

SN54SC8T244-SEP Total Ionizing Dose (TID) Report



ABSTRACT

This report covers the radiation characterization results of the SN54SC8T244-SEP, radiation tolerant octal buffers/drivers with 3-state outputs. The study was done to determine Total Ionizing Dose (TID) effects under high dose rate (HDR) to 30krad(Si). Radiation Lot Acceptance Testing (RLAT) will be performed using five units at a dose level of 30krad(Si) per MIL-STD-883 TM 1019. All future wafer lots will be tested under the same conditions. The device is manufactured in pure CMOS process. HDR TID response is the worst case. TID HDR characterization was performed per TM 1019.

The SN54SC8T244-SEP is packaged in a space enhanced plastic package for low outgassing characteristics and is Single Event Latch-Up (SEL) immune up to 50MeV-cm²/mg, which makes the device an option for low Earth orbit space applications. Single Event Transient (SET) data is also provided in the Single Event Effects Radiation Report.

For full total ionizing dose characterization results, see [SN54SC8T541-SEP Total Ionizing Dose \(TID\) Report](#).

Table of Contents

1 Device Information	2
1.1 Device Details.....	2
2 Total Dose Test Setup	3
2.1 Test Overview.....	3
2.2 Test Description and Facilities.....	3
2.3 Test Setup Details.....	3
2.4 Test Configuration and Condition.....	4
3 TID Characterization Test Results	5
3.1 TID Characterization Summary Results.....	5
3.2 Specification Compliance Matrix.....	6
4 Reference Documents	7
5 Appendix: HDR TID Report Data	7

List of Figures

Figure 2-1. SN54SC8T244-SEP Bias Diagram.....	3
---	---

List of Tables

Table 1-1. Device and Exposure Details.....	2
Table 2-1. HDR Device Information.....	4
Table 3-1. Electrical Parameters Table.....	6

Trademarks

All trademarks are the property of their respective owners.

1 Device Information

The SN54SC8T244-SEP is an octal buffer with 3-state outputs. The device is configured into two banks of four drivers, each controlled by an output enable pin.

The input is designed with a reduced threshold circuit to support up translation when the supply voltage is larger than the input voltage. Additionally, the 5V tolerant input pins enable down translation when the input voltage is larger than the supply voltage. The output level is always referenced to the supply voltage (V_{CC}) and supports 1.8V, 2.5V, 3.3V, and 5V CMOS levels.

1.1 Device Details

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

Table 1-1. Device and Exposure Details

TID HDR Details: Up To 30krad(Si)	
TI Device Number	SN54SC8T244-SEP
VID Number	V62/25631
Package	20-pin PW (TSSOP)
Technology	LBC9
Die Lot Number	3270892RFB
A/T Lot Number and Date Code	4166236ML4 / 42C22KK
Quantity Tested	6 irradiated devices + 4 control
Lot Accept or Reject	Devices passed 30krad(Si)
HDR Radiation Facility	Texas Instruments CLAB in Dallas, Texas
HDR Dose Level	30krad(Si)
HDR Dose Rate	172.35rad(Si)/s ionizing radiation
Effective Dose Rate 30krad(Si) with 72 hour Anneal	115.74mrad(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 SN54SC8T244-SEP samples were irradiated at a high dose rate of 172.35rad(Si)/s up to 30krad(Si) (115.74mrad(Si)/s effective does rate for 30krad(Si) with 72 hour anneal) 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 SN54SC8T244-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 172.35rads(Si)/s (115.74mrad(Si)/s effective does rate of 30krad(Si) with 72 hour anneal). 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 shows the bias conditions for each pin during irradiation.

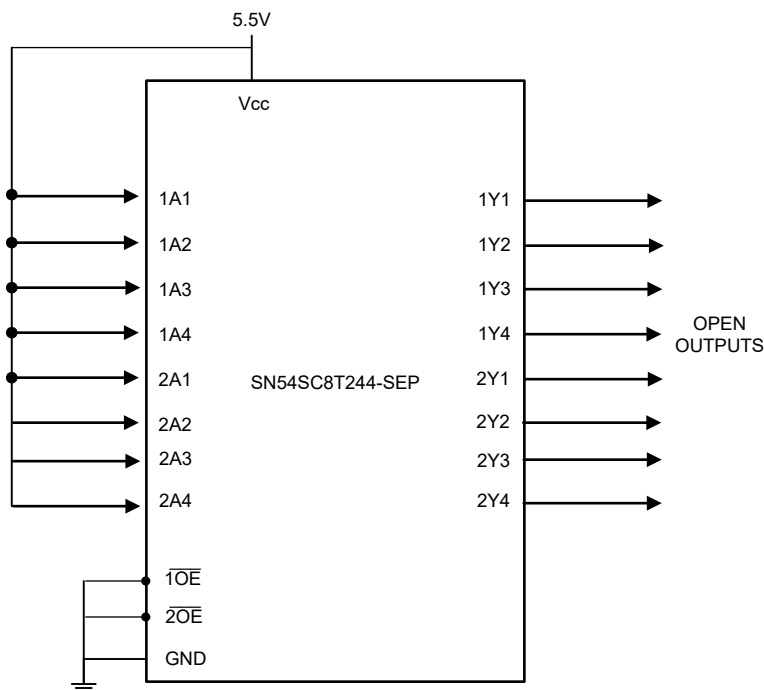


Figure 2-1. SN54SC8T244-SEP Bias Diagram

2.4 Test Configuration and Condition

The HDR RLAT units were irradiated to 30krad(Si), parametrically tested on ATE, and then were annealed at 25°C for 72 hours. The units that were irradiated to 30krad(Si) and were annealed for 72 hours are denoted as 31krad(Si) in [Section 5](#). ATE parametric testing was completed before and after the anneal.

[Table 2-1](#) lists the serialized samples used for TID characterization.

Table 2-1. HDR Device Information

Control Group	HDR Dose Rate = 172.35rad(Si)/s Effective Dose Rate (30krad + Anneal 72 hours) = 115.74mrad(Si)/s	
Total Samples: 4	Total Samples: 6 Biased	
	Exposure Levels	
0krad (Si)	30krad(Si)	
Biased	Biased	Biased + 72 hour anneal
1 - 4	5 - 10	5a - 10a

3 TID Characterization Test Results

3.1 TID Characterization Summary Results

The parametric data for the SN54SC8T244-SEP passes up to 30krad(Si) (with 72 hour room temperature anneal) HDR TID irradiation. The drifts of the electrical parameters through HDR were within the data sheet limits.

Overall, the SN54SC8T244-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 each dose level. The parameters that did show a greater 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 [SN54SC8T244-SEP Radiation-Tolerant, Octal Buffers/Drivers with 3-State Outputs](#).

See [Section 5](#) for HDR report up to 30 krad(Si).

3.2 Specification Compliance Matrix

Table 3-1. Electrical Parameters Table

Parameter	Test Conditions	V _{CC}	T _A = -55°C to +125°C			Unit	Test Name
			MIN	TYP	MAX		
V _{T+} 1	Positive-going input threshold voltage	1.2V to 1.3V	0.31	0.655	1.1	V	VTP_1P2V
		1.65V to 2V	0.39	0.915	1.32		VTP_1P65V
		2.25V to 2.75V	0.51	1.09	1.51		VTP_2P25V
		3V to 3.6V	0.65	1.2	1.7		VTP_3V
		4.5V to 5.5V	0.87	1.51	2.16		VTP_4P5V, VTP_5P5V
V _{T-} 1	Negative-going input threshold voltage	1.2V to 1.3V	0.11	0.349	0.60	V	VTN_1P2V
		1.65V to 2V	0.18	0.455	0.63		VTN_1P65V
		2.25V to 2.75V	0.25	0.545	0.74		VTN_2P25V
		3V to 3.6V	0.33	0.635	0.85		VTN_3V
		4.5V to 5.5V	0.45	0.755	1.14		VTN_4P5V, VTN_5P5V
ΔV _T 1	Hysteresis (V _{T+} - V _{T-})	1.2V to 1.3V	0.2	0.29	0.77	V	DELTAVT_1P2V
		1.65V to 2V	0.21	0.43	0.88		DELTAVT_1P65V
		2.25V to 2.75V	0.25	0.54	0.91		DELTAVT_2P25V
		3V to 3.6V	0.31	0.63	0.91		DELTAVT_3V
		4.5V to 5.5V	0.43	0.75	1.05		DELTAVT_4P5V, DELTAVT_5P5V
V _{IH}	High-level input voltage	1.2V to 1.3V	0.78			V	VIH_1P2V
		1.65V to 2V	1.1				VIH_1P65V
		2.25V to 2.75V	1.28				VIH_2P25V
		3V to 3.6V	1.45				VIH_3V
		4.5V to 5.5V	2				VIH_4P5V, VIH_5P5V
V _{IL}	Low-Level input voltage	1.2V to 1.3V			0.18	V	VIL_1P2V
		1.65V to 2V			0.5		VIL_1P65V
		2.25V to 2.75V			0.65		VIL_2P25V
		3V to 3.6V			0.75		VIL_3V
		4.5V to 5.5V			0.85		VIL_4P5V, VIL_5P5V
V _{OH} 2	I _{OH} = -50μA	1.2V to 5.5V	V _{CC} -0.2			V	VOH_N50UA_1P2V, VOH_N50UA_5P5V
	I _{OH} = -1mA	1.2V	0.8				VOH_N1MA_1P2V
	I _{OH} = -2mA	1.65V to 2V	1.21				VOH_N2MA_1P65V
	I _{OH} = -3mA	2.25V to 2.75V	1.93				VOH_N3MA_2P25V
	I _{OH} = -5.5mA	3V to 3.6V	2.49				VOH_N5P5MA_3V
	I _{OH} = -8mA	4.5V to 5.5V	3.95				VOH_N8MA_4P5V
	I _{OH} = -24mA	4.5V to 5.5V	3.15				VOH_N24MA_5P5V
V _{OL}	I _{OL} = 50μA	1.2V to 5.5V			0.1	V	VOL_50UA_1P2V, VOL_50UA_5P5V
	I _{OL} = 1mA	1.2V			0.2		VOL_1MA_1P2V
	I _{OL} = 2mA	1.65V to 2V			0.25		VOL_2MA_1P65V
	I _{OL} = 3mA	2.25V to 2.75V			0.2		VOL_3MA_2P25V
	I _{OL} = 5.5mA	3V to 3.6V			0.25		VOL_5P5MA_3V
	I _{OL} = 8mA	4.5V to 5.5V			0.35		VOL_8MA_4P5V
	I _{OL} = 24mA	4.5V to 5.5V			0.75		VOL_24MA_5P5V
I _{CC}	V _I = V _{CC} or GND, I _O = 0	1.2V to 5.5V		2	220	μA	ICC_5P5V
ΔI _{CC}	One input at 0.3V or 3.4V, other inputs at V _{CC} or GND	5.5V			1.5	mA	DELTAICC_5P5V
	One input at 0.3V or 1.1V, other inputs at V _{CC} or GND	1.8V			68	μA	DELTAICC_1P8V
I _{OZ} 3	V _O = V _{CC} or GND	5.5V			±26	μA	IOZ_5P5V
I _I	V _I = 0V to V _{CC}	V _I = 0V to V _{CC}			±1	μA	II_5P5V

- Schmitt-trigger input devices only.
- Push-pull output devices only.
- 3-State output devices only.

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.

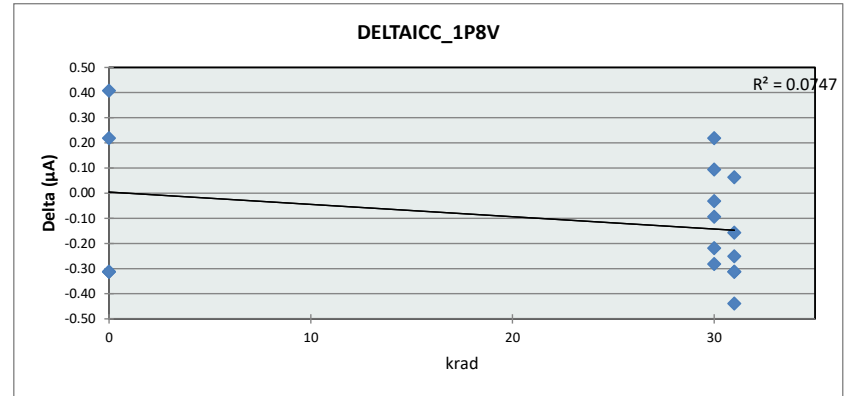
5 Appendix: HDR TID Report Data

This appendix provides the SN54SC8T244-SEP TID HDR report. The report shows the variation for each parameter up to 30krad(Si).

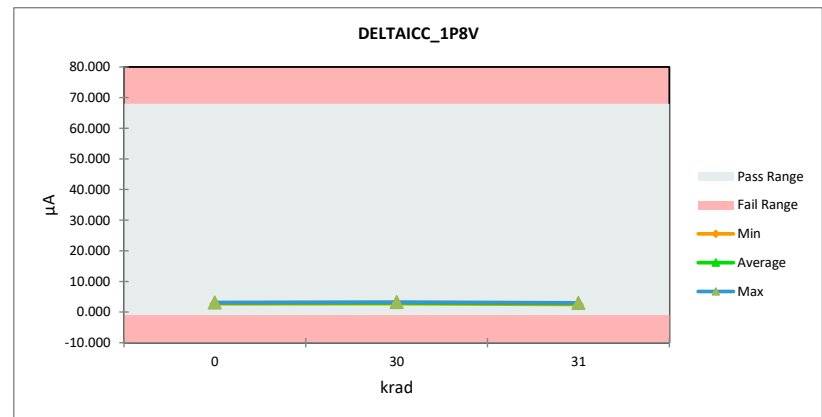
TID Report

SN54SC8T244-SEP

DELTAICC_1P8V						
Units	μA					
Max Limit	68					
Min Limit	-1					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	2.973	2.660	-0.31	-10.53%	0.45%
0	2	3.192	2.879	-0.31	-9.81%	0.45%
0	3	2.879	3.098	0.22	7.61%	0.32%
0	4	2.723	3.130	0.41	14.95%	0.59%
30	5	2.911	3.005	0.09	3.23%	0.14%
30	6	3.005	2.973	-0.03	-1.06%	0.05%
30	7	2.973	2.879	-0.09	-3.16%	0.14%
30	8	2.942	2.723	-0.22	-7.44%	0.32%
30	9	3.161	2.879	-0.28	-8.92%	0.41%
30	10	3.036	3.255	0.22	7.21%	0.32%
31	5a	2.911	2.472	-0.44	-15.08%	0.64%
31	6a	3.005	2.848	-0.16	-5.22%	0.23%
31	7a	2.973	2.660	-0.31	-10.53%	0.45%
31	8a	2.942	3.005	0.06	2.14%	0.09%
31	9a	3.161	2.848	-0.31	-9.90%	0.45%
31	10a	3.036	2.785	-0.25	-8.27%	0.36%
Max		3.192	3.255	0.06	14.95%	0.64%
Average		2.989	2.881	-0.11	-3.42%	0.34%
Min		2.723	2.472	-0.25	-15.08%	0.05%
Std Dev		0.117	0.198	0.08	8.35%	0.17%



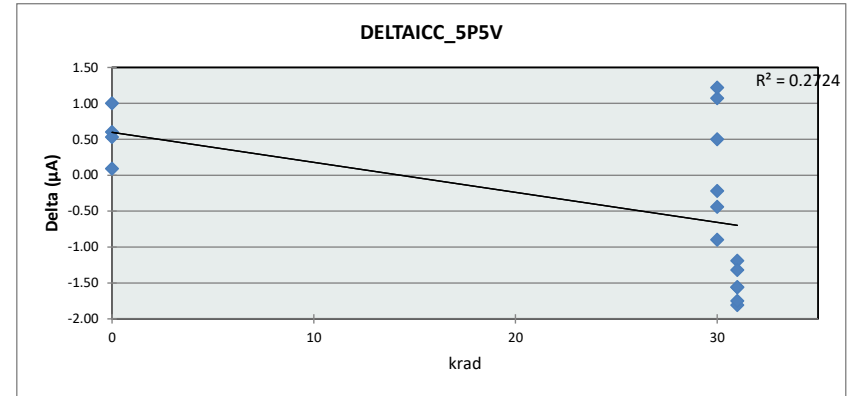
DELTAICC_1P8V			
Units	μA		
Max Limit	68		
Min Limit	-1		
krad	0	30	31
LL	-1.000	-1.000	-1.000
Min	2.660	2.723	2.472
Average	2.942	2.952	2.770
Max	3.130	3.255	3.005
UL	68.000	68.000	68.000



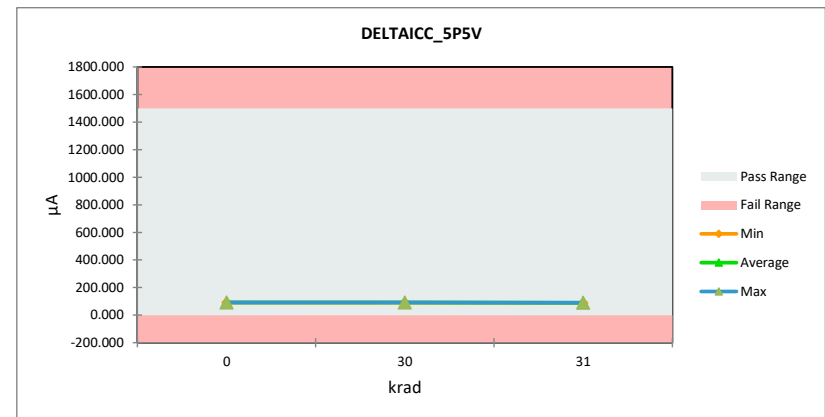
TID Report

SN54SC8T244-SEP

DELTAICC_5P5V						
Units	μA					
Max Limit	1500					
Min Limit	-1					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	91.420	91.510	0.09	0.10%	0.01%
0	2	90.320	90.920	0.60	0.66%	0.04%
0	3	90.760	91.760	1.00	1.10%	0.07%
0	4	90.860	91.390	0.53	0.58%	0.04%
30	5	90.290	91.360	1.07	1.19%	0.07%
30	6	91.510	90.610	-0.90	-0.98%	0.06%
30	7	91.760	91.320	-0.44	-0.48%	0.03%
30	8	90.790	92.010	1.22	1.34%	0.08%
30	9	91.360	91.860	0.50	0.55%	0.03%
30	10	91.640	91.420	-0.22	-0.24%	0.01%
31	5a	90.290	88.730	-1.56	-1.73%	0.10%
31	6a	91.510	89.950	-1.56	-1.70%	0.10%
31	7a	91.760	89.950	-1.81	-1.97%	0.12%
31	8a	90.790	89.600	-1.19	-1.31%	0.08%
31	9a	91.360	90.040	-1.32	-1.44%	0.09%
31	10a	91.640	89.890	-1.75	-1.91%	0.12%
Max		91.760	92.010	0.25	1.34%	0.12%
Average		91.129	90.770	-0.36	-0.39%	0.07%
Min		90.290	88.730	-1.56	-1.97%	0.01%
Std Dev		0.535	0.964	0.43	1.20%	0.04%



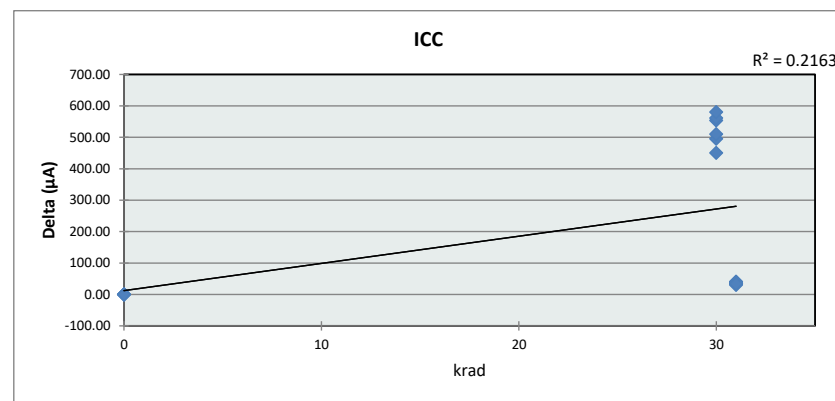
DELTAICC_5P5V			
Units	μA		
Max Limit	1500		
Min Limit	-1		
krad	0	30	31
LL	-1.000	-1.000	-1.000
Min	90.920	90.610	88.730
Average	91.395	91.430	89.693
Max	91.760	92.010	90.040
UL	1500.000	1500.000	1500.000



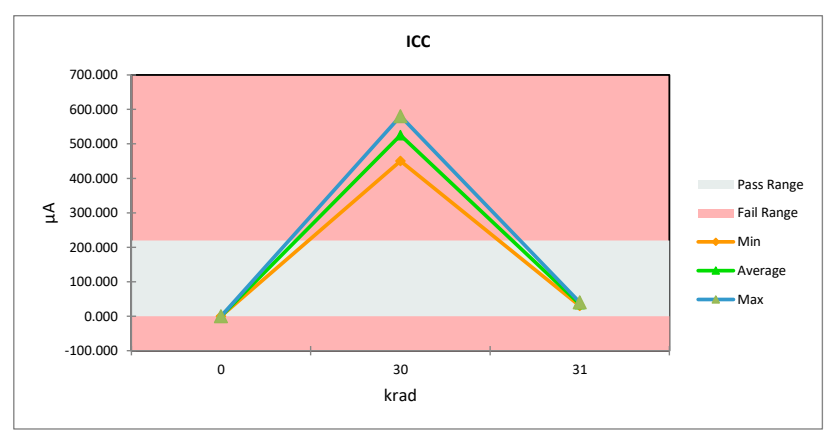
TID Report

SN54SC8T244-SEP

ICC						
Units	μA					
Max Limit	220					
Min Limit	-0.1					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.109	0.033	-0.08	-69.50%	0.03%
0	2	0.030	0.012	-0.02	-59.35%	0.01%
0	3	0.084	0.041	-0.04	-51.43%	0.02%
0	4	0.033	0.044	0.01	31.94%	0.00%
30	5	0.029	450.300	450.27	1534141.91%	204.58%
30	6	0.034	553.800	553.77	1625376.96%	251.60%
30	7	0.037	561.500	561.46	1508902.96%	255.09%
30	8	0.038	580.500	580.46	1547074.84%	263.73%
30	9	0.047	495.500	495.45	1062292.80%	225.10%
30	10	0.044	509.800	509.76	1147064.72%	231.60%
31	5a	0.029	30.100	30.07	102455.37%	13.66%
31	6a	0.034	35.310	35.28	103539.57%	16.03%
31	7a	0.037	39.490	39.45	106027.39%	17.92%
31	8a	0.038	40.610	40.57	108135.61%	18.43%
31	9a	0.047	32.730	32.68	70075.81%	14.85%
31	10a	0.044	34.390	34.35	77285.24%	15.60%
Max		0.109	580.500	580.39	1625376.96%	263.73%
Average		0.045	210.260	210.22	562014.05%	95.52%
Min		0.029	0.012	-0.02	-69.50%	0.00%
Std Dev		0.021	253.957	253.94	688533.39%	115.38%



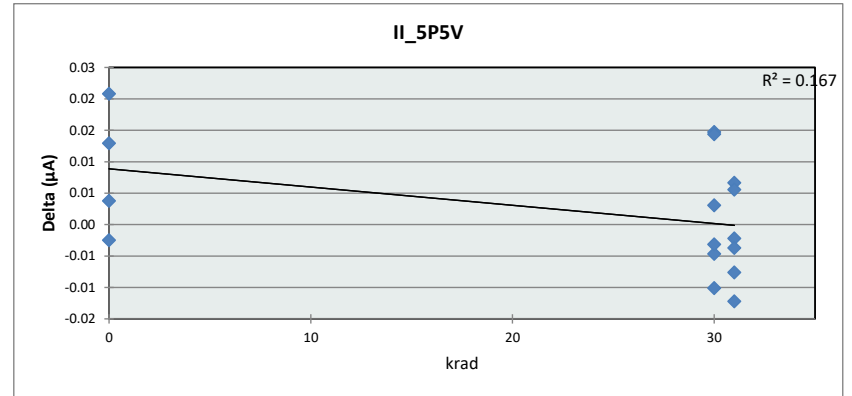
ICC			
Units	μA		
Max Limit	220		
Min Limit	-0.1		
krad	0	30	31
LL	-0.100	-0.100	-0.100
Min	0.012	450.300	30.100
Average	0.032	525.233	35.438
Max	0.044	580.500	40.610
UL	220.000	220.000	220.000



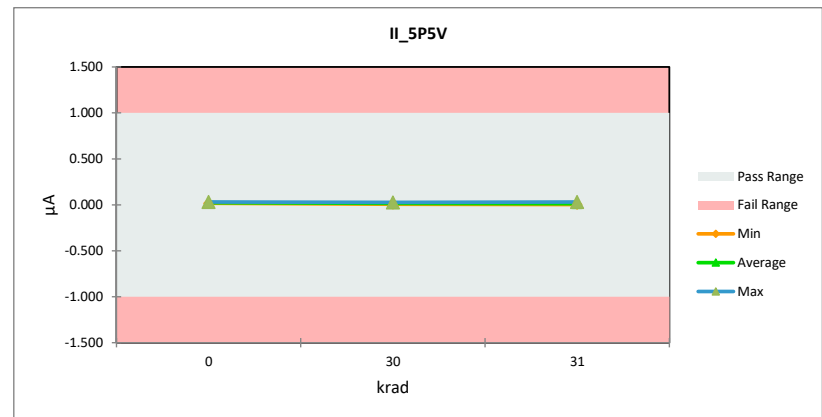
TID Report

SN54SC8T244-SEP

II_5P5V						
Units	μA					
Max Limit	1					
Min Limit	-1					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.010	0.031	0.02	207.99%	1.04%
0	2	0.008	0.021	0.01	158.93%	0.65%
0	3	0.020	0.024	0.00	19.01%	0.19%
0	4	0.019	0.017	0.00	-12.69%	0.12%
30	5	0.015	0.010	0.00	-30.94%	0.23%
30	6	0.010	0.025	0.01	146.13%	0.74%
30	7	0.015	0.005	-0.01	-65.55%	0.51%
30	8	0.013	0.009	0.00	-25.08%	0.16%
30	9	0.023	0.026	0.00	13.39%	0.15%
30	10	0.012	0.026	0.01	119.97%	0.72%
31	5a	0.015	0.003	-0.01	-81.05%	0.61%
31	6a	0.010	0.008	0.00	-21.79%	0.11%
31	7a	0.015	0.008	-0.01	-49.37%	0.38%
31	8a	0.013	0.009	0.00	-29.67%	0.19%
31	9a	0.023	0.030	0.01	29.00%	0.33%
31	10a	0.012	0.018	0.01	46.45%	0.28%
Max		0.023	0.031	0.01	207.99%	1.04%
Average		0.015	0.017	0.00	26.55%	0.40%
Min		0.008	0.003	-0.01	-81.05%	0.11%
Std Dev		0.005	0.009	0.00	86.77%	0.28%



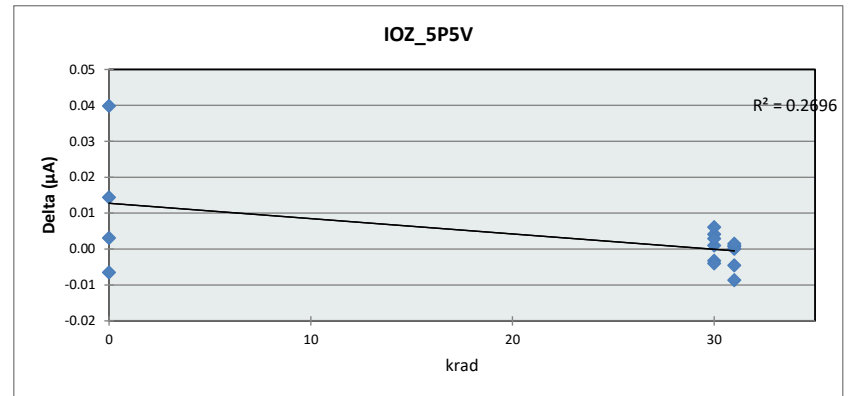
II_5P5V			
Units	μA		
Max Limit	1		
Min Limit	-1		
krad	0	30	31
LL	-1.000	-1.000	-1.000
Min	0.017	0.005	0.003
Average	0.023	0.017	0.012
Max	0.031	0.026	0.030
UL	1.000	1.000	1.000



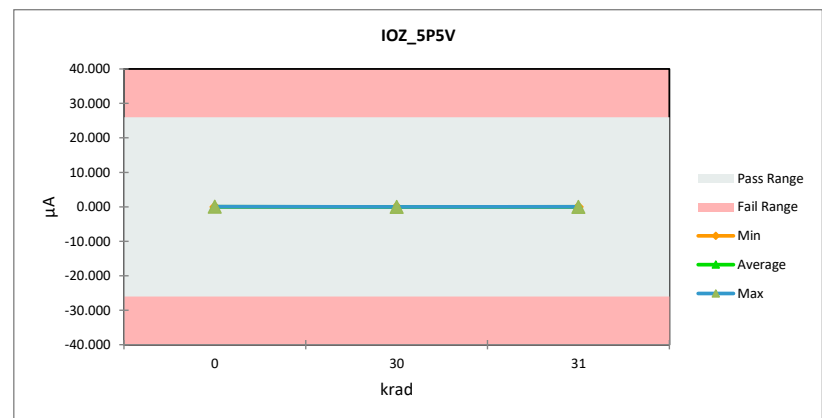
TID Report

SN54SC8T244-SEP

IOZ_5P5V						
Units	μA					
Max Limit	26					
Min Limit	-26					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.005	0.045	0.04	844.02%	0.08%
0	2	0.007	0.021	0.01	205.68%	0.03%
0	3	0.018	0.011	-0.01	-36.60%	0.01%
0	4	0.007	0.010	0.00	46.50%	0.01%
30	5	0.009	0.006	0.00	-34.54%	0.01%
30	6	0.006	0.010	0.00	71.53%	0.01%
30	7	0.010	0.006	0.00	-40.66%	0.01%
30	8	0.006	0.007	0.00	15.61%	0.00%
30	9	0.008	0.011	0.00	37.63%	0.01%
30	10	0.004	0.010	0.01	160.42%	0.01%
31	5a	0.009	0.005	0.00	-48.36%	0.01%
31	6a	0.006	0.006	0.00	11.97%	0.00%
31	7a	0.010	0.001	-0.01	-88.26%	0.02%
31	8a	0.006	0.007	0.00	14.72%	0.00%
31	9a	0.008	0.008	0.00	1.15%	0.00%
31	10a	0.004	0.005	0.00	39.40%	0.00%
Max	0.018	0.045	0.03	844.02%	0.08%	
Average	0.008	0.011	0.00	75.01%	0.01%	
Min	0.004	0.001	0.00	-88.26%	0.00%	
Std Dev	0.003	0.010	0.01	218.41%	0.02%	



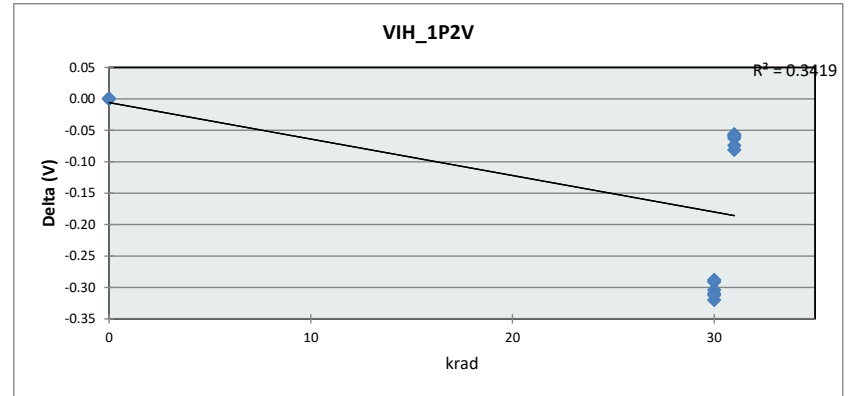
IOZ_5P5V			
Units	μA		
Max Limit	26		
Min Limit	-26		
krad	0	30	31
LL	-26.000	-26.000	-26.000
Min	0.010	0.006	0.001
Average	0.022	0.008	0.005
Max	0.045	0.011	0.008
UL	26.000	26.000	26.000



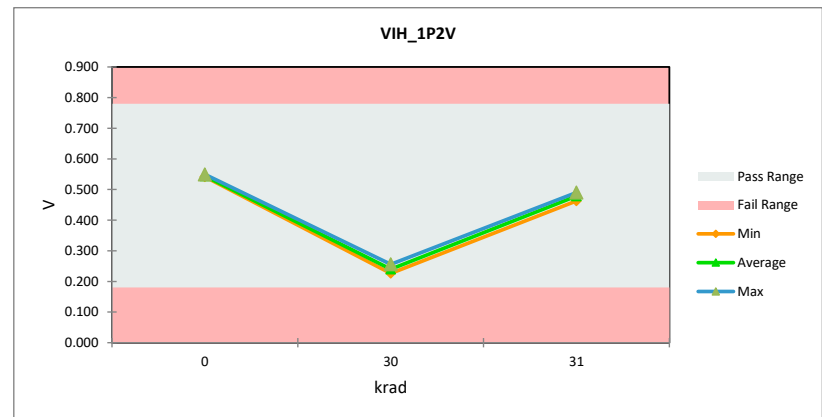
TID Report

SN54SC8T244-SEP

VIH_1P2V						
Units		V				
Max Limit		0.78				
Min Limit		0.18				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.549	0.549	0.00	0.11%	0.10%
0	2	0.544	0.544	0.00	0.00%	0.00%
0	3	0.541	0.541	0.00	0.00%	0.00%
0	4	0.541	0.541	0.00	0.00%	0.00%
30	5	0.542	0.238	-0.30	-56.05%	50.64%
30	6	0.543	0.233	-0.31	-57.10%	51.65%
30	7	0.544	0.253	-0.29	-53.52%	48.51%
30	8	0.544	0.256	-0.29	-52.96%	48.01%
30	9	0.546	0.226	-0.32	-58.61%	53.37%
30	10	0.546	0.233	-0.31	-57.23%	52.05%
31	5a	0.542	0.479	-0.06	-11.63%	10.51%
31	6a	0.543	0.484	-0.06	-10.73%	9.70%
31	7a	0.544	0.463	-0.08	-14.94%	13.54%
31	8a	0.544	0.470	-0.07	-13.60%	12.33%
31	9a	0.546	0.490	-0.06	-10.32%	9.40%
31	10a	0.546	0.486	-0.06	-10.89%	9.90%
Max		0.549	0.549	0.00	0.11%	53.37%
Average		0.544	0.405	-0.14	-25.47%	23.11%
Min		0.541	0.226	-0.32	-58.61%	0.00%
Std Dev		0.002	0.135	0.13	24.88%	22.55%



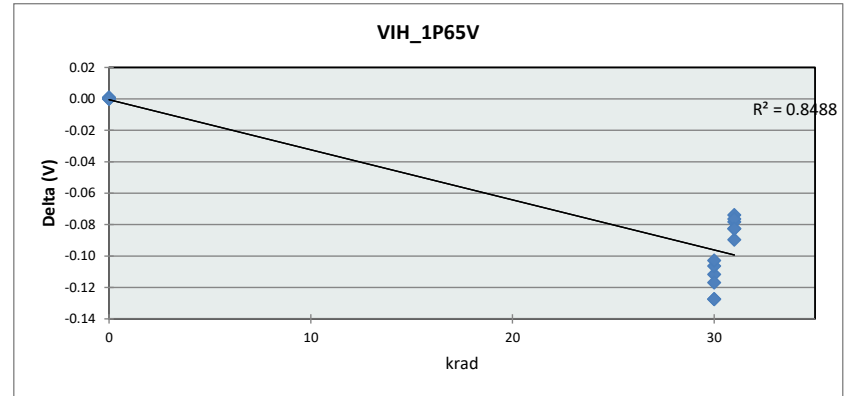
VIH_1P2V			
Units		V	
Max Limit		0.78	
Min Limit		0.18	
krad	0	30	31
LL	0.180	0.180	0.180
Min	0.541	0.226	0.463
Average	0.544	0.240	0.479
Max	0.549	0.256	0.490
UL	0.780	0.780	0.780



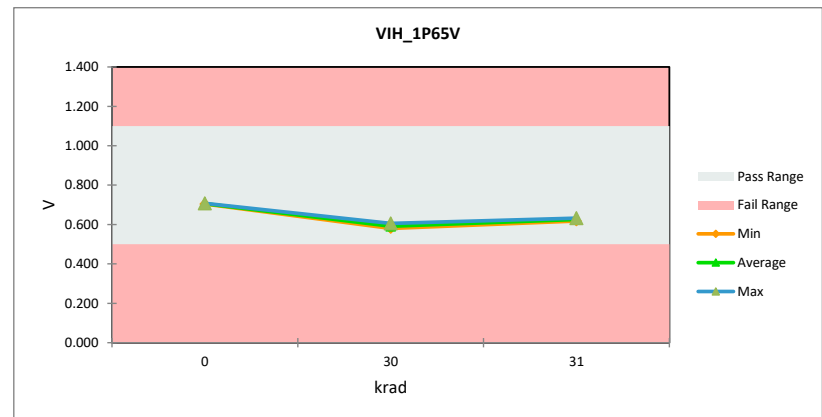
TID Report

SN54SC8T244-SEP

VIH_1P65V						
Units	V					
Max Limit	1.1					
Min Limit	0.5					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.706	0.707	0.00	0.12%	0.15%
0	2	0.707	0.708	0.00	0.12%	0.15%
0	3	0.705	0.705	0.00	0.00%	0.00%
0	4	0.704	0.704	0.00	0.00%	0.00%
30	5	0.707	0.595	-0.11	-15.80%	18.61%
30	6	0.705	0.599	-0.11	-15.09%	17.73%
30	7	0.708	0.580	-0.13	-18.02%	21.25%
30	8	0.704	0.587	-0.12	-16.61%	19.49%
30	9	0.708	0.606	-0.10	-14.52%	17.15%
30	10	0.708	0.581	-0.13	-18.00%	21.25%
31	5a	0.707	0.628	-0.08	-11.07%	13.04%
31	6a	0.705	0.631	-0.07	-10.48%	12.31%
31	7a	0.708	0.618	-0.09	-12.68%	14.95%
31	8a	0.704	0.621	-0.08	-11.74%	13.78%
31	9a	0.708	0.632	-0.08	-10.80%	12.75%
31	10a	0.708	0.626	-0.08	-11.67%	13.78%
Max		0.708	0.708	0.00	0.12%	21.25%
Average		0.706	0.633	-0.07	-10.39%	12.27%
Min		0.704	0.580	-0.12	-18.02%	0.00%
Std Dev		0.002	0.047	0.04	6.68%	7.81%



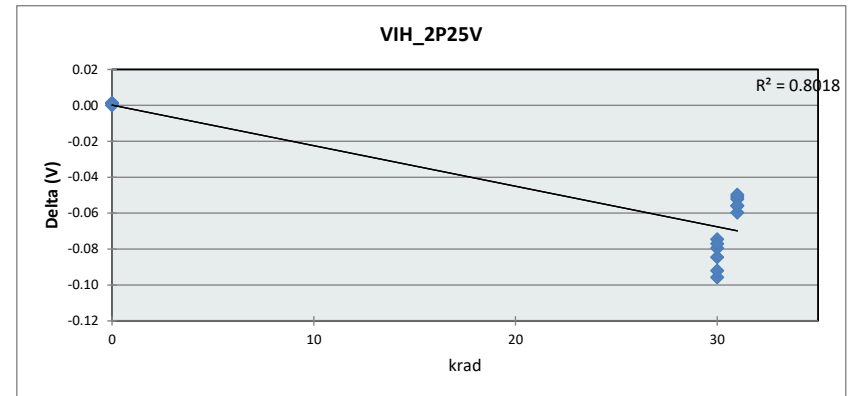
VIH_1P65V			
Units	V		
Max Limit	1.1		
Min Limit	0.5		
krad	0	30	31
LL	0.500	0.500	0.500
Min	0.704	0.580	0.618
Average	0.706	0.591	0.626
Max	0.708	0.606	0.632
UL	1.100	1.100	1.100



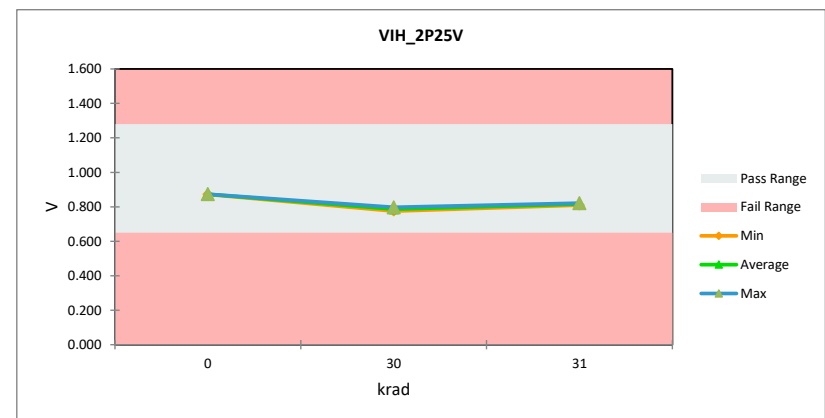
TID Report

SN54SC8T244-SEP

VIH_2P25V						
Units	V					
Max Limit	1.28					
Min Limit	0.65					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.872	0.873	0.00	0.14%	0.20%
0	2	0.872	0.873	0.00	0.14%	0.20%
0	3	0.871	0.872	0.00	0.14%	0.20%
0	4	0.873	0.873	0.00	0.00%	0.00%
30	5	0.872	0.797	-0.07	-8.55%	11.84%
30	6	0.872	0.787	-0.08	-9.69%	13.42%
30	7	0.871	0.775	-0.10	-10.99%	15.19%
30	8	0.866	0.786	-0.08	-9.19%	12.63%
30	9	0.870	0.792	-0.08	-8.86%	12.23%
30	10	0.872	0.780	-0.09	-10.55%	14.60%
31	5a	0.872	0.821	-0.05	-5.85%	8.09%
31	6a	0.872	0.820	-0.05	-5.99%	8.29%
31	7a	0.871	0.811	-0.06	-6.85%	9.47%
31	8a	0.866	0.810	-0.06	-6.46%	8.88%
31	9a	0.870	0.820	-0.05	-5.72%	7.89%
31	10a	0.872	0.816	-0.06	-6.42%	8.88%
Max	0.873	0.873	0.00	0.14%	15.19%	
Average	0.871	0.819	-0.05	-5.92%	8.25%	
Min	0.866	0.775	-0.09	-10.99%	0.00%	
Std Dev	0.002	0.035	0.03	3.95%	5.34%	



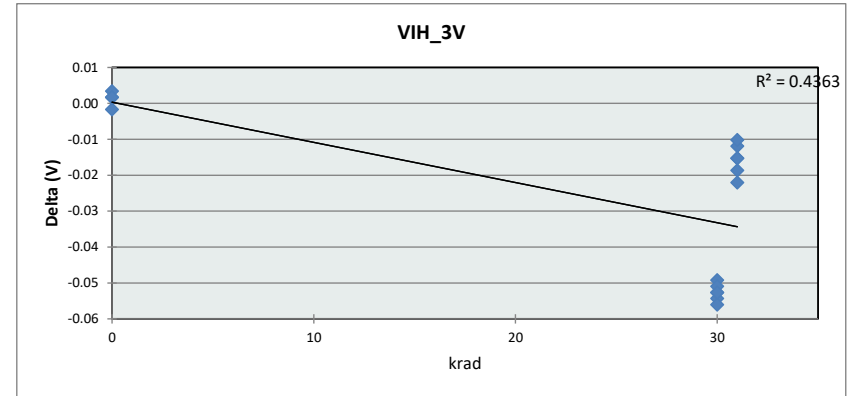
VIH_2P25V			
Units	V		
Max Limit	1.28		
Min Limit	0.65		
krad	0	30	31
LL	0.650	0.650	0.650
Min	0.872	0.775	0.810
Average	0.873	0.786	0.816
Max	0.873	0.797	0.821
UL	1.280	1.280	1.280



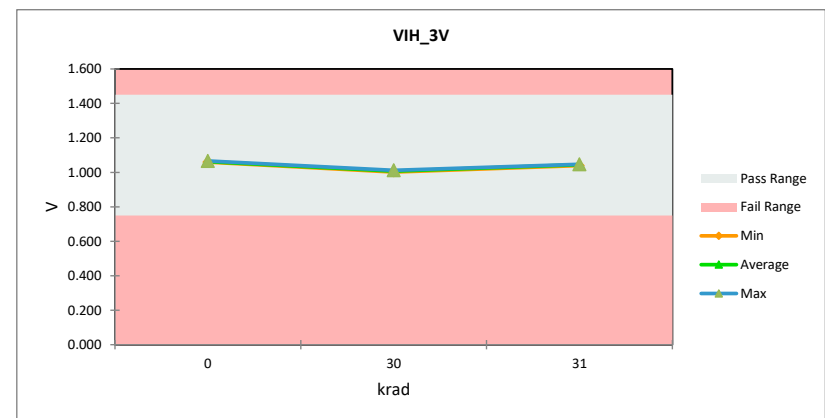
TID Report

SN54SC8T244-SEP

		VIH_3V				
Units		V				
Max Limit		1.45				
Min Limit		0.75				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.063	1.066	0.00	0.32%	0.49%
0	2	1.064	1.063	0.00	-0.16%	0.24%
0	3	1.059	1.061	0.00	0.16%	0.24%
0	4	1.058	1.059	0.00	0.16%	0.24%
30	5	1.063	1.008	-0.05	-5.11%	7.76%
30	6	1.058	1.005	-0.05	-4.98%	7.52%
30	7	1.056	1.007	-0.05	-4.66%	7.03%
30	8	1.058	1.002	-0.06	-5.30%	8.00%
30	9	1.063	1.012	-0.05	-4.79%	7.28%
30	10	1.061	1.008	-0.05	-4.96%	7.52%
31	5a	1.063	1.041	-0.02	-2.08%	3.15%
31	6a	1.058	1.046	-0.01	-1.12%	1.70%
31	7a	1.056	1.046	-0.01	-0.96%	1.46%
31	8a	1.058	1.039	-0.02	-1.77%	2.67%
31	9a	1.063	1.047	-0.02	-1.44%	2.18%
31	10a	1.061	1.046	-0.02	-1.44%	2.18%
Max		1.064	1.066	0.00	0.32%	8.00%
Average		1.060	1.035	-0.03	-2.38%	3.73%
Min		1.056	1.002	-0.05	-5.30%	0.24%
Std Dev		0.003	0.024	0.02	2.18%	3.16%



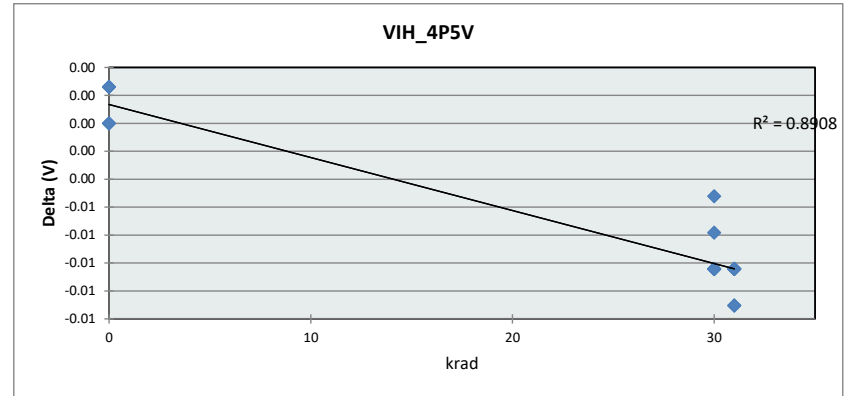
		VIH_3V		
Units		V		
Max Limit		1.45		
Min Limit		0.75		
krad		0	30	31
LL		0.750	0.750	0.750
Min		1.059	1.002	1.039
Average		1.062	1.007	1.044
Max		1.066	1.012	1.047
UL		1.450	1.450	1.450



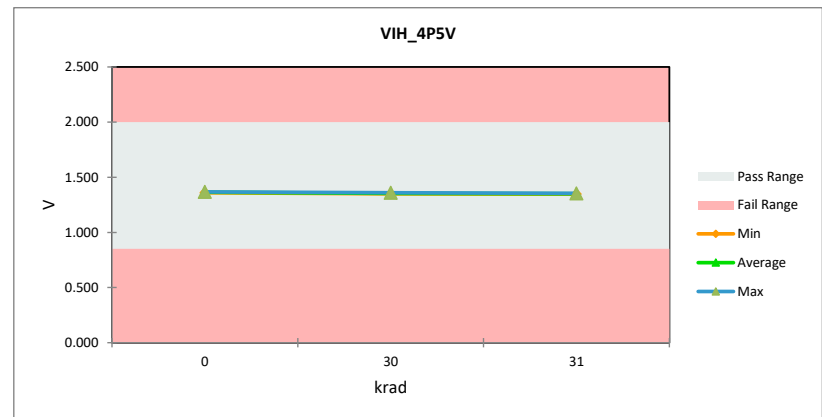
TID Report

SN54SC8T244-SEP

VIH_4P5V						
Units	V					
Max Limit	2					
Min Limit	0.85					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.367	1.367	0.00	0.00%	0.00%
0	2	1.365	1.367	0.00	0.19%	0.23%
0	3	1.362	1.362	0.00	0.00%	0.00%
0	4	1.357	1.359	0.00	0.19%	0.23%
30	5	1.365	1.359	-0.01	-0.38%	0.45%
30	6	1.359	1.349	-0.01	-0.77%	0.91%
30	7	1.362	1.352	-0.01	-0.77%	0.91%
30	8	1.359	1.349	-0.01	-0.77%	0.91%
30	9	1.362	1.354	-0.01	-0.57%	0.68%
30	10	1.362	1.352	-0.01	-0.77%	0.91%
31	5a	1.365	1.354	-0.01	-0.76%	0.91%
31	6a	1.359	1.346	-0.01	-0.96%	1.13%
31	7a	1.362	1.352	-0.01	-0.77%	0.91%
31	8a	1.359	1.346	-0.01	-0.96%	1.13%
31	9a	1.362	1.352	-0.01	-0.77%	0.91%
31	10a	1.362	1.352	-0.01	-0.77%	0.91%
Max	1.367	1.367	0.00	0.19%	1.13%	
Average	1.362	1.355	-0.01	-0.54%	0.69%	
Min	1.357	1.346	-0.01	-0.96%	0.00%	
Std Dev	0.003	0.007	0.00	0.40%	0.38%	



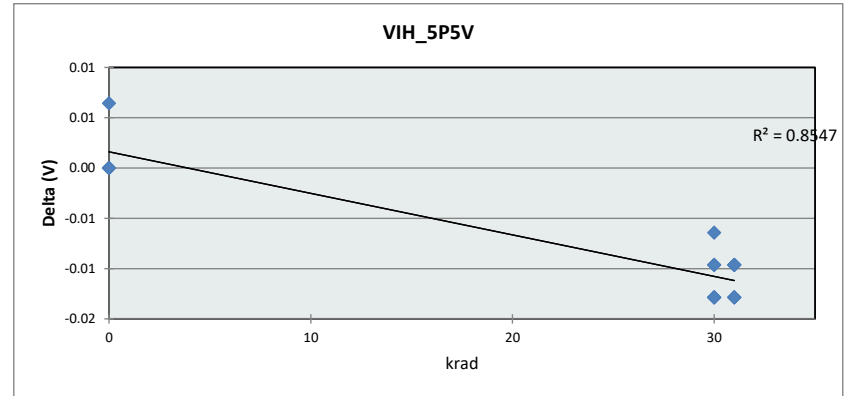
VIH_4P5V			
Units	V		
Max Limit	2		
Min Limit	0.85		
krad	0	30	31
LL	0.850	0.850	0.850
Min	1.359	1.349	1.346
Average	1.364	1.353	1.350
Max	1.367	1.359	1.354
UL	2.000	2.000	2.000



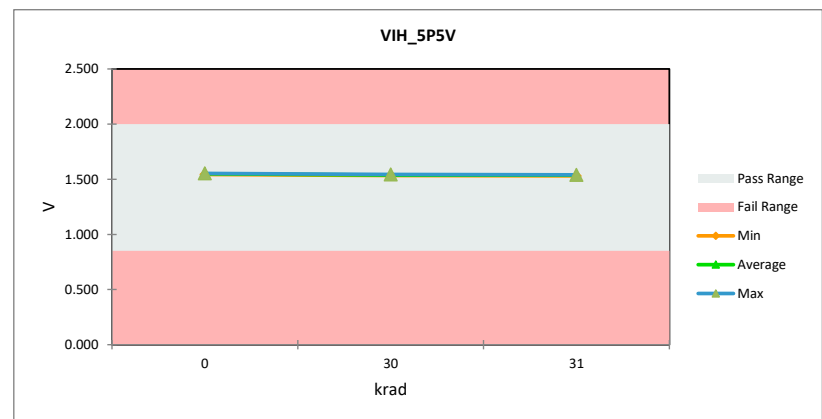
TID Report

SN54SC8T244-SEP

VIH_5P5V						
Units	V					
Max Limit	2					
Min Limit	0.85					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.553	1.553	0.00	0.00%	0.00%
0	2	1.553	1.553	0.00	0.00%	0.00%
0	3	1.543	1.550	0.01	0.42%	0.56%
0	4	1.543	1.543	0.00	0.00%	0.00%
30	5	1.550	1.543	-0.01	-0.41%	0.56%
30	6	1.546	1.533	-0.01	-0.83%	1.12%
30	7	1.550	1.540	-0.01	-0.62%	0.84%
30	8	1.543	1.533	-0.01	-0.62%	0.84%
30	9	1.550	1.537	-0.01	-0.83%	1.12%
30	10	1.550	1.537	-0.01	-0.83%	1.12%
31	5a	1.550	1.540	-0.01	-0.62%	0.84%
31	6a	1.546	1.533	-0.01	-0.83%	1.12%
31	7a	1.550	1.540	-0.01	-0.62%	0.84%
31	8a	1.543	1.530	-0.01	-0.83%	1.12%
31	9a	1.550	1.540	-0.01	-0.62%	0.84%
31	10a	1.550	1.537	-0.01	-0.83%	1.12%
Max		1.553	1.553	0.00	0.42%	1.12%
Average		1.548	1.540	-0.01	-0.51%	0.75%
Min		1.543	1.530	-0.01	-0.83%	0.00%
Std Dev		0.003	0.007	0.00	0.39%	0.42%



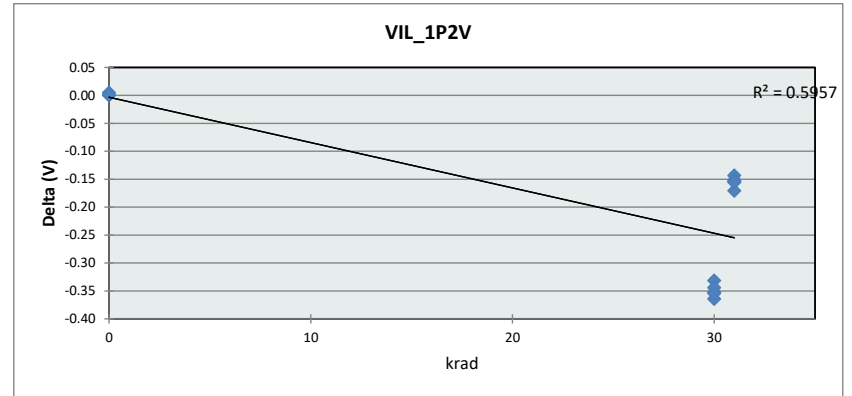
VIH_5P5V			
Units	V		
Max Limit	2		
Min Limit	0.85		
krad	0	30	31
LL	0.850	0.850	0.850
Min	1.543	1.533	1.530
Average	1.550	1.537	1.537
Max	1.553	1.543	1.540
UL	2.000	2.000	2.000



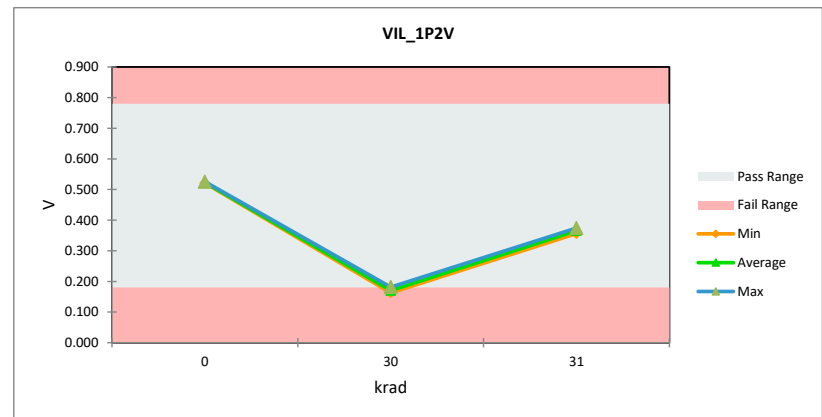
TID Report

SN54SC8T244-SEP

VIL_1P2V						
Units	V					
Max Limit	0.78					
Min Limit	0.18					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.520	0.521	0.00	0.13%	0.11%
0	2	0.518	0.522	0.00	0.90%	0.78%
0	3	0.522	0.523	0.00	0.26%	0.22%
0	4	0.526	0.526	0.00	0.00%	0.00%
30	5	0.510	0.178	-0.33	-65.06%	55.26%
30	6	0.522	0.169	-0.35	-67.66%	58.82%
30	7	0.519	0.167	-0.35	-67.88%	58.71%
30	8	0.527	0.163	-0.36	-69.12%	60.71%
30	9	0.526	0.181	-0.34	-65.49%	57.37%
30	10	0.518	0.164	-0.35	-68.35%	59.04%
31	5a	0.510	0.366	-0.14	-28.15%	23.90%
31	6a	0.522	0.368	-0.15	-29.42%	25.57%
31	7a	0.519	0.364	-0.16	-29.95%	25.91%
31	8a	0.527	0.356	-0.17	-32.41%	28.46%
31	9a	0.526	0.374	-0.15	-28.81%	25.24%
31	10a	0.518	0.363	-0.16	-29.99%	25.91%
	Max	0.527	0.526	0.00	0.90%	60.71%
	Average	0.520	0.332	-0.19	-36.31%	31.63%
	Min	0.510	0.163	-0.35	-69.12%	0.00%
	Std Dev	0.005	0.144	0.14	27.56%	23.71%



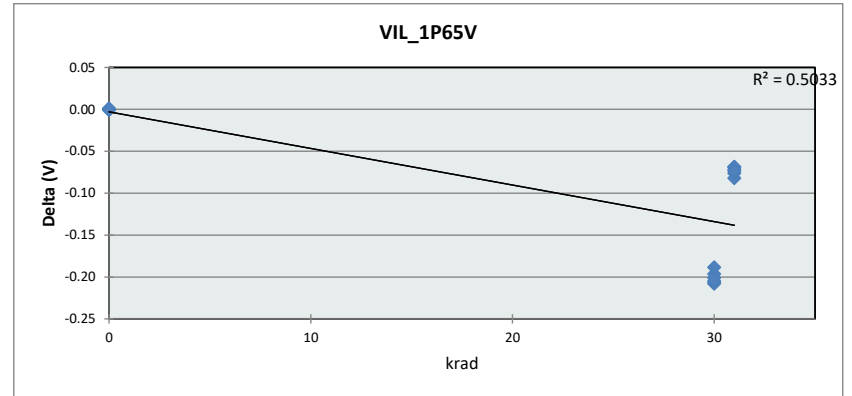
VIL_1P2V			
Units	V		
Max Limit	0.78		
Min Limit	0.18		
krad	0	30	31
LL	0.180	0.180	0.180
Min	0.521	0.163	0.356
Average	0.523	0.170	0.365
Max	0.526	0.181	0.374
UL	0.780	0.780	0.780



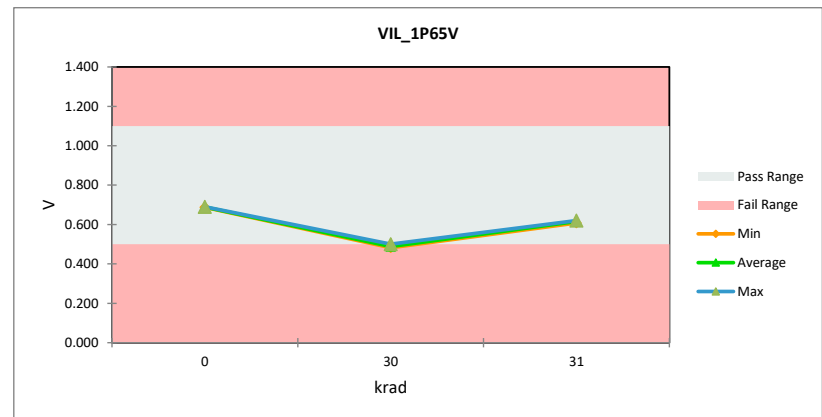
TID Report

SN54SC8T244-SEP

VIL_1P65V						
Units	V					
Max Limit	1.1					
Min Limit	0.5					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.688	0.688	0.00	0.00%	0.00%
0	2	0.689	0.690	0.00	0.14%	0.16%
0	3	0.688	0.689	0.00	0.14%	0.16%
0	4	0.688	0.687	0.00	-0.14%	0.16%
30	5	0.688	0.492	-0.20	-28.54%	32.73%
30	6	0.689	0.488	-0.20	-29.20%	33.53%
30	7	0.690	0.482	-0.21	-30.14%	34.66%
30	8	0.688	0.482	-0.21	-29.94%	34.34%
30	9	0.689	0.500	-0.19	-27.37%	31.44%
30	10	0.691	0.486	-0.21	-29.68%	34.18%
31	5a	0.688	0.617	-0.07	-10.40%	11.93%
31	6a	0.689	0.620	-0.07	-9.97%	11.45%
31	7a	0.690	0.608	-0.08	-11.92%	13.70%
31	8a	0.688	0.612	-0.08	-11.11%	12.74%
31	9a	0.689	0.620	-0.07	-9.97%	11.45%
31	10a	0.691	0.618	-0.07	-10.64%	12.25%
Max		0.691	0.690	0.00	0.14%	34.66%
Average		0.689	0.586	-0.10	-14.92%	17.18%
Min		0.688	0.482	-0.21	-30.14%	0.00%
Std Dev		0.001	0.084	0.08	12.18%	13.94%



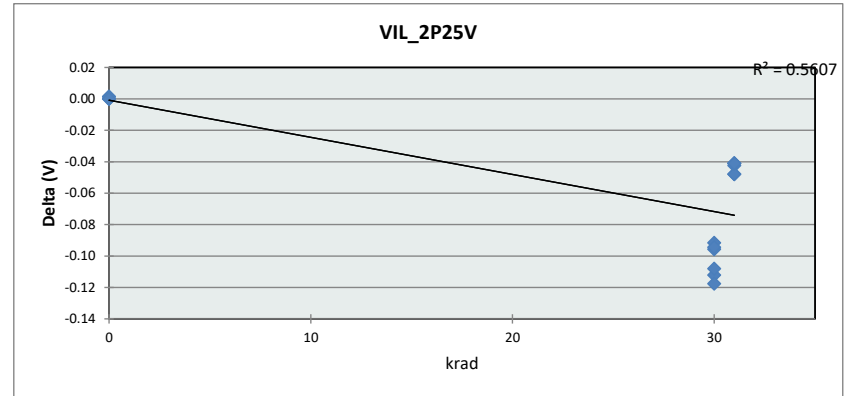
VIL_1P65V			
Units	V		
Max Limit	1.1		
Min Limit	0.5		
krad	0	30	31
LL	0.500	0.500	0.500
Min	0.687	0.482	0.608
Average	0.689	0.488	0.616
Max	0.690	0.500	0.620
UL	1.100	1.100	1.100



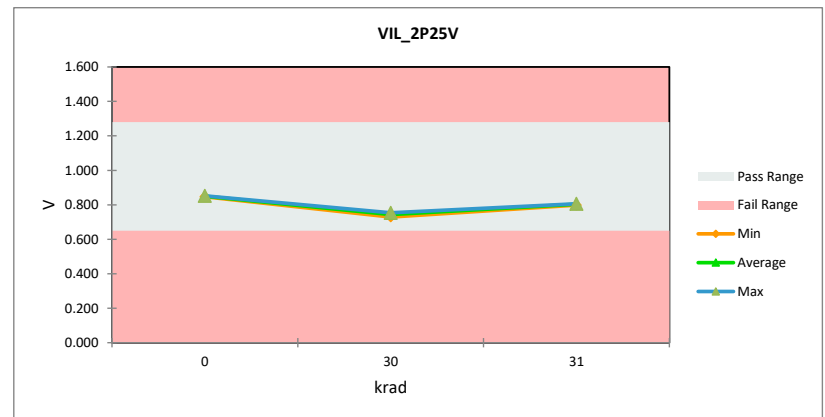
TID Report

SN54SC8T244-SEP

VIL_2P25V						
Units	V					
Max Limit	1.28					
Min Limit	0.65					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.852	0.852	0.00	0.00%	0.00%
0	2	0.849	0.851	0.00	0.16%	0.22%
0	3	0.848	0.849	0.00	0.16%	0.22%
0	4	0.847	0.847	0.00	0.00%	0.00%
30	5	0.845	0.750	-0.10	-11.32%	15.20%
30	6	0.848	0.736	-0.11	-13.22%	17.80%
30	7	0.848	0.740	-0.11	-12.74%	17.15%
30	8	0.847	0.729	-0.12	-13.89%	18.67%
30	9	0.845	0.754	-0.09	-10.84%	14.54%
30	10	0.847	0.752	-0.09	-11.14%	14.98%
31	5a	0.845	0.804	-0.04	-4.85%	6.51%
31	6a	0.848	0.806	-0.04	-5.00%	6.73%
31	7a	0.848	0.800	-0.05	-5.64%	7.60%
31	8a	0.847	0.799	-0.05	-5.65%	7.60%
31	9a	0.845	0.804	-0.04	-4.85%	6.51%
31	10a	0.847	0.806	-0.04	-4.85%	6.51%
Max	0.852	0.852	0.00	0.16%	18.67%	
Average	0.847	0.792	-0.05	-6.48%	8.76%	
Min	0.845	0.729	-0.12	-13.89%	0.00%	
Std Dev	0.002	0.044	0.04	5.08%	6.76%	



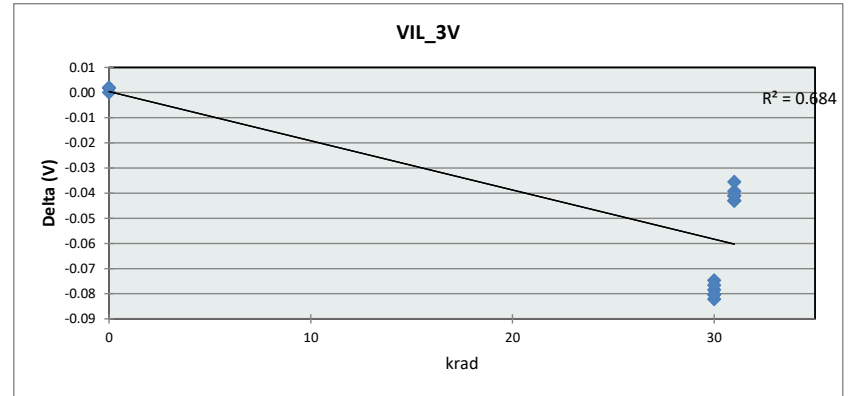
VIL_2P25V			
Units	V		
Max Limit	1.28		
Min Limit	0.65		
krad	0	30	31
LL	0.650	0.650	0.650
Min	0.847	0.729	0.799
Average	0.850	0.743	0.803
Max	0.852	0.754	0.806
UL	1.280	1.280	1.280



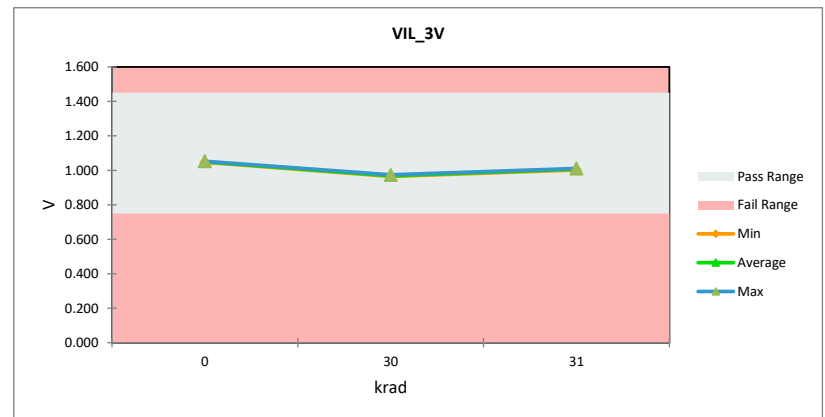
TID Report

SN54SC8T244-SEP

VIL_3V						
Units	V					
Max Limit	1.45					
Min Limit	0.75					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.051	1.053	0.00	0.18%	0.27%
0	2	1.049	1.049	0.00	0.00%	0.00%
0	3	1.045	1.047	0.00	0.18%	0.27%
0	4	1.047	1.049	0.00	0.18%	0.27%
30	5	1.049	0.974	-0.07	-7.12%	10.67%
30	6	1.045	0.967	-0.08	-7.51%	11.21%
30	7	1.049	0.967	-0.08	-7.84%	11.74%
30	8	1.045	0.965	-0.08	-7.68%	11.47%
30	9	1.047	0.970	-0.08	-7.31%	10.94%
30	10	1.047	0.967	-0.08	-7.67%	11.47%
31	5a	1.049	1.008	-0.04	-3.92%	5.87%
31	6a	1.045	1.006	-0.04	-3.75%	5.60%
31	7a	1.049	1.006	-0.04	-4.10%	6.14%
31	8a	1.045	1.002	-0.04	-4.11%	6.14%
31	9a	1.047	1.006	-0.04	-3.92%	5.87%
31	10a	1.047	1.012	-0.04	-3.39%	5.07%
Max	1.051	1.053	0.00	0.18%	11.74%	
Average	1.047	1.003	-0.04	-4.24%	6.44%	
Min	1.045	0.965	-0.08	-7.84%	0.00%	
Std Dev	0.002	0.033	0.03	3.08%	4.46%	

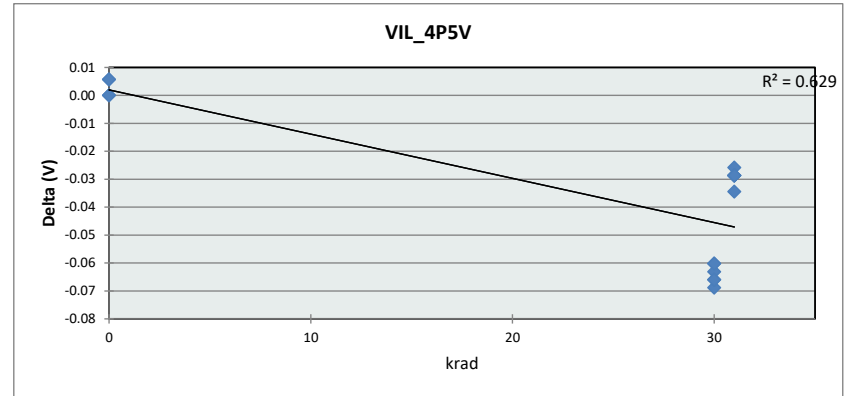


VIL_3V			
Units	V		
Max Limit	1.45		
Min Limit	0.75		
krad	0	30	31
LL	0.750	0.750	0.750
Min	1.047	0.965	1.002
Average	1.049	0.968	1.007
Max	1.053	0.974	1.012
UL	1.450	1.450	1.450

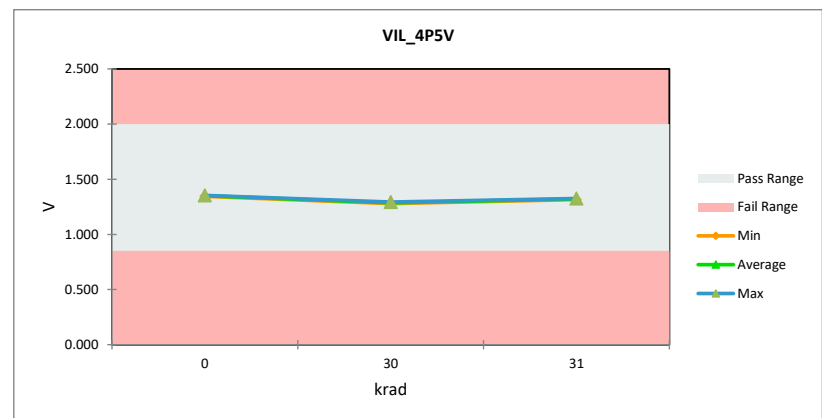


TID Report SN54SC8T244-SEP

VIL_4P5V						
Units	V					
Max Limit	2					
Min Limit	0.85					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.354	1.354	0.00	0.00%	0.00%
0	2	1.354	1.354	0.00	0.00%	0.00%
0	3	1.345	1.351	0.01	0.43%	0.50%
0	4	1.339	1.345	0.01	0.43%	0.50%
30	5	1.354	1.293	-0.06	-4.45%	5.24%
30	6	1.348	1.285	-0.06	-4.68%	5.49%
30	7	1.351	1.282	-0.07	-5.10%	5.99%
30	8	1.345	1.279	-0.07	-4.91%	5.74%
30	9	1.351	1.290	-0.06	-4.46%	5.24%
30	10	1.351	1.285	-0.07	-4.88%	5.74%
31	5a	1.354	1.325	-0.03	-2.12%	2.49%
31	6a	1.348	1.322	-0.03	-1.92%	2.24%
31	7a	1.351	1.316	-0.03	-2.55%	2.99%
31	8a	1.345	1.316	-0.03	-2.13%	2.49%
31	9a	1.351	1.322	-0.03	-2.12%	2.49%
31	10a	1.351	1.322	-0.03	-2.12%	2.49%
Max	1.354	1.354	0.00	0.43%	5.99%	
Average	1.349	1.315	-0.03	-2.54%	3.10%	
Min	1.339	1.279	-0.06	-5.10%	0.00%	
Std Dev	0.004	0.027	0.02	2.02%	2.19%	

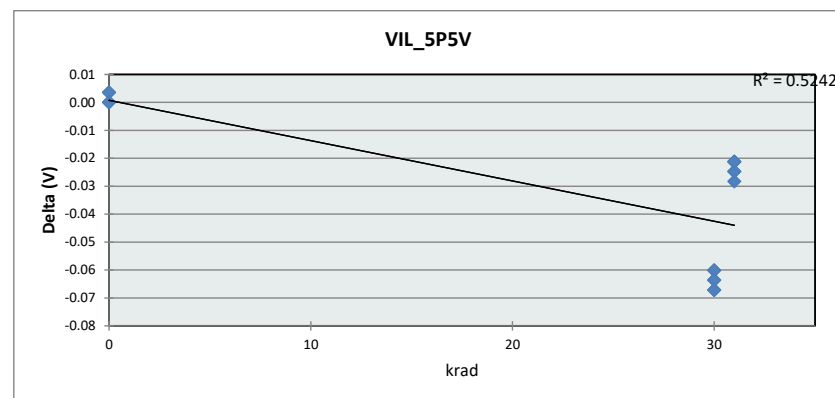


VIL_4P5V			
Units	V		
Max Limit	2		
Min Limit	0.85		
krad	0	30	31
LL	0.850	0.850	0.850
Min	1.345	1.279	1.316
Average	1.351	1.286	1.321
Max	1.354	1.293	1.325
UL	2.000	2.000	2.000

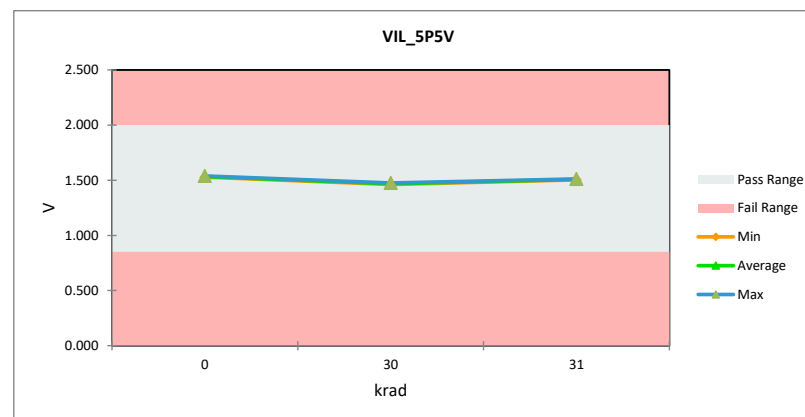


TID Report SN54SC8T244-SEP

VIL_5P5V						
Units	V					
Max Limit	2					
Min Limit	0.85					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.535	1.539	0.00	0.23%	0.31%
0	2	1.535	1.535	0.00	0.00%	0.00%
0	3	1.528	1.532	0.00	0.23%	0.31%
0	4	1.528	1.528	0.00	0.00%	0.00%
30	5	1.535	1.475	-0.06	-3.91%	5.23%
30	6	1.528	1.465	-0.06	-4.16%	5.53%
30	7	1.532	1.465	-0.07	-4.39%	5.84%
30	8	1.528	1.461	-0.07	-4.40%	5.84%
30	9	1.532	1.472	-0.06	-3.92%	5.23%
30	10	1.532	1.468	-0.06	-4.15%	5.53%
31	5a	1.535	1.511	-0.02	-1.61%	2.15%
31	6a	1.528	1.507	-0.02	-1.39%	1.84%
31	7a	1.532	1.504	-0.03	-1.85%	2.46%
31	8a	1.528	1.504	-0.02	-1.62%	2.15%
31	9a	1.532	1.511	-0.02	-1.38%	1.84%
31	10a	1.532	1.511	-0.02	-1.38%	1.84%
Max	1.535	1.539	0.00	0.23%	5.84%	
Average	1.532	1.499	-0.03	-2.11%	2.88%	
Min	1.528	1.461	-0.07	-4.40%	0.00%	
Std Dev	0.003	0.028	0.02	1.78%	2.26%	



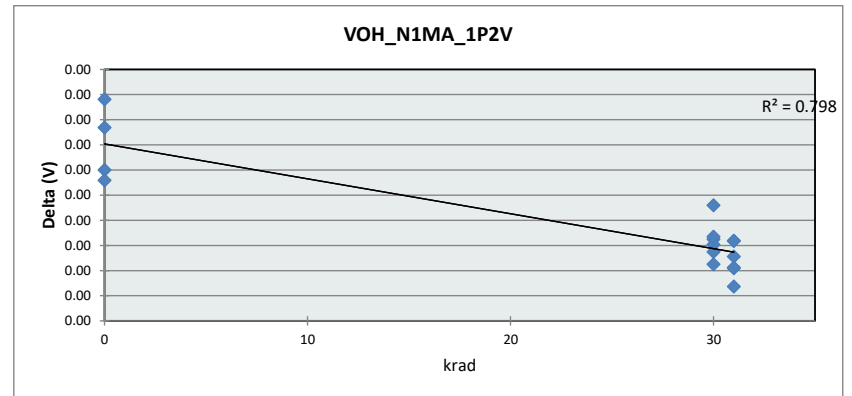
VIL_5P5V			
Units	V		
Max Limit	2		
Min Limit	0.85		
krad	0	30	31
LL	0.850	0.850	0.850
Min	1.528	1.461	1.504
Average	1.534	1.468	1.508
Max	1.539	1.475	1.511
UL	2.000	2.000	2.000



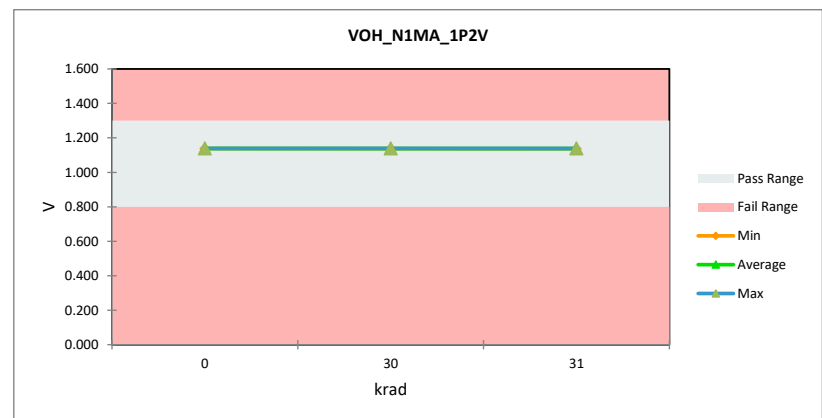
TID Report

SN54SC8T244-SEP

VOH_N1MA_1P2V						
Units		V				
Max Limit		1.3				
Min Limit		0.8				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.138	1.139	0.00	0.05%	0.11%
0	2	1.138	1.138	0.00	0.03%	0.07%
0	3	1.138	1.138	0.00	0.00%	0.00%
0	4	1.139	1.139	0.00	-0.01%	0.02%
30	5	1.138	1.138	0.00	-0.05%	0.11%
30	6	1.139	1.138	0.00	-0.05%	0.12%
30	7	1.139	1.139	0.00	-0.07%	0.15%
30	8	1.139	1.139	0.00	-0.02%	0.06%
30	9	1.139	1.138	0.00	-0.05%	0.11%
30	10	1.139	1.138	0.00	-0.06%	0.13%
31	5a	1.138	1.137	0.00	-0.08%	0.19%
31	6a	1.139	1.138	0.00	-0.05%	0.11%
31	7a	1.139	1.139	0.00	-0.07%	0.16%
31	8a	1.139	1.138	0.00	-0.05%	0.11%
31	9a	1.139	1.138	0.00	-0.06%	0.14%
31	10a	1.139	1.138	0.00	-0.07%	0.16%
Max		1.139	1.139	0.00	0.05%	0.19%
Average		1.139	1.138	0.00	-0.04%	0.11%
Min		1.138	1.137	0.00	-0.08%	0.00%
Std Dev		0.000	0.000	0.00	0.04%	0.05%



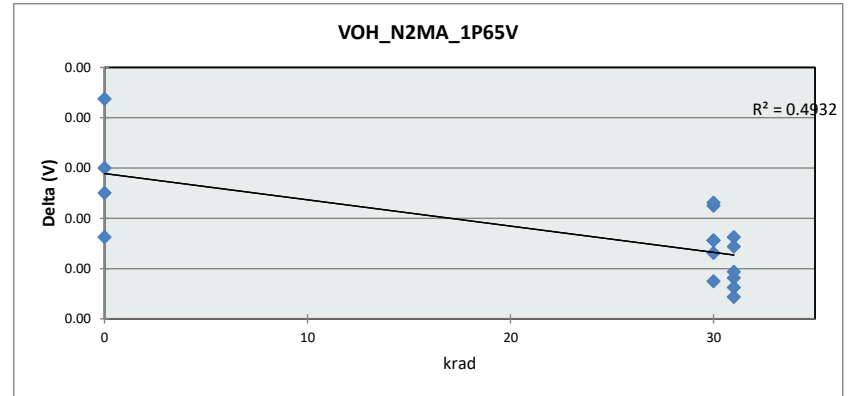
VOH_N1MA_1P2V			
Units		V	
Max Limit		1.3	
Min Limit		0.8	
krad	0	30	31
LL	0.800	0.800	0.800
Min	1.138	1.138	1.137
Average	1.138	1.138	1.138
Max	1.139	1.139	1.139
UL	1.300	1.300	1.300



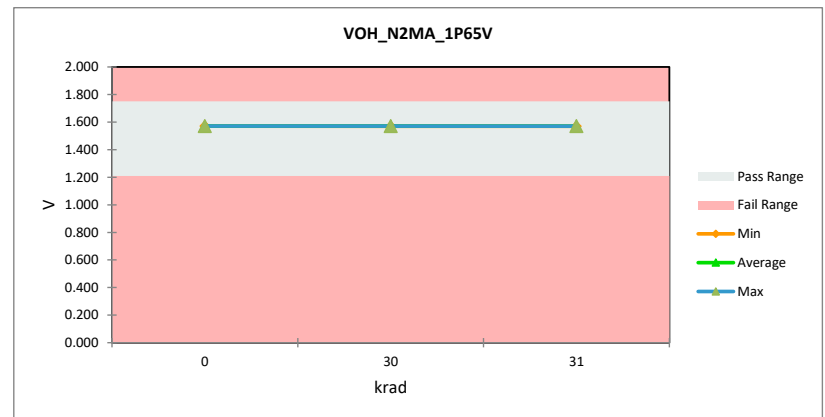
TID Report

SN54SC8T244-SEP

VOH_N2MA_1P65V						
Units	V					
Max Limit	1.75					
Min Limit	1.21					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	1.570	1.571	0.00	0.08%	0.22%
0	2	1.570	1.571	0.00	0.03%	0.09%
0	3	1.570	1.571	0.00	0.02%	0.05%
0	4	1.571	1.571	0.00	-0.01%	0.03%
30	5	1.570	1.570	0.00	-0.01%	0.04%
30	6	1.571	1.571	0.00	-0.02%	0.06%
30	7	1.571	1.570	0.00	-0.04%	0.12%
30	8	1.571	1.571	0.00	0.01%	0.02%
30	9	1.571	1.571	0.00	-0.01%	0.04%
30	10	1.571	1.571	0.00	0.01%	0.03%
31	5a	1.570	1.570	0.00	-0.04%	0.11%
31	6a	1.571	1.570	0.00	-0.04%	0.13%
31	7a	1.571	1.570	0.00	-0.05%	0.14%
31	8a	1.571	1.570	0.00	-0.01%	0.03%
31	9a	1.571	1.570	0.00	-0.03%	0.10%
31	10a	1.571	1.571	0.00	-0.02%	0.05%
Max	1.571	1.571	0.00	0.08%	0.22%	
Average	1.571	1.571	0.00	-0.01%	0.08%	
Min	1.570	1.570	0.00	-0.05%	0.02%	
Std Dev	0.000	0.000	0.00	0.03%	0.05%	



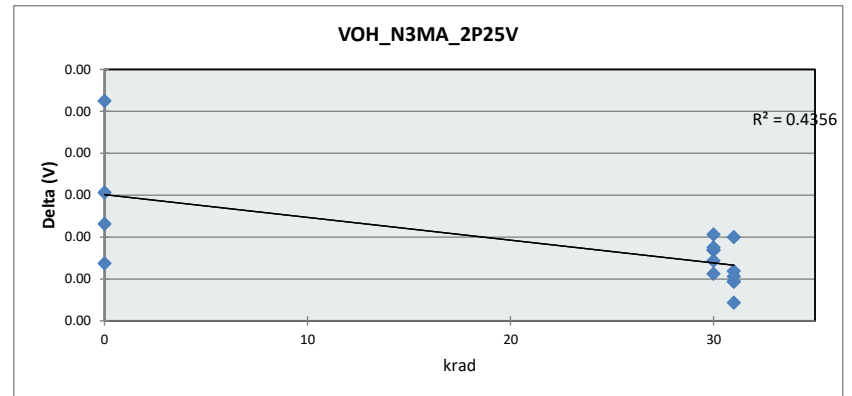
VOH_N2MA_1P65V			
Units	V		
Max Limit	1.75		
Min Limit	1.21		
krad	0	30	31
LL	1.210	1.210	1.210
Min	1.571	1.570	1.570
Average	1.571	1.571	1.570
Max	1.571	1.571	1.571
UL	1.750	1.750	1.750



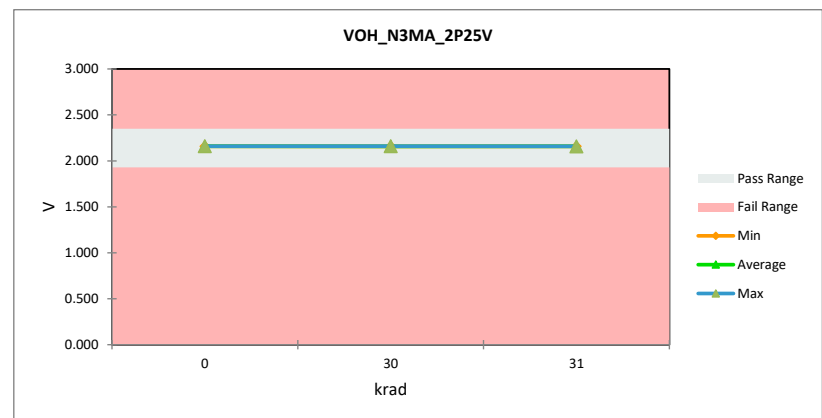
TID Report

SN54SC8T244-SEP

VOH_N3MA_2P25V						
Units		V				
Max Limit		2.35				
Min Limit		1.93				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	2.158	2.159	0.00	0.08%	0.39%
0	2	2.159	2.159	0.00	0.02%	0.13%
0	3	2.158	2.159	0.00	0.01%	0.04%
0	4	2.159	2.159	0.00	-0.01%	0.07%
30	5	2.158	2.158	0.00	-0.01%	0.04%
30	6	2.159	2.159	0.00	-0.01%	0.04%
30	7	2.159	2.158	0.00	-0.02%	0.10%
30	8	2.158	2.158	0.00	0.00%	0.01%
30	9	2.159	2.159	0.00	-0.01%	0.03%
30	10	2.159	2.159	0.00	-0.01%	0.07%
31	5a	2.158	2.158	0.00	-0.02%	0.13%
31	6a	2.159	2.158	0.00	-0.02%	0.13%
31	7a	2.159	2.158	0.00	-0.04%	0.19%
31	8a	2.158	2.158	0.00	0.00%	0.00%
31	9a	2.159	2.158	0.00	-0.02%	0.10%
31	10a	2.159	2.159	0.00	-0.02%	0.11%
Max		2.159	2.159	0.00	0.08%	0.39%
Average		2.159	2.159	0.00	-0.01%	0.10%
Min		2.158	2.158	0.00	-0.04%	0.00%
Std Dev		0.000	0.000	0.00	0.03%	0.09%



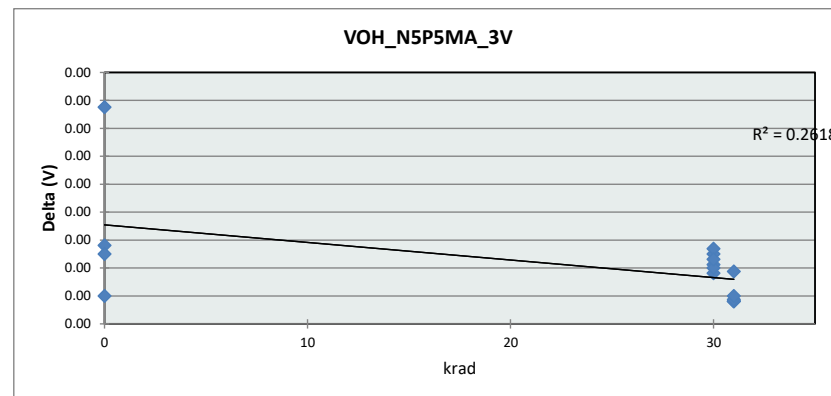
VOH_N3MA_2P25V			
Units		V	
Max Limit		2.35	
Min Limit		1.93	
krad	0	30	31
LL	1.930	1.930	1.930
Min	2.159	2.158	2.158
Average	2.159	2.159	2.158
Max	2.159	2.159	2.159
UL	2.350	2.350	2.350



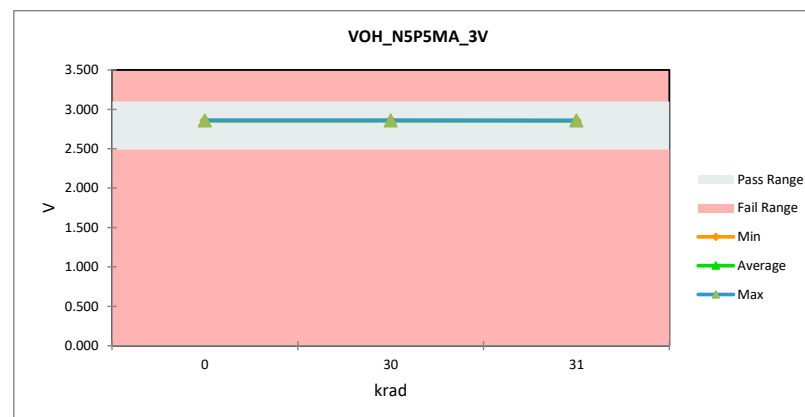
TID Report

SN54SC8T244-SEP

VOH_N5P5MA_3V						
Units	V					
Max Limit	3.1					
Min Limit	2.49					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	2.857	2.860	0.00	0.10%	0.47%
0	2	2.858	2.859	0.00	0.01%	0.07%
0	3	2.858	2.858	0.00	0.01%	0.04%
0	4	2.859	2.858	0.00	-0.02%	0.08%
30	5	2.858	2.858	0.00	0.01%	0.04%
30	6	2.858	2.858	0.00	0.00%	0.01%
30	7	2.858	2.858	0.00	0.00%	0.02%
30	8	2.857	2.858	0.00	0.01%	0.06%
30	9	2.858	2.858	0.00	0.00%	0.00%
30	10	2.858	2.858	0.00	0.01%	0.03%
31	5a	2.858	2.857	0.00	-0.02%	0.10%
31	6a	2.858	2.858	0.00	-0.02%	0.10%
31	7a	2.858	2.857	0.00	-0.02%	0.10%
31	8a	2.857	2.857	0.00	0.00%	0.01%
31	9a	2.858	2.858	0.00	-0.02%	0.09%
31	10a	2.858	2.858	0.00	-0.02%	0.08%
Max	2.859	2.860	0.00	0.10%	0.47%	
Average	2.858	2.858	0.00	0.00%	0.08%	
Min	2.857	2.857	0.00	-0.02%	0.00%	
Std Dev	0.001	0.001	0.00	0.03%	0.11%	



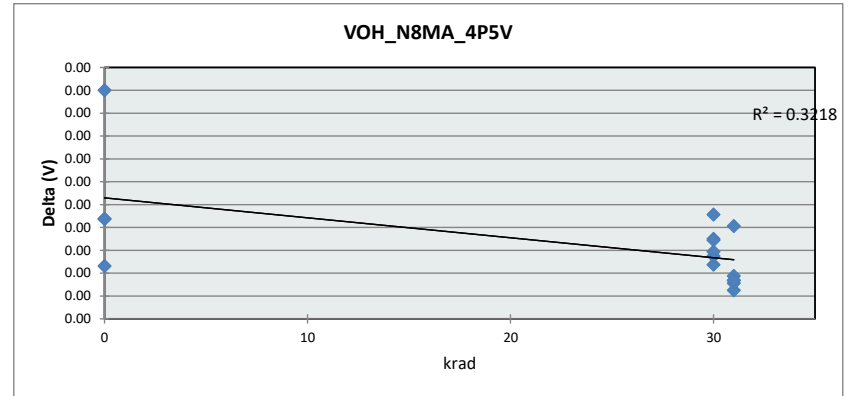
VOH_N5P5MA_3V			
Units	V		
Max Limit	3.1		
Min Limit	2.49		
krad	0	30	31
LL	2.490	2.490	2.490
Min	2.858	2.858	2.857
Average	2.859	2.858	2.857
Max	2.860	2.858	2.858
UL	3.100	3.100	3.100



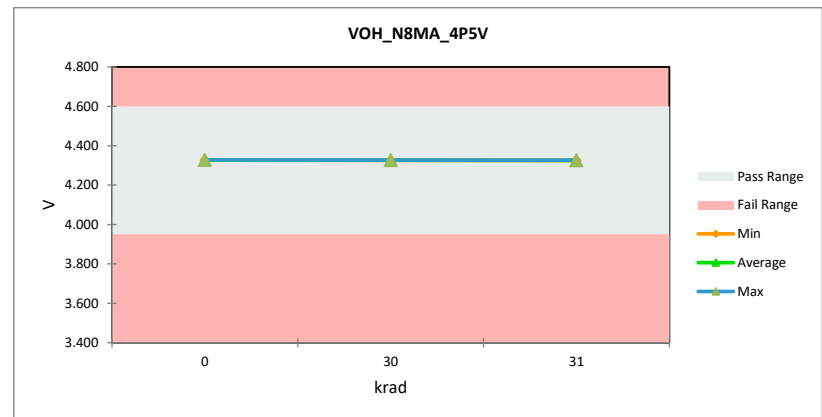
TID Report

SN54SC8T244-SEP

VOH_N8MA_4P5V						
Units	V					
Max Limit	4.6					
Min Limit	3.95					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	4.325	4.328	0.00	0.08%	0.54%
0	2	4.327	4.327	0.00	0.02%	0.11%
0	3	4.326	4.327	0.00	0.02%	0.11%
0	4	4.327	4.327	0.00	-0.01%	0.05%
30	5	4.326	4.326	0.00	0.01%	0.04%
30	6	4.327	4.327	0.00	0.01%	0.03%
30	7	4.326	4.326	0.00	-0.01%	0.05%
30	8	4.325	4.326	0.00	0.02%	0.12%
30	9	4.327	4.326	0.00	0.00%	0.02%
30	10	4.327	4.327	0.00	0.00%	0.00%
31	5a	4.326	4.325	0.00	-0.02%	0.10%
31	6a	4.327	4.326	0.00	-0.01%	0.09%
31	7a	4.326	4.325	0.00	-0.02%	0.13%
31	8a	4.325	4.326	0.00	0.01%	0.08%
31	9a	4.327	4.326	0.00	-0.02%	0.11%
31	10a	4.327	4.326	0.00	-0.02%	0.10%
Max	4.327	4.328	0.00	0.08%	0.54%	
Average	4.326	4.326	0.00	0.00%	0.11%	
Min	4.325	4.325	0.00	-0.02%	0.00%	
Std Dev	0.001	0.001	0.00	0.02%	0.12%	



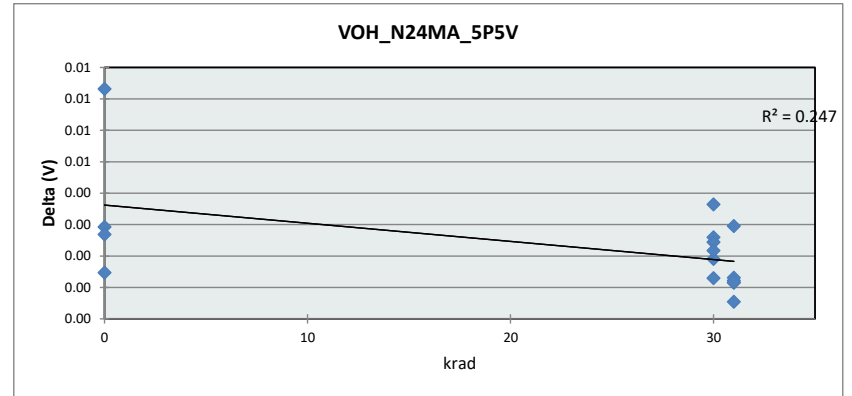
VOH_N8MA_4P5V			
Units	V		
Max Limit	4.6		
Min Limit	3.95		
krad	0	30	31
LL	3.950	3.950	3.950
Min	4.327	4.326	4.325
Average	4.327	4.326	4.326
Max	4.328	4.327	4.326
UL	4.600	4.600	4.600



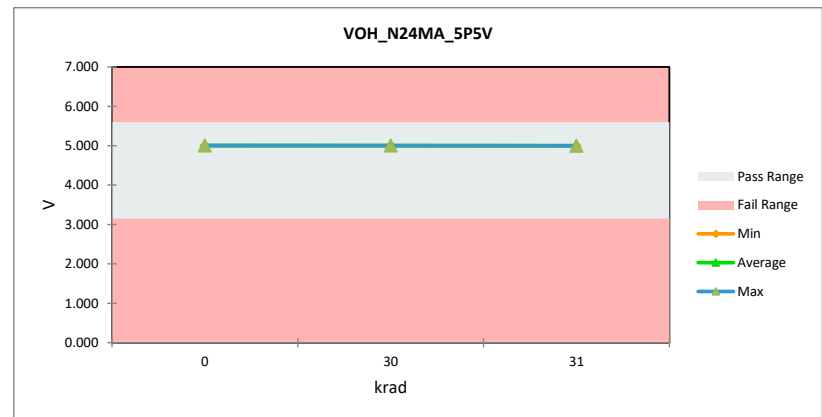
TID Report

SN54SC8T244-SEP

VOH_N24MA_5P5V						
Units	V					
Max Limit	5.6					
Min Limit	3.15					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	4.996	5.007	0.01	0.21%	0.43%
0	2	5.002	5.004	0.00	0.04%	0.08%
0	3	5.001	5.002	0.00	0.03%	0.06%
0	4	5.004	5.003	0.00	-0.02%	0.04%
30	5	5.001	5.002	0.00	0.02%	0.05%
30	6	5.003	5.004	0.00	0.02%	0.04%
30	7	5.000	4.999	0.00	-0.03%	0.06%
30	8	4.997	5.000	0.00	0.07%	0.13%
30	9	5.002	5.001	0.00	0.00%	0.01%
30	10	5.003	5.003	0.00	0.01%	0.01%
31	5a	5.001	4.999	0.00	-0.03%	0.07%
31	6a	5.003	5.001	0.00	-0.03%	0.06%
31	7a	5.000	4.998	0.00	-0.06%	0.12%
31	8a	4.997	4.999	0.00	0.04%	0.08%
31	9a	5.002	5.000	0.00	-0.03%	0.06%
31	10a	5.003	5.001	0.00	-0.03%	0.07%
Max	5.004	5.007	0.00	0.21%	0.43%	
Average	5.001	5.001	0.00	0.01%	0.09%	
Min	4.996	4.998	0.00	-0.06%	0.01%	
Std Dev	0.002	0.002	0.00	0.06%	0.10%	



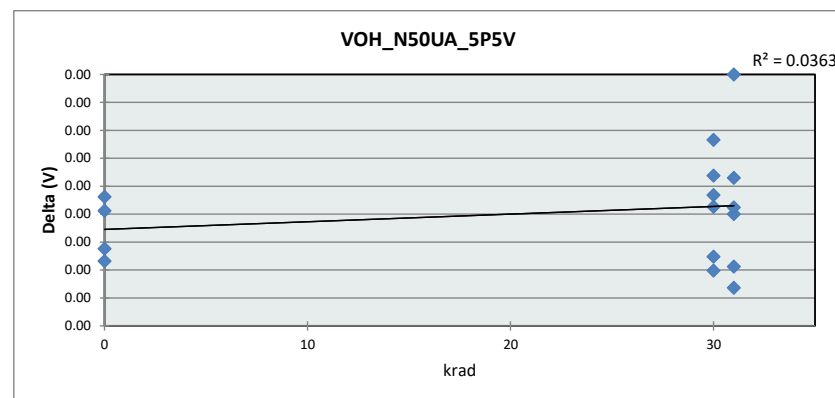
VOH_N24MA_5P5V			
Units	V		
Max Limit	5.6		
Min Limit	3.15		
krad	0	30	31
LL	3.150	3.150	3.150
Min	5.002	4.999	4.998
Average	5.004	5.002	5.000
Max	5.007	5.004	5.001
UL	5.600	5.600	5.600



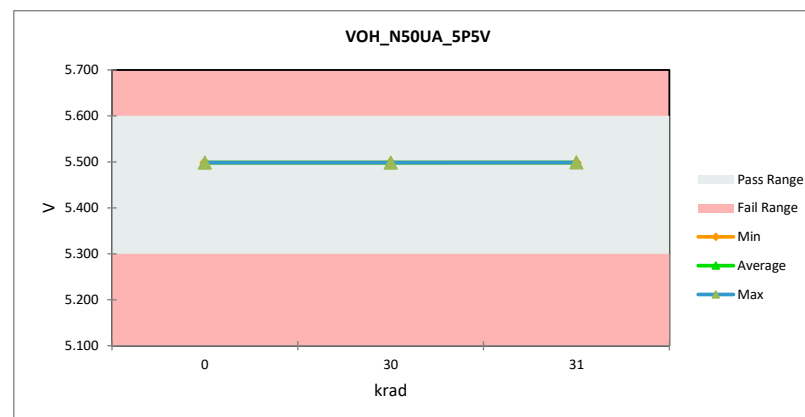
TID Report

SN54SC8T244-SEP

VOH_N50UA_5P5V						
Units		V				
Max Limit		5.6				
Min Limit		5.3				
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	5.499	5.499	0.00	-0.01%	0.10%
0	2	5.499	5.498	0.00	0.00%	0.08%
0	3	5.499	5.498	0.00	-0.01%	0.11%
0	4	5.499	5.498	0.00	0.00%	0.07%
30	5	5.499	5.498	0.00	0.00%	0.08%
30	6	5.499	5.498	0.00	0.00%	0.06%
30	7	5.499	5.498	0.00	0.00%	0.07%
30	8	5.499	5.498	0.00	-0.01%	0.12%
30	9	5.499	5.498	0.00	0.00%	0.04%
30	10	5.499	5.498	0.00	-0.01%	0.11%
31	5a	5.499	5.498	0.00	-0.01%	0.11%
31	6a	5.499	5.498	0.00	0.00%	0.08%
31	7a	5.499	5.499	0.00	0.00%	0.06%
31	8a	5.499	5.498	0.00	-0.01%	0.13%
31	9a	5.499	5.499	0.00	0.00%	0.00%
31	10a	5.499	5.498	0.00	0.00%	0.08%
Max		5.499	5.499	0.00	0.00%	0.13%
Average		5.499	5.498	0.00	0.00%	0.08%
Min		5.499	5.498	0.00	-0.01%	0.00%
Std Dev		0.000	0.000	0.00	0.00%	0.03%



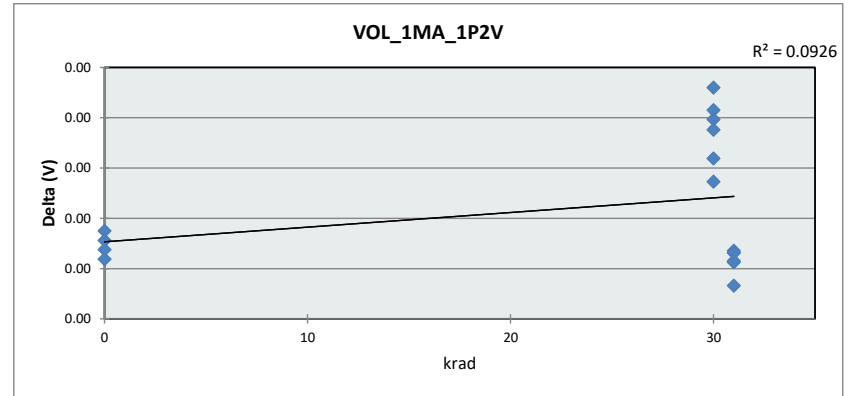
VOH_N50UA_5P5V			
Units		V	
Max Limit		5.6	
Min Limit		5.3	
krad	0	30	31
LL	5.300	5.300	5.300
Min	5.498	5.498	5.498
Average	5.498	5.498	5.498
Max	5.499	5.498	5.499
UL	5.600	5.600	5.600



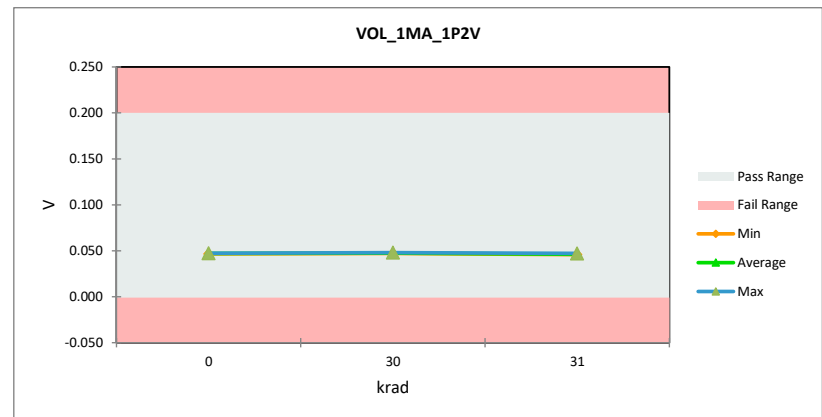
TID Report

SN54SC8T244-SEP

VOL_1MA_1P2V						
Units	V					
Max Limit	0.2					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.047	0.047	0.00	-0.86%	0.20%
0	2	0.047	0.047	0.00	-0.46%	0.11%
0	3	0.048	0.047	0.00	-0.66%	0.16%
0	4	0.047	0.046	0.00	-0.27%	0.06%
30	5	0.048	0.048	0.00	0.77%	0.18%
30	6	0.047	0.048	0.00	1.27%	0.30%
30	7	0.046	0.047	0.00	2.33%	0.54%
30	8	0.046	0.047	0.00	2.13%	0.49%
30	9	0.046	0.047	0.00	1.90%	0.44%
30	10	0.047	0.048	0.00	2.80%	0.65%
31	5a	0.048	0.047	0.00	-0.92%	0.22%
31	6a	0.047	0.046	0.00	-1.43%	0.33%
31	7a	0.046	0.046	0.00	-0.70%	0.16%
31	8a	0.046	0.046	0.00	-0.92%	0.21%
31	9a	0.046	0.046	0.00	-0.74%	0.17%
31	10a	0.047	0.046	0.00	-0.74%	0.17%
Max	0.048	0.048	0.00	2.80%	0.65%	
Average	0.047	0.047	0.00	0.22%	0.27%	
Min	0.046	0.046	0.00	-1.43%	0.06%	
Std Dev	0.001	0.001	0.00	1.40%	0.17%	



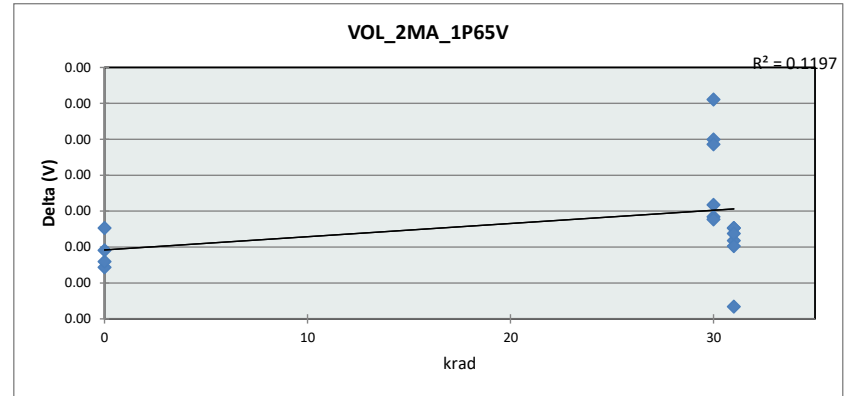
VOL_1MA_1P2V			
Units	V		
Max Limit	0.2		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.046	0.047	0.046
Average	0.047	0.047	0.046
Max	0.047	0.048	0.047
UL	0.200	0.200	0.200



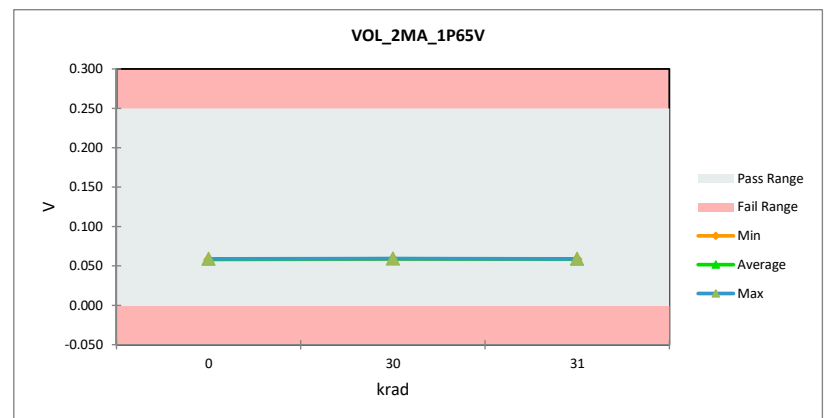
TID Report

SN54SC8T244-SEP

VOL_2MA_1P65V						
Units	V					
Max Limit	0.25					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.059	0.059	0.00	-0.53%	0.12%
0	2	0.059	0.059	0.00	-0.48%	0.11%
0	3	0.059	0.059	0.00	-0.37%	0.09%
0	4	0.058	0.058	0.00	-0.16%	0.04%
30	5	0.059	0.059	0.00	-0.05%	0.01%
30	6	0.059	0.059	0.00	-0.08%	0.02%
30	7	0.059	0.059	0.00	0.68%	0.16%
30	8	0.059	0.059	0.00	1.06%	0.25%
30	9	0.059	0.059	0.00	0.06%	0.01%
30	10	0.059	0.059	0.00	0.63%	0.15%
31	5a	0.059	0.059	0.00	-0.16%	0.04%
31	6a	0.059	0.059	0.00	-0.90%	0.21%
31	7a	0.059	0.058	0.00	-0.28%	0.07%
31	8a	0.059	0.059	0.00	-0.16%	0.04%
31	9a	0.059	0.059	0.00	-0.21%	0.05%
31	10a	0.059	0.059	0.00	-0.33%	0.08%
Max	0.059	0.059	0.00	1.06%	0.25%	
Average	0.059	0.059	0.00	-0.08%	0.09%	
Min	0.058	0.058	0.00	-0.90%	0.01%	
Std Dev	0.000	0.000	0.00	0.49%	0.07%	



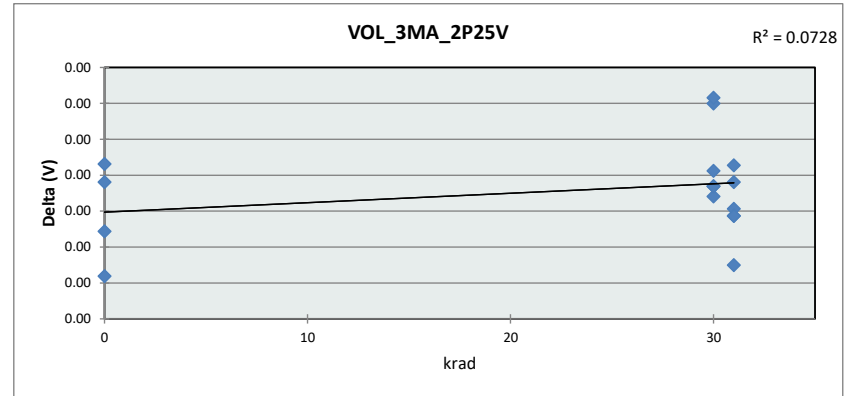
VOL_2MA_1P65V			
Units	V		
Max Limit	0.25		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.058	0.059	0.058
Average	0.059	0.059	0.059
Max	0.059	0.059	0.059
UL	0.250	0.250	0.250



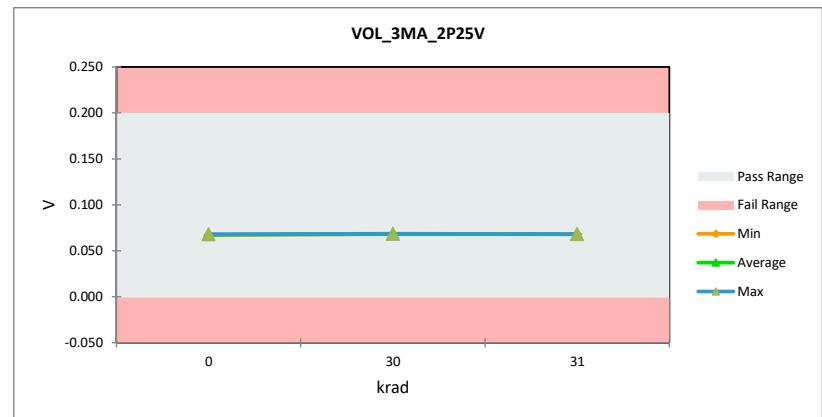
TID Report

SN54SC8T244-SEP

VOL_3MA_2P25V						
Units	V					
Max Limit	0.2					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.068	0.067	0.00	-0.83%	0.28%
0	2	0.068	0.068	0.00	-0.46%	0.16%
0	3	0.068	0.068	0.00	-0.06%	0.02%
0	4	0.067	0.067	0.00	0.09%	0.03%
30	5	0.068	0.068	0.00	-0.09%	0.03%
30	6	0.068	0.068	0.00	-0.17%	0.06%
30	7	0.068	0.068	0.00	0.59%	0.20%
30	8	0.068	0.069	0.00	0.63%	0.21%
30	9	0.068	0.068	0.00	-0.09%	0.03%
30	10	0.068	0.068	0.00	0.04%	0.01%
31	5a	0.068	0.068	0.00	-0.06%	0.02%
31	6a	0.068	0.068	0.00	-0.73%	0.25%
31	7a	0.068	0.068	0.00	0.08%	0.03%
31	8a	0.068	0.068	0.00	-0.28%	0.09%
31	9a	0.068	0.068	0.00	-0.33%	0.11%
31	10a	0.068	0.068	0.00	-0.33%	0.11%
Max	0.068	0.069	0.00	0.63%	0.28%	
Average	0.068	0.068	0.00	-0.12%	0.10%	
Min	0.067	0.067	0.00	-0.83%	0.01%	
Std Dev	0.000	0.000	0.00	0.39%	0.09%	



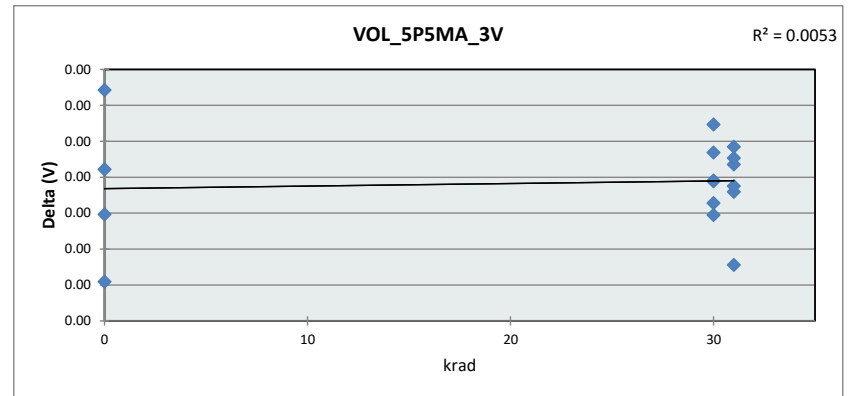
VOL_3MA_2P25V			
Units	V		
Max Limit	0.2		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.067	0.068	0.068
Average	0.068	0.068	0.068
Max	0.068	0.069	0.068
UL	0.200	0.200	0.200



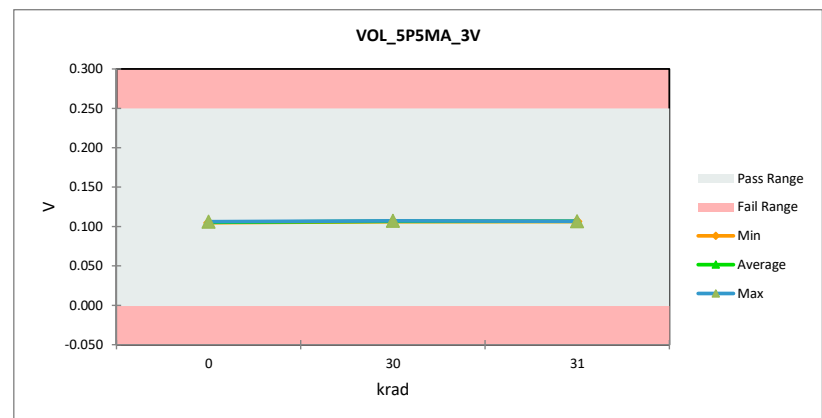
TID Report

SN54SC8T244-SEP

VOL_5P5MA_3V						
Units	V					
Max Limit	0.25					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.106	0.105	0.00	-0.74%	0.31%
0	2	0.106	0.105	0.00	-0.38%	0.16%
0	3	0.106	0.106	0.00	-0.15%	0.06%
0	4	0.105	0.105	0.00	0.27%	0.11%
30	5	0.106	0.106	0.00	-0.39%	0.16%
30	6	0.107	0.107	0.00	-0.32%	0.14%
30	7	0.107	0.107	0.00	-0.06%	0.02%
30	8	0.107	0.107	0.00	0.09%	0.04%
30	9	0.107	0.107	0.00	-0.21%	0.09%
30	10	0.107	0.106	0.00	-0.21%	0.09%
31	5a	0.106	0.106	0.00	-0.12%	0.05%
31	6a	0.107	0.106	0.00	-0.64%	0.27%
31	7a	0.107	0.107	0.00	-0.09%	0.04%
31	8a	0.107	0.107	0.00	-0.26%	0.11%
31	9a	0.107	0.107	0.00	-0.23%	0.10%
31	10a	0.107	0.107	0.00	-0.03%	0.01%
Max	0.107	0.107	0.00	0.27%	0.31%	
Average	0.107	0.106	0.00	-0.22%	0.11%	
Min	0.105	0.105	0.00	-0.74%	0.01%	
Std Dev	0.001	0.001	0.00	0.25%	0.08%	



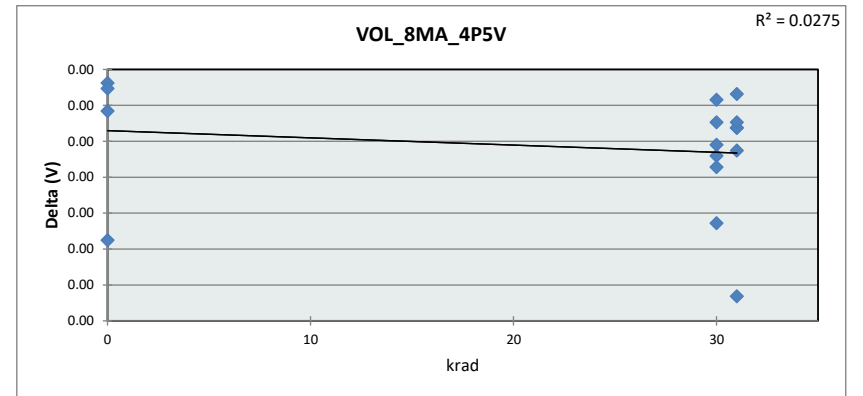
VOL_5P5MA_3V			
Units	V		
Max Limit	0.25		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.105	0.106	0.106
Average	0.105	0.107	0.107
Max	0.106	0.107	0.107
UL	0.250	0.250	0.250



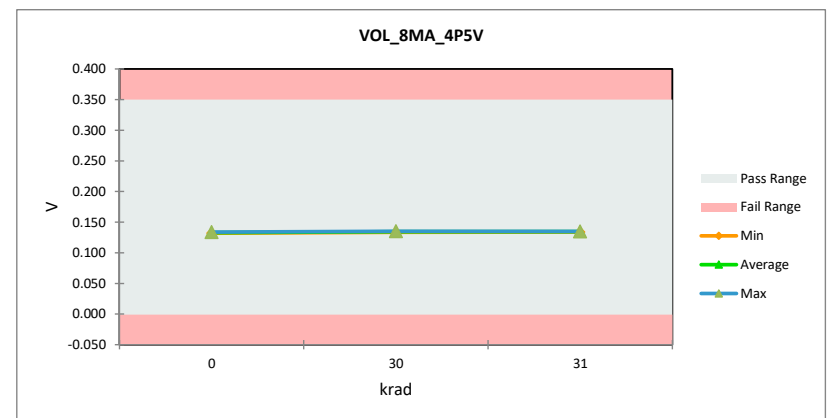
TID Report

SN54SC8T244-SEP

VOL_8MA_4P5V						
Units	V					
Max Limit	0.35					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.133	0.132	0.00	-0.56%	0.21%
0	2	0.133	0.133	0.00	0.09%	0.04%
0	3	0.134	0.134	0.00	-0.02%	0.01%
0	4	0.132	0.132	0.00	0.07%	0.03%
30	5	0.134	0.133	0.00	-0.21%	0.08%
30	6	0.135	0.134	0.00	-0.49%	0.19%
30	7	0.135	0.135	0.00	0.02%	0.01%
30	8	0.135	0.135	0.00	-0.16%	0.06%
30	9	0.135	0.134	0.00	-0.07%	0.03%
30	10	0.134	0.134	0.00	-0.26%	0.10%
31	5a	0.134	0.134	0.00	0.05%	0.02%
31	6a	0.135	0.134	0.00	-0.79%	0.30%
31	7a	0.135	0.135	0.00	-0.09%	0.04%
31	8a	0.135	0.135	0.00	-0.19%	0.07%
31	9a	0.135	0.134	0.00	-0.09%	0.04%
31	10a	0.134	0.134	0.00	-0.07%	0.03%
Max	0.135	0.135	0.00	0.09%	0.30%	
Average	0.134	0.134	0.00	-0.17%	0.08%	
Min	0.132	0.132	0.00	-0.79%	0.01%	
Std Dev	0.001	0.001	0.00	0.25%	0.08%	



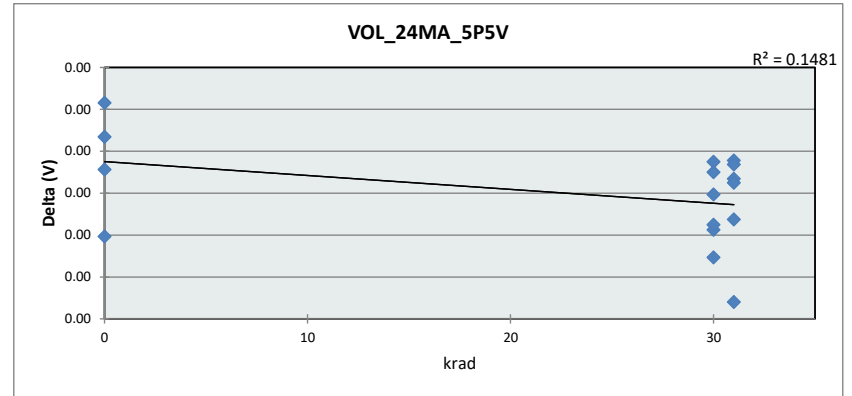
VOL_8MA_4P5V			
Units	V		
Max Limit	0.35		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.132	0.133	0.134
Average	0.133	0.134	0.134
Max	0.134	0.135	0.135
UL	0.350	0.350	0.350



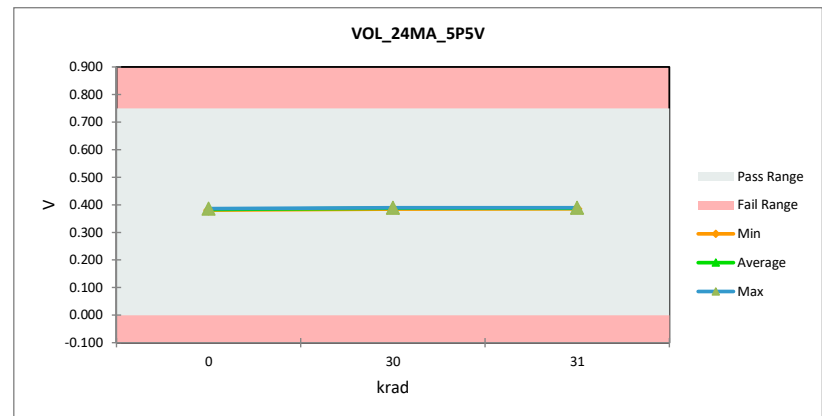
TID Report

SN54SC8T244-SEP

VOL_24MA_5P5V						
Units	V					
Max Limit	0.75					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.384	0.382	0.00	-0.53%	0.27%
0	2	0.384	0.384	0.00	-0.11%	0.06%
0	3	0.386	0.386	0.00	0.09%	0.05%
0	4	0.380	0.381	0.00	0.30%	0.15%
30	5	0.386	0.385	0.00	-0.27%	0.14%
30	6	0.390	0.387	0.00	-0.65%	0.34%
30	7	0.390	0.389	0.00	-0.06%	0.03%
30	8	0.391	0.389	0.00	-0.48%	0.25%
30	9	0.388	0.388	0.00	-0.13%	0.07%
30	10	0.388	0.386	0.00	-0.45%	0.23%
31	5a	0.386	0.386	0.00	-0.06%	0.03%
31	6a	0.390	0.386	0.00	-0.92%	0.48%
31	7a	0.390	0.389	0.00	-0.17%	0.09%
31	8a	0.391	0.389	0.00	-0.42%	0.22%
31	9a	0.388	0.388	0.00	-0.08%	0.04%
31	10a	0.388	0.387	0.00	-0.19%	0.10%
Max		0.391	0.389	0.00	0.30%	0.48%
Average		0.387	0.386	0.00	-0.26%	0.16%
Min		0.380	0.381	0.00	-0.92%	0.03%
Std Dev		0.003	0.003	0.00	0.30%	0.13%

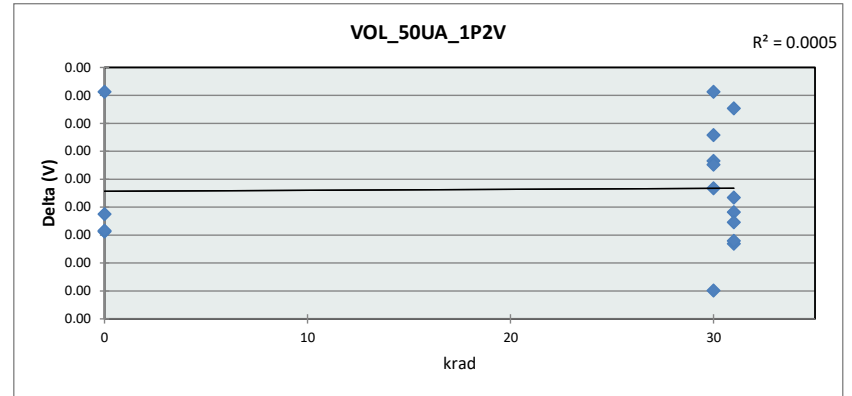


VOL_24MA_5P5V			
Units	V		
Max Limit	0.75		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.381	0.385	0.386
Average	0.383	0.387	0.388
Max	0.386	0.389	0.389
UL	0.750	0.750	0.750

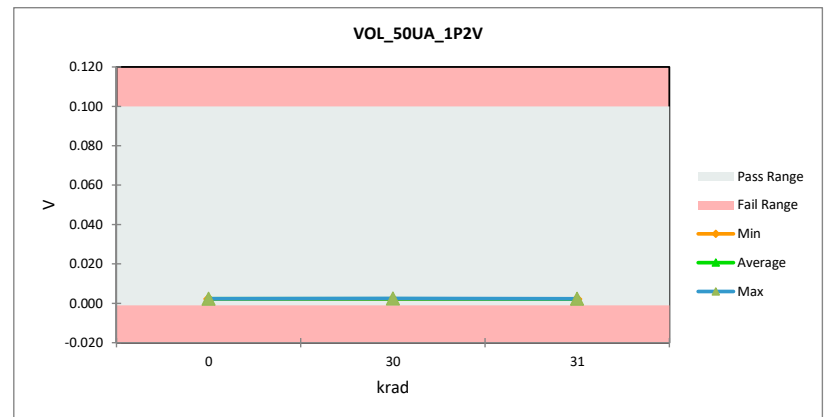


TID Report SN54SC8T244-SEP

VOL_50UA_1P2V						
Units	V					
Max Limit	0.1					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.002	0.002	0.00	7.17%	0.15%
0	2	0.002	0.002	0.00	-3.96%	0.09%
0	3	0.002	0.002	0.00	-2.77%	0.06%
0	4	0.002	0.002	0.00	-3.90%	0.09%
30	5	0.002	0.002	0.00	-8.59%	0.20%
30	6	0.002	0.002	0.00	6.78%	0.15%
30	7	0.002	0.002	0.00	1.50%	0.03%
30	8	0.002	0.002	0.00	1.14%	0.03%
30	9	0.002	0.002	0.00	-0.71%	0.02%
30	10	0.002	0.002	0.00	3.63%	0.08%
31	5a	0.002	0.002	0.00	-2.55%	0.06%
31	6a	0.002	0.002	0.00	-1.42%	0.03%
31	7a	0.002	0.002	0.00	-3.55%	0.08%
31	8a	0.002	0.002	0.00	-5.03%	0.11%
31	9a	0.002	0.002	0.00	-4.75%	0.11%
31	10a	0.002	0.002	0.00	5.81%	0.13%
Max	0.002	0.002	0.00	7.17%	0.20%	
Average	0.002	0.002	0.00	-0.70%	0.09%	
Min	0.002	0.002	0.00	-8.59%	0.02%	
Std Dev	0.000	0.000	0.00	4.63%	0.05%	



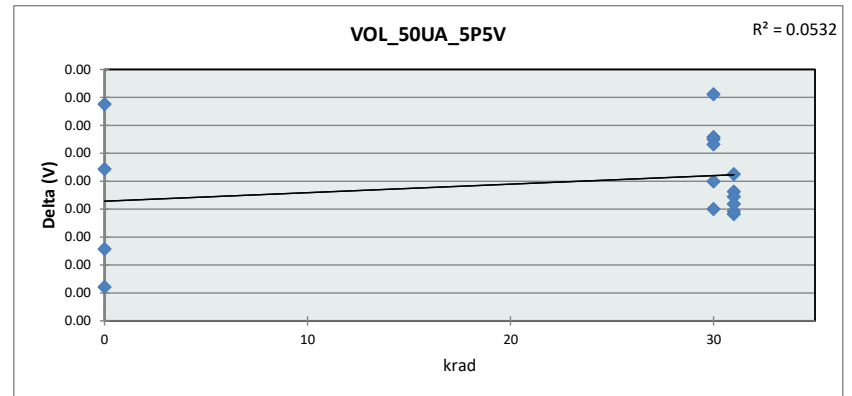
VOL_50UA_1P2V			
Units	V		
Max Limit	0.1		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.002	0.002	0.002
Average	0.002	0.002	0.002
Max	0.002	0.002	0.002
UL	0.100	0.100	0.100



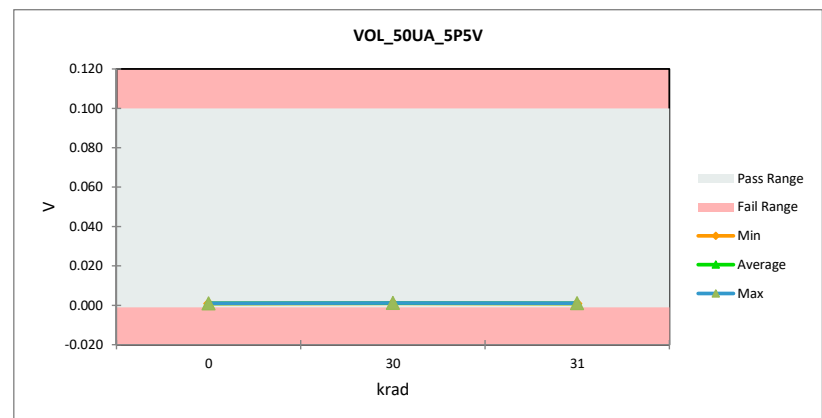
TID Report

SN54SC8T244-SEP

VOL_50UA_5P5V						
Units	V					
Max Limit	0.1					
Min Limit	-0.001					
krad	Serial #	PreTestHDR	PostTestHDR	Delta	Delta %	% of Limit Range
0	1	0.001	0.001	0.00	7.68%	0.07%
0	2	0.001	0.001	0.00	-12.86%	0.14%
0	3	0.001	0.001	0.00	-7.36%	0.07%
0	4	0.001	0.001	0.00	22.37%	0.19%
30	5	0.001	0.001	0.00	13.88%	0.12%
30	6	0.001	0.001	0.00	12.45%	0.13%
30	7	0.001	0.001	0.00	23.62%	0.20%
30	8	0.001	0.001	0.00	13.20%	0.11%
30	9	0.001	0.001	0.00	4.92%	0.05%
30	10	0.001	0.001	0.00	0.00%	0.00%
31	5a	0.001	0.001	0.00	3.47%	0.03%
31	6a	0.001	0.001	0.00	-0.88%	0.01%
31	7a	0.001	0.001	0.00	7.19%	0.06%
31	8a	0.001	0.001	0.00	2.53%	0.02%
31	9a	0.001	0.001	0.00	-0.38%	0.00%
31	10a	0.001	0.001	0.00	0.86%	0.01%
Max	0.001	0.001	0.00	23.62%	0.20%	
Average	0.001	0.001	0.00	5.67%	0.08%	
Min	0.001	0.001	0.00	-12.86%	0.00%	
Std Dev	0.000	0.000	0.00	9.80%	0.07%	



VOL_50UA_5P5V			
Units	V		
Max Limit	0.1		
Min Limit	-0.001		
krad	0	30	31
LL	-0.001	-0.001	-0.001
Min	0.001	0.001	0.001
Average	0.001	0.001	0.001
Max	0.001	0.001	0.001
UL	0.100	0.100	0.100



IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2025, Texas Instruments Incorporated