

HIGH DOSE RADIATION TEST REPORT ADL8142S

October 2022

Generic

Radiation Test Report

Product:	ADL8142S
Gamma:	0, 30k, 50k, 100k
Gamma Source:	Co60/TM1019 Condition A
Dose Rate:	92 Rad(Si)/s
Facilities:	VPT RAD
Tested:	10/14/22

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.

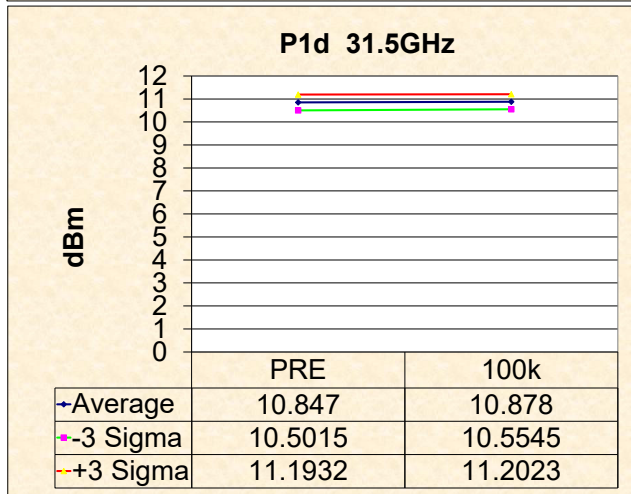
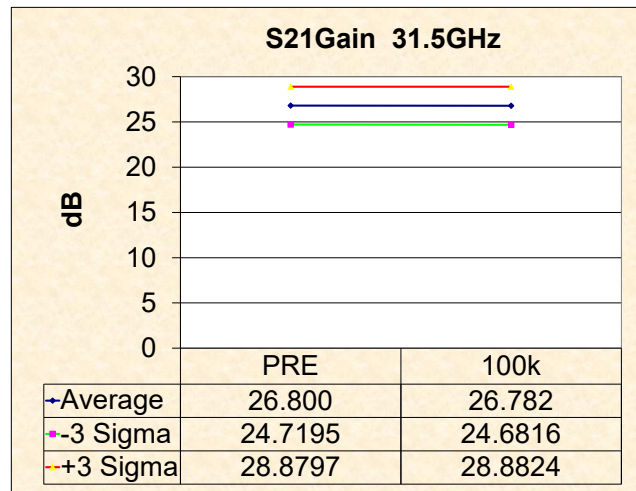
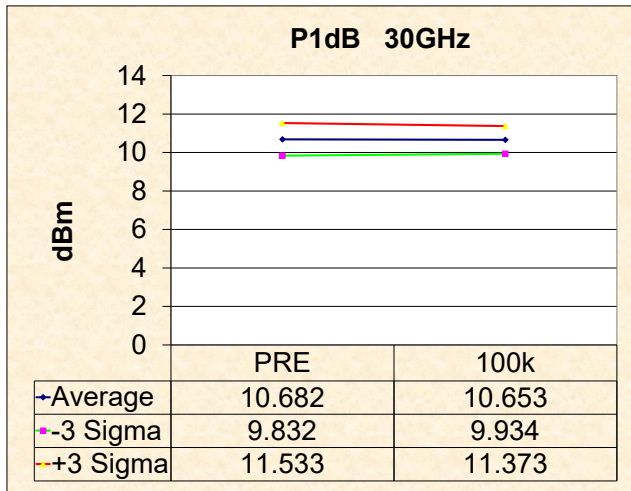
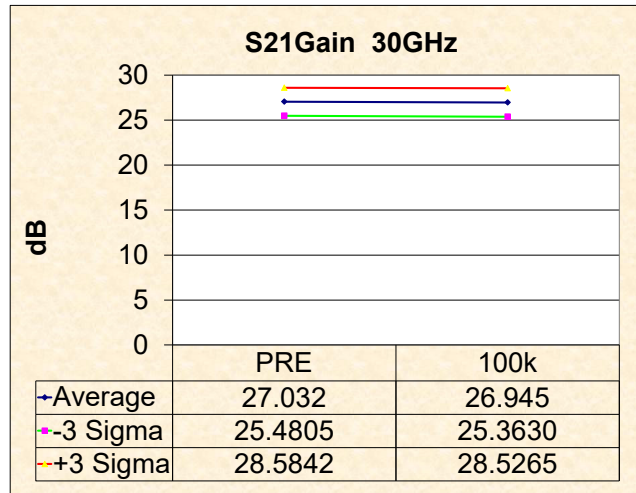
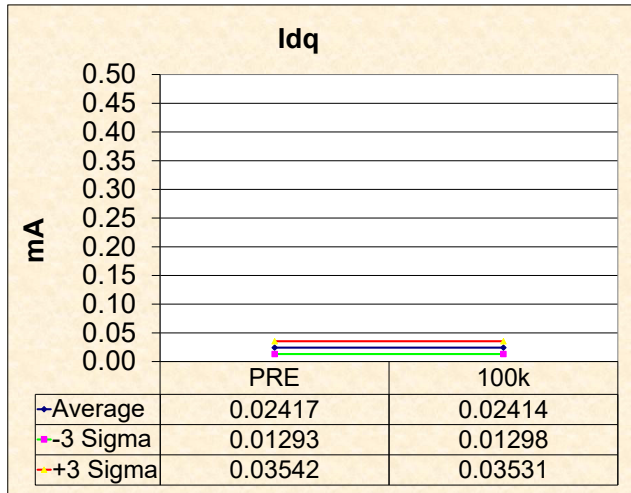
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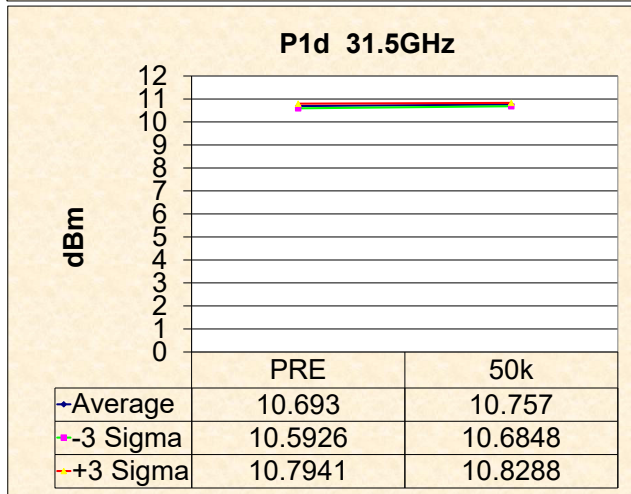
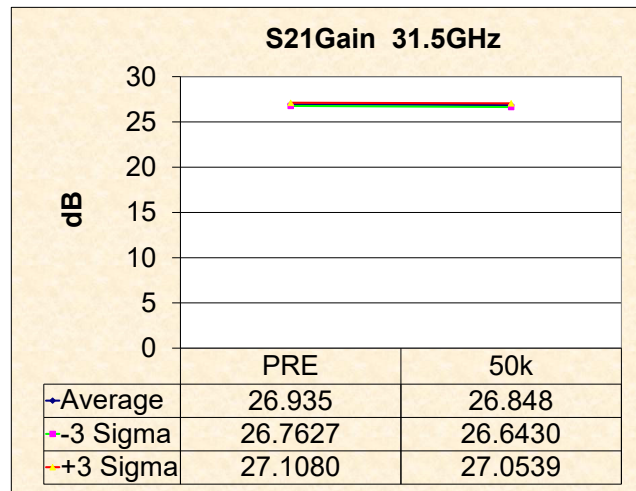
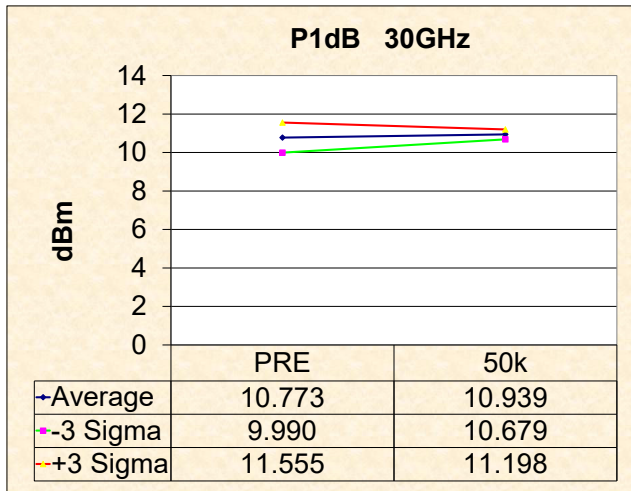
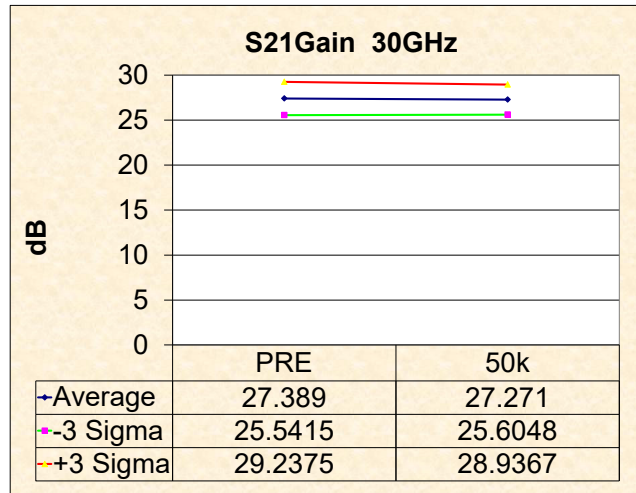
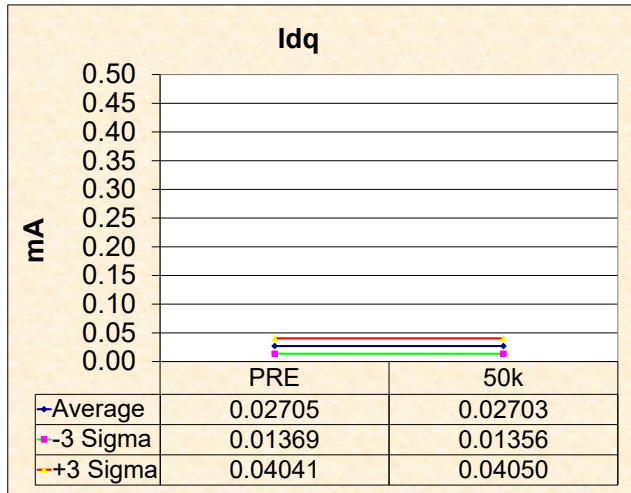
		Idq (mA)		S21Gain 30GHz (dB)		P1dB 30GHz (dBm)	
SN		PRE	100k	PRE	100k	PRE	100k
CTRL	c1	0.02046	0.02045	25.764	25.795	11.12778	10.29930
100k	1	0.03228	0.03220	28.133	28.054	10.868	10.652
	2	0.02225	0.02217	26.713	26.488	10.784	10.813
	3	0.02367	0.02371	26.945	26.965	10.663	10.666
	4	0.02022	0.02021	26.292	26.269	9.983	10.086
	5	0.02500	0.02490	27.248	26.894	10.901	10.939
	6	0.02918	0.02912	27.576	27.581	10.845	10.734
	7	0.02174	0.02171	26.626	26.631	10.838	10.419
	8	0.02229	0.02230	26.943	26.902	10.648	10.695
	9	0.02308	0.02306	26.903	26.642	10.439	10.766
	10	0.02204	0.02204	26.944	27.021	10.854	10.766
	Min	0.02022	0.02021	26.292	26.269	9.983	10.086
	Max	0.03228	0.03220	28.133	28.054	10.901	10.939
	Mean	0.02417	0.02414	27.032	26.945	10.682	10.653
	Std. Dev	0.00375	0.00372	0.5173	0.5272	0.284	0.240
	Mean - 3 Sigma	0.01293	0.01298	25.4805	25.3630	9.832	9.934
	Mean + 3 Sigma	0.03542	0.03531	28.5842	28.5265	11.533	11.373

		S21Gain 31.5GHz (dB)		P1d 31.5GHz (dBm)	
SN		PRE	100k	PRE	100k
CTRL	c1	24.900	25.044	10.819	10.821
100k	1	28.571	28.533	10.986	11.035
	2	26.737	26.623	10.720	10.982
	3	26.682	26.724	11.024	10.931
	4	26.508	26.348	10.896	10.833
	5	26.836	26.938	10.860	10.793
	6	26.718	26.929	10.816	10.790
	7	26.778	26.761	10.886	10.958
	8	26.381	26.282	10.873	10.966
	9	26.926	26.814	10.643	10.716
	10	25.858	25.870	10.770	10.780
	Min	25.858	25.870	10.643	10.716
	Max	28.571	28.533	11.024	11.035
	Mean	26.800	26.782	10.847	10.878
	Std. Dev	0.6934	0.7001	0.1153	0.1080
	Mean - 3 Sigma	24.7195	24.6816	10.5015	10.5545
	Mean + 3 Sigma	28.8797	28.8824	11.1932	11.2023



		Idq (mA)		S21Gain 30GHz (dB)		P1dB 30GHz (dBm)	
SN		PRE	50k	PRE	50k	PRE	50k
CTRL	c1	0.02046	0.02045	25.764	25.795	11.12778	10.29930
50k	11	0.02368	0.02366	27.009	27.085	11.005	10.852
	12	0.02537	0.02530	27.060	26.832	10.822	11.025
	13	0.03210	0.03213	28.100	27.895	10.490	10.940
	Min	0.02368	0.02366	27.009	26.832	10.490	10.852
	Max	0.03210	0.03213	28.100	27.895	11.005	11.025
	Mean	0.02705	0.02703	27.389	27.271	10.773	10.939
	Std. Dev	0.00445	0.00449	0.6160	0.5553	0.261	0.086
	Mean - 3 Sigma	0.01369	0.01356	25.5415	25.6048	9.990	10.679
	Mean + 3 Sigma	0.04041	0.04050	29.2375	28.9367	11.555	11.198

		S21Gain 31.5GHz (dB)		P1d 31.5GHz (dBm)	
SN		PRE	50k	PRE	50k
CTRL	c1	24.900	25.044	10.819	10.821
50k	11	26.968	26.877	10.702	10.784
	12	26.869	26.898	10.656	10.747
	13	26.969	26.770	10.722	10.739
	Min	26.869	26.770	10.656	10.739
	Max	26.969	26.898	10.722	10.784
	Mean	26.935	26.848	10.693	10.757
	Std. Dev	0.0576	0.0685	0.0336	0.0240
	Mean - 3 Sigma	26.7627	26.6430	10.5926	10.6848
	Mean + 3 Sigma	27.1080	27.0539	10.7941	10.8288



		Idq (mA)		S21Gain 30GHz (dB)		P1dB 30GHz (dBm)	
SN		PRE	30k	PRE	30k	PRE	30k
CTRL	c1	0.02046	0.02045	25.764	25.795	11.12778	10.29930
30k	14	0.03377	0.03373	28.343	28.474	10.870	10.943
	15	0.02338	0.02338	27.142	26.998	10.907	10.803
	Min	0.02338	0.02338	27.142	26.998	10.870	10.803
	Max	0.03377	0.03373	28.343	28.474	10.907	10.943
	Mean	0.02857	0.02856	27.742	27.736	10.888	10.873
	Std. Dev	0.00735	0.00732	0.8491	1.0439	0.026	0.099
	Mean - 3 Sigma	0.00653	0.00660	25.1950	24.6041	10.809	10.577
	Mean + 3 Sigma	0.05061	0.05052	30.2897	30.8673	10.968	11.169

		S21Gain 31.5GHz (dB)		P1d 31.5GHz (dBm)	
SN		PRE	30k	PRE	30k
CTRL	c1	24.900	25.044	10.819	10.821
30k	14	27.315	27.455	10.895	10.998
	15	27.102	27.000	10.761	10.858
	Min	27.102	27.000	10.761	10.858
	Max	27.315	27.455	10.895	10.998
	Mean	27.208	27.227	10.828	10.928
	Std. Dev	0.1511	0.3220	0.0949	0.0993
	Mean - 3 Sigma	26.7551	26.2613	10.5435	10.6304
	Mean + 3 Sigma	27.6619	28.1935	11.1129	11.2262

