



**Summary Data
For
ERDLVA-2G18G-65-70MV-70C**

Customer: _____

Tested By: Jim Hopson

SO No: _____

Temperature: -40C TO +70C

Model No: ERDLVA-2G18G-65-70MV-70C

Date 10/18/2024

Serial No: PL44921/2443

Drawing No: 27642020

Rev: A1

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:	2.2:1 MAX @ 50 Ω	1.78:1 MAX	
3	Input Power:	(1) 1 W CW, Max. (2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%, Max.	Pass	
4	VIDEO OUT TSS	-71 dBm MAX	-71 dBm	
5	VIDEO OUT Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	
6	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	71.7/67.5 mv/db	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	.80/- .77 db	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	1.50/-1.53 db	
9	VIDEO OUT Absolute Log Accuracy:	±2.9 dB MAX Over Freq & temp	1.79/-1.81 db	
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	35 mV	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	24.8 ns	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	126.3 ns	
13	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value @-10 dBm	40ns	

7311-F Grove Road Frederick, MD 21704 USA

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14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	600 ns	PMI QA3
15	VIDEO OUT Video Frequency Flatness:	±2.0 dB MAX @25C	±1.51 dB MAX @25C	
16	VIDEO OUT CW Immunity:	CW Immune Power TSS to -40 dBm	Pass	
		Pulse Peak Amplitude Loss; 2 dB MAX @ -40dBm CW	<2dB	
		Baseline shift 200mV @-40dBm CW	< 200mV	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	2.0 ms	
		CW Recovery Time at CW = -40 dBm, ≤ 20 us	<20 us	
17	Pulse droop	1dB Max for 300us pulse at or above -65dBm	<1dB	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	100 ns to 300 us	
19	VIDEO LOAD Impedance:	75 ±1 Ω	75Ω	
20	VIDEO driver capability	100 ft RG11 into 75 ohm load	Pass	
21	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	
22	VIDEO OUT Noise Level (Vp-p):	160 mV max	126 mV	



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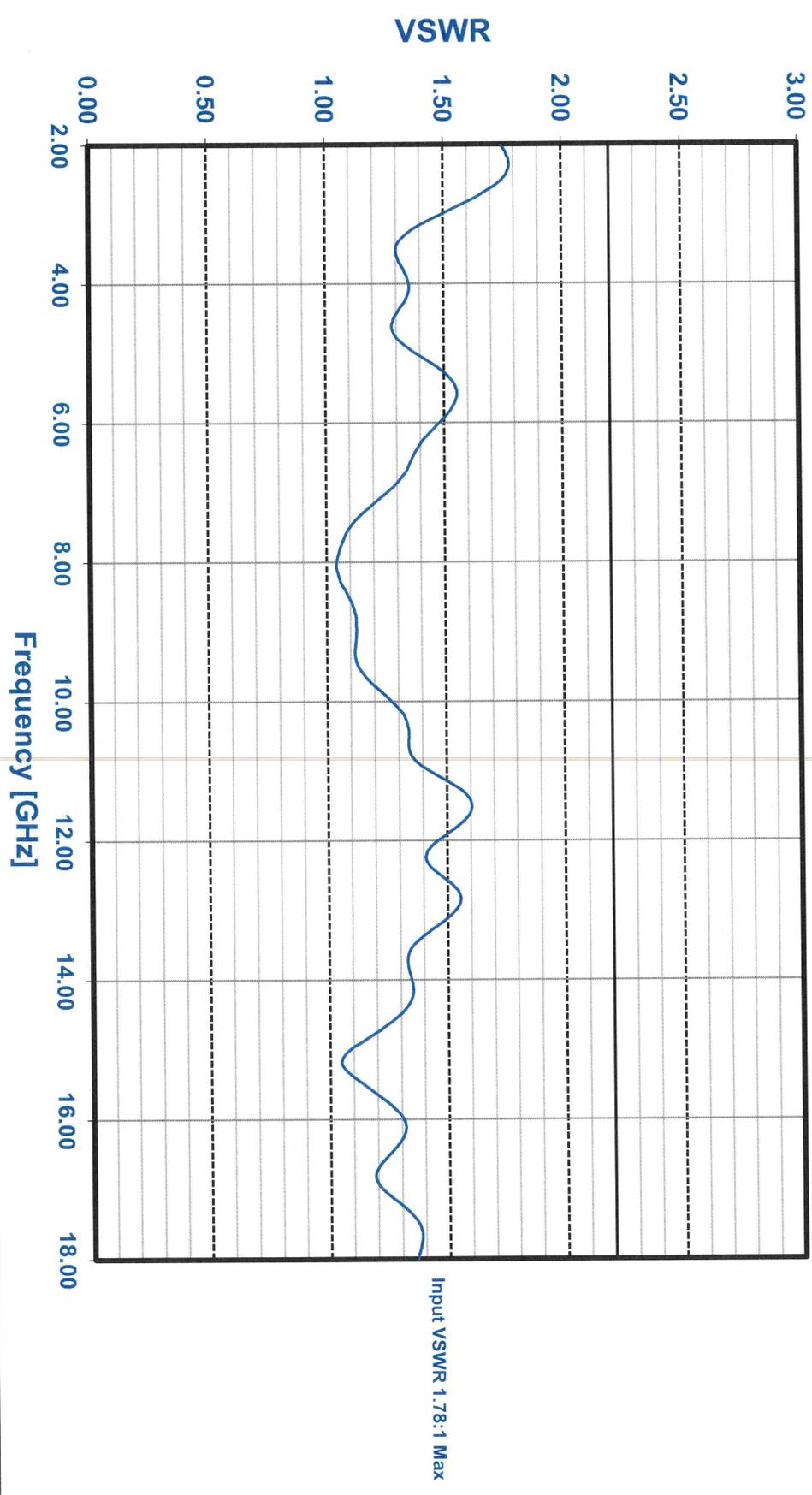
23	VIDEO OUT Propagation Delay:	50 ns MAX from RF 50% to 10% video (excluding cable)	< 50 ns	PMI QA3
24	Power Supply	+15 V @ 500 mA MAX -15 V @ 100 mA MAX	+15 V @ 310 mA 15 V @ 80 mA	
25	Power Supply Ripple From DC to 10 MHz	100 mV MAX	Pass	

QA/QC Approval: K. Klamm Date: 10-23-24

Model Number: ERDLVA-2G18G-65-70MV-70C
Serial Number: PL44921
Date: 10/18/2024

Temperature: +25C

VSWR GRAPH



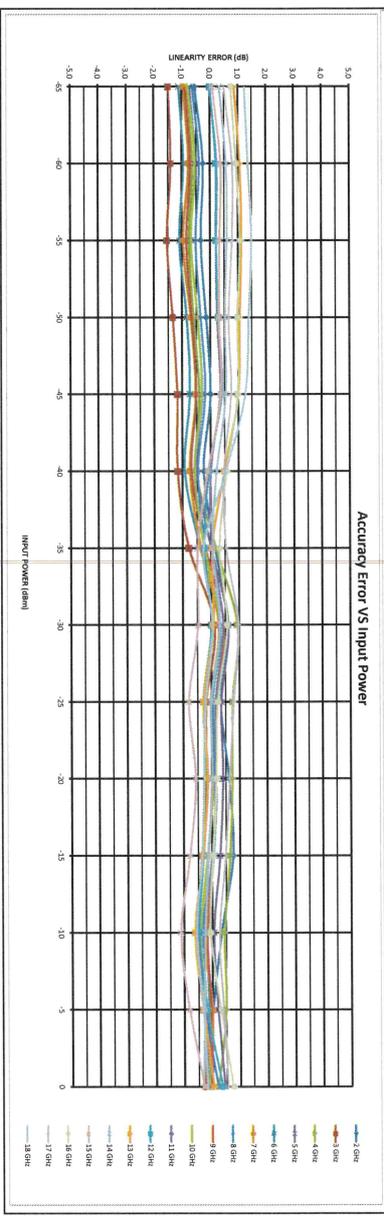
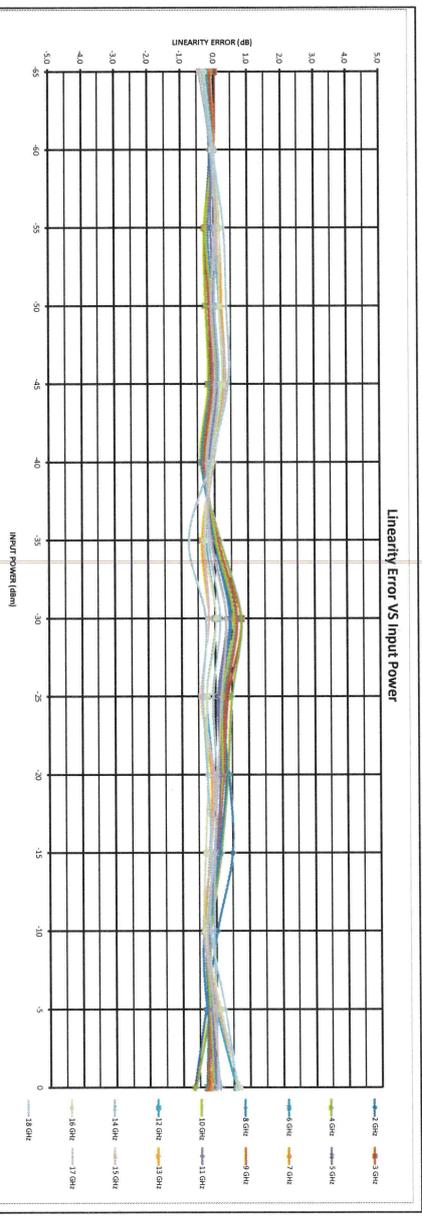


Frequency

Frequency	2 GHz	3 GHz	4 GHz	5 GHz	6 GHz	7 GHz	8 GHz	9 GHz	10 GHz	11 GHz	12 GHz	13 GHz	14 GHz	15 GHz	16 GHz	17 GHz	18 GHz
Intercept (mV)	4938	4912	4971	4949	4928	4921	4917	4927	4909	4901	4896	4870	4886	4886	4820	4844	4856
Slope (mV/DB)	70.62	71.86	71.70	71.28	71.36	71.08	70.55	71.08	70.54	69.46	69.53	69.54	68.84	68.53	68.95	69.51	67.51
RF Input Power (dBm)	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15
Measured Value (mV)	322	693	1037	1400	1761	2093	2471	2854	3185	3556	3916	4235	4563	4892	5231	5570	5909
Linearity Error (dB)	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46
Accuracy Error (dB)	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Measured Value (mV)	256	613	953	1318	1679	2023	2406	2819	3148	3498	3836	4177	4541	4935	5329	5723	6117
Linearity Error (dB)	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
Accuracy Error (dB)	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
Measured Value (mV)	309	673	1013	1379	1740	2076	2461	2854	3186	3540	3922	4216	4576	4963	5350	5737	6124
Linearity Error (dB)	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7
Accuracy Error (dB)	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Measured Value (mV)	283	646	986	1353	1710	2047	2434	2834	3164	3524	3886	4199	4554	4907	5260	5613	5966
Linearity Error (dB)	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
Accuracy Error (dB)	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Measured Value (mV)	294	657	994	1362	1724	2059	2436	2830	3169	3545	3952	4194	4562	4908	5273	5638	5993
Linearity Error (dB)	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7
Accuracy Error (dB)	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Measured Value (mV)	316	683	1024	1367	1748	2079	2447	2832	3161	3513	3851	4183	4544	4903	5262	5621	5980
Linearity Error (dB)	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15
Accuracy Error (dB)	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Measured Value (mV)	299	691	1002	1364	1726	2095	2447	2843	3173	3524	3864	4199	4558	4910	5262	5614	5966
Linearity Error (dB)	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8
Accuracy Error (dB)	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Measured Value (mV)	306	673	1013	1379	1739	2071	2444	2833	3161	3513	3851	4183	4544	4903	5262	5621	5980
Linearity Error (dB)	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19
Accuracy Error (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Measured Value (mV)	398	727	1075	1438	1798	2166	2464	2844	3171	3523	3862	4192	4536	4890	5240	5589	5938
Linearity Error (dB)	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
Accuracy Error (dB)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Measured Value (mV)	360	726	1075	1431	1789	2156	2445	2812	3141	3500	3841	4179	4549	4937	5315	5693	6071
Linearity Error (dB)	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16
Accuracy Error (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Measured Value (mV)	424	786	1140	1485	1831	2166	2484	2817	3142	3502	3839	4169	4539	4915	5285	5655	6031
Linearity Error (dB)	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39
Accuracy Error (dB)	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Measured Value (mV)	383	751	1103	1447	1800	2126	2465	2833	3161	3512	3853	4194	4543	4899	5248	5597	5946
Linearity Error (dB)	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29
Accuracy Error (dB)	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Measured Value (mV)	366	737	1084	1433	1787	2104	2427	2778	3105	3471	3807	4134	4505	4891	5267	5643	6019
Linearity Error (dB)	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40
Accuracy Error (dB)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Measured Value (mV)	413	776	1135	1478	1830	2152	2483	2831	3177	3524	3864	4207	4554	4905	5252	5600	5947
Linearity Error (dB)	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19
Accuracy Error (dB)	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Measured Value (mV)	396	766	1116	1457	1813	2144	2489	2879	3247	3557	3896	4230	4590	4951	5311	5671	6031
Linearity Error (dB)	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23
Accuracy Error (dB)	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Measured Value (mV)	447	806	1165	1508	1848	2150	2443	2815	3146	3492	3837	4172	4539	4891	5248	5605	5962
Linearity Error (dB)	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33
Accuracy Error (dB)	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Max Measured (mV)	447	806	1165	1508	1848	2152	2489	2879	3217	3564	3915	4243	4597	4965	5315	5666	6016
Min Measured (mV)	256	613	953	1318	1679	2022	2406	2819	3105	3471	3807	4134	4505	4899	5267	5643	6019
Avg Slope (mV/DB)	70.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0
Max Slope (mV/DB)	71.7	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
Min Slope (mV/DB)	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5

Output Volt: 35.0 mV

PL44921
+ 250c





Frequency

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

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
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2 GHz Intercept (mV) 4899
Slope (mV/dB) 71.08

294	648	983	1346	1703	2035	2415	2817	3153	3525	3887	4199	4532	4856
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
1.12 Accuracy Error (dB)

3 GHz Intercept (mV) 4888
Slope (mV/dB) 72.26

235	569	904	1264	1618	1981	2342	2778	3117	3468	3808	4146	4515	4871
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
1.33 Accuracy Error (dB)

4 GHz Intercept (mV) 4837
Slope (mV/dB) 72.17

272	618	952	1311	1667	2011	2408	2838	3177	3529	3875	4202	4582	4890
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
1.19 Accuracy Error (dB)

5 GHz Intercept (mV) 4914
Slope (mV/dB) 71.63

278	628	960	1327	1682	2016	2400	2812	3148	3504	3849	4177	4541	4904
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.82 Accuracy Error (dB)

6 GHz Intercept (mV) 4889
Slope (mV/dB) 71.79

253	595	928	1292	1645	1981	2366	2785	3122	3485	3828	4158	4513	4866
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
1.00 Accuracy Error (dB)

7 GHz Intercept (mV) 4880
Slope (mV/dB) 71.28

269	614	951	1309	1665	1999	2372	2783	3118	3476	3813	4150	4521	4885
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.75 Accuracy Error (dB)

8 GHz Intercept (mV) 4876
Slope (mV/dB) 70.70

292	644	980	1337	1696	2028	2387	2787	3120	3479	3825	4143	4506	4885
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.46 Accuracy Error (dB)

9 GHz Intercept (mV) 4891
Slope (mV/dB) 71.20

269	619	952	1312	1670	2004	2381	2783	3127	3479	3823	4153	4514	4882
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.67 Accuracy Error (dB)

10 GHz Intercept (mV) 4855
Slope (mV/dB) 70.65

277	626	959	1319	1674	2004	2371	2773	3107	3461	3799	4129	4494	4851
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.62 Accuracy Error (dB)

11 GHz Intercept (mV) 4840
Slope (mV/dB) 69.26

334	681	1029	1376	1732	2051	2386	2753	3116	3470	3807	4131	4487	4846
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.29 Accuracy Error (dB)

12 GHz Intercept (mV) 4847
Slope (mV/dB) 69.54

333	690	1029	1379	1734	2045	2385	2757	3103	3464	3796	4131	4504	4888
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.30 Accuracy Error (dB)

13 GHz Intercept (mV) 4810
Slope (mV/dB) 68.26

370	725	1068	1411	1758	2066	2386	2747	3090	3441	3779	4108	4479	4854
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.65 Accuracy Error (dB)

14 GHz Intercept (mV) 4824
Slope (mV/dB) 68.72

346	710	1045	1390	1742	2061	2398	2770	3101	3464	3796	4132	4480	4833
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.91 Accuracy Error (dB)

15 GHz Intercept (mV) 4785
Slope (mV/dB) 68.61

322	665	1018	1369	1721	2030	2354	2706	3045	3411	3747	4076	4449	4836
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.77 Accuracy Error (dB)

16 GHz Intercept (mV) 4867
Slope (mV/dB) 69.34

358	718	1062	1405	1759	2072	2412	2794	3125	3478	3823	4159	4535	4885
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
1.02 Accuracy Error (dB)

17 GHz Intercept (mV) 4889
Slope (mV/dB) 70.61

296	648	982	1334	1686	2017	2373	2784	3125	3474	3815	4142	4508	4872
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Measured Value (mV)
Error (mV)
Linearity Error (dB)
0.40 Accuracy Error (dB)

18 GHz Intercept (mV) 4766
Slope (mV/dB) 67.37

380	739	1081	1422	1765	2087	2346	2733	3085	3409	3754	4084	4451	4811
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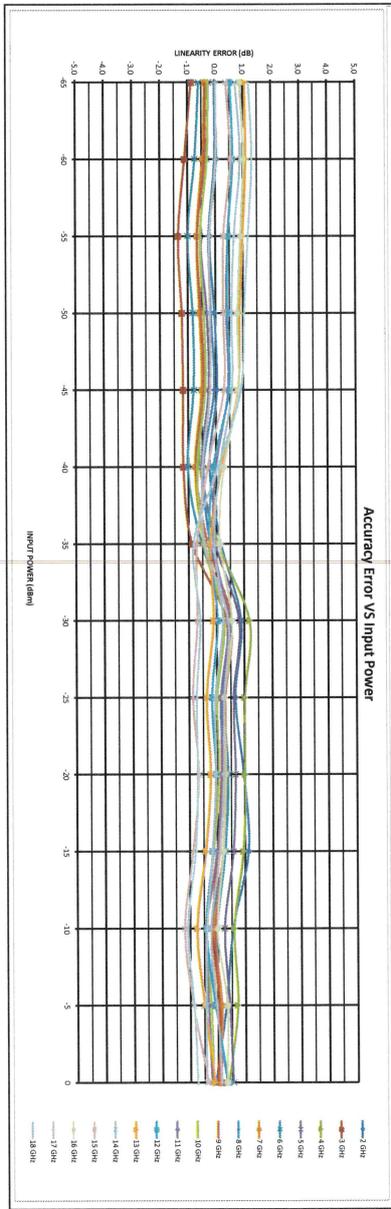
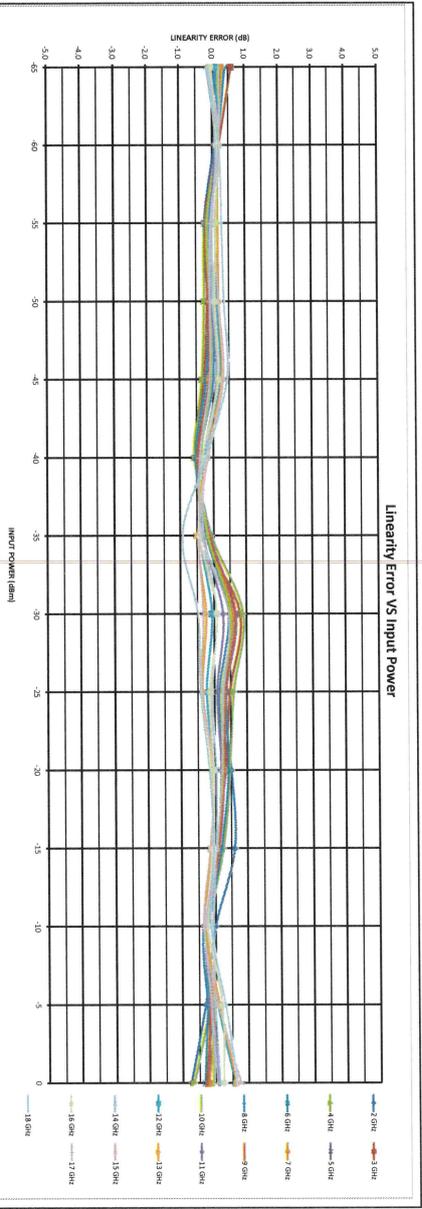
Measured Value (mV)
Error (mV)
Linearity Error (dB)
1.32 Accuracy Error (dB)

Output Voss: 46.0 mV
 Avg Slope: 70.3 mV/dB
 Max Slope: 72.3 mV/dB
 Min Slope: 67.4 mV/dB

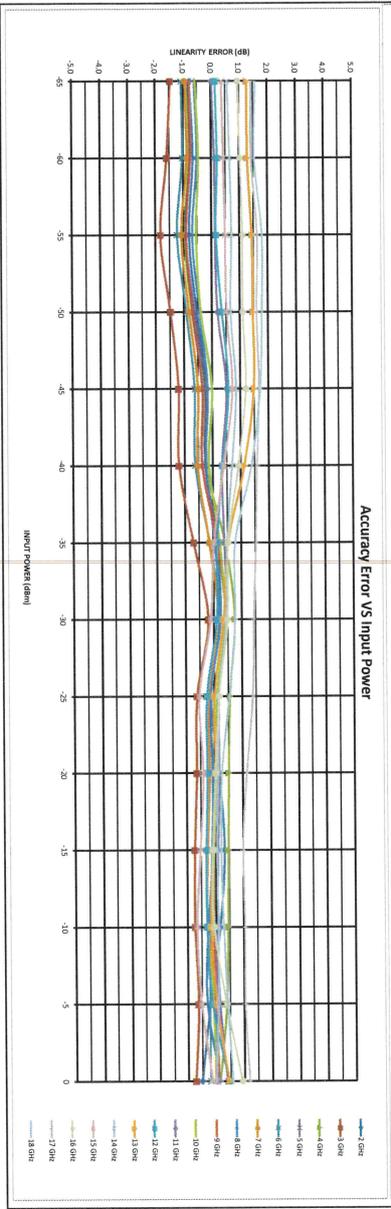
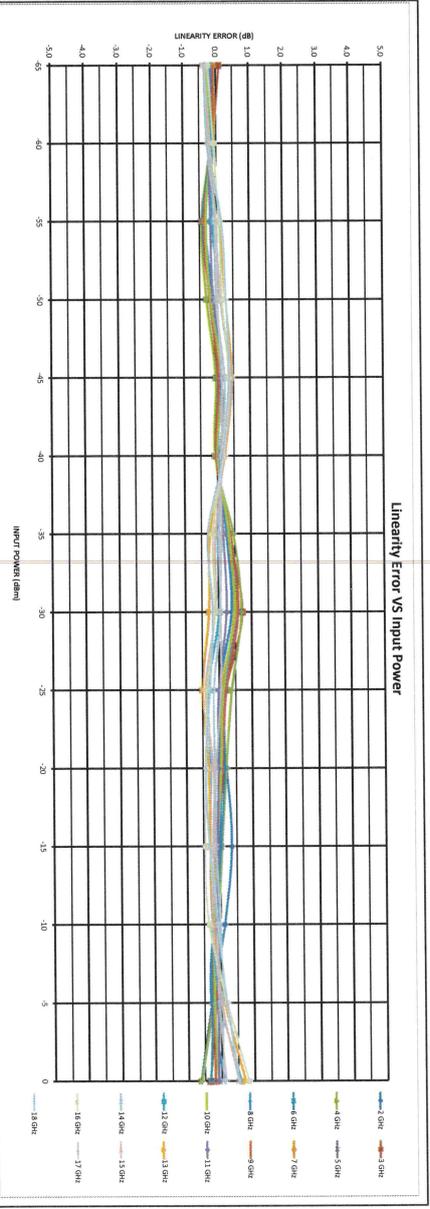
380	739	1081	1422	1765	2072	2415	2838	3177	3529	3875	4202	4582	4901
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Min Measured (mV)
 Max Measured (mV)
 Min Slope (mV/dB)
 Max Slope (mV/dB)

PL44921
+ 70°C



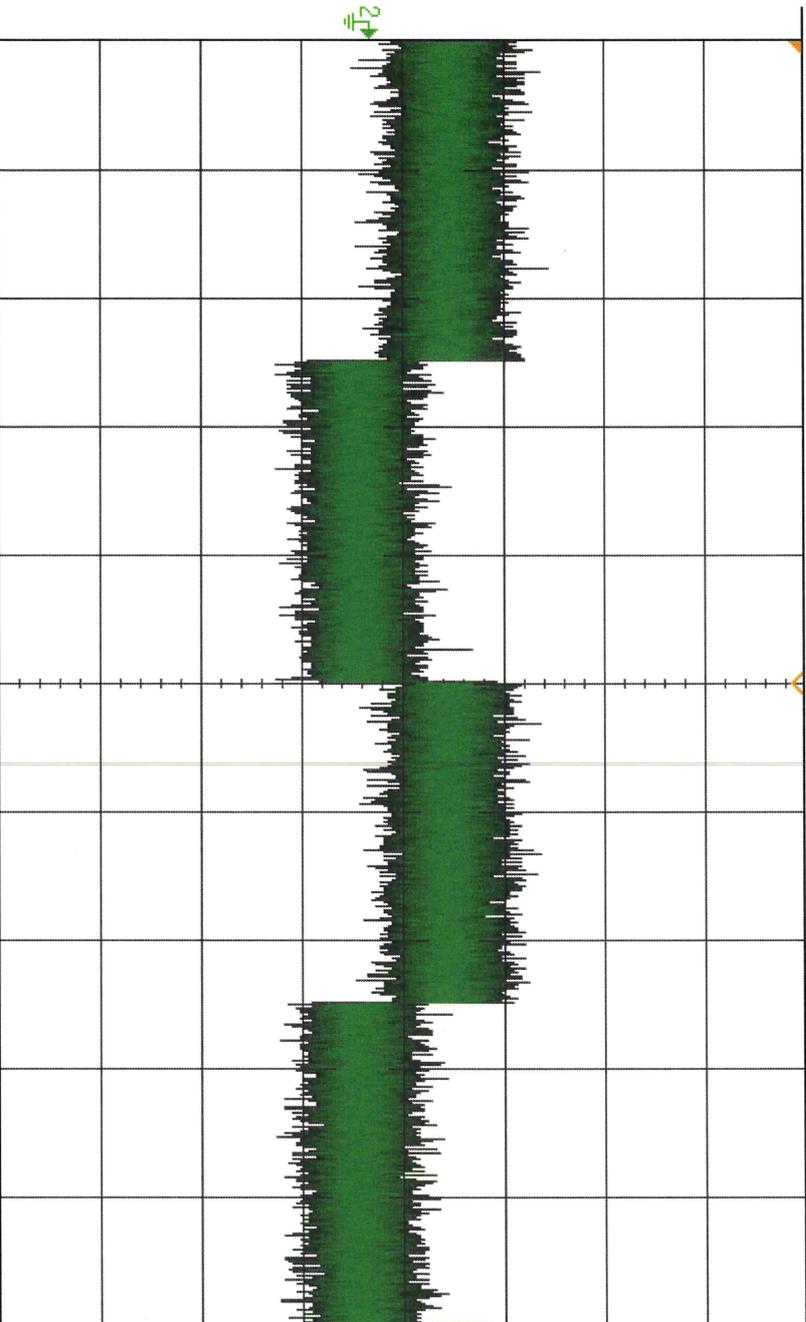
PL44921
-40°C



PL44921
TSS - 7/dbm

DSO-X 3034A, MY52394003: Tue Oct 15 13:31:19 2024

1 2 100% / 3 4 2.000µs 20.00µs / Auto f E 2.57V



Acquisition	:	:
Normal	:	:
4.00GSa/s	:	:
Channels	:	:
DC	1.00:1	:

Save to file = pl44921_tss_71

Save

Recall

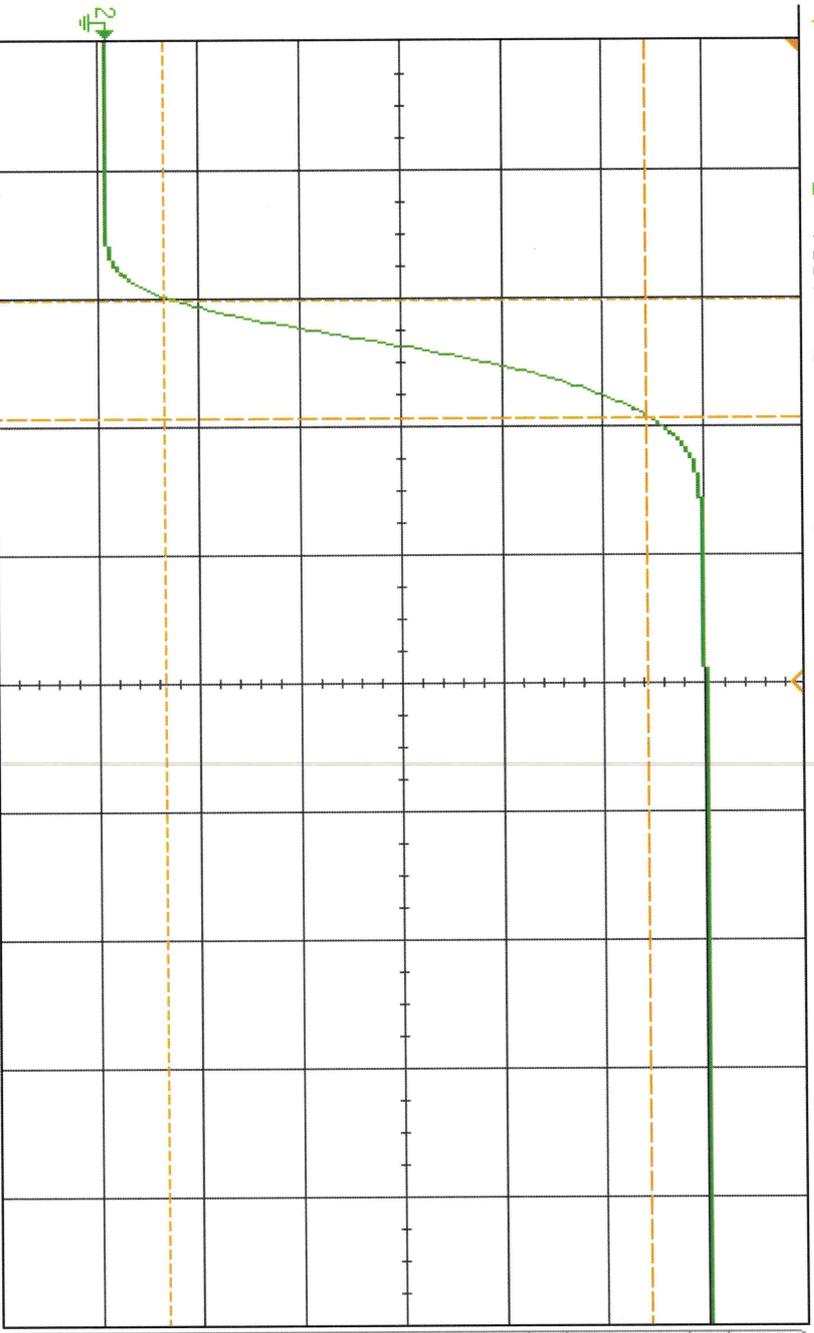
Default/Erase

Press to Save

PL44921
Settle

DSO-X 3034A, MW52394003, Tue Oct 15 13:35:42 2024

1 2 700ns / 3 4 2.000ns 20.00ns / Auto f E 2.57V



Save to file = pl44921_settle

Save

Recall

Default/Erase

Acquisition	:	:
Averaging: 32	:	:
4.00GSa/s	:	:
Channels	:	:
DC	:	1.00:1
Measurements	:	:
Fall(2):	:	No edges
AC RMS - FS(2):	:	1.6945V
Rise(2):	:	18.3ns

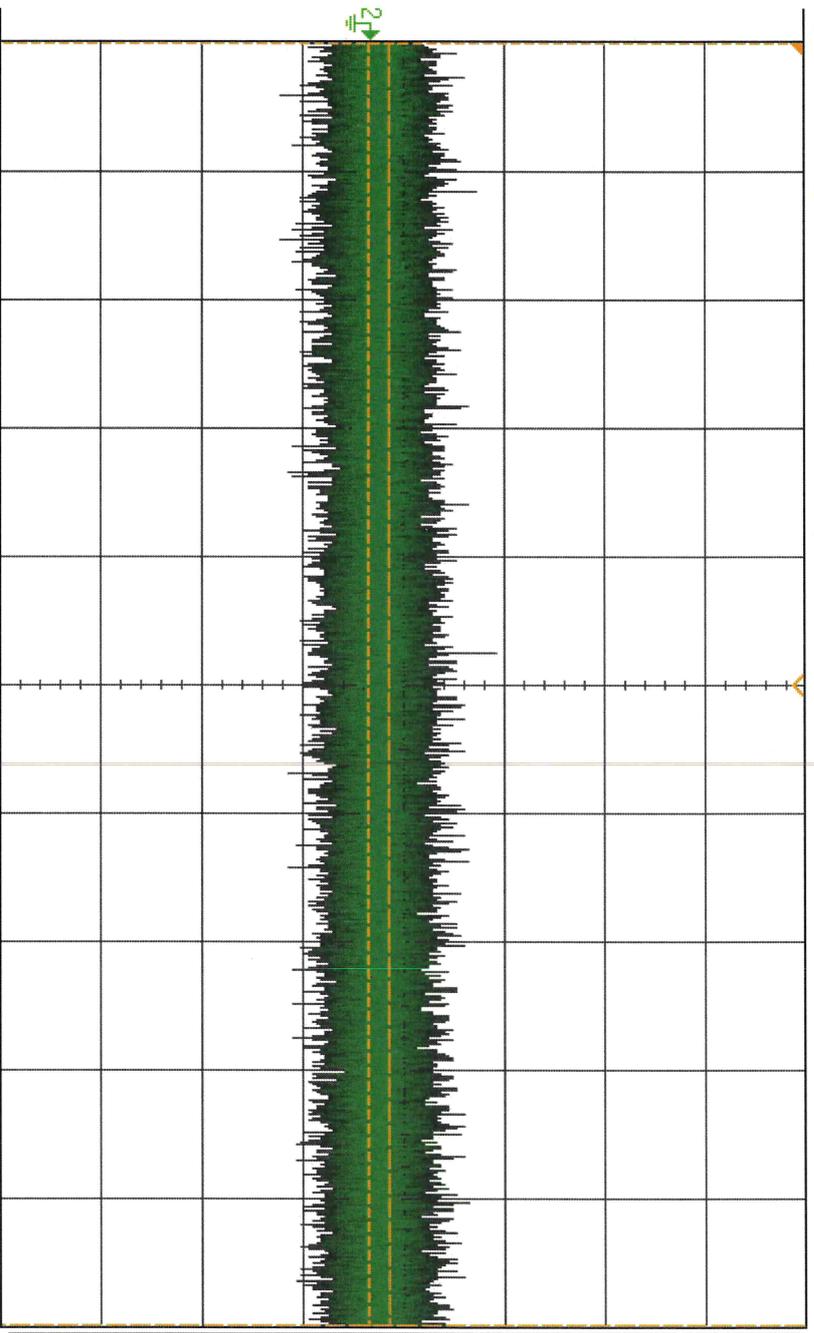
Press to Save

PL44921
RMS noise

DSO-X 3034A, MW52394003: Tue Oct 15 13:32:14 2024

1 2 100% / 3 4

2.000ms 20.00%/ Auto f E 2.57V



Acquisition	Normal
Channels	4.00GSa/s
DC	1.00:1
Measurements	
Fall(2):	29ns
Rise(2):	13ns
AC RMS - FS(2):	21.04mV

Measurement Menu

Source 2

Type: AC RMS - FS

Add Measurement

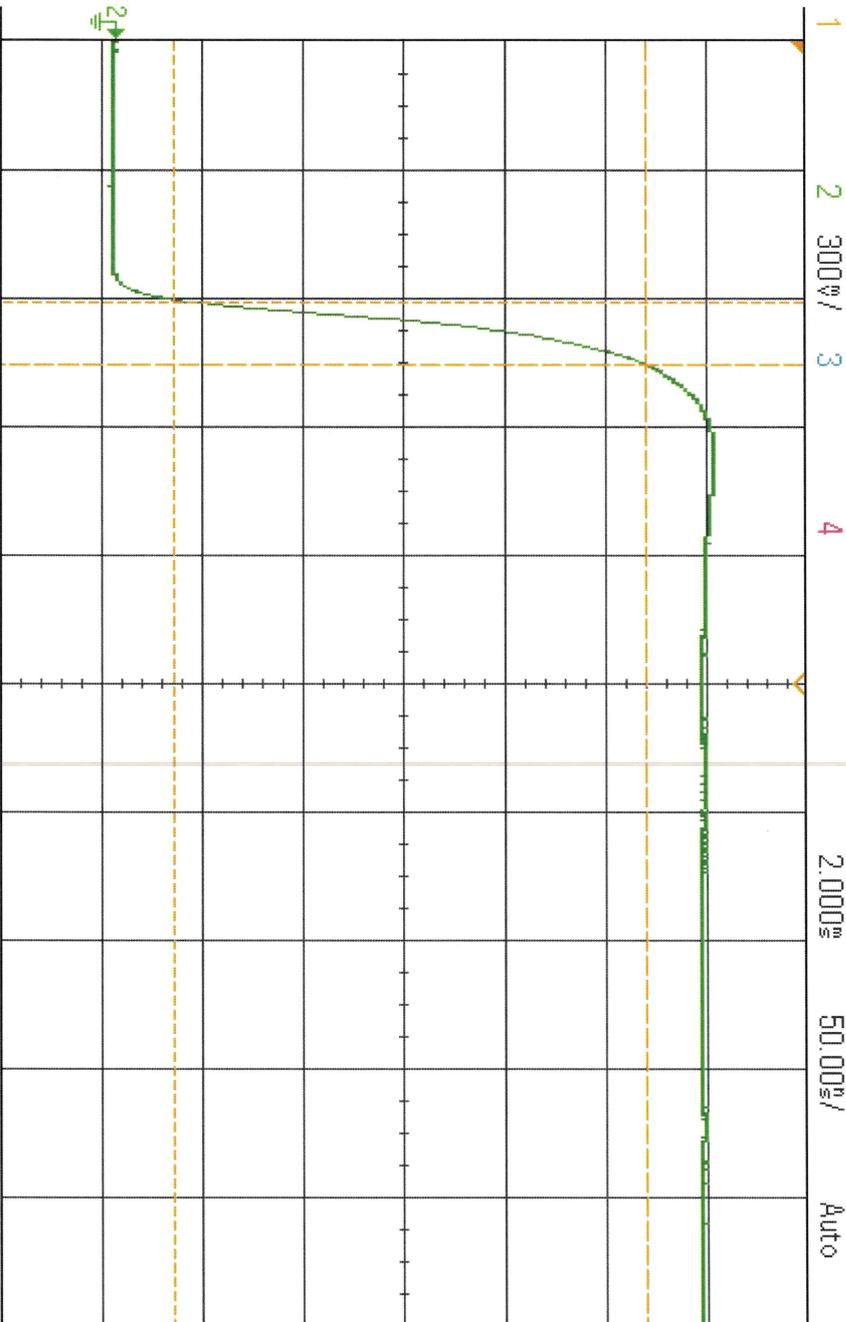
Settings

Clear Meas

Statistics

PL44921
 Rise Time - 45dbm

DSO-X 3034A, MW52394003: Tue Oct 15 13:34:35 2024



f E 2.57V



Acquisition
 Averaging: 32
 4.00GSa/s

Channels

DC 1.00:1
 DC 1.00:1
 DC 1.00:1
 DC 1.00:1

Measurements

Fall(2): No edges
 AC RMS - FS(2): 711.33mV
 Rise(2): 24.8ns

Measurement Menu

Source 2

Type: Rise

Add Measurement

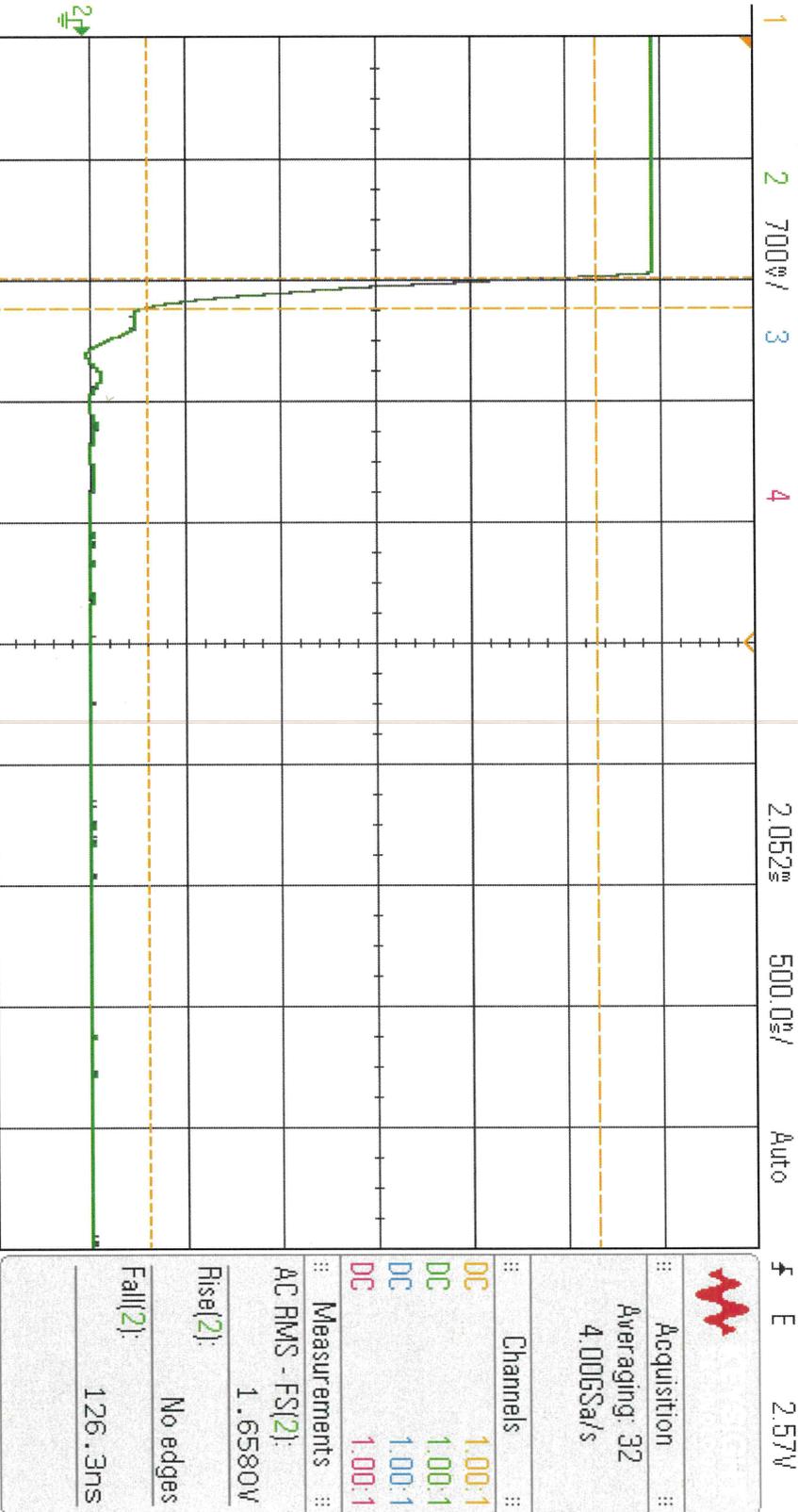
Settings

Clear Meas

Statistics

PL 44921
RECOVERY Fall

DSO-X 3034A, MY52394003, Tue Oct 15 14:09:20 2024



Measurement Menu

Source 2

Type: Fall

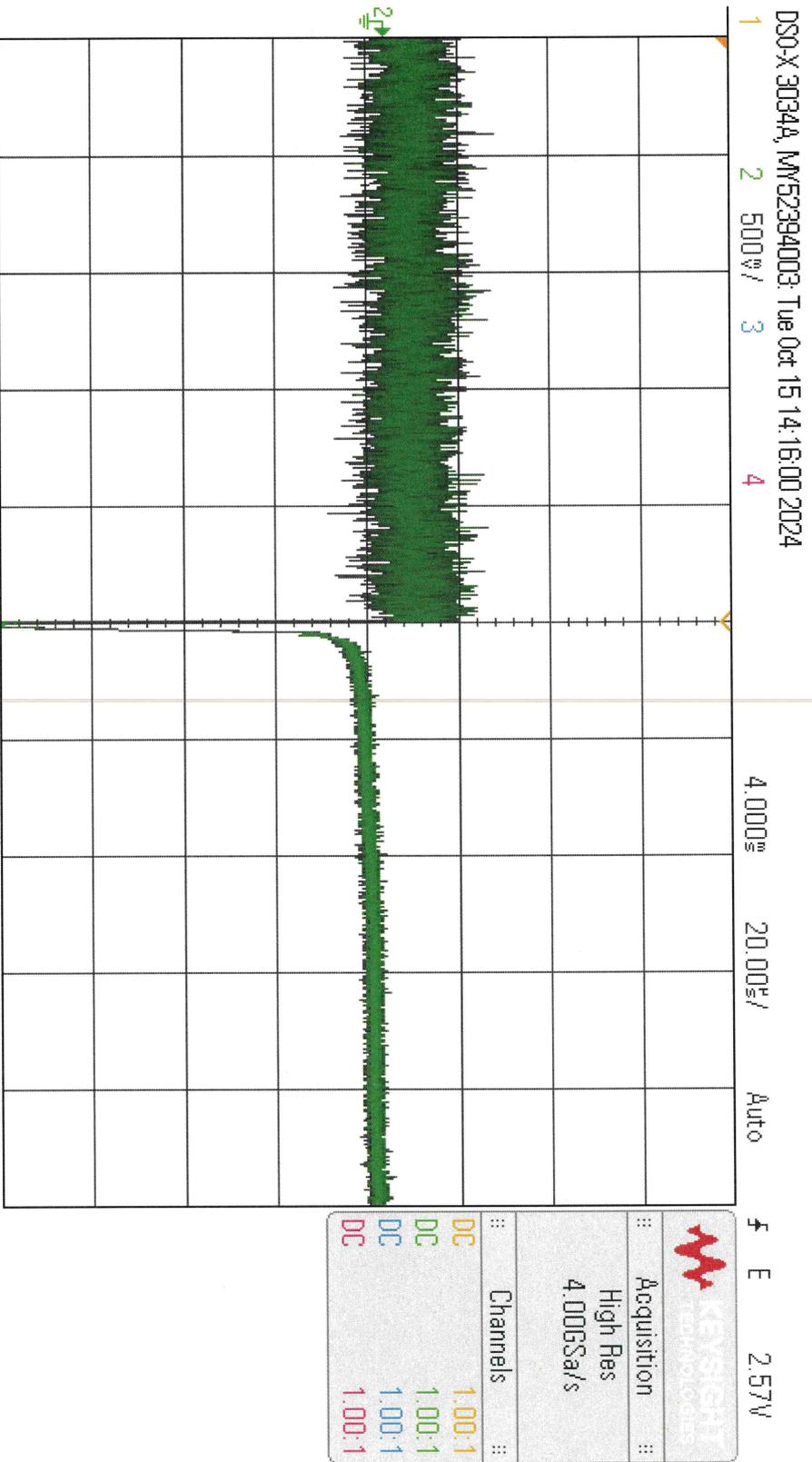
Add Measurement

Settings

Clear Meas

Statistics

PL 44921
CW Recovery

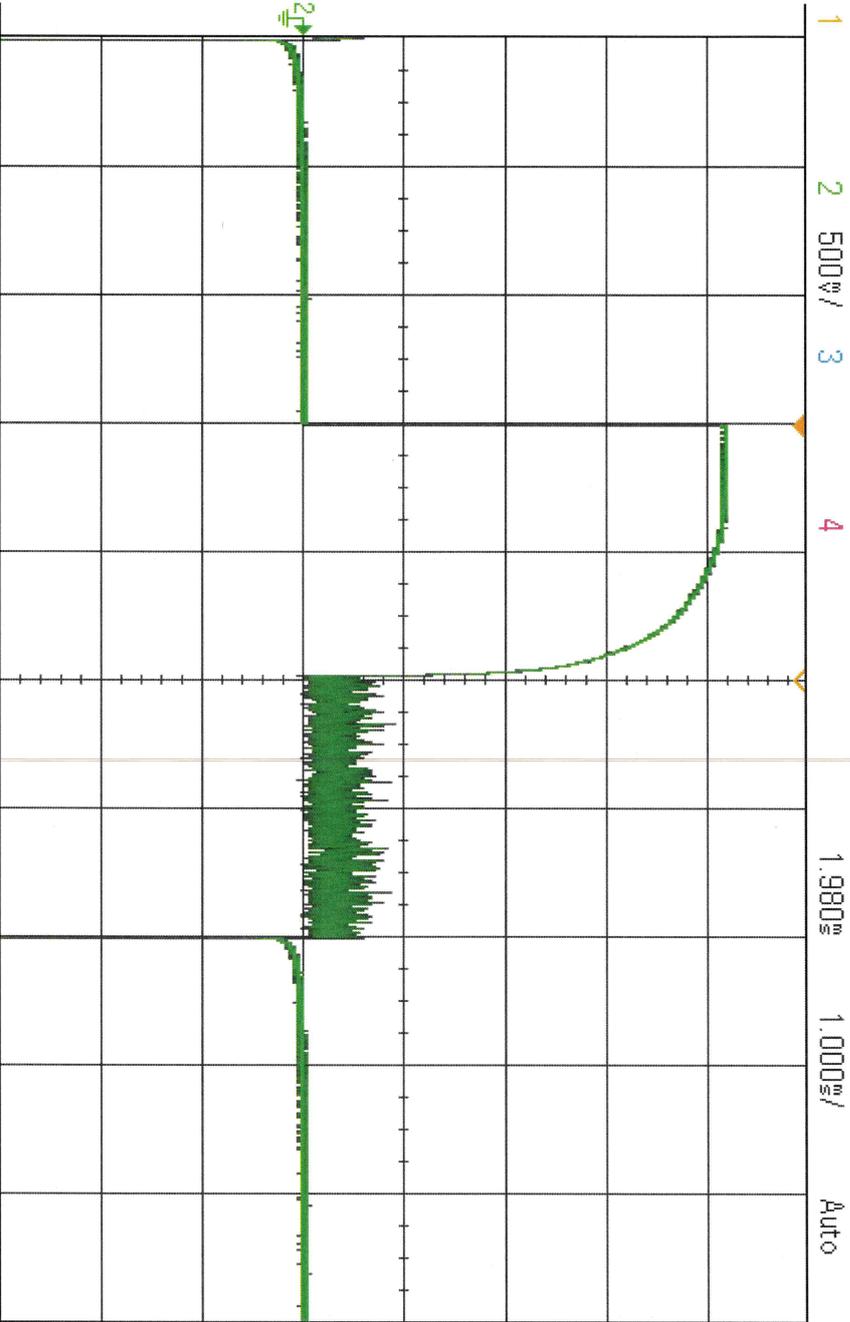


Cursors Menu
Mode Off

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

PL44921
Cov Recovery

DSO-X 3034A, MY52394003: Tue Oct 15 14:21:46 2024



1.980µs

1.000µs/div

Auto

f E 2.57V

KEYSIGHT
TECHNOLOGIES

Acquisition High Res
100MSa/s

Channels	
DC	1.00:1

Cursors Menu

Mode
Off

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