ANALOG DEVICES
AHEAD OF WHAT'S POSSIBLE™

DISPLACEMENT DAMAGE TEST REPORT OP471S

January 2023

Radiation Test Report	
Product:	OP471S
Die:	1470W
Fluence:	2e12 n/cm^2
Test Method:	MIL-STD-883 TM1017
Facilities:	UMass Lowell
Tested:	January 5, 2023

The RADTEST® DATA SERVICE is a compilation of radiation test results on Analog Devices' Space grade products. It is designed to assist customers in selecting the right product for applications where radiation is a consideration. Many products manufactured by Analog Devices, Inc. have been shown to be radiation tolerant to most tactical radiation environments. Analog Devices, Inc. does not make any claim to maintain or guarantee these levels of radiation tolerance without lot qualification test.

It is the responsibility of the Procuring Activity to screen products from Analog Devices, Inc. for compliance to Nuclear Hardness Critical Items (HCI) specifications.

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Wafer #	SN	+ICC @ VCC=+-15V			-ICC @ VCC=+-15V			VIO A		
		A			A			V		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
	86	7.91E-03	7.66E-03	7.65E-03	-7.91E-03	-7.66E-03	-7.65E-03	-1.95E-04	-1.99E-04	-1.92E-04
	76	7.82E-03	7.79E-03	7.82E-03	-7.82E-03	-7.79E-03	-7.82E-03	-3.05E-04	-3.33E-04	-3.52E-04
	77	7.98E-03	7.88E-03	7.91E-03	-7.98E-03	-7.88E-03	-7.91E-03	-2.48E-04	-2.69E-04	-3.10E-04
	78	7.80E-03	7.78E-03	7.81E-03	-7.80E-03	-7.78E-03	-7.81E-03	-1.59E-04	-1.84E-04	-2.16E-04
	79	7.73E-03	7.69E-03	7.72E-03	-7.73E-03	-7.69E-03	-7.72E-03	-1.62E-04	-1.79E-04	-1.97E-04
	80	7.76E-03	7.74E-03	7.79E-03	-7.76E-03	-7.74E-03	-7.79E-03	-2.59E-04	-2.99E-04	-3.32E-04
	81	7.86E-03	7.81E-03	7.85E-03	-7.86E-03	-7.82E-03	-7.85E-03	-1.27E-04	-1.57E-04	-1.71E-04
	82	7.70E-03	7.71E-03	7.76E-03	-7.70E-03	-7.71E-03	-7.76E-03	-7.70E-05	-7.15E-05	-8.39E-05
	83	7.63E-03	7.65E-03	7.70E-03	-7.63E-03	-7.65E-03	-7.70E-03	-1.76E-04	-1.97E-04	-2.10E-04
	84	7.81E-03	7.82E-03	7.85E-03	-7.81E-03	-7.82E-03	-7.86E-03	-1.21E-04	-1.42E-04	-1.70E-04
	85	7.86E-03	7.87E-03	7.91E-03	-7.86E-03	-7.87E-03	-7.91E-03	-3.59E-04	-3.81E-04	-3.88E-04
min		7.63E-03	7.65E-03	7.70E-03	-7.98E-03	-7.88E-03	-7.91E-03	-3.59E-04	-3.81E-04	-3.88E-04
max		7.98E-03	7.88E-03	7.91E-03	-7.63E-03	-7.65E-03	-7.70E-03	-7.70E-05	-7.15E-05	-8.39E-05
mean		7.79E-03	7.77E-03	7.81E-03	-7.79E-03	-7.77E-03	-7.81E-03	-1.99E-04	-2.21E-04	-2.43E-04
std. dev		9.84E-05	7.55E-05	7.19E-05	9.77E-05	7.56E-05	7.18E-05	8.96E-05	9.59E-05	9.73E-05
mean - 3 sigma		7.50E-03	7.55E-03	7.60E-03	-8.09E-03	-8.00E-03	-8.03E-03	-4.68E-04	-5.09E-04	-5.35E-04
mean +3 sigma		8.09E-03	8.00E-03	8.03E-03	-7.50E-03	-7.55E-03	-7.60E-03	6.96E-05	6.64E-05	4.88E-05

Wafer #	SN	VIO B			VIO C			VIO D		
		V			V			V		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
	86	5.51E-05	4.90E-05	5.78E-05	9.91E-05	9.26E-05	1.01E-04	-3.14E-04	-3.18E-04	-3.10E-04
	76	-1.55E-04	-1.69E-04	-1.81E-04	2.38E-05	-4.10E-07	-2.49E-05	-7.78E-05	-9.04E-05	-1.06E-04
	77	-3.94E-05	-8.55E-05	-1.04E-04	2.78E-04	2.46E-04	2.24E-04	7.59E-05	7.77E-05	4.26E-05
	78	4.41E-05	1.52E-05	1.09E-06	2.12E-04	1.83E-04	1.82E-04	9.18E-06	-5.07E-05	-6.91E-05
	79	4.12E-05	1.69E-05	-9.32E-06	4.60E-05	1.82E-05	6.32E-06	-3.55E-05	-5.15E-05	-7.35E-05
	80	-6.93E-06	-4.59E-05	-7.37E-05	9.27E-05	4.12E-05	3.53E-05	6.64E-05	3.25E-05	1.60E-05
	81	5.54E-05	4.36E-05	2.50E-05	2.11E-04	1.80E-04	1.86E-04	-4.11E-05	-6.95E-05	-7.45E-05
	82	6.61E-05	3.40E-05	3.24E-05	1.96E-04	1.63E-04	1.68E-04	-3.57E-05	-7.13E-05	-7.78E-05
	83	-5.22E-05	-9.17E-05	-1.14E-04	2.10E-04	1.64E-04	1.62E-04	-2.46E-05	-4.00E-05	-7.05E-05
	84	-6.20E-05	-1.00E-04	-1.09E-04	1.41E-04	1.27E-04	1.14E-04	-7.08E-05	-8.33E-05	-9.08E-05
	85	1.11E-04	8.37E-05	7.14E-05	8.00E-05	4.22E-05	6.23E-05	-1.58E-04	5.98E-09	-2.00E-04
min		-1.55E-04	-1.69E-04	-1.81E-04	2.38E-05	-4.10E-07	-2.49E-05	-1.58E-04	-9.04E-05	-2.00E-04
max		1.11E-04	8.37E-05	7.14E-05	2.78E-04	2.46E-04	2.24E-04	7.59E-05	7.77E-05	4.26E-05
mean		2.63E-07	-2.98E-05	-4.61E-05	1.49E-04	1.16E-04	1.12E-04	-2.92E-05	-3.46E-05	-7.03E-05
std. dev		7.85E-05	8.02E-05	8.13E-05	8.48E-05	8.45E-05	8.62E-05	6.88E-05	5.47E-05	6.57E-05
mean - 3 sigma		-2.35E-04	-2.71E-04	-2.90E-04	-1.05E-04	-1.37E-04	-1.47E-04	-2.36E-04	-1.99E-04	-2.67E-04
mean +3 sigma		2.36E-04	2.11E-04	1.98E-04	4.04E-04	3.70E-04	3.70E-04	1.77E-04	1.30E-04	1.27E-04

Wafer #	SN	+IIB A @ VCM=0V			+IIB B @ VCM=0V			+IIB C @ VCM=0V		
		A			A			A		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
	86	3.31E-09	3.20E-09	3.23E-09	2.73E-09	2.71E-09	2.68E-09	2.19E-09	2.24E-09	2.05E-09
	76	5.31E-09	1.14E-08	1.79E-08	3.99E-09	9.50E-09	2.07E-08	3.57E-09	3.93E-09	1.36E-08
	77	5.21E-09	1.77E-08	1.96E-08	4.53E-09	1.94E-08	2.90E-08	4.36E-09	1.52E-08	2.49E-08
	78	5.52E-09	1.69E-08	2.40E-08	5.40E-09	2.27E-08	2.48E-08	4.47E-09	1.97E-08	2.20E-08
	79	5.73E-09	1.61E-08	2.79E-08	4.38E-09	2.46E-08	2.70E-08	3.36E-09	1.51E-08	2.47E-08
	80	5.26E-09	1.28E-08	2.71E-08	5.26E-09	3.01E-08	3.85E-08	4.37E-09	1.76E-08	2.13E-08
	81	3.91E-09	8.18E-09	1.12E-08	3.53E-09	1.54E-08	2.16E-08	2.66E-09	1.80E-08	2.05E-08
	82	3.87E-09	1.74E-08	2.24E-08	4.01E-09	1.42E-08	1.80E-08	2.91E-09	1.27E-08	2.18E-08
	83	5.19E-09	1.31E-08	2.19E-08	4.81E-09	2.26E-08	2.64E-08	3.98E-09	1.70E-08	2.49E-08
	84	3.52E-09	8.70E-09	1.35E-08	3.01E-09	8.93E-09	1.64E-08	2.62E-09	1.10E-08	2.01E-08
	85	3.38E-09	8.26E-09	1.36E-08	3.01E-09	1.28E-08	1.72E-08	1.78E-09	1.25E-08	1.84E-08
min		3.38E-09	8.18E-09	1.12E-08	3.01E-09	8.93E-09	1.64E-08	1.78E-09	3.93E-09	1.36E-08
max		5.73E-09	1.77E-08	2.79E-08	5.40E-09	3.01E-08	3.85E-08	4.47E-09	1.97E-08	2.49E-08
mean		4.69E-09	1.31E-08	1.99E-08	4.19E-09	1.80E-08	2.40E-08	3.41E-09	1.43E-08	2.12E-08
std. dev		9.07E-10	3.85E-09	5.81E-09	8.46E-10	6.98E-09	6.72E-09	9.07E-10	4.55E-09	3.46E-09
mean - 3 sigma		1.97E-09	1.50E-09	2.49E-09	1.65E-09	-2.90E-09	3.82E-09	6.87E-10	6.10E-10	1.08E-08
mean +3 sigma		7.41E-09	2.46E-08	3.73E-08	6.73E-09	3.90E-08	4.41E-08	6.13E-09	2.79E-08	3.16E-08

Wafer #	SN	+IIB D @ VCM=0V			-IIB A @ VCM=0V			-IIB B @ VCM=0V		
		A			A			A		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
	86	2.26E-09	2.23E-09	2.17E-09	2.43E-09	2.54E-09	2.42E-09	1.68E-09	1.73E-09	1.73E-09
	76	4.72E-09	1.32E-08	1.93E-08	4.79E-09	1.88E-08	2.67E-08	2.85E-09	1.12E-08	1.34E-08
	77	4.51E-09	1.78E-08	2.32E-08	4.48E-09	1.61E-08	2.33E-08	3.94E-09	1.58E-08	2.55E-08
	78	4.03E-09	1.29E-08	2.01E-08	3.09E-09	1.11E-08	1.65E-08	4.33E-09	1.51E-08	2.19E-08
	79	3.88E-09	1.28E-08	1.37E-08	4.33E-09	2.03E-08	2.81E-08	2.90E-09	1.94E-08	2.45E-08
	80	4.86E-09	1.47E-08	2.34E-08	4.63E-09	1.71E-08	3.38E-08	3.66E-09	2.03E-08	2.63E-08
	81	3.56E-09	1.24E-08	1.62E-08	3.17E-09	7.77E-09	1.04E-08	2.55E-09	1.23E-08	1.91E-08
	82	3.49E-09	1.40E-08	2.06E-08	3.09E-09	1.69E-08	2.05E-08	2.78E-09	1.10E-08	1.53E-08
	83	4.43E-09	2.08E-08	2.81E-08	3.81E-09	1.65E-08	2.39E-08	3.88E-09	1.59E-08	3.08E-08
	84	3.40E-09	1.23E-08	1.86E-08	2.03E-09	8.20E-09	1.55E-08	2.11E-09	1.49E-08	2.38E-08
	85	2.73E-09	1.38E-08	1.68E-08	2.62E-09	1.43E-08	1.41E-08	1.82E-09	1.16E-08	1.68E-08
min		2.73E-09	1.23E-08	1.37E-08	2.03E-09	7.77E-09	1.04E-08	1.82E-09	1.10E-08	1.34E-08
max		4.86E-09	2.08E-08	2.81E-08	4.79E-09	2.03E-08	3.38E-08	4.33E-09	2.03E-08	3.08E-08
mean		3.96E-09	1.45E-08	2.00E-08	3.60E-09	1.47E-08	2.13E-08	3.08E-09	1.48E-08	2.17E-08
std. dev		6.76E-10	2.75E-09	4.14E-09	9.40E-10	4.30E-09	7.25E-09	8.34E-10	3.30E-09	5.48E-09
mean - 3 sigma		1.93E-09	6.21E-09	7.57E-09	7.84E-10	1.78E-09	-4.69E-10	5.79E-10	4.87E-09	5.29E-09
mean +3 sigma		5.99E-09	2.27E-08	3.24E-08	6.42E-09	2.76E-08	4.30E-08	5.58E-09	2.46E-08	3.82E-08

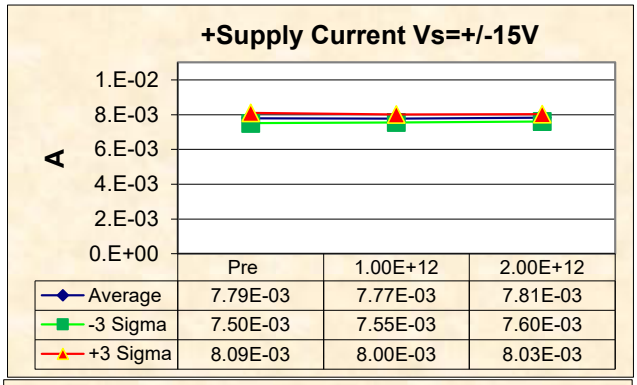
Wafer #	SN	-IIB C @ VCM=0V			-IIB D @ VCM=0V			IIO A @ VCM=0V		
		A			A			A		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
	86	1.48E-09	1.40E-09	1.50E-09	2.56E-09	2.58E-09	2.62E-09	8.78E-10	6.61E-10	8.02E-10
	76	3.59E-09	8.06E-09	1.58E-08	4.17E-09	1.10E-08	1.95E-08	5.13E-10	-7.36E-09	-8.83E-09
	77	3.83E-09	1.71E-08	2.58E-08	4.26E-09	1.42E-08	2.46E-08	7.36E-10	1.62E-09	-3.70E-09
	78	3.97E-09	1.81E-08	1.86E-08	4.40E-09	2.10E-08	2.79E-08	2.44E-09	5.82E-09	7.56E-09
	79	2.93E-09	1.11E-08	1.96E-08	3.56E-09	1.37E-08	1.62E-08	1.40E-09	-4.24E-09	-2.67E-10
	80	3.90E-09	1.66E-08	2.24E-08	4.23E-09	1.59E-08	2.46E-08	6.34E-10	-4.34E-09	-6.71E-09
	81	2.20E-09	1.20E-08	1.93E-08	3.32E-09	1.51E-08	2.01E-08	7.41E-10	4.17E-10	8.10E-10
	82	2.58E-09	1.74E-08	2.80E-08	2.82E-09	1.38E-08	2.15E-08	7.78E-10	5.50E-10	1.93E-09
	83	3.57E-09	2.38E-08	3.06E-08	4.19E-09	1.21E-08	2.52E-08	1.38E-09	-3.36E-09	-2.00E-09
	84	2.16E-09	7.87E-09	1.55E-08	3.14E-09	9.28E-09	1.58E-08	1.48E-09	4.93E-10	-2.03E-09
	85	1.67E-09	9.40E-09	1.37E-08	2.22E-09	1.32E-08	1.80E-08	7.62E-10	-6.03E-09	-4.37E-10
min		1.67E-09	7.87E-09	1.37E-08	2.22E-09	9.28E-09	1.58E-08	5.13E-10	-7.36E-09	-8.83E-09
max		3.97E-09	2.38E-08	3.06E-08	4.40E-09	2.10E-08	2.79E-08	2.44E-09	5.82E-09	7.56E-09
mean		3.04E-09	1.41E-08	2.09E-08	3.63E-09	1.39E-08	2.13E-08	1.09E-09	-1.64E-09	-1.37E-09
std. dev		8.44E-10	5.24E-09	5.66E-09	7.40E-10	3.16E-09	4.11E-09	5.90E-10	4.07E-09	4.57E-09
mean - 3 sigma		5.08E-10	-1.57E-09	3.96E-09	1.41E-09	4.44E-09	9.00E-09	-6.85E-10	-1.38E-08	-1.51E-08
mean +3 sigma		5.57E-09	2.99E-08	3.79E-08	5.85E-09	2.34E-08	3.37E-08	2.86E-09	1.06E-08	1.23E-08

Wafer #	SN	IIO B @ VCM=0V			IIO C @ VCM=0V			IIO D @ VCM=0V		
		A			A			A		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
	86	1.06E-09	9.78E-10	9.55E-10	7.10E-10	8.39E-10	5.57E-10	-3.01E-10	-3.49E-10	-4.47E-10
	76	1.14E-09	-1.74E-09	7.31E-09	-1.51E-11	-4.13E-09	-2.18E-09	5.51E-10	2.19E-09	-1.62E-10
	77	5.97E-10	3.68E-09	3.54E-09	5.37E-10	-1.95E-09	-9.16E-10	2.46E-10	3.59E-09	-1.42E-09
	78	1.08E-09	7.61E-09	2.83E-09	4.94E-10	1.60E-09	3.36E-09	-3.73E-10	-8.12E-09	-7.81E-09
	79	1.48E-09	5.19E-09	2.53E-09	4.24E-10	4.02E-09	5.03E-09	3.21E-10	-9.36E-10	-2.43E-09
	80	1.60E-09	9.87E-09	1.22E-08	4.67E-10	9.77E-10	-1.12E-09	6.36E-10	-1.21E-09	-1.18E-09
	81	9.76E-10	3.13E-09	2.54E-09	4.59E-10	5.98E-09	1.21E-09	2.38E-10	-2.67E-09	-3.90E-09
	82	1.23E-09	3.23E-09	2.70E-09	3.29E-10	-4.71E-09	-6.25E-09	6.76E-10	2.29E-10	-9.02E-10
	83	9.24E-10	6.66E-09	-4.31E-09	4.06E-10	-6.80E-09	-5.70E-09	2.40E-10	8.72E-09	2.92E-09
	84	9.03E-10	-6.00E-09	-7.35E-09	4.62E-10	3.14E-09	4.52E-09	2.63E-10	3.07E-09	2.75E-09
	85	1.19E-09	1.28E-09	4.50E-10	1.13E-10	3.14E-09	0.00E+00	5.12E-10	5.74E-10	-1.24E-09
min		5.97E-10	-6.00E-09	-7.35E-09	-1.51E-11	-6.80E-09	-6.25E-09	-3.73E-10	-8.12E-09	-7.81E-09
max		1.60E-09	9.87E-09	1.22E-08	5.37E-10	5.98E-09	5.03E-09	6.76E-10	8.72E-09	2.92E-09
mean		1.11E-09	3.29E-09	2.24E-09	3.67E-10	1.26E-10	-2.07E-10	3.31E-10	5.43E-10	-1.34E-09
std. dev		2.91E-10	4.63E-09	5.43E-09	1.79E-10	4.27E-09	3.89E-09	3.01E-10	4.42E-09	3.09E-09
mean - 3 sigma		2.40E-10	-1.06E-08	-1.40E-08	-1.70E-10	-1.27E-08	-1.19E-08	-5.73E-10	-1.27E-08	-1.06E-08
mean +3 sigma		1.98E-09	1.72E-08	1.85E-08	9.05E-10	1.29E-08	1.15E-08	1.23E-09	1.38E-08	7.95E-09

Wafer #	SN	AVO A@ VO=+-10V, RL=10K			AVO B @ VO=+-10V, RL=10K			AVO C @ VO=+-10V, RL=10K		
		V/mV			V/mV			V/mV		
		Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
	86	867.10	846.04	848.83	843.99	855.53	851.27	883.11	893.40	884.59
	76	792.62	319.17	227.18	784.74	313.67	225.51	806.46	319.49	226.99
	77	763.16	303.98	219.17	752.46	297.34	212.94	761.37	301.66	214.88
	78	769.14	301.45	217.78	752.47	294.89	214.14	792.26	304.47	221.49
	79	804.22	309.61	228.19	796.17	312.89	227.51	827.24	320.23	232.67
	80	783.79	310.05	223.26	775.51	305.50	223.13	818.72	317.81	228.85
	81	826.10	343.69	248.85	845.28	348.14	254.75	873.60	355.13	257.23
	82	828.57	342.69	250.19	845.20	343.68	250.35	898.42	353.75	256.64
	83	790.34	320.54	234.47	795.84	322.48	233.60	812.70	325.24	234.44
	84	838.68	342.66	250.59	853.16	350.25	254.90	901.53	362.97	260.73
	85	838.63	341.28	250.46	846.50	338.26	250.84	883.95	351.88	258.67
	min	763.16	301.45	217.78	752.46	294.89	212.94	761.37	301.66	214.88
	max	838.68	343.69	250.59	853.16	350.25	254.90	901.53	362.97	260.73
	mean	803.53	323.51	235.01	804.73	322.71	234.77	837.62	331.26	239.26
	std. dev	28.09	17.41	13.73	39.78	21.03	16.61	48.48	22.55	17.32
	mean - 3 sigma	719.27	271.28	193.81	685.40	259.63	184.94	692.19	263.61	187.31
	mean +3 sigma	887.78	375.74	276.21	924.06	385.79	284.60	983.06	398.91	291.20

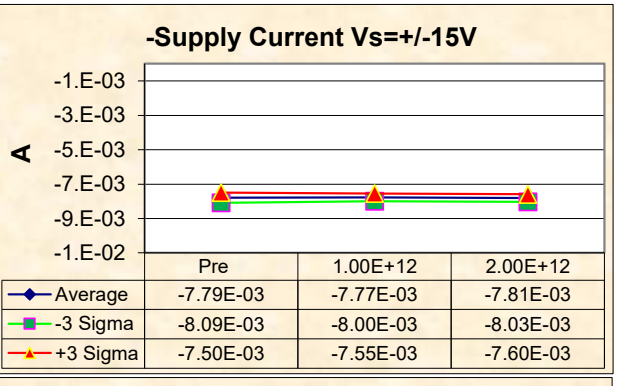
Wafer #	SN	AVO D @ VO=+-10V, RL=10K		
		V/mV		
		Pre	1.00E+12	2.00E+12
	86	913.93	912.21	912.87
	76	835.85	326.13	234.38
	77	792.06	304.00	219.47
	78	809.72	308.92	222.37
	79	842.60	323.77	234.95
	80	837.78	323.49	232.84
	81	894.77	359.70	260.94
	82	895.13	356.32	260.43
	83	838.53	327.71	239.88
	84	906.06	360.64	263.87
	85	923.82	361.06	264.15
	min	792.06	304.00	219.47
	max	923.82	361.06	264.15
	mean	857.63	335.17	243.33
	std. dev	44.18	22.19	17.45
	mean - 3 sigma	725.09	268.59	190.99
	mean +3 sigma	990.17	401.75	295.66

+Supply Current Vs=+/-15V



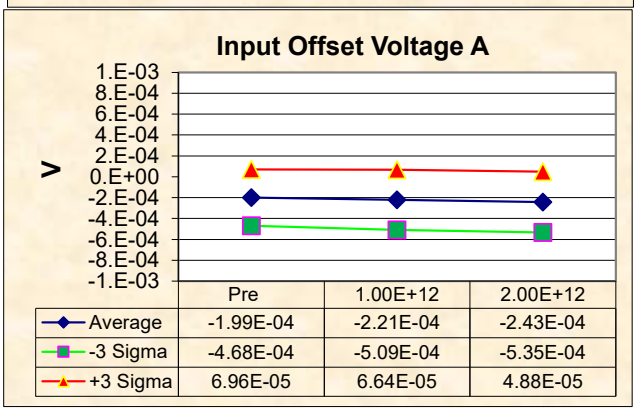
	Pre	1.00E+12	2.00E+12
Average	7.79E-03	7.77E-03	7.81E-03
-3 Sigma	7.50E-03	7.55E-03	7.60E-03
+3 Sigma	8.09E-03	8.00E-03	8.03E-03

-Supply Current Vs=+/-15V



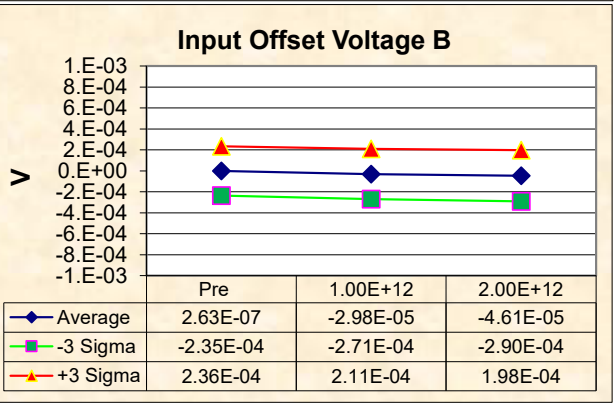
	Pre	1.00E+12	2.00E+12
Average	-7.79E-03	-7.77E-03	-7.81E-03
-3 Sigma	-8.09E-03	-8.00E-03	-8.03E-03
+3 Sigma	-7.50E-03	-7.55E-03	-7.60E-03

Input Offset Voltage A



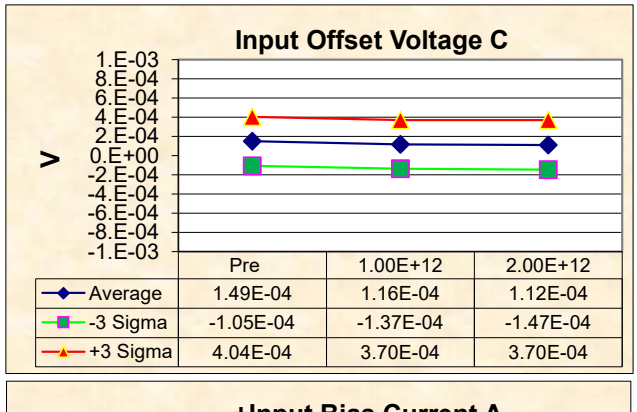
	Pre	1.00E+12	2.00E+12
Average	-1.99E-04	-2.21E-04	-2.43E-04
-3 Sigma	-4.68E-04	-5.09E-04	-5.35E-04
+3 Sigma	6.96E-05	6.64E-05	4.88E-05

Input Offset Voltage B



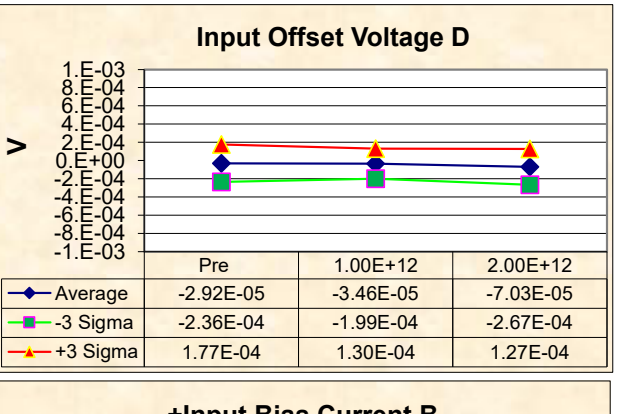
	Pre	1.00E+12	2.00E+12
Average	2.63E-07	-2.98E-05	-4.61E-05
-3 Sigma	-2.35E-04	-2.71E-04	-2.90E-04
+3 Sigma	2.36E-04	2.11E-04	1.98E-04

Input Offset Voltage C



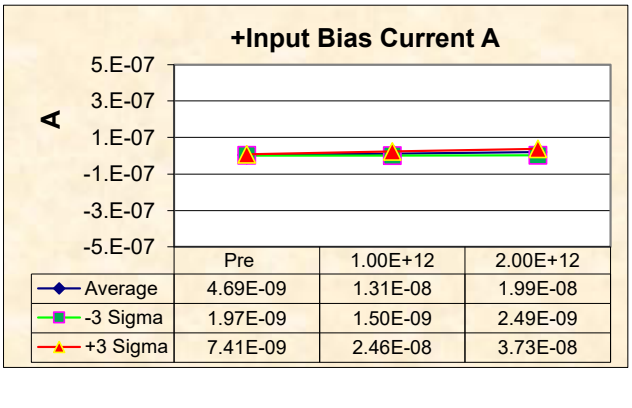
	Pre	1.00E+12	2.00E+12
Average	1.49E-04	1.16E-04	1.12E-04
-3 Sigma	-1.05E-04	-1.37E-04	-1.47E-04
+3 Sigma	4.04E-04	3.70E-04	3.70E-04

Input Offset Voltage D



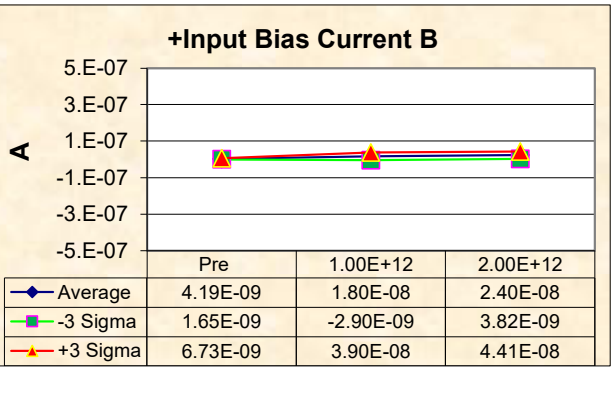
	Pre	1.00E+12	2.00E+12
Average	-2.92E-05	-3.46E-05	-7.03E-05
-3 Sigma	-2.36E-04	-1.99E-04	-2.67E-04
+3 Sigma	1.77E-04	1.30E-04	1.27E-04

+Input Bias Current A



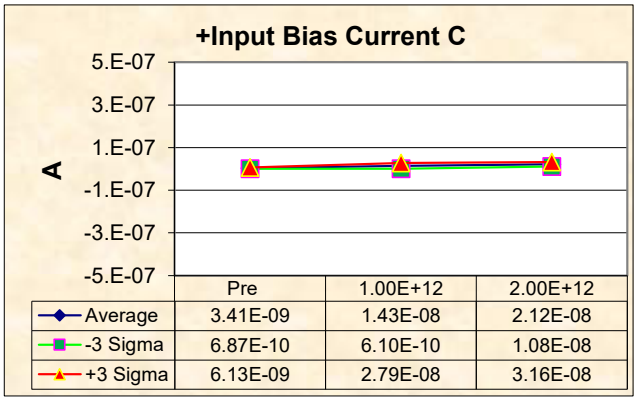
	Pre	1.00E+12	2.00E+12
Average	4.69E-09	1.31E-08	1.99E-08
-3 Sigma	1.97E-09	1.50E-09	2.49E-09
+3 Sigma	7.41E-09	2.46E-08	3.73E-08

+Input Bias Current B



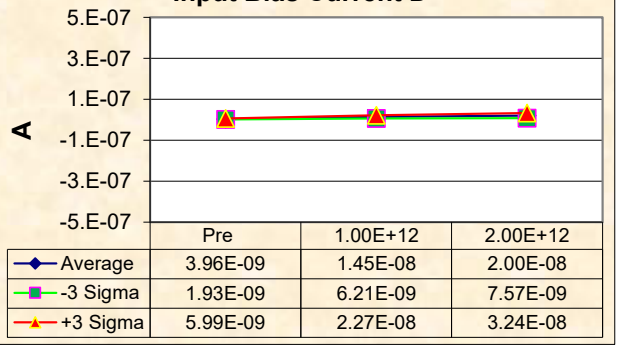
	Pre	1.00E+12	2.00E+12
Average	4.19E-09	1.80E-08	2.40E-08
-3 Sigma	1.65E-09	-2.90E-09	3.82E-09
+3 Sigma	6.73E-09	3.90E-08	4.41E-08

+Input Bias Current C



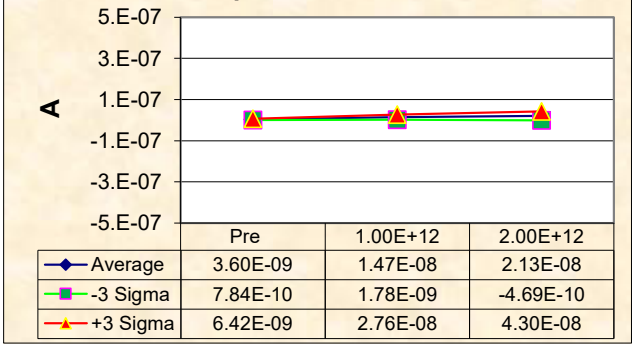
	Pre	1.00E+12	2.00E+12
Average	3.41E-09	1.43E-08	2.12E-08
-3 Sigma	6.87E-10	6.10E-10	1.08E-08
+3 Sigma	6.13E-09	2.79E-08	3.16E-08

+Input Bias Current D



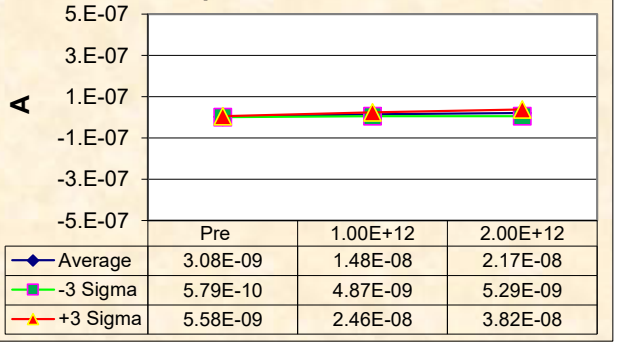
	Pre	1.00E+12	2.00E+12
Average	3.96E-09	1.45E-08	2.00E-08
-3 Sigma	1.93E-09	6.21E-09	7.57E-09
+3 Sigma	5.99E-09	2.27E-08	3.24E-08

-Input Bias Current A



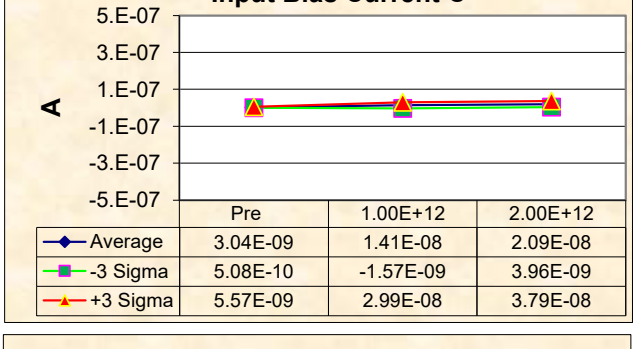
	Pre	1.00E+12	2.00E+12
Average	3.60E-09	1.47E-08	2.13E-08
-3 Sigma	7.84E-10	1.78E-09	-4.69E-10
+3 Sigma	6.42E-09	2.76E-08	4.30E-08

-Input Bias Current B



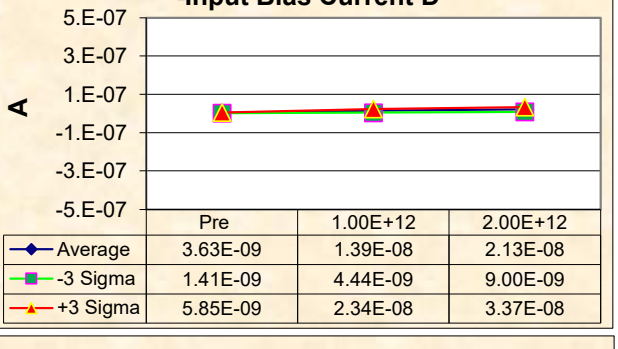
	Pre	1.00E+12	2.00E+12
Average	3.08E-09	1.48E-08	2.17E-08
-3 Sigma	5.79E-10	4.87E-09	5.29E-09
+3 Sigma	5.58E-09	2.46E-08	3.82E-08

-Input Bias Current C



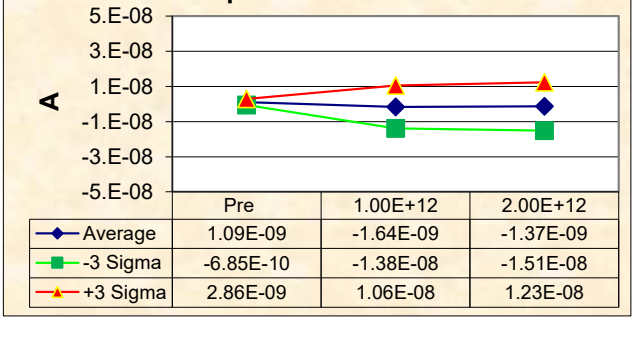
	Pre	1.00E+12	2.00E+12
Average	3.04E-09	1.41E-08	2.09E-08
-3 Sigma	5.08E-10	-1.57E-09	3.96E-09
+3 Sigma	5.57E-09	2.99E-08	3.79E-08

-Input Bias Current D



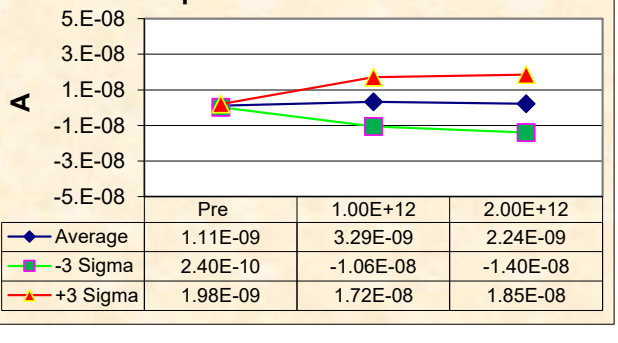
	Pre	1.00E+12	2.00E+12
Average	3.63E-09	1.39E-08	2.13E-08
-3 Sigma	1.41E-09	4.44E-09	9.00E-09
+3 Sigma	5.85E-09	2.34E-08	3.37E-08

Input Offset Current A



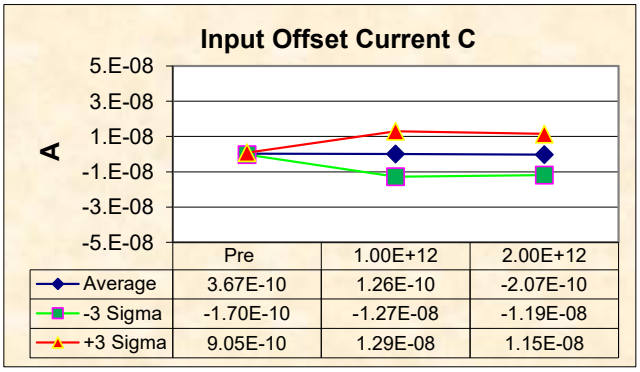
	Pre	1.00E+12	2.00E+12
Average	1.09E-09	-1.64E-09	-1.37E-09
-3 Sigma	-6.85E-10	-1.38E-08	-1.51E-08
+3 Sigma	2.86E-09	1.06E-08	1.23E-08

Input Offset Current B



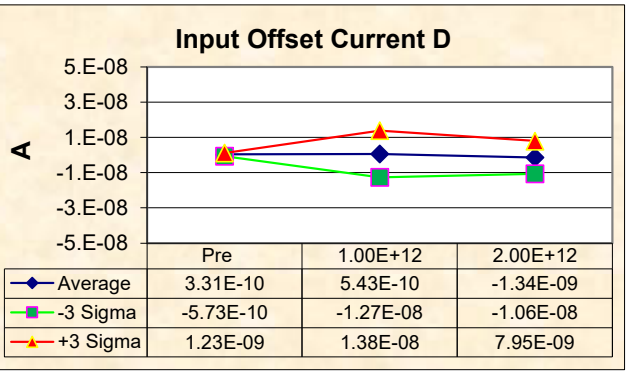
	Pre	1.00E+12	2.00E+12
Average	1.11E-09	3.29E-09	2.24E-09
-3 Sigma	2.40E-10	-1.06E-08	-1.40E-08
+3 Sigma	1.98E-09	1.72E-08	1.85E-08

Input Offset Current C



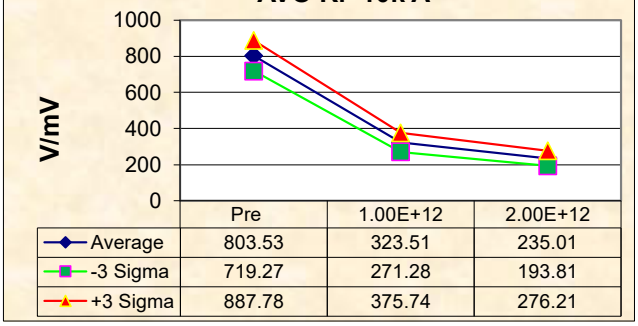
	Pre	1.00E+12	2.00E+12
Average	3.67E-10	1.26E-10	-2.07E-10
-3 Sigma	-1.70E-10	-1.27E-08	-1.19E-08
+3 Sigma	9.05E-10	1.29E-08	1.15E-08

Input Offset Current D



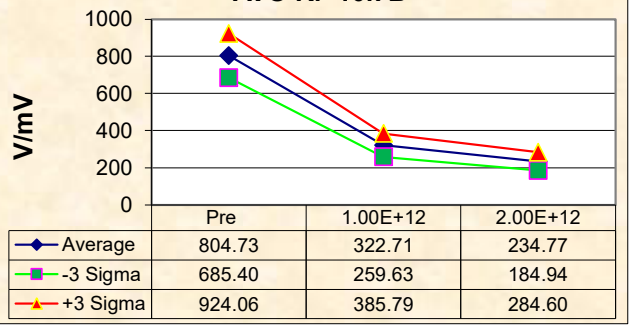
	Pre	1.00E+12	2.00E+12
Average	3.31E-10	5.43E-10	-1.34E-09
-3 Sigma	-5.73E-10	-1.27E-08	-1.06E-08
+3 Sigma	1.23E-09	1.38E-08	7.95E-09

AVO RI=10k A



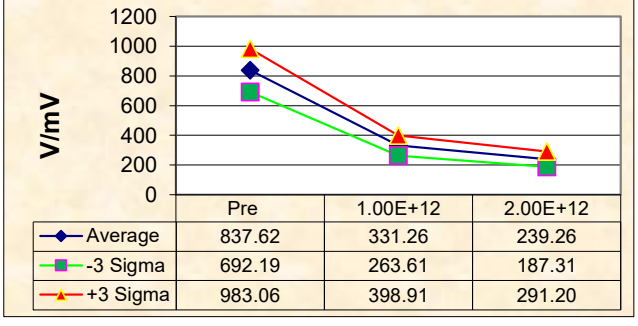
	Pre	1.00E+12	2.00E+12
Average	803.53	323.51	235.01
-3 Sigma	719.27	271.28	193.81
+3 Sigma	887.78	375.74	276.21

AVO RI=10k B



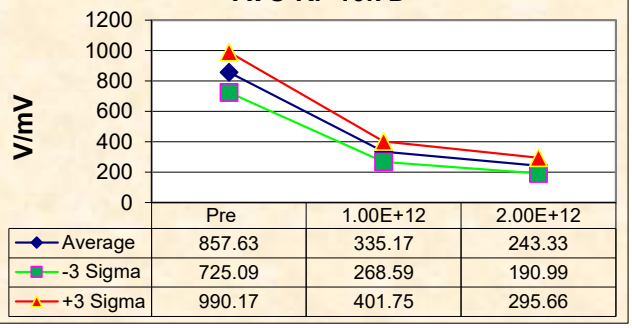
	Pre	1.00E+12	2.00E+12
Average	804.73	322.71	234.77
-3 Sigma	685.40	259.63	184.94
+3 Sigma	924.06	385.79	284.60

AVO RI=10k C



	Pre	1.00E+12	2.00E+12
Average	837.62	331.26	239.26
-3 Sigma	692.19	263.61	187.31
+3 Sigma	983.06	398.91	291.20

AVO RI=10k D



	Pre	1.00E+12	2.00E+12
Average	857.63	335.17	243.33
-3 Sigma	725.09	268.59	190.99
+3 Sigma	990.17	401.75	295.66