0.0022
60	1e+12	1E12n/cm2	0.7372	0.801	0.0638
61	1e+12	1E12n/cm2	0.6641	0.7268	0.0627
62	1e+12	1E12n/cm2	0.7606	0.7819	0.0213
63	1e+12	1E12n/cm2	0.708	0.7464	0.0384
64	5e+12	5E12n/cm2	0.7819	0.9501	0.1682
65	5e+12	5E12n/cm2	0.7592	0.9725	0.2133
66	5e+12	5E12n/cm2	0.7531	0.9386	0.1855
67	5e+12	5E12n/cm2	0.7336	0.9673	0.2337
68	1e+13	1E13n/cm2	0.7179	1.0375	0.3196
69	1e+13	1E13n/cm2	0.7217	1.1185	0.3968
70	1e+13	1E13n/cm2	0.7064	1.0746	0.3682
71	1e+13	1E13n/cm2	0.7935	1.1307	0.3372

Test Statistics (PCT)

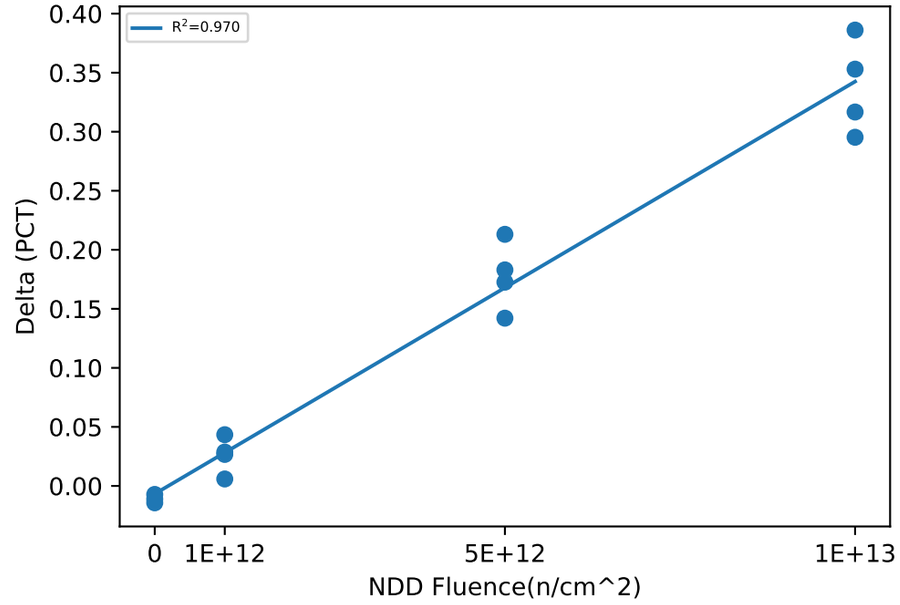
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.7417	0.75893	0.7782	0.018335	0.7439	0.75433	0.7624	0.0094744	-0.0158	-0.0046	0.0022	0.0097734
1e+12	0.6641	0.71747	0.7606	0.041583	0.7268	0.76403	0.801	0.033581	0.0213	0.04655	0.0638	0.020513
5e+12	0.7336	0.75695	0.7819	0.019896	0.9386	0.95713	0.9725	0.015625	0.1682	0.20017	0.2337	0.029063
1e+13	0.7064	0.73487	0.7935	0.039621	1.0375	1.0903	1.1307	0.042668	0.3196	0.35545	0.3968	0.034111

Device Test: 50.6 ACCURACY|//VOUT/1N8V/10mA/6.3/@ACC_VIN_6P3_VOUT_1N8_10MA

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = -1.5, Upper Limit = 1.5 (PCT))

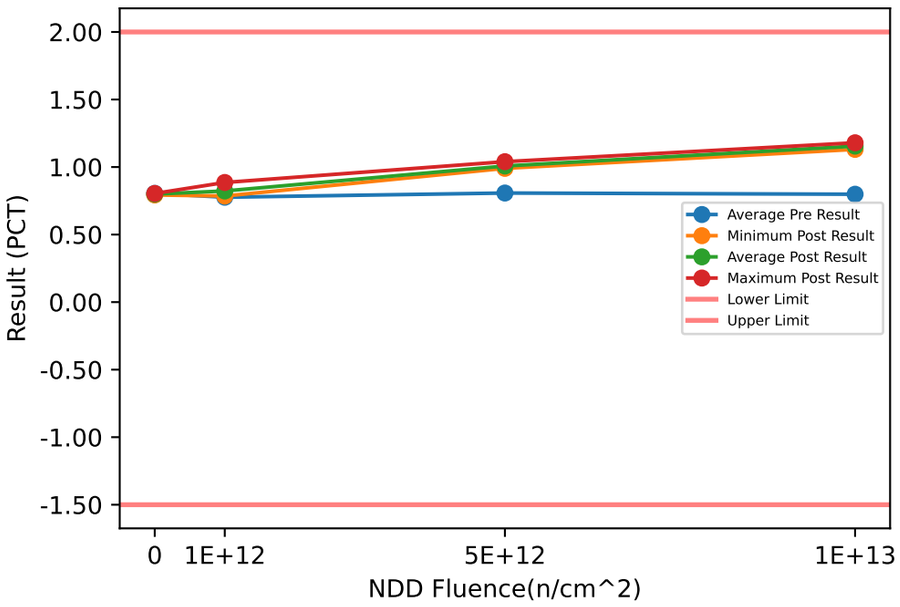
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	-0.1236	-0.1379	-0.0143
2	0	CU2	-0.103	-0.1141	-0.0111
3	0	CU3	-0.1332	-0.1404	-0.0072
60	1e+12	1E12n/cm2	-0.0848	-0.0414	0.0434
61	1e+12	1E12n/cm2	-0.1919	-0.1632	0.0287
62	1e+12	1E12n/cm2	-0.1025	-0.0966	0.0059
63	1e+12	1E12n/cm2	-0.1282	-0.1015	0.0267
64	5e+12	5E12n/cm2	-0.0664	0.0757	0.1421
65	5e+12	5E12n/cm2	-0.0927	0.0903	0.183
66	5e+12	5E12n/cm2	-0.0767	0.0959	0.1726
67	5e+12	5E12n/cm2	-0.1554	0.0577	0.2131
68	1e+13	1E13n/cm2	-0.1004	0.1949	0.2953
69	1e+13	1E13n/cm2	-0.1093	0.2768	0.3861
70	1e+13	1E13n/cm2	-0.1454	0.2076	0.353
71	1e+13	1E13n/cm2	-0.1177	0.199	0.3167

Test Statistics (PCT)

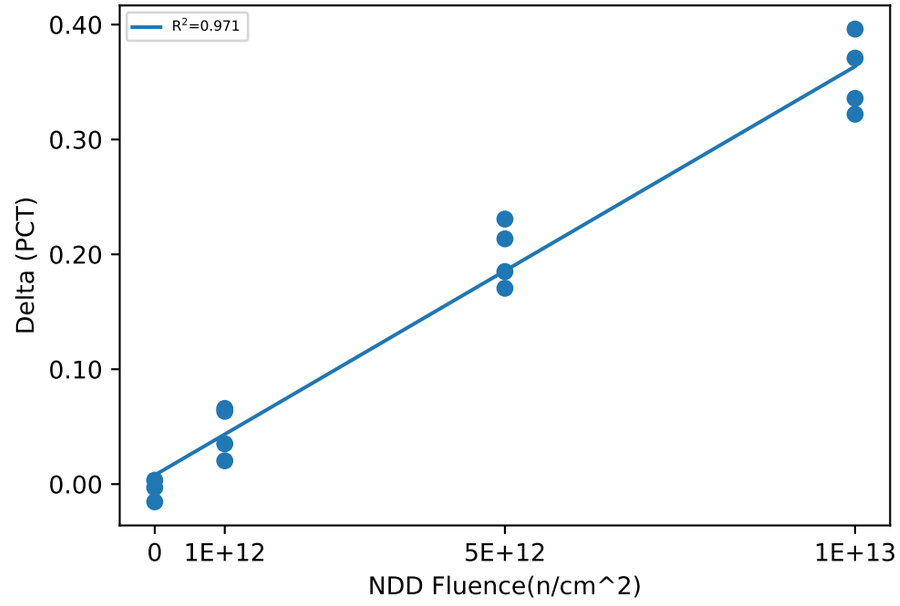
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-0.1332	-0.11993	-0.103	0.01543	-0.1404	-0.1308	-0.1141	0.014517	-0.0143	-0.010867	-0.0072	0.0035557
1e+12	-0.1919	-0.12685	-0.0848	0.046884	-0.1632	-0.10068	-0.0414	0.0498	0.0059	0.026175	0.0434	0.015432
5e+12	-0.1554	-0.0978	-0.0664	0.039895	0.0577	0.0799	0.0959	0.017075	0.1421	0.1777	0.2131	0.029295
1e+13	-0.1454	-0.1182	-0.1004	0.019461	0.1949	0.21958	0.2768	0.038515	0.2953	0.33777	0.3861	0.040064

Device Test: 50.7 ACCURACY|//VOUT/1N8V/400mA/6.3/@ACC_VIN_6P3_VOUT_1N8_400MA

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



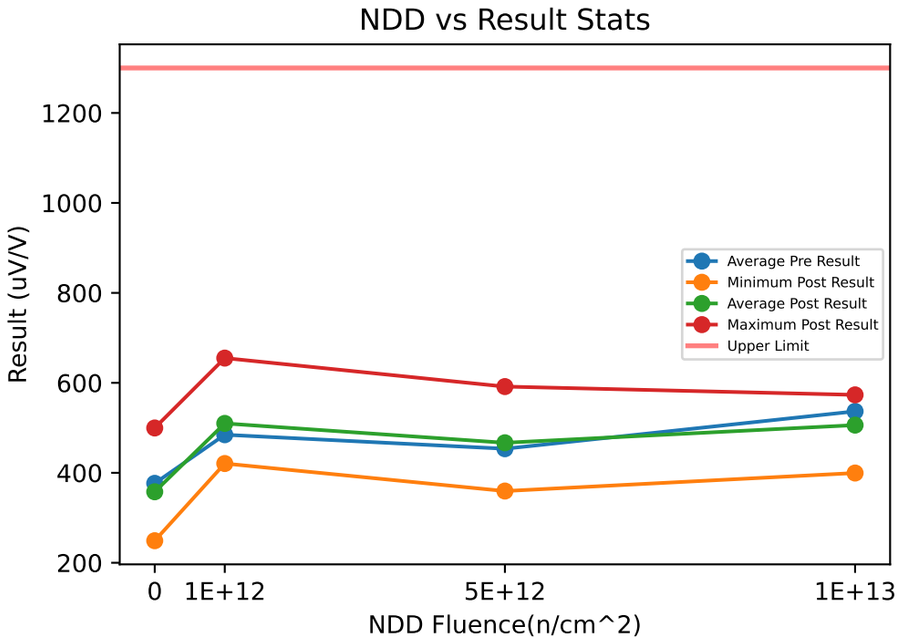
Test Results (Lower Limit = -1.5, Upper Limit = 2.0 (PCT))

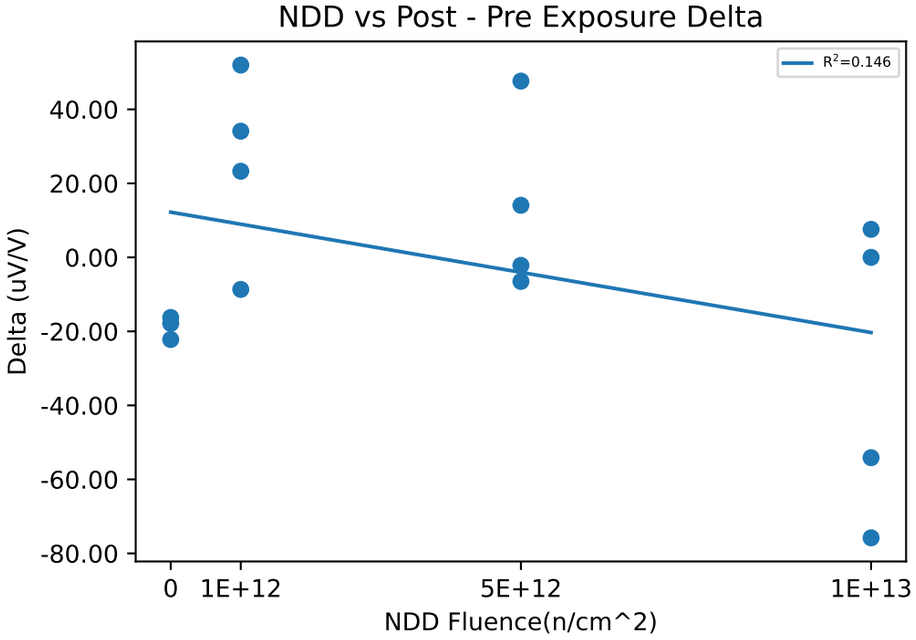
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.8088	0.7934	-0.0154
2	0	CU2	0.8047	0.8017	-0.003
3	0	CU3	0.801	0.8044	0.0034
60	1e+12	1E12n/cm2	0.8198	0.8857	0.0659
61	1e+12	1E12n/cm2	0.7221	0.7855	0.0634
62	1e+12	1E12n/cm2	0.7925	0.8128	0.0203
63	1e+12	1E12n/cm2	0.7717	0.8068	0.0351
64	5e+12	5E12n/cm2	0.8343	1.0048	0.1705
65	5e+12	5E12n/cm2	0.8262	1.0397	0.2135
66	5e+12	5E12n/cm2	0.8053	0.9903	0.185
67	5e+12	5E12n/cm2	0.7647	0.9954	0.2307
68	1e+13	1E13n/cm2	0.8087	1.1307	0.322
69	1e+13	1E13n/cm2	0.7818	1.1779	0.3961
70	1e+13	1E13n/cm2	0.7607	1.1315	0.3708
71	1e+13	1E13n/cm2	0.8439	1.1797	0.3358

Test Statistics (PCT)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.801	0.80483	0.8088	0.0039017	0.7934	0.79983	0.8044	0.0057327	-0.0154	-0.005	0.0034	0.0095582
1e+12	0.7221	0.77653	0.8198	0.041285	0.7855	0.8227	0.8857	0.043603	0.0203	0.046175	0.0659	0.022196
5e+12	0.7647	0.80763	0.8343	0.031116	0.9903	1.0075	1.0397	0.022259	0.1705	0.19992	0.2307	0.027203
1e+13	0.7607	0.79878	0.8439	0.035929	1.1307	1.1549	1.1797	0.027551	0.322	0.35618	0.3961	0.03362

Device Test: 55.1 ACCURACY|//LINE_REGULATION_DN/1N8V/150mA//@LINE_REG





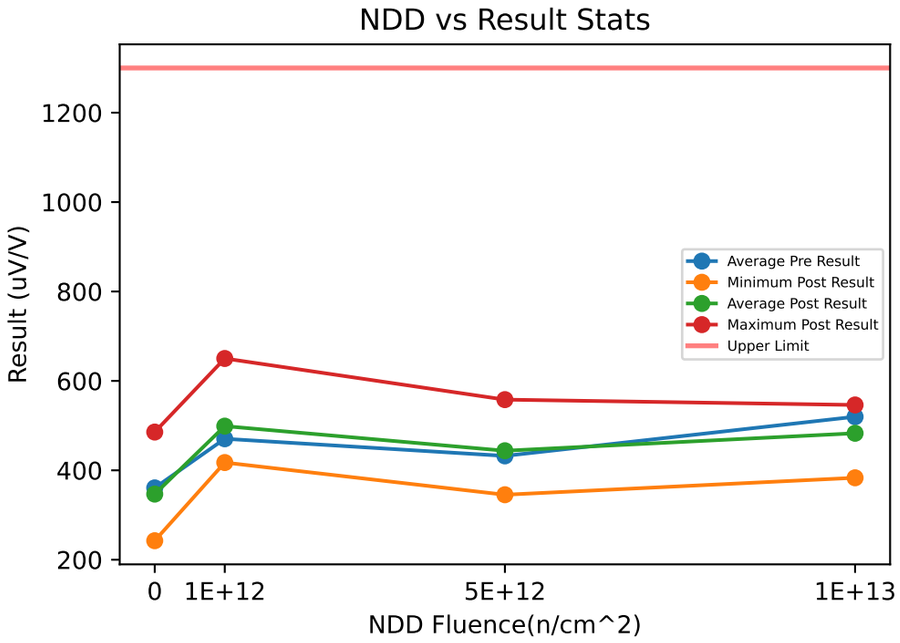
Test Results (Upper Limit = 1300.0 (uV/V))

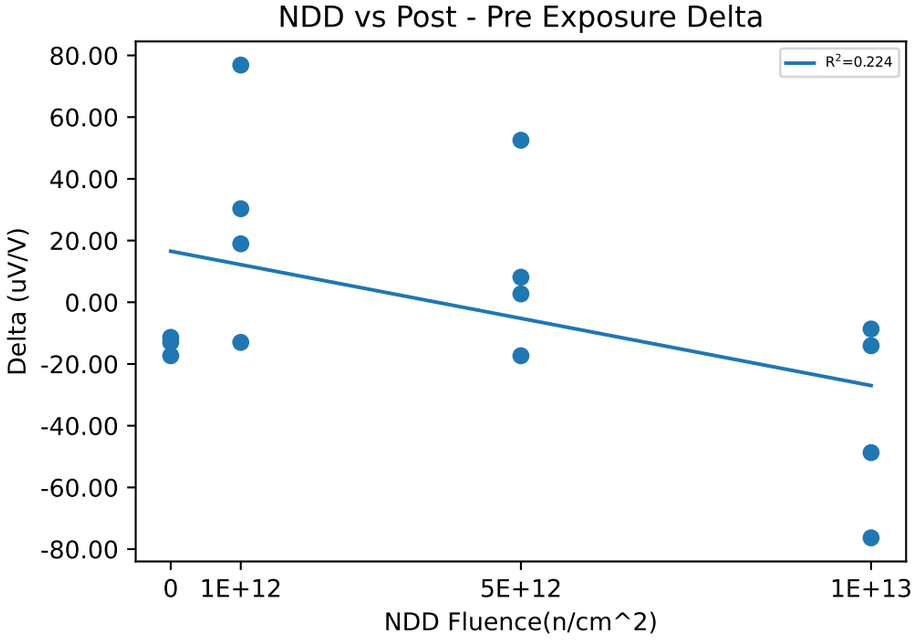
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	266.88	249.02	-17.867
2	0	CU2	347	324.8	-22.198
3	0	CU3	515.9	499.66	-16.245
60	1e+12	1E12n/cm2	603.06	655.02	51.963
61	1e+12	1E12n/cm2	397.35	420.62	23.274
62	1e+12	1E12n/cm2	443.9	435.24	-8.6653
63	1e+12	1E12n/cm2	494.25	528.35	34.1
64	5e+12	5E12n/cm2	344.84	392.47	47.635
65	5e+12	5E12n/cm2	529.98	523.47	-6.5007
66	5e+12	5E12n/cm2	577.61	591.68	14.07
67	5e+12	5E12n/cm2	361.62	359.45	-2.1685
68	1e+13	1E13n/cm2	565.7	573.28	7.5738
69	1e+13	1E13n/cm2	576.53	522.39	-54.139
70	1e+13	1E13n/cm2	475.3	399.51	-75.791
71	1e+13	1E13n/cm2	528.89	528.89	-0.0046

Test Statistics (uV/V)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	266.88	376.59	515.9	127.12	249.02	357.82	499.66	128.54	-22.198	-18.77	-16.245	3.0777
1e+12	397.35	484.64	603.06	88.307	420.62	509.81	655.02	107.93	-8.6653	25.168	51.963	25.469
5e+12	344.84	453.51	577.61	117.62	359.45	466.77	591.68	109.33	-6.5007	13.259	47.635	24.568
1e+13	475.3	536.61	576.53	45.675	399.51	506.02	573.28	74.519	-75.791	-30.59	7.5738	40.783

Device Test: 55.2 ACCURACY|//LINE_REGULATION_UP/1N8V/150mA//@LINE_REG





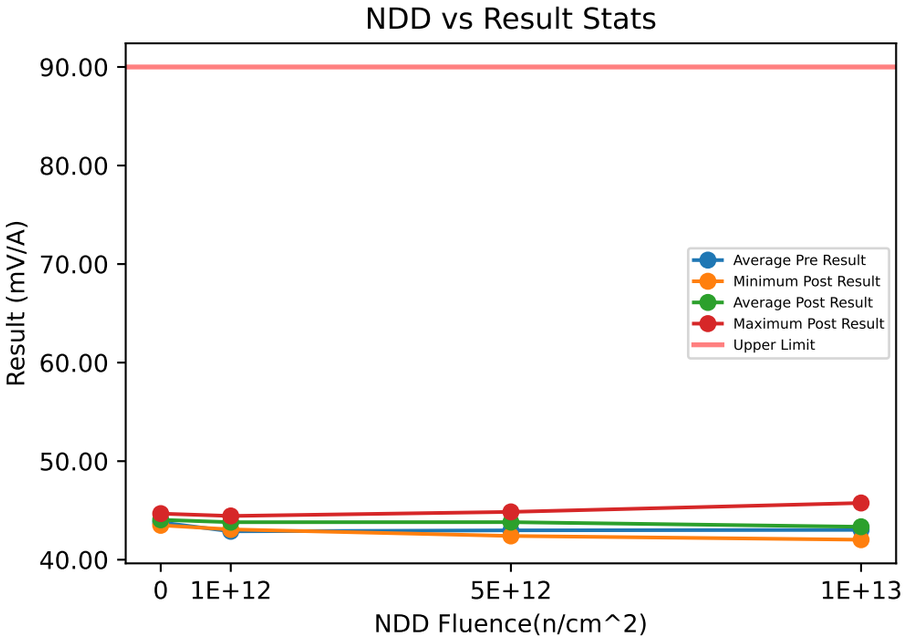
Test Results (Upper Limit = 1300.0 (uV/V))

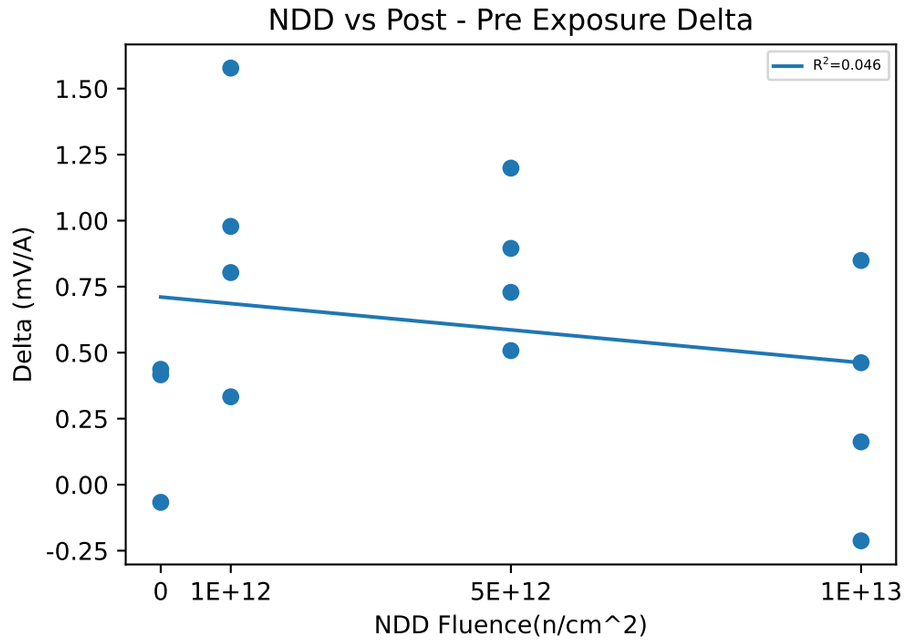
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	253.89	242.52	-11.37
2	0	CU2	325.35	312.35	-12.995
3	0	CU3	502.91	485.58	-17.327
60	1e+12	1E12n/cm2	573.28	650.15	76.865
61	1e+12	1E12n/cm2	387.06	417.37	30.312
62	1e+12	1E12n/cm2	434.7	421.7	-12.996
63	1e+12	1E12n/cm2	487.21	506.15	18.943
64	5e+12	5E12n/cm2	323.18	375.69	52.507
65	5e+12	5E12n/cm2	513.19	495.87	-17.327
66	5e+12	5E12n/cm2	550	558.12	8.1153
67	5e+12	5E12n/cm2	342.67	345.37	2.7037
68	1e+13	1E13n/cm2	560.29	546.21	-14.08
69	1e+13	1E13n/cm2	552.17	503.44	-48.725
70	1e+13	1E13n/cm2	459.6	383.27	-76.333
71	1e+13	1E13n/cm2	507.24	498.57	-8.6658

Test Statistics (uV/V)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	253.89	360.72	502.91	128.22	242.52	346.82	485.58	125.14	-17.327	-13.898	-11.37	3.0794
1e+12	387.06	470.56	573.28	79.765	417.37	498.84	650.15	108.83	-12.996	28.281	76.865	37.218
5e+12	323.18	432.26	550	115.96	345.37	443.76	558.12	100.18	-17.327	11.5	52.507	29.447
1e+13	459.6	519.82	560.29	46.437	383.27	482.87	546.21	69.768	-76.333	-36.951	-8.6658	31.69

Device Test: 55.3 ACCURACY|//LOAD_REGULATION/1N8V//5/@LOAD_REG_1302





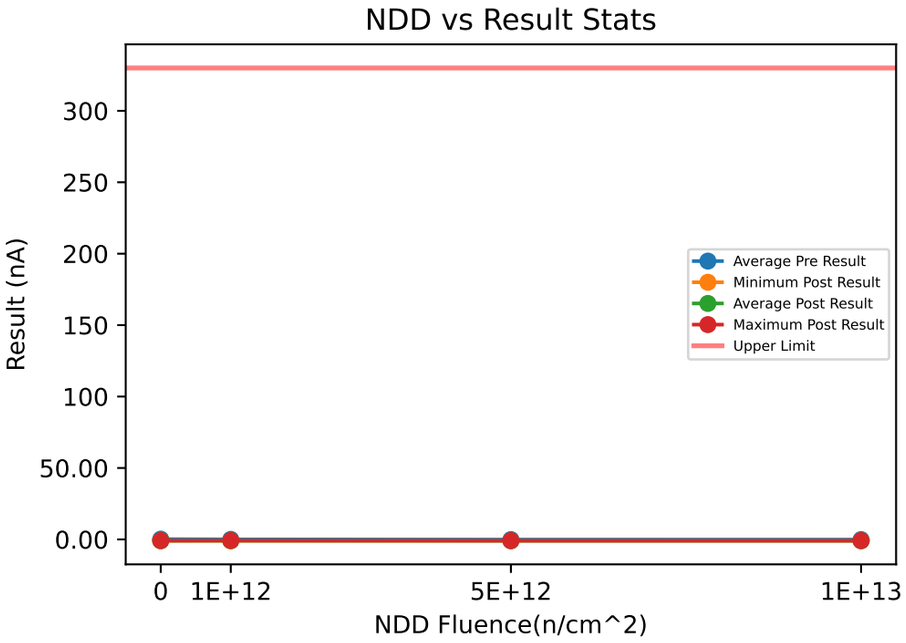
Test Results (Upper Limit = 90.0 (mV/A))

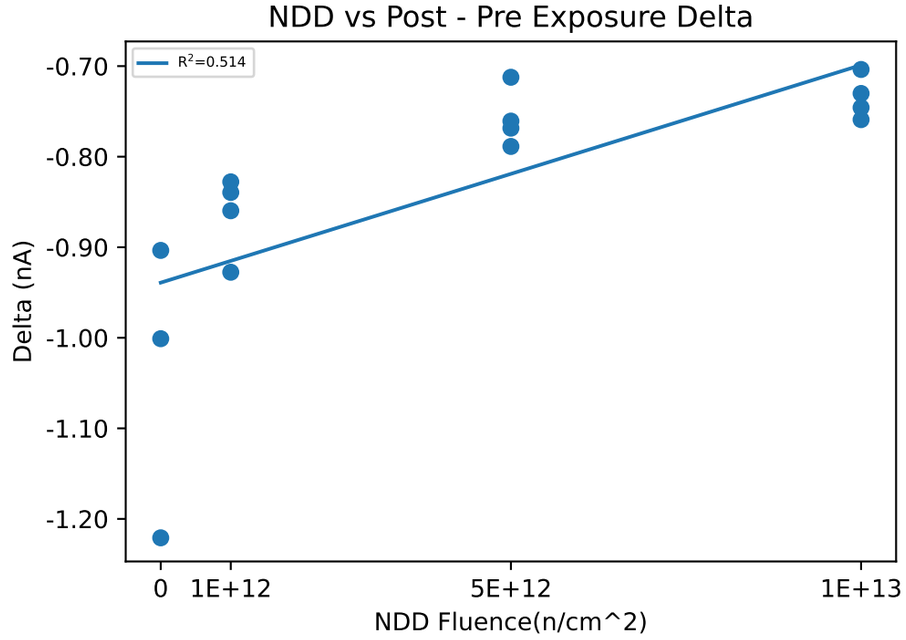
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	44.744	44.677	-0.067
2	0	CU2	43.053	43.49	0.4368
3	0	CU3	43.557	43.973	0.4161
60	1e+12	1E12n/cm2	42.37	43.349	0.9782
61	1e+12	1E12n/cm2	42.862	44.44	1.5778
62	1e+12	1E12n/cm2	43.557	44.361	0.8033
63	1e+12	1E12n/cm2	42.741	43.074	0.3328
64	5e+12	5E12n/cm2	43.033	43.928	0.8949
65	5e+12	5E12n/cm2	42.854	44.053	1.1989
66	5e+12	5E12n/cm2	41.904	42.412	0.5077
67	5e+12	5E12n/cm2	44.124	44.852	0.7284
68	1e+13	1E13n/cm2	41.983	42.832	0.8491
69	1e+13	1E13n/cm2	42.241	42.029	-0.2127
70	1e+13	1E13n/cm2	42.591	42.753	0.1621
71	1e+13	1E13n/cm2	45.294	45.756	0.4618

Test Statistics (mV/A)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	43.053	43.785	44.744	0.86799	43.49	44.047	44.677	0.59681	-0.067	0.26197	0.4368	0.28508
1e+12	42.37	42.883	43.557	0.49596	43.074	43.806	44.44	0.69624	0.3328	0.92302	1.5778	0.51461
5e+12	41.904	42.978	44.124	0.90997	42.412	43.811	44.852	1.0187	0.5077	0.83248	1.1989	0.29125
1e+13	41.983	43.027	45.294	1.5313	42.029	43.343	45.756	1.6489	-0.2127	0.31508	0.8491	0.45043

Device Test: 65.1 LEAK|/EN/CURRENT///3/@I_EN_LKG





Test Results (Upper Limit = 330.0 (nA))

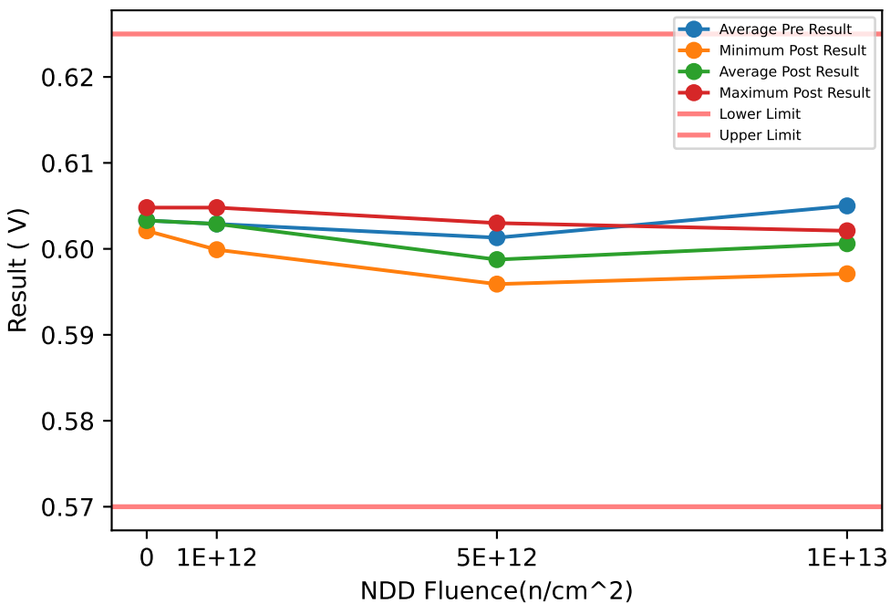
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.3042	-0.9167	-1.2209
2	0	CU2	0.1724	-0.8286	-1.001
3	0	CU3	0.0538	-0.8497	-0.9035
60	1e+12	1E12n/cm2	0.0694	-0.8582	-0.9276
61	1e+12	1E12n/cm2	-0.0211	-0.8489	-0.8278
62	1e+12	1E12n/cm2	0.0421	-0.7974	-0.8395
63	1e+12	1E12n/cm2	-0.0461	-0.9058	-0.8597
64	5e+12	5E12n/cm2	-0.1124	-0.8731	-0.7607
65	5e+12	5E12n/cm2	-0.121	-0.9097	-0.7887
66	5e+12	5E12n/cm2	-0.1202	-0.8887	-0.7685
67	5e+12	5E12n/cm2	-0.1444	-0.8567	-0.7123
68	1e+13	1E13n/cm2	-0.1452	-0.9043	-0.7591
69	1e+13	1E13n/cm2	-0.1561	-0.8598	-0.7037
70	1e+13	1E13n/cm2	-0.1382	-0.8684	-0.7302
71	1e+13	1E13n/cm2	-0.1288	-0.8746	-0.7458

Test Statistics (nA)

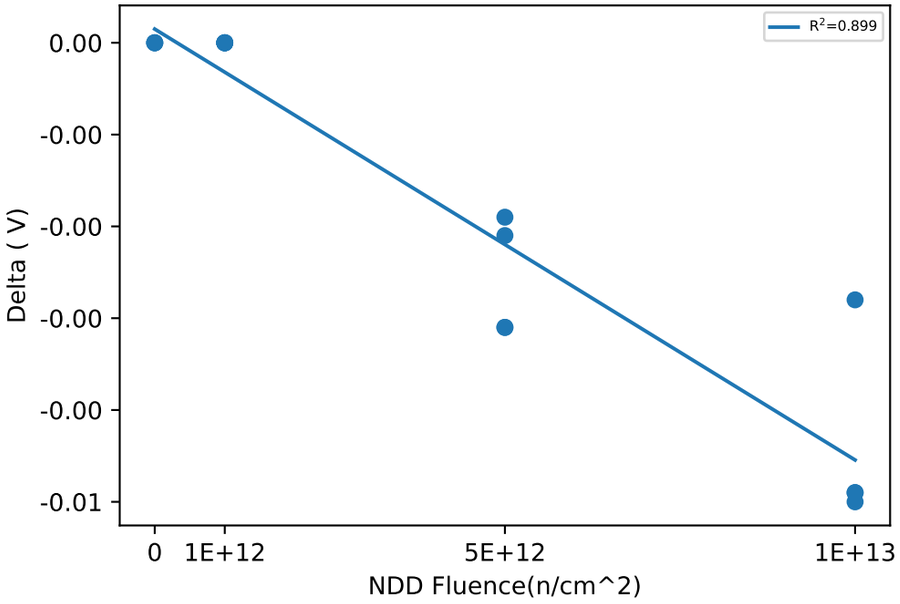
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.0538	0.1768	0.3042	0.12526	-0.9167	-0.865	-0.8286	0.046	-1.2209	-1.0418	-0.9035	0.16259
1e+12	-0.0461	0.011075	0.0694	0.053754	-0.9058	-0.85257	-0.7974	0.044431	-0.9276	-0.86365	-0.8278	0.044623
5e+12	-0.1444	-0.1245	-0.1124	0.013822	-0.9097	-0.88205	-0.8567	0.022594	-0.7887	-0.75755	-0.7123	0.032392
1e+13	-0.1561	-0.14208	-0.1288	0.011514	-0.9043	-0.87677	-0.8598	0.019327	-0.7591	-0.7347	-0.7037	0.023804

Device Test: 65.2 ENABLE|/EN/RISE///3/@V_EN_RISING

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



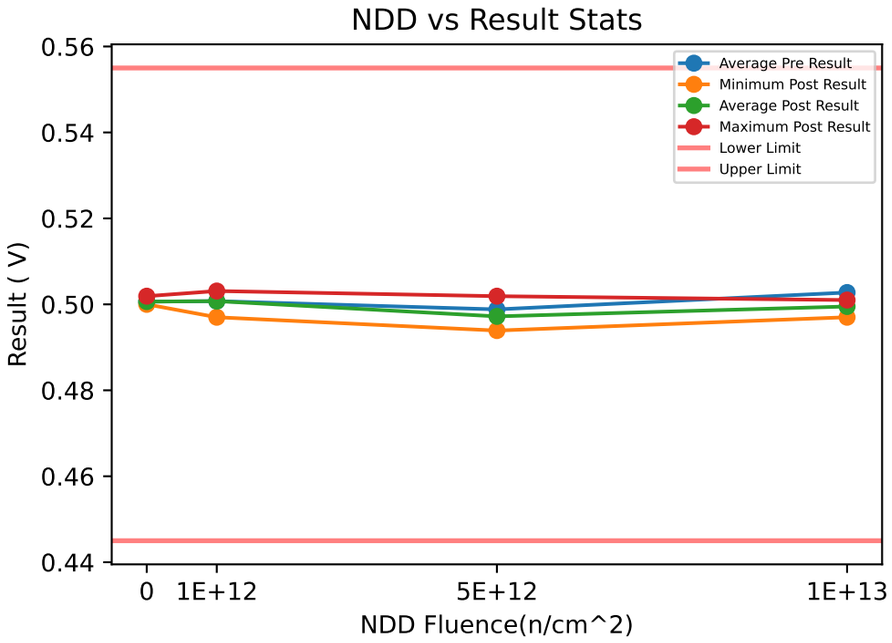
Test Results (Lower Limit = 0.57, Upper Limit = 0.625 (V))

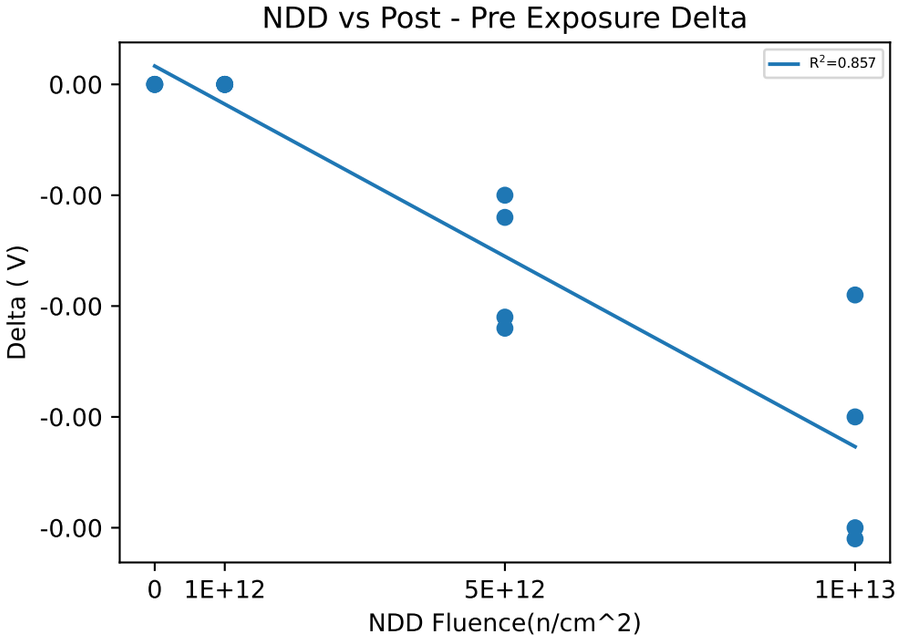
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.6048	0.6048	0
2	0	CU2	0.603	0.603	0
3	0	CU3	0.6021	0.6021	0
60	1e+12	1E12n/cm2	0.5999	0.5999	0
61	1e+12	1E12n/cm2	0.6048	0.6048	0
62	1e+12	1E12n/cm2	0.6039	0.6039	0
63	1e+12	1E12n/cm2	0.603	0.603	0
64	5e+12	5E12n/cm2	0.599	0.5971	-0.0019
65	5e+12	5E12n/cm2	0.6061	0.603	-0.0031
66	5e+12	5E12n/cm2	0.6021	0.599	-0.0031
67	5e+12	5E12n/cm2	0.598	0.5959	-0.0021
68	1e+13	1E13n/cm2	0.607	0.6021	-0.0049
69	1e+13	1E13n/cm2	0.607	0.6021	-0.0049
70	1e+13	1E13n/cm2	0.6021	0.5971	-0.005
71	1e+13	1E13n/cm2	0.6039	0.6011	-0.0028

Test Statistics (V)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.6021	0.6033	0.6048	0.0013748	0.6021	0.6033	0.6048	0.0013748	0	0	0	0
1e+12	0.5999	0.6029	0.6048	0.0021307	0.5999	0.6029	0.6048	0.0021307	0	0	0	0
5e+12	0.598	0.6013	0.6061	0.0036451	0.5959	0.59875	0.603	0.0031075	-0.0031	-0.00255	-0.0019	0.00064031
1e+13	0.6021	0.605	0.607	0.0024235	0.5971	0.6006	0.6021	0.0023805	-0.005	-0.0044	-0.0028	0.0010677

Device Test: 65.3 ENABLE|/EN/FALL///3/@V_EN_FALLING





Test Results (Lower Limit = 0.445, Upper Limit = 0.555 (V))

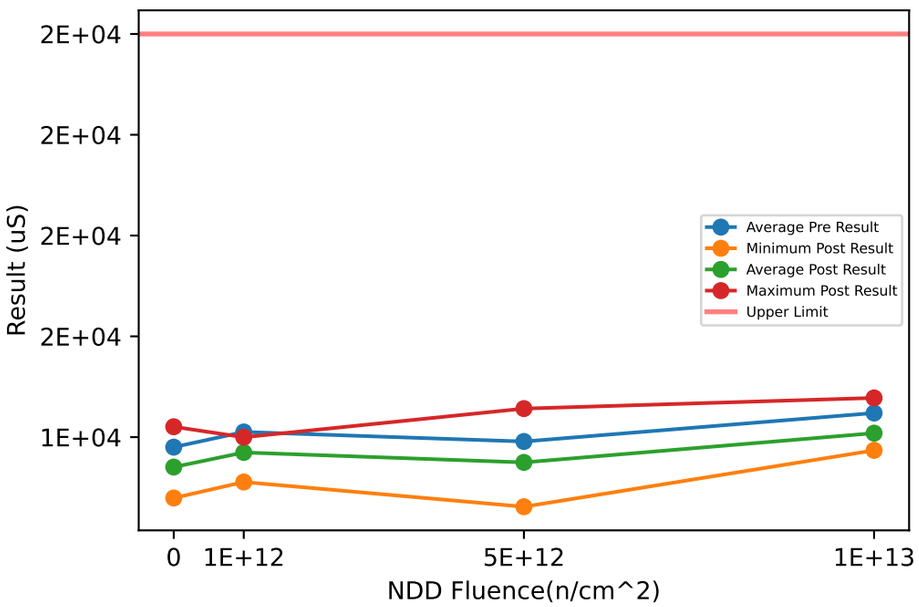
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.5019	0.5019	0
2	0	CU2	0.5	0.5	0
3	0	CU3	0.5	0.5	0
60	1e+12	1E12n/cm2	0.497	0.497	0
61	1e+12	1E12n/cm2	0.5031	0.5031	0
62	1e+12	1E12n/cm2	0.5019	0.5019	0
63	1e+12	1E12n/cm2	0.501	0.501	0
64	5e+12	5E12n/cm2	0.497	0.496	-0.001
65	5e+12	5E12n/cm2	0.5041	0.5019	-0.0022
66	5e+12	5E12n/cm2	0.4991	0.497	-0.0021
67	5e+12	5E12n/cm2	0.4951	0.4939	-0.0012
68	1e+13	1E13n/cm2	0.5041	0.5	-0.0041
69	1e+13	1E13n/cm2	0.505	0.501	-0.004
70	1e+13	1E13n/cm2	0.5	0.497	-0.003
71	1e+13	1E13n/cm2	0.5019	0.5	-0.0019

Test Statistics (V)

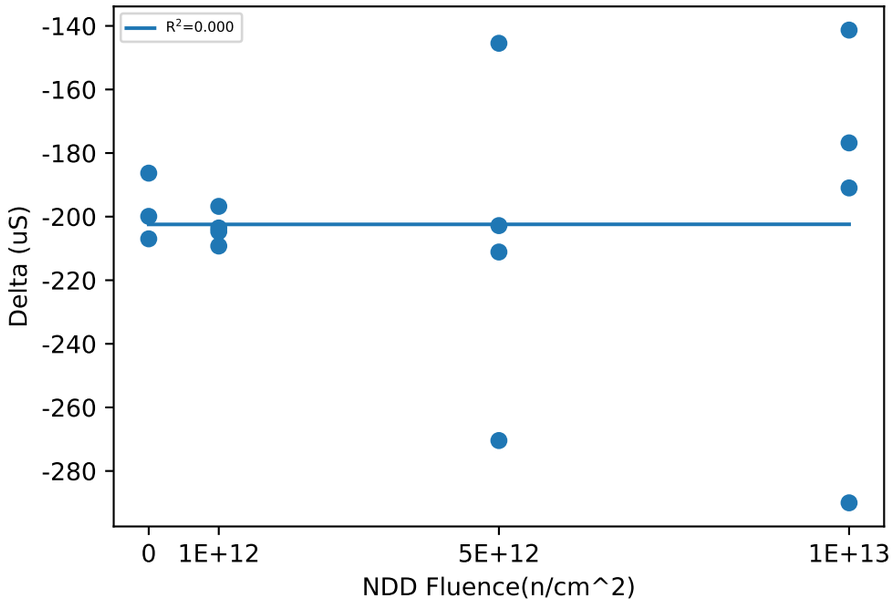
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5	0.50063	0.5019	0.001097	0.5	0.50063	0.5019	0.001097	0	0	0	0
1e+12	0.497	0.50075	0.5031	0.0026439	0.497	0.50075	0.5031	0.0026439	0	0	0	0
5e+12	0.4951	0.49882	0.5041	0.0038776	0.4939	0.4972	0.5019	0.0033892	-0.0022	-0.001625	-0.001	0.00061305
1e+13	0.5	0.50275	0.505	0.0022487	0.497	0.4995	0.501	0.0017321	-0.0041	-0.00325	-0.0019	0.0010279

Device Test: 65.4 ENABLE|/EN/DELAY///3/@T_EN_DELAY

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



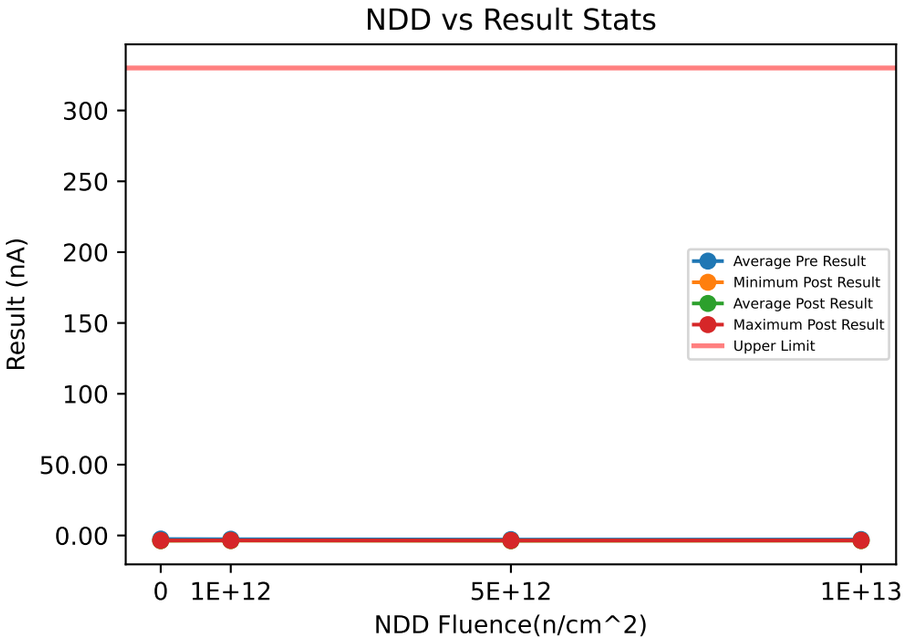
Test Results (Upper Limit = 18000.0 (uS))

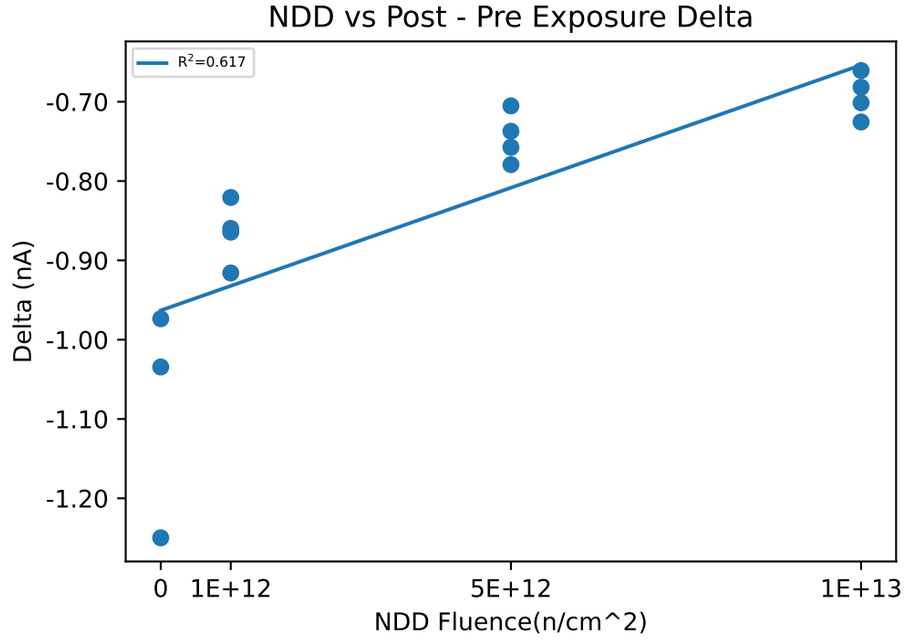
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1.38e+04	1.36e+04	-186.32
2	0	CU2	1.43e+04	1.41e+04	-199.92
3	0	CU3	1.36e+04	1.34e+04	-206.98
60	1e+12	1E12n/cm2	1.42e+04	1.4e+04	-196.77
61	1e+12	1E12n/cm2	1.42e+04	1.4e+04	-203.56
62	1e+12	1E12n/cm2	1.38e+04	1.36e+04	-209.24
63	1e+12	1E12n/cm2	1.41e+04	1.39e+04	-204.68
64	5e+12	5E12n/cm2	1.39e+04	1.37e+04	-202.82
65	5e+12	5E12n/cm2	1.44e+04	1.43e+04	-145.47
66	5e+12	5E12n/cm2	1.36e+04	1.33e+04	-270.43
67	5e+12	5E12n/cm2	1.39e+04	1.37e+04	-211.13
68	1e+13	1E13n/cm2	1.46e+04	1.44e+04	-176.8
69	1e+13	1E13n/cm2	1.4e+04	1.39e+04	-141.32
70	1e+13	1E13n/cm2	1.42e+04	1.4e+04	-190.97
71	1e+13	1E13n/cm2	1.42e+04	1.39e+04	-290.02

Test Statistics (uS)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.36e+04	1.39e+04	1.43e+04	361.5	1.34e+04	1.37e+04	1.41e+04	362.59	-206.98	-197.74	-186.32	10.5
1e+12	1.38e+04	1.41e+04	1.42e+04	201.71	1.36e+04	1.38e+04	1.4e+04	205.85	-209.24	-203.56	-196.77	5.1523
5e+12	1.36e+04	1.4e+04	1.44e+04	350.95	1.33e+04	1.37e+04	1.43e+04	401.23	-270.43	-207.46	-145.47	51.13
1e+13	1.4e+04	1.42e+04	1.46e+04	234.2	1.39e+04	1.4e+04	1.44e+04	237.61	-290.02	-199.78	-141.32	63.68

Device Test: 65.5 LEAK|/EN/CURRENT///5/@I_EN_LKG





Test Results (Upper Limit = 330.0 (nA))

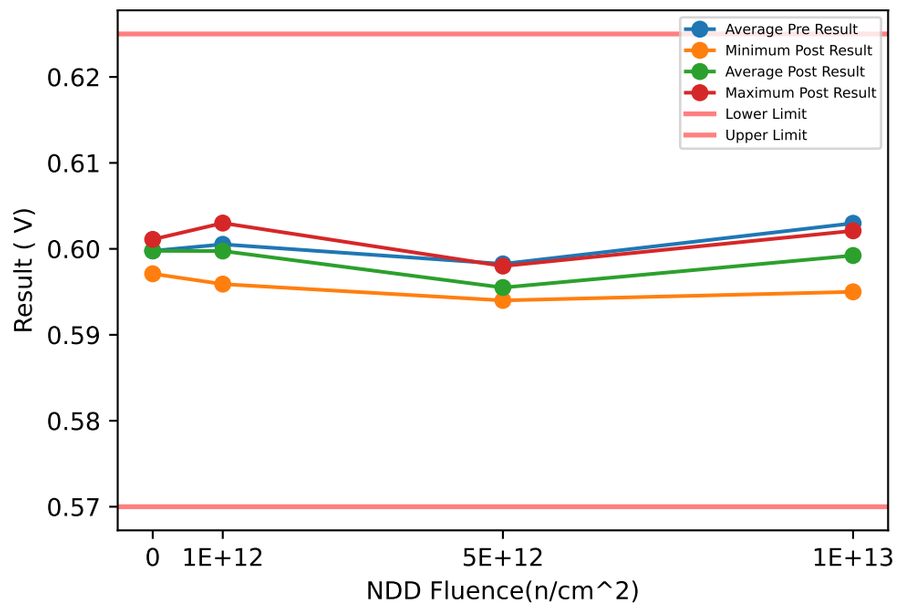
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	-2.4281	-3.6779	-1.2498
2	0	CU2	-2.4718	-3.5062	-1.0344
3	0	CU3	-2.6497	-3.6233	-0.9736
60	1e+12	1E12n/cm2	-2.5381	-3.454	-0.9159
61	1e+12	1E12n/cm2	-2.5826	-3.4423	-0.8597
62	1e+12	1E12n/cm2	-2.7027	-3.5234	-0.8207
63	1e+12	1E12n/cm2	-2.7558	-3.6202	-0.8644
64	5e+12	5E12n/cm2	-2.9516	-3.6888	-0.7372
65	5e+12	5E12n/cm2	-2.7425	-3.5218	-0.7793
66	5e+12	5E12n/cm2	-2.9384	-3.6958	-0.7574
67	5e+12	5E12n/cm2	-2.9111	-3.6163	-0.7052
68	1e+13	1E13n/cm2	-2.9251	-3.5858	-0.6607
69	1e+13	1E13n/cm2	-2.8385	-3.5398	-0.7013
70	1e+13	1E13n/cm2	-2.9306	-3.6123	-0.6817
71	1e+13	1E13n/cm2	-2.7355	-3.461	-0.7255

Test Statistics (nA)

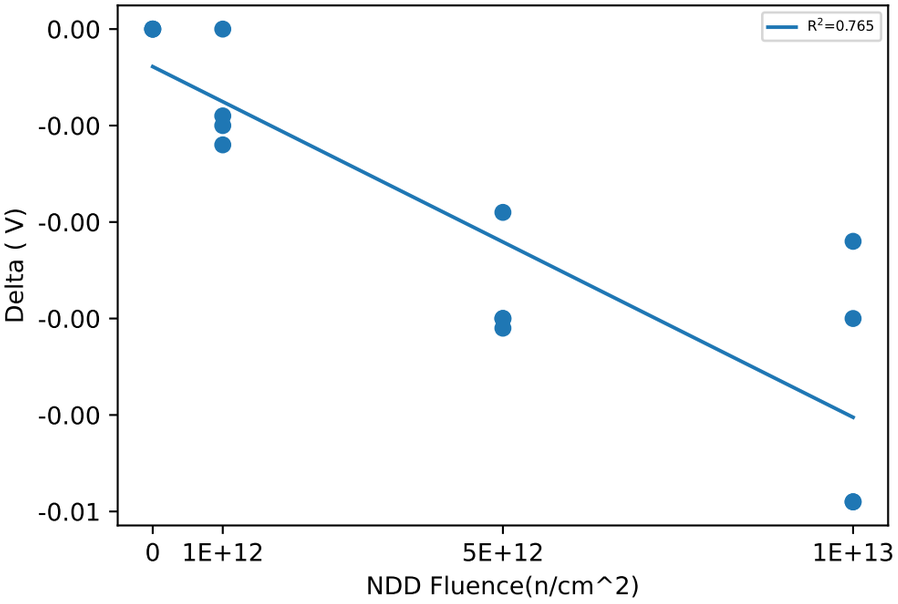
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	-2.6497	-2.5165	-2.4281	0.11738	-3.6779	-3.6025	-3.5062	0.087725	-1.2498	-1.0859	-0.9736	0.14513
1e+12	-2.7558	-2.6448	-2.5381	0.10153	-3.6202	-3.51	-3.4423	0.081737	-0.9159	-0.86517	-0.8207	0.03908
5e+12	-2.9516	-2.8859	-2.7425	0.097076	-3.6958	-3.6307	-3.5218	0.080994	-0.7793	-0.74477	-0.7052	0.03149
1e+13	-2.9306	-2.8574	-2.7355	0.091576	-3.6123	-3.5497	-3.461	0.066302	-0.7255	-0.6923	-0.6607	0.027654

Device Test: 65.6 ENABLE|/EN/RISE///5/@V_EN_RISING

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 0.57, Upper Limit = 0.625 (V))

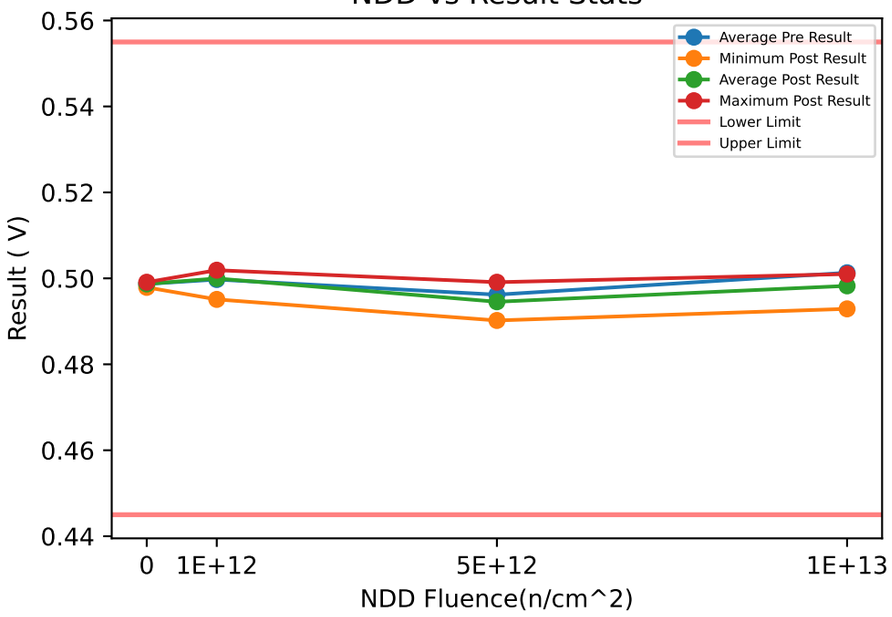
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.6011	0.6011	0
2	0	CU2	0.5971	0.5971	0
3	0	CU3	0.6011	0.6011	0
60	1e+12	1E12n/cm2	0.5971	0.5959	-0.0012
61	1e+12	1E12n/cm2	0.603	0.6021	-0.0009
62	1e+12	1E12n/cm2	0.599	0.598	-0.001
63	1e+12	1E12n/cm2	0.603	0.603	0
64	5e+12	5E12n/cm2	0.598	0.595	-0.003
65	5e+12	5E12n/cm2	0.5999	0.598	-0.0019
66	5e+12	5E12n/cm2	0.5971	0.594	-0.0031
67	5e+12	5E12n/cm2	0.598	0.595	-0.003
68	1e+13	1E13n/cm2	0.607	0.6021	-0.0049
69	1e+13	1E13n/cm2	0.6048	0.5999	-0.0049
70	1e+13	1E13n/cm2	0.598	0.595	-0.003
71	1e+13	1E13n/cm2	0.6021	0.5999	-0.0022

Test Statistics (V)

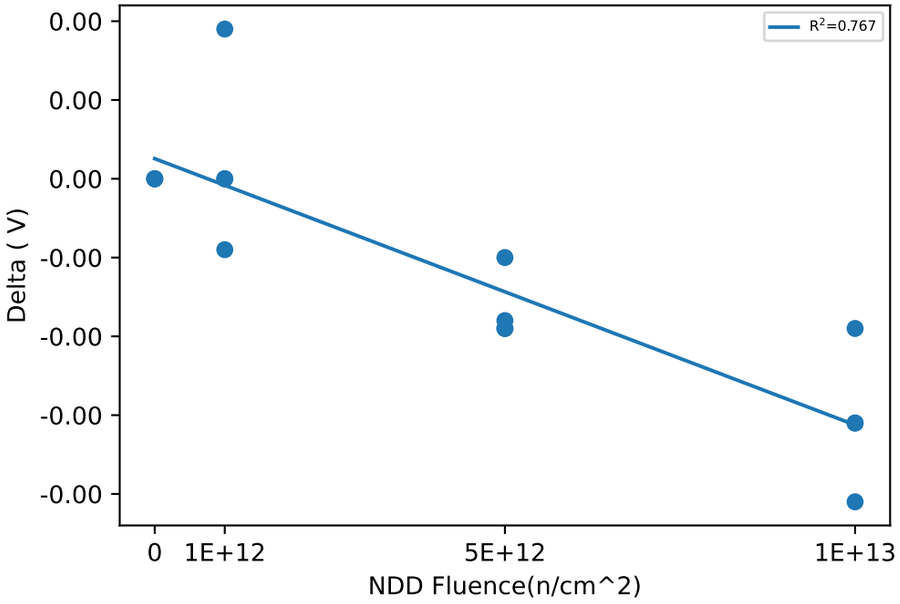
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.5971	0.59977	0.6011	0.0023094	0.5971	0.59977	0.6011	0.0023094	0	0	0	0
1e+12	0.5971	0.60052	0.603	0.0029613	0.5959	0.59975	0.603	0.003365	-0.0012	-0.000775	0	0.00053151
5e+12	0.5971	0.59825	0.5999	0.001179	0.594	0.5955	0.598	0.0017321	-0.0031	-0.00275	-0.0019	0.00056862
1e+13	0.598	0.60298	0.607	0.003875	0.595	0.59923	0.6021	0.0030015	-0.0049	-0.00375	-0.0022	0.0013675

Device Test: 65.7 ENABLE|/EN/FALL///5/@V_EN_FALLING

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 0.445, Upper Limit = 0.555 (V))

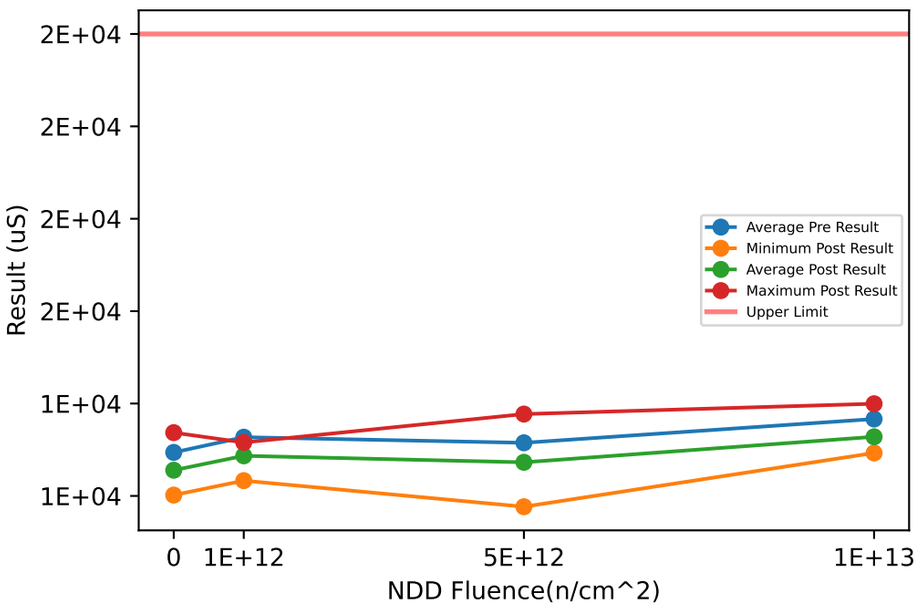
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.4991	0.4991	0
2	0	CU2	0.4979	0.4979	0
3	0	CU3	0.4991	0.4991	0
60	1e+12	1E12n/cm2	0.496	0.4951	-0.0009
61	1e+12	1E12n/cm2	0.5019	0.5019	0
62	1e+12	1E12n/cm2	0.4991	0.501	0.0019
63	1e+12	1E12n/cm2	0.5019	0.5019	0
64	5e+12	5E12n/cm2	0.4939	0.4929	-0.001
65	5e+12	5E12n/cm2	0.501	0.4991	-0.0019
66	5e+12	5E12n/cm2	0.4979	0.496	-0.0019
67	5e+12	5E12n/cm2	0.492	0.4902	-0.0018
68	1e+13	1E13n/cm2	0.5041	0.501	-0.0031
69	1e+13	1E13n/cm2	0.5031	0.5	-0.0031
70	1e+13	1E13n/cm2	0.497	0.4929	-0.0041
71	1e+13	1E13n/cm2	0.501	0.4991	-0.0019

Test Statistics (V)

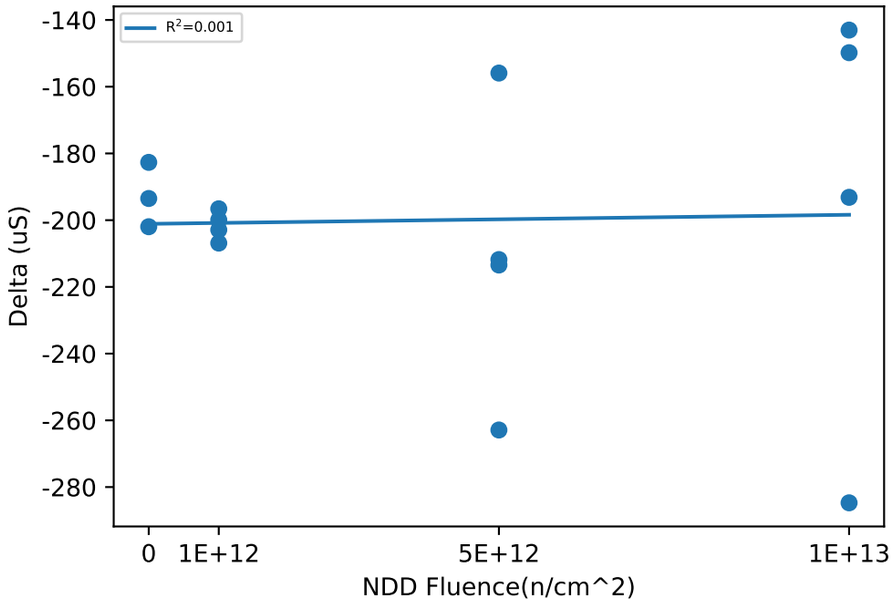
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.4979	0.4987	0.4991	0.00069282	0.4979	0.4987	0.4991	0.00069282	0	0	0	0
1e+12	0.496	0.49972	0.5019	0.0028123	0.4951	0.49998	0.5019	0.0032776	-0.0009	0.00025	0.0019	0.001179
5e+12	0.492	0.4962	0.501	0.0040357	0.4902	0.49455	0.4991	0.0038492	-0.0019	-0.00165	-0.001	0.00043589
1e+13	0.497	0.5013	0.5041	0.0031443	0.4929	0.49825	0.501	0.0036501	-0.0041	-0.00305	-0.0019	0.0009

Device Test: 65.8 ENABLE|/EN/DELAY///5/@T_EN_DELAY

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



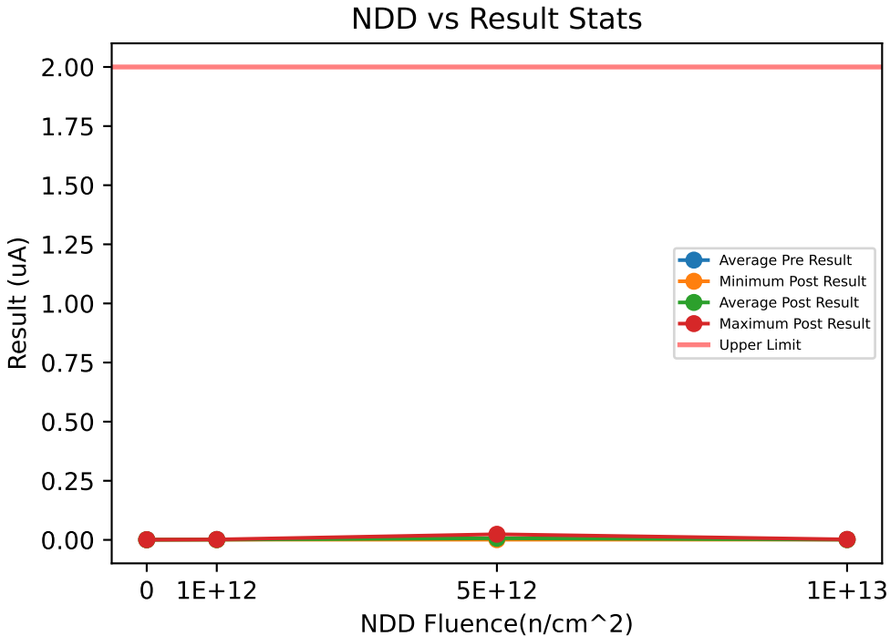
Test Results (Upper Limit = 18000.0 (uS))

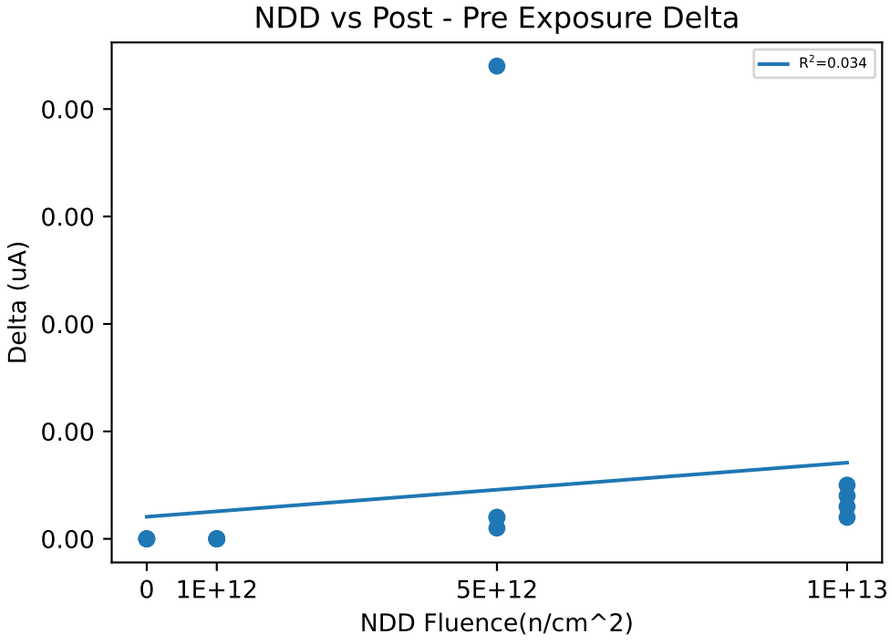
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	1.33e+04	1.31e+04	-193.51
2	0	CU2	1.39e+04	1.37e+04	-201.97
3	0	CU3	1.32e+04	1.3e+04	-182.68
60	1e+12	1E12n/cm2	1.37e+04	1.35e+04	-196.59
61	1e+12	1E12n/cm2	1.38e+04	1.36e+04	-206.87
62	1e+12	1E12n/cm2	1.34e+04	1.32e+04	-199.9
63	1e+12	1E12n/cm2	1.37e+04	1.35e+04	-202.9
64	5e+12	5E12n/cm2	1.35e+04	1.33e+04	-211.81
65	5e+12	5E12n/cm2	1.4e+04	1.39e+04	-155.91
66	5e+12	5E12n/cm2	1.31e+04	1.29e+04	-262.9
67	5e+12	5E12n/cm2	1.36e+04	1.33e+04	-213.45
68	1e+13	1E13n/cm2	1.41e+04	1.4e+04	-149.81
69	1e+13	1E13n/cm2	1.36e+04	1.35e+04	-143.03
70	1e+13	1E13n/cm2	1.38e+04	1.36e+04	-193.15
71	1e+13	1E13n/cm2	1.38e+04	1.35e+04	-284.72

Test Statistics (uS)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	1.32e+04	1.35e+04	1.39e+04	367.14	1.3e+04	1.33e+04	1.37e+04	358.25	-201.97	-192.72	-182.68	9.669
1e+12	1.34e+04	1.36e+04	1.38e+04	187.36	1.32e+04	1.34e+04	1.36e+04	185.97	-206.87	-201.57	-196.59	4.3762
5e+12	1.31e+04	1.36e+04	1.4e+04	366.39	1.29e+04	1.34e+04	1.39e+04	410.08	-262.9	-211.02	-155.91	43.721
1e+13	1.36e+04	1.38e+04	1.41e+04	226.98	1.35e+04	1.36e+04	1.4e+04	247.78	-284.72	-192.68	-143.03	65.256

Device Test: 70.1 LEAK|/PG/CURRENT/1N8V//3/@PWRGD_OUTPUT_HIGH_LEAK





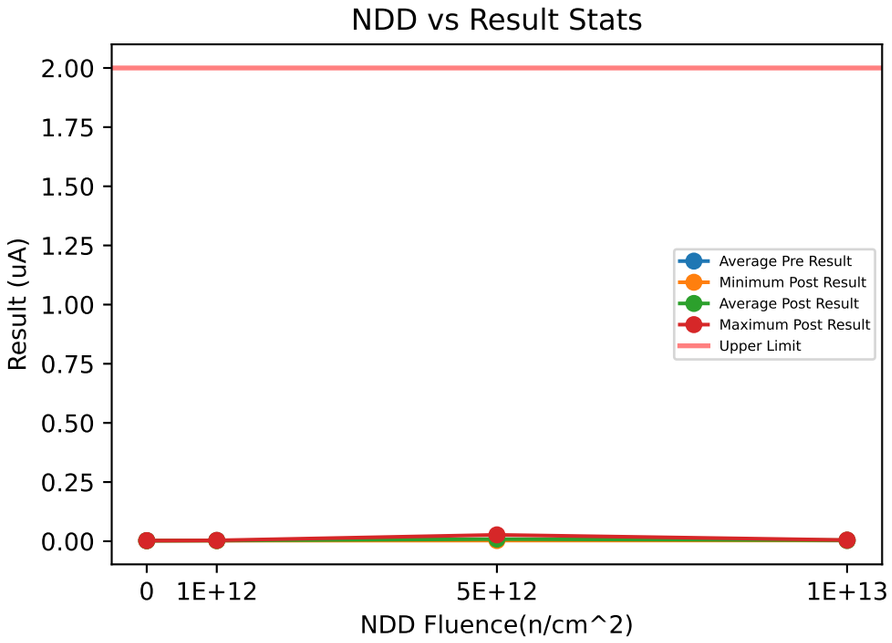
Test Results (Upper Limit = 2.0 (uA))

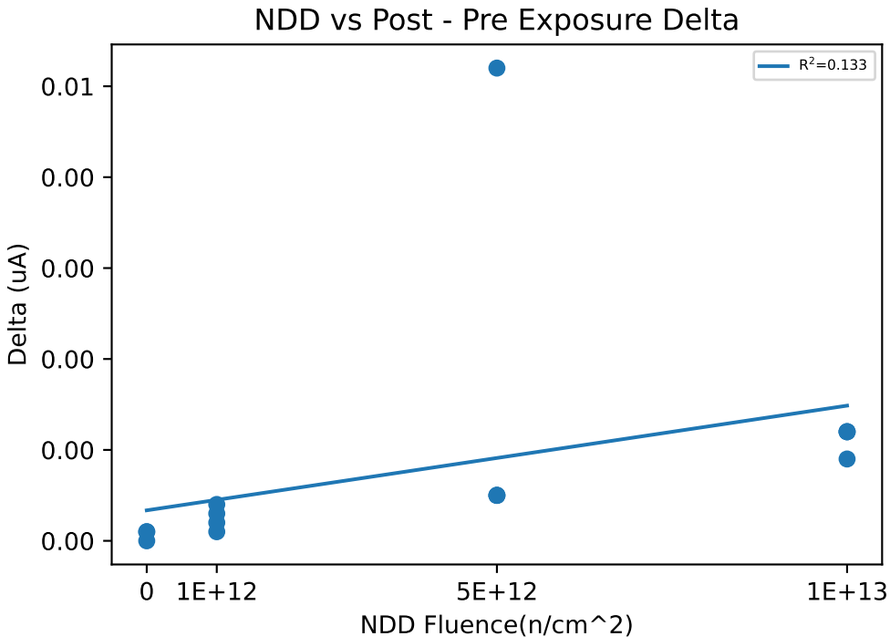
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.0007	0.0007	0
2	0	CU2	0.0007	0.0007	0
3	0	CU3	0.0009	0.0009	0
60	1e+12	1E12n/cm2	0.0008	0.0008	0
61	1e+12	1E12n/cm2	0.0011	0.0011	0
62	1e+12	1E12n/cm2	0.0018	0.0018	0
63	1e+12	1E12n/cm2	0.0017	0.0017	0
64	5e+12	5E12n/cm2	0.0194	0.0238	0.0044
65	5e+12	5E12n/cm2	0.0009	0.001	0.0001
66	5e+12	5E12n/cm2	0.0009	0.0011	0.0002
67	5e+12	5E12n/cm2	0.0007	0.0009	0.0002
68	1e+13	1E13n/cm2	0.0008	0.001	0.0002
69	1e+13	1E13n/cm2	0.0016	0.0021	0.0005
70	1e+13	1E13n/cm2	0.001	0.0014	0.0004
71	1e+13	1E13n/cm2	0.001	0.0013	0.0003

Test Statistics (uA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.0007	0.00076667	0.0009	0.00011547	0.0007	0.00076667	0.0009	0.00011547	0	0	0	0
1e+12	0.0008	0.00135	0.0018	0.00047958	0.0008	0.00135	0.0018	0.00047958	0	0	0	0
5e+12	0.0007	0.005475	0.0194	0.0092838	0.0009	0.0067	0.0238	0.0114	0.0001	0.001225	0.0044	0.0021172
1e+13	0.0008	0.0011	0.0016	0.00034641	0.001	0.00145	0.0021	0.00046547	0.0002	0.00035	0.0005	0.0001291

Device Test: 70.2 LEAK|/PG/CURRENT/1N8V//6.3/@PWRGD_OUTPUT_HIGH_LEAK





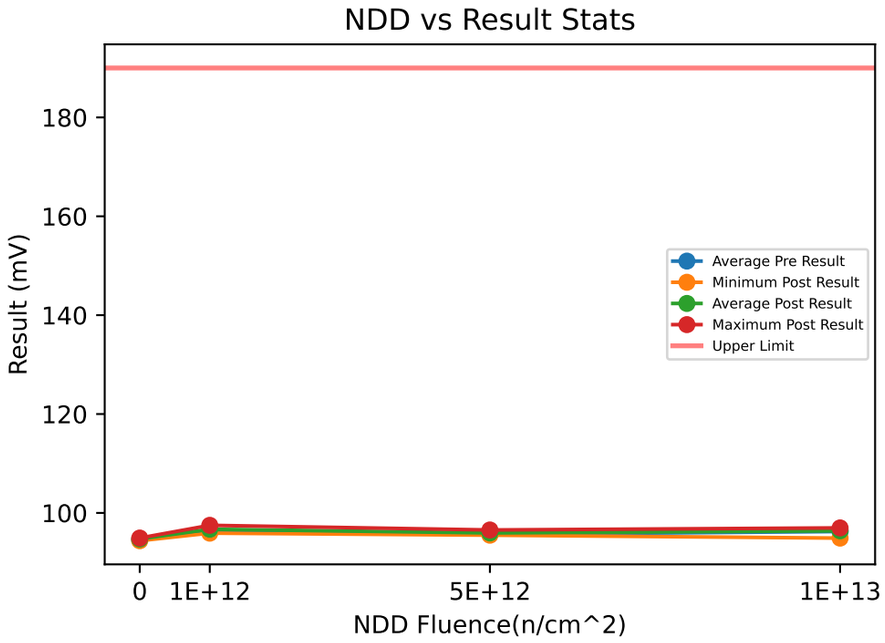
Test Results (Upper Limit = 2.0 (uA))

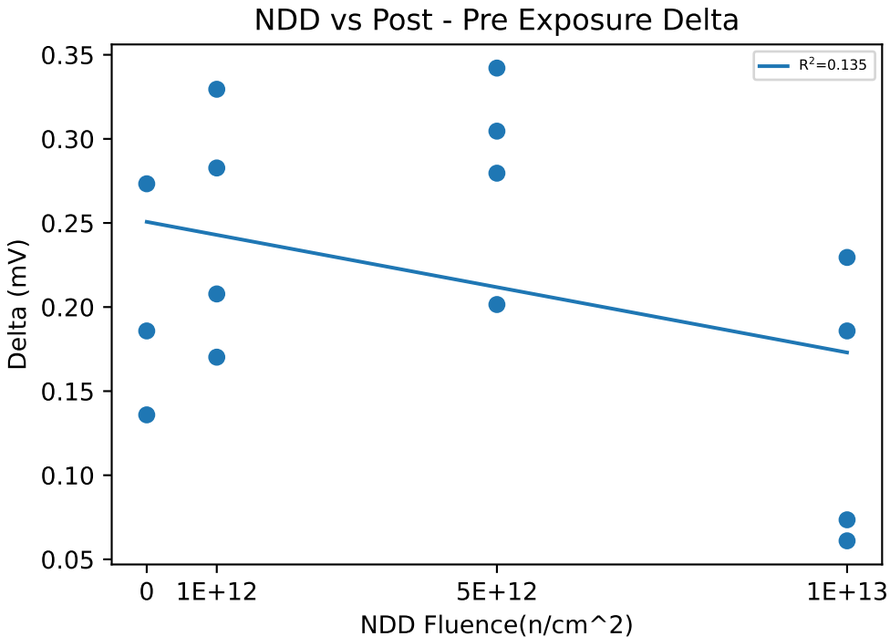
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.0021	0.0021	0
2	0	CU2	0.0024	0.0025	0.0001
3	0	CU3	0.0026	0.0027	0.0001
60	1e+12	1E12n/cm2	0.002	0.0023	0.0003
61	1e+12	1E12n/cm2	0.0024	0.0028	0.0004
62	1e+12	1E12n/cm2	0.0034	0.0036	0.0002
63	1e+12	1E12n/cm2	0.0034	0.0035	0.0001
64	5e+12	5E12n/cm2	0.0217	0.0269	0.0052
65	5e+12	5E12n/cm2	0.0023	0.0028	0.0005
66	5e+12	5E12n/cm2	0.0027	0.0032	0.0005
67	5e+12	5E12n/cm2	0.0023	0.0028	0.0005
68	1e+13	1E13n/cm2	0.0023	0.0032	0.0009
69	1e+13	1E13n/cm2	0.0038	0.005	0.0012
70	1e+13	1E13n/cm2	0.0034	0.0046	0.0012
71	1e+13	1E13n/cm2	0.0027	0.0039	0.0012

Test Statistics (uA)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.0021	0.0023667	0.0026	0.00025166	0.0021	0.0024333	0.0027	0.00030551	0	6.6667e-05	0.0001	5.7735e-05
1e+12	0.002	0.0028	0.0034	0.00071181	0.0023	0.00305	0.0036	0.00061373	0.0001	0.00025	0.0004	0.0001291
5e+12	0.0023	0.00725	0.0217	0.0096352	0.0028	0.008925	0.0269	0.011985	0.0005	0.001675	0.0052	0.00235
1e+13	0.0023	0.00305	0.0038	0.00067577	0.0032	0.004175	0.005	0.0007932	0.0009	0.001125	0.0012	0.00015

Device Test: 70.3 POWER_GOOD|//OUTPUT_LOW/1N8V//3/@V_PG_OL





Test Results (Upper Limit = 190.0 (mV))

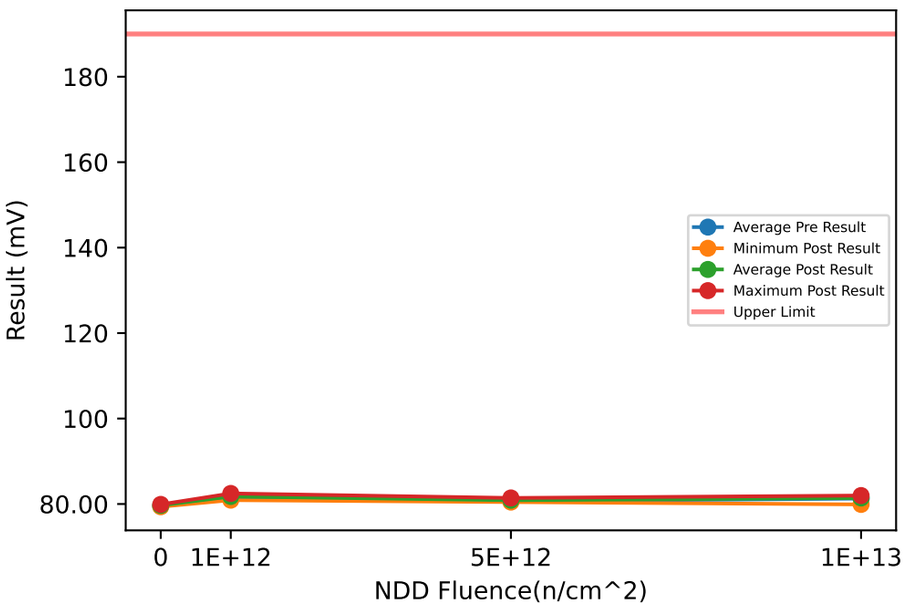
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	94.239	94.375	0.1359
2	0	CU2	94.645	94.919	0.2733
3	0	CU3	94.686	94.872	0.1858
60	1e+12	1E12n/cm2	95.623	95.906	0.2827
61	1e+12	1E12n/cm2	96.778	97.108	0.3295
62	1e+12	1E12n/cm2	96.085	96.293	0.2078
63	1e+12	1E12n/cm2	97.319	97.489	0.1702
64	5e+12	5E12n/cm2	95.192	95.496	0.3046
65	5e+12	5E12n/cm2	95.532	95.734	0.2015
66	5e+12	5E12n/cm2	96.207	96.549	0.3421
67	5e+12	5E12n/cm2	95.729	96.009	0.2796
68	1e+13	1E13n/cm2	96.454	96.683	0.2295
69	1e+13	1E13n/cm2	94.829	94.903	0.0735
70	1e+13	1E13n/cm2	96.906	96.967	0.061
71	1e+13	1E13n/cm2	96.766	96.952	0.1858

Test Statistics (mV)

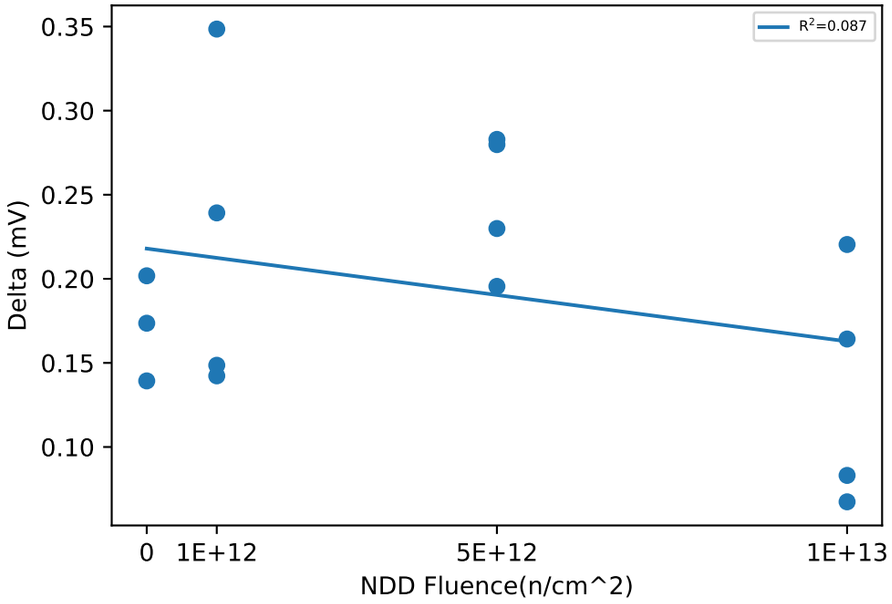
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	94.239	94.524	94.686	0.24696	94.375	94.722	94.919	0.30111	0.1359	0.19833	0.2733	0.069552
1e+12	95.623	96.451	97.319	0.74832	95.906	96.699	97.489	0.72704	0.1702	0.24755	0.3295	0.071913
5e+12	95.192	95.665	96.207	0.42395	95.496	95.947	96.549	0.45263	0.2015	0.28195	0.3421	0.059466
1e+13	94.829	96.239	96.906	0.95843	94.903	96.376	96.967	0.99083	0.061	0.13745	0.2295	0.083157

Device Test: 70.4 POWER_GOOD|//OUTPUT_LOW/1N8V//6.3/@V_PG_OL

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Upper Limit = 190.0 (mV))

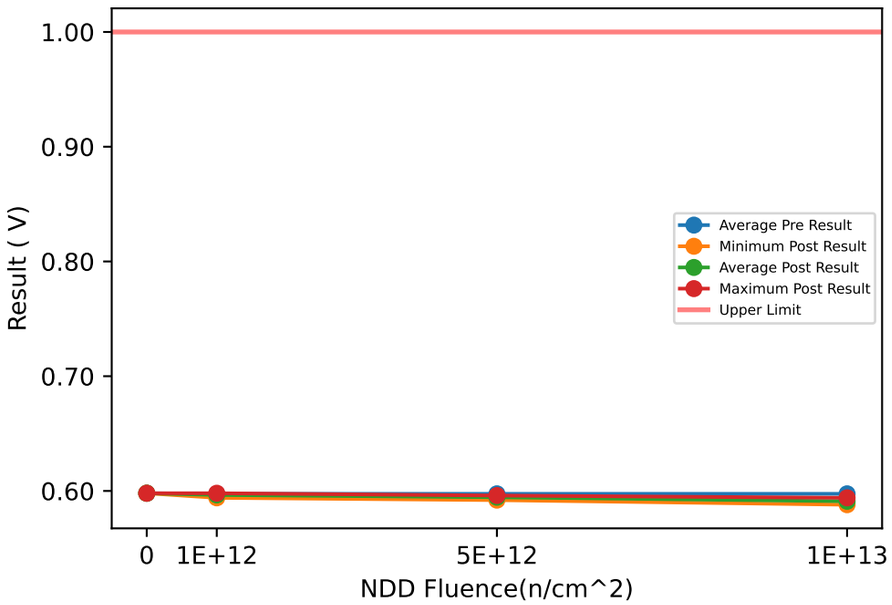
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	79.226	79.366	0.1393
2	0	CU2	79.704	79.906	0.2018
3	0	CU3	79.592	79.765	0.1736
60	1e+12	1E12n/cm2	80.663	80.902	0.2392
61	1e+12	1E12n/cm2	82.121	82.47	0.3485
62	1e+12	1E12n/cm2	81.081	81.23	0.1486
63	1e+12	1E12n/cm2	82.309	82.451	0.1423
64	5e+12	5E12n/cm2	80.169	80.449	0.2798
65	5e+12	5E12n/cm2	80.519	80.715	0.1955
66	5e+12	5E12n/cm2	81.188	81.417	0.2299
67	5e+12	5E12n/cm2	80.666	80.949	0.2829
68	1e+13	1E13n/cm2	81.544	81.764	0.2204
69	1e+13	1E13n/cm2	79.82	79.903	0.0831
70	1e+13	1E13n/cm2	81.906	81.973	0.0674
71	1e+13	1E13n/cm2	81.815	81.98	0.1642

Test Statistics (mV)

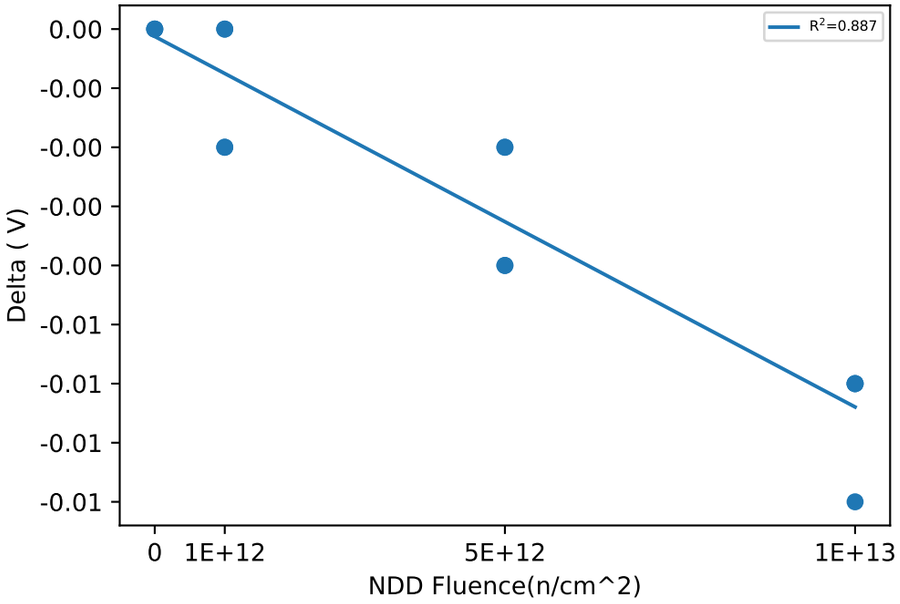
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	79.226	79.507	79.704	0.24981	79.366	79.679	79.906	0.28031	0.1393	0.17157	0.2018	0.0313
1e+12	80.663	81.544	82.309	0.79763	80.902	81.763	82.47	0.81618	0.1423	0.21965	0.3485	0.096636
5e+12	80.169	80.636	81.188	0.42285	80.449	80.883	81.417	0.41087	0.1955	0.24703	0.2829	0.042069
1e+13	79.82	81.271	81.906	0.97984	79.903	81.405	81.98	1.0064	0.0674	0.13377	0.2204	0.071655

Device Test: 71.1 POWER_GOOD|//MIN_VIN_PG/1N8V///@MIN_VIN_FOR_PWRGD_OUTPUT

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Upper Limit = 1.0 (V))

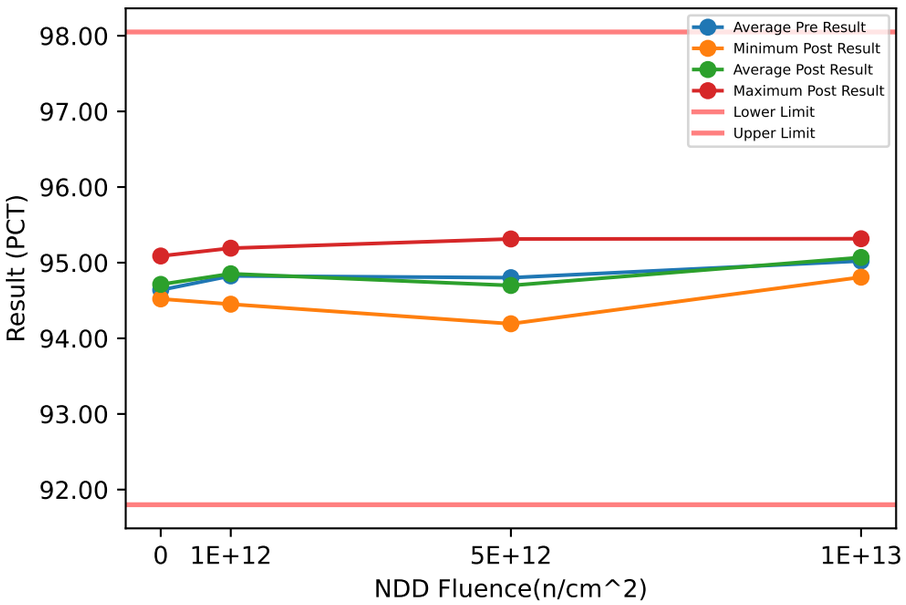
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	0.598	0.598	0
2	0	CU2	0.598	0.598	0
3	0	CU3	0.598	0.598	0
60	1e+12	1E12n/cm2	0.598	0.598	0
61	1e+12	1E12n/cm2	0.596	0.594	-0.002
62	1e+12	1E12n/cm2	0.598	0.598	0
63	1e+12	1E12n/cm2	0.598	0.596	-0.002
64	5e+12	5E12n/cm2	0.596	0.592	-0.004
65	5e+12	5E12n/cm2	0.6	0.596	-0.004
66	5e+12	5E12n/cm2	0.598	0.596	-0.002
67	5e+12	5E12n/cm2	0.596	0.594	-0.002
68	1e+13	1E13n/cm2	0.598	0.592	-0.006
69	1e+13	1E13n/cm2	0.6	0.594	-0.006
70	1e+13	1E13n/cm2	0.596	0.59	-0.006
71	1e+13	1E13n/cm2	0.596	0.588	-0.008

Test Statistics (V)

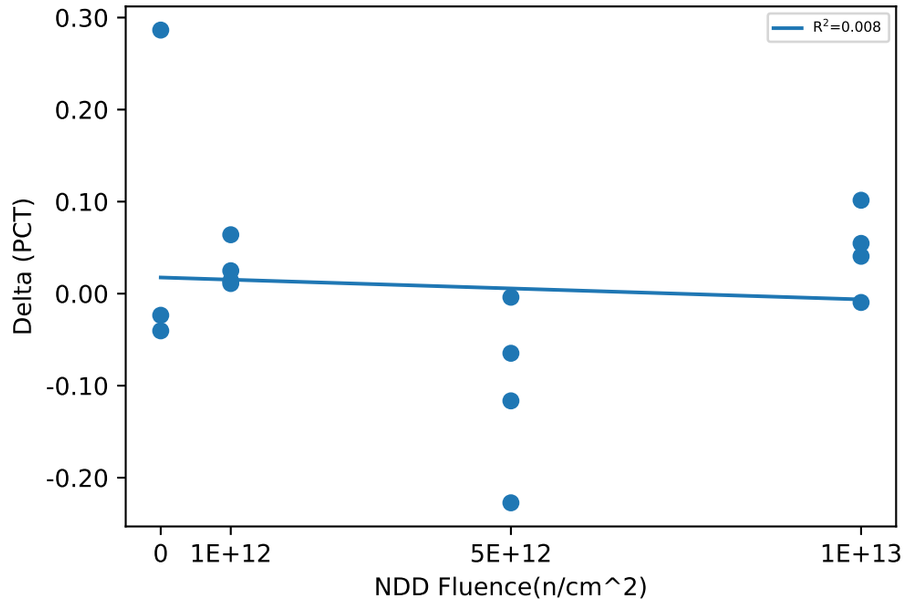
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	0.598	0.598	0.598	0	0.598	0.598	0.598	0	0	0	0	0
1e+12	0.596	0.5975	0.598	0.001	0.594	0.5965	0.598	0.0019149	-0.002	-0.001	0	0.0011547
5e+12	0.596	0.5975	0.6	0.0019149	0.592	0.5945	0.596	0.0019149	-0.004	-0.003	-0.002	0.0011547
1e+13	0.596	0.5975	0.6	0.0019149	0.588	0.591	0.594	0.002582	-0.008	-0.0065	-0.006	0.001

Device Test: 71.3 POWER_GOOD|//RISE_THRESHOLD/1N8V//3/@V_PG_RISE

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 91.8, Upper Limit = 98.05 (PCT))

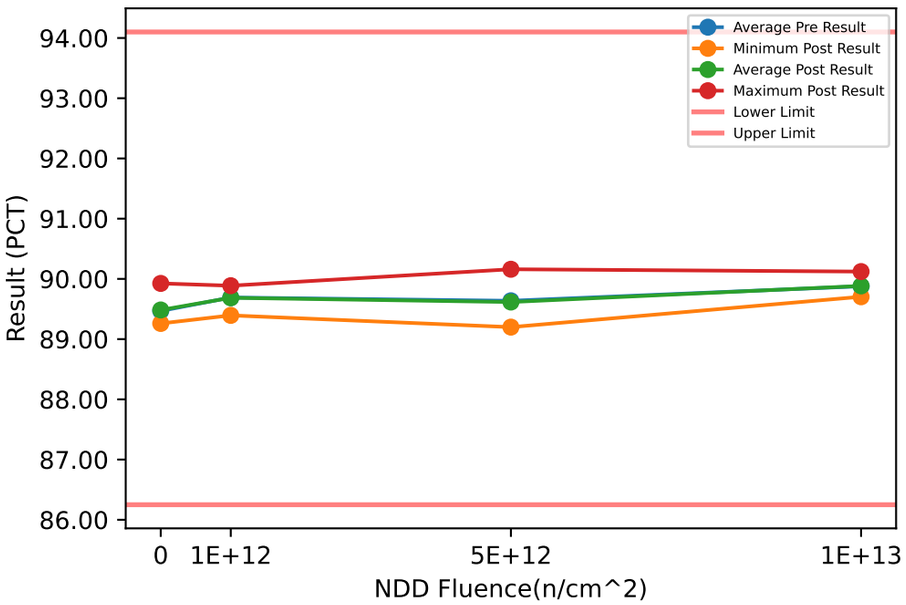
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	94.544	94.521	-0.0235
2	0	CU2	95.129	95.088	-0.0404
3	0	CU3	94.243	94.529	0.2864
60	1e+12	1E12n/cm2	94.887	94.951	0.064
61	1e+12	1E12n/cm2	95.166	95.191	0.0249
62	1e+12	1E12n/cm2	94.437	94.451	0.0138
63	1e+12	1E12n/cm2	94.81	94.821	0.011
64	5e+12	5E12n/cm2	94.806	94.69	-0.1165
65	5e+12	5E12n/cm2	95.317	95.313	-0.0039
66	5e+12	5E12n/cm2	94.257	94.192	-0.0648
67	5e+12	5E12n/cm2	94.826	94.599	-0.2273
68	1e+13	1E13n/cm2	95.262	95.316	0.0546
69	1e+13	1E13n/cm2	94.818	94.808	-0.0096
70	1e+13	1E13n/cm2	95.058	95.16	0.1015
71	1e+13	1E13n/cm2	94.951	94.991	0.0406

Test Statistics (PCT)

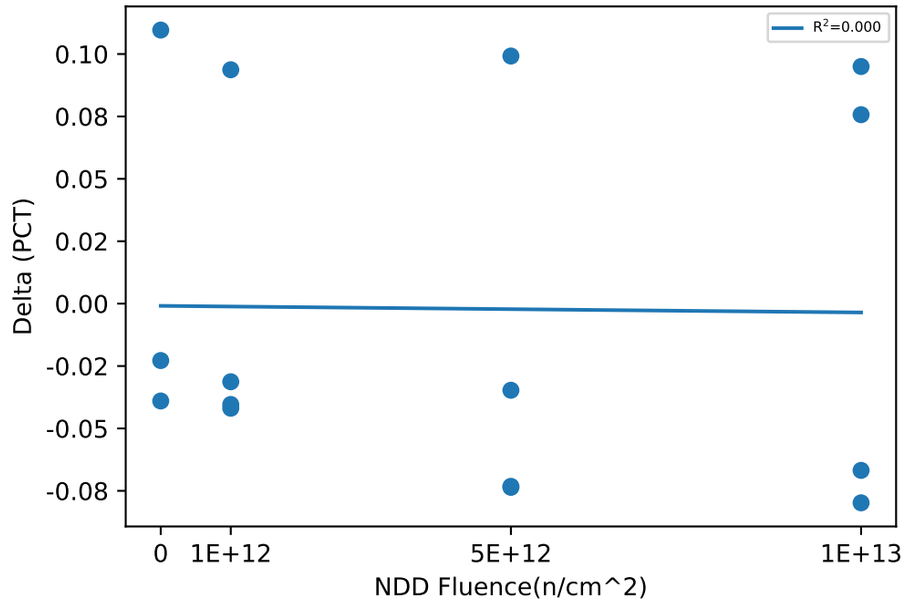
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	94.243	94.639	95.129	0.45037	94.521	94.713	95.088	0.32522	-0.0404	0.074167	0.2864	0.18399
1e+12	94.437	94.825	95.166	0.3006	94.451	94.853	95.191	0.30916	0.011	0.028425	0.064	0.024464
5e+12	94.257	94.802	95.317	0.43326	94.192	94.699	95.313	0.46349	-0.2273	-0.10312	-0.0039	0.094715
1e+13	94.818	95.022	95.262	0.18758	94.808	95.069	95.316	0.21869	-0.0096	0.046775	0.1015	0.045725

Device Test: 71.4 POWER_GOOD|//FALL_THRESHOLD/1N8V//3/@V_PG_FALL

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 86.25, Upper Limit = 94.1 (PCT))

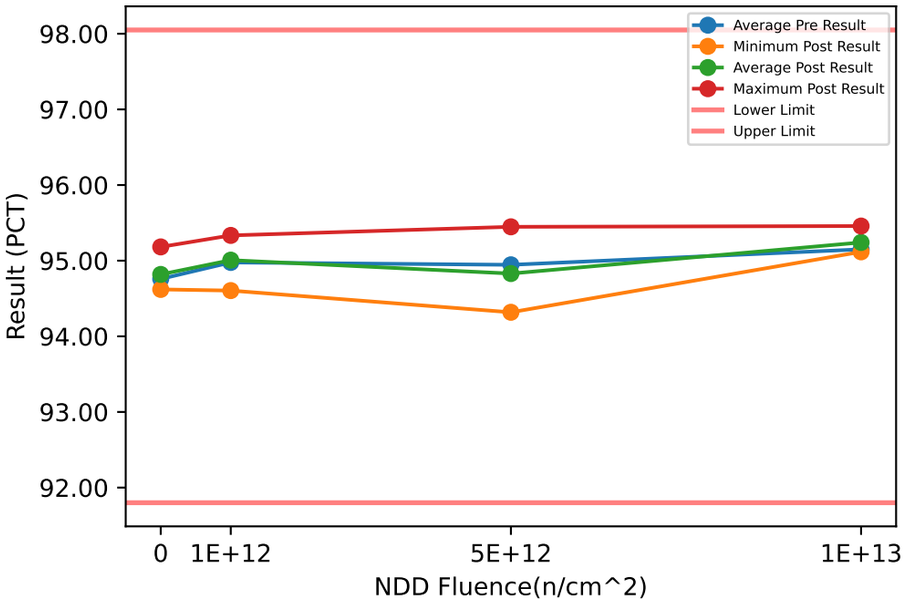
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	89.305	89.266	-0.039
2	0	CU2	89.948	89.925	-0.0228
3	0	CU3	89.15	89.26	0.1096
60	1e+12	1E12n/cm2	89.761	89.73	-0.0313
61	1e+12	1E12n/cm2	89.793	89.887	0.0937
62	1e+12	1E12n/cm2	89.436	89.394	-0.0419
63	1e+12	1E12n/cm2	89.773	89.733	-0.0404
64	5e+12	5E12n/cm2	89.588	89.553	-0.0347
65	5e+12	5E12n/cm2	90.061	90.16	0.0992
66	5e+12	5E12n/cm2	89.273	89.199	-0.0736
67	5e+12	5E12n/cm2	89.624	89.551	-0.0732
68	1e+13	1E13n/cm2	90.046	90.121	0.0757
69	1e+13	1E13n/cm2	89.763	89.858	0.095
70	1e+13	1E13n/cm2	89.931	89.851	-0.0798
71	1e+13	1E13n/cm2	89.77	89.703	-0.0668

Test Statistics (PCT)

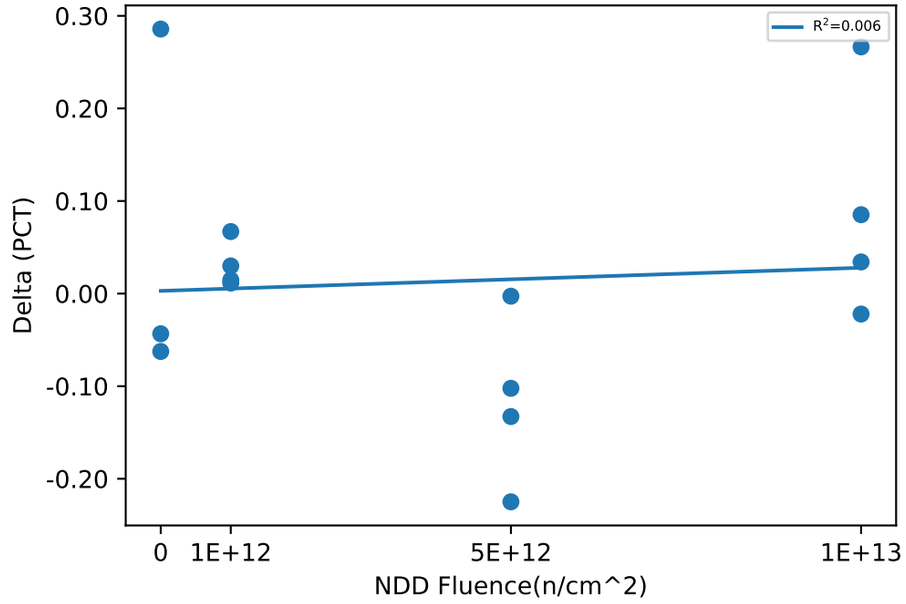
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	89.15	89.468	89.948	0.42263	89.26	89.484	89.925	0.38193	-0.039	0.015933	0.1096	0.081521
1e+12	89.436	89.691	89.793	0.17053	89.394	89.686	89.887	0.208	-0.0419	-0.004975	0.0937	0.06595
5e+12	89.273	89.636	90.061	0.32394	89.199	89.616	90.16	0.39908	-0.0736	-0.020575	0.0992	0.081908
1e+13	89.763	89.877	90.046	0.1366	89.703	89.883	90.121	0.17408	-0.0798	0.006025	0.095	0.092088

Device Test: 71.6 POWER_GOOD|//RISE_THRESHOLD/1N8V//6.3/@V_PG_RISE

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 91.8, Upper Limit = 98.05 (PCT))

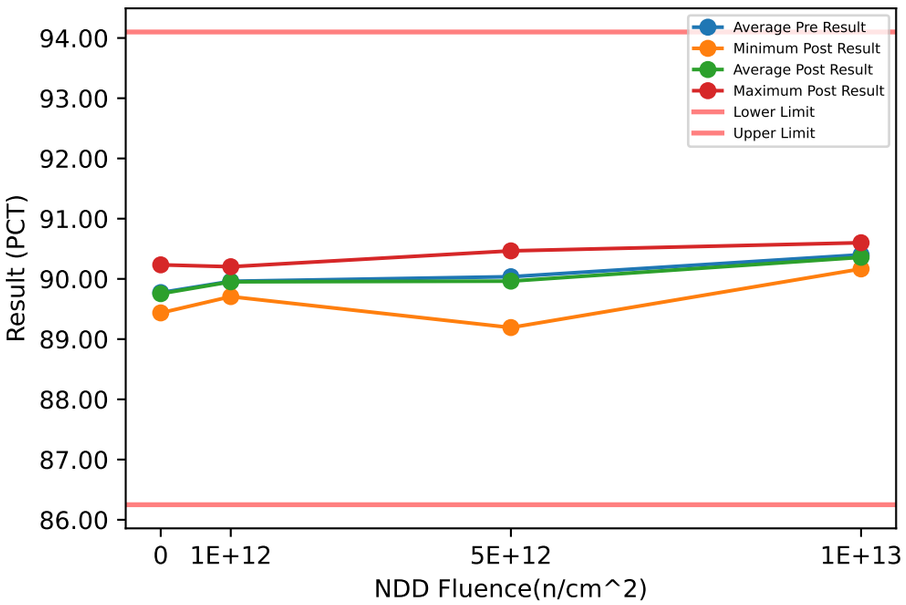
Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	94.663	94.62	-0.0434
2	0	CU2	95.245	95.182	-0.0625
3	0	CU3	94.367	94.653	0.2857
60	1e+12	1E12n/cm2	95.098	95.11	0.0114
61	1e+12	1E12n/cm2	95.267	95.334	0.067
62	1e+12	1E12n/cm2	94.575	94.605	0.0299
63	1e+12	1E12n/cm2	94.966	94.98	0.0147
64	5e+12	5E12n/cm2	94.955	94.822	-0.1328
65	5e+12	5E12n/cm2	95.45	95.448	-0.0028
66	5e+12	5E12n/cm2	94.42	94.318	-0.1023
67	5e+12	5E12n/cm2	94.956	94.731	-0.2249
68	1e+13	1E13n/cm2	95.373	95.458	0.0852
69	1e+13	1E13n/cm2	94.963	95.23	0.2665
70	1e+13	1E13n/cm2	95.181	95.159	-0.0221
71	1e+13	1E13n/cm2	95.083	95.117	0.0342

Test Statistics (PCT)

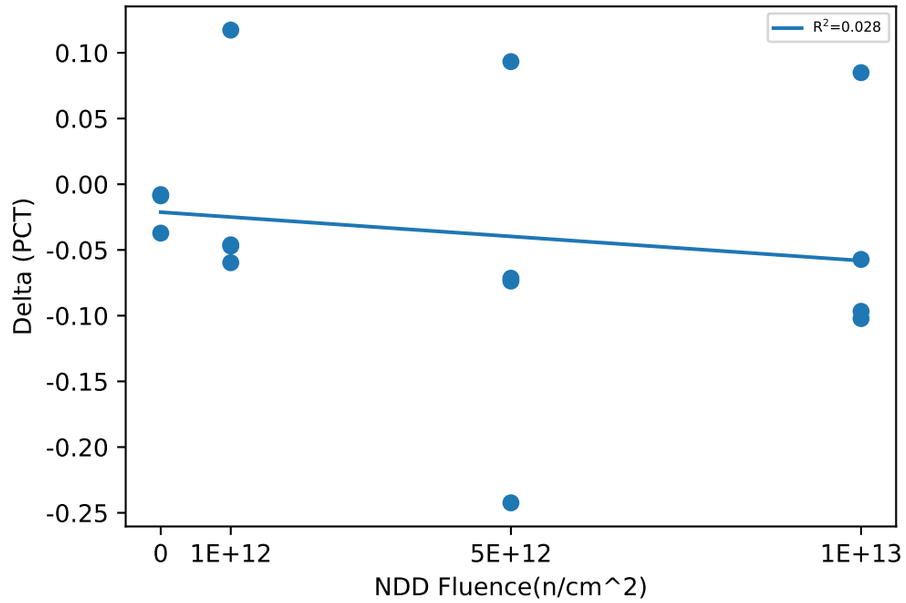
Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	94.367	94.758	95.245	0.44647	94.62	94.818	95.182	0.31551	-0.0625	0.059933	0.2857	0.19575
1e+12	94.575	94.976	95.267	0.29484	94.605	95.007	95.334	0.30556	0.0114	0.03075	0.067	0.025474
5e+12	94.42	94.945	95.45	0.42078	94.318	94.83	95.448	0.46677	-0.2249	-0.1157	-0.0028	0.091548
1e+13	94.963	95.15	95.373	0.17322	95.117	95.241	95.458	0.15191	-0.0221	0.09095	0.2665	0.12497

Device Test: 71.7 POWER_GOOD|//FALL_THRESHOLD/1N8V//6.3/@V_PG_FALL

NDD vs Result Stats



NDD vs Post - Pre Exposure Delta



Test Results (Lower Limit = 86.25, Upper Limit = 94.1 (PCT))

Serial #	Fluence(n/cm^2)	Exposure Conditions	Pre Result	Post Result	Delta
1	0	CU1	89.444	89.435	-0.0088
2	0	CU2	90.241	90.233	-0.0079
3	0	CU3	89.632	89.595	-0.0372
60	1e+12	1E12n/cm2	89.915	89.869	-0.0461
61	1e+12	1E12n/cm2	90.085	90.202	0.1173
62	1e+12	1E12n/cm2	89.753	89.706	-0.047
63	1e+12	1E12n/cm2	90.088	90.028	-0.0597
64	5e+12	5E12n/cm2	90.076	90.169	0.0933
65	5e+12	5E12n/cm2	90.537	90.465	-0.0715
66	5e+12	5E12n/cm2	89.434	89.192	-0.2424
67	5e+12	5E12n/cm2	90.098	90.024	-0.0737
68	1e+13	1E13n/cm2	90.515	90.6	0.0849
69	1e+13	1E13n/cm2	90.27	90.168	-0.1022
70	1e+13	1E13n/cm2	90.556	90.498	-0.0572
71	1e+13	1E13n/cm2	90.262	90.165	-0.0967

Test Statistics (PCT)

Fluence(n/cm^2)	Pre Exposure Min	Pre Exposure Avg	Pre Exposure Max	Pre Exposure Std	Post Exposure Min	Post Exposure Avg	Post Exposure Max	Post Exposure Std	Min Delta	Avg Delta	Max Delta	Std Delta
0	89.444	89.772	90.241	0.41658	89.435	89.755	90.233	0.42217	-0.0372	-0.017967	-0.0079	0.016663
1e+12	89.753	89.96	90.088	0.16013	89.706	89.951	90.202	0.21282	-0.0597	-0.008875	0.1173	0.084346
5e+12	89.434	90.036	90.537	0.45396	89.192	89.963	90.465	0.5456	-0.2424	-0.073575	0.0933	0.13706
1e+13	90.262	90.401	90.556	0.15649	90.165	90.358	90.6	0.22489	-0.1022	-0.0428	0.0849	0.087461

5 Revision History

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

Changes from Revision * (September 2026) to Revision A (November 2026)	Page
• Updated Table 3-1 in *Specification Compliance Matrix* section	4

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