



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

Customer: PMI - 662-5019

Tested By: Jim Hopson

SO No:

Temperature: 0°C TO +85°C

Model No: EWDM-6G18G-65-70MV-1

Date 7/18/2024

Serial No: PL40935/2335

Drawing No: 27637972

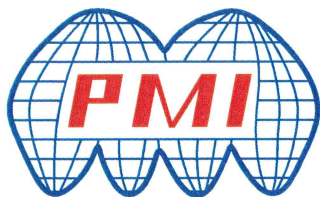
Rev: A1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	6 to 18 GHz	6 to 18 GHz	PMI QA3
2	VSWR:	2.2:1 MAX @ 50 Ω	1.63:1 @ 50 Ω (RF IN) 1.63:1 @ 50 Ω (BIT IN) 1.62:1 @ 50 Ω (RF OUT) 1.54:1 @ 50 Ω (SW OUT)	
3	Noise Figure:	6 dB MAX	4.6 dB TYP	
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	35 dB MIN / 36.7 dB MAX	
9	RF OUT Frequency Flatness:	±2.5 dB MAX	±0.8 dB	
10	RF OUT 1 dB Compression Point:	+3 dBm MIN	7.5 dBm	
11	RF OUT Second Harmonic:	-9 dBc MIN	-28 dBc	
12	RF OUT Third Harmonic:	-12 dBc MIN	-42 dBc	

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



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

13	SW Linear Gain	+7 dB MIN, 15 dB MAX	12.7 dB MIN / 13.9 dB MAX	PMI QA ³
14	SW Frequency Flatness:	±1.5 dB MAX	±0.6 dB	
15	SW 1 dB Compression Point:	+3 dBm MIN	3.2 dBm	
16	SW Saturated Power:	+9 dBm MAX	8.6 dBm	
17	SW Second Harmonic:	-9 dBc MIN	-27 dBc	
18	SW Third Harmonic:	-12 dBc MIN	-44 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	69.9 mV/dB	
22	VIDEO OUT Log Linearity:	±1.0 dB MAX @12 GHZ	+0.28 / -0.2 dB	
23	VIDEO OUT Log Accuracy:	±2.0 dB MAX	+1.17 / -1.23 dB	
24	VIDEO OUT Absolute Log Accuracy:	±2.25 dB MAX	+1.93 / -1.96 dB	
25	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On)	-5 mV	
26	VIDEO OUT Rise Time (10% to 90%):	25 ns TYP 28 ns MAX	26.5 ns	
27	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	161.3 ns	
28	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value, MAX	40 ns typ	

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



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

29	VIDEO OUT Recovery Time:	0.5 us MAX to within 1 dB of baseline	< 0.5 us	PMI QA3
30	VIDEO OUT Video Frequency Flatness:	±1.75 dB MAX	±0.87 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	1.5ms	
		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	



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

38	VIDEO OUT Propagation Delay:	50 ns MAX (excluding cable)	33 ns	PMI QA3
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. Luter

Date:

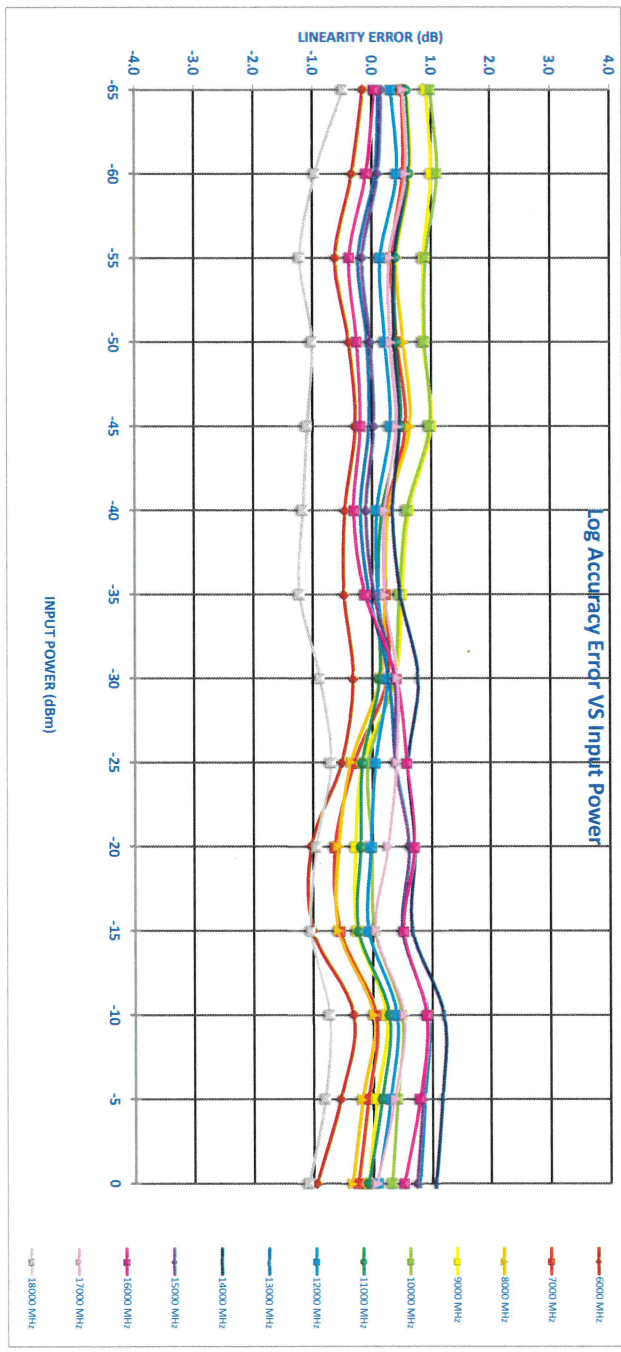
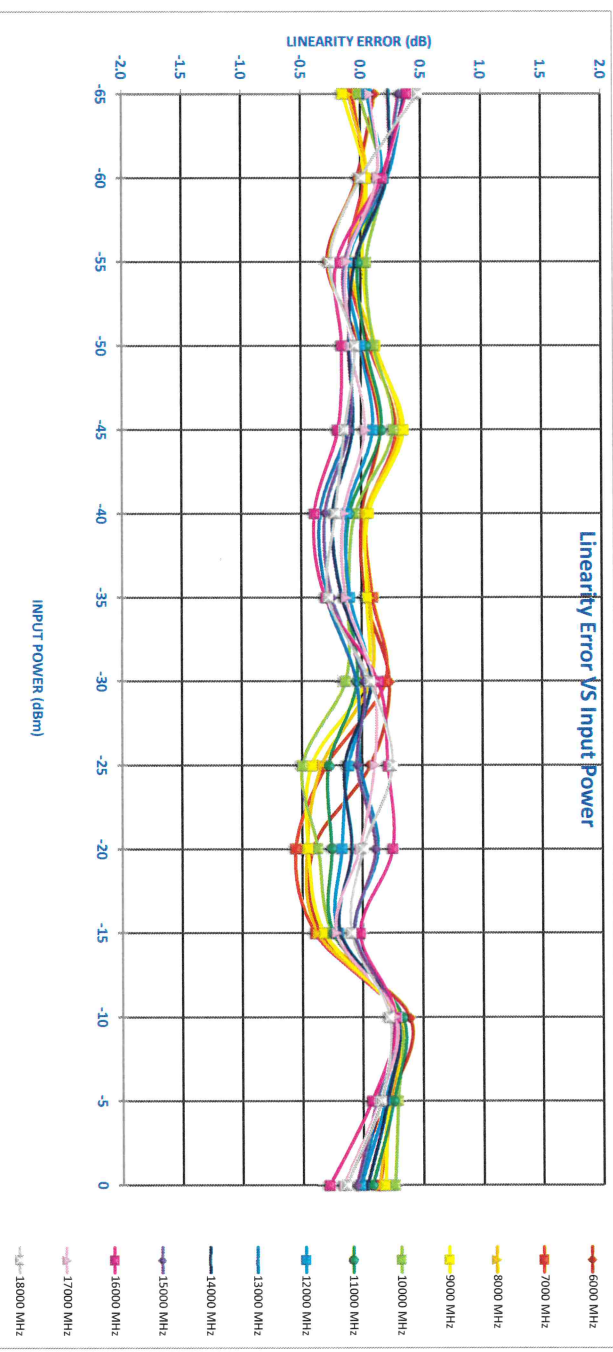
7-19-24

PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway STE 1
TEL: 916-542-1401 FAX: 301-662-1731

1-2000 CERTIFIED

Frequency	RF Input Power (dBm)																			
	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0						
6000 MHz	INTERCEPT (mV)	4710.2													Measured Value (mV)					
	SLOPE (mV/dB)	69.441													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
5000 MHz	INTERCEPT (mV)	4738.6													Measured Value (mV)					
	SLOPE (mV/dB)	68.975													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
3000 MHz	INTERCEPT (mV)	4731.8													Measured Value (mV)					
	SLOPE (mV/dB)	68.758													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
9000 MHz	INTERCEPT (mV)	4747.6													Measured Value (mV)					
	SLOPE (mV/dB)	68.593													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
10000 MHz	INTERCEPT (mV)	4769													Measured Value (mV)					
	SLOPE (mV/dB)	68.985													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
20000 MHz	INTERCEPT (mV)	4754													Measured Value (mV)					
	SLOPE (mV/dB)	69.275													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
12000 MHz	INTERCEPT (mV)	4771.7													Measured Value (mV)					
	SLOPE (mV/dB)	69.825													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
13000 MHz	INTERCEPT (mV)	4822.3													Measured Value (mV)					
	SLOPE (mV/dB)	71.169													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
14000 MHz	INTERCEPT (mV)	4836.7													Measured Value (mV)					
	SLOPE (mV/dB)	70.771													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
15000 MHz	INTERCEPT (mV)	4821													Measured Value (mV)					
	SLOPE (mV/dB)	71.045													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
16000 MHz	INTERCEPT (mV)	4821.9													Measured Value (mV)					
	SLOPE (mV/dB)	71.253													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
17000 MHz	INTERCEPT (mV)	4780.5													Measured Value (mV)					
	SLOPE (mV/dB)	69.755													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
18000 MHz	INTERCEPT (mV)	4698.9													Measured Value (mV)					
	SLOPE (mV/dB)	70.02													Error (mV)					
															LINEARITY ERROR (dB)					
															ACCURACY ERROR (dB)					
	Fatness	+/- dB	0.56	0.71	0.76	0.64	0.64	0.54	0.49	0.54	0.56	0.87	0.84	0.76	0.86	1.00				

PL40935 RF



LOG TRANSFER WITH FREQUENCY

TESTED BY: Jim Hopson
MODEL: EWDm-6G18G-65-70MV-1
SERIAL NO.: PL40935 BIT
DATE: 07/18/24

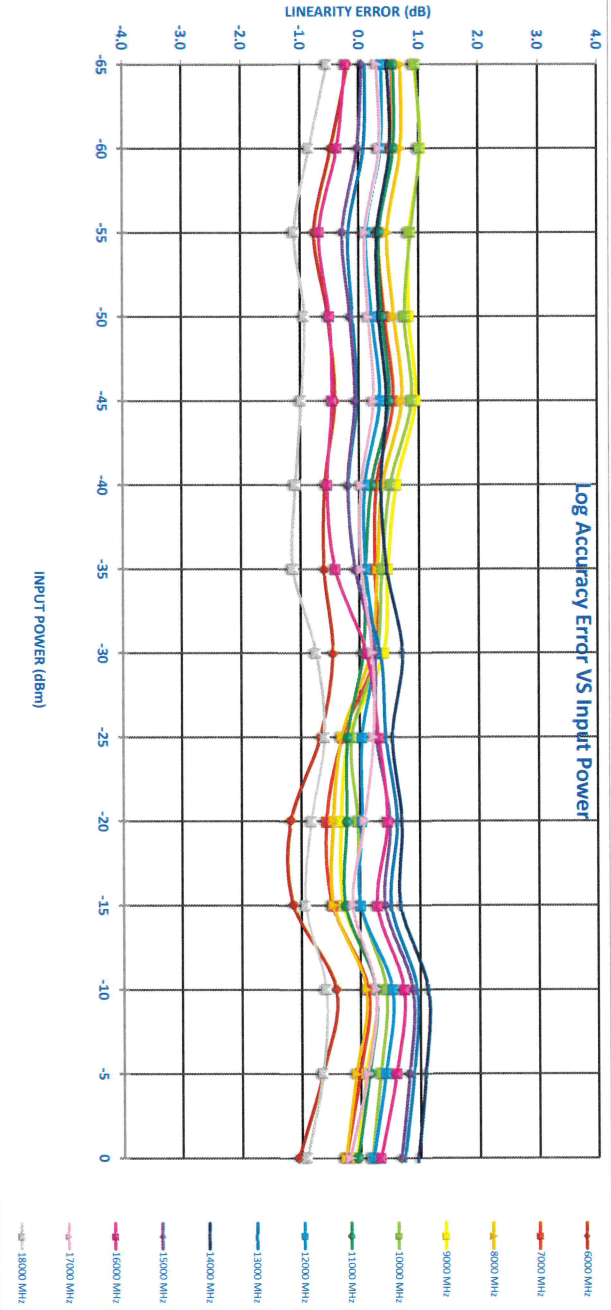
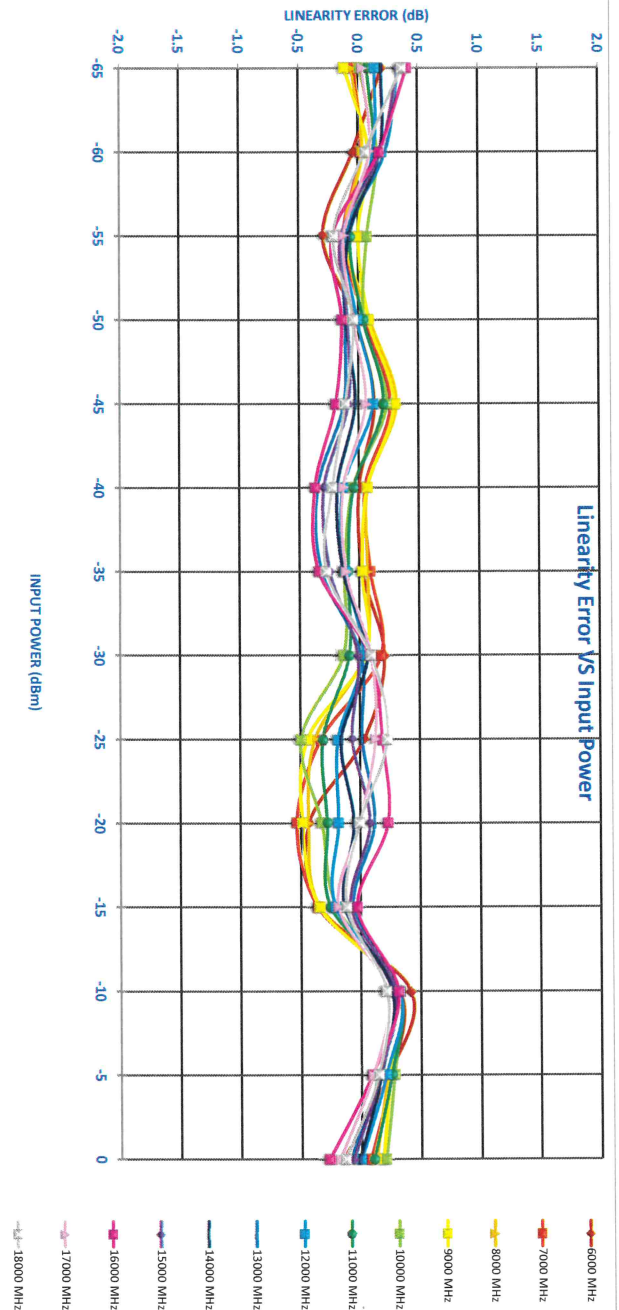
Test Temp: 25C
Video Offset: -0.006

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

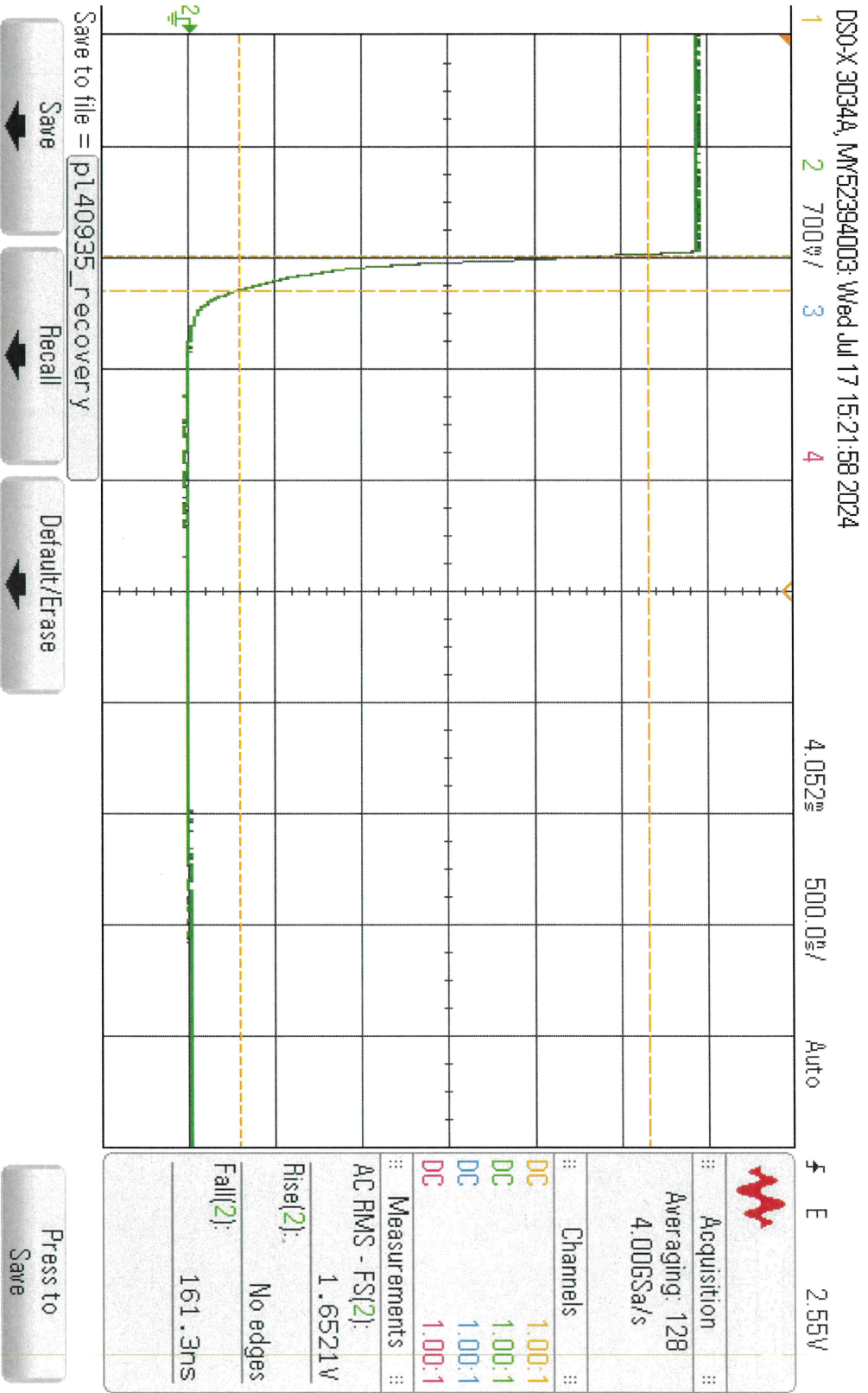


Frequency		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dbm)	Measured Value (mV)	Error (mV)	LINEARITY ERROR (dB)	ACCURACY ERROR (dB)
6000 MHz	INTERCEPT (mV)																4711.3			
	SLOPE (mV/dB)																69.439			
		14	-3	-20	-1	9	0	15	3	-30	-24	29	16	-10						
		0.20	-0.04	-0.29	-0.02	0.14	0.00	0.03	0.21	0.04	-0.43	-0.34	0.42	0.23	-0.15					
7000 MHz	INTERCEPT (mV)																4751.5			
	SLOPE (mV/dB)																69.007			
		264	613	948	1305	1665	1995	2243	2594	3004	3355	3692	4084	4424	4757					
		-2	2	-2	4	19	5	7	13	-22	-36	-24	23	48	5					
8000 MHz	INTERCEPT (mV)																4748.3			
	SLOPE (mV/dB)																68.78			
		274	624	956	1316	1675	2002	2246	2668	3003	3343	3693	4082	4420	4757					
		-4	3	-7	7	22	5	5	3	-26	-30	-24	22	16	9					
9000 MHz	INTERCEPT (mV)																4757.4			
	SLOPE (mV/dB)																68.607			
		290	647	984	1333	1691	2018	2258	2703	3012	3352	3705	4093	4431	4770					
		-8	6	0	6	21	5	2	4	-30	-33	-23	22	17	13					
10000 MHz	INTERCEPT (mV)																4773.7			
	SLOPE (mV/dB)																68.979			
		291	646	985	1328	1686	2011	2251	2695	3015	3372	3725	4105	4448	4788					
		1	11	5	3	16	-4	-8	-9	-34	-22	-14	21	19	14					
11000 MHz	INTERCEPT (mV)																4763.8			
	SLOPE (mV/dB)																69.294			
		265	615	948	1302	1660	1989	2232	2679	3010	3359	3707	4093	4435	4771					
		5	2	5	2	16	-2	-7	-6	-31	-27	-17	22	16	7					
12000 MHz	INTERCEPT (mV)																4789.2			
	SLOPE (mV/dB)																69.97			
		251	600	933	1290	1649	1981	2232	2692	3027	3377	3725	4112	4454	4789					
		10	9	8	-1	8	-9	-8	2	-13	-16	-73	15	0	0					
13000 MHz	INTERCEPT (mV)																4832.4			
	SLOPE (mV/dB)																71.145			
		232	580	912	1267	1622	1962	2220	2699	3055	3418	3761	4141	4487	4826					
		24	16	-7	-8	-9	-25	-22	1	9	-4	20	10	-6	-6					
14000 MHz	INTERCEPT (mV)																4842.9			
	SLOPE (mV/dB)																70.753			
		258	611	946	1296	1657	2000	2257	2725	3063	3424	3772	4154	4501	4842					
		14	13	-5	-7	-2	-13	-10	5	-11	-4	-10	19	12	-1					
15000 MHz	INTERCEPT (mV)																4826.5			
	SLOPE (mV/dB)																71.121			
		228	573	905	1264	1620	1961	2220	2692	3044	3410	3754	4136	4482	4822					
		24	14	-10	-6	-6	-21	-17	-1	-4	6	-6	21	11	-5					
16000 MHz	INTERCEPT (mV)																4816.9			
	SLOPE (mV/dB)																71.345			
		209	549	878	1240	1593	1937	2226	2683	3047	3407	3745	4126	4467	4798					
		29	13	-15	-10	-13	-26	-24	6	14	17	-2	23	7	-19					
17000 MHz	INTERCEPT (mV)																4774.4			
	SLOPE (mV/dB)																69.708			
		246	599	932	1286	1642	1977	2237	2690	3041	3380	3716	4093	4433	4762					
		3	7	-8	-3	4	-9	-8	7	9	0	-13	16	7	-12					
18000 MHz	INTERCEPT (mV)																4720.3			
	SLOPE (mV/dB)																70.142			
		187	516	848	1210	1566	1899	2246	2623	2983	3317	3660	4034	4380	4711					
		26	4	-15	-3	-8	-16	-19	7	16	0	-8	15	10	-9					
Flatness	INTERCEPT (mV)																			
	SLOPE (mV/dB)																			
		0.59	0.75	0.81	0.68	0.70	0.60	0.54	0.59	0.61	0.94	0.90	0.77	0.86	1.01					
		0.37	0.06	-0.21	-0.05	-0.11	-0.22	-0.28	0.10	0.23	-0.01	-0.12	0.22	0.15	-0.13					

PL40935 Bit



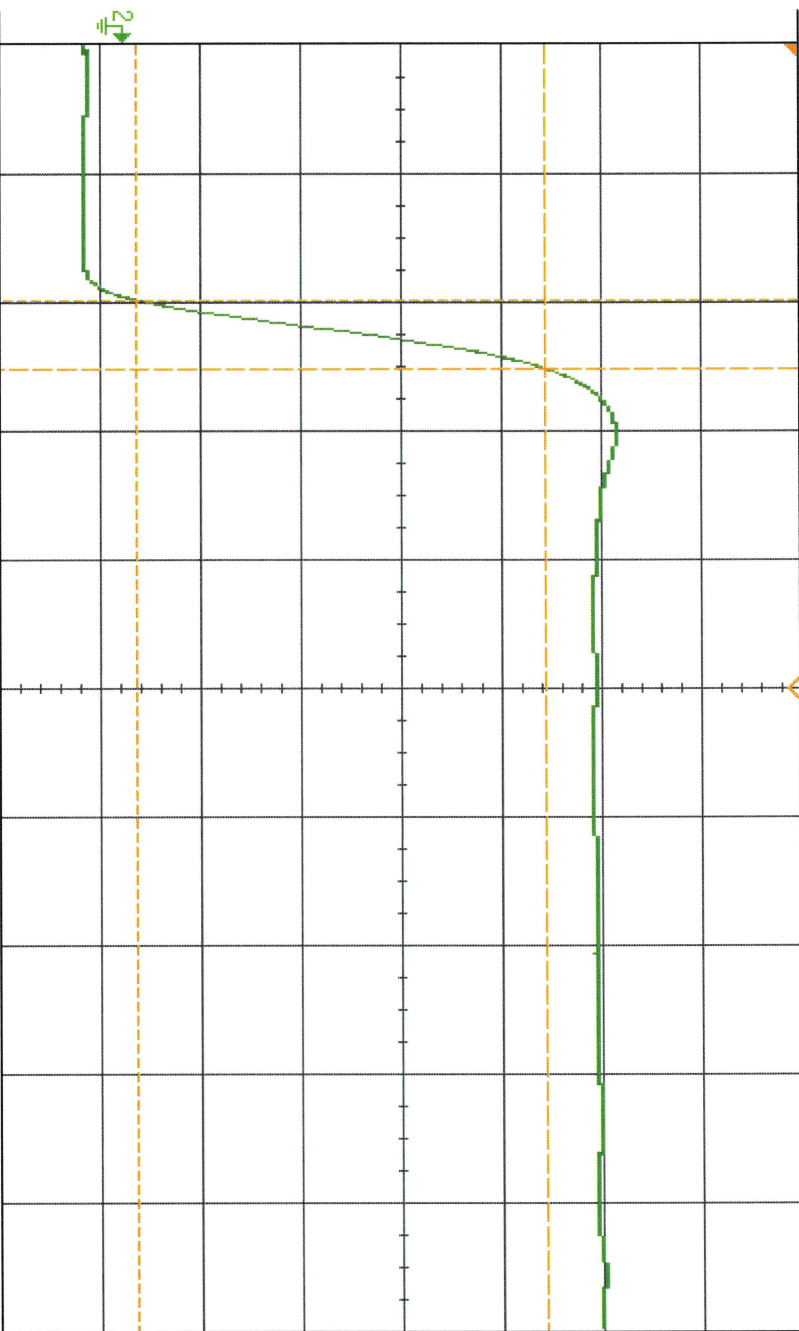
PL40935
RECOVERY



PL40935,
RiseTime

DSO-X 3034A, MY52394003: Wed Jul 17 15:24:45 2024

1 2 50% / 3 4 4.000s 50.00%/ Stop f E 2.55V



Acquisition	
Averaging: 256	
4.006Sa/s	
Channels	
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1
Measurements	
AC RMS - FS(2):	
103.68mV	
Fall(2):	
No edges	
Rise(2):	
26.5ns	

Acquire Menu

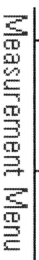
Acq Mode Averaging

Avgs 256

Segmented

5077e

1	2	3	4	4.000s	50.00s/	Auto	F	E	2.55V
700V/									



2

Add

