ANALOG DEVICES
AHEAD OF WHAT'S POSSIBLE™

DISPLACEMENT DAMAGE TEST REPORT REF43S

January 2023

Radiation Test Report	
Product:	REF43S
Die:	1802Y
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.

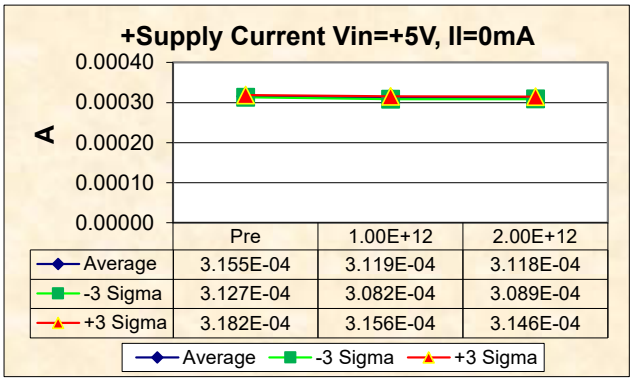
It is the responsibility of the Procuring Activity to screen products from Analog Devices, Inc. for compliance to Nuclear Hardness Critical Items (HCI) specifications.

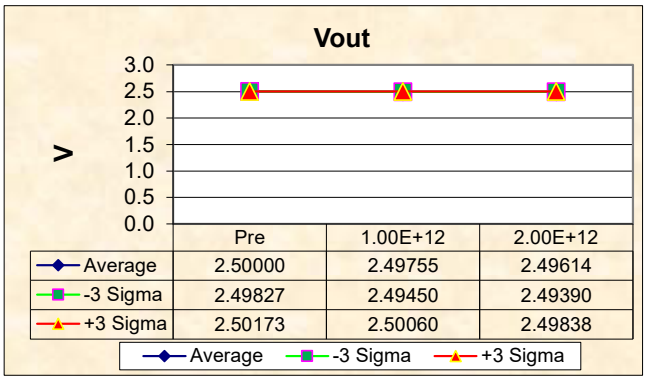
Warning:

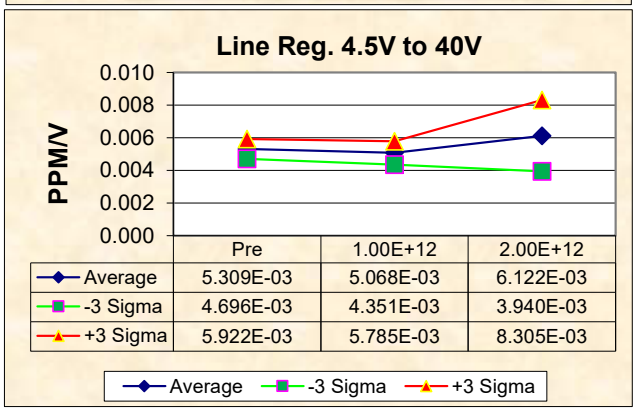
Analog Devices, Inc. does not recommend use of this data to qualify other product grades or process levels. Analog Devices, Inc. is not responsible and has no liability for any consequences, and all applicable Warranties are null and void if any Analog Devices product is modified in any way or used outside of normal environmental and operating conditions, including the parameters specified in the corresponding data sheet. Analog Devices, Inc. does not guarantee that wafer manufacturing is the same for all process levels.

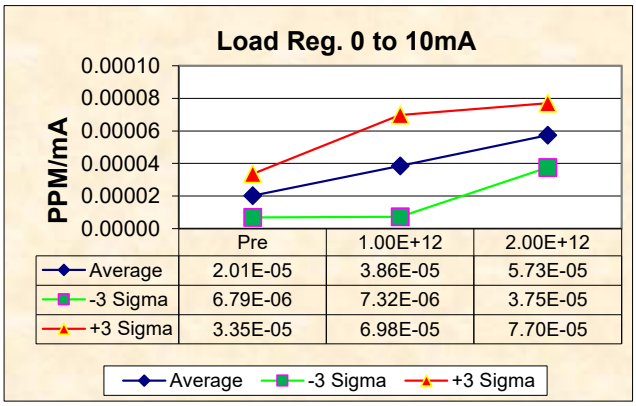
		ISY @ Vin=5V & IL=0mA			Vout @ Vin=5V & IL=0m			Line Reg. 4.5V to 40V		
		A			V			PPM/V		
Wafer #	SN	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12	Pre	1.00E+12	2.00E+12
CNTRL	167	3.126E-04	3.112E-04	3.136E-04	2.50030	2.50037	2.50035	5.287E-03	5.238E-03	5.644E-03
	177	3.158E-04	3.143E-04	3.119E-04	2.49985	2.49996	2.49608	5.298E-03	5.580E-03	5.926E-03
	178	3.155E-04	3.122E-04	3.132E-04	2.50017	2.49736	2.49669	5.257E-03	5.106E-03	7.356E-03
	179	3.165E-04	3.129E-04	3.132E-04	2.50092	2.49780	2.49625	5.572E-03	4.927E-03	7.472E-03
	180	3.171E-04	3.130E-04	3.118E-04	2.50063	2.49745	2.49427	5.093E-03	5.350E-03	5.459E-03
	181	3.154E-04	3.115E-04	3.104E-04	2.49876	2.49586	2.49608	5.103E-03	4.879E-03	5.897E-03
	182	3.143E-04	3.105E-04	3.113E-04	2.49995	2.49711	2.49583	5.424E-03	4.917E-03	5.807E-03
	183	3.151E-04	3.113E-04	3.120E-04	2.49969	2.49706	2.49678	5.238E-03	5.137E-03	5.340E-03
	184	3.156E-04	3.118E-04	3.117E-04	2.49984	2.49784	2.49616	5.143E-03	4.949E-03	5.825E-03
	185	3.155E-04	3.116E-04	3.103E-04	2.50019	2.49743	2.49629	5.245E-03	4.801E-03	5.865E-03
	186	3.141E-04	3.102E-04	3.118E-04	2.49997	2.49764	2.49697	5.715E-03	5.028E-03	6.276E-03
min		3.141E-04	3.102E-04	3.103E-04	2.49876	2.49586	2.49427	5.093E-03	4.801E-03	5.340E-03
max		3.171E-04	3.143E-04	3.132E-04	2.50092	2.49996	2.49697	5.715E-03	5.580E-03	7.472E-03
mean		3.155E-04	3.119E-04	3.118E-04	2.50000	2.49755	2.49614	5.309E-03	5.068E-03	6.122E-03
std. dev		9.166E-07	1.230E-06	9.595E-07	0.00058	0.00102	0.00075	2.043E-04	2.390E-04	7.274E-04
mean - 3 sigma		3.127E-04	3.082E-04	3.089E-04	2.49827	2.49450	2.49390	4.696E-03	4.351E-03	3.940E-03
mean +3 sigma		3.182E-04	3.156E-04	3.146E-04	2.50173	2.50060	2.49838	5.922E-03	5.785E-03	8.305E-03

		Load Reg 0 to 10mA		
		PPM/mA		
Wafer #	SN	Pre	1.00E+12	2.00E+12
CNTRL	167	2.70E-05	2.60E-05	2.85E-05
	177	1.41E-05	1.40E-05	5.98E-05
	178	1.55E-05	3.96E-05	6.04E-05
	179	1.81E-05	3.65E-05	4.38E-05
	180	1.48E-05	4.05E-05	5.52E-05
	181	2.01E-05	3.44E-05	6.43E-05
	182	2.38E-05	5.45E-05	5.73E-05
	183	2.27E-05	3.65E-05	5.43E-05
	184	2.34E-05	3.97E-05	5.22E-05
	185	2.13E-05	4.35E-05	6.76E-05
	186	2.76E-05	4.65E-05	5.78E-05
min		1.41E-05	1.40E-05	4.38E-05
max		2.76E-05	5.45E-05	6.76E-05
mean		2.01E-05	3.86E-05	5.73E-05
std. dev		4.45E-06	1.04E-05	6.59E-06
mean - 3 sigma		6.79E-06	7.32E-06	3.75E-05
mean +3 sigma		3.35E-05	6.98E-05	7.70E-05


+Supply Current Vin=+5V, Il=0mA
A
0.00040
0.00030
0.00020
0.00010
0.00000
Pre
1.00E+12
2.00E+12
Average 3.155E-04 3.119E-04 3.118E-04
-3 Sigma 3.127E-04 3.082E-04 3.089E-04
+3 Sigma 3.182E-04 3.156E-04 3.146E-04
Average
-3 Sigma
+3 Sigma


Vout
V
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Pre
1.00E+12
2.00E+12
Average 2.50000 2.49755 2.49614
-3 Sigma 2.49827 2.49450 2.49390
+3 Sigma 2.50173 2.50060 2.49838
Average
-3 Sigma
+3 Sigma


Line Reg. 4.5V to 40V
PPM/V
0.010
0.008
0.006
0.004
0.002
0.000
Pre
1.00E+12
2.00E+12
Average 5.309E-03 5.068E-03 6.122E-03
-3 Sigma 4.696E-03 4.351E-03 3.940E-03
+3 Sigma 5.922E-03 5.785E-03 8.305E-03
Average
-3 Sigma
+3 Sigma


Load Reg. 0 to 10mA
PPM/mA
0.00010
0.00008
0.00006
0.00004
0.00002
0.00000
Pre
1.00E+12
2.00E+12
Average 2.01E-05 3.86E-05 5.73E-05
-3 Sigma 6.79E-06 7.32E-06 3.75E-05
+3 Sigma 3.35E-05 6.98E-05 7.70E-05
Average
-3 Sigma
+3 Sigma