

# TMP9R01-SP Total Ionizing Dose (TID) Report



## ABSTRACT

This report covers the radiation characterization results of the TMP9R01-SP, high-accuracy, remote and local temperature sensor. The study was done to determine total ionizing dose (TID) effects under low dose rate (LDR) up to 100krad(Si) as a one time characterization. The results show that all samples passed within the specified limits up to 100krad(Si).

Radiation lot acceptance testing (RLAT) will be performed using five units at a dose level of 100krad(Si) for future wafer lots per MIL-STD-883 TM 1019. All future wafer lots will be tested under the same conditions. LDR TID response is the worst case. TID LDR characterization was performed per TM 1019.

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## 1 Device Information

The TMP9R01-SP device is a radiation-hardened, high-accuracy, low-power remote temperature sensor monitor with a built-in local temperature sensor. The remote temperature sensors are typically low-cost discrete NPN or PNP transistors, or substrate thermal transistors or diodes that are integral parts of microprocessors, analog-to-digital converters (ADC), digital-to-analog converters (DAC), microcontrollers, or field-programmable gate arrays (FPGA). Temperature is represented as a 12-bit digital code for both local and remote sensors, giving a resolution of 0.0625°C. The two-wire serial interface accepts the SMBus communication protocol with up to nine different pin-programmable addresses.

Advanced features such as series resistance cancellation, programmable non-ideality factor ( $\eta$ -factor), programmable offset, programmable temperature limits, and a programmable digital filter are combined to provide a robust thermal monitoring design with improved accuracy and noise immunity.

The TMP9R01-SP is designed for for multi-location, high-accuracy temperature measurements in a variety of distributed telemetry applications. The integrated local and remote temperature sensors simplify spacecraft housekeeping activities by providing a simple way of measuring temperature gradients. The device is specified for operation over a supply voltage range of 1.7V to 3.6V, and a temperature range of –55°C to 125°C.

### 1.1 Device Details

[Table 1-1](#) lists the TMP9R01-SP device information used for TID LDR characterization and qualification.

**Table 1-1. Device and Exposure Details**

| TID HDR Details: Up To 50krad(Si) |                                   |
|-----------------------------------|-----------------------------------|
| TI Device Number                  | TMP9R01-SP                        |
| VID/SMD Number                    | V62/5962-17218                    |
| Package                           | 10-Pin VSSOP (DGSL)               |
| Technology                        | LBC8LV                            |
| Die Lot Number                    | 5067316                           |
| A/T Lot Number                    | 5081959                           |
| Lot Trace Code                    | 51CLN0K                           |
| Quantity Tested                   | 20 irradiated devices + 5 control |
| Lot Accept or Reject              | Devices passed 100krad(Si)        |
| LDR Radiation Facility            | VPTRad, Chelmsford Massachusetts  |
| LDR Dose Level                    | Up to 100krad(Si)                 |
| LDR Dose Rate                     | 0.01rad(Si)/s                     |
| LDR Radiation Source              | JLSA 81-22 Co-60                  |
| Irradiation Temperature           | Ambient, room temperature         |

## 2 Total Dose Test Setup

### 2.1 Test Overview

The TMP9R01-SP samples were irradiated at a high dose rate of 0.01rad(Si)/s up to 100krad(Si) and then put through full electrical parametric testing on the production automated test equipment (ATE). The samples were functional and passed all electrical parametric tests with readings within datasheet electrical specification limits.

### 2.2 Test Description and Facilities

The TMP9R01-SP LDR exposure was performed on biased and unbiased devices in a Co-60 gamma cell at VPT Rad facility in Chelmsford, Massachusetts. A uniform radiation beam is emitted through a single divergent beam port on the irradiator. A range of dose rates from 0.01rad(Si)/sec to 0.1rad(Si)/sec is available by varying the distance to the beam port. Lead-aluminum test boxes provide energy spectrum hardening for the device under test (DUT). The DUT is positioned using a precise and versatile positioning system. An adjacent laboratory area provides a location for bias power supplies, monitoring, and test instrumentation. After exposure, the devices were packed in dry ice (per MIL-STD-883 Method 1019.9 section 3.10) and returned to TI Dallas for a full post-radiation electrical evaluation using Texas Instruments production ATE. ATE guard band test limits are set within SMD electrical limits to verify a minimum Cpk and test error margin based on initial qualification and characterization data. Post-radiation measurements were taken within 30 minutes of removal of the devices from the dry ice container. The devices were allowed to reach room temperature prior to electrical post-radiation measurements.

### 2.3 Test Setup Details

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

#### 2.3.1 Bias Diagram

The TMP9R01-SP was tested in both biased and unbiased conditions. [Figure 2-1](#) shows the bias condition for each pin during irradiation.

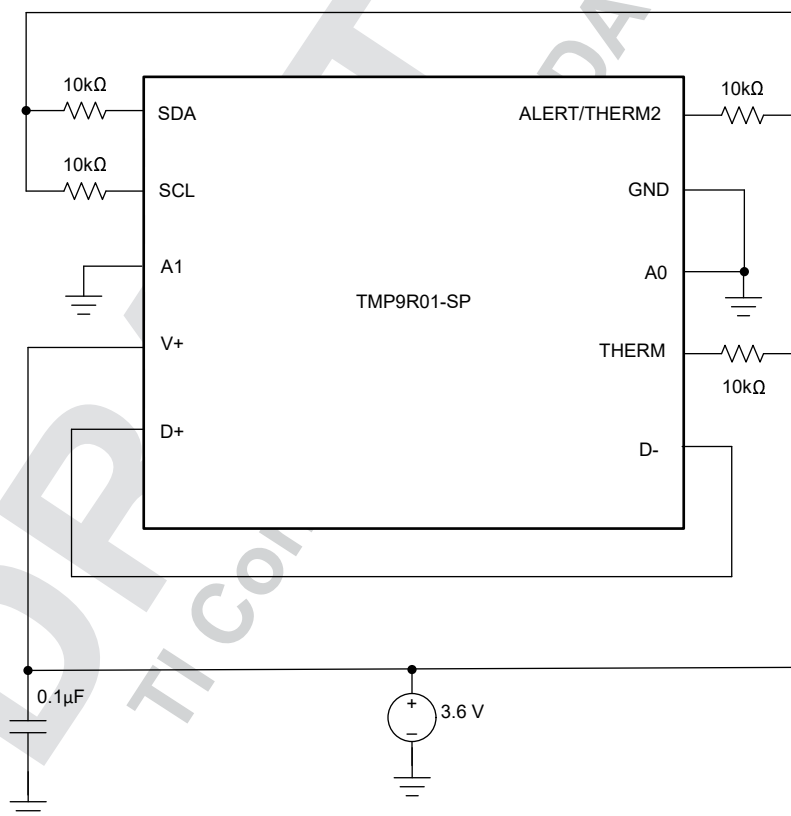


Figure 2-1. TMP9R01-SP Bias Diagram

## 2.4 Test Configuration and Condition

Devices at LDR were stressed at 3krad(Si), 10krad(Si), 30krad(Si), 50krad(Si), and 100krad(Si) for biased and unbiased conditions. End point electrical testing is performed on irradiated devices to verify the devices are within specified SMD electrical test limits. MIL-STD-883, Test Method 1019.9, Condition D was used in this case. For purposes of data analysis, units at each radiation level were assigned unique serial numbers. For testing at the radiation facility, five units biased and five units unbiased were submitted in one group from 3krad(Si) to 50krad(Si), and another group of five units biased and five units unbiased up to 100krad(Si).

Table 2-1 shows serialized devices used for LDR RHA characterization.

**Table 2-1. LDR Biased Device Information**

| LDR Dose Rate = 10mrad(Si)/s |          |                    |                       |                       |                       |                       |
|------------------------------|----------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Exposure Levels              |          | 3krad(Si)          | 10krad(Si)            | 30krad(Si)            | 50krad(Si)            | 100krad(Si)           |
| Device:<br>TMP9R01-SP        | Biased   | 1, 2, 3, 4, 5      | 11, 12, 13,<br>14, 15 | 21, 22, 23,<br>24, 25 | 31, 32, 33,<br>34, 35 | 41, 42, 43,<br>44, 45 |
|                              | Unbiased | 6, 7, 8, 9, 10     | 16, 17, 18,<br>19, 20 | 26, 27, 28,<br>29, 30 | 36, 37, 38,<br>39, 40 | 46, 47, 48,<br>49, 50 |
|                              | Control  | 51, 52, 53, 54, 55 |                       |                       |                       |                       |

## 3 TID Characterization Test Results

### 3.1 TID Characterization Summary Results

The parametric data for the TMP9R01-SP passes up to 100krad(Si) LDR TID irradiation. The drifts of the electrical parameters through LDR were within the datasheet limits.

Overall, the TMP9R01-SP showed a strong degree of hardness to HDR TID irradiation up to 100krad(Si). The measurements taken post-irradiation for each sample set showed a marginal shift for most parameters at the device's TID specification level. The parameters that did show a degree of change between pre- and post-irradiation were still within the electrical performance characteristics specified in the datasheet electrical parameters.

See [Appendix A](#) for HDR report up to 100krad(Si).

### 3.2 Specification Compliance Matrix

**Table 3-1. Electrical Parameters Table**

V+ = 1.7V to 3.6V, unless otherwise noted, TA = -55°C to 125°C, unless otherwise noted.

| PARAMETER                          |                                                        | CONDITIONS                                              | SUB-GROUP   | MIN      | TYP    | MAX          | UNIT | TEST NUMBER                              |
|------------------------------------|--------------------------------------------------------|---------------------------------------------------------|-------------|----------|--------|--------------|------|------------------------------------------|
| <b>TEMPERATURE MEASUREMENT</b>     |                                                        |                                                         |             |          |        |              |      |                                          |
| T <sub>LOCAL</sub>                 | Local temperature sensor accuracy                      |                                                         | [1, 2, 3]   | -2       | ±0.5   | 2            | °C   | 4.24, 4.26, 4.27                         |
| T <sub>REMOTE</sub>                | Remote temperature sensor accuracy                     |                                                         | [1, 2, 3]   | -1.5     | ±0.125 | 1.5          | °C   | 4.10, 4.11, 4.12, 4.14, 4.15, 4.17, 4.18 |
| T <sub>ERROR_P S</sub>             | Temperature error supply sensitivity (local or remote) | V+ = 1.7V to 3.6V                                       | [1, 2, 3]   | -0.3     | ±0.1   | 0.3          | °C/V | 4.29                                     |
| T <sub>RES</sub>                   | Temperature resolution (local and remote)              |                                                         |             |          | 0.0625 |              | °C   |                                          |
|                                    | ADC resolution                                         |                                                         | [4, 5, 6]   |          | 12     |              | Bits |                                          |
| t <sub>CONV</sub>                  | ADC conversion time                                    | One-shot mode, per channel (local or remote)            | [9, 10, 11] |          | 15     | 17           | ms   | 4.30                                     |
| R <sub>SERIES</sub>                | Remote sensor source current                           | High                                                    | [1, 2, 3]   | 85       | 120    | 155          | μA   | 4.4                                      |
|                                    |                                                        | Medium                                                  |             | 30       | 45     | 60           |      | 4.2                                      |
|                                    |                                                        | Low                                                     |             | 5        | 7.5    | 10           |      | 4.0                                      |
| η                                  | Remote transistor ideality factor                      | TMP9R01-SEP/<br>TMP9R01-SP<br>optimized ideality factor |             |          | 1.008  |              |      |                                          |
| <b>SERIAL INTERFACE (SCL, SDA)</b> |                                                        |                                                         |             |          |        |              |      |                                          |
| V <sub>IH</sub>                    | High-level input voltage                               |                                                         | [1, 2, 3]   | 1.4      |        |              | V    |                                          |
| V <sub>IL</sub>                    | Low-level input voltage                                |                                                         | [1, 2, 3]   |          |        | 0.45         | V    | 2.4, 2.5, 2.6                            |
| V <sub>HYST</sub>                  | Hysteresis                                             |                                                         |             |          | 200    |              | mV   |                                          |
|                                    | SDA output-low sink current                            |                                                         | [1, 2, 3]   | 6        |        |              | mA   |                                          |
| V <sub>OL</sub>                    | Low-level output voltage                               | I <sub>O</sub> = -6mA                                   | [1, 2, 3]   |          | 0.15   | 0.4          | V    |                                          |
| I <sub>IN</sub>                    | Serial bus input leakage current                       | 0V ≤ V <sub>IN</sub> ≤ 3.6V                             | [1, 2, 3]   | -1       |        | 1            | μA   |                                          |
| C <sub>IN</sub>                    | Serial bus input capacitance                           | SCL                                                     |             |          | 3.5    |              | pF   |                                          |
|                                    |                                                        | SDA                                                     |             |          | 5      |              |      |                                          |
|                                    | Serial bus clock frequency                             |                                                         | [9, 10, 11] |          |        | 2.17         | MHz  |                                          |
|                                    | Serial bus timeout                                     |                                                         | [9, 10, 11] | 20       | 25     | 30           | ms   | 2.24                                     |
| <b>DIGITAL INPUTS (A0, A1)</b>     |                                                        |                                                         |             |          |        |              |      |                                          |
| V <sub>IH</sub>                    | High-level input voltage                               |                                                         | [1, 2, 3]   | 0.9x(V+) |        | (V+)<br>+0.3 | V    |                                          |

**Table 3-1. Electrical Parameters Table (continued)**

V+ = 1.7V to 3.6V, unless otherwise noted, TA = -55°C to 125°C, unless otherwise noted.

| PARAMETER                                     |                                   | CONDITIONS                                                 | SUB-GROUP | MIN  | TYP  | MAX                   | UNIT | TEST NUMBER |
|-----------------------------------------------|-----------------------------------|------------------------------------------------------------|-----------|------|------|-----------------------|------|-------------|
| V <sub>IL</sub>                               | Low-level input voltage           |                                                            | [1, 2, 3] | -0.3 |      | 0.1x(V <sub>+</sub> ) | V    |             |
| I <sub>IN</sub>                               | Input leakage current             | 0V ≤ V <sub>IN</sub> ≤ 3.6V                                | [1, 2, 3] | -1   |      | 1                     | μA   |             |
| C <sub>IN</sub>                               | Input capacitance                 |                                                            |           |      | 4.5  |                       | pF   |             |
| <b>DIGITAL OUTPUTS (THERM1, ALERT/THERM2)</b> |                                   |                                                            |           |      |      |                       |      |             |
|                                               | Output-low sink current           |                                                            | [1, 2, 3] | 6    |      |                       | mA   |             |
| V <sub>OL</sub>                               | Low-level output voltage          | I <sub>O</sub> = -6mA                                      | [1, 2, 3] |      | 0.15 | 0.4                   | V    |             |
| I <sub>OH</sub>                               | High-level output leakage current | V <sub>O</sub> = V+                                        | [1, 2, 3] |      |      | 1                     | μA   |             |
| <b>POWER SUPPLY</b>                           |                                   |                                                            |           |      |      |                       |      |             |
| V+                                            | Specified supply voltage range    |                                                            | [1, 2, 3] | 1.7  |      | 3.6                   | V    |             |
| I <sub>Q</sub>                                | Quiescent current                 | Active conversion, local sensor                            | [1, 2, 3] |      | 240  | 375                   | μA   | 1.12, 5.2   |
|                                               |                                   | Active conversion, remote sensors                          | [1, 2, 3] |      | 400  | 600                   |      | 1.13, 5.3   |
|                                               |                                   | Standby mode (between conversions)                         | [1, 2, 3] |      | 15   | 50                    |      | 1.11, 5.1   |
|                                               |                                   | Shutdown mode, serial bus inactive                         | [1, 2, 3] |      | 3    | 25                    |      | 1.10, 5.0   |
|                                               |                                   | Shutdown mode, serial bus active, f <sub>S</sub> = 400kHz  |           |      | 90   |                       |      |             |
|                                               |                                   | Shutdown mode, serial bus active, f <sub>S</sub> = 2.17MHz |           |      | 350  |                       |      |             |
| POR                                           | Power-on reset threshold          | Rising edge                                                | [1, 2, 3] |      | 1.41 | 1.55                  | V    |             |

## 4 Reference Documents

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

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## Appendix A: LDR TID Report Data

This appendix provides the TMP9R01-SP TID LDR report. The report shows the variation for each parameter up to 100krad(Si).

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Delta Threshold 10.00%

## TID Report TMP9R01-SP

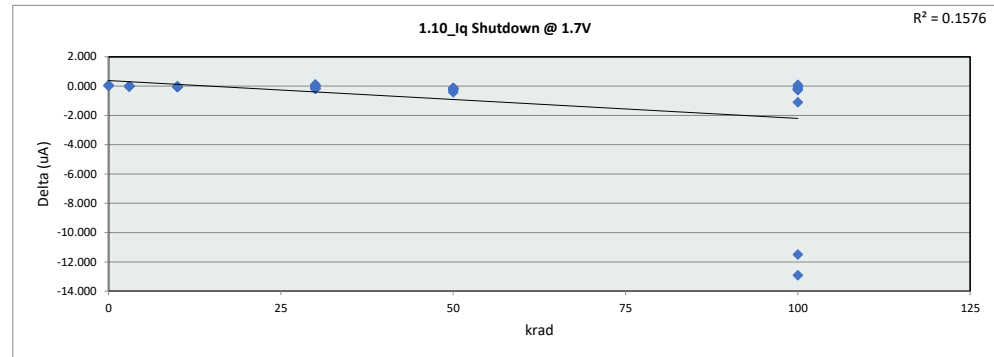
# TID Report

## TMP9R01-SP

### 1.10\_Iq Shutdown @ 1.7V

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | uA        | uA        |
| Max Limit   | 25        | 25        |
| Min Limit   | 0         | 0         |

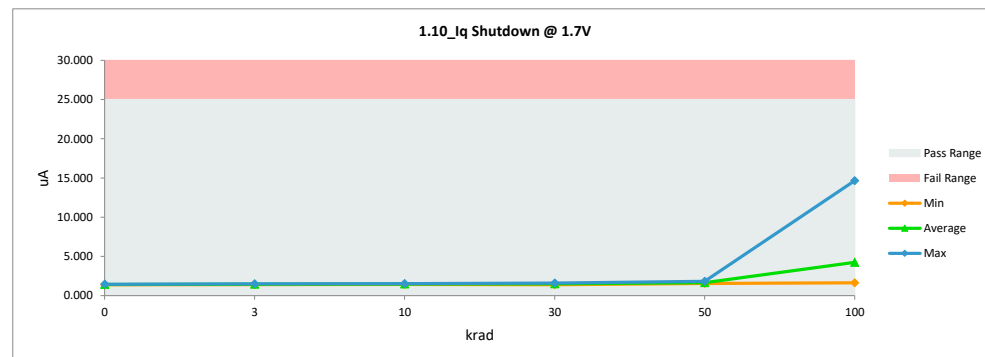
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta   |
|------|----------|---------------|---------------|---------|
| 3    | 1        | 1.411         | 1.424         | -0.013  |
| 3    | 2        | 1.415         | 1.412         | 0.003   |
| 3    | 3        | 1.410         | 1.409         | 0.001   |
| 3    | 4        | 1.408         | 1.416         | -0.008  |
| 3    | 5        | 1.422         | 1.424         | -0.002  |
| 3    | 6        | 1.424         | 1.425         | -0.001  |
| 3    | 7        | 1.458         | 1.450         | 0.008   |
| 3    | 8        | 1.497         | 1.490         | 0.007   |
| 3    | 9        | 1.489         | 1.487         | 0.002   |
| 3    | 10       | 1.504         | 1.495         | 0.009   |
| 10   | 11       | 1.411         | 1.446         | -0.035  |
| 10   | 12       | 1.415         | 1.463         | -0.048  |
| 10   | 13       | 1.410         | 1.456         | -0.046  |
| 10   | 14       | 1.408         | 1.453         | -0.045  |
| 10   | 15       | 1.422         | 1.441         | -0.019  |
| 10   | 16       | 1.424         | 1.439         | -0.015  |
| 10   | 17       | 1.458         | 1.499         | -0.041  |
| 10   | 18       | 1.497         | 1.520         | -0.023  |
| 10   | 19       | 1.489         | 1.519         | -0.030  |
| 10   | 20       | 1.504         | 1.533         | -0.029  |
| 30   | 21       | 1.411         | 1.501         | -0.090  |
| 30   | 22       | 1.415         | 1.577         | -0.162  |
| 30   | 23       | 1.410         | 1.573         | -0.163  |
| 30   | 24       | 1.408         | 1.565         | -0.157  |
| 30   | 25       | 1.422         | 1.588         | -0.166  |
| 30   | 26       | 1.424         | 1.412         | 0.012   |
| 30   | 27       | 1.458         | 1.445         | 0.013   |
| 30   | 28       | 1.497         | 1.436         | 0.061   |
| 30   | 29       | 1.489         | 1.447         | 0.042   |
| 30   | 30       | 1.504         | 1.389         | 0.115   |
| 50   | 31       | 1.411         | 1.684         | -0.273  |
| 50   | 32       | 1.415         | 1.620         | -0.205  |
| 50   | 33       | 1.410         | 1.821         | -0.411  |
| 50   | 34       | 1.408         | 1.658         | -0.250  |
| 50   | 35       | 1.422         | 1.572         | -0.150  |
| 50   | 36       | 1.424         | 1.552         | -0.128  |
| 50   | 37       | 1.458         | 1.617         | -0.159  |
| 50   | 38       | 1.497         | 1.610         | -0.113  |
| 50   | 39       | 1.489         | 1.616         | -0.127  |
| 50   | 40       | 1.504         | 1.639         | -0.135  |
| 100  | 41       | 1.690         | 2.793         | -1.103  |
| 100  | 42       | 1.739         | 14.653        | -12.914 |
| 100  | 43       | 1.775         | 1.680         | 0.095   |
| 100  | 44       | 1.848         | 1.856         | -0.008  |
| 100  | 45       | 1.665         | 13.155        | -11.490 |
| 100  | 46       | 1.467         | 1.661         | -0.194  |
| 100  | 47       | 1.490         | 1.651         | -0.161  |
| 100  | 48       | 1.411         | 1.671         | -0.260  |
| 100  | 49       | 1.440         | 1.667         | -0.227  |



### 1.10\_Iq Shutdown @ 1.7V

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 25 uA     |
| Min Limit   | 0 uA      |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| Min     | 1.392  | 1.409  | 1.439  | 1.389  | 1.552  | 1.636  |
| Average | 1.418  | 1.443  | 1.477  | 1.493  | 1.639  | 4.242  |
| Max     | 1.446  | 1.495  | 1.533  | 1.588  | 1.821  | 14.653 |
| UL      | 25.000 | 25.000 | 25.000 | 25.000 | 25.000 | 25.000 |



# TID Report TMP9R01-SP

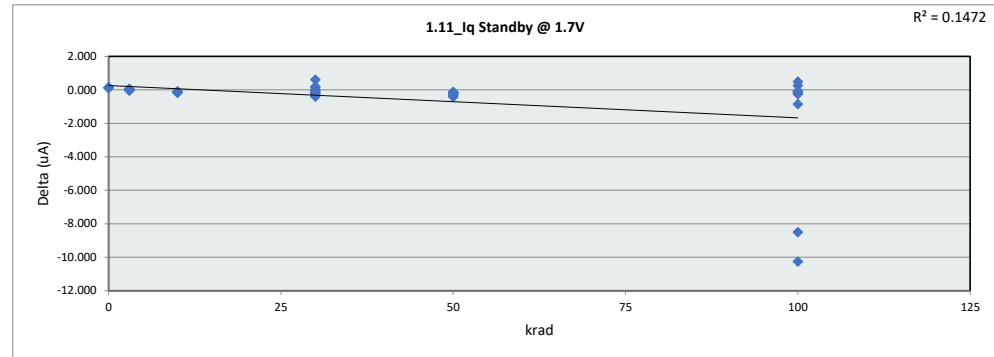
|         |    |       |        |         |
|---------|----|-------|--------|---------|
| 100     | 50 | 1.491 | 1.636  | -0.145  |
| 0       | 51 | 1.445 | 1.396  | 0.049   |
| 0       | 52 | 1.498 | 1.446  | 0.052   |
| 0       | 53 | 1.475 | 1.426  | 0.049   |
| 0       | 54 | 1.472 | 1.429  | 0.043   |
| 0       | 55 | 1.445 | 1.392  | 0.053   |
| Max     |    | 1.848 | 14.653 | 0.115   |
| Average |    | 1.475 | 2.001  | -0.526  |
| Min     |    | 1.408 | 1.389  | -12.914 |
| Std Dev |    | 0.095 | 2.347  | 2.300   |

# TID Report

## TMP9R01-SP

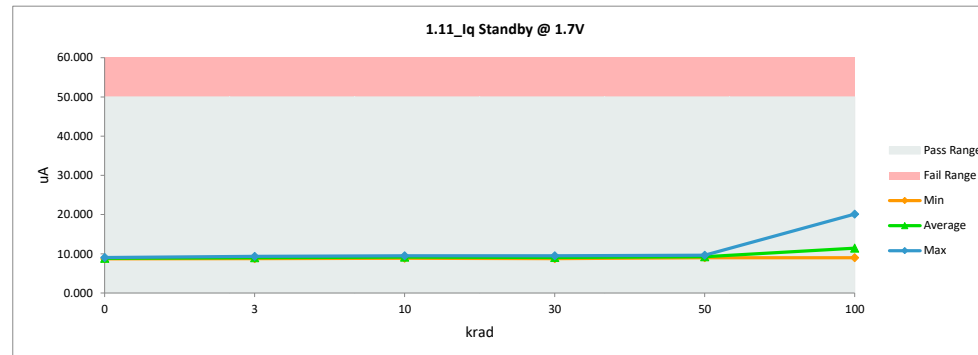
| 1.11_Iq Standby @ 1.7V |           |           |
|------------------------|-----------|-----------|
| Test Site              | J2S       | J2S       |
| Tester                 | FETS36405 | FETS36406 |
| Test Number            | EE131301  | EE131301  |
| Unit                   | uA        | uA        |
| Max Limit              | 50        | 50        |
| Min Limit              | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta   |
|------|----------|---------------|---------------|---------|
| 3    | 1        | 9.321         | 9.337         | -0.016  |
| 3    | 2        | 9.301         | 9.339         | -0.038  |
| 3    | 3        | 8.746         | 8.734         | 0.012   |
| 3    | 4        | 8.734         | 8.762         | -0.028  |
| 3    | 5        | 8.888         | 8.885         | 0.003   |
| 3    | 6        | 9.355         | 9.360         | -0.005  |
| 3    | 7        | 9.052         | 9.019         | 0.033   |
| 3    | 8        | 8.852         | 8.861         | -0.009  |
| 3    | 9        | 8.978         | 8.944         | 0.034   |
| 3    | 10       | 8.976         | 8.928         | 0.048   |
| 10   | 11       | 9.321         | 9.491         | -0.170  |
| 10   | 12       | 9.301         | 9.452         | -0.151  |
| 10   | 13       | 8.746         | 8.846         | -0.100  |
| 10   | 14       | 8.734         | 8.906         | -0.172  |
| 10   | 15       | 8.888         | 9.036         | -0.148  |
| 10   | 16       | 9.355         | 9.493         | -0.138  |
| 10   | 17       | 9.052         | 9.181         | -0.129  |
| 10   | 18       | 8.852         | 8.966         | -0.114  |
| 10   | 19       | 8.978         | 9.104         | -0.126  |
| 10   | 20       | 8.976         | 9.098         | -0.122  |
| 30   | 21       | 9.321         | 9.506         | -0.185  |
| 30   | 22       | 9.301         | 9.281         | 0.020   |
| 30   | 23       | 8.746         | 9.004         | -0.258  |
| 30   | 24       | 8.734         | 9.149         | -0.415  |
| 30   | 25       | 8.888         | 9.142         | -0.254  |
| 30   | 26       | 9.355         | 8.752         | 0.603   |
| 30   | 27       | 9.052         | 8.892         | 0.160   |
| 30   | 28       | 8.852         | 8.916         | -0.064  |
| 30   | 29       | 8.978         | 9.084         | -0.106  |
| 30   | 30       | 8.976         | 8.790         | 0.186   |
| 50   | 31       | 9.321         | 9.612         | -0.291  |
| 50   | 32       | 9.301         | 9.518         | -0.217  |
| 50   | 33       | 8.746         | 9.172         | -0.426  |
| 50   | 34       | 8.734         | 9.085         | -0.351  |
| 50   | 35       | 8.888         | 9.022         | -0.134  |
| 50   | 36       | 9.355         | 9.538         | -0.183  |
| 50   | 37       | 9.052         | 9.291         | -0.239  |
| 50   | 38       | 8.852         | 8.988         | -0.136  |
| 50   | 39       | 8.978         | 9.154         | -0.176  |
| 50   | 40       | 8.976         | 9.150         | -0.174  |
| 100  | 41       | 9.168         | 10.029        | -0.861  |
| 100  | 42       | 9.853         | 20.111        | -10.258 |
| 100  | 43       | 9.437         | 9.180         | 0.257   |
| 100  | 44       | 9.825         | 9.343         | 0.482   |
| 100  | 45       | 9.895         | 18.399        | -8.504  |
| 100  | 46       | 9.603         | 9.705         | -0.102  |
| 100  | 47       | 8.915         | 8.988         | -0.073  |
| 100  | 48       | 8.836         | 9.089         | -0.253  |
| 100  | 49       | 9.446         | 9.685         | -0.239  |



| 1.11_Iq Standby @ 1.7V |           |    |
|------------------------|-----------|----|
| Test Site              | J2S       |    |
| Tester                 | FETS36405 |    |
| Test Number            | EE131301  |    |
| Max Limit              | 50        | uA |
| Min Limit              | 0         | uA |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| Min     | 8.710  | 8.734  | 8.846  | 8.752  | 8.988  | 8.988  |
| Average | 8.846  | 9.017  | 9.157  | 9.052  | 9.253  | 11.429 |
| Max     | 9.039  | 9.360  | 9.493  | 9.506  | 9.612  | 20.111 |
| UL      | 50.000 | 50.000 | 50.000 | 50.000 | 50.000 | 50.000 |



# TID Report TMP9R01-SP

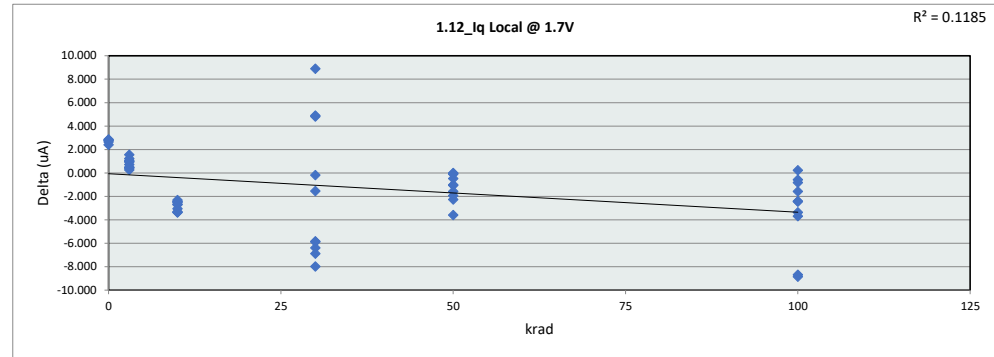
|         |    |       |        |         |
|---------|----|-------|--------|---------|
| 100     | 50 | 9.609 | 9.763  | -0.154  |
| 0       | 51 | 8.844 | 8.710  | 0.134   |
| 0       | 52 | 8.984 | 8.858  | 0.126   |
| 0       | 53 | 9.000 | 8.875  | 0.125   |
| 0       | 54 | 9.172 | 9.039  | 0.133   |
| 0       | 55 | 8.873 | 8.746  | 0.127   |
| Max     |    | 9.895 | 20.111 | 0.603   |
| Average |    | 9.096 | 9.515  | -0.419  |
| Min     |    | 8.734 | 8.710  | -10.258 |
| Std Dev |    | 0.302 | 1.939  | 1.778   |

# TID Report

## TMP9R01-SP

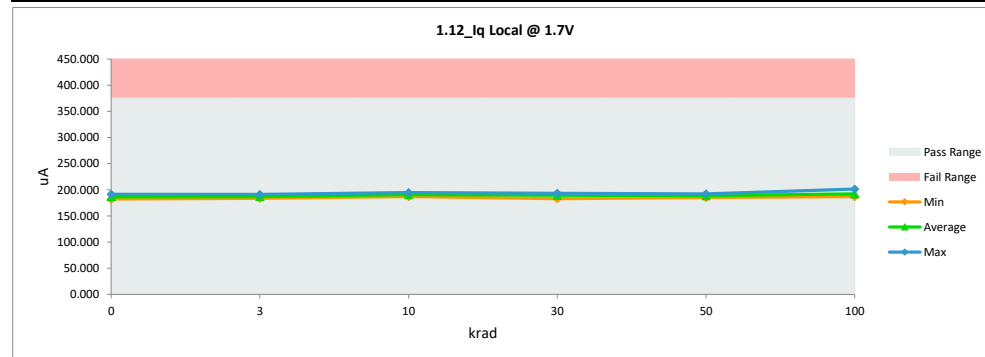
| 1.12_Iq Local @ 1.7V |           |           |
|----------------------|-----------|-----------|
| Test Site            | J2S       | J2S       |
| Tester               | FETS36405 | FETS36406 |
| Test Number          | EE131301  | EE131301  |
| Unit                 | uA        | uA        |
| Max Limit            | 375       | 375       |
| Min Limit            | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 184.724       | 184.326       | 0.398  |
| 3    | 2        | 184.364       | 183.647       | 0.717  |
| 3    | 3        | 186.295       | 185.326       | 0.969  |
| 3    | 4        | 186.690       | 186.436       | 0.254  |
| 3    | 5        | 187.420       | 186.474       | 0.946  |
| 3    | 6        | 189.170       | 188.702       | 0.468  |
| 3    | 7        | 190.684       | 189.126       | 1.558  |
| 3    | 8        | 191.659       | 191.168       | 0.491  |
| 3    | 9        | 184.935       | 183.881       | 1.054  |
| 3    | 10       | 191.875       | 190.646       | 1.229  |
| 10   | 11       | 184.724       | 188.039       | -3.315 |
| 10   | 12       | 184.364       | 187.070       | -2.706 |
| 10   | 13       | 186.295       | 188.826       | -2.531 |
| 10   | 14       | 186.690       | 190.060       | -3.370 |
| 10   | 15       | 187.420       | 190.775       | -3.355 |
| 10   | 16       | 189.170       | 191.840       | -2.670 |
| 10   | 17       | 190.684       | 193.000       | -2.316 |
| 10   | 18       | 191.659       | 194.713       | -3.054 |
| 10   | 19       | 184.935       | 187.394       | -2.459 |
| 10   | 20       | 191.875       | 194.304       | -2.429 |
| 30   | 21       | 184.724       | 191.114       | -6.390 |
| 30   | 22       | 184.364       | 192.342       | -7.978 |
| 30   | 23       | 186.295       | 193.185       | -6.890 |
| 30   | 24       | 186.690       | 186.874       | -0.184 |
| 30   | 25       | 187.420       | 193.254       | -5.834 |
| 30   | 26       | 189.170       | 184.279       | 4.891  |
| 30   | 27       | 190.684       | 192.228       | -1.544 |
| 30   | 28       | 191.659       | 186.845       | 4.814  |
| 30   | 29       | 184.935       | 190.816       | -5.881 |
| 30   | 30       | 191.875       | 182.985       | 8.890  |
| 50   | 31       | 184.724       | 186.996       | -2.272 |
| 50   | 32       | 184.364       | 186.306       | -1.942 |
| 50   | 33       | 186.295       | 189.892       | -3.597 |
| 50   | 34       | 186.690       | 187.709       | -1.019 |
| 50   | 35       | 187.420       | 188.991       | -1.571 |
| 50   | 36       | 189.170       | 190.216       | -1.046 |
| 50   | 37       | 190.684       | 190.735       | -0.051 |
| 50   | 38       | 191.659       | 192.134       | -0.475 |
| 50   | 39       | 184.935       | 185.043       | -0.108 |
| 50   | 40       | 191.875       | 191.882       | -0.007 |
| 100  | 41       | 189.798       | 192.243       | -2.445 |
| 100  | 42       | 192.517       | 201.364       | -8.847 |
| 100  | 43       | 187.598       | 190.968       | -3.370 |
| 100  | 44       | 188.007       | 191.691       | -3.684 |
| 100  | 45       | 189.773       | 198.454       | -8.681 |
| 100  | 46       | 189.374       | 189.947       | -0.573 |
| 100  | 47       | 188.239       | 188.018       | 0.221  |
| 100  | 48       | 189.284       | 191.703       | -2.419 |
| 100  | 49       | 185.399       | 186.974       | -1.575 |



| 1.12_Iq Local @ 1.7V |           |    |
|----------------------|-----------|----|
| Test Site            | J2S       |    |
| Tester               | FETS36405 |    |
| Test Number          | EE131301  |    |
| Max Limit            | 375       | uA |
| Min Limit            | 0         | uA |

| krad    | 0       | 3       | 10      | 30      | 50      | 100     |
|---------|---------|---------|---------|---------|---------|---------|
| LL      | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| Min     | 182.304 | 183.647 | 187.070 | 182.985 | 185.043 | 186.974 |
| Average | 186.460 | 186.973 | 190.602 | 189.392 | 188.990 | 192.180 |
| Max     | 191.237 | 191.168 | 194.713 | 193.254 | 192.134 | 201.364 |
| UL      | 375.000 | 375.000 | 375.000 | 375.000 | 375.000 | 375.000 |



# TID Report TMP9R01-SP

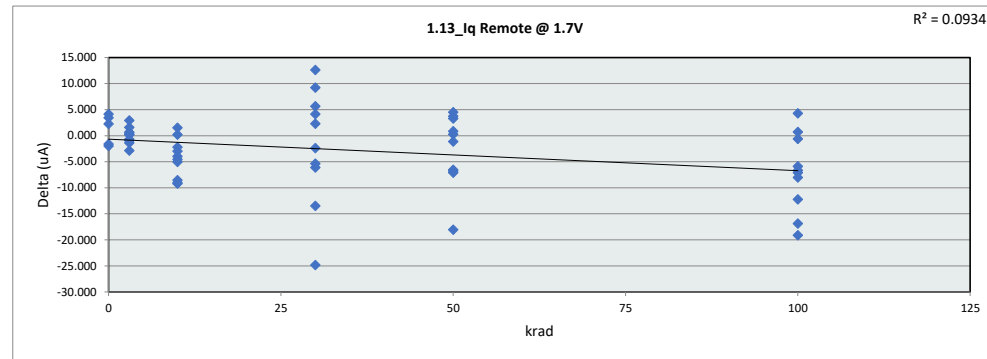
|         |    |         |         |        |
|---------|----|---------|---------|--------|
| 100     | 50 | 189.607 | 190.435 | -0.828 |
| 0       | 51 | 186.165 | 183.302 | 2.863  |
| 0       | 52 | 193.885 | 191.237 | 2.648  |
| 0       | 53 | 188.487 | 185.694 | 2.793  |
| 0       | 54 | 192.536 | 189.762 | 2.774  |
| 0       | 55 | 184.716 | 182.304 | 2.412  |
| Max     |    | 193.885 | 201.364 | 8.890  |
| Average |    | 188.121 | 189.340 | -1.219 |
| Min     |    | 184.364 | 182.304 | -8.847 |
| Std Dev |    | 2.755   | 3.747   | 3.371  |

# TID Report

## TMP9R01-SP

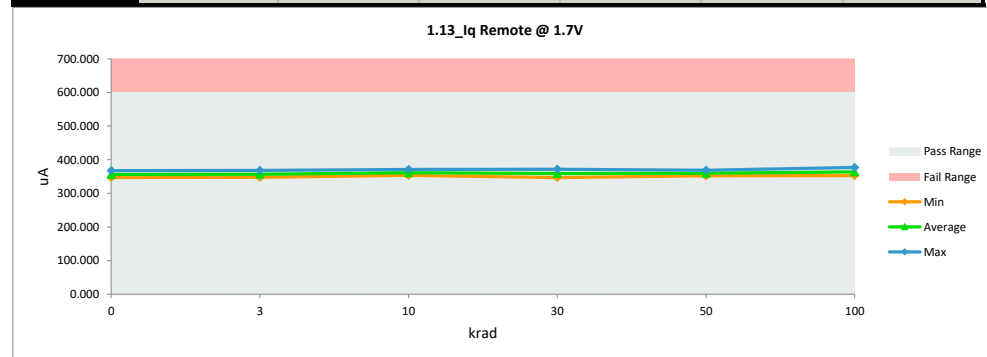
| 1.13_Iq Remote @ 1.7V |           |           |
|-----------------------|-----------|-----------|
| Test Site             | J2S       | J2S       |
| Tester                | FETS36405 | FETS36406 |
| Test Number           | EE131301  | EE131301  |
| Unit                  | uA        | uA        |
| Max Limit             | 600       | 600       |
| Min Limit             | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta   |
|------|----------|---------------|---------------|---------|
| 3    | 1        | 352.050       | 352.742       | -0.692  |
| 3    | 2        | 346.640       | 347.593       | -0.953  |
| 3    | 3        | 348.580       | 348.337       | 0.243   |
| 3    | 4        | 356.940       | 359.799       | -2.859  |
| 3    | 5        | 366.639       | 365.942       | 0.697   |
| 3    | 6        | 352.518       | 351.974       | 0.544   |
| 3    | 7        | 362.031       | 359.095       | 2.936   |
| 3    | 8        | 366.774       | 368.172       | -1.398  |
| 3    | 9        | 353.347       | 353.135       | 0.212   |
| 3    | 10       | 364.635       | 363.044       | 1.591   |
| 10   | 11       | 352.050       | 361.081       | -9.031  |
| 10   | 12       | 346.640       | 355.176       | -8.536  |
| 10   | 13       | 348.580       | 353.598       | -5.018  |
| 10   | 14       | 356.940       | 360.886       | -3.946  |
| 10   | 15       | 366.639       | 366.444       | 0.195   |
| 10   | 16       | 352.518       | 355.481       | -2.963  |
| 10   | 17       | 362.031       | 371.238       | -9.207  |
| 10   | 18       | 366.774       | 368.964       | -2.190  |
| 10   | 19       | 353.347       | 357.908       | -4.561  |
| 10   | 20       | 364.635       | 363.121       | 1.514   |
| 30   | 21       | 352.050       | 354.431       | -2.381  |
| 30   | 22       | 346.640       | 371.459       | -24.819 |
| 30   | 23       | 348.580       | 362.047       | -13.467 |
| 30   | 24       | 356.940       | 354.639       | 2.301   |
| 30   | 25       | 366.639       | 362.477       | 4.162   |
| 30   | 26       | 352.518       | 346.857       | 5.661   |
| 30   | 27       | 362.031       | 367.409       | -5.378  |
| 30   | 28       | 366.774       | 357.550       | 9.224   |
| 30   | 29       | 353.347       | 359.432       | -6.085  |
| 30   | 30       | 364.635       | 351.991       | 12.644  |
| 50   | 31       | 352.050       | 359.160       | -7.110  |
| 50   | 32       | 346.640       | 353.196       | -6.556  |
| 50   | 33       | 348.580       | 366.629       | -18.049 |
| 50   | 34       | 356.940       | 352.433       | 4.507   |
| 50   | 35       | 366.639       | 365.789       | 0.850   |
| 50   | 36       | 352.518       | 353.652       | -1.134  |
| 50   | 37       | 362.031       | 368.808       | -6.777  |
| 50   | 38       | 366.774       | 363.461       | 3.313   |
| 50   | 39       | 353.347       | 353.058       | 0.289   |
| 50   | 40       | 364.635       | 360.876       | 3.759   |
| 100  | 41       | 355.831       | 374.948       | -19.117 |
| 100  | 42       | 365.452       | 372.087       | -6.635  |
| 100  | 43       | 352.074       | 357.959       | -5.885  |
| 100  | 44       | 356.804       | 364.835       | -8.031  |
| 100  | 45       | 360.209       | 377.068       | -16.859 |
| 100  | 46       | 355.229       | 354.493       | 0.736   |
| 100  | 47       | 352.399       | 364.634       | -12.235 |
| 100  | 48       | 352.249       | 352.846       | -0.597  |
| 100  | 49       | 359.708       | 355.430       | 4.278   |



| 1.13_Iq Remote @ 1.7V |           |    |
|-----------------------|-----------|----|
| Test Site             | J2S       |    |
| Tester                | FETS36405 |    |
| Test Number           | EE131301  |    |
| Max Limit             | 600       | uA |
| Min Limit             | 0         | uA |

| krad    | 0       | 3       | 10      | 30      | 50      | 100     |
|---------|---------|---------|---------|---------|---------|---------|
| LL      | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| Min     | 347.183 | 347.593 | 353.598 | 346.857 | 352.433 | 352.846 |
| Average | 356.325 | 356.983 | 361.390 | 358.829 | 359.706 | 363.861 |
| Max     | 367.619 | 368.172 | 371.238 | 371.459 | 368.808 | 377.068 |
| UL      | 600.000 | 600.000 | 600.000 | 600.000 | 600.000 | 600.000 |





# TID Report TMP9R01-SP

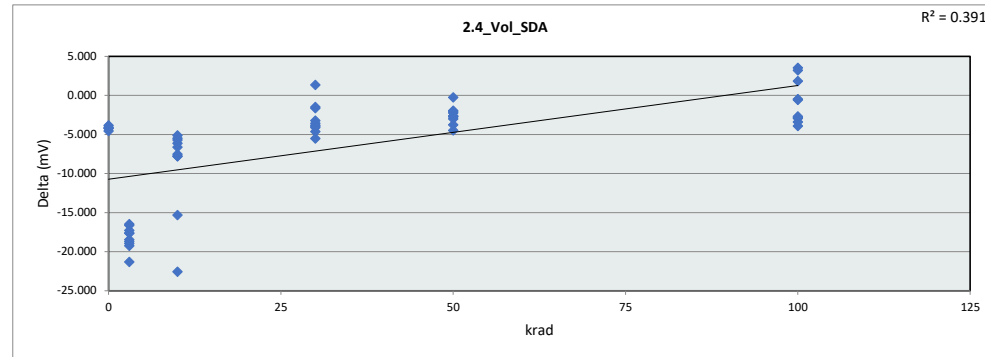
|         |    |         |         |         |
|---------|----|---------|---------|---------|
| 100     | 50 | 357.224 | 364.308 | -7.084  |
| 0       | 51 | 349.453 | 347.183 | 2.270   |
| 0       | 52 | 365.650 | 367.619 | -1.969  |
| 0       | 53 | 355.968 | 357.576 | -1.608  |
| 0       | 54 | 361.799 | 358.338 | 3.461   |
| 0       | 55 | 355.060 | 350.909 | 4.151   |
| Max     |    | 366.774 | 377.068 | 12.644  |
| Average |    | 357.013 | 359.806 | -2.793  |
| Min     |    | 346.640 | 346.857 | -24.819 |
| Std Dev |    | 6.603   | 7.351   | 6.999   |

# TID Report

## TMP9R01-SP

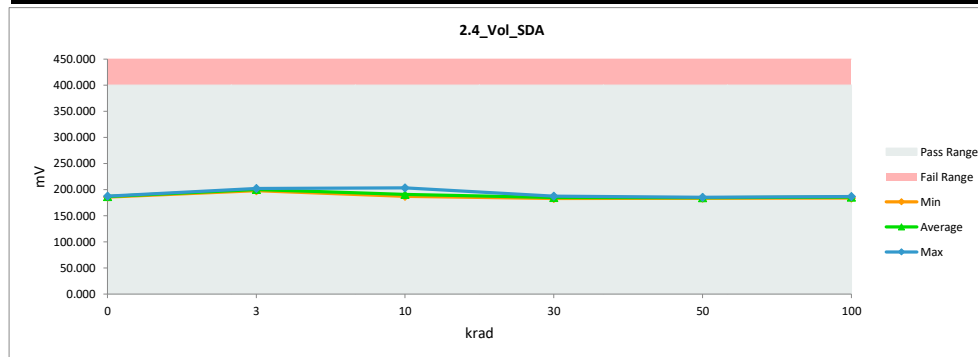
| 2.4_Vol_SDA |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | mV        | mV        |
| Max Limit   | 400       | 400       |
| Min Limit   | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta   |
|------|----------|---------------|---------------|---------|
| 3    | 1        | 180.739       | 202.059       | -21.320 |
| 3    | 2        | 180.876       | 199.824       | -18.948 |
| 3    | 3        | 181.263       | 199.724       | -18.461 |
| 3    | 4        | 180.377       | 198.013       | -17.636 |
| 3    | 5        | 184.396       | 201.685       | -17.289 |
| 3    | 6        | 182.699       | 201.422       | -18.723 |
| 3    | 7        | 182.449       | 199.074       | -16.625 |
| 3    | 8        | 183.085       | 202.347       | -19.262 |
| 3    | 9        | 182.049       | 199.674       | -17.625 |
| 3    | 10       | 182.511       | 199.000       | -16.489 |
| 10   | 11       | 180.739       | 188.519       | -7.780  |
| 10   | 12       | 180.876       | 203.460       | -22.584 |
| 10   | 13       | 181.263       | 189.056       | -7.793  |
| 10   | 14       | 180.377       | 187.907       | -7.530  |
| 10   | 15       | 184.396       | 190.529       | -6.133  |
| 10   | 16       | 182.699       | 198.018       | -15.319 |
| 10   | 17       | 182.449       | 189.068       | -6.619  |
| 10   | 18       | 183.085       | 188.794       | -5.709  |
| 10   | 19       | 182.049       | 187.183       | -5.134  |
| 10   | 20       | 182.511       | 187.995       | -5.484  |
| 30   | 21       | 180.739       | 185.376       | -4.637  |
| 30   | 22       | 180.876       | 185.003       | -4.127  |
| 30   | 23       | 181.263       | 184.828       | -3.565  |
| 30   | 24       | 180.377       | 183.608       | -3.231  |
| 30   | 25       | 184.396       | 183.060       | 1.336   |
| 30   | 26       | 182.699       | 184.330       | -1.631  |
| 30   | 27       | 182.449       | 186.273       | -3.824  |
| 30   | 28       | 183.085       | 184.579       | -1.494  |
| 30   | 29       | 182.049       | 187.568       | -5.519  |
| 30   | 30       | 182.511       | 186.447       | -3.936  |
| 50   | 31       | 180.739       | 183.389       | -2.650  |
| 50   | 32       | 180.876       | 183.888       | -3.012  |
| 50   | 33       | 181.263       | 185.024       | -3.761  |
| 50   | 34       | 180.377       | 184.862       | -4.485  |
| 50   | 35       | 184.396       | 184.662       | -0.266  |
| 50   | 36       | 182.699       | 185.436       | -2.737  |
| 50   | 37       | 182.449       | 185.124       | -2.675  |
| 50   | 38       | 183.085       | 185.336       | -2.251  |
| 50   | 39       | 182.049       | 184.000       | -1.951  |
| 50   | 40       | 182.511       | 184.612       | -2.101  |
| 100  | 41       | 189.163       | 185.633       | 3.530   |
| 100  | 42       | 186.318       | 186.794       | -0.476  |
| 100  | 43       | 187.853       | 186.020       | 1.833   |
| 100  | 44       | 185.919       | 186.507       | -0.588  |
| 100  | 45       | 188.352       | 185.146       | 3.206   |
| 100  | 46       | 183.310       | 186.258       | -2.948  |
| 100  | 47       | 183.148       | 185.995       | -2.847  |
| 100  | 48       | 181.088       | 184.996       | -3.908  |
| 100  | 49       | 180.340       | 183.748       | -3.408  |



| 2.4_Vol_SDA |           |    |
|-------------|-----------|----|
| Test Site   | J2S       |    |
| Tester      | FETS36405 |    |
| Test Number | EE131301  |    |
| Max Limit   | 400       | mV |
| Min Limit   | 0         | mV |

| krad    | 0       | 3       | 10      | 30      | 50      | 100     |
|---------|---------|---------|---------|---------|---------|---------|
| LL      | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| Min     | 185.648 | 198.013 | 187.183 | 183.060 | 183.389 | 183.748 |
| Average | 186.692 | 200.282 | 191.053 | 185.107 | 184.633 | 185.627 |
| Max     | 187.720 | 202.347 | 203.460 | 187.568 | 185.436 | 186.794 |
| UL      | 400.000 | 400.000 | 400.000 | 400.000 | 400.000 | 400.000 |



# TID Report TMP9R01-SP

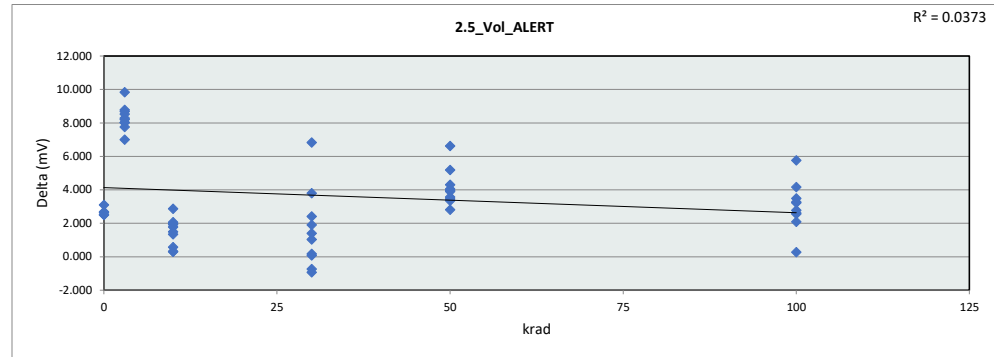
|         |    |         |         |         |
|---------|----|---------|---------|---------|
| 100     | 50 | 182.486 | 185.171 | -2.685  |
| 0       | 51 | 181.550 | 185.648 | -4.098  |
| 0       | 52 | 182.836 | 187.059 | -4.223  |
| 0       | 53 | 181.126 | 185.673 | -4.547  |
| 0       | 54 | 183.884 | 187.720 | -3.836  |
| 0       | 55 | 183.148 | 187.358 | -4.210  |
| Max     |    | 189.163 | 203.460 | 3.530   |
| Average |    | 182.587 | 189.100 | -6.512  |
| Min     |    | 180.340 | 183.060 | -22.584 |
| Std Dev |    | 1.972   | 6.244   | 6.774   |

# TID Report

## TMP9R01-SP

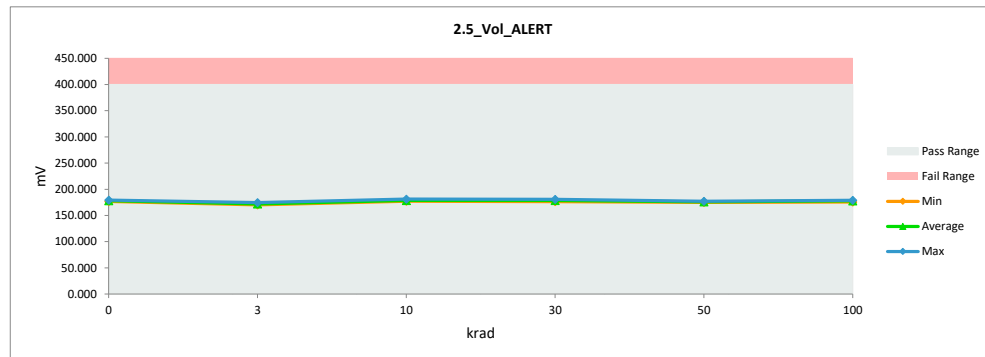
| 2.5_Vol_ALERT |           |           |
|---------------|-----------|-----------|
| Test Site     | J2S       | J2S       |
| Tester        | FETS36405 | FETS36406 |
| Test Number   | EE131301  | EE131301  |
| Unit          | mV        | mV        |
| Max Limit     | 400       | 400       |
| Min Limit     | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 178.974       | 171.973       | 7.001  |
| 3    | 2        | 179.174       | 171.161       | 8.013  |
| 3    | 3        | 179.498       | 171.486       | 8.012  |
| 3    | 4        | 178.849       | 170.562       | 8.287  |
| 3    | 5        | 183.091       | 174.571       | 8.520  |
| 3    | 6        | 180.858       | 172.660       | 8.198  |
| 3    | 7        | 180.296       | 172.548       | 7.748  |
| 3    | 8        | 181.257       | 172.485       | 8.772  |
| 3    | 9        | 179.860       | 171.174       | 8.686  |
| 3    | 10       | 180.047       | 170.212       | 9.835  |
| 10   | 11       | 178.974       | 178.682       | 0.292  |
| 10   | 12       | 179.174       | 177.833       | 1.341  |
| 10   | 13       | 179.498       | 179.181       | 0.317  |
| 10   | 14       | 178.849       | 178.283       | 0.566  |
| 10   | 15       | 183.091       | 181.314       | 1.777  |
| 10   | 16       | 180.858       | 178.881       | 1.977  |
| 10   | 17       | 180.296       | 178.807       | 1.489  |
| 10   | 18       | 181.257       | 179.193       | 2.064  |
| 10   | 19       | 179.860       | 177.933       | 1.927  |
| 10   | 20       | 180.047       | 177.185       | 2.862  |
| 30   | 21       | 178.974       | 178.811       | 0.163  |
| 30   | 22       | 179.174       | 177.279       | 1.895  |
| 30   | 23       | 179.498       | 178.475       | 1.023  |
| 30   | 24       | 178.849       | 177.453       | 1.396  |
| 30   | 25       | 183.091       | 176.269       | 6.822  |
| 30   | 26       | 180.858       | 178.450       | 2.408  |
| 30   | 27       | 180.296       | 180.219       | 0.077  |
| 30   | 28       | 181.257       | 177.465       | 3.792  |
| 30   | 29       | 179.860       | 180.792       | -0.932 |
| 30   | 30       | 180.047       | 180.792       | -0.745 |
| 50   | 31       | 178.974       | 175.525       | 3.449  |
| 50   | 32       | 179.174       | 175.825       | 3.349  |
| 50   | 33       | 179.498       | 175.600       | 3.898  |
| 50   | 34       | 178.849       | 176.037       | 2.812  |
| 50   | 35       | 183.091       | 176.473       | 6.618  |
| 50   | 36       | 180.858       | 176.898       | 3.960  |
| 50   | 37       | 180.296       | 176.735       | 3.561  |
| 50   | 38       | 181.257       | 176.960       | 4.297  |
| 50   | 39       | 179.860       | 175.812       | 4.048  |
| 50   | 40       | 180.047       | 174.864       | 5.183  |
| 100  | 41       | 182.158       | 178.000       | 4.158  |
| 100  | 42       | 180.861       | 178.312       | 2.549  |
| 100  | 43       | 182.532       | 179.048       | 3.484  |
| 100  | 44       | 179.314       | 179.048       | 0.266  |
| 100  | 45       | 182.171       | 176.414       | 5.757  |
| 100  | 46       | 181.282       | 178.674       | 2.608  |
| 100  | 47       | 181.320       | 178.100       | 3.220  |
| 100  | 48       | 179.361       | 177.276       | 2.085  |
| 100  | 49       | 178.462       | 175.690       | 2.772  |



| 2.5_Vol_ALERT |           |    |
|---------------|-----------|----|
| Test Site     | J2S       |    |
| Tester        | FETS36405 |    |
| Test Number   | EE131301  |    |
| Max Limit     | 400       | mV |
| Min Limit     | 0         | mV |

| krad    | 0       | 3       | 10      | 30      | 50      | 100     |
|---------|---------|---------|---------|---------|---------|---------|
| LL      | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| Min     | 176.611 | 170.212 | 177.185 | 176.269 | 174.864 | 175.690 |
| Average | 178.088 | 171.883 | 178.729 | 178.601 | 176.073 | 177.786 |
| Max     | 179.418 | 174.571 | 181.314 | 180.792 | 176.960 | 179.048 |
| UL      | 400.000 | 400.000 | 400.000 | 400.000 | 400.000 | 400.000 |



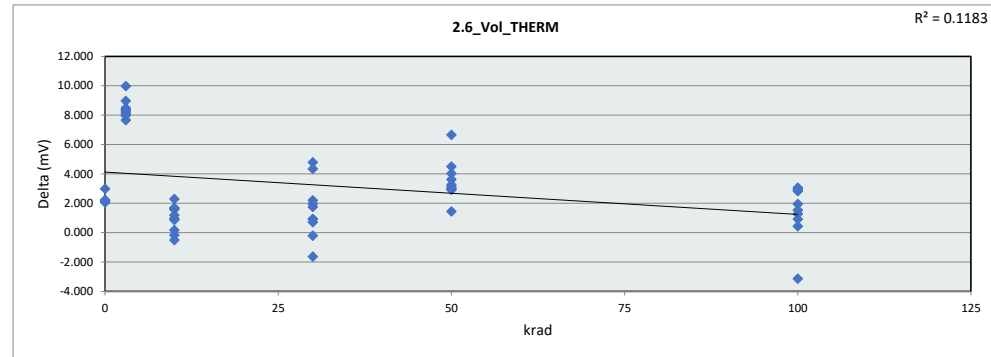
# TID Report TMP9R01-SP

|         |    |         |         |        |
|---------|----|---------|---------|--------|
| 100     | 50 | 180.571 | 177.301 | 3.270  |
| 0       | 51 | 179.723 | 177.222 | 2.501  |
| 0       | 52 | 181.120 | 178.607 | 2.513  |
| 0       | 53 | 179.286 | 176.611 | 2.675  |
| 0       | 54 | 182.517 | 179.418 | 3.099  |
| 0       | 55 | 181.220 | 178.582 | 2.638  |
| Max     |    | 183.091 | 181.314 | 9.835  |
| Average |    | 180.355 | 176.748 | 3.606  |
| Min     |    | 178.462 | 170.212 | -0.932 |
| Std Dev |    | 1.272   | 2.731   | 2.747  |

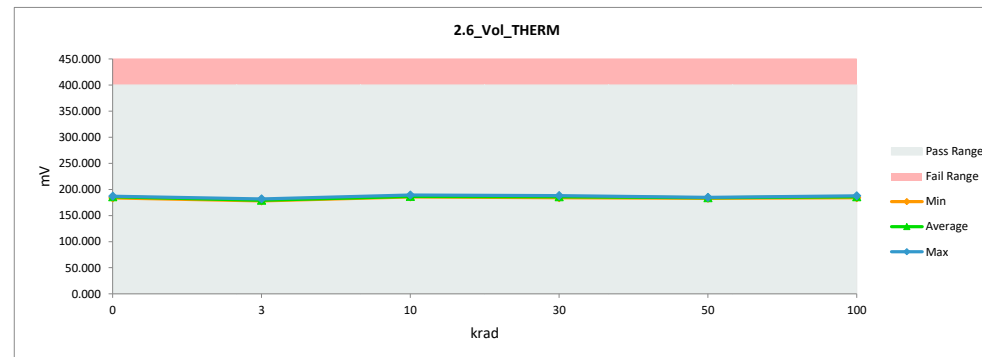
# TID Report TMP9R01-SP

| 2.6_Vol_THERM |           |           |
|---------------|-----------|-----------|
| Test Site     | J2S       | J2S       |
| Tester        | FETS36405 | FETS36406 |
| Test Number   | EE131301  | EE131301  |
| Unit          | mV        | mV        |
| Max Limit     | 400       | 400       |
| Min Limit     | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 186.328       | 178.664       | 7.664  |
| 3    | 2        | 186.803       | 178.801       | 8.002  |
| 3    | 3        | 185.966       | 177.977       | 7.989  |
| 3    | 4        | 186.291       | 178.014       | 8.277  |
| 3    | 5        | 190.123       | 181.762       | 8.361  |
| 3    | 6        | 188.151       | 179.988       | 8.163  |
| 3    | 7        | 187.914       | 179.426       | 8.488  |
| 3    | 8        | 188.525       | 179.550       | 8.975  |
| 3    | 9        | 186.616       | 178.601       | 8.015  |
| 3    | 10       | 188.787       | 178.813       | 9.974  |
| 10   | 11       | 186.328       | 186.832       | -0.504 |
| 10   | 12       | 186.803       | 185.610       | 1.193  |
| 10   | 13       | 185.966       | 186.134       | -0.168 |
| 10   | 14       | 186.291       | 186.121       | 0.170  |
| 10   | 15       | 190.123       | 189.265       | 0.858  |
| 10   | 16       | 188.151       | 186.570       | 1.581  |
| 10   | 17       | 187.914       | 186.233       | 1.681  |
| 10   | 18       | 188.525       | 186.857       | 1.668  |
| 10   | 19       | 186.616       | 185.659       | 0.957  |
| 10   | 20       | 188.787       | 186.495       | 2.292  |
| 30   | 21       | 186.328       | 186.538       | -0.210 |
| 30   | 22       | 186.803       | 184.843       | 1.960  |
| 30   | 23       | 185.966       | 185.030       | 0.936  |
| 30   | 24       | 186.291       | 184.544       | 1.747  |
| 30   | 25       | 190.123       | 185.341       | 4.782  |
| 30   | 26       | 188.151       | 185.952       | 2.199  |
| 30   | 27       | 187.914       | 187.211       | 0.703  |
| 30   | 28       | 188.525       | 184.182       | 4.343  |
| 30   | 29       | 186.616       | 188.245       | -1.629 |
| 30   | 30       | 188.787       | 187.871       | 0.916  |
| 50   | 31       | 186.328       | 183.389       | 2.939  |
| 50   | 32       | 186.803       | 183.788       | 3.015  |
| 50   | 33       | 185.966       | 182.840       | 3.126  |
| 50   | 34       | 186.291       | 184.849       | 1.442  |
| 50   | 35       | 190.123       | 183.464       | 6.659  |
| 50   | 36       | 188.151       | 184.524       | 3.627  |
| 50   | 37       | 187.914       | 184.661       | 3.253  |
| 50   | 38       | 188.525       | 184.499       | 4.026  |
| 50   | 39       | 186.616       | 183.701       | 2.915  |
| 50   | 40       | 188.787       | 184.287       | 4.500  |
| 100  | 41       | 187.972       | 186.703       | 1.269  |
| 100  | 42       | 186.337       | 185.904       | 0.433  |
| 100  | 43       | 187.435       | 186.516       | 0.919  |
| 100  | 44       | 184.678       | 187.814       | -3.136 |
| 100  | 45       | 187.211       | 184.144       | 3.067  |
| 100  | 46       | 189.237       | 187.290       | 1.947  |
| 100  | 47       | 189.424       | 186.466       | 2.958  |
| 100  | 48       | 186.091       | 184.556       | 1.535  |
| 100  | 49       | 186.940       | 184.119       | 2.821  |



| 2.6_Vol_THERM |           |         |         |         |         |         |
|---------------|-----------|---------|---------|---------|---------|---------|
| Test Site     | J2S       |         |         |         |         |         |
| Tester        | FETS36405 |         |         |         |         |         |
| Test Number   | EE131301  |         |         |         |         |         |
| Max Limit     | 400       | mV      |         |         |         |         |
| Min Limit     | 0         | mV      |         |         |         |         |
| krad          | 0         | 3       | 10      | 30      | 50      | 100     |
| LL            | 0.000     | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| Min           | 183.713   | 177.977 | 185.610 | 184.182 | 182.840 | 184.119 |
| Average       | 185.884   | 179.160 | 186.578 | 185.976 | 184.000 | 185.920 |
| Max           | 186.982   | 181.762 | 189.265 | 188.245 | 184.849 | 187.814 |
| UL            | 400.000   | 400.000 | 400.000 | 400.000 | 400.000 | 400.000 |



# TID Report TMP9R01-SP

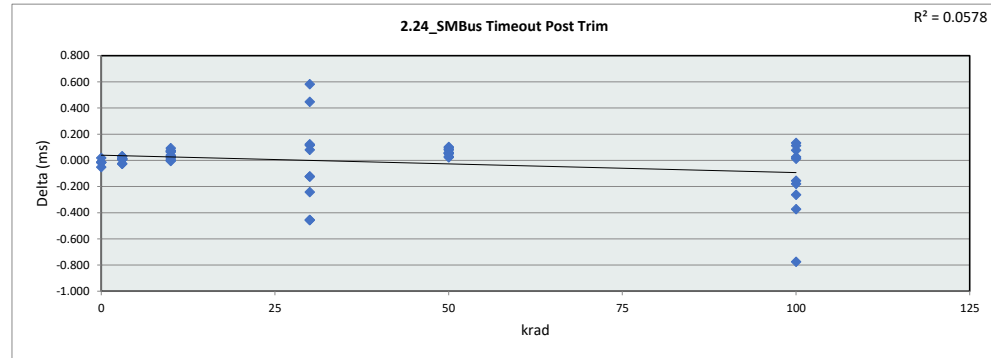
|         |    |         |         |        |
|---------|----|---------|---------|--------|
| 100     | 50 | 188.550 | 185.692 | 2.858  |
| 0       | 51 | 187.065 | 184.923 | 2.142  |
| 0       | 52 | 188.962 | 186.907 | 2.055  |
| 0       | 53 | 185.904 | 183.713 | 2.191  |
| 0       | 54 | 189.960 | 186.982 | 2.978  |
| 0       | 55 | 189.124 | 186.895 | 2.229  |
| Max     |    | 190.123 | 189.265 | 9.974  |
| Average |    | 187.580 | 184.468 | 3.112  |
| Min     |    | 184.678 | 177.977 | -3.136 |
| Std Dev |    | 1.357   | 2.885   | 2.961  |

# TID Report

## TMP9R01-SP

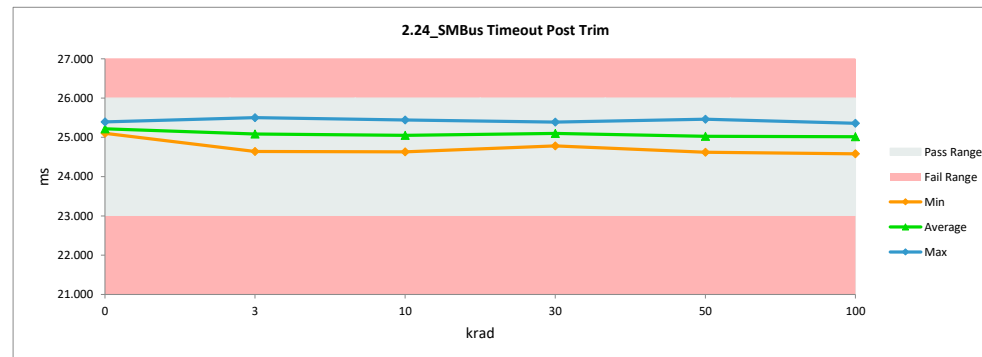
| 2.24_SMBus Timeout Post Trim |           |           |
|------------------------------|-----------|-----------|
| Test Site                    | J2S       | J2S       |
| Tester                       | FETS36405 | FETS36406 |
| Test Number                  | EE131301  | EE131301  |
| Unit                         | ms        | ms        |
| Max Limit                    | 26        | 26        |
| Min Limit                    | 23        | 23        |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 24.672        | 24.641        | 0.031  |
| 3    | 2        | 24.896        | 24.889        | 0.007  |
| 3    | 3        | 25.333        | 25.360        | -0.027 |
| 3    | 4        | 25.441        | 25.434        | 0.007  |
| 3    | 5        | 25.513        | 25.502        | 0.011  |
| 3    | 6        | 24.934        | 24.921        | 0.013  |
| 3    | 7        | 24.818        | 24.843        | -0.025 |
| 3    | 8        | 25.271        | 25.240        | 0.031  |
| 3    | 9        | 25.037        | 25.026        | 0.011  |
| 3    | 10       | 25.013        | 24.997        | 0.016  |
| 10   | 11       | 24.672        | 24.633        | 0.039  |
| 10   | 12       | 24.896        | 24.830        | 0.066  |
| 10   | 13       | 25.333        | 25.338        | -0.005 |
| 10   | 14       | 25.441        | 25.441        | 0.000  |
| 10   | 15       | 25.513        | 25.437        | 0.076  |
| 10   | 16       | 24.934        | 24.924        | 0.010  |
| 10   | 17       | 24.818        | 24.796        | 0.022  |
| 10   | 18       | 25.271        | 25.205        | 0.066  |
| 10   | 19       | 25.037        | 25.007        | 0.030  |
| 10   | 20       | 25.013        | 24.919        | 0.094  |
| 30   | 21       | 24.672        | 24.915        | -0.243 |
| 30   | 22       | 24.896        | 24.780        | 0.116  |
| 30   | 23       | 25.333        | 25.210        | 0.123  |
| 30   | 24       | 25.441        | 24.994        | 0.447  |
| 30   | 25       | 25.513        | 24.931        | 0.582  |
| 30   | 26       | 24.934        | 25.391        | -0.457 |
| 30   | 27       | 24.818        | 25.273        | -0.455 |
| 30   | 28       | 25.271        | 25.190        | 0.081  |
| 30   | 29       | 25.037        | 25.160        | -0.123 |
| 30   | 30       | 25.013        | 25.136        | -0.123 |
| 50   | 31       | 24.672        | 24.619        | 0.053  |
| 50   | 32       | 24.896        | 24.793        | 0.103  |
| 50   | 33       | 25.333        | 25.276        | 0.057  |
| 50   | 34       | 25.441        | 25.412        | 0.029  |
| 50   | 35       | 25.513        | 25.460        | 0.053  |
| 50   | 36       | 24.934        | 24.874        | 0.060  |
| 50   | 37       | 24.818        | 24.794        | 0.024  |
| 50   | 38       | 25.271        | 25.186        | 0.085  |
| 50   | 39       | 25.037        | 24.957        | 0.080  |
| 50   | 40       | 25.013        | 24.917        | 0.096  |
| 100  | 41       | 25.130        | 25.309        | -0.179 |
| 100  | 42       | 24.491        | 24.647        | -0.156 |
| 100  | 43       | 24.900        | 25.163        | -0.263 |
| 100  | 44       | 24.818        | 25.191        | -0.373 |
| 100  | 45       | 24.457        | 25.231        | -0.774 |
| 100  | 46       | 24.680        | 24.654        | 0.026  |
| 100  | 47       | 25.375        | 25.297        | 0.078  |
| 100  | 48       | 25.371        | 25.358        | 0.013  |
| 100  | 49       | 24.842        | 24.729        | 0.113  |



| 2.24_SMBus Timeout Post Trim |           |    |
|------------------------------|-----------|----|
| Test Site                    | J2S       |    |
| Tester                       | FETS36405 |    |
| Test Number                  | EE131301  |    |
| Max Limit                    | 26        | ms |
| Min Limit                    | 23        | ms |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | 23.000 | 23.000 | 23.000 | 23.000 | 23.000 | 23.000 |
| Min     | 25.103 | 24.641 | 24.633 | 24.780 | 24.619 | 24.581 |
| Average | 25.218 | 25.085 | 25.053 | 25.098 | 25.029 | 25.016 |
| Max     | 25.393 | 25.502 | 25.441 | 25.391 | 25.460 | 25.358 |
| UL      | 26.000 | 26.000 | 26.000 | 26.000 | 26.000 | 26.000 |





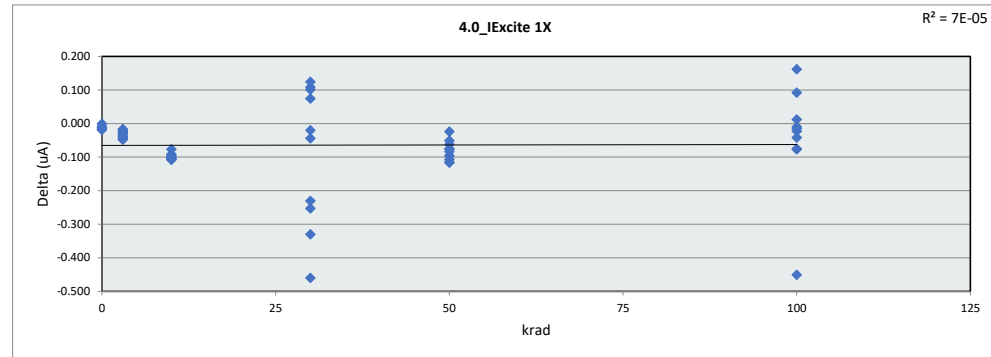
# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | 24.714 | 24.581 | 0.133  |
| 0       | 51 | 25.378 | 25.393 | -0.015 |
| 0       | 52 | 25.225 | 25.240 | -0.015 |
| 0       | 53 | 25.140 | 25.192 | -0.052 |
| 0       | 54 | 25.145 | 25.160 | -0.015 |
| 0       | 55 | 25.122 | 25.103 | 0.019  |
| Max     |    | 25.513 | 25.502 | 0.582  |
| Average |    | 25.064 | 25.071 | -0.007 |
| Min     |    | 24.457 | 24.581 | -0.774 |
| Std Dev |    | 0.283  | 0.260  | 0.195  |

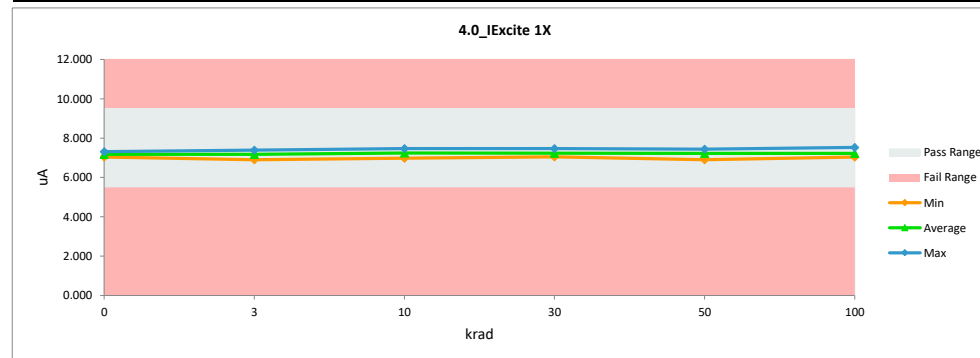
# TID Report

## TMP9R01-SP

| 4.0_IExcite 1X |           |               |               |        |
|----------------|-----------|---------------|---------------|--------|
| Test Site      | J2S       | J2S           |               |        |
| Tester         | FETS36405 | FETS36406     |               |        |
| Test Number    | EE131301  | EE131301      |               |        |
| Unit           | uA        | uA            |               |        |
| Max Limit      | 9.5       | 9.5           |               |        |
| Min Limit      | 5.5       | 5.5           |               |        |
| krad           | Serial #  | LDR pre (all) | LDR post 100k | Delta  |
| 3              | 1         | 7.134         | 7.172         | -0.038 |
| 3              | 2         | 6.881         | 6.900         | -0.019 |
| 3              | 3         | 7.101         | 7.118         | -0.017 |
| 3              | 4         | 7.190         | 7.234         | -0.044 |
| 3              | 5         | 7.134         | 7.166         | -0.032 |
| 3              | 6         | 7.086         | 7.127         | -0.041 |
| 3              | 7         | 7.256         | 7.282         | -0.026 |
| 3              | 8         | 7.267         | 7.315         | -0.048 |
| 3              | 9         | 7.028         | 7.057         | -0.029 |
| 3              | 10        | 7.372         | 7.394         | -0.022 |
| 10             | 11        | 7.134         | 7.242         | -0.108 |
| 10             | 12        | 6.881         | 6.979         | -0.098 |
| 10             | 13        | 7.101         | 7.178         | -0.077 |
| 10             | 14        | 7.190         | 7.289         | -0.099 |
| 10             | 15        | 7.134         | 7.239         | -0.105 |
| 10             | 16        | 7.086         | 7.191         | -0.105 |
| 10             | 17        | 7.256         | 7.359         | -0.103 |
| 10             | 18        | 7.267         | 7.375         | -0.108 |
| 10             | 19        | 7.028         | 7.124         | -0.096 |
| 10             | 20        | 7.372         | 7.464         | -0.092 |
| 30             | 21        | 7.134         | 7.178         | -0.044 |
| 30             | 22        | 6.881         | 7.341         | -0.460 |
| 30             | 23        | 7.101         | 7.354         | -0.253 |
| 30             | 24        | 7.190         | 7.116         | 0.074  |
| 30             | 25        | 7.134         | 7.464         | -0.330 |
| 30             | 26        | 7.086         | 7.317         | -0.231 |
| 30             | 27        | 7.256         | 7.148         | 0.108  |
| 30             | 28        | 7.267         | 7.166         | 0.101  |
| 30             | 29        | 7.028         | 7.048         | -0.020 |
| 30             | 30        | 7.372         | 7.248         | 0.124  |
| 50             | 31        | 7.134         | 7.241         | -0.107 |
| 50             | 32        | 6.881         | 6.905         | -0.024 |
| 50             | 33        | 7.101         | 7.218         | -0.117 |
| 50             | 34        | 7.190         | 7.241         | -0.051 |
| 50             | 35        | 7.134         | 7.249         | -0.115 |
| 50             | 36        | 7.086         | 7.170         | -0.084 |
| 50             | 37        | 7.256         | 7.332         | -0.076 |
| 50             | 38        | 7.267         | 7.363         | -0.096 |
| 50             | 39        | 7.028         | 7.105         | -0.077 |
| 50             | 40        | 7.372         | 7.434         | -0.062 |
| 100            | 41        | 7.270         | 7.258         | 0.012  |
| 100            | 42        | 7.149         | 7.226         | -0.077 |
| 100            | 43        | 7.322         | 7.160         | 0.162  |
| 100            | 44        | 7.077         | 7.528         | -0.451 |
| 100            | 45        | 7.244         | 7.152         | 0.092  |
| 100            | 46        | 7.064         | 7.079         | -0.015 |
| 100            | 47        | 7.195         | 7.218         | -0.023 |
| 100            | 48        | 7.322         | 7.364         | -0.042 |
| 100            | 49        | 6.964         | 7.040         | -0.076 |



| 4.0_IExcite 1X |           |       |       |       |       |       |
|----------------|-----------|-------|-------|-------|-------|-------|
| Test Site      | J2S       |       |       |       |       |       |
| Tester         | FETS36405 |       |       |       |       |       |
| Test Number    | EE131301  |       |       |       |       |       |
| Max Limit      | 9.5       | uA    |       |       |       |       |
| Min Limit      | 5.5       | uA    |       |       |       |       |
| krad           | 0         | 3     | 10    | 30    | 50    | 100   |
| LL             | 5.500     | 5.500 | 5.500 | 5.500 | 5.500 | 5.500 |
| Min            | 7.040     | 6.900 | 6.979 | 7.048 | 6.905 | 7.040 |
| Average        | 7.177     | 7.177 | 7.244 | 7.238 | 7.226 | 7.220 |
| Max            | 7.312     | 7.394 | 7.464 | 7.464 | 7.434 | 7.528 |
| UL             | 9.500     | 9.500 | 9.500 | 9.500 | 9.500 | 9.500 |



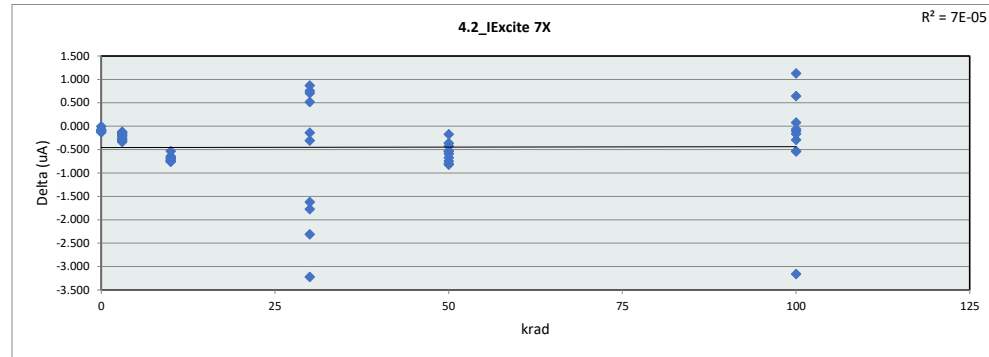
TID Report  
TMP9R01-SP

|         |    |       |       |        |
|---------|----|-------|-------|--------|
| 100     | 50 | 7.163 | 7.173 | -0.010 |
| 0       | 51 | 7.293 | 7.312 | -0.019 |
| 0       | 52 | 7.133 | 7.134 | -0.001 |
| 0       | 53 | 7.145 | 7.160 | -0.015 |
| 0       | 54 | 7.031 | 7.040 | -0.009 |
| 0       | 55 | 7.228 | 7.240 | -0.012 |
| Max     |    | 7.372 | 7.528 | 0.162  |
| Average |    | 7.153 | 7.217 | -0.064 |
| Min     |    | 6.881 | 6.900 | -0.460 |
| Std Dev |    | 0.126 | 0.133 | 0.113  |

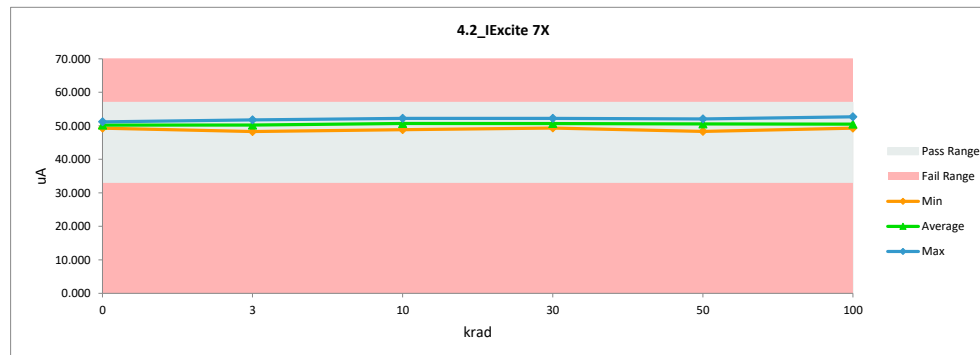
# TID Report

## TMP9R01-SP

| 4.2_IExcite 7X |           |               |               |        |
|----------------|-----------|---------------|---------------|--------|
| Test Site      | J2S       | J2S           |               |        |
| Tester         | FETS36405 | FETS36406     |               |        |
| Test Number    | EE131301  | EE131301      |               |        |
| Unit           | uA        | uA            |               |        |
| Max Limit      | 57        | 57            |               |        |
| Min Limit      | 33        | 33            |               |        |
| krad           | Serial #  | LDR pre (all) | LDR post 100k | Delta  |
| 3              | 1         | 49.938        | 50.203        | -0.265 |
| 3              | 2         | 48.167        | 48.300        | -0.133 |
| 3              | 3         | 49.709        | 49.826        | -0.117 |
| 3              | 4         | 50.327        | 50.640        | -0.313 |
| 3              | 5         | 49.937        | 50.163        | -0.226 |
| 3              | 6         | 49.599        | 49.890        | -0.291 |
| 3              | 7         | 50.789        | 50.972        | -0.183 |
| 3              | 8         | 50.867        | 51.204        | -0.337 |
| 3              | 9         | 49.198        | 49.397        | -0.199 |
| 3              | 10        | 51.607        | 51.758        | -0.151 |
| 10             | 11        | 49.938        | 50.696        | -0.758 |
| 10             | 12        | 48.167        | 48.856        | -0.689 |
| 10             | 13        | 49.709        | 50.243        | -0.534 |
| 10             | 14        | 50.327        | 51.022        | -0.695 |
| 10             | 15        | 49.937        | 50.673        | -0.736 |
| 10             | 16        | 49.599        | 50.337        | -0.738 |
| 10             | 17        | 50.789        | 51.514        | -0.725 |
| 10             | 18        | 50.867        | 51.623        | -0.756 |
| 10             | 19        | 49.198        | 49.867        | -0.669 |
| 10             | 20        | 51.607        | 52.248        | -0.641 |
| 30             | 21        | 49.938        | 50.246        | -0.308 |
| 30             | 22        | 48.167        | 51.389        | -3.222 |
| 30             | 23        | 49.709        | 51.481        | -1.772 |
| 30             | 24        | 50.327        | 49.811        | 0.516  |
| 30             | 25        | 49.937        | 52.245        | -2.308 |
| 30             | 26        | 49.599        | 51.220        | -1.621 |
| 30             | 27        | 50.789        | 50.034        | 0.755  |
| 30             | 28        | 50.867        | 50.162        | 0.705  |
| 30             | 29        | 49.198        | 49.337        | -0.139 |
| 30             | 30        | 51.607        | 50.738        | 0.869  |
| 50             | 31        | 49.938        | 50.686        | -0.748 |
| 50             | 32        | 48.167        | 48.338        | -0.171 |
| 50             | 33        | 49.709        | 50.527        | -0.818 |
| 50             | 34        | 50.327        | 50.689        | -0.362 |
| 50             | 35        | 49.937        | 50.742        | -0.805 |
| 50             | 36        | 49.599        | 50.189        | -0.590 |
| 50             | 37        | 50.789        | 51.327        | -0.538 |
| 50             | 38        | 50.867        | 51.539        | -0.672 |
| 50             | 39        | 49.198        | 49.732        | -0.534 |
| 50             | 40        | 51.607        | 52.035        | -0.428 |
| 100            | 41        | 50.887        | 50.807        | 0.080  |
| 100            | 42        | 50.043        | 50.582        | -0.539 |
| 100            | 43        | 51.252        | 50.122        | 1.130  |
| 100            | 44        | 49.538        | 52.699        | -3.161 |
| 100            | 45        | 50.707        | 50.061        | 0.646  |
| 100            | 46        | 49.447        | 49.553        | -0.106 |
| 100            | 47        | 50.362        | 50.526        | -0.164 |
| 100            | 48        | 51.255        | 51.547        | -0.292 |
| 100            | 49        | 48.749        | 49.280        | -0.531 |



| 4.2_IExcite 7X |           |        |        |        |        |        |
|----------------|-----------|--------|--------|--------|--------|--------|
| Test Site      | J2S       |        |        |        |        |        |
| Tester         | FETS36405 |        |        |        |        |        |
| Test Number    | EE131301  |        |        |        |        |        |
| Max Limit      | 57        | uA     |        |        |        |        |
| Min Limit      | 33        | uA     |        |        |        |        |
| krad           | 0         | 3      | 10     | 30     | 50     | 100    |
| LL             | 33.000    | 33.000 | 33.000 | 33.000 | 33.000 | 33.000 |
| Min            | 49.282    | 48.300 | 48.856 | 49.337 | 48.338 | 49.280 |
| Average        | 50.241    | 50.235 | 50.708 | 50.666 | 50.580 | 50.539 |
| Max            | 51.184    | 51.758 | 52.248 | 52.245 | 52.035 | 52.699 |
| UL             | 57.000    | 57.000 | 57.000 | 57.000 | 57.000 | 57.000 |



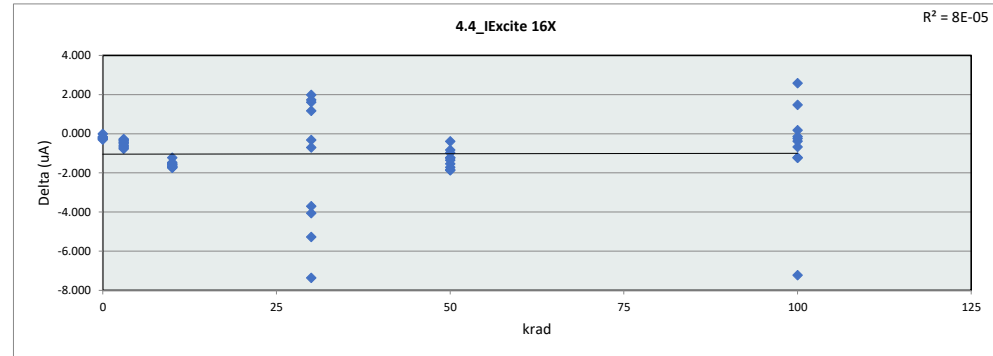
# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | 50.144 | 50.208 | -0.064 |
| 0       | 51 | 51.053 | 51.184 | -0.131 |
| 0       | 52 | 49.933 | 49.936 | -0.003 |
| 0       | 53 | 50.013 | 50.120 | -0.107 |
| 0       | 54 | 49.214 | 49.282 | -0.068 |
| 0       | 55 | 50.595 | 50.682 | -0.087 |
| Max     |    | 51.607 | 52.699 | 1.130  |
| Average |    | 50.068 | 50.518 | -0.450 |
| Min     |    | 48.167 | 48.300 | -3.222 |
| Std Dev |    | 0.880  | 0.931  | 0.793  |

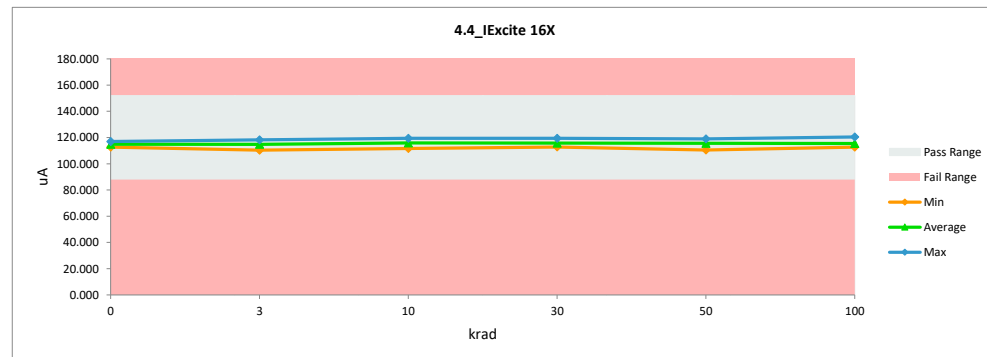
# TID Report

## TMP9R01-SP

| 4.4_IExcite 16X |           |               |               |        |
|-----------------|-----------|---------------|---------------|--------|
| Test Site       | J2S       | J2S           |               |        |
| Tester          | FETS36405 | FETS36406     |               |        |
| Test Number     | EE131301  | EE131301      |               |        |
| Unit            | uA        | uA            |               |        |
| Max Limit       | 152       | 152           |               |        |
| Min Limit       | 88        | 88            |               |        |
| krad            | Serial #  | LDR pre (all) | LDR post 100k | Delta  |
| 3               | 1         | 114.145       | 114.749       | -0.604 |
| 3               | 2         | 110.096       | 110.400       | -0.304 |
| 3               | 3         | 113.620       | 113.888       | -0.268 |
| 3               | 4         | 115.032       | 115.748       | -0.716 |
| 3               | 5         | 114.143       | 114.657       | -0.514 |
| 3               | 6         | 113.368       | 114.034       | -0.666 |
| 3               | 7         | 116.090       | 116.508       | -0.418 |
| 3               | 8         | 116.268       | 117.038       | -0.770 |
| 3               | 9         | 112.453       | 112.908       | -0.455 |
| 3               | 10        | 117.959       | 118.304       | -0.345 |
| 10              | 11        | 114.145       | 115.876       | -1.731 |
| 10              | 12        | 110.096       | 111.670       | -1.574 |
| 10              | 13        | 113.620       | 114.841       | -1.221 |
| 10              | 14        | 115.032       | 116.622       | -1.590 |
| 10              | 15        | 114.143       | 115.824       | -1.681 |
| 10              | 16        | 113.368       | 115.055       | -1.687 |
| 10              | 17        | 116.090       | 117.746       | -1.656 |
| 10              | 18        | 116.268       | 117.996       | -1.728 |
| 10              | 19        | 112.453       | 113.982       | -1.529 |
| 10              | 20        | 117.959       | 119.424       | -1.465 |
| 30              | 21        | 114.145       | 114.848       | -0.703 |
| 30              | 22        | 110.096       | 117.459       | -7.363 |
| 30              | 23        | 113.620       | 117.672       | -4.052 |
| 30              | 24        | 115.032       | 113.855       | 1.177  |
| 30              | 25        | 114.143       | 119.418       | -5.275 |
| 30              | 26        | 113.368       | 117.074       | -3.706 |
| 30              | 27        | 116.090       | 114.363       | 1.727  |
| 30              | 28        | 116.268       | 114.657       | 1.611  |
| 30              | 29        | 112.453       | 112.771       | -0.318 |
| 30              | 30        | 117.959       | 115.974       | 1.985  |
| 50              | 31        | 114.145       | 115.854       | -1.709 |
| 50              | 32        | 110.096       | 110.487       | -0.391 |
| 50              | 33        | 113.620       | 115.491       | -1.871 |
| 50              | 34        | 115.032       | 115.861       | -0.829 |
| 50              | 35        | 114.143       | 115.982       | -1.839 |
| 50              | 36        | 113.368       | 114.717       | -1.349 |
| 50              | 37        | 116.090       | 117.319       | -1.229 |
| 50              | 38        | 116.268       | 117.803       | -1.535 |
| 50              | 39        | 112.453       | 113.673       | -1.220 |
| 50              | 40        | 117.959       | 118.938       | -0.979 |
| 100             | 41        | 116.313       | 116.130       | 0.183  |
| 100             | 42        | 114.385       | 115.616       | -1.231 |
| 100             | 43        | 117.148       | 114.565       | 2.583  |
| 100             | 44        | 113.230       | 120.455       | -7.225 |
| 100             | 45        | 115.901       | 114.426       | 1.475  |
| 100             | 46        | 113.022       | 113.263       | -0.241 |
| 100             | 47        | 115.113       | 115.488       | -0.375 |
| 100             | 48        | 117.155       | 117.822       | -0.667 |
| 100             | 49        | 111.427       | 112.639       | -1.212 |



| 4.4_IExcite 16X |           |         |         |         |         |         |
|-----------------|-----------|---------|---------|---------|---------|---------|
| Test Site       | J2S       |         |         |         |         |         |
| Tester          | FETS36405 |         |         |         |         |         |
| Test Number     | EE131301  |         |         |         |         |         |
| Max Limit       | 152       | uA      |         |         |         |         |
| Min Limit       | 88        | uA      |         |         |         |         |
| krad            | 0         | 3       | 10      | 30      | 50      | 100     |
| LL              | 88.000    | 88.000  | 88.000  | 88.000  | 88.000  | 88.000  |
| Min             | 112.644   | 110.400 | 111.670 | 112.771 | 110.487 | 112.639 |
| Average         | 114.836   | 114.823 | 115.904 | 115.809 | 115.613 | 115.516 |
| Max             | 116.991   | 118.304 | 119.424 | 119.418 | 118.938 | 120.455 |
| UL              | 152.000   | 152.000 | 152.000 | 152.000 | 152.000 | 152.000 |



# TID Report TMP9R01-SP

|         |    |         |         |        |
|---------|----|---------|---------|--------|
| 100     | 50 | 114.615 | 114.760 | -0.145 |
| 0       | 51 | 116.692 | 116.991 | -0.299 |
| 0       | 52 | 114.132 | 114.139 | -0.007 |
| 0       | 53 | 114.315 | 114.559 | -0.244 |
| 0       | 54 | 112.489 | 112.644 | -0.155 |
| 0       | 55 | 115.645 | 115.845 | -0.200 |
| Max     |    | 117.959 | 120.455 | 2.583  |
| Average |    | 114.441 | 115.470 | -1.028 |
| Min     |    | 110.096 | 110.400 | -7.363 |
| Std Dev |    | 2.011   | 2.127   | 1.813  |

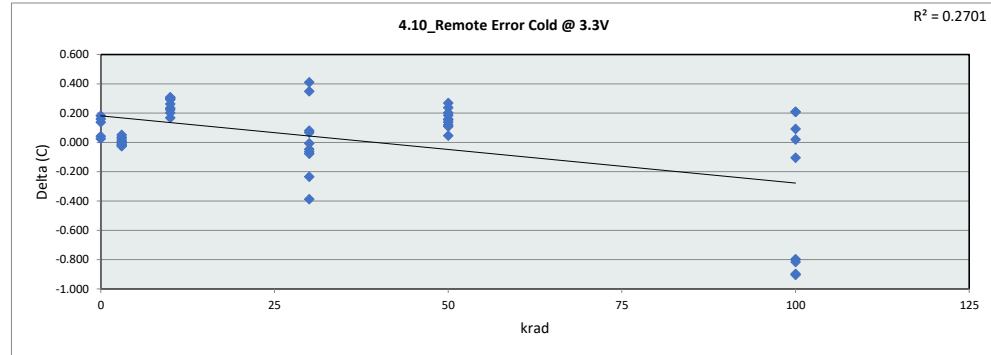
# TID Report

## TMP9R01-SP

### 4.10\_Remote Error Cold @ 3.3V

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | C         | C         |
| Max Limit   | 1.5       | 1.5       |
| Min Limit   | -1.5      | -1.5      |

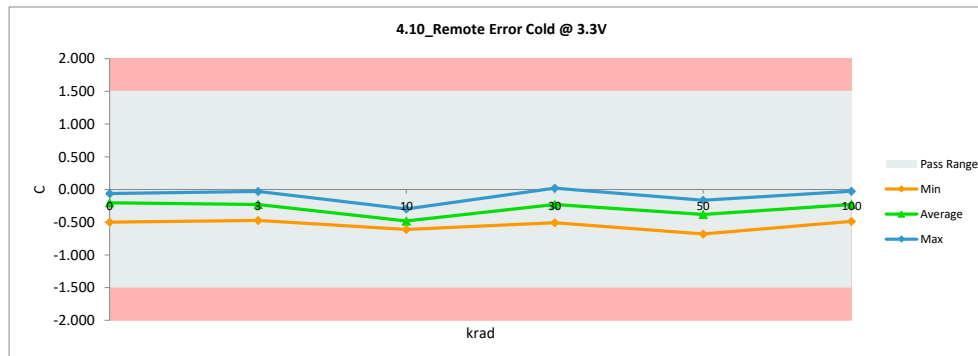
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | -0.074        | -0.089        | 0.015  |
| 3    | 2        | -0.116        | -0.096        | -0.020 |
| 3    | 3        | -0.443        | -0.473        | 0.030  |
| 3    | 4        | -0.275        | -0.326        | 0.051  |
| 3    | 5        | -0.067        | -0.061        | -0.006 |
| 3    | 6        | -0.340        | -0.342        | 0.002  |
| 3    | 7        | -0.045        | -0.029        | -0.016 |
| 3    | 8        | -0.369        | -0.404        | 0.035  |
| 3    | 9        | -0.120        | -0.123        | 0.003  |
| 3    | 10       | -0.368        | -0.342        | -0.026 |
| 10   | 11       | -0.074        | -0.298        | 0.224  |
| 10   | 12       | -0.116        | -0.423        | 0.307  |
| 10   | 13       | -0.443        | -0.611        | 0.168  |
| 10   | 14       | -0.275        | -0.579        | 0.304  |
| 10   | 15       | -0.067        | -0.361        | 0.294  |
| 10   | 16       | -0.340        | -0.602        | 0.262  |
| 10   | 17       | -0.045        | -0.352        | 0.307  |
| 10   | 18       | -0.369        | -0.571        | 0.202  |
| 10   | 19       | -0.120        | -0.414        | 0.294  |
| 10   | 20       | -0.368        | -0.602        | 0.234  |
| 30   | 21       | -0.074        | -0.484        | 0.410  |
| 30   | 22       | -0.116        | -0.109        | -0.007 |
| 30   | 23       | -0.443        | -0.509        | 0.066  |
| 30   | 24       | -0.275        | -0.228        | -0.047 |
| 30   | 25       | -0.067        | -0.415        | 0.348  |
| 30   | 26       | -0.340        | -0.105        | -0.235 |
| 30   | 27       | -0.045        | 0.020         | -0.065 |
| 30   | 28       | -0.369        | -0.449        | 0.080  |
| 30   | 29       | -0.120        | -0.042        | -0.078 |
| 30   | 30       | -0.368        | 0.020         | -0.388 |
| 50   | 31       | -0.074        | -0.275        | 0.201  |
| 50   | 32       | -0.116        | -0.274        | 0.158  |
| 50   | 33       | -0.443        | -0.680        | 0.237  |
| 50   | 34       | -0.275        | -0.430        | 0.155  |
| 50   | 35       | -0.067        | -0.336        | 0.269  |
| 50   | 36       | -0.340        | -0.524        | 0.184  |
| 50   | 37       | -0.045        | -0.164        | 0.119  |
| 50   | 38       | -0.369        | -0.477        | 0.108  |
| 50   | 39       | -0.120        | -0.258        | 0.138  |
| 50   | 40       | -0.368        | -0.414        | 0.046  |
| 100  | 41       | -1.306        | -0.408        | -0.898 |
| 100  | 42       | -1.368        | -0.464        | -0.904 |
| 100  | 43       | -0.931        | -0.132        | -0.799 |
| 100  | 44       | -0.962        | -0.162        | -0.800 |
| 100  | 45       | -1.306        | -0.489        | -0.817 |
| 100  | 46       | 0.088         | -0.120        | 0.208  |
| 100  | 47       | -0.131        | -0.026        | -0.105 |
| 100  | 48       | -0.068        | -0.276        | 0.208  |
| 100  | 49       | -0.006        | -0.026        | 0.020  |



### 4.10\_Remote Error Cold @ 3.3V

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 1.5 C     |
| Min Limit   | -1.5 C    |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 |
| Min     | -0.499 | -0.473 | -0.611 | -0.509 | -0.680 | -0.489 |
| Average | -0.204 | -0.229 | -0.481 | -0.230 | -0.383 | -0.229 |
| Max     | -0.061 | -0.029 | -0.298 | 0.020  | -0.164 | -0.026 |
| UL      | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  |





# TID Report TMP9R01-SP

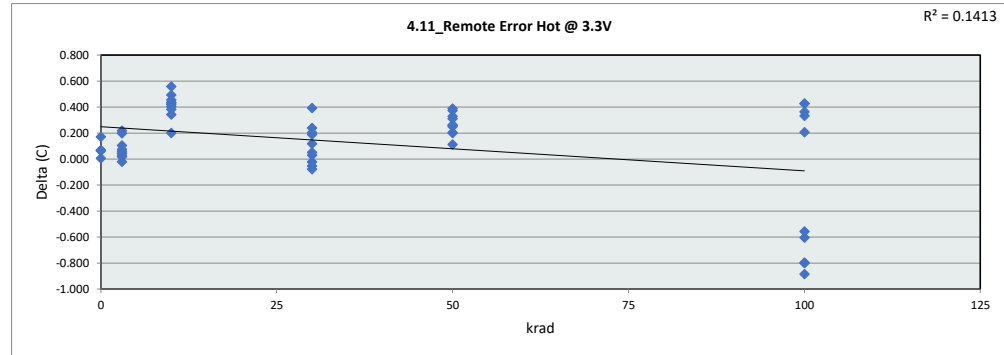
|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.099 | -0.191 | 0.092  |
| 0       | 51 | -0.129 | -0.171 | 0.042  |
| 0       | 52 | 0.027  | -0.133 | 0.160  |
| 0       | 53 | -0.317 | -0.499 | 0.182  |
| 0       | 54 | -0.036 | -0.061 | 0.025  |
| 0       | 55 | -0.016 | -0.154 | 0.138  |
| Max     |    | 0.088  | 0.020  | 0.410  |
| Average |    | -0.280 | -0.301 | 0.020  |
| Min     |    | -1.368 | -0.680 | -0.904 |
| Std Dev |    | 0.325  | 0.191  | 0.312  |

# TID Report

## TMP9R01-SP

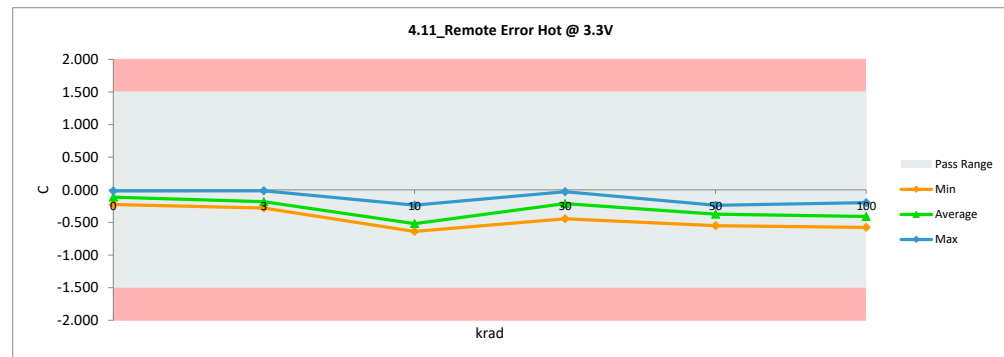
| 4.11_Remote Error Hot @ 3.3V |           |           |
|------------------------------|-----------|-----------|
| Test Site                    | J2S       | J2S       |
| Tester                       | FETS36405 | FETS36406 |
| Test Number                  | EE131301  | EE131301  |
| Unit                         | C         | C         |
| Max Limit                    | 1.5       | 1.5       |
| Min Limit                    | -1.5      | -1.5      |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | -0.175        | -0.200        | 0.025  |
| 3    | 2        | -0.052        | -0.250        | 0.198  |
| 3    | 3        | -0.035        | -0.015        | -0.020 |
| 3    | 4        | -0.125        | -0.170        | 0.045  |
| 3    | 5        | -0.175        | -0.280        | 0.105  |
| 3    | 6        | -0.098        | -0.155        | 0.057  |
| 3    | 7        | -0.144        | -0.187        | 0.043  |
| 3    | 8        | 0.000         | -0.218        | 0.218  |
| 3    | 9        | -0.113        | -0.187        | 0.074  |
| 3    | 10       | -0.138        | -0.155        | 0.017  |
| 10   | 11       | -0.175        | -0.580        | 0.405  |
| 10   | 12       | -0.052        | -0.611        | 0.559  |
| 10   | 13       | -0.035        | -0.236        | 0.201  |
| 10   | 14       | -0.125        | -0.580        | 0.455  |
| 10   | 15       | -0.175        | -0.611        | 0.436  |
| 10   | 16       | -0.098        | -0.481        | 0.383  |
| 10   | 17       | -0.144        | -0.638        | 0.494  |
| 10   | 18       | 0.000         | -0.419        | 0.419  |
| 10   | 19       | -0.113        | -0.544        | 0.431  |
| 10   | 20       | -0.138        | -0.481        | 0.343  |
| 30   | 21       | -0.175        | -0.226        | 0.051  |
| 30   | 22       | -0.052        | -0.445        | 0.393  |
| 30   | 23       | -0.035        | -0.239        | 0.204  |
| 30   | 24       | -0.125        | -0.364        | 0.239  |
| 30   | 25       | -0.175        | -0.364        | 0.189  |
| 30   | 26       | -0.098        | -0.216        | 0.118  |
| 30   | 27       | -0.144        | -0.091        | -0.053 |
| 30   | 28       | 0.000         | -0.029        | 0.029  |
| 30   | 29       | -0.113        | -0.091        | -0.022 |
| 30   | 30       | -0.138        | -0.060        | -0.078 |
| 50   | 31       | -0.175        | -0.504        | 0.329  |
| 50   | 32       | -0.052        | -0.362        | 0.310  |
| 50   | 33       | -0.035        | -0.424        | 0.389  |
| 50   | 34       | -0.125        | -0.237        | 0.112  |
| 50   | 35       | -0.175        | -0.549        | 0.374  |
| 50   | 36       | -0.098        | -0.299        | 0.201  |
| 50   | 37       | -0.144        | -0.405        | 0.261  |
| 50   | 38       | 0.000         | -0.249        | 0.249  |
| 50   | 39       | -0.113        | -0.374        | 0.261  |
| 50   | 40       | -0.138        | -0.342        | 0.204  |
| 100  | 41       | -1.182        | -0.577        | -0.605 |
| 100  | 42       | -1.025        | -0.469        | -0.556 |
| 100  | 43       | -1.244        | -0.360        | -0.884 |
| 100  | 44       | -1.213        | -0.413        | -0.800 |
| 100  | 45       | -0.994        | -0.198        | -0.796 |
| 100  | 46       | 0.014         | -0.350        | 0.364  |
| 100  | 47       | -0.174        | -0.381        | 0.207  |
| 100  | 48       | 0.014         | -0.413        | 0.427  |
| 100  | 49       | -0.080        | -0.413        | 0.333  |



| 4.11_Remote Error Hot @ 3.3V |           |   |
|------------------------------|-----------|---|
| Test Site                    | J2S       |   |
| Tester                       | FETS36405 |   |
| Test Number                  | EE131301  |   |
| Max Limit                    | 1.5       | C |
| Min Limit                    | -1.5      | C |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 |
| Min     | -0.225 | -0.280 | -0.638 | -0.445 | -0.549 | -0.577 |
| Average | -0.112 | -0.182 | -0.518 | -0.213 | -0.375 | -0.408 |
| Max     | -0.018 | -0.015 | -0.236 | -0.029 | -0.237 | -0.198 |
| UL      | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  |



# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.080 | -0.507 | 0.427  |
| 0       | 51 | -0.159 | -0.225 | 0.066  |
| 0       | 52 | -0.066 | -0.072 | 0.006  |
| 0       | 53 | 0.153  | -0.018 | 0.171  |
| 0       | 54 | -0.066 | -0.136 | 0.070  |
| 0       | 55 | -0.047 | -0.110 | 0.063  |
| Max     |    | 0.153  | -0.015 | 0.559  |
| Average |    | -0.189 | -0.318 | 0.130  |
| Min     |    | -1.244 | -0.638 | -0.884 |
| Std Dev |    | 0.310  | 0.172  | 0.319  |

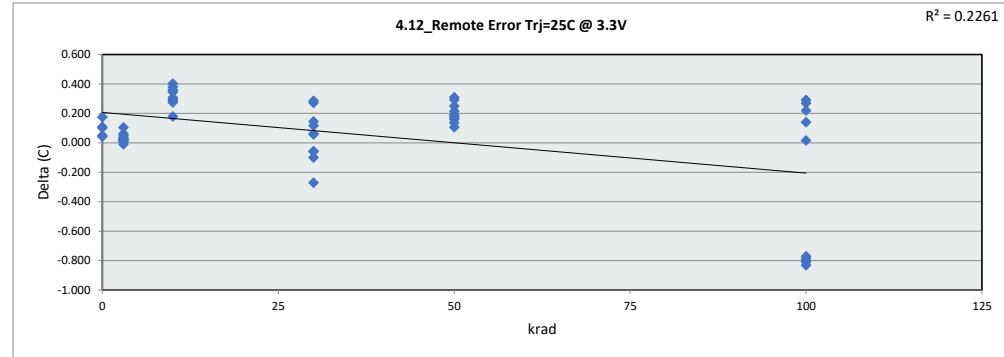
# TID Report

## TMP9R01-SP

### 4.12\_Remote Error Trj=25C @ 3.3V

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | C         | C         |
| Max Limit   | 1.5       | 1.5       |
| Min Limit   | -1.5      | -1.5      |

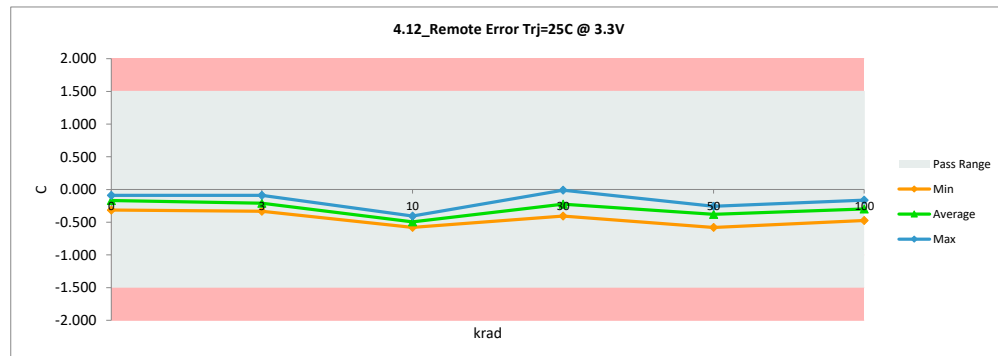
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | -0.113        | -0.131        | 0.018  |
| 3    | 2        | -0.092        | -0.154        | 0.062  |
| 3    | 3        | -0.288        | -0.299        | 0.011  |
| 3    | 4        | -0.218        | -0.267        | 0.049  |
| 3    | 5        | -0.108        | -0.144        | 0.036  |
| 3    | 6        | -0.248        | -0.271        | 0.023  |
| 3    | 7        | -0.082        | -0.089        | 0.007  |
| 3    | 8        | -0.229        | -0.334        | 0.105  |
| 3    | 9        | -0.117        | -0.147        | 0.030  |
| 3    | 10       | -0.281        | -0.271        | -0.010 |
| 10   | 11       | -0.113        | -0.406        | 0.293  |
| 10   | 12       | -0.092        | -0.495        | 0.403  |
| 10   | 13       | -0.288        | -0.467        | 0.179  |
| 10   | 14       | -0.218        | -0.579        | 0.361  |
| 10   | 15       | -0.108        | -0.457        | 0.349  |
| 10   | 16       | -0.248        | -0.556        | 0.308  |
| 10   | 17       | -0.082        | -0.462        | 0.380  |
| 10   | 18       | -0.229        | -0.512        | 0.283  |
| 10   | 19       | -0.117        | -0.464        | 0.347  |
| 10   | 20       | -0.281        | -0.556        | 0.275  |
| 30   | 21       | -0.113        | -0.385        | 0.272  |
| 30   | 22       | -0.092        | -0.238        | 0.146  |
| 30   | 23       | -0.288        | -0.405        | 0.117  |
| 30   | 24       | -0.218        | -0.280        | 0.062  |
| 30   | 25       | -0.108        | -0.395        | 0.287  |
| 30   | 26       | -0.248        | -0.148        | -0.100 |
| 30   | 27       | -0.082        | -0.023        | -0.059 |
| 30   | 28       | -0.229        | -0.287        | 0.058  |
| 30   | 29       | -0.117        | -0.061        | -0.056 |
| 30   | 30       | -0.281        | -0.011        | -0.270 |
| 50   | 31       | -0.113        | -0.363        | 0.250  |
| 50   | 32       | -0.092        | -0.307        | 0.215  |
| 50   | 33       | -0.288        | -0.581        | 0.293  |
| 50   | 34       | -0.218        | -0.355        | 0.137  |
| 50   | 35       | -0.108        | -0.418        | 0.310  |
| 50   | 36       | -0.248        | -0.437        | 0.189  |
| 50   | 37       | -0.082        | -0.257        | 0.175  |
| 50   | 38       | -0.229        | -0.389        | 0.160  |
| 50   | 39       | -0.117        | -0.303        | 0.186  |
| 50   | 40       | -0.281        | -0.387        | 0.106  |
| 100  | 41       | -1.258        | -0.473        | -0.785 |
| 100  | 42       | -1.236        | -0.466        | -0.770 |
| 100  | 43       | -1.051        | -0.220        | -0.831 |
| 100  | 44       | -1.058        | -0.258        | -0.800 |
| 100  | 45       | -1.186        | -0.377        | -0.809 |
| 100  | 46       | 0.060         | -0.209        | 0.269  |
| 100  | 47       | -0.147        | -0.163        | 0.016  |
| 100  | 48       | -0.037        | -0.329        | 0.292  |
| 100  | 49       | -0.034        | -0.175        | 0.141  |



### 4.12\_Remote Error Trj=25C @

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 1.5 C     |
| Min Limit   | -1.5 C    |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 |
| Min     | -0.314 | -0.334 | -0.579 | -0.405 | -0.581 | -0.473 |
| Average | -0.169 | -0.211 | -0.495 | -0.223 | -0.380 | -0.298 |
| Max     | -0.090 | -0.089 | -0.406 | -0.011 | -0.257 | -0.163 |
| UL      | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  |



# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.092 | -0.312 | 0.220  |
| 0       | 51 | -0.141 | -0.192 | 0.051  |
| 0       | 52 | -0.008 | -0.110 | 0.102  |
| 0       | 53 | -0.138 | -0.314 | 0.176  |
| 0       | 54 | -0.047 | -0.090 | 0.043  |
| 0       | 55 | -0.028 | -0.137 | 0.109  |
| Max     |    | 0.060  | -0.011 | 0.403  |
| Average |    | -0.246 | -0.308 | 0.062  |
| Min     |    | -1.258 | -0.581 | -0.831 |
| Std Dev |    | 0.305  | 0.149  | 0.306  |

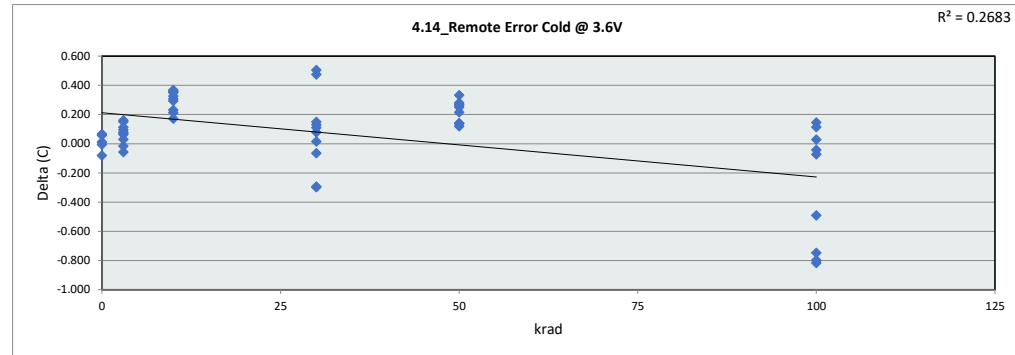
# TID Report

## TMP9R01-SP

### 4.14\_Remote Error Cold @ 3.6V

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | C         | C         |
| Max Limit   | 1.5       | 1.5       |
| Min Limit   | -1.5      | -1.5      |

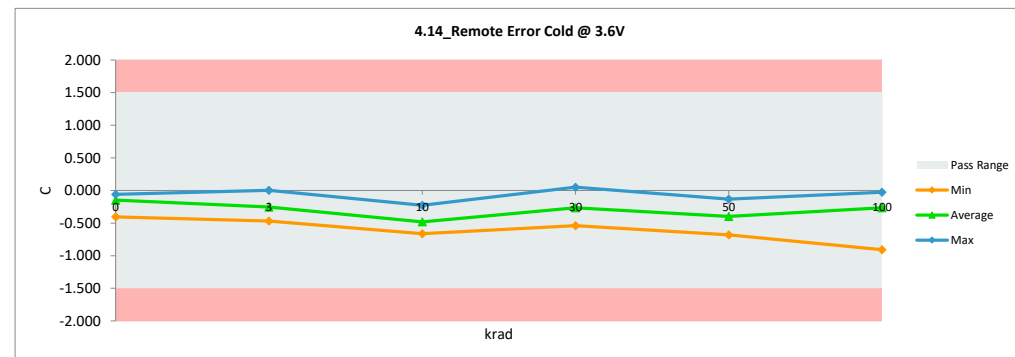
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 0.020         | -0.058        | 0.078  |
| 3    | 2        | -0.054        | -0.127        | 0.073  |
| 3    | 3        | -0.411        | -0.441        | 0.030  |
| 3    | 4        | -0.275        | -0.388        | 0.113  |
| 3    | 5        | -0.004        | -0.154        | 0.150  |
| 3    | 6        | -0.340        | -0.404        | 0.064  |
| 3    | 7        | -0.014        | 0.002         | -0.016 |
| 3    | 8        | -0.307        | -0.467        | 0.160  |
| 3    | 9        | -0.058        | -0.154        | 0.096  |
| 3    | 10       | -0.399        | -0.342        | -0.057 |
| 10   | 11       | 0.020         | -0.329        | 0.349  |
| 10   | 12       | -0.054        | -0.361        | 0.307  |
| 10   | 13       | -0.411        | -0.642        | 0.231  |
| 10   | 14       | -0.275        | -0.642        | 0.367  |
| 10   | 15       | -0.004        | -0.361        | 0.357  |
| 10   | 16       | -0.340        | -0.633        | 0.293  |
| 10   | 17       | -0.014        | -0.227        | 0.213  |
| 10   | 18       | -0.307        | -0.664        | 0.357  |
| 10   | 19       | -0.058        | -0.383        | 0.325  |
| 10   | 20       | -0.399        | -0.571        | 0.172  |
| 30   | 21       | 0.020         | -0.484        | 0.504  |
| 30   | 22       | -0.054        | -0.203        | 0.149  |
| 30   | 23       | -0.411        | -0.540        | 0.129  |
| 30   | 24       | -0.275        | -0.290        | 0.015  |
| 30   | 25       | -0.004        | -0.478        | 0.474  |
| 30   | 26       | -0.340        | -0.042        | -0.298 |
| 30   | 27       | -0.014        | 0.051         | -0.065 |
| 30   | 28       | -0.307        | -0.417        | 0.110  |
| 30   | 29       | -0.058        | -0.136        | 0.078  |
| 30   | 30       | -0.399        | -0.105        | -0.294 |
| 50   | 31       | 0.020         | -0.244        | 0.264  |
| 50   | 32       | -0.054        | -0.305        | 0.251  |
| 50   | 33       | -0.411        | -0.680        | 0.269  |
| 50   | 34       | -0.275        | -0.555        | 0.280  |
| 50   | 35       | -0.004        | -0.336        | 0.332  |
| 50   | 36       | -0.340        | -0.555        | 0.215  |
| 50   | 37       | -0.014        | -0.133        | 0.119  |
| 50   | 38       | -0.307        | -0.446        | 0.139  |
| 50   | 39       | -0.058        | -0.196        | 0.138  |
| 50   | 40       | -0.399        | -0.539        | 0.140  |
| 100  | 41       | -1.399        | -0.908        | -0.491 |
| 100  | 42       | -1.306        | -0.558        | -0.748 |
| 100  | 43       | -0.899        | -0.101        | -0.798 |
| 100  | 44       | -0.993        | -0.193        | -0.800 |
| 100  | 45       | -1.212        | -0.395        | -0.817 |
| 100  | 46       | 0.119         | -0.026        | 0.145  |
| 100  | 47       | -0.099        | -0.026        | -0.073 |
| 100  | 48       | -0.162        | -0.120        | -0.042 |
| 100  | 49       | -0.006        | -0.120        | 0.114  |



### 4.14\_Remote Error Cold @ 3.6V

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 1.5 C     |
| Min Limit   | -1.5 C    |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 |
| Min     | -0.405 | -0.467 | -0.664 | -0.540 | -0.680 | -0.908 |
| Average | -0.147 | -0.253 | -0.481 | -0.264 | -0.399 | -0.264 |
| Max     | -0.060 | 0.002  | -0.227 | 0.051  | -0.133 | -0.026 |
| UL      | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  |



# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.162 | -0.191 | 0.029  |
| 0       | 51 | -0.129 | -0.140 | 0.011  |
| 0       | 52 | -0.004 | -0.070 | 0.066  |
| 0       | 53 | -0.411 | -0.405 | -0.006 |
| 0       | 54 | -0.004 | -0.061 | 0.057  |
| 0       | 55 | -0.141 | -0.060 | -0.081 |
| Max     |    | 0.119  | 0.051  | 0.504  |
| Average |    | -0.258 | -0.316 | 0.058  |
| Min     |    | -1.399 | -0.908 | -0.817 |
| Std Dev |    | 0.334  | 0.218  | 0.300  |

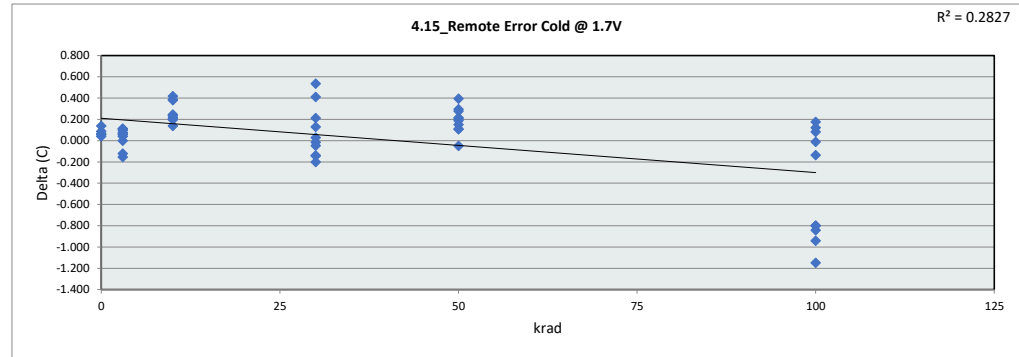
# TID Report

## TMP9R01-SP

### 4.15\_Remote Error Cold @ 1.7V

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | C         | C         |
| Max Limit   | 1.5       | 1.5       |
| Min Limit   | -1.5      | -1.5      |

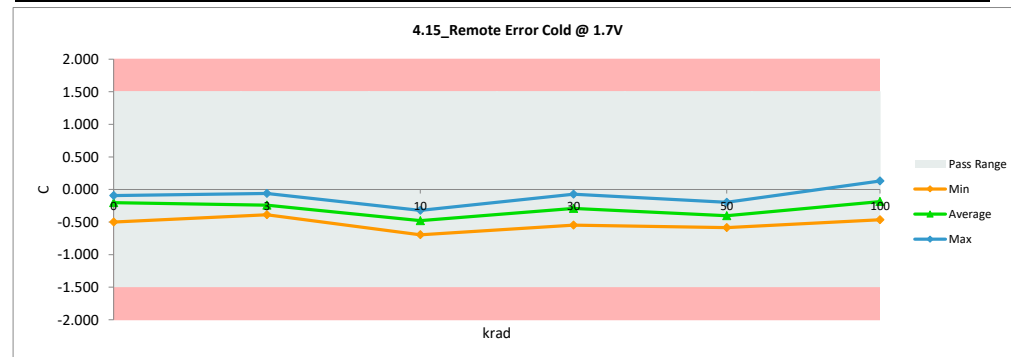
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | -0.012        | -0.089        | 0.077  |
| 3    | 2        | -0.116        | -0.158        | 0.042  |
| 3    | 3        | -0.380        | -0.379        | -0.001 |
| 3    | 4        | -0.275        | -0.388        | 0.113  |
| 3    | 5        | -0.004        | -0.061        | 0.057  |
| 3    | 6        | -0.309        | -0.373        | 0.064  |
| 3    | 7        | -0.107        | -0.217        | 0.110  |
| 3    | 8        | -0.400        | -0.279        | -0.121 |
| 3    | 9        | -0.245        | -0.092        | -0.153 |
| 3    | 10       | -0.274        | -0.373        | 0.099  |
| 10   | 11       | -0.012        | -0.392        | 0.380  |
| 10   | 12       | -0.116        | -0.361        | 0.245  |
| 10   | 13       | -0.380        | -0.579        | 0.199  |
| 10   | 14       | -0.275        | -0.517        | 0.242  |
| 10   | 15       | -0.004        | -0.423        | 0.419  |
| 10   | 16       | -0.309        | -0.696        | 0.387  |
| 10   | 17       | -0.107        | -0.321        | 0.214  |
| 10   | 18       | -0.400        | -0.602        | 0.202  |
| 10   | 19       | -0.245        | -0.383        | 0.138  |
| 10   | 20       | -0.274        | -0.508        | 0.234  |
| 30   | 21       | -0.012        | -0.547        | 0.535  |
| 30   | 22       | -0.116        | -0.328        | 0.212  |
| 30   | 23       | -0.380        | -0.509        | 0.129  |
| 30   | 24       | -0.275        | -0.228        | -0.047 |
| 30   | 25       | -0.004        | -0.415        | 0.411  |
| 30   | 26       | -0.309        | -0.167        | -0.142 |
| 30   | 27       | -0.107        | -0.136        | 0.029  |
| 30   | 28       | -0.400        | -0.386        | -0.014 |
| 30   | 29       | -0.245        | -0.105        | -0.140 |
| 30   | 30       | -0.274        | -0.074        | -0.200 |
| 50   | 31       | -0.012        | -0.307        | 0.295  |
| 50   | 32       | -0.116        | -0.305        | 0.189  |
| 50   | 33       | -0.380        | -0.586        | 0.206  |
| 50   | 34       | -0.275        | -0.492        | 0.217  |
| 50   | 35       | -0.004        | -0.399        | 0.395  |
| 50   | 36       | -0.309        | -0.586        | 0.277  |
| 50   | 37       | -0.107        | -0.258        | 0.151  |
| 50   | 38       | -0.400        | -0.508        | 0.108  |
| 50   | 39       | -0.245        | -0.196        | -0.049 |
| 50   | 40       | -0.274        | -0.383        | 0.109  |
| 100  | 41       | -1.306        | -0.158        | -1.148 |
| 100  | 42       | -1.306        | -0.464        | -0.842 |
| 100  | 43       | -0.931        | -0.132        | -0.799 |
| 100  | 44       | -1.056        | -0.256        | -0.800 |
| 100  | 45       | -1.274        | -0.333        | -0.941 |
| 100  | 46       | -0.006        | -0.089        | 0.083  |
| 100  | 47       | -0.006        | 0.130         | -0.136 |
| 100  | 48       | -0.162        | -0.339        | 0.177  |
| 100  | 49       | -0.037        | -0.026        | -0.011 |



### 4.15\_Remote Error Cold @ 1.7V

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 1.5 C     |
| Min Limit   | -1.5 C    |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 |
| Min     | -0.499 | -0.388 | -0.696 | -0.547 | -0.586 | -0.464 |
| Average | -0.204 | -0.241 | -0.478 | -0.290 | -0.402 | -0.186 |
| Max     | -0.093 | -0.061 | -0.321 | -0.074 | -0.196 | 0.130  |
| UL      | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  |





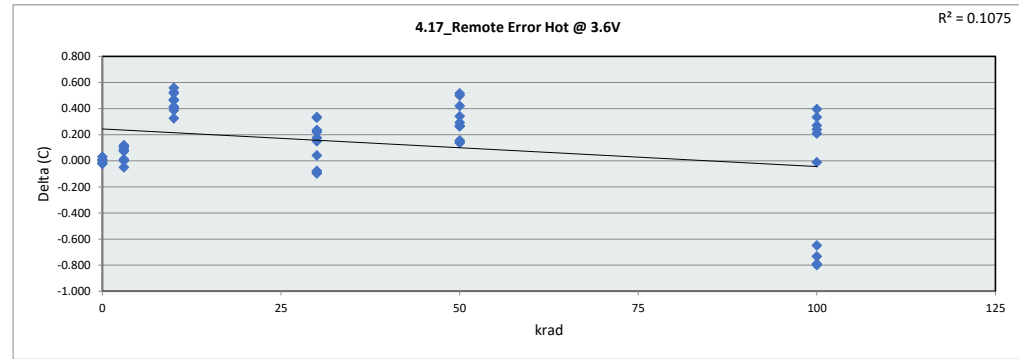
# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.068 | -0.191 | 0.123  |
| 0       | 51 | -0.098 | -0.140 | 0.042  |
| 0       | 52 | -0.067 | -0.133 | 0.066  |
| 0       | 53 | -0.411 | -0.499 | 0.088  |
| 0       | 54 | -0.036 | -0.093 | 0.057  |
| 0       | 55 | -0.016 | -0.154 | 0.138  |
| Max     |    | -0.004 | 0.130  | 0.535  |
| Average |    | -0.278 | -0.309 | 0.031  |
| Min     |    | -1.306 | -0.696 | -1.148 |
| Std Dev |    | 0.320  | 0.179  | 0.339  |

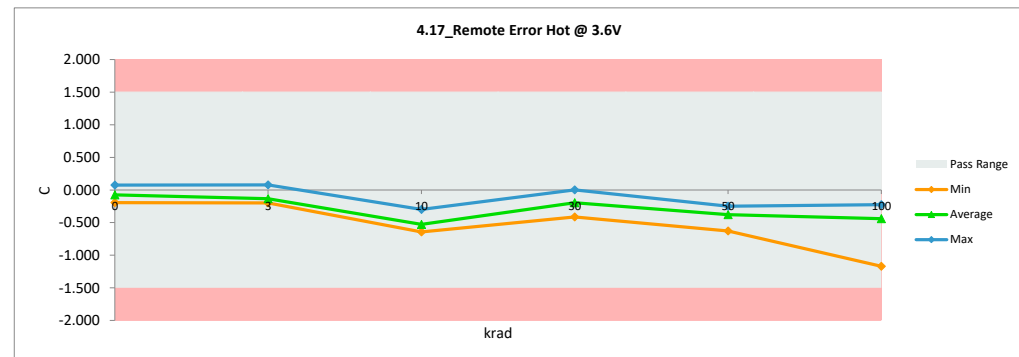
# TID Report

## TMP9R01-SP

| 4.17_Remote Error Hot @ 3.6V |           |               |               |        |
|------------------------------|-----------|---------------|---------------|--------|
| Test Site                    | J2S       | J2S           |               |        |
| Tester                       | FETS36405 | FETS36406     |               |        |
| Test Number                  | EE131301  | EE131301      |               |        |
| Unit                         | C         | C             |               |        |
| Max Limit                    | 1.5       | 1.5           |               |        |
| Min Limit                    | -1.5      | -1.5          |               |        |
| krad                         | Serial #  | LDR pre (all) | LDR post 100k | Delta  |
| 3                            | 1         | -0.113        | -0.200        | 0.087  |
| 3                            | 2         | -0.083        | -0.156        | 0.073  |
| 3                            | 3         | 0.027         | 0.078         | -0.051 |
| 3                            | 4         | -0.031        | -0.139        | 0.108  |
| 3                            | 5         | -0.112        | -0.187        | 0.075  |
| 3                            | 6         | -0.036        | -0.155        | 0.119  |
| 3                            | 7         | -0.175        | -0.187        | 0.012  |
| 3                            | 8         | -0.094        | -0.093        | -0.001 |
| 3                            | 9         | -0.019        | -0.124        | 0.105  |
| 3                            | 10        | -0.107        | -0.187        | 0.080  |
| 10                           | 11        | -0.113        | -0.580        | 0.467  |
| 10                           | 12        | -0.083        | -0.642        | 0.559  |
| 10                           | 13        | 0.027         | -0.298        | 0.325  |
| 10                           | 14        | -0.031        | -0.548        | 0.517  |
| 10                           | 15        | -0.112        | -0.517        | 0.405  |
| 10                           | 16        | -0.036        | -0.450        | 0.414  |
| 10                           | 17        | -0.175        | -0.638        | 0.463  |
| 10                           | 18        | -0.094        | -0.481        | 0.387  |
| 10                           | 19        | -0.019        | -0.544        | 0.525  |
| 10                           | 20        | -0.107        | -0.575        | 0.468  |
| 30                           | 21        | -0.113        | -0.289        | 0.176  |
| 30                           | 22        | -0.083        | -0.414        | 0.331  |
| 30                           | 23        | 0.027         | -0.208        | 0.235  |
| 30                           | 24        | -0.031        | -0.364        | 0.333  |
| 30                           | 25        | -0.112        | -0.333        | 0.221  |
| 30                           | 26        | -0.036        | -0.185        | 0.149  |
| 30                           | 27        | -0.175        | -0.091        | -0.084 |
| 30                           | 28        | -0.094        | 0.003         | -0.097 |
| 30                           | 29        | -0.019        | -0.060        | 0.041  |
| 30                           | 30        | -0.107        | -0.029        | -0.078 |
| 50                           | 31        | -0.113        | -0.629        | 0.516  |
| 50                           | 32        | -0.083        | -0.424        | 0.341  |
| 50                           | 33        | 0.027         | -0.393        | 0.420  |
| 50                           | 34        | -0.031        | -0.299        | 0.268  |
| 50                           | 35        | -0.112        | -0.612        | 0.500  |
| 50                           | 36        | -0.036        | -0.299        | 0.263  |
| 50                           | 37        | -0.175        | -0.311        | 0.136  |
| 50                           | 38        | -0.094        | -0.249        | 0.155  |
| 50                           | 39        | -0.019        | -0.311        | 0.292  |
| 50                           | 40        | -0.107        | -0.249        | 0.142  |
| 100                          | 41        | -1.182        | -1.170        | -0.012 |
| 100                          | 42        | -1.088        | -0.438        | -0.650 |
| 100                          | 43        | -1.150        | -0.360        | -0.790 |
| 100                          | 44        | -1.088        | -0.288        | -0.800 |
| 100                          | 45        | -1.025        | -0.292        | -0.733 |
| 100                          | 46        | -0.017        | -0.225        | 0.208  |
| 100                          | 47        | -0.205        | -0.444        | 0.239  |
| 100                          | 48        | -0.017        | -0.413        | 0.396  |
| 100                          | 49        | -0.080        | -0.350        | 0.270  |



| 4.17_Remote Error Hot @ 3.6V |           |        |        |        |        |        |
|------------------------------|-----------|--------|--------|--------|--------|--------|
| Test Site                    | J2S       |        |        |        |        |        |
| Tester                       | FETS36405 |        |        |        |        |        |
| Test Number                  | EE131301  |        |        |        |        |        |
| Max Limit                    | 1.5       | C      |        |        |        |        |
| Min Limit                    | -1.5      | C      |        |        |        |        |
| krad                         | 0         | 3      | 10     | 30     | 50     | 100    |
| LL                           | -1.500    | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 |
| Min                          | -0.194    | -0.200 | -0.642 | -0.414 | -0.629 | -1.170 |
| Average                      | -0.075    | -0.135 | -0.527 | -0.197 | -0.378 | -0.439 |
| Max                          | 0.075     | 0.078  | -0.298 | 0.003  | -0.249 | -0.225 |
| UL                           | 1.500     | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  |



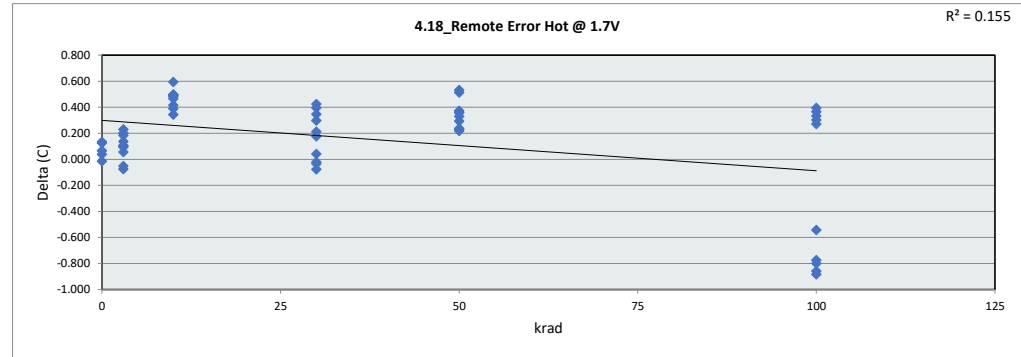
# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.080 | -0.413 | 0.333  |
| 0       | 51 | -0.191 | -0.194 | 0.003  |
| 0       | 52 | -0.128 | -0.104 | -0.024 |
| 0       | 53 | 0.059  | 0.075  | -0.016 |
| 0       | 54 | -0.034 | -0.042 | 0.008  |
| 0       | 55 | -0.079 | -0.110 | 0.031  |
| Max     |    | 0.059  | 0.078  | 0.559  |
| Average |    | -0.169 | -0.312 | 0.143  |
| Min     |    | -1.182 | -1.170 | -0.800 |
| Std Dev |    | 0.305  | 0.220  | 0.311  |

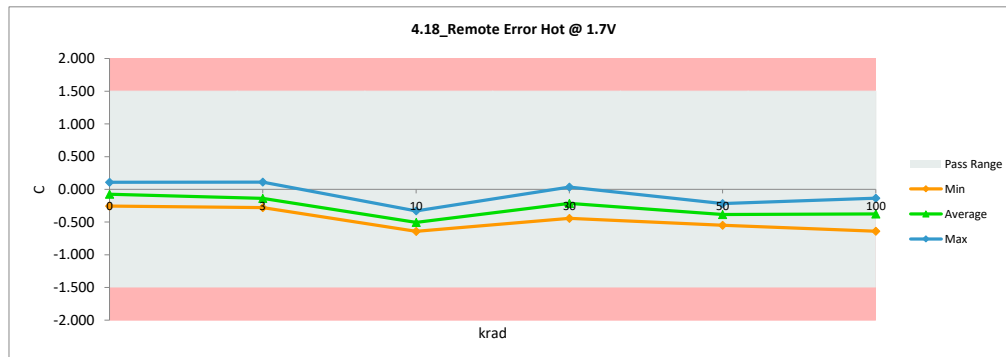
# TID Report

## TMP9R01-SP

| 4.18_Remote Error Hot @ 1.7V |           |               |               |        |
|------------------------------|-----------|---------------|---------------|--------|
| Test Site                    | J2S       | J2S           |               |        |
| Tester                       | FETS36405 | FETS36406     |               |        |
| Test Number                  | EE131301  | EE131301      |               |        |
| Unit                         | C         | C             |               |        |
| Max Limit                    | 1.5       | 1.5           |               |        |
| Min Limit                    | -1.5      | -1.5          |               |        |
| krad                         | Serial #  | LDR pre (all) | LDR post 100k | Delta  |
| 3                            | 1         | -0.144        | -0.200        | 0.056  |
| 3                            | 2         | -0.021        | -0.125        | 0.104  |
| 3                            | 3         | 0.058         | 0.110         | -0.052 |
| 3                            | 4         | 0.000         | -0.202        | 0.202  |
| 3                            | 5         | -0.018        | -0.155        | 0.137  |
| 3                            | 6         | -0.004        | -0.187        | 0.183  |
| 3                            | 7         | -0.050        | -0.280        | 0.230  |
| 3                            | 8         | 0.000         | -0.093        | 0.093  |
| 3                            | 9         | -0.082        | -0.187        | 0.105  |
| 3                            | 10        | -0.138        | -0.062        | -0.076 |
| 10                           | 11        | -0.144        | -0.642        | 0.498  |
| 10                           | 12        | -0.021        | -0.486        | 0.465  |
| 10                           | 13        | 0.058         | -0.330        | 0.388  |
| 10                           | 14        | 0.000         | -0.486        | 0.486  |
| 10                           | 15        | -0.018        | -0.611        | 0.593  |
| 10                           | 16        | -0.004        | -0.419        | 0.415  |
| 10                           | 17        | -0.050        | -0.544        | 0.494  |
| 10                           | 18        | 0.000         | -0.481        | 0.481  |
| 10                           | 19        | -0.082        | -0.575        | 0.493  |
| 10                           | 20        | -0.138        | -0.481        | 0.343  |
| 30                           | 21        | -0.144        | -0.320        | 0.176  |
| 30                           | 22        | -0.021        | -0.445        | 0.424  |
| 30                           | 23        | 0.058         | -0.239        | 0.297  |
| 30                           | 24        | 0.000         | -0.395        | 0.395  |
| 30                           | 25        | -0.018        | -0.364        | 0.346  |
| 30                           | 26        | -0.004        | -0.216        | 0.212  |
| 30                           | 27        | -0.050        | -0.091        | 0.041  |
| 30                           | 28        | 0.000         | 0.034         | -0.034 |
| 30                           | 29        | -0.082        | -0.060        | -0.022 |
| 30                           | 30        | -0.138        | -0.060        | -0.078 |
| 50                           | 31        | -0.144        | -0.504        | 0.360  |
| 50                           | 32        | -0.021        | -0.393        | 0.372  |
| 50                           | 33        | 0.058         | -0.455        | 0.513  |
| 50                           | 34        | 0.000         | -0.330        | 0.330  |
| 50                           | 35        | -0.018        | -0.549        | 0.531  |
| 50                           | 36        | -0.004        | -0.362        | 0.358  |
| 50                           | 37        | -0.050        | -0.342        | 0.292  |
| 50                           | 38        | 0.000         | -0.217        | 0.217  |
| 50                           | 39        | -0.082        | -0.311        | 0.229  |
| 50                           | 40        | -0.138        | -0.374        | 0.236  |
| 100                          | 41        | -1.182        | -0.639        | -0.543 |
| 100                          | 42        | -1.088        | -0.313        | -0.775 |
| 100                          | 43        | -1.213        | -0.329        | -0.884 |
| 100                          | 44        | -1.213        | -0.413        | -0.800 |
| 100                          | 45        | -0.994        | -0.136        | -0.858 |
| 100                          | 46        | 0.014         | -0.256        | 0.270  |
| 100                          | 47        | -0.049        | -0.350        | 0.301  |
| 100                          | 48        | -0.080        | -0.475        | 0.395  |
| 100                          | 49        | -0.080        | -0.413        | 0.333  |



| 4.18_Remote Error Hot @ 1.7V |           |        |        |        |        |        |
|------------------------------|-----------|--------|--------|--------|--------|--------|
| Test Site                    | J2S       |        |        |        |        |        |
| Tester                       | FETS36405 |        |        |        |        |        |
| Test Number                  | EE131301  |        |        |        |        |        |
| Max Limit                    | 1.5       | C      |        |        |        |        |
| Min Limit                    | -1.5      | C      |        |        |        |        |
| krad                         | 0         | 3      | 10     | 30     | 50     | 100    |
| LL                           | -1.500    | -1.500 | -1.500 | -1.500 | -1.500 | -1.500 |
| Min                          | -0.256    | -0.280 | -0.642 | -0.445 | -0.549 | -0.639 |
| Average                      | -0.075    | -0.138 | -0.506 | -0.216 | -0.384 | -0.377 |
| Max                          | 0.107     | 0.110  | -0.330 | 0.034  | -0.217 | -0.136 |
| UL                           | 1.500     | 1.500  | 1.500  | 1.500  | 1.500  | 1.500  |



# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.080 | -0.445 | 0.365  |
| 0       | 51 | -0.191 | -0.256 | 0.065  |
| 0       | 52 | -0.066 | -0.104 | 0.038  |
| 0       | 53 | 0.091  | 0.107  | -0.016 |
| 0       | 54 | 0.059  | -0.074 | 0.133  |
| 0       | 55 | 0.078  | -0.047 | 0.125  |
| Max     |    | 0.091  | 0.110  | 0.593  |
| Average |    | -0.138 | -0.301 | 0.163  |
| Min     |    | -1.213 | -0.642 | -0.884 |
| Std Dev |    | 0.326  | 0.187  | 0.347  |

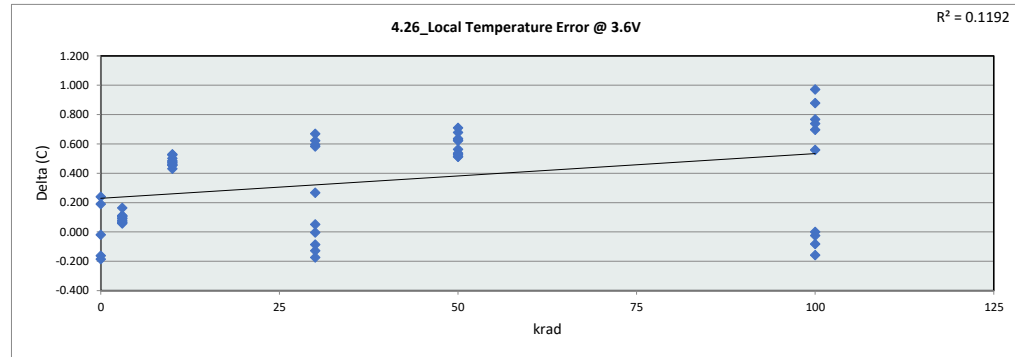
# TID Report

## TMP9R01-SP

### 4.26\_Local Temperature Error @

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | C         | C         |
| Max Limit   | 2         | 2         |
| Min Limit   | -2        | -2        |

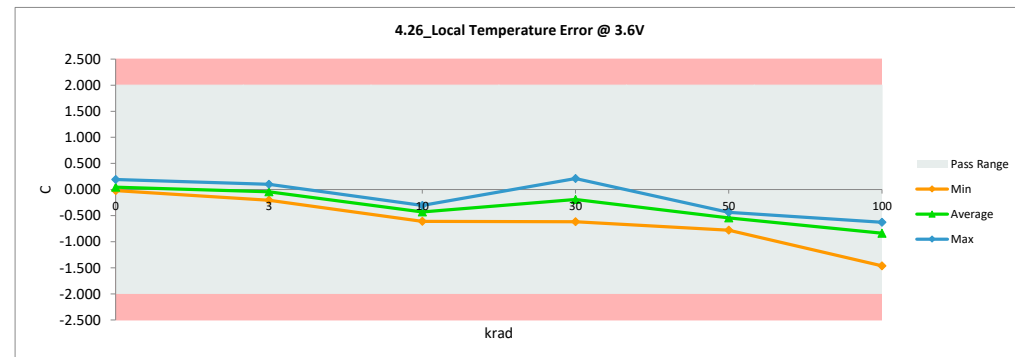
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 0.172         | 0.060         | 0.112  |
| 3    | 2        | 0.166         | 0.099         | 0.068  |
| 3    | 3        | -0.101        | -0.206        | 0.106  |
| 3    | 4        | 0.130         | -0.034        | 0.164  |
| 3    | 5        | 0.005         | -0.054        | 0.059  |
| 3    | 6        | -0.050        | -0.145        | 0.095  |
| 3    | 7        | 0.069         | 0.001         | 0.068  |
| 3    | 8        | 0.126         | 0.034         | 0.091  |
| 3    | 9        | 0.072         | -0.007        | 0.079  |
| 3    | 10       | -0.084        | -0.193        | 0.110  |
| 10   | 11       | 0.172         | -0.329        | 0.502  |
| 10   | 12       | 0.166         | -0.320        | 0.486  |
| 10   | 13       | -0.101        | -0.557        | 0.456  |
| 10   | 14       | 0.130         | -0.400        | 0.530  |
| 10   | 15       | 0.005         | -0.473        | 0.478  |
| 10   | 16       | -0.050        | -0.505        | 0.455  |
| 10   | 17       | 0.069         | -0.403        | 0.472  |
| 10   | 18       | 0.126         | -0.306        | 0.432  |
| 10   | 19       | 0.072         | -0.391        | 0.463  |
| 10   | 20       | -0.084        | -0.609        | 0.525  |
| 30   | 21       | 0.172         | -0.498        | 0.670  |
| 30   | 22       | 0.166         | -0.429        | 0.595  |
| 30   | 23       | -0.101        | -0.368        | 0.267  |
| 30   | 24       | 0.130         | -0.453        | 0.583  |
| 30   | 25       | 0.005         | -0.617        | 0.622  |
| 30   | 26       | -0.050        | 0.078         | -0.128 |
| 30   | 27       | 0.069         | 0.016         | 0.052  |
| 30   | 28       | 0.126         | 0.211         | -0.085 |
| 30   | 29       | 0.072         | 0.075         | -0.003 |
| 30   | 30       | -0.084        | 0.090         | -0.174 |
| 50   | 31       | 0.172         | -0.454        | 0.626  |
| 50   | 32       | 0.166         | -0.456        | 0.622  |
| 50   | 33       | -0.101        | -0.779        | 0.679  |
| 50   | 34       | 0.130         | -0.579        | 0.709  |
| 50   | 35       | 0.005         | -0.512        | 0.517  |
| 50   | 36       | -0.050        | -0.562        | 0.512  |
| 50   | 37       | 0.069         | -0.469        | 0.537  |
| 50   | 38       | 0.126         | -0.438        | 0.563  |
| 50   | 39       | 0.072         | -0.457        | 0.529  |
| 50   | 40       | -0.084        | -0.720        | 0.636  |
| 100  | 41       | -0.767        | -1.463        | 0.696  |
| 100  | 42       | -0.793        | -0.769        | -0.024 |
| 100  | 43       | -0.709        | -0.627        | -0.082 |
| 100  | 44       | -0.766        | -0.766        | 0.000  |
| 100  | 45       | -0.923        | -0.765        | -0.157 |
| 100  | 46       | 0.092         | -0.675        | 0.767  |
| 100  | 47       | -0.142        | -0.701        | 0.559  |
| 100  | 48       | 0.025         | -0.854        | 0.879  |
| 100  | 49       | 0.206         | -0.766        | 0.972  |



### 4.26\_Local Temperature Error

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 2 C       |
| Min Limit   | -2 C      |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -2.000 | -2.000 | -2.000 | -2.000 | -2.000 | -2.000 |
| Min     | -0.021 | -0.206 | -0.609 | -0.617 | -0.779 | -1.463 |
| Average | 0.045  | -0.045 | -0.429 | -0.189 | -0.543 | -0.837 |
| Max     | 0.193  | 0.099  | -0.306 | 0.211  | -0.438 | -0.627 |
| UL      | 2.000  | 2.000  | 2.000  | 2.000  | 2.000  | 2.000  |



# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.243 | -0.981 | 0.739  |
| 0       | 51 | 0.250  | 0.009  | 0.241  |
| 0       | 52 | -0.206 | -0.021 | -0.185 |
| 0       | 53 | 0.174  | 0.193  | -0.019 |
| 0       | 54 | 0.233  | 0.043  | 0.190  |
| 0       | 55 | -0.162 | 0.000  | -0.162 |
| Max     |    | 0.250  | 0.211  | 0.972  |
| Average |    | -0.031 | -0.367 | 0.336  |
| Min     |    | -0.923 | -1.463 | -0.185 |
| Std Dev |    | 0.270  | 0.347  | 0.312  |

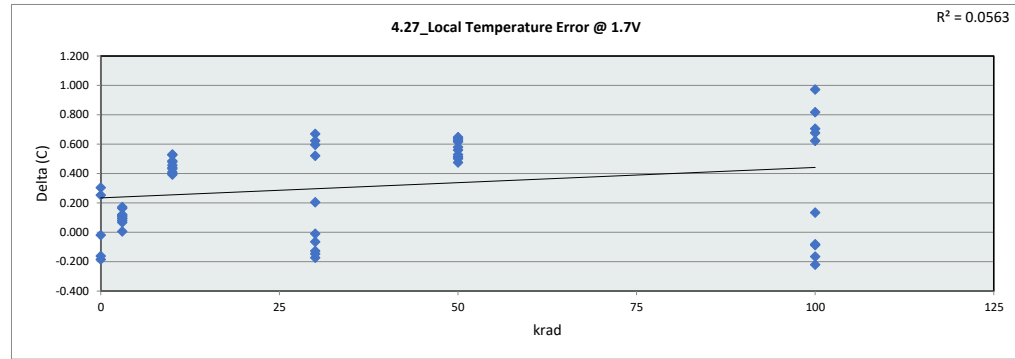
# TID Report

## TMP9R01-SP

### 4.27\_Local Temperature Error @

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | C         | C         |
| Max Limit   | 2         | 2         |
| Min Limit   | -2        | -2        |

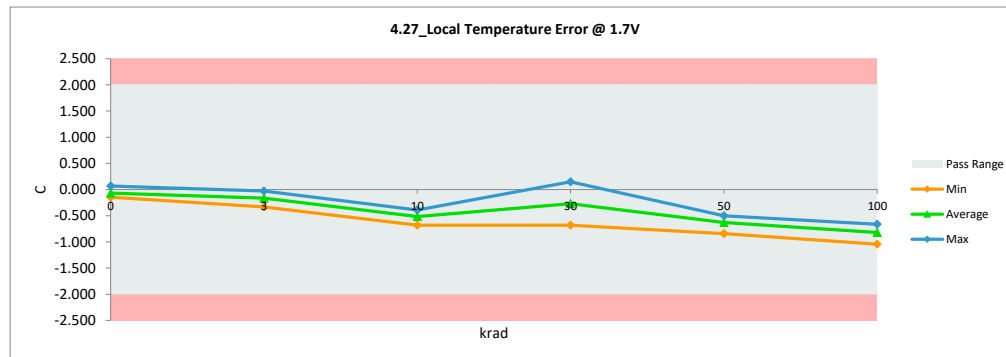
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 0.047         | -0.065        | 0.112  |
| 3    | 2        | 0.041         | -0.026        | 0.068  |
| 3    | 3        | -0.226        | -0.331        | 0.106  |
| 3    | 4        | 0.005         | -0.159        | 0.164  |
| 3    | 5        | -0.058        | -0.179        | 0.121  |
| 3    | 6        | -0.175        | -0.270        | 0.095  |
| 3    | 7        | -0.056        | -0.062        | 0.005  |
| 3    | 8        | 0.001         | -0.091        | 0.091  |
| 3    | 9        | -0.053        | -0.132        | 0.079  |
| 3    | 10       | -0.146        | -0.318        | 0.172  |
| 10   | 11       | 0.047         | -0.392        | 0.439  |
| 10   | 12       | 0.041         | -0.445        | 0.486  |
| 10   | 13       | -0.226        | -0.682        | 0.456  |
| 10   | 14       | 0.005         | -0.525        | 0.530  |
| 10   | 15       | -0.058        | -0.536        | 0.478  |
| 10   | 16       | -0.175        | -0.567        | 0.392  |
| 10   | 17       | -0.056        | -0.465        | 0.409  |
| 10   | 18       | 0.001         | -0.431        | 0.432  |
| 10   | 19       | -0.053        | -0.454        | 0.401  |
| 10   | 20       | -0.146        | -0.672        | 0.525  |
| 30   | 21       | 0.047         | -0.623        | 0.670  |
| 30   | 22       | 0.041         | -0.554        | 0.595  |
| 30   | 23       | -0.226        | -0.430        | 0.205  |
| 30   | 24       | 0.005         | -0.515        | 0.520  |
| 30   | 25       | -0.058        | -0.679        | 0.622  |
| 30   | 26       | -0.175        | -0.047        | -0.128 |
| 30   | 27       | -0.056        | -0.046        | -0.010 |
| 30   | 28       | 0.001         | 0.148         | -0.148 |
| 30   | 29       | -0.053        | 0.013         | -0.066 |
| 30   | 30       | -0.146        | 0.028         | -0.174 |
| 50   | 31       | 0.047         | -0.579        | 0.626  |
| 50   | 32       | 0.041         | -0.518        | 0.560  |
| 50   | 33       | -0.226        | -0.842        | 0.616  |
| 50   | 34       | 0.005         | -0.642        | 0.647  |
| 50   | 35       | -0.058        | -0.637        | 0.579  |
| 50   | 36       | -0.175        | -0.687        | 0.512  |
| 50   | 37       | -0.056        | -0.531        | 0.475  |
| 50   | 38       | 0.001         | -0.500        | 0.501  |
| 50   | 39       | -0.053        | -0.582        | 0.529  |
| 50   | 40       | -0.146        | -0.783        | 0.636  |
| 100  | 41       | -0.829        | -0.963        | 0.134  |
| 100  | 42       | -0.856        | -0.769        | -0.087 |
| 100  | 43       | -0.772        | -0.690        | -0.082 |
| 100  | 44       | -0.829        | -0.664        | -0.165 |
| 100  | 45       | -0.985        | -0.765        | -0.220 |
| 100  | 46       | -0.033        | -0.738        | 0.705  |
| 100  | 47       | -0.205        | -0.826        | 0.622  |
| 100  | 48       | -0.100        | -0.916        | 0.817  |
| 100  | 49       | 0.143         | -0.829        | 0.972  |



### 4.27\_Local Temperature Error

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 2 C       |
| Min Limit   | -2 C      |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -2.000 | -2.000 | -2.000 | -2.000 | -2.000 | -2.000 |
| Min     | -0.146 | -0.331 | -0.682 | -0.680 | -0.842 | -1.044 |
| Average | -0.068 | -0.163 | -0.517 | -0.271 | -0.630 | -0.820 |
| Max     | 0.068  | -0.026 | -0.392 | 0.148  | -0.500 | -0.664 |
| UL      | 2.000  | 2.000  | 2.000  | 2.000  | 2.000  | 2.000  |





# TID Report TMP9R01-SP

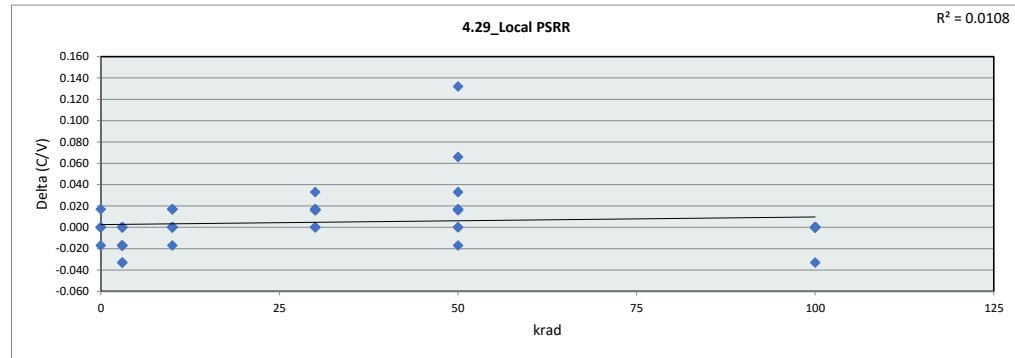
|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | -0.368 | -1.044 | 0.676  |
| 0       | 51 | 0.187  | -0.116 | 0.303  |
| 0       | 52 | -0.331 | -0.146 | -0.185 |
| 0       | 53 | 0.049  | 0.068  | -0.019 |
| 0       | 54 | 0.170  | -0.082 | 0.253  |
| 0       | 55 | -0.225 | -0.063 | -0.162 |
| Max     |    | 0.187  | 0.148  | 0.972  |
| Average |    | -0.136 | -0.443 | 0.307  |
| Min     |    | -0.985 | -1.044 | -0.220 |
| Std Dev |    | 0.257  | 0.304  | 0.309  |

# TID Report

## TMP9R01-SP

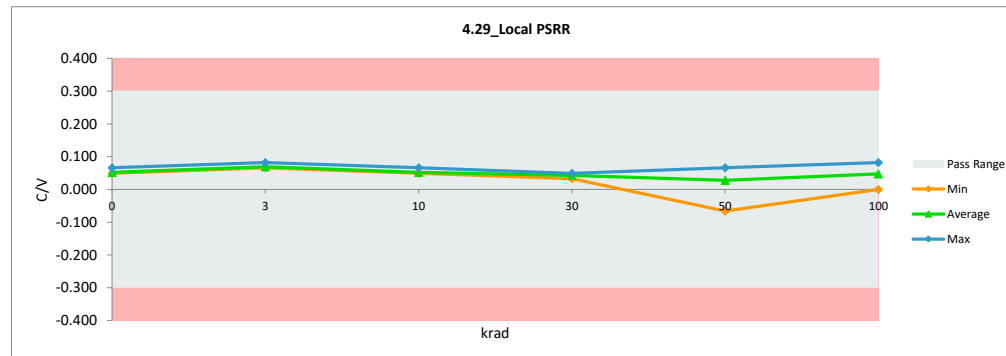
| 4.29_Local PSRR |           |           |
|-----------------|-----------|-----------|
| Test Site       | J2S       | J2S       |
| Tester          | FETS36405 | FETS36406 |
| Test Number     | EE131301  | EE131301  |
| Unit            | C/V       | C/V       |
| Max Limit       | 0.3       | 0.3       |
| Min Limit       | -0.3      | -0.3      |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 0.066         | 0.066         | 0.000  |
| 3    | 2        | 0.066         | 0.066         | 0.000  |
| 3    | 3        | 0.049         | 0.066         | -0.017 |
| 3    | 4        | 0.049         | 0.066         | -0.017 |
| 3    | 5        | 0.049         | 0.066         | -0.017 |
| 3    | 6        | 0.066         | 0.066         | 0.000  |
| 3    | 7        | 0.066         | 0.066         | 0.000  |
| 3    | 8        | 0.049         | 0.066         | -0.017 |
| 3    | 9        | 0.049         | 0.082         | -0.033 |
| 3    | 10       | 0.049         | 0.082         | -0.033 |
| 10   | 11       | 0.066         | 0.049         | 0.017  |
| 10   | 12       | 0.066         | 0.066         | 0.000  |
| 10   | 13       | 0.049         | 0.049         | 0.000  |
| 10   | 14       | 0.049         | 0.066         | -0.017 |
| 10   | 15       | 0.049         | 0.049         | 0.000  |
| 10   | 16       | 0.066         | 0.049         | 0.017  |
| 10   | 17       | 0.066         | 0.049         | 0.017  |
| 10   | 18       | 0.049         | 0.049         | 0.000  |
| 10   | 19       | 0.049         | 0.049         | 0.000  |
| 10   | 20       | 0.049         | 0.049         | 0.000  |
| 30   | 21       | 0.066         | 0.049         | 0.017  |
| 30   | 22       | 0.066         | 0.049         | 0.017  |
| 30   | 23       | 0.049         | 0.049         | 0.000  |
| 30   | 24       | 0.049         | 0.049         | 0.000  |
| 30   | 25       | 0.049         | 0.033         | 0.016  |
| 30   | 26       | 0.066         | 0.049         | 0.017  |
| 30   | 27       | 0.066         | 0.033         | 0.033  |
| 30   | 28       | 0.049         | 0.033         | 0.016  |
| 30   | 29       | 0.049         | 0.049         | 0.000  |
| 30   | 30       | 0.049         | 0.033         | 0.016  |
| 50   | 31       | 0.066         | -0.066        | 0.132  |
| 50   | 32       | 0.066         | 0.000         | 0.066  |
| 50   | 33       | 0.049         | 0.033         | 0.016  |
| 50   | 34       | 0.049         | 0.016         | 0.033  |
| 50   | 35       | 0.049         | 0.033         | 0.016  |
| 50   | 36       | 0.066         | 0.049         | 0.017  |
| 50   | 37       | 0.066         | 0.049         | 0.017  |
| 50   | 38       | 0.049         | 0.049         | 0.000  |
| 50   | 39       | 0.049         | 0.066         | -0.017 |
| 50   | 40       | 0.049         | 0.049         | 0.000  |
| 100  | 41       | 0.000         | 0.000         | 0.000  |
| 100  | 42       | 0.049         | 0.049         | 0.000  |
| 100  | 43       | 0.049         | 0.049         | 0.000  |
| 100  | 44       | 0.049         | 0.049         | 0.000  |
| 100  | 45       | 0.049         | 0.049         | 0.000  |
| 100  | 46       | 0.049         | 0.049         | 0.000  |
| 100  | 47       | 0.049         | 0.082         | -0.033 |
| 100  | 48       | 0.049         | 0.049         | 0.000  |
| 100  | 49       | 0.049         | 0.049         | 0.000  |



| 4.29_Local PSRR |           |     |
|-----------------|-----------|-----|
| Test Site       | J2S       |     |
| Tester          | FETS36405 |     |
| Test Number     | EE131301  |     |
| Max Limit       | 0.3       | C/V |
| Min Limit       | -0.3      | C/V |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | -0.300 | -0.300 | -0.300 | -0.300 | -0.300 | -0.300 |
| Min     | 0.049  | 0.066  | 0.049  | 0.033  | -0.066 | 0.000  |
| Average | 0.052  | 0.069  | 0.052  | 0.043  | 0.028  | 0.048  |
| Max     | 0.066  | 0.082  | 0.066  | 0.049  | 0.066  | 0.082  |
| UL      | 0.300  | 0.300  | 0.300  | 0.300  | 0.300  | 0.300  |



# TID Report TMP9R01-SP

|         |    |       |        |        |
|---------|----|-------|--------|--------|
| 100     | 50 | 0.049 | 0.049  | 0.000  |
| 0       | 51 | 0.049 | 0.066  | -0.017 |
| 0       | 52 | 0.049 | 0.049  | 0.000  |
| 0       | 53 | 0.066 | 0.049  | 0.017  |
| 0       | 54 | 0.049 | 0.049  | 0.000  |
| 0       | 55 | 0.049 | 0.049  | 0.000  |
| Max     |    | 0.066 | 0.082  | 0.132  |
| Average |    | 0.053 | 0.048  | 0.005  |
| Min     |    | 0.000 | -0.066 | -0.033 |
| Std Dev |    | 0.011 | 0.023  | 0.024  |

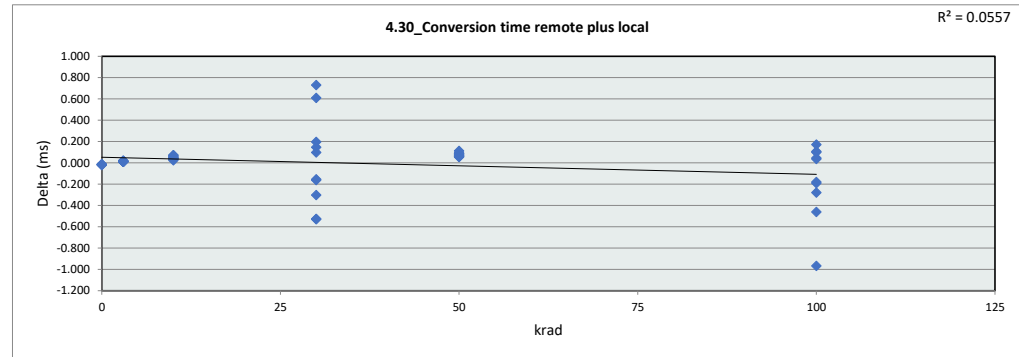
# TID Report

## TMP9R01-SP

### 4.30\_Conversion time remote plus local

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | ms        | ms        |
| Max Limit   | 34        | 34        |
| Min Limit   | 28        | 28        |

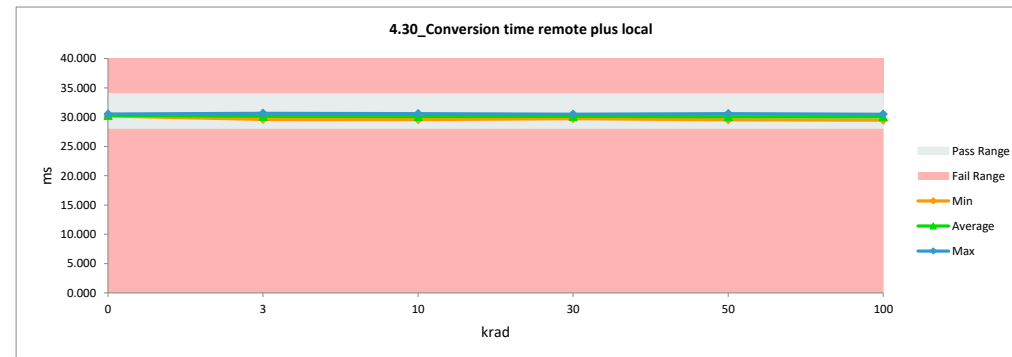
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 29.611        | 29.599        | 0.012  |
| 3    | 2        | 29.889        | 29.877        | 0.012  |
| 3    | 3        | 30.478        | 30.469        | 0.009  |
| 3    | 4        | 30.617        | 30.596        | 0.021  |
| 3    | 5        | 30.666        | 30.647        | 0.019  |
| 3    | 6        | 29.978        | 29.965        | 0.013  |
| 3    | 7        | 29.836        | 29.826        | 0.010  |
| 3    | 8        | 30.355        | 30.343        | 0.012  |
| 3    | 9        | 30.062        | 30.048        | 0.014  |
| 3    | 10       | 30.035        | 30.017        | 0.018  |
| 10   | 11       | 29.611        | 29.560        | 0.051  |
| 10   | 12       | 29.889        | 29.850        | 0.039  |
| 10   | 13       | 30.478        | 30.455        | 0.023  |
| 10   | 14       | 30.617        | 30.573        | 0.044  |
| 10   | 15       | 30.666        | 30.607        | 0.059  |
| 10   | 16       | 29.978        | 29.924        | 0.054  |
| 10   | 17       | 29.836        | 29.766        | 0.070  |
| 10   | 18       | 30.355        | 30.316        | 0.039  |
| 10   | 19       | 30.062        | 30.027        | 0.035  |
| 10   | 20       | 30.035        | 29.962        | 0.073  |
| 30   | 21       | 29.611        | 29.913        | -0.302 |
| 30   | 22       | 29.889        | 29.743        | 0.146  |
| 30   | 23       | 30.478        | 30.282        | 0.196  |
| 30   | 24       | 30.617        | 30.008        | 0.609  |
| 30   | 25       | 30.666        | 29.935        | 0.731  |
| 30   | 26       | 29.978        | 30.508        | -0.530 |
| 30   | 27       | 29.836        | 30.362        | -0.526 |
| 30   | 28       | 30.355        | 30.258        | 0.097  |
| 30   | 29       | 30.062        | 30.223        | -0.161 |
| 30   | 30       | 30.035        | 30.190        | -0.155 |
| 50   | 31       | 29.611        | 29.543        | 0.068  |
| 50   | 32       | 29.889        | 29.801        | 0.088  |
| 50   | 33       | 30.478        | 30.386        | 0.092  |
| 50   | 34       | 30.617        | 30.534        | 0.083  |
| 50   | 35       | 30.666        | 30.605        | 0.061  |
| 50   | 36       | 29.978        | 29.900        | 0.078  |
| 50   | 37       | 29.836        | 29.765        | 0.071  |
| 50   | 38       | 30.355        | 30.295        | 0.060  |
| 50   | 39       | 30.062        | 30.007        | 0.055  |
| 50   | 40       | 30.035        | 29.922        | 0.113  |
| 100  | 41       | 30.220        | 30.401        | -0.181 |
| 100  | 42       | 29.377        | 29.568        | -0.191 |
| 100  | 43       | 29.936        | 30.214        | -0.278 |
| 100  | 44       | 29.831        | 30.292        | -0.461 |
| 100  | 45       | 29.377        | 30.345        | -0.968 |
| 100  | 46       | 29.619        | 29.582        | 0.037  |
| 100  | 47       | 30.530        | 30.431        | 0.099  |
| 100  | 48       | 30.527        | 30.482        | 0.045  |
| 100  | 49       | 29.820        | 29.714        | 0.106  |



### 4.30\_Conversion time remote plus local

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 34 ms     |
| Min Limit   | 28 ms     |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | 28.000 | 28.000 | 28.000 | 28.000 | 28.000 | 28.000 |
| Min     | 30.190 | 29.599 | 29.560 | 29.743 | 29.543 | 29.487 |
| Average | 30.308 | 30.139 | 30.104 | 30.142 | 30.076 | 30.052 |
| Max     | 30.511 | 30.647 | 30.607 | 30.508 | 30.605 | 30.482 |
| UL      | 34.000 | 34.000 | 34.000 | 34.000 | 34.000 | 34.000 |



# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | 29.659 | 29.487 | 0.172  |
| 0       | 51 | 30.497 | 30.511 | -0.014 |
| 0       | 52 | 30.345 | 30.362 | -0.017 |
| 0       | 53 | 30.238 | 30.259 | -0.021 |
| 0       | 54 | 30.204 | 30.218 | -0.014 |
| 0       | 55 | 30.176 | 30.190 | -0.014 |
| Max     |    | 30.666 | 30.647 | 0.731  |
| Average |    | 30.118 | 30.121 | -0.004 |
| Min     |    | 29.377 | 29.487 | -0.968 |
| Std Dev |    | 0.359  | 0.327  | 0.240  |

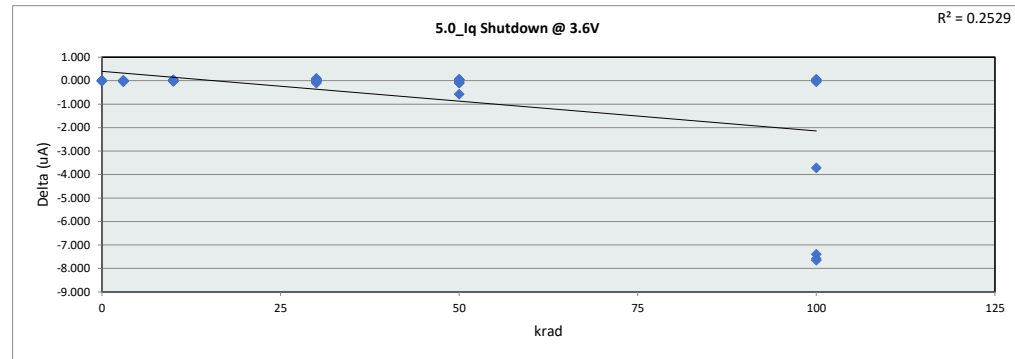
# TID Report

## TMP9R01-SP

### 5.0\_Iq Shutdown @ 3.6V

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | uA        | uA        |
| Max Limit   | 25        | 25        |
| Min Limit   | 0         | 0         |

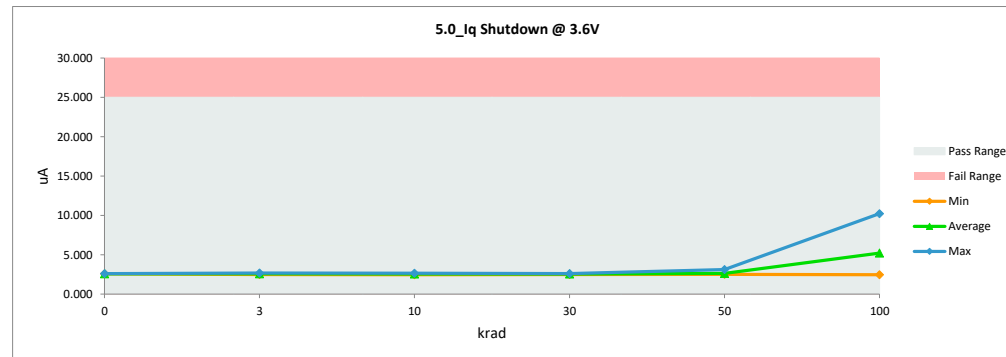
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 2.551         | 2.561         | -0.010 |
| 3    | 2        | 2.473         | 2.501         | -0.028 |
| 3    | 3        | 2.530         | 2.562         | -0.032 |
| 3    | 4        | 2.504         | 2.492         | 0.012  |
| 3    | 5        | 2.518         | 2.532         | -0.014 |
| 3    | 6        | 2.552         | 2.557         | -0.005 |
| 3    | 7        | 2.639         | 2.674         | -0.035 |
| 3    | 8        | 2.629         | 2.625         | 0.004  |
| 3    | 9        | 2.550         | 2.589         | -0.039 |
| 3    | 10       | 2.622         | 2.632         | -0.010 |
| 10   | 11       | 2.551         | 2.573         | -0.022 |
| 10   | 12       | 2.473         | 2.461         | 0.012  |
| 10   | 13       | 2.530         | 2.546         | -0.016 |
| 10   | 14       | 2.504         | 2.485         | 0.019  |
| 10   | 15       | 2.518         | 2.548         | -0.030 |
| 10   | 16       | 2.552         | 2.543         | 0.009  |
| 10   | 17       | 2.639         | 2.652         | -0.013 |
| 10   | 18       | 2.629         | 2.594         | 0.035  |
| 10   | 19       | 2.550         | 2.549         | 0.001  |
| 10   | 20       | 2.622         | 2.632         | -0.010 |
| 30   | 21       | 2.551         | 2.480         | 0.071  |
| 30   | 22       | 2.473         | 2.579         | -0.106 |
| 30   | 23       | 2.530         | 2.576         | -0.046 |
| 30   | 24       | 2.504         | 2.494         | 0.010  |
| 30   | 25       | 2.518         | 2.557         | -0.039 |
| 30   | 26       | 2.552         | 2.555         | -0.003 |
| 30   | 27       | 2.639         | 2.573         | 0.066  |
| 30   | 28       | 2.629         | 2.534         | 0.095  |
| 30   | 29       | 2.550         | 2.605         | -0.055 |
| 30   | 30       | 2.622         | 2.552         | 0.070  |
| 50   | 31       | 2.551         | 2.647         | -0.096 |
| 50   | 32       | 2.473         | 2.569         | -0.096 |
| 50   | 33       | 2.530         | 3.107         | -0.577 |
| 50   | 34       | 2.504         | 2.609         | -0.105 |
| 50   | 35       | 2.518         | 2.566         | -0.048 |
| 50   | 36       | 2.552         | 2.511         | 0.041  |
| 50   | 37       | 2.639         | 2.619         | 0.020  |
| 50   | 38       | 2.629         | 2.613         | 0.016  |
| 50   | 39       | 2.550         | 2.497         | 0.053  |
| 50   | 40       | 2.622         | 2.576         | 0.046  |
| 100  | 41       | 2.603         | 6.322         | -3.719 |
| 100  | 42       | 2.642         | 10.230        | -7.588 |
| 100  | 43       | 2.489         | 2.539         | -0.050 |
| 100  | 44       | 2.829         | 10.230        | -7.401 |
| 100  | 45       | 2.574         | 10.230        | -7.656 |
| 100  | 46       | 2.555         | 2.507         | 0.048  |
| 100  | 47       | 2.550         | 2.504         | 0.046  |
| 100  | 48       | 2.523         | 2.563         | -0.040 |
| 100  | 49       | 2.535         | 2.505         | 0.030  |



### 5.0\_Iq Shutdown @ 3.6V

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 25 uA     |
| Min Limit   | 0 uA      |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| Min     | 2.574  | 2.492  | 2.461  | 2.480  | 2.497  | 2.467  |
| Average | 2.585  | 2.573  | 2.558  | 2.551  | 2.631  | 5.210  |
| Max     | 2.600  | 2.674  | 2.652  | 2.605  | 3.107  | 10.230 |
| UL      | 25.000 | 25.000 | 25.000 | 25.000 | 25.000 | 25.000 |



# TID Report TMP9R01-SP

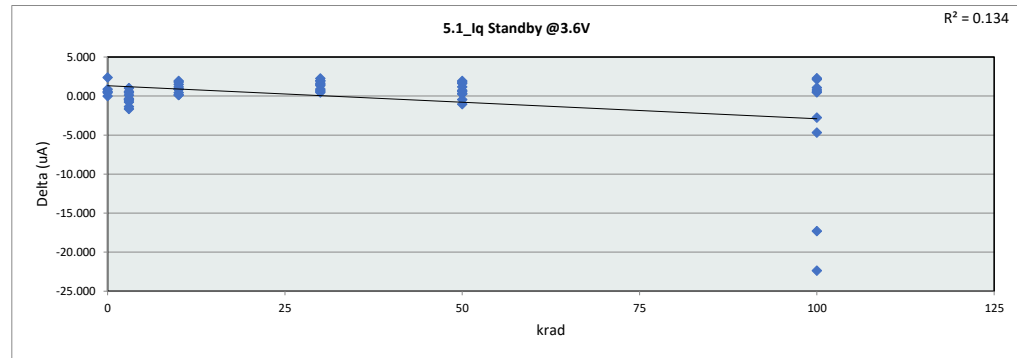
|         |    |       |        |        |
|---------|----|-------|--------|--------|
| 100     | 50 | 2.513 | 2.467  | 0.046  |
| 0       | 51 | 2.559 | 2.574  | -0.015 |
| 0       | 52 | 2.598 | 2.600  | -0.002 |
| 0       | 53 | 2.557 | 2.574  | -0.017 |
| 0       | 54 | 2.607 | 2.597  | 0.010  |
| 0       | 55 | 2.572 | 2.582  | -0.010 |
| Max     |    | 2.829 | 10.230 | 0.095  |
| Average |    | 2.563 | 3.057  | -0.494 |
| Min     |    | 2.473 | 2.461  | -7.656 |
| Std Dev |    | 0.062 | 1.813  | 1.784  |

# TID Report

## TMP9R01-SP

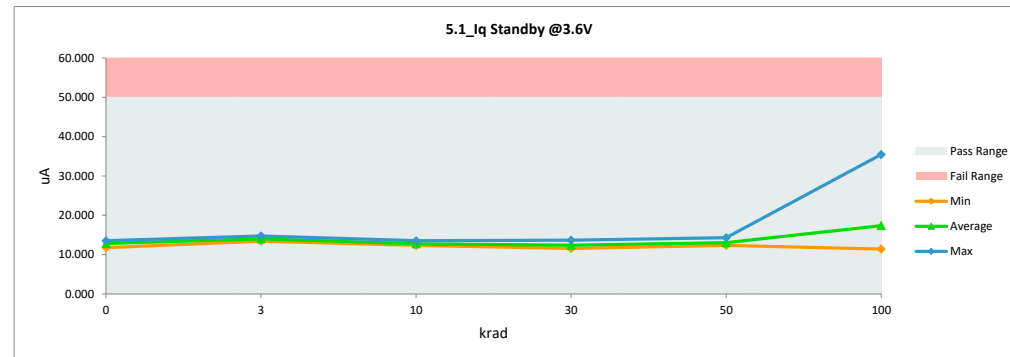
| 5.1_Iq Standby @3.6V |           |           |
|----------------------|-----------|-----------|
| Test Site            | J2S       | J2S       |
| Tester               | FETS36405 | FETS36406 |
| Test Number          | EE131301  | EE131301  |
| Unit                 | uA        | uA        |
| Max Limit            | 50        | 50        |
| Min Limit            | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta   |
|------|----------|---------------|---------------|---------|
| 3    | 1        | 14.574        | 14.158        | 0.416   |
| 3    | 2        | 13.534        | 14.307        | -0.773  |
| 3    | 3        | 13.683        | 13.565        | 0.118   |
| 3    | 4        | 12.495        | 14.158        | -1.663  |
| 3    | 5        | 14.425        | 13.416        | 1.009   |
| 3    | 6        | 14.277        | 14.752        | -0.475  |
| 3    | 7        | 13.980        | 14.307        | -0.327  |
| 3    | 8        | 14.277        | 13.713        | 0.564   |
| 3    | 9        | 13.386        | 13.861        | -0.475  |
| 3    | 10       | 12.643        | 14.010        | -1.367  |
| 10   | 11       | 14.574        | 13.102        | 1.472   |
| 10   | 12       | 13.534        | 12.657        | 0.877   |
| 10   | 13       | 13.683        | 12.805        | 0.878   |
| 10   | 14       | 12.495        | 12.360        | 0.135   |
| 10   | 15       | 14.425        | 12.657        | 1.768   |
| 10   | 16       | 14.277        | 13.102        | 1.175   |
| 10   | 17       | 13.980        | 13.547        | 0.433   |
| 10   | 18       | 14.277        | 12.360        | 1.917   |
| 10   | 19       | 13.386        | 12.508        | 0.878   |
| 10   | 20       | 12.643        | 12.508        | 0.135   |
| 30   | 21       | 14.574        | 13.231        | 1.343   |
| 30   | 22       | 13.534        | 11.595        | 1.939   |
| 30   | 23       | 13.683        | 12.190        | 1.493   |
| 30   | 24       | 12.495        | 11.893        | 0.602   |
| 30   | 25       | 14.425        | 13.678        | 0.747   |
| 30   | 26       | 14.277        | 12.041        | 2.236   |
| 30   | 27       | 13.980        | 12.339        | 1.641   |
| 30   | 28       | 14.277        | 12.339        | 1.938   |
| 30   | 29       | 13.386        | 12.488        | 0.898   |
| 30   | 30       | 12.643        | 12.190        | 0.453   |
| 50   | 31       | 14.574        | 14.289        | 0.285   |
| 50   | 32       | 13.534        | 13.251        | 0.283   |
| 50   | 33       | 13.683        | 12.954        | 0.729   |
| 50   | 34       | 12.495        | 13.548        | -1.053  |
| 50   | 35       | 14.425        | 13.251        | 1.174   |
| 50   | 36       | 14.277        | 12.509        | 1.768   |
| 50   | 37       | 13.980        | 12.361        | 1.619   |
| 50   | 38       | 14.277        | 12.361        | 1.916   |
| 50   | 39       | 13.386        | 12.806        | 0.580   |
| 50   | 40       | 12.643        | 13.103        | -0.460  |
| 100  | 41       | 13.551        | 16.317        | -2.766  |
| 100  | 42       | 13.106        | 35.469        | -22.363 |
| 100  | 43       | 12.364        | 11.863        | 0.501   |
| 100  | 44       | 12.068        | 16.762        | -4.694  |
| 100  | 45       | 13.848        | 31.164        | -17.316 |
| 100  | 46       | 13.386        | 12.902        | 0.484   |
| 100  | 47       | 13.386        | 12.605        | 0.781   |
| 100  | 48       | 13.683        | 11.417        | 2.266   |
| 100  | 49       | 14.425        | 12.308        | 2.117   |



| 5.1_Iq Standby @3.6V |           |    |
|----------------------|-----------|----|
| Test Site            | J2S       |    |
| Tester               | FETS36405 |    |
| Test Number          | EE131301  |    |
| Max Limit            | 50        | uA |
| Min Limit            | 0         | uA |

| krad    | 0      | 3      | 10     | 30     | 50     | 100    |
|---------|--------|--------|--------|--------|--------|--------|
| LL      | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| Min     | 11.767 | 13.416 | 12.360 | 11.595 | 12.361 | 11.417 |
| Average | 12.835 | 14.025 | 12.761 | 12.398 | 13.043 | 17.371 |
| Max     | 13.547 | 14.752 | 13.547 | 13.678 | 14.289 | 35.469 |
| UL      | 50.000 | 50.000 | 50.000 | 50.000 | 50.000 | 50.000 |





# TID Report TMP9R01-SP

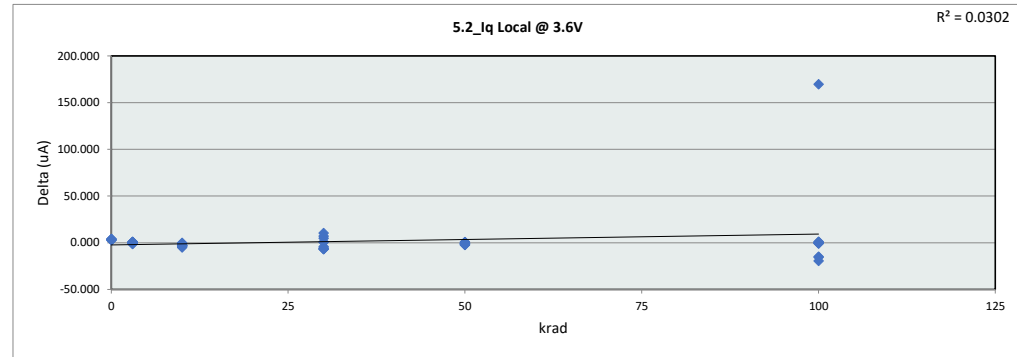
|         |    |        |        |         |
|---------|----|--------|--------|---------|
| 100     | 50 | 13.980 | 12.902 | 1.078   |
| 0       | 51 | 14.128 | 11.767 | 2.361   |
| 0       | 52 | 13.386 | 12.509 | 0.877   |
| 0       | 53 | 13.980 | 13.547 | 0.433   |
| 0       | 54 | 13.386 | 12.805 | 0.581   |
| 0       | 55 | 13.534 | 13.547 | -0.013  |
| Max     |    | 14.574 | 35.469 | 2.361   |
| Average |    | 13.660 | 13.821 | -0.161  |
| Min     |    | 12.068 | 11.417 | -22.363 |
| Std Dev |    | 0.680  | 3.976  | 4.086   |

# TID Report

## TMP9R01-SP

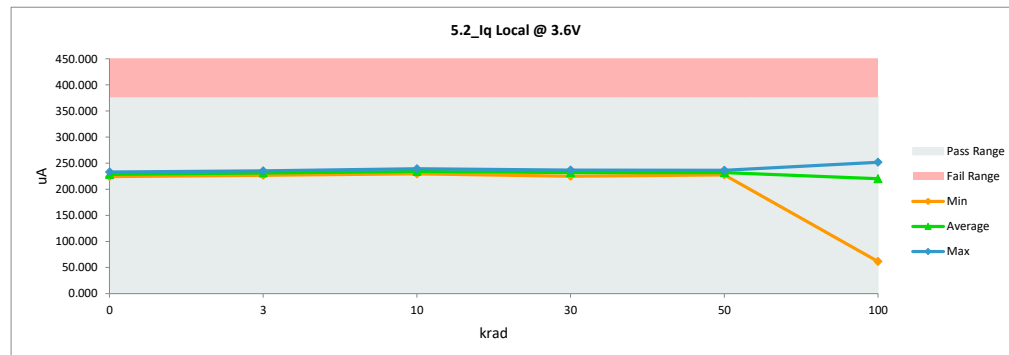
| 5.2_Iq Local @ 3.6V |           |           |
|---------------------|-----------|-----------|
| Test Site           | J2S       | J2S       |
| Tester              | FETS36405 | FETS36406 |
| Test Number         | EE131301  | EE131301  |
| Unit                | uA        | uA        |
| Max Limit           | 375       | 375       |
| Min Limit           | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta   |
|------|----------|---------------|---------------|---------|
| 3    | 1        | 227.215       | 226.762       | 0.453   |
| 3    | 2        | 228.194       | 228.106       | 0.088   |
| 3    | 3        | 229.417       | 228.534       | 0.883   |
| 3    | 4        | 229.906       | 230.733       | -0.827  |
| 3    | 5        | 230.945       | 230.367       | 0.578   |
| 3    | 6        | 233.147       | 233.789       | -0.642  |
| 3    | 7        | 235.409       | 234.827       | 0.582   |
| 3    | 8        | 233.881       | 235.194       | -1.313  |
| 3    | 9        | 228.377       | 227.800       | 0.577   |
| 3    | 10       | 235.470       | 234.461       | 1.009   |
| 10   | 11       | 227.215       | 232.289       | -5.074  |
| 10   | 12       | 228.194       | 231.007       | -2.813  |
| 10   | 13       | 229.417       | 229.479       | -0.062  |
| 10   | 14       | 229.906       | 232.961       | -3.055  |
| 10   | 15       | 230.945       | 233.878       | -2.933  |
| 10   | 16       | 233.147       | 236.993       | -3.846  |
| 10   | 17       | 235.409       | 236.688       | -1.279  |
| 10   | 18       | 233.881       | 237.054       | -3.173  |
| 10   | 19       | 228.377       | 230.946       | -2.569  |
| 10   | 20       | 235.470       | 239.253       | -3.783  |
| 30   | 21       | 227.215       | 233.665       | -6.450  |
| 30   | 22       | 228.194       | 234.829       | -6.635  |
| 30   | 23       | 229.417       | 236.177       | -6.760  |
| 30   | 24       | 229.906       | 229.255       | 0.651   |
| 30   | 25       | 230.945       | 236.606       | -5.661  |
| 30   | 26       | 233.147       | 226.009       | 7.138   |
| 30   | 27       | 235.409       | 234.523       | 0.886   |
| 30   | 28       | 233.881       | 229.010       | 4.871   |
| 30   | 29       | 228.377       | 232.563       | -4.186  |
| 30   | 30       | 235.470       | 224.968       | 10.502  |
| 50   | 31       | 227.215       | 229.236       | -2.021  |
| 50   | 32       | 228.194       | 229.480       | -1.286  |
| 50   | 33       | 229.417       | 231.679       | -2.262  |
| 50   | 34       | 229.906       | 230.213       | -0.307  |
| 50   | 35       | 230.945       | 232.351       | -1.406  |
| 50   | 36       | 233.147       | 234.123       | -0.976  |
| 50   | 37       | 235.409       | 234.734       | 0.675   |
| 50   | 38       | 233.881       | 234.551       | -0.670  |
| 50   | 39       | 228.377       | 227.648       | 0.729   |
| 50   | 40       | 235.470       | 236.261       | -0.791  |
| 100  | 41       | 231.311       | 250.652       | -19.341 |
| 100  | 42       | 236.138       | 251.630       | -15.492 |
| 100  | 43       | 231.556       | 232.189       | -0.633  |
| 100  | 44       | 231.311       | 61.504        | 169.807 |
| 100  | 45       | 233.694       | 248.451       | -14.757 |
| 100  | 46       | 232.535       | 231.334       | 1.201   |
| 100  | 47       | 231.190       | 230.417       | 0.773   |
| 100  | 48       | 231.924       | 232.189       | -0.265  |
| 100  | 49       | 229.417       | 229.072       | 0.345   |



| 5.2_Iq Local @ 3.6V |           |    |
|---------------------|-----------|----|
| Test Site           | J2S       |    |
| Tester              | FETS36405 |    |
| Test Number         | EE131301  |    |
| Max Limit           | 375       | uA |
| Min Limit           | 0         | uA |

| krad    | 0       | 3       | 10      | 30      | 50      | 100     |
|---------|---------|---------|---------|---------|---------|---------|
| LL      | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| Min     | 224.165 | 226.762 | 229.479 | 224.968 | 227.648 | 61.504  |
| Average | 228.686 | 231.057 | 234.055 | 231.761 | 232.028 | 220.146 |
| Max     | 232.962 | 235.194 | 239.253 | 236.606 | 236.261 | 251.630 |
| UL      | 375.000 | 375.000 | 375.000 | 375.000 | 375.000 | 375.000 |



# TID Report TMP9R01-SP

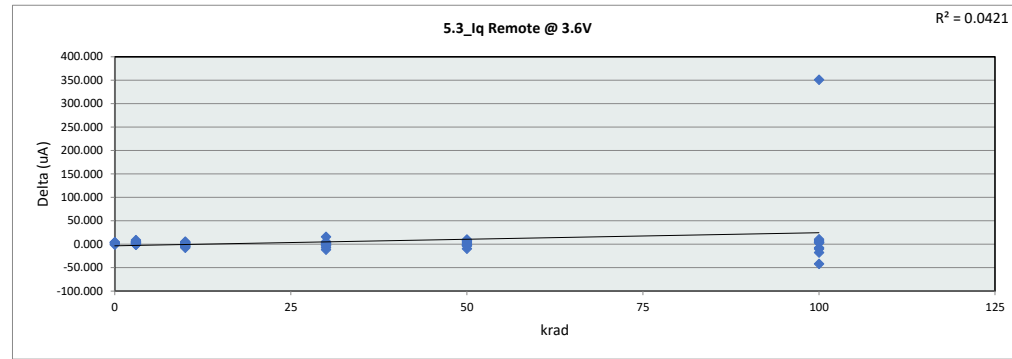
|         |    |         |         |         |
|---------|----|---------|---------|---------|
| 100     | 50 | 233.269 | 234.023 | -0.754  |
| 0       | 51 | 230.823 | 226.853 | 3.970   |
| 0       | 52 | 236.571 | 232.962 | 3.609   |
| 0       | 53 | 230.395 | 227.647 | 2.748   |
| 0       | 54 | 235.776 | 231.801 | 3.975   |
| 0       | 55 | 227.032 | 224.165 | 2.867   |
| Max     |    | 236.571 | 251.630 | 169.807 |
| Average |    | 231.469 | 229.707 | 1.762   |
| Min     |    | 227.032 | 61.504  | -19.341 |
| Std Dev |    | 2.866   | 23.719  | 23.589  |

# TID Report

## TMP9R01-SP

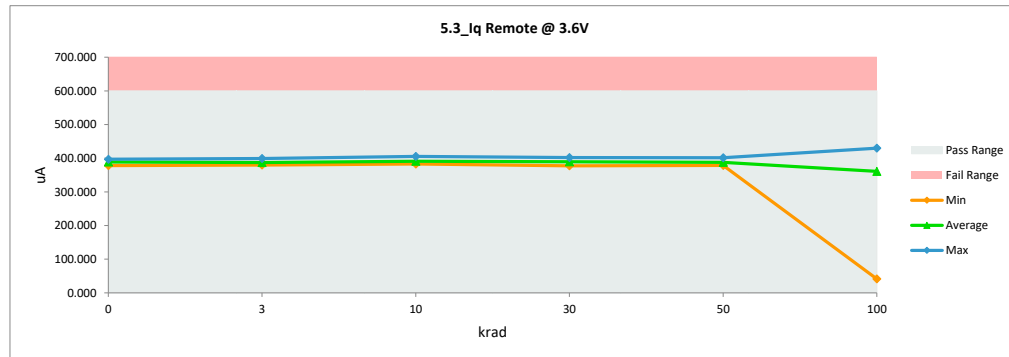
| 5.3_Iq Remote @ 3.6V |           |           |
|----------------------|-----------|-----------|
| Test Site            | J2S       | J2S       |
| Tester               | FETS36405 | FETS36406 |
| Test Number          | EE131301  | EE131301  |
| Unit                 | uA        | uA        |
| Max Limit            | 600       | 600       |
| Min Limit            | 0         | 0         |

| krad | Serial # | LDR pre (all) | LDR post 100k | Delta   |
|------|----------|---------------|---------------|---------|
| 3    | 1        | 388.221       | 382.635       | 5.586   |
| 3    | 2        | 385.836       | 386.607       | -0.771  |
| 3    | 3        | 389.994       | 386.118       | 3.876   |
| 3    | 4        | 384.919       | 384.285       | 0.634   |
| 3    | 5        | 390.422       | 387.340       | 3.082   |
| 3    | 6        | 380.516       | 379.763       | 0.753   |
| 3    | 7        | 399.778       | 394.000       | 5.778   |
| 3    | 8        | 398.005       | 399.316       | -1.311  |
| 3    | 9        | 388.832       | 380.008       | 8.824   |
| 3    | 10       | 392.990       | 390.456       | 2.534   |
| 10   | 11       | 388.221       | 382.807       | 5.414   |
| 10   | 12       | 385.836       | 390.321       | -4.485  |
| 10   | 13       | 389.994       | 388.671       | 1.323   |
| 10   | 14       | 384.919       | 390.565       | -5.646  |
| 10   | 15       | 390.422       | 392.459       | -2.037  |
| 10   | 16       | 380.516       | 384.212       | -3.696  |
| 10   | 17       | 399.778       | 396.796       | 2.982   |
| 10   | 18       | 398.005       | 405.592       | -7.587  |
| 10   | 19       | 388.832       | 384.884       | 3.948   |
| 10   | 20       | 392.990       | 392.764       | 0.226   |
| 30   | 21       | 388.221       | 387.467       | 0.754   |
| 30   | 22       | 385.836       | 388.998       | -3.162  |
| 30   | 23       | 389.994       | 401.739       | -11.745 |
| 30   | 24       | 384.919       | 381.709       | 3.210   |
| 30   | 25       | 390.422       | 390.040       | 0.382   |
| 30   | 26       | 380.516       | 387.773       | -7.257  |
| 30   | 27       | 399.778       | 397.145       | 2.633   |
| 30   | 28       | 398.005       | 392.367       | 5.638   |
| 30   | 29       | 388.832       | 391.203       | -2.371  |
| 30   | 30       | 392.990       | 377.422       | 15.568  |
| 50   | 31       | 388.221       | 378.532       | 9.689   |
| 50   | 32       | 385.836       | 378.776       | 7.060   |
| 50   | 33       | 389.994       | 389.527       | 0.467   |
| 50   | 34       | 384.919       | 387.695       | -2.776  |
| 50   | 35       | 390.422       | 391.727       | -1.305  |
| 50   | 36       | 380.516       | 390.077       | -9.561  |
| 50   | 37       | 399.778       | 390.322       | 9.456   |
| 50   | 38       | 398.005       | 401.623       | -3.618  |
| 50   | 39       | 388.832       | 381.586       | 7.246   |
| 50   | 40       | 392.990       | 389.039       | 3.951   |
| 100  | 41       | 387.714       | 429.774       | -42.060 |
| 100  | 42       | 398.040       | 405.810       | -7.770  |
| 100  | 43       | 379.589       | 389.854       | -10.265 |
| 100  | 44       | 392.358       | 41.452        | 350.906 |
| 100  | 45       | 391.991       | 409.844       | -17.853 |
| 100  | 46       | 388.649       | 385.391       | 3.258   |
| 100  | 47       | 394.519       | 387.592       | 6.927   |
| 100  | 48       | 392.073       | 388.937       | 3.136   |
| 100  | 49       | 389.321       | 378.850       | 10.471  |



| 5.3_Iq Remote @ 3.6V |           |    |
|----------------------|-----------|----|
| Test Site            | J2S       |    |
| Tester               | FETS36405 |    |
| Test Number          | EE131301  |    |
| Max Limit            | 600       | uA |
| Min Limit            | 0         | uA |

| krad    | 0       | 3       | 10      | 30      | 50      | 100     |
|---------|---------|---------|---------|---------|---------|---------|
| LL      | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| Min     | 377.798 | 379.763 | 382.807 | 377.422 | 378.532 | 41.452  |
| Average | 388.830 | 387.053 | 390.907 | 389.586 | 387.890 | 360.889 |
| Max     | 397.041 | 399.316 | 405.592 | 401.739 | 401.623 | 429.774 |
| UL      | 600.000 | 600.000 | 600.000 | 600.000 | 600.000 | 600.000 |



# TID Report TMP9R01-SP

|         |    |         |         |         |
|---------|----|---------|---------|---------|
| 100     | 50 | 396.109 | 391.382 | 4.727   |
| 0       | 51 | 391.339 | 387.633 | 3.706   |
| 0       | 52 | 401.307 | 397.041 | 4.266   |
| 0       | 53 | 389.444 | 390.443 | -0.999  |
| 0       | 54 | 391.890 | 391.237 | 0.653   |
| 0       | 55 | 380.516 | 377.798 | 2.718   |
| Max     |    | 401.307 | 429.774 | 350.906 |
| Average |    | 390.235 | 383.771 | 6.464   |
| Min     |    | 379.589 | 41.452  | -42.060 |
| Std Dev |    | 5.608   | 47.860  | 48.036  |

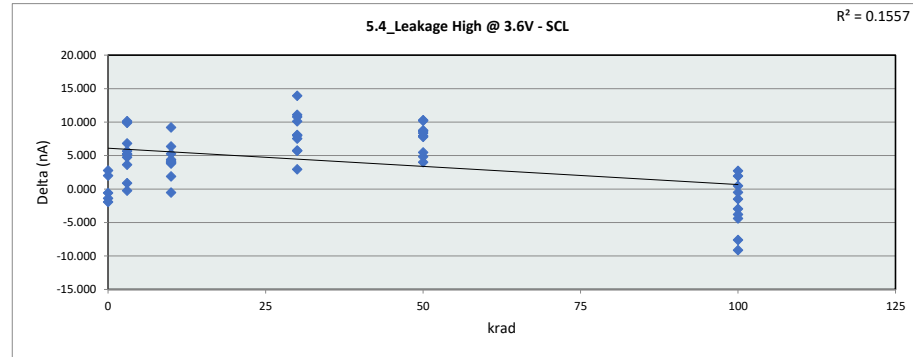
# TID Report

## TMP9R01-SP

### 5.4\_Leakage High @ 3.6V - SCL

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | nA        | nA        |
| Max Limit   | 150       | 150       |
| Min Limit   | -150      | -150      |

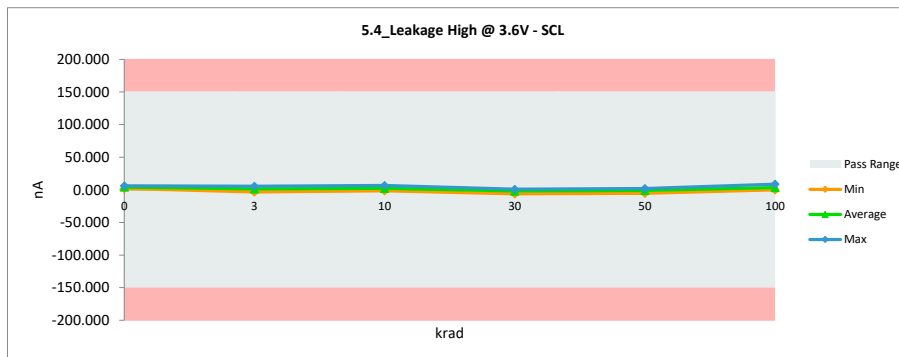
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 5.073         | -0.605        | 5.678  |
| 3    | 2        | 9.063         | 5.441         | 3.622  |
| 3    | 3        | 7.772         | 0.952         | 6.820  |
| 3    | 4        | 6.643         | -3.239        | 9.882  |
| 3    | 5        | 3.547         | 3.780         | -0.233 |
| 3    | 6        | 8.652         | 3.915         | 4.737  |
| 3    | 7        | 5.630         | 4.753         | 0.877  |
| 3    | 8        | 7.464         | -2.670        | 10.134 |
| 3    | 9        | 6.217         | 1.041         | 5.176  |
| 3    | 10       | 6.496         | 1.251         | 5.245  |
| 10   | 11       | 5.073         | 1.122         | 3.951  |
| 10   | 12       | 9.063         | 4.664         | 4.399  |
| 10   | 13       | 7.772         | -1.415        | 9.187  |
| 10   | 14       | 6.643         | 1.384         | 5.259  |
| 10   | 15       | 3.547         | 4.066         | -0.519 |
| 10   | 16       | 8.652         | 6.778         | 1.874  |
| 10   | 17       | 5.630         | 1.836         | 3.794  |
| 10   | 18       | 7.464         | 3.425         | 4.039  |
| 10   | 19       | 6.217         | -0.132        | 6.349  |
| 10   | 20       | 6.496         | 2.317         | 4.179  |
| 30   | 21       | 5.073         | -6.027        | 11.100 |
| 30   | 22       | 9.063         | 0.995         | 8.068  |
| 30   | 23       | 7.772         | -6.160        | 13.932 |
| 30   | 24       | 6.643         | -1.341        | 7.984  |
| 30   | 25       | 3.547         | 0.611         | 2.936  |
| 30   | 26       | 8.652         | -2.124        | 10.776 |
| 30   | 27       | 5.630         | -1.917        | 7.547  |
| 30   | 28       | 7.464         | -2.656        | 10.120 |
| 30   | 29       | 6.217         | 0.492         | 5.725  |
| 30   | 30       | 6.496         | 0.773         | 5.723  |
| 50   | 31       | 5.073         | 1.061         | 4.012  |
| 50   | 32       | 9.063         | 1.120         | 7.943  |
| 50   | 33       | 7.772         | -0.586        | 8.358  |
| 50   | 34       | 6.643         | 1.805         | 4.838  |
| 50   | 35       | 3.547         | -5.221        | 8.768  |
| 50   | 36       | 8.652         | 0.872         | 7.780  |
| 50   | 37       | 5.630         | -3.020        | 8.650  |
| 50   | 38       | 7.464         | 2.009         | 5.455  |
| 50   | 39       | 6.217         | -4.070        | 10.287 |
| 50   | 40       | 6.496         | -3.705        | 10.201 |
| 100  | 41       | 0.040         | 1.538         | -1.498 |
| 100  | 42       | -2.529        | 6.600         | -9.129 |
| 100  | 43       | -2.131        | 0.829         | -2.960 |
| 100  | 44       | 0.306         | -0.180        | 0.486  |
| 100  | 45       | -2.116        | 5.496         | -7.612 |
| 100  | 46       | 5.029         | 2.311         | 2.718  |
| 100  | 47       | 4.281         | 8.665         | -4.384 |
| 100  | 48       | 3.137         | 1.192         | 1.945  |
| 100  | 49       | 2.961         | 3.446         | -0.485 |



### 5.4\_Leakage High @ 3.6V - SCL

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 150 nA    |
| Min Limit   | -150 nA   |

| krad    | 0        | 3        | 10       | 30       | 50       | 100      |
|---------|----------|----------|----------|----------|----------|----------|
| LL      | -150.000 | -150.000 | -150.000 | -150.000 | -150.000 | -150.000 |
| Min     | 2.129    | -3.239   | -1.415   | -6.160   | -5.221   | -0.180   |
| Average | 4.263    | 1.462    | 2.405    | -1.735   | -0.974   | 3.568    |
| Max     | 6.210    | 5.441    | 6.778    | 0.995    | 2.009    | 8.665    |
| UL      | 150.000  | 150.000  | 150.000  | 150.000  | 150.000  | 150.000  |



# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | 1.978  | 5.780  | -3.802 |
| 0       | 51 | 2.491  | 3.878  | -1.387 |
| 0       | 52 | 5.763  | 2.989  | 2.774  |
| 0       | 53 | 4.120  | 2.129  | 1.991  |
| 0       | 54 | 5.528  | 6.108  | -0.580 |
| 0       | 55 | 4.281  | 6.210  | -1.929 |
| Max     |    | 9.063  | 8.665  | 13.932 |
| Average |    | 5.443  | 1.247  | 4.196  |
| Min     |    | -2.529 | -6.160 | -9.129 |
| Std Dev |    | 2.821  | 3.353  | 4.861  |

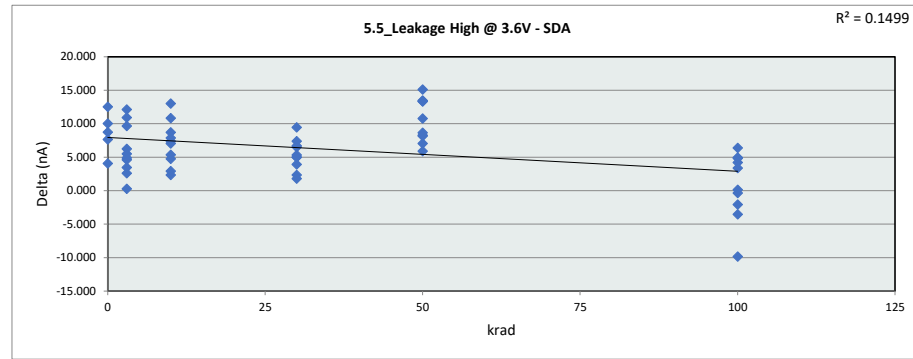
# TID Report

## TMP9R01-SP

### 5.5\_Leakage High @ 3.6V - SDA

|             |           |           |
|-------------|-----------|-----------|
| Test Site   | J2S       | J2S       |
| Tester      | FETS36405 | FETS36406 |
| Test Number | EE131301  | EE131301  |
| Unit        | nA        | nA        |
| Max Limit   | 150       | 150       |
| Min Limit   | -150      | -150      |

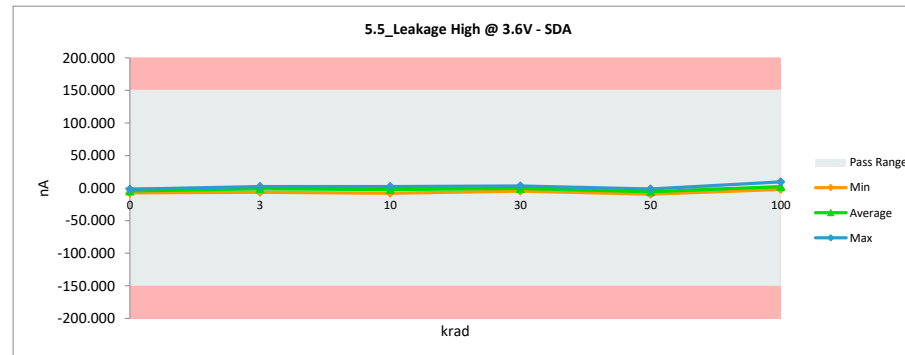
| krad | Serial # | LDR pre (all) | LDR post 100k | Delta  |
|------|----------|---------------|---------------|--------|
| 3    | 1        | 3.771         | -5.905        | 9.676  |
| 3    | 2        | 4.842         | 0.227         | 4.615  |
| 3    | 3        | 5.223         | -0.297        | 5.520  |
| 3    | 4        | 4.578         | -6.354        | 10.932 |
| 3    | 5        | 1.952         | 1.677         | 0.275  |
| 3    | 6        | 4.871         | -0.043        | 4.914  |
| 3    | 7        | 5.223         | 1.737         | 3.486  |
| 3    | 8        | 6.587         | -5.546        | 12.133 |
| 3    | 9        | 5.164         | 2.545         | 2.619  |
| 3    | 10       | 5.766         | -0.476        | 6.242  |
| 10   | 11       | 3.771         | -4.946        | 8.717  |
| 10   | 12       | 4.842         | 2.480         | 2.362  |
| 10   | 13       | 5.223         | -5.608        | 10.831 |
| 10   | 14       | 4.578         | -3.299        | 7.877  |
| 10   | 15       | 1.952         | -3.417        | 5.369  |
| 10   | 16       | 4.871         | 1.950         | 2.921  |
| 10   | 17       | 5.223         | -2.181        | 7.404  |
| 10   | 18       | 6.587         | -0.461        | 7.048  |
| 10   | 19       | 5.164         | -7.857        | 13.021 |
| 10   | 20       | 5.766         | 0.995         | 4.771  |
| 30   | 21       | 3.771         | -3.618        | 7.389  |
| 30   | 22       | 4.842         | 3.047         | 1.795  |
| 30   | 23       | 5.223         | 1.299         | 3.924  |
| 30   | 24       | 4.578         | -1.929        | 6.507  |
| 30   | 25       | 1.952         | -4.758        | 6.710  |
| 30   | 26       | 4.871         | -0.478        | 5.349  |
| 30   | 27       | 5.223         | 0.218         | 5.005  |
| 30   | 28       | 6.587         | -2.892        | 9.479  |
| 30   | 29       | 5.164         | 0.129         | 5.035  |
| 30   | 30       | 5.766         | 3.417         | 2.349  |
| 50   | 31       | 3.771         | -3.294        | 7.065  |
| 50   | 32       | 4.842         | -3.456        | 8.298  |
| 50   | 33       | 5.223         | -3.441        | 8.664  |
| 50   | 34       | 4.578         | -1.338        | 5.916  |
| 50   | 35       | 1.952         | -8.823        | 10.775 |
| 50   | 36       | 4.871         | -8.602        | 13.473 |
| 50   | 37       | 5.223         | -8.132        | 13.355 |
| 50   | 38       | 6.587         | -1.603        | 8.190  |
| 50   | 39       | 5.164         | -8.176        | 13.340 |
| 50   | 40       | 5.766         | -9.338        | 15.104 |
| 100  | 41       | 4.158         | 0.777         | 3.381  |
| 100  | 42       | -0.244        | 9.592         | -9.836 |
| 100  | 43       | 0.613         | 0.475         | 0.138  |
| 100  | 44       | 4.321         | -0.655        | 4.976  |
| 100  | 45       | 2.858         | 3.196         | -0.338 |
| 100  | 46       | 4.754         | 0.523         | 4.231  |
| 100  | 47       | 2.803         | 6.331         | -3.528 |
| 100  | 48       | 3.609         | -1.228        | 4.837  |
| 100  | 49       | 4.387         | -2.007        | 6.394  |



### 5.5\_Leakage High @ 3.6V - SDA

|             |           |
|-------------|-----------|
| Test Site   | J2S       |
| Tester      | FETS36405 |
| Test Number | EE131301  |
| Max Limit   | 150 nA    |
| Min Limit   | -150 nA   |

| krad    | 0        | 3        | 10       | 30       | 50       | 100      |
|---------|----------|----------|----------|----------|----------|----------|
| LL      | -150.000 | -150.000 | -150.000 | -150.000 | -150.000 | -150.000 |
| Min     | -7.397   | -6.354   | -7.857   | -4.758   | -9.338   | -2.007   |
| Average | -4.488   | -1.244   | -2.234   | -0.557   | -5.620   | 2.322    |
| Max     | -1.633   | 2.545    | 2.480    | 3.417    | -1.338   | 9.592    |
| UL      | 150.000  | 150.000  | 150.000  | 150.000  | 150.000  | 150.000  |





# TID Report TMP9R01-SP

|         |    |        |        |        |
|---------|----|--------|--------|--------|
| 100     | 50 | 4.167  | 6.219  | -2.052 |
| 0       | 51 | 6.015  | -4.030 | 10.045 |
| 0       | 52 | 5.135  | -7.397 | 12.532 |
| 0       | 53 | 3.668  | -4.000 | 7.668  |
| 0       | 54 | 2.436  | -1.633 | 4.069  |
| 0       | 55 | 3.360  | -5.382 | 8.742  |
| Max     |    | 6.587  | 9.592  | 15.104 |
| Average |    | 4.435  | -1.741 | 6.177  |
| Min     |    | -0.244 | -9.338 | -9.836 |
| Std Dev |    | 1.440  | 4.074  | 4.606  |

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