



**SUMMARY TEST DATA  
ON  
ERDLVA-218-CW-75MV-93**

**PL46228/2422**

<b>Customer:</b> <u>TRUMP TRUMP</u>	<b>Tested By:</b> <u>Jim Hopson</u>
<b>SO No:</b> <u>20240101</u>	<b>Temperature:</b> <u>-25°C +25C +85C</u>
<b>Model No:</b> <u>ERDLVA-218-CW-75MV-93</u>	<b>Date:</b> <u>5/29/2024</u>
<b>Serial No:</b> <u>PL46228/2422</u>	<b>Drawing No:</b> <u>2764240</u> <b>Rev:</b> <u>A1</u>

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 18 GHz	2 to 18 GHz	PMI QA3
2	VSWR:	2.5:1 MAX @ -20 dBm	1.79:1 MAX	
3	Input Power:	23 dBm Max.	Pass	
4	VIDEO OUT TSS:	-42 dBm MAX	-43dBm	
5	VIDEO OUT Dynamic Range:	-40 to +20 dBm	-40 to +20 dBm	
6	VIDEO OUT Log Slope Fixed:	75 ± 10mV/dB	73.5-76.4mV/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	40mV	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	15.3ns	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	<0.5dB	

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Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



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11	VIDEO OUT Recovery	500ns MAX	400ns	PMI QA3
12	Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	1.60dB p-p MAX @ -20dBm	
13	VIDEO OUT CW Immunity:	CW Immune Power -50 to -10 dBm	Pass	
		CW Attack Time 1500us	1300us	
		CW Release Time 250us	<100us	
17	Pulse droop	1dB Max for 250us pulses	<1dB	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	100 ns to 300 us	
19	VIDEO LOAD Impedance:	93 ±1 Ω	93Ω	
21	VIDEO OUT Noise Level (RMS):	102 mV max	33.7mV	
22	VIDEO OUT Propagation Delay:	35 ns MAX from RF 10% to 10% video (excluding cable)	<35ns	
23	Power Supply	+12 V @ 250 mA MAX -12 V @ 250 mA MAX	+12 V @ 170 mA -12 V @ 70 mA	

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LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 TESTED BY: Jim Hopson  
 DATE: 5-29-24  
 SERIAL NO.: PL46228  
 Test Temp: +25C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3442
	SLOPE (mV/DB)	76.3

410	784	1156	1527	1896	2265	2662	3060	3455	3842	4237	4591	4946
20	12	3	-8	-20	-33	-17	-1	13	18	32	4	-22
0.26	0.16	0.04	-0.10	-0.27	-0.43	-0.23	-0.01	0.17	0.24	0.42	0.05	-0.29

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

4.67 GHz	INTERCEPT (mV)	3440
	SLOPE (mV/DB)	76.4

409	788	1159	1530	1891	2256	2651	3044	3440	3825	4225	4591	4985
24	21	10	-1	-22	-39	-25	-14	0	3	21	5	17
0.31	0.28	0.13	-0.01	-0.28	-0.50	-0.33	-0.19	0.00	0.04	0.27	0.07	0.22

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

7.33 GHz	INTERCEPT (mV)	3465
	SLOPE (mV/DB)	73.5

559	907	1291	1668	1986	2308	2661	3049	3443	3823	4228	4595	4981
32	13	29	39	-10	-55	-70	-49	-22	-9	28	28	47
0.43	0.17	0.40	0.53	-0.14	-0.75	-0.95	-0.67	-0.30	-0.13	0.39	0.38	0.64

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

10 GHz	INTERCEPT (mV)	3496
	SLOPE (mV/DB)	75.2

519	876	1259	1635	1971	2320	2704	3085	3482	3871	4265	4631	5047
33	13	20	20	-20	-47	-39	-35	-14	-1	17	7	47
0.43	0.18	0.27	0.27	-0.27	-0.63	-0.52	-0.46	-0.18	-0.01	0.22	0.09	0.62

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

12.67 GHz	INTERCEPT (mV)	3456
	SLOPE (mV/DB)	74.2

519	875	1254	1626	1958	2297	2660	3049	3443	3819	4218	4584	4985
30	15	23	24	-15	-47	-54	-36	-13	-8	20	15	45
0.40	0.20	0.31	0.33	-0.20	-0.63	-0.73	-0.49	-0.18	-0.11	0.27	0.21	0.61

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

15.33 GHz	INTERCEPT (mV)	3443
	SLOPE (mV/DB)	76.3

418	793	1171	1537	1894	2251	2657	3046	3441	3820	4220	4590	5005
27	20	17	1	-23	-48	-23	-16	-2	-5	14	2	36
0.35	0.27	0.22	0.02	-0.30	-0.62	-0.30	-0.21	-0.03	-0.06	0.18	0.03	0.47

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

18 GHz	INTERCEPT (mV)	3370
	SLOPE (mV/DB)	74.9

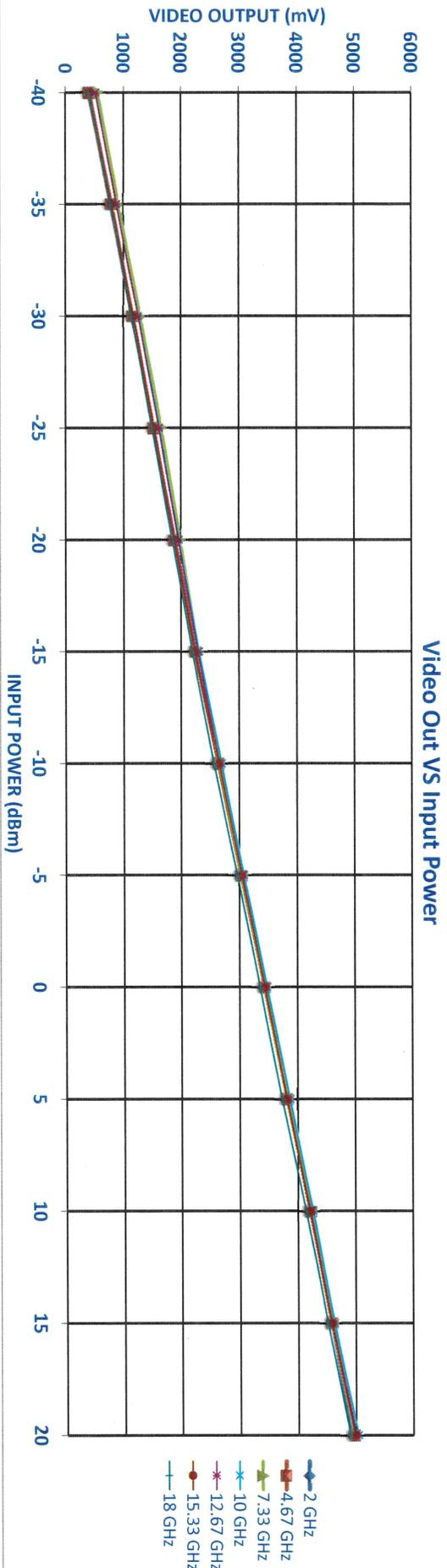
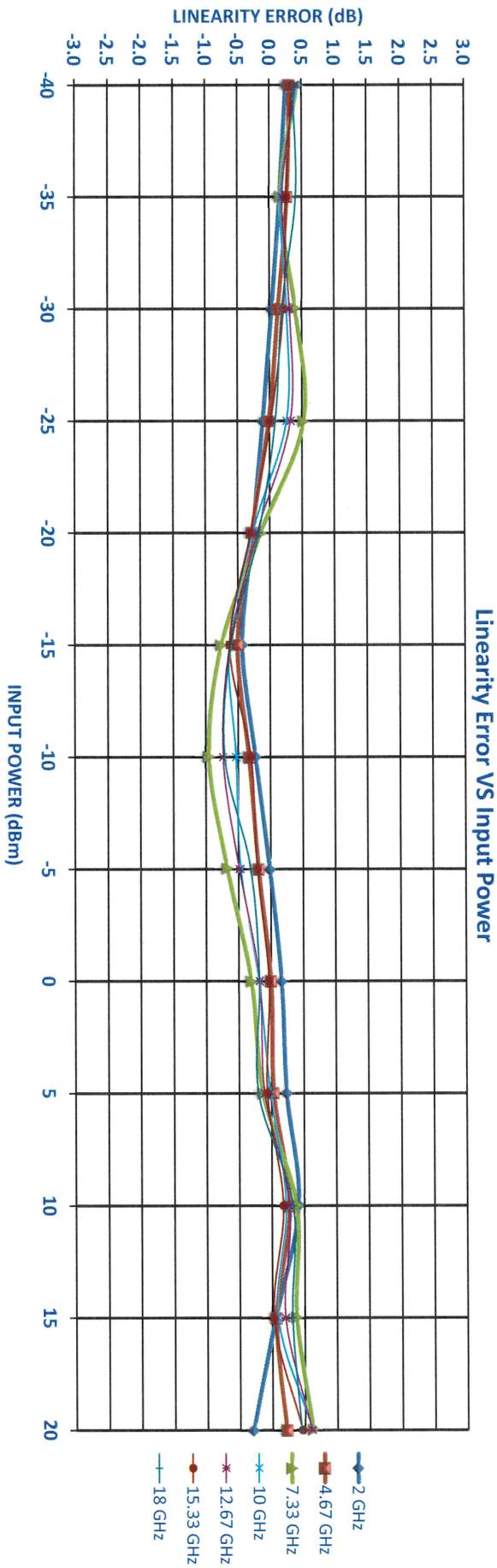
402	780	1138	1505	1860	2202	2569	2973	3357	3730	4144	4517	4902
27	31	14	7	-13	-45	-52	-23	-13	-15	25	23	34
0.36	0.41	0.19	0.09	-0.17	-0.60	-0.70	-0.31	-0.18	-0.20	0.33	0.31	0.45

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

Flatness P-P

Slope Avg(mv/DB)	75.2
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2.0	1.6	2.0	2.2	1.6	1.6	1.8	1.4	1.6	1.8	1.6	1.6	2.0
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LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 TESTED BY: Jim Hopson  
 DATE: 5-29-24  
 SERIAL NO.: PL46228  
 Test Temp: +85C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3304
	SLOPE (mV/DB)	74.9

270	701	1070	1441	1823	2178	2563	2922	3293	3671	4067	4426	4796
-39	18	12	9	16	-3	8	-8	-11	-8	14	-2	-6
-0.52	0.24	0.16	0.12	0.22	-0.04	0.10	-0.11	-0.15	-0.10	0.19	-0.02	-0.08

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

4.67 GHz	INTERCEPT (mV)	3292
	SLOPE (mV/DB)	75.0

262	692	1059	1430	1807	2157	2541	2902	3268	3642	4044	4417	4824
-30	25	17	13	15	-10	-1	-15	-24	-25	2	0	32
-0.40	0.33	0.22	0.17	0.20	-0.13	-0.01	-0.20	-0.32	-0.33	0.03	0.00	0.43

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

7.33 GHz	INTERCEPT (mV)	3307
	SLOPE (mV/DB)	72.5

373	793	1167	1538	1881	2209	2544	2898	3264	3635	4041	4412	4814
-34	23	35	43	24	-11	-38	-47	-43	-35	9	17	57
-0.47	0.32	0.48	0.60	0.33	-0.15	-0.53	-0.65	-0.60	-0.48	0.12	0.24	0.78

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

10 GHz	INTERCEPT (mV)	3323
	SLOPE (mV/DB)	74.6

308	737	1109	1479	1847	2195	2571	2923	3293	3668	4067	4439	4864
-32	24	24	21	16	-9	-6	-27	-30	-28	-1	-2	50
-0.42	0.33	0.32	0.28	0.21	-0.12	-0.08	-0.36	-0.40	-0.37	-0.02	-0.03	0.67

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

12.67 GHz	INTERCEPT (mV)	3293
	SLOPE (mV/DB)	73.4

322	748	1118	1484	1846	2182	2539	2895	3259	3625	4028	4398	4818
-33	25	28	27	22	-9	-20	-31	-34	-35	1	3	56
-0.46	0.34	0.38	0.37	0.30	-0.13	-0.27	-0.42	-0.46	-0.48	0.01	0.05	0.77

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

15.33 GHz	INTERCEPT (mV)	3256
	SLOPE (mV/DB)	76.9

168	570	958	1327	1721	2078	2517	2885	3247	3613	4018	4394	4825
-10	7	11	-5	4	-24	31	14	-9	-27	-7	-16	30
-0.13	0.10	0.14	-0.07	0.05	-0.31	0.40	0.18	-0.11	-0.36	-0.09	-0.21	0.40

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

18 GHz	INTERCEPT (mV)	3167
	SLOPE (mV/DB)	76.3

129	493	884	1257	1639	1998	2419	2805	3154	3520	3932	4309	4718
14	-4	6	-3	-2	-25	15	19	-13	-29	2	-3	25
0.18	-0.05	0.07	-0.04	-0.03	-0.33	0.19	0.25	-0.18	-0.38	0.02	-0.04	0.32

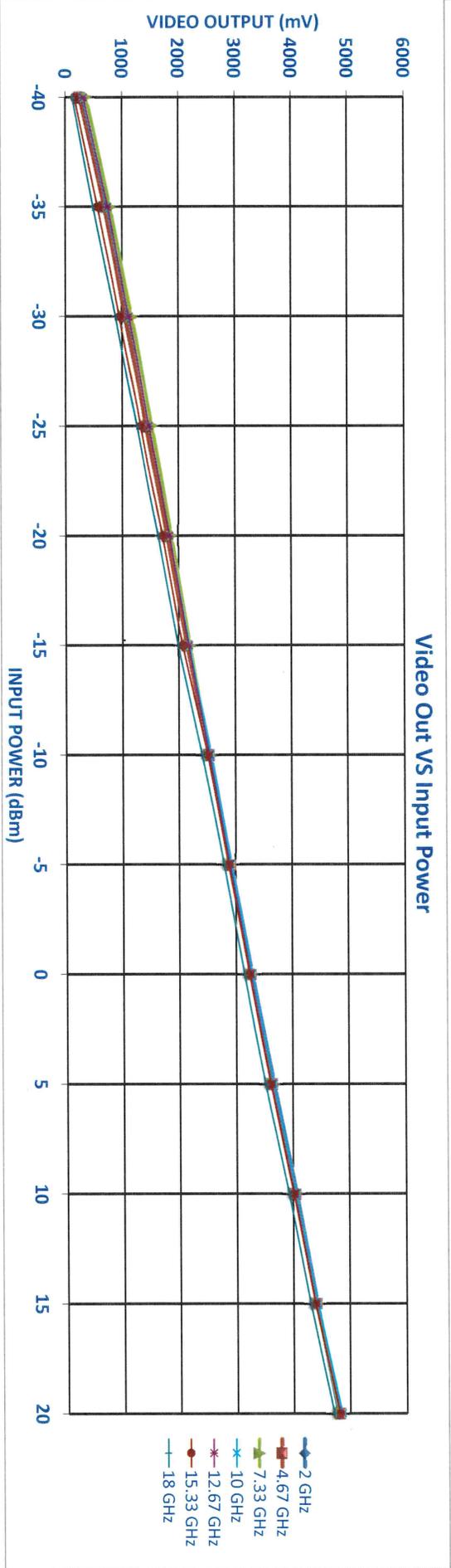
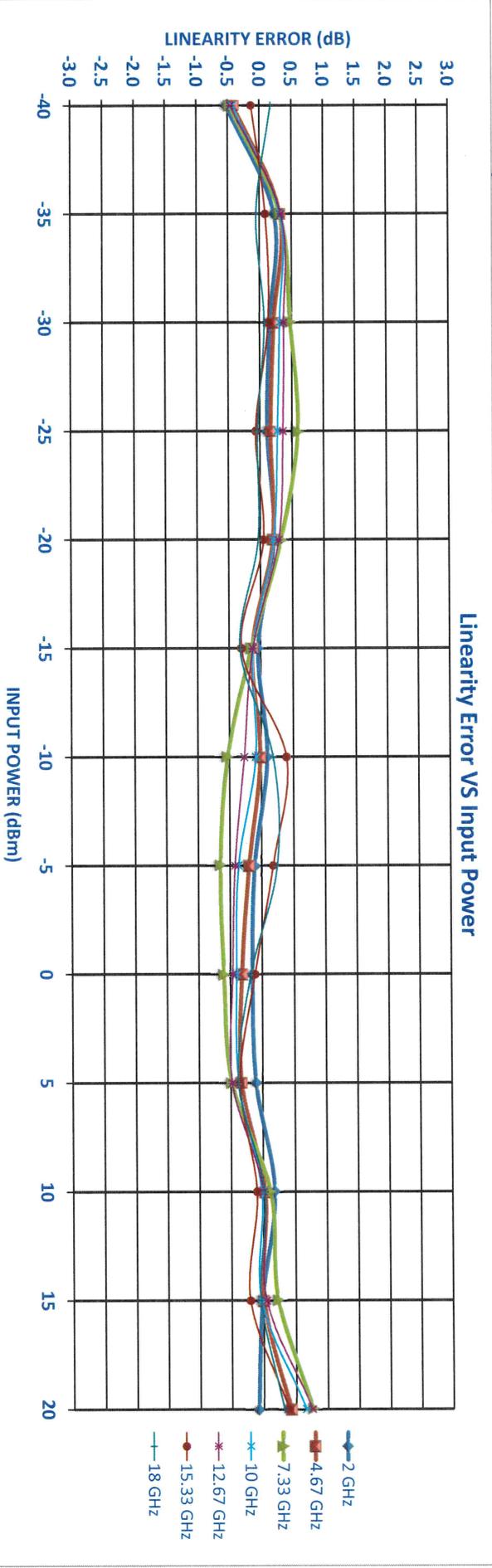
Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (dB)

Flatness P-P

3.2	4.0	3.8	3.8	3.2	2.8	2.0	1.6	1.8	2.0	1.8	1.8	2.0
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Slope Avg(mv/db) 74.8

LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 SERIAL NO: PL46228  
 Test Temp: +85C





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LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV-93  
 TESTED BY: Jim Hopson  
 DATE: 5-29-24  
 SERIAL NO: PL46228  
 Test Temp: -25C

Frequency	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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2 GHz	INTERCEPT (mV)	3499											
	SLOPE (mV/DB)	77.5											
	430	798	1175	1555	1918	2290	2699	3121	3526	3923	4317	4665	5004
	29	10	0	-8	-32	-47	-26	9	27	36	43	4	-45
	0.38	0.13	0.00	-0.10	-0.41	-0.61	-0.33	0.12	0.34	0.47	0.55	0.05	-0.58

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

4.67 GHz	INTERCEPT (mV)	3504											
	SLOPE (mV/DB)	77.5											
	439	806	1185	1564	1918	2288	2695	3111	3519	3913	4310	4669	5052
	37	16	7	-1	-35	-53	-33	-5	15	21	31	2	-3
	0.48	0.21	0.10	-0.02	-0.45	-0.68	-0.43	-0.07	0.20	0.28	0.40	0.03	-0.03

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

7.33 GHz	INTERCEPT (mV)	3536											
	SLOPE (mV/DB)	74.5											
	600	946	1330	1713	2029	2334	2713	3124	3528	3920	4320	4680	5055
	42	16	28	38	-18	-85	-79	-40	-8	11	39	27	29
	0.57	0.22	0.37	0.52	-0.24	-1.15	-1.06	-0.54	-0.11	0.15	0.52	0.36	0.39

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

10 GHz	INTERCEPT (mV)	3574											
	SLOPE (mV/DB)	76.0											
	579	926	1311	1696	2023	2357	2764	3165	3571	3973	4362	4719	5127
	47	14	18	23	-30	-76	-49	-28	-3	19	28	5	33
	0.61	0.18	0.24	0.31	-0.39	-1.00	-0.65	-0.37	-0.03	0.25	0.37	0.06	0.43

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

12.67 GHz	INTERCEPT (mV)	3520											
	SLOPE (mV/DB)	75.3											
	550	898	1280	1660	1987	2318	2703	3118	3523	3909	4306	4665	5050
	43	15	20	23	-26	-72	-64	-25	3	12	33	15	23
	0.58	0.20	0.27	0.31	-0.35	-0.96	-0.85	-0.34	0.04	0.16	0.43	0.20	0.31

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

15.33 GHz	INTERCEPT (mV)	3519											
	SLOPE (mV/DB)	76.9											
	482	841	1228	1607	1947	2296	2707	3120	3527	3917	4314	4677	5079
	41	15	18	12	-33	-69	-42	-14	8	13	26	4	21
	0.53	0.20	0.23	0.15	-0.43	-0.89	-0.55	-0.18	0.11	0.17	0.33	0.05	0.28

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

18 GHz	INTERCEPT (mV)	3459											
	SLOPE (mV/DB)	75.2											
	494	850	1225	1600	1931	2261	2623	3054	3456	3837	4250	4617	4986
	44	24	23	22	-23	-69	-83	-29	-3	2	39	30	23
	0.58	0.32	0.30	0.29	-0.31	-0.92	-1.11	-0.38	-0.03	0.03	0.52	0.40	0.31

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

Flatness P-P	2.2	2.0	2.0	2.0	2.0	1.4	1.2	1.8	1.4	1.6	1.8	1.4	1.4	1.8
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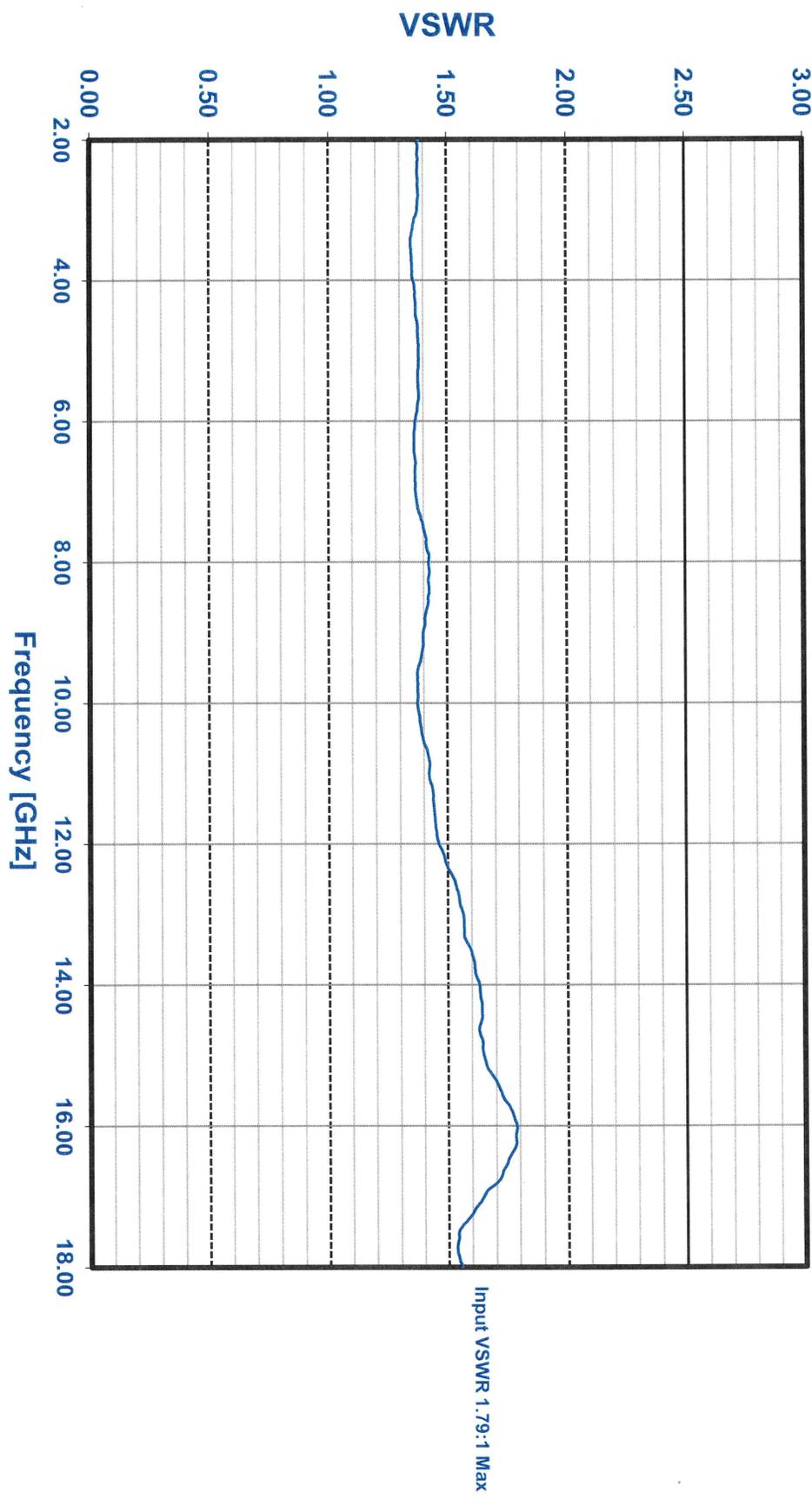
Slope Avg(mv/db) 76.1



Model Number: ERDLVA-2G18G-CW-75MW  
Serial Number: PL46228  
Date: 5/29/2024

Temperature: +25C

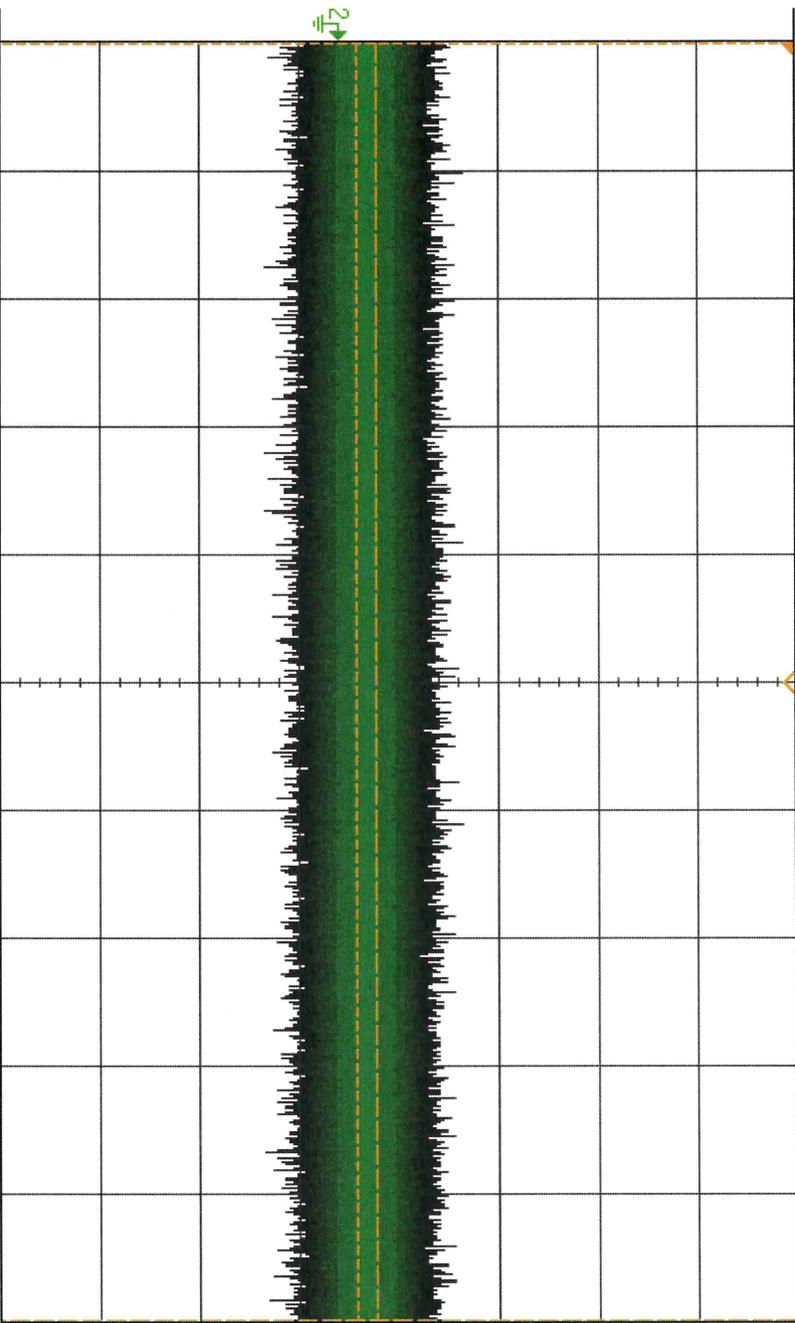
# VSWR GRAPH



PL46228  
RMS noise

DSO-X 3034A, MY52394003: Wed May 29 12:21:43 2024

1 2 160% / 3 4 2.052e 200.0e / Auto f E 2.11V



KEYSIGHT TECHNOLOGIES	
Acquisition	Normal
	1.006Sa/s
Channels	
DC	1.00:1
Measurements	
Rise[2]:	<93ns
Fall[2]:	<93ns
AC RMS - FS[2]:	33.76mV

Measurement Menu

Source 2

Type: AC RMS - FS

Add Measurement

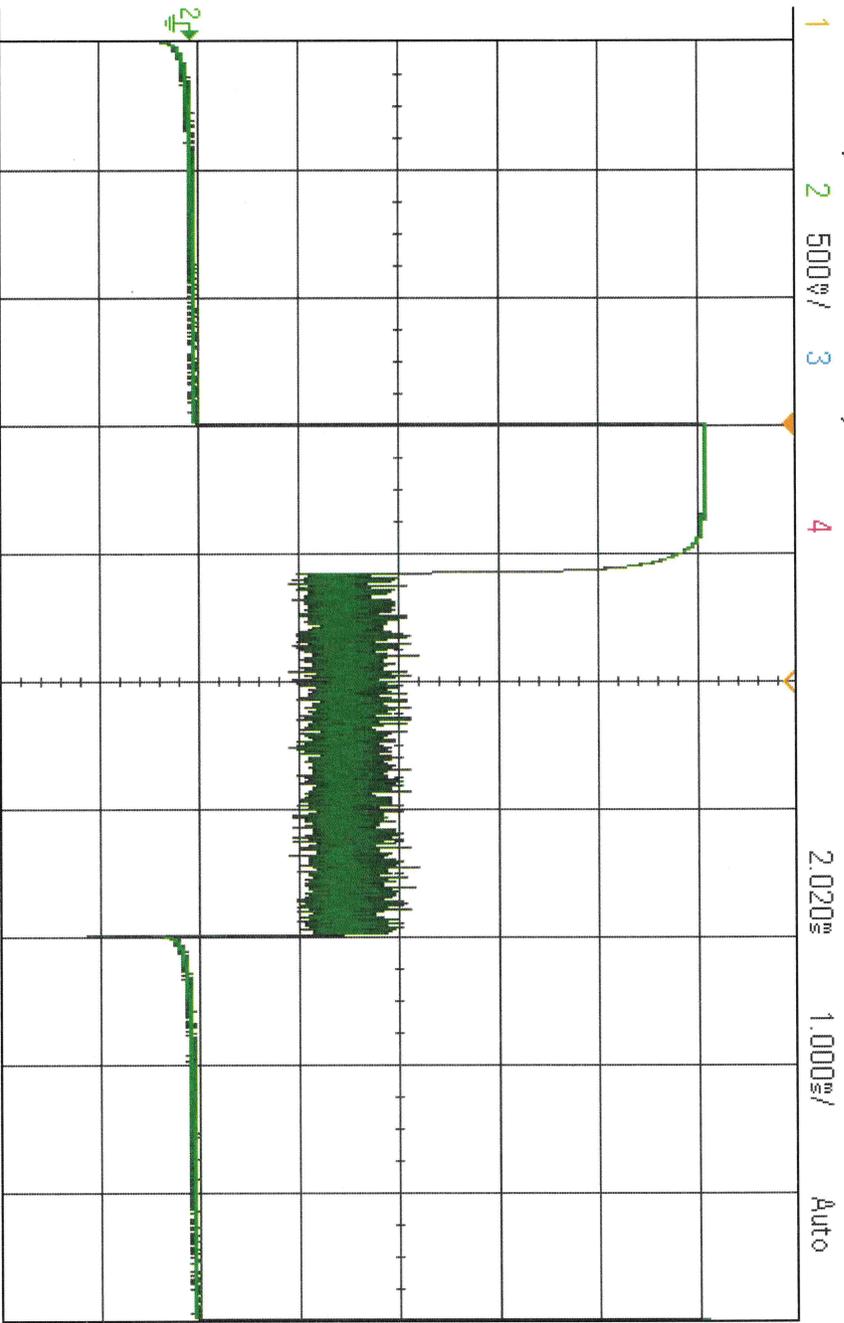
Settings

Clear Meas

Statistics

PL46228  
CIR IMMUNE

DSO-X 3034A, MW52394003, Wed May 29 12:23:33 2024



f E 2.11V

**KEYSIGHT**  
TECHNOLOGIES

Acquisition ::  
Averaging: 2  
50.0MSa/s

Channels	
DC	1.00:1

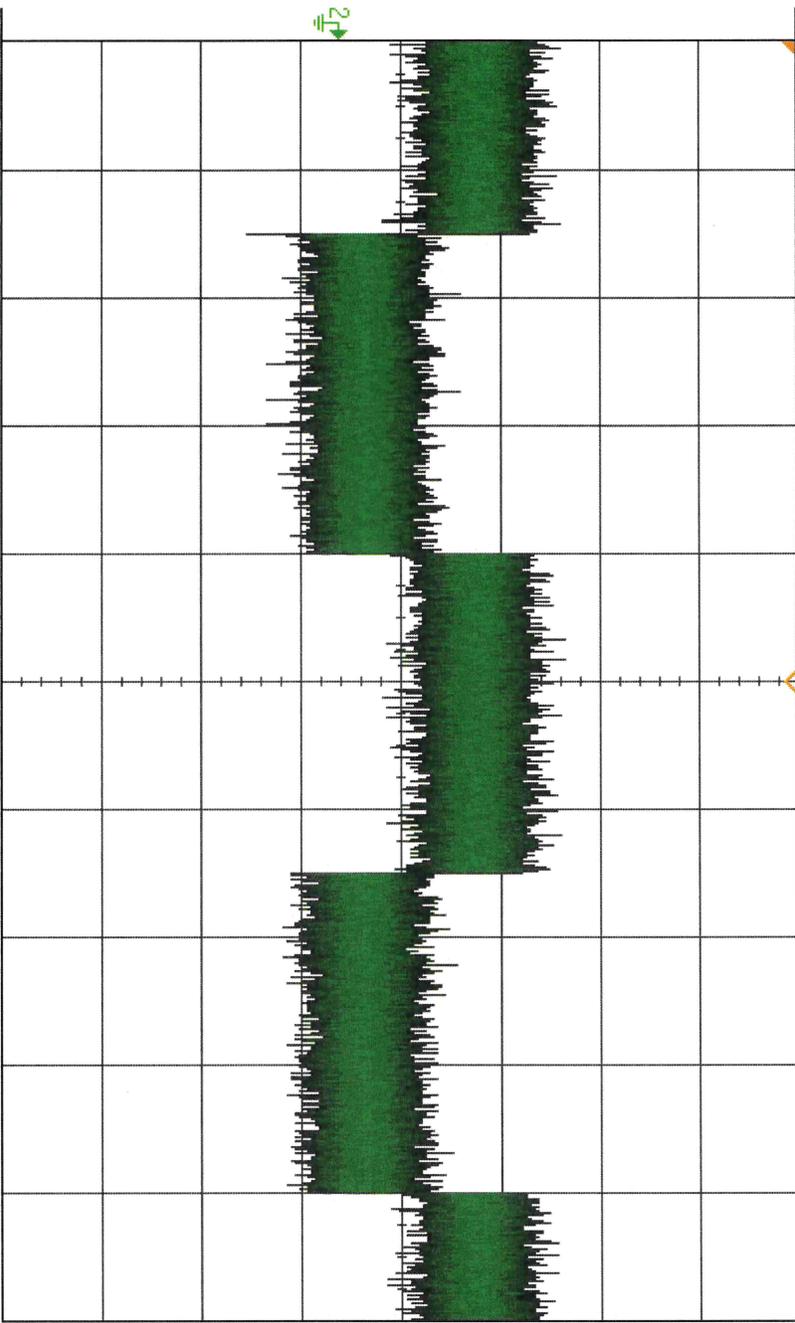
Cursors Menu  
Mode  
Off

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

PL46228  
TSS -43 dbm

DSO-X 3034A, MW52394003: Wed May 29 12:10:29 2024

1 2 160% / 3 4 2.020ms 20.00ns / Auto f E 2.11V



**KEYSIGHT TECHNOLOGIES**

Acquisition Normal  
4.006Sa/s

Channels	
DC	1.00:1

Save to file = [PL46228\_tss\_43

Save

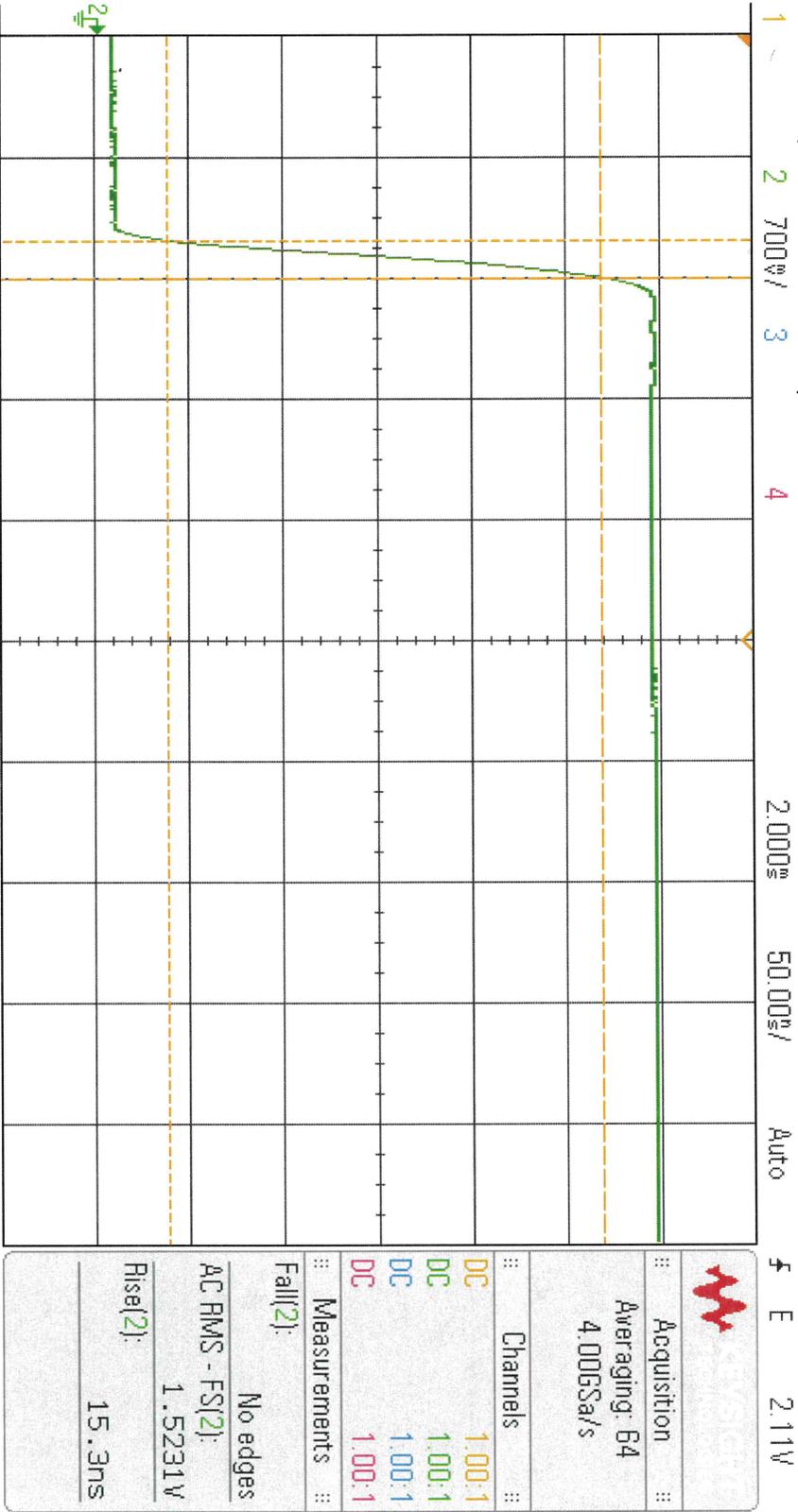
Recall

Default/Erase

Press to Save

P146228  
Settle/Rise

DSO-X 3034A, MW52394003, Wed May 29 12:15:00 2024



Measurement Menu

Source 2

Type: Rise

Add Measurement

Settings

Clear Meas

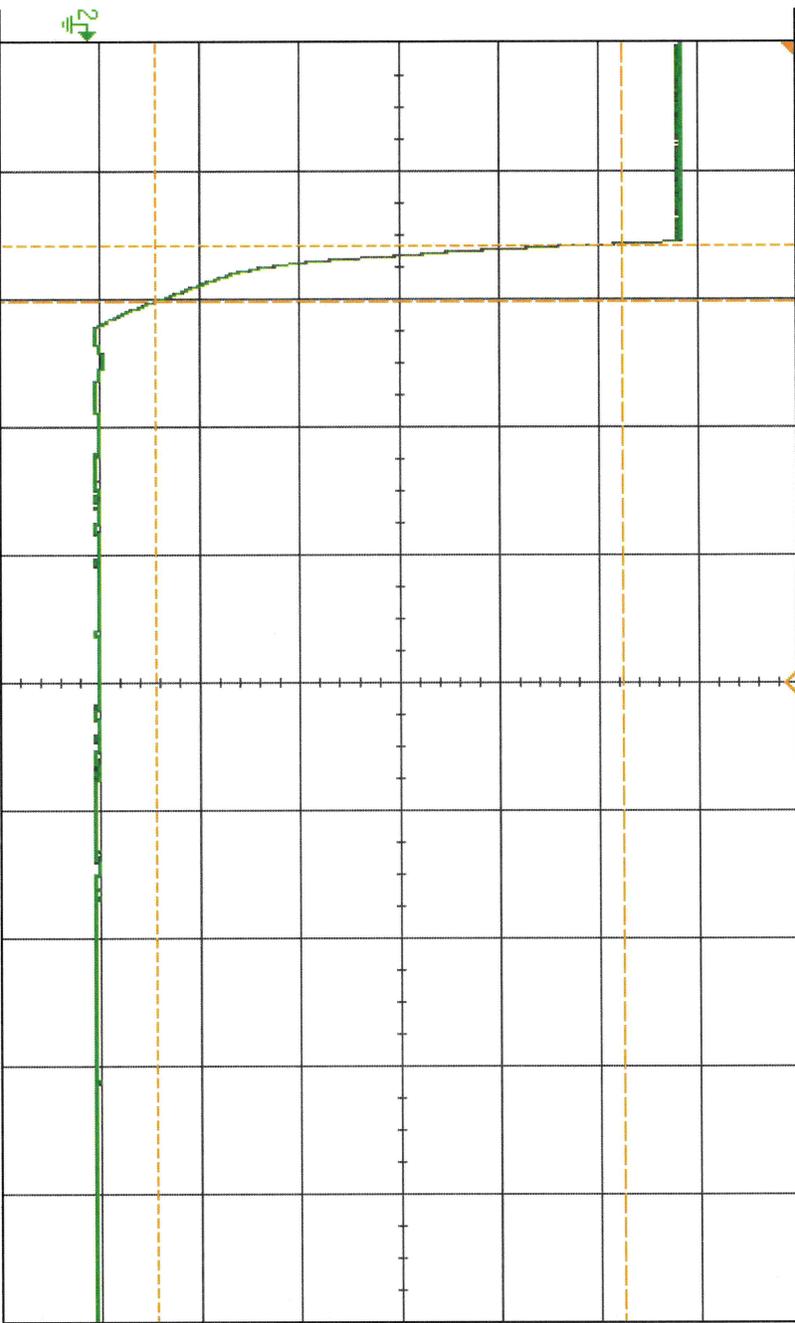
Statistics

PL46228

Recovery

DSO-X 3034A, MW52394003: Wed May 29 12:20:29 2024

1 2 700mV / 3 4 2.052ms 500.0mV / Auto f E 2.11V



Measurement Menu

- Source 2
- Type: Fall
- Add Measurement
- Settings
- Clear Meas
- Statistics

Acquisition  
Averaging: B4  
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): 1.5071V
- Rise(2): No edges
- Fall(2): 225.3ns