

TPS7H5001-SP Neutron Displacement Damage (NDD) Characterization



ABSTRACT

This report presents the effect of neutron displacement damage (NDD) on the TPS7H5001-SP PWM controller. The TPS7H5001-SP showed a strong degree of hardness to neutron irradiation up to fluence level 1×10^{13} n/cm².

The neutron irradiation test is a destructive test. Test procedure follows MIL-STD-883 method 1017 as guidance. The purpose of this test is to determine the device susceptibility to non-ionizing energy loss (NIEL) degradation. Objectives of the test are, to detect and measure the degradation of critical device parameters as a function of neutron fluence and to determine if these parameters are within specified limits after exposure to a specified level of neutron fluence.

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 Facility..... | 3 |
| 2.3 Test Setup Details..... | 3 |
| 3 Test Results | 4 |
| 3.1 NDD Characterization Summary..... | 4 |
| 3.2 Data Sheet Electrical Parameters and Associated Tests..... | 5 |
| 4 Applicable and Reference Documents | 14 |
| 4.1 Applicable Documents..... | 14 |
| 4.2 Reference Documents..... | 14 |
| A Appendix: NDD Report Data | 15 |

List of Figures

| | |
|--------------------------------------|---|
| Figure 1-1. TPS7H5001-SP Device..... | 2 |
|--------------------------------------|---|

List of Tables

| | |
|--|---|
| Table 1-1. Device and Exposure Details..... | 2 |
| Table 2-1. Neutron Irradiation Conditions..... | 3 |
| Table 3-1. TPS7H5001-SP Electrical Parameters Table..... | 5 |

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1 Device Information

1.1 Product Description

The TPS7H5001-SP is a radiation-hardness-assured, current mode, dual output PWM controller optimized for DC-DC converters in space applications. The high switching frequency capability of the TPS7H5001-SP, small footprint, and low-current consumption makes the device ideal for fully exploiting the area reduction and high-efficiency benefits of DC-DC converters. The TPS7H5001-SP features integrated synchronous rectifier control outputs and dead-time programmability in order to target high-efficiency and high-performance topologies. In addition, the TPS7H5001-SP supports single-ended converter topologies by providing the user the flexibility to control the maximum duty cycle.

The TPS7H5001-SP can be driven using an external clock through the SYNC pin or run using its internal oscillator at a frequency programmed by the user. Other programmable features include the UVLO threshold, soft start, and slope compensation. The TPS7H5001-SP is packaged in a very small 22-pin ceramic dual flat package.

1.2 Device Details

Table 1-1 lists the device information and test conditions used in the NDD characterization.

Table 1-1. Device and Exposure Details

| NDD Exposure Details | |
|--|--|
| TI Device | TPS7H5001-SP |
| TI Part Name | 5962R1822201VXC |
| Device Function | PWM controller |
| Package | 22-pin CFP (HFT) |
| Technology | LBC7 |
| Lot Number / Date Code | 1003547 / 2114A |
| Sample Quantity | 9 + 1 control unit |
| Exposure Facility | Fast Neutron Irradiation (FNI) Facility of University of Massachusetts Lowell Research Reactor (UMLRR) |
| Neutron Fluence (1-MeV equivalent) Level | 1×10^{12} , 5×10^{12} , 1×10^{13} n/cm ² |
| Irradiation Temperature | 25°C |



Figure 1-1. TPS7H5001-SP Device

2 Total Dose Test Setup

2.1 Test Overview

General test procedures adhere to MIL-STD-883, Method 1017 as a guide for neutron irradiation. The TPS7H5001-SP was electrically tested using the production automated test equipment (ATE) program at an ambient room temperature of 25°C before and after neutron irradiation.

2.2 Test Facility

The utilized test facility is the Fast Neutron Irradiation (FNI) Facility of University of Massachusetts Lowell Research Reactor. The neutron fluence for this irradiation was measured utilizing ASTM E-265 “Measuring Reaction Rates and Fast Neutron Fluence by Radioactivation of Sulfur-32” and correlated to the measured reactor power level. All irradiation conditions required under ASTM 722 were met, this includes: neutron fluence, distribution and uncertainty. The Average Integrated Neutron Fluence, 1-MeV(Si) equivalent, reflects these factors.

Detailed information of the radiation facility is available at the following link:

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

2.3 Test Setup Details

Devices were irradiated at three fluence levels in unbiased conditions: 1.0×10^{12} n/cm², 5.0×10^{12} n/cm² and 1.0×10^{13} n/cm².

Table 2-1. Neutron Irradiation Conditions

| GROUP | SAMPLE QTY | NEUTRON FLUENCE (n/cm ²) | BIAS |
|--------------|------------|---|--------|
| A | 3 | 1.0×10^{12} | Unbias |
| B | 3 | 5.0×10^{12} | Unbias |
| C | 3 | 1.0×10^{13} | Unbias |
| Control Unit | 1 | N/A | N/A |

3 Test Results

3.1 NDD Characterization Summary

The results show that all devices were fully functional and within specification limits. A sample size of nine units was exposed for neutron irradiation and an additional unirradiated control unit was used as correlation.

Overall, the TPS7H5001-SP showed a strong degree of hardness to Neutron irradiation up to fluence level 1×10^{13} n/cm². The measurements taken post-irradiation for each sample set showed a marginal shift for most parameters at each fluence level. The parameters that showed a greater degree of change between pre- and post- irradiation were still within the Electrical Performance Characteristics specified in the Data Sheet Electrical Parameters table. See [Table 3-1](#) for the Data Sheet Electrical Parameters and Associated Tests.

Electrical testing is done for pre- and post- neutron irradiation by ATE. ATE electrical test is done at an ambient room temperature of 25°C. Parameters not listed in the [Table 3-1](#) are omitted either because there is no parametric data or because verification was done through bench testing.

See [Appendix A](#) for NDD report up to 1.0×10^{13} n/cm².

3.2 Data Sheet Electrical Parameters and Associated Tests

Table 3-1. TPS7H5001-SP Electrical Parameters Table

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|--------------------------------------|--|-------------------------|------|------|------|---|
| | | MIN | TYP | MAX | UNIT | |
| SUPPLY VOLTAGES AND CURRENTS | | | | | | |
| IDD Operating supply current | f _{SW} = 500 kHz, No load for OUTA, OUTB, SRA, and SRB | | 6.25 | 8 | mA | 5.24 __IDD_ACT_500K_NOLOAD_4V 5.27 __IDD_ACT_500K_NOLOAD_14V |
| | f _{SW} = 1 MHz, No load for OUTA, OUTB, SRA, and SRB | | 6.75 | 9.5 | mA | 5.28 __IDD_ACT_1M_NOLOAD_4V 5.31 __IDD_ACT_1M_NOLOAD_14 |
| | f _{SW} = 2 MHz, No load for OUTA, OUTB, SRA, and SRB | | 8.5 | 13.5 | mA | 5.36 __IDD_ACT_2M_NOLOAD_4V 5.39 __IDD_ACT_2M_NOLOAD_14V |
| | f _{SW} = 500 kHz, C _{LOAD} = 100 pF for OUTA, OUTB, SRA, and SRB | | 7.5 | 9.5 | mA | 5.48 __IDD_ACT_500K_4V 5.51 __IDD_ACT_500K_14V |
| | f _{SW} = 1 MHz, C _{LOAD} = 100 pF for OUTA, OUTB, SRA, and SRB | | 9 | 12 | mA | 5.52 __IDD_ACT_1M_4V 5.55 __IDD_ACT_1M_14V |
| | f _{SW} = 2 MHz, C _{LOAD} = 100 pF for OUTA, OUTB, SRA, and SRB | | 14 | 19.5 | mA | 5.60 __IDD_ACT_2M_4V 5.63 __IDD_ACT_2M_14V |
| I _{DD(dis)} Standby current | EN = 0 V | | | 3 | mA | 5.1 __IDD_DIS_4V 5.4 __IDD_DIS_14V |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|---|-------------------------------|-------------------------|------|------|------|--|
| | | MIN | TYP | MAX | UNIT | |
| VLDO Internal linear regulator output voltage | 5 V ≤ VIN ≤ 14 V, fsw ≤ 1 MHz | 4.75 | 5 | 5.2 | V | 5.65 __V_LDO_100K_5V 5.67 __V_LDO_100K_14V 5.77 __V_LDO_1M_5V 5.79 __V_LDO_1M_14V |
| | 5 V ≤ VIN ≤ 14 V, fsw = 2 MHz | 4.65 | 5 | 5.2 | V | 5.85 __V_LDO_2M_5V 5.87 __V_LDO_2M_14V |
| ENABLE AND UNDERVOLTAGE LOCKOUT | | | | | | |
| V _{ENR} EN threshold rising | | 0.57 | 0.6 | 0.63 | V | 6.5 __V_EN_RISE_4V 6.14 __V_EN_RISE_14V |
| V _{ENF} EN threshold falling | | 0.47 | 0.5 | 0.53 | V | 6.6 __V_EN_FALL_4V 6.15 __V_EN_FALL_14V |
| V _{ENH} EN hysteresis voltage | | 85 | 95 | 105 | mV | 6.7 __V_EN_HYS_4V 6.16 __V_EN_HYS_14V, |
| I _{EN} EN pin input leakage current | VIN = 14 V, EN = 5 V | | | 25 | nA | 6.4 __I_EN_LEAK_14V |
| VLDO _{UVLOR} UVLO rising | | 3.44 | 3.55 | 3.66 | V | 6.34 __UVLO_VLDO_RISE_1MHz 6.37 __UVLO_VLDO_RISE_100kHz |
| VLDO _{UVLOF} UVLO falling | | 3.29 | 3.4 | 3.51 | V | 6.35 __UVLO_VLDO_FALL_1MHz 6.38 __UVLO_VLDO_FALL_100kHz |
| VLDO _{UVLOH} UVLO hysteresis | | 115 | 135 | 160 | mV | 6.36 __UVLO_VLDO_HYST_1MHz 6.39 __UVLO_VLDO_HYST_100kHz |
| SOFT START | | | | | | |
| I _{SS} Soft-start current | SS = 0.3 V | 1.98 | 2.7 | 3.32 | μA | 7.1 __I_SS_4V 7.7 __I_SS_14V |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|---|--|-------------------------|------|------|-----------------|---|
| | | MIN | TYP | MAX | UNIT | |
| ERROR AMPLIFIER | | | | | | |
| EA _{gm} Transconductance | $-2 \mu\text{A} < I_{\text{COMP}} < 2 \mu\text{A}$, $V_{(\text{COMP})} = 1 \text{ V}$ | 1150 | 1800 | 2400 | $\mu\text{A/V}$ | 8.9 __EA_GM_4V 8.12 __EA_GM_14V |
| EA _{ISRC} Error amplifier source current | $V_{(\text{COMP})} = 1 \text{ V}$, 100-mV input overdrive | 100 | | 190 | μA | 8.13 __EA_I_SOURCE_4 V 8.16 __EA_I_SOURCE_1 4V |
| EA _{ISNK} Error amplifier sink current | $V_{(\text{COMP})} = 1 \text{ V}$, 100-mV input overdrive | 100 | | 190 | μA | 8.17 __EA_I_SINK_4V 8.20 __EA_I_SINK_14V |
| EA _{OS} Error amplifier offset voltage | | -2 | | 2 | mV | 8.5 __EA_OS_4V 8.8 __EA_OS_14V |
| OSCILLATOR | | | | | | |
| SYNC _{RT} SYNC out low-to-high rise time (10%/90%) | $C_{\text{LOAD}} = 25 \text{ pF}$ | | 6 | 15 | ns | 9.1 __T_SYNC_RISE_1 00kHz_4V 9.21 __T_SYNC_RISE_2 MHz_4V 9.73 __T_SYNC_RISE_1 00kHz_14V 9.93 __T_SYNC_RISE_2 MHz_14V |
| SYNC _{FT} SYNC out high-to-low fall time (10%/90%) | $C_{\text{LOAD}} = 25 \text{ pF}$ | | 6 | 17 | ns | 9.2 __T_SYNC_FALL_1 00kHz_4V 9.22 __T_SYNC_FALL_2 MHz_4V 9.74 __T_SYNC_FALL_1 00kHz_14V 9.94 __T_SYNC_FALL_2 MHz_14V |
| SYNC _{OL} SYNC out low level | $I_{\text{OL}} = 10 \text{ mA}$ | | | 500 | mV | 9.186 __SYNC_VOL_ 4V 9.189 __SYNC_VOL_ 14V |
| EXT _{DT} Externally set frequency detection time | RT = Open, $f = 200 \text{ kHz}$ | | | 20 | μs | 9.185 __T_SYNC_DE TECT |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|--|------------------------|-------------------------|-------|-------|------|--|
| | | MIN | TYP | MAX | UNIT | |
| FSW _{EXT} Externally set frequency | RT = 1.07 MΩ | 95 | 105 | 115 | kHz | 9.4 __FSW_EXT_RT_10 0kHz_4V 9.76 __FSW_EXT_RT_10 0kHz_14V |
| | RT = 511 kΩ | 190 | 210 | 230 | kHz | 9.8 __FSW_EXT_RT_20 0kHz_4V 9.80 __FSW_EXT_RT_20 0kHz_14V |
| | RT = 90.9 kΩ | 900 | 1000 | 1100 | kHz | 9.16 __FSW_EXT_RT_1 MHz_4V 9.88 __FSW_EXT_RT_1 MHz_14V |
| | RT = 34.8 kΩ | 1700 | 2000 | 2300 | kHz | 9.24 __FSW_EXT_RT_2 MHz_4V 9.96 __FSW_EXT_RT_2 MHz_14V |
| VOLTAGE REFERENCE | | | | | | |
| VREF Internal voltage reference initial tolerance ⁽¹⁾ | Measured at COMP, 25°C | 0.609 | 0.613 | 0.615 | V | 8.1 __VREF_4V 8.4 __VREF_14V |
| REFCAP REFCAP voltage | REFCAP = 470 nF | 1.213 | 1.225 | 1.237 | V | 5.88 __V_REFCAP_100K _4V 5.91 __V_REFCAP_100K _14V 5.100 __V_REFCAP_ 1M_4V 5.103 __V_REFCAP_ 1M_14V 5.104 __V_REFCAP_ 1P5M_4V 5.107 __V_REFCAP_ 1P5M_14V 5.108 __V_REFCAP_ 2M_4V 5.111 __V_REFCAP_ 2M_14V |
| CURRENT SENSE, CURRENT LIMIT, AND HICCUP | | | | | | |
| CCSR COMP to CS_LIM ratio | | 2 | 2.06 | 2.12 | | 10.49 __CCSR_Ratio |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|---|---------------------------|-------------------------|------|------|---------------|---|
| | | MIN | TYP | MAX | UNIT | |
| V_{CS_ILIM} Current limit (over-current) threshold | | | 1.05 | 1.09 | V | 10.1 __V_CS_ILIM_OC_Rise_4V 10.7 __V_CS_ILIM_OC_Rise_14V |
| FAULT | | | | | | |
| V_{FLTR} FLT threshold rising | | 0.57 | 0.6 | 0.63 | V | 12.1 __V_FAULT_RISE_4V 12.10 __V_FAULT_RISE_14V |
| V_{FLTF} FLT threshold falling | | 0.47 | 0.5 | 0.53 | V | 12.2 __V_FAULT_FALL_4V 12.11 __V_FAULT_FALL_14V |
| V_{FLTH} FLT hysteresis voltage | | 90 | 100 | 110 | mV | 12.3 __V_FAULT_HYS_4V 12.12 __V_FAULT_HYS_14V |
| T_{FLT} FLT minimum pulse width | $V_{FLT} = 1\text{ V}$ | 0.4 | | 1.4 | μs | 12.14 __T_FAULT_MIN |
| t_{DFLT} FLT delay duration | $f_{sw} = 100\text{ kHz}$ | 140 | 152 | 162 | μs | 12.15 __T_FAULT_DELAY_100kHz |
| | $f_{sw} = 200\text{ kHz}$ | 66 | 78 | 86 | μs | 12.17 __T_FAULT_DELAY_200kHz |
| | $f_{sw} = 1\text{ MHz}$ | 14 | 17 | 21 | μs | 12.21 __T_FAULT_DELAY_1MHz |
| | $f_{sw} = 2\text{ MHz}$ | 7 | 11 | 14 | μs | 12.23 __T_FAULT_DELAY_2MHz |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|--|--|-------------------------|-----|-----|------|--|
| | | MIN | TYP | MAX | UNIT | |
| PRIMARY AND SYNCHRONOUS RECTIFIER OUTPUTS | | | | | | |
| Rise/fall time | $R_{LOAD} = 50\text{ k}\Omega$, $C_{LOAD} = 100\text{ pF}$, 10% to 90% | | 10 | 17 | ns | 13.1 __OUTA_RISE_1MH z_4V 13.25 __OUTA_RISE_1MH z_14V 13.3 __OUTA_FALL_1MH z_4V 13.27 __OUTA_FALL_1MH z_14V 13.2 __OUTB_RISE_1MH z_4V 13.26 __OUTB_RISE_1MH z_14V 13.4 __OUTB_FALL_1MH z_4V 13.28 __OUTB_FALL_1MH z_14V 13.5 __SRA_RISE_1MHz _4V 13.29 __SRA_RISE_1MHz _14V 13.7 __SRA_FALL_1MHz _4V 13.31 __SRA_FALL_1MHz _14V 13.6 __SRB_RISE_1MHz _4V 13.30 __SRB_RISE_1MHz _14V 13.8 __SRB_FALL_1MHz _4V 13.32 __SRB_FALL_1MHz _14V |
| t_{MIN} Minimum on-time LEB = 10 k Ω | LEB = 10 k Ω , 5 V \leq VIN \leq 14 V | | | 85 | ns | 13.241__OUT_T_ON _MIN |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|--|--|-------------------------|-----|-----|------|--|
| | | MIN | TYP | MAX | UNIT | |
| TD _{PS} Primary off to secondary on dead time | PS = floating, 5 V < VIN < 14 V, 90% of OUTx falling edge to 10% of SRx rising edge with OUTx and SRx floating | 5 | 8 | 11 | ns | 13.37 __PSA_DT_0ns_1M_5V 13.38 __PSB_DT_0ns_1M_5V 13.45 __PSA_DT_0ns_1M_14V 13.46 __PSB_DT_0ns_1M_14V |
| | PS = 49.9 kΩ, 5 V < VIN < 14 V, 90% of OUTx falling edge to 10% of SRx rising edge with OUTx and SRx floating | 43 | 50 | 55 | ns | 13.53 __PSA_DT_50ns_1M_5V 13.54 __PSB_DT_50ns_1M_5V 13.61 __PSA_DT_50ns_1M_14V 13.62 __PSB_DT_50ns_1M_14V |
| | PS = 107 kΩ, 5 V < VIN < 14 V, 90% of OUTx falling edge to 10% of SRx rising edge with OUTx and SRx floating | 85 | 100 | 110 | ns | 13.69 __PSA_DT_100ns_1M_5V 13.70 __PSB_DT_100ns_1M_5V 13.77 __PSA_DT_100ns_1M_14V 13.78 __PSB_DT_100ns_1M_14V |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|--|--|-------------------------|-----|-----|------|--|
| | | MIN | TYP | MAX | UNIT | |
| TD _{SP} Secondary off to primary on dead time | SP = floating, 5 V < VIN < 14 V, 90% of SRx falling edge to 10% of OUTx rising edge with OUTx and SRx floating | 5 | 8 | 11 | ns | 13.39 __SPA_DT_0ns_1M_5V 13.40 __SPB_DT_0ns_1M_5V 13.47 __SPA_DT_0ns_1M_14V 13.48 __SPB_DT_0ns_1M_14V |
| | SP = 49.9 kΩ, 5 V < VIN < 14 V, 90% of SRx falling edge to 10% of OUTx rising edge with OUTx and SRx floating | 43 | 50 | 55 | ns | 13.55 __SPA_DT_50ns_1M_5V 13.56 __SPB_DT_50ns_1M_5V 13.63 __SPA_DT_50ns_1M_14V 13.64 __SPB_DT_50ns_1M_14V |
| | SP = 100 kΩ, 5 V < VIN < 14V, 90% of SRx falling edge to 10% of OUTx rising edge with OUTx and SRx floating | 85 | 100 | 110 | ns | 13.71 __SPA_DT_100ns_1M_5V 13.72 __SPB_DT_100ns_1M_5V 13.79 __SPA_DT_100ns_1M_14V 13.80 __SPB_DT_100ns_1M_14V |
| DUTY CYCLE | | | | | | |
| T _{LEB} Leading edge blank time | LEB = 10 kΩ, 5 V < VIN < 14 V | 12 | 15 | 19 | ns | 13.243__T_LEB_10ns_5V 13.245__T_LEB_10ns_14V |
| | LEB = 49.9 kΩ, 5 V < VIN < 14 V | 45 | 50 | 55 | ns | 13.247__T_LEB_50ns_5V 13.249__T_LEB_50ns_14V |
| | LEB = 110 kΩ, 5 V < VIN < 14 V | 85 | 100 | 110 | ns | 13.251__T_LEB_100ns_5V 13.253__T_LEB_100ns_14V |
| D _{MAX} Maximum duty cycle | DCL = AVSS | 45% | 48% | 50% | | 13.256__MAX_DC_DCL_AVSS |

Table 3-1. TPS7H5001-SP Electrical Parameters Table (continued)

| PARAMETER | TEST CONDITION | TPS7H5001-SP DATA SHEET | | | | TEST # |
|-----------|----------------|-------------------------|-----|------|------|-----------------------------|
| | | MIN | TYP | MAX | UNIT | |
| | DCL = floating | 70% | 75% | 80% | | 13.259__MAX_DC_ DCL_OPEN |
| | DCL = VLDO | | | 100% | | 13.262__MAX_DC_ DCL_VLDO |

(1) Measured at COMP pin to include error amplifier offset.

4 Applicable and Reference Documents

4.1 Applicable Documents

- Texas Instruments, [TPS7H5001-SP Radiation-Hardness-Assured Si and GaN Dual Output Controller data sheet](#)
- Texas Instruments, [TPS7H5001EVM-CVAL Evaluation Module user's guide](#)
- Texas Instruments, [TPS7H5001-SP Single-Event Effects \(SEE\) radiation report](#)

4.2 Reference Documents

Texas Instruments neutron irradiation test follow the guideline from MIL-STD-883 TM 1017. The document is available in Defense Logistic Agency's website.

A Appendix: NDD Report Data

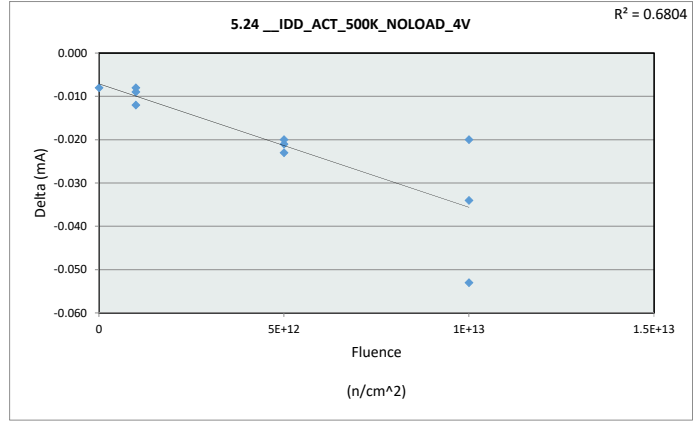
This appendix contains the NDD report data.

Neutron Displacement Damage (NDD) Report
TPS7H5001-SP

Neutron Displacement Damage (NDD) Report TPS7H5001-SP

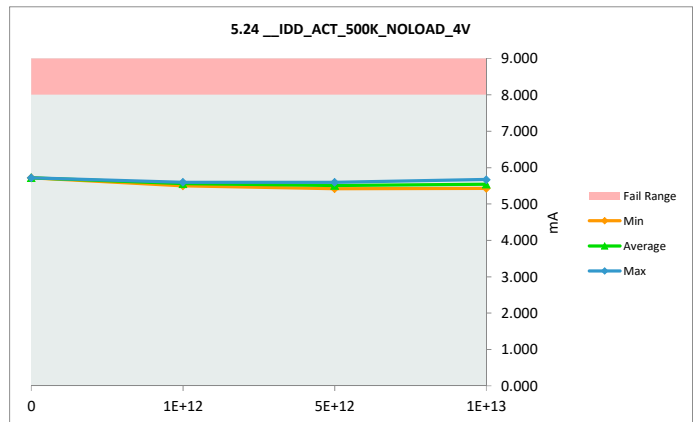
| 5.24 IDD_ACT_500K_NOLOAD_4V | |
|-----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 8 |
| Min Limit | 8 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 5.725 | 5.717 | -0.008 |
| 1E+12 | 45 | 5.581 | 5.569 | -0.012 |
| 1E+12 | 46 | 5.602 | 5.594 | -0.008 |
| 1E+12 | 54 | 5.507 | 5.498 | -0.009 |
| 5E+12 | 57 | 5.543 | 5.520 | -0.023 |
| 5E+12 | 58 | 5.440 | 5.420 | -0.020 |
| 5E+12 | 60 | 5.616 | 5.595 | -0.021 |
| 1E+13 | 62 | 5.563 | 5.529 | -0.034 |
| 1E+13 | 65 | 5.689 | 5.669 | -0.020 |
| 1E+13 | 66 | 5.479 | 5.426 | -0.053 |
| Max | | 5.725 | 5.717 | -0.008 |
| Average | | 5.575 | 5.554 | -0.021 |
| Min | | 5.440 | 5.420 | -0.053 |
| Std Dev | | 0.089 | 0.096 | 0.014 |



| 5.24 IDD_ACT_500K_NOLOAD_4V | |
|-----------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 8 mA |
| Min Limit | 8 mA |

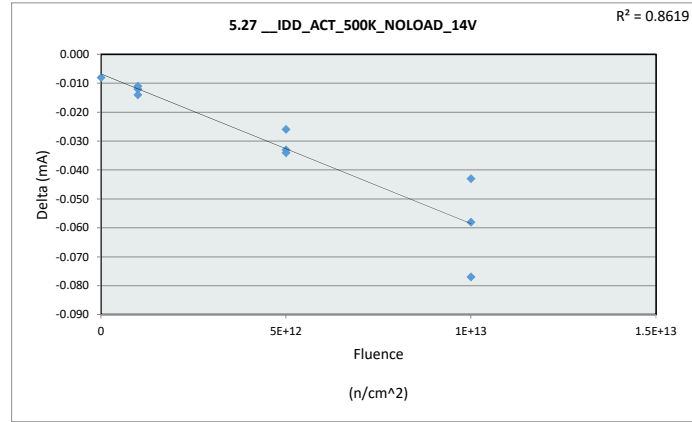
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 5.717 | 5.498 | 5.420 | 5.426 |
| Average | 5.717 | 5.554 | 5.512 | 5.541 |
| Max | 5.717 | 5.594 | 5.595 | 5.669 |
| UL | 8.000 | 8.000 | 8.000 | 8.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

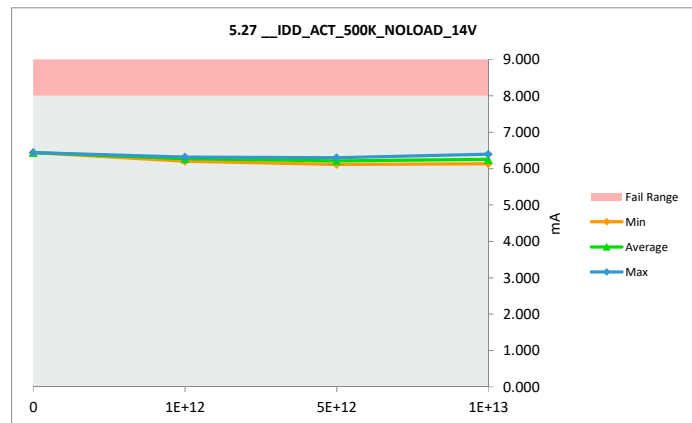
| 5.27 IDD_ACT_500K_NOLOAD_14V | |
|------------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 8 |
| Min Limit | 8 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.448 | 6.440 | -0.008 |
| 1E+12 | 45 | 6.303 | 6.291 | -0.012 |
| 1E+12 | 46 | 6.326 | 6.315 | -0.011 |
| 1E+12 | 54 | 6.214 | 6.200 | -0.014 |
| 5E+12 | 57 | 6.248 | 6.214 | -0.034 |
| 5E+12 | 58 | 6.143 | 6.117 | -0.026 |
| 5E+12 | 60 | 6.335 | 6.302 | -0.033 |
| 1E+13 | 62 | 6.285 | 6.227 | -0.058 |
| 1E+13 | 65 | 6.438 | 6.395 | -0.043 |
| 1E+13 | 66 | 6.206 | 6.129 | -0.077 |
| Max | | 6.448 | 6.440 | -0.008 |
| Average | | 6.295 | 6.263 | -0.032 |
| Min | | 6.143 | 6.117 | -0.026 |
| Std Dev | | 0.098 | 0.106 | 0.023 |



| 5.27 IDD_ACT_500K_NOLOAD_14V | |
|------------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 8 mA |
| Min Limit | 8 mA |

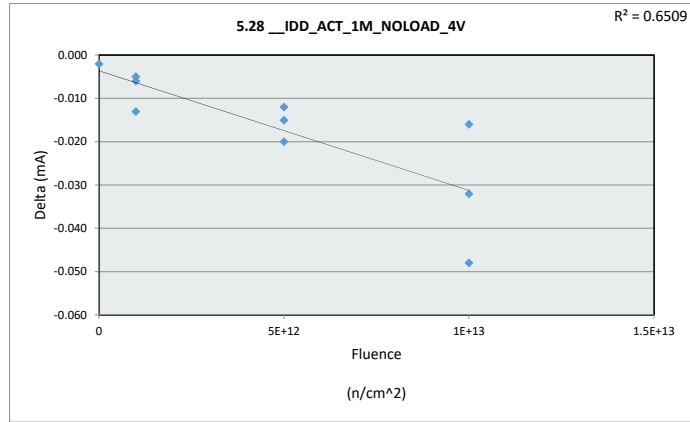
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 6.440 | 6.200 | 6.117 | 6.129 |
| Average | 6.440 | 6.269 | 6.211 | 6.250 |
| Max | 6.440 | 6.315 | 6.302 | 6.395 |
| UL | 8.000 | 8.000 | 8.000 | 8.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

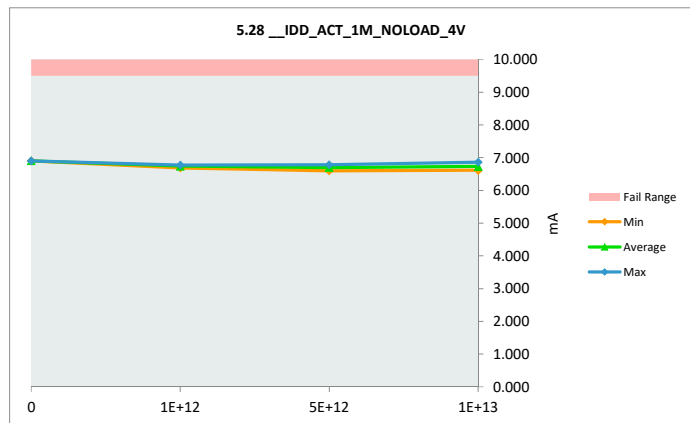
| 5.28 __IDD_ACT_1M_NOLOAD_4V | |
|-----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 9.5 |
| Min Limit | 9.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.905 | 6.903 | -0.002 |
| 1E+12 | 45 | 6.766 | 6.760 | -0.006 |
| 1E+12 | 46 | 6.779 | 6.774 | -0.005 |
| 1E+12 | 54 | 6.699 | 6.686 | -0.013 |
| 5E+12 | 57 | 6.717 | 6.702 | -0.015 |
| 5E+12 | 58 | 6.608 | 6.596 | -0.012 |
| 5E+12 | 60 | 6.802 | 6.782 | -0.020 |
| 1E+13 | 62 | 6.750 | 6.718 | -0.032 |
| 1E+13 | 65 | 6.879 | 6.863 | -0.016 |
| 1E+13 | 66 | 6.658 | 6.610 | -0.048 |
| Max | | 6.905 | 6.903 | -0.002 |
| Average | | 6.756 | 6.739 | -0.017 |
| Min | | 6.608 | 6.596 | -0.048 |
| Std Dev | | 0.092 | 0.099 | 0.014 |



| 5.28 __IDD_ACT_1M_NOLOAD | |
|--------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 9.5 |
| Min Limit | 9.5 |

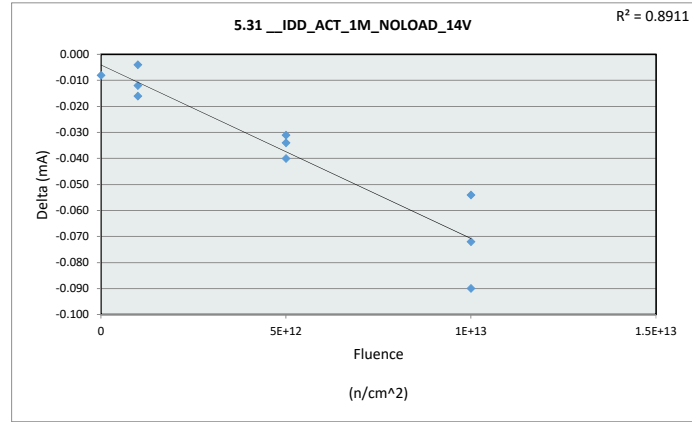
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 6.903 | 6.686 | 6.596 | 6.610 |
| Average | 6.903 | 6.740 | 6.693 | 6.730 |
| Max | 6.903 | 6.774 | 6.782 | 6.863 |
| UL | 9.500 | 9.500 | 9.500 | 9.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

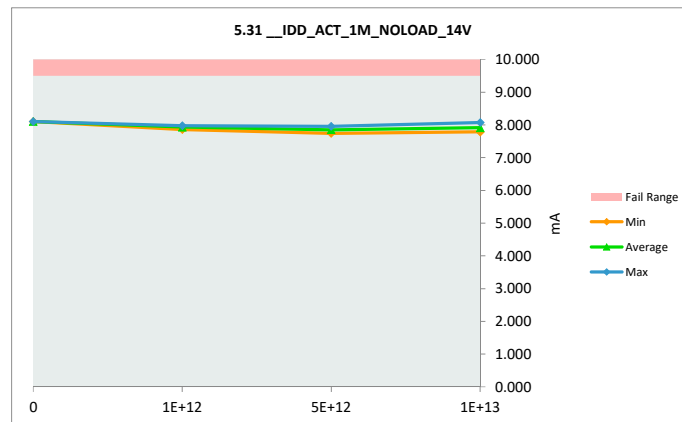
| 5.31 IDD_ACT_1M_NOLOAD_14V | |
|----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 9.5 |
| Min Limit | 9.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.110 | 8.102 | -0.008 |
| 1E+12 | 45 | 7.967 | 7.955 | -0.012 |
| 1E+12 | 46 | 7.978 | 7.974 | -0.004 |
| 1E+12 | 54 | 7.873 | 7.857 | -0.016 |
| 5E+12 | 57 | 7.895 | 7.861 | -0.034 |
| 5E+12 | 58 | 7.777 | 7.746 | -0.031 |
| 5E+12 | 60 | 7.997 | 7.957 | -0.040 |
| 1E+13 | 62 | 7.949 | 7.877 | -0.072 |
| 1E+13 | 65 | 8.128 | 8.074 | -0.054 |
| 1E+13 | 66 | 7.873 | 7.783 | -0.090 |
| Max | | 8.128 | 8.102 | -0.004 |
| Average | | 7.955 | 7.919 | -0.036 |
| Min | | 7.777 | 7.746 | -0.090 |
| Std Dev | | 0.108 | 0.116 | 0.029 |



| 5.31 IDD_ACT_1M_NOLOAD | |
|------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 9.5 mA |
| Min Limit | 9.5 mA |

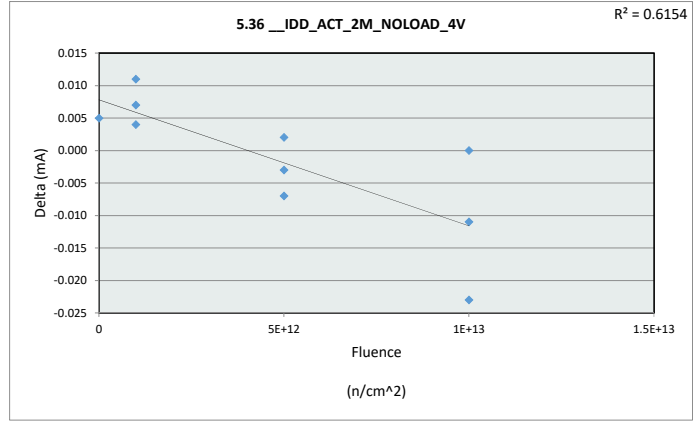
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 8.102 | 7.857 | 7.746 | 7.783 |
| Average | 8.102 | 7.929 | 7.855 | 7.911 |
| Max | 8.102 | 7.974 | 7.957 | 8.074 |
| UL | 9.500 | 9.500 | 9.500 | 9.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

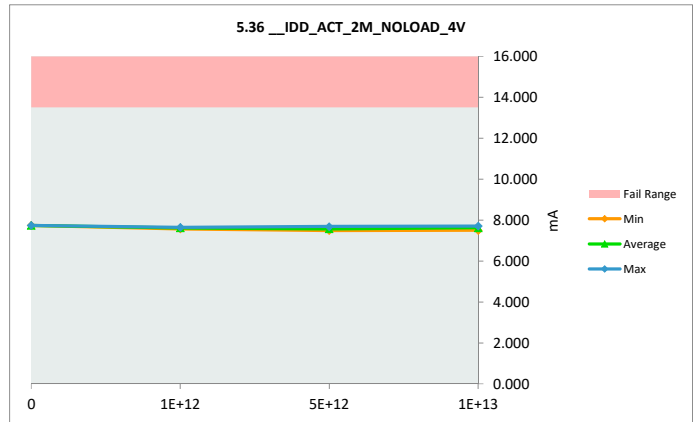
| 5.36 __IDD_ACT_2M_NOLOAD_4V | |
|-----------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 13.5 |
| Min Limit | 13.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.739 | 7.744 | 0.005 |
| 1E+12 | 45 | 7.646 | 7.650 | 0.004 |
| 1E+12 | 46 | 7.613 | 7.624 | 0.011 |
| 1E+12 | 54 | 7.562 | 7.569 | 0.007 |
| 5E+12 | 57 | 7.532 | 7.529 | -0.003 |
| 5E+12 | 58 | 7.492 | 7.494 | 0.002 |
| 5E+12 | 60 | 7.694 | 7.687 | -0.007 |
| 1E+13 | 62 | 7.681 | 7.670 | -0.011 |
| 1E+13 | 65 | 7.711 | 7.711 | 0.000 |
| 1E+13 | 66 | 7.519 | 7.496 | -0.023 |
| Max | | 7.739 | 7.744 | 0.011 |
| Average | | 7.619 | 7.617 | -0.002 |
| Min | | 7.492 | 7.494 | -0.023 |
| Std Dev | | 0.088 | 0.090 | 0.010 |



| 5.36 __IDD_ACT_2M_NOLOAD | |
|--------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 13.5 |
| Min Limit | 13.5 |

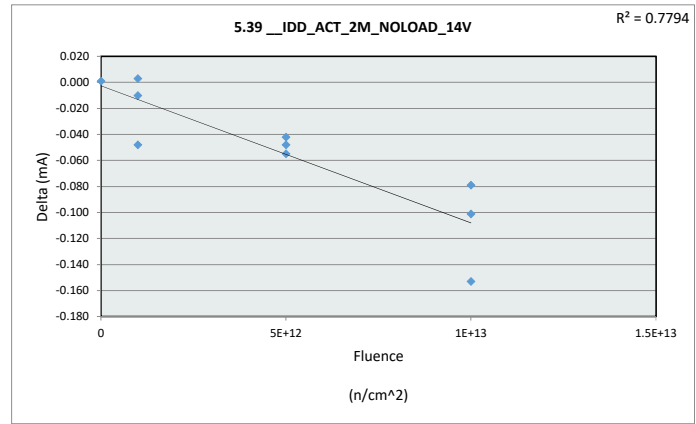
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 7.744 | 7.569 | 7.494 | 7.496 |
| Average | 7.744 | 7.614 | 7.570 | 7.626 |
| Max | 7.744 | 7.650 | 7.687 | 7.711 |
| UL | 13.500 | 13.500 | 13.500 | 13.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

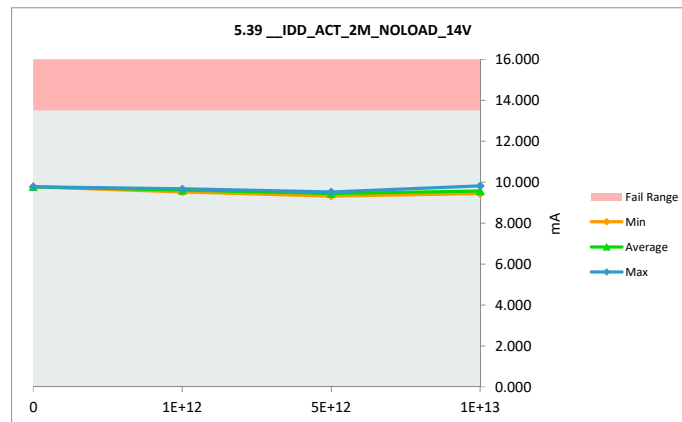
| 5.39 IDD_ACT_2M_NOLOAD_14V | |
|----------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 13.5 |
| Min Limit | 13.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.775 | 9.776 | 0.001 |
| 1E+12 | 45 | 9.635 | 9.625 | -0.010 |
| 1E+12 | 46 | 9.668 | 9.671 | 0.003 |
| 1E+12 | 54 | 9.571 | 9.523 | -0.048 |
| 5E+12 | 57 | 9.520 | 9.472 | -0.048 |
| 5E+12 | 58 | 9.372 | 9.330 | -0.042 |
| 5E+12 | 60 | 9.583 | 9.528 | -0.055 |
| 1E+13 | 62 | 9.549 | 9.448 | -0.101 |
| 1E+13 | 65 | 9.898 | 9.819 | -0.079 |
| 1E+13 | 66 | 9.592 | 9.439 | -0.153 |
| Max | | 9.898 | 9.819 | 0.003 |
| Average | | 9.616 | 9.563 | -0.053 |
| Min | | 9.372 | 9.330 | -0.153 |
| Std Dev | | 0.143 | 0.156 | 0.048 |



| 5.39 IDD_ACT_2M_NOLOAD | |
|------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 13.5 |
| Min Limit | 13.5 |

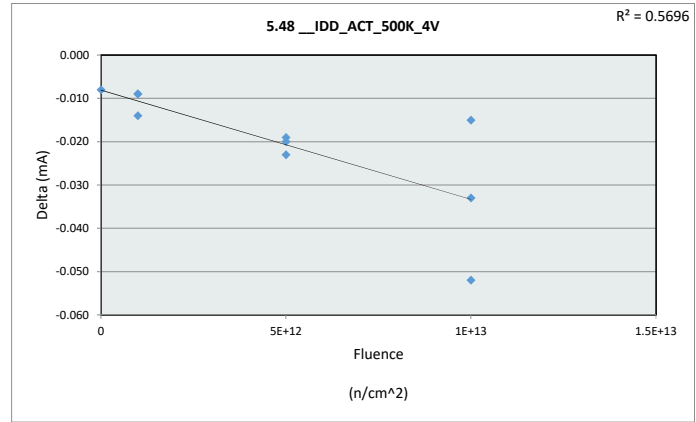
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.776 | 9.523 | 9.330 | 9.439 |
| Average | 9.776 | 9.606 | 9.443 | 9.569 |
| Max | 9.776 | 9.671 | 9.528 | 9.819 |
| UL | 13.500 | 13.500 | 13.500 | 13.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

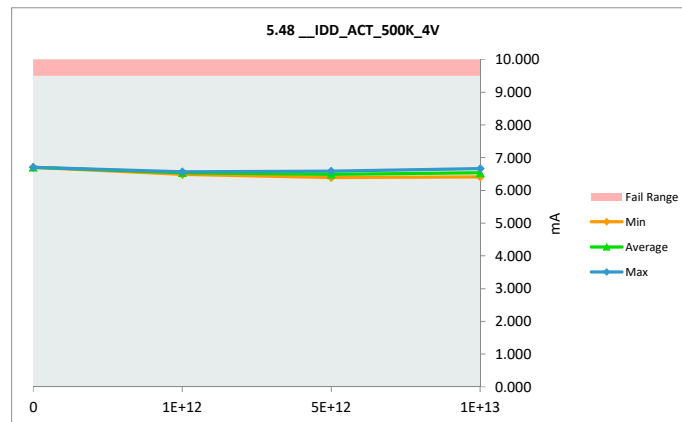
| 5.48_IDD_ACT_500K_4V | |
|----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 9.5 |
| Min Limit | 9.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.710 | 6.702 | -0.008 |
| 1E+12 | 45 | 6.565 | 6.556 | -0.009 |
| 1E+12 | 46 | 6.583 | 6.574 | -0.009 |
| 1E+12 | 54 | 6.500 | 6.486 | -0.014 |
| 5E+12 | 57 | 6.520 | 6.500 | -0.020 |
| 5E+12 | 58 | 6.416 | 6.397 | -0.019 |
| 5E+12 | 60 | 6.609 | 6.586 | -0.023 |
| 1E+13 | 62 | 6.554 | 6.521 | -0.033 |
| 1E+13 | 65 | 6.680 | 6.665 | -0.015 |
| 1E+13 | 66 | 6.462 | 6.410 | -0.052 |
| Max | | 6.710 | 6.702 | -0.008 |
| Average | | 6.560 | 6.540 | -0.020 |
| Min | | 6.416 | 6.397 | -0.052 |
| Std Dev | | 0.092 | 0.099 | 0.014 |



| 5.48_IDD_ACT_500K_4V | |
|----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 9.5 |
| Min Limit | 9.5 |

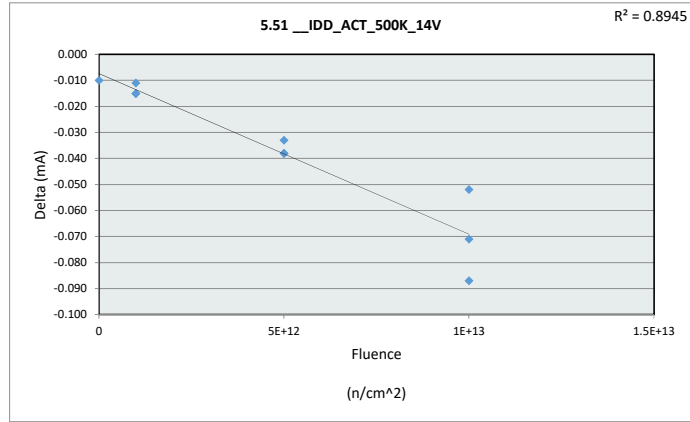
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 6.702 | 6.486 | 6.397 | 6.410 |
| Average | 6.702 | 6.539 | 6.494 | 6.532 |
| Max | 6.702 | 6.574 | 6.586 | 6.665 |
| UL | 9.500 | 9.500 | 9.500 | 9.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

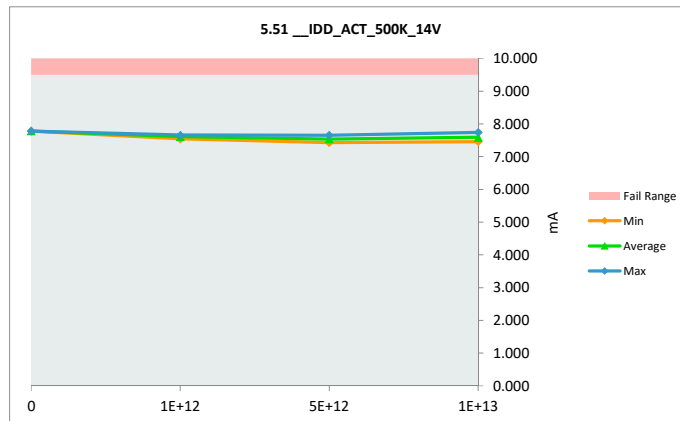
| 5.51 __IDD_ACT_500K_14V | |
|-------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 9.5 |
| Min Limit | 9.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.793 | 7.783 | -0.010 |
| 1E+12 | 45 | 7.643 | 7.628 | -0.015 |
| 1E+12 | 46 | 7.668 | 7.657 | -0.011 |
| 1E+12 | 54 | 7.556 | 7.541 | -0.015 |
| 5E+12 | 57 | 7.572 | 7.534 | -0.038 |
| 5E+12 | 58 | 7.464 | 7.431 | -0.033 |
| 5E+12 | 60 | 7.689 | 7.651 | -0.038 |
| 1E+13 | 62 | 7.632 | 7.561 | -0.071 |
| 1E+13 | 65 | 7.794 | 7.742 | -0.052 |
| 1E+13 | 66 | 7.546 | 7.459 | -0.087 |
| Max | | 7.794 | 7.783 | -0.010 |
| Average | | 7.636 | 7.599 | -0.037 |
| Min | | 7.464 | 7.431 | -0.087 |
| Std Dev | | 0.106 | 0.115 | 0.026 |



| 5.51 __IDD_ACT_500K_14V | |
|-------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 9.5 |
| Min Limit | 9.5 |

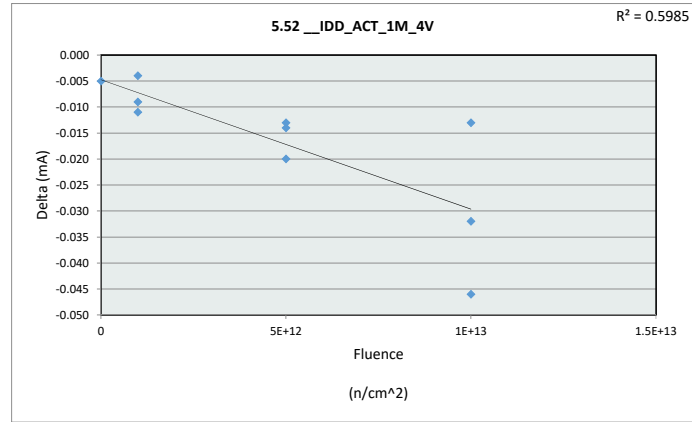
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 7.783 | 7.541 | 7.431 | 7.459 |
| Average | 7.783 | 7.609 | 7.539 | 7.587 |
| Max | 7.783 | 7.657 | 7.651 | 7.742 |
| UL | 9.500 | 9.500 | 9.500 | 9.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

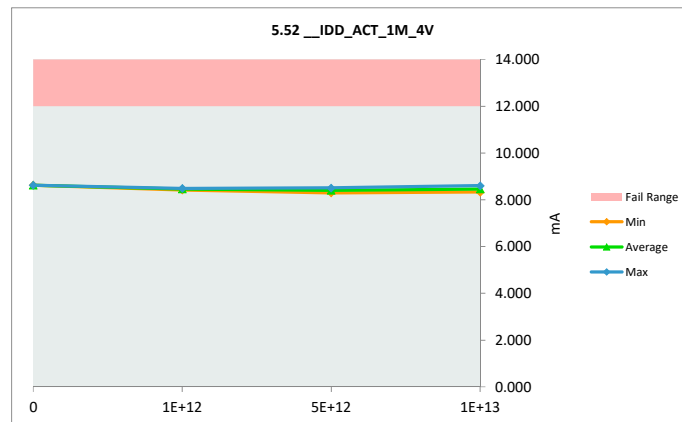
| 5.52 IDD_ACT_1M_4V | |
|--------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 12 |
| Min Limit | 12 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.625 | 8.620 | -0.005 |
| 1E+12 | 45 | 8.486 | 8.477 | -0.009 |
| 1E+12 | 46 | 8.485 | 8.481 | -0.004 |
| 1E+12 | 54 | 8.423 | 8.412 | -0.011 |
| 5E+12 | 57 | 8.427 | 8.413 | -0.014 |
| 5E+12 | 58 | 8.308 | 8.295 | -0.013 |
| 5E+12 | 60 | 8.524 | 8.504 | -0.020 |
| 1E+13 | 62 | 8.477 | 8.445 | -0.032 |
| 1E+13 | 65 | 8.610 | 8.597 | -0.013 |
| 1E+13 | 66 | 8.375 | 8.329 | -0.046 |
| Max | | 8.625 | 8.620 | -0.004 |
| Average | | 8.474 | 8.457 | -0.017 |
| Min | | 8.308 | 8.295 | -0.046 |
| Std Dev | | 0.098 | 0.103 | 0.013 |



| 5.52 IDD_ACT_1M_4V | |
|--------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 12 mA |
| Min Limit | 12 mA |

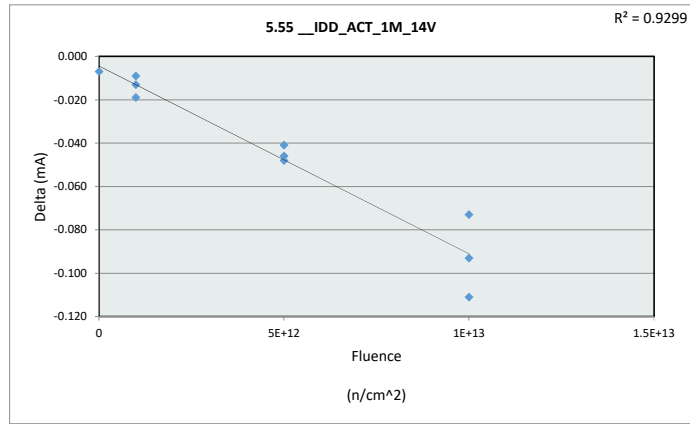
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.620 | 8.412 | 8.295 | 8.329 |
| Average | 8.620 | 8.457 | 8.404 | 8.457 |
| Max | 8.620 | 8.481 | 8.504 | 8.597 |
| UL | 12.000 | 12.000 | 12.000 | 12.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

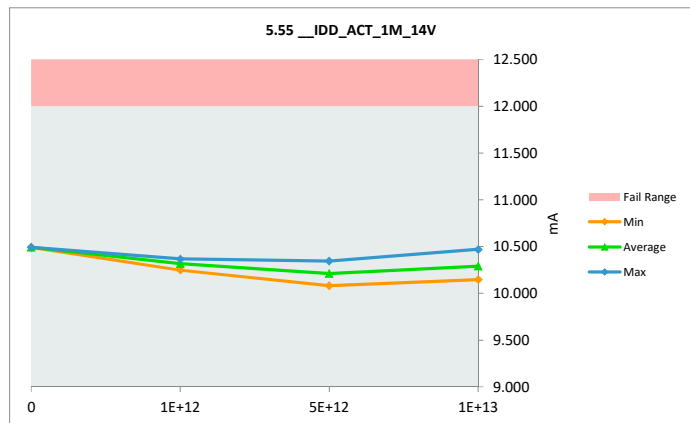
| 5.55_IDD_ACT_1M_14V | |
|---------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 12 |
| Min Limit | 12 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 10.500 | 10.493 | -0.007 |
| 1E+12 | 45 | 10.349 | 10.336 | -0.013 |
| 1E+12 | 46 | 10.376 | 10.367 | -0.009 |
| 1E+12 | 54 | 10.268 | 10.249 | -0.019 |
| 5E+12 | 57 | 10.256 | 10.208 | -0.048 |
| 5E+12 | 58 | 10.124 | 10.083 | -0.041 |
| 5E+12 | 60 | 10.390 | 10.344 | -0.046 |
| 1E+13 | 62 | 10.347 | 10.254 | -0.093 |
| 1E+13 | 65 | 10.542 | 10.469 | -0.073 |
| 1E+13 | 66 | 10.257 | 10.146 | -0.111 |
| Max | | 10.542 | 10.493 | -0.007 |
| Average | | 10.341 | 10.295 | -0.046 |
| Min | | 10.124 | 10.083 | -0.111 |
| Std Dev | | 0.123 | 0.132 | 0.036 |



| 5.55_IDD_ACT_1M_14V | |
|---------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 12 mA |
| Min Limit | 12 mA |

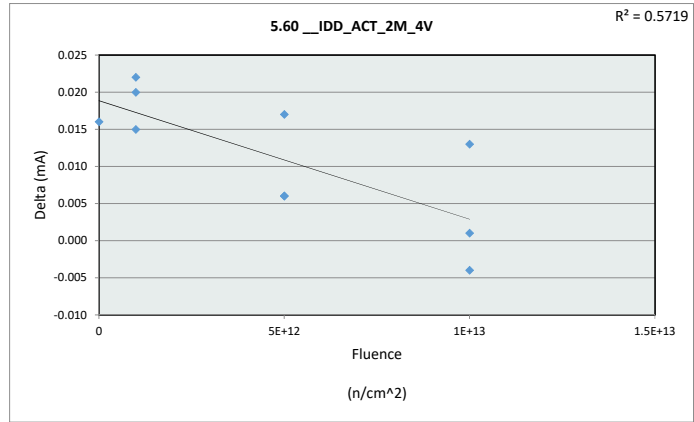
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 10.493 | 10.249 | 10.083 | 10.146 |
| Average | 10.493 | 10.317 | 10.212 | 10.290 |
| Max | 10.493 | 10.367 | 10.344 | 10.469 |
| UL | 12.000 | 12.000 | 12.000 | 12.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

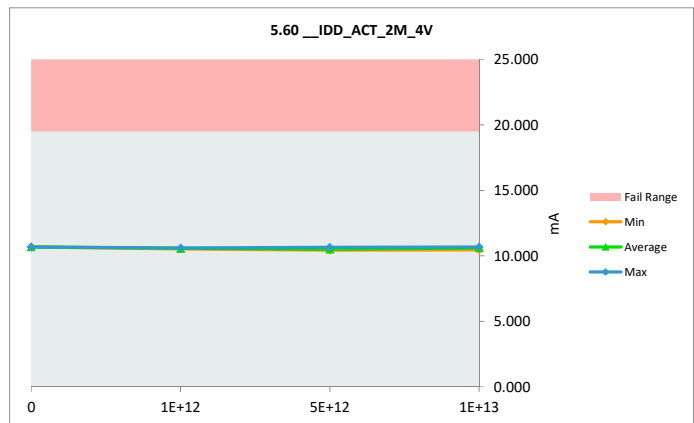
| 5.60 __IDD_ACT_2M_4V | |
|----------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 19.5 |
| Min Limit | 19.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 10.674 | 10.690 | 0.016 |
| 1E+12 | 45 | 10.595 | 10.610 | 0.015 |
| 1E+12 | 46 | 10.530 | 10.552 | 0.022 |
| 1E+12 | 54 | 10.516 | 10.536 | 0.020 |
| 5E+12 | 57 | 10.453 | 10.459 | 0.006 |
| 5E+12 | 58 | 10.421 | 10.438 | 0.017 |
| 5E+12 | 60 | 10.650 | 10.656 | 0.006 |
| 1E+13 | 62 | 10.668 | 10.669 | 0.001 |
| 1E+13 | 65 | 10.659 | 10.672 | 0.013 |
| 1E+13 | 66 | 10.464 | 10.460 | -0.004 |
| Max | | 10.674 | 10.690 | 0.022 |
| Average | | 10.563 | 10.574 | 0.011 |
| Min | | 10.421 | 10.438 | -0.004 |
| Std Dev | | 0.098 | 0.098 | 0.009 |



| 5.60 __IDD_ACT_2M_4V | |
|----------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 19.5 |
| Min Limit | 19.5 |

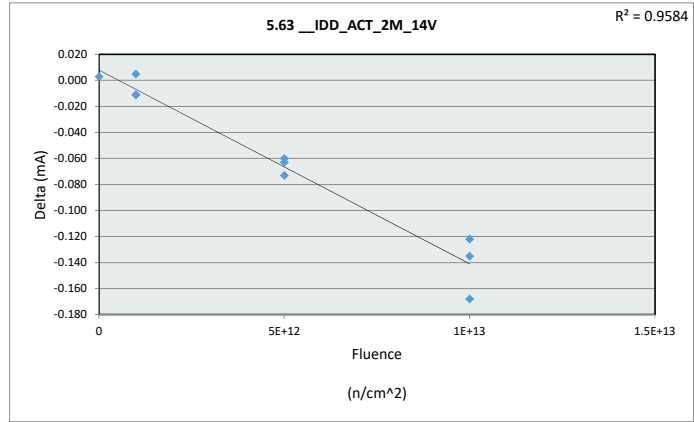
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 10.690 | 10.536 | 10.438 | 10.460 |
| Average | 10.690 | 10.566 | 10.518 | 10.600 |
| Max | 10.690 | 10.610 | 10.656 | 10.672 |
| UL | 19.500 | 19.500 | 19.500 | 19.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

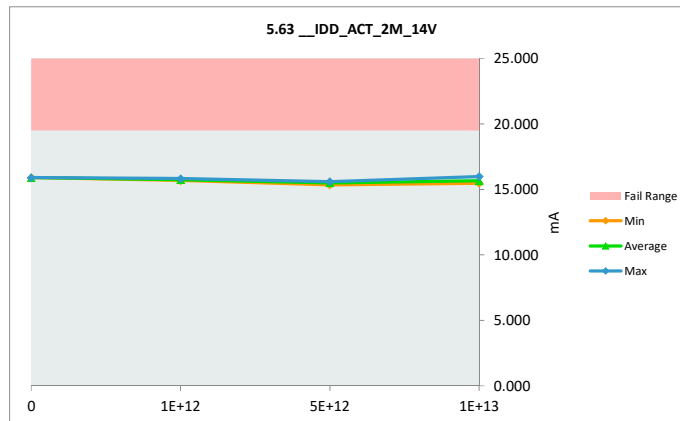
| 5.63 _IDD_ACT_2M_14V | |
|----------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 19.5 |
| Min Limit | 19.5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 15.896 | 15.899 | 0.003 |
| 1E+12 | 45 | 15.728 | 15.717 | -0.011 |
| 1E+12 | 46 | 15.815 | 15.820 | 0.005 |
| 1E+12 | 54 | 15.690 | 15.679 | -0.011 |
| 5E+12 | 57 | 15.620 | 15.557 | -0.063 |
| 5E+12 | 58 | 15.407 | 15.347 | -0.060 |
| 5E+12 | 60 | 15.668 | 15.595 | -0.073 |
| 1E+13 | 62 | 15.654 | 15.519 | -0.135 |
| 1E+13 | 65 | 16.103 | 15.981 | -0.122 |
| 1E+13 | 66 | 15.631 | 15.463 | -0.168 |
| Max | | 16.103 | 15.981 | 0.005 |
| Average | | 15.721 | 15.658 | -0.063 |
| Min | | 15.407 | 15.347 | -0.168 |
| Std Dev | | 0.186 | 0.200 | 0.062 |



| 5.63 _IDD_ACT_2M_14V | |
|----------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 19.5 |
| Min Limit | 19.5 |

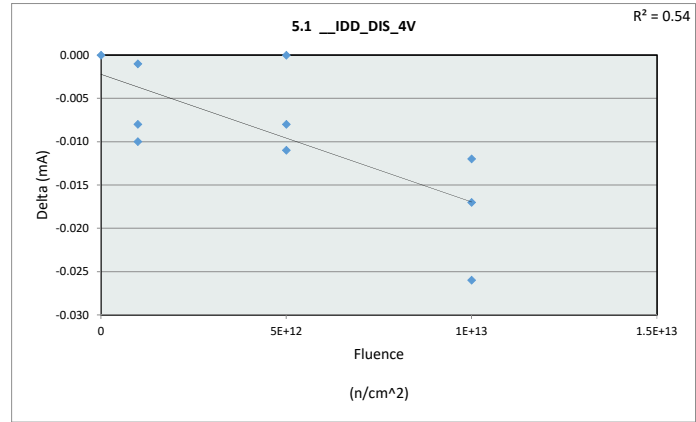
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 15.899 | 15.679 | 15.347 | 15.463 |
| Average | 15.899 | 15.739 | 15.500 | 15.654 |
| Max | 15.899 | 15.820 | 15.595 | 15.981 |
| UL | 19.500 | 19.500 | 19.500 | 19.500 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

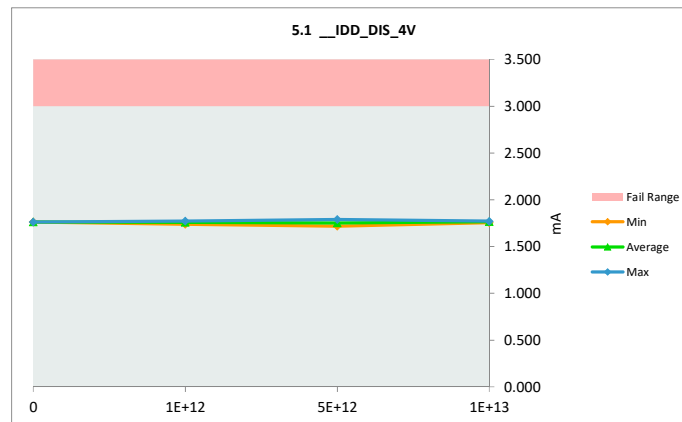
| 5.1 __IDD_DIS_4V | |
|------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA |
| Max Limit | 3 |
| Min Limit | 3 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.762 | 1.762 | 0.000 |
| 1E+12 | 45 | 1.773 | 1.772 | -0.001 |
| 1E+12 | 46 | 1.776 | 1.768 | -0.008 |
| 1E+12 | 54 | 1.747 | 1.737 | -0.010 |
| 5E+12 | 57 | 1.797 | 1.789 | -0.008 |
| 5E+12 | 58 | 1.719 | 1.719 | 0.000 |
| 5E+12 | 60 | 1.760 | 1.749 | -0.011 |
| 1E+13 | 62 | 1.782 | 1.770 | -0.012 |
| 1E+13 | 65 | 1.786 | 1.769 | -0.017 |
| 1E+13 | 66 | 1.780 | 1.754 | -0.026 |
| Max | | 1.797 | 1.789 | 0.000 |
| Average | | 1.768 | 1.759 | -0.009 |
| Min | | 1.719 | 1.719 | -0.026 |
| Std Dev | | 0.022 | 0.020 | 0.008 |



| 5.1 __IDD_DIS_4V | |
|------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 3 mA |
| Min Limit | 3 mA |

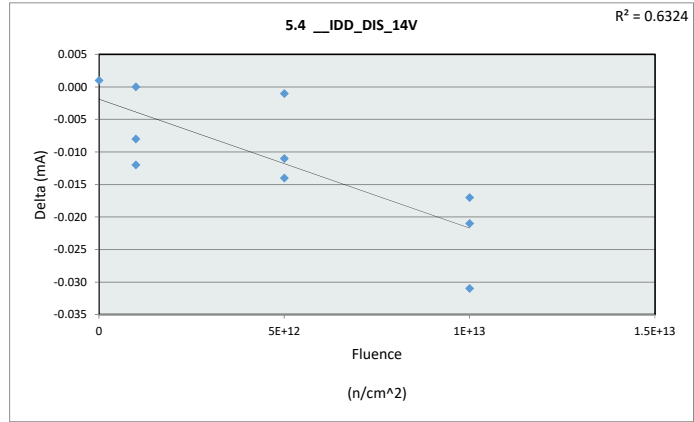
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 1.762 | 1.737 | 1.719 | 1.754 |
| Average | 1.762 | 1.759 | 1.752 | 1.764 |
| Max | 1.762 | 1.772 | 1.789 | 1.770 |
| UL | 3.000 | 3.000 | 3.000 | 3.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

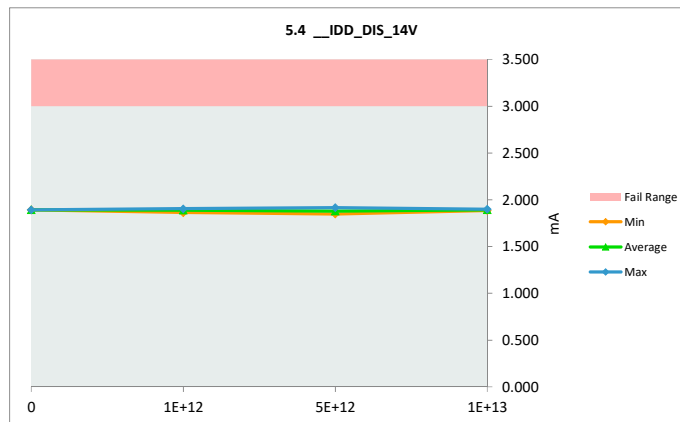
| 5.4 __IDD_DIS_14V | |
|-------------------|----------------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mA mA |
| Max Limit | 3 3 |
| Min Limit | |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.891 | 1.892 | 0.001 |
| 1E+12 | 45 | 1.903 | 1.903 | 0.000 |
| 1E+12 | 46 | 1.907 | 1.899 | -0.008 |
| 1E+12 | 54 | 1.875 | 1.863 | -0.012 |
| 5E+12 | 57 | 1.927 | 1.916 | -0.011 |
| 5E+12 | 58 | 1.848 | 1.847 | -0.001 |
| 5E+12 | 60 | 1.890 | 1.876 | -0.014 |
| 1E+13 | 62 | 1.911 | 1.894 | -0.017 |
| 1E+13 | 65 | 1.919 | 1.898 | -0.021 |
| 1E+13 | 66 | 1.916 | 1.885 | -0.031 |
| Max | | 1.927 | 1.916 | 0.001 |
| Average | | 1.899 | 1.887 | -0.011 |
| Min | | 1.848 | 1.847 | -0.031 |
| Std Dev | | 0.024 | 0.020 | 0.010 |



| 5.4 __IDD_DIS_14V | |
|-------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 3 mA |
| Min Limit | mA |

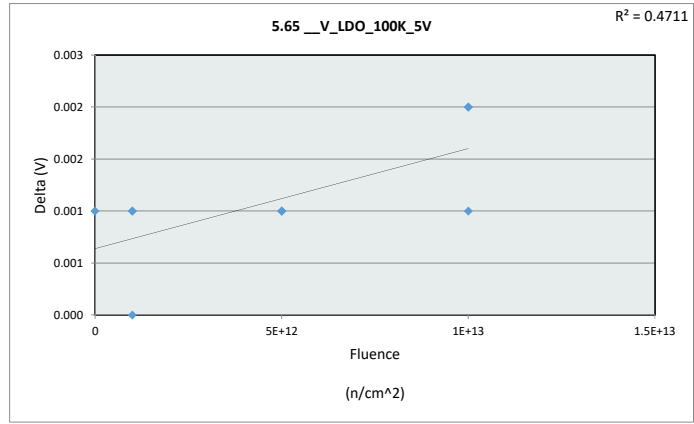
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 1.892 | 1.863 | 1.847 | 1.885 |
| Average | 1.892 | 1.888 | 1.880 | 1.892 |
| Max | 1.892 | 1.903 | 1.916 | 1.898 |
| UL | 3.000 | 3.000 | 3.000 | 3.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

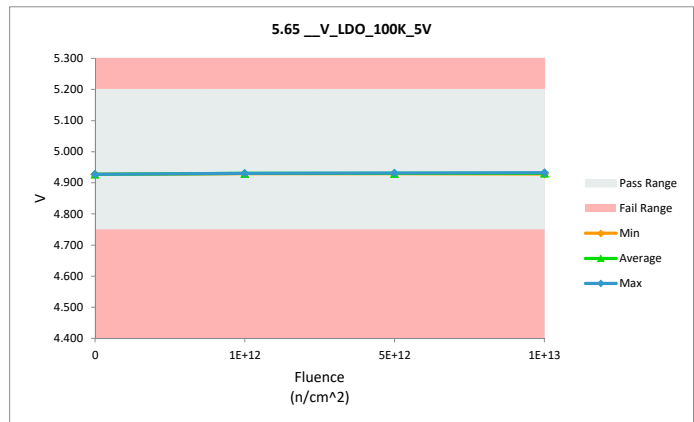
| 5.65_V_LDO_100K_5V | |
|--------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|-------|
| 0 | 68 | 4.926 | 4.927 | 0.001 |
| 1E+12 | 45 | 4.928 | 4.929 | 0.001 |
| 1E+12 | 46 | 4.929 | 4.929 | 0.000 |
| 1E+12 | 54 | 4.929 | 4.930 | 0.001 |
| 5E+12 | 57 | 4.928 | 4.929 | 0.001 |
| 5E+12 | 58 | 4.930 | 4.931 | 0.001 |
| 5E+12 | 60 | 4.928 | 4.929 | 0.001 |
| 1E+13 | 62 | 4.929 | 4.931 | 0.002 |
| 1E+13 | 65 | 4.927 | 4.928 | 0.001 |
| 1E+13 | 66 | 4.930 | 4.932 | 0.002 |
| Max | | 4.930 | 4.932 | 0.002 |
| Average | | 4.928 | 4.930 | 0.001 |
| Min | | 4.926 | 4.927 | 0.000 |
| Std Dev | | 0.001 | 0.002 | 0.001 |



| 5.65_V_LDO_100K_5V | |
|--------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

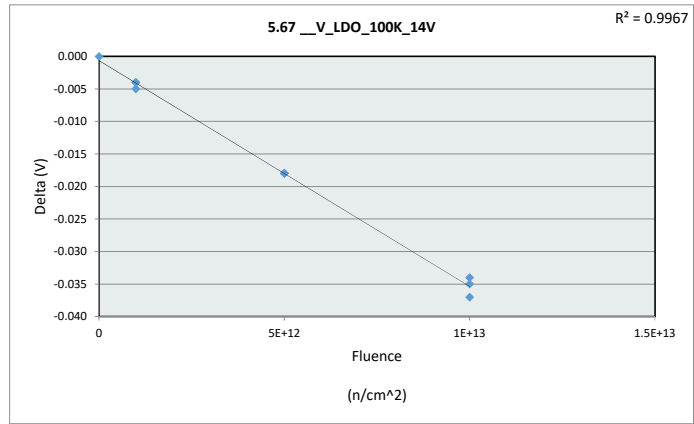
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 4.750 | 4.750 | 4.750 | 4.750 |
| Min | 4.927 | 4.929 | 4.929 | 4.928 |
| Average | 4.927 | 4.929 | 4.930 | 4.930 |
| Max | 4.927 | 4.930 | 4.931 | 4.932 |
| UL | 5.200 | 5.200 | 5.200 | 5.200 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

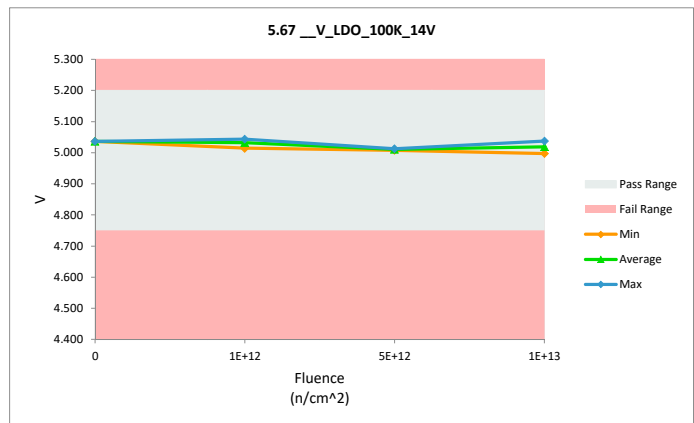
| 5.67 _V_LDO_100K_14V | |
|----------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 5.036 | 5.036 | 0.000 |
| 1E+12 | 45 | 5.043 | 5.039 | -0.004 |
| 1E+12 | 46 | 5.047 | 5.043 | -0.004 |
| 1E+12 | 54 | 5.019 | 5.014 | -0.005 |
| 5E+12 | 57 | 5.031 | 5.013 | -0.018 |
| 5E+12 | 58 | 5.025 | 5.007 | -0.018 |
| 5E+12 | 60 | 5.030 | 5.012 | -0.018 |
| 1E+13 | 62 | 5.034 | 4.997 | -0.037 |
| 1E+13 | 65 | 5.071 | 5.037 | -0.034 |
| 1E+13 | 66 | 5.056 | 5.021 | -0.035 |
| Max | | 5.071 | 5.043 | 0.000 |
| Average | | 5.039 | 5.022 | -0.017 |
| Min | | 5.019 | 4.997 | -0.037 |
| Std Dev | | 0.016 | 0.016 | 0.014 |



| 5.67 _V_LDO_100K_14V | |
|----------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

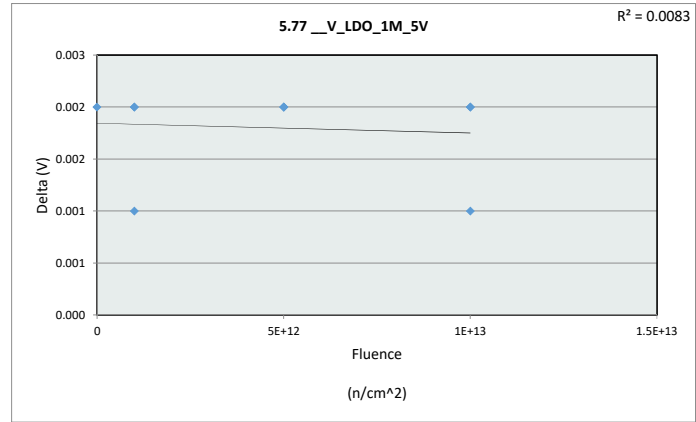
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 4.750 | 4.750 | 4.750 | 4.750 |
| Min | 5.036 | 5.014 | 5.007 | 4.997 |
| Average | 5.036 | 5.032 | 5.011 | 5.018 |
| Max | 5.036 | 5.043 | 5.013 | 5.037 |
| UL | 5.200 | 5.200 | 5.200 | 5.200 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

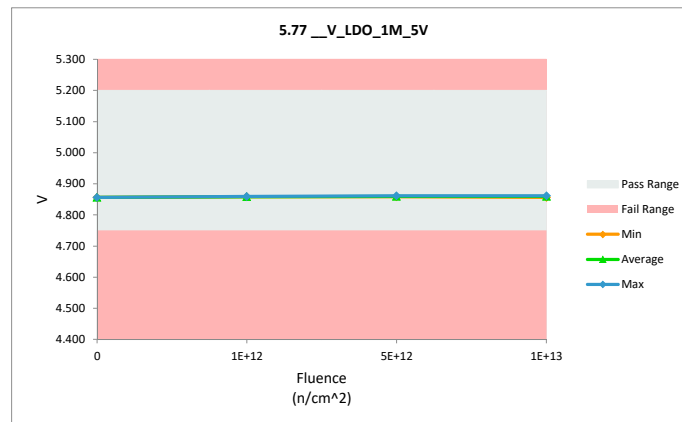
| 5.77 __V_LDO_1M_5V | |
|--------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|-------|
| 0 | 68 | 4.854 | 4.856 | 0.002 |
| 1E+12 | 45 | 4.856 | 4.858 | 0.002 |
| 1E+12 | 46 | 4.857 | 4.859 | 0.002 |
| 1E+12 | 54 | 4.857 | 4.858 | 0.001 |
| 5E+12 | 57 | 4.856 | 4.858 | 0.002 |
| 5E+12 | 58 | 4.859 | 4.861 | 0.002 |
| 5E+12 | 60 | 4.856 | 4.858 | 0.002 |
| 1E+13 | 62 | 4.858 | 4.860 | 0.002 |
| 1E+13 | 65 | 4.855 | 4.856 | 0.001 |
| 1E+13 | 66 | 4.859 | 4.861 | 0.002 |
| Max | | 4.859 | 4.861 | 0.002 |
| Average | | 4.857 | 4.858 | 0.002 |
| Min | | 4.854 | 4.856 | 0.001 |
| Std Dev | | 0.002 | 0.002 | 0.000 |



| 5.77 __V_LDO_1M_5V | |
|--------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

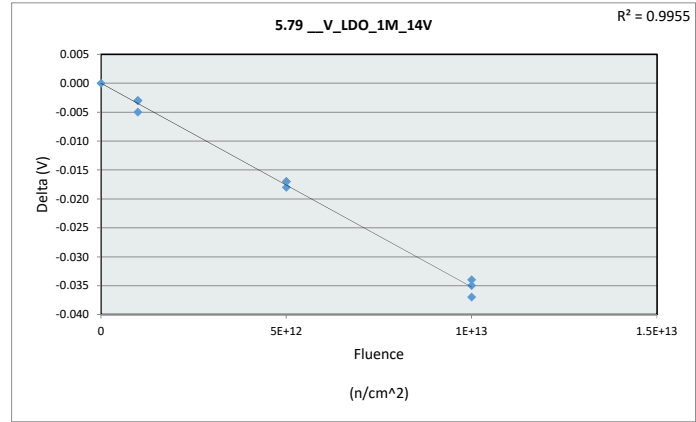
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 4.750 | 4.750 | 4.750 | 4.750 |
| Min | 4.856 | 4.858 | 4.858 | 4.856 |
| Average | 4.856 | 4.858 | 4.859 | 4.859 |
| Max | 4.856 | 4.859 | 4.861 | 4.861 |
| UL | 5.200 | 5.200 | 5.200 | 5.200 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

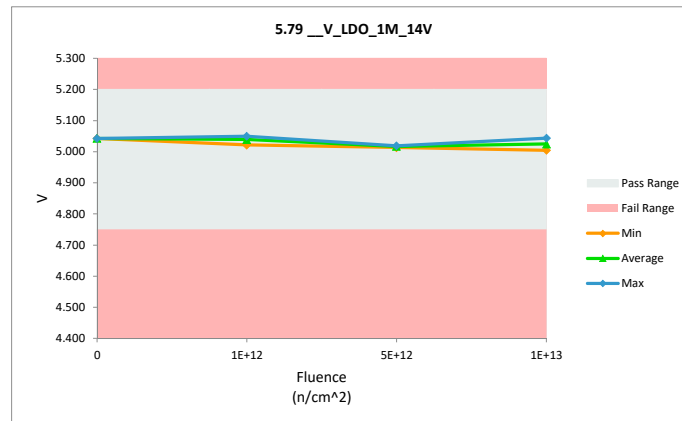
| 5.79_V_LDO_1M_14V | |
|-------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 5.042 | 5.042 | 0.000 |
| 1E+12 | 45 | 5.048 | 5.045 | -0.003 |
| 1E+12 | 46 | 5.053 | 5.050 | -0.003 |
| 1E+12 | 54 | 5.026 | 5.021 | -0.005 |
| 5E+12 | 57 | 5.036 | 5.018 | -0.018 |
| 5E+12 | 58 | 5.030 | 5.013 | -0.017 |
| 5E+12 | 60 | 5.036 | 5.019 | -0.017 |
| 1E+13 | 62 | 5.041 | 5.004 | -0.037 |
| 1E+13 | 65 | 5.077 | 5.043 | -0.034 |
| 1E+13 | 66 | 5.061 | 5.026 | -0.035 |
| Max | | 5.077 | 5.050 | 0.000 |
| Average | | 5.045 | 5.028 | -0.017 |
| Min | | 5.026 | 5.004 | -0.037 |
| Std Dev | | 0.015 | 0.016 | 0.014 |



| 5.79_V_LDO_1M_14V | |
|-------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 5.2 |
| Min Limit | 4.75 |

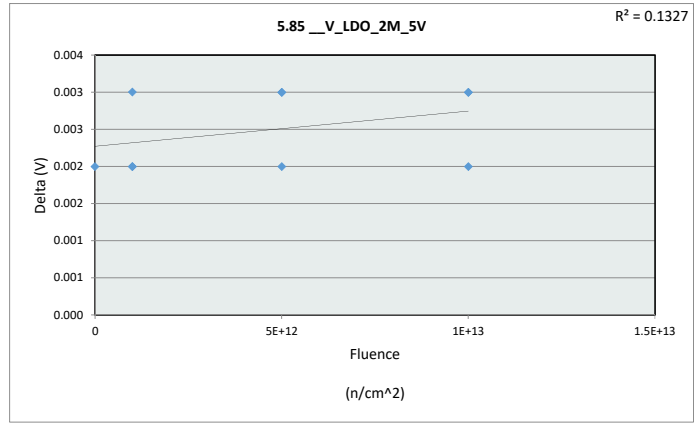
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 4.750 | 4.750 | 4.750 | 4.750 |
| Min | 5.042 | 5.021 | 5.013 | 5.004 |
| Average | 5.042 | 5.039 | 5.017 | 5.024 |
| Max | 5.042 | 5.050 | 5.019 | 5.043 |
| UL | 5.200 | 5.200 | 5.200 | 5.200 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

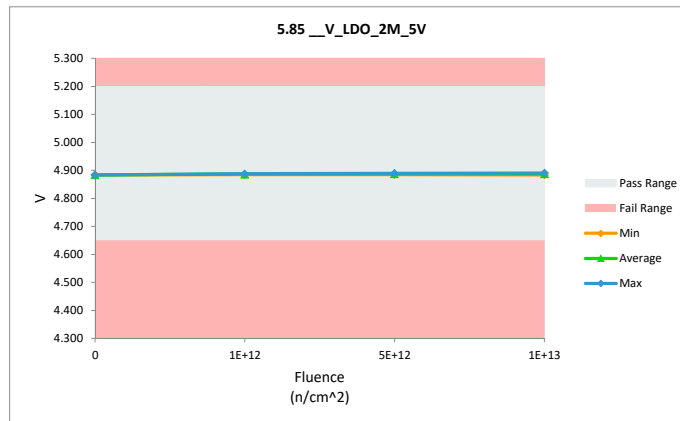
| 5.85 __V_LDO_2M_5V | |
|--------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 5.2 |
| Min Limit | 4.65 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|-------|
| 0 | 68 | 4.881 | 4.883 | 0.002 |
| 1E+12 | 45 | 4.883 | 4.886 | 0.003 |
| 1E+12 | 46 | 4.885 | 4.887 | 0.002 |
| 1E+12 | 54 | 4.883 | 4.885 | 0.002 |
| 5E+12 | 57 | 4.883 | 4.885 | 0.002 |
| 5E+12 | 58 | 4.886 | 4.889 | 0.003 |
| 5E+12 | 60 | 4.885 | 4.888 | 0.003 |
| 1E+13 | 62 | 4.888 | 4.890 | 0.002 |
| 1E+13 | 65 | 4.880 | 4.883 | 0.003 |
| 1E+13 | 66 | 4.886 | 4.889 | 0.003 |
| Max | | 4.888 | 4.890 | 0.003 |
| Average | | 4.884 | 4.887 | 0.002 |
| Min | | 4.880 | 4.883 | 0.002 |
| Std Dev | | 0.002 | 0.003 | 0.001 |



| 5.85 __V_LDO_2M_5V | |
|--------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 5.2 |
| Min Limit | 4.65 |

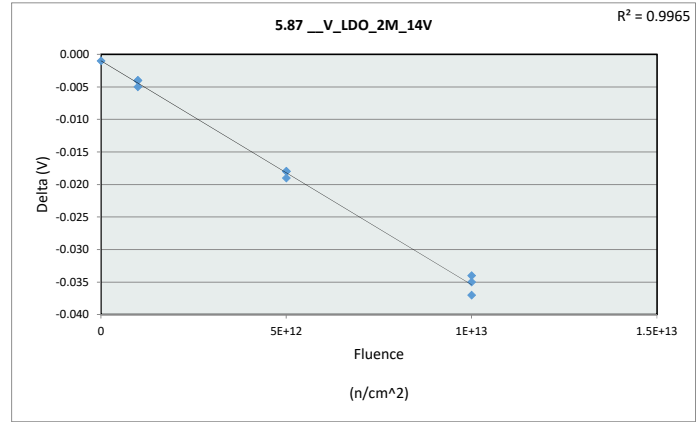
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|-------|-------|-------|-------|
| LL | 4.650 | 4.650 | 4.650 | 4.650 |
| Min | 4.883 | 4.885 | 4.885 | 4.883 |
| Average | 4.883 | 4.886 | 4.887 | 4.887 |
| Max | 4.883 | 4.887 | 4.889 | 4.890 |
| UL | 5.200 | 5.200 | 5.200 | 5.200 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

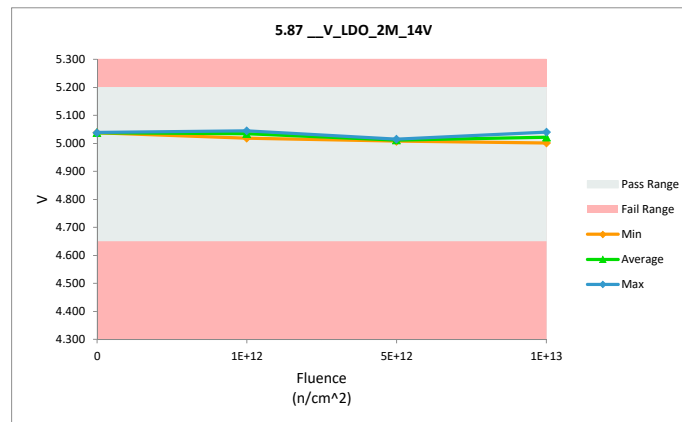
| 5.87 __V_LDO_2M_14V | |
|---------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 5.2 |
| Min Limit | 4.65 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 5.039 | 5.038 | -0.001 |
| 1E+12 | 45 | 5.044 | 5.040 | -0.004 |
| 1E+12 | 46 | 5.049 | 5.045 | -0.004 |
| 1E+12 | 54 | 5.023 | 5.018 | -0.005 |
| 5E+12 | 57 | 5.033 | 5.014 | -0.019 |
| 5E+12 | 58 | 5.025 | 5.007 | -0.018 |
| 5E+12 | 60 | 5.033 | 5.015 | -0.018 |
| 1E+13 | 62 | 5.038 | 5.001 | -0.037 |
| 1E+13 | 65 | 5.074 | 5.040 | -0.034 |
| 1E+13 | 66 | 5.058 | 5.023 | -0.035 |
| Max | | 5.074 | 5.045 | -0.001 |
| Average | | 5.042 | 5.024 | -0.018 |
| Min | | 5.023 | 5.001 | -0.037 |
| Std Dev | | 0.016 | 0.016 | 0.014 |



| 5.87 __V_LDO_2M_14V | |
|---------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 5.2 |
| Min Limit | 4.65 |

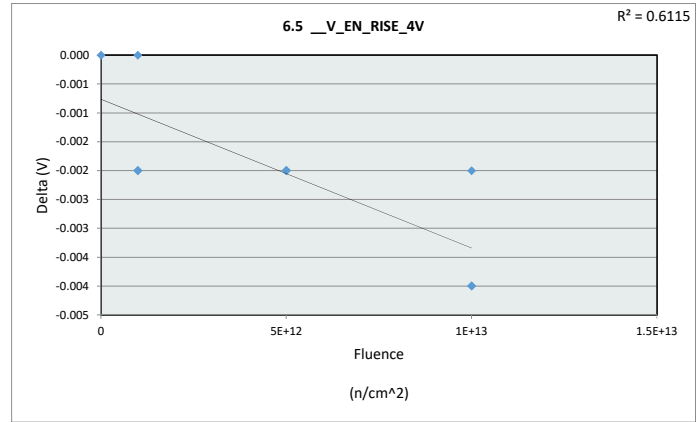
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 4.650 | 4.650 | 4.650 | 4.650 |
| Min | 5.038 | 5.018 | 5.007 | 5.001 |
| Average | 5.038 | 5.034 | 5.012 | 5.021 |
| Max | 5.038 | 5.045 | 5.015 | 5.040 |
| UL | 5.200 | 5.200 | 5.200 | 5.200 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

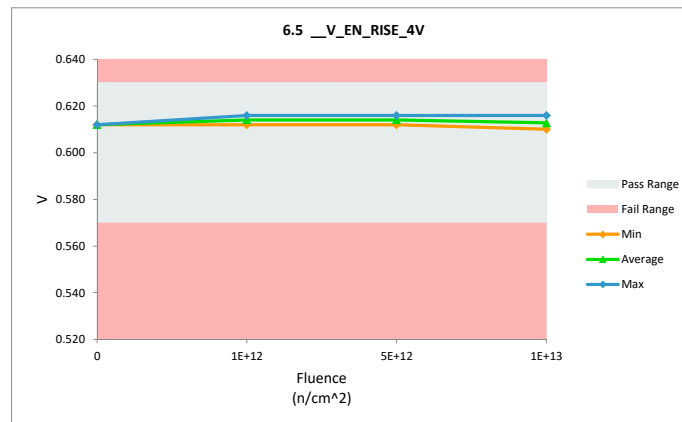
| 6.5 __V_EN_RISE_4V | |
|--------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 0.63 0.63 |
| Min Limit | 0.57 0.57 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.612 | 0.612 | 0.000 |
| 1E+12 | 45 | 0.616 | 0.614 | -0.002 |
| 1E+12 | 46 | 0.616 | 0.616 | 0.000 |
| 1E+12 | 54 | 0.614 | 0.612 | -0.002 |
| 5E+12 | 57 | 0.618 | 0.616 | -0.002 |
| 5E+12 | 58 | 0.616 | 0.614 | -0.002 |
| 5E+12 | 60 | 0.614 | 0.612 | -0.002 |
| 1E+13 | 62 | 0.620 | 0.616 | -0.004 |
| 1E+13 | 65 | 0.614 | 0.610 | -0.004 |
| 1E+13 | 66 | 0.614 | 0.612 | -0.002 |
| Max | | 0.620 | 0.616 | 0.000 |
| Average | | 0.615 | 0.613 | -0.002 |
| Min | | 0.612 | 0.610 | -0.004 |
| Std Dev | | 0.002 | 0.002 | 0.001 |



| 6.5 __V_EN_RISE_4V | |
|--------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 0.63 V |
| Min Limit | 0.57 V |

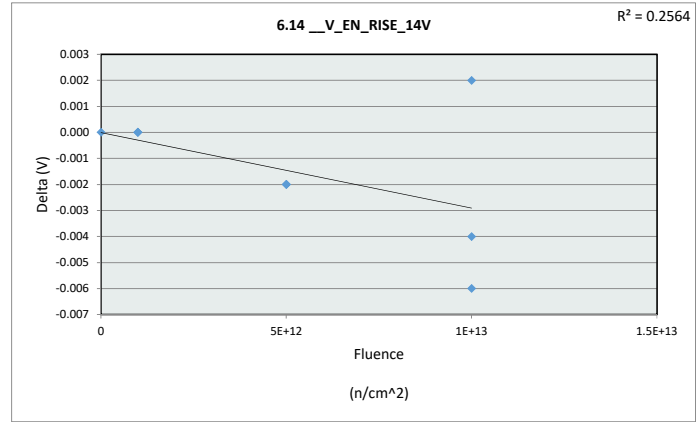
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 0.570 | 0.570 | 0.570 | 0.570 |
| Min | 0.612 | 0.612 | 0.612 | 0.610 |
| Average | 0.612 | 0.614 | 0.614 | 0.613 |
| Max | 0.612 | 0.616 | 0.616 | 0.616 |
| UL | 0.630 | 0.630 | 0.630 | 0.630 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

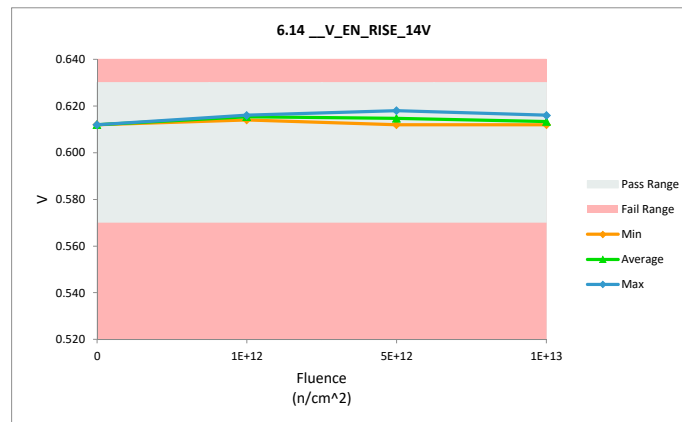
| 6.14 __V_EN_RISE_14V | | |
|----------------------|------|------|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | V | V |
| Max Limit | 0.63 | 0.63 |
| Min Limit | 0.57 | 0.57 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.612 | 0.612 | 0.000 |
| 1E+12 | 45 | 0.616 | 0.616 | 0.000 |
| 1E+12 | 46 | 0.616 | 0.616 | 0.000 |
| 1E+12 | 54 | 0.614 | 0.614 | 0.000 |
| 5E+12 | 57 | 0.620 | 0.618 | -0.002 |
| 5E+12 | 58 | 0.616 | 0.614 | -0.002 |
| 5E+12 | 60 | 0.614 | 0.612 | -0.002 |
| 1E+13 | 62 | 0.622 | 0.616 | -0.006 |
| 1E+13 | 65 | 0.610 | 0.612 | 0.002 |
| 1E+13 | 66 | 0.616 | 0.612 | -0.004 |
| Max | | 0.622 | 0.618 | 0.002 |
| Average | | 0.616 | 0.614 | -0.001 |
| Min | | 0.610 | 0.612 | -0.006 |
| Std Dev | | 0.004 | 0.002 | 0.002 |



| 6.14 __V_EN_RISE_14V | | |
|----------------------|------|---|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 0.63 | V |
| Min Limit | 0.57 | V |

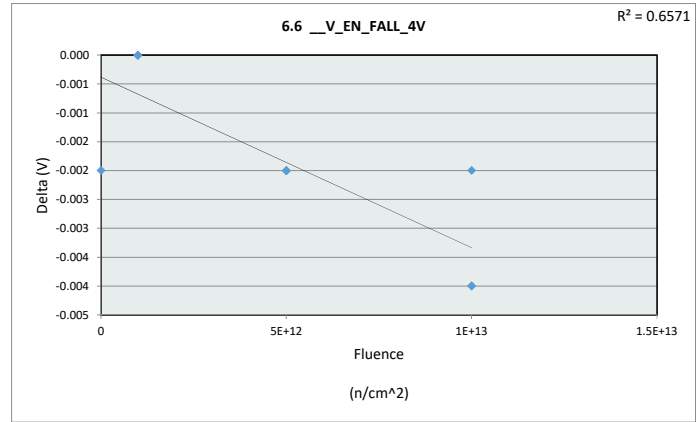
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|-------|-------|-------|-------|
| LL | 0.570 | 0.570 | 0.570 | 0.570 |
| Min | 0.612 | 0.614 | 0.612 | 0.612 |
| Average | 0.612 | 0.615 | 0.615 | 0.613 |
| Max | 0.612 | 0.616 | 0.618 | 0.616 |
| UL | 0.630 | 0.630 | 0.630 | 0.630 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

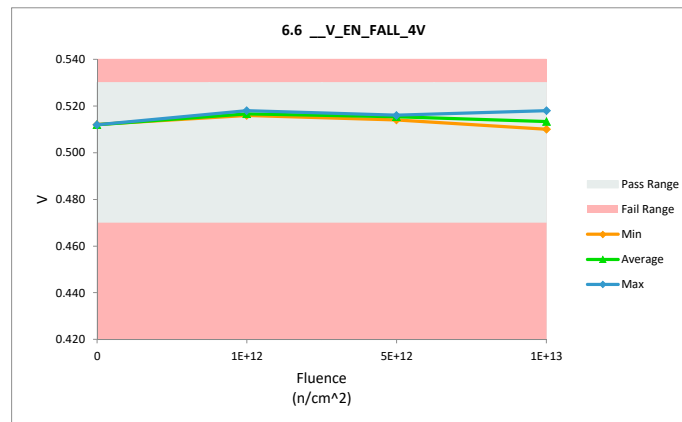
| 6.6 __V_EN_FALL_4V | |
|--------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 0.53 0.53 |
| Min Limit | 0.47 0.47 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.514 | 0.512 | -0.002 |
| 1E+12 | 45 | 0.516 | 0.516 | 0.000 |
| 1E+12 | 46 | 0.518 | 0.518 | 0.000 |
| 1E+12 | 54 | 0.516 | 0.516 | 0.000 |
| 5E+12 | 57 | 0.518 | 0.516 | -0.002 |
| 5E+12 | 58 | 0.518 | 0.516 | -0.002 |
| 5E+12 | 60 | 0.516 | 0.514 | -0.002 |
| 1E+13 | 62 | 0.522 | 0.518 | -0.004 |
| 1E+13 | 65 | 0.514 | 0.510 | -0.004 |
| 1E+13 | 66 | 0.514 | 0.512 | -0.002 |
| Max | | 0.522 | 0.518 | 0.000 |
| Average | | 0.517 | 0.515 | -0.002 |
| Min | | 0.514 | 0.510 | -0.004 |
| Std Dev | | 0.003 | 0.003 | 0.001 |



| 6.6 __V_EN_FALL_4V | |
|--------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 0.53 V |
| Min Limit | 0.47 V |

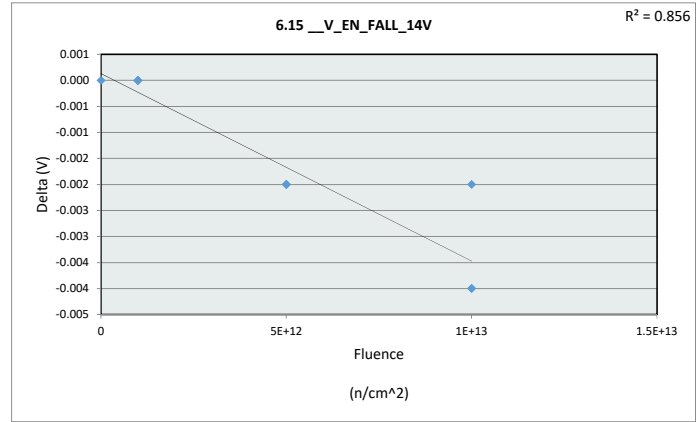
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 0.470 | 0.470 | 0.470 | 0.470 |
| Min | 0.512 | 0.516 | 0.514 | 0.510 |
| Average | 0.512 | 0.517 | 0.515 | 0.513 |
| Max | 0.512 | 0.518 | 0.516 | 0.518 |
| UL | 0.530 | 0.530 | 0.530 | 0.530 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

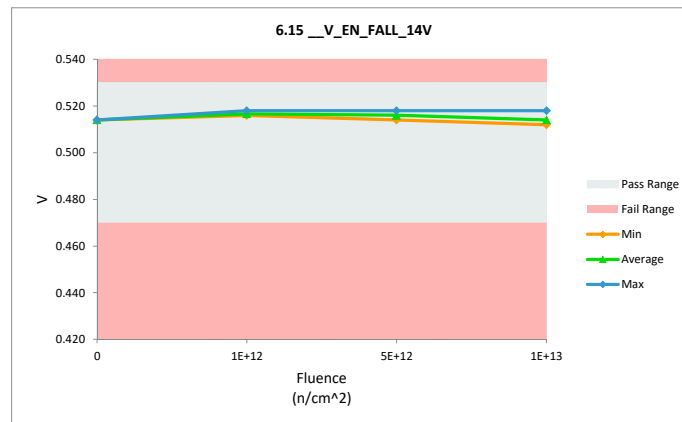
| 6.15 __V_EN_FALL_14V | | |
|----------------------|------|------|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | V | V |
| Max Limit | 0.53 | 0.53 |
| Min Limit | 0.47 | 0.47 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.514 | 0.514 | 0.000 |
| 1E+12 | 45 | 0.516 | 0.516 | 0.000 |
| 1E+12 | 46 | 0.518 | 0.518 | 0.000 |
| 1E+12 | 54 | 0.516 | 0.516 | 0.000 |
| 5E+12 | 57 | 0.520 | 0.518 | -0.002 |
| 5E+12 | 58 | 0.518 | 0.516 | -0.002 |
| 5E+12 | 60 | 0.516 | 0.514 | -0.002 |
| 1E+13 | 62 | 0.522 | 0.518 | -0.004 |
| 1E+13 | 65 | 0.514 | 0.512 | -0.002 |
| 1E+13 | 66 | 0.516 | 0.512 | -0.004 |
| Max | | 0.522 | 0.518 | 0.000 |
| Average | | 0.517 | 0.515 | -0.002 |
| Min | | 0.514 | 0.512 | -0.004 |
| Std Dev | | 0.003 | 0.002 | 0.002 |



| 6.15 __V_EN_FALL_14V | | |
|----------------------|------|---|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 0.53 | V |
| Min Limit | 0.47 | V |

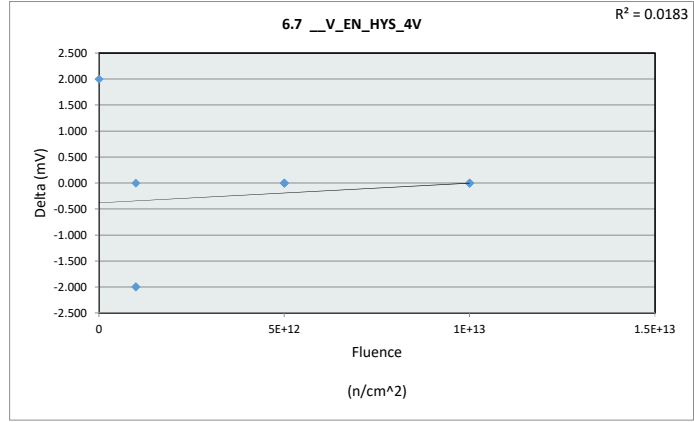
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|-------|-------|-------|-------|
| LL | 0.470 | 0.470 | 0.470 | 0.470 |
| Min | 0.514 | 0.516 | 0.514 | 0.512 |
| Average | 0.514 | 0.517 | 0.516 | 0.514 |
| Max | 0.514 | 0.518 | 0.518 | 0.518 |
| UL | 0.530 | 0.530 | 0.530 | 0.530 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

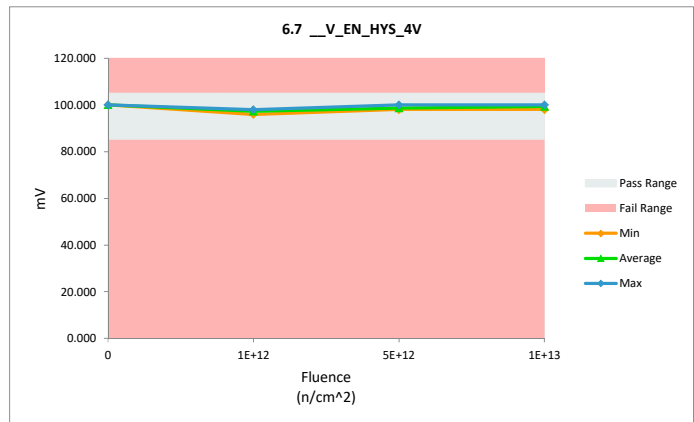
| 6.7 __V_EN_HYS_4V | |
|-------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 105 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 98.000 | 100.000 | 2.000 |
| 1E+12 | 45 | 100.000 | 98.000 | -2.000 |
| 1E+12 | 46 | 98.000 | 98.000 | 0.000 |
| 1E+12 | 54 | 98.000 | 96.000 | -2.000 |
| 5E+12 | 57 | 100.000 | 100.000 | 0.000 |
| 5E+12 | 58 | 98.000 | 98.000 | 0.000 |
| 5E+12 | 60 | 98.000 | 98.000 | 0.000 |
| 1E+13 | 62 | 98.000 | 98.000 | 0.000 |
| 1E+13 | 65 | 100.000 | 100.000 | 0.000 |
| 1E+13 | 66 | 100.000 | 100.000 | 0.000 |
| Max | | 100.000 | 100.000 | 2.000 |
| Average | | 98.800 | 98.600 | -0.200 |
| Min | | 98.000 | 96.000 | -2.000 |
| Std Dev | | 1.033 | 1.350 | 1.135 |



| 6.7 __V_EN_HYS_4V | |
|-------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 105 mV |
| Min Limit | 85 mV |

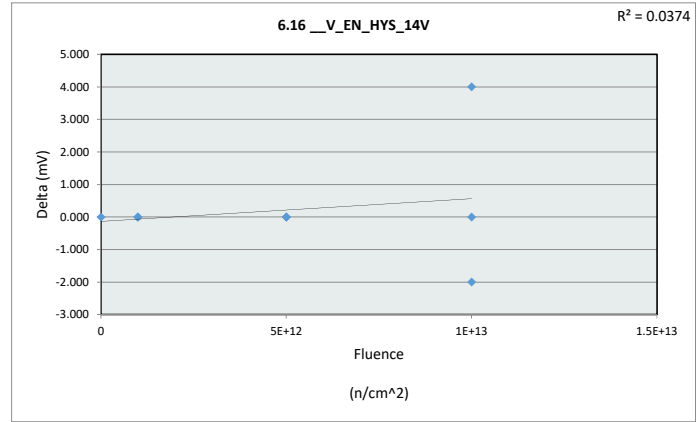
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 100.000 | 96.000 | 98.000 | 98.000 |
| Average | 100.000 | 97.333 | 98.667 | 99.333 |
| Max | 100.000 | 98.000 | 100.000 | 100.000 |
| UL | 105.000 | 105.000 | 105.000 | 105.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

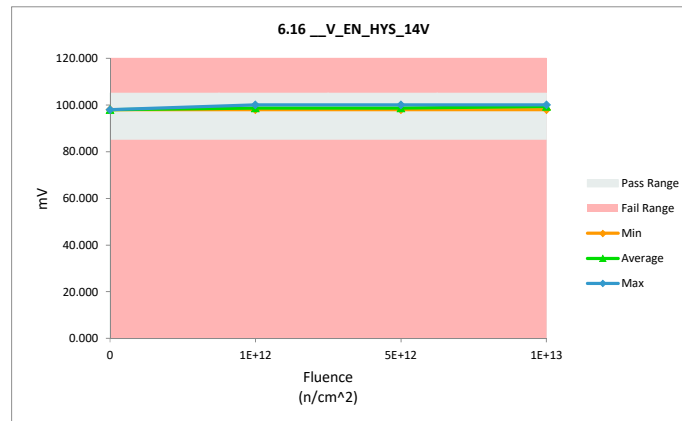
| 6.16 __V_EN_HYS_14V | | |
|---------------------|-----|-----|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | mV | mV |
| Max Limit | 105 | 105 |
| Min Limit | 85 | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 98.000 | 98.000 | 0.000 |
| 1E+12 | 45 | 100.000 | 100.000 | 0.000 |
| 1E+12 | 46 | 98.000 | 98.000 | 0.000 |
| 1E+12 | 54 | 98.000 | 98.000 | 0.000 |
| 5E+12 | 57 | 100.000 | 100.000 | 0.000 |
| 5E+12 | 58 | 98.000 | 98.000 | 0.000 |
| 5E+12 | 60 | 98.000 | 98.000 | 0.000 |
| 1E+13 | 62 | 100.000 | 98.000 | -2.000 |
| 1E+13 | 65 | 96.000 | 100.000 | 4.000 |
| 1E+13 | 66 | 100.000 | 100.000 | 0.000 |
| Max | | 100.000 | 100.000 | 4.000 |
| Average | | 98.600 | 98.800 | 0.200 |
| Min | | 96.000 | 98.000 | -2.000 |
| Std Dev | | 1.350 | 1.033 | 1.476 |



| 6.16 __V_EN_HYS_14V | | |
|---------------------|-----|----|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 105 | mV |
| Min Limit | 85 | mV |

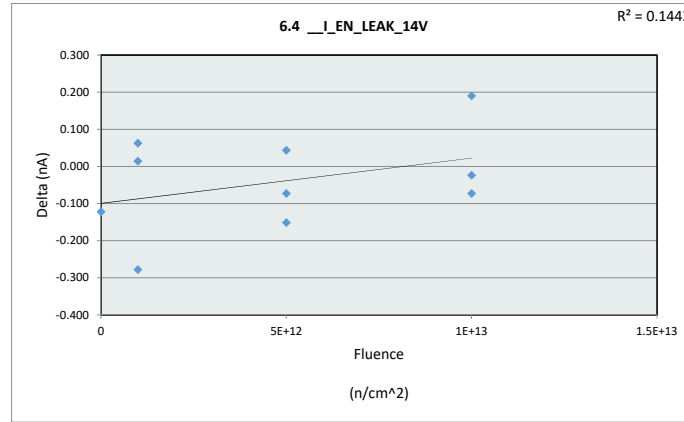
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 98.000 | 98.000 | 98.000 | 98.000 |
| Average | 98.000 | 98.667 | 98.667 | 99.333 |
| Max | 98.000 | 100.000 | 100.000 | 100.000 |
| UL | 105.000 | 105.000 | 105.000 | 105.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

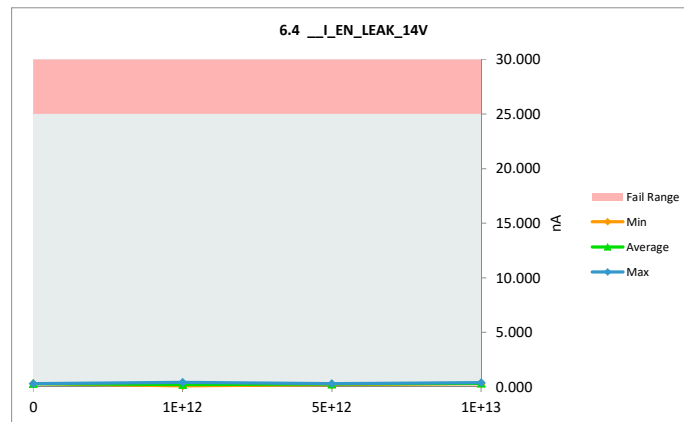
| 6.4 __I_EN_LEAK_14V | |
|---------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | nA nA |
| Max Limit | 25 25 |
| Min Limit | |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.417 | 0.295 | -0.122 |
| 1E+12 | 45 | 0.359 | 0.081 | -0.278 |
| 1E+12 | 46 | 0.349 | 0.412 | 0.063 |
| 1E+12 | 54 | 0.154 | 0.168 | 0.014 |
| 5E+12 | 57 | 0.242 | 0.286 | 0.044 |
| 5E+12 | 58 | 0.349 | 0.276 | -0.073 |
| 5E+12 | 60 | 0.339 | 0.188 | -0.151 |
| 1E+13 | 62 | 0.144 | 0.334 | 0.190 |
| 1E+13 | 65 | 0.456 | 0.383 | -0.073 |
| 1E+13 | 66 | 0.310 | 0.286 | -0.024 |
| Max | | 0.456 | 0.412 | 0.190 |
| Average | | 0.312 | 0.271 | -0.041 |
| Min | | 0.144 | 0.081 | -0.278 |
| Std Dev | | 0.103 | 0.101 | 0.130 |



| 6.4 __I_EN_LEAK_14V | |
|---------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 25 nA |
| Min Limit | nA |

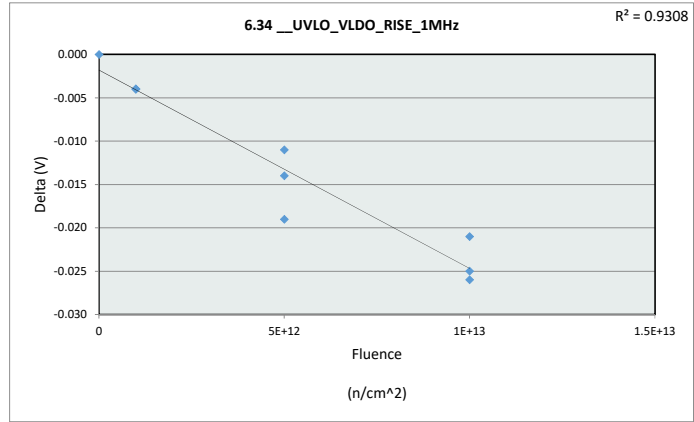
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 0.295 | 0.081 | 0.188 | 0.286 |
| Average | 0.295 | 0.220 | 0.250 | 0.334 |
| Max | 0.295 | 0.412 | 0.286 | 0.383 |
| UL | 25.000 | 25.000 | 25.000 | 25.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

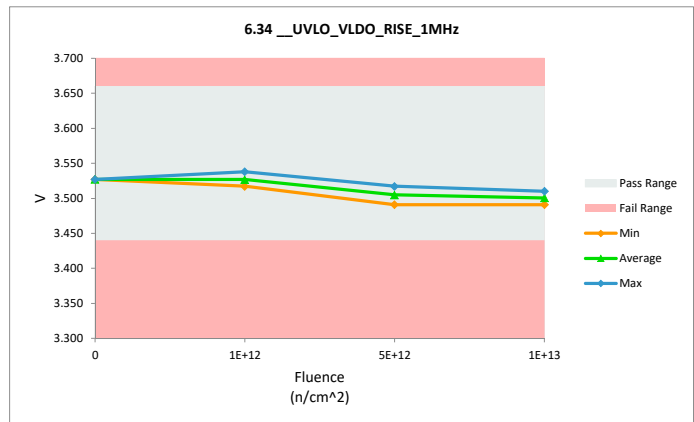
| 6.34 __UVLO_VLDO_RISE_1MHz | |
|----------------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 3.66 3.66 |
| Min Limit | 3.44 3.44 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 3.527 | 3.527 | 0.000 |
| 1E+12 | 45 | 3.521 | 3.517 | -0.004 |
| 1E+12 | 46 | 3.542 | 3.538 | -0.004 |
| 1E+12 | 54 | 3.529 | 3.525 | -0.004 |
| 5E+12 | 57 | 3.531 | 3.517 | -0.014 |
| 5E+12 | 58 | 3.502 | 3.491 | -0.011 |
| 5E+12 | 60 | 3.525 | 3.506 | -0.019 |
| 1E+13 | 62 | 3.517 | 3.491 | -0.026 |
| 1E+13 | 65 | 3.521 | 3.500 | -0.021 |
| 1E+13 | 66 | 3.535 | 3.510 | -0.025 |
| Max | | 3.542 | 3.538 | 0.000 |
| Average | | 3.525 | 3.512 | -0.013 |
| Min | | 3.502 | 3.491 | -0.026 |
| Std Dev | | 0.011 | 0.016 | 0.010 |



| 6.34 __UVLO_VLDO_RISE_1MHz | |
|----------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 3.66 V |
| Min Limit | 3.44 V |

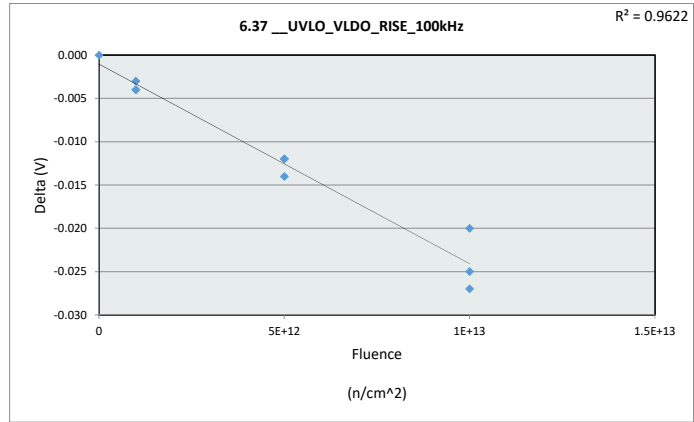
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 3.440 | 3.440 | 3.440 | 3.440 |
| Min | 3.527 | 3.517 | 3.491 | 3.491 |
| Average | 3.527 | 3.527 | 3.505 | 3.500 |
| Max | 3.527 | 3.538 | 3.517 | 3.510 |
| UL | 3.660 | 3.660 | 3.660 | 3.660 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

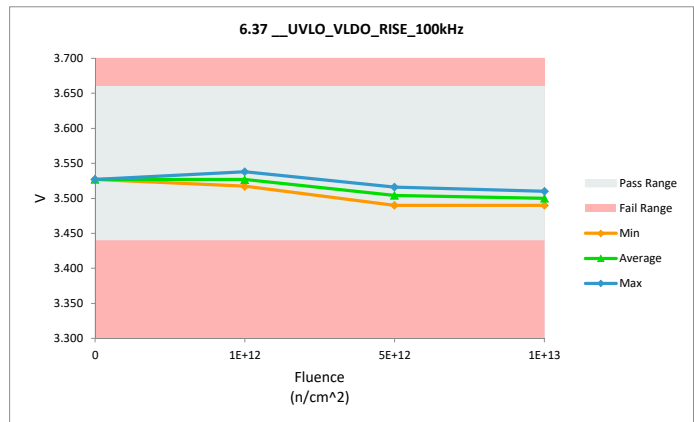
| 6.37 __ UVLO_VLDO_RISE_100kHz | |
|-------------------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 3.66 3.66 |
| Min Limit | 3.44 3.44 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 3.527 | 3.527 | 0.000 |
| 1E+12 | 45 | 3.521 | 3.517 | -0.004 |
| 1E+12 | 46 | 3.542 | 3.538 | -0.004 |
| 1E+12 | 54 | 3.528 | 3.525 | -0.003 |
| 5E+12 | 57 | 3.530 | 3.516 | -0.014 |
| 5E+12 | 58 | 3.502 | 3.490 | -0.012 |
| 5E+12 | 60 | 3.518 | 3.506 | -0.012 |
| 1E+13 | 62 | 3.517 | 3.490 | -0.027 |
| 1E+13 | 65 | 3.520 | 3.500 | -0.020 |
| 1E+13 | 66 | 3.535 | 3.510 | -0.025 |
| Max | | 3.542 | 3.538 | 0.000 |
| Average | | 3.524 | 3.512 | -0.012 |
| Min | | 3.502 | 3.490 | -0.027 |
| Std Dev | | 0.011 | 0.016 | 0.010 |



| 6.37 __ UVLO_VLDO_RISE_100 | |
|----------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 3.66 V |
| Min Limit | 3.44 V |

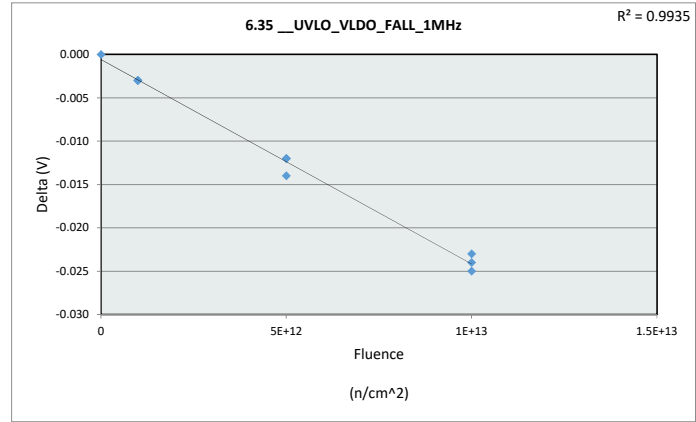
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 3.440 | 3.440 | 3.440 | 3.440 |
| Min | 3.527 | 3.517 | 3.490 | 3.490 |
| Average | 3.527 | 3.527 | 3.504 | 3.500 |
| Max | 3.527 | 3.538 | 3.516 | 3.510 |
| UL | 3.660 | 3.660 | 3.660 | 3.660 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

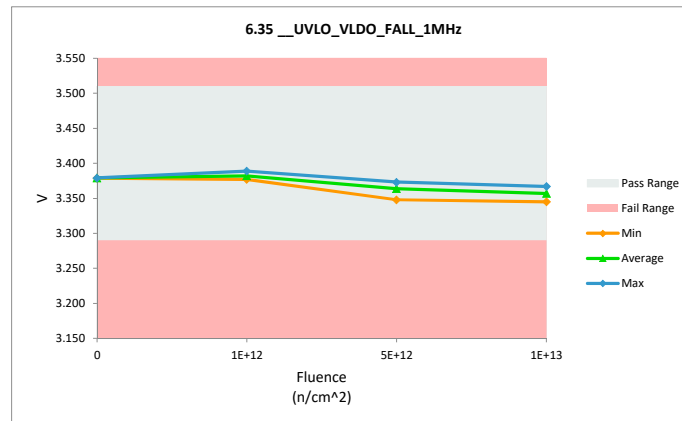
| 6.35 __UVLO_VLDO_FALL_1MHz | |
|----------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 3.51 |
| Min Limit | 3.29 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 3.379 | 3.379 | 0.000 |
| 1E+12 | 45 | 3.380 | 3.377 | -0.003 |
| 1E+12 | 46 | 3.392 | 3.389 | -0.003 |
| 1E+12 | 54 | 3.383 | 3.380 | -0.003 |
| 5E+12 | 57 | 3.387 | 3.373 | -0.014 |
| 5E+12 | 58 | 3.360 | 3.348 | -0.012 |
| 5E+12 | 60 | 3.382 | 3.370 | -0.012 |
| 1E+13 | 62 | 3.369 | 3.345 | -0.024 |
| 1E+13 | 65 | 3.384 | 3.359 | -0.025 |
| 1E+13 | 66 | 3.390 | 3.367 | -0.023 |
| Max | | 3.392 | 3.389 | 0.000 |
| Average | | 3.381 | 3.369 | -0.012 |
| Min | | 3.360 | 3.345 | -0.025 |
| Std Dev | | 0.010 | 0.014 | 0.010 |



| 6.35 __UVLO_VLDO_FALL_1MHz | |
|----------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 3.51 |
| Min Limit | 3.29 |

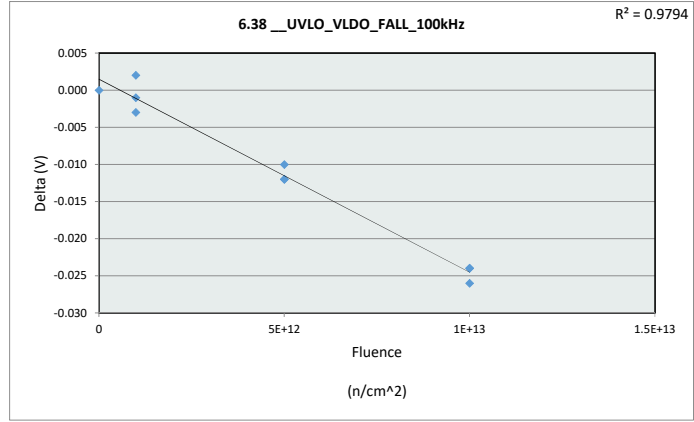
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 3.290 | 3.290 | 3.290 | 3.290 |
| Min | 3.379 | 3.377 | 3.348 | 3.345 |
| Average | 3.379 | 3.382 | 3.364 | 3.357 |
| Max | 3.379 | 3.389 | 3.373 | 3.367 |
| UL | 3.510 | 3.510 | 3.510 | 3.510 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

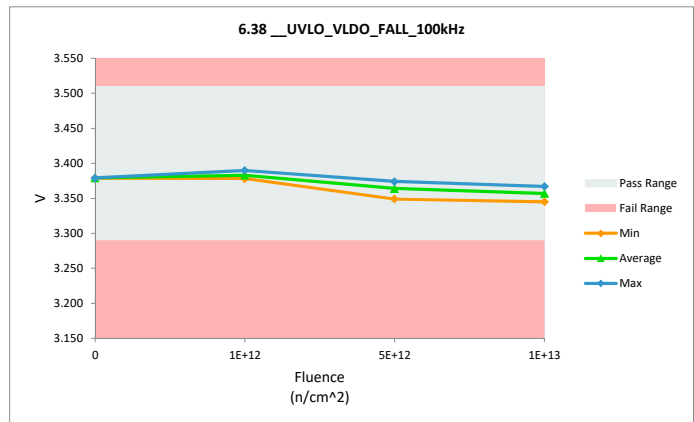
| 6.38 __UVLO_VLDO_FALL_100kHz | | |
|------------------------------|------|------|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | V | V |
| Max Limit | 3.51 | 3.51 |
| Min Limit | 3.29 | 3.29 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 3.379 | 3.379 | 0.000 |
| 1E+12 | 45 | 3.376 | 3.378 | 0.002 |
| 1E+12 | 46 | 3.391 | 3.390 | -0.001 |
| 1E+12 | 54 | 3.384 | 3.381 | -0.003 |
| 5E+12 | 57 | 3.386 | 3.374 | -0.012 |
| 5E+12 | 58 | 3.359 | 3.349 | -0.010 |
| 5E+12 | 60 | 3.381 | 3.369 | -0.012 |
| 1E+13 | 62 | 3.369 | 3.345 | -0.024 |
| 1E+13 | 65 | 3.385 | 3.359 | -0.026 |
| 1E+13 | 66 | 3.391 | 3.367 | -0.024 |
| Max | | 3.391 | 3.390 | 0.002 |
| Average | | 3.380 | 3.369 | -0.011 |
| Min | | 3.359 | 3.345 | -0.026 |
| Std Dev | | 0.010 | 0.014 | 0.011 |



| 6.38 __UVLO_VLDO_FALL_100 | | |
|---------------------------|------|---|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 3.51 | V |
| Min Limit | 3.29 | V |

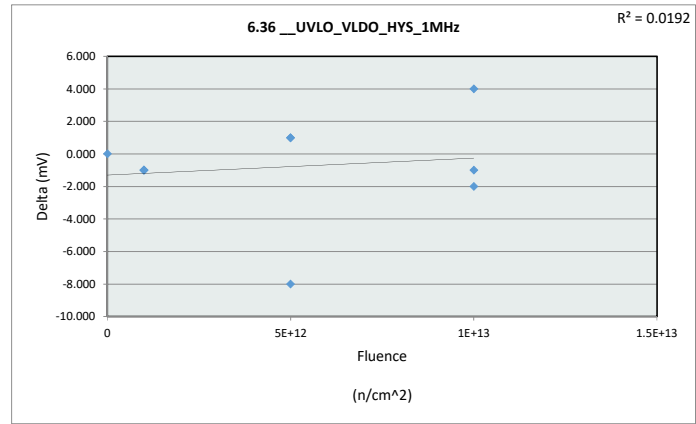
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|-------|-------|-------|-------|
| LL | 3.290 | 3.290 | 3.290 | 3.290 |
| Min | 3.379 | 3.378 | 3.349 | 3.345 |
| Average | 3.379 | 3.383 | 3.364 | 3.357 |
| Max | 3.379 | 3.390 | 3.374 | 3.367 |
| UL | 3.510 | 3.510 | 3.510 | 3.510 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

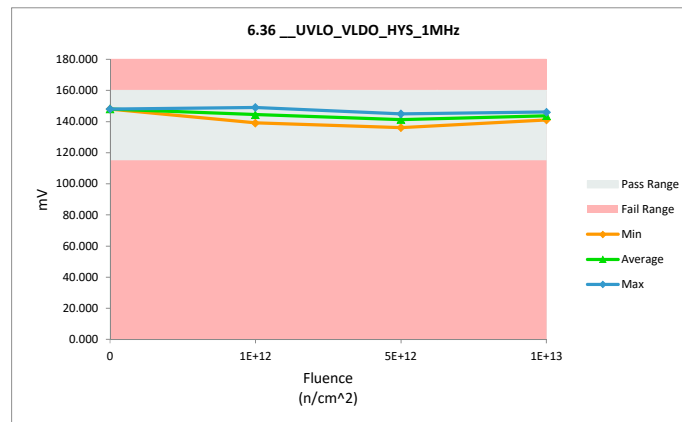
| 6.36 UVLO_VLDO_HYS_1MHz | |
|-------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 160 |
| Min Limit | 115 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 148.000 | 148.000 | 0.000 |
| 1E+12 | 45 | 140.000 | 139.000 | -1.000 |
| 1E+12 | 46 | 150.000 | 149.000 | -1.000 |
| 1E+12 | 54 | 146.000 | 145.000 | -1.000 |
| 5E+12 | 57 | 144.000 | 145.000 | 1.000 |
| 5E+12 | 58 | 142.000 | 143.000 | 1.000 |
| 5E+12 | 60 | 144.000 | 136.000 | -8.000 |
| 1E+13 | 62 | 148.000 | 146.000 | -2.000 |
| 1E+13 | 65 | 137.000 | 141.000 | 4.000 |
| 1E+13 | 66 | 145.000 | 144.000 | -1.000 |
| Max | | 150.000 | 149.000 | 4.000 |
| Average | | 144.400 | 143.600 | -0.800 |
| Min | | 137.000 | 136.000 | -8.000 |
| Std Dev | | 3.950 | 4.006 | 3.048 |



| 6.36 UVLO_VLDO_HYS_1MHz | |
|-------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 160 mV |
| Min Limit | 115 mV |

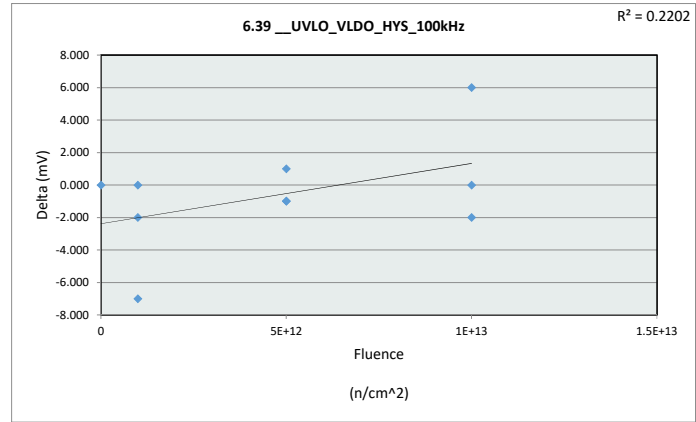
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 115.000 | 115.000 | 115.000 | 115.000 |
| Min | 148.000 | 139.000 | 136.000 | 141.000 |
| Average | 148.000 | 144.333 | 141.333 | 143.667 |
| Max | 148.000 | 149.000 | 145.000 | 146.000 |
| UL | 160.000 | 160.000 | 160.000 | 160.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

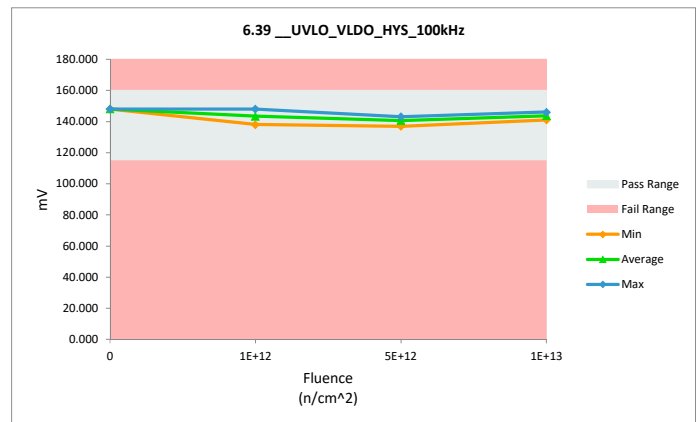
| 6.39 UVLO_VLDO_HYS_100kHz | |
|---------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 160 |
| Min Limit | 115 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 148.000 | 148.000 | 0.000 |
| 1E+12 | 45 | 145.000 | 138.000 | -7.000 |
| 1E+12 | 46 | 150.000 | 148.000 | -2.000 |
| 1E+12 | 54 | 144.000 | 144.000 | 0.000 |
| 5E+12 | 57 | 144.000 | 143.000 | -1.000 |
| 5E+12 | 58 | 143.000 | 142.000 | -1.000 |
| 5E+12 | 60 | 136.000 | 137.000 | 1.000 |
| 1E+13 | 62 | 148.000 | 146.000 | -2.000 |
| 1E+13 | 65 | 135.000 | 141.000 | 6.000 |
| 1E+13 | 66 | 144.000 | 144.000 | 0.000 |
| Max | | 150.000 | 148.000 | 6.000 |
| Average | | 143.700 | 143.100 | -0.600 |
| Min | | 135.000 | 137.000 | -7.000 |
| Std Dev | | 4.877 | 3.755 | 3.204 |



| 6.39 UVLO_VLDO_HYS_100 | |
|------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 160 mV |
| Min Limit | 115 mV |

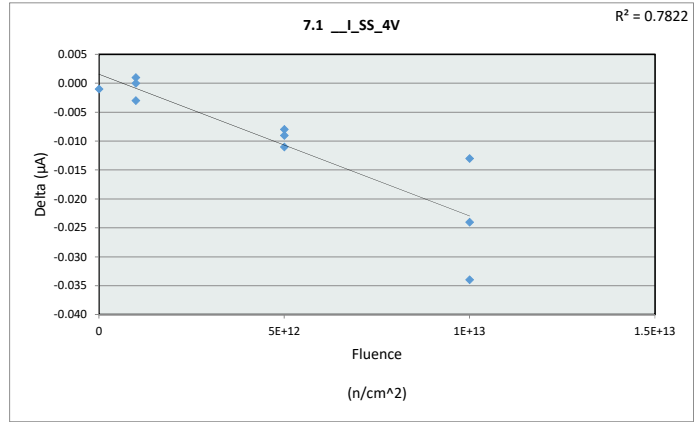
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 115.000 | 115.000 | 115.000 | 115.000 |
| Min | 148.000 | 138.000 | 137.000 | 141.000 |
| Average | 148.000 | 143.333 | 140.667 | 143.667 |
| Max | 148.000 | 148.000 | 143.000 | 146.000 |
| UL | 160.000 | 160.000 | 160.000 | 160.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

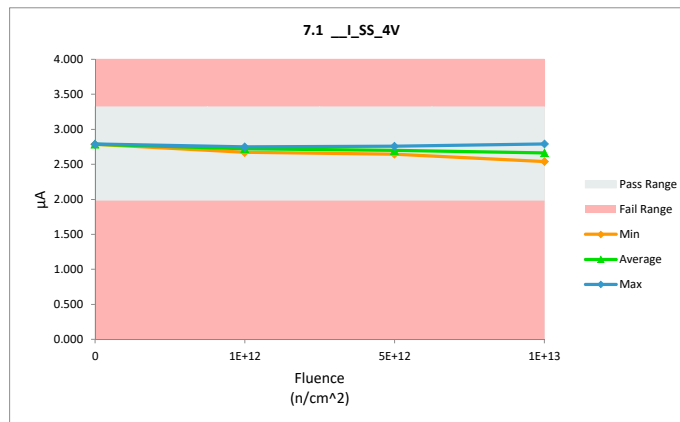
| 7.1 __ I_SS_4V | |
|----------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µA |
| Max Limit | 3.32 |
| Min Limit | 1.98 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 2.788 | 2.787 | -0.001 |
| 1E+12 | 45 | 2.750 | 2.750 | 0.000 |
| 1E+12 | 46 | 2.744 | 2.745 | 0.001 |
| 1E+12 | 54 | 2.673 | 2.670 | -0.003 |
| 5E+12 | 57 | 2.768 | 2.759 | -0.009 |
| 5E+12 | 58 | 2.653 | 2.645 | -0.008 |
| 5E+12 | 60 | 2.696 | 2.685 | -0.011 |
| 1E+13 | 62 | 2.689 | 2.665 | -0.024 |
| 1E+13 | 65 | 2.805 | 2.792 | -0.013 |
| 1E+13 | 66 | 2.573 | 2.539 | -0.034 |
| Max | | 2.805 | 2.792 | 0.001 |
| Average | | 2.714 | 2.704 | -0.010 |
| Min | | 2.573 | 2.539 | -0.034 |
| Std Dev | | 0.071 | 0.078 | 0.011 |



| 7.1 __ I_SS_4V | |
|----------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 3.32 µA |
| Min Limit | 1.98 µA |

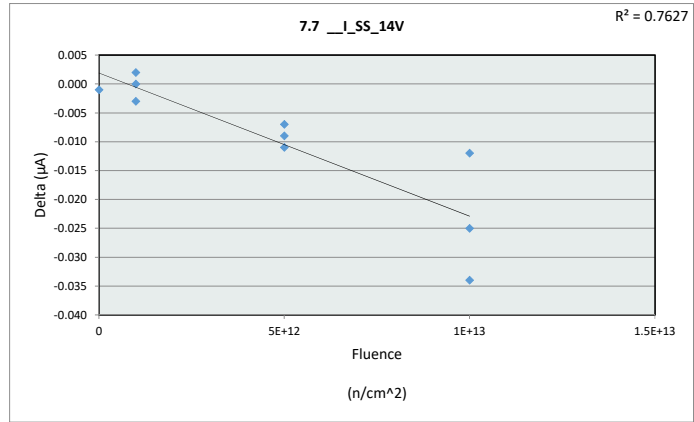
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.980 | 1.980 | 1.980 | 1.980 |
| Min | 2.787 | 2.670 | 2.645 | 2.539 |
| Average | 2.787 | 2.722 | 2.696 | 2.665 |
| Max | 2.787 | 2.750 | 2.759 | 2.792 |
| UL | 3.320 | 3.320 | 3.320 | 3.320 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

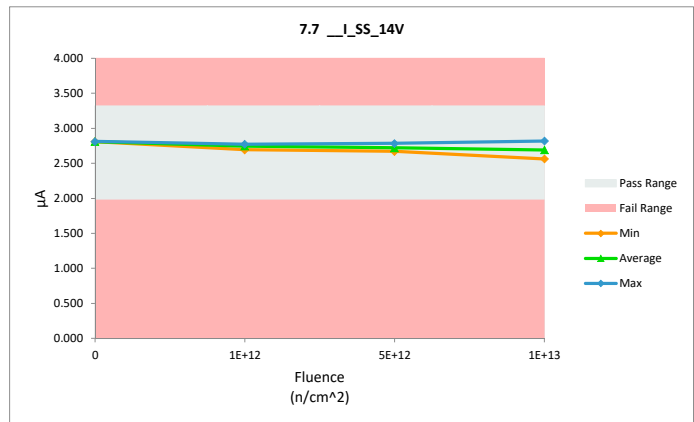
| 7.7 __I_SS_14V | |
|----------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | μA |
| Max Limit | 3.32 |
| Min Limit | 1.98 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 2.812 | 2.811 | -0.001 |
| 1E+12 | 45 | 2.771 | 2.771 | 0.000 |
| 1E+12 | 46 | 2.765 | 2.767 | 0.002 |
| 1E+12 | 54 | 2.695 | 2.692 | -0.003 |
| 5E+12 | 57 | 2.790 | 2.783 | -0.007 |
| 5E+12 | 58 | 2.677 | 2.668 | -0.009 |
| 5E+12 | 60 | 2.718 | 2.707 | -0.011 |
| 1E+13 | 62 | 2.712 | 2.687 | -0.025 |
| 1E+13 | 65 | 2.829 | 2.817 | -0.012 |
| 1E+13 | 66 | 2.596 | 2.562 | -0.034 |
| Max | | 2.829 | 2.817 | 0.002 |
| Average | | 2.736 | 2.726 | -0.010 |
| Min | | 2.596 | 2.562 | -0.034 |
| Std Dev | | 0.071 | 0.079 | 0.011 |



| 7.7 __I_SS_14V | |
|----------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 3.32 μA |
| Min Limit | 1.98 μA |

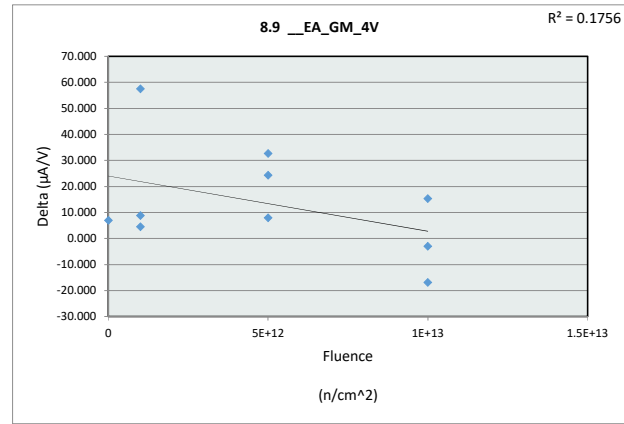
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.980 | 1.980 | 1.980 | 1.980 |
| Min | 2.811 | 2.692 | 2.668 | 2.562 |
| Average | 2.811 | 2.743 | 2.719 | 2.689 |
| Max | 2.811 | 2.771 | 2.783 | 2.817 |
| UL | 3.320 | 3.320 | 3.320 | 3.320 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

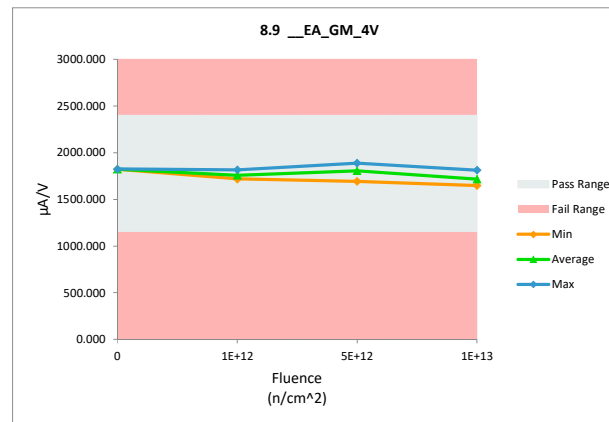
| 8.9 __EA_GM_4V | |
|----------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | μA/V |
| Max Limit | 2400 |
| Min Limit | 1150 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|----------|----------|---------|
| 0 | 68 | 1816.601 | 1823.630 | 7.029 |
| 1E+12 | 45 | 1732.450 | 1736.979 | 4.529 |
| 1E+12 | 46 | 1757.145 | 1814.646 | 57.501 |
| 1E+12 | 54 | 1708.448 | 1717.305 | 8.857 |
| 5E+12 | 57 | 1827.026 | 1834.999 | 7.973 |
| 5E+12 | 58 | 1667.069 | 1691.422 | 24.353 |
| 5E+12 | 60 | 1855.230 | 1887.934 | 32.704 |
| 1E+13 | 62 | 1710.870 | 1693.950 | -16.920 |
| 1E+13 | 65 | 1797.662 | 1813.028 | 15.366 |
| 1E+13 | 66 | 1649.507 | 1646.520 | -2.987 |
| Max | | 1855.230 | 1887.934 | 57.501 |
| Average | | 1752.201 | 1766.041 | 13.841 |
| Min | | 1649.507 | 1646.520 | -16.920 |
| Std Dev | | 70.126 | 78.719 | 20.539 |



| 8.9 __EA_GM_4V | |
|----------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 2400 μA/V |
| Min Limit | 1150 μA/V |

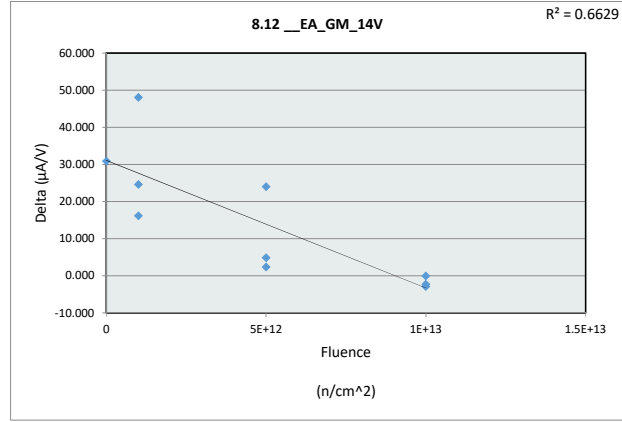
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|----------|----------|----------|----------|
| LL | 1150.000 | 1150.000 | 1150.000 | 1150.000 |
| Min | 1823.630 | 1717.305 | 1691.422 | 1646.520 |
| Average | 1823.630 | 1756.310 | 1804.785 | 1717.833 |
| Max | 1823.630 | 1814.646 | 1887.934 | 1813.028 |
| UL | 2400.000 | 2400.000 | 2400.000 | 2400.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

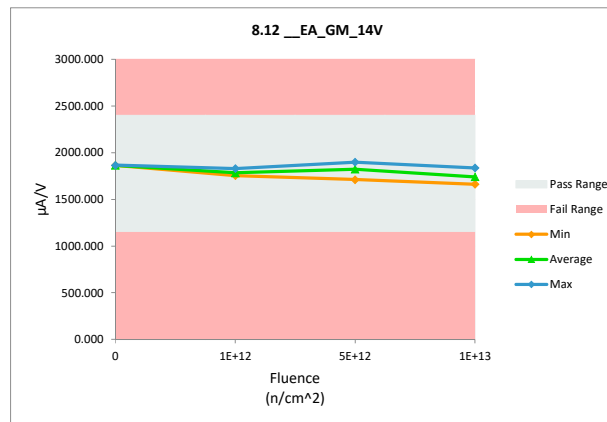
| 8.12 __EA_GM_14V | |
|------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | μA/V |
| Max Limit | 2400 |
| Min Limit | 1150 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|----------|----------|--------|
| 0 | 68 | 1833.105 | 1864.032 | 30.927 |
| 1E+12 | 45 | 1747.882 | 1764.101 | 16.219 |
| 1E+12 | 46 | 1780.085 | 1828.171 | 48.086 |
| 1E+12 | 54 | 1727.891 | 1752.510 | 24.619 |
| 5E+12 | 57 | 1831.194 | 1855.230 | 24.036 |
| 5E+12 | 58 | 1705.149 | 1710.050 | 4.901 |
| 5E+12 | 60 | 1896.031 | 1898.433 | 2.402 |
| 1E+13 | 62 | 1726.300 | 1723.427 | -2.873 |
| 1E+13 | 65 | 1834.989 | 1834.999 | 0.010 |
| 1E+13 | 66 | 1662.230 | 1659.935 | -2.295 |
| Max | | 1896.031 | 1898.433 | 48.086 |
| Average | | 1774.486 | 1789.089 | 14.603 |
| Min | | 1662.230 | 1659.935 | -2.873 |
| Std Dev | | 72.822 | 78.020 | 17.083 |



| 8.12 __EA_GM_14V | |
|------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 2400 μA/V |
| Min Limit | 1150 μA/V |

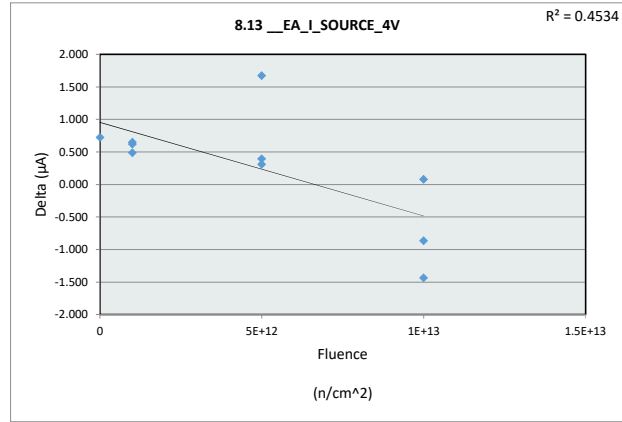
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|----------|----------|----------|----------|
| LL | 1150.000 | 1150.000 | 1150.000 | 1150.000 |
| Min | 1864.032 | 1752.510 | 1710.050 | 1659.935 |
| Average | 1864.032 | 1781.594 | 1821.238 | 1739.454 |
| Max | 1864.032 | 1828.171 | 1898.433 | 1834.999 |
| UL | 2400.000 | 2400.000 | 2400.000 | 2400.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

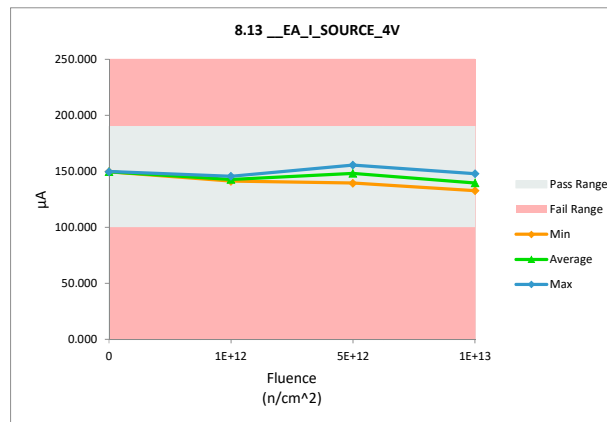
| 8.13 EA_I_SOURCE_4V | |
|---------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µA |
| Max Limit | 190 |
| Min Limit | 100 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 148.893 | 149.617 | 0.724 |
| 1E+12 | 45 | 140.593 | 141.079 | 0.486 |
| 1E+12 | 46 | 145.105 | 145.726 | 0.621 |
| 1E+12 | 54 | 140.591 | 141.242 | 0.651 |
| 5E+12 | 57 | 149.101 | 149.410 | 0.309 |
| 5E+12 | 58 | 139.021 | 139.417 | 0.396 |
| 5E+12 | 60 | 154.009 | 155.682 | 1.673 |
| 1E+13 | 62 | 139.487 | 138.621 | -0.866 |
| 1E+13 | 65 | 147.732 | 147.810 | 0.078 |
| 1E+13 | 66 | 134.065 | 132.629 | -1.436 |
| Max | | 154.009 | 155.682 | 1.673 |
| Average | | 143.860 | 144.123 | 0.264 |
| Min | | 134.065 | 132.629 | -1.436 |
| Std Dev | | 6.075 | 6.750 | 0.866 |



| 8.13 EA_I_SOURCE_4V | |
|---------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 190 µA |
| Min Limit | 100 µA |

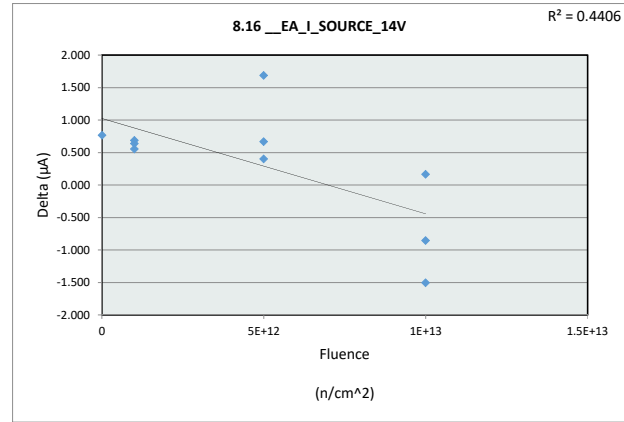
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 100.000 | 100.000 | 100.000 | 100.000 |
| Min | 149.617 | 141.079 | 139.417 | 132.629 |
| Average | 149.617 | 142.682 | 148.170 | 139.687 |
| Max | 149.617 | 145.726 | 155.682 | 147.810 |
| UL | 190.000 | 190.000 | 190.000 | 190.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

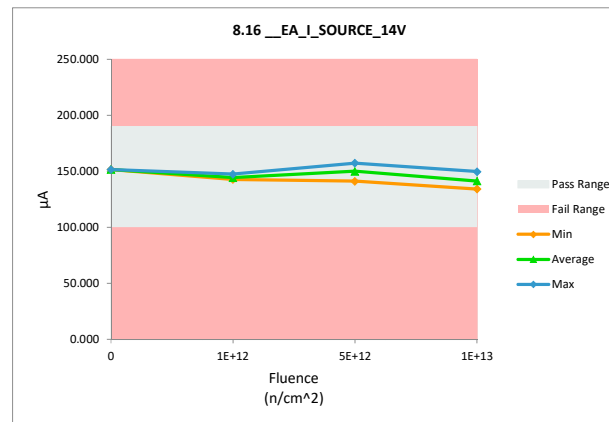
| 8.16 EA_I_SOURCE_14V | |
|----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µA |
| Max Limit | 190 |
| Min Limit | 100 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 150.801 | 151.567 | 0.766 |
| 1E+12 | 45 | 142.206 | 142.762 | 0.556 |
| 1E+12 | 46 | 146.771 | 147.457 | 0.686 |
| 1E+12 | 54 | 142.073 | 142.711 | 0.638 |
| 5E+12 | 57 | 150.687 | 151.353 | 0.666 |
| 5E+12 | 58 | 140.746 | 141.148 | 0.402 |
| 5E+12 | 60 | 155.648 | 157.337 | 1.689 |
| 1E+13 | 62 | 141.287 | 140.433 | -0.854 |
| 1E+13 | 65 | 149.448 | 149.614 | 0.166 |
| 1E+13 | 66 | 135.798 | 134.292 | -1.506 |
| Max | | 155.648 | 157.337 | 1.689 |
| Average | | 145.546 | 145.867 | 0.321 |
| Min | | 135.798 | 134.292 | -1.506 |
| Std Dev | | 6.076 | 6.799 | 0.896 |



| 8.16 EA_I_SOURCE_14V | |
|----------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 190 µA |
| Min Limit | 100 µA |

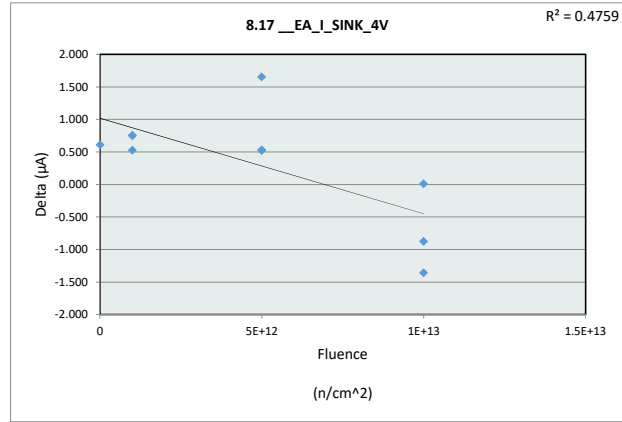
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 100.000 | 100.000 | 100.000 | 100.000 |
| Min | 151.567 | 142.711 | 141.148 | 134.292 |
| Average | 151.567 | 144.310 | 149.946 | 141.446 |
| Max | 151.567 | 147.457 | 157.337 | 149.614 |
| UL | 190.000 | 190.000 | 190.000 | 190.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

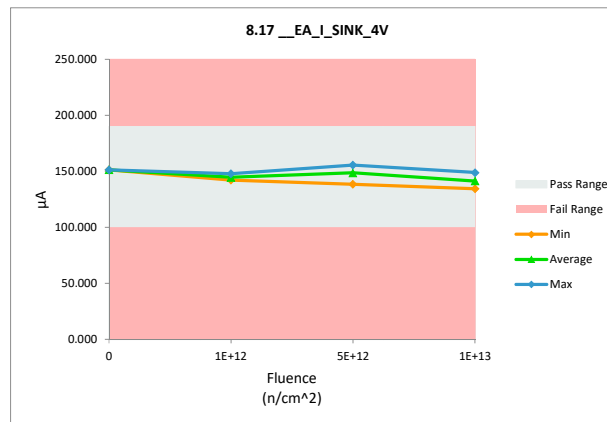
| 8.17 __EA_I_SINK_4V | |
|---------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | μA |
| Max Limit | 190 |
| Min Limit | 100 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 150.623 | 151.235 | 0.612 |
| 1E+12 | 45 | 143.058 | 143.586 | 0.528 |
| 1E+12 | 46 | 147.122 | 147.871 | 0.749 |
| 1E+12 | 54 | 141.370 | 142.130 | 0.760 |
| 5E+12 | 57 | 150.823 | 151.347 | 0.524 |
| 5E+12 | 58 | 137.821 | 138.354 | 0.533 |
| 5E+12 | 60 | 154.058 | 155.709 | 1.651 |
| 1E+13 | 62 | 141.241 | 140.366 | -0.875 |
| 1E+13 | 65 | 148.772 | 148.781 | 0.009 |
| 1E+13 | 66 | 135.921 | 134.566 | -1.355 |
| Max | | 154.058 | 155.709 | 1.651 |
| Average | | 145.081 | 145.395 | 0.314 |
| Min | | 135.921 | 134.566 | -1.355 |
| Std Dev | | 6.067 | 6.663 | 0.862 |



| 8.17 __EA_I_SINK_4V | |
|---------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 190 μA |
| Min Limit | 100 μA |

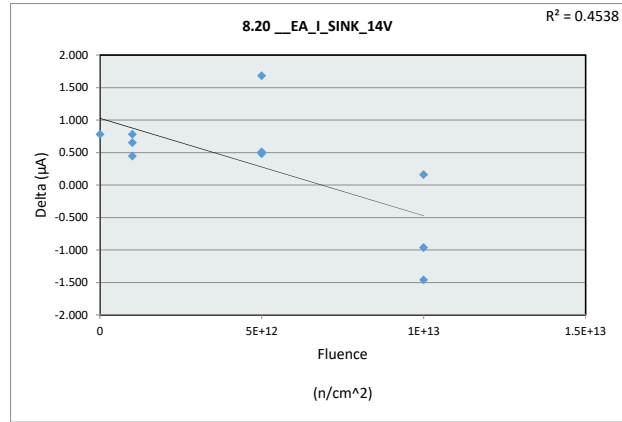
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 100.000 | 100.000 | 100.000 | 100.000 |
| Min | 151.235 | 142.130 | 138.354 | 134.566 |
| Average | 151.235 | 144.529 | 148.470 | 141.238 |
| Max | 151.235 | 147.871 | 155.709 | 148.781 |
| UL | 190.000 | 190.000 | 190.000 | 190.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

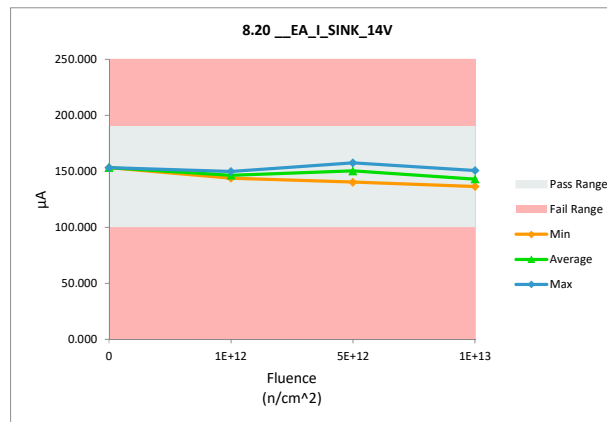
| 8.20 __EA_I_SINK_14V | |
|----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µA |
| Max Limit | 190 |
| Min Limit | 100 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 152.462 | 153.244 | 0.782 |
| 1E+12 | 45 | 144.936 | 145.383 | 0.447 |
| 1E+12 | 46 | 149.034 | 149.817 | 0.783 |
| 1E+12 | 54 | 143.118 | 143.769 | 0.651 |
| 5E+12 | 57 | 152.717 | 153.198 | 0.481 |
| 5E+12 | 58 | 139.734 | 140.244 | 0.510 |
| 5E+12 | 60 | 155.816 | 157.498 | 1.682 |
| 1E+13 | 62 | 143.093 | 142.129 | -0.964 |
| 1E+13 | 65 | 150.534 | 150.696 | 0.162 |
| 1E+13 | 66 | 137.782 | 136.323 | -1.459 |
| Max | | 155.816 | 157.498 | 1.682 |
| Average | | 146.923 | 147.230 | 0.308 |
| Min | | 137.782 | 136.323 | -1.459 |
| Std Dev | | 6.048 | 6.709 | 0.901 |



| 8.20 __EA_I_SINK_14V | |
|----------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 190 µA |
| Min Limit | 100 µA |

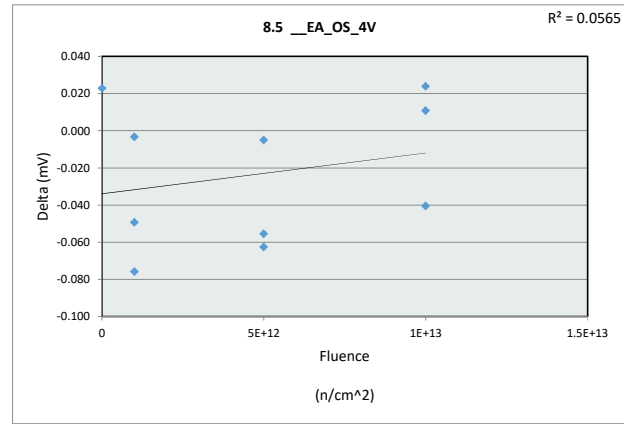
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 100.000 | 100.000 | 100.000 | 100.000 |
| Min | 153.244 | 143.769 | 140.244 | 136.323 |
| Average | 153.244 | 146.323 | 150.313 | 143.049 |
| Max | 153.244 | 149.817 | 157.498 | 150.696 |
| UL | 190.000 | 190.000 | 190.000 | 190.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

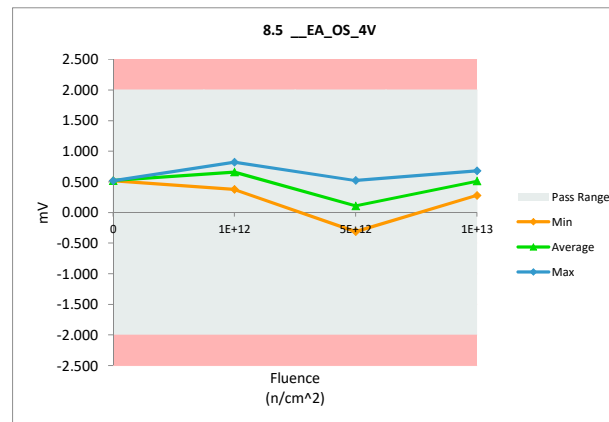
| 8.5 __EA_OS_4V | |
|----------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 2 |
| Min Limit | -2 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.498 | 0.521 | 0.023 |
| 1E+12 | 45 | 0.836 | 0.786 | -0.049 |
| 1E+12 | 46 | 0.824 | 0.820 | -0.003 |
| 1E+12 | 54 | 0.451 | 0.376 | -0.076 |
| 5E+12 | 57 | 0.577 | 0.522 | -0.055 |
| 5E+12 | 58 | -0.307 | -0.312 | -0.005 |
| 5E+12 | 60 | 0.177 | 0.114 | -0.063 |
| 1E+13 | 62 | 0.655 | 0.679 | 0.024 |
| 1E+13 | 65 | 0.269 | 0.279 | 0.011 |
| 1E+13 | 66 | 0.619 | 0.578 | -0.040 |
| Max | | 0.836 | 0.820 | 0.024 |
| Average | | 0.460 | 0.436 | -0.023 |
| Min | | -0.307 | -0.312 | -0.076 |
| Std Dev | | 0.343 | 0.342 | 0.037 |



| 8.5 __EA_OS_4V | |
|----------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 2 mV |
| Min Limit | -2 mV |

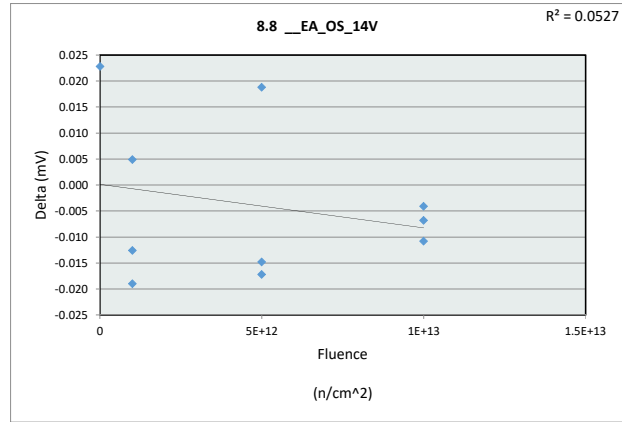
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | -2.000 | -2.000 | -2.000 | -2.000 |
| Min | 0.521 | 0.376 | -0.312 | 0.279 |
| Average | 0.521 | 0.661 | 0.108 | 0.512 |
| Max | 0.521 | 0.820 | 0.522 | 0.679 |
| UL | 2.000 | 2.000 | 2.000 | 2.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

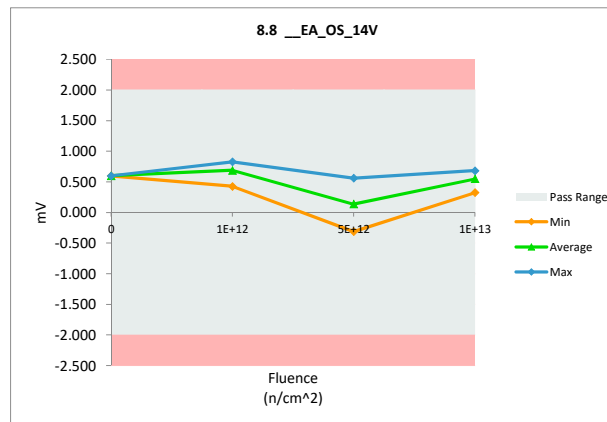
| 8.8 __EA_OS_14V | |
|-----------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV mV |
| Max Limit | 2 2 |
| Min Limit | -2 -2 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.576 | 0.599 | 0.023 |
| 1E+12 | 45 | 0.832 | 0.813 | -0.019 |
| 1E+12 | 46 | 0.838 | 0.826 | -0.013 |
| 1E+12 | 54 | 0.422 | 0.427 | 0.005 |
| 5E+12 | 57 | 0.540 | 0.559 | 0.019 |
| 5E+12 | 58 | -0.298 | -0.312 | -0.015 |
| 5E+12 | 60 | 0.176 | 0.159 | -0.017 |
| 1E+13 | 62 | 0.687 | 0.683 | -0.004 |
| 1E+13 | 65 | 0.330 | 0.323 | -0.007 |
| 1E+13 | 66 | 0.648 | 0.637 | -0.011 |
| Max | | 0.838 | 0.826 | 0.023 |
| Average | | 0.475 | 0.471 | -0.004 |
| Min | | -0.298 | -0.312 | -0.019 |
| Std Dev | | 0.343 | 0.345 | 0.015 |



| 8.8 __EA_OS_14V | |
|-----------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 2 mV |
| Min Limit | -2 mV |

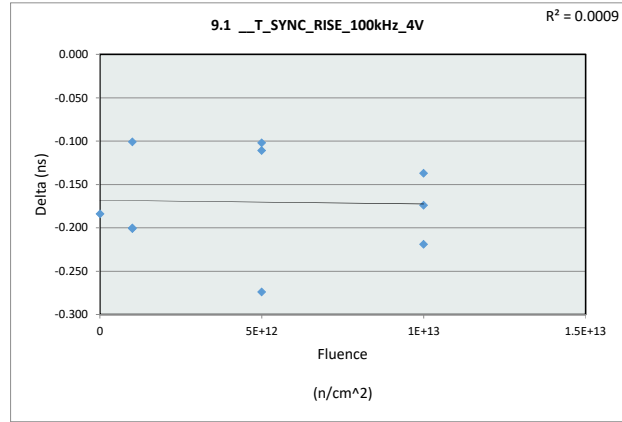
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | -2.000 | -2.000 | -2.000 | -2.000 |
| Min | 0.599 | 0.427 | -0.312 | 0.323 |
| Average | 0.599 | 0.689 | 0.135 | 0.548 |
| Max | 0.599 | 0.826 | 0.559 | 0.683 |
| UL | 2.000 | 2.000 | 2.000 | 2.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

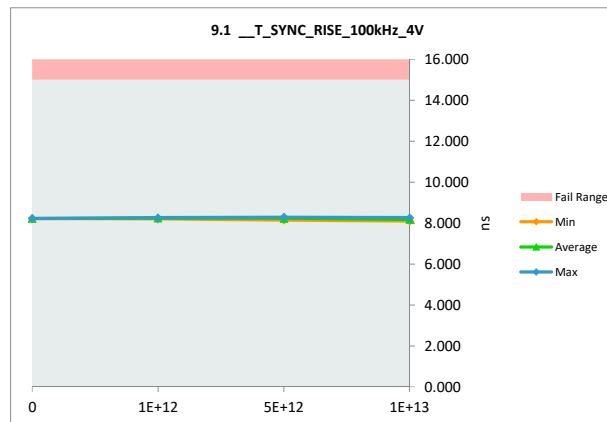
| 9.1 __T_SYNC_RISE_100kHz_4V | |
|-----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 15 |
| Min Limit | 15 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.410 | 8.226 | -0.184 |
| 1E+12 | 45 | 8.469 | 8.268 | -0.201 |
| 1E+12 | 46 | 8.367 | 8.266 | -0.101 |
| 1E+12 | 54 | 8.401 | 8.201 | -0.200 |
| 5E+12 | 57 | 8.397 | 8.286 | -0.111 |
| 5E+12 | 58 | 8.361 | 8.259 | -0.102 |
| 5E+12 | 60 | 8.422 | 8.148 | -0.274 |
| 1E+13 | 62 | 8.376 | 8.157 | -0.219 |
| 1E+13 | 65 | 8.401 | 8.264 | -0.137 |
| 1E+13 | 66 | 8.282 | 8.108 | -0.174 |
| Max | | 8.469 | 8.286 | -0.101 |
| Average | | 8.389 | 8.218 | -0.170 |
| Min | | 8.282 | 8.108 | -0.274 |
| Std Dev | | 0.048 | 0.062 | 0.057 |



| 9.1 __T_SYNC_RISE_100kHz | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 15 |
| Min Limit | ns |

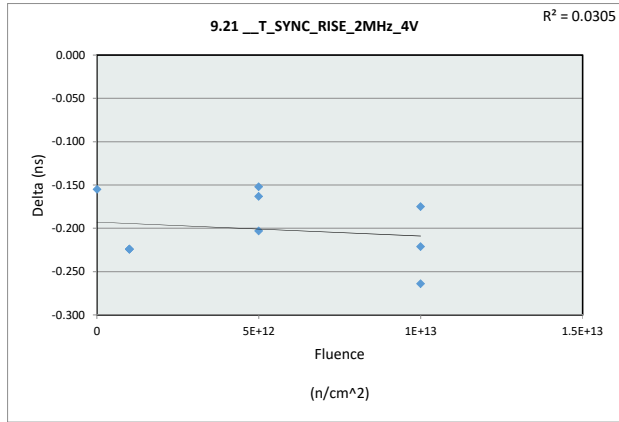
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.226 | 8.201 | 8.148 | 8.108 |
| Average | 8.226 | 8.245 | 8.231 | 8.176 |
| Max | 8.226 | 8.268 | 8.286 | 8.264 |
| UL | 15.000 | 15.000 | 15.000 | 15.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

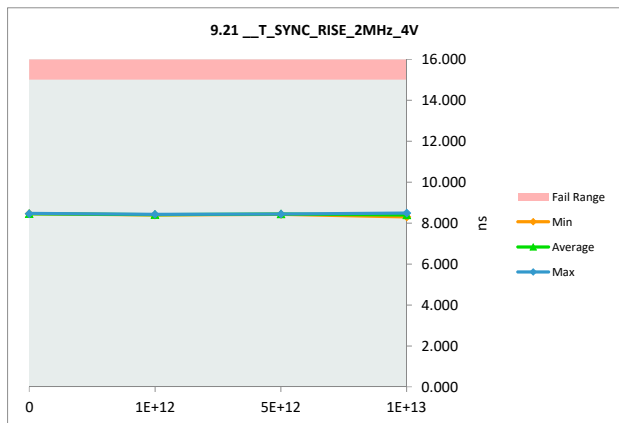
| 9.21 __T_SYNC_RISE_2MHz_4V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 15 |
| Min Limit | 15 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.623 | 8.468 | -0.155 |
| 1E+12 | 45 | 8.652 | 8.428 | -0.224 |
| 1E+12 | 46 | 8.620 | 8.396 | -0.224 |
| 1E+12 | 54 | 8.640 | 8.416 | -0.224 |
| 5E+12 | 57 | 8.598 | 8.446 | -0.152 |
| 5E+12 | 58 | 8.649 | 8.446 | -0.203 |
| 5E+12 | 60 | 8.595 | 8.432 | -0.163 |
| 1E+13 | 62 | 8.644 | 8.380 | -0.264 |
| 1E+13 | 65 | 8.674 | 8.499 | -0.175 |
| 1E+13 | 66 | 8.528 | 8.307 | -0.221 |
| Max | | 8.674 | 8.499 | -0.152 |
| Average | | 8.622 | 8.422 | -0.200 |
| Min | | 8.528 | 8.307 | -0.264 |
| Std Dev | | 0.041 | 0.053 | 0.037 |



| 9.21 __T_SYNC_RISE_2MHz_4 | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 15 |
| Min Limit | ns |

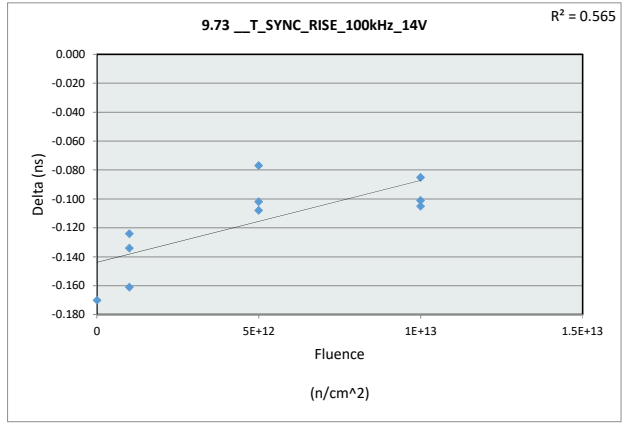
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.468 | 8.396 | 8.432 | 8.307 |
| Average | 8.468 | 8.413 | 8.441 | 8.395 |
| Max | 8.468 | 8.428 | 8.446 | 8.499 |
| UL | 15.000 | 15.000 | 15.000 | 15.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

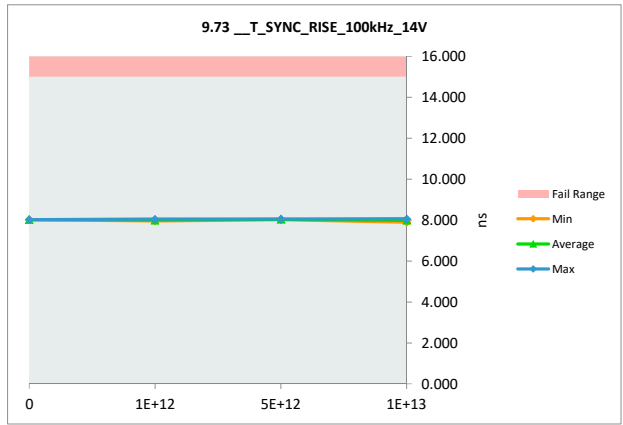
| 9.73 __T_SYNC_RISE_100kHz_14V | |
|-------------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 15 |
| Min Limit | 15 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.192 | 8.022 | -0.170 |
| 1E+12 | 45 | 8.136 | 8.002 | -0.134 |
| 1E+12 | 46 | 8.080 | 7.956 | -0.124 |
| 1E+12 | 54 | 8.205 | 8.044 | -0.161 |
| 5E+12 | 57 | 8.147 | 8.045 | -0.102 |
| 5E+12 | 58 | 8.138 | 8.061 | -0.077 |
| 5E+12 | 60 | 8.124 | 8.016 | -0.108 |
| 1E+13 | 62 | 8.103 | 8.018 | -0.085 |
| 1E+13 | 65 | 8.159 | 8.058 | -0.101 |
| 1E+13 | 66 | 8.010 | 7.905 | -0.105 |
| Max | | 8.205 | 8.061 | -0.077 |
| Average | | 8.129 | 8.013 | -0.117 |
| Min | | 8.010 | 7.905 | -0.170 |
| Std Dev | | 0.056 | 0.049 | 0.031 |



| 9.73 __T_SYNC_RISE_100kHz | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 15 |
| Min Limit | ns |

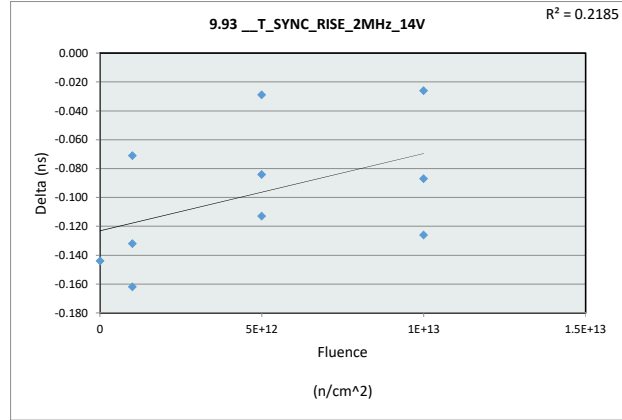
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.022 | 7.956 | 8.016 | 7.905 |
| Average | 8.022 | 8.001 | 8.041 | 7.994 |
| Max | 8.022 | 8.044 | 8.061 | 8.058 |
| UL | 15.000 | 15.000 | 15.000 | 15.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

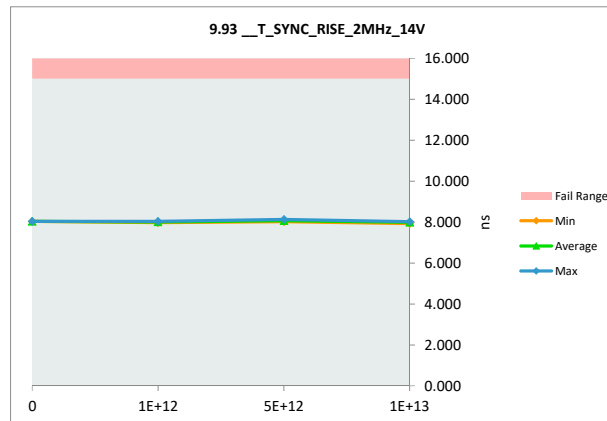
| 9.93 __T_SYNC_RISE_2MHz_14V | |
|-----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 15 |
| Min Limit | 15 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.183 | 8.039 | -0.144 |
| 1E+12 | 45 | 8.072 | 8.001 | -0.071 |
| 1E+12 | 46 | 8.105 | 7.973 | -0.132 |
| 1E+12 | 54 | 8.198 | 8.036 | -0.162 |
| 5E+12 | 57 | 8.158 | 8.129 | -0.029 |
| 5E+12 | 58 | 8.154 | 8.070 | -0.084 |
| 5E+12 | 60 | 8.137 | 8.024 | -0.113 |
| 1E+13 | 62 | 8.055 | 8.029 | -0.026 |
| 1E+13 | 65 | 8.150 | 8.024 | -0.126 |
| 1E+13 | 66 | 8.016 | 7.929 | -0.087 |
| Max | | 8.198 | 8.129 | -0.026 |
| Average | | 8.123 | 8.025 | -0.097 |
| Min | | 8.016 | 7.929 | -0.162 |
| Std Dev | | 0.059 | 0.053 | 0.046 |



| 9.93 __T_SYNC_RISE_2MHz_1 | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 15 |
| Min Limit | ns |

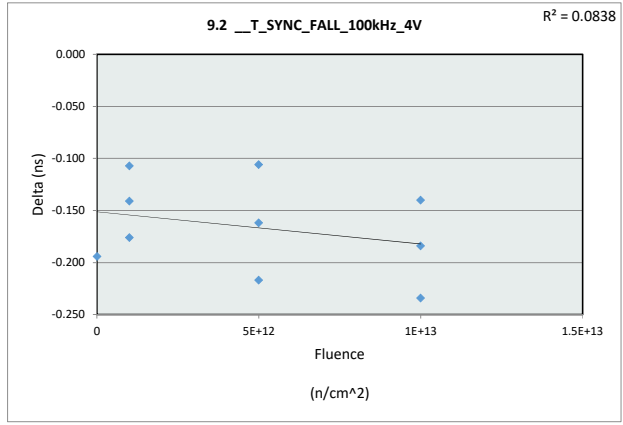
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.039 | 7.973 | 8.024 | 7.929 |
| Average | 8.039 | 8.003 | 8.074 | 7.994 |
| Max | 8.039 | 8.036 | 8.129 | 8.029 |
| UL | 15.000 | 15.000 | 15.000 | 15.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

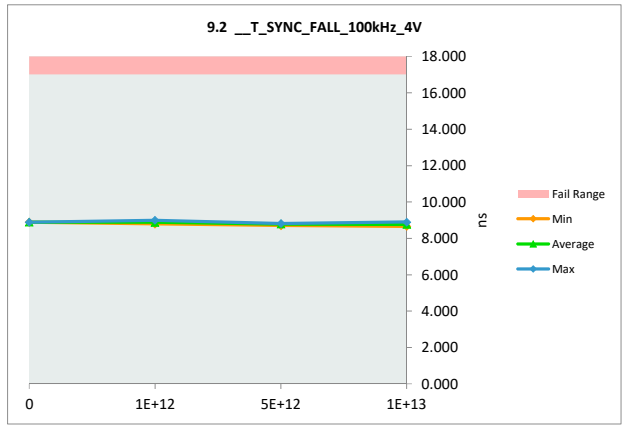
| 9.2 __T_SYNC_FALL_100kHz_4V | |
|-----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.080 | 8.886 | -0.194 |
| 1E+12 | 45 | 9.166 | 8.990 | -0.176 |
| 1E+12 | 46 | 8.891 | 8.784 | -0.107 |
| 1E+12 | 54 | 8.998 | 8.857 | -0.141 |
| 5E+12 | 57 | 8.918 | 8.812 | -0.106 |
| 5E+12 | 58 | 8.917 | 8.700 | -0.217 |
| 5E+12 | 60 | 8.973 | 8.811 | -0.162 |
| 1E+13 | 62 | 8.995 | 8.761 | -0.234 |
| 1E+13 | 65 | 9.033 | 8.893 | -0.140 |
| 1E+13 | 66 | 8.837 | 8.653 | -0.184 |
| Max | | 9.166 | 8.990 | -0.106 |
| Average | | 8.981 | 8.815 | -0.166 |
| Min | | 8.837 | 8.653 | -0.234 |
| Std Dev | | 0.097 | 0.098 | 0.043 |



| 9.2 __T_SYNC_FALL_100kHz | |
|--------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 ns |
| Min Limit | ns |

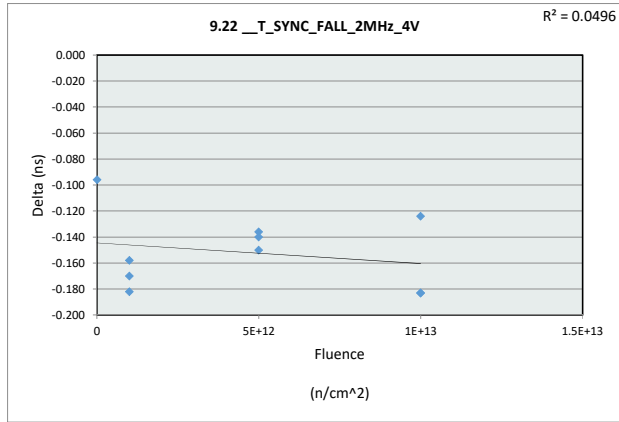
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.886 | 8.784 | 8.700 | 8.653 |
| Average | 8.886 | 8.877 | 8.774 | 8.769 |
| Max | 8.886 | 8.990 | 8.812 | 8.893 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

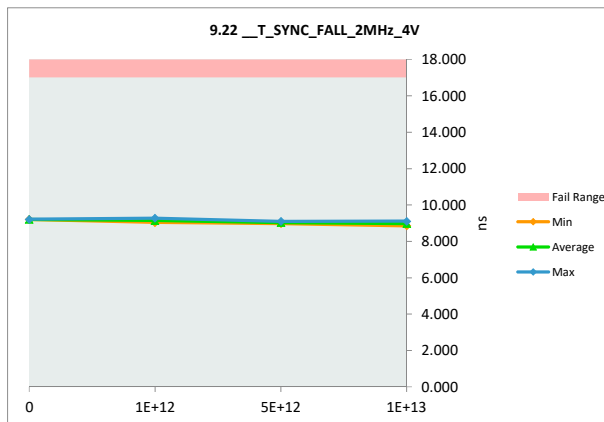
| 9.22 __T_SYNC_FALL_2MHz_4V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.308 | 9.212 | -0.096 |
| 1E+12 | 45 | 9.438 | 9.280 | -0.158 |
| 1E+12 | 46 | 9.215 | 9.033 | -0.182 |
| 1E+12 | 54 | 9.273 | 9.103 | -0.170 |
| 5E+12 | 57 | 9.240 | 9.100 | -0.140 |
| 5E+12 | 58 | 9.145 | 9.009 | -0.136 |
| 5E+12 | 60 | 9.125 | 8.975 | -0.150 |
| 1E+13 | 62 | 9.136 | 8.953 | -0.183 |
| 1E+13 | 65 | 9.232 | 9.108 | -0.124 |
| 1E+13 | 66 | 9.035 | 8.852 | -0.183 |
| Max | | 9.438 | 9.280 | -0.096 |
| Average | | 9.215 | 9.063 | -0.152 |
| Min | | 9.035 | 8.852 | -0.183 |
| Std Dev | | 0.113 | 0.126 | 0.029 |



| 9.22 __T_SYNC_FALL_2MHz_4 | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

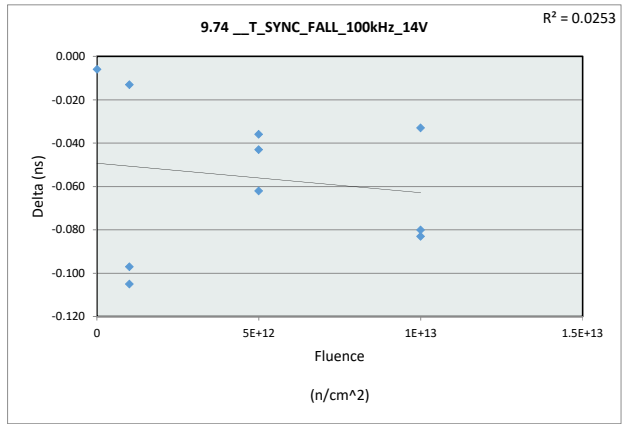
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.212 | 9.033 | 8.975 | 8.852 |
| Average | 9.212 | 9.139 | 9.028 | 8.971 |
| Max | 9.212 | 9.280 | 9.100 | 9.108 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

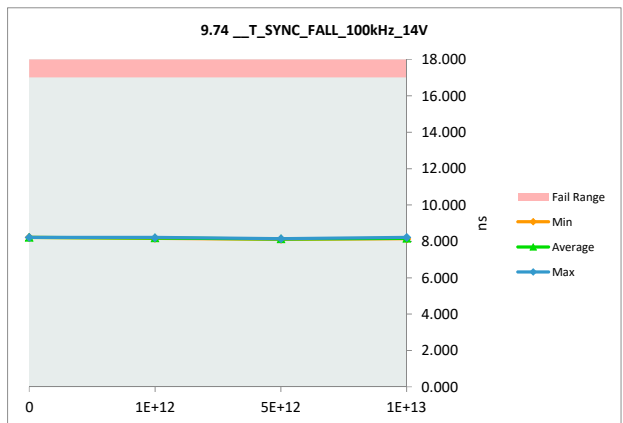
| 9.74 __T_SYNC_FALL_100kHz_14V | |
|-------------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.233 | 8.227 | -0.006 |
| 1E+12 | 45 | 8.264 | 8.167 | -0.097 |
| 1E+12 | 46 | 8.266 | 8.161 | -0.105 |
| 1E+12 | 54 | 8.219 | 8.206 | -0.013 |
| 5E+12 | 57 | 8.177 | 8.141 | -0.036 |
| 5E+12 | 58 | 8.168 | 8.106 | -0.062 |
| 5E+12 | 60 | 8.191 | 8.148 | -0.043 |
| 1E+13 | 62 | 8.216 | 8.133 | -0.083 |
| 1E+13 | 65 | 8.260 | 8.227 | -0.033 |
| 1E+13 | 66 | 8.215 | 8.135 | -0.080 |
| Max | | 8.266 | 8.227 | -0.006 |
| Average | | 8.221 | 8.165 | -0.056 |
| Min | | 8.168 | 8.106 | -0.105 |
| Std Dev | | 0.035 | 0.042 | 0.035 |



| 9.74 __T_SYNC_FALL_100kHz | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

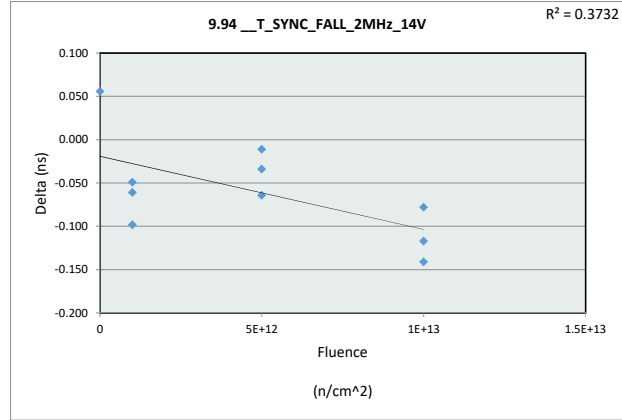
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.227 | 8.161 | 8.106 | 8.133 |
| Average | 8.227 | 8.178 | 8.132 | 8.165 |
| Max | 8.227 | 8.206 | 8.148 | 8.227 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

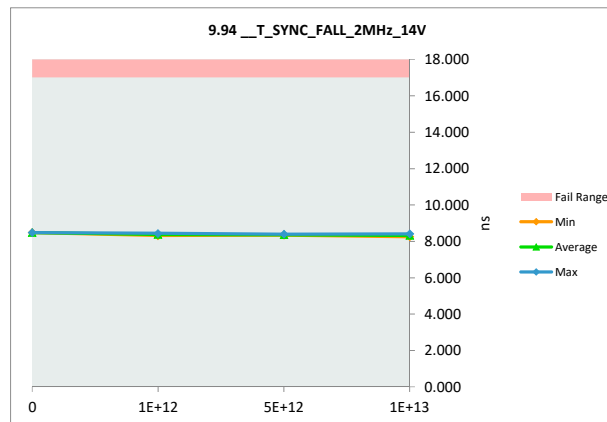
| 9.94 __T_SYNC_FALL_2MHz_14V | |
|-----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.432 | 8.488 | 0.056 |
| 1E+12 | 45 | 8.464 | 8.366 | -0.098 |
| 1E+12 | 46 | 8.498 | 8.437 | -0.061 |
| 1E+12 | 54 | 8.362 | 8.313 | -0.049 |
| 5E+12 | 57 | 8.436 | 8.402 | -0.034 |
| 5E+12 | 58 | 8.354 | 8.343 | -0.011 |
| 5E+12 | 60 | 8.400 | 8.336 | -0.064 |
| 1E+13 | 62 | 8.414 | 8.297 | -0.117 |
| 1E+13 | 65 | 8.491 | 8.413 | -0.078 |
| 1E+13 | 66 | 8.399 | 8.258 | -0.141 |
| Max | | 8.498 | 8.488 | 0.056 |
| Average | | 8.425 | 8.365 | -0.060 |
| Min | | 8.354 | 8.258 | -0.141 |
| Std Dev | | 0.049 | 0.070 | 0.056 |



| 9.94 __T_SYNC_FALL_2MHz_1 | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

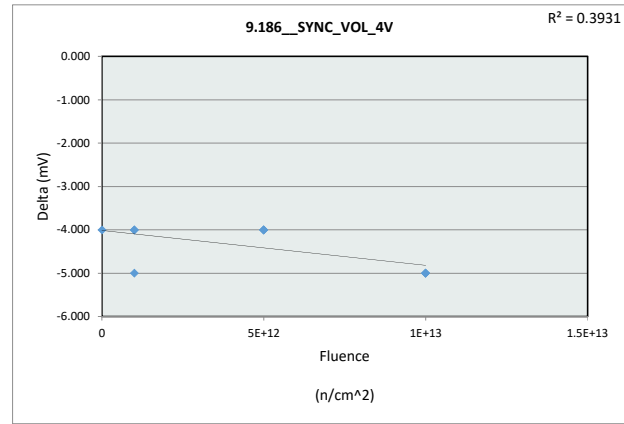
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 8.488 | 8.313 | 8.336 | 8.258 |
| Average | 8.488 | 8.372 | 8.360 | 8.323 |
| Max | 8.488 | 8.437 | 8.402 | 8.413 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

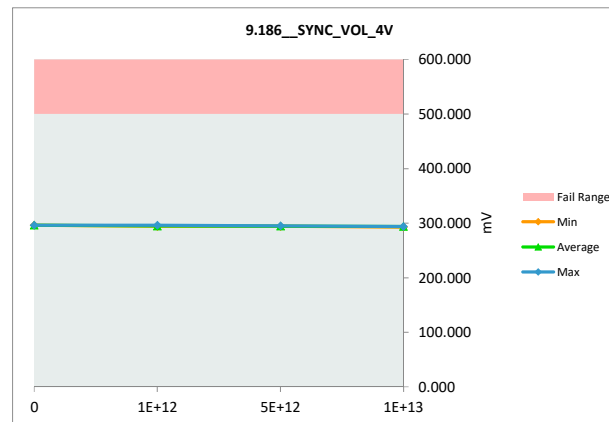
| 9.186_SYNC_VOL_4V | |
|-------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 500 |
| Min Limit | |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 300.000 | 296.000 | -4.000 |
| 1E+12 | 45 | 301.000 | 296.000 | -5.000 |
| 1E+12 | 46 | 298.000 | 294.000 | -4.000 |
| 1E+12 | 54 | 298.000 | 294.000 | -4.000 |
| 5E+12 | 57 | 299.000 | 295.000 | -4.000 |
| 5E+12 | 58 | 298.000 | 294.000 | -4.000 |
| 5E+12 | 60 | 298.000 | 294.000 | -4.000 |
| 1E+13 | 62 | 298.000 | 293.000 | -5.000 |
| 1E+13 | 65 | 299.000 | 294.000 | -5.000 |
| 1E+13 | 66 | 299.000 | 294.000 | -5.000 |
| Max | | 301.000 | 296.000 | -4.000 |
| Average | | 298.800 | 294.400 | -4.400 |
| Min | | 298.000 | 293.000 | -5.000 |
| Std Dev | | 1.033 | 0.966 | 0.516 |



| 9.186_SYNC_VOL_4V | |
|-------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 500 mV |
| Min Limit | mV |

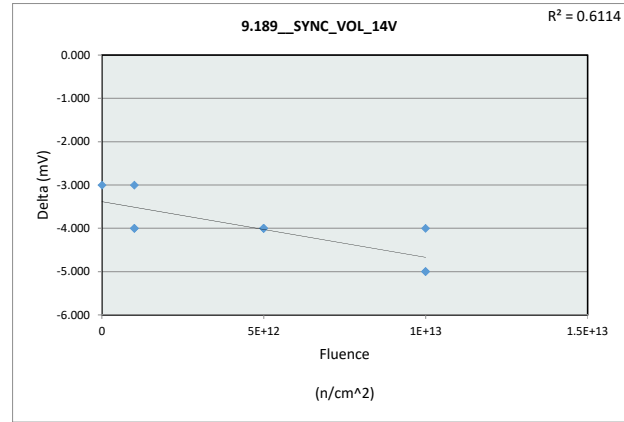
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | | | | |
| Min | 296.000 | 294.000 | 294.000 | 293.000 |
| Average | 296.000 | 294.667 | 294.333 | 293.667 |
| Max | 296.000 | 296.000 | 295.000 | 294.000 |
| UL | 500.000 | 500.000 | 500.000 | 500.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

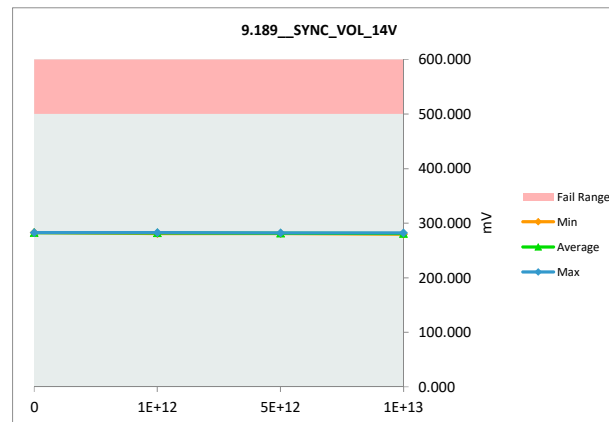
| 9.189_SYNC_VOL_14V | |
|--------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 500 |
| Min Limit | 500 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 286.000 | 283.000 | -3.000 |
| 1E+12 | 45 | 287.000 | 283.000 | -4.000 |
| 1E+12 | 46 | 285.000 | 281.000 | -4.000 |
| 1E+12 | 54 | 285.000 | 282.000 | -3.000 |
| 5E+12 | 57 | 286.000 | 282.000 | -4.000 |
| 5E+12 | 58 | 285.000 | 281.000 | -4.000 |
| 5E+12 | 60 | 285.000 | 281.000 | -4.000 |
| 1E+13 | 62 | 285.000 | 280.000 | -5.000 |
| 1E+13 | 65 | 286.000 | 282.000 | -4.000 |
| 1E+13 | 66 | 286.000 | 281.000 | -5.000 |
| Max | | 287.000 | 283.000 | -3.000 |
| Average | | 285.600 | 281.600 | -4.000 |
| Min | | 285.000 | 280.000 | -5.000 |
| Std Dev | | 0.699 | 0.966 | 0.667 |



| 9.189_SYNC_VOL_14V | |
|--------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 500 mV |
| Min Limit | mV |

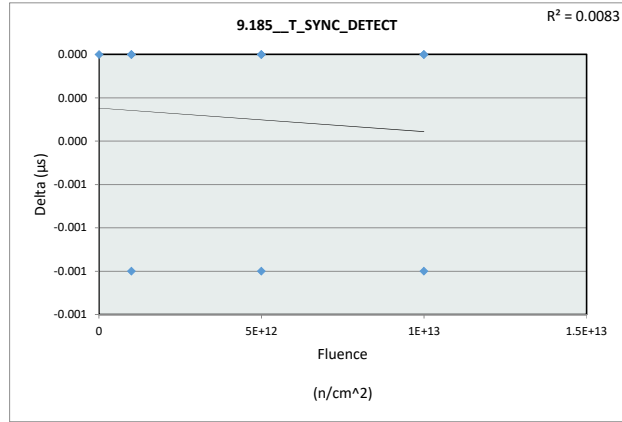
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | | | | |
| Min | 283.000 | 281.000 | 281.000 | 280.000 |
| Average | 283.000 | 282.000 | 281.333 | 281.000 |
| Max | 283.000 | 283.000 | 282.000 | 282.000 |
| UL | 500.000 | 500.000 | 500.000 | 500.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

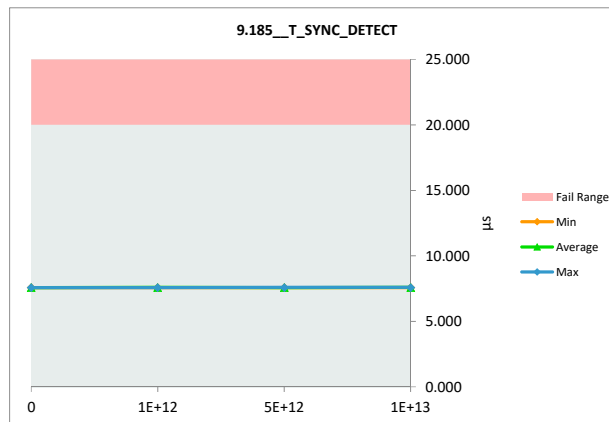
| 9.185_T_SYNC_DETECT | |
|---------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µs |
| Max Limit | 20 |
| Min Limit | 20 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.586 | 7.586 | 0.000 |
| 1E+12 | 45 | 7.586 | 7.586 | 0.000 |
| 1E+12 | 46 | 7.586 | 7.585 | -0.001 |
| 1E+12 | 54 | 7.588 | 7.588 | 0.000 |
| 5E+12 | 57 | 7.587 | 7.587 | 0.000 |
| 5E+12 | 58 | 7.586 | 7.586 | 0.000 |
| 5E+12 | 60 | 7.588 | 7.587 | -0.001 |
| 1E+13 | 62 | 7.586 | 7.586 | 0.000 |
| 1E+13 | 65 | 7.587 | 7.587 | 0.000 |
| 1E+13 | 66 | 7.587 | 7.586 | -0.001 |
| Max | | 7.588 | 7.588 | 0.000 |
| Average | | 7.587 | 7.586 | 0.000 |
| Min | | 7.586 | 7.585 | -0.001 |
| Std Dev | | 0.001 | 0.001 | 0.000 |



| 9.185_T_SYNC_DETECT | |
|---------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 20 µs |
| Min Limit | µs |

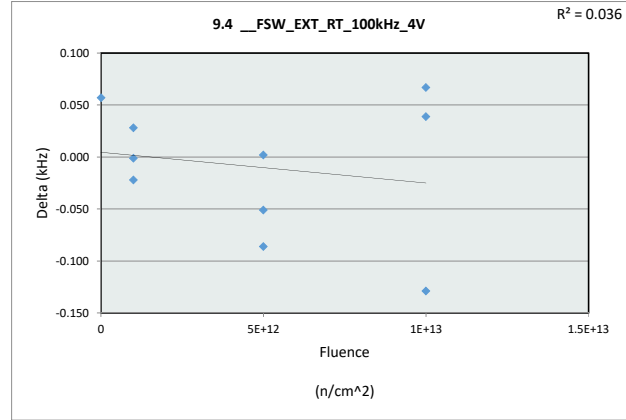
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 7.586 | 7.585 | 7.586 | 7.586 |
| Average | 7.586 | 7.586 | 7.587 | 7.586 |
| Max | 7.586 | 7.588 | 7.587 | 7.587 |
| UL | 20.000 | 20.000 | 20.000 | 20.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

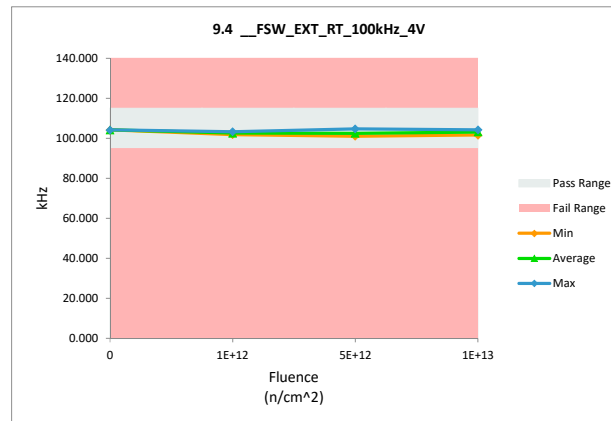
| 9.4 __FSW_EXT_RT_100kHz_4V | |
|----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | kHz |
| Max Limit | 115 |
| Min Limit | 95 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 104.115 | 104.172 | 0.057 |
| 1E+12 | 45 | 103.321 | 103.320 | -0.001 |
| 1E+12 | 46 | 101.862 | 101.840 | -0.022 |
| 1E+12 | 54 | 102.518 | 102.546 | 0.028 |
| 5E+12 | 57 | 101.175 | 101.124 | -0.051 |
| 5E+12 | 58 | 101.538 | 101.452 | -0.086 |
| 5E+12 | 60 | 104.731 | 104.733 | 0.002 |
| 1E+13 | 62 | 103.656 | 103.527 | -0.129 |
| 1E+13 | 65 | 104.117 | 104.184 | 0.067 |
| 1E+13 | 66 | 101.496 | 101.535 | 0.039 |
| Max | | 104.731 | 104.733 | 0.067 |
| Average | | 102.853 | 102.843 | -0.010 |
| Min | | 101.175 | 101.124 | -0.129 |
| Std Dev | | 1.294 | 1.313 | 0.063 |



| 9.4 __FSW_EXT_RT_100kHz | |
|-------------------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 115 kHz |
| Min Limit | 95 kHz |

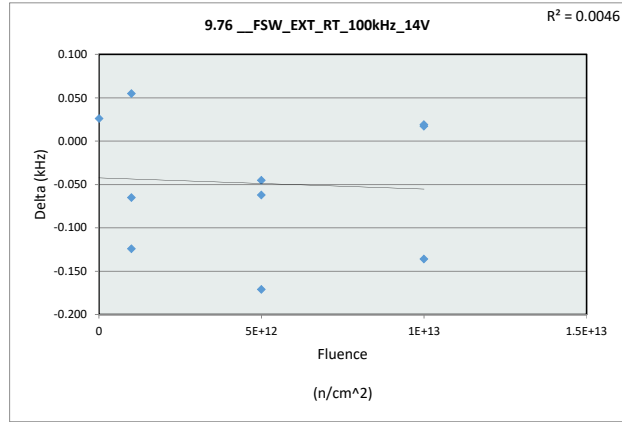
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 95.000 | 95.000 | 95.000 | 95.000 |
| Min | 104.172 | 101.840 | 101.124 | 101.535 |
| Average | 104.172 | 102.569 | 102.436 | 103.082 |
| Max | 104.172 | 103.320 | 104.733 | 104.184 |
| UL | 115.000 | 115.000 | 115.000 | 115.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

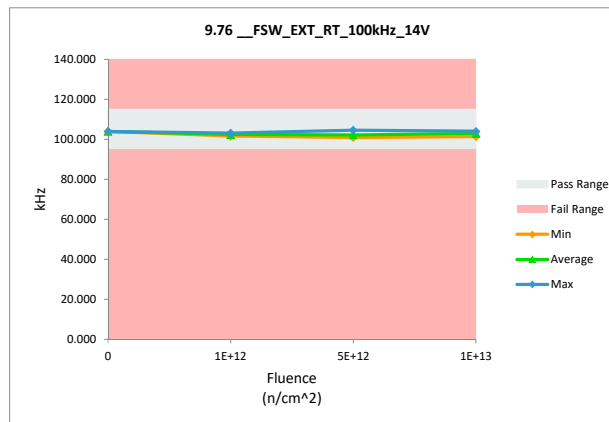
| 9.76_FSW_EXT_RT_100kHz_14V | |
|----------------------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | kHz kHz |
| Max Limit | 115 115 |
| Min Limit | 95 95 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 103.889 | 103.915 | 0.026 |
| 1E+12 | 45 | 103.138 | 103.073 | -0.065 |
| 1E+12 | 46 | 101.699 | 101.575 | -0.124 |
| 1E+12 | 54 | 102.371 | 102.426 | 0.055 |
| 5E+12 | 57 | 101.006 | 100.944 | -0.062 |
| 5E+12 | 58 | 101.419 | 101.248 | -0.171 |
| 5E+12 | 60 | 104.580 | 104.535 | -0.045 |
| 1E+13 | 62 | 103.445 | 103.309 | -0.136 |
| 1E+13 | 65 | 103.940 | 103.959 | 0.019 |
| 1E+13 | 66 | 101.312 | 101.329 | 0.017 |
| Max | | 104.580 | 104.535 | 0.055 |
| Average | | 102.680 | 102.631 | -0.049 |
| Min | | 101.006 | 100.944 | -0.171 |
| Std Dev | | 1.281 | 1.304 | 0.077 |



| 9.76_FSW_EXT_RT_100kHz | |
|------------------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 115 kHz |
| Min Limit | 95 kHz |

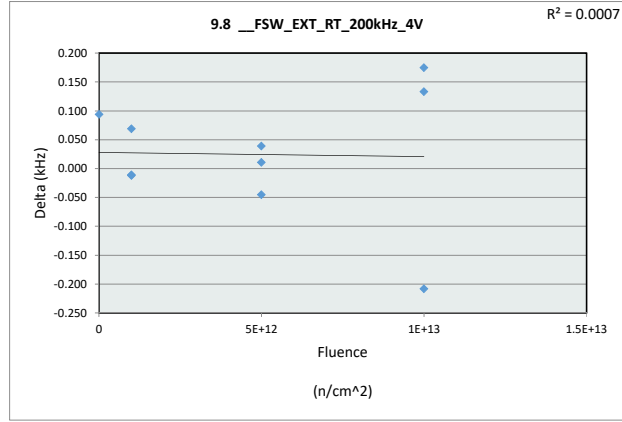
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 95.000 | 95.000 | 95.000 | 95.000 |
| Min | 103.915 | 101.575 | 100.944 | 101.329 |
| Average | 103.915 | 102.358 | 102.242 | 102.866 |
| Max | 103.915 | 103.073 | 104.535 | 103.959 |
| UL | 115.000 | 115.000 | 115.000 | 115.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

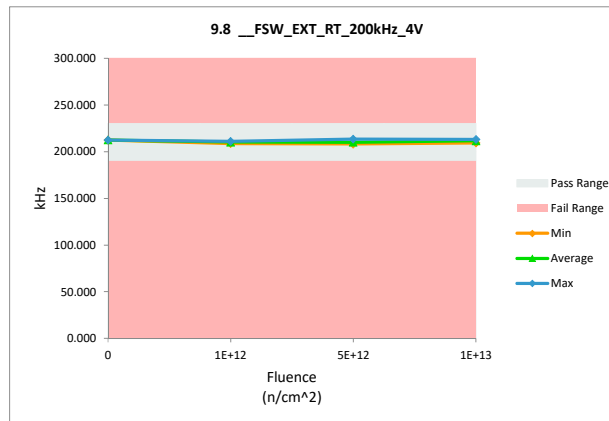
| 9.8 __FSW_EXT_RT_200kHz_4V | |
|----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | kHz |
| Max Limit | 230 |
| Min Limit | 190 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 212.220 | 212.314 | 0.094 |
| 1E+12 | 45 | 211.204 | 211.192 | -0.012 |
| 1E+12 | 46 | 208.581 | 208.570 | -0.011 |
| 1E+12 | 54 | 210.703 | 210.772 | 0.069 |
| 5E+12 | 57 | 208.103 | 208.142 | 0.039 |
| 5E+12 | 58 | 208.228 | 208.183 | -0.045 |
| 5E+12 | 60 | 213.552 | 213.563 | 0.011 |
| 1E+13 | 62 | 212.597 | 212.389 | -0.208 |
| 1E+13 | 65 | 212.859 | 213.034 | 0.175 |
| 1E+13 | 66 | 209.059 | 209.192 | 0.133 |
| Max | | 213.552 | 213.563 | 0.175 |
| Average | | 210.711 | 210.735 | 0.025 |
| Min | | 208.103 | 208.142 | -0.208 |
| Std Dev | | 2.082 | 2.082 | 0.107 |



| 9.8 __FSW_EXT_RT_200kHz | |
|-------------------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 230 kHz |
| Min Limit | 190 kHz |

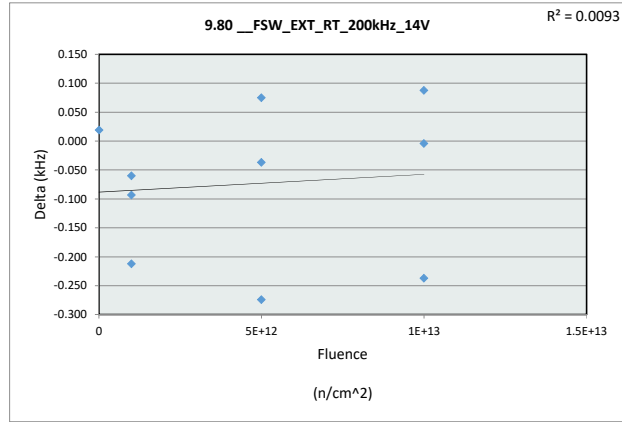
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 190.000 | 190.000 | 190.000 | 190.000 |
| Min | 212.314 | 208.570 | 208.142 | 209.192 |
| Average | 212.314 | 210.178 | 209.963 | 211.538 |
| Max | 212.314 | 211.192 | 213.563 | 213.034 |
| UL | 230.000 | 230.000 | 230.000 | 230.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

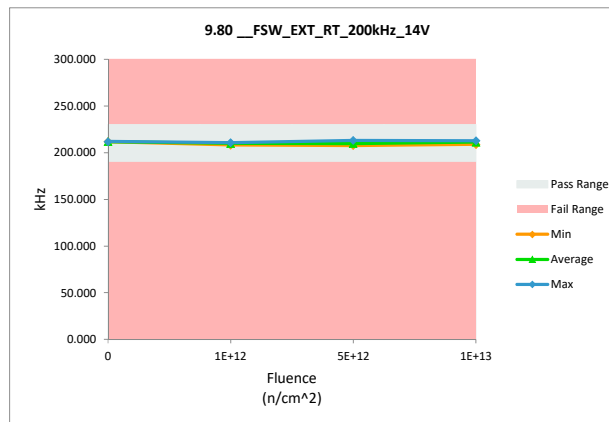
| 9.80_FSW_EXT_RT_200kHz_14V | |
|----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | kHz |
| Max Limit | 230 |
| Min Limit | 190 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 211.813 | 211.832 | 0.019 |
| 1E+12 | 45 | 210.922 | 210.829 | -0.093 |
| 1E+12 | 46 | 208.315 | 208.103 | -0.212 |
| 1E+12 | 54 | 210.383 | 210.323 | -0.060 |
| 5E+12 | 57 | 207.733 | 207.808 | 0.075 |
| 5E+12 | 58 | 208.056 | 207.782 | -0.274 |
| 5E+12 | 60 | 213.286 | 213.249 | -0.037 |
| 1E+13 | 62 | 212.076 | 211.839 | -0.237 |
| 1E+13 | 65 | 212.580 | 212.668 | 0.088 |
| 1E+13 | 66 | 208.718 | 208.714 | -0.004 |
| Max | | 213.286 | 213.249 | 0.088 |
| Average | | 210.388 | 210.315 | -0.074 |
| Min | | 207.733 | 207.782 | -0.274 |
| Std Dev | | 2.053 | 2.087 | 0.129 |



| 9.80_FSW_EXT_RT_200kHz | |
|------------------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 230 kHz |
| Min Limit | 190 kHz |

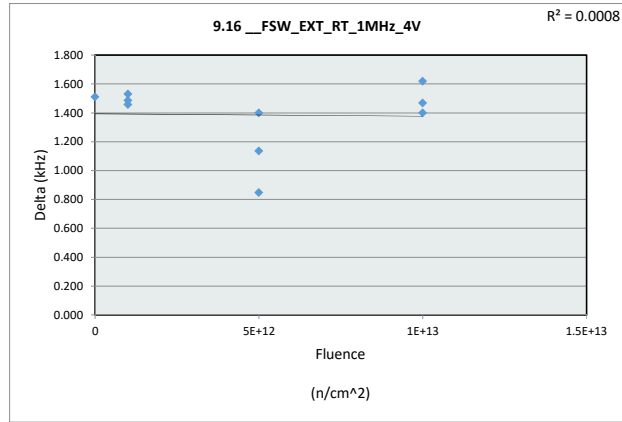
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 190.000 | 190.000 | 190.000 | 190.000 |
| Min | 211.832 | 208.103 | 207.782 | 208.714 |
| Average | 211.832 | 209.752 | 209.613 | 211.074 |
| Max | 211.832 | 210.829 | 213.249 | 212.668 |
| UL | 230.000 | 230.000 | 230.000 | 230.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

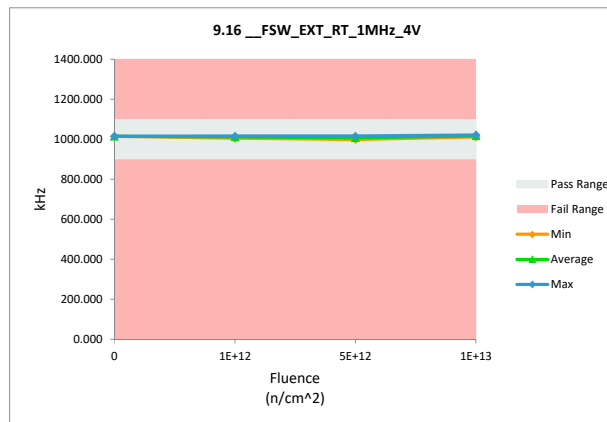
| 9.16_FSW_EXT_RT_1MHz_4V | | |
|-------------------------|------|------|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | kHz | kHz |
| Max Limit | 1100 | 1100 |
| Min Limit | 900 | 900 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|----------|----------|-------|
| 0 | 68 | 1013.560 | 1015.070 | 1.510 |
| 1E+12 | 45 | 1012.838 | 1014.368 | 1.530 |
| 1E+12 | 46 | 1003.111 | 1004.598 | 1.487 |
| 1E+12 | 54 | 1013.950 | 1015.407 | 1.457 |
| 5E+12 | 57 | 1005.554 | 1006.691 | 1.137 |
| 5E+12 | 58 | 999.121 | 999.969 | 0.848 |
| 5E+12 | 60 | 1014.248 | 1015.648 | 1.400 |
| 1E+13 | 62 | 1018.127 | 1019.527 | 1.400 |
| 1E+13 | 65 | 1019.482 | 1021.101 | 1.619 |
| 1E+13 | 66 | 1010.018 | 1011.487 | 1.469 |
| Max | | 1019.482 | 1021.101 | 1.619 |
| Average | | 1011.001 | 1012.387 | 1.386 |
| Min | | 999.121 | 999.969 | 0.848 |
| Std Dev | | 6.548 | 6.716 | 0.227 |



| 9.16_FSW_EXT_RT_1MHz_4V | | |
|-------------------------|------|-----|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 1100 | kHz |
| Min Limit | 900 | kHz |

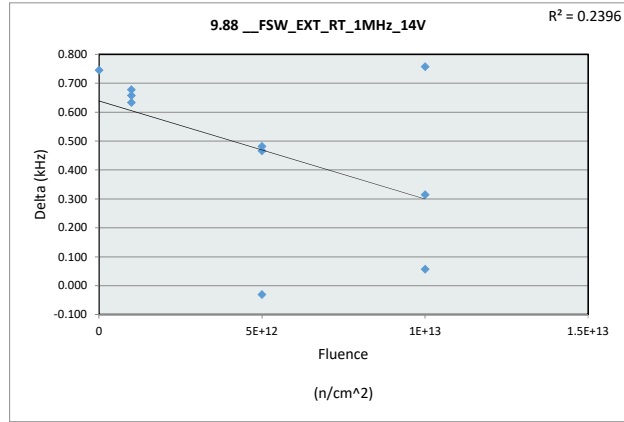
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|----------|----------|----------|----------|
| LL | 900.000 | 900.000 | 900.000 | 900.000 |
| Min | 1015.070 | 1004.598 | 999.969 | 1011.487 |
| Average | 1015.070 | 1011.458 | 1007.436 | 1017.372 |
| Max | 1015.070 | 1015.407 | 1015.648 | 1021.101 |
| UL | 1100.000 | 1100.000 | 1100.000 | 1100.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

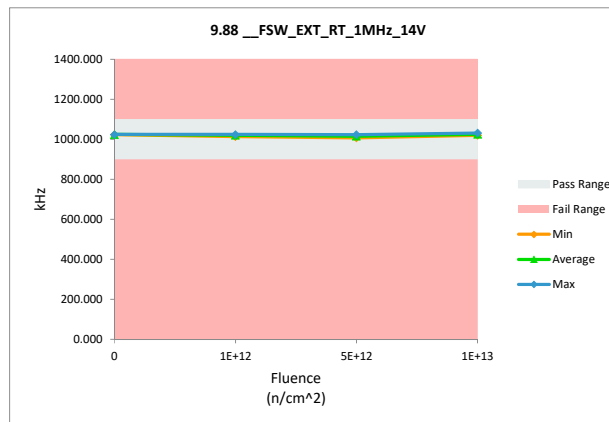
| 9.88_FSW_EXT_RT_1MHz_14V | |
|--------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | kHz |
| Max Limit | 1100 |
| Min Limit | 900 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|----------|----------|--------|
| 0 | 68 | 1022.593 | 1023.338 | 0.745 |
| 1E+12 | 45 | 1020.872 | 1021.530 | 0.658 |
| 1E+12 | 46 | 1012.541 | 1013.219 | 0.678 |
| 1E+12 | 54 | 1022.817 | 1023.451 | 0.634 |
| 5E+12 | 57 | 1015.286 | 1015.752 | 0.466 |
| 5E+12 | 58 | 1007.685 | 1007.654 | -0.031 |
| 5E+12 | 60 | 1022.151 | 1022.633 | 0.482 |
| 1E+13 | 62 | 1025.596 | 1025.911 | 0.315 |
| 1E+13 | 65 | 1029.934 | 1030.691 | 0.757 |
| 1E+13 | 66 | 1019.505 | 1019.562 | 0.057 |
| Max | | 1029.934 | 1030.691 | 0.757 |
| Average | | 1019.898 | 1020.374 | 0.476 |
| Min | | 1007.685 | 1007.654 | -0.031 |
| Std Dev | | 6.495 | 6.640 | 0.281 |



| 9.88_FSW_EXT_RT_1MHz_14V | |
|--------------------------|----------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1100 kHz |
| Min Limit | 900 kHz |

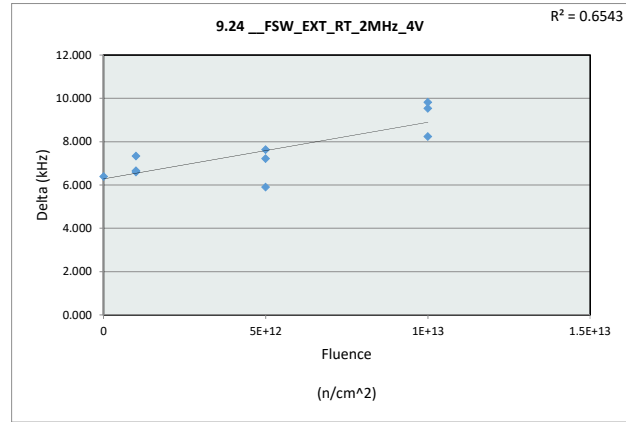
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|----------|----------|----------|----------|
| LL | 900.000 | 900.000 | 900.000 | 900.000 |
| Min | 1023.338 | 1013.219 | 1007.654 | 1019.562 |
| Average | 1023.338 | 1019.400 | 1015.346 | 1025.388 |
| Max | 1023.338 | 1023.451 | 1022.633 | 1030.691 |
| UL | 1100.000 | 1100.000 | 1100.000 | 1100.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

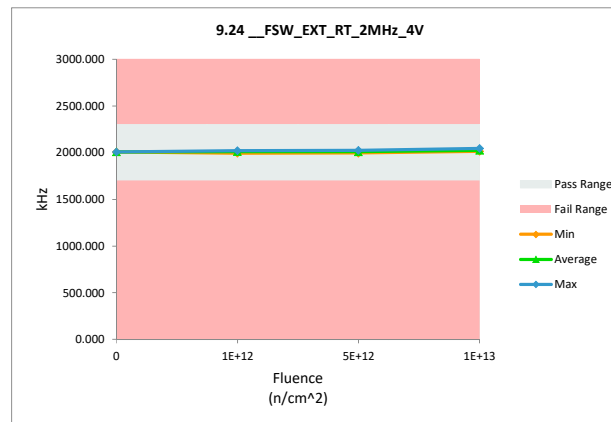
| 9.24 __FSW_EXT_RT_2MHz_4V | |
|---------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | kHz |
| Max Limit | 2300 |
| Min Limit | 1700 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|----------|----------|-------|
| 0 | 68 | 2000.688 | 2007.085 | 6.397 |
| 1E+12 | 45 | 2012.600 | 2019.204 | 6.604 |
| 1E+12 | 46 | 1986.035 | 1992.694 | 6.659 |
| 1E+12 | 54 | 2012.686 | 2020.032 | 7.346 |
| 5E+12 | 57 | 1988.454 | 1994.357 | 5.903 |
| 5E+12 | 58 | 1998.075 | 2005.703 | 7.628 |
| 5E+12 | 60 | 2016.046 | 2023.261 | 7.215 |
| 1E+13 | 62 | 2035.905 | 2045.443 | 9.538 |
| 1E+13 | 65 | 2009.291 | 2017.534 | 8.243 |
| 1E+13 | 66 | 2006.162 | 2015.978 | 9.816 |
| Max | | 2035.905 | 2045.443 | 9.816 |
| Average | | 2006.594 | 2014.129 | 7.535 |
| Min | | 1986.035 | 1992.694 | 5.903 |
| Std Dev | | 14.485 | 15.314 | 1.310 |



| 9.24 __FSW_EXT_RT_2MHz_4V | |
|---------------------------|----------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 2300 kHz |
| Min Limit | 1700 kHz |

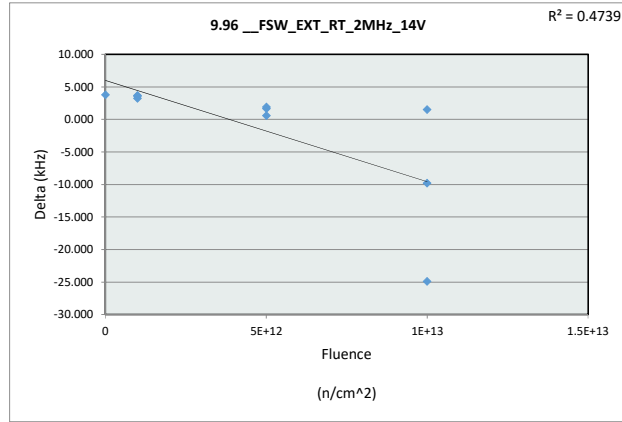
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|----------|----------|----------|----------|
| LL | 1700.000 | 1700.000 | 1700.000 | 1700.000 |
| Min | 2007.085 | 1992.694 | 1994.357 | 2015.978 |
| Average | 2007.085 | 2010.643 | 2007.774 | 2026.318 |
| Max | 2007.085 | 2020.032 | 2023.261 | 2045.443 |
| UL | 2300.000 | 2300.000 | 2300.000 | 2300.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

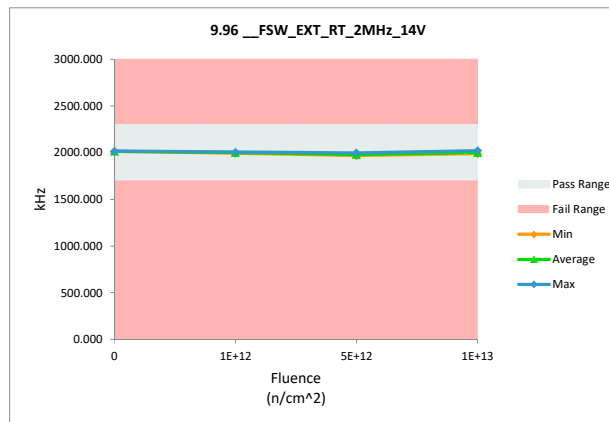
| 9.96_FSW_EXT_RT_2MHz_14V | |
|--------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | kHz |
| Max Limit | 2300 |
| Min Limit | 1700 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|----------|----------|---------|
| 0 | 68 | 2011.956 | 2015.736 | 3.780 |
| 1E+12 | 45 | 1988.424 | 1991.990 | 3.566 |
| 1E+12 | 46 | 2002.459 | 2005.708 | 3.249 |
| 1E+12 | 54 | 1999.992 | 2003.678 | 3.686 |
| 5E+12 | 57 | 1997.892 | 1998.453 | 0.561 |
| 5E+12 | 58 | 1966.345 | 1968.249 | 1.904 |
| 5E+12 | 60 | 1973.216 | 1974.878 | 1.662 |
| 1E+13 | 62 | 1987.314 | 1988.827 | 1.513 |
| 1E+13 | 65 | 2032.541 | 2022.764 | -9.777 |
| 1E+13 | 66 | 2013.821 | 1988.911 | -24.910 |
| Max | | 2032.541 | 2022.764 | 3.780 |
| Average | | 1997.396 | 1995.919 | -1.477 |
| Min | | 1966.345 | 1968.249 | -24.910 |
| Std Dev | | 19.665 | 16.993 | 9.156 |



| 9.96_FSW_EXT_RT_2MHz_14V | |
|--------------------------|----------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 2300 kHz |
| Min Limit | 1700 kHz |

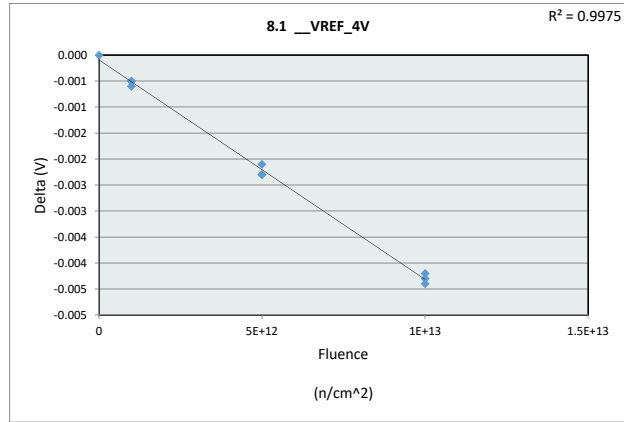
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|----------|----------|----------|----------|
| LL | 1700.000 | 1700.000 | 1700.000 | 1700.000 |
| Min | 2015.736 | 1991.990 | 1968.249 | 1988.827 |
| Average | 2015.736 | 2000.459 | 1980.527 | 2000.167 |
| Max | 2015.736 | 2005.708 | 1998.453 | 2022.764 |
| UL | 2300.000 | 2300.000 | 2300.000 | 2300.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

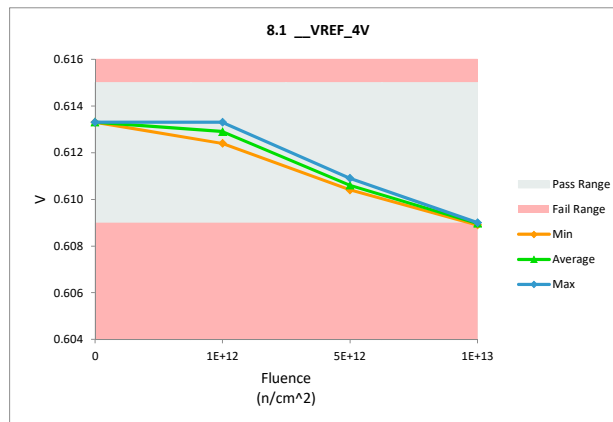
| 8.1 __VREF_4V | | |
|---------------|-------|-------|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | V | V |
| Max Limit | 0.615 | 0.615 |
| Min Limit | 0.609 | 0.609 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.613 | 0.613 | 0.000 |
| 1E+12 | 45 | 0.614 | 0.613 | -0.001 |
| 1E+12 | 46 | 0.613 | 0.613 | -0.001 |
| 1E+12 | 54 | 0.613 | 0.612 | -0.001 |
| 5E+12 | 57 | 0.613 | 0.611 | -0.002 |
| 5E+12 | 58 | 0.613 | 0.610 | -0.002 |
| 5E+12 | 60 | 0.613 | 0.610 | -0.002 |
| 1E+13 | 62 | 0.613 | 0.609 | -0.004 |
| 1E+13 | 65 | 0.613 | 0.609 | -0.004 |
| 1E+13 | 66 | 0.613 | 0.609 | -0.004 |
| Max | | 0.614 | 0.613 | 0.000 |
| Average | | 0.613 | 0.611 | -0.002 |
| Min | | 0.613 | 0.609 | -0.004 |
| Std Dev | | 0.000 | 0.002 | 0.002 |



| 8.1 __VREF_4V | | |
|---------------|-------|---|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 0.615 | V |
| Min Limit | 0.609 | V |

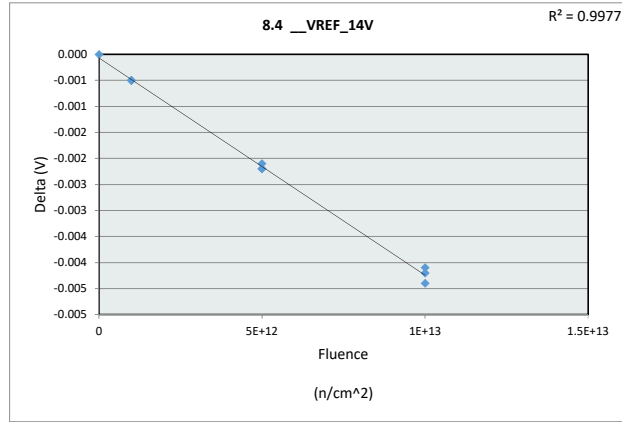
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 0.609 | 0.609 | 0.609 | 0.609 |
| Min | 0.613 | 0.612 | 0.610 | 0.609 |
| Average | 0.613 | 0.613 | 0.611 | 0.609 |
| Max | 0.613 | 0.613 | 0.611 | 0.609 |
| UL | 0.615 | 0.615 | 0.615 | 0.615 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

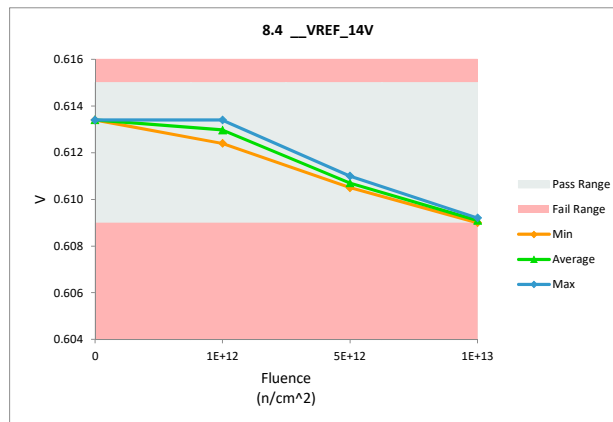
| 8.4 __VREF_14V | | |
|----------------|-------|-------|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | V | V |
| Max Limit | 0.615 | 0.615 |
| Min Limit | 0.609 | 0.609 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.613 | 0.613 | 0.000 |
| 1E+12 | 45 | 0.614 | 0.613 | -0.001 |
| 1E+12 | 46 | 0.614 | 0.613 | -0.001 |
| 1E+12 | 54 | 0.613 | 0.612 | -0.001 |
| 5E+12 | 57 | 0.613 | 0.611 | -0.002 |
| 5E+12 | 58 | 0.613 | 0.610 | -0.002 |
| 5E+12 | 60 | 0.613 | 0.611 | -0.002 |
| 1E+13 | 62 | 0.613 | 0.609 | -0.004 |
| 1E+13 | 65 | 0.613 | 0.609 | -0.004 |
| 1E+13 | 66 | 0.613 | 0.609 | -0.004 |
| Max | | 0.614 | 0.613 | 0.000 |
| Average | | 0.613 | 0.611 | -0.002 |
| Min | | 0.613 | 0.609 | -0.004 |
| Std Dev | | 0.000 | 0.002 | 0.002 |



| 8.4 __VREF_14V | | |
|----------------|-------|---|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 0.615 | V |
| Min Limit | 0.609 | V |

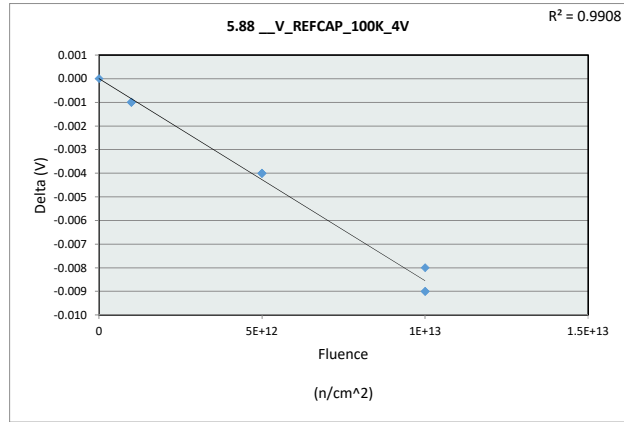
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|-------|-------|-------|-------|
| LL | 0.609 | 0.609 | 0.609 | 0.609 |
| Min | 0.613 | 0.612 | 0.611 | 0.609 |
| Average | 0.613 | 0.613 | 0.611 | 0.609 |
| Max | 0.613 | 0.613 | 0.611 | 0.609 |
| UL | 0.615 | 0.615 | 0.615 | 0.615 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

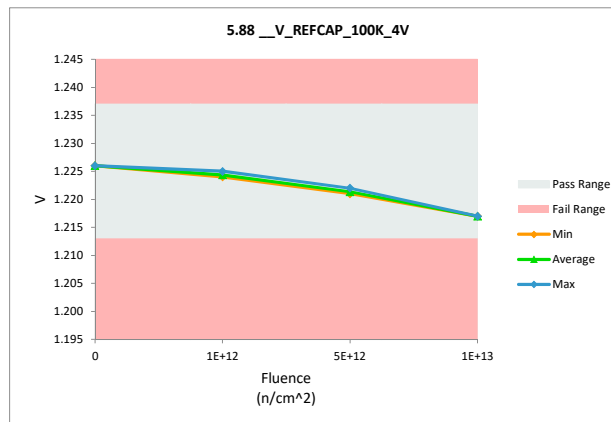
| 5.88 __V_REFCAP_100K_4V | |
|-------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.226 | 1.226 | 0.000 |
| 1E+12 | 45 | 1.226 | 1.225 | -0.001 |
| 1E+12 | 46 | 1.225 | 1.224 | -0.001 |
| 1E+12 | 54 | 1.225 | 1.224 | -0.001 |
| 5E+12 | 57 | 1.225 | 1.221 | -0.004 |
| 5E+12 | 58 | 1.226 | 1.222 | -0.004 |
| 5E+12 | 60 | 1.225 | 1.221 | -0.004 |
| 1E+13 | 62 | 1.226 | 1.217 | -0.009 |
| 1E+13 | 65 | 1.226 | 1.217 | -0.009 |
| 1E+13 | 66 | 1.225 | 1.217 | -0.008 |
| Max | | 1.226 | 1.226 | 0.000 |
| Average | | 1.225 | 1.221 | -0.004 |
| Min | | 1.225 | 1.217 | -0.009 |
| Std Dev | | 0.001 | 0.003 | 0.003 |



| 5.88 __V_REFCAP_100K_4V | |
|-------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

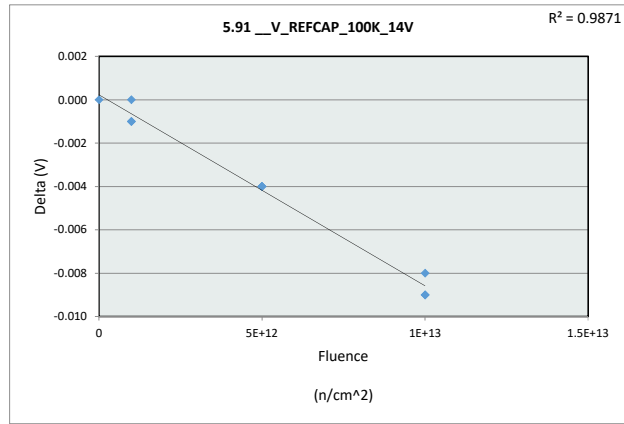
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.226 | 1.224 | 1.221 | 1.217 |
| Average | 1.226 | 1.224 | 1.221 | 1.217 |
| Max | 1.226 | 1.225 | 1.222 | 1.217 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

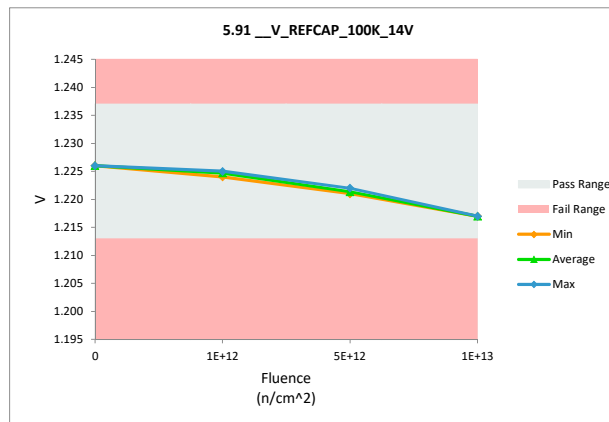
| 5.91 __V_REFCAP_100K_14V | |
|--------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.226 | 1.226 | 0.000 |
| 1E+12 | 45 | 1.226 | 1.225 | -0.001 |
| 1E+12 | 46 | 1.225 | 1.225 | 0.000 |
| 1E+12 | 54 | 1.225 | 1.224 | -0.001 |
| 5E+12 | 57 | 1.225 | 1.221 | -0.004 |
| 5E+12 | 58 | 1.226 | 1.222 | -0.004 |
| 5E+12 | 60 | 1.225 | 1.221 | -0.004 |
| 1E+13 | 62 | 1.226 | 1.217 | -0.009 |
| 1E+13 | 65 | 1.226 | 1.217 | -0.009 |
| 1E+13 | 66 | 1.225 | 1.217 | -0.008 |
| Max | | 1.226 | 1.226 | 0.000 |
| Average | | 1.225 | 1.221 | -0.004 |
| Min | | 1.225 | 1.217 | -0.009 |
| Std Dev | | 0.001 | 0.004 | 0.004 |



| 5.91 __V_REFCAP_100K_14V | |
|--------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

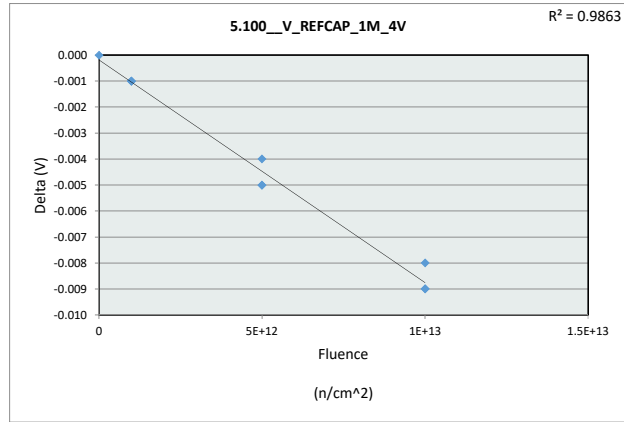
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.226 | 1.224 | 1.221 | 1.217 |
| Average | 1.226 | 1.225 | 1.221 | 1.217 |
| Max | 1.226 | 1.225 | 1.222 | 1.217 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

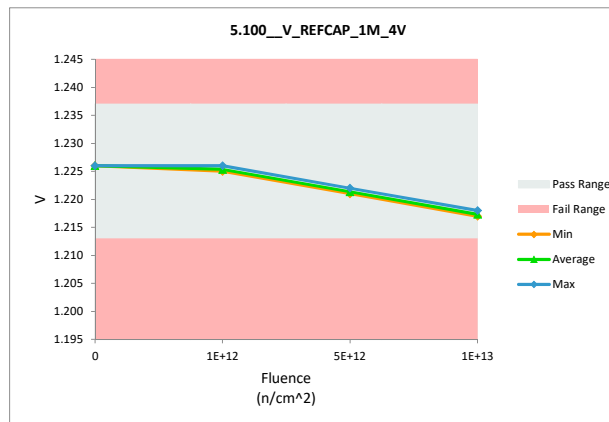
| 5.100_V_REFCAP_1M_4V | |
|----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.226 | 1.226 | 0.000 |
| 1E+12 | 45 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 46 | 1.226 | 1.225 | -0.001 |
| 1E+12 | 54 | 1.226 | 1.225 | -0.001 |
| 5E+12 | 57 | 1.226 | 1.221 | -0.005 |
| 5E+12 | 58 | 1.226 | 1.222 | -0.004 |
| 5E+12 | 60 | 1.226 | 1.221 | -0.005 |
| 1E+13 | 62 | 1.226 | 1.217 | -0.009 |
| 1E+13 | 65 | 1.226 | 1.218 | -0.008 |
| 1E+13 | 66 | 1.226 | 1.217 | -0.009 |
| Max | | 1.227 | 1.226 | 0.000 |
| Average | | 1.226 | 1.222 | -0.004 |
| Min | | 1.226 | 1.217 | -0.009 |
| Std Dev | | 0.000 | 0.004 | 0.003 |



| 5.100_V_REFCAP_1M_4V | |
|----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

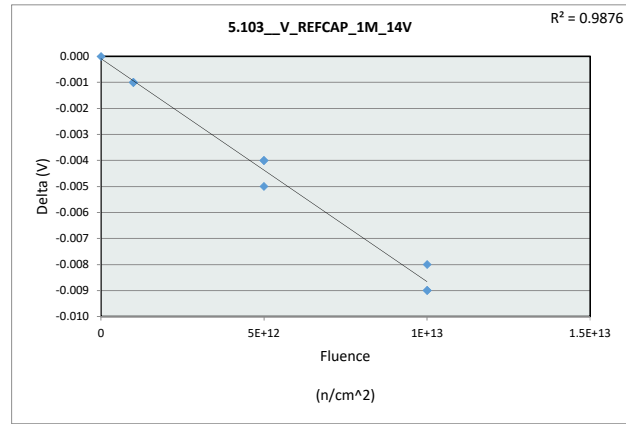
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.226 | 1.225 | 1.221 | 1.217 |
| Average | 1.226 | 1.225 | 1.221 | 1.217 |
| Max | 1.226 | 1.226 | 1.222 | 1.218 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

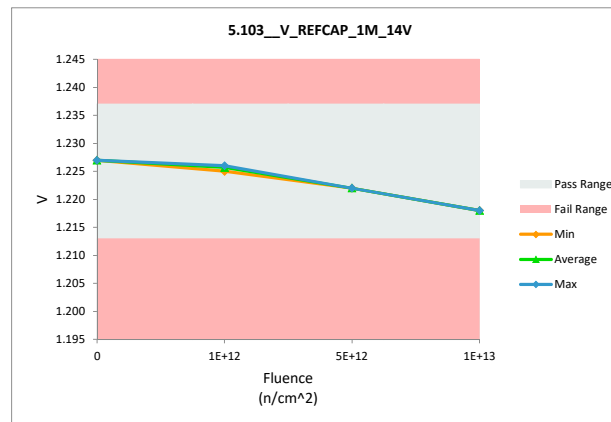
| 5.103_V_REFCAP_1M_14V | |
|-----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.227 | 1.227 | 0.000 |
| 1E+12 | 45 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 46 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 54 | 1.226 | 1.225 | -0.001 |
| 5E+12 | 57 | 1.226 | 1.222 | -0.004 |
| 5E+12 | 58 | 1.227 | 1.222 | -0.005 |
| 5E+12 | 60 | 1.226 | 1.222 | -0.004 |
| 1E+13 | 62 | 1.227 | 1.218 | -0.009 |
| 1E+13 | 65 | 1.227 | 1.218 | -0.009 |
| 1E+13 | 66 | 1.226 | 1.218 | -0.008 |
| Max | | 1.227 | 1.227 | 0.000 |
| Average | | 1.227 | 1.222 | -0.004 |
| Min | | 1.226 | 1.218 | -0.009 |
| Std Dev | | 0.001 | 0.004 | 0.003 |



| 5.103_V_REFCAP_1M_14V | |
|-----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

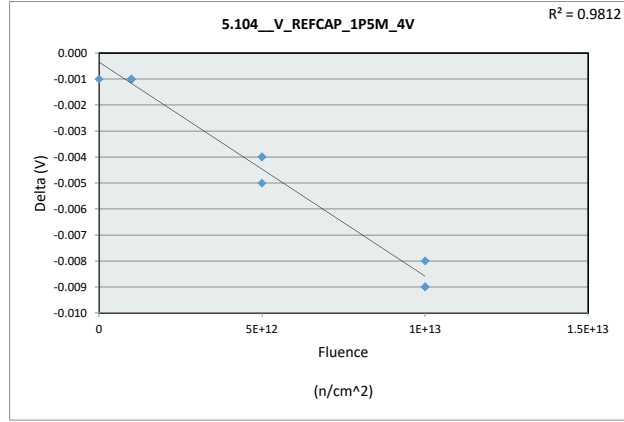
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.227 | 1.225 | 1.222 | 1.218 |
| Average | 1.227 | 1.226 | 1.222 | 1.218 |
| Max | 1.227 | 1.226 | 1.222 | 1.218 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

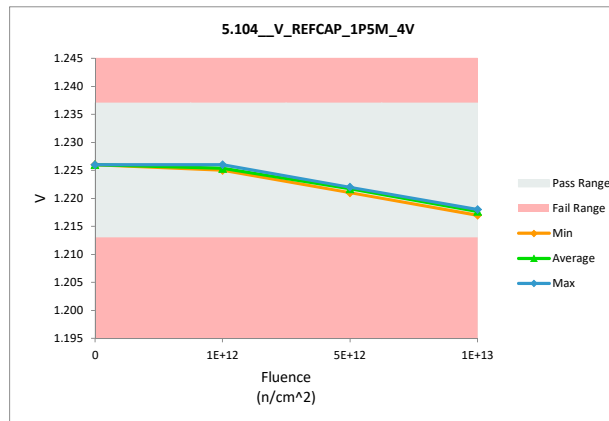
| 5.104_V_REFCAP_1P5M_4V | |
|------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 45 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 46 | 1.226 | 1.225 | -0.001 |
| 1E+12 | 54 | 1.226 | 1.225 | -0.001 |
| 5E+12 | 57 | 1.226 | 1.221 | -0.005 |
| 5E+12 | 58 | 1.226 | 1.222 | -0.004 |
| 5E+12 | 60 | 1.226 | 1.222 | -0.004 |
| 1E+13 | 62 | 1.226 | 1.217 | -0.009 |
| 1E+13 | 65 | 1.227 | 1.218 | -0.009 |
| 1E+13 | 66 | 1.226 | 1.218 | -0.008 |
| Max | | 1.227 | 1.226 | -0.001 |
| Average | | 1.226 | 1.222 | -0.004 |
| Min | | 1.226 | 1.217 | -0.009 |
| Std Dev | | 0.000 | 0.003 | 0.003 |



| 5.104_V_REFCAP_1P5M_4V | |
|------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

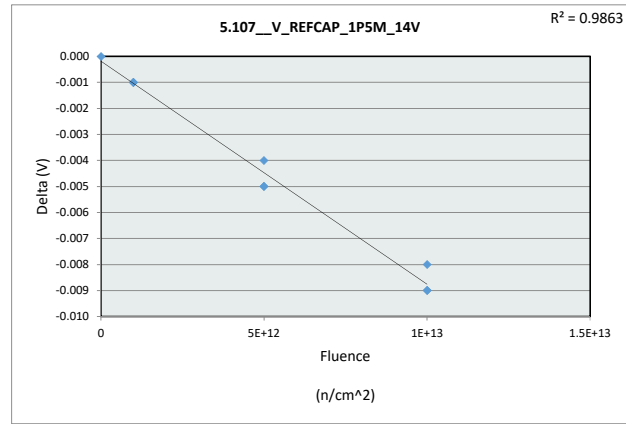
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.226 | 1.225 | 1.221 | 1.217 |
| Average | 1.226 | 1.225 | 1.222 | 1.218 |
| Max | 1.226 | 1.226 | 1.222 | 1.218 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

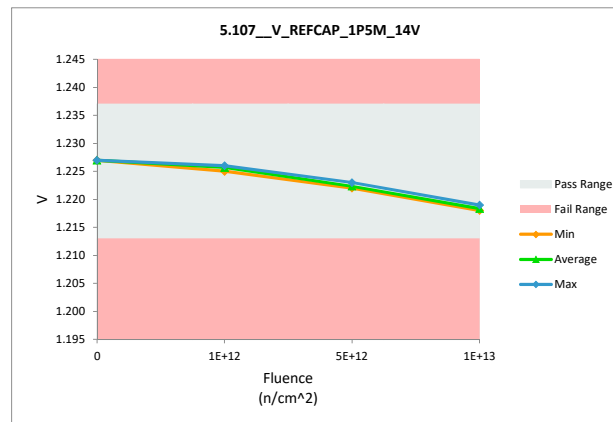
| 5.107_V_REFCAP_1P5M_14V | |
|-------------------------|-------------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 1.237 1.237 |
| Min Limit | 1.213 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.227 | 1.227 | 0.000 |
| 1E+12 | 45 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 46 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 54 | 1.226 | 1.225 | -0.001 |
| 5E+12 | 57 | 1.227 | 1.222 | -0.005 |
| 5E+12 | 58 | 1.227 | 1.223 | -0.004 |
| 5E+12 | 60 | 1.227 | 1.222 | -0.005 |
| 1E+13 | 62 | 1.227 | 1.218 | -0.009 |
| 1E+13 | 65 | 1.227 | 1.219 | -0.008 |
| 1E+13 | 66 | 1.227 | 1.218 | -0.009 |
| Max | | 1.227 | 1.227 | 0.000 |
| Average | | 1.227 | 1.223 | -0.004 |
| Min | | 1.226 | 1.218 | -0.009 |
| Std Dev | | 0.000 | 0.003 | 0.003 |



| 5.107_V_REFCAP_1P5M_14V | |
|-------------------------|---------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 V |
| Min Limit | 1.213 V |

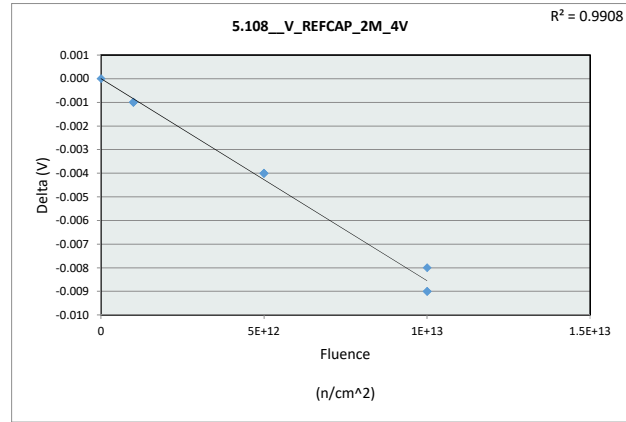
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.227 | 1.225 | 1.222 | 1.218 |
| Average | 1.227 | 1.226 | 1.222 | 1.218 |
| Max | 1.227 | 1.226 | 1.223 | 1.219 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

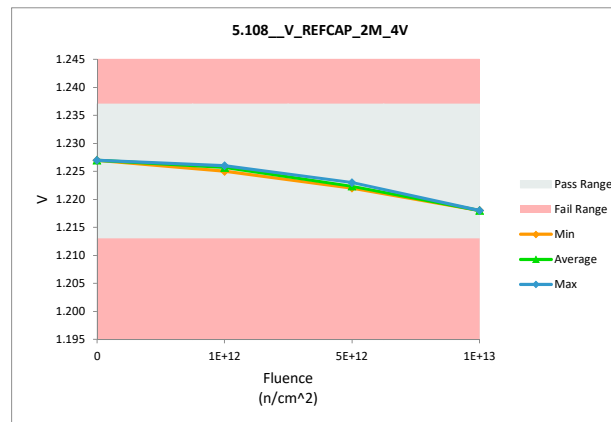
| 5.108_V_REFCAP_2M_4V | |
|----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.227 | 1.227 | 0.000 |
| 1E+12 | 45 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 46 | 1.227 | 1.226 | -0.001 |
| 1E+12 | 54 | 1.226 | 1.225 | -0.001 |
| 5E+12 | 57 | 1.226 | 1.222 | -0.004 |
| 5E+12 | 58 | 1.227 | 1.223 | -0.004 |
| 5E+12 | 60 | 1.226 | 1.222 | -0.004 |
| 1E+13 | 62 | 1.227 | 1.218 | -0.009 |
| 1E+13 | 65 | 1.227 | 1.218 | -0.009 |
| 1E+13 | 66 | 1.226 | 1.218 | -0.008 |
| Max | | 1.227 | 1.227 | 0.000 |
| Average | | 1.227 | 1.223 | -0.004 |
| Min | | 1.226 | 1.218 | -0.009 |
| Std Dev | | 0.001 | 0.004 | 0.003 |



| 5.108_V_REFCAP_2M_4V | |
|----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

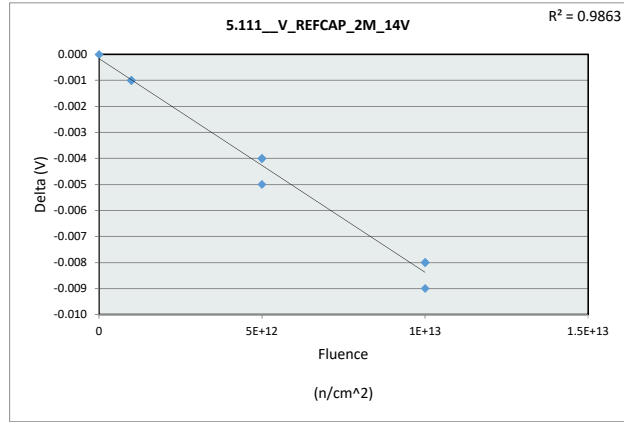
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.227 | 1.225 | 1.222 | 1.218 |
| Average | 1.227 | 1.226 | 1.223 | 1.218 |
| Max | 1.227 | 1.226 | 1.223 | 1.218 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

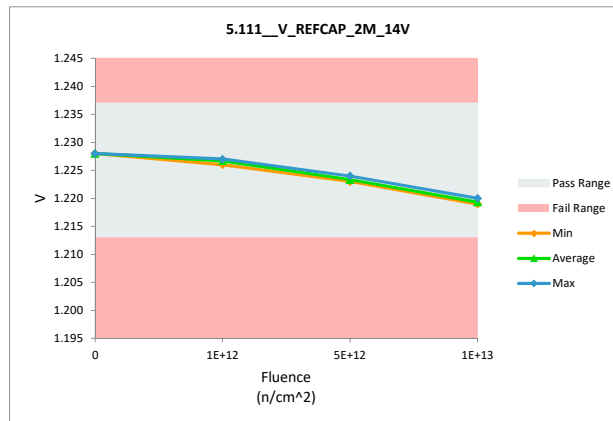
| 5.111_V_REFCAP_2M_14V | |
|-----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.228 | 1.228 | 0.000 |
| 1E+12 | 45 | 1.228 | 1.227 | -0.001 |
| 1E+12 | 46 | 1.228 | 1.227 | -0.001 |
| 1E+12 | 54 | 1.227 | 1.226 | -0.001 |
| 5E+12 | 57 | 1.228 | 1.223 | -0.005 |
| 5E+12 | 58 | 1.228 | 1.224 | -0.004 |
| 5E+12 | 60 | 1.227 | 1.223 | -0.004 |
| 1E+13 | 62 | 1.228 | 1.219 | -0.009 |
| 1E+13 | 65 | 1.228 | 1.220 | -0.008 |
| 1E+13 | 66 | 1.227 | 1.219 | -0.008 |
| Max | | 1.228 | 1.228 | 0.000 |
| Average | | 1.228 | 1.224 | -0.004 |
| Min | | 1.227 | 1.219 | -0.009 |
| Std Dev | | 0.000 | 0.003 | 0.003 |



| 5.111_V_REFCAP_2M_14V | |
|-----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.237 |
| Min Limit | 1.213 |

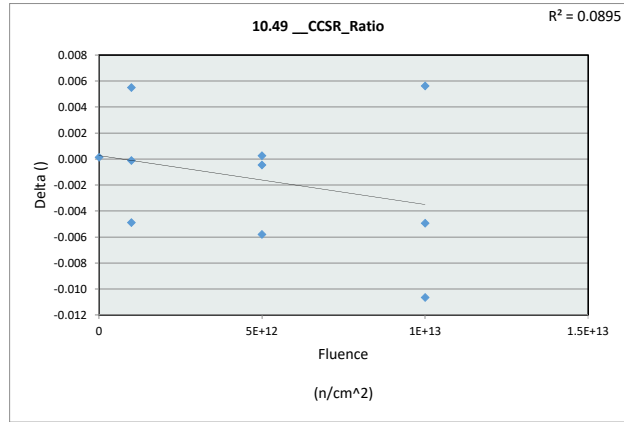
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 1.213 | 1.213 | 1.213 | 1.213 |
| Min | 1.228 | 1.226 | 1.223 | 1.219 |
| Average | 1.228 | 1.227 | 1.223 | 1.219 |
| Max | 1.228 | 1.227 | 1.224 | 1.220 |
| UL | 1.237 | 1.237 | 1.237 | 1.237 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

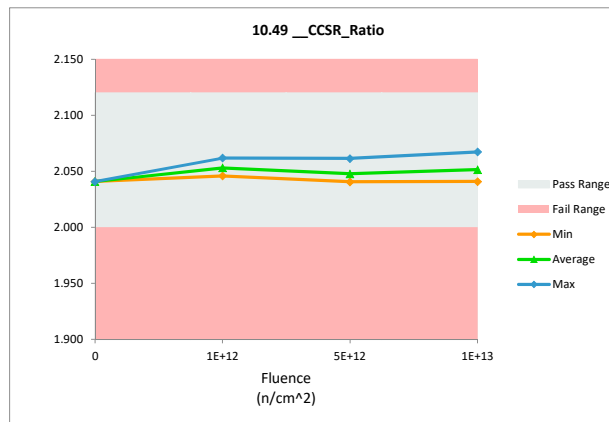
| 10.49 __ CCSR_Ratio | | |
|---------------------|------|------|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | | |
| Max Limit | 2.12 | 2.12 |
| Min Limit | 2 | 2 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 2.041 | 2.041 | 0.000 |
| 1E+12 | 45 | 2.067 | 2.062 | -0.005 |
| 1E+12 | 46 | 2.046 | 2.051 | 0.006 |
| 1E+12 | 54 | 2.046 | 2.046 | 0.000 |
| 5E+12 | 57 | 2.041 | 2.041 | 0.000 |
| 5E+12 | 58 | 2.067 | 2.061 | -0.006 |
| 5E+12 | 60 | 2.041 | 2.041 | 0.000 |
| 1E+13 | 62 | 2.051 | 2.046 | -0.005 |
| 1E+13 | 65 | 2.052 | 2.041 | -0.011 |
| 1E+13 | 66 | 2.062 | 2.067 | 0.006 |
| Max | | 2.067 | 2.067 | 0.006 |
| Average | | 2.051 | 2.050 | -0.002 |
| Min | | 2.041 | 2.041 | -0.011 |
| Std Dev | | 0.010 | 0.010 | 0.005 |



| 10.49 __ CCSR_Ratio | |
|---------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 2.12 |
| Min Limit | 2 |

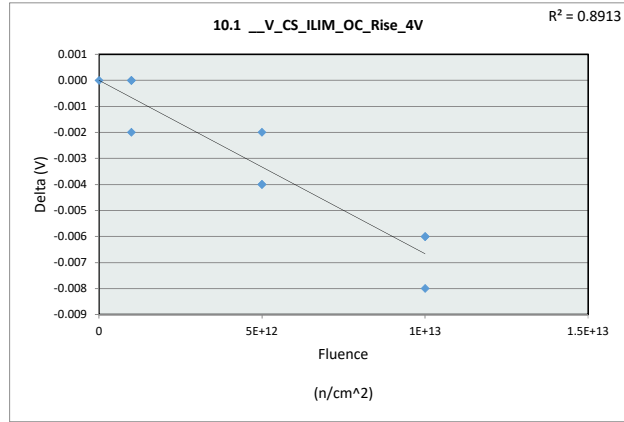
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 2.000 | 2.000 | 2.000 | 2.000 |
| Min | 2.041 | 2.046 | 2.041 | 2.041 |
| Average | 2.041 | 2.053 | 2.048 | 2.051 |
| Max | 2.041 | 2.062 | 2.061 | 2.067 |
| UL | 2.120 | 2.120 | 2.120 | 2.120 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

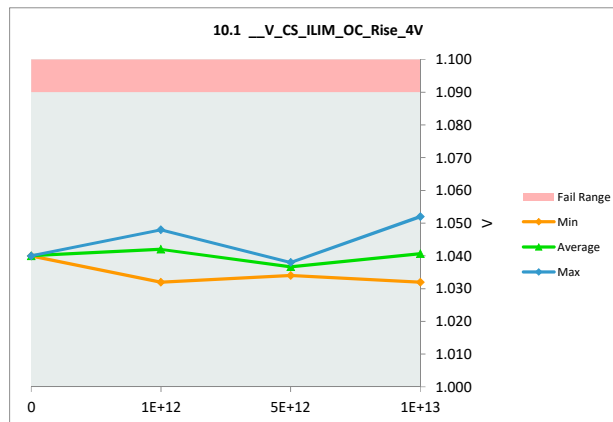
| 10.1 __V_CS_ILIM_OC_Rise_4V | |
|-----------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V |
| Max Limit | 1.09 |
| Min Limit | 1.09 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.040 | 1.040 | 0.000 |
| 1E+12 | 45 | 1.032 | 1.032 | 0.000 |
| 1E+12 | 46 | 1.048 | 1.046 | -0.002 |
| 1E+12 | 54 | 1.048 | 1.048 | 0.000 |
| 5E+12 | 57 | 1.038 | 1.034 | -0.004 |
| 5E+12 | 58 | 1.040 | 1.038 | -0.002 |
| 5E+12 | 60 | 1.042 | 1.038 | -0.004 |
| 1E+13 | 62 | 1.058 | 1.052 | -0.006 |
| 1E+13 | 65 | 1.040 | 1.032 | -0.008 |
| 1E+13 | 66 | 1.044 | 1.038 | -0.006 |
| Max | | 1.058 | 1.052 | 0.000 |
| Average | | 1.043 | 1.040 | -0.003 |
| Min | | 1.032 | 1.032 | -0.008 |
| Std Dev | | 0.007 | 0.007 | 0.003 |



| 10.1 __V_CS_ILIM_OC_Rise_4V | |
|-----------------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.09 |
| Min Limit | V |

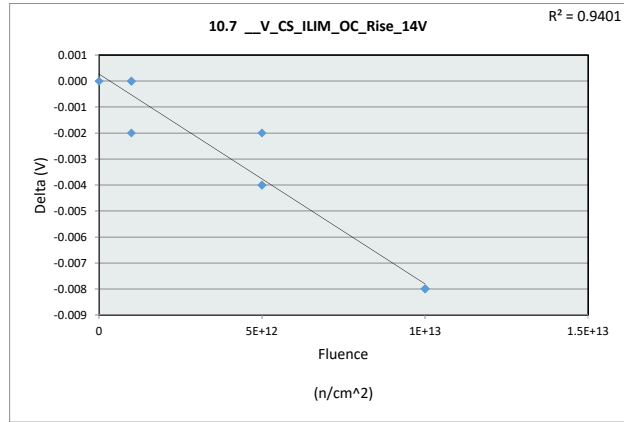
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 1.040 | 1.032 | 1.034 | 1.032 |
| Average | 1.040 | 1.042 | 1.037 | 1.041 |
| Max | 1.040 | 1.048 | 1.038 | 1.052 |
| UL | 1.090 | 1.090 | 1.090 | 1.090 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

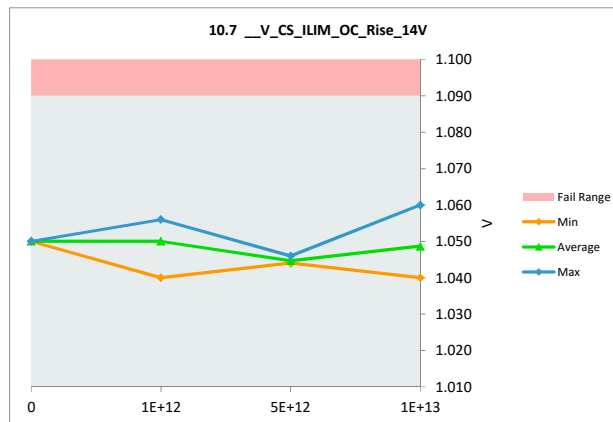
| 10.7 __V_CS_ILIM_OC_Rise_14V | |
|------------------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 1.09 1.09 |
| Min Limit | |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 1.050 | 1.050 | 0.000 |
| 1E+12 | 45 | 1.040 | 1.040 | 0.000 |
| 1E+12 | 46 | 1.056 | 1.056 | 0.000 |
| 1E+12 | 54 | 1.056 | 1.054 | -0.002 |
| 5E+12 | 57 | 1.048 | 1.044 | -0.004 |
| 5E+12 | 58 | 1.046 | 1.044 | -0.002 |
| 5E+12 | 60 | 1.050 | 1.046 | -0.004 |
| 1E+13 | 62 | 1.068 | 1.060 | -0.008 |
| 1E+13 | 65 | 1.048 | 1.040 | -0.008 |
| 1E+13 | 66 | 1.054 | 1.046 | -0.008 |
| Max | | 1.068 | 1.060 | 0.000 |
| Average | | 1.052 | 1.048 | -0.004 |
| Min | | 1.040 | 1.040 | -0.008 |
| Std Dev | | 0.008 | 0.007 | 0.003 |



| 10.7 __V_CS_ILIM_OC_Rise | |
|--------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.09 V |
| Min Limit | V |

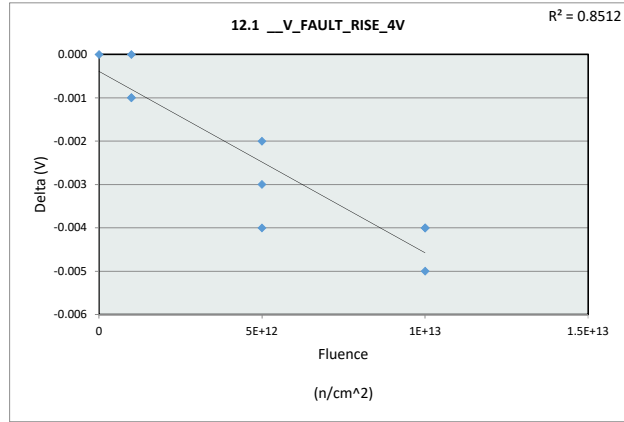
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | | | | |
| Min | 1.050 | 1.040 | 1.044 | 1.040 |
| Average | 1.050 | 1.050 | 1.045 | 1.049 |
| Max | 1.050 | 1.056 | 1.046 | 1.060 |
| UL | 1.090 | 1.090 | 1.090 | 1.090 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

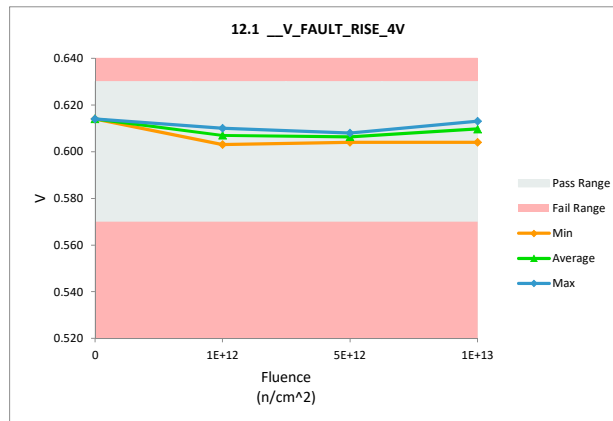
| 12.1 __V_FAULT_RISE_4V | |
|------------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 0.63 0.63 |
| Min Limit | 0.57 0.57 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.614 | 0.614 | 0.000 |
| 1E+12 | 45 | 0.609 | 0.608 | -0.001 |
| 1E+12 | 46 | 0.603 | 0.603 | 0.000 |
| 1E+12 | 54 | 0.611 | 0.610 | -0.001 |
| 5E+12 | 57 | 0.607 | 0.604 | -0.003 |
| 5E+12 | 58 | 0.611 | 0.607 | -0.004 |
| 5E+12 | 60 | 0.610 | 0.608 | -0.002 |
| 1E+13 | 62 | 0.618 | 0.613 | -0.005 |
| 1E+13 | 65 | 0.608 | 0.604 | -0.004 |
| 1E+13 | 66 | 0.616 | 0.612 | -0.004 |
| Max | | 0.618 | 0.614 | 0.000 |
| Average | | 0.611 | 0.608 | -0.002 |
| Min | | 0.603 | 0.603 | -0.005 |
| Std Dev | | 0.004 | 0.004 | 0.002 |



| 12.1 __V_FAULT_RISE_4V | |
|------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 0.63 V |
| Min Limit | 0.57 V |

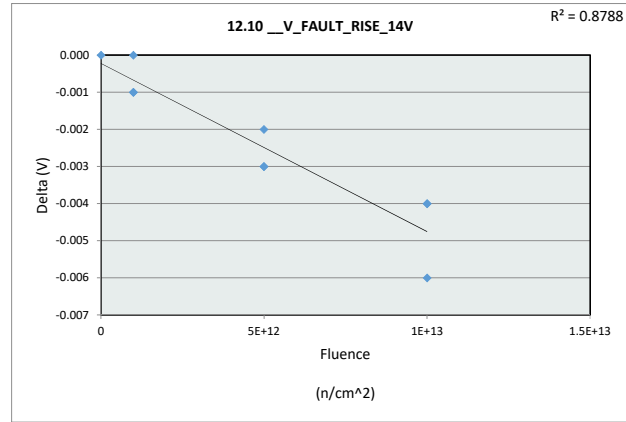
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 0.570 | 0.570 | 0.570 | 0.570 |
| Min | 0.614 | 0.603 | 0.604 | 0.604 |
| Average | 0.614 | 0.607 | 0.606 | 0.610 |
| Max | 0.614 | 0.610 | 0.608 | 0.613 |
| UL | 0.630 | 0.630 | 0.630 | 0.630 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

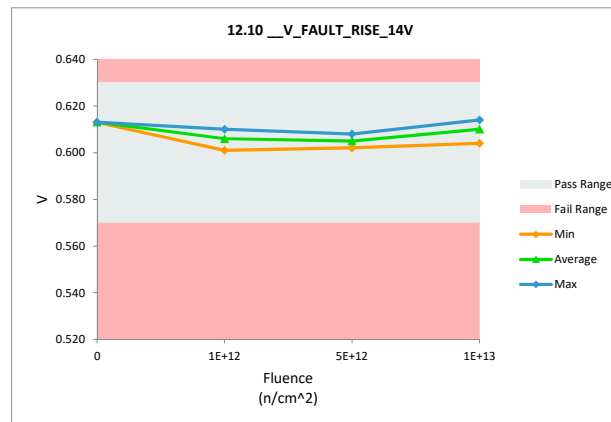
| 12.10 __V_FAULT_RISE_14V | |
|--------------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 0.63 0.63 |
| Min Limit | 0.57 0.57 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.613 | 0.613 | 0.000 |
| 1E+12 | 45 | 0.608 | 0.607 | -0.001 |
| 1E+12 | 46 | 0.601 | 0.601 | 0.000 |
| 1E+12 | 54 | 0.611 | 0.610 | -0.001 |
| 5E+12 | 57 | 0.605 | 0.602 | -0.003 |
| 5E+12 | 58 | 0.608 | 0.605 | -0.003 |
| 5E+12 | 60 | 0.610 | 0.608 | -0.002 |
| 1E+13 | 62 | 0.620 | 0.614 | -0.006 |
| 1E+13 | 65 | 0.608 | 0.604 | -0.004 |
| 1E+13 | 66 | 0.616 | 0.612 | -0.004 |
| Max | | 0.620 | 0.614 | 0.000 |
| Average | | 0.610 | 0.608 | -0.002 |
| Min | | 0.601 | 0.601 | -0.006 |
| Std Dev | | 0.005 | 0.005 | 0.002 |



| 12.10 __V_FAULT_RISE_14V | |
|--------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 0.63 V |
| Min Limit | 0.57 V |

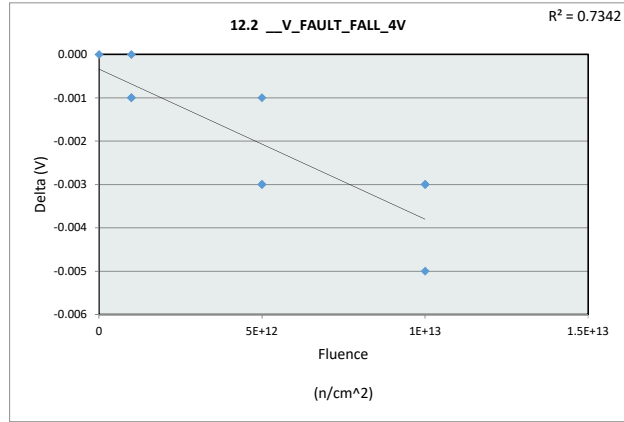
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 0.570 | 0.570 | 0.570 | 0.570 |
| Min | 0.613 | 0.601 | 0.602 | 0.604 |
| Average | 0.613 | 0.606 | 0.605 | 0.610 |
| Max | 0.613 | 0.610 | 0.608 | 0.614 |
| UL | 0.630 | 0.630 | 0.630 | 0.630 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

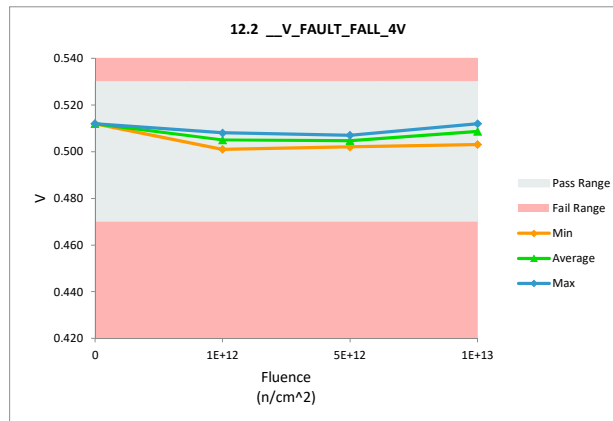
| 12.2 __V_FAULT_FALL_4V | |
|------------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 0.53 0.53 |
| Min Limit | 0.47 0.47 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.512 | 0.512 | 0.000 |
| 1E+12 | 45 | 0.506 | 0.506 | 0.000 |
| 1E+12 | 46 | 0.502 | 0.501 | -0.001 |
| 1E+12 | 54 | 0.509 | 0.508 | -0.001 |
| 5E+12 | 57 | 0.505 | 0.502 | -0.003 |
| 5E+12 | 58 | 0.508 | 0.505 | -0.003 |
| 5E+12 | 60 | 0.508 | 0.507 | -0.001 |
| 1E+13 | 62 | 0.517 | 0.512 | -0.005 |
| 1E+13 | 65 | 0.506 | 0.503 | -0.003 |
| 1E+13 | 66 | 0.514 | 0.511 | -0.003 |
| Max | | 0.517 | 0.512 | 0.000 |
| Average | | 0.509 | 0.507 | -0.002 |
| Min | | 0.502 | 0.501 | -0.005 |
| Std Dev | | 0.004 | 0.004 | 0.002 |



| 12.2 __V_FAULT_FALL_4V | |
|------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 0.53 V |
| Min Limit | 0.47 V |

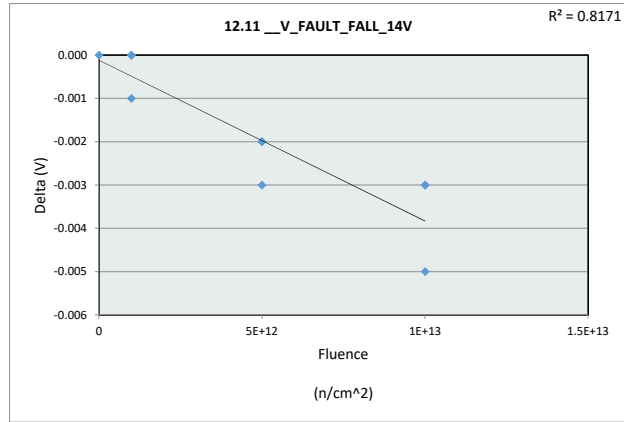
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|-------|-------|-------|-------|
| LL | 0.470 | 0.470 | 0.470 | 0.470 |
| Min | 0.512 | 0.501 | 0.502 | 0.503 |
| Average | 0.512 | 0.505 | 0.505 | 0.509 |
| Max | 0.512 | 0.508 | 0.507 | 0.512 |
| UL | 0.530 | 0.530 | 0.530 | 0.530 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

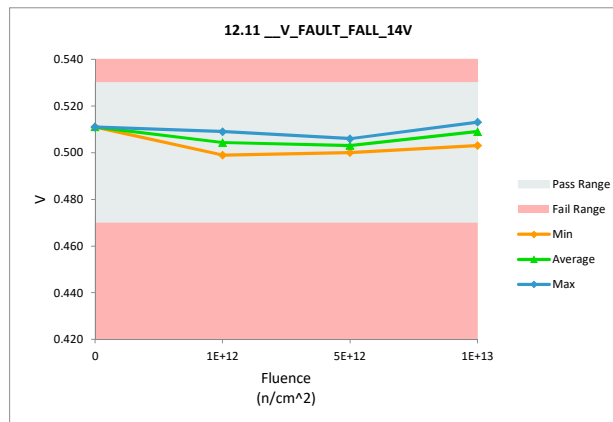
| 12.11 __ V_FAULT_FALL_14V | |
|---------------------------|-----------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | V V |
| Max Limit | 0.53 0.53 |
| Min Limit | 0.47 0.47 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 0.511 | 0.511 | 0.000 |
| 1E+12 | 45 | 0.506 | 0.505 | -0.001 |
| 1E+12 | 46 | 0.499 | 0.499 | 0.000 |
| 1E+12 | 54 | 0.509 | 0.509 | 0.000 |
| 5E+12 | 57 | 0.502 | 0.500 | -0.002 |
| 5E+12 | 58 | 0.506 | 0.503 | -0.003 |
| 5E+12 | 60 | 0.508 | 0.506 | -0.002 |
| 1E+13 | 62 | 0.518 | 0.513 | -0.005 |
| 1E+13 | 65 | 0.506 | 0.503 | -0.003 |
| 1E+13 | 66 | 0.514 | 0.511 | -0.003 |
| Max | | 0.518 | 0.513 | 0.000 |
| Average | | 0.508 | 0.506 | -0.002 |
| Min | | 0.499 | 0.499 | -0.005 |
| Std Dev | | 0.006 | 0.005 | 0.002 |



| 12.11 __ V_FAULT_FALL_14V | |
|---------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 0.53 V |
| Min Limit | 0.47 V |

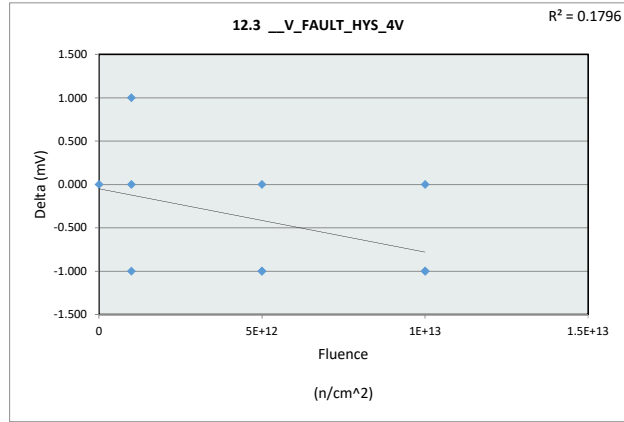
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|-------|-------|-------|-------|
| LL | 0.470 | 0.470 | 0.470 | 0.470 |
| Min | 0.511 | 0.499 | 0.500 | 0.503 |
| Average | 0.511 | 0.504 | 0.503 | 0.509 |
| Max | 0.511 | 0.509 | 0.506 | 0.513 |
| UL | 0.530 | 0.530 | 0.530 | 0.530 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

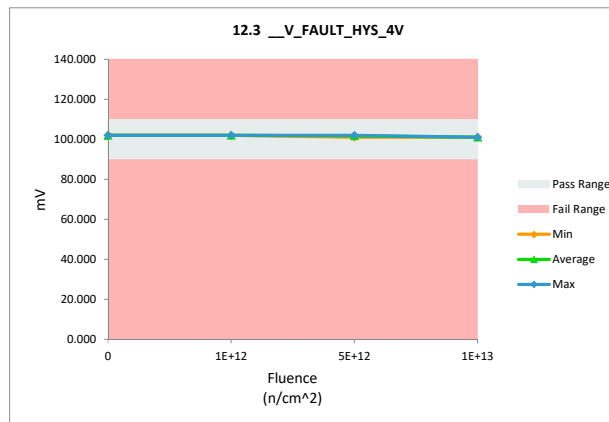
| 12.3 __V_FAULT_HYS_4V | |
|-----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 110 |
| Min Limit | 90 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 102.000 | 102.000 | 0.000 |
| 1E+12 | 45 | 103.000 | 102.000 | -1.000 |
| 1E+12 | 46 | 101.000 | 102.000 | 1.000 |
| 1E+12 | 54 | 102.000 | 102.000 | 0.000 |
| 5E+12 | 57 | 102.000 | 102.000 | 0.000 |
| 5E+12 | 58 | 103.000 | 102.000 | -1.000 |
| 5E+12 | 60 | 102.000 | 101.000 | -1.000 |
| 1E+13 | 62 | 101.000 | 101.000 | 0.000 |
| 1E+13 | 65 | 102.000 | 101.000 | -1.000 |
| 1E+13 | 66 | 102.000 | 101.000 | -1.000 |
| Max | | 103.000 | 102.000 | 1.000 |
| Average | | 102.000 | 101.600 | -0.400 |
| Min | | 101.000 | 101.000 | -1.000 |
| Std Dev | | 0.667 | 0.516 | 0.699 |



| 12.3 __V_FAULT_HYS_4V | |
|-----------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 mV |
| Min Limit | 90 mV |

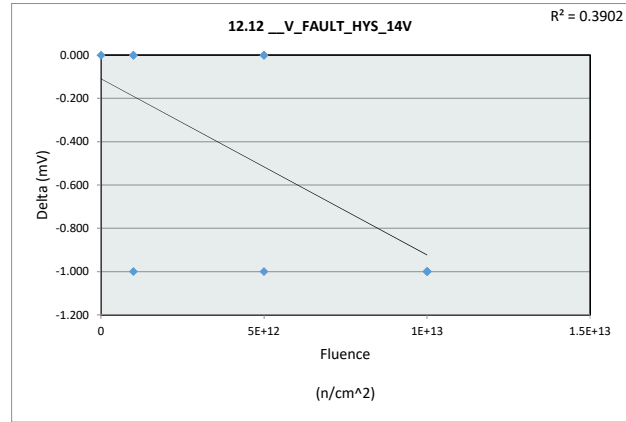
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 90.000 | 90.000 | 90.000 | 90.000 |
| Min | 102.000 | 102.000 | 101.000 | 101.000 |
| Average | 102.000 | 102.000 | 101.667 | 101.000 |
| Max | 102.000 | 102.000 | 102.000 | 101.000 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

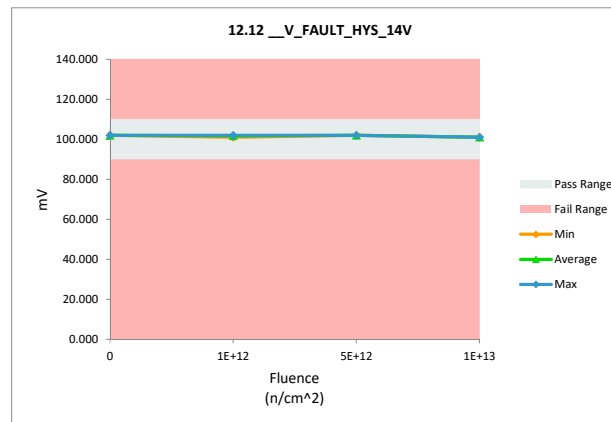
| 12.12 __V_FAULT_HYS_14V | |
|-------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | mV |
| Max Limit | 110 |
| Min Limit | 90 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 102.000 | 102.000 | 0.000 |
| 1E+12 | 45 | 102.000 | 102.000 | 0.000 |
| 1E+12 | 46 | 102.000 | 102.000 | 0.000 |
| 1E+12 | 54 | 102.000 | 101.000 | -1.000 |
| 5E+12 | 57 | 103.000 | 102.000 | -1.000 |
| 5E+12 | 58 | 102.000 | 102.000 | 0.000 |
| 5E+12 | 60 | 102.000 | 102.000 | 0.000 |
| 1E+13 | 62 | 102.000 | 101.000 | -1.000 |
| 1E+13 | 65 | 102.000 | 101.000 | -1.000 |
| 1E+13 | 66 | 102.000 | 101.000 | -1.000 |
| Max | | 103.000 | 102.000 | 0.000 |
| Average | | 102.100 | 101.600 | -0.500 |
| Min | | 102.000 | 101.000 | -1.000 |
| Std Dev | | 0.316 | 0.516 | 0.527 |



| 12.12 __V_FAULT_HYS_14V | |
|-------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 mV |
| Min Limit | 90 mV |

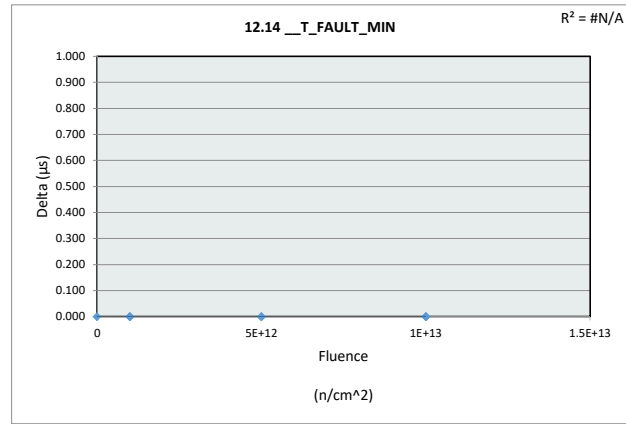
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 90.000 | 90.000 | 90.000 | 90.000 |
| Min | 102.000 | 101.000 | 102.000 | 101.000 |
| Average | 102.000 | 101.667 | 102.000 | 101.000 |
| Max | 102.000 | 102.000 | 102.000 | 101.000 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

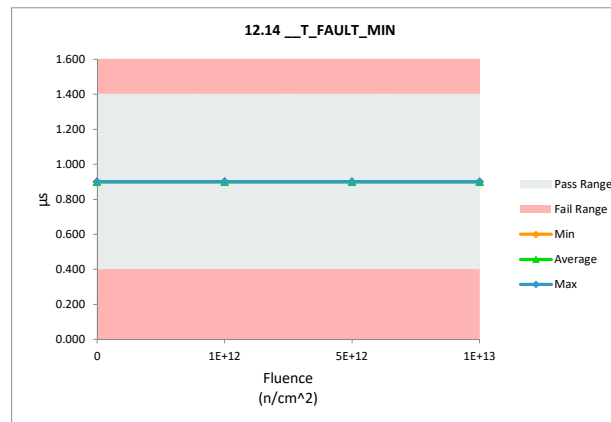
| 12.14 __T_FAULT_MIN | |
|---------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µs |
| Max Limit | 1.4 |
| Min Limit | 0.4 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|-------|
| 0 | 68 | 0.900 | 0.900 | 0.000 |
| 1E+12 | 45 | 0.900 | 0.900 | 0.000 |
| 1E+12 | 46 | 0.900 | 0.900 | 0.000 |
| 1E+12 | 54 | 0.900 | 0.900 | 0.000 |
| 5E+12 | 57 | 0.900 | 0.900 | 0.000 |
| 5E+12 | 58 | 0.900 | 0.900 | 0.000 |
| 5E+12 | 60 | 0.900 | 0.900 | 0.000 |
| 1E+13 | 62 | 0.900 | 0.900 | 0.000 |
| 1E+13 | 65 | 0.900 | 0.900 | 0.000 |
| 1E+13 | 66 | 0.900 | 0.900 | 0.000 |
| Max | | 0.900 | 0.900 | 0.000 |
| Average | | 0.900 | 0.900 | 0.000 |
| Min | | 0.900 | 0.900 | 0.000 |
| Std Dev | | 0.000 | 0.000 | 0.000 |



| 12.14 __T_FAULT_MIN | |
|---------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 1.4 µs |
| Min Limit | 0.4 µs |

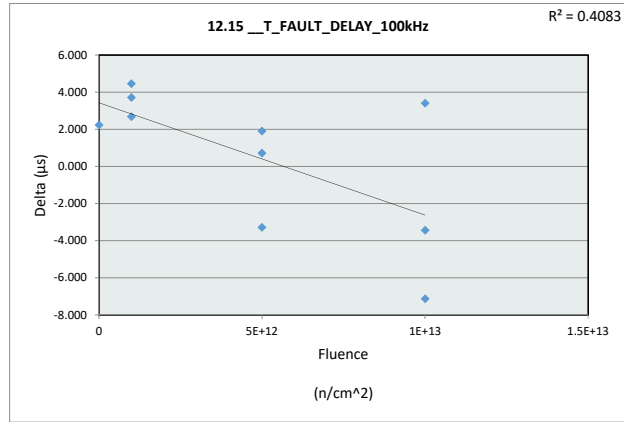
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|-------|-------|-------|-------|
| LL | 0.400 | 0.400 | 0.400 | 0.400 |
| Min | 0.900 | 0.900 | 0.900 | 0.900 |
| Average | 0.900 | 0.900 | 0.900 | 0.900 |
| Max | 0.900 | 0.900 | 0.900 | 0.900 |
| UL | 1.400 | 1.400 | 1.400 | 1.400 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

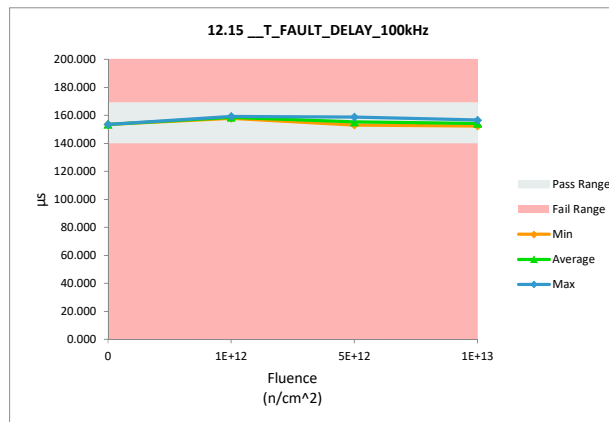
| 12.15 _T_FAULT_DELAY_100kHz | |
|-----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µs |
| Max Limit | 169 |
| Min Limit | 140 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 151.164 | 153.390 | 2.226 |
| 1E+12 | 45 | 156.456 | 159.139 | 2.683 |
| 1E+12 | 46 | 154.731 | 158.443 | 3.712 |
| 1E+12 | 54 | 153.340 | 157.790 | 4.450 |
| 5E+12 | 57 | 156.218 | 152.932 | -3.286 |
| 5E+12 | 58 | 151.957 | 153.865 | 1.908 |
| 5E+12 | 60 | 158.017 | 158.739 | 0.722 |
| 1E+13 | 62 | 157.081 | 153.647 | -3.434 |
| 1E+13 | 65 | 159.424 | 152.293 | -7.131 |
| 1E+13 | 66 | 153.111 | 156.518 | 3.407 |
| Max | | 159.424 | 159.139 | 4.450 |
| Average | | 155.150 | 155.676 | 0.526 |
| Min | | 151.164 | 152.293 | -7.131 |
| Std Dev | | 2.723 | 2.704 | 3.832 |



| 12.15 _T_FAULT_DELAY_100 | |
|--------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 169 µs |
| Min Limit | 140 µs |

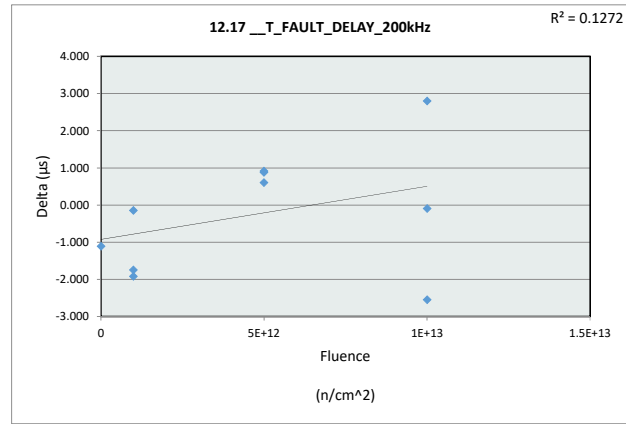
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 140.000 | 140.000 | 140.000 | 140.000 |
| Min | 153.390 | 157.790 | 152.932 | 152.293 |
| Average | 153.390 | 158.457 | 155.179 | 154.153 |
| Max | 153.390 | 159.139 | 158.739 | 156.518 |
| UL | 169.000 | 169.000 | 169.000 | 169.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

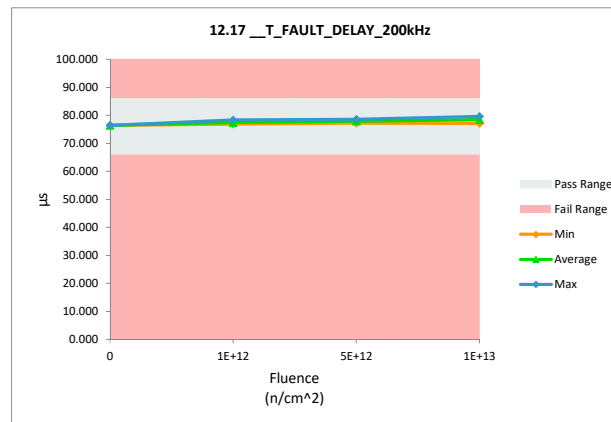
| 12.17 __T_FAULT_DELAY_200kHz | |
|------------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µs |
| Max Limit | 86 |
| Min Limit | 66 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 77.568 | 76.456 | -1.112 |
| 1E+12 | 45 | 78.598 | 76.855 | -1.743 |
| 1E+12 | 46 | 80.237 | 78.323 | -1.914 |
| 1E+12 | 54 | 76.950 | 76.809 | -0.141 |
| 5E+12 | 57 | 77.224 | 77.831 | 0.607 |
| 5E+12 | 58 | 77.669 | 78.546 | 0.877 |
| 5E+12 | 60 | 76.318 | 77.230 | 0.912 |
| 1E+13 | 62 | 75.799 | 78.599 | 2.800 |
| 1E+13 | 65 | 79.678 | 79.588 | -0.090 |
| 1E+13 | 66 | 79.624 | 77.077 | -2.547 |
| Max | | 80.237 | 79.588 | 2.800 |
| Average | | 77.967 | 77.731 | -0.235 |
| Min | | 75.799 | 76.456 | -2.547 |
| Std Dev | | 1.508 | 1.008 | 1.623 |



| 12.17 __T_FAULT_DELAY_200 | |
|---------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 86 µs |
| Min Limit | 66 µs |

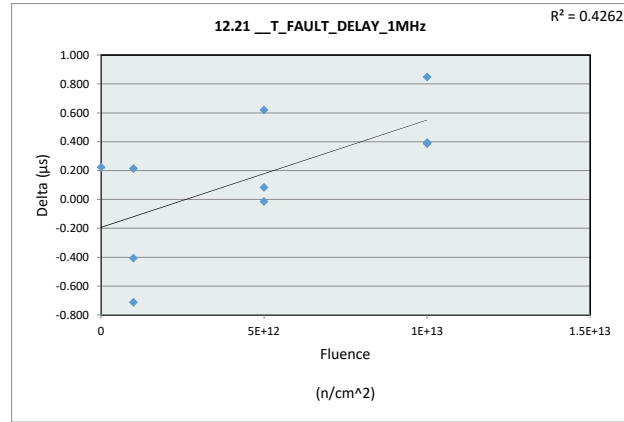
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | 66.000 | 66.000 | 66.000 | 66.000 |
| Min | 76.456 | 76.809 | 77.230 | 77.077 |
| Average | 76.456 | 77.329 | 77.869 | 78.421 |
| Max | 76.456 | 78.323 | 78.546 | 79.588 |
| UL | 86.000 | 86.000 | 86.000 | 86.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

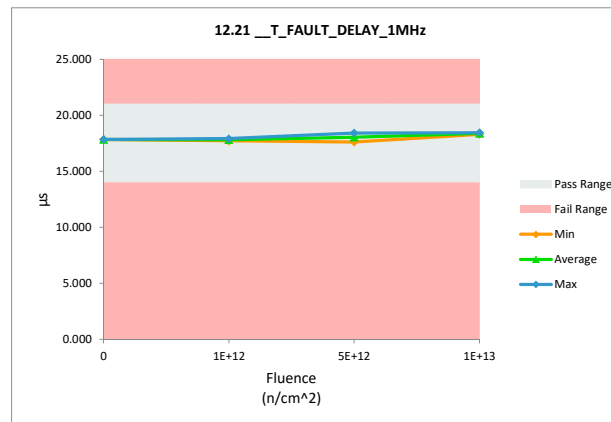
| 12.21 __T_FAULT_DELAY_1MHz | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µs |
| Max Limit | 21 |
| Min Limit | 14 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 17.615 | 17.838 | 0.223 |
| 1E+12 | 45 | 17.649 | 17.863 | 0.214 |
| 1E+12 | 46 | 18.319 | 17.913 | -0.406 |
| 1E+12 | 54 | 18.426 | 17.713 | -0.713 |
| 5E+12 | 57 | 17.482 | 18.101 | 0.619 |
| 5E+12 | 58 | 17.616 | 17.603 | -0.013 |
| 5E+12 | 60 | 18.328 | 18.411 | 0.083 |
| 1E+13 | 62 | 17.568 | 18.416 | 0.848 |
| 1E+13 | 65 | 17.924 | 18.311 | 0.387 |
| 1E+13 | 66 | 18.044 | 18.438 | 0.394 |
| Max | | 18.426 | 18.438 | 0.848 |
| Average | | 17.897 | 18.061 | 0.164 |
| Min | | 17.482 | 17.603 | -0.713 |
| Std Dev | | 0.360 | 0.316 | 0.461 |



| 12.21 __T_FAULT_DELAY_1MHz | |
|----------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 21 µs |
| Min Limit | 14 µs |

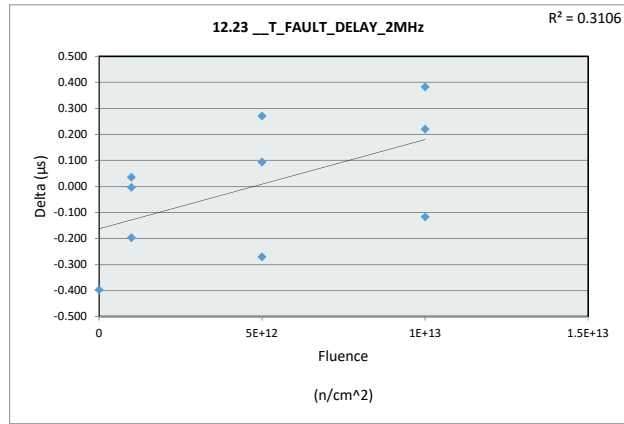
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 14.000 | 14.000 | 14.000 | 14.000 |
| Min | 17.838 | 17.713 | 17.603 | 18.311 |
| Average | 17.838 | 17.830 | 18.038 | 18.388 |
| Max | 17.838 | 17.913 | 18.411 | 18.438 |
| UL | 21.000 | 21.000 | 21.000 | 21.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

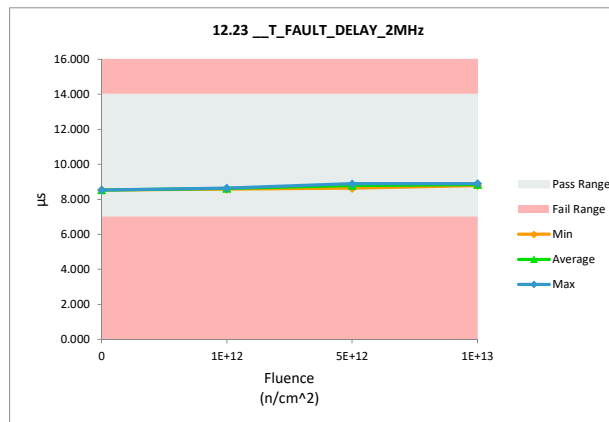
| 12.23 __T_FAULT_DELAY_2MHz | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | µs |
| Max Limit | 14 |
| Min Limit | 7 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.921 | 8.524 | -0.397 |
| 1E+12 | 45 | 8.597 | 8.633 | 0.036 |
| 1E+12 | 46 | 8.645 | 8.641 | -0.004 |
| 1E+12 | 54 | 8.774 | 8.578 | -0.196 |
| 5E+12 | 57 | 8.616 | 8.887 | 0.271 |
| 5E+12 | 58 | 8.901 | 8.630 | -0.271 |
| 5E+12 | 60 | 8.754 | 8.848 | 0.094 |
| 1E+13 | 62 | 8.973 | 8.856 | -0.117 |
| 1E+13 | 65 | 8.517 | 8.900 | 0.383 |
| 1E+13 | 66 | 8.560 | 8.780 | 0.220 |
| Max | | 8.973 | 8.900 | 0.383 |
| Average | | 8.726 | 8.728 | 0.002 |
| Min | | 8.517 | 8.524 | -0.397 |
| Std Dev | | 0.163 | 0.141 | 0.250 |



| 12.23 __T_FAULT_DELAY_2MHz | |
|----------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 14 µs |
| Min Limit | 7 µs |

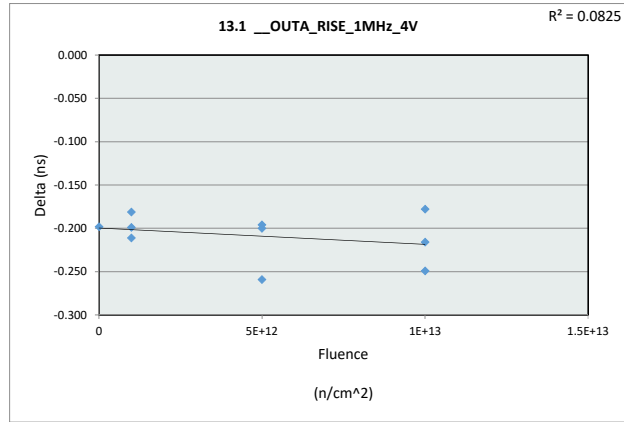
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 7.000 | 7.000 | 7.000 | 7.000 |
| Min | 8.524 | 8.578 | 8.630 | 8.780 |
| Average | 8.524 | 8.617 | 8.788 | 8.845 |
| Max | 8.524 | 8.641 | 8.887 | 8.900 |
| UL | 14.000 | 14.000 | 14.000 | 14.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

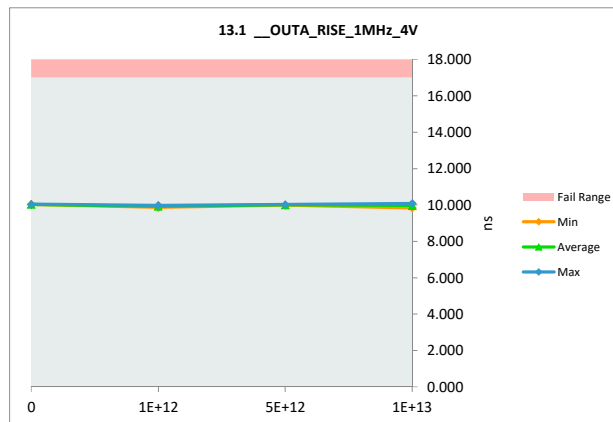
| 13.1 __OUTA_RISE_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 10.230 | 10.032 | -0.198 |
| 1E+12 | 45 | 10.181 | 9.982 | -0.199 |
| 1E+12 | 46 | 10.105 | 9.924 | -0.181 |
| 1E+12 | 54 | 10.072 | 9.861 | -0.211 |
| 5E+12 | 57 | 10.191 | 9.991 | -0.200 |
| 5E+12 | 58 | 10.276 | 10.017 | -0.259 |
| 5E+12 | 60 | 10.179 | 9.983 | -0.196 |
| 1E+13 | 62 | 10.146 | 9.968 | -0.178 |
| 1E+13 | 65 | 10.297 | 10.081 | -0.216 |
| 1E+13 | 66 | 10.085 | 9.836 | -0.249 |
| Max | | 10.297 | 10.081 | -0.178 |
| Average | | 10.176 | 9.968 | -0.209 |
| Min | | 10.072 | 9.836 | -0.259 |
| Std Dev | | 0.077 | 0.075 | 0.027 |



| 13.1 __OUTA_RISE_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

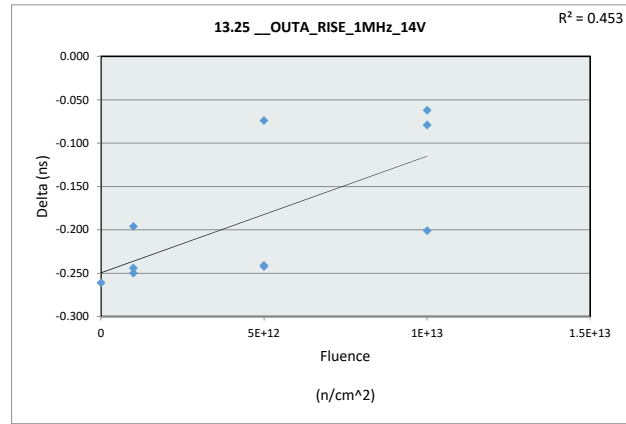
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 10.032 | 9.861 | 9.983 | 9.836 |
| Average | 10.032 | 9.922 | 9.997 | 9.962 |
| Max | 10.032 | 9.982 | 10.017 | 10.081 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

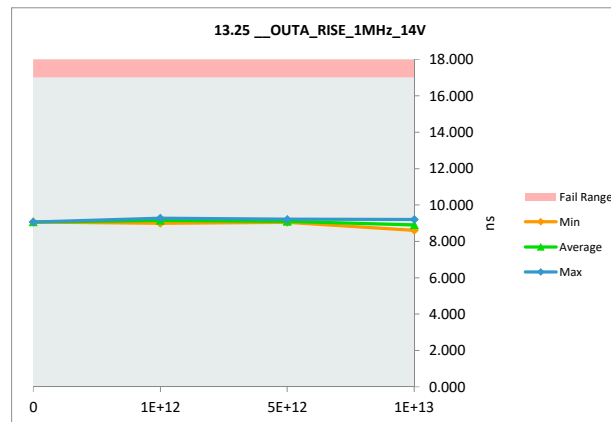
| 13.25 __OUTA_RISE_1MHz_14V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.322 | 9.061 | -0.261 |
| 1E+12 | 45 | 9.448 | 9.198 | -0.250 |
| 1E+12 | 46 | 9.235 | 8.991 | -0.244 |
| 1E+12 | 54 | 9.473 | 9.277 | -0.196 |
| 5E+12 | 57 | 9.449 | 9.207 | -0.242 |
| 5E+12 | 58 | 9.116 | 9.042 | -0.074 |
| 5E+12 | 60 | 9.288 | 9.047 | -0.241 |
| 1E+13 | 62 | 9.282 | 9.203 | -0.079 |
| 1E+13 | 65 | 9.107 | 8.906 | -0.201 |
| 1E+13 | 66 | 8.666 | 8.604 | -0.062 |
| Max | | 9.473 | 9.277 | -0.062 |
| Average | | 9.239 | 9.054 | -0.185 |
| Min | | 8.666 | 8.604 | -0.261 |
| Std Dev | | 0.239 | 0.196 | 0.081 |



| 13.25 __OUTA_RISE_1MHz_14V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

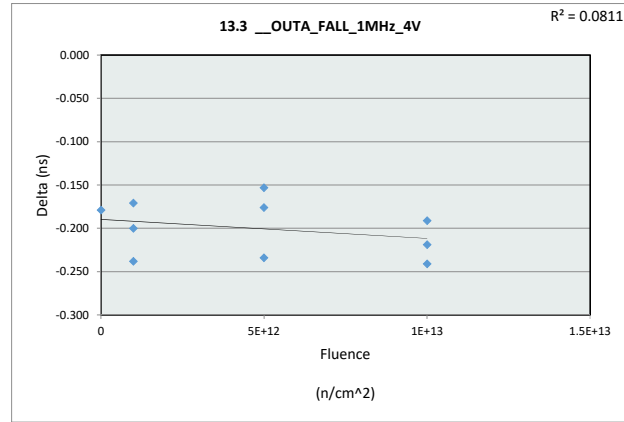
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.061 | 8.991 | 9.042 | 8.604 |
| Average | 9.061 | 9.155 | 9.099 | 8.904 |
| Max | 9.061 | 9.277 | 9.207 | 9.203 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

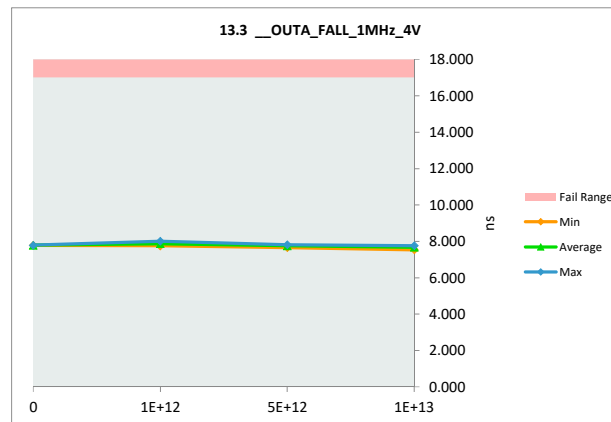
| 13.3 __OUTA_FALL_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.966 | 7.787 | -0.179 |
| 1E+12 | 45 | 8.250 | 8.012 | -0.238 |
| 1E+12 | 46 | 7.924 | 7.753 | -0.171 |
| 1E+12 | 54 | 8.020 | 7.820 | -0.200 |
| 5E+12 | 57 | 7.883 | 7.649 | -0.234 |
| 5E+12 | 58 | 7.937 | 7.784 | -0.153 |
| 5E+12 | 60 | 7.985 | 7.809 | -0.176 |
| 1E+13 | 62 | 7.935 | 7.744 | -0.191 |
| 1E+13 | 65 | 8.011 | 7.770 | -0.241 |
| 1E+13 | 66 | 7.746 | 7.527 | -0.219 |
| Max | | 8.250 | 8.012 | -0.153 |
| Average | | 7.966 | 7.766 | -0.200 |
| Min | | 7.746 | 7.527 | -0.241 |
| Std Dev | | 0.127 | 0.124 | 0.031 |



| 13.3 __OUTA_FALL_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

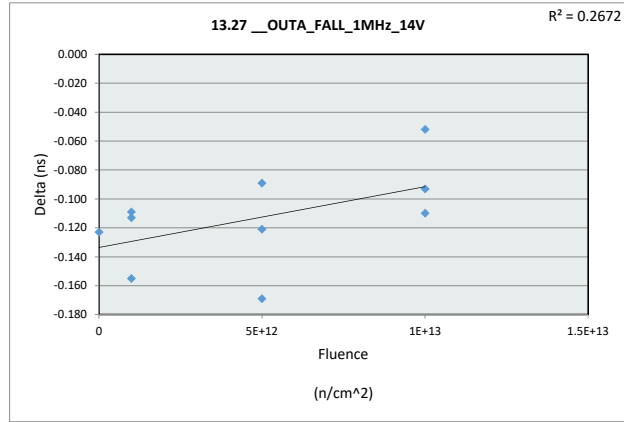
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 7.787 | 7.753 | 7.649 | 7.527 |
| Average | 7.787 | 7.862 | 7.747 | 7.680 |
| Max | 7.787 | 8.012 | 7.809 | 7.770 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

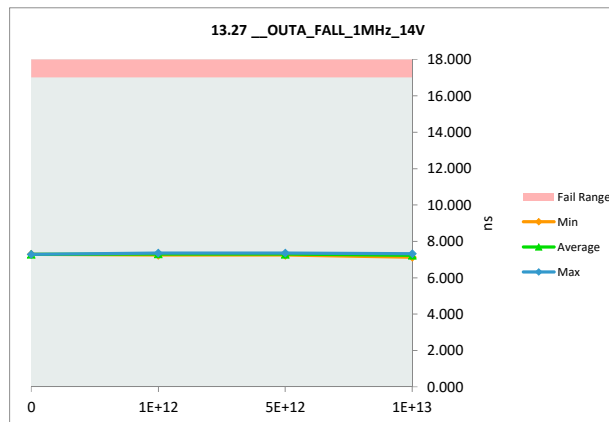
| 13.27 __OUTA_FALL_1MHz_14V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.407 | 7.284 | -0.123 |
| 1E+12 | 45 | 7.511 | 7.356 | -0.155 |
| 1E+12 | 46 | 7.349 | 7.240 | -0.109 |
| 1E+12 | 54 | 7.452 | 7.339 | -0.113 |
| 5E+12 | 57 | 7.362 | 7.241 | -0.121 |
| 5E+12 | 58 | 7.447 | 7.358 | -0.089 |
| 5E+12 | 60 | 7.456 | 7.287 | -0.169 |
| 1E+13 | 62 | 7.354 | 7.261 | -0.093 |
| 1E+13 | 65 | 7.373 | 7.321 | -0.052 |
| 1E+13 | 66 | 7.247 | 7.137 | -0.110 |
| Max | | 7.511 | 7.358 | -0.052 |
| Average | | 7.396 | 7.282 | -0.113 |
| Min | | 7.247 | 7.137 | -0.169 |
| Std Dev | | 0.075 | 0.067 | 0.033 |



| 13.27 __OUTA_FALL_1MHz_14V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

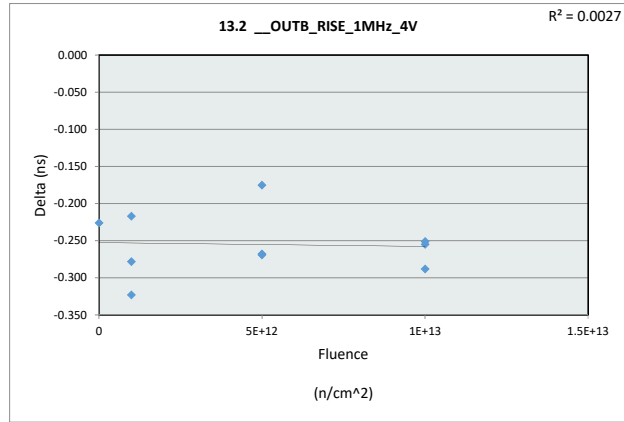
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 7.284 | 7.240 | 7.241 | 7.137 |
| Average | 7.284 | 7.312 | 7.295 | 7.240 |
| Max | 7.284 | 7.356 | 7.358 | 7.321 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

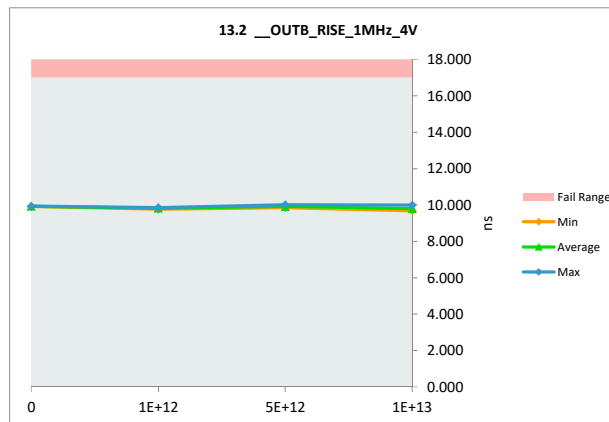
| 13.2 __OUTB_RISE_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 10.159 | 9.933 | -0.226 |
| 1E+12 | 45 | 10.107 | 9.829 | -0.278 |
| 1E+12 | 46 | 10.082 | 9.759 | -0.323 |
| 1E+12 | 54 | 10.068 | 9.851 | -0.217 |
| 5E+12 | 57 | 10.184 | 10.009 | -0.175 |
| 5E+12 | 58 | 10.147 | 9.879 | -0.268 |
| 5E+12 | 60 | 10.121 | 9.852 | -0.269 |
| 1E+13 | 62 | 10.025 | 9.737 | -0.288 |
| 1E+13 | 65 | 10.241 | 9.990 | -0.251 |
| 1E+13 | 66 | 9.929 | 9.674 | -0.255 |
| Max | | 10.241 | 10.009 | -0.175 |
| Average | | 10.106 | 9.851 | -0.255 |
| Min | | 9.929 | 9.674 | -0.323 |
| Std Dev | | 0.088 | 0.108 | 0.041 |



| 13.2 __OUTB_RISE_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

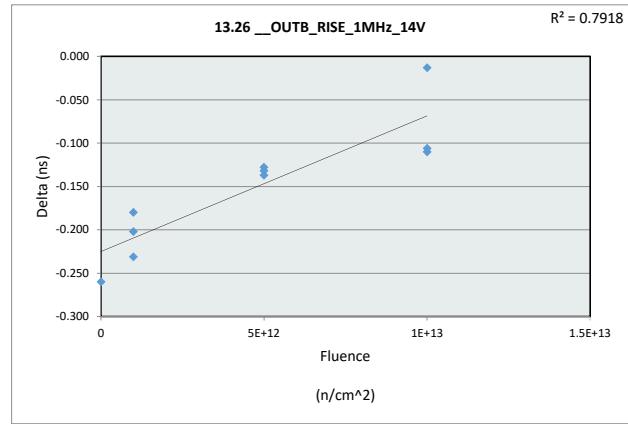
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.933 | 9.759 | 9.852 | 9.674 |
| Average | 9.933 | 9.813 | 9.913 | 9.800 |
| Max | 9.933 | 9.851 | 10.009 | 9.990 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

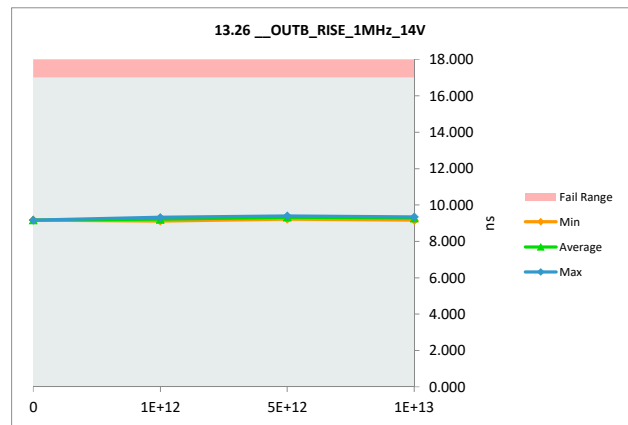
| 13.26 __OUTB_RISE_1MHz_14V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.422 | 9.162 | -0.260 |
| 1E+12 | 45 | 9.395 | 9.193 | -0.202 |
| 1E+12 | 46 | 9.341 | 9.110 | -0.231 |
| 1E+12 | 54 | 9.496 | 9.316 | -0.180 |
| 5E+12 | 57 | 9.364 | 9.227 | -0.137 |
| 5E+12 | 58 | 9.532 | 9.400 | -0.132 |
| 5E+12 | 60 | 9.470 | 9.342 | -0.128 |
| 1E+13 | 62 | 9.450 | 9.340 | -0.110 |
| 1E+13 | 65 | 9.342 | 9.329 | -0.013 |
| 1E+13 | 66 | 9.266 | 9.160 | -0.106 |
| Max | | 9.532 | 9.400 | -0.013 |
| Average | | 9.408 | 9.258 | -0.150 |
| Min | | 9.266 | 9.110 | -0.260 |
| Std Dev | | 0.082 | 0.099 | 0.071 |



| 13.26 __OUTB_RISE_1MHz_14V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

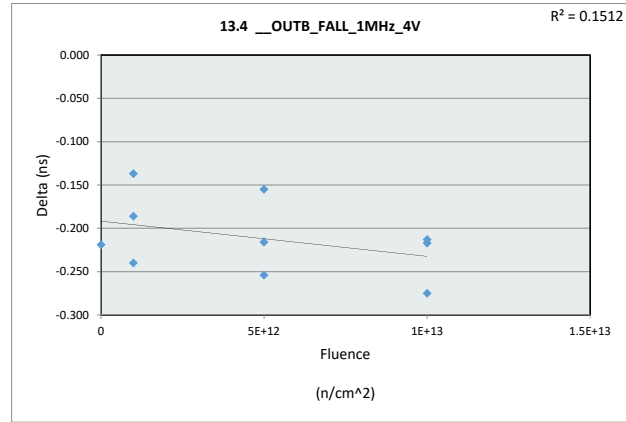
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.162 | 9.110 | 9.227 | 9.160 |
| Average | 9.162 | 9.206 | 9.323 | 9.276 |
| Max | 9.162 | 9.316 | 9.400 | 9.340 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

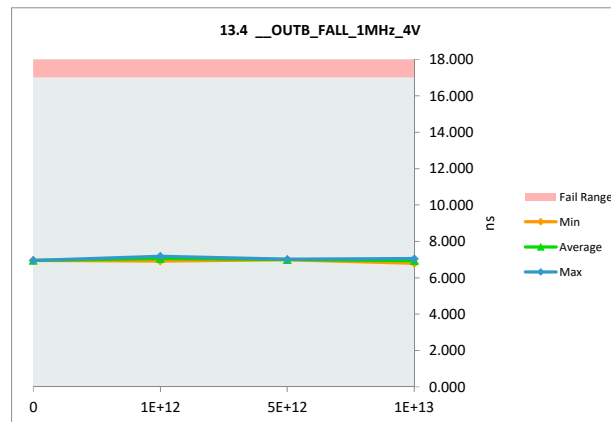
| 13.4 __OUTB_FALL_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.170 | 6.951 | -0.219 |
| 1E+12 | 45 | 7.422 | 7.182 | -0.240 |
| 1E+12 | 46 | 7.099 | 6.913 | -0.186 |
| 1E+12 | 54 | 7.223 | 7.086 | -0.137 |
| 5E+12 | 57 | 7.151 | 6.996 | -0.155 |
| 5E+12 | 58 | 7.199 | 6.983 | -0.216 |
| 5E+12 | 60 | 7.262 | 7.008 | -0.254 |
| 1E+13 | 62 | 7.207 | 6.994 | -0.213 |
| 1E+13 | 65 | 7.259 | 7.042 | -0.217 |
| 1E+13 | 66 | 7.065 | 6.790 | -0.275 |
| Max | | 7.422 | 7.182 | -0.137 |
| Average | | 7.206 | 6.994 | -0.211 |
| Min | | 7.065 | 6.790 | -0.275 |
| Std Dev | | 0.099 | 0.104 | 0.042 |



| 13.4 __OUTB_FALL_1MHz_4V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

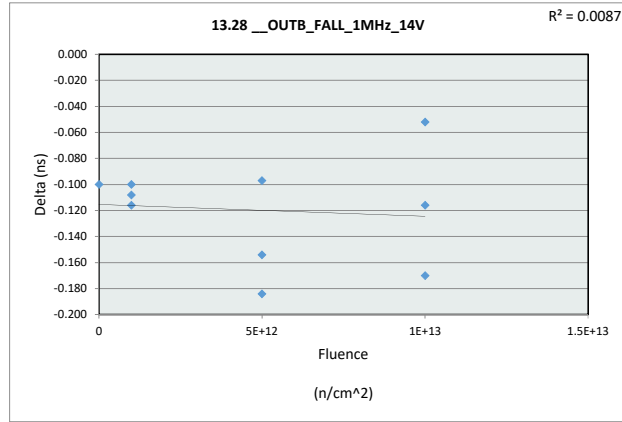
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 6.951 | 6.913 | 6.983 | 6.790 |
| Average | 6.951 | 7.060 | 6.996 | 6.942 |
| Max | 6.951 | 7.182 | 7.008 | 7.042 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

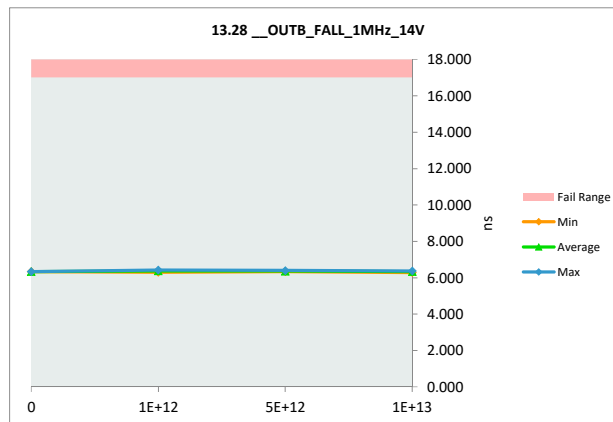
| 13.28_OUTB_FALL_1MHz_14V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.431 | 6.331 | -0.100 |
| 1E+12 | 45 | 6.526 | 6.418 | -0.108 |
| 1E+12 | 46 | 6.418 | 6.302 | -0.116 |
| 1E+12 | 54 | 6.495 | 6.395 | -0.100 |
| 5E+12 | 57 | 6.490 | 6.336 | -0.154 |
| 5E+12 | 58 | 6.544 | 6.360 | -0.184 |
| 5E+12 | 60 | 6.490 | 6.393 | -0.097 |
| 1E+13 | 62 | 6.484 | 6.368 | -0.116 |
| 1E+13 | 65 | 6.500 | 6.330 | -0.170 |
| 1E+13 | 66 | 6.342 | 6.290 | -0.052 |
| Max | | 6.544 | 6.418 | -0.052 |
| Average | | 6.472 | 6.352 | -0.120 |
| Min | | 6.342 | 6.290 | -0.184 |
| Std Dev | | 0.059 | 0.042 | 0.039 |



| 13.28_OUTB_FALL_1MHz_14V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

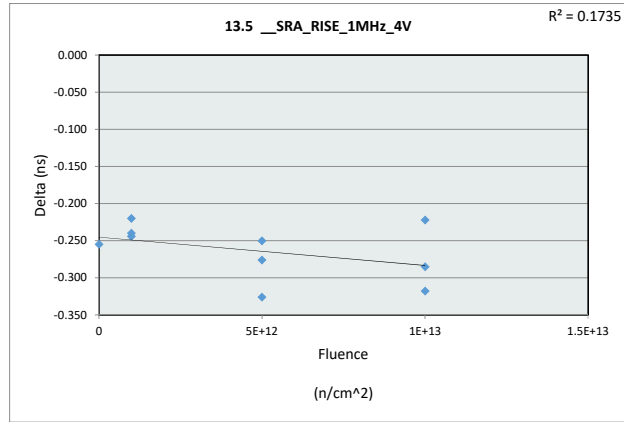
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 6.331 | 6.302 | 6.336 | 6.290 |
| Average | 6.331 | 6.372 | 6.363 | 6.329 |
| Max | 6.331 | 6.418 | 6.393 | 6.368 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

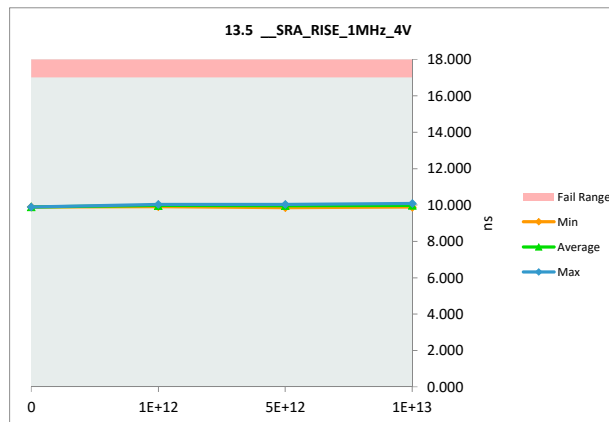
| 13.5_SRA_RISE_1MHz_4V | |
|-----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 10.141 | 9.886 | -0.255 |
| 1E+12 | 45 | 10.273 | 10.029 | -0.244 |
| 1E+12 | 46 | 10.179 | 9.939 | -0.240 |
| 1E+12 | 54 | 10.136 | 9.916 | -0.220 |
| 5E+12 | 57 | 10.139 | 9.863 | -0.276 |
| 5E+12 | 58 | 10.276 | 10.026 | -0.250 |
| 5E+12 | 60 | 10.310 | 9.984 | -0.326 |
| 1E+13 | 62 | 10.304 | 9.986 | -0.318 |
| 1E+13 | 65 | 10.312 | 10.090 | -0.222 |
| 1E+13 | 66 | 10.165 | 9.880 | -0.285 |
| Max | | 10.312 | 10.090 | -0.220 |
| Average | | 10.223 | 9.960 | -0.264 |
| Min | | 10.136 | 9.863 | -0.326 |
| Std Dev | | 0.077 | 0.075 | 0.037 |



| 13.5_SRA_RISE_1MHz_4V | |
|-----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

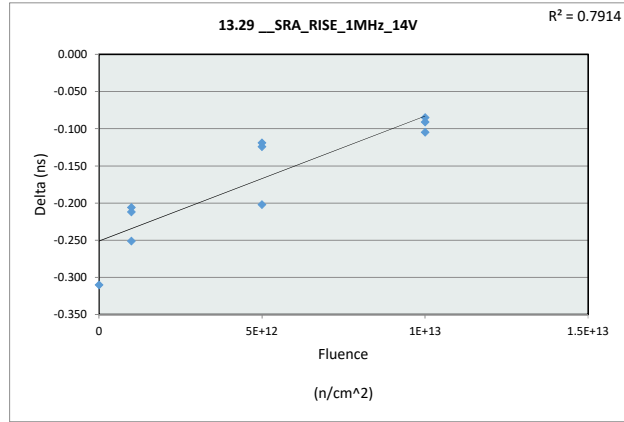
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.886 | 9.916 | 9.863 | 9.880 |
| Average | 9.886 | 9.961 | 9.958 | 9.985 |
| Max | 9.886 | 10.029 | 10.026 | 10.090 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

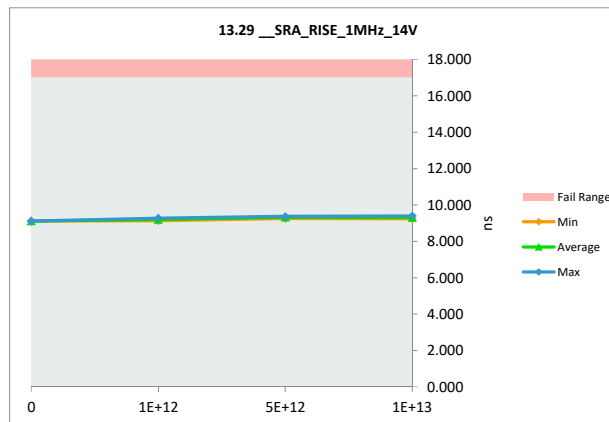
| 13.29_SRA_RISE_1MHz_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.435 | 9.125 | -0.310 |
| 1E+12 | 45 | 9.448 | 9.197 | -0.251 |
| 1E+12 | 46 | 9.343 | 9.131 | -0.212 |
| 1E+12 | 54 | 9.479 | 9.273 | -0.206 |
| 5E+12 | 57 | 9.386 | 9.262 | -0.124 |
| 5E+12 | 58 | 9.538 | 9.336 | -0.202 |
| 5E+12 | 60 | 9.488 | 9.369 | -0.119 |
| 1E+13 | 62 | 9.511 | 9.406 | -0.105 |
| 1E+13 | 65 | 9.360 | 9.269 | -0.091 |
| 1E+13 | 66 | 9.324 | 9.239 | -0.085 |
| Max | | 9.538 | 9.406 | -0.085 |
| Average | | 9.431 | 9.261 | -0.170 |
| Min | | 9.324 | 9.125 | -0.310 |
| Std Dev | | 0.075 | 0.093 | 0.076 |



| 13.29_SRA_RISE_1MHz_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

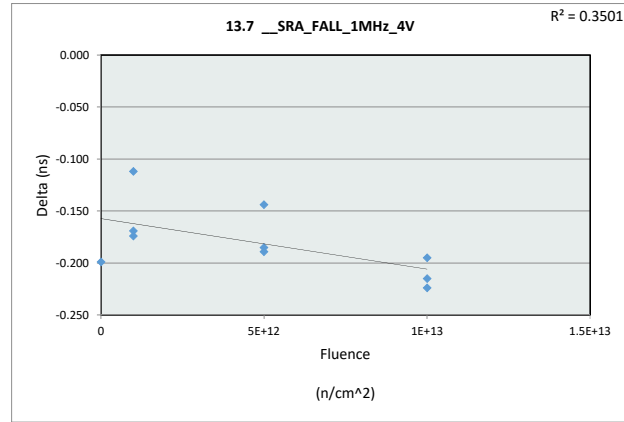
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.125 | 9.131 | 9.262 | 9.239 |
| Average | 9.125 | 9.200 | 9.322 | 9.305 |
| Max | 9.125 | 9.273 | 9.369 | 9.406 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

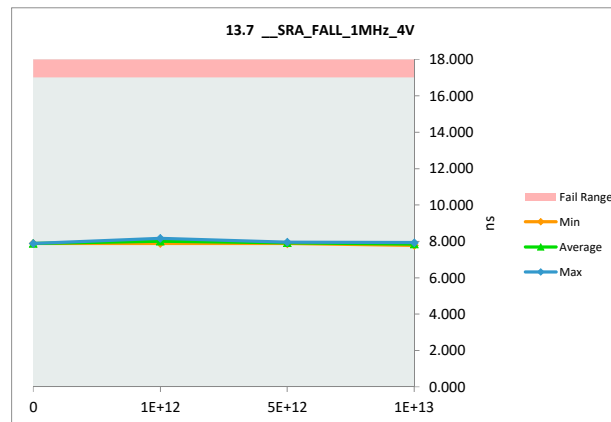
| 13.7 __SRA_FALL_1MHz_4V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 8.084 | 7.885 | -0.199 |
| 1E+12 | 45 | 8.339 | 8.170 | -0.169 |
| 1E+12 | 46 | 7.991 | 7.879 | -0.112 |
| 1E+12 | 54 | 8.152 | 7.978 | -0.174 |
| 5E+12 | 57 | 8.061 | 7.876 | -0.185 |
| 5E+12 | 58 | 8.070 | 7.926 | -0.144 |
| 5E+12 | 60 | 8.137 | 7.948 | -0.189 |
| 1E+13 | 62 | 8.086 | 7.862 | -0.224 |
| 1E+13 | 65 | 8.143 | 7.928 | -0.215 |
| 1E+13 | 66 | 7.975 | 7.780 | -0.195 |
| Max | | 8.339 | 8.170 | -0.112 |
| Average | | 8.104 | 7.923 | -0.181 |
| Min | | 7.975 | 7.780 | -0.224 |
| Std Dev | | 0.102 | 0.102 | 0.033 |



| 13.7 __SRA_FALL_1MHz_4V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

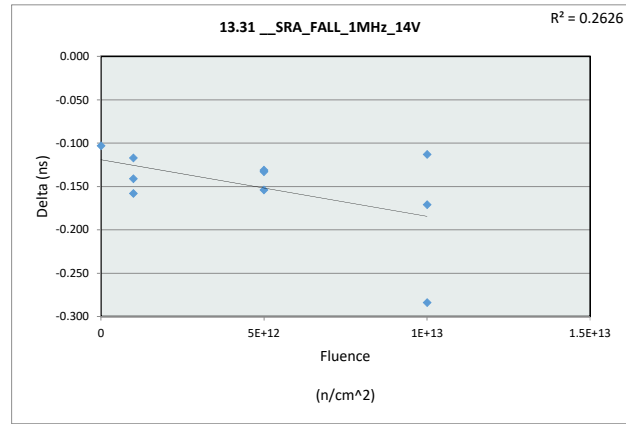
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 7.885 | 7.879 | 7.876 | 7.780 |
| Average | 7.885 | 8.009 | 7.917 | 7.857 |
| Max | 7.885 | 8.170 | 7.948 | 7.928 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

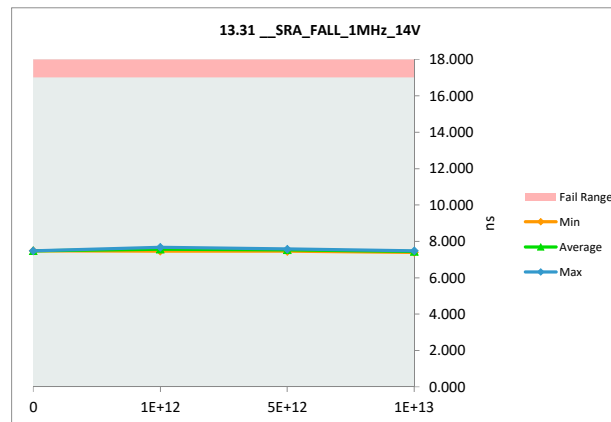
| 13.31 __SRA_FALL_1MHz_14V | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.582 | 7.479 | -0.103 |
| 1E+12 | 45 | 7.810 | 7.669 | -0.141 |
| 1E+12 | 46 | 7.621 | 7.463 | -0.158 |
| 1E+12 | 54 | 7.706 | 7.589 | -0.117 |
| 5E+12 | 57 | 7.580 | 7.447 | -0.133 |
| 5E+12 | 58 | 7.698 | 7.567 | -0.131 |
| 5E+12 | 60 | 7.729 | 7.575 | -0.154 |
| 1E+13 | 62 | 7.649 | 7.478 | -0.171 |
| 1E+13 | 65 | 7.754 | 7.470 | -0.284 |
| 1E+13 | 66 | 7.502 | 7.389 | -0.113 |
| Max | | 7.810 | 7.669 | -0.103 |
| Average | | 7.663 | 7.513 | -0.150 |
| Min | | 7.502 | 7.389 | -0.284 |
| Std Dev | | 0.093 | 0.084 | 0.052 |



| 13.31 __SRA_FALL_1MHz_14V | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

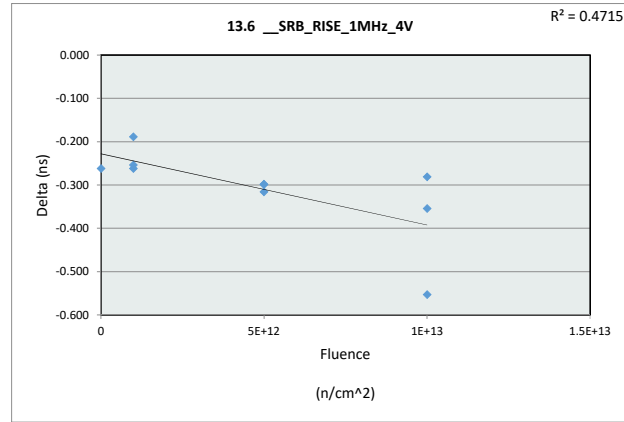
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 7.479 | 7.463 | 7.447 | 7.389 |
| Average | 7.479 | 7.574 | 7.530 | 7.446 |
| Max | 7.479 | 7.669 | 7.575 | 7.478 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

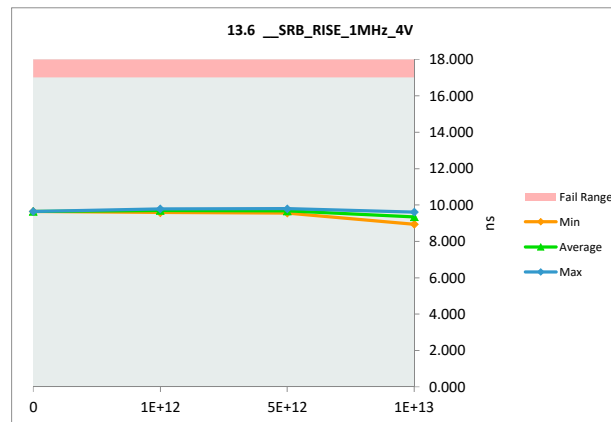
| 13.6 __SRB_RISE_1MHz_4V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.899 | 9.637 | -0.262 |
| 1E+12 | 45 | 9.979 | 9.717 | -0.262 |
| 1E+12 | 46 | 9.764 | 9.575 | -0.189 |
| 1E+12 | 54 | 10.031 | 9.777 | -0.254 |
| 5E+12 | 57 | 10.092 | 9.794 | -0.298 |
| 5E+12 | 58 | 9.872 | 9.556 | -0.316 |
| 5E+12 | 60 | 9.950 | 9.651 | -0.299 |
| 1E+13 | 62 | 9.834 | 9.480 | -0.354 |
| 1E+13 | 65 | 9.885 | 9.604 | -0.281 |
| 1E+13 | 66 | 9.498 | 8.945 | -0.553 |
| Max | | 10.092 | 9.794 | -0.189 |
| Average | | 9.880 | 9.574 | -0.307 |
| Min | | 9.498 | 8.945 | -0.553 |
| Std Dev | | 0.165 | 0.242 | 0.097 |



| 13.6 __SRB_RISE_1MHz_4V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

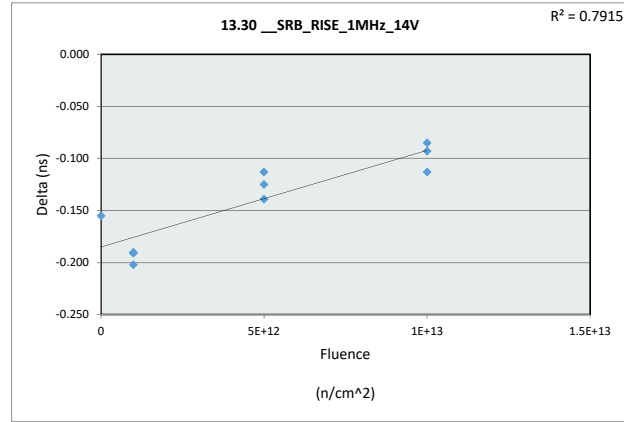
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.637 | 9.575 | 9.556 | 8.945 |
| Average | 9.637 | 9.690 | 9.667 | 9.343 |
| Max | 9.637 | 9.777 | 9.794 | 9.604 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

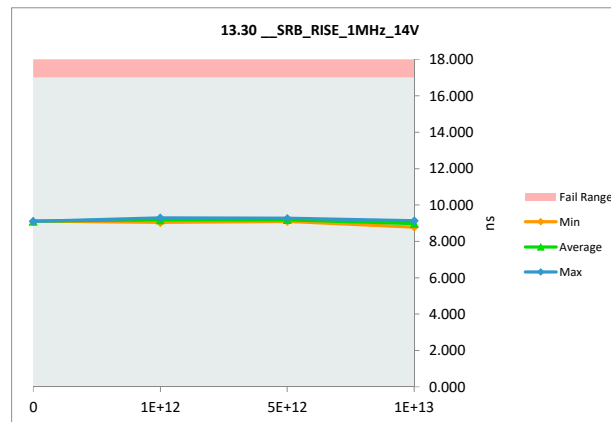
| 13.30_SRB_RISE_1MHz_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 9.256 | 9.101 | -0.155 |
| 1E+12 | 45 | 9.370 | 9.179 | -0.191 |
| 1E+12 | 46 | 9.237 | 9.035 | -0.202 |
| 1E+12 | 54 | 9.490 | 9.300 | -0.190 |
| 5E+12 | 57 | 9.378 | 9.265 | -0.113 |
| 5E+12 | 58 | 9.231 | 9.106 | -0.125 |
| 5E+12 | 60 | 9.319 | 9.180 | -0.139 |
| 1E+13 | 62 | 9.219 | 9.134 | -0.085 |
| 1E+13 | 65 | 9.138 | 9.025 | -0.113 |
| 1E+13 | 66 | 8.869 | 8.776 | -0.093 |
| Max | | 9.490 | 9.300 | -0.085 |
| Average | | 9.251 | 9.110 | -0.141 |
| Min | | 8.869 | 8.776 | -0.202 |
| Std Dev | | 0.167 | 0.147 | 0.042 |



| 13.30_SRB_RISE_1MHz_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

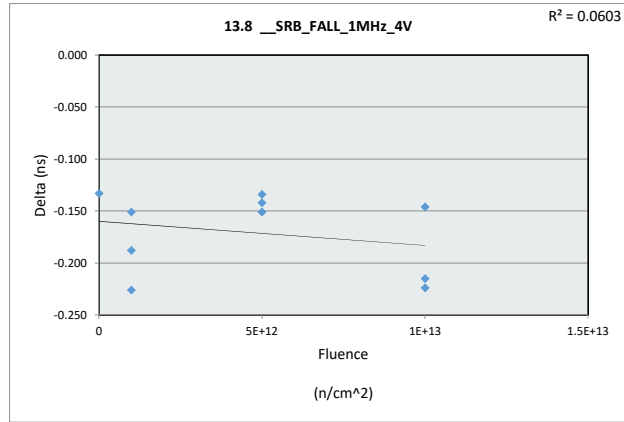
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 9.101 | 9.035 | 9.106 | 8.776 |
| Average | 9.101 | 9.171 | 9.184 | 8.978 |
| Max | 9.101 | 9.300 | 9.265 | 9.134 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

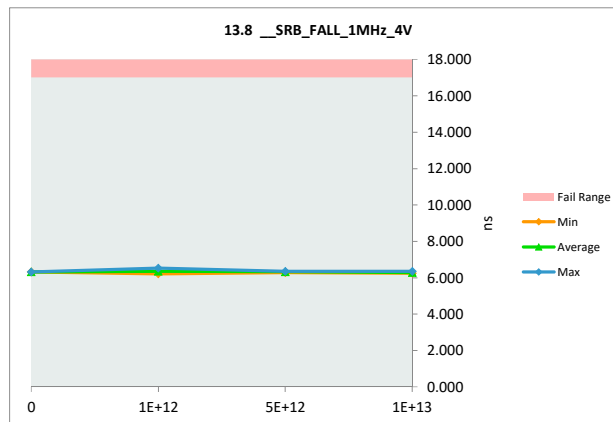
| 13.8 __SRB_FALL_1MHz_4V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.450 | 6.317 | -0.133 |
| 1E+12 | 45 | 6.713 | 6.525 | -0.188 |
| 1E+12 | 46 | 6.442 | 6.216 | -0.226 |
| 1E+12 | 54 | 6.497 | 6.346 | -0.151 |
| 5E+12 | 57 | 6.432 | 6.281 | -0.151 |
| 5E+12 | 58 | 6.479 | 6.345 | -0.134 |
| 5E+12 | 60 | 6.489 | 6.347 | -0.142 |
| 1E+13 | 62 | 6.483 | 6.259 | -0.224 |
| 1E+13 | 65 | 6.496 | 6.350 | -0.146 |
| 1E+13 | 66 | 6.457 | 6.242 | -0.215 |
| Max | | 6.713 | 6.525 | -0.133 |
| Average | | 6.494 | 6.323 | -0.171 |
| Min | | 6.432 | 6.216 | -0.226 |
| Std Dev | | 0.080 | 0.086 | 0.038 |



| 13.8 __SRB_FALL_1MHz_4V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

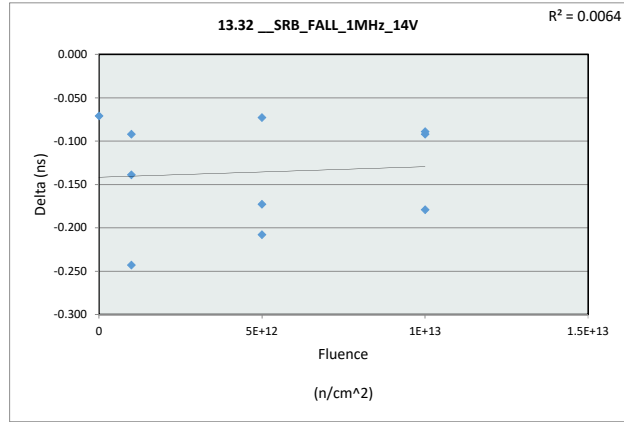
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 6.317 | 6.216 | 6.281 | 6.242 |
| Average | 6.317 | 6.362 | 6.324 | 6.284 |
| Max | 6.317 | 6.525 | 6.347 | 6.350 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

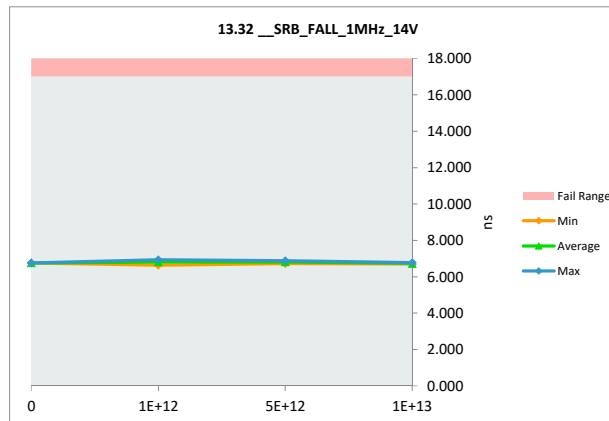
| 13.32_SRB_FALL_1MHz_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 17 |
| Min Limit | 17 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.822 | 6.751 | -0.071 |
| 1E+12 | 45 | 7.074 | 6.935 | -0.139 |
| 1E+12 | 46 | 6.878 | 6.635 | -0.243 |
| 1E+12 | 54 | 6.951 | 6.859 | -0.092 |
| 5E+12 | 57 | 6.931 | 6.723 | -0.208 |
| 5E+12 | 58 | 7.008 | 6.835 | -0.173 |
| 5E+12 | 60 | 6.955 | 6.882 | -0.073 |
| 1E+13 | 62 | 6.909 | 6.730 | -0.179 |
| 1E+13 | 65 | 6.869 | 6.777 | -0.092 |
| 1E+13 | 66 | 6.781 | 6.692 | -0.089 |
| Max | | 7.074 | 6.935 | -0.071 |
| Average | | 6.918 | 6.782 | -0.136 |
| Min | | 6.781 | 6.635 | -0.243 |
| Std Dev | | 0.086 | 0.094 | 0.062 |



| 13.32_SRB_FALL_1MHz_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 17 |
| Min Limit | ns |

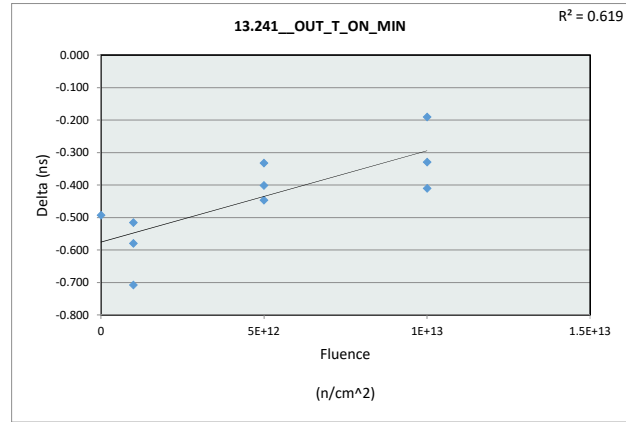
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 6.751 | 6.635 | 6.723 | 6.692 |
| Average | 6.751 | 6.810 | 6.813 | 6.733 |
| Max | 6.751 | 6.935 | 6.882 | 6.777 |
| UL | 17.000 | 17.000 | 17.000 | 17.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

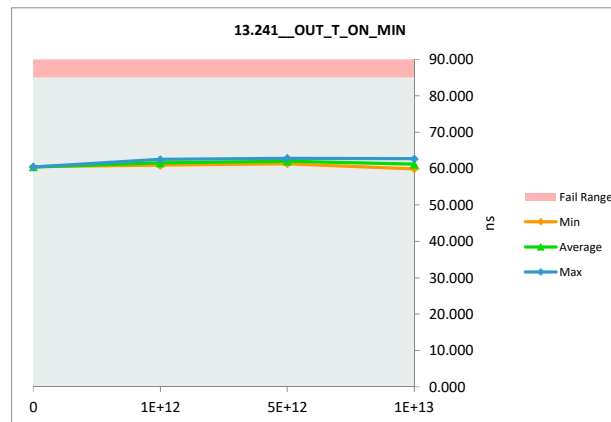
| 13.241_OUT_T_ON_MIN | |
|---------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 85 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 60.943 | 60.450 | -0.493 |
| 1E+12 | 45 | 61.653 | 61.137 | -0.516 |
| 1E+12 | 46 | 63.093 | 62.513 | -0.580 |
| 1E+12 | 54 | 61.601 | 60.893 | -0.708 |
| 5E+12 | 57 | 62.286 | 61.954 | -0.332 |
| 5E+12 | 58 | 63.190 | 62.789 | -0.401 |
| 5E+12 | 60 | 61.771 | 61.324 | -0.447 |
| 1E+13 | 62 | 61.225 | 60.896 | -0.329 |
| 1E+13 | 65 | 60.299 | 59.889 | -0.410 |
| 1E+13 | 66 | 62.873 | 62.682 | -0.191 |
| Max | | 63.190 | 62.789 | -0.191 |
| Average | | 61.893 | 61.453 | -0.441 |
| Min | | 60.299 | 59.889 | -0.708 |
| Std Dev | | 0.959 | 0.992 | 0.145 |



| 13.241_OUT_T_ON_MIN | |
|---------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 85 |
| Min Limit | ns |

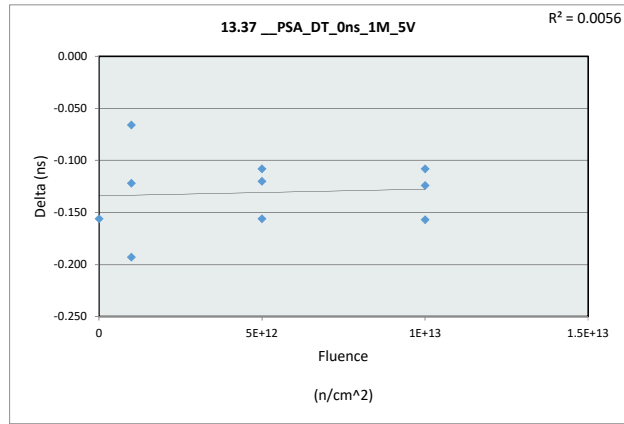
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | | | | |
| Min | 60.450 | 60.893 | 61.324 | 59.889 |
| Average | 60.450 | 61.514 | 62.022 | 61.156 |
| Max | 60.450 | 62.513 | 62.789 | 62.682 |
| UL | 85.000 | 85.000 | 85.000 | 85.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

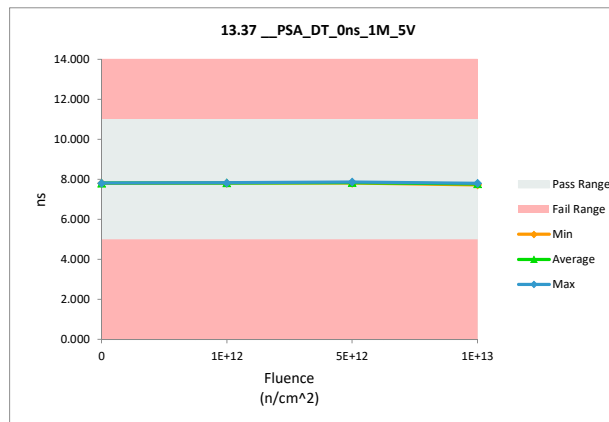
| 13.37 __ PSA_DT_0ns_1M_5V | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 11 |
| Min Limit | 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.963 | 7.807 | -0.156 |
| 1E+12 | 45 | 7.891 | 7.825 | -0.066 |
| 1E+12 | 46 | 7.940 | 7.818 | -0.122 |
| 1E+12 | 54 | 7.996 | 7.803 | -0.193 |
| 5E+12 | 57 | 7.985 | 7.865 | -0.120 |
| 5E+12 | 58 | 7.958 | 7.802 | -0.156 |
| 5E+12 | 60 | 7.956 | 7.848 | -0.108 |
| 1E+13 | 62 | 7.882 | 7.725 | -0.157 |
| 1E+13 | 65 | 7.910 | 7.802 | -0.108 |
| 1E+13 | 66 | 7.888 | 7.764 | -0.124 |
| Max | | 7.996 | 7.865 | -0.066 |
| Average | | 7.937 | 7.806 | -0.131 |
| Min | | 7.882 | 7.725 | -0.193 |
| Std Dev | | 0.042 | 0.040 | 0.035 |



| 13.37 __ PSA_DT_0ns_1M_5V | |
|---------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 ns |
| Min Limit | 5 ns |

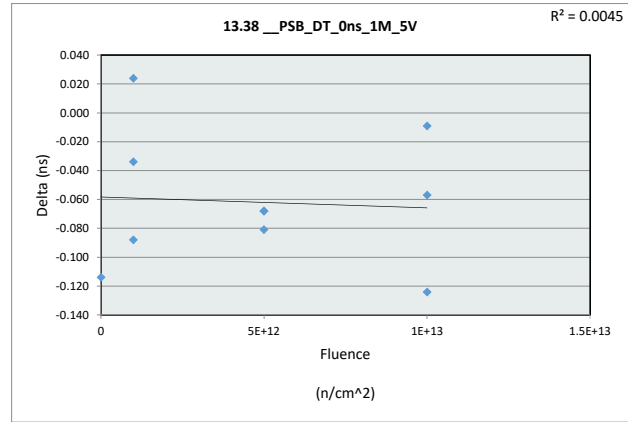
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 7.807 | 7.803 | 7.802 | 7.725 |
| Average | 7.807 | 7.815 | 7.838 | 7.764 |
| Max | 7.807 | 7.825 | 7.865 | 7.802 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

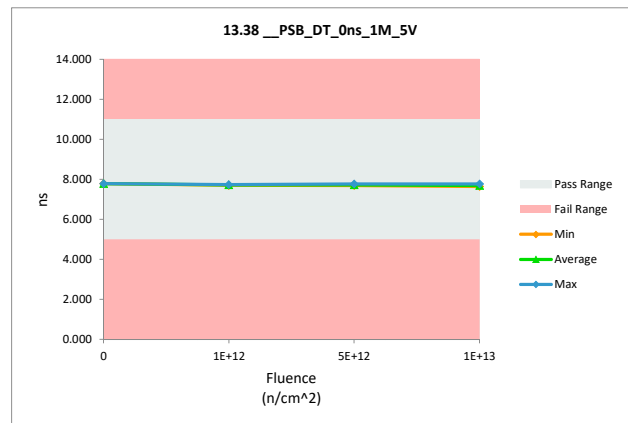
| 13.38 PSB_DT_0ns_1M_5V | |
|------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 11 |
| Min Limit | 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.903 | 7.789 | -0.114 |
| 1E+12 | 45 | 7.752 | 7.718 | -0.034 |
| 1E+12 | 46 | 7.833 | 7.745 | -0.088 |
| 1E+12 | 54 | 7.667 | 7.691 | 0.024 |
| 5E+12 | 57 | 7.834 | 7.766 | -0.068 |
| 5E+12 | 58 | 7.785 | 7.704 | -0.081 |
| 5E+12 | 60 | 7.752 | 7.684 | -0.068 |
| 1E+13 | 62 | 7.684 | 7.675 | -0.009 |
| 1E+13 | 65 | 7.819 | 7.762 | -0.057 |
| 1E+13 | 66 | 7.768 | 7.644 | -0.124 |
| Max | | 7.903 | 7.789 | 0.024 |
| Average | | 7.780 | 7.718 | -0.062 |
| Min | | 7.667 | 7.644 | -0.124 |
| Std Dev | | 0.072 | 0.046 | 0.046 |



| 13.38 PSB_DT_0ns_1M_5V | |
|------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 |
| Min Limit | 5 |

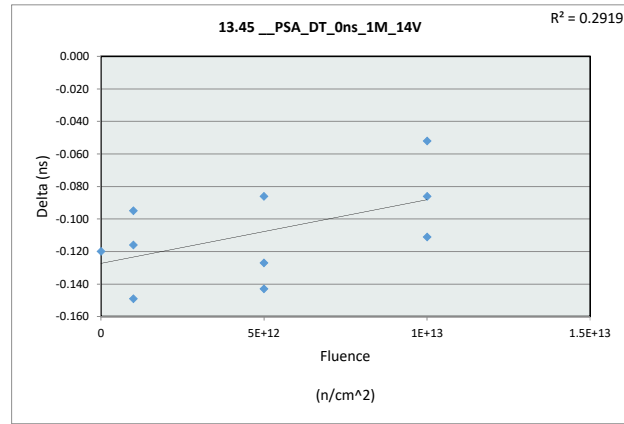
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 7.789 | 7.691 | 7.684 | 7.644 |
| Average | 7.789 | 7.718 | 7.718 | 7.694 |
| Max | 7.789 | 7.745 | 7.766 | 7.762 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

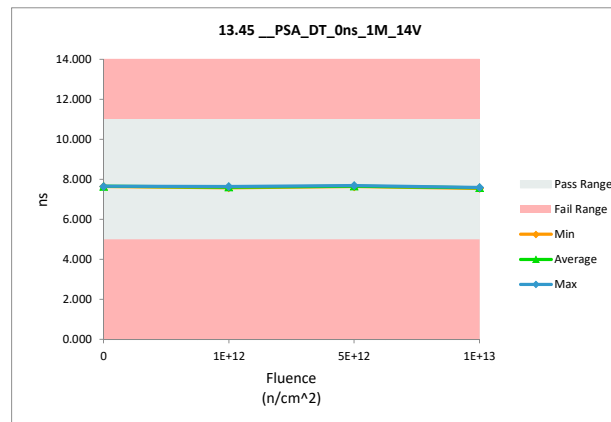
| 13.45_PSA_DT_0ns_1M_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 11 |
| Min Limit | 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.764 | 7.644 | -0.120 |
| 1E+12 | 45 | 7.666 | 7.571 | -0.095 |
| 1E+12 | 46 | 7.734 | 7.618 | -0.116 |
| 1E+12 | 54 | 7.788 | 7.639 | -0.149 |
| 5E+12 | 57 | 7.800 | 7.673 | -0.127 |
| 5E+12 | 58 | 7.713 | 7.627 | -0.086 |
| 5E+12 | 60 | 7.825 | 7.682 | -0.143 |
| 1E+13 | 62 | 7.627 | 7.541 | -0.086 |
| 1E+13 | 65 | 7.643 | 7.591 | -0.052 |
| 1E+13 | 66 | 7.702 | 7.591 | -0.111 |
| Max | | 7.825 | 7.682 | -0.052 |
| Average | | 7.726 | 7.618 | -0.109 |
| Min | | 7.627 | 7.541 | -0.149 |
| Std Dev | | 0.068 | 0.045 | 0.029 |



| 13.45_PSA_DT_0ns_1M_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 |
| Min Limit | 5 |

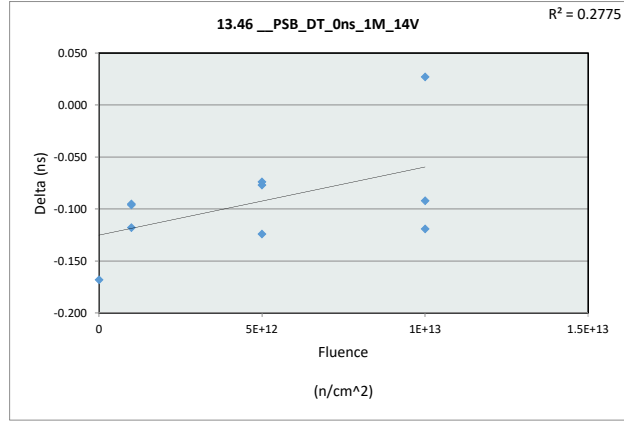
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 7.644 | 7.571 | 7.627 | 7.541 |
| Average | 7.644 | 7.609 | 7.661 | 7.574 |
| Max | 7.644 | 7.639 | 7.682 | 7.591 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

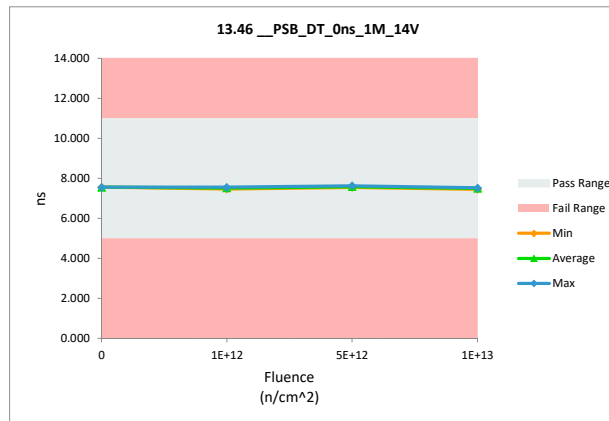
| 13.46_PSB_DT_0ns_1M_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 11 |
| Min Limit | 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.716 | 7.548 | -0.168 |
| 1E+12 | 45 | 7.557 | 7.462 | -0.095 |
| 1E+12 | 46 | 7.647 | 7.551 | -0.096 |
| 1E+12 | 54 | 7.625 | 7.507 | -0.118 |
| 5E+12 | 57 | 7.697 | 7.620 | -0.077 |
| 5E+12 | 58 | 7.676 | 7.552 | -0.124 |
| 5E+12 | 60 | 7.627 | 7.553 | -0.074 |
| 1E+13 | 62 | 7.495 | 7.522 | 0.027 |
| 1E+13 | 65 | 7.607 | 7.515 | -0.092 |
| 1E+13 | 66 | 7.570 | 7.451 | -0.119 |
| Max | | 7.716 | 7.620 | 0.027 |
| Average | | 7.622 | 7.528 | -0.094 |
| Min | | 7.495 | 7.451 | -0.168 |
| Std Dev | | 0.068 | 0.049 | 0.050 |



| 13.46_PSB_DT_0ns_1M_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 |
| Min Limit | 5 |

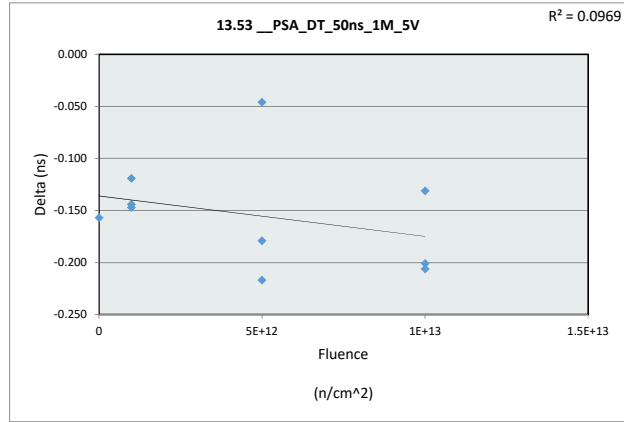
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 7.548 | 7.462 | 7.552 | 7.451 |
| Average | 7.548 | 7.507 | 7.575 | 7.496 |
| Max | 7.548 | 7.551 | 7.620 | 7.522 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

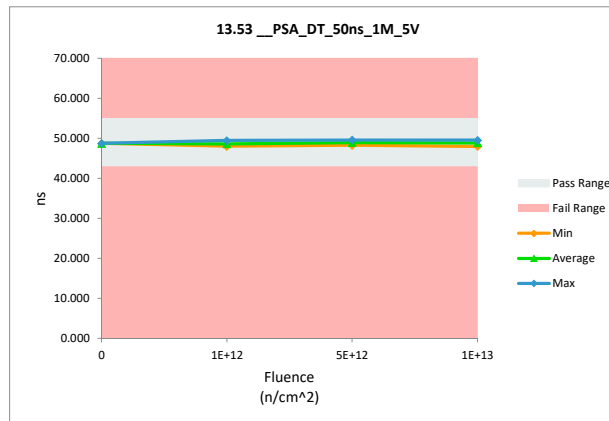
| 13.53 __ PSA_DT_50ns_1M_5V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 48.882 | 48.725 | -0.157 |
| 1E+12 | 45 | 48.150 | 48.006 | -0.144 |
| 1E+12 | 46 | 48.402 | 48.283 | -0.119 |
| 1E+12 | 54 | 49.592 | 49.445 | -0.147 |
| 5E+12 | 57 | 49.092 | 48.875 | -0.217 |
| 5E+12 | 58 | 48.283 | 48.237 | -0.046 |
| 5E+12 | 60 | 49.771 | 49.592 | -0.179 |
| 1E+13 | 62 | 48.139 | 47.938 | -0.201 |
| 1E+13 | 65 | 49.629 | 49.498 | -0.131 |
| 1E+13 | 66 | 49.245 | 49.039 | -0.206 |
| Max | | 49.771 | 49.592 | -0.046 |
| Average | | 48.919 | 48.764 | -0.155 |
| Min | | 48.139 | 47.938 | -0.217 |
| Std Dev | | 0.640 | 0.627 | 0.051 |



| 13.53 __ PSA_DT_50ns_1M_5V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 43 |

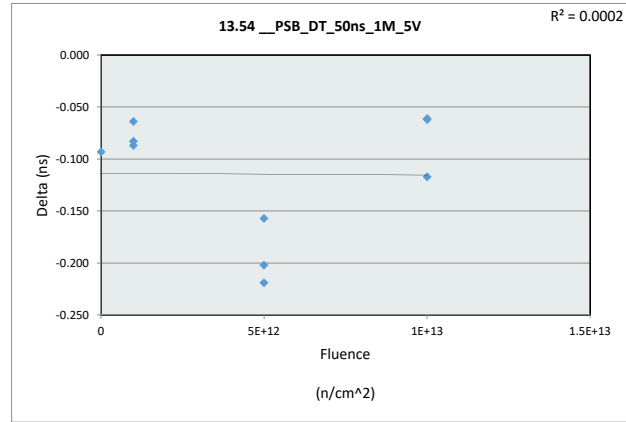
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 48.725 | 48.006 | 48.237 | 47.938 |
| Average | 48.725 | 48.578 | 48.901 | 48.825 |
| Max | 48.725 | 49.445 | 49.592 | 49.498 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

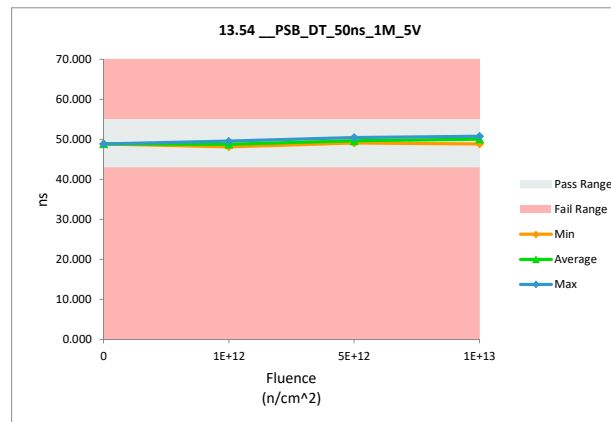
| 13.54 __ PSB_DT_50ns_1M_5V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 48.930 | 48.837 | -0.093 |
| 1E+12 | 45 | 48.237 | 48.150 | -0.087 |
| 1E+12 | 46 | 48.783 | 48.700 | -0.083 |
| 1E+12 | 54 | 49.579 | 49.515 | -0.064 |
| 5E+12 | 57 | 49.341 | 49.122 | -0.219 |
| 5E+12 | 58 | 49.334 | 49.177 | -0.157 |
| 5E+12 | 60 | 50.609 | 50.407 | -0.202 |
| 1E+13 | 62 | 48.879 | 48.818 | -0.061 |
| 1E+13 | 65 | 50.600 | 50.483 | -0.117 |
| 1E+13 | 66 | 50.802 | 50.740 | -0.062 |
| Max | | 50.802 | 50.740 | -0.061 |
| Average | | 49.509 | 49.395 | -0.114 |
| Min | | 48.237 | 48.150 | -0.219 |
| Std Dev | | 0.883 | 0.871 | 0.058 |



| 13.54 __ PSB_DT_50ns_1M_5V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 43 |

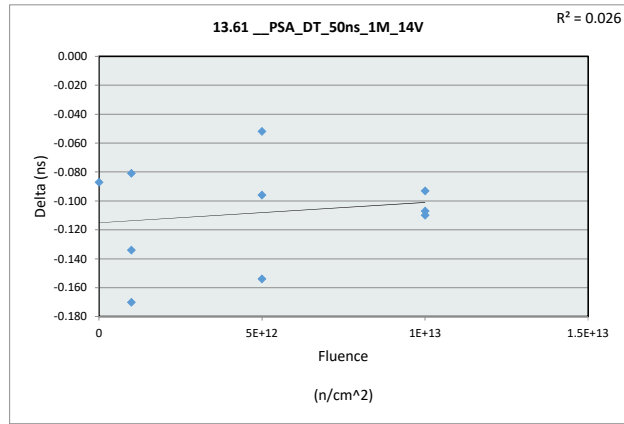
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 48.837 | 48.150 | 49.122 | 48.818 |
| Average | 48.837 | 48.788 | 49.569 | 50.014 |
| Max | 48.837 | 49.515 | 50.407 | 50.740 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

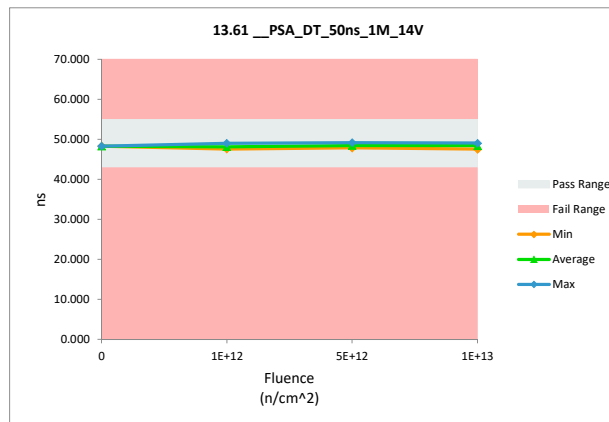
| 13.61 __ PSA_DT_50ns_1M_14V | |
|-----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 48.337 | 48.250 | -0.087 |
| 1E+12 | 45 | 47.620 | 47.539 | -0.081 |
| 1E+12 | 46 | 47.893 | 47.723 | -0.170 |
| 1E+12 | 54 | 49.135 | 49.001 | -0.134 |
| 5E+12 | 57 | 48.583 | 48.429 | -0.154 |
| 5E+12 | 58 | 47.860 | 47.808 | -0.052 |
| 5E+12 | 60 | 49.282 | 49.186 | -0.096 |
| 1E+13 | 62 | 47.636 | 47.526 | -0.110 |
| 1E+13 | 65 | 49.124 | 49.031 | -0.093 |
| 1E+13 | 66 | 48.670 | 48.563 | -0.107 |
| Max | | 49.282 | 49.186 | -0.052 |
| Average | | 48.414 | 48.306 | -0.108 |
| Min | | 47.620 | 47.526 | -0.170 |
| Std Dev | | 0.640 | 0.637 | 0.035 |



| 13.61 __ PSA_DT_50ns_1M_14 | |
|----------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 ns |
| Min Limit | 43 ns |

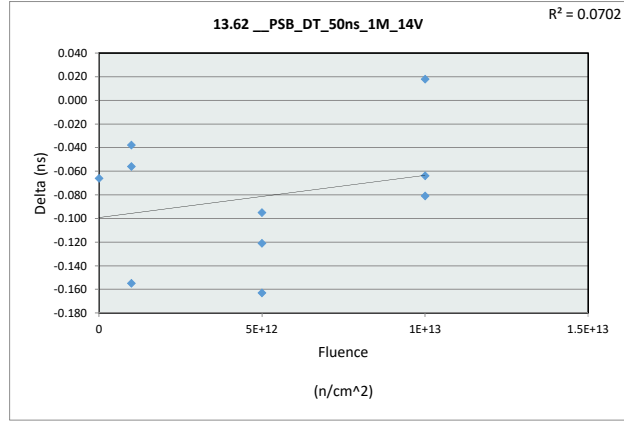
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 48.250 | 47.539 | 47.808 | 47.526 |
| Average | 48.250 | 48.088 | 48.474 | 48.373 |
| Max | 48.250 | 49.001 | 49.186 | 49.031 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

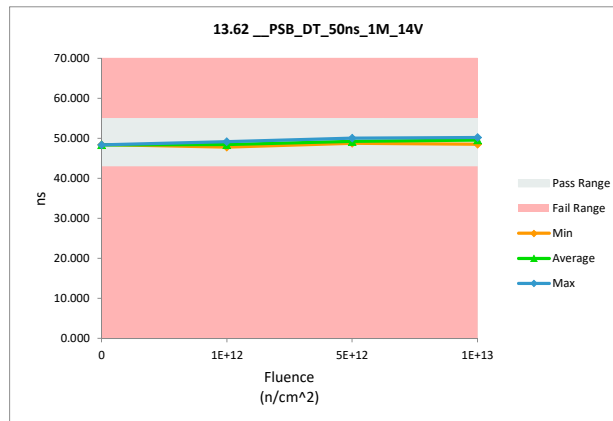
| 13.62_PSB_DT_50ns_1M_14V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 48.437 | 48.371 | -0.066 |
| 1E+12 | 45 | 47.814 | 47.776 | -0.038 |
| 1E+12 | 46 | 48.329 | 48.273 | -0.056 |
| 1E+12 | 54 | 49.295 | 49.140 | -0.155 |
| 5E+12 | 57 | 48.964 | 48.801 | -0.163 |
| 5E+12 | 58 | 48.906 | 48.785 | -0.121 |
| 5E+12 | 60 | 50.124 | 50.029 | -0.095 |
| 1E+13 | 62 | 48.471 | 48.489 | 0.018 |
| 1E+13 | 65 | 50.128 | 50.064 | -0.064 |
| 1E+13 | 66 | 50.325 | 50.244 | -0.081 |
| Max | | 50.325 | 50.244 | 0.018 |
| Average | | 49.079 | 48.997 | -0.082 |
| Min | | 47.814 | 47.776 | -0.163 |
| Std Dev | | 0.868 | 0.852 | 0.055 |



| 13.62_PSB_DT_50ns_1M_14V | |
|--------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 ns |
| Min Limit | 43 ns |

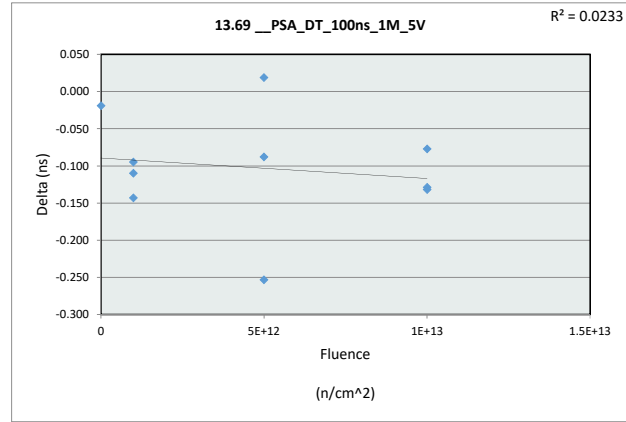
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 48.371 | 47.776 | 48.785 | 48.489 |
| Average | 48.371 | 48.396 | 49.205 | 49.599 |
| Max | 48.371 | 49.140 | 50.029 | 50.244 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

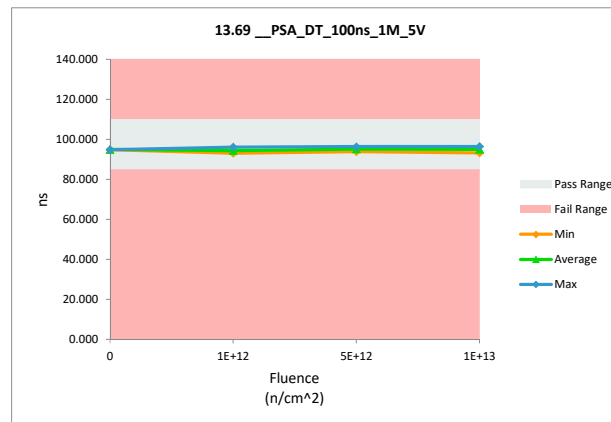
| 13.69_PSA_DT_100ns_1M_5V | |
|--------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 94.880 | 94.861 | -0.019 |
| 1E+12 | 45 | 93.201 | 93.058 | -0.143 |
| 1E+12 | 46 | 93.821 | 93.726 | -0.095 |
| 1E+12 | 54 | 96.174 | 96.064 | -0.110 |
| 5E+12 | 57 | 95.455 | 95.202 | -0.253 |
| 5E+12 | 58 | 93.757 | 93.776 | 0.019 |
| 5E+12 | 60 | 96.372 | 96.284 | -0.088 |
| 1E+13 | 62 | 93.271 | 93.139 | -0.132 |
| 1E+13 | 65 | 96.485 | 96.408 | -0.077 |
| 1E+13 | 66 | 95.444 | 95.315 | -0.129 |
| Max | | 96.485 | 96.408 | 0.019 |
| Average | | 94.886 | 94.783 | -0.103 |
| Min | | 93.201 | 93.058 | -0.253 |
| Std Dev | | 1.287 | 1.283 | 0.073 |



| 13.69_PSA_DT_100ns_1M_5V | |
|--------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

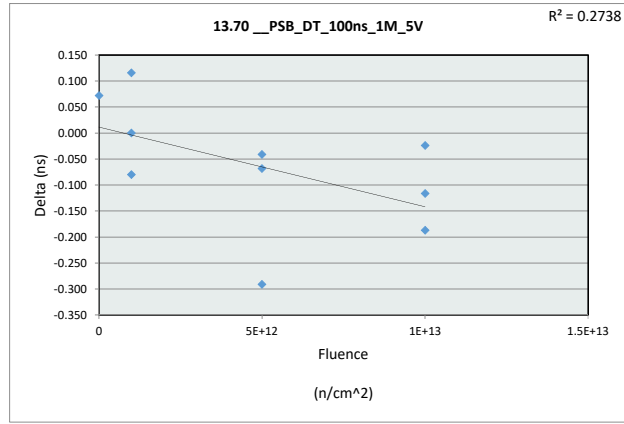
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 94.861 | 93.058 | 93.776 | 93.139 |
| Average | 94.861 | 94.283 | 95.087 | 94.954 |
| Max | 94.861 | 96.064 | 96.284 | 96.408 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

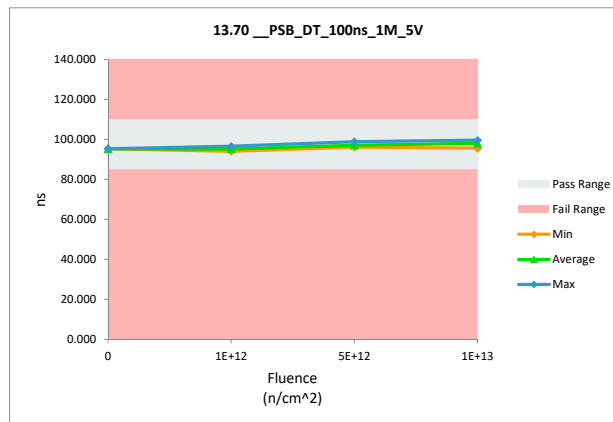
| 13.70_PSB_DT_100ns_1M_5V | |
|--------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 95.157 | 95.229 | 0.072 |
| 1E+12 | 45 | 93.821 | 93.937 | 0.116 |
| 1E+12 | 46 | 95.164 | 95.084 | -0.080 |
| 1E+12 | 54 | 96.467 | 96.467 | 0.000 |
| 5E+12 | 57 | 96.381 | 96.090 | -0.291 |
| 5E+12 | 58 | 96.268 | 96.200 | -0.068 |
| 5E+12 | 60 | 98.792 | 98.751 | -0.041 |
| 1E+13 | 62 | 95.517 | 95.493 | -0.024 |
| 1E+13 | 65 | 99.132 | 99.016 | -0.116 |
| 1E+13 | 66 | 99.720 | 99.533 | -0.187 |
| Max | | 99.720 | 99.533 | 0.116 |
| Average | | 96.642 | 96.580 | -0.062 |
| Min | | 93.821 | 93.937 | -0.291 |
| Std Dev | | 1.948 | 1.885 | 0.119 |



| 13.70_PSB_DT_100ns_1M_5 | |
|-------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

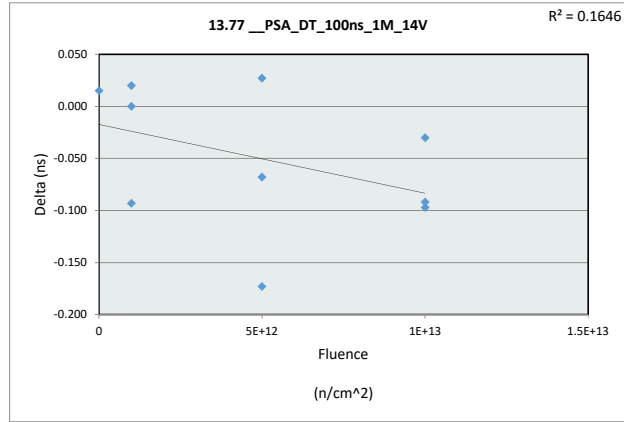
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 95.229 | 93.937 | 96.090 | 95.493 |
| Average | 95.229 | 95.163 | 97.014 | 98.014 |
| Max | 95.229 | 96.467 | 98.751 | 99.533 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

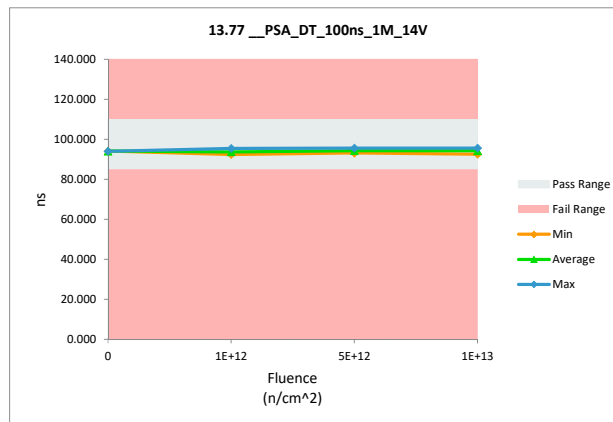
| 13.77 __ PSA_DT_100ns_1M_14V | |
|------------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 94.075 | 94.090 | 0.015 |
| 1E+12 | 45 | 92.446 | 92.466 | 0.020 |
| 1E+12 | 46 | 93.069 | 93.069 | 0.000 |
| 1E+12 | 54 | 95.509 | 95.416 | -0.093 |
| 5E+12 | 57 | 94.639 | 94.466 | -0.173 |
| 5E+12 | 58 | 93.038 | 93.065 | 0.027 |
| 5E+12 | 60 | 95.676 | 95.608 | -0.068 |
| 1E+13 | 62 | 92.614 | 92.522 | -0.092 |
| 1E+13 | 65 | 95.683 | 95.653 | -0.030 |
| 1E+13 | 66 | 94.678 | 94.581 | -0.097 |
| Max | | 95.683 | 95.653 | 0.027 |
| Average | | 94.143 | 94.094 | -0.049 |
| Min | | 92.446 | 92.466 | -0.173 |
| Std Dev | | 1.279 | 1.251 | 0.066 |



| 13.77 __ PSA_DT_100ns_1M_1 | |
|----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

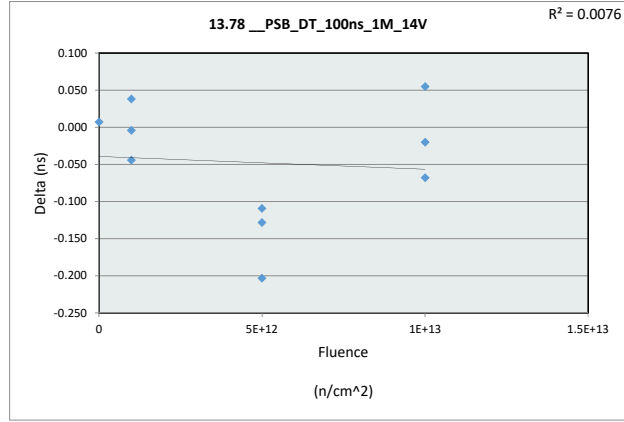
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 94.090 | 92.466 | 93.065 | 92.522 |
| Average | 94.090 | 93.650 | 94.380 | 94.252 |
| Max | 94.090 | 95.416 | 95.608 | 95.653 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

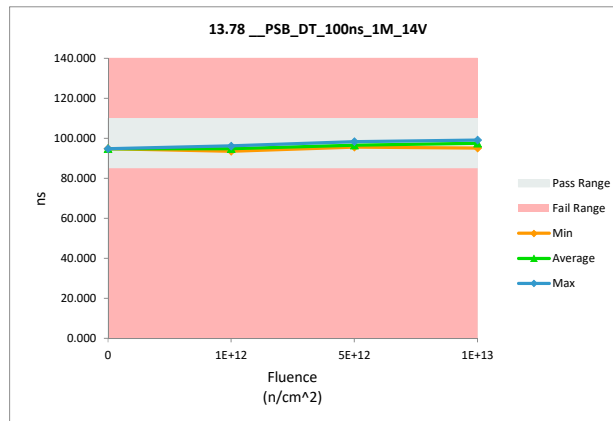
| 13.78 PSB_DT_100ns_1M_14V | |
|---------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 94.783 | 94.790 | 0.007 |
| 1E+12 | 45 | 93.500 | 93.538 | 0.038 |
| 1E+12 | 46 | 94.694 | 94.650 | -0.044 |
| 1E+12 | 54 | 96.129 | 96.125 | -0.004 |
| 5E+12 | 57 | 95.874 | 95.671 | -0.203 |
| 5E+12 | 58 | 95.895 | 95.786 | -0.109 |
| 5E+12 | 60 | 98.387 | 98.259 | -0.128 |
| 1E+13 | 62 | 95.018 | 95.073 | 0.055 |
| 1E+13 | 65 | 98.533 | 98.465 | -0.068 |
| 1E+13 | 66 | 99.117 | 99.097 | -0.020 |
| Max | | 99.117 | 99.097 | 0.055 |
| Average | | 96.193 | 96.145 | -0.048 |
| Min | | 93.500 | 93.538 | -0.203 |
| Std Dev | | 1.883 | 1.854 | 0.080 |



| 13.78 PSB_DT_100ns_1M_1 | |
|-------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

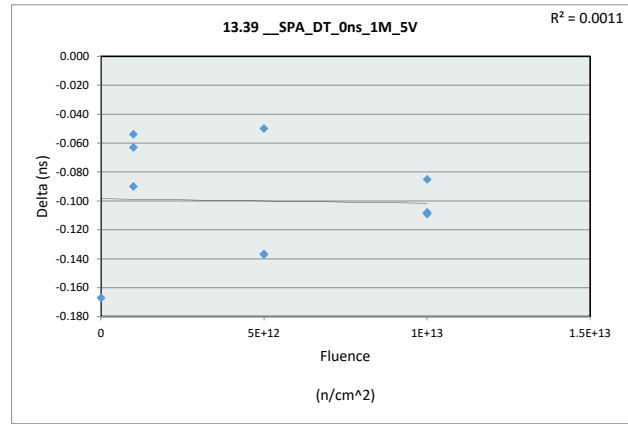
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 94.790 | 93.538 | 95.671 | 95.073 |
| Average | 94.790 | 94.771 | 96.572 | 97.545 |
| Max | 94.790 | 96.125 | 98.259 | 99.097 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

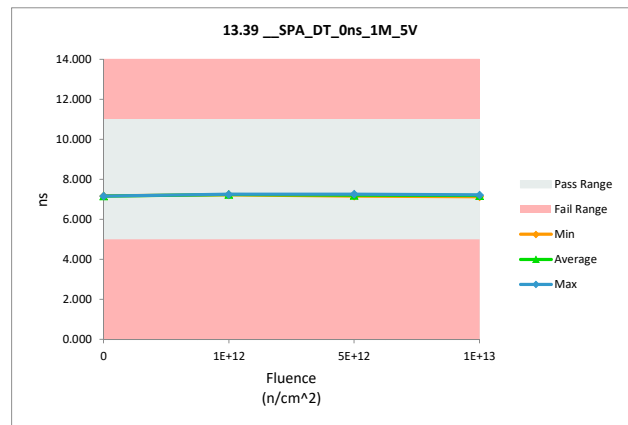
| 13.39_SPA_DT_0ns_1M_5V | |
|------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 11 |
| Min Limit | 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.330 | 7.163 | -0.167 |
| 1E+12 | 45 | 7.288 | 7.225 | -0.063 |
| 1E+12 | 46 | 7.333 | 7.243 | -0.090 |
| 1E+12 | 54 | 7.297 | 7.243 | -0.054 |
| 5E+12 | 57 | 7.329 | 7.192 | -0.137 |
| 5E+12 | 58 | 7.299 | 7.162 | -0.137 |
| 5E+12 | 60 | 7.301 | 7.251 | -0.050 |
| 1E+13 | 62 | 7.313 | 7.204 | -0.109 |
| 1E+13 | 65 | 7.326 | 7.218 | -0.108 |
| 1E+13 | 66 | 7.209 | 7.124 | -0.085 |
| Max | | 7.333 | 7.251 | -0.050 |
| Average | | 7.303 | 7.203 | -0.100 |
| Min | | 7.209 | 7.124 | -0.167 |
| Std Dev | | 0.037 | 0.042 | 0.039 |



| 13.39_SPA_DT_0ns_1M_5V | |
|------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 |
| Min Limit | 5 |

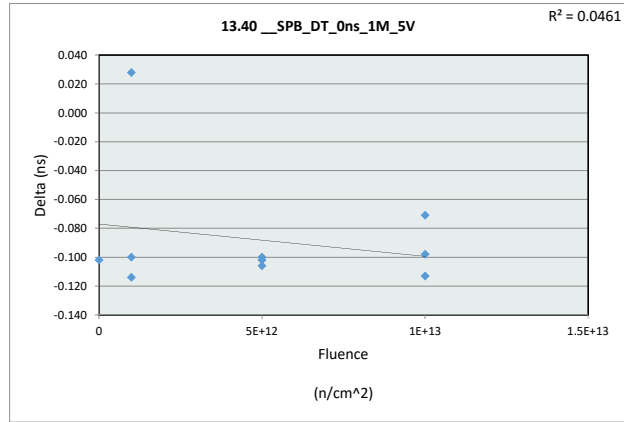
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 7.163 | 7.225 | 7.162 | 7.124 |
| Average | 7.163 | 7.237 | 7.202 | 7.182 |
| Max | 7.163 | 7.243 | 7.251 | 7.218 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

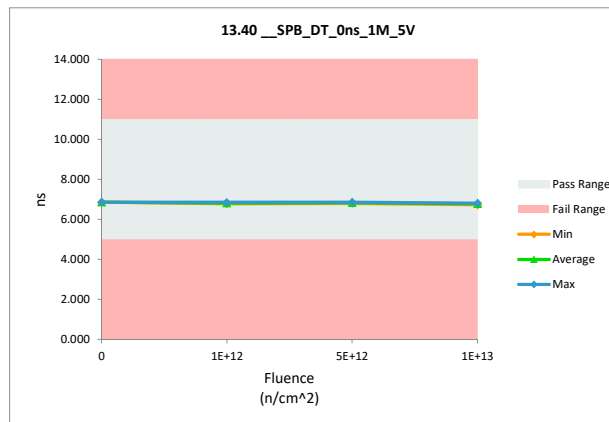
| 13.40_SPB_DT_0ns_1M_5V | |
|------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 11 |
| Min Limit | 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.955 | 6.853 | -0.102 |
| 1E+12 | 45 | 6.815 | 6.843 | 0.028 |
| 1E+12 | 46 | 6.904 | 6.790 | -0.114 |
| 1E+12 | 54 | 6.875 | 6.775 | -0.100 |
| 5E+12 | 57 | 6.920 | 6.818 | -0.102 |
| 5E+12 | 58 | 6.897 | 6.791 | -0.106 |
| 5E+12 | 60 | 6.964 | 6.864 | -0.100 |
| 1E+13 | 62 | 6.884 | 6.813 | -0.071 |
| 1E+13 | 65 | 6.921 | 6.808 | -0.113 |
| 1E+13 | 66 | 6.820 | 6.722 | -0.098 |
| Max | | 6.964 | 6.864 | 0.028 |
| Average | | 6.895 | 6.808 | -0.088 |
| Min | | 6.815 | 6.722 | -0.114 |
| Std Dev | | 0.050 | 0.042 | 0.042 |



| 13.40_SPB_DT_0ns_1M_5V | |
|------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 ns |
| Min Limit | 5 ns |

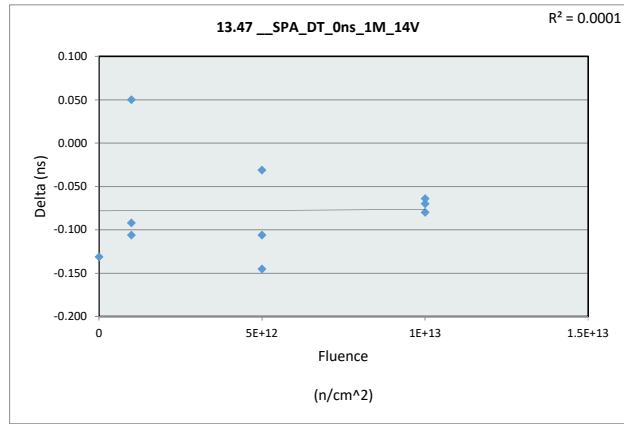
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 6.853 | 6.775 | 6.791 | 6.722 |
| Average | 6.853 | 6.803 | 6.824 | 6.781 |
| Max | 6.853 | 6.843 | 6.864 | 6.813 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

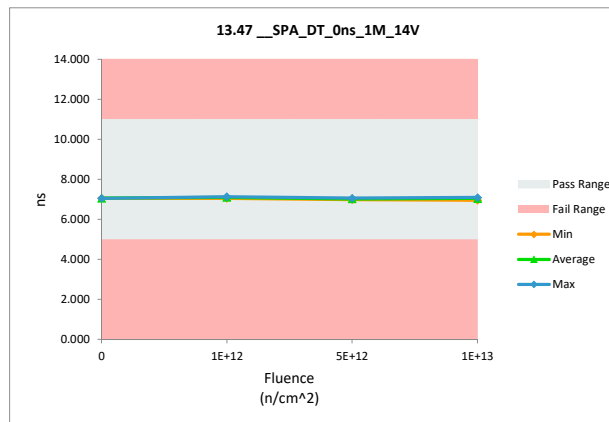
| 13.47 __SPA_DT_0ns_1M_14V | |
|---------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns ns |
| Max Limit | 11 11 |
| Min Limit | 5 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 7.185 | 7.054 | -0.131 |
| 1E+12 | 45 | 7.044 | 7.094 | 0.050 |
| 1E+12 | 46 | 7.142 | 7.050 | -0.092 |
| 1E+12 | 54 | 7.235 | 7.129 | -0.106 |
| 5E+12 | 57 | 7.171 | 7.026 | -0.145 |
| 5E+12 | 58 | 7.014 | 6.983 | -0.031 |
| 5E+12 | 60 | 7.163 | 7.057 | -0.106 |
| 1E+13 | 62 | 7.149 | 7.085 | -0.064 |
| 1E+13 | 65 | 7.134 | 7.064 | -0.070 |
| 1E+13 | 66 | 7.036 | 6.956 | -0.080 |
| Max | | 7.235 | 7.129 | 0.050 |
| Average | | 7.127 | 7.050 | -0.078 |
| Min | | 7.014 | 6.956 | -0.145 |
| Std Dev | | 0.072 | 0.051 | 0.056 |



| 13.47 __SPA_DT_0ns_1M_14V | |
|---------------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 ns |
| Min Limit | 5 ns |

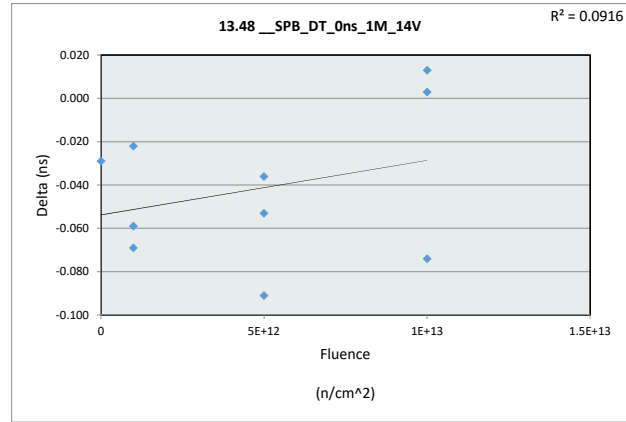
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 7.054 | 7.050 | 6.983 | 6.956 |
| Average | 7.054 | 7.091 | 7.022 | 7.035 |
| Max | 7.054 | 7.129 | 7.057 | 7.085 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

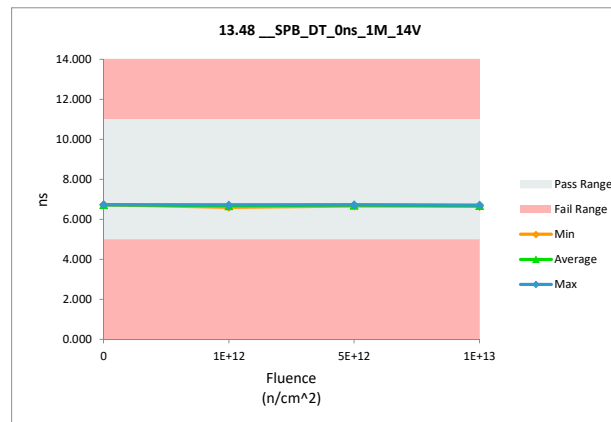
| 13.48_SPB_DT_0ns_1M_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 11 |
| Min Limit | 5 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 6.754 | 6.725 | -0.029 |
| 1E+12 | 45 | 6.677 | 6.608 | -0.069 |
| 1E+12 | 46 | 6.718 | 6.696 | -0.022 |
| 1E+12 | 54 | 6.777 | 6.718 | -0.059 |
| 5E+12 | 57 | 6.767 | 6.731 | -0.036 |
| 5E+12 | 58 | 6.714 | 6.661 | -0.053 |
| 5E+12 | 60 | 6.806 | 6.715 | -0.091 |
| 1E+13 | 62 | 6.773 | 6.699 | -0.074 |
| 1E+13 | 65 | 6.708 | 6.711 | 0.003 |
| 1E+13 | 66 | 6.622 | 6.635 | 0.013 |
| Max | | 6.806 | 6.731 | 0.013 |
| Average | | 6.732 | 6.690 | -0.042 |
| Min | | 6.622 | 6.608 | -0.091 |
| Std Dev | | 0.055 | 0.041 | 0.034 |



| 13.48_SPB_DT_0ns_1M_14V | |
|-------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 11 |
| Min Limit | 5 |

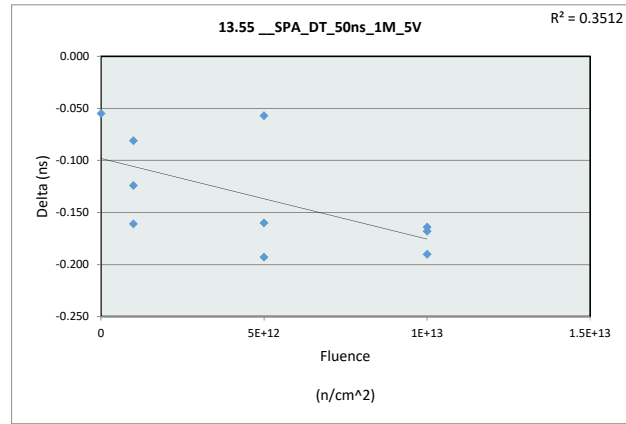
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 5.000 | 5.000 | 5.000 | 5.000 |
| Min | 6.725 | 6.608 | 6.661 | 6.635 |
| Average | 6.725 | 6.674 | 6.702 | 6.682 |
| Max | 6.725 | 6.718 | 6.731 | 6.711 |
| UL | 11.000 | 11.000 | 11.000 | 11.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

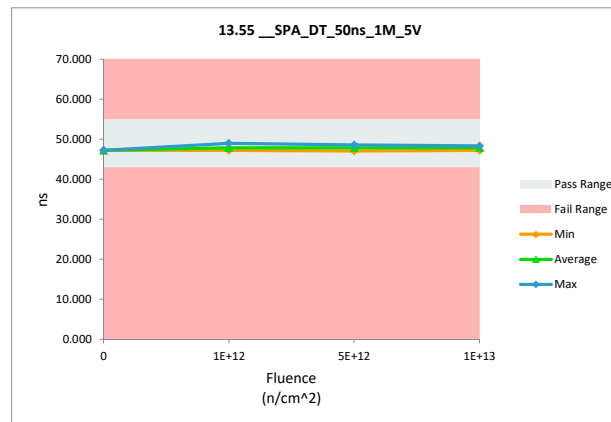
| 13.55 __SPA_DT_50ns_1M_5V | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 47.327 | 47.272 | -0.055 |
| 1E+12 | 45 | 47.466 | 47.305 | -0.161 |
| 1E+12 | 46 | 47.317 | 47.236 | -0.081 |
| 1E+12 | 54 | 49.153 | 49.029 | -0.124 |
| 5E+12 | 57 | 48.111 | 47.951 | -0.160 |
| 5E+12 | 58 | 47.114 | 47.057 | -0.057 |
| 5E+12 | 60 | 48.767 | 48.574 | -0.193 |
| 1E+13 | 62 | 47.437 | 47.247 | -0.190 |
| 1E+13 | 65 | 48.527 | 48.359 | -0.168 |
| 1E+13 | 66 | 48.233 | 48.069 | -0.164 |
| Max | | 49.153 | 49.029 | -0.055 |
| Average | | 47.945 | 47.810 | -0.135 |
| Min | | 47.114 | 47.057 | -0.193 |
| Std Dev | | 0.710 | 0.684 | 0.053 |



| 13.55 __SPA_DT_50ns_1M_5V | |
|---------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 43 |

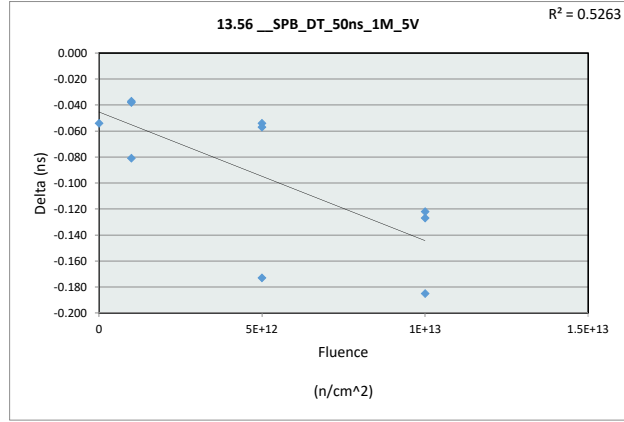
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 47.272 | 47.236 | 47.057 | 47.247 |
| Average | 47.272 | 47.857 | 47.861 | 47.892 |
| Max | 47.272 | 49.029 | 48.574 | 48.359 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

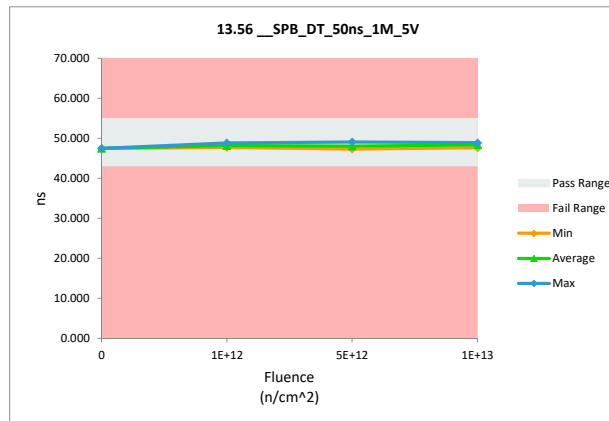
| 13.56 __ SPB_DT_50ns_1M_5V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 47.506 | 47.452 | -0.054 |
| 1E+12 | 45 | 47.889 | 47.852 | -0.037 |
| 1E+12 | 46 | 47.821 | 47.740 | -0.081 |
| 1E+12 | 54 | 48.870 | 48.832 | -0.038 |
| 5E+12 | 57 | 47.524 | 47.351 | -0.173 |
| 5E+12 | 58 | 47.744 | 47.690 | -0.054 |
| 5E+12 | 60 | 49.110 | 49.053 | -0.057 |
| 1E+13 | 62 | 47.815 | 47.630 | -0.185 |
| 1E+13 | 65 | 49.008 | 48.881 | -0.127 |
| 1E+13 | 66 | 48.764 | 48.642 | -0.122 |
| Max | | 49.110 | 49.053 | -0.037 |
| Average | | 48.205 | 48.112 | -0.093 |
| Min | | 47.506 | 47.351 | -0.185 |
| Std Dev | | 0.648 | 0.659 | 0.055 |



| 13.56 __ SPB_DT_50ns_1M_5V | |
|----------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 43 |

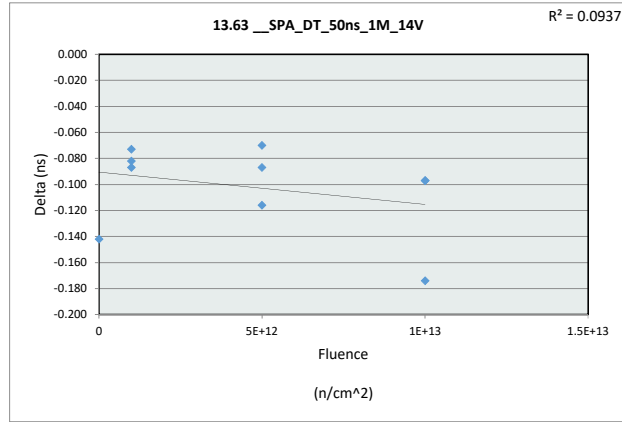
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 47.452 | 47.740 | 47.351 | 47.630 |
| Average | 47.452 | 48.141 | 48.031 | 48.384 |
| Max | 47.452 | 48.832 | 49.053 | 48.881 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

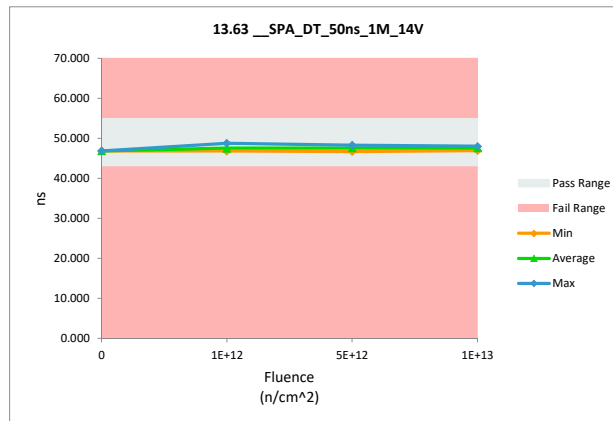
| 13.63 SPA_DT_50ns_1M_14V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 46.977 | 46.835 | -0.142 |
| 1E+12 | 45 | 47.008 | 46.926 | -0.082 |
| 1E+12 | 46 | 46.880 | 46.807 | -0.073 |
| 1E+12 | 54 | 48.857 | 48.770 | -0.087 |
| 5E+12 | 57 | 47.732 | 47.645 | -0.087 |
| 5E+12 | 58 | 46.755 | 46.685 | -0.070 |
| 5E+12 | 60 | 48.376 | 48.260 | -0.116 |
| 1E+13 | 62 | 47.074 | 46.900 | -0.174 |
| 1E+13 | 65 | 48.083 | 47.986 | -0.097 |
| 1E+13 | 66 | 47.880 | 47.783 | -0.097 |
| Max | | 48.857 | 48.770 | -0.070 |
| Average | | 47.562 | 47.460 | -0.103 |
| Min | | 46.755 | 46.685 | -0.174 |
| Std Dev | | 0.726 | 0.729 | 0.033 |



| 13.63 SPA_DT_50ns_1M_14V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 43 |

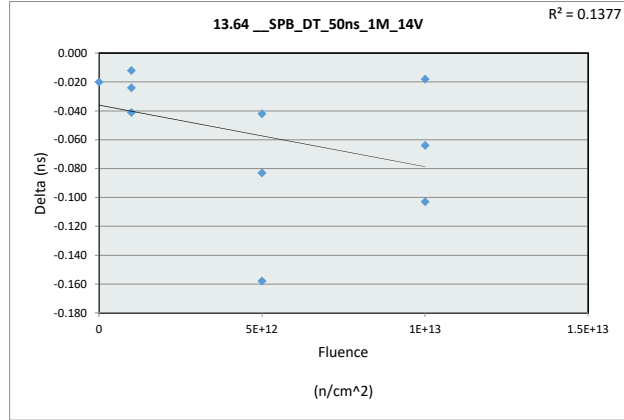
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 46.835 | 46.807 | 46.685 | 46.900 |
| Average | 46.835 | 47.501 | 47.530 | 47.556 |
| Max | 46.835 | 48.770 | 48.260 | 47.986 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

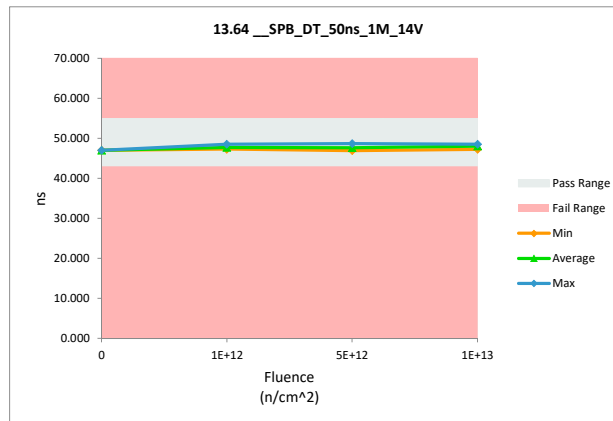
| 13.64_SPB_DT_50ns_1M_14V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 43 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 47.004 | 46.984 | -0.020 |
| 1E+12 | 45 | 47.383 | 47.371 | -0.012 |
| 1E+12 | 46 | 47.277 | 47.253 | -0.024 |
| 1E+12 | 54 | 48.554 | 48.513 | -0.041 |
| 5E+12 | 57 | 47.075 | 46.917 | -0.158 |
| 5E+12 | 58 | 47.329 | 47.246 | -0.083 |
| 5E+12 | 60 | 48.765 | 48.723 | -0.042 |
| 1E+13 | 62 | 47.367 | 47.264 | -0.103 |
| 1E+13 | 65 | 48.562 | 48.498 | -0.064 |
| 1E+13 | 66 | 48.317 | 48.299 | -0.018 |
| Max | | 48.765 | 48.723 | -0.012 |
| Average | | 47.763 | 47.707 | -0.057 |
| Min | | 47.004 | 46.917 | -0.158 |
| Std Dev | | 0.695 | 0.710 | 0.047 |



| 13.64_SPB_DT_50ns_1M_14V | |
|--------------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 43 |

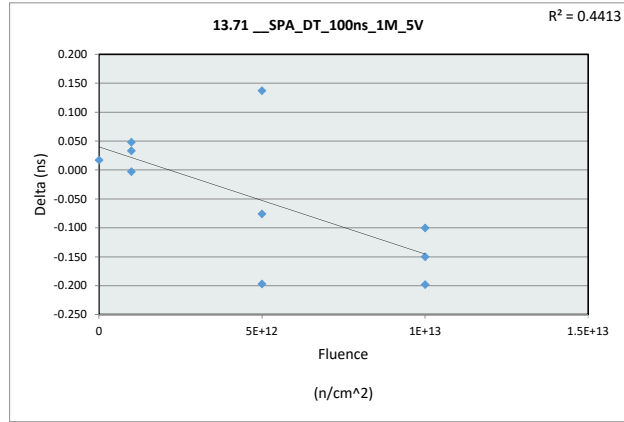
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 43.000 | 43.000 | 43.000 | 43.000 |
| Min | 46.984 | 47.253 | 46.917 | 47.264 |
| Average | 46.984 | 47.712 | 47.629 | 48.020 |
| Max | 46.984 | 48.513 | 48.723 | 48.498 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

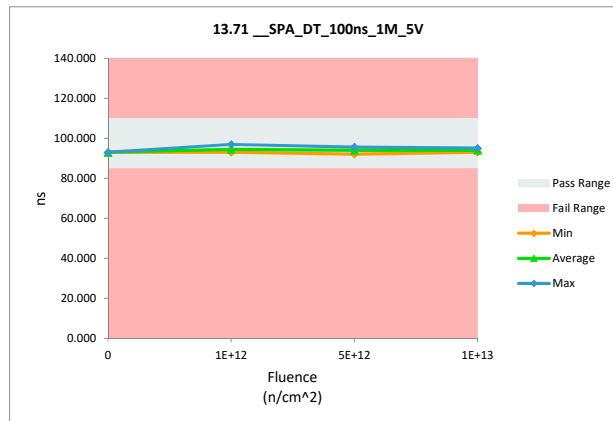
| 13.71 SPA_DT_100ns_1M_5V | |
|--------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 92.956 | 92.973 | 0.017 |
| 1E+12 | 45 | 93.486 | 93.519 | 0.033 |
| 1E+12 | 46 | 92.981 | 93.029 | 0.048 |
| 1E+12 | 54 | 96.971 | 96.968 | -0.003 |
| 5E+12 | 57 | 94.345 | 94.148 | -0.197 |
| 5E+12 | 58 | 91.981 | 92.118 | 0.137 |
| 5E+12 | 60 | 95.681 | 95.605 | -0.076 |
| 1E+13 | 62 | 93.288 | 93.090 | -0.198 |
| 1E+13 | 65 | 95.150 | 95.000 | -0.150 |
| 1E+13 | 66 | 93.984 | 93.884 | -0.100 |
| Max | | 96.971 | 96.968 | 0.137 |
| Average | | 94.082 | 94.033 | -0.049 |
| Min | | 91.981 | 92.118 | -0.198 |
| Std Dev | | 1.491 | 1.453 | 0.113 |



| 13.71 SPA_DT_100ns_1M_5V | |
|--------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

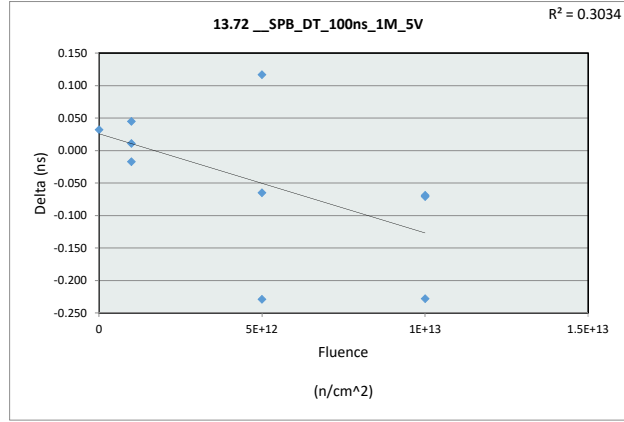
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 92.973 | 93.029 | 92.118 | 93.090 |
| Average | 92.973 | 94.505 | 93.957 | 93.991 |
| Max | 92.973 | 96.968 | 95.605 | 95.000 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

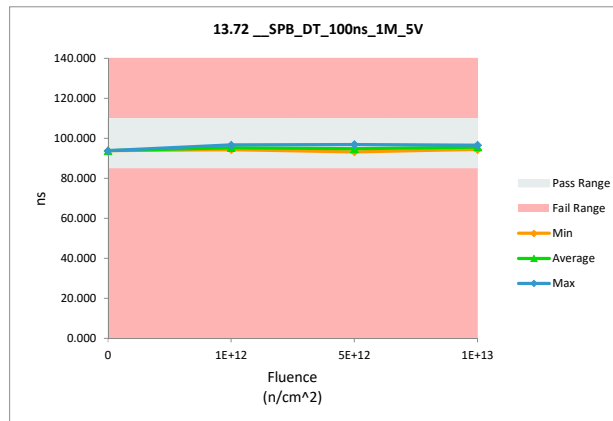
| 13.72 __SPB_DT_100ns_1M_5V | |
|----------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 93.740 | 93.772 | 0.032 |
| 1E+12 | 45 | 94.776 | 94.821 | 0.045 |
| 1E+12 | 46 | 94.389 | 94.400 | 0.011 |
| 1E+12 | 54 | 96.612 | 96.595 | -0.017 |
| 5E+12 | 57 | 93.385 | 93.156 | -0.229 |
| 5E+12 | 58 | 93.815 | 93.932 | 0.117 |
| 5E+12 | 60 | 97.002 | 96.937 | -0.065 |
| 1E+13 | 62 | 94.593 | 94.365 | -0.228 |
| 1E+13 | 65 | 96.600 | 96.531 | -0.069 |
| 1E+13 | 66 | 96.127 | 96.056 | -0.071 |
| Max | | 97.002 | 96.937 | 0.117 |
| Average | | 95.104 | 95.056 | -0.047 |
| Min | | 93.385 | 93.156 | -0.229 |
| Std Dev | | 1.355 | 1.357 | 0.112 |



| 13.72 __SPB_DT_100ns_1M_5 | |
|---------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

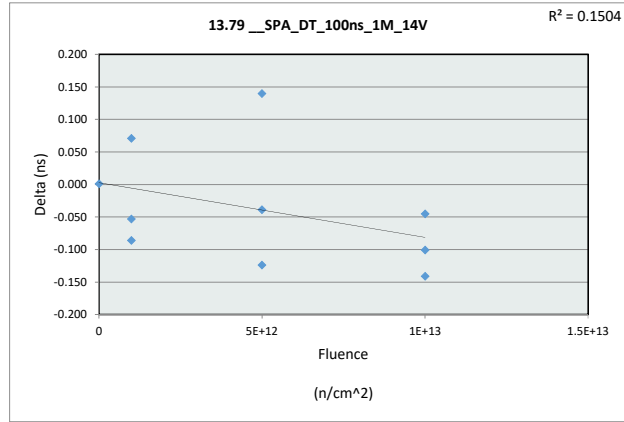
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 93.772 | 94.400 | 93.156 | 94.365 |
| Average | 93.772 | 95.272 | 94.675 | 95.651 |
| Max | 93.772 | 96.595 | 96.937 | 96.531 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

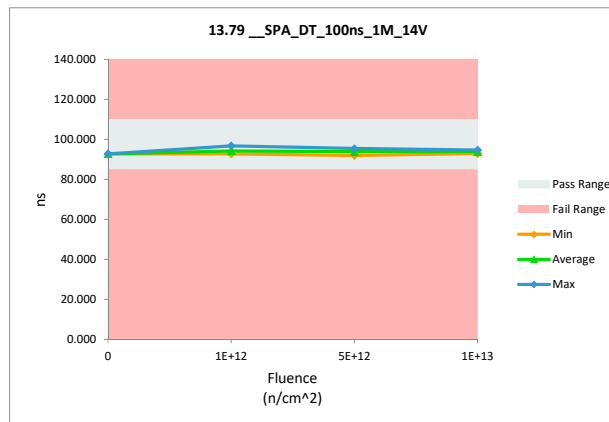
| 13.79 SPA_DT_100ns_1M_14V | |
|---------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 92.661 | 92.662 | 0.001 |
| 1E+12 | 45 | 93.255 | 93.326 | 0.071 |
| 1E+12 | 46 | 92.790 | 92.704 | -0.086 |
| 1E+12 | 54 | 96.766 | 96.713 | -0.053 |
| 5E+12 | 57 | 94.077 | 93.953 | -0.124 |
| 5E+12 | 58 | 91.790 | 91.930 | 0.140 |
| 5E+12 | 60 | 95.368 | 95.329 | -0.039 |
| 1E+13 | 62 | 92.965 | 92.864 | -0.101 |
| 1E+13 | 65 | 94.763 | 94.622 | -0.141 |
| 1E+13 | 66 | 93.730 | 93.685 | -0.045 |
| Max | | 96.766 | 96.713 | 0.140 |
| Average | | 93.817 | 93.779 | -0.038 |
| Min | | 91.790 | 91.930 | -0.141 |
| Std Dev | | 1.476 | 1.439 | 0.088 |



| 13.79 SPA_DT_100ns_1M_1 | |
|-------------------------|--------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 ns |
| Min Limit | 85 ns |

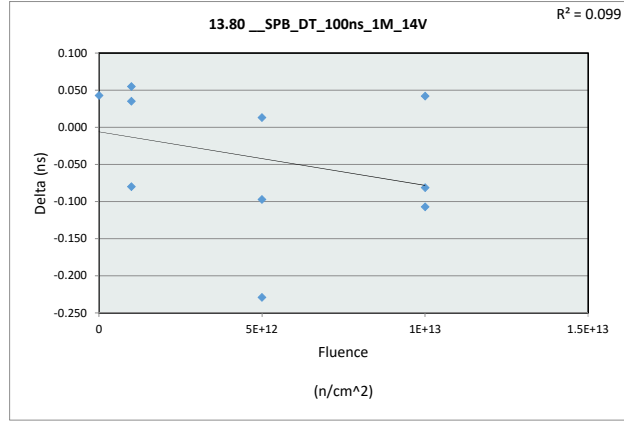
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 92.662 | 92.704 | 91.930 | 92.864 |
| Average | 92.662 | 94.248 | 93.737 | 93.724 |
| Max | 92.662 | 96.713 | 95.329 | 94.622 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

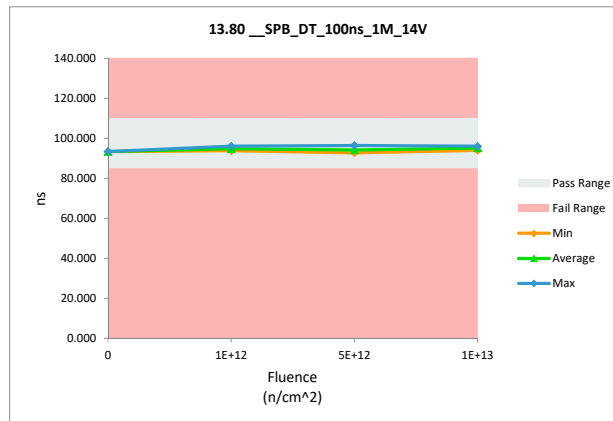
| 13.80_SPB_DT_100ns_1M_14V | |
|---------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 93.285 | 93.328 | 0.043 |
| 1E+12 | 45 | 94.327 | 94.362 | 0.035 |
| 1E+12 | 46 | 93.792 | 93.847 | 0.055 |
| 1E+12 | 54 | 96.135 | 96.055 | -0.080 |
| 5E+12 | 57 | 92.909 | 92.680 | -0.229 |
| 5E+12 | 58 | 93.338 | 93.351 | 0.013 |
| 5E+12 | 60 | 96.496 | 96.399 | -0.097 |
| 1E+13 | 62 | 94.123 | 94.016 | -0.107 |
| 1E+13 | 65 | 96.045 | 95.964 | -0.081 |
| 1E+13 | 66 | 95.535 | 95.577 | 0.042 |
| Max | | 96.496 | 96.399 | 0.055 |
| Average | | 94.599 | 94.558 | -0.041 |
| Min | | 92.909 | 92.680 | -0.229 |
| Std Dev | | 1.335 | 1.332 | 0.093 |



| 13.80_SPB_DT_100ns_1M_1 | |
|-------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

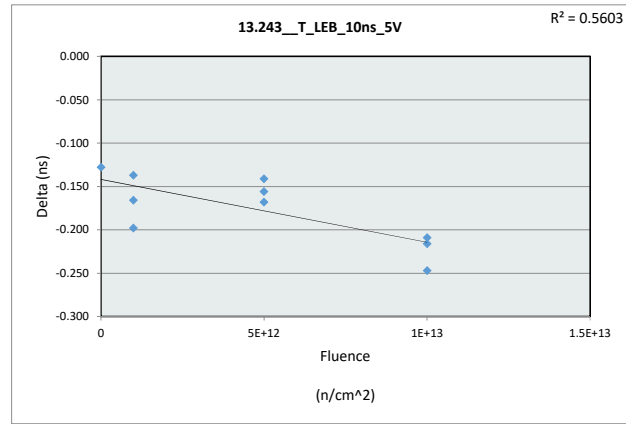
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 93.328 | 93.847 | 92.680 | 94.016 |
| Average | 93.328 | 94.755 | 94.143 | 95.186 |
| Max | 93.328 | 96.055 | 96.399 | 95.964 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

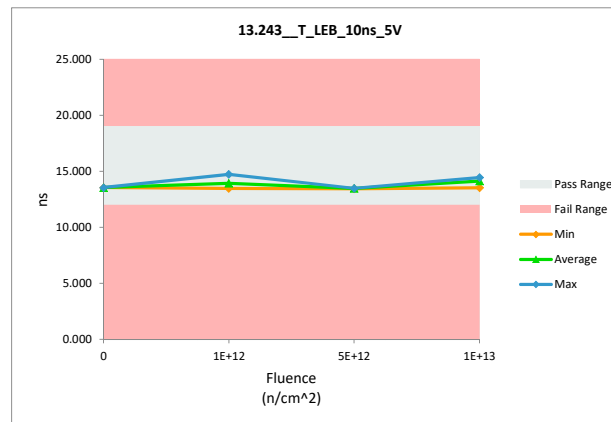
| 13.243_T_LEB_10ns_5V | |
|----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 19 |
| Min Limit | 12 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 13.669 | 13.541 | -0.128 |
| 1E+12 | 45 | 13.741 | 13.575 | -0.166 |
| 1E+12 | 46 | 14.855 | 14.718 | -0.137 |
| 1E+12 | 54 | 13.671 | 13.473 | -0.198 |
| 5E+12 | 57 | 13.656 | 13.488 | -0.168 |
| 5E+12 | 58 | 13.599 | 13.458 | -0.141 |
| 5E+12 | 60 | 13.593 | 13.437 | -0.156 |
| 1E+13 | 62 | 14.659 | 14.443 | -0.216 |
| 1E+13 | 65 | 13.751 | 13.542 | -0.209 |
| 1E+13 | 66 | 14.672 | 14.425 | -0.247 |
| Max | | 14.855 | 14.718 | -0.128 |
| Average | | 13.987 | 13.810 | -0.177 |
| Min | | 13.593 | 13.437 | -0.247 |
| Std Dev | | 0.517 | 0.504 | 0.039 |



| 13.243_T_LEB_10ns_5V | |
|----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 19 |
| Min Limit | 12 |

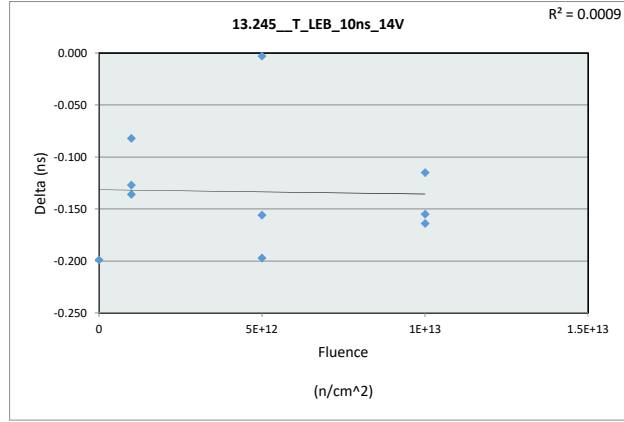
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 12.000 | 12.000 | 12.000 | 12.000 |
| Min | 13.541 | 13.473 | 13.437 | 13.542 |
| Average | 13.541 | 13.922 | 13.461 | 14.137 |
| Max | 13.541 | 14.718 | 13.488 | 14.443 |
| UL | 19.000 | 19.000 | 19.000 | 19.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

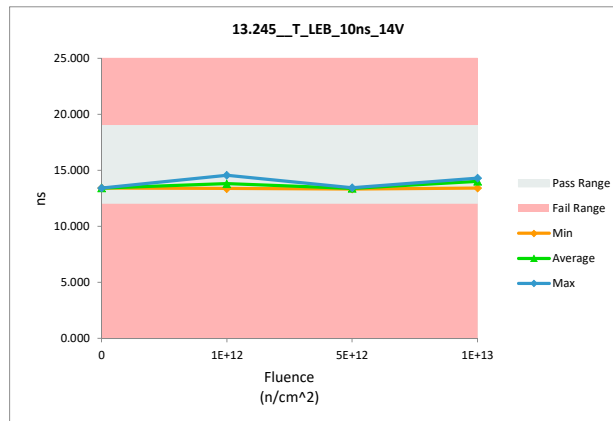
| 13.245_T_LEB_10ns_14V | |
|-----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 19 |
| Min Limit | 12 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 13.603 | 13.404 | -0.199 |
| 1E+12 | 45 | 13.587 | 13.451 | -0.136 |
| 1E+12 | 46 | 14.651 | 14.569 | -0.082 |
| 1E+12 | 54 | 13.490 | 13.363 | -0.127 |
| 5E+12 | 57 | 13.442 | 13.439 | -0.003 |
| 5E+12 | 58 | 13.535 | 13.379 | -0.156 |
| 5E+12 | 60 | 13.522 | 13.325 | -0.197 |
| 1E+13 | 62 | 14.465 | 14.301 | -0.164 |
| 1E+13 | 65 | 13.567 | 13.412 | -0.155 |
| 1E+13 | 66 | 14.417 | 14.302 | -0.115 |
| Max | | 14.651 | 14.569 | -0.003 |
| Average | | 13.828 | 13.694 | -0.133 |
| Min | | 13.442 | 13.325 | -0.199 |
| Std Dev | | 0.477 | 0.487 | 0.058 |



| 13.245_T_LEB_10ns_14V | |
|-----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 19 |
| Min Limit | 12 |

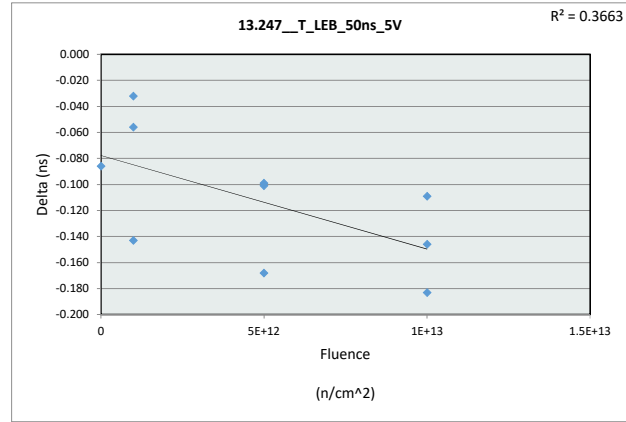
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 12.000 | 12.000 | 12.000 | 12.000 |
| Min | 13.404 | 13.363 | 13.325 | 13.412 |
| Average | 13.404 | 13.794 | 13.381 | 14.005 |
| Max | 13.404 | 14.569 | 13.439 | 14.302 |
| UL | 19.000 | 19.000 | 19.000 | 19.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

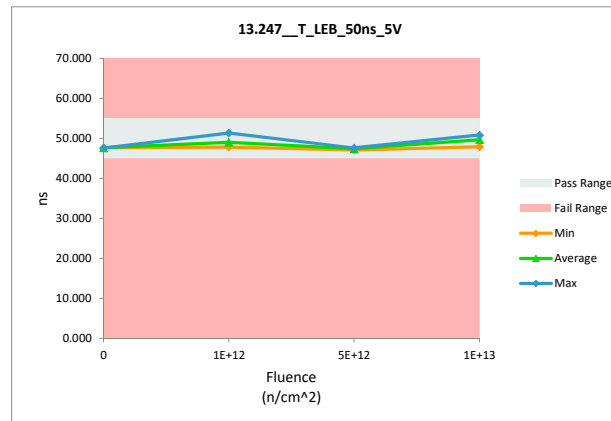
| 13.247_T_LEB_50ns_5V | |
|----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 45 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 47.672 | 47.586 | -0.086 |
| 1E+12 | 45 | 47.962 | 47.930 | -0.032 |
| 1E+12 | 46 | 51.457 | 51.314 | -0.143 |
| 1E+12 | 54 | 47.832 | 47.776 | -0.056 |
| 5E+12 | 57 | 47.693 | 47.594 | -0.099 |
| 5E+12 | 58 | 47.255 | 47.087 | -0.168 |
| 5E+12 | 60 | 47.623 | 47.522 | -0.101 |
| 1E+13 | 62 | 50.901 | 50.792 | -0.109 |
| 1E+13 | 65 | 48.045 | 47.862 | -0.183 |
| 1E+13 | 66 | 50.363 | 50.217 | -0.146 |
| Max | | 51.457 | 51.314 | -0.032 |
| Average | | 48.680 | 48.568 | -0.112 |
| Min | | 47.255 | 47.087 | -0.183 |
| Std Dev | | 1.572 | 1.561 | 0.048 |



| 13.247_T_LEB_50ns_5V | |
|----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 45 |

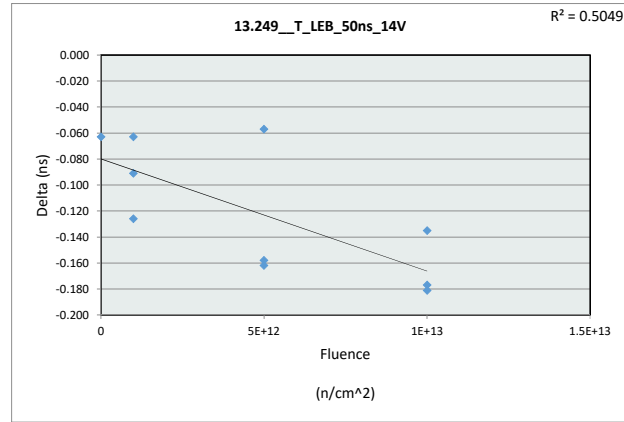
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|---------------------------------|--------|--------|--------|--------|
| LL | 45.000 | 45.000 | 45.000 | 45.000 |
| Min | 47.586 | 47.776 | 47.087 | 47.862 |
| Average | 47.586 | 49.007 | 47.401 | 49.624 |
| Max | 47.586 | 51.314 | 47.594 | 50.792 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

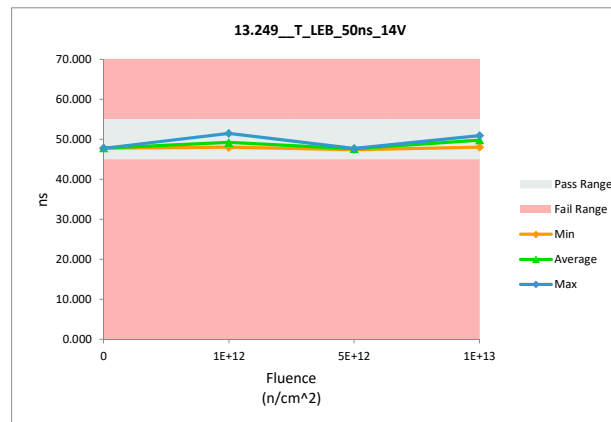
| 13.249_T_LEB_50ns_14V | |
|-----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 55 |
| Min Limit | 45 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 47.853 | 47.790 | -0.063 |
| 1E+12 | 45 | 48.200 | 48.109 | -0.091 |
| 1E+12 | 46 | 51.625 | 51.499 | -0.126 |
| 1E+12 | 54 | 48.040 | 47.977 | -0.063 |
| 5E+12 | 57 | 47.917 | 47.755 | -0.162 |
| 5E+12 | 58 | 47.447 | 47.390 | -0.057 |
| 5E+12 | 60 | 47.854 | 47.696 | -0.158 |
| 1E+13 | 62 | 51.038 | 50.903 | -0.135 |
| 1E+13 | 65 | 48.244 | 48.067 | -0.177 |
| 1E+13 | 66 | 50.586 | 50.405 | -0.181 |
| Max | | 51.625 | 51.499 | -0.057 |
| Average | | 48.880 | 48.759 | -0.121 |
| Min | | 47.447 | 47.390 | -0.181 |
| Std Dev | | 1.555 | 1.538 | 0.049 |



| 13.249_T_LEB_50ns_14V | |
|-----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 55 |
| Min Limit | 45 |

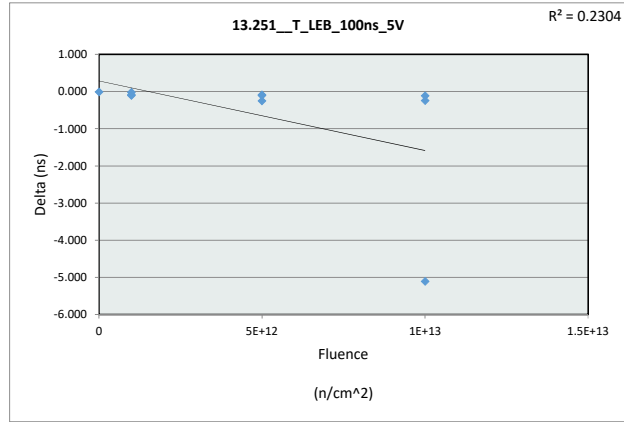
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 45.000 | 45.000 | 45.000 | 45.000 |
| Min | 47.790 | 47.977 | 47.390 | 48.067 |
| Average | 47.790 | 49.195 | 47.614 | 49.792 |
| Max | 47.790 | 51.499 | 47.755 | 50.903 |
| UL | 55.000 | 55.000 | 55.000 | 55.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

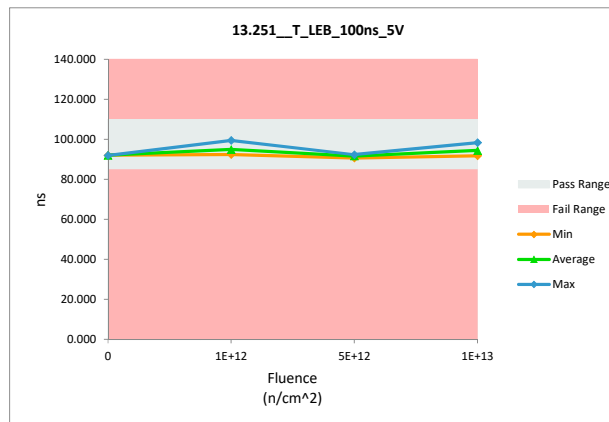
| 13.251_T_LEB_100ns_5V | |
|-----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 91.987 | 91.978 | -0.009 |
| 1E+12 | 45 | 92.990 | 92.887 | -0.103 |
| 1E+12 | 46 | 99.540 | 99.453 | -0.087 |
| 1E+12 | 54 | 92.364 | 92.341 | -0.023 |
| 5E+12 | 57 | 92.395 | 92.306 | -0.089 |
| 5E+12 | 58 | 90.887 | 90.633 | -0.254 |
| 5E+12 | 60 | 92.082 | 91.975 | -0.107 |
| 1E+13 | 62 | 98.373 | 98.258 | -0.115 |
| 1E+13 | 65 | 93.347 | 93.104 | -0.243 |
| 1E+13 | 66 | 96.857 | 91.754 | -5.103 |
| Max | | 99.540 | 99.453 | -0.009 |
| Average | | 94.082 | 93.469 | -0.613 |
| Min | | 90.887 | 90.633 | -5.103 |
| Std Dev | | 3.019 | 2.930 | 1.580 |



| 13.251_T_LEB_100ns_5V | |
|-----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

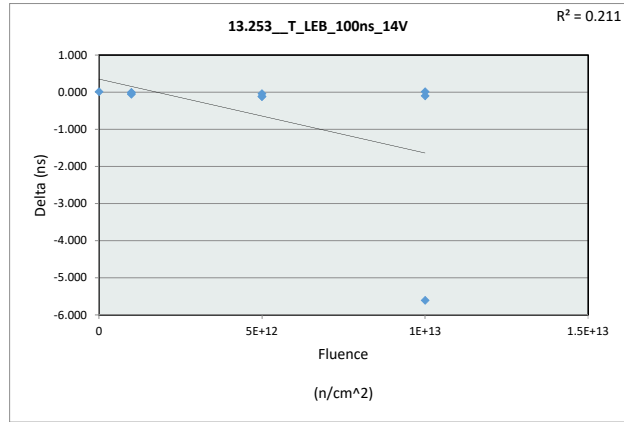
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 91.978 | 92.341 | 90.633 | 91.754 |
| Average | 91.978 | 94.894 | 91.638 | 94.372 |
| Max | 91.978 | 99.453 | 92.306 | 98.258 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

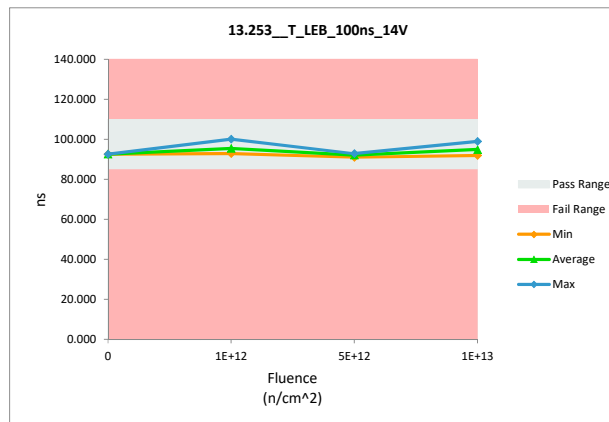
| 13.253_T_LEB_100ns_14V | |
|------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | ns |
| Max Limit | 110 |
| Min Limit | 85 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|------------------------------|----------|---------|----------|--------|
| 0 | 68 | 92.522 | 92.534 | 0.012 |
| 1E+12 | 45 | 93.457 | 93.453 | -0.004 |
| 1E+12 | 46 | 100.163 | 100.110 | -0.053 |
| 1E+12 | 54 | 92.927 | 92.907 | -0.020 |
| 5E+12 | 57 | 92.929 | 92.817 | -0.112 |
| 5E+12 | 58 | 91.092 | 91.051 | -0.041 |
| 5E+12 | 60 | 92.558 | 92.440 | -0.118 |
| 1E+13 | 62 | 98.957 | 98.969 | 0.012 |
| 1E+13 | 65 | 93.750 | 93.648 | -0.102 |
| 1E+13 | 66 | 97.490 | 91.888 | -5.602 |
| Max | | 100.163 | 100.110 | 0.012 |
| Average | | 94.585 | 93.982 | -0.603 |
| Min | | 91.092 | 91.051 | -5.602 |
| Std Dev | | 3.104 | 3.033 | 1.757 |



| 13.253_T_LEB_100ns_14V | |
|------------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 110 |
| Min Limit | 85 |

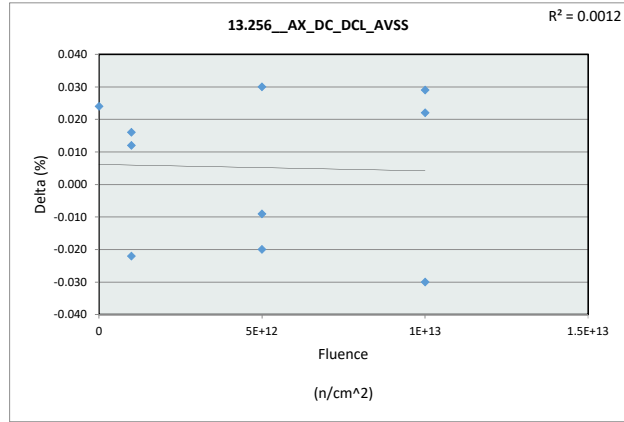
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | 85.000 | 85.000 | 85.000 | 85.000 |
| Min | 92.534 | 92.907 | 91.051 | 91.888 |
| Average | 92.534 | 95.490 | 92.103 | 94.835 |
| Max | 92.534 | 100.110 | 92.817 | 98.969 |
| UL | 110.000 | 110.000 | 110.000 | 110.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

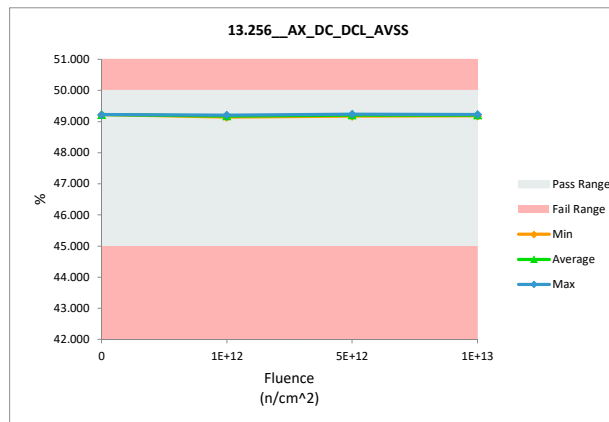
| 13.256_AX_DC_DCL_AVSS | |
|-----------------------|----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | % |
| Max Limit | 50 |
| Min Limit | 45 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 49.197 | 49.221 | 0.024 |
| 1E+12 | 45 | 49.190 | 49.206 | 0.016 |
| 1E+12 | 46 | 49.176 | 49.188 | 0.012 |
| 1E+12 | 54 | 49.161 | 49.139 | -0.022 |
| 5E+12 | 57 | 49.189 | 49.169 | -0.020 |
| 5E+12 | 58 | 49.242 | 49.233 | -0.009 |
| 5E+12 | 60 | 49.171 | 49.201 | 0.030 |
| 1E+13 | 62 | 49.232 | 49.202 | -0.030 |
| 1E+13 | 65 | 49.157 | 49.179 | 0.022 |
| 1E+13 | 66 | 49.193 | 49.222 | 0.029 |
| Max | | 49.242 | 49.233 | 0.030 |
| Average | | 49.191 | 49.196 | 0.005 |
| Min | | 49.157 | 49.139 | -0.030 |
| Std Dev | | 0.028 | 0.028 | 0.023 |



| 13.256_AX_DC_DCL_AVSS | |
|-----------------------|------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 50 % |
| Min Limit | 45 % |

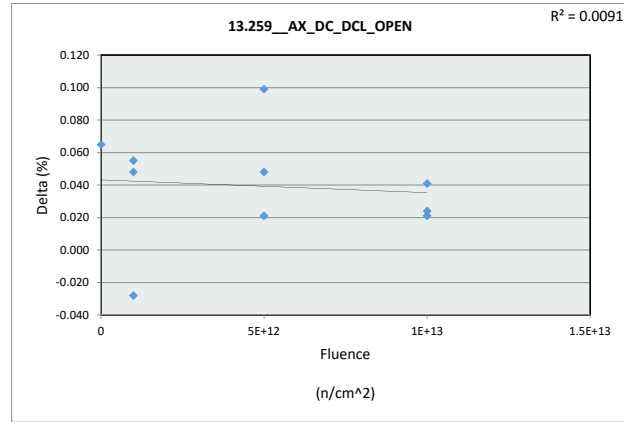
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 45.000 | 45.000 | 45.000 | 45.000 |
| Min | 49.221 | 49.139 | 49.169 | 49.179 |
| Average | 49.221 | 49.178 | 49.201 | 49.201 |
| Max | 49.221 | 49.206 | 49.233 | 49.222 |
| UL | 50.000 | 50.000 | 50.000 | 50.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

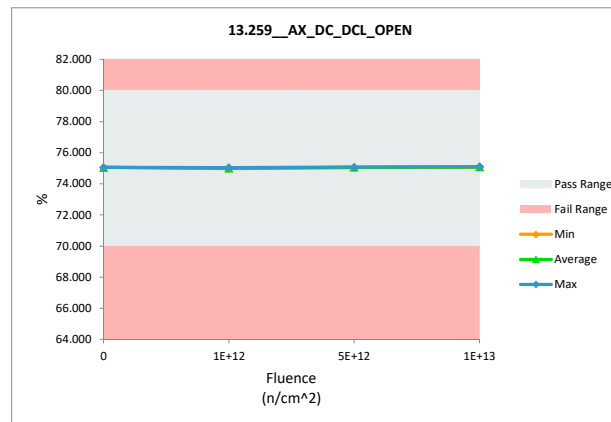
| 13.259_AX_DC_DCL_OPEN | | |
|-----------------------|----|----|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Unit | % | % |
| Max Limit | 80 | 80 |
| Min Limit | 70 | 70 |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|----------|--------|
| 0 | 68 | 74.975 | 75.040 | 0.065 |
| 1E+12 | 45 | 74.953 | 75.008 | 0.055 |
| 1E+12 | 46 | 74.988 | 75.036 | 0.048 |
| 1E+12 | 54 | 74.998 | 74.970 | -0.028 |
| 5E+12 | 57 | 74.986 | 75.034 | 0.048 |
| 5E+12 | 58 | 75.041 | 75.062 | 0.021 |
| 5E+12 | 60 | 74.961 | 75.060 | 0.099 |
| 1E+13 | 62 | 75.035 | 75.059 | 0.024 |
| 1E+13 | 65 | 75.040 | 75.061 | 0.021 |
| 1E+13 | 66 | 75.061 | 75.102 | 0.041 |
| Max | | 75.061 | 75.102 | 0.099 |
| Average | | 75.004 | 75.043 | 0.039 |
| Min | | 74.953 | 74.970 | -0.028 |
| Std Dev | | 0.038 | 0.036 | 0.033 |



| 13.259_AX_DC_DCL_OPEN | | |
|-----------------------|----|---|
| Test Site | | |
| Tester | | |
| Test Number | | |
| Max Limit | 80 | % |
| Min Limit | 70 | % |

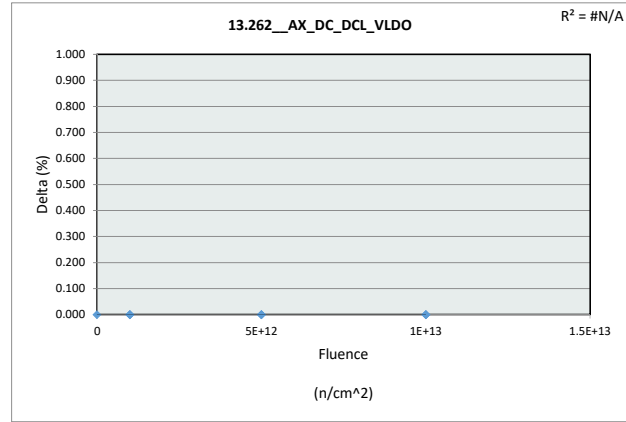
| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|--------|--------|--------|--------|
| LL | 70.000 | 70.000 | 70.000 | 70.000 |
| Min | 75.040 | 74.970 | 75.034 | 75.059 |
| Average | 75.040 | 75.005 | 75.052 | 75.074 |
| Max | 75.040 | 75.036 | 75.062 | 75.102 |
| UL | 80.000 | 80.000 | 80.000 | 80.000 |



Neutron Displacement Damage (NDD) Report TPS7H5001-SP

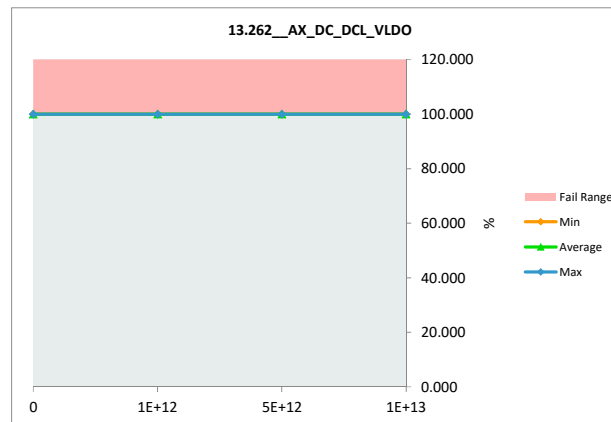
| 13.262_AX_DC_DCL_VLDO | |
|-----------------------|-----|
| Test Site | |
| Tester | |
| Test Number | |
| Unit | % |
| Max Limit | 100 |
| Min Limit | |

| Fluence (n/cm ²) | Serial # | PRE_NDD | POST_NDD | Delta |
|---------------------------------|----------|---------|-----------------------------|-------|
| 0 | 68 | 100.000 | 100.000 | 0.000 |
| 1E+12 | 45 | 100.000 | 100.000 | 0.000 |
| 1E+12 | 46 | 100.000 | 100.000 | 0.000 |
| 1E+12 | 54 | 100.000 | 100.000 | 0.000 |
| 5E+12 | 57 | 100.000 | 100.000 | 0.000 |
| 5E+12 | 58 | 100.000 | 100.000 </td <td>0.000</td> | 0.000 |
| 5E+12 | 60 | 100.000 | 100.000 | 0.000 |
| 1E+13 | 62 | 100.000 | 100.000 | 0.000 |
| 1E+13 | 65 | 100.000 | 100.000 | 0.000 |
| 1E+13 | 66 | 100.000 | 100.000 | 0.000 |
| Max | | 100.000 | 100.000 | 0.000 |
| Average | | 100.000 | 100.000 | 0.000 |
| Min | | 100.000 | 100.000 | 0.000 |
| Std Dev | | 0.000 | 0.000 | 0.000 |



| 13.262_AX_DC_DCL_VLDO | |
|-----------------------|-------|
| Test Site | |
| Tester | |
| Test Number | |
| Max Limit | 100 % |
| Min Limit | % |

| Fluence (n/cm ²) | 0 | 1E+12 | 5E+12 | 1E+13 |
|------------------------------|---------|---------|---------|---------|
| LL | | | | |
| Min | 100.000 | 100.000 | 100.000 | 100.000 |
| Average | 100.000 | 100.000 | 100.000 | 100.000 |
| Max | 100.000 | 100.000 | 100.000 | 100.000 |
| UL | 100.000 | 100.000 | 100.000 | 100.000 |



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