



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

Customer: _____

Tested By: Simon K.

SO No: _____

Temperature: +25°C, -10°C, +85°C

Model No: ERDLVA-2G8G-65-70MV

Date 1/15/2019

Serial No: PL23418

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 QA 1
2	VSWR:	2.3:1 Max @ 50 Ω	1.45 :1 @ 50 Ω (RF In) 1.73 :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)	67 dB	
5	Switching Speed:	100 ns Max	55 ns	
6	Video Frequency Flatness:	± 1.75 dB Max @ 25°C	± 0.80 dB	
7	TSS:	-71 dBm	-71 dBm	PMI QA 1

Planar Monolithics Industries

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**Summary Data
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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 $\pm$ 3 mV/dB	68.99 mV/dB	
10	Log Linearity:	$\pm$ 1.0 dB Max	+0.61 / -0.57 dB	
11	Log Accuracy @ 25°C:	$\pm$ 1.25 dB Max	+1.02 / -1.00 dB	
12	Absolute Log Accuracy:	$\pm$ 2.0 dB Max	+1.32 / -1.36 dB	
13	DC Offset:	0 - 100mV	98 mV	
14	Rise Time:	28 ns Max (10% to 90% @ -40 & -10 dBm)	27.04 ns	
15	Fall Time:	300 ns Max (90% to 10% @ -40 & -10 dBm)	141.95 ns	
16	Settling Time:	50 ns Max (From 10% to within 35 mV of final value @ -40 & -10 dBm)	50 ns	
17	Recovery Time:	500 ns Max (From 90% of a -5 dBm, 100us Pulse to within $\pm$ 1 dB of baseline) without Amplitude loss of a following -65 dBm, 100ns Pulse	178.19 ns	
18	Pulse Width Process Range:	100ns to 100us	100ns to 100us	
19	Video Output Load Impedance:	95 $\pm$ 1 Ω	95 $\pm$ 1 Ω	PMI QA 1

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TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
20	Video Output @ -65 dBm:	330 ± 88 mV Over Frequency	277 - 349 mV	PMI QA 1
21	Video Output Drive Capability:	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	10.91 mV	
24	Pulse Droop @ -65 dBm:	70 mV Max	0 mV	
25	Propagation Delay:	80ns Max (50% RF to 10% Video)	17 ns	
26	CW Immune Power:	TSS to -40 dBm	TSS to -40 dBm	
27	Baseline Shift:	200 mV Max @ -40 dBm CW	172 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 = 1.7 dB	
29	CW Immue Time @ CW = -40 dBm	4ms Max	3.9 ms	
30	CW Recovery Time @ CW = -40 dBm	120us Max	62 us	
31	DC Power:	+15V (±5%) @ 500 mA Max -15V (±5%) @ 200 mA Max	+405 mA -141 mA	PMI QA 1

QA/QC Approval:

PMI
QA 1

Date:

1/17/19

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LOG TRANSFER WITH FREQUENCY
MODEL: ERLVA-2G8G-65-70MV
TESTED BY: Simon K.
DATE: 01/15/2019
SERIAL NO: PL23418

Test Temp: +25C

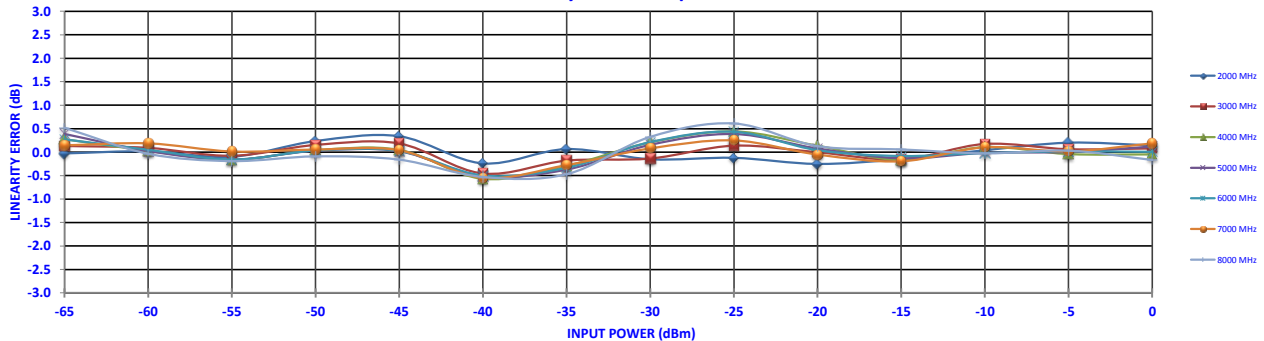


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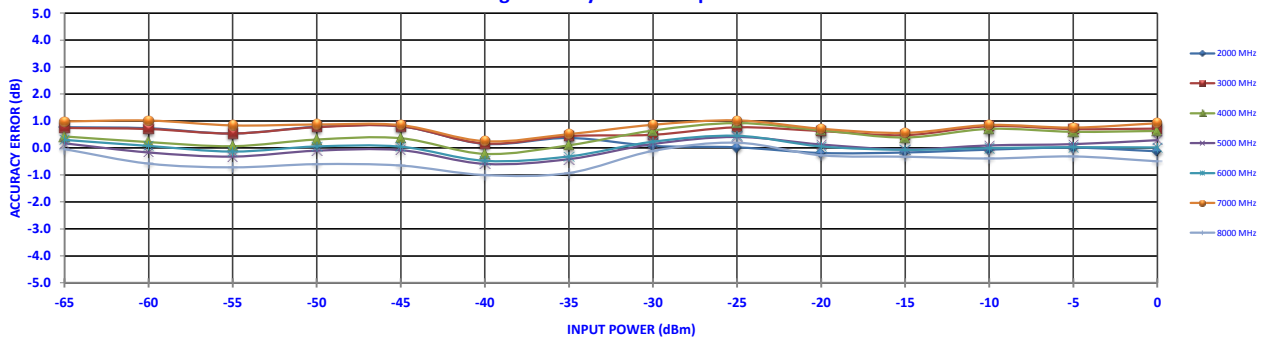
DC Offset= 0.098

Frequency		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	INTERCEPT (mV)	334	682	1019	1387	1739	2044	2410	2740	3087	3423	3775	4133	4489	4830	Measured Value (mV)
	SLOPE (mV/dB)	-2	1	-7	16	23	-17	4	-10	-8	-17	-10	3	14	10	Error (mV)
		-0.03	0.02	-0.10	0.24	0.34	-0.24	0.06	-0.15	-0.12	-0.25	-0.15	0.04	0.20	0.14	LINEARITY ERROR (dB)
3000 MHz	INTERCEPT (mV)	332	680	1019	1386	1739	2045	2415	2769	3139	3480	3820	4194	4537	4889	Measured Value (mV)
	SLOPE (mV/dB)	9	6	-5	11	13	-32	-13	-10	10	0	-11	12	4	6	Error (mV)
		0.13	0.09	-0.08	0.15	0.18	-0.45	-0.18	-0.14	0.14	0.00	-0.16	0.17	0.06	0.08	LINEARITY ERROR (dB)
4000 MHz	INTERCEPT (mV)	310	646	986	1354	1708	2018	2391	2780	3150	3482	3814	4187	4530	4883	Measured Value (mV)
	SLOPE (mV/dB)	10	7	-12	3	3	-40	-21	15	31	10	-12	8	3	-3	Error (mV)
		0.28	0.03	-0.16	0.04	0.05	-0.57	-0.29	0.21	0.44	0.14	-0.17	0.11	-0.04	-0.05	LINEARITY ERROR (dB)
5000 MHz	INTERCEPT (mV)	292	619	959	1325	1677	1992	2355	2745	3114	3445	3783	4144	4498	4859	Measured Value (mV)
	SLOPE (mV/dB)	27	2	-11	2	1	-36	-26	11	27	5	-9	-1	0	8	Error (mV)
		0.39	0.02	-0.16	0.03	0.02	-0.52	-0.37	0.16	0.39	0.08	-0.13	-0.02	0.00	0.12	LINEARITY ERROR (dB)
6000 MHz	INTERCEPT (mV)	301	636	972	1336	1686	2000	2362	2751	3117	3440	3782	4137	4490	4840	Measured Value (mV)
	SLOPE (mV/dB)	19	4	-11	2	2	-35	-23	15	30	3	-6	-1	1	0	Error (mV)
		0.27	0.05	-0.16	0.03	0.03	-0.50	-0.33	0.21	0.43	0.04	-0.08	-0.02	0.01	0.01	LINEARITY ERROR (dB)
7000 MHz	INTERCEPT (mV)	349	702	1040	1393	1742	2051	2420	2795	3157	3486	3826	4197	4541	4903	Measured Value (mV)
	SLOPE (mV/dB)	10	13	1	4	3	-38	-19	6	17	-4	-14	7	1	13	Error (mV)
		0.14	0.19	0.01	0.06	0.04	-0.55	-0.28	0.08	0.25	-0.05	-0.20	0.10	0.02	0.19	LINEARITY ERROR (dB)
8000 MHz	INTERCEPT (mV)	277	590	931	1290	1637	1963	2319	2727	3099	3417	3764	4110	4466	4804	Measured Value (mV)
	SLOPE (mV/dB)	36	-2	-13	-6	-11	-37	-33	23	43	9	4	-2	2	-12	Error (mV)
		0.52	-0.04	-0.19	-0.09	-0.16	-0.53	-0.47	0.33	0.61	0.13	0.06	-0.03	0.03	-0.17	LINEARITY ERROR (dB)
Flatness	+/- dB	0.51	0.80	0.78	0.73	0.75	0.63	0.72	0.48	0.50	0.49	0.44	0.62	0.53	0.71	ACCURACY ERROR (dB)
-65dBm mV-Out		349	Max													
		277	Min													

Linearity Error VS Input Power



Log Accuracy Error VS Input Power



LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-2G8G-65-70MV
TESTED BY: Simon K.
DATE: 01/15/2019
SERIAL NO: PL23418

Test Temp: -10C

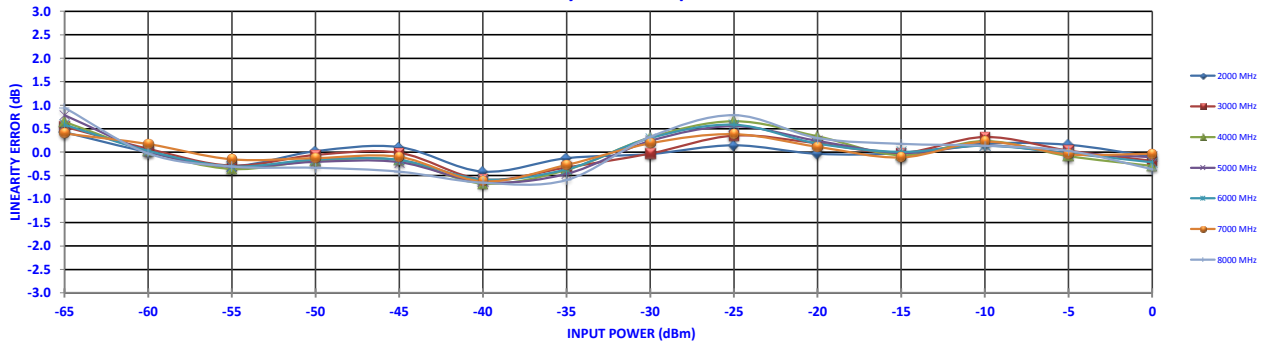


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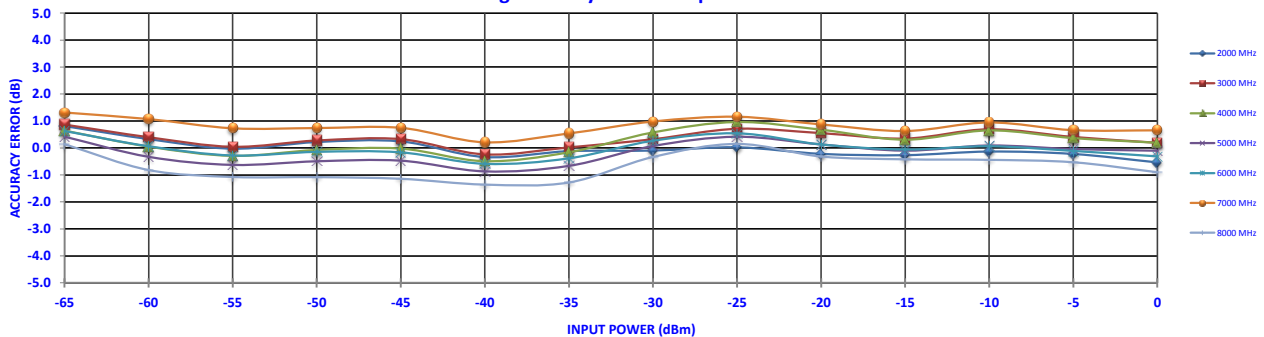
DC Offset= 0.098

Frequency		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	INTERCEPT (mV)	303	626	958	1333	1692	2008	2381	2740	3106	3446	3800	4167	4518	4853	Measured Value (mV)
	SLOPE (mV/dB)	30	0	-21	1	8	-29	-9	-3	10	-3	-1	13	11	-7	Error (mV)
		0.42	0.00	-0.29	0.02	0.11	-0.41	-0.13	-0.04	0.15	-0.04	-0.02	0.18	0.16	-0.10	LINEARITY ERROR (dB)
3000 MHz	INTERCEPT (mV)	307	631	963	1337	1698	2015	2391	2770	3155	3501	3844	4226	4563	4905	Measured Value (mV)
	SLOPE (mV/dB)	39	5	-21	-4	-1	-42	-23	-2	25	13	-1	23	2	-13	Error (mV)
		0.54	0.07	-0.29	-0.06	-0.01	-0.58	-0.33	-0.03	0.35	0.19	-0.02	0.32	0.03	-0.19	LINEARITY ERROR (dB)
4000 MHz	INTERCEPT (mV)	291	606	939	1312	1673	1997	2378	2788	3173	3510	3841	4223	4560	4905	Measured Value (mV)
	SLOPE (mV/dB)	46	1	-26	-13	-12	-46	-27	23	47	24	-5	17	4	-21	Error (mV)
		0.64	0.02	-0.38	-0.18	-0.17	-0.67	-0.38	0.31	0.66	0.34	-0.07	0.24	-0.09	-0.30	LINEARITY ERROR (dB)
5000 MHz	INTERCEPT (mV)	275	579	915	1282	1641	1970	2342	2752	3134	3471	3812	4183	4531	4884	Measured Value (mV)
	SLOPE (mV/dB)	57	1	-22	-15	-15	-46	-33	17	40	17	-1	10	-1	-8	Error (mV)
		0.79	0.01	-0.31	-0.21	-0.21	-0.64	-0.46	0.24	0.55	0.24	-0.02	0.14	-0.02	-0.11	LINEARITY ERROR (dB)
6000 MHz	INTERCEPT (mV)	290	607	940	1307	1663	1990	2362	2766	3143	3471	3815	4181	4526	4869	Measured Value (mV)
	SLOPE (mV/dB)	42	2	-22	-11	-12	-41	-26	21	42	13	0	10	-2	-15	Error (mV)
		0.58	0.03	-0.30	-0.16	-0.17	-0.58	-0.37	0.30	0.58	0.18	0.01	0.14	-0.03	-0.22	LINEARITY ERROR (dB)
7000 MHz	INTERCEPT (mV)	339	679	1012	1370	1728	2047	2428	2817	3187	3524	3864	4244	4581	4938	Measured Value (mV)
	SLOPE (mV/dB)	28	12	-11	-9	-7	-44	-20	13	27	8	-8	16	-3	-2	Error (mV)
		0.40	0.17	-0.15	-0.13	-0.10	-0.62	-0.27	0.19	0.38	0.11	-0.11	0.22	-0.05	-0.03	LINEARITY ERROR (dB)
8000 MHz	INTERCEPT (mV)	255	544	883	1240	1593	1935	2298	2723	3115	3439	3789	4145	4496	4827	Measured Value (mV)
	SLOPE (mV/dB)	68	-2	-22	-24	-30	-47	-43	23	56	22	13	10	2	-26	Error (mV)
		0.94	-0.03	-0.31	-0.33	-0.42	-0.65	-0.59	0.33	0.79	0.30	0.18	0.14	0.03	-0.36	LINEARITY ERROR (dB)
Flatness	+/- dB	0.59	0.94	0.90	0.91	0.94	0.78	0.91	0.66	0.57	0.59	0.52	0.69	0.59	0.78	ACCURACY ERROR (dB)
-65dBm mV-Out		339	Max													
		255	Min													

Linearity Error VS Input Power



Log Accuracy Error VS Input Power



LOG TRANSFER WITH FREQUENCY
MODEL: ERLVA-2G8G-65-70MV
TESTED BY: Simon K.
DATE: 01/15/2019
SERIAL NO: PL23418

Test Temp: +85C

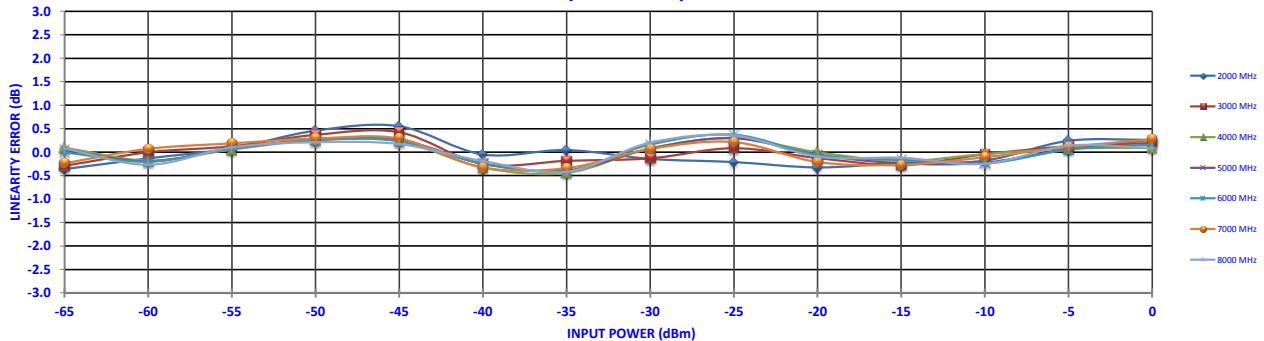


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DC Offset= 0.099

Frequency		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	INTERCEPT (mV)	287	639	990	1352	1695	1991	2334	2658	2990	3319	3662	4002	4367	4705	Measured Value (mV)
	SLOPE (mV/dB)	-24	-9	5	31	37	-3	3	-10	-14	-22	-16	-12	16	18	Error (mV)
		-0.36	-0.13	0.08	0.46	0.55	-0.05	0.04	-0.14	-0.21	-0.33	-0.23	-0.18	0.24	0.26	LINEARITY ERROR (dB)
3000 MHz	INTERCEPT (mV)	299	660	1010	1368	1713	2008	2354	2699	3055	3382	3713	4070	4423	4769	Measured Value (mV)
	SLOPE (mV/dB)	-20	0	8	25	29	-17	-13	-9	6	-9	-19	-3	9	13	Error (mV)
		-0.29	0.00	0.12	0.37	0.42	-0.26	-0.19	-0.13	0.08	-0.13	-0.28	-0.05	0.12	0.19	LINEARITY ERROR (dB)
4000 MHz	INTERCEPT (mV)	253	580	942	1302	1646	1953	2291	2673	3034	3359	3692	4048	4402	4749	Measured Value (mV)
	SLOPE (mV/dB)	6	-12	4	18	16	-23	-31	6	21	0	-13	-3	5	6	Error (mV)
		0.09	-0.18	0.05	0.26	0.23	-0.33	-0.44	0.08	0.30	0.00	-0.19	-0.04	0.08	0.09	LINEARITY ERROR (dB)
5000 MHz	INTERCEPT (mV)	255	581	943	1298	1641	1949	2282	2657	3015	3334	3664	4008	4371	4727	Measured Value (mV)
	SLOPE (mV/dB)	3	-14	6	18	18	-17	-27	5	20	-4	-16	-15	5	18	Error (mV)
		0.05	-0.20	0.08	0.26	0.26	-0.25	-0.39	0.08	0.30	-0.05	-0.24	-0.22	0.07	0.26	LINEARITY ERROR (dB)
6000 MHz	INTERCEPT (mV)	251	579	940	1294	1634	1943	2274	2654	3010	3322	3657	3993	4355	4704	Measured Value (mV)
	SLOPE (mV/dB)	0	-14	5	18	16	-17	-27	11	25	-4	-11	-17	4	11	Error (mV)
		0.00	-0.20	0.08	0.26	0.23	-0.24	-0.40	0.16	0.37	-0.06	-0.16	-0.24	0.05	0.16	LINEARITY ERROR (dB)
7000 MHz	INTERCEPT (mV)	288	650	999	1347	1688	1987	2327	2696	3047	3359	3696	4048	4404	4756	Measured Value (mV)
	SLOPE (mV/dB)	-16	5	13	20	20	-22	-23	5	15	-14	-18	-7	8	18	Error (mV)
		-0.24	0.07	0.19	0.29	0.29	-0.33	-0.34	0.07	0.21	-0.21	-0.27	-0.11	0.11	0.27	LINEARITY ERROR (dB)
8000 MHz	INTERCEPT (mV)	245	562	928	1276	1614	1930	2255	2638	2989	3299	3638	3970	4337	4674	Measured Value (mV)
	SLOPE (mV/dB)	5	-18	7	14	12	-13	-29	14	24	-7	-8	-17	9	6	Error (mV)
		0.08	-0.27	0.10	0.21	0.17	-0.19	-0.42	0.20	0.35	-0.10	-0.12	-0.25	0.14	0.09	LINEARITY ERROR (dB)
Flatness	+/- dB	0.40	0.72	0.60	0.67	0.72	0.57	0.72	0.45	0.48	0.61	0.55	0.73	0.63	0.70	ACCURACY ERROR (dB)
-65dBm mV-Out		299	Max													
		245	Min													

Linearity Error VS Input Power



Log Accuracy Error VS Input Power

