Summary Data
For
EWDM-2G6G-65-70MV-1

Customer:

SO No:

Model No: EWDM-2G6G-65-70MV-1

Serial No: PL30085

Tested By: Glen G.

Temperature: 0°C TO +85°C

Date 10/30/2020

Drawing No: 27637945 **Rev:** A1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 6 GHz	**2 to 6 GHz**	PMI QA3
2	VSWR:	2.0:1 MAX @ 50 Ω	**1.:1.61 @ 50 Ω (RF IN)** **1.:1.18 @ 50 Ω (BIT IN)** **1.:1.17 @ 50 Ω (RF OUT)** **1.:1.51 @ 50 Ω (SW OUT)**	
3	Noise Figure:	6 dB MAX	**5.2 dB**	
4	Input Power:	(1) 1 W CW, Max. (2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%, Max.	**PASS**	
5	TTL Control	See Logic Table	**PASS**	
6	SP3T Switch Isolation	60 dB MIN (All Ports)	**> 60 dB**	
7	SP3T Switching Speed:	100 ns MAX	**50 ns**	
8	RF OUT Linear Gain	+33 dB MIN, 39 dB MAX	**37 dB**	
9	RF OUT Frequency Flatness:	±2.0 dB MAX	**±1.1 dB**	
10	RF OUT 1 dB Compression Point:	+3 dBm MIN	**+11.3 dBm**	
11	RF OUT Second Harmonic:	-9 dBc MIN	**-30 dBc**	
12	RF OUT Third Harmonic:	-12 dBc MIN	**-22 dBc**	PMI QA3

7311-F Grove Road Frederick, MD 21704 USA
Phone: (301)662-5019 Fax: (301)662-1731
Website: www.pmi-rf.com Email: sales@pmi-rf.com

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13	SW Linear Gain	+7 dB MIN, 15 dB MAX	**12 dB**	PMI QA3
14	SW Frequency Flatness:	±1.2 dB MAX	**±1.1 dB**	
15	SW 1 dB Compression Point:	+3 dBm MIN	**+5.0 dBm**	
16	SW Second Harmonic:	-9 dBc MIN	**-25 dBc**	
17	SW Third Harmonic:	-12 dBc MIN	**-35 dBc**	
18	VIDEO OUT TSS:	-71 dBm MAX	**-72 dBm**	
19	VIDEO OUT Dynamic Range:	-65 to 0 dBm	**-65dBm to 0dBm**	
20	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	**70.9 mV/dB**	
21	VIDEO OUT Log Linearity:	±0.75 dB MAX @ 4 GHZ	**+0.31 / -0.25 dB**	
22	VIDEO OUT Log Accuracy:	±1.25 dB MAX	**±1.10 dB**	
23	VIDEO OUT Absolute Log Accuracy:	±1.5 dB MAX	**±1.36 dB**	
24	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On)	**-29 mV**	
25	VIDEO OUT Rise Time (10% to 90%):	25 ns TYP 28 ns MAX	**27 ns**	
26	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	**260 ns**	
27	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value, MAX	**40 ns**	
28	VIDEO OUT Recovery Time:	0.5 us MAX to within 1 dB of baseline	**0.35 us**	PMI QA3

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29	VIDEO OUT Video Frequency Flatness:	±1.0 dB MAX	**±0.78 dB**	PMI QA3
30	VIDEO OUT CW Immunity:	A. CW Immune Power TSS to -40 dBm Baseline Shift: 200 mV MAX	**140 mV**	
		B. Pulse Peak Amplitude Loss; 2 dB MAX	**1.1 dB**	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	**2.7 ms**	
		CW Recovery Time at CW = -40 dBm, ≤ 50 us	**32 us**	
31	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	**100 ns to 300 us**	
32	VIDEO OUT load Impedance:	75 ±1 Ω	**75 Ω**	
33	VIDEO OUT Video Output driver capability	150 ft. RG11 into 75 ohm load	**PASS**	
34	Pulse density capability:	10% duty cycle 100ns; 70% duty cycle 300us at peak power -10 dBm with 1 dB variable for pulse amplitude and baseline	**PASS**	
35	VIDEO OUT Noise Level (Vp-p):	150 mV TYP	**130 mV**	PMI QA3

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36	Droop of the Output Video Pulse @ 300us & -65 dBm	70mV (1 dB) MAX	**53 mV**	PMI QA3
37	VIDEO OUT Propagation Delay:	50 ns MAX Excluding cable	**44 ns**	
38	Power Supply	+15 V @ 1000 mA MAX -15 V @ 500 mA MAX	**+15 V @ 650 mA** **-15 V @ 130 mA**	
39	Power Supply Ripple From DC to 10 MHz	100 mV MAX	**Pass**	PMI QA3

QA/QC Approval: a Zimmerman **Date:** 10-30-20

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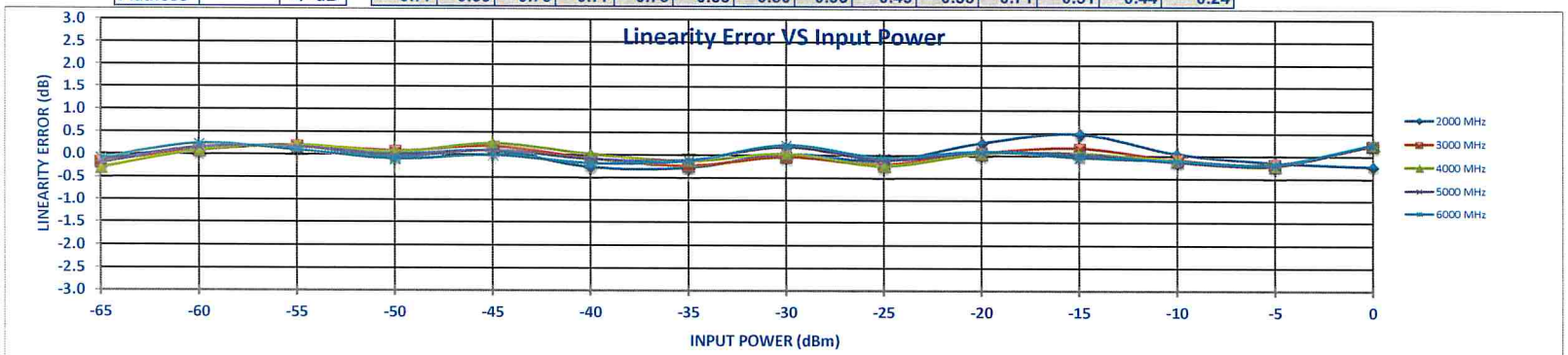
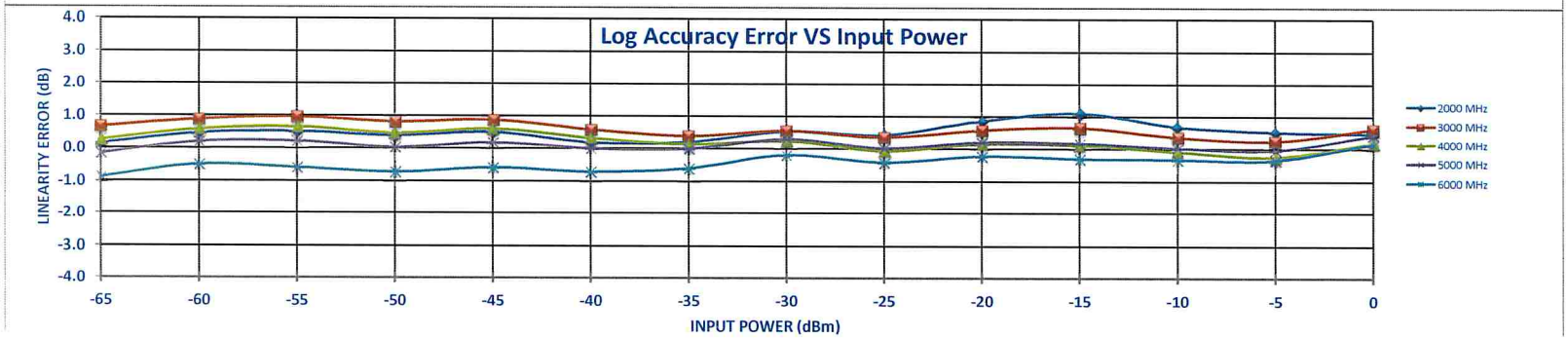
LOG TRANSFER WITH FREQUENCY
MODEL: EWDM-2G6G-65-70MV
TESTED BY: J. Emperador
MODEL: EWDM-2G6G-65-70MV-1
SERIAL NO: PL30085
DATE: 10/30/2020
Vos= -29 mV

Test Temp: 25C

PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway STE 1
TEL: 916-542-1401 FAX: 301-662-1731
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)	4949.1	353	726	1080	1422	1780	2108	2460	2834	3177	3558	3925	4247	4586	4933	Measured Value (mV)
	SLOPE (mV/dB)	70.547	-11	10	11	0	5	-19	-20	1	-8	20	34	3	-10	-16	Error (mV)
			-0.15	0.14	0.16	0.00	0.08	-0.27	-0.28	0.02	-0.12	0.28	0.48	0.05	-0.15	-0.23	LINEARITY ERROR (dB)
			0.14	0.46	0.51	0.39	0.50	0.18	0.20	0.53	0.43	0.86	1.10	0.69	0.53	0.48	ACCURACY ERROR (dB)
3000 MHz	INTERCEPT (mV)	4926.2	389	755	1111	1451	1806	2136	2473	2835	3172	3538	3894	4224	4566	4943	Measured Value (mV)
	SLOPE (mV/dB)	69.614	-12	6	14	5	12	-6	-17	-3	-14	4	12	-6	-12	17	Error (mV)
			-0.18	0.08	0.19	0.08	0.18	-0.08	-0.24	-0.04	-0.20	0.06	0.17	-0.09	-0.17	0.24	LINEARITY ERROR (dB)
			0.66	0.88	0.96	0.81	0.87	0.58	0.39	0.55	0.36	0.58	0.66	0.36	0.24	0.62	ACCURACY ERROR (dB)
4000 MHz	INTERCEPT (mV)	4893.1	361	734	1090	1427	1787	2118	2455	2813	3142	3508	3856	4192	4531	4912	Measured Value (mV)
	SLOPE (mV/dB)	69.4	-21	5	14	4	17	1	-9	2	-16	3	4	-7	-15	19	Error (mV)
			-0.30	0.07	0.20	0.06	0.24	0.01	-0.13	0.03	-0.23	0.04	0.06	-0.10	-0.22	0.27	LINEARITY ERROR (dB)
			0.26	0.58	0.66	0.46	0.60	0.32	0.13	0.24	-0.07	0.15	0.11	-0.09	-0.26	0.18	ACCURACY ERROR (dB)
5000 MHz	INTERCEPT (mV)	4911.9	331	707	1059	1396	1757	2095	2445	2817	3148	3512	3860	4200	4546	4929	Measured Value (mV)
	SLOPE (mV/dB)	70.253	-14	10	11	-3	6	-7	-8	13	-8	5	2	-9	-15	17	Error (mV)
			-0.21	0.15	0.16	-0.05	0.09	-0.10	-0.12	0.18	-0.11	0.07	0.03	-0.13	-0.21	0.24	LINEARITY ERROR (dB)
			-0.17	0.19	0.21	0.02	0.17	-0.01	-0.01	0.29	0.01	0.21	0.17	0.02	-0.04	0.42	ACCURACY ERROR (dB)
6000 MHz	INTERCEPT (mV)	4891.1	281	658	1002	1343	1703	2045	2403	2782	3117	3481	3826	4175	4524	4910	Measured Value (mV)
	SLOPE (mV/dB)	70.825	-6	16	6	-7	-1	-13	-9	16	-3	6	-3	-8	-13	19	Error (mV)
			-0.09	0.23	0.09	-0.10	-0.01	-0.18	-0.13	0.22	-0.05	0.09	-0.04	-0.11	-0.18	0.27	LINEARITY ERROR (dB)
			-0.88	-0.51	-0.60	-0.73	-0.60	-0.72	-0.61	-0.21	-0.43	-0.24	-0.31	-0.34	-0.36	0.15	ACCURACY ERROR (dB)
	Flatness	+/- dB	0.77	0.69	0.78	0.77	0.73	0.65	0.50	0.38	0.43	0.55	0.71	0.51	0.44	0.24	



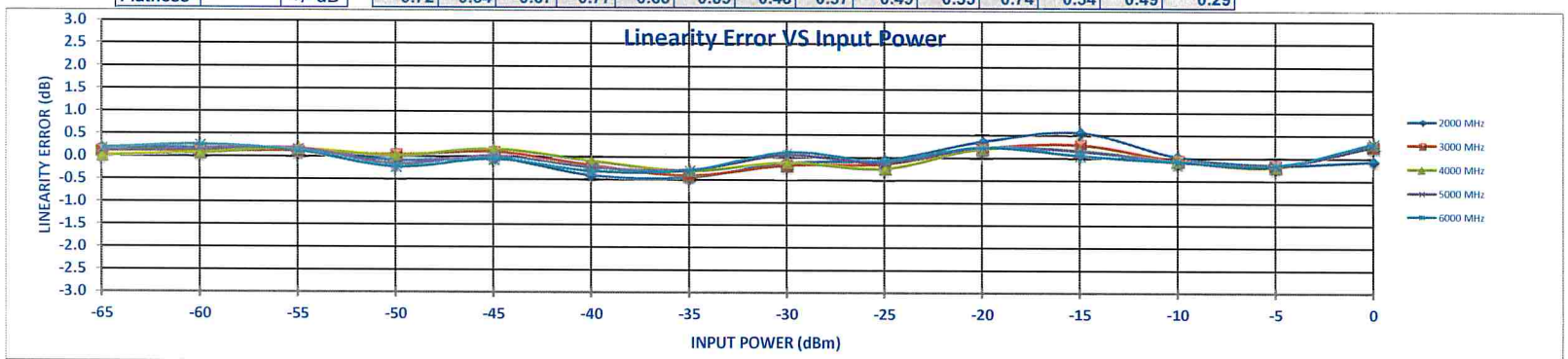


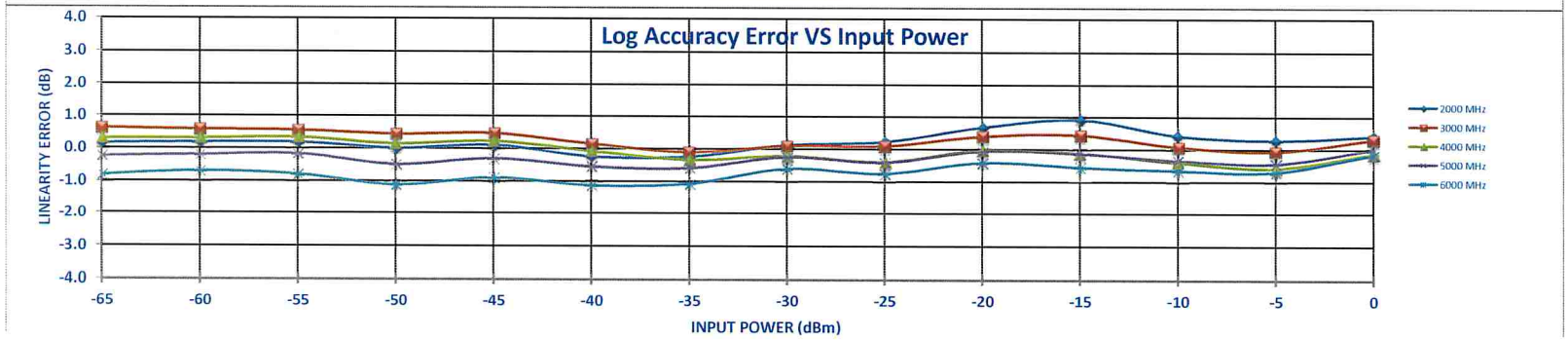
LOG TRANSFER WITH FREQUENCY
MODEL: EWDM-2G6G-65-70MV
TESTED BY: J. Emperador
MODEL: EWDM-2G6G-65-70MV-1
SERIAL NO: PL30085
DATE: 10/30/2020
Vos= -36 mV

Test Temp: 0C

PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway STE 1
TEL: 916-542-1401 FAX: 301-662-1731
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)	5030.9	380	738	1094	1437	1800	2131	2487	2869	3233	3621	3994	4315	4661	5026	Measured Value (mV)
	SLOPE (mV/dB)	71.75	13	12	9	-6	-2	-30	-33	-9	-4	25	39	2	-11	-5	Error (mV)
			0.18	0.17	0.13	-0.09	-0.03	-0.42	-0.45	-0.13	-0.06	0.35	0.55	0.02	-0.16	-0.07	LINEARITY ERROR (dB)
			0.15	0.18	0.18	0.00	0.10	-0.26	-0.26	0.11	0.22	0.67	0.91	0.42	0.28	0.40	ACCURACY ERROR (dB)
3000 MHz	INTERCEPT (mV)	5001.2	413	766	1120	1468	1826	2159	2497	2867	3223	3601	3960	4290	4636	5019	Measured Value (mV)
	SLOPE (mV/dB)	70.707	8	7	8	2	7	-14	-29	-13	-11	14	19	-4	-12	18	Error (mV)
			0.11	0.10	0.11	0.03	0.09	-0.20	-0.42	-0.18	-0.15	0.20	0.27	-0.06	-0.16	0.25	LINEARITY ERROR (dB)
			0.62	0.57	0.54	0.43	0.46	0.14	-0.12	0.08	0.08	0.39	0.43	0.07	-0.07	0.31	ACCURACY ERROR (dB)
4000 MHz	INTERCEPT (mV)	4964.9	391	747	1105	1447	1809	2143	2480	2845	3188	3571	3920	4256	4599	4987	Measured Value (mV)
	SLOPE (mV/dB)	70.374	0	5	11	1	11	-7	-22	-9	-18	14	11	-5	-14	22	Error (mV)
			0.01	0.06	0.15	0.01	0.16	-0.10	-0.31	-0.12	-0.25	0.19	0.15	-0.07	-0.20	0.31	LINEARITY ERROR (dB)
			0.31	0.31	0.33	0.14	0.22	-0.09	-0.35	-0.23	-0.41	-0.03	-0.13	-0.41	-0.59	-0.14	ACCURACY ERROR (dB)
5000 MHz	INTERCEPT (mV)	4978.7	351	710	1068	1401	1770	2109	2462	2842	3187	3568	3919	4260	4609	4997	Measured Value (mV)
	SLOPE (mV/dB)	71.316	8	10	12	-12	1	-17	-21	3	-9	16	10	-6	-13	18	Error (mV)
			0.11	0.14	0.16	-0.17	0.01	-0.24	-0.29	0.04	-0.12	0.22	0.14	-0.08	-0.18	0.26	LINEARITY ERROR (dB)
			-0.26	-0.21	-0.19	-0.51	-0.33	-0.56	-0.61	-0.27	-0.42	-0.07	-0.14	-0.35	-0.45	0.00	ACCURACY ERROR (dB)
6000 MHz	INTERCEPT (mV)	4961.8	311	675	1024	1358	1729	2069	2429	2817	3163	3543	3889	4238	4591	4985	Measured Value (mV)
	SLOPE (mV/dB)	71.745	13	18	8	-17	-4	-23	-22	8	-5	16	3	-6	-12	23	Error (mV)
			0.18	0.25	0.11	-0.23	-0.06	-0.32	-0.30	0.11	-0.07	0.22	0.05	-0.09	-0.17	0.32	LINEARITY ERROR (dB)
			-0.82	-0.71	-0.80	-1.11	-0.90	-1.13	-1.07	-0.62	-0.76	-0.42	-0.56	-0.66	-0.71	-0.17	ACCURACY ERROR (dB)
	Flatness	+/- dB	0.72	0.64	0.67	0.77	0.68	0.63	0.48	0.37	0.49	0.55	0.74	0.54	0.49	0.29	





LOG TRANSFER WITH FREQUENCY
MODEL: EWDM-2G6G-65-70MV
TESTED BY: J. Emperador
MODEL: EWDM-2G6G-65-70MV-1
SERIAL NO: PL30085
DATE: 10/30/2020
Vos= +30 mV

Test Temp: +85C

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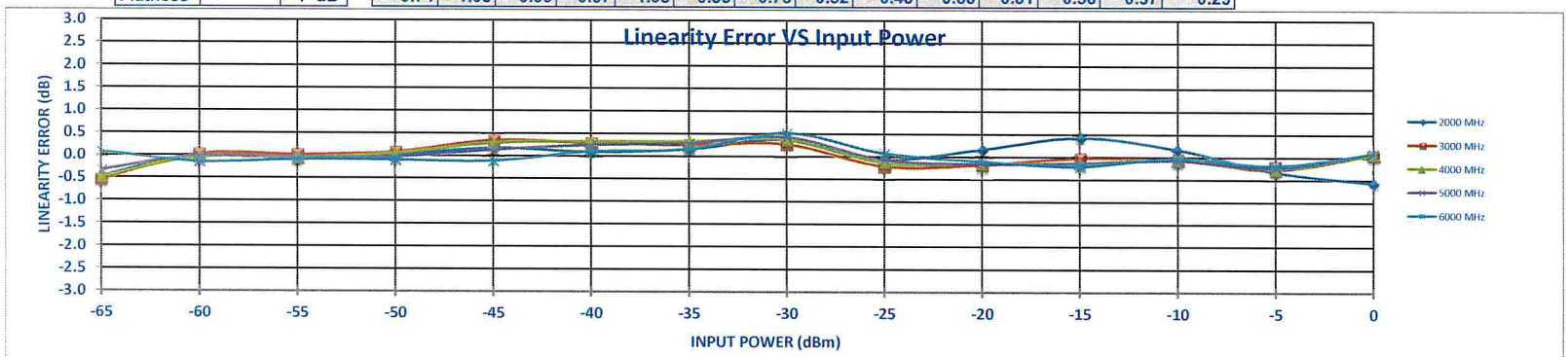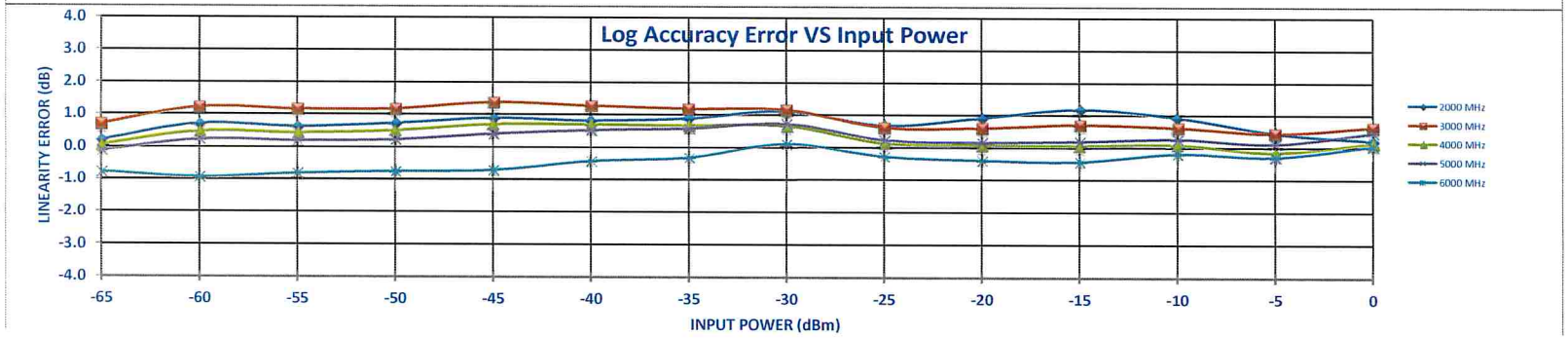
Frequency			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
2000 MHz	INTERCEPT (mV)	4694.8	249	622	955	1301	1651	1985	2329	2683	2993	3348	3705	4027	4333	4656	Measured Value (mV)
	SLOPE (mV/dB)	67.891	-33	1	-6	1	11	6	10	25	-5	11	29	11	-22	-39	Error (mV)
			-0.48	0.01	-0.09	0.01	0.17	0.09	0.15	0.37	-0.07	0.16	0.42	0.16	-0.33	-0.57	LINEARITY ERROR (dB)
			0.19	0.70	0.61	0.71	0.87	0.80	0.87	1.09	0.67	0.90	1.17	0.92	0.43	0.19	ACCURACY ERROR (dB)
3000 MHz	INTERCEPT (mV)	4681.8	282	656	991	1331	1684	2016	2349	2686	2989	3327	3673	4006	4333	4685	Measured Value (mV)
	SLOPE (mV/dB)	67.115	-37	1	1	5	22	19	16	18	-15	-13	-2	-5	-13	3	Error (mV)
			-0.56	0.02	0.01	0.07	0.33	0.28	0.24	0.26	-0.22	-0.19	-0.03	-0.07	-0.20	0.05	LINEARITY ERROR (dB)
			0.68	1.20	1.14	1.15	1.36	1.26	1.17	1.14	0.61	0.59	0.70	0.61	0.43	0.62	ACCURACY ERROR (dB)
4000 MHz	INTERCEPT (mV)	4647.9	239	606	942	1286	1638	1977	2314	2653	2956	3291	3629	3970	4293	4652	Measured Value (mV)
	SLOPE (mV/dB)	67.305	-34	-4	-4	3	19	21	22	24	-9	-11	-9	-5	-18	4	Error (mV)
			-0.51	-0.05	-0.06	0.05	0.28	0.32	0.32	0.36	-0.14	-0.16	-0.14	-0.07	-0.27	0.06	LINEARITY ERROR (dB)
			0.05	0.46	0.42	0.49	0.68	0.68	0.65	0.65	0.12	0.06	0.05	0.08	-0.16	0.14	ACCURACY ERROR (dB)
5000 MHz	INTERCEPT (mV)	4666.9	227	589	926	1267	1618	1965	2308	2657	2963	3297	3638	3982	4311	4673	Measured Value (mV)
	SLOPE (mV/dB)	67.947	-23	-1	-4	-3	9	16	19	28	-5	-11	-10	-5	-16	6	Error (mV)
			-0.34	-0.02	-0.06	-0.04	0.13	0.23	0.28	0.42	-0.08	-0.16	-0.14	-0.08	-0.24	0.09	LINEARITY ERROR (dB)
			-0.13	0.21	0.18	0.21	0.39	0.50	0.56	0.71	0.22	0.15	0.18	0.25	0.11	0.45	ACCURACY ERROR (dB)
6000 MHz	INTERCEPT (mV)	4639.1	182	510	857	1200	1542	1900	2247	2615	2928	3259	3595	3951	4283	4645	Measured Value (mV)
	SLOPE (mV/dB)	68.646	5	-10	-7	-7	-8	7	10	35	5	-7	-14	-2	-13	6	Error (mV)
			0.07	-0.15	-0.10	-0.10	-0.12	0.10	0.15	0.51	0.07	-0.11	-0.21	-0.02	-0.19	0.09	LINEARITY ERROR (dB)
			-0.79	-0.96	-0.84	-0.78	-0.73	-0.45	-0.34	0.09	-0.29	-0.41	-0.45	-0.20	-0.31	0.03	ACCURACY ERROR (dB)
	Flatness	+/- dB	0.74	1.08	0.99	0.97	1.05	0.86	0.75	0.52	0.48	0.66	0.81	0.56	0.37	0.29