Radiation Report

ADC168M102R-SEP Total Ionizing Dose (TID) Radiation Report

ABSTRACT

This report covers the radiation characterization results of the ADC168M102R-SEP which is a space grade 16-Bit 1-MSPS, 8-channel ADC that offers simultaneous sampling. The study was done to determine Total Ionizing Dose (TID) effects under low dose rate (LDR) and high dose rate (HDR) up to 30 Krad(Si) as a one-time characterization. The results show that all samples passed within the specified limits up to 30 Krad(Si).

In production, the Radiation Lot Acceptance Testing (RLAT) is performed using 5 units on every fab-lot to the specified rating of 30 krad(Si). Furthermore, the ADC168M102R-SEP has a Single Event Latch-Up (SEL) immunization up to 48MeV-cm2/mg which makes it suitable for Radiation Hardness Assured Space Applications.

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Trademarks

1 Device Information

1.1 Product Description

The ADC168M102R-SEP is space grade 16-Bit 1-MSPS, ADC with eight pseudo- or four fully differential input channels grouped into two pairs for simultaneous signal acquisition analog inputs are maintained differentially to the input of the ADC. The input multiplexer can be used in either pseudo-differential mode, supporting up to four channels per ADC (4x2), or in fully-differential mode that allows to convert up to two inputs per ADC (2x2).

The ADC168M102R-SEP can be operated with independent analog and digital supplies. The analog supply (AVDD) can range from 2.7 V to 5.5V and the digital supply (DVDD) can range from 2.3V to 5.5V. The ADC168M102R-SEP is packaged in a 32-lead VQFN package.

1.2 Device Details

Table 1-1 lists the device information used for TID HDR characterization and qualification.

Table 1-1. TID HDR Device and Exposure Details

TID HDR Details:	
TI Device Number	ADC168M102R-SEP
Package	32-RHB
Technology	HPA07
Die Lot Number	3713261
A/T Lot Number / Lot Trace Code	4493181MLA / 46ARCTI
Quantity Tested	5 units + 1 control units
Lot Accept/Reject	5 / 0
HDR Radiation Facility	Texas Instruments CLAB, Dallas, TX
HDR Dose Level	30 Krad(Si)
HDR Dose Rate	170-260 rad(Si)/s ionizing radiation with increments
HDR Radiation Source	Gamma (GR420) Co-60
Irradiation Temperature	Ambient, room temperature
Irradiation and Test Temperature	Ambient, room temperature controlled to 24°C ±6°C per MIL-STD-883 and MIL-STD-750

Table 1-2 lists the device information used for TID LDR characterization and qualification.

Table 1-2. TID LDR Device and Exposure Details

TID LDR Details:	
TI Device Number	ADC168M102R-SEP
Package	32-RHB
Technology	HPA07
Die Lot Number	3612490
A/T Lot Number / Lot Trace Code	3958191MLA / 3CC3JXK
Quantity Tested	5 units + 1 control units
Lot Accept/Reject	5 / 0
LDR Radiation Facility	Radiation Test Solutions, Inc. Colorado Springs, CO
LDR Dose Level	30 Krad(Si)
LDR Dose Rate	10mrad(Si)/s ionizing radiation with increments
LDR Radiation Source	Gamma rays provided by JLSA 81-20/81-22 Co60 LDR source
Irradiation Temperature	Ambient, room temperature
Irradiation and Test Temperature	Ambient, room temperature controlled to 24°C ±6°C per MIL-STD-883 and MIL-STD-750

2 Total Dose Test Setup

2.1 Test Overview

The ADC168M102R-SEP was tested according to MIL-STD-883, Test Method 1019.9, Conditions A. For this test, the product was irradiated up to the target radiation level, and then put through full electrical parametric testing on the production Automated Test Equipment (ATE). All devices remained functional passing all parametric test limits.

2.2 Test Description and Facilities

The ADC168M102R-SEP HDR exposure was performed on biased devices at TI CLAB facility in Dallas, Texas. The dose rate of the exposure was between 170-260 rad(Si)/s. After the exposure, the devices were electrically tested at TI testing facility. The electrical test guard-band limits were set within the data sheet electrical specifications to maintain a minimum Cpk and test error margin based on initial qualification and characterization data.

The ADC168M102R-SEP LDR exposure was performed on biased devices at Radiation Test Solutions, Inc. in Colorado Springs, CO. The dose rate of the exposure was between 10 mrad(Si)/s. After the exposure, the devices were electrically tested at TI testing facility. The electrical test guard-band limits were set within the data sheet electrical specifications to maintain a minimum Cpk and test error margin based on initial qualification and characterization data.

2.3 Test Setup Details

The devices were biased to the maximum recommended operating conditions as described below.

2.3.1 Biased

Figure 2-1 shows biased conditions for each pin during radiation.

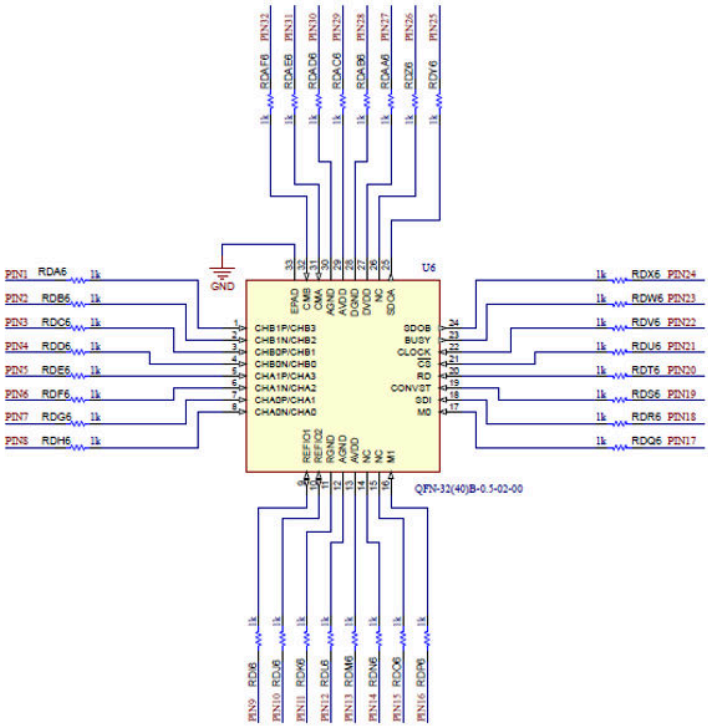

Figure 2-1. ADC168M102R-SEP Biased Diagram

Table 2-1. Pinout

Pin #	Pin Name	Bias	Pin #	Pin Name	Bias
1	CHB1+	5.5V	17	M0	5.5V
2	CHB1-	5.5V	18	SDI	5.5V
3	CHB0+	5.5V	19	CONVST	5.5V
4	CHB0-	5.5V	20	RD	5.5V
5	CHA1+	5.5V	21	CS	5.5V
6	CHA1-	5.5V	22	CLOCK	5.5V

Table 2-1. Pinout (continued)

Pin #	Pin Name	Bias	Pin #	Pin Name	Bias
7	CHA0+	5.5V	23	BUSY	GND
8	CHA0-	5.5V	24	SDOB	GND
9	REFIO1	5.5V	25	SDOA	GND
10	REFIO2	5.5V	26	NC	GND
11	RGND	GND	27	BVDD	5.5V
12	AGND	GND	28	BGND	GND
13	AVDD	5.5V	29	AVDD1	5.5V
14	NC	GND	30	AGND1	GND
15	NC	GND	31	CMB	5.5V
16	M1	5.5V	32	CMA	5.5V

2.4 Test Configuration and Condition

Prior to and after testing, electrical tests were performed on a given sample of parts to verify that the units are within specified data sheet electrical test limits. 5 samples were used at the 10 mrad(si)/s dose level for HDR and 5 samples were used at the 170-260 rad(Si)/s dose level for HDR with biased setup conditions per Table 2-2 and Table 2-3.

Table 2-2. LDR Biased Conditions

LDR = 10 mrad(Si)/s
Total Samples: 5/dose level
Exposure Levels
30 krad(Si), Unit#s 4, 5 ,6 ,7, 8
Passed

Table 2-3. HDR Biased Conditions

HDR = 172-260 rad(Si)/s
Total Samples: 5/dose level
Exposure Levels:
30 krad(Si), Unit#s 50, 51, 52, 53, 54
Passed

3 Total Ionizing Dose (RHA) Characterization Test Results

3.1 Total Ionizing Dose RHA Characterization Summary Results

ADC168M102R-SEP passed HDR and LDR up to 30Krad at the maximum recommended operating conditions. The drifts of critical parameters were within the specification. ELDRS study was also performed and HDR was worst case. 30 kRads HDR are used for radiation lot acceptance.

4 Applicable and Reference Documents

4.1 Reference Documents

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

4.2 Total Ionizing Dose HDR and LDR Reports

Pre- and post-TID exposure testing was done with data collected on all critical parameters. All tested parameters were found to be within data sheet specifications during both pre- and post-testing.

Table 4-1. Critical Parameters

Parameter	Units	Lower Limit	Upper Limit
46000001:AVDD_max_supply	mA	5	25
46000003:DVDD_max_supply	mA	1	13
46000004:AVDD_nap_max_supply	uA	0	6200
46000006:DVDD_nap_max_supply	uA	-5	20
46000007:AVDD_pd_max_supply	nA		150000
33000001:offset_A	mV	-2.5	2.5
33000002:gain_A	%	-0.15	0.15
33000004:offset_B	mV	-2.5	2.5
33000005:gain_B	%	-0.15	0.15
33000003:cmrr_A	dB		
33000006:cmrr_B	dB		
43000001:SFDR_A	dB		-89
43000002:THD_A	dB		-90
43000003:SNR_A	dB	89	
43000004:SINAD_A	dB	88	
44000001:SFDR_B	dB		-89
44000002:THD_B	dB		-90
44000003:SNR_B	dB	89	
44000004:SINAD_B	dB	88	
26000002:DNL_max_A	LSB	-2	2
26000004:DNL_min_A	LSB	-2	2
26000001:INL_max_A	LSB	-4	4
26000003:INL_min_A	LSB	-4	4
26000006:DNL_max_B	LSB	-2	2
26000008:DNL_min_B	LSB	-2	2
26000005:INL_max_B	LSB	-4	4
26000007:INL_min_B	LSB	-4	4
29000008:internalRef1_FS	V	2.485	2.54
29000011:internalRef2_FS	V	2.485	2.54
53000001:AVDD_3_6V	mA	5	18
53000003:DVDD_3_6V	mA	1	10
53000004:AVDD_nap_3_6V	uA	0	2000

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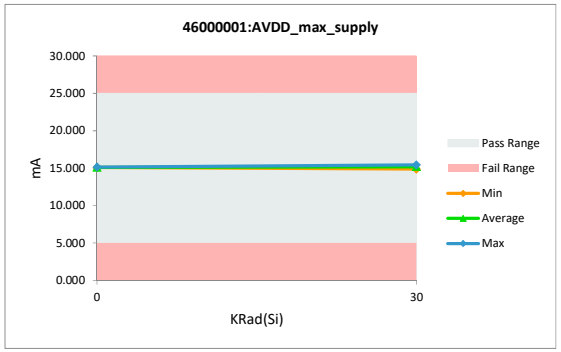
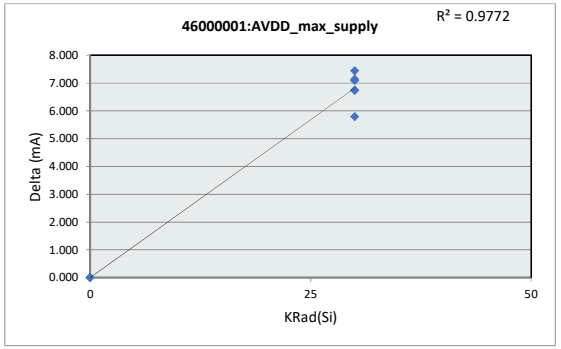
	46000001:AVDD_max_supply		
Test Site			
Tester			
Test Number			
Unit	mA	mA	
Max Limit	25	25	
Min Limit	5	5	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	22.313	14.871	7.442
30	51	22.082	15.338	6.744
30	52	22.559	15.425	7.134
30	53	21.874	15.137	6.737
30	54	22.348	15.262	7.086
30	55	20.917	15.127	5.790
0	47	15.092	15.092	0.000
0	48	15.134	15.134	0.000
Max		22.559	15.425	7.442
Average		20.290	15.173	5.117
Min		15.092	14.871	0.000
Std Dev		3.234	0.170	3.195





	46000001:AVDD_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	25	mA
Min Limit	5	mA
KRad(Si)	0	30
LL	5.000	5.000
Min	15.092	14.871
Average	15.113	15.193
Max	15.134	15.425
UL	25.000	25.000

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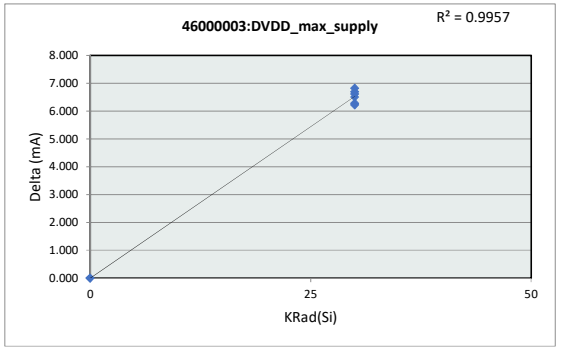
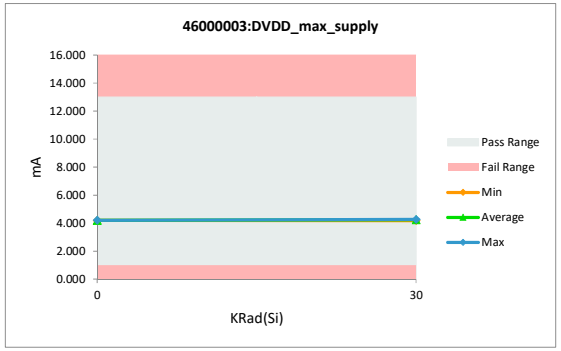
	46000003:DVDD_max_supply	
Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	13	13
Min Limit	1	1

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	10.846	4.226	6.620
30	51	10.472	4.249	6.223
30	52	10.942	4.246	6.696
30	53	10.472	4.185	6.287
30	54	11.086	4.258	6.828
30	55	10.779	4.271	6.508
0	47	4.188	4.188	0.000
0	48	4.210	4.210	0.000
	Max	11.086	4.271	6.828
	Average	9.124	4.229	4.895
	Min	4.188	4.185	0.000
	Std Dev	3.047	0.032	3.028





	46000003:DVDD_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	13	mA
Min Limit	1	mA
KRad(Si)	0	30
LL	1.000	1.000
Min	4.188	4.185
Average	4.199	4.239
Max	4.210	4.271
UL	13.000	13.000

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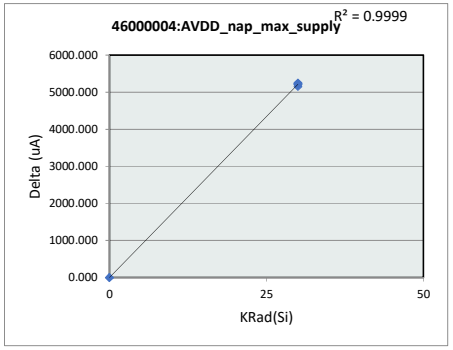
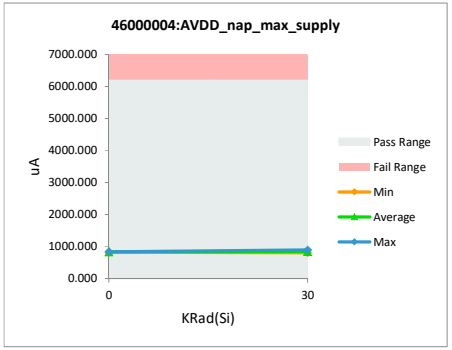
	46000004:AVDD_nap_max_supp	
Test Site		
Tester		
Test Number		
Unit	uA	uA
Max Limit	6200	6200
Min Limit	0	0

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	6065.405	811.932	5253.473
30	51	6049.434	849.359	5200.075
30	52	6120.256	897.432	5222.824
30	53	6066.212	836.291	5229.921
30	54	6070.407	845.487	5224.920
30	55	5985.549	832.581	5152.968
0	47	840.808	840.808	0.000
0	48	826.935	826.935	0.000
	Max	6120.256	897.432	5253.473
	Average	4753.126	842.603	3910.523
	Min	826.935	811.932	0.000
	Std Dev	2419.298	25.042	2413.802





	46000004:AVDD_nap_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	6200	uA
Min Limit	0	uA
KRad(Si)	0	30
LL	0.000	0.000
Min	826.935	811.932
Average	833.872	845.514
Max	840.808	897.432
UL	6200.000	6200.000

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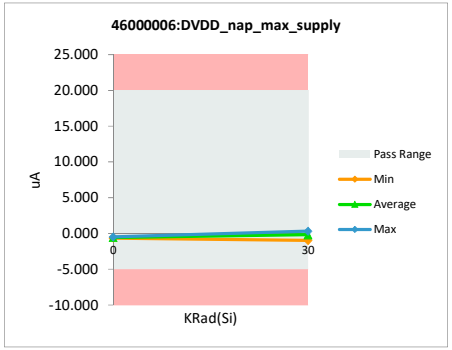
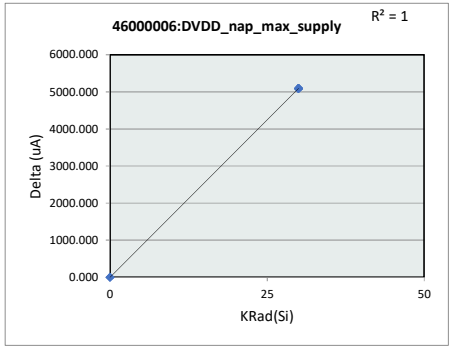
	46000006:DVDD_nap_max_supp	
Test Site		
Tester		
Test Number		
Unit	uA	uA
Max Limit	20	20
Min Limit	-5	-5

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	5092.285	0.000	5092.285
30	51	5091.640	0.000	5091.640
30	52	5092.769	-0.323	5093.092
30	53	5093.253	-0.968	5094.221
30	54	5091.156	0.323	5090.833
30	55	5091.640	-0.161	5091.801
0	47	-0.646	-0.646	0.000
0	48	-0.484	-0.484	0.000
Max		5093.253	0.323	5094.221
Average		3818.952	-0.282	3819.234
Min		-0.646	-0.968	0.000
Std Dev		2357.457	0.411	2357.283





	46000006:DVDD_nap_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	20	uA
Min Limit	-5	uA
KRad(Si)	0	30
LL	-5.000	-5.000
Min	-0.646	-0.968
Average	-0.565	-0.188
Max	-0.484	0.323
UL	20.000	20.000

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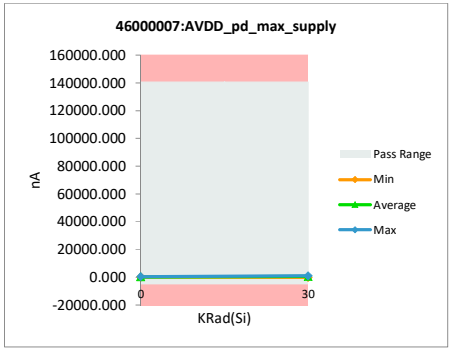
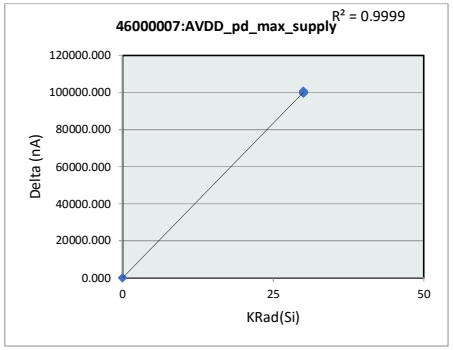
	46000007:AVDD_pd_max_supply		
Test Site			
Tester			
Test Number			
Unit	nA	nA	
Max Limit	140500	140500	
Min Limit	-5000	-5000	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	100646.469	-82.895	100729.364
30	51	100627.344	1125.770	99501.574
30	52	100657.633	1095.418	99562.215
30	53	100657.633	379.526	100278.107
30	54	100654.438	765.370	99889.068
30	55	100643.281	15.977	100627.304
0	47	178.607	178.607	0.000
0	48	448.094	448.094	0.000
	Max	100657.633	1125.770	100729.364
	Average	75564.187	490.733	75073.454
	Min	178.607	-82.895	0.000
	Std Dev	46445.882	464.511	46338.496





	46000007:AVDD_pd_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	140500	nA
Min Limit	-5000	nA
KRad(Si)	0	30
LL	-5000.000	-5000.000
Min	178.607	-82.895
Average	313.351	549.861
Max	448.094	1125.770
UL	140500.000	140500.000

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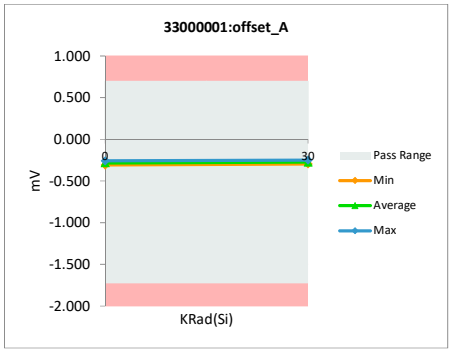
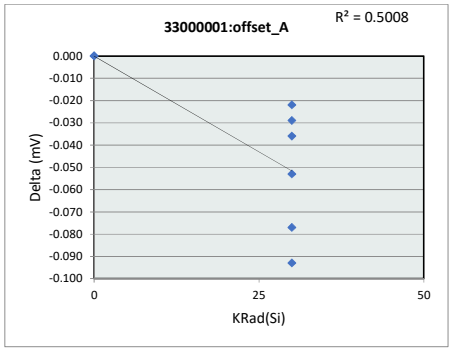
	33000001:offset_A		
Test Site			
Tester			
Test Number			
Unit	mV	mV	
Max Limit	0.695	0.695	
Min Limit	-1.726	-1.726	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-0.366	-0.289	-0.077
30	51	-0.330	-0.294	-0.036
30	52	-0.297	-0.268	-0.029
30	53	-0.323	-0.270	-0.053
30	54	-0.342	-0.249	-0.093
30	55	-0.291	-0.269	-0.022
0	47	-0.308	-0.308	0.000
0	48	-0.258	-0.258	0.000
Max		-0.258	-0.249	0.000
Average		-0.314	-0.276	-0.039
Min		-0.366	-0.308	-0.093
Std Dev		0.033	0.020	0.034





	33000001:offset_A	
Test Site		
Tester		
Test Number		
Max Limit	0.695	mV
Min Limit	-1.726	mV
KRad(Si)	0	30
LL	-1.726	-1.726
Min	-0.308	-0.294
Average	-0.283	-0.273
Max	-0.258	-0.249
UL	0.695	0.695

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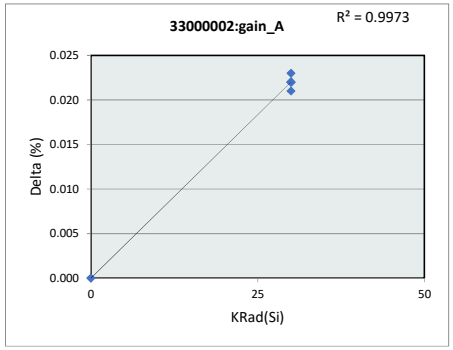
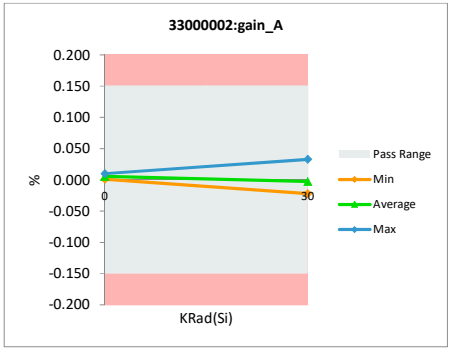
		33000002:gain_A		
	Test Site			
	Tester			
	Test Number			
	Unit	%	%	
	Max Limit	0.15	0.15	
	Min Limit	-0.15	-0.15	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	0.001	-0.020	0.021
30	51	0.000	-0.022	0.022
30	52	0.025	0.003	0.022
30	53	0.015	-0.008	0.023
30	54	0.020	-0.002	0.022
30	55	0.055	0.033	0.022
0	47	0.010	0.010	0.000
0	48	0.001	0.001	0.000
	Max	0.055	0.033	0.023
	Average	0.016	-0.001	0.016
	Min	0.000	-0.022	0.000
	Std Dev	0.018	0.018	0.010





	33000002:gain_A	
Test Site		
Tester		
Test Number		
Max Limit	0.15	%
Min Limit	-0.15	%
KRad(Si)	0	30
LL	-0.150	-0.150
Min	0.001	-0.022
Average	0.006	-0.003
Max	0.010	0.033
UL	0.150	0.150

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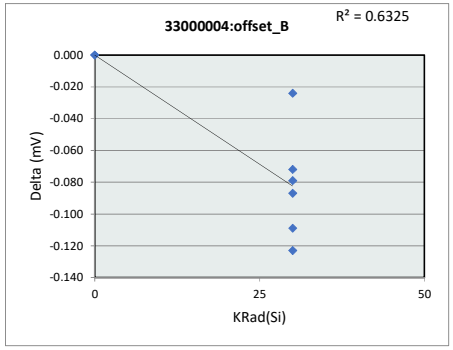
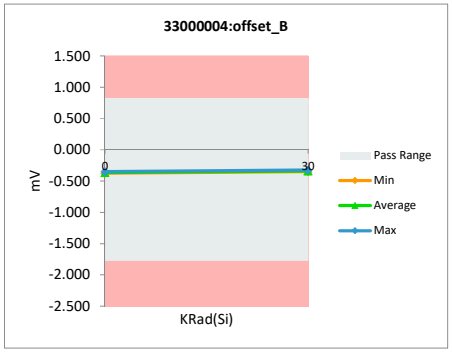
	33000004:offset_B	
Test Site		
Tester		
Test Number		
Unit	mV	mV
Max Limit	0.818	0.818
Min Limit	-1.779	-1.779

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-0.471	-0.348	-0.123
30	51	-0.409	-0.330	-0.079
30	52	-0.374	-0.350	-0.024
30	53	-0.435	-0.326	-0.109
30	54	-0.425	-0.338	-0.087
30	55	-0.419	-0.347	-0.072
0	47	-0.375	-0.375	0.000
0	48	-0.352	-0.352	0.000
Max		-0.352	-0.326	0.000
Average		-0.408	-0.346	-0.062
Min		-0.471	-0.375	-0.123
Std Dev		0.039	0.015	0.048





	33000004:offset_B	
Test Site		
Tester		
Test Number		
Max Limit	0.818	mV
Min Limit	-1.779	mV
KRad(Si)	0	30
LL	-1.779	-1.779
Min	-0.375	-0.350
Average	-0.364	-0.340
Max	-0.352	-0.326
UL	0.818	0.818

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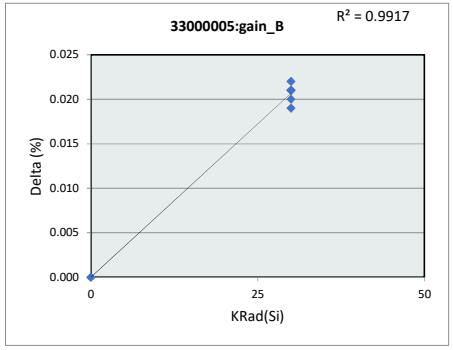
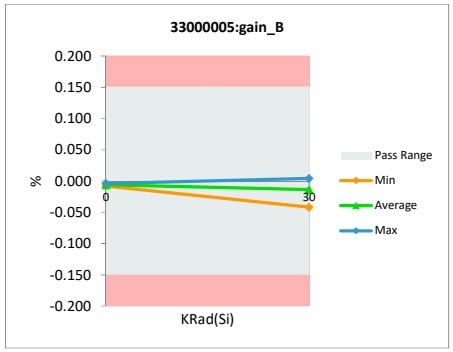
	33000005:gain_B		
Test Site			
Tester			
Test Number			
Unit	%	%	
Max Limit	0.15	0.15	
Min Limit	-0.15	-0.15	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	0.003	-0.016	0.019
30	51	0.007	-0.014	0.021
30	52	0.007	-0.015	0.022
30	53	0.025	0.004	0.021
30	54	-0.021	-0.042	0.021
30	55	0.021	0.001	0.020
0	47	-0.004	-0.004	0.000
0	48	-0.008	-0.008	0.000
Max		0.025	0.004	0.022
Average		0.004	-0.012	0.016
Min		-0.021	-0.042	0.000
Std Dev		0.015	0.014	0.010





	33000005:gain_B	
Test Site		
Tester		
Test Number		
Max Limit	0.15	%
Min Limit	-0.15	%
KRad(Si)	0	30
LL	-0.150	-0.150
Min	-0.008	-0.042
Average	-0.006	-0.014
Max	-0.004	0.004
UL	0.150	0.150

TID HDR Report
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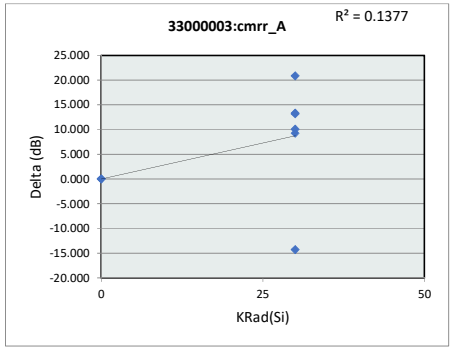
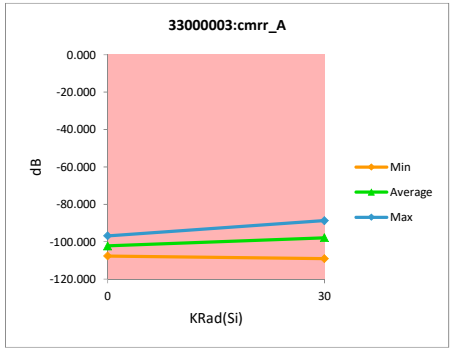
	33000003:cmrr_A		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit	none	none	
Min Limit	none	none	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-87.146	-100.477	13.331
30	51	-88.123	-109.003	20.880
30	52	-80.676	-89.926	9.250
30	53	-102.898	-88.649	-14.249
30	54	-91.542	-104.735	13.193
30	55	-84.110	-94.198	10.088
0	47	-96.803	-96.803	0.000
0	48	-107.597	-107.597	0.000
	Max	-80.676	-88.649	20.880
	Average	-92.362	-98.924	6.562
	Min	-107.597	-109.003	-14.249
	Std Dev	9.361	7.804	10.913





	33000003:cmrr_A	
Test Site		
Tester		
Test Number		
Max Limit	none	dB
Min Limit	none	dB
KRad(Si)	0	30
LL		
Min	-107.597	-109.003
Average	-102.200	-97.831
Max	-96.803	-88.649
UL		

TID HDR Report
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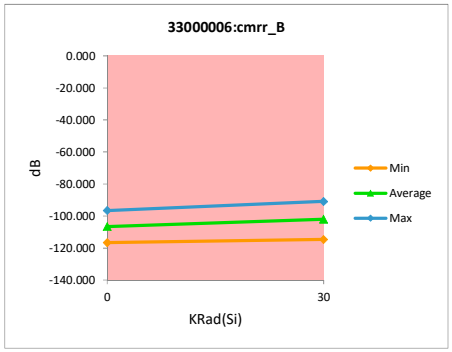
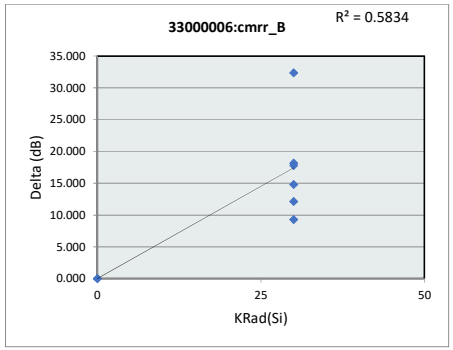
	33000006:cmrr_B		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit	none	none	
Min Limit	none	none	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-86.800	-98.916	12.116
30	51	-90.869	-108.640	17.771
30	52	-82.049	-96.844	14.795
30	53	-81.560	-90.855	9.295
30	54	-83.548	-101.717	18.169
30	55	-82.219	-114.578	32.359
0	47	-116.530	-116.530	0.000
0	48	-96.523	-96.523	0.000
Max		-81.560	-90.855	32.359
Average		-90.012	-103.075	13.063
Min		-116.530	-116.530	0.000
Std Dev		11.916	9.216	10.556





	33000006:cmrr_B	
Test Site		
Tester		
Test Number		
Max Limit	none	dB
Min Limit	none	dB
KRad(Si)	0	30
LL		
Min	-116.530	-114.578
Average	-106.527	-101.925
Max	-96.523	-90.855
UL		

TID HDR Report
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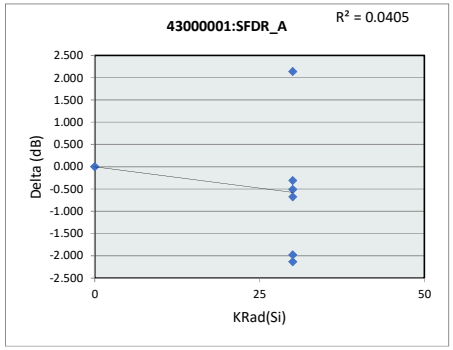
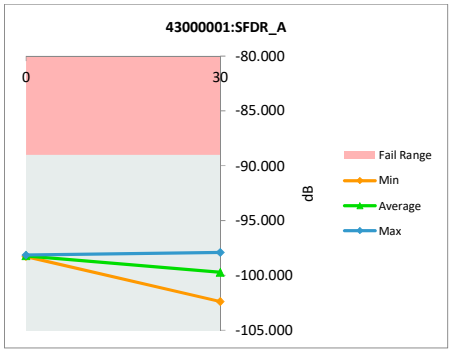
	43000001:SFDR_A	
Test Site		
Tester		
Test Number		
Unit	dB	dB
Max Limit	-89	-89
Min Limit		

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-99.896	-97.918	-1.978
30	51	-102.297	-100.164	-2.133
30	52	-100.246	-102.386	2.140
30	53	-100.532	-100.222	-0.310
30	54	-98.469	-97.961	-0.508
30	55	-100.325	-99.650	-0.675
0	47	-98.279	-98.279	0.000
0	48	-98.151	-98.151	0.000
	Max	-98.151	-97.918	2.140
	Average	-99.774	-99.341	-0.433
	Min	-102.297	-102.386	-2.133
	Std Dev	1.417	1.572	1.328





	43000001:SFDR_A	
Test Site		
Tester		
Test Number		
Max Limit	-89	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-98.279	-102.386
Average	-98.215	-99.717
Max	-98.151	-97.918
UL	-89.000	-89.000

TID HDR Report
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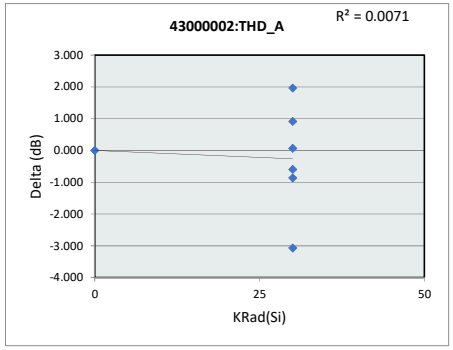
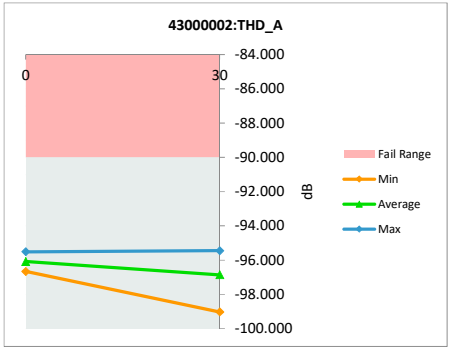
	43000002:THD_A	
Test Site		
Tester		
Test Number		
Unit	dB	dB
Max Limit	-90	-90
Min Limit		

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-95.223	-96.134	0.911
30	51	-99.839	-96.772	-3.067
30	52	-97.068	-99.032	1.964
30	53	-96.309	-95.447	-0.862
30	54	-96.414	-96.478	0.064
30	55	-97.883	-97.286	-0.597
0	47	-95.507	-95.507	0.000
0	48	-96.660	-96.660	0.000
Max		-95.223	-95.447	1.964
Average		-96.863	-96.665	-0.198
Min		-99.839	-99.032	-3.067
Std Dev		1.465	1.143	1.458





	43000002:THD_A	
Test Site		
Tester		
Test Number		
Max Limit	-90	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-96.660	-99.032
Average	-96.084	-96.858
Max	-95.507	-95.447
UL	-90.000	-90.000

TID HDR Report
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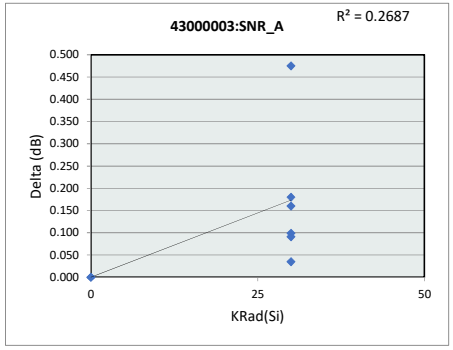
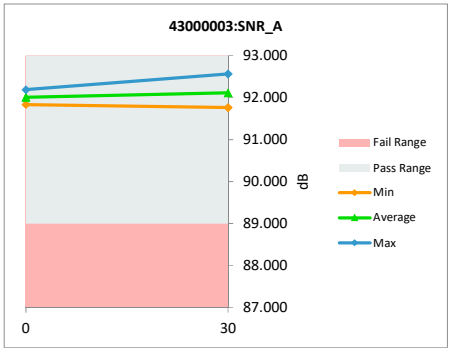
	43000003:SNR_A		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	89	89	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	92.596	92.561	0.035
30	51	92.600	92.440	0.160
30	52	92.349	91.874	0.475
30	53	91.974	91.794	0.180
30	54	91.853	91.762	0.091
30	55	92.345	92.246	0.099
0	47	91.834	91.834	0.000
0	48	92.188	92.188	0.000
	Max	92.600	92.561	0.475
	Average	92.217	92.087	0.130
	Min	91.834	91.762	0.000
	Std Dev	0.308	0.313	0.155





	43000003:SNR_A	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	89	dB
KRad(Si)	0	30
LL	89.000	89.000
Min	91.834	91.762
Average	92.011	92.113
Max	92.188	92.561
UL		

TID HDR Report
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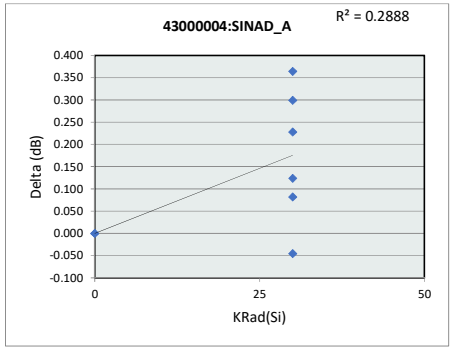
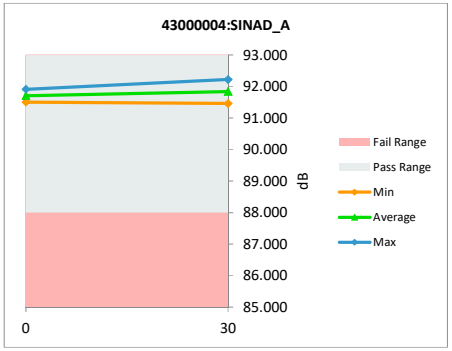
	43000004:SINAD_A		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	88	88	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	92.176	92.221	-0.045
30	51	92.451	92.152	0.299
30	52	92.085	91.721	0.364
30	53	91.687	91.459	0.228
30	54	91.580	91.498	0.082
30	55	92.125	92.001	0.124
0	47	91.501	91.501	0.000
0	48	91.910	91.910	0.000
	Max	92.451	92.221	0.364
	Average	91.939	91.808	0.131
	Min	91.501	91.459	-0.045
	Std Dev	0.329	0.306	0.151

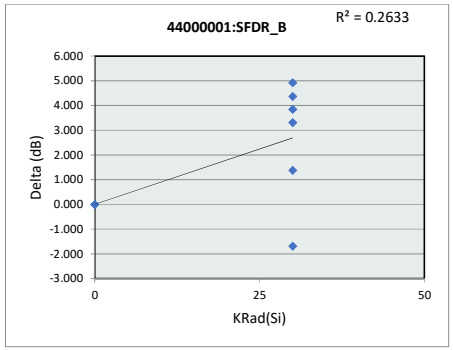


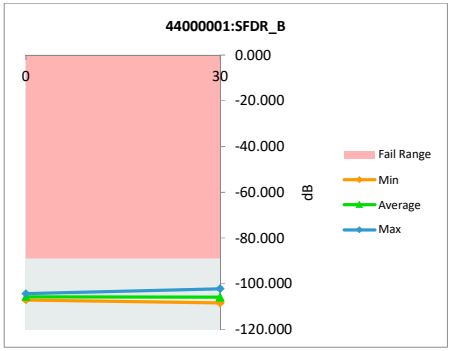


	43000004:SINAD_A	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	88	dB
KRad(Si)	0	30
LL	88.000	88.000
Min	91.501	91.459
Average	91.706	91.842
Max	91.910	92.221
UL		

TID HDR Report
ADC168M102R

	44000001:SFDR_B		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit	-89	-89	
Min Limit			
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-101.926	-106.291	4.365
30	51	-107.377	-105.691	-1.686
30	52	-100.818	-102.197	1.379
30	53	-104.518	-108.368	3.850
30	54	-101.195	-104.508	3.313
30	55	-103.035	-107.952	4.917
0	47	-104.331	-104.331	0.000
0	48	-107.094	-107.094	0.000
	Max	-100.818	-102.197	4.917
	Average	-103.787	-105.804	2.017
	Min	-107.377	-108.368	-1.686
	Std Dev	2.513	2.069	2.427



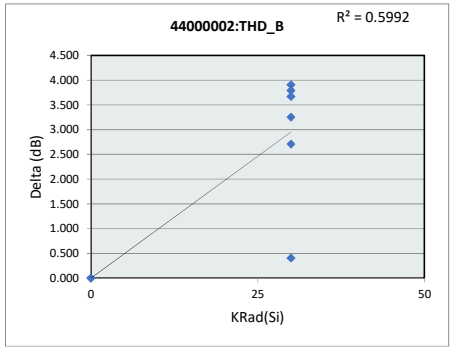


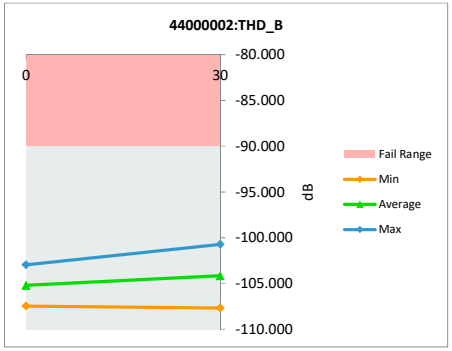
	44000001:SFDR_B	
Test Site		
Tester		
Test Number		
Max Limit	-89	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-107.094	-108.368
Average	-105.713	-105.835
Max	-104.331	-102.197
UL	-89.000	-89.000

TID HDR Report
ADC168M102R

	44000002:THD_B	
Test Site		
Tester		
Test Number		
Unit	dB	dB
Max Limit	-90	-90
Min Limit		

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-99.992	-103.901	3.909
30	51	-107.289	-107.694	0.405
30	52	-98.013	-100.725	2.712
30	53	-100.675	-104.466	3.791
30	54	-99.526	-102.778	3.252
30	55	-101.686	-105.359	3.673
0	47	-102.953	-102.953	0.000
0	48	-107.476	-107.476	0.000
	Max	-98.013	-100.725	3.909
	Average	-102.201	-104.419	2.218
	Min	-107.476	-107.694	0.000
	Std Dev	3.514	2.382	1.768

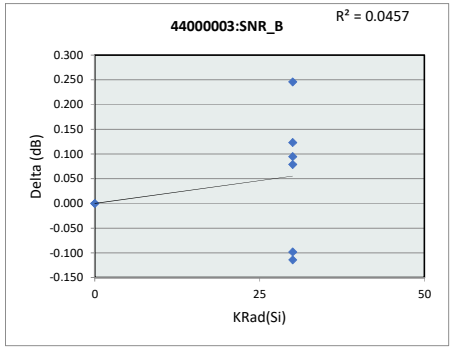


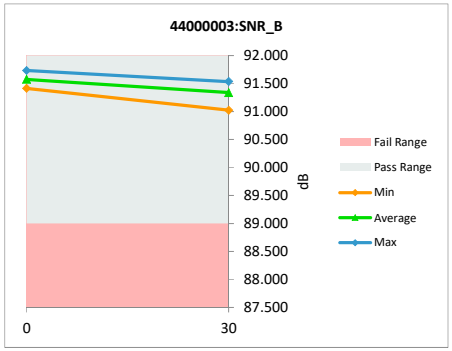


	44000002:THD_B	
Test Site		
Tester		
Test Number		
Max Limit	-90	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-107.476	-107.694
Average	-105.215	-104.154
Max	-102.953	-100.725
UL	-90.000	-90.000

TID HDR Report
ADC168M102R

	44000003:SNR_B		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	89	89	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	91.403	91.324	0.079
30	51	91.561	91.315	0.246
30	52	90.908	91.022	-0.114
30	53	91.631	91.536	0.095
30	54	91.597	91.474	0.123
30	55	91.269	91.367	-0.098
0	47	91.734	91.734	0.000
0	48	91.415	91.415	0.000
	Max	91.734	91.734	0.246
	Average	91.440	91.398	0.041
	Min	90.908	91.022	-0.114
	Std Dev	0.261	0.204	0.119

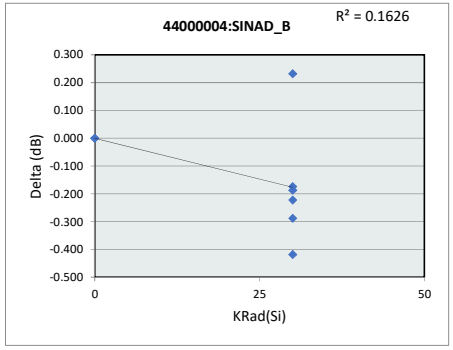


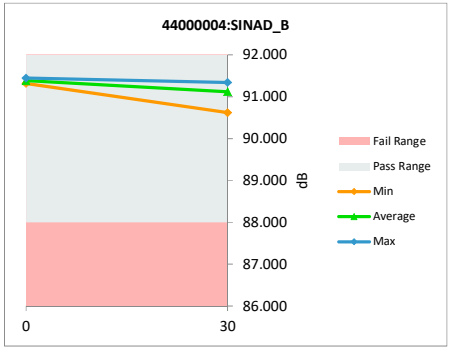


	44000003:SNR_B	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	89	dB
KRad(Si)	0	30
LL	89.000	89.000
Min	91.415	91.022
Average	91.575	91.340
Max	91.734	91.536
UL		

TID HDR Report
ADC168M102R

	44000004:SINAD_B		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	88	88	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	90.890	91.112	-0.222
30	51	91.457	91.225	0.232
30	52	90.202	90.620	-0.418
30	53	91.166	91.340	-0.174
30	54	91.005	91.192	-0.187
30	55	90.925	91.213	-0.288
0	47	91.446	91.446	0.000
0	48	91.318	91.318	0.000
	Max	91.457	91.446	0.232
	Average	91.051	91.183	-0.132
	Min	90.202	90.620	-0.418
	Std Dev	0.409	0.250	0.202





	44000004:SINAD_B	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	88	dB
KRad(Si)	0	30
LL	88.000	88.000
Min	91.318	90.620
Average	91.382	91.117
Max	91.446	91.340
UL		

TID HDR Report
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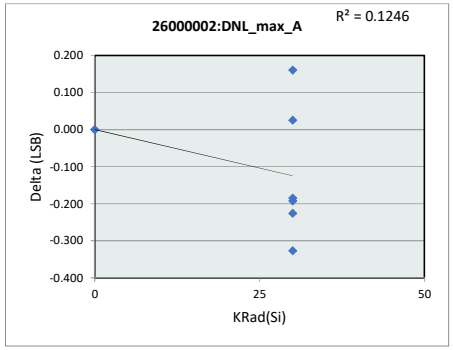
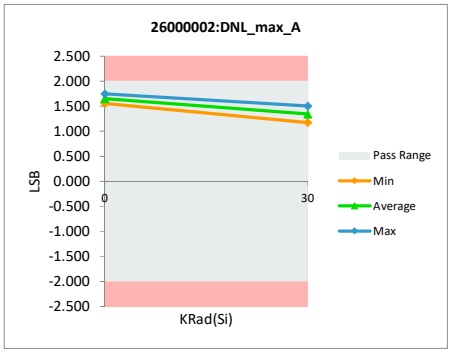
	26000002:DNL_max_A	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	2	2
Min Limit	-2	-2

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	0.957	1.284	-0.327
30	51	0.990	1.175	-0.185
30	52	1.394	1.369	0.025
30	53	1.058	1.251	-0.193
30	54	1.663	1.503	0.160
30	55	1.252	1.478	-0.226
0	47	1.554	1.554	0.000
0	48	1.746	1.746	0.000
	Max	1.746	1.746	0.160
	Average	1.327	1.420	-0.093
	Min	0.957	1.175	-0.327
	Std Dev	0.310	0.187	0.163





	26000002:DNL_max_A	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	1.554	1.175
Average	1.650	1.343
Max	1.746	1.503
UL	2.000	2.000

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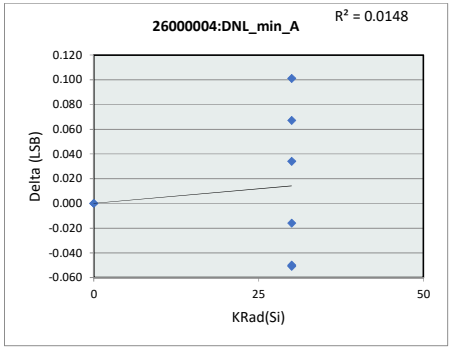
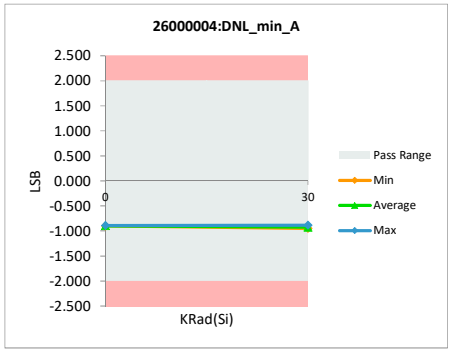
	26000004:DNL_min_A	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	2	2
Min Limit	-2	-2

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-0.849	-0.950	0.101
30	51	-0.899	-0.933	0.034
30	52	-0.857	-0.924	0.067
30	53	-0.933	-0.882	-0.051
30	54	-0.958	-0.908	-0.050
30	55	-0.966	-0.950	-0.016
0	47	-0.891	-0.891	0.000
0	48	-0.899	-0.899	0.000
	Max	-0.849	-0.882	0.101
	Average	-0.906	-0.917	0.011
	Min	-0.966	-0.950	-0.051
	Std Dev	0.043	0.026	0.054





	26000004:DNL_min_A	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	-0.899	-0.950
Average	-0.895	-0.925
Max	-0.891	-0.882
UL	2.000	2.000

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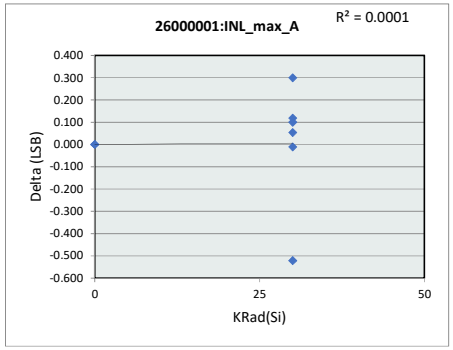
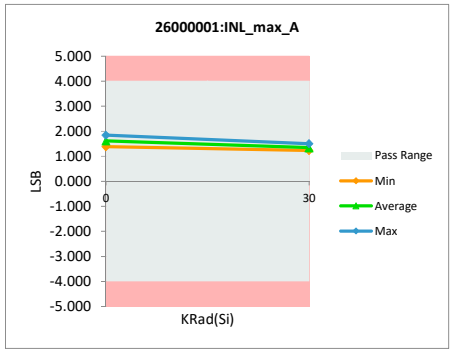
	26000001:INL_max_A	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	4	4
Min Limit	-4	-4

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	0.780	1.302	-0.522
30	51	1.332	1.232	0.100
30	52	1.591	1.292	0.299
30	53	1.325	1.336	-0.011
30	54	1.622	1.504	0.118
30	55	1.436	1.383	0.053
0	47	1.381	1.381	0.000
0	48	1.847	1.847	0.000
	Max	1.847	1.847	0.299
	Average	1.414	1.410	0.005
	Min	0.780	1.232	-0.522
	Std Dev	0.312	0.194	0.236





	26000001:INL_max_A	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	1.381	1.232
Average	1.614	1.342
Max	1.847	1.504
UL	4.000	4.000

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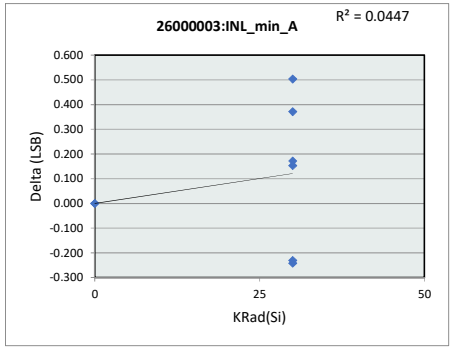
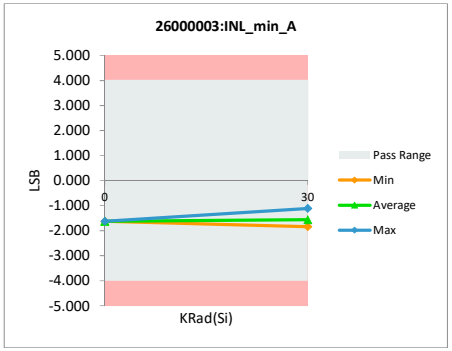
	26000003:INL_min_A	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	4	4
Min Limit	-4	-4

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-1.355	-1.113	-0.242
30	51	-1.144	-1.647	0.503
30	52	-1.668	-1.839	0.171
30	53	-1.607	-1.376	-0.231
30	54	-1.567	-1.720	0.153
30	55	-1.312	-1.683	0.371
0	47	-1.625	-1.625	0.000
0	48	-1.627	-1.627	0.000
	Max	-1.144	-1.113	0.503
	Average	-1.488	-1.579	0.091
	Min	-1.668	-1.839	-0.242
	Std Dev	0.192	0.229	0.264





	26000003:INL_min_A	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	-1.627	-1.839
Average	-1.626	-1.563
Max	-1.625	-1.113
UL	4.000	4.000

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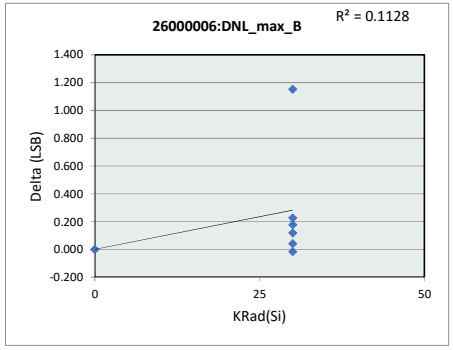
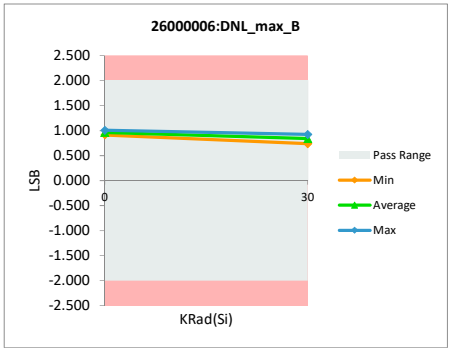
	26000006:DNL_max_B	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	2	2
Min Limit	-2	-2

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	1.091	0.915	0.176
30	51	0.881	0.839	0.042
30	52	1.150	0.923	0.227
30	53	0.722	0.739	-0.017
30	54	0.923	0.805	0.118
30	55	1.982	0.831	1.151
0	47	1.007	1.007	0.000
0	48	0.915	0.915	0.000
	Max	1.982	1.007	1.151
	Average	1.084	0.872	0.212
	Min	0.722	0.739	-0.017
	Std Dev	0.386	0.084	0.390





	26000006:DNL_max_B	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	0.915	0.739
Average	0.961	0.842
Max	1.007	0.923
UL	2.000	2.000

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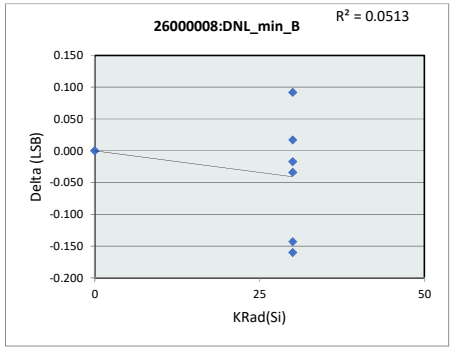
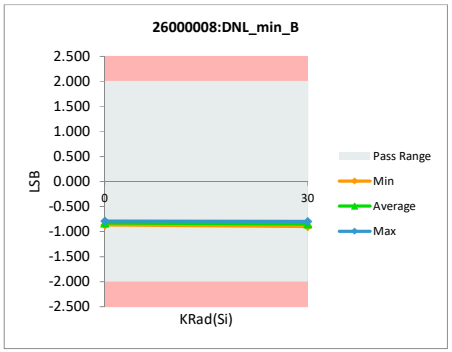
		26000008:DNL_min_B		
	Test Site			
	Tester			
	Test Number			
	Unit	LSB	LSB	
	Max Limit	2	2	
	Min Limit	-2	-2	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-0.941	-0.798	-0.143
30	51	-0.832	-0.815	-0.017
30	52	-0.933	-0.899	-0.034
30	53	-0.790	-0.882	0.092
30	54	-0.840	-0.857	0.017
30	55	-1.000	-0.840	-0.160
0	47	-0.866	-0.866	0.000
0	48	-0.790	-0.790	0.000
	Max	-0.790	-0.790	0.092
	Average	-0.874	-0.843	-0.031
	Min	-1.000	-0.899	-0.160
	Std Dev	0.076	0.040	0.083





	26000008:DNL_min_B	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	-0.866	-0.899
Average	-0.828	-0.849
Max	-0.790	-0.798
UL	2.000	2.000

TID HDR Report
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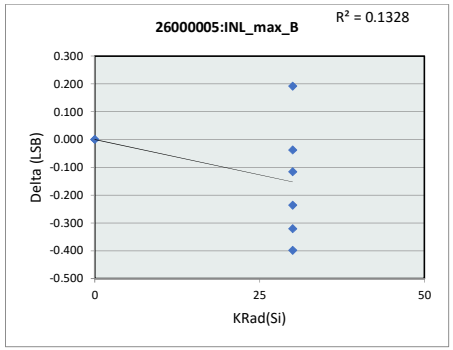
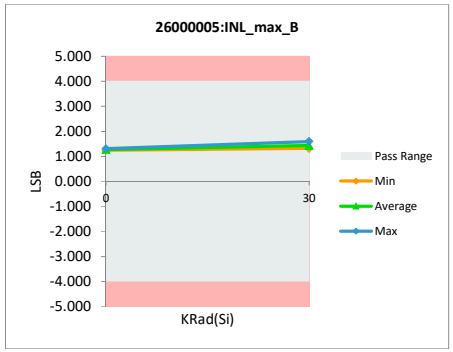
	26000005:INL_max_B	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	4	4
Min Limit	-4	-4

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	1.200	1.598	-0.398
30	51	1.246	1.362	-0.116
30	52	1.329	1.565	-0.236
30	53	1.282	1.320	-0.038
30	54	1.011	1.332	-0.321
30	55	1.630	1.438	0.192
0	47	1.251	1.251	0.000
0	48	1.306	1.306	0.000
	Max	1.630	1.598	0.192
	Average	1.282	1.397	-0.115
	Min	1.011	1.251	-0.398
	Std Dev	0.172	0.126	0.194





	26000005:INL_max_B	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	1.251	1.320
Average	1.279	1.436
Max	1.306	1.598
UL	4.000	4.000

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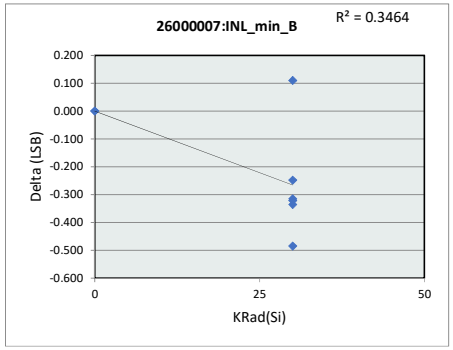
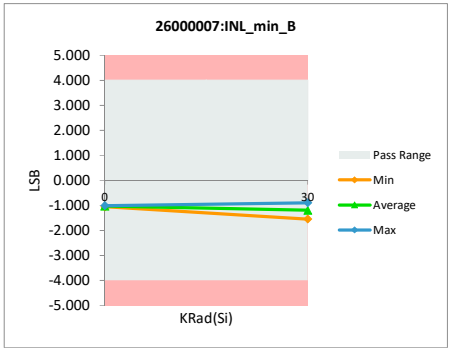
	26000007:INL_min_B	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	4	4
Min Limit	-4	-4

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	-1.607	-1.286	-0.321
30	51	-1.065	-1.175	0.110
30	52	-1.882	-1.546	-0.336
30	53	-1.260	-0.945	-0.315
30	54	-1.141	-0.893	-0.248
30	55	-1.783	-1.298	-0.485
0	47	-1.054	-1.054	0.000
0	48	-1.007	-1.007	0.000
	Max	-1.007	-0.893	0.110
	Average	-1.350	-1.150	-0.199
	Min	-1.882	-1.546	-0.485
	Std Dev	0.354	0.219	0.209





	26000007:INL_min_B	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	-1.054	-1.546
Average	-1.031	-1.191
Max	-1.007	-0.893
UL	4.000	4.000

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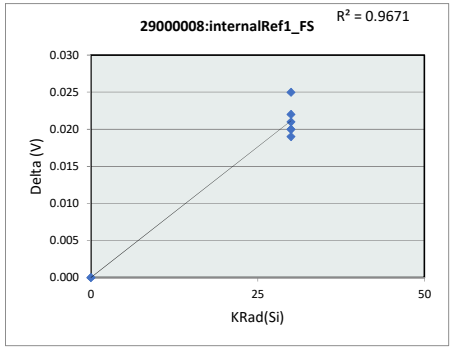
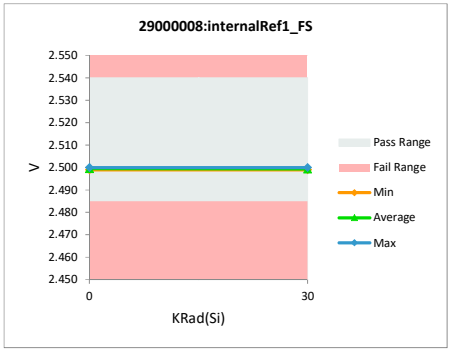
	29000008:internalRef1_FS		
Test Site			
Tester			
Test Number			
Unit	V	V	
Max Limit	2.54	2.54	
Min Limit	2.485	2.485	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	2.519	2.499	0.020
30	51	2.519	2.500	0.019
30	52	2.522	2.500	0.022
30	53	2.519	2.499	0.020
30	54	2.524	2.499	0.025
30	55	2.520	2.499	0.021
0	47	2.500	2.500	0.000
0	48	2.499	2.499	0.000
	Max	2.524	2.500	0.025
	Average	2.515	2.499	0.016
	Min	2.499	2.499	0.000
	Std Dev	0.010	0.001	0.010





	29000008:internalRef1_FS	
Test Site		
Tester		
Test Number		
Max Limit	2.54	V
Min Limit	2.485	V
KRad(Si)	0	30
LL	2.485	2.485
Min	2.499	2.499
Average	2.500	2.499
Max	2.500	2.500
UL	2.540	2.540

TID HDR Report
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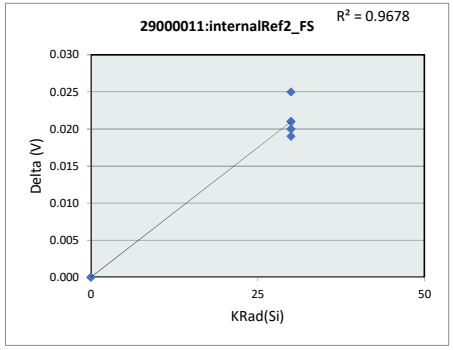
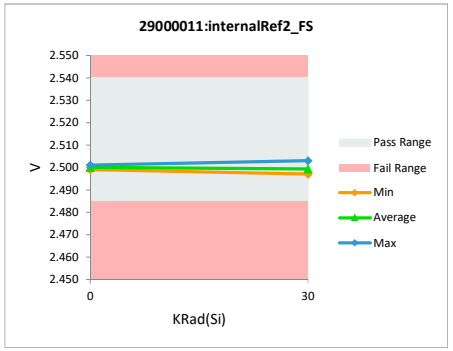
	29000011:internalRef2_FS		
Test Site			
Tester			
Test Number			
Unit	V	V	
Max Limit	2.54	2.54	
Min Limit	2.485	2.485	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	2.519	2.499	0.020
30	51	2.522	2.503	0.019
30	52	2.520	2.499	0.021
30	53	2.517	2.497	0.020
30	54	2.524	2.499	0.025
30	55	2.520	2.499	0.021
0	47	2.501	2.501	0.000
0	48	2.499	2.499	0.000
	Max	2.524	2.503	0.025
	Average	2.515	2.500	0.016
	Min	2.499	2.497	0.000
	Std Dev	0.010	0.002	0.010





	29000011:internalRef2_FS	
Test Site		
Tester		
Test Number		
Max Limit	2.54	V
Min Limit	2.485	V
KRad(Si)	0	30
LL	2.485	2.485
Min	2.499	2.497
Average	2.500	2.499
Max	2.501	2.503
UL	2.540	2.540

TID HDR Report
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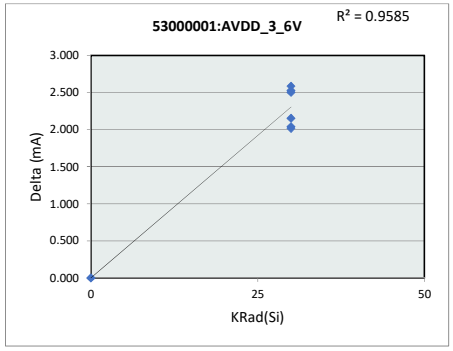
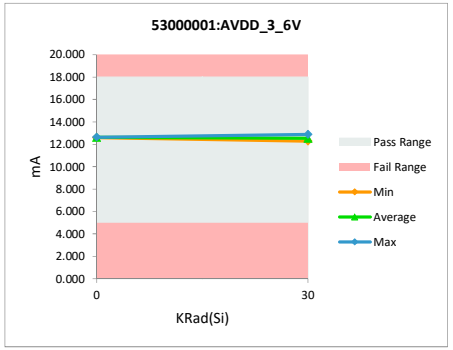
	53000001:AVDD_3_6V		
Test Site			
Tester			
Test Number			
Unit	mA	mA	
Max Limit	18	18	
Min Limit	5	5	
KRad(Si)	Serial #	postrad	prerad	Delta
30	50	14.815	12.290	2.525
30	51	14.927	12.889	2.038
30	52	15.058	12.473	2.585
30	53	14.748	12.594	2.154
30	54	14.873	12.370	2.503
30	55	14.584	12.569	2.015
0	47	12.591	12.591	0.000
0	48	12.639	12.639	0.000
	Max	15.058	12.889	2.585
	Average	14.279	12.552	1.727
	Min	12.591	12.290	0.000
	Std Dev	1.036	0.182	1.089





	53000001:AVDD_3_6V	
Test Site		
Tester		
Test Number		
Max Limit	18	mA
Min Limit	5	mA
KRad(Si)	0	30
LL	5.000	5.000
Min	12.591	12.290
Average	12.615	12.531
Max	12.639	12.889
UL	18.000	18.000

TID HDR Report
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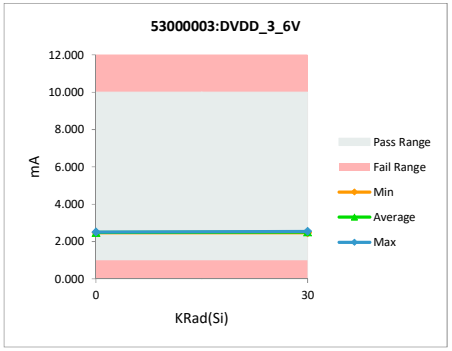
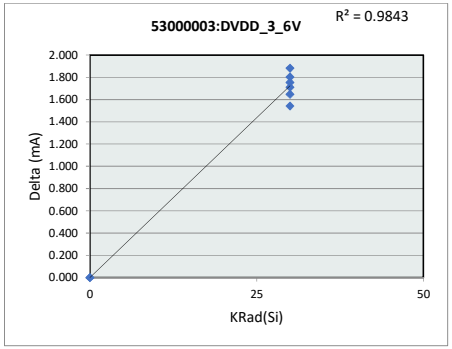
	53000003:DVDD_3_6V	
Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	10	10
Min Limit	1	1

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	4.254	2.500	1.754
30	51	4.065	2.523	1.542
30	52	4.293	2.491	1.802
30	53	4.184	2.472	1.712
30	54	4.424	2.542	1.882
30	55	4.193	2.545	1.648
0	47	2.475	2.475	0.000
0	48	2.504	2.504	0.000
	Max	4.424	2.545	1.882
	Average	3.799	2.506	1.293
	Min	2.475	2.472	0.000
	Std Dev	0.815	0.028	0.804





	53000003:DVDD_3_6V	
Test Site		
Tester		
Test Number		
Max Limit	10	mA
Min Limit	1	mA
KRad(Si)	0	30
LL	1.000	1.000
Min	2.475	2.472
Average	2.490	2.512
Max	2.504	2.545
UL	10.000	10.000

TID HDR Report
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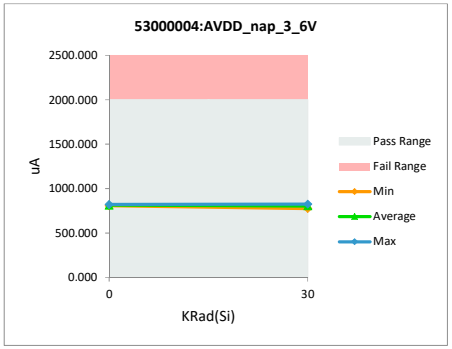
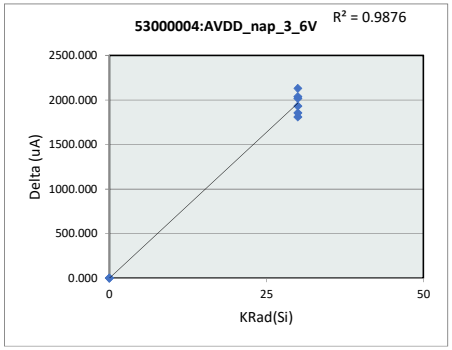
	53000004:AVDD_nap_3_6V	
Test Site		
Tester		
Test Number		
Unit	uA	uA
Max Limit	2000	2000
Min Limit	0	0

KRad(Si)	Serial #	postrad	prerad	Delta
30	50	2800.771	782.248	2018.523
30	51	2633.654	824.353	1809.301
30	52	2858.042	820.643	2037.399
30	53	2745.443	812.253	1933.190
30	54	2904.495	774.343	2130.152
30	55	2662.042	807.736	1854.306
0	47	820.159	820.159	0.000
0	48	806.607	806.607	0.000
	Max	2904.495	824.353	2130.152
	Average	2278.902	806.043	1472.859
	Min	806.607	774.343	0.000
	Std Dev	909.082	18.363	914.777



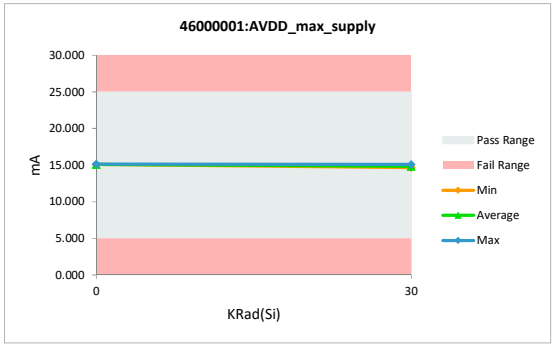


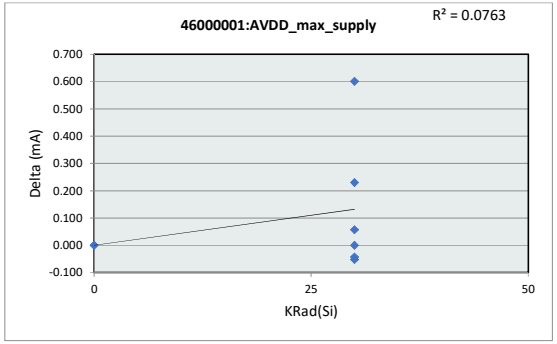
	53000004:AVDD_nap_3_6V	
Test Site		
Tester		
Test Number		
Max Limit	2000	uA
Min Limit	0	uA
KRad(Si)	0	30
LL	0.000	0.000
Min	806.607	774.343
Average	813.383	803.596
Max	820.159	824.353
UL	2000.000	2000.000

TID LDR Report
ADC168M102R

	46000001:AVDD_max_supply	
Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	25	25
Min Limit	5	5

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	15.118	15.061	0.057
30	5	15.038	15.090	-0.052
30	6	14.881	14.651	0.230
30	7	14.695	14.695	0.000
30	8	14.929	14.972	-0.043
30	9	15.252	14.651	0.601
0	47	15.092	15.092	0.000
0	48	15.134	15.134	0.000
	Max	15.252	15.134	0.601
	Average	15.017	14.918	0.099
	Min	14.695	14.651	-0.052
	Std Dev	0.175	0.215	0.222



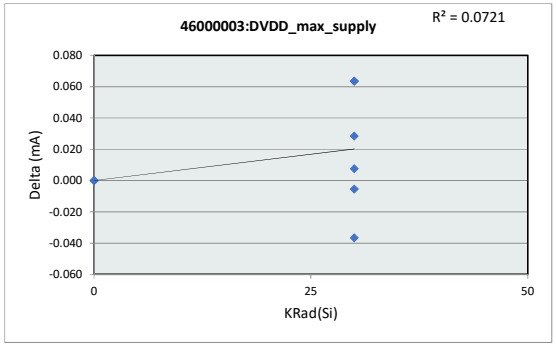


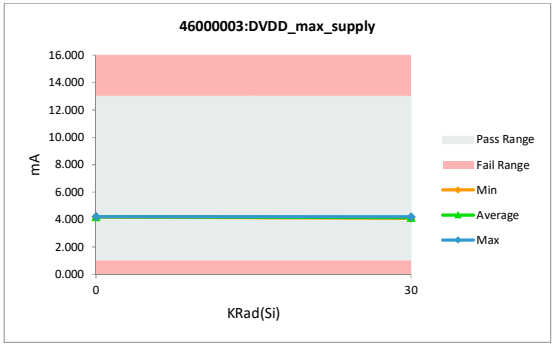
	46000001:AVDD_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	25	mA
Min Limit	5	mA
KRad(Si)	0	30
LL	5.000	5.000
Min	15.092	14.651
Average	15.113	14.853
Max	15.134	15.090
UL	25.000	25.000

TID LDR Report
ADC168M102R

	46000003:DVDD_max_supply	
Test Site		
Tester		
Test Number		
Unit	mA	mA
Max Limit	13	13
Min Limit	1	1

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	4.166	4.103	0.063
30	5	4.166	4.203	-0.037
30	6	4.121	4.093	0.028
30	7	4.162	4.154	0.008
30	8	4.162	4.167	-0.005
30	9	4.156	4.093	0.063
0	47	4.188	4.188	0.000
0	48	4.210	4.210	0.000
	Max	4.210	4.210	0.063
	Average	4.166	4.151	0.015
	Min	4.121	4.093	-0.037
	Std Dev	0.026	0.049	0.035



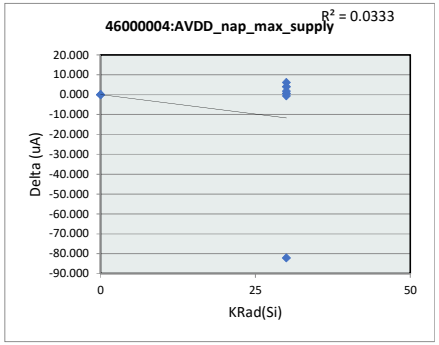


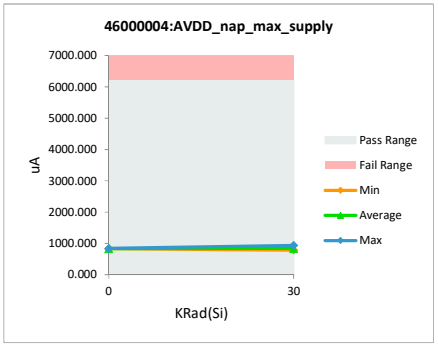
	46000003:DVDD_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	13	mA
Min Limit	1	mA
KRad(Si)	0	30
LL	1.000	1.000
Min	4.188	4.093
Average	4.199	4.135
Max	4.210	4.203
UL	13.000	13.000

TID LDR Report
ADC168M102R

	46000004:AVDD_nap_max_supp	
Test Site		
Tester		
Test Number		
Unit	uA	uA
Max Limit	6200	6200
Min Limit	0	0

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	852.587	934.680	-82.093
30	5	840.808	834.680	6.128
30	6	798.705	794.680	4.025
30	7	826.452	824.680	1.772
30	8	784.024	784.680	-0.656
30	9	868.557	868.018	0.539
0	47	840.808	840.808	0.000
0	48	826.935	826.935	0.000
	Max	868.557	934.680	6.128
	Average	829.859	838.645	-8.786
	Min	784.024	784.680	-82.093
	Std Dev	27.634	46.726	29.711





	46000004:AVDD_nap_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	6200	uA
Min Limit	0	uA
KRad(Si)	0	30
LL	0.000	0.000
Min	826.935	784.680
Average	833.872	840.236
Max	840.808	934.680
UL	6200.000	6200.000

TID LDR Report
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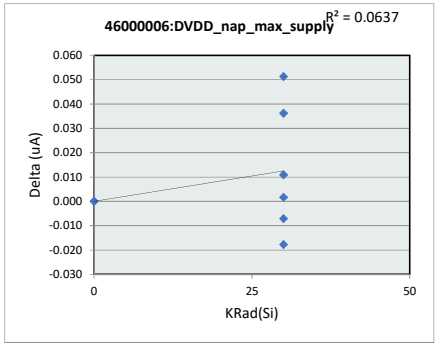
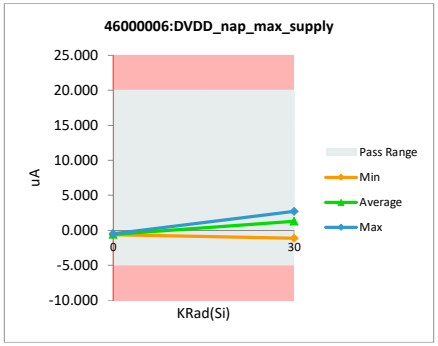
	46000006:DVDD_nap_max_supp		
Test Site			
Tester			
Test Number			
Unit	uA	uA	
Max Limit	20	20	
Min Limit	-5	-5	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	2.583	2.532	0.051
30	5	-1.130	-1.132	0.002
30	6	1.614	1.632	-0.018
30	7	0.968	0.957	0.011
30	8	1.130	1.137	-0.007
30	9	2.744	2.708	0.036
0	47	-0.646	-0.646	0.000
0	48	-0.484	-0.484	0.000
Max		2.744	2.708	0.051
Average		0.847	0.838	0.009
Min		-1.130	-1.132	-0.018
Std Dev		1.474	1.460	0.023





	46000006:DVDD_nap_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	20	uA
Min Limit	-5	uA
KRad(Si)	0	30
LL	-5.000	-5.000
Min	-0.646	-1.132
Average	-0.565	1.306
Max	-0.484	2.708
UL	20.000	20.000

TID LDR Report
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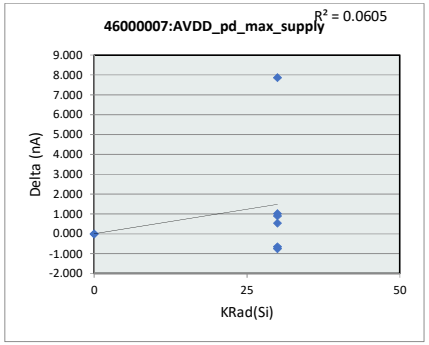
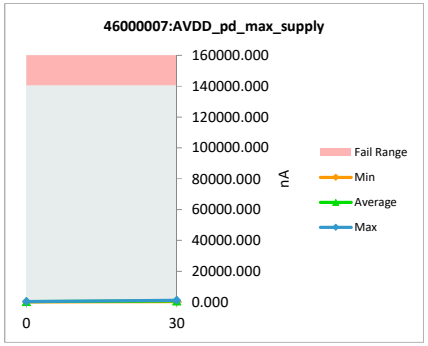
	46000007:AVDD_pd_max_supply	
Test Site		
Tester		
Test Number		
Unit	nA	nA
Max Limit	140500	140500
Min Limit		

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	322.204	321.301	0.903
30	5	446.560	447.301	-0.741
30	6	1017.381	1018.030	-0.649
30	7	1202.320	1201.301	1.019
30	8	712.839	712.301	0.538
30	9	499.171	491.301	7.870
0	47	178.607	178.607	0.000
0	48	448.094	448.094	0.000
	Max	1202.320	1201.301	7.870
	Average	603.397	602.279	1.118
	Min	178.607	178.607	-0.741
	Std Dev	350.747	350.985	2.805





	46000007:AVDD_pd_max_supply	
Test Site		
Tester		
Test Number		
Max Limit	140500	nA
Min Limit		nA
KRad(Si)	0	30
LL		
Min	178.607	321.301
Average	313.351	698.589
Max	448.094	1201.301
UL	140500.000	140500.000

TID LDR Report
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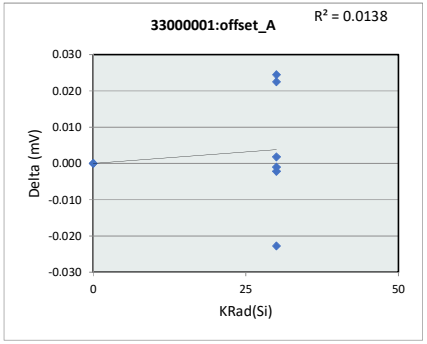
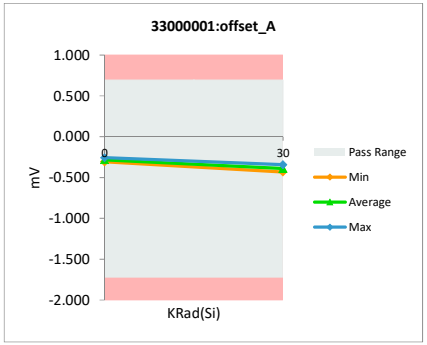
	33000001:offset_A		
Test Site			
Tester			
Test Number			
Unit	mV	mV	
Max Limit	0.695	0.695	
Min Limit	-1.726	-1.726	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-0.408	-0.432	0.024
30	5	-0.366	-0.343	-0.023
30	6	-0.402	-0.424	0.022
30	7	-0.402	-0.404	0.002
30	8	-0.351	-0.349	-0.002
30	9	-0.389	-0.388	-0.001
0	47	-0.308	-0.308	0.000
0	48	-0.258	-0.258	0.000
	Max	-0.258	-0.258	0.024
	Average	-0.361	-0.363	0.003
	Min	-0.408	-0.432	-0.023
	Std Dev	0.053	0.060	0.015





	33000001:offset_A	
Test Site		
Tester		
Test Number		
Max Limit	0.695	mV
Min Limit	-1.726	mV
KRad(Si)	0	30
LL	-1.726	-1.726
Min	-0.308	-0.432
Average	-0.283	-0.390
Max	-0.258	-0.343
UL	0.695	0.695

TID LDR Report
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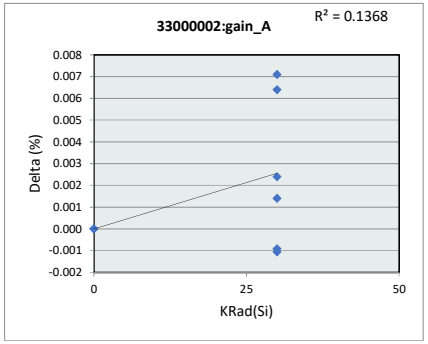
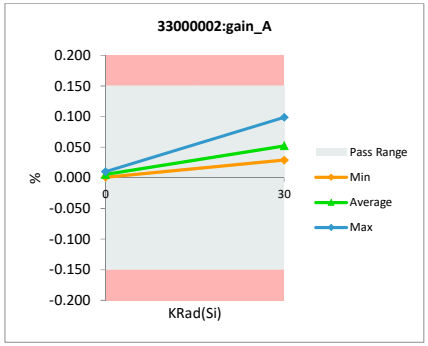
	33000002:gain_A		
Test Site			
Tester			
Test Number			
Unit	%	%	
Max Limit	0.15	0.15	
Min Limit	-0.15	-0.15	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	0.082	0.081	0.001
30	5	0.037	0.031	0.006
30	6	0.043	0.041	0.002
30	7	0.106	0.099	0.007
30	8	0.033	0.034	-0.001
30	9	0.028	0.029	-0.001
0	47	0.010	0.010	0.000
0	48	0.001	0.001	0.000
	Max	0.106	0.099	0.007
	Average	0.043	0.041	0.002
	Min	0.001	0.001	-0.001
	Std Dev	0.035	0.033	0.003





	33000002:gain_A	
Test Site		
Tester		
Test Number		
Max Limit	0.15	%
Min Limit	-0.15	%
KRad(Si)	0	30
LL	-0.150	-0.150
Min	0.001	0.029
Average	0.006	0.052
Max	0.010	0.099
UL	0.150	0.150

TID LDR Report
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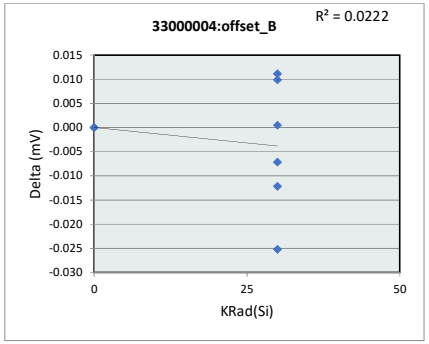
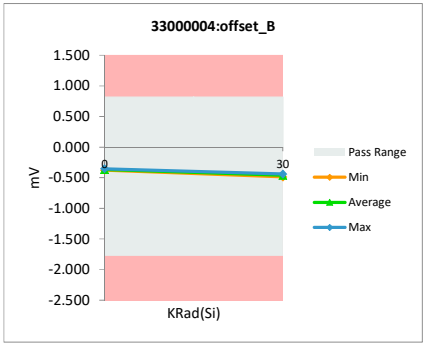
	33000004:offset_B		
Test Site			
Tester			
Test Number			
Unit	mV	mV	
Max Limit	0.818	0.818	
Min Limit	-1.779	-1.779	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-0.449	-0.442	-0.007
30	5	-0.497	-0.472	-0.025
30	6	-0.452	-0.462	0.010
30	7	-0.474	-0.485	0.011
30	8	-0.438	-0.439	0.001
30	9	-0.474	-0.462	-0.012
0	47	-0.375	-0.375	0.000
0	48	-0.352	-0.352	0.000
	Max	-0.352	-0.352	0.011
	Average	-0.439	-0.436	-0.003
	Min	-0.497	-0.485	-0.025
	Std Dev	0.050	0.048	0.012

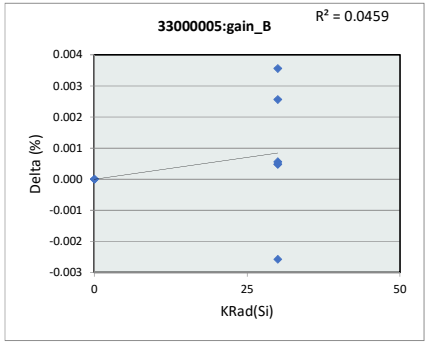


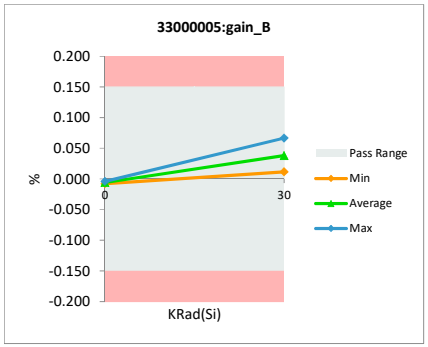


	33000004:offset_B	
Test Site		
Tester		
Test Number		
Max Limit	0.818	mV
Min Limit	-1.779	mV
KRad(Si)	0	30
LL	-1.779	-1.779
Min	-0.375	-0.485
Average	-0.364	-0.460
Max	-0.352	-0.439
UL	0.818	0.818

TID LDR Report
ADC168M102R

	33000005:gain_B		
Test Site			
Tester			
Test Number			
Unit	%	%	
Max Limit	0.15	0.15	
Min Limit	-0.15	-0.15	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	0.039	0.038	0.001
30	5	0.036	0.033	0.003
30	6	0.047	0.043	0.004
30	7	0.067	0.067	0.000
30	8	0.037	0.037	0.000
30	9	0.009	0.012	-0.003
0	47	-0.004	-0.004	0.000
0	48	-0.008	-0.008	0.000
	Max	0.067	0.067	0.004
	Average	0.028	0.027	0.001
	Min	-0.008	-0.008	-0.003
	Std Dev	0.026	0.025	0.002





	33000005:gain_B	
Test Site		
Tester		
Test Number		
Max Limit	0.15	%
Min Limit	-0.15	%
KRad(Si)	0	30
LL	-0.150	-0.150
Min	-0.008	0.012
Average	-0.006	0.038
Max	-0.004	0.067
UL	0.150	0.150

TID LDR Report
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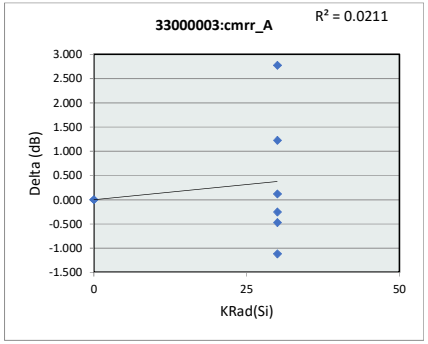
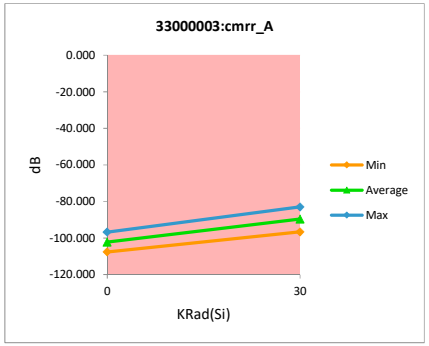
	33000003:cmrr_A		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit	none	none	
Min Limit	none	none	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-97.787	-96.665	-1.122
30	5	-87.890	-90.665	2.775
30	6	-88.444	-89.665	1.221
30	7	-91.398	-90.923	-0.475
30	8	-82.879	-82.997	0.118
30	9	-86.877	-86.623	-0.254
0	47	-96.803	-96.803	0.000
0	48	-107.597	-107.597	0.000
Max		-82.879	-82.997	2.775
Average		-92.459	-92.742	0.283
Min		-107.597	-107.597	-1.122
Std Dev		7.905	7.579	1.202





	33000003:cmrr_A	
Test Site		
Tester		
Test Number		
Max Limit	none	dB
Min Limit	none	dB
KRad(Si)	0	30
LL		
Min	-107.597	-96.665
Average	-102.200	-89.590
Max	-96.803	-82.997
UL		

TID LDR Report
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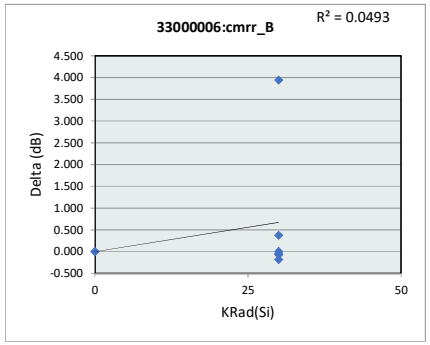
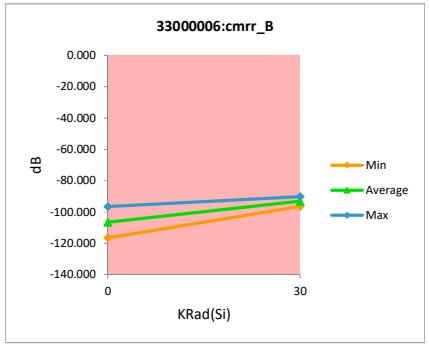
	33000006:cmrr_B		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit	none	none	
Min Limit	none	none	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-92.478	-96.418	3.940
30	5	-91.601	-91.418	-0.183
30	6	-93.801	-94.177	0.376
30	7	-94.065	-94.069	0.004
30	8	-92.258	-92.187	-0.071
30	9	-90.230	-90.187	-0.043
0	47	-116.530	-116.530	0.000
0	48	-96.523	-96.523	0.000
Max		-90.230	-90.187	3.940
Average		-95.936	-96.439	0.503
Min		-116.530	-116.530	-0.183
Std Dev		8.530	8.424	1.398





	33000006:cmrr_B	
Test Site		
Tester		
Test Number		
Max Limit	none	dB
Min Limit	none	dB
KRad(Si)	0	30
LL		
Min	-116.530	-96.418
Average	-106.527	-93.076
Max	-96.523	-90.187
UL		

TID LDR Report
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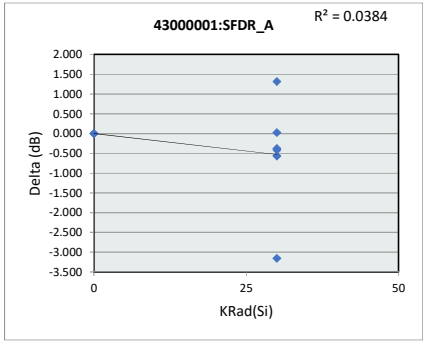
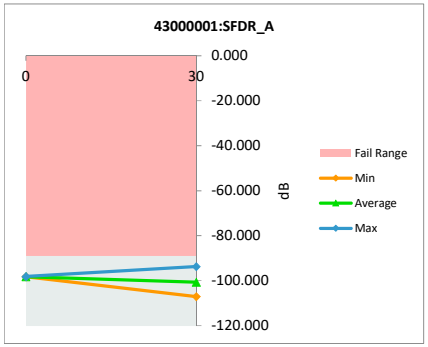
	43000001:SFDR_A		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit	-89	-89	
Min Limit			
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-97.395	-98.707	1.312
30	5	-102.868	-99.707	-3.161
30	6	-104.126	-103.707	-0.419
30	7	-101.545	-100.975	-0.570
30	8	-94.090	-93.708	-0.382
30	9	-107.050	-107.075	0.025
0	47	-98.279	-98.279	0.000
0	48	-98.151	-98.151	0.000
Max		-94.090	-93.708	1.312
Average		-100.438	-100.039	-0.399
Min		-107.050	-107.075	-3.161
Std Dev		4.207	4.008	1.258



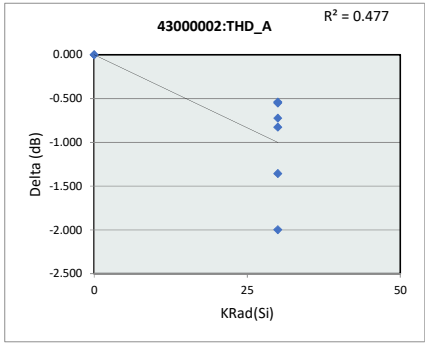


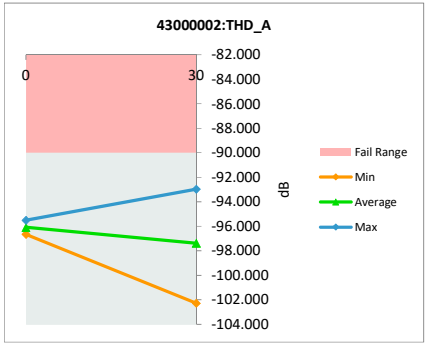
	43000001:SFDR_A	
Test Site		
Tester		
Test Number		
Max Limit	-89	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-98.279	-107.075
Average	-98.215	-100.647
Max	-98.151	-93.708
UL	-89.000	-89.000

TID LDR Report
ADC168M102R

	43000002:THD_A	
Test Site		
Tester		
Test Number		
Unit	dB	dB
Max Limit	-90	-90
Min Limit		

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-94.827	-94.000	-0.827
30	5	-98.997	-97.000	-1.997
30	6	-100.357	-99.000	-1.357
30	7	-99.724	-99.000	-0.724
30	8	-93.512	-92.972	-0.540
30	9	-102.821	-102.271	-0.550
0	47	-95.507	-95.507	0.000
0	48	-96.660	-96.660	0.000
	Max	-93.512	-92.972	0.000
	Average	-97.801	-97.051	-0.749
	Min	-102.821	-102.271	-1.997
	Std Dev	3.177	3.008	0.670

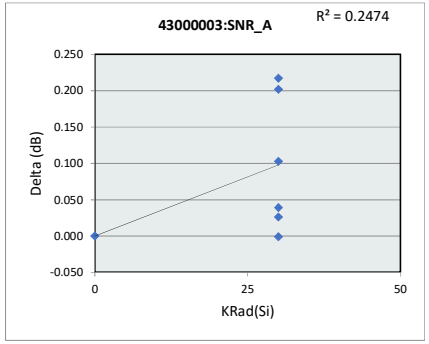


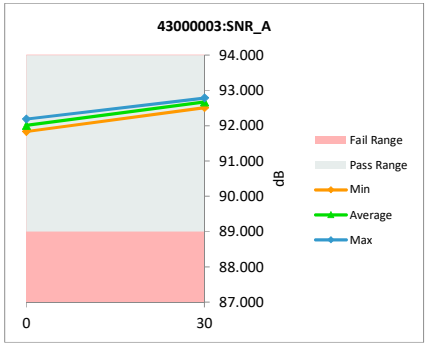


	43000002:THD_A	
Test Site		
Tester		
Test Number		
Max Limit	-90	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-96.660	-102.271
Average	-96.084	-97.374
Max	-95.507	-92.972
UL	-90.000	-90.000

TID LDR Report
ADC168M102R

	43000003:SNR_A		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	89	89	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	92.868	92.651	0.217
30	5	92.534	92.508	0.026
30	6	92.986	92.784	0.202
30	7	92.703	92.704	-0.001
30	8	92.654	92.615	0.039
30	9	92.887	92.784	0.103
0	47	91.834	91.834	0.000
0	48	92.188	92.188	0.000
	Max	92.986	92.784	0.217
	Average	92.582	92.509	0.073
	Min	91.834	91.834	-0.001
	Std Dev	0.392	0.334	0.091

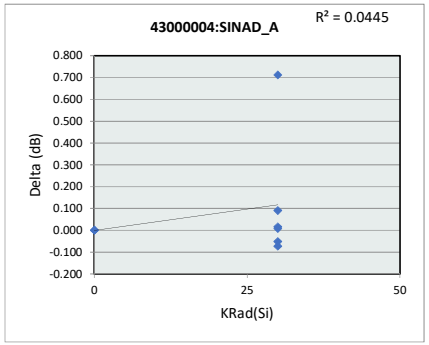


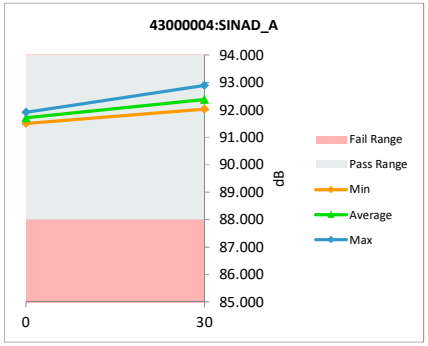


	43000003:SNR_A	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	89	dB
KRad(Si)	0	30
LL	89.000	89.000
Min	91.834	92.508
Average	92.011	92.674
Max	92.188	92.784
UL		

TID LDR Report
ADC168M102R

	43000004:SINAD_A		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	88	88	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	92.382	92.291	0.091
30	5	92.356	92.429	-0.073
30	6	92.841	92.893	-0.052
30	7	92.545	92.529	0.016
30	8	92.038	92.030	0.008
30	9	92.806	92.094	0.712
0	47	91.501	91.501	0.000
0	48	91.910	91.910	0.000
Max		92.841	92.893	0.712
Average		92.297	92.210	0.088
Min		91.501	91.501	-0.073
Std Dev		0.459	0.424	0.257



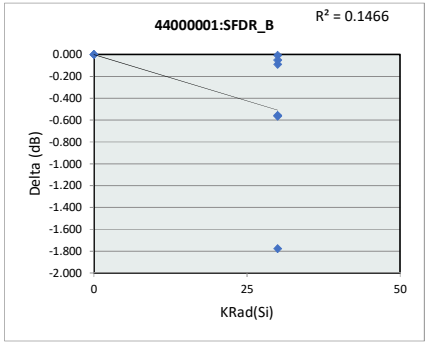


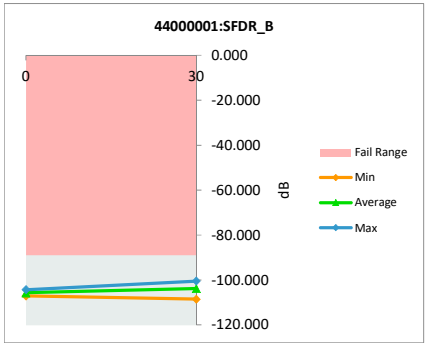
	43000004:SINAD_A	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	88	dB
KRad(Si)	0	30
LL	88.000	88.000
Min	91.501	92.030
Average	91.706	92.378
Max	91.910	92.893
UL		

TID LDR Report
ADC168M102R

	44000001:SFDR_B	
Test Site		
Tester		
Test Number		
Unit	dB	dB
Max Limit	-89	-89
Min Limit		

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-103.578	-103.489	-0.089
30	5	-101.046	-100.489	-0.557
30	6	-105.054	-104.489	-0.565
30	7	-103.142	-103.135	-0.007
30	8	-104.794	-103.015	-1.779
30	9	-108.587	-108.535	-0.052
0	47	-104.331	-104.331	0.000
0	48	-107.094	-107.094	0.000
	Max	-101.046	-100.489	0.000
	Average	-104.703	-104.322	-0.381
	Min	-108.587	-108.535	-1.779
	Std Dev	2.334	2.506	0.614



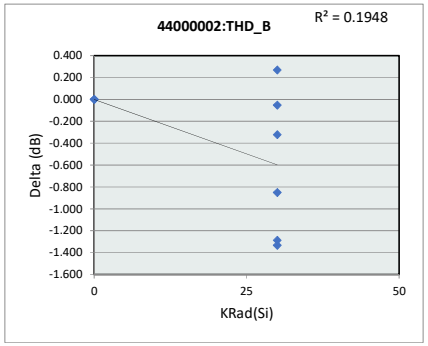


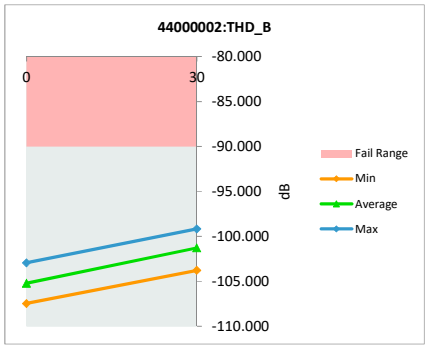
	44000001:SFDR_B	
Test Site		
Tester		
Test Number		
Max Limit	-89	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-107.094	-108.535
Average	-105.713	-103.859
Max	-104.331	-100.489
UL	-89.000	-89.000

TID LDR Report
ADC168M102R

	44000002:THD_B	
Test Site		
Tester		
Test Number		
Unit	dB	dB
Max Limit	-90	-90
Min Limit		

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-100.467	-99.179	-1.288
30	5	-100.511	-100.189	-0.322
30	6	-101.512	-100.179	-1.333
30	7	-101.542	-101.489	-0.053
30	8	-103.520	-103.789	0.269
30	9	-103.743	-102.892	-0.851
0	47	-102.953	-102.953	0.000
0	48	-107.476	-107.476	0.000
Max		-100.467	-99.179	0.269
Average		-102.715	-102.268	-0.447
Min		-107.476	-107.476	-1.333
Std Dev		2.304	2.649	0.626

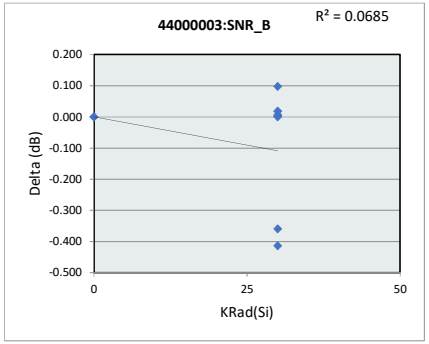


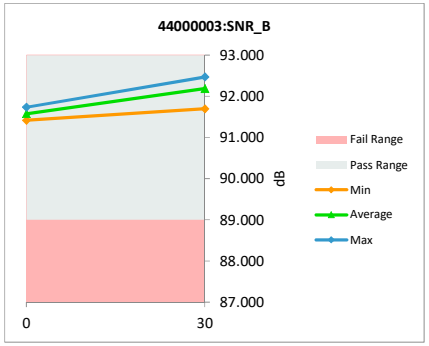


	44000002:THD_B	
Test Site		
Tester		
Test Number		
Max Limit	-90	dB
Min Limit		dB
KRad(Si)	0	30
LL		
Min	-107.476	-103.789
Average	-105.215	-101.286
Max	-102.953	-99.179
UL	-90.000	-90.000

TID LDR Report
ADC168M102R

	44000003:SNR_B		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	89	89	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	92.107	92.467	-0.360
30	5	92.033	92.447	-0.414
30	6	92.047	92.047	0.000
30	7	92.275	92.257	0.018
30	8	92.213	92.207	0.006
30	9	91.793	91.695	0.098
0	47	91.734	91.734	0.000
0	48	91.415	91.415	0.000
	Max	92.275	92.467	0.098
	Average	91.952	92.033	-0.081
	Min	91.415	91.415	-0.414
	Std Dev	0.286	0.383	0.192

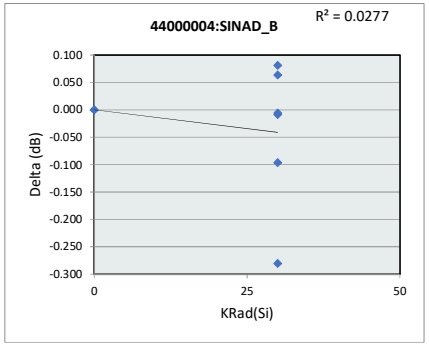


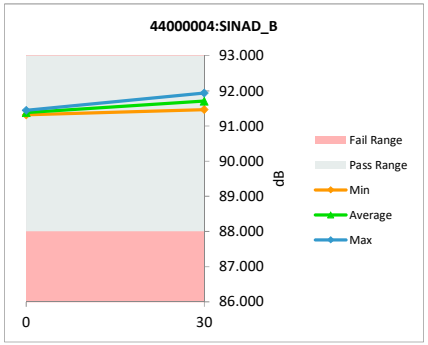


	44000003:SNR_B	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	89	dB
KRad(Si)	0	30
LL	89.000	89.000
Min	91.415	91.695
Average	91.575	92.186
Max	91.734	92.467
UL		

TID LDR Report
ADC168M102R

	44000004:SINAD_B		
Test Site			
Tester			
Test Number			
Unit	dB	dB	
Max Limit			
Min Limit	88	88	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	91.567	91.503	0.064
30	5	91.507	91.603	-0.096
30	6	91.623	91.903	-0.280
30	7	91.831	91.840	-0.009
30	8	91.931	91.937	-0.006
30	9	91.549	91.468	0.081
0	47	91.446	91.446	0.000
0	48	91.318	91.318	0.000
	Max	91.931	91.937	0.081
	Average	91.597	91.627	-0.031
	Min	91.318	91.318	-0.280
	Std Dev	0.200	0.235	0.114



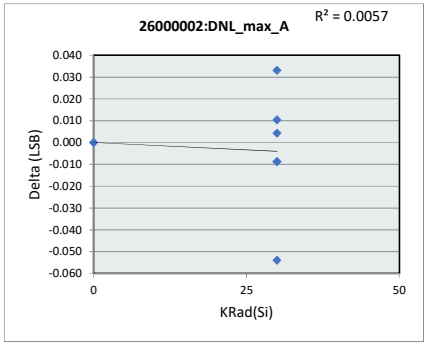


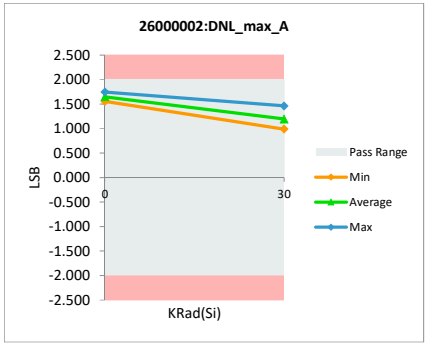
	44000004:SINAD_B	
Test Site		
Tester		
Test Number		
Max Limit		dB
Min Limit	88	dB
KRad(Si)	0	30
LL	88.000	88.000
Min	91.318	91.468
Average	91.382	91.709
Max	91.446	91.937
UL		

TID LDR Report
ADC168M102R

	26000002:DNL_max_A	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	2	2
Min Limit	-2	-2

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	1.311	1.320	-0.009
30	5	1.495	1.462	0.033
30	6	1.008	1.062	-0.054
30	7	1.253	1.262	-0.009
30	8	0.999	0.989	0.010
30	9	1.083	1.079	0.004
0	47	1.554	1.554	0.000
0	48	1.746	1.746	0.000
	Max	1.746	1.746	0.033
	Average	1.306	1.309	-0.003
	Min	0.999	0.989	-0.054
	Std Dev	0.274	0.265	0.025



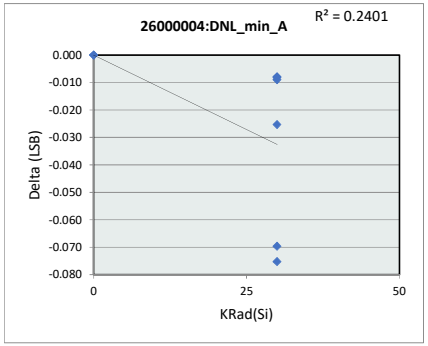


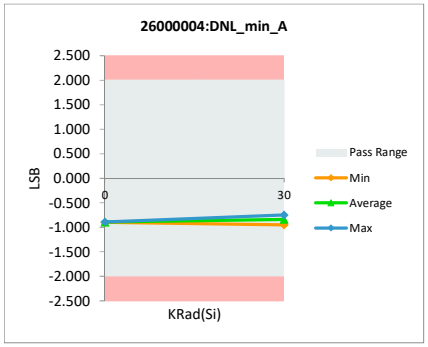
	26000002:DNL_max_A	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	1.554	0.989
Average	1.650	1.195
Max	1.746	1.462
UL	2.000	2.000

TID LDR Report
ADC168M102R

	26000004:DNL_min_A	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	2	2
Min Limit	-2	-2

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-0.824	-0.749	-0.075
30	5	-0.975	-0.950	-0.025
30	6	-0.857	-0.787	-0.070
30	7	-0.899	-0.891	-0.008
30	8	-0.798	-0.789	-0.009
30	9	-0.866	-0.858	-0.008
0	47	-0.891	-0.891	0.000
0	48	-0.899	-0.899	0.000
	Max	-0.798	-0.749	0.000
	Average	-0.876	-0.852	-0.024
	Min	-0.975	-0.950	-0.075
	Std Dev	0.054	0.069	0.031



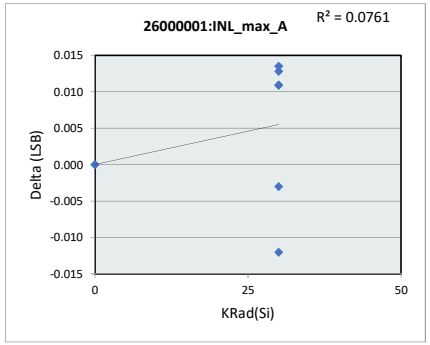


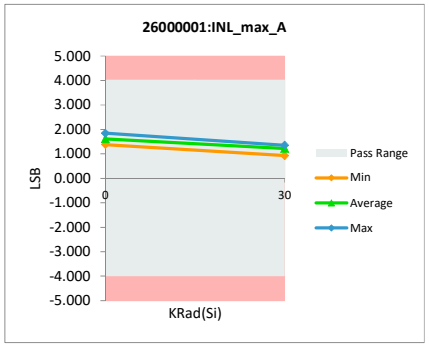
	26000004:DNL_min_A	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	-0.899	-0.950
Average	-0.895	-0.837
Max	-0.891	-0.749
UL	2.000	2.000

TID LDR Report
ADC168M102R

	26000001:INL_max_A	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	4	4
Min Limit	-4	-4

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	1.291	1.280	0.011
30	5	1.315	1.318	-0.003
30	6	1.156	1.168	-0.012
30	7	1.363	1.352	0.011
30	8	1.294	1.280	0.014
30	9	0.939	0.926	0.013
0	47	1.381	1.381	0.000
0	48	1.847	1.847	0.000
	Max	1.847	1.847	0.014
	Average	1.323	1.319	0.004
	Min	0.939	0.926	-0.012
	Std Dev	0.255	0.257	0.009

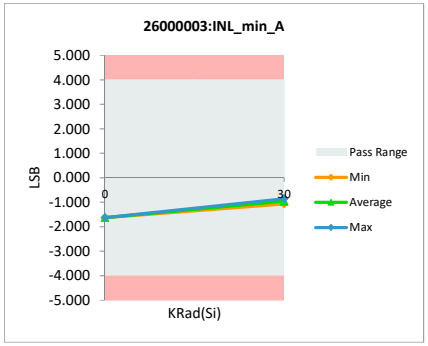


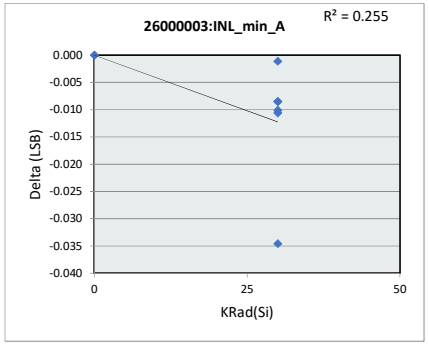


	26000001:INL_max_A	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	1.381	0.926
Average	1.614	1.221
Max	1.847	1.352
UL	4.000	4.000

TID LDR Report
ADC168M102R

	26000003:INL_min_A		
Test Site			
Tester			
Test Number			
Unit	LSB	LSB	
Max Limit	4	4	
Min Limit	-4	-4	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-1.020	-1.019	-0.001
30	5	-0.929	-0.894	-0.035
30	6	-0.895	-0.884	-0.011
30	7	-0.861	-0.852	-0.009
30	8	-1.021	-1.012	-0.009
30	9	-1.083	-1.073	-0.010
0	47	-1.625	-1.625	0.000
0	48	-1.627	-1.627	0.000
Max		-0.861	-0.852	0.000
Average		-1.133	-1.123	-0.009
Min		-1.627	-1.627	-0.035
Std Dev		0.313	0.319	0.011



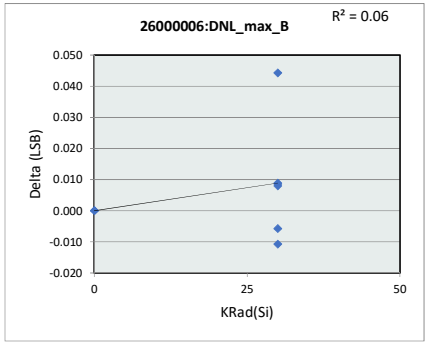


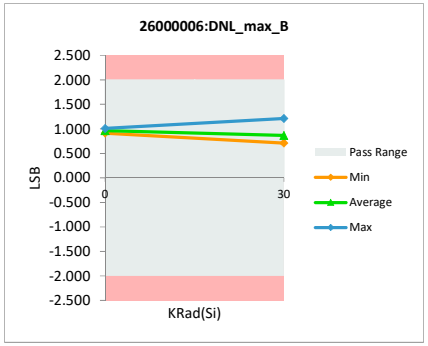
	26000003:INL_min_A	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	-1.627	-1.073
Average	-1.626	-0.956
Max	-1.625	-0.852
UL	4.000	4.000

TID LDR Report
ADC168M102R

	26000006:DNL_max_B	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	2	2
Min Limit	-2	-2

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	0.756	0.712	0.044
30	5	1.201	1.212	-0.011
30	6	0.806	0.812	-0.006
30	7	0.899	0.891	0.008
30	8	0.865	0.856	0.009
30	9	0.730	0.721	0.009
0	47	1.007	1.007	0.000
0	48	0.915	0.915	0.000
	Max	1.201	1.212	0.044
	Average	0.897	0.891	0.007
	Min	0.730	0.712	-0.011
	Std Dev	0.152	0.163	0.017





	26000006:DNL_max_B	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	0.915	0.712
Average	0.961	0.867
Max	1.007	1.212
UL	2.000	2.000

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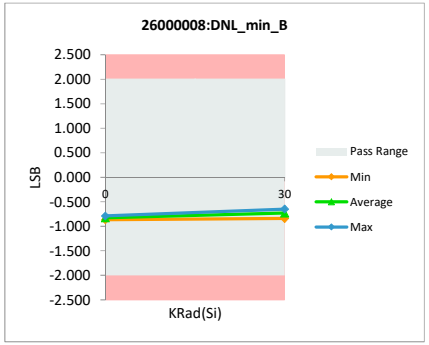
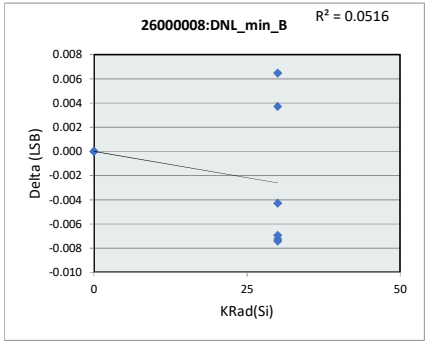
	26000008:DNL_min_B	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	2	2
Min Limit	-2	-2

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-0.689	-0.685	-0.004
30	5	-0.832	-0.838	0.006
30	6	-0.731	-0.735	0.004
30	7	-0.731	-0.724	-0.007
30	8	-0.748	-0.741	-0.007
30	9	-0.656	-0.649	-0.007
0	47	-0.866	-0.866	0.000
0	48	-0.790	-0.790	0.000
	Max	-0.656	-0.649	0.006
	Average	-0.755	-0.753	-0.002
	Min	-0.866	-0.866	-0.007
	Std Dev	0.071	0.074	0.005





	26000008:DNL_min_B	
Test Site		
Tester		
Test Number		
Max Limit	2	LSB
Min Limit	-2	LSB
KRad(Si)	0	30
LL	-2.000	-2.000
Min	-0.866	-0.838
Average	-0.828	-0.729
Max	-0.790	-0.649
UL	2.000	2.000

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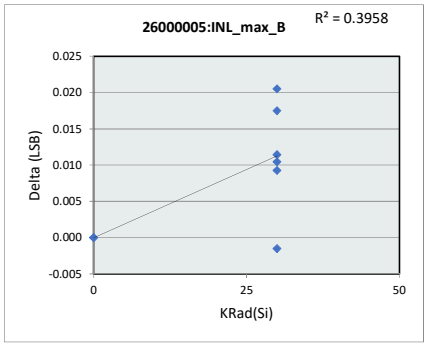
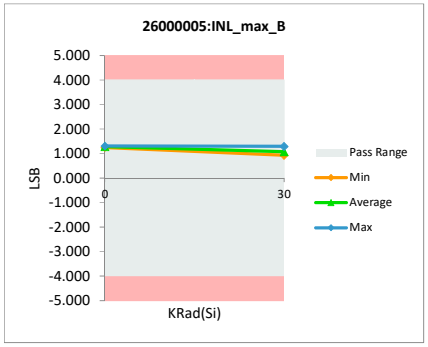
	26000005:INL_max_B	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	4	4
Min Limit	-4	-4

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	1.001	1.002	-0.001
30	5	1.313	1.292	0.021
30	6	1.210	1.192	0.018
30	7	1.059	1.048	0.011
30	8	0.938	0.928	0.010
30	9	1.027	1.018	0.009
0	47	1.251	1.251	0.000
0	48	1.306	1.306	0.000
	Max	1.313	1.306	0.021
	Average	1.138	1.130	0.008
	Min	0.938	0.928	-0.001
	Std Dev	0.148	0.148	0.008





	26000005:INL_max_B	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	1.251	0.928
Average	1.279	1.080
Max	1.306	1.292
UL	4.000	4.000

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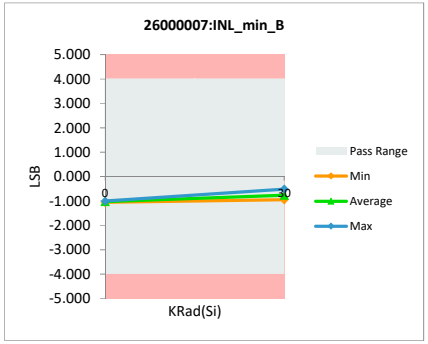
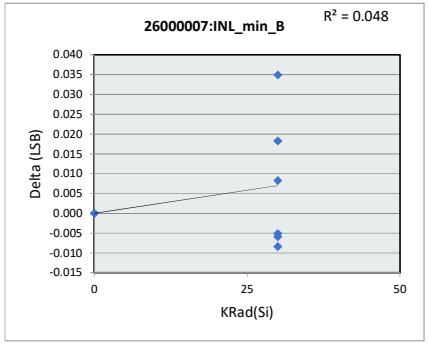
	26000007:INL_min_B	
Test Site		
Tester		
Test Number		
Unit	LSB	LSB
Max Limit	4	4
Min Limit	-4	-4

KRad(Si)	Serial #	postrad	prerad	Delta
30	4	-0.791	-0.799	0.008
30	5	-0.825	-0.860	0.035
30	6	-0.881	-0.899	0.018
30	7	-0.602	-0.594	-0.008
30	8	-0.517	-0.511	-0.006
30	9	-0.955	-0.950	-0.005
0	47	-1.054	-1.054	0.000
0	48	-1.007	-1.007	0.000
Max		-0.517	-0.511	0.035
Average		-0.829	-0.834	0.005
Min		-1.054	-1.054	-0.008
Std Dev		0.189	0.193	0.015





	26000007:INL_min_B	
Test Site		
Tester		
Test Number		
Max Limit	4	LSB
Min Limit	-4	LSB
KRad(Si)	0	30
LL	-4.000	-4.000
Min	-1.054	-0.950
Average	-1.031	-0.769
Max	-1.007	-0.511
UL	4.000	4.000

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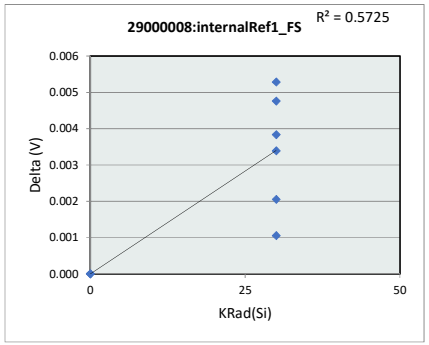
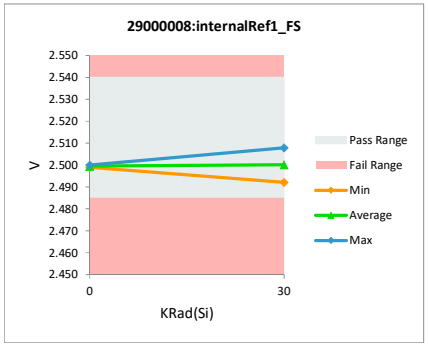
	29000008:internalRef1_FS		
Test Site			
Tester			
Test Number			
Unit	V	V	
Max Limit	2.54	2.54	
Min Limit	2.485	2.485	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	2.505	2.500	0.005
30	5	2.509	2.508	0.001
30	6	2.509	2.507	0.002
30	7	2.496	2.492	0.004
30	8	2.501	2.498	0.003
30	9	2.501	2.496	0.005
0	47	2.500	2.500	0.000
0	48	2.499	2.499	0.000
	Max	2.509	2.508	0.005
	Average	2.503	2.500	0.003
	Min	2.496	2.492	0.000
	Std Dev	0.005	0.005	0.002

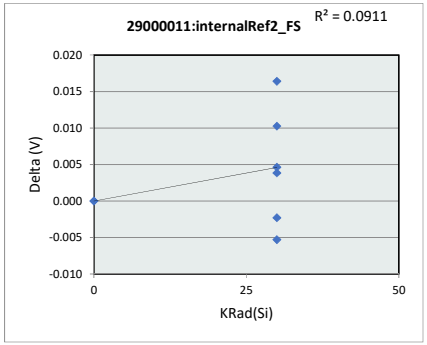


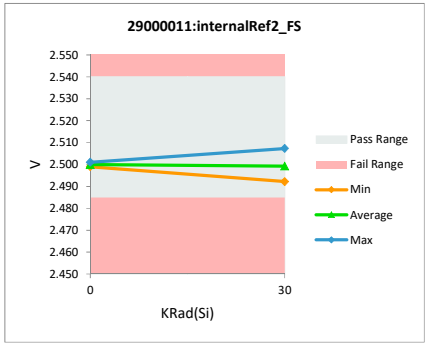


	29000008:internalRef1_FS	
Test Site		
Tester		
Test Number		
Max Limit	2.54	V
Min Limit	2.485	V
KRad(Si)	0	30
LL	2.485	2.485
Min	2.499	2.492
Average	2.500	2.500
Max	2.500	2.508
UL	2.540	2.540

TID LDR Report
ADC168M102R

	29000011:internalRef2_FS		
Test Site			
Tester			
Test Number			
Unit	V	V	
Max Limit	2.54	2.54	
Min Limit	2.485	2.485	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	2.506	2.496	0.010
30	5	2.510	2.494	0.016
30	6	2.509	2.504	0.005
30	7	2.496	2.492	0.004
30	8	2.502	2.507	-0.005
30	9	2.500	2.502	-0.002
0	47	2.501	2.501	0.000
0	48	2.499	2.499	0.000
	Max	2.510	2.507	0.016
	Average	2.503	2.499	0.003
	Min	2.496	2.492	-0.005
	Std Dev	0.005	0.005	0.007





	29000011:internalRef2_FS	
Test Site		
Tester		
Test Number		
Max Limit	2.54	V
Min Limit	2.485	V
KRad(Si)	0	30
LL	2.485	2.485
Min	2.499	2.492
Average	2.500	2.499
Max	2.501	2.507
UL	2.540	2.540

TID LDR Report
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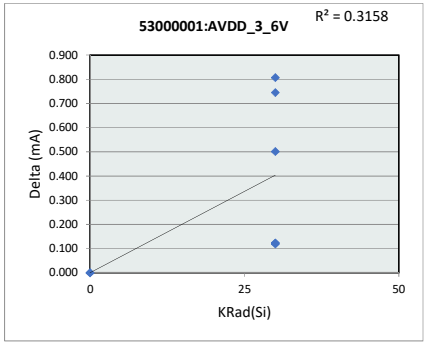
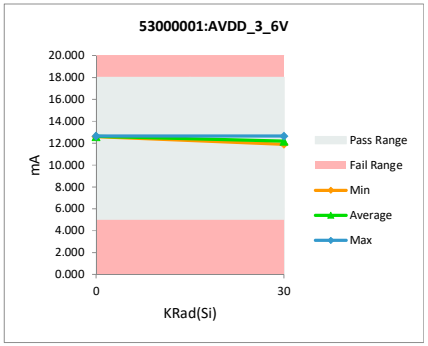
	53000001:AVDD_3_6V		
Test Site			
Tester			
Test Number			
Unit	mA	mA	
Max Limit	18	18	
Min Limit	5	5	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	12.844	12.037	0.807
30	5	12.649	11.904	0.745
30	6	12.492	11.990	0.502
30	7	12.322	12.203	0.119
30	8	12.470	12.348	0.122
30	9	12.761	12.638	0.123
0	47	12.591	12.591	0.000
0	48	12.639	12.639	0.000
	Max	12.844	12.639	0.807
	Average	12.596	12.294	0.302
	Min	12.322	11.904	0.000
	Std Dev	0.167	0.304	0.332





	53000001:AVDD_3_6V	
Test Site		
Tester		
Test Number		
Max Limit	18	mA
Min Limit	5	mA
KRad(Si)	0	30
LL	5.000	5.000
Min	12.591	11.904
Average	12.615	12.187
Max	12.639	12.638
UL	18.000	18.000

TID LDR Report
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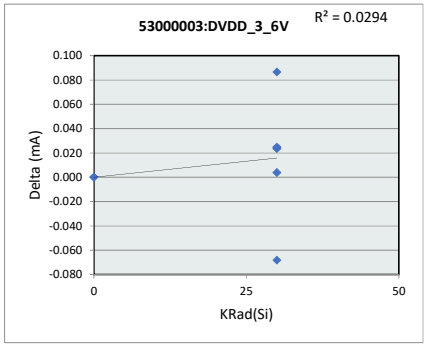
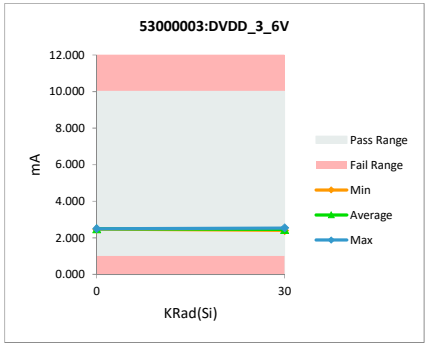
	53000003:DVDD_3_6V		
Test Site			
Tester			
Test Number			
Unit	mA	mA	
Max Limit	10	10	
Min Limit	1	1	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	2.494	2.490	0.004
30	5	2.488	2.401	0.087
30	6	2.472	2.540	-0.068
30	7	2.516	2.492	0.024
30	8	2.449	2.424	0.025
30	9	2.468	2.444	0.024
0	47	2.475	2.475	0.000
0	48	2.504	2.504	0.000
	Max	2.516	2.540	0.087
	Average	2.483	2.471	0.012
	Min	2.449	2.401	-0.068
	Std Dev	0.022	0.046	0.043





	53000003:DVDD_3_6V	
Test Site		
Tester		
Test Number		
Max Limit	10	mA
Min Limit	1	mA
KRad(Si)	0	30
LL	1.000	1.000
Min	2.475	2.401
Average	2.490	2.465
Max	2.504	2.540
UL	10.000	10.000

TID LDR Report
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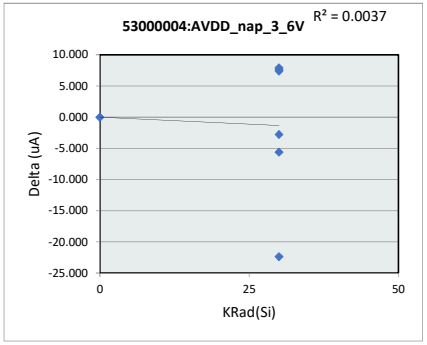
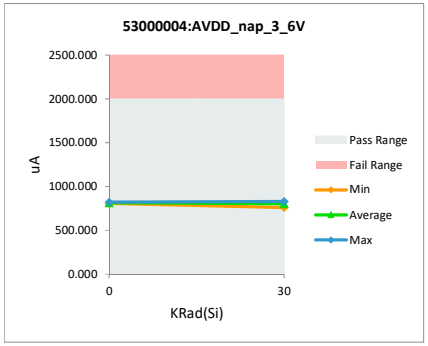
	53000004:AVDD_nap_3_6V		
Test Site			
Tester			
Test Number			
Unit	uA	uA	
Max Limit	2000	2000	
Min Limit	0	0	
KRad(Si)	Serial #	postrad	prerad	Delta
30	4	826.613	829.406	-2.793
30	5	815.804	821.406	-5.602
30	6	779.023	801.406	-22.383
30	7	797.735	790.355	7.380
30	8	767.890	759.986	7.904
30	9	833.066	825.466	7.600
0	47	820.159	820.159	0.000
0	48	806.607	806.607	0.000
Max		833.066	829.406	7.904
Average		805.862	806.849	-0.987
Min		767.890	759.986	-22.383
Std Dev		22.999	23.122	10.050





	53000004:AVDD_nap_3_6V	
Test Site		
Tester		
Test Number		
Max Limit	2000	uA
Min Limit	0	uA
KRad(Si)	0	30
LL	0.000	0.000
Min	806.607	759.986
Average	813.383	804.671
Max	820.159	829.406
UL	2000.000	2000.000

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