



ABSTRACT

This report covers the radiation characterization results of the TMUX182-SEP, 8:1, 1-Channel Multiplexer with 1.8V Logic. The study was done to determine Total Ionizing Dose (TID) effects under high dose rate (HDR) up to 50krad(Si) as a one time characterization. The results show that all samples passed within the specified limits up to 30krad(Si).

Radiation Lot Acceptance Testing(RLAT) will be performed using 5 units at a dose level of 30krad(Si) configured with bias 2 setup (shown worst drift) for future wafer lots per MIL-STD-883 TM 1019. All future wafer lots will be tested under the same conditions. HDR TID response is the worst case. TID HDR characterization was performed per TM 1019.

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Trademarks

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1 Device Information

The TMUX182-SEP device is general purpose complementary metal-oxide semiconductor (CMOS) multiplexer (MUX). The device works with a single supply (5V to 15V), dual supplies (up to $\pm 6V$), or asymmetric supplies (such as $V_{DD} = 6V$, $V_{SS} = -3V$). The wide supply voltage range allows the devices to be used in a broad array of applications in space.

The TMUX182-SEP supports bidirectional analog signals on the source (Sx) and drain (Dx) pins ranging from VSS to VDD. All logic inputs have 1.8V logic compatible thresholds, which is compatible for both TTL and CMOS logic when operating with a valid supply voltage.

1.1 Device Details

[Table 1-1](#) lists the TMUX182-SEP device information used for TID HDR characterization and qualification.

Table 1-1. Device and Exposure Details

TID HDR Details: Up To 50krad(Si)	
TI Device Number	TMUX182-SEP
VID/SMD Number	V62/26609
Package	16DYY
Technology	LBC9
Die Lot Number	5128136RFB
A/T Lot Number	5408378WCW
Lot Trace Code	58AFQFW
Quantity Tested	5 irradiated devices + 5 control
Lot Accept or Reject	Devices passed 30 krad(Si)
HDR Radiation Facility	Texas Instruments CLAB in Dallas, Texas
HDR Dose Level	Up to 50krad(Si)
HDR Dose Rate	150.96rad(Si)/s ionizing radiation
HDR Radiation Source	Gammacell 220 Excel (GC-220E) Co-60
Irradiation Temperature	Ambient, room temperature

2 Total Dose Test Setup

2.1 Test Overview

The TMUX182-SEP samples were irradiated at a high dose rate of 150.96rad(Si)/s up to 50krad(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 data sheet electrical specification limits.

2.2 Test Description and Facilities

The TMUX182-SEP HDR exposure was performed on biased devices in a Co-60 gamma cell at TI facility in Dallas, Texas. The un-attenuated dose rate of this cell is 150.96rad(Si)/s. After exposure, the devices were packed in dry ice (per MIL-STD-883 Method 1019.9 section 3.10) and full post radiation electrical evaluation using Texas Instruments ATE was conducted. ATE test limits are set per data sheet electrical limits based on qualification and characterization data. Post radiation measurements were taken within 30 minutes of removing 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 were tested in biased conditions as described in the following sections.

2.3.1 Bias Diagram

Figure 2-1 and Figure 2-2 shows the bias conditions for each pin during irradiation.

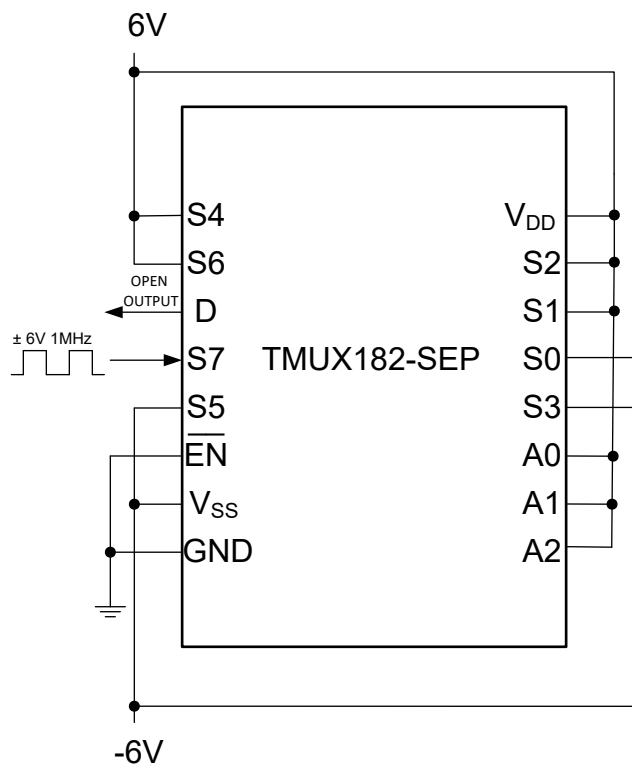


Figure 2-1. TMUX182-SEP Bias 1 Diagram

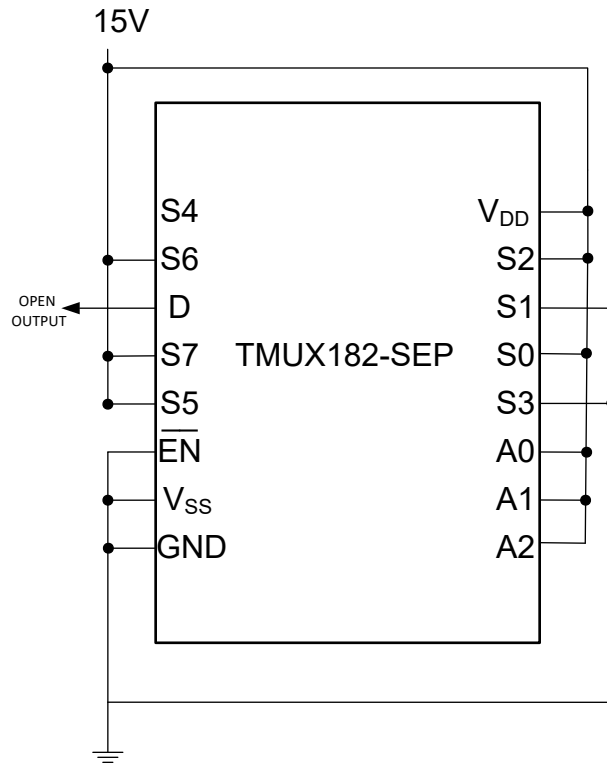


Figure 2-2. TMUX182-SEP Bias 2 Diagram

2.4 Test Configuration and Condition

Radiation Lot Acceptance Testing (RLAT) will be performed using 5 units at a dose level of 30krad(Si) configured with bias 2 setup (shown worst drift)

That is, after a predetermined TID level was reached, an electrical test was performed on a given sample of parts to verify that the units are within specified data sheet electrical test limits. The HDR RLAT units will be irradiated to 30krad(Si), and parametrically tested on ATE.

Table 2-1 lists the serialized samples used for TID HDR biased characterization.

Table 2-1. HDR Biased Device Information

Control Group	HDR Dose Rate = 150.96 rad(Si)/s			
Total Samples: 5	Total Exposed Samples: 25			
	Exposure Levels			
0krad (Si)	10 krad (Si)	20 krad(Si)	30 krad(Si)	50 krad(Si)
1 - 5	6 - 10	11-15	16-20	21 - 25

3 TID Characterization Test Results

3.1 TID Characterization Summary Results

The parametric data for the TMUX182-SEP passes up to 30krad(Si) HDR TID irradiation. The drifts of the electrical parameters through HDR were within the data sheet limits.

Overall, the TMUX182-SEP showed a strong degree of hardness to HDR TID irradiation up to 30krad(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 data sheet electrical parameters. For the data sheet electrical parameters and associated tests, see [TMUX182-SEP Radiation Tolerant 15V, 8:1, 1-Channel Multiplexer with 1.8V Logic](#).

See [Appendix A](#) for HDR report up to 50krad(Si).

3.2 Specification Compliance Matrix

PARAMETER	TEST CONDITIONS	V _{DD}	V _{SS}	T _A	MIN	TYP	MAX	UNIT	TEST NAME		
Supply current I _{DD}	Address inputs = 0V, 5V, or V _{DD} EN = 0V	5V	0V	-55°C			60	μA	IDD		
				25°C		17	60				
				85°C			80				
				125°C			80				
		10V	0V	-55°C						60	
				25°C		18	60				
				85°C			80				
				125°C			80				
		5V	-5V	-55°C						60	μA
				25°C		18	60				
				85°C			80				
				125°C			80				
		15V	0V	-55°C						60	μA
				25°C		18	60				
				85°C			80				
				125°C			80				
Negative supply current I _{SS}	Address inputs = 0V, 5V, or V _{DD} EN = 0V	5V	-5V	-55°C			20	μA	ISS		
				25°C		6	20				
				85°C			25				
				125°C			25				
I _{DD} disable	EN = 5V or V _{DD}	All		25°C		8		μA	IDD_DIS		
				-55°C to 125°C			20				
R _{ON} Source to Drain ON-Resistance	V _S = V _{SS} to V _{DD} I _D = -1mA	5V	0V	-55°C			800	Ω	RON		
				25°C		75	1050				
				85°C			1200				
				125°C			1300				
		10V	0V	-55°C						310	
				25°C		60	400				
				85°C			520				
				125°C			550				
		5V	-5V	-55°C						310	Ω
				25°C		60	400				
				85°C			520				
				125°C			550				
		15V	0V	-55°C						200	Ω
				25°C		60	240				
				85°C			300				
				125°C			300				
ΔR _{ON}	V _S = V _{SS} to V _{DD} I _D = -1mA	All		25°C		2		Ω	RON_DELTA		

PARAMETER	TEST CONDITIONS	V _{DD}	V _{SS}	T _A	MIN	TYP	MAX	UNIT	TEST NAME
R _{ON FLAT}	V _S = V _{SS} to V _{DD} I _D = -1mA	All		25°C		60		Ω	RON_FLAT
				-55°C to 85°C			150		
				-55°C to 125°C			150		
I _{S(OFF)} I _{D(OFF)}	Switch State is off V _S = V _{SS} / V _{DD} V _D = V _{DD} / V _{SS}	5V	0V	25°C		±0.3	±100	nA	IDOFF / ISOFF
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
	Switch State is off V _S = V _{SS} / V _{DD} V _D = V _{DD} / V _{SS}	10V	0V	25°C		±0.3	±100	nA	
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
	Switch State is off V _S = V _{SS} / V _{DD} V _D = V _{DD} / V _{SS}	15V	0V	25°C		±0.3	±100	nA	
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
	Switch State is off V _S = V _{SS} / V _{DD} V _D = V _{DD} / V _{SS}	5V	-5V	25°C		±0.3	±100	nA	
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
Switch State is off V _S = V _{SS} / V _{DD} V _D = V _{DD} / V _{SS}	12V	-12V	25°C		±0.3	±100	nA		
			-55°C to 85°C			±800	nA		
			-55°C to 125°C			±1000	nA		
I _{ON}	Switch State is on V _S = V _D = V _{SS} or V _{DD}	5V	0V	25°C		±0.3	±100	nA	ION
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
		10V	0V	25°C		±0.3	±100	nA	
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
		5V	-5V	25°C		±0.3	±100	nA	
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
		15V	0V	25°C		±0.3		nA	
				-55°C to 85°C			±800	nA	
				-55°C to 125°C			±1000	nA	
V _{IH}	Input High Voltage	All		-55°C to 125°C	1.35		V _{DD}	V	VIH

PARAMETER	TEST CONDITIONS	V _{DD}	V _{SS}	T _A	MIN	TYP	MAX	UNIT	TEST NAME
V _{IL}	Input Low Voltage	All		-55°C to 125°C	0		0.8	V	VIL
I _{IH} / I _{IL}	V _{LOGIC} = 0V, 5V, or V _{DD}	All		25°C		±0.6		μA	IIH / IIL
				-55°C to 125°C	-1		1		

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.

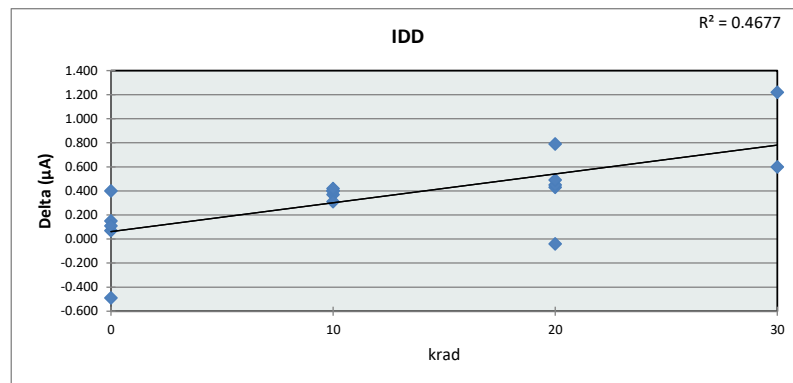
Appendix A: HDR TID Report Data

This appendix provides the TMUX182-SEP TID HDR report. The report shows the variation for each parameter up to 50krad(Si).

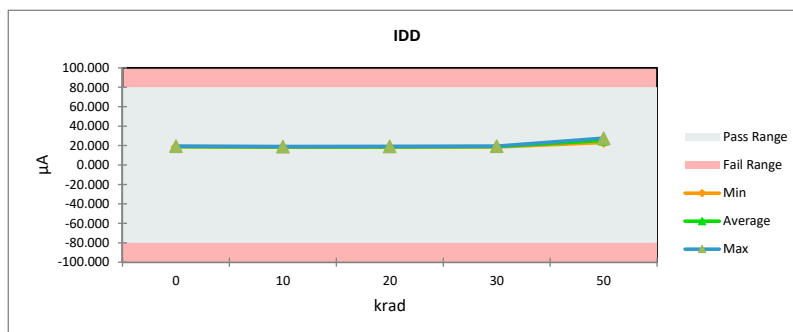
TID Report

TMUX182-SEP Bias 1

		IDD				
Units		μA				
Max Limit		80				
Min Limit		-80				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	18.760	18.830	0.070	0.37%	0.04%
0	2	19.340	19.490	0.150	0.78%	0.09%
0	3	18.820	19.220	0.400	2.13%	0.25%
0	4	18.860	18.970	0.110	0.58%	0.07%
0	5	19.300	18.810	-0.490	-2.54%	0.31%
10	6	18.040	18.410	0.370	2.05%	0.23%
10	7	18.430	18.830	0.400	2.17%	0.25%
10	8	18.580	18.980	0.400	2.15%	0.25%
10	9	18.640	19.060	0.420	2.25%	0.26%
10	10	17.970	18.280	0.310	1.73%	0.19%
20	11	18.810	19.240	0.430	2.29%	0.27%
20	12	18.040	18.490	0.450	2.49%	0.28%
20	13	17.850	18.340	0.490	2.75%	0.31%
20	14	18.400	19.190	0.790	4.29%	0.49%
20	15	18.920	18.880	-0.040	-0.21%	0.02%
30	16	18.830	19.430	0.600	3.19%	0.37%
30	17	18.140	19.360	1.220	6.73%	0.76%
30	18	18.010	18.590	0.580	3.22%	0.36%
30	19	18.380	18.540	0.160	0.87%	0.10%
30	20	18.570	18.830	0.260	1.40%	0.16%
50	21	17.910	25.950	8.040	44.89%	5.03%
50	22	18.180	24.590	6.410	35.26%	4.01%
50	23	18.680	25.440	6.760	36.19%	4.23%
50	24	18.160	23.190	5.030	27.70%	3.14%
50	25	18.730	27.670	8.940	47.73%	5.59%
	Max	19.340	27.670	8.330	47.73%	5.59%
	Average	18.494	20.184	1.690	9.22%	1.08%
	Min	17.850	18.280	0.430	-2.54%	0.02%
	Std Dev	0.420	2.750	2.330	15.31%	1.74%



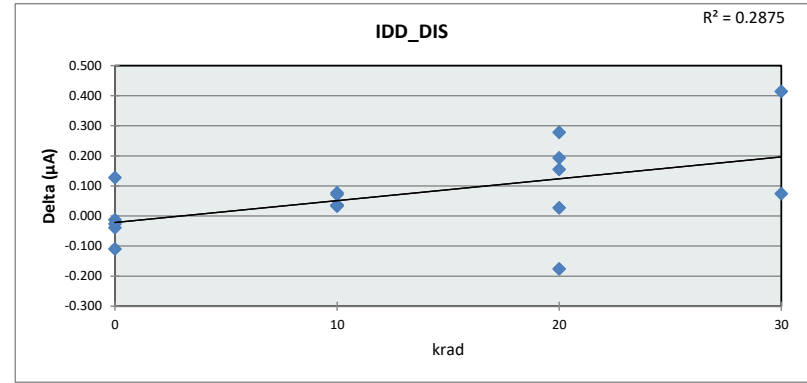
		IDD				
Units		μA				
Max Limit		80				
Min Limit		-80				
krad		0	10	20	30	50
LL		-80.000	-80.000	-80.000	-80.000	-80.000
Min		18.810	18.280	18.340	18.540	23.190
Average		19.064	18.712	18.828	18.950	25.368
Max		19.490	19.060	19.240	19.430	27.670
UL		80.000	80.000	80.000	80.000	80.000



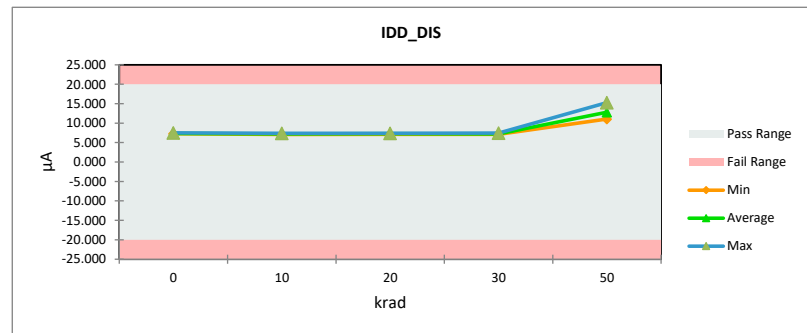
TID Report

TMUX182-SEP Bias 1

		IDD_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	7.301	7.262	-0.039	-0.53%	0.10%
0	2	7.529	7.516	-0.013	-0.17%	0.03%
0	3	7.272	7.400	0.128	1.76%	0.32%
0	4	7.323	7.297	-0.026	-0.36%	0.07%
0	5	7.470	7.360	-0.110	-1.47%	0.28%
10	6	7.054	7.131	0.077	1.09%	0.19%
10	7	7.204	7.240	0.036	0.50%	0.09%
10	8	7.301	7.334	0.033	0.45%	0.08%
10	9	7.319	7.390	0.071	0.97%	0.18%
10	10	7.051	7.087	0.036	0.51%	0.09%
20	11	7.360	7.387	0.027	0.37%	0.07%
20	12	7.129	7.322	0.193	2.71%	0.48%
20	13	6.991	7.146	0.155	2.22%	0.39%
20	14	7.144	7.422	0.278	3.89%	0.70%
20	15	7.388	7.212	-0.176	-2.38%	0.44%
30	16	7.363	7.437	0.074	1.01%	0.19%
30	17	7.020	7.434	0.414	5.90%	1.04%
30	18	7.007	7.099	0.092	1.31%	0.23%
30	19	7.188	7.103	-0.085	-1.18%	0.21%
30	20	7.213	7.200	-0.013	-0.18%	0.03%
50	21	7.023	13.320	6.297	89.66%	15.74%
50	22	7.129	12.320	5.191	72.82%	12.98%
50	23	7.341	12.070	4.729	64.42%	11.82%
50	24	7.135	11.060	3.925	55.01%	9.81%
50	25	7.344	15.280	7.936	108.06%	19.84%
Max		7.529	15.280	7.751	108.06%	19.84%
Average		7.224	8.393	1.169	16.25%	3.02%
Min		6.991	7.087	0.096	-2.38%	0.03%
Std Dev		0.152	2.349	2.197	32.70%	5.85%



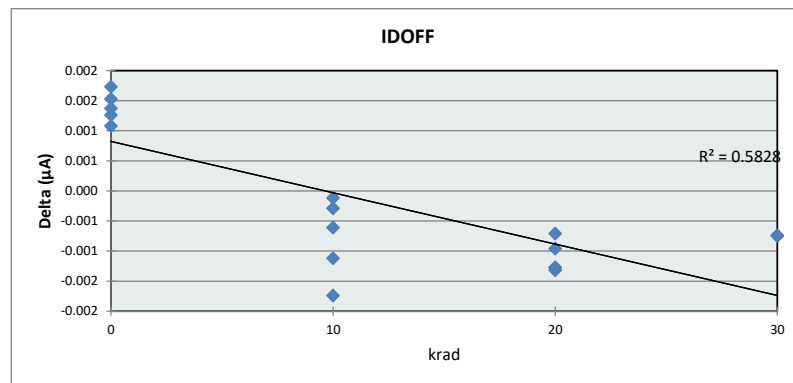
		IDD_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad		0	10	20	30	50
LL		-20.000	-20.000	-20.000	-20.000	-20.000
Min		7.262	7.087	7.146	7.099	11.060
Average		7.367	7.236	7.298	7.255	12.810
Max		7.516	7.390	7.422	7.437	15.280
UL		20.000	20.000	20.000	20.000	20.000



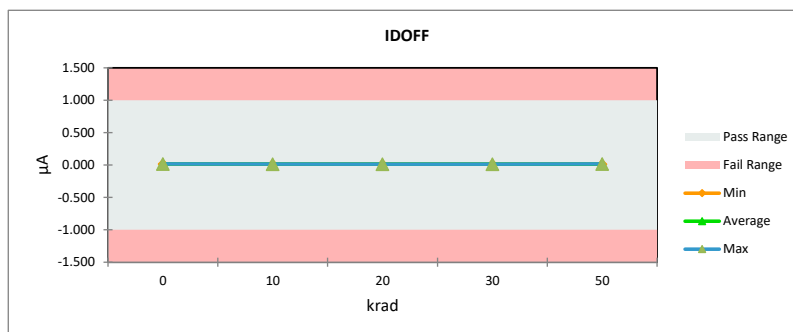
TID Report

TMUX182-SEP Bias 1

		IDOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.015	0.017	0.001	8.24%	0.06%
0	2	0.015	0.017	0.002	10.19%	0.08%
0	3	0.015	0.017	0.002	11.34%	0.09%
0	4	0.015	0.017	0.001	8.98%	0.07%
0	5	0.016	0.017	0.001	6.87%	0.05%
10	6	0.015	0.014	-0.002	-11.27%	0.09%
10	7	0.015	0.015	0.000	-0.82%	0.01%
10	8	0.016	0.015	-0.001	-7.14%	0.06%
10	9	0.015	0.015	-0.001	-3.96%	0.03%
10	10	0.015	0.015	0.000	-1.93%	0.01%
20	11	0.016	0.015	-0.001	-6.19%	0.05%
20	12	0.015	0.015	-0.001	-4.59%	0.04%
20	13	0.016	0.015	-0.001	-8.04%	0.06%
20	14	0.016	0.015	-0.001	-8.18%	0.07%
20	15	0.016	0.015	-0.001	-8.05%	0.06%
30	16	0.016	0.015	-0.001	-4.83%	0.04%
30	17	0.016	0.015	-0.001	-4.76%	0.04%
30	18	0.016	0.015	-0.001	-7.86%	0.06%
30	19	0.015	0.015	-0.001	-4.02%	0.03%
30	20	0.016	0.015	-0.001	-6.98%	0.06%
50	21	0.016	0.015	-0.001	-4.51%	0.04%
50	22	0.016	0.015	-0.001	-7.20%	0.06%
50	23	0.016	0.015	-0.001	-7.40%	0.06%
50	24	0.015	0.015	0.000	-0.26%	0.00%
50	25	0.016	0.013	-0.003	-17.92%	0.15%
Max		0.016	0.017	0.001	11.34%	0.15%
Average		0.016	0.015	-0.001	-3.21%	0.05%
Min		0.015	0.013	-0.001	-17.92%	0.00%
Std Dev		0.000	0.001	0.001	7.20%	0.03%



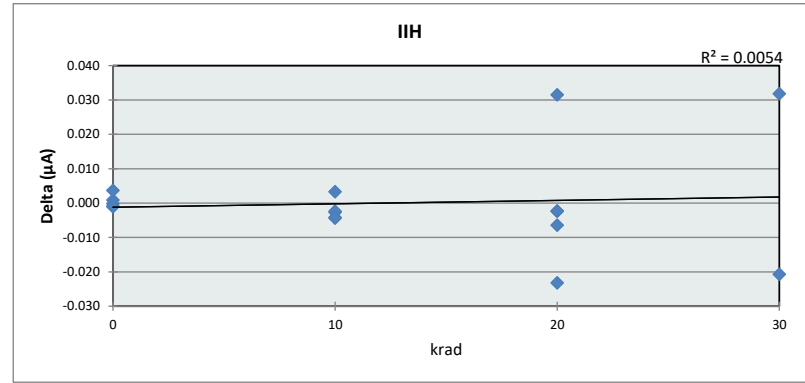
		IDOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.017	0.014	0.015	0.015	0.013
Average		0.017	0.014	0.015	0.015	0.015
Max		0.017	0.015	0.015	0.015	0.015
UL		1.000	1.000	1.000	1.000	1.000



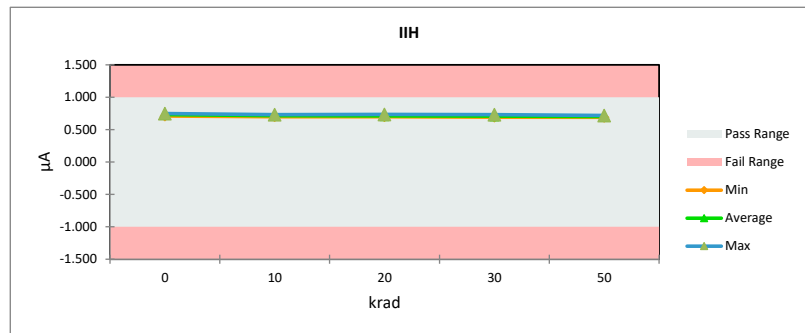
TID Report

TMUX182-SEP Bias 1

		IIH				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.709	0.710	0.001	0.13%	0.04%
0	2	0.742	0.741	-0.001	-0.13%	0.05%
0	3	0.731	0.735	0.004	0.51%	0.19%
0	4	0.725	0.724	0.000	-0.03%	0.01%
0	5	0.749	0.748	-0.001	-0.13%	0.05%
10	6	0.709	0.706	-0.003	-0.38%	0.13%
10	7	0.720	0.724	0.003	0.46%	0.16%
10	8	0.726	0.724	-0.002	-0.33%	0.12%
10	9	0.735	0.731	-0.004	-0.57%	0.21%
10	10	0.702	0.697	-0.004	-0.63%	0.22%
20	11	0.726	0.720	-0.006	-0.88%	0.32%
20	12	0.711	0.708	-0.002	-0.34%	0.12%
20	13	0.703	0.701	-0.002	-0.33%	0.11%
20	14	0.704	0.735	0.031	4.48%	1.57%
20	15	0.722	0.699	-0.023	-3.21%	1.16%
30	16	0.736	0.715	-0.021	-2.81%	1.04%
30	17	0.700	0.732	0.032	4.54%	1.59%
30	18	0.713	0.692	-0.021	-2.88%	1.03%
30	19	0.707	0.704	-0.003	-0.42%	0.15%
30	20	0.708	0.702	-0.007	-0.96%	0.34%
50	21	0.702	0.693	-0.009	-1.27%	0.45%
50	22	0.712	0.690	-0.022	-3.08%	1.10%
50	23	0.728	0.701	-0.027	-3.65%	1.33%
50	24	0.717	0.719	0.002	0.25%	0.09%
50	25	0.728	0.708	-0.020	-2.77%	1.01%
Max		0.749	0.748	-0.001	4.54%	1.59%
Average		0.719	0.714	-0.004	-0.58%	0.50%
Min		0.700	0.690	-0.010	-3.65%	0.01%
Std Dev		0.014	0.016	0.003	1.99%	0.53%



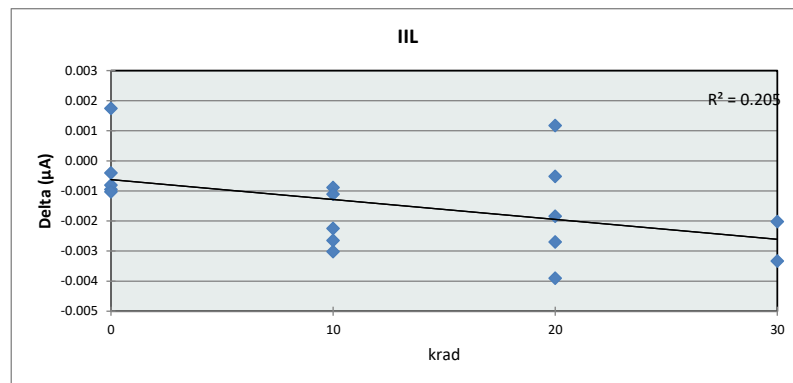
		IIH				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.710	0.697	0.699	0.692	0.690
Average		0.732	0.716	0.713	0.709	0.702
Max		0.748	0.731	0.735	0.732	0.719
UL		1.000	1.000	1.000	1.000	1.000



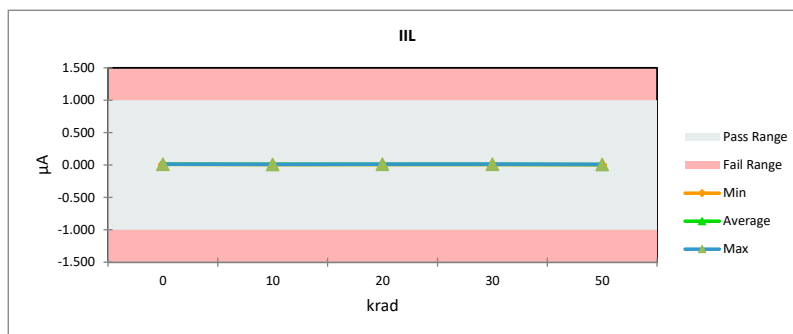
TID Report

TMUX182-SEP Bias 1

		IIL				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.012	0.011	-0.001	-7.90%	0.05%
0	2	0.011	0.011	0.000	-3.48%	0.02%
0	3	0.011	0.012	0.002	16.23%	0.09%
0	4	0.012	0.011	-0.001	-6.70%	0.04%
0	5	0.012	0.011	-0.001	-8.39%	0.05%
10	6	0.011	0.008	-0.003	-26.69%	0.15%
10	7	0.012	0.011	-0.001	-7.39%	0.04%
10	8	0.010	0.009	-0.001	-10.59%	0.06%
10	9	0.012	0.010	-0.002	-18.67%	0.11%
10	10	0.013	0.010	-0.003	-20.98%	0.13%
20	11	0.012	0.012	-0.001	-4.27%	0.03%
20	12	0.012	0.013	0.001	10.09%	0.06%
20	13	0.012	0.008	-0.004	-33.00%	0.20%
20	14	0.012	0.010	-0.002	-15.41%	0.09%
20	15	0.011	0.008	-0.003	-24.32%	0.14%
30	16	0.012	0.009	-0.003	-27.84%	0.17%
30	17	0.012	0.010	-0.002	-16.61%	0.10%
30	18	0.012	0.009	-0.003	-26.19%	0.16%
30	19	0.013	0.009	-0.005	-34.81%	0.23%
30	20	0.012	0.012	0.000	1.16%	0.01%
50	21	0.012	0.004	-0.008	-65.50%	0.39%
50	22	0.011	0.010	-0.001	-8.47%	0.04%
50	23	0.011	0.006	-0.005	-47.48%	0.27%
50	24	0.012	0.012	0.000	0.43%	0.00%
50	25	0.012	0.008	-0.003	-29.74%	0.17%
	Max	0.013	0.013	0.000	16.23%	0.39%
	Average	0.012	0.010	-0.002	-16.66%	0.11%
	Min	0.010	0.004	-0.006	-65.50%	0.00%
	Std Dev	0.001	0.002	0.001	17.88%	0.09%



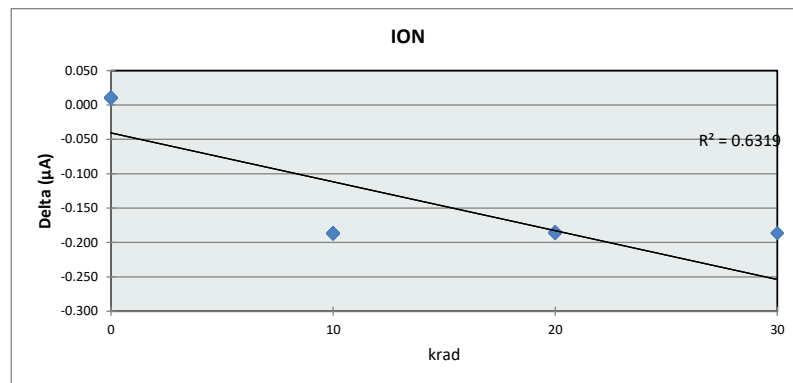
		IIL				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	0	10	20	30	50	
LL	-1.000	-1.000	-1.000	-1.000	-1.000	
Min	0.011	0.008	0.008	0.009	0.004	
Average	0.011	0.010	0.010	0.010	0.008	
Max	0.012	0.011	0.013	0.012	0.012	
UL	1.000	1.000	1.000	1.000	1.000	



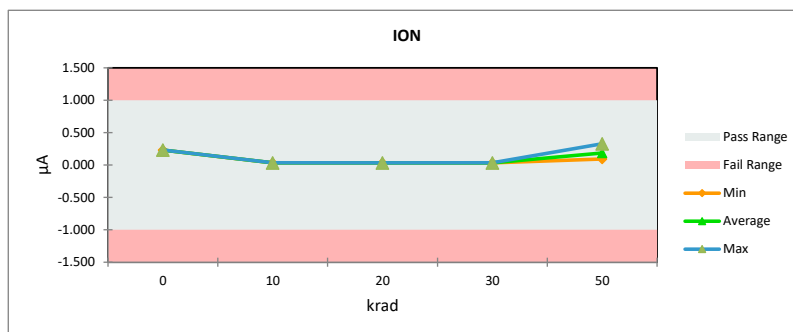
TID Report

TMUX182-SEP Bias 1

		ION				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.221	0.230	0.010	4.40%	0.48%
0	2	0.221	0.231	0.010	4.39%	0.48%
0	3	0.220	0.231	0.012	5.24%	0.57%
0	4	0.221	0.231	0.011	4.76%	0.52%
0	5	0.220	0.231	0.010	4.58%	0.51%
10	6	0.221	0.035	-0.186	-84.18%	9.29%
10	7	0.221	0.034	-0.186	-84.42%	9.32%
10	8	0.220	0.033	-0.187	-84.89%	9.33%
10	9	0.222	0.034	-0.188	-84.65%	9.39%
10	10	0.222	0.035	-0.187	-84.28%	9.33%
20	11	0.221	0.035	-0.186	-84.15%	9.28%
20	12	0.221	0.035	-0.186	-84.23%	9.31%
20	13	0.221	0.035	-0.186	-84.26%	9.31%
20	14	0.219	0.035	-0.184	-84.07%	9.22%
20	15	0.221	0.034	-0.187	-84.56%	9.34%
30	16	0.221	0.034	-0.187	-84.53%	9.34%
30	17	0.221	0.034	-0.186	-84.42%	9.31%
30	18	0.221	0.034	-0.187	-84.73%	9.36%
30	19	0.220	0.034	-0.186	-84.42%	9.30%
30	20	0.221	0.035	-0.186	-84.16%	9.28%
50	21	0.220	0.284	0.064	29.16%	3.21%
50	22	0.221	0.328	0.107	48.37%	5.35%
50	23	0.220	0.099	-0.122	-55.23%	6.08%
50	24	0.220	0.093	-0.127	-57.60%	6.35%
50	25	0.222	0.131	-0.091	-40.96%	4.54%
Max		0.222	0.328	0.106	48.37%	9.39%
Average		0.221	0.104	-0.116	-52.75%	6.71%
Min		0.219	0.033	-0.186	-84.89%	0.48%
Std Dev		0.001	0.099	0.099	45.01%	3.61%



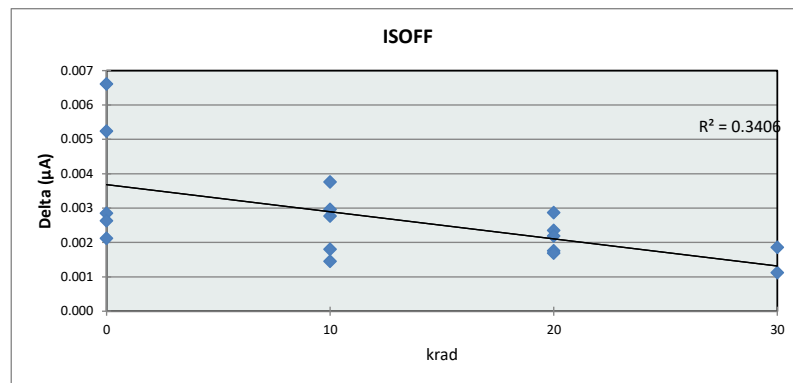
		ION				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.230	0.033	0.034	0.034	0.093
Average		0.231	0.034	0.035	0.034	0.187
Max		0.231	0.035	0.035	0.035	0.328
UL		1.000	1.000	1.000	1.000	1.000



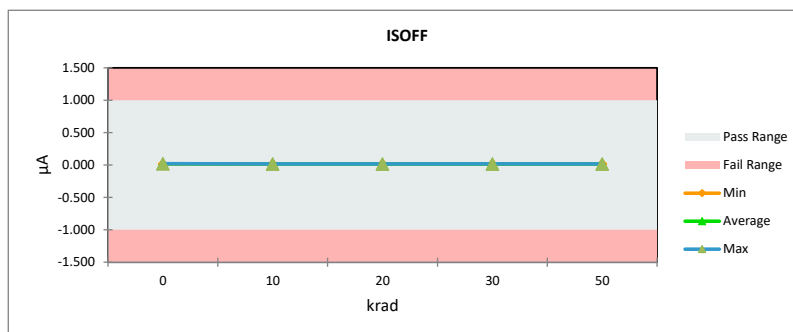
TID Report

TMUX182-SEP Bias 1

		ISOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.015	0.021	0.007	45.49%	0.33%
0	2	0.015	0.018	0.003	19.26%	0.14%
0	3	0.015	0.021	0.005	34.09%	0.26%
0	4	0.015	0.018	0.003	17.34%	0.13%
0	5	0.015	0.017	0.002	13.87%	0.11%
10	6	0.014	0.016	0.002	12.50%	0.09%
10	7	0.014	0.018	0.004	26.95%	0.19%
10	8	0.016	0.018	0.001	9.02%	0.07%
10	9	0.015	0.018	0.003	18.47%	0.14%
10	10	0.014	0.017	0.003	20.66%	0.15%
20	11	0.015	0.017	0.002	15.60%	0.12%
20	12	0.015	0.017	0.002	14.46%	0.11%
20	13	0.016	0.017	0.002	11.24%	0.09%
20	14	0.015	0.018	0.003	19.16%	0.14%
20	15	0.016	0.018	0.002	10.53%	0.08%
30	16	0.016	0.018	0.002	11.87%	0.09%
30	17	0.016	0.017	0.001	7.04%	0.06%
30	18	0.016	0.017	0.001	7.08%	0.06%
30	19	0.015	0.018	0.002	13.72%	0.11%
30	20	0.016	0.017	0.002	9.61%	0.08%
50	21	0.016	0.018	0.002	12.46%	0.10%
50	22	0.015	0.017	0.002	11.52%	0.09%
50	23	0.017	0.017	0.000	2.17%	0.02%
50	24	0.015	0.018	0.003	23.23%	0.17%
50	25	0.018	0.016	-0.001	-7.27%	0.06%
Max		0.018	0.021	0.004	45.49%	0.33%
Average		0.015	0.018	0.002	15.20%	0.12%
Min		0.014	0.016	0.002	-7.27%	0.02%
Std Dev		0.001	0.001	0.000	10.23%	0.07%



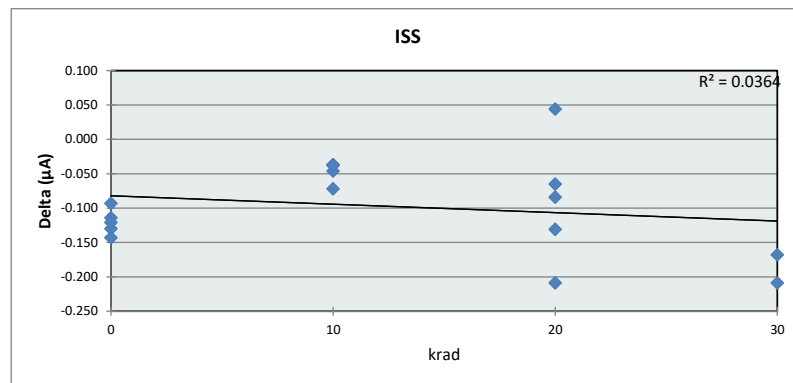
		ISOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.017	0.016	0.017	0.017	0.016
Average		0.019	0.017	0.018	0.017	0.017
Max		0.021	0.018	0.018	0.018	0.018
UL		1.000	1.000	1.000	1.000	1.000



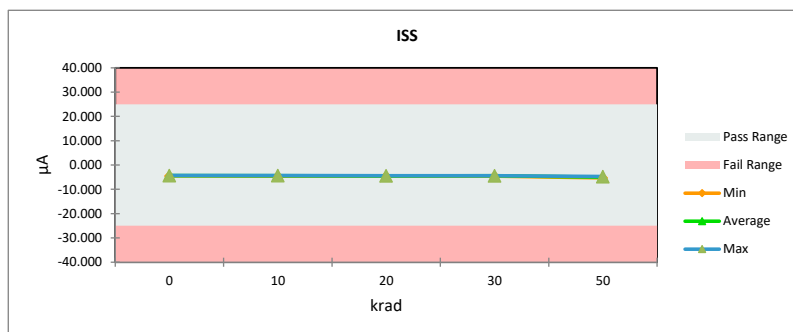
TID Report

TMUX182-SEP Bias 1

		ISS				
Units		μA				
Max Limit		25				
Min Limit		-25				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	-4.176	-4.290	-0.114	2.73%	0.23%
0	2	-4.320	-4.450	-0.130	3.01%	0.26%
0	3	-4.135	-4.278	-0.143	3.46%	0.29%
0	4	-4.232	-4.353	-0.121	2.86%	0.24%
0	5	-4.324	-4.417	-0.093	2.15%	0.19%
10	6	-4.302	-4.339	-0.037	0.86%	0.07%
10	7	-4.436	-4.474	-0.038	0.86%	0.08%
10	8	-4.474	-4.546	-0.072	1.61%	0.14%
10	9	-4.468	-4.514	-0.046	1.03%	0.09%
10	10	-4.315	-4.352	-0.037	0.86%	0.07%
20	11	-4.449	-4.533	-0.084	1.89%	0.17%
20	12	-4.321	-4.386	-0.065	1.50%	0.13%
20	13	-4.249	-4.380	-0.131	3.08%	0.26%
20	14	-4.355	-4.564	-0.209	4.80%	0.42%
20	15	-4.471	-4.427	0.044	-0.98%	0.09%
30	16	-4.365	-4.533	-0.168	3.85%	0.34%
30	17	-4.340	-4.549	-0.209	4.82%	0.42%
30	18	-4.308	-4.367	-0.059	1.37%	0.12%
30	19	-4.374	-4.367	0.007	-0.16%	0.01%
30	20	-4.411	-4.367	0.044	-1.00%	0.09%
50	21	-4.286	-4.896	-0.610	14.23%	1.22%
50	22	-4.365	-5.046	-0.681	15.60%	1.36%
50	23	-4.452	-5.037	-0.585	13.14%	1.17%
50	24	-4.286	-4.718	-0.432	10.08%	0.86%
50	25	-4.440	-5.315	-0.875	19.71%	1.75%
	Max	-4.135	-4.278	-0.143	19.71%	1.75%
	Average	-4.346	-4.540	-0.194	4.45%	0.40%
	Min	-4.474	-5.315	-0.841	-1.00%	0.01%
	Std Dev	0.091	0.265	0.174	5.55%	0.47%



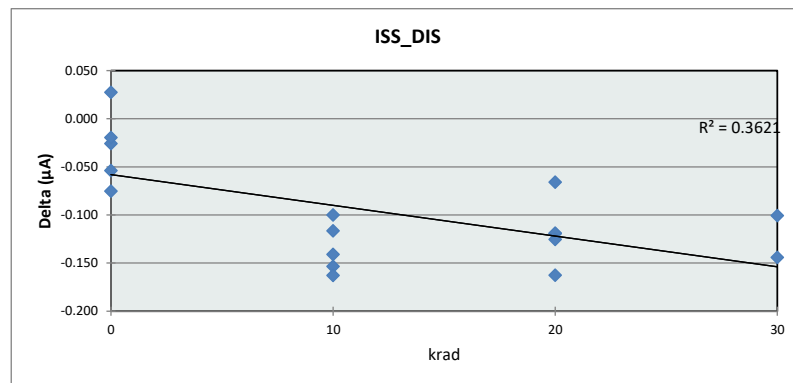
		ISS				
Units		μA				
Max Limit		25				
Min Limit		-25				
krad		0	10	20	30	50
LL		-25.000	-25.000	-25.000	-25.000	-25.000
Min		-4.450	-4.546	-4.564	-4.549	-5.315
Average		-4.358	-4.445	-4.458	-4.437	-5.002
Max		-4.278	-4.339	-4.380	-4.367	-4.718
UL		25.000	25.000	25.000	25.000	25.000



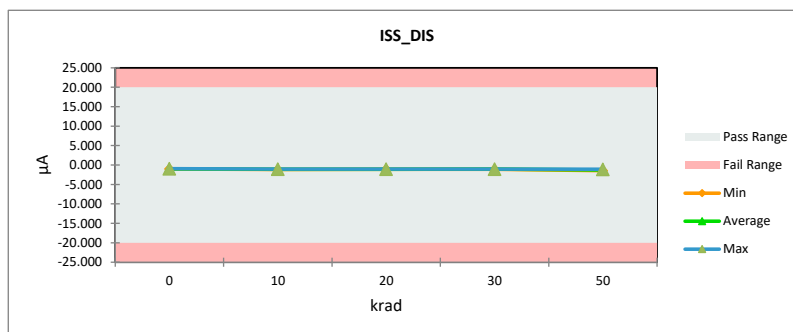
TID Report

TMUX182-SEP Bias 1

		ISS_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	-0.938	-0.964	-0.026	2.75%	0.06%
0	2	-0.982	-1.001	-0.020	1.99%	0.05%
0	3	-0.966	-0.939	0.027	-2.84%	0.07%
0	4	-0.950	-1.004	-0.054	5.66%	0.13%
0	5	-0.938	-1.013	-0.075	8.03%	0.19%
10	6	-0.944	-1.044	-0.100	10.59%	0.25%
10	7	-0.960	-1.076	-0.116	12.13%	0.29%
10	8	-0.960	-1.113	-0.153	15.99%	0.38%
10	9	-0.972	-1.135	-0.163	16.76%	0.41%
10	10	-0.922	-1.063	-0.141	15.28%	0.35%
20	11	-0.985	-1.104	-0.119	12.13%	0.30%
20	12	-0.947	-1.066	-0.119	12.55%	0.30%
20	13	-0.960	-1.085	-0.125	13.07%	0.31%
20	14	-0.953	-1.116	-0.163	17.07%	0.41%
20	15	-1.010	-1.076	-0.066	6.53%	0.17%
30	16	-0.978	-1.079	-0.101	10.28%	0.25%
30	17	-0.944	-1.088	-0.144	15.25%	0.36%
30	18	-0.928	-1.054	-0.126	13.54%	0.31%
30	19	-0.935	-1.032	-0.097	10.42%	0.24%
30	20	-0.947	-1.044	-0.097	10.23%	0.24%
50	21	-0.919	-1.104	-0.185	20.13%	0.46%
50	22	-0.944	-1.448	-0.504	53.39%	1.26%
50	23	-0.947	-1.273	-0.326	34.41%	0.81%
50	24	-0.953	-1.085	-0.132	13.82%	0.33%
50	25	-0.969	-1.451	-0.482	49.74%	1.21%
	Max	-0.919	-0.939	-0.020	53.39%	1.26%
	Average	-0.954	-1.098	-0.144	15.16%	0.37%
	Min	-1.010	-1.451	-0.441	-2.84%	0.05%
	Std Dev	0.021	0.123	0.102	12.99%	0.30%



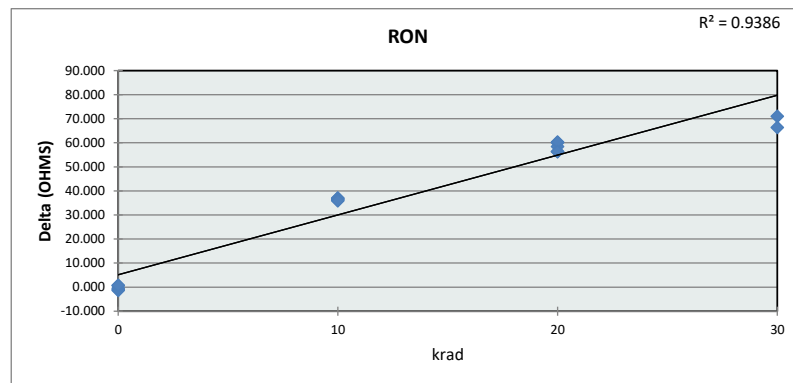
		ISS_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad		0	10	20	30	50
LL		-20.000	-20.000	-20.000	-20.000	-20.000
Min		-1.013	-1.135	-1.116	-1.088	-1.451
Average		-0.984	-1.086	-1.089	-1.059	-1.272
Max		-0.939	-1.044	-1.066	-1.032	-1.085
UL		20.000	20.000	20.000	20.000	20.000



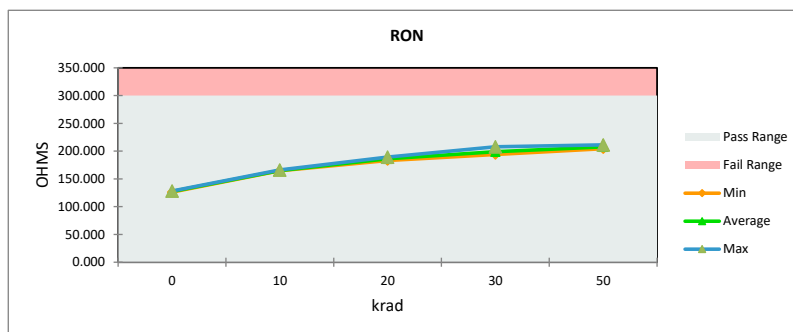
TID Report

TMUX182-SEP Bias 1

		RON				
Units		OHMS				
Max Limit		300				
Min Limit		0				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	127.600	126.200	-1.400	-1.10%	0.47%
0	2	127.700	126.700	-1.000	-0.78%	0.33%
0	3	128.600	128.100	-0.500	-0.39%	0.17%
0	4	126.700	127.300	0.600	0.47%	0.20%
0	5	127.400	128.200	0.800	0.63%	0.27%
10	6	127.600	164.600	37.000	29.00%	12.33%
10	7	129.200	166.100	36.900	28.56%	12.30%
10	8	128.700	164.900	36.200	28.13%	12.07%
10	9	128.500	165.000	36.500	28.40%	12.17%
10	10	129.000	164.900	35.900	27.83%	11.97%
20	11	129.200	189.200	60.000	46.44%	20.00%
20	12	127.000	185.400	58.400	45.98%	19.47%
20	13	126.800	183.200	56.400	44.48%	18.80%
20	14	127.100	187.400	60.300	47.44%	20.10%
20	15	129.100	185.400	56.300	43.61%	18.77%
30	16	128.000	199.000	71.000	55.47%	23.67%
30	17	132.400	198.800	66.400	50.15%	22.13%
30	18	128.000	207.800	79.800	62.34%	26.60%
30	19	128.100	194.000	65.900	51.44%	21.97%
30	20	129.600	195.800	66.200	51.08%	22.07%
50	21	127.300	211.300	84.000	65.99%	28.00%
50	22	127.600	204.400	76.800	60.19%	25.60%
50	23	129.600	204.600	75.000	57.87%	25.00%
50	24	129.300	209.100	79.800	61.72%	26.60%
50	25	127.000	208.900	81.900	64.49%	27.30%
	Max	132.400	211.300	78.900	65.99%	28.00%
	Average	128.284	177.052	48.768	37.98%	16.33%
	Min	126.700	126.200	-0.500	-1.10%	0.17%
	Std Dev	1.254	29.430	28.176	22.73%	9.58%



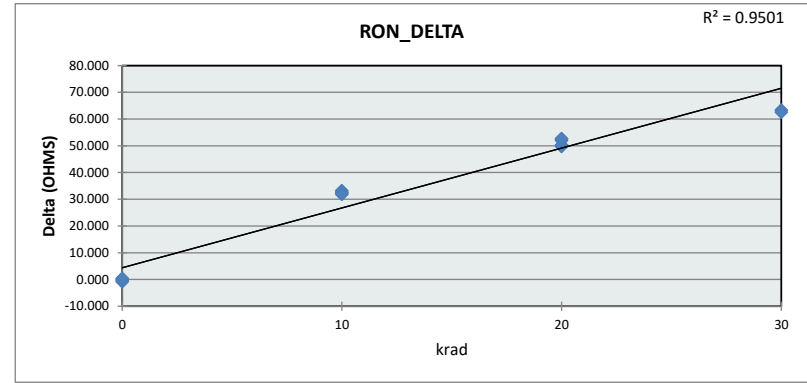
		RON				
Units		OHMS				
Max Limit		300				
Min Limit		0				
krad		0	10	20	30	50
LL		0.000	0.000	0.000	0.000	0.000
Min		126.200	164.600	183.200	194.000	204.400
Average		127.300	165.100	186.120	199.080	207.660
Max		128.200	166.100	189.200	207.800	211.300
UL		300.000	300.000	300.000	300.000	300.000



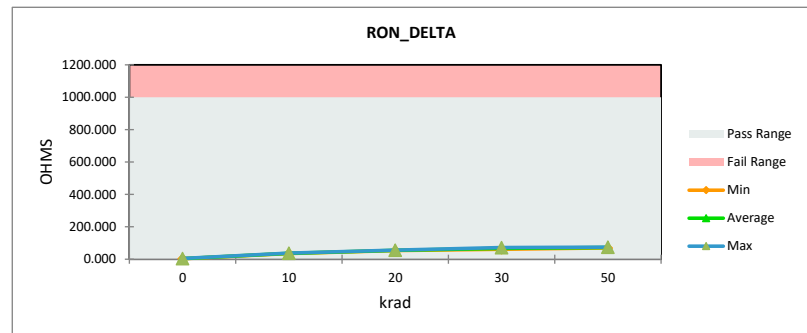
TID Report

TMUX182-SEP Bias 1

		RON_DELTA				
Units		OHMS				
Max Limit		1000				
Min Limit		0				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	3.640	3.269	-0.371	-10.19%	0.04%
0	2	3.035	3.135	0.100	3.29%	0.01%
0	3	3.799	2.927	-0.872	-22.95%	0.09%
0	4	3.625	3.425	-0.200	-5.52%	0.02%
0	5	4.308	4.766	0.458	10.63%	0.05%
10	6	3.400	36.060	32.660	960.59%	3.27%
10	7	4.022	37.210	33.188	825.16%	3.32%
10	8	3.644	35.480	31.836	873.66%	3.18%
10	9	3.324	35.910	32.586	980.32%	3.26%
10	10	3.592	35.610	32.018	891.37%	3.20%
20	11	3.439	56.040	52.601	1529.54%	5.26%
20	12	3.573	53.870	50.297	1407.70%	5.03%
20	13	3.197	52.920	49.723	1555.30%	4.97%
20	14	3.856	55.830	51.974	1347.87%	5.20%
20	15	3.145	55.750	52.605	1672.66%	5.26%
30	16	3.909	67.270	63.361	1620.90%	6.34%
30	17	3.929	66.470	62.541	1591.78%	6.25%
30	18	3.953	72.100	68.147	1723.93%	6.81%
30	19	3.208	61.290	58.082	1810.54%	5.81%
30	20	4.022	63.300	59.278	1473.84%	5.93%
50	21	3.755	74.550	70.795	1885.35%	7.08%
50	22	3.215	69.940	66.725	2075.43%	6.67%
50	23	4.054	70.150	66.096	1630.39%	6.61%
50	24	4.276	73.620	69.344	1621.70%	6.93%
50	25	3.613	73.810	70.197	1942.90%	7.02%
Max		4.308	74.550	70.242	2075.43%	7.08%
Average		3.661	46.588	42.927	1175.85%	4.30%
Min		3.035	2.927	-0.108	-22.95%	0.01%
Std Dev		0.355	25.426	25.071	689.82%	2.52%



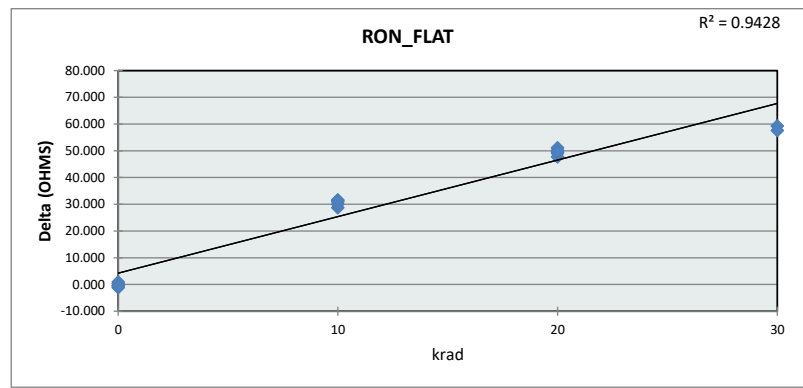
		RON_DELTA				
Units		OHMS				
Max Limit		1000				
Min Limit		0				
krad		0	10	20	30	50
LL		0.000	0.000	0.000	0.000	0.000
Min		2.927	35.480	52.920	61.290	69.940
Average		3.504	36.054	54.882	66.086	72.414
Max		4.766	37.210	56.040	72.100	74.550
UL		1000.000	1000.000	1000.000	1000.000	1000.000



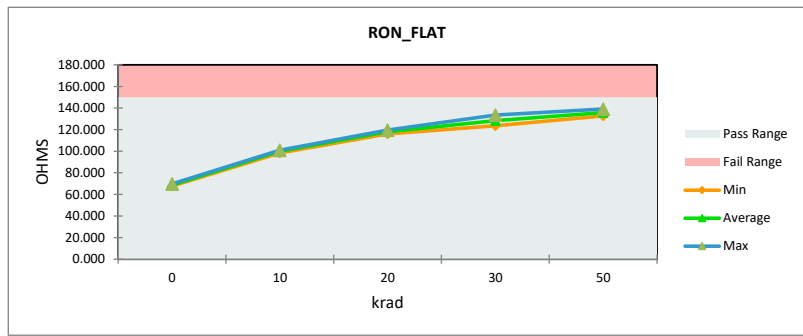
TID Report

TMUX182-SEP Bias 1

RON_FLAT						
Units		OHMS				
Max Limit		150				
Min Limit		0				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	69.160	68.010	-1.150	-1.66%	0.77%
0	2	67.430	67.730	0.300	0.44%	0.20%
0	3	69.320	68.740	-0.580	-0.84%	0.39%
0	4	68.910	69.780	0.870	1.26%	0.58%
0	5	69.290	68.860	-0.430	-0.62%	0.29%
10	6	69.660	98.410	28.750	41.27%	19.17%
10	7	69.920	100.900	30.980	44.31%	20.65%
10	8	68.990	100.600	31.610	45.82%	21.07%
10	9	69.270	99.280	30.010	43.32%	20.01%
10	10	69.120	100.500	31.380	45.40%	20.92%
20	11	69.580	119.700	50.120	72.03%	33.41%
20	12	67.930	117.000	49.070	72.24%	32.71%
20	13	68.400	116.100	47.700	69.74%	31.80%
20	14	67.780	118.900	51.120	75.42%	34.08%
20	15	68.800	118.500	49.700	72.24%	33.13%
30	16	69.730	129.000	59.270	85.00%	39.51%
30	17	71.590	129.200	57.610	80.47%	38.41%
30	18	69.340	133.500	64.160	92.53%	42.77%
30	19	68.250	123.600	55.350	81.10%	36.90%
30	20	68.600	126.800	58.200	84.84%	38.80%
50	21	68.320	139.100	70.780	103.60%	47.19%
50	22	68.010	133.300	65.290	96.00%	43.53%
50	23	69.730	132.700	62.970	90.31%	41.98%
50	24	68.550	136.300	67.750	98.83%	45.17%
50	25	68.860	137.600	68.740	99.83%	45.83%
Max		71.590	139.100	67.510	103.60%	47.19%
Average		68.982	110.164	41.183	59.72%	27.57%
Min		67.430	67.730	0.300	-1.66%	0.20%
Std Dev		0.859	24.590	23.731	35.71%	16.19%



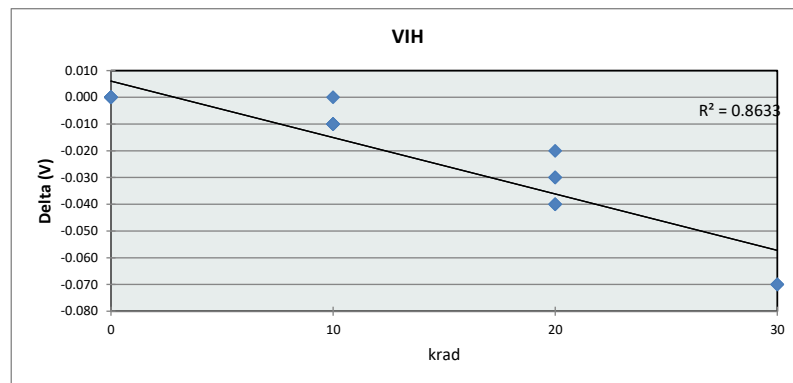
RON_FLAT					
Units		OHMS			
Max Limit		150			
Min Limit		0			
krad	0	10	20	30	50
LL	0.000	0.000	0.000	0.000	0.000
Min	67.730	98.410	116.100	123.600	132.700
Average	68.624	99.938	118.040	128.420	135.800
Max	69.780	100.900	119.700	133.500	139.100
UL	150.000	150.000	150.000	150.000	150.000



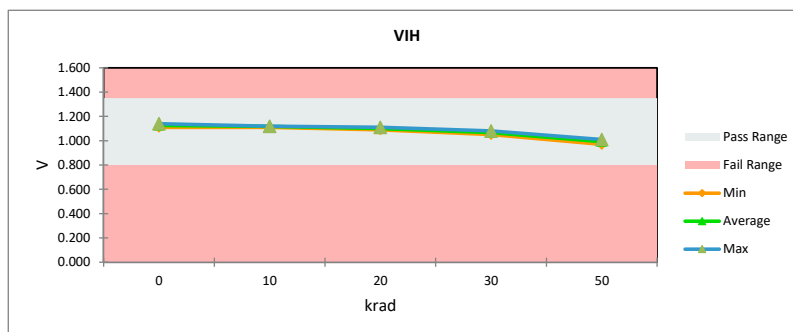
TID Report

TMUX182-SEP Bias 1

		VIH				
Units		V				
Max Limit		1.35				
Min Limit		0.8				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.130	1.130	0.000	0.00%	0.00%
0	2	1.120	1.120	0.000	0.00%	0.00%
0	3	1.140	1.140	0.000	0.00%	0.00%
0	4	1.130	1.130	0.000	0.00%	0.00%
0	5	1.110	1.110	0.000	0.00%	0.00%
10	6	1.130	1.120	-0.010	-0.88%	1.82%
10	7	1.130	1.120	-0.010	-0.88%	1.82%
10	8	1.120	1.110	-0.010	-0.89%	1.82%
10	9	1.120	1.120	0.000	0.00%	0.00%
10	10	1.130	1.120	-0.010	-0.88%	1.82%
20	11	1.120	1.090	-0.030	-2.68%	5.45%
20	12	1.140	1.100	-0.040	-3.51%	7.27%
20	13	1.130	1.100	-0.030	-2.65%	5.45%
20	14	1.140	1.100	-0.040	-3.51%	7.27%
20	15	1.130	1.110	-0.020	-1.77%	3.64%
30	16	1.120	1.050	-0.070	-6.25%	12.73%
30	17	1.130	1.060	-0.070	-6.19%	12.73%
30	18	1.120	1.080	-0.040	-3.57%	7.27%
30	19	1.130	1.070	-0.060	-5.31%	10.91%
30	20	1.140	1.070	-0.070	-6.14%	12.73%
50	21	1.130	0.970	-0.160	-14.16%	29.09%
50	22	1.140	0.990	-0.150	-13.16%	27.27%
50	23	1.130	1.010	-0.120	-10.62%	21.82%
50	24	1.130	1.000	-0.130	-11.50%	23.64%
50	25	1.130	0.990	-0.140	-12.39%	25.45%
Max		1.140	1.140	0.000	0.00%	29.09%
Average		1.129	1.080	-0.048	-4.28%	8.80%
Min		1.110	0.970	-0.140	-14.16%	0.00%
Std Dev		0.008	0.051	0.043	4.64%	9.54%



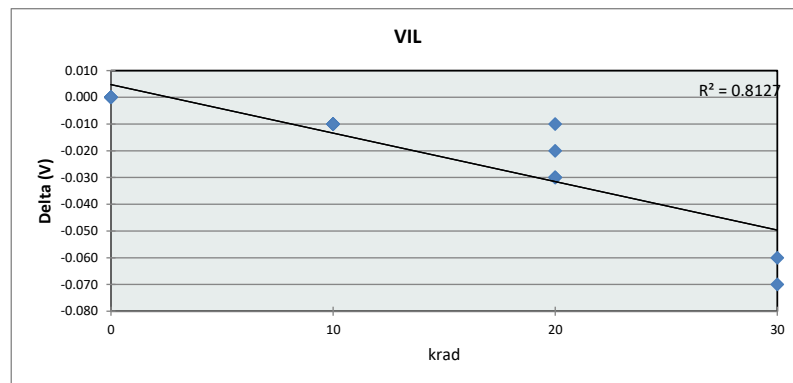
		VIH				
Units		V				
Max Limit		1.35				
Min Limit		0.8				
krad		0	10	20	30	50
LL		0.800	0.800	0.800	0.800	0.800
Min		1.110	1.110	1.090	1.050	0.970
Average		1.126	1.118	1.100	1.066	0.992
Max		1.140	1.120	1.110	1.080	1.010
UL		1.350	1.350	1.350	1.350	1.350



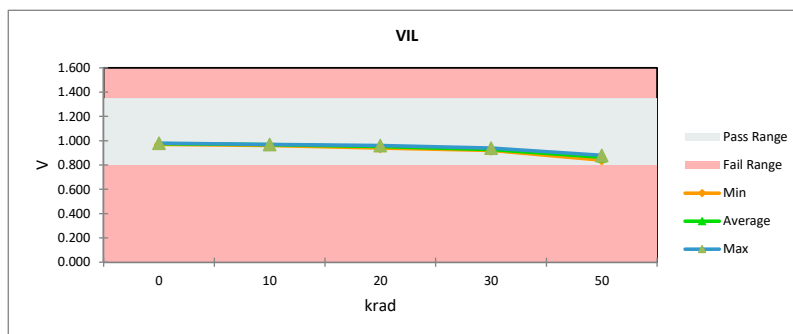
TID Report

TMUX182-SEP Bias 1

		VIL					
Units		V					
Max Limit		1.35					
Min Limit		0.8					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range	
0	1	0.980	0.980	0.000	0.00%	0.00%	
0	2	0.970	0.970	0.000	0.00%	0.00%	
0	3	0.980	0.980	0.000	0.00%	0.00%	
0	4	0.980	0.980	0.000	0.00%	0.00%	
0	5	0.970	0.970	0.000	0.00%	0.00%	
10	6	0.980	0.970	-0.010	-1.02%	1.82%	
10	7	0.980	0.970	-0.010	-1.02%	1.82%	
10	8	0.970	0.960	-0.010	-1.03%	1.82%	
10	9	0.980	0.970	-0.010	-1.02%	1.82%	
10	10	0.980	0.970	-0.010	-1.02%	1.82%	
20	11	0.970	0.940	-0.030	-3.09%	5.45%	
20	12	0.980	0.960	-0.020	-2.04%	3.64%	
20	13	0.980	0.950	-0.030	-3.06%	5.45%	
20	14	0.980	0.950	-0.030	-3.06%	5.45%	
20	15	0.970	0.960	-0.010	-1.03%	1.82%	
30	16	0.980	0.920	-0.060	-6.12%	10.91%	
30	17	0.990	0.920	-0.070	-7.07%	12.73%	
30	18	0.970	0.940	-0.030	-3.09%	5.45%	
30	19	0.990	0.930	-0.060	-6.06%	10.91%	
30	20	0.980	0.930	-0.050	-5.10%	9.09%	
50	21	0.980	0.840	-0.140	-14.29%	25.45%	
50	22	0.980	0.870	-0.110	-11.22%	20.00%	
50	23	0.980	0.880	-0.100	-10.20%	18.18%	
50	24	0.980	0.870	-0.110	-11.22%	20.00%	
50	25	0.980	0.860	-0.120	-12.24%	21.82%	
Max		0.990	0.980	-0.010	0.00%	25.45%	
Average		0.978	0.938	-0.041	-4.16%	7.42%	
Min		0.970	0.840	-0.130	-14.29%	0.00%	
Std Dev		0.006	0.042	0.036	4.45%	7.94%	



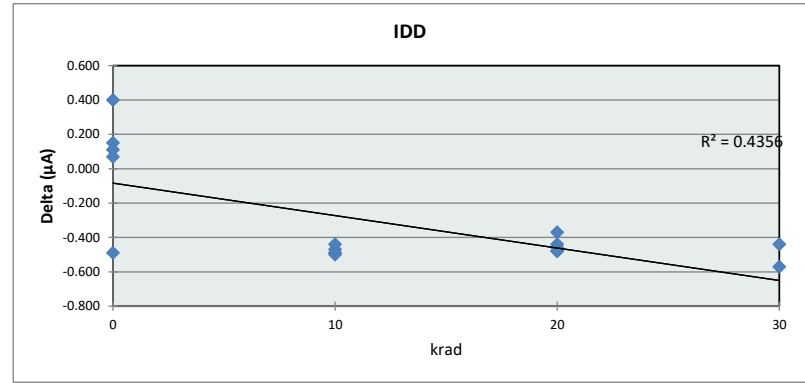
		VIL				
Units		V				
Max Limit		1.35				
Min Limit		0.8				
krad		0	10	20	30	50
LL		0.800	0.800	0.800	0.800	0.800
Min		0.970	0.960	0.940	0.920	0.840
Average		0.976	0.968	0.952	0.928	0.864
Max		0.980	0.970	0.960	0.940	0.880
UL		1.350	1.350	1.350	1.350	1.350



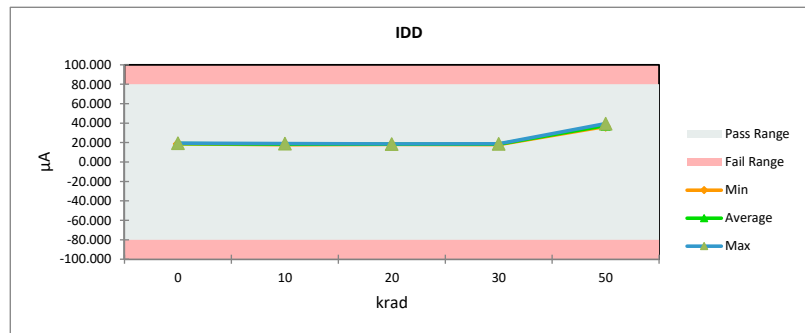
TID Report

TMUX182-SEP Bias 2

IDD						
Units		μA				
Max Limit		80				
Min Limit		-80				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	18.760	18.830	0.070	0.37%	0.04%
0	2	19.340	19.490	0.150	0.78%	0.09%
0	3	18.820	19.220	0.400	2.13%	0.25%
0	4	18.860	18.970	0.110	0.58%	0.07%
0	5	19.300	18.810	-0.490	-2.54%	0.31%
10	6	19.020	18.530	-0.490	-2.58%	0.31%
10	7	18.920	18.430	-0.490	-2.59%	0.31%
10	8	18.680	18.180	-0.500	-2.68%	0.31%
10	9	18.250	17.780	-0.470	-2.58%	0.29%
10	10	19.400	18.960	-0.440	-2.27%	0.28%
20	11	18.890	18.450	-0.440	-2.33%	0.27%
20	12	18.980	18.520	-0.460	-2.42%	0.29%
20	13	19.110	18.630	-0.480	-2.51%	0.30%
20	14	18.880	18.400	-0.480	-2.54%	0.30%
20	15	18.550	18.180	-0.370	-1.99%	0.23%
30	16	18.650	18.210	-0.440	-2.36%	0.27%
30	17	19.310	18.740	-0.570	-2.95%	0.36%
30	18	19.020	18.680	-0.340	-1.79%	0.21%
30	19	18.430	17.930	-0.500	-2.71%	0.31%
30	20	18.550	18.140	-0.410	-2.21%	0.26%
50	21	18.380	36.590	18.210	99.08%	11.38%
50	22	18.700	36.750	18.050	96.52%	11.28%
50	23	18.820	39.530	20.710	110.04%	12.94%
50	24	19.360	38.470	19.110	98.71%	11.94%
50	25	18.420	36.680	18.260	99.13%	11.41%
Max		19.400	39.530	20.130	110.04%	12.94%
Average		18.856	22.364	3.508	18.73%	2.56%
Min		18.250	17.780	-0.470	-2.95%	0.04%
Std Dev		0.328	7.805	7.477	41.90%	4.72%



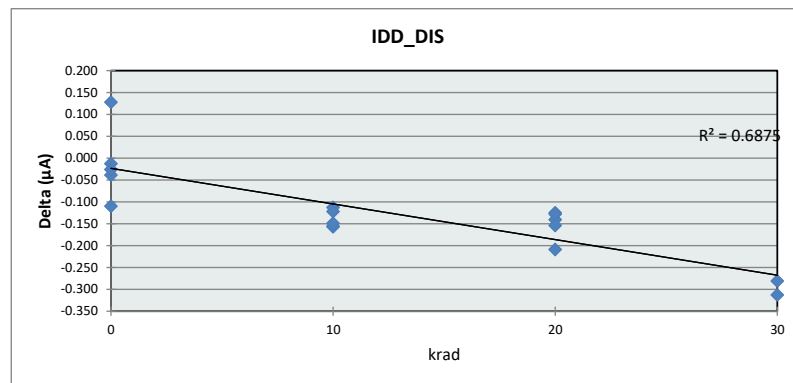
IDD					
Units		μA			
Max Limit		80			
Min Limit		-80			
krad	0	10	20	30	50
LL	-80.000	-80.000	-80.000	-80.000	-80.000
Min	18.810	17.780	18.180	17.930	36.590
Average	19.064	18.376	18.436	18.340	37.604
Max	19.490	18.960	18.630	18.740	39.530
UL	80.000	80.000	80.000	80.000	80.000



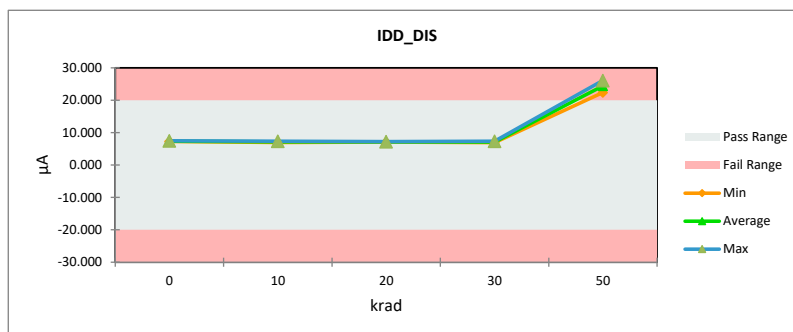
TID Report

TMUX182-SEP Bias 2

		IDD_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	7.301	7.262	-0.039	-0.53%	0.10%
0	2	7.529	7.516	-0.013	-0.17%	0.03%
0	3	7.272	7.400	0.128	1.76%	0.32%
0	4	7.323	7.297	-0.026	-0.36%	0.07%
0	5	7.470	7.360	-0.110	-1.47%	0.28%
10	6	7.404	7.291	-0.113	-1.53%	0.28%
10	7	7.370	7.213	-0.157	-2.13%	0.39%
10	8	7.257	7.101	-0.156	-2.15%	0.39%
10	9	7.116	6.967	-0.149	-2.09%	0.37%
10	10	7.451	7.329	-0.122	-1.64%	0.31%
20	11	7.276	7.151	-0.125	-1.72%	0.31%
20	12	7.385	7.176	-0.209	-2.83%	0.52%
20	13	7.370	7.229	-0.141	-1.91%	0.35%
20	14	7.314	7.160	-0.154	-2.11%	0.39%
20	15	7.232	7.104	-0.128	-1.77%	0.32%
30	16	7.285	7.004	-0.281	-3.86%	0.70%
30	17	7.636	7.323	-0.313	-4.10%	0.78%
30	18	7.426	7.245	-0.181	-2.44%	0.45%
30	19	7.138	6.914	-0.224	-3.14%	0.56%
30	20	7.160	6.998	-0.162	-2.26%	0.41%
50	21	7.082	22.390	15.308	216.15%	38.27%
50	22	7.295	26.100	18.805	257.78%	47.01%
50	23	7.351	23.970	16.619	226.08%	41.55%
50	24	7.423	25.710	18.287	246.36%	45.72%
50	25	7.135	23.930	16.795	235.39%	41.99%
	Max	7.636	26.100	18.464	257.78%	47.01%
	Average	7.320	10.646	3.326	45.81%	8.87%
	Min	7.082	6.914	-0.168	-4.10%	0.03%
	Std Dev	0.134	7.057	6.923	97.47%	17.43%



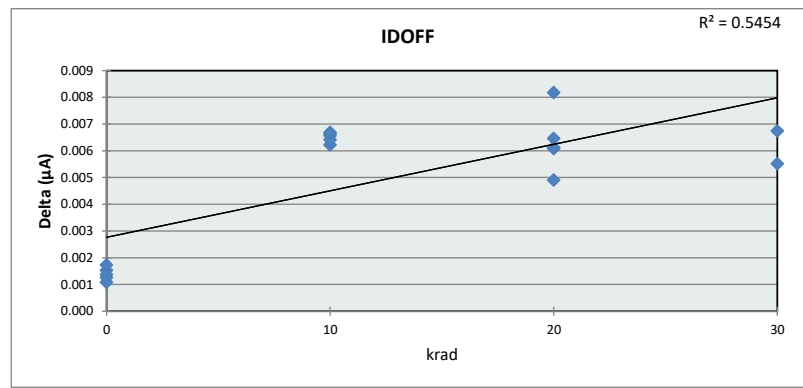
		IDD_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad		0	10	20	30	50
LL		-20.000	-20.000	-20.000	-20.000	-20.000
Min		7.262	6.967	7.104	6.914	22.390
Average		7.367	7.180	7.164	7.097	24.420
Max		7.516	7.329	7.229	7.323	26.100
UL		20.000	20.000	20.000	20.000	20.000



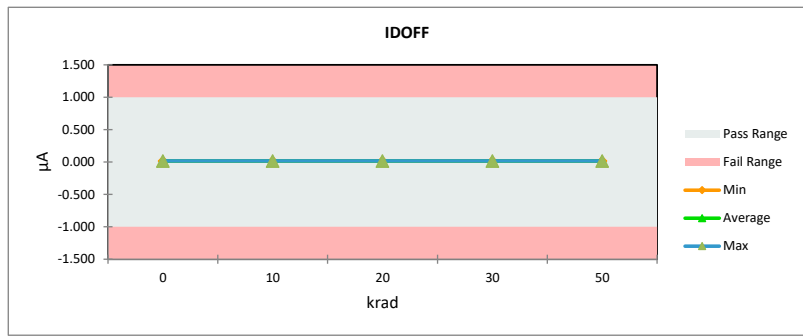
TID Report

TMUX182-SEP Bias 2

		IDOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.015	0.017	0.001	8.24%	0.06%
0	2	0.015	0.017	0.002	10.19%	0.08%
0	3	0.015	0.017	0.002	11.34%	0.09%
0	4	0.015	0.017	0.001	8.98%	0.07%
0	5	0.016	0.017	0.001	6.87%	0.05%
10	6	0.010	0.017	0.007	64.92%	0.33%
10	7	0.010	0.017	0.006	60.51%	0.31%
10	8	0.010	0.017	0.007	66.47%	0.33%
10	9	0.010	0.016	0.006	65.31%	0.32%
10	10	0.010	0.016	0.007	68.25%	0.33%
20	11	0.011	0.017	0.006	57.83%	0.30%
20	12	0.009	0.017	0.008	95.96%	0.41%
20	13	0.010	0.016	0.006	66.26%	0.32%
20	14	0.011	0.016	0.005	43.76%	0.25%
20	15	0.011	0.017	0.006	57.30%	0.31%
30	16	0.010	0.016	0.007	69.61%	0.34%
30	17	0.011	0.017	0.006	49.51%	0.28%
30	18	0.012	0.017	0.005	41.62%	0.24%
30	19	0.010	0.017	0.006	62.23%	0.32%
30	20	0.010	0.016	0.006	56.90%	0.30%
50	21	0.010	0.016	0.006	59.20%	0.30%
50	22	0.011	0.016	0.006	55.01%	0.29%
50	23	0.010	0.016	0.006	55.30%	0.29%
50	24	0.011	0.016	0.005	43.25%	0.25%
50	25	0.010	0.016	0.006	58.12%	0.30%
Max		0.016	0.017	0.001	95.96%	0.41%
Average		0.011	0.017	0.005	49.72%	0.26%
Min		0.009	0.016	0.008	6.87%	0.05%
Std Dev		0.002	0.000	-0.002	23.24%	0.10%



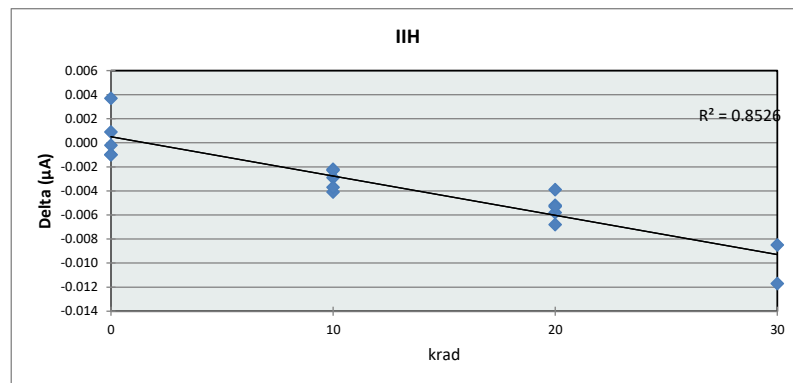
		IDOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.017	0.016	0.016	0.016	0.016
Average		0.017	0.017	0.016	0.017	0.016
Max		0.017	0.017	0.017	0.017	0.016
UL		1.000	1.000	1.000	1.000	1.000



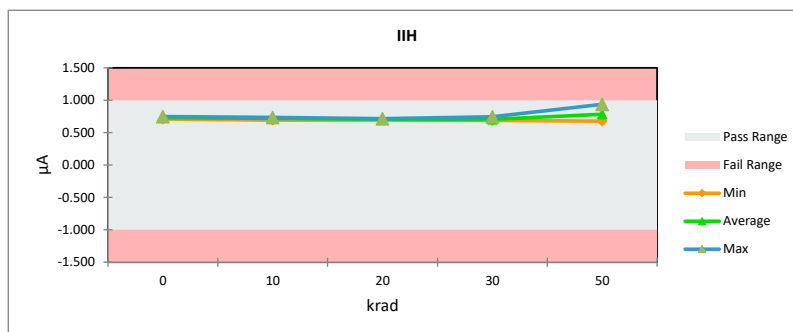
TID Report

TMUX182-SEP Bias 2

		IIH				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.709	0.710	0.001	0.13%	0.04%
0	2	0.742	0.741	-0.001	-0.13%	0.05%
0	3	0.731	0.735	0.004	0.51%	0.19%
0	4	0.725	0.724	0.000	-0.03%	0.01%
0	5	0.749	0.748	-0.001	-0.13%	0.05%
10	6	0.738	0.734	-0.004	-0.56%	0.21%
10	7	0.728	0.726	-0.002	-0.30%	0.11%
10	8	0.709	0.706	-0.003	-0.41%	0.15%
10	9	0.696	0.693	-0.002	-0.33%	0.11%
10	10	0.733	0.730	-0.004	-0.50%	0.19%
20	11	0.698	0.694	-0.004	-0.56%	0.20%
20	12	0.714	0.708	-0.006	-0.81%	0.29%
20	13	0.716	0.711	-0.005	-0.73%	0.26%
20	14	0.721	0.716	-0.005	-0.74%	0.26%
20	15	0.705	0.698	-0.007	-0.96%	0.34%
30	16	0.697	0.689	-0.009	-1.22%	0.43%
30	17	0.755	0.744	-0.012	-1.55%	0.59%
30	18	0.722	0.710	-0.012	-1.72%	0.62%
30	19	0.705	0.698	-0.007	-0.95%	0.34%
30	20	0.698	0.687	-0.011	-1.58%	0.55%
50	21	0.688	0.677	-0.011	-1.61%	0.56%
50	22	0.699	0.687	-0.013	-1.82%	0.64%
50	23	0.736	0.937	0.202	27.41%	10.08%
50	24	0.730	0.936	0.206	28.26%	10.31%
50	25	0.696	0.682	-0.014	-1.96%	0.68%
Max		0.755	0.937	0.182	28.26%	10.31%
Average		0.718	0.729	0.011	1.51%	1.09%
Min		0.688	0.677	-0.011	-1.96%	0.01%
Std Dev		0.019	0.066	0.047	7.95%	2.75%



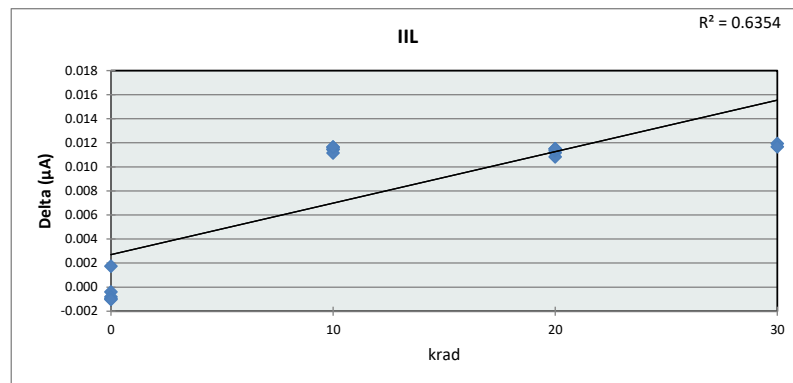
		IIH				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.710	0.693	0.694	0.687	0.677
Average		0.732	0.718	0.705	0.705	0.784
Max		0.748	0.734	0.716	0.744	0.937
UL		1.000	1.000	1.000	1.000	1.000



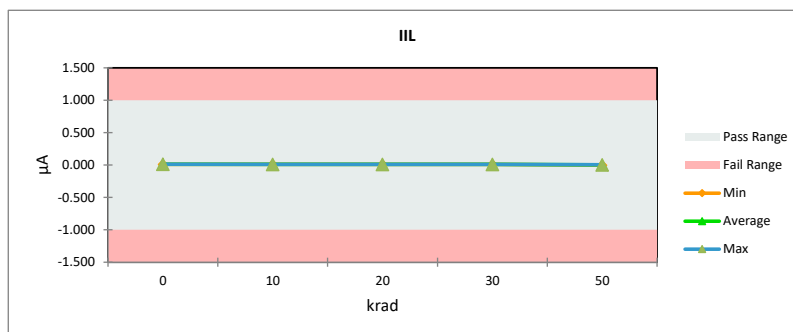
TID Report

TMUX182-SEP Bias 2

		IIL				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.012	0.011	-0.001	-7.90%	0.05%
0	2	0.011	0.011	0.000	-3.48%	0.02%
0	3	0.011	0.012	0.002	16.23%	0.09%
0	4	0.012	0.011	-0.001	-6.70%	0.04%
0	5	0.012	0.011	-0.001	-8.39%	0.05%
10	6	0.000	0.011	0.011	-4438.75%	0.57%
10	7	0.000	0.011	0.012	-3161.45%	0.58%
10	8	0.000	0.011	0.011	-3843.28%	0.57%
10	9	0.000	0.012	0.011	2430.51%	0.56%
10	10	0.000	0.012	0.012	11306.40%	0.58%
20	11	0.000	0.011	0.011	-4058.56%	0.56%
20	12	0.000	0.011	0.012	-2999.61%	0.58%
20	13	0.000	0.011	0.011	3098.86%	0.54%
20	14	0.000	0.011	0.011	18492.15%	0.57%
20	15	0.000	0.011	0.011	-2407.69%	0.57%
30	16	-0.001	0.011	0.012	-2043.16%	0.60%
30	17	0.000	0.011	0.012	-3262.75%	0.58%
30	18	0.000	0.011	0.011	-2736.43%	0.56%
30	19	0.000	0.011	0.011	2208.01%	0.54%
30	20	0.000	0.011	0.011	-6592.36%	0.56%
50	21	-0.001	-0.002	-0.001	210.77%	0.07%
50	22	0.000	0.002	0.003	-697.44%	0.14%
50	23	0.000	0.005	0.005	-1270.56%	0.26%
50	24	0.000	0.004	0.004	24838.92%	0.21%
50	25	0.000	0.005	0.005	3912.64%	0.23%
Max		0.012	0.012	0.000	24838.92%	0.60%
Average		0.002	0.010	0.007	1159.04%	0.39%
Min		-0.001	-0.002	-0.001	-6592.36%	0.02%
Std Dev		0.005	0.004	-0.001	7166.25%	0.23%



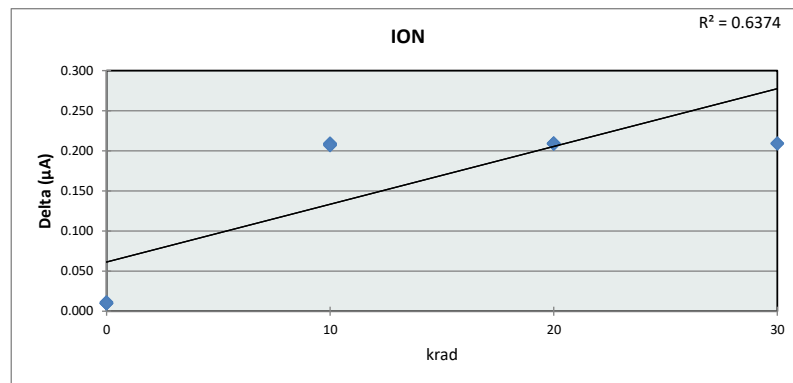
		IIL				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.011	0.011	0.011	0.011	-0.002
Average		0.011	0.011	0.011	0.011	0.003
Max		0.012	0.012	0.011	0.011	0.005
UL		1.000	1.000	1.000	1.000	1.000



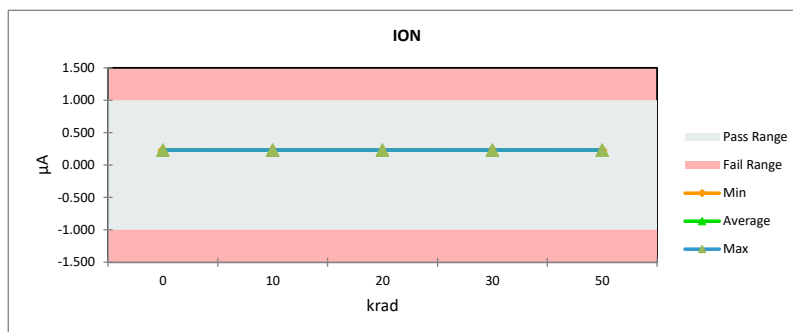
TID Report

TMUX182-SEP Bias 2

		ION				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.221	0.230	0.010	4.40%	0.48%
0	2	0.221	0.231	0.010	4.39%	0.48%
0	3	0.220	0.231	0.012	5.24%	0.57%
0	4	0.221	0.231	0.011	4.76%	0.52%
0	5	0.220	0.231	0.010	4.58%	0.51%
10	6	0.022	0.231	0.209	967.53%	10.46%
10	7	0.023	0.231	0.208	910.96%	10.39%
10	8	0.022	0.231	0.209	944.28%	10.45%
10	9	0.023	0.231	0.208	913.17%	10.40%
10	10	0.025	0.231	0.207	832.31%	10.33%
20	11	0.022	0.230	0.209	971.63%	10.45%
20	12	0.022	0.230	0.209	966.23%	10.43%
20	13	0.022	0.231	0.209	933.08%	10.44%
20	14	0.021	0.231	0.210	988.12%	10.48%
20	15	0.022	0.231	0.209	972.49%	10.46%
30	16	0.021	0.231	0.209	990.31%	10.47%
30	17	0.023	0.231	0.209	922.54%	10.44%
30	18	0.023	0.231	0.208	897.41%	10.38%
30	19	0.022	0.231	0.209	939.66%	10.43%
30	20	0.022	0.231	0.209	941.50%	10.44%
50	21	0.024	0.231	0.207	880.86%	10.35%
50	22	0.022	0.231	0.209	956.65%	10.47%
50	23	0.024	0.231	0.207	845.97%	10.33%
50	24	0.023	0.230	0.207	902.61%	10.36%
50	25	0.022	0.231	0.210	962.47%	10.48%
Max		0.221	0.231	0.011	990.31%	10.48%
Average		0.062	0.231	0.169	746.53%	8.44%
Min		0.021	0.230	0.209	4.39%	0.48%
Std Dev		0.081	0.000	-0.080	380.60%	4.04%



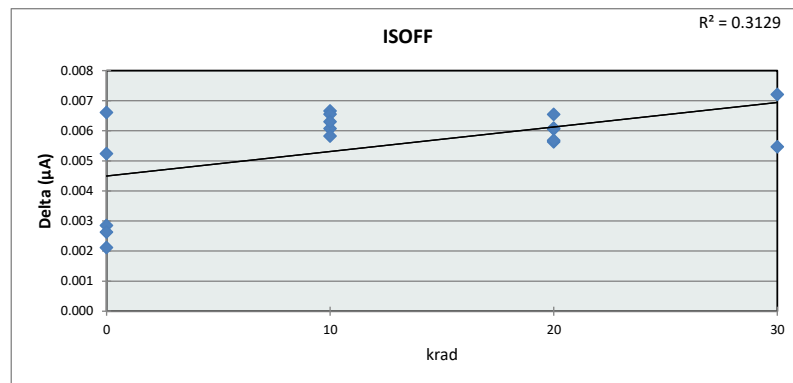
		ION				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.230	0.231	0.230	0.231	0.230
Average		0.231	0.231	0.231	0.231	0.231
Max		0.231	0.231	0.231	0.231	0.231
UL		1.000	1.000	1.000	1.000	1.000



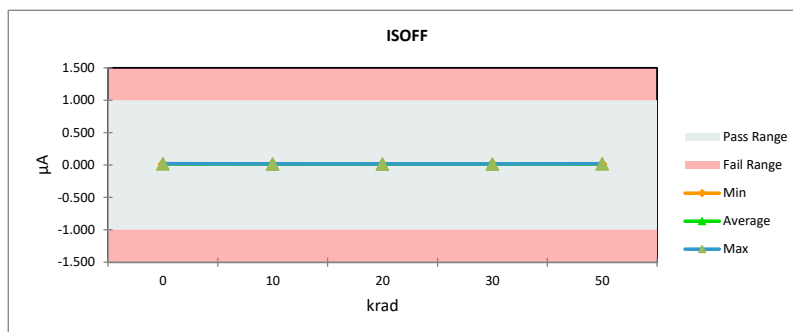
TID Report

TMUX182-SEP Bias 2

		ISOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.015	0.021	0.007	45.49%	0.33%
0	2	0.015	0.018	0.003	19.26%	0.14%
0	3	0.015	0.021	0.005	34.09%	0.26%
0	4	0.015	0.018	0.003	17.34%	0.13%
0	5	0.015	0.017	0.002	13.87%	0.11%
10	6	0.011	0.017	0.007	61.72%	0.33%
10	7	0.011	0.017	0.007	60.82%	0.33%
10	8	0.011	0.017	0.006	54.20%	0.30%
10	9	0.011	0.018	0.006	55.95%	0.32%
10	10	0.011	0.017	0.006	51.55%	0.29%
20	11	0.011	0.017	0.006	54.16%	0.30%
20	12	0.012	0.018	0.006	47.11%	0.28%
20	13	0.011	0.017	0.007	61.12%	0.33%
20	14	0.012	0.018	0.006	46.79%	0.28%
20	15	0.011	0.017	0.006	53.56%	0.30%
30	16	0.011	0.018	0.007	66.33%	0.36%
30	17	0.012	0.017	0.005	46.16%	0.27%
30	18	0.011	0.017	0.006	56.53%	0.31%
30	19	0.011	0.017	0.006	58.77%	0.32%
30	20	0.011	0.017	0.006	49.64%	0.28%
50	21	0.011	0.017	0.006	49.30%	0.28%
50	22	0.013	0.021	0.008	61.31%	0.40%
50	23	0.011	0.018	0.007	58.93%	0.33%
50	24	0.011	0.017	0.006	50.80%	0.29%
50	25	0.011	0.017	0.006	51.73%	0.29%
Max		0.015	0.021	0.006	66.33%	0.40%
Average		0.012	0.018	0.006	49.06%	0.29%
Min		0.011	0.017	0.006	13.87%	0.11%
Std Dev		0.002	0.001	0.000	13.94%	0.07%



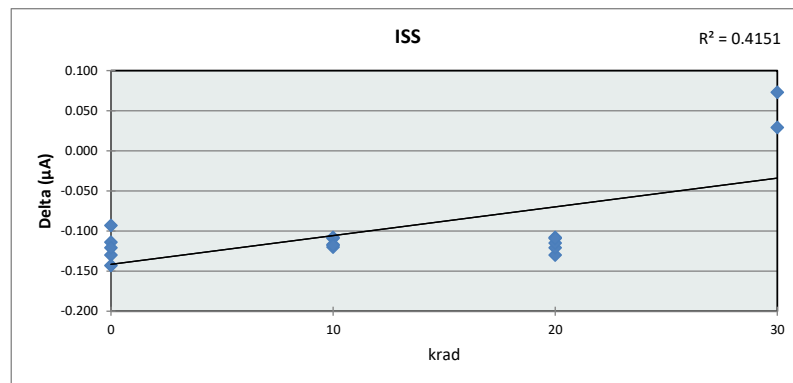
		ISOFF				
Units		μA				
Max Limit		1				
Min Limit		-1				
krad		0	10	20	30	50
LL		-1.000	-1.000	-1.000	-1.000	-1.000
Min		0.017	0.017	0.017	0.017	0.017
Average		0.019	0.017	0.017	0.017	0.018
Max		0.021	0.018	0.018	0.018	0.021
UL		1.000	1.000	1.000	1.000	1.000



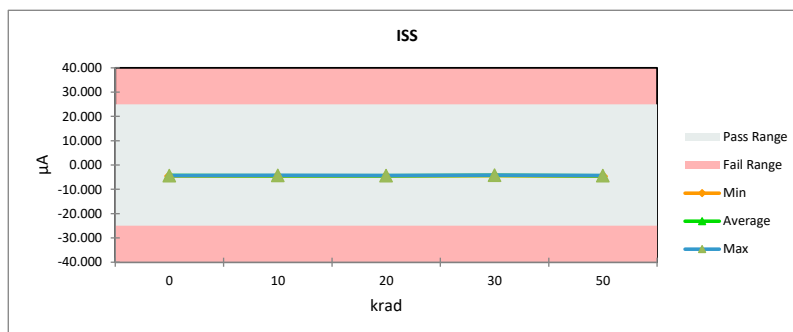
TID Report

TMUX182-SEP Bias 2

		ISS				
Units		μA				
Max Limit		25				
Min Limit		-25				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	-4.176	-4.290	-0.114	2.73%	0.23%
0	2	-4.320	-4.450	-0.130	3.01%	0.26%
0	3	-4.135	-4.278	-0.143	3.46%	0.29%
0	4	-4.232	-4.353	-0.121	2.86%	0.24%
0	5	-4.324	-4.417	-0.093	2.15%	0.19%
10	6	-4.266	-4.375	-0.109	2.56%	0.22%
10	7	-4.298	-4.406	-0.108	2.51%	0.22%
10	8	-4.220	-4.340	-0.120	2.84%	0.24%
10	9	-4.126	-4.243	-0.117	2.84%	0.23%
10	10	-4.404	-4.522	-0.118	2.68%	0.24%
20	11	-4.257	-4.387	-0.130	3.05%	0.26%
20	12	-4.238	-4.359	-0.121	2.86%	0.24%
20	13	-4.357	-4.472	-0.115	2.64%	0.23%
20	14	-4.248	-4.356	-0.108	2.54%	0.22%
20	15	-4.194	-4.303	-0.109	2.60%	0.22%
30	16	-4.213	-4.184	0.029	-0.69%	0.06%
30	17	-4.404	-4.331	0.073	-1.66%	0.15%
30	18	-4.273	-4.365	-0.092	2.15%	0.18%
30	19	-4.148	-4.146	0.002	-0.05%	0.00%
30	20	-4.148	-4.240	-0.092	2.22%	0.18%
50	21	-4.113	-4.287	-0.174	4.23%	0.35%
50	22	-4.201	-4.475	-0.274	6.52%	0.55%
50	23	-4.226	-4.428	-0.202	4.78%	0.40%
50	24	-4.370	-4.568	-0.198	4.53%	0.40%
50	25	-4.144	-4.297	-0.153	3.69%	0.31%
	Max	-4.113	-4.146	-0.033	6.52%	0.55%
	Average	-4.241	-4.355	-0.113	2.68%	0.24%
	Min	-4.404	-4.568	-0.164	-1.66%	0.00%
	Std Dev	0.086	0.101	0.015	1.65%	0.11%



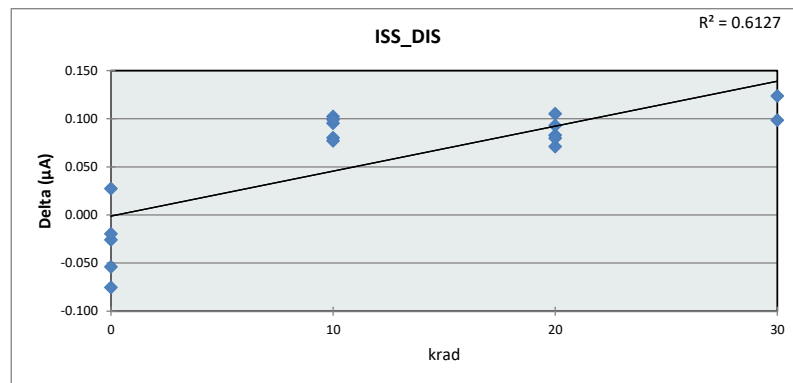
		ISS				
Units		μA				
Max Limit		25				
Min Limit		-25				
krad		0	10	20	30	50
LL		-25.000	-25.000	-25.000	-25.000	-25.000
Min		-4.450	-4.522	-4.472	-4.365	-4.568
Average		-4.358	-4.377	-4.375	-4.253	-4.411
Max		-4.278	-4.243	-4.303	-4.146	-4.287
UL		25.000	25.000	25.000	25.000	25.000



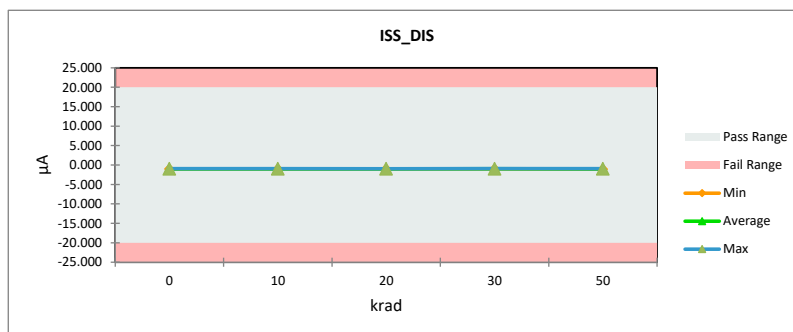
TID Report

TMUX182-SEP Bias 2

		ISS_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	-0.938	-0.964	-0.026	2.75%	0.06%
0	2	-0.982	-1.001	-0.020	1.99%	0.05%
0	3	-0.966	-0.939	0.027	-2.84%	0.07%
0	4	-0.950	-1.004	-0.054	5.66%	0.13%
0	5	-0.938	-1.013	-0.075	8.03%	0.19%
10	6	-1.097	-0.995	0.102	-9.33%	0.26%
10	7	-1.062	-0.967	0.095	-8.98%	0.24%
10	8	-1.047	-0.948	0.099	-9.47%	0.25%
10	9	-1.028	-0.948	0.080	-7.80%	0.20%
10	10	-1.078	-1.001	0.077	-7.14%	0.19%
20	11	-1.040	-0.957	0.083	-7.96%	0.21%
20	12	-1.050	-0.957	0.093	-8.84%	0.23%
20	13	-1.078	-0.973	0.105	-9.76%	0.26%
20	14	-1.081	-1.010	0.071	-6.57%	0.18%
20	15	-1.037	-0.957	0.080	-7.70%	0.20%
30	16	-1.037	-0.939	0.098	-9.50%	0.25%
30	17	-1.109	-0.985	0.124	-11.15%	0.31%
30	18	-1.081	-0.960	0.121	-11.17%	0.30%
30	19	-1.053	-0.951	0.102	-9.69%	0.26%
30	20	-1.022	-0.920	0.102	-10.01%	0.26%
50	21	-1.015	-1.013	0.002	-0.20%	0.01%
50	22	-1.056	-1.042	0.014	-1.33%	0.03%
50	23	-1.091	-1.038	0.053	-4.86%	0.13%
50	24	-1.084	-0.998	0.086	-7.94%	0.22%
50	25	-1.015	-0.923	0.092	-9.08%	0.23%
	Max	-0.938	-0.920	0.018	8.03%	0.31%
	Average	-1.037	-0.976	0.061	-5.72%	0.19%
	Min	-1.109	-1.042	0.067	-11.17%	0.01%
	Std Dev	0.050	0.034	-0.016	5.45%	0.09%



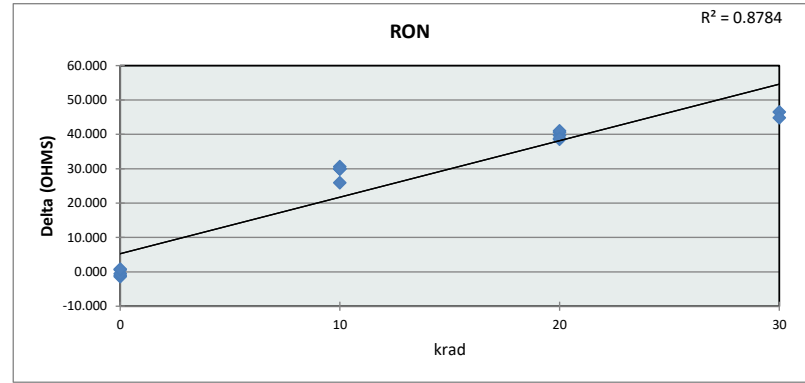
		ISS_DIS				
Units		μA				
Max Limit		20				
Min Limit		-20				
krad		0	10	20	30	50
LL		-20.000	-20.000	-20.000	-20.000	-20.000
Min		-1.013	-1.001	-1.010	-0.985	-1.042
Average		-0.984	-0.972	-0.971	-0.951	-1.003
Max		-0.939	-0.948	-0.957	-0.920	-0.923
UL		20.000	20.000	20.000	20.000	20.000



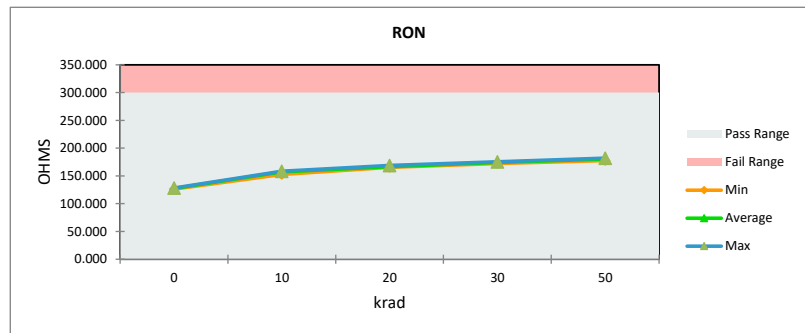
TID Report

TMUX182-SEP Bias 2

		RON				
Units		OHMS				
Max Limit		300				
Min Limit		0				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	127.600	126.200	-1.400	-1.10%	0.47%
0	2	127.700	126.700	-1.000	-0.78%	0.33%
0	3	128.600	128.100	-0.500	-0.39%	0.17%
0	4	126.700	127.300	0.600	0.47%	0.20%
0	5	127.400	128.200	0.800	0.63%	0.27%
10	6	127.900	157.900	30.000	23.46%	10.00%
10	7	127.800	158.400	30.600	23.94%	10.20%
10	8	128.200	158.100	29.900	23.32%	9.97%
10	9	126.800	152.700	25.900	20.43%	8.63%
10	10	128.400	158.400	30.000	23.36%	10.00%
20	11	125.700	165.400	39.700	31.58%	13.23%
20	12	126.700	165.300	38.600	30.47%	12.87%
20	13	128.000	168.600	40.600	31.72%	13.53%
20	14	127.900	168.900	41.000	32.06%	13.67%
20	15	126.400	165.200	38.800	30.70%	12.93%
30	16	127.700	174.200	46.500	36.41%	15.50%
30	17	127.500	172.300	44.800	35.14%	14.93%
30	18	128.700	175.300	46.600	36.21%	15.53%
30	19	128.600	175.400	46.800	36.39%	15.60%
30	20	127.500	174.400	46.900	36.78%	15.63%
50	21	128.100	182.000	53.900	42.08%	17.97%
50	22	128.400	181.900	53.500	41.67%	17.83%
50	23	128.300	181.700	53.400	41.62%	17.80%
50	24	127.000	178.800	51.800	40.79%	17.27%
50	25	126.700	177.600	50.900	40.17%	16.97%
	Max	128.700	182.000	53.300	42.08%	17.97%
	Average	127.612	161.160	33.548	26.29%	11.26%
	Min	125.700	126.200	0.500	-1.10%	0.17%
	Std Dev	0.778	19.093	18.315	14.90%	6.20%



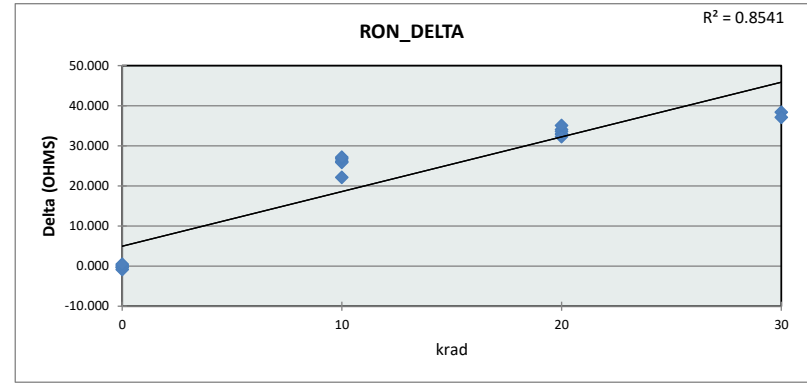
		RON				
Units		OHMS				
Max Limit		300				
Min Limit		0				
krad		0	10	20	30	50
LL		0.000	0.000	0.000	0.000	0.000
Min		126.200	152.700	165.200	172.300	177.600
Average		127.300	157.100	166.680	174.320	180.400
Max		128.200	158.400	168.900	175.400	182.000
UL		300.000	300.000	300.000	300.000	300.000



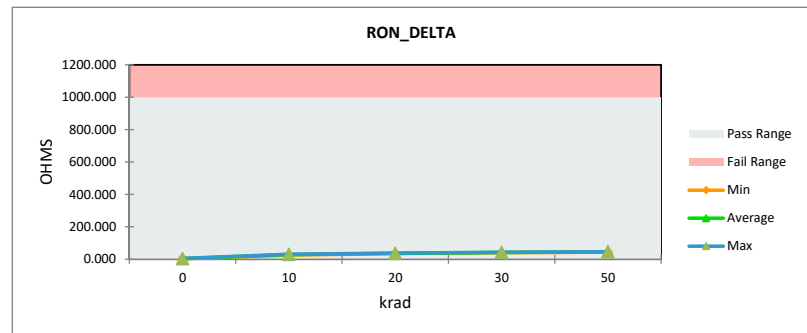
TID Report

TMUX182-SEP Bias 2

		RON_DELTA				
Units		OHMS				
Max Limit		1000				
Min Limit		0				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	3.640	3.269	-0.371	-10.19%	0.04%
0	2	3.035	3.135	0.100	3.29%	0.01%
0	3	3.799	2.927	-0.872	-22.95%	0.09%
0	4	3.625	3.425	-0.200	-5.52%	0.02%
0	5	4.308	4.766	0.458	10.63%	0.05%
10	6	3.495	29.640	26.145	748.07%	2.61%
10	7	3.165	29.010	25.845	816.59%	2.58%
10	8	2.876	29.680	26.804	931.99%	2.68%
10	9	3.310	25.430	22.120	668.28%	2.21%
10	10	3.840	30.990	27.150	707.03%	2.72%
20	11	3.400	36.350	32.950	969.12%	3.30%
20	12	2.332	35.890	33.558	1439.02%	3.36%
20	13	2.872	36.920	34.048	1185.52%	3.40%
20	14	2.800	37.840	35.040	1251.43%	3.50%
20	15	3.029	35.320	32.291	1066.06%	3.23%
30	16	3.351	41.750	38.399	1145.90%	3.84%
30	17	2.937	40.030	37.093	1262.96%	3.71%
30	18	3.310	41.500	38.190	1153.78%	3.82%
30	19	3.106	41.330	38.224	1230.65%	3.82%
30	20	2.806	42.290	39.484	1407.13%	3.95%
50	21	3.636	45.110	41.474	1140.65%	4.15%
50	22	3.702	46.380	42.678	1152.84%	4.27%
50	23	3.482	44.940	41.458	1190.64%	4.15%
50	24	2.946	45.620	42.674	1448.54%	4.27%
50	25	3.365	43.730	40.365	1199.55%	4.04%
Max		4.308	46.380	42.072	1448.54%	4.27%
Average		3.287	31.091	27.804	883.64%	2.79%
Min		2.332	2.927	0.595	-22.95%	0.01%
Std Dev		0.428	15.167	14.739	498.27%	1.51%



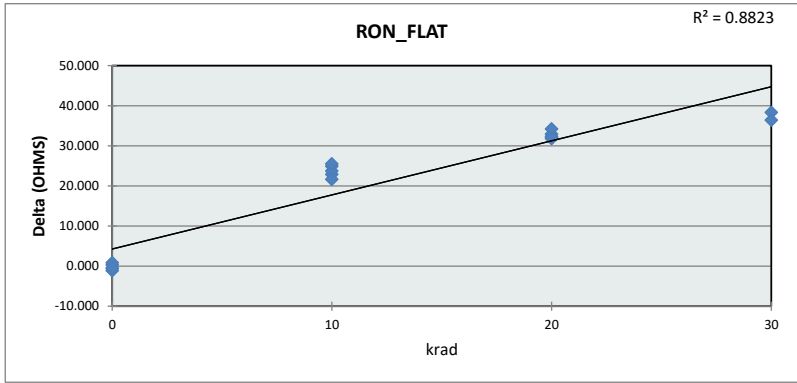
		RON_DELTA				
Units		OHMS				
Max Limit		1000				
Min Limit		0				
krad		0	10	20	30	50
LL		0.000	0.000	0.000	0.000	0.000
Min		2.927	25.430	35.320	40.030	43.730
Average		3.504	28.950	36.464	41.380	45.156
Max		4.766	30.990	37.840	42.290	46.380
UL		1000.000	1000.000	1000.000	1000.000	1000.000



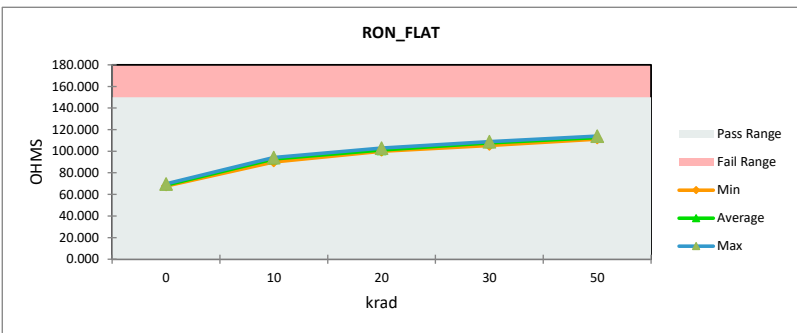
TID Report

TMUX182-SEP Bias 2

		RON_FLAT				
Units		OHMS				
Max Limit		150				
Min Limit		0				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	69.160	68.010	-1.150	-1.66%	0.77%
0	2	67.430	67.730	0.300	0.44%	0.20%
0	3	69.320	68.740	-0.580	-0.84%	0.39%
0	4	68.910	69.780	0.870	1.26%	0.58%
0	5	69.290	68.860	-0.430	-0.62%	0.29%
10	6	68.890	91.790	22.900	33.24%	15.27%
10	7	68.870	93.780	24.910	36.17%	16.61%
10	8	70.110	93.840	23.730	33.85%	15.82%
10	9	68.290	89.940	21.650	31.70%	14.43%
10	10	68.690	94.190	25.500	37.12%	17.00%
20	11	67.470	100.400	32.930	48.81%	21.95%
20	12	67.610	99.930	32.320	47.80%	21.55%
20	13	70.040	102.100	32.060	45.77%	21.37%
20	14	68.790	103.000	34.210	49.73%	22.81%
20	15	68.820	100.600	31.780	46.18%	21.19%
30	16	69.350	107.700	38.350	55.30%	25.57%
30	17	68.970	105.400	36.430	52.82%	24.29%
30	18	70.330	107.800	37.470	53.28%	24.98%
30	19	70.560	108.900	38.340	54.34%	25.56%
30	20	69.020	108.800	39.780	57.64%	26.52%
50	21	69.390	113.600	44.210	63.71%	29.47%
50	22	69.420	112.700	43.280	62.35%	28.85%
50	23	69.700	114.000	44.300	63.56%	29.53%
50	24	68.370	111.200	42.830	62.64%	28.55%
50	25	69.000	111.700	42.700	61.88%	28.47%
Max		70.560	114.000	43.440	63.71%	29.53%
Average		69.032	96.580	27.548	39.86%	18.48%
Min		67.430	67.730	0.300	-1.66%	0.20%
Std Dev		0.803	15.859	15.055	22.64%	10.24%



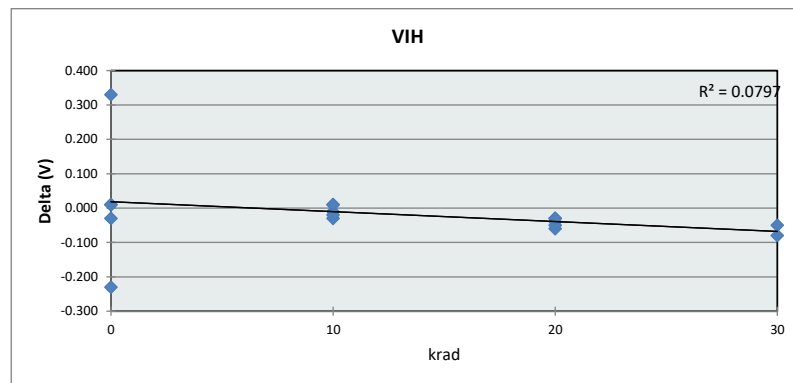
		RON_FLAT				
Units		OHMS				
Max Limit		150				
Min Limit		0				
krad		0	10	20	30	50
LL		0.000	0.000	0.000	0.000	0.000
Min		67.730	89.940	99.930	105.400	111.200
Average		68.624	92.708	101.206	107.720	112.640
Max		69.780	94.190	103.000	108.900	114.000
UL		150.000	150.000	150.000	150.000	150.000



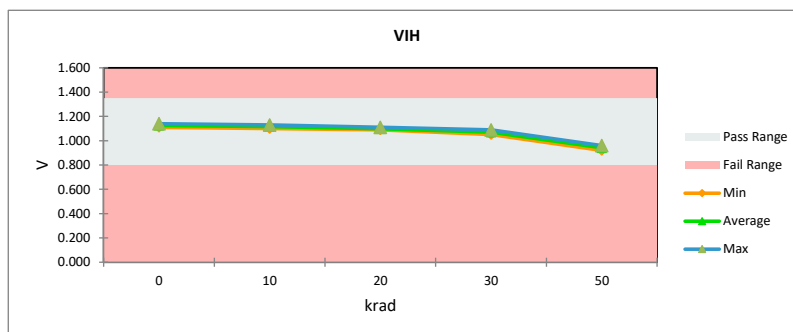
TID Report

TMUX182-SEP Bias 2

		VIH				
Units		V				
Max Limit		1.35				
Min Limit		0.8				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.800	1.130	0.330	41.25%	60.00%
0	2	1.350	1.120	-0.230	-17.04%	41.82%
0	3	1.130	1.140	0.010	0.88%	1.82%
0	4	1.120	1.130	0.010	0.89%	1.82%
0	5	1.140	1.110	-0.030	-2.63%	5.45%
10	6	1.130	1.100	-0.030	-2.65%	5.45%
10	7	1.110	1.100	-0.010	-0.90%	1.82%
10	8	1.120	1.130	0.010	0.89%	1.82%
10	9	1.120	1.130	0.010	0.89%	1.82%
10	10	1.140	1.120	-0.020	-1.75%	3.64%
20	11	1.150	1.090	-0.060	-5.22%	10.91%
20	12	1.130	1.100	-0.030	-2.65%	5.45%
20	13	1.140	1.100	-0.040	-3.51%	7.27%
20	14	1.140	1.090	-0.050	-4.39%	9.09%
20	15	1.140	1.110	-0.030	-2.63%	5.45%
30	16	1.130	1.080	-0.050	-4.42%	9.09%
30	17	1.130	1.050	-0.080	-7.08%	14.55%
30	18	1.130	1.060	-0.070	-6.19%	12.73%
30	19	1.130	1.070	-0.060	-5.31%	10.91%
30	20	1.140	1.090	-0.050	-4.39%	9.09%
50	21	1.140	0.960	-0.180	-15.79%	32.73%
50	22	1.140	0.940	-0.200	-17.54%	36.36%
50	23	1.130	0.920	-0.210	-18.58%	38.18%
50	24	1.140	0.930	-0.210	-18.42%	38.18%
50	25	1.120	0.960	-0.160	-14.29%	29.09%
	Max	1.350	1.140	-0.210	41.25%	60.00%
	Average	1.128	1.070	-0.057	-4.42%	15.78%
	Min	0.800	0.920	0.120	-18.58%	1.82%
	Std Dev	0.081	0.070	-0.012	11.54%	16.25%



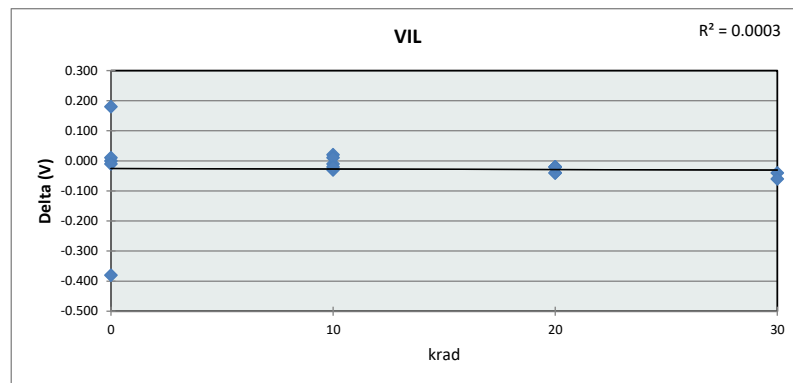
		VIH				
Units		V				
Max Limit		1.35				
Min Limit		0.8				
krad	0	10	20	30	50	
LL	0.800	0.800	0.800	0.800	0.800	
Min	1.110	1.100	1.090	1.050	0.920	
Average	1.126	1.116	1.098	1.070	0.942	
Max	1.140	1.130	1.110	1.090	0.960	
UL	1.350	1.350	1.350	1.350	1.350	



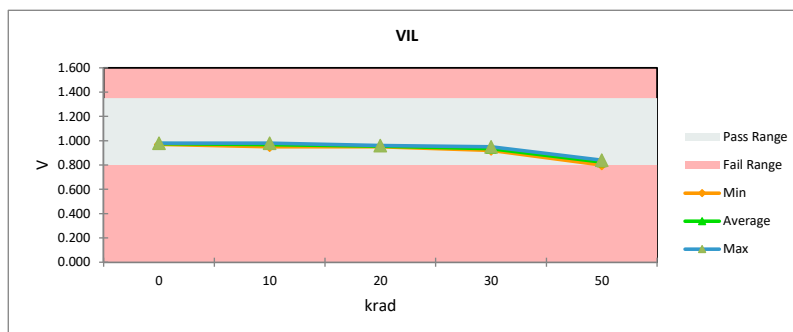
TID Report

TMUX182-SEP Bias 2

		VIL				
Units		V				
Max Limit		1.35				
Min Limit		0.8				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.800	0.980	0.180	22.50%	32.73%
0	2	1.350	0.970	-0.380	-28.15%	69.09%
0	3	0.980	0.980	0.000	0.00%	0.00%
0	4	0.970	0.980	0.010	1.03%	1.82%
0	5	0.980	0.970	-0.010	-1.02%	1.82%
10	6	0.980	0.950	-0.030	-3.06%	5.45%
10	7	0.970	0.960	-0.010	-1.03%	1.82%
10	8	0.960	0.980	0.020	2.08%	3.64%
10	9	0.970	0.980	0.010	1.03%	1.82%
10	10	0.990	0.970	-0.020	-2.02%	3.64%
20	11	0.990	0.950	-0.040	-4.04%	7.27%
20	12	0.980	0.960	-0.020	-2.04%	3.64%
20	13	0.980	0.960	-0.020	-2.04%	3.64%
20	14	0.990	0.950	-0.040	-4.04%	7.27%
20	15	0.980	0.960	-0.020	-2.04%	3.64%
30	16	0.980	0.940	-0.040	-4.08%	7.27%
30	17	0.980	0.920	-0.060	-6.12%	10.91%
30	18	0.980	0.930	-0.050	-5.10%	9.09%
30	19	0.970	0.930	-0.040	-4.12%	7.27%
30	20	0.980	0.950	-0.030	-3.06%	5.45%
50	21	0.990	0.840	-0.150	-15.15%	27.27%
50	22	0.990	0.830	-0.160	-16.16%	29.09%
50	23	0.990	0.800	-0.190	-19.19%	34.55%
50	24	0.990	0.810	-0.180	-18.18%	32.73%
50	25	0.970	0.840	-0.130	-13.40%	23.64%
	Max	1.350	0.980	-0.370	22.50%	69.09%
	Average	0.988	0.932	-0.056	-5.10%	13.38%
	Min	0.800	0.800	0.000	-28.15%	0.00%
	Std Dev	0.084	0.058	-0.026	9.56%	16.24%



		VIL				
Units		V				
Max Limit		1.35				
Min Limit		0.8				
krad	0	10	20	30	50	
LL	0.800	0.800	0.800	0.800	0.800	
Min	0.970	0.950	0.950	0.920	0.800	
Average	0.976	0.968	0.956	0.934	0.824	
Max	0.980	0.980	0.960	0.950	0.840	
UL	1.350	1.350	1.350	1.350	1.350	



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