

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 5 units at 30 krad(Si) (See RLAT Update Section) 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.

Table of Contents

| | |
|---|----|
| 1 Device Information | 2 |
| 1.1 Product Description..... | 2 |
| 1.2 Device Details..... | 2 |
| 2 Total Dose Test Setup | 3 |
| 2.1 Test Overview..... | 3 |
| 2.2 Test Description and Facilities..... | 3 |
| 2.3 Test Setup Details..... | 4 |
| 2.4 Test Configuration and Condition..... | 5 |
| 3 Tested Parameters | 6 |
| 3.1 Parameter Measurement Information..... | 8 |
| A Total Ionizing Dose RHA Characterization Summary Results | 9 |
| B Full TID Report Graphs and Tables | 10 |
| C Full ELDRS Report Graphs and Tables | 11 |
| D RLAT Update | 12 |
| E Full TID Report Graphs and Tables: RLAT Update | 14 |
| F Applicable and Reference Documents | 15 |
| 9.1 Applicable Documents..... | 15 |
| F Revision History | 16 |

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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 $\pm 16V$, and overtemperature (thermal shutdown) protection. This device operates over a wide $-7V$ to $12V$ 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 $-55^{\circ}C$ to $125^{\circ}C$. It has been Radiation Hardened qualified to 30krad(Si) under HDR.

1.2 Device Details

[Table 1-1](#) lists the device information used in the initial Radiation Hardened TID characterization and qualification of HDR tests.

Table 1-1. 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 CLAB in Dallas, TX |
| 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 1-1. 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

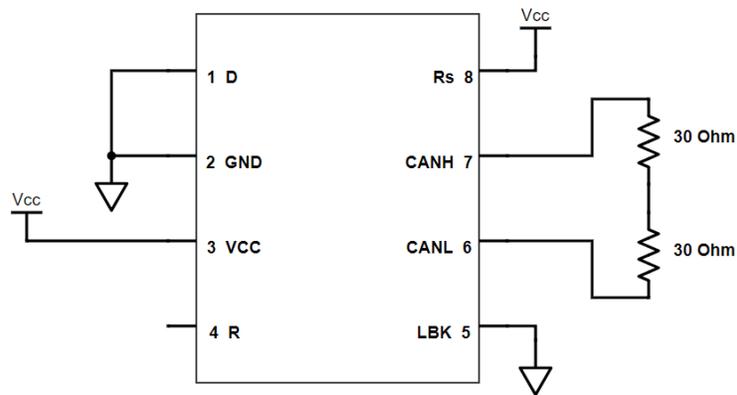
The SN55HVD233-SEP LDR exposure was performed on biased devices in a Co60 gamma cell under a 10-mrad(Si)/s exposure rate. The dose rate of the irradiator used in the exposure ranges from < 10 mrad(Si)/s to a maximum of approximately 65 rad(Si)/s, determined by the distance from the source. The exposure 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 CLAB Facility in Dallas, TX. 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 evaluated for 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 2-1](#) is used for HDR and LDR exposure with biased condition.



Bias condition: Pin 8 connected toggling to simulate switching between high-speed and low power modes during normal operation

Figure 2-1. Bias Diagram Used in TID Exposure

2.4 Test Configuration and Condition

A step-stress (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 5 units were used at the 30-krad(Si) dose level with biased setup conditions and this will be repeated for each wafer lot.

Table 2-1. 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 2-2. 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 3-1 and Table 3-2 listed the test numbers for each test condition with the data sheet parameters.

Table 3-1. 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 | V(D) = 0V, V(RS) = 0V, see Figure 3-1 and Figure 3-2 | 2.4 | | VCC | V | 200.0_VO_D_CH_VCC3V 3200.0_VO_D_CH_VCC36V |
| | | CANL | | 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) = 0V, V(RS) = 0V, see Figure 3-1 and Figure 3-2 | 1.5 | 2 | 3 | V | 200.2_VOD_D_VCC3V 3200.2_VOD_D_VC_C36V | |
| | | V(D) = 0V, V(RS) = 0V, see Figure 3-2 and Figure 3-3 | 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) = 3V, V(RS) = 0V, see Figure 3-1 and Figure 3-2 | -120 | | 120 | mV | 200.5_VOD_R_VCC3V 3200.5_VOD_R_VC_C36V | |
| | | V(D) = 3V, V(RS) = 0V, 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) = -7V, CANL open, see Figure 3-4 | -250 | | | mA | 300.4_IOSN7V_CANH_VCC3V 3300.4_IOSN7V_CANH_VCC36V | |
| | | V(CANH) = 12V, CANL open, see Figure 3-4 | | | 1 | | 300.5_IOS12V_CANH_VCC3V 3300.5_IOS12V_CANH_VCC36V | |
| | | V(CANL) = -7V, CANH open, see Figure 3-4 | -1 | | | | 300.6_IOSN7V_CANL_VCC3V 3300.6_IOSN7V_CANL_VCC36V | |
| | | V(CANL) = 12V, CANH open, see Figure 3-4 | | | 250 | | 300.7_IOS12V_CANL_VCC3V 3300.7_IOS12V_CANL_VCC36V | |
| I_{CC} | Supply current | Standby | V(RS) = VCC, V(D) = VCC, V(LBK) = 0V | 200 | 700 | μ A | 500.0_ICC_STANDBY_VCC3V 3500.0_ICC_STANDBY_VCC36V | |
| | | Dominant | V(D) = 0V, no load, V(LBK) = 0V, RS = 0V | | | 6 | mA | 500.3_ICC_DOMINANT_VCC3V 3500.3_ICC_DOMINANT_VCC36V |
| | | Recessive | V(D) = VCC, no load, V(LBK) = 0V, V(RS) = 0V | | | 6 | | 500.2_ICC_RECESSIVE_VCC3V 3500.2_ICC_RECESSIVE_VCC36V |

Table 3-2. 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 | $V(LBK) = 0V$, see Table 3-3 | | | 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 $V_{(CANL)} = 12V$ | Other bus pin = 0V, $V(D) = 3V$, $V(LBK) = 0V$, $V(RS) = 0V$ | 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 $V_{(CANL)} = 12V$, $VCC = 0V$ | | 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 = -7V | | -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 = -7V, $VCC = 0V$ | | -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

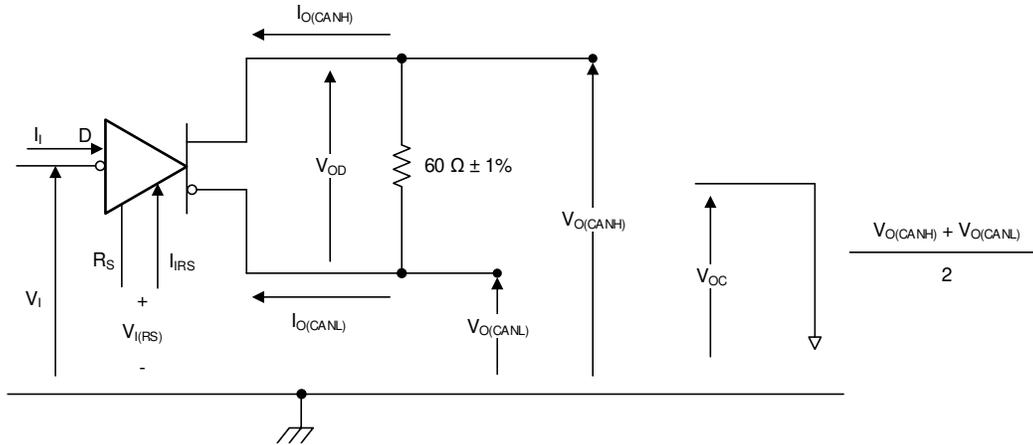


Figure 3-1. Driver Voltage, Current, and Test Definition

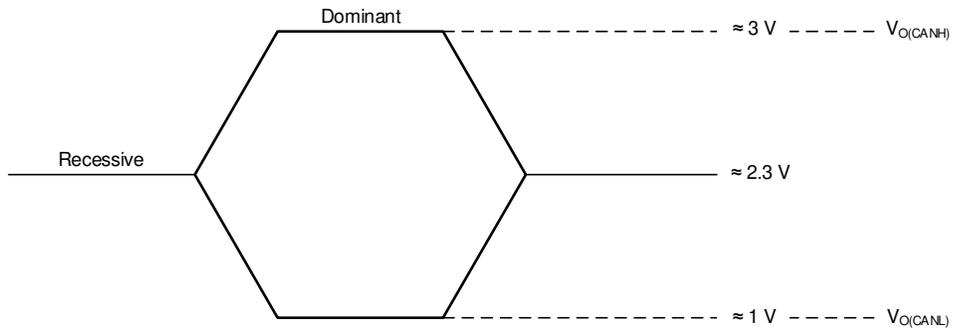


Figure 3-2. Bus Logic State Voltage Definitions

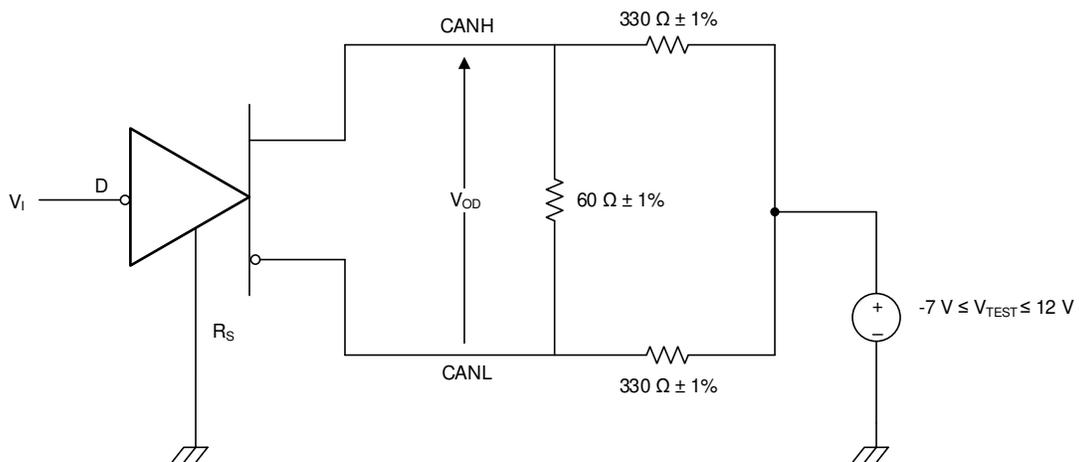


Figure 3-3. Driver V_{OD}

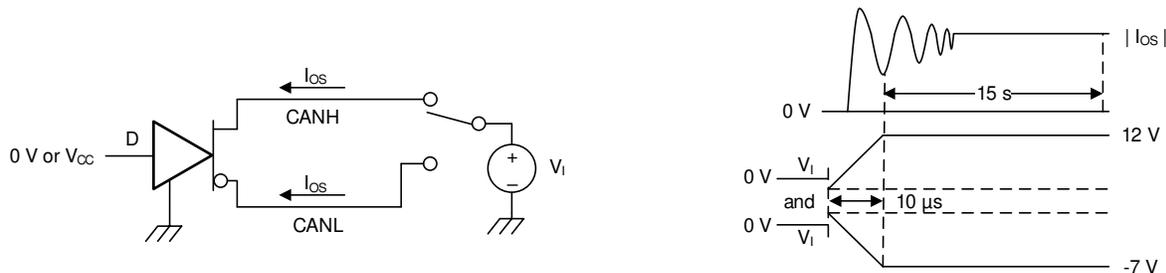


Figure 3-4. I_{OS} Test Circuit and Waveforms

Table 3-3. Differential Input Voltage Threshold Test

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

A 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.

Delta Threshold 10.00%

TID Report SN55HVD233-SEP

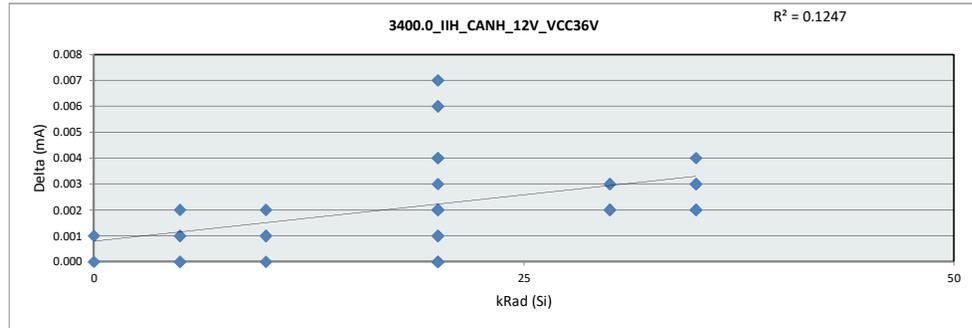
Notes: Data at 35Krad represent the 30Krad post 2WKS annealed data

TID Report SN55HVD233-SEP

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

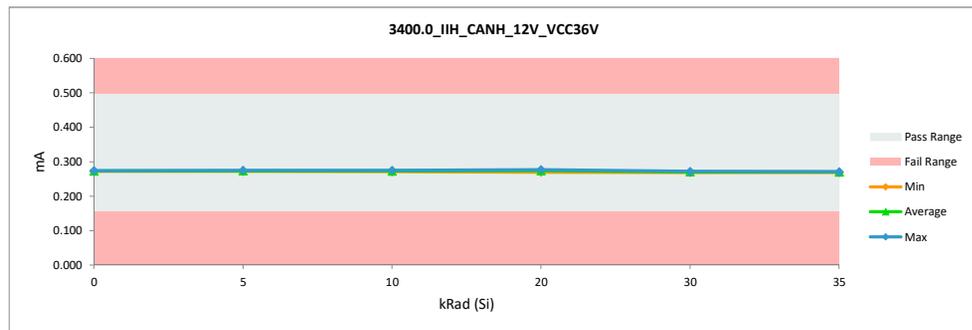
| 3400.0_IIH_CANH_12V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.495 | 0.495 |
| Min Limit | 0.155 | 0.155 |

| 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 | |
| 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 | 0.272 | 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 |



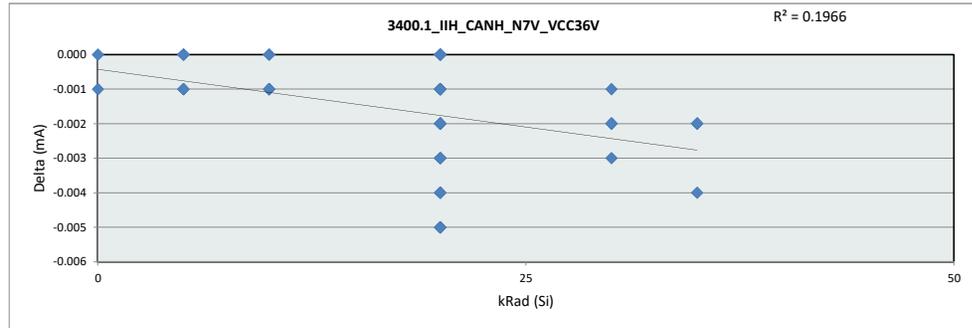
TID Report

SN55HVD233-SEP

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

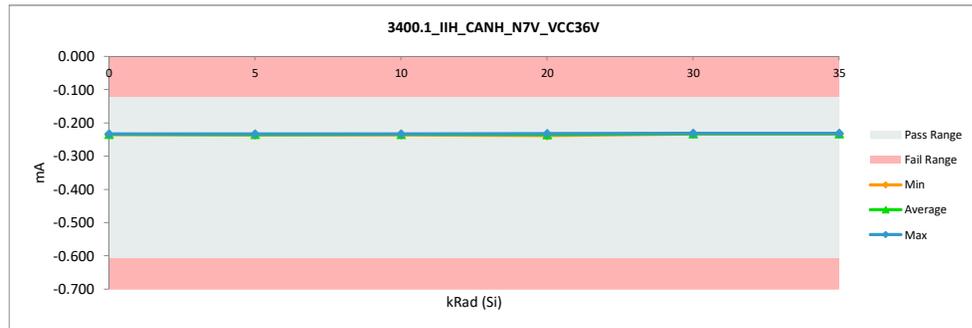
| 3400.1_IIH_CANH_N7V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.605 | -0.605 |

| 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 |

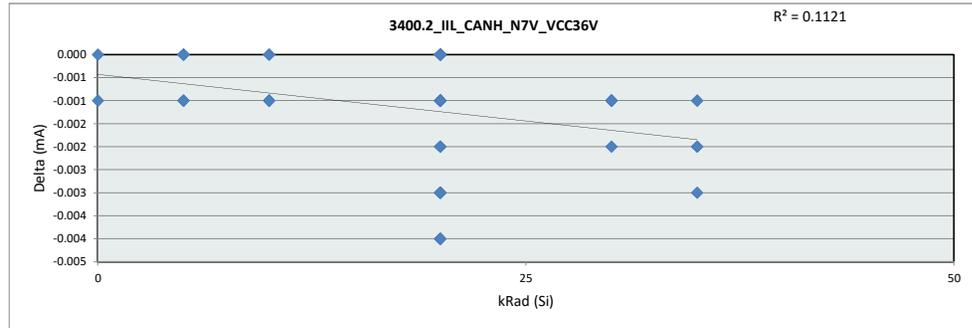


TID Report SN55HVD233-SEP

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

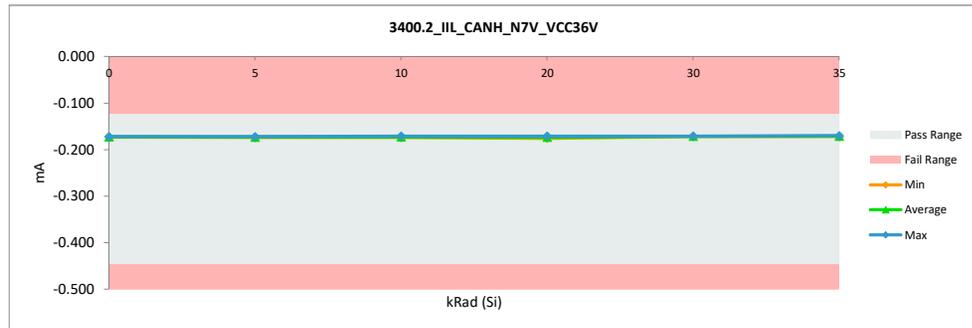
| 3400.2_IIL_CANH_N7V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.445 | -0.445 |

| 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 |

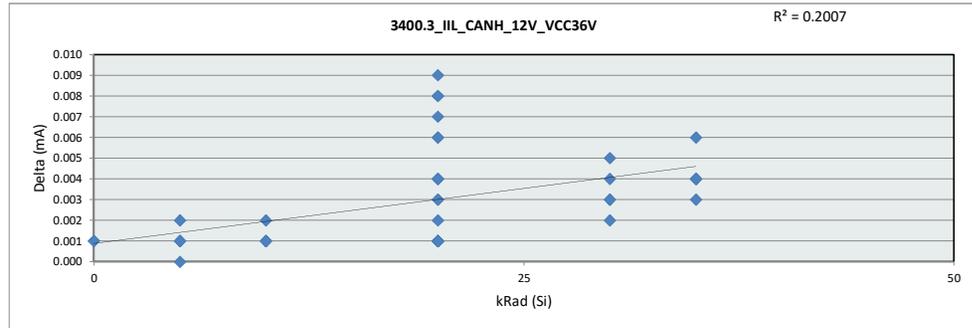


TID Report SN55HVD233-SEP

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

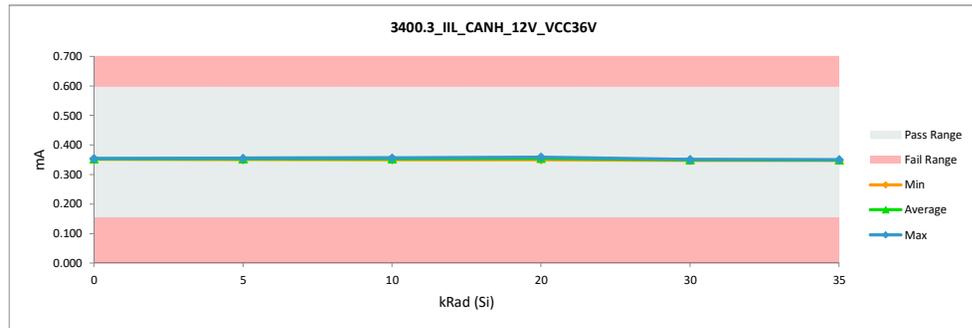
| 3400.3_IIL_CANH_12V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | |
| Max Limit | 0.595 | 0.595 |
| Min Limit | 0.155 | 0.155 |

| 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 | |
| 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 | 0.350 | 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 |



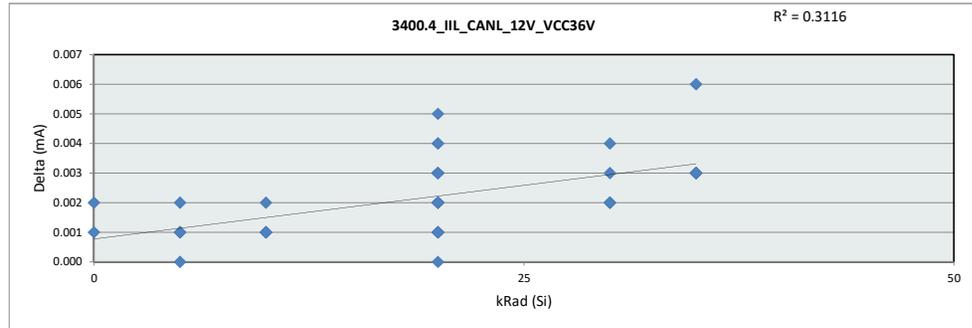
TID Report

SN55HVD233-SEP

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

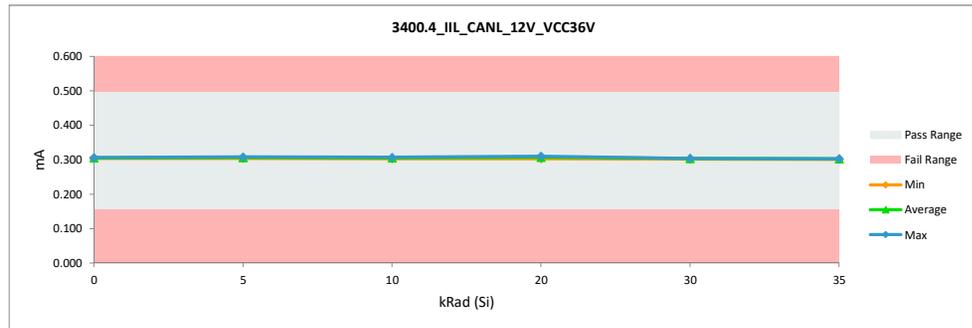
| 3400.4_IIL_CANL_12V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.495 | 0.495 |
| Min Limit | 0.155 | 0.155 |

| 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 |

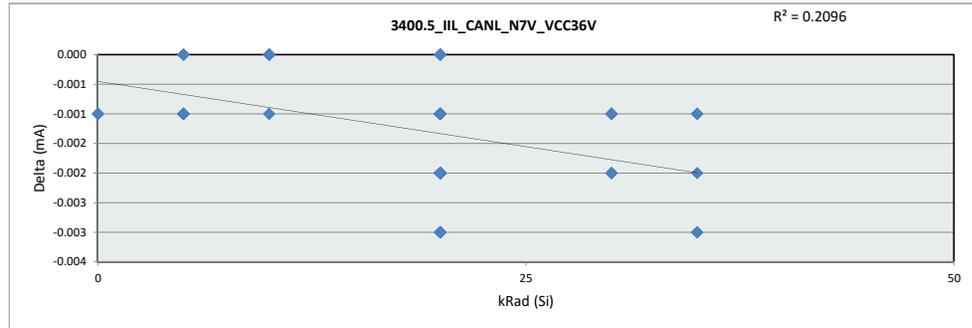


TID Report SN55HVD233-SEP

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

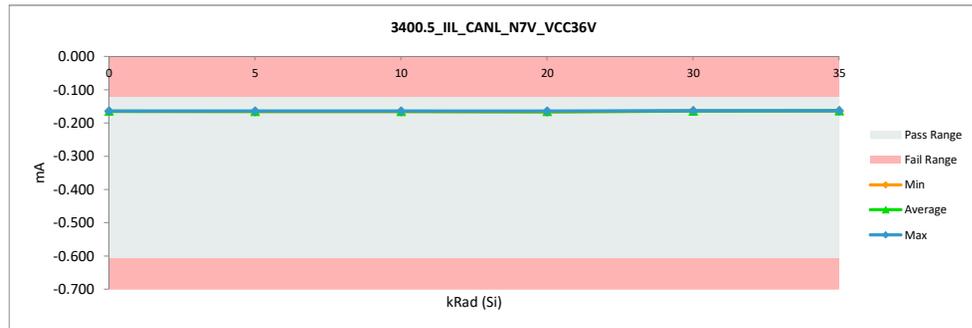
| 3400.5_IIL_CANL_N7V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.605 | -0.605 |

| 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 |

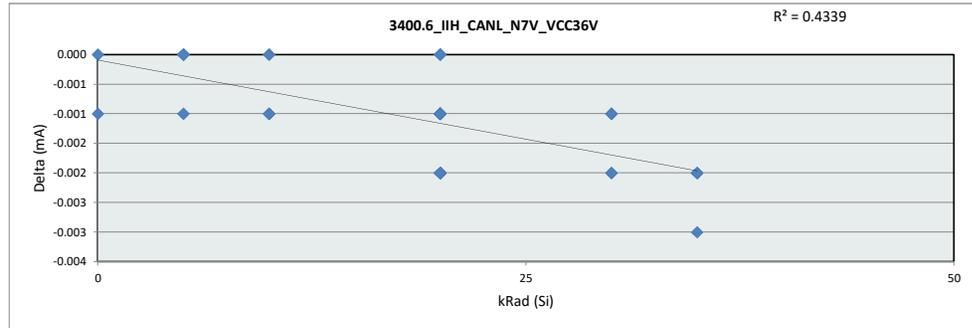


TID Report SN55HVD233-SEP

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

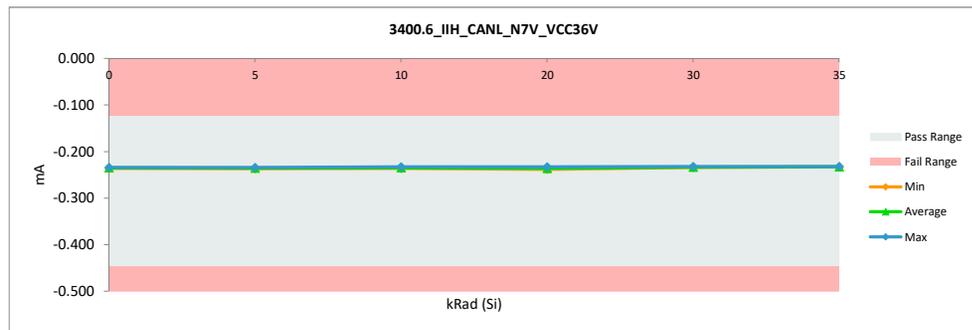
| 3400.6_IIH_CANL_N7V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.445 | -0.445 |

| 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 |

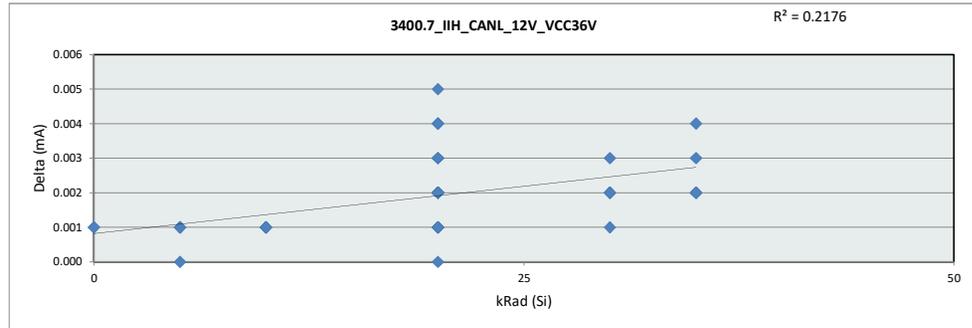


TID Report SN55HVD233-SEP

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

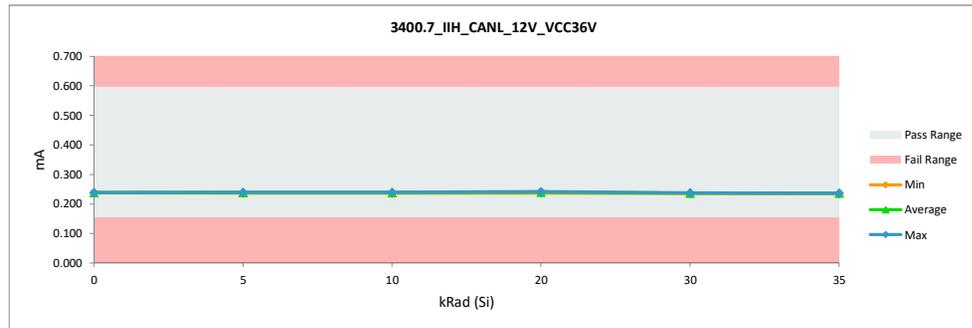
| 3400.7_IIH_CANL_12V_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | |
| Max Limit | 0.595 | 0.595 |
| Min Limit | 0.155 | 0.155 |

| 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 |

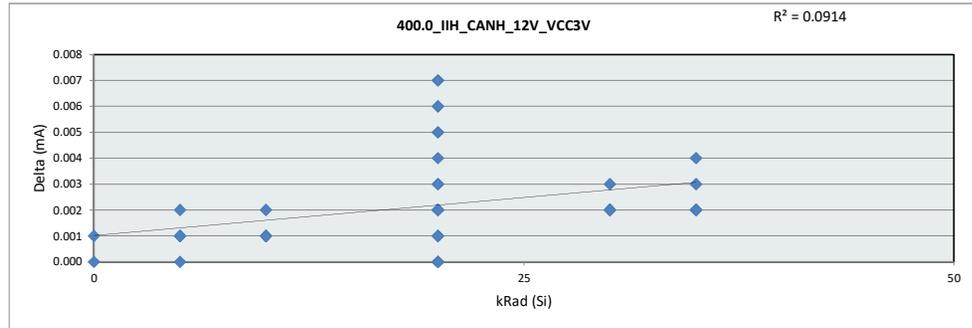


TID Report SN55HVD233-SEP

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

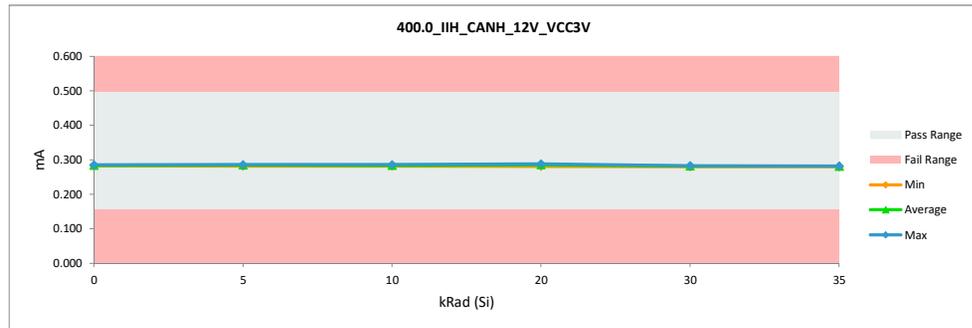
| 400.0_IIH_CANH_12V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.495 | 0.495 |
| Min Limit | 0.155 | 0.155 |

| 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 |



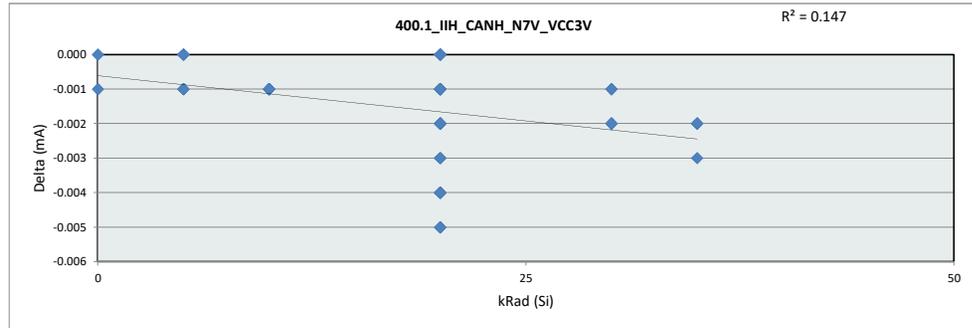
TID Report

SN55HVD233-SEP

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

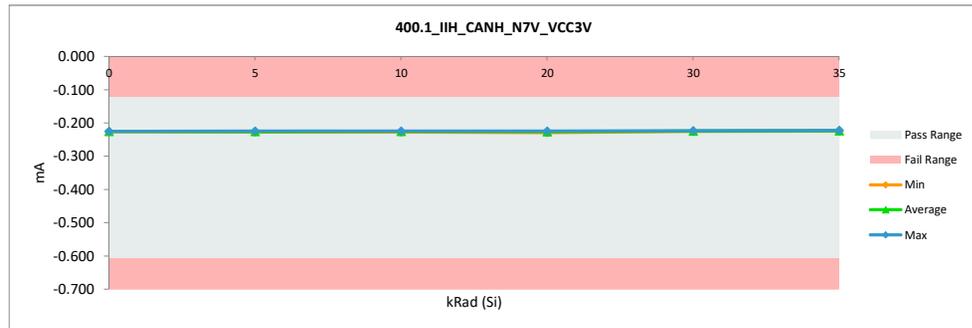
| 400.1_IIH_CANH_N7V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.605 | -0.605 |

| 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 |



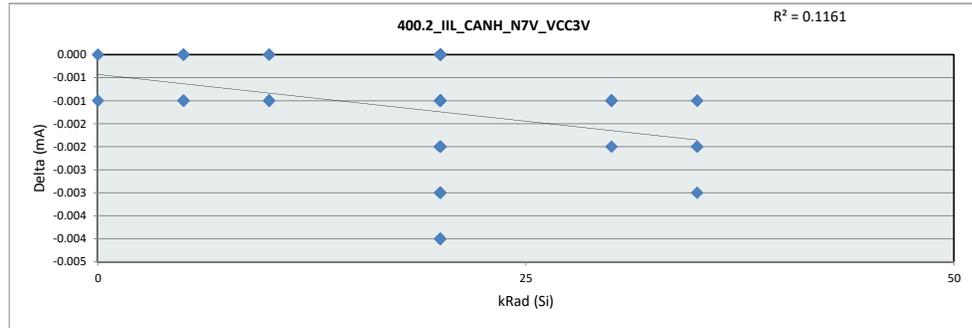
TID Report

SN55HVD233-SEP

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

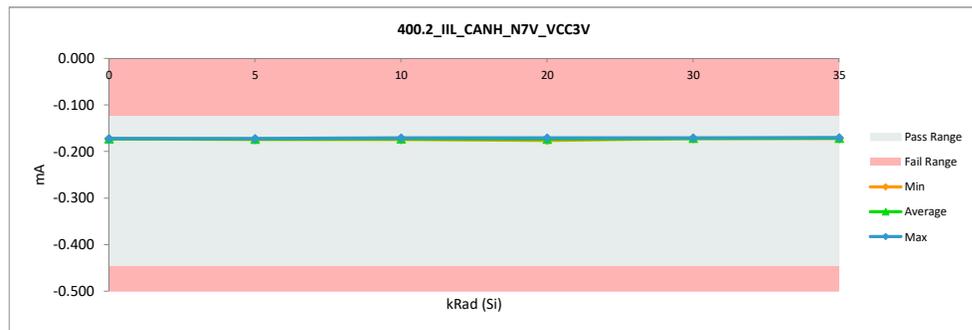
| 400.2_IIL_CANH_N7V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.445 | -0.445 |

| 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 |

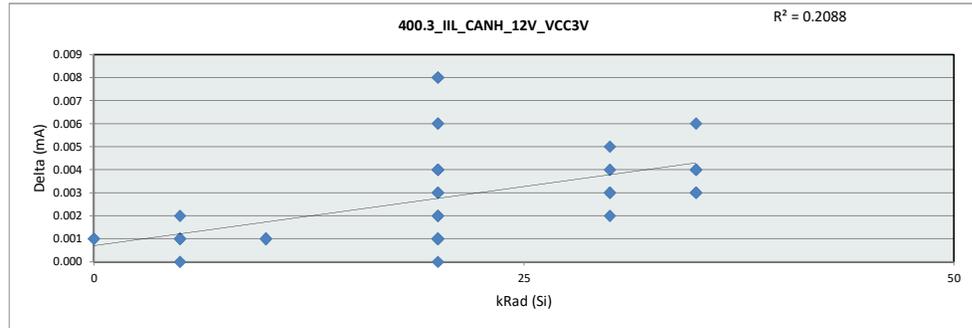


TID Report SN55HVD233-SEP

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

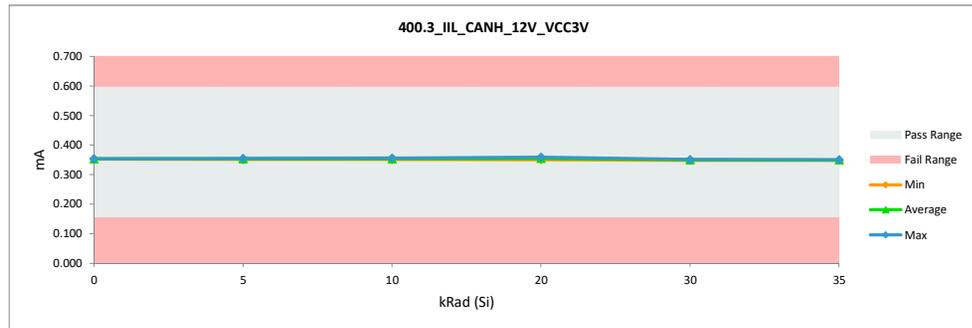
| 400.3_IIL_CANH_12V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.595 | 0.595 |
| Min Limit | 0.155 | 0.155 |

| 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 |

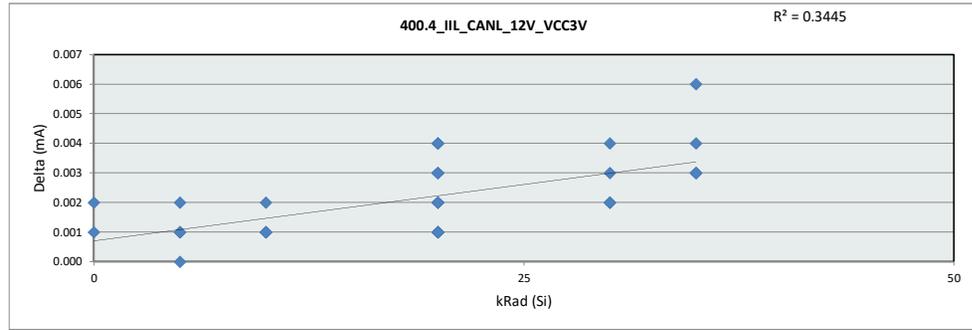


TID Report SN55HVD233-SEP

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

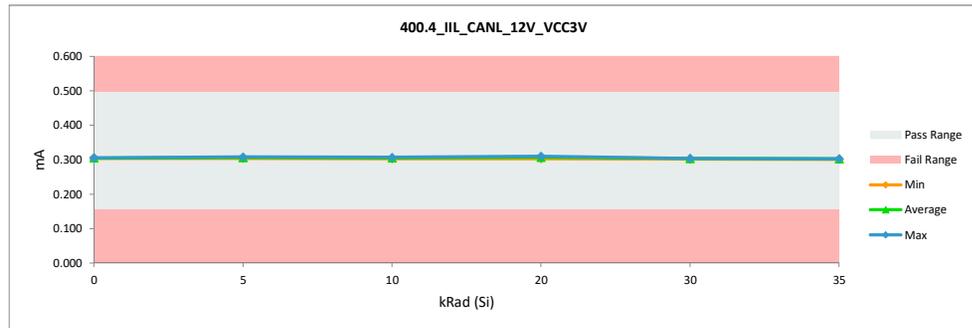
| 400.4_IIL_CANL_12V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.495 | 0.495 |
| Min Limit | 0.155 | 0.155 |

| 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 |



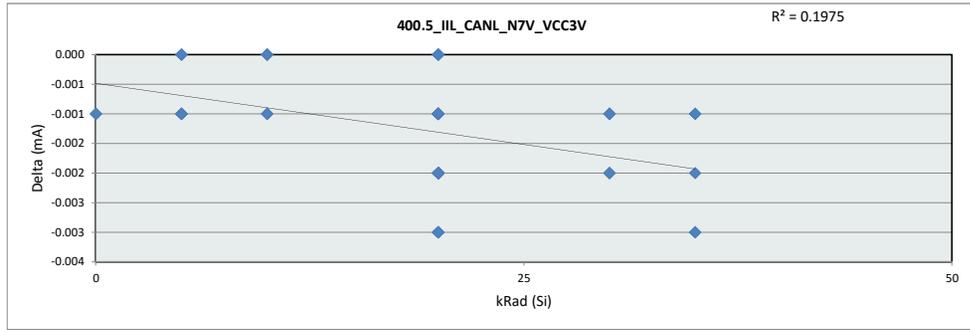
TID Report

SN55HVD233-SEP

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

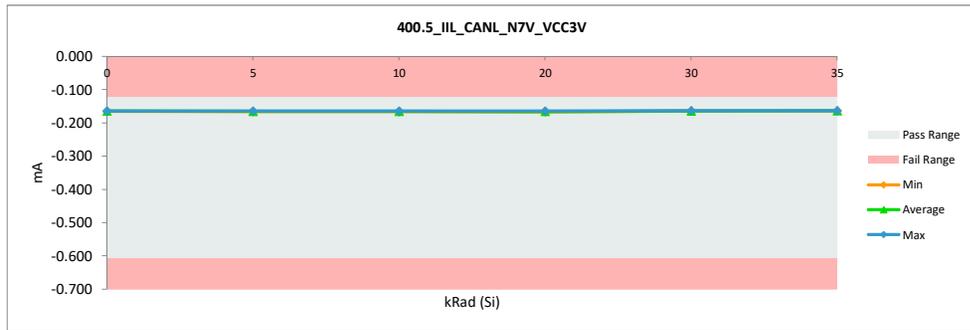
| 400.5_IIL_CANL_N7V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.605 | -0.605 |

| 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 |

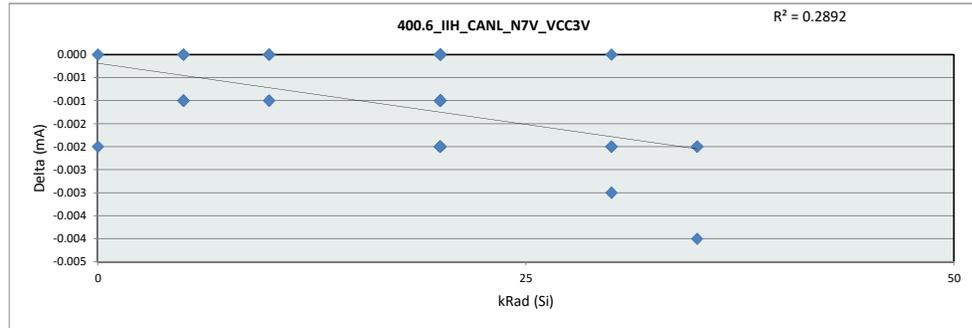


TID Report SN55HVD233-SEP

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

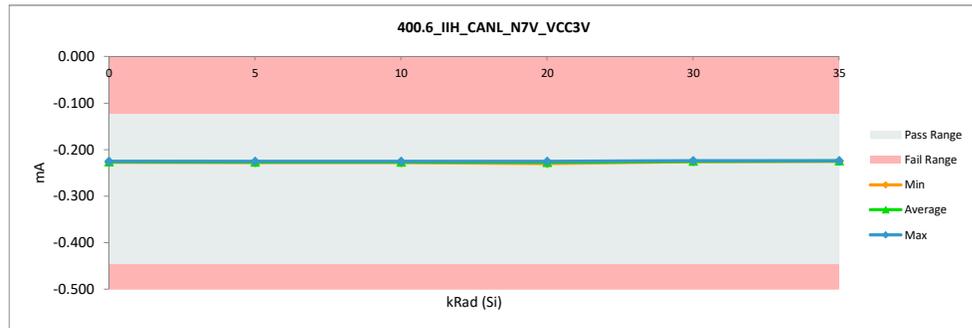
| 400.6_IIH_CANL_N7V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | -0.123 | -0.123 |
| Min Limit | -0.445 | -0.445 |

| 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 |

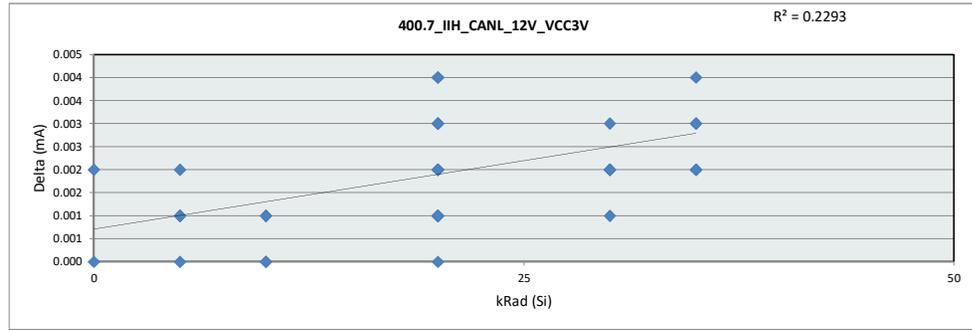


TID Report SN55HVD233-SEP

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

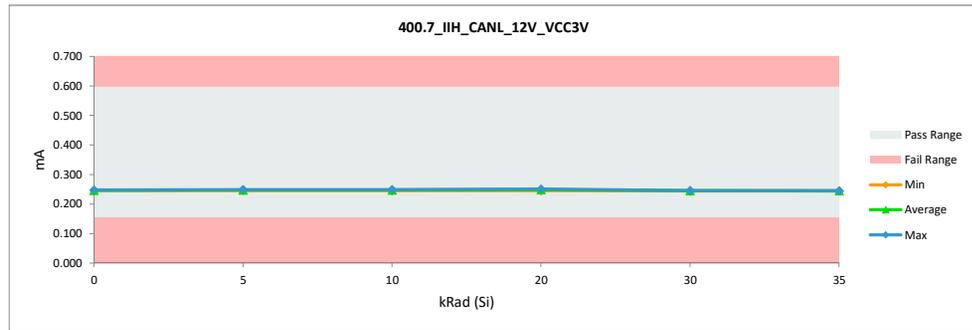
| 400.7_IIH_CANL_12V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.595 | 0.595 |
| Min Limit | 0.155 | 0.155 |

| 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 |

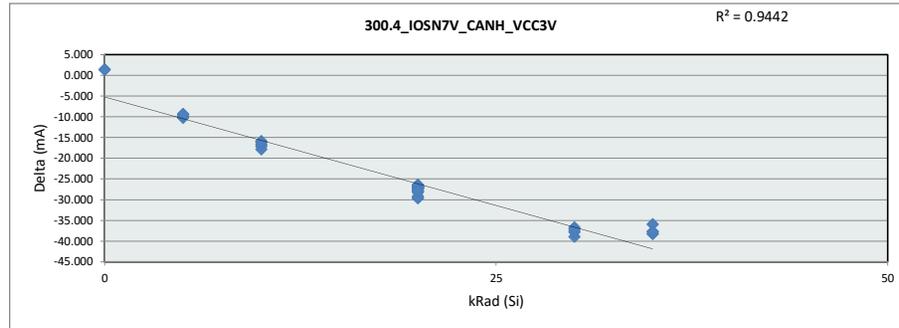


TID Report SN55HVD233-SEP

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

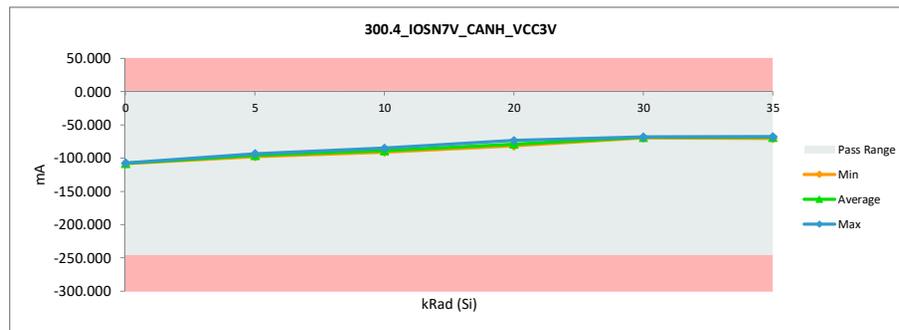
| 300.4_IOSN7V_CANH_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.9 | 0.9 |
| Min Limit | -245 | -245 |

| 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 |

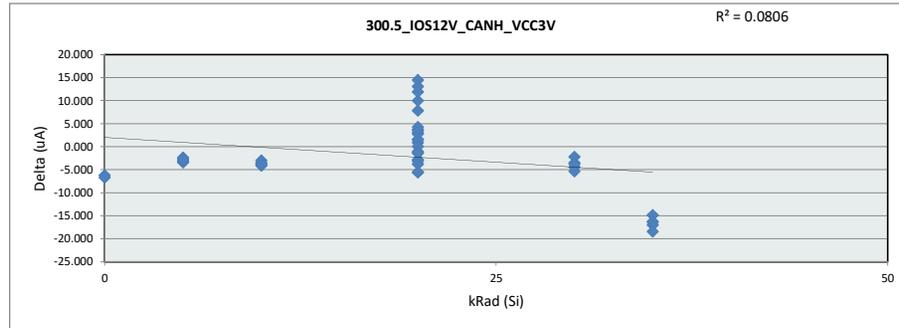


TID Report SN55HVD233-SEP

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

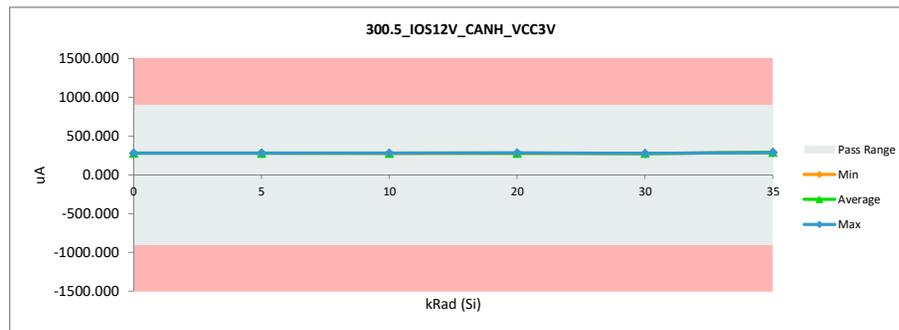
| 300.5_IOS12V_CANH_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | -900 | -900 |

| 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 |

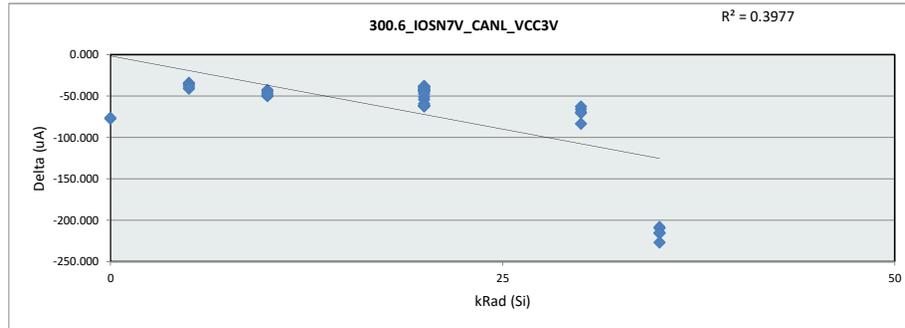


TID Report SN55HVD233-SEP

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

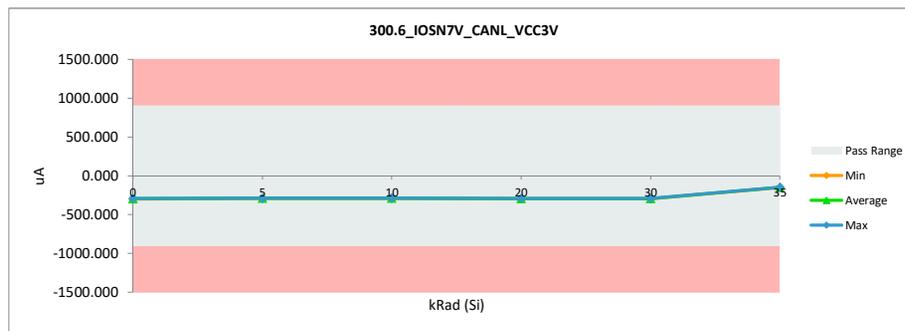
| 300.6_IOSN7V_CANL_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | -900 | -900 |

| 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 |

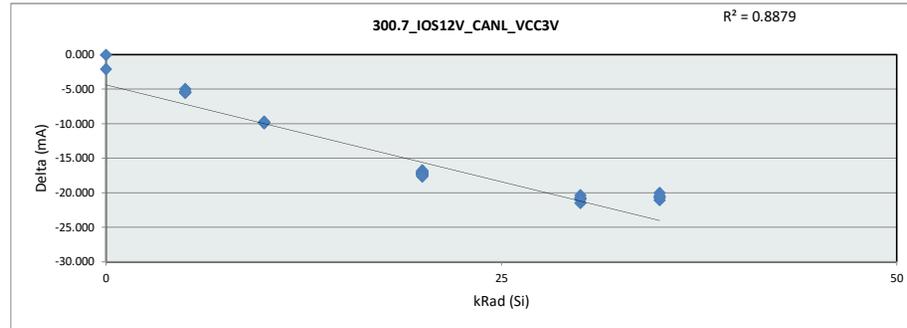


TID Report SN55HVD233-SEP

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

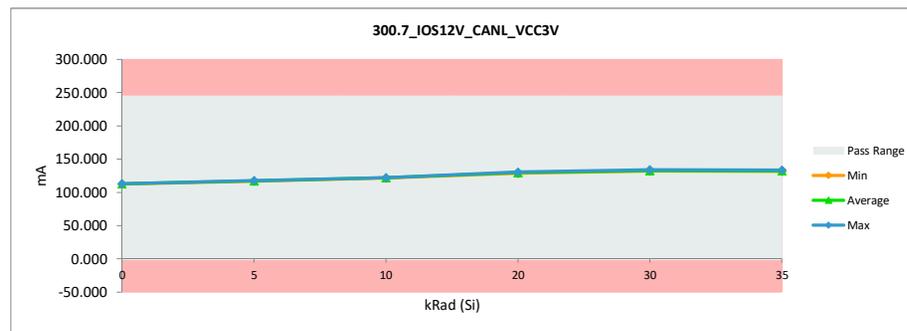
| 300.7_IOS12V_CANL_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 245 | 245 |
| Min Limit | -0.9 | -0.9 |

| 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 |

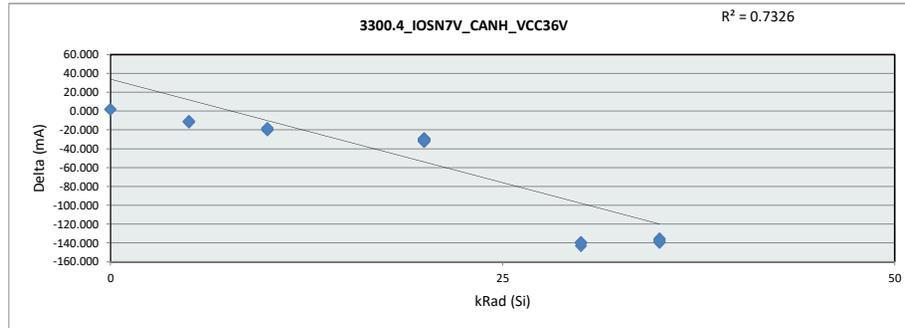


TID Report SN55HVD233-SEP

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

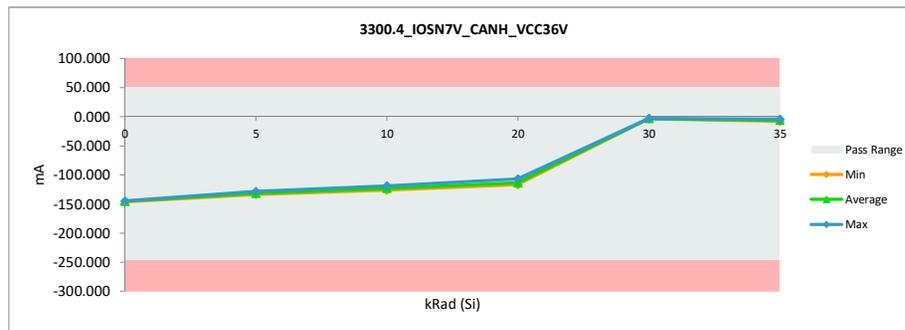
| 3300.4_IOSN7V_CANH_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 50 | 50 |
| Min Limit | -245 | -245 |

| 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 |

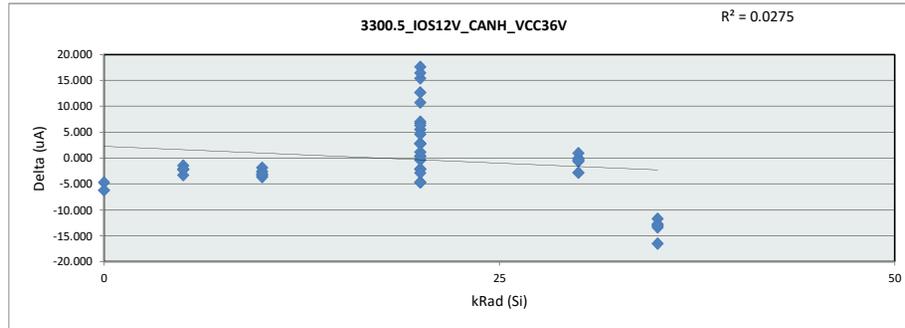


TID Report SN55HVD233-SEP

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

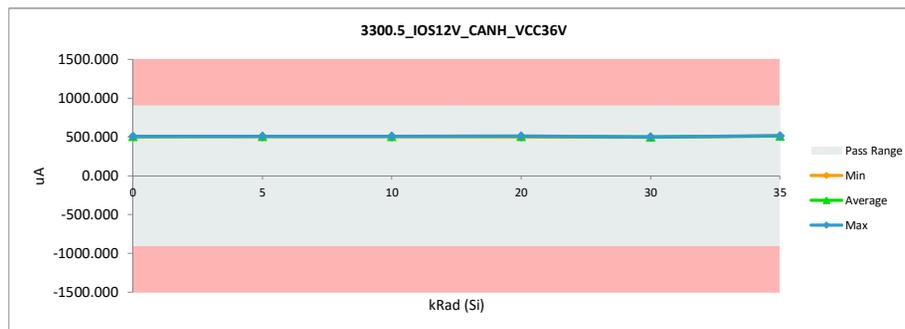
| 3300.5_IOS12V_CANH_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | -900 | -900 |

| 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 |

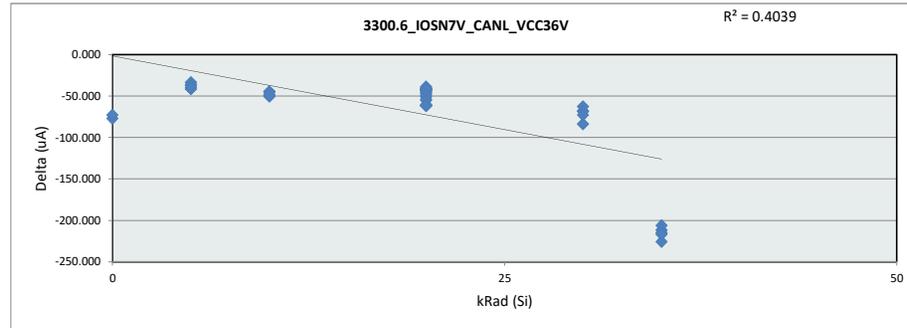


TID Report SN55HVD233-SEP

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

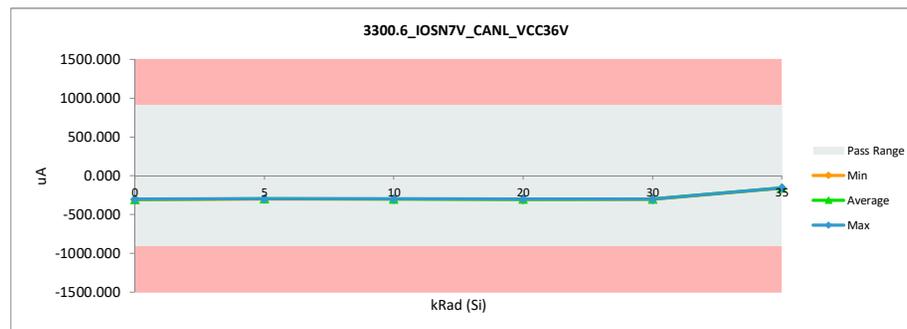
| 3300.6_IOSN7V_CANL_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | -900 | -900 |

| 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 |

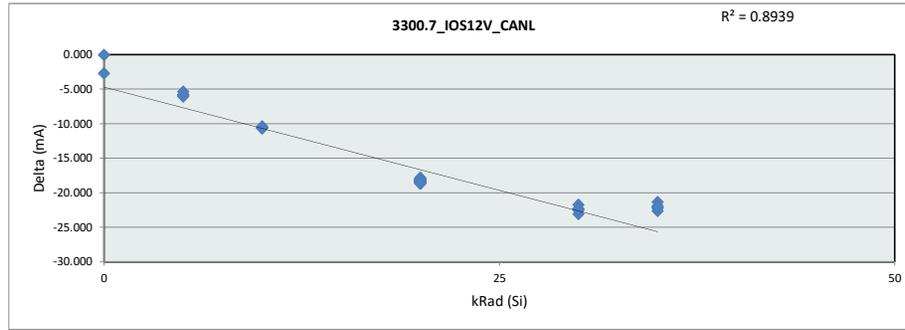


TID Report SN55HVD233-SEP

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

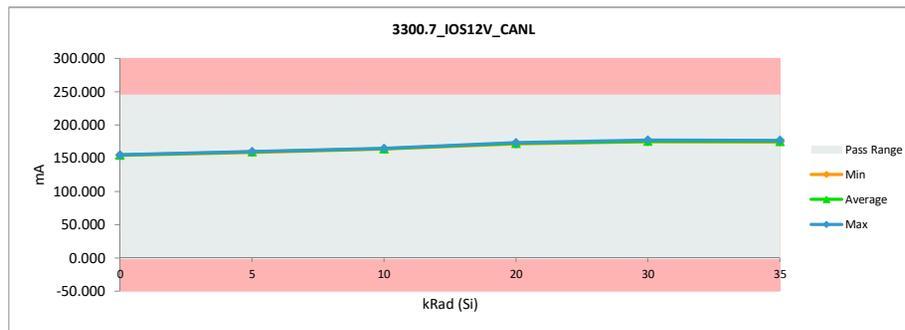
| 3300.7_IOS12V_CANL | | |
|--------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 245 | 245 |
| Min Limit | -0.9 | -0.9 |

| 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 |

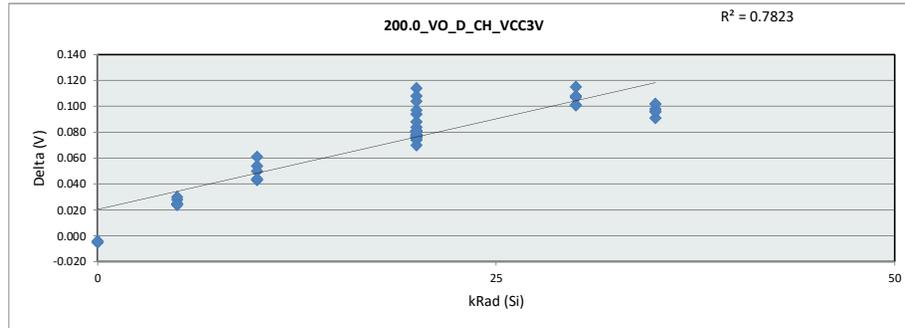


TID Report SN55HVD233-SEP

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

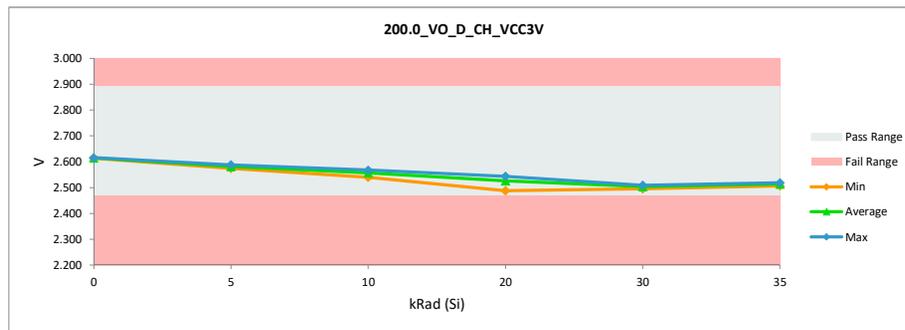
| 200.0_VO_D_CH_VCC3V | | |
|---------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | V | V |
| Max Limit | 2.89 | 2.89 |
| Min Limit | 2.47 | 2.47 |

| 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 |

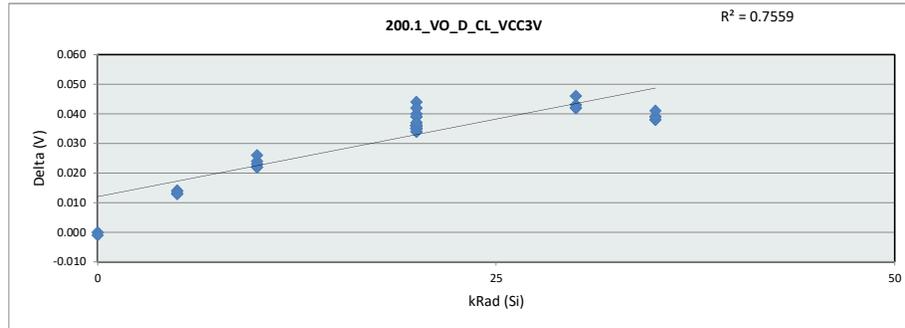


TID Report SN55HVD233-SEP

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

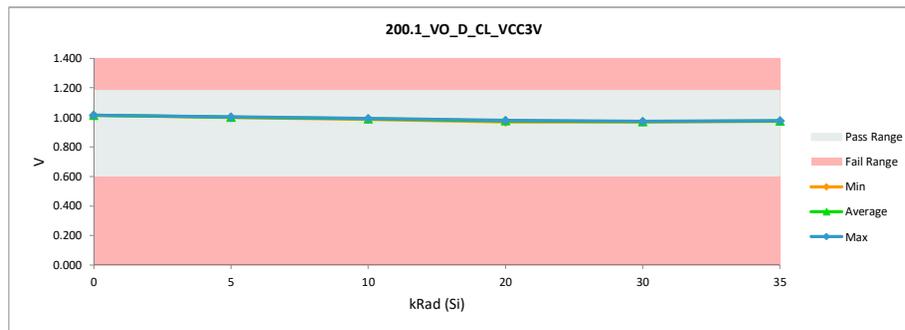
| 200.1_VO_D_CL_VCC3V | | |
|---------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | V | V |
| Max Limit | 1.18 | 1.18 |
| Min Limit | 0.6 | 0.6 |

| 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 |

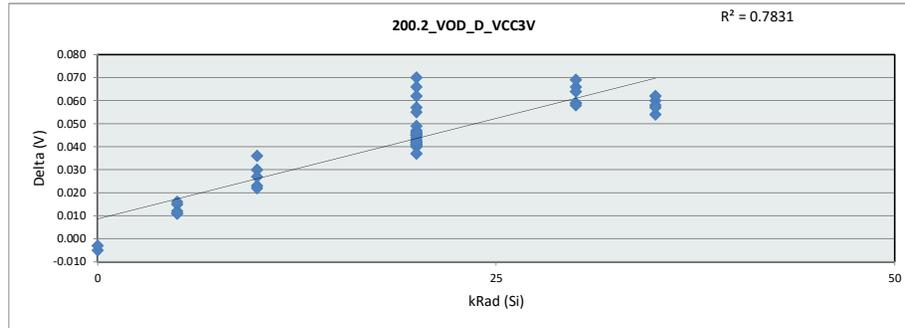


TID Report SN55HVD233-SEP

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

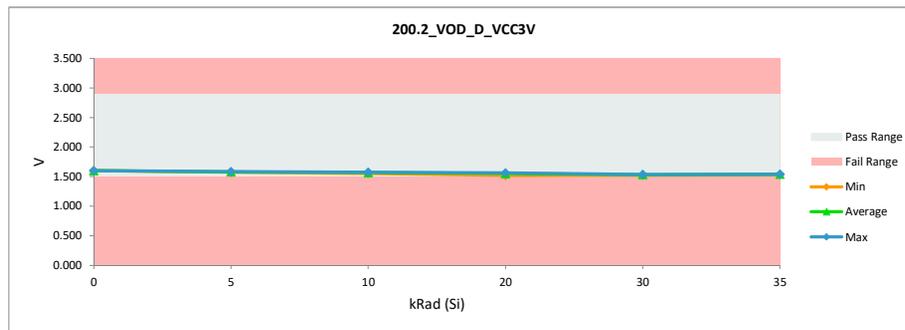
| 200.2_VOD_D_VCC3V | | |
|-------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | V | V |
| Max Limit | 2.89 | 2.89 |
| Min Limit | 1.5 | 1.5 |

| 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 |

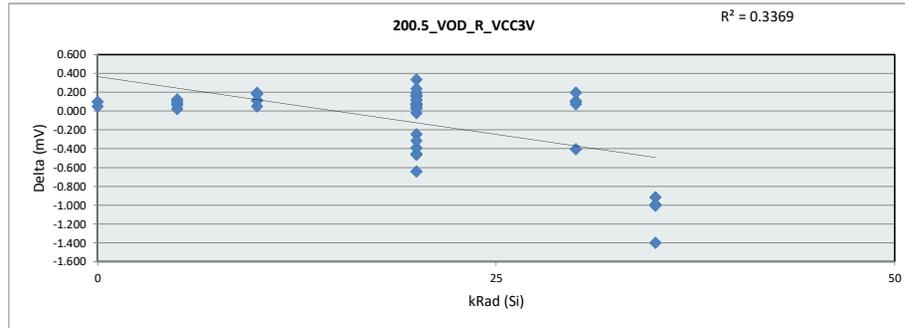


TID Report SN55HVD233-SEP

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

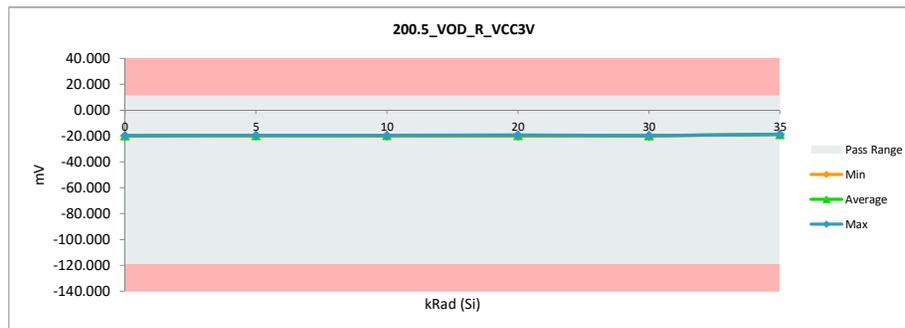
| 200.5_VOD_R_VCC3V | | |
|-------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 10.92 | 10.92 |
| Min Limit | -119 | -119 |

| 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 |

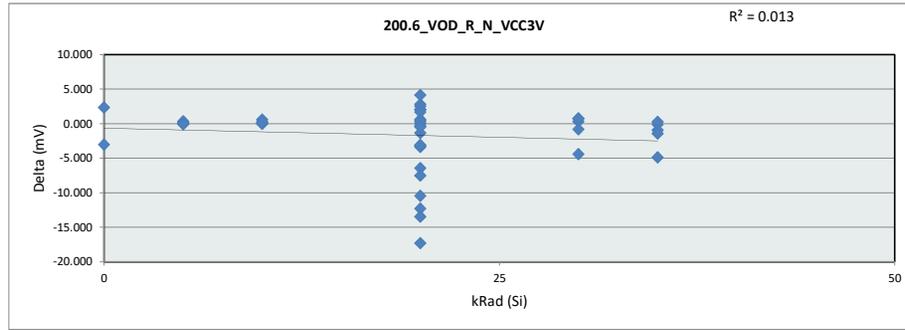


TID Report SN55HVD233-SEP

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

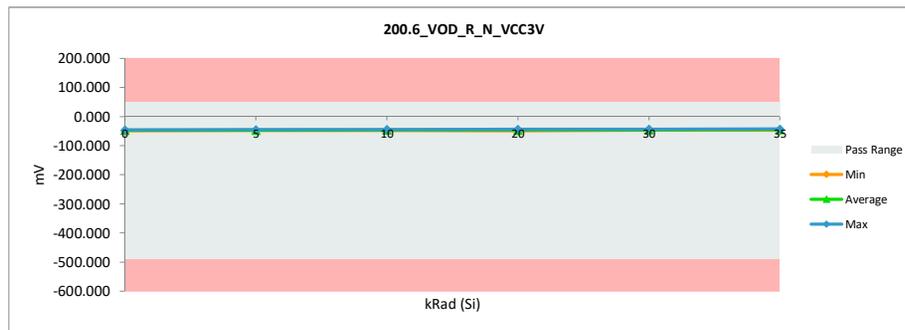
| 200.6_VOD_R_N_VCC3V | | |
|---------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 49 | 49 |
| Min Limit | -490 | -490 |

| 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 |

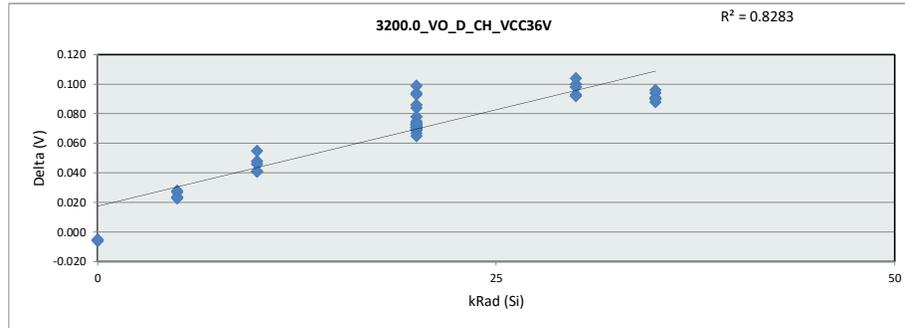


TID Report SN55HVD233-SEP

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

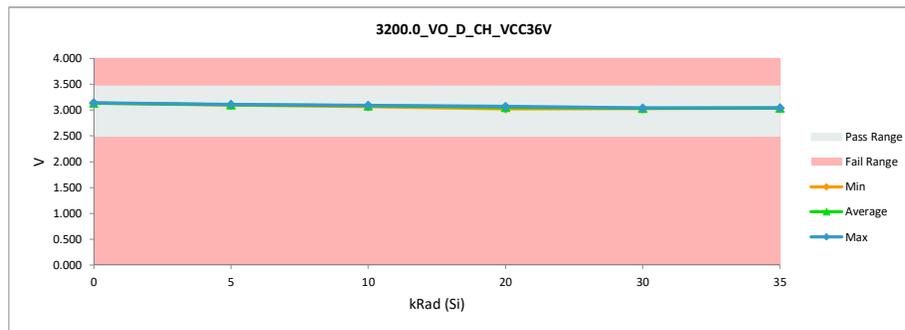
| 3200.0_VO_D_CH_VCC36V | | |
|-----------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | V | V |
| Max Limit | 3.46 | 3.46 |
| Min Limit | 2.47 | 2.47 |

| 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 |

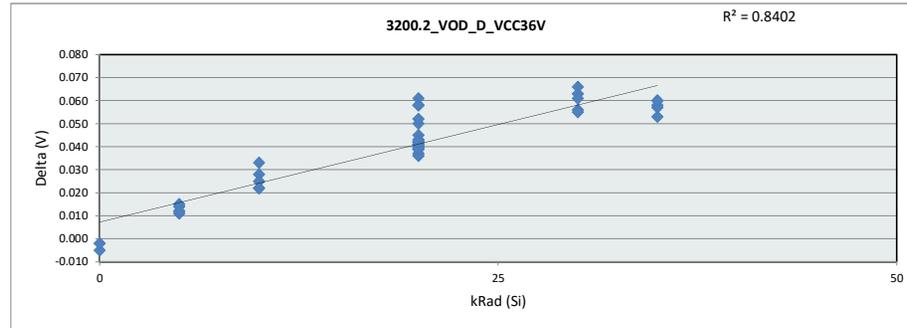


TID Report SN55HVD233-SEP

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

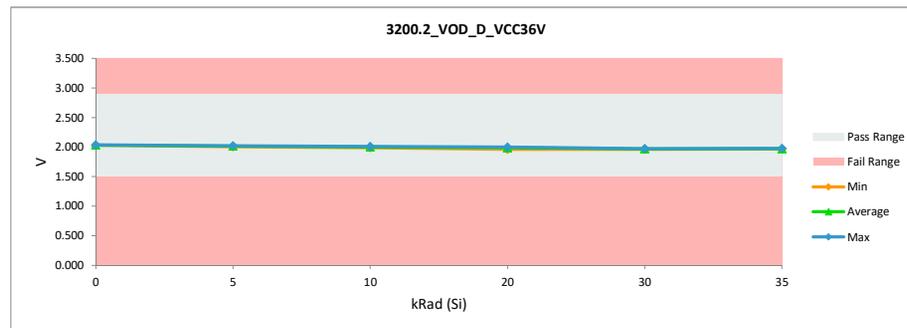
| 3200.2_VOD_D_VCC36V | | |
|---------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | V | V |
| Max Limit | 2.89 | 2.89 |
| Min Limit | 1.5 | 1.5 |

| 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 |

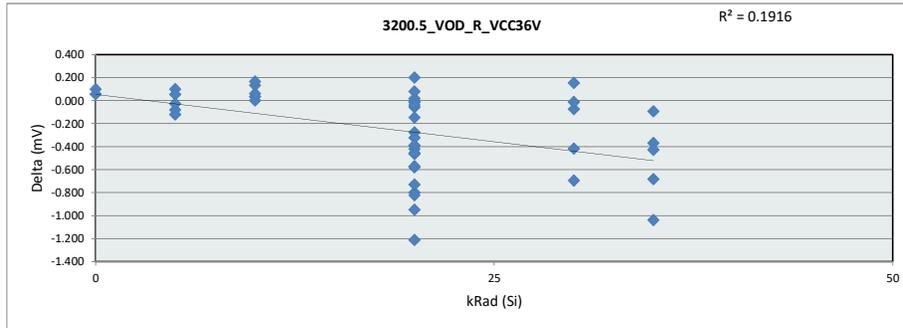


TID Report SN55HVD233-SEP

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

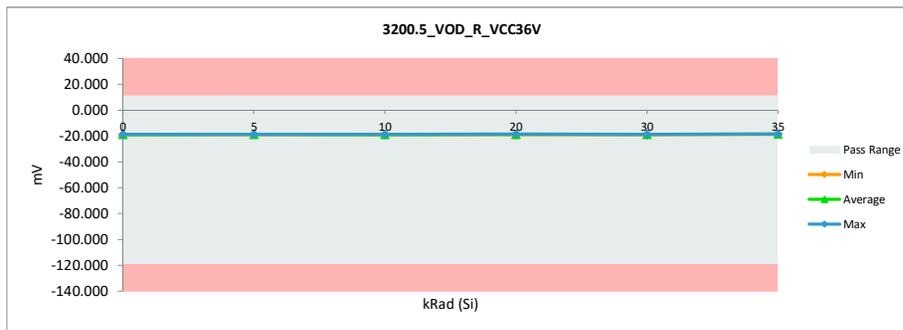
| 3200.5_VOD_R_VCC36V | | |
|---------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 10.92 | 10.92 |
| Min Limit | -119 | -119 |

| 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 |

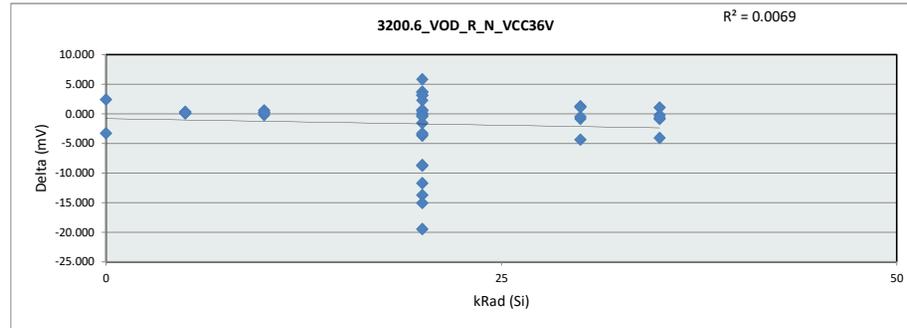


TID Report SN55HVD233-SEP

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

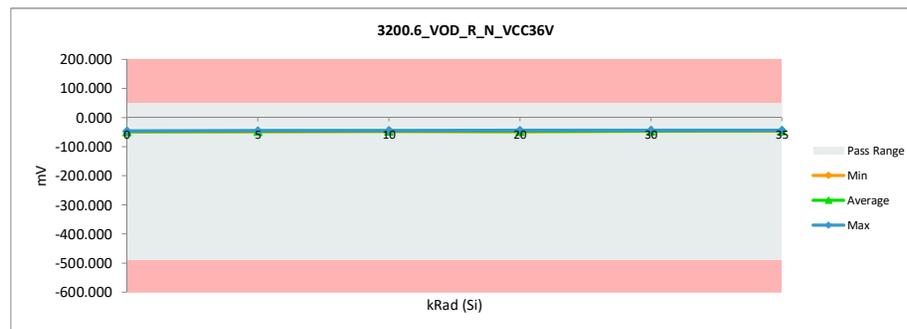
| 3200.6_VOD_R_N_VCC36V | | |
|-----------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 49 | 49 |
| Min Limit | -490 | -490 |

| 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 |

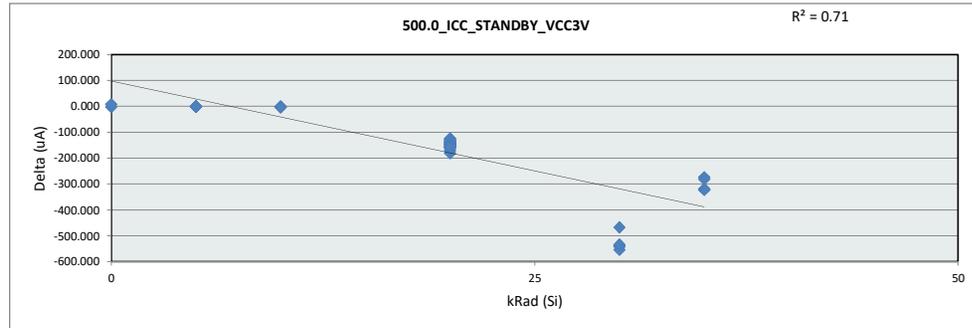


TID Report SN55HVD233-SEP

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

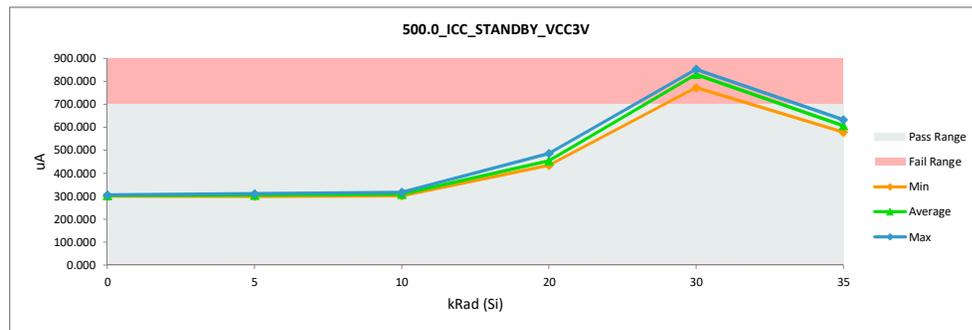
| 500.0_ICC_STANDBY_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 700 | 700 |
| Min Limit | 0 | 0 |

| 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 |

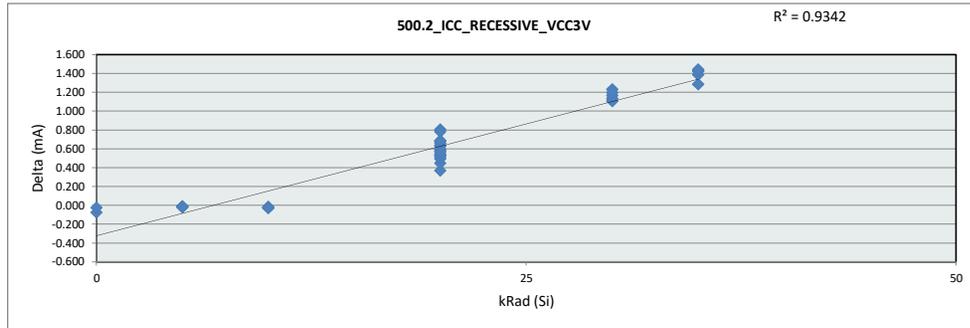


TID Report SN55HVD233-SEP

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

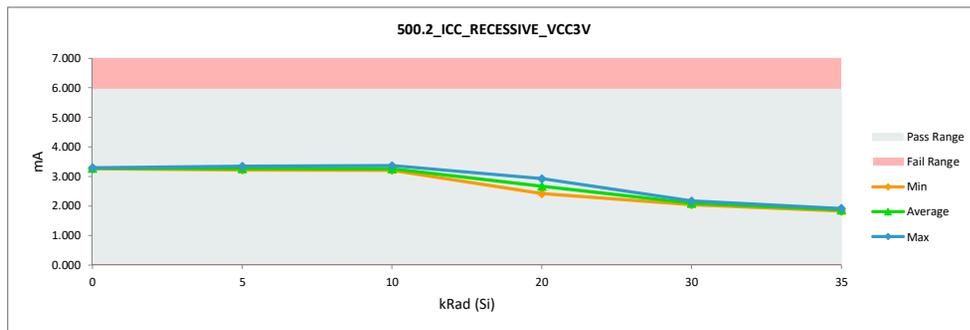
| 500.2_ICC_RECESSIVE_VCC3V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 5.95 | 5.95 |
| Min Limit | 0 | 0 |

| 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 |

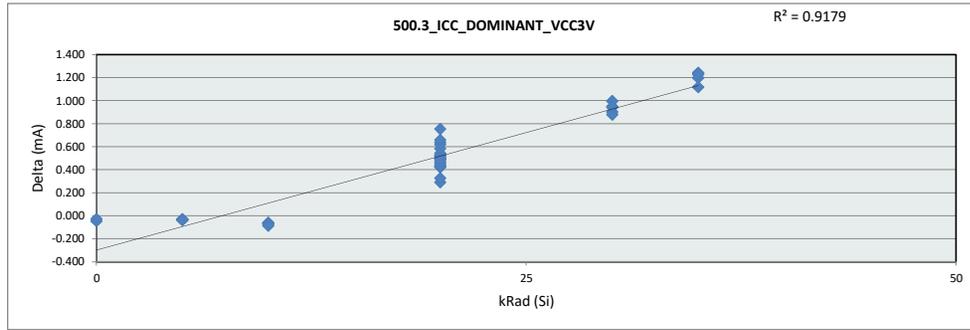


TID Report SN55HVD233-SEP

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

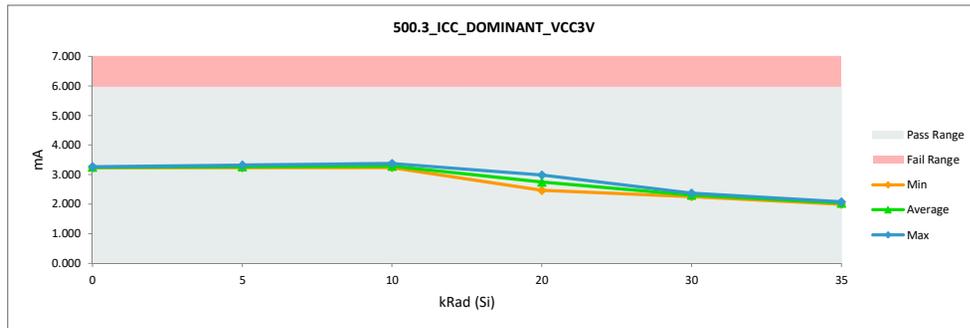
| 500.3_ICC_DOMINANT_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 5.95 | 5.95 |
| Min Limit | 0 | 0 |

| 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 |

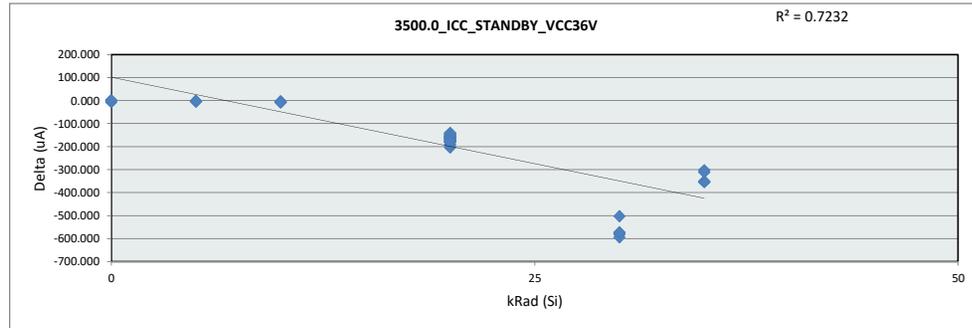


TID Report SN55HVD233-SEP

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

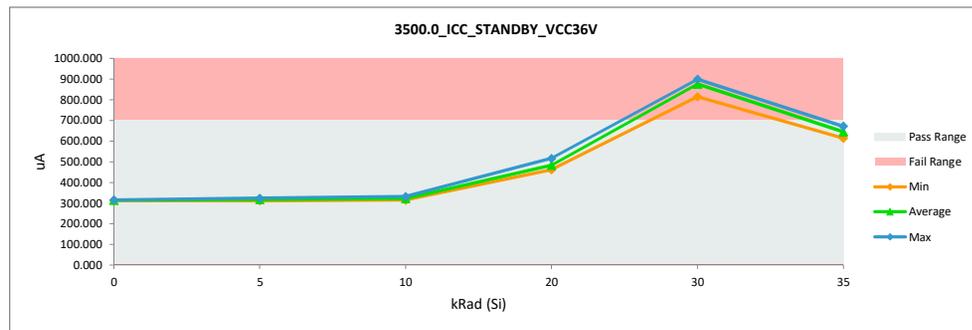
| 3500.0_ICC_STANDBY_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 700 | 700 |
| Min Limit | 0 | 0 |

| 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 |

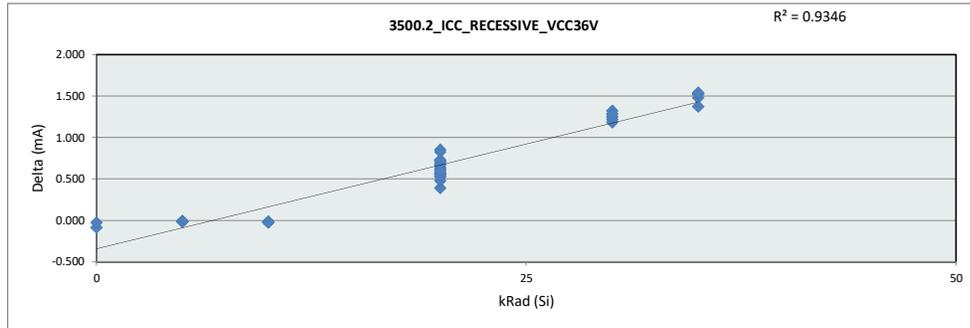


TID Report SN55HVD233-SEP

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

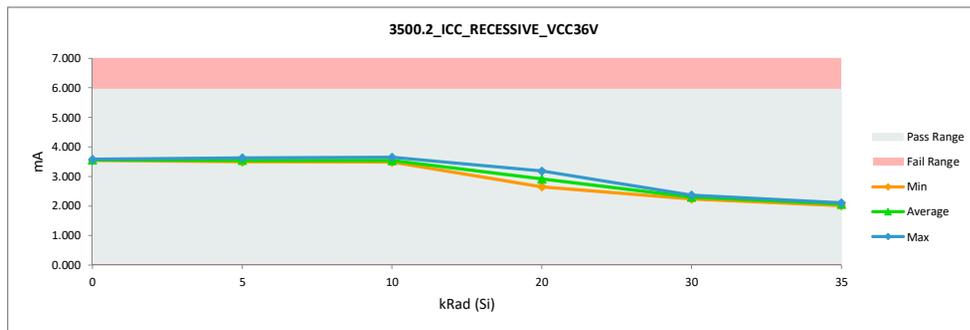
| 3500.2_ICC_RECESSIVE_VCC36V | | |
|-----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 5.95 | 5.95 |
| Min Limit | 0 | 0 |

| 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 |

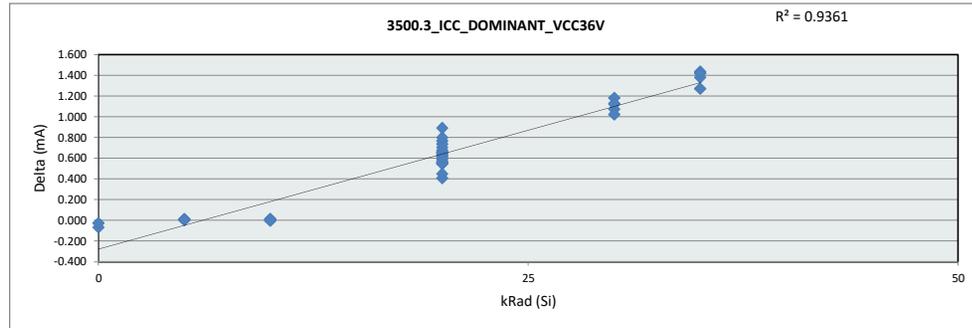


TID Report SN55HVD233-SEP

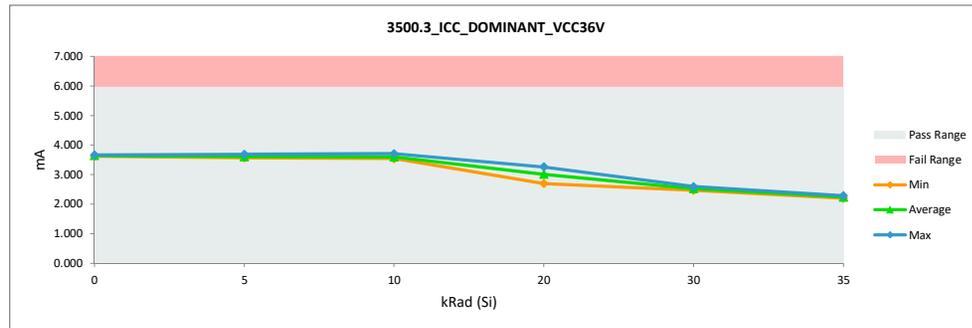
Notes: Data at 35kRad represent the 30kRad post 2WKS annealed data

| 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 |

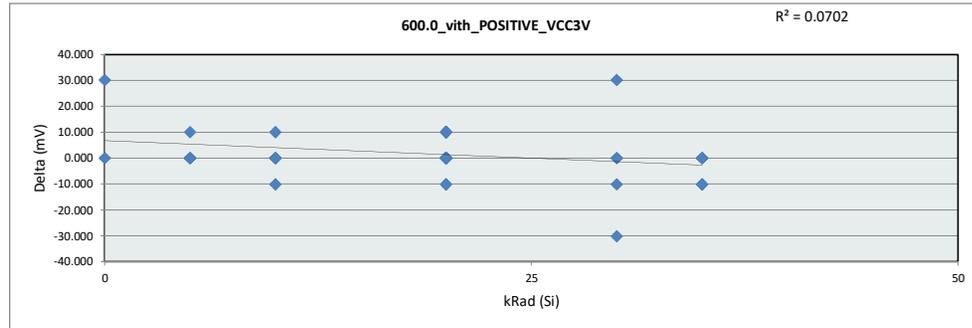


TID Report SN55HVD233-SEP

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

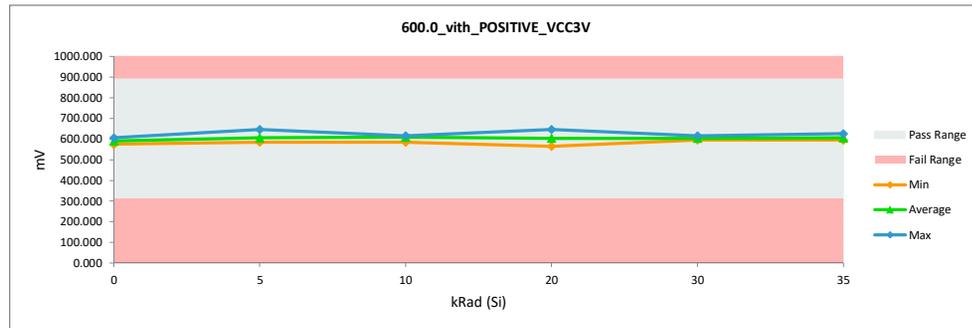
| 600.0_vith_POSITIVE_VCC3V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |

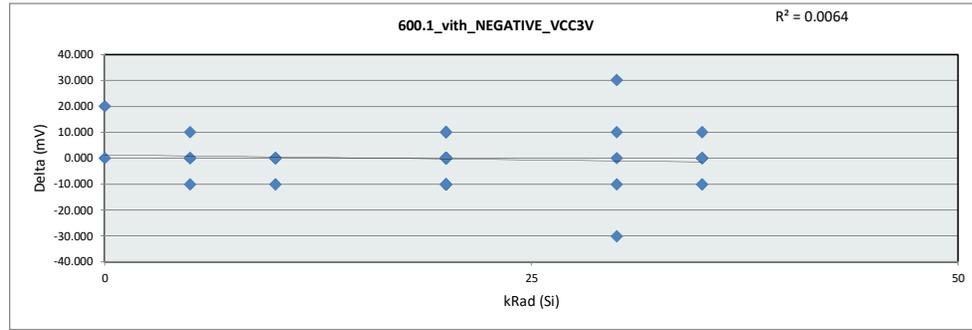


TID Report SN55HVD233-SEP

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

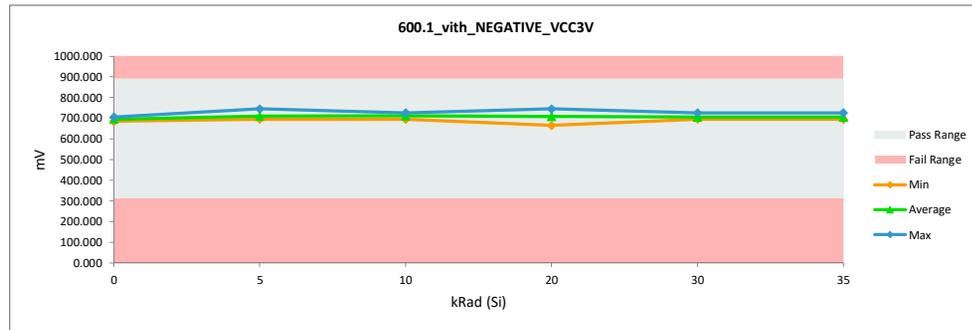
| 600.1_vith_NEGATIVE_VCC3V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |

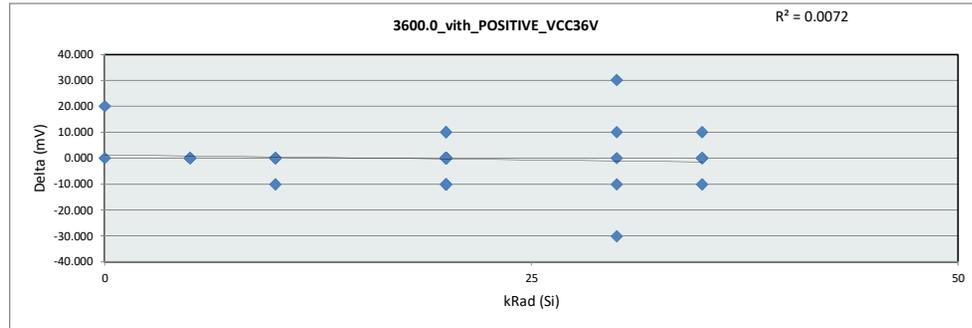


TID Report SN55HVD233-SEP

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

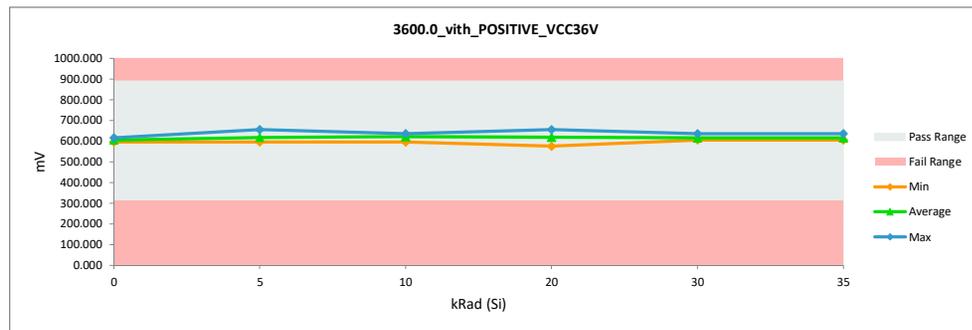
| 3600.0_vith_POSITIVE_VCC36V | | |
|-----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |

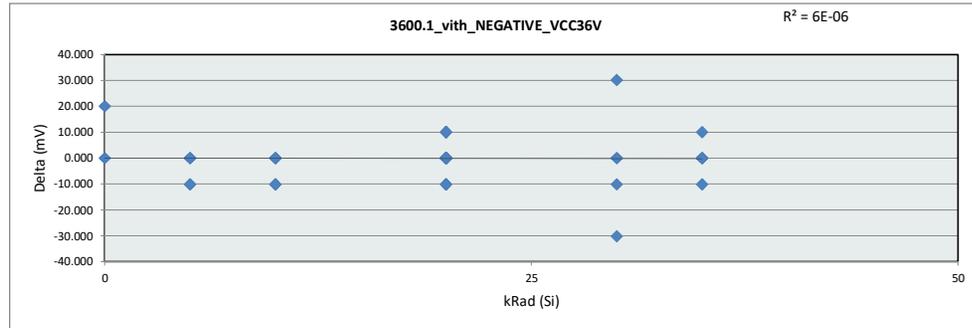


TID Report SN55HVD233-SEP

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

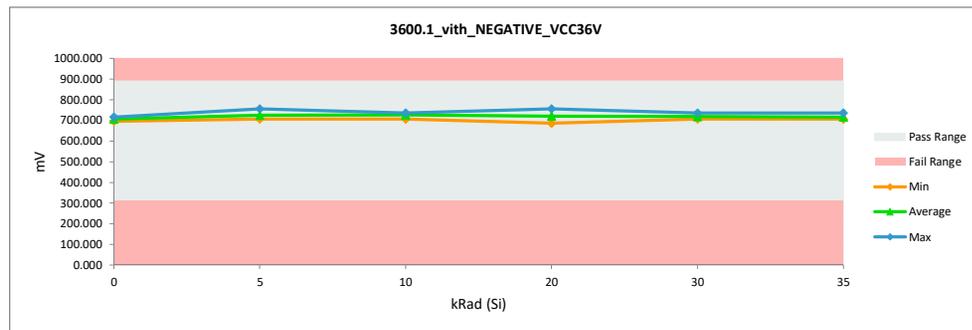
| 3600.1_vith_NEGATIVE_VCC36V | | |
|-----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |



B Full TID Report Graphs and Tables

This section provides the full TID report for SN55HVD233-SEP.

Delta Threshold 10.00%

Excerpt from Mil-Std 883J, 1019.9

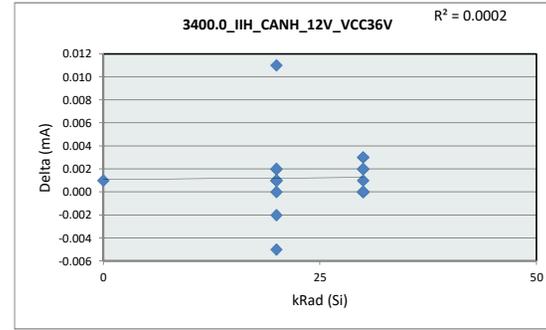
3.13.1.1 Characterization test to determine if a part exhibits ELDRS. Calculate the radiation induced change in each electrical parameter (Δ para) for each sample at each radiation level. Calculate the ratio of the median Δ para at low dose rate to the median Δ para at high dose rate for each irradiation 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

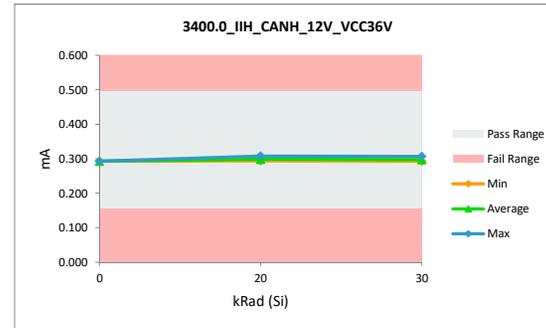
ELDRS Report
SN55HVD233-SEP

| 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 | | |



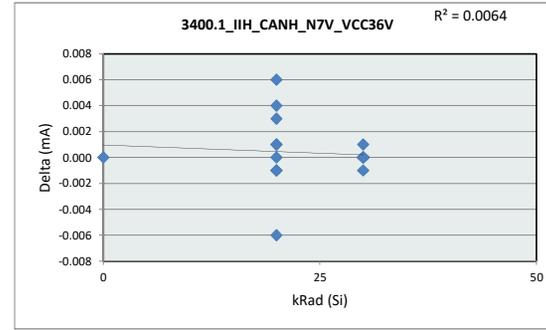
| 3400.0_IIH_CANH_12V_VCC36V | | | |
|----------------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 0.495 | mA | |
| Min Limit | 0.155 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.155 | 0.155 | 0.155 |
| Min | 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 |



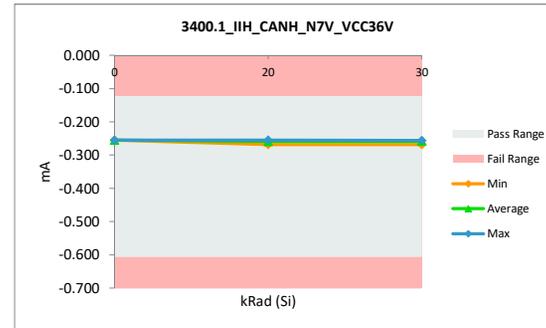
ELDRS Report
SN55HVD233-SEP

| 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 | | |



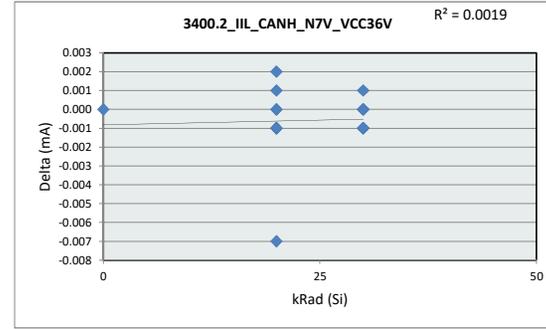
| 3400.1_IIH_CANH_N7V_VCC36V | | | |
|----------------------------|-----------|--------|--------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | -0.123 | mA | |
| Min Limit | -0.605 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -0.605 | -0.605 | -0.605 |
| 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 |



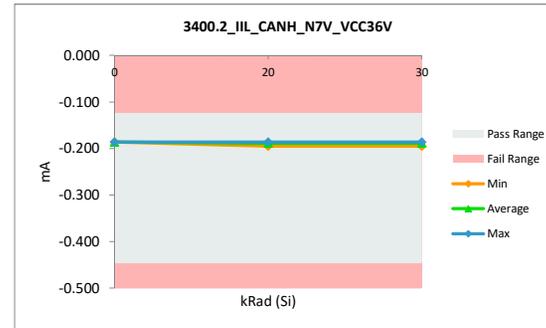
ELDRS Report
SN55HVD233-SEP

| 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 | | |



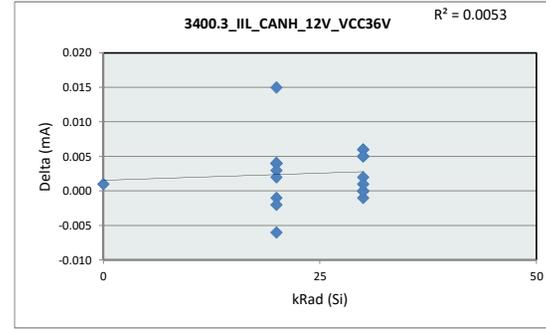
| 3400.2_IIL_CANH_N7V_VCC36V | | | |
|----------------------------|-----------|--------|--------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | -0.123 | mA | |
| Min Limit | -0.445 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -0.445 | -0.445 | -0.445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



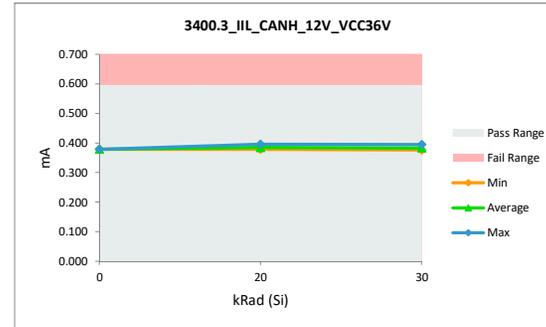
ELDRS Report
SN55HVD233-SEP

| 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 |

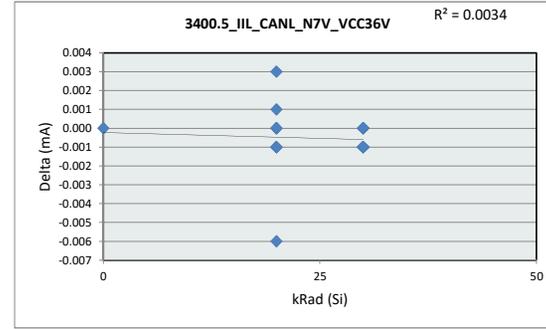


Note: Post radiation readings are below the pre-irradiation electrical specification limits at low dose rate at the specification dose.

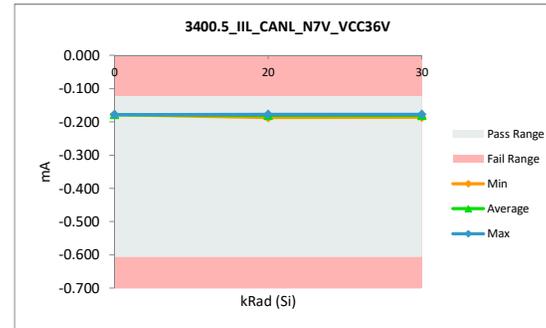
ELDRS Report
SN55HVD233-SEP

| 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 | | |



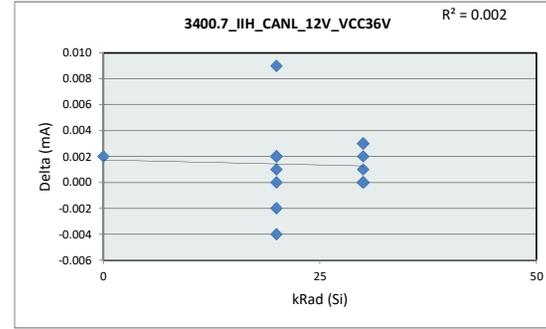
| 3400.5_IIL_CANL_N7V_VCC36V | | | |
|----------------------------|-----------|--------|--------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | -0.123 | mA | |
| Min Limit | -0.605 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -0.605 | -0.605 | -0.605 |
| 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 |



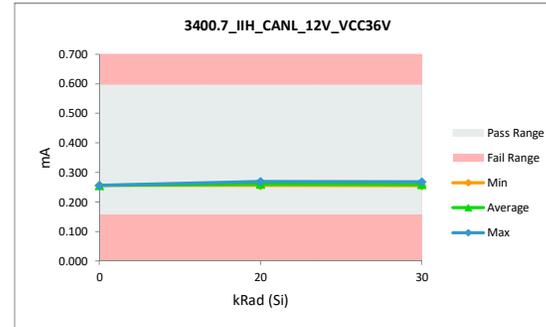
ELDRS Report
SN55HVD233-SEP

| 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 | | |



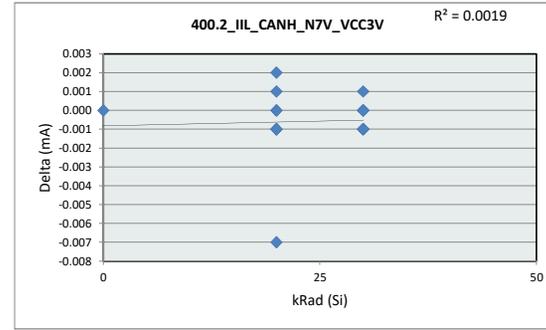
| 3400.7_IIH_CANL_12V_VCC36V | | | |
|----------------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 0.595 | mA | |
| Min Limit | 0.155 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.155 | 0.155 | 0.155 |
| Min | 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 |



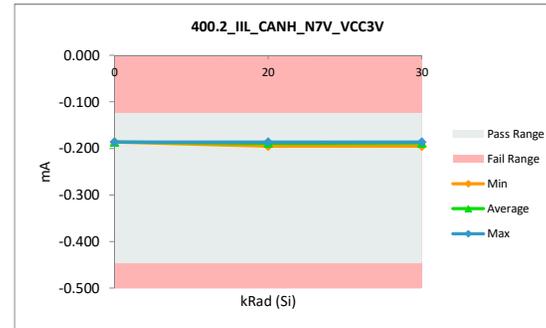
ELDRS Report
SN55HVD233-SEP

| 400.2_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 | | |



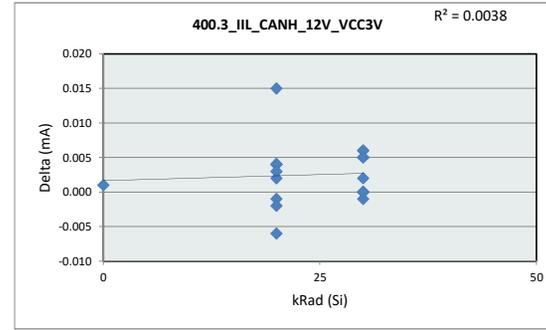
| 400.2_IIL_CANH_N7V_VCC3V | | | |
|--------------------------|-----------|--------|--------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | -0.123 | mA | |
| Min Limit | -0.445 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -0.445 | -0.445 | -0.445 |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



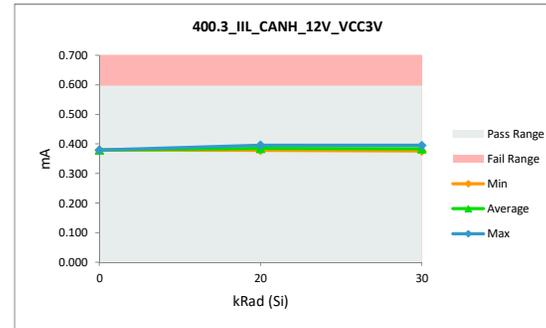
ELDRS Report
SN55HVD233-SEP

| 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 |

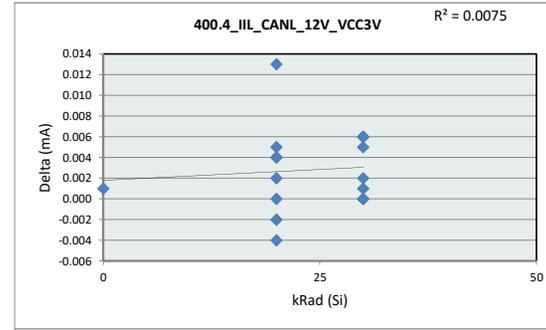


Note: Post radiation readings are below the pre-irradiation electrical specification limits at low dose rate at the specification dose.

ELDRS Report
SN55HVD233-SEP

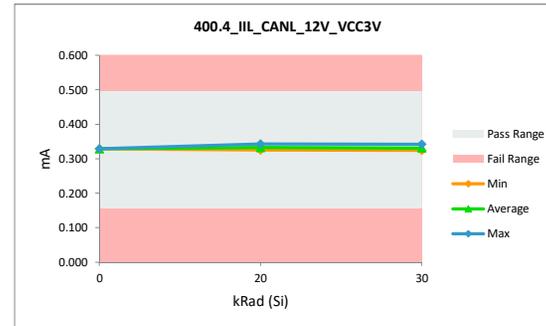
| 400.4_IIL_CANL_12V_VCC3V | | |
|--------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.495 | 0.495 |
| Min Limit | 0.155 | 0.155 |

| 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 |

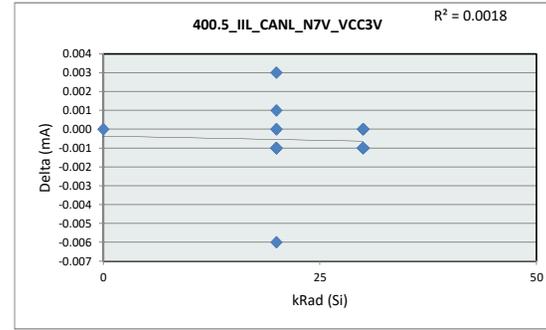
| kRad (Si) | 0 | 20 | 30 |
|-----------|-------|-------|-------|
| LL | 0.155 | 0.155 | 0.155 |
| Min | 0.329 | 0.325 | 0.324 |
| Average | 0.329 | 0.332 | 0.331 |
| Max | 0.329 | 0.343 | 0.342 |
| UL | 0.495 | 0.495 | 0.495 |



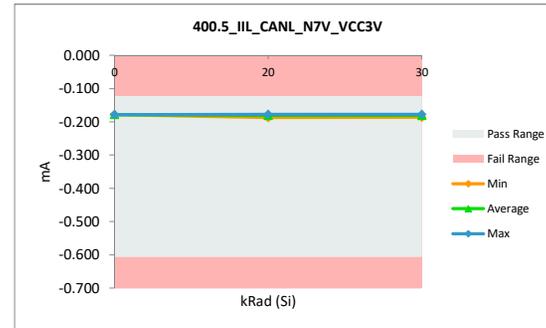
ELDRS Report
SN55HVD233-SEP

| 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 | | |



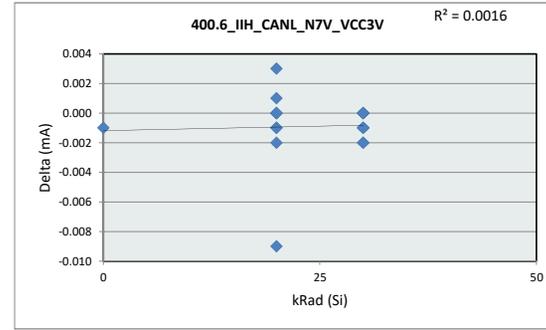
| 400.5_IIL_CANL_N7V_VCC3V | | | |
|--------------------------|-----------|--------|--------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | -0.123 | mA | |
| Min Limit | -0.605 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -0.605 | -0.605 | -0.605 |
| 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 |



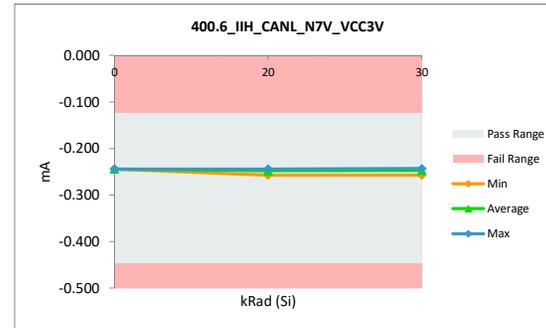
ELDRS Report
SN55HVD233-SEP

| 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 | | |



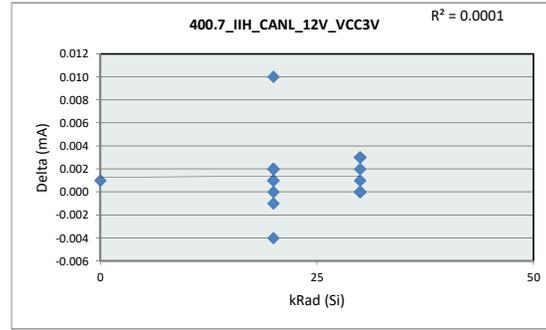
| 400.6_IIH_CANL_N7V_VCC3V | | | |
|--------------------------|-----------|--------|--------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | -0.123 | mA | |
| Min Limit | -0.445 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -0.445 | -0.445 | -0.445 |
| 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 |



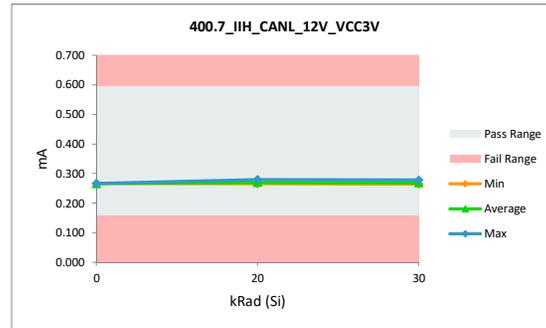
ELDRS Report
SN55HVD233-SEP

| 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 | | |



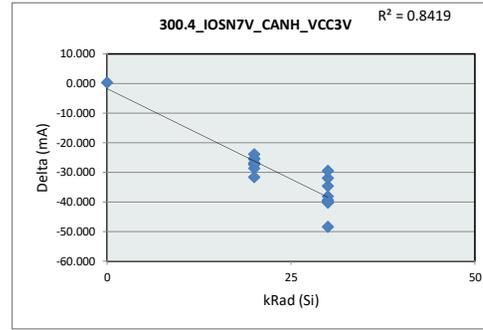
| 400.7_IIH_CANL_12V_VCC3V | | | |
|--------------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 0.595 | mA | |
| Min Limit | 0.155 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.155 | 0.155 | 0.155 |
| Min | 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 |



ELDRS Report
SN55HVD233-SEP

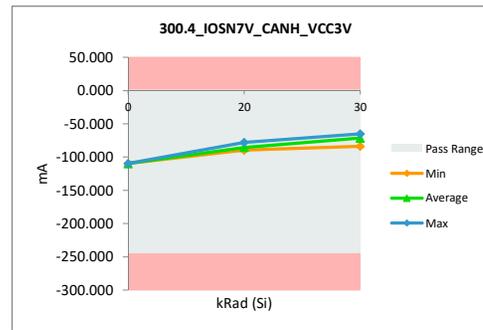
| 300.4_IOSN7V_CANH_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.9 | 0.9 |
| Min Limit | -245 | -245 |

| 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 |

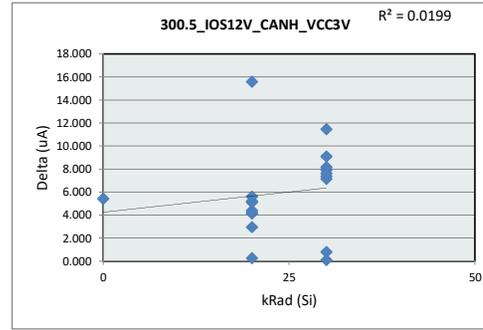
| kRad (Si) | 0 | 20 | 30 |
|-----------|----------|----------|----------|
| LL | -245.000 | -245.000 | -245.000 |
| Min | -109.822 | -89.344 | -83.745 |
| Average | -109.822 | -85.471 | -71.477 |
| Max | -109.822 | -77.815 | -64.897 |
| UL | 0.900 | 0.900 | 0.900 |



ELDRS Report
SN55HVD233-SEP

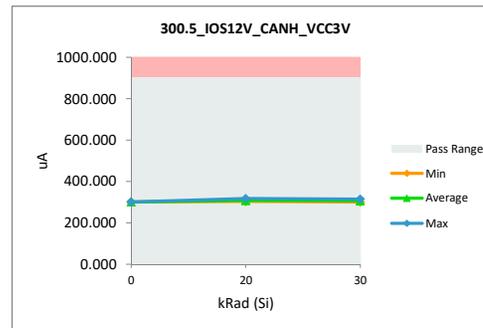
| 300.5_IOS12V_CANH_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | | |

| 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 | | |

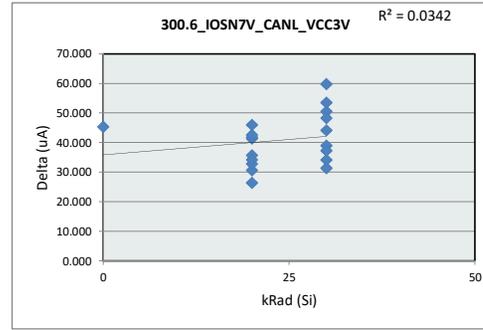
| kRad (Si) | 0 | 20 | 30 |
|-----------|---------|---------|---------|
| LL | | | |
| Min | 300.606 | 303.228 | 300.470 |
| Average | 300.606 | 308.571 | 306.154 |
| Max | 300.606 | 317.717 | 314.497 |
| UL | 900.000 | 900.000 | 900.000 |



ELDRS Report
SN55HVD233-SEP

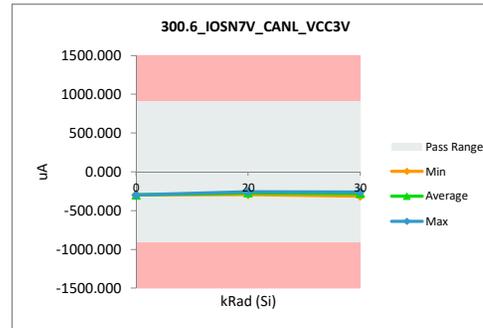
| 300.6_IOSN7V_CANL_VCC3V | | |
|-------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | -900 | -900 |

| 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 |

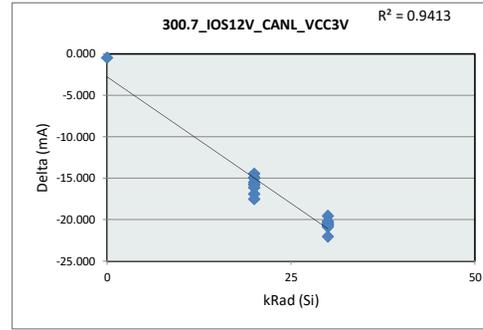
| kRad (Si) | 0 | 20 | 30 |
|-----------|----------|----------|----------|
| LL | -900.000 | -900.000 | -900.000 |
| Min | -298.605 | -293.552 | -313.354 |
| Average | -298.605 | -272.655 | -280.009 |
| Max | -298.605 | -257.155 | -260.359 |
| UL | 900.000 | 900.000 | 900.000 |



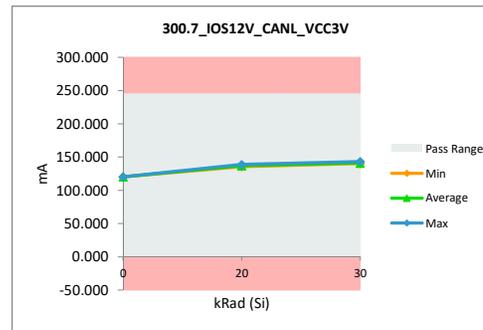
ELDRS Report
SN55HVD233-SEP

| 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 | | |



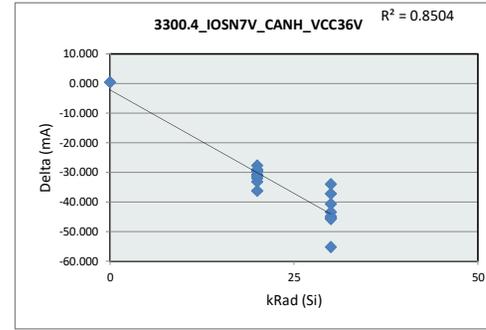
| 300.7_IOS12V_CANL_VCC3V | | | |
|-------------------------|-----------|---------|---------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 245 mA | | |
| Min Limit | -0.9 mA | | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -0.900 | -0.900 | -0.900 |
| Min | 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 |



ELDRS Report
SN55HVD233-SEP

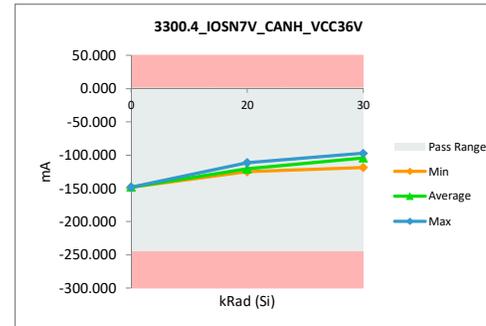
| 3300.4_IOSN7V_CANH_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 0.9 | 0.9 |
| Min Limit | -245 | -245 |

| 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 |

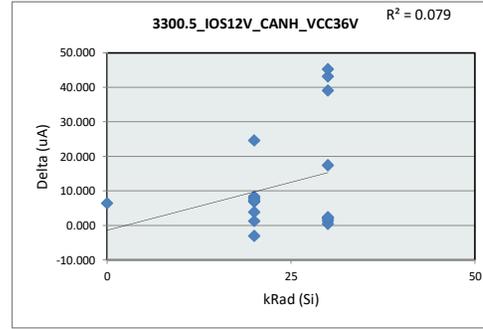
| kRad (Si) | 0 | 20 | 30 |
|-----------|----------|----------|----------|
| LL | -245.000 | -245.000 | -245.000 |
| Min | -148.129 | -124.884 | -118.507 |
| Average | -148.129 | -120.377 | -104.123 |
| Max | -148.129 | -111.348 | -97.167 |
| UL | 0.900 | 0.900 | 0.900 |



ELDRS Report
SN55HVD233-SEP

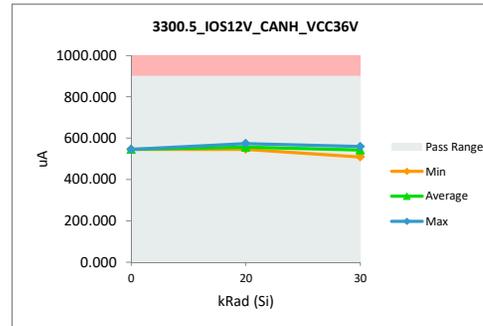
| 3300.5_IOS12V_CANH_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | | |

| 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 |

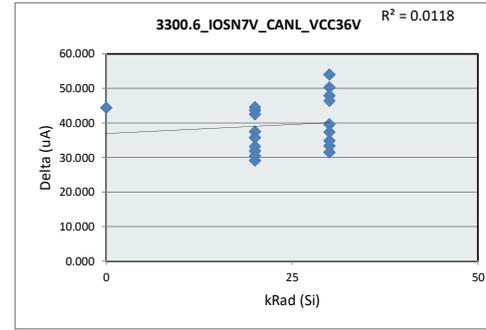


Note: Post radiation readings are below the pre-irradiation electrical specification limits at low dose rate at the specification dose.

ELDRS Report
SN55HVD233-SEP

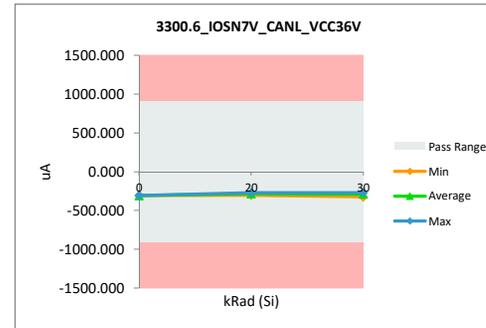
| 3300.6_IOSN7V_CANL_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 900 | 900 |
| Min Limit | -900 | -900 |

| 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 |

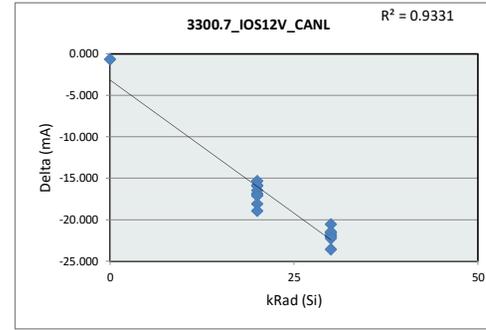
| kRad (Si) | 0 | 20 | 30 |
|-----------|----------|----------|----------|
| LL | -900.000 | -900.000 | -900.000 |
| Min | -306.288 | -303.576 | -324.776 |
| Average | -306.288 | -282.994 | -289.641 |
| Max | -306.288 | -268.411 | -269.356 |
| UL | 900.000 | 900.000 | 900.000 |



ELDRS Report
SN55HVD233-SEP

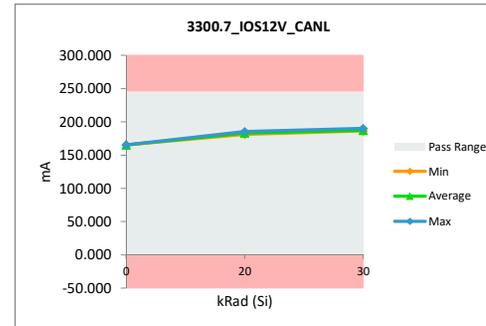
| 3300.7_IOS12V_CANL | | |
|--------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 245 | 245 |
| Min Limit | -0.9 | -0.9 |

| 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 |

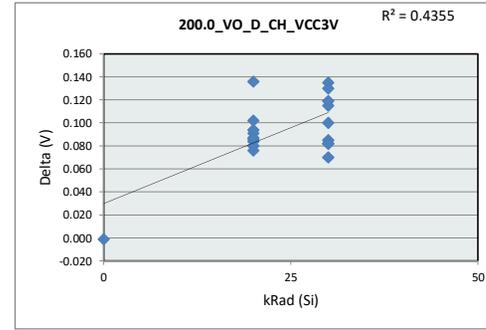
| kRad (Si) | 0 | 20 | 30 |
|-----------|---------|---------|---------|
| LL | -0.900 | -0.900 | -0.900 |
| Min | 165.382 | 181.367 | 186.252 |
| Average | 165.382 | 183.250 | 187.324 |
| Max | 165.382 | 185.363 | 190.213 |
| UL | 245.000 | 245.000 | 245.000 |



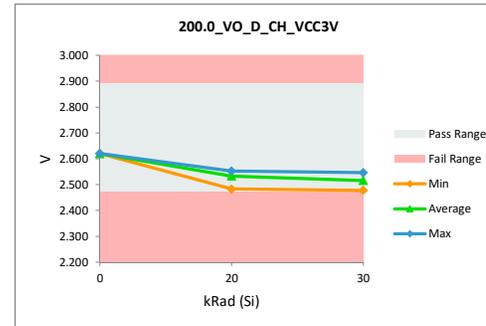
ELDRS Report
SN55HVD233-SEP

| 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 | | |



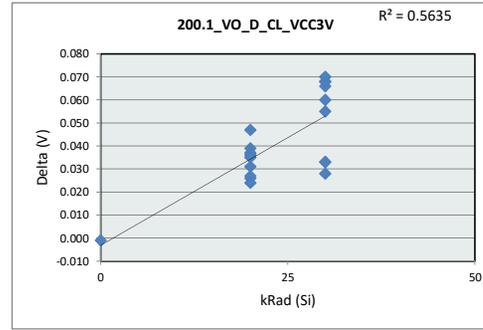
| 200.0_VO_D_CH_VCC3V | | | |
|---------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 2.89 V | | |
| Min Limit | 2.47 V | | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 2.470 | 2.470 | 2.470 |
| Min | 2.620 | 2.483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



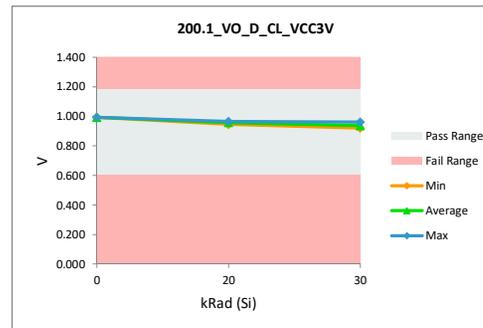
ELDRS Report
SN55HVD233-SEP

| 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 | | |



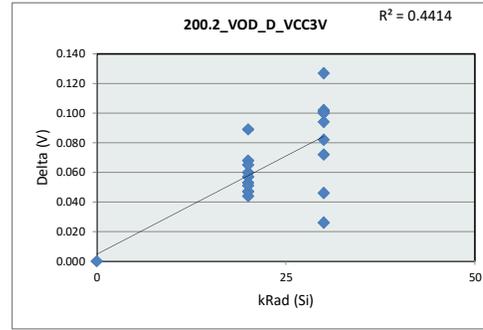
| 200.1_VO_D_CL_VCC3V | | | |
|---------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 1.18 | V | |
| Min Limit | 0.6 | V | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.600 | 0.600 | 0.600 |
| Min | 0.994 | 0.945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



ELDRS Report
SN55HVD233-SEP

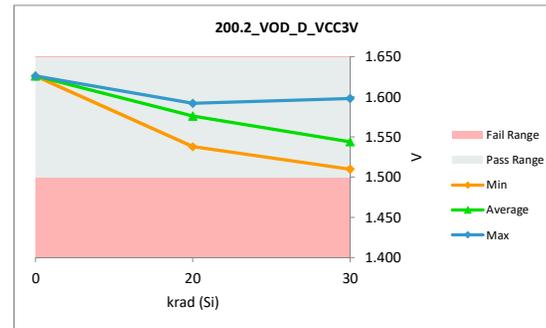
| 200.2_VOD_D_VCC3V | | |
|-------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | V | V |
| Max Limit | | |
| Min Limit | 1.475 | 1.5 |

| 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 |

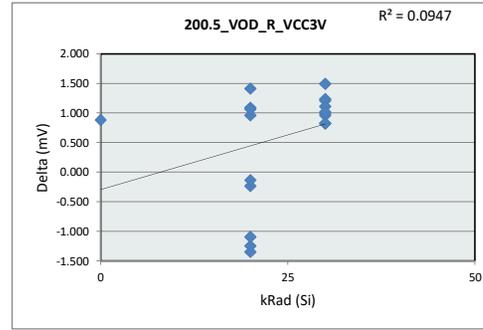
| kRad (Si) | 0 | 20 | 30 |
|-----------|-------|-------|-------|
| LL | 1.500 | 1.500 | 1.500 |
| Min | 1.626 | 1.538 | 1.510 |
| Average | 1.626 | 1.576 | 1.544 |
| Max | 1.626 | 1.592 | 1.598 |
| UL | | | |



ELDRS Report
SN55HVD233-SEP

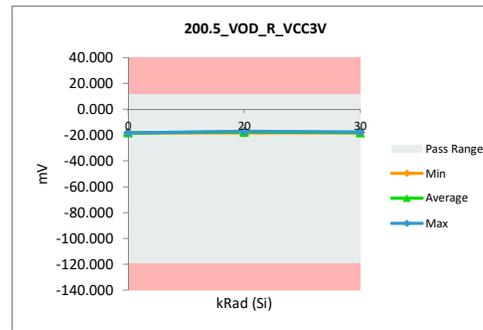
| 200.5_VOD_R_VCC3V | | |
|-------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 10.92 | 10.92 |
| Min Limit | -119 | -119 |

| 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 |

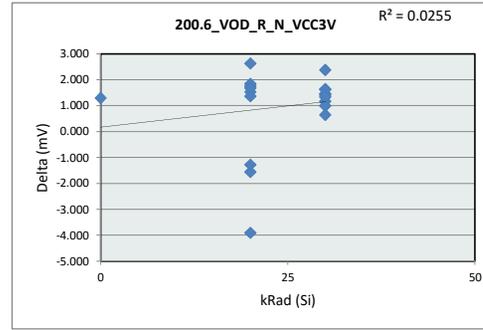
| kRad (Si) | 0 | 20 | 30 |
|-----------|----------|----------|----------|
| LL | -119.000 | -119.000 | -119.000 |
| Min | -18.240 | -18.274 | -18.332 |
| Average | -18.240 | -17.682 | -18.103 |
| Max | -18.240 | -17.142 | -17.560 |
| UL | 10.920 | 10.920 | 10.920 |



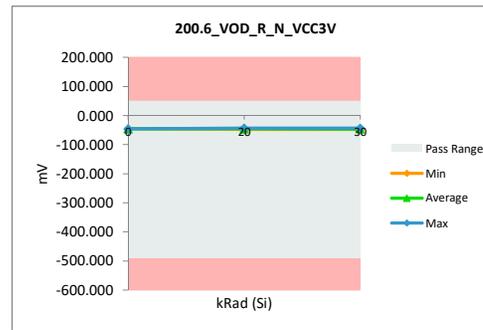
ELDRS Report
SN55HVD233-SEP

| 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 | | |



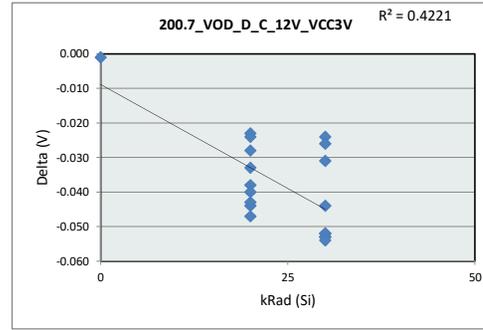
| 200.6_VOD_R_N_VCC3V | | | |
|---------------------|-----------|----------|----------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 49 | mV | |
| Min Limit | -490 | mV | |
| kRad (Si) | 0 | 20 | 30 |
| LL | -490.000 | -490.000 | -490.000 |
| Min | -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 |



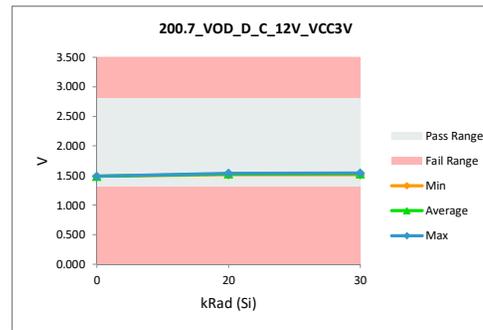
ELDRS Report
SN55HVD233-SEP

| 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 | | |



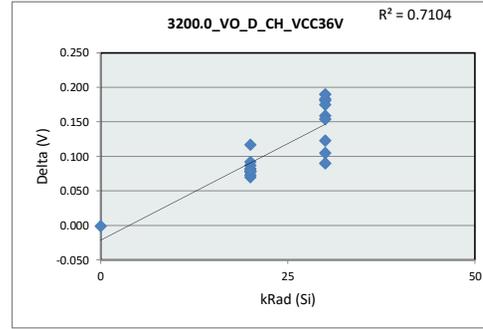
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|-------------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 2.8 | V | |
| Min Limit | 1.3 | V | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 1.300 | 1.300 | 1.300 |
| 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 |



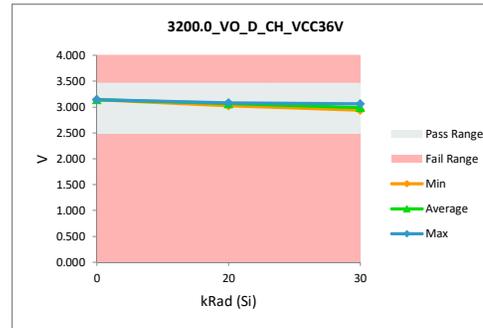
ELDRS Report
SN55HVD233-SEP

| 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 | | |



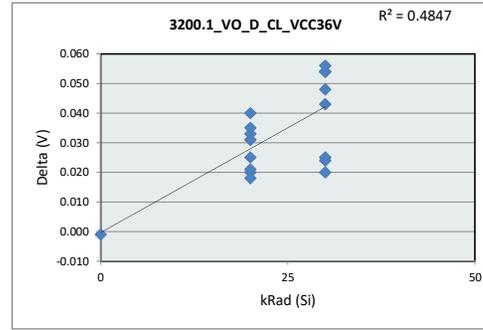
| 3200.0_VO_D_CH_VCC36V | | | |
|-----------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 3.46 | V | |
| Min Limit | 2.47 | V | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 2.470 | 2.470 | 2.470 |
| Min | 3.143 | 3.025 | 2.941 |
| Average | 3.143 | 3.067 | 2.990 |
| Max | 3.143 | 3.082 | 3.062 |
| UL | 3.460 | 3.460 | 3.460 |



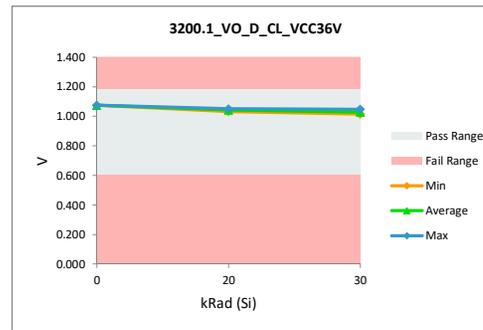
ELDRS Report
SN55HVD233-SEP

| 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 | | |



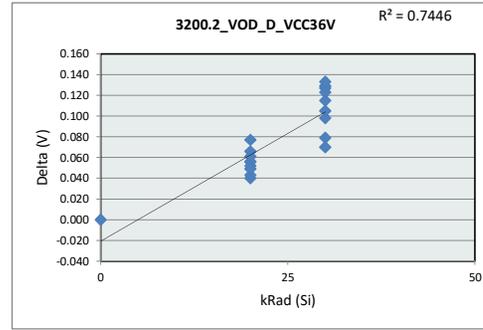
| 3200.1_VO_D_CL_VCC36V | | | |
|-----------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 1.18 | V | |
| Min Limit | 0.6 | V | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.600 | 0.600 | 0.600 |
| Min | 1.074 | 1.033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



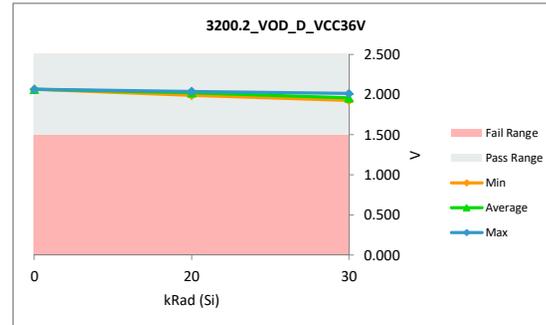
ELDRS Report
SN55HVD233-SEP

| 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 | | |



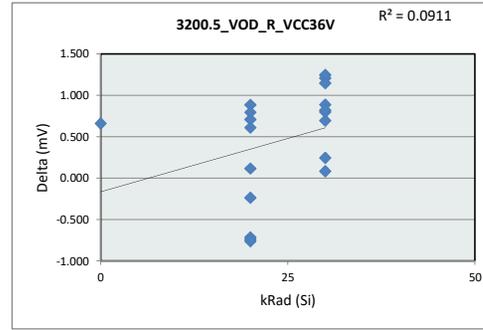
| 3200.2_VOD_D_VCC36V | | | |
|---------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | | | |
| Min Limit | 1.5 | V | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 1.500 | 1.500 | 1.500 |
| Min | 2.069 | 1.992 | 1.927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



ELDRS Report
SN55HVD233-SEP

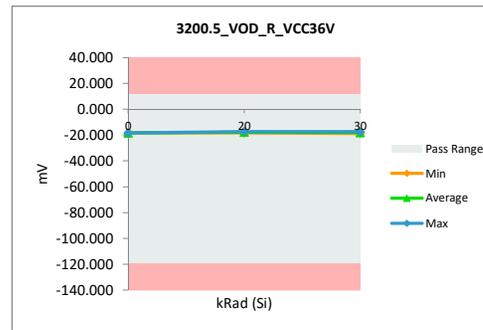
| 3200.5_VOD_R_VCC36V | | |
|---------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 10.92 | 10.92 |
| Min Limit | -119 | -119 |

| 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 |

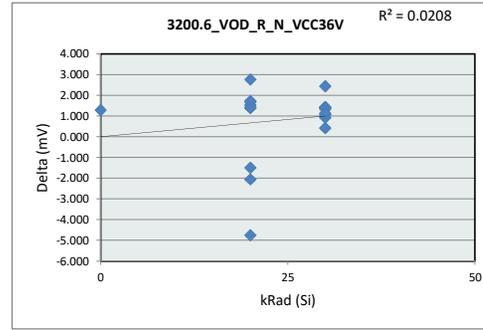
| kRad (Si) | 0 | 20 | 30 |
|-----------|----------|----------|----------|
| LL | -119.000 | -119.000 | -119.000 |
| Min | -18.374 | -18.432 | -18.728 |
| Average | -18.374 | -17.768 | -18.206 |
| Max | -18.374 | -17.231 | -17.466 |
| UL | 10.920 | 10.920 | 10.920 |



ELDRS Report
SN55HVD233-SEP

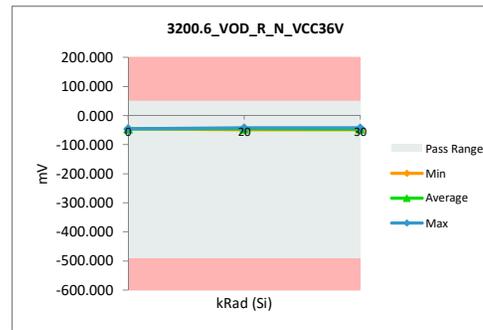
| 3200.6_VOD_R_N_VCC36V | | |
|-----------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 49 | 49 |
| Min Limit | -490 | -490 |

| 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 |

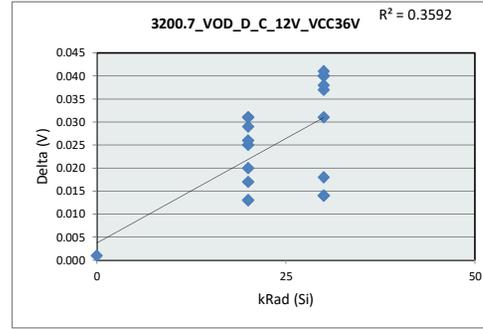
| kRad (Si) | 0 | 20 | 30 |
|-----------|----------|----------|----------|
| LL | -490.000 | -490.000 | -490.000 |
| Min | -45.745 | -48.657 | -48.408 |
| Average | -45.745 | -45.596 | -46.063 |
| Max | -45.745 | -42.582 | -42.690 |
| UL | 49.000 | 49.000 | 49.000 |



ELDRS Report
SN55HVD233-SEP

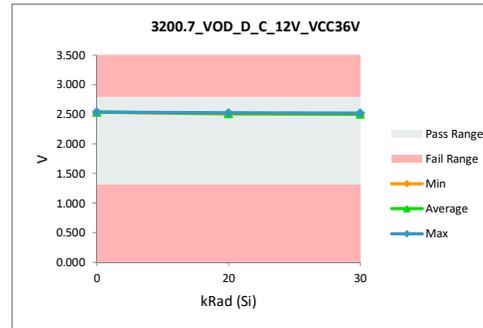
| 3200.7_VOD_D_C_12V_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | V | V |
| Max Limit | 2.79 | 2.79 |
| Min Limit | 1.3 | 1.3 |

| 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 |

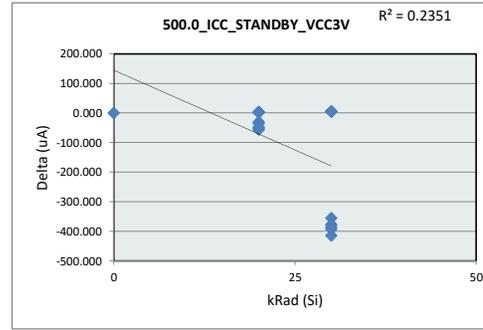
| kRad (Si) | 0 | 20 | 30 |
|-----------|-------|-------|-------|
| LL | 1.300 | 1.300 | 1.300 |
| Min | 2.540 | 2.506 | 2.498 |
| Average | 2.540 | 2.514 | 2.508 |
| Max | 2.540 | 2.525 | 2.524 |
| UL | 2.790 | 2.790 | 2.790 |



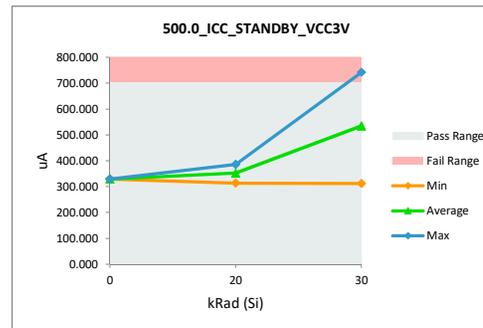
ELDRS Report
SN55HVD233-SEP

| 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 | | |



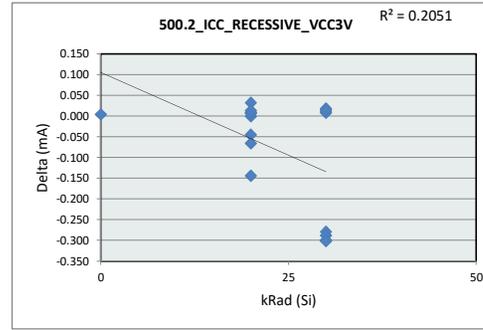
| 500.0_ICC_STANDBY_VCC3V | | | |
|-------------------------|-----------|---------|---------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 700 | uA | |
| Min Limit | 0 | uA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.000 | 0.000 | 0.000 |
| Min | 329.008 | 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 |



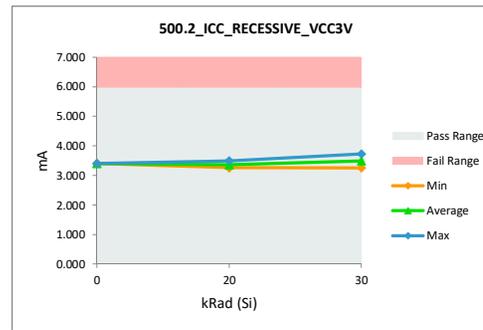
ELDRS Report
SN55HVD233-SEP

| 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 | | |



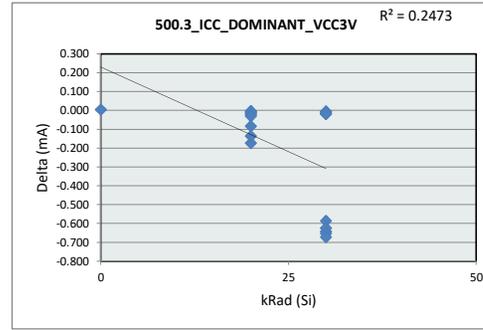
| 500.2_ICC_RECESSIVE_VCC3V | | | |
|---------------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 5.95 | mA | |
| Min Limit | 0 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.000 | 0.000 | 0.000 |
| Min | 3.406 | 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 |



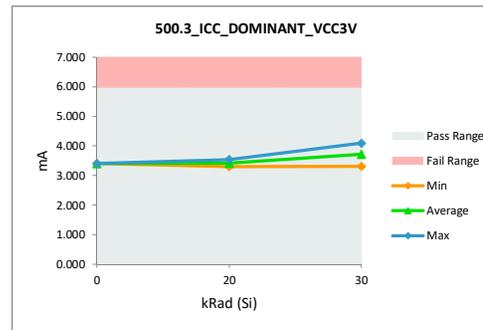
ELDRS Report
SN55HVD233-SEP

| 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 | | |



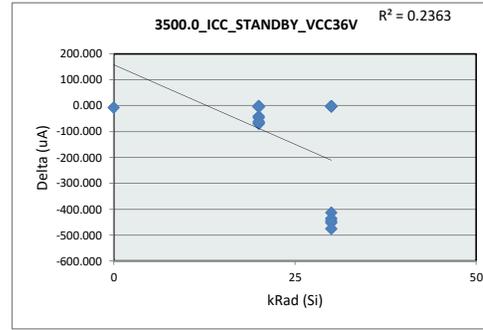
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|--------------------------|-----------|-------|-------|
| Test Site | Dallas | | |
| Tester | FETS36404 | | |
| Test Number | EF580303 | | |
| Max Limit | 5.95 | mA | |
| Min Limit | 0 | mA | |
| kRad (Si) | 0 | 20 | 30 |
| LL | 0.000 | 0.000 | 0.000 |
| 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 |



ELDRS Report
SN55HVD233-SEP

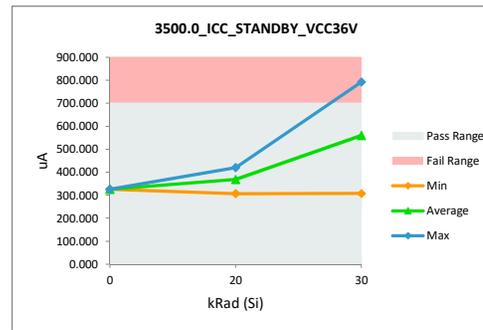
| 3500.0_ICC_STANDBY_VCC36V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | uA | uA |
| Max Limit | 700 | 700 |
| Min Limit | 0 | 0 |

| 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 |

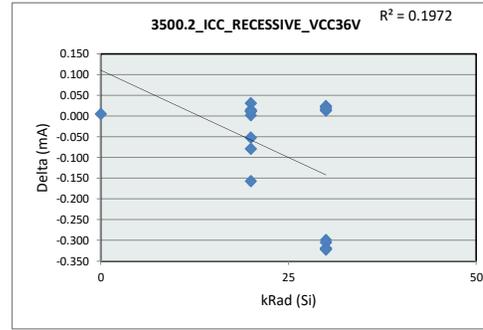
| kRad (Si) | 0 | 20 | 30 |
|-----------|---------|---------|---------|
| LL | 0.000 | 0.000 | 0.000 |
| Min | 325.780 | 307.201 | 307.521 |
| Average | 325.780 | 368.341 | 559.740 |
| Max | 325.780 | 419.952 | 792.920 |
| UL | 700.000 | 700.000 | 700.000 |



ELDRS Report
SN55HVD233-SEP

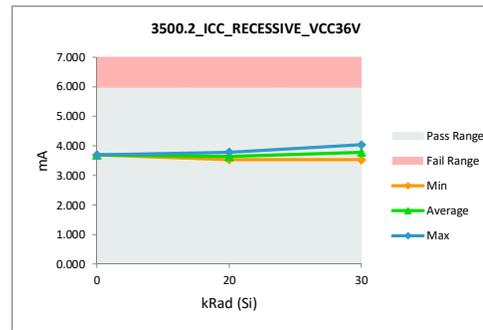
| 3500.2_ICC_RECESSIVE_VCC36V | | |
|-----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 5.95 | 5.95 |
| Min Limit | 0 | 0 |

| 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 |

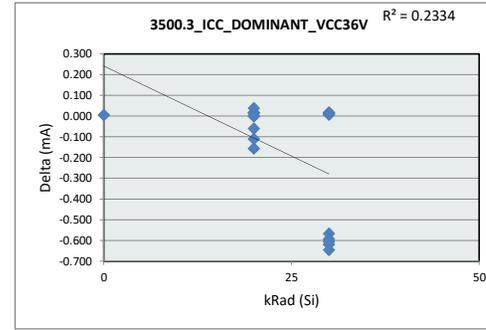
| kRad (Si) | 0 | 20 | 30 |
|-----------|-------|-------|-------|
| LL | 0.000 | 0.000 | 0.000 |
| Min | 3.692 | 3.531 | 3.528 |
| Average | 3.692 | 3.643 | 3.785 |
| Max | 3.692 | 3.786 | 4.041 |
| UL | 5.950 | 5.950 | 5.950 |



ELDRS Report
SN55HVD233-SEP

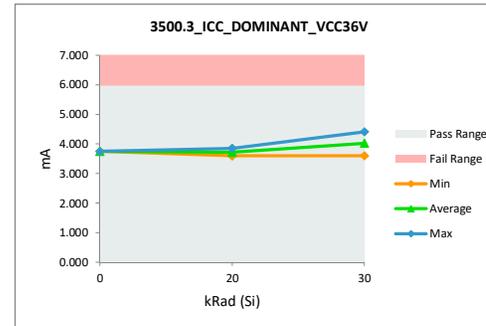
| 3500.3_ICC_DOMINANT_VCC36V | | |
|----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mA | mA |
| Max Limit | 5.95 | 5.95 |
| Min Limit | 0 | 0 |

| 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 |

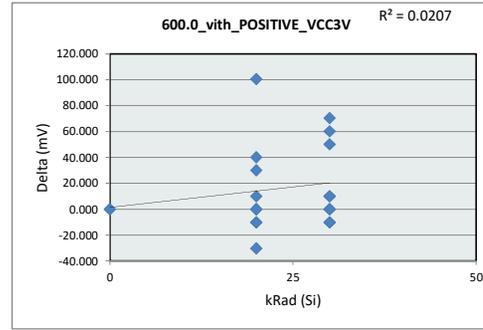
| kRad (Si) | 0 | 20 | 30 |
|-----------|-------|-------|-------|
| LL | 0.000 | 0.000 | 0.000 |
| Min | 3.749 | 3.595 | 3.596 |
| Average | 3.749 | 3.716 | 4.022 |
| Max | 3.749 | 3.849 | 4.413 |
| UL | 5.950 | 5.950 | 5.950 |



ELDRS Report
SN55HVD233-SEP

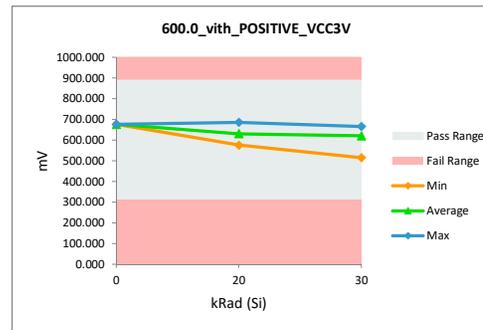
| 600.0_vith_POSITIVE_VCC3V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |

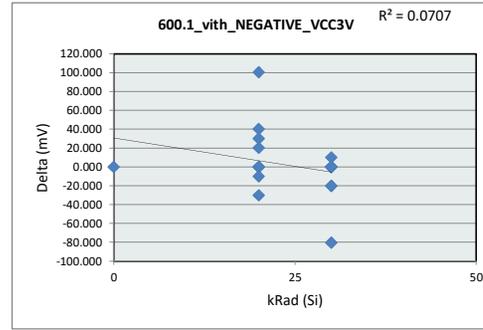
| kRad (Si) | 0 | 20 | 30 |
|-----------|---------|---------|---------|
| LL | 310.000 | 310.000 | 310.000 |
| Min | 675.879 | 575.377 | 515.075 |
| Average | 675.879 | 630.095 | 620.045 |
| Max | 675.879 | 685.929 | 665.829 |
| UL | 890.000 | 890.000 | 890.000 |



ELDRS Report
SN55HVD233-SEP

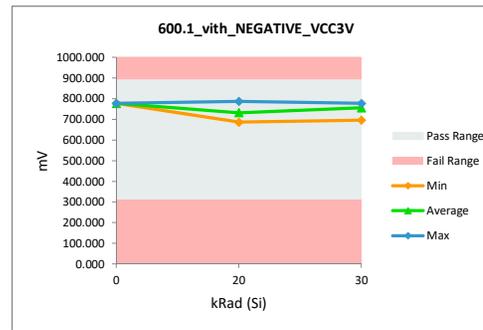
| 600.1_vith_NEGATIVE_VCC3V | | |
|---------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |

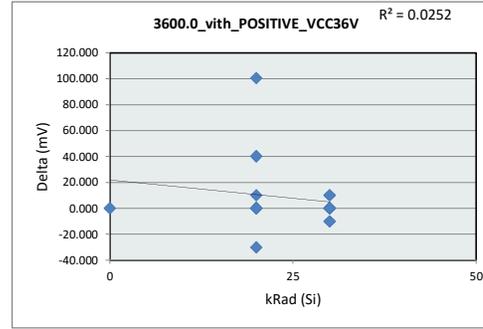
| kRad (Si) | 0 | 20 | 30 |
|-----------|---------|---------|---------|
| LL | 310.000 | 310.000 | 310.000 |
| Min | 776.382 | 685.929 | 695.980 |
| Average | 776.382 | 731.714 | 756.282 |
| Max | 776.382 | 786.432 | 776.382 |
| UL | 890.000 | 890.000 | 890.000 |



ELDRS Report
SN55HVD233-SEP

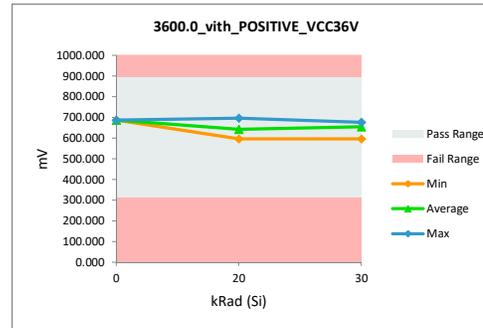
| 3600.0_vith_POSITIVE_VCC36V | | |
|-----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |

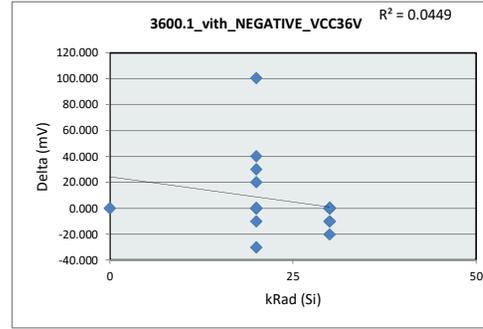
| kRad (Si) | 0 | 20 | 30 |
|-----------|---------|---------|---------|
| LL | 310.000 | 310.000 | 310.000 |
| Min | 685.929 | 595.478 | 595.478 |
| Average | 685.929 | 641.262 | 654.662 |
| Max | 685.929 | 695.980 | 675.879 |
| UL | 890.000 | 890.000 | 890.000 |



ELDRS Report
SN55HVD233-SEP

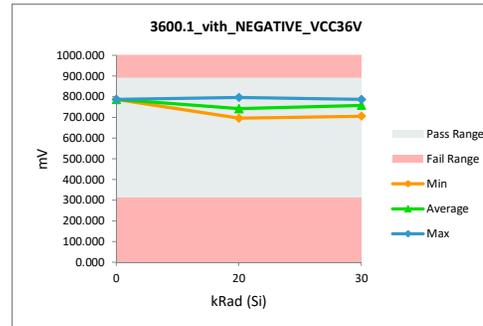
| 3600.1_vith_NEGATIVE_VCC36V | | |
|-----------------------------|-----------|-----------|
| Test Site | Dallas | Dallas |
| Tester | FETS36404 | FETS36404 |
| Test Number | EF580303 | EF580303 |
| Unit | mV | mV |
| Max Limit | 890 | 890 |
| Min Limit | 310 | 310 |

| 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 |



C Full ELDRS Report Graphs and Tables

This section provides the full ELDRS report for SN55HVD233-SEP.

D RLAT Update

The RLAT for this device is being updated to 30 krad(Si) level and to reflect a bias closer to the typical use case in application. The data collected at initial characterization remains above as a valid reflection of ELDRS performance. This re-characterization with the new bias has been done to analyze and reflect the performance in the typical use case for this device. [Table D-1](#) shows the details of the updated characterization.

Table D-1. Device and Exposure Details

| TID HDR/LDR Details: 30krad(Si) | |
|---------------------------------|---|
| TI Device Number | SN55HVD233-SEP |
| Package | 8-Pin D |
| Technology | LBC3S |
| Die Lot Number | 2248264DFB |
| A/T Lot Number / Date Code | 3188718WDH/38A219M |
| Quantity Tested | 26 units, including 3 control unit |
| Lot Accept/Reject | Devices passed 10 krad(Si), 20 krad(Si) and 30 krad(Si) |
| HDR Radiation Facility | Texas Instruments CLAB in Dallas, TX |
| HDR Dose Level | 10 krad(Si), 20 krad(Si), 30 krad(Si) |
| HDR Dose Rate | 157.96 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 |

Updated RLAT Test Setup

[Figure D-1](#) shows the new bias that is used for all future RLAT. This bias reflects the typical use case where the device is not kept in low-power mode all the time, but instead switched between low-power and high-speed modes.

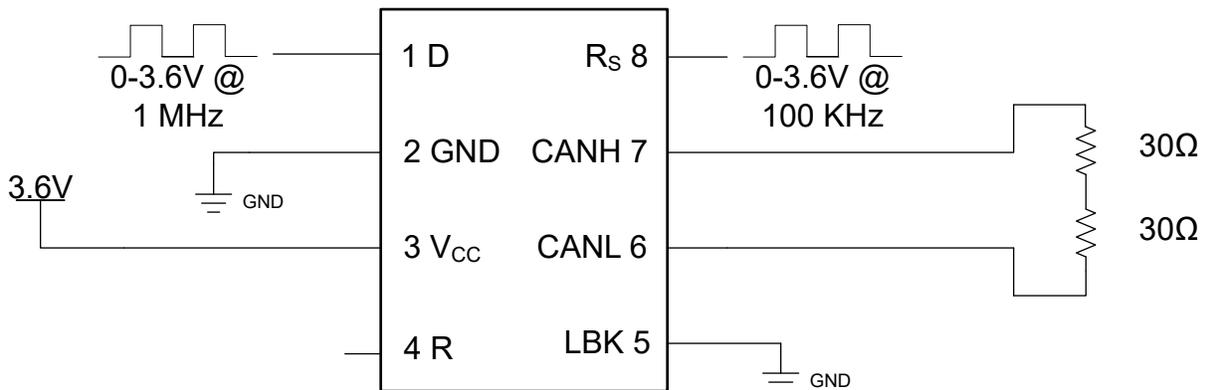


Figure D-1. Bias Diagram Used in TID Exposure

Updated RLAT Test Configuration and Condition

Table D-2 shows the device exposure information.

Table D-2. HDR Biased Device and Exposure Information

| HDR = 157.97 rad(Si)/s | | | |
|-----------------------------------|-----------|--------------|----------------|
| Total Samples: 5 Biased/TID level | | | |
| Exposure Levels: | | | |
| 0k | 10k | 20k | 30k |
| 1, 2 | 3,4,5,6,7 | 8,9,10,11,12 | 13,14,15,16,17 |

Tested Parameters

The below datasheet parameters were tested and the test results are provided in the section below.

Table D-3. 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 | V(D) = 0V, V(RS) = 0V, see Figure 3-1 and Figure 3-2 | | 2.4 | VCC | V | VO_D_CH | |
| | | CANL | | | 0.5 | 1.25 | | VO_D_CL | |
| V _{OD(D)} | Differential output voltage (dominant) | V(D) = 0V, V(RS) = 0V, see Figure 3-1 and Figure 3-2 | 1.5 | 2 | 3 | V | VOD_D | | |
| | | V(D) = 0V, V(RS) = 0V, see Figure 3-2 and Figure 3-3 | 1.2 | 2 | 3 | | VOD_D_C | | |
| V _{OD} | Differential output voltage (recessive) | V(D) = 3V, V(RS) = 0V, see Figure 3-1 and Figure 3-2 | -120 | | 120 | mV | VOD_R | | |
| | | V(D) = 3V, V(RS) = 0V, no load | -0.5 | | 0.05 | V | VOD_R_N | | |
| I _{IH} | High-level input current | D, LBK | V(D) = 2V | | -30 | 30 | μA | IIH_D_PIN, IIH_LBK | |
| I _{IL} | Low-level input current | D, LBK | V(D) = 0.8V | | -30 | 30 | μA | IIL_D_PIN, IIL_LBK | |
| I _{OS} | Short-circuit output current | V(CANH) = -7V, CANL open, see Figure 3-4 | | | -250 | | mA | IOSN7V_CANH | |
| | | V(CANH) = 12V, CANL open, see Figure 3-4 | | | | 1 | | IOS12V_CANH | |
| | | V(CANL) = -7V, CANH open, see Figure 3-4 | | | -1 | | | IOSN7V_CANL | |
| | | V(CANL) = 12V, CANH open, see Figure 3-4 | | | | 250 | | IOS12V_CANL | |
| I _{CC} | Supply current | Standby | V(RS) = VCC, V(D) = VCC, V(LBK) = 0V | | 200 | 700 | μA | ICC_STANDBY | |
| | | Dominant | V(D) = 0V, no load, V(LBK) = 0V, RS = 0V | | | 6 | | mA | ICC_DOMINANT |
| | | Recessive | V(D) = VCC, no load, V(LBK) = 0V, V(RS) = 0V | | | 6 | | | ICC_RECESSIVE |

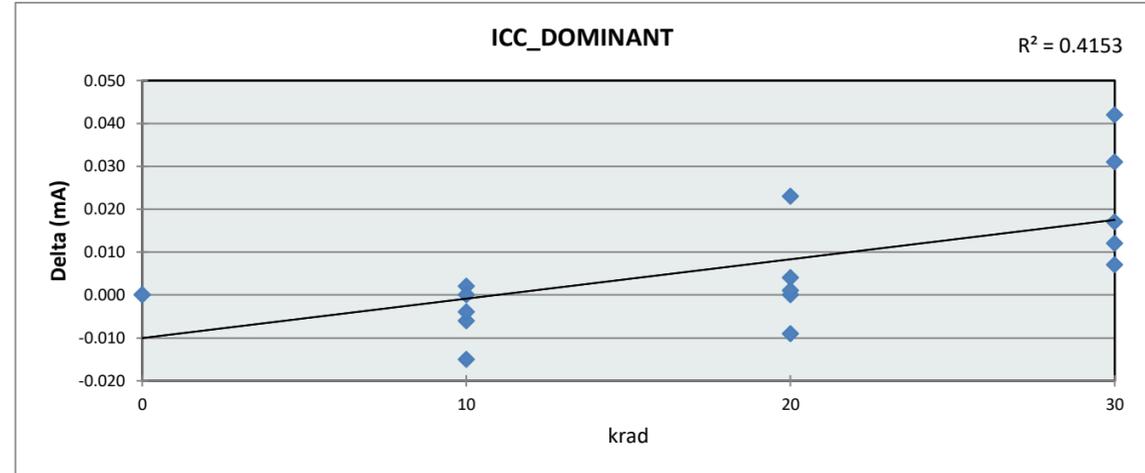
Table D-4. SN55HVD233-SEP Data Sheet Parameters with Test Numbers - Receiver Electrical Characteristics

| PARAMETER | TEST CONDITIONS | | Data sheet Lit# SLLSF98 December 2018 | | | | Test # or Name |
|--|--|---|--|------|---------|------|----------------|
| | | | MIN | TYP | MAX | UNIT | |
| V_{IT+} Positive-going input threshold voltage | $V(LBK) = 0V$, see Table 3-3 | | 750 | 900 | | mV | VIT+ |
| V_{IT-} Negative-going input threshold voltage | | | 500 | 650 | | mV | VIT- |
| V_{hys} Hysteresis voltage ($V_{IT+} - V_{IT-}$) | | | 100 | | | mV | VIT_HYS |
| V_{OH} High-level output voltage | $I_O = -4\text{ mA}$ | | 2.4 | | | V | VOH |
| V_{OL} Low-level output voltage | $I_O = 4\text{ mA}$ | | | 0.4 | | V | VOL |
| I_I Bus input current | $V_{(CANH)}$ or $V_{(CANL)} = 12V$ | Other bus pin = 0V, $V(D) = 3V$, $V(LBK) = 0V$, $V(RS) = 0V$ | 150 | 500 | μA | | IIHL_CANHL_12V |
| | $V_{(CANH)}$ or $V_{(CANL)} = 12V$, $VCC = 0V$ | | 150 | 600 | | | IIHL_CANLH_12V |
| | CANH or CANL = -7V | | -610 | -100 | | | IIHL_CANHL_N7V |
| | CANH or CANL = -7V, $VCC = 0V$ | | -450 | -100 | | | IIHL_CANLH_N7V |

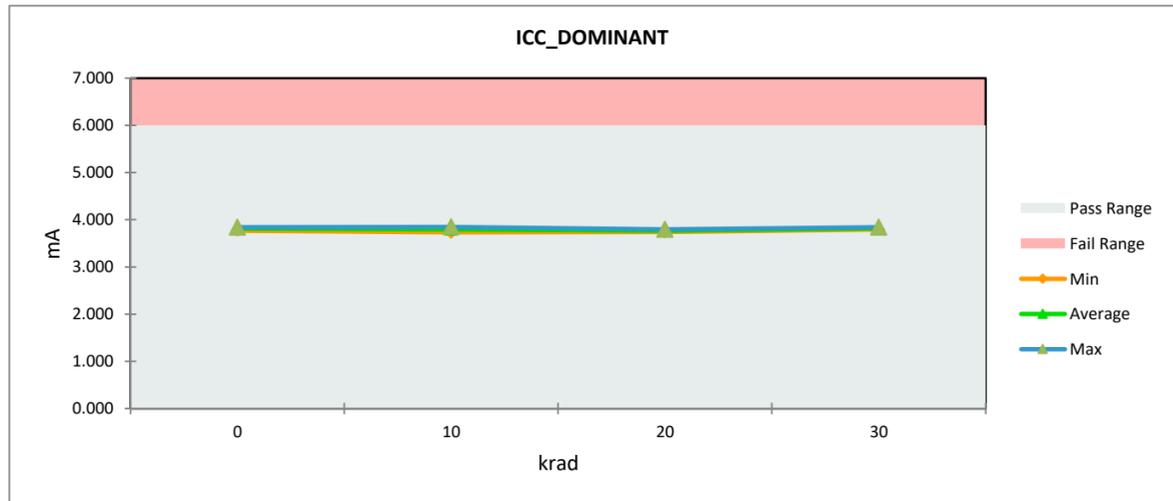
E Full TID Report Graphs and Tables: RLAT Update

TID Report SN55HVD233-SEP

| ICC_DOMINANT | | | | | | |
|--------------|----------|------------|-------------|--------|---------|------------------|
| Units | | mA | | | | |
| Max Limit | | 6 | | | | |
| Min Limit | | 0 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 3.772 | 3.772 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 3.823 | 3.823 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 3.844 | 3.838 | -0.006 | -0.16% | 0.10% |
| 10 | 4 | 3.835 | 3.831 | -0.004 | -0.10% | 0.07% |
| 10 | 5 | 3.749 | 3.734 | -0.015 | -0.40% | 0.25% |
| 10 | 6 | 3.810 | 3.812 | 0.002 | 0.05% | 0.03% |
| 10 | 7 | 3.752 | 3.752 | 0.000 | 0.00% | 0.00% |
| 20 | 8 | 3.800 | 3.823 | 0.023 | 0.61% | 0.38% |
| 20 | 9 | 3.842 | 3.846 | 0.004 | 0.10% | 0.07% |
| 20 | 10 | 3.772 | 3.772 | 0.000 | 0.00% | 0.00% |
| 20 | 11 | 3.782 | 3.773 | -0.009 | -0.24% | 0.15% |
| 20 | 12 | 3.739 | 3.740 | 0.001 | 0.03% | 0.02% |
| 30 | 13 | 3.749 | 3.756 | 0.007 | 0.19% | 0.12% |
| 30 | 14 | 3.764 | 3.795 | 0.031 | 0.82% | 0.52% |
| 30 | 15 | 3.777 | 3.794 | 0.017 | 0.45% | 0.28% |
| 30 | 16 | 3.809 | 3.821 | 0.012 | 0.32% | 0.20% |
| 30 | 17 | 3.800 | 3.842 | 0.042 | 1.11% | 0.70% |
| Max | | 3.844 | 3.846 | 0.002 | 1.11% | 0.70% |
| Average | | 3.789 | 3.796 | 0.006 | 0.16% | 0.17% |
| Min | | 3.739 | 3.734 | -0.005 | -0.40% | 0.00% |
| Std Dev | | 0.034 | 0.037 | 0.003 | 0.39% | 0.20% |

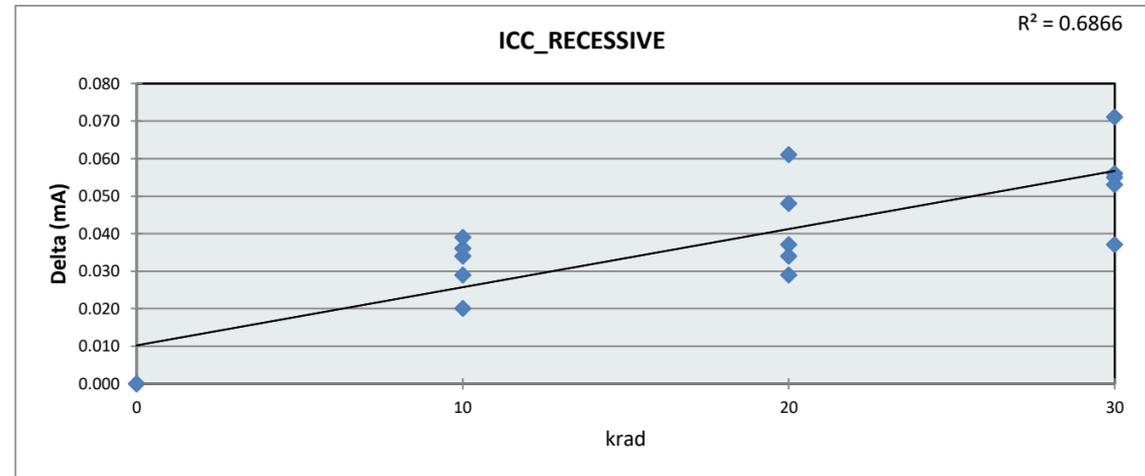


| ICC_DOMINANT | | | | |
|--------------|-------|-------|-------|-------|
| Units | | mA | | |
| Max Limit | | 6 | | |
| Min Limit | | 0 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 0.000 | 0.000 | 0.000 | 0.000 |
| Min | 3.772 | 3.734 | 3.740 | 3.794 |
| Average | 3.816 | 3.793 | 3.767 | 3.819 |
| Max | 3.838 | 3.846 | 3.795 | 3.842 |
| UL | 6.000 | 6.000 | 6.000 | 6.000 |

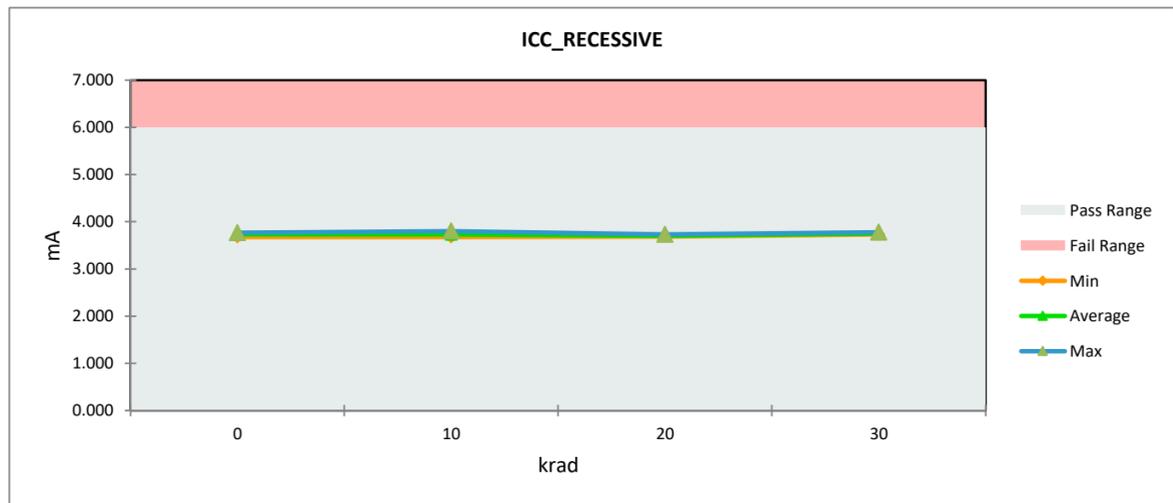


TID Report SN55HVD233-SEP

| ICC_RECESSIVE | | | | | | |
|---------------|----------|------------|-------------|-------|---------|------------------|
| Units | | mA | | | | |
| Max Limit | | 6 | | | | |
| Min Limit | | 0 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 3.675 | 3.675 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 3.720 | 3.720 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 3.729 | 3.758 | 0.029 | 0.78% | 0.48% |
| 10 | 4 | 3.734 | 3.768 | 0.034 | 0.91% | 0.57% |
| 10 | 5 | 3.655 | 3.675 | 0.020 | 0.55% | 0.33% |
| 10 | 6 | 3.708 | 3.744 | 0.036 | 0.97% | 0.60% |
| 10 | 7 | 3.656 | 3.695 | 0.039 | 1.07% | 0.65% |
| 20 | 8 | 3.692 | 3.753 | 0.061 | 1.65% | 1.02% |
| 20 | 9 | 3.763 | 3.800 | 0.037 | 0.98% | 0.62% |
| 20 | 10 | 3.676 | 3.705 | 0.029 | 0.79% | 0.48% |
| 20 | 11 | 3.668 | 3.702 | 0.034 | 0.93% | 0.57% |
| 20 | 12 | 3.637 | 3.685 | 0.048 | 1.32% | 0.80% |
| 30 | 13 | 3.652 | 3.689 | 0.037 | 1.01% | 0.62% |
| 30 | 14 | 3.676 | 3.732 | 0.056 | 1.52% | 0.93% |
| 30 | 15 | 3.676 | 3.731 | 0.055 | 1.50% | 0.92% |
| 30 | 16 | 3.687 | 3.740 | 0.053 | 1.44% | 0.88% |
| 30 | 17 | 3.703 | 3.774 | 0.071 | 1.92% | 1.18% |
| Max | | 3.763 | 3.800 | 0.037 | 1.92% | 1.18% |
| Average | | 3.689 | 3.726 | 0.038 | 1.02% | 0.63% |
| Min | | 3.637 | 3.675 | 0.038 | 0.00% | 0.00% |
| Std Dev | | 0.034 | 0.037 | 0.004 | 0.52% | 0.32% |



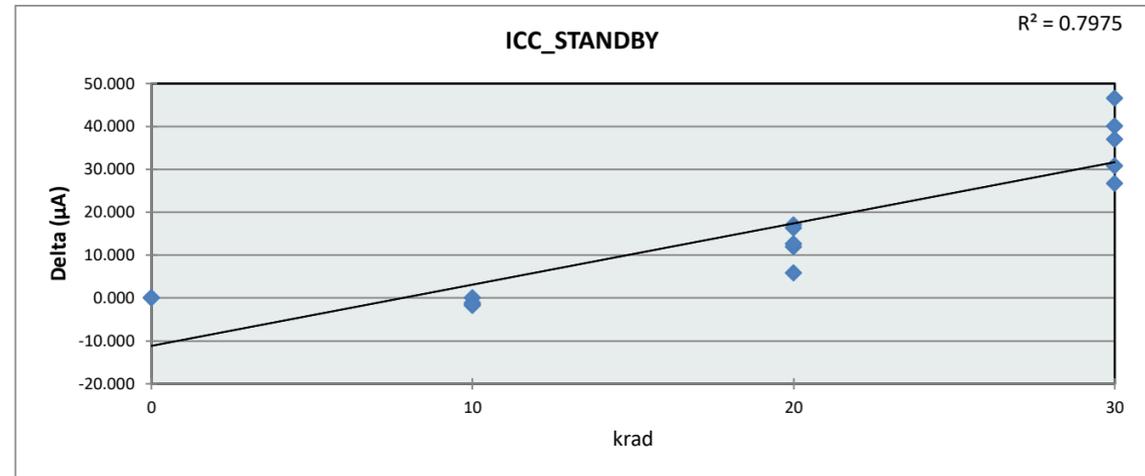
| ICC_RECESSIVE | | | | |
|---------------|-------|-------|-------|-------|
| Units | | mA | | |
| Max Limit | | 6 | | |
| Min Limit | | 0 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 0.000 | 0.000 | 0.000 | 0.000 |
| Min | 3.675 | 3.675 | 3.685 | 3.731 |
| Average | 3.730 | 3.733 | 3.703 | 3.748 |
| Max | 3.768 | 3.800 | 3.732 | 3.774 |
| UL | 6.000 | 6.000 | 6.000 | 6.000 |



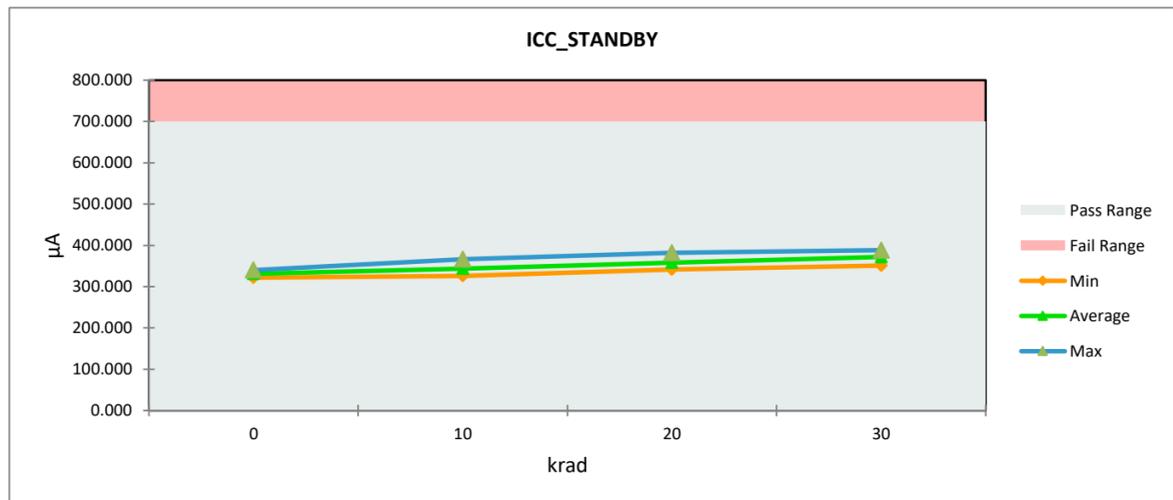
TID Report

SN55HVD233-SEP

| ICC_STANDBY | | | | | | |
|-------------|----------|------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | 700 | | | | |
| Min Limit | | 0 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 339.900 | 339.900 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 333.600 | 333.600 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 330.800 | 329.000 | -1.800 | -0.54% | 0.26% |
| 10 | 4 | 322.800 | 321.600 | -1.200 | -0.37% | 0.17% |
| 10 | 5 | 345.700 | 345.700 | 0.000 | 0.00% | 0.00% |
| 10 | 6 | 341.000 | 339.400 | -1.600 | -0.47% | 0.23% |
| 10 | 7 | 327.500 | 325.900 | -1.600 | -0.49% | 0.23% |
| 20 | 8 | 325.000 | 342.000 | 17.000 | 5.23% | 2.43% |
| 20 | 9 | 349.700 | 366.000 | 16.300 | 4.66% | 2.33% |
| 20 | 10 | 336.200 | 348.100 | 11.900 | 3.54% | 1.70% |
| 20 | 11 | 335.900 | 341.700 | 5.800 | 1.73% | 0.83% |
| 20 | 12 | 333.200 | 345.800 | 12.600 | 3.78% | 1.80% |
| 30 | 13 | 343.500 | 374.300 | 30.800 | 8.97% | 4.40% |
| 30 | 14 | 335.200 | 381.800 | 46.600 | 13.90% | 6.66% |
| 30 | 15 | 336.400 | 376.500 | 40.100 | 11.92% | 5.73% |
| 30 | 16 | 324.200 | 350.900 | 26.700 | 8.24% | 3.81% |
| 30 | 17 | 351.300 | 388.300 | 37.000 | 10.53% | 5.29% |
| Max | | 351.300 | 388.300 | 37.000 | 13.90% | 6.66% |
| Average | | 335.994 | 350.029 | 14.035 | 4.15% | 2.11% |
| Min | | 322.800 | 321.600 | -1.200 | -0.54% | 0.00% |
| Std Dev | | 8.517 | 20.174 | 11.658 | 4.88% | 2.26% |



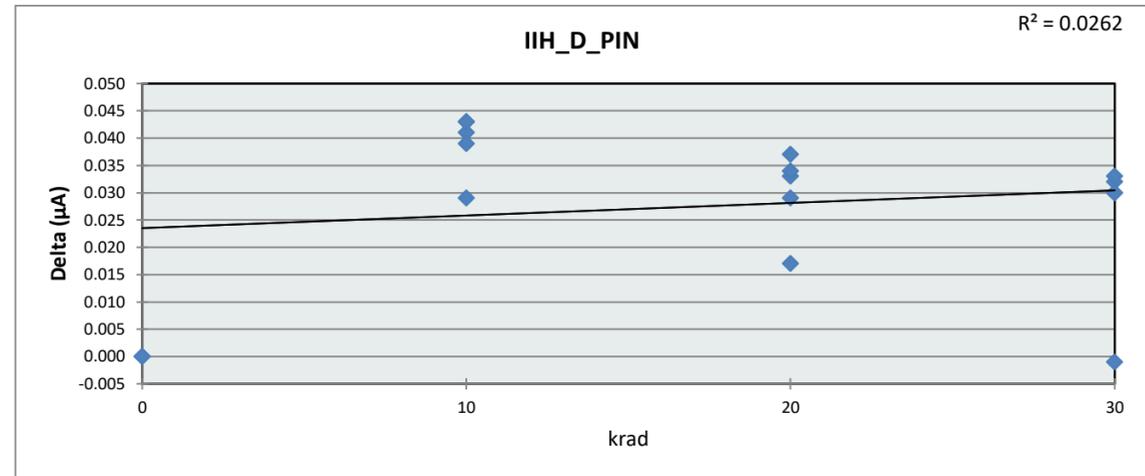
| ICC_STANDBY | | | | |
|-------------|---------|---------|---------|---------|
| Units | | μA | | |
| Max Limit | | 700 | | |
| Min Limit | | 0 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 0.000 | 0.000 | 0.000 | 0.000 |
| Min | 321.600 | 325.900 | 341.700 | 350.900 |
| Average | 331.025 | 343.800 | 358.340 | 371.900 |
| Max | 339.900 | 366.000 | 381.800 | 388.300 |
| UL | 700.000 | 700.000 | 700.000 | 700.000 |



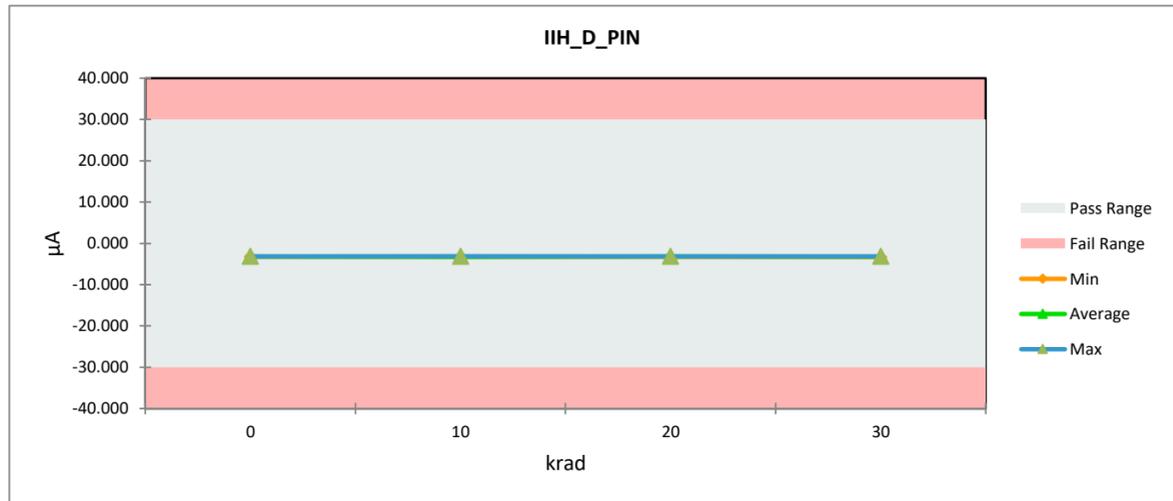
TID Report

SN55HVD233-SEP

| | | IIH_D_PIN | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | 30 | | | | |
| Min Limit | | -30 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -3.245 | -3.245 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -3.155 | -3.155 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -3.224 | -3.183 | 0.041 | -1.27% | 0.07% |
| 10 | 4 | -3.181 | -3.138 | 0.043 | -1.35% | 0.07% |
| 10 | 5 | -3.330 | -3.287 | 0.043 | -1.29% | 0.07% |
| 10 | 6 | -3.276 | -3.237 | 0.039 | -1.19% | 0.07% |
| 10 | 7 | -3.157 | -3.128 | 0.029 | -0.92% | 0.05% |
| 20 | 8 | -3.177 | -3.160 | 0.017 | -0.54% | 0.03% |
| 20 | 9 | -3.295 | -3.262 | 0.033 | -1.00% | 0.05% |
| 20 | 10 | -3.235 | -3.198 | 0.037 | -1.14% | 0.06% |
| 20 | 11 | -3.210 | -3.176 | 0.034 | -1.06% | 0.06% |
| 20 | 12 | -3.171 | -3.142 | 0.029 | -0.91% | 0.05% |
| 30 | 13 | -3.348 | -3.316 | 0.032 | -0.96% | 0.05% |
| 30 | 14 | -3.259 | -3.226 | 0.033 | -1.01% | 0.05% |
| 30 | 15 | -3.205 | -3.175 | 0.030 | -0.94% | 0.05% |
| 30 | 16 | -3.184 | -3.154 | 0.030 | -0.94% | 0.05% |
| 30 | 17 | -3.322 | -3.323 | -0.001 | 0.03% | 0.00% |
| Max | | -3.155 | -3.128 | 0.027 | 0.03% | 0.07% |
| Average | | -3.234 | -3.206 | 0.028 | -0.85% | 0.05% |
| Min | | -3.348 | -3.323 | 0.025 | -1.35% | 0.00% |
| Std Dev | | 0.062 | 0.063 | 0.000 | 0.45% | 0.02% |



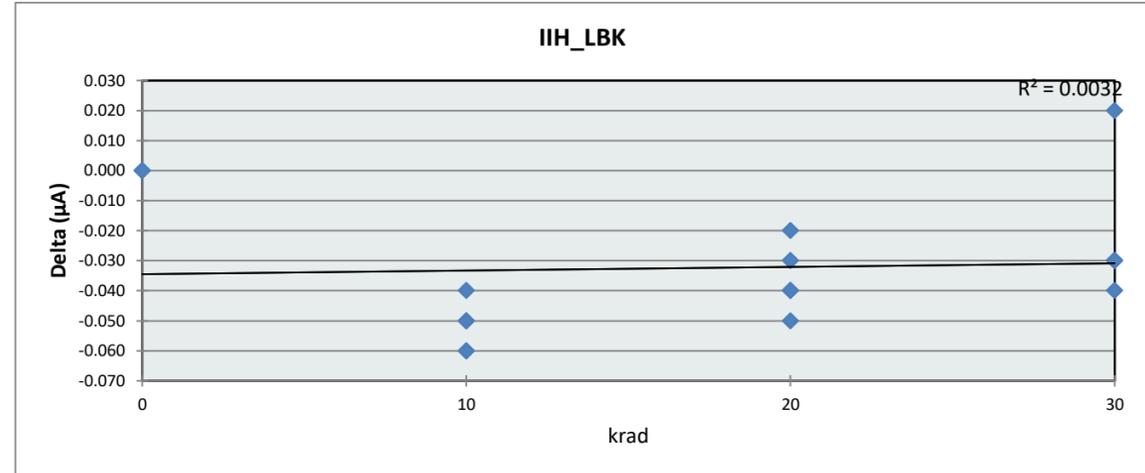
| | | IIH_D_PIN | | | |
|-----------|--|-----------|---------|---------|---------|
| Units | | μA | | | |
| Max Limit | | 30 | | | |
| Min Limit | | -30 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | -30.000 | -30.000 | -30.000 | -30.000 |
| Min | | -3.245 | -3.287 | -3.316 | -3.323 |
| Average | | -3.180 | -3.215 | -3.212 | -3.217 |
| Max | | -3.138 | -3.128 | -3.142 | -3.154 |
| UL | | 30.000 | 30.000 | 30.000 | 30.000 |



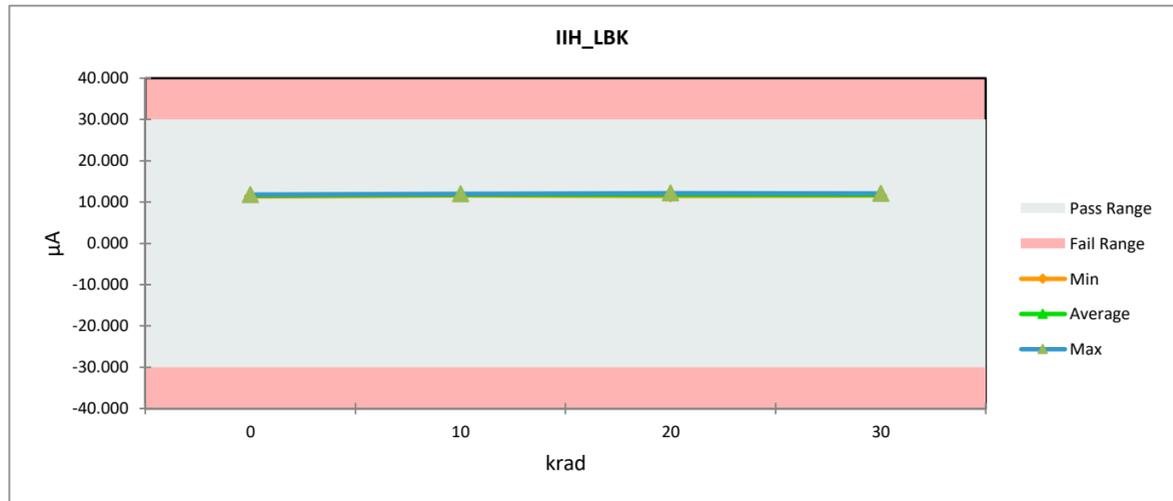
TID Report

SN55HVD233-SEP

| IIH_LBK | | | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | 30 | | | | |
| Min Limit | | -30 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 11.800 | 11.800 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 11.570 | 11.570 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 11.730 | 11.670 | -0.060 | -0.51% | 0.10% |
| 10 | 4 | 11.390 | 11.340 | -0.050 | -0.44% | 0.08% |
| 10 | 5 | 12.080 | 12.020 | -0.060 | -0.50% | 0.10% |
| 10 | 6 | 11.900 | 11.850 | -0.050 | -0.42% | 0.08% |
| 10 | 7 | 11.630 | 11.590 | -0.040 | -0.34% | 0.07% |
| 20 | 8 | 11.630 | 11.610 | -0.020 | -0.17% | 0.03% |
| 20 | 9 | 11.930 | 11.890 | -0.040 | -0.34% | 0.07% |
| 20 | 10 | 11.940 | 11.890 | -0.050 | -0.42% | 0.08% |
| 20 | 11 | 11.710 | 11.670 | -0.040 | -0.34% | 0.07% |
| 20 | 12 | 11.490 | 11.460 | -0.030 | -0.26% | 0.05% |
| 30 | 13 | 12.180 | 12.140 | -0.040 | -0.33% | 0.07% |
| 30 | 14 | 11.760 | 11.730 | -0.030 | -0.26% | 0.05% |
| 30 | 15 | 11.670 | 11.640 | -0.030 | -0.26% | 0.05% |
| 30 | 16 | 11.550 | 11.520 | -0.030 | -0.26% | 0.05% |
| 30 | 17 | 12.070 | 12.090 | 0.020 | 0.17% | 0.03% |
| Max | | 12.180 | 12.140 | -0.040 | 0.17% | 0.10% |
| Average | | 11.766 | 11.734 | -0.032 | -0.27% | 0.06% |
| Min | | 11.390 | 11.340 | -0.050 | -0.51% | 0.00% |
| Std Dev | | 0.222 | 0.223 | 0.001 | 0.18% | 0.03% |

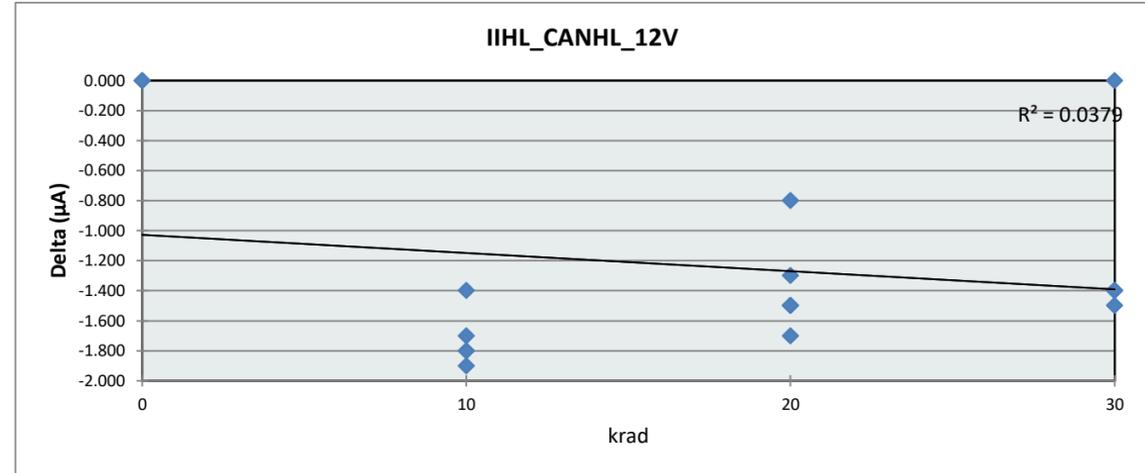


| IIH_LBK | | | | |
|-----------|---------|---------|---------|---------|
| Units | | μA | | |
| Max Limit | | 30 | | |
| Min Limit | | -30 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | -30.000 | -30.000 | -30.000 | -30.000 |
| Min | 11.340 | 11.590 | 11.460 | 11.520 |
| Average | 11.595 | 11.792 | 11.778 | 11.750 |
| Max | 11.800 | 12.020 | 12.140 | 12.090 |
| UL | 30.000 | 30.000 | 30.000 | 30.000 |

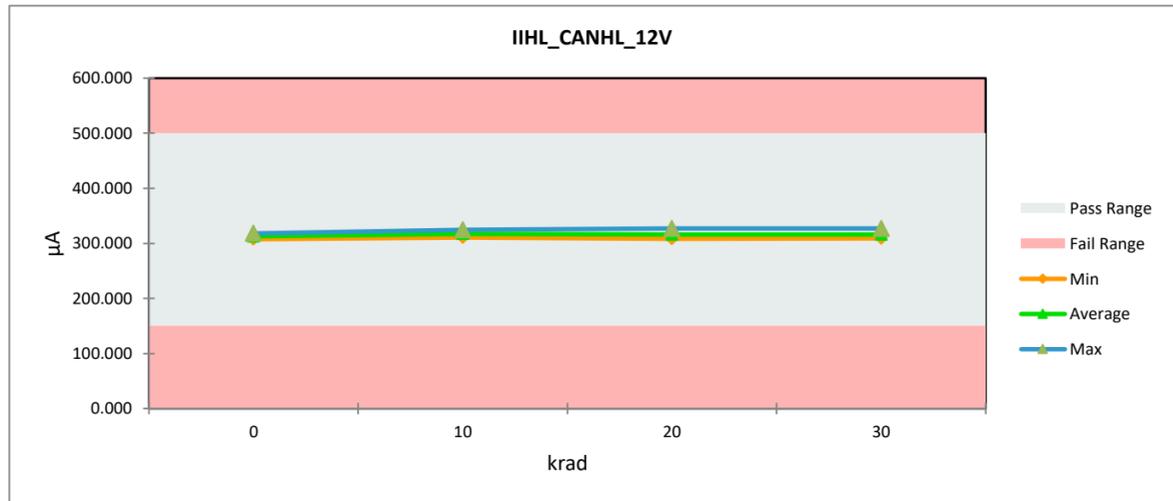


TID Report SN55HVD233-SEP

| IIHL_CANHL_12V | | | | | | |
|----------------|----------|------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | 500 | | | | |
| Min Limit | | 150 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 318.000 | 318.000 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 311.300 | 311.300 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 316.000 | 314.200 | -1.800 | -0.57% | 0.51% |
| 10 | 4 | 309.400 | 307.500 | -1.900 | -0.61% | 0.54% |
| 10 | 5 | 326.000 | 324.200 | -1.800 | -0.55% | 0.51% |
| 10 | 6 | 320.500 | 318.800 | -1.700 | -0.53% | 0.49% |
| 10 | 7 | 311.900 | 310.500 | -1.400 | -0.45% | 0.40% |
| 20 | 8 | 311.500 | 310.700 | -0.800 | -0.26% | 0.23% |
| 20 | 9 | 323.100 | 321.600 | -1.500 | -0.46% | 0.43% |
| 20 | 10 | 320.200 | 318.500 | -1.700 | -0.53% | 0.49% |
| 20 | 11 | 312.300 | 310.800 | -1.500 | -0.48% | 0.43% |
| 20 | 12 | 309.500 | 308.200 | -1.300 | -0.42% | 0.37% |
| 30 | 13 | 328.400 | 327.000 | -1.400 | -0.43% | 0.40% |
| 30 | 14 | 318.300 | 316.800 | -1.500 | -0.47% | 0.43% |
| 30 | 15 | 314.000 | 312.600 | -1.400 | -0.45% | 0.40% |
| 30 | 16 | 310.500 | 309.100 | -1.400 | -0.45% | 0.40% |
| 30 | 17 | 327.000 | 327.000 | 0.000 | 0.00% | 0.00% |
| Max | | 328.400 | 327.000 | -1.400 | 0.00% | 0.54% |
| Average | | 316.935 | 315.694 | -1.241 | -0.39% | 0.35% |
| Min | | 309.400 | 307.500 | -1.900 | -0.61% | 0.00% |
| Std Dev | | 6.376 | 6.426 | 0.050 | 0.20% | 0.18% |



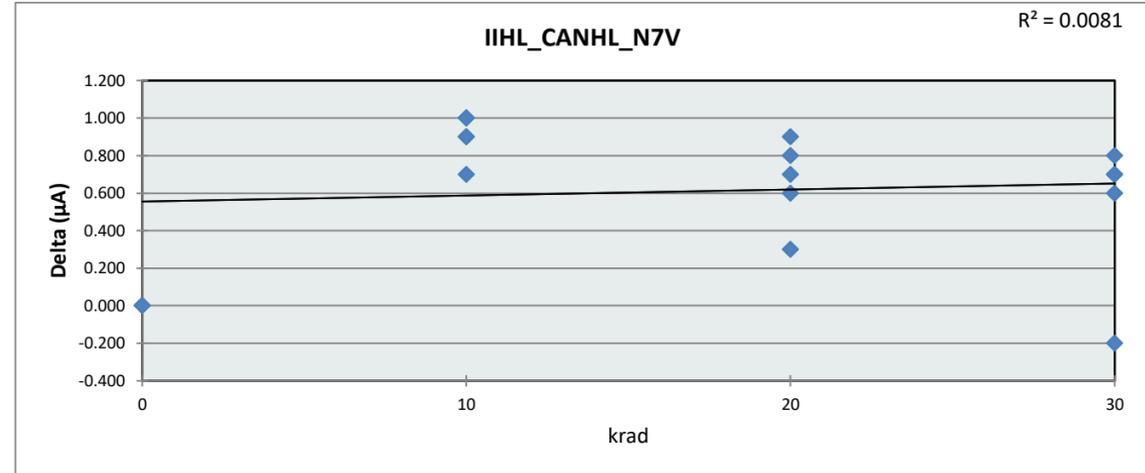
| IIHL_CANHL_12V | | | | |
|----------------|---------|---------|---------|---------|
| Units | | μA | | |
| Max Limit | | 500 | | |
| Min Limit | | 150 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 150.000 | 150.000 | 150.000 | 150.000 |
| Min | 307.500 | 310.500 | 308.200 | 309.100 |
| Average | 312.750 | 317.160 | 316.260 | 316.233 |
| Max | 318.000 | 324.200 | 327.000 | 327.000 |
| UL | 500.000 | 500.000 | 500.000 | 500.000 |



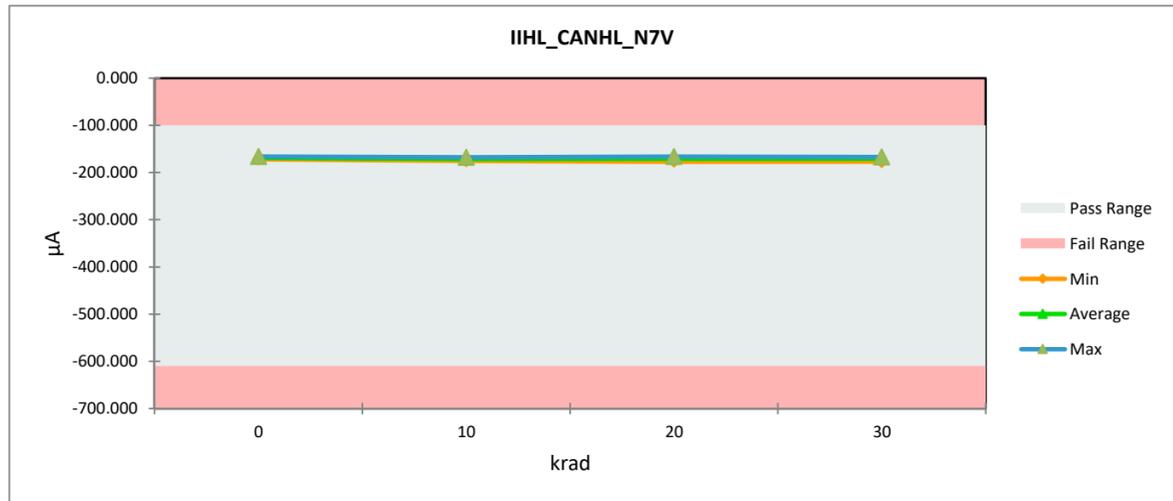
TID Report

SN55HVD233-SEP

| IIHL_CANHL_N7V | | | | | | |
|----------------|----------|------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | -100 | | | | |
| Min Limit | | -610 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -171.900 | -171.900 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -168.100 | -168.100 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -170.600 | -169.700 | 0.900 | -0.53% | 0.18% |
| 10 | 4 | -167.100 | -166.100 | 1.000 | -0.60% | 0.20% |
| 10 | 5 | -176.100 | -175.100 | 1.000 | -0.57% | 0.20% |
| 10 | 6 | -173.200 | -172.300 | 0.900 | -0.52% | 0.18% |
| 10 | 7 | -168.400 | -167.700 | 0.700 | -0.42% | 0.14% |
| 20 | 8 | -168.200 | -167.900 | 0.300 | -0.18% | 0.06% |
| 20 | 9 | -174.500 | -173.800 | 0.700 | -0.40% | 0.14% |
| 20 | 10 | -173.000 | -172.100 | 0.900 | -0.52% | 0.18% |
| 20 | 11 | -168.700 | -167.900 | 0.800 | -0.47% | 0.16% |
| 20 | 12 | -167.200 | -166.600 | 0.600 | -0.36% | 0.12% |
| 30 | 13 | -177.400 | -176.700 | 0.700 | -0.39% | 0.14% |
| 30 | 14 | -172.000 | -171.200 | 0.800 | -0.47% | 0.16% |
| 30 | 15 | -169.600 | -168.900 | 0.700 | -0.41% | 0.14% |
| 30 | 16 | -167.700 | -167.100 | 0.600 | -0.36% | 0.12% |
| 30 | 17 | -176.600 | -176.800 | -0.200 | 0.11% | 0.04% |
| Max | | -167.100 | -166.100 | 1.000 | 0.11% | 0.20% |
| Average | | -171.194 | -170.582 | 0.612 | -0.36% | 0.12% |
| Min | | -177.400 | -176.800 | 0.600 | -0.60% | 0.00% |
| Std Dev | | 3.460 | 3.489 | 0.029 | 0.21% | 0.06% |

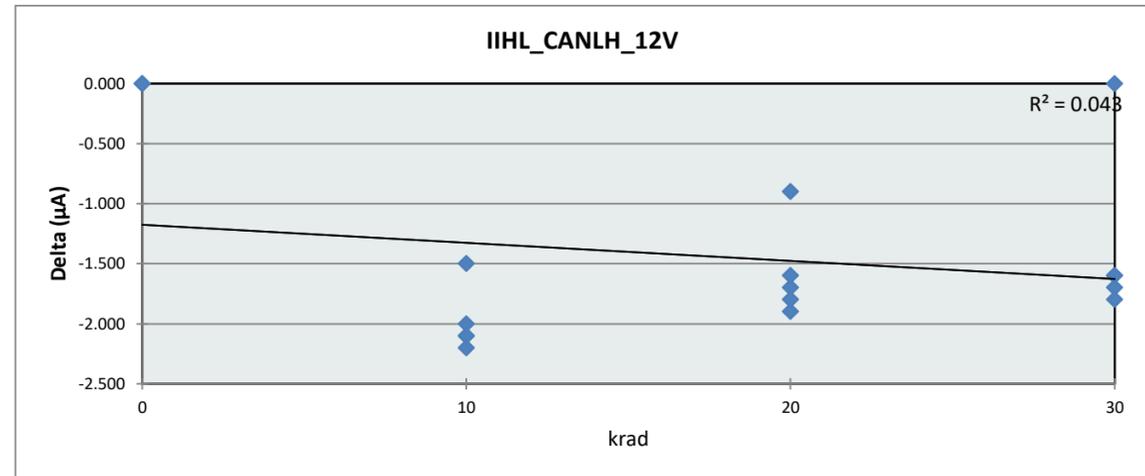


| IIHL_CANHL_N7V | | | | |
|----------------|----------|----------|----------|----------|
| Units | | μA | | |
| Max Limit | | -100 | | |
| Min Limit | | -610 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | -610.000 | -610.000 | -610.000 | -610.000 |
| Min | -171.900 | -175.100 | -176.700 | -176.800 |
| Average | -168.950 | -171.360 | -170.900 | -170.933 |
| Max | -166.100 | -167.700 | -166.600 | -167.100 |
| UL | -100.000 | -100.000 | -100.000 | -100.000 |

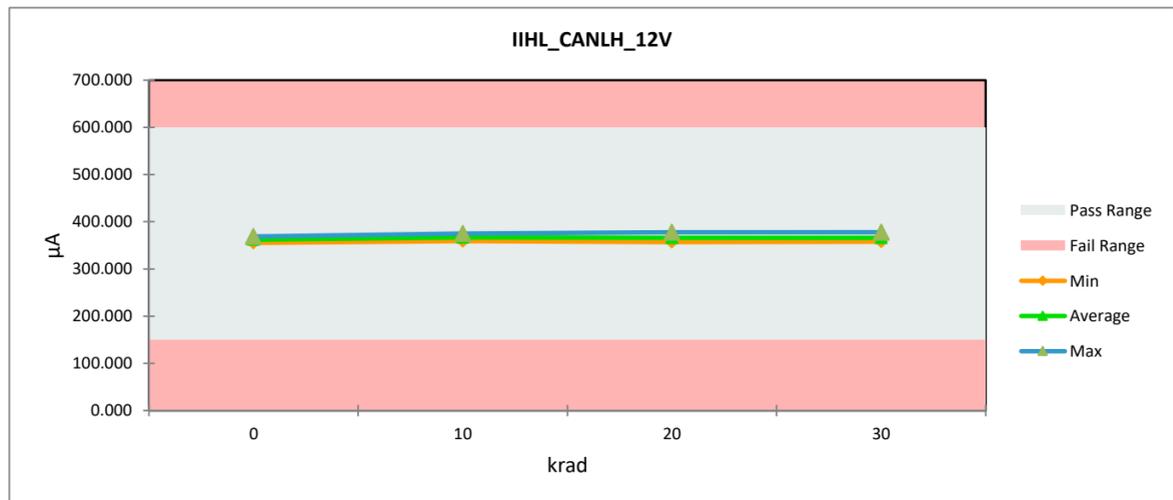


TID Report SN55HVD233-SEP

| IIHL_CANLH_12V | | | | | | |
|----------------|----------|------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | 600 | | | | |
| Min Limit | | 150 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 368.800 | 368.800 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 359.900 | 359.900 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 365.900 | 363.800 | -2.100 | -0.57% | 0.47% |
| 10 | 4 | 357.300 | 355.200 | -2.100 | -0.59% | 0.47% |
| 10 | 5 | 377.200 | 375.000 | -2.200 | -0.58% | 0.49% |
| 10 | 6 | 370.900 | 368.900 | -2.000 | -0.54% | 0.44% |
| 10 | 7 | 360.500 | 359.000 | -1.500 | -0.42% | 0.33% |
| 20 | 8 | 360.200 | 359.300 | -0.900 | -0.25% | 0.20% |
| 20 | 9 | 374.200 | 372.500 | -1.700 | -0.45% | 0.38% |
| 20 | 10 | 370.600 | 368.700 | -1.900 | -0.51% | 0.42% |
| 20 | 11 | 361.100 | 359.300 | -1.800 | -0.50% | 0.40% |
| 20 | 12 | 358.200 | 356.600 | -1.600 | -0.45% | 0.36% |
| 30 | 13 | 379.400 | 377.700 | -1.700 | -0.45% | 0.38% |
| 30 | 14 | 368.800 | 367.000 | -1.800 | -0.49% | 0.40% |
| 30 | 15 | 363.300 | 361.700 | -1.600 | -0.44% | 0.36% |
| 30 | 16 | 359.300 | 357.700 | -1.600 | -0.45% | 0.36% |
| 30 | 17 | 377.800 | 377.800 | 0.000 | 0.00% | 0.00% |
| Max | | 379.400 | 377.800 | -1.600 | 0.00% | 0.49% |
| Average | | 366.671 | 365.229 | -1.441 | -0.39% | 0.32% |
| Min | | 357.300 | 355.200 | -2.100 | -0.59% | 0.00% |
| Std Dev | | 7.410 | 7.446 | 0.036 | 0.20% | 0.17% |



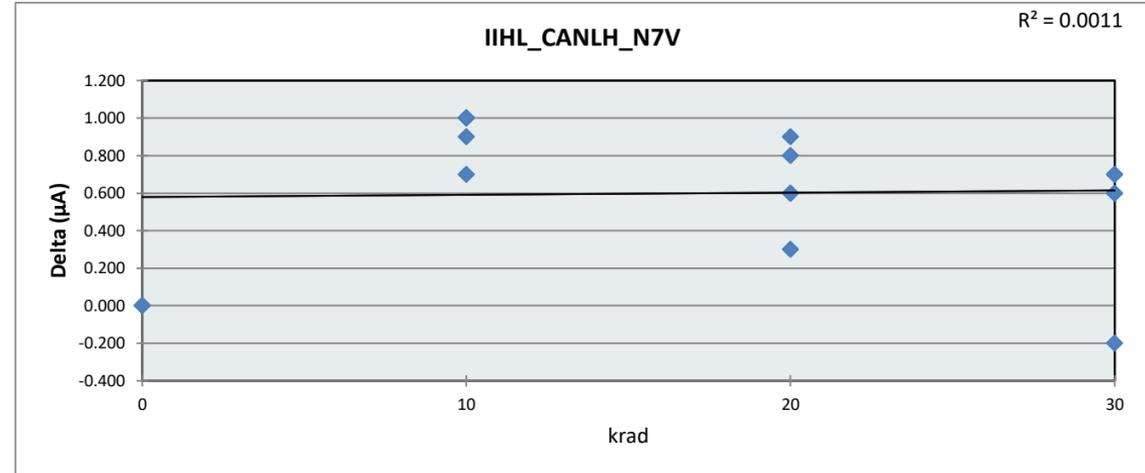
| IIHL_CANLH_12V | | | | |
|----------------|---------|---------|---------|---------|
| Units | | μA | | |
| Max Limit | | 600 | | |
| Min Limit | | 150 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 150.000 | 150.000 | 150.000 | 150.000 |
| Min | 355.200 | 359.000 | 356.600 | 357.700 |
| Average | 361.925 | 366.940 | 365.860 | 365.733 |
| Max | 368.800 | 375.000 | 377.700 | 377.800 |
| UL | 600.000 | 600.000 | 600.000 | 600.000 |



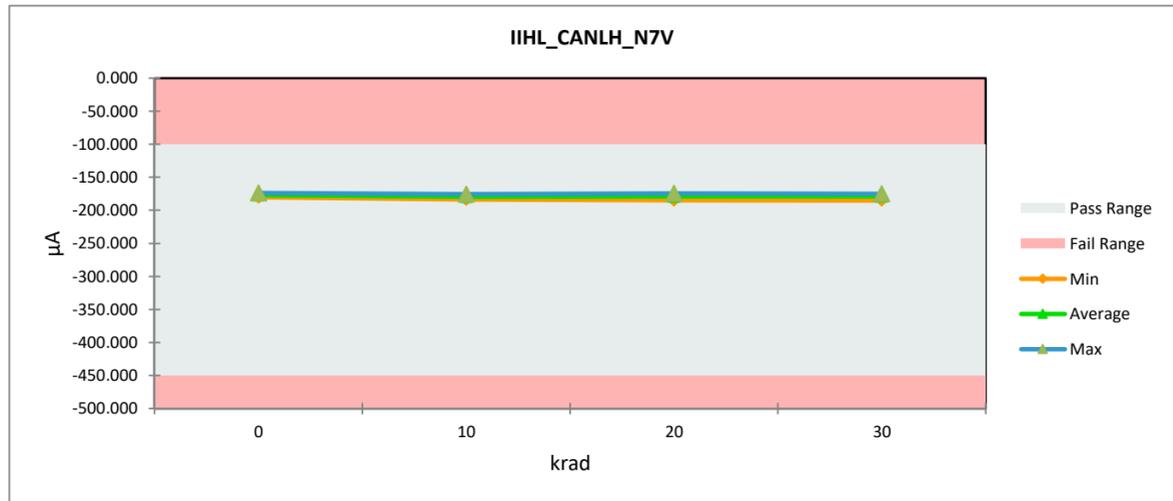
TID Report

SN55HVD233-SEP

| | | IIHL_CANLH_N7V | | | | |
|-----------|----------|----------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | -100 | | | | |
| Min Limit | | -450 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -180.300 | -180.300 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -176.100 | -176.100 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -178.600 | -177.600 | 1.000 | -0.56% | 0.29% |
| 10 | 4 | -174.800 | -173.800 | 1.000 | -0.57% | 0.29% |
| 10 | 5 | -184.600 | -183.600 | 1.000 | -0.54% | 0.29% |
| 10 | 6 | -181.300 | -180.400 | 0.900 | -0.50% | 0.26% |
| 10 | 7 | -176.300 | -175.600 | 0.700 | -0.40% | 0.20% |
| 20 | 8 | -176.000 | -175.700 | 0.300 | -0.17% | 0.09% |
| 20 | 9 | -182.800 | -182.200 | 0.600 | -0.33% | 0.17% |
| 20 | 10 | -181.400 | -180.500 | 0.900 | -0.50% | 0.26% |
| 20 | 11 | -176.500 | -175.700 | 0.800 | -0.45% | 0.23% |
| 20 | 12 | -175.000 | -174.400 | 0.600 | -0.34% | 0.17% |
| 30 | 13 | -185.700 | -185.100 | 0.600 | -0.32% | 0.17% |
| 30 | 14 | -180.000 | -179.400 | 0.600 | -0.33% | 0.17% |
| 30 | 15 | -177.500 | -176.800 | 0.700 | -0.39% | 0.20% |
| 30 | 16 | -175.600 | -174.900 | 0.700 | -0.40% | 0.20% |
| 30 | 17 | -185.000 | -185.200 | -0.200 | 0.11% | 0.06% |
| Max | | -174.800 | -173.800 | 1.000 | 0.11% | 0.29% |
| Average | | -179.265 | -178.665 | 0.600 | -0.34% | 0.18% |
| Min | | -185.700 | -185.200 | 0.500 | -0.57% | 0.00% |
| Std Dev | | 3.690 | 3.748 | 0.058 | 0.21% | 0.09% |



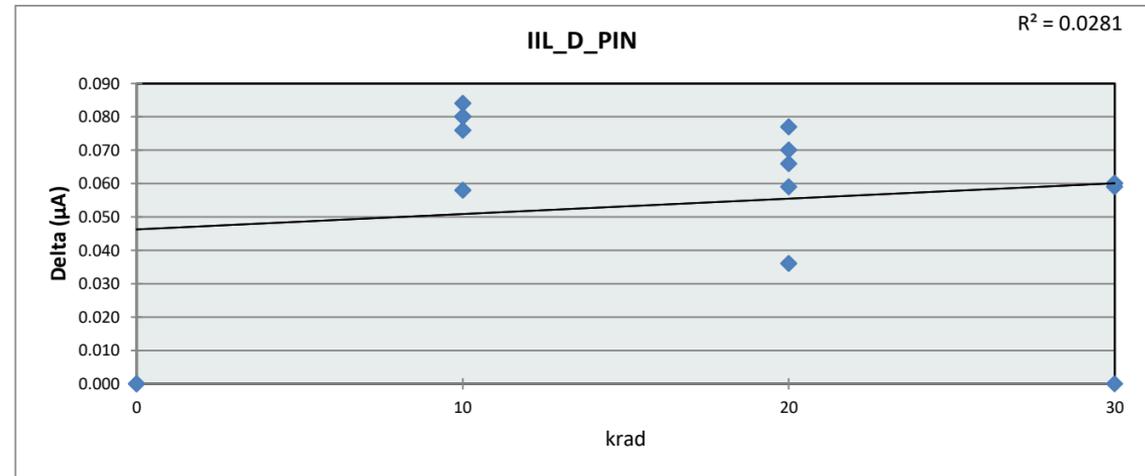
| | | IIHL_CANLH_N7V | | | |
|-----------|--|----------------|----------|----------|----------|
| Units | | μA | | | |
| Max Limit | | -100 | | | |
| Min Limit | | -450 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | -450.000 | -450.000 | -450.000 | -450.000 |
| Min | | -180.300 | -183.600 | -185.100 | -185.200 |
| Average | | -176.950 | -179.500 | -179.020 | -178.967 |
| Max | | -173.800 | -175.600 | -174.400 | -174.900 |
| UL | | -100.000 | -100.000 | -100.000 | -100.000 |



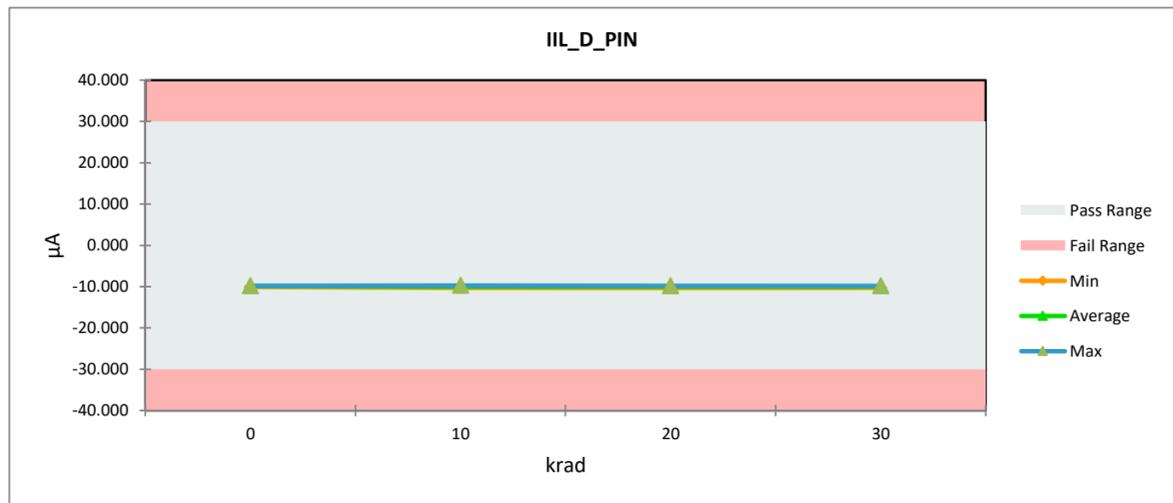
TID Report

SN55HVD233-SEP

| IIL_D_PIN | | | | | | |
|-----------|----------|------------|-------------|-------|---------|------------------|
| Units | μA | | | | | |
| Max Limit | 30 | | | | | |
| Min Limit | -30 | | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -10.070 | -10.070 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -9.779 | -9.779 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -10.010 | -9.934 | 0.076 | -0.76% | 0.13% |
| 10 | 4 | -9.868 | -9.784 | 0.084 | -0.85% | 0.14% |
| 10 | 5 | -10.350 | -10.270 | 0.080 | -0.77% | 0.13% |
| 10 | 6 | -10.180 | -10.100 | 0.080 | -0.79% | 0.13% |
| 10 | 7 | -9.791 | -9.733 | 0.058 | -0.59% | 0.10% |
| 20 | 8 | -9.859 | -9.823 | 0.036 | -0.37% | 0.06% |
| 20 | 9 | -10.240 | -10.170 | 0.070 | -0.68% | 0.12% |
| 20 | 10 | -10.050 | -9.973 | 0.077 | -0.77% | 0.13% |
| 20 | 11 | -9.962 | -9.896 | 0.066 | -0.66% | 0.11% |
| 20 | 12 | -9.837 | -9.778 | 0.059 | -0.60% | 0.10% |
| 30 | 13 | -10.410 | -10.350 | 0.060 | -0.58% | 0.10% |
| 30 | 14 | -10.120 | -10.060 | 0.060 | -0.59% | 0.10% |
| 30 | 15 | -9.943 | -9.884 | 0.059 | -0.59% | 0.10% |
| 30 | 16 | -9.880 | -9.820 | 0.060 | -0.61% | 0.10% |
| 30 | 17 | -10.330 | -10.330 | 0.000 | 0.00% | 0.00% |
| Max | | -9.779 | -9.733 | 0.046 | 0.00% | 0.14% |
| Average | | -10.040 | -9.986 | 0.054 | -0.54% | 0.09% |
| Min | | -10.410 | -10.350 | 0.060 | -0.85% | 0.00% |
| Std Dev | | 0.203 | 0.203 | 0.000 | 0.28% | 0.05% |



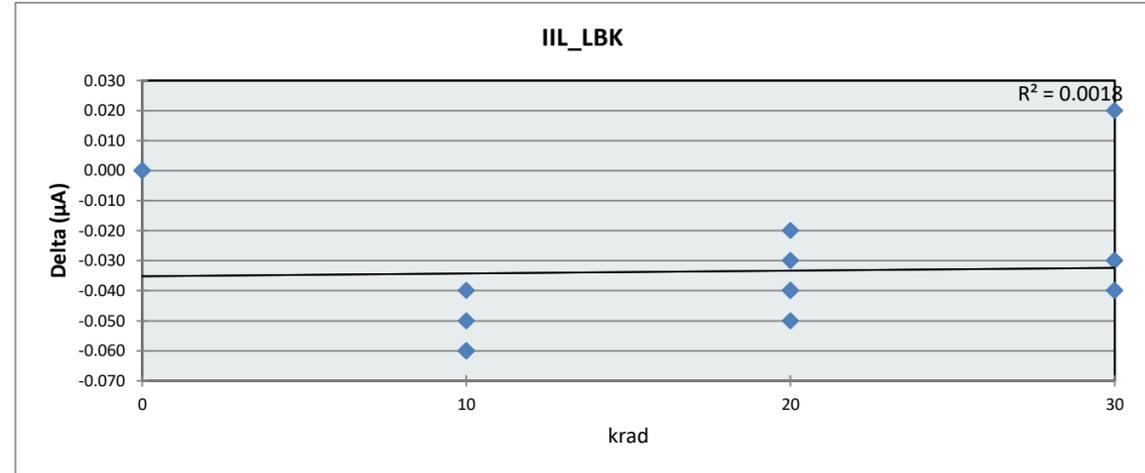
| IIL D PIN | | | | |
|-----------|---------|---------|---------|---------|
| Units | μA | | | |
| Max Limit | 30 | | | |
| Min Limit | -30 | | | |
| krad | 0 | 10 | 20 | 30 |
| LL | -30.000 | -30.000 | -30.000 | -30.000 |
| Min | -10.070 | -10.270 | -10.350 | -10.330 |
| Average | -9.892 | -10.019 | -10.011 | -10.011 |
| Max | -9.779 | -9.733 | -9.778 | -9.820 |
| UL | 30.000 | 30.000 | 30.000 | 30.000 |



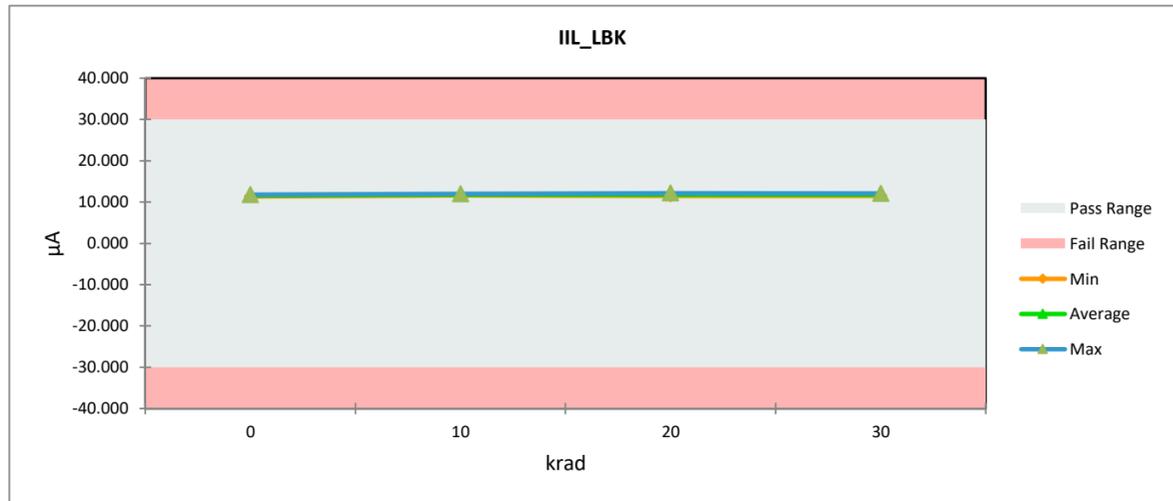
TID Report

SN55HVD233-SEP

| | | IIL_LBK | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | μA | | | | |
| Max Limit | | 30 | | | | |
| Min Limit | | -30 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 11.790 | 11.790 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 11.560 | 11.560 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 11.720 | 11.660 | -0.060 | -0.51% | 0.10% |
| 10 | 4 | 11.390 | 11.330 | -0.060 | -0.53% | 0.10% |
| 10 | 5 | 12.070 | 12.010 | -0.060 | -0.50% | 0.10% |
| 10 | 6 | 11.890 | 11.840 | -0.050 | -0.42% | 0.08% |
| 10 | 7 | 11.620 | 11.580 | -0.040 | -0.34% | 0.07% |
| 20 | 8 | 11.620 | 11.600 | -0.020 | -0.17% | 0.03% |
| 20 | 9 | 11.920 | 11.880 | -0.040 | -0.34% | 0.07% |
| 20 | 10 | 11.930 | 11.880 | -0.050 | -0.42% | 0.08% |
| 20 | 11 | 11.700 | 11.660 | -0.040 | -0.34% | 0.07% |
| 20 | 12 | 11.480 | 11.450 | -0.030 | -0.26% | 0.05% |
| 30 | 13 | 12.170 | 12.130 | -0.040 | -0.33% | 0.07% |
| 30 | 14 | 11.750 | 11.720 | -0.030 | -0.26% | 0.05% |
| 30 | 15 | 11.660 | 11.630 | -0.030 | -0.26% | 0.05% |
| 30 | 16 | 11.550 | 11.510 | -0.040 | -0.35% | 0.07% |
| 30 | 17 | 12.060 | 12.080 | 0.020 | 0.17% | 0.03% |
| Max | | 12.170 | 12.130 | -0.040 | 0.17% | 0.10% |
| Average | | 11.758 | 11.724 | -0.034 | -0.29% | 0.06% |
| Min | | 11.390 | 11.330 | -0.060 | -0.53% | 0.00% |
| Std Dev | | 0.221 | 0.223 | 0.002 | 0.19% | 0.03% |

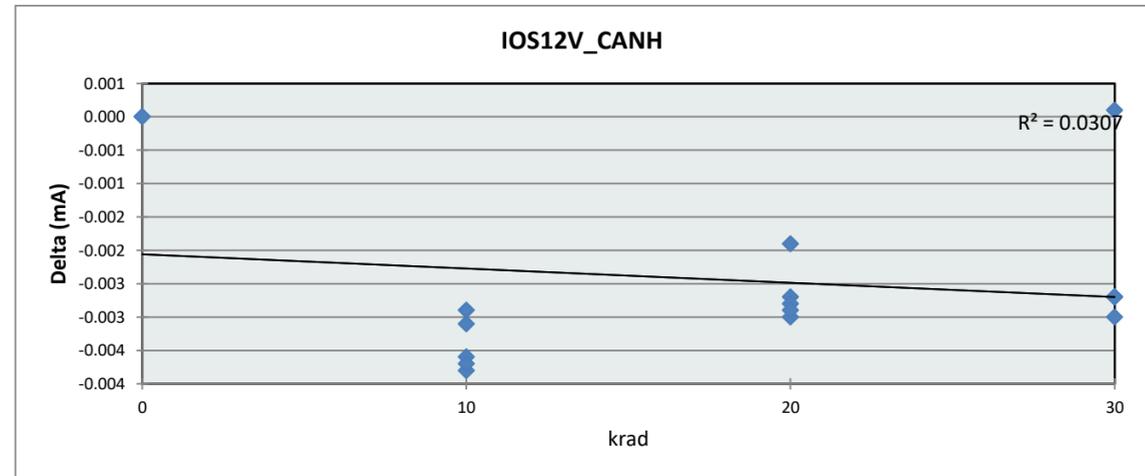


| | | IIL_LBK | | | |
|-----------|--|---------|---------|---------|---------|
| Units | | μA | | | |
| Max Limit | | 30 | | | |
| Min Limit | | -30 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | -30.000 | -30.000 | -30.000 | -30.000 |
| Min | | 11.330 | 11.580 | 11.450 | 11.510 |
| Average | | 11.585 | 11.782 | 11.768 | 11.740 |
| Max | | 11.790 | 12.010 | 12.130 | 12.080 |
| UL | | 30.000 | 30.000 | 30.000 | 30.000 |

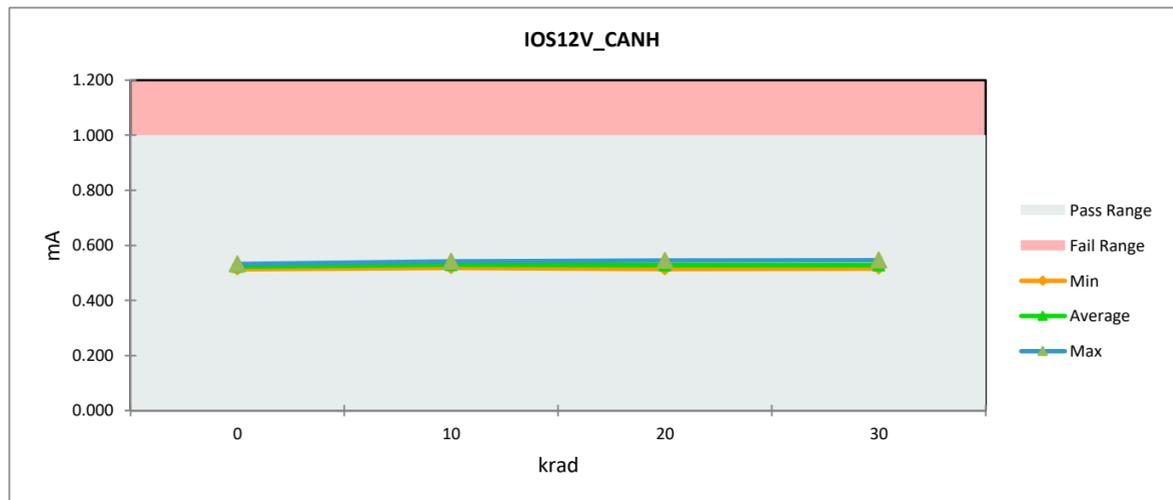


TID Report SN55HVD233-SEP

| IOS12V_CANH | | | | | | |
|-------------|----------|------------|-------------|--------|---------|------------------|
| Units | | mA | | | | |
| Max Limit | | 1 | | | | |
| Min Limit | | 0 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 0.532 | 0.532 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 0.520 | 0.520 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 0.528 | 0.525 | -0.004 | -0.68% | 0.36% |
| 10 | 4 | 0.517 | 0.513 | -0.004 | -0.74% | 0.38% |
| 10 | 5 | 0.545 | 0.541 | -0.004 | -0.68% | 0.37% |
| 10 | 6 | 0.536 | 0.533 | -0.003 | -0.58% | 0.31% |
| 10 | 7 | 0.521 | 0.518 | -0.003 | -0.56% | 0.29% |
| 20 | 8 | 0.520 | 0.519 | -0.002 | -0.37% | 0.19% |
| 20 | 9 | 0.540 | 0.537 | -0.003 | -0.50% | 0.27% |
| 20 | 10 | 0.535 | 0.532 | -0.003 | -0.56% | 0.30% |
| 20 | 11 | 0.522 | 0.519 | -0.003 | -0.54% | 0.28% |
| 20 | 12 | 0.517 | 0.514 | -0.003 | -0.56% | 0.29% |
| 30 | 13 | 0.548 | 0.545 | -0.003 | -0.49% | 0.27% |
| 30 | 14 | 0.532 | 0.529 | -0.003 | -0.56% | 0.30% |
| 30 | 15 | 0.525 | 0.522 | -0.003 | -0.51% | 0.27% |
| 30 | 16 | 0.519 | 0.516 | -0.003 | -0.52% | 0.27% |
| 30 | 17 | 0.546 | 0.546 | 0.000 | 0.02% | 0.01% |
| Max | | 0.548 | 0.546 | -0.002 | 0.02% | 0.38% |
| Average | | 0.529 | 0.527 | -0.002 | -0.46% | 0.24% |
| Min | | 0.517 | 0.513 | -0.004 | -0.74% | 0.00% |
| Std Dev | | 0.011 | 0.011 | 0.000 | 0.24% | 0.12% |



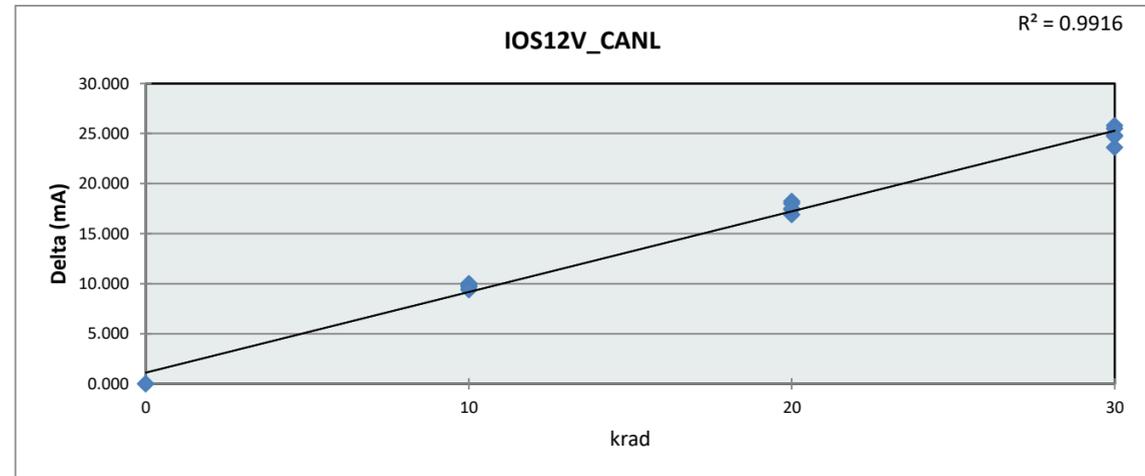
| IOS12V_CANH | | | | | |
|-------------|--|-------|-------|-------|-------|
| Units | | mA | | | |
| Max Limit | | 1 | | | |
| Min Limit | | 0 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | 0.000 | 0.000 | 0.000 | 0.000 |
| Min | | 0.513 | 0.518 | 0.514 | 0.516 |
| Average | | 0.522 | 0.529 | 0.528 | 0.528 |
| Max | | 0.532 | 0.541 | 0.545 | 0.546 |
| UL | | 1.000 | 1.000 | 1.000 | 1.000 |



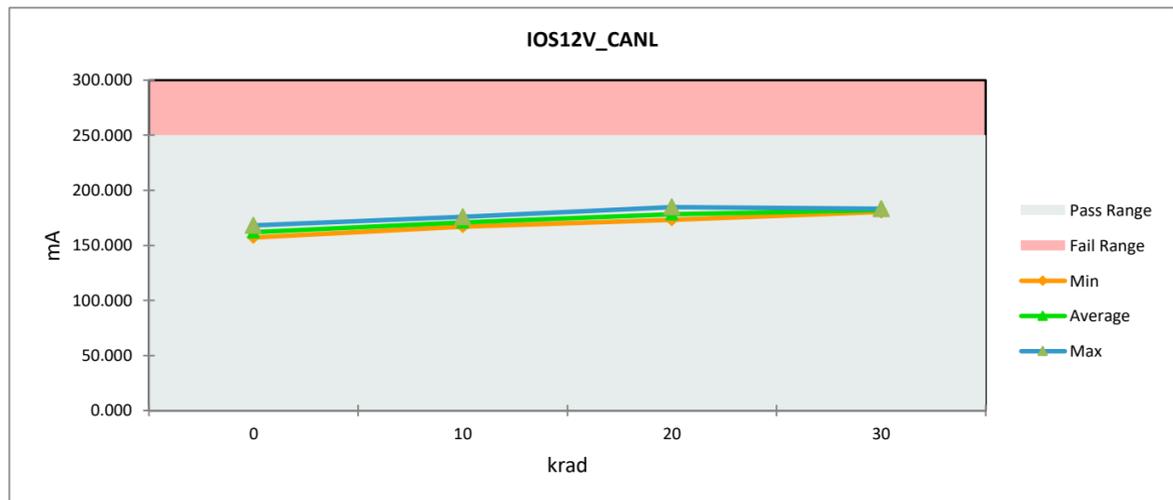
TID Report

SN55HVD233-SEP

| IOS12V_CANL | | | | | | |
|-------------|----------|------------|-------------|--------|---------|------------------|
| Units | mA | | | | | |
| Max Limit | 250 | | | | | |
| Min Limit | 0 | | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 157.100 | 157.100 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 157.500 | 157.500 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 158.300 | 168.100 | 9.800 | 6.19% | 3.92% |
| 10 | 4 | 155.400 | 165.100 | 9.700 | 6.24% | 3.88% |
| 10 | 5 | 158.500 | 168.500 | 10.000 | 6.31% | 4.00% |
| 10 | 6 | 158.100 | 167.500 | 9.400 | 5.95% | 3.76% |
| 10 | 7 | 157.600 | 167.000 | 9.400 | 5.96% | 3.76% |
| 20 | 8 | 157.400 | 174.800 | 17.400 | 11.05% | 6.96% |
| 20 | 9 | 157.700 | 175.900 | 18.200 | 11.54% | 7.28% |
| 20 | 10 | 158.900 | 176.900 | 18.000 | 11.33% | 7.20% |
| 20 | 11 | 156.100 | 173.000 | 16.900 | 10.83% | 6.76% |
| 20 | 12 | 156.000 | 173.500 | 17.500 | 11.22% | 7.00% |
| 30 | 13 | 158.900 | 184.700 | 25.800 | 16.24% | 10.32% |
| 30 | 14 | 157.600 | 183.100 | 25.500 | 16.18% | 10.20% |
| 30 | 15 | 157.600 | 182.400 | 24.800 | 15.74% | 9.92% |
| 30 | 16 | 156.700 | 180.300 | 23.600 | 15.06% | 9.44% |
| 30 | 17 | 158.600 | 183.300 | 24.700 | 15.57% | 9.88% |
| Max | | 158.900 | 184.700 | 25.800 | 16.24% | 10.32% |
| Average | | 157.529 | 172.865 | 15.335 | 9.73% | 6.13% |
| Min | | 155.400 | 157.100 | 1.700 | 0.00% | 0.00% |
| Std Dev | | 1.019 | 8.586 | 7.567 | 5.29% | 3.34% |



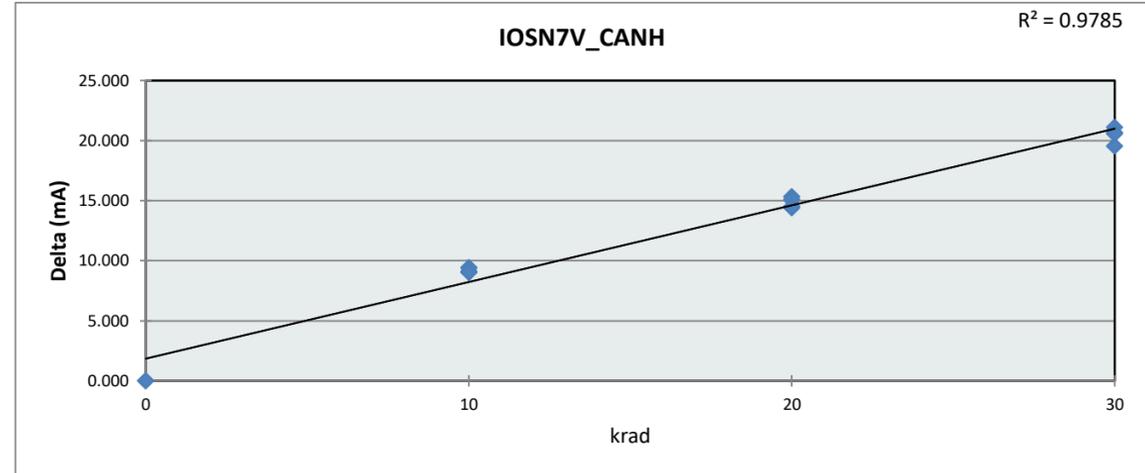
| IOS12V_CANL | | | | |
|-------------|---------|---------|---------|---------|
| Units | mA | | | |
| Max Limit | 250 | | | |
| Min Limit | 0 | | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 0.000 | 0.000 | 0.000 | 0.000 |
| Min | 157.100 | 167.000 | 173.000 | 180.300 |
| Average | 161.950 | 170.740 | 178.240 | 182.000 |
| Max | 168.100 | 175.900 | 184.700 | 183.300 |
| UL | 250.000 | 250.000 | 250.000 | 250.000 |



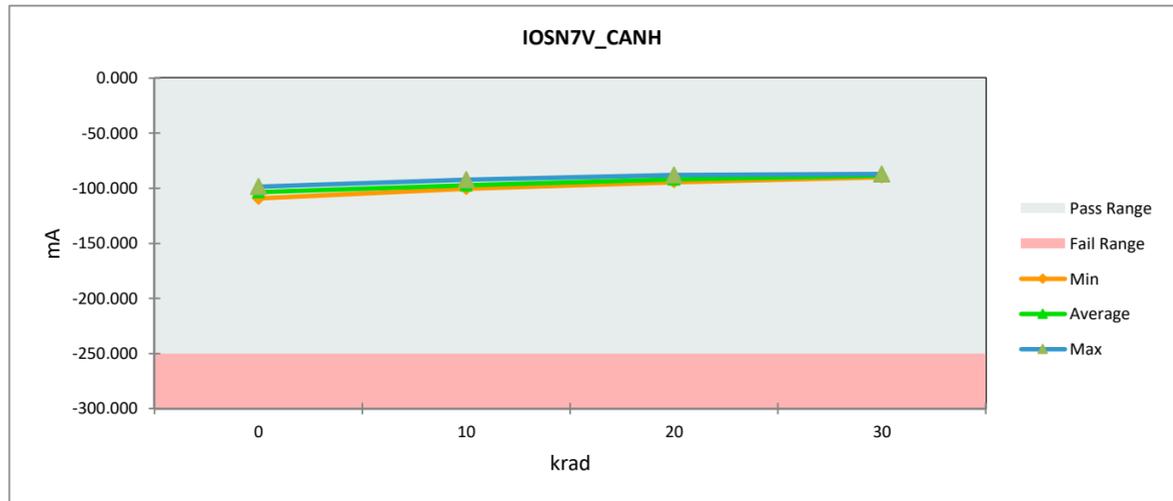
TID Report

SN55HVD233-SEP

| IOSN7V_CANH | | | | | | |
|-------------|----------|------------|-------------|--------|---------|------------------|
| Units | mA | | | | | |
| Max Limit | 0 | | | | | |
| Min Limit | -250 | | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -109.200 | -109.200 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -107.300 | -107.300 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -108.300 | -98.880 | 9.420 | -8.70% | 3.77% |
| 10 | 4 | -107.700 | -98.600 | 9.100 | -8.45% | 3.64% |
| 10 | 5 | -110.000 | -100.600 | 9.400 | -8.55% | 3.76% |
| 10 | 6 | -109.600 | -100.500 | 9.100 | -8.30% | 3.64% |
| 10 | 7 | -107.300 | -98.280 | 9.020 | -8.41% | 3.61% |
| 20 | 8 | -107.400 | -92.370 | 15.030 | -13.99% | 6.01% |
| 20 | 9 | -110.200 | -94.880 | 15.320 | -13.90% | 6.13% |
| 20 | 10 | -108.600 | -93.540 | 15.060 | -13.87% | 6.02% |
| 20 | 11 | -107.800 | -93.290 | 14.510 | -13.46% | 5.80% |
| 20 | 12 | -108.800 | -94.390 | 14.410 | -13.24% | 5.76% |
| 30 | 13 | -110.500 | -89.940 | 20.560 | -18.61% | 8.22% |
| 30 | 14 | -109.000 | -87.900 | 21.100 | -19.36% | 8.44% |
| 30 | 15 | -107.700 | -87.060 | 20.640 | -19.16% | 8.26% |
| 30 | 16 | -107.900 | -88.360 | 19.540 | -18.11% | 7.82% |
| 30 | 17 | -110.600 | -89.970 | 20.630 | -18.65% | 8.25% |
| Max | | -107.300 | -87.060 | 20.240 | 0.00% | 8.44% |
| Average | | -108.700 | -95.592 | 13.108 | -12.04% | 5.24% |
| Min | | -110.600 | -109.200 | 1.400 | -19.36% | 0.00% |
| Std Dev | | 1.151 | 6.462 | 5.312 | 6.10% | 2.66% |



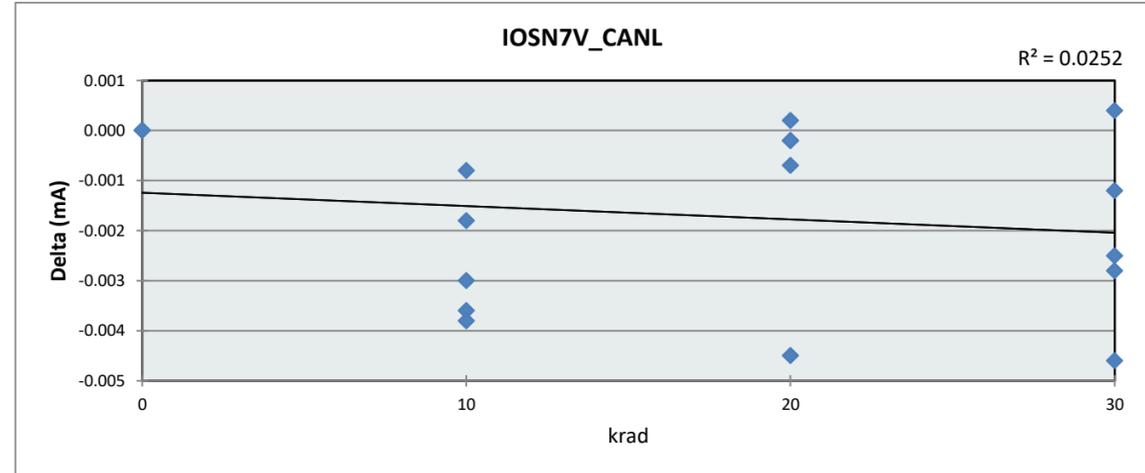
| IOSN7V CANH | | | | |
|-------------|----------|----------|----------|----------|
| Units | mA | | | |
| Max Limit | 0 | | | |
| Min Limit | -250 | | | |
| krad | 0 | 10 | 20 | 30 |
| LL | -250.000 | -250.000 | -250.000 | -250.000 |
| Min | -109.200 | -100.600 | -94.390 | -89.970 |
| Average | -103.495 | -97.326 | -91.812 | -88.463 |
| Max | -98.600 | -92.370 | -87.900 | -87.060 |
| UL | 0.000 | 0.000 | 0.000 | 0.000 |



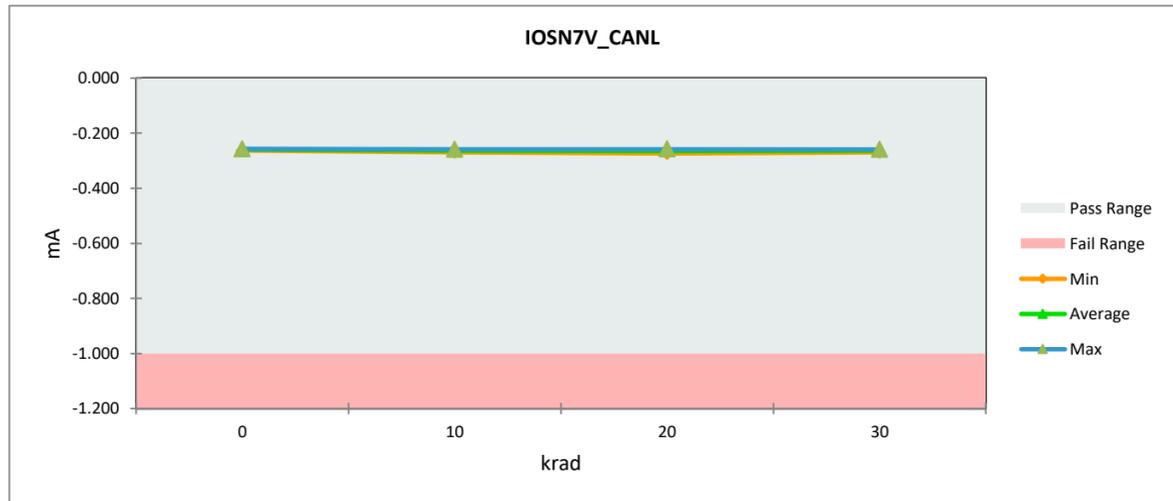
TID Report

SN55HVD233-SEP

| IOSN7V_CANL | | | | | | |
|-------------|----------|------------|-------------|--------|---------|------------------|
| Units | | mA | | | | |
| Max Limit | | 0 | | | | |
| Min Limit | | -1 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -0.263 | -0.263 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -0.257 | -0.257 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -0.257 | -0.260 | -0.004 | 1.40% | 0.36% |
| 10 | 4 | -0.254 | -0.257 | -0.003 | 1.18% | 0.30% |
| 10 | 5 | -0.266 | -0.270 | -0.004 | 1.43% | 0.38% |
| 10 | 6 | -0.263 | -0.265 | -0.002 | 0.68% | 0.18% |
| 10 | 7 | -0.257 | -0.258 | -0.001 | 0.31% | 0.08% |
| 20 | 8 | -0.258 | -0.259 | -0.001 | 0.27% | 0.07% |
| 20 | 9 | -0.266 | -0.266 | 0.000 | 0.08% | 0.02% |
| 20 | 10 | -0.264 | -0.265 | 0.000 | 0.08% | 0.02% |
| 20 | 11 | -0.258 | -0.258 | 0.000 | -0.08% | 0.02% |
| 20 | 12 | -0.256 | -0.261 | -0.005 | 1.76% | 0.45% |
| 30 | 13 | -0.271 | -0.274 | -0.003 | 0.92% | 0.25% |
| 30 | 14 | -0.263 | -0.268 | -0.005 | 1.75% | 0.46% |
| 30 | 15 | -0.259 | -0.262 | -0.003 | 1.08% | 0.28% |
| 30 | 16 | -0.258 | -0.259 | -0.001 | 0.47% | 0.12% |
| 30 | 17 | -0.270 | -0.270 | 0.000 | -0.15% | 0.04% |
| Max | | -0.254 | -0.257 | -0.003 | 1.76% | 0.46% |
| Average | | -0.261 | -0.263 | -0.002 | 0.66% | 0.18% |
| Min | | -0.271 | -0.274 | -0.003 | -0.15% | 0.00% |
| Std Dev | | 0.005 | 0.005 | 0.000 | 0.67% | 0.17% |



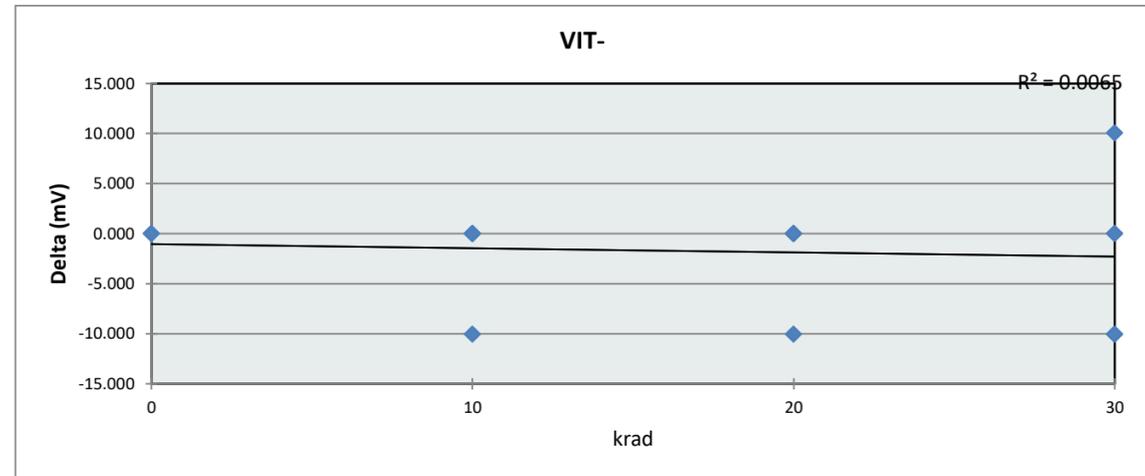
| IOSN7V CANL | | | | |
|-------------|--------|--------|--------|--------|
| Units | | mA | | |
| Max Limit | | 0 | | |
| Min Limit | | -1 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | -1.000 | -1.000 | -1.000 | -1.000 |
| Min | -0.263 | -0.270 | -0.274 | -0.270 |
| Average | -0.259 | -0.264 | -0.265 | -0.263 |
| Max | -0.257 | -0.258 | -0.258 | -0.259 |
| UL | 0.000 | 0.000 | 0.000 | 0.000 |



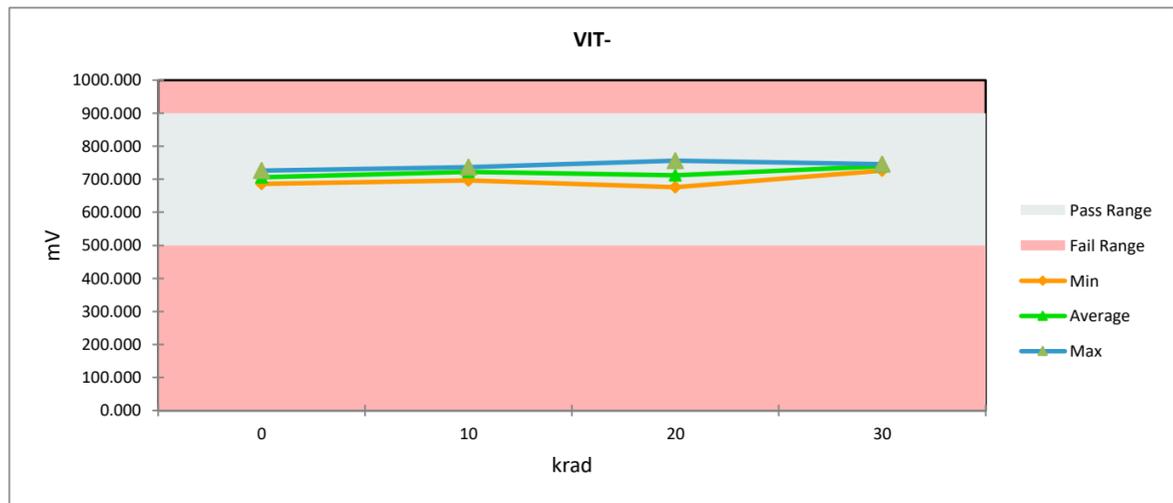
TID Report

SN55HVD233-SEP

| | | VIT- | | | | |
|-----------|----------|------------|-------------|---------|---------|------------------|
| Units | | mV | | | | |
| Max Limit | | 900 | | | | |
| Min Limit | | 500 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 706.030 | 706.030 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 726.131 | 726.131 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 706.030 | 706.030 | 0.000 | 0.00% | 0.00% |
| 10 | 4 | 695.980 | 685.929 | -10.050 | -1.44% | 2.51% |
| 10 | 5 | 726.131 | 726.131 | 0.000 | 0.00% | 0.00% |
| 10 | 6 | 736.181 | 736.181 | 0.000 | 0.00% | 0.00% |
| 10 | 7 | 695.980 | 695.980 | 0.000 | 0.00% | 0.00% |
| 20 | 8 | 726.131 | 726.131 | 0.000 | 0.00% | 0.00% |
| 20 | 9 | 726.131 | 726.131 | 0.000 | 0.00% | 0.00% |
| 20 | 10 | 706.030 | 706.030 | 0.000 | 0.00% | 0.00% |
| 20 | 11 | 756.282 | 756.282 | 0.000 | 0.00% | 0.00% |
| 20 | 12 | 726.131 | 716.081 | -10.050 | -1.38% | 2.51% |
| 30 | 13 | 716.081 | 706.030 | -10.050 | -1.40% | 2.51% |
| 30 | 14 | 675.879 | 675.879 | 0.000 | 0.00% | 0.00% |
| 30 | 15 | 746.231 | 746.231 | 0.000 | 0.00% | 0.00% |
| 30 | 16 | 736.181 | 726.131 | -10.050 | -1.37% | 2.51% |
| 30 | 17 | 736.181 | 746.231 | 10.050 | 1.37% | 2.51% |
| Max | | 756.282 | 756.282 | 0.000 | 1.37% | 2.51% |
| Average | | 720.219 | 718.445 | -1.774 | -0.25% | 0.74% |
| Min | | 675.879 | 675.879 | 0.000 | -1.44% | 0.00% |
| Std Dev | | 20.430 | 21.768 | 1.338 | 0.74% | 1.18% |

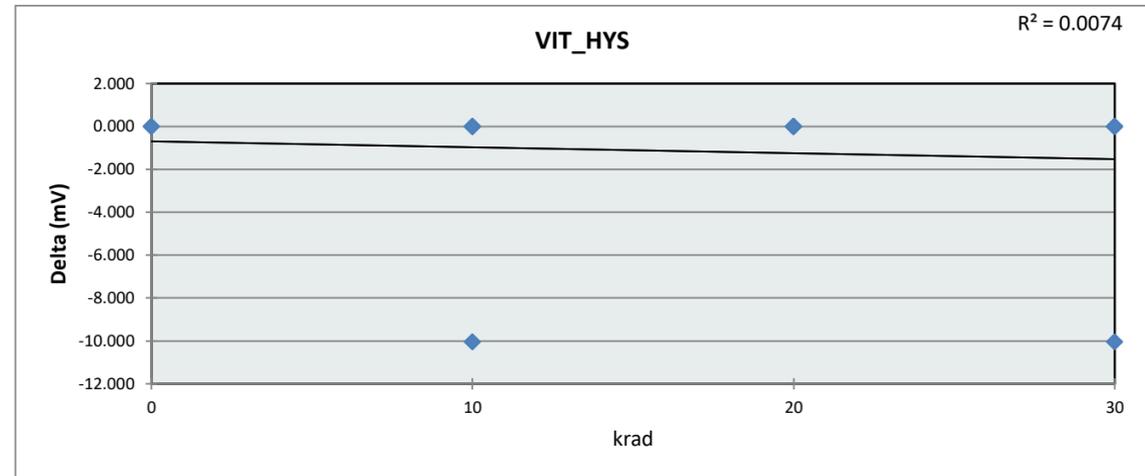


| | | VIT- | | | |
|-----------|--|---------|---------|---------|---------|
| Units | | mV | | | |
| Max Limit | | 900 | | | |
| Min Limit | | 500 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | 500.000 | 500.000 | 500.000 | 500.000 |
| Min | | 685.929 | 695.980 | 675.879 | 726.131 |
| Average | | 706.030 | 722.110 | 712.060 | 739.531 |
| Max | | 726.131 | 736.181 | 756.282 | 746.231 |
| UL | | 900.000 | 900.000 | 900.000 | 900.000 |

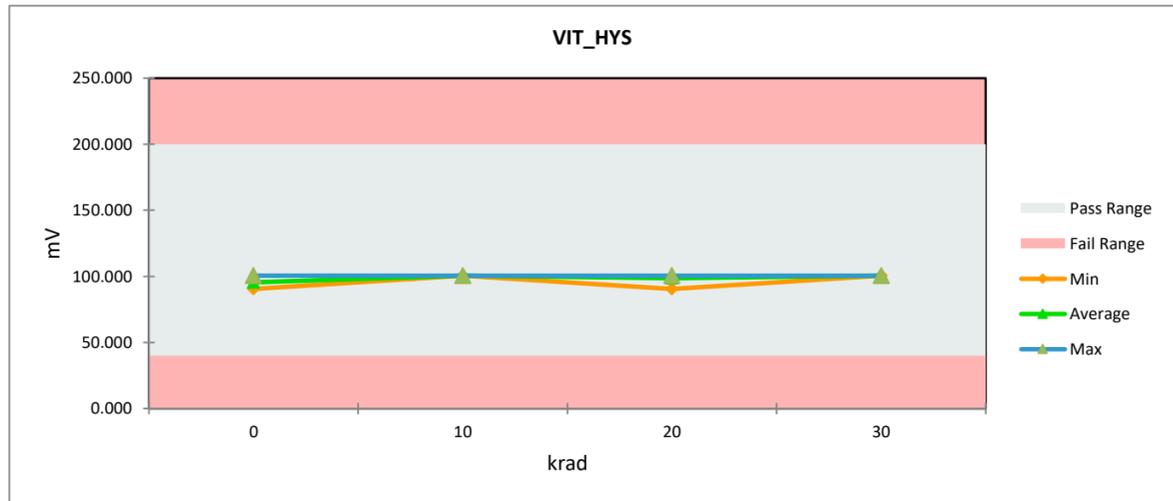


TID Report SN55HVD233-SEP

| VIT_HYS | | | | | | |
|-----------|----------|------------|-------------|---------|---------|------------------|
| Units | | mV | | | | |
| Max Limit | | 200 | | | | |
| Min Limit | | 40 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 100.503 | 100.503 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 90.452 | 90.452 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 100.503 | 90.452 | -10.050 | -10.00% | 6.28% |
| 10 | 4 | 100.502 | 100.502 | 0.000 | 0.00% | 0.00% |
| 10 | 5 | 100.502 | 100.502 | 0.000 | 0.00% | 0.00% |
| 10 | 6 | 100.502 | 100.502 | 0.000 | 0.00% | 0.00% |
| 10 | 7 | 100.502 | 100.502 | 0.000 | 0.00% | 0.00% |
| 20 | 8 | 100.502 | 100.502 | 0.000 | 0.00% | 0.00% |
| 20 | 9 | 100.502 | 100.502 | 0.000 | 0.00% | 0.00% |
| 20 | 10 | 100.503 | 100.503 | 0.000 | 0.00% | 0.00% |
| 20 | 11 | 100.503 | 100.503 | 0.000 | 0.00% | 0.00% |
| 20 | 12 | 100.503 | 100.503 | 0.000 | 0.00% | 0.00% |
| 30 | 13 | 100.503 | 100.503 | 0.000 | 0.00% | 0.00% |
| 30 | 14 | 100.502 | 90.452 | -10.050 | -10.00% | 6.28% |
| 30 | 15 | 100.503 | 100.503 | 0.000 | 0.00% | 0.00% |
| 30 | 16 | 100.502 | 100.502 | 0.000 | 0.00% | 0.00% |
| 30 | 17 | 100.502 | 100.503 | 0.000 | 0.00% | 0.00% |
| Max | | 100.503 | 100.503 | 0.000 | 0.00% | 6.28% |
| Average | | 99.911 | 98.729 | -1.182 | -1.18% | 0.74% |
| Min | | 90.452 | 90.452 | 0.000 | -10.00% | 0.00% |
| Std Dev | | 2.437 | 3.949 | 1.512 | 3.32% | 2.09% |



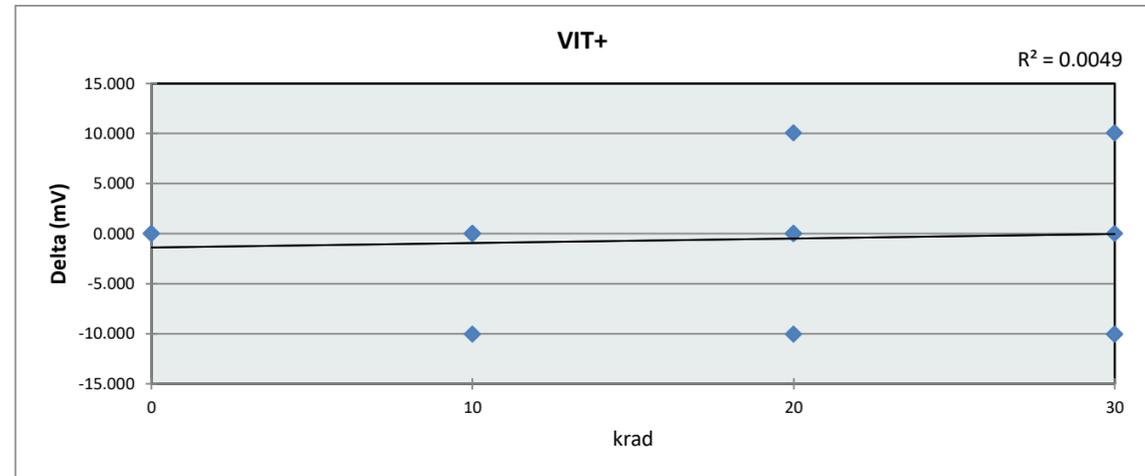
| VIT_HYS | | | | |
|-----------|---------|---------|---------|---------|
| Units | | mV | | |
| Max Limit | | 200 | | |
| Min Limit | | 40 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 40.000 | 40.000 | 40.000 | 40.000 |
| Min | 90.452 | 100.502 | 90.452 | 100.502 |
| Average | 95.477 | 100.502 | 98.492 | 100.502 |
| Max | 100.503 | 100.502 | 100.503 | 100.503 |
| UL | 200.000 | 200.000 | 200.000 | 200.000 |



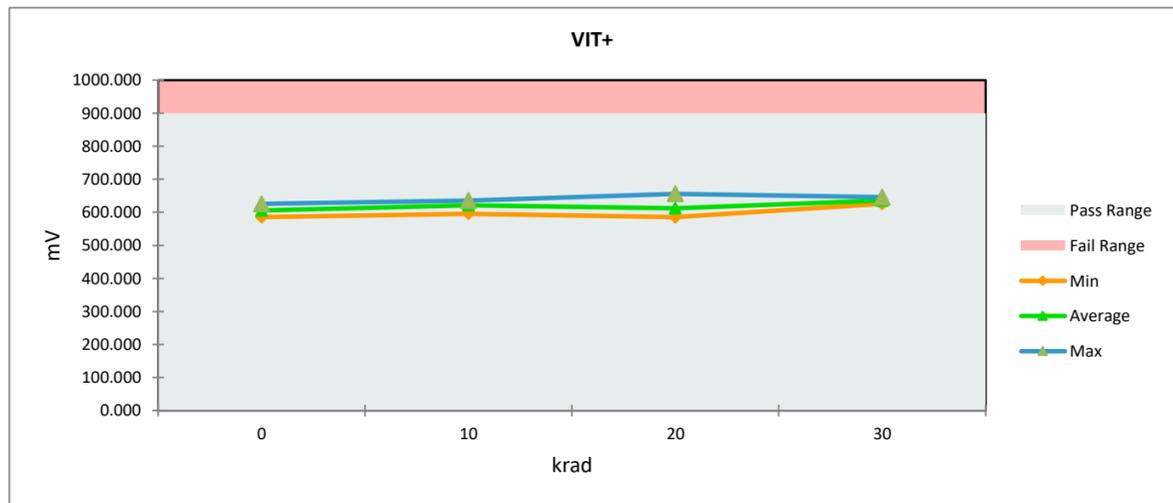
TID Report

SN55HVD233-SEP

| | | VIT+ | | | | |
|-----------|----------|------------|-------------|---------|---------|------------------|
| Units | | mV | | | | |
| Max Limit | | 900 | | | | |
| Min Limit | | 0 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 605.528 | 605.528 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 625.628 | 625.628 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 605.528 | 605.528 | 0.000 | 0.00% | 0.00% |
| 10 | 4 | 595.478 | 585.427 | -10.050 | -1.69% | 1.12% |
| 10 | 5 | 625.628 | 625.628 | 0.000 | 0.00% | 0.00% |
| 10 | 6 | 635.679 | 635.679 | 0.000 | 0.00% | 0.00% |
| 10 | 7 | 595.478 | 595.478 | 0.000 | 0.00% | 0.00% |
| 20 | 8 | 625.628 | 625.628 | 0.000 | 0.00% | 0.00% |
| 20 | 9 | 625.628 | 625.628 | 0.000 | 0.00% | 0.00% |
| 20 | 10 | 605.528 | 595.478 | -10.050 | -1.66% | 1.12% |
| 20 | 11 | 645.729 | 655.779 | 10.050 | 1.56% | 1.12% |
| 20 | 12 | 615.578 | 615.578 | 0.000 | 0.00% | 0.00% |
| 30 | 13 | 605.528 | 605.528 | 0.000 | 0.00% | 0.00% |
| 30 | 14 | 575.377 | 585.427 | 10.050 | 1.75% | 1.12% |
| 30 | 15 | 645.729 | 635.679 | -10.050 | -1.56% | 1.12% |
| 30 | 16 | 635.679 | 625.628 | -10.050 | -1.58% | 1.12% |
| 30 | 17 | 635.679 | 645.729 | 10.050 | 1.58% | 1.12% |
| Max | | 645.729 | 655.779 | 10.050 | 1.75% | 1.12% |
| Average | | 617.943 | 617.352 | -0.591 | -0.09% | 0.46% |
| Min | | 575.377 | 585.427 | 10.050 | -1.69% | 0.00% |
| Std Dev | | 19.633 | 20.485 | 0.852 | 1.07% | 0.57% |

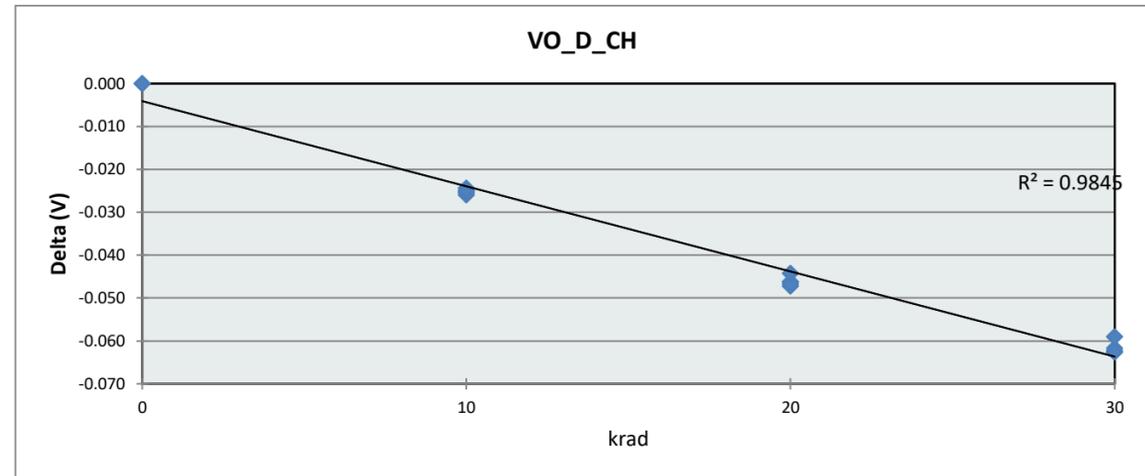


| | | VIT+ | | | |
|-----------|------|---------|---------|---------|---------|
| Units | | mV | | | |
| Max Limit | | 900 | | | |
| Min Limit | | 0 | | | |
| | krad | 0 | 10 | 20 | 30 |
| LL | | 0.000 | 0.000 | 0.000 | 0.000 |
| Min | | 585.427 | 595.478 | 585.427 | 625.628 |
| Average | | 605.528 | 621.608 | 611.558 | 635.679 |
| Max | | 625.628 | 635.679 | 655.779 | 645.729 |
| UL | | 900.000 | 900.000 | 900.000 | 900.000 |

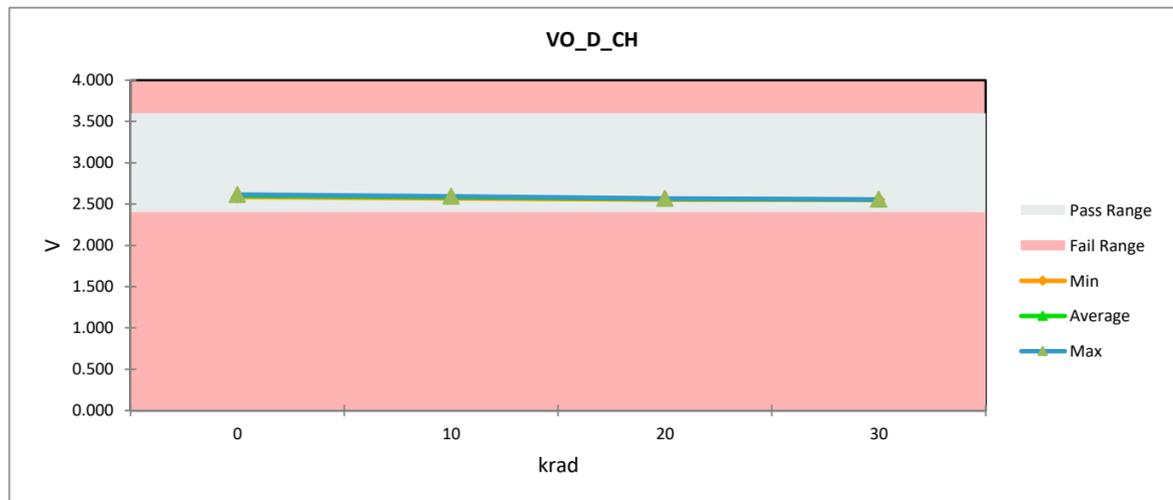


TID Report SN55HVD233-SEP

| | | VO_D_CH | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | V | | | | |
| Max Limit | | 3.6 | | | | |
| Min Limit | | 2.4 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 2.615 | 2.615 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 2.612 | 2.612 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 2.614 | 2.589 | -0.025 | -0.96% | 2.09% |
| 10 | 4 | 2.612 | 2.586 | -0.026 | -1.00% | 2.17% |
| 10 | 5 | 2.618 | 2.592 | -0.026 | -0.98% | 2.13% |
| 10 | 6 | 2.616 | 2.592 | -0.024 | -0.93% | 2.03% |
| 10 | 7 | 2.612 | 2.587 | -0.025 | -0.96% | 2.10% |
| 20 | 8 | 2.612 | 2.566 | -0.046 | -1.77% | 3.86% |
| 20 | 9 | 2.618 | 2.572 | -0.046 | -1.77% | 3.86% |
| 20 | 10 | 2.615 | 2.567 | -0.047 | -1.81% | 3.94% |
| 20 | 11 | 2.612 | 2.565 | -0.047 | -1.79% | 3.90% |
| 20 | 12 | 2.613 | 2.569 | -0.044 | -1.69% | 3.69% |
| 30 | 13 | 2.618 | 2.555 | -0.063 | -2.39% | 5.22% |
| 30 | 14 | 2.615 | 2.553 | -0.062 | -2.38% | 5.19% |
| 30 | 15 | 2.613 | 2.551 | -0.062 | -2.36% | 5.14% |
| 30 | 16 | 2.613 | 2.554 | -0.059 | -2.26% | 4.92% |
| 30 | 17 | 2.618 | 2.556 | -0.063 | -2.39% | 5.22% |
| Max | | 2.618 | 2.615 | -0.003 | 0.00% | 5.22% |
| Average | | 2.614 | 2.575 | -0.039 | -1.50% | 3.26% |
| Min | | 2.612 | 2.551 | -0.061 | -2.39% | 0.00% |
| Std Dev | | 0.003 | 0.020 | 0.018 | 0.79% | 1.72% |



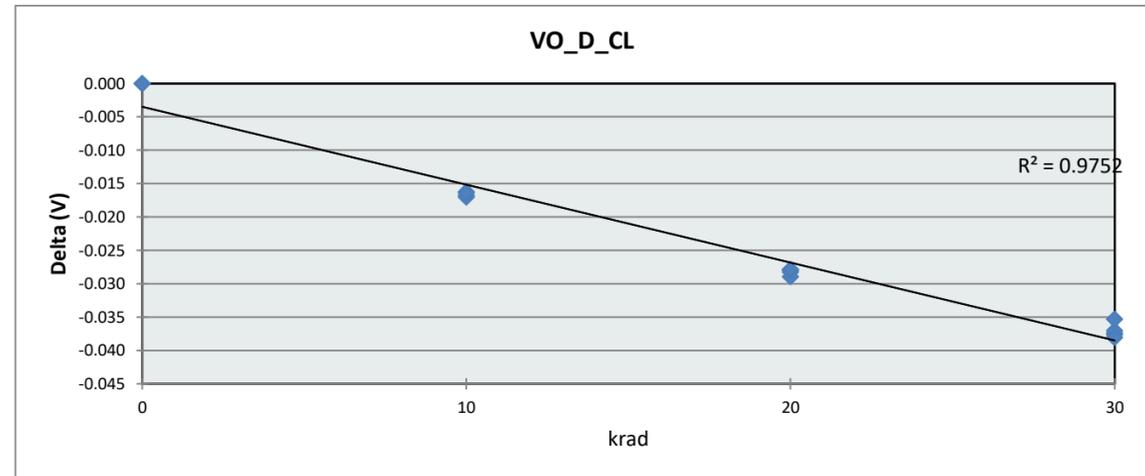
| | | VO D CH | | | |
|-----------|--|---------|-------|-------|-------|
| Units | | V | | | |
| Max Limit | | 3.6 | | | |
| Min Limit | | 2.4 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | 2.400 | 2.400 | 2.400 | 2.400 |
| Min | | 2.586 | 2.566 | 2.553 | 2.551 |
| Average | | 2.601 | 2.582 | 2.562 | 2.554 |
| Max | | 2.615 | 2.592 | 2.569 | 2.556 |
| UL | | 3.600 | 3.600 | 3.600 | 3.600 |



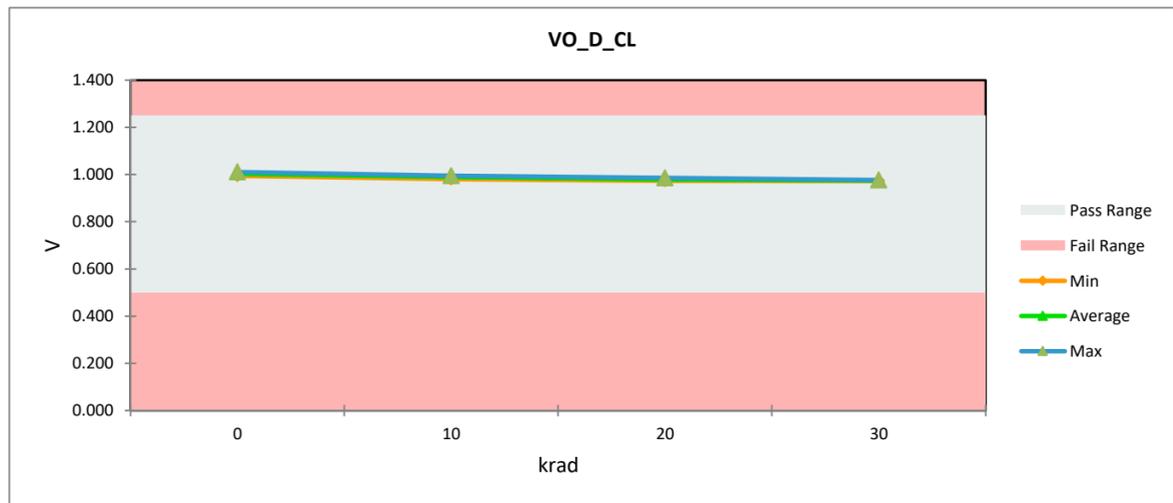
TID Report

SN55HVD233-SEP

| VO_D_CL | | | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | V | | | | |
| Max Limit | | 1.25 | | | | |
| Min Limit | | 0.5 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 1.010 | 1.010 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 1.010 | 1.010 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 1.011 | 0.994 | -0.016 | -1.61% | 2.17% |
| 10 | 4 | 1.013 | 0.996 | -0.017 | -1.65% | 2.23% |
| 10 | 5 | 1.011 | 0.994 | -0.017 | -1.68% | 2.27% |
| 10 | 6 | 1.010 | 0.994 | -0.016 | -1.62% | 2.18% |
| 10 | 7 | 1.011 | 0.994 | -0.016 | -1.61% | 2.18% |
| 20 | 8 | 1.011 | 0.983 | -0.028 | -2.80% | 3.77% |
| 20 | 9 | 1.010 | 0.981 | -0.029 | -2.87% | 3.86% |
| 20 | 10 | 1.009 | 0.981 | -0.028 | -2.78% | 3.74% |
| 20 | 11 | 1.013 | 0.985 | -0.028 | -2.76% | 3.73% |
| 20 | 12 | 1.013 | 0.985 | -0.028 | -2.75% | 3.72% |
| 30 | 13 | 1.011 | 0.973 | -0.037 | -3.71% | 4.99% |
| 30 | 14 | 1.011 | 0.973 | -0.038 | -3.72% | 5.02% |
| 30 | 15 | 1.011 | 0.974 | -0.037 | -3.66% | 4.94% |
| 30 | 16 | 1.012 | 0.977 | -0.035 | -3.49% | 4.71% |
| 30 | 17 | 1.011 | 0.972 | -0.038 | -3.77% | 5.08% |
| Max | | 1.013 | 1.010 | -0.003 | 0.00% | 5.08% |
| Average | | 1.011 | 0.987 | -0.024 | -2.38% | 3.21% |
| Min | | 1.009 | 0.972 | -0.036 | -3.77% | 0.00% |
| Std Dev | | 0.001 | 0.012 | 0.011 | 1.21% | 1.63% |



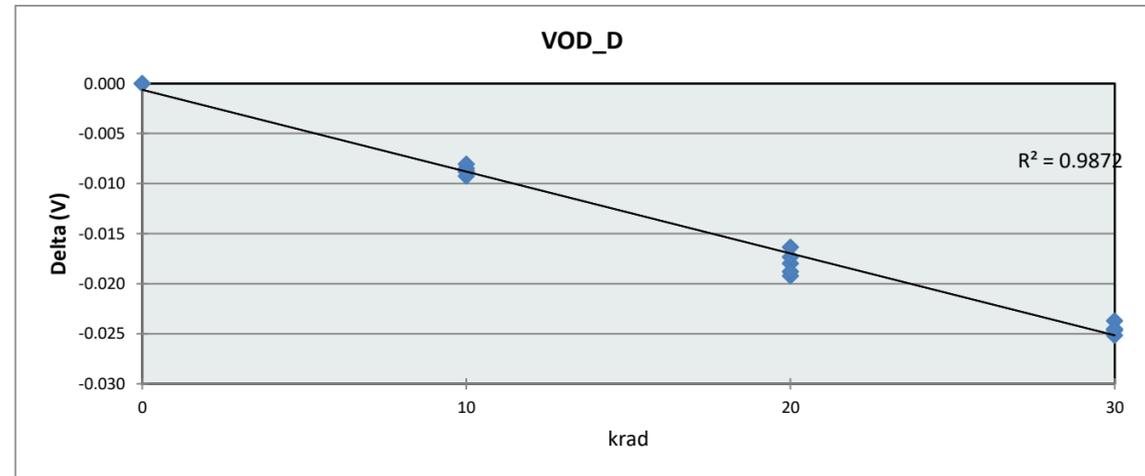
| VO D CL | | | | |
|-----------|-------|-------|-------|-------|
| Units | | V | | |
| Max Limit | | 1.25 | | |
| Min Limit | | 0.5 | | |
| krad | 0 | 10 | 20 | 30 |
| LL | 0.500 | 0.500 | 0.500 | 0.500 |
| Min | 0.994 | 0.981 | 0.973 | 0.972 |
| Average | 1.003 | 0.989 | 0.979 | 0.974 |
| Max | 1.010 | 0.994 | 0.985 | 0.977 |
| UL | 1.250 | 1.250 | 1.250 | 1.250 |



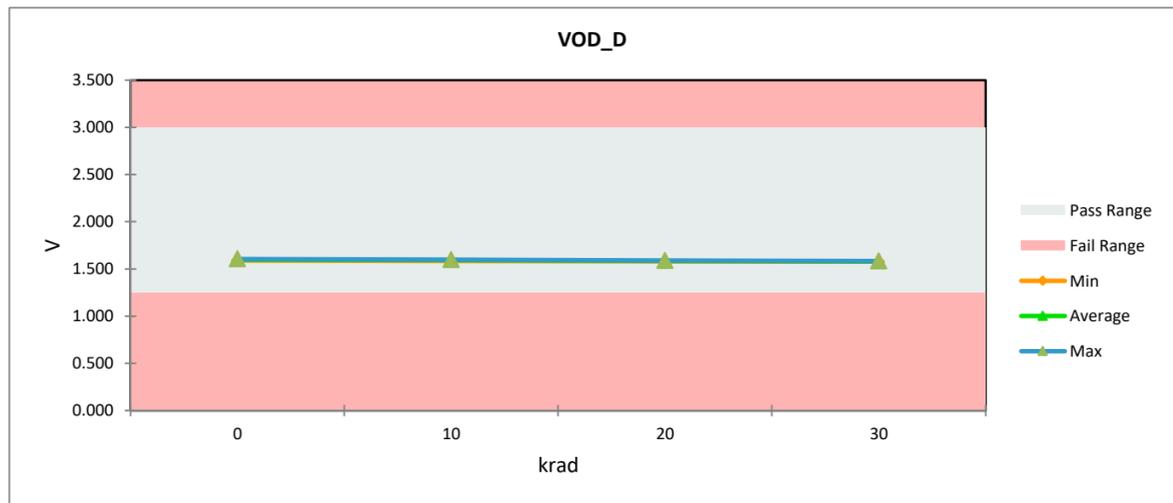
TID Report

SN55HVD233-SEP

| | | VOD_D | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | V | | | | |
| Max Limit | | 3 | | | | |
| Min Limit | | 1.25 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 1.605 | 1.605 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 1.601 | 1.601 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 1.604 | 1.595 | -0.009 | -0.55% | 0.50% |
| 10 | 4 | 1.598 | 1.589 | -0.009 | -0.58% | 0.53% |
| 10 | 5 | 1.607 | 1.598 | -0.009 | -0.53% | 0.49% |
| 10 | 6 | 1.606 | 1.598 | -0.008 | -0.50% | 0.46% |
| 10 | 7 | 1.601 | 1.592 | -0.009 | -0.55% | 0.50% |
| 20 | 8 | 1.601 | 1.583 | -0.018 | -1.12% | 1.03% |
| 20 | 9 | 1.608 | 1.591 | -0.017 | -1.08% | 0.99% |
| 20 | 10 | 1.606 | 1.587 | -0.019 | -1.20% | 1.10% |
| 20 | 11 | 1.599 | 1.580 | -0.019 | -1.18% | 1.08% |
| 20 | 12 | 1.600 | 1.584 | -0.016 | -1.02% | 0.93% |
| 30 | 13 | 1.608 | 1.582 | -0.025 | -1.57% | 1.44% |
| 30 | 14 | 1.605 | 1.580 | -0.025 | -1.54% | 1.41% |
| 30 | 15 | 1.602 | 1.577 | -0.025 | -1.54% | 1.41% |
| 30 | 16 | 1.601 | 1.577 | -0.024 | -1.48% | 1.35% |
| 30 | 17 | 1.608 | 1.583 | -0.025 | -1.53% | 1.40% |
| Max | | 1.608 | 1.605 | -0.003 | 0.00% | 1.44% |
| Average | | 1.603 | 1.588 | -0.015 | -0.94% | 0.86% |
| Min | | 1.598 | 1.577 | -0.021 | -1.57% | 0.00% |
| Std Dev | | 0.003 | 0.009 | 0.005 | 0.53% | 0.49% |

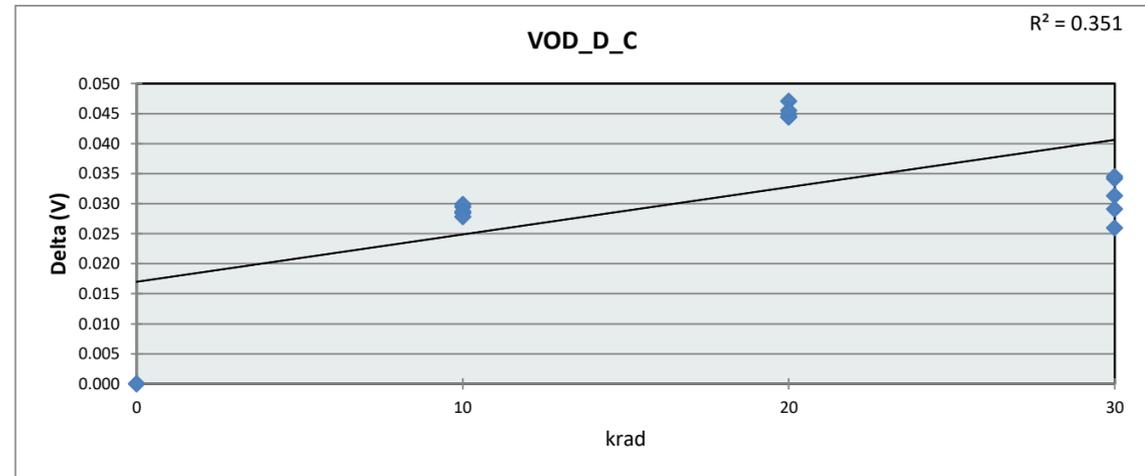


| | | VOD_D | | | |
|-----------|--|-------|-------|-------|-------|
| Units | | V | | | |
| Max Limit | | 3 | | | |
| Min Limit | | 1.25 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | 1.250 | 1.250 | 1.250 | 1.250 |
| Min | | 1.589 | 1.583 | 1.580 | 1.577 |
| Average | | 1.598 | 1.592 | 1.583 | 1.579 |
| Max | | 1.605 | 1.598 | 1.587 | 1.583 |
| UL | | 3.000 | 3.000 | 3.000 | 3.000 |

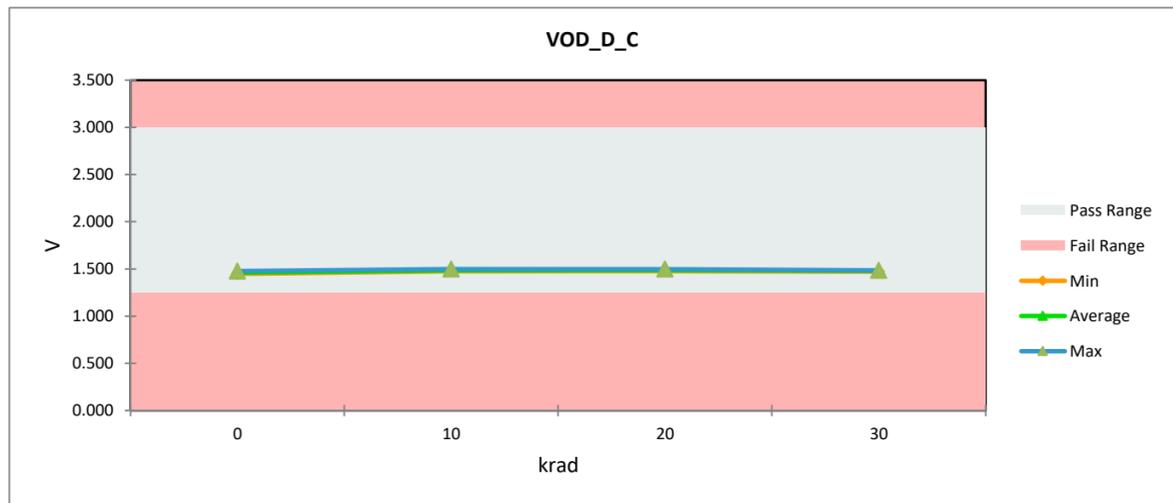


TID Report SN55HVD233-SEP

| | | VOD_D_C | | | | |
|-----------|----------|------------|-------------|-------|---------|------------------|
| Units | | V | | | | |
| Max Limit | | 3 | | | | |
| Min Limit | | 1.25 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 1.448 | 1.448 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 1.447 | 1.447 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 1.449 | 1.477 | 0.028 | 1.96% | 1.62% |
| 10 | 4 | 1.441 | 1.471 | 0.029 | 2.04% | 1.68% |
| 10 | 5 | 1.450 | 1.480 | 0.030 | 2.06% | 1.70% |
| 10 | 6 | 1.450 | 1.478 | 0.029 | 1.97% | 1.64% |
| 10 | 7 | 1.447 | 1.475 | 0.028 | 1.92% | 1.59% |
| 20 | 8 | 1.446 | 1.490 | 0.044 | 3.07% | 2.54% |
| 20 | 9 | 1.450 | 1.497 | 0.047 | 3.24% | 2.69% |
| 20 | 10 | 1.452 | 1.497 | 0.045 | 3.09% | 2.56% |
| 20 | 11 | 1.443 | 1.487 | 0.044 | 3.08% | 2.54% |
| 20 | 12 | 1.442 | 1.488 | 0.045 | 3.15% | 2.60% |
| 30 | 13 | 1.451 | 1.483 | 0.031 | 2.16% | 1.79% |
| 30 | 14 | 1.448 | 1.477 | 0.029 | 2.01% | 1.66% |
| 30 | 15 | 1.447 | 1.473 | 0.026 | 1.79% | 1.48% |
| 30 | 16 | 1.444 | 1.478 | 0.034 | 2.36% | 1.95% |
| 30 | 17 | 1.451 | 1.485 | 0.035 | 2.38% | 1.97% |
| Max | | 1.452 | 1.497 | 0.045 | 3.24% | 2.69% |
| Average | | 1.447 | 1.478 | 0.031 | 2.13% | 1.77% |
| Min | | 1.441 | 1.447 | 0.006 | 0.00% | 0.00% |
| Std Dev | | 0.003 | 0.014 | 0.011 | 0.95% | 0.78% |

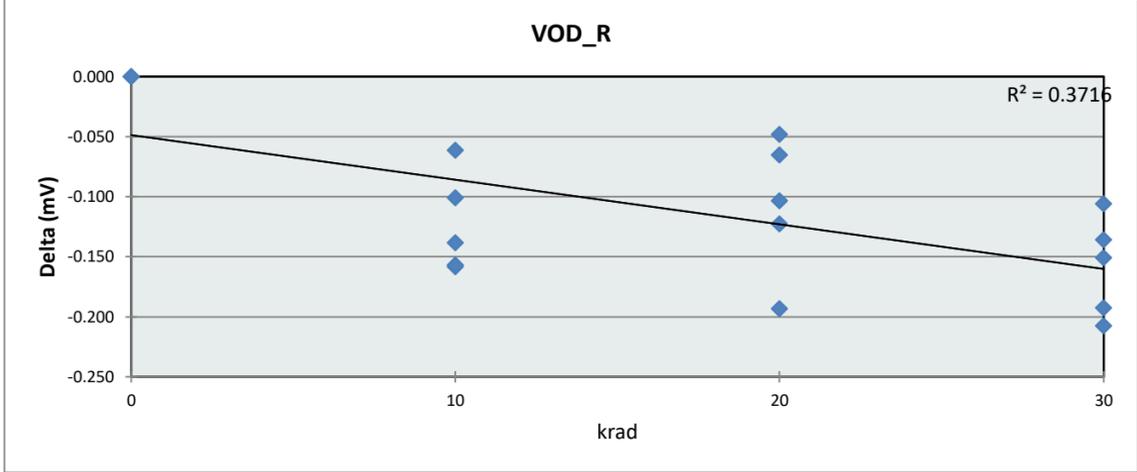


| | | VOD_D_C | | | |
|-----------|--|---------|-------|-------|-------|
| Units | | V | | | |
| Max Limit | | 3 | | | |
| Min Limit | | 1.25 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | 1.250 | 1.250 | 1.250 | 1.250 |
| Min | | 1.447 | 1.475 | 1.477 | 1.473 |
| Average | | 1.461 | 1.484 | 1.486 | 1.479 |
| Max | | 1.477 | 1.497 | 1.497 | 1.485 |
| UL | | 3.000 | 3.000 | 3.000 | 3.000 |

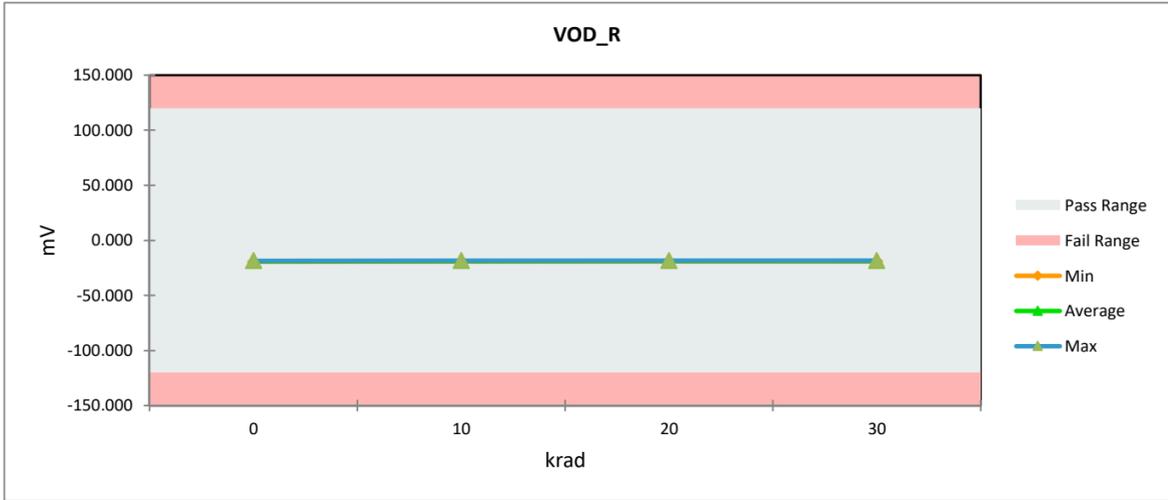


TID Report
SN55HVD233-SEP

| | | VOD_R | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | mV | | | | |
| Max Limit | | 120 | | | | |
| Min Limit | | -120 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -18.645 | -18.645 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -19.169 | -19.169 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -18.910 | -19.011 | -0.101 | 0.53% | 0.04% |
| 10 | 4 | -19.413 | -19.475 | -0.061 | 0.32% | 0.03% |
| 10 | 5 | -18.392 | -18.550 | -0.158 | 0.86% | 0.07% |
| 10 | 6 | -18.606 | -18.745 | -0.138 | 0.74% | 0.06% |
| 10 | 7 | -19.172 | -19.329 | -0.157 | 0.82% | 0.07% |
| 20 | 8 | -19.146 | -19.340 | -0.194 | 1.01% | 0.08% |
| 20 | 9 | -18.545 | -18.593 | -0.048 | 0.26% | 0.02% |
| 20 | 10 | -18.781 | -18.846 | -0.065 | 0.35% | 0.03% |
| 20 | 11 | -19.140 | -19.262 | -0.123 | 0.64% | 0.05% |
| 20 | 12 | -19.285 | -19.389 | -0.104 | 0.54% | 0.04% |
| 30 | 13 | -18.239 | -18.432 | -0.193 | 1.06% | 0.08% |
| 30 | 14 | -18.701 | -18.908 | -0.208 | 1.11% | 0.09% |
| 30 | 15 | -19.074 | -19.180 | -0.106 | 0.56% | 0.04% |
| 30 | 16 | -19.243 | -19.394 | -0.151 | 0.78% | 0.06% |
| 30 | 17 | -18.264 | -18.400 | -0.136 | 0.74% | 0.06% |
| Max | | -18.239 | -18.400 | -0.161 | 1.11% | 0.09% |
| Average | | -18.866 | -18.980 | -0.114 | 0.61% | 0.05% |
| Min | | -19.413 | -19.475 | -0.061 | 0.00% | 0.00% |
| Std Dev | | 0.374 | 0.367 | -0.007 | 0.34% | 0.03% |

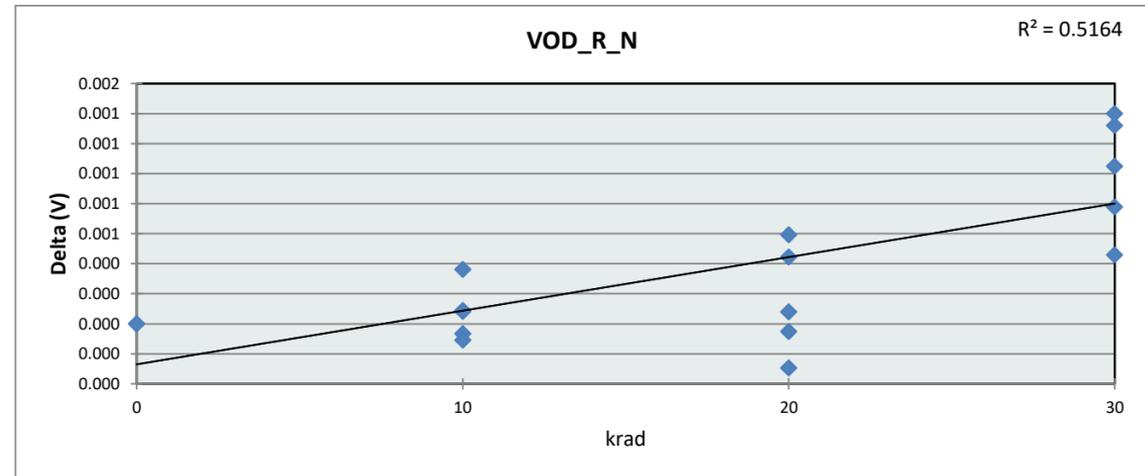


| | | VOD_R | | | |
|-----------|--|----------|----------|----------|----------|
| Units | | mV | | | |
| Max Limit | | 120 | | | |
| Min Limit | | -120 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | -120.000 | -120.000 | -120.000 | -120.000 |
| Min | | -19.475 | -19.340 | -19.389 | -19.394 |
| Average | | -19.075 | -18.911 | -18.967 | -18.991 |
| Max | | -18.645 | -18.550 | -18.432 | -18.400 |
| UL | | 120.000 | 120.000 | 120.000 | 120.000 |

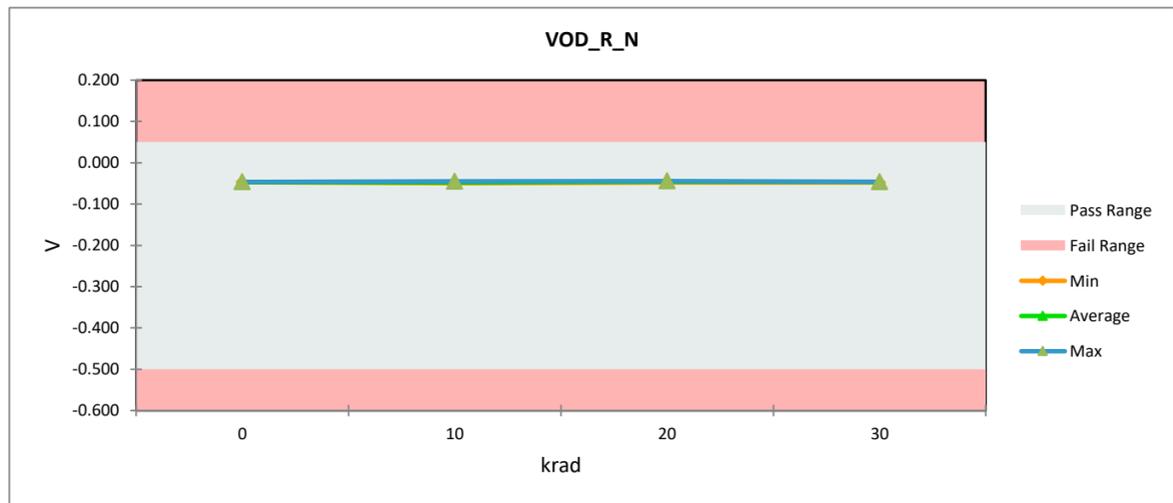


TID Report SN55HVD233-SEP

| | | VOD_R_N | | | | |
|-----------|----------|------------|-------------|-------|---------|------------------|
| Units | | V | | | | |
| Max Limit | | 0.05 | | | | |
| Min Limit | | -0.5 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | -0.047 | -0.047 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | -0.047 | -0.047 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | -0.047 | -0.046 | 0.000 | -0.18% | 0.02% |
| 10 | 4 | -0.048 | -0.047 | 0.000 | -0.75% | 0.07% |
| 10 | 5 | -0.050 | -0.050 | 0.000 | -0.17% | 0.01% |
| 10 | 6 | -0.048 | -0.048 | 0.000 | 0.14% | 0.01% |
| 10 | 7 | -0.045 | -0.045 | 0.000 | 0.25% | 0.02% |
| 20 | 8 | -0.047 | -0.048 | 0.000 | 0.62% | 0.05% |
| 20 | 9 | -0.049 | -0.049 | 0.000 | 0.11% | 0.01% |
| 20 | 10 | -0.048 | -0.048 | 0.001 | -1.23% | 0.11% |
| 20 | 11 | -0.048 | -0.048 | 0.000 | -0.16% | 0.01% |
| 20 | 12 | -0.047 | -0.047 | 0.000 | -0.94% | 0.08% |
| 30 | 13 | -0.046 | -0.045 | 0.001 | -2.27% | 0.19% |
| 30 | 14 | -0.045 | -0.044 | 0.001 | -1.72% | 0.14% |
| 30 | 15 | -0.047 | -0.046 | 0.001 | -2.81% | 0.24% |
| 30 | 16 | -0.047 | -0.046 | 0.001 | -2.96% | 0.25% |
| 30 | 17 | -0.048 | -0.048 | 0.000 | -0.95% | 0.08% |
| Max | | -0.045 | -0.044 | 0.000 | 0.62% | 0.25% |
| Average | | -0.047 | -0.047 | 0.000 | -0.77% | 0.08% |
| Min | | -0.050 | -0.050 | 0.000 | -2.96% | 0.00% |
| Std Dev | | 0.001 | 0.001 | 0.000 | 1.10% | 0.08% |

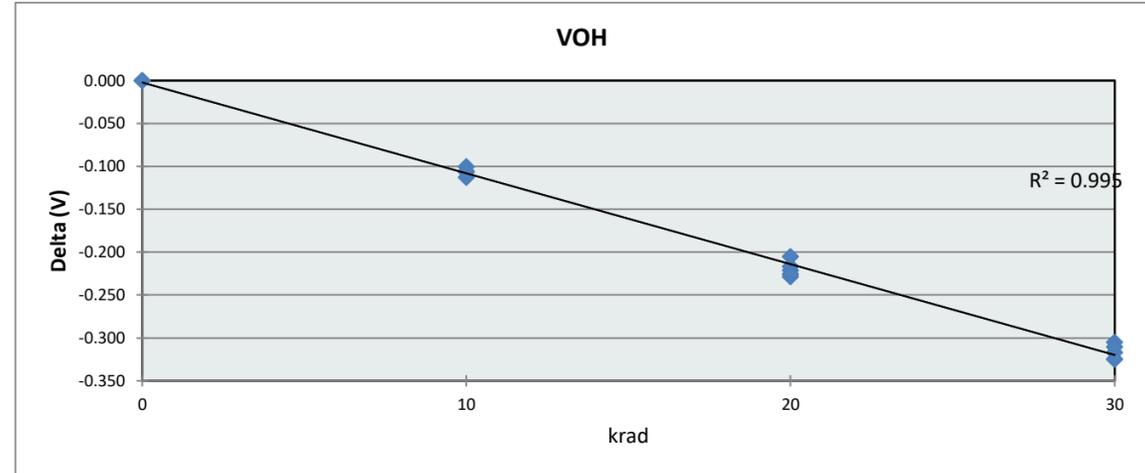


| | | VOD_R_N | | | |
|-----------|--|---------|--------|--------|--------|
| Units | | V | | | |
| Max Limit | | 0.05 | | | |
| Min Limit | | -0.5 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | -0.500 | -0.500 | -0.500 | -0.500 |
| Min | | -0.047 | -0.050 | -0.048 | -0.048 |
| Average | | -0.047 | -0.048 | -0.046 | -0.046 |
| Max | | -0.046 | -0.045 | -0.044 | -0.046 |
| UL | | 0.050 | 0.050 | 0.050 | 0.050 |

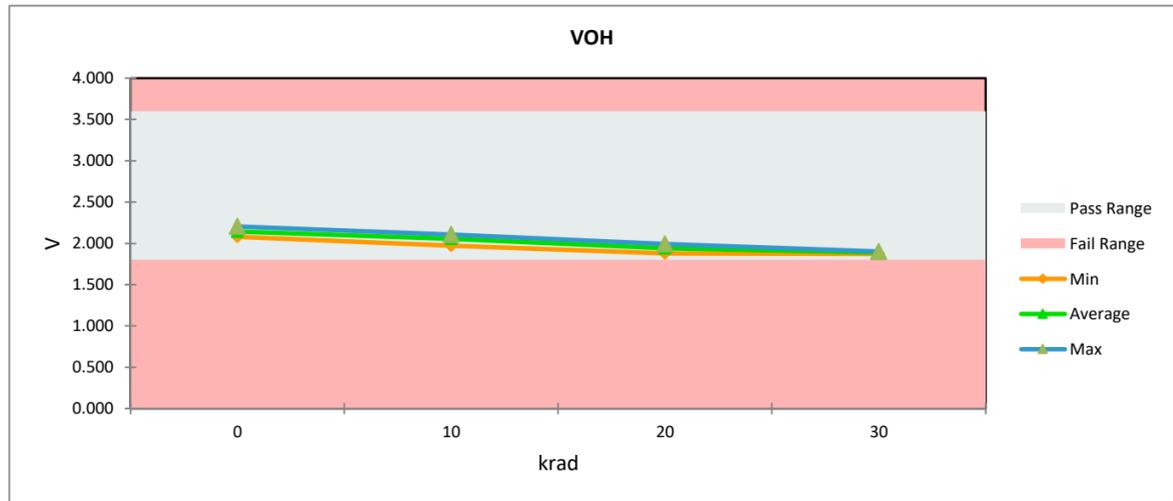


TID Report SN55HVD233-SEP

| | | VOH | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | V | | | | |
| Max Limit | | 3.6 | | | | |
| Min Limit | | 1.8 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 2.204 | 2.204 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 2.193 | 2.193 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 2.201 | 2.095 | -0.106 | -4.82% | 5.90% |
| 10 | 4 | 2.192 | 2.079 | -0.113 | -5.16% | 6.28% |
| 10 | 5 | 2.209 | 2.102 | -0.107 | -4.83% | 5.93% |
| 10 | 6 | 2.207 | 2.107 | -0.100 | -4.55% | 5.58% |
| 10 | 7 | 2.194 | 2.087 | -0.107 | -4.86% | 5.92% |
| 20 | 8 | 2.195 | 1.973 | -0.221 | -10.08% | 12.28% |
| 20 | 9 | 2.211 | 1.994 | -0.217 | -9.82% | 12.06% |
| 20 | 10 | 2.200 | 1.971 | -0.229 | -10.41% | 12.72% |
| 20 | 11 | 2.192 | 1.966 | -0.226 | -10.31% | 12.55% |
| 20 | 12 | 2.200 | 1.994 | -0.206 | -9.34% | 11.42% |
| 30 | 13 | 2.210 | 1.893 | -0.317 | -14.35% | 17.61% |
| 30 | 14 | 2.204 | 1.879 | -0.325 | -14.74% | 18.05% |
| 30 | 15 | 2.196 | 1.871 | -0.325 | -14.80% | 18.06% |
| 30 | 16 | 2.196 | 1.891 | -0.305 | -13.90% | 16.96% |
| 30 | 17 | 2.212 | 1.901 | -0.311 | -14.04% | 17.26% |
| Max | | 2.212 | 2.204 | -0.008 | 0.00% | 18.06% |
| Average | | 2.201 | 2.012 | -0.189 | -8.59% | 10.50% |
| Min | | 2.192 | 1.871 | -0.321 | -14.80% | 0.00% |
| Std Dev | | 0.007 | 0.109 | 0.102 | 4.97% | 6.09% |

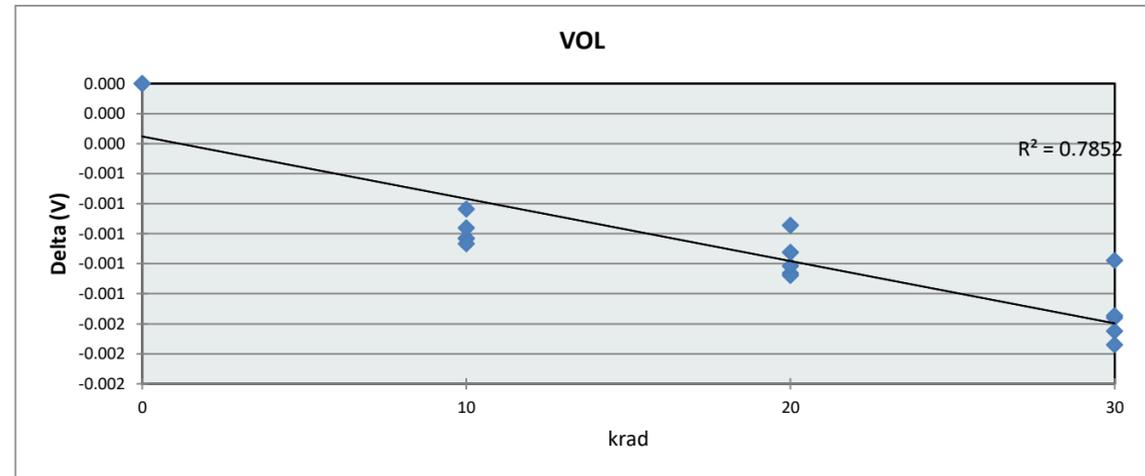


| | | VOH | | | |
|-----------|--|-------|-------|-------|-------|
| Units | | V | | | |
| Max Limit | | 3.6 | | | |
| Min Limit | | 1.8 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | 1.800 | 1.800 | 1.800 | 1.800 |
| Min | | 2.079 | 1.973 | 1.879 | 1.871 |
| Average | | 2.143 | 2.053 | 1.941 | 1.888 |
| Max | | 2.204 | 2.107 | 1.994 | 1.901 |
| UL | | 3.600 | 3.600 | 3.600 | 3.600 |

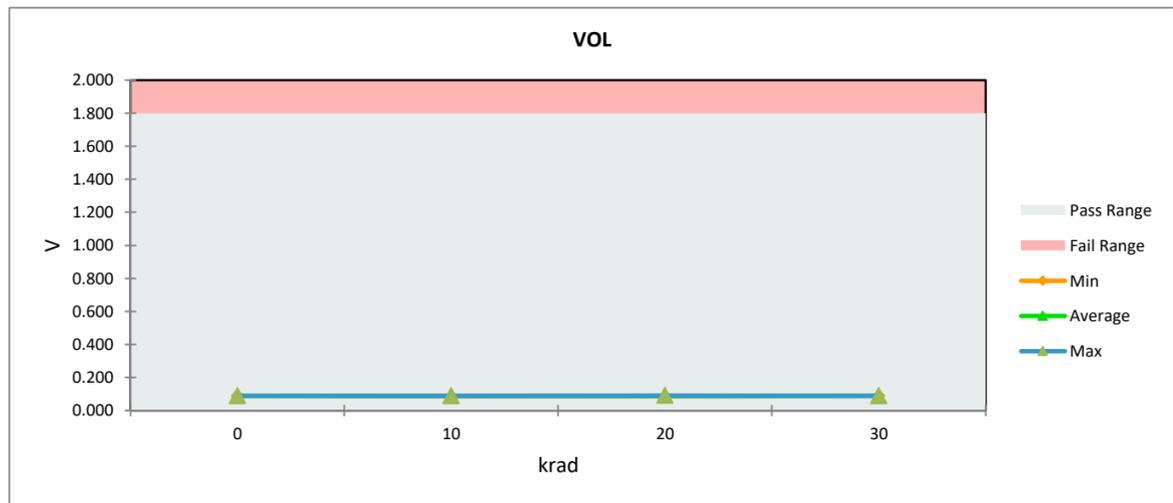


TID Report SN55HVD233-SEP

| | | VOL | | | | |
|-----------|----------|------------|-------------|--------|---------|------------------|
| Units | | V | | | | |
| Max Limit | | 1.8 | | | | |
| Min Limit | | 0 | | | | |
| krad | Serial # | PreTestHDR | PostTestHDR | Delta | Delta % | % of Limit Range |
| 0 | 1 | 0.089 | 0.089 | 0.000 | 0.00% | 0.00% |
| 0 | 2 | 0.089 | 0.089 | 0.000 | 0.00% | 0.00% |
| 10 | 3 | 0.090 | 0.089 | -0.001 | -1.15% | 0.06% |
| 10 | 4 | 0.089 | 0.088 | -0.001 | -1.15% | 0.06% |
| 10 | 5 | 0.091 | 0.090 | -0.001 | -1.18% | 0.06% |
| 10 | 6 | 0.088 | 0.087 | -0.001 | -1.10% | 0.05% |
| 10 | 7 | 0.089 | 0.088 | -0.001 | -0.94% | 0.05% |
| 20 | 8 | 0.088 | 0.088 | -0.001 | -1.07% | 0.05% |
| 20 | 9 | 0.090 | 0.089 | -0.001 | -1.40% | 0.07% |
| 20 | 10 | 0.089 | 0.088 | -0.001 | -1.43% | 0.07% |
| 20 | 11 | 0.089 | 0.088 | -0.001 | -1.37% | 0.07% |
| 20 | 12 | 0.088 | 0.087 | -0.001 | -1.28% | 0.06% |
| 30 | 13 | 0.092 | 0.090 | -0.002 | -1.89% | 0.10% |
| 30 | 14 | 0.088 | 0.086 | -0.002 | -1.87% | 0.09% |
| 30 | 15 | 0.089 | 0.088 | -0.002 | -1.75% | 0.09% |
| 30 | 16 | 0.090 | 0.088 | -0.002 | -1.73% | 0.09% |
| 30 | 17 | 0.091 | 0.090 | -0.001 | -1.29% | 0.07% |
| Max | | 0.092 | 0.090 | -0.002 | 0.00% | 0.10% |
| Average | | 0.089 | 0.088 | -0.001 | -1.21% | 0.06% |
| Min | | 0.088 | 0.086 | -0.001 | -1.89% | 0.00% |
| Std Dev | | 0.001 | 0.001 | 0.000 | 0.54% | 0.03% |



| | | VOL | | | |
|-----------|--|-------|-------|-------|-------|
| Units | | V | | | |
| Max Limit | | 1.8 | | | |
| Min Limit | | 0 | | | |
| krad | | 0 | 10 | 20 | 30 |
| LL | | 0.000 | 0.000 | 0.000 | 0.000 |
| Min | | 0.088 | 0.087 | 0.086 | 0.088 |
| Average | | 0.089 | 0.088 | 0.088 | 0.088 |
| Max | | 0.089 | 0.090 | 0.090 | 0.090 |
| UL | | 1.800 | 1.800 | 1.800 | 1.800 |



9 Applicable and Reference Documents

9.1 Applicable Documents

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

10 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

| Changes from Revision * (January 2019) to Revision A (March 2026) | Page |
|---|--------------------|
| • Changed RLAT level in Abstract from 20krad(Si) to 30krad(Si)..... | 1 |
| • Added Appendix D RLAT update with new RLAT characterization information for future RLATs..... | 12 |

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