



Tested By: Jim Hopson

SO No:

Temperature: 0°C TO +85°C

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

Date 6/12/2024

Serial No: PL35305/2305

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	1.25:1 @ 50 Ω (RF IN) 1.43:1 @ 50 Ω (BIT IN) 1.33:1 @ 50 Ω (RF OUT) 1.35:1 @ 50 Ω (SW OUT)	
3	Noise Figure:	6 dB MAX	4.8 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)	61 dB	
7	SP3T Switching Speed:	100 ns MAX	50 ns	
8	RF OUT Linear Gain	+33 dB MIN, 39 dB MAX	36.7/34.6 db	
9	RF OUT Frequency Flatness:	±2.0 dB MAX	+ - 1.05 db	
10	RF OUT 1 dB Compression Point:	+3 dBm MIN	10.64 dBm	
11	RF OUT Second Harmonic:	-9 dBc MIN	-29 dBc	
12	RF OUT Third Harmonic:	-12 dBc MIN	-46 dBc	

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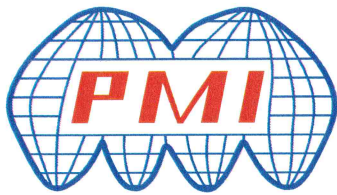
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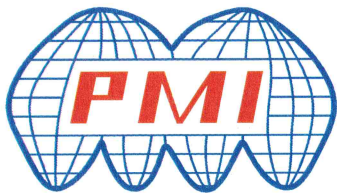
**Summary Data
For
EWDM-2G6G-65-70MV-1**

13	SW Linear Gain	+7 dB MIN, 15 dB MAX	13.2/11.7 db	PMI QA3
14	SW Frequency Flatness:	±1.2 dB MAX	+-.75 db	
15	SW 1 dB Compression Point:	+3 dBm MIN	3.56 dBm	
16	SW Second Harmonic:	-9 dBc MIN	-34 dBc	
17	SW Third Harmonic:	-12 dBc MIN	-38 dBc	
18	VIDEO OUT TSS:	-71 dBm MAX	-71 dBm	
19	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
20	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	70 mV/dB	
21	VIDEO OUT Log Linearity:	±0.75 dB MAX @ 4 GHZ	.43/- .37 db	
22	VIDEO OUT Log Accuracy:	±1.25 dB MAX	.87/- .86 db	
23	VIDEO OUT Absolute Log Accuracy:	±1.5 dB MAX	+-. 1.25 db	
24	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On)	10 mv	
25	VIDEO OUT Rise Time (10% to 90%):	25 ns TYP 28 ns MAX	16.5 ns	
26	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	121.3 ns	
27	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value, MAX	45 ns	
28	VIDEO OUT Recovery Time:	0.5 us MAX to within 1 dB of baseline	0.45 us	



**Summary Data
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29	VIDEO OUT Video Frequency Flatness:	± 1.0 dB MAX	+-.64 db	PMI QA3
30	VIDEO OUT CW Immunity:	A. CW Immune Power TSS to -40 dBm Baseline Shift: 200 mV MAX	142 mV	
		B. Pulse Peak Amplitude Loss; 2 dB MAX	1.5 dB	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	3.0 ms	
		CW Recovery Time at CW = -40 dBm, ≤ 50 us	40 us	
31	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	100 ns to 300 us	
32	VIDEO OUT load Impedance:	$75 \pm 1 \Omega$	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	106.3 mv	



Summary Data
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36	Droop of the Output Video Pulse @ 300us & - 65 dBm	70mV (1 dB) MAX	10 mV	PMI QA3
37	VIDEO OUT Propagation Delay:	50 ns MAX Excluding cable	40 ns	
38	Power Supply	+15 V @ 1000 mA MAX -15 V @ 500 mA MAX	+15 V @ 640 mA -15 V @ 140 mA	
39	Power Supply Ripple From DC to 10 MHz	100 mV MAX	PASS	

QA/QC Approval:

K. Luter

Date:

6-14-24



Frequency

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
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RF Input Power (dBm)

2000 MHz	INTERCEPT (mV)	4757.3
	SLOPE (mV/dB)	69.652

229	574	908	1280	1632	1961	2324	2688	3014	3370	3730	4050	4420	4730
-1	-4	-18	5	9	-10	5	20	-2	6	18	-11	11	-27
-0.01	-0.06	-0.26	0.08	0.13	-0.15	0.07	0.29	-0.03	0.08	0.25	-0.15	0.16	-0.39
-0.15	-0.23	-0.46	-0.14	-0.11	-0.41	-0.23	-0.03	-0.37	-0.29	-0.14	-0.57	-0.29	-0.86

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

3000 MHz	INTERCEPT (mV)	4793.3
	SLOPE (mV/dB)	69.257

271	625	974	1338	1688	2006	2401	2741	3070	3420	3770	4090	4450	4750
-20	-13	-10	8	11	-17	32	25	8	12	16	-11	3	-43
-0.29	-0.19	-0.15	0.11	0.16	-0.25	0.46	0.37	0.12	0.17	0.22	-0.15	0.04	-0.63
0.45	0.50	0.49	0.69	0.69	0.23	0.87	0.73	0.43	0.43	0.43	0.00	0.14	-0.57

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

4000 MHz	INTERCEPT (mV)	4749.6
	SLOPE (mV/dB)	68.768

254	613	953	1319	1673	1996	2371	2716	3040	3380	3720	4040	4400	4730
-26	-11	-14	8	18	-3	28	29	10	6	2	-22	-6	-20
-0.37	-0.15	-0.21	0.11	0.26	-0.04	0.41	0.43	0.14	0.08	0.03	-0.32	-0.08	-0.29
0.20	0.33	0.19	0.41	0.47	0.09	0.44	0.37	0.00	-0.14	-0.29	-0.71	-0.57	-0.86

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

5000 MHz	INTERCEPT (mV)	4771.4
	SLOPE (mV/dB)	69.529

244	593	931	1300	1654	1981	2360	2711	3040	3380	3730	4050	4420	4770
-8	-7	-16	5	11	-9	22	25	7	-1	2	-26	-4	-1
-0.12	-0.10	-0.23	0.07	0.16	-0.13	0.32	0.37	0.10	-0.01	0.02	-0.38	-0.05	-0.02
0.05	0.04	-0.13	0.14	0.20	-0.13	0.29	0.30	0.00	-0.14	-0.14	-0.57	-0.29	-0.29

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

6000 MHz	INTERCEPT (mV)	4753.8
	SLOPE (mV/dB)	70.003

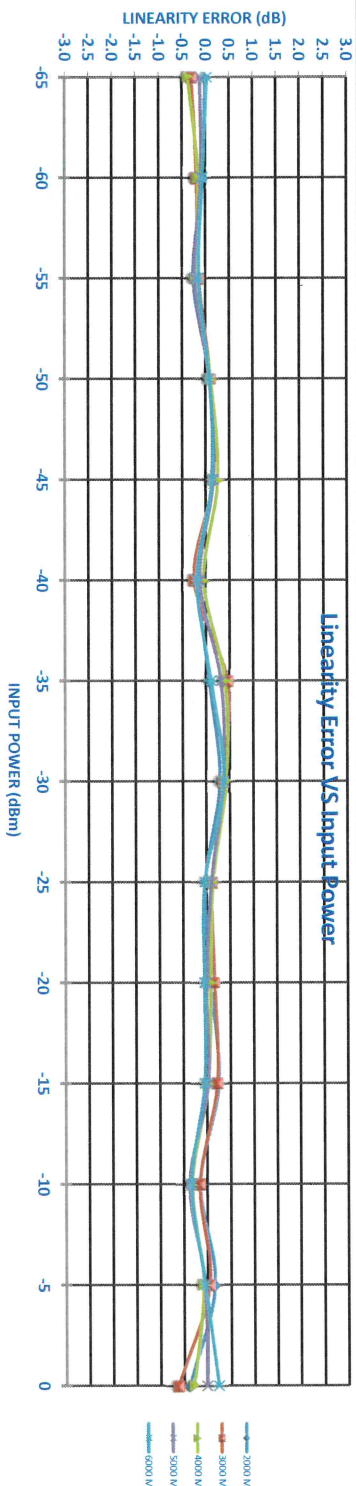
206	549	893	1259	1613	1940	2311	2680	3001	3350	3700	4030	4400	4770
2	-5	-11	5	9	-14	7	26	-3	-4	-4	-24	-4	16
0.03	-0.07	-0.15	0.08	0.13	-0.20	0.10	0.38	-0.04	-0.05	-0.05	-0.34	-0.05	0.23
-0.49	-0.59	-0.67	-0.44	-0.39	-0.71	-0.41	-0.14	-0.56	-0.57	-0.57	-0.86	-0.57	-0.29

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

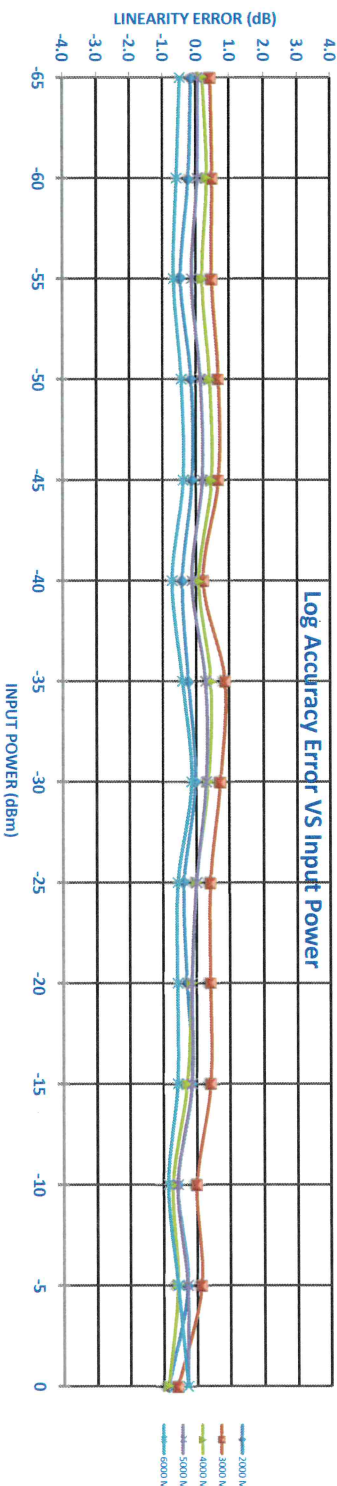
Flatness	+/- dB
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0.47	0.54	0.58	0.56	0.54	0.47	0.64	0.44	0.49	0.50	0.50	0.43	0.36	0.29
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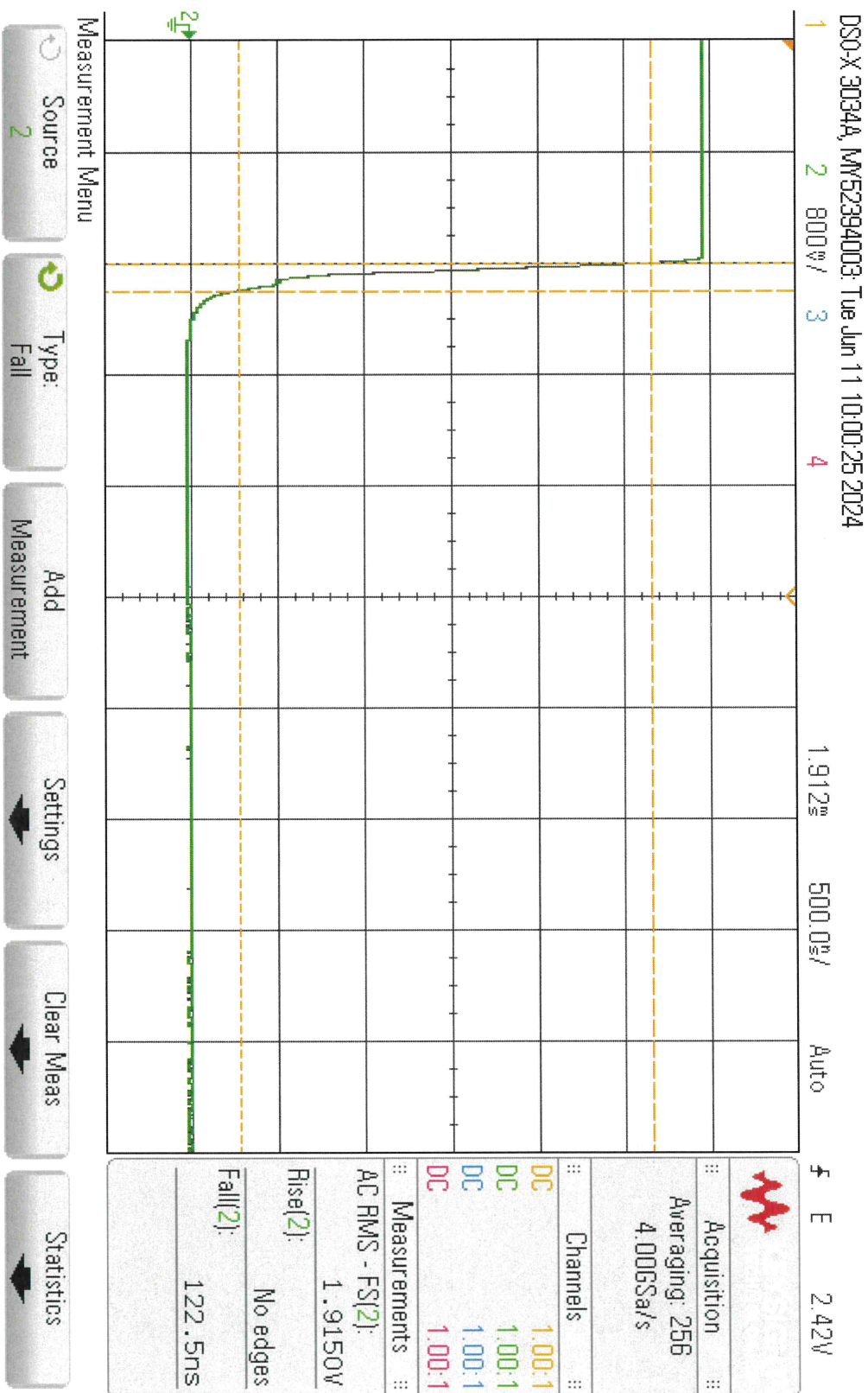
Linearity Error VS Input Power



Log Accuracy Error VS Input Power



PL35305 Recovery
w 10ps P 50ps



PL35305 Recovery
w 100ps P 300ps

