

LMH5401-SP (5962R1721401VXC) Neutron Displacement Damage Characterization

ABSTRACT

This report presents the effect of neutron displacement damage (NDD) on the LMH5401-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 fifteen units was exposed to radiation testing per (MIL-STD-883, Method 1017 for Neutron Irradiation) and an additional unirradiated sample device was used for correlation. All devices used in the experiment were from lot date code 1808A and assembly lot 8001081MMT. Electrical testing was performed at Texas Instruments before and after neutron irradiation using the production test program for 5962R1721401VXC.

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1 Overview

The LMH5401-SP is a very high-performance, radiation hardened, differential amplifier optimized for radio frequency (RF), intermediate frequency (IF), or high-speed, dc-coupled, time-domain applications. The device is ideal for dc- or ac-coupled applications that may require a single-ended-to-differential (SEDE) conversion when driving an analog-to-digital converter (ADC). The LMH5401-SP generates very low levels of second- and third-order distortion when operating in SE-DE or differential-to-differential (DEDE) mode. General device information and testing conditions are listed in [Table 1](#).

Table 1. Overview Information

TI Part Number	LMH5401-SP
SMD Number	5962-17214
Device Function	Low-Noise, Low-Power, Gain-Configurable Fully Differential Amplifier
Die Name	GHLMH5401AH1
Technology	CBICMOS
A/T Lot Number / Date Code	8001081MMT / 1808A
Unbiased Quantity Tested	15
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 LMH5401-SP was electrically pre-tested using the production automated test equipment program. General test procedures were IAW MIL-STD-883, Method 1017 for Neutron Irradiation of LMH5401-SP as modified in [Table 2](#).

Table 2. Neutron Irradiation Conditions

Group	Sample Qty	Neutron Fluence (n/cm ²)	Bias
A	5	1.0×10^{12}	Unbiased
B	5	5.0×10^{12}	Unbiased
C	5	1.0×10^{13}	Unbiased



Figure 1. LMH5401-SP Device

3 Facility

The University of Massachusetts's Fast Neutron Irradiation (FNI) facility is an experimental facility replaces three beam ports that originally existed on the left side of the research reactor. It is designed to give a fast flux level $\geq 10^{11}$ n/cm²-s, with relatively low thermal fluence and gamma dose rates. Samples with a cross-sectional area as large as 30 cm (12 in) x 30 cm (12 in) and up to 15 cm (6 in) thick can be irradiated. The fast neutron flux is designed to be nearly uniform over the 30 cm (12 in) x 30 cm (12 in) area facing the core, and the fast fluence variation through the sample thickness is minimized via a single 180° rotation of the sample canister at the midpoint of the irradiation period. The FNI facility offers a significantly larger sample volume than previously available within the University of Massachusetts Lowell Research Reactor (UMLRR). The fluences are calculated based on 1-MeV equivalences.

Detailed information of the radiation facility is available at the following link:
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 data sheet (SBOS849) limits and within the production test limits, which are guard-banded from the data sheet limits for all exposure levels. The following list is an overview of the largest drifts seen post-test and on critical parameters. The full parameter list and graphs are found in Appendix A.

The largest shifts seen for various parameters are shown in the following list:

1. 2200.11__IOD_NEG_OUT_SINK_3V. Pre readings are approximately 2.019 mV, Post readings are approximately -2.071 mV. This accounts for < 6% shift of Fail Limit Range.

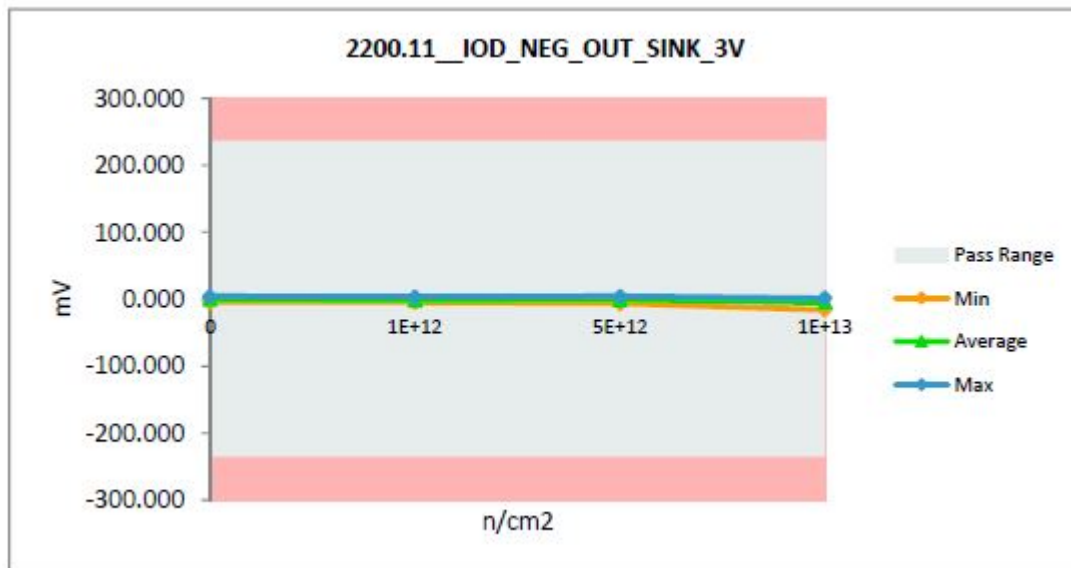


Figure 2. 2200.11__IOD_NEG_OUT_SINK_3V NDD Graph

2. 1600.7__IOD_POS_OUT_SOURCE_5V. Pre readings are approximately 22.451 mV, Post readings are approximately 12.673 mV. This accounts for < 4% shift of Fail Limit Range.

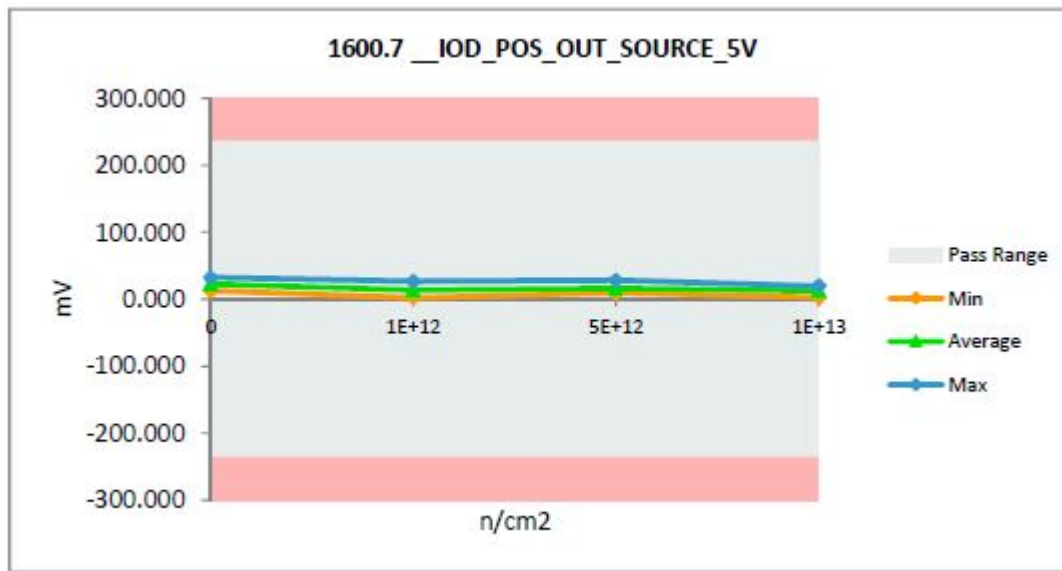


Figure 3. 600.7 __IOD_POS_OUT_SOURCE_5V NDD Graph

- 2200.5 __IOD_POS_OUT_NO_LOAD_3V. Pre readings are approximately -0.086 mV, Post readings are approximately -1.386 mV. This accounts for $< 3\%$ shift of Fail Limit Range.

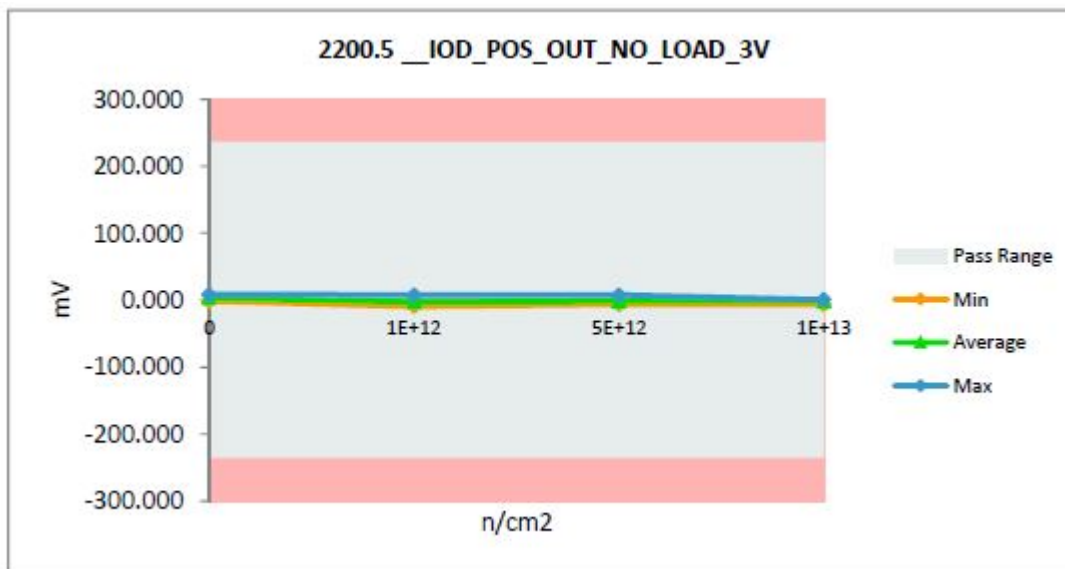


Figure 4. 2200.5 __IOD_POS_OUT_NO_LOAD_3V NDD Graph

Critical parameters such as PSRR and IQ are well within the datasheet limit with minimal drift, $< 3\%$ which accounts for $< 2\%$ of the Fail Limit Range

The Fail Limit range is a guard-banded limit that Texas Instruments puts into test programs to insure device performance. It is always set within the data sheet limits to insure the device meets all data sheet parameters.

Table 3 lists the full LMH5401-SP specification compliance matrix.

Table 3. LMH5401-SP Specification Compliance Matrix

PARAMETER		TEST CONDITIONS	LMH5401 Data Sheet SBOS849 - December 2017				TEST #	
SYMBOL	DESCRIPTION		MIN	TYP	MAX	UNIT	VS = 5 V	VS = 3 V
Output resistance	Resistance measured at output pins		6.6		12.25	Ω	1400.1, 1400.2	2000.1, 2000.2
CMRR	Common-mode rejection ratio	Differential, 1-Vpp input shift, dc		-72		dB	1500.1	2100.1
VOUT	Output voltage	Out+, high	(VS+)-1.3	(VS+)-1.1		V	1600.3	2200.3
		Out-, high	(VS+)-1.3	(VS+)-1.1		V	1600.4	2200.4
		Out+, low	(VS-)+1.3	(VS-)+1.1		V	1600.1	2200.1
		Out-, low	(VS-)+1.3	(VS-)+1.1		V	1600.2	2200.2
IDD	Differential output current	3 V, VOUT = 0 V	30	40		mA	—	2200.5, 2200.6, 2200.7, 2200.8, 2200.9, 2200.10, 2200.11, 2200.12, 2200.13, 2200.14
		5 V, VOUT = 0 V	40	50			1600.5, 1600.6, 1600.7, 1600.8, 1600.9, 1600.10, 1600.11, 1600.12, 1600.13, 1600.14	—
PSRR	Power-supply rejection ratio	VS+		-82	-48	dB	1700.1	2300.1
		VS-		-80	-44		1700.2	2300.2
IQ	Quiescent current	3 V, PD = 0 (part enabled)	44	54	63	mA	—	2300.3, 2300.4
		3 V, PD = 1 (part disabled)	1	1.6	5		—	2300.5, 2300.6, 2500.2
		5 V, PD = 0 (part enabled)	46	60	78		1700.3, 1700.4	—
		5 V, PD = 1 (part disabled)	1	3	6		1700.5, 1700.6, 1900.2	—
VCM gain	Output common mode gain	VCM gain = 0 V	0.98	1	1.01	V/V	1800.1, 1800.2, 1800.3	2400.1, 2400.2, 2400.3
VT	Enable or disable threshold voltage		0.9	1.1	1.2	V	1900.1	2500.1
IPD	Power down bias current	PD = 2.5 V		10	±100	uA	1900.3	2500.3
IIB	Input bias current			70	150	uA	2700.1, 2700.2	2700.4, 2700.5
VIO	Input offset voltage			±0.5	±5	mV	2700.3	2700.6
IIO	Input offset current			±1	±20	uA	2700.7	2700.8

Test Results

This appendix contains the detailed test results.

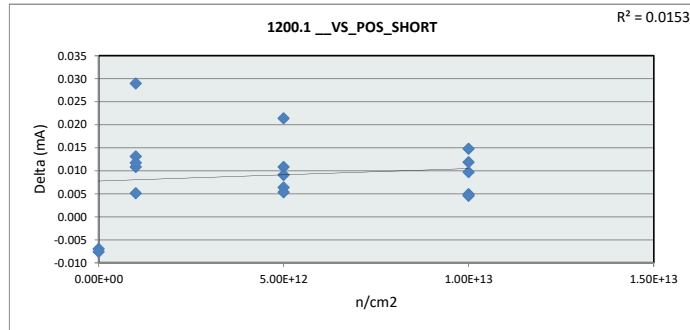
Delta Threshold 10.00%

NDD Report
LMH5401-SP

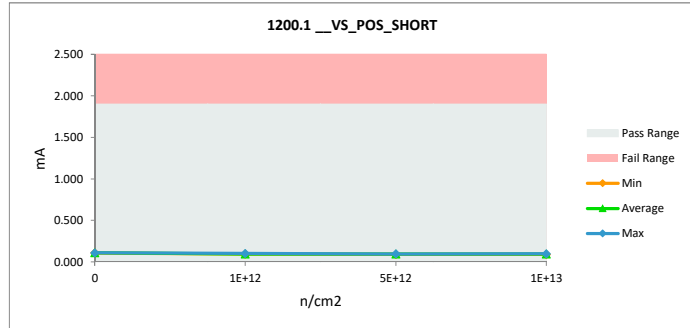
NDD Report LMH5401-SP

1200.1 VS POS_SHORT		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	1.9	1.9
Min Limit	0.001	0.001

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.100	0.107	-0.007
0	106	0.102	0.109	-0.008
1E+12	1	0.123	0.094	0.029
1E+12	2	0.102	0.092	0.011
1E+12	3	0.105	0.091	0.013
1E+12	4	0.105	0.099	0.005
1E+12	5	0.104	0.092	0.012
5E+12	13	0.113	0.092	0.021
5E+12	14	0.101	0.092	0.009
5E+12	15	0.100	0.094	0.006
5E+12	16	0.100	0.095	0.005
5E+12	17	0.101	0.090	0.011
1E+13	6	0.101	0.096	0.005
1E+13	7	0.101	0.096	0.005
1E+13	9	0.101	0.091	0.010
1E+13	10	0.108	0.093	0.015
1E+13	12	0.102	0.091	0.012
Max		0.123	0.109	0.029
Average		0.104	0.095	0.009
Min		0.100	0.090	-0.008
Std Dev		0.006	0.006	0.009

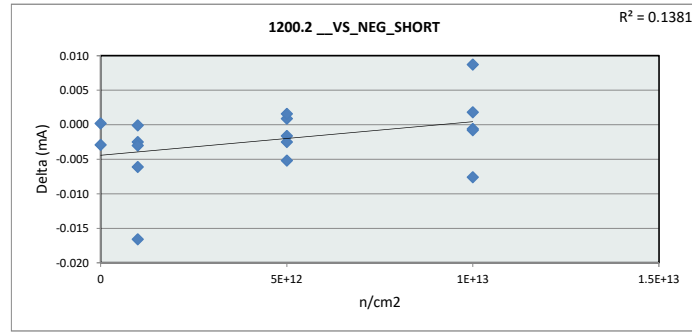


1200.1 VS POS_SHORT				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	1.9 mA			
Min Limit	0.001 mA			
n/cm2	0	1E+12	5E+12	1E+13
LL	0.001	0.001	0.001	0.001
Min	0.107	0.091	0.090	0.091
Average	0.108	0.094	0.093	0.093
Max	0.109	0.099	0.095	0.096
UL	1.900	1.900	1.900	1.900

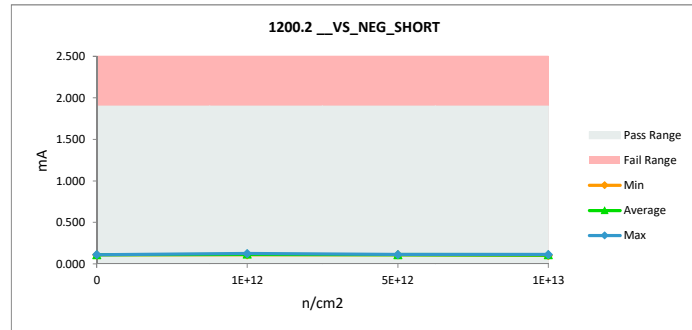


NDD Report
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1200.2 VS NEG_SHORT				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit	mA	mA		
Max Limit	1.9	1.9		
Min Limit	0.001	0.001		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.109	0.112	-0.003
0	106	0.107	0.107	0.000
1E+12	1	0.107	0.109	-0.002
1E+12	2	0.108	0.125	-0.017
1E+12	3	0.108	0.108	0.000
1E+12	4	0.111	0.117	-0.006
1E+12	5	0.108	0.111	-0.003
5E+12	13	0.109	0.108	0.001
5E+12	14	0.107	0.108	-0.002
5E+12	15	0.109	0.107	0.002
5E+12	16	0.110	0.112	-0.002
5E+12	17	0.108	0.113	-0.005
1E+13	6	0.108	0.108	-0.001
1E+13	7	0.111	0.109	0.002
1E+13	9	0.108	0.108	-0.001
1E+13	10	0.105	0.113	-0.008
1E+13	12	0.110	0.101	0.009
Max		0.111	0.125	0.009
Average		0.108	0.110	-0.002
Min		0.105	0.101	-0.017
Std Dev		0.001	0.005	0.005



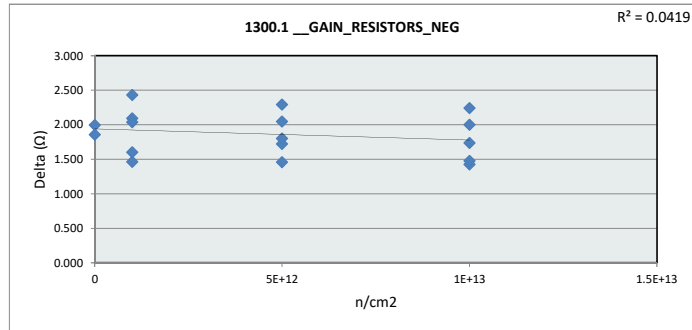
1200.2 VS NEG_SHORT				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	1.9	mA		
Min Limit	0.001	mA		
n/cm2	0	1E+12	5E+12	1E+13
LL	0.001	0.001	0.001	0.001
Min	0.107	0.108	0.107	0.101
Average	0.109	0.114	0.110	0.108
Max	0.112	0.125	0.113	0.113
UL	1.900	1.900	1.900	1.900



NDD Report
LMH5401-SP

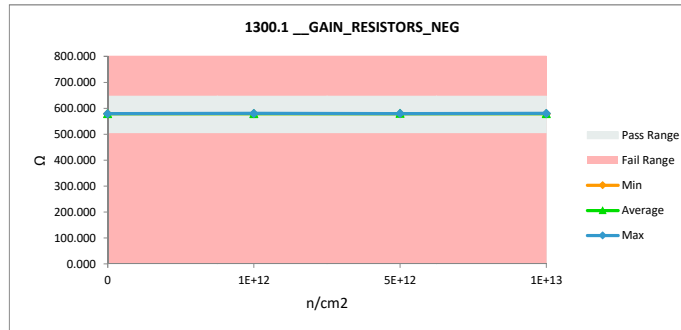
1300.1 GAIN_RESISTORS_NEG		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	Ω	Ω
Max Limit	646.25	646.25
Min Limit	503.75	503.75

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	581.055	579.058	1.997
0	106	581.047	579.190	1.858
1E+12	1	580.814	579.351	1.463
1E+12	2	581.608	579.514	2.094
1E+12	3	581.071	579.467	1.604
1E+12	4	581.382	578.949	2.433
1E+12	5	581.281	579.243	2.038
5E+12	13	581.359	579.313	2.046
5E+12	14	581.312	579.019	2.293
5E+12	15	581.265	579.545	1.721
5E+12	16	581.079	579.622	1.457
5E+12	17	581.499	579.700	1.799
1E+13	6	581.195	579.197	1.999
1E+13	7	581.063	579.637	1.426
1E+13	9	580.620	579.142	1.478
1E+13	10	581.047	579.312	1.735
1E+13	12	581.437	579.197	2.240
Max		581.608	579.700	2.433
Average		581.184	579.321	1.863
Min		580.620	578.949	1.426
Std Dev		0.249	0.228	0.314



1300.1 GAIN_RESISTORS_NEG		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	646.25	Ω
Min Limit	503.75	Ω

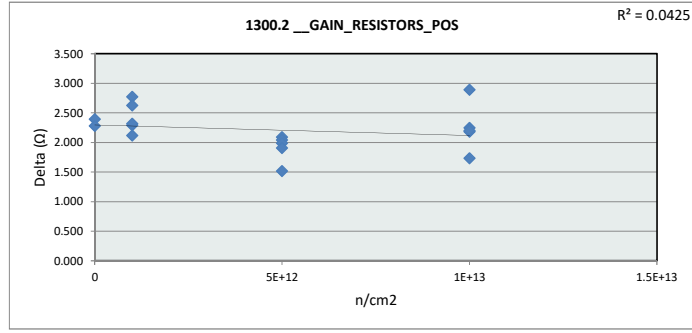
n/cm2	0	1E+12	5E+12	1E+13
LL	503.750	503.750	503.750	503.750
Min	579.058	578.949	579.019	579.142
Average	579.124	579.305	579.440	579.297
Max	579.190	579.514	579.700	579.637
UL	646.250	646.250	646.250	646.250



NDD Report
LMH5401-SP

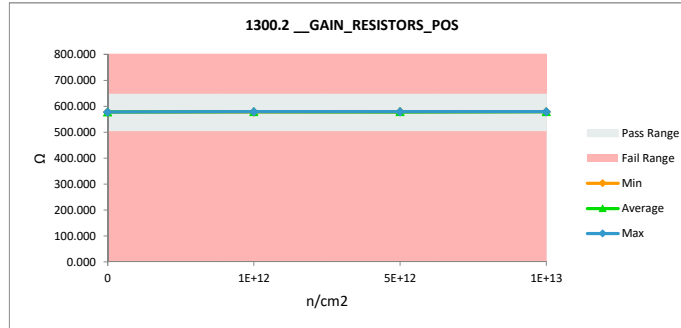
1300.2_GAIN_RESISTORS_POS		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	Ω	Ω
Max Limit	646.25	646.25
Min Limit	503.75	503.75

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	580.492	578.100	2.391
0	106	580.197	577.916	2.281
1E+12	1	580.802	578.034	2.769
1E+12	2	581.323	578.696	2.628
1E+12	3	580.507	578.388	2.119
1E+12	4	580.585	578.295	2.289
1E+12	5	580.810	578.495	2.315
5E+12	13	580.903	578.812	2.091
5E+12	14	580.500	578.457	2.042
5E+12	15	581.036	579.051	1.985
5E+12	16	580.531	578.626	1.904
5E+12	17	580.445	578.927	1.518
1E+13	6	580.950	578.704	2.246
1E+13	7	580.670	578.488	2.182
1E+13	9	580.601	578.403	2.197
1E+13	10	580.430	578.696	1.733
1E+13	12	581.502	578.611	2.891
Max		581.502	579.051	2.891
Average		580.723	578.512	2.211
Min		580.197	577.916	1.518
Std Dev		0.338	0.307	0.345



1300.2_GAIN_RESISTORS_P		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	646.25	Ω
Min Limit	503.75	Ω

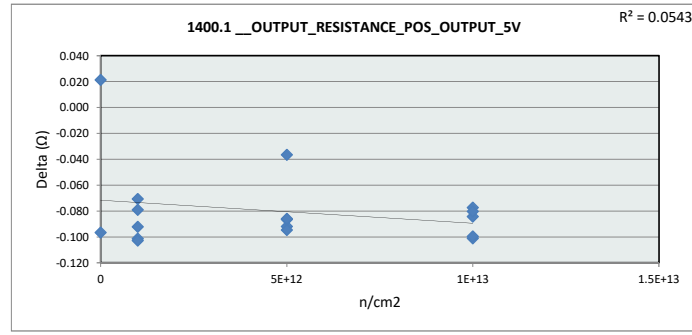
n/cm2	0	1E+12	5E+12	1E+13
LL	503.750	503.750	503.750	503.750
Min	577.916	578.034	578.457	578.403
Average	578.008	578.382	578.775	578.581
Max	578.100	578.696	579.051	578.704
UL	646.250	646.250	646.250	646.250



NDD Report
LMH5401-SP

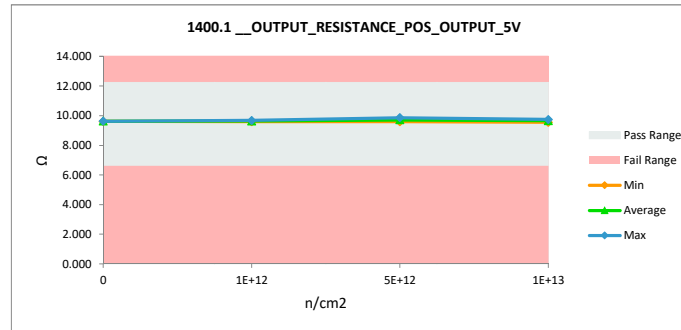
1400.1 OUTPUT RESISTANCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	Ω	Ω
Max Limit	12.25	12.25
Min Limit	6.6	6.6

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	9.519	9.616	-0.097
0	106	9.653	9.631	0.021
1E+12	1	9.551	9.622	-0.071
1E+12	2	9.565	9.666	-0.101
1E+12	3	9.551	9.653	-0.103
1E+12	4	9.512	9.592	-0.079
1E+12	5	9.582	9.674	-0.092
5E+12	13	9.557	9.593	-0.036
5E+12	14	9.527	9.619	-0.092
5E+12	15	9.782	9.869	-0.087
5E+12	16	9.632	9.726	-0.095
5E+12	17	9.650	9.736	-0.086
1E+13	6	9.470	9.555	-0.084
1E+13	7	9.551	9.652	-0.101
1E+13	9	9.584	9.662	-0.077
1E+13	10	9.575	9.656	-0.080
1E+13	12	9.640	9.740	-0.100
Max		9.782	9.869	0.021
Average		9.582	9.662	-0.080
Min		9.470	9.555	-0.103
Std Dev		0.072	0.074	0.031



1400.1 OUTPUT RESISTANCE		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	12.25	Ω
Min Limit	6.6	Ω

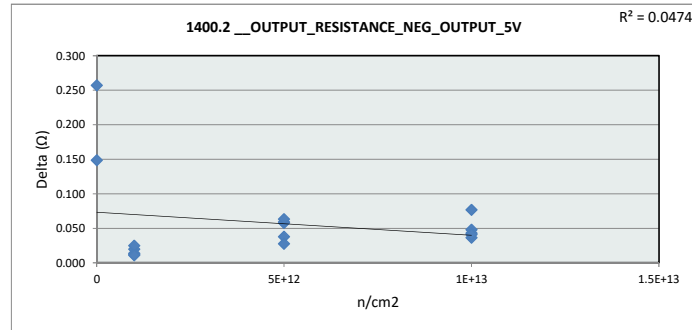
n/cm2	0	1E+12	5E+12	1E+13
LL	6.600	6.600	6.600	6.600
Min	9.616	9.592	9.593	9.555
Average	9.623	9.641	9.709	9.653
Max	9.631	9.674	9.869	9.740
UL	12.250	12.250	12.250	12.250



NDD Report
LMH5401-SP

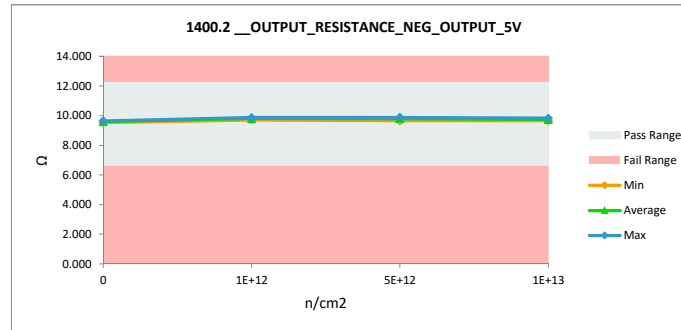
1400.2 OUTPUT RESISTANCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	Ω	Ω
Max Limit	12.25	12.25
Min Limit	6.6	6.6

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	9.801	9.544	0.257
0	106	9.794	9.646	0.149
1E+12	1	9.815	9.795	0.020
1E+12	2	9.856	9.844	0.012
1E+12	3	9.726	9.712	0.013
1E+12	4	9.782	9.757	0.025
1E+12	5	9.880	9.869	0.011
5E+12	13	9.782	9.744	0.038
5E+12	14	9.721	9.663	0.058
5E+12	15	9.917	9.858	0.059
5E+12	16	9.889	9.825	0.063
5E+12	17	9.919	9.891	0.028
1E+13	6	9.708	9.661	0.048
1E+13	7	9.799	9.763	0.036
1E+13	9	9.779	9.736	0.043
1E+13	10	9.781	9.704	0.076
1E+13	12	9.866	9.825	0.041
Max		9.919	9.891	0.257
Average		9.813	9.755	0.057
Min		9.708	9.544	0.011
Std Dev		0.066	0.094	0.061



1400.2 OUTPUT RESISTANCE		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	12.25	Ω
Min Limit	6.6	Ω

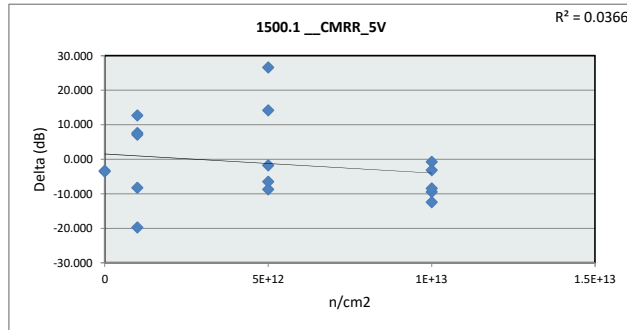
n/cm2	0	1E+12	5E+12	1E+13
LL	6.600	6.600	6.600	6.600
Min	9.544	9.712	9.663	9.661
Average	9.595	9.795	9.796	9.738
Max	9.646	9.869	9.891	9.825
UL	12.250	12.250	12.250	12.250



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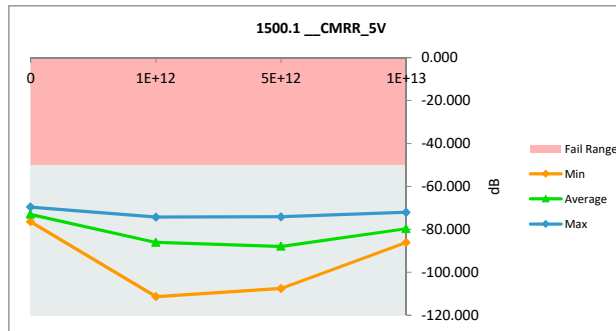
1500.1_CMRR_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	-50	-50
Min Limit		

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-79.860	-76.473	-3.388
0	106	-73.127	-69.612	-3.515
1E+12	1	-82.543	-74.298	-8.245
1E+12	2	-75.885	-83.489	7.604
1E+12	3	-96.204	-76.467	-19.737
1E+12	4	-98.701	-111.355	12.654
1E+12	5	-78.217	-85.301	7.084
5E+12	13	-75.956	-74.226	-1.730
5E+12	14	-88.098	-81.557	-6.540
5E+12	15	-90.702	-81.938	-8.764
5E+12	16	-81.062	-107.629	26.566
5E+12	17	-80.388	-94.553	14.165
1E+13	6	-72.940	-72.154	-0.786
1E+13	7	-89.266	-79.844	-9.422
1E+13	9	-87.140	-78.718	-8.422
1E+13	10	-94.379	-81.984	-12.394
1E+13	12	-89.312	-86.161	-3.150
Max		-72.940	-69.612	26.566
Average		-84.340	-83.280	-1.060
Min		-98.701	-111.355	-19.737
Std Dev		8.077	11.526	11.411



1500.1_CMRR_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-50	dB
Min Limit		dB

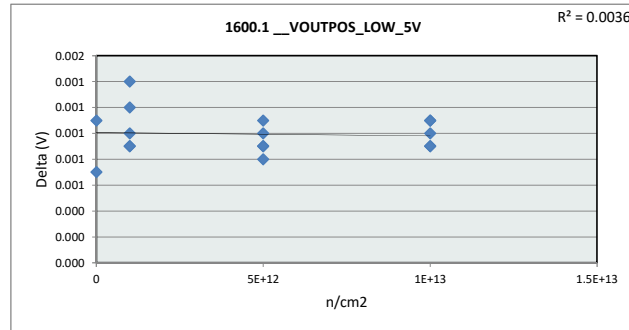
n/cm2	0	1E+12	5E+12	1E+13
LL				
Min	-76.473	-111.355	-107.629	-86.161
Average	-73.042	-86.182	-87.980	-79.772
Max	-69.612	-74.298	-74.226	-72.154
UL	-50.000	-50.000	-50.000	-50.000



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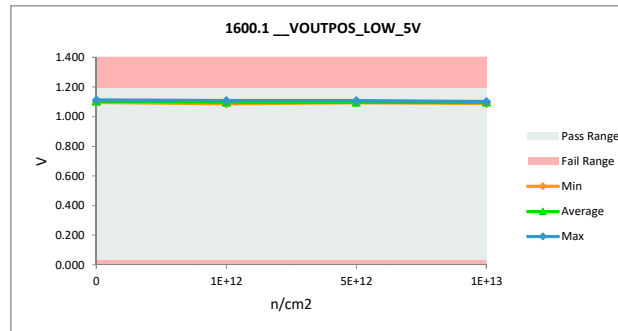
1600.1_VOUTPOS_LOW_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.097	1.096	0.001
0	106	1.114	1.113	0.001
1E+12	1	1.109	1.108	0.001
1E+12	2	1.089	1.087	0.001
1E+12	3	1.102	1.102	0.001
1E+12	4	1.094	1.092	0.001
1E+12	5	1.093	1.092	0.001
5E+12	13	1.110	1.109	0.001
5E+12	14	1.097	1.096	0.001
5E+12	15	1.097	1.096	0.001
5E+12	16	1.096	1.095	0.001
5E+12	17	1.095	1.094	0.001
1E+13	6	1.095	1.094	0.001
1E+13	7	1.097	1.096	0.001
1E+13	9	1.103	1.102	0.001
1E+13	10	1.089	1.088	0.001
1E+13	12	1.102	1.101	0.001
Max		1.114	1.113	0.001
Average		1.099	1.098	0.001
Min		1.089	1.087	0.001
Std Dev		0.007	0.007	0.000



1600.1_VOUTPOS_LOW_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

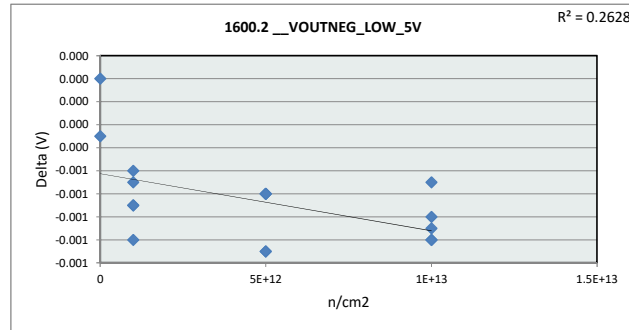
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	1.096	1.087	1.094	1.088
Average	1.105	1.096	1.098	1.096
Max	1.113	1.108	1.109	1.102
UL	1.190	1.190	1.190	1.190



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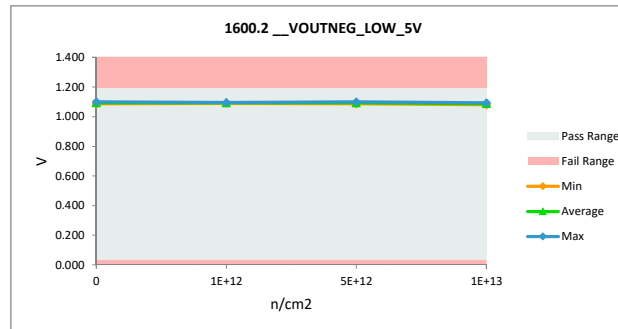
1600.2_VOUTNEG_LOW_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.086	1.087	0.000
0	106	1.099	1.099	0.000
1E+12	1	1.092	1.092	-0.001
1E+12	2	1.089	1.090	-0.001
1E+12	3	1.093	1.094	-0.001
1E+12	4	1.090	1.091	-0.001
1E+12	5	1.091	1.092	-0.001
5E+12	13	1.094	1.095	-0.001
5E+12	14	1.085	1.086	-0.001
5E+12	15	1.099	1.100	-0.001
5E+12	16	1.092	1.092	-0.001
5E+12	17	1.093	1.094	-0.001
1E+13	6	1.088	1.089	-0.001
1E+13	7	1.087	1.088	-0.001
1E+13	9	1.092	1.093	-0.001
1E+13	10	1.080	1.081	-0.001
1E+13	12	1.089	1.090	-0.001
Max		1.099	1.100	0.000
Average		1.091	1.091	-0.001
Min		1.080	1.081	-0.001
Std Dev		0.005	0.005	0.000



1600.2_VOUTNEG_LOW_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

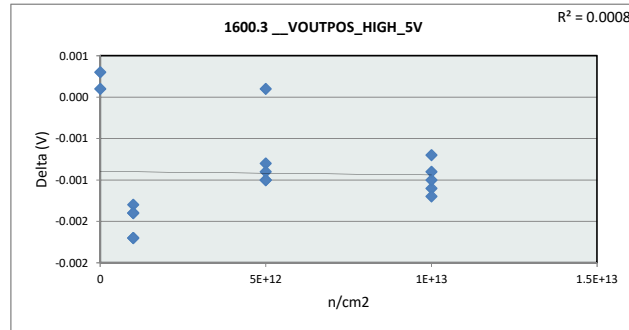
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	1.087	1.090	1.086	1.081
Average	1.093	1.092	1.094	1.088
Max	1.099	1.095	1.100	1.093
UL	1.190	1.190	1.190	1.190



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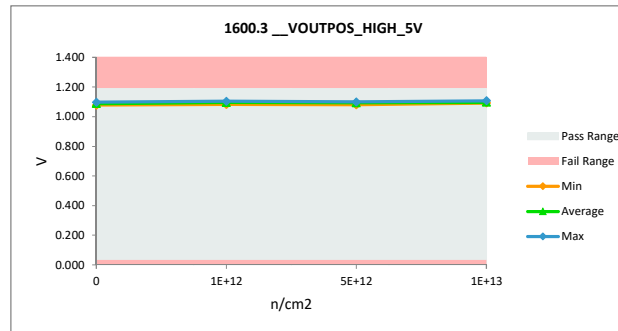
1600.3 VOUTPOS_HIGH_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.097	1.097	0.000
0	106	1.078	1.078	0.000
1E+12	1	1.081	1.082	-0.001
1E+12	2	1.103	1.105	-0.002
1E+12	3	1.089	1.091	-0.002
1E+12	4	1.097	1.098	-0.001
1E+12	5	1.100	1.101	-0.001
5E+12	13	1.081	1.081	0.000
5E+12	14	1.094	1.095	-0.001
5E+12	15	1.095	1.096	-0.001
5E+12	16	1.097	1.098	-0.001
5E+12	17	1.099	1.100	-0.001
1E+13	6	1.094	1.095	-0.001
1E+13	7	1.096	1.097	-0.001
1E+13	9	1.091	1.092	-0.001
1E+13	10	1.107	1.108	-0.001
1E+13	12	1.093	1.094	-0.001
Max		1.107	1.108	0.000
Average		1.094	1.095	-0.001
Min		1.078	1.078	-0.002
Std Dev		0.008	0.008	0.001



1600.3 VOUTPOS_HIGH_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

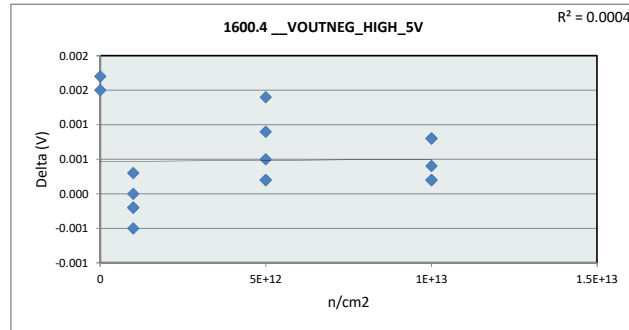
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	1.078	1.082	1.081	1.092
Average	1.088	1.096	1.094	1.097
Max	1.097	1.105	1.100	1.108
UL	1.190	1.190	1.190	1.190



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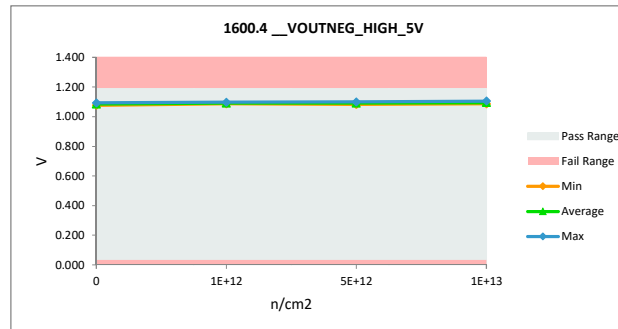
1600.4 VOUTNEG_HIGH_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.095	1.093	0.002
0	106	1.079	1.077	0.002
1E+12	1	1.087	1.087	0.000
1E+12	2	1.098	1.098	0.000
1E+12	3	1.085	1.086	0.000
1E+12	4	1.092	1.092	0.000
1E+12	5	1.092	1.092	-0.001
5E+12	13	1.084	1.083	0.001
5E+12	14	1.099	1.099	0.000
5E+12	15	1.089	1.088	0.001
5E+12	16	1.093	1.093	0.000
5E+12	17	1.092	1.092	0.000
1E+13	6	1.092	1.092	0.001
1E+13	7	1.096	1.096	0.000
1E+13	9	1.087	1.087	0.001
1E+13	10	1.105	1.105	0.000
1E+13	12	1.093	1.092	0.000
Max		1.105	1.105	0.002
Average		1.092	1.091	0.000
Min		1.079	1.077	-0.001
Std Dev		0.006	0.007	0.001



1600.4 VOUTNEG_HIGH_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

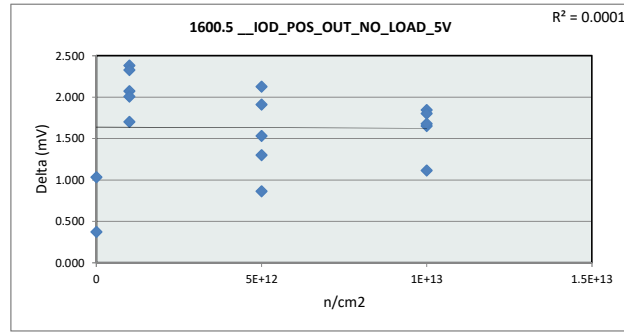
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	1.077	1.086	1.083	1.087
Average	1.085	1.091	1.091	1.094
Max	1.093	1.098	1.099	1.105
UL	1.190	1.190	1.190	1.190



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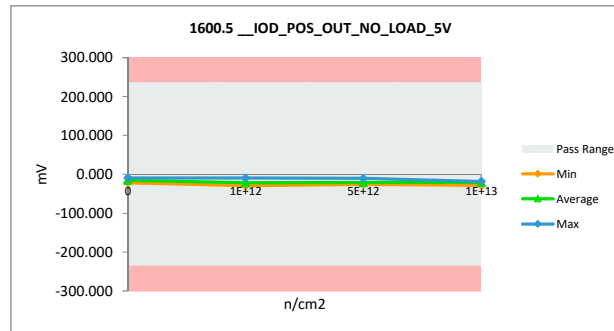
1600.5 IOD_POS_OUT_NO_LOAD_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-21.267	-21.638	0.371
0	106	-8.184	-9.217	1.033
1E+12	1	-7.738	-9.812	2.074
1E+12	2	-27.234	-29.242	2.008
1E+12	3	-16.772	-19.152	2.380
1E+12	4	-23.063	-24.763	1.700
1E+12	5	-24.952	-27.279	2.327
5E+12	13	-9.682	-10.546	0.864
5E+12	14	-19.675	-21.208	1.533
5E+12	15	-23.104	-24.403	1.299
5E+12	16	-22.815	-24.724	1.910
5E+12	17	-24.071	-26.198	2.128
1E+13	6	-18.916	-20.569	1.653
1E+13	7	-20.968	-22.084	1.115
1E+13	9	-16.708	-18.551	1.843
1E+13	10	-26.642	-28.446	1.804
1E+13	12	-16.583	-18.262	1.679
Max		-7.738	-9.217	2.380
Average		-19.316	-20.947	1.631
Min		-27.234	-29.242	0.371
Std Dev		6.071	6.232	0.543



1600.5 IOD_POS_OUT_NO_LOAD_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

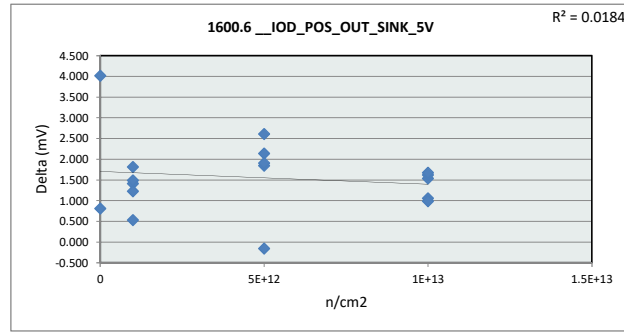
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-21.638	-29.242	-26.199	-28.446
Average	-15.427	-22.050	-21.416	-21.582
Max	-9.217	-9.812	-10.546	-18.262
UL	235.000	235.000	235.000	235.000



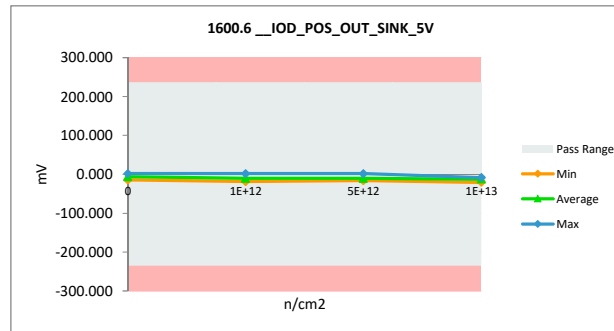
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1600.6 IOD_POS_OUT_SINK		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-10.510	-14.522	4.013
0	106	2.728	1.921	0.807
1E+12	1	2.382	1.850	0.532
1E+12	2	-16.829	-18.643	1.814
1E+12	3	-7.123	-8.531	1.409
1E+12	4	-12.547	-13.772	1.226
1E+12	5	-13.542	-15.028	1.486
5E+12	13	1.517	1.676	-0.160
5E+12	14	-9.949	-11.795	1.846
5E+12	15	-14.226	-16.837	2.611
5E+12	16	-10.826	-12.968	2.142
5E+12	17	-12.787	-14.694	1.906
1E+13	6	-10.304	-11.841	1.537
1E+13	7	-10.510	-12.128	1.618
1E+13	9	-7.258	-8.317	1.059
1E+13	10	-19.933	-20.918	0.985
1E+13	12	-7.080	-8.753	1.673
Max		2.728	1.921	4.013
Average		-9.223	-10.782	1.559
Min		-19.933	-20.918	-0.160
Std Dev		6.390	6.881	0.903



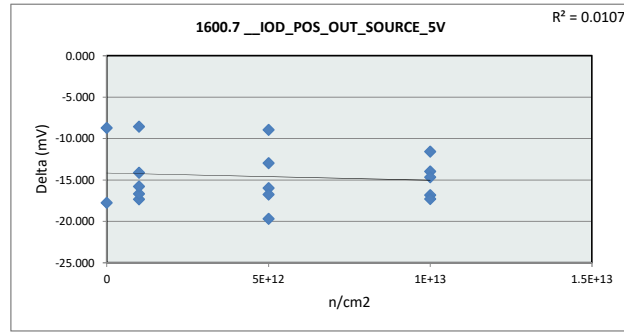
1600.6 IOD_POS_OUT_SINK				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	235	mV		
Min Limit	-235	mV		
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-14.522	-18.643	-16.837	-20.918
Average	-6.300	-10.825	-10.924	-12.392
Max	1.922	1.850	1.676	-8.317
UL	235.000	235.000	235.000	235.000



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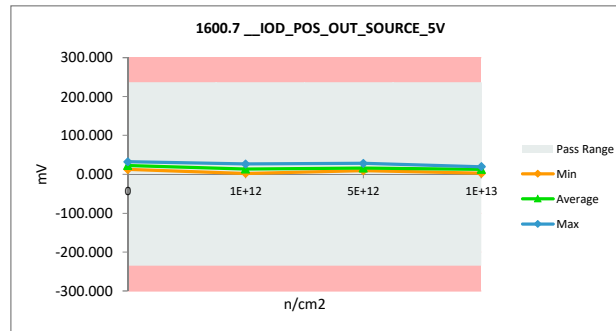
1600.7_IOD_POS_OUT_SOURCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-5.206	12.542	-17.748
0	106	23.636	32.360	-8.724
1E+12	1	17.469	26.051	-8.582
1E+12	2	-15.106	2.226	-17.332
1E+12	3	5.981	20.093	-14.112
1E+12	4	-7.616	9.074	-16.690
1E+12	5	-9.047	6.736	-15.783
5E+12	13	18.899	27.841	-8.942
5E+12	14	-5.063	14.620	-19.683
5E+12	15	3.487	16.441	-12.955
5E+12	16	-4.912	11.087	-15.999
5E+12	17	-7.725	9.029	-16.754
1E+13	6	-0.606	10.967	-11.573
1E+13	7	-2.096	11.868	-13.964
1E+13	9	4.670	19.353	-14.683
1E+13	10	-13.962	2.872	-16.835
1E+13	12	0.992	18.304	-17.311
Max		23.636	32.360	-8.582
Average		0.223	14.792	-14.569
Min		-15.106	2.226	-19.683
Std Dev		11.167	8.450	3.384



1600.7_IOD_POS_OUT_SOU		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

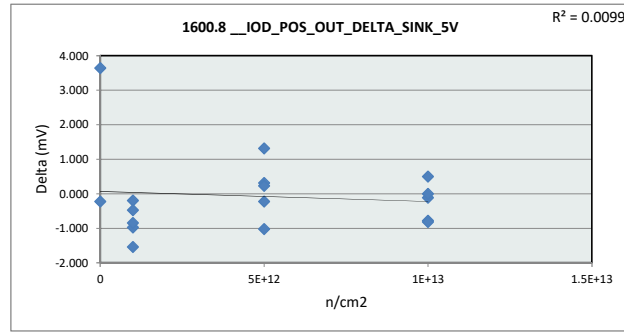
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	12.542	2.226	9.029	2.872
Average	22.451	12.836	15.804	12.673
Max	32.360	26.051	27.841	19.353
UL	235.000	235.000	235.000	235.000



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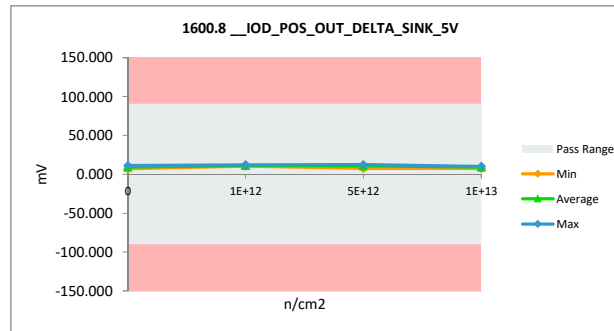
1600.8 IOD_POS_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	10.757	7.115	3.642
0	106	10.912	11.138	-0.226
1E+12	1	10.121	11.662	-1.542
1E+12	2	10.405	10.599	-0.194
1E+12	3	9.650	10.621	-0.971
1E+12	4	10.517	10.991	-0.474
1E+12	5	11.410	12.251	-0.841
5E+12	13	11.198	12.222	-1.024
5E+12	14	9.726	9.412	0.314
5E+12	15	8.877	7.565	1.312
5E+12	16	11.988	11.756	0.232
5E+12	17	11.283	11.505	-0.221
1E+13	6	8.611	8.728	-0.116
1E+13	7	10.458	9.955	0.502
1E+13	9	9.450	10.234	-0.784
1E+13	10	6.709	7.528	-0.819
1E+13	12	9.503	9.509	-0.005
Max		11.988	12.251	3.642
Average		10.093	10.164	-0.072
Min		6.709	7.115	-1.542
Std Dev		1.267	1.645	1.174



1600.8 IOD_POS_OUT_DELTA		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

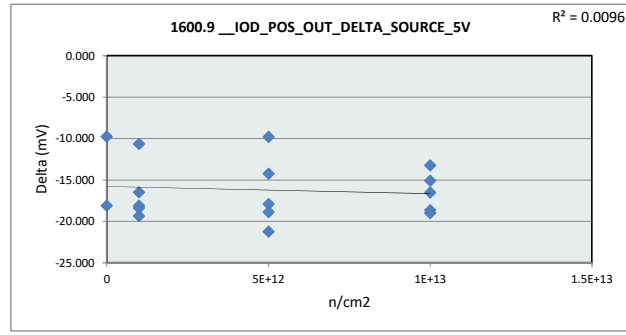
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	7.115	10.599	7.565	7.528
Average	9.127	11.225	10.492	9.191
Max	11.138	12.251	12.222	10.234
UL	90.000	90.000	90.000	90.000



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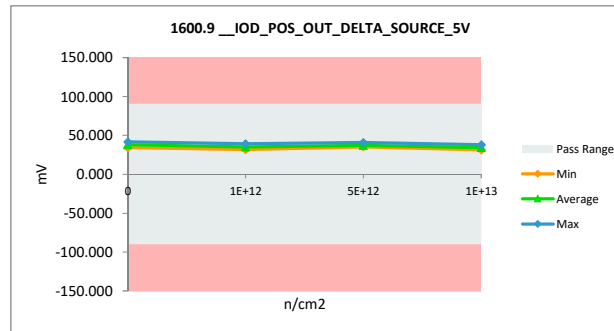
1600.9_IOD_POS_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	16.061	34.180	-18.119
0	106	31.820	41.576	-9.757
1E+12	1	25.208	35.863	-10.655
1E+12	2	12.128	31.468	-19.340
1E+12	3	22.753	39.245	-16.492
1E+12	4	15.447	33.838	-18.391
1E+12	5	15.905	34.015	-18.111
5E+12	13	28.581	38.388	-9.807
5E+12	14	14.612	35.827	-21.215
5E+12	15	26.590	40.844	-14.254
5E+12	16	17.903	35.812	-17.909
5E+12	17	16.346	35.227	-18.882
1E+13	6	18.310	31.536	-13.226
1E+13	7	18.872	33.952	-15.079
1E+13	9	21.378	37.904	-16.526
1E+13	10	12.679	31.318	-18.639
1E+13	12	17.576	36.566	-18.990
Max		31.820	41.576	-9.757
Average		19.539	35.739	-16.199
Min		12.128	31.318	-21.215
Std Dev		5.674	3.090	3.520



1600.9_IOD_POS_OUT_DELTA		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

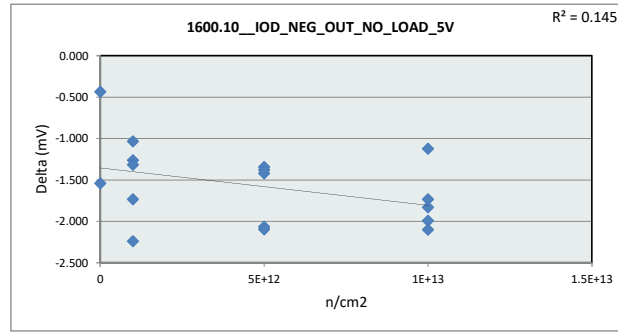
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	34.180	31.468	35.227	31.318
Average	37.878	34.886	37.220	34.255
Max	41.576	39.245	40.844	37.904
UL	90.000	90.000	90.000	90.000



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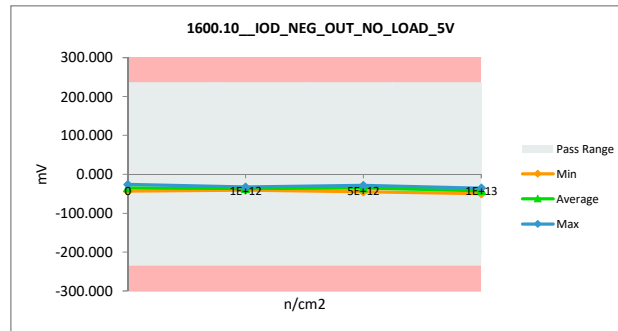
1600.10_IOD_NEG_OUT_NO_LOAD_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-44.324	-43.888	-0.437
0	106	-27.604	-26.063	-1.541
1E+12	1	-38.081	-36.349	-1.733
1E+12	2	-41.725	-40.463	-1.262
1E+12	3	-35.340	-33.101	-2.239
1E+12	4	-39.843	-38.528	-1.314
1E+12	5	-37.623	-36.588	-1.036
5E+12	13	-34.607	-32.540	-2.067
5E+12	14	-46.875	-45.453	-1.421
5E+12	15	-30.826	-28.730	-2.096
5E+12	16	-37.658	-36.314	-1.344
5E+12	17	-35.829	-34.450	-1.379
1E+13	6	-43.289	-41.458	-1.831
1E+13	7	-44.818	-43.695	-1.122
1E+13	9	-37.716	-35.724	-1.992
1E+13	10	-52.043	-49.944	-2.099
1E+13	12	-40.991	-39.259	-1.732
Max		-27.604	-26.063	-0.437
Average		-39.364	-37.797	-1.567
Min		-52.043	-49.944	-2.239
Std Dev		5.959	6.083	0.474



1600.10_IOD_NEG_OUT_NO_LOAD_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

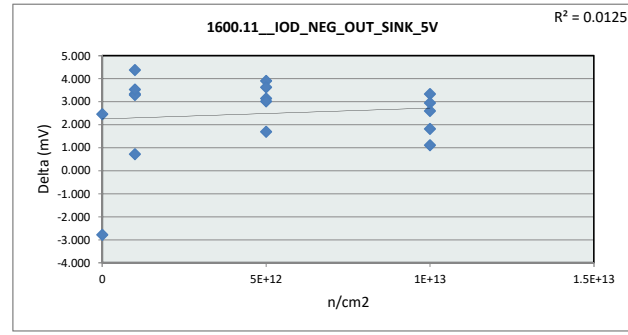
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-43.888	-40.463	-45.453	-49.944
Average	-34.975	-37.006	-35.498	-42.016
Max	-26.063	-33.101	-28.730	-35.724
UL	235.000	235.000	235.000	235.000



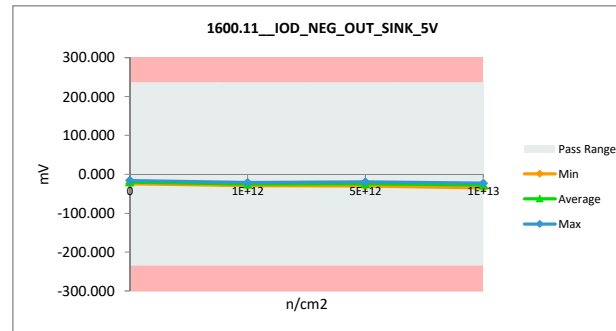
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1600.11_IOD_NEG_OUT_SINK		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-27.028	-24.239	-2.789
0	106	-13.254	-15.711	2.457
1E+12	1	-23.417	-27.792	4.375
1E+12	2	-25.861	-29.202	3.342
1E+12	3	-18.159	-21.454	3.295
1E+12	4	-23.469	-24.191	0.723
1E+12	5	-23.000	-26.530	3.531
5E+12	13	-19.414	-23.317	3.903
5E+12	14	-28.540	-30.231	1.691
5E+12	15	-16.299	-19.440	3.141
5E+12	16	-23.243	-26.258	3.014
5E+12	17	-21.667	-25.298	3.631
1E+13	6	-23.492	-26.823	3.331
1E+13	7	-26.558	-29.502	2.944
1E+13	9	-20.301	-22.902	2.601
1E+13	10	-32.806	-34.619	1.813
1E+13	12	-24.391	-25.495	1.104
Max		-13.254	-15.711	4.375
Average		-22.994	-25.471	2.477
Min		-32.806	-34.619	-2.789
Std Dev		4.689	4.385	1.676



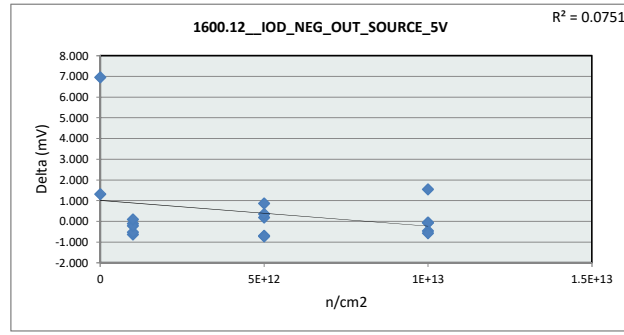
1600.11_IOD_NEG_OUT_SIN				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	235	mV		
Min Limit	-235	mV		
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-24.239	-29.202	-30.231	-34.619
Average	-19.975	-25.834	-24.909	-27.868
Max	-15.711	-21.454	-19.440	-22.902
UL	235.000	235.000	235.000	235.000



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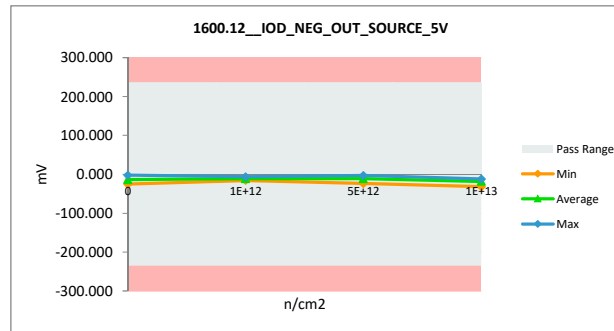
1600.12_IOD_NEG_OUT_SOURCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-18.255	-25.214	6.959
0	106	-1.027	-2.339	1.312
1E+12	1	-6.599	-6.486	-0.113
1E+12	2	-16.658	-16.021	-0.636
1E+12	3	-11.009	-10.480	-0.529
1E+12	4	-13.659	-13.442	-0.217
1E+12	5	-11.406	-11.497	0.091
5E+12	13	-4.312	-3.620	-0.692
5E+12	14	-24.045	-24.233	0.188
5E+12	15	-5.873	-5.148	-0.725
5E+12	16	-13.702	-14.569	0.867
5E+12	17	-9.727	-10.081	0.354
1E+13	6	-14.625	-14.155	-0.470
1E+13	7	-19.242	-19.179	-0.063
1E+13	9	-12.525	-11.954	-0.572
1E+13	10	-30.116	-31.666	1.550
1E+13	12	-14.482	-14.425	-0.057
Max		-1.027	-2.339	6.959
Average		-13.368	-13.795	0.426
Min		-30.116	-31.666	-0.725
Std Dev		7.187	7.867	1.815



1600.12_IOD_NEG_OUT_SOURCE		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

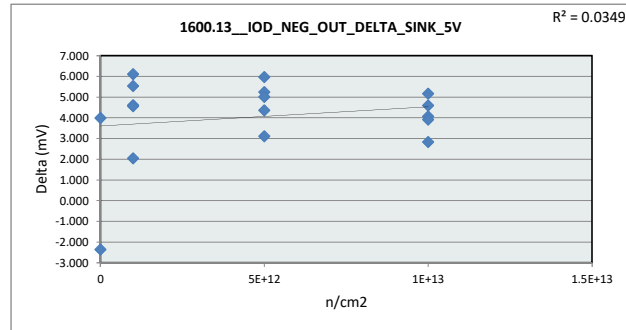
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-25.214	-16.021	-24.233	-31.666
Average	-13.777	-11.585	-11.530	-18.276
Max	-2.339	-6.486	-3.620	-11.954
UL	235.000	235.000	235.000	235.000



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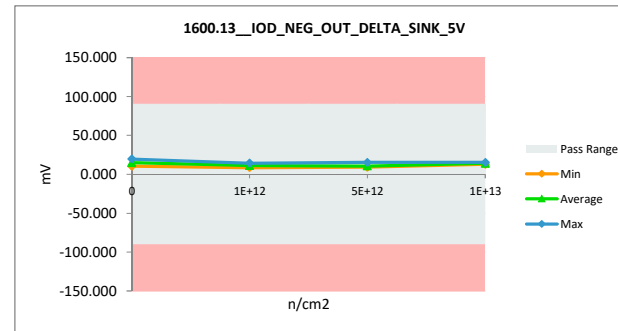
1600.13_IOD_NEG_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	17.296	19.649	-2.352
0	106	14.349	10.351	3.998
1E+12	1	14.663	8.557	6.107
1E+12	2	15.865	11.261	4.604
1E+12	3	17.181	11.647	5.534
1E+12	4	16.374	14.337	2.037
1E+12	5	14.624	10.057	4.566
5E+12	13	15.193	9.223	5.970
5E+12	14	18.335	15.222	3.112
5E+12	15	14.527	9.290	5.236
5E+12	16	14.414	10.056	4.358
5E+12	17	14.162	9.152	5.010
1E+13	6	19.796	14.634	5.162
1E+13	7	18.260	14.193	4.067
1E+13	9	17.414	12.822	4.593
1E+13	10	19.237	15.325	3.912
1E+13	12	16.600	13.764	2.836
Max		19.796	19.649	6.107
Average		16.370	12.326	4.044
Min		14.162	8.557	-2.352
Std Dev		1.834	3.012	1.970



1600.13_IOD_NEG_OUT_DEL		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

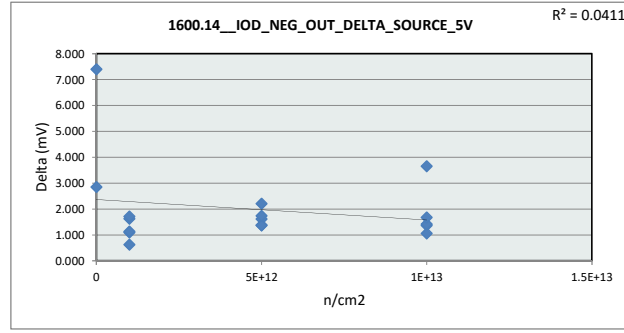
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	10.351	8.557	9.152	12.822
Average	15.000	11.172	10.589	14.148
Max	19.649	14.337	15.222	15.326
UL	90.000	90.000	90.000	90.000



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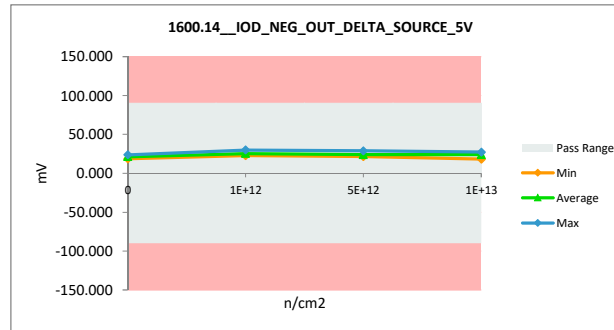
1600.14_IOD_NEG_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	26.069	18.673	7.396
0	106	26.576	23.723	2.853
1E+12	1	31.482	29.863	1.620
1E+12	2	25.067	24.442	0.626
1E+12	3	24.330	22.620	1.710
1E+12	4	26.184	25.086	1.098
1E+12	5	26.218	25.091	1.127
5E+12	13	30.295	28.920	1.375
5E+12	14	22.830	21.220	1.610
5E+12	15	24.953	23.583	1.370
5E+12	16	23.956	21.746	2.210
5E+12	17	26.102	24.369	1.733
1E+13	6	28.664	27.303	1.361
1E+13	7	25.576	24.516	1.059
1E+13	9	25.190	23.770	1.420
1E+13	10	21.927	18.278	3.649
1E+13	12	26.509	24.835	1.674
Max		31.482	29.863	7.396
Average		25.996	24.002	1.994
Min		21.927	18.278	0.626
Std Dev		2.407	3.055	1.562



1600.14_IOD_NEG_OUT_DEL		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

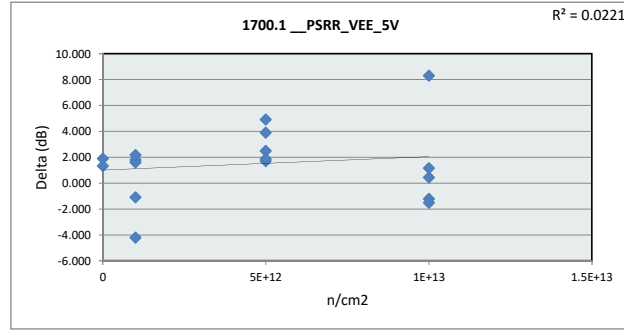
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	18.673	22.620	21.220	18.278
Average	21.198	25.420	23.968	23.740
Max	23.723	29.863	28.920	27.303
UL	90.000	90.000	90.000	90.000



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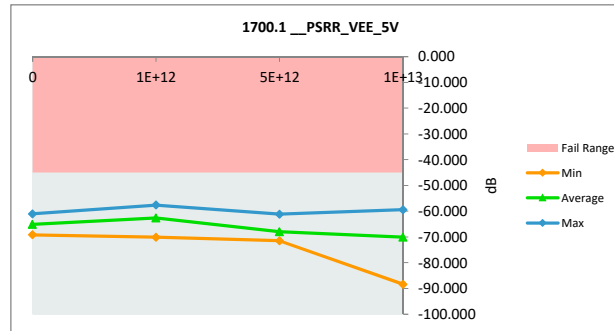
1700.1 PSRR_VEE_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	-45	-45
Min Limit		

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-67.843	-69.168	1.325
0	106	-59.235	-61.126	1.891
1E+12	1	-56.057	-57.648	1.591
1E+12	2	-68.397	-70.191	1.795
1E+12	3	-61.874	-60.789	-1.085
1E+12	4	-64.950	-60.740	-4.210
1E+12	5	-61.923	-64.099	2.176
5E+12	13	-59.473	-61.170	1.696
5E+12	14	-69.002	-71.484	2.482
5E+12	15	-67.871	-69.738	1.867
5E+12	16	-66.447	-70.341	3.894
5E+12	17	-62.819	-67.739	4.919
1E+13	6	-64.731	-65.884	1.152
1E+13	7	-76.168	-74.946	-1.222
1E+13	9	-63.375	-61.867	-1.508
1E+13	10	-80.062	-88.372	8.310
1E+13	12	-59.081	-59.522	0.441
Max		-56.057	-57.648	8.310
Average		-65.253	-66.754	1.501
Min		-80.062	-88.372	-4.210
Std Dev		6.134	7.495	2.769



1700.1 PSRR_VEE_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-45	dB
Min Limit		dB

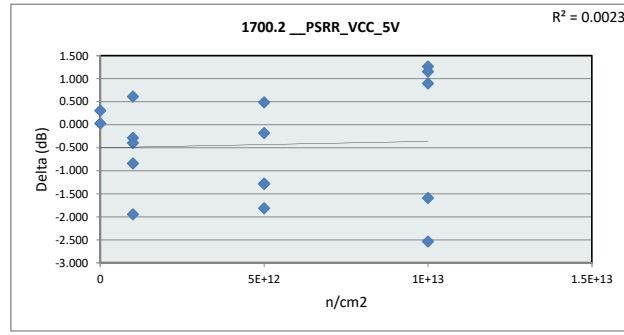
n/cm2	0	1E+12	5E+12	1E+13
LL				
Min	-69.168	-70.191	-71.484	-88.372
Average	-65.147	-62.693	-68.094	-70.118
Max	-61.126	-57.648	-61.170	-59.522
UL	-45.000	-45.000	-45.000	-45.000



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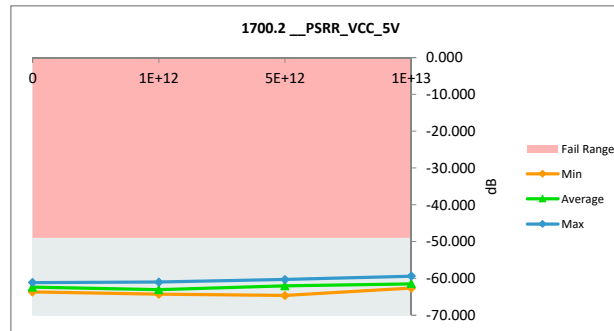
1700.2 PSRR_VCC_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	-49	-49
Min Limit		

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-60.831	-61.137	0.306
0	106	-63.697	-63.726	0.028
1E+12	1	-61.831	-60.987	-0.844
1E+12	2	-64.098	-63.813	-0.285
1E+12	3	-64.750	-64.352	-0.397
1E+12	4	-62.404	-63.018	0.614
1E+12	5	-65.168	-63.224	-1.943
5E+12	13	-61.371	-61.193	-0.178
5E+12	14	-59.881	-60.370	0.489
5E+12	15	-65.928	-64.641	-1.287
5E+12	16	-62.649	-61.368	-1.281
5E+12	17	-64.638	-62.821	-1.817
1E+13	6	-60.474	-61.742	1.268
1E+13	7	-59.752	-60.909	1.157
1E+13	9	-64.196	-62.604	-1.592
1E+13	10	-61.740	-62.635	0.895
1E+13	12	-61.946	-59.411	-2.535
Max		-59.752	-59.411	1.268
Average		-62.668	-62.233	-0.435
Min		-65.928	-64.641	-2.535
Std Dev		1.917	1.485	1.161



1700.2 PSRR_VCC_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-49	dB
Min Limit		dB

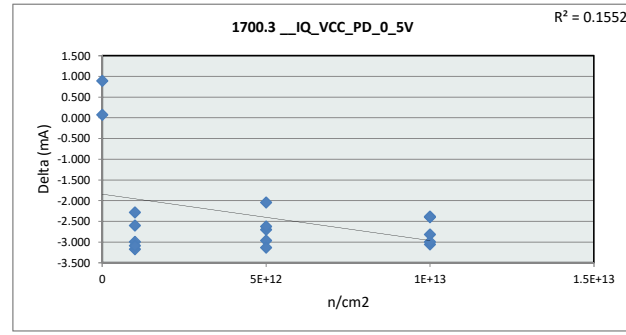
n/cm2	0	1E+12	5E+12	1E+13
LL				
Min	-63.726	-64.352	-64.641	-62.635
Average	-62.432	-63.079	-62.079	-61.460
Max	-61.137	-60.987	-60.370	-59.411
UL	-49.000	-49.000	-49.000	-49.000



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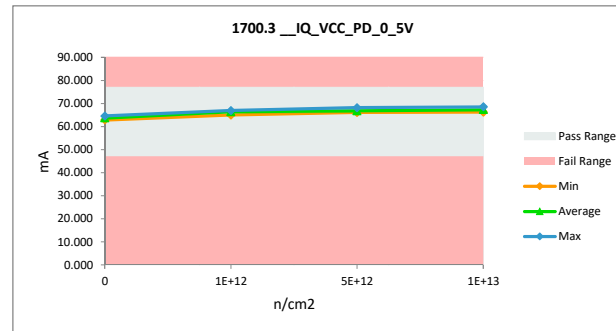
1700.3 IQ_VCC_PD_0_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	77	77
Min Limit	47	47

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	65.459	64.567	0.892
0	106	62.951	62.874	0.077
1E+12	1	62.433	65.030	-2.597
1E+12	2	63.932	66.928	-2.996
1E+12	3	63.425	66.595	-3.170
1E+12	4	64.493	66.773	-2.281
1E+12	5	63.102	66.186	-3.084
5E+12	13	64.326	66.368	-2.042
5E+12	14	65.444	68.148	-2.704
5E+12	15	63.151	66.114	-2.963
5E+12	16	64.304	66.931	-2.627
5E+12	17	63.274	66.411	-3.137
1E+13	6	64.849	67.247	-2.398
1E+13	7	64.371	67.425	-3.054
1E+13	9	63.943	66.938	-2.995
1E+13	10	66.146	68.532	-2.386
1E+13	12	63.476	66.289	-2.813
Max		66.146	68.532	0.892
Average		64.064	66.433	-2.369
Min		62.433	62.874	-3.170
Std Dev		1.009	1.327	1.132



1700.3 IQ_VCC_PD_0_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	77	mA
Min Limit	47	mA

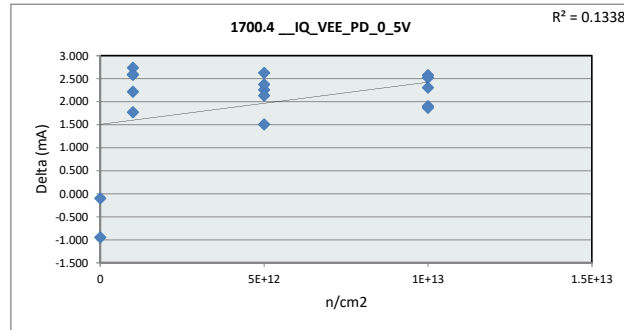
n/cm2	0	1E+12	5E+12	1E+13
LL	47.000	47.000	47.000	47.000
Min	62.874	65.030	66.114	66.289
Average	63.721	66.302	66.794	67.286
Max	64.567	66.928	68.148	68.532
UL	77.000	77.000	77.000	77.000



NDD Report LMH5401-SP

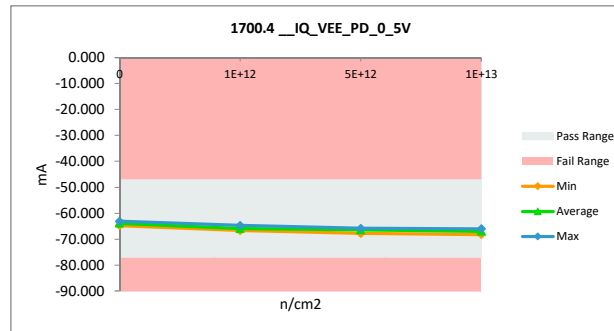
1700.4 IQ_VEE_PD_0_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	-47	-47
Min Limit	-77	-77

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-65.730	-64.780	-0.951
0	106	-63.194	-63.093	-0.101
1E+12	1	-62.551	-64.766	2.215
1E+12	2	-64.068	-66.659	2.590
1E+12	3	-63.592	-66.328	2.736
1E+12	4	-64.735	-66.509	1.774
1E+12	5	-63.326	-65.911	2.585
5E+12	13	-64.589	-66.094	1.505
5E+12	14	-65.603	-67.864	2.261
5E+12	15	-63.435	-65.809	2.373
5E+12	16	-64.516	-66.647	2.131
5E+12	17	-63.481	-66.106	2.625
1E+13	6	-65.100	-67.006	1.907
1E+13	7	-64.584	-67.164	2.580
1E+13	9	-64.147	-66.671	2.524
1E+13	10	-66.382	-68.252	1.870
1E+13	12	-63.702	-66.008	2.306
Max		-62.551	-63.093	2.736
Average		-64.278	-66.216	1.937
Min		-66.382	-68.252	-0.951
Std Dev		1.021	1.207	0.999



1700.4 IQ_VEE_PD_0_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-47	mA
Min Limit	-77	mA

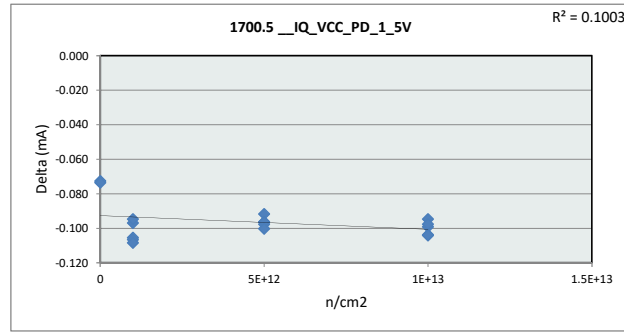
n/cm2	0	1E+12	5E+12	1E+13
LL	-77.000	-77.000	-77.000	-77.000
Min	-64.780	-66.659	-67.864	-68.252
Average	-63.936	-66.035	-66.504	-67.020
Max	-63.093	-64.766	-65.809	-66.008
UL	-47.000	-47.000	-47.000	-47.000



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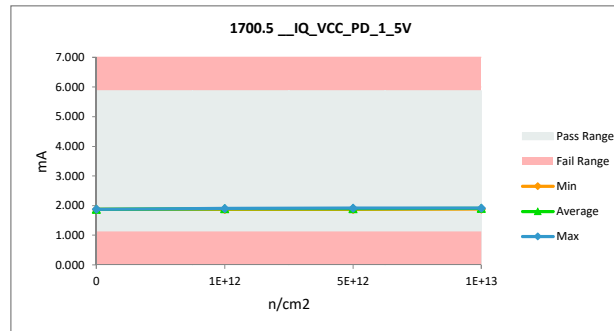
1700.5 IQ_VCC_PD_1_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	5.875	5.875
Min Limit	1.125	1.125

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.796	1.868	-0.073
0	106	1.802	1.875	-0.074
1E+12	1	1.796	1.893	-0.097
1E+12	2	1.787	1.892	-0.105
1E+12	3	1.799	1.906	-0.106
1E+12	4	1.796	1.904	-0.108
1E+12	5	1.779	1.874	-0.095
5E+12	13	1.805	1.901	-0.096
5E+12	14	1.817	1.908	-0.092
5E+12	15	1.785	1.882	-0.098
5E+12	16	1.784	1.881	-0.096
5E+12	17	1.772	1.872	-0.100
1E+13	6	1.803	1.898	-0.095
1E+13	7	1.808	1.913	-0.104
1E+13	9	1.814	1.913	-0.099
1E+13	10	1.816	1.913	-0.098
1E+13	12	1.780	1.884	-0.104
Max		1.817	1.913	-0.073
Average		1.796	1.893	-0.096
Min		1.772	1.868	-0.108
Std Dev		0.014	0.016	0.010



1700.5 IQ_VCC_PD_1_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	5.875	mA
Min Limit	1.125	mA

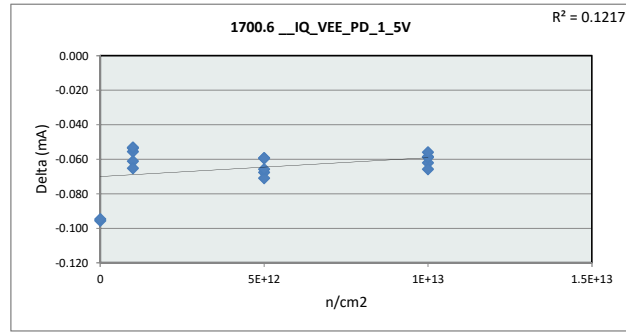
n/cm2	0	1E+12	5E+12	1E+13
LL	1.125	1.125	1.125	1.125
Min	1.868	1.874	1.872	1.884
Average	1.872	1.894	1.889	1.904
Max	1.875	1.906	1.909	1.913
UL	5.875	5.875	5.875	5.875



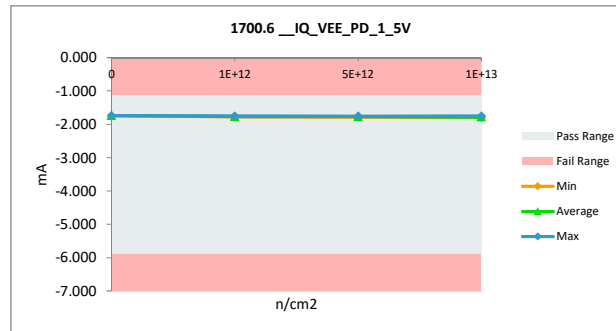
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1700.6 IQ VEE PD 1 5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	-1.125	-1.125
Min Limit	-5.875	-5.875

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-1.839	-1.743	-0.096
0	106	-1.837	-1.743	-0.095
1E+12	1	-1.826	-1.770	-0.056
1E+12	2	-1.820	-1.767	-0.053
1E+12	3	-1.842	-1.781	-0.061
1E+12	4	-1.833	-1.780	-0.053
1E+12	5	-1.822	-1.756	-0.065
5E+12	13	-1.849	-1.781	-0.068
5E+12	14	-1.849	-1.789	-0.059
5E+12	15	-1.830	-1.759	-0.071
5E+12	16	-1.828	-1.762	-0.066
5E+12	17	-1.817	-1.757	-0.059
1E+13	6	-1.845	-1.783	-0.062
1E+13	7	-1.848	-1.789	-0.058
1E+13	9	-1.850	-1.791	-0.059
1E+13	10	-1.851	-1.795	-0.056
1E+13	12	-1.822	-1.757	-0.066
Max		-1.817	-1.743	-0.053
Average		-1.836	-1.771	-0.065
Min		-1.851	-1.795	-0.096
Std Dev		0.012	0.017	0.012



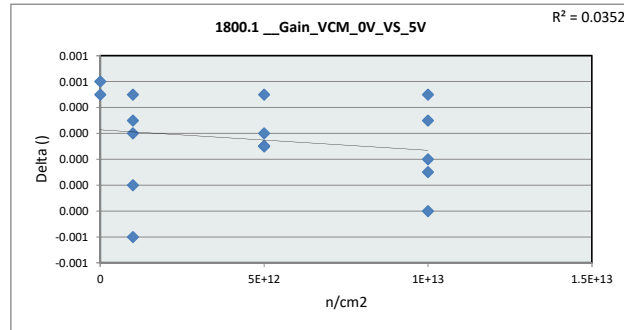
1700.6 IQ VEE PD 1 5V				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	-1.125	mA		
Min Limit	-5.875	mA		
n/cm2	0	1E+12	5E+12	1E+13
LL	-5.875	-5.875	-5.875	-5.875
Min	-1.743	-1.781	-1.789	-1.795
Average	-1.743	-1.771	-1.770	-1.783
Max	-1.743	-1.756	-1.757	-1.757
UL	-1.125	-1.125	-1.125	-1.125



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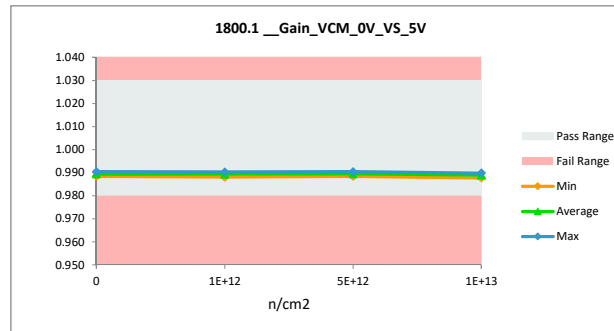
1800.1 Gain_VCM_OV_VS_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit		
Max Limit	1.03	1.03
Min Limit	0.98	0.98

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.989	0.988	0.001
0	106	0.991	0.990	0.001
1E+12	1	0.990	0.990	0.000
1E+12	2	0.988	0.988	0.000
1E+12	3	0.990	0.990	-0.001
1E+12	4	0.989	0.988	0.001
1E+12	5	0.989	0.989	0.000
5E+12	13	0.991	0.990	0.000
5E+12	14	0.988	0.988	0.000
5E+12	15	0.990	0.990	0.000
5E+12	16	0.989	0.989	0.000
5E+12	17	0.990	0.989	0.001
1E+13	6	0.989	0.989	0.000
1E+13	7	0.988	0.988	0.000
1E+13	9	0.989	0.990	0.000
1E+13	10	0.988	0.988	0.001
1E+13	12	0.990	0.989	0.000
Max		0.991	0.990	0.001
Average		0.989	0.989	0.000
Min		0.988	0.988	-0.001
Std Dev		0.001	0.001	0.000



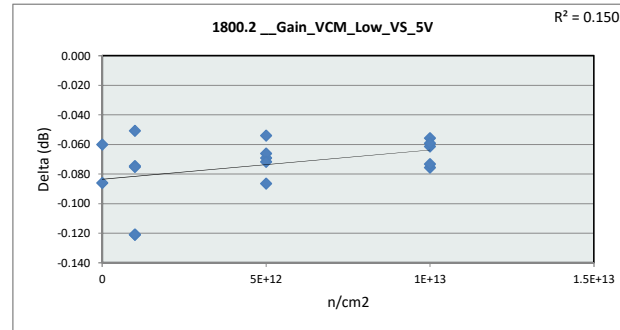
1800.1 Gain_VCM_OV_VS_5		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.03	
Min Limit	0.98	

n/cm2	0	1E+12	5E+12	1E+13
LL	0.980	0.980	0.980	0.980
Min	0.988	0.988	0.988	0.988
Average	0.989	0.989	0.989	0.989
Max	0.990	0.990	0.990	0.990
UL	1.030	1.030	1.030	1.030

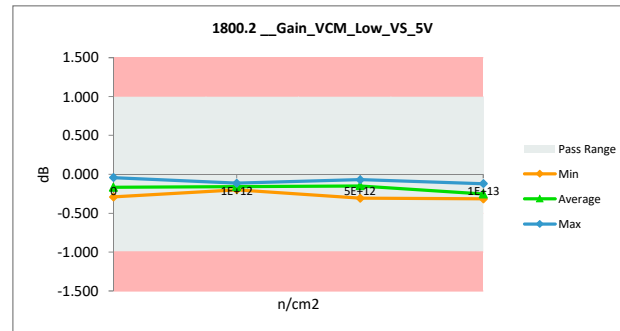


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1800.2 Gain_VCM_Low_VS_5V				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit	dB	dB		
Max Limit	0.99	0.99		
Min Limit	-0.99	-0.99		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-0.353	-0.293	-0.060
0	106	-0.128	-0.043	-0.086
1E+12	1	-0.195	-0.121	-0.074
1E+12	2	-0.319	-0.198	-0.121
1E+12	3	-0.265	-0.190	-0.075
1E+12	4	-0.290	-0.169	-0.121
1E+12	5	-0.167	-0.116	-0.051
5E+12	13	-0.212	-0.143	-0.069
5E+12	14	-0.375	-0.309	-0.066
5E+12	15	-0.157	-0.071	-0.086
5E+12	16	-0.190	-0.119	-0.072
5E+12	17	-0.161	-0.107	-0.054
1E+13	6	-0.372	-0.316	-0.056
1E+13	7	-0.363	-0.301	-0.061
1E+13	9	-0.299	-0.223	-0.076
1E+13	10	-0.373	-0.314	-0.059
1E+13	12	-0.193	-0.120	-0.073
Max		-0.128	-0.043	-0.051
Average		-0.260	-0.185	-0.074
Min		-0.375	-0.316	-0.121
Std Dev		0.089	0.092	0.020



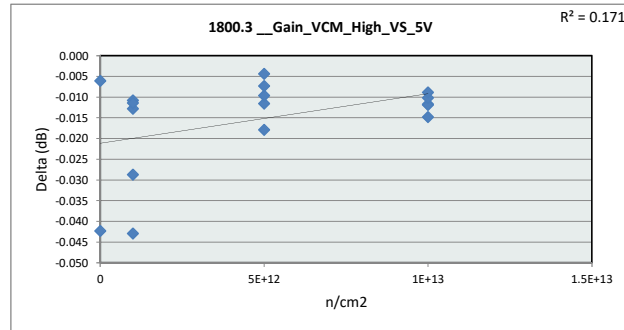
1800.2 Gain_VCM_Low_VS_5V				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	0.99	dB		
Min Limit	-0.99	dB		
n/cm2	0	1E+12	5E+12	1E+13
LL	-0.990	-0.990	-0.990	-0.990
Min	-0.293	-0.198	-0.309	-0.316
Average	-0.168	-0.159	-0.149	-0.255
Max	-0.043	-0.116	-0.071	-0.120
UL	0.990	0.990	0.990	0.990



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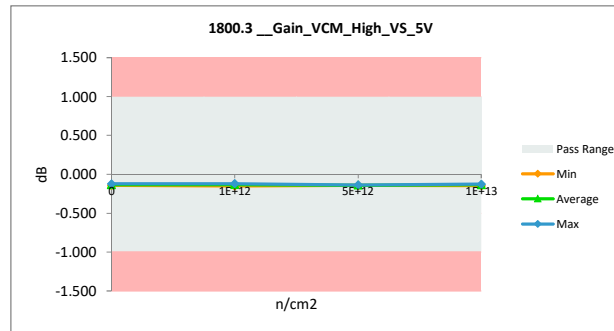
1800.3 Gain_VCM_High_VS 5		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	0.99	0.99
Min Limit	-0.99	-0.99

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-0.149	-0.143	-0.006
0	106	-0.168	-0.125	-0.042
1E+12	1	-0.164	-0.121	-0.043
1E+12	2	-0.145	-0.133	-0.013
1E+12	3	-0.161	-0.150	-0.011
1E+12	4	-0.153	-0.124	-0.029
1E+12	5	-0.150	-0.139	-0.011
5E+12	13	-0.159	-0.141	-0.018
5E+12	14	-0.149	-0.138	-0.012
5E+12	15	-0.148	-0.144	-0.004
5E+12	16	-0.150	-0.140	-0.010
5E+12	17	-0.150	-0.143	-0.007
1E+13	6	-0.147	-0.136	-0.012
1E+13	7	-0.144	-0.132	-0.012
1E+13	9	-0.157	-0.147	-0.010
1E+13	10	-0.143	-0.128	-0.015
1E+13	12	-0.154	-0.145	-0.009
Max		-0.143	-0.121	-0.004
Average		-0.152	-0.137	-0.015
Min		-0.168	-0.150	-0.043
Std Dev		0.007	0.009	0.012



1800.3 Gain_VCM_High_VS		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	0.99	dB
Min Limit	-0.99	dB

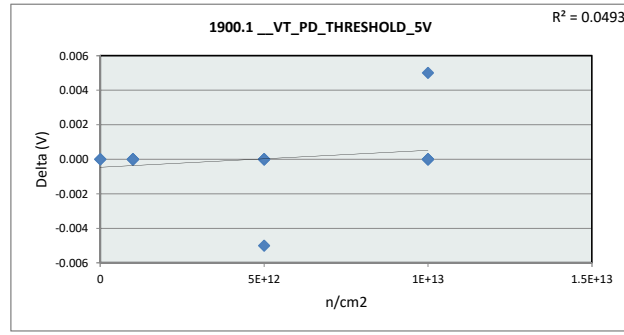
n/cm2	0	1E+12	5E+12	1E+13
LL	-0.990	-0.990	-0.990	-0.990
Min	-0.143	-0.150	-0.144	-0.147
Average	-0.134	-0.133	-0.141	-0.138
Max	-0.125	-0.121	-0.138	-0.128
UL	0.990	0.990	0.990	0.990



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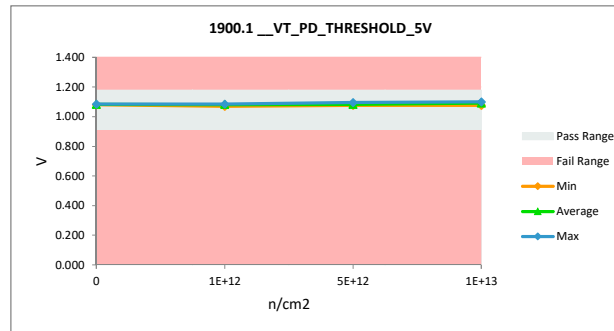
1900.1 VT_PD_THRESHOLD 5		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.18	1.18
Min Limit	0.91	0.91

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.080	1.080	0.000
0	106	1.085	1.085	0.000
1E+12	1	1.070	1.070	0.000
1E+12	2	1.085	1.085	0.000
1E+12	3	1.085	1.085	0.000
1E+12	4	1.085	1.085	0.000
1E+12	5	1.080	1.080	0.000
5E+12	13	1.085	1.085	0.000
5E+12	14	1.090	1.095	-0.005
5E+12	15	1.080	1.080	0.000
5E+12	16	1.075	1.075	0.000
5E+12	17	1.075	1.075	0.000
1E+13	6	1.100	1.100	0.000
1E+13	7	1.100	1.100	0.000
1E+13	9	1.090	1.085	0.005
1E+13	10	1.095	1.095	0.000
1E+13	12	1.075	1.075	0.000
Max		1.100	1.100	0.005
Average		1.084	1.084	0.000
Min		1.070	1.070	-0.005
Std Dev		0.009	0.009	0.002



1900.1 VT_PD_THRESHOLD		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.18	V
Min Limit	0.91	V

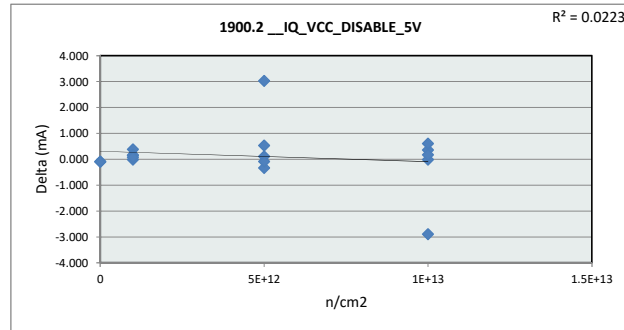
n/cm2	0	1E+12	5E+12	1E+13
LL	0.910	0.910	0.910	0.910
Min	1.080	1.070	1.075	1.075
Average	1.083	1.081	1.082	1.091
Max	1.085	1.085	1.095	1.100
UL	1.180	1.180	1.180	1.180



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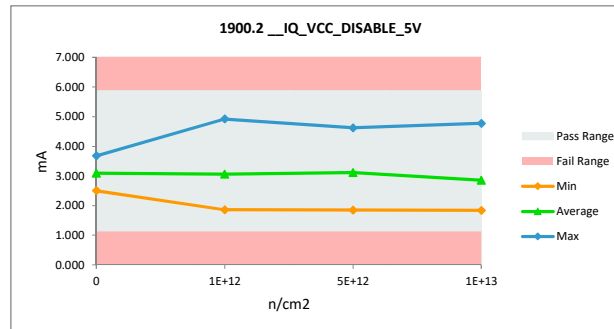
1900.2 IQ_VCC_DISABLE_5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	5.875	5.875
Min Limit	1.125	1.125

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	2.414	2.502	-0.088
0	106	3.577	3.680	-0.103
1E+12	1	3.579	3.203	0.376
1E+12	2	3.171	3.022	0.149
1E+12	3	4.913	4.922	-0.009
1E+12	4	2.412	2.256	0.157
1E+12	5	1.932	1.862	0.070
5E+12	13	3.646	3.982	-0.336
5E+12	14	4.884	1.851	3.033
5E+12	15	4.738	4.627	0.110
5E+12	16	2.129	2.216	-0.086
5E+12	17	3.424	2.895	0.529
1E+13	6	1.904	1.918	-0.014
1E+13	7	2.196	1.836	0.359
1E+13	9	1.880	4.772	-2.892
1E+13	10	2.056	1.880	0.176
1E+13	12	4.465	3.855	0.609
Max		4.913	4.922	3.033
Average		3.137	3.016	0.120
Min		1.880	1.836	-2.892
Std Dev		1.116	1.104	1.074



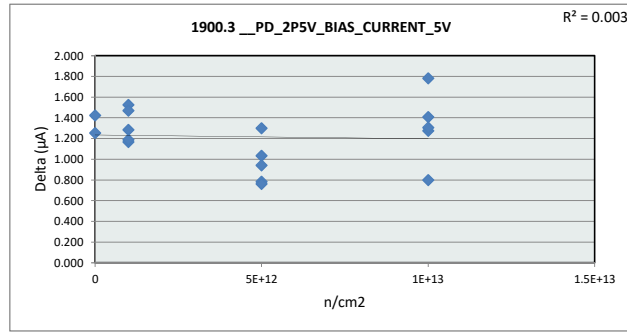
1900.2 IQ_VCC_DISABLE_5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	5.875	mA
Min Limit	1.125	mA

n/cm2	0	1E+12	5E+12	1E+13
LL	1.125	1.125	1.125	1.125
Min	2.502	1.862	1.851	1.836
Average	3.091	3.053	3.114	2.852
Max	3.680	4.922	4.627	4.772
UL	5.875	5.875	5.875	5.875

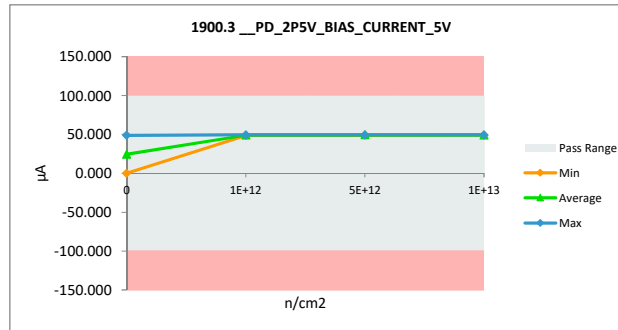


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1900.3_PD_2P5V_BIAS_CURR				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit	µA	µA		
Max Limit	99	99		
Min Limit	-99	-99		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	50.708	49.285	1.423
0	106	50.171	48.919	1.252
1E+12	1	50.459	48.935	1.524
1E+12	2	50.202	48.733	1.469
1E+12	3	50.249	48.966	1.282
1E+12	4	50.553	49.387	1.165
1E+12	5	50.225	49.036	1.189
5E+12	13	50.366	49.333	1.033
5E+12	14	50.529	49.231	1.298
5E+12	15	49.852	48.912	0.940
5E+12	16	50.171	49.387	0.784
5E+12	17	50.116	49.356	0.761
1E+13	6	50.109	48.834	1.275
1E+13	7	50.576	48.795	1.781
1E+13	9	50.140	49.340	0.799
1E+13	10	50.623	49.216	1.407
1E+13	12	50.155	48.849	1.306
Max		50.708	49.387	1.781
Average		50.306	49.089	1.217
Min		49.852	48.733	0.761
Std Dev		0.232	0.235	0.281



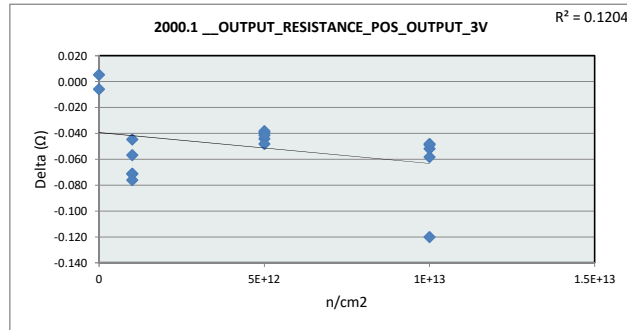
1900.3_PD_2P5V_BIAS_CURR				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	99	µA		
Min Limit	-99	µA		
n/cm2	0	1E+12	5E+12	1E+13
LL	-99.000	-99.000	-99.000	-99.000
Min	0.000	48.733	48.912	48.795
Average	24.459	49.012	49.244	49.007
Max	48.919	49.387	49.387	49.340
UL	99.000	99.000	99.000	99.000



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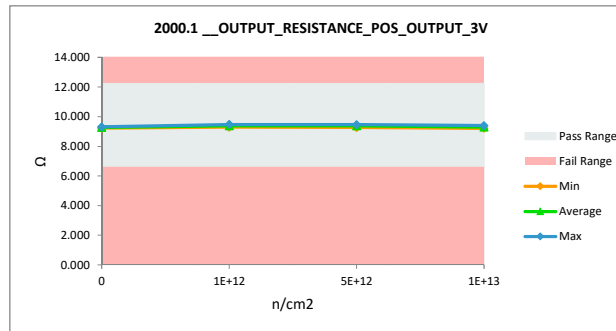
2000.1 OUTPUT RESISTANCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	Ω	Ω
Max Limit	12.25	12.25
Min Limit	6.6	6.6

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	9.232	9.227	0.005
0	106	9.311	9.316	-0.006
1E+12	1	9.234	9.305	-0.071
1E+12	2	9.416	9.473	-0.057
1E+12	3	9.226	9.297	-0.071
1E+12	4	9.239	9.315	-0.076
1E+12	5	9.394	9.439	-0.045
5E+12	13	9.245	9.285	-0.040
5E+12	14	9.229	9.273	-0.044
5E+12	15	9.418	9.466	-0.048
5E+12	16	9.391	9.429	-0.038
5E+12	17	9.408	9.449	-0.041
1E+13	6	9.164	9.213	-0.049
1E+13	7	9.248	9.300	-0.052
1E+13	9	9.259	9.307	-0.048
1E+13	10	9.136	9.257	-0.120
1E+13	12	9.346	9.405	-0.058
Max		9.418	9.473	0.005
Average		9.288	9.339	-0.051
Min		9.136	9.213	-0.120
Std Dev		0.091	0.086	0.027



2000.1 OUTPUT RESISTANCE		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	12.25	Ω
Min Limit	6.6	Ω

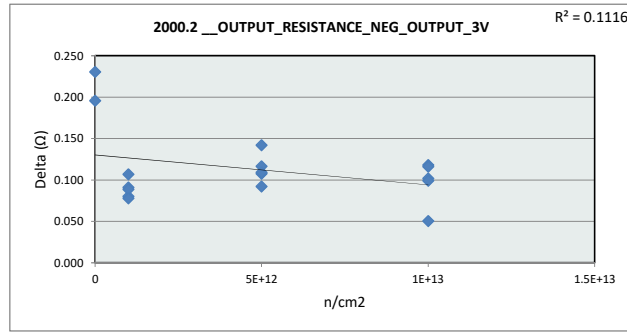
n/cm2	0	1E+12	5E+12	1E+13
LL	6.600	6.600	6.600	6.600
Min	9.227	9.297	9.273	9.213
Average	9.272	9.366	9.380	9.296
Max	9.317	9.473	9.466	9.405
UL	12.250	12.250	12.250	12.250



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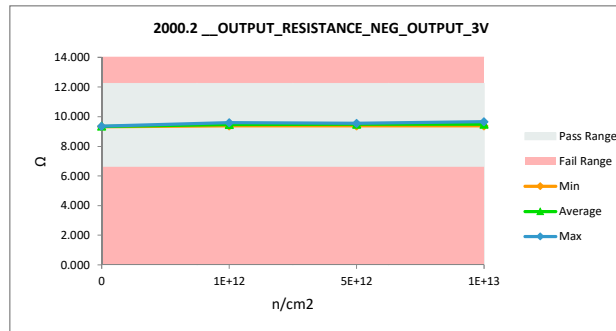
2000.2 OUTPUT RESISTANCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	Ω	Ω
Max Limit	12.25	12.25
Min Limit	6.6	6.6

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	9.557	9.327	0.230
0	106	9.554	9.358	0.196
1E+12	1	9.472	9.381	0.091
1E+12	2	9.660	9.579	0.080
1E+12	3	9.486	9.397	0.089
1E+12	4	9.523	9.416	0.107
1E+12	5	9.594	9.516	0.078
5E+12	13	9.499	9.382	0.116
5E+12	14	9.566	9.424	0.142
5E+12	15	9.660	9.552	0.108
5E+12	16	9.625	9.516	0.109
5E+12	17	9.635	9.543	0.092
1E+13	6	9.479	9.377	0.102
1E+13	7	9.576	9.458	0.118
1E+13	9	9.526	9.410	0.116
1E+13	10	9.710	9.660	0.051
1E+13	12	9.611	9.512	0.099
Max		9.710	9.660	0.230
Average		9.572	9.459	0.113
Min		9.472	9.327	0.051
Std Dev		0.071	0.092	0.043



2000.2 OUTPUT RESISTANCE		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	12.25	Ω
Min Limit	6.6	Ω

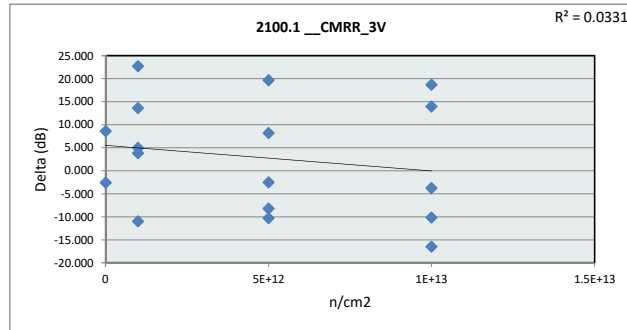
n/cm2	0	1E+12	5E+12	1E+13
LL	6.600	6.600	6.600	6.600
Min	9.327	9.381	9.382	9.377
Average	9.342	9.458	9.484	9.483
Max	9.358	9.579	9.552	9.660
UL	12.250	12.250	12.250	12.250



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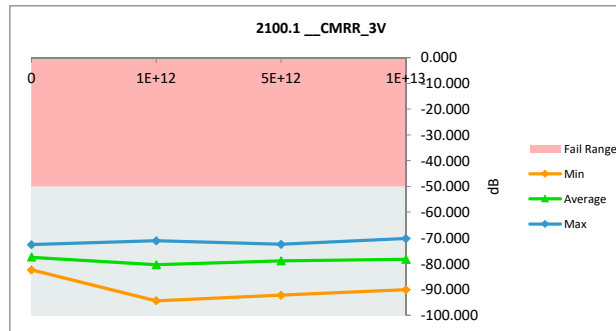
2100.1_CMRR_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	-50	-50
Min Limit		

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-73.780	-82.393	8.614
0	106	-75.153	-72.604	-2.549
1E+12	1	-71.993	-75.797	3.804
1E+12	2	-69.257	-82.887	13.630
1E+12	3	-82.164	-71.176	-10.989
1E+12	4	-73.064	-78.036	4.972
1E+12	5	-71.694	-94.434	22.740
5E+12	13	-81.246	-73.043	-8.203
5E+12	14	-82.805	-72.503	-10.302
5E+12	15	-73.688	-81.909	8.221
5E+12	16	-77.561	-75.030	-2.531
5E+12	17	-72.590	-92.281	19.691
1E+13	6	-71.436	-90.117	18.681
1E+13	7	-82.598	-72.464	-10.134
1E+13	9	-86.727	-70.238	-16.489
1E+13	10	-76.117	-72.363	-3.755
1E+13	12	-72.667	-86.650	13.983
Max		-69.257	-70.238	22.740
Average		-76.149	-79.054	2.905
Min		-86.727	-94.434	-16.489
Std Dev		5.097	7.914	12.167



2100.1_CMRR_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-50	dB
Min Limit		dB

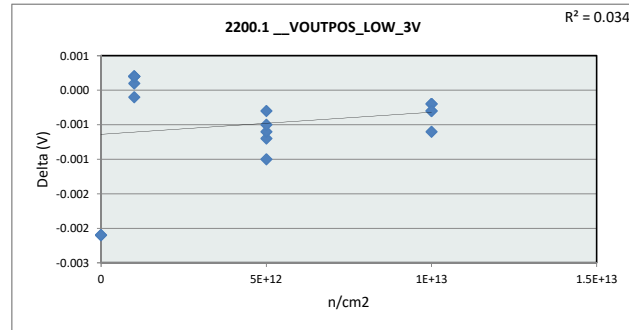
n/cm2	0	1E+12	5E+12	1E+13
LL				
Min	-82.393	-94.434	-92.281	-90.117
Average	-77.499	-80.466	-78.953	-78.366
Max	-72.604	-71.176	-72.503	-70.238
UL	-50.000	-50.000	-50.000	-50.000



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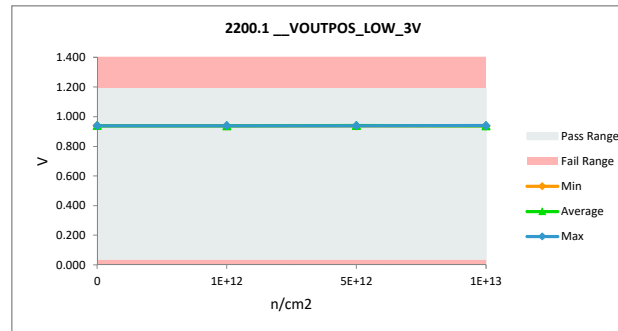
2200.1_VOUTPOS_LOW_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.937	0.939	-0.002
0	106	0.937	0.939	-0.002
1E+12	1	0.938	0.938	0.000
1E+12	2	0.939	0.939	0.000
1E+12	3	0.939	0.938	0.000
1E+12	4	0.938	0.938	0.000
1E+12	5	0.939	0.939	0.000
5E+12	13	0.938	0.939	-0.001
5E+12	14	0.938	0.939	-0.001
5E+12	15	0.938	0.939	-0.001
5E+12	16	0.938	0.938	0.000
5E+12	17	0.938	0.938	0.000
1E+13	6	0.938	0.938	-0.001
1E+13	7	0.938	0.938	0.000
1E+13	9	0.938	0.938	0.000
1E+13	10	0.939	0.939	0.000
1E+13	12	0.938	0.938	0.000
Max		0.939	0.939	0.000
Average		0.938	0.939	0.000
Min		0.937	0.938	-0.002
Std Dev		0.001	0.000	0.001



2200.1_VOUTPOS_LOW_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

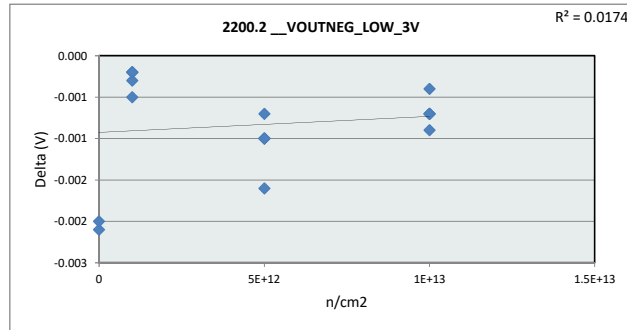
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	0.939	0.938	0.938	0.938
Average	0.939	0.938	0.939	0.938
Max	0.939	0.939	0.939	0.939
UL	1.190	1.190	1.190	1.190



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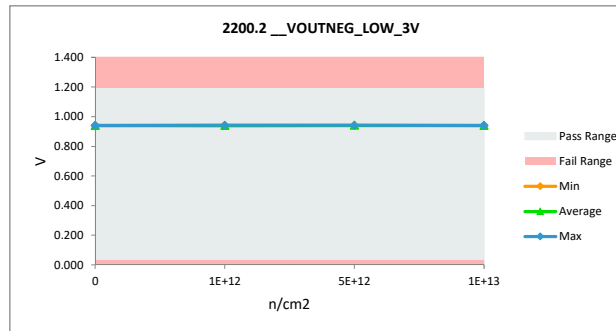
2200.2_VOUTNEG_LOW_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.938	0.940	-0.002
0	106	0.939	0.941	-0.002
1E+12	1	0.939	0.939	0.000
1E+12	2	0.940	0.941	0.000
1E+12	3	0.940	0.940	0.000
1E+12	4	0.940	0.941	-0.001
1E+12	5	0.941	0.941	0.000
5E+12	13	0.939	0.941	-0.002
5E+12	14	0.940	0.941	-0.001
5E+12	15	0.940	0.941	-0.001
5E+12	16	0.940	0.941	-0.001
5E+12	17	0.940	0.940	-0.001
1E+13	6	0.938	0.939	-0.001
1E+13	7	0.940	0.940	-0.001
1E+13	9	0.939	0.940	-0.001
1E+13	10	0.941	0.941	0.000
1E+13	12	0.940	0.940	-0.001
Max		0.941	0.941	0.000
Average		0.940	0.940	-0.001
Min		0.938	0.939	-0.002
Std Dev		0.001	0.001	0.001



2200.2_VOUTNEG_LOW_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

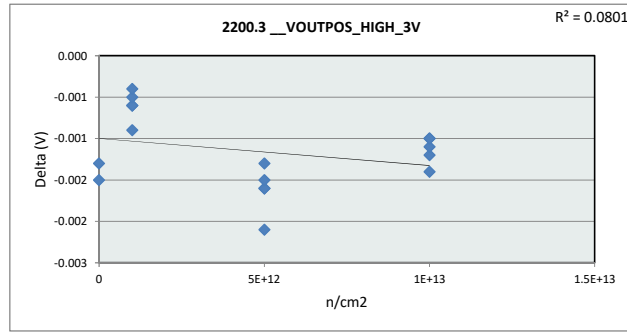
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	0.940	0.939	0.940	0.939
Average	0.941	0.940	0.941	0.940
Max	0.941	0.941	0.941	0.941
UL	1.190	1.190	1.190	1.190



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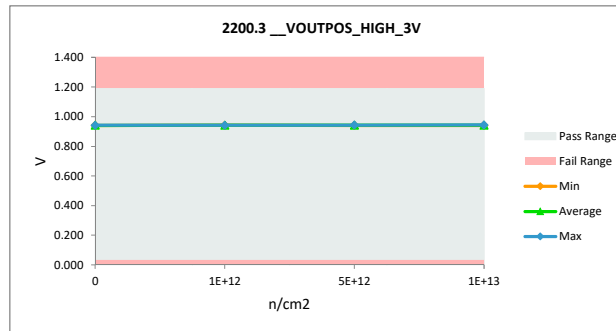
2200.3 VOUTPOS_HIGH_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.940	0.941	-0.001
0	106	0.940	0.942	-0.002
1E+12	1	0.942	0.942	-0.001
1E+12	2	0.942	0.942	-0.001
1E+12	3	0.941	0.942	0.000
1E+12	4	0.941	0.942	-0.001
1E+12	5	0.941	0.941	0.000
5E+12	13	0.942	0.944	-0.002
5E+12	14	0.941	0.942	-0.002
5E+12	15	0.940	0.941	-0.002
5E+12	16	0.940	0.942	-0.002
5E+12	17	0.940	0.941	-0.001
1E+13	6	0.942	0.943	-0.001
1E+13	7	0.941	0.942	-0.001
1E+13	9	0.941	0.942	-0.001
1E+13	10	0.942	0.943	-0.001
1E+13	12	0.940	0.941	-0.001
Max		0.942	0.944	0.000
Average		0.941	0.942	-0.001
Min		0.940	0.941	-0.002
Std Dev		0.001	0.001	0.000



2200.3 VOUTPOS_HIGH_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

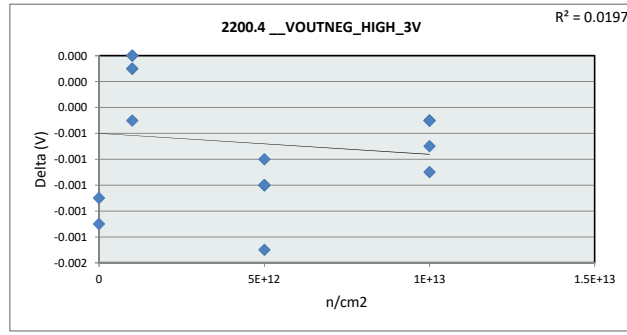
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	0.941	0.941	0.941	0.941
Average	0.941	0.942	0.942	0.942
Max	0.942	0.942	0.944	0.943
UL	1.190	1.190	1.190	1.190



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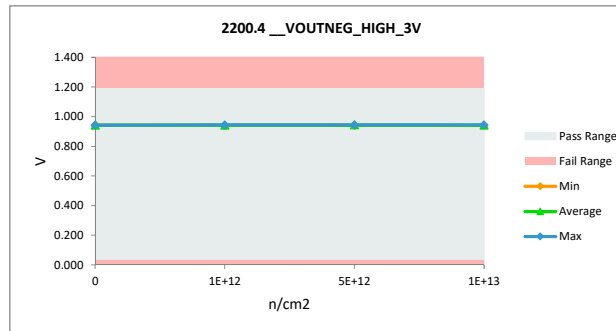
2200.4 VOUTNEG_HIGH_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.19	1.19
Min Limit	0.033	0.033

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.941	0.942	-0.001
0	106	0.942	0.943	-0.001
1E+12	1	0.942	0.943	0.000
1E+12	2	0.942	0.942	0.000
1E+12	3	0.943	0.943	0.000
1E+12	4	0.942	0.942	0.000
1E+12	5	0.942	0.942	0.000
5E+12	13	0.943	0.944	-0.002
5E+12	14	0.942	0.943	-0.001
5E+12	15	0.941	0.942	-0.001
5E+12	16	0.941	0.942	-0.001
5E+12	17	0.941	0.942	-0.001
1E+13	6	0.942	0.943	-0.001
1E+13	7	0.942	0.943	-0.001
1E+13	9	0.942	0.942	-0.001
1E+13	10	0.943	0.943	-0.001
1E+13	12	0.941	0.942	-0.001
Max		0.943	0.944	0.000
Average		0.942	0.943	-0.001
Min		0.941	0.942	-0.002
Std Dev		0.001	0.001	0.000



2200.4 VOUTNEG_HIGH_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.19	V
Min Limit	0.033	V

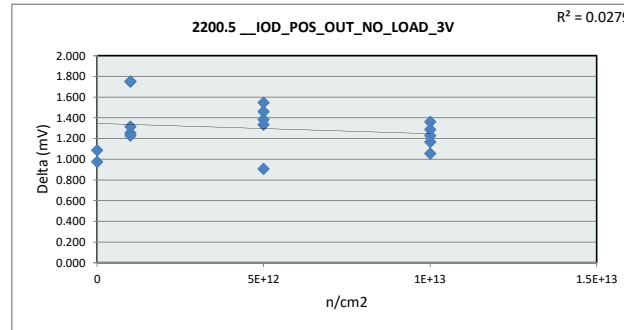
n/cm2	0	1E+12	5E+12	1E+13
LL	0.033	0.033	0.033	0.033
Min	0.942	0.942	0.942	0.942
Average	0.942	0.942	0.943	0.943
Max	0.943	0.943	0.944	0.943
UL	1.190	1.190	1.190	1.190



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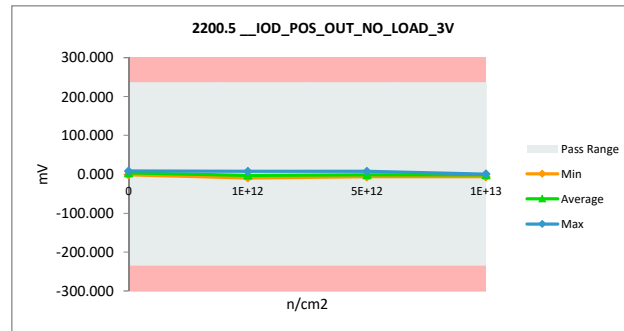
2200.5_IOD_POS_OUT_NO_LOAD_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-0.501	-1.588	1.088
0	106	9.558	8.582	0.976
1E+12	1	9.019	7.766	1.253
1E+12	2	-7.359	-9.109	1.750
1E+12	3	1.686	0.370	1.316
1E+12	4	-3.719	-5.471	1.752
1E+12	5	-6.551	-7.779	1.228
5E+12	13	8.341	7.435	0.906
5E+12	14	0.727	-0.656	1.383
5E+12	15	-3.135	-4.682	1.547
5E+12	16	-3.130	-4.590	1.460
5E+12	17	-5.211	-6.545	1.334
1E+13	6	0.591	-0.465	1.057
1E+13	7	0.096	-1.265	1.361
1E+13	9	1.681	0.454	1.227
1E+13	10	-5.472	-6.757	1.286
1E+13	12	1.911	0.743	1.168
Max		9.558	8.582	1.752
Average		-0.086	-1.386	1.299
Min		-7.359	-9.109	0.906
Std Dev		5.245	5.403	0.237



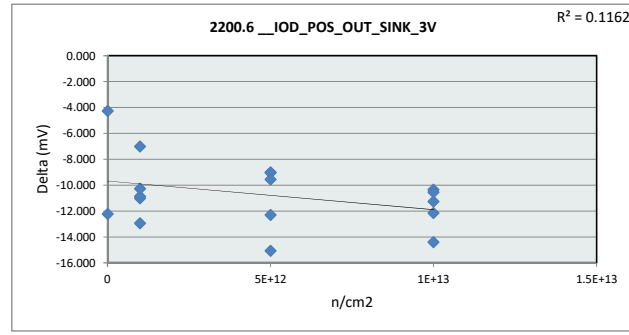
2200.5_IOD_POS_OUT_NO_LOAD_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-1.588	-9.109	-6.545	-6.757
Average	3.497	-2.845	-1.808	-1.458
Max	8.582	7.766	7.435	0.743
UL	235.000	235.000	235.000	235.000

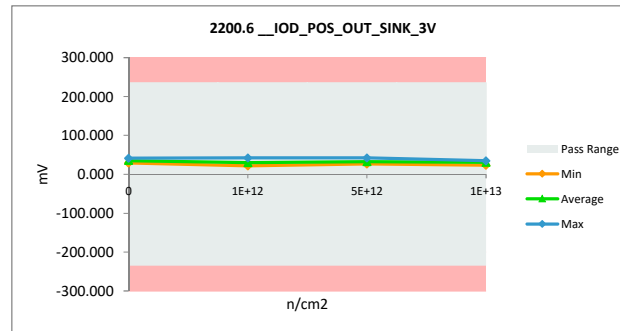


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2200.6 IOD_POS_OUT_SINK				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit	mV	mV		
Max Limit	235	235		
Min Limit	-235	-235		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	16.915	29.135	-12.220
0	106	36.549	40.815	-4.265
1E+12	1	34.676	41.678	-7.003
1E+12	2	8.490	21.436	-12.946
1E+12	3	23.297	34.312	-11.015
1E+12	4	16.171	27.050	-10.879
1E+12	5	13.555	23.826	-10.270
5E+12	13	33.127	42.138	-9.011
5E+12	14	18.105	33.178	-15.073
5E+12	15	19.454	28.489	-9.035
5E+12	16	17.239	29.533	-12.295
5E+12	17	17.036	26.588	-9.552
1E+13	6	19.137	31.290	-12.152
1E+13	7	16.348	30.745	-14.396
1E+13	9	23.288	34.551	-11.263
1E+13	10	12.570	22.931	-10.361
1E+13	12	23.764	34.305	-10.541
	Max	36.549	42.138	-4.265
	Average	20.572	31.294	-10.722
	Min	8.490	21.436	-15.073
	Std Dev	7.825	6.262	2.593



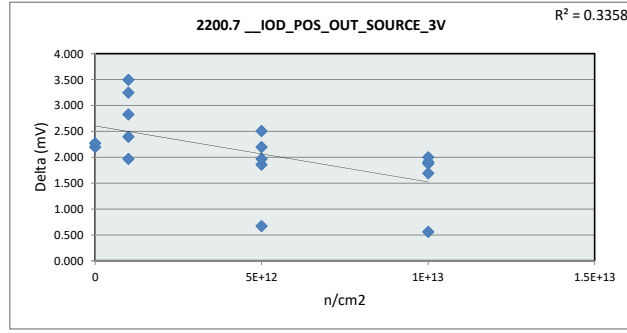
2200.6 IOD_POS_OUT_SINK				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	235	mV		
Min Limit	-235	mV		
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	29.135	21.436	26.588	22.931
Average	34.975	29.660	31.985	30.764
Max	40.815	41.678	42.138	34.551
UL	235.000	235.000	235.000	235.000



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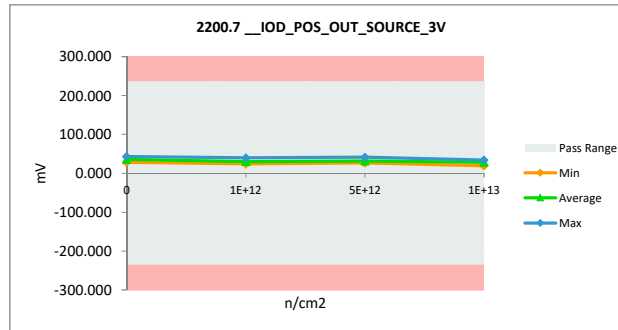
2200.7_IOD_POS_OUT_SOURCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	30.226	28.031	2.195
0	106	45.417	43.145	2.272
1E+12	1	41.598	39.627	1.971
1E+12	2	27.167	23.669	3.498
1E+12	3	36.010	33.613	2.397
1E+12	4	28.775	25.527	3.248
1E+12	5	28.228	25.399	2.829
5E+12	13	41.626	40.955	0.671
5E+12	14	32.818	30.958	1.859
5E+12	15	30.593	28.623	1.970
5E+12	16	30.434	28.237	2.197
5E+12	17	28.582	26.076	2.505
1E+13	6	28.843	27.154	1.688
1E+13	7	30.644	28.771	1.873
1E+13	9	35.654	33.749	1.905
1E+13	10	19.767	19.205	0.562
1E+13	12	34.464	32.463	2.000
Max		45.417	43.145	3.498
Average		32.403	30.306	2.097
Min		19.767	19.205	0.562
Std Dev		6.260	6.372	0.745



2200.7_IOD_POS_OUT_SOU		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

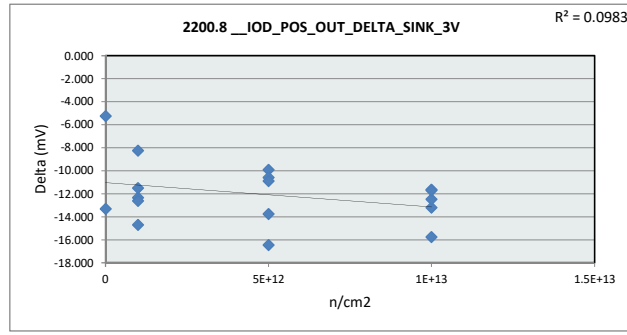
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	28.031	23.669	26.076	19.205
Average	35.588	29.567	30.970	28.269
Max	43.145	39.627	40.955	33.749
UL	235.000	235.000	235.000	235.000



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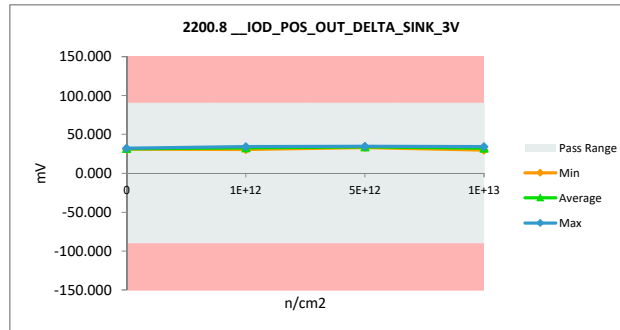
2200.8_IOD_POS_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	17.416	30.723	-13.307
0	106	26.992	32.233	-5.242
1E+12	1	25.657	33.912	-8.256
1E+12	2	15.848	30.545	-14.697
1E+12	3	21.611	33.942	-12.331
1E+12	4	19.890	32.521	-12.631
1E+12	5	20.106	31.604	-11.498
5E+12	13	24.787	34.703	-9.917
5E+12	14	17.378	33.834	-16.456
5E+12	15	22.588	33.171	-10.583
5E+12	16	20.368	34.123	-13.754
5E+12	17	22.247	33.133	-10.886
1E+13	6	18.546	31.755	-13.209
1E+13	7	16.253	32.010	-15.757
1E+13	9	21.606	34.097	-12.490
1E+13	10	18.041	29.688	-11.647
1E+13	12	21.853	33.562	-11.708
Max		26.992	34.703	-5.242
Average		20.658	32.680	-12.022
Min		15.848	29.688	-16.456
Std Dev		3.238	1.455	2.692



2200.8_IOD_POS_OUT_DELTA		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

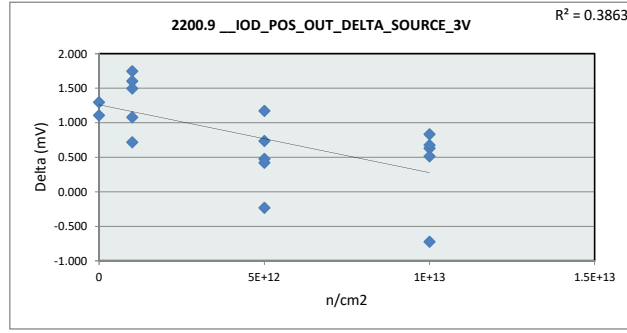
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	30.723	30.545	33.133	29.688
Average	31.478	32.505	33.793	32.222
Max	32.233	33.942	34.703	34.097
UL	90.000	90.000	90.000	90.000



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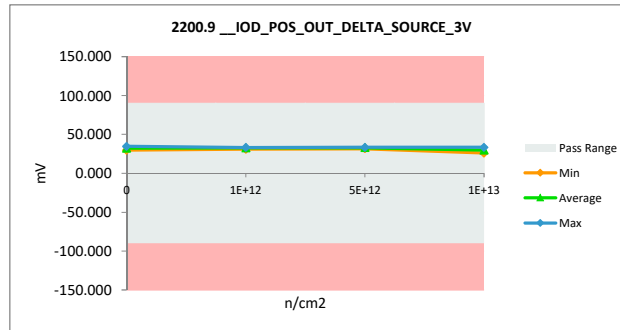
2200.9_IOD_POS_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	30.727	29.619	1.108
0	106	35.859	34.563	1.296
1E+12	1	32.579	31.861	0.718
1E+12	2	34.525	32.778	1.747
1E+12	3	34.324	33.243	1.081
1E+12	4	32.494	30.998	1.497
1E+12	5	34.779	33.178	1.601
5E+12	13	33.285	33.520	-0.235
5E+12	14	32.091	31.615	0.476
5E+12	15	33.728	33.305	0.423
5E+12	16	33.564	32.826	0.737
5E+12	17	33.793	32.621	1.171
1E+13	6	28.252	27.620	0.632
1E+13	7	30.549	30.036	0.513
1E+13	9	33.972	33.295	0.678
1E+13	10	25.239	25.963	-0.724
1E+13	12	32.553	31.720	0.833
Max		35.859	34.563	1.747
Average		32.489	31.692	0.797
Min		25.239	25.963	-0.724
Std Dev		2.609	2.259	0.630



2200.9_IOD_POS_OUT_DELTA		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

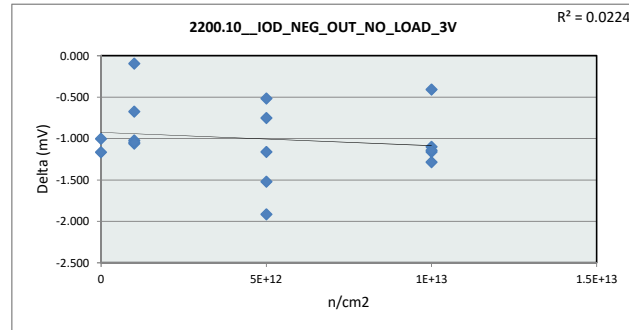
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	29.619	30.998	31.615	25.963
Average	32.091	32.412	32.778	29.727
Max	34.563	33.243	33.520	33.295
UL	90.000	90.000	90.000	90.000



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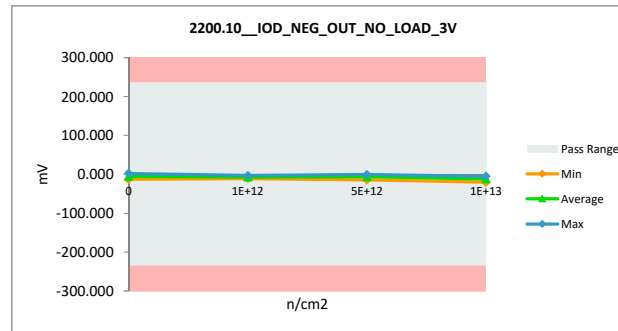
2200.10_IOD_NEG_OUT_NO_LOAD_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-14.540	-13.374	-1.166
0	106	1.188	2.191	-1.003
1E+12	1	-7.237	-6.177	-1.061
1E+12	2	-11.555	-10.878	-0.676
1E+12	3	-4.326	-3.303	-1.023
1E+12	4	-9.265	-8.219	-1.046
1E+12	5	-7.531	-7.437	-0.094
5E+12	13	-4.412	-2.891	-1.521
5E+12	14	-16.028	-14.868	-1.160
5E+12	15	-2.658	-0.743	-1.915
5E+12	16	-8.343	-7.590	-0.754
5E+12	17	-6.400	-5.883	-0.517
1E+13	6	-11.995	-10.895	-1.100
1E+13	7	-14.663	-13.503	-1.160
1E+13	9	-6.602	-5.315	-1.287
1E+13	10	-20.709	-20.302	-0.408
1E+13	12	-11.172	-10.030	-1.142
Max		1.188	2.191	-0.094
Average		-9.191	-8.189	-1.002
Min		-20.709	-20.302	-1.915
Std Dev		5.443	5.579	0.424



2200.10_IOD_NEG_OUT_NO_LOAD_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

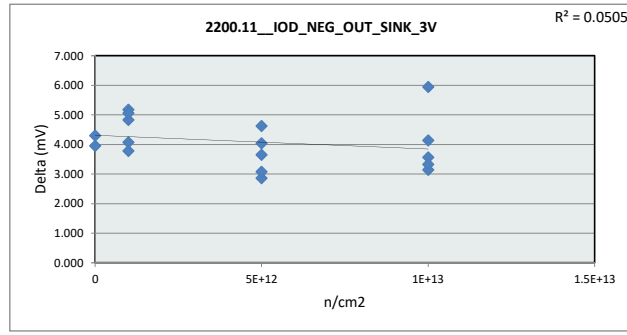
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-13.374	-10.878	-14.868	-20.302
Average	-5.591	-7.203	-6.395	-12.009
Max	2.191	-3.304	-0.743	-5.315
UL	235.000	235.000	235.000	235.000



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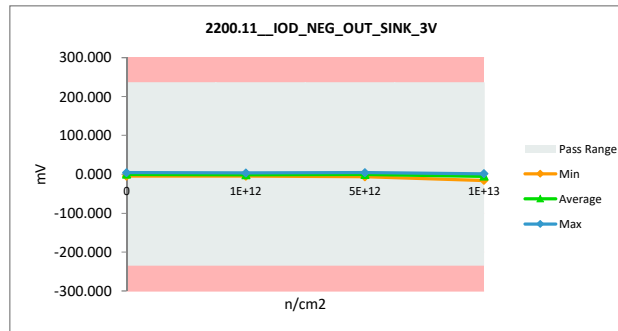
2200.11_IOD_NEG_OUT_SINK		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-0.959	-4.914	3.955
0	106	8.478	4.183	4.294
1E+12	1	1.747	-2.327	4.074
1E+12	2	0.067	-5.109	5.175
1E+12	3	6.692	2.912	3.780
1E+12	4	3.691	-1.138	4.829
1E+12	5	3.679	-1.379	5.058
5E+12	13	4.135	1.269	2.866
5E+12	14	-3.507	-6.582	3.075
5E+12	15	7.942	4.294	3.648
5E+12	16	2.568	-1.469	4.037
5E+12	17	4.761	0.139	4.622
1E+13	6	1.020	-2.543	3.563
1E+13	7	-1.672	-4.815	3.144
1E+13	9	4.680	1.349	3.331
1E+13	10	-9.842	-15.783	5.941
1E+13	12	0.845	-3.293	4.138
Max		8.478	4.294	5.941
Average		2.019	-2.071	4.090
Min		-9.842	-15.783	2.866
Std Dev		4.497	4.802	0.829



2200.11_IOD_NEG_OUT_SIN		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

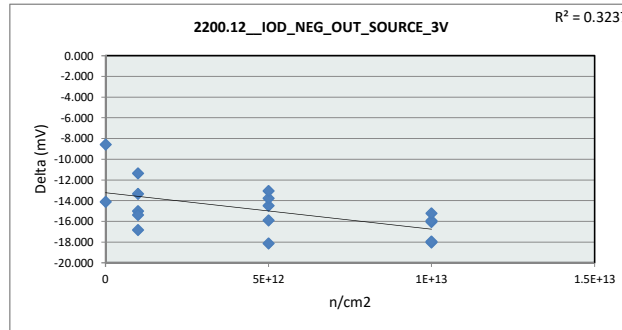
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	-4.914	-5.109	-6.583	-15.784
Average	-0.365	-1.408	-0.470	-5.017
Max	4.184	2.912	4.294	1.349
UL	235.000	235.000	235.000	235.000



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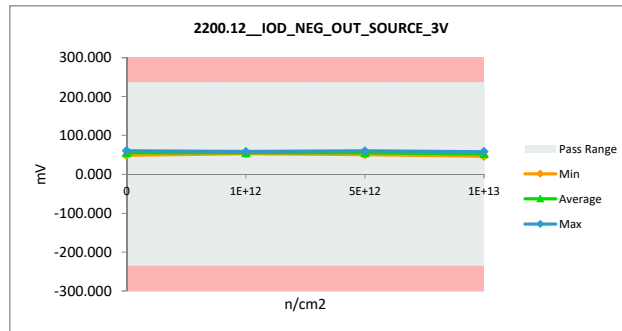
2200.12_IOD_NEG_OUT_SOURCE		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	235	235
Min Limit	-235	-235

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	34.597	48.696	-14.099
0	106	52.231	60.813	-8.583
1E+12	1	43.948	55.307	-11.359
1E+12	2	37.267	54.096	-16.829
1E+12	3	42.994	58.012	-15.018
1E+12	4	38.758	54.137	-15.379
1E+12	5	39.307	52.637	-13.330
5E+12	13	45.318	59.803	-14.485
5E+12	14	31.971	50.096	-18.125
5E+12	15	45.104	58.873	-13.770
5E+12	16	38.462	54.359	-15.897
5E+12	17	41.286	54.356	-13.070
1E+13	6	37.049	53.106	-16.057
1E+13	7	33.133	51.178	-18.046
1E+13	9	42.056	58.005	-15.950
1E+13	10	28.113	46.048	-17.935
1E+13	12	37.903	53.115	-15.212
Max		52.231	60.813	-8.583
Average		39.382	54.273	-14.891
Min		28.113	46.048	-18.125
Std Dev		5.782	3.990	2.467



2200.12_IOD_NEG_OUT_SOURCE		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	235	mV
Min Limit	-235	mV

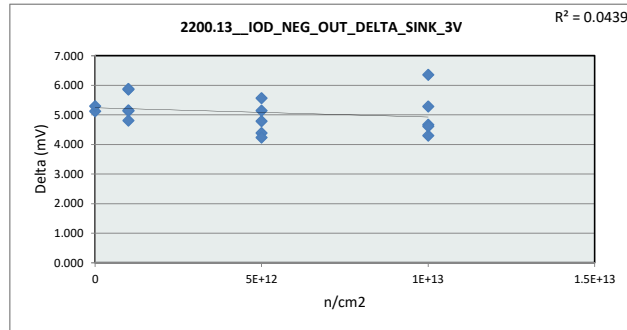
n/cm2	0	1E+12	5E+12	1E+13
LL	-235.000	-235.000	-235.000	-235.000
Min	48.696	52.637	50.096	46.048
Average	54.755	54.838	55.497	52.291
Max	60.813	58.012	59.803	58.005
UL	235.000	235.000	235.000	235.000



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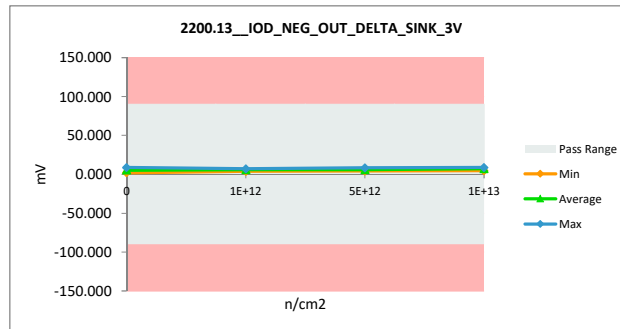
2200.13 IOD_NEG_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	13.580	8.460	5.121
0	106	7.290	1.992	5.298
1E+12	1	8.984	3.849	5.135
1E+12	2	11.621	5.770	5.852
1E+12	3	11.018	6.215	4.802
1E+12	4	12.956	7.081	5.875
1E+12	5	11.210	6.057	5.153
5E+12	13	8.547	4.160	4.387
5E+12	14	12.521	8.285	4.235
5E+12	15	10.600	5.037	5.563
5E+12	16	10.911	6.120	4.791
5E+12	17	11.161	6.022	5.139
1E+13	6	13.015	8.352	4.663
1E+13	7	12.991	8.688	4.304
1E+13	9	11.281	6.664	4.618
1E+13	10	10.867	4.518	6.349
1E+13	12	12.017	6.737	5.279
Max		13.580	8.688	6.349
Average		11.210	6.118	5.092
Min		7.290	1.992	4.235
Std Dev		1.690	1.824	0.587



2200.13 IOD_NEG_OUT_DEL		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

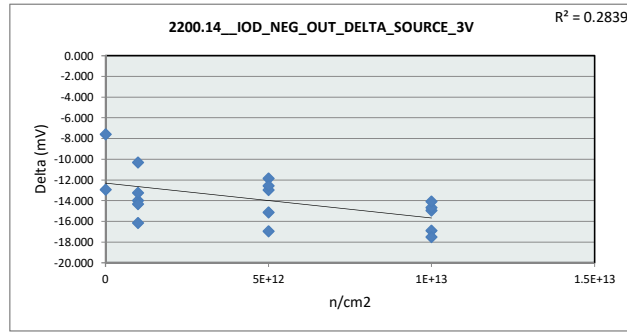
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	1.993	3.850	4.160	4.518
Average	5.226	5.795	5.925	6.992
Max	8.460	7.081	8.285	8.688
UL	90.000	90.000	90.000	90.000



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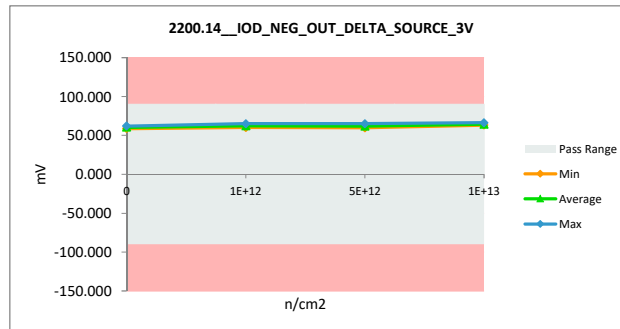
2200.14 IOD_NEG_OUT_DELTA		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	90	90
Min Limit	-90	-90

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	49.137	62.070	-12.933
0	106	51.043	58.622	-7.579
1E+12	1	51.186	61.484	-10.299
1E+12	2	48.822	64.974	-16.153
1E+12	3	47.320	61.315	-13.995
1E+12	4	48.023	62.356	-14.333
1E+12	5	46.839	60.074	-13.236
5E+12	13	49.730	62.694	-12.964
5E+12	14	47.999	64.963	-16.964
5E+12	15	47.761	59.616	-11.854
5E+12	16	46.805	61.949	-15.144
5E+12	17	47.686	60.239	-12.553
1E+13	6	49.045	64.002	-14.957
1E+13	7	47.796	64.681	-16.886
1E+13	9	48.657	63.320	-14.663
1E+13	10	48.822	66.349	-17.527
1E+13	12	49.075	63.145	-14.070
Max		51.186	66.349	-7.579
Average		48.573	62.462	-13.889
Min		46.805	58.622	-17.527
Std Dev		1.264	2.128	2.515



2200.14 IOD_NEG_OUT_DEL		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	90	mV
Min Limit	-90	mV

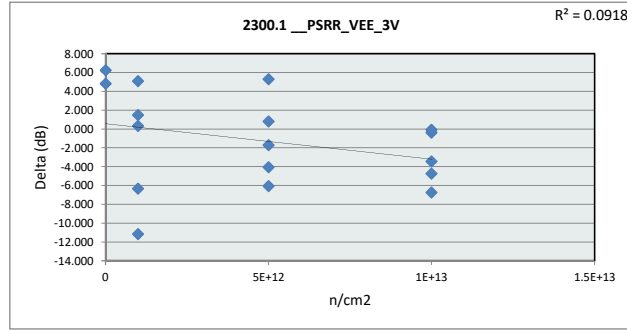
n/cm2	0	1E+12	5E+12	1E+13
LL	-90.000	-90.000	-90.000	-90.000
Min	58.622	60.074	59.616	63.145
Average	60.346	62.041	61.892	64.299
Max	62.070	64.974	64.963	66.349
UL	90.000	90.000	90.000	90.000



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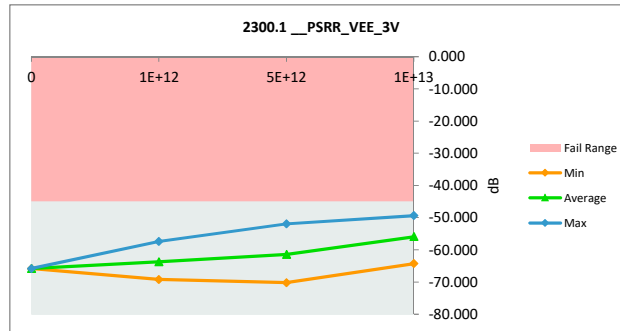
2300.1 PSRR_VEE_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	-45	-45
Min Limit		

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-61.001	-65.825	4.824
0	106	-59.588	-65.823	6.234
1E+12	1	-63.773	-57.445	-6.328
1E+12	2	-58.431	-63.508	5.077
1E+12	3	-60.539	-62.038	1.499
1E+12	4	-68.873	-69.198	0.325
1E+12	5	-78.043	-66.872	-11.171
5E+12	13	-55.223	-53.504	-1.719
5E+12	14	-55.982	-51.926	-4.056
5E+12	15	-62.477	-67.768	5.291
5E+12	16	-63.443	-64.243	0.800
5E+12	17	-76.284	-70.233	-6.051
1E+13	6	-54.289	-50.853	-3.436
1E+13	7	-55.829	-51.105	-4.723
1E+13	9	-64.712	-64.311	-0.401
1E+13	10	-56.109	-49.384	-6.726
1E+13	12	-64.166	-64.091	-0.075
Max		-54.289	-49.384	6.234
Average		-62.280	-61.066	-1.214
Min		-78.043	-70.233	-11.171
Std Dev		6.896	7.091	4.964



2300.1 PSRR_VEE_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-45	dB
Min Limit		dB

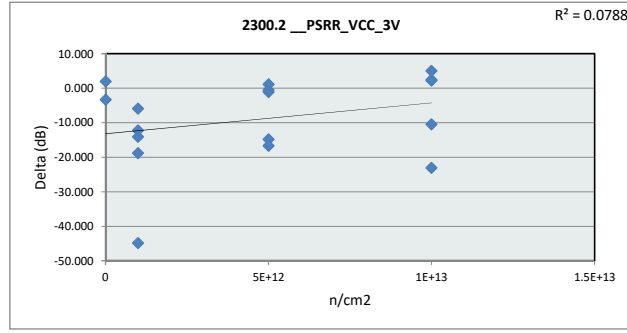
n/cm2	0	1E+12	5E+12	1E+13
LL				
Min	-65.825	-69.198	-70.233	-64.311
Average	-65.824	-63.812	-61.535	-55.949
Max	-65.823	-57.445	-51.927	-49.384
UL	-45.000	-45.000	-45.000	-45.000



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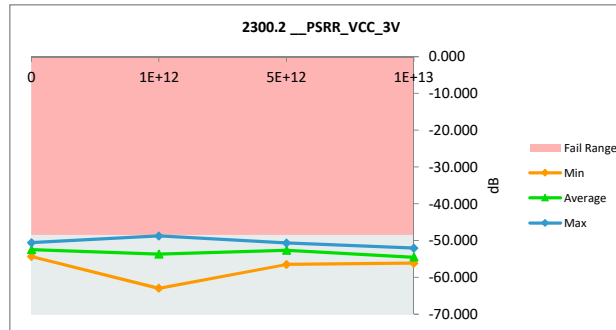
2300.2 PSRR_VCC_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	-48.5	-48.5
Min Limit		

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-48.608	-50.583	1.975
0	106	-57.674	-54.339	-3.335
1E+12	1	-99.752	-54.939	-44.813
1E+12	2	-65.607	-51.574	-14.033
1E+12	3	-61.025	-48.757	-12.269
1E+12	4	-68.875	-62.972	-5.903
1E+12	5	-69.318	-50.521	-18.797
5E+12	13	-57.022	-56.506	-0.516
5E+12	14	-51.258	-52.354	1.097
5E+12	15	-51.819	-50.702	-1.117
5E+12	16	-65.649	-50.805	-14.844
5E+12	17	-69.869	-53.178	-16.691
1E+13	6	-53.972	-56.185	2.213
1E+13	7	-51.270	-53.701	2.431
1E+13	9	-62.463	-52.048	-10.415
1E+13	10	-49.823	-54.829	5.006
1E+13	12	-78.867	-55.825	-23.043
Max		-48.608	-48.757	5.006
Average		-62.522	-53.519	-9.003
Min		-99.752	-62.972	-44.813
Std Dev		12.906	3.337	12.644



2300.2 PSRR_VCC_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-48.5	dB
Min Limit		dB

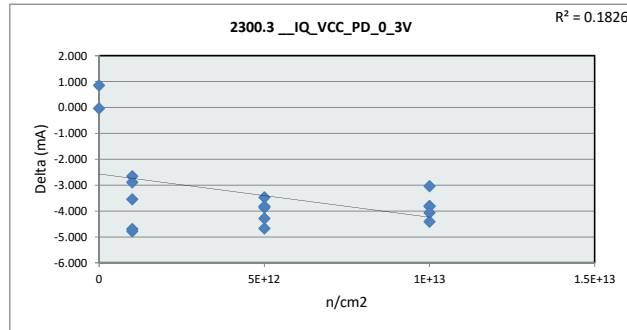
n/cm2	0	1E+12	5E+12	1E+13
LL				
Min	-54.339	-62.972	-56.506	-56.185
Average	-52.461	-53.752	-52.709	-54.518
Max	-50.583	-48.757	-50.702	-52.048
UL	-48.500	-48.500	-48.500	-48.500



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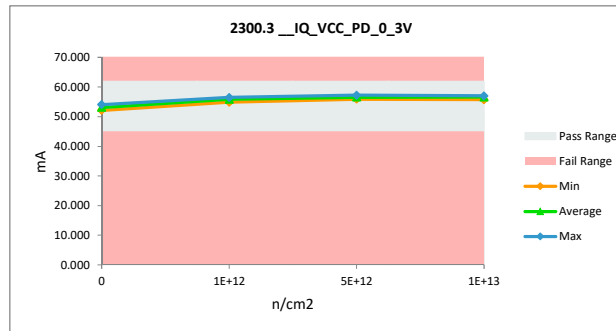
2300.3 IQ_VCC_PD_0_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	62	62
Min Limit	45	45

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	53.009	52.152	0.857
0	106	54.033	54.067	-0.033
1E+12	1	50.022	54.808	-4.786
1E+12	2	50.709	55.406	-4.697
1E+12	3	53.536	56.432	-2.896
1E+12	4	53.548	56.206	-2.658
1E+12	5	52.666	56.208	-3.542
5E+12	13	52.445	55.921	-3.475
5E+12	14	52.694	56.565	-3.871
5E+12	15	53.426	57.246	-3.821
5E+12	16	51.689	56.359	-4.670
5E+12	17	52.500	56.785	-4.286
1E+13	6	52.667	55.707	-3.040
1E+13	7	52.565	56.974	-4.409
1E+13	9	52.857	56.659	-3.802
1E+13	10	53.100	56.924	-3.824
1E+13	12	52.389	56.451	-4.062
Max		54.033	57.246	0.857
Average		52.580	55.934	-3.354
Min		50.022	52.152	-4.786
Std Dev		1.004	1.267	1.553



2300.3 IQ_VCC_PD_0_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	62	mA
Min Limit	45	mA

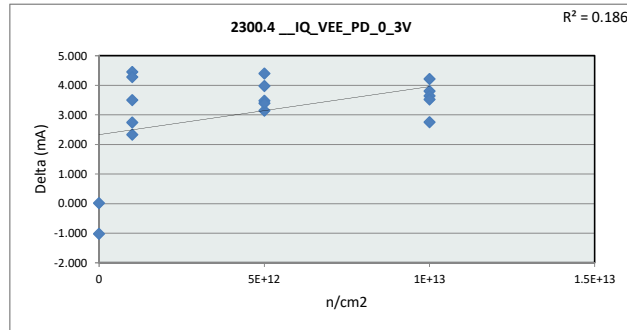
n/cm2	0	1E+12	5E+12	1E+13
LL	45.000	45.000	45.000	45.000
Min	52.152	54.808	55.921	55.707
Average	53.109	55.812	56.575	56.543
Max	54.067	56.432	57.246	56.974
UL	62.000	62.000	62.000	62.000



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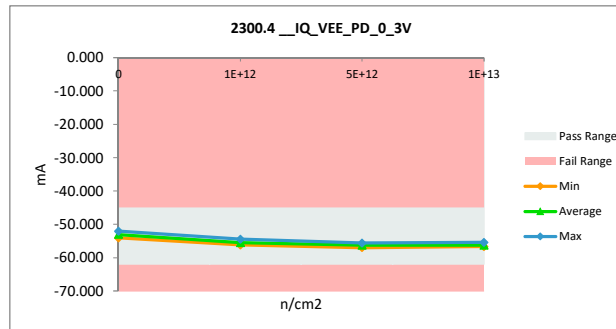
2300.4 IQ_VEE_PD_0_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	-45	-45
Min Limit	-62	-62

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-53.105	-52.081	-1.024
0	106	-54.043	-54.056	0.013
1E+12	1	-50.038	-54.494	4.456
1E+12	2	-50.852	-55.125	4.274
1E+12	3	-53.433	-56.172	2.738
1E+12	4	-53.626	-55.956	2.330
1E+12	5	-52.447	-55.945	3.499
5E+12	13	-52.476	-55.617	3.141
5E+12	14	-52.757	-56.233	3.476
5E+12	15	-53.585	-56.981	3.396
5E+12	16	-51.714	-56.111	4.397
5E+12	17	-52.577	-56.549	3.972
1E+13	6	-52.653	-55.411	2.758
1E+13	7	-52.491	-56.702	4.211
1E+13	9	-52.619	-56.419	3.800
1E+13	10	-53.012	-56.650	3.638
1E+13	12	-52.698	-56.217	3.520
Max		-50.038	-52.081	4.456
Average		-52.596	-55.689	3.094
Min		-54.043	-56.981	-1.024
Std Dev		0.991	1.213	1.492



2300.4 IQ_VEE_PD_0_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-45	mA
Min Limit	-62	mA

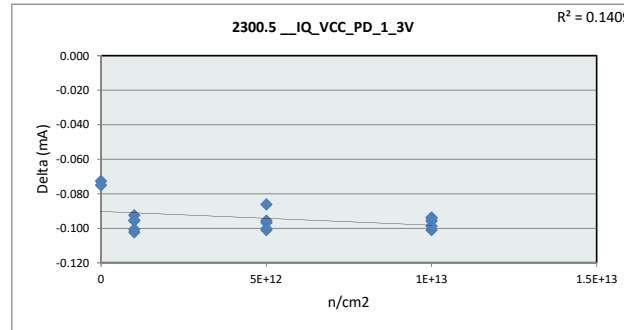
n/cm2	0	1E+12	5E+12	1E+13
LL	-62.000	-62.000	-62.000	-62.000
Min	-54.056	-56.172	-56.981	-56.702
Average	-53.069	-55.538	-56.298	-56.280
Max	-52.081	-54.494	-55.617	-55.411
UL	-45.000	-45.000	-45.000	-45.000



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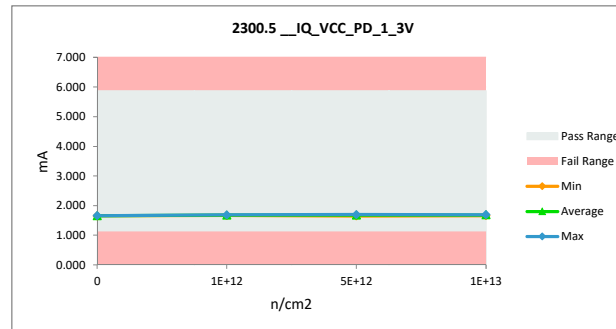
2300.5 IQ_VCC_PD_1_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	5.875	5.875
Min Limit	1.125	1.125

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.581	1.654	-0.073
0	106	1.583	1.658	-0.075
1E+12	1	1.576	1.668	-0.092
1E+12	2	1.570	1.665	-0.095
1E+12	3	1.585	1.685	-0.101
1E+12	4	1.577	1.679	-0.102
1E+12	5	1.563	1.658	-0.096
5E+12	13	1.585	1.686	-0.101
5E+12	14	1.594	1.691	-0.097
5E+12	15	1.570	1.665	-0.096
5E+12	16	1.570	1.670	-0.100
5E+12	17	1.565	1.651	-0.086
1E+13	6	1.588	1.684	-0.096
1E+13	7	1.595	1.688	-0.094
1E+13	9	1.591	1.692	-0.101
1E+13	10	1.594	1.693	-0.099
1E+13	12	1.568	1.662	-0.094
Max		1.595	1.693	-0.073
Average		1.580	1.674	-0.094
Min		1.563	1.651	-0.102
Std Dev		0.011	0.014	0.009



2300.5 IQ_VCC_PD_1_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	5.875	mA
Min Limit	1.125	mA

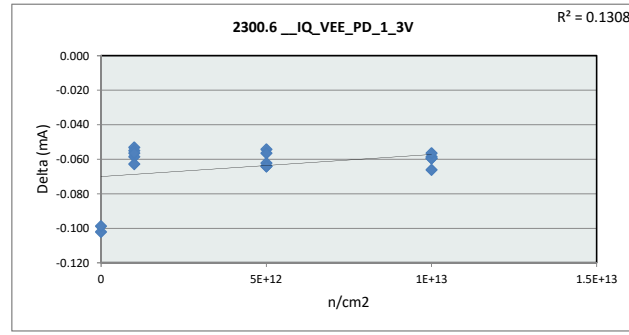
n/cm2	0	1E+12	5E+12	1E+13
LL	1.125	1.125	1.125	1.125
Min	1.654	1.659	1.651	1.662
Average	1.656	1.671	1.673	1.684
Max	1.658	1.685	1.691	1.693
UL	5.875	5.875	5.875	5.875



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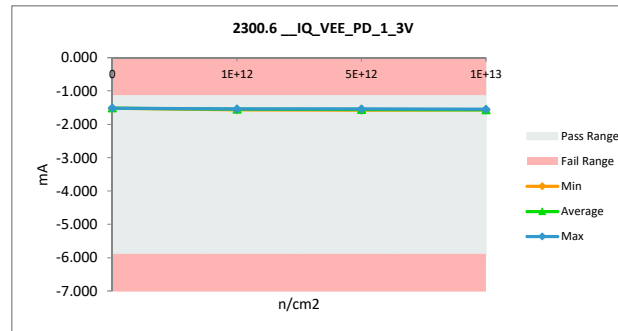
2300.6 IQ_VEE_PD_1_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	-1.125	-1.125
Min Limit	-5.875	-5.875

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-1.620	-1.518	-0.102
0	106	-1.617	-1.519	-0.099
1E+12	1	-1.607	-1.554	-0.053
1E+12	2	-1.608	-1.553	-0.055
1E+12	3	-1.626	-1.567	-0.058
1E+12	4	-1.620	-1.564	-0.056
1E+12	5	-1.606	-1.543	-0.063
5E+12	13	-1.630	-1.568	-0.062
5E+12	14	-1.631	-1.577	-0.054
5E+12	15	-1.610	-1.553	-0.056
5E+12	16	-1.612	-1.548	-0.064
5E+12	17	-1.605	-1.541	-0.064
1E+13	6	-1.630	-1.564	-0.066
1E+13	7	-1.632	-1.574	-0.059
1E+13	9	-1.633	-1.573	-0.059
1E+13	10	-1.634	-1.575	-0.059
1E+13	12	-1.606	-1.550	-0.056
Max		-1.605	-1.518	-0.053
Average		-1.619	-1.555	-0.064
Min		-1.634	-1.577	-0.102
Std Dev		0.011	0.018	0.014



2300.6 IQ_VEE_PD_1_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	-1.125	mA
Min Limit	-5.875	mA

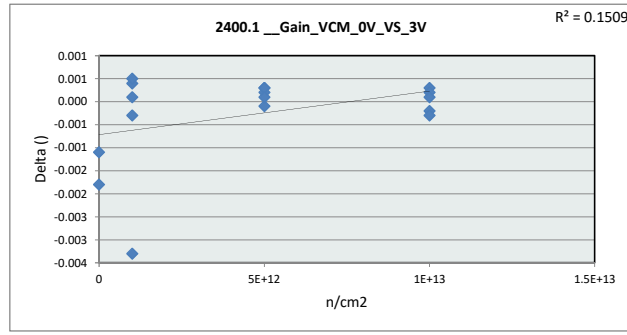
n/cm2	0	1E+12	5E+12	1E+13
LL	-5.875	-5.875	-5.875	-5.875
Min	-1.519	-1.567	-1.577	-1.575
Average	-1.518	-1.556	-1.557	-1.567
Max	-1.518	-1.543	-1.541	-1.550
UL	-1.125	-1.125	-1.125	-1.125



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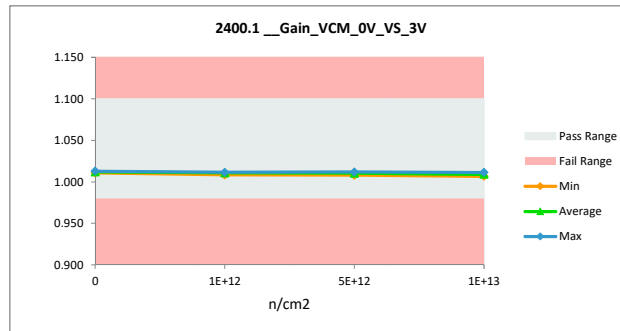
2400.1 Gain_VCM_OV_VS_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	1.1	1.1
Min Limit	0.98	0.98

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.009	1.011	-0.002
0	106	1.012	1.013	-0.001
1E+12	1	1.008	1.011	-0.003
1E+12	2	1.008	1.008	0.000
1E+12	3	1.012	1.012	0.000
1E+12	4	1.011	1.010	0.000
1E+12	5	1.011	1.011	0.000
5E+12	13	1.011	1.011	0.000
5E+12	14	1.008	1.008	0.000
5E+12	15	1.012	1.012	0.000
5E+12	16	1.011	1.011	0.000
5E+12	17	1.010	1.010	0.000
1E+13	6	1.007	1.007	0.000
1E+13	7	1.009	1.009	0.000
1E+13	9	1.012	1.011	0.000
1E+13	10	1.007	1.007	0.000
1E+13	12	1.011	1.011	0.000
Max		1.012	1.013	0.000
Average		1.010	1.010	0.000
Min		1.007	1.007	-0.003
Std Dev		0.002	0.002	0.001



2400.1 Gain_VCM_OV_VS_3		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.1	
Min Limit	0.98	

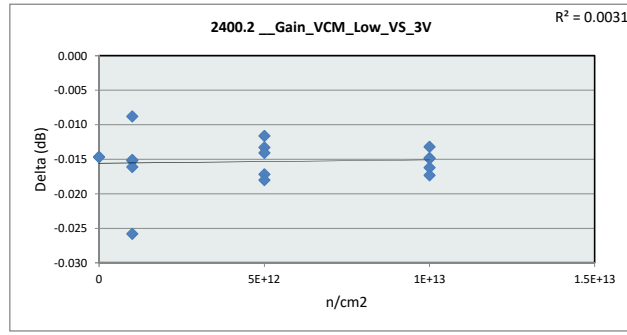
n/cm2	0	1E+12	5E+12	1E+13
LL	0.980	0.980	0.980	0.980
Min	1.011	1.009	1.008	1.007
Average	1.012	1.011	1.010	1.009
Max	1.013	1.012	1.012	1.011
UL	1.100	1.100	1.100	1.100



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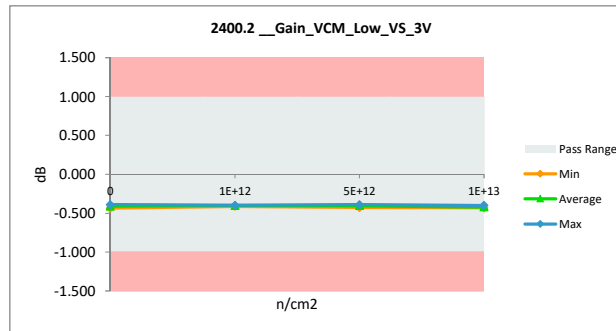
2400.2 Gain_VCM_Low_VS_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	dB	dB
Max Limit	0.99	0.99
Min Limit	-0.99	-0.99

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-0.449	-0.434	-0.015
0	106	-0.405	-0.391	-0.015
1E+12	1	-0.414	-0.399	-0.015
1E+12	2	-0.419	-0.404	-0.015
1E+12	3	-0.428	-0.412	-0.016
1E+12	4	-0.430	-0.404	-0.026
1E+12	5	-0.409	-0.400	-0.009
5E+12	13	-0.416	-0.403	-0.013
5E+12	14	-0.444	-0.427	-0.017
5E+12	15	-0.409	-0.391	-0.018
5E+12	16	-0.416	-0.402	-0.014
5E+12	17	-0.405	-0.394	-0.012
1E+13	6	-0.436	-0.421	-0.015
1E+13	7	-0.447	-0.430	-0.016
1E+13	9	-0.433	-0.415	-0.017
1E+13	10	-0.446	-0.433	-0.013
1E+13	12	-0.414	-0.399	-0.015
Max		-0.405	-0.391	-0.009
Average		-0.425	-0.409	-0.015
Min		-0.449	-0.434	-0.026
Std Dev		0.015	0.015	0.003



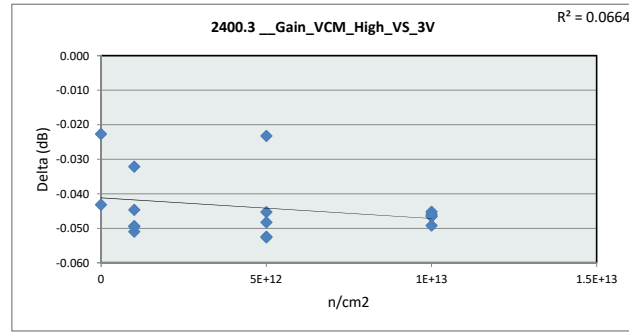
2400.2 Gain_VCM_Low_VS_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	0.99	dB
Min Limit	-0.99	dB

n/cm2	0	1E+12	5E+12	1E+13
LL	-0.990	-0.990	-0.990	-0.990
Min	-0.434	-0.412	-0.427	-0.433
Average	-0.412	-0.404	-0.403	-0.420
Max	-0.391	-0.399	-0.391	-0.399
UL	0.990	0.990	0.990	0.990

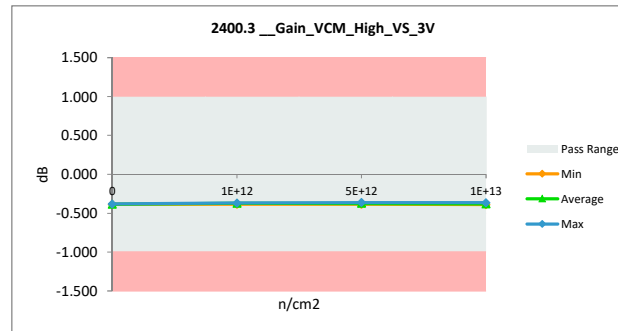


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2400.3 Gain_VCM_High_VS_3				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit	dB	dB		
Max Limit	0.99	0.99		
Min Limit	-0.99	-0.99		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-0.431	-0.388	-0.043
0	106	-0.404	-0.382	-0.023
1E+12	1	-0.407	-0.375	-0.032
1E+12	2	-0.422	-0.373	-0.049
1E+12	3	-0.430	-0.385	-0.045
1E+12	4	-0.426	-0.375	-0.051
1E+12	5	-0.418	-0.368	-0.049
5E+12	13	-0.410	-0.387	-0.023
5E+12	14	-0.428	-0.383	-0.045
5E+12	15	-0.421	-0.369	-0.052
5E+12	16	-0.421	-0.373	-0.048
5E+12	17	-0.416	-0.363	-0.053
1E+13	6	-0.435	-0.390	-0.045
1E+13	7	-0.434	-0.388	-0.047
1E+13	9	-0.432	-0.385	-0.046
1E+13	10	-0.437	-0.388	-0.049
1E+13	12	-0.412	-0.366	-0.046
Max		-0.404	-0.363	-0.023
Average		-0.423	-0.379	-0.044
Min		-0.437	-0.390	-0.053
Std Dev		0.010	0.009	0.009



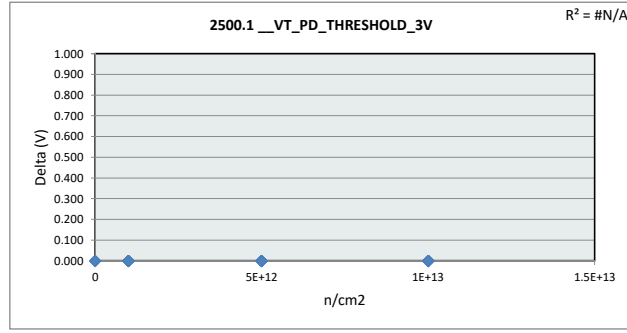
2400.3 Gain_VCM_High_VS				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	0.99	dB		
Min Limit	-0.99	dB		
n/cm2	0	1E+12	5E+12	1E+13
LL	-0.990	-0.990	-0.990	-0.990
Min	-0.388	-0.385	-0.387	-0.390
Average	-0.385	-0.375	-0.375	-0.383
Max	-0.382	-0.368	-0.363	-0.366
UL	0.990	0.990	0.990	0.990



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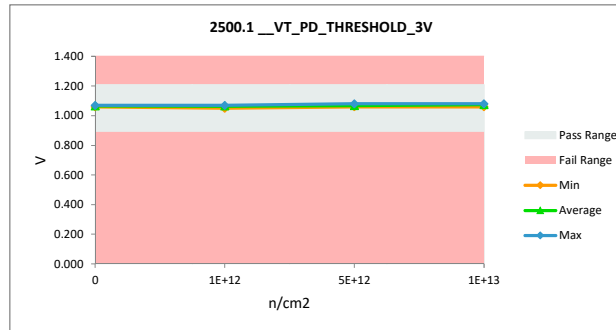
2500.1 VT_PD_THRESHOLD_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	V	V
Max Limit	1.21	1.21
Min Limit	0.89	0.89

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.060	1.060	0.000
0	106	1.070	1.070	0.000
1E+12	1	1.050	1.050	0.000
1E+12	2	1.070	1.070	0.000
1E+12	3	1.070	1.070	0.000
1E+12	4	1.070	1.070	0.000
1E+12	5	1.060	1.060	0.000
5E+12	13	1.070	1.070	0.000
5E+12	14	1.080	1.080	0.000
5E+12	15	1.070	1.070	0.000
5E+12	16	1.060	1.060	0.000
5E+12	17	1.060	1.060	0.000
1E+13	6	1.080	1.080	0.000
1E+13	7	1.080	1.080	0.000
1E+13	9	1.070	1.070	0.000
1E+13	10	1.080	1.080	0.000
1E+13	12	1.060	1.060	0.000
Max		1.080	1.080	0.000
Average		1.068	1.068	0.000
Min		1.050	1.050	0.000
Std Dev		0.009	0.009	0.000



2500.1 VT_PD_THRESHOLD		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	1.21	V
Min Limit	0.89	V

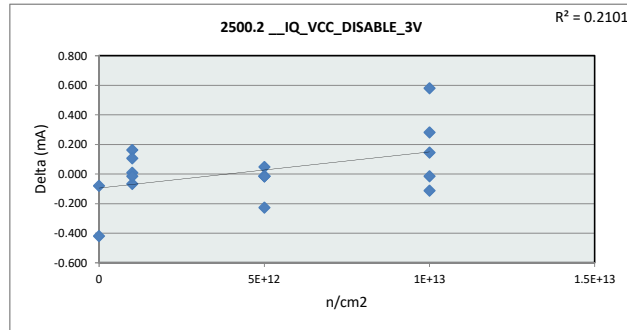
n/cm2	0	1E+12	5E+12	1E+13
LL	0.890	0.890	0.890	0.890
Min	1.060	1.050	1.060	1.060
Average	1.065	1.064	1.068	1.074
Max	1.070	1.070	1.080	1.080
UL	1.210	1.210	1.210	1.210



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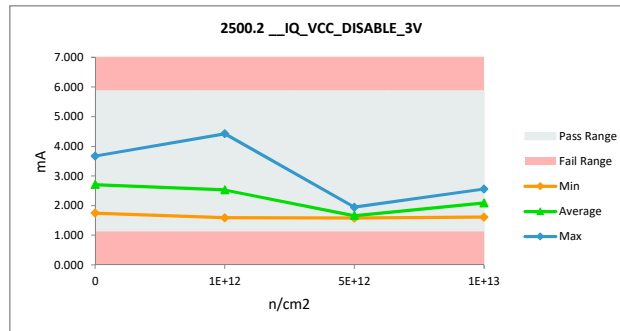
2500.2 IQ_VCC_DISABLE_3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	5.875	5.875
Min Limit	1.125	1.125

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	3.252	3.670	-0.418
0	106	1.666	1.744	-0.079
1E+12	1	4.588	4.425	0.163
1E+12	2	1.595	1.586	0.010
1E+12	3	2.223	2.290	-0.068
1E+12	4	1.582	1.597	-0.016
1E+12	5	2.835	2.728	0.107
5E+12	13	1.721	1.948	-0.227
5E+12	14	1.594	1.609	-0.015
5E+12	15	1.573	1.587	-0.014
5E+12	16	1.572	1.586	-0.015
5E+12	17	1.624	1.577	0.047
1E+13	6	2.449	2.561	-0.113
1E+13	7	2.835	2.255	0.580
1E+13	9	2.356	2.211	0.146
1E+13	10	1.595	1.610	-0.015
1E+13	12	2.077	1.797	0.280
Max		4.588	4.425	0.580
Average		2.184	2.164	0.021
Min		1.572	1.577	-0.418
Std Dev		0.823	0.811	0.212



2500.2 IQ_VCC_DISABLE_3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	5.875	mA
Min Limit	1.125	mA

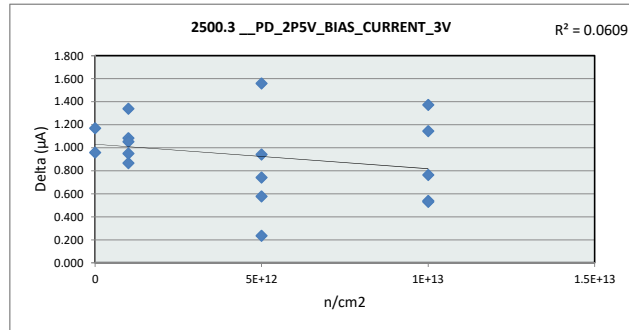
n/cm2	0	1E+12	5E+12	1E+13
LL	1.125	1.125	1.125	1.125
Min	1.744	1.586	1.577	1.610
Average	2.707	2.525	1.662	2.087
Max	3.670	4.425	1.948	2.561
UL	5.875	5.875	5.875	5.875



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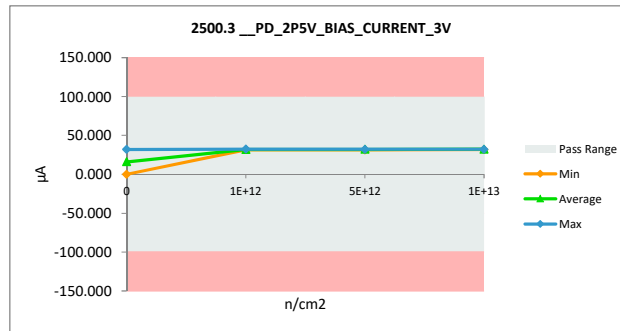
2500.3_PD_2P5V_BIAS_CURR		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	µA	µA
Max Limit	99	99
Min Limit	-99	-99

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	33.078	32.120	0.958
0	106	33.047	31.878	1.168
1E+12	1	32.782	31.699	1.083
1E+12	2	32.455	31.590	0.865
1E+12	3	33.101	31.761	1.340
1E+12	4	33.296	32.346	0.950
1E+12	5	32.759	31.707	1.052
5E+12	13	32.953	32.011	0.943
5E+12	14	32.782	32.206	0.577
5E+12	15	32.689	31.948	0.740
5E+12	16	32.502	32.268	0.234
5E+12	17	32.946	31.387	1.558
1E+13	6	32.556	32.019	0.538
1E+13	7	32.751	32.221	0.530
1E+13	9	32.969	32.206	0.763
1E+13	10	33.132	31.761	1.371
1E+13	12	32.728	31.582	1.145
Max		33.296	32.346	1.558
Average		32.854	31.924	0.930
Min		32.455	31.387	0.234
Std Dev		0.237	0.281	0.344



2500.3_PD_2P5V_BIAS_CURR		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	99	µA
Min Limit	-99	µA

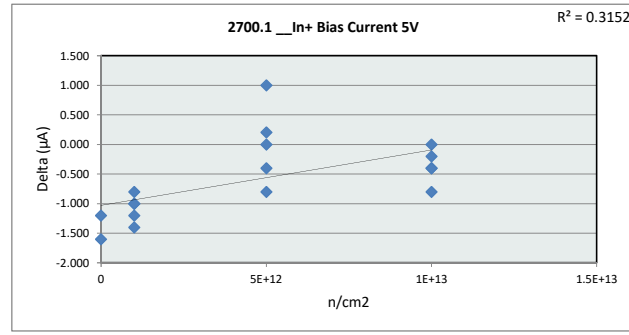
n/cm2	0	1E+12	5E+12	1E+13
LL	-99.000	-99.000	-99.000	-99.000
Min	0.000	31.590	31.387	31.582
Average	15.939	31.821	31.964	31.958
Max	31.878	32.346	32.268	32.221
UL	99.000	99.000	99.000	99.000



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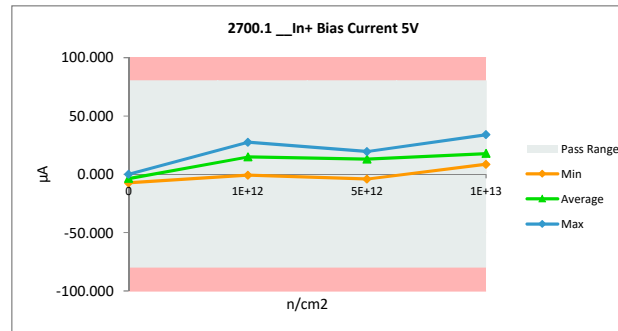
2700.1 In+ Bias Current 5V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	µA	µA
Max Limit	80	80
Min Limit	-80	-80

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	16.921	18.523	-1.602
0	106	-8.511	-7.309	-1.202
1E+12	1	-1.702	-0.701	-1.001
1E+12	2	26.333	27.534	-1.201
1E+12	3	6.708	7.509	-0.801
1E+12	4	16.921	17.922	-1.001
1E+12	5	19.725	21.126	-1.401
5E+12	13	-3.104	-4.105	1.001
5E+12	14	19.324	19.324	0.000
5E+12	15	11.715	11.514	0.201
5E+12	16	19.124	19.524	-0.400
5E+12	17	17.722	18.523	-0.801
1E+13	6	12.916	13.317	-0.401
1E+13	7	17.922	17.922	0.000
1E+13	9	8.310	8.511	-0.201
1E+13	10	33.141	33.942	-0.801
1E+13	12	14.518	14.919	-0.401
Max		33.141	33.942	1.001
Average		13.411	14.000	-0.589
Min		-8.511	-7.309	-1.602
Std Dev		10.560	10.724	0.662



2700.1 In+ Bias Current 5V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	80	µA
Min Limit	-80	µA

n/cm2	0	1E+12	5E+12	1E+13
LL	-80.000	-80.000	-80.000	-80.000
Min	-7.309	-0.701	-4.105	8.511
Average	-3.654	14.678	12.956	17.722
Max	0.000	27.534	19.524	33.942
UL	80.000	80.000	80.000	80.000

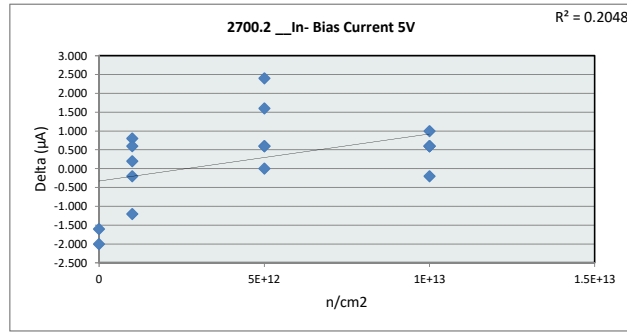


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2700.2 In- Bias Current 5V

Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	µA	µA
Max Limit	80	80
Min Limit	-80	-80

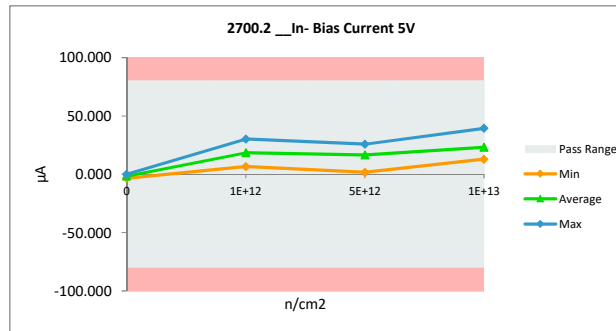
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	24.330	26.333	-2.003
0	106	-4.906	-3.304	-1.602
1E+12	1	6.308	6.508	-0.200
1E+12	2	30.338	30.138	0.200
1E+12	3	11.715	10.914	0.801
1E+12	4	21.527	20.926	0.601
1E+12	5	22.528	23.730	-1.202
5E+12	13	4.105	1.702	2.403
5E+12	14	26.333	25.732	0.601
5E+12	15	13.517	11.915	1.602
5E+12	16	21.927	21.327	0.600
5E+12	17	20.926	20.926	0.000
1E+13	6	19.324	18.723	0.601
1E+13	7	25.932	25.332	0.600
1E+13	9	13.517	12.916	0.601
1E+13	10	39.149	39.349	-0.200
1E+13	12	20.325	19.324	1.001
Max	39.149	39.349	2.403	
Average	18.641	18.382	0.259	
Min	-4.906	-3.304	-2.003	
Std Dev	10.498	10.641	1.094	



2700.2 In- Bias Current 5V

Test Site	1
Tester	ETS364
Test Number	EF868301
Max Limit	80 µA
Min Limit	-80 µA

n/cm2	0	1E+12	5E+12	1E+13
LL	-80.000	-80.000	-80.000	-80.000
Min	-3.304	6.508	1.702	12.916
Average	-1.652	18.443	16.320	23.129
Max	0.000	30.138	25.732	39.349
UL	80.000	80.000	80.000	80.000

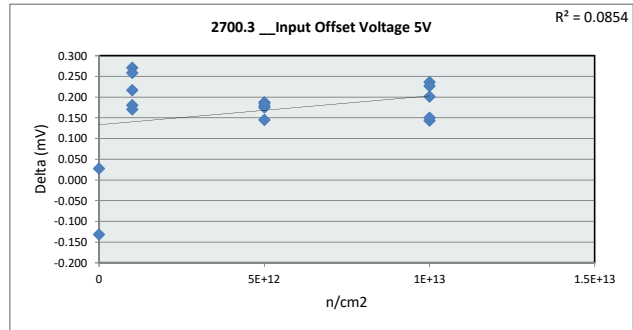


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2700.3 Input Offset Voltage 5V

Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	5	5
Min Limit	-5	-5

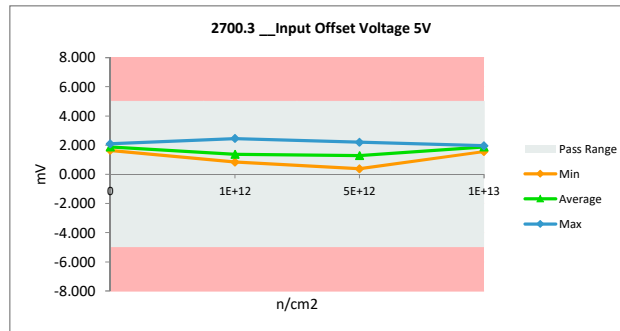
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.957	2.089	-0.132
0	106	1.670	1.643	0.027
1E+12	1	2.720	2.450	0.271
1E+12	2	1.179	0.961	0.217
1E+12	3	1.571	1.312	0.259
1E+12	4	1.403	1.233	0.170
1E+12	5	1.015	0.835	0.180
5E+12	13	2.181	2.002	0.179
5E+12	14	2.376	2.202	0.175
5E+12	15	0.562	0.375	0.187
5E+12	16	1.201	1.056	0.145
5E+12	17	0.923	0.738	0.185
1E+13	6	2.094	1.892	0.202
1E+13	7	2.078	1.934	0.143
1E+13	9	1.793	1.557	0.236
1E+13	10	2.179	1.952	0.227
1E+13	12	2.107	1.957	0.150
Max		2.720	2.450	0.271
Average		1.706	1.540	0.166
Min		0.562	0.375	-0.132
Std Dev		0.586	0.593	0.094



2700.3 Input Offset Voltage

Test Site	1
Tester	ETS364
Test Number	EF868301
Max Limit	5 mV
Min Limit	-5 mV

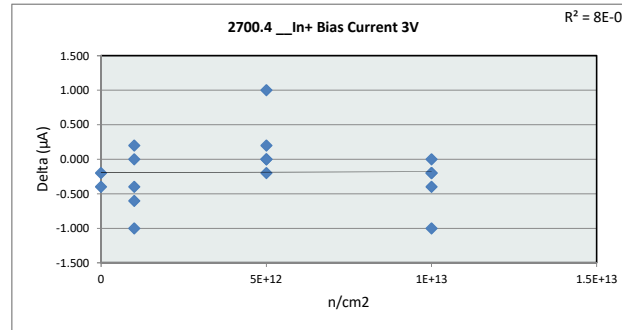
n/cm2	0	1E+12	5E+12	1E+13
LL	-5.000	-5.000	-5.000	-5.000
Min	1.643	0.835	0.375	1.557
Average	1.866	1.358	1.274	1.858
Max	2.089	2.450	2.202	1.957
UL	5.000	5.000	5.000	5.000



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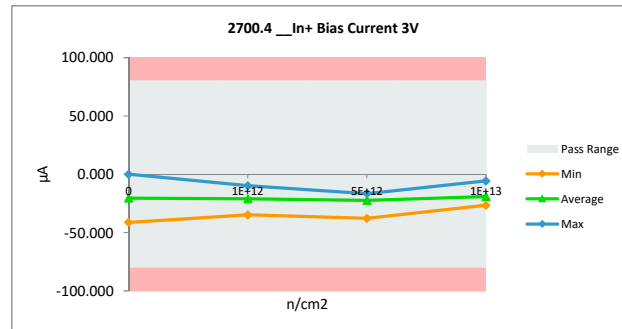
2700.4 In+ Bias Current 3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	µA	µA
Max Limit	80	80
Min Limit	-80	-80

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-19.324	-18.924	-0.400
0	106	-41.352	-41.151	-0.201
1E+12	1	-34.944	-34.944	0.000
1E+12	2	-10.513	-9.912	-0.601
1E+12	3	-27.935	-28.135	0.200
1E+12	4	-18.723	-18.323	-0.400
1E+12	5	-15.319	-14.318	-1.001
5E+12	13	-36.946	-37.947	1.001
5E+12	14	-18.523	-18.323	-0.200
5E+12	15	-22.728	-22.728	0.000
5E+12	16	-16.521	-16.521	0.000
5E+12	17	-16.721	-16.921	0.200
1E+13	6	-23.930	-23.730	-0.200
1E+13	7	-19.324	-19.124	-0.200
1E+13	9	-26.533	-26.533	0.000
1E+13	10	-6.708	-5.707	-1.001
1E+13	12	-20.726	-20.325	-0.401
Max		-6.708	-5.707	1.001
Average		-22.163	-21.974	-0.188
Min		-41.352	-41.151	-1.001
Std Dev		9.124	9.435	0.467



2700.4 In+ Bias Current 3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	80	µA
Min Limit	-80	µA

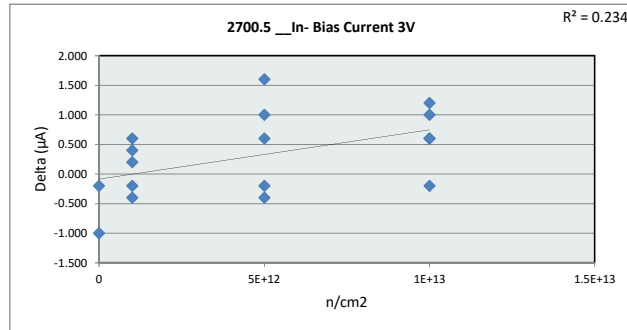
n/cm2	0	1E+12	5E+12	1E+13
LL	-80.000	-80.000	-80.000	-80.000
Min	-41.151	-34.944	-37.947	-26.533
Average	-20.576	-21.126	-22.488	-19.084
Max	0.000	-9.912	-16.521	-5.707
UL	80.000	80.000	80.000	80.000



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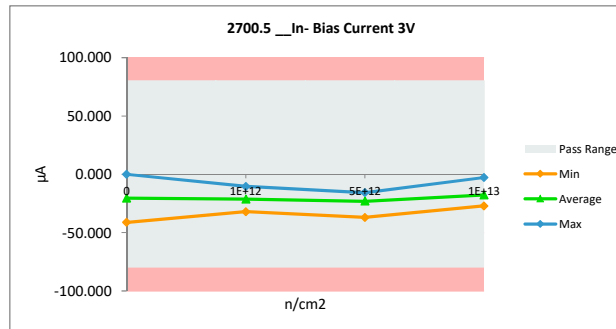
2700.5 In- Bias Current 3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	µA	µA
Max Limit	80	80
Min Limit	-80	-80

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-16.120	-15.920	-0.200
0	106	-42.153	-41.151	-1.002
1E+12	1	-31.740	-32.140	0.400
1E+12	2	-10.914	-10.513	-0.401
1E+12	3	-28.536	-29.136	0.600
1E+12	4	-18.723	-18.924	0.201
1E+12	5	-16.521	-16.320	-0.201
5E+12	13	-35.544	-37.146	1.602
5E+12	14	-15.119	-15.720	0.601
5E+12	15	-25.532	-26.533	1.001
5E+12	16	-18.123	-17.722	-0.401
5E+12	17	-18.723	-18.523	-0.200
1E+13	6	-21.727	-22.929	1.202
1E+13	7	-15.519	-16.120	0.601
1E+13	9	-26.533	-27.134	0.601
1E+13	10	-2.904	-2.703	-0.201
1E+13	12	-18.723	-19.725	1.002
Max		-2.904	-2.703	1.602
Average		-21.362	-21.668	0.306
Min		-42.153	-41.151	-1.002
Std Dev		9.494	9.645	0.687



2700.5 In- Bias Current 3V		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	80	µA
Min Limit	-80	µA

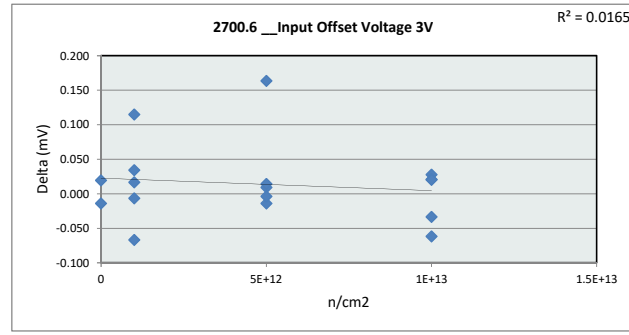
n/cm2	0	1E+12	5E+12	1E+13
LL	-80.000	-80.000	-80.000	-80.000
Min	-41.151	-32.140	-37.146	-27.134
Average	-20.576	-21.407	-23.129	-17.722
Max	0.000	-10.513	-15.720	-2.703
UL	80.000	80.000	80.000	80.000



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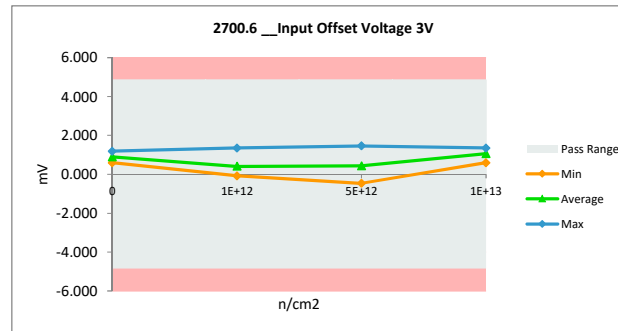
2700.6 Input Offset Voltage 3V		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mV	mV
Max Limit	4.85	4.85
Min Limit	-4.85	-4.85

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	1.210	1.191	0.019
0	106	0.578	0.592	-0.014
1E+12	1	1.364	1.347	0.016
1E+12	2	0.173	0.180	-0.007
1E+12	3	0.391	0.357	0.034
1E+12	4	0.330	0.215	0.115
1E+12	5	-0.147	-0.080	-0.067
5E+12	13	1.024	1.015	0.009
5E+12	14	1.476	1.462	0.014
5E+12	15	-0.298	-0.461	0.164
5E+12	16	0.266	0.280	-0.014
5E+12	17	-0.134	-0.130	-0.004
1E+13	6	1.022	1.056	-0.034
1E+13	7	1.290	1.263	0.028
1E+13	9	0.616	0.595	0.021
1E+13	10	1.285	1.347	-0.062
1E+13	12	1.058	1.038	0.020
Max		1.476	1.462	0.164
Average		0.677	0.663	0.014
Min		-0.298	-0.461	-0.067
Std Dev		0.584	0.600	0.056



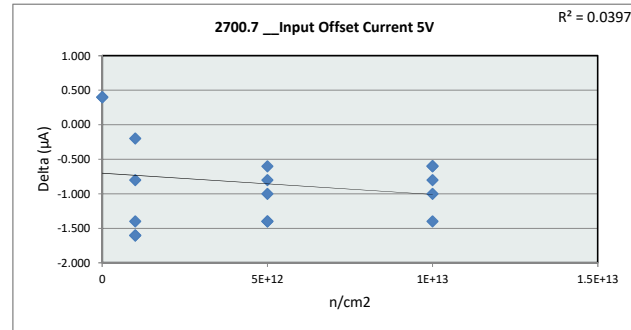
2700.6 Input Offset Voltage		
Test Site	1	
Tester	ETS364	
Test Number	EF868301	
Max Limit	4.85	mV
Min Limit	-4.85	mV

n/cm2	0	1E+12	5E+12	1E+13
LL	-4.850	-4.850	-4.850	-4.850
Min	0.592	-0.080	-0.461	0.595
Average	0.892	0.404	0.433	1.060
Max	1.191	1.347	1.462	1.347
UL	4.850	4.850	4.850	4.850

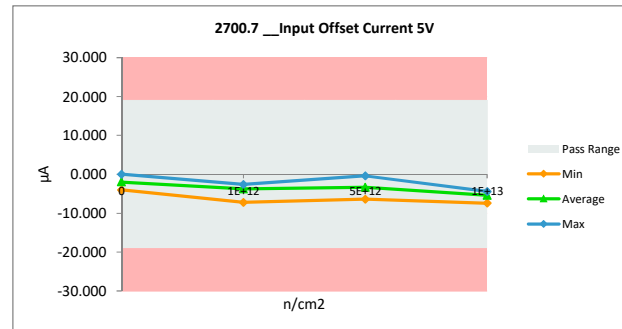


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2700.7 __Input Offset Current 5V				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit	µA	µA		
Max Limit	19	19		
Min Limit	-19	-19		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-7.409	-7.810	0.401
0	106	-3.605	-4.005	0.400
1E+12	1	-8.010	-7.209	-0.801
1E+12	2	-4.005	-2.604	-1.401
1E+12	3	-5.007	-3.405	-1.602
1E+12	4	-4.606	-3.004	-1.602
1E+12	5	-2.803	-2.604	-0.199
5E+12	13	-7.209	-5.807	-1.402
5E+12	14	-7.009	-6.408	-0.601
5E+12	15	-1.802	-0.401	-1.401
5E+12	16	-2.803	-1.803	-1.000
5E+12	17	-3.204	-2.403	-0.801
1E+13	6	-6.408	-5.406	-1.002
1E+13	7	-8.010	-7.410	-0.600
1E+13	9	-5.207	-4.405	-0.802
1E+13	10	-6.008	-5.407	-0.601
1E+13	12	-5.807	-4.405	-1.402
Max		-1.802	-0.401	0.401
Average		-5.230	-4.382	-0.848
Min		-8.010	-7.810	-1.602
Std Dev		1.966	2.134	0.619

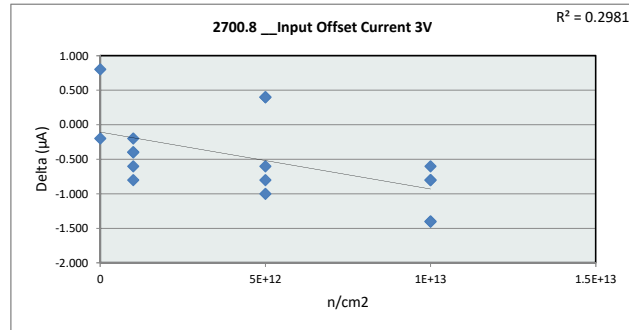


2700.7 __Input Offset Current				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	19	µA		
Min Limit	-19	µA		
n/cm2	0	1E+12	5E+12	1E+13
LL	-19.000	-19.000	-19.000	-19.000
Min	-4.005	-7.209	-6.408	-7.410
Average	-2.003	-3.765	-3.364	-5.407
Max	0.000	-2.604	-0.401	-4.405
UL	19.000	19.000	19.000	19.000

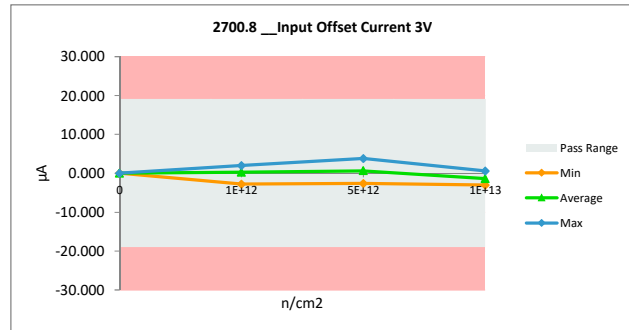


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2700.8 Input Offset Current 3V				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit	µA	µA		
Max Limit	19	19		
Min Limit	-19	-19		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	-3.204	-3.004	-0.200
0	106	0.801	0.000	0.801
1E+12	1	-3.204	-2.804	-0.400
1E+12	2	0.401	0.601	-0.200
1E+12	3	0.601	1.001	-0.400
1E+12	4	0.000	0.601	-0.601
1E+12	5	1.202	2.002	-0.800
5E+12	13	-1.402	-0.801	-0.601
5E+12	14	-3.404	-2.603	-0.801
5E+12	15	2.804	3.805	-1.001
5E+12	16	1.602	1.201	0.401
5E+12	17	2.002	1.602	0.400
1E+13	6	-2.203	-0.801	-1.402
1E+13	7	-3.805	-3.004	-0.801
1E+13	9	0.000	0.601	-0.601
1E+13	10	-3.804	-3.004	-0.800
1E+13	12	-2.003	-0.600	-1.403
Max		2.804	3.805	0.801
Average		-0.801	-0.306	-0.495
Min		-3.805	-3.004	-1.403
Std Dev		2.208	2.036	0.601

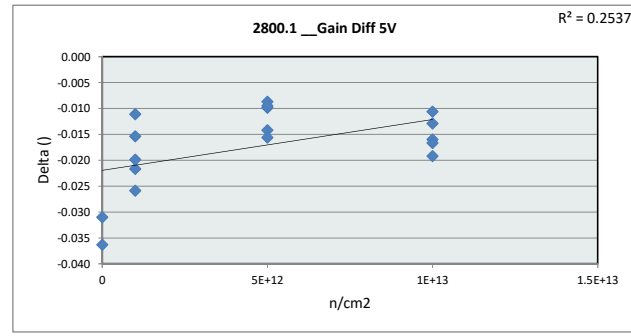


2700.8 Input Offset Current				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	19	µA		
Min Limit	-19	µA		
n/cm2	0	1E+12	5E+12	1E+13
LL	-19.000	-19.000	-19.000	-19.000
Min	0.000	-2.804	-2.603	-3.004
Average	0.000	0.280	0.641	-1.362
Max	0.000	2.002	3.805	0.601
UL	19.000	19.000	19.000	19.000

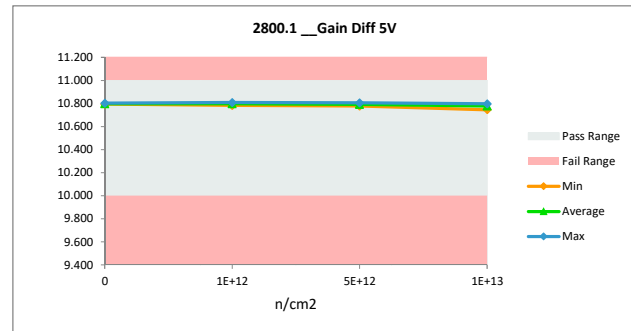


NDD Report LMH5401-SP

2800.1 Gain Diff 5V				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit				
Max Limit	11	11		
Min Limit	10	10		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	10.763	10.794	-0.031
0	106	10.765	10.802	-0.036
1E+12	1	10.760	10.782	-0.022
1E+12	2	10.793	10.808	-0.015
1E+12	3	10.766	10.786	-0.020
1E+12	4	10.780	10.806	-0.026
1E+12	5	10.795	10.806	-0.011
5E+12	13	10.765	10.779	-0.014
5E+12	14	10.761	10.776	-0.016
5E+12	15	10.790	10.800	-0.010
5E+12	16	10.795	10.804	-0.009
5E+12	17	10.793	10.803	-0.010
1E+13	6	10.729	10.745	-0.016
1E+13	7	10.768	10.781	-0.013
1E+13	9	10.764	10.784	-0.019
1E+13	10	10.769	10.786	-0.017
1E+13	12	10.787	10.797	-0.011
Max		10.795	10.808	-0.009
Average		10.773	10.790	-0.017
Min		10.729	10.745	-0.036
Std Dev		0.018	0.016	0.008

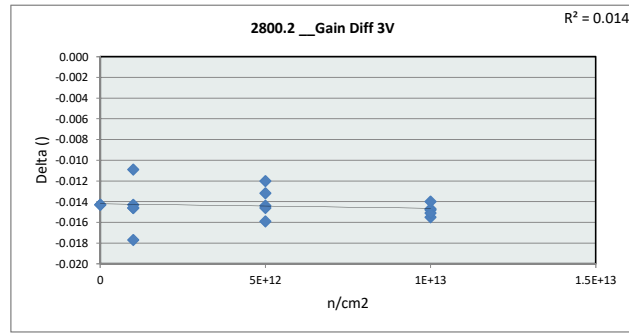


2800.1 Gain Diff 5V				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	11			
Min Limit	10			
n/cm2	0	1E+12	5E+12	1E+13
LL	10.000	10.000	10.000	10.000
Min	10.794	10.782	10.776	10.745
Average	10.798	10.798	10.792	10.779
Max	10.802	10.808	10.804	10.797
UL	11.000	11.000	11.000	11.000

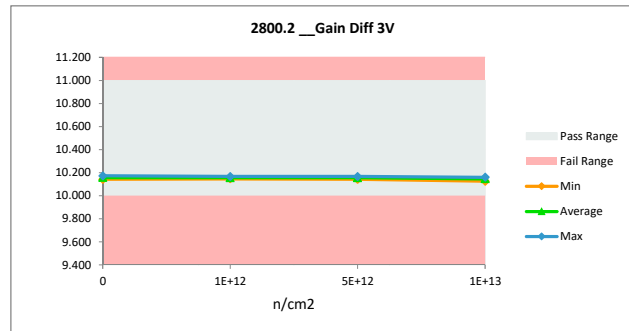


NDD Report LMH5401-SP

2800.2 Gain Diff 3V				
Test Site	1	1		
Tester	ETS364	ETS364		
Test Number	EF868301	EF868301		
Unit				
Max Limit	11	11		
Min Limit	10	10		
n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	10.127	10.141	-0.014
0	106	10.159	10.173	-0.014
1E+12	1	10.153	10.168	-0.015
1E+12	2	10.132	10.147	-0.014
1E+12	3	10.142	10.156	-0.015
1E+12	4	10.135	10.153	-0.018
1E+12	5	10.144	10.155	-0.011
5E+12	13	10.153	10.167	-0.014
5E+12	14	10.125	10.141	-0.016
5E+12	15	10.144	10.159	-0.015
5E+12	16	10.138	10.151	-0.013
5E+12	17	10.144	10.156	-0.012
1E+13	6	10.140	10.155	-0.015
1E+13	7	10.125	10.140	-0.015
1E+13	9	10.139	10.154	-0.016
1E+13	10	10.111	10.125	-0.014
1E+13	12	10.144	10.160	-0.015
	Max	10.159	10.173	-0.011
	Average	10.139	10.153	-0.014
	Min	10.111	10.125	-0.018
	Std Dev	0.012	0.012	0.001



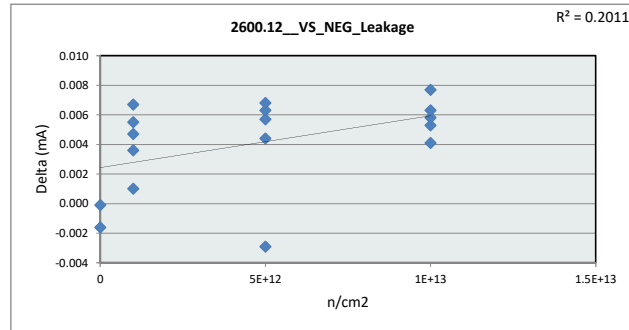
2800.2 Gain Diff 3V				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	11			
Min Limit	10			
n/cm2	0	1E+12	5E+12	1E+13
LL	10.000	10.000	10.000	10.000
Min	10.141	10.147	10.141	10.125
Average	10.157	10.156	10.155	10.147
Max	10.173	10.168	10.168	10.160
UL	11.000	11.000	11.000	11.000



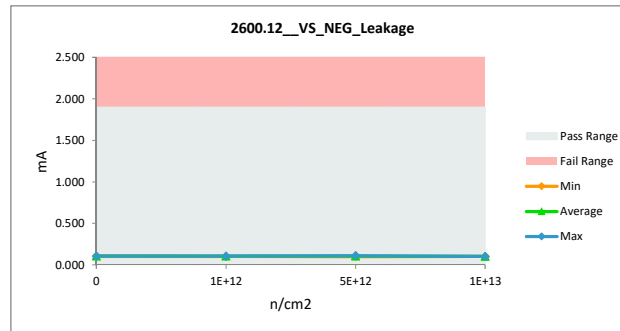
NDD Report LMH5401-SP

2600.12_VS_NEG_Leakage		
Test Site	1	1
Tester	ETS364	ETS364
Test Number	EF868301	EF868301
Unit	mA	mA
Max Limit	1.9	1.9
Min Limit	0.001	0.001

n/cm2	Serial #	Pre Data.txt	01 post NDD roun	Delta
0	57	0.104	0.105	-0.002
0	106	0.106	0.106	0.000
1E+12	1	0.106	0.105	0.001
1E+12	2	0.108	0.102	0.005
1E+12	3	0.105	0.102	0.004
1E+12	4	0.107	0.102	0.005
1E+12	5	0.107	0.100	0.007
5E+12	13	0.106	0.101	0.004
5E+12	14	0.106	0.101	0.006
5E+12	15	0.108	0.111	-0.003
5E+12	16	0.106	0.100	0.006
5E+12	17	0.106	0.099	0.007
1E+13	6	0.106	0.102	0.004
1E+13	7	0.106	0.101	0.005
1E+13	9	0.107	0.101	0.006
1E+13	10	0.108	0.101	0.008
1E+13	12	0.106	0.100	0.006
Max		0.108	0.111	0.008
Average		0.106	0.102	0.004
Min		0.104	0.099	-0.003
Std Dev		0.001	0.003	0.003



2600.12_VS_NEG_Leakage				
Test Site	1			
Tester	ETS364			
Test Number	EF868301			
Max Limit	1.9	mA		
Min Limit	0.001	mA		
n/cm2	0	1E+12	5E+12	1E+13
LL	0.001	0.001	0.001	0.001
Min	0.105	0.100	0.099	0.100
Average	0.105	0.102	0.102	0.101
Max	0.106	0.105	0.111	0.102
UL	1.900	1.900	1.900	1.900



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