

TPS7H4001-SP Neutron Displacement Damage Characterization

ABSTRACT

This report presents the effect of neutron displacement damage (NDD) on the TPS7H4001-SP device. The results show that all devices were fully functional and within production test limits after having been irradiated up to 1×10^{13} n/cm² (1-MeV equivalent). A sample size of nine units was exposed to radiation testing per MIL-STD-883, Method 1017 for Neutron Irradiation, and an additional one device was used as a control unit and was not irradiated. All devices used in the experiment were from lot date code 1950A and assembly lot 9011405. Electrical testing was performed at Texas Instruments before and after neutron irradiation using the production test program for TPS7H4001-SP.

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1 Overview

The TPS7H4001-SP is a radiation-hardness-assured, 7-V, 18-A synchronous buck converter with integrated low resistance high-side and low-side MOSFETs in a thermally enhanced 34-pin ceramic flatpack package. High efficiency and reduced component count are achieved through current mode control. The TPS7H4001-SP can be configured in master-slave mode to provide up to 36-A of output current or with the SYNC2 pin, four devices can be configured in parallel to provide up to 72-A of output current without the need of an external clock.

General device information and testing conditions are listed in [Table 1](#).

Table 1. Overview Information

TI Part Number	TPS7H4001-SP
SMD Number	5962-1820501VXC
Device Name	PTPS7H4001HKY/EM
Device Function	Synchronous Buck Converter
Die Name	RTPS7H4001A1VM
Technology	LBC7
A/T Lot Number / Date Code	9011405 / 1950A
Unbiased Quantity Tested	9
Exposure Facility	VPT Rad
Neutron Fluence (1-MeV equivalent)	1.0×10^{12} , 5.0×10^{12} , 1.0×10^{13} n/cm ²
Irradiation Temperature	25°C
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2 Test Procedures

The TPS7H4001-SP was electrically pre-tested using the production automated test equipment program.

General test procedures adhered to MIL-STD-883, Method 1017 for Neutron Irradiation of TPS7H4001-SP. Neutron irradiation conditions are listed in [Table 2](#).

Table 2. Neutron Irradiation Conditions

Group	Sample Qty	Neutron Fluence (n/cm ²)	Bias
A	3	1.0×10^{12}	Unbiased
B	3	5.0×10^{12}	Unbiased
C	3	1.0×10^{13}	Unbiased

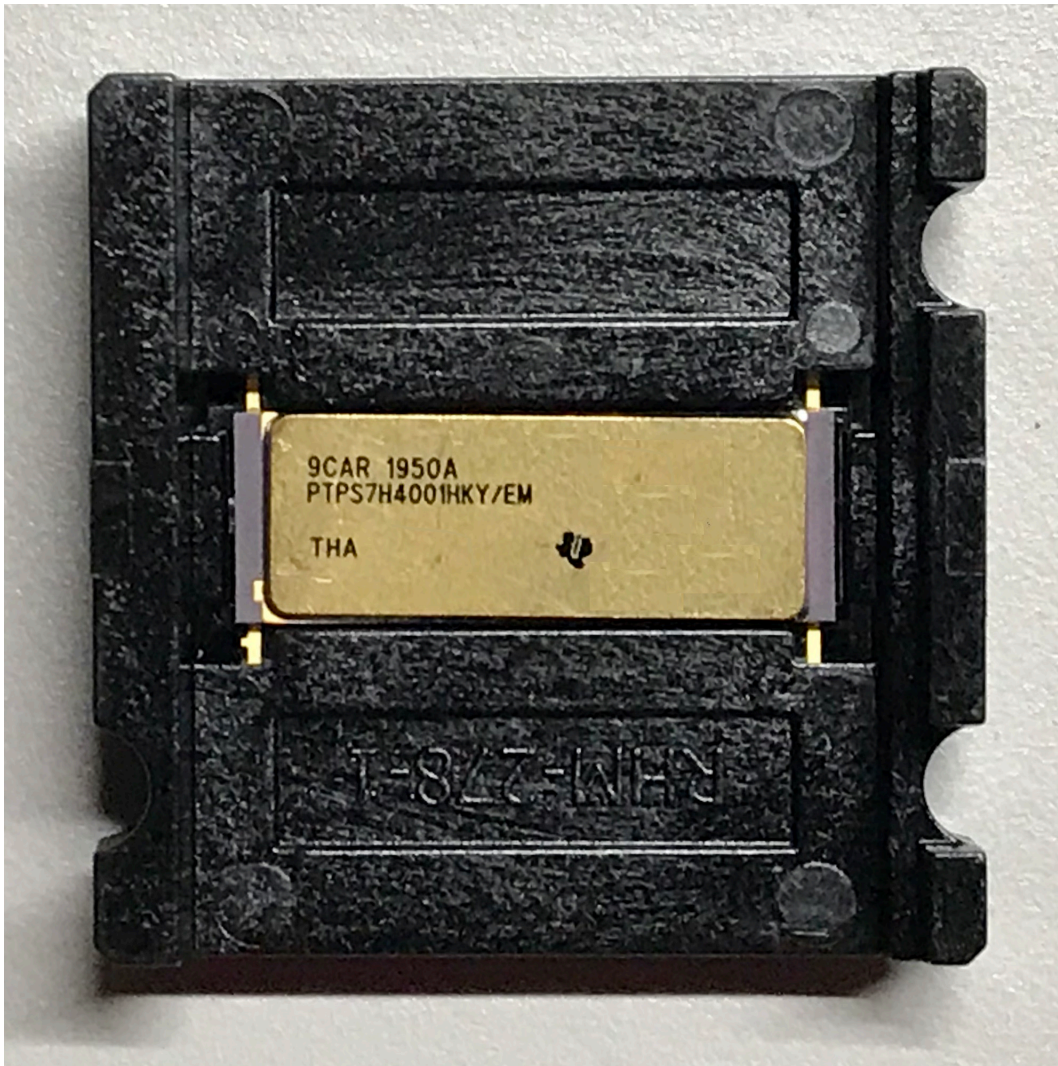


Figure 1. TPS7H4001-SP Device

3 Facility

Neutron Dosimetry Test is done in Fast Neutron Irradiation (FNI) facility of The University of Massachusetts Lowell. It is designed to give a fast flux level = 10^{11} n/cm²-s, with relatively low thermal fluence and gamma dose rates.

The neutron fluence for this irradiation was measured utilizing ASTM E-265 - Measuring Reaction Rates and Fast Neutron Fluence by Radio-activation 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) reported in this document reflects these factors.

Detailed information of the radiation facility is available at the following link:

https://www.uml.edu/docs/FNI%20Brochure_tcm18-90375.pdf

4 Results

There were no functional failures at any irradiation level. All parametric measurements remained well within all data sheet (SLVSEN7) limits for all exposure levels. The full parameter list and graphs are found in [Appendix A](#).

Table 3 lists the TPS7H4001-SP specification compliance matrix.

Table 3. TPS7H4001-SP Specification Compliance Matrix

Parameter	Test Condition	TPS7H4001-SP Data Sheet (SLVSEN7)				Test #
		MIN	TYP	MAX	Unit	
PVIN internal UVLO threshold	PVIN rising	2.425	2.50	2.575	V	23.0, 23.4
PVIN internal UVLO hysteresis	Load = 0 A	425	450	475	mV	23.2, 23.6
VIN internal UVLO threshold	V _{IN} rising	2.71	2.75	2.8	V	24.0
VIN internal UVLO hysteresis		134	150	178	mV	24.2
VIN shutdown supply current	V _{EN} = 0 V		2.32	2.85	mA	4.1, 4.3
VIN operating – non-switching supply current	V _{SENSE} = V _{BG}		4	6	mA	4.0, 4.2
Enable threshold	Rising	1.122	1.14	1.172	V	7.0, 7.6
	Falling	1.090	1.11	1.148	V	7.1, 7.7
Input current	V _{EN} = 1.1 V	4.8	6.1	7.6	μA	7.3, 7.9
Hysteresis current	V _{EN} = 1.3 V	2.4	3.0	3.9	μA	7.5, 7.11
Internal voltage reference initial tolerance	0 A ≤ I _{out} ≤ 18 A, 25°C, measured at COMP	0.599	0.605	0.612	V	3.8, 3.10
REFCAP voltage	REFCAP = 470 nF	1.191	1.209	1.226	V	3.2, 3.3, 3.4
High-side switch resistance	PVIN = VIN = 3.0 V, 25°C, lead length = 3 mm		22	25	mΩ	8.0
High-side switch resistance	PVIN = VIN = 5.0 V, 25°C, lead length = 3 mm		20	22	mΩ	8.1
Low-side switch resistance	PVIN = VIN = 3.0 V, 25°C, lead length = 3 mm		9	12	mΩ	15.0
Low-side switch resistance	PVIN = VIN = 5.0 V, 25°C, lead length = 3 mm		9	11	mΩ	15.1
Error amplifier input offset voltage	V _{SENSE} = 0.6 V	-2		2	mV	3.9, 3.11
VSENSE pin input current	V _{SENSE} = 0.6 V	-15		15	nA	3.5
Error amplifier transconductance (g _m)	-2 μA < I _{COMP} < 2 μA, V _(COMP) = 1 V	1150	1800	2400	μS	9.0, 9.3
Error amplifier source	V _(COMP) = 1 V, 100-mV input overdrive	100	140	190	μA	9.2, 9.5
Error amplifier sink	V _(COMP) = 1 V, 100-mV input overdrive	100	140	190	μA	9.1, 9.4
Internally set frequency	RT = Open, VIN = 3 V	444	473	499	kHz	21.1, 21.2
Internally set frequency	RT = Open, VIN = 5 V	449	502	554	kHz	21.4, 21.5
Externally set frequency	RT = 1.07 MΩ (1%), VIN = 5 V	80	100	120	kHz	11.0
	RT = 165 kΩ (1%), VIN = 5 V	455	503	550		11.8
	RT = 73.2 kΩ (1%), VIN = 5 V	760	986	1212		11.4
SYNC1/SYNC2 out low-to-high rise time (10%/90%)	Cload = 25 pF		70	180	ns	13.8, 13.10, 13.12, 13.14
SYNC1/SYNC2 out high-to-low fall time (90%/10%)	Cload = 25 pF		10	21	ns	13.9, 13.11, 13.13, 13.15
SYNC2 to SYNC1 rising edge phase shift		77	85	94	°	21.0, 21.3
SYNC1/SYNC2 out high level threshold ⁽¹⁾	I _{OH} = 50 μA	V _{IN} - 0.3			V	13.0, 13.1, 13.4, 13.5

⁽¹⁾ Parameter is a functional test parameter. Test procedures to guarantee functional parameters can potentially require test(s) that do not reflect the actual line item specification.

Table 3. TPS7H4001-SP Specification Compliance Matrix (continued)

Parameter	Test Condition	TPS7H4001-SP Data Sheet (SLVSEN7)				Test #
		MIN	TYP	MAX	Unit	
SYNC1/SYNC2 out low level threshold ⁽¹⁾	$I_{OL} = 50 \mu\text{A}$			600	mV	13.2, 13.3, 13.6, 13.7
SYNC1/SYNC2 in low level threshold ⁽¹⁾	PVIN = VIN = 3 V			800	mV	21.7
	PVIN = VIN = 5 V			800	mV	21.11
SYNC1/SYNC2 in high level threshold ⁽¹⁾	PVIN = VIN = 3 V	2.25			V	21.8
	PVIN = VIN = 5 V	3.5			V	21.12
SYNC1 in frequency range ⁽¹⁾		100		1000	kHz	22.2, 22.4, 22.6
SYNC1 in duty cycle ⁽¹⁾	Duty cycle of external clock	40		60	%	22.4, 22.6
Minimum on time	Measured at 10% to 90% of VIN, $I_{PH} = 2 \text{ A}$, VIN = 5 V		190	235	ns	11.12
SS charge current		1.5	2.5	3	μA	9.6, 9.7
V _{SENSE} threshold	V _{SENSE} falling (fault)	90	91		% Vref	12.0, 12.6
	V _{SENSE} E rising (good)		94	97		12.1, 12.7
	V _{SENSE} rising (fault)		109	111		12.2, 12.8
	V _{SENSE} falling (good)	103	106			12.3, 12.9
Output high leakage	V _{SENSE} = Vref, V _(PWRGD) = 5 V		30	181	nA	12.4, 12.10
Output low	$I_{(PWRGD)} = 2 \text{ mA}$			0.3	V	12.5, 12.11
Minimum VIN for valid output	V _(PWRGD) < 0.5 V at 100 μA		0.6	1	V	24.3

Test Results

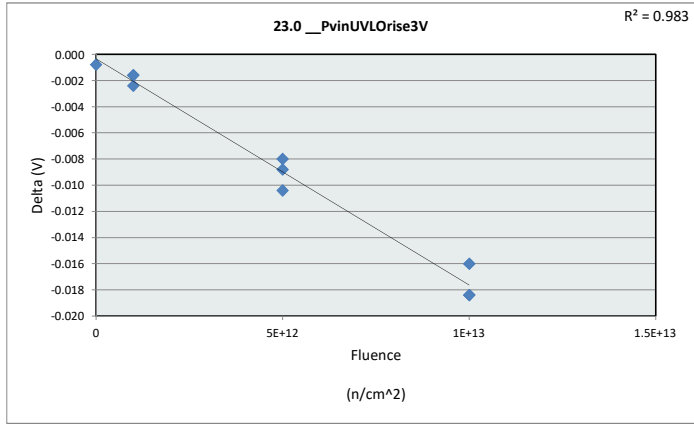
This appendix contains the detailed test results.

NDD Report
TPS7H4001-SP

NDD Report
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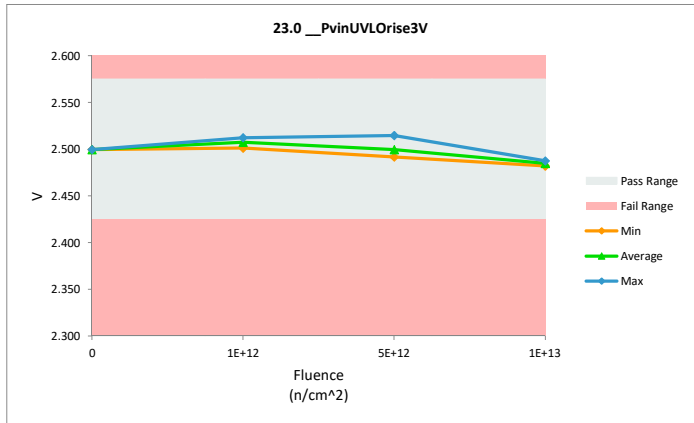
		23.0 __PvinUVLOrise3V	
Test Site			
Tester			
Test Number			
Unit	V	V	
Max Limit	2.575	2.575	
Min Limit	2.425	2.425	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	2.500	2.500	-0.001
1E+12	2	2.504	2.501	-0.002
1E+12	3	2.514	2.512	-0.002
1E+12	4	2.511	2.509	-0.002
5E+12	5	2.500	2.492	-0.008
5E+12	6	2.503	2.492	-0.010
5E+12	7	2.524	2.515	-0.009
1E+13	8	2.500	2.482	-0.018
1E+13	9	2.504	2.485	-0.018
1E+13	10	2.504	2.488	-0.016
Max		2.524	2.515	-0.001
Average		2.506	2.498	-0.009
Min		2.500	2.482	-0.018
Std Dev		0.008	0.012	0.007



		23.0 __PvinUVLOrise3V	
Test Site			
Tester			
Test Number			
Max Limit	2.575	V	
Min Limit	2.425	V	

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	2.425	2.425	2.425	2.425
Min	2.500	2.501	2.492	2.482
Average	2.500	2.508	2.500	2.485
Max	2.500	2.512	2.515	2.488
UL	2.575	2.575	2.575	2.575

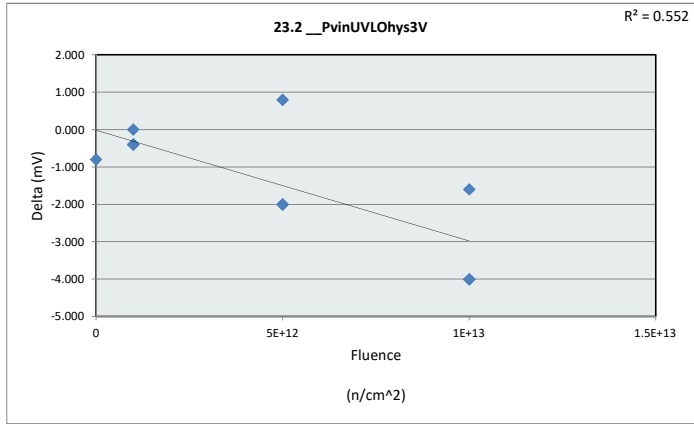


NDD Report
TPS7H4001-SP

23.2 __PvinUVLOhys3V		
Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	475	475
Min Limit	425	425

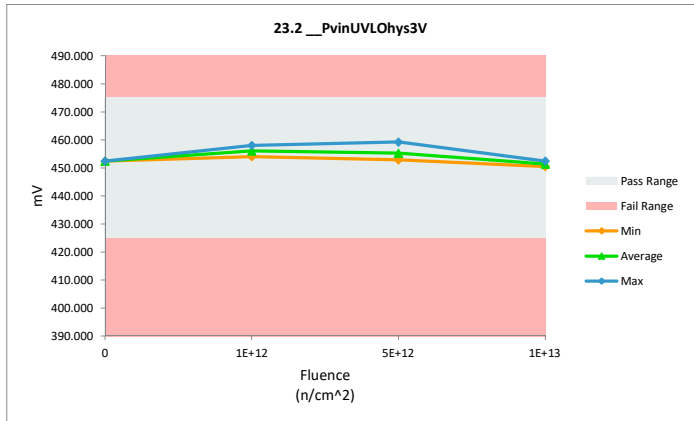
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	453.253	452.453	-0.800
1E+12	2	454.054	454.054	0.000
1E+12	3	458.458	458.058	-0.400
1E+12	4	456.457	456.056	-0.401
5E+12	5	454.855	452.853	-2.002
5E+12	6	455.656	453.653	-2.003
5E+12	7	458.459	459.259	0.800
1E+13	8	454.454	450.450	-4.004
1E+13	9	452.853	451.251	-1.602
1E+13	10	456.457	452.453	-4.004

Max	458.459	459.259	0.800
Average	455.496	454.054	-1.442
Min	452.853	450.450	-4.004
Std Dev	1.973	2.881	1.615



23.2 __PvinUVLOhys3V		
Test Site		
Tester		
Test Number		
Max Limit	475	mV
Min Limit	425	mV

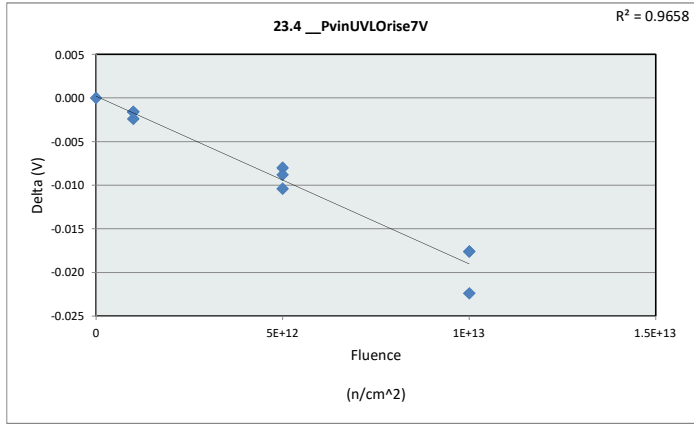
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	425.000	425.000	425.000	425.000
Min	452.453	454.054	452.853	450.450
Average	452.453	456.056	455.255	451.385
Max	452.453	458.058	459.259	452.453
UL	475.000	475.000	475.000	475.000



NDD Report
TPS7H4001-SP

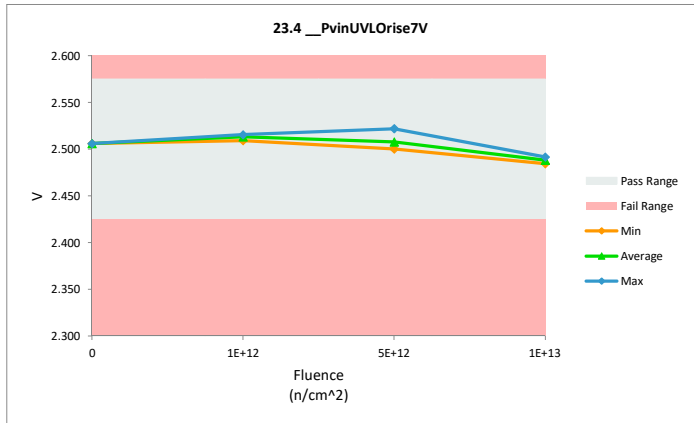
23.4 __PvinUVLOrise7V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	2.575	2.575
Min Limit	2.425	2.425

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	2.506	2.506	0.000
1E+12	2	2.511	2.509	-0.002
1E+12	3	2.518	2.516	-0.002
1E+12	4	2.516	2.515	-0.002
5E+12	5	2.508	2.500	-0.008
5E+12	6	2.512	2.501	-0.010
5E+12	7	2.531	2.522	-0.009
1E+13	8	2.502	2.484	-0.018
1E+13	9	2.509	2.492	-0.018
1E+13	10	2.511	2.488	-0.022
Max		2.531	2.522	0.000
Average		2.512	2.503	-0.009
Min		2.502	2.484	-0.022
Std Dev		0.008	0.012	0.008



23.4 __PvinUVLOrise7V		
Test Site		
Tester		
Test Number		
Max Limit	2.575	V
Min Limit	2.425	V

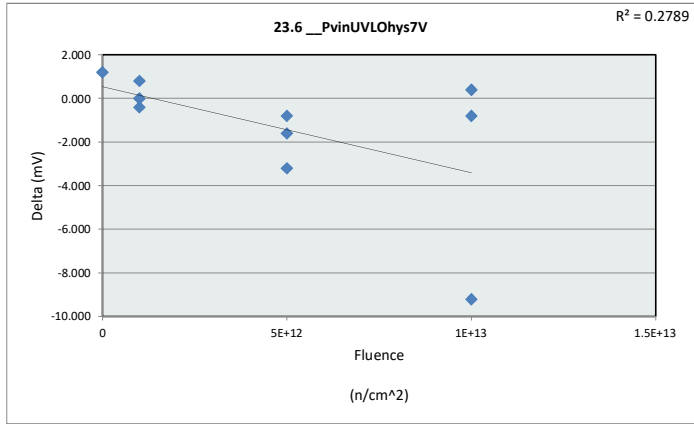
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	2.425	2.425	2.425	2.425
Min	2.506	2.509	2.500	2.484
Average	2.506	2.513	2.508	2.488
Max	2.506	2.516	2.522	2.492
UL	2.575	2.575	2.575	2.575



NDD Report
TPS7H4001-SP

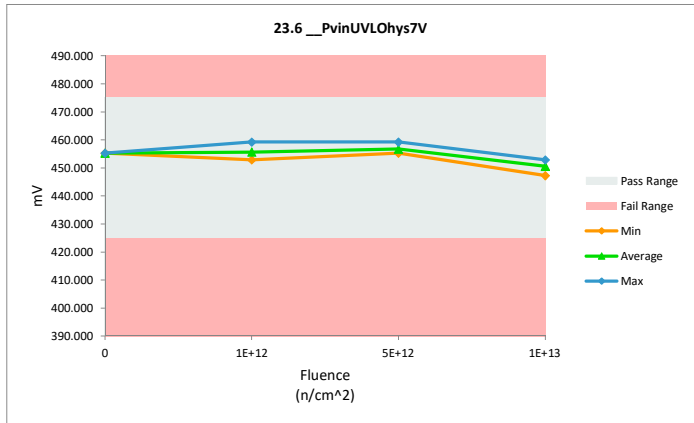
23.6 __PvinUVLOhys7V		
Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	475	475
Min Limit	425	425

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	454.054	455.255	1.201
1E+12	2	455.255	454.855	-0.400
1E+12	3	452.853	452.853	0.000
1E+12	4	458.458	459.259	0.801
5E+12	5	456.456	455.655	-0.801
5E+12	6	458.459	455.255	-3.204
5E+12	7	460.861	459.259	-1.602
1E+13	8	451.251	451.651	0.400
1E+13	9	453.653	452.853	-0.800
1E+13	10	456.457	447.247	-9.210
Max		460.861	459.259	1.201
Average		455.776	454.414	-1.361
Min		451.251	447.247	-9.210
Std Dev		2.943	3.559	3.033



23.6 __PvinUVLOhys7V		
Test Site		
Tester		
Test Number		
Max Limit	475	mV
Min Limit	425	mV

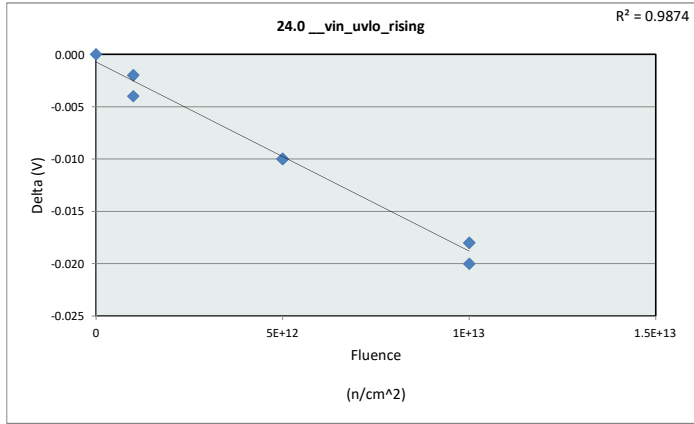
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	425.000	425.000	425.000	425.000
Min	455.255	452.853	455.255	447.247
Average	455.255	455.656	456.723	450.584
Max	455.255	459.259	459.259	452.853
UL	475.000	475.000	475.000	475.000



NDD Report
TPS7H4001-SP

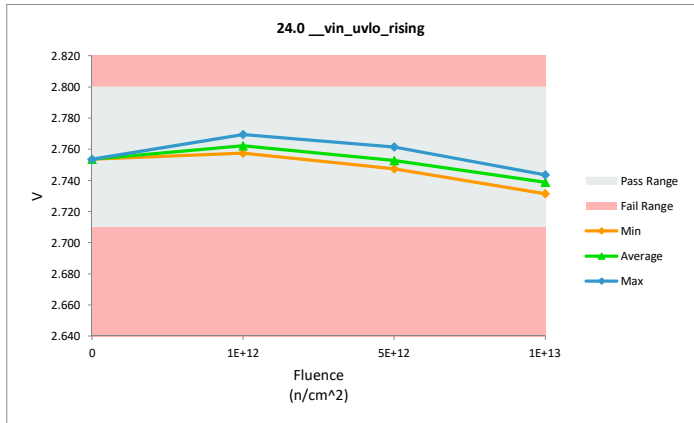
24.0 __vin_uvlo_rising	
Test Site	
Tester	
Test Number	
Unit	V V
Max Limit	2.8 2.8
Min Limit	2.71 2.71

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	2.753	2.753	0.000
1E+12	2	2.763	2.760	-0.004
1E+12	3	2.772	2.770	-0.002
1E+12	4	2.760	2.757	-0.002
5E+12	5	2.760	2.750	-0.010
5E+12	6	2.757	2.747	-0.010
5E+12	7	2.772	2.761	-0.010
1E+13	8	2.750	2.731	-0.018
1E+13	9	2.761	2.743	-0.018
1E+13	10	2.761	2.741	-0.020
Max		2.772	2.770	0.000
Average		2.761	2.751	-0.009
Min		2.750	2.731	-0.020
Std Dev		0.007	0.011	0.007



24.0 __vin_uvlo_rising	
Test Site	
Tester	
Test Number	
Max Limit	2.8 V
Min Limit	2.71 V

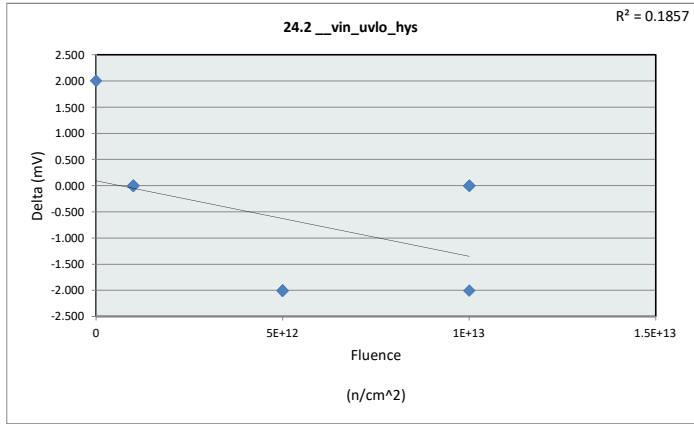
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	2.710	2.710	2.710	2.710
Min	2.754	2.758	2.748	2.732
Average	2.754	2.762	2.753	2.739
Max	2.754	2.770	2.762	2.744
UL	2.800	2.800	2.800	2.800



NDD Report
TPS7H4001-SP

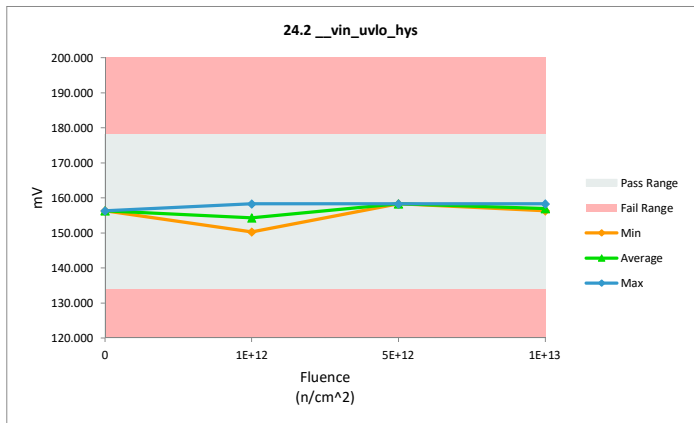
24.2 __vin_uvlo_hys		
Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	178	178
Min Limit	134	134

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	154.309	156.313	2.004
1E+12	2	150.301	150.301	0.000
1E+12	3	154.309	154.309	0.000
1E+12	4	158.317	158.317	0.000
5E+12	5	160.321	158.317	-2.004
5E+12	6	160.321	158.317	-2.004
5E+12	7	160.321	158.317	-2.004
1E+13	8	156.313	156.313	0.000
1E+13	9	158.317	158.317	0.000
1E+13	10	158.317	156.313	-2.004
Max		160.321	158.317	2.004
Average		157.115	156.513	-0.601
Min		150.301	150.301	-2.004
Std Dev		3.300	2.579	1.353



24.2 __vin_uvlo_hys		
Test Site		
Tester		
Test Number		
Max Limit	178	mV
Min Limit	134	mV

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	134.000	134.000	134.000	134.000
Min	156.313	150.301	158.317	156.313
Average	156.313	154.309	158.317	156.981
Max	156.313	158.317	158.317	158.317
UL	178.000	178.000	178.000	178.000

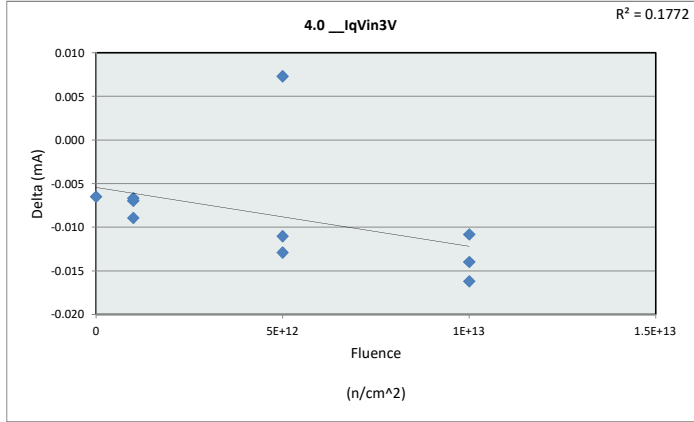


NDD Report
TPS7H4001-SP

4.0 __IqVin3V	
Test Site	
Tester	
Test Number	
Unit	mA mA
Max Limit	6 6
Min Limit	

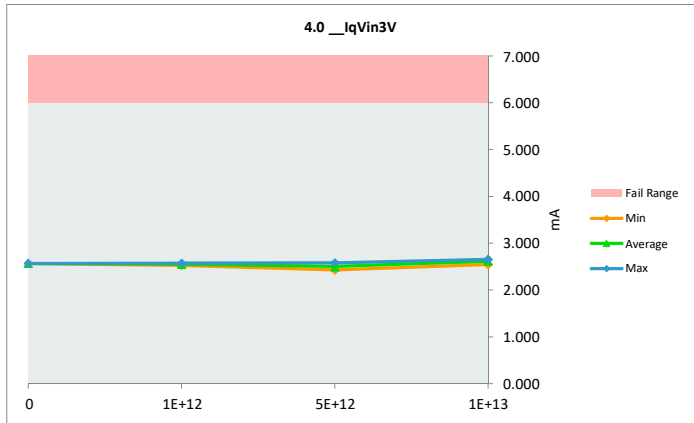
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	2.574	2.567	-0.006
1E+12	2	2.580	2.571	-0.009
1E+12	3	2.571	2.564	-0.007
1E+12	4	2.529	2.522	-0.007
5E+12	5	2.486	2.494	0.007
5E+12	6	2.594	2.583	-0.011
5E+12	7	2.439	2.426	-0.013
1E+13	8	2.666	2.655	-0.011
1E+13	9	2.558	2.544	-0.014
1E+13	10	2.667	2.651	-0.016

Max	2.667	2.655	0.007
Average	2.566	2.558	-0.009
Min	2.439	2.426	-0.016
Std Dev	0.071	0.068	0.006



4.0 __IqVin3V	
Test Site	
Tester	
Test Number	
Max Limit	6 mA
Min Limit	mA

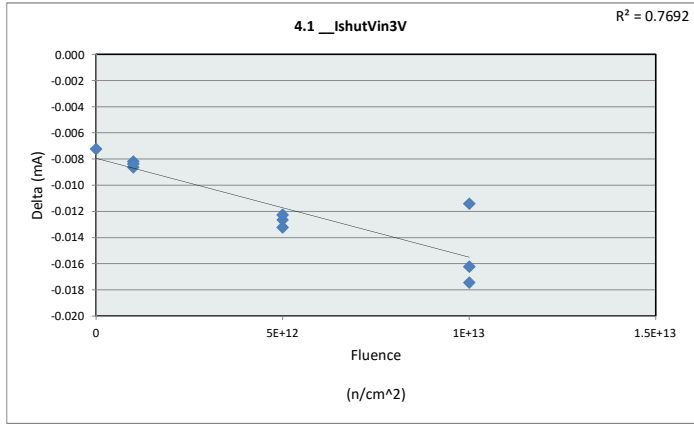
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	2.567	2.522	2.426	2.544
Average	2.567	2.553	2.501	2.617
Max	2.567	2.571	2.583	2.655
UL	6.000	6.000	6.000	6.000



NDD Report
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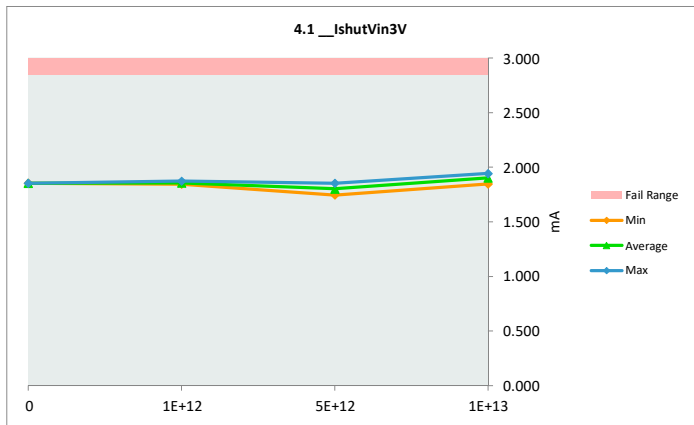
4.1 __IshutVin3V	
Test Site	
Tester	
Test Number	
Unit	mA mA
Max Limit	2.85 2.85
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.860	1.853	-0.007
1E+12	2	1.881	1.873	-0.008
1E+12	3	1.858	1.849	-0.009
1E+12	4	1.853	1.844	-0.008
5E+12	5	1.819	1.806	-0.013
5E+12	6	1.865	1.853	-0.012
5E+12	7	1.759	1.745	-0.013
1E+13	8	1.953	1.942	-0.011
1E+13	9	1.863	1.847	-0.016
1E+13	10	1.932	1.914	-0.017
Max		1.953	1.942	-0.007
Average		1.864	1.853	-0.012
Min		1.759	1.745	-0.017
Std Dev		0.054	0.054	0.003



4.1 __IshutVin3V	
Test Site	
Tester	
Test Number	
Max Limit	2.85 mA
Min Limit	mA

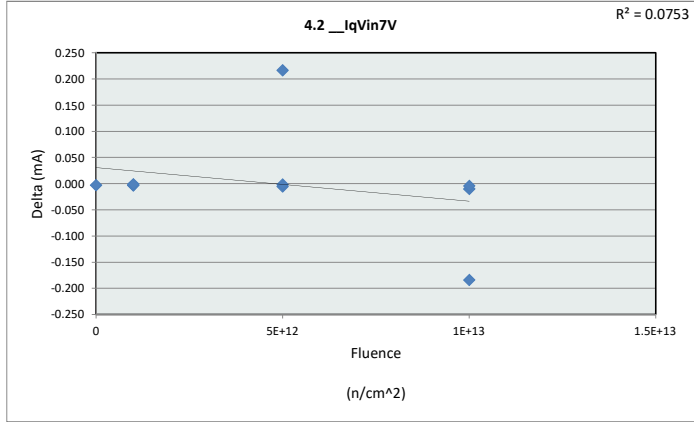
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	1.853	1.844	1.745	1.847
Average	1.853	1.856	1.802	1.901
Max	1.853	1.873	1.853	1.942
UL	2.850	2.850	2.850	2.850



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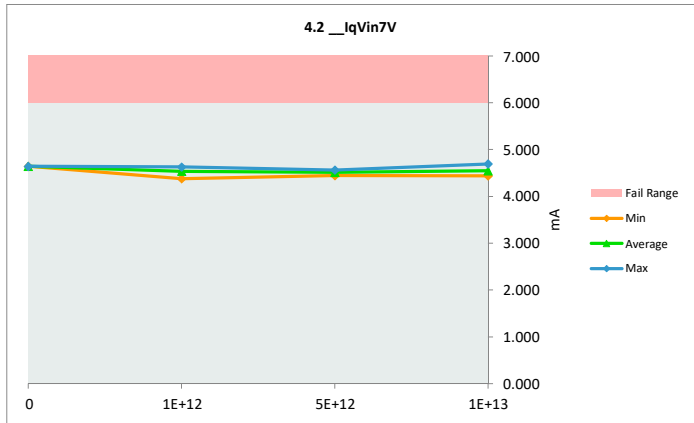
4.2 __IqVin7V	
Test Site	
Tester	
Test Number	
Unit	mA mA
Max Limit	6 6
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	4.643	4.641	-0.003
1E+12	2	4.604	4.601	-0.003
1E+12	3	4.633	4.630	-0.003
1E+12	4	4.378	4.377	-0.001
5E+12	5	4.347	4.564	0.217
5E+12	6	4.450	4.445	-0.005
5E+12	7	4.532	4.530	-0.002
1E+13	8	4.686	4.502	-0.184
1E+13	9	4.449	4.439	-0.010
1E+13	10	4.699	4.695	-0.004
Max		4.699	4.695	0.217
Average		4.542	4.542	0.000
Min		4.347	4.377	-0.184
Std Dev		0.129	0.102	0.095



4.2 __IqVin7V	
Test Site	
Tester	
Test Number	
Max Limit	6 mA
Min Limit	mA

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	4.641	4.377	4.445	4.439
Average	4.641	4.536	4.513	4.545
Max	4.641	4.630	4.564	4.695
UL	6.000	6.000	6.000	6.000

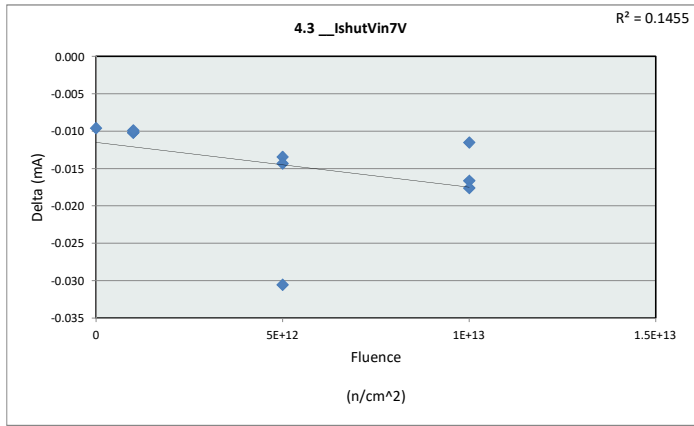


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4.3 __IshutVin7V	
Test Site	
Tester	
Test Number	
Unit	mA mA
Max Limit	2.85 2.85
Min Limit	

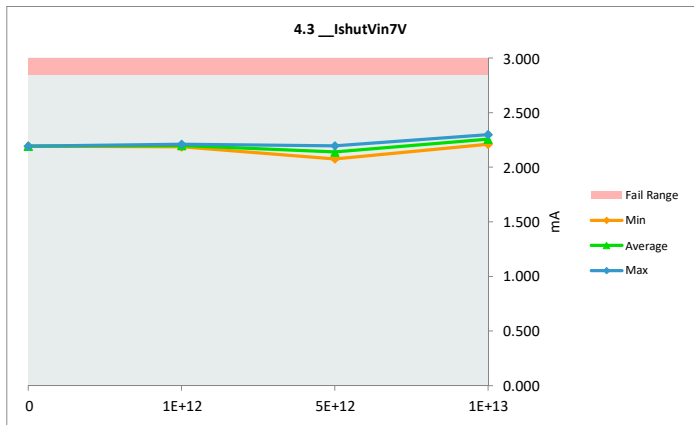
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	2.203	2.193	-0.010
1E+12	2	2.220	2.210	-0.010
1E+12	3	2.196	2.186	-0.010
1E+12	4	2.211	2.201	-0.010
5E+12	5	2.176	2.146	-0.031
5E+12	6	2.209	2.196	-0.013
5E+12	7	2.089	2.075	-0.014
1E+13	8	2.309	2.297	-0.012
1E+13	9	2.227	2.210	-0.017
1E+13	10	2.279	2.261	-0.018

Max	2.309	2.297	-0.010
Average	2.212	2.197	-0.014
Min	2.089	2.075	-0.031
Std Dev	0.059	0.060	0.006



4.3 __IshutVin7V	
Test Site	
Tester	
Test Number	
Max Limit	2.85 mA
Min Limit	mA

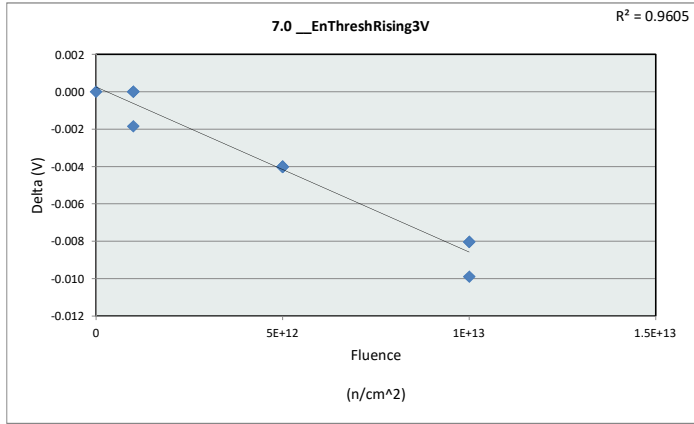
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	2.193	2.186	2.075	2.210
Average	2.193	2.199	2.139	2.256
Max	2.193	2.210	2.196	2.297
UL	2.850	2.850	2.850	2.850



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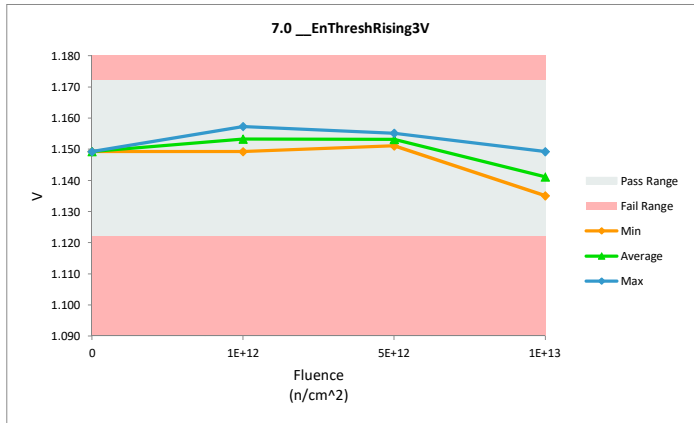
7.0 __EnThreshRising3V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.172	1.172
Min Limit	1.122	1.122

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.149	1.149	0.000
1E+12	2	1.153	1.153	0.000
1E+12	3	1.157	1.157	0.000
1E+12	4	1.151	1.149	-0.002
5E+12	5	1.155	1.151	-0.004
5E+12	6	1.157	1.153	-0.004
5E+12	7	1.159	1.155	-0.004
1E+13	8	1.143	1.135	-0.008
1E+13	9	1.159	1.149	-0.010
1E+13	10	1.147	1.139	-0.008
Max		1.159	1.157	0.000
Average		1.153	1.149	-0.004
Min		1.143	1.135	-0.010
Std Dev		0.005	0.007	0.004



7.0 __EnThreshRising3V		
Test Site		
Tester		
Test Number		
Max Limit	1.172	V
Min Limit	1.122	V

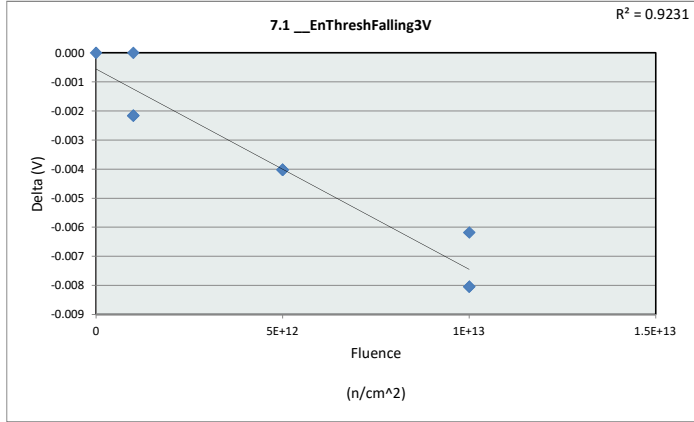
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.122	1.122	1.122	1.122
Min	1.149	1.149	1.151	1.135
Average	1.149	1.153	1.153	1.141
Max	1.149	1.157	1.155	1.149
UL	1.172	1.172	1.172	1.172



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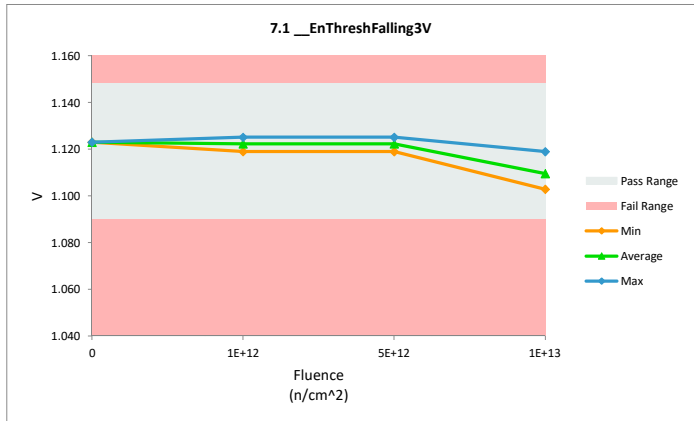
7.1 __EnThreshFalling3V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.148	1.148
Min Limit	1.09	1.09

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.123	1.123	0.000
1E+12	2	1.121	1.119	-0.002
1E+12	3	1.125	1.123	-0.002
1E+12	4	1.125	1.125	0.000
5E+12	5	1.123	1.119	-0.004
5E+12	6	1.129	1.125	-0.004
5E+12	7	1.127	1.123	-0.004
1E+13	8	1.111	1.103	-0.008
1E+13	9	1.125	1.119	-0.006
1E+13	10	1.115	1.107	-0.008
Max		1.129	1.125	0.000
Average		1.122	1.119	-0.004
Min		1.111	1.103	-0.008
Std Dev		0.006	0.008	0.003



7.1 __EnThreshFalling3V		
Test Site		
Tester		
Test Number		
Max Limit	1.148	V
Min Limit	1.09	V

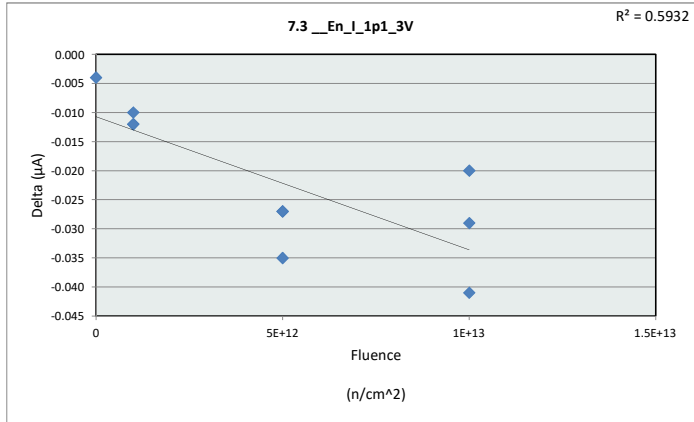
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.090	1.090	1.090	1.090
Min	1.123	1.119	1.119	1.103
Average	1.123	1.122	1.122	1.110
Max	1.123	1.125	1.125	1.119
UL	1.148	1.148	1.148	1.148



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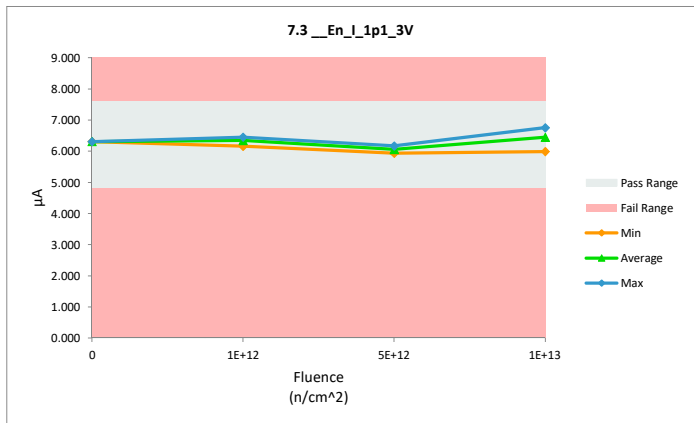
7.3 __En_I_1p1_3V	
Test Site	
Tester	
Test Number	
Unit	µA µA
Max Limit	7.6 7.6
Min Limit	4.8 4.8

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	6.313	6.309	-0.004
1E+12	2	6.463	6.453	-0.010
1E+12	3	6.443	6.431	-0.012
1E+12	4	6.171	6.159	-0.012
5E+12	5	6.097	6.070	-0.027
5E+12	6	6.195	6.168	-0.027
5E+12	7	5.972	5.937	-0.035
1E+13	8	6.776	6.756	-0.020
1E+13	9	6.031	5.990	-0.041
1E+13	10	6.628	6.599	-0.029
Max		6.776	6.756	-0.004
Average		6.309	6.287	-0.022
Min		5.972	5.937	-0.041
Std Dev		0.264	0.270	0.012



7.3 __En_I_1p1_3V	
Test Site	
Tester	
Test Number	
Max Limit	7.6 µA
Min Limit	4.8 µA

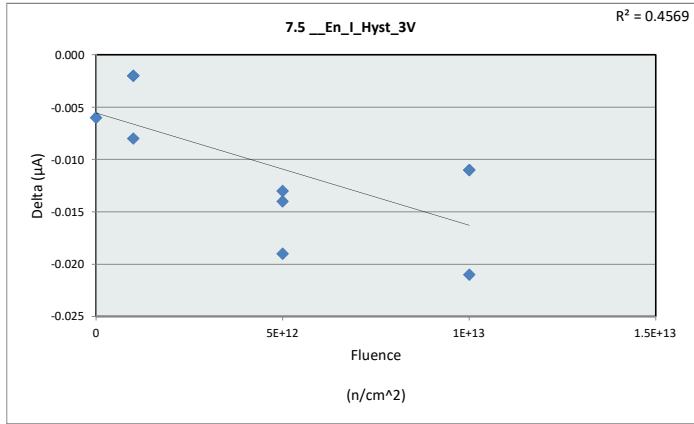
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	4.800	4.800	4.800	4.800
Min	6.309	6.159	5.937	5.990
Average	6.309	6.348	6.058	6.448
Max	6.309	6.453	6.168	6.756
UL	7.600	7.600	7.600	7.600



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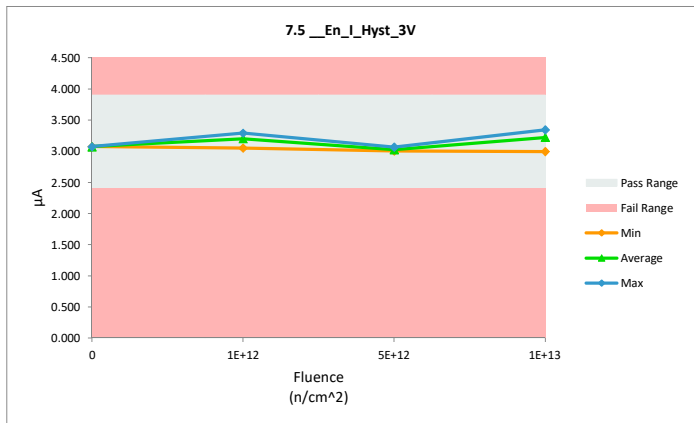
7.5 __En_I_Hyst_3V	
Test Site	
Tester	
Test Number	
Unit	μA μA
Max Limit	3.9 3.9
Min Limit	2.4 2.4

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	3.080	3.074	-0.006
1E+12	2	3.292	3.290	-0.002
1E+12	3	3.266	3.264	-0.002
1E+12	4	3.060	3.052	-0.008
5E+12	5	3.019	3.005	-0.014
5E+12	6	3.080	3.067	-0.013
5E+12	7	3.026	3.007	-0.019
1E+13	8	3.341	3.330	-0.011
1E+13	9	3.015	2.994	-0.021
1E+13	10	3.354	3.343	-0.011
Max		3.354	3.343	-0.002
Average		3.153	3.143	-0.011
Min		3.015	2.994	-0.021
Std Dev		0.142	0.145	0.006



7.5 __En_I_Hyst_3V	
Test Site	
Tester	
Test Number	
Max Limit	3.9 μA
Min Limit	2.4 μA

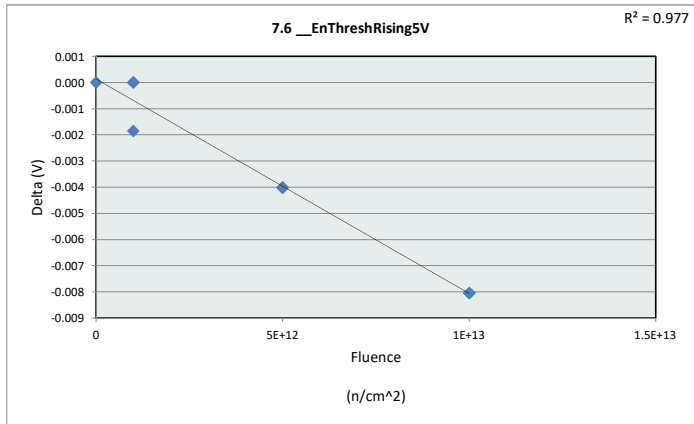
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	2.400	2.400	2.400	2.400
Min	3.074	3.052	3.005	2.994
Average	3.074	3.202	3.026	3.222
Max	3.074	3.290	3.067	3.343
UL	3.900	3.900	3.900	3.900



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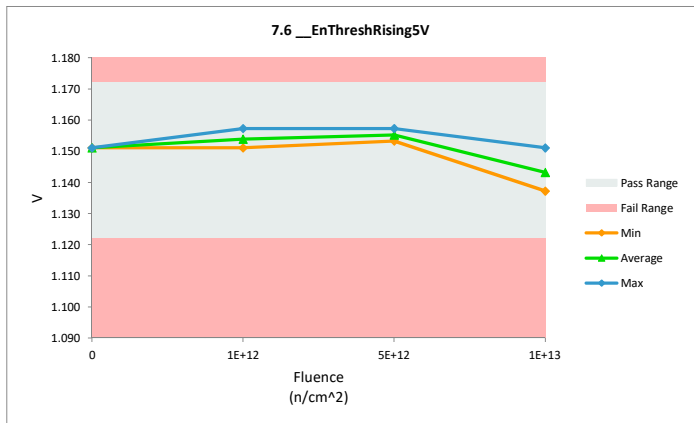
7.6 __EnThreshRising5V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.172	1.172
Min Limit	1.122	1.122

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.151	1.151	0.000
1E+12	2	1.155	1.153	-0.002
1E+12	3	1.157	1.157	0.000
1E+12	4	1.151	1.151	0.000
5E+12	5	1.157	1.153	-0.004
5E+12	6	1.159	1.155	-0.004
5E+12	7	1.161	1.157	-0.004
1E+13	8	1.145	1.137	-0.008
1E+13	9	1.159	1.151	-0.008
1E+13	10	1.149	1.141	-0.008
Max		1.161	1.157	0.000
Average		1.155	1.151	-0.004
Min		1.145	1.137	-0.008
Std Dev		0.005	0.007	0.003



7.6 __EnThreshRising5V		
Test Site		
Tester		
Test Number		
Max Limit	1.172	V
Min Limit	1.122	V

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.122	1.122	1.122	1.122
Min	1.151	1.151	1.153	1.137
Average	1.151	1.154	1.155	1.143
Max	1.151	1.157	1.157	1.151
UL	1.172	1.172	1.172	1.172

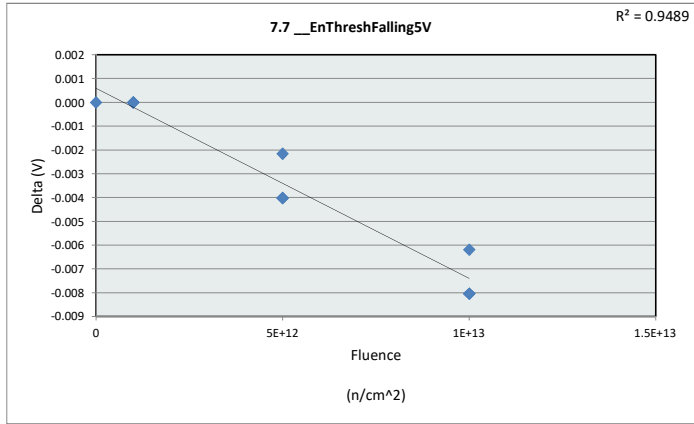


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7.7 __EnThreshFalling5V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.148	1.148
Min Limit	1.09	1.09

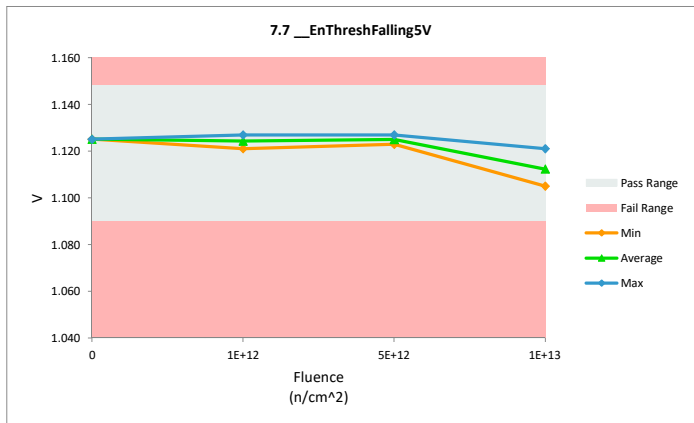
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.125	1.125	0.000
1E+12	2	1.121	1.121	0.000
1E+12	3	1.125	1.125	0.000
1E+12	4	1.127	1.127	0.000
5E+12	5	1.125	1.123	-0.002
5E+12	6	1.131	1.127	-0.004
5E+12	7	1.129	1.125	-0.004
1E+13	8	1.113	1.105	-0.008
1E+13	9	1.129	1.121	-0.008
1E+13	10	1.117	1.111	-0.006

Max	1.131	1.127	0.000
Average	1.124	1.121	-0.003
Min	1.113	1.105	-0.008
Std Dev	0.006	0.007	0.003



7.7 __EnThreshFalling5V		
Test Site		
Tester		
Test Number		
Max Limit	1.148	V
Min Limit	1.09	V

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.090	1.090	1.090	1.090
Min	1.125	1.121	1.123	1.105
Average	1.125	1.124	1.125	1.112
Max	1.125	1.127	1.127	1.121
UL	1.148	1.148	1.148	1.148

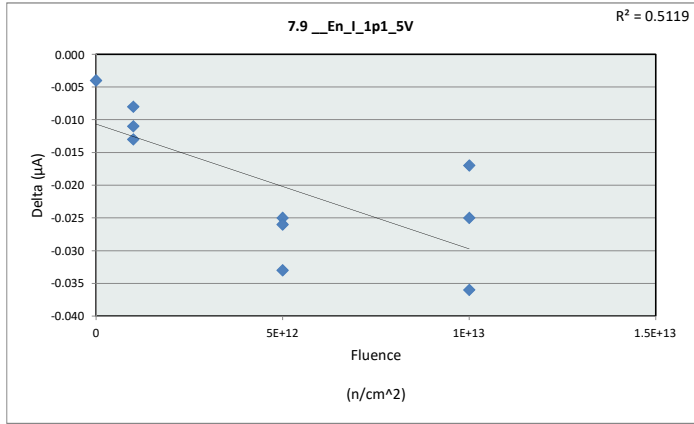


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7.9 __En_I_1p1_5V		
Test Site		
Tester		
Test Number		
Unit	µA	µA
Max Limit	7.6	7.6
Min Limit	4.8	4.8

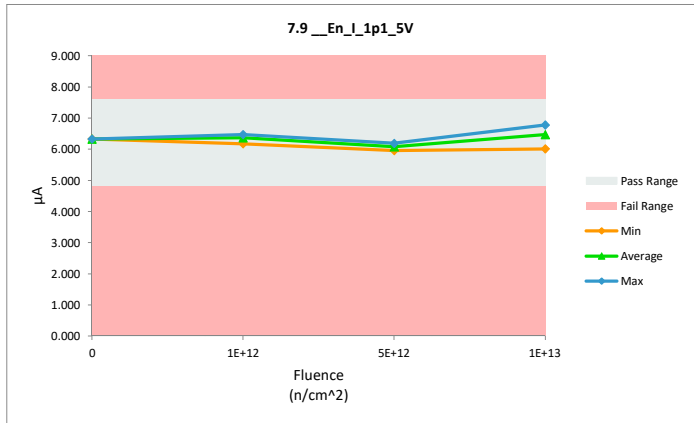
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	6.332	6.328	-0.004
1E+12	2	6.482	6.474	-0.008
1E+12	3	6.462	6.451	-0.011
1E+12	4	6.191	6.178	-0.013
5E+12	5	6.116	6.091	-0.025
5E+12	6	6.217	6.191	-0.026
5E+12	7	5.991	5.958	-0.033
1E+13	8	6.797	6.780	-0.017
1E+13	9	6.049	6.013	-0.036
1E+13	10	6.648	6.623	-0.025

Max	6.797	6.780	-0.004
Average	6.328	6.309	-0.020
Min	5.991	5.958	-0.036
Std Dev	0.265	0.270	0.011



7.9 __En_I_1p1_5V		
Test Site		
Tester		
Test Number		
Max Limit	7.6	µA
Min Limit	4.8	µA

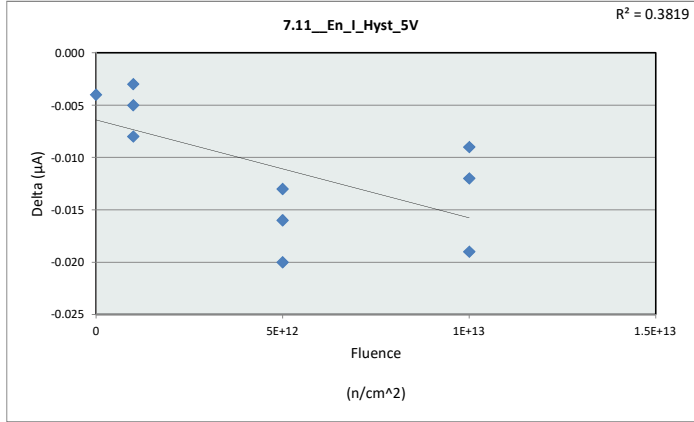
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	4.800	4.800	4.800	4.800
Min	6.328	6.178	5.958	6.013
Average	6.328	6.368	6.080	6.472
Max	6.328	6.474	6.191	6.780
UL	7.600	7.600	7.600	7.600



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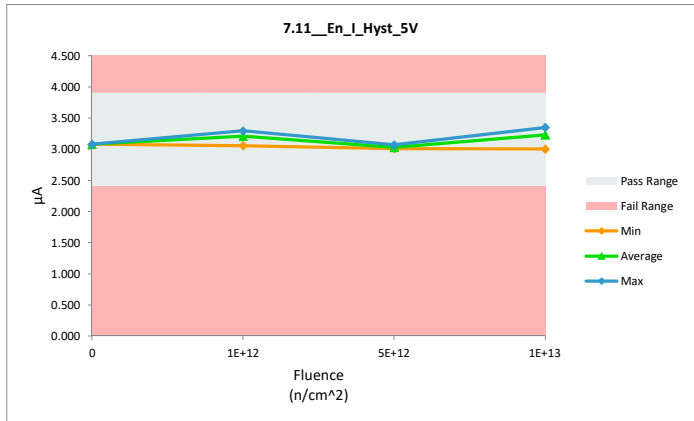
7.11_En_I_Hyst_5V	
Test Site	
Tester	
Test Number	
Unit	µA
Max Limit	3.9
Min Limit	2.4

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	3.084	3.080	-0.004
1E+12	2	3.298	3.295	-0.003
1E+12	3	3.275	3.270	-0.005
1E+12	4	3.065	3.057	-0.008
5E+12	5	3.024	3.011	-0.013
5E+12	6	3.085	3.069	-0.016
5E+12	7	3.032	3.012	-0.020
1E+13	8	3.347	3.338	-0.009
1E+13	9	3.021	3.002	-0.019
1E+13	10	3.361	3.349	-0.012
Max		3.361	3.349	-0.003
Average		3.159	3.148	-0.011
Min		3.021	3.002	-0.020
Std Dev		0.142	0.146	0.006



7.11_En_I_Hyst_5V	
Test Site	
Tester	
Test Number	
Max Limit	3.9 µA
Min Limit	2.4 µA

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	2.400	2.400	2.400	2.400
Min	3.080	3.057	3.011	3.002
Average	3.080	3.207	3.031	3.230
Max	3.080	3.295	3.069	3.349
UL	3.900	3.900	3.900	3.900

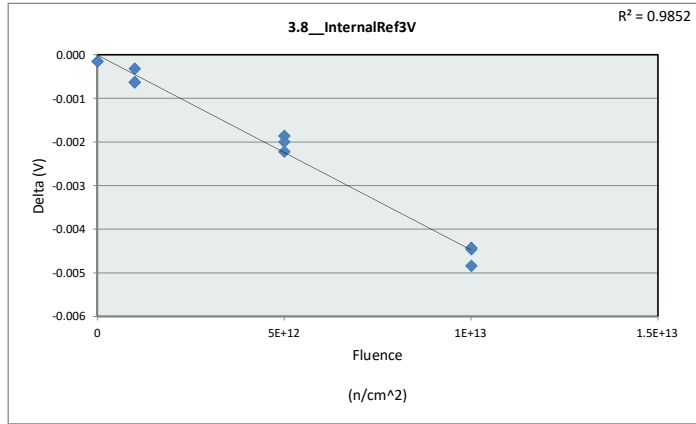


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3.8_InternalRef3V	
Test Site	
Tester	
Test Number	
Unit	V V
Max Limit	0.612 0.612
Min Limit	0.599 0.599

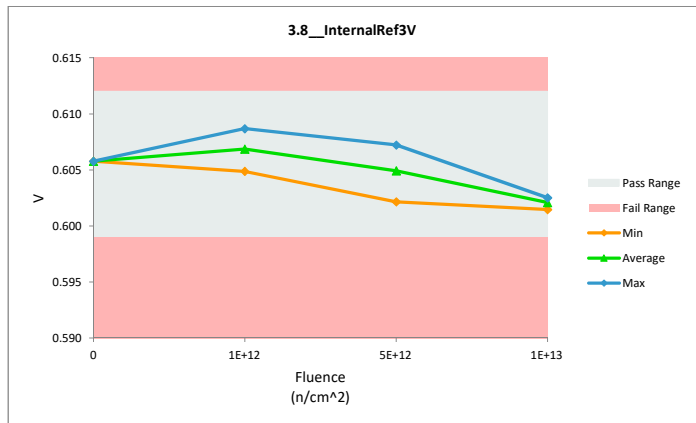
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	0.606	0.606	0.000
1E+12	2	0.606	0.605	-0.001
1E+12	3	0.608	0.607	-0.001
1E+12	4	0.609	0.609	0.000
5E+12	5	0.604	0.602	-0.002
5E+12	6	0.607	0.605	-0.002
5E+12	7	0.609	0.607	-0.002
1E+13	8	0.607	0.603	-0.005
1E+13	9	0.606	0.601	-0.004
1E+13	10	0.607	0.602	-0.004

Max	0.609	0.609	0.000
Average	0.607	0.605	-0.002
Min	0.604	0.601	-0.005
Std Dev	0.002	0.003	0.002



3.8_InternalRef3V	
Test Site	
Tester	
Test Number	
Max Limit	0.612 V
Min Limit	0.599 V

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	0.599	0.599	0.599	0.599
Min	0.606	0.605	0.602	0.601
Average	0.606	0.607	0.605	0.602
Max	0.606	0.609	0.607	0.603
UL	0.612	0.612	0.612	0.612

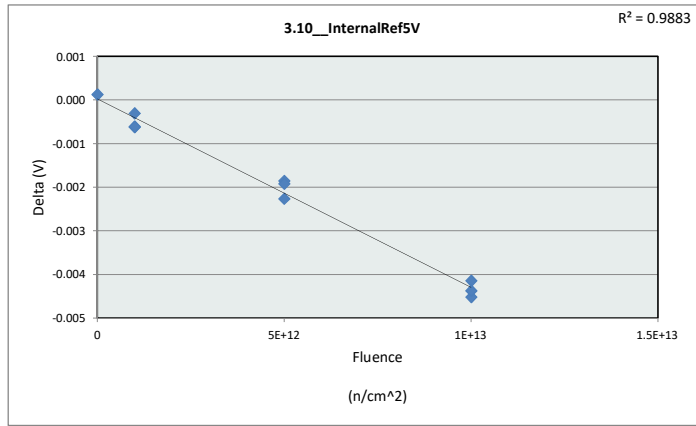


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3.10_ InternalRef5V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	0.612	0.612
Min Limit	0.599	0.599

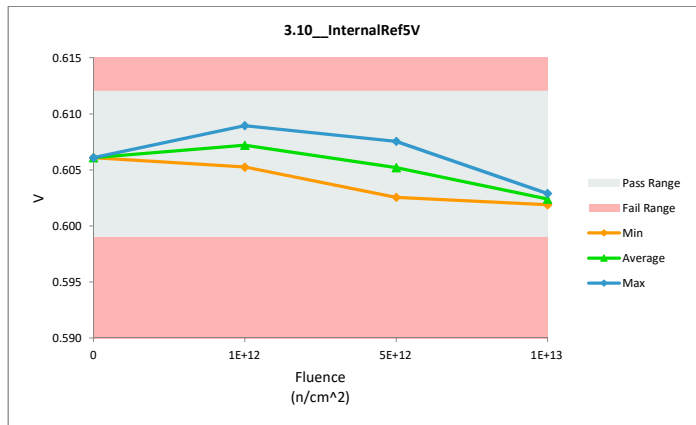
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	0.606	0.606	0.000
1E+12	2	0.606	0.605	-0.001
1E+12	3	0.608	0.607	-0.001
1E+12	4	0.609	0.609	0.000
5E+12	5	0.604	0.603	-0.002
5E+12	6	0.608	0.605	-0.002
5E+12	7	0.609	0.608	-0.002
1E+13	8	0.607	0.603	-0.005
1E+13	9	0.606	0.602	-0.004
1E+13	10	0.607	0.602	-0.004

Max	0.609	0.609	0.000
Average	0.607	0.605	-0.002
Min	0.604	0.602	-0.005
Std Dev	0.002	0.003	0.002



3.10_ InternalRef5V		
Test Site		
Tester		
Test Number		
Max Limit	0.612	V
Min Limit	0.599	V

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	0.599	0.599	0.599	0.599
Min	0.606	0.605	0.603	0.602
Average	0.606	0.607	0.605	0.602
Max	0.606	0.609	0.608	0.603
UL	0.612	0.612	0.612	0.612

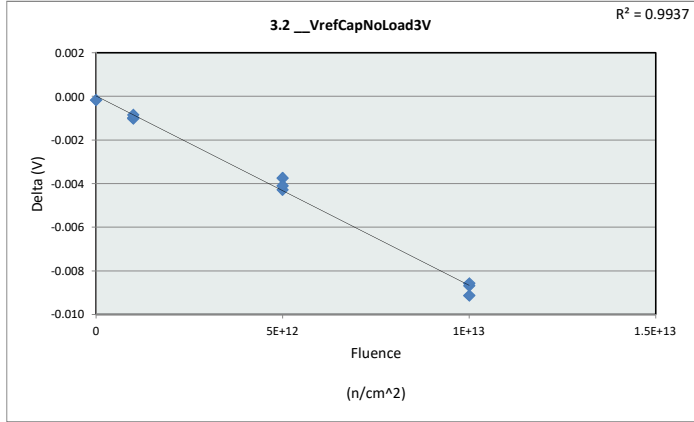


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3.2 __VrefCapNoLoad3V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.226	1.226
Min Limit	1.191	1.191

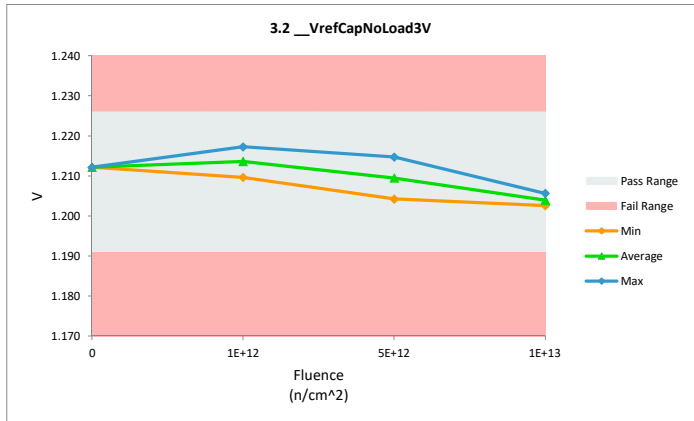
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.212	1.212	0.000
1E+12	2	1.211	1.210	-0.001
1E+12	3	1.215	1.214	-0.001
1E+12	4	1.218	1.217	-0.001
5E+12	5	1.208	1.204	-0.004
5E+12	6	1.214	1.210	-0.004
5E+12	7	1.219	1.215	-0.004
1E+13	8	1.215	1.206	-0.009
1E+13	9	1.211	1.203	-0.009
1E+13	10	1.212	1.204	-0.009

Max	1.219	1.217	0.000
Average	1.213	1.209	-0.004
Min	1.208	1.203	-0.009
Std Dev	0.003	0.005	0.004



3.2 __VrefCapNoLoad3V		
Test Site		
Tester		
Test Number		
Max Limit	1.226	V
Min Limit	1.191	V

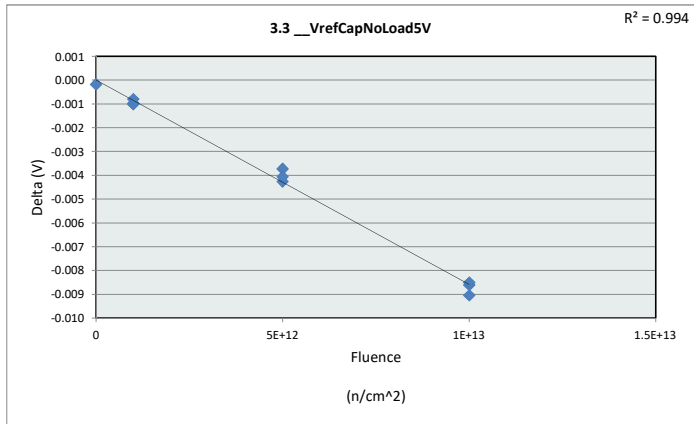
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.191	1.191	1.191	1.191
Min	1.212	1.210	1.204	1.203
Average	1.212	1.214	1.209	1.204
Max	1.212	1.217	1.215	1.206
UL	1.226	1.226	1.226	1.226



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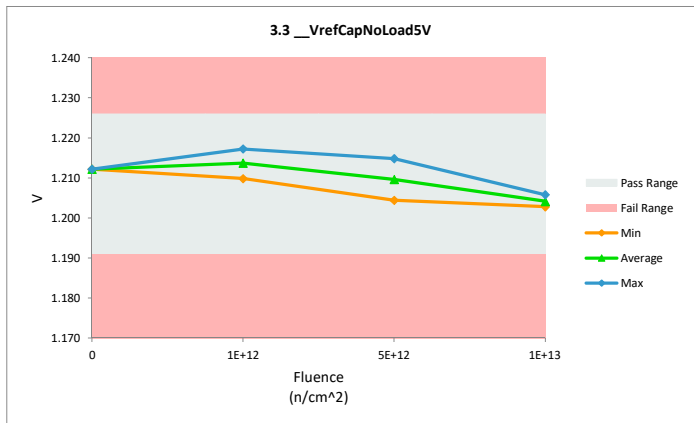
3.3 __VrefCapNoLoad5V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.226	1.226
Min Limit	1.191	1.191

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.212	1.212	0.000
1E+12	2	1.211	1.210	-0.001
1E+12	3	1.215	1.214	-0.001
1E+12	4	1.218	1.217	-0.001
5E+12	5	1.208	1.204	-0.004
5E+12	6	1.214	1.210	-0.004
5E+12	7	1.219	1.215	-0.004
1E+13	8	1.215	1.206	-0.009
1E+13	9	1.211	1.203	-0.009
1E+13	10	1.212	1.204	-0.008
Max		1.219	1.217	0.000
Average		1.214	1.209	-0.004
Min		1.208	1.203	-0.009
Std Dev		0.003	0.005	0.003



3.3 __VrefCapNoLoad5V		
Test Site		
Tester		
Test Number		
Max Limit	1.226	V
Min Limit	1.191	V

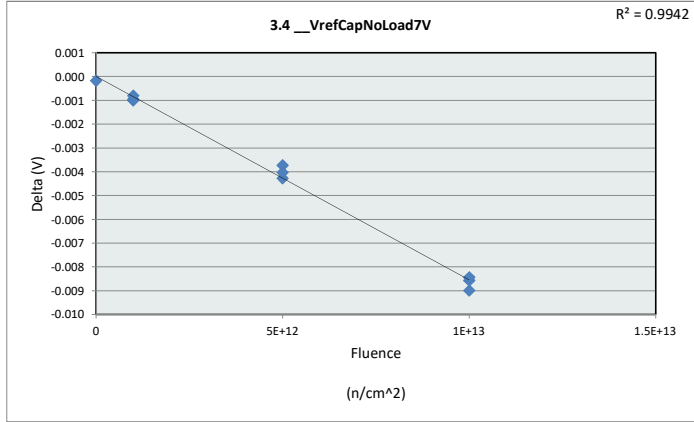
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.191	1.191	1.191	1.191
Min	1.212	1.210	1.204	1.203
Average	1.212	1.214	1.210	1.204
Max	1.212	1.217	1.215	1.206
UL	1.226	1.226	1.226	1.226



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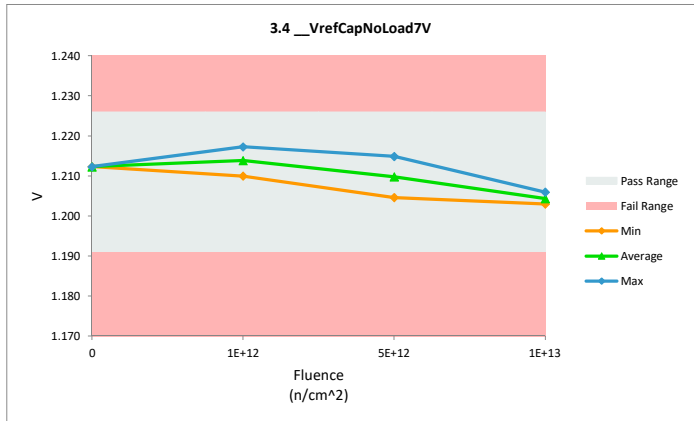
3.4 __VrefCapNoLoad7V		
Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1.226	1.226
Min Limit	1.191	1.191

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1.212	1.212	0.000
1E+12	2	1.211	1.210	-0.001
1E+12	3	1.215	1.214	-0.001
1E+12	4	1.218	1.217	-0.001
5E+12	5	1.208	1.205	-0.004
5E+12	6	1.214	1.210	-0.004
5E+12	7	1.219	1.215	-0.004
1E+13	8	1.215	1.206	-0.009
1E+13	9	1.212	1.203	-0.009
1E+13	10	1.212	1.204	-0.008
Max		1.219	1.217	0.000
Average		1.214	1.210	-0.004
Min		1.208	1.203	-0.009
Std Dev		0.003	0.005	0.003



3.4 __VrefCapNoLoad7V		
Test Site		
Tester		
Test Number		
Max Limit	1.226	V
Min Limit	1.191	V

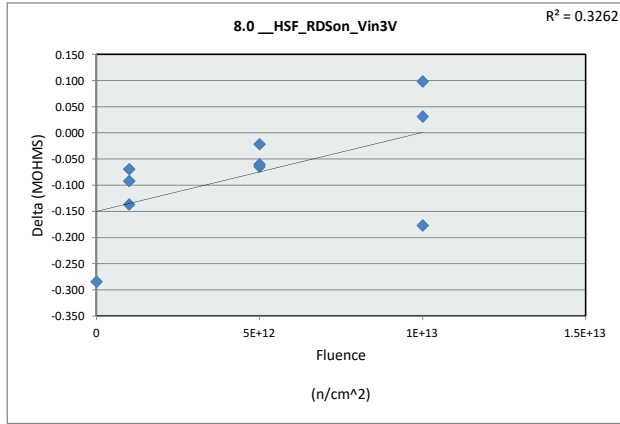
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.191	1.191	1.191	1.191
Min	1.212	1.210	1.205	1.203
Average	1.212	1.214	1.210	1.204
Max	1.212	1.217	1.215	1.206
UL	1.226	1.226	1.226	1.226



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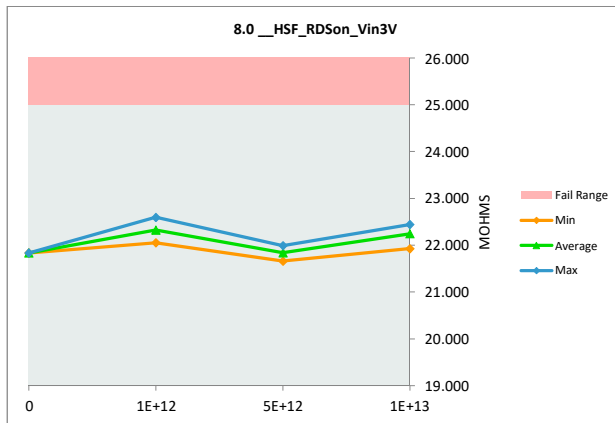
8.0 __HSF_RDSon_Vin3V		
Test Site		
Tester		
Test Number		
Unit	MOHMS	MOHMS
Max Limit	25	25
Min Limit		

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	22.119	21.835	-0.284
1E+12	2	22.145	22.052	-0.092
1E+12	3	22.732	22.596	-0.137
1E+12	4	22.398	22.328	-0.069
5E+12	5	22.055	21.990	-0.065
5E+12	6	21.888	21.867	-0.022
5E+12	7	21.719	21.659	-0.060
1E+13	8	22.270	22.368	0.098
1E+13	9	22.412	22.443	0.031
1E+13	10	22.104	21.927	-0.177
Max		22.732	22.596	0.098
Average		22.184	22.106	-0.078
Min		21.719	21.659	-0.284
Std Dev		0.286	0.307	0.107



8.0 __HSF_RDSon_Vin3V		
Test Site		
Tester		
Test Number		
Max Limit	25	MOHMS
Min Limit		MOHMS

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	21.835	22.052	21.659	21.927
Average	21.835	22.325	21.838	22.246
Max	21.835	22.596	21.990	22.443
UL	25.000	25.000	25.000	25.000

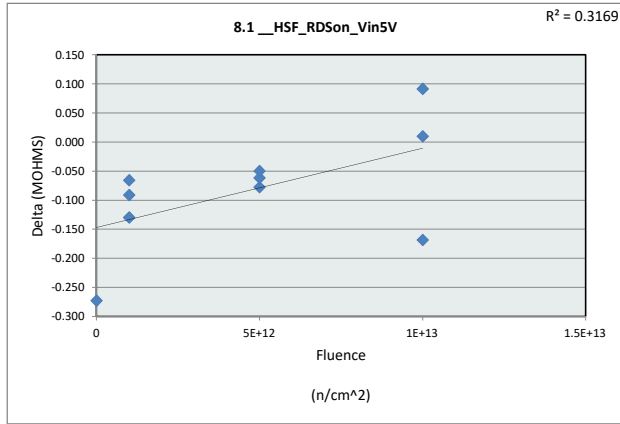


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8.1 __HSF_RDSon_Vin5V		
Test Site		
Tester		
Test Number		
Unit	MOHMS	MOHMS
Max Limit	22	22
Min Limit		

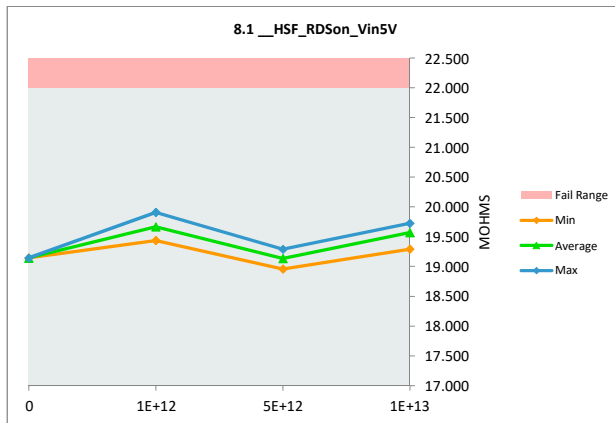
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	19.415	19.142	-0.273
1E+12	2	19.527	19.437	-0.091
1E+12	3	20.039	19.909	-0.129
1E+12	4	19.717	19.651	-0.066
5E+12	5	19.366	19.288	-0.077
5E+12	6	19.222	19.160	-0.062
5E+12	7	19.007	18.958	-0.050
1E+13	8	19.600	19.691	0.091
1E+13	9	19.716	19.726	0.010
1E+13	10	19.459	19.291	-0.168

Max	20.039	19.909	0.091
Average	19.507	19.425	-0.081
Min	19.007	18.958	-0.273
Std Dev	0.287	0.308	0.098



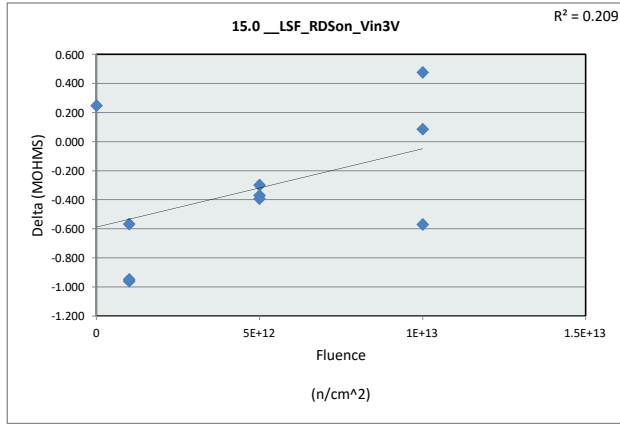
8.1 __HSF_RDSon_Vin5V		
Test Site		
Tester		
Test Number		
Max Limit	22	MOHMS
Min Limit		MOHMS

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	19.142	19.437	18.958	19.291
Average	19.142	19.666	19.135	19.569
Max	19.142	19.909	19.288	19.726
UL	22.000	22.000	22.000	22.000



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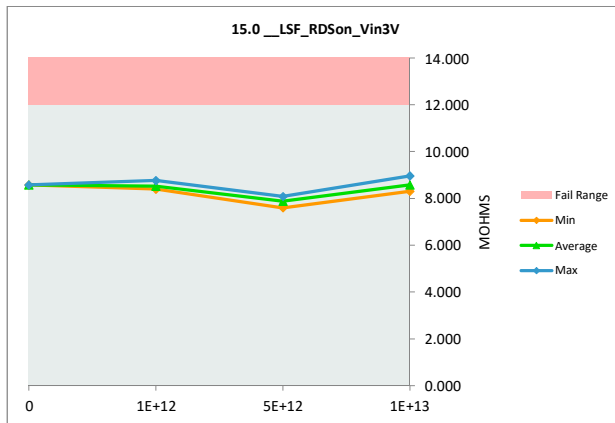
15.0 __LSF_RDSon_Vin3V		
Test Site		
Tester		
Test Number		
Unit	MOHMS	MOHMS
Max Limit	12	12
Min Limit		



Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	8.329	8.576	0.247
1E+12	2	9.334	8.767	-0.567
1E+12	3	9.374	8.415	-0.959
1E+12	4	9.340	8.393	-0.947
5E+12	5	8.453	8.083	-0.370
5E+12	6	8.345	7.953	-0.392
5E+12	7	7.895	7.597	-0.299
1E+13	8	8.875	8.306	-0.569
1E+13	9	8.486	8.962	0.476
1E+13	10	8.366	8.450	0.085
Max		9.374	8.962	0.476
Average		8.680	8.350	-0.330
Min		7.895	7.597	-0.959
Std Dev		0.519	0.396	0.477

15.0 __LSF_RDSon_Vin3V		
Test Site		
Tester		
Test Number		
Max Limit	12	MOHMS
Min Limit		MOHMS

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	8.576	8.393	7.597	8.306
Average	8.576	8.525	7.877	8.573
Max	8.576	8.767	8.083	8.962
UL	12.000	12.000	12.000	12.000

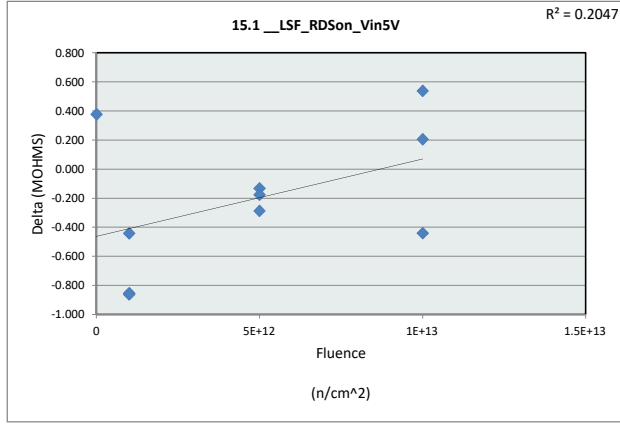


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15.1 __LSF_RDSon_Vin5V		
Test Site		
Tester		
Test Number		
Unit	MOHMS	MOHMS
Max Limit	11	11
Min Limit		

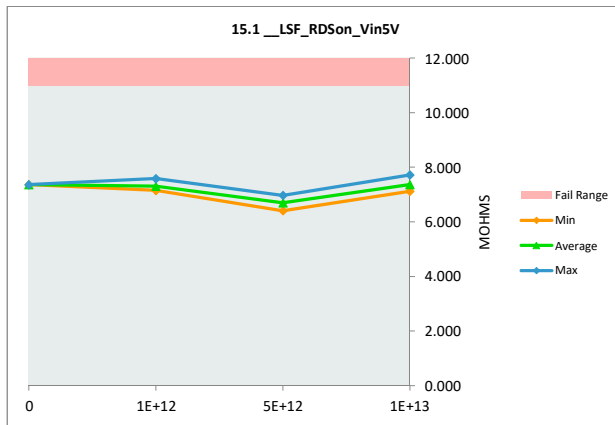
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	6.981	7.358	0.377
1E+12	2	8.023	7.582	-0.441
1E+12	3	8.022	7.168	-0.854
1E+12	4	8.009	7.148	-0.861
5E+12	5	7.101	6.968	-0.133
5E+12	6	7.003	6.715	-0.287
5E+12	7	6.580	6.404	-0.176
1E+13	8	7.561	7.121	-0.440
1E+13	9	7.180	7.718	0.538
1E+13	10	7.050	7.256	0.206

Max	8.023	7.718	0.538
Average	7.351	7.144	-0.207
Min	6.580	6.404	-0.861
Std Dev	0.518	0.386	0.476



15.1 __LSF_RDSon_Vin5V		
Test Site		
Tester		
Test Number		
Max Limit	11	MOHMS
Min Limit		MOHMS

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	7.358	7.148	6.404	7.121
Average	7.358	7.299	6.696	7.365
Max	7.358	7.582	6.968	7.718
UL	11.000	11.000	11.000	11.000

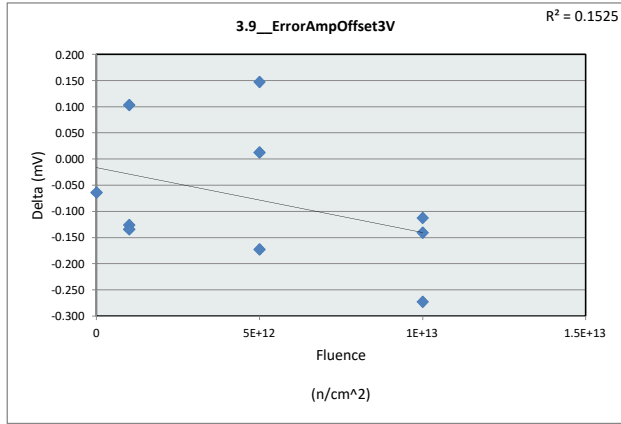


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3.9_ErrorAmpOffset3V		
Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	2	2
Min Limit	-2	-2

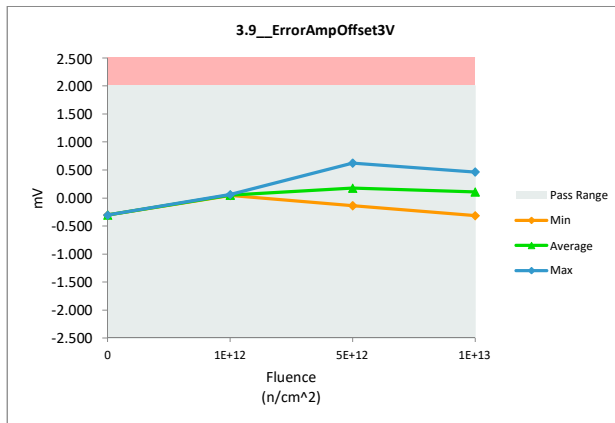
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	-0.241	-0.305	-0.064
1E+12	2	0.172	0.046	-0.126
1E+12	3	0.198	0.064	-0.134
1E+12	4	-0.058	0.045	0.103
5E+12	5	0.026	0.038	0.012
5E+12	6	0.478	0.625	0.147
5E+12	7	0.036	-0.136	-0.173
1E+13	8	-0.041	-0.314	-0.273
1E+13	9	0.294	0.182	-0.112
1E+13	10	0.606	0.465	-0.141

Max	0.606	0.625	0.147
Average	0.147	0.071	-0.076
Min	-0.241	-0.314	-0.273
Std Dev	0.258	0.300	0.129



3.9_ErrorAmpOffset3V		
Test Site		
Tester		
Test Number		
Max Limit	2	mV
Min Limit	-2	mV

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	-2.000	-2.000	-2.000	-2.000
Min	-0.305	0.045	-0.136	-0.314
Average	-0.305	0.052	0.176	0.111
Max	-0.305	0.064	0.625	0.466
UL	2.000	2.000	2.000	2.000



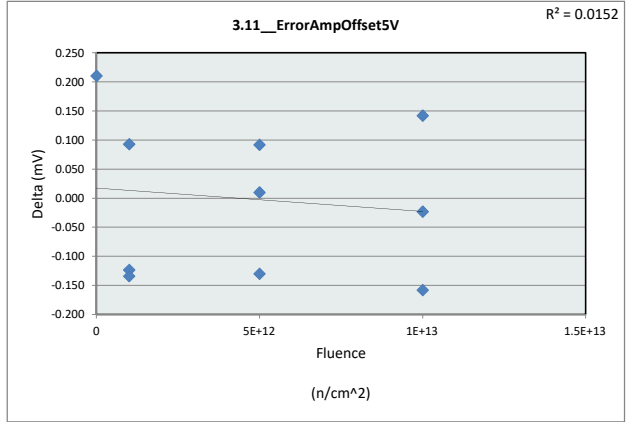
NDD Report
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3.11_ErrorAmpOffset5V

Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	2	2
Min Limit	-2	-2

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	-0.261	-0.050	0.211
1E+12	2	0.396	0.273	-0.123
1E+12	3	0.423	0.289	-0.134
1E+12	4	0.229	0.322	0.093
5E+12	5	0.250	0.261	0.010
5E+12	6	0.707	0.577	-0.130
5E+12	7	0.026	0.119	0.092
1E+13	8	-0.062	-0.084	-0.023
1E+13	9	0.254	0.396	0.142
1E+13	10	0.571	0.413	-0.158

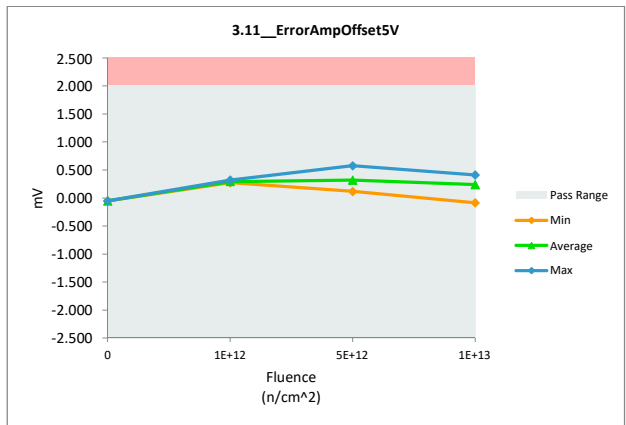
Max	0.707	0.577	0.211
Average	0.254	0.251	-0.002
Min	-0.261	-0.084	-0.158
Std Dev	0.293	0.206	0.132



3.11_ErrorAmpOffset5V

Test Site		
Tester		
Test Number		
Max Limit	2	mV
Min Limit	-2	mV

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	-2.000	-2.000	-2.000	-2.000
Min	-0.050	0.273	0.118	-0.084
Average	-0.050	0.294	0.319	0.242
Max	-0.050	0.322	0.577	0.413
UL	2.000	2.000	2.000	2.000

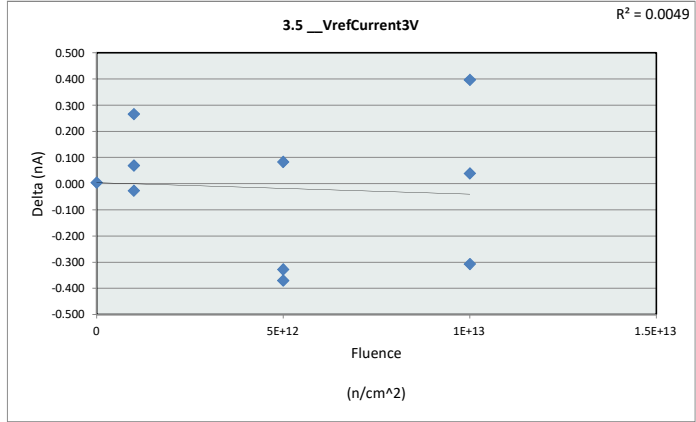


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		3.5 __VrefCurrent3V	
Test Site			
Tester			
Test Number			
Unit	nA	nA	
Max Limit	15	15	
Min Limit	-15	-15	

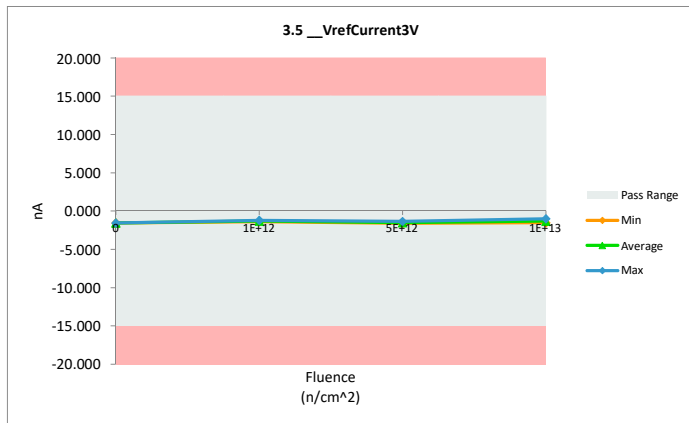
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	-1.553	-1.549	0.004
1E+12	2	-1.411	-1.342	0.069
1E+12	3	-1.460	-1.194	0.266
1E+12	4	-1.347	-1.374	-0.027
5E+12	5	-1.268	-1.596	-0.328
5E+12	6	-1.234	-1.604	-0.370
5E+12	7	-1.435	-1.352	0.083
1E+13	8	-1.560	-1.521	0.039
1E+13	9	-1.113	-1.420	-0.307
1E+13	10	-1.400	-1.004	0.396

Max	-1.113	-1.004	0.396
Average	-1.378	-1.395	-0.017
Min	-1.560	-1.604	-0.370
Std Dev	0.141	0.189	0.253



		3.5 __VrefCurrent3V	
Test Site			
Tester			
Test Number			
Max Limit	15	nA	
Min Limit	-15	nA	

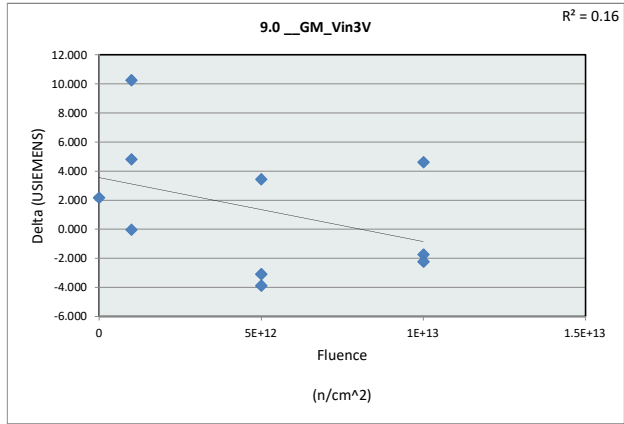
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	-15.000	-15.000	-15.000	-15.000
Min	-1.549	-1.374	-1.604	-1.521
Average	-1.549	-1.303	-1.517	-1.315
Max	-1.549	-1.194	-1.352	-1.004
UL	15.000	15.000	15.000	15.000



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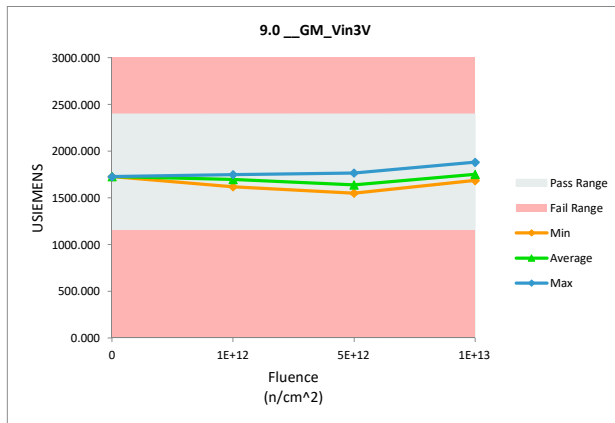
		9.0 __GM_Vin3V	
Test Site			
Tester			
Test Number			
Unit		USIEMENS	USIEMENS
Max Limit		2400	2400
Min Limit		1150	1150

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1725.136	1727.307	2.171
1E+12	2	1723.953	1728.764	4.811
1E+12	3	1750.546	1750.516	-0.030
1E+12	4	1608.671	1618.922	10.251
5E+12	5	1605.971	1602.889	-3.082
5E+12	6	1769.775	1765.909	-3.866
5E+12	7	1547.648	1551.088	3.440
1E+13	8	1687.037	1691.652	4.615
1E+13	9	1687.951	1686.219	-1.732
1E+13	10	1884.094	1881.873	-2.221
Max		1884.094	1881.873	10.251
Average		1699.078	1700.514	1.436
Min		1547.648	1551.088	-3.866
Std Dev		96.158	94.271	4.445



		9.0 __GM_Vin3V	
Test Site			
Tester			
Test Number			
Max Limit		2400	USIEMENS
Min Limit		1150	USIEMENS

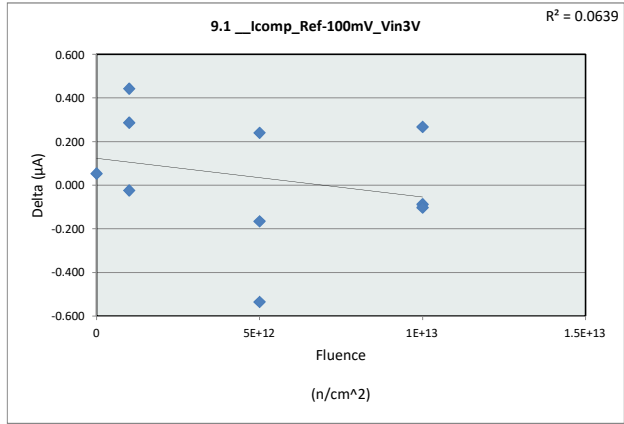
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1150.000	1150.000	1150.000	1150.000
Min	1727.307	1618.922	1551.088	1686.219
Average	1727.307	1699.401	1639.962	1753.248
Max	1727.307	1750.516	1765.909	1881.873
UL	2400.000	2400.000	2400.000	2400.000



NDD Report
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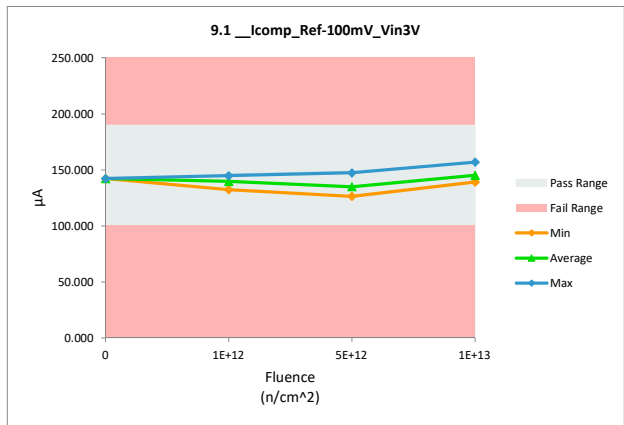
9.1 __Icomp_Ref-100mV_Vin3V		
Test Site		
Tester		
Test Number		
Unit	µA	µA
Max Limit	190	190
Min Limit	100	100

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	142.256	142.309	0.053
1E+12	2	141.556	141.843	0.287
1E+12	3	144.406	144.848	0.442
1E+12	4	132.488	132.464	-0.024
5E+12	5	131.739	131.204	-0.535
5E+12	6	147.178	147.418	0.240
5E+12	7	126.655	126.489	-0.166
1E+13	8	138.884	139.151	0.267
1E+13	9	139.608	139.521	-0.087
1E+13	10	157.128	157.026	-0.102
Max		157.128	157.026	0.442
Average		140.190	140.227	0.038
Min		126.655	126.489	-0.535
Std Dev		8.664	8.783	0.284



9.1 __Icomp_Ref-100mV_Vin3V		
Test Site		
Tester		
Test Number		
Max Limit	190	µA
Min Limit	100	µA

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	100.000	100.000	100.000	100.000
Min	142.309	132.464	126.489	139.151
Average	142.309	139.718	135.037	145.233
Max	142.309	144.848	147.418	157.026
UL	190.000	190.000	190.000	190.000

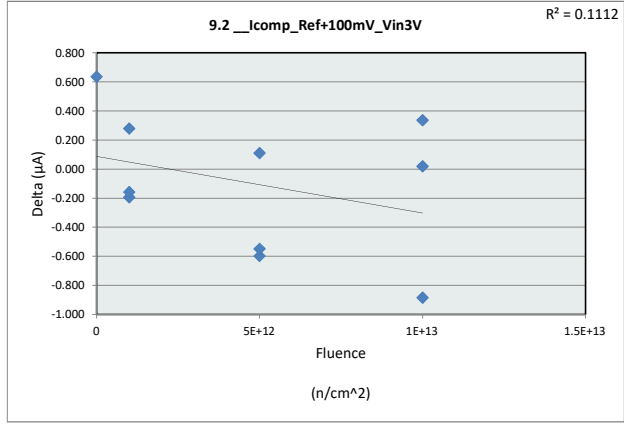


NDD Report
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		9.2 __Icomp_Ref+100mV_Vin3V	
Test Site			
Tester			
Test Number			
Unit		µA	µA
Max Limit		190	190
Min Limit		100	100

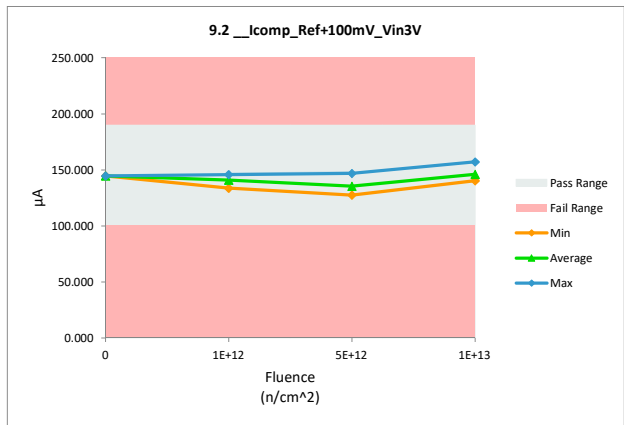
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	144.077	144.713	0.636
1E+12	2	143.217	143.024	-0.193
1E+12	3	145.953	145.796	-0.157
1E+12	4	133.396	133.676	0.280
5E+12	5	132.676	132.079	-0.597
5E+12	6	147.485	146.937	-0.548
5E+12	7	127.401	127.511	0.110
1E+13	8	140.414	140.433	0.019
1E+13	9	140.011	140.347	0.336
1E+13	10	158.140	157.257	-0.883

Max	158.140	157.257	0.636
Average	141.277	141.177	-0.100
Min	127.401	127.511	-0.883
Std Dev	8.739	8.538	0.472



		9.2 __Icomp_Ref+100mV_Vin3V	
Test Site			
Tester			
Test Number			
Max Limit		190	µA
Min Limit		100	µA

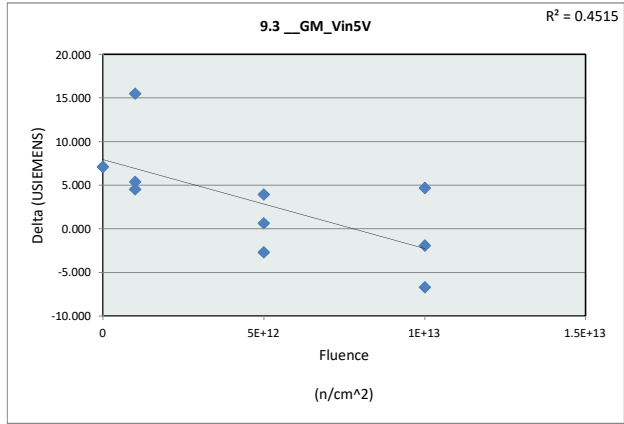
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	100.000	100.000	100.000	100.000
Min	144.713	133.676	127.511	140.347
Average	144.713	140.832	135.509	146.012
Max	144.713	145.796	146.937	157.257
UL	190.000	190.000	190.000	190.000



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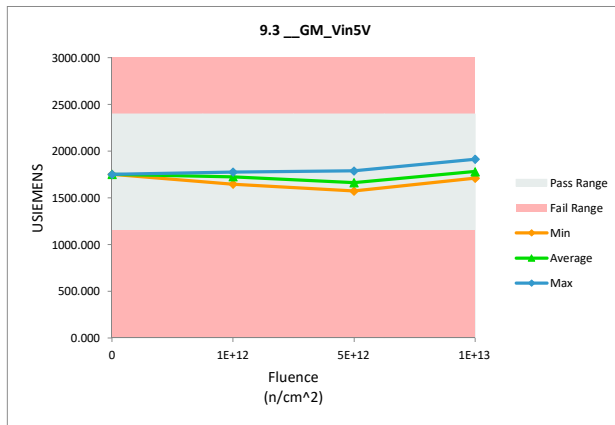
		9.3 __GM_Vin5V	
Test Site			
Tester			
Test Number			
Unit		USIEMENS	USIEMENS
Max Limit		2400	2400
Min Limit		1150	1150

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1744.678	1751.782	7.104
1E+12	2	1753.085	1757.626	4.541
1E+12	3	1771.230	1776.614	5.384
1E+12	4	1631.388	1646.869	15.481
5E+12	5	1633.807	1631.119	-2.688
5E+12	6	1788.521	1789.148	0.627
5E+12	7	1570.752	1574.695	3.943
1E+13	8	1716.905	1721.593	4.688
1E+13	9	1717.595	1710.902	-6.693
1E+13	10	1916.043	1914.133	-1.910
	Max	1916.043	1914.133	15.481
	Average	1724.400	1727.448	3.048
	Min	1570.752	1574.695	-6.693
	Std Dev	97.088	95.448	6.150



		9.3 __GM_Vin5V	
Test Site			
Tester			
Test Number			
Max Limit		2400	USIEMENS
Min Limit		1150	USIEMENS

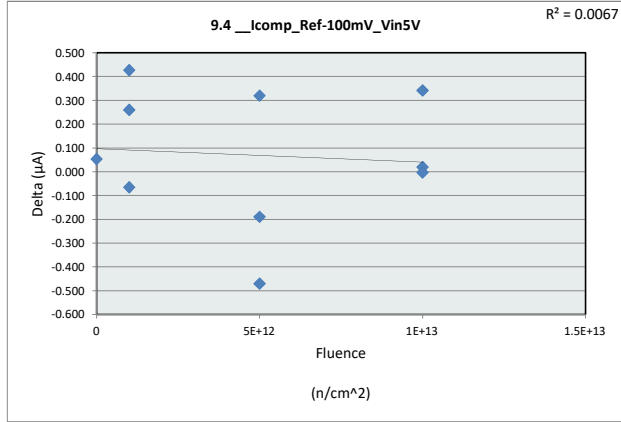
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1150.000	1150.000	1150.000	1150.000
Min	1751.782	1646.869	1574.695	1710.902
Average	1751.782	1727.036	1664.987	1782.209
Max	1751.782	1776.614	1789.148	1914.133
UL	2400.000	2400.000	2400.000	2400.000



NDD Report
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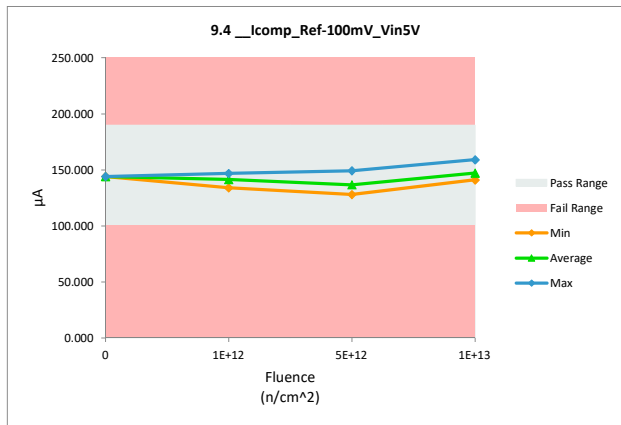
		9.4 __Icomp_Ref-100mV_Vin5V	
Test Site			
Tester			
Test Number			
Unit		µA	µA
Max Limit		190	190
Min Limit		100	100

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	144.027	144.081	0.054
1E+12	2	143.289	143.549	0.260
1E+12	3	146.390	146.817	0.427
1E+12	4	134.093	134.028	-0.065
5E+12	5	133.446	132.976	-0.470
5E+12	6	148.938	149.258	0.320
5E+12	7	128.286	128.097	-0.189
1E+13	8	140.750	141.092	0.342
1E+13	9	141.416	141.436	0.020
1E+13	10	159.101	159.098	-0.003
Max		159.101	159.098	0.427
Average		141.974	142.043	0.070
Min		128.286	128.097	-0.470
Std Dev		8.764	8.909	0.276



		9.4 __Icomp_Ref-100mV_Vin5V	
Test Site			
Tester			
Test Number			
Max Limit		190	µA
Min Limit		100	µA

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	100.000	100.000	100.000	100.000
Min	144.081	134.028	128.097	141.092
Average	144.081	141.465	136.777	147.209
Max	144.081	146.817	149.258	159.098
UL	190.000	190.000	190.000	190.000

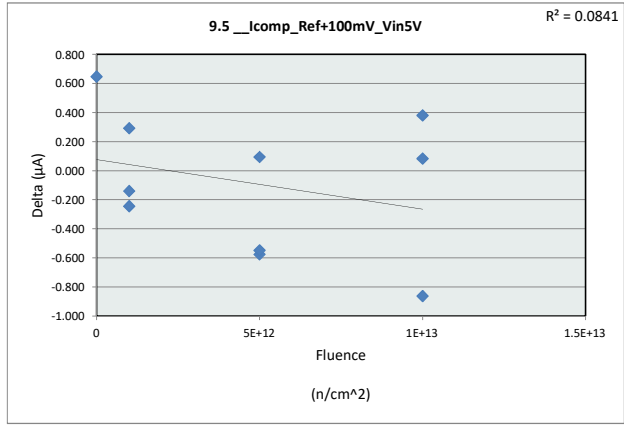


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		9.5 __Icomp_Ref+100mV_Vin5V	
Test Site			
Tester			
Test Number			
Unit		µA	µA
Max Limit		190	190
Min Limit		100	100

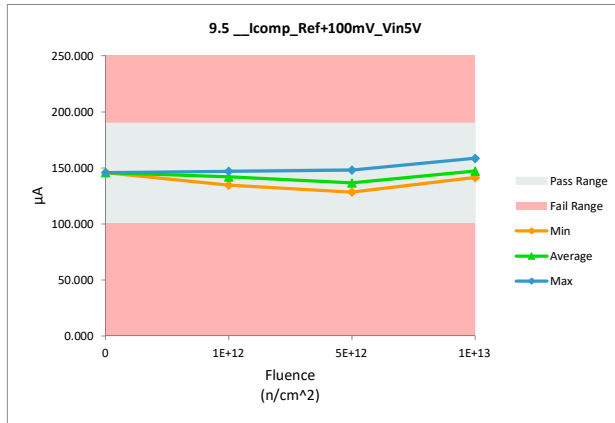
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	145.223	145.870	0.647
1E+12	2	144.268	144.024	-0.244
1E+12	3	147.200	147.060	-0.140
1E+12	4	134.450	134.741	0.291
5E+12	5	133.681	133.106	-0.575
5E+12	6	148.565	148.017	-0.548
5E+12	7	128.419	128.513	0.094
1E+13	8	141.567	141.650	0.083
1E+13	9	141.119	141.499	0.380
1E+13	10	159.419	158.557	-0.862

Max	159.419	158.557	0.647
Average	142.391	142.304	-0.087
Min	128.419	128.513	-0.862
Std Dev	8.814	8.616	0.476



		9.5 __Icomp_Ref+100mV_Vin5V	
Test Site			
Tester			
Test Number			
Max Limit		190	µA
Min Limit		100	µA

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	100.000	100.000	100.000	100.000
Min	145.870	134.741	128.513	141.499
Average	145.870	141.942	136.545	147.235
Max	145.870	147.060	148.017	158.557
UL	190.000	190.000	190.000	190.000

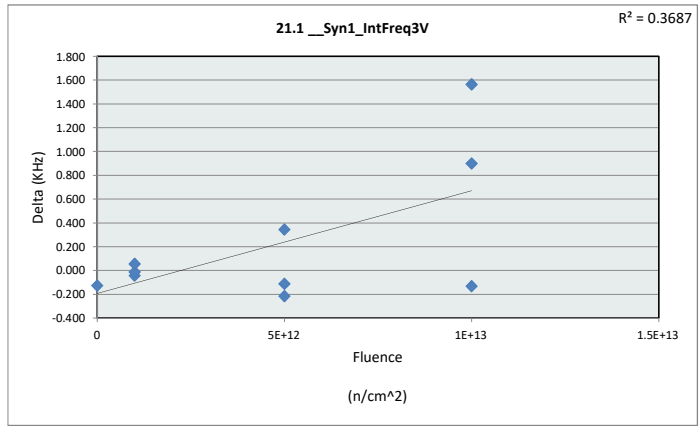


NDD Report
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21.1 __Syn1_IntFreq3V	
Test Site	
Tester	
Test Number	
Unit	KHz KHz
Max Limit	499 499
Min Limit	444 444

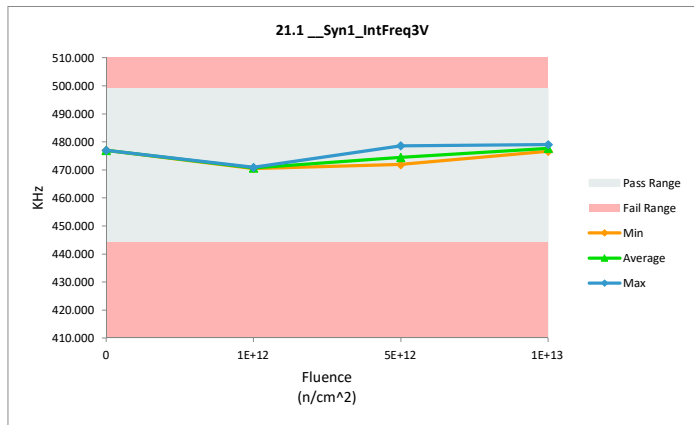
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	477.125	476.999	-0.126
1E+12	2	470.575	470.532	-0.043
1E+12	3	470.901	470.889	-0.012
1E+12	4	470.771	470.827	0.056
5E+12	5	472.126	471.911	-0.215
5E+12	6	478.259	478.604	0.345
5E+12	7	473.010	472.898	-0.112
1E+13	8	477.497	479.062	1.565
1E+13	9	476.748	476.616	-0.132
1E+13	10	476.579	477.478	0.899

Max	478.259	479.062	1.565
Average	474.359	474.582	0.223
Min	470.575	470.532	-0.215
Std Dev	3.150	3.476	0.575



21.1 __Syn1_IntFreq3V	
Test Site	
Tester	
Test Number	
Max Limit	499 KHz
Min Limit	444 KHz

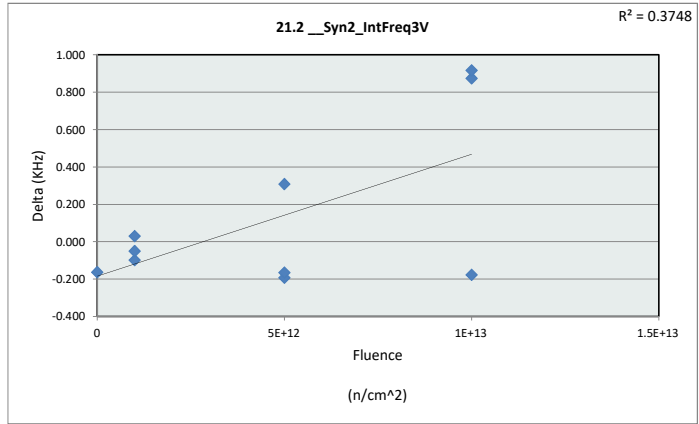
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	444.000	444.000	444.000	444.000
Min	476.999	470.532	471.911	476.616
Average	476.999	470.749	474.471	477.719
Max	476.999	470.889	478.604	479.062
UL	499.000	499.000	499.000	499.000



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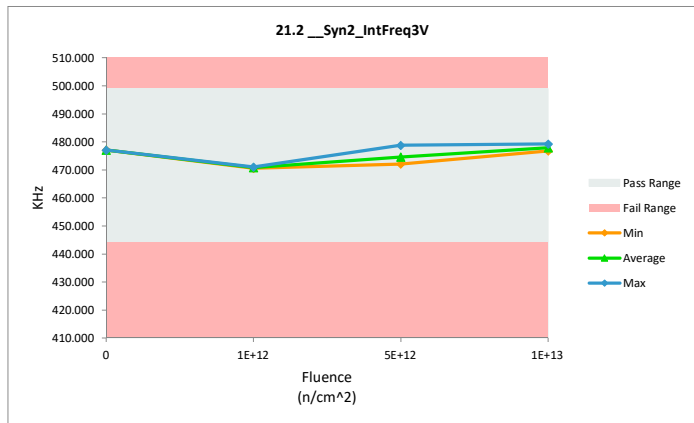
21.2 __Syn2_IntFreq3V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	499	499
Min Limit	444	444

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	477.242	477.079	-0.163
1E+12	2	470.671	470.573	-0.098
1E+12	3	470.993	470.943	-0.050
1E+12	4	470.967	470.998	0.031
5E+12	5	472.283	472.091	-0.192
5E+12	6	478.453	478.762	0.309
5E+12	7	473.142	472.977	-0.165
1E+13	8	478.361	479.236	0.875
1E+13	9	476.956	476.779	-0.177
1E+13	10	476.700	477.617	0.917
Max		478.453	479.236	0.917
Average		474.577	474.705	0.129
Min		470.671	470.573	-0.192
Std Dev		3.250	3.499	0.431



21.2 __Syn2_IntFreq3V		
Test Site		
Tester		
Test Number		
Max Limit	499	KHz
Min Limit	444	KHz

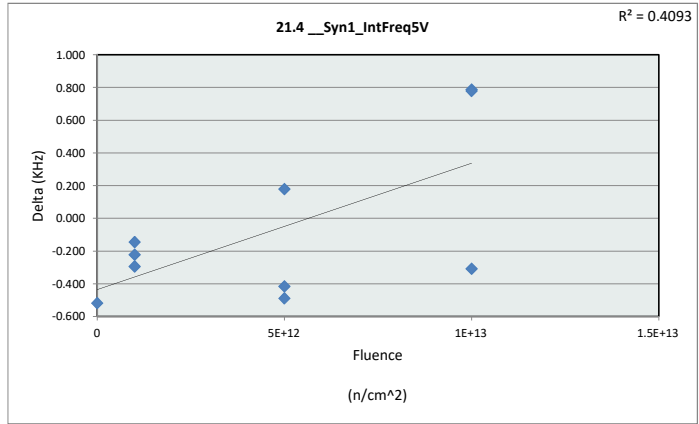
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	444.000	444.000	444.000	444.000
Min	477.079	470.573	472.091	476.779
Average	477.079	470.838	474.610	477.877
Max	477.079	470.998	478.762	479.236
UL	499.000	499.000	499.000	499.000



NDD Report
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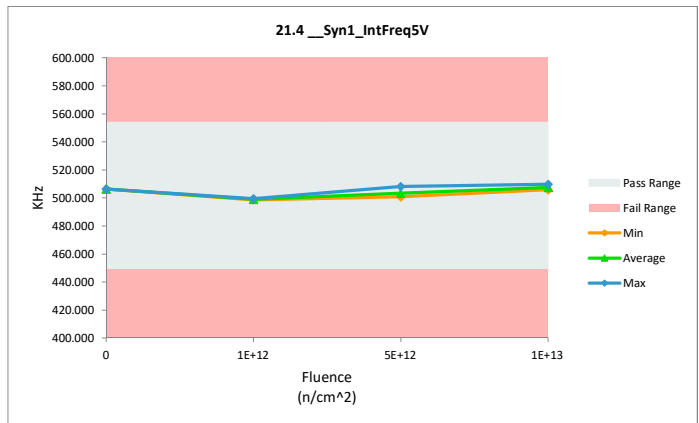
21.4 __Syn1_IntFreq5V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	554	554
Min Limit	449	449

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	506.933	506.415	-0.518
1E+12	2	498.929	498.635	-0.294
1E+12	3	499.260	499.038	-0.222
1E+12	4	499.682	499.538	-0.144
5E+12	5	501.417	500.929	-0.488
5E+12	6	508.087	508.267	0.180
5E+12	7	501.240	500.824	-0.416
1E+13	8	509.012	509.800	0.788
1E+13	9	506.099	505.791	-0.308
1E+13	10	506.247	507.026	0.779
Max		509.012	509.800	0.788
Average		503.691	503.626	-0.064
Min		498.929	498.635	-0.518
Std Dev		3.945	4.236	0.489



21.4 __Syn1_IntFreq5V		
Test Site		
Tester		
Test Number		
Max Limit	554	KHz
Min Limit	449	KHz

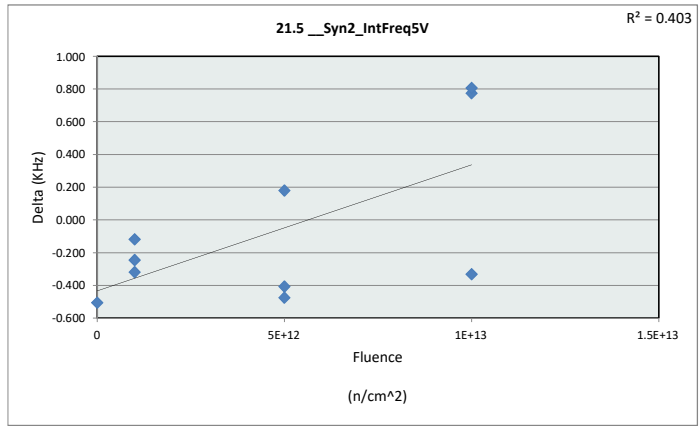
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	449.000	449.000	449.000	449.000
Min	506.415	498.635	500.824	505.791
Average	506.415	499.070	503.340	507.539
Max	506.415	499.538	508.267	509.800
UL	554.000	554.000	554.000	554.000



NDD Report
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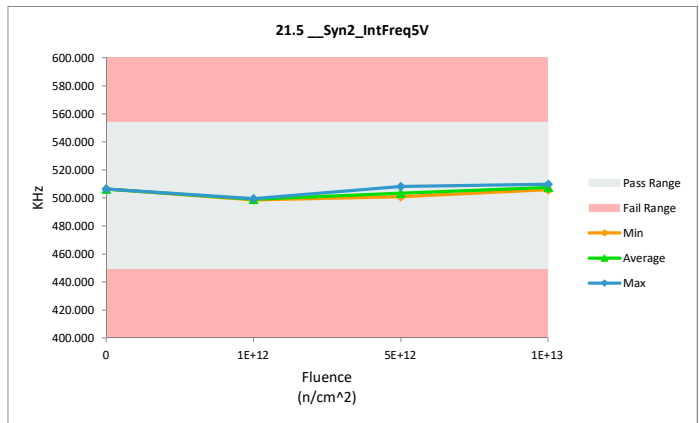
21.5 __Syn2_IntFreq5V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	554	554
Min Limit	449	449

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	506.945	506.439	-0.506
1E+12	2	498.966	498.647	-0.319
1E+12	3	499.246	499.001	-0.245
1E+12	4	499.674	499.556	-0.118
5E+12	5	501.422	500.947	-0.475
5E+12	6	508.091	508.271	0.180
5E+12	7	501.239	500.832	-0.407
1E+13	8	509.029	509.803	0.774
1E+13	9	506.137	505.805	-0.332
1E+13	10	506.241	507.047	0.806
Max		509.029	509.803	0.806
Average		503.699	503.635	-0.064
Min		498.966	498.647	-0.506
Std Dev		3.948	4.240	0.491



21.5 __Syn2_IntFreq5V		
Test Site		
Tester		
Test Number		
Max Limit	554	KHz
Min Limit	449	KHz

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	449.000	449.000	449.000	449.000
Min	506.439	498.647	500.832	505.805
Average	506.439	499.068	503.350	507.552
Max	506.439	499.556	508.271	509.803
UL	554.000	554.000	554.000	554.000

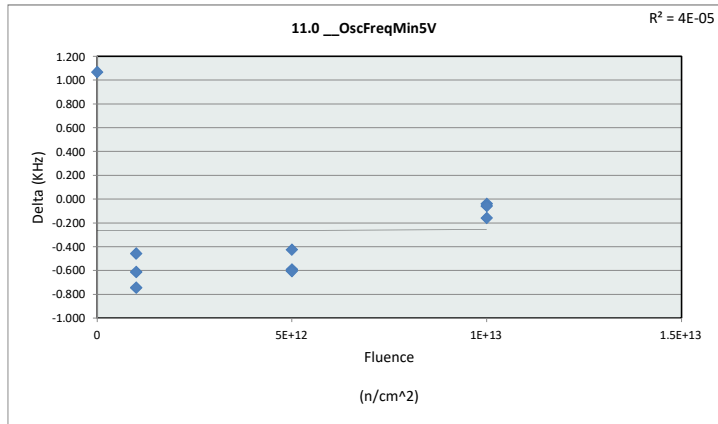


NDD Report
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		11.0 __OscFreqMin5V	
Test Site			
Tester			
Test Number			
Unit		KHz	KHz
Max Limit		120	120
Min Limit		80	80

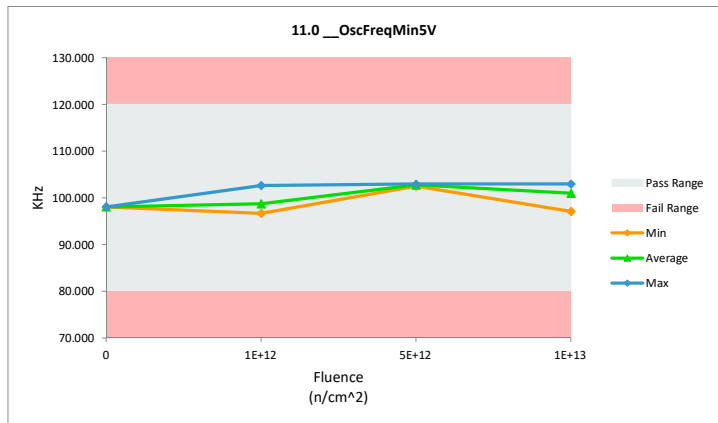
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	97.023	98.090	1.067
1E+12	2	103.270	102.658	-0.612
1E+12	3	97.457	96.712	-0.745
1E+12	4	97.412	96.955	-0.457
5E+12	5	103.083	102.492	-0.591
5E+12	6	103.575	102.969	-0.606
5E+12	7	103.328	102.903	-0.425
1E+13	8	103.141	102.983	-0.158
1E+13	9	97.149	97.110	-0.039
1E+13	10	103.055	102.997	-0.058

Max	103.575	102.997	1.067
Average	100.849	100.587	-0.262
Min	97.023	96.712	-0.745
Std Dev	3.095	2.926	0.529



		11.0 __OscFreqMin5V	
Test Site			
Tester			
Test Number			
Max Limit		120	KHz
Min Limit		80	KHz

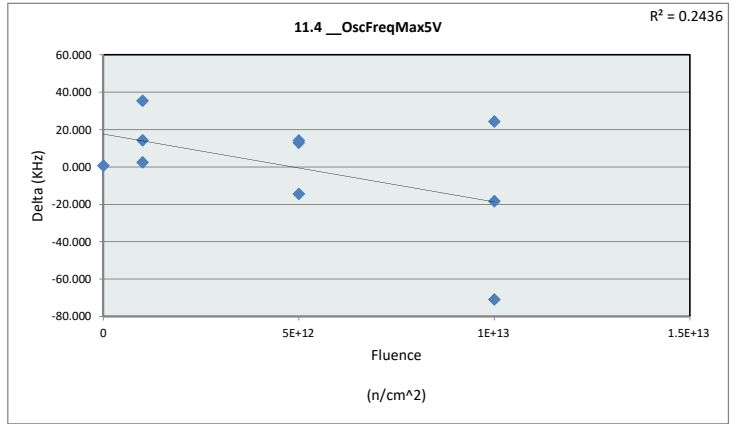
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	80.000	80.000	80.000	80.000
Min	98.090	96.712	102.492	97.110
Average	98.090	98.775	102.788	101.030
Max	98.090	102.658	102.969	102.997
UL	120.000	120.000	120.000	120.000



NDD Report
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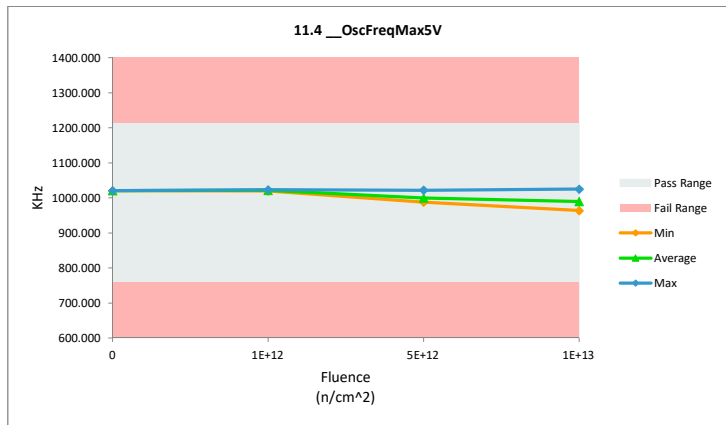
11.4 __OscFreqMax5V	
Test Site	
Tester	
Test Number	
Unit	KHz
Max Limit	1212
Min Limit	760

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	1019.837	1020.536	0.699
1E+12	2	1006.872	1021.179	14.307
1E+12	3	987.996	1023.430	35.434
1E+12	4	1017.168	1019.645	2.477
5E+12	5	1001.993	987.618	-14.375
5E+12	6	1009.221	1022.204	12.983
5E+12	7	975.174	989.381	14.207
1E+13	8	999.125	980.834	-18.291
1E+13	9	1034.669	963.857	-70.812
1E+13	10	1000.623	1024.983	24.360
Max		1034.669	1024.983	35.434
Average		1005.268	1005.367	0.099
Min		975.174	963.857	-70.812
Std Dev		16.702	22.544	29.788



11.4 __OscFreqMax5V	
Test Site	
Tester	
Test Number	
Max Limit	1212 KHz
Min Limit	760 KHz

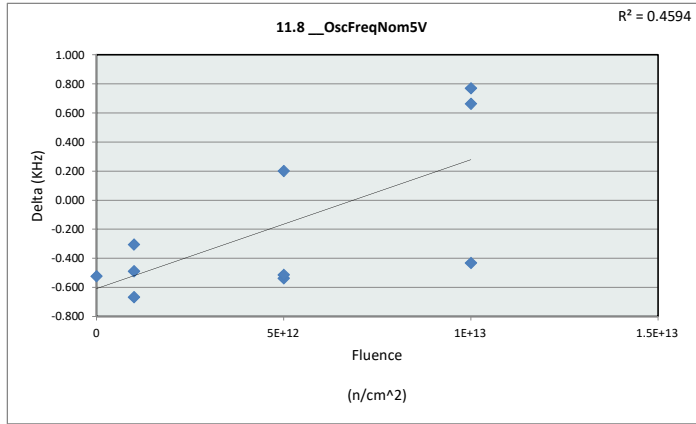
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	760.000	760.000	760.000	760.000
Min	1020.536	1019.645	987.618	963.857
Average	1020.536	1021.418	999.734	989.891
Max	1020.536	1023.430	1022.204	1024.983
UL	1212.000	1212.000	1212.000	1212.000



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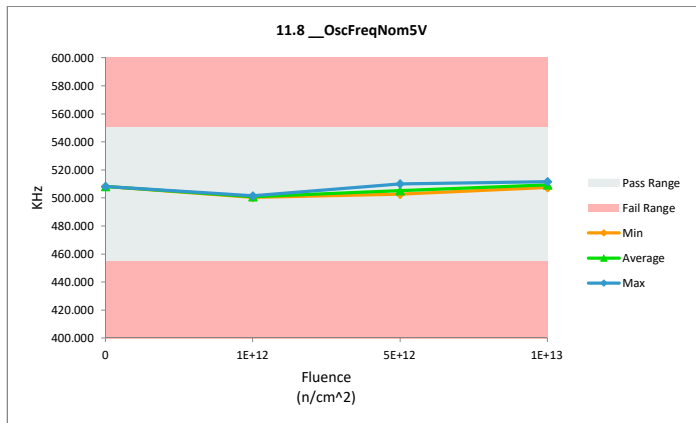
11.8 __OscFreqNom5V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	550	550
Min Limit	455	455

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	508.737	508.215	-0.522
1E+12	2	501.086	500.420	-0.666
1E+12	3	501.395	500.907	-0.488
1E+12	4	501.798	501.494	-0.304
5E+12	5	503.566	503.029	-0.537
5E+12	6	509.856	510.057	0.201
5E+12	7	503.166	502.653	-0.513
1E+13	8	510.848	511.618	0.770
1E+13	9	507.871	507.439	-0.432
1E+13	10	508.105	508.768	0.663
Max		510.848	511.618	0.770
Average		505.643	505.460	-0.183
Min		501.086	500.420	-0.666
Std Dev		3.793	4.179	0.530



11.8 __OscFreqNom5V		
Test Site		
Tester		
Test Number		
Max Limit	550	KHz
Min Limit	455	KHz

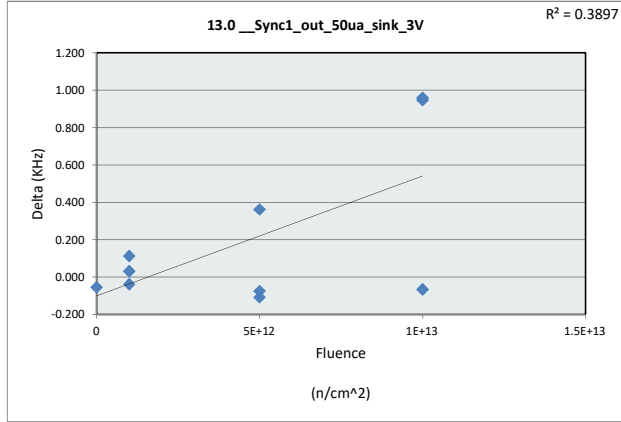
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	455.000	455.000	455.000	455.000
Min	508.215	500.420	502.653	507.439
Average	508.215	500.940	505.246	509.275
Max	508.215	501.494	510.057	511.618
UL	550.000	550.000	550.000	550.000



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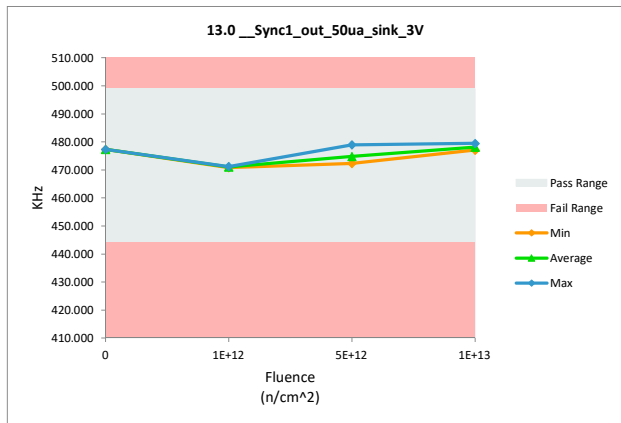
13.0 __Sync1_out_50ua_sink_3V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	499	499
Min Limit	444	444

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	477.371	477.317	-0.054
1E+12	2	470.858	470.820	-0.038
1E+12	3	471.121	471.153	0.032
1E+12	4	471.108	471.221	0.113
5E+12	5	472.397	472.290	-0.107
5E+12	6	478.600	478.962	0.362
5E+12	7	473.270	473.195	-0.075
1E+13	8	478.506	479.453	0.947
1E+13	9	477.141	477.076	-0.065
1E+13	10	476.850	477.810	0.960
Max		478.600	479.453	0.960
Average		474.722	474.930	0.208
Min		470.858	470.820	-0.107
Std Dev		3.253	3.499	0.416



13.0 Sync1_out_50ua_sink		
Test Site		
Tester		
Test Number		
Max Limit	499	KHz
Min Limit	444	KHz

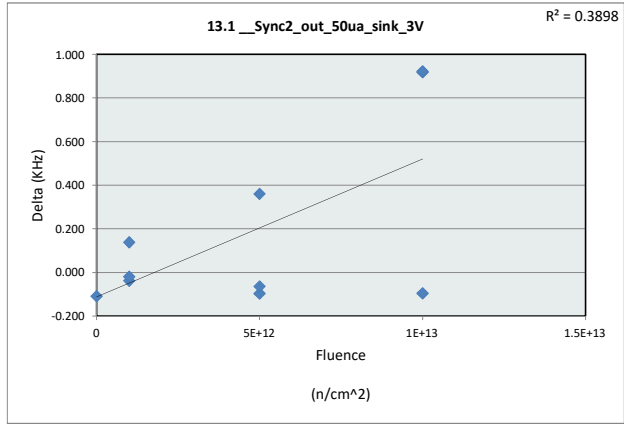
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	444.000	444.000	444.000	444.000
Min	477.317	470.820	472.290	477.076
Average	477.317	471.065	474.816	478.113
Max	477.317	471.221	478.962	479.453
UL	499.000	499.000	499.000	499.000



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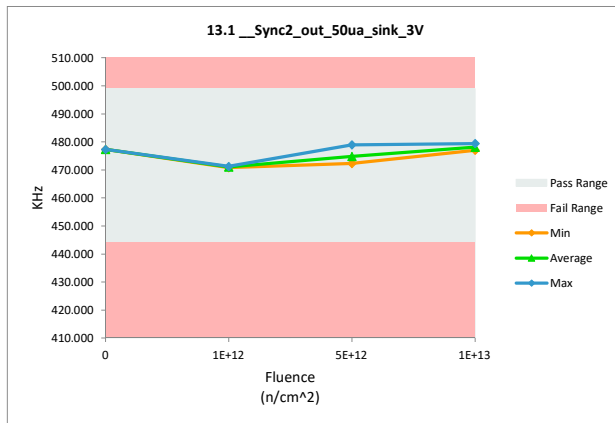
13.1 __Sync2_out_50ua_sink_3V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	499	499
Min Limit	444	444

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	477.419	477.310	-0.109
1E+12	2	470.843	470.805	-0.038
1E+12	3	471.175	471.156	-0.019
1E+12	4	471.088	471.226	0.138
5E+12	5	472.400	472.303	-0.097
5E+12	6	478.607	478.967	0.360
5E+12	7	473.266	473.202	-0.064
1E+13	8	478.520	479.438	0.918
1E+13	9	477.140	477.044	-0.096
1E+13	10	476.882	477.804	0.922
Max		478.607	479.438	0.922
Average		474.734	474.926	0.192
Min		470.843	470.805	-0.109
Std Dev		3.260	3.494	0.410



13.1 __Sync2_out_50ua_sink		
Test Site		
Tester		
Test Number		
Max Limit	499	KHz
Min Limit	444	KHz

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	444.000	444.000	444.000	444.000
Min	477.310	470.805	472.303	477.044
Average	477.310	471.062	474.824	478.095
Max	477.310	471.226	478.967	479.438
UL	499.000	499.000	499.000	499.000

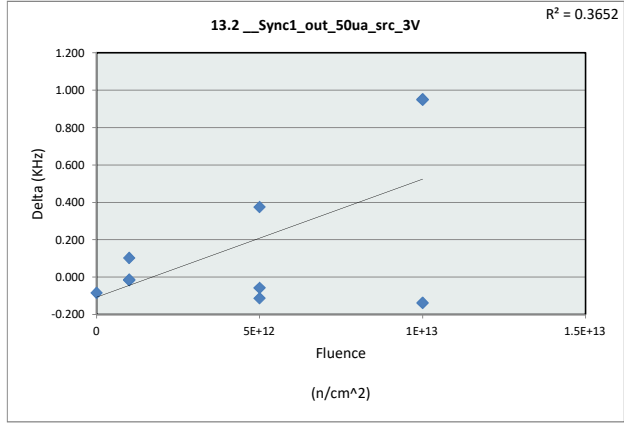


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		13.2 __ Sync1_out_50ua_src_3V	
Test Site			
Tester			
Test Number			
Unit		KHz	KHz
Max Limit		499	499
Min Limit		444	444

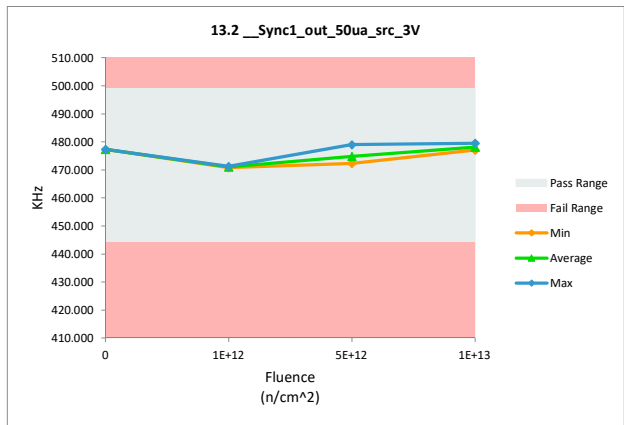
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	477.439	477.355	-0.084
1E+12	2	470.845	470.829	-0.016
1E+12	3	471.205	471.192	-0.013
1E+12	4	471.155	471.258	0.103
5E+12	5	472.429	472.316	-0.113
5E+12	6	478.622	478.997	0.375
5E+12	7	473.296	473.239	-0.057
1E+13	8	478.531	479.482	0.951
1E+13	9	477.192	477.055	-0.137
1E+13	10	476.898	477.847	0.949

Max	478.622	479.482	0.951
Average	474.761	474.957	0.196
Min	470.845	470.829	-0.137
Std Dev	3.255	3.498	0.424



		13.2 __ Sync1_out_50ua_src_3V	
Test Site			
Tester			
Test Number			
Max Limit		499	KHz
Min Limit		444	KHz

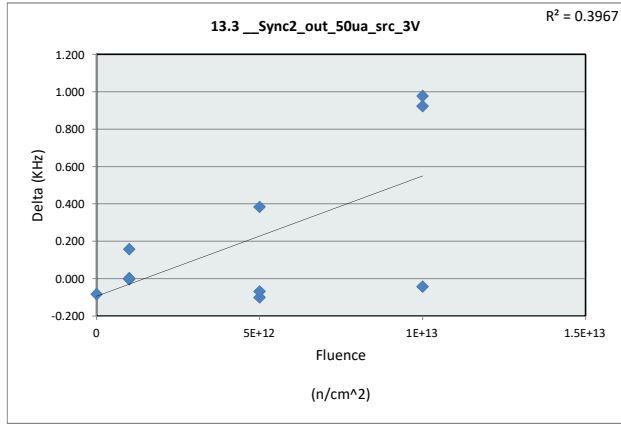
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	444.000	444.000	444.000	444.000
Min	477.355	470.829	472.316	477.055
Average	477.355	471.093	474.851	478.128
Max	477.355	471.258	478.997	479.482
UL	499.000	499.000	499.000	499.000



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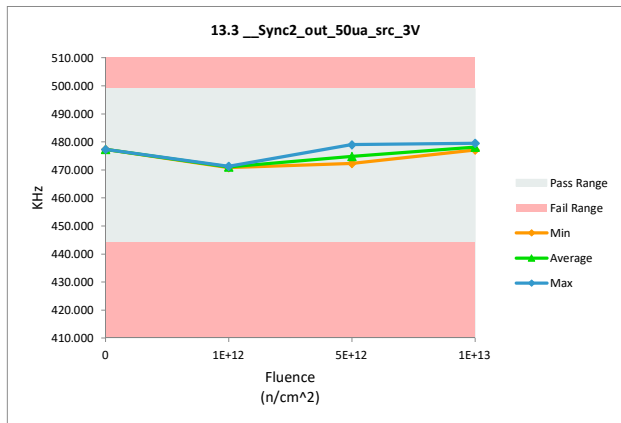
		13.3 __Sync2_out_50ua_src_3V	
Test Site			
Tester			
Test Number			
Unit		KHz	KHz
Max Limit		499	499
Min Limit		444	444

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	477.420	477.338	-0.082
1E+12	2	470.838	470.836	-0.002
1E+12	3	471.176	471.179	0.003
1E+12	4	471.111	471.269	0.158
5E+12	5	472.430	472.330	-0.100
5E+12	6	478.612	478.996	0.384
5E+12	7	473.310	473.242	-0.068
1E+13	8	478.565	479.488	0.923
1E+13	9	477.132	477.090	-0.042
1E+13	10	476.859	477.836	0.977
	Max	478.612	479.488	0.977
	Average	474.745	474.960	0.215
	Min	470.838	470.836	-0.100
	Std Dev	3.257	3.497	0.414



		13.3 __Sync2_out_50ua_src_3V	
Test Site			
Tester			
Test Number			
Max Limit		499	KHz
Min Limit		444	KHz

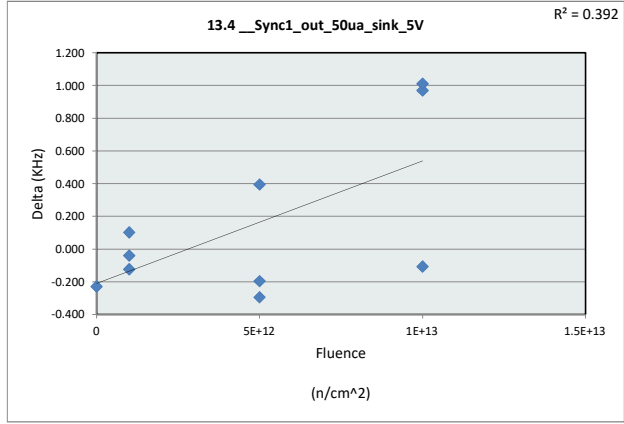
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	444.000	444.000	444.000	444.000
Min	477.338	470.836	472.330	477.090
Average	477.338	471.095	474.856	478.138
Max	477.338	471.269	478.996	479.488
UL	499.000	499.000	499.000	499.000



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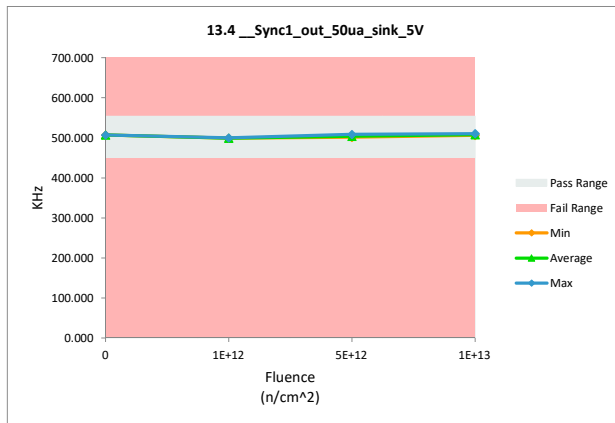
13.4 __Sync1_out_50ua_sink_5V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	554	554
Min Limit	449	449

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	507.283	507.054	-0.229
1E+12	2	499.317	499.194	-0.123
1E+12	3	499.615	499.576	-0.039
1E+12	4	500.013	500.116	0.103
5E+12	5	501.782	501.488	-0.294
5E+12	6	508.465	508.860	0.395
5E+12	7	501.593	501.397	-0.196
1E+13	8	509.363	510.333	0.970
1E+13	9	506.466	506.360	-0.106
1E+13	10	506.601	507.612	1.011
Max		509.363	510.333	1.011
Average		504.050	504.199	0.149
Min		499.317	499.194	-0.294
Std Dev		3.945	4.244	0.484



13.4 Sync1_out_50ua_sink		
Test Site		
Tester		
Test Number		
Max Limit	554	KHz
Min Limit	449	KHz

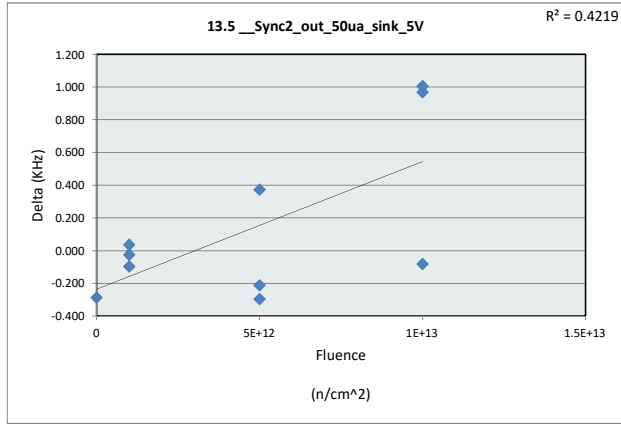
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	449.000	449.000	449.000	449.000
Min	507.054	499.194	501.397	506.360
Average	507.054	499.629	503.915	508.102
Max	507.054	500.116	508.860	510.333
UL	554.000	554.000	554.000	554.000



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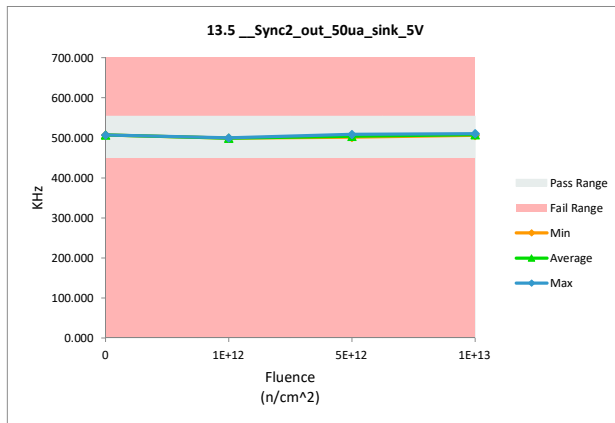
13.5 __Sync2_out_50ua_sink_5V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	554	554
Min Limit	449	449

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	507.266	506.979	-0.287
1E+12	2	499.336	499.239	-0.097
1E+12	3	499.625	499.600	-0.025
1E+12	4	500.072	500.108	0.036
5E+12	5	501.771	501.475	-0.296
5E+12	6	508.464	508.837	0.373
5E+12	7	501.603	501.391	-0.212
1E+13	8	509.389	510.358	0.969
1E+13	9	506.472	506.390	-0.082
1E+13	10	506.586	507.591	1.005
Max		509.389	510.358	1.005
Average		504.058	504.197	0.138
Min		499.336	499.239	-0.296
Std Dev		3.936	4.233	0.486



13.5 Sync2_out_50ua_sink		
Test Site		
Tester		
Test Number		
Max Limit	554	KHz
Min Limit	449	KHz

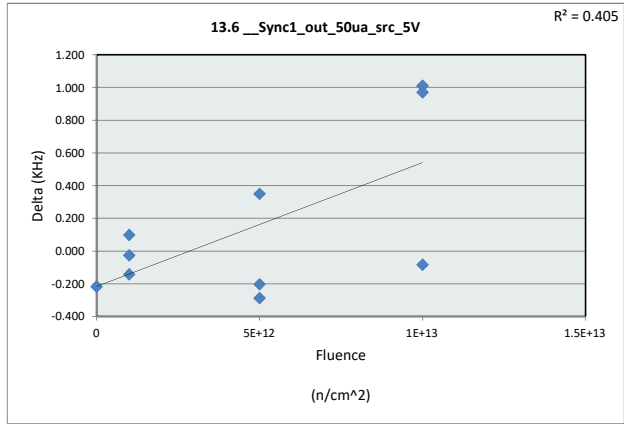
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	449.000	449.000	449.000	449.000
Min	506.979	499.239	501.391	506.390
Average	506.979	499.649	503.901	508.113
Max	506.979	500.108	508.837	510.358
UL	554.000	554.000	554.000	554.000



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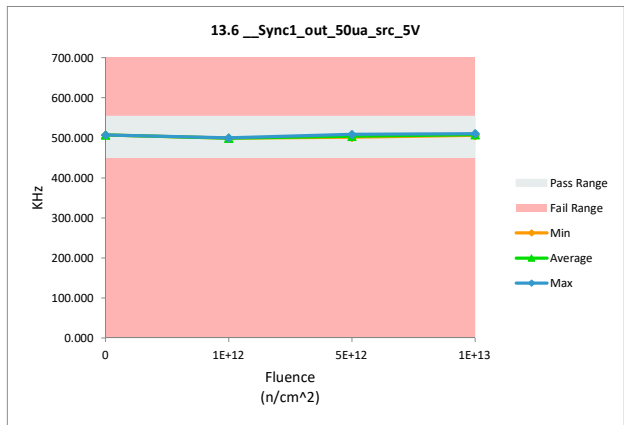
13.6 __Sync1_out_50ua_src_5V		
Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	554	554
Min Limit	449	449

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	507.286	507.069	-0.217
1E+12	2	499.382	499.240	-0.142
1E+12	3	499.636	499.611	-0.025
1E+12	4	500.028	500.127	0.099
5E+12	5	501.772	501.485	-0.287
5E+12	6	508.477	508.827	0.350
5E+12	7	501.609	501.406	-0.203
1E+13	8	509.398	510.369	0.971
1E+13	9	506.477	506.394	-0.083
1E+13	10	506.613	507.624	1.011
Max		509.398	510.369	1.011
Average		504.068	504.215	0.147
Min		499.382	499.240	-0.287
Std Dev		3.940	4.238	0.481



13.6 Sync1_out_50ua_src_5V		
Test Site		
Tester		
Test Number		
Max Limit	554	KHz
Min Limit	449	KHz

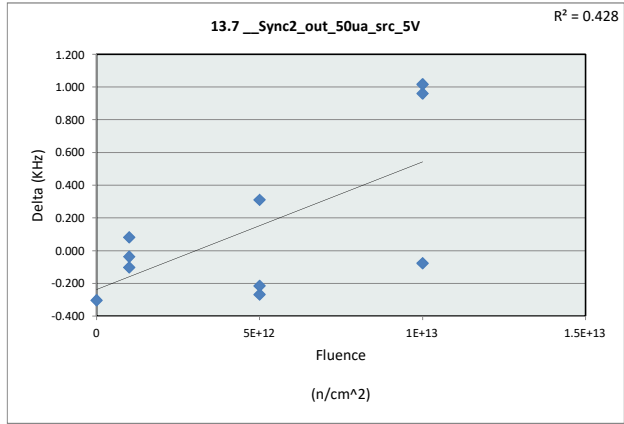
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	449.000	449.000	449.000	449.000
Min	507.069	499.240	501.406	506.394
Average	507.069	499.659	503.906	508.129
Max	507.069	500.127	508.827	510.369
UL	554.000	554.000	554.000	554.000



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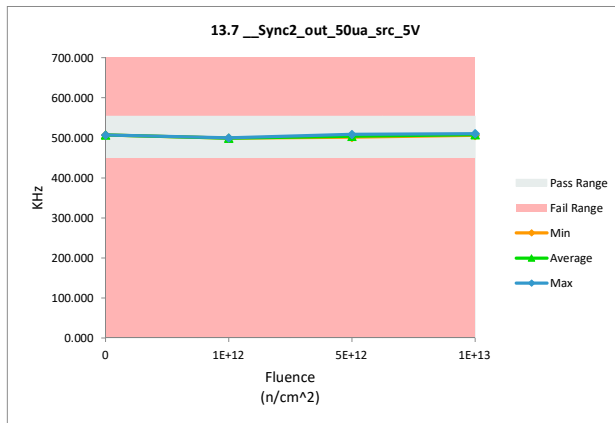
13.7 __ Sync2_out_50ua_src_5V	
Test Site	
Tester	
Test Number	
Unit	KHz KHz
Max Limit	554 554
Min Limit	449 449

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	507.313	507.010	-0.303
1E+12	2	499.339	499.237	-0.102
1E+12	3	499.631	499.594	-0.037
1E+12	4	500.045	500.127	0.082
5E+12	5	501.803	501.535	-0.268
5E+12	6	508.500	508.810	0.310
5E+12	7	501.623	501.408	-0.215
1E+13	8	509.430	510.390	0.960
1E+13	9	506.476	506.399	-0.077
1E+13	10	506.613	507.630	1.017
	Max	509.430	510.390	1.017
	Average	504.077	504.214	0.137
	Min	499.339	499.237	-0.303
	Std Dev	3.952	4.235	0.483



13.7 __ Sync2_out_50ua_src_5V	
Test Site	
Tester	
Test Number	
Max Limit	554 KHz
Min Limit	449 KHz

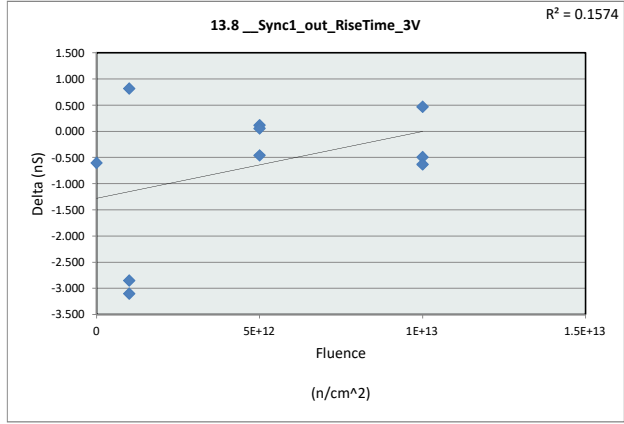
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	449.000	449.000	449.000	449.000
Min	507.010	499.237	501.408	506.399
Average	507.010	499.653	503.918	508.140
Max	507.010	500.127	508.810	510.390
UL	554.000	554.000	554.000	554.000



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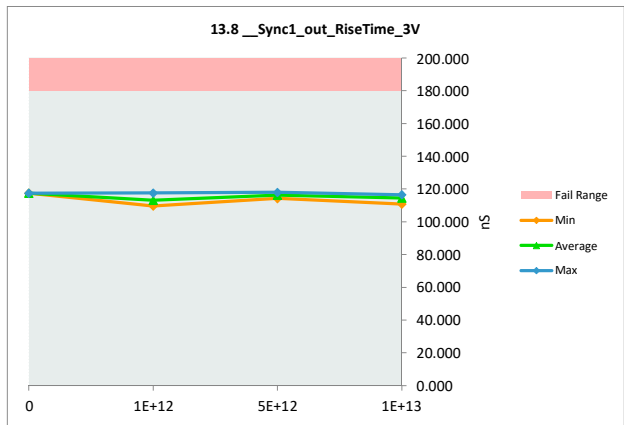
13.8 __Sync1_out_RiseTime_3V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	180 180
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	118.039	117.437	-0.602
1E+12	2	112.514	109.664	-2.850
1E+12	3	115.109	112.009	-3.100
1E+12	4	116.766	117.585	0.819
5E+12	5	117.842	117.957	0.115
5E+12	6	117.091	116.633	-0.458
5E+12	7	114.185	114.241	0.056
1E+13	8	117.048	116.555	-0.493
1E+13	9	117.026	116.393	-0.633
1E+13	10	110.357	110.826	0.469
Max		118.039	117.957	0.819
Average		115.598	114.930	-0.668
Min		110.357	109.664	-3.100
Std Dev		2.537	3.051	1.308



13.8 Sync1_out_RiseTime_3V	
Test Site	
Tester	
Test Number	
Max Limit	180 nS
Min Limit	

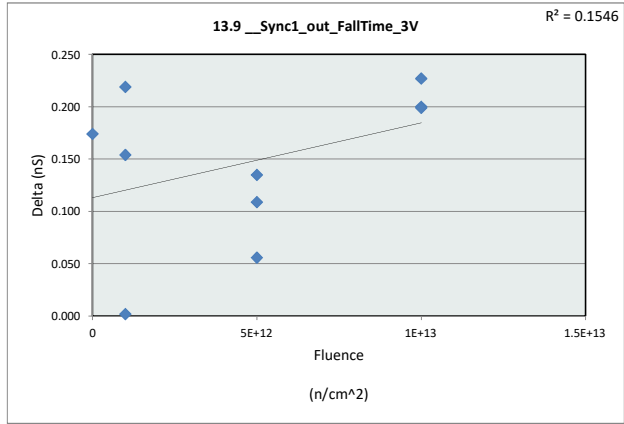
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	117.437	109.664	114.241	110.826
Average	117.437	113.086	116.277	114.591
Max	117.437	117.585	117.957	116.555
UL	180.000	180.000	180.000	180.000



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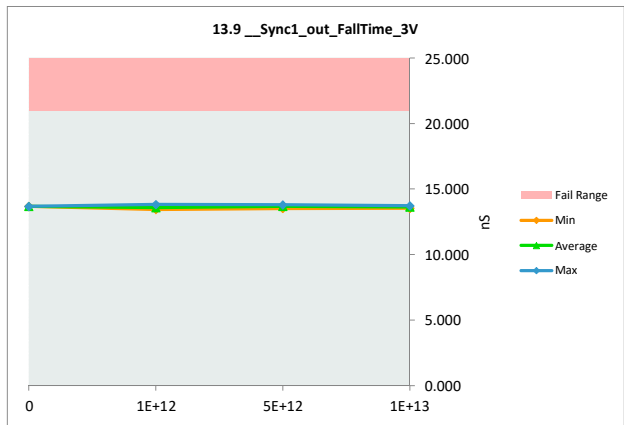
13.9 __Sync1_out_FallTime_3V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	21 21
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	13.500	13.674	0.174
1E+12	2	13.279	13.433	0.154
1E+12	3	13.283	13.502	0.219
1E+12	4	13.816	13.818	0.002
5E+12	5	13.678	13.734	0.056
5E+12	6	13.658	13.793	0.135
5E+12	7	13.411	13.520	0.109
1E+13	8	13.304	13.531	0.227
1E+13	9	13.524	13.724	0.200
1E+13	10	13.449	13.648	0.199
Max		13.816	13.818	0.227
Average		13.490	13.638	0.147
Min		13.279	13.433	0.002
Std Dev		0.183	0.133	0.074



13.9 Sync1_out_FallTime_3V	
Test Site	
Tester	
Test Number	
Max Limit	21 nS
Min Limit	nS

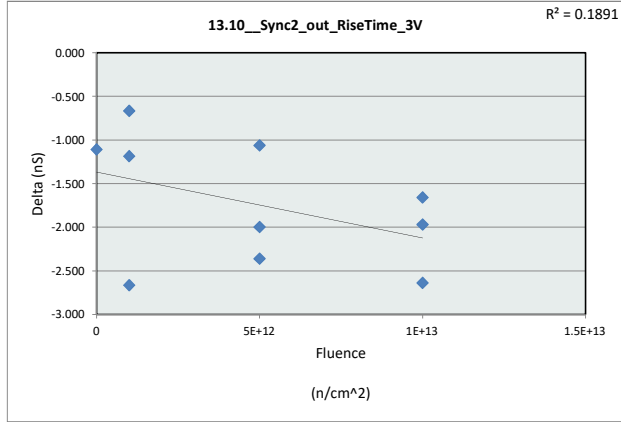
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	13.674	13.433	13.520	13.531
Average	13.674	13.584	13.682	13.634
Max	13.674	13.818	13.793	13.724
UL	21.000	21.000	21.000	21.000



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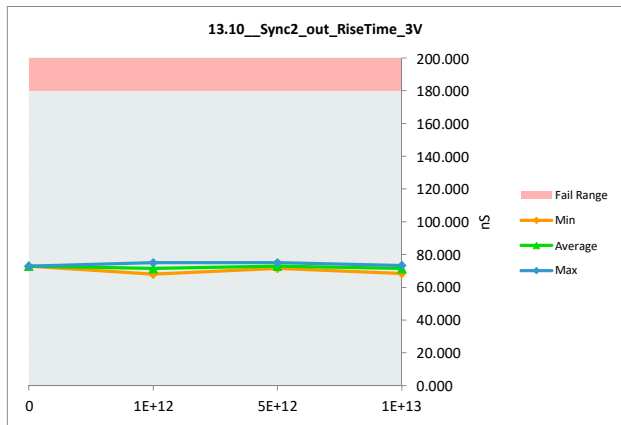
13.10_Sync2_out_RiseTime_3V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	180 180
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	74.013	72.907	-1.106
1E+12	2	69.161	67.976	-1.185
1E+12	3	71.965	71.300	-0.665
1E+12	4	77.761	75.099	-2.662
5E+12	5	77.060	75.063	-1.997
5E+12	6	73.941	71.583	-2.358
5E+12	7	73.325	72.264	-1.061
1E+13	8	74.167	72.509	-1.658
1E+13	9	75.987	73.350	-2.637
1E+13	10	70.481	68.514	-1.967
Max		77.761	75.099	-0.665
Average		73.786	72.056	-1.730
Min		69.161	67.976	-2.662
Std Dev		2.737	2.379	0.706



13.10_Sync2_out_RiseTime_3V	
Test Site	
Tester	
Test Number	
Max Limit	180 nS
Min Limit	

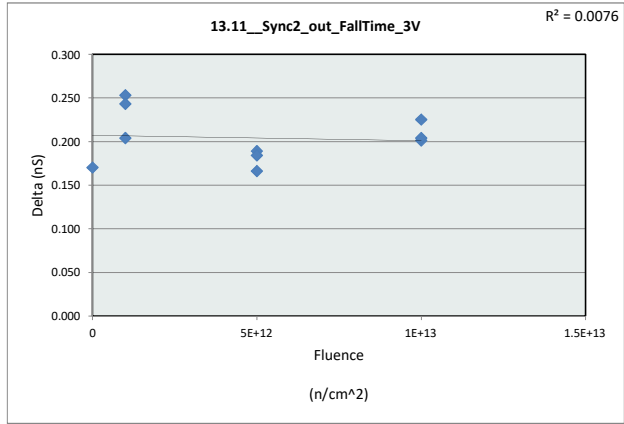
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	72.907	67.976	71.583	68.514
Average	72.907	71.458	72.970	71.458
Max	72.907	75.099	75.063	73.350
UL	180.000	180.000	180.000	180.000



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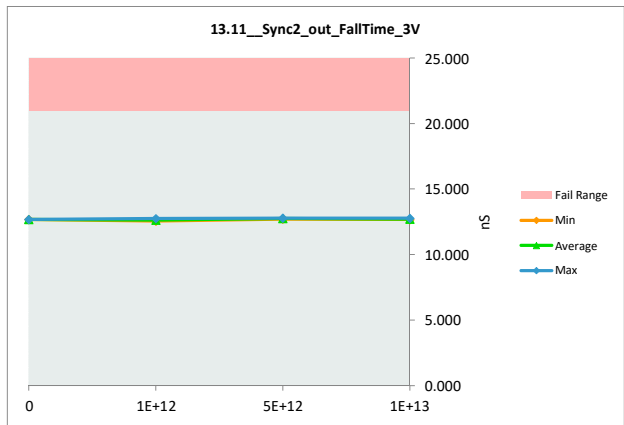
13.11_Sync2_out_FallTime_3V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	21 21
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	12.511	12.681	0.170
1E+12	2	12.297	12.550	0.253
1E+12	3	12.353	12.596	0.243
1E+12	4	12.540	12.744	0.204
5E+12	5	12.590	12.756	0.166
5E+12	6	12.585	12.774	0.189
5E+12	7	12.524	12.708	0.184
1E+13	8	12.494	12.695	0.201
1E+13	9	12.562	12.766	0.204
1E+13	10	12.444	12.669	0.225
Max		12.590	12.774	0.253
Average		12.490	12.694	0.204
Min		12.297	12.550	0.166
Std Dev		0.098	0.074	0.029



13.11_Sync2_out_FallTime_3V	
Test Site	
Tester	
Test Number	
Max Limit	21 nS
Min Limit	nS

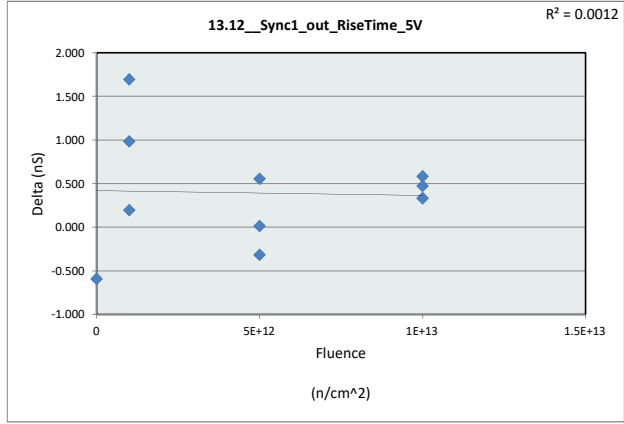
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	12.681	12.550	12.708	12.669
Average	12.681	12.630	12.746	12.710
Max	12.681	12.744	12.774	12.766
UL	21.000	21.000	21.000	21.000



NDD Report
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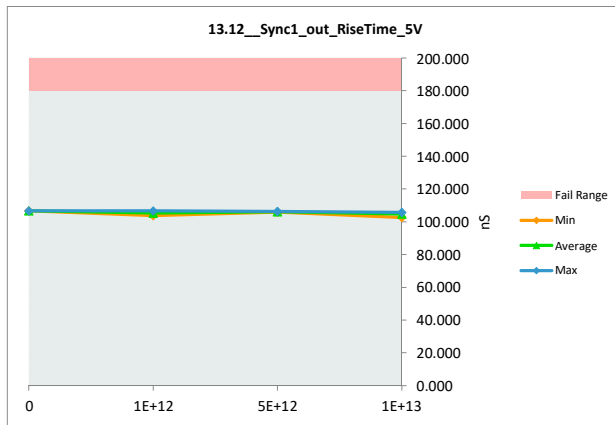
13.12_Sync1_out_RiseTime_5V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	180 180
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	107.297	106.707	-0.590
1E+12	2	102.751	103.736	0.985
1E+12	3	103.950	105.647	1.697
1E+12	4	106.467	106.665	0.198
5E+12	5	106.089	106.105	0.016
5E+12	6	106.599	106.283	-0.316
5E+12	7	105.378	105.935	0.557
1E+13	8	105.376	105.709	0.333
1E+13	9	105.278	105.752	0.474
1E+13	10	102.067	102.651	0.584
Max		107.297	106.707	1.697
Average		105.125	105.519	0.394
Min		102.067	102.651	-0.590
Std Dev		1.704	1.305	0.648



13.12_Sync1_out_RiseTime_5V	
Test Site	
Tester	
Test Number	
Max Limit	180 nS
Min Limit	

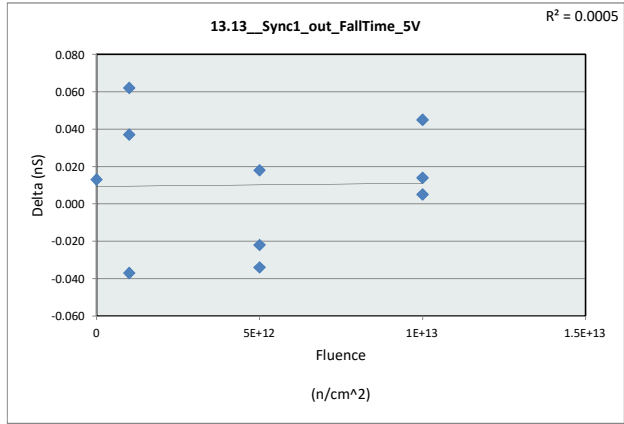
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	106.707	103.736	105.935	102.651
Average	106.707	105.349	106.108	104.704
Max	106.707	106.665	106.283	105.752
UL	180.000	180.000	180.000	180.000



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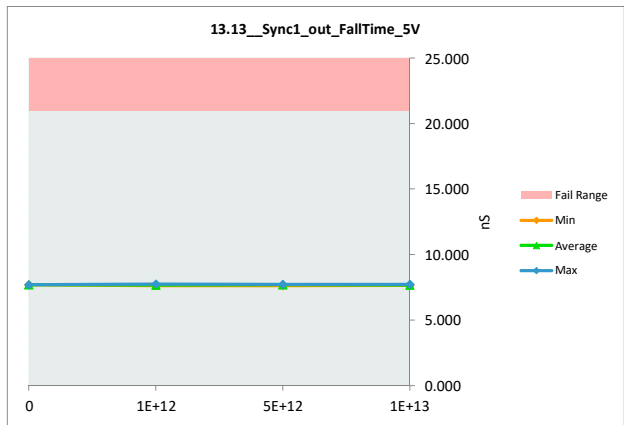
13.13_Sync1_out_FallTime_5V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	21 21
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	7.678	7.691	0.013
1E+12	2	7.596	7.633	0.037
1E+12	3	7.606	7.668	0.062
1E+12	4	7.795	7.758	-0.037
5E+12	5	7.748	7.726	-0.022
5E+12	6	7.696	7.714	0.018
5E+12	7	7.665	7.631	-0.034
1E+13	8	7.628	7.642	0.014
1E+13	9	7.674	7.719	0.045
1E+13	10	7.639	7.644	0.005
Max		7.795	7.758	0.062
Average		7.672	7.683	0.010
Min		7.596	7.631	-0.037
Std Dev		0.062	0.045	0.033



13.13_Sync1_out_FallTime_5V	
Test Site	
Tester	
Test Number	
Max Limit	21 nS
Min Limit	nS

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	7.691	7.633	7.631	7.642
Average	7.691	7.686	7.690	7.668
Max	7.691	7.758	7.726	7.719
UL	21.000	21.000	21.000	21.000

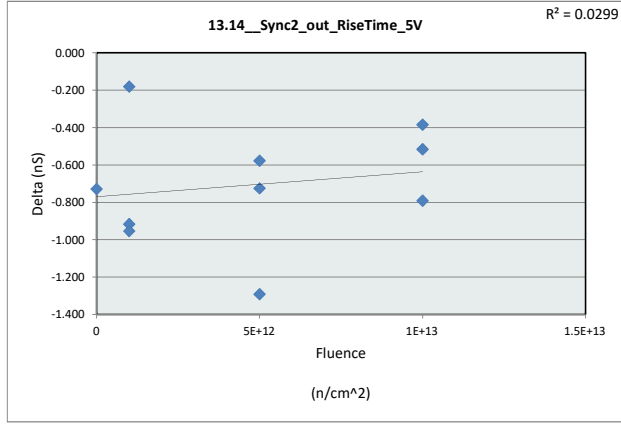


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13.14_Sync2_out_RiseTime_5V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	180 180
Min Limit	

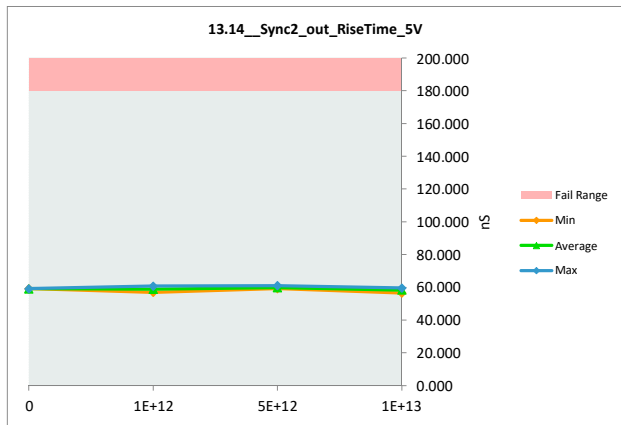
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	59.886	59.157	-0.729
1E+12	2	57.130	56.949	-0.181
1E+12	3	59.947	59.030	-0.917
1E+12	4	61.730	60.776	-0.954
5E+12	5	62.356	61.065	-1.291
5E+12	6	59.766	59.188	-0.578
5E+12	7	60.001	59.275	-0.726
1E+13	8	59.394	58.878	-0.516
1E+13	9	60.398	59.607	-0.791
1E+13	10	56.973	56.588	-0.385

Max	62.356	61.065	-0.181
Average	59.758	59.052	-0.706
Min	56.973	56.588	-1.291
Std Dev	1.698	1.412	0.314



13.14_Sync2_out_RiseTime_5V	
Test Site	
Tester	
Test Number	
Max Limit	180 nS
Min Limit	

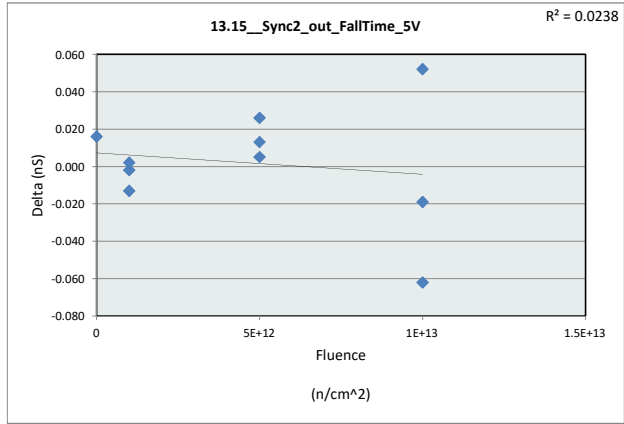
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	59.157	56.949	59.188	56.588
Average	59.157	58.919	59.843	58.358
Max	59.157	60.776	61.065	59.607
UL	180.000	180.000	180.000	180.000



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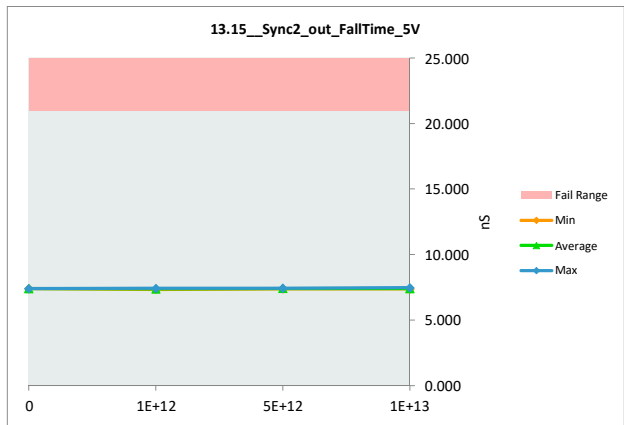
13.15_Sync2_out_FallTime_5V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	21 21
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	7.380	7.396	0.016
1E+12	2	7.345	7.343	-0.002
1E+12	3	7.380	7.367	-0.013
1E+12	4	7.417	7.419	0.002
5E+12	5	7.426	7.439	0.013
5E+12	6	7.405	7.410	0.005
5E+12	7	7.364	7.390	0.026
1E+13	8	7.433	7.371	-0.062
1E+13	9	7.415	7.467	0.052
1E+13	10	7.404	7.385	-0.019
Max		7.433	7.467	0.052
Average		7.397	7.399	0.002
Min		7.345	7.343	-0.062
Std Dev		0.029	0.036	0.030



13.15_Sync2_out_FallTime_5V	
Test Site	
Tester	
Test Number	
Max Limit	21 nS
Min Limit	nS

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	7.396	7.343	7.390	7.371
Average	7.396	7.376	7.413	7.408
Max	7.396	7.419	7.439	7.467
UL	21.000	21.000	21.000	21.000

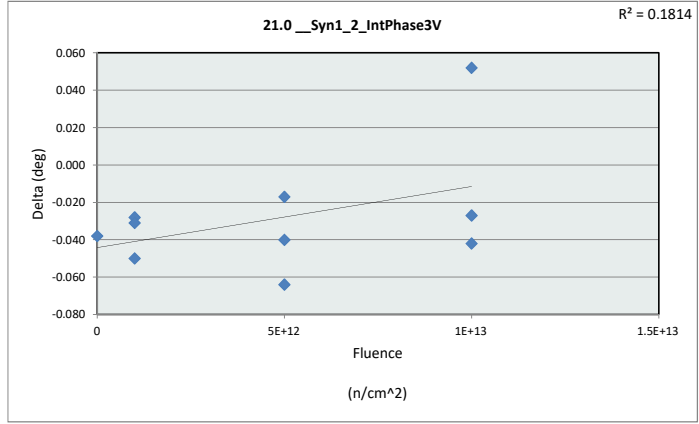


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21.0 __Syn1_2_IntPhase3V	
Test Site	
Tester	
Test Number	
Unit	deg deg
Max Limit	94 94
Min Limit	77 77

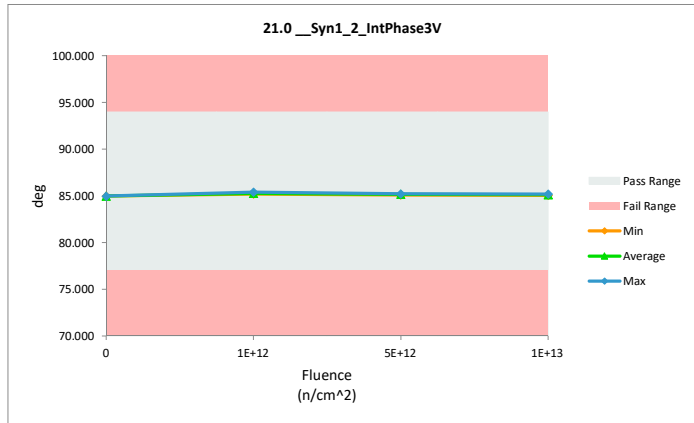
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	85.019	84.981	-0.038
1E+12	2	85.257	85.229	-0.028
1E+12	3	85.455	85.405	-0.050
1E+12	4	85.234	85.203	-0.031
5E+12	5	85.265	85.225	-0.040
5E+12	6	85.163	85.099	-0.064
5E+12	7	85.224	85.207	-0.017
1E+13	8	85.023	85.075	0.052
1E+13	9	85.232	85.205	-0.027
1E+13	10	85.205	85.163	-0.042

Max	85.455	85.405	0.052
Average	85.208	85.179	-0.029
Min	85.019	84.981	-0.064
Std Dev	0.125	0.113	0.031



21.0 __Syn1_2_IntPhase3V	
Test Site	
Tester	
Test Number	
Max Limit	94 deg
Min Limit	77 deg

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	77.000	77.000	77.000	77.000
Min	84.981	85.203	85.099	85.075
Average	84.981	85.279	85.177	85.148
Max	84.981	85.405	85.225	85.205
UL	94.000	94.000	94.000	94.000



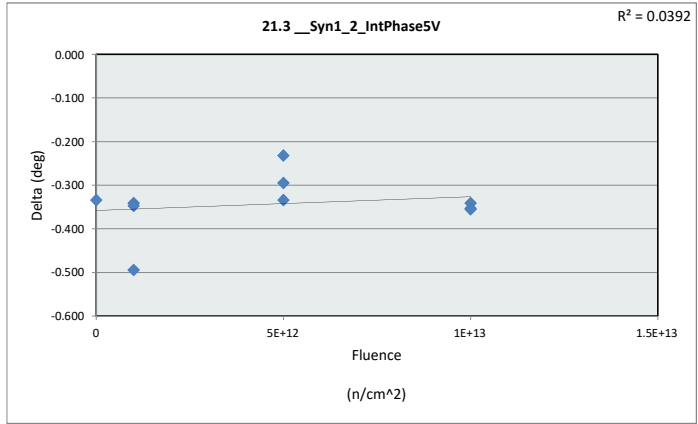
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21.3 __Syn1_2_IntPhase5V

Test Site		
Tester		
Test Number		
Unit	deg	deg
Max Limit	94	94
Min Limit	77	77

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	82.977	82.643	-0.334
1E+12	2	83.104	82.610	-0.494
1E+12	3	83.199	82.858	-0.341
1E+12	4	83.152	82.805	-0.347
5E+12	5	83.183	82.849	-0.334
5E+12	6	82.979	82.747	-0.232
5E+12	7	83.137	82.842	-0.295
1E+13	8	83.089	82.734	-0.355
1E+13	9	83.228	82.887	-0.341
1E+13	10	83.100	82.747	-0.353

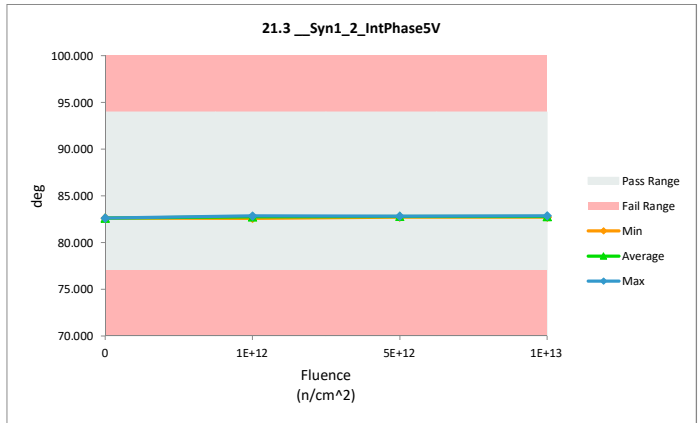
Max	83.228	82.887	-0.232
Average	83.115	82.772	-0.343
Min	82.977	82.610	-0.494
Std Dev	0.085	0.093	0.065



21.3 __Syn1_2_IntPhase5V

Test Site		
Tester		
Test Number		
Max Limit	94	deg
Min Limit	77	deg

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	77.000	77.000	77.000	77.000
Min	82.643	82.610	82.747	82.734
Average	82.643	82.758	82.813	82.789
Max	82.643	82.858	82.849	82.887
UL	94.000	94.000	94.000	94.000

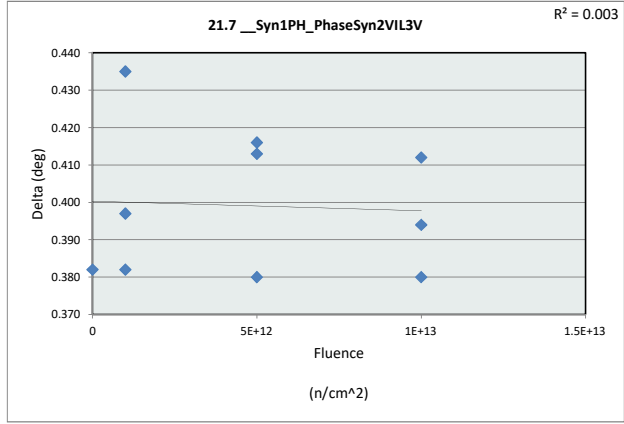


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		21.7 __Syn1PH_PhaseSyn2VIL3V	
Test Site			
Tester			
Test Number			
Unit	deg	deg	
Max Limit	185	185	
Min Limit	180	180	

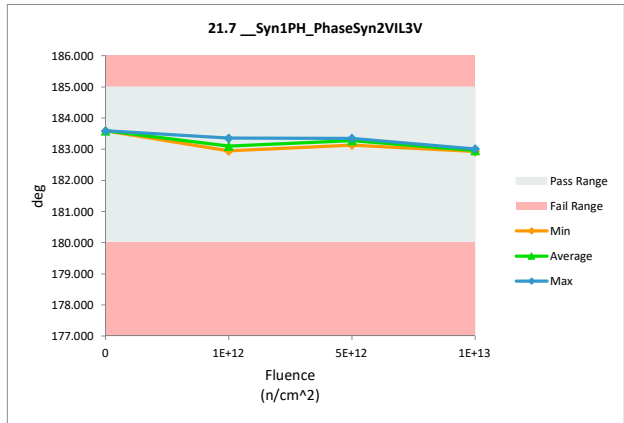
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	183.209	183.591	0.382
1E+12	2	182.569	182.951	0.382
1E+12	3	182.610	183.007	0.397
1E+12	4	182.919	183.354	0.435
5E+12	5	182.922	183.335	0.413
5E+12	6	182.719	183.135	0.416
5E+12	7	182.970	183.350	0.380
1E+13	8	182.596	183.008	0.412
1E+13	9	182.530	182.924	0.394
1E+13	10	182.567	182.947	0.380

Max	183.209	183.591	0.435
Average	182.761	183.160	0.399
Min	182.530	182.924	0.380
Std Dev	0.230	0.231	0.019



		21.7 __Syn1PH_PhaseSyn2VIL	
Test Site			
Tester			
Test Number			
Max Limit	185	deg	
Min Limit	180	deg	

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	180.000	180.000	180.000	180.000
Min	183.591	182.951	183.135	182.924
Average	183.591	183.104	183.273	182.960
Max	183.591	183.354	183.350	183.008
UL	185.000	185.000	185.000	185.000

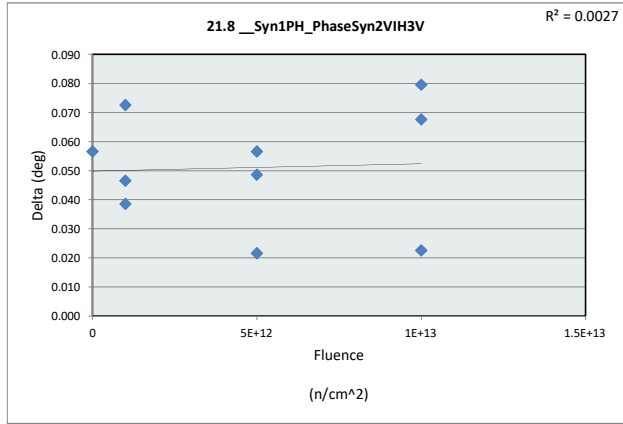


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21.8 __Syn1PH_PhaseSyn2VIH3V		
Test Site		
Tester		
Test Number		
Unit	deg	deg
Max Limit	20	20
Min Limit	5	5

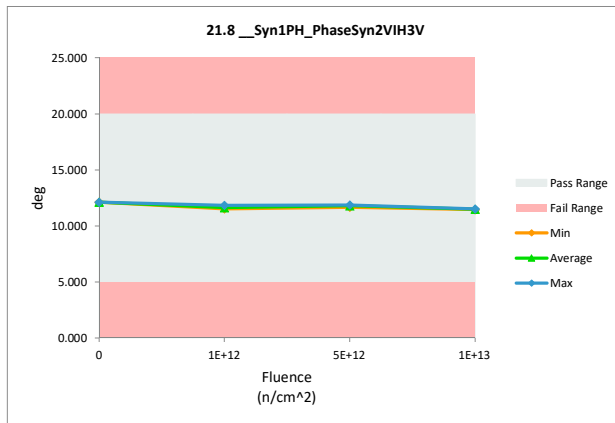
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	12.071	12.128	0.057
1E+12	2	11.467	11.514	0.047
1E+12	3	11.464	11.537	0.073
1E+12	4	11.804	11.843	0.039
5E+12	5	11.798	11.855	0.057
5E+12	6	11.624	11.673	0.049
5E+12	7	11.859	11.881	0.022
1E+13	8	11.448	11.528	0.080
1E+13	9	11.392	11.460	0.068
1E+13	10	11.454	11.477	0.023

Max	12.071	12.128	0.080
Average	11.638	11.689	0.051
Min	11.392	11.460	0.022
Std Dev	0.231	0.226	0.020



21.8 __Syn1PH_PhaseSyn2VIH3V		
Test Site		
Tester		
Test Number		
Max Limit	20	deg
Min Limit	5	deg

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	5.000	5.000	5.000	5.000
Min	12.128	11.514	11.673	11.460
Average	12.128	11.631	11.803	11.488
Max	12.128	11.843	11.881	11.528
UL	20.000	20.000	20.000	20.000



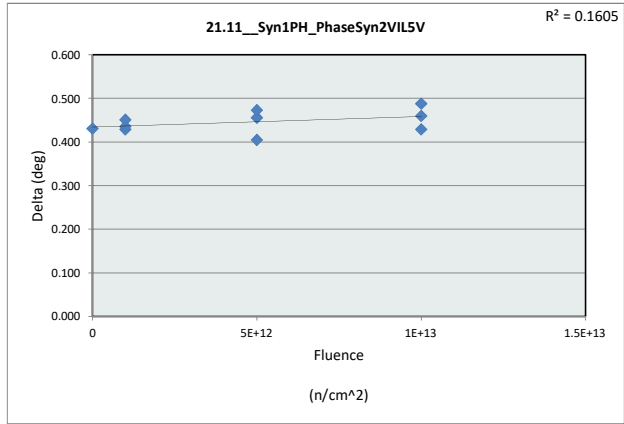
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21.11_Syn1PH_PhaseSyn2VIL5V

Test Site		
Tester		
Test Number		
Unit	deg	deg
Max Limit	185	185
Min Limit	180	180

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	182.895	183.326	0.431
1E+12	2	182.395	182.824	0.429
1E+12	3	181.745	182.181	0.436
1E+12	4	182.894	183.345	0.451
5E+12	5	182.082	182.538	0.456
5E+12	6	182.515	182.920	0.405
5E+12	7	182.706	183.179	0.473
1E+13	8	182.232	182.661	0.429
1E+13	9	182.360	182.820	0.460
1E+13	10	182.554	183.042	0.488

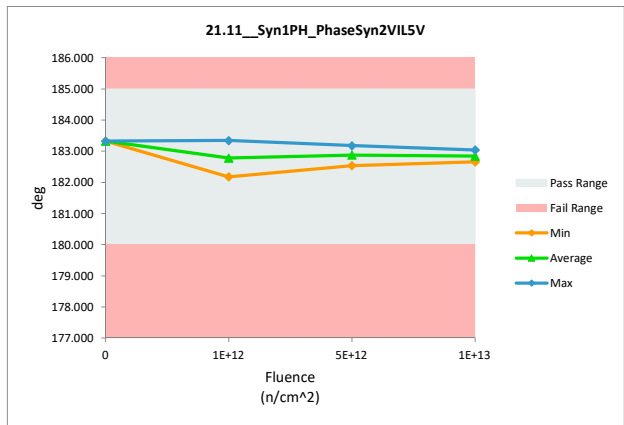
Max	182.895	183.345	0.488
Average	182.438	182.884	0.446
Min	181.745	182.181	0.405
Std Dev	0.360	0.364	0.024



21.11_Syn1PH_PhaseSyn2VI

Test Site		
Tester		
Test Number		
Max Limit	185	deg
Min Limit	180	deg

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	180.000	180.000	180.000	180.000
Min	183.326	182.181	182.538	182.661
Average	183.326	182.783	182.879	182.841
Max	183.326	183.345	183.179	183.042
UL	185.000	185.000	185.000	185.000

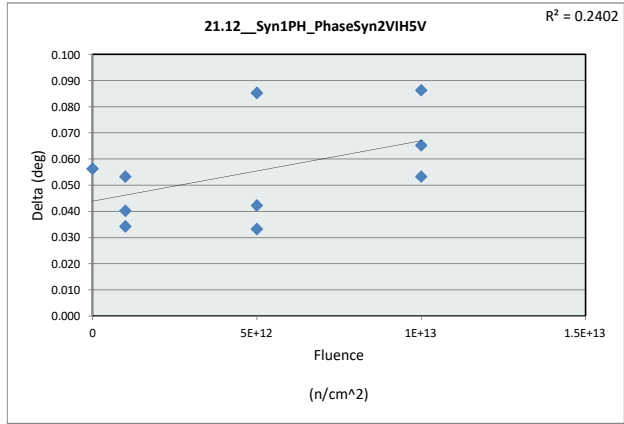


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21.12_Syn1PH_PhaseSyn2VIH5V

Test Site		
Tester		
Test Number		
Unit	deg	deg
Max Limit	20	20
Min Limit	5	5

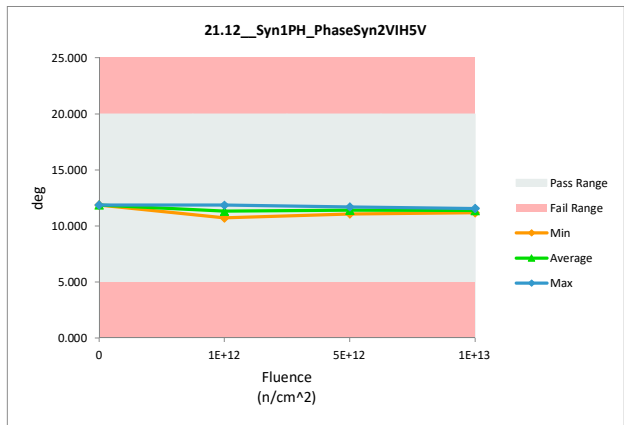
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	11.822	11.878	0.056
1E+12	2	11.327	11.361	0.034
1E+12	3	10.668	10.721	0.053
1E+12	4	11.816	11.856	0.040
5E+12	5	10.990	11.075	0.085
5E+12	6	11.447	11.480	0.033
5E+12	7	11.668	11.710	0.042
1E+13	8	11.126	11.179	0.053
1E+13	9	11.311	11.376	0.065
1E+13	10	11.480	11.566	0.086
Max		11.822	11.878	0.086
Average		11.365	11.420	0.055
Min		10.668	10.721	0.033
Std Dev		0.367	0.362	0.019



21.12_Syn1PH_PhaseSyn2VI

Test Site		
Tester		
Test Number		
Max Limit	20	deg
Min Limit	5	deg

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	5.000	5.000	5.000	5.000
Min	11.878	10.721	11.075	11.179
Average	11.878	11.313	11.422	11.374
Max	11.878	11.856	11.710	11.566
UL	20.000	20.000	20.000	20.000



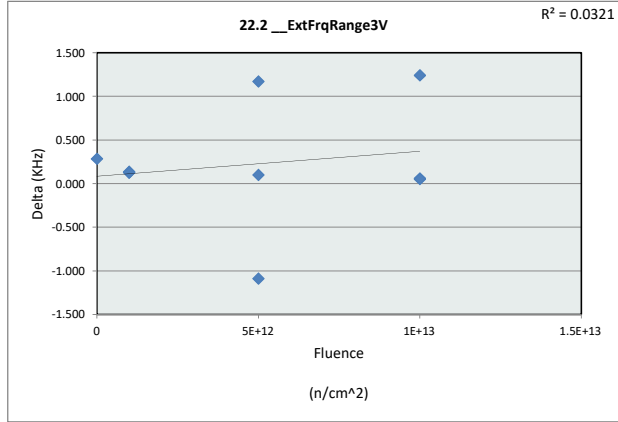
NDD Report
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22.2 __ExtFrqRange3V

Test Site		
Tester		
Test Number		
Unit	KHz	KHz
Max Limit	1050	1050
Min Limit	950	950

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	999.198	999.484	0.286
1E+12	2	999.250	999.379	0.129
1E+12	3	999.216	999.353	0.137
1E+12	4	999.279	999.405	0.126
5E+12	5	999.202	998.115	-1.087
5E+12	6	999.207	1000.378	1.171
5E+12	7	999.219	999.319	0.100
1E+13	8	999.211	999.271	0.060
1E+13	9	999.256	999.309	0.053
1E+13	10	998.077	999.319	1.242

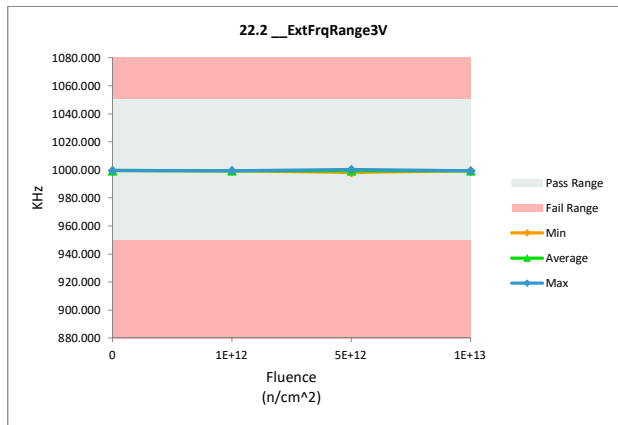
Max	999.279	1000.378	1.242
Average	999.111	999.333	0.222
Min	998.077	998.115	-1.087
Std Dev	0.364	0.539	0.646



22.2 __ExtFrqRange3V

Test Site		
Tester		
Test Number		
Max Limit	1050	KHz
Min Limit	950	KHz

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	950.000	950.000	950.000	950.000
Min	999.484	999.353	998.115	999.271
Average	999.484	999.379	999.271	999.300
Max	999.484	999.405	1000.378	999.319
UL	1050.000	1050.000	1050.000	1050.000

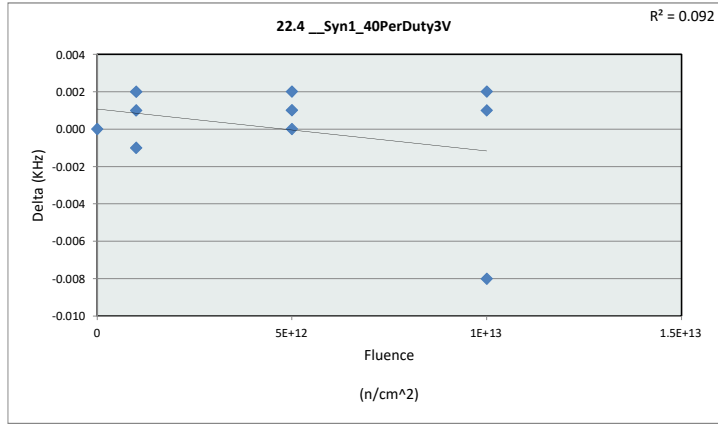


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22.4 __Syn1_40PerDuty3V	
Test Site	
Tester	
Test Number	
Unit	KHz KHz
Max Limit	105 105
Min Limit	95 95

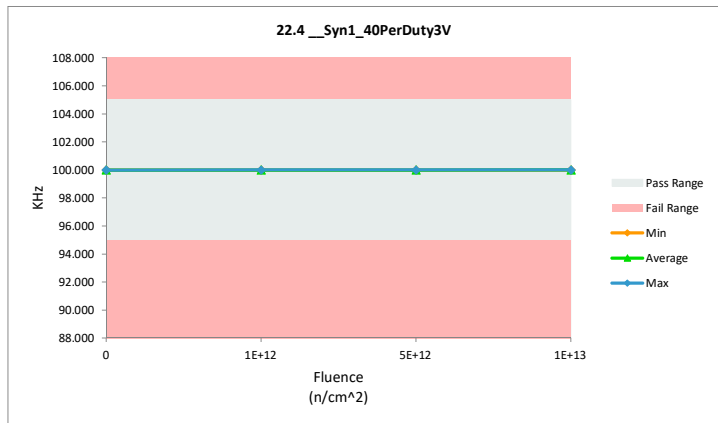
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	99.993	99.993	0.000
1E+12	2	99.991	99.993	0.002
1E+12	3	99.992	99.993	0.001
1E+12	4	99.995	99.994	-0.001
5E+12	5	99.992	99.994	0.002
5E+12	6	99.993	99.994	0.001
5E+12	7	99.993	99.993	0.000
1E+13	8	99.992	99.993	0.001
1E+13	9	100.007	99.999	-0.008
1E+13	10	99.992	99.994	0.002

Max	100.007	99.999	0.002
Average	99.994	99.994	0.000
Min	99.991	99.993	-0.008
Std Dev	0.005	0.002	0.003



22.4 __Syn1_40PerDuty3V	
Test Site	
Tester	
Test Number	
Max Limit	105 KHz
Min Limit	95 KHz

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	95.000	95.000	95.000	95.000
Min	99.993	99.993	99.993	99.993
Average	99.993	99.993	99.994	99.995
Max	99.993	99.994	99.994	99.999
UL	105.000	105.000	105.000	105.000

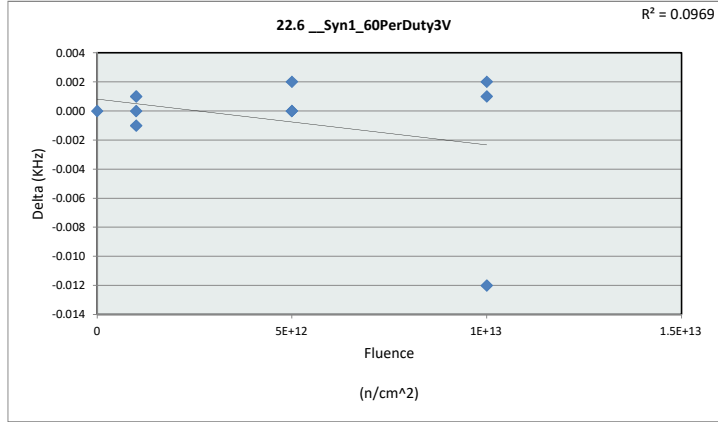


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22.6 __Syn1_60PerDuty3V	
Test Site	
Tester	
Test Number	
Unit	KHz KHz
Max Limit	105 105
Min Limit	95 95

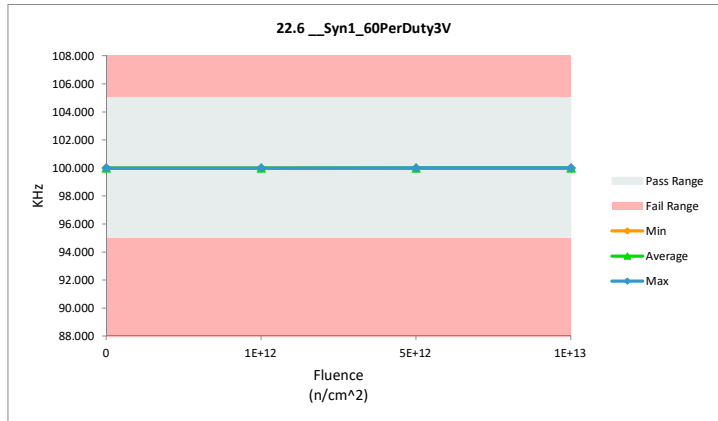
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	99.993	99.993	0.000
1E+12	2	99.994	99.993	-0.001
1E+12	3	99.993	99.993	0.000
1E+12	4	99.992	99.993	0.001
5E+12	5	99.992	99.994	0.002
5E+12	6	99.993	99.993	0.000
5E+12	7	99.994	99.994	0.000
1E+13	8	99.992	99.993	0.001
1E+13	9	100.005	99.993	-0.012
1E+13	10	99.992	99.994	0.002

Max	100.005	99.994	0.002
Average	99.994	99.993	-0.001
Min	99.992	99.993	-0.012
Std Dev	0.004	0.000	0.004



22.6 __Syn1_60PerDuty3V	
Test Site	
Tester	
Test Number	
Max Limit	105 KHz
Min Limit	95 KHz

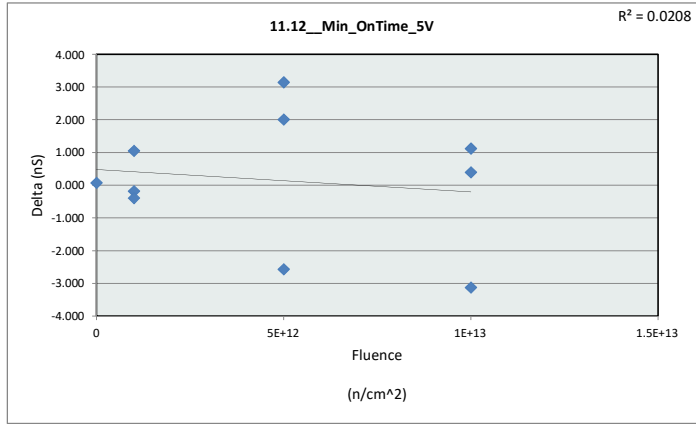
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	95.000	95.000	95.000	95.000
Min	99.993	99.993	99.993	99.993
Average	99.993	99.993	99.994	99.993
Max	99.993	99.993	99.994	99.994
UL	105.000	105.000	105.000	105.000



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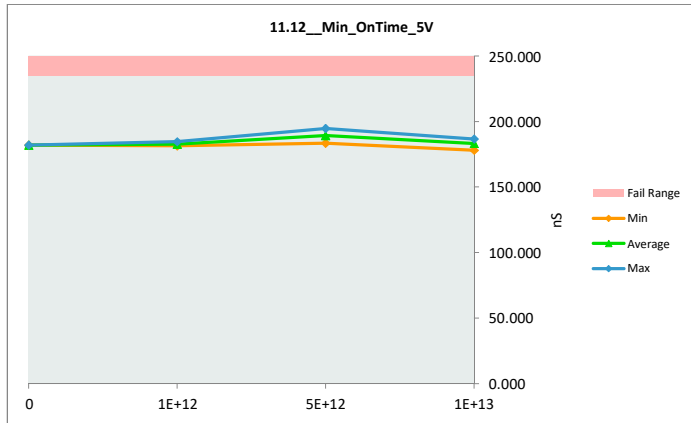
11.12_Min_OnTime_5V	
Test Site	
Tester	
Test Number	
Unit	nS nS
Max Limit	235 235
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	181.914	181.981	0.067
1E+12	2	183.525	184.573	1.048
1E+12	3	182.598	182.417	-0.181
1E+12	4	181.756	181.361	-0.395
5E+12	5	186.003	183.430	-2.573
5E+12	6	191.574	194.716	3.142
5E+12	7	187.617	189.623	2.006
1E+13	8	183.971	185.087	1.116
1E+13	9	181.211	178.080	-3.131
1E+13	10	186.285	186.679	0.394
Max		191.574	194.716	3.142
Average		184.645	184.795	0.149
Min		181.211	178.080	-3.131
Std Dev		3.247	4.687	1.909



11.12_Min_OnTime_5V	
Test Site	
Tester	
Test Number	
Max Limit	235 nS
Min Limit	

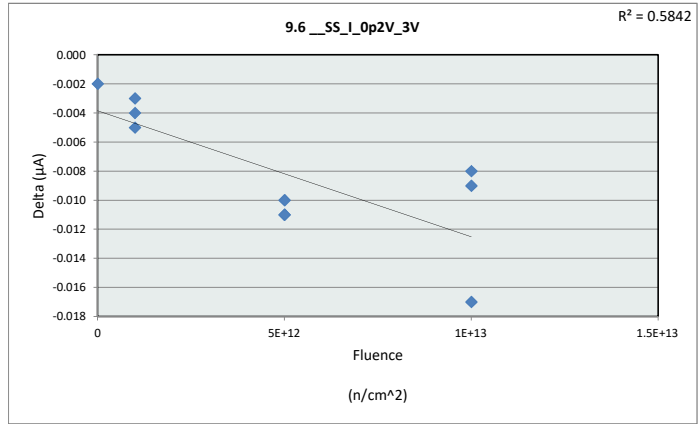
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	181.981	181.361	183.430	178.080
Average	181.981	182.784	189.256	183.282
Max	181.981	184.573	194.716	186.679
UL	235.000	235.000	235.000	235.000



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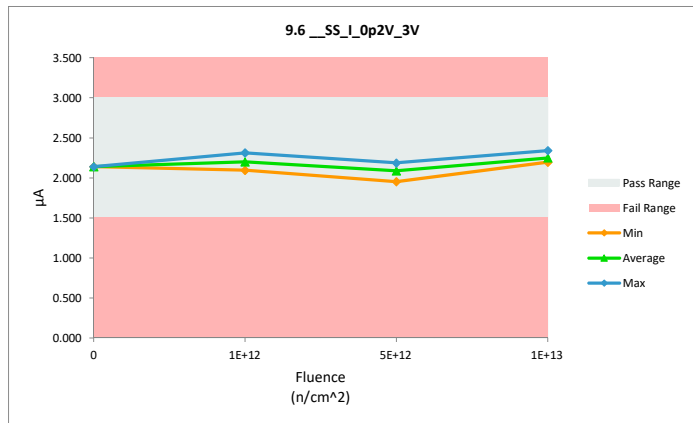
9.6 __SS_I_0p2V_3V	
Test Site	
Tester	
Test Number	
Unit	μA μA
Max Limit	3 3
Min Limit	1.5 1.5

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	2.142	2.140	-0.002
1E+12	2	2.194	2.189	-0.005
1E+12	3	2.317	2.314	-0.003
1E+12	4	2.100	2.096	-0.004
5E+12	5	2.136	2.125	-0.011
5E+12	6	2.198	2.187	-0.011
5E+12	7	1.964	1.954	-0.010
1E+13	8	2.220	2.212	-0.008
1E+13	9	2.205	2.196	-0.009
1E+13	10	2.358	2.341	-0.017
	Max	2.358	2.341	-0.002
	Average	2.183	2.175	-0.008
	Min	1.964	1.954	-0.017
	Std Dev	0.110	0.109	0.005



9.6 __SS_I_0p2V_3V	
Test Site	
Tester	
Test Number	
Max Limit	3 μA
Min Limit	1.5 μA

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.500	1.500	1.500	1.500
Min	2.140	2.096	1.954	2.196
Average	2.140	2.200	2.089	2.250
Max	2.140	2.314	2.187	2.341
UL	3.000	3.000	3.000	3.000

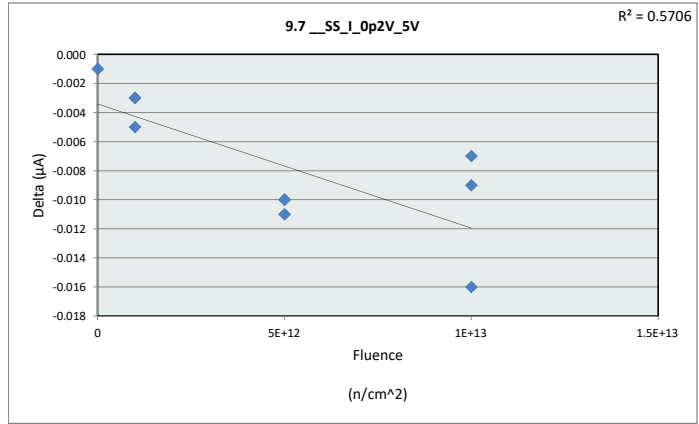


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		9.7 __SS_I_0p2V_5V	
Test Site			
Tester			
Test Number			
Unit		µA	µA
Max Limit		3	3
Min Limit		1.5	1.5

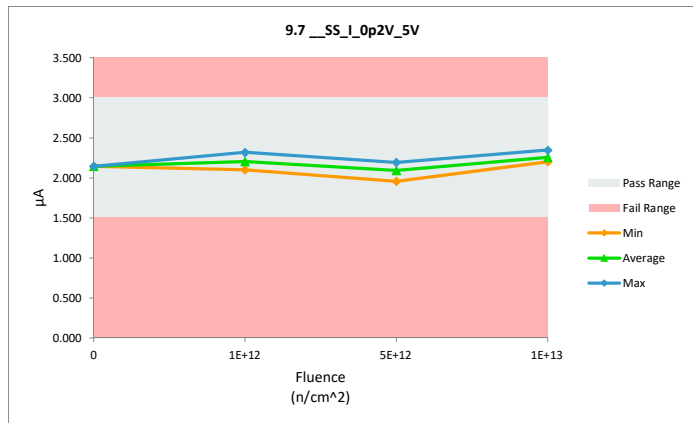
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	2.146	2.145	-0.001
1E+12	2	2.199	2.194	-0.005
1E+12	3	2.322	2.319	-0.003
1E+12	4	2.104	2.101	-0.003
5E+12	5	2.140	2.130	-0.010
5E+12	6	2.203	2.193	-0.010
5E+12	7	1.969	1.958	-0.011
1E+13	8	2.225	2.218	-0.007
1E+13	9	2.211	2.202	-0.009
1E+13	10	2.363	2.347	-0.016

Max	2.363	2.347	-0.001
Average	2.188	2.181	-0.007
Min	1.969	1.958	-0.016
Std Dev	0.111	0.110	0.005



		9.7 __SS_I_0p2V_5V	
Test Site			
Tester			
Test Number			
Max Limit		3	µA
Min Limit		1.5	µA

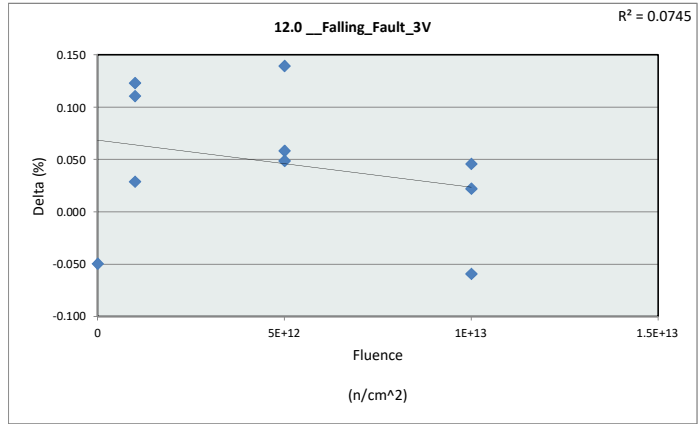
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	1.500	1.500	1.500	1.500
Min	2.145	2.101	1.958	2.202
Average	2.145	2.205	2.094	2.256
Max	2.145	2.319	2.193	2.347
UL	3.000	3.000	3.000	3.000



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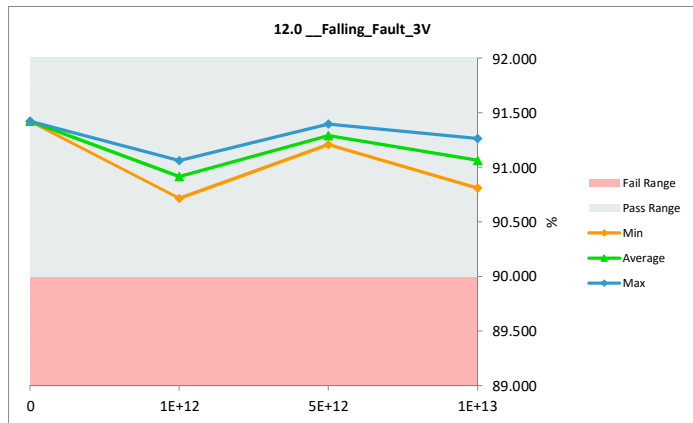
12.0 __Falling_Fault_3V		
Test Site		
Tester		
Test Number		
Unit	%	%
Max Limit		
Min Limit	90	90

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	91.471	91.422	-0.050
1E+12	2	90.951	91.061	0.111
1E+12	3	90.843	90.966	0.123
1E+12	4	90.686	90.715	0.029
5E+12	5	91.208	91.266	0.058
5E+12	6	91.068	91.207	0.139
5E+12	7	91.347	91.396	0.049
1E+13	8	91.216	91.262	0.046
1E+13	9	91.175	91.116	-0.059
1E+13	10	90.788	90.810	0.022
Max		91.471	91.422	0.139
Average		91.075	91.122	0.047
Min		90.686	90.715	-0.059
Std Dev		0.254	0.237	0.067



12.0 __Falling_Fault_3V		
Test Site		
Tester		
Test Number		
Max Limit	%	%
Min Limit	90	%

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	90.000	90.000	90.000	90.000
Min	91.422	90.715	91.207	90.810
Average	91.422	90.914	91.290	91.063
Max	91.422	91.061	91.396	91.262
UL				

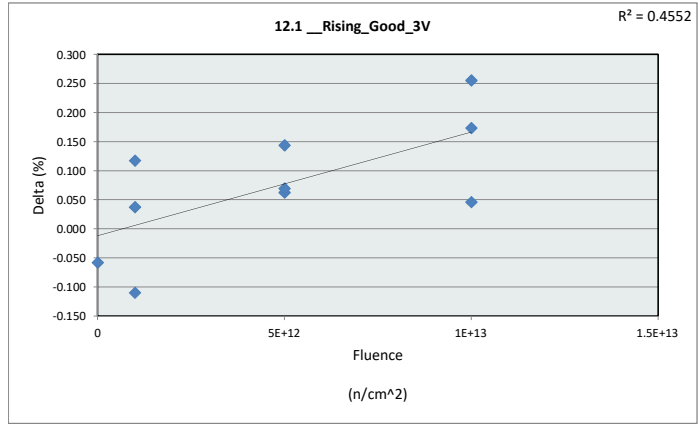


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12.1 __ Rising_Good_3V	
Test Site	
Tester	
Test Number	
Unit	% %
Max Limit	97 97
Min Limit	

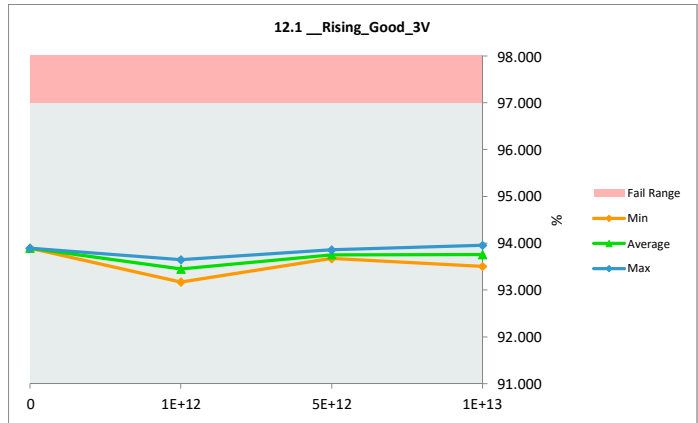
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	93.951	93.893	-0.058
1E+12	2	93.637	93.527	-0.110
1E+12	3	93.529	93.646	0.117
1E+12	4	93.133	93.171	0.037
5E+12	5	93.669	93.731	0.062
5E+12	6	93.529	93.673	0.144
5E+12	7	93.787	93.856	0.069
1E+13	8	93.909	93.955	0.046
1E+13	9	93.639	93.812	0.173
1E+13	10	93.249	93.504	0.255

Max	93.951	93.955	0.255
Average	93.603	93.677	0.074
Min	93.133	93.171	-0.110
Std Dev	0.261	0.233	0.107



12.1 __ Rising_Good_3V	
Test Site	
Tester	
Test Number	
Max Limit	97 %
Min Limit	%

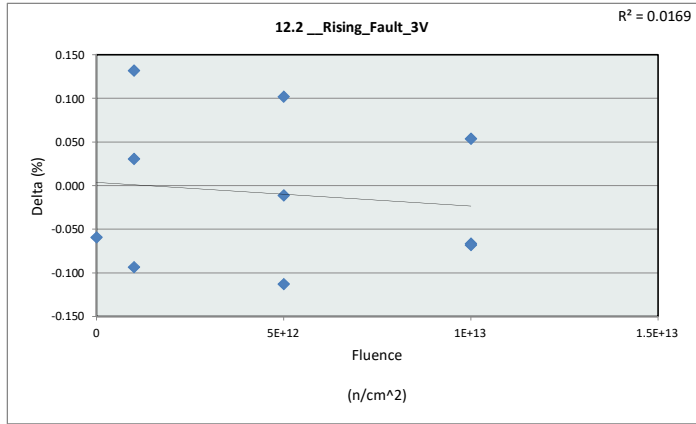
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	93.893	93.171	93.673	93.504
Average	93.893	93.448	93.753	93.757
Max	93.893	93.646	93.856	93.955
UL	97.000	97.000	97.000	97.000



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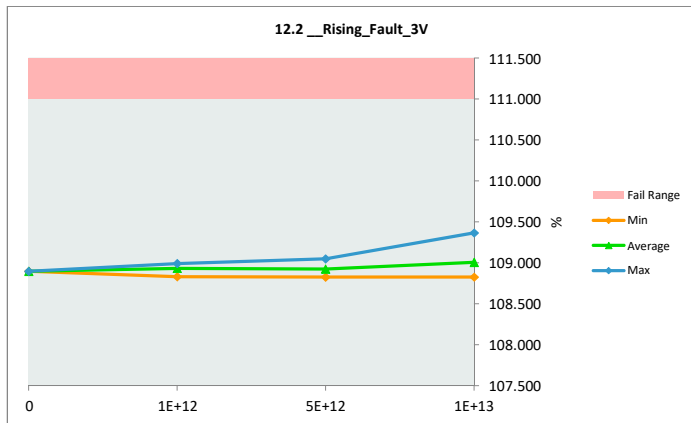
12.2 __ Rising_Fault_3V	
Test Site	
Tester	
Test Number	
Unit	%
Max Limit	111
Min Limit	111

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	108.956	108.896	-0.059
1E+12	2	109.084	108.991	-0.093
1E+12	3	108.697	108.829	0.132
1E+12	4	108.947	108.978	0.031
5E+12	5	108.938	108.826	-0.113
5E+12	6	108.911	108.900	-0.011
5E+12	7	108.945	109.047	0.102
1E+13	8	108.892	108.826	-0.066
1E+13	9	109.312	109.365	0.054
1E+13	10	108.896	108.827	-0.068
Max		109.312	109.365	0.132
Average		108.958	108.948	-0.009
Min		108.697	108.826	-0.113
Std Dev		0.156	0.167	0.085



12.2 __ Rising_Fault_3V	
Test Site	
Tester	
Test Number	
Max Limit	111 %
Min Limit	%

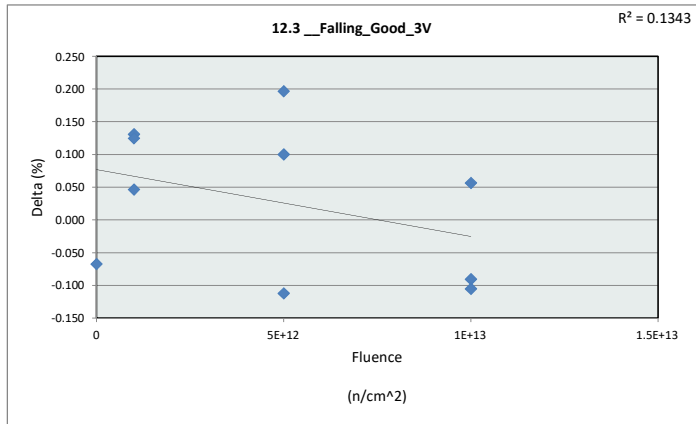
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	108.896	108.829	108.826	108.826
Average	108.896	108.932	108.924	109.006
Max	108.896	108.991	109.047	109.365
UL	111.000	111.000	111.000	111.000



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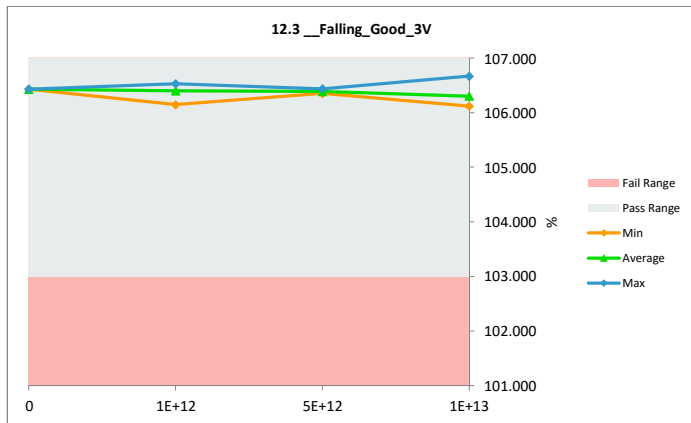
12.3 __Falling_Good_3V		
Test Site		
Tester		
Test Number		
Unit	%	%
Max Limit		
Min Limit	103	103

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	106.497	106.429	-0.068
1E+12	2	106.396	106.527	0.131
1E+12	3	106.021	106.145	0.125
1E+12	4	106.476	106.522	0.046
5E+12	5	106.249	106.349	0.100
5E+12	6	106.238	106.435	0.197
5E+12	7	106.483	106.371	-0.112
1E+13	8	106.213	106.122	-0.090
1E+13	9	106.610	106.667	0.056
1E+13	10	106.222	106.116	-0.105
	Max	106.610	106.667	0.197
	Average	106.340	106.368	0.028
	Min	106.021	106.116	-0.112
	Std Dev	0.180	0.189	0.113



12.3 __Falling_Good_3V		
Test Site		
Tester		
Test Number		
Max Limit	%	%
Min Limit	103	%

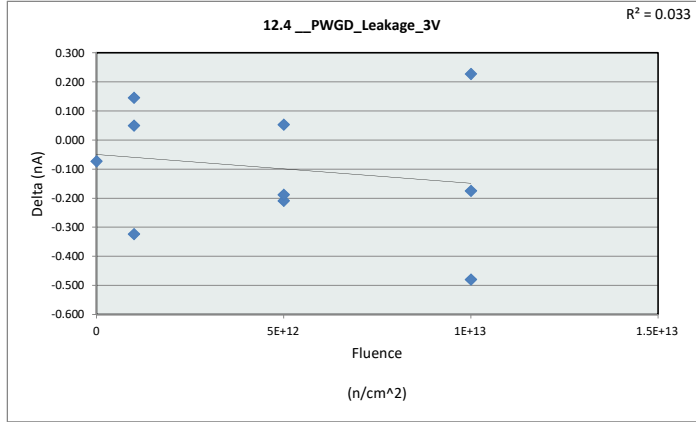
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	103.000	103.000	103.000	103.000
Min	106.429	106.145	106.349	106.116
Average	106.429	106.398	106.385	106.302
Max	106.429	106.527	106.435	106.667
UL				



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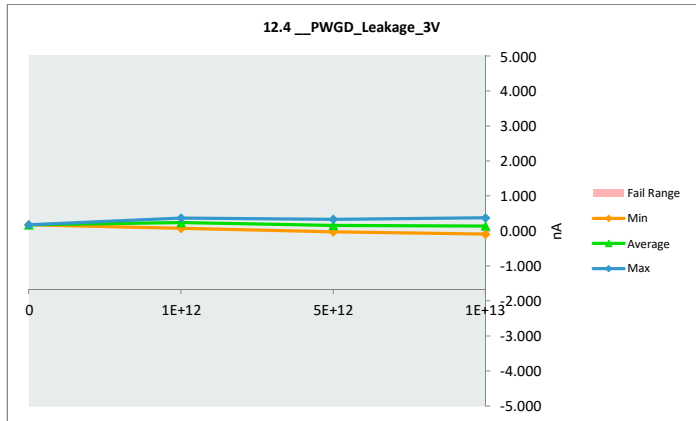
12.4 __PWGD_Leakage_3V	
Test Site	
Tester	
Test Number	
Unit	nA nA
Max Limit	181 181
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	0.252	0.179	-0.073
1E+12	2	0.394	0.071	-0.324
1E+12	3	0.228	0.278	0.050
1E+12	4	0.222	0.367	0.145
5E+12	5	0.181	-0.028	-0.209
5E+12	6	0.114	0.167	0.053
5E+12	7	0.523	0.335	-0.188
1E+13	8	0.322	0.147	-0.175
1E+13	9	0.146	0.373	0.227
1E+13	10	0.388	-0.092	-0.480
Max		0.523	0.373	0.227
Average		0.277	0.180	-0.097
Min		0.114	-0.092	-0.480
Std Dev		0.128	0.162	0.219



12.4 __PWGD_Leakage_3V	
Test Site	
Tester	
Test Number	
Max Limit	181 nA
Min Limit	

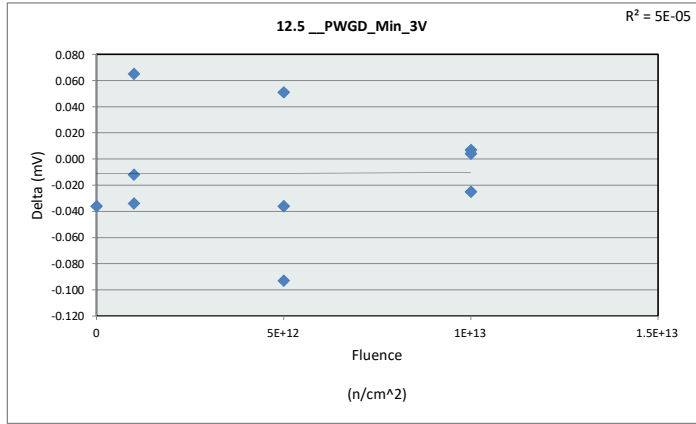
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	0.179	0.071	-0.028	-0.092
Average	0.179	0.239	0.158	0.142
Max	0.179	0.367	0.335	0.373
UL	181.000	181.000	181.000	181.000



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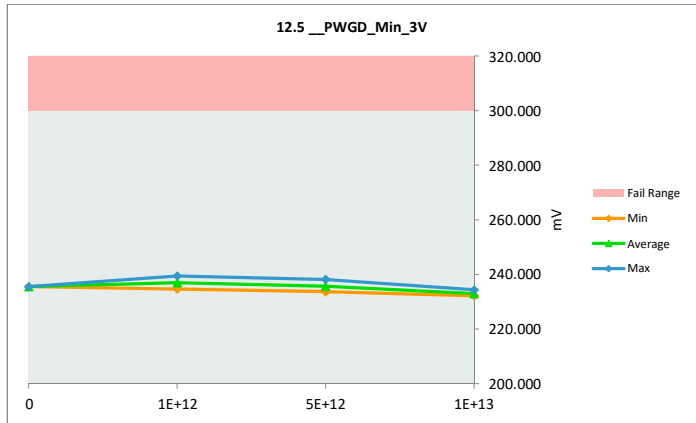
12.5 __PWGD_Min_3V	
Test Site	
Tester	
Test Number	
Unit	mV mV
Max Limit	300 300
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	235.554	235.518	-0.036
1E+12	2	236.658	236.624	-0.034
1E+12	3	239.400	239.465	0.065
1E+12	4	234.665	234.653	-0.012
5E+12	5	233.592	233.643	0.051
5E+12	6	235.307	235.214	-0.093
5E+12	7	238.216	238.180	-0.036
1E+13	8	232.349	232.356	0.007
1E+13	9	232.181	232.156	-0.025
1E+13	10	234.370	234.374	0.004
Max		239.400	239.465	0.065
Average		235.229	235.218	-0.011
Min		232.181	232.156	-0.093
Std Dev		2.352	2.356	0.046



12.5 __PWGD_Min_3V	
Test Site	
Tester	
Test Number	
Max Limit	300 mV
Min Limit	

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	235.518	234.653	233.643	232.156
Average	235.518	236.914	235.679	232.962
Max	235.518	239.465	238.180	234.374
UL	300.000	300.000	300.000	300.000

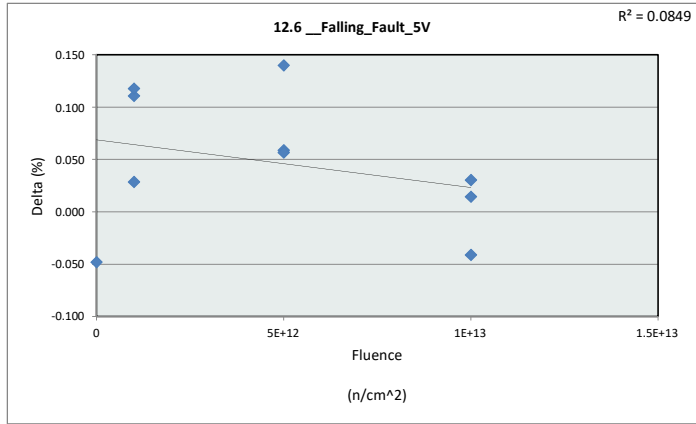


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12.6 __Falling_Fault_5V		
Test Site		
Tester		
Test Number		
Unit	%	%
Max Limit		
Min Limit	90	90

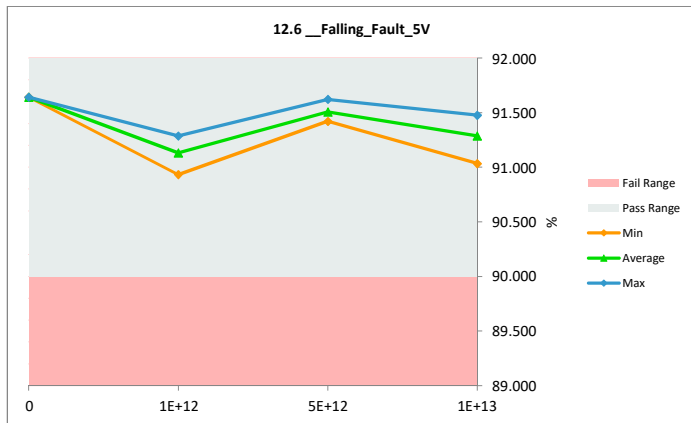
Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	91.688	91.640	-0.048
1E+12	2	91.175	91.285	0.111
1E+12	3	91.059	91.176	0.118
1E+12	4	90.904	90.932	0.029
5E+12	5	91.415	91.474	0.059
5E+12	6	91.280	91.420	0.140
5E+12	7	91.564	91.621	0.057
1E+13	8	91.446	91.476	0.030
1E+13	9	91.388	91.346	-0.041
1E+13	10	91.019	91.033	0.015

Max	91.688	91.640	0.140
Average	91.294	91.341	0.047
Min	90.904	90.932	-0.048
Std Dev	0.252	0.236	0.064



12.6 __Falling_Fault_5V		
Test Site		
Tester		
Test Number		
Max Limit	%	%
Min Limit	90	%

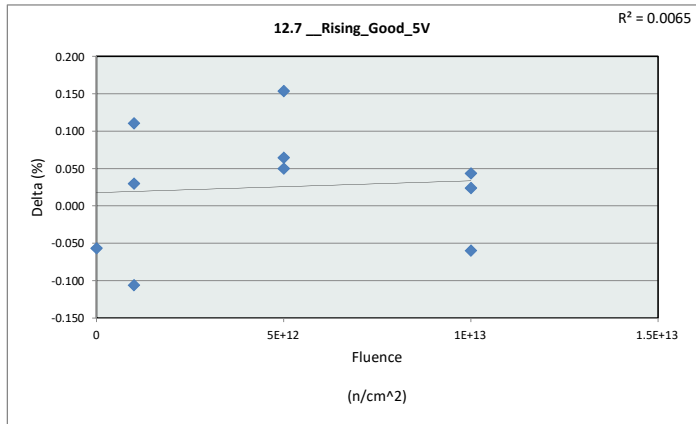
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	90.000	90.000	90.000	90.000
Min	91.640	90.932	91.420	91.033
Average	91.640	91.131	91.505	91.285
Max	91.640	91.286	91.621	91.476
UL				



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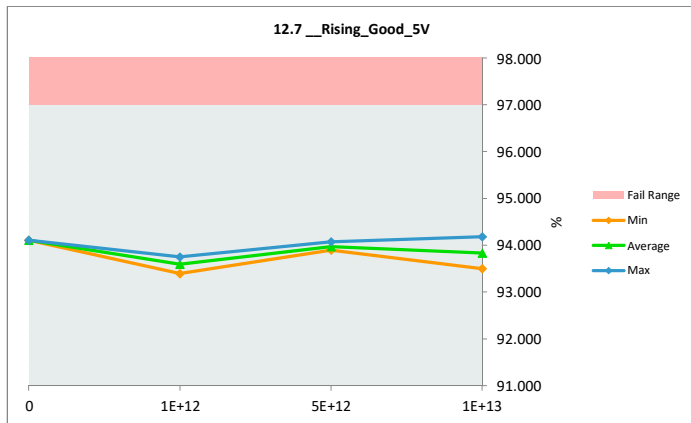
12.7 __ Rising_Good_5V	
Test Site	
Tester	
Test Number	
Unit	%
Max Limit	97
Min Limit	97

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	94.164	94.107	-0.057
1E+12	2	93.641	93.751	0.110
1E+12	3	93.741	93.635	-0.106
1E+12	4	93.364	93.393	0.030
5E+12	5	93.895	93.945	0.050
5E+12	6	93.741	93.895	0.154
5E+12	7	94.008	94.072	0.064
1E+13	8	94.136	94.180	0.044
1E+13	9	93.872	93.812	-0.060
1E+13	10	93.475	93.499	0.024
Max		94.164	94.180	0.154
Average		93.804	93.829	0.025
Min		93.364	93.393	-0.106
Std Dev		0.265	0.263	0.080



12.7 __ Rising_Good_5V	
Test Site	
Tester	
Test Number	
Max Limit	97
Min Limit	%

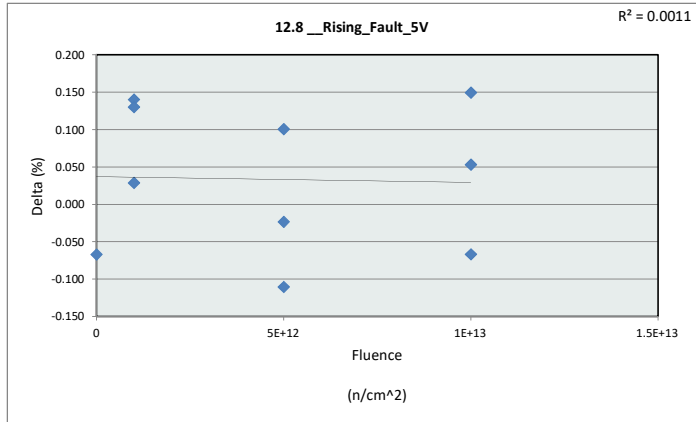
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	94.107	93.393	93.895	93.499
Average	94.107	93.593	93.971	93.830
Max	94.107	93.751	94.072	94.180
UL	97.000	97.000	97.000	97.000



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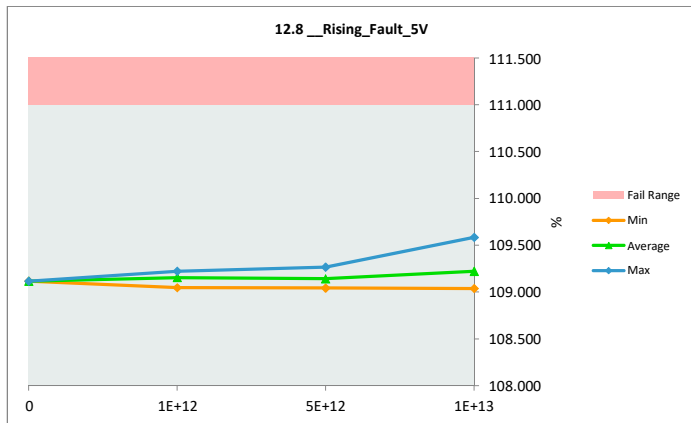
12.8 __ Rising_Fault_5V	
Test Site	
Tester	
Test Number	
Unit	%
Max Limit	111
Min Limit	111

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	109.184	109.117	-0.067
1E+12	2	109.082	109.222	0.140
1E+12	3	108.917	109.047	0.130
1E+12	4	109.166	109.195	0.029
5E+12	5	109.154	109.043	-0.110
5E+12	6	109.138	109.115	-0.023
5E+12	7	109.166	109.267	0.101
1E+13	8	109.104	109.038	-0.067
1E+13	9	109.532	109.585	0.053
1E+13	10	108.890	109.039	0.149
Max		109.532	109.585	0.149
Average		109.133	109.167	0.033
Min		108.890	109.038	-0.110
Std Dev		0.174	0.169	0.096



12.8 __ Rising_Fault_5V	
Test Site	
Tester	
Test Number	
Max Limit	111 %
Min Limit	%

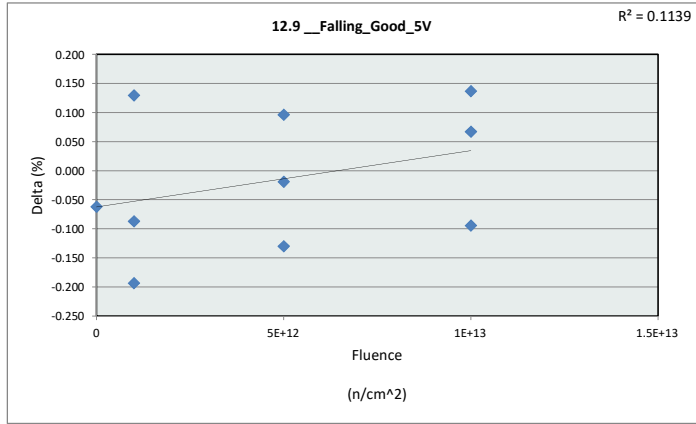
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	109.117	109.047	109.043	109.038
Average	109.117	109.155	109.142	109.221
Max	109.117	109.222	109.267	109.585
UL	111.000	111.000	111.000	111.000



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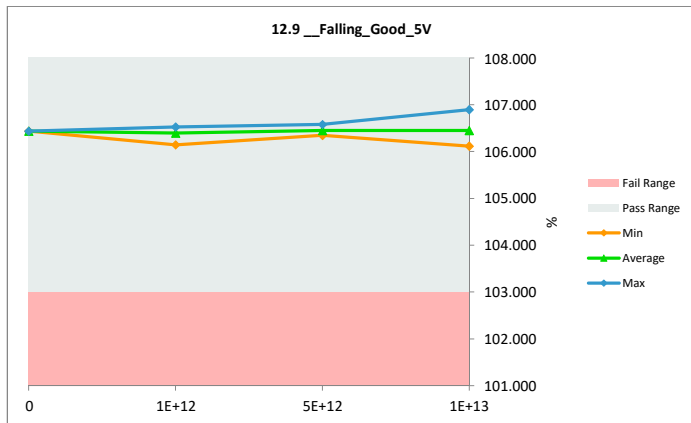
12.9 __Falling_Good_5V		
Test Site		
Tester		
Test Number		
Unit	%	%
Max Limit		
Min Limit	103	103

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	106.497	106.435	-0.062
1E+12	2	106.396	106.525	0.129
1E+12	3	106.233	106.145	-0.087
1E+12	4	106.711	106.518	-0.193
5E+12	5	106.475	106.345	-0.130
5E+12	6	106.452	106.433	-0.019
5E+12	7	106.485	106.581	0.096
1E+13	8	106.213	106.118	-0.094
1E+13	9	106.827	106.894	0.067
1E+13	10	106.209	106.345	0.136
Max		106.827	106.894	0.136
Average		106.450	106.434	-0.016
Min		106.209	106.118	-0.193
Std Dev		0.205	0.223	0.116



12.9 __Falling_Good_5V		
Test Site		
Tester		
Test Number		
Max Limit	%	%
Min Limit	103	%

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL	103.000	103.000	103.000	103.000
Min	106.435	106.145	106.345	106.118
Average	106.435	106.396	106.453	106.452
Max	106.435	106.525	106.581	106.894
UL				



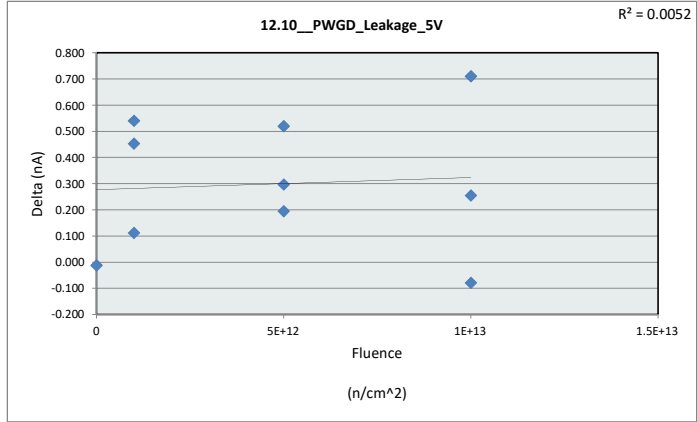
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12.10_PWGD_Leakage_5V

Test Site		
Tester		
Test Number		
Unit	nA	nA
Max Limit	181	181
Min Limit		

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	0.390	0.378	-0.012
1E+12	2	0.357	0.468	0.112
1E+12	3	0.350	0.803	0.453
1E+12	4	0.169	0.709	0.540
5E+12	5	0.257	0.452	0.195
5E+12	6	0.119	0.639	0.520
5E+12	7	0.616	0.913	0.297
1E+13	8	0.389	0.644	0.255
1E+13	9	0.157	0.868	0.711
1E+13	10	0.494	0.415	-0.079

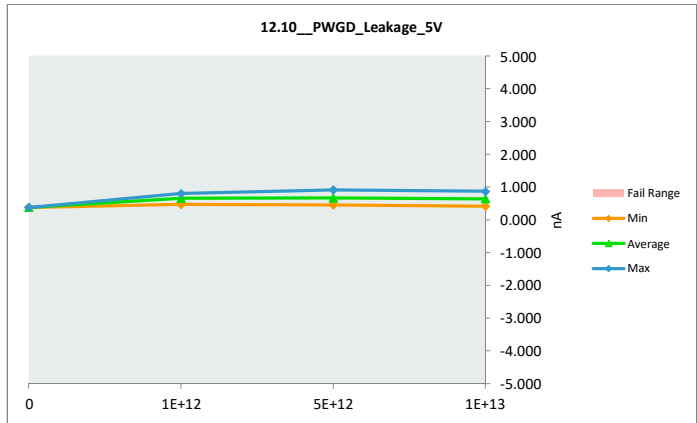
Max	0.616	0.913	0.711
Average	0.330	0.629	0.299
Min	0.119	0.378	-0.079
Std Dev	0.157	0.194	0.255



12.10_PWGD_Leakage_5V

Test Site		
Tester		
Test Number		
Max Limit	181	nA
Min Limit		nA

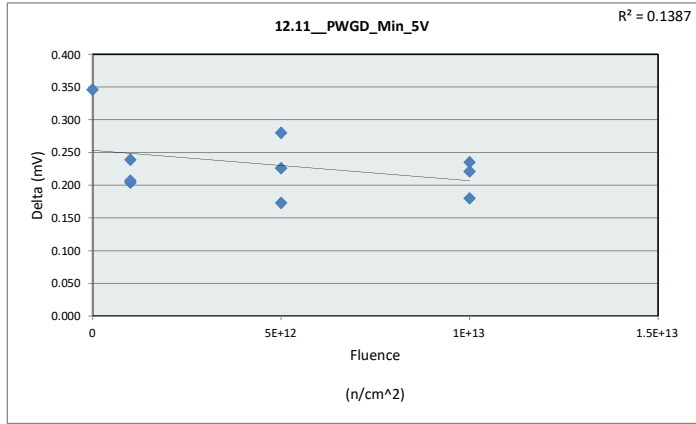
Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	0.378	0.468	0.452	0.415
Average	0.378	0.660	0.668	0.642
Max	0.378	0.803	0.913	0.868
UL	181.000	181.000	181.000	181.000



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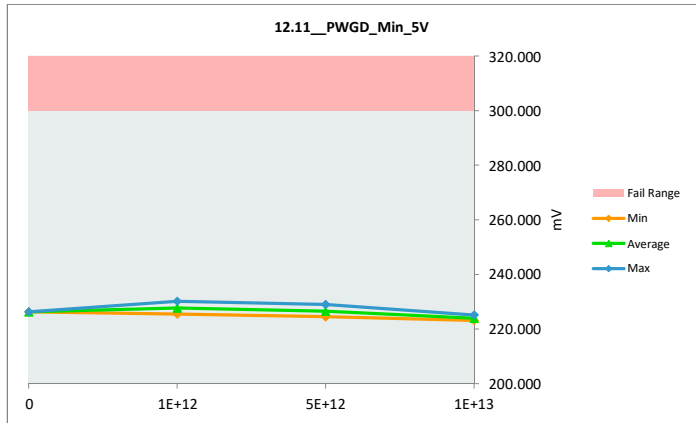
12.11_PWGD_Min_5V	
Test Site	
Tester	
Test Number	
Unit	mV mV
Max Limit	300 300
Min Limit	

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	226.002	226.348	0.346
1E+12	2	227.262	227.466	0.204
1E+12	3	229.961	230.168	0.207
1E+12	4	225.251	225.490	0.239
5E+12	5	224.265	224.491	0.226
5E+12	6	225.867	226.040	0.173
5E+12	7	228.683	228.963	0.280
1E+13	8	223.226	223.447	0.221
1E+13	9	222.943	223.178	0.235
1E+13	10	224.993	225.173	0.180
	Max	229.961	230.168	0.346
	Average	225.845	226.076	0.231
	Min	222.943	223.178	0.173
	Std Dev	2.258	2.262	0.051



12.11_PWGD_Min_5V	
Test Site	
Tester	
Test Number	
Max Limit	300 mV
Min Limit	mV

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	226.348	225.490	224.491	223.178
Average	226.348	227.708	226.498	223.933
Max	226.348	230.168	228.963	225.173
UL	300.000	300.000	300.000	300.000



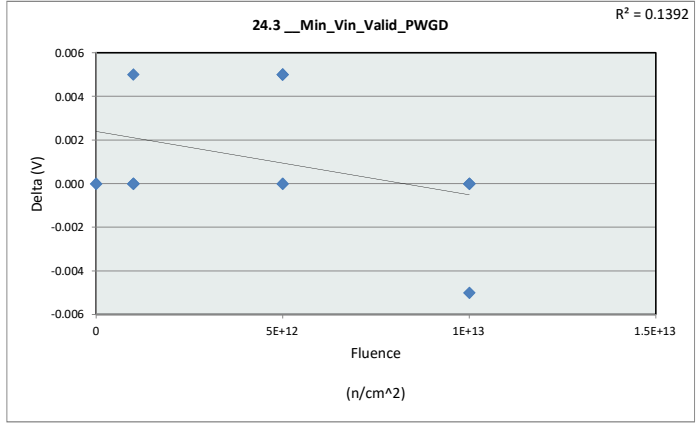
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24.3 __Min_Vin_Valid_PWGD

Test Site		
Tester		
Test Number		
Unit	V	V
Max Limit	1	1
Min Limit		

Fluence (n/cm ²)	Serial #	PRE	POST	Delta
0	1	0.553	0.553	0.000
1E+12	2	0.553	0.553	0.000
1E+12	3	0.553	0.553	0.000
1E+12	4	0.548	0.553	0.005
5E+12	5	0.548	0.553	0.005
5E+12	6	0.553	0.553	0.000
5E+12	7	0.548	0.553	0.005
1E+13	8	0.543	0.543	0.000
1E+13	9	0.543	0.543	0.000
1E+13	10	0.553	0.548	-0.005

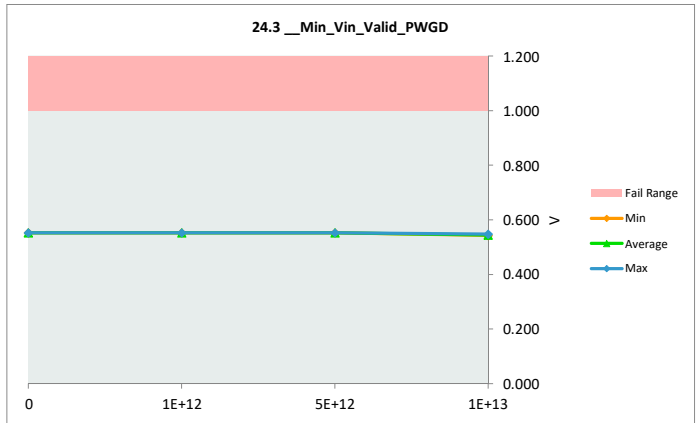
Max	0.553	0.553	0.005
Average	0.549	0.550	0.001
Min	0.543	0.543	-0.005
Std Dev	0.004	0.004	0.003



24.3 __Min_Vin_Valid_PWGD

Test Site		
Tester		
Test Number		
Max Limit	1	V
Min Limit		V

Fluence (n/cm ²)	0	1E+12	5E+12	1E+13
LL				
Min	0.553	0.553	0.553	0.543
Average	0.553	0.553	0.553	0.544
Max	0.553	0.553	0.553	0.548
UL	1.000	1.000	1.000	1.000



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