

HIGH DOSE RADIATION TEST REPORT ADMV1013S-CSH

April 2025
Generic

Radiation Test Report	
Product:	ADMV1013S-CSH
Gamma:	0,100k
Gamma Source:	Co60/TM1019 Condition A
Dose Rate:	160 Rad/s
Facilities:	VPT RAD
Tested:	February 13th, 2025

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		TotalCurrent_IFMode_DetOn		Conversion Gain @ 24GHz IF Mode(dB)		Conversion Gain @ 28GHz IF Mode(dB)	
	SN	PRE	100k	PRE	100k	PRE	100k
CTRL	816	570.576	569.073	20.410	20.271	18.433	18.068
	910	574.016	577.494	20.164	21.649	18.001	20.926
Biased	911	571.043	573.480	19.631	21.530	17.191	20.422
	912	572.343	575.761	20.127	21.699	17.841	20.574
	873	572.563	576.126	20.178	22.033	17.640	20.838
	Min	571.043	573.480	19.631	21.530	17.191	20.422
	Max	574.016	577.494	20.178	22.033	18.001	20.926
	Mean	572.491	575.715	20.025	21.728	17.668	20.690
	Std. Dev	1.218	1.666	0.264	0.215	0.351	0.233
	Mean - 3 Sigma	568.837	570.717	19.233	21.082	16.616	19.991
Unbiased	Mean + 3 Sigma	576.145	580.714	20.816	22.374	18.721	21.389
	756	580.080	579.152	20.856	20.299	18.826	18.456
	758	571.668	570.697	19.912	19.434	17.973	17.441
	808	575.224	574.246	19.995	19.542	18.107	17.555
	900	574.283	573.112	20.518	20.015	18.536	17.769
	Min	571.668	570.697	19.912	19.434	17.973	17.441
	Max	580.080	579.152	20.856	20.299	18.826	18.456
	Mean	575.314	574.302	20.320	19.822	18.360	17.805
	Std. Dev	3.515	3.556	0.447	0.406	0.393	0.455
	Mean - 3 Sigma	564.767	563.634	18.980	18.605	17.182	16.441
Mean + 3 Sigma	585.860	584.969	21.660	21.040	19.538	19.170	

		Conversion Gain @ 39GHz IF Mode(dB)		Output IP3 - Upper Sideband @24GHz IF Mode(dBm)		Output IP3 - Upper Sideband @28GHz IF Mode(dBm)	
	SN	PRE	100k	PRE	100k	PRE	100k
CTRL	816	16.771	16.563	23.807	23.831	24.351	24.060
	910	16.665	19.060	23.640	23.447	24.903	24.151
Biased	911	16.014	18.611	23.721	23.443	24.482	24.837
	912	16.416	18.880	23.424	23.431	24.381	24.729
	873	16.323	19.018	23.994	23.725	24.493	24.955
	Min	16.014	18.611	23.424	23.431	24.381	24.151
	Max	16.665	19.060	23.994	23.725	24.903	24.955
	Mean	16.354	18.892	23.695	23.512	24.565	24.668
	Std. Dev	0.269	0.203	0.235	0.143	0.231	0.357
	Mean - 3 Sigma	15.548	18.284	22.988	23.084	23.871	23.597
	Mean + 3 Sigma	17.161	19.501	24.401	23.940	25.258	25.740
	Unbiased	756	17.457	16.919	24.012	24.241	24.846
758		16.474	15.934	23.648	23.879	23.597	24.098
808		16.634	16.108	23.699	23.956	24.048	23.843
900		17.097	16.535	23.768	23.899	24.776	24.766
Min		16.474	15.934	23.648	23.879	23.597	23.843
Max		17.457	16.919	24.012	24.241	24.846	24.766
Mean		16.915	16.374	23.782	23.994	24.317	24.231
Std. Dev		0.448	0.443	0.161	0.168	0.600	0.389
Mean - 3 Sigma		15.573	15.047	23.298	23.490	22.516	23.063
Mean + 3 Sigma		18.258	17.702	24.266	24.497	26.117	25.399

		Output IP3 - Upper Sideband @39GHz IF Mode(dBm)		Output P1dB @ 24GHz IF Mode (dBm)		Output P1dB @ 28GHz IF Mode (dBm)	
	SN	PRE	100k	PRE	100k	PRE	100k
CTRL	816	23.379	23.768	13.973	13.972	14.275	14.411
	910	23.535	23.704	13.770	14.061	14.978	14.401
Biased	911	23.367	23.357	13.645	14.106	14.589	14.960
	912	23.163	23.557	13.672	14.081	14.616	14.757
	873	23.843	23.561	13.954	14.511	14.536	15.206
	Min	23.163	23.357	13.645	14.061	14.536	14.401
	Max	23.843	23.704	13.954	14.511	14.978	15.206
	Mean	23.477	23.545	13.760	14.189	14.680	14.831
	Std. Dev	0.288	0.143	0.140	0.215	0.201	0.340
	Mean - 3 Sigma	22.614	23.117	13.340	13.545	14.076	13.810
	Mean + 3 Sigma	24.339	23.973	14.180	14.834	15.283	15.852
	Unbiased	756	23.586	23.519	14.032	14.520	14.958
758		23.264	23.432	13.937	13.912	13.646	14.236
808		23.638	23.963	13.985	14.023	14.091	13.873
900		23.259	23.119	14.153	14.231	14.984	14.772
Min		23.259	23.119	13.937	13.912	13.646	13.873
Max		23.638	23.963	14.153	14.520	14.984	14.772
Mean		23.437	23.508	14.027	14.172	14.420	14.345
Std. Dev		0.204	0.349	0.093	0.267	0.662	0.383
Mean - 3 Sigma		22.826	22.463	13.749	13.369	12.434	13.195
Mean + 3 Sigma		24.048	24.554	14.305	14.974	16.405	15.495

		Output P1dB @ 39GHz IF Mode (dBm)		Conversion Gain @ 24GHz IQ Mode (dB)		Conversion Gain @ 28GHz IQ Mode (dB)	
	SN	PRE	100k	PRE	100k	PRE	100k
CTRL	816	13.489	13.445	25.492	25.382	23.274	23.035
	910	13.182	13.677	25.256	26.659	22.755	25.397
Biased	911	13.138	13.396	24.675	26.494	22.036	25.035
	912	12.804	13.445	25.190	26.536	22.669	25.049
	873	13.152	13.586	25.270	27.016	22.474	25.427
	Min	12.804	13.396	24.675	26.494	22.036	25.035
	Max	13.182	13.677	25.270	27.016	22.755	25.427
	Mean	13.069	13.526	25.098	26.676	22.484	25.227
	Std. Dev	0.178	0.129	0.284	0.237	0.320	0.214
	Mean - 3 Sigma	12.535	13.139	24.246	25.964	21.522	24.585
	Mean + 3 Sigma	13.603	13.912	25.950	27.388	23.445	25.869
Unbiased	756	13.236	13.604	25.936	25.434	23.603	23.285
	758	12.871	13.220	25.004	24.562	22.678	22.266
	808	13.217	13.499	25.085	24.682	22.904	22.405
	900	13.180	13.295	25.671	25.191	23.337	22.656
	Min	12.871	13.220	25.004	24.562	22.678	22.266
	Max	13.236	13.604	25.936	25.434	23.603	23.285
	Mean	13.126	13.404	25.424	24.967	23.131	22.653
	Std. Dev	0.172	0.178	0.453	0.414	0.417	0.451
	Mean - 3 Sigma	12.611	12.871	24.066	23.727	21.880	21.299
	Mean + 3 Sigma	13.641	13.938	26.782	26.208	24.382	24.008

		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)	
	SN	PRE	100k	PRE	100k	PRE	100k
CTRL	816	22.693	22.556	23.948	24.105	24.656	24.332
	910	22.536	24.288	23.812	24.051	24.764	24.207
	911	21.931	24.010	23.868	23.923	25.052	24.987
	912	22.314	23.886	23.654	23.865	24.696	24.805
	873	22.269	24.338	24.043	24.246	24.592	25.110
	Min	21.931	23.886	23.654	23.865	24.592	24.207
	Max	22.536	24.338	24.043	24.246	25.052	25.110
	Mean	22.262	24.130	23.844	24.021	24.776	24.777
	Std. Dev	0.250	0.218	0.161	0.169	0.197	0.400
	Mean - 3 Sigma	21.512	23.476	23.362	23.515	24.184	23.577
Biased	Mean + 3 Sigma	23.013	24.784	24.327	24.528	25.368	25.978
	756	23.330	22.826	24.265	24.589	25.050	24.272
	758	22.352	21.869	24.037	24.103	24.004	24.154
	808	22.482	22.049	24.049	24.154	24.050	23.973
	900	22.972	22.491	24.208	24.250	24.967	24.925
	Min	22.352	21.869	24.037	24.103	24.004	23.973
	Max	23.330	22.826	24.265	24.589	25.050	24.925
	Mean	22.784	22.309	24.140	24.274	24.518	24.331
	Std. Dev	0.451	0.433	0.114	0.218	0.568	0.415
	Mean - 3 Sigma	21.431	21.010	23.797	23.619	22.813	23.087
Unbiased	Mean + 3 Sigma	24.137	23.607	24.482	24.929	26.222	25.575

		Output IP3 - Upper Sideband @ 39GHz I/Q Mode (dBm)		Output P1dB @ 24GHz I/Q Mode (dBm)		Output P1dB @ 28GHz I/Q Mode (dBm)	
	SN	PRE	Post	PRE	Post	PRE	Post
CTRL	816	23.550	23.693	14.668	14.560	14.848	14.543
	910	23.359	23.875	14.487	14.921	15.017	14.886
	911	23.714	23.647	14.360	14.839	15.085	15.175
	912	23.370	23.786	14.280	14.817	14.992	15.120
	873	23.667	23.883	14.701	15.209	14.901	15.391
	Min	23.359	23.647	14.280	14.817	14.901	14.886
	Max	23.714	23.883	14.701	15.209	15.085	15.391
	Mean	23.527	23.797	14.457	14.946	14.999	15.143
	Std. Dev	0.189	0.110	0.184	0.181	0.076	0.207
	Mean - 3 Sigma	22.959	23.468	13.906	14.404	14.770	14.521
Biased	Mean + 3 Sigma	24.096	24.127	15.007	15.489	15.227	15.765
	756	23.562	23.923	15.066	15.112	15.228	14.884
	758	23.557	23.653	14.577	14.551	14.380	14.584
	808	23.710	24.095	14.648	14.653	14.627	14.420
	900	23.543	23.569	14.995	14.891	15.220	15.108
	Min	23.543	23.569	14.577	14.551	14.380	14.420
	Max	23.710	24.095	15.066	15.112	15.228	15.108
	Mean	23.593	23.810	14.821	14.802	14.864	14.749
	Std. Dev	0.079	0.243	0.245	0.251	0.428	0.307
	Mean - 3 Sigma	23.357	23.081	14.087	14.048	13.579	13.829
Unbiased	Mean + 3 Sigma	23.828	24.539	15.555	15.555	16.149	15.669

		Output P1dB @ 39GHz I/Q Mode (dBm)	
		PRE	Post
CTRL	816	13.971	13.993
	910	13.691	14.359
	911	13.601	14.115
	912	13.521	14.190
	873	13.769	14.274
	Min	13.521	14.115
	Max	13.769	14.359
	Mean	13.643	14.235
	Std. Dev	0.104	0.106
	Mean - 3 Sigma	13.331	13.918
Biased	Mean + 3 Sigma	13.955	14.551
	756	13.975	14.180
	758	13.626	13.712
	808	13.865	14.015
	900	13.755	13.813
	Min	13.626	13.712
	Max	13.975	14.180
	Mean	13.805	13.930
	Std. Dev	0.150	0.209
	Mean - 3 Sigma	13.356	13.303
Unbiased	Mean + 3 Sigma	14.254	14.557









