



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: PL35302/2305

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	1.69:1 @ 50 Ω (RF IN) 1.53:1 @ 50 Ω (BIT IN) 1.32:1 @ 50 Ω (RF OUT) 1.40:1 @ 50 Ω (SW OUT)	
3	Noise Figure:	6 dB MAX	4.9 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)	68 dB	
7	SP3T Switching Speed:	100 ns MAX	50 ns	
8	RF OUT Linear Gain	+33 dB MIN, 39 dB MAX	37.4/35.3 db	
9	RF OUT Frequency Flatness:	±2.0 dB MAX	+ - 1.05 db	
10	RF OUT 1 dB Compression Point:	+3 dBm MIN	11.34 dBm	
11	RF OUT Second Harmonic:	-9 dBc MIN	-28 dBc	
12	RF OUT Third Harmonic:	-12 dBc MIN	-46 dBc	

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

13	SW Linear Gain	+7 dB MIN, 15 dB MAX	13.0/11.7 db	PMI QA3
14	SW Frequency Flatness:	±1.2 dB MAX	+/- .65 db	
15	SW 1 dB Compression Point:	+3 dBm MIN	5.34 dBm	
16	SW Second Harmonic:	-9 dBc MIN	-36 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	0.41 dB	
22	VIDEO OUT Log Accuracy:	±1.25 dB MAX	.91/- .90 db	
23	VIDEO OUT Absolute Log Accuracy:	±1.5 dB MAX	+/- 1.2 db	
24	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On)	13 mV	
25	VIDEO OUT Rise Time (10% to 90%):	25 ns TYP 28 ns MAX	22 ns	
26	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	132.8 ns	
27	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value, MAX	42 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	+-.88 db	PMI QA3
30	VIDEO OUT CW Immunity:	A. CW Immune Power TSS to -40 dBm Baseline Shift: 200 mV MAX	98 mV	
		B. Pulse Peak Amplitude Loss; 2 dB MAX	1.9 dB	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	2.4 ms	
		CW Recovery Time at CW = -40 dBm, ≤ 50 us	42 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	94 mV	



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36	Droop of the Output Video Pulse @ 300us & - 65 dBm	70mV (1 dB) MAX	13 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. Lister

Date:

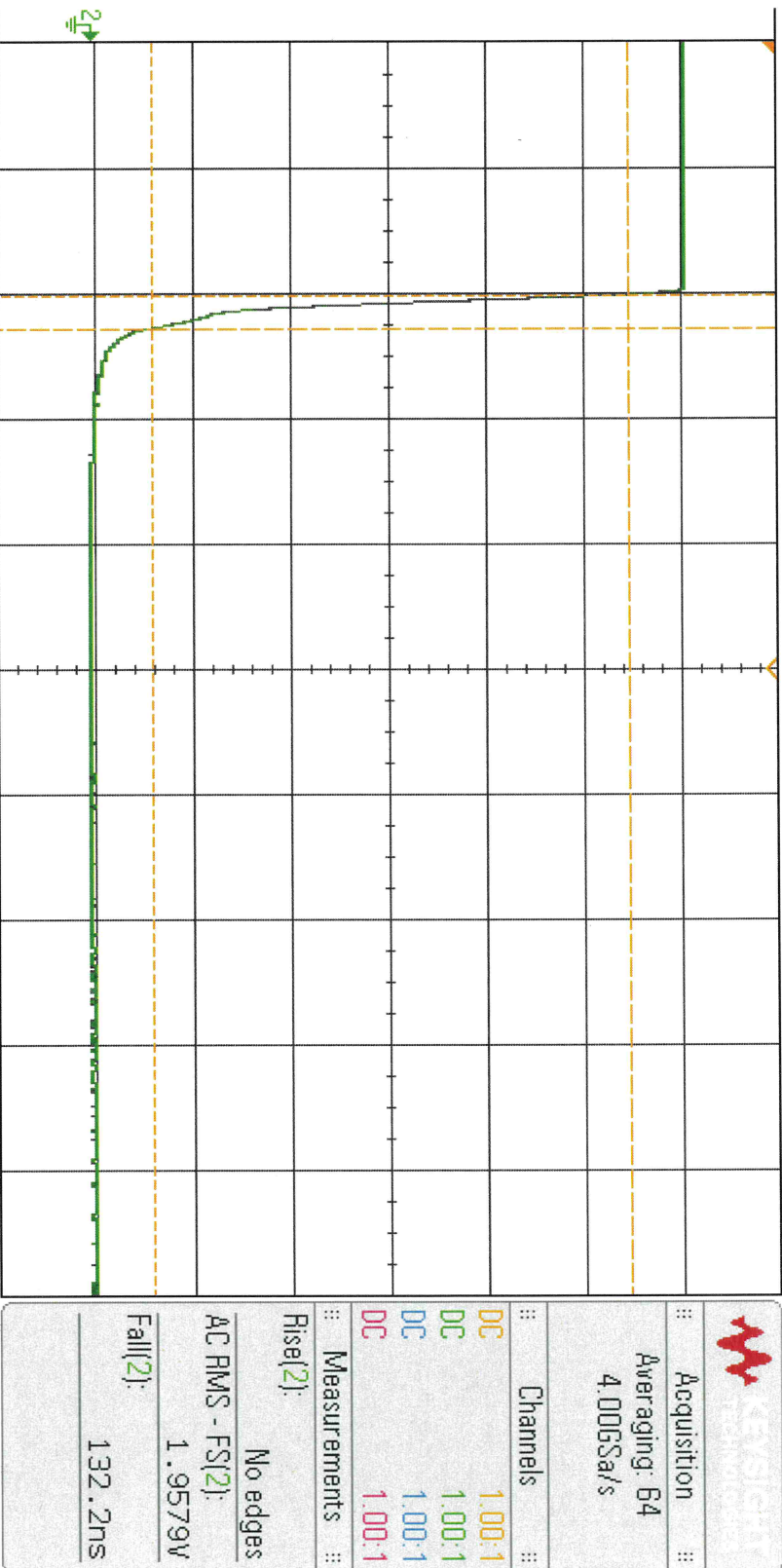
6.14.24

PL 35302

W 10ns P 50ns

DSO-X 3034A, MW52394003: Tue Jun 11 10:20:15 2024

1 2 800%/ 3 4 2.012s 500.0%/ Auto f E 2.42V

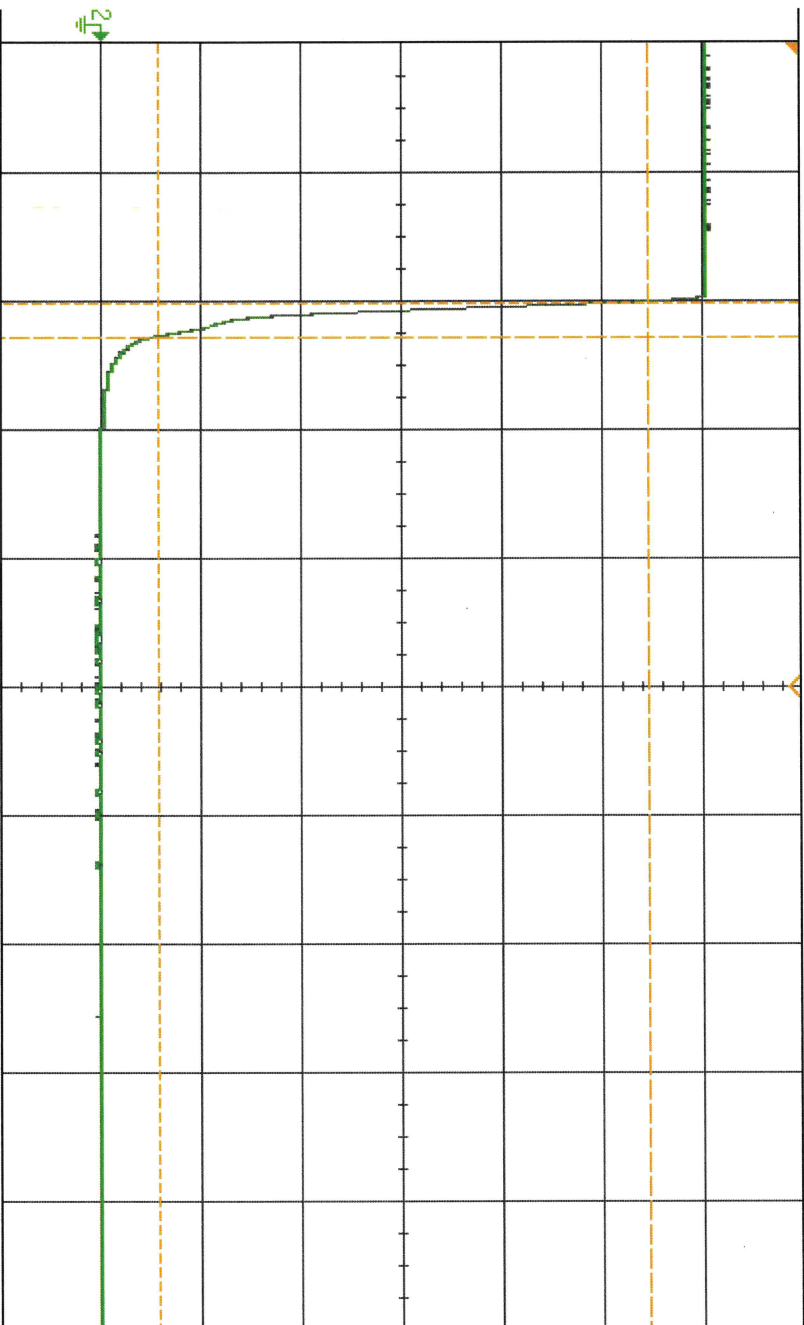


PL3502

w 100ps P 300ps

DSO-X 3034A, MW52394003: Tue Jun 11 10:21:37 2024

1 2 800V/ 3 4 2.202s 500.0ns/ Auto f E 2.42V



Save to file = PL35302_recovery100

Save

Recall

Default/Erase

KEYSIGHT TECHNOLOGIES	
Acquisition	
Averaging: B4	
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):	1.9551V
Fall(2):	132.8ns

Press to
Save

LOG TRANSFER WITH FREQUENCY

MODEL: EWDN-2G6G-65-70MV

TESTED BY: Jim Hopson

MODEL: EWDN-2G6G-65-70MV-1

SERIAL NO: PL35302 RF

DATE: 06/10/24

Test Temp: 25C



PLANAR MONOLITHICS INDUSTRIES

4921 Robert J. Mathews Parkway STE 1

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ISO 9001:2000 CERTIFIED

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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)	4894.9
	SLOPE (mV/dB)	69.897

355	709	1068	1419	1762	2099	2426	2738	3110	3480	3870	4210	4590	4890
3	8	17	19	12	0	-23	-60	-38	-17	24	14	45	-5
0.05	-0.11	0.25	0.27	0.18	0.00	-0.32	-0.86	-0.54	-0.24	0.34	0.20	0.64	-0.07
0.50	0.56	0.69	0.70	0.60	0.41	0.09	-0.46	-0.14	0.14	0.71	0.57	1.00	0.29

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

3000 MHz	INTERCEPT (mV)	4913.3
	SLOPE (mV/dB)	69.893

357	717	1084	1434	1773	2116	2456	2804	3150	3520	3890	4230	4580	4880
-13	-3	12	15	5	-2	-11	-16	-16	5	25	16	16	-33
-0.19	-0.04	0.17	0.22	0.07	-0.02	-0.16	-0.22	-0.23	0.07	0.36	0.22	0.23	-0.48
0.53	0.67	0.87	0.91	0.76	0.66	0.51	0.44	0.43	0.71	1.00	0.86	0.86	0.14

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

2000 MHz	INTERCEPT (mV)	4866.1
	SLOPE (mV/dB)	69.854

311	672	1034	1379	1728	2067	2424	2770	3120	3470	3840	4170	4510	4850
-15	-3	7	6	5	-5	3	0	0	1	22	2	-7	-16
-0.21	-0.04	0.10	0.08	0.08	-0.07	0.04	-0.01	0.00	0.01	0.31	0.03	-0.10	-0.23
-0.13	0.03	0.16	0.13	0.11	-0.04	0.06	0.00	0.00	0.00	0.29	0.00	-0.14	-0.29

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

5000 MHz	INTERCEPT (mV)	4869.5
	SLOPE (mV/dB)	70.388

288	644	1000	1355	1705	2045	2412	2767	3110	3450	3820	4170	4520	4860
-6	-2	2	5	3	-9	6	9	0	-12	6	4	2	-9
-0.09	-0.03	0.03	0.07	0.04	-0.13	0.09	0.13	0.00	-0.17	0.09	0.06	0.04	-0.13
-0.46	-0.37	-0.29	-0.21	-0.21	-0.36	-0.11	-0.04	-0.14	-0.29	0.00	0.00	0.00	-0.14

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

6000 MHz	INTERCEPT (mV)	4848.9
	SLOPE (mV/dB)	70.686

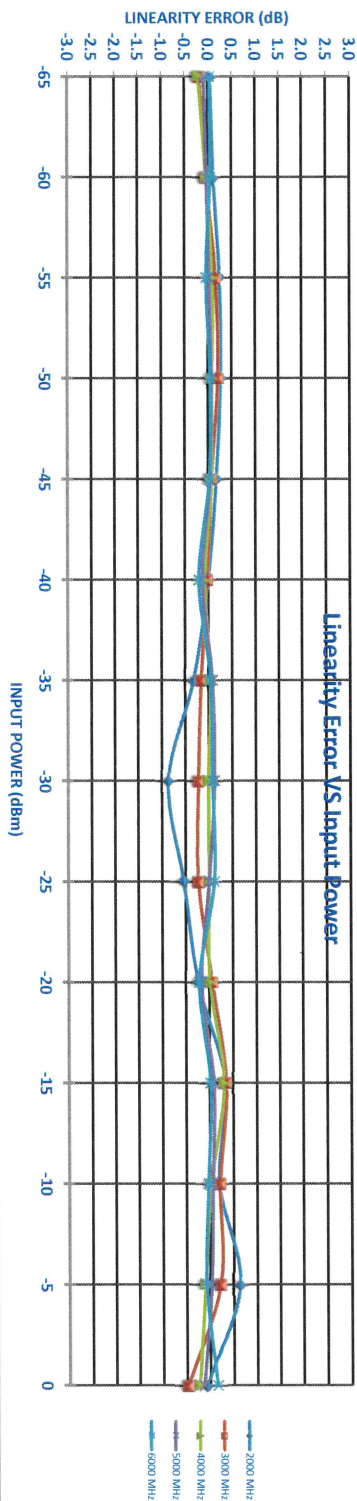
257	611	958	1318	1670	2007	2378	2734	3090	3420	3790	4140	4490	4860
2	3	-3	3	2	-14	3	6	8	-15	1	-2	-5	11
0.03	0.05	-0.05	0.05	0.03	-0.20	0.04	0.08	0.12	-0.21	0.02	-0.03	-0.08	0.16
-0.91	-0.84	-0.89	-0.74	-0.71	-0.90	-0.60	-0.51	-0.43	-0.71	-0.43	-0.43	-0.43	-0.14

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

Flatness	+/- dB
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0.72	0.76	0.88	0.83	0.74	0.78	0.56	0.48	0.43	0.71	0.71	0.64	0.71	0.29
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Linearity Error VS Input Power



Log Accuracy Error VS Input Power

