

# HIGH DOSE RADIATION TEST REPORT ADMV1013S-CSL

January 2025  
Generic



Radiation Test Report	
Product:	ADMV1013S-CSL
Gamma:	0,50k
Gamma Source:	Co60/TM1019 Condition A
Dose Rate:	165 Rad/s
Facilities:	VPT RAD
Tested:	October 8th, 2024

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		Supply Current 3.3V Power On (mA)		Supply Current 3.3V Power Down (mA)		Supply Current 1.8V Power On (uA)		
		PRE	50k	PRE	50k	PRE	50k	
50k Biased	CTRL	26	580.647	579.990	23.268	23.514	-10.618	-10.563
		11	578.810	582.257	23.647	24.338	-10.547	-6.792
		12	579.365	581.682	23.460	23.771	-10.513	-10.735
		13	583.219	586.246	23.250	23.713	-10.531	-16.872
		14	576.994	579.607	23.193	24.210	-10.584	-10.365
		Min	576.9939	579.6068	23.1928	23.7132	-10.5844	-16.8716
		Max	583.2190	586.2455	23.6472	24.3378	-10.5130	-6.7923
		Mean	579.5969	582.4478	23.3877	24.0081	-10.5438	-11.1910
		Std. Dev	2.6185	2.7759	0.2078	0.3123	0.0304	4.1836
		Mean - 3 Sigma	571.7416	574.1201	22.7644	23.0713	-10.6351	-23.7418
		Mean + 3 Sigma	587.4523	590.7756	24.0110	24.9450	-10.4526	1.3598

		Supply Current 1.8V Power Down (uA)		Conversion Gain @ 24GHz IF Mode(dB)		Conversion Gain @ 28GHz IF Mode(dB)		
		PRE	50k	PRE	50k	PRE	50k	
50k Biased	CTRL	26	-12.478	-12.293	18.09	18.24	16.81	16.80
		11	-12.387	-8.072	18.14	19.10	17.104	18.631
		12	-12.319	-13.069	18.22	19.25	16.728	18.383
		13	-12.503	-15.387	18.34	19.01	17.187	18.514
		14	-12.310	-12.335	18.17	19.13	16.980	18.583
		Min	-12.5028	-15.3869	18.14	19.01	16.7277	18.3830
		Max	-12.3100	-8.0720	18.34	19.25	17.1873	18.6313
		Mean	-12.3797	-12.2155	18.21	19.12	16.9996	18.5280
		Std. Dev	0.0889	3.0533	0.0871	0.0998	0.2003	0.1079
		Mean - 3 Sigma	-12.6464	-21.3754	17.95	18.82	16.3986	18.2043
		Mean + 3 Sigma	-12.1129	-3.0556	18.48	19.42	17.6006	18.8518

		Conversion Gain @ 39GHz IF Mode(dB)		Output IP3 - Upper Sideband @24GHz IF Mode(dBm)		Output IP3 - Upper Sideband @28GHz IF Mode(dBm)		
		PRE	50k	PRE	50k	PRE	50k	
50k Biased	CTRL	26	15.740	15.776	21.659	21.790	23.860	24.292
		11	15.638	16.604	21.791	21.558	23.186	23.282
		12	15.419	16.553	22.246	21.875	23.779	24.015
		13	15.711	16.402	21.795	21.440	22.939	23.005
		14	15.539	16.577	21.929	21.645	23.345	23.796
		Min	15.4191	16.4018	21.7910	21.4397	22.9390	23.0047
		Max	15.7107	16.6043	22.2458	21.8748	24.3447	24.0150
		Mean	15.5767	16.5341	21.9402	21.6294	23.5622	23.5246
		Std. Dev	0.1266	0.0907	0.2136	0.1839	0.6296	0.4631
		Mean - 3 Sigma	15.1970	16.2621	21.2995	21.0776	21.6733	22.1353
		Mean + 3 Sigma	15.9565	16.8062	22.5809	22.1813	25.4511	24.9139

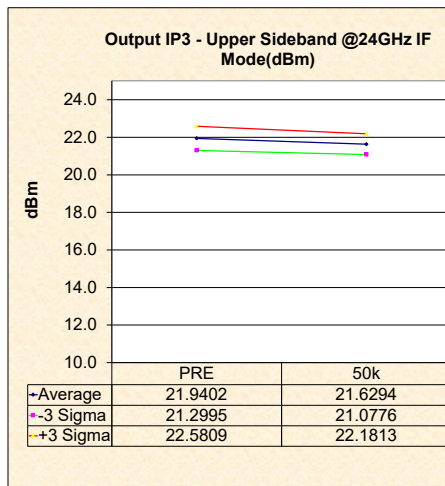
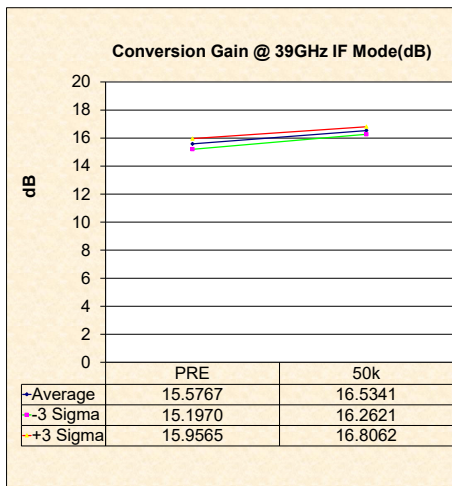
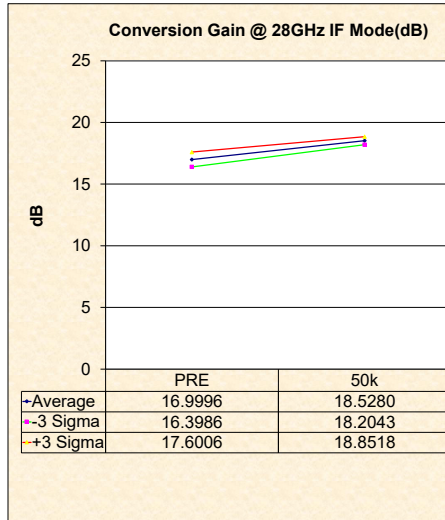
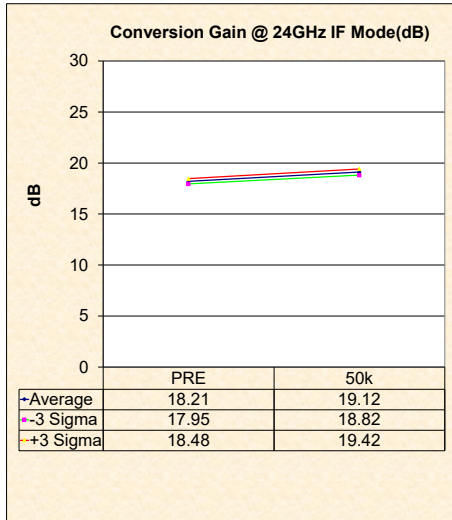
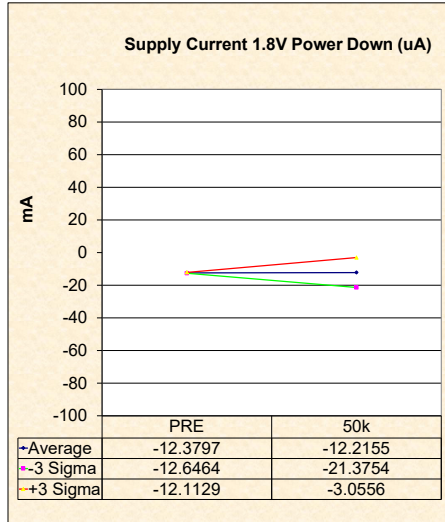
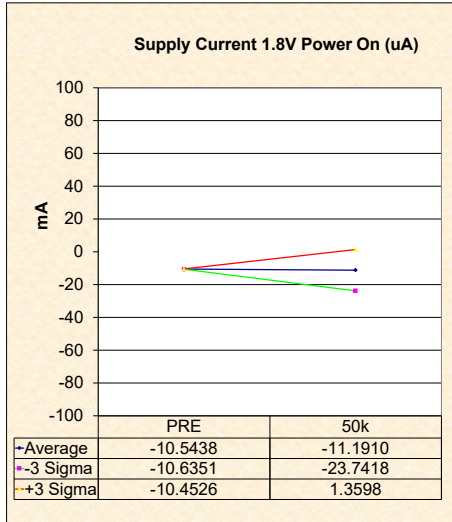
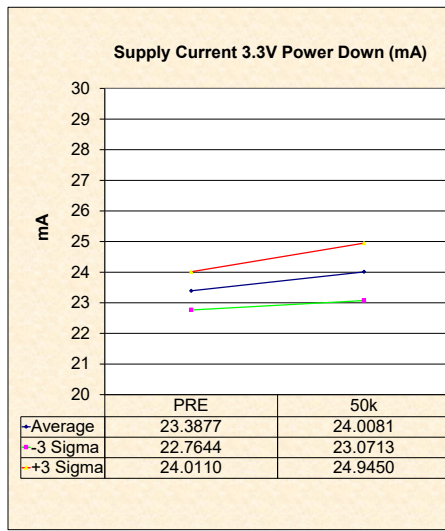
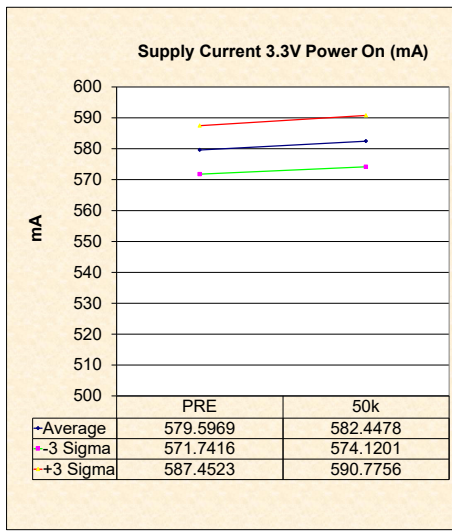
		Output IP3 - Upper Sideband @39GHz IF Mode(dBm)		Output P1dB @ 24GHz IF Mode (dBm)		Output P1dB @ 28GHz IF Mode (dBm)		
		PRE	50k	PRE	50k	PRE	50k	
50k Biased	CTRL	26	23.143	22.869	11.504	11.766	13.950	14.140
		11	23.023	22.592	11.873	12.204	13.343	13.793
		12	23.224	22.762	12.114	12.180	13.835	14.009
		13	22.664	22.558	12.023	11.901	13.179	13.376
		14	22.756	22.605	11.841	12.371	14.322	14.030
		Min	22.6637	22.5578	11.8414	11.9006	13.1787	13.3757
		Max	23.2243	22.7624	12.1136	12.3709	14.3216	14.0302
		Mean	22.9168	22.6294	11.9628	12.1639	13.6696	13.8018
		Std. Dev	0.2554	0.0909	0.1279	0.1950	0.5165	0.3037
		Mean - 3 Sigma	22.1506	22.3566	11.5790	11.5790	12.1202	12.8908
		Mean + 3 Sigma	23.6829	22.9021	12.3466	12.7488	15.2189	14.7128

		Output P1dB @ 39GHz IF Mode (dBm)		Conversion Gain @ 24GHz I/Q Mode (dB)		Conversion Gain @ 28GHz I/Q Mode (dB)		
		PRE	50k	PRE	50k	PRE	50k	
50k Biased	CTRL	26	12.483	12.464	23.140	23.276	21.611	21.580
		11	12.601	12.541	23.074	24.129	21.800	23.364
		12	12.841	12.680	23.221	24.333	21.502	23.167
		13	12.467	12.321	23.306	24.098	21.842	23.191
		14	12.410	12.430	23.180	24.206	21.749	23.352
		Min	12.4097	12.3215	23.0738	24.0976	21.5021	23.1673
		Max	12.8413	12.6798	23.3055	24.3333	21.8423	23.3635
		Mean	12.5797	12.4932	23.1952	24.1915	21.7235	23.2683
		Std. Dev	0.1920	0.1534	0.0963	0.1050	0.1525	0.1036
		Mean - 3 Sigma	12.0038	12.0330	22.9062	23.8765	21.2662	22.9576
		Mean + 3 Sigma	13.1555	12.9534	23.4841	24.5065	22.1809	23.5790

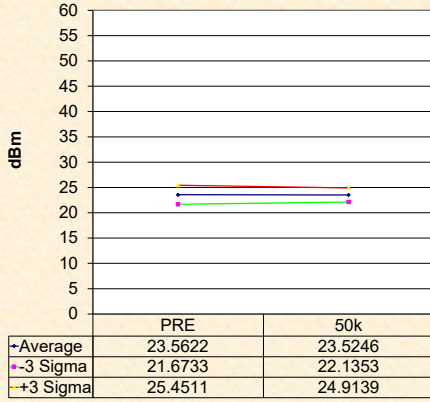
		Conversion Gain @ 39GHz I/Q Mode (dB)		Output IP3 - Upper Sideband @ 24GHz I/Q Mode (dBm)		Output IP3 - Upper Sideband @ 28GHz I/Q Mode (dBm)		
		PRE	Post	PRE	Post	PRE	Post	
50k Biased	CTRL	26	21.538	21.561	21.876	21.955	24.007	23.932
		11	21.272	22.422	21.976	21.916	22.994	23.250
		12	21.229	22.508	22.441	22.150	23.409	23.665
		13	21.400	22.307	22.010	21.827	22.783	22.735
		14	21.322	22.507	22.007	21.884	24.174	23.543
		Min	21.2292	22.3072	21.9755	21.8265	22.7828	22.7349
		Max	21.4003	22.5078	22.4406	22.1495	24.1739	23.6654
		Mean	21.3057	22.4360	22.1082	21.9440	23.3400	23.2985
		Std. Dev	0.0735	0.0949	0.2221	0.1419	0.6138	0.4142
		Mean - 3 Sigma	21.0851	22.1513	21.4418	21.5182	21.4987	22.0559
		Mean + 3 Sigma	21.5262	22.7208	22.7746	22.3697	25.1814	24.5411

		Output IP3 - Upper Sideband @ 39GHz I/Q Mode (dBm)			Output P1dB @ 24GHz I/Q Mode (dBm)		Output P1dB @ 28GHz I/Q Mode (dBm)	
		PRE	Post	PRE	Post	PRE	Post	
50k Biased	<b>CTRL</b>	<b>26</b>	<b>22.691</b>	<b>22.869</b>	<b>12.513</b>	<b>12.682</b>	<b>13.927</b>	<b>14.087</b>
		11	22.705	22.816	12.714	12.810	13.424	13.758
		12	22.959	23.039	12.962	13.124	13.747	13.913
		13	22.969	22.489	12.834	12.814	13.175	13.443
		14	22.758	22.723	12.744	12.918	14.241	13.946
		Min	22.7053	22.4891	12.7142	12.8096	13.1750	13.4426
		Max	22.9689	23.0386	12.9623	13.1235	14.2409	13.9457
		Mean	22.8480	22.7667	12.8135	12.9165	13.6468	13.7647
		Std. Dev	0.1360	0.2275	0.1115	0.1469	0.4601	0.2298
		Mean - 3 Sigma	22.4400	22.0842	12.4790	12.4758	12.2665	13.0752
		Mean + 3 Sigma	23.2559	23.4492	13.1479	13.3571	15.0271	14.4542

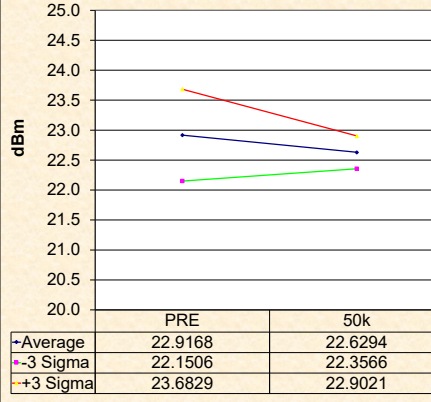
		Output P1dB @ 39GHz I/Q Mode (dBm)		
		PRE	Post	
50k Biased	<b>CTRL</b>	<b>26</b>	<b>12.941</b>	<b>12.952</b>
		11	13.078	13.147
		12	13.142	13.188
		13	12.947	12.906
		14	13.013	13.157
		Min	12.9468	12.9055
		Max	13.1418	13.1875
		Mean	13.0448	13.0992
		Std. Dev	0.0840	0.1303
		Mean - 3 Sigma	12.7928	12.7084
		Mean + 3 Sigma	13.2967	13.4900



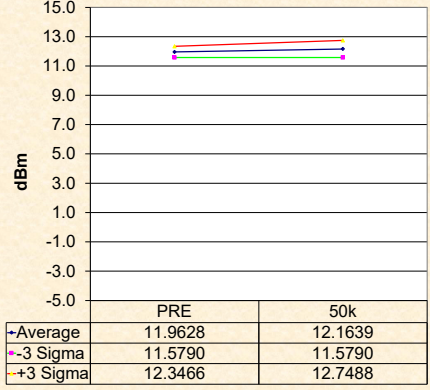
Output IP3 - Upper Sideband @28GHz IF Mode(dBm)



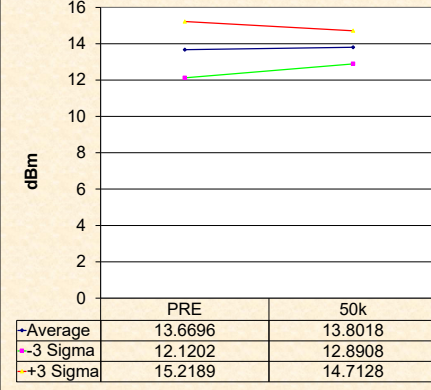
Output IP3 - Upper Sideband @39GHz IF Mode(dBm)



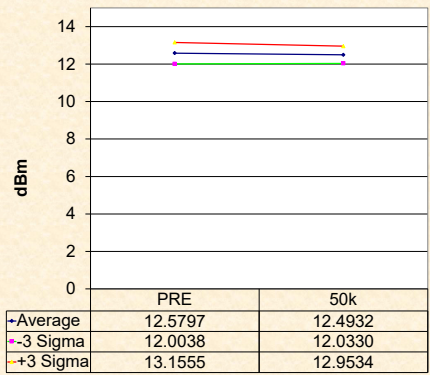
Output P1dB @ 24GHz IF Mode (dBm)



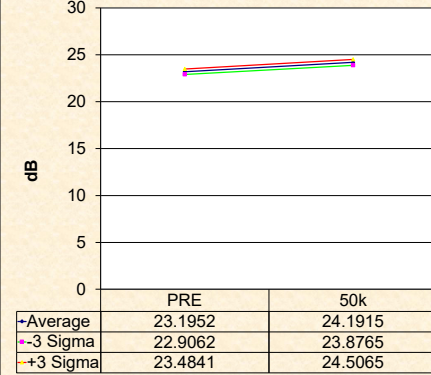
Output P1dB @ 28GHz IF Mode (dBm)



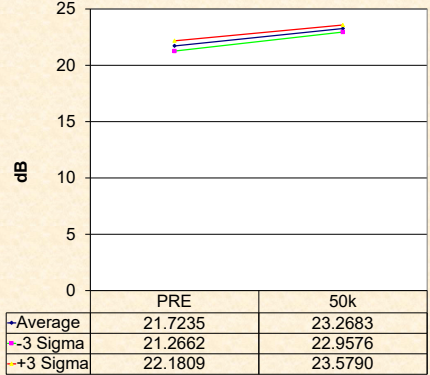
Output P1dB @ 39GHz IF Mode (dBm)



Conversion Gain @ 24GHz I/Q Mode (dB)



Conversion Gain @ 28GHz I/Q Mode (dB)



Conversion Gain @ 39GHz I/Q Mode (dB)

