



Rev: A1



Summary Data
For
EWDM-6G18G-65-70MV-1

13	SW Linear Gain	+7 dB MIN, 15 dB MAX	11.7/13.4 dB	PMI QA3
14	SW Frequency Flatness:	±1.5 dB MAX	±0.83 dB	
15	SW 1 dB Compression Point:	+3 dBm MIN	5.4 dBm	
16	SW Saturated Power:	+9 dBm MAX	7.1 dBm	
17	SW Second Harmonic:	-9 dBc MIN	-25 dBc	
18	SW Third Harmonic:	-12 dBc MIN	-35 dBc	
19	VIDEO OUT TSS:	-71 dBm MAX	-71 dBm	
20	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
21	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	71.0/69.64 mv/db	
22	VIDEO OUT Log Linearity:	±1.0 dB MAX @12 GHZ	+0.36 / -0.28 dB	
23	VIDEO OUT Log Accuracy:	±2.0 dB MAX	+1.56 / -1.61 dB	
24	VIDEO OUT Absolute Log Accuracy:	±2.25 dB MAX	+1.92 / -2.03 dB	
25	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On)	-18 mV	
26	VIDEO OUT Rise Time (10% to 90%):	25 ns TYP 28 ns MAX	24.3 ns	
27	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	191.3 ns	
28	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value, MAX	40 ns typ	



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29	VIDEO OUT Recovery Time:	0.5 us MAX to within 1 dB of baseline	.45 us	PMI QA3
30	VIDEO OUT Video Frequency Flatness:	±1.75 dB MAX	±0.89 dB	
31	VIDEO OUT CW Immunity:	A. CW Immune Power TSS to -40 dBm Baseline Shift: 200 mV MAX	125 mV TYP	
		B. Pulse Peak Amplitude Loss; 2 dB MAX	1.7 dB TYP	
		CW Immunity Time at CW = -40 dBm, ≤ 3 ms	1.4ms	
		CW Recovery Time at CW = -40 dBm, ≤ 50 us	40 us TYP	
32	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	100 ns to 300 us	
33	VIDEO OUT Impedance:	75 ±1 Ω	75 Ω	
34	VIDEO driver capability	150 ft RG11 into 75 ohm load	PASS	
35	Pulse density capability	10% duty cycle 100 ns, 70% duty cycle 300 us at peak power -10 dBm with 1 dB variable for pulse amplitude and baseline	PASS	
36	VIDEO OUT Noise Level (Vp-p):	160 mV TYP	140mV TYP	
37	Droop of the Output Video Pulse: @ -65 dBm & 300 us pulse width	70mV (1 dB) MAX	45 mV TYP	



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38	VIDEO OUT Propagation Delay:	50 ns MAX (excluding cable)	33 ns	PMI QAS
39	Power Supply	+15 V @ 1000 mA MAX -15 V @ 500 mA MAX	+15 V @ 630 mA -15 V @ 140 mA	
40	Power Supply Ripple From DC to 10 MHz	100 mV MAX	PASS	

QA/QC Approval: K. Klemm

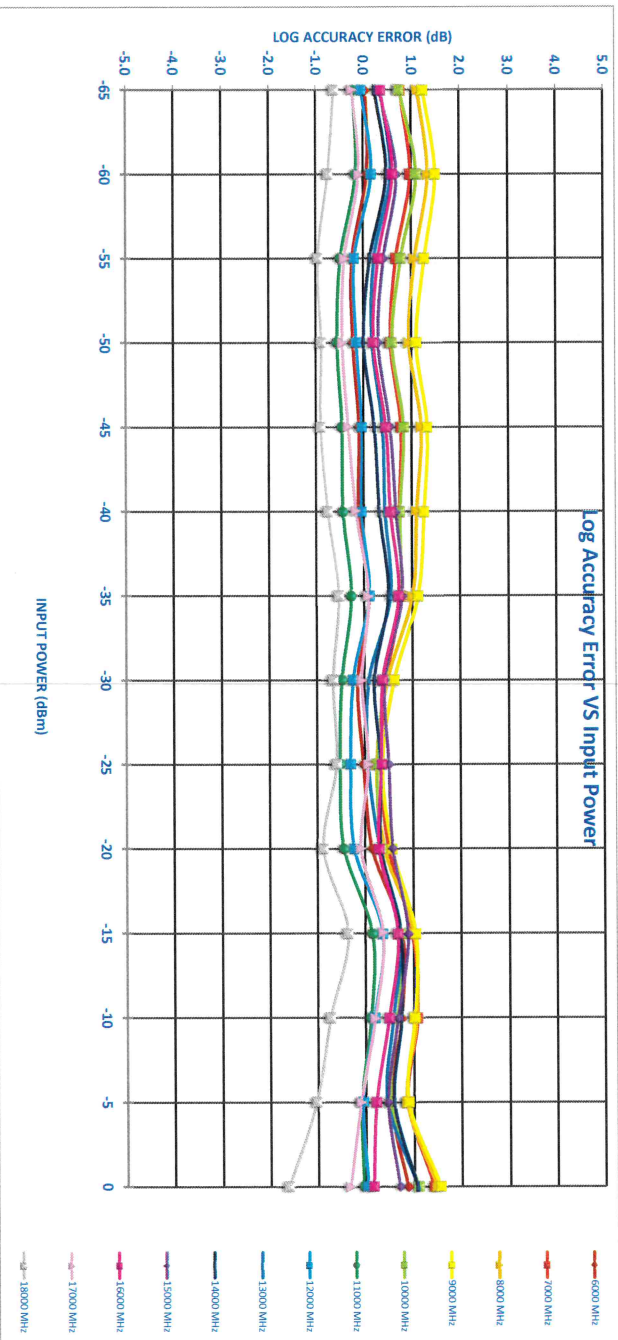
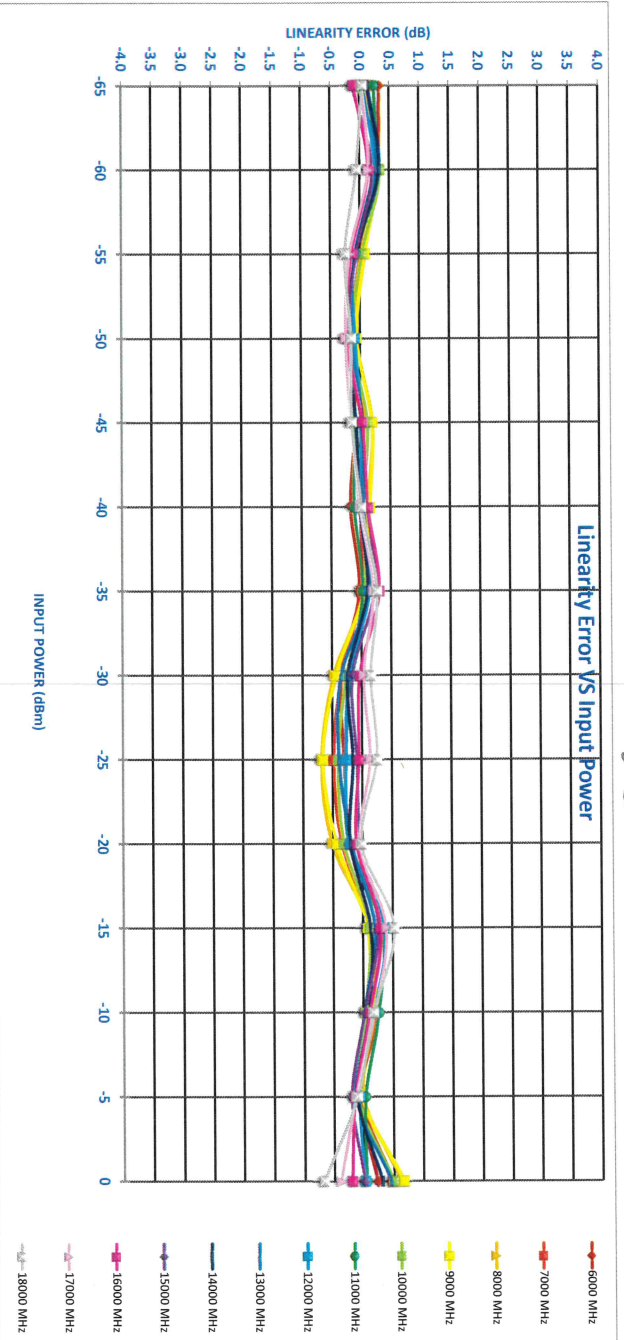
Date: 11-15-24

PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Matthews Parkway STE 1
TEL: 916-542-1401 FAX: 301-662-1731
EMAIL: SALES@PMI-RF.COM

Frequency	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
6000 MHz	228	580	908	1259	1618	1967	2332	2665	3023	3385	3778	4127	4461	4836	Measured Value (mV)
	24	21	-6	-10	-6	-12	-2	-24	-21	-14	23	17	-4	16	Error (mV)
	0.33	0.29	-0.09	-0.15	-0.09	-0.17	-0.03	-0.34	-0.30	-0.23	0.33	0.25	-0.05	0.23	LINEARITY ERROR (dB)
	0.04	0.07	-0.24	-0.23	-0.10	-0.10	0.10	-0.14	-0.03	0.14	0.76	0.74	0.51	0.87	ACCURACY ERROR (dB)
7050 MHz	278	643	972	1314	1679	2026	2378	2706	3048	3409	3793	4150	4486	4874	Measured Value (mV)
	19	23	1	-9	4	0	0	-24	-24	-24	8	13	-2	34	Error (mV)
	0.14	0.33	0.01	-0.13	0.06	-0.07	0.00	-0.34	-0.48	-0.34	0.11	0.19	-0.03	0.48	LINEARITY ERROR (dB)
	0.76	0.97	0.67	0.56	0.77	0.73	0.76	0.44	0.33	0.49	0.97	1.07	0.87	1.41	ACCURACY ERROR (dB)
8000 MHz	303	668	999	1341	1708	2051	2395	2708	3042	3403	3795	4149	4485	4878	Measured Value (mV)
	9	21	3	-4	14	8	3	-33	-47	-35	8	13	0	44	Error (mV)
	0.07	0.30	0.04	-0.06	0.20	0.12	0.05	-0.47	-0.68	-0.51	0.11	0.16	0.00	0.63	LINEARITY ERROR (dB)
	1.11	1.33	1.06	0.94	1.19	1.00	0.47	0.24	0.47	0.36	0.56	1.04	1.01	1.47	ACCURACY ERROR (dB)
9000 MHz	311	679	1013	1351	1717	2062	2403	2718	3050	3414	3798	4146	4487	4884	Measured Value (mV)
	0	20	6	-4	14	11	3	-30	-46	-30	6	5	-2	47	Error (mV)
	0.01	0.29	0.09	-0.06	0.20	0.15	0.05	-0.43	-0.66	-0.43	0.08	0.08	-0.03	0.67	LINEARITY ERROR (dB)
	1.23	1.49	1.26	1.09	1.31	1.24	1.11	0.61	0.36	0.56	1.04	1.01	0.89	1.56	ACCURACY ERROR (dB)
10000 MHz	277	651	979	1316	1663	2027	2377	2704	3043	3396	3777	4121	4461	4851	Measured Value (mV)
	-2	23	2	-10	8	3	4	-18	-28	-22	8	3	-6	35	Error (mV)
	-0.02	0.33	0.03	-0.14	0.12	0.04	0.06	-0.26	-0.40	-0.32	0.11	0.04	-0.09	0.49	LINEARITY ERROR (dB)
	0.74	1.09	0.77	0.59	0.83	0.74	0.74	0.41	0.26	0.33	0.74	0.66	0.51	1.09	ACCURACY ERROR (dB)
12000 MHz	209	563	891	1236	1593	1944	2306	2642	2989	3344	3735	4083	4419	4772	Measured Value (mV)
	12	13	8	-12	-8	-8	2	-14	-26	-17	22	18	2	9	Error (mV)
	0.24	0.27	-0.07	-0.17	-0.10	-0.12	0.02	-0.21	-0.28	-0.24	0.32	0.26	0.03	0.05	LINEARITY ERROR (dB)
	-0.23	-0.17	-0.49	-0.56	-0.46	-0.44	-0.27	-0.47	-0.51	-0.44	0.14	0.11	-0.09	-0.04	ACCURACY ERROR (dB)
13000 MHz	222	586	911	1264	1622	1971	2332	2658	3004	3359	3750	4088	4421	4778	Measured Value (mV)
	3	17	9	-7	-1	-1	10	-15	-19	-13	25	13	-8	2	Error (mV)
	0.05	0.24	-0.13	-0.09	0.01	-0.01	0.14	-0.21	-0.28	-0.21	0.36	0.18	-0.07	0.02	LINEARITY ERROR (dB)
	-0.04	0.16	-0.20	-0.16	-0.04	-0.06	0.10	-0.24	-0.30	-0.23	0.36	0.19	-0.06	0.04	ACCURACY ERROR (dB)
14000 MHz	290	614	940	1287	1652	2005	2363	2681	3030	3396	3776	4127	4466	4849	Measured Value (mV)
	9	21	-6	-11	2	3	5	-25	-28	-14	14	1	-10	32	Error (mV)
	0.12	0.29	-0.08	-0.15	0.03	0.05	0.13	-0.35	-0.39	-0.19	0.20	0.02	-0.14	0.46	LINEARITY ERROR (dB)
	0.36	0.56	0.21	0.17	0.39	0.43	0.54	0.09	0.07	0.30	0.73	0.57	0.44	1.07	ACCURACY ERROR (dB)
15000 MHz	241	608	934	1275	1640	1997	2360	2689	3048	3398	3778	4127	4466	4849	Measured Value (mV)
	-10	23	-8	-17	-5	-2	8	-17	-11	-15	-9	7	-8	22	Error (mV)
	-0.14	0.33	-0.06	-0.24	-0.08	-0.03	0.11	-0.24	-0.16	-0.21	0.13	0.10	-0.11	0.31	LINEARITY ERROR (dB)
	0.23	0.47	0.13	0.00	0.21	0.31	0.50	0.20	0.33	0.33	0.73	0.74	0.59	1.06	ACCURACY ERROR (dB)
16000 MHz	248	623	954	1296	1663	2021	2380	2704	3060	3415	3787	4122	4457	4824	Measured Value (mV)
	-9	15	-5	-14	2	8	16	-11	-6	-3	18	2	-14	1	Error (mV)
	-0.12	0.22	-0.07	-0.20	0.02	-0.12	0.23	-0.16	-0.09	-0.04	0.26	0.03	-0.20	0.02	LINEARITY ERROR (dB)
	0.33	0.69	0.41	0.30	0.54	0.66	0.79	0.41	0.50	0.57	0.89	0.67	0.46	0.70	ACCURACY ERROR (dB)
17000 MHz	250	617	946	1289	1657	2013	2375	2701	3049	3395	3772	4109	4440	4766	Measured Value (mV)
	-7	10	-10	-16	2	9	21	-2	-4	-7	20	8	-10	-14	Error (mV)
	-0.10	0.15	-0.14	-0.24	0.03	0.12	0.30	-0.03	-0.05	-0.10	0.29	0.12	-0.15	-0.20	LINEARITY ERROR (dB)
	0.36	0.60	0.30	0.20	0.46	0.54	0.71	0.37	0.34	0.29	0.67	0.49	0.21	0.16	ACCURACY ERROR (dB)
18000 MHz	206	566	897	1244	1602	1963	2331	2671	3030	3369	3751	4089	4418	4752	Measured Value (mV)
	2	11	-12	-17	-11	-2	15	3	10	-3	27	13	-9	-27	Error (mV)
	0.03	0.15	-0.17	-0.24	-0.15	-0.02	0.21	0.04	0.14	-0.04	0.39	0.19	-0.13	-0.39	LINEARITY ERROR (dB)
	-0.24	-0.10	-0.40	-0.44	-0.33	-0.17	0.09	-0.06	0.07	-0.09	0.37	0.20	-0.10	-0.33	ACCURACY ERROR (dB)
Flatness	-182	523	856	1213	1562	1922	2286	2629	2984	3314	3700	4024	4353	4662	Measured Value (mV)
	3	-4	-18	-11	-11	1	18	11	17	-1	36	12	-8	-47	Error (mV)
	0.05	-0.06	-0.25	-0.16	0.01	0.26	0.16	0.25	-0.02	0.52	0.17	-0.11	-0.67	-1.41	LINEARITY ERROR (dB)
	-0.61	-0.74	-0.96	-0.89	-0.90	-0.76	-0.53	-0.66	-0.59	-0.87	-0.36	-0.73	-1.03	-1.61	ACCURACY ERROR (dB)

PL40928 RF

25°C



LOG TRANSFER WITH FREQUENCY

TESTED BY: Jim Hopson.
MODEL: EMDM-6G18G-6S-70MV-1
SERIAL NO: PL40928 BIT
DATE: 11/12/24

Test Temp: 25C
Video Offset: -0.022

PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Matthews 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
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RF Input Power (dbm)

6000 MHz	INTERCEPT (mV)	4793.4
	SLOPE (mV/dB)	71.141

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

7000 MHz	INTERCEPT (mV)	4821.1
	SLOPE (mV/dB)	70.363

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

8000 MHz	INTERCEPT (mV)	4815.2
	SLOPE (mV/dB)	69.849

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

9000 MHz	INTERCEPT (mV)	4828.9
	SLOPE (mV/dB)	69.745

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

10000 MHz	INTERCEPT (mV)	4827.9
	SLOPE (mV/dB)	70.069

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

11000 MHz	INTERCEPT (mV)	4796.2
	SLOPE (mV/dB)	70.583

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

12000 MHz	INTERCEPT (mV)	4807.5
	SLOPE (mV/dB)	70.302

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

13000 MHz	INTERCEPT (mV)	4857.8
	SLOPE (mV/dB)	70.802

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

14000 MHz	INTERCEPT (mV)	4858.2
	SLOPE (mV/dB)	70.836

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

15000 MHz	INTERCEPT (mV)	4840.5
	SLOPE (mV/dB)	70.357

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

16000 MHz	INTERCEPT (mV)	4799.5
	SLOPE (mV/dB)	69.911

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

17000 MHz	INTERCEPT (mV)	4801.9
	SLOPE (mV/dB)	70.336

Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

18000 MHz	INTERCEPT (mV)	4758.7
	SLOPE (mV/dB)	69.935

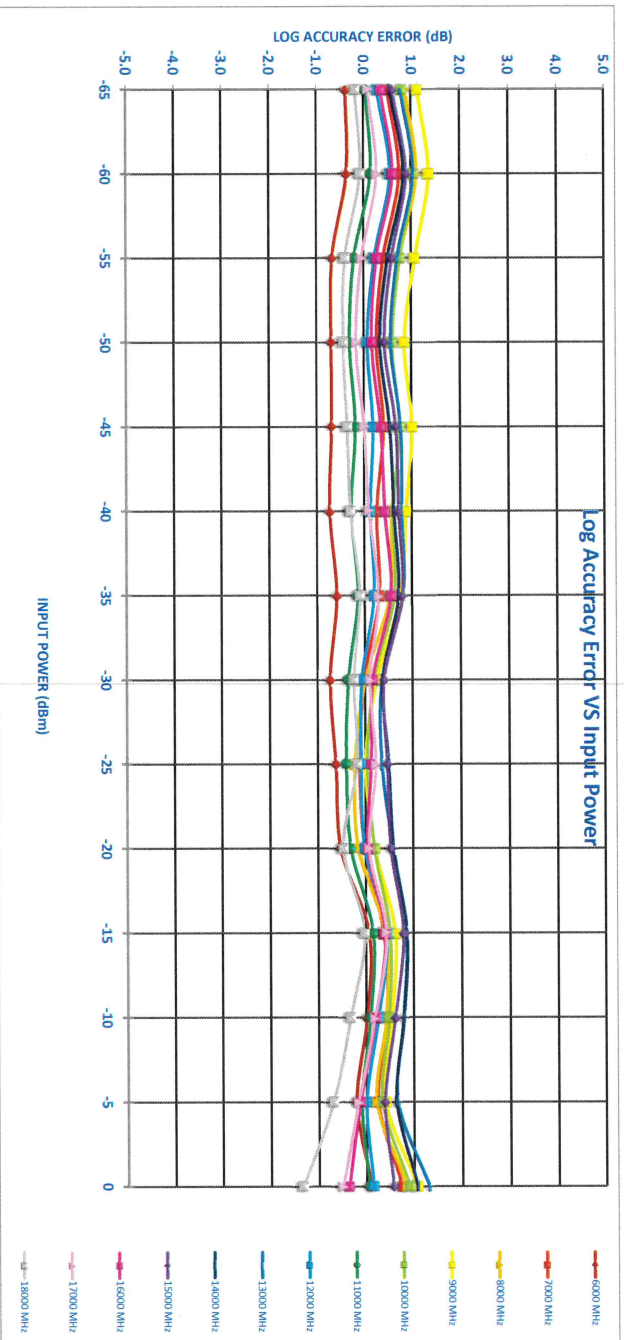
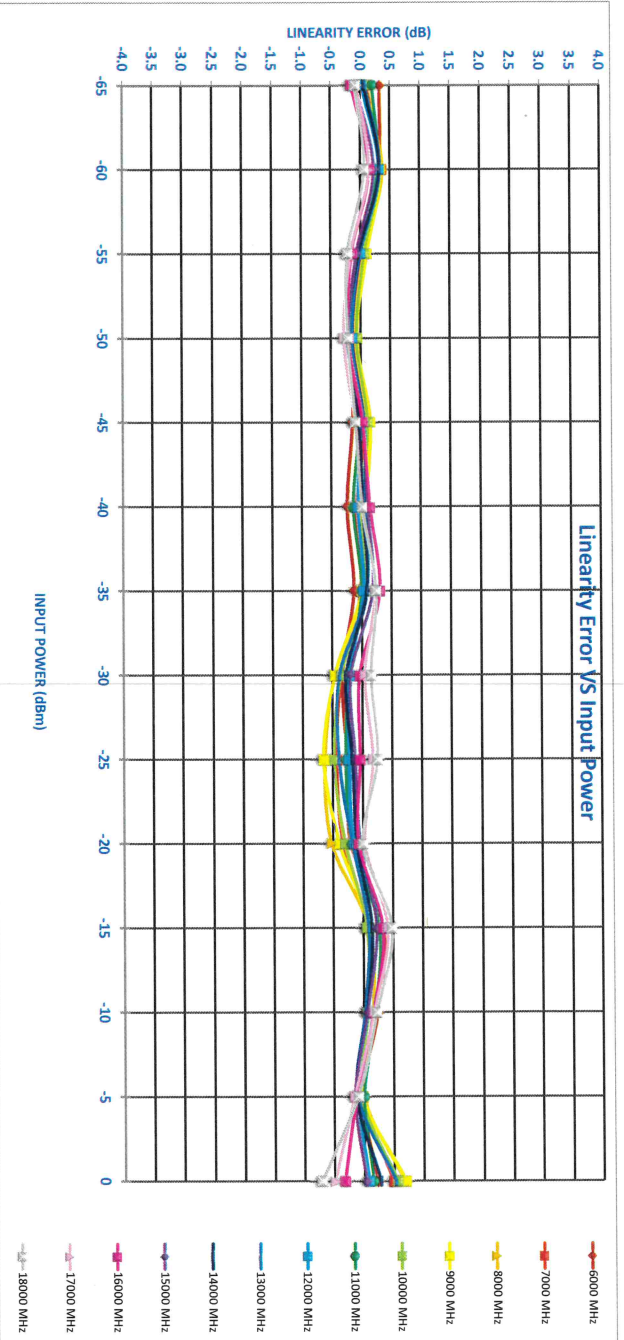
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
ACCURACY ERROR (dB)

Flatness

+/- dB

0.75	0.86	0.87	0.77	0.84	0.80	0.70	0.57	0.55	0.55	0.40	0.39	0.43	0.84
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PL40928 Bit
250c



PL40928

Recovery

DSO-X 3034A, MW52394003: Tue Nov 12 15:41:19 2024

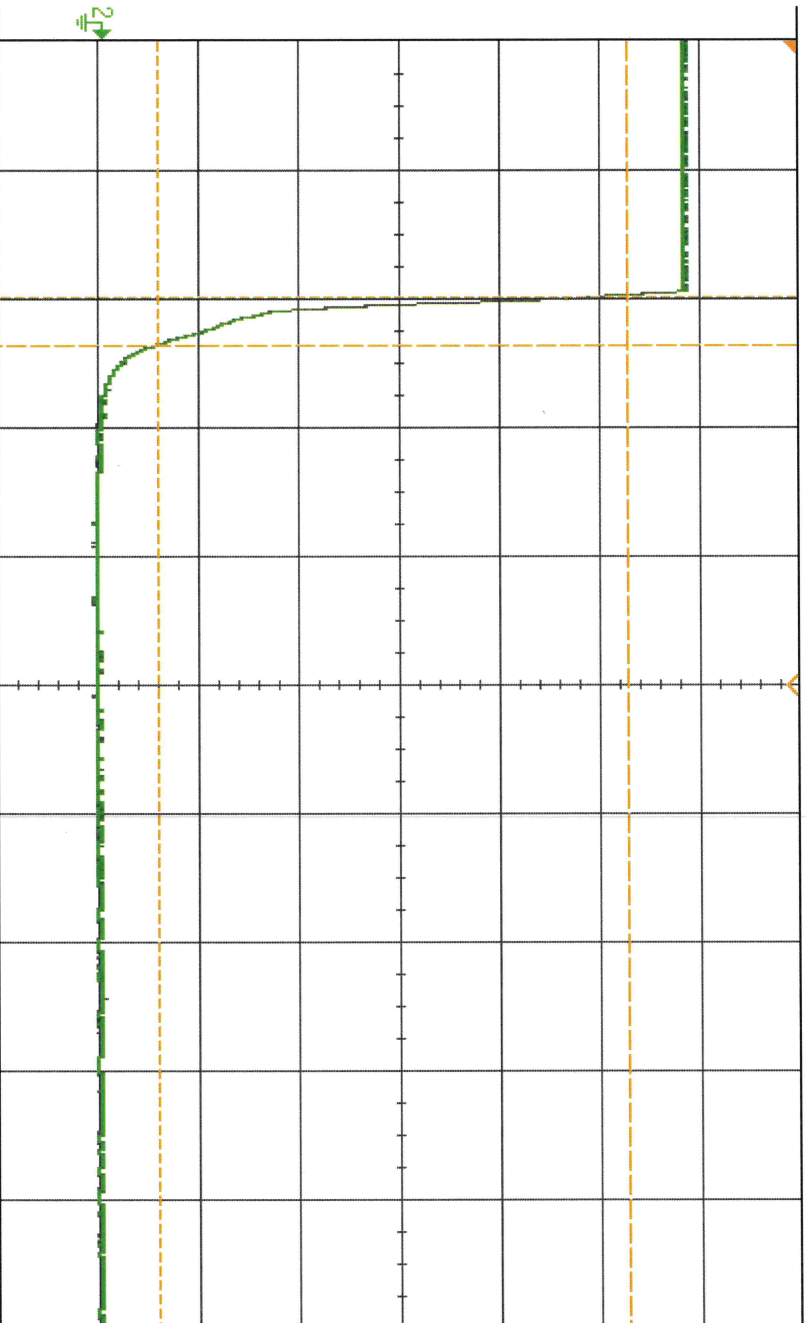
1 2 700% / 3 4

24.95ms

500.0ns /

Auto

f E 2.50V



Measurement Menu

Source 2

Type: Fall

Add Measurement

Settings

Clear Meas

Statistics

Acquisition	
Averaging: 16	
4.00GSa/s	
Channels	
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1
Measurements	
Rise(2):	No edges
AC RMS - FS(2):	1.6363V
Fall(2):	191.3ns