Summary Data
For
ERDLVA-2G8G-65-70MV

Customer: ____ **Tested By:** RCombs

SO No: ____ **Temperature:** +25°C, -10°C, +85°C

Model No: ERDLVA-2G8G-65-70MV **Date** 1/17/2019

Serial No: PL24083-EC **Drawing No:** 27633270 **Rev:** A1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 8 GHz	**2 to 8 GHz**	PMI QA1
2	VSWR:	2.3:1 Max @ 50 Ω	**1.29:1 @ 50 Ω (RF In)** **1.24:1 @ 50 Ω (Bit In)**	
3	Input Power Max:	(1) 1 W CW (2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%	**(1) 1 W CW** **(2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%**	
4	Switch Isolation:	60 dB Min (All Ports)	**>100 dB**	
5	Switching Speed:	100 ns Max	**37.8 ns**	
6	Video Frequency Flatness:	±1.75 dB Max @ 25°C	**±0.68 dB**	
7	TSS:	-71 dBm	**-71.2dBm**	PMI QA1

Planar Monolithics Industries
Phone: (301) 662-5019 Fax: (301) 662-1731
Website: www.pmi-rf.com Email: sales@pmi-rf.com

Summary Data
For
ERDLVA-2G8G-65-70MV

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
8	Dynamic Range:	-65 to 0 dBm	**-65 to 0 dBm**	PMI QA 1
9	Log Slope:	70 mV/dB ±3 mV/dB	**67.89 mV/dB**	
10	Log Linearity:	±1.0 dB Max	**+0.42 / -0.30 dB**	
11	Log Accuracy @ 25°C:	±1.25 dB Max	**+0.67 / -0.77 dB**	
12	Absolute Log Accuracy:	±2.0 dB Max	**+0.77 / -0.93 dB**	
13	DC Offset:	0 - 100mV	**23 mV**	
14	Rise Time:	28 ns Max (10% to 90% @ -40 & -10 dBm)	**24.3 ns**	
15	Fall Time:	300 ns Max (90% to 10% @ -40 & -10 dBm)	**160 ns**	
16	Settling Time:	50 ns Max (From 10% to within 35 mV of final value @ -40 & -10 dBm)	**47 ns**	
17	Recovery Time:	500 ns Max (From 90% of a -5 dBm, 100us Pulse to within ±1 dB of baseline) without Amplitude loss of a following -65 dBm, 100ns Pulse	**330ns**	
18	Pulse Width Process Range:	100ns to 100us	**100ns to100us**	
19	Video Output Load Impedance:	95 ±1 Ω	**95 ±1 Ω**	PMI QA 1

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Summary Data
For
ERDLVA-2G8G-65-70MV

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
20	Video Output @ -65 dBm:	330 ± 88 mV Over Frequeny	**357-410 mV**	PMI QA 1
21	Video Output Drive Capbility:	Driving 100 Ft RG180 into 95 Ω Load	**Pass**	
22	Pulse Density Capability:	No Pulse Amplitude Loss 20% Duty @ 100ns PW 70% Duty @ 100us PW	**No Pulse Amplitude Loss 20% Duty @100 ns PW 70% Duty @ 100us PW**	
23	Noise Level:	30 mV RMS Max	**15.5 mV**	
24	Pulse Droop @ -65 dBm:	70 mV Max	**0 mV**	
25	Propogation Delay:	80ns Max (50% RF to 10% Video)	**13.4 ns**	
26	CW Immune Power:	TSS to -40 dBm	**TSS to-40 dBm**	
27	Baseline Shift:	200 mV Max @ -40 dBm CW	**75 mV**	
28	Pulse Amplitude Loss with Pulse @ -30 dBm:	CW @ -50 dBm = No Loss CW @ -40 dBm = 2 dB Max	**-50 dBm = 0 dB -40 dBm = 1.26 dB**	
29	CW Immue Time @ CW = -40 dBm	4ms Max	**2.9 ms**	
30	CW Recovery Time @ CW = -40 dBm	120us Max	**31 us**	
31	DC Power:	+15V (±5%) @ 500 mA Max -15V (±5%) @ 200 mA Max	**+355 mA -138 mA**	PMI QA 1

QA/QC Approval: PMI QA 1 **Date:** 1/23/19

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LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-2G8G-65-70MV
TESTED BY: RCombs
DATE: 1-17-19
SERIAL NO: PL24083-EC

Test Temp: 25 C

PLANAR MONOLITHICS INDUSTRIES
7311-F Grove Road, Frederick, Maryland, 21704
TEL: 916-542-1401 FAX: 301-662-1731
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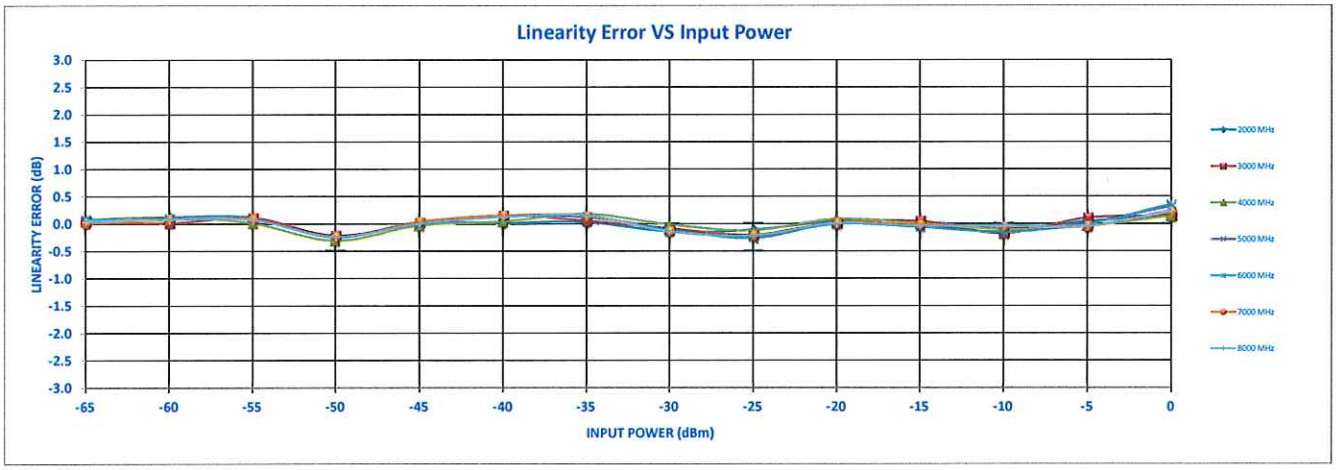
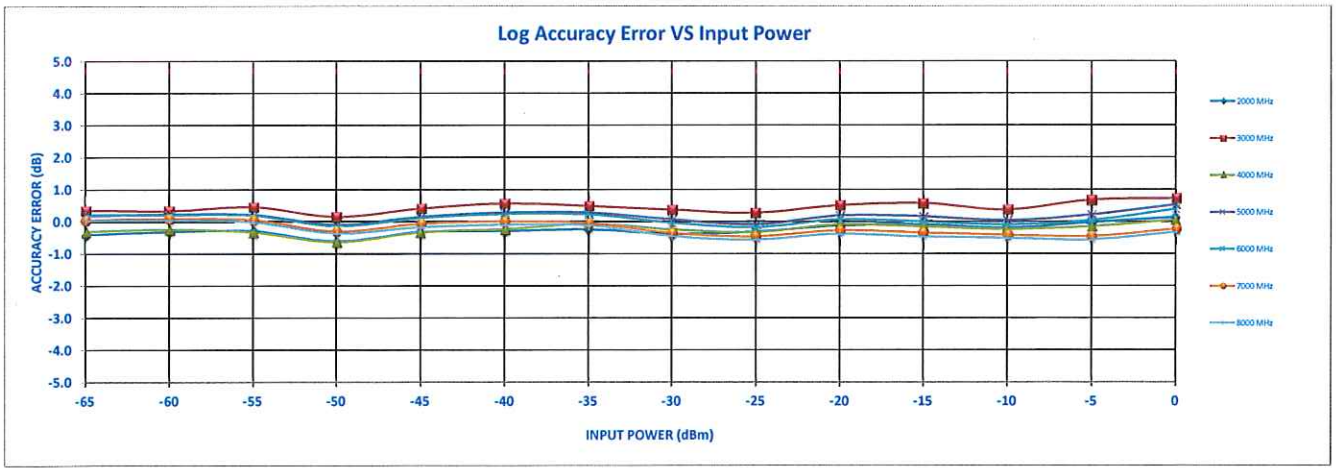
ISO 9001:2000 CERTIFIED

DC Offset= 0.023

Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	INTERCEPT (mV)	4848.9	357	707	1052	1373	1737	2083	2430	2764	3112	3468	3814	4150	4505	4860	Measured Value (mV)
	SLOPE (mV/dB)	69.17	4	8	8	-17	1	1	2	-10	-8	3	2	-7	2	11	Error (mV)
			0.06	0.12	0.11	-0.25	0.01	0.01	0.03	-0.14	-0.12	0.04	0.04	-0.10	0.03	0.16	LINEARITY ERROR (dB)
			-0.42	-0.32	-0.30	-0.62	-0.33	-0.30	-0.25	-0.39	-0.32	-0.13	-0.10	-0.20	-0.04	0.12	ACCURACY ERROR (dB)
3000 MHz	INTERCEPT (mV)	4891.9	410	752	1104	1426	1788	2142	2480	2815	3152	3512	3860	4189	4554	4901	Measured Value (mV)
	SLOPE (mV/dB)	69.01	4	1	8	-15	1	10	4	-6	-14	0	3	-12	7	9	Error (mV)
			0.05	0.01	0.11	-0.22	0.02	0.15	0.06	-0.09	-0.21	0.00	0.05	-0.18	0.10	0.13	LINEARITY ERROR (dB)
			0.35	0.33	0.45	0.15	0.41	0.56	0.49	0.37	0.27	0.50	0.57	0.37	0.67	0.72	ACCURACY ERROR (dB)
4000 MHz	INTERCEPT (mV)	4845.2	364	712	1049	1372	1737	2087	2441	2773	3111	3470	3810	4147	4497	4855	Measured Value (mV)
	SLOPE (mV/dB)	69.03	5	6	1	-22	-2	3	12	-1	-9	6	0	-7	-3	9	Error (mV)
			0.08	0.12	0.01	-0.31	-0.03	0.04	0.18	-0.02	-0.13	0.08	0.00	-0.11	-0.04	0.14	LINEARITY ERROR (dB)
			-0.32	-0.25	-0.34	-0.64	-0.34	-0.24	-0.08	-0.25	-0.33	-0.10	-0.16	-0.25	-0.15	0.05	ACCURACY ERROR (dB)
5000 MHz	INTERCEPT (mV)	4865.7	398	744	1087	1409	1769	2122	2466	2795	3127	3489	3831	4167	4522	4887	Measured Value (mV)
	SLOPE (mV/dB)	68.81	5	7	5	-17	0	9	8	-7	-18	0	-2	-11	0	21	Error (mV)
			0.07	0.10	0.08	-0.24	0.00	0.13	0.12	-0.10	-0.27	0.00	-0.03	-0.16	0.00	0.31	LINEARITY ERROR (dB)
			0.18	0.22	0.20	-0.11	0.14	0.27	0.28	0.06	-0.10	0.18	0.15	0.03	0.21	0.52	ACCURACY ERROR (dB)
6000 MHz	INTERCEPT (mV)	4853.8	400	743	1085	1406	1767	2119	2462	2787	3121	3481	3820	4157	4510	4877	Measured Value (mV)
	SLOPE (mV/dB)	68.61	6	6	5	-17	0	10	9	-8	-18	-1	-5	-11	-1	24	Error (mV)
			0.08	0.08	0.08	-0.25	0.01	0.14	0.13	-0.12	-0.26	-0.01	-0.07	-0.15	-0.01	0.34	LINEARITY ERROR (dB)
			0.21	0.20	0.19	-0.15	0.10	0.23	0.22	-0.04	-0.19	0.05	-0.01	-0.10	0.03	0.38	ACCURACY ERROR (dB)
7000 MHz	INTERCEPT (mV)	4821	389	735	1076	1395	1755	2104	2444	2766	3102	3458	3797	4135	4476	4835	Measured Value (mV)
	SLOPE (mV/dB)	68.19	0	5	6	-16	3	10	10	-10	-15	1	-1	-4	-4	14	Error (mV)
			0.01	0.08	0.08	-0.24	0.04	0.15	0.14	-0.14	-0.21	0.01	-0.02	-0.05	-0.05	0.21	LINEARITY ERROR (dB)
			0.05	0.08	0.05	-0.31	-0.06	0.01	-0.04	-0.36	-0.47	-0.28	-0.35	-0.42	-0.46	-0.24	ACCURACY ERROR (dB)
8000 MHz	INTERCEPT (mV)	4812.1	388	732	1071	1391	1747	2096	2439	2759	3094	3450	3788	4129	4469	4828	Measured Value (mV)
	SLOPE (mV/dB)	68.11	3	6	5	-16	0	8	10	-10	-15	0	-3	-2	-3	16	Error (mV)
			0.05	0.09	0.07	-0.24	0.00	0.12	0.15	-0.15	-0.22	0.00	-0.04	-0.04	-0.04	0.23	LINEARITY ERROR (dB)
			0.04	0.04	-0.02	-0.37	-0.18	-0.11	-0.12	-0.46	-0.57	-0.40	-0.48	-0.52	-0.57	-0.34	ACCURACY ERROR (dB)
	Flatness	+/- dB	0.38	0.33	0.40	0.39	0.37	0.43	0.37	0.41	0.42	0.45	0.53	0.44	0.62	0.53	

-65dBm mV-Out	
410	Max
357	Min





LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-2G8G-65-70MV
TESTED BY: RCombs
DATE: 1-17-19
SERIAL NO: PL24083-EC

Test Temp: -10 C

DC Offset= 0.012

PLANAR MONOLITHICS INDUSTRIES
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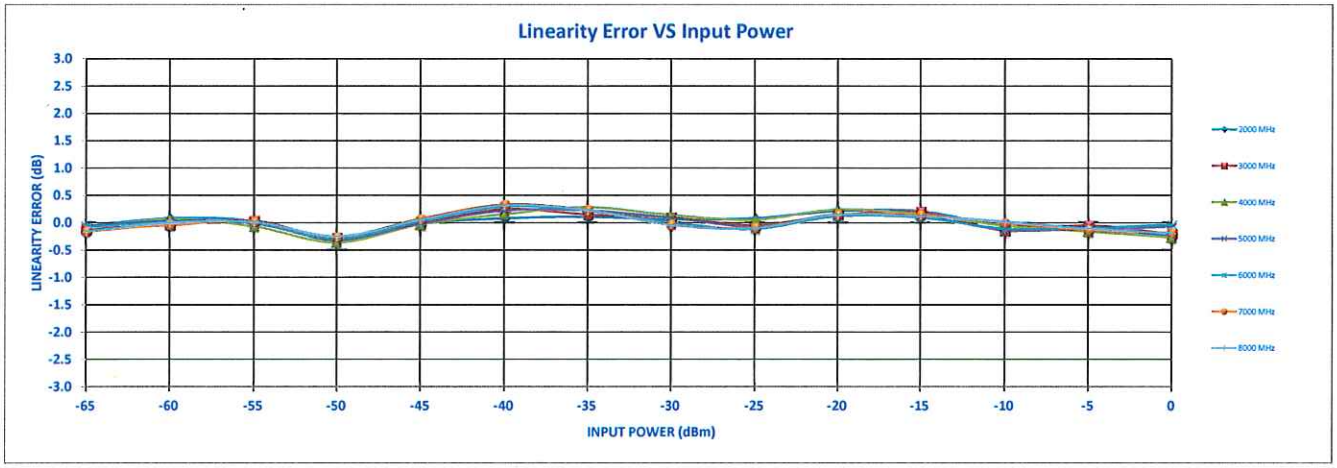
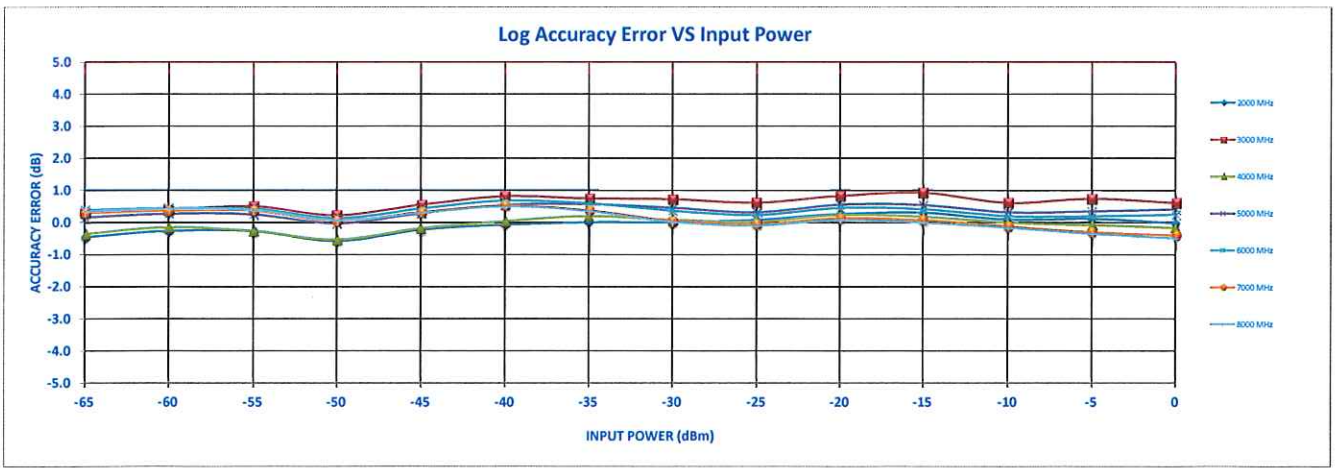
ISO 9001:2000 CERTIFIED

Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	INTERCEPT (mV)	4933.8	346	709	1058	1385	1759	2119	2473	2823	3177	3538	3891	4225	4576	4915	Measured Value (mV)
	SLOPE (mV/dB)	70.51	-5	5	2	-23	-2	5	7	4	5	15	14	-4	-5	-18	Error (mV)
			-0.07	0.07	0.03	-0.33	-0.03	0.08	0.10	0.06	0.08	0.21	0.21	-0.06	-0.08	-0.26	LINEARITY ERROR (dB)
			-0.47	-0.27	-0.27	-0.59	-0.23	-0.08	0.00	0.00	0.07	0.25	0.30	0.08	0.11	-0.03	ACCURACY ERROR (dB)
3000 MHz	INTERCEPT (mV)	4974.5	399	755	1112	1441	1814	2181	2526	2873	3215	3579	3935	4262	4620	4960	Measured Value (mV)
	SLOPE (mV/dB)	70.27	-8	-3	2	-20	1	17	11	7	-3	9	14	-10	-3	-15	Error (mV)
			-0.11	-0.05	0.03	-0.28	0.02	0.25	0.15	0.10	-0.04	0.14	0.20	-0.14	-0.05	-0.21	LINEARITY ERROR (dB)
			0.30	0.39	0.50	0.22	0.55	0.81	0.75	0.72	0.62	0.83	0.93	0.61	0.74	0.60	ACCURACY ERROR (dB)
4000 MHz	INTERCEPT (mV)	4924.6	354	717	1058	1389	1763	2127	2487	2828	3173	3537	3882	4219	4562	4905	Measured Value (mV)
	SLOPE (mV/dB)	70.21	-8	5	-5	-26	-3	11	20	10	4	17	11	-4	-11	-19	Error (mV)
			-0.11	0.07	-0.07	-0.37	-0.04	0.15	0.28	0.14	0.05	0.24	0.15	-0.06	-0.16	-0.27	LINEARITY ERROR (dB)
			-0.36	-0.15	-0.27	-0.54	-0.18	0.04	0.19	0.08	0.02	0.23	0.18	-0.01	-0.09	-0.17	ACCURACY ERROR (dB)
5000 MHz	INTERCEPT (mV)	4951	389	746	1094	1424	1795	2162	2513	2854	3193	3559	3907	4241	4592	4945	Measured Value (mV)
	SLOPE (mV/dB)	70.11	-5	2	-1	-22	-1	15	15	6	-5	10	8	-9	-8	-6	Error (mV)
			-0.07	0.03	-0.02	-0.31	-0.02	0.22	0.22	0.09	-0.07	0.15	0.12	-0.13	-0.12	-0.08	LINEARITY ERROR (dB)
			0.15	0.27	0.24	-0.03	0.28	0.54	0.56	0.45	0.31	0.55	0.54	0.31	0.34	0.40	ACCURACY ERROR (dB)
6000 MHz	INTERCEPT (mV)	4936.5	405	758	1107	1435	1805	2171	2514	2847	3187	3552	3898	4232	4581	4934	Measured Value (mV)
	SLOPE (mV/dB)	69.64	-5	0	0	-20	2	20	15	0	-8	8	6	-8	-7	-3	Error (mV)
			-0.08	0.00	0.00	-0.29	0.03	0.29	0.22	0.00	-0.12	0.11	0.09	-0.11	-0.10	-0.04	LINEARITY ERROR (dB)
			0.37	0.44	0.43	0.12	0.42	0.67	0.59	0.36	0.22	0.44	0.40	0.19	0.19	0.24	ACCURACY ERROR (dB)
7000 MHz	INTERCEPT (mV)	4901.9	399	753	1103	1429	1797	2161	2499	2826	3168	3530	3875	4210	4547	4889	Measured Value (mV)
	SLOPE (mV/dB)	69.10	-11	-3	1	-18	5	23	16	-3	-6	10	9	0	-10	-13	Error (mV)
			-0.16	-0.04	0.02	-0.26	0.07	0.33	0.23	-0.04	-0.09	0.15	0.14	-0.01	-0.14	-0.19	LINEARITY ERROR (dB)
			0.30	0.36	0.37	0.04	0.32	0.52	0.37	0.05	-0.05	0.13	0.07	-0.12	-0.31	-0.40	ACCURACY ERROR (dB)
8000 MHz	INTERCEPT (mV)	4895.6	402	758	1104	1430	1796	2159	2498	2824	3164	3526	3869	4207	4543	4882	Measured Value (mV)
	SLOPE (mV/dB)	68.96	-11	-1	1	-17	3	22	16	-3	-7	10	8	1	-8	-13	Error (mV)
			-0.16	-0.01	0.01	-0.25	0.05	0.31	0.23	-0.05	-0.11	0.14	0.12	0.02	-0.11	-0.19	LINEARITY ERROR (dB)
			0.34	0.43	0.39	0.06	0.30	0.50	0.35	0.02	-0.10	0.08	-0.01	-0.17	-0.36	-0.50	ACCURACY ERROR (dB)
	Flatness	+/- dB	0.42	0.36	0.39	0.40	0.39	0.45	0.38	0.36	0.36	0.37	0.47	0.39	0.55	0.55	

-65dBm mV-Out	
405	Max
346	Min





LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-2G8G-65-70MV
TESTED BY: RCombs
DATE: 1-17-19
SERIAL NO: PL24083-EC

Test Temp: 85 C

DC Offset= 0.026

PLANAR MONOLITHICS INDUSTRIES
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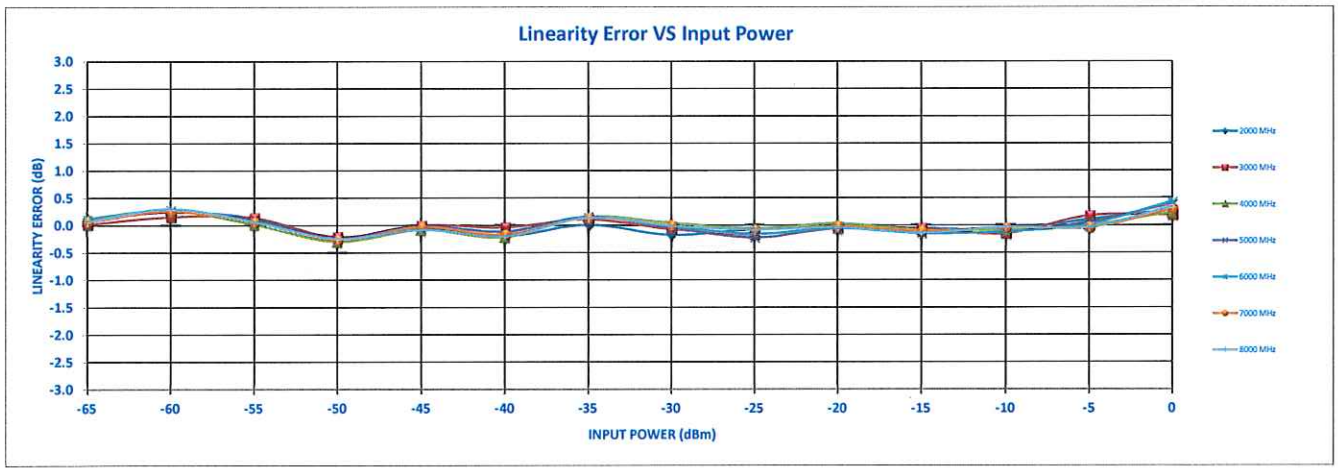
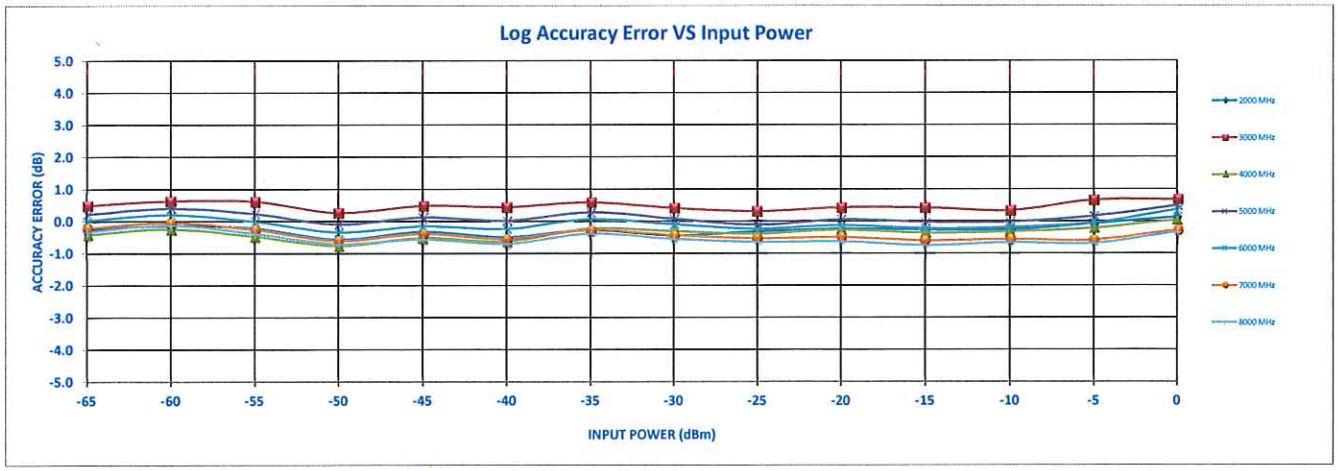
EMAIL: SALES@PMI-RF.COM
ISO 9001:2000 CERTIFIED

Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	INTERCEPT (mV)	4702.2	281	630	963	1279	1634	1963	2317	2645	2993	3338	3676	4015	4368	4721	Measured Value (mV)
	SLOPE (mV/dB)	68.15	8	16	9	-16	-1	-14	0	-12	-5	-1	-4	-5	7	19	Error (mV)
			0.12	0.24	0.13	-0.23	-0.02	-0.20	0.00	-0.18	-0.08	-0.02	-0.06	-0.08	0.10	0.28	LINEARITY ERROR (dB)
			-0.28	-0.14	-0.23	-0.58	-0.34	-0.51	-0.28	-0.45	-0.33	-0.25	-0.27	-0.27	-0.08	0.12	ACCURACY ERROR (dB)
3000 MHz	INTERCEPT (mV)	4745.6	333	682	1020	1336	1690	2027	2376	2704	3036	3384	3723	4056	4418	4758	Measured Value (mV)
	SLOPE (mV/dB)	67.90	1	10	9	-15	0	-3	7	-5	-12	-4	-4	-11	12	13	Error (mV)
			0.02	0.15	0.14	-0.21	0.00	-0.04	0.11	-0.07	-0.17	-0.06	-0.06	-0.16	0.17	0.19	LINEARITY ERROR (dB)
			0.49	0.63	0.61	0.26	0.48	0.44	0.58	0.41	0.31	0.42	0.42	0.33	0.65	0.67	ACCURACY ERROR (dB)
4000 MHz	INTERCEPT (mV)	4699.4	271	622	946	1266	1622	1954	2321	2654	2989	3336	3669	4011	4358	4715	Measured Value (mV)
	SLOPE (mV/dB)	68.26	8	18	1	-21	-6	-15	10	3	-4	2	-6	-6	0	15	Error (mV)
			0.12	0.27	0.01	-0.30	-0.09	-0.22	0.15	0.04	-0.06	0.03	-0.09	-0.08	0.00	0.23	LINEARITY ERROR (dB)
			-0.42	-0.25	-0.48	-0.77	-0.53	-0.63	-0.24	-0.32	-0.39	-0.28	-0.37	-0.34	-0.22	0.03	ACCURACY ERROR (dB)
5000 MHz	INTERCEPT (mV)	4718.9	314	666	994	1311	1665	1997	2355	2680	3007	3358	3692	4032	4384	4745	Measured Value (mV)
	SLOPE (mV/dB)	67.84	4	17	6	-16	-1	-8	10	-4	-16	-5	-9	-9	4	26	Error (mV)
			0.06	0.25	0.09	-0.24	-0.01	-0.12	0.15	-0.05	-0.23	-0.07	-0.13	-0.13	0.06	0.38	LINEARITY ERROR (dB)
			0.21	0.39	0.23	-0.10	0.11	0.01	0.27	0.06	-0.12	0.04	-0.03	-0.03	0.15	0.47	ACCURACY ERROR (dB)
6000 MHz	INTERCEPT (mV)	4707.9	300	652	977	1294	1646	1980	2340	2669	2999	3345	3679	4020	4369	4737	Measured Value (mV)
	SLOPE (mV/dB)	67.92	7	19	5	-18	-5	-11	9	-2	-11	-4	-11	-9	1	29	Error (mV)
			0.10	0.28	0.07	-0.26	-0.08	-0.16	0.13	-0.03	-0.16	-0.06	-0.16	-0.13	0.01	0.42	LINEARITY ERROR (dB)
			0.01	0.19	-0.02	-0.35	-0.17	-0.25	0.05	-0.11	-0.25	-0.14	-0.23	-0.20	-0.06	0.35	ACCURACY ERROR (dB)
7000 MHz	INTERCEPT (mV)	4674.5	285	636	961	1277	1630	1959	2317	2646	2979	3321	3653	3995	4333	4694	Measured Value (mV)
	SLOPE (mV/dB)	67.59	4	17	4	-18	-2	-11	9	-1	-6	-2	-7	-3	-3	19	Error (mV)
			0.06	0.25	0.06	-0.27	-0.03	-0.17	0.13	-0.01	-0.08	-0.02	-0.11	-0.04	-0.05	0.29	LINEARITY ERROR (dB)
			-0.22	-0.05	-0.27	-0.61	-0.40	-0.56	-0.28	-0.44	-0.54	-0.50	-0.61	-0.57	-0.59	-0.28	ACCURACY ERROR (dB)
8000 MHz	INTERCEPT (mV)	4666.7	277	630	952	1270	1619	1949	2309	2638	2971	3311	3643	3988	4326	4689	Measured Value (mV)
	SLOPE (mV/dB)	67.61	5	20	4	-17	-6	-14	9	-1	-6	-3	-10	-2	-3	23	Error (mV)
			0.07	0.30	0.06	-0.25	-0.08	-0.20	0.13	-0.01	-0.08	-0.05	-0.14	-0.04	-0.04	0.33	LINEARITY ERROR (dB)
			-0.34	-0.13	-0.39	-0.72	-0.57	-0.71	-0.40	-0.57	-0.66	-0.64	-0.76	-0.67	-0.70	-0.35	ACCURACY ERROR (dB)
	Flatness	+/- dB	0.46	0.44	0.55	0.52	0.53	0.58	0.49	0.49	0.48	0.53	0.59	0.50	0.68	0.51	

-65dBm mV-Out	
333	Max
271	Min