Radiation Report

TPS7H4002-SP Neutron Displacement Damage (NDD) Characterization

ABSTRACT

This report presents the effect of neutron displacement damage (NDD) on the TPS7H4002-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/cm^2 (1-MeV equivalent). A sample size of nine units was exposed to radiation testing per MIL-STD-883 (Method 1017 for Neutron Irradiation) and an additional unirradiated sample device was used for correlation. Electrical testing was performed at Texas Instruments before and after neutron irradiation using the production test program for TPS7H4002-SP.

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1 Overview

The TPS7H4002-SP is a radiation hardened, 3-V to 5.5-V, 3-A, synchronous buck converter optimized for small designs through high-efficiency and integrating the high-side and low-side MOSFETs. Further space savings are achieved through current mode control, which reduces component count, and a high switching frequency that reduces the inductor footprint. The devices are offered in an ultra-small, thermally enhanced 20-pin ceramic flatpack package.

General device information and testing conditions are listed in Table 1-1.

Table 1-1. Overview Information

TI Part Number	TPS7H4002-SP
Orderable Number	5962R2021001VSC
Device Function	Point-of-load (POL) Switching Regulator
Die Name	RTPS7H4002A1VM
Package	20-pin CFP (HKH)
Technology	LBC7 (250-nm Linear BiCMOS)
A/T Lot Number / Date Code	#0010354 / 2052B
Unbiased Quantity Tested	9 + control
Exposure Facility	Radiation Test Solutions (RTS) Inc.
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 TPS7H4002-SP was electrically pre-tested using the production automated test equipment (ATE) program.

General test procedures were IAW MIL-STD-883, Method 1017 for Neutron Irradiation of TPS7H4002-SP.

Table 2-1. Neutron Irradiation Conditions

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

Figure 2-1. TPS7H4002-SP Device

The TPS7H4002-SP is packaged in a 20-pin thermally-enhanced dual ceramic flat pack package (HKH) as shown in Figure 2-1 .

3 Facility

The University of Massachusetts' Fast Neutron Irradiation (FNI) 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 ≥10^{11} n/cm^2 –s, with relatively low thermal fluence and gamma dose rates. Samples with a cross-sectional area as large as 30 cm (12 in) × 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) × 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:

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

4 Results

There were no functional failures at any irradiation level. All parametric measurements remained well within all data sheet (SLVSFL2) limits for all exposure levels. All parametric measurements remained well within the production test limits which are guard-banded from the data sheet limits. The full parameter list and graphs are found in Appendix A.

Table 4-1 lists the TPS7H4002-SP specification compliance matrix.

Table 4-1. TPS7H4002-SP Specification Compliance Matrix

PARAMETER	TEST CONDITION	TPS7H4002-SP DATA SHEET (SLVSFL2) MIN	MAX	UNIT	ATE TEST #
VIN internal UVLO threshold	VIN rising		3.0	V	15.0, 15.1
Minimum VIN for valid output	V(PWRGD) < 0.5 V at 100 μA		1.0	mV	15.3
Voltage reference	0 A ≤ Iout ≤ 3 A, –55°C	0.795	0.817	V	20.1, 21.1, 22.1
	0 A ≤ Iout ≤ 3 A, 25°C	0.796	0.818		
	0 A ≤ Iout ≤ 3 A, 125°C	0.797	0.819		
Error amplifier transconductance (gm)	2 μA < ICOMP < 2 μA, V(COMP) = 1 V	900	1900	μS	25.0, 25.1, 26.0, 26.1, 27.0, 27.1
Error amplifier source current	V(COMP) = 1 V, 100-mV input overdrive	85	185	μA	25.4, 26.4, 27.4
Error amplifier sink current	V(COMP) = 1 V, 100-mV input overdrive	85	185	μA	25.3, 26.3, 27.3
SS/TR to VSENSE matching	V(SS/TR) = 0.4 V		90	mV	25.2, 26.2, 27.2
SS charge current		1.5	3.0	μA	30.6, 31.6, 32.6
Output low	I(PWRGD) = 2 mA		0.3	V	30.2, 31.2, 32.2
VIN operating – non switching supply current	VSENSE = VBG		5	mA	30.3, 31.3, 32.3
VIN shutdown supply current	VEN = 0 V		2.5	mA	35.0, 36.0, 37.0
Output high leakage	VSENSE = Vref, V(PWRGD) = 5 V		181	μA	39.0, 39.1, 39.2
Internally set frequency	RT = Open	395	585	kHz	50.0, 51.0
SYNC out low level threshold	IOH = 50 μA		600	mV	50.3, 51.3
SYNC out low-to-high rise time (10%/90%)	Cload = 25 pF		130	nS	51.1, 50.1
SYNC out high-to-low fall time (90%/10%)	Cload = 25 pF		15.5	nS	51.2, 50.2
SYNC out high level threshold	IOH = 50 μA	VIN–0.3		V	51.4, 50.4
Externally set frequency	RT = 100 kΩ (1%)	395	585	kHz	55.4, 56.4, 57.4
	RT = 487 kΩ (1%)	80	115		55.2, 56.2, 57.2
	RT = 47 kΩ (1%)	900	1100		55.3, 56.3, 57.3
SYNC in low level threshold	PVIN=VIN= 3.0 V		800	mV	60.1
SYNC in high level threshold	PVIN=VIN= 3.0 V	2.45		V	60.0
SYNC in low level threshold	PVIN=VIN= 5.5 V		800	mV	61.1
SYNC in high level threshold	PVIN=VIN= 5.5 V	4.25		V	61.0
SYNC in frequency range		100	1000	kHz	60.0, 60.1, 61.0, 61.1
Minimum on time	Measured at 10% to 90% of VIN, +25°C, IPH = 2 A		235	nS	65.0, 65.3

Table 4-1. TPS7H4002-SP Specification Compliance Matrix (continued)

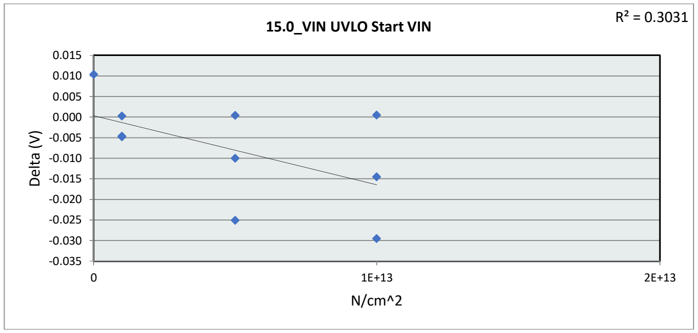
PARAMETER	TEST CONDITION	TPS7H4002-SP DATA SHEET (SLVSFL2)			ATE TEST #
		MIN	MAX	UNIT	
Enable threshold	Rising		1.18	V	72.0, 71.0, 70.0
	Falling	1.05			72.1, 71.1, 70.1
Minimum SS/TR voltage for PWRGD			1.55	V	72.6, 71.6, 70.6

A Appendix: NDD Test Results

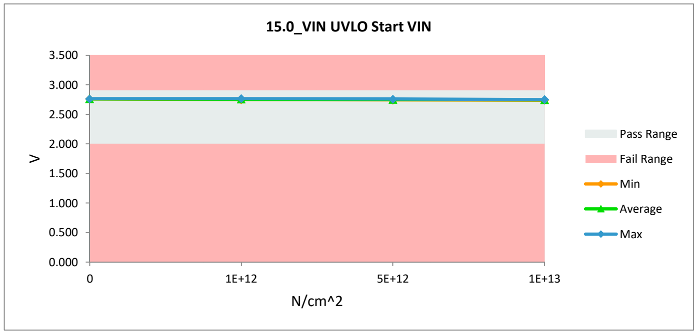
This appendix contains the detailed NDD test results.

NDD Report
TPS7H4002-SP

		15.0_VIN UVLO Start VIN		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	2.9	2.9	
	Min Limit	2	2	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	2.752	2.763	0.010
1E+12	50	2.752	2.747	-0.005
1E+12	175	2.757	2.753	-0.005
1E+12	254	2.767	2.767	0.000
5E+12	308	2.757	2.758	0.000
5E+12	349	2.763	2.753	-0.010
5E+12	111	2.767	2.742	-0.025
1E+13	214	2.767	2.738	-0.030
1E+13	144	2.762	2.748	-0.014
1E+13	131	2.753	2.753	0.000
	Max	2.767	2.767	0.010
	Average	2.760	2.752	-0.008
	Min	2.752	2.738	-0.030
	Std Dev	0.006	0.009	0.012

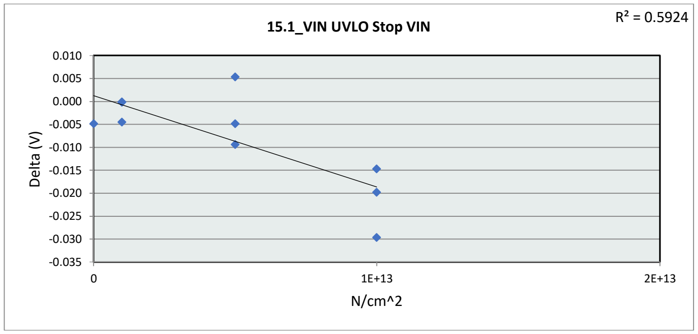


	15.0_VIN UVLO Start VIN			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	2.9	V		
Min Limit	2	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	2.000	2.000	2.000	2.000
Min	2.763	2.748	2.742	2.738
Average	2.763	2.756	2.751	2.746
Max	2.763	2.768	2.758	2.753
UL	2.900	2.900	2.900	2.900

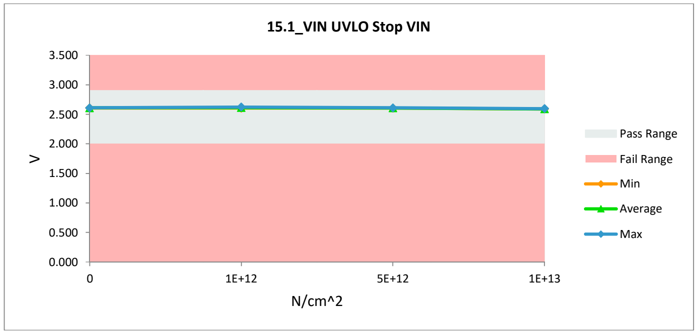


NDD Report
TPS7H4002-SP

		15.1_VIN UVLO Stop VIN		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	2.9	2.9	
	Min Limit	2	2	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	2.612	2.608	-0.005
1E+12	50	2.607	2.603	-0.005
1E+12	175	2.618	2.618	0.000
1E+12	254	2.623	2.623	0.000
5E+12	308	2.602	2.608	0.005
5E+12	349	2.608	2.603	-0.005
5E+12	111	2.612	2.603	-0.009
1E+13	214	2.617	2.588	-0.030
1E+13	144	2.612	2.592	-0.020
1E+13	131	2.612	2.598	-0.015
	Max	2.623	2.623	0.005
	Average	2.612	2.604	-0.008
	Min	2.602	2.588	-0.030
	Std Dev	0.006	0.011	0.010

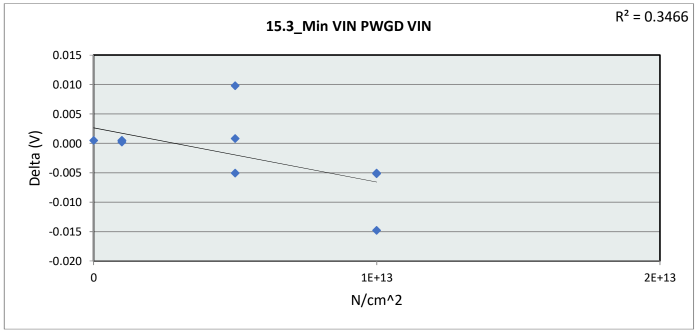


	15.1_VIN UVLO Stop VIN			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	2.9	V		
Min Limit	2	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	2.000	2.000	2.000	2.000
Min	2.608	2.603	2.603	2.588
Average	2.608	2.614	2.604	2.593
Max	2.608	2.623	2.608	2.598
UL	2.900	2.900	2.900	2.900

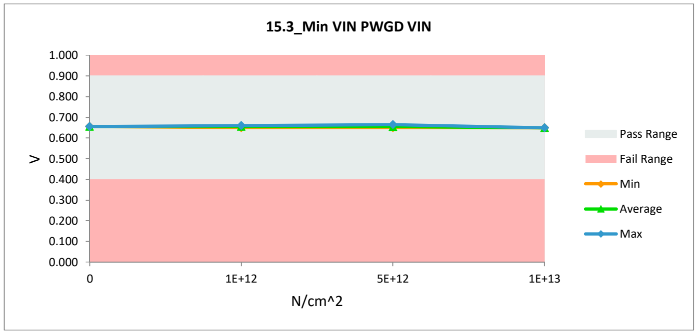


NDD Report
TPS7H4002-SP

		15.3_Min VIN PWGD VIN		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	0.9	0.9	
	Min Limit	0.4	0.4	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	0.654	0.655	0.001
1E+12	50	0.654	0.655	0.001
1E+12	175	0.649	0.650	0.001
1E+12	254	0.660	0.660	0.000
5E+12	308	0.655	0.650	-0.005
5E+12	349	0.649	0.650	0.001
5E+12	111	0.655	0.664	0.010
1E+13	214	0.654	0.649	-0.005
1E+13	144	0.655	0.650	-0.005
1E+13	131	0.664	0.650	-0.015
	Max	0.664	0.664	0.010
	Average	0.655	0.653	-0.002
	Min	0.649	0.649	-0.015
	Std Dev	0.004	0.005	0.006

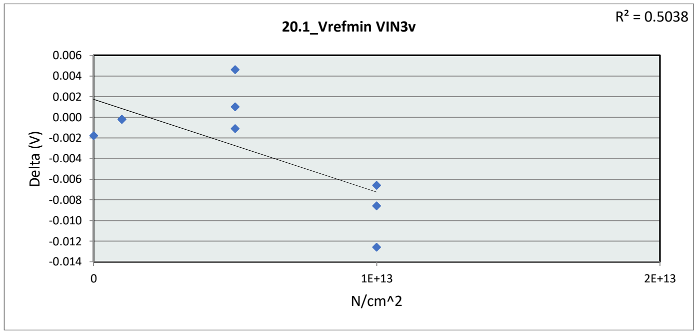


	15.3_Min VIN PWGD VIN			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	0.9	V		
Min Limit	0.4	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.400	0.400	0.400	0.400
Min	0.655	0.650	0.650	0.649
Average	0.655	0.655	0.655	0.649
Max	0.655	0.660	0.665	0.650
UL	0.900	0.900	0.900	0.900

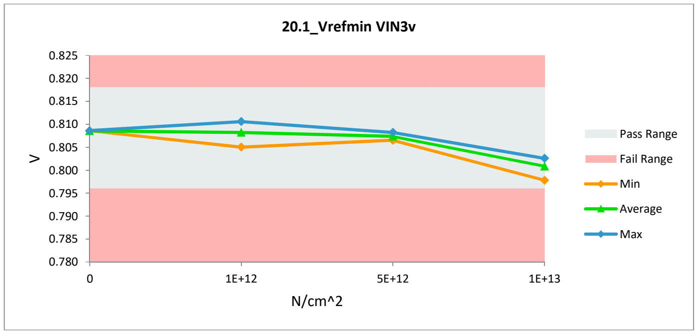


NDD Report
TPS7H4002-SP

		20.1_Vrefmin VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	0.818	0.818	
	Min Limit	0.796	0.796	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	0.810	0.809	-0.002
1E+12	50	0.805	0.805	0.000
1E+12	175	0.809	0.809	0.000
1E+12	254	0.811	0.811	0.000
5E+12	308	0.808	0.807	-0.001
5E+12	349	0.807	0.808	0.001
5E+12	111	0.803	0.807	0.005
1E+13	214	0.809	0.803	-0.007
1E+13	144	0.811	0.802	-0.009
1E+13	131	0.810	0.798	-0.013
	Max	0.811	0.811	0.005
	Average	0.808	0.806	-0.003
	Min	0.803	0.798	-0.013
	Std Dev	0.003	0.004	0.005

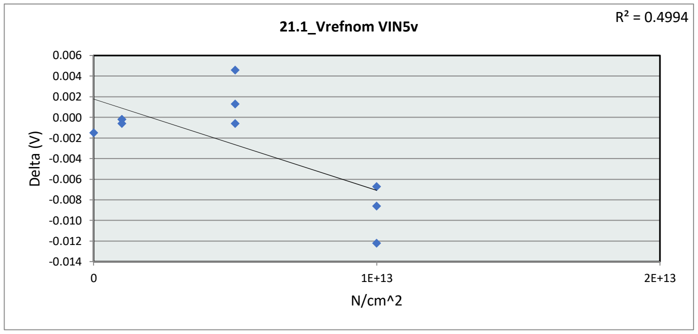


	20.1_Vrefmin VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	0.818	V		
Min Limit	0.796	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.796	0.796	0.796	0.796
Min	0.809	0.805	0.807	0.798
Average	0.809	0.808	0.807	0.801
Max	0.809	0.811	0.808	0.803
UL	0.818	0.818	0.818	0.818

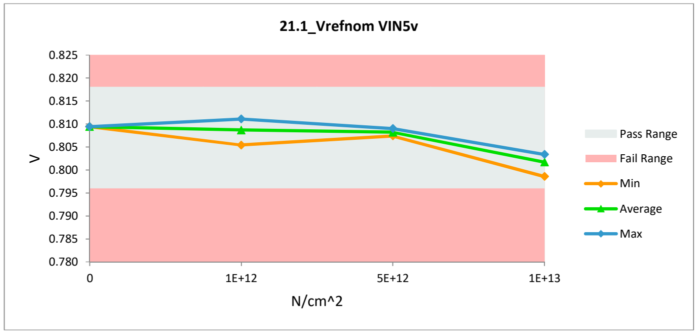


NDD Report
TPS7H4002-SP

		21.1_Vrefnom VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	0.818	0.818	
	Min Limit	0.796	0.796	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	0.811	0.809	-0.001
1E+12	50	0.806	0.805	-0.001
1E+12	175	0.810	0.809	0.000
1E+12	254	0.811	0.811	0.000
5E+12	308	0.808	0.807	-0.001
5E+12	349	0.808	0.809	0.001
5E+12	111	0.804	0.808	0.005
1E+13	214	0.810	0.803	-0.007
1E+13	144	0.812	0.803	-0.009
1E+13	131	0.811	0.799	-0.012
	Max	0.812	0.811	0.005
	Average	0.809	0.807	-0.002
	Min	0.804	0.799	-0.012
	Std Dev	0.003	0.004	0.005



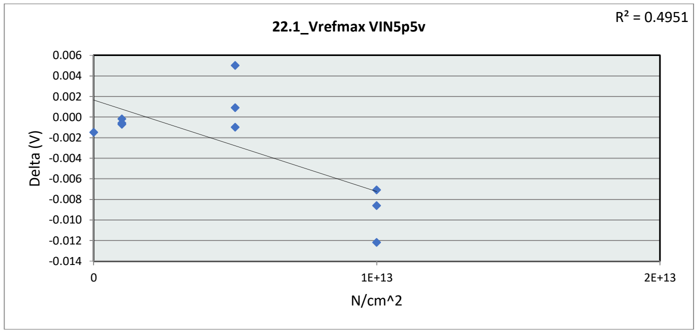
	21.1_Vrefnom VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	0.818	V		
Min Limit	0.796	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.796	0.796	0.796	0.796
Min	0.809	0.805	0.807	0.799
Average	0.809	0.809	0.808	0.802
Max	0.809	0.811	0.809	0.803
UL	0.818	0.818	0.818	0.818



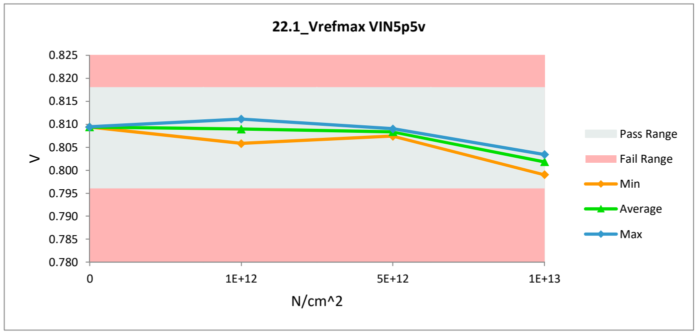
NDD Report
TPS7H4002-SP

	22.1_Vrefmax VIN5p5v	
Test Site	Dal-FL	Dal-FL
Tester	ETS364	ETS364
Test Number	EB386805	EB386805
Unit	V	V
Max Limit	0.818	0.818
Min Limit	0.796	0.796

N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	0.811	0.809	-0.001
1E+12	50	0.807	0.806	-0.001
1E+12	175	0.810	0.810	0.000
1E+12	254	0.812	0.811	-0.001
5E+12	308	0.808	0.807	-0.001
5E+12	349	0.808	0.809	0.001
5E+12	111	0.804	0.809	0.005
1E+13	214	0.811	0.803	-0.007
1E+13	144	0.812	0.803	-0.009
1E+13	131	0.811	0.799	-0.012
	Max	0.812	0.811	0.005
	Average	0.809	0.807	-0.003
	Min	0.804	0.799	-0.012
	Std Dev	0.003	0.004	0.005

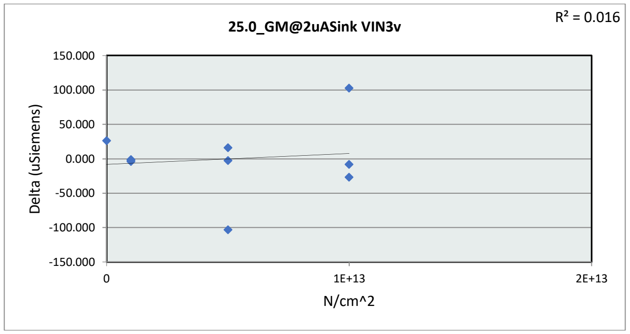


	22.1_Vrefmax VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	0.818	V		
Min Limit	0.796	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.796	0.796	0.796	0.796
Min	0.809	0.806	0.807	0.799
Average	0.809	0.809	0.808	0.802
Max	0.809	0.811	0.809	0.803
UL	0.818	0.818	0.818	0.818

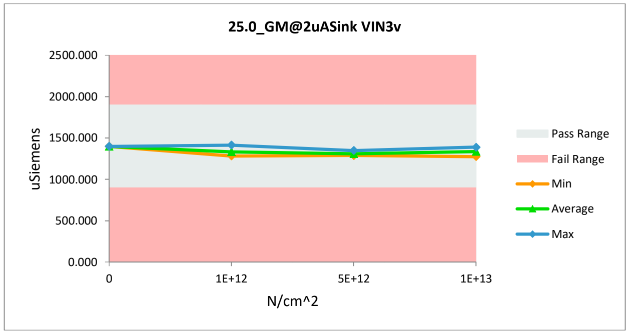


NDD Report
TPS7H4002-SP

		25.0_GM@2uASink VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	USIEMENS	uSiemens	
	Max Limit	1900	1900	
	Min Limit	900	900	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1371.258	1397.491	26.234
1E+12	50	1283.900	1279.827	-4.073
1E+12	175	1301.781	1299.489	-2.292
1E+12	254	1414.028	1412.572	-1.456
5E+12	308	1348.327	1345.546	-2.782
5E+12	349	1388.740	1285.566	-103.174
5E+12	111	1282.656	1298.381	15.724
1E+13	214	1347.920	1339.376	-8.544
1E+13	144	1285.520	1387.840	102.320
1E+13	131	1302.561	1275.484	-27.076
	Max	1414.028	1412.572	102.320
	Average	1332.669	1332.157	-0.512
	Min	1282.656	1275.484	-103.174
	Std Dev	47.951	52.064	50.426

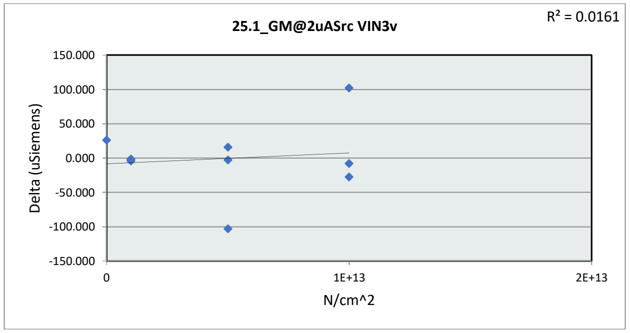


	25.0_GM@2uASink VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1900	uSiemens		
Min Limit	900	uSiemens		
N/cm^2	0	1E+12	5E+12	1E+13
LL	900.000	900.000	900.000	900.000
Min	1397.491	1279.827	1285.566	1275.485
Average	1397.491	1330.630	1309.831	1334.233
Max	1397.491	1412.572	1345.546	1387.840
UL	1900.000	1900.000	1900.000	1900.000

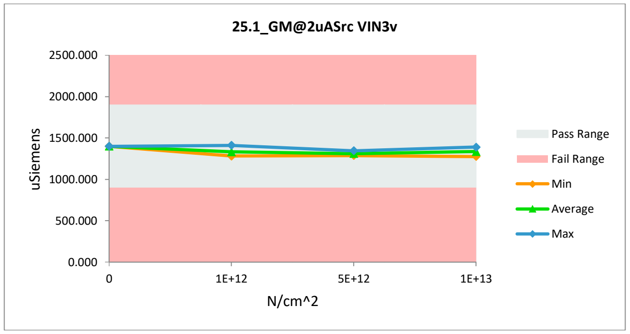


NDD Report
TPS7H4002-SP

		25.1_GM@2uASrc VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	USIEMENS	uSiemens	
	Max Limit	1900	1900	
	Min Limit	900	900	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1371.398	1397.355	25.956
1E+12	50	1284.044	1279.813	-4.231
1E+12	175	1301.901	1299.562	-2.339
1E+12	254	1413.908	1412.355	-1.552
5E+12	308	1348.527	1345.542	-2.985
5E+12	349	1388.767	1285.671	-103.097
5E+12	111	1282.764	1298.340	15.576
1E+13	214	1348.014	1339.698	-8.315
1E+13	144	1285.685	1387.738	102.053
1E+13	131	1302.803	1275.331	-27.472
	Max	1413.908	1412.355	102.053
	Average	1332.781	1332.140	-0.641
	Min	1282.764	1275.331	-103.097
	Std Dev	47.883	52.008	50.348

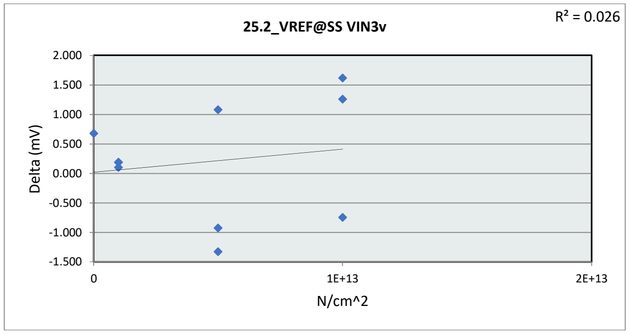


	25.1_GM@2uASrc VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1900	uSiemens		
Min Limit	900	uSiemens		
N/cm^2	0	1E+12	5E+12	1E+13
LL	900.000	900.000	900.000	900.000
Min	1397.355	1279.813	1285.671	1275.331
Average	1397.355	1330.577	1309.851	1334.256
Max	1397.355	1412.356	1345.542	1387.738
UL	1900.000	1900.000	1900.000	1900.000

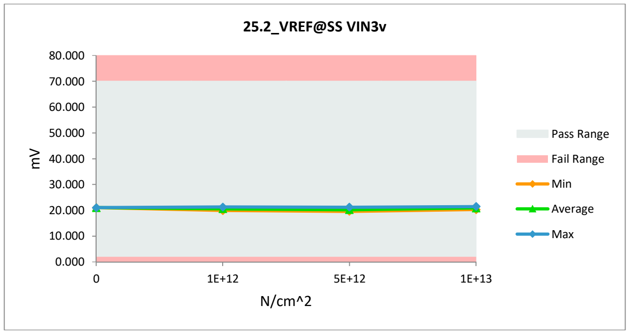


NDD Report
TPS7H4002-SP

		25.2_VREF@SS VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	mV	mV	
	Max Limit	70	70	
	Min Limit	2	2	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	20.336	21.013	0.676
1E+12	50	20.381	20.566	0.185
1E+12	175	19.712	19.897	0.185
1E+12	254	21.139	21.236	0.097
5E+12	308	20.113	21.191	1.078
5E+12	349	21.273	19.942	-1.331
5E+12	111	20.559	19.629	-0.930
1E+13	214	21.005	20.254	-0.751
1E+13	144	19.890	21.504	1.613
1E+13	131	19.489	20.745	1.256
	Max	21.273	21.504	1.613
	Average	20.390	20.598	0.208
	Min	19.489	19.629	-1.331
	Std Dev	0.610	0.646	0.980

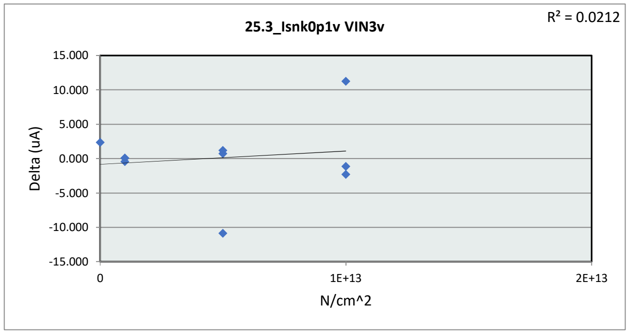


	25.2_VREF@SS VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	70	mV		
Min Limit	2	mV		
N/cm^2	0	1E+12	5E+12	1E+13
LL	2.000	2.000	2.000	2.000
Min	21.013	19.897	19.629	20.254
Average	21.013	20.566	20.254	20.834
Max	21.013	21.236	21.191	21.504
UL	70.000	70.000	70.000	70.000

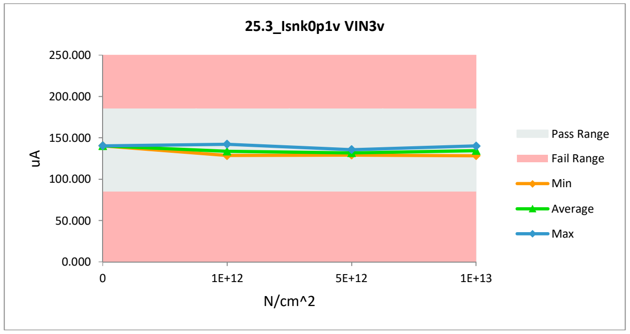


NDD Report
TPS7H4002-SP

		25.3_Isnk0p1v VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	185	185	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	137.926	140.283	2.358
1E+12	50	128.825	128.407	-0.418
1E+12	175	130.279	130.375	0.096
1E+12	254	142.063	142.127	0.063
5E+12	308	134.980	135.699	0.720
5E+12	349	139.846	128.985	-10.861
5E+12	111	129.206	130.410	1.203
1E+13	214	135.652	134.515	-1.137
1E+13	144	128.881	140.111	11.230
1E+13	131	130.670	128.379	-2.291
	Max	142.063	142.127	11.230
	Average	133.833	133.929	0.096
	Min	128.825	128.379	-10.861
	Std Dev	4.932	5.375	5.357

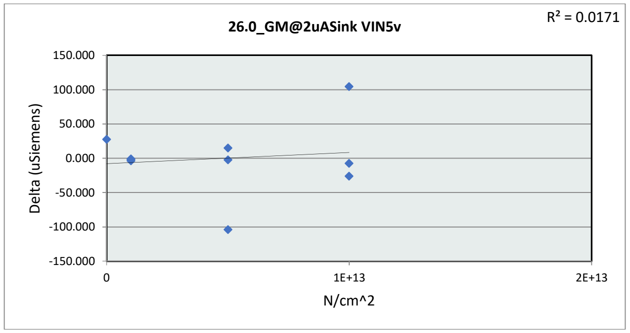


	25.3_Isnk0p1v VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	185	uA		
Min Limit	85	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	140.283	128.407	128.985	128.379
Average	140.283	133.636	131.698	134.335
Max	140.283	142.127	135.700	140.111
UL	185.000	185.000	185.000	185.000

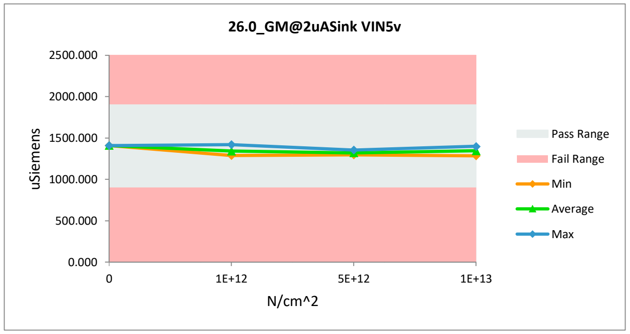


NDD Report
TPS7H4002-SP

		26.0_GM@2uASink VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	USIEMENS	uSiemens	
	Max Limit	1900	1900	
	Min Limit	900	900	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1379.985	1407.461	27.476
1E+12	50	1292.570	1288.498	-4.072
1E+12	175	1311.185	1309.189	-1.996
1E+12	254	1422.770	1421.503	-1.267
5E+12	308	1357.129	1354.528	-2.601
5E+12	349	1399.235	1295.298	-103.937
5E+12	111	1292.384	1307.281	14.897
1E+13	214	1356.524	1348.906	-7.618
1E+13	144	1294.713	1398.920	104.207
1E+13	131	1311.579	1285.331	-26.248
	Max	1422.770	1421.503	104.207
	Average	1341.807	1341.692	-0.116
	Min	1292.384	1285.331	-103.937
	Std Dev	47.956	52.267	51.006



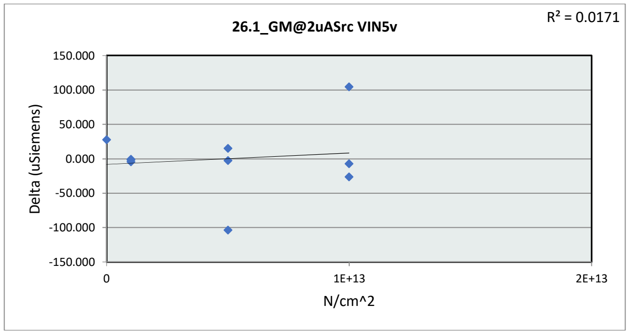
	26.0_GM@2uASink VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1900	uSiemens		
Min Limit	900	uSiemens		
N/cm^2	0	1E+12	5E+12	1E+13
LL	900.000	900.000	900.000	900.000
Min	1407.461	1288.498	1295.298	1285.331
Average	1407.461	1339.730	1319.036	1344.386
Max	1407.461	1421.503	1354.528	1398.920
UL	1900.000	1900.000	1900.000	1900.000



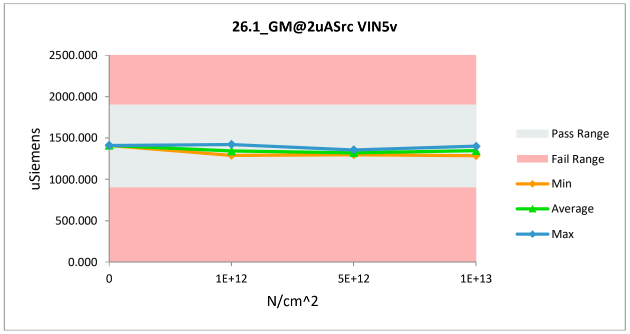
NDD Report
TPS7H4002-SP

	26.1_GM@2uASrc VIN5v	
Test Site	Dal-FL	Dal-FL
Tester	ETS364	ETS364
Test Number	EB386805	EB386805
Unit	USIEMENS	uSiemens
Max Limit	1900	1900
Min Limit	900	900

N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1380.007	1407.454	27.448
1E+12	50	1292.636	1288.188	-4.448
1E+12	175	1311.067	1309.106	-1.961
1E+12	254	1422.444	1421.750	-0.694
5E+12	308	1357.356	1354.546	-2.810
5E+12	349	1399.218	1295.289	-103.929
5E+12	111	1292.145	1307.257	15.112
1E+13	214	1356.568	1349.404	-7.164
1E+13	144	1294.612	1398.932	104.320
1E+13	131	1312.163	1285.470	-26.694
	Max	1422.444	1421.750	104.320
	Average	1341.822	1341.740	-0.082
	Min	1292.145	1285.470	-103.929
	Std Dev	47.903	52.345	51.057

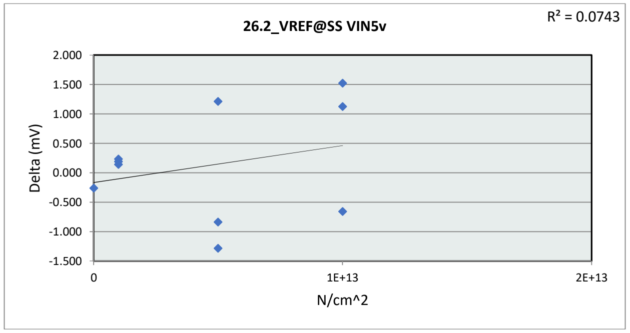


	26.1_GM@2uASrc VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1900	uSiemens		
Min Limit	900	uSiemens		
N/cm^2	0	1E+12	5E+12	1E+13
LL	900.000	900.000	900.000	900.000
Min	1407.454	1288.188	1295.289	1285.470
Average	1407.454	1339.682	1319.031	1344.602
Max	1407.454	1421.750	1354.546	1398.932
UL	1900.000	1900.000	1900.000	1900.000

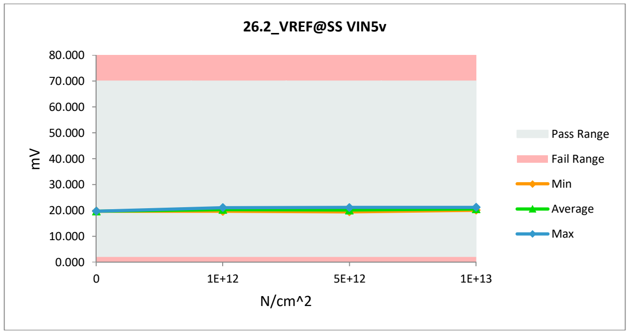


NDD Report
TPS7H4002-SP

		26.2_VREF@SS VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	mV	mV	
	Max Limit	70	70	
	Min Limit	2	2	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	19.890	19.629	-0.261
1E+12	50	19.980	20.209	0.230
1E+12	175	19.444	19.585	0.141
1E+12	254	20.827	21.013	0.186
5E+12	308	19.846	21.057	1.212
5E+12	349	21.050	19.763	-1.287
5E+12	111	20.292	19.451	-0.841
1E+13	214	20.693	20.031	-0.662
1E+13	144	19.667	21.191	1.524
1E+13	131	19.310	20.433	1.122
	Max	21.050	21.191	1.524
	Average	20.100	20.236	0.136
	Min	19.310	19.451	-1.287
	Std Dev	0.595	0.659	0.933

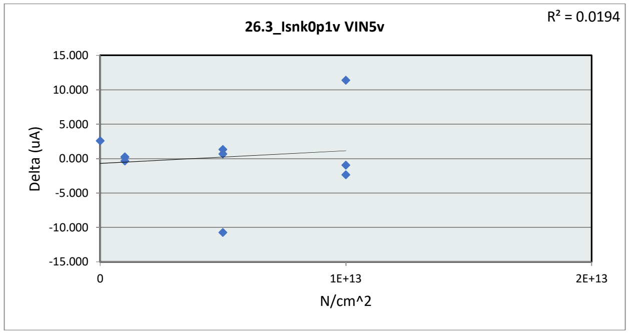


	26.2_VREF@SS VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	70	mV		
Min Limit	2	mV		
N/cm^2	0	1E+12	5E+12	1E+13
LL	2.000	2.000	2.000	2.000
Min	19.629	19.585	19.451	20.031
Average	19.629	20.269	20.091	20.552
Max	19.629	21.013	21.057	21.191
UL	70.000	70.000	70.000	70.000

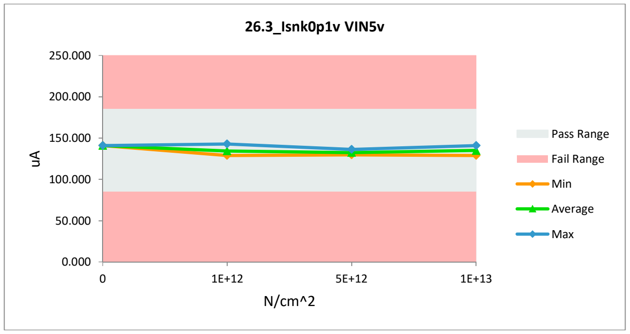


NDD Report
TPS7H4002-SP

		26.3_Isnk0p1v VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	185	185	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	138.332	140.911	2.579
1E+12	50	129.212	128.841	-0.371
1E+12	175	130.698	130.953	0.255
1E+12	254	142.523	142.730	0.207
5E+12	308	135.424	136.087	0.663
5E+12	349	140.387	129.628	-10.758
5E+12	111	129.704	131.000	1.297
1E+13	214	136.021	135.068	-0.953
1E+13	144	129.403	140.768	11.364
1E+13	131	131.261	128.888	-2.373
	Max	142.523	142.730	11.364
	Average	134.296	134.487	0.191
	Min	129.212	128.841	-10.758
	Std Dev	4.926	5.406	5.376

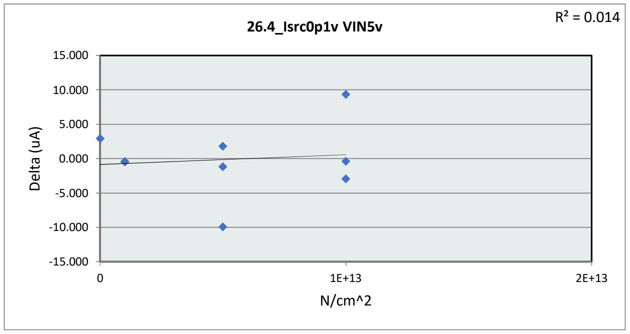


	26.3_Isnk0p1v VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	185	uA		
Min Limit	85	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	140.911	128.841	129.629	128.888
Average	140.911	134.175	132.239	134.908
Max	140.911	142.730	136.087	140.768
UL	185.000	185.000	185.000	185.000

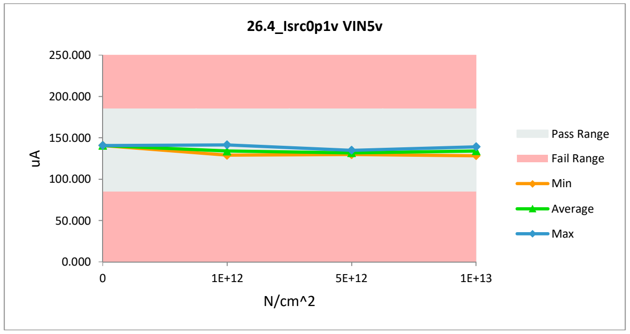


NDD Report
TPS7H4002-SP

		26.4_Isrc0p1v VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	185	185	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	137.722	140.630	2.908
1E+12	50	129.299	128.807	-0.493
1E+12	175	131.423	130.972	-0.451
1E+12	254	142.106	141.652	-0.455
5E+12	308	135.989	134.803	-1.186
5E+12	349	139.467	129.531	-9.935
5E+12	111	128.746	130.566	1.820
1E+13	214	135.288	134.902	-0.386
1E+13	144	129.672	139.030	9.358
1E+13	131	131.254	128.300	-2.954
	Max	142.106	141.652	9.358
	Average	134.097	133.919	-0.177
	Min	128.746	128.300	-9.935
	Std Dev	4.686	5.051	4.815



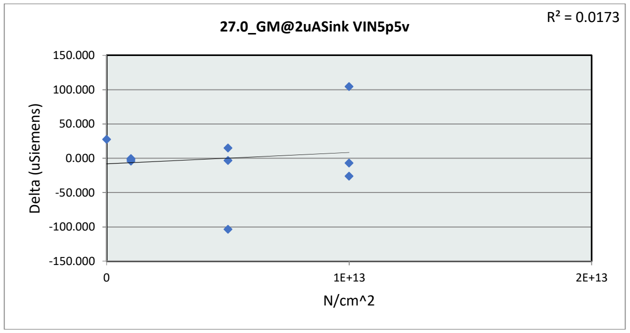
	26.4_Isrc0p1v VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	185	uA		
Min Limit	85	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	140.630	128.807	129.531	128.300
Average	140.630	133.810	131.633	134.078
Max	140.630	141.652	134.803	139.030
UL	185.000	185.000	185.000	185.000



NDD Report
TPS7H4002-SP

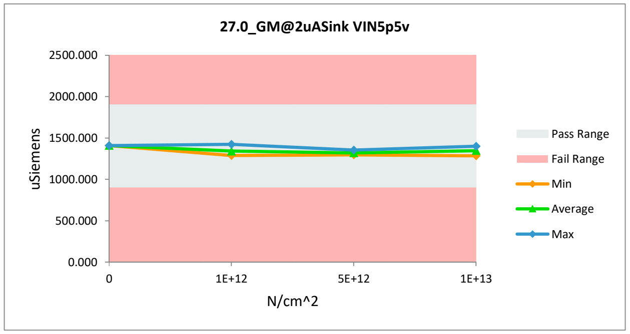
	27.0_GM@2uASink VIN5p5v	
Test Site	Dal-FL	Dal-FL
Tester	ETS364	ETS364
Test Number	EB386805	EB386805
Unit	USIEMENS	uSiemens
Max Limit	1900	1900
Min Limit	900	900

N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1380.870	1408.355	27.485
1E+12	50	1293.579	1289.159	-4.420
1E+12	175	1312.133	1310.108	-2.025
1E+12	254	1423.312	1422.521	-0.791
5E+12	308	1357.972	1354.646	-3.326
5E+12	349	1400.442	1296.548	-103.894
5E+12	111	1293.521	1308.450	14.929
1E+13	214	1357.686	1350.331	-7.354
1E+13	144	1295.860	1400.030	104.170
1E+13	131	1313.227	1287.010	-26.217
	Max	1423.312	1422.521	104.170
	Average	1342.860	1342.716	-0.144
	Min	1293.521	1287.010	-103.894
	Std Dev	47.814	52.178	50.990



	27.0_GM@2uASink VIN5p5v	
Test Site	Dal-FL	
Tester	ETS364	
Test Number	EB386805	
Max Limit	1900	uSiemens
Min Limit	900	uSiemens

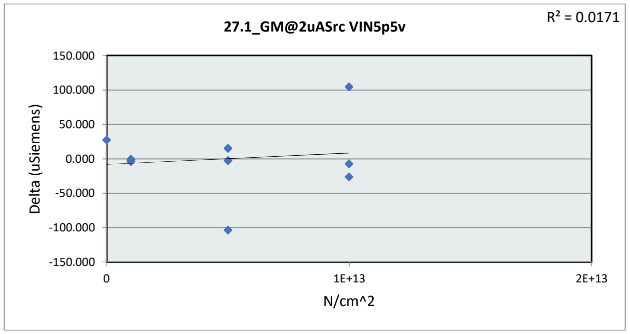
N/cm^2	0	1E+12	5E+12	1E+13
LL	900.000	900.000	900.000	900.000
Min	1408.355	1289.159	1296.548	1287.010
Average	1408.355	1340.596	1319.882	1345.790
Max	1408.355	1422.521	1354.646	1400.030
UL	1900.000	1900.000	1900.000	1900.000



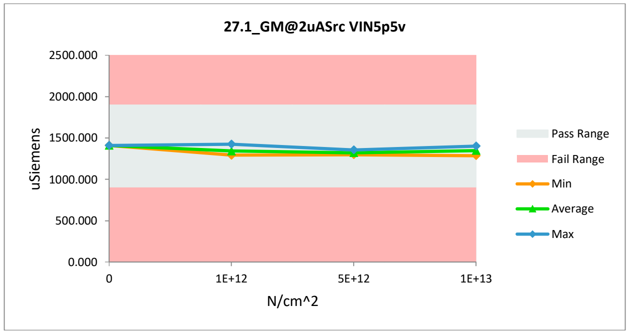
NDD Report
TPS7H4002-SP

	27.1_GM@2uASrc VIN5p5v	
Test Site	Dal-FL	Dal-FL
Tester	ETS364	ETS364
Test Number	EB386805	EB386805
Unit	USIEMENS	uSiemens
Max Limit	1900	1900
Min Limit	900	900

N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1380.973	1408.210	27.237
1E+12	50	1293.542	1289.450	-4.092
1E+12	175	1312.275	1310.344	-1.931
1E+12	254	1423.658	1422.779	-0.879
5E+12	308	1357.513	1354.852	-2.661
5E+12	349	1400.455	1296.527	-103.927
5E+12	111	1293.500	1308.493	14.993
1E+13	214	1357.805	1350.338	-7.467
1E+13	144	1295.885	1400.125	104.241
1E+13	131	1313.217	1286.829	-26.387
	Max	1423.658	1422.779	104.241
	Average	1342.882	1342.795	-0.087
	Min	1293.500	1286.829	-103.927
	Std Dev	47.872	52.190	51.005

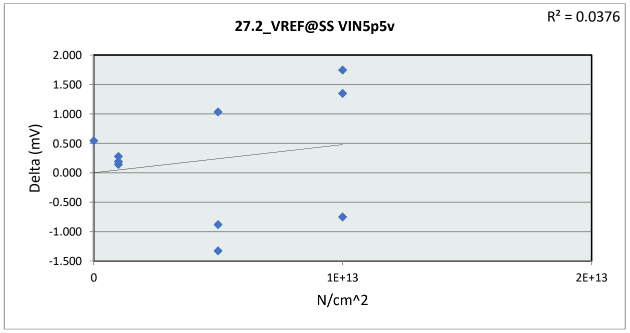


	27.1_GM@2uASrc VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1900	uSiemens		
Min Limit	900	uSiemens		
N/cm^2	0	1E+12	5E+12	1E+13
LL	900.000	900.000	900.000	900.000
Min	1408.210	1289.450	1296.527	1286.829
Average	1408.210	1340.858	1319.958	1345.764
Max	1408.210	1422.779	1354.852	1400.126
UL	1900.000	1900.000	1900.000	1900.000

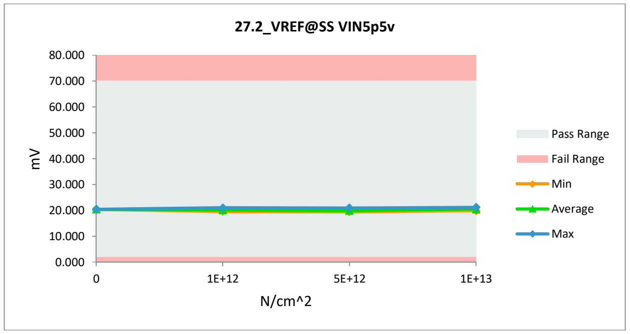


NDD Report
TPS7H4002-SP

		27.2_VREF@SS VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	mV	mV	
	Max Limit	70	70	
	Min Limit	2	2	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	19.935	20.477	0.542
1E+12	50	19.890	20.031	0.141
1E+12	175	19.266	19.540	0.274
1E+12	254	20.738	20.924	0.186
5E+12	308	19.846	20.879	1.033
5E+12	349	20.961	19.629	-1.331
5E+12	111	20.292	19.406	-0.885
1E+13	214	20.604	19.853	-0.751
1E+13	144	19.400	21.147	1.747
1E+13	131	19.043	20.388	1.345
	Max	20.961	21.147	1.747
	Average	19.997	20.227	0.230
	Min	19.043	19.406	-1.331
	Std Dev	0.647	0.626	0.997

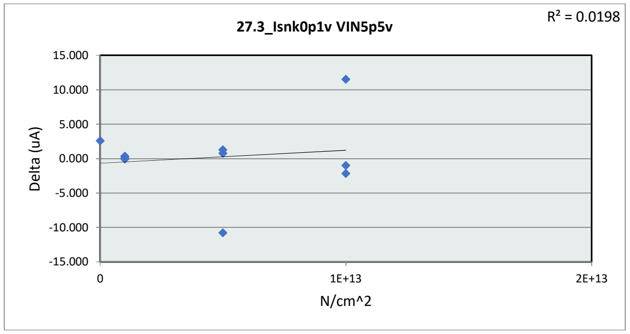


	27.2_VREF@SS VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	70	mV		
Min Limit	2	mV		
N/cm^2	0	1E+12	5E+12	1E+13
LL	2.000	2.000	2.000	2.000
Min	20.477	19.540	19.406	19.853
Average	20.477	20.165	19.972	20.462
Max	20.477	20.924	20.879	21.147
UL	70.000	70.000	70.000	70.000

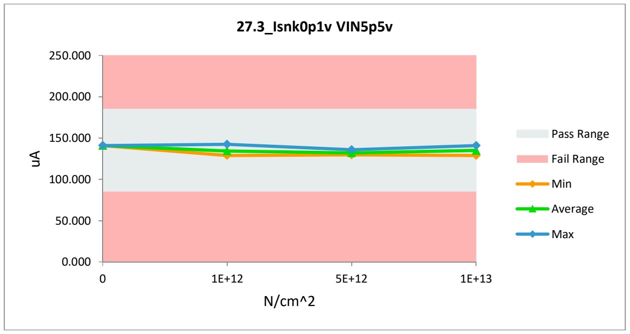


NDD Report
TPS7H4002-SP

		27.3_Isnk0p1v VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	185	185	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	138.245	140.789	2.545
1E+12	50	128.975	128.876	-0.099
1E+12	175	130.654	130.975	0.321
1E+12	254	142.448	142.598	0.151
5E+12	308	135.302	136.065	0.763
5E+12	349	140.334	129.525	-10.808
5E+12	111	129.569	130.819	1.250
1E+13	214	136.008	134.971	-1.037
1E+13	144	129.275	140.789	11.514
1E+13	131	131.073	128.885	-2.189
	Max	142.448	142.598	11.514
	Average	134.188	134.429	0.241
	Min	128.975	128.876	-10.808
	Std Dev	4.965	5.387	5.410

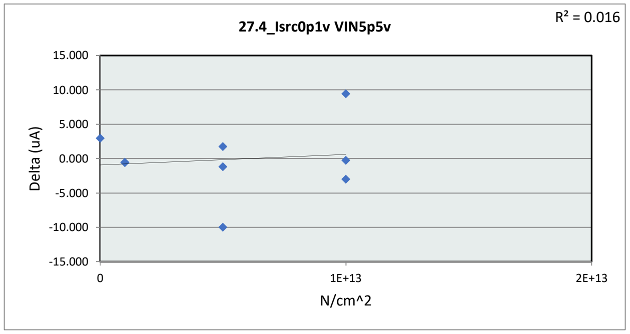


	27.3_Isnk0p1v VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	185	uA		
Min Limit	85	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	140.789	128.876	129.525	128.885
Average	140.789	134.150	132.136	134.882
Max	140.789	142.599	136.065	140.789
UL	185.000	185.000	185.000	185.000

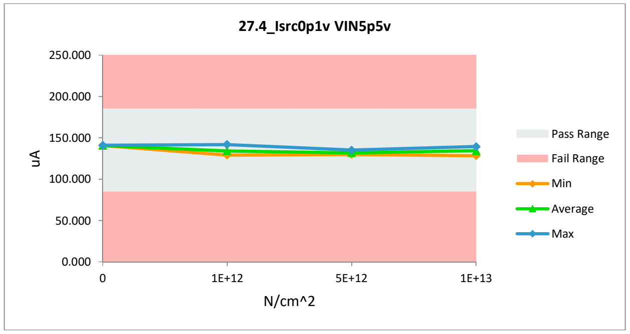


NDD Report
TPS7H4002-SP

		27.4_Isrc0p1v VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	185	185	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	137.906	140.850	2.944
1E+12	50	129.598	129.038	-0.560
1E+12	175	131.724	131.161	-0.564
1E+12	254	142.340	141.832	-0.508
5E+12	308	136.263	135.094	-1.168
5E+12	349	139.696	129.736	-9.960
5E+12	111	129.046	130.802	1.756
1E+13	214	135.400	135.155	-0.245
1E+13	144	129.821	139.264	9.444
1E+13	131	131.484	128.467	-3.016
	Max	142.340	141.832	9.444
	Average	134.328	134.140	-0.188
	Min	129.046	128.467	-9.960
	Std Dev	4.669	5.055	4.844

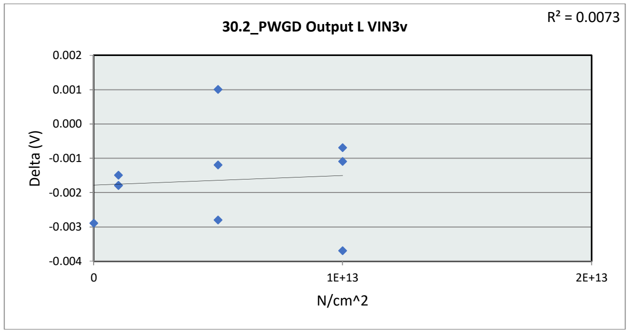


	27.4_Isrc0p1v VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	185	uA		
Min Limit	85	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	140.850	129.038	129.736	128.468
Average	140.850	134.010	131.878	134.296
Max	140.850	141.832	135.095	139.265
UL	185.000	185.000	185.000	185.000

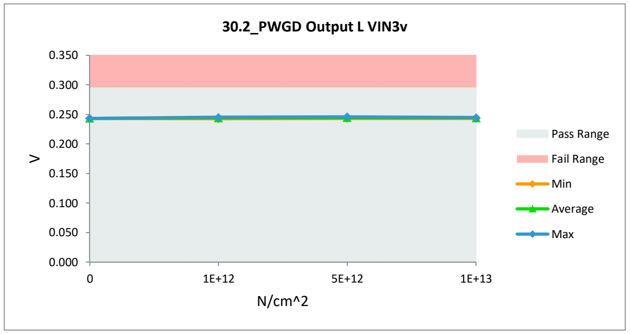


NDD Report
TPS7H4002-SP

		30.2_PWGD Output L VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	0.295	0.295	
	Min Limit	0	0	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	0.246	0.243	-0.003
1E+12	50	0.245	0.244	-0.001
1E+12	175	0.245	0.243	-0.002
1E+12	254	0.247	0.245	-0.002
5E+12	308	0.246	0.243	-0.003
5E+12	349	0.245	0.244	-0.001
5E+12	111	0.245	0.246	0.001
1E+13	214	0.245	0.244	-0.001
1E+13	144	0.244	0.243	-0.001
1E+13	131	0.247	0.244	-0.004
	Max	0.247	0.246	0.001
	Average	0.246	0.244	-0.002
	Min	0.244	0.243	-0.004
	Std Dev	0.001	0.001	0.001

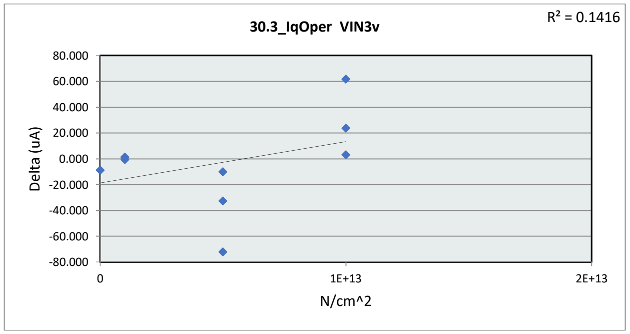


	30.2_PWGD Output L VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	0.295	V		
Min Limit	0	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.000	0.000	0.000	0.000
Min	0.243	0.243	0.243	0.243
Average	0.243	0.244	0.244	0.244
Max	0.243	0.245	0.246	0.244
UL	0.295	0.295	0.295	0.295

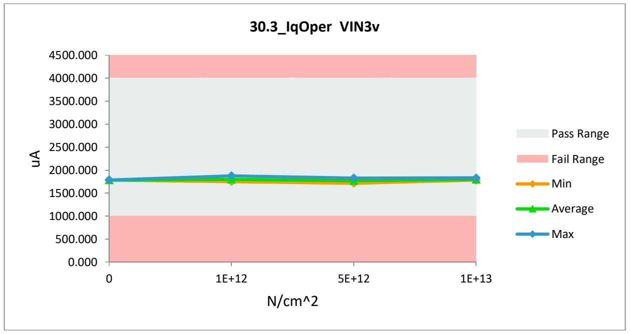


NDD Report
TPS7H4002-SP

		30.3_IqOper_VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	4000	4000	
	Min Limit	1000	1000	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1792.636	1783.653	-8.983
1E+12	50	1764.188	1765.527	1.339
1E+12	175	1749.789	1748.998	-0.792
1E+12	254	1874.701	1875.746	1.045
5E+12	308	1832.913	1822.868	-10.045
5E+12	349	1797.033	1764.375	-32.658
5E+12	111	1787.650	1715.500	-72.150
1E+13	214	1824.309	1827.257	2.948
1E+13	144	1767.736	1791.466	23.729
1E+13	131	1718.090	1779.656	61.566
	Max	1874.701	1875.746	61.566
	Average	1790.905	1787.505	-3.400
	Min	1718.090	1715.500	-72.150
	Std Dev	44.965	45.209	34.487

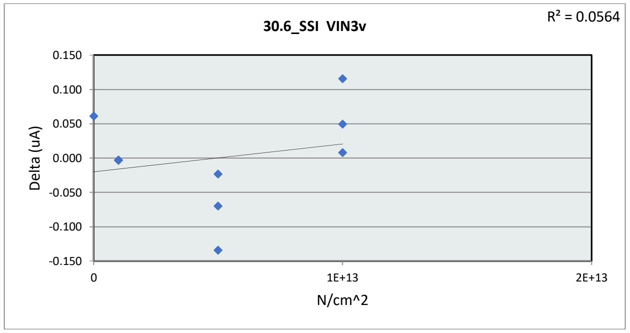


	30.3_IqOper_VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	4000	uA		
Min Limit	1000	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1000.000	1000.000	1000.000	1000.000
Min	1783.653	1748.998	1715.500	1779.656
Average	1783.653	1796.757	1767.581	1799.460
Max	1783.653	1875.746	1822.868	1827.257
UL	4000.000	4000.000	4000.000	4000.000

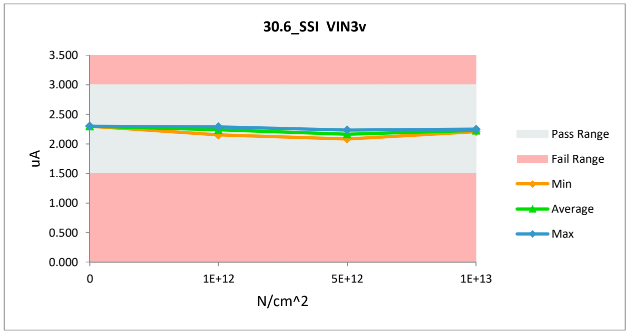


NDD Report
TPS7H4002-SP

		30.6_SSI VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	3	3	
	Min Limit	1.5	1.5	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	2.238	2.299	0.061
1E+12	50	2.153	2.150	-0.004
1E+12	175	2.273	2.269	-0.004
1E+12	254	2.292	2.289	-0.003
5E+12	308	2.260	2.237	-0.024
5E+12	349	2.241	2.171	-0.070
5E+12	111	2.217	2.082	-0.134
1E+13	214	2.240	2.248	0.008
1E+13	144	2.180	2.229	0.049
1E+13	131	2.091	2.206	0.116
	Max	2.292	2.299	0.116
	Average	2.218	2.218	0.000
	Min	2.091	2.082	-0.134
	Std Dev	0.061	0.067	0.069

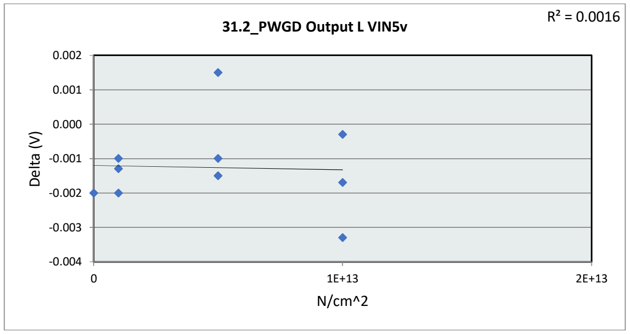


	30.6_SSI VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	3	uA		
Min Limit	1.5	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.500	1.500	1.500	1.500
Min	2.299	2.150	2.082	2.206
Average	2.299	2.236	2.163	2.228
Max	2.299	2.289	2.237	2.248
UL	3.000	3.000	3.000	3.000

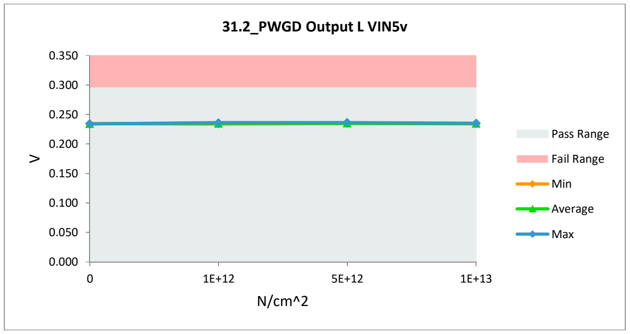


NDD Report
TPS7H4002-SP

		31.2_PWGD Output L VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	0.295	0.295	
	Min Limit	0	0	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	0.236	0.234	-0.002
1E+12	50	0.236	0.235	-0.001
1E+12	175	0.235	0.234	-0.001
1E+12	254	0.238	0.236	-0.002
5E+12	308	0.236	0.235	-0.002
5E+12	349	0.236	0.235	-0.001
5E+12	111	0.235	0.236	0.002
1E+13	214	0.235	0.235	0.000
1E+13	144	0.236	0.234	-0.002
1E+13	131	0.238	0.234	-0.003
	Max	0.238	0.236	0.002
	Average	0.236	0.235	-0.001
	Min	0.235	0.234	-0.003
	Std Dev	0.001	0.001	0.001

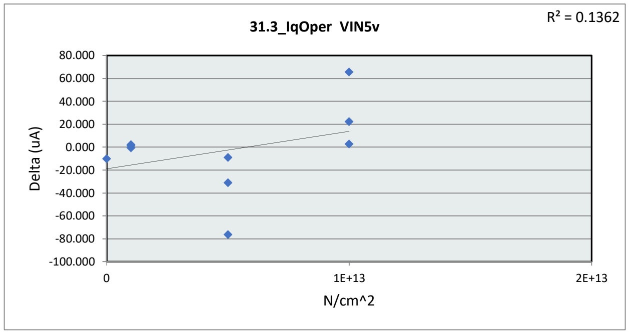


	31.2_PWGD Output L VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	0.295	V		
Min Limit	0	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.000	0.000	0.000	0.000
Min	0.234	0.234	0.235	0.234
Average	0.234	0.235	0.235	0.234
Max	0.234	0.236	0.236	0.235
UL	0.295	0.295	0.295	0.295

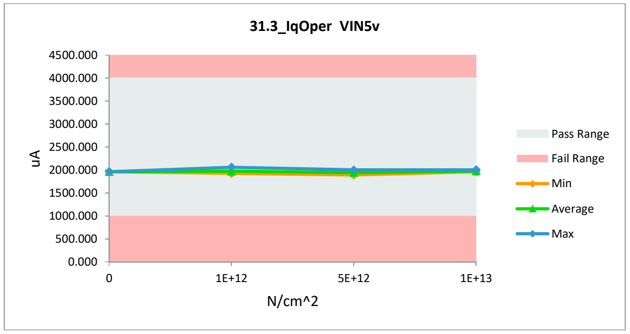


NDD Report
TPS7H4002-SP

		31.3_IqOper VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	4000	4000	
	Min Limit	1000	1000	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1969.925	1959.909	-10.016
1E+12	50	1932.348	1934.630	2.282
1E+12	175	1922.456	1921.944	-0.511
1E+12	254	2058.392	2059.635	1.243
5E+12	308	2008.390	1999.448	-8.942
5E+12	349	1969.856	1938.819	-31.036
5E+12	111	1965.527	1889.290	-76.237
1E+13	214	2000.321	2003.062	2.741
1E+13	144	1941.593	1963.851	22.258
1E+13	131	1892.125	1957.628	65.503
	Max	2058.392	2059.635	65.503
	Average	1966.093	1962.822	-3.272
	Min	1892.125	1889.290	-76.237
	Std Dev	47.869	48.096	35.977

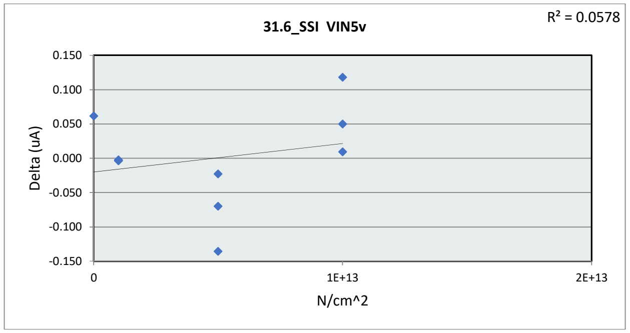


	31.3_IqOper VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	4000	uA		
Min Limit	1000	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1000.000	1000.000	1000.000	1000.000
Min	1959.909	1921.944	1889.290	1957.628
Average	1959.909	1972.070	1942.519	1974.847
Max	1959.909	2059.635	1999.448	2003.062
UL	4000.000	4000.000	4000.000	4000.000

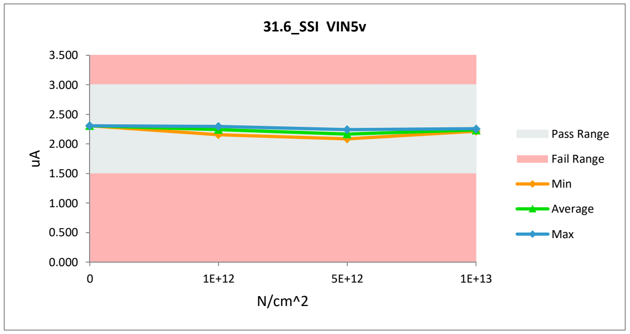


NDD Report
TPS7H4002-SP

		31.6_SSI VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	3	3	
	Min Limit	1.5	1.5	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	2.244	2.306	0.062
1E+12	50	2.159	2.156	-0.003
1E+12	175	2.279	2.275	-0.004
1E+12	254	2.298	2.295	-0.003
5E+12	308	2.266	2.243	-0.023
5E+12	349	2.247	2.177	-0.070
5E+12	111	2.224	2.088	-0.136
1E+13	214	2.246	2.255	0.009
1E+13	144	2.186	2.236	0.050
1E+13	131	2.095	2.213	0.118
	Max	2.298	2.306	0.118
	Average	2.224	2.224	0.000
	Min	2.095	2.088	-0.136
	Std Dev	0.061	0.068	0.070

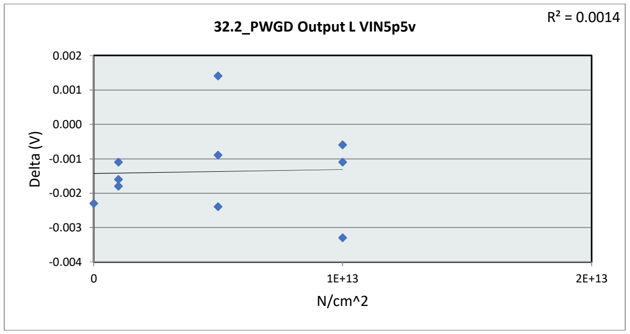


	31.6_SSI VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	3	uA		
Min Limit	1.5	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.500	1.500	1.500	1.500
Min	2.306	2.156	2.088	2.213
Average	2.306	2.242	2.169	2.235
Max	2.306	2.295	2.244	2.255
UL	3.000	3.000	3.000	3.000

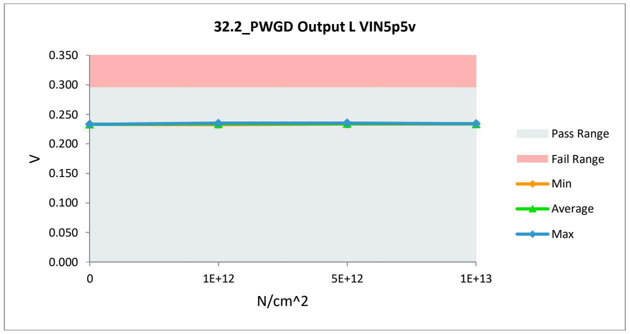


NDD Report
TPS7H4002-SP

		32.2_PWGD Output L VIN5p5v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit		V	V	
Max Limit		0.295	0.295	
Min Limit		0	0	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	0.235	0.233	-0.002
1E+12	50	0.235	0.234	-0.002
1E+12	175	0.234	0.233	-0.001
1E+12	254	0.236	0.235	-0.002
5E+12	308	0.236	0.233	-0.002
5E+12	349	0.234	0.234	-0.001
5E+12	111	0.234	0.235	0.001
1E+13	214	0.235	0.234	-0.001
1E+13	144	0.235	0.233	-0.001
1E+13	131	0.237	0.234	-0.003
	Max	0.237	0.235	0.001
	Average	0.235	0.234	-0.001
	Min	0.234	0.233	-0.003
	Std Dev	0.001	0.001	0.001

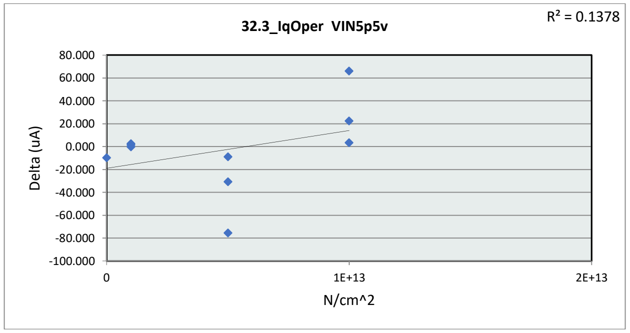


	32.2_PWGD Output L VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	0.295	V		
Min Limit	0	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.000	0.000	0.000	0.000
Min	0.233	0.233	0.233	0.233
Average	0.233	0.234	0.234	0.234
Max	0.233	0.235	0.235	0.234
UL	0.295	0.295	0.295	0.295

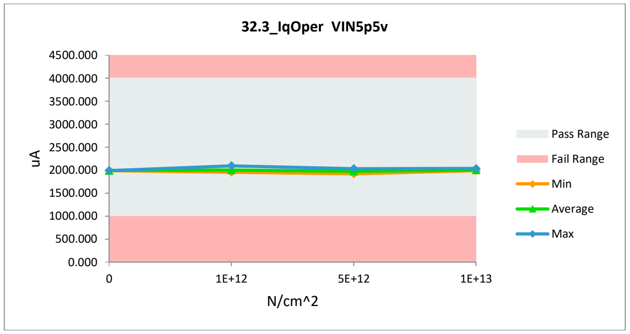


NDD Report
TPS7H4002-SP

		32.3_IqOper_VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	4000	4000	
	Min Limit	1000	1000	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	2002.132	1992.297	-9.835
1E+12	50	1963.348	1965.938	2.590
1E+12	175	1954.465	1954.076	-0.389
1E+12	254	2091.146	2092.570	1.424
5E+12	308	2040.515	2031.417	-9.098
5E+12	349	2001.472	1970.658	-30.814
5E+12	111	1997.841	1922.272	-75.568
1E+13	214	2032.012	2035.281	3.270
1E+13	144	1973.578	1995.852	22.274
1E+13	131	1924.026	1989.970	65.944
	Max	2091.146	2092.570	65.944
	Average	1998.053	1995.033	-3.020
	Min	1924.026	1922.272	-75.568
	Std Dev	48.114	48.193	35.921

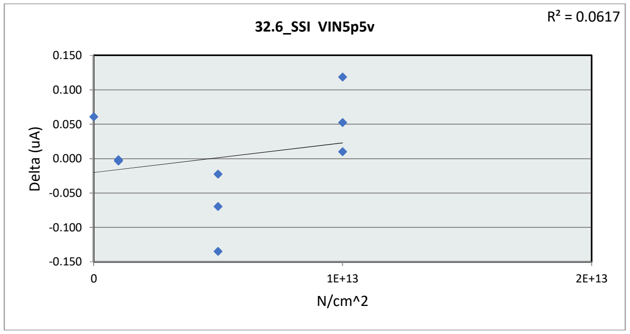


	32.3_IqOper_VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	4000	uA		
Min Limit	1000	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1000.000	1000.000	1000.000	1000.000
Min	1992.297	1954.076	1922.272	1989.970
Average	1992.297	2004.195	1974.782	2007.034
Max	1992.297	2092.570	2031.417	2035.282
UL	4000.000	4000.000	4000.000	4000.000

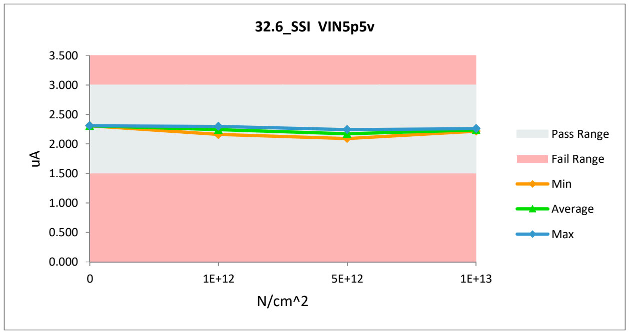


NDD Report
TPS7H4002-SP

		32.6_SSI_VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	µA	uA	
	Max Limit	3	3	
	Min Limit	1.5	1.5	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	2.246	2.307	0.061
1E+12	50	2.159	2.158	-0.002
1E+12	175	2.280	2.277	-0.004
1E+12	254	2.299	2.296	-0.003
5E+12	308	2.268	2.245	-0.023
5E+12	349	2.249	2.179	-0.070
5E+12	111	2.225	2.090	-0.135
1E+13	214	2.247	2.257	0.010
1E+13	144	2.187	2.240	0.052
1E+13	131	2.097	2.215	0.118
	Max	2.299	2.307	0.118
	Average	2.226	2.226	0.001
	Min	2.097	2.090	-0.135
	Std Dev	0.062	0.067	0.070

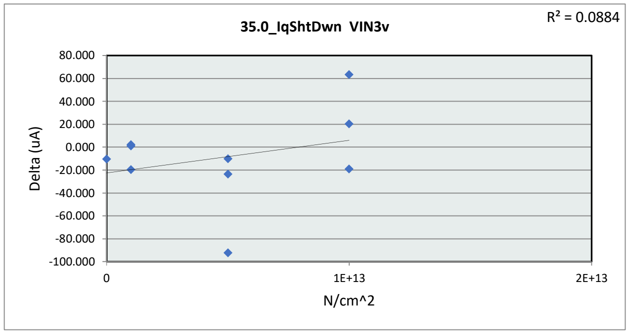


	32.6_SSI_VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	3	uA		
Min Limit	1.5	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.500	1.500	1.500	1.500
Min	2.307	2.158	2.090	2.215
Average	2.307	2.244	2.172	2.237
Max	2.307	2.296	2.245	2.257
UL	3.000	3.000	3.000	3.000

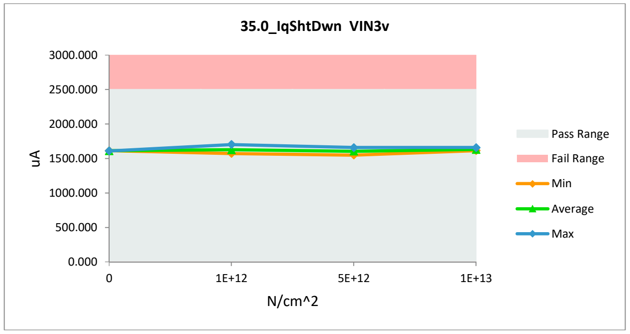


NDD Report
TPS7H4002-SP

		35.0_IqShtDwn VIN3v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit		µA	uA	
Max Limit		2500	2500	
Min Limit		0.1	0.1	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1621.273	1610.884	-10.389
1E+12	50	1600.291	1602.373	2.082
1E+12	175	1590.522	1570.796	-19.726
1E+12	254	1700.276	1701.390	1.115
5E+12	308	1679.457	1655.982	-23.476
5E+12	349	1625.793	1615.808	-9.986
5E+12	111	1641.207	1549.036	-92.171
1E+13	214	1676.851	1657.694	-19.157
1E+13	144	1599.121	1619.339	20.219
1E+13	131	1550.890	1614.149	63.259
	Max	1700.276	1701.390	63.259
	Average	1628.568	1619.745	-8.823
	Min	1550.890	1549.036	-92.171
	Std Dev	46.466	43.770	38.941



	35.0_IqShtDwn VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	2500	uA		
Min Limit	0.1	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.100	0.100	0.100	0.100
Min	1610.884	1570.796	1549.036	1614.149
Average	1610.884	1624.853	1606.942	1630.394
Max	1610.884	1701.390	1655.982	1657.694
UL	2500.000	2500.000	2500.000	2500.000



NDD Report
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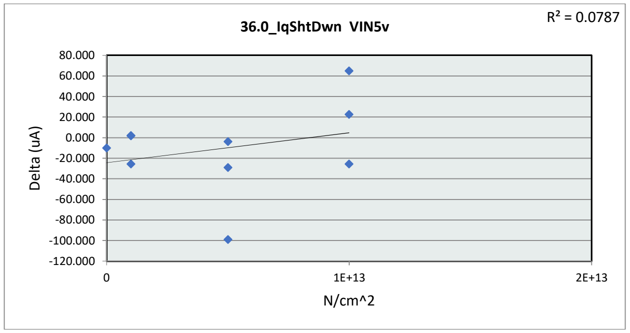
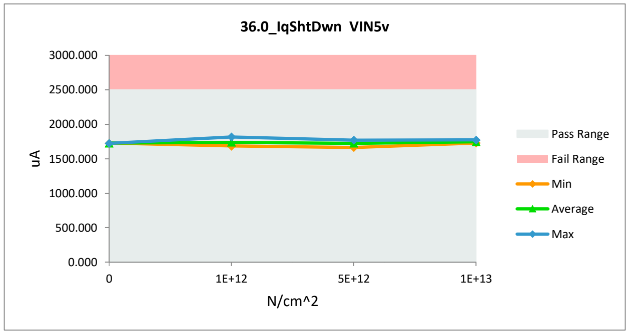
		36.0_IqShtDwn VIN5v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit		µA	uA	
Max Limit		2500	2500	
Min Limit		0.1	0.1	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1733.847	1723.654	-10.193
1E+12	50	1710.844	1712.958	2.114
1E+12	175	1707.367	1681.510	-25.857
1E+12	254	1814.955	1816.569	1.614
5E+12	308	1798.422	1769.231	-29.191
5E+12	349	1738.673	1734.585	-4.088
5E+12	111	1760.725	1661.622	-99.103
1E+13	214	1796.692	1771.139	-25.552
1E+13	144	1710.454	1733.046	22.592
1E+13	131	1662.692	1727.434	64.742
	Max	1814.955	1816.569	64.742
	Average	1743.467	1733.175	-10.292
	Min	1662.692	1661.622	-99.103
	Std Dev	48.715	44.745	41.853



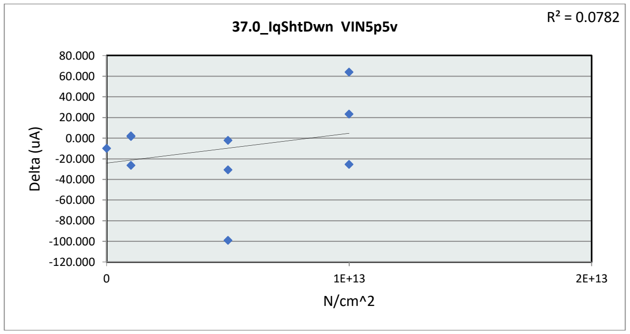
	36.0_IqShtDwn VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	2500	uA		
Min Limit	0.1	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.100	0.100	0.100	0.100
Min	1723.654	1681.510	1661.622	1727.434
Average	1723.654	1737.012	1721.813	1743.873
Max	1723.654	1816.569	1769.231	1771.139
UL	2500.000	2500.000	2500.000	2500.000



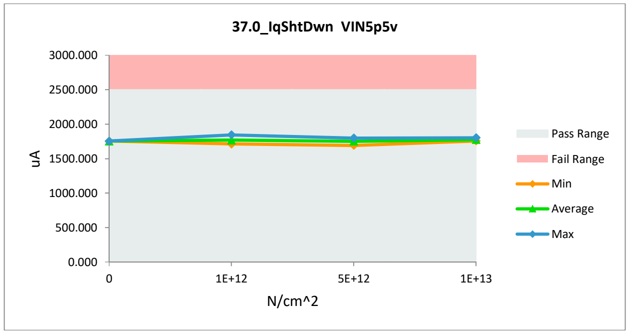
NDD Report
TPS7H4002-SP

	37.0_IqShtDwn VIN5p5v	
Test Site	Dal-FL	Dal-FL
Tester	ETS364	ETS364
Test Number	EB386805	EB386805
Unit	µA	uA
Max Limit	2500	2500
Min Limit	0.1	0.1

N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1763.542	1753.600	-9.943
1E+12	50	1740.019	1742.218	2.200
1E+12	175	1736.836	1710.286	-26.551
1E+12	254	1843.231	1844.850	1.619
5E+12	308	1828.658	1797.725	-30.933
5E+12	349	1768.609	1766.200	-2.410
5E+12	111	1790.647	1691.582	-99.065
1E+13	214	1826.053	1800.458	-25.595
1E+13	144	1740.263	1763.349	23.086
1E+13	131	1692.864	1756.724	63.860
	Max	1843.231	1844.850	63.860
	Average	1773.072	1762.699	-10.373
	Min	1692.864	1691.582	-99.065
	Std Dev	48.481	44.418	41.870

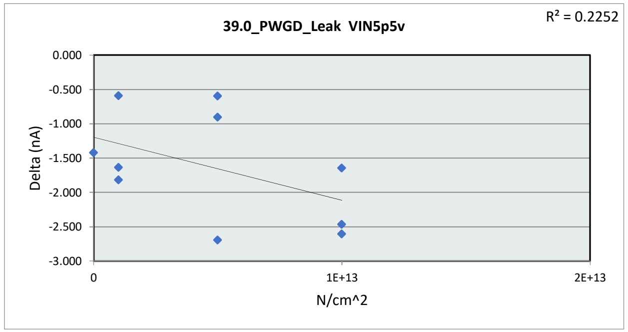


	37.0_IqShtDwn VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	2500	uA		
Min Limit	0.1	uA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.100	0.100	0.100	0.100
Min	1753.600	1710.286	1691.582	1756.724
Average	1753.600	1765.784	1751.835	1773.510
Max	1753.600	1844.850	1797.725	1800.458
UL	2500.000	2500.000	2500.000	2500.000

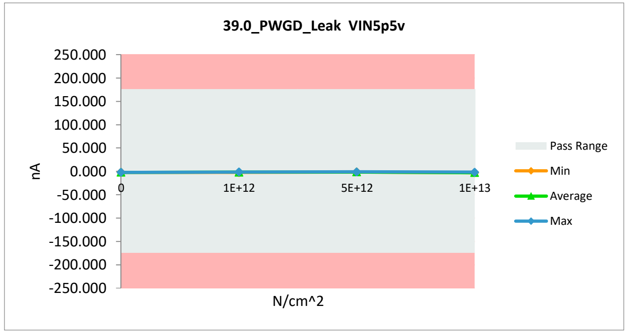


NDD Report
TPS7H4002-SP

		39.0_PWGD_Leak VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	nA	nA	
	Max Limit	175	175	
	Min Limit	-175	-175	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	-0.854	-2.277	-1.423
1E+12	50	-0.991	-2.630	-1.639
1E+12	175	-0.708	-1.300	-0.592
1E+12	254	0.092	-1.726	-1.818
5E+12	308	-0.790	-1.385	-0.595
5E+12	349	-0.558	-1.464	-0.906
5E+12	111	1.052	-1.642	-2.694
1E+13	214	-0.225	-2.694	-2.469
1E+13	144	-0.435	-3.042	-2.607
1E+13	131	-0.577	-2.222	-1.645
	Max	1.052	-1.300	-0.592
	Average	-0.399	-2.038	-1.639
	Min	-0.991	-3.042	-2.694
	Std Dev	0.600	0.618	0.785

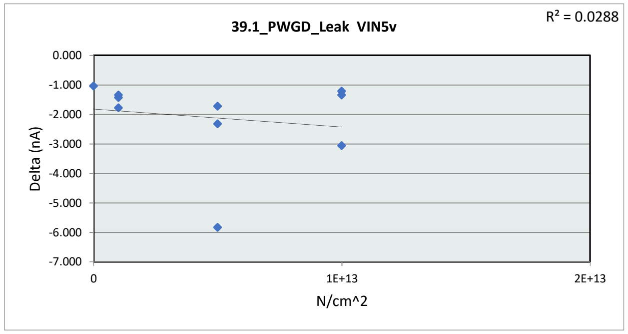


	39.0_PWGD_Leak VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	175	nA		
Min Limit	-175	nA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	-175.000	-175.000	-175.000	-175.000
Min	-2.277	-2.630	-1.642	-3.042
Average	-2.277	-1.885	-1.497	-2.653
Max	-2.277	-1.300	-1.385	-2.222
UL	175.000	175.000	175.000	175.000

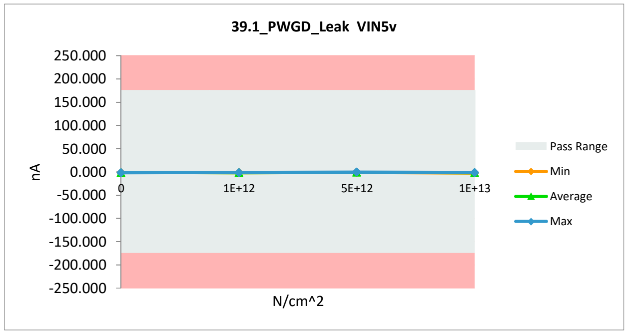


NDD Report
TPS7H4002-SP

		39.1_PWGD_Leak VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	nA	nA	
	Max Limit	175	175	
	Min Limit	-175	-175	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	-0.832	-1.876	-1.044
1E+12	50	-0.287	-1.721	-1.434
1E+12	175	-0.115	-1.897	-1.781
1E+12	254	-0.702	-2.051	-1.349
5E+12	308	5.221	-0.610	-5.831
5E+12	349	0.533	-1.190	-1.723
5E+12	111	1.150	-1.171	-2.321
1E+13	214	-0.443	-1.655	-1.213
1E+13	144	0.300	-2.769	-3.069
1E+13	131	-0.568	-1.916	-1.348
	Max	5.221	-0.610	-1.044
	Average	0.426	-1.686	-2.111
	Min	-0.832	-2.769	-5.831
	Std Dev	1.793	0.588	1.439

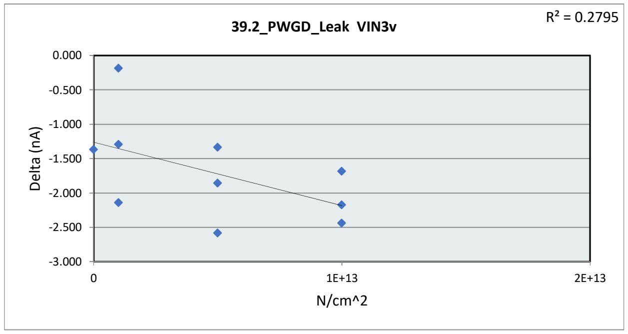


	39.1_PWGD_Leak VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	175	nA		
Min Limit	-175	nA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	-175.000	-175.000	-175.000	-175.000
Min	-1.876	-2.051	-1.190	-2.769
Average	-1.876	-1.890	-0.990	-2.114
Max	-1.876	-1.721	-0.610	-1.655
UL	175.000	175.000	175.000	175.000

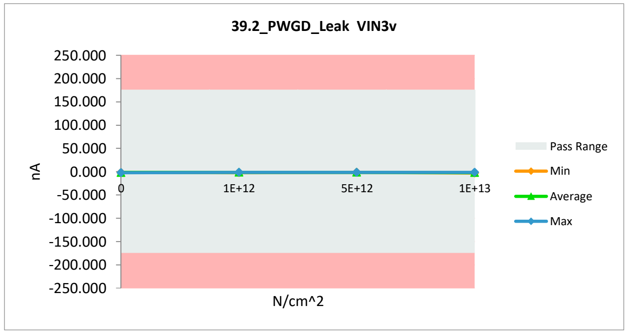


NDD Report
TPS7H4002-SP

		39.2_PWGD_Leak VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	nA	nA	
	Max Limit	175	175	
	Min Limit	-175	-175	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	-0.807	-2.171	-1.365
1E+12	50	-0.247	-2.389	-2.141
1E+12	175	-0.116	-1.409	-1.292
1E+12	254	-1.547	-1.729	-0.182
5E+12	308	0.144	-1.711	-1.855
5E+12	349	-0.510	-1.844	-1.333
5E+12	111	0.879	-1.702	-2.581
1E+13	214	-0.236	-2.675	-2.439
1E+13	144	-0.582	-2.266	-1.684
1E+13	131	0.568	-1.604	-2.172
	Max	0.879	-1.409	-0.182
	Average	-0.245	-1.950	-1.704
	Min	-1.547	-2.675	-2.581
	Std Dev	0.690	0.403	0.706



	39.2_PWGD_Leak VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	175	nA		
Min Limit	-175	nA		
N/cm^2	0	1E+12	5E+12	1E+13
LL	-175.000	-175.000	-175.000	-175.000
Min	-2.171	-2.389	-1.844	-2.675
Average	-2.171	-1.842	-1.752	-2.182
Max	-2.171	-1.409	-1.702	-1.604
UL	175.000	175.000	175.000	175.000



NDD Report
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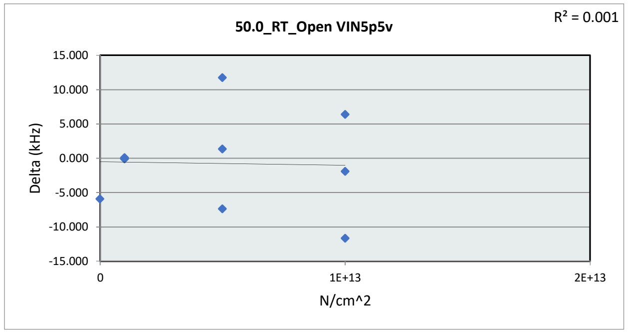
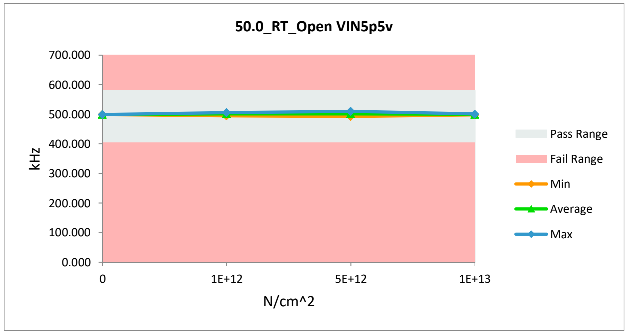
		50.0_RT_Open VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	505.072	499.123	-5.949
1E+12	50	494.685	494.634	-0.051
1E+12	175	505.610	505.671	0.061
1E+12	254	503.544	503.435	-0.109
5E+12	308	498.096	509.830	11.734
5E+12	349	501.013	502.333	1.320
5E+12	111	499.928	492.541	-7.387
1E+13	214	509.984	498.304	-11.680
1E+13	144	502.843	500.906	-1.937
1E+13	131	492.876	499.246	6.370
	Max	509.984	509.830	11.734
	Average	501.365	500.602	-0.763
	Min	492.876	492.541	-11.680
	Std Dev	5.191	5.076	6.703

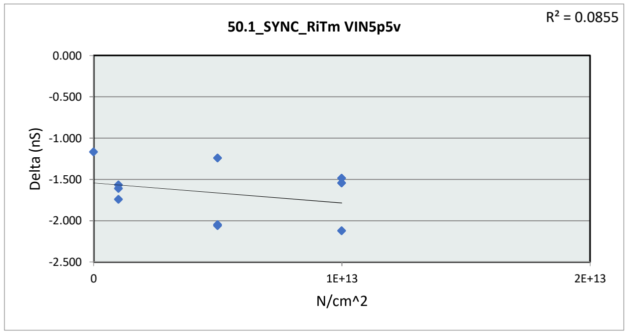


	50.0_RT_Open VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	499.123	494.634	492.541	498.304
Average	499.123	501.247	501.568	499.485
Max	499.123	505.671	509.830	500.906
UL	580.000	580.000	580.000	580.000

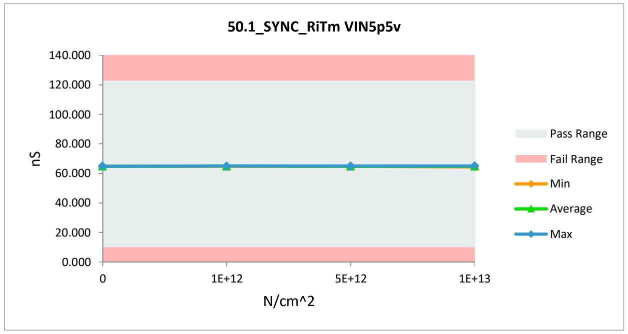


NDD Report
TPS7H4002-SP

		50.1_SYNC_RiTm VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	nS	nS	
	Max Limit	122.5	122.5	
	Min Limit	10	10	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	65.982	64.813	-1.168
1E+12	50	66.500	64.932	-1.568
1E+12	175	66.441	64.698	-1.743
1E+12	254	66.485	64.875	-1.609
5E+12	308	66.823	64.775	-2.048
5E+12	349	66.081	64.838	-1.243
5E+12	111	66.877	64.814	-2.062
1E+13	214	66.576	65.031	-1.545
1E+13	144	66.548	64.427	-2.121
1E+13	131	66.599	65.113	-1.486
	Max	66.877	65.113	-1.168
	Average	66.491	64.832	-1.659
	Min	65.982	64.427	-2.121
	Std Dev	0.281	0.188	0.334

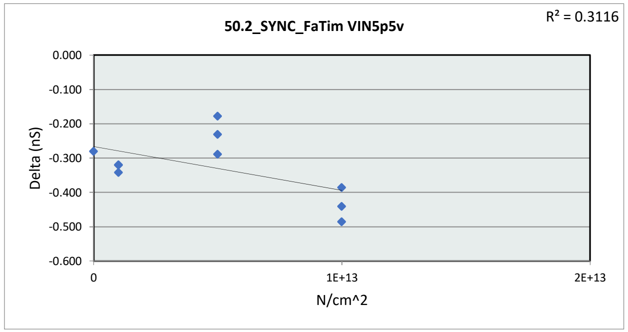


	50.1_SYNC_RiTm VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	122.5	nS		
Min Limit	10	nS		
N/cm^2	0	1E+12	5E+12	1E+13
LL	10.000	10.000	10.000	10.000
Min	64.814	64.698	64.775	64.427
Average	64.814	64.835	64.809	64.857
Max	64.814	64.932	64.838	65.113
UL	122.500	122.500	122.500	122.500

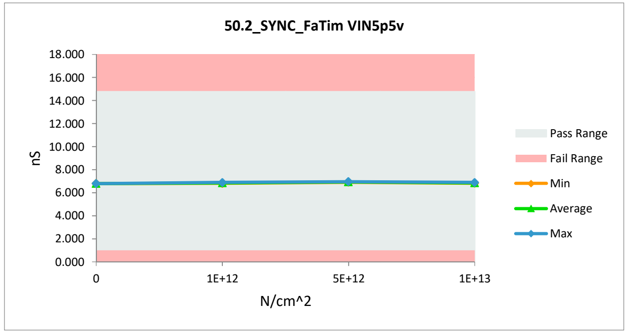


NDD Report
TPS7H4002-SP

		50.2_SYNC_FaTim VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	nS	nS	
	Max Limit	14.8	14.8	
	Min Limit	1	1	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	7.076	6.795	-0.281
1E+12	50	7.204	6.883	-0.321
1E+12	175	7.116	6.796	-0.320
1E+12	254	7.209	6.866	-0.343
5E+12	308	7.238	6.949	-0.289
5E+12	349	7.143	6.912	-0.231
5E+12	111	7.136	6.958	-0.178
1E+13	214	7.272	6.886	-0.386
1E+13	144	7.255	6.815	-0.441
1E+13	131	7.300	6.814	-0.486
	Max	7.300	6.958	-0.178
	Average	7.195	6.867	-0.328
	Min	7.076	6.795	-0.486
	Std Dev	0.074	0.061	0.092

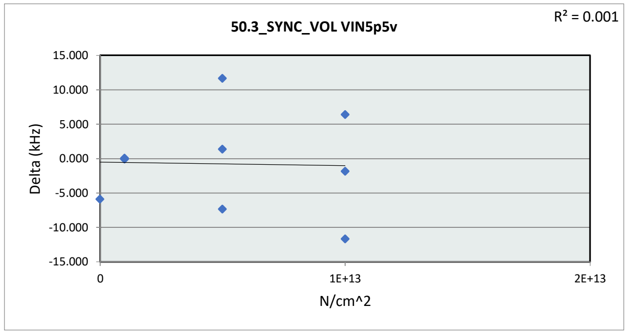


	50.2_SYNC_FaTim VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	14.8	nS		
Min Limit	1	nS		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.000	1.000	1.000	1.000
Min	6.795	6.796	6.912	6.814
Average	6.795	6.848	6.940	6.838
Max	6.795	6.883	6.958	6.886
UL	14.800	14.800	14.800	14.800

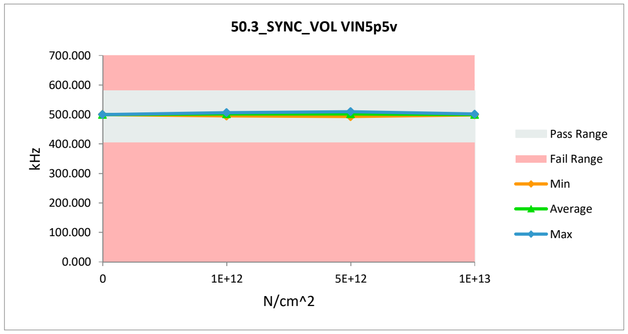


NDD Report
TPS7H4002-SP

		50.3_SYNC_VOL VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	505.132	499.224	-5.908
1E+12	50	494.801	494.702	-0.099
1E+12	175	505.715	505.688	-0.027
1E+12	254	503.446	503.480	0.034
5E+12	308	498.208	509.846	11.638
5E+12	349	501.064	502.409	1.345
5E+12	111	499.923	492.588	-7.336
1E+13	214	510.084	498.391	-11.692
1E+13	144	502.897	501.028	-1.869
1E+13	131	492.965	499.344	6.379
	Max	510.084	509.846	11.638
	Average	501.423	500.670	-0.754
	Min	492.965	492.588	-11.692
	Std Dev	5.181	5.060	6.677

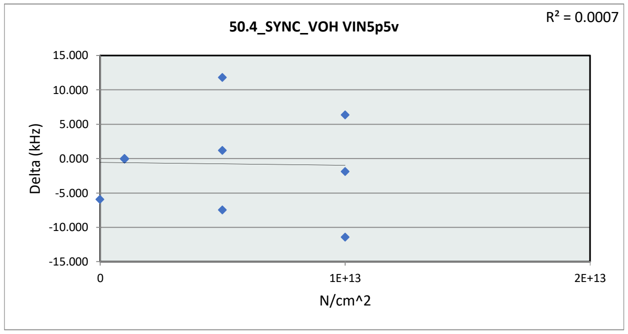


	50.3_SYNC_VOL VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	499.224	494.702	492.588	498.391
Average	499.224	501.290	501.614	499.588
Max	499.224	505.688	509.846	501.028
UL	580.000	580.000	580.000	580.000

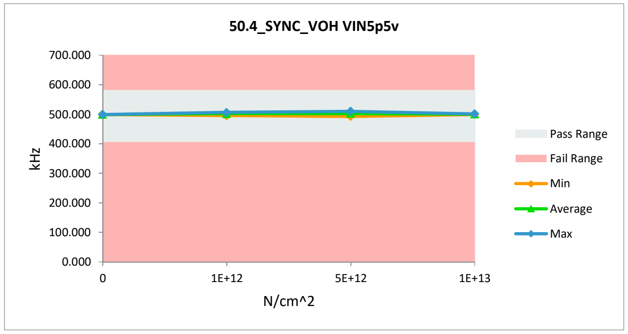


NDD Report
TPS7H4002-SP

		50.4_SYNC_VOH VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	505.262	499.336	-5.926
1E+12	50	494.829	494.786	-0.043
1E+12	175	505.660	505.686	0.026
1E+12	254	503.447	503.373	-0.074
5E+12	308	498.093	509.897	11.803
5E+12	349	501.174	502.358	1.183
5E+12	111	500.068	492.596	-7.472
1E+13	214	509.843	498.403	-11.441
1E+13	144	502.831	500.967	-1.864
1E+13	131	492.984	499.338	6.354
	Max	509.843	509.897	11.803
	Average	501.419	500.674	-0.745
	Min	492.984	492.596	-11.441
	Std Dev	5.135	5.045	6.674

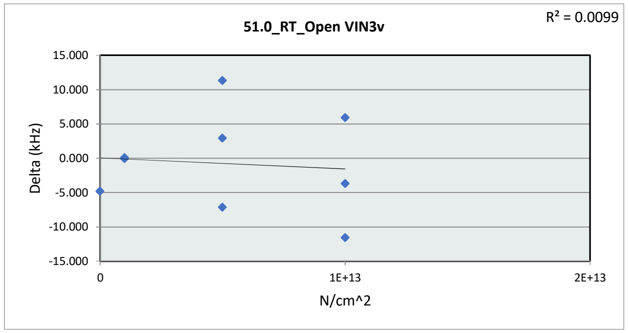


	50.4_SYNC_VOH VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	499.336	494.786	492.596	498.403
Average	499.336	501.282	501.617	499.569
Max	499.336	505.686	509.897	500.967
UL	580.000	580.000	580.000	580.000

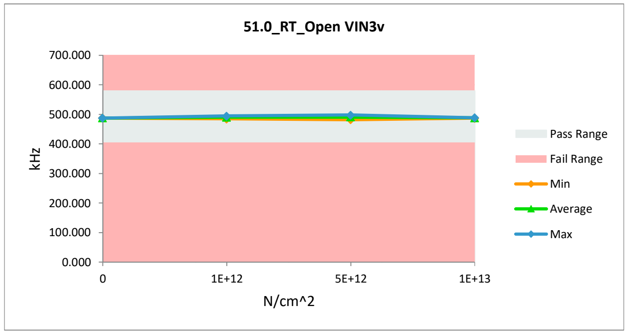


NDD Report
TPS7H4002-SP

		51.0_RT_Open VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	492.500	487.668	-4.833
1E+12	50	484.671	484.633	-0.038
1E+12	175	494.246	494.301	0.054
1E+12	254	491.655	491.602	-0.053
5E+12	308	486.452	497.780	11.328
5E+12	349	488.811	491.720	2.909
5E+12	111	488.960	481.825	-7.135
1E+13	214	498.032	486.452	-11.581
1E+13	144	492.179	488.488	-3.691
1E+13	131	482.232	488.148	5.916
	Max	498.032	497.780	11.328
	Average	489.974	489.262	-0.712
	Min	482.232	481.825	-11.581
	Std Dev	4.715	4.696	6.572

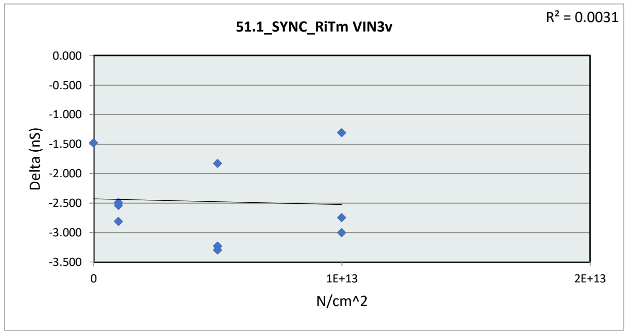


	51.0_RT_Open VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	487.668	484.633	481.825	486.452
Average	487.668	490.179	490.442	487.696
Max	487.668	494.301	497.780	488.488
UL	580.000	580.000	580.000	580.000

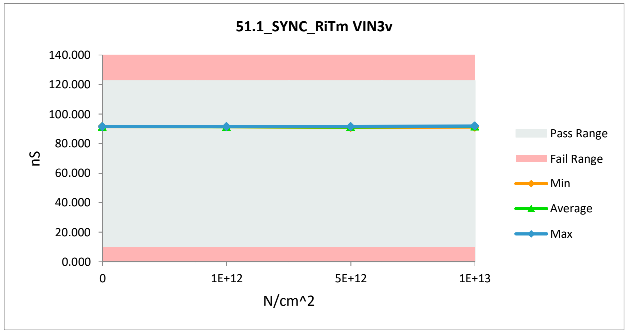


NDD Report
TPS7H4002-SP

		51.1_SYNC_RiTm VIN3v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit		nS	nS	
Max Limit		122.5	122.5	
Min Limit		10	10	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	93.022	91.537	-1.485
1E+12	50	94.205	91.389	-2.816
1E+12	175	93.890	91.399	-2.491
1E+12	254	93.828	91.285	-2.544
5E+12	308	94.293	91.062	-3.231
5E+12	349	93.328	91.496	-1.832
5E+12	111	94.232	90.936	-3.295
1E+13	214	94.590	91.840	-2.750
1E+13	144	94.073	91.070	-3.003
1E+13	131	93.270	91.964	-1.307
	Max	94.590	91.964	-1.307
	Average	93.873	91.398	-2.475
	Min	93.022	90.936	-3.295
	Std Dev	0.512	0.332	0.706

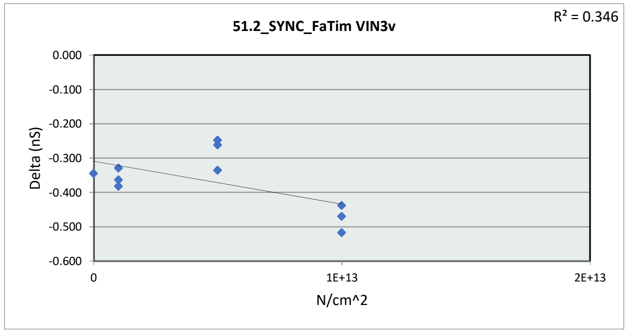


	51.1_SYNC_RiTm VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	122.5	nS		
Min Limit	10	nS		
N/cm^2	0	1E+12	5E+12	1E+13
LL	10.000	10.000	10.000	10.000
Min	91.538	91.285	90.936	91.070
Average	91.538	91.358	91.165	91.624
Max	91.538	91.399	91.496	91.964
UL	122.500	122.500	122.500	122.500

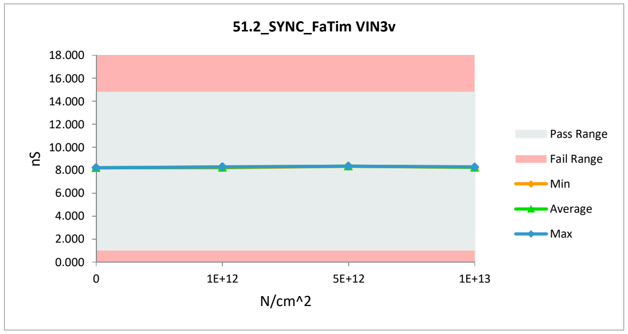


NDD Report
TPS7H4002-SP

		51.2_SYNC_FaTim VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	nS	nS	
	Max Limit	14.8	14.8	
	Min Limit	1	1	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	8.549	8.204	-0.345
1E+12	50	8.625	8.261	-0.363
1E+12	175	8.591	8.208	-0.382
1E+12	254	8.619	8.290	-0.329
5E+12	308	8.680	8.344	-0.336
5E+12	349	8.601	8.352	-0.248
5E+12	111	8.609	8.347	-0.262
1E+13	214	8.709	8.271	-0.438
1E+13	144	8.694	8.224	-0.470
1E+13	131	8.745	8.227	-0.518
	Max	8.745	8.352	-0.248
	Average	8.642	8.273	-0.369
	Min	8.549	8.204	-0.518
	Std Dev	0.062	0.058	0.086

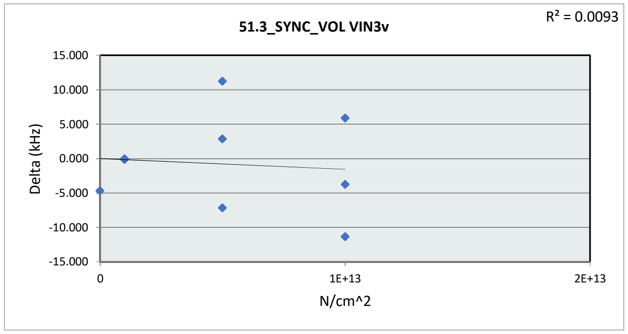


	51.2_SYNC_FaTim VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	14.8	nS		
Min Limit	1	nS		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.000	1.000	1.000	1.000
Min	8.204	8.208	8.344	8.224
Average	8.204	8.253	8.348	8.241
Max	8.204	8.290	8.352	8.271
UL	14.800	14.800	14.800	14.800

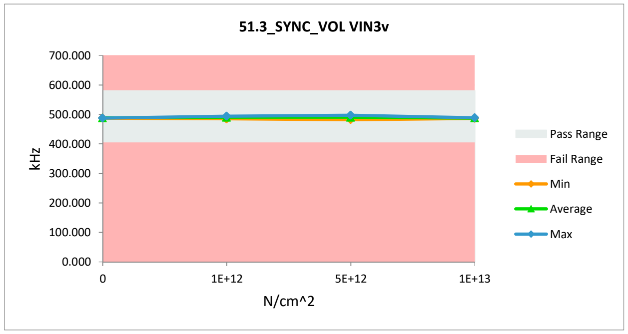


NDD Report
TPS7H4002-SP

		51.3_SYNC_VOL VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	492.467	487.766	-4.701
1E+12	50	484.727	484.588	-0.139
1E+12	175	494.322	494.208	-0.113
1E+12	254	491.662	491.623	-0.039
5E+12	308	486.560	497.781	11.221
5E+12	349	488.784	491.622	2.837
5E+12	111	488.980	481.802	-7.177
1E+13	214	497.958	486.599	-11.359
1E+13	144	492.229	488.479	-3.750
1E+13	131	482.304	488.194	5.891
	Max	497.958	497.781	11.221
	Average	489.999	489.266	-0.733
	Min	482.304	481.802	-11.359
	Std Dev	4.681	4.676	6.498

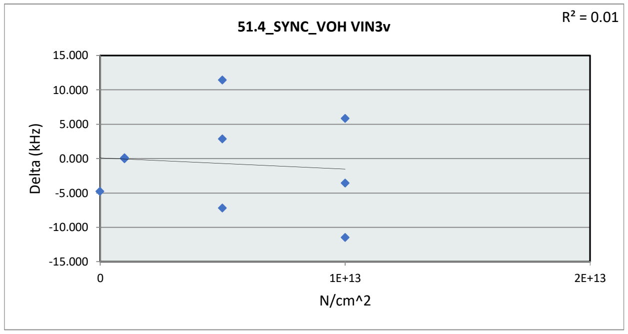


	51.3_SYNC_VOL VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	487.766	484.588	481.802	486.600
Average	487.766	490.140	490.402	487.758
Max	487.766	494.208	497.781	488.479
UL	580.000	580.000	580.000	580.000

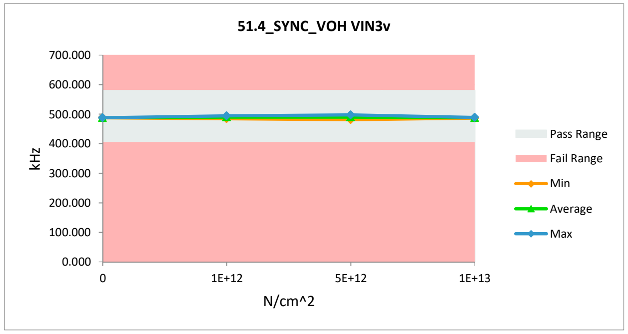


NDD Report
TPS7H4002-SP

		51.4_SYNC_VOH VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	492.419	487.638	-4.781
1E+12	50	484.554	484.665	0.111
1E+12	175	494.202	494.231	0.030
1E+12	254	491.615	491.610	-0.005
5E+12	308	486.375	497.802	11.427
5E+12	349	488.783	491.659	2.876
5E+12	111	489.011	481.831	-7.181
1E+13	214	497.988	486.497	-11.491
1E+13	144	492.133	488.597	-3.536
1E+13	131	482.272	488.109	5.838
	Max	497.988	497.802	11.427
	Average	489.935	489.264	-0.671
	Min	482.272	481.831	-11.491
	Std Dev	4.707	4.682	6.561

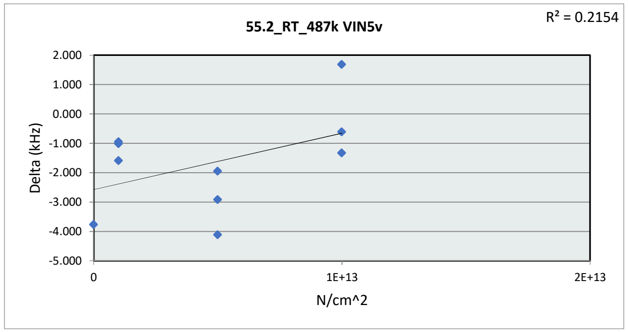


	51.4_SYNC_VOH VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	487.638	484.665	481.831	486.497
Average	487.638	490.169	490.430	487.734
Max	487.638	494.231	497.802	488.597
UL	580.000	580.000	580.000	580.000

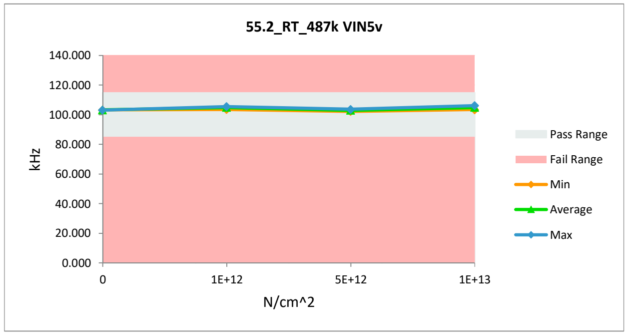


NDD Report
TPS7H4002-SP

		55.2_RT_487k VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	115	115	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	106.933	103.169	-3.763
1E+12	50	104.644	103.631	-1.012
1E+12	175	106.899	105.303	-1.596
1E+12	254	106.385	105.437	-0.948
5E+12	308	104.176	102.228	-1.948
5E+12	349	106.513	103.596	-2.917
5E+12	111	107.290	103.176	-4.114
1E+13	214	104.749	103.421	-1.328
1E+13	144	105.674	105.057	-0.616
1E+13	131	104.542	106.223	1.681
	Max	107.290	106.223	1.681
	Average	105.780	104.124	-1.656
	Min	104.176	102.228	-4.114
	Std Dev	1.166	1.283	1.680

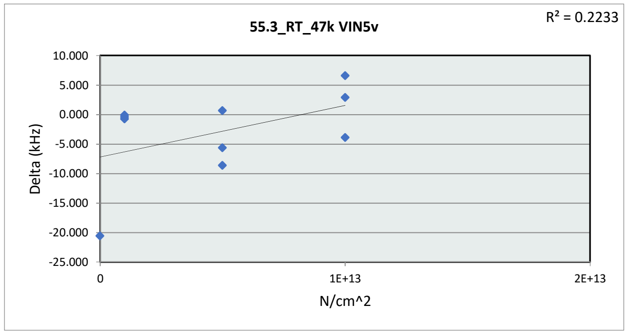


	55.2_RT_487k VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	115	kHz		
Min Limit	85	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	103.169	103.631	102.228	103.421
Average	103.169	104.790	103.000	104.900
Max	103.169	105.437	103.596	106.223
UL	115.000	115.000	115.000	115.000

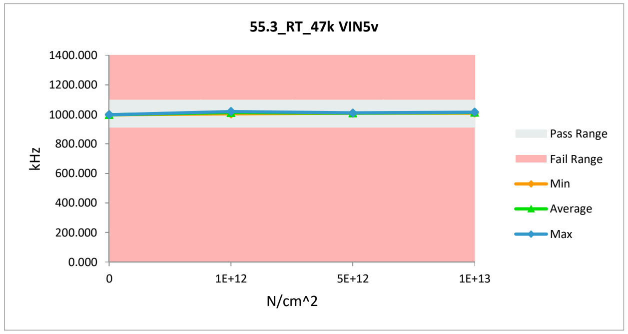


NDD Report
TPS7H4002-SP

		55.3_RT_47k VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	1095	1095	
	Min Limit	910	910	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1017.756	997.147	-20.610
1E+12	50	1002.732	1002.321	-0.411
1E+12	175	1009.320	1009.236	-0.084
1E+12	254	1019.573	1018.817	-0.757
5E+12	308	1008.110	1008.769	0.659
5E+12	349	1014.487	1005.859	-8.628
5E+12	111	1014.208	1008.579	-5.629
1E+13	214	1010.844	1006.911	-3.933
1E+13	144	1007.118	1013.683	6.565
1E+13	131	1010.560	1013.418	2.858
	Max	1019.573	1018.817	6.565
	Average	1011.471	1008.474	-2.997
	Min	1002.732	997.147	-20.610
	Std Dev	5.101	6.098	7.520

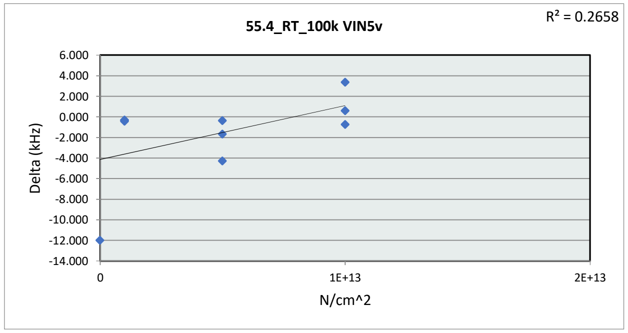


	55.3_RT_47k VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1095	kHz		
Min Limit	910	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	910.000	910.000	910.000	910.000
Min	997.147	1002.321	1005.859	1006.911
Average	997.147	1010.125	1007.736	1011.338
Max	997.147	1018.817	1008.769	1013.684
UL	1095.000	1095.000	1095.000	1095.000

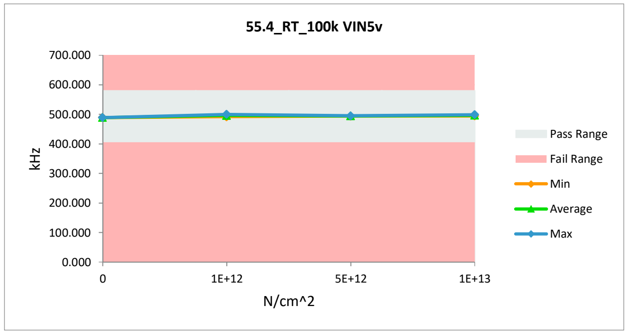


NDD Report
TPS7H4002-SP

		55.4_RT_100k VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	501.275	489.266	-12.010
1E+12	50	491.799	491.465	-0.334
1E+12	175	495.992	495.680	-0.312
1E+12	254	500.664	500.219	-0.445
5E+12	308	494.330	493.954	-0.376
5E+12	349	496.452	494.764	-1.689
5E+12	111	499.161	494.869	-4.292
1E+13	214	494.820	494.069	-0.751
1E+13	144	495.292	495.893	0.602
1E+13	131	495.488	498.841	3.353
	Max	501.275	500.219	3.353
	Average	496.527	494.902	-1.625
	Min	491.799	489.266	-12.010
	Std Dev	2.974	3.172	4.107

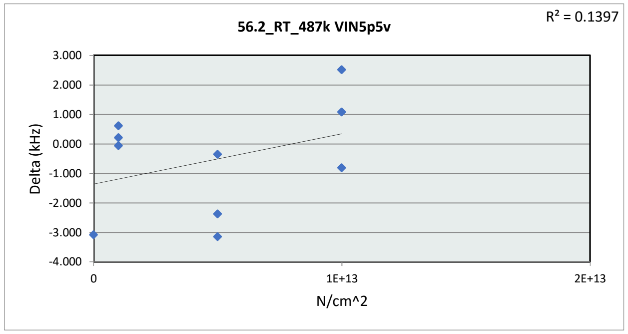


	55.4_RT_100k VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	489.266	491.465	493.954	494.069
Average	489.266	495.788	494.529	496.268
Max	489.266	500.219	494.869	498.841
UL	580.000	580.000	580.000	580.000

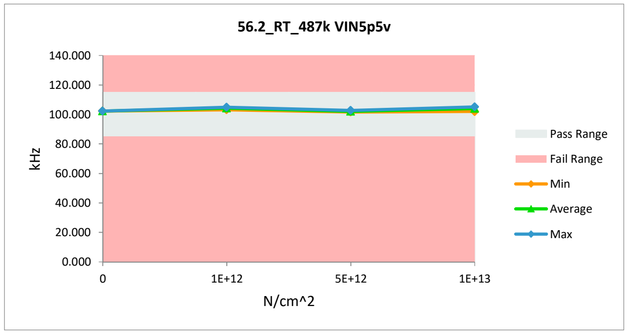


NDD Report
TPS7H4002-SP

		56.2_RT_487k VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	115	115	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	105.291	102.205	-3.086
1E+12	50	102.631	103.237	0.605
1E+12	175	104.925	104.863	-0.062
1E+12	254	104.291	104.496	0.205
5E+12	308	101.963	101.606	-0.356
5E+12	349	105.033	102.651	-2.382
5E+12	111	105.342	102.193	-3.149
1E+13	214	102.692	101.879	-0.813
1E+13	144	103.650	104.723	1.073
1E+13	131	102.708	105.217	2.509
	Max	105.342	105.217	2.509
	Average	103.853	103.307	-0.546
	Min	101.963	101.606	-3.149
	Std Dev	1.282	1.387	1.849

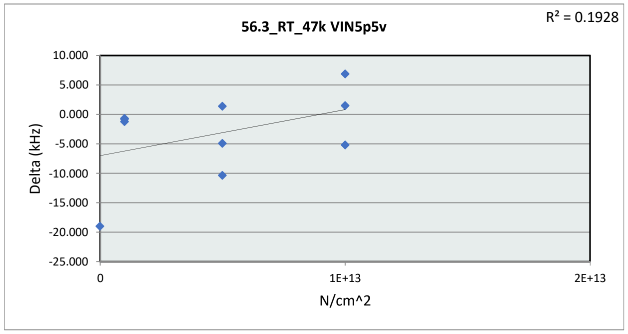


	56.2_RT_487k VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	115	kHz		
Min Limit	85	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	102.205	103.237	101.606	101.879
Average	102.205	104.199	102.150	103.940
Max	102.205	104.863	102.651	105.217
UL	115.000	115.000	115.000	115.000

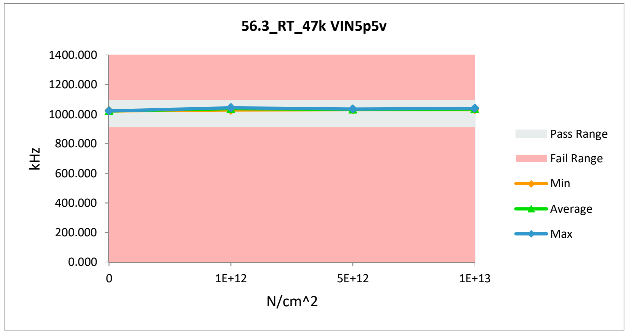


NDD Report
TPS7H4002-SP

		56.3_RT_47k VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	1095	1095	
	Min Limit	910	910	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1040.936	1021.946	-18.990
1E+12	50	1027.146	1026.448	-0.698
1E+12	175	1034.354	1033.587	-0.767
1E+12	254	1045.393	1044.154	-1.239
5E+12	308	1031.177	1032.557	1.380
5E+12	349	1040.011	1029.662	-10.349
5E+12	111	1038.344	1033.435	-4.909
1E+13	214	1035.350	1030.171	-5.179
1E+13	144	1031.722	1038.619	6.898
1E+13	131	1035.763	1037.274	1.510
	Max	1045.393	1044.154	6.898
	Average	1036.020	1032.785	-3.234
	Min	1027.146	1021.946	-18.990
	Std Dev	5.347	6.314	7.214

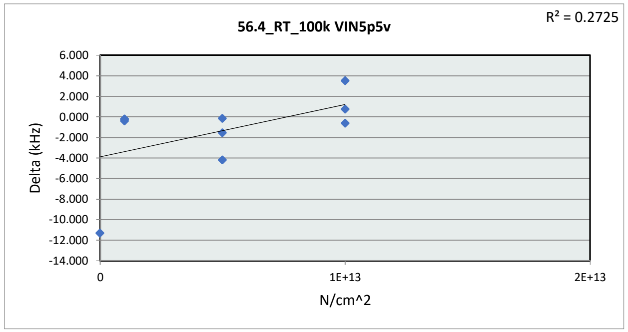


	56.3_RT_47k VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1095	kHz		
Min Limit	910	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	910.000	910.000	910.000	910.000
Min	1021.946	1026.448	1029.663	1030.171
Average	1021.946	1034.730	1031.885	1035.355
Max	1021.946	1044.154	1033.435	1038.619
UL	1095.000	1095.000	1095.000	1095.000

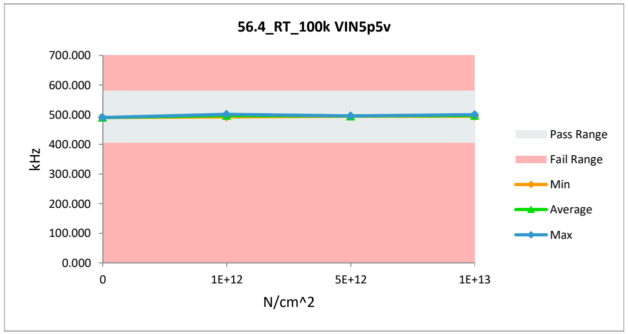


NDD Report
TPS7H4002-SP

		56.4_RT_100k VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	580	580	
	Min Limit	405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	502.038	490.720	-11.318
1E+12	50	492.798	492.585	-0.213
1E+12	175	496.997	496.768	-0.229
1E+12	254	501.941	501.552	-0.389
5E+12	308	495.103	494.948	-0.154
5E+12	349	497.424	495.881	-1.543
5E+12	111	500.208	496.013	-4.195
1E+13	214	495.648	495.030	-0.618
1E+13	144	496.290	497.040	0.750
1E+13	131	496.552	500.074	3.522
	Max	502.038	501.552	3.522
	Average	497.500	496.061	-1.439
	Min	492.798	490.720	-11.318
	Std Dev	3.010	3.174	3.958

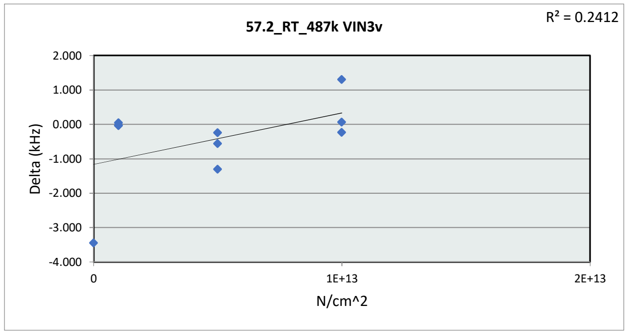


	56.4_RT_100k VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	490.720	492.585	494.948	495.030
Average	490.720	496.969	495.614	497.382
Max	490.720	501.552	496.013	500.074
UL	580.000	580.000	580.000	580.000

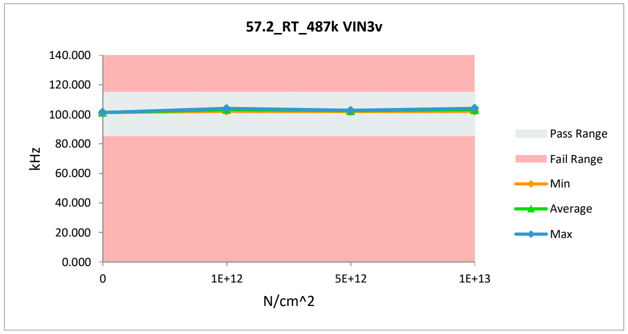


NDD Report
TPS7H4002-SP

		57.2_RT_487k VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	115	115	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	104.758	101.315	-3.444
1E+12	50	102.067	102.109	0.042
1E+12	175	103.671	103.640	-0.031
1E+12	254	103.867	103.829	-0.038
5E+12	308	102.064	101.824	-0.241
5E+12	349	103.177	102.617	-0.560
5E+12	111	103.896	102.592	-1.304
1E+13	214	102.286	102.055	-0.231
1E+13	144	103.005	103.067	0.062
1E+13	131	102.670	103.970	1.300
	Max	104.758	103.970	1.300
	Average	103.146	102.702	-0.444
	Min	102.064	101.315	-3.444
	Std Dev	0.899	0.905	1.234

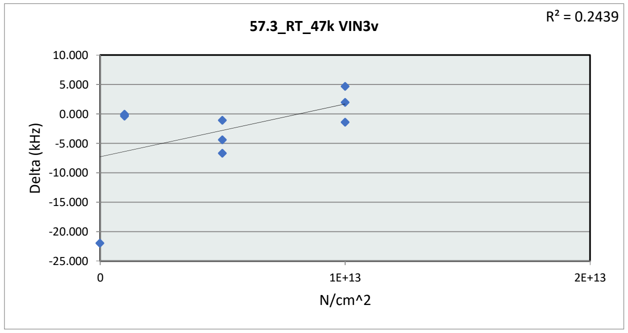


	57.2_RT_487k VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	115	kHz		
Min Limit	85	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	101.315	102.109	101.824	102.055
Average	101.315	103.193	102.344	103.031
Max	101.315	103.829	102.617	103.970
UL	115.000	115.000	115.000	115.000

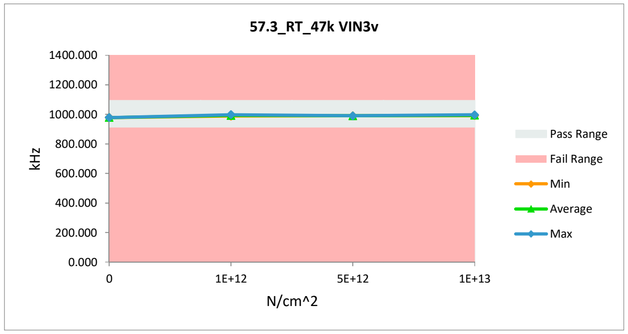


NDD Report
TPS7H4002-SP

		57.3_RT_47k VIN3v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit			kHz	
Max Limit		1095	1095	
Min Limit		910	910	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1001.266	979.273	-21.993
1E+12	50	987.191	986.968	-0.223
1E+12	175	992.329	992.276	-0.053
1E+12	254	997.373	997.009	-0.364
5E+12	308	990.793	989.682	-1.110
5E+12	349	993.577	989.174	-4.403
5E+12	111	996.503	989.811	-6.692
1E+13	214	991.928	990.516	-1.411
1E+13	144	990.950	992.921	1.971
1E+13	131	991.615	996.271	4.656
	Max	1001.266	997.009	4.656
	Average	993.353	990.390	-2.962
	Min	987.191	979.273	-21.993
	Std Dev	4.016	5.011	7.372

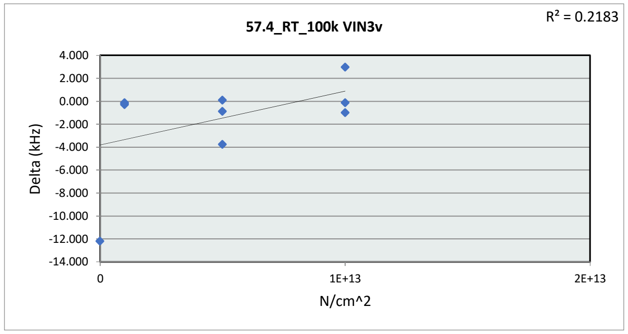


	57.3_RT_47k VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1095	kHz		
Min Limit	910	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	910.000	910.000	910.000	910.000
Min	979.273	986.968	989.174	990.517
Average	979.273	992.084	989.556	993.236
Max	979.273	997.009	989.811	996.271
UL	1095.000	1095.000	1095.000	1095.000

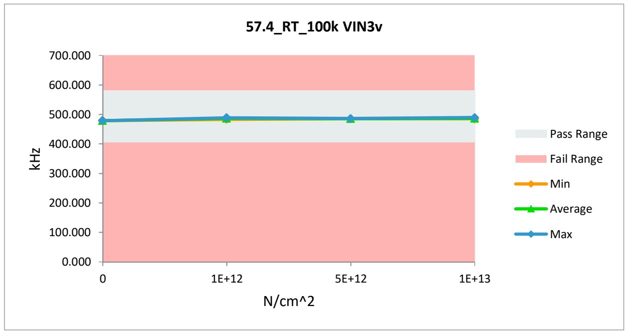


NDD Report
TPS7H4002-SP

		57.4_RT_100k VIN3v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit			kHz	
Max Limit		580	580	
Min Limit		405	405	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	491.694	479.482	-12.212
1E+12	50	483.255	483.133	-0.122
1E+12	175	486.947	486.768	-0.178
1E+12	254	489.597	489.300	-0.297
5E+12	308	485.085	485.171	0.086
5E+12	349	486.629	485.729	-0.900
5E+12	111	489.224	485.444	-3.780
1E+13	214	485.913	484.898	-1.014
1E+13	144	486.269	486.148	-0.121
1E+13	131	486.084	489.056	2.972
	Max	491.694	489.300	2.972
	Average	487.070	485.513	-1.557
	Min	483.255	479.482	-12.212
	Std Dev	2.451	2.818	4.083

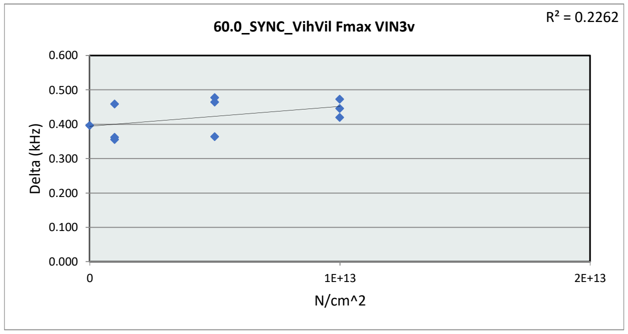


	57.4_RT_100k VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	580	kHz		
Min Limit	405	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	405.000	405.000	405.000	405.000
Min	479.482	483.133	485.171	484.899
Average	479.482	486.400	485.448	486.701
Max	479.482	489.300	485.729	489.056
UL	580.000	580.000	580.000	580.000

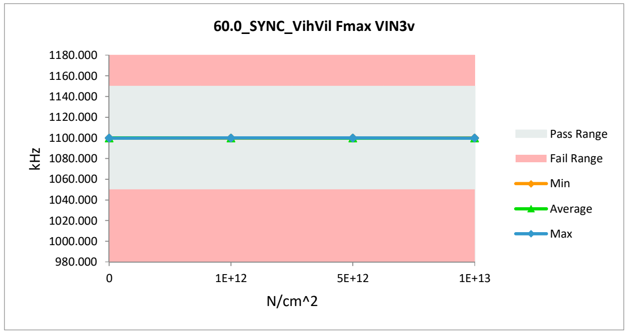


NDD Report
TPS7H4002-SP

		60.0_SYNC_VihVil Fmax VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	1150	1150	
	Min Limit	1050	1050	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1099.299	1099.696	0.396
1E+12	50	1099.302	1099.658	0.356
1E+12	175	1099.282	1099.644	0.362
1E+12	254	1099.283	1099.743	0.459
5E+12	308	1099.204	1099.681	0.477
5E+12	349	1099.293	1099.657	0.364
5E+12	111	1099.237	1099.702	0.465
1E+13	214	1099.285	1099.758	0.473
1E+13	144	1099.242	1099.688	0.446
1E+13	131	1099.264	1099.684	0.420
	Max	1099.302	1099.758	0.477
	Average	1099.269	1099.691	0.422
	Min	1099.204	1099.644	0.356
	Std Dev	0.032	0.036	0.049

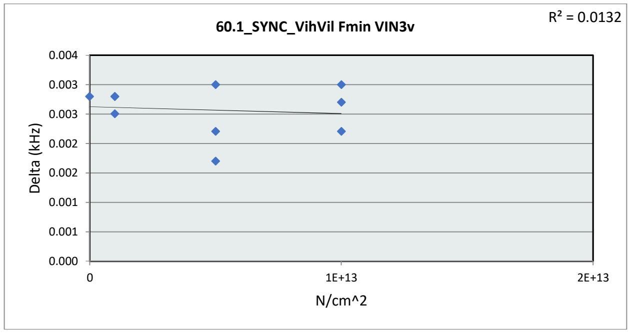


	60.0_SYNC_VihVil Fmax VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1150	kHz		
Min Limit	1050	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1050.000	1050.000	1050.000	1050.000
Min	1099.696	1099.644	1099.657	1099.684
Average	1099.696	1099.682	1099.680	1099.710
Max	1099.696	1099.743	1099.702	1099.758
UL	1150.000	1150.000	1150.000	1150.000

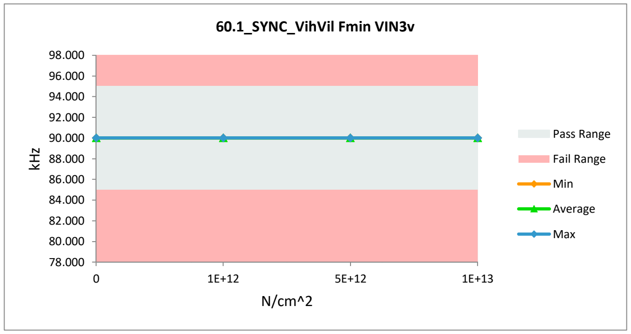


NDD Report
TPS7H4002-SP

		60.1_SYNC_VihVil Fmin VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	95	95	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	89.995	89.998	0.003
1E+12	50	89.995	89.998	0.003
1E+12	175	89.995	89.998	0.003
1E+12	254	89.996	89.998	0.003
5E+12	308	89.996	89.998	0.002
5E+12	349	89.995	89.998	0.003
5E+12	111	89.996	89.998	0.002
1E+13	214	89.995	89.998	0.003
1E+13	144	89.995	89.998	0.003
1E+13	131	89.995	89.998	0.002
	Max	89.996	89.998	0.003
	Average	89.995	89.998	0.003
	Min	89.995	89.998	0.002
	Std Dev	0.000	0.000	0.000



	60.1_SYNC_VihVil Fmin VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	95	kHz		
Min Limit	85	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	89.998	89.998	89.998	89.998
Average	89.998	89.998	89.998	89.998
Max	89.998	89.998	89.998	89.998
UL	95.000	95.000	95.000	95.000



NDD Report
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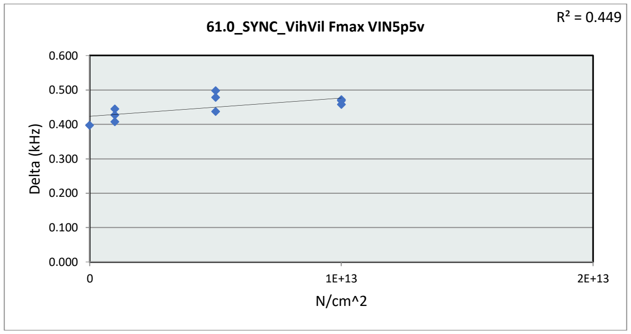
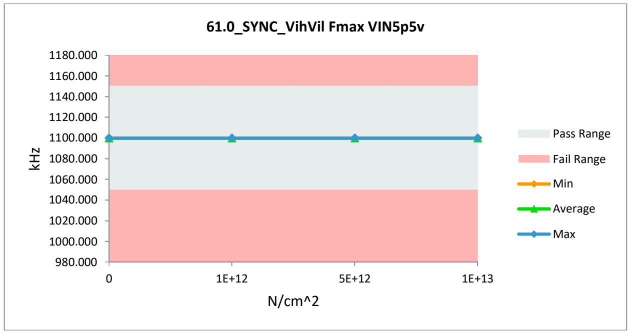
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
		61.0_SYNC_VihVil Fmax VIN5p5		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	1150	1150	
	Min Limit	1050	1050	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1099.318	1099.715	0.397
1E+12	50	1099.316	1099.723	0.407
1E+12	175	1099.293	1099.738	0.445
1E+12	254	1099.291	1099.718	0.427
5E+12	308	1099.234	1099.732	0.498
5E+12	349	1099.272	1099.710	0.437
5E+12	111	1099.253	1099.732	0.478
1E+13	214	1099.260	1099.717	0.458
1E+13	144	1099.247	1099.716	0.469
1E+13	131	1099.257	1099.728	0.471
	Max	1099.318	1099.738	0.498
	Average	1099.274	1099.723	0.449
	Min	1099.234	1099.710	0.397
	Std Dev	0.029	0.009	0.032

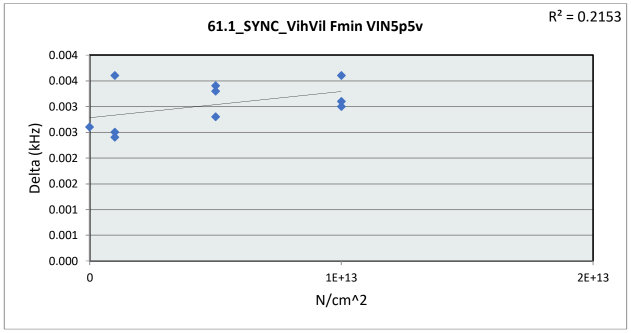


	61.0_SYNC_VihVil Fmax VIN5p			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1150	kHz		
Min Limit	1050	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1050.000	1050.000	1050.000	1050.000
Min	1099.715	1099.718	1099.710	1099.716
Average	1099.715	1099.726	1099.724	1099.720
Max	1099.715	1099.738	1099.732	1099.728
UL	1150.000	1150.000	1150.000	1150.000

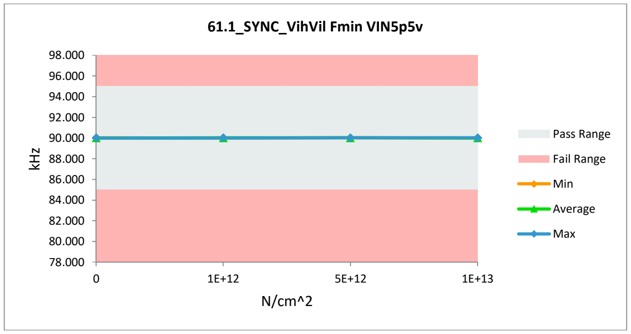


NDD Report
TPS7H4002-SP

		61.1_SYNC_VihVil Fmin VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit		kHz	
	Max Limit	95	95	
	Min Limit	85	85	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	89.995	89.998	0.003
1E+12	50	89.995	89.998	0.002
1E+12	175	89.995	89.998	0.003
1E+12	254	89.995	89.999	0.004
5E+12	308	89.995	89.998	0.003
5E+12	349	89.995	89.998	0.003
5E+12	111	89.995	89.998	0.003
1E+13	214	89.995	89.998	0.003
1E+13	144	89.995	89.998	0.004
1E+13	131	89.995	89.998	0.003
	Max	89.995	89.999	0.004
	Average	89.995	89.998	0.003
	Min	89.995	89.998	0.002
	Std Dev	0.000	0.000	0.000



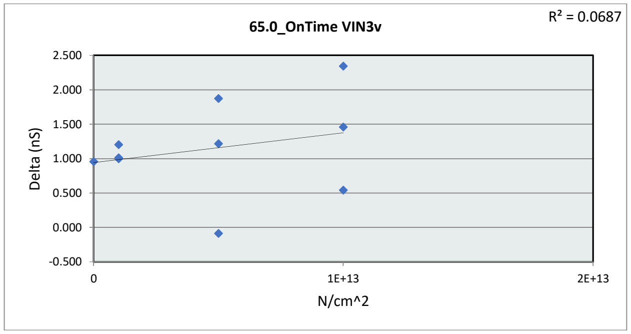
	61.1_SYNC_VihVil Fmin VIN5p			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	95	kHz		
Min Limit	85	kHz		
N/cm^2	0	1E+12	5E+12	1E+13
LL	85.000	85.000	85.000	85.000
Min	89.998	89.998	89.998	89.998
Average	89.998	89.998	89.998	89.998
Max	89.998	89.999	89.998	89.999
UL	95.000	95.000	95.000	95.000



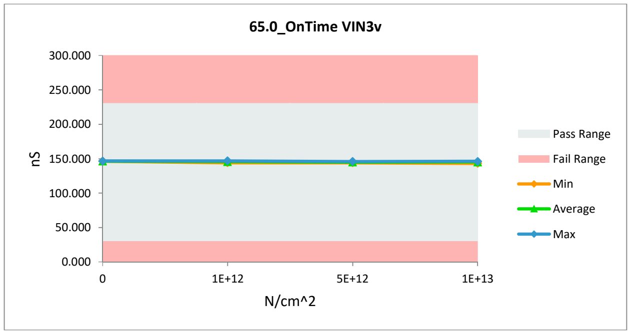
NDD Report
TPS7H4002-SP

	65.0_OnTime VIN3v	
Test Site	Dal-FL	Dal-FL
Tester	ETS364	ETS364
Test Number	EB386805	EB386805
Unit	nS	nS
Max Limit	230	230
Min Limit	30	30

N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	145.576	146.529	0.953
1E+12	50	142.630	143.833	1.203
1E+12	175	145.229	146.225	0.996
1E+12	254	145.630	146.639	1.009
5E+12	308	141.994	143.863	1.869
5E+12	349	144.776	144.688	-0.088
5E+12	111	144.678	145.895	1.217
1E+13	214	142.733	143.274	0.541
1E+13	144	143.592	145.932	2.340
1E+13	131	144.642	146.097	1.455
	Max	145.630	146.639	2.340
	Average	144.148	145.297	1.149
	Min	141.994	143.274	-0.088
	Std Dev	1.316	1.258	0.668

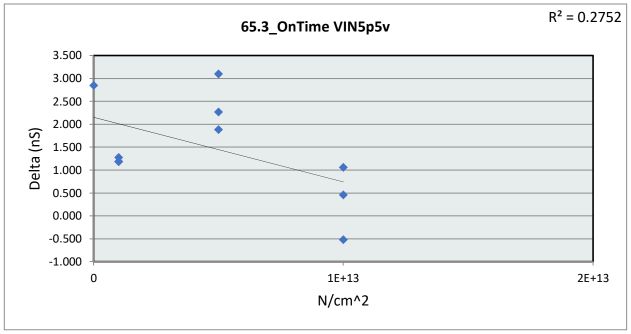


	65.0_OnTime VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	230	nS		
Min Limit	30	nS		
N/cm^2	0	1E+12	5E+12	1E+13
LL	30.000	30.000	30.000	30.000
Min	146.529	143.833	143.863	143.274
Average	146.529	145.566	144.815	145.101
Max	146.529	146.640	145.895	146.097
UL	230.000	230.000	230.000	230.000

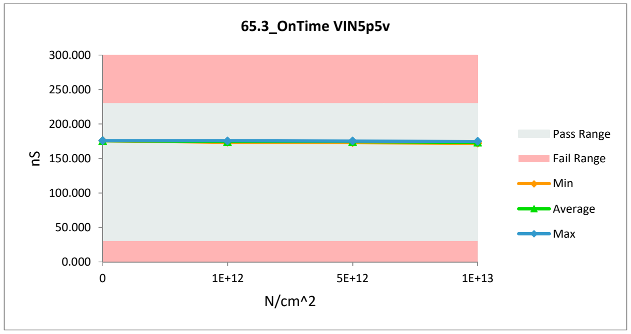


NDD Report
TPS7H4002-SP

		65.3_OnTime VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	nS	nS	
	Max Limit	230	230	
	Min Limit	30	30	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	172.907	175.751	2.844
1E+12	50	172.029	173.304	1.275
1E+12	175	174.202	175.388	1.185
1E+12	254	173.384	174.568	1.185
5E+12	308	170.616	172.883	2.267
5E+12	349	171.949	175.049	3.100
5E+12	111	173.291	175.177	1.886
1E+13	214	171.607	172.066	0.460
1E+13	144	173.812	173.292	-0.519
1E+13	131	173.827	174.887	1.061
	Max	174.202	175.751	3.100
	Average	172.762	174.237	1.474
	Min	170.616	172.066	-0.519
	Std Dev	1.161	1.247	1.090

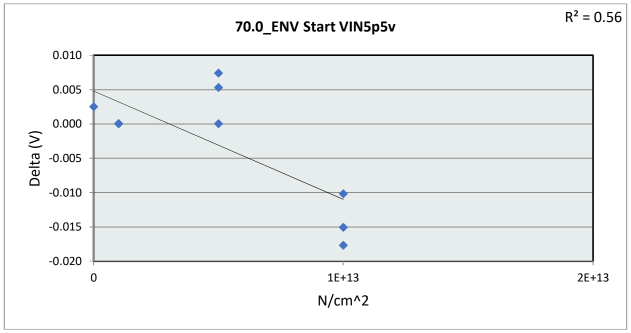


	65.3_OnTime VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	230	nS		
Min Limit	30	nS		
N/cm^2	0	1E+12	5E+12	1E+13
LL	30.000	30.000	30.000	30.000
Min	175.751	173.304	172.883	172.066
Average	175.751	174.420	174.370	173.415
Max	175.751	175.388	175.177	174.887
UL	230.000	230.000	230.000	230.000

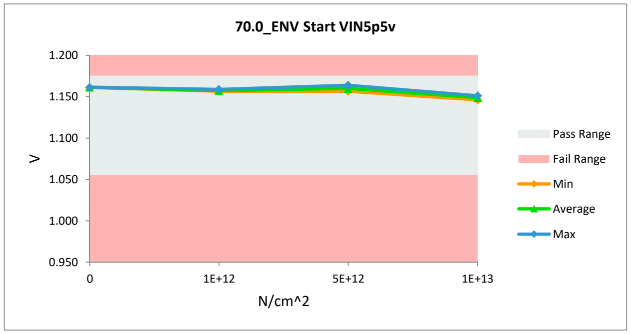


NDD Report
TPS7H4002-SP

		70.0_ENV Start VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	1.175	1.175	
	Min Limit	1.055	1.055	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.159	1.161	0.002
1E+12	50	1.159	1.159	0.000
1E+12	175	1.156	1.156	0.000
1E+12	254	1.156	1.156	0.000
5E+12	308	1.151	1.156	0.005
5E+12	349	1.159	1.159	0.000
5E+12	111	1.156	1.164	0.007
1E+13	214	1.161	1.146	-0.015
1E+13	144	1.161	1.151	-0.010
1E+13	131	1.166	1.149	-0.018
	Max	1.166	1.164	0.007
	Average	1.159	1.156	-0.003
	Min	1.151	1.146	-0.018
	Std Dev	0.004	0.006	0.009

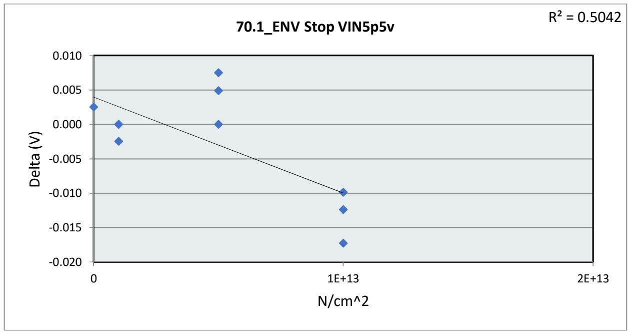


	70.0_ENV Start VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.175	V		
Min Limit	1.055	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.055	1.055	1.055	1.055
Min	1.161	1.156	1.156	1.146
Average	1.161	1.157	1.160	1.149
Max	1.161	1.159	1.164	1.151
UL	1.175	1.175	1.175	1.175

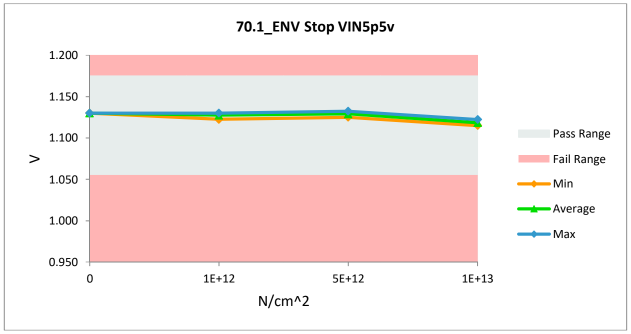


NDD Report
TPS7H4002-SP

		70.1_ENV Stop VIN5p5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	1.175	1.175	
	Min Limit	1.055	1.055	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.127	1.130	0.002
1E+12	50	1.132	1.130	-0.003
1E+12	175	1.130	1.130	0.000
1E+12	254	1.122	1.122	0.000
5E+12	308	1.120	1.125	0.005
5E+12	349	1.130	1.130	0.000
5E+12	111	1.125	1.132	0.008
1E+13	214	1.127	1.115	-0.012
1E+13	144	1.132	1.122	-0.010
1E+13	131	1.135	1.117	-0.017
	Max	1.135	1.132	0.008
	Average	1.128	1.125	-0.003
	Min	1.120	1.115	-0.017
	Std Dev	0.005	0.006	0.008

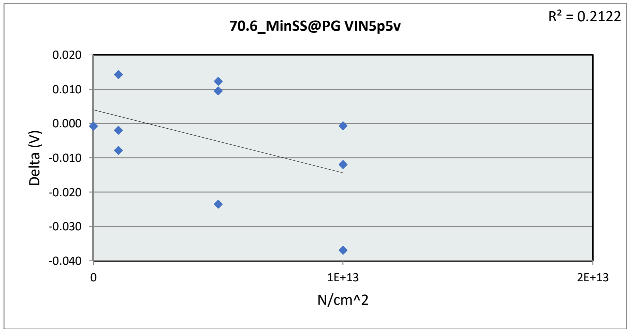


	70.1_ENV Stop VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.175	V		
Min Limit	1.055	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.055	1.055	1.055	1.055
Min	1.130	1.122	1.125	1.115
Average	1.130	1.127	1.129	1.118
Max	1.130	1.130	1.132	1.122
UL	1.175	1.175	1.175	1.175

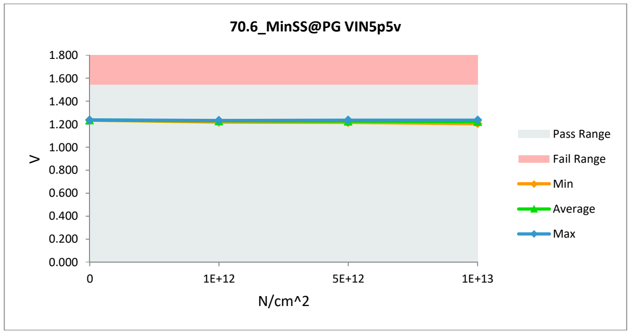


NDD Report
TPS7H4002-SP

		70.6_MinSS@PG VIN5p5v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit		V	V	
Max Limit		1.54	1.54	
Min Limit		0	0	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.237	1.236	-0.001
1E+12	50	1.218	1.232	0.014
1E+12	175	1.225	1.217	-0.008
1E+12	254	1.236	1.234	-0.002
5E+12	308	1.214	1.224	0.009
5E+12	349	1.237	1.214	-0.024
5E+12	111	1.224	1.236	0.012
1E+13	214	1.236	1.235	-0.001
1E+13	144	1.234	1.222	-0.012
1E+13	131	1.243	1.206	-0.037
	Max	1.243	1.236	0.014
	Average	1.230	1.226	-0.005
	Min	1.214	1.206	-0.037
	Std Dev	0.009	0.011	0.016

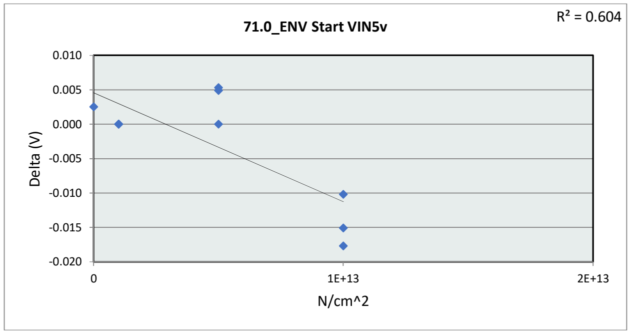


	70.6_MinSS@PG VIN5p5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.54	V		
Min Limit	0	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.000	0.000	0.000	0.000
Min	1.236	1.217	1.214	1.206
Average	1.236	1.228	1.225	1.221
Max	1.236	1.234	1.236	1.235
UL	1.540	1.540	1.540	1.540

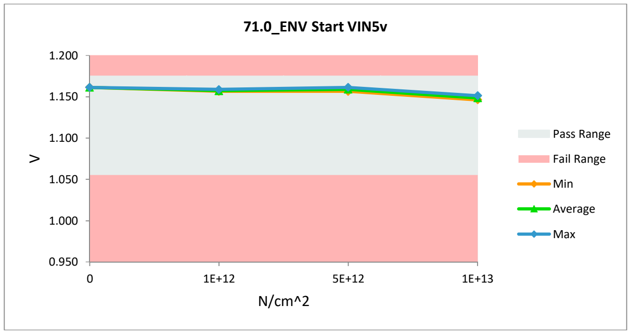


NDD Report
TPS7H4002-SP

		71.0_ENV Start VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	1.175	1.175	
	Min Limit	1.055	1.055	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.159	1.161	0.002
1E+12	50	1.159	1.159	0.000
1E+12	175	1.156	1.156	0.000
1E+12	254	1.156	1.156	0.000
5E+12	308	1.151	1.156	0.005
5E+12	349	1.159	1.159	0.000
5E+12	111	1.156	1.161	0.005
1E+13	214	1.161	1.146	-0.015
1E+13	144	1.161	1.151	-0.010
1E+13	131	1.166	1.149	-0.018
	Max	1.166	1.161	0.005
	Average	1.159	1.156	-0.003
	Min	1.151	1.146	-0.018
	Std Dev	0.004	0.005	0.008

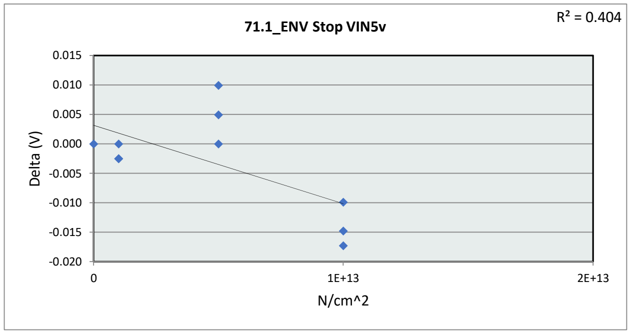


	71.0_ENV Start VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.175	V		
Min Limit	1.055	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.055	1.055	1.055	1.055
Min	1.161	1.156	1.156	1.146
Average	1.161	1.157	1.159	1.149
Max	1.161	1.159	1.161	1.151
UL	1.175	1.175	1.175	1.175

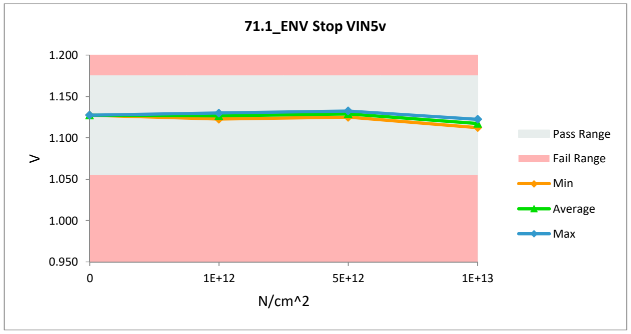


NDD Report
TPS7H4002-SP

		71.1_ENV Stop VIN5v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	1.175	1.175	
	Min Limit	1.055	1.055	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.127	1.127	0.000
1E+12	50	1.132	1.130	-0.003
1E+12	175	1.130	1.127	-0.002
1E+12	254	1.122	1.122	0.000
5E+12	308	1.120	1.125	0.005
5E+12	349	1.130	1.130	0.000
5E+12	111	1.122	1.132	0.010
1E+13	214	1.127	1.112	-0.015
1E+13	144	1.132	1.122	-0.010
1E+13	131	1.135	1.117	-0.017
	Max	1.135	1.132	0.010
	Average	1.128	1.125	-0.003
	Min	1.120	1.112	-0.017
	Std Dev	0.005	0.006	0.008



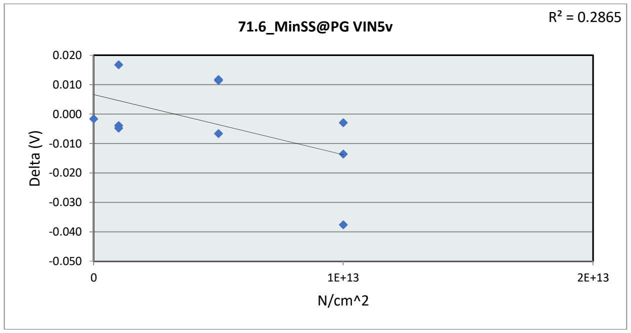
	71.1_ENV Stop VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.175	V		
Min Limit	1.055	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.055	1.055	1.055	1.055
Min	1.127	1.122	1.125	1.113
Average	1.127	1.127	1.129	1.117
Max	1.127	1.130	1.132	1.122
UL	1.175	1.175	1.175	1.175



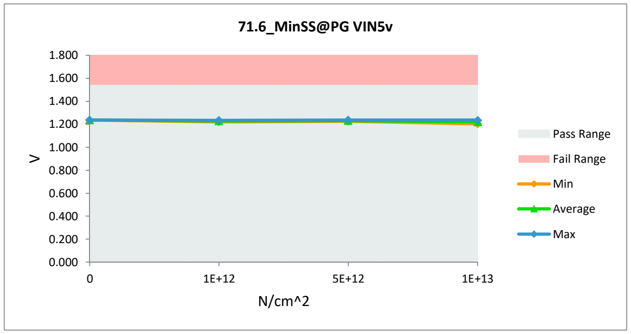
NDD Report
TPS7H4002-SP

	71.6_MinSS@PG VIN5v	
Test Site	Dal-FL	Dal-FL
Tester	ETS364	ETS364
Test Number	EB386805	EB386805
Unit	V	V
Max Limit	1.54	1.54
Min Limit	0	0

N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.238	1.236	-0.002
1E+12	50	1.216	1.233	0.017
1E+12	175	1.225	1.220	-0.005
1E+12	254	1.235	1.231	-0.004
5E+12	308	1.214	1.225	0.012
5E+12	349	1.238	1.231	-0.007
5E+12	111	1.225	1.236	0.011
1E+13	214	1.237	1.234	-0.003
1E+13	144	1.236	1.223	-0.014
1E+13	131	1.242	1.204	-0.038
	Max	1.242	1.236	0.017
	Average	1.231	1.227	-0.003
	Min	1.214	1.204	-0.038
	Std Dev	0.010	0.010	0.015

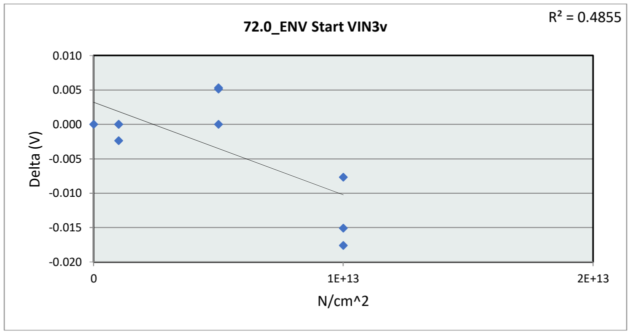


	71.6_MinSS@PG VIN5v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.54	V		
Min Limit	0	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.000	0.000	0.000	0.000
Min	1.236	1.220	1.225	1.204
Average	1.236	1.228	1.231	1.220
Max	1.236	1.233	1.236	1.234
UL	1.540	1.540	1.540	1.540

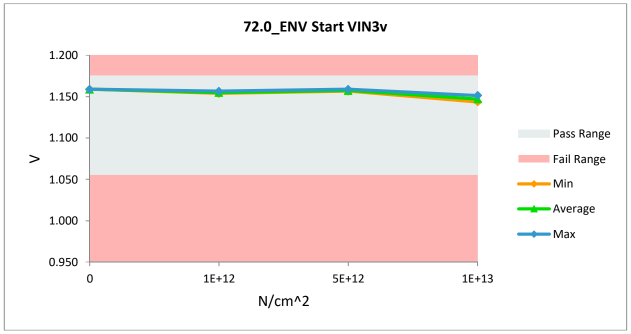


NDD Report
TPS7H4002-SP

		72.0_ENV Start VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	1.175	1.175	
	Min Limit	1.055	1.055	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.159	1.159	0.000
1E+12	50	1.159	1.156	-0.002
1E+12	175	1.154	1.154	0.000
1E+12	254	1.154	1.154	0.000
5E+12	308	1.151	1.156	0.005
5E+12	349	1.156	1.156	0.000
5E+12	111	1.154	1.159	0.005
1E+13	214	1.159	1.144	-0.015
1E+13	144	1.159	1.151	-0.008
1E+13	131	1.164	1.146	-0.018
	Max	1.164	1.159	0.005
	Average	1.157	1.154	-0.003
	Min	1.151	1.144	-0.018
	Std Dev	0.004	0.005	0.008

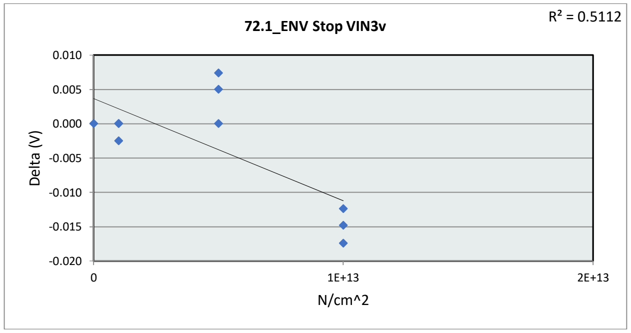


	72.0_ENV Start VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.175	V		
Min Limit	1.055	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.055	1.055	1.055	1.055
Min	1.159	1.154	1.156	1.144
Average	1.159	1.155	1.157	1.147
Max	1.159	1.156	1.159	1.151
UL	1.175	1.175	1.175	1.175

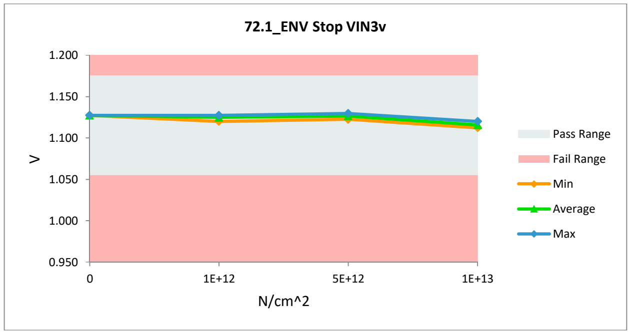


NDD Report
TPS7H4002-SP

		72.1_ENV Stop VIN3v		
Test Site		Dal-FL	Dal-FL	
Tester		ETS364	ETS364	
Test Number		EB386805	EB386805	
Unit		V	V	
Max Limit		1.175	1.175	
Min Limit		1.055	1.055	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.127	1.127	0.000
1E+12	50	1.130	1.127	-0.002
1E+12	175	1.127	1.127	0.000
1E+12	254	1.120	1.120	0.000
5E+12	308	1.117	1.122	0.005
5E+12	349	1.127	1.127	0.000
5E+12	111	1.122	1.130	0.007
1E+13	214	1.127	1.112	-0.015
1E+13	144	1.132	1.120	-0.012
1E+13	131	1.132	1.115	-0.017
	Max	1.132	1.130	0.007
	Average	1.126	1.123	-0.003
	Min	1.117	1.112	-0.017
	Std Dev	0.005	0.006	0.008

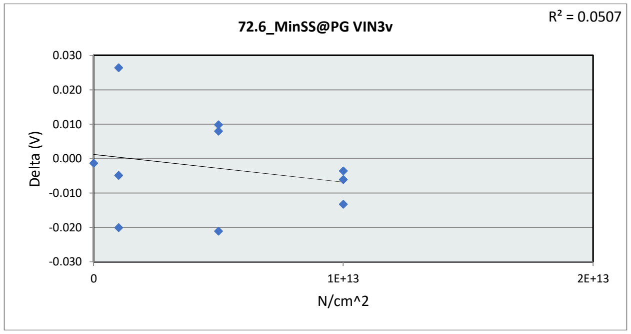


	72.1_ENV Stop VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.175	V		
Min Limit	1.055	V		
N/cm^2	0	1E+12	5E+12	1E+13
LL	1.055	1.055	1.055	1.055
Min	1.127	1.120	1.122	1.113
Average	1.127	1.125	1.127	1.116
Max	1.127	1.127	1.130	1.120
UL	1.175	1.175	1.175	1.175

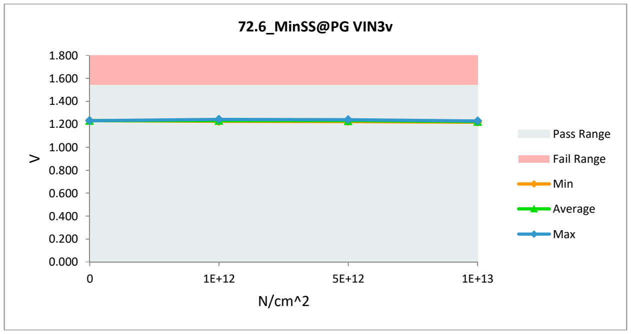


NDD Report
TPS7H4002-SP

		72.6_MinSS@PG VIN3v		
	Test Site	Dal-FL	Dal-FL	
	Tester	ETS364	ETS364	
	Test Number	EB386805	EB386805	
	Unit	V	V	
	Max Limit	1.54	1.54	
	Min Limit	0	0	
N/cm^2	Serial #	Pre_NDD	Post_NDD	Delta
0	c1	1.232	1.230	-0.001
1E+12	50	1.246	1.225	-0.020
1E+12	175	1.217	1.243	0.026
1E+12	254	1.229	1.224	-0.005
5E+12	308	1.244	1.223	-0.021
5E+12	349	1.231	1.239	0.008
5E+12	111	1.219	1.228	0.010
1E+13	214	1.231	1.228	-0.004
1E+13	144	1.230	1.217	-0.013
1E+13	131	1.236	1.230	-0.006
	Max	1.246	1.243	0.026
	Average	1.231	1.229	-0.003
	Min	1.217	1.217	-0.021
	Std Dev	0.009	0.008	0.014



	72.6_MinSS@PG VIN3v			
Test Site	Dal-FL			
Tester	ETS364			
Test Number	EB386805			
Max Limit	1.54 V			
Min Limit	0 V			
N/cm^2	0	1E+12	5E+12	1E+13
LL	0.000	0.000	0.000	0.000
Min	1.231	1.225	1.223	1.217
Average	1.231	1.231	1.230	1.225
Max	1.231	1.243	1.239	1.230
UL	1.540	1.540	1.540	1.540



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