

SN55HVD233-SEP Total Ionizing Dose (TID) Radiation Report

ABSTRACT

This report covers the radiation characterization results of the SN55HVD233-SEP CAN Transceiver. The study was done to determine Total Ionizing Dose (TID) effects under low dose rate (LDR) up to 30krad(Si) as a one time characterization. The results show that all samples passed within the specified limits up to 30 krad(Si) and Radiation Lot Acceptance Testing (RLAT) will be performed using 22 units at 20 krad(Si) for future wafer lots. Furthermore, the SN55HVD233-SEP is packaged in a space enhanced plastic for low outgassing characteristics and is Single Event Latch-Up (SEL) immune up to 43 MeV-cm²/mg making the device suitable for low Earth orbit space applications.

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1 Device Information

1.1 Product Description

The SN55HVD233-SEP is used in LEO applications employing the controller area network (CAN) serial communication physical layer in accordance with the ISO 11898 standard. As a CAN transceiver, the device provides transmit and receive capability between the differential CAN bus and a CAN controller, with signaling rates up to 1 Mbps. Designed for operation in especially harsh radiation environments, the SN55HVD233-SEP features crosswire, overvoltage, and loss of ground protection to ± 16 V, and overtemperature (thermal shutdown) protection. This device operates over a wide -7 -V to 12-V common mode range. This transceiver is the interface between the host CAN controller on the microprocessor, FPGA or ASIC, and the differential CAN bus used in satellite applications. The SN55HVD233-SEP is characterized for operation from -55°C to 125°C . It has been Radiation Hardened qualified to 30 krad(Si) under HDR (after 336 hours of anneal).

1.2 Device Details

Table 1 lists the device information used in the initial Radiation Hardened TID characterization and qualification of HDR tests.

Table 1. Device and Exposure Details

TID HDR/LDR Details: 30 krad(Si)	
TI Device Number	SN55HVD233-SEP
Package	8-Pin D
Technology	LBC3S
Die Lot Number	1730306DFB
A/T Lot Number / Date Code	8342104WCI/89ALZLM
Quantity Tested	38 units, including 1 control unit
Lot Accept/Reject	Devices passed 5 krad(Si), 10 krad(Si), 20 krad(Si) and 30 krad(Si)
HDR Radiation Facility	Texas Instruments SVA Group, Santa Clara, CA
HDR Dose Level	5 krad(Si), 10 krad(Si), 20 krad(Si), 30 krad(Si)
HDR Dose Rate	65 rad(Si)/s
LDR Dose Level	20 krad(Si), 30 krad(Si)
LDR Dose Rate	0.01 rad(Si)/s
HDR Radiation Source	Gammacell 220 Excel (GC-220E) Co-60
LDR Radiation Source	Gammacell JLSA 81-24 Co-60
Irradiation Temperature	Ambient, room temperature

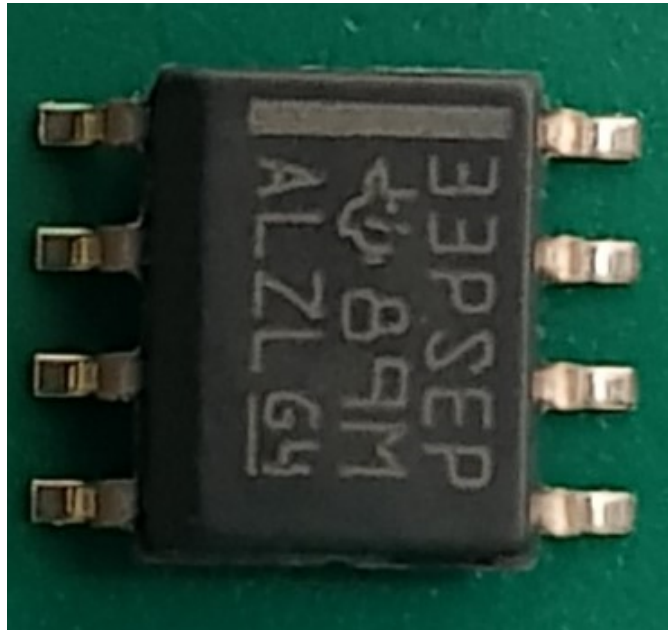


Figure 1. SN55HVD233-SEP Device Used in Exposure

2 Total Dose Test Setup

2.1 Test Overview

The SN55HVD233-SEP was irradiated up to 30 krad(Si) and then put through full electrical parametric testing on the production Automated Test Equipment (ATE). The device was functional and passed all electrical parametric tests with the readings within guard bands of the data sheet electrical specification limits.

The SN55HVD233-SEP LBC3S process technology contains Bipolar and CMOS components. Both LDR and HDR were performed. Results showed the worst case was at HDR and the device did not exhibit ELDRS. Hence HDR will be performed on each wafer lot for future RLAT.

2.2 Test Description and Facilities

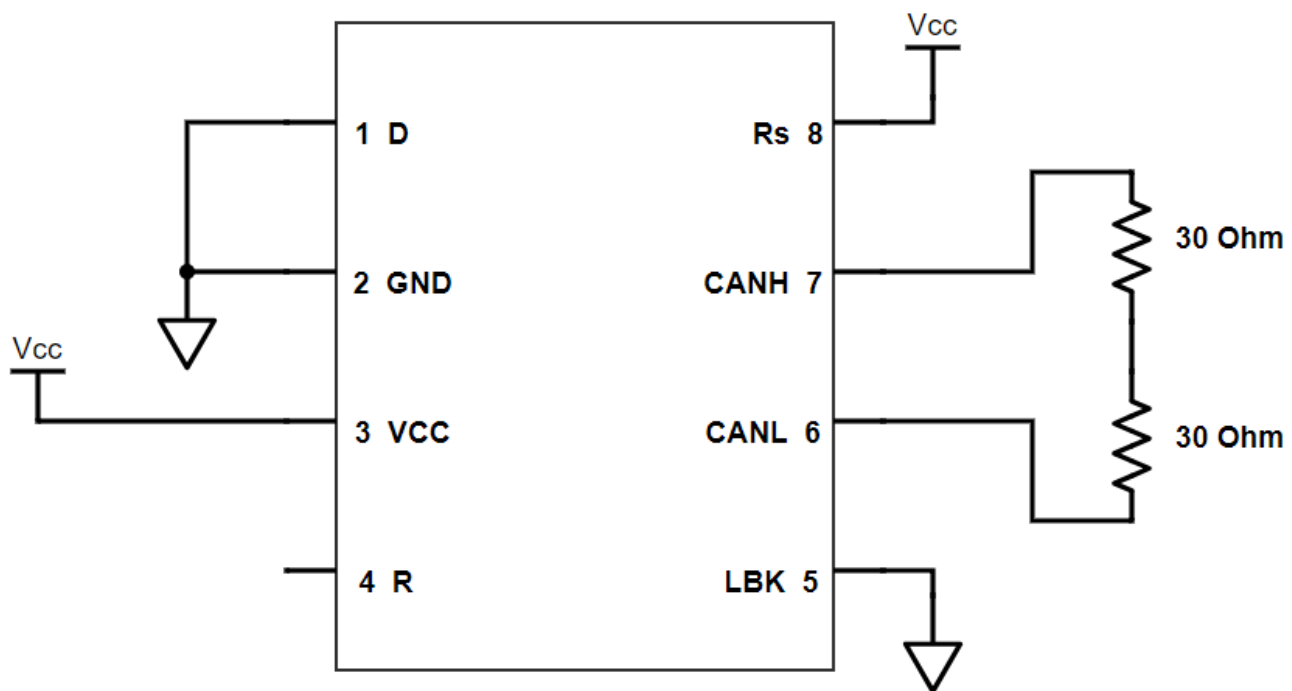
The SN55HVD233-SEP LDR exposure was performed on biased devices in a Co60 gamma cell under a 10-mrad(Si)/s exposure rate. The dose rate of the irradiator used in the exposure ranges from < 10 mrad(Si)/s to a maximum of approximately 65 rad(Si)/s, determined by the distance from the source. The exposure boards are housed in a lead-aluminum box (as specified in MIL-STD-883 TM 1019.9) to harden the gamma spectrum and minimize dose enhancement effects. The irradiator calibration is maintained by Logmire Laboratories using Thermoluminescence Dosimeters (TLDs) traceable to the National Institute of Standards and Technology (NIST) and the dosimetry was verified using TLDs prior to the radiation exposures. After exposure, the devices were packed in dry ice (per MIL-STD-883 Method 1019.9 section 3.10) and returned to TI Dallas for a full post radiation electrical evaluation using Texas Instruments production Automated Test Equipment (ATE). ATE guard band test limits are set within data sheet electrical limits to ensure a minimum Cpk and test error margin based on initial qualification and characterization data. Post radiation measurements were taken within 30 minutes of removal of the devices from the dry ice container. The devices were allowed to reach room temperature prior to electrical post radiation measurements.

The SN55HVD233-SEP HDR exposure was performed on biased devices in a Co60 gamma cell at TI SVA facility in Santa Clara, California. The un-attenuated dose rate of this cell is 65 rad(Si)/s. After exposure, the devices were packed in dry ice (per MIL-STD-883 Method 1019.9 section 3.10) and returned to TI Dallas for a full post radiation electrical evaluation using Texas Instruments ATE. ATE guard band test limits are set within data sheet electrical limits to ensure a minimum Cpk and test error margin based on initial qualification and characterization data. Post radiation measurements were taken within 30 minutes of removal of the devices from the dry ice container. The devices were allowed to reach room temperature prior to electrical post radiation measurements.

2.3 Test Setup Details

The devices under HDR and LDR exposure were tested in biased conditions as described below.

Biased - - [Figure 2](#) is used for HDR and LDR exposure with biased condition.



Bias condition: Pin 8 connected 3.6 V for low power mode.

Figure 2. Bias Diagram Used in TID Exposure

2.4 Test Configuration and Condition

A step-stress (5k, 10k, 20k, 30k) test method was used to determine the TID hardness level. That is, after a predetermined TID level was reached, an electrical test was performed on a given sample of parts to verify that the units are within data sheet electrical test limits. From initial feasibility studies the difference between pre and post irradiation was greater for samples that were biased, hence for RLAT 22 units were used at the 20-krad(Si) dose level with biased setup conditions and this will be repeated for each wafer lot.

Table 2. HDR Biased Device and Exposure Information

HDR = 65 rad(Si)/s			
Total Samples: 5 Biased/TID level			
Exposure Levels:			
5k	10k	20k	30k
1, 2, 3, 4, 5	6, 7, 8, 9, 10	11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32	33, 34, 35, 36, 37

Control Unit: 38, 39

Table 3. LDR Biased Device and Exposure Information

LDR = 10 mrad(Si)/s	
Total Samples: 4 Biased/TID level	
Exposure Levels:	
20k	30k
16, 18, 19, 31	16, 18, 19, 31

Control Unit: 21

3 Tested Parameters

Table 4 and Table 5 listed the test numbers for each test condition with the datasheet parameters.

Table 4. SN55HVD233-SEP Data Sheet Parameters with Test Numbers - Driver Electrical Characteristics

PARAMETER		TEST CONDITIONS	Data sheet Lit# SLLSF98 December 2018				Test # or Name
			MIN	TYP	MAX	UNIT	
$V_{O(D)}$	Bus output voltage (dominant)	CANH CANL $V(D) = 0\text{ V}$, $V(RS) = 0\text{ V}$, see Figure 3 and Figure 4	2.4		VCC	V	200.0_VO_D_CH_VCC3V 3200.0_VO_D_CH_VCC36V
			0.5		1.25		200.1_VO_D_CL_VCC3V 3200.1_VO_D_CL_VCC36V
$V_{OD(D)}$	Differential output voltage (dominant)	$V(D) = 0\text{ V}$, $V(RS) = 0\text{ V}$, see Figure 3 and Figure 4	1.5	2	3	V	200.2_VOD_D_VC C3V 3200.2_VOD_D_V CC36V
		$V(D) = 0\text{ V}$, $V(RS) = 0\text{ V}$, see Figure 4 and Figure 5	1.2	2	3		200.7_VOD_D_C_12V_VCC3V 3200.7_VOD_D_C_12V_VCC36V
V_{OD}	Differential output voltage (recessive)	$V(D) = 3\text{ V}$, $V(RS) = 0\text{ V}$, see Figure 3 and Figure 4	-120		12	mV	200.5_VOD_R_VC C3V 3200.5_VOD_R_V CC36V
		$V(D) = 3\text{ V}$, $V(RS) = 0\text{ V}$, no load	-0.5		0.05	V	200.6_VOD_R_N_VCC3V 3200.6_VOD_R_N_VCC36V
I_{OS}	Short-circuit output current	$V(CANH) = -7\text{ V}$, CANL open, see Figure 6	-250			mA	300.4_IOSN7V_C ANH_VCC3V 3300.4_IOSN7V_C ANH_VCC36V
		$V(CANH) = 12\text{ V}$, CANL open, see Figure 6			1		300.5_IOS12V_CA NH_VCC3V 3300.5_IOS12V_C ANH_VCC36V
		$V(CANL) = -7\text{ V}$, CANH open, see Figure 6	-1				300.6_IOSN7V_C ANL_VCC3V 3300.6_IOSN7V_C ANL_VCC36V
		$V(CANL) = 12\text{ V}$, CANH open, see Figure 6			250		300.7_IOS12V_CA NL_VCC3V 3300.7_IOS12V_C ANL_VCC36V
I_{CC}	Standby	$V(RS) = VCC$, $V(D) = VCC$, $V(LBK) = 0\text{ V}$		200	700	μA	500.0_ICC_STAN DBY_VCC3V 3500.0_ICC_STAN DBY_VCC36V
	Dominant	$V(D) = 0\text{ V}$, no load, $V(LBK) = 0\text{ V}$, $RS = 0\text{ V}$			6	mA	500.3_ICC_DOMI NANT_VCC3V 3500.3_ICC_DOMI NANT_VCC36V
	Recessive	$V(D) = VCC$, no load, $V(LBK) = 0\text{ V}$, $V(RS) = 0\text{ V}$			6		500.2_ICC_RECE SSIVE_VCC3V 3500.2_ICC_REC ESSIVE_VCC36V

Table 5. SN55HVD233-SEP Data Sheet Parameters with Test Numbers - Receiver Electrical Characteristics

PARAMETER	TEST CONDITIONS		Data sheet Lit# SLLSF98 December 2018				Test # or Name
			MIN	TYP	MAX	UNIT	
V_{IT+} Positive-going input threshold voltage	$V(LBK) = 0\text{ V}$, see Table 6			750	900	mV	600.0_vith_POSITIVE_VCC3V 3600.0_vith_POSITIVE_VCC36V
V_{IT-} Negative-going input threshold voltage				500	650	mV	600.1_vith_NEGATIVE_VCC3V 3600.1_vith_NEGATIVE_VCC36V
I_i Bus input current	$V_{(CANH)}$ or $V_{(CANL)} = 12\text{ V}$	Other bus pin = 0 V, $V(D) = 3\text{ V}$, $V(LBK) = 0\text{ V}$, $V(RS) = 0\text{ V}$	150		500	μA	400.0_IIH_CANH_12V_VCC3V 3400.0_IIH_CANH_12V_VCC36V 400.4_IIL_CANL_12V_VCC3V 3400.4_IIL_CANL_12V_VCC36V
	$V_{(CANH)}$ or $V_{(CANL)} = 12\text{ V}$, $VCC = 0\text{ V}$		150		600		400.3_IIL_CANH_12V_VCC3V 3400.3_IIL_CANH_12V_VCC36V 400.7_IIH_CANL_12V_VCC3V 3400.7_IIH_CANL_12V_VCC36V
	CANH or CANL = -7 V		-610		-100		400.1_IIH_CANH_N7V_VCC3V 3400.1_IIH_CANH_N7V_VCC36V 400.5_IIL_CANL_N7V_VCC3V 3400.5_IIL_CANL_N7V_VCC36V
	CANH or CANL = -7 V, $VCC = 0\text{ V}$		-450		-100		400.2_IIL_CANH_N7V_VCC3V 3400.2_IIL_CANH_N7V_VCC36V 400.6_IIH_CANL_N7V_VCC3V 3400.6_IIH_CANL_N7V_VCC36V

3.1 Parameter Measurement Information

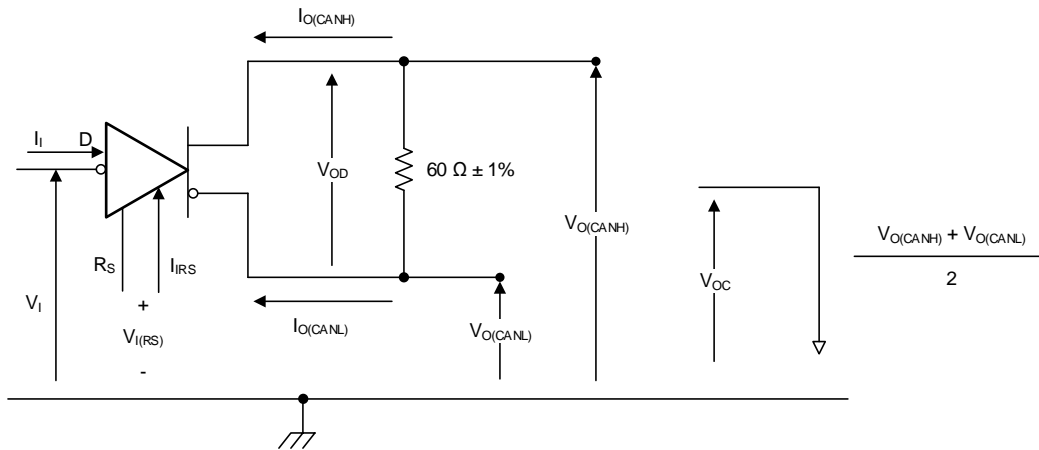


Figure 3. Driver Voltage, Current, and Test Definition

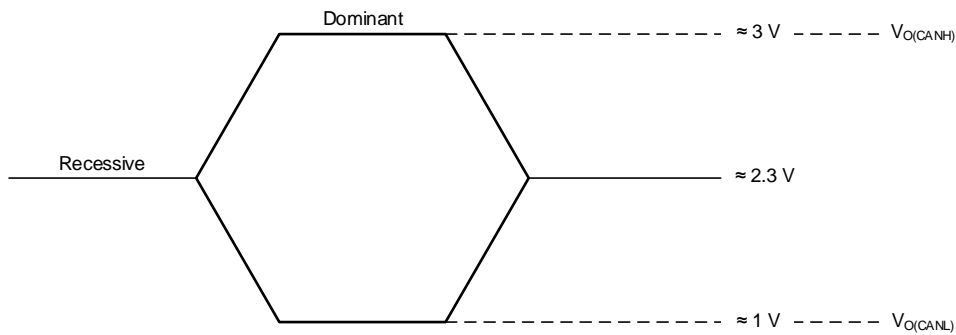


Figure 4. Bus Logic State Voltage Definitions

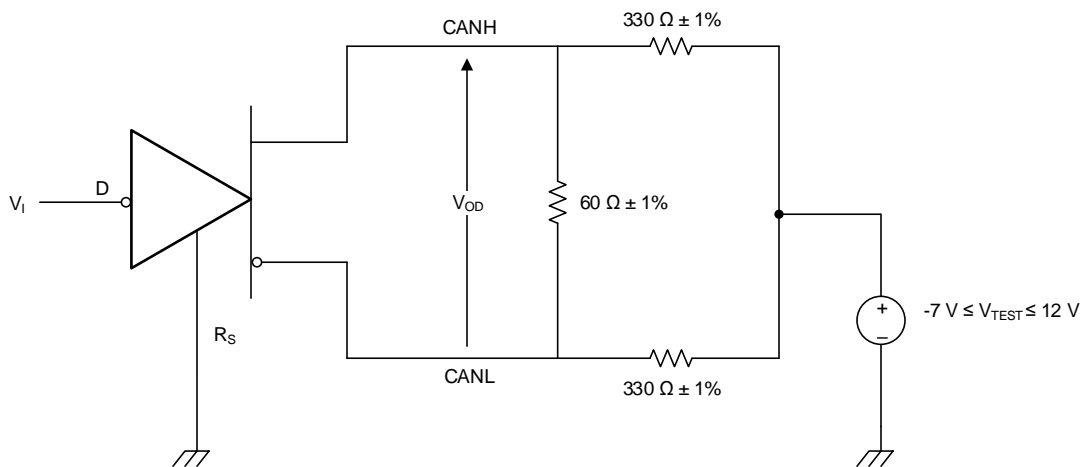


Figure 5. Driver V_{OD}

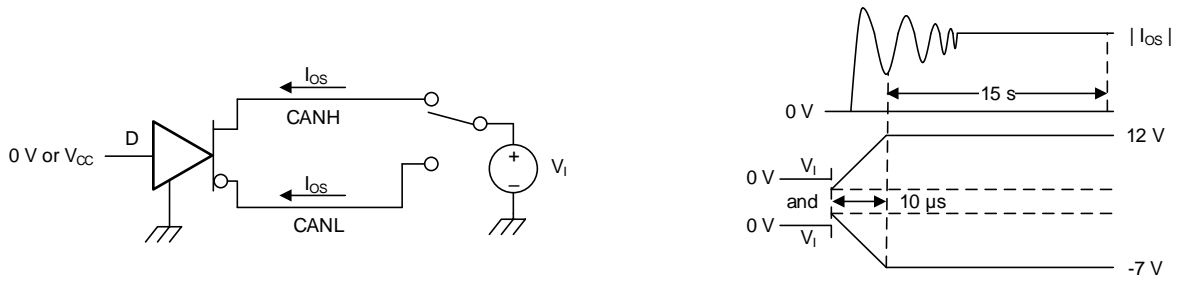


Figure 6. I_{os} Test Circuit and Waveforms

Table 6. Differential Input Voltage Threshold Test

INPUT		OUTPUT		MEASURED
V_{CANH}	V_{CANL}	R		$ V_{ID} $
-6.1 V	-7 V	L	V_{OL}	900 mV
12 V	11.1 V	L		900 mV
-1 V	-7 V	L		6 V
12 V	6 V	L		6 V
-6.5 V	-7 V	H	V_{OH}	500 mV
12 V	11.5 V	H		500 mV
-7 V	-1 V	H		6 V
6 V	12 V	H		6 V
Open	Open	H		X

4 Total Ionizing Dose (RHA) Characterization Test Results

4.1 Total Ionizing Dose RHA Characterization Summary Results

The parametric data for the SN55HVD233-SEP passes up to 30-krad(Si) LDR and HDR.

The drift of data sheet electrical parameters including critical parameters through LDR is within experimental error to the drift at HDR. The device is tested to maximum total dose of 30 krad(Si).

The SN55HVD233-SEP passed post electrical test over all the conditions below ensuring that the wafer lot is certifiable as 30-krad(Si) Radiation Hardened. Samples were assembled from one wafer level variability regarding TID drift through post electrical test on ATE after HDR exposure.

- HDR (65-rad(Si)/s) biased: Post 5 krad(Si), 10 krad(Si), 20 krad(Si), 30 krad(Si)

Overall radiation performance was very solid. There were no functional or parametric failures at any read point. All data sheet parameters passed at all exposure levels with margin and ELDRS free. However, radiation end point limits for the noted parameters are ensured only for the conditions as specified in MIL-STD-883, method 1019, condition A. Based on the room temp anneal with MIL-STD-883 method 1019 paragraph 3.11.2 C; effective dose rate is 24.8 mrad(Si)/s. There were 2 parameters that showed a consistent trend during exposure and these were the worst case shift seen of all parameters tested. These are listed below.

1. $V_{OD(D)}$ Differential output voltage (dominant)

Differential output voltage – exhibits a decrease from 20 krad(Si) to 30 krad(Si) and the amount of shift from T0 to 30 krad(Si) was ~4.3% but still within data sheet specifications.

2. I_{CC} Supply current, dominant

Supply current, dominant – exhibits an decrease of I_{CC} current through increased exposure but is still within the data sheet specifications.

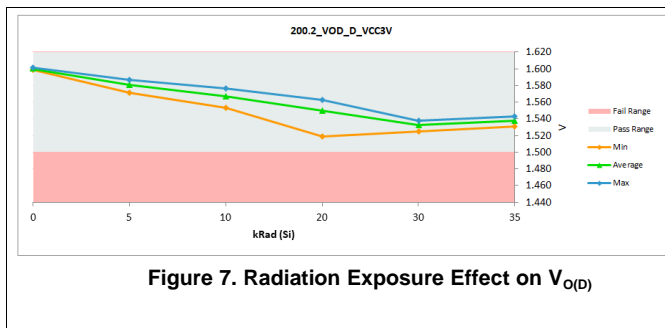


Figure 7. Radiation Exposure Effect on $V_{OD(D)}$

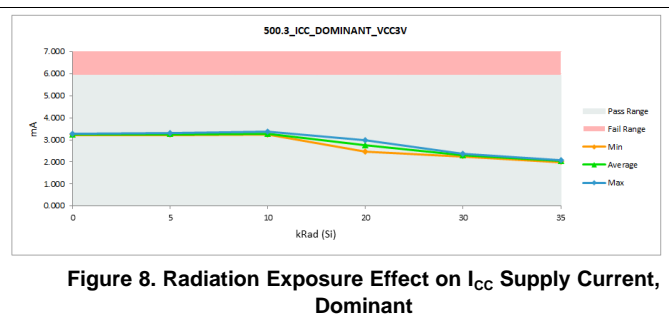


Figure 8. Radiation Exposure Effect on I_{CC} Supply Current, Dominant

5 Applicable and Reference Documents

5.1 *Applicable Documents*

- [SN55HVD233-SEP 3.3-V Radiation Hardened CANS Transceiver](#), SLLSF98
- [TCAN1042DEVM Evaluation Module User's Guide](#), SLLU234

Full TID Report Graphs and Tables

This section provides the Full TID Report for SN55HVD233-SEP.

Delta Threshold 10.00%

TID Report SN55HVD233-SEP

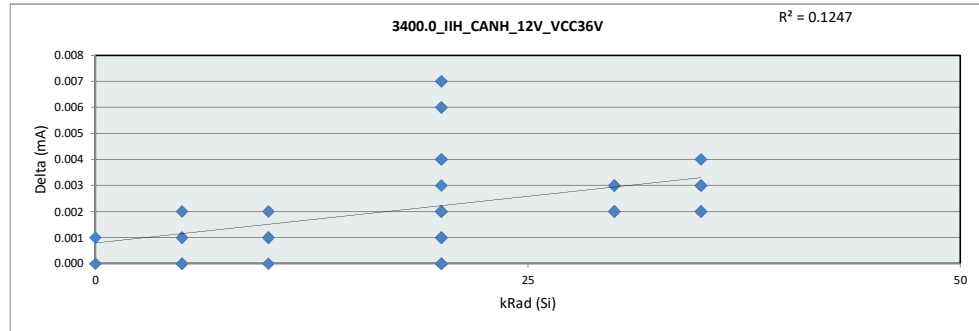
Notes: Data at 35Krad represent the 30Krad post 2WKS annealed data

TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

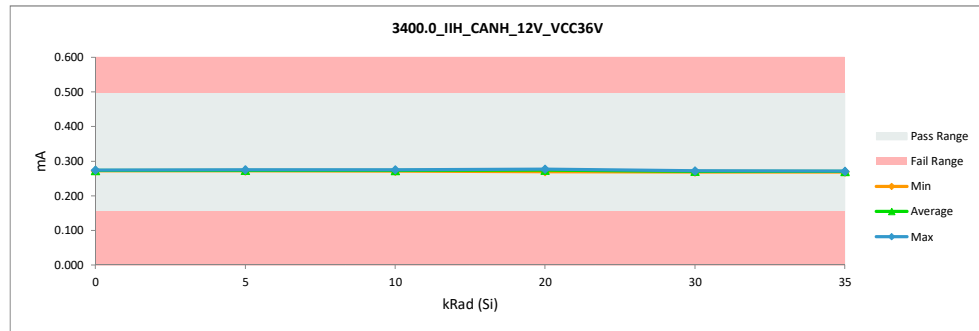
3400.0_IIH_CANH_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.495	0.495
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.273	0.272	0.001
0	039C1	0.274	0.274	0.000
5	001B5	0.272	0.272	0.000
5	002B5	0.276	0.274	0.002
5	003B5	0.274	0.273	0.001
5	004B5	0.275	0.274	0.001
5	005B5	0.275	0.275	0.000
10	006B10	0.276	0.274	0.002
10	007B10	0.272	0.271	0.001
10	008B10	0.272	0.271	0.001
10	009B10	0.276	0.275	0.001
10	010B10	0.274	0.274	0.000
20	011B20	0.276	0.275	0.001
20	012B20	0.276	0.274	0.002
20	013B20	0.278	0.276	0.002
20	014B20	0.274	0.272	0.002
20	015B20	0.274	0.270	0.004
20	016B20	0.279	0.276	0.003
20	017B20	0.278	0.276	0.002
20	018B20	0.277	0.276	0.001
20	019B20	0.282	0.276	0.006
20	020B20	0.283	0.277	0.006
20	021B20	0.282	0.275	0.007
20	022B20	0.277	0.271	0.006
20	023B20	0.281	0.274	0.007
20	024B20	0.281	0.277	0.004
20	025B20	0.280	0.276	0.004
20	026B20	0.272	0.272	0.000
20	027B20	0.273	0.273	0.000
20	028B20	0.276	0.275	0.001
20	029B20	0.275	0.275	0.000
20	030B20	0.275	0.274	0.001
20	031B20	0.275	0.275	0.000
20	032B20	0.271	0.271	0.000
30	033B30	0.271	0.269	0.002
30	034B30	0.275	0.272	0.003
30	035B30	0.274	0.271	0.003
30	036B30	0.273	0.271	0.002
30	037B30	0.273	0.271	0.002
35	033B35	0.271	0.269	0.002
35	034B35	0.275	0.271	0.004
35	035B35	0.274	0.271	0.003
35	036B35	0.273	0.271	0.002
35	037B35	0.273	0.270	0.003
	Max	0.283	0.277	0.007
	Average	0.275	0.273	0.002
	Min	0.271	0.269	0.000
	Std Dev	0.003	0.002	0.002



3400.0_IIH_CANH_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Max Limit	0.495	mA
Min Limit	0.155	mA

kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.272	0.272	0.271	0.270	0.269	0.269
Average	0.273	0.274	0.273	0.274	0.271	0.270
Max	0.274	0.275	0.275	0.277	0.272	0.271
UL	0.495	0.495	0.495	0.495	0.495	0.495

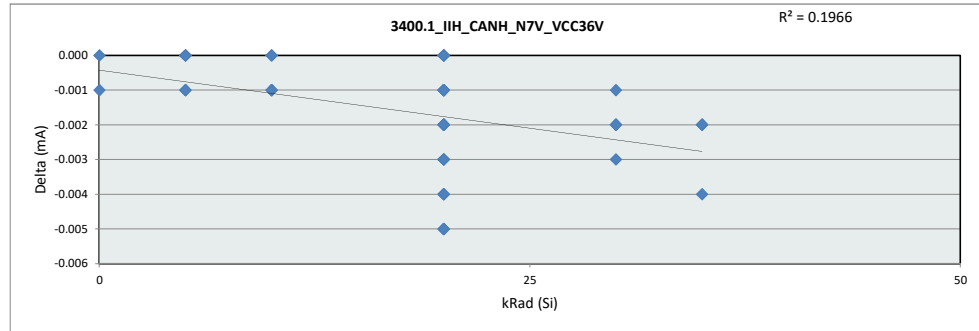


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Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

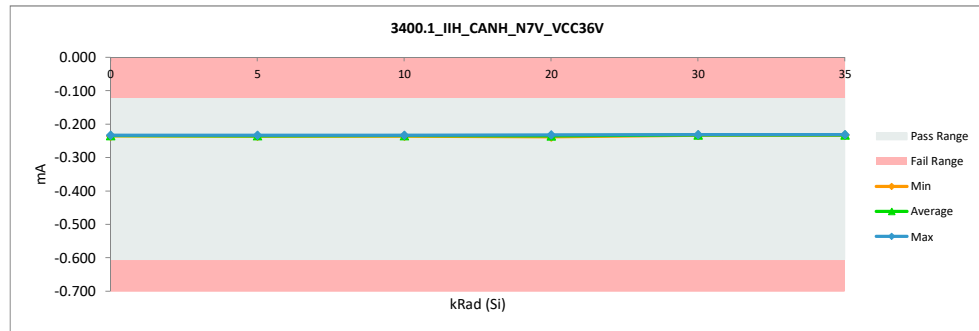
3400.1_IIH_CANH_N7V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.234	-0.233	-0.001
0	039C1	-0.235	-0.235	0.000
5	001B5	-0.233	-0.233	0.000
5	002B5	-0.237	-0.236	-0.001
5	003B5	-0.235	-0.234	-0.001
5	004B5	-0.235	-0.235	0.000
5	005B5	-0.236	-0.236	0.000
10	006B10	-0.237	-0.236	-0.001
10	007B10	-0.233	-0.233	0.000
10	008B10	-0.233	-0.233	0.000
10	009B10	-0.237	-0.236	-0.001
10	010B10	-0.236	-0.235	-0.001
20	011B20	-0.237	-0.236	-0.001
20	012B20	-0.237	-0.235	-0.002
20	013B20	-0.239	-0.237	-0.002
20	014B20	-0.235	-0.233	-0.002
20	015B20	-0.235	-0.232	-0.003
20	016B20	-0.239	-0.237	-0.002
20	017B20	-0.239	-0.237	-0.002
20	018B20	-0.237	-0.237	0.000
20	019B20	-0.241	-0.237	-0.004
20	020B20	-0.242	-0.238	-0.004
20	021B20	-0.241	-0.236	-0.005
20	022B20	-0.237	-0.232	-0.005
20	023B20	-0.240	-0.235	-0.005
20	024B20	-0.241	-0.238	-0.003
20	025B20	-0.240	-0.237	-0.003
20	026B20	-0.234	-0.233	-0.001
20	027B20	-0.235	-0.234	-0.001
20	028B20	-0.237	-0.236	-0.001
20	029B20	-0.236	-0.236	0.000
20	030B20	-0.236	-0.235	-0.001
20	031B20	-0.236	-0.236	0.000
20	032B20	-0.233	-0.233	0.000
30	033B30	-0.233	-0.231	-0.002
30	034B30	-0.236	-0.233	-0.003
30	035B30	-0.235	-0.233	-0.002
30	036B30	-0.235	-0.233	-0.002
30	037B30	-0.234	-0.233	-0.001
35	033B35	-0.233	-0.231	-0.002
35	034B35	-0.236	-0.232	-0.004
35	035B35	-0.235	-0.233	-0.002
35	036B35	-0.235	-0.233	-0.002
35	037B35	-0.234	-0.232	-0.002
Max		-0.233	-0.231	0.000
Average		-0.236	-0.235	-0.002
Min		-0.242	-0.238	-0.005
Std Dev		0.002	0.002	0.001



3400.1_IIH_CANH_N7V_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.605	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.605	-0.605	-0.605	-0.605	-0.605	-0.605
Min	-0.235	-0.236	-0.236	-0.238	-0.233	-0.233
Average	-0.234	-0.235	-0.235	-0.235	-0.233	-0.232
Max	-0.233	-0.233	-0.233	-0.232	-0.231	-0.231
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123



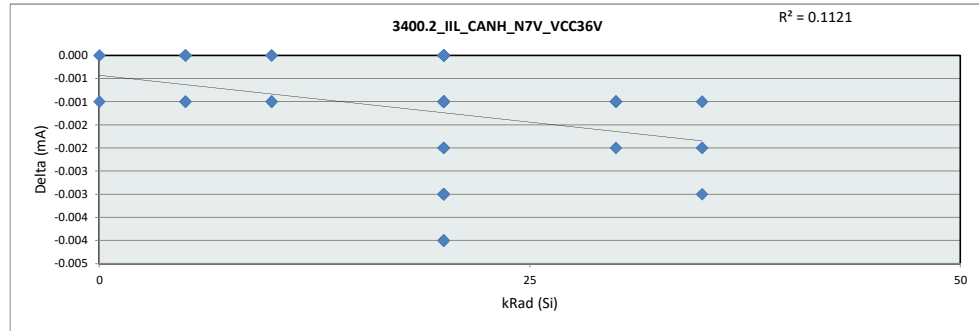
TID Report

SN55HVD233-SEP

Notes: Data at 35Krad represent the 30Krad post 2WKS annealed data

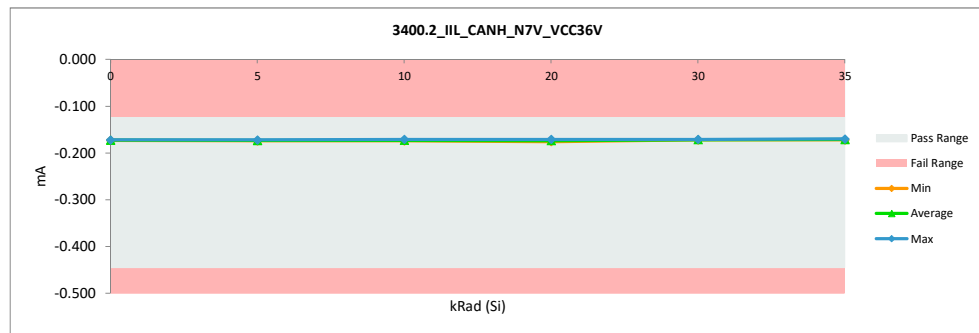
3400.2_IIL_CANH_N7V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.445	-0.445

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.173	-0.172	-0.001
0	039C1	-0.173	-0.173	0.000
5	001B5	-0.172	-0.172	0.000
5	002B5	-0.175	-0.174	-0.001
5	003B5	-0.173	-0.173	0.000
5	004B5	-0.174	-0.173	-0.001
5	005B5	-0.174	-0.174	0.000
10	006B10	-0.175	-0.174	-0.001
10	007B10	-0.172	-0.172	0.000
10	008B10	-0.172	-0.171	-0.001
10	009B10	-0.174	-0.174	0.000
10	010B10	-0.174	-0.173	-0.001
20	011B20	-0.175	-0.174	-0.001
20	012B20	-0.175	-0.173	-0.002
20	013B20	-0.176	-0.175	-0.001
20	014B20	-0.173	-0.172	-0.001
20	015B20	-0.173	-0.171	-0.002
20	016B20	-0.176	-0.175	-0.001
20	017B20	-0.176	-0.175	-0.001
20	018B20	-0.175	-0.175	0.000
20	019B20	-0.178	-0.175	-0.003
20	020B20	-0.179	-0.176	-0.003
20	021B20	-0.178	-0.174	-0.004
20	022B20	-0.175	-0.171	-0.004
20	023B20	-0.177	-0.173	-0.004
20	024B20	-0.178	-0.175	-0.003
20	025B20	-0.176	-0.175	-0.001
20	026B20	-0.172	-0.172	0.000
20	027B20	-0.173	-0.173	0.000
20	028B20	-0.174	-0.174	0.000
20	029B20	-0.174	-0.174	0.000
20	030B20	-0.174	-0.173	-0.001
20	031B20	-0.174	-0.174	0.000
20	032B20	-0.172	-0.172	0.000
30	033B30	-0.172	-0.171	-0.001
30	034B30	-0.174	-0.172	-0.002
30	035B30	-0.173	-0.172	-0.001
30	036B30	-0.173	-0.172	-0.001
30	037B30	-0.173	-0.172	-0.001
35	033B35	-0.172	-0.170	-0.002
35	034B35	-0.174	-0.171	-0.003
35	035B35	-0.173	-0.172	-0.001
35	036B35	-0.173	-0.172	-0.001
35	037B35	-0.173	-0.171	-0.002
	Max	-0.172	-0.170	0.000
	Average	-0.174	-0.173	-0.001
	Min	-0.179	-0.176	-0.004
	Std Dev	0.002	0.001	0.001



3400.2_IIL_CANH_N7V_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.445	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.445	-0.445	-0.445	-0.445	-0.445	-0.445
Min	-0.173	-0.174	-0.174	-0.176	-0.172	-0.172
Average	-0.173	-0.173	-0.173	-0.174	-0.172	-0.171
Max	-0.172	-0.172	-0.171	-0.171	-0.171	-0.170
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123

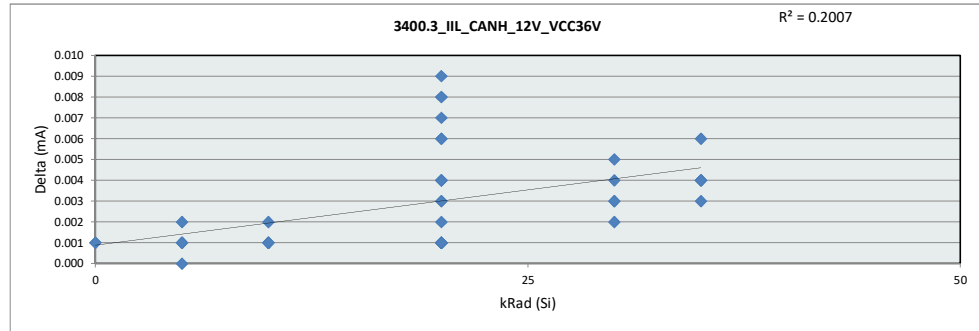


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Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

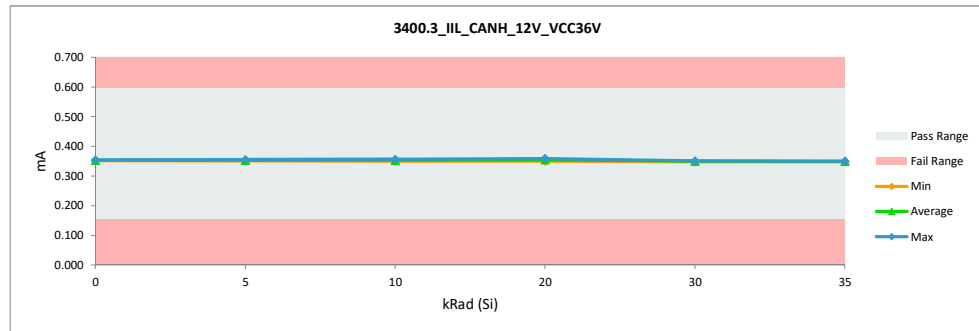
3400.3_IIL_CANH_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.595	0.595
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.353	0.352	0.001
0	039C1	0.355	0.354	0.001
5	001B5	0.351	0.351	0.000
5	002B5	0.357	0.355	0.002
5	003B5	0.354	0.353	0.001
5	004B5	0.355	0.354	0.001
5	005B5	0.356	0.355	0.001
10	006B10	0.356	0.355	0.001
10	007B10	0.352	0.351	0.001
10	008B10	0.352	0.350	0.002
10	009B10	0.357	0.356	0.001
10	010B10	0.355	0.354	0.001
20	011B20	0.357	0.356	0.001
20	012B20	0.357	0.354	0.003
20	013B20	0.360	0.356	0.004
20	014B20	0.355	0.352	0.003
20	015B20	0.354	0.350	0.004
20	016B20	0.361	0.357	0.004
20	017B20	0.359	0.357	0.002
20	018B20	0.358	0.357	0.001
20	019B20	0.364	0.358	0.006
20	020B20	0.366	0.359	0.007
20	021B20	0.364	0.356	0.008
20	022B20	0.358	0.350	0.008
20	023B20	0.363	0.354	0.009
20	024B20	0.364	0.358	0.006
20	025B20	0.362	0.358	0.004
20	026B20	0.352	0.351	0.001
20	027B20	0.354	0.353	0.001
20	028B20	0.357	0.356	0.001
20	029B20	0.356	0.355	0.001
20	030B20	0.356	0.355	0.001
20	031B20	0.356	0.355	0.001
20	032B20	0.351	0.350	0.001
30	033B30	0.351	0.348	0.003
30	034B30	0.356	0.351	0.005
30	035B30	0.354	0.351	0.003
30	036B30	0.354	0.350	0.004
30	037B30	0.353	0.351	0.002
35	033B35	0.351	0.348	0.003
35	034B35	0.356	0.350	0.006
35	035B35	0.354	0.350	0.004
35	036B35	0.354	0.350	0.004
35	037B35	0.353	0.349	0.004
	Max	0.366	0.359	0.009
	Average	0.356	0.353	0.003
	Min	0.351	0.348	0.000
	Std Dev	0.004	0.003	0.002



3400.3_IIL_CANH_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Max Limit	0.595	mA
Min Limit	0.155	mA

kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.352	0.351	0.350	0.350	0.348	0.348
Average	0.353	0.354	0.353	0.355	0.350	0.349
Max	0.354	0.355	0.356	0.359	0.351	0.350
UL	0.595	0.595	0.595	0.595	0.595	0.595

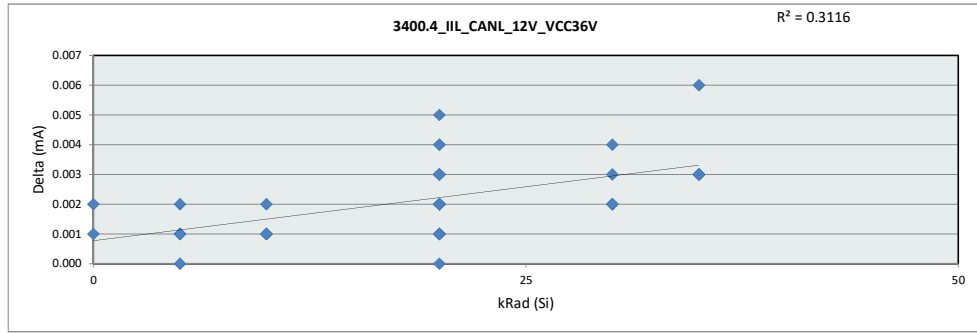


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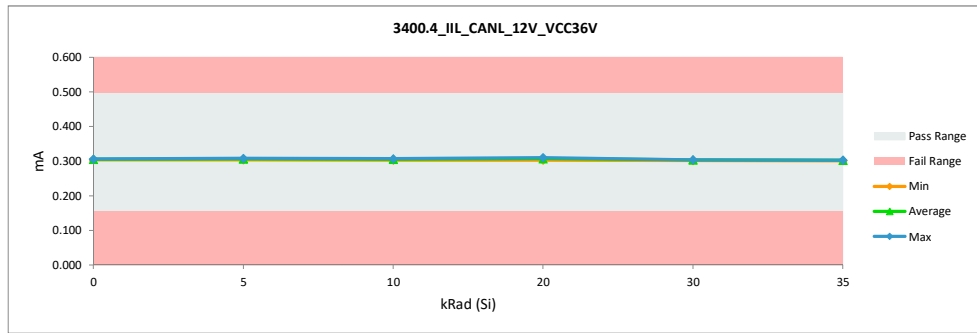
Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

3400.4_IIL_CANL_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.495	0.495
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.306	0.304	0.002
0	039C1	0.307	0.306	0.001
5	001B5	0.304	0.304	0.000
5	002B5	0.309	0.307	0.002
5	003B5	0.306	0.305	0.001
5	004B5	0.308	0.307	0.001
5	005B5	0.309	0.308	0.001
10	006B10	0.308	0.307	0.001
10	007B10	0.305	0.304	0.001
10	008B10	0.305	0.303	0.002
10	009B10	0.308	0.307	0.001
10	010B10	0.308	0.307	0.001
20	011B20	0.309	0.308	0.001
20	012B20	0.308	0.306	0.002
20	013B20	0.310	0.309	0.001
20	014B20	0.306	0.304	0.002
20	015B20	0.306	0.303	0.003
20	016B20	0.314	0.309	0.005
20	017B20	0.312	0.309	0.003
20	018B20	0.310	0.309	0.001
20	019B20	0.312	0.309	0.003
20	020B20	0.313	0.310	0.003
20	021B20	0.312	0.308	0.004
20	022B20	0.307	0.303	0.004
20	023B20	0.309	0.306	0.003
20	024B20	0.312	0.310	0.002
20	025B20	0.312	0.309	0.003
20	026B20	0.305	0.304	0.001
20	027B20	0.307	0.305	0.002
20	028B20	0.310	0.308	0.002
20	029B20	0.309	0.307	0.002
20	030B20	0.308	0.306	0.002
20	031B20	0.308	0.307	0.001
20	032B20	0.304	0.304	0.000
30	033B30	0.304	0.302	0.002
30	034B30	0.308	0.304	0.004
30	035B30	0.306	0.304	0.002
30	036B30	0.306	0.303	0.003
30	037B30	0.306	0.304	0.002
35	033B35	0.304	0.301	0.003
35	034B35	0.308	0.302	0.006
35	035B35	0.306	0.303	0.003
35	036B35	0.306	0.303	0.003
35	037B35	0.306	0.303	0.003
Max		0.314	0.310	0.006
Average		0.308	0.306	0.002
Min		0.304	0.301	0.000
Std Dev		0.003	0.002	0.001



3400.4_IIL_CANL_12V_VCC36V						
Test Site	Dallas					
Tester	FETS36404					
Test Number	EF580303					
Max Limit	0.495 mA					
Min Limit	0.155 mA					
kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.304	0.304	0.303	0.303	0.302	0.301
Average	0.305	0.306	0.306	0.307	0.303	0.302
Max	0.306	0.308	0.307	0.310	0.304	0.303
UL	0.495	0.495	0.495	0.495	0.495	0.495

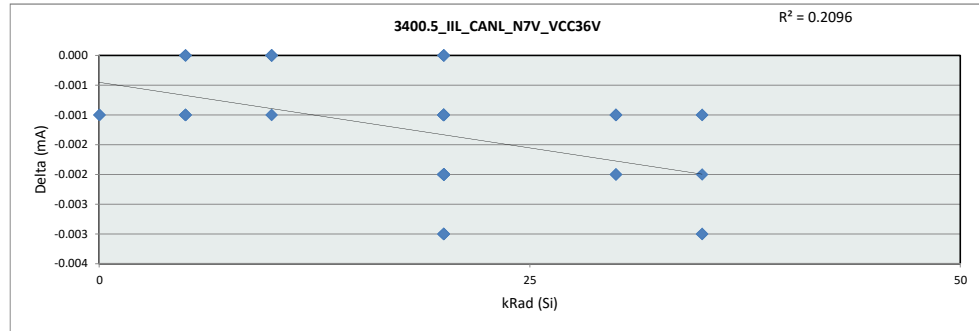


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Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

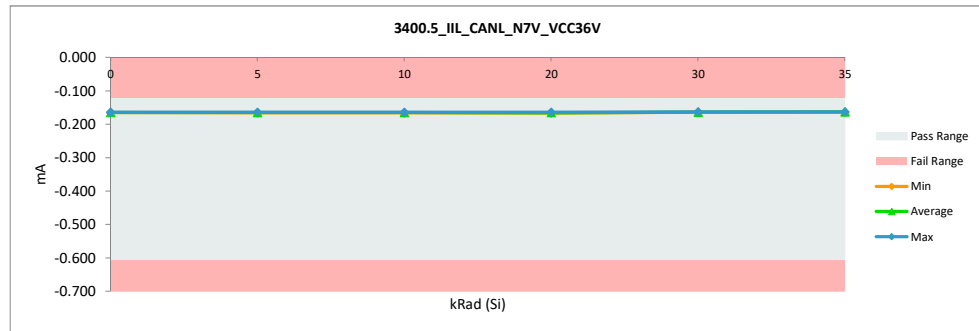
3400.5_IIL_CANL_N7V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.165	-0.164	-0.001
0	039C1	-0.166	-0.165	-0.001
5	001B5	-0.164	-0.164	0.000
5	002B5	-0.167	-0.166	-0.001
5	003B5	-0.165	-0.165	0.000
5	004B5	-0.166	-0.165	-0.001
5	005B5	-0.167	-0.166	-0.001
10	006B10	-0.166	-0.166	0.000
10	007B10	-0.164	-0.164	0.000
10	008B10	-0.164	-0.164	0.000
10	009B10	-0.166	-0.166	0.000
10	010B10	-0.166	-0.165	-0.001
20	011B20	-0.167	-0.166	-0.001
20	012B20	-0.167	-0.165	-0.002
20	013B20	-0.168	-0.167	-0.001
20	014B20	-0.165	-0.164	-0.001
20	015B20	-0.166	-0.164	-0.002
20	016B20	-0.170	-0.167	-0.003
20	017B20	-0.169	-0.167	-0.002
20	018B20	-0.167	-0.167	0.000
20	019B20	-0.169	-0.167	-0.002
20	020B20	-0.170	-0.167	-0.003
20	021B20	-0.169	-0.166	-0.003
20	022B20	-0.166	-0.164	-0.002
20	023B20	-0.167	-0.165	-0.002
20	024B20	-0.169	-0.167	-0.002
20	025B20	-0.169	-0.167	-0.002
20	026B20	-0.165	-0.164	-0.001
20	027B20	-0.166	-0.165	-0.001
20	028B20	-0.168	-0.166	-0.002
20	029B20	-0.167	-0.166	-0.001
20	030B20	-0.166	-0.165	-0.001
20	031B20	-0.166	-0.166	0.000
20	032B20	-0.164	-0.164	0.000
30	033B30	-0.164	-0.163	-0.001
30	034B30	-0.166	-0.164	-0.002
30	035B30	-0.166	-0.164	-0.002
30	036B30	-0.165	-0.164	-0.001
30	037B30	-0.165	-0.164	-0.001
35	033B35	-0.164	-0.163	-0.001
35	034B35	-0.166	-0.163	-0.003
35	035B35	-0.166	-0.163	-0.003
35	036B35	-0.165	-0.164	-0.001
35	037B35	-0.165	-0.163	-0.002
	Max	-0.164	-0.163	0.000
	Average	-0.166	-0.165	-0.001
	Min	-0.170	-0.167	-0.003
	Std Dev	0.002	0.001	0.001



3400.5_IIL_CANL_N7V_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.605	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.605	-0.605	-0.605	-0.605	-0.605	-0.605
Min	-0.165	-0.166	-0.166	-0.167	-0.164	-0.164
Average	-0.165	-0.165	-0.165	-0.166	-0.164	-0.163
Max	-0.164	-0.164	-0.164	-0.164	-0.163	-0.163
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123

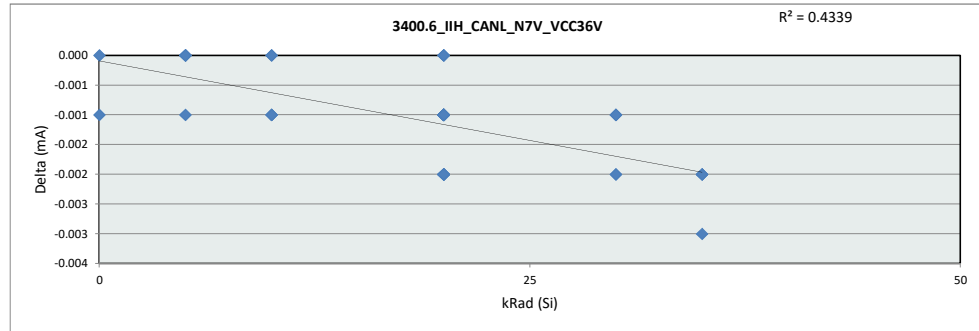


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Notes: Data at 35Krad represent the 30Krad post 2WKS annealed data

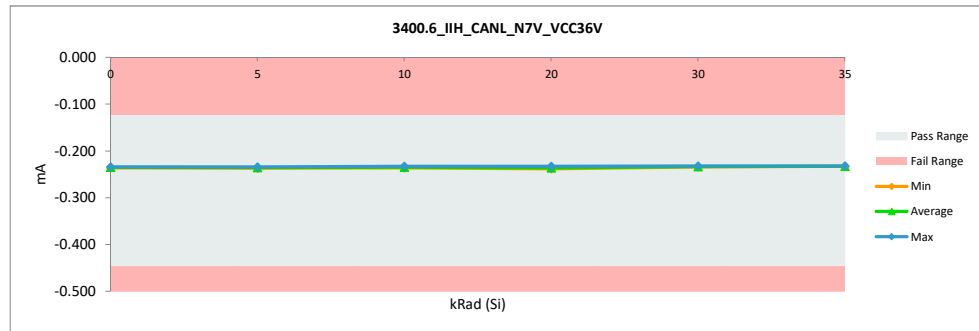
3400.6_IIH_CANL_N7V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.445	-0.445

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.235	-0.234	-0.001
0	039C1	-0.236	-0.236	0.000
5	001B5	-0.234	-0.234	0.000
5	002B5	-0.237	-0.236	-0.001
5	003B5	-0.235	-0.235	0.000
5	004B5	-0.236	-0.236	0.000
5	005B5	-0.237	-0.237	0.000
10	006B10	-0.237	-0.236	-0.001
10	007B10	-0.234	-0.234	0.000
10	008B10	-0.234	-0.233	-0.001
10	009B10	-0.237	-0.236	-0.001
10	010B10	-0.236	-0.236	0.000
20	011B20	-0.238	-0.237	-0.001
20	012B20	-0.237	-0.236	-0.001
20	013B20	-0.238	-0.237	-0.001
20	014B20	-0.235	-0.234	-0.001
20	015B20	-0.235	-0.233	-0.002
20	016B20	-0.240	-0.238	-0.002
20	017B20	-0.239	-0.238	-0.001
20	018B20	-0.238	-0.237	-0.001
20	019B20	-0.239	-0.238	-0.001
20	020B20	-0.240	-0.238	-0.002
20	021B20	-0.239	-0.237	-0.002
20	022B20	-0.235	-0.233	-0.002
20	023B20	-0.237	-0.235	-0.002
20	024B20	-0.240	-0.238	-0.002
20	025B20	-0.239	-0.238	-0.001
20	026B20	-0.234	-0.234	0.000
20	027B20	-0.236	-0.235	-0.001
20	028B20	-0.238	-0.237	-0.001
20	029B20	-0.237	-0.236	-0.001
20	030B20	-0.236	-0.235	-0.001
20	031B20	-0.236	-0.236	0.000
20	032B20	-0.234	-0.234	0.000
30	033B30	-0.234	-0.232	-0.002
30	034B30	-0.236	-0.234	-0.002
30	035B30	-0.235	-0.234	-0.001
30	036B30	-0.235	-0.234	-0.001
30	037B30	-0.235	-0.234	-0.001
35	033B35	-0.234	-0.232	-0.002
35	034B35	-0.236	-0.233	-0.003
35	035B35	-0.235	-0.233	-0.002
35	036B35	-0.235	-0.233	-0.002
35	037B35	-0.235	-0.233	-0.002
	Max	-0.234	-0.232	0.000
	Average	-0.236	-0.235	-0.001
	Min	-0.240	-0.238	-0.003
	Std Dev	0.002	0.002	0.001



3400.6_IIH_CANL_N7V_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.445	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.445	-0.445	-0.445	-0.445	-0.445	-0.445
Min	-0.236	-0.237	-0.236	-0.238	-0.234	-0.233
Average	-0.235	-0.236	-0.235	-0.236	-0.234	-0.233
Max	-0.234	-0.234	-0.233	-0.233	-0.232	-0.232
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123

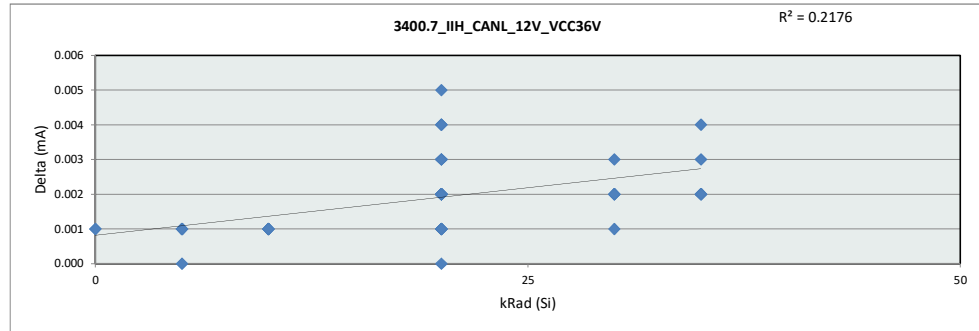


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

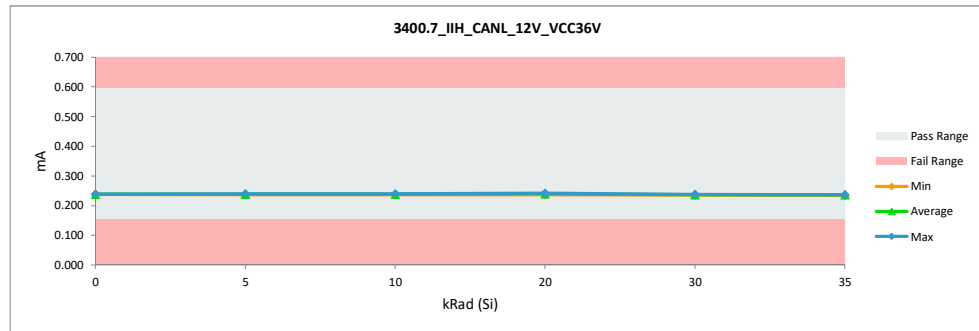
3400.7_IIH_CANL_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	
Max Limit	0.595	0.595
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.239	0.238	0.001
0	039C1	0.240	0.239	0.001
5	001B5	0.237	0.237	0.000
5	002B5	0.241	0.240	0.001
5	003B5	0.239	0.238	0.001
5	004B5	0.240	0.239	0.001
5	005B5	0.241	0.240	0.001
10	006B10	0.241	0.240	0.001
10	007B10	0.238	0.237	0.001
10	008B10	0.238	0.237	0.001
10	009B10	0.241	0.240	0.001
10	010B10	0.240	0.239	0.001
20	011B20	0.242	0.241	0.001
20	012B20	0.241	0.239	0.002
20	013B20	0.242	0.241	0.001
20	014B20	0.239	0.238	0.001
20	015B20	0.239	0.237	0.002
20	016B20	0.246	0.241	0.005
20	017B20	0.244	0.242	0.002
20	018B20	0.242	0.241	0.001
20	019B20	0.244	0.241	0.003
20	020B20	0.245	0.242	0.003
20	021B20	0.244	0.240	0.004
20	022B20	0.241	0.237	0.004
20	023B20	0.243	0.239	0.004
20	024B20	0.244	0.242	0.002
20	025B20	0.244	0.241	0.003
20	026B20	0.238	0.237	0.001
20	027B20	0.240	0.238	0.002
20	028B20	0.242	0.240	0.002
20	029B20	0.242	0.240	0.002
20	030B20	0.241	0.239	0.002
20	031B20	0.240	0.240	0.000
20	032B20	0.238	0.237	0.001
30	033B30	0.238	0.236	0.002
30	034B30	0.240	0.237	0.003
30	035B30	0.239	0.237	0.002
30	036B30	0.239	0.237	0.002
30	037B30	0.239	0.238	0.001
35	033B35	0.238	0.235	0.003
35	034B35	0.240	0.236	0.004
35	035B35	0.239	0.237	0.002
35	036B35	0.239	0.237	0.002
35	037B35	0.239	0.237	0.002
	Max	0.246	0.242	0.005
	Average	0.241	0.239	0.002
	Min	0.237	0.235	0.000
	Std Dev	0.002	0.002	0.001



3400.7_IIH_CANL_12V_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	0.595	mA
Min Limit	0.155	mA

kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.238	0.237	0.237	0.237	0.236	0.235
Average	0.239	0.239	0.239	0.240	0.237	0.236
Max	0.239	0.240	0.240	0.242	0.238	0.237
UL	0.595	0.595	0.595	0.595	0.595	0.595

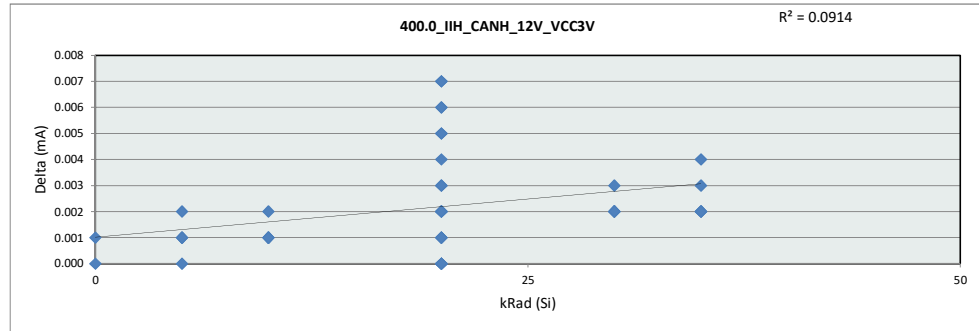


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

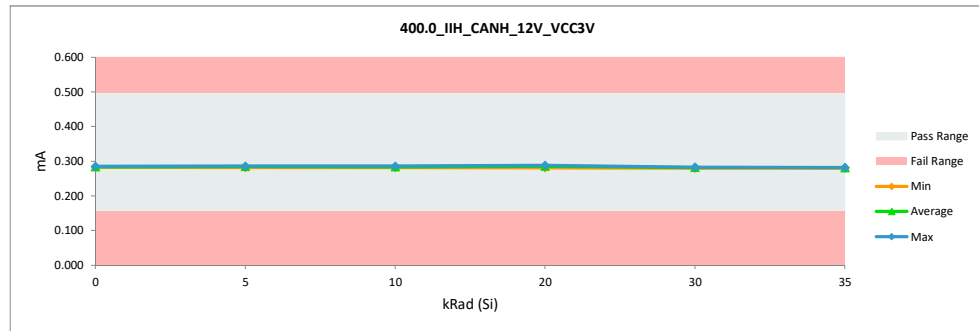
400.0_IIH_CANH_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.495	0.495
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.284	0.283	0.001
0	039C1	0.285	0.285	0.000
5	001B5	0.283	0.282	0.001
5	002B5	0.287	0.285	0.002
5	003B5	0.285	0.284	0.001
5	004B5	0.286	0.285	0.001
5	005B5	0.286	0.286	0.000
10	006B10	0.287	0.285	0.002
10	007B10	0.283	0.282	0.001
10	008B10	0.283	0.282	0.001
10	009B10	0.287	0.286	0.001
10	010B10	0.286	0.285	0.001
20	011B20	0.287	0.286	0.001
20	012B20	0.287	0.285	0.002
20	013B20	0.289	0.287	0.002
20	014B20	0.285	0.283	0.002
20	015B20	0.285	0.281	0.004
20	016B20	0.290	0.287	0.003
20	017B20	0.289	0.287	0.002
20	018B20	0.288	0.287	0.001
20	019B20	0.293	0.288	0.005
20	020B20	0.294	0.288	0.006
20	021B20	0.293	0.286	0.007
20	022B20	0.288	0.282	0.006
20	023B20	0.292	0.285	0.007
20	024B20	0.293	0.288	0.005
20	025B20	0.291	0.288	0.003
20	026B20	0.283	0.283	0.000
20	027B20	0.284	0.284	0.000
20	028B20	0.287	0.286	0.001
20	029B20	0.286	0.286	0.000
20	030B20	0.286	0.285	0.001
20	031B20	0.286	0.286	0.000
20	032B20	0.282	0.282	0.000
30	033B30	0.282	0.280	0.002
30	034B30	0.286	0.283	0.003
30	035B30	0.284	0.282	0.002
30	036B30	0.284	0.282	0.002
30	037B30	0.284	0.282	0.002
35	033B35	0.282	0.280	0.002
35	034B35	0.286	0.282	0.004
35	035B35	0.284	0.282	0.002
35	036B35	0.284	0.282	0.002
35	037B35	0.284	0.281	0.003
Max		0.294	0.288	0.007
Average		0.286	0.284	0.002
Min		0.282	0.280	0.000
Std Dev		0.003	0.002	0.002



400.0_IIH_CANH_12V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	0.495	mA
Min Limit	0.155	mA

kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.283	0.282	0.282	0.281	0.280	0.280
Average	0.284	0.284	0.284	0.285	0.282	0.281
Max	0.285	0.286	0.286	0.288	0.283	0.282
UL	0.495	0.495	0.495	0.495	0.495	0.495

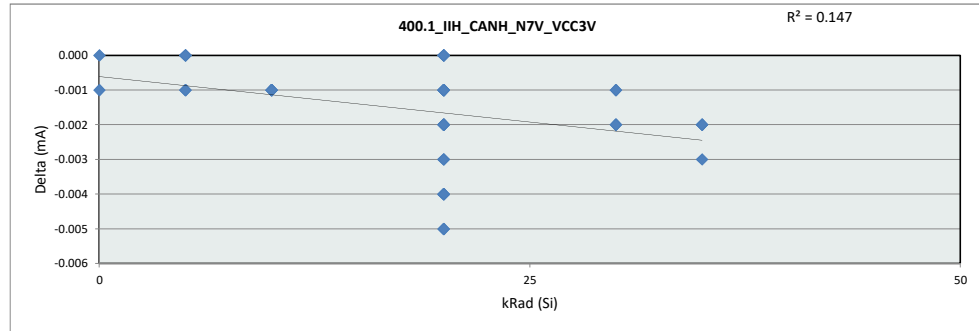


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Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

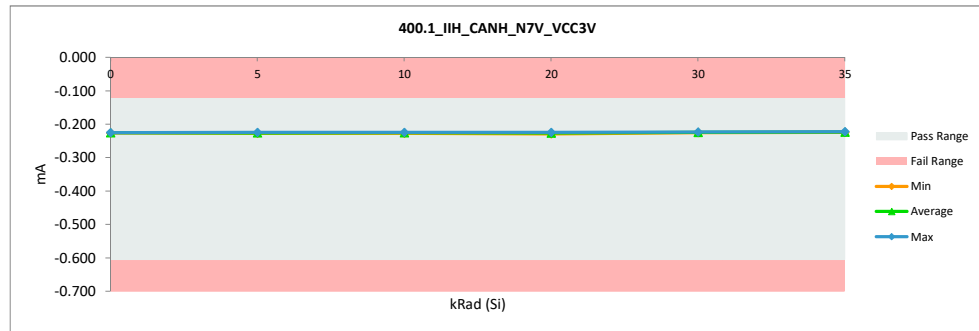
400.1_IIH_CANH_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.226	-0.225	-0.001
0	039C1	-0.226	-0.226	0.000
5	001B5	-0.224	-0.224	0.000
5	002B5	-0.228	-0.227	-0.001
5	003B5	-0.226	-0.226	0.000
5	004B5	-0.227	-0.226	-0.001
5	005B5	-0.227	-0.227	0.000
10	006B10	-0.228	-0.227	-0.001
10	007B10	-0.225	-0.224	-0.001
10	008B10	-0.225	-0.224	-0.001
10	009B10	-0.228	-0.227	-0.001
10	010B10	-0.227	-0.226	-0.001
20	011B20	-0.228	-0.227	-0.001
20	012B20	-0.228	-0.226	-0.002
20	013B20	-0.230	-0.228	-0.002
20	014B20	-0.226	-0.225	-0.001
20	015B20	-0.226	-0.224	-0.002
20	016B20	-0.230	-0.228	-0.002
20	017B20	-0.230	-0.228	-0.002
20	018B20	-0.228	-0.228	0.000
20	019B20	-0.232	-0.228	-0.004
20	020B20	-0.233	-0.229	-0.004
20	021B20	-0.232	-0.227	-0.005
20	022B20	-0.228	-0.224	-0.004
20	023B20	-0.231	-0.226	-0.005
20	024B20	-0.232	-0.229	-0.003
20	025B20	-0.231	-0.228	-0.003
20	026B20	-0.225	-0.224	-0.001
20	027B20	-0.226	-0.225	-0.001
20	028B20	-0.228	-0.227	-0.001
20	029B20	-0.227	-0.227	0.000
20	030B20	-0.227	-0.226	-0.001
20	031B20	-0.227	-0.227	0.000
20	032B20	-0.224	-0.224	0.000
30	033B30	-0.224	-0.223	-0.001
30	034B30	-0.227	-0.225	-0.002
30	035B30	-0.226	-0.225	-0.001
30	036B30	-0.226	-0.224	-0.002
30	037B30	-0.226	-0.224	-0.002
35	033B35	-0.224	-0.222	-0.002
35	034B35	-0.227	-0.224	-0.003
35	035B35	-0.226	-0.224	-0.002
35	036B35	-0.226	-0.224	-0.002
35	037B35	-0.226	-0.224	-0.002
	Max	-0.224	-0.222	0.000
	Average	-0.227	-0.226	-0.002
	Min	-0.233	-0.229	-0.005
	Std Dev	0.002	0.002	0.001



400.1_IIH_CANH_N7V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.605	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.605	-0.605	-0.605	-0.605	-0.605	-0.605
Min	-0.226	-0.227	-0.227	-0.229	-0.225	-0.224
Average	-0.226	-0.226	-0.226	-0.227	-0.224	-0.224
Max	-0.225	-0.224	-0.224	-0.224	-0.223	-0.222
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123



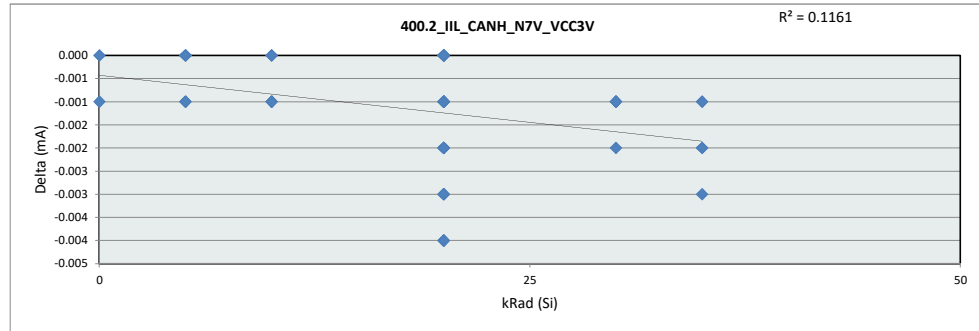
TID Report

SN55HVD233-SEP

Notes: Data at 35Krad represent the 30Krad post 2WKS annealed data

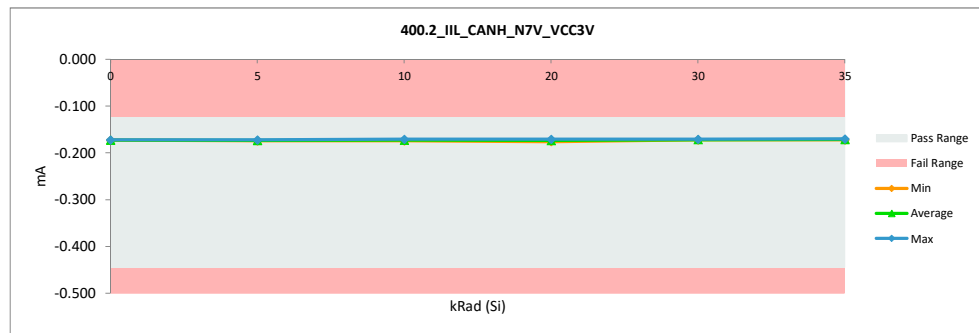
400.2_IIL_CANH_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.445	-0.445

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.173	-0.172	-0.001
0	039C1	-0.173	-0.173	0.000
5	001B5	-0.172	-0.172	0.000
5	002B5	-0.175	-0.174	-0.001
5	003B5	-0.173	-0.173	0.000
5	004B5	-0.174	-0.173	-0.001
5	005B5	-0.174	-0.174	0.000
10	006B10	-0.175	-0.174	-0.001
10	007B10	-0.172	-0.172	0.000
10	008B10	-0.172	-0.171	-0.001
10	009B10	-0.174	-0.174	0.000
10	010B10	-0.174	-0.173	-0.001
20	011B20	-0.175	-0.174	-0.001
20	012B20	-0.175	-0.173	-0.002
20	013B20	-0.176	-0.175	-0.001
20	014B20	-0.173	-0.172	-0.001
20	015B20	-0.173	-0.171	-0.002
20	016B20	-0.176	-0.175	-0.001
20	017B20	-0.176	-0.175	-0.001
20	018B20	-0.175	-0.175	0.000
20	019B20	-0.178	-0.175	-0.003
20	020B20	-0.179	-0.176	-0.003
20	021B20	-0.178	-0.174	-0.004
20	022B20	-0.175	-0.171	-0.004
20	023B20	-0.177	-0.173	-0.004
20	024B20	-0.177	-0.175	-0.002
20	025B20	-0.177	-0.175	-0.002
20	026B20	-0.172	-0.172	0.000
20	027B20	-0.173	-0.173	0.000
20	028B20	-0.174	-0.174	0.000
20	029B20	-0.174	-0.174	0.000
20	030B20	-0.174	-0.173	-0.001
20	031B20	-0.174	-0.174	0.000
20	032B20	-0.172	-0.172	0.000
30	033B30	-0.172	-0.171	-0.001
30	034B30	-0.174	-0.172	-0.002
30	035B30	-0.173	-0.172	-0.001
30	036B30	-0.173	-0.172	-0.001
30	037B30	-0.173	-0.172	-0.001
35	033B35	-0.172	-0.170	-0.002
35	034B35	-0.174	-0.171	-0.003
35	035B35	-0.173	-0.172	-0.001
35	036B35	-0.173	-0.172	-0.001
35	037B35	-0.173	-0.171	-0.002
	Max	-0.172	-0.170	0.000
	Average	-0.174	-0.173	-0.001
	Min	-0.179	-0.176	-0.004
	Std Dev	0.002	0.001	0.001



400.2_IIL_CANH_N7V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.445	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.445	-0.445	-0.445	-0.445	-0.445	-0.445
Min	-0.173	-0.174	-0.174	-0.176	-0.172	-0.172
Average	-0.173	-0.173	-0.173	-0.174	-0.172	-0.171
Max	-0.172	-0.172	-0.171	-0.171	-0.171	-0.170
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123

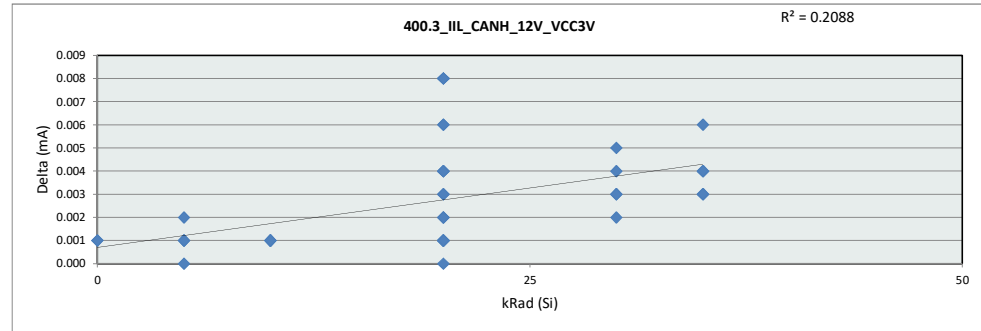


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

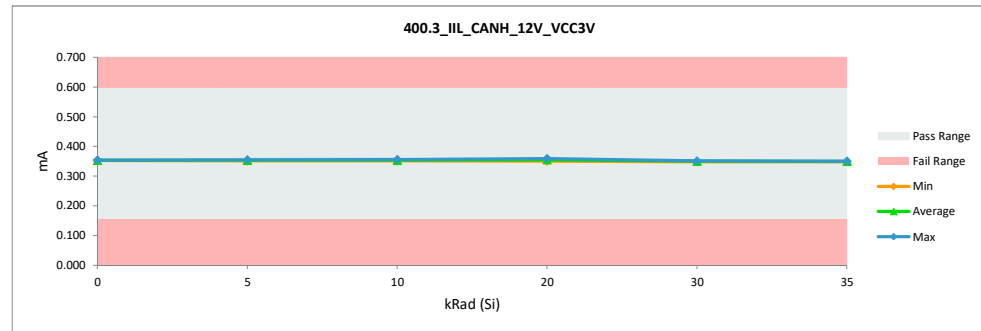
400.3_IIL_CANH_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.595	0.595
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.353	0.352	0.001
0	039C1	0.355	0.354	0.001
5	001B5	0.351	0.351	0.000
5	002B5	0.357	0.355	0.002
5	003B5	0.354	0.353	0.001
5	004B5	0.355	0.354	0.001
5	005B5	0.356	0.355	0.001
10	006B10	0.356	0.355	0.001
10	007B10	0.352	0.351	0.001
10	008B10	0.352	0.351	0.001
10	009B10	0.357	0.356	0.001
10	010B10	0.355	0.354	0.001
20	011B20	0.357	0.356	0.001
20	012B20	0.357	0.354	0.003
20	013B20	0.359	0.356	0.003
20	014B20	0.354	0.352	0.002
20	015B20	0.354	0.350	0.004
20	016B20	0.361	0.357	0.004
20	017B20	0.359	0.357	0.002
20	018B20	0.358	0.357	0.001
20	019B20	0.364	0.358	0.006
20	020B20	0.365	0.359	0.006
20	021B20	0.364	0.356	0.008
20	022B20	0.358	0.350	0.008
20	023B20	0.362	0.354	0.008
20	024B20	0.360	0.358	0.002
20	025B20	0.362	0.358	0.004
20	026B20	0.352	0.352	0.000
20	027B20	0.354	0.353	0.001
20	028B20	0.357	0.356	0.001
20	029B20	0.356	0.355	0.001
20	030B20	0.356	0.355	0.001
20	031B20	0.356	0.355	0.001
20	032B20	0.351	0.350	0.001
30	033B30	0.351	0.348	0.003
30	034B30	0.356	0.351	0.005
30	035B30	0.354	0.351	0.003
30	036B30	0.354	0.350	0.004
30	037B30	0.353	0.351	0.002
35	033B35	0.351	0.348	0.003
35	034B35	0.356	0.350	0.006
35	035B35	0.354	0.350	0.004
35	036B35	0.354	0.350	0.004
35	037B35	0.353	0.350	0.003
Max		0.365	0.359	0.008
Average		0.356	0.353	0.003
Min		0.351	0.348	0.000
Std Dev		0.004	0.003	0.002



400.3_IIL_CANH_12V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	0.595	mA
Min Limit	0.155	mA

kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.352	0.351	0.351	0.350	0.348	0.348
Average	0.353	0.354	0.353	0.355	0.350	0.350
Max	0.354	0.355	0.356	0.359	0.351	0.350
UL	0.595	0.595	0.595	0.595	0.595	0.595

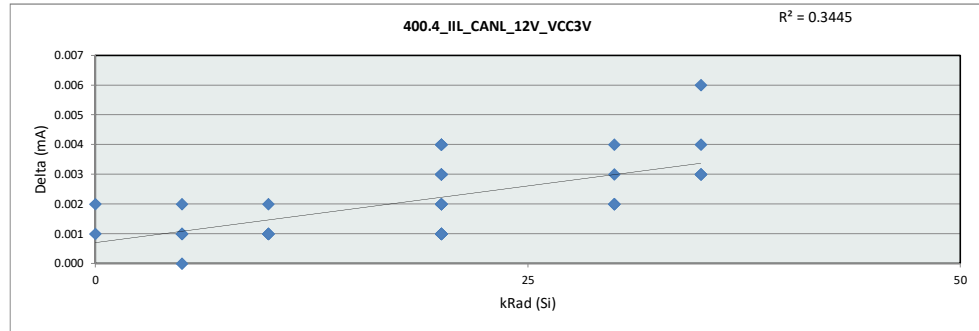


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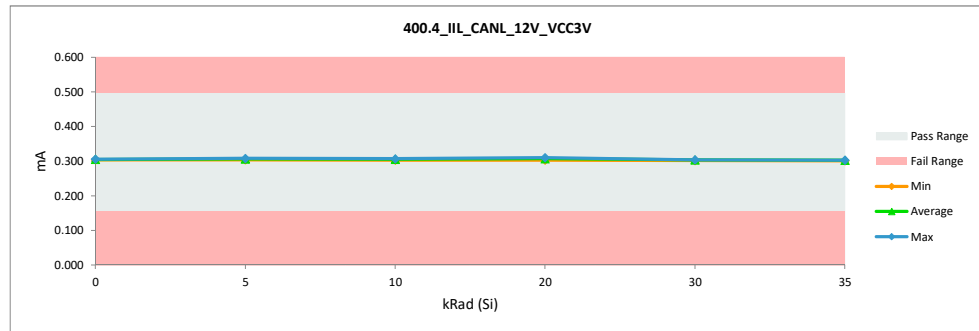
Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

400.4_IIL_CANL_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.495	0.495
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.306	0.304	0.002
0	039C1	0.307	0.306	0.001
5	001B5	0.304	0.304	0.000
5	002B5	0.309	0.307	0.002
5	003B5	0.306	0.305	0.001
5	004B5	0.308	0.307	0.001
5	005B5	0.309	0.308	0.001
10	006B10	0.308	0.307	0.001
10	007B10	0.305	0.304	0.001
10	008B10	0.305	0.303	0.002
10	009B10	0.308	0.307	0.001
10	010B10	0.308	0.307	0.001
20	011B20	0.309	0.308	0.001
20	012B20	0.308	0.306	0.002
20	013B20	0.310	0.309	0.001
20	014B20	0.306	0.304	0.002
20	015B20	0.306	0.303	0.003
20	016B20	0.313	0.309	0.004
20	017B20	0.312	0.309	0.003
20	018B20	0.310	0.309	0.001
20	019B20	0.312	0.309	0.003
20	020B20	0.313	0.310	0.003
20	021B20	0.312	0.308	0.004
20	022B20	0.307	0.303	0.004
20	023B20	0.310	0.306	0.004
20	024B20	0.311	0.310	0.001
20	025B20	0.312	0.309	0.003
20	026B20	0.305	0.304	0.001
20	027B20	0.307	0.306	0.001
20	028B20	0.310	0.308	0.002
20	029B20	0.309	0.307	0.002
20	030B20	0.308	0.306	0.002
20	031B20	0.308	0.307	0.001
20	032B20	0.305	0.304	0.001
30	033B30	0.305	0.302	0.003
30	034B30	0.308	0.304	0.004
30	035B30	0.306	0.304	0.002
30	036B30	0.306	0.304	0.002
30	037B30	0.306	0.304	0.002
35	033B35	0.305	0.301	0.004
35	034B35	0.308	0.302	0.006
35	035B35	0.306	0.303	0.003
35	036B35	0.306	0.303	0.003
35	037B35	0.306	0.303	0.003
Max		0.313	0.310	0.006
Average		0.308	0.306	0.002
Min		0.304	0.301	0.000
Std Dev		0.002	0.002	0.001



400.4_IIL_CANL_12V_VCC3V						
Test Site	Dallas					
Tester	FETS36404					
Test Number	EF580303					
Max Limit	0.495 mA					
Min Limit	0.155 mA					
kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.304	0.304	0.303	0.303	0.302	0.301
Average	0.305	0.306	0.306	0.307	0.304	0.302
Max	0.306	0.308	0.307	0.310	0.304	0.303
UL	0.495	0.495	0.495	0.495	0.495	0.495

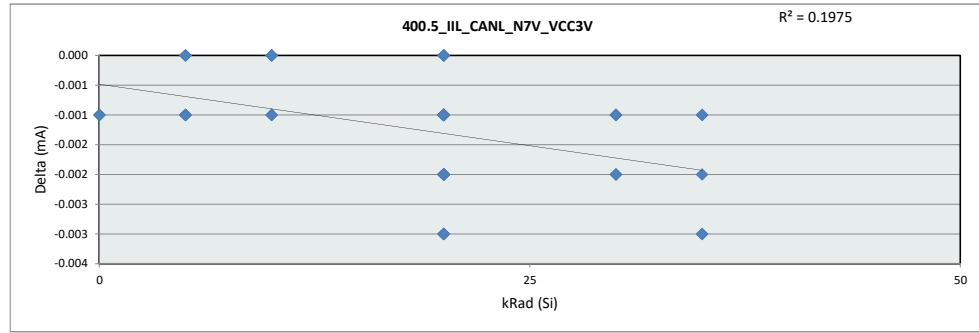


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

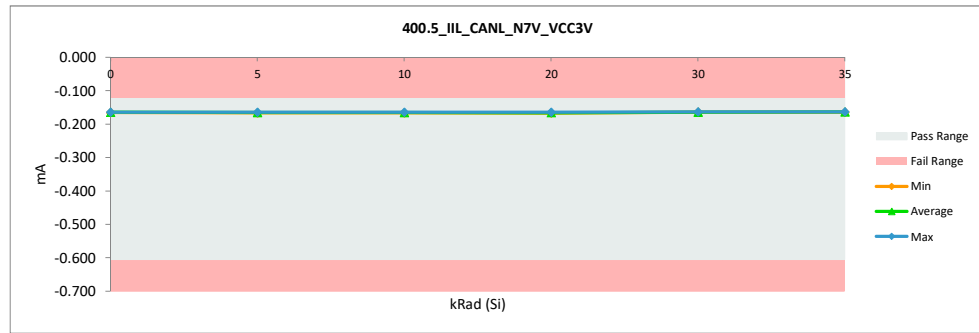
400.5_IIL_CANL_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.165	-0.164	-0.001
0	039C1	-0.166	-0.165	-0.001
5	001B5	-0.164	-0.164	0.000
5	002B5	-0.167	-0.166	-0.001
5	003B5	-0.165	-0.165	0.000
5	004B5	-0.166	-0.165	-0.001
5	005B5	-0.167	-0.166	-0.001
10	006B10	-0.167	-0.166	-0.001
10	007B10	-0.164	-0.164	0.000
10	008B10	-0.164	-0.164	0.000
10	009B10	-0.166	-0.166	0.000
10	010B10	-0.166	-0.165	-0.001
20	011B20	-0.167	-0.166	-0.001
20	012B20	-0.167	-0.165	-0.002
20	013B20	-0.168	-0.167	-0.001
20	014B20	-0.165	-0.164	-0.001
20	015B20	-0.165	-0.164	-0.001
20	016B20	-0.170	-0.167	-0.003
20	017B20	-0.169	-0.167	-0.002
20	018B20	-0.167	-0.167	0.000
20	019B20	-0.169	-0.167	-0.002
20	020B20	-0.169	-0.167	-0.002
20	021B20	-0.169	-0.166	-0.003
20	022B20	-0.166	-0.164	-0.002
20	023B20	-0.168	-0.165	-0.003
20	024B20	-0.168	-0.167	-0.001
20	025B20	-0.169	-0.167	-0.002
20	026B20	-0.165	-0.164	-0.001
20	027B20	-0.166	-0.165	-0.001
20	028B20	-0.168	-0.166	-0.002
20	029B20	-0.167	-0.166	-0.001
20	030B20	-0.166	-0.165	-0.001
20	031B20	-0.166	-0.166	0.000
20	032B20	-0.164	-0.164	0.000
30	033B30	-0.164	-0.163	-0.001
30	034B30	-0.166	-0.164	-0.002
30	035B30	-0.166	-0.164	-0.002
30	036B30	-0.165	-0.164	-0.001
30	037B30	-0.165	-0.164	-0.001
35	033B35	-0.164	-0.163	-0.001
35	034B35	-0.166	-0.163	-0.003
35	035B35	-0.166	-0.163	-0.003
35	036B35	-0.165	-0.164	-0.001
35	037B35	-0.165	-0.163	-0.002
	Max	-0.164	-0.163	0.000
	Average	-0.166	-0.165	-0.001
	Min	-0.170	-0.167	-0.003
	Std Dev	0.002	0.001	0.001



400.5_IIL_CANL_N7V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.605	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.605	-0.605	-0.605	-0.605	-0.605	-0.605
Min	-0.165	-0.166	-0.166	-0.167	-0.164	-0.164
Average	-0.165	-0.165	-0.165	-0.166	-0.164	-0.163
Max	-0.164	-0.164	-0.164	-0.164	-0.163	-0.163
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123



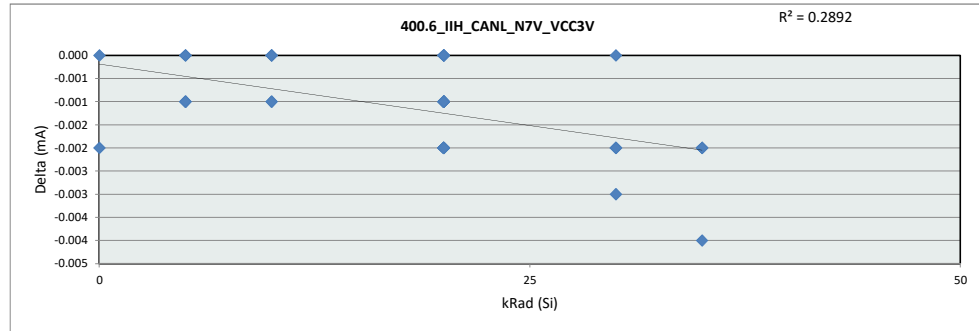
TID Report

SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

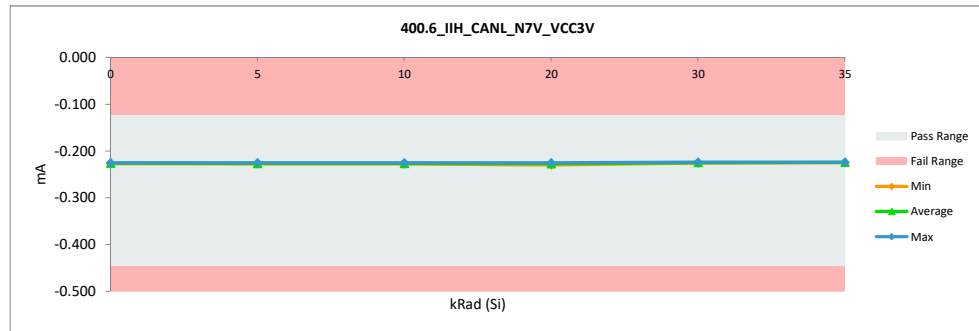
400.6_IIH_CANL_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.445	-0.445

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-0.227	-0.225	-0.002
0	039C1	-0.227	-0.227	0.000
5	001B5	-0.225	-0.225	0.000
5	002B5	-0.229	-0.228	-0.001
5	003B5	-0.227	-0.226	-0.001
5	004B5	-0.227	-0.227	0.000
5	005B5	-0.229	-0.228	-0.001
10	006B10	-0.228	-0.228	0.000
10	007B10	-0.226	-0.225	-0.001
10	008B10	-0.225	-0.225	0.000
10	009B10	-0.228	-0.228	0.000
10	010B10	-0.228	-0.227	-0.001
20	011B20	-0.229	-0.228	-0.001
20	012B20	-0.228	-0.227	-0.001
20	013B20	-0.229	-0.229	0.000
20	014B20	-0.226	-0.225	-0.001
20	015B20	-0.226	-0.225	-0.001
20	016B20	-0.231	-0.229	-0.002
20	017B20	-0.231	-0.229	-0.002
20	018B20	-0.229	-0.229	0.000
20	019B20	-0.231	-0.229	-0.002
20	020B20	-0.231	-0.229	-0.002
20	021B20	-0.230	-0.228	-0.002
20	022B20	-0.227	-0.225	-0.002
20	023B20	-0.229	-0.227	-0.002
20	024B20	-0.230	-0.230	0.000
20	025B20	-0.231	-0.229	-0.002
20	026B20	-0.226	-0.225	-0.001
20	027B20	-0.227	-0.226	-0.001
20	028B20	-0.229	-0.228	-0.001
20	029B20	-0.229	-0.228	-0.001
20	030B20	-0.228	-0.227	-0.001
20	031B20	-0.228	-0.228	0.000
20	032B20	-0.225	-0.225	0.000
30	033B30	-0.226	-0.224	-0.002
30	034B30	-0.228	-0.225	-0.003
30	035B30	-0.227	-0.225	-0.002
30	036B30	-0.227	-0.225	-0.002
30	037B30	-0.226	-0.226	0.000
35	033B35	-0.226	-0.224	-0.002
35	034B35	-0.228	-0.224	-0.004
35	035B35	-0.227	-0.225	-0.002
35	036B35	-0.227	-0.225	-0.002
35	037B35	-0.226	-0.224	-0.002
	Max	-0.225	-0.224	0.000
	Average	-0.228	-0.227	-0.001
	Min	-0.231	-0.230	-0.004
	Std Dev	0.002	0.002	0.001



400.6_IIH_CANL_N7V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	-0.123	mA
Min Limit	-0.445	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.445	-0.445	-0.445	-0.445	-0.445	-0.445
Min	-0.227	-0.228	-0.228	-0.230	-0.226	-0.225
Average	-0.226	-0.227	-0.227	-0.228	-0.225	-0.224
Max	-0.225	-0.225	-0.225	-0.225	-0.224	-0.224
UL	-0.123	-0.123	-0.123	-0.123	-0.123	-0.123

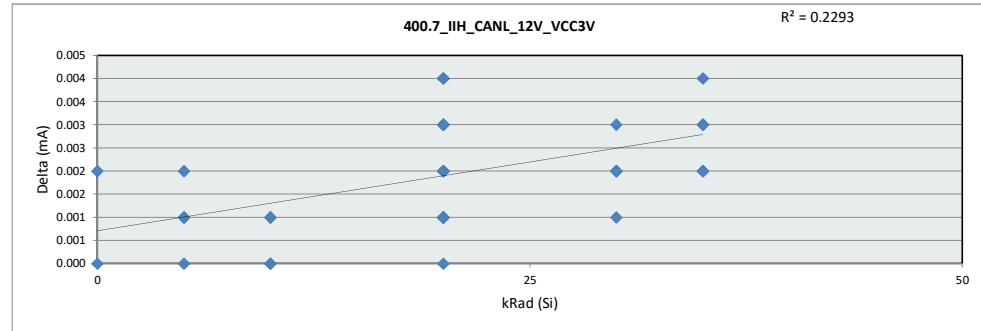


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

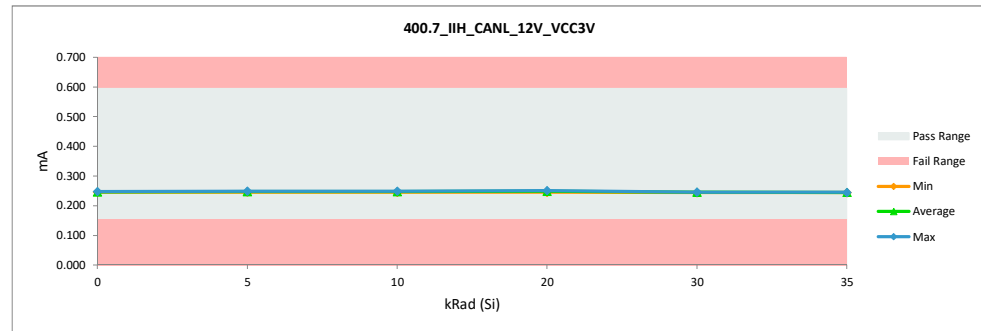
400.7_IIH_CANL_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.595	0.595
Min Limit	0.155	0.155

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	0.248	0.246	0.002
0	039C1	0.248	0.248	0.000
5	001B5	0.246	0.246	0.000
5	002B5	0.250	0.248	0.002
5	003B5	0.248	0.247	0.001
5	004B5	0.249	0.248	0.001
5	005B5	0.250	0.249	0.001
10	006B10	0.249	0.248	0.001
10	007B10	0.246	0.246	0.000
10	008B10	0.246	0.245	0.001
10	009B10	0.249	0.249	0.000
10	010B10	0.249	0.248	0.001
20	011B20	0.250	0.249	0.001
20	012B20	0.250	0.248	0.002
20	013B20	0.251	0.250	0.001
20	014B20	0.247	0.246	0.001
20	015B20	0.248	0.245	0.003
20	016B20	0.254	0.250	0.004
20	017B20	0.253	0.250	0.003
20	018B20	0.251	0.250	0.001
20	019B20	0.253	0.250	0.003
20	020B20	0.254	0.251	0.003
20	021B20	0.253	0.249	0.004
20	022B20	0.249	0.245	0.004
20	023B20	0.252	0.248	0.004
20	024B20	0.252	0.251	0.001
20	025B20	0.253	0.250	0.003
20	026B20	0.247	0.246	0.001
20	027B20	0.249	0.247	0.002
20	028B20	0.251	0.249	0.002
20	029B20	0.250	0.248	0.002
20	030B20	0.249	0.248	0.001
20	031B20	0.249	0.248	0.001
20	032B20	0.246	0.246	0.000
30	033B30	0.246	0.244	0.002
30	034B30	0.249	0.246	0.003
30	035B30	0.248	0.246	0.002
30	036B30	0.248	0.246	0.002
30	037B30	0.247	0.246	0.001
35	033B35	0.246	0.244	0.002
35	034B35	0.249	0.245	0.004
35	035B35	0.248	0.245	0.003
35	036B35	0.248	0.245	0.003
35	037B35	0.247	0.245	0.002
Max		0.254	0.251	0.004
Average		0.249	0.247	0.002
Min		0.246	0.244	0.000
Std Dev		0.002	0.002	0.001



400.7_IIH_CANL_12V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	0.595	mA
Min Limit	0.155	mA

kRad (Si)	0	5	10	20	30	35
LL	0.155	0.155	0.155	0.155	0.155	0.155
Min	0.246	0.246	0.245	0.245	0.244	0.244
Average	0.247	0.248	0.247	0.248	0.246	0.245
Max	0.248	0.249	0.249	0.251	0.246	0.245
UL	0.595	0.595	0.595	0.595	0.595	0.595

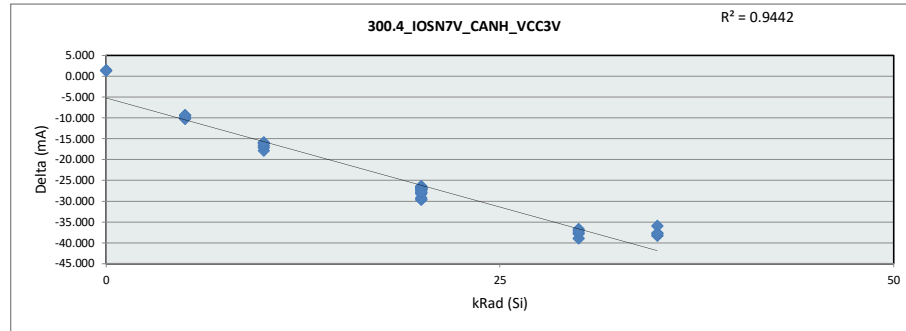


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

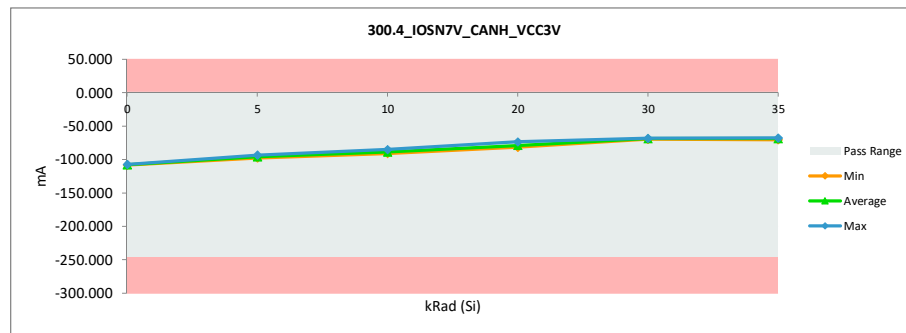
300.4_IOSN7V_CANH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.9	0.9
Min Limit	-245	-245

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-105.801	-107.245	1.444
0	039C1	-106.817	-108.144	1.327
5	001B5	-104.213	-94.288	-9.925
5	002B5	-105.968	-96.489	-9.479
5	003B5	-106.962	-97.610	-9.352
5	004B5	-103.525	-93.277	-10.248
5	005B5	-106.832	-97.408	-9.424
10	006B10	-106.773	-90.900	-15.873
10	007B10	-104.477	-87.345	-17.132
10	008B10	-102.746	-84.884	-17.862
10	009B10	-105.092	-88.416	-16.676
10	010B10	-106.928	-90.823	-16.105
20	011B20	-105.674	-77.690	-27.984
20	012B20	-107.009	-80.536	-26.473
20	013B20	-107.249	-80.038	-27.211
20	014B20	-103.114	-73.452	-29.662
20	015B20	-105.138	-78.159	-26.979
20	016B20	-106.624	-79.573	-27.051
20	017B20	-107.423	-81.008	-26.415
20	018B20	-105.241	-77.004	-28.237
20	019B20	-106.332	-78.498	-27.834
20	020B20	-107.729	-80.668	-27.061
20	021B20	-106.615	-79.583	-27.032
20	022B20	-105.132	-78.068	-27.064
20	023B20	-106.668	-79.652	-27.016
20	024B20	-108.432	-81.672	-26.760
20	025B20	-107.958	-81.349	-26.609
20	026B20	-103.748	-74.171	-29.577
20	027B20	-104.035	-74.833	-29.202
20	028B20	-107.637	-80.838	-26.799
20	029B20	-107.398	-80.444	-26.954
20	030B20	-107.521	-80.188	-27.333
20	031B20	-107.628	-80.168	-27.460
20	032B20	-105.758	-77.826	-27.932
30	033B30	-106.138	-69.474	-36.664
30	034B30	-108.021	-69.106	-38.915
30	035B30	-106.055	-68.472	-37.583
30	036B30	-105.901	-68.084	-37.817
30	037B30	-105.230	-68.155	-37.075
35	033B35	-106.138	-70.188	-35.950
35	034B35	-108.021	-69.745	-38.276
35	035B35	-106.055	-68.379	-37.676
35	036B35	-105.901	-67.706	-38.195
35	037B35	-105.230	-67.477	-37.753
	Max	-102.746	-67.477	1.444
	Average	-106.111	-80.887	-25.224
	Min	-108.432	-108.144	-38.915
	Std Dev	1.393	10.319	10.404



300.4_IOSN7V_CANH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Max Limit	0.9	mA
Min Limit	-245	mA

kRad (Si)	0	5	10	20	30	35
LL	-245.000	-245.000	-245.000	-245.000	-245.000	-245.000
Min	-108.144	-97.610	-90.900	-81.672	-69.474	-70.188
Average	-107.695	-95.814	-88.474	-78.883	-68.658	-68.699
Max	-107.245	-93.277	-84.884	-73.452	-68.084	-67.477
UL	0.900	0.900	0.900	0.900	0.900	0.900

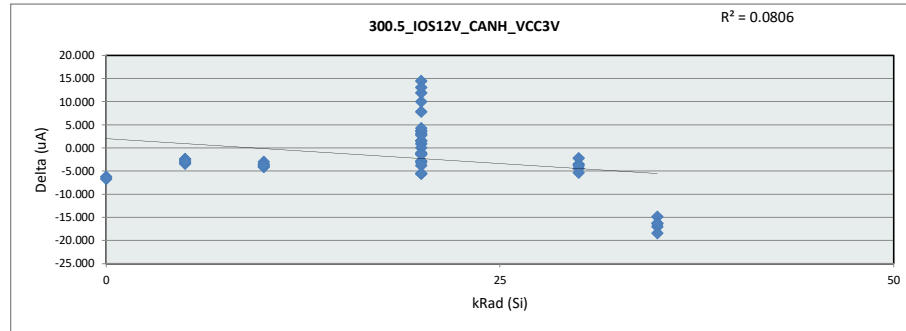


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

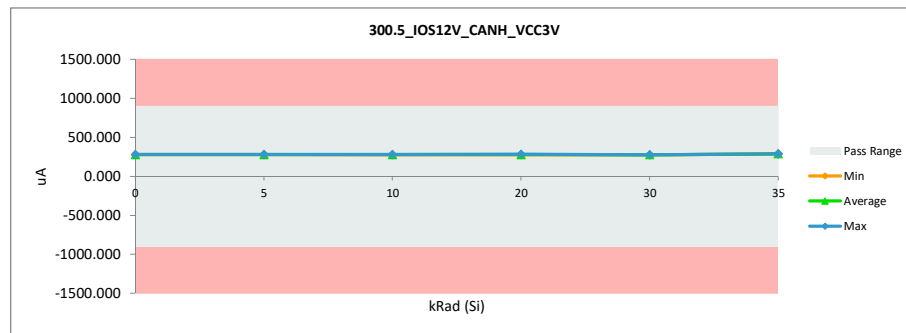
300.5_IOS12V_CANH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit	-900	-900

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	272.347	278.586	-6.239
0	039C1	273.341	280.016	-6.675
5	001B5	275.162	278.569	-3.407
5	002B5	279.264	281.615	-2.351
5	003B5	277.587	280.180	-2.593
5	004B5	278.183	281.430	-3.247
5	005B5	279.227	282.108	-2.881
10	006B10	278.582	281.549	-2.967
10	007B10	274.669	278.779	-4.110
10	008B10	274.447	277.961	-3.514
10	009B10	278.018	282.034	-4.016
10	010B10	277.303	280.990	-3.687
20	011B20	279.321	282.141	-2.820
20	012B20	281.808	280.891	0.917
20	013B20	284.134	282.613	1.521
20	014B20	280.299	278.742	1.557
20	015B20	280.147	277.024	3.123
20	016B20	286.797	283.086	3.711
20	017B20	285.992	283.230	2.762
20	018B20	286.559	282.885	3.674
20	019B20	291.437	283.583	7.854
20	020B20	294.347	284.340	10.007
20	021B20	296.295	281.816	14.479
20	022B20	289.452	277.550	11.902
20	023B20	293.365	280.283	13.082
20	024B20	281.097	284.220	-3.123
20	025B20	287.599	283.324	4.275
20	026B20	274.431	278.191	-3.760
20	027B20	279.584	279.564	0.020
20	028B20	281.204	282.280	-1.076
20	029B20	280.094	281.524	-1.430
20	030B20	279.630	280.978	-1.348
20	031B20	275.988	281.578	-5.590
20	032B20	272.117	277.628	-5.511
30	033B30	272.043	275.585	-3.542
30	034B30	273.654	278.076	-4.422
30	035B30	275.590	277.797	-2.207
30	036B30	273.563	277.398	-3.835
30	037B30	272.355	277.698	-5.343
35	033B35	272.043	288.402	-16.359
35	034B35	273.654	290.677	-17.023
35	035B35	275.590	290.452	-14.862
35	036B35	273.563	289.842	-16.279
35	037B35	272.355	290.767	-18.412
	Max	296.295	290.767	14.479
	Average	279.414	281.545	-2.131
	Min	272.043	275.585	-18.412
	Std Dev	6.516	3.763	7.326



300.5_IOS12V_CANH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Max Limit	900	uA
Min Limit	-900	uA

kRad (Si)	0	5	10	20	30	35
LL	-900.000	-900.000	-900.000	-900.000	-900.000	-900.000
Min	278.586	278.569	277.961	277.024	275.585	288.402
Average	279.301	280.780	280.263	281.249	277.311	290.028
Max	280.016	282.108	282.034	284.340	278.076	290.767
UL	900.000	900.000	900.000	900.000	900.000	900.000

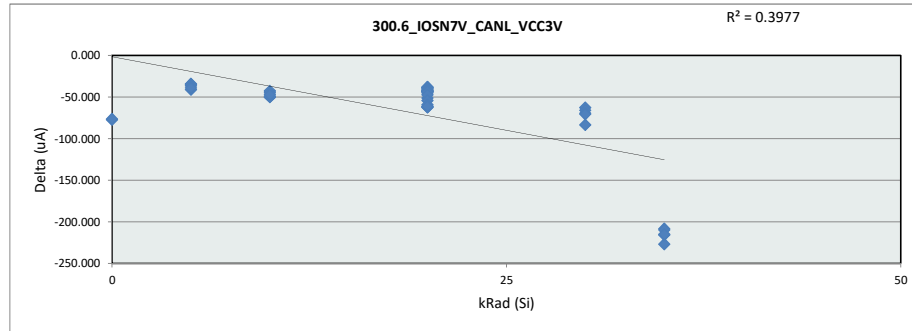


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

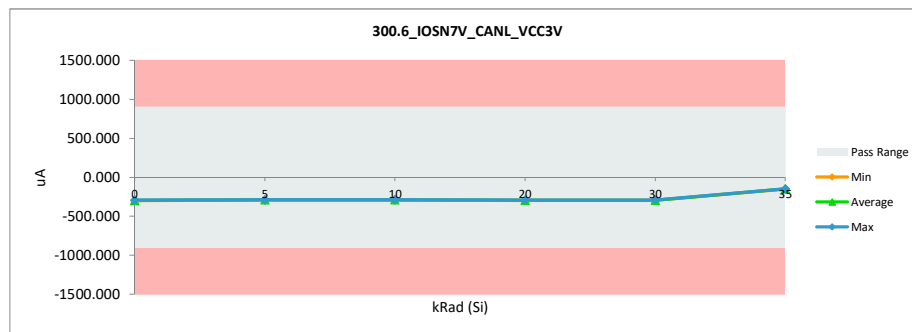
300.6_IOSN7V_CANL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit	-900	-900

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-369.545	-292.217	-77.328
0	039C1	-375.876	-299.576	-76.300
5	001B5	-322.474	-287.613	-34.861
5	002B5	-329.915	-288.764	-41.151
5	003B5	-324.365	-290.244	-34.121
5	004B5	-325.311	-288.805	-36.506
5	005B5	-329.134	-290.203	-38.931
10	006B10	-334.273	-291.683	-42.590
10	007B10	-337.150	-287.037	-50.113
10	008B10	-333.245	-288.559	-44.686
10	009B10	-341.631	-291.477	-50.154
10	010B10	-337.726	-290.408	-47.318
20	011B20	-334.191	-295.629	-38.562
20	012B20	-333.492	-290.737	-42.755
20	013B20	-335.506	-293.039	-42.467
20	014B20	-328.312	-290.573	-37.739
20	015B20	-331.724	-293.204	-38.520
20	016B20	-338.137	-295.054	-43.083
20	017B20	-334.725	-295.013	-39.712
20	018B20	-335.383	-295.054	-40.329
20	019B20	-337.685	-293.738	-43.947
20	020B20	-339.247	-295.465	-43.782
20	021B20	-338.137	-296.945	-41.192
20	022B20	-334.232	-291.765	-42.467
20	023B20	-339.864	-293.409	-46.455
20	024B20	-338.425	-294.684	-43.741
20	025B20	-346.894	-295.629	-51.265
20	026B20	-340.316	-292.875	-47.441
20	027B20	-346.565	-292.423	-54.142
20	028B20	-351.950	-292.628	-59.322
20	029B20	-355.897	-293.574	-62.323
20	030B20	-354.951	-292.752	-62.199
20	031B20	-353.348	-292.094	-61.254
20	032B20	-352.608	-291.436	-61.172
30	033B30	-354.581	-291.806	-62.775
30	034B30	-376.945	-293.574	-83.371
30	035B30	-358.774	-292.752	-66.022
30	036B30	-363.091	-293.697	-69.394
30	037B30	-366.626	-295.999	-70.627
35	033B35	-354.581	-146.483	-208.098
35	034B35	-376.945	-150.388	-226.557
35	035B35	-358.774	-149.360	-209.414
35	036B35	-363.091	-147.675	-215.416
35	037B35	-366.626	-151.703	-214.923
	Max	-322.474	-146.483	-34.121
	Average	-345.506	-276.312	-69.194
	Min	-376.945	-299.576	-226.557
	Std Dev	15.018	46.139	54.208



300.6_IOSN7V_CANL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Max Limit	900	uA
Min Limit	-900	uA

kRad (Si)	0	5	10	20	30	35
LL	-900.000	-900.000	-900.000	-900.000	-900.000	-900.000
Min	-299.576	-290.244	-291.683	-296.945	-295.999	-151.703
Average	-295.897	-289.126	-289.833	-293.533	-293.566	-149.122
Max	-292.217	-287.613	-287.037	-290.573	-291.806	-146.483
UL	900.000	900.000	900.000	900.000	900.000	900.000

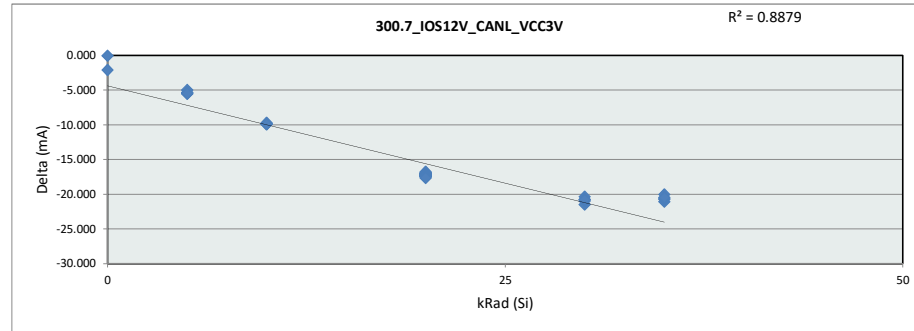


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

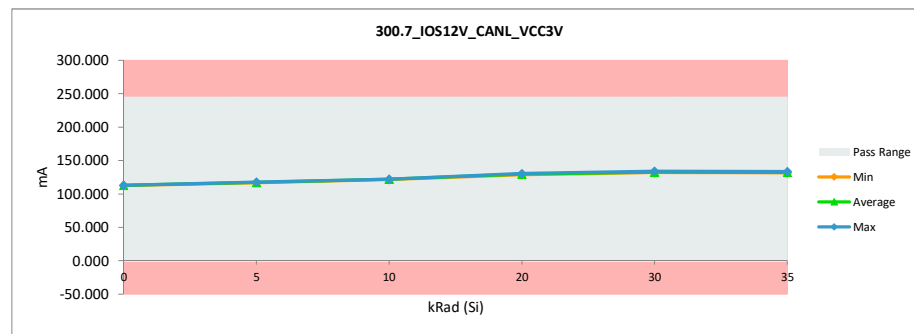
300.7_IOS12V_CANL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	245	245
Min Limit	-0.9	-0.9

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	111.081	113.192	-2.111
0	039C1	112.410	112.460	-0.050
5	001B5	111.975	116.970	-4.995
5	002B5	112.261	117.786	-5.525
5	003B5	112.563	117.924	-5.361
5	004B5	111.486	116.823	-5.337
5	005B5	112.374	117.855	-5.481
10	006B10	112.261	122.077	-9.816
10	007B10	111.890	121.767	-9.877
10	008B10	111.660	121.538	-9.878
10	009B10	112.253	121.957	-9.704
10	010B10	112.385	122.325	-9.940
20	011B20	111.792	128.744	-16.952
20	012B20	112.450	129.400	-16.950
20	013B20	112.480	129.672	-17.192
20	014B20	111.820	129.001	-17.181
20	015B20	112.333	129.714	-17.381
20	016B20	112.442	129.766	-17.324
20	017B20	112.564	129.318	-16.754
20	018B20	111.843	128.806	-16.963
20	019B20	111.716	129.013	-17.297
20	020B20	112.588	129.737	-17.149
20	021B20	112.444	129.555	-17.111
20	022B20	112.687	129.630	-16.943
20	023B20	112.289	129.329	-17.040
20	024B20	112.692	130.085	-17.393
20	025B20	112.426	129.792	-17.366
20	026B20	112.299	129.685	-17.386
20	027B20	112.094	129.451	-17.357
20	028B20	112.776	129.851	-17.075
20	029B20	112.554	129.798	-17.244
20	030B20	112.523	130.043	-17.520
20	031B20	112.579	130.025	-17.446
20	032B20	112.962	130.620	-17.658
30	033B30	112.765	134.255	-21.490
30	034B30	112.000	132.356	-20.356
30	035B30	111.190	132.164	-20.974
30	036B30	111.272	132.006	-20.734
30	037B30	111.194	131.999	-20.805
35	033B35	112.765	133.829	-21.064
35	034B35	112.000	132.032	-20.032
35	035B35	111.190	131.896	-20.706
35	036B35	111.272	131.945	-20.673
35	037B35	111.194	131.661	-20.467
	Max	112.962	134.255	-0.050
	Average	112.132	127.224	-15.092
	Min	111.081	112.460	-21.490
	Std Dev	0.524	5.779	5.762



300.7_IOS12V_CANL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Max Limit	245	mA
Min Limit	-0.9	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.900	-0.900	-0.900	-0.900	-0.900	-0.900
Min	112.460	116.823	121.538	128.744	131.999	131.661
Average	112.826	117.472	121.933	129.593	132.556	132.273
Max	113.192	117.924	122.325	130.620	134.255	133.829
UL	245.000	245.000	245.000	245.000	245.000	245.000

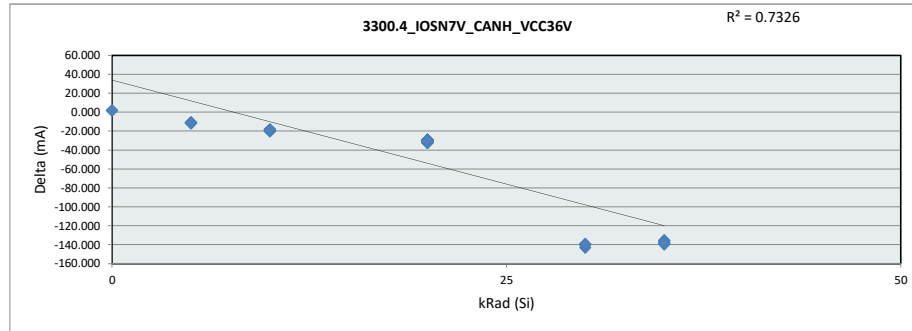


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

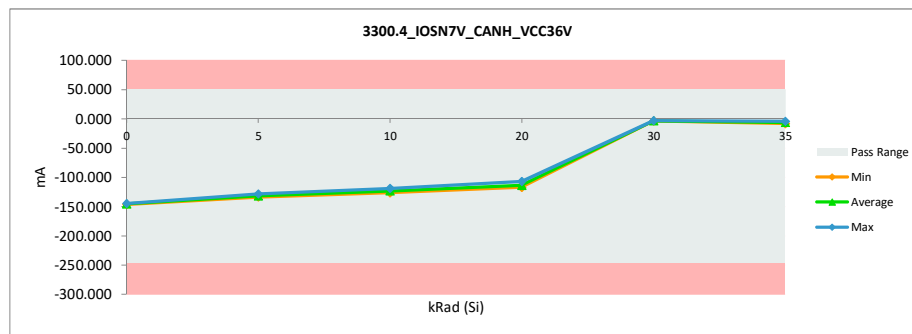
3300.4_IOSN7V_CANH_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	50	50
Min Limit	-245	-245

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-143.072	-144.855	1.783
0	039C1	-144.366	-146.086	1.720
5	001B5	-140.899	-129.529	-11.370
5	002B5	-143.242	-132.304	-10.938
5	003B5	-144.510	-133.643	-10.867
5	004B5	-140.136	-128.307	-11.829
5	005B5	-144.373	-133.440	-10.933
10	006B10	-144.350	-126.236	-18.114
10	007B10	-141.335	-121.799	-19.536
10	008B10	-139.186	-118.849	-20.337
10	009B10	-142.162	-123.127	-19.035
10	010B10	-144.487	-126.104	-18.383
20	011B20	-142.832	-111.856	-30.976
20	012B20	-144.625	-115.409	-29.216
20	013B20	-144.879	-114.996	-29.883
20	014B20	-139.632	-107.109	-32.523
20	015B20	-142.207	-112.640	-29.567
20	016B20	-144.098	-114.376	-29.722
20	017B20	-145.121	-115.989	-29.132
20	018B20	-142.318	-111.099	-31.219
20	019B20	-143.746	-113.050	-30.696
20	020B20	-145.491	-115.701	-29.790
20	021B20	-144.142	-114.339	-29.803
20	022B20	-142.226	-112.558	-29.668
20	023B20	-144.137	-114.408	-29.729
20	024B20	-146.393	-117.003	-29.390
20	025B20	-145.705	-116.665	-29.040
20	026B20	-140.432	-108.062	-32.370
20	027B20	-140.822	-108.857	-31.965
20	028B20	-145.394	-115.890	-29.504
20	029B20	-145.100	-115.487	-29.613
20	030B20	-145.294	-115.309	-29.985
20	031B20	-145.429	-115.316	-30.113
20	032B20	-143.034	-112.540	-30.494
30	033B30	-143.499	-3.598	-139.901
30	034B30	-145.875	-2.833	-143.042
30	035B30	-143.394	-3.438	-139.956
30	036B30	-143.234	-3.338	-139.896
30	037B30	-142.352	-3.153	-139.199
35	033B35	-143.499	-8.077	-135.422
35	034B35	-145.875	-6.305	-139.570
35	035B35	-143.394	-5.509	-137.885
35	036B35	-143.234	-6.604	-136.630
35	037B35	-142.352	-4.064	-138.288
	Max	-139.186	-2.833	1.783
	Average	-143.452	-93.406	-50.046
	Min	-146.393	-146.086	-143.042
	Std Dev	1.777	49.416	49.540



3300.4_IOSN7V_CANH_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	50	mA
Min Limit	-245	mA

kRad (Si)	0	5	10	20	30	35
LL	-245.000	-245.000	-245.000	-245.000	-245.000	-245.000
Min	-146.086	-133.643	-126.236	-117.003	-3.598	-8.077
Average	-145.471	-131.445	-123.223	-113.575	-3.272	-6.112
Max	-144.855	-128.307	-118.849	-107.109	-2.833	-4.064
UL	50.000	50.000	50.000	50.000	50.000	50.000

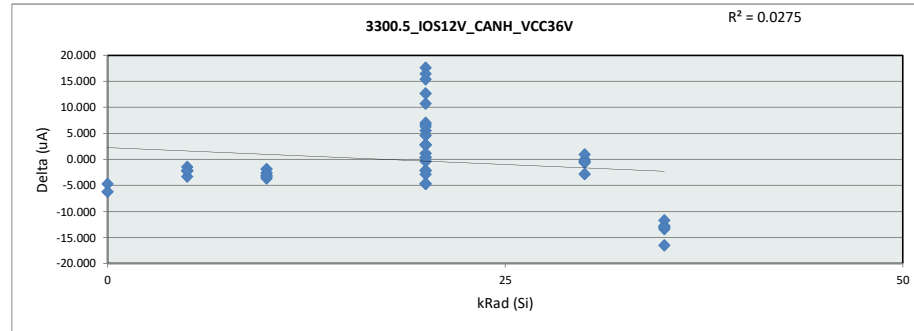


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

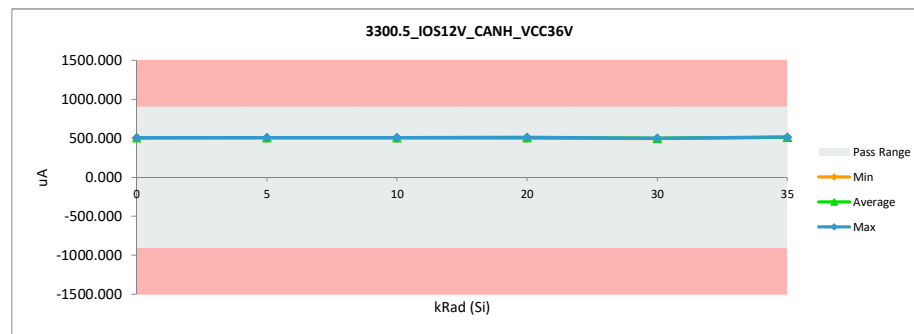
3300.5_IOS12V_CANH_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit	-900	-900

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	500.582	505.255	-4.673
0	039C1	502.013	508.202	-6.189
5	001B5	501.766	505.021	-3.255
5	002B5	509.226	510.660	-1.434
5	003B5	505.457	507.639	-2.182
5	004B5	507.577	509.694	-2.117
5	005B5	509.205	511.363	-2.158
10	006B10	508.523	510.343	-1.820
10	007B10	501.519	504.836	-3.317
10	008B10	500.985	503.558	-2.573
10	009B10	507.253	510.894	-3.641
10	010B10	506.275	509.312	-3.037
20	011B20	509.784	511.938	-2.154
20	012B20	511.839	509.045	2.794
20	013B20	515.205	512.337	2.868
20	014B20	507.758	504.992	2.766
20	015B20	507.894	502.366	5.528
20	016B20	520.178	513.414	6.764
20	017B20	518.115	513.492	4.623
20	018B20	520.014	512.978	7.036
20	019B20	524.354	513.598	10.756
20	020B20	527.667	514.971	12.696
20	021B20	528.604	510.985	17.619
20	022B20	518.543	503.118	15.425
20	023B20	524.662	508.223	16.439
20	024B20	512.842	514.885	-2.043
20	025B20	519.582	513.282	6.300
20	026B20	501.478	504.310	-2.832
20	027B20	508.062	506.871	1.191
20	028B20	511.613	511.219	0.394
20	029B20	510.376	509.957	0.419
20	030B20	508.580	508.934	-0.354
20	031B20	505.313	509.978	-4.665
20	032B20	499.095	503.722	-4.627
30	033B30	498.947	499.243	-0.296
30	034B30	502.826	502.872	-0.046
30	035B30	503.726	502.761	0.965
30	036B30	501.561	502.152	-0.591
30	037B30	500.077	502.880	-2.803
35	033B35	498.947	512.291	-13.344
35	034B35	502.826	515.588	-12.762
35	035B35	503.726	515.396	-11.670
35	036B35	501.561	514.570	-13.009
35	037B35	500.077	516.558	-16.481
	Max	528.604	516.558	17.619
	Average	508.778	508.993	-0.216
	Min	498.947	499.243	-16.481
	Std Dev	8.224	4.520	7.507



3300.5_IOS12V_CANH_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	900	uA
Min Limit	-900	uA

kRad (Si)	0	5	10	20	30	35
LL	-900.000	-900.000	-900.000	-900.000	-900.000	-900.000
Min	505.255	505.021	503.558	502.366	499.243	512.291
Average	506.729	508.875	507.789	509.755	501.982	514.881
Max	508.202	511.363	510.894	514.971	502.880	516.558
UL	900.000	900.000	900.000	900.000	900.000	900.000

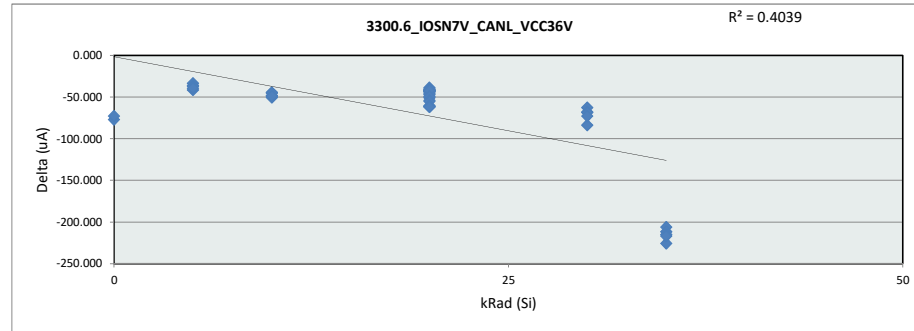


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

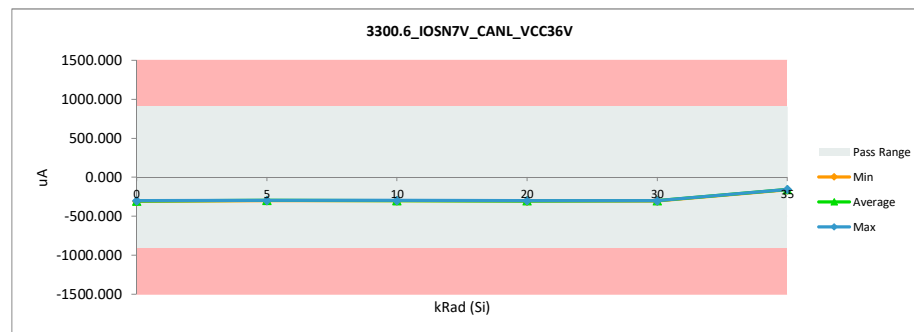
3300.6_IOSN7V_CANL_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit	-900	-900

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-378.302	-301.220	-77.082
0	039C1	-382.783	-309.936	-72.847
5	001B5	-331.518	-295.301	-36.217
5	002B5	-337.808	-296.246	-41.562
5	003B5	-331.806	-298.425	-33.381
5	004B5	-334.067	-297.027	-37.040
5	005B5	-338.466	-298.959	-39.507
10	006B10	-344.509	-300.110	-44.399
10	007B10	-344.016	-295.588	-48.428
10	008B10	-341.919	-296.945	-44.974
10	009B10	-351.786	-301.220	-50.566
10	010B10	-346.277	-297.397	-48.880
20	011B20	-343.769	-302.084	-41.685
20	012B20	-343.399	-300.974	-42.425
20	013B20	-344.550	-303.523	-41.027
20	014B20	-338.959	-300.193	-38.766
20	015B20	-340.850	-300.645	-40.205
20	016B20	-344.961	-303.029	-41.932
20	017B20	-344.139	-302.618	-41.521
20	018B20	-346.524	-302.454	-44.070
20	019B20	-344.879	-302.084	-42.795
20	020B20	-349.607	-302.824	-46.783
20	021B20	-348.415	-305.167	-43.248
20	022B20	-343.111	-299.576	-43.535
20	023B20	-347.017	-301.138	-45.879
20	024B20	-345.496	-303.276	-42.220
20	025B20	-355.938	-305.126	-50.812
20	026B20	-350.018	-300.850	-49.168
20	027B20	-355.280	-301.261	-54.019
20	028B20	-357.952	-302.906	-55.046
20	029B20	-363.050	-302.618	-60.432
20	030B20	-363.379	-301.796	-61.583
20	031B20	-362.639	-301.097	-61.542
20	032B20	-361.364	-299.658	-61.706
30	033B30	-363.338	-300.522	-62.816
30	034B30	-385.249	-301.631	-83.618
30	035B30	-368.846	-300.850	-67.996
30	036B30	-370.203	-301.673	-68.530
30	037B30	-376.369	-303.605	-72.764
35	033B35	-363.338	-157.293	-206.045
35	034B35	-385.249	-159.512	-225.737
35	035B35	-368.846	-157.169	-211.677
35	036B35	-370.203	-155.197	-215.006
35	037B35	-376.369	-159.389	-216.980
	Max	-331.518	-155.197	-33.381
	Average	-354.240	-284.775	-69.465
	Min	-385.249	-309.936	-225.737
	Std Dev	14.832	46.101	54.090



3300.6_IOSN7V_CANL_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	900	uA
Min Limit	-900	uA

kRad (Si)	0	5	10	20	30	35
LL	-900.000	-900.000	-900.000	-900.000	-900.000	-900.000
Min	-309.936	-298.959	-301.220	-305.167	-303.605	-159.512
Average	-305.578	-297.192	-298.252	-302.041	-301.656	-157.712
Max	-301.220	-295.301	-295.588	-299.576	-300.522	-155.197
UL	900.000	900.000	900.000	900.000	900.000	900.000

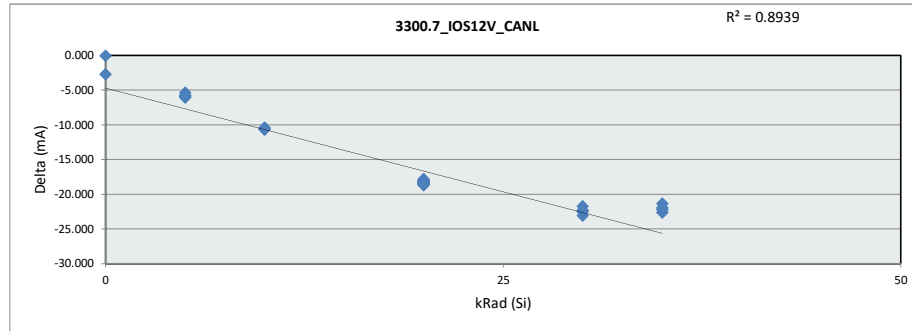


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

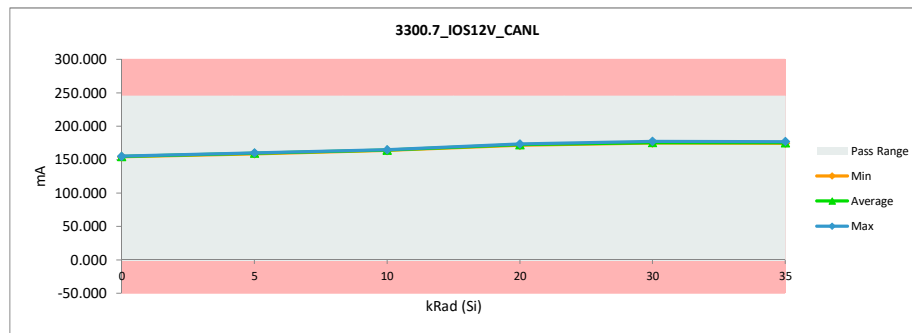
3300.7_IOS12V_CANL		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	245	245
Min Limit	-0.9	-0.9

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	152.525	155.227	-2.702
0	039C1	154.167	154.229	-0.062
5	001B5	153.572	158.951	-5.379
5	002B5	153.953	160.001	-6.048
5	003B5	154.370	160.173	-5.803
5	004B5	153.000	158.794	-5.794
5	005B5	154.189	160.127	-5.938
10	006B10	153.945	164.520	-10.575
10	007B10	153.426	164.023	-10.597
10	008B10	153.172	163.797	-10.625
10	009B10	153.943	164.355	-10.412
10	010B10	154.065	164.745	-10.680
20	011B20	153.514	171.554	-18.040
20	012B20	154.225	172.249	-18.024
20	013B20	154.186	172.497	-18.311
20	014B20	153.341	171.618	-18.277
20	015B20	153.892	172.400	-18.508
20	016B20	154.121	172.620	-18.499
20	017B20	154.331	172.155	-17.824
20	018B20	153.567	171.605	-18.038
20	019B20	153.436	171.838	-18.402
20	020B20	154.387	172.602	-18.215
20	021B20	154.139	172.333	-18.194
20	022B20	154.392	172.368	-17.976
20	023B20	153.968	172.087	-18.119
20	024B20	154.472	172.974	-18.502
20	025B20	154.140	172.622	-18.482
20	026B20	153.963	172.422	-18.459
20	027B20	153.730	172.172	-18.442
20	028B20	154.632	172.758	-18.126
20	029B20	154.366	172.694	-18.328
20	030B20	154.329	172.948	-18.619
20	031B20	154.410	172.929	-18.519
20	032B20	154.736	173.436	-18.700
30	033B30	154.480	177.557	-23.077
30	034B30	153.629	175.377	-21.748
30	035B30	152.651	175.159	-22.508
30	036B30	152.703	175.004	-22.301
30	037B30	152.617	174.989	-22.372
35	033B35	154.480	177.095	-22.615
35	034B35	153.629	174.976	-21.347
35	035B35	152.651	174.826	-22.175
35	036B35	152.703	174.867	-22.164
35	037B35	152.617	174.553	-21.936
	Max	154.736	177.557	-0.062
	Average	153.790	169.914	-16.124
	Min	152.525	154.229	-23.077
	Std Dev	0.640	6.118	6.110



3300.7_IOS12V_CANL		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	245	mA
Min Limit	-0.9	mA

kRad (Si)	0	5	10	20	30	35
LL	-0.900	-0.900	-0.900	-0.900	-0.900	-0.900
Min	154.229	158.794	163.797	171.554	174.989	174.553
Average	154.728	159.609	164.288	172.404	175.617	175.263
Max	155.227	160.173	164.745	173.436	177.557	177.095
UL	245.000	245.000	245.000	245.000	245.000	245.000

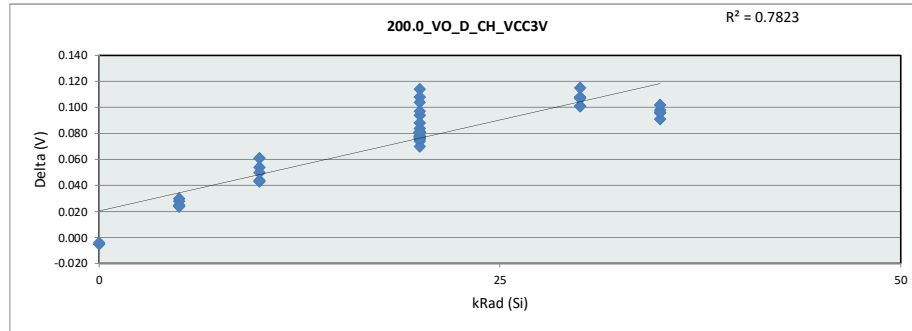


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

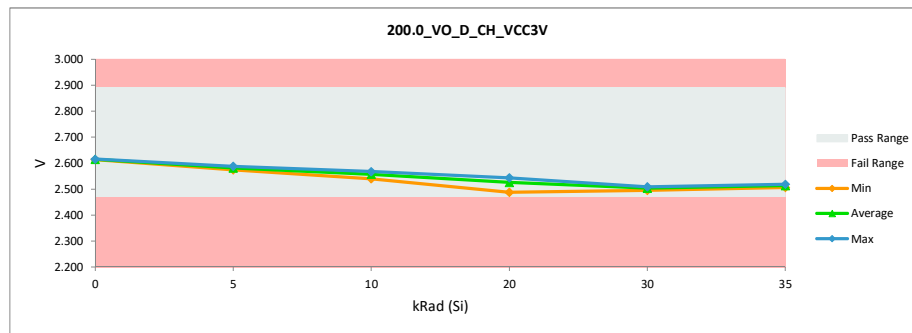
200.0_VO_D_CH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	2.89	2.89
Min Limit	2.47	2.47

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	2.609	2.614	-0.005
0	039C1	2.612	2.616	-0.004
5	001B5	2.605	2.577	0.028
5	002B5	2.609	2.584	0.025
5	003B5	2.612	2.588	0.024
5	004B5	2.604	2.574	0.030
5	005B5	2.611	2.587	0.024
10	006B10	2.611	2.568	0.043
10	007B10	2.606	2.552	0.054
10	008B10	2.601	2.540	0.061
10	009B10	2.607	2.557	0.050
10	010B10	2.612	2.568	0.044
20	011B20	2.608	2.514	0.094
20	012B20	2.613	2.537	0.076
20	013B20	2.612	2.532	0.080
20	014B20	2.602	2.488	0.114
20	015B20	2.607	2.526	0.081
20	016B20	2.610	2.529	0.081
20	017B20	2.613	2.537	0.076
20	018B20	2.607	2.510	0.097
20	019B20	2.611	2.523	0.088
20	020B20	2.613	2.535	0.078
20	021B20	2.612	2.531	0.081
20	022B20	2.608	2.524	0.084
20	023B20	2.611	2.530	0.081
20	024B20	2.615	2.541	0.074
20	025B20	2.614	2.544	0.070
20	026B20	2.603	2.495	0.108
20	027B20	2.604	2.500	0.104
20	028B20	2.613	2.537	0.076
20	029B20	2.613	2.536	0.077
20	030B20	2.614	2.536	0.078
20	031B20	2.613	2.536	0.077
20	032B20	2.609	2.528	0.081
30	033B30	2.610	2.509	0.101
30	034B30	2.615	2.507	0.108
30	035B30	2.610	2.503	0.107
30	036B30	2.610	2.495	0.115
30	037B30	2.608	2.507	0.101
35	033B35	2.610	2.519	0.091
35	034B35	2.615	2.517	0.098
35	035B35	2.610	2.514	0.096
35	036B35	2.610	2.514	0.096
35	037B35	2.608	2.506	0.102
	Max	2.615	2.616	0.115
	Average	2.610	2.536	0.074
	Min	2.601	2.488	-0.005
	Std Dev	0.004	0.031	0.031



200.0_VO_D_CH_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	2.89	V
Min Limit	2.47	V

kRad (Si)	0	5	10	20	30	35
LL	2.470	2.470	2.470	2.470	2.470	2.470
Min	2.614	2.574	2.540	2.488	2.495	2.506
Average	2.615	2.582	2.557	2.526	2.504	2.514
Max	2.616	2.588	2.568	2.544	2.509	2.519
UL	2.890	2.890	2.890	2.890	2.890	2.890

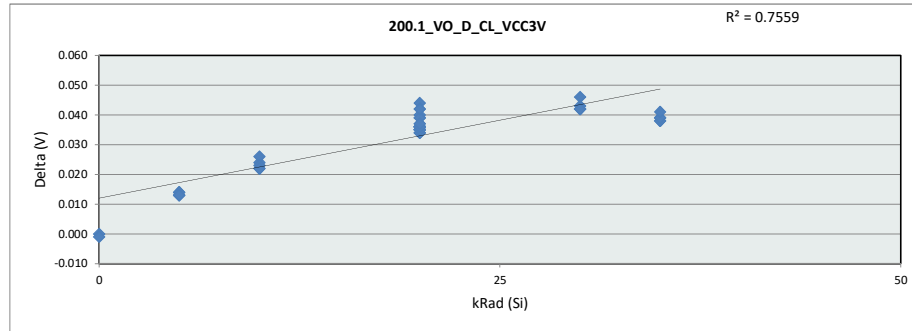


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

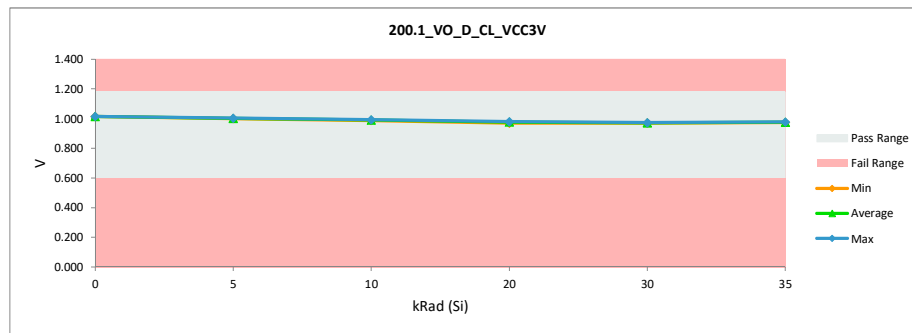
200.1_VO_D_CL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	1.18	1.18
Min Limit	0.6	0.6

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	1.015	1.015	0.000
0	039C1	1.014	1.015	-0.001
5	001B5	1.014	1.000	0.014
5	002B5	1.013	1.000	0.013
5	003B5	1.014	1.001	0.013
5	004B5	1.017	1.003	0.014
5	005B5	1.014	1.001	0.013
10	006B10	1.014	0.992	0.022
10	007B10	1.014	0.990	0.024
10	008B10	1.013	0.987	0.026
10	009B10	1.013	0.990	0.023
10	010B10	1.014	0.992	0.022
20	011B20	1.014	0.975	0.039
20	012B20	1.014	0.979	0.035
20	013B20	1.013	0.978	0.035
20	014B20	1.013	0.969	0.044
20	015B20	1.013	0.977	0.036
20	016B20	1.013	0.977	0.036
20	017B20	1.013	0.979	0.034
20	018B20	1.013	0.973	0.040
20	019B20	1.015	0.976	0.039
20	020B20	1.014	0.978	0.036
20	021B20	1.014	0.978	0.036
20	022B20	1.013	0.976	0.037
20	023B20	1.014	0.978	0.036
20	024B20	1.014	0.979	0.035
20	025B20	1.014	0.980	0.034
20	026B20	1.012	0.970	0.042
20	027B20	1.013	0.971	0.042
20	028B20	1.013	0.978	0.035
20	029B20	1.013	0.978	0.035
20	030B20	1.014	0.978	0.036
20	031B20	1.014	0.978	0.036
20	032B20	1.013	0.976	0.037
30	033B30	1.014	0.972	0.042
30	034B30	1.015	0.972	0.043
30	035B30	1.015	0.973	0.042
30	036B30	1.016	0.970	0.046
30	037B30	1.015	0.973	0.042
35	033B35	1.014	0.975	0.039
35	034B35	1.015	0.977	0.038
35	035B35	1.015	0.977	0.038
35	036B35	1.016	0.977	0.039
35	037B35	1.015	0.974	0.041
	Max	1.017	1.015	0.046
	Average	1.014	0.982	0.032
	Min	1.012	0.969	-0.001
	Std Dev	0.001	0.012	0.012



200.1_VO_D_CL_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	1.18	V
Min Limit	0.6	V

kRad (Si)	0	5	10	20	30	35
LL	0.600	0.600	0.600	0.600	0.600	0.600
Min	1.015	1.000	0.987	0.969	0.970	0.974
Average	1.015	1.001	0.990	0.976	0.972	0.976
Max	1.015	1.003	0.992	0.980	0.973	0.977
UL	1.180	1.180	1.180	1.180	1.180	1.180

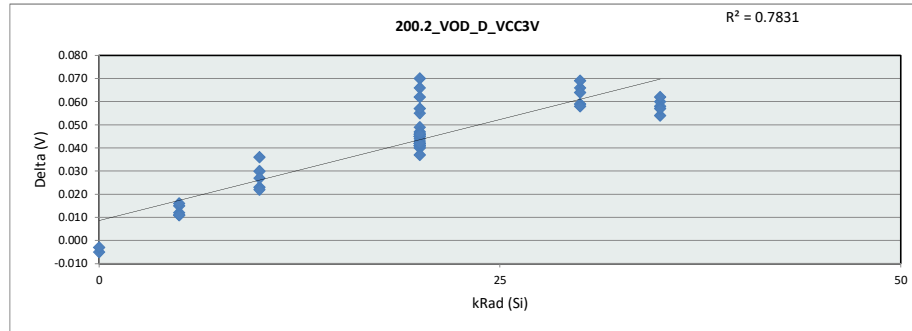


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

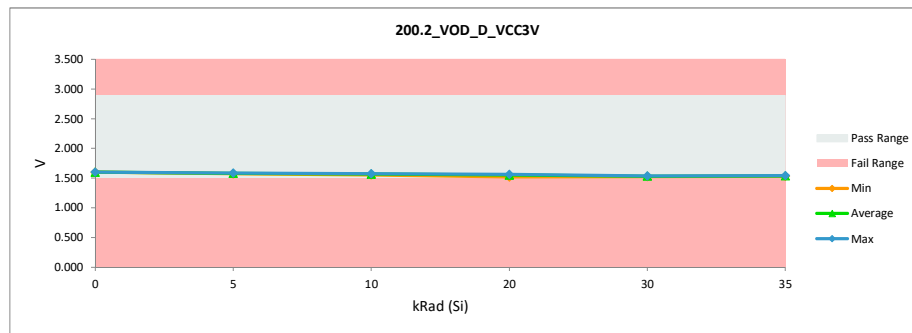
200.2_VOD_D_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	2.89	2.89
Min Limit	1.5	1.5

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	1.594	1.599	-0.005
0	039C1	1.598	1.601	-0.003
5	001B5	1.591	1.576	0.015
5	002B5	1.596	1.584	0.012
5	003B5	1.598	1.587	0.011
5	004B5	1.587	1.571	0.016
5	005B5	1.597	1.586	0.011
10	006B10	1.598	1.575	0.023
10	007B10	1.592	1.562	0.030
10	008B10	1.589	1.553	0.036
10	009B10	1.594	1.567	0.027
10	010B10	1.598	1.576	0.022
20	011B20	1.594	1.539	0.055
20	012B20	1.599	1.558	0.041
20	013B20	1.599	1.555	0.044
20	014B20	1.589	1.519	0.070
20	015B20	1.595	1.549	0.046
20	016B20	1.598	1.553	0.045
20	017B20	1.599	1.558	0.041
20	018B20	1.594	1.537	0.057
20	019B20	1.596	1.547	0.049
20	020B20	1.600	1.557	0.043
20	021B20	1.598	1.553	0.045
20	022B20	1.595	1.548	0.047
20	023B20	1.597	1.552	0.045
20	024B20	1.602	1.562	0.040
20	025B20	1.600	1.563	0.037
20	026B20	1.591	1.525	0.066
20	027B20	1.591	1.529	0.062
20	028B20	1.600	1.559	0.041
20	029B20	1.600	1.558	0.042
20	030B20	1.600	1.558	0.042
20	031B20	1.600	1.558	0.042
20	032B20	1.597	1.551	0.046
30	033B30	1.597	1.538	0.059
30	034B30	1.600	1.534	0.066
30	035B30	1.595	1.531	0.064
30	036B30	1.594	1.525	0.069
30	037B30	1.593	1.535	0.058
35	033B35	1.597	1.543	0.054
35	034B35	1.600	1.540	0.060
35	035B35	1.595	1.537	0.058
35	036B35	1.594	1.537	0.057
35	037B35	1.593	1.531	0.062
	Max	1.602	1.601	0.070
	Average	1.596	1.554	0.042
	Min	1.587	1.519	-0.005
	Std Dev	0.004	0.020	0.019



200.2_VOD_D_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	2.89	V
Min Limit	1.5	V

kRad (Si)	0	5	10	20	30	35
LL	1.500	1.500	1.500	1.500	1.500	1.500
Min	1.599	1.571	1.553	1.519	1.525	1.531
Average	1.600	1.581	1.567	1.549	1.533	1.538
Max	1.601	1.587	1.576	1.563	1.538	1.543
UL	2.890	2.890	2.890	2.890	2.890	2.890

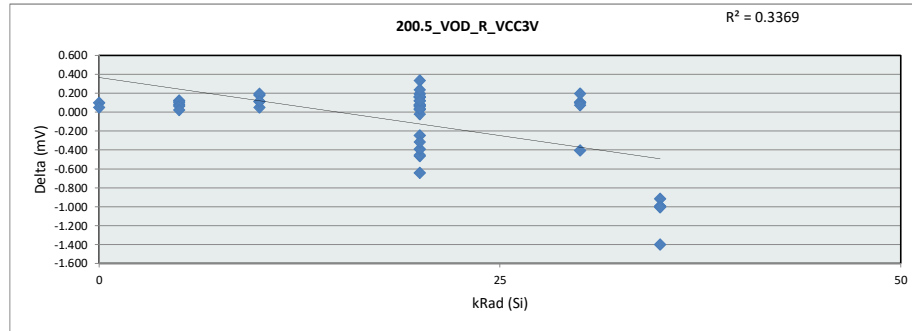


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

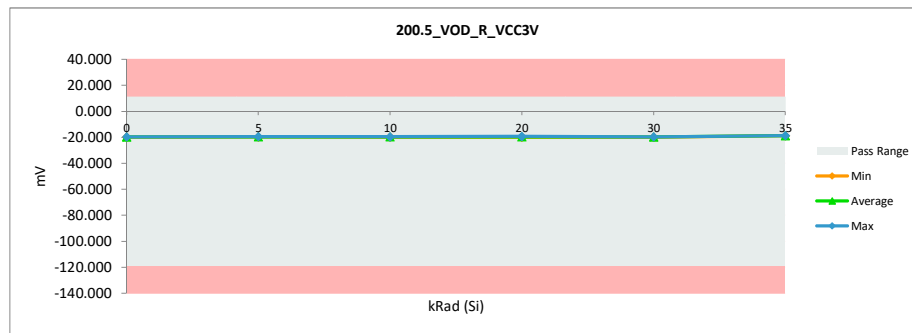
200.5_VOD_R_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	10.92	10.92
Min Limit	-119	-119

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-19.695	-19.793	0.098
0	039C1	-19.598	-19.649	0.051
5	001B5	-19.652	-19.776	0.124
5	002B5	-19.498	-19.583	0.085
5	003B5	-19.544	-19.651	0.107
5	004B5	-19.646	-19.712	0.066
5	005B5	-19.452	-19.476	0.024
10	006B10	-19.424	-19.603	0.179
10	007B10	-19.697	-19.807	0.110
10	008B10	-19.714	-19.764	0.050
10	009B10	-19.341	-19.535	0.194
10	010B10	-19.457	-19.573	0.116
20	011B20	-19.334	-19.669	0.335
20	012B20	-19.616	-19.684	0.068
20	013B20	-19.414	-19.491	0.077
20	014B20	-19.620	-19.778	0.158
20	015B20	-19.883	-19.944	0.061
20	016B20	-20.081	-19.439	-0.642
20	017B20	-19.719	-19.472	-0.247
20	018B20	-19.269	-19.464	0.195
20	019B20	-19.433	-19.461	0.028
20	020B20	-19.334	-19.314	-0.020
20	021B20	-19.473	-19.634	0.161
20	022B20	-19.585	-19.746	0.161
20	023B20	-19.573	-19.695	0.122
20	024B20	-19.181	-19.262	0.081
20	025B20	-19.476	-19.511	0.035
20	026B20	-19.708	-19.873	0.165
20	027B20	-20.079	-19.615	-0.464
20	028B20	-19.933	-19.481	-0.452
20	029B20	-19.945	-19.556	-0.389
20	030B20	-19.945	-19.630	-0.315
20	031B20	-19.493	-19.613	0.120
20	032B20	-19.688	-19.924	0.236
30	033B30	-19.796	-19.895	0.099
30	034B30	-19.662	-19.768	0.106
30	035B30	-20.045	-19.641	-0.404
30	036B30	-19.641	-19.837	0.196
30	037B30	-19.710	-19.784	0.074
35	033B35	-19.796	-18.799	-0.997
35	034B35	-19.662	-18.669	-0.993
35	035B35	-20.045	-18.648	-1.397
35	036B35	-19.641	-18.725	-0.916
35	037B35	-19.710	-18.705	-1.005
	Max	-19.181	-18.648	0.335
	Average	-19.641	-19.537	-0.104
	Min	-20.081	-19.944	-1.397
	Std Dev	0.220	0.337	0.409



200.5_VOD_R_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	10.92	mV
Min Limit	-119	mV

kRad (Si)	0	5	10	20	30	35
LL	-119.000	-119.000	-119.000	-119.000	-119.000	-119.000
Min	-19.793	-19.776	-19.807	-19.944	-19.895	-18.799
Average	-19.721	-19.640	-19.656	-19.603	-19.785	-18.709
Max	-19.649	-19.476	-19.535	-19.262	-19.641	-18.648
UL	10.920	10.920	10.920	10.920	10.920	10.920

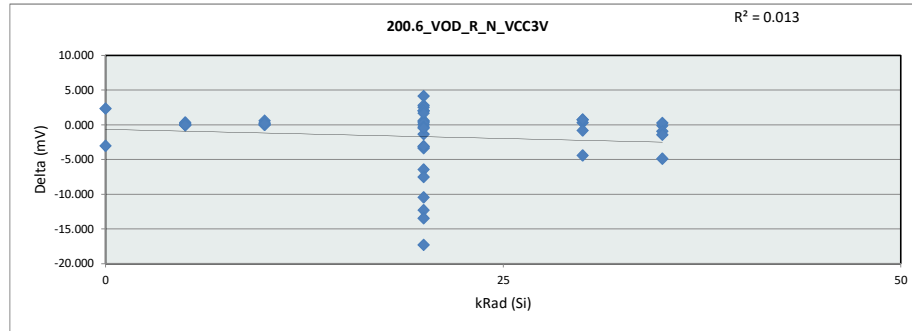


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

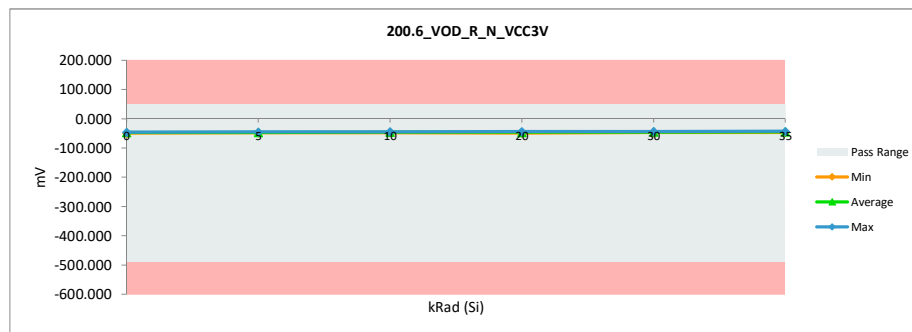
200.6_VOD_R_N_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	49	49
Min Limit	-490	-490

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-46.451	-48.791	2.340
0	039C1	-48.870	-45.845	-3.025
5	001B5	-44.823	-45.042	0.219
5	002B5	-45.298	-45.655	0.357
5	003B5	-47.579	-47.545	-0.034
5	004B5	-45.855	-45.909	0.054
5	005B5	-48.219	-48.172	-0.047
10	006B10	-46.844	-47.445	0.601
10	007B10	-45.278	-45.275	-0.003
10	008B10	-44.677	-44.662	-0.015
10	009B10	-45.829	-46.103	0.274
10	010B10	-46.496	-46.692	0.196
20	011B20	-46.546	-47.179	0.633
20	012B20	-49.280	-47.948	-1.332
20	013B20	-49.587	-46.229	-3.358
20	014B20	-48.436	-45.232	-3.204
20	015B20	-47.441	-44.368	-3.073
20	016B20	-40.700	-44.839	4.139
20	017B20	-41.081	-43.879	2.798
20	018B20	-54.124	-47.689	-6.435
20	019B20	-54.323	-46.822	-7.501
20	020B20	-56.501	-46.058	-10.443
20	021B20	-58.096	-45.788	-12.308
20	022B20	-60.496	-47.037	-13.459
20	023B20	-63.251	-45.963	-17.288
20	024B20	-45.044	-45.505	0.461
20	025B20	-45.070	-45.121	0.051
20	026B20	-46.770	-47.051	0.281
20	027B20	-43.676	-46.211	2.535
20	028B20	-45.034	-47.062	2.028
20	029B20	-43.755	-45.783	2.028
20	030B20	-47.024	-48.703	1.679
20	031B20	-46.749	-46.424	-0.325
20	032B20	-46.948	-46.504	-0.444
30	033B30	-45.142	-45.472	0.330
30	034B30	-46.067	-46.802	0.735
30	035B30	-47.842	-43.434	-4.408
30	036B30	-44.149	-44.899	0.750
30	037B30	-46.020	-45.192	-0.828
35	033B35	-45.142	-45.015	-0.127
35	034B35	-46.067	-46.323	0.256
35	035B35	-47.842	-42.962	-4.880
35	036B35	-44.149	-43.219	-0.930
35	037B35	-46.020	-44.582	-1.438
	Max	-40.700	-42.962	4.139
	Average	-47.604	-45.964	-1.640
	Min	-63.251	-48.791	-17.288
	Std Dev	4.633	1.366	4.471



200.6_VOD_R_N_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	49	mV
Min Limit	-490	mV

kRad (Si)	0	5	10	20	30	35
LL	-490.000	-490.000	-490.000	-490.000	-490.000	-490.000
Min	-48.791	-48.172	-47.445	-48.703	-46.802	-46.323
Average	-47.318	-46.465	-46.035	-46.245	-45.160	-44.420
Max	-45.845	-45.042	-44.662	-43.879	-43.434	-42.962
UL	49.000	49.000	49.000	49.000	49.000	49.000



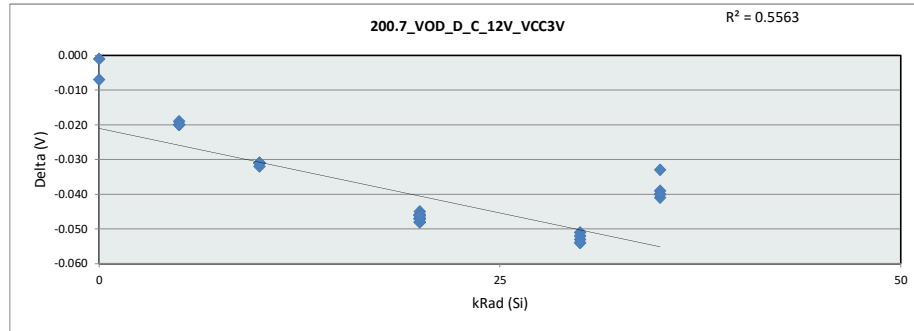
TID Report

SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

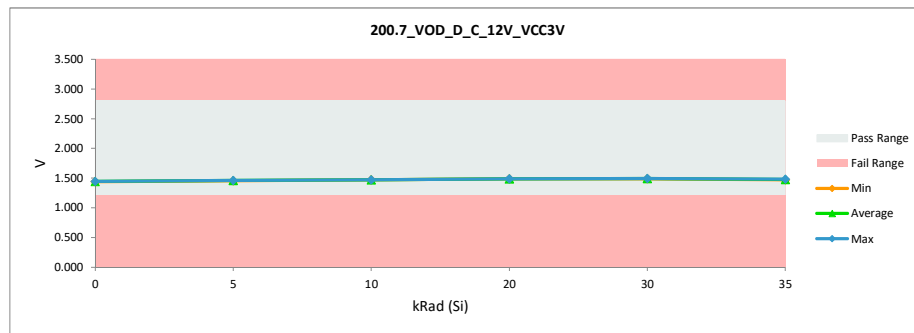
		200.7_VOD_D_C_12V_VCC3V	
Test Site		Dallas	Dallas
Tester		FETS36404	FETS36404
Test Number		EF580303	EF580303
Unit		V	V
Max Limit		2.8	2.8
Min Limit		1.2	1.2

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	1.436	1.443	-0.007
0	039C1	1.440	1.441	-0.001
5	001B5	1.438	1.457	-0.019
5	002B5	1.440	1.460	-0.020
5	003B5	1.441	1.461	-0.020
5	004B5	1.435	1.455	-0.020
5	005B5	1.440	1.460	-0.020
10	006B10	1.440	1.471	-0.031
10	007B10	1.438	1.469	-0.031
10	008B10	1.438	1.470	-0.032
10	009B10	1.440	1.471	-0.031
10	010B10	1.440	1.471	-0.031
20	011B20	1.438	1.486	-0.048
20	012B20	1.441	1.486	-0.045
20	013B20	1.441	1.487	-0.046
20	014B20	1.438	1.486	-0.048
20	015B20	1.439	1.486	-0.047
20	016B20	1.440	1.487	-0.047
20	017B20	1.441	1.487	-0.046
20	018B20	1.439	1.486	-0.047
20	019B20	1.439	1.486	-0.047
20	020B20	1.441	1.487	-0.046
20	021B20	1.441	1.487	-0.046
20	022B20	1.441	1.487	-0.046
20	023B20	1.440	1.486	-0.046
20	024B20	1.442	1.488	-0.046
20	025B20	1.440	1.487	-0.047
20	026B20	1.440	1.487	-0.047
20	027B20	1.439	1.487	-0.048
20	028B20	1.442	1.488	-0.046
20	029B20	1.442	1.488	-0.046
20	030B20	1.441	1.488	-0.047
20	031B20	1.442	1.488	-0.046
20	032B20	1.442	1.488	-0.046
30	033B30	1.441	1.495	-0.054
30	034B30	1.439	1.490	-0.051
30	035B30	1.437	1.489	-0.052
30	036B30	1.436	1.489	-0.053
30	037B30	1.436	1.490	-0.054
35	033B35	1.441	1.482	-0.041
35	034B35	1.439	1.479	-0.040
35	035B35	1.437	1.476	-0.039
35	036B35	1.436	1.476	-0.040
35	037B35	1.436	1.469	-0.033
Max		1.442	1.495	-0.001
Average		1.439	1.479	-0.040
Min		1.435	1.441	-0.054
Std Dev		0.002	0.013	0.013



		200.7_VOD_D_C_12V_VCC3V	
Test Site		Dallas	
Tester		FETS36404	
Test Number		EF580303	
Max Limit		2.8	V
Min Limit		1.2	V

kRad (Si)	0	5	10	20	30	35
LL	1.200	1.200	1.200	1.200	1.200	1.200
Min	1.441	1.455	1.469	1.486	1.489	1.469
Average	1.442	1.459	1.470	1.487	1.491	1.476
Max	1.443	1.461	1.471	1.488	1.495	1.482
UL	2.800	2.800	2.800	2.800	2.800	2.800

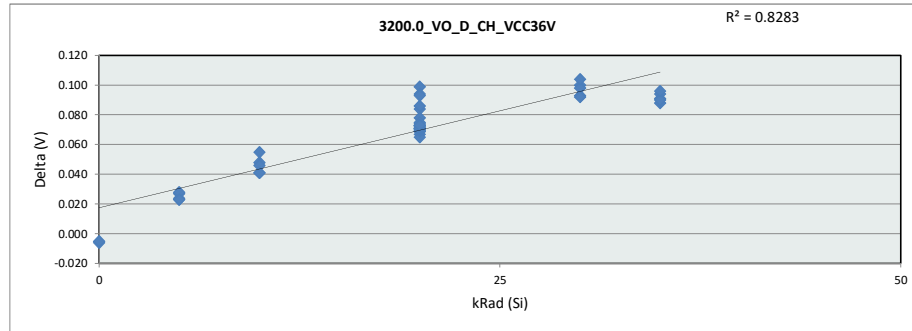


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

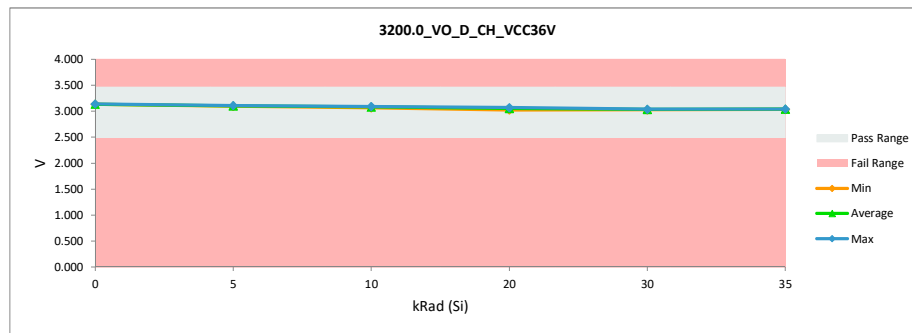
3200.0_VO_D_CH_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	3.46	3.46
Min Limit	2.47	2.47

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	3.129	3.135	-0.006
0	039C1	3.132	3.137	-0.005
5	001B5	3.125	3.098	0.027
5	002B5	3.129	3.105	0.024
5	003B5	3.132	3.109	0.023
5	004B5	3.124	3.096	0.028
5	005B5	3.132	3.109	0.023
10	006B10	3.132	3.091	0.041
10	007B10	3.125	3.077	0.048
10	008B10	3.121	3.066	0.055
10	009B10	3.127	3.081	0.046
10	010B10	3.132	3.091	0.041
20	011B20	3.128	3.044	0.084
20	012B20	3.133	3.064	0.069
20	013B20	3.132	3.060	0.072
20	014B20	3.122	3.023	0.099
20	015B20	3.128	3.054	0.074
20	016B20	3.131	3.058	0.073
20	017B20	3.133	3.064	0.069
20	018B20	3.127	3.041	0.086
20	019B20	3.131	3.053	0.078
20	020B20	3.134	3.063	0.071
20	021B20	3.132	3.059	0.073
20	022B20	3.128	3.053	0.075
20	023B20	3.131	3.058	0.073
20	024B20	3.136	3.069	0.067
20	025B20	3.135	3.070	0.065
20	026B20	3.123	3.029	0.094
20	027B20	3.124	3.031	0.093
20	028B20	3.134	3.065	0.069
20	029B20	3.134	3.063	0.071
20	030B20	3.134	3.064	0.070
20	031B20	3.134	3.063	0.071
20	032B20	3.129	3.056	0.073
30	033B30	3.131	3.038	0.093
30	034B30	3.136	3.036	0.100
30	035B30	3.131	3.033	0.098
30	036B30	3.130	3.026	0.104
30	037B30	3.128	3.036	0.092
35	033B35	3.131	3.043	0.088
35	034B35	3.136	3.042	0.094
35	035B35	3.131	3.040	0.091
35	036B35	3.130	3.040	0.090
35	037B35	3.128	3.032	0.096
	Max	3.136	3.137	0.104
	Average	3.130	3.063	0.067
	Min	3.121	3.023	-0.006
	Std Dev	0.004	0.028	0.028



3200.0_VO_D_CH_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	3.46	V
Min Limit	2.47	V

kRad (Si)	0	5	10	20	30	35
LL	2.470	2.470	2.470	2.470	2.470	2.470
Min	3.135	3.096	3.066	3.023	3.026	3.032
Average	3.136	3.103	3.081	3.055	3.034	3.039
Max	3.137	3.109	3.091	3.070	3.038	3.043
UL	3.460	3.460	3.460	3.460	3.460	3.460

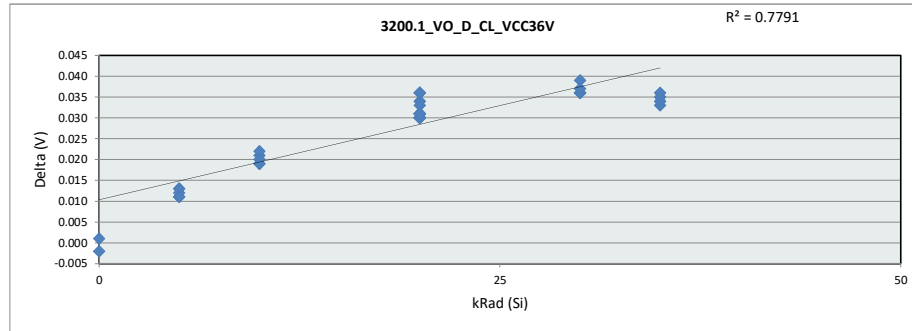


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

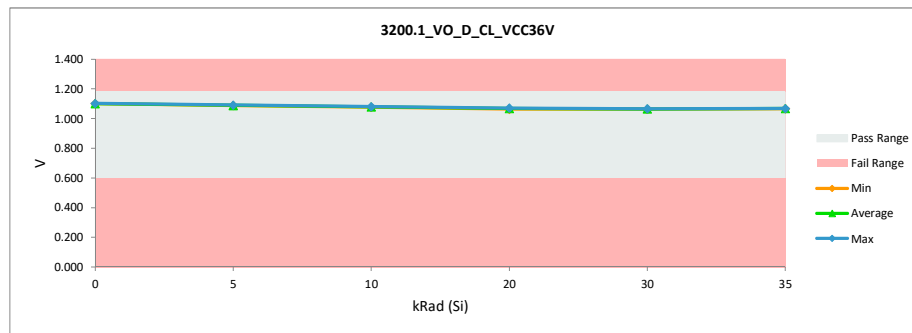
3200.1_VO_D_CL_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	1.18	1.18
Min Limit	0.6	0.6

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	1.102	1.101	0.001
0	039C1	1.100	1.102	-0.002
5	001B5	1.101	1.088	0.013
5	002B5	1.099	1.088	0.011
5	003B5	1.100	1.088	0.012
5	004B5	1.104	1.091	0.013
5	005B5	1.100	1.089	0.011
10	006B10	1.100	1.081	0.019
10	007B10	1.101	1.080	0.021
10	008B10	1.099	1.077	0.022
10	009B10	1.099	1.079	0.020
10	010B10	1.100	1.081	0.019
20	011B20	1.100	1.066	0.034
20	012B20	1.100	1.070	0.030
20	013B20	1.099	1.069	0.030
20	014B20	1.099	1.063	0.036
20	015B20	1.100	1.069	0.031
20	016B20	1.099	1.068	0.031
20	017B20	1.099	1.069	0.030
20	018B20	1.099	1.065	0.034
20	019B20	1.101	1.068	0.033
20	020B20	1.100	1.069	0.031
20	021B20	1.100	1.069	0.031
20	022B20	1.099	1.068	0.031
20	023B20	1.101	1.070	0.031
20	024B20	1.100	1.070	0.030
20	025B20	1.101	1.071	0.030
20	026B20	1.099	1.063	0.036
20	027B20	1.100	1.064	0.036
20	028B20	1.099	1.069	0.030
20	029B20	1.100	1.069	0.031
20	030B20	1.100	1.069	0.031
20	031B20	1.100	1.069	0.031
20	032B20	1.099	1.068	0.031
30	033B30	1.100	1.064	0.036
30	034B30	1.101	1.065	0.036
30	035B30	1.102	1.066	0.036
30	036B30	1.103	1.064	0.039
30	037B30	1.102	1.065	0.037
35	033B35	1.100	1.066	0.034
35	034B35	1.101	1.068	0.033
35	035B35	1.102	1.068	0.034
35	036B35	1.103	1.068	0.035
35	037B35	1.102	1.066	0.036
	Max	1.104	1.102	0.039
	Average	1.100	1.073	0.028
	Min	1.099	1.063	-0.002
	Std Dev	0.001	0.010	0.010



3200.1_VO_D_CL_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	1.18	V
Min Limit	0.6	V

kRad (Si)	0	5	10	20	30	35
LL	0.600	0.600	0.600	0.600	0.600	0.600
Min	1.101	1.088	1.077	1.063	1.064	1.066
Average	1.102	1.089	1.080	1.068	1.065	1.067
Max	1.102	1.091	1.081	1.071	1.066	1.068
UL	1.180	1.180	1.180	1.180	1.180	1.180

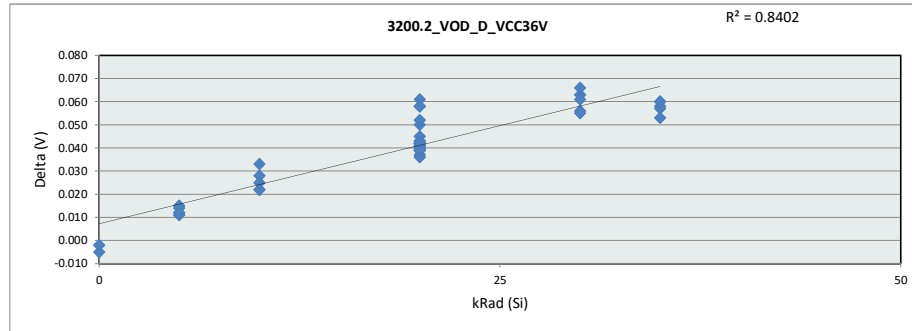


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

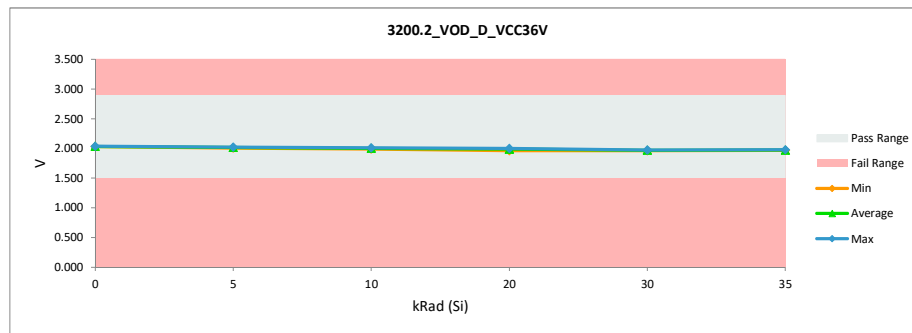
3200.2_VOD_D_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	2.89	2.89
Min Limit	1.5	1.5

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	2.028	2.033	-0.005
0	039C1	2.033	2.035	-0.002
5	001B5	2.024	2.010	0.014
5	002B5	2.030	2.018	0.012
5	003B5	2.032	2.021	0.011
5	004B5	2.020	2.005	0.015
5	005B5	2.032	2.020	0.012
10	006B10	2.032	2.010	0.022
10	007B10	2.025	1.997	0.028
10	008B10	2.022	1.989	0.033
10	009B10	2.028	2.003	0.025
10	010B10	2.032	2.010	0.022
20	011B20	2.028	1.978	0.050
20	012B20	2.033	1.994	0.039
20	013B20	2.033	1.992	0.041
20	014B20	2.022	1.961	0.061
20	015B20	2.028	1.985	0.043
20	016B20	2.032	1.990	0.042
20	017B20	2.034	1.995	0.039
20	018B20	2.028	1.976	0.052
20	019B20	2.030	1.985	0.045
20	020B20	2.034	1.994	0.040
20	021B20	2.032	1.990	0.042
20	022B20	2.028	1.985	0.043
20	023B20	2.030	1.989	0.041
20	024B20	2.036	1.999	0.037
20	025B20	2.035	1.999	0.036
20	026B20	2.024	1.966	0.058
20	027B20	2.025	1.967	0.058
20	028B20	2.035	1.996	0.039
20	029B20	2.034	1.994	0.040
20	030B20	2.034	1.995	0.039
20	031B20	2.034	1.995	0.039
20	032B20	2.030	1.988	0.042
30	033B30	2.030	1.974	0.056
30	034B30	2.034	1.971	0.063
30	035B30	2.029	1.968	0.061
30	036B30	2.028	1.962	0.066
30	037B30	2.026	1.971	0.055
35	033B35	2.030	1.977	0.053
35	034B35	2.034	1.974	0.060
35	035B35	2.029	1.971	0.058
35	036B35	2.028	1.971	0.057
35	037B35	2.026	1.966	0.060
	Max	2.036	2.035	0.066
	Average	2.030	1.990	0.040
	Min	2.020	1.961	-0.005
	Std Dev	0.004	0.019	0.018



3200.2_VOD_D_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	2.89	V
Min Limit	1.5	V

kRad (Si)	0	5	10	20	30	35
LL	1.500	1.500	1.500	1.500	1.500	1.500
Min	2.033	2.005	1.989	1.961	1.962	1.966
Average	2.034	2.015	2.002	1.987	1.969	1.972
Max	2.035	2.021	2.010	1.999	1.974	1.977
UL	2.890	2.890	2.890	2.890	2.890	2.890

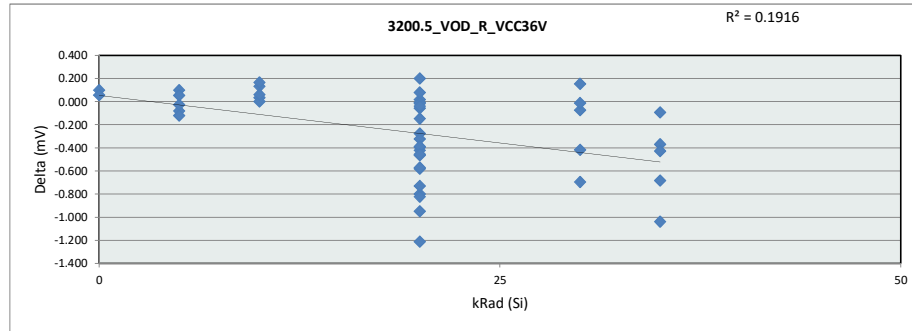


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

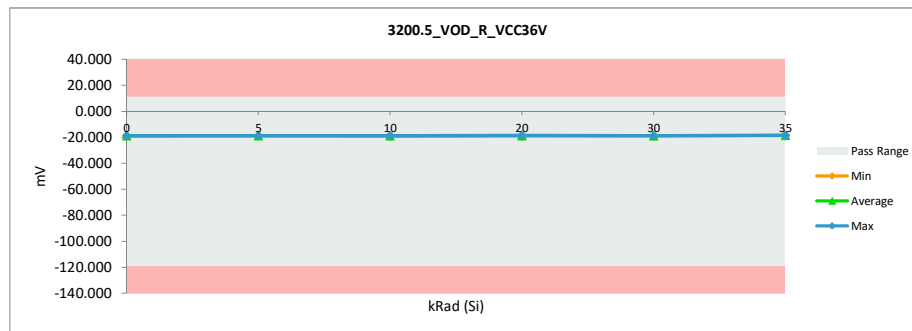
3200.5_VOD_R_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	10.92	10.92
Min Limit	-119	-119

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-18.810	-18.909	0.099
0	039C1	-18.709	-18.766	0.057
5	001B5	-18.956	-18.876	-0.080
5	002B5	-18.601	-18.701	0.100
5	003B5	-18.828	-18.802	-0.026
5	004B5	-18.821	-18.876	0.055
5	005B5	-18.729	-18.609	-0.120
10	006B10	-18.636	-18.768	0.132
10	007B10	-18.871	-18.906	0.035
10	008B10	-19.012	-19.014	0.002
10	009B10	-18.607	-18.669	0.062
10	010B10	-18.620	-18.785	0.165
20	011B20	-18.618	-18.819	0.201
20	012B20	-19.026	-18.880	-0.146
20	013B20	-18.690	-18.634	-0.056
20	014B20	-18.958	-18.976	0.018
20	015B20	-19.410	-18.990	-0.420
20	016B20	-19.787	-18.577	-1.210
20	017B20	-19.407	-18.609	-0.798
20	018B20	-18.917	-18.642	-0.275
20	019B20	-19.040	-18.718	-0.322
20	020B20	-18.958	-18.565	-0.393
20	021B20	-19.170	-18.707	-0.463
20	022B20	-19.361	-18.974	-0.387
20	023B20	-19.264	-18.810	-0.454
20	024B20	-18.456	-18.449	-0.007
20	025B20	-19.227	-18.648	-0.579
20	026B20	-18.878	-18.958	0.080
20	027B20	-19.773	-18.951	-0.822
20	028B20	-19.703	-18.756	-0.947
20	029B20	-19.481	-18.753	-0.728
20	030B20	-19.469	-18.899	-0.570
20	031B20	-18.714	-18.697	-0.017
20	032B20	-19.041	-19.002	-0.039
30	033B30	-19.245	-18.828	-0.417
30	034B30	-18.644	-18.799	0.155
30	035B30	-19.499	-18.806	-0.693
30	036B30	-18.824	-18.751	-0.073
30	037B30	-18.788	-18.776	-0.012
35	033B35	-19.245	-18.563	-0.682
35	034B35	-18.644	-18.551	-0.093
35	035B35	-19.499	-18.461	-1.038
35	036B35	-18.824	-18.456	-0.368
35	037B35	-18.788	-18.362	-0.426
	Max	-18.456	-18.362	0.201
	Average	-19.012	-18.751	-0.261
	Min	-19.787	-19.014	-1.210
	Std Dev	0.351	0.164	0.363



3200.5_VOD_R_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	10.92	mV
Min Limit	-119	mV

kRad (Si)	0	5	10	20	30	35
LL	-119.000	-119.000	-119.000	-119.000	-119.000	-119.000
Min	-18.909	-18.876	-19.014	-19.002	-18.828	-18.563
Average	-18.838	-18.773	-18.828	-18.773	-18.792	-18.479
Max	-18.766	-18.609	-18.669	-18.449	-18.751	-18.362
UL	10.920	10.920	10.920	10.920	10.920	10.920

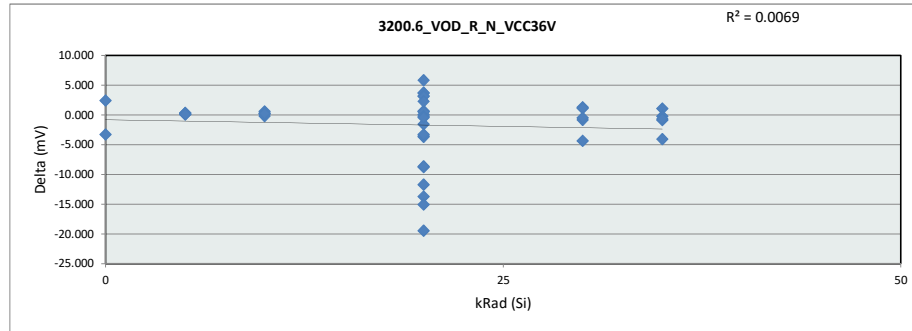


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

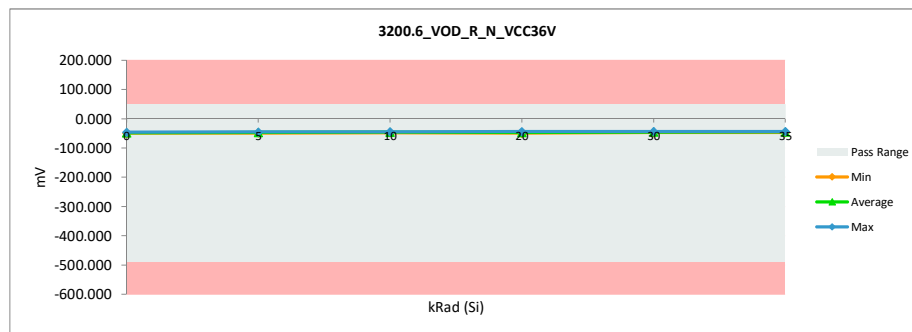
3200.6_VOD_R_N_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	49	49
Min Limit	-490	-490

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	-46.796	-49.224	2.428
0	039C1	-49.207	-45.910	-3.297
5	001B5	-44.653	-44.967	0.314
5	002B5	-45.311	-45.638	0.327
5	003B5	-47.842	-47.957	0.115
5	004B5	-45.968	-46.046	0.078
5	005B5	-48.609	-48.701	0.092
10	006B10	-46.848	-47.408	0.560
10	007B10	-45.275	-45.063	-0.212
10	008B10	-44.277	-44.388	0.111
10	009B10	-45.794	-46.093	0.299
10	010B10	-46.606	-46.856	0.250
20	011B20	-46.802	-47.441	0.639
20	012B20	-49.909	-48.344	-1.565
20	013B20	-50.110	-46.437	-3.673
20	014B20	-48.633	-45.071	-3.562
20	015B20	-47.253	-43.964	-3.289
20	016B20	-38.931	-44.778	5.847
20	017B20	-40.245	-43.899	3.654
20	018B20	-56.944	-48.156	-8.788
20	019B20	-55.572	-46.903	-8.669
20	020B20	-57.942	-46.227	-11.715
20	021B20	-59.164	-45.437	-13.727
20	022B20	-62.325	-47.265	-15.060
20	023B20	-65.147	-45.674	-19.473
20	024B20	-45.174	-45.787	0.613
20	025B20	-45.178	-45.237	0.059
20	026B20	-46.917	-47.431	0.514
20	027B20	-42.638	-46.366	3.728
20	028B20	-43.945	-47.140	3.195
20	029B20	-43.170	-46.297	3.127
20	030B20	-46.776	-49.065	2.289
20	031B20	-46.801	-46.577	-0.224
20	032B20	-46.989	-46.554	-0.435
30	033B30	-46.403	-45.564	-0.839
30	034B30	-45.987	-47.257	1.270
30	035B30	-47.580	-43.226	-4.354
30	036B30	-43.716	-44.832	1.116
30	037B30	-46.148	-45.655	-0.493
35	033B35	-46.403	-45.526	-0.877
35	034B35	-45.987	-47.042	1.055
35	035B35	-47.580	-43.509	-4.071
35	036B35	-43.716	-43.474	-0.242
35	037B35	-46.148	-45.461	-0.687
	Max	-38.931	-43.226	5.847
	Average	-47.805	-46.133	-1.672
	Min	-65.147	-49.224	-19.473
	Std Dev	5.312	1.476	5.166



3200.6_VOD_R_N_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	49	mV
Min Limit	-490	mV

kRad (Si)	0	5	10	20	30	35
LL	-490.000	-490.000	-490.000	-490.000	-490.000	-490.000
Min	-49.224	-48.701	-47.408	-49.065	-47.257	-47.042
Average	-47.567	-46.662	-45.962	-46.366	-45.307	-45.002
Max	-45.910	-44.967	-44.388	-43.899	-43.226	-43.474
UL	49.000	49.000	49.000	49.000	49.000	49.000

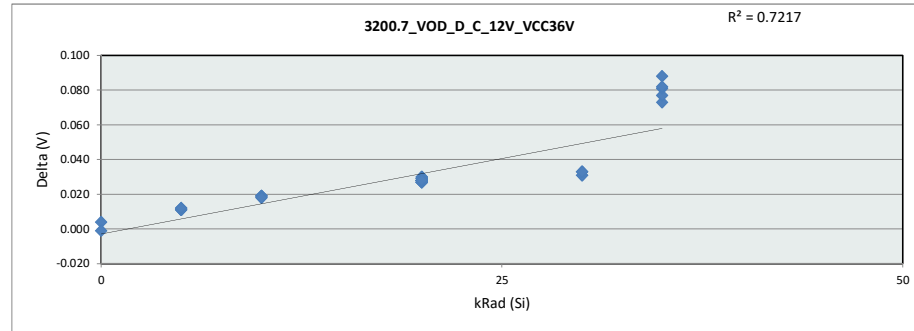


TID Report SN55HVD233-SEP

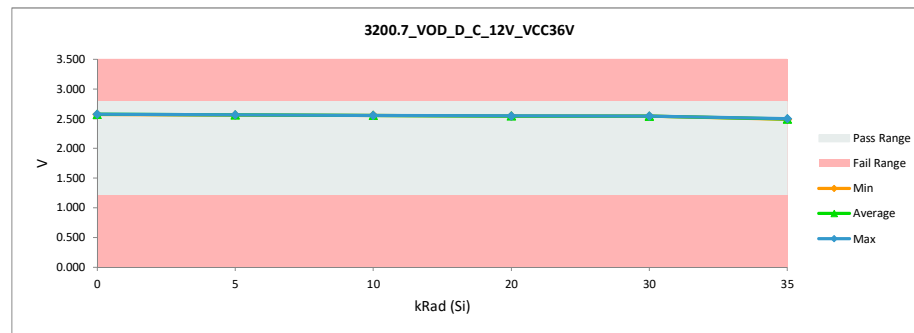
Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

3200.7_VOD_D_C_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	2.79	2.79
Min Limit	1.2	1.2

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	2.576	2.572	0.004
0	039C1	2.573	2.574	-0.001
5	001B5	2.575	2.564	0.011
5	002B5	2.573	2.562	0.011
5	003B5	2.573	2.562	0.011
5	004B5	2.577	2.565	0.012
5	005B5	2.574	2.562	0.012
10	006B10	2.574	2.556	0.018
10	007B10	2.575	2.556	0.019
10	008B10	2.575	2.556	0.019
10	009B10	2.574	2.555	0.019
10	010B10	2.574	2.556	0.018
20	011B20	2.574	2.546	0.028
20	012B20	2.574	2.546	0.028
20	013B20	2.573	2.546	0.027
20	014B20	2.575	2.545	0.030
20	015B20	2.575	2.547	0.028
20	016B20	2.574	2.545	0.029
20	017B20	2.573	2.546	0.027
20	018B20	2.574	2.545	0.029
20	019B20	2.574	2.546	0.028
20	020B20	2.573	2.545	0.028
20	021B20	2.573	2.546	0.027
20	022B20	2.574	2.546	0.028
20	023B20	2.574	2.547	0.027
20	024B20	2.573	2.545	0.028
20	025B20	2.574	2.547	0.027
20	026B20	2.574	2.544	0.030
20	027B20	2.574	2.545	0.029
20	028B20	2.572	2.545	0.027
20	029B20	2.573	2.545	0.028
20	030B20	2.573	2.545	0.028
20	031B20	2.573	2.545	0.028
20	032B20	2.573	2.545	0.028
30	033B30	2.574	2.541	0.033
30	034B30	2.575	2.544	0.031
30	035B30	2.576	2.545	0.031
30	036B30	2.577	2.544	0.033
30	037B30	2.577	2.544	0.033
35	033B35	2.574	2.501	0.073
35	034B35	2.575	2.498	0.077
35	035B35	2.576	2.495	0.081
35	036B35	2.577	2.495	0.082
35	037B35	2.577	2.489	0.088
Max		2.577	2.574	0.088
Average		2.574	2.544	0.030
Min		2.572	2.489	-0.001
Std Dev		0.001	0.019	0.020



3200.7_VOD_D_C_12V_VCC36V						
Test Site	Dallas					
Tester	FETS36404					
Test Number	EF580303					
Max Limit	2.79	V				
Min Limit	1.2	V				
kRad (Si)	0	5	10	20	30	35
LL	1.200	1.200	1.200	1.200	1.200	1.200
Min	2.572	2.562	2.555	2.544	2.541	2.489
Average	2.573	2.563	2.556	2.546	2.544	2.496
Max	2.574	2.565	2.556	2.547	2.545	2.501
UL	2.790	2.790	2.790	2.790	2.790	2.790

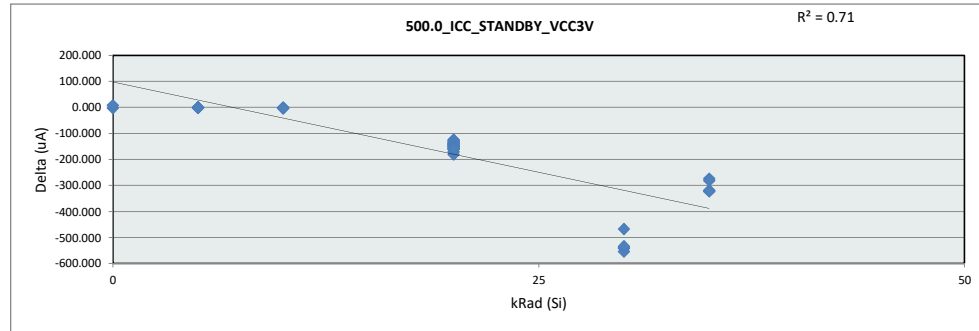


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Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

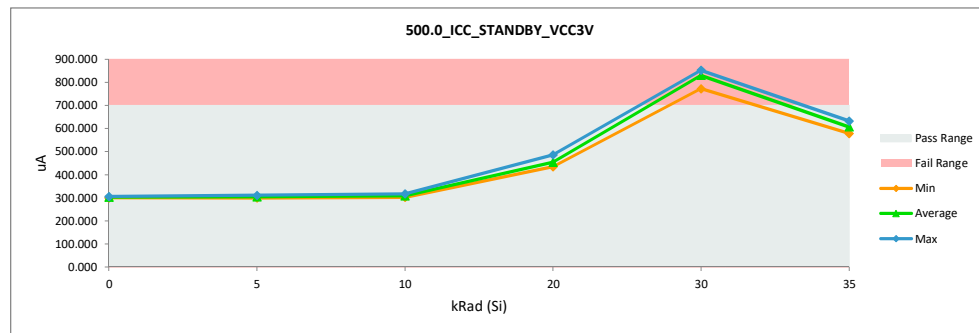
500.0_ICC_STANDBY_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	700	700
Min Limit	0	0

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	303.619	305.649	-2.030
0	039C1	308.073	299.881	8.192
5	001B5	305.126	306.214	-1.088
5	002B5	304.289	304.376	-0.087
5	003B5	304.377	303.905	0.472
5	004B5	299.385	299.320	0.065
5	005B5	309.586	310.845	-1.259
10	006B10	310.161	310.571	-0.410
10	007B10	299.453	301.975	-2.522
10	008B10	300.191	303.309	-3.118
10	009B10	308.954	309.876	-0.922
10	010B10	314.028	317.432	-3.404
20	011B20	312.062	452.511	-140.449
20	012B20	307.968	448.733	-140.765
20	013B20	311.729	451.408	-139.679
20	014B20	304.910	456.503	-151.593
20	015B20	305.433	436.544	-131.111
20	016B20	310.982	441.475	-130.493
20	017B20	313.683	437.511	-123.828
20	018B20	306.731	452.353	-145.622
20	019B20	308.537	445.039	-136.502
20	020B20	309.083	450.853	-141.770
20	021B20	305.602	454.763	-149.161
20	022B20	308.651	434.792	-126.141
20	023B20	299.367	436.049	-136.682
20	024B20	311.063	456.805	-145.742
20	025B20	305.677	464.607	-158.930
20	026B20	304.795	464.893	-160.098
20	027B20	307.886	465.317	-157.431
20	028B20	305.826	454.877	-149.051
20	029B20	303.375	456.792	-153.417
20	030B20	310.254	480.230	-169.976
20	031B20	305.895	486.214	-180.319
20	032B20	313.056	470.662	-157.606
30	033B30	311.342	852.300	-540.958
30	034B30	300.859	837.085	-536.226
30	035B30	305.245	772.233	-466.988
30	036B30	297.575	851.345	-553.770
30	037B30	303.923	837.015	-533.092
35	033B35	311.342	632.428	-321.086
35	034B35	300.859	619.343	-318.484
35	035B35	305.245	578.482	-273.237
35	036B35	297.575	578.819	-281.244
35	037B35	303.923	626.183	-322.260
	Max	314.028	852.300	8.192
	Average	306.311	474.034	-167.723
	Min	297.575	299.320	-553.770
	Std Dev	4.392	158.494	159.275



500.0_ICC_STANDBY_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	700	uA
Min Limit	0	uA

kRad (Si)	0	5	10	20	30	35
LL	0.000	0.000	0.000	0.000	0.000	0.000
Min	299.881	299.320	301.975	434.792	772.233	578.482
Average	302.765	304.932	308.633	454.497	829.996	607.051
Max	305.649	310.845	317.432	486.214	852.300	632.428
UL	700.000	700.000	700.000	700.000	700.000	700.000

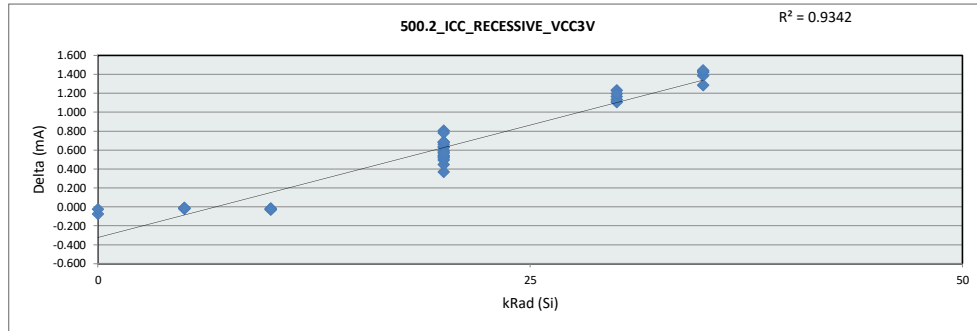


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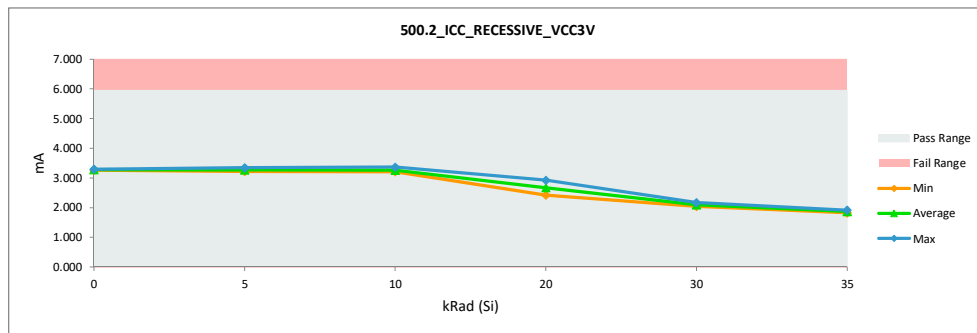
Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

500.2_ICC_RECESSIVE_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	3.186	3.262	-0.076
0	039C1	3.272	3.297	-0.025
5	001B5	3.251	3.264	-0.013
5	002B5	3.205	3.221	-0.016
5	003B5	3.263	3.273	-0.010
5	004B5	3.219	3.239	-0.020
5	005B5	3.334	3.347	-0.013
10	006B10	3.219	3.238	-0.019
10	007B10	3.236	3.261	-0.025
10	008B10	3.218	3.237	-0.019
10	009B10	3.185	3.211	-0.026
10	010B10	3.335	3.364	-0.029
20	011B20	3.305	2.798	0.507
20	012B20	3.297	2.929	0.368
20	013B20	3.330	2.732	0.598
20	014B20	3.226	2.592	0.634
20	015B20	3.201	2.673	0.528
20	016B20	3.268	2.820	0.448
20	017B20	3.298	2.722	0.576
20	018B20	3.291	2.750	0.541
20	019B20	3.334	2.795	0.539
20	020B20	3.279	2.595	0.684
20	021B20	3.238	2.605	0.633
20	022B20	3.284	2.790	0.494
20	023B20	3.178	2.656	0.522
20	024B20	3.318	2.658	0.660
20	025B20	3.233	2.602	0.631
20	026B20	3.198	2.514	0.684
20	027B20	3.286	2.696	0.590
20	028B20	3.267	2.586	0.681
20	029B20	3.305	2.742	0.563
20	030B20	3.285	2.599	0.686
20	031B20	3.229	2.424	0.805
20	032B20	3.304	2.522	0.782
30	033B30	3.322	2.156	1.166
30	034B30	3.302	2.168	1.134
30	035B30	3.289	2.058	1.231
30	036B30	3.152	2.046	1.106
30	037B30	3.271	2.075	1.196
35	033B35	3.322	1.896	1.426
35	034B35	3.302	1.916	1.386
35	035B35	3.289	1.866	1.423
35	036B35	3.152	1.866	1.286
35	037B35	3.271	1.829	1.442
	Max	3.335	3.364	1.442
	Average	3.262	2.679	0.583
	Min	3.152	1.829	-0.076
	Std Dev	0.051	0.468	0.474



500.2_ICC_RECESSIVE_VCC3V						
Test Site	Dallas					
Tester	FETS36404					
Test Number	EF580303					
Max Limit	5.95	mA				
Min Limit	0	mA				
kRad (Si)	0	5	10	20	30	35
LL	0.000	0.000	0.000	0.000	0.000	0.000
Min	3.262	3.221	3.211	2.424	2.046	1.829
Average	3.280	3.269	3.262	2.673	2.101	1.875
Max	3.297	3.347	3.364	2.929	2.168	1.916
UL	5.950	5.950	5.950	5.950	5.950	5.950

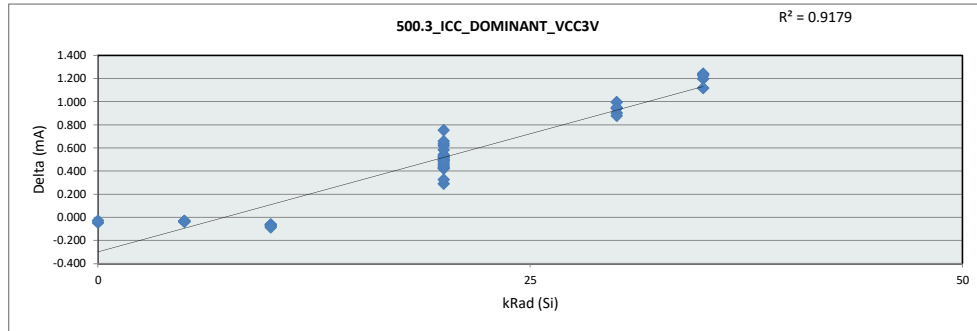


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

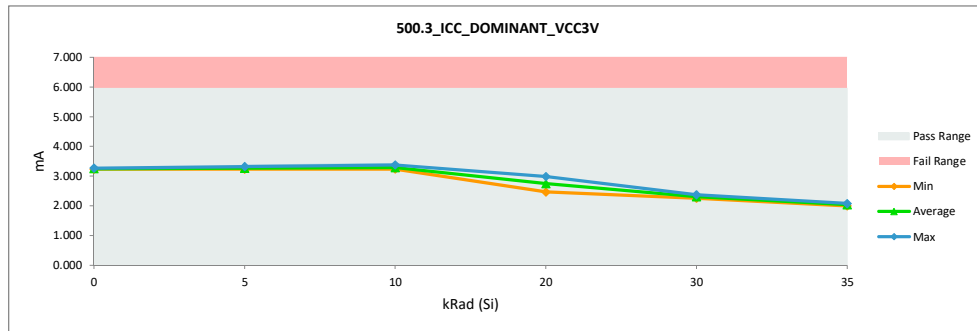
500.3_ICC_DOMINANT_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	3.181	3.229	-0.048
0	039C1	3.240	3.268	-0.028
5	001B5	3.215	3.247	-0.032
5	002B5	3.211	3.244	-0.033
5	003B5	3.240	3.270	-0.030
5	004B5	3.191	3.230	-0.039
5	005B5	3.282	3.318	-0.036
10	006B10	3.193	3.255	-0.062
10	007B10	3.224	3.297	-0.073
10	008B10	3.192	3.253	-0.061
10	009B10	3.166	3.234	-0.068
10	010B10	3.291	3.378	-0.087
20	011B20	3.289	2.867	0.422
20	012B20	3.276	2.985	0.291
20	013B20	3.322	2.829	0.493
20	014B20	3.205	2.662	0.543
20	015B20	3.181	2.757	0.424
20	016B20	3.232	2.906	0.326
20	017B20	3.282	2.782	0.500
20	018B20	3.270	2.805	0.465
20	019B20	3.316	2.881	0.435
20	020B20	3.265	2.628	0.637
20	021B20	3.220	2.705	0.515
20	022B20	3.256	2.823	0.433
20	023B20	3.176	2.725	0.451
20	024B20	3.287	2.764	0.523
20	025B20	3.207	2.685	0.522
20	026B20	3.173	2.643	0.530
20	027B20	3.259	2.765	0.494
20	028B20	3.262	2.679	0.583
20	029B20	3.294	2.812	0.482
20	030B20	3.285	2.665	0.620
20	031B20	3.217	2.463	0.754
20	032B20	3.278	2.620	0.658
30	033B30	3.297	2.356	0.941
30	034B30	3.273	2.371	0.902
30	035B30	3.252	2.255	0.997
30	036B30	3.140	2.261	0.879
30	037B30	3.230	2.281	0.949
35	033B35	3.297	2.055	1.242
35	034B35	3.273	2.075	1.198
35	035B35	3.252	2.023	1.229
35	036B35	3.140	2.023	1.117
35	037B35	3.230	1.998	1.232
	Max	3.322	3.378	1.242
	Average	3.240	2.758	0.482
	Min	3.140	1.998	-0.087
	Std Dev	0.047	0.406	0.412



500.3_ICC_DOMINANT_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	5.95	mA
Min Limit	0	mA

kRad (Si)	0	5	10	20	30	35
LL	0.000	0.000	0.000	0.000	0.000	0.000
Min	3.229	3.230	3.234	2.463	2.255	1.998
Average	3.249	3.262	3.283	2.748	2.305	2.035
Max	3.268	3.318	3.378	2.985	2.371	2.075
UL	5.950	5.950	5.950	5.950	5.950	5.950

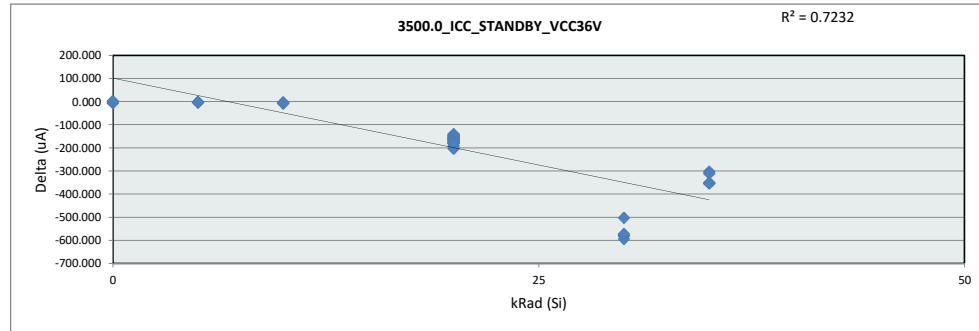


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Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

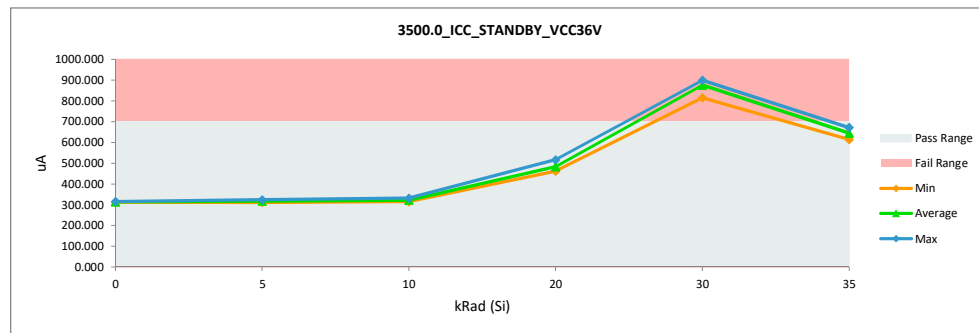
3500.0_ICC_STANDBY_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	700	700
Min Limit	0	0

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	309.836	315.928	-6.092
0	039C1	314.464	311.990	2.474
5	001B5	316.758	319.068	-2.310
5	002B5	315.138	317.243	-2.105
5	003B5	315.097	316.569	-1.472
5	004B5	309.664	311.488	-1.824
5	005B5	320.556	323.926	-3.370
10	006B10	320.383	323.943	-3.560
10	007B10	308.948	314.933	-5.985
10	008B10	309.705	316.454	-6.749
10	009B10	318.755	323.022	-4.267
10	010B10	324.354	331.579	-7.225
20	011B20	322.192	479.869	-157.677
20	012B20	317.777	476.449	-158.672
20	013B20	321.805	479.120	-157.315
20	014B20	314.662	484.751	-170.089
20	015B20	315.138	463.091	-147.953
20	016B20	321.115	468.171	-147.056
20	017B20	324.189	464.200	-140.011
20	018B20	316.955	480.551	-163.596
20	019B20	318.928	471.928	-153.000
20	020B20	319.216	478.989	-159.773
20	021B20	315.418	482.779	-167.361
20	022B20	318.550	461.307	-142.757
20	023B20	308.332	462.696	-154.364
20	024B20	321.082	484.817	-163.735
20	025B20	314.974	494.016	-179.042
20	026B20	313.141	493.728	-180.587
20	027B20	316.223	494.008	-177.785
20	028B20	313.988	482.450	-168.462
20	029B20	311.258	484.801	-173.543
20	030B20	318.394	510.103	-191.709
20	031B20	312.960	516.335	-203.375
20	032B20	320.564	499.894	-179.330
30	033B30	317.999	899.096	-581.097
30	034B30	307.123	882.779	-575.656
30	035B30	311.957	814.146	-502.189
30	036B30	304.386	897.526	-593.140
30	037B30	310.551	882.064	-571.513
35	033B35	317.999	671.590	-353.591
35	034B35	307.123	657.613	-350.490
35	035B35	311.957	614.266	-302.309
35	036B35	304.386	614.577	-310.191
35	037B35	310.551	664.405	-353.854
	Max	324.354	899.096	2.474
	Average	315.103	500.870	-185.766
	Min	304.386	311.488	-593.140
	Std Dev	5.138	168.540	170.418



3500.0_ICC_STANDBY_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	700	uA
Min Limit	0	uA

kRad (Si)	0	5	10	20	30	35
LL	0.000	0.000	0.000	0.000	0.000	0.000
Min	311.990	311.488	314.933	461.307	814.146	614.266
Average	313.959	317.659	321.986	482.457	875.122	644.490
Max	315.928	323.926	331.579	516.335	899.096	671.590
UL	700.000	700.000	700.000	700.000	700.000	700.000

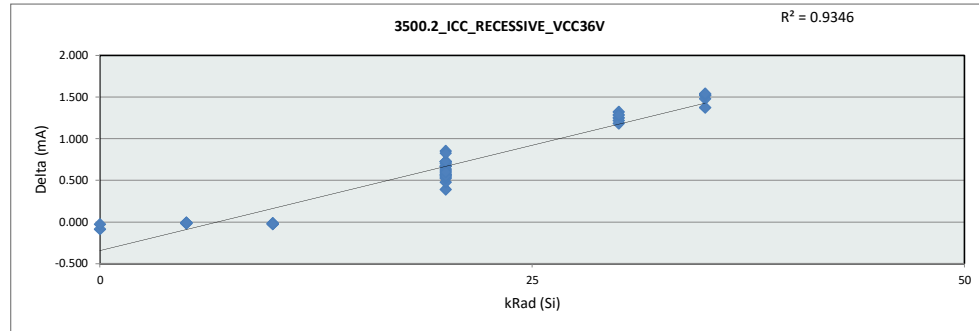


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

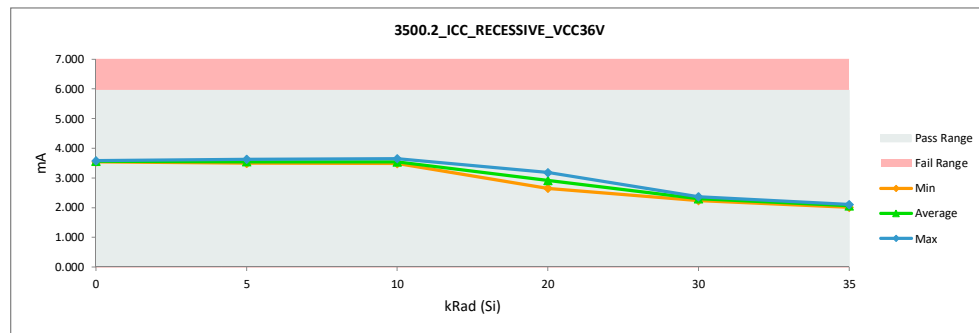
3500.2_ICC_RECESSIVE_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	3.459	3.546	-0.087
0	039C1	3.556	3.581	-0.025
5	001B5	3.532	3.543	-0.011
5	002B5	3.481	3.495	-0.014
5	003B5	3.546	3.554	-0.008
5	004B5	3.491	3.508	-0.017
5	005B5	3.623	3.633	-0.010
10	006B10	3.497	3.512	-0.015
10	007B10	3.513	3.535	-0.022
10	008B10	3.496	3.511	-0.015
10	009B10	3.461	3.484	-0.023
10	010B10	3.625	3.649	-0.024
20	011B20	3.590	3.051	0.539
20	012B20	3.580	3.188	0.392
20	013B20	3.618	2.981	0.637
20	014B20	3.503	2.832	0.671
20	015B20	3.476	2.918	0.558
20	016B20	3.555	3.076	0.479
20	017B20	3.584	2.971	0.613
20	018B20	3.575	3.001	0.574
20	019B20	3.620	3.045	0.575
20	020B20	3.565	2.841	0.724
20	021B20	3.516	2.845	0.671
20	022B20	3.569	3.044	0.525
20	023B20	3.453	2.901	0.552
20	024B20	3.608	2.905	0.703
20	025B20	3.514	2.844	0.670
20	026B20	3.475	2.747	0.728
20	027B20	3.570	2.944	0.626
20	028B20	3.548	2.826	0.722
20	029B20	3.591	2.993	0.598
20	030B20	3.568	2.842	0.726
20	031B20	3.505	2.652	0.853
20	032B20	3.591	2.764	0.827
30	033B30	3.610	2.359	1.251
30	034B30	3.586	2.368	1.218
30	035B30	3.573	2.251	1.322
30	036B30	3.424	2.241	1.183
30	037B30	3.553	2.268	1.285
35	033B35	3.610	2.088	1.522
35	034B35	3.586	2.106	1.480
35	035B35	3.573	2.051	1.522
35	036B35	3.424	2.052	1.372
35	037B35	3.553	2.013	1.540
	Max	3.625	3.649	1.540
	Average	3.544	2.922	0.622
	Min	3.424	2.013	-0.087
	Std Dev	0.056	0.499	0.506



3500.2_ICC_RECESSIVE_VCC3		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	5.95	mA
Min Limit	0	mA

kRad (Si)	0	5	10	20	30	35
LL	0.000	0.000	0.000	0.000	0.000	0.000
Min	3.546	3.495	3.484	2.652	2.241	2.013
Average	3.564	3.547	3.538	2.919	2.297	2.062
Max	3.581	3.633	3.649	3.188	2.368	2.106
UL	5.950	5.950	5.950	5.950	5.950	5.950

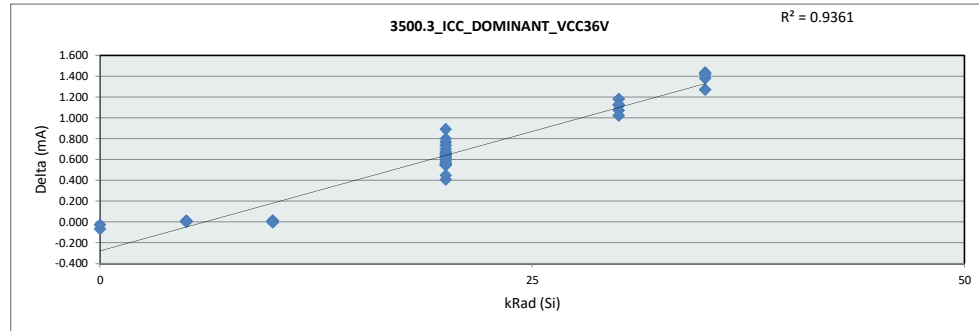


TID Report SN55HVD233-SEP

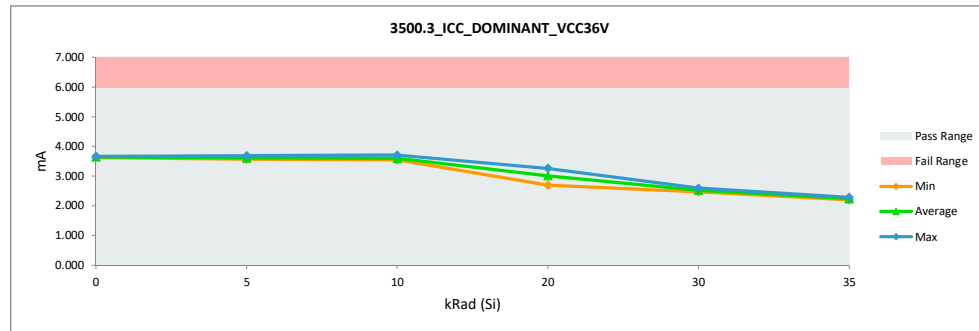
Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

3500.3_ICC_DOMINANT_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	3.555	3.622	-0.067
0	039C1	3.634	3.661	-0.027
5	001B5	3.610	3.602	0.008
5	002B5	3.584	3.577	0.007
5	003B5	3.626	3.614	0.012
5	004B5	3.567	3.566	0.001
5	005B5	3.691	3.682	0.009
10	006B10	3.575	3.562	0.013
10	007B10	3.606	3.603	0.003
10	008B10	3.581	3.566	0.015
10	009B10	3.545	3.541	0.004
10	010B10	3.702	3.706	-0.004
20	011B20	3.685	3.139	0.546
20	012B20	3.667	3.260	0.407
20	013B20	3.716	3.098	0.618
20	014B20	3.592	2.918	0.674
20	015B20	3.567	3.019	0.548
20	016B20	3.632	3.182	0.450
20	017B20	3.672	3.049	0.623
20	018B20	3.662	3.074	0.588
20	019B20	3.712	3.153	0.559
20	020B20	3.653	2.887	0.766
20	021B20	3.608	2.966	0.642
20	022B20	3.658	3.090	0.568
20	023B20	3.541	2.986	0.555
20	024B20	3.693	3.032	0.661
20	025B20	3.594	2.948	0.646
20	026B20	3.558	2.901	0.657
20	027B20	3.653	3.030	0.623
20	028B20	3.644	2.940	0.704
20	029B20	3.681	3.081	0.600
20	030B20	3.664	2.928	0.736
20	031B20	3.589	2.698	0.891
20	032B20	3.678	2.879	0.799
30	033B30	3.703	2.581	1.122
30	034B30	3.666	2.593	1.073
30	035B30	3.651	2.470	1.181
30	036B30	3.500	2.478	1.022
30	037B30	3.622	2.494	1.128
35	033B35	3.703	2.267	1.436
35	034B35	3.666	2.285	1.381
35	035B35	3.651	2.229	1.422
35	036B35	3.500	2.228	1.272
35	037B35	3.622	2.203	1.419
	Max	3.716	3.706	1.436
	Average	3.629	3.032	0.598
	Min	3.500	2.203	-0.067
	Std Dev	0.057	0.452	0.458



3500.3_ICC_DOMINANT_VCC3						
Test Site	Dallas					
Tester	FETS36404					
Test Number	EF580303					
Max Limit	5.95	mA				
Min Limit	0	mA				
kRad (Si)	0	5	10	20	30	35
LL	0.000	0.000	0.000	0.000	0.000	0.000
Min	3.622	3.566	3.541	2.698	2.470	2.203
Average	3.642	3.608	3.596	3.012	2.523	2.242
Max	3.661	3.682	3.706	3.260	2.593	2.285
UL	5.950	5.950	5.950	5.950	5.950	5.950

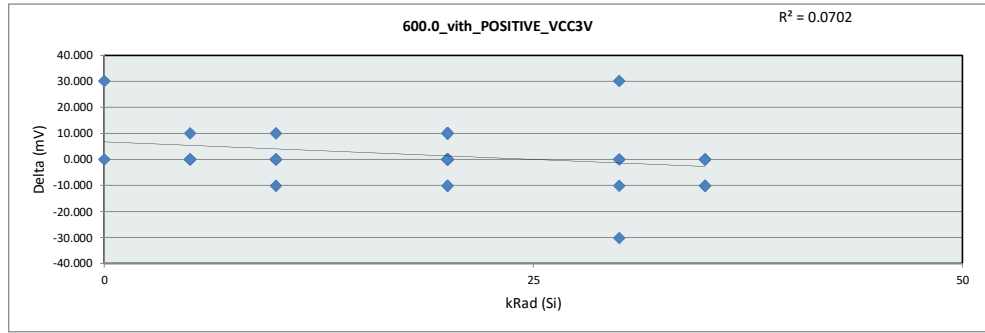


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

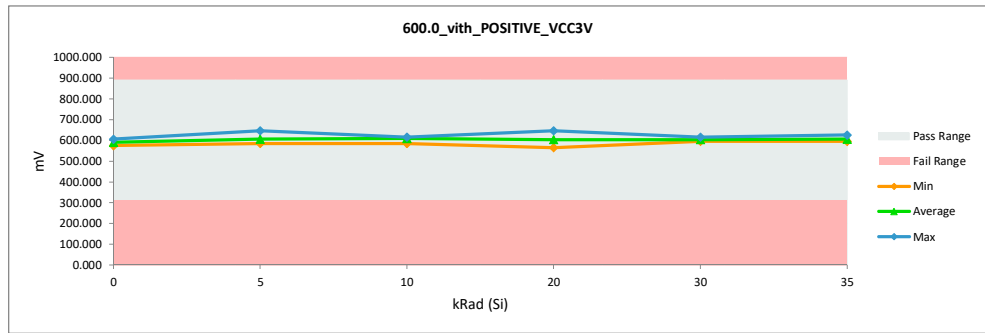
600.0_vith_POSITIVE_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	605.528	605.528	0.000
0	039C1	605.528	575.377	30.151
5	001B5	605.528	605.528	0.000
5	002B5	585.427	585.427	0.000
5	003B5	605.528	595.477	10.051
5	004B5	595.477	595.477	0.000
5	005B5	645.729	645.729	0.000
10	006B10	605.528	615.578	-10.050
10	007B10	625.628	615.578	10.050
10	008B10	615.578	615.578	0.000
10	009B10	585.427	585.427	0.000
10	010B10	615.578	615.578	0.000
20	011B20	605.528	615.578	-10.050
20	012B20	585.427	595.477	-10.050
20	013B20	615.578	605.528	10.050
20	014B20	605.528	605.528	0.000
20	015B20	625.628	625.628	0.000
20	016B20	595.477	595.477	0.000
20	017B20	595.477	585.427	10.050
20	018B20	615.578	605.528	10.050
20	019B20	605.528	605.528	0.000
20	020B20	585.427	575.377	10.050
20	021B20	625.628	615.578	10.050
20	022B20	645.729	645.729	0.000
20	023B20	615.578	615.578	0.000
20	024B20	595.477	595.477	0.000
20	025B20	575.377	565.327	10.050
20	026B20	615.578	615.578	0.000
20	027B20	625.628	625.628	0.000
20	028B20	585.427	585.427	0.000
20	029B20	585.427	575.377	10.050
20	030B20	605.528	605.528	0.000
20	031B20	605.528	605.528	0.000
20	032B20	625.628	615.578	10.050
30	033B30	615.578	615.578	0.000
30	034B30	585.427	595.477	-10.050
30	035B30	595.477	595.477	0.000
30	036B30	585.427	615.578	-30.151
30	037B30	625.628	595.477	30.151
35	033B35	615.578	615.578	0.000
35	034B35	585.427	595.477	-10.050
35	035B35	595.477	595.477	0.000
35	036B35	585.427	595.477	-10.050
35	037B35	625.628	625.628	0.000
	Max	645.729	645.729	30.151
	Average	605.756	604.157	1.599
	Min	575.377	565.327	-30.151
	Std Dev	16.996	17.148	9.919



600.0_vith_POSITIVE_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	890	mV
Min Limit	310	mV

kRad (Si)	0	5	10	20	30	35
LL	310.000	310.000	310.000	310.000	310.000	310.000
Min	575.377	585.427	585.427	565.327	595.477	595.477
Average	590.453	605.528	609.548	603.700	603.517	605.527
Max	605.528	645.729	615.578	645.729	615.578	625.628
UL	890.000	890.000	890.000	890.000	890.000	890.000

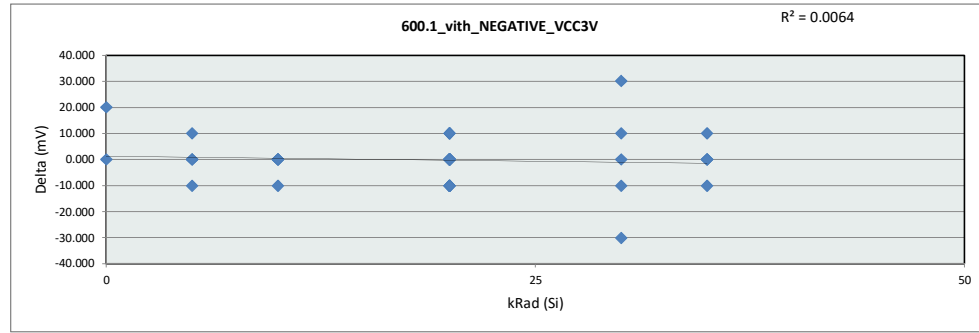


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

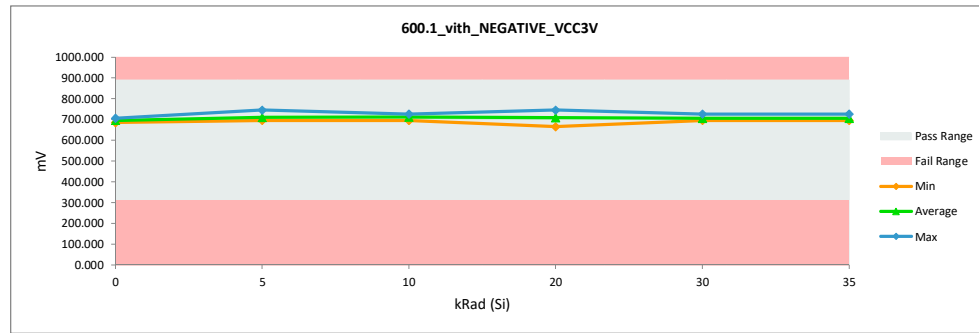
600.1_vith_NEGATIVE_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	706.030	706.030	0.000
0	039C1	706.030	685.929	20.101
5	001B5	706.030	706.030	0.000
5	002B5	685.929	695.980	-10.051
5	003B5	706.030	706.030	0.000
5	004B5	706.030	695.980	10.050
5	005B5	746.231	746.231	0.000
10	006B10	706.030	706.030	0.000
10	007B10	726.131	726.131	0.000
10	008B10	716.081	716.081	0.000
10	009B10	685.929	695.980	-10.051
10	010B10	716.081	716.081	0.000
20	011B20	706.030	716.081	-10.051
20	012B20	685.929	695.980	-10.051
20	013B20	716.081	716.081	0.000
20	014B20	706.030	706.030	0.000
20	015B20	726.131	726.131	0.000
20	016B20	695.980	695.980	0.000
20	017B20	695.980	695.980	0.000
20	018B20	716.081	716.081	0.000
20	019B20	706.030	716.081	-10.051
20	020B20	695.980	685.929	10.051
20	021B20	736.181	726.131	10.050
20	022B20	746.231	746.231	0.000
20	023B20	716.081	726.131	-10.050
20	024B20	695.980	706.030	-10.050
20	025B20	675.879	665.829	10.050
20	026B20	716.081	716.081	0.000
20	027B20	726.131	726.131	0.000
20	028B20	695.980	695.980	0.000
20	029B20	685.929	685.929	0.000
20	030B20	706.030	706.030	0.000
20	031B20	706.030	706.030	0.000
20	032B20	726.131	726.131	0.000
30	033B30	716.081	716.081	0.000
30	034B30	685.929	695.980	-10.051
30	035B30	706.030	695.980	10.050
30	036B30	695.980	726.131	-30.151
30	037B30	726.131	695.980	30.151
35	033B35	716.081	716.081	0.000
35	034B35	685.929	695.980	-10.051
35	035B35	706.030	695.980	10.050
35	036B35	695.980	695.980	0.000
35	037B35	726.131	726.131	0.000
	Max	746.231	746.231	30.151
	Average	708.086	708.314	-0.229
	Min	675.879	665.829	-30.151
	Std Dev	16.159	16.200	9.320



600.1_vith_NEGATIVE_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	890	mV
Min Limit	310	mV

kRad (Si)	0	5	10	20	30	35
LL	310.000	310.000	310.000	310.000	310.000	310.000
Min	685.929	695.980	695.980	665.829	695.980	695.980
Average	695.980	710.050	712.061	709.228	706.030	706.030
Max	706.030	746.231	726.131	746.231	726.131	726.131
UL	890.000	890.000	890.000	890.000	890.000	890.000

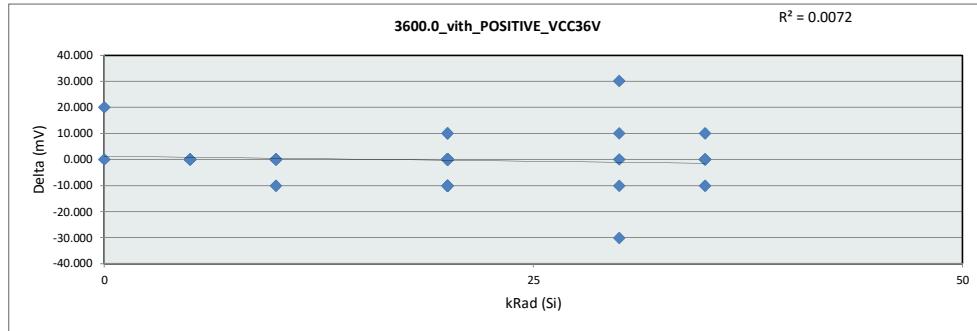


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

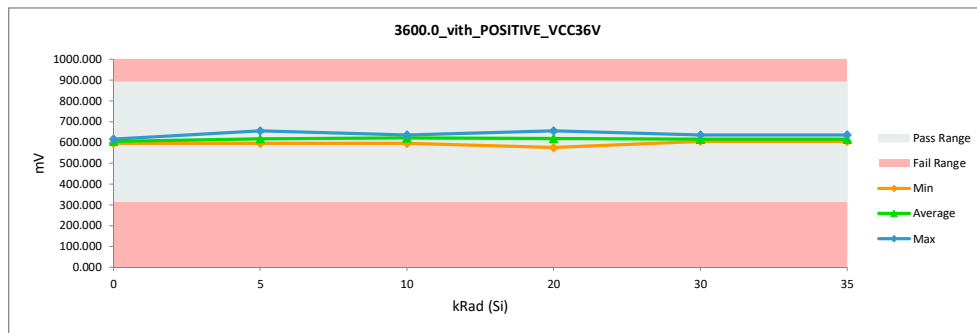
3600.0_vith_POSITIVE_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	615.578	615.578	0.000
0	039C1	615.578	595.478	20.100
5	001B5	615.578	615.578	0.000
5	002B5	595.478	595.478	0.000
5	003B5	615.578	615.578	0.000
5	004B5	605.528	605.528	0.000
5	005B5	655.779	655.779	0.000
10	006B10	615.578	625.628	-10.050
10	007B10	635.678	635.678	0.000
10	008B10	625.628	625.628	0.000
10	009B10	595.478	595.478	0.000
10	010B10	625.628	625.628	0.000
20	011B20	615.578	625.628	-10.050
20	012B20	595.478	605.528	-10.050
20	013B20	625.628	625.628	0.000
20	014B20	615.578	615.578	0.000
20	015B20	635.678	635.678	0.000
20	016B20	605.528	605.528	0.000
20	017B20	605.528	605.528	0.000
20	018B20	625.628	625.628	0.000
20	019B20	615.578	615.578	0.000
20	020B20	595.478	595.478	0.000
20	021B20	635.678	635.678	0.000
20	022B20	655.779	655.779	0.000
20	023B20	625.628	635.678	-10.050
20	024B20	605.528	615.578	-10.050
20	025B20	585.427	575.377	10.050
20	026B20	625.628	625.628	0.000
20	027B20	635.678	635.678	0.000
20	028B20	605.528	605.528	0.000
20	029B20	595.478	595.478	0.000
20	030B20	615.578	615.578	0.000
20	031B20	615.578	615.578	0.000
20	032B20	645.729	635.678	10.051
30	033B30	625.628	625.628	0.000
30	034B30	595.478	605.528	-10.050
30	035B30	615.578	605.528	10.050
30	036B30	605.528	635.678	-30.150
30	037B30	635.678	605.528	30.150
35	033B35	625.628	625.628	0.000
35	034B35	595.478	605.528	-10.050
35	035B35	615.578	605.528	10.050
35	036B35	605.528	605.528	0.000
35	037B35	635.678	635.678	0.000
	Max	655.779	655.779	30.150
	Average	617.177	617.405	-0.228
	Min	585.427	575.377	-30.150
	Std Dev	16.499	16.687	8.801



3600.0_vith_POSITIVE_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	890	mV
Min Limit	310	mV

kRad (Si)	0	5	10	20	30	35
LL	310.000	310.000	310.000	310.000	310.000	310.000
Min	595.478	595.478	595.478	575.377	605.528	605.528
Average	605.528	617.588	621.608	618.319	615.578	615.578
Max	615.578	655.779	635.678	655.779	635.678	635.678
UL	890.000	890.000	890.000	890.000	890.000	890.000

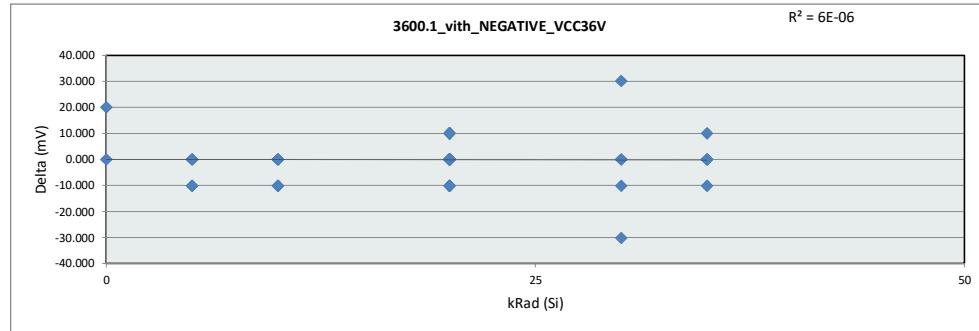


TID Report SN55HVD233-SEP

Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

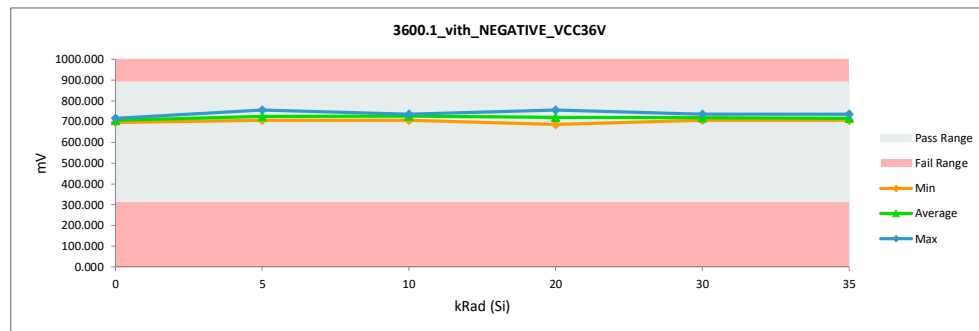
3600.1_vith_NEGATIVE_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	PreHDR	PostHDR	Delta
0	038C1	716.080	716.080	0.000
0	039C1	716.080	695.980	20.100
5	001B5	716.080	726.131	-10.051
5	002B5	695.980	706.030	-10.050
5	003B5	716.080	716.080	0.000
5	004B5	716.080	716.080	0.000
5	005B5	756.281	756.281	0.000
10	006B10	716.080	726.131	-10.051
10	007B10	736.181	736.181	0.000
10	008B10	726.131	726.131	0.000
10	009B10	706.030	706.030	0.000
10	010B10	726.131	736.181	-10.050
20	011B20	726.131	726.131	0.000
20	012B20	695.980	706.030	-10.050
20	013B20	726.131	726.131	0.000
20	014B20	716.080	716.080	0.000
20	015B20	736.181	736.181	0.000
20	016B20	706.030	706.030	0.000
20	017B20	716.080	706.030	10.050
20	018B20	726.131	726.131	0.000
20	019B20	726.131	726.131	0.000
20	020B20	706.030	706.030	0.000
20	021B20	746.231	736.181	10.050
20	022B20	756.281	756.281	0.000
20	023B20	726.131	736.181	-10.050
20	024B20	706.030	716.080	-10.050
20	025B20	685.929	685.929	0.000
20	026B20	726.131	726.131	0.000
20	027B20	736.181	736.181	0.000
20	028B20	706.030	706.030	0.000
20	029B20	706.030	695.980	10.050
20	030B20	726.131	726.131	0.000
20	031B20	726.131	716.080	10.051
20	032B20	746.231	736.181	10.050
30	033B30	726.131	726.131	0.000
30	034B30	695.980	706.030	-10.050
30	035B30	716.080	716.080	0.000
30	036B30	706.030	736.181	-30.151
30	037B30	736.181	706.030	30.151
35	033B35	726.131	726.131	0.000
35	034B35	695.980	706.030	-10.050
35	035B35	716.080	706.030	10.050
35	036B35	706.030	706.030	0.000
35	037B35	736.181	736.181	0.000
	Max	756.281	756.281	30.151
	Average	719.963	720.192	-0.228
	Min	685.929	685.929	-30.151
	Std Dev	15.960	15.375	9.320



3600.1_vith_NEGATIVE_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	890	mV
Min Limit	310	mV

kRad (Si)	0	5	10	20	30	35
LL	310.000	310.000	310.000	310.000	310.000	310.000
Min	695.980	706.030	706.030	685.929	706.030	706.030
Average	706.030	724.120	726.131	720.649	718.090	716.080
Max	716.080	756.281	736.181	756.281	736.181	736.181
UL	890.000	890.000	890.000	890.000	890.000	890.000



Full ELDRS Report Graphs and Tables

This section provides the Full ELDRS Report for SN55HVD233-SEP.

Delta Threshold 10.00%

Excerpt from Mil-Std 883J, 1019.9

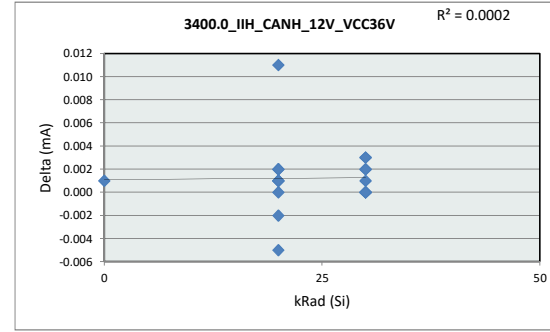
3.13.1.1 Characterization test to determine if a part exhibits ELDRS. Calculate the radiation induced change in each electrical parameter (Δ para) for each sample at each radiation level. Calculate the ratio of the median Δ para at low dose rate to the median Δ para at high dose rate for each irradiation bias group at each total dose level. If this ratio exceeds 1.5 for any of the most sensitive parameters then the part is considered to be ELDRS susceptible. This test does not apply to parameters which exhibit changes that are within experimental error or whose values are below the pre-irradiation electrical specification limits at low dose rate at the specification dose.

ELDRS Report SN55HVD233-SEP

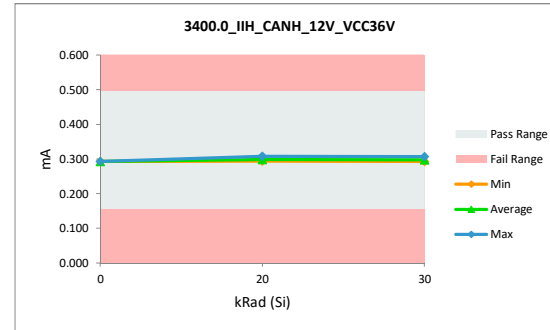
ELDRS Report
SN55HVD233-SEP

3400.0_IIH_CANH_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.495	0.495
Min Limit	0.155	0.155

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.294	0.293	0.001		
20	LDR016B20	0.309	0.308	0.001	0.001499996	#DIV/0!
20	LDR018B20	0.296	0.294	0.002		
20	LDR019B20	0.296	0.294	0.002		
20	LDR031B20	0.297	0.296	0.001		
30	LDR016B30	0.309	0.307	0.002	0.002	#DIV/0!
30	LDR018B30	0.296	0.293	0.003		
30	LDR019B30	0.296	0.293	0.003		
30	LDR031B30	0.297	0.295	0.002		
20	HDR071B20	0.310	0.299	0.011	0.000	
20	HDR072B20	0.299	0.299	0.000		
20	HDR073B20	0.294	0.296	-0.002		
20	HDR074B20	0.295	0.300	-0.005		
20	HDR075B20	0.300	0.299	0.001		
30	HDR001B30	0.298	0.297	0.001	0.000	
30	HDR002B30	0.298	0.298	0.000		
30	HDR003B30	0.299	0.299	0.000		
30	HDR004B30	0.299	0.299	0.000		
30	HDR005B30	0.297	0.297	0.000		
	Max	0.310	0.308	0.011		
	Average	0.299	0.298	0.001		
	Min	0.294	0.293	-0.005		
	Std Dev	0.005	0.004	0.003		



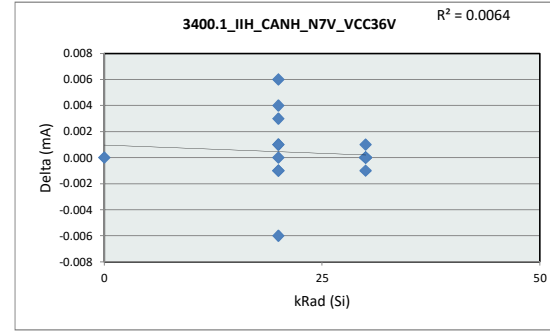
3400.0_IIH_CANH_12V_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	0.495	mA	
Min Limit	0.155	mA	
kRad (Si)	0	20	30
LL	0.155	0.155	0.155
Min	0.293	0.294	0.293
Average	0.293	0.298	0.298
Max	0.293	0.308	0.307
UL	0.495	0.495	0.495



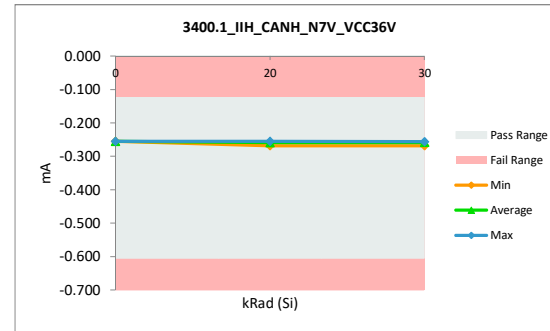
ELDRS Report
SN55HVD233-SEP

3400.1_IIH_CANH_N7V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-0.255	-0.255	0.000		
20	LDR016B20	-0.268	-0.268	0.000	-0.000500008	-0.166669978
20	LDR018B20	-0.256	-0.255	-0.001		
20	LDR019B20	-0.256	-0.255	-0.001		
20	LDR031B20	-0.257	-0.258	0.001		
30	LDR016B30	-0.268	-0.268	0.000	0.000	#DIV/0!
30	LDR018B30	-0.256	-0.256	0.000		
30	LDR019B30	-0.256	-0.256	0.000		
30	LDR031B30	-0.257	-0.258	0.001		
20	HDR071B20	-0.265	-0.259	-0.006	0.003	
20	HDR072B20	-0.256	-0.259	0.003		
20	HDR073B20	-0.252	-0.256	0.004		
20	HDR074B20	-0.253	-0.259	0.006		
20	HDR075B20	-0.257	-0.258	0.001		
30	HDR001B30	-0.256	-0.256	0.000	0.000	
30	HDR002B30	-0.258	-0.258	0.000		
30	HDR003B30	-0.259	-0.259	0.000		
30	HDR004B30	-0.259	-0.258	-0.001		
30	HDR005B30	-0.257	-0.257	0.000		
	Max	-0.252	-0.255	0.006		
	Average	-0.258	-0.258	0.000		
	Min	-0.268	-0.268	-0.006		
	Std Dev	0.004	0.004	0.002		



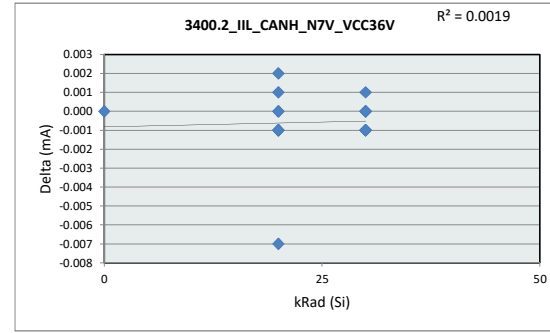
3400.1_IIH_CANH_N7V_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	-0.123	mA	
Min Limit	-0.605	mA	
kRad (Si)	0	20	30
LL	-0.605	-0.605	-0.605
Min	-0.255	-0.268	-0.268
Average	-0.255	-0.259	-0.258
Max	-0.255	-0.255	-0.256
UL	-0.123	-0.123	-0.123



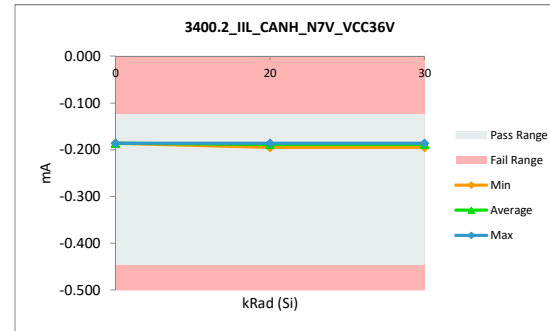
ELDRS Report
SN55HVD233-SEP

3400.2_IIL_CANH_N7V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.445	-0.445

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-0.186	-0.186	0.000		
20	LDR016B20	-0.196	-0.195	-0.001	-0.001000002	#DIV/0!
20	LDR018B20	-0.187	-0.186	-0.001		
20	LDR019B20	-0.187	-0.186	-0.001		
20	LDR031B20	-0.188	-0.188	0.000		
30	LDR016B30	-0.196	-0.195	-0.001	-0.001	#DIV/0!
30	LDR018B30	-0.187	-0.186	-0.001		
30	LDR019B30	-0.187	-0.186	-0.001		
30	LDR031B30	-0.188	-0.187	-0.001		
20	HDR071B20	-0.196	-0.189	-0.007	0.000	
20	HDR072B20	-0.189	-0.189	0.000		
20	HDR073B20	-0.186	-0.187	0.001		
20	HDR074B20	-0.187	-0.189	0.002		
20	HDR075B20	-0.190	-0.189	-0.001		
30	HDR001B30	-0.188	-0.188	0.000	0.000	
30	HDR002B30	-0.188	-0.188	0.000		
30	HDR003B30	-0.189	-0.190	0.001		
30	HDR004B30	-0.189	-0.189	0.000		
30	HDR005B30	-0.188	-0.188	0.000		
	Max	-0.186	-0.186	0.002		
	Average	-0.189	-0.188	-0.001		
	Min	-0.196	-0.195	-0.007		
	Std Dev	0.003	0.003	0.002		



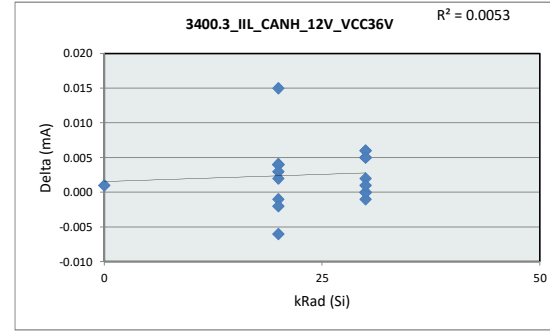
3400.2_IIL_CANH_N7V_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	-0.123	mA	
Min Limit	-0.445	mA	
kRad (Si)	0	20	30
LL	-0.445	-0.445	-0.445
Min	-0.186	-0.195	-0.195
Average	-0.186	-0.189	-0.189
Max	-0.186	-0.186	-0.186
UL	-0.123	-0.123	-0.123



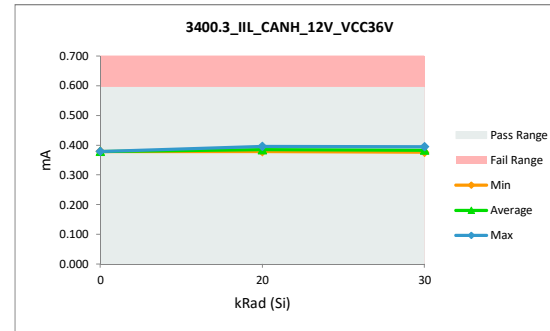
ELDRS Report
SN55HVD233-SEP

3400.3_IIL_CANH_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.595	0.595
Min Limit		

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.380	0.379	0.001		
20	LDR016B20	0.400	0.396	0.004	0.004000008	-4.000059605
20	LDR018B20	0.382	0.378	0.004		
20	LDR019B20	0.382	0.378	0.004		
20	LDR031B20	0.384	0.381	0.003		
30	LDR016B30	0.400	0.395	0.005	0.006	#DIV/0!
30	LDR018B30	0.382	0.376	0.006		
30	LDR019B30	0.382	0.376	0.006		
30	LDR031B30	0.384	0.379	0.005		
20	HDR071B20	0.401	0.386	0.015	-0.001	
20	HDR072B20	0.386	0.387	-0.001		
20	HDR073B20	0.380	0.382	-0.002		
20	HDR074B20	0.381	0.387	-0.006		
20	HDR075B20	0.388	0.386	0.002		
30	HDR001B30	0.385	0.383	0.002	0.000	
30	HDR002B30	0.385	0.385	0.000		
30	HDR003B30	0.386	0.387	-0.001		
30	HDR004B30	0.386	0.386	0.000		
30	HDR005B30	0.384	0.383	0.001		
	Max	0.401	0.396	0.015		
	Average	0.386	0.384	0.003		
	Min	0.380	0.376	-0.006		
	Std Dev	0.007	0.006	0.004		



3400.3_IIL_CANH_12V_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	0.595	mA	
Min Limit			
kRad (Si)	0	20	30
LL			
Min	0.379	0.378	0.376
Average	0.379	0.385	0.383
Max	0.379	0.396	0.395
UL	0.595	0.595	0.595

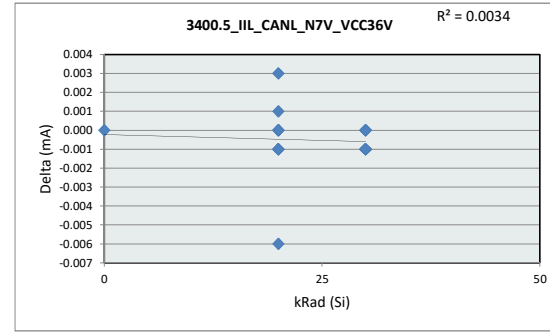


Note: Post radiation readings are below the pre-irradiation electrical specification limits at low dose rate at the specification dose.

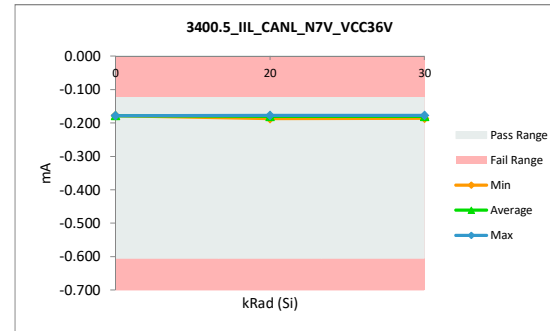
ELDRS Report
SN55HVD233-SEP

3400.5_IIL_CANL_N7V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-0.178	-0.178	0.000		
20	LDR016B20	-0.187	-0.187	0.000	-0.000500001	#DIV/0!
20	LDR018B20	-0.178	-0.177	-0.001		
20	LDR019B20	-0.178	-0.177	-0.001		
20	LDR031B20	-0.180	-0.180	0.000		
30	LDR016B30	-0.187	-0.186	-0.001	-0.001	#DIV/0!
30	LDR018B30	-0.178	-0.177	-0.001		
30	LDR019B30	-0.178	-0.177	-0.001		
30	LDR031B30	-0.180	-0.179	-0.001		
20	HDR071B20	-0.187	-0.181	-0.006	0.000	
20	HDR072B20	-0.181	-0.181	0.000		
20	HDR073B20	-0.178	-0.179	0.001		
20	HDR074B20	-0.178	-0.181	0.003		
20	HDR075B20	-0.182	-0.181	-0.001		
30	HDR001B30	-0.180	-0.180	0.000	0.000	
30	HDR002B30	-0.180	-0.180	0.000		
30	HDR003B30	-0.181	-0.181	0.000		
30	HDR004B30	-0.180	-0.180	0.000		
30	HDR005B30	-0.180	-0.179	-0.001		
	Max	-0.178	-0.177	0.003		
	Average	-0.181	-0.180	-0.001		
	Min	-0.187	-0.187	-0.006		
	Std Dev	0.003	0.003	0.002		



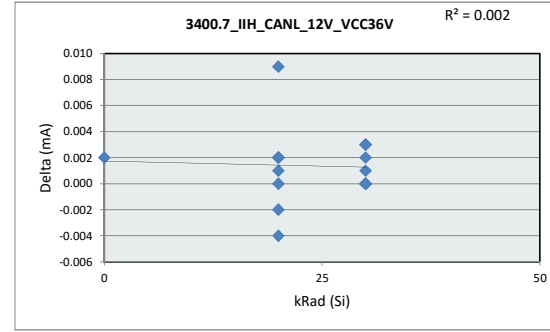
3400.5_IIL_CANL_N7V_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	-0.123	mA	
Min Limit	-0.605	mA	
kRad (Si)	0	20	30
LL	-0.605	-0.605	-0.605
Min	-0.178	-0.187	-0.186
Average	-0.178	-0.180	-0.180
Max	-0.178	-0.177	-0.177
UL	-0.123	-0.123	-0.123



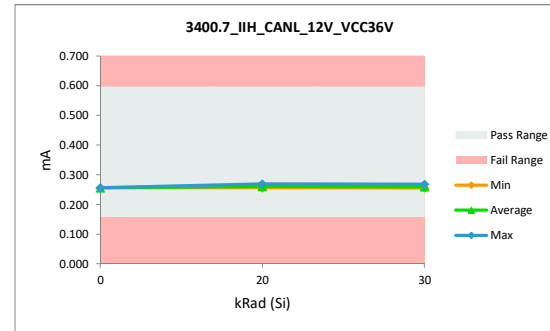
ELDRS Report
SN55HVD233-SEP

3400.7_IIH_CANL_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.595	0.595
Min Limit	0.155	0.155

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.258	0.256	0.002		
20	LDR016B20	0.271	0.269	0.002	0.001999974	#DIV/0!
20	LDR018B20	0.258	0.256	0.002		
20	LDR019B20	0.258	0.256	0.002		
20	LDR031B20	0.260	0.259	0.001		
30	LDR016B30	0.271	0.268	0.003	0.003	#DIV/0!
30	LDR018B30	0.258	0.255	0.003		
30	LDR019B30	0.258	0.255	0.003		
30	LDR031B30	0.260	0.258	0.002		
20	HDR071B20	0.271	0.262	0.009	0.000	
20	HDR072B20	0.262	0.262	0.000		
20	HDR073B20	0.257	0.259	-0.002		
20	HDR074B20	0.258	0.262	-0.004		
20	HDR075B20	0.263	0.261	0.002		
30	HDR001B30	0.261	0.260	0.001	0.000	
30	HDR002B30	0.260	0.260	0.000		
30	HDR003B30	0.261	0.261	0.000		
30	HDR004B30	0.261	0.261	0.000		
30	HDR005B30	0.260	0.260	0.000		
	Max	0.271	0.269	0.009		
	Average	0.261	0.260	0.001		
	Min	0.257	0.255	-0.004		
	Std Dev	0.005	0.004	0.003		



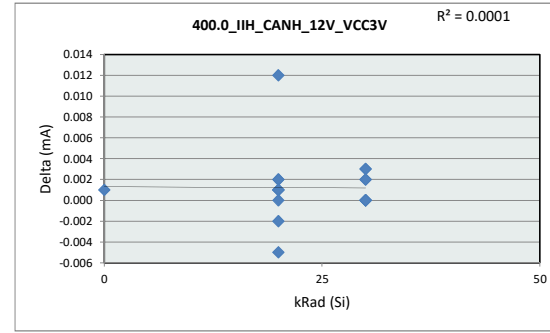
3400.7_IIH_CANL_12V_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	0.595	mA	
Min Limit	0.155	mA	
kRad (Si)	0	20	30
LL	0.155	0.155	0.155
Min	0.256	0.256	0.255
Average	0.256	0.261	0.260
Max	0.256	0.269	0.268
UL	0.595	0.595	0.595



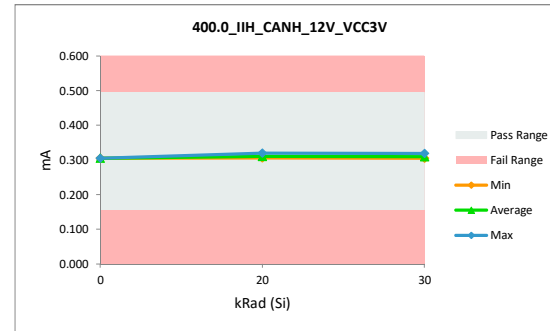
ELDRS Report
SN55HVD233-SEP

400.0_IIH_CANH_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.495	0.495
Min Limit	0.155	0.155

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.306	0.305	0.001		
20	LDR016B20	0.322	0.320	0.002	0.00150001	#DIV/0!
20	LDR018B20	0.308	0.306	0.002		
20	LDR019B20	0.307	0.306	0.001		
20	LDR031B20	0.309	0.308	0.001		
30	LDR016B30	0.322	0.319	0.003	0.002	#DIV/0!
30	LDR018B30	0.308	0.305	0.003		
30	LDR019B30	0.307	0.305	0.002		
30	LDR031B30	0.309	0.307	0.002		
20	HDR071B20	0.323	0.311	0.012	0.000	
20	HDR072B20	0.311	0.311	0.000		
20	HDR073B20	0.306	0.308	-0.002		
20	HDR074B20	0.307	0.312	-0.005		
20	HDR075B20	0.312	0.311	0.001		
30	HDR001B30	0.309	0.309	0.000	0.000	
30	HDR002B30	0.310	0.310	0.000		
30	HDR003B30	0.311	0.311	0.000		
30	HDR004B30	0.311	0.311	0.000		
30	HDR005B30	0.309	0.309	0.000		
	Max	0.323	0.320	0.012		
	Average	0.311	0.310	0.001		
	Min	0.306	0.305	-0.005		
	Std Dev	0.005	0.004	0.003		



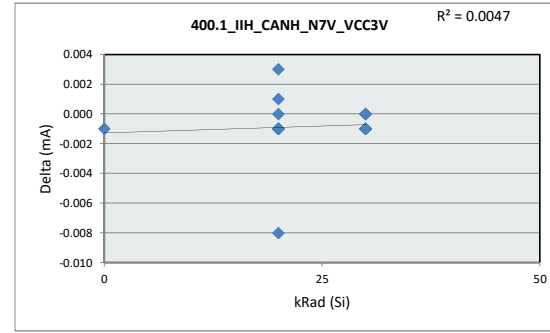
400.0_IIH_CANH_12V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	0.495	mA	
Min Limit	0.155	mA	
kRad (Si)	0	20	30
LL	0.155	0.155	0.155
Min	0.305	0.306	0.305
Average	0.305	0.310	0.310
Max	0.305	0.320	0.319
UL	0.495	0.495	0.495



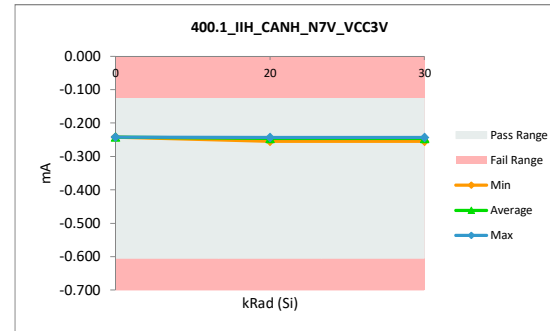
ELDRS Report
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400.1_IIH_CANH_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-0.243	-0.242	-0.001		
20	LDR016B20	-0.256	-0.255	-0.001	-0.001000002	#DIV/0!
20	LDR018B20	-0.244	-0.243	-0.001		
20	LDR019B20	-0.244	-0.243	-0.001		
20	LDR031B20	-0.246	-0.245	-0.001		
30	LDR016B30	-0.256	-0.255	-0.001	-0.001	#DIV/0!
30	LDR018B30	-0.244	-0.243	-0.001		
30	LDR019B30	-0.244	-0.243	-0.001		
30	LDR031B30	-0.246	-0.245	-0.001		
20	HDR071B20	-0.255	-0.247	-0.008	0.000	
20	HDR072B20	-0.247	-0.247	0.000		
20	HDR073B20	-0.243	-0.244	0.001		
20	HDR074B20	-0.244	-0.247	0.003		
20	HDR075B20	-0.247	-0.246	-0.001		
30	HDR001B30	-0.245	-0.245	0.000	0.000	
30	HDR002B30	-0.246	-0.245	-0.001		
30	HDR003B30	-0.247	-0.247	0.000		
30	HDR004B30	-0.247	-0.246	-0.001		
30	HDR005B30	-0.245	-0.245	0.000		
	Max	-0.243	-0.242	0.003		
	Average	-0.247	-0.246	-0.001		
	Min	-0.256	-0.255	-0.008		
	Std Dev	0.004	0.004	0.002		



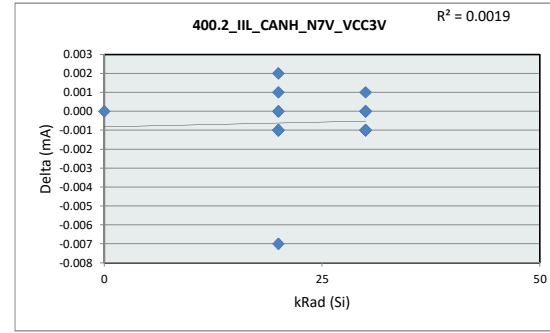
400.1_IIH_CANH_N7V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	-0.123	mA	
Min Limit	-0.605	mA	
kRad (Si)	0	20	30
LL	-0.605	-0.605	-0.605
Min	-0.242	-0.255	-0.255
Average	-0.242	-0.246	-0.246
Max	-0.242	-0.243	-0.243
UL	-0.123	-0.123	-0.123



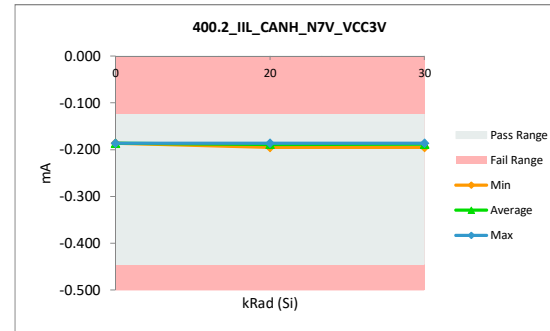
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400.2_IIL_CANH_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.445	-0.445

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-0.186	-0.186	0.000		
20	LDR016B20	-0.196	-0.195	-0.001	-0.001000002	#DIV/0!
20	LDR018B20	-0.187	-0.186	-0.001		
20	LDR019B20	-0.187	-0.186	-0.001		
20	LDR031B20	-0.188	-0.188	0.000		
30	LDR016B30	-0.196	-0.195	-0.001	-0.001	#DIV/0!
30	LDR018B30	-0.187	-0.186	-0.001		
30	LDR019B30	-0.187	-0.186	-0.001		
30	LDR031B30	-0.188	-0.187	-0.001		
20	HDR071B20	-0.196	-0.189	-0.007	0.000	
20	HDR072B20	-0.189	-0.189	0.000		
20	HDR073B20	-0.186	-0.187	0.001		
20	HDR074B20	-0.187	-0.189	0.002		
20	HDR075B20	-0.190	-0.189	-0.001		
30	HDR001B30	-0.188	-0.188	0.000	0.000	
30	HDR002B30	-0.188	-0.188	0.000		
30	HDR003B30	-0.189	-0.190	0.001		
30	HDR004B30	-0.189	-0.189	0.000		
30	HDR005B30	-0.188	-0.188	0.000		
	Max	-0.186	-0.186	0.002		
	Average	-0.189	-0.188	-0.001		
	Min	-0.196	-0.195	-0.007		
	Std Dev	0.003	0.003	0.002		



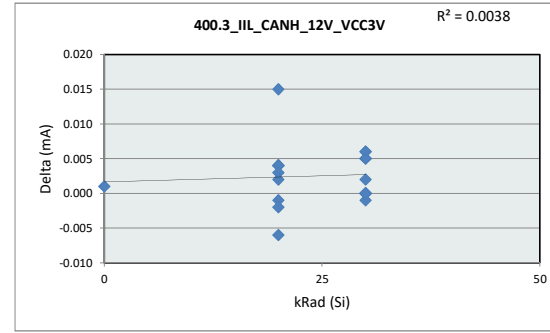
400.2_IIL_CANH_N7V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	-0.123	mA	
Min Limit	-0.445	mA	
kRad (Si)	0	20	30
LL	-0.445	-0.445	-0.445
Min	-0.186	-0.195	-0.195
Average	-0.186	-0.189	-0.189
Max	-0.186	-0.186	-0.186
UL	-0.123	-0.123	-0.123



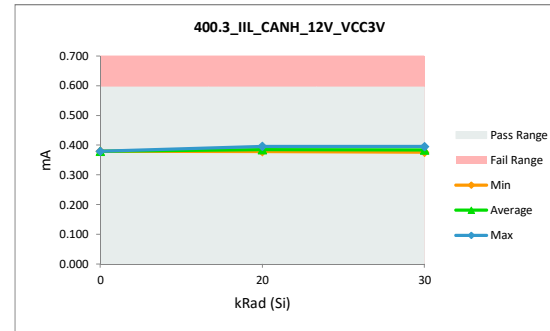
ELDRS Report
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400.3_IIL_CANH_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.595	0.595
Min Limit		

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.380	0.379	0.001		
20	LDR016B20	0.400	0.396	0.004	0.004000008	-4.000059605
20	LDR018B20	0.382	0.378	0.004		
20	LDR019B20	0.382	0.378	0.004		
20	LDR031B20	0.384	0.381	0.003		
30	LDR016B30	0.400	0.395	0.005	0.006	#DIV/0!
30	LDR018B30	0.382	0.376	0.006		
30	LDR019B30	0.382	0.376	0.006		
30	LDR031B30	0.384	0.379	0.005		
20	HDR071B20	0.401	0.386	0.015	-0.001	
20	HDR072B20	0.386	0.387	-0.001		
20	HDR073B20	0.380	0.382	-0.002		
20	HDR074B20	0.381	0.387	-0.006		
20	HDR075B20	0.388	0.386	0.002		
30	HDR001B30	0.385	0.383	0.002	0.000	
30	HDR002B30	0.385	0.385	0.000		
30	HDR003B30	0.386	0.387	-0.001		
30	HDR004B30	0.386	0.386	0.000		
30	HDR005B30	0.384	0.384	0.000		
	Max	0.401	0.396	0.015		
	Average	0.386	0.384	0.002		
	Min	0.380	0.376	-0.006		
	Std Dev	0.007	0.006	0.004		



400.3_IIL_CANH_12V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	0.595	mA	
Min Limit			
kRad (Si)	0	20	30
LL			
Min	0.379	0.378	0.376
Average	0.379	0.385	0.383
Max	0.379	0.396	0.395
UL	0.595	0.595	0.595

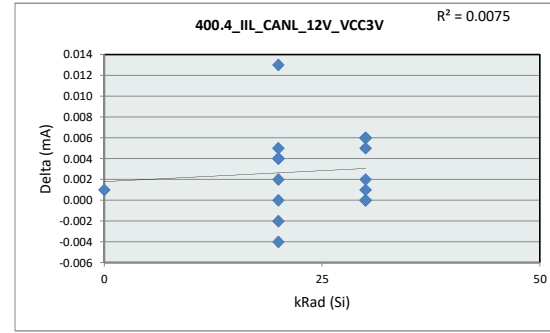


Note: Post radiation readings are below the pre-irradiation electrical specification limits at low dose rate at the specification dose.

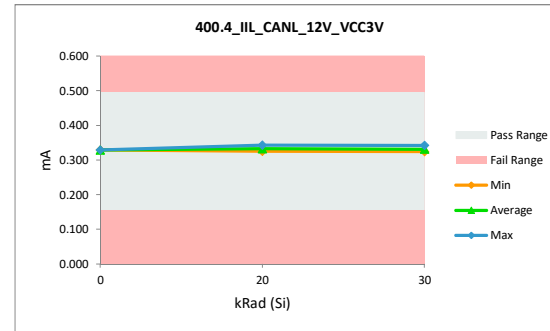
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400.4_IIL_CANL_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.495	0.495
Min Limit	0.155	0.155

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.330	0.329	0.001		
20	LDR016B20	0.347	0.343	0.004	0.004000008	#DIV/0!
20	LDR018B20	0.330	0.325	0.005		
20	LDR019B20	0.330	0.326	0.004		
20	LDR031B20	0.333	0.329	0.004		
30	LDR016B30	0.347	0.342	0.005	0.006	#DIV/0!
30	LDR018B30	0.330	0.324	0.006		
30	LDR019B30	0.330	0.324	0.006		
30	LDR031B30	0.333	0.327	0.006		
20	HDR071B20	0.347	0.334	0.013	0.000	
20	HDR072B20	0.335	0.335	0.000		
20	HDR073B20	0.329	0.331	-0.002		
20	HDR074B20	0.330	0.334	-0.004		
20	HDR075B20	0.336	0.334	0.002		
30	HDR001B30	0.334	0.332	0.002	0.000	
30	HDR002B30	0.333	0.333	0.000		
30	HDR003B30	0.334	0.334	0.000		
30	HDR004B30	0.334	0.333	0.001		
30	HDR005B30	0.332	0.332	0.000		
	Max	0.347	0.343	0.013		
	Average	0.334	0.332	0.003		
	Min	0.329	0.324	-0.004		
	Std Dev	0.006	0.005	0.004		



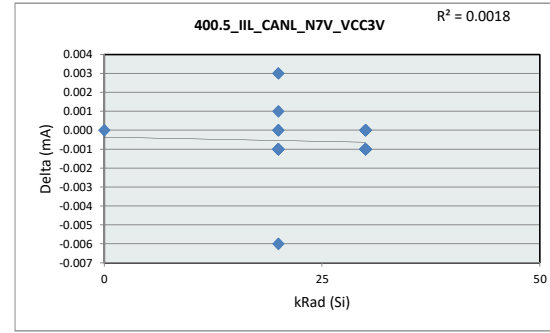
400.4_IIL_CANL_12V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	0.495	mA	
Min Limit	0.155	mA	
kRad (Si)	0	20	30
LL	0.155	0.155	0.155
Min	0.329	0.325	0.324
Average	0.329	0.332	0.331
Max	0.329	0.343	0.342
UL	0.495	0.495	0.495



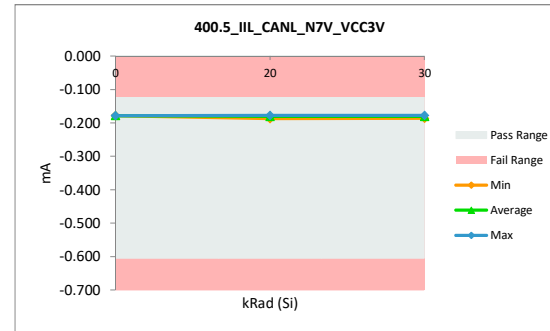
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400.5_IIL_CANL_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.605	-0.605

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-0.178	-0.178	0.000		
20	LDR016B20	-0.187	-0.187	0.000	-0.001000002	#DIV/0!
20	LDR018B20	-0.178	-0.177	-0.001		
20	LDR019B20	-0.178	-0.177	-0.001		
20	LDR031B20	-0.180	-0.179	-0.001		
30	LDR016B30	-0.187	-0.186	-0.001	-0.001	#DIV/0!
30	LDR018B30	-0.178	-0.177	-0.001		
30	LDR019B30	-0.178	-0.177	-0.001		
30	LDR031B30	-0.180	-0.179	-0.001		
20	HDR071B20	-0.187	-0.181	-0.006	0.000	
20	HDR072B20	-0.181	-0.181	0.000		
20	HDR073B20	-0.178	-0.179	0.001		
20	HDR074B20	-0.178	-0.181	0.003		
20	HDR075B20	-0.182	-0.181	-0.001		
30	HDR001B30	-0.180	-0.180	0.000	0.000	
30	HDR002B30	-0.180	-0.180	0.000		
30	HDR003B30	-0.181	-0.181	0.000		
30	HDR004B30	-0.180	-0.180	0.000		
30	HDR005B30	-0.180	-0.179	-0.001		
	Max	-0.178	-0.177	0.003		
	Average	-0.181	-0.180	-0.001		
	Min	-0.187	-0.187	-0.006		
	Std Dev	0.003	0.003	0.002		



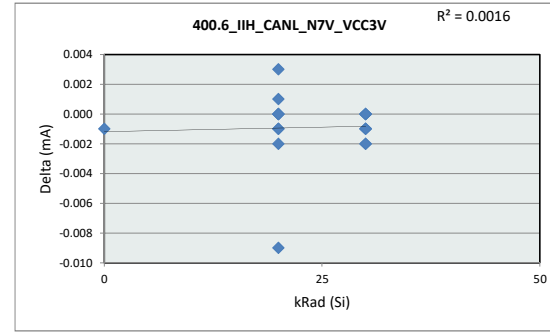
400.5_IIL_CANL_N7V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	-0.123	mA	
Min Limit	-0.605	mA	
kRad (Si)	0	20	30
LL	-0.605	-0.605	-0.605
Min	-0.178	-0.187	-0.186
Average	-0.178	-0.180	-0.180
Max	-0.178	-0.177	-0.177
UL	-0.123	-0.123	-0.123



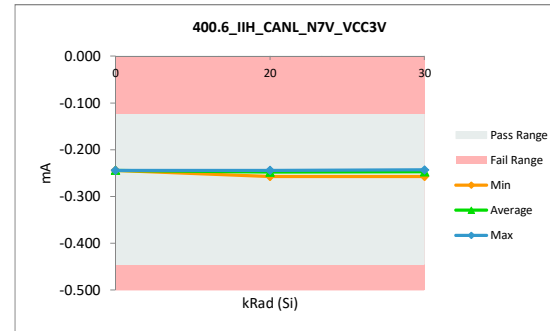
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400.6_IIH_CANL_N7V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	-0.123	-0.123
Min Limit	-0.445	-0.445

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-0.245	-0.244	-0.001		
20	LDR016B20	-0.257	-0.257	0.000	-0.000500001	#DIV/0!
20	LDR018B20	-0.245	-0.244	-0.001		
20	LDR019B20	-0.245	-0.244	-0.001		
20	LDR031B20	-0.247	-0.247	0.000		
30	LDR016B30	-0.257	-0.257	0.000	-0.001	#DIV/0!
30	LDR018B30	-0.245	-0.243	-0.002		
30	LDR019B30	-0.245	-0.243	-0.002		
30	LDR031B30	-0.247	-0.246	-0.001		
20	HDR071B20	-0.257	-0.248	-0.009	0.000	
20	HDR072B20	-0.249	-0.249	0.000		
20	HDR073B20	-0.244	-0.245	0.001		
20	HDR074B20	-0.245	-0.248	0.003		
20	HDR075B20	-0.250	-0.248	-0.002		
30	HDR001B30	-0.247	-0.247	0.000	0.000	
30	HDR002B30	-0.247	-0.247	0.000		
30	HDR003B30	-0.248	-0.248	0.000		
30	HDR004B30	-0.248	-0.247	-0.001		
30	HDR005B30	-0.247	-0.246	-0.001		
	Max	-0.244	-0.243	0.003		
	Average	-0.248	-0.247	-0.001		
	Min	-0.257	-0.257	-0.009		
	Std Dev	0.004	0.004	0.002		



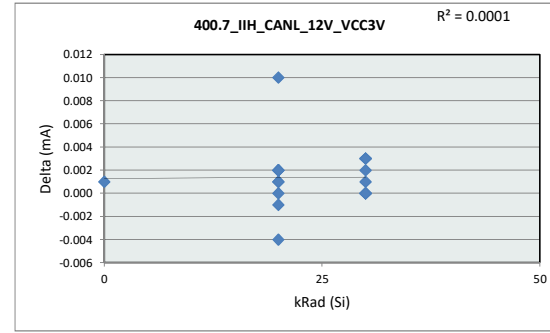
400.6_IIH_CANL_N7V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	-0.123	mA	
Min Limit	-0.445	mA	
kRad (Si)	0	20	30
LL	-0.445	-0.445	-0.445
Min	-0.244	-0.257	-0.257
Average	-0.244	-0.248	-0.247
Max	-0.244	-0.244	-0.243
UL	-0.123	-0.123	-0.123



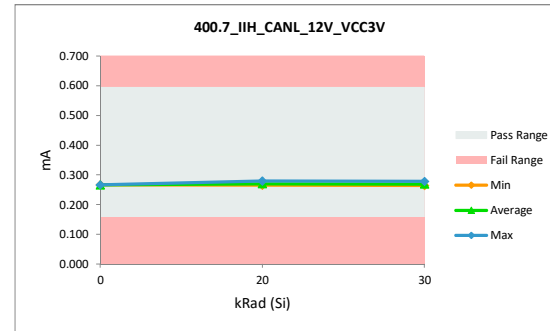
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400.7_IIH_CANL_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.595	0.595
Min Limit	0.155	0.155

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.267	0.266	0.001		
20	LDR016B20	0.281	0.279	0.002	0.001999989	#DIV/0!
20	LDR018B20	0.267	0.265	0.002		
20	LDR019B20	0.267	0.265	0.002		
20	LDR031B20	0.269	0.268	0.001		
30	LDR016B30	0.281	0.278	0.003	0.003	#DIV/0!
30	LDR018B30	0.267	0.264	0.003		
30	LDR019B30	0.267	0.264	0.003		
30	LDR031B30	0.269	0.267	0.002		
20	HDR071B20	0.281	0.271	0.010	0.000	
20	HDR072B20	0.271	0.271	0.000		
20	HDR073B20	0.267	0.268	-0.001		
20	HDR074B20	0.267	0.271	-0.004		
20	HDR075B20	0.272	0.271	0.001		
30	HDR001B30	0.270	0.269	0.001	0.000	
30	HDR002B30	0.270	0.270	0.000		
30	HDR003B30	0.271	0.271	0.000		
30	HDR004B30	0.270	0.270	0.000		
30	HDR005B30	0.269	0.269	0.000		
	Max	0.281	0.279	0.010		
	Average	0.271	0.269	0.001		
	Min	0.267	0.264	-0.004		
	Std Dev	0.005	0.004	0.003		



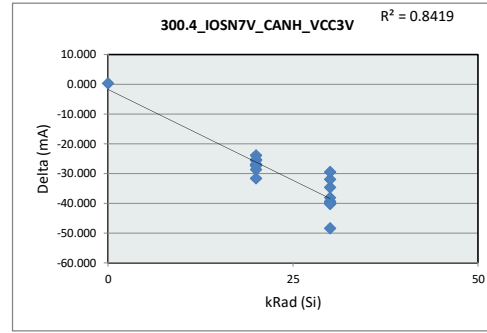
400.7_IIH_CANL_12V_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	0.595	mA	
Min Limit	0.155	mA	
kRad (Si)	0	20	30
LL	0.155	0.155	0.155
Min	0.266	0.265	0.264
Average	0.266	0.270	0.269
Max	0.266	0.279	0.278
UL	0.595	0.595	0.595



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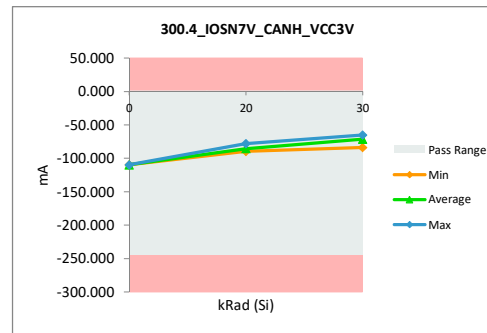
300.4_IOSN7V_CANH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.9	0.9
Min Limit	-245	-245

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-109.493	-109.822	0.329		
20	LDR016B20	-113.298	-87.823	-25.475		
20	LDR018B20	-112.051	-84.722	-27.329	-25.44499969	0.932973903
20	LDR019B20	-112.551	-87.136	-25.415		
20	LDR031B20	-113.244	-89.344	-23.900		
30	LDR016B30	-113.298	-64.897	-48.401	-33.313	0.835603378
30	LDR018B30	-112.051	-77.386	-34.665		
30	LDR019B30	-112.551	-80.590	-31.961		
30	LDR031B30	-113.244	-83.745	-29.499		
20	HDR071B20	-112.391	-87.013	-25.378	-27.273	
20	HDR072B20	-112.695	-85.759	-26.936		
20	HDR073B20	-112.228	-83.561	-28.667		
20	HDR074B20	-109.453	-77.815	-31.638		
20	HDR075B20	-113.342	-86.069	-27.273		
30	HDR001B30	-108.600	-70.432	-38.168	-39.867	
30	HDR002B30	-106.746	-66.879	-39.867		
30	HDR003B30	-106.986	-67.588	-39.398		
30	HDR004B30	-106.256	-66.284	-39.972		
30	HDR005B30	-105.725	-65.492	-40.233		
	Max	-105.725	-64.897	0.329		
	Average	-110.853	-80.124	-30.729		
	Min	-113.342	-109.822	-48.401		
	Std Dev	2.729	11.336	10.163		



300.4_IOSN7V_CANH_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	0.9	mA
Min Limit	-245	mA

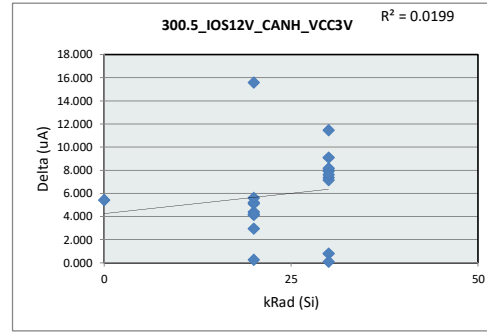
kRad (Si)	0	20	30
LL	-245.000	-245.000	-245.000
Min	-109.822	-89.344	-83.745
Average	-109.822	-85.471	-71.477
Max	-109.822	-77.815	-64.897
UL	0.900	0.900	0.900



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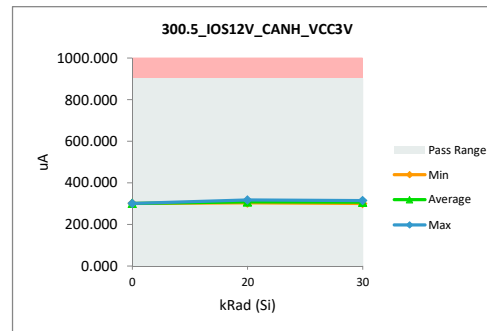
300.5_IOS12V_CANH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit		

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	306.031	300.606	5.425		
20	LDR016B20	321.859	317.717	4.142	4.753494263	1.139106047
20	LDR018B20	308.395	303.285	5.110		
20	LDR019B20	307.625	303.228	4.397		
20	LDR031B20	310.571	305.371	5.200		
30	LDR016B30	321.859	314.497	7.362	7.643	1.003743067
30	LDR018B30	308.395	300.470	7.925		
30	LDR019B30	307.625	300.479	7.146		
30	LDR031B30	310.571	302.409	8.162		
20	HDR071B20	325.917	310.345	15.572	4.173	
20	HDR072B20	314.354	310.181	4.173		
20	HDR073B20	309.173	306.231	2.942		
20	HDR074B20	310.739	310.484	0.255		
20	HDR075B20	315.895	310.296	5.599		
30	HDR001B30	318.764	307.301	11.463	7.615	
30	HDR002B30	309.264	308.481	0.783		
30	HDR003B30	310.505	310.419	0.086		
30	HDR004B30	318.817	309.722	9.095		
30	HDR005B30	309.227	301.612	7.615		
	Max	325.917	317.717	15.572		
	Average	312.926	307.007	5.919		
	Min	306.031	300.470	0.086		
	Std Dev	5.849	4.968	3.807		



300.5_IOS12V_CANH_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	900	uA
Min Limit		

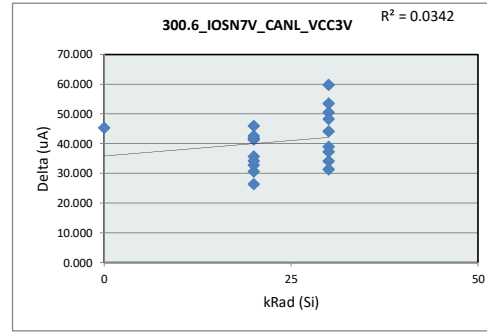
kRad (Si)	0	20	30
LL			
Min	300.606	303.228	300.470
Average	300.606	308.571	306.154
Max	300.606	317.717	314.497
UL	900.000	900.000	900.000



ELDRS Report
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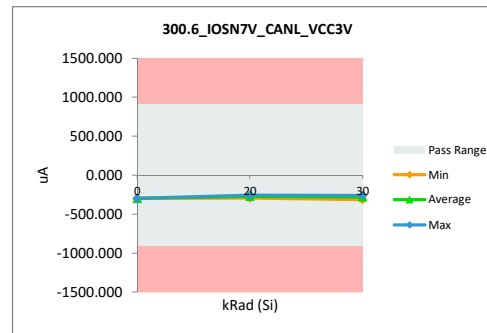
300.6_IOSN7V_CANL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit	-900	-900

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-253.238	-298.605	45.367		
20	LDR016B20	-262.851	-293.552	30.701	34.29400635	0.820155872
20	LDR018B20	-244.981	-280.733	35.752		
20	LDR019B20	-250.403	-283.239	32.836		
20	LDR031B20	-245.391	-286.814	41.423		
30	LDR016B30	-262.851	-313.354	50.503	52.022	1.396802021
30	LDR018B30	-244.981	-298.523	53.542		
30	LDR019B30	-250.403	-298.728	48.325		
30	LDR031B30	-245.391	-305.219	59.828		
20	HDR071B20	-234.311	-260.770	26.459	41.814	
20	HDR072B20	-224.502	-266.316	41.814		
20	HDR073B20	-220.029	-262.660	42.631		
20	HDR074B20	-216.705	-262.660	45.955		
20	HDR075B20	-222.902	-257.155	34.253		
30	HDR001B30	-221.454	-260.441	38.987	37.244	
30	HDR002B30	-227.716	-261.879	34.163		
30	HDR003B30	-228.989	-260.359	31.370		
30	HDR004B30	-216.442	-260.606	44.164		
30	HDR005B30	-223.731	-260.975	37.244		
	Max	-216.442	-257.155	59.828		
	Average	-236.698	-277.505	40.806		
	Min	-262.851	-313.354	26.459		
	Std Dev	15.418	18.895	8.586		



300.6_IOSN7V_CANL_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	900	uA
Min Limit	-900	uA

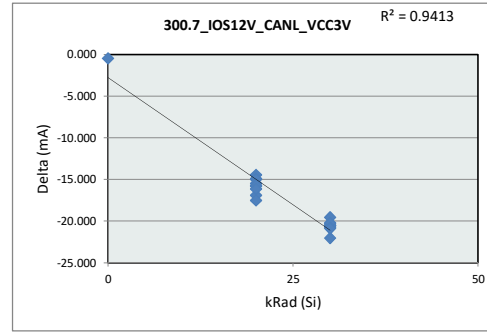
kRad (Si)	0	20	30
LL	-900.000	-900.000	-900.000
Min	-298.605	-293.552	-313.354
Average	-298.605	-272.655	-280.009
Max	-298.605	-257.155	-260.359
UL	900.000	900.000	900.000



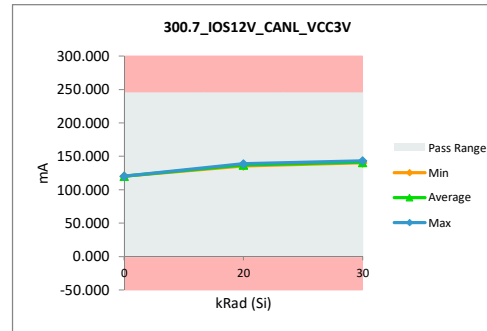
ELDRS Report
SN55HVD233-SEP

300.7_IOS12V_CANL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	245	245
Min Limit	-0.9	-0.9

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	119.922	120.394	-0.472		
20	LDR016B20	121.371	137.153	-15.782	-14.94199753	0.925946807
20	LDR018B20	121.081	135.538	-14.457		
20	LDR019B20	120.883	135.789	-14.906		
20	LDR031B20	121.782	136.760	-14.978		
30	LDR016B30	121.371	143.413	-22.042	-20.422	0.992033902
30	LDR018B30	121.081	140.618	-19.537		
30	LDR019B30	120.883	141.215	-20.332		
30	LDR031B30	121.782	142.294	-20.512		
20	HDR071B20	121.069	137.975	-16.906	-16.137	
20	HDR072B20	121.261	138.791	-17.530		
20	HDR073B20	120.825	136.309	-15.484		
20	HDR074B20	121.010	136.765	-15.755		
20	HDR075B20	122.334	138.471	-16.137		
30	HDR001B30	120.066	140.652	-20.586	-20.586	
30	HDR002B30	119.994	140.516	-20.522		
30	HDR003B30	119.992	140.207	-20.215		
30	HDR004B30	120.101	140.884	-20.783		
30	HDR005B30	119.685	140.572	-20.887		
	Max	122.334	143.413	-0.472		
	Average	120.868	138.122	-17.254		
	Min	119.685	120.394	-22.042		
	Std Dev	0.734	4.866	4.793		



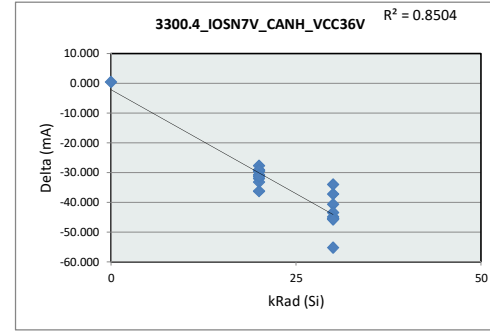
300.7_IOS12V_CANL_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	245 mA		
Min Limit	-0.9 mA		
kRad (Si)	0	20	30
LL	-0.900	-0.900	-0.900
Min	120.394	135.538	140.207
Average	120.394	137.061	141.152
Max	120.394	138.791	143.413
UL	245.000	245.000	245.000



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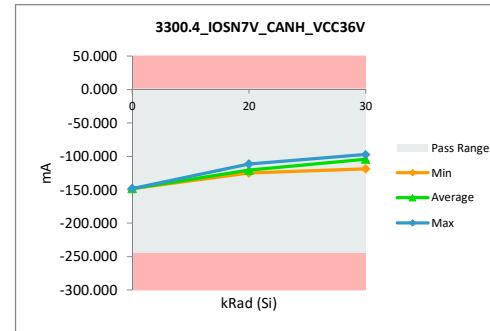
3300.4_IOSN7V_CANH_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	0.9	0.9
Min Limit	-245	-245

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-147.686	-148.129	0.443		
20	LDR016B20	-152.674	-123.275	-29.399	-29.51049423	0.940303712
20	LDR018B20	-150.848	-118.835	-32.013		
20	LDR019B20	-151.465	-121.843	-29.622		
20	LDR031B20	-152.550	-124.884	-27.666		
30	LDR016B30	-152.674	-97.453	-55.221	-38.949	0.858199053
30	LDR018B30	-150.848	-110.190	-40.658		
30	LDR019B30	-151.465	-114.226	-37.239		
30	LDR031B30	-152.550	-118.507	-34.043		
20	HDR071B20	-151.626	-122.527	-29.099	-31.384	
20	HDR072B20	-151.915	-121.108	-30.807		
20	HDR073B20	-151.340	-118.154	-33.186		
20	HDR074B20	-147.609	-111.348	-36.261		
20	HDR075B20	-152.806	-121.422	-31.384		
30	HDR001B30	-146.489	-103.060	-43.429	-45.384	
30	HDR002B30	-144.208	-98.824	-45.384		
30	HDR003B30	-144.473	-99.613	-44.860		
30	HDR004B30	-143.548	-98.069	-45.479		
30	HDR005B30	-142.953	-97.167	-45.786		
	Max	-142.953	-97.167	0.443		
	Average	-149.459	-114.139	-35.321		
	Min	-152.806	-148.129	-55.221		
	Std Dev	3.514	13.037	11.539		



3300.4_IOSN7V_CANH_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	0.9	mA
Min Limit	-245	mA

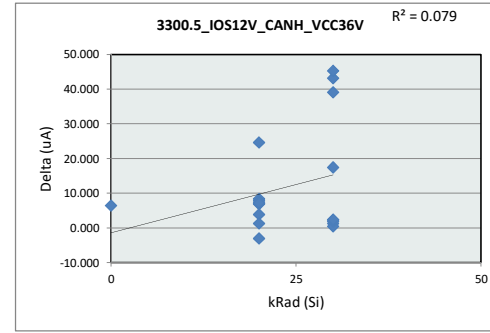
kRad (Si)	0	20	30
LL	-245.000	-245.000	-245.000
Min	-148.129	-124.884	-118.507
Average	-148.129	-120.377	-104.123
Max	-148.129	-111.348	-97.167
UL	0.900	0.900	0.900



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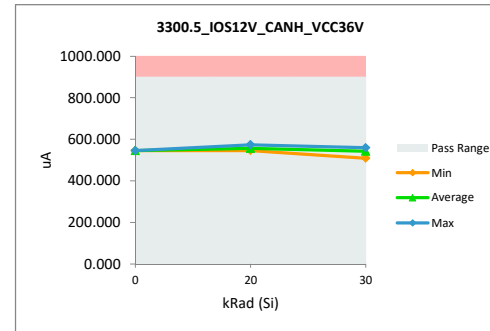
3300.5_IOS12V_CANH_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit		

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	552.756	546.310	6.446		
20	LDR016B20	581.041	574.162	6.879	7.468017578	1.894466293
20	LDR018B20	554.801	546.388	8.413		
20	LDR019B20	553.961	546.847	7.114		
20	LDR031B20	559.361	551.539	7.822		
30	LDR016B30	581.041	537.840	43.201	41.148	21.92231652
30	LDR018B30	554.801	509.525	45.276		
30	LDR019B30	553.961	536.468	17.493		
30	LDR031B30	559.361	520.265	39.096		
20	HDR071B20	584.859	560.188	24.671	3.942	
20	HDR072B20	564.351	560.409	3.942		
20	HDR073B20	554.961	553.661	1.300		
20	HDR074B20	557.277	560.291	-3.014		
20	HDR075B20	567.114	559.869	7.245		
30	HDR001B30	557.906	555.579	2.327	1.877	
30	HDR002B30	558.357	557.074	1.283		
30	HDR003B30	560.389	559.889	0.500		
30	HDR004B30	560.537	558.660	1.877		
30	HDR005B30	557.820	555.419	2.401		
	Max	584.859	574.162	45.276		
	Average	561.824	550.020	11.804		
	Min	552.756	509.525	-3.014		
	Std Dev	9.818	15.254	15.054		



3300.5_IOS12V_CANH_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	900	uA
Min Limit		

kRad (Si)	0	20	30
LL			
Min	546.310	546.388	509.525
Average	546.310	557.039	543.413
Max	546.310	574.162	559.889
UL	900.000	900.000	900.000

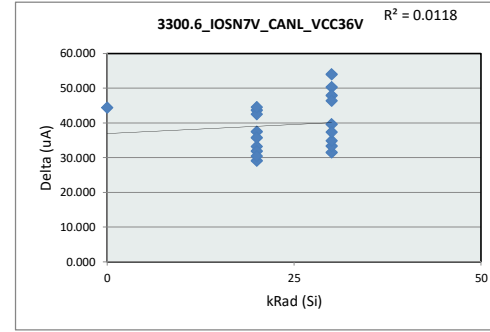


Note: Post radiation readings are below the pre-irradiation electrical specification limits at low dose rate at the specification dose.

ELDRS Report
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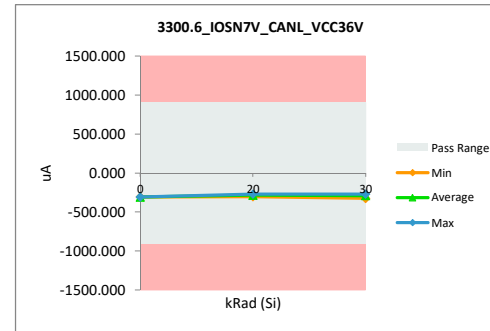
3300.6_IOSN7V_CANL_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	900	900
Min Limit	-900	-900

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-261.906	-306.288	44.382		
20	LDR016B20	-274.436	-303.576	29.140	32.56150818	0.765810547
20	LDR018B20	-253.525	-291.004	37.479		
20	LDR019B20	-260.386	-293.634	33.248		
20	LDR031B20	-266.031	-297.906	31.875		
30	LDR016B30	-274.436	-324.776	50.340	49.128	1.409199218
30	LDR018B30	-253.525	-307.520	53.995		
30	LDR019B30	-260.386	-308.301	47.915		
30	LDR031B30	-266.031	-312.409	46.378		
20	HDR071B20	-239.769	-270.218	30.449	42.519	
20	HDR072B20	-233.079	-276.750	43.671		
20	HDR073B20	-231.068	-273.587	42.519		
20	HDR074B20	-227.293	-271.862	44.569		
20	HDR075B20	-232.669	-268.411	35.742		
30	HDR001B30	-231.026	-270.670	39.644	34.862	
30	HDR002B30	-237.863	-269.356	31.493		
30	HDR003B30	-237.698	-271.040	33.342		
30	HDR004B30	-236.014	-270.876	34.862		
30	HDR005B30	-234.453	-271.821	37.368		
	Max	-227.293	-268.411	53.995		
	Average	-247.979	-287.369	39.390		
	Min	-274.436	-324.776	29.140		
	Std Dev	16.115	18.612	7.281		



3300.6_IOSN7V_CANL_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	900	uA
Min Limit	-900	uA

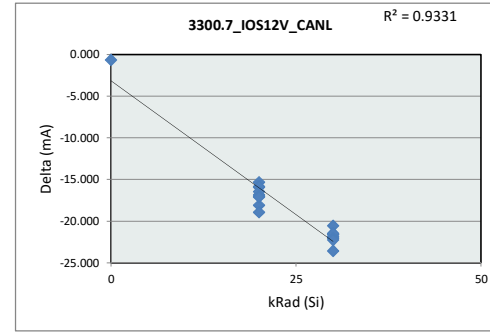
kRad (Si)	0	20	30
LL	-900.000	-900.000	-900.000
Min	-306.288	-303.576	-324.776
Average	-306.288	-282.994	-289.641
Max	-306.288	-268.411	-269.356
UL	900.000	900.000	900.000



ELDRS Report
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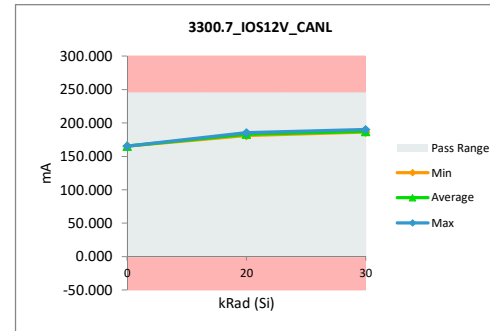
3300.7_IOS12V_CANL		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	245	245
Min Limit	-0.9	-0.9

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	164.725	165.382	-0.657		
20	LDR016B20	166.642	183.499	-16.857	-15.88999939	0.928479658
20	LDR018B20	166.030	181.367	-15.337		
20	LDR019B20	165.763	181.680	-15.917		
20	LDR031B20	166.997	182.860	-15.863		
30	LDR016B30	166.642	190.213	-23.571	-21.579	0.984286019
30	LDR018B30	166.030	186.591	-20.561		
30	LDR019B30	165.763	187.315	-21.552		
30	LDR031B30	166.997	188.602	-21.605		
20	HDR071B20	166.323	184.425	-18.102	-17.114	
20	HDR072B20	166.426	185.363	-18.937		
20	HDR073B20	165.826	182.273	-16.447		
20	HDR074B20	165.868	182.885	-17.017		
20	HDR075B20	167.783	184.897	-17.114		
30	HDR001B30	164.815	186.738	-21.923	-21.923	
30	HDR002B30	164.738	186.568	-21.830		
30	HDR003B30	164.786	186.252	-21.466		
30	HDR004B30	164.898	186.986	-22.088		
30	HDR005B30	164.393	186.654	-22.261		
	Max	167.783	190.213	-0.657		
	Average	165.866	184.239	-18.374		
	Min	164.393	165.382	-23.571		
	Std Dev	0.942	5.159	5.059		



3300.7_IOS12V_CANL		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	245	mA
Min Limit	-0.9	mA

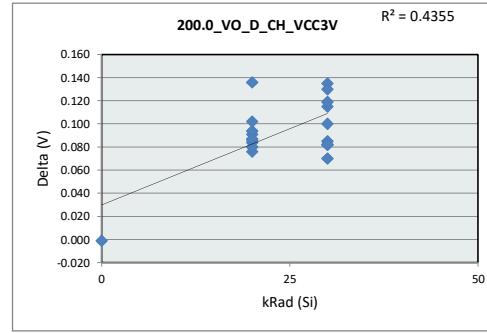
kRad (Si)	0	20	30
LL	-0.900	-0.900	-0.900
Min	165.382	181.367	186.252
Average	165.382	183.250	187.324
Max	165.382	185.363	190.213
UL	245.000	245.000	245.000



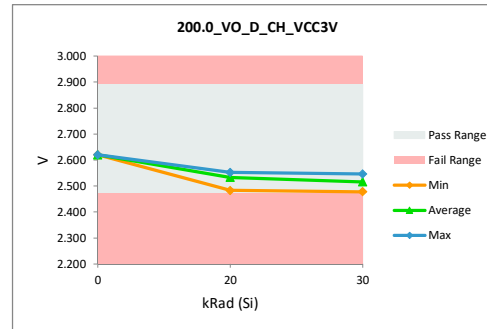
ELDRS Report
SN55HVD233-SEP

200.0_VO_D_CH_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	2.89	2.89
Min Limit	2.47	2.47

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	2.619	2.620	-0.001		
20	LDR016B20	2.628	2.537	0.091	0.087500095	1.005746701
20	LDR018B20	2.624	2.530	0.094		
20	LDR019B20	2.625	2.541	0.084		
20	LDR031B20	2.628	2.552	0.076		
30	LDR016B30	2.628	2.546	0.082	0.107	1.26470481
30	LDR018B30	2.624	2.489	0.135		
30	LDR019B30	2.625	2.510	0.115		
30	LDR031B30	2.628	2.528	0.100		
20	HDR071B20	2.627	2.547	0.080	0.087	
20	HDR072B20	2.628	2.542	0.086		
20	HDR073B20	2.627	2.525	0.102		
20	HDR074B20	2.619	2.483	0.136		
20	HDR075B20	2.630	2.543	0.087		
30	HDR001B30	2.616	2.531	0.085	0.085	
30	HDR002B30	2.611	2.492	0.119		
30	HDR003B30	2.611	2.541	0.070		
30	HDR004B30	2.609	2.527	0.082		
30	HDR005B30	2.608	2.478	0.130		
	Max	2.630	2.620	0.136		
	Average	2.622	2.530	0.092		
	Min	2.608	2.478	-0.001		
	Std Dev	0.007	0.032	0.030		



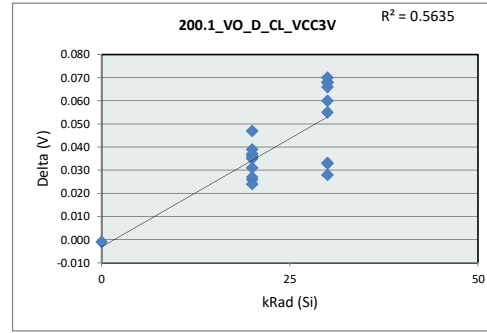
200.0_VO_D_CH_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	2.89 V		
Min Limit	2.47 V		
kRad (Si)	0	20	30
LL	2.470	2.470	2.470
Min	2.620	2.483	2.478
Average	2.620	2.533	2.516
Max	2.620	2.552	2.546
UL	2.890	2.890	2.890



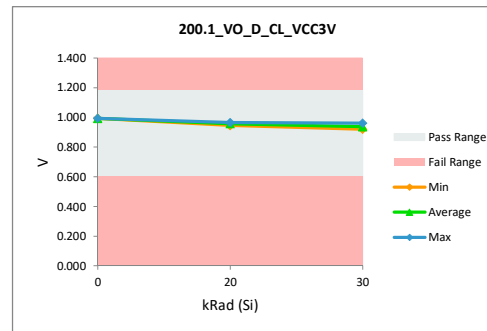
ELDRS Report
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200.1_VO_D_CL_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	1.18	1.18
Min Limit	0.6	0.6

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	0.993	0.994	-0.001		
20	LDR016B20	0.991	0.960	0.031	0.026500016	0.716216652
20	LDR018B20	0.991	0.965	0.026		
20	LDR019B20	0.992	0.965	0.027		
20	LDR031B20	0.989	0.965	0.024		
30	LDR016B30	0.991	0.936	0.055	0.033	0.485293873
30	LDR018B30	0.991	0.958	0.033		
30	LDR019B30	0.992	0.959	0.033		
30	LDR031B30	0.989	0.961	0.028		
20	HDR071B20	0.991	0.955	0.036	0.037	
20	HDR072B20	0.992	0.953	0.039		
20	HDR073B20	0.992	0.955	0.037		
20	HDR074B20	0.992	0.945	0.047		
20	HDR075B20	0.989	0.954	0.035		
30	HDR001B30	0.992	0.932	0.060	0.068	
30	HDR002B30	0.990	0.922	0.068		
30	HDR003B30	0.990	0.924	0.066		
30	HDR004B30	0.990	0.922	0.068		
30	HDR005B30	0.990	0.920	0.070		
	Max	0.993	0.994	0.070		
	Average	0.991	0.950	0.041		
	Min	0.989	0.920	-0.001		
	Std Dev	0.001	0.019	0.019		



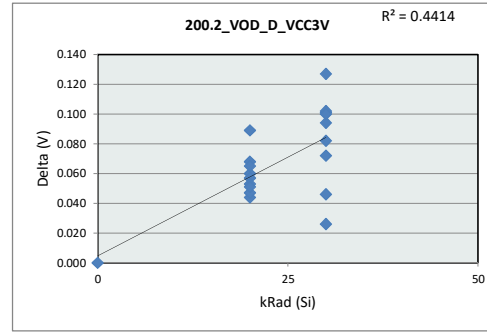
200.1_VO_D_CL_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	1.18	V	
Min Limit	0.6	V	
kRad (Si)	0	20	30
LL	0.600	0.600	0.600
Min	0.994	0.945	0.920
Average	0.994	0.957	0.937
Max	0.994	0.965	0.961
UL	1.180	1.180	1.180



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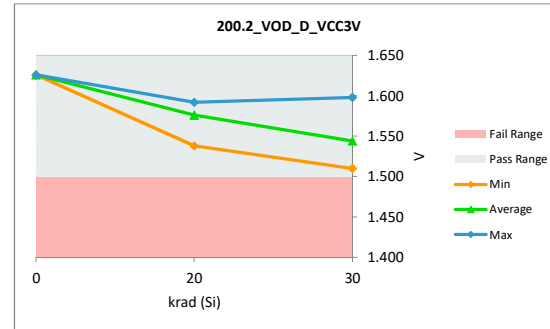
200.2_VOD_D_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit		
Min Limit	1.475	1.5

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	1.626	1.626	0.000		
20	LDR016B20	1.637	1.577	0.060	0.058499992	1.147058686
20	LDR018B20	1.633	1.565	0.068		
20	LDR019B20	1.633	1.576	0.057		
20	LDR031B20	1.639	1.586	0.053		
30	LDR016B30	1.637	1.510	0.127	0.092	0.97340491
30	LDR018B30	1.633	1.532	0.101		
30	LDR019B30	1.633	1.551	0.082		
30	LDR031B30	1.639	1.567	0.072		
20	HDR071B20	1.636	1.592	0.044	0.051	
20	HDR072B20	1.637	1.590	0.047		
20	HDR073B20	1.635	1.570	0.065		
20	HDR074B20	1.627	1.538	0.089		
20	HDR075B20	1.641	1.590	0.051		
30	HDR001B30	1.624	1.598	0.026	0.094	
30	HDR002B30	1.621	1.519	0.102		
30	HDR003B30	1.621	1.575	0.046		
30	HDR004B30	1.619	1.525	0.094		
30	HDR005B30	1.619	1.519	0.100		
	Max	1.641	1.626	0.127		
	Average	1.631	1.563	0.068		
	Min	1.619	1.510	0.000		
	Std Dev	0.007	0.032	0.030		



200.2_VOD_D_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit		
Min Limit	1.5	V

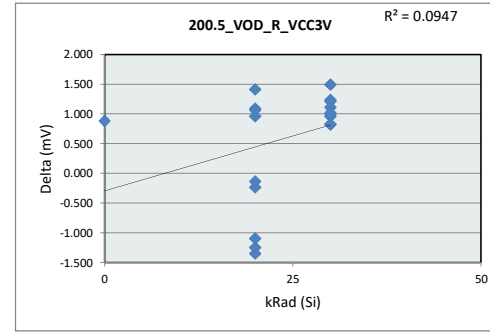
kRad (Si)	0	20	30
LL	1.500	1.500	1.500
Min	1.626	1.538	1.510
Average	1.626	1.576	1.544
Max	1.626	1.592	1.598
UL			



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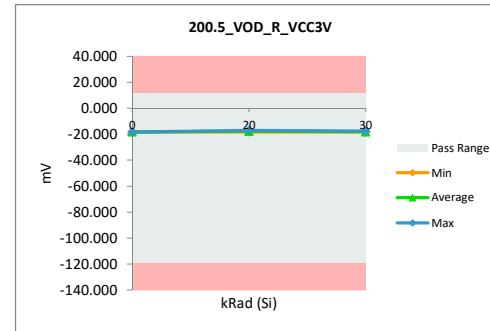
200.5_VOD_R_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	10.92	10.92
Min Limit	-119	-119

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-17.358	-18.240	0.882		
20	LDR016B20	-16.326	-17.286	0.960	1.079500198	-0.988552425
20	LDR018B20	-17.120	-18.211	1.091		
20	LDR019B20	-17.206	-18.274	1.068		
20	LDR031B20	-16.719	-18.130	1.411		
30	LDR016B30	-16.326	-17.560	1.234	1.223	1.271309468
30	LDR018B30	-17.120	-18.332	1.212		
30	LDR019B30	-17.206	-18.318	1.112		
30	LDR031B30	-16.719	-18.212	1.493		
20	HDR071B20	-18.537	-17.191	-1.346	-1.092	
20	HDR072B20	-18.079	-17.847	-0.232		
20	HDR073B20	-18.384	-17.142	-1.242		
20	HDR074B20	-18.318	-17.226	-1.092		
20	HDR075B20	-17.964	-17.832	-0.132		
30	HDR001B30	-17.396	-18.222	0.826	0.962	
30	HDR002B30	-17.243	-18.205	0.962		
30	HDR003B30	-16.989	-17.984	0.995		
30	HDR004B30	-17.147	-17.974	0.827		
30	HDR005B30	-17.099	-18.118	1.019		
	Max	-16.326	-17.142	1.493		
	Average	-17.329	-17.911	0.581		
	Min	-18.537	-18.332	-1.346		
	Std Dev	0.650	0.418	0.913		



200.5_VOD_R_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	10.92	mV
Min Limit	-119	mV

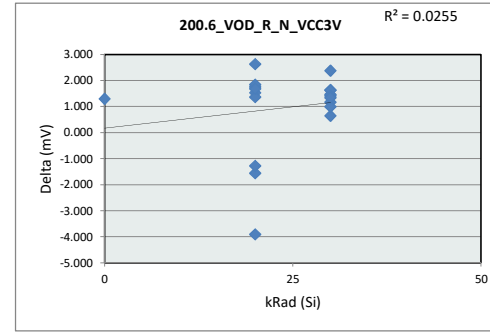
kRad (Si)	0	20	30
LL	-119.000	-119.000	-119.000
Min	-18.240	-18.274	-18.332
Average	-18.240	-17.682	-18.103
Max	-18.240	-17.142	-17.560
UL	10.920	10.920	10.920



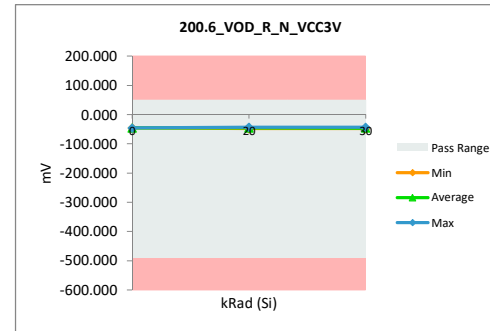
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200.6_VOD_R_N_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	49	49
Min Limit	-490	-490

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-44.549	-45.845	1.296		
20	LDR016B20	-41.413	-43.174	1.761	1.801000595	-1.404839199
20	LDR018B20	-45.661	-47.196	1.535		
20	LDR019B20	-46.338	-48.179	1.841		
20	LDR031B20	-44.746	-47.374	2.628		
30	LDR016B30	-41.413	-43.046	1.633	1.629	1.395460281
30	LDR018B30	-45.661	-47.127	1.466		
30	LDR019B30	-46.338	-47.962	1.624		
30	LDR031B30	-44.746	-47.123	2.377		
20	HDR071B20	-45.248	-46.609	1.361	-1.282	
20	HDR072B20	-46.839	-45.280	-1.559		
20	HDR073B20	-43.260	-44.949	1.689		
20	HDR074B20	-44.406	-43.124	-1.282		
20	HDR075B20	-49.153	-45.242	-3.911		
30	HDR001B30	-43.791	-44.435	0.644	1.167	
30	HDR002B30	-44.945	-46.112	1.167		
30	HDR003B30	-44.505	-45.495	0.990		
30	HDR004B30	-45.940	-47.353	1.413		
30	HDR005B30	-44.925	-46.265	1.340		
	Max	-41.413	-43.046	2.628		
	Average	-44.941	-45.889	0.948		
	Min	-49.153	-48.179	-3.911		
	Std Dev	1.781	1.606	1.565		



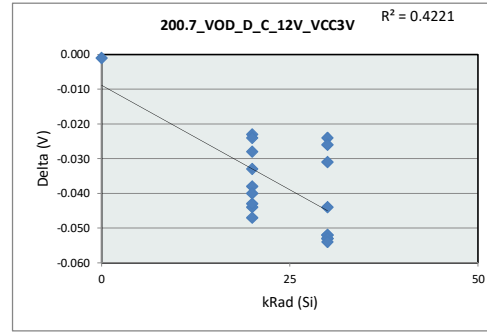
200.6_VOD_R_N_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	49	mV	
Min Limit	-490	mV	
kRad (Si)	0	20	30
LL	-490.000	-490.000	-490.000
Min	-45.845	-48.179	-47.962
Average	-45.845	-45.681	-46.102
Max	-45.845	-43.124	-43.046
UL	49.000	49.000	49.000



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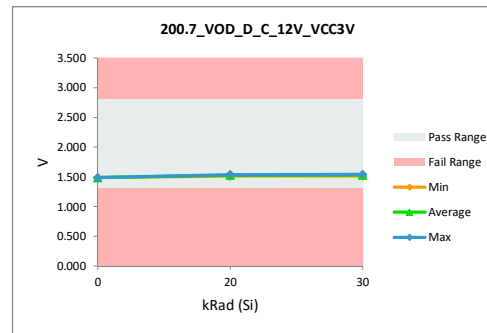
200.7_VOD_D_C_12V_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	2.8	2.8
Min Limit	1.3	1.3

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	1.485	1.486	-0.001		
20	LDR016B20	1.492	1.525	-0.033	-0.026000023	0.604651936
20	LDR018B20	1.489	1.512	-0.023		
20	LDR019B20	1.488	1.516	-0.028		
20	LDR031B20	1.495	1.519	-0.024		
30	LDR016B30	1.492	1.536	-0.044	-0.029	0.537735297
30	LDR018B30	1.489	1.513	-0.024		
30	LDR019B30	1.488	1.519	-0.031		
30	LDR031B30	1.495	1.521	-0.026		
20	HDR071B20	1.492	1.536	-0.044	-0.043	
20	HDR072B20	1.491	1.538	-0.047		
20	HDR073B20	1.490	1.528	-0.038		
20	HDR074B20	1.488	1.531	-0.043		
20	HDR075B20	1.497	1.537	-0.040		
30	HDR001B30	1.486	1.538	-0.052	-0.053	
30	HDR002B30	1.486	1.539	-0.053		
30	HDR003B30	1.486	1.538	-0.052		
30	HDR004B30	1.486	1.539	-0.053		
30	HDR005B30	1.486	1.540	-0.054		
	Max	1.497	1.540	-0.001		
	Average	1.490	1.527	-0.037		
	Min	1.485	1.486	-0.054		
	Std Dev	0.004	0.014	0.014		



200.7_VOD_D_C_12V_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	2.8	V
Min Limit	1.3	V

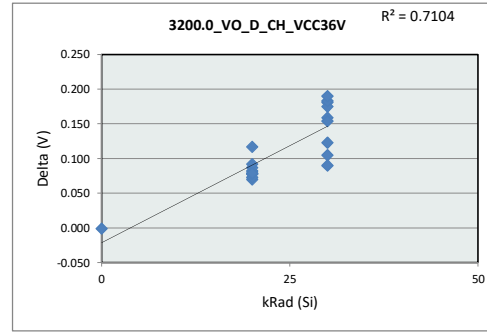
kRad (Si)	0	20	30
LL	1.300	1.300	1.300
Min	1.486	1.512	1.513
Average	1.486	1.527	1.531
Max	1.486	1.538	1.540
UL	2.800	2.800	2.800



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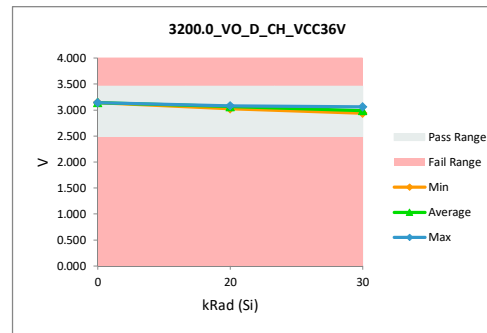
3200.0_VO_D_CH_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	3.46	3.46
Min Limit	2.47	2.47

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	3.142	3.143	-0.001		
20	LDR016B20	3.153	3.071	0.082	0.079999924	1.012657311
20	LDR018B20	3.148	3.061	0.087		
20	LDR019B20	3.149	3.071	0.078		
20	LDR031B20	3.152	3.082	0.070		
30	LDR016B30	3.153	2.994	0.159	0.114	0.629834069
30	LDR018B30	3.148	3.025	0.123		
30	LDR019B30	3.149	3.044	0.105		
30	LDR031B30	3.152	3.062	0.090		
20	HDR071B20	3.152	3.079	0.073	0.079	
20	HDR072B20	3.153	3.075	0.078		
20	HDR073B20	3.152	3.060	0.092		
20	HDR074B20	3.142	3.025	0.117		
20	HDR075B20	3.155	3.076	0.079		
30	HDR001B30	3.138	2.984	0.154	0.181	
30	HDR002B30	3.133	2.952	0.181		
30	HDR003B30	3.133	2.958	0.175		
30	HDR004B30	3.131	2.948	0.183		
30	HDR005B30	3.131	2.941	0.190		
	Max	3.155	3.143	0.190		
	Average	3.146	3.034	0.111		
	Min	3.131	2.941	-0.001		
	Std Dev	0.008	0.057	0.050		



3200.0_VO_D_CH_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	3.46	V
Min Limit	2.47	V

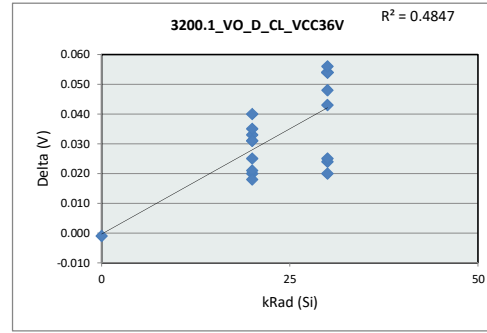
kRad (Si)	0	20	30
LL	2.470	2.470	2.470
Min	3.143	3.025	2.941
Average	3.143	3.067	2.990
Max	3.143	3.082	3.062
UL	3.460	3.460	3.460



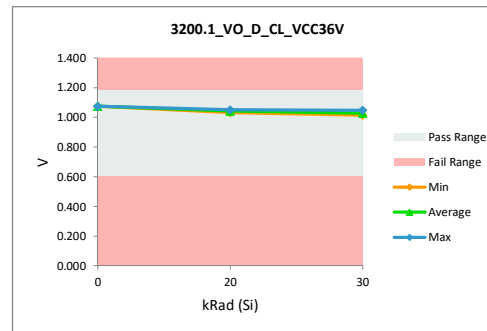
ELDRS Report
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3200.1_VO_D_CL_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	1.18	1.18
Min Limit	0.6	0.6

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	1.073	1.074	-0.001		
20	LDR016B20	1.070	1.045	0.025	0.020500004	0.621212395
20	LDR018B20	1.071	1.051	0.020		
20	LDR019B20	1.072	1.051	0.021		
20	LDR031B20	1.068	1.050	0.018		
30	LDR016B30	1.070	1.027	0.043	0.024	0.453702661
30	LDR018B30	1.071	1.047	0.024		
30	LDR019B30	1.072	1.047	0.025		
30	LDR031B30	1.068	1.048	0.020		
20	HDR071B20	1.071	1.038	0.033	0.033	
20	HDR072B20	1.071	1.036	0.035		
20	HDR073B20	1.072	1.041	0.031		
20	HDR074B20	1.073	1.033	0.040		
20	HDR075B20	1.068	1.037	0.031		
30	HDR001B30	1.072	1.024	0.048	0.054	
30	HDR002B30	1.070	1.016	0.054		
30	HDR003B30	1.071	1.017	0.054		
30	HDR004B30	1.070	1.016	0.054		
30	HDR005B30	1.070	1.014	0.056		
	Max	1.073	1.074	0.056		
	Average	1.071	1.037	0.033		
	Min	1.068	1.014	-0.001		
	Std Dev	0.002	0.016	0.015		



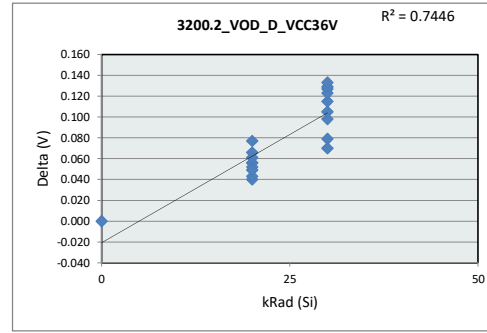
3200.1_VO_D_CL_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	1.18	V	
Min Limit	0.6	V	
kRad (Si)	0	20	30
LL	0.600	0.600	0.600
Min	1.074	1.033	1.014
Average	1.074	1.042	1.028
Max	1.074	1.051	1.048
UL	1.180	1.180	1.180



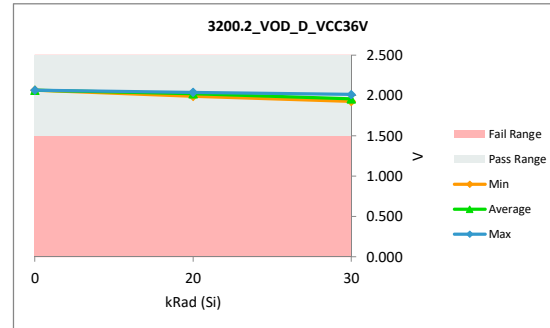
ELDRS Report
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3200.2_VOD_D_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit		
Min Limit	1.475	1.5

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	2.069	2.069	0.000		
20	LDR016B20	2.082	2.026	0.056	0.055999994	1.142862009
20	LDR018B20	2.076	2.010	0.066		
20	LDR019B20	2.076	2.020	0.056		
20	LDR031B20	2.084	2.032	0.052		
30	LDR016B30	2.082	1.967	0.115	0.088	0.696850246
30	LDR018B30	2.076	1.978	0.098		
30	LDR019B30	2.076	1.997	0.079		
30	LDR031B30	2.084	2.014	0.070		
20	HDR071B20	2.081	2.041	0.040	0.049	
20	HDR072B20	2.082	2.039	0.043		
20	HDR073B20	2.080	2.019	0.061		
20	HDR074B20	2.069	1.992	0.077		
20	HDR075B20	2.087	2.038	0.049		
30	HDR001B30	2.066	1.961	0.105	0.127	
30	HDR002B30	2.063	1.936	0.127		
30	HDR003B30	2.063	1.940	0.123		
30	HDR004B30	2.061	1.932	0.129		
30	HDR005B30	2.060	1.927	0.133		
	Max	2.087	2.069	0.133		
	Average	2.075	1.997	0.078		
	Min	2.060	1.927	0.000		
	Std Dev	0.009	0.043	0.037		



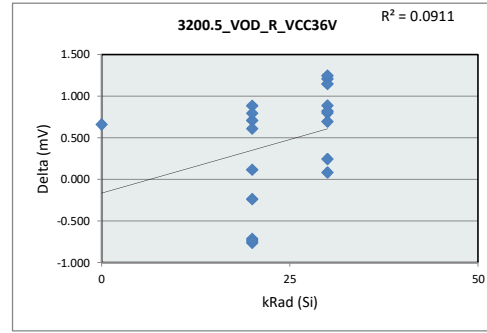
3200.2_VOD_D_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit			
Min Limit	1.5	V	
kRad (Si)	0	20	30
LL	1.500	1.500	1.500
Min	2.069	1.992	1.927
Average	2.069	2.024	1.961
Max	2.069	2.041	2.014
UL			



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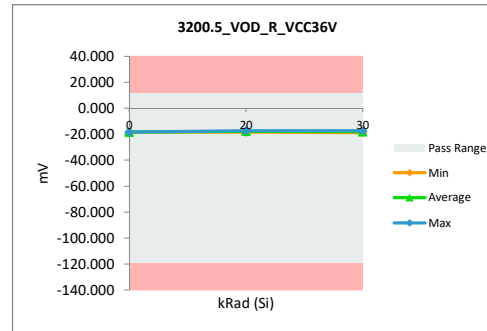
3200.5_VOD_R_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	10.92	10.92
Min Limit	-119	-119

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-17.713	-18.374	0.661		
20	LDR016B20	-16.811	-17.520	0.709	0.751499176	-1.05399419
20	LDR018B20	-17.537	-18.421	0.884		
20	LDR019B20	-17.638	-18.432	0.794		
20	LDR031B20	-17.558	-18.169	0.611		
30	LDR016B30	-16.811	-17.610	0.799		
30	LDR018B30	-17.537	-18.423	0.886	0.809	0.705933752
30	LDR019B30	-17.638	-18.457	0.819		
30	LDR031B30	-17.558	-18.253	0.695		
20	HDR071B20	-17.378	-17.496	0.118	-0.713	
20	HDR072B20	-17.993	-17.231	-0.762		
20	HDR073B20	-18.291	-17.578	-0.713		
20	HDR074B20	-18.244	-17.503	-0.741		
20	HDR075B20	-17.799	-17.563	-0.236		
30	HDR001B30	-17.521	-17.767	0.246	1.146	
30	HDR002B30	-17.522	-18.728	1.206		
30	HDR003B30	-17.329	-18.475	1.146		
30	HDR004B30	-17.381	-17.466	0.085		
30	HDR005B30	-17.431	-18.678	1.247		
	Max	-16.811	-17.231	1.247		
	Average	-17.563	-18.008	0.445		
	Min	-18.291	-18.728	-0.762		
	Std Dev	0.376	0.493	0.651		



3200.5_VOD_R_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	10.92	mV
Min Limit	-119	mV

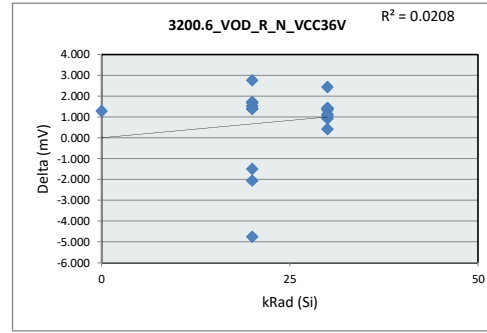
kRad (Si)	0	20	30
LL	-119.000	-119.000	-119.000
Min	-18.374	-18.432	-18.728
Average	-18.374	-17.768	-18.206
Max	-18.374	-17.231	-17.466
UL	10.920	10.920	10.920



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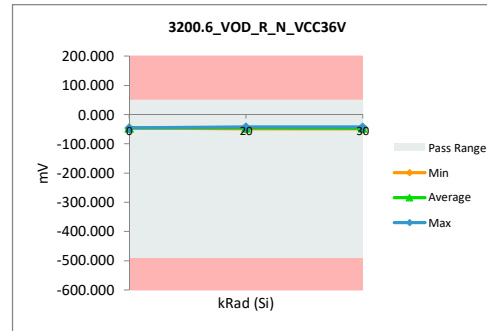
3200.6_VOD_R_N_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	49	49
Min Limit	-490	-490

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	-44.459	-45.745	1.286		
20	LDR016B20	-41.259	-42.980	1.721	1.696500778	-1.135543084
20	LDR018B20	-46.156	-47.680	1.524		
20	LDR019B20	-46.985	-48.657	1.672		
20	LDR031B20	-44.774	-47.540	2.766		
30	LDR016B30	-41.259	-42.690	1.431	1.427	1.338646823
30	LDR018B30	-46.156	-47.496	1.340		
30	LDR019B30	-46.985	-48.408	1.423		
30	LDR031B30	-44.774	-47.216	2.442		
20	HDR071B20	-45.210	-46.613	1.403	-1.494	
20	HDR072B20	-46.706	-44.650	-2.056		
20	HDR073B20	-43.035	-44.422	1.387		
20	HDR074B20	-44.076	-42.582	-1.494		
20	HDR075B20	-49.996	-45.242	-4.754		
30	HDR001B30	-43.684	-44.104	0.420	1.066	
30	HDR002B30	-44.966	-46.032	1.066		
30	HDR003B30	-44.259	-45.190	0.931		
30	HDR004B30	-45.831	-47.236	1.405		
30	HDR005B30	-45.061	-46.196	1.135		
	Max	-41.259	-42.582	2.766		
	Average	-45.033	-45.825	0.792		
	Min	-49.996	-48.657	-4.754		
	Std Dev	2.035	1.887	1.759		



3200.6_VOD_R_N_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	49	mV
Min Limit	-490	mV

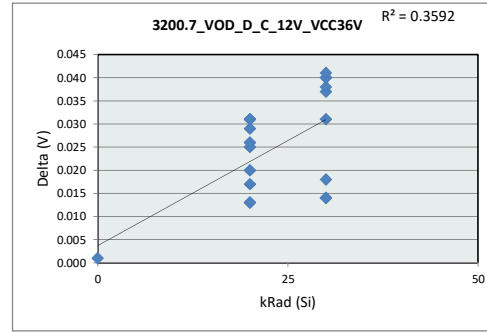
kRad (Si)	0	20	30
LL	-490.000	-490.000	-490.000
Min	-45.745	-48.657	-48.408
Average	-45.745	-45.596	-46.063
Max	-45.745	-42.582	-42.690
UL	49.000	49.000	49.000



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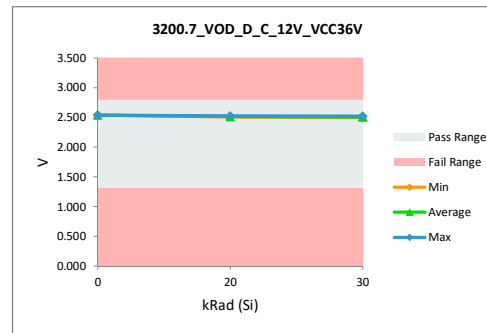
3200.7_VOD_D_C_12V_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	V	V
Max Limit	2.79	2.79
Min Limit	1.3	1.3

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	2.541	2.540	0.001		
20	LDR016B20	2.536	2.516	0.020	0.014999986	0.517240104
20	LDR018B20	2.538	2.525	0.013		
20	LDR019B20	2.539	2.522	0.017		
20	LDR031B20	2.534	2.521	0.013		
30	LDR016B30	2.536	2.505	0.031	0.016	0.400004172
30	LDR018B30	2.538	2.524	0.014		
30	LDR019B30	2.539	2.521	0.018		
30	LDR031B30	2.534	2.520	0.014		
20	HDR071B20	2.537	2.508	0.029	0.029	
20	HDR072B20	2.537	2.506	0.031		
20	HDR073B20	2.538	2.513	0.025		
20	HDR074B20	2.540	2.509	0.031		
20	HDR075B20	2.533	2.507	0.026		
30	HDR001B30	2.540	2.503	0.037	0.040	
30	HDR002B30	2.539	2.499	0.040		
30	HDR003B30	2.539	2.501	0.038		
30	HDR004B30	2.539	2.499	0.040		
30	HDR005B30	2.539	2.498	0.041		
	Max	2.541	2.540	0.041		
	Average	2.538	2.512	0.025		
	Min	2.533	2.498	0.001		
	Std Dev	0.002	0.011	0.012		



3200.7_VOD_D_C_12V_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	2.79	V
Min Limit	1.3	V

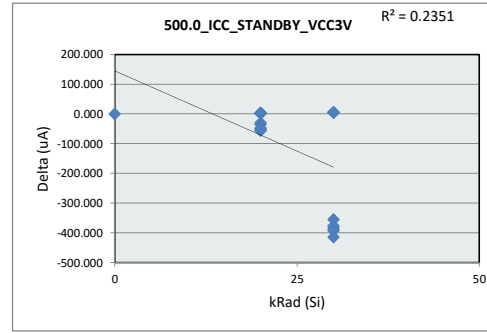
kRad (Si)	0	20	30
LL	1.300	1.300	1.300
Min	2.540	2.506	2.498
Average	2.540	2.514	2.508
Max	2.540	2.525	2.524
UL	2.790	2.790	2.790



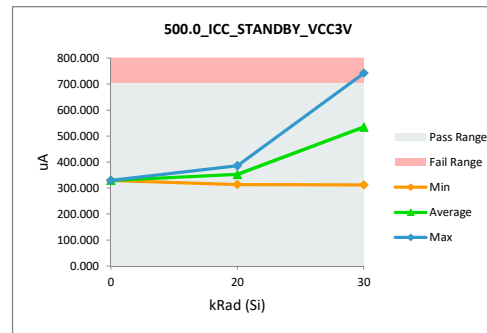
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500.0_ICC_STANDBY_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	700	700
Min Limit	0	0

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	329.503	329.008	0.495		
20	LDR016B20	327.656	325.889	1.767	2.830001831	-0.059666925
20	LDR018B20	317.426	313.525	3.901		
20	LDR019B20	317.864	313.987	3.877		
20	LDR031B20	323.177	321.394	1.783		
30	LDR016B30	327.656	322.599	5.057	5.046	-0.013118154
30	LDR018B30	317.426	312.059	5.367		
30	LDR019B30	317.864	312.830	5.034		
30	LDR031B30	323.177	318.183	4.994		
20	HDR071B20	347.094	377.222	-30.128	-47.430	
20	HDR072B20	334.021	385.904	-51.883		
20	HDR073B20	337.246	371.528	-34.282		
20	HDR074B20	324.789	380.893	-56.104		
20	HDR075B20	333.323	380.753	-47.430		
30	HDR001B30	320.634	674.804	-354.170	-384.621	
30	HDR002B30	320.255	704.876	-384.621		
30	HDR003B30	327.105	703.221	-376.116		
30	HDR004B30	327.334	719.006	-391.672		
30	HDR005B30	328.301	742.257	-413.956		
	Max	347.094	742.257	5.367		
	Average	326.413	437.365	-110.952		
	Min	317.426	312.059	-413.956		
	Std Dev	7.713	169.092	169.315		



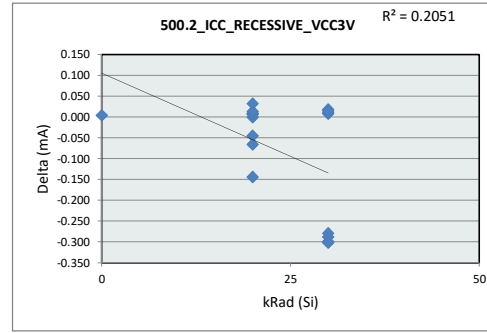
500.0_ICC_STANDBY_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	700	uA	
Min Limit	0	uA	
kRad (Si)	0	20	30
LL	0.000	0.000	0.000
Min	329.008	313.525	312.059
Average	329.008	352.344	534.426
Max	329.008	385.904	742.257
UL	700.000	700.000	700.000



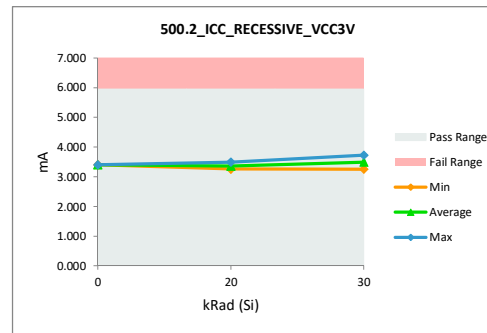
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500.2_ICC_RECESSIVE_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	3.410	3.406	0.004		
20	LDR016B20	3.286	3.287	-0.001	0.006999969	-0.155554614
20	LDR018B20	3.267	3.259	0.008		
20	LDR019B20	3.276	3.267	0.009		
20	LDR031B20	3.345	3.339	0.006		
30	LDR016B30	3.286	3.278	0.008	0.013	-0.043478296
30	LDR018B30	3.267	3.256	0.011		
30	LDR019B30	3.276	3.258	0.018		
30	LDR031B30	3.345	3.330	0.015		
20	HDR071B20	3.313	3.358	-0.045	-0.045	
20	HDR072B20	3.462	3.430	0.032		
20	HDR073B20	3.349	3.493	-0.144		
20	HDR074B20	3.364	3.430	-0.066		
20	HDR075B20	3.396	3.383	0.013		
30	HDR001B30	3.312	3.591	-0.279	-0.299	
30	HDR002B30	3.338	3.638	-0.300		
30	HDR003B30	3.443	3.731	-0.288		
30	HDR004B30	3.421	3.720	-0.299		
30	HDR005B30	3.344	3.646	-0.302		
	Max	3.462	3.731	0.032		
	Average	3.342	3.426	-0.084		
	Min	3.267	3.256	-0.302		
	Std Dev	0.061	0.163	0.135		



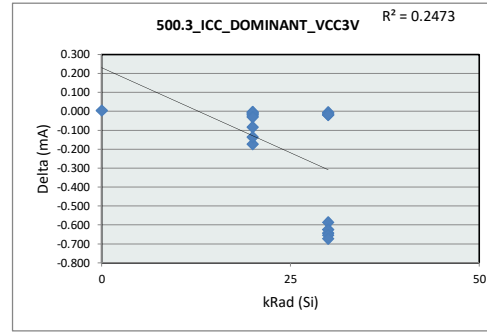
500.2_ICC_RECESSIVE_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	5.95	mA	
Min Limit	0	mA	
kRad (Si)	0	20	30
LL	0.000	0.000	0.000
Min	3.406	3.259	3.256
Average	3.406	3.361	3.494
Max	3.406	3.493	3.731
UL	5.950	5.950	5.950



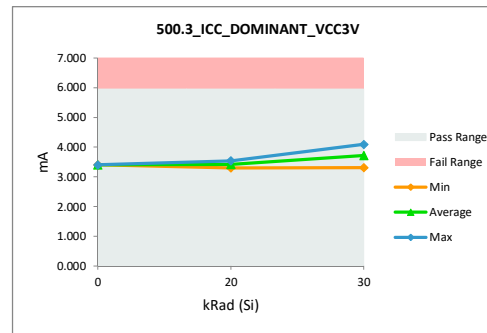
ELDRS Report
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500.3_ICC_DOMINANT_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	3.405	3.401	0.004		
20	LDR016B20	3.317	3.342	-0.025	-0.014500141	0.174700612
20	LDR018B20	3.300	3.303	-0.003		
20	LDR019B20	3.296	3.308	-0.012		
20	LDR031B20	3.360	3.377	-0.017		
30	LDR016B30	3.317	3.337	-0.020	-0.014	0.020995485
30	LDR018B30	3.300	3.305	-0.005		
30	LDR019B30	3.296	3.305	-0.009		
30	LDR031B30	3.360	3.378	-0.018		
20	HDR071B20	3.348	3.431	-0.083	-0.083	
20	HDR072B20	3.487	3.493	-0.006		
20	HDR073B20	3.365	3.539	-0.174		
20	HDR074B20	3.378	3.514	-0.136		
20	HDR075B20	3.408	3.439	-0.031		
30	HDR001B30	3.336	3.922	-0.586	-0.643	
30	HDR002B30	3.359	4.002	-0.643		
30	HDR003B30	3.467	4.092	-0.625		
30	HDR004B30	3.418	4.072	-0.654		
30	HDR005B30	3.359	4.032	-0.673		
	Max	3.487	4.092	0.004		
	Average	3.362	3.557	-0.196		
	Min	3.296	3.303	-0.673		
	Std Dev	0.055	0.296	0.275		



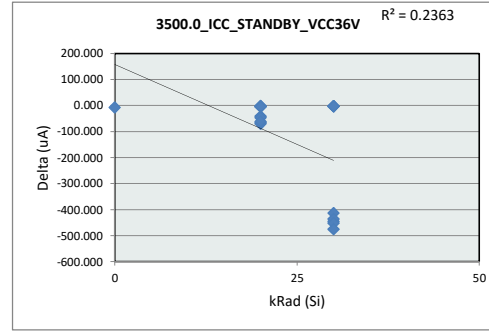
500.3_ICC_DOMINANT_VCC3V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	5.95	mA	
Min Limit	0	mA	
kRad (Si)	0	20	30
LL	0.000	0.000	0.000
Min	3.401	3.303	3.305
Average	3.401	3.416	3.716
Max	3.401	3.539	4.092
UL	5.950	5.950	5.950



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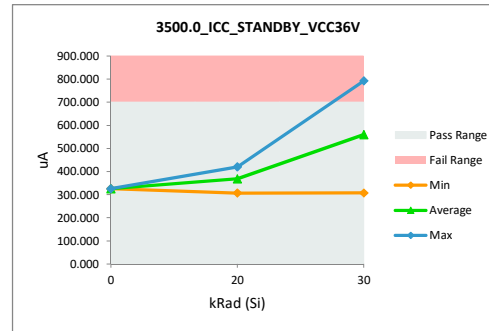
3500.0_ICC_STANDBY_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	uA	uA
Max Limit	700	700
Min Limit	0	0

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	318.298	325.780	-7.482		
20	LDR016B20	316.959	321.380	-4.421	-3.188491821	0.052146413
20	LDR018B20	305.245	307.201	-1.956		
20	LDR019B20	305.893	307.374	-1.481		
20	LDR031B20	311.221	315.879	-4.658		
30	LDR016B30	316.959	319.664	-2.705	-2.441	0.005490587
30	LDR018B30	305.245	307.521	-2.276		
30	LDR019B30	305.893	308.260	-2.367		
30	LDR031B30	311.221	313.736	-2.515		
20	HDR071B20	369.091	410.429	-41.338	-61.145	
20	HDR072B20	354.626	419.952	-65.326		
20	HDR073B20	357.609	403.714	-46.105		
20	HDR074B20	344.924	414.632	-69.708		
20	HDR075B20	353.364	414.509	-61.145		
30	HDR001B30	309.399	722.011	-412.612	-444.578	
30	HDR002B30	308.955	753.533	-444.578		
30	HDR003B30	316.114	752.179	-436.065		
30	HDR004B30	316.508	767.833	-451.325		
30	HDR005B30	317.764	792.920	-475.156		
	Max	369.091	792.920	-1.481		
	Average	323.436	456.764	-133.327		
	Min	305.245	307.201	-475.156		
	Std Dev	20.829	189.874	192.440		



3500.0_ICC_STANDBY_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	700	uA
Min Limit	0	uA

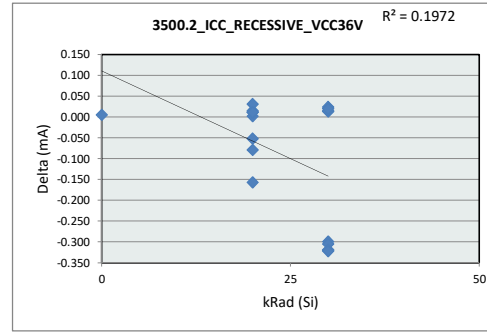
kRad (Si)	0	20	30
LL	0.000	0.000	0.000
Min	325.780	307.201	307.521
Average	325.780	368.341	559.740
Max	325.780	419.952	792.920
UL	700.000	700.000	700.000



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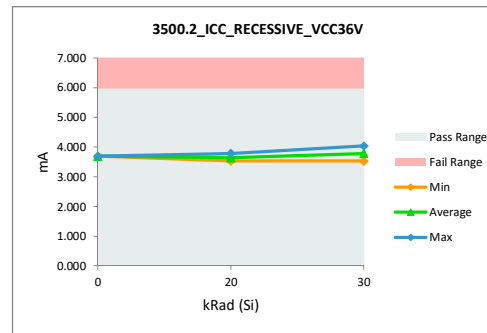
3500.2_ICC_RECESSIVE_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	3.697	3.692	0.005		
20	LDR016B20	3.561	3.559	0.002	0.01150012	-0.221155962
20	LDR018B20	3.543	3.531	0.012		
20	LDR019B20	3.554	3.539	0.015		
20	LDR031B20	3.627	3.616	0.011		
30	LDR016B30	3.561	3.548	0.013	0.017	-0.054858694
30	LDR018B30	3.543	3.528	0.015		
30	LDR019B30	3.554	3.530	0.024		
30	LDR031B30	3.627	3.607	0.020		
20	HDR071B20	3.590	3.642	-0.052	-0.052	
20	HDR072B20	3.749	3.718	0.031		
20	HDR073B20	3.629	3.786	-0.157		
20	HDR074B20	3.647	3.726	-0.079		
20	HDR075B20	3.682	3.671	0.011		
30	HDR001B30	3.589	3.888	-0.299	-0.319	
30	HDR002B30	3.620	3.940	-0.320		
30	HDR003B30	3.736	4.041	-0.305		
30	HDR004B30	3.714	4.033	-0.319		
30	HDR005B30	3.631	3.953	-0.322		
	Max	3.749	4.041	0.031		
	Average	3.624	3.713	-0.089		
	Min	3.543	3.528	-0.322		
	Std Dev	0.066	0.177	0.144		



3500.2_ICC_RECESSIVE_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	5.95	mA
Min Limit	0	mA

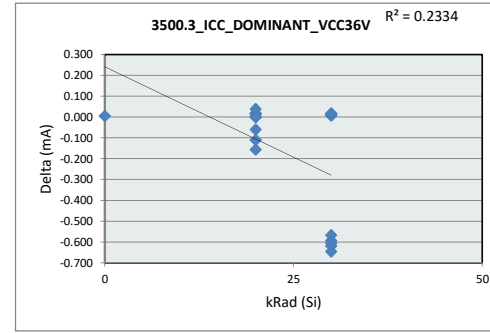
kRad (Si)	0	20	30
LL	0.000	0.000	0.000
Min	3.692	3.531	3.528
Average	3.692	3.643	3.785
Max	3.692	3.786	4.041
UL	5.950	5.950	5.950



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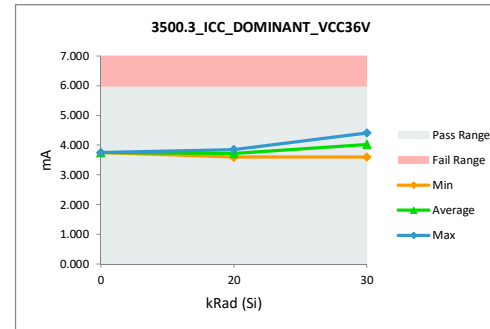
3500.3_ICC_DOMINANT_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mA	mA
Max Limit	5.95	5.95
Min Limit	0	0

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	3.754	3.749	0.005		
20	LDR016B20	3.636	3.634	0.002	0.014999866	-0.245899012
20	LDR018B20	3.610	3.595	0.015		
20	LDR019B20	3.613	3.598	0.015		
20	LDR031B20	3.689	3.672	0.017		
30	LDR016B30	3.636	3.629	0.007	0.013	-0.02231382
30	LDR018B30	3.610	3.598	0.012		
30	LDR019B30	3.613	3.596	0.017		
30	LDR031B30	3.689	3.674	0.015		
20	HDR071B20	3.672	3.733	-0.061	-0.061	
20	HDR072B20	3.835	3.797	0.038		
20	HDR073B20	3.693	3.849	-0.156		
20	HDR074B20	3.715	3.825	-0.110		
20	HDR075B20	3.741	3.743	-0.002		
30	HDR001B30	3.666	4.234	-0.568	-0.605	
30	HDR002B30	3.697	4.316	-0.619		
30	HDR003B30	3.820	4.413	-0.593		
30	HDR004B30	3.786	4.391	-0.605		
30	HDR005B30	3.705	4.351	-0.646		
	Max	3.835	4.413	0.038		
	Average	3.694	3.863	-0.169		
	Min	3.610	3.595	-0.646		
	Std Dev	0.069	0.305	0.273		



3500.3_ICC_DOMINANT_VCC3		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	5.95	mA
Min Limit	0	mA

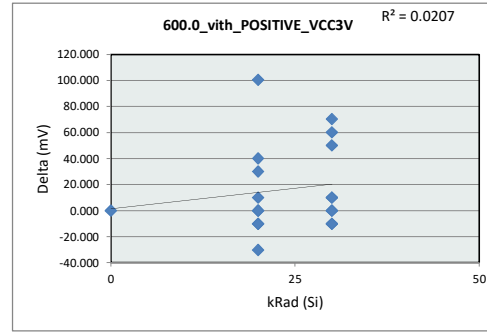
kRad (Si)	0	20	30
LL	0.000	0.000	0.000
Min	3.749	3.595	3.596
Average	3.749	3.716	4.022
Max	3.749	3.849	4.413
UL	5.950	5.950	5.950



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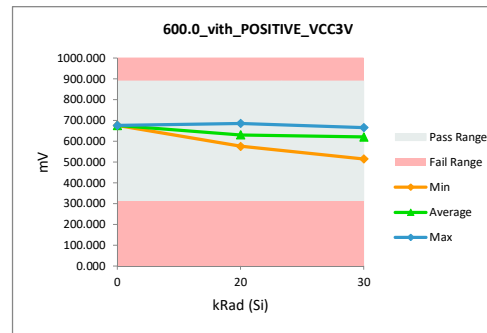
600.0_vith_POSITIVE_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	675.879	675.879	0.000		
20	LDR016B20	635.678	635.678	0.000	-5.024993896	-0.166660931
20	LDR018B20	575.377	575.377	0.000		
20	LDR019B20	585.427	595.477	-10.050		
20	LDR031B20	645.729	655.779	-10.050		
30	LDR016B30	635.678	565.327	70.351	55.277	#DIV/0!
30	LDR018B30	575.377	515.075	60.302		
30	LDR019B30	585.427	595.477	-10.050		
30	LDR031B30	645.729	595.477	50.252		
20	HDR071B20	685.929	645.729	40.200	30.151	
20	HDR072B20	706.030	605.528	100.502		
20	HDR073B20	655.779	685.929	-30.150		
20	HDR074B20	655.779	645.729	10.050		
20	HDR075B20	655.779	625.628	30.151		
30	HDR001B30	675.879	665.829	10.050	0.000	
30	HDR002B30	655.779	655.779	0.000		
30	HDR003B30	665.829	655.779	10.050		
30	HDR004B30	665.829	665.829	0.000		
30	HDR005B30	655.779	665.829	-10.050		
	Max	706.030	685.929	100.502		
	Average	644.142	627.744	16.398		
	Min	575.377	515.075	-30.150		
	Std Dev	37.793	44.768	33.536		



600.0_vith_POSITIVE_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	890	mV
Min Limit	310	mV

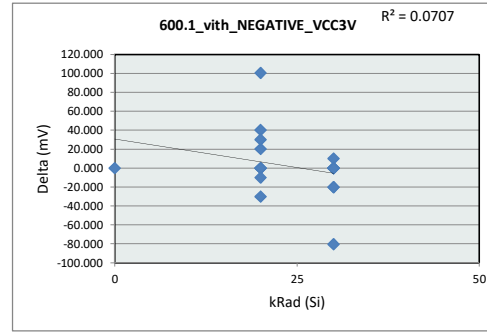
kRad (Si)	0	20	30
LL	310.000	310.000	310.000
Min	675.879	575.377	515.075
Average	675.879	630.095	620.045
Max	675.879	685.929	665.829
UL	890.000	890.000	890.000



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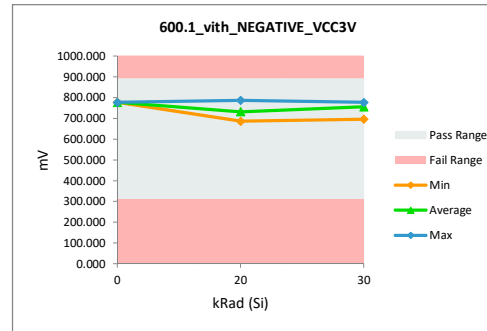
600.1_vith_NEGATIVE_VCC3V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	776.382	776.382	0.000		
20	LDR016B20	736.181	736.181	0.000	0	0
20	LDR018B20	685.929	685.929	0.000		
20	LDR019B20	695.980	695.980	0.000		
20	LDR031B20	746.231	756.282	-10.051		
30	LDR016B30	736.181	756.282	-20.101	-20.101	#DIV/0!
30	LDR018B30	685.929	766.332	-80.403		
30	LDR019B30	695.980	695.980	0.000		
30	LDR031B30	746.231	766.332	-20.101		
20	HDR071B20	786.432	746.231	40.201	30.151	
20	HDR072B20	806.533	706.030	100.503		
20	HDR073B20	756.282	786.432	-30.150		
20	HDR074B20	766.332	746.231	20.101		
20	HDR075B20	756.282	726.131	30.151		
30	HDR001B30	776.382	776.382	0.000	0.000	
30	HDR002B30	756.282	756.282	0.000		
30	HDR003B30	766.332	756.282	10.050		
30	HDR004B30	766.332	766.332	0.000		
30	HDR005B30	766.332	766.332	0.000		
	Max	806.533	786.432	100.503		
	Average	747.818	745.702	2.116		
	Min	685.929	685.929	-80.403		
	Std Dev	34.534	30.053	34.423		



600.1_vith_NEGATIVE_VCC3V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	890	mV
Min Limit	310	mV

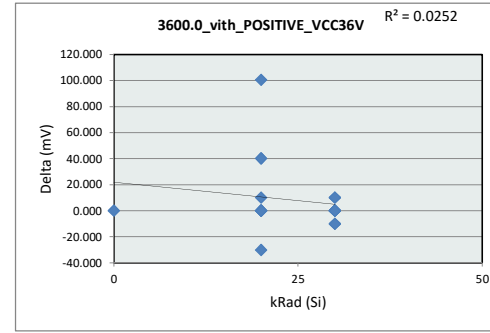
kRad (Si)	0	20	30
LL	310.000	310.000	310.000
Min	776.382	685.929	695.980
Average	776.382	731.714	756.282
Max	776.382	786.432	776.382
UL	890.000	890.000	890.000



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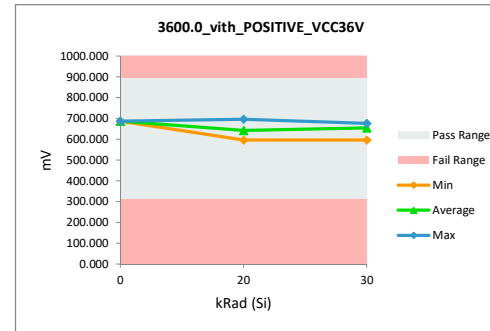
3600.0_vith_POSITIVE_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	685.929	685.929	0.000		
20	LDR016B20	645.729	645.729	0.000	0	0
20	LDR018B20	595.478	595.478	0.000		
20	LDR019B20	605.528	605.528	0.000		
20	LDR031B20	665.829	665.829	0.000		
30	LDR016B30	645.729	655.779	-10.050	-5.025	#DIV/0!
30	LDR018B30	595.478	595.478	0.000		
30	LDR019B30	605.528	605.528	0.000		
30	LDR031B30	665.829	675.879	-10.050		
20	HDR071B20	695.980	655.779	40.201	40.201	
20	HDR072B20	716.081	615.578	100.503		
20	HDR073B20	665.829	695.980	-30.151		
20	HDR074B20	665.829	655.779	10.050		
20	HDR075B20	675.879	635.678	40.201		
30	HDR001B30	685.929	675.879	10.050	0.000	
30	HDR002B30	665.829	665.829	0.000		
30	HDR003B30	675.879	665.829	10.050		
30	HDR004B30	675.879	675.879	0.000		
30	HDR005B30	675.879	675.879	0.000		
	Max	716.081	695.980	100.503		
	Average	658.424	649.960	8.463		
	Min	595.478	595.478	-30.151		
	Std Dev	34.628	31.837	27.271		



3600.0_vith_POSITIVE_VCC36V		
Test Site	Dallas	
Tester	FETS36404	
Test Number	EF580303	
Max Limit	890	mV
Min Limit	310	mV

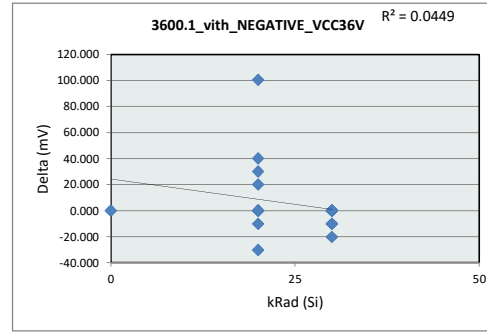
kRad (Si)	0	20	30
LL	310.000	310.000	310.000
Min	685.929	595.478	595.478
Average	685.929	641.262	654.662
Max	685.929	695.980	675.879
UL	890.000	890.000	890.000



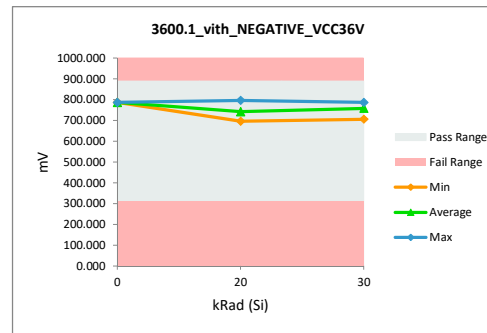
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3600.1_vith_NEGATIVE_VCC36V		
Test Site	Dallas	Dallas
Tester	FETS36404	FETS36404
Test Number	EF580303	EF580303
Unit	mV	mV
Max Limit	890	890
Min Limit	310	310

kRad (Si)	Serial #	HDRLDR PreRad	HDRLDR PostRad	Delta	Delta Median	Delta Median Ratio
0	021C1	786.432	786.432	0.000		
20	LDR016B20	746.231	746.231	0.000	0	0
20	LDR018B20	695.980	695.980	0.000		
20	LDR019B20	706.030	706.030	0.000		
20	LDR031B20	756.281	766.332	-10.051		
30	LDR016B30	746.231	746.231	0.000	-5.025	#DIV/0!
30	LDR018B30	695.980	706.030	-10.050		
30	LDR019B30	706.030	706.030	0.000		
30	LDR031B30	756.281	776.382	-20.101		
20	HDR071B20	796.482	756.281	40.201	30.151	
20	HDR072B20	816.583	716.080	100.503		
20	HDR073B20	766.332	796.482	-30.150		
20	HDR074B20	776.382	756.281	20.101		
20	HDR075B20	766.332	736.181	30.151		
30	HDR001B30	786.432	786.432	0.000	0.000	
30	HDR002B30	766.332	766.332	0.000		
30	HDR003B30	776.382	776.382	0.000		
30	HDR004B30	776.382	786.432	-10.050		
30	HDR005B30	776.382	776.382	0.000		
	Max	816.583	796.482	100.503		
	Average	757.868	752.050	5.819		
	Min	695.980	695.980	-30.150		
	Std Dev	34.534	32.362	27.892		



3600.1_vith_NEGATIVE_VCC36V			
Test Site	Dallas		
Tester	FETS36404		
Test Number	EF580303		
Max Limit	890 mV		
Min Limit	310 mV		
kRad (Si)	0	20	30
LL	310.000	310.000	310.000
Min	786.432	695.980	706.030
Average	786.432	741.764	758.515
Max	786.432	796.482	786.432
UL	890.000	890.000	890.000



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