



**SUMMARY TEST DATA  
ON  
ERDLVA-218-CW-75MV**

**PL40964/2325**

Customer: _____	Tested By: <u>Jim Hopson</u>
SO No: _____	Temperature: <u>-25°C +25C +85C</u>
Model No: <u>ERDLVA-218-CW-75MV</u>	Date: <u>06/21/2023</u>
Serial No: <u>PL40964/2325</u>	Drawing No: <u>27642440</u> Rev: <u>A1</u>

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 18 GHz	2 to 18 GHz	PM QAS
2	VSWR:	2.5:1 MAX @ -20 dBm	1.38:1 MAX	
3	Input Power:	23 dBm Max.	Pass	
4	VIDEO OUT TSS:	-42 dBm MAX	-42dBm	
5	VIDEO OUT Dynamic Range:	-40 to +20 dBm	-40 to +20 dBm	
6	VIDEO OUT Log Slope Fixed:	75 ± 10mV/dB	74.6-80.6mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C ±1.5 dB MAX @ Over Temperature	See attached Graphs	
8	VIDEO OUT DC Offset:	0 to 125 mV @25C	70mV	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	14.5ns	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	<0.5dB	

4921 Robert J. Mathews Pkwy Suite 1, El Dorado Hills, CA 95762 USA Phone: (916)542-1401 Fax: (916)265-2597 Email: <a href="mailto:sales@pmi-rf.com">sales@pmi-rf.com</a>
---



**SUMMARY TEST DATA  
ON  
ERDLVA-218-CW-75MV**

**PL40964/2325**

11	VIDEO OUT Recovery	500ns MAX	<500ns	<i>PMI 06</i>
12	Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	2.0dB p-p MAX @ -20dBm	
13	VIDEO OUT CW Immunity:	CW Immune Power -50 to -10 dBm	<b>Pass</b>	
		CW Attack Time 1500us	<b>&lt;1500us</b>	
		CW Release Time 250us	<b>&lt;50us</b>	
17	Pulse droop	1dB Max for 250us pulses	<b>&lt;1dB</b>	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	<b>100 ns to 300 us</b>	
19	VIDEO LOAD Impedance:	93 ± 1 Ω	<b>93Ω</b>	
21	VIDEO OUT Noise Level (RMS):	102 mV max	<b>25mV</b>	
22	VIDEO OUT Propagation Delay:	35 ns MAX from RF 10% to 10% video (excluding cable)	<b>&lt;20ns</b>	
23	Power Supply	+12 V @ 250 mA MAX -12 V @ 250 mA MAX	<b>+12 V @ 140 mA -12 V @ 60 mA</b>	<i>Hand 6-21-23</i>

4921 Robert J. Mathews Pkwy Suite 1, El Dorado Hills, CA 95762 USA Phone: (916)542-1401 Fax: (916)265-2597  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



PLANAR MONOLITHICS INDUSTRIES  
 4921 Robert J. Mathews Parkway, Suite 1  
 El Dorado Hills, CA 95762  
 Phone: 916-542-1401 Fax: 301-662-1731  
 Email: sales@pmi-rf.com | www.pmi-rf.com

LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 TESTED BY: Jim Hopson  
 DATE: 06-19-23  
 SERIAL NO: PL40964  
 Test Temp: +25C

Frequency

RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3367
	SLOPE (mV/DB)	76.2

Measured Value (mV)	299	684	1065	1474	1864	2211	2611	3022	3391	3771	4145	4464	4864
Error (mV)	-19	-15	-15	12	21	-13	6	36	24	23	15	-47	-28
LINEARITY ERROR (DB)	-0.25	-0.20	-0.20	0.16	0.28	-0.17	0.08	0.47	0.31	0.30	0.20	-0.61	-0.36

4.67 GHz	INTERCEPT (mV)	3366
	SLOPE (mV/DB)	79.4

Measured Value (mV)	225	557	952	1369	1762	2144	2586	3029	3400	3784	4177	4532	4909
Error (mV)	37	-28	-31	-11	-15	-30	15	61	34	21	17	-25	-45
LINEARITY ERROR (DB)	0.46	-0.36	-0.38	-0.13	-0.19	-0.38	0.19	0.76	0.43	0.27	0.22	-0.32	-0.57

7.33 GHz	INTERCEPT (mV)	3395
	SLOPE (mV/DB)	77.7

Measured Value (mV)	284	665	1045	1461	1853	2210	2629	3042	3412	3791	4184	4540	4917
Error (mV)	-4	-11	-20	8	12	-20	11	36	17	8	13	-19	-31
LINEARITY ERROR (DB)	-0.05	-0.15	-0.25	0.10	0.15	-0.25	0.14	0.46	0.23	0.11	0.17	-0.25	-0.39

10 GHz	INTERCEPT (mV)	3377
	SLOPE (mV/DB)	78.9

Measured Value (mV)	243	593	983	1400	1788	2160	2604	3044	3415	3795	4186	4534	4901
Error (mV)	21	-23	-27	-5	-11	-34	16	61	38	24	20	-26	-54
LINEARITY ERROR (DB)	0.27	-0.29	-0.35	-0.06	-0.14	-0.43	0.20	0.78	0.48	0.30	0.25	-0.33	-0.68

12.67 GHz	INTERCEPT (mV)	3389
	SLOPE (mV/DB)	75.6

Measured Value (mV)	335	736	1113	1531	1911	2244	2629	3029	3394	3772	4156	4506	4881
Error (mV)	-31	-8	-9	31	33	-12	-5	18	5	5	11	-17	-20
LINEARITY ERROR (DB)	-0.42	-0.11	-0.12	0.41	0.44	-0.16	-0.06	0.23	0.06	0.06	0.14	-0.22	-0.26

15.33 GHz	INTERCEPT (mV)	3382
	SLOPE (mV/DB)	75.9

Measured Value (mV)	320	718	1095	1513	1894	2228	2620	3024	3388	3763	4149	4505	4884
Error (mV)	-26	-8	-10	28	30	-16	-3	21	6	1	8	-16	-16
LINEARITY ERROR (DB)	-0.34	-0.10	-0.13	0.37	0.39	-0.21	-0.04	0.28	0.08	0.02	0.10	-0.21	-0.21

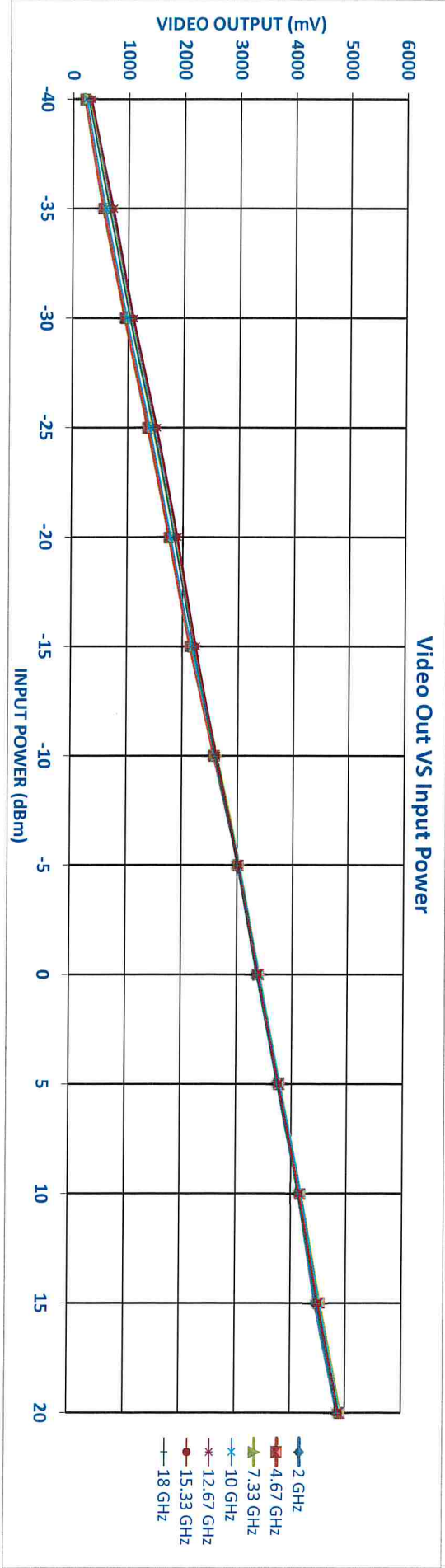
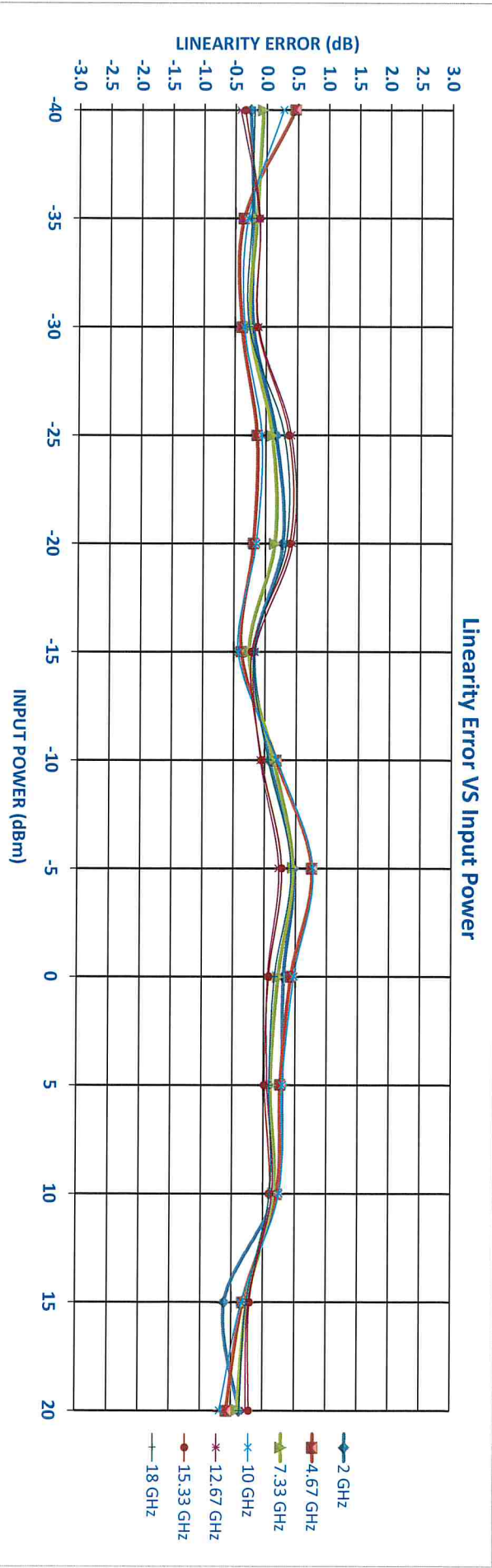
18 GHz	INTERCEPT (mV)	3353
	SLOPE (mV/DB)	76.4

Measured Value (mV)	283	662	1041	1466	1851	2194	2594	3004	3366	3742	4125	4479	4853
Error (mV)	-15	-18	-21	23	26	-13	5	33	13	7	8	-20	-28
LINEARITY ERROR (DB)	-0.19	-0.23	-0.27	0.29	0.34	-0.17	0.06	0.43	0.17	0.09	0.11	-0.26	-0.36

Flatness P-P		
Slope Avg(mv/DB)		77.2



LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 SERIAL NO: PL40964  
 Test Temp: +25C





PLANAR MONOLITHICS INDUSTRIES  
 4921 Robert J. Matthews Parkway, Suite 1  
 El Dorado Hills, CA 95762  
 Phone: 916-542-1401 Fax: 301-662-1731  
 Email: sales@pmi-rf.com | www.pmi-

LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 TESTED BY: Jim Hopson  
 DATE: 06-19-23  
 SERIAL NO: PL40964  
 Test Temp: -28C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
-----	-----	-----	-----	-----	-----	-----	----	---	---	----	----	----

RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3416
	SLOPE (mV/dB)	76.0

350	746	1123	1529	1919	2268	2661	3062	3437	3818	4200	4514	4900
-26	-10	-13	13	23	8	5	26	21	22	24	-42	-35
-0.35	-0.14	-0.17	0.17	0.30	-0.11	0.07	0.34	0.28	0.29	0.32	-0.55	-0.47

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

4.67 GHz	INTERCEPT (mV)	3421
	SLOPE (mV/dB)	78.9

281	642	1022	1441	1838	2214	2656	3074	3451	3834	4231	4585	4949
17	-17	-32	-7	-5	-24	24	47	30	18	20	-20	-51
0.21	-0.21	-0.40	-0.09	-0.06	-0.30	0.30	0.60	0.37	0.23	0.26	-0.26	-0.65

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

7.33 GHz	INTERCEPT (mV)	3460
	SLOPE (mV/dB)	76.7

372	772	1148	1553	1943	2299	2700	3093	3472	3850	4246	4601	4961
-20	-3	-11	11	17	-10	7	16	12	6	19	-10	-34
-0.25	-0.04	-0.14	0.14	0.22	-0.14	0.09	0.21	0.15	0.08	0.24	-0.13	-0.44

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

10 GHz	INTERCEPT (mV)	3451
	SLOPE (mV/dB)	77.8

332	717	1095	1507	1899	2261	2696	3101	3479	3859	4252	4600	4950
-7	-11	-22	1	4	-23	23	39	28	19	23	-18	-57
-0.09	-0.14	-0.28	0.02	0.05	-0.29	0.30	0.50	0.36	0.24	0.29	-0.23	-0.74

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

12.67 GHz	INTERCEPT (mV)	3456
	SLOPE (mV/dB)	74.6

431	837	1222	1629	1996	2333	2696	3083	3456	3831	4220	4568	4928
-40	-7	4	38	32	-4	-14	0	0	2	18	-8	-21
-0.54	-0.10	0.06	0.51	0.43	-0.05	-0.19	0.00	0.00	0.02	0.24	-0.10	-0.28

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

15.33 GHz	INTERCEPT (mV)	3454
	SLOPE (mV/dB)	74.6

436	840	1224	1628	1993	2329	2692	3079	3452	3824	4215	4569	4933
-36	-5	6	38	30	-7	-17	-3	-2	-3	15	-4	-12
-0.48	-0.06	0.09	0.50	0.40	-0.09	-0.22	-0.03	-0.03	-0.04	0.20	-0.05	-0.17

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

18 GHz	INTERCEPT (mV)	3428
	SLOPE (mV/dB)	74.8

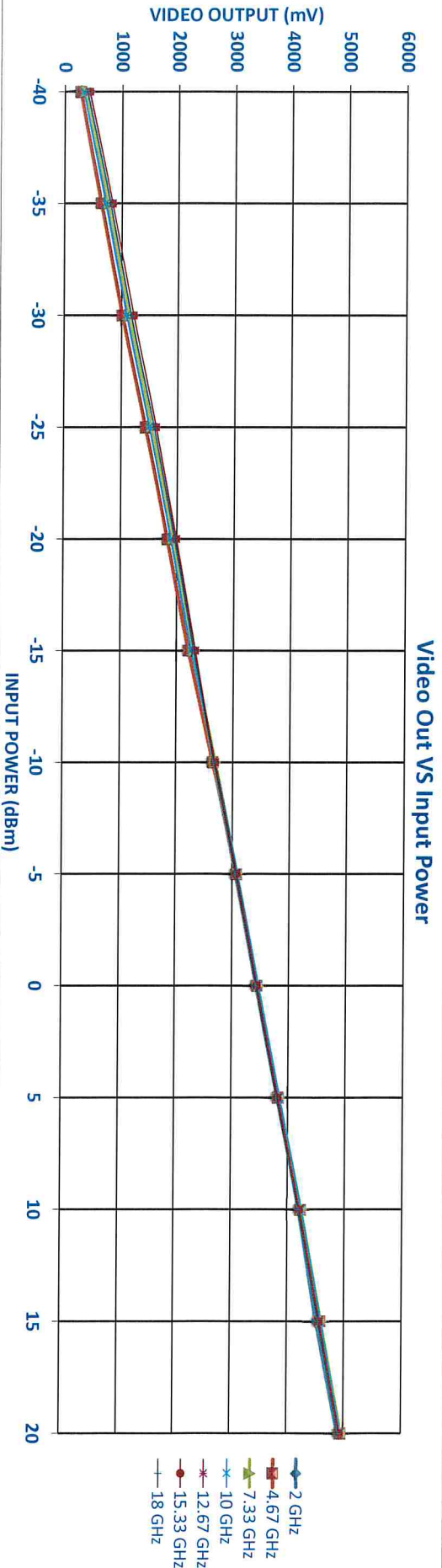
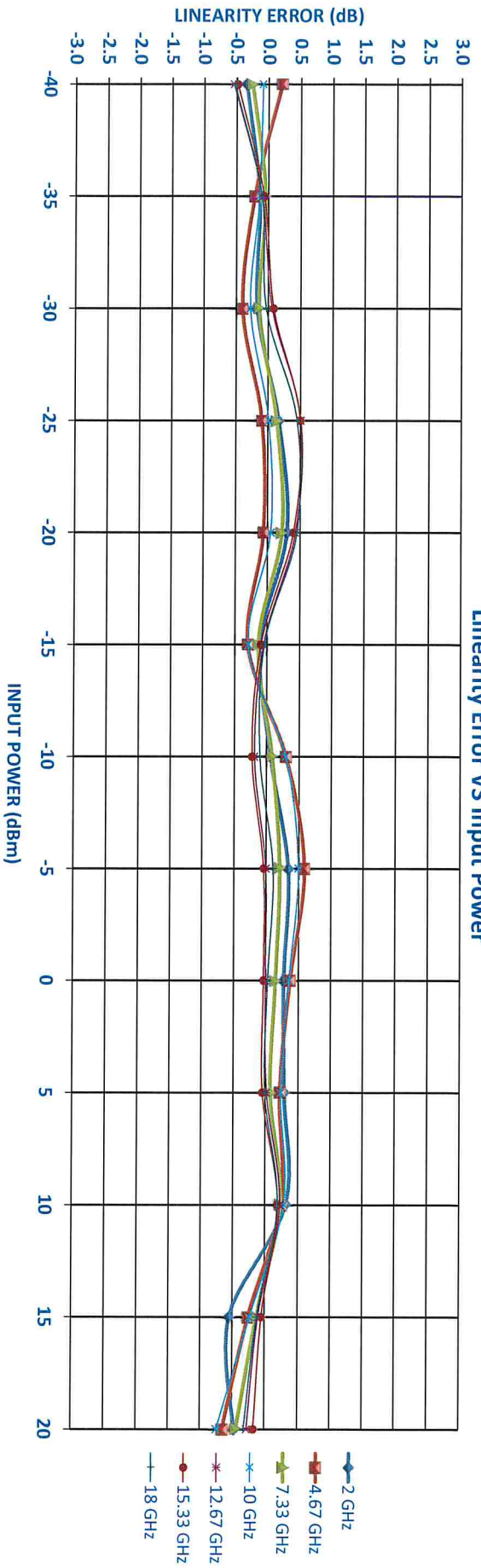
398	804	1183	1593	1967	2304	2673	3063	3431	3802	4191	4541	4900
-40	-7	-2	34	34	-3	-8	8	3	0	15	-9	-24
-0.53	-0.10	-0.03	0.45	0.45	-0.04	-0.10	0.11	0.03	0.00	0.20	-0.12	-0.32

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

Flatness P-P

2.0	2.6	2.6	2.4	2.0	1.6	0.6	0.6	0.6	0.6	0.8	0.8	1.2	0.8
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Slope Avg(mv/dB) 76.2







PLANAR MONOLITHICS INDUSTRIES  
 4921 Robert J. Mathews Parkway, Suite 1  
 El Dorado Hills, CA 95762  
 Phone: 916-542-1401 Fax: 301-662-1731  
 Email: sales@pmi-rf.com | www.pmi-rf.com

LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 TESTED BY: Jim Hopson  
 DATE: 06-19-23  
 SERIAL NO: PL40964  
 Test Temp: +85C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
-----	-----	-----	-----	-----	-----	-----	----	---	---	----	----	----

RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3240
	SLOPE (mV/DB)	77.0

125	504	926	1339	1730	2085	2483	2912	3272	3647	4011	4338	4741
-36	-42	-5	23	29	0	13	57	32	22	1	-56	-38
-0.47	-0.55	-0.06	0.30	0.38	-0.01	0.17	0.74	0.42	0.29	0.02	-0.73	-0.50

Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (DB)

4.67 GHz	INTERCEPT (mV)	3228
	SLOPE (mV/DB)	80.5

56	341	796	1206	1601	2004	2433	2910	3276	3656	4042	4400	4780
47	-70	-18	-10	-17	-17	10	84	48	26	9	-35	-57
0.58	-0.87	-0.22	-0.13	-0.22	-0.21	0.12	1.05	0.60	0.32	0.12	-0.43	-0.71

Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (DB)

7.33 GHz	INTERCEPT (mV)	3248
	SLOPE (mV/DB)	79.0

92	430	867	1282	1674	2051	2472	2920	3282	3656	4043	4401	4783
5	-52	-10	9	6	-12	14	67	34	13	5	-33	-46
0.06	-0.66	-0.13	0.12	0.08	-0.15	0.18	0.85	0.43	0.16	0.06	-0.41	-0.58

Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (DB)

10 GHz	INTERCEPT (mV)	3214
	SLOPE (mV/DB)	80.6

46	321	777	1186	1578	1982	2412	2907	3274	3652	4034	4385	4756
55	-73	-20	-14	-25	-24	4	96	60	35	14	-38	-70
0.68	-0.91	-0.25	-0.17	-0.31	-0.29	0.04	1.19	0.74	0.43	0.17	-0.47	-0.87

Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (DB)

12.67 GHz	INTERCEPT (mV)	3245
	SLOPE (mV/DB)	77.0

127	512	931	1357	1743	2088	2483	2908	3263	3638	4014	4368	4748
-39	-39	-5	36	37	-3	8	48	18	8	-1	-32	-36
-0.51	-0.51	-0.07	0.47	0.48	-0.03	0.10	0.62	0.23	0.11	-0.01	-0.41	-0.47

Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (DB)

15.33 GHz	INTERCEPT (mV)	3228
	SLOPE (mV/DB)	77.6

104	463	893	1318	1704	2058	2459	2894	3250	3624	4002	4361	4744
-20	-49	-7	30	28	-6	7	54	22	8	-2	-31	-36
-0.26	-0.63	-0.09	0.39	0.36	-0.08	0.09	0.70	0.29	0.11	-0.02	-0.40	-0.46

Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (DB)

18 GHz	INTERCEPT (mV)	3191
	SLOPE (mV/DB)	78.7

58	361	814	1238	1626	2007	2414	2869	3227	3602	3976	4337	4716
16	-75	-15	15	10	-3	11	72	36	18	-2	-34	-49
0.20	-0.95	-0.19	0.19	0.12	-0.04	0.13	0.91	0.46	0.23	-0.02	-0.44	-0.62

Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (DB)

Flatness P-P

1.0	2.4	2.0	2.2	2.0	1.4	1.0	0.6	0.6	0.6	0.6	0.8	0.8
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Slope Avg(mv/DB)

78.6



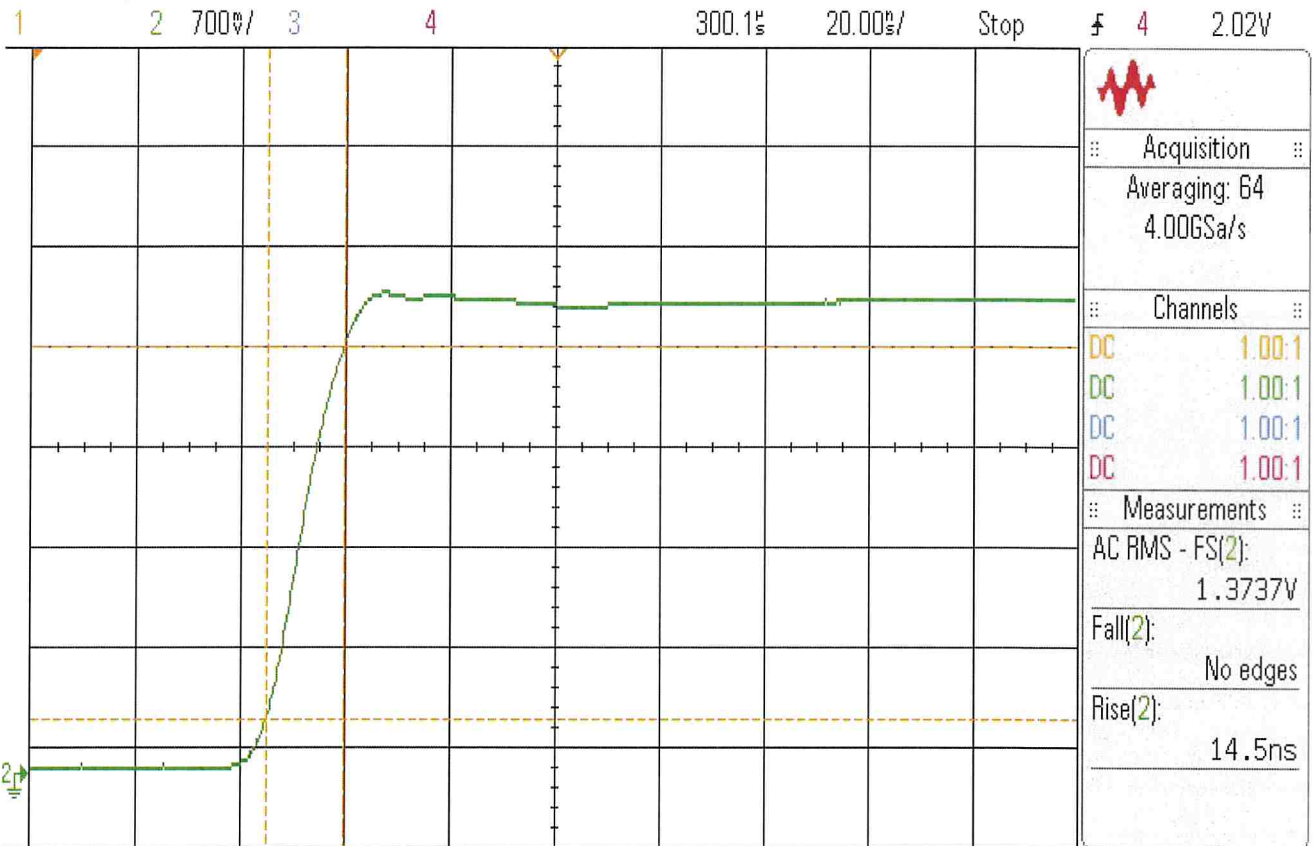




**SUMMARY TEST DATA  
ON  
ERDLVA-218-CW-75MV**

**PL40964/2325**

DSO-X 3034A, MY52394003: Tue Jun 20 14:26:48 2023



Measurement Menu

Source 2 Type: Rise Add Measurement Settings Clear Meas Statistics

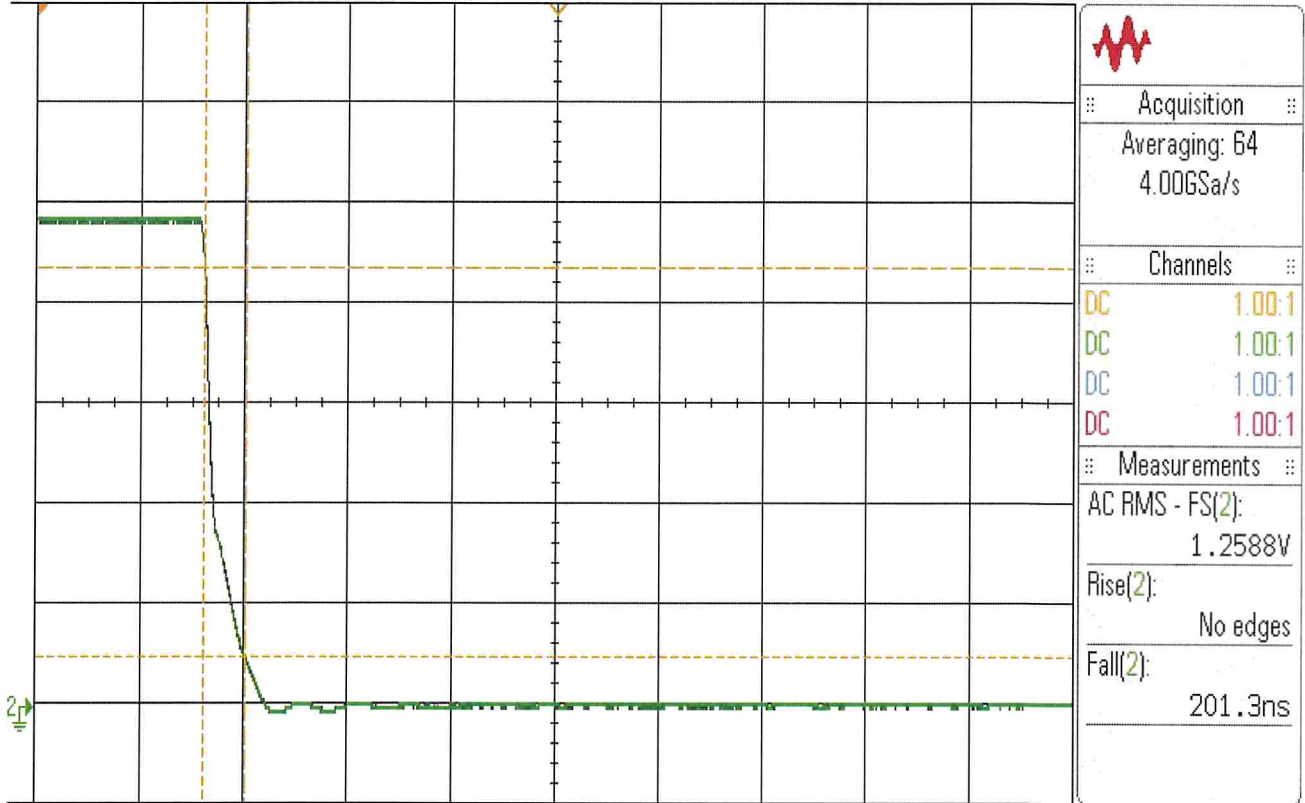


SUMMARY TEST DATA  
ON  
ERDLVA-218-CW-75MV

PL40964/2325

DSO-X 3034A, MY52394003: Tue Jun 20 14:35:37 2023

1 2 700V/ 3 4 301.8ns 500.0ns/ Auto f 4 2.02V



Acquire Menu

Acq Mode  
Averaging

# Avgs  
64

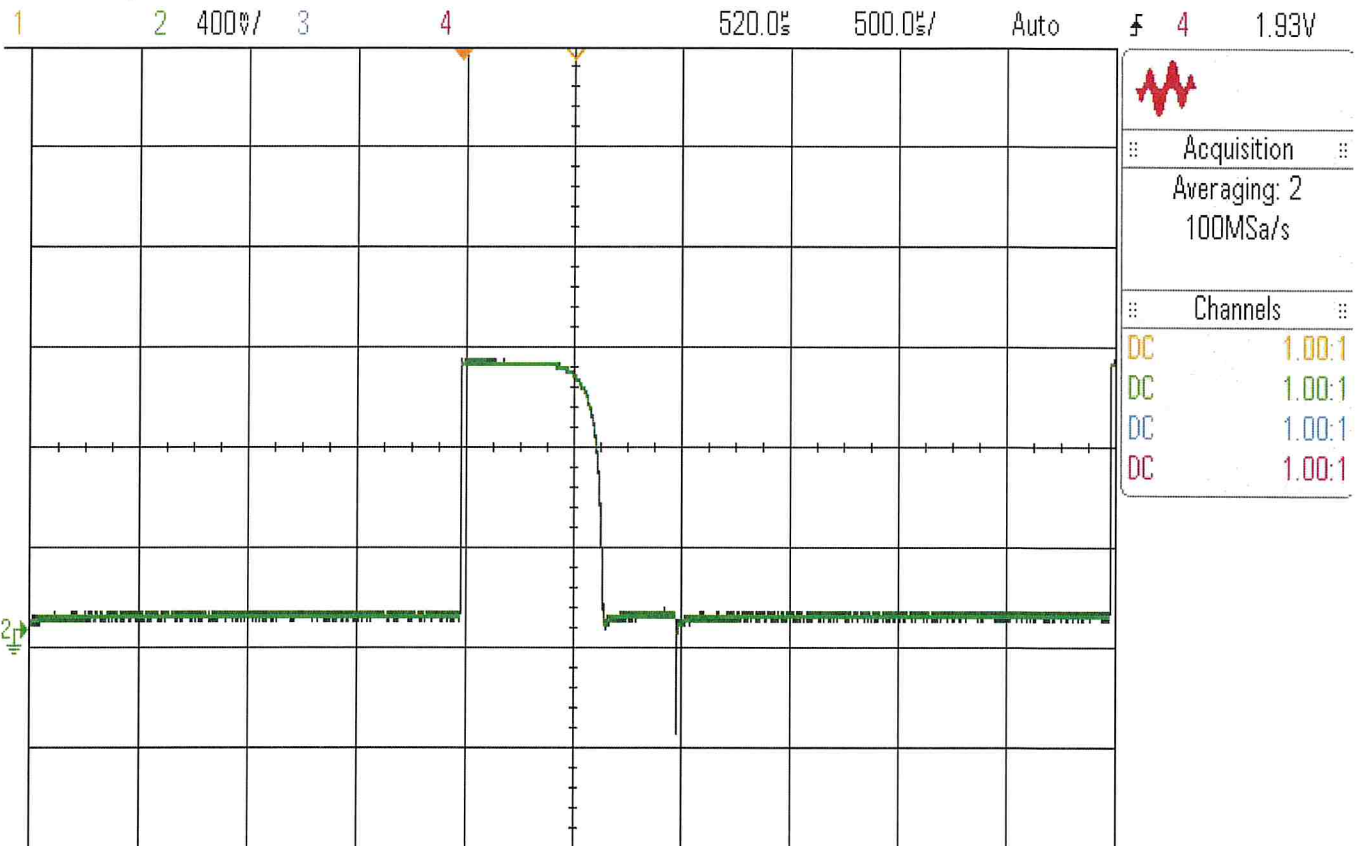
Segmented  
↓



**SUMMARY TEST DATA  
ON  
ERDLVA-218-CW-75MV**

**PL40964/2325**

DSO-X 3034A, MY52394003: Tue Jun 20 14:39:29 2023



Cursors Menu

Mode  
Off

To turn on cursors, press the [Cursors] key on the front panel.

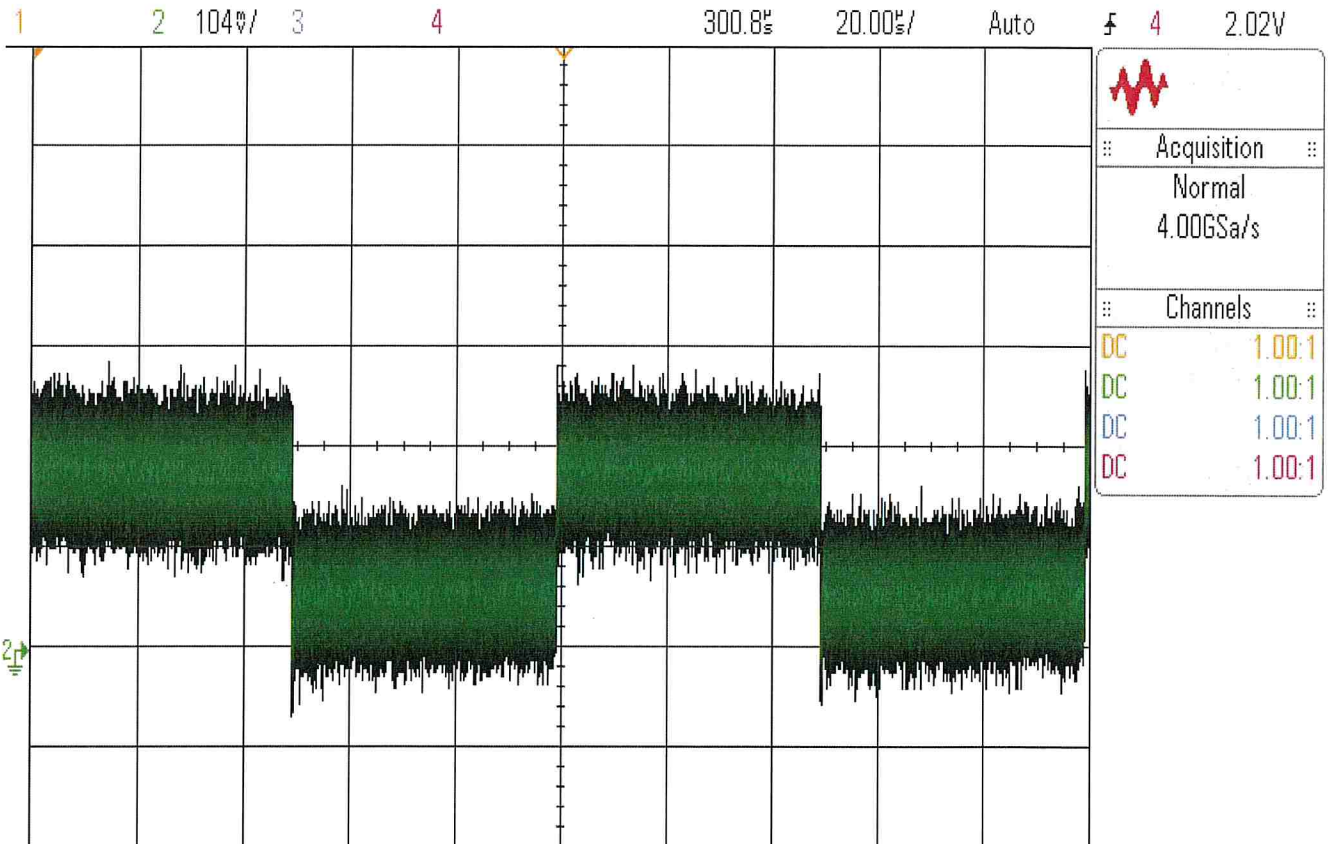




**SUMMARY TEST DATA  
ON  
ERDLVA-218-CW-75MV**

**PL40964/2325**

DSO-X 3034A, MY52394003: Tue Jun 20 14:37:11 2023



Cursors Menu

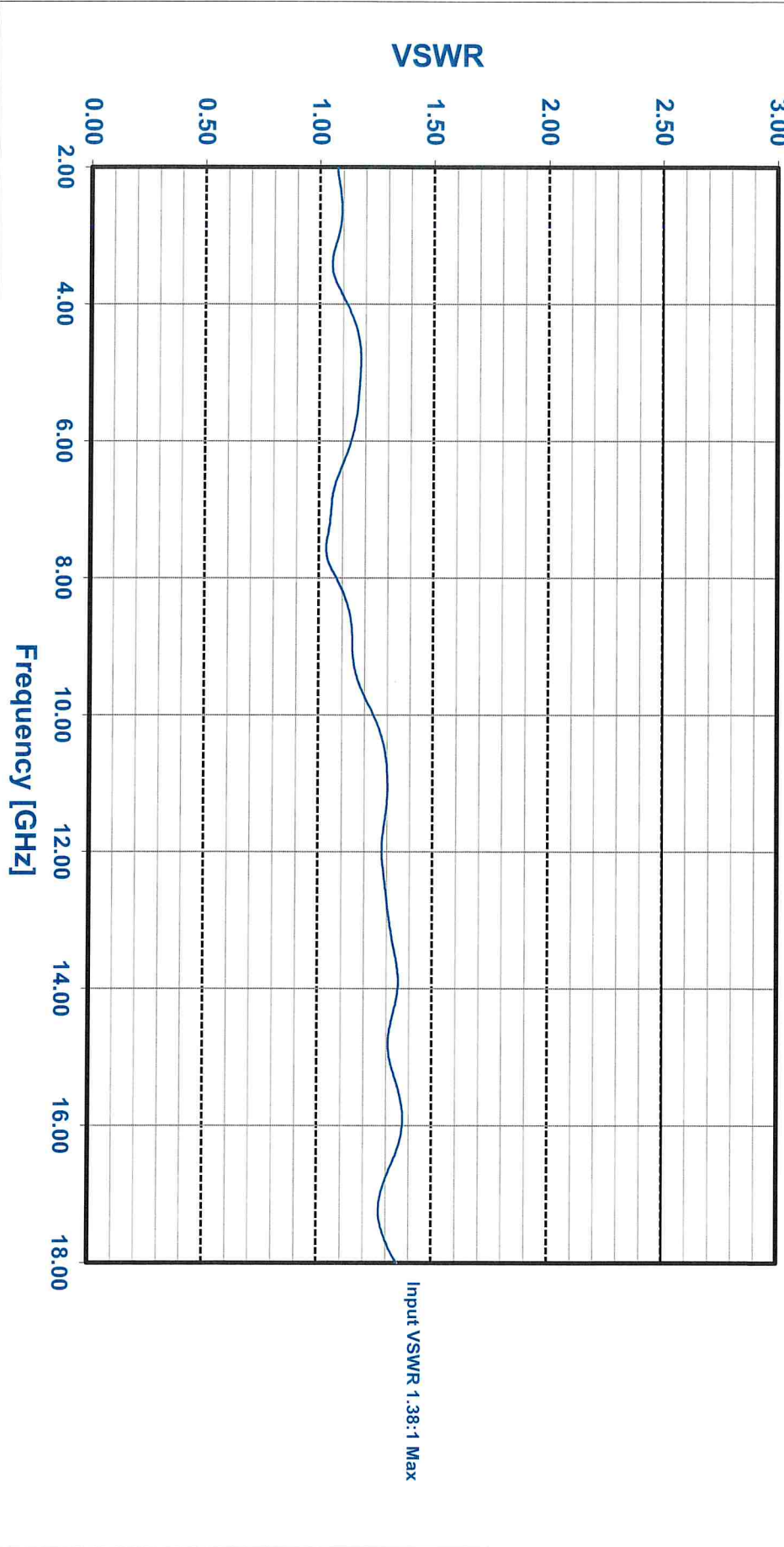
Mode  
Off

To turn on cursors, press the [Cursors] key on the front panel.

Model Number: ERDLVA-2G18G-CW-75MV  
Serial Number: PL40964  
Date: 6/21/2023

Temperature: +25C

# VSWR GRAPH



VSWR

Frequency [GHz]

Input VSWR 1.38:1 Max