



**Summary Data**  
**For**  
**ERDLVA-2G18G-65-70MV-85C**

Customer: \_\_\_\_\_  
 SO No: \_\_\_\_\_  
 Model No: ERDLVA-2G18G-65-70MV-85C  
 Serial No: PL45184/2418-Demo

Tested By: Jim Hopson  
 Temperature: +25°C  
 Date 4/30/2024  
 Drawing No: 27642020      Rev: B1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 18 GHz	<b>2 to 18 GHz</b>	
2	VSWR:	2.2:1 MAX @ 50 Ω	<b>1.88:1 MAX</b>	
3	Input Power:	(1) 1 W CW, Max. (2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%, Max.	<b>Pass</b>	
4	VIDEO OUT TSS:	-71 dBm MAX	<b>-71 dBm</b>	
5	VIDEO OUT Dynamic Range:	-65 to 0 dBm	<b>-65 to 0 dBm</b>	
6	VIDEO OUT Log Slope Fixed:	70 ± 3mV/dB	<b>70 mV/dB TYP</b>	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C	<b>.44/- .42 dB MAX @25C</b>	
8	VIDEO OUT Log Accuracy:	±2.3 dB MAX @25C	<b>1.06/-1.07 dB MAX @25C</b>	
9	VIDEO OUT Absolute Log Accuracy:	±2.6 dB MAX Over Freq & temp		
10	VIDEO OUT DC Offset:	0 ±70 mV (RF Input Terminated & DC Power On) @25C	<b>40 mV</b>	
11	VIDEO OUT Rise Time (10% to 90%):	28 ns MAX	<b>42 ns</b>	
12	VIDEO OUT Fall Time (90% to 10%):	300 ns MAX	<b>179.1 ns</b>	
13	VIDEO OUT Settling Time:	50 ns With in ±70 mV of final value @-10 dBm	<b>&lt; 50 ns</b>	



**Summary Data  
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14	VIDEO OUT Recovery Time:	1 us MAX to within 1 dB of baseline for PW <10us & Power = -10dBm	< 1us	
15	VIDEO OUT Video Frequency Flatness:	±2.0 dB MAX @25C	± .95 @25C	
16	VIDEO OUT CW Immunity:	CW Immune Power TSS to -40 dBm	Pass	
		Pulse Peak Amplitude Loss; 2 dB MAX @ -40dBm CW	< 2.0dB	
		Baseline shift 200mV @-40dBm CW	< 200 mv	
		CW Immunity Time at CW = -40 dBm, ≤ 4 ms	1.5ms	
		CW Recovery Time at CW = -40 dBm, ≤ 20 us	< 20us	
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	< 1dB	



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21	VIDEO OUT Noise Level (Vp-p):	160 mV max	152.4 mV	
22	VIDEO OUT Propagation Delay:	50 ns MAX from RF 50% to 10% video (excluding cable)	< 50ns	
23	Power Supply	+15 V @ 500 mA MAX -15 V @ 100 mA MAX	+15 V @ 310 mA -15 V @ 80 mA	
24	Power Supply Ripple From DC to 10 MHz	100 mV MAX	Pass	

QA/QC Approval: \_\_\_\_\_ Date: \_\_\_\_\_

LOG TRANSFER WITH FREQUENCY

TESTED BY: Jim Hopson  
 MODEL: ERDLVA-2G18G-6S-70MW-85C  
 SERIAL NO: PL45184  
 DATE: 4-30-24

Test Temp: +25°C

PLANAR MONOLITHICS INDUSTRIES  
 4921 Robert J. Matthews 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
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2000 MHz INTERCEPT (mV) 4932.8  
 SLOPE (mV/dB) 70.34

344	721	1061	1419	1774	2097	2472	2836	3177	3537	3908	4236	4570	4903
-17	9	-3	3	6	-22	1	13	3	11	30	7	-11	-30
-0.24	0.12	-0.04	0.04	0.09	-0.32	0.02	0.19	0.04	0.16	0.43	0.09	-0.16	-0.42
-0.30	0.09	-0.06	0.06	0.13	-0.26	0.10	0.30	0.17	0.31	0.61	0.30	0.07	-0.17

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

6000 MHz INTERCEPT (mV) 4965.9  
 SLOPE (mV/dB) 71.207

326	698	1043	1400	1757	2091	2493	2861	3207	3556	3907	4239	4598	4947
-11	5	-6	-6	-5	-27	19	31	21	14	9	-15	-12	-19
-0.16	0.06	-0.09	-0.08	-0.06	-0.37	0.27	0.44	0.30	0.20	0.13	-0.21	-0.17	-0.27
-0.56	-0.24	-0.31	-0.21	-0.11	-0.34	0.40	0.66	0.60	0.59	0.60	0.34	0.47	0.46

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

10000 MHz INTERCEPT (mV) 4914.6  
 SLOPE (mV/dB) 70.907

290	659	1006	1374	1736	2063	2440	2816	3151	3503	3860	4190	4551	4903
-16	-1	-9	5	12	-15	7	29	9	7	9	-16	-9	-12
-0.22	-0.02	-0.12	0.07	0.17	-0.22	0.10	0.40	0.13	0.09	0.13	-0.22	-0.13	-0.16
-1.07	-0.80	-0.84	-0.59	-0.41	-0.74	-0.36	0.01	-0.20	-0.17	-0.07	-0.36	-0.20	-0.17

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

14000 MHz INTERCEPT (mV) 4938.5  
 SLOPE (mV/dB) 69.325

411	787	1139	1484	1828	2147	2506	2859	3206	3554	3905	4241	4594	4935
-21	8	13	12	9	-18	-6	0	1	2	6	-4	2	-3
-0.31	0.12	0.19	0.17	0.13	-0.27	-0.09	0.00	0.01	0.03	0.09	-0.06	0.03	-0.05
0.66	1.03	1.06	0.99	0.90	0.46	0.59	0.63	0.59	0.56	0.57	0.37	0.41	0.29

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

18000 MHz INTERCEPT (mV) 4946.9  
 SLOPE (mV/dB) 70.66

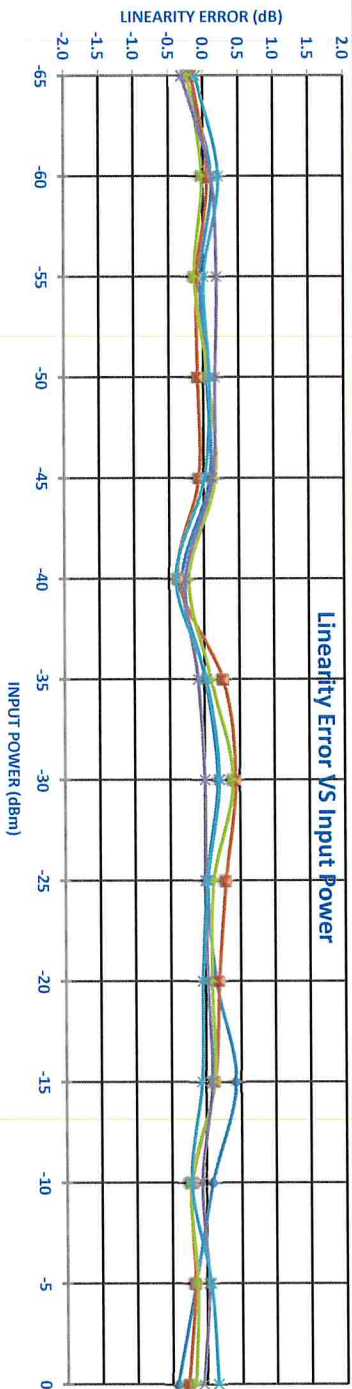
346	723	1061	1420	1768	2092	2476	2842	3183	3531	3883	4225	4598	4958
-8	16	0	6	1	-28	2	15	3	-3	-4	-15	4	11
-0.11	0.22	0.01	0.09	0.01	-0.40	0.03	0.21	0.04	-0.04	-0.06	-0.22	0.06	0.16
-0.27	0.11	-0.06	0.07	0.04	-0.33	0.16	0.39	0.26	0.23	0.26	0.14	0.47	0.61

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

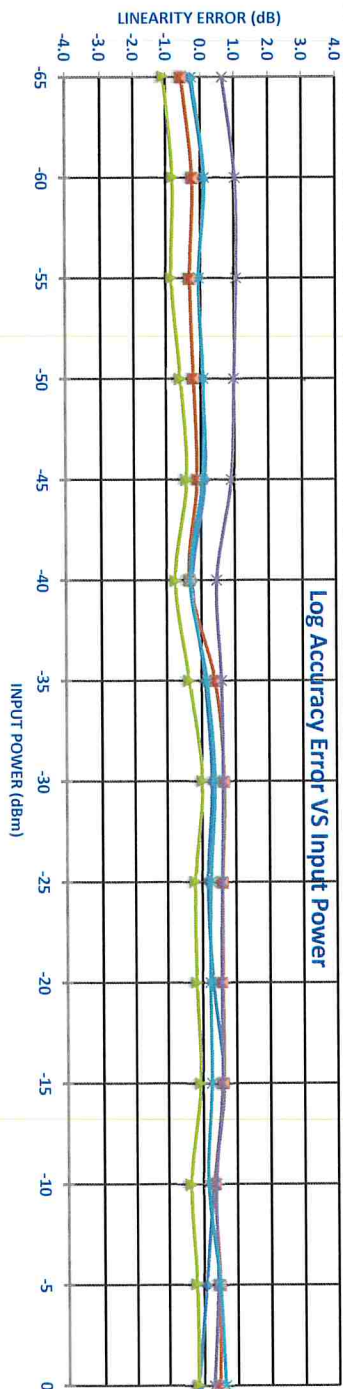
Flatness +/- dB

0.86	0.91	0.95	0.79	0.66	0.60	0.47	0.32	0.40	0.38	0.34	0.36	0.34	0.39
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Linearity Error Vs Input Power

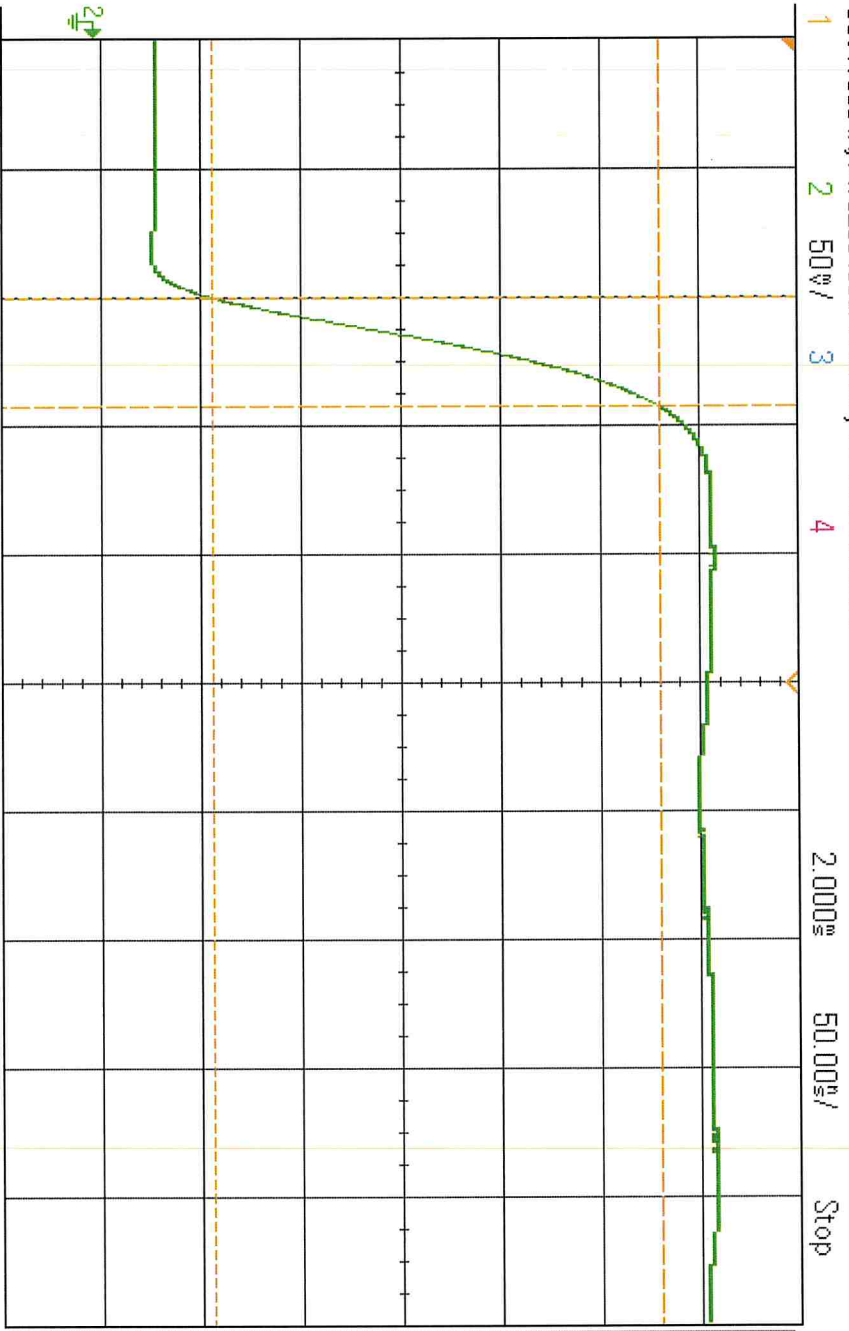


Log Accuracy Error VS Input Power



PL45184  
 Rise Time @ -65dbm

DSO-X 3034A, MW52394003, Wed May 01 11:11:41 2024



F 4 1.60V

**KEYSIGHT**  
 TECHNOLOGIES

Acquisition  
 Averaging: 1024  
 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):  
 112.68mV

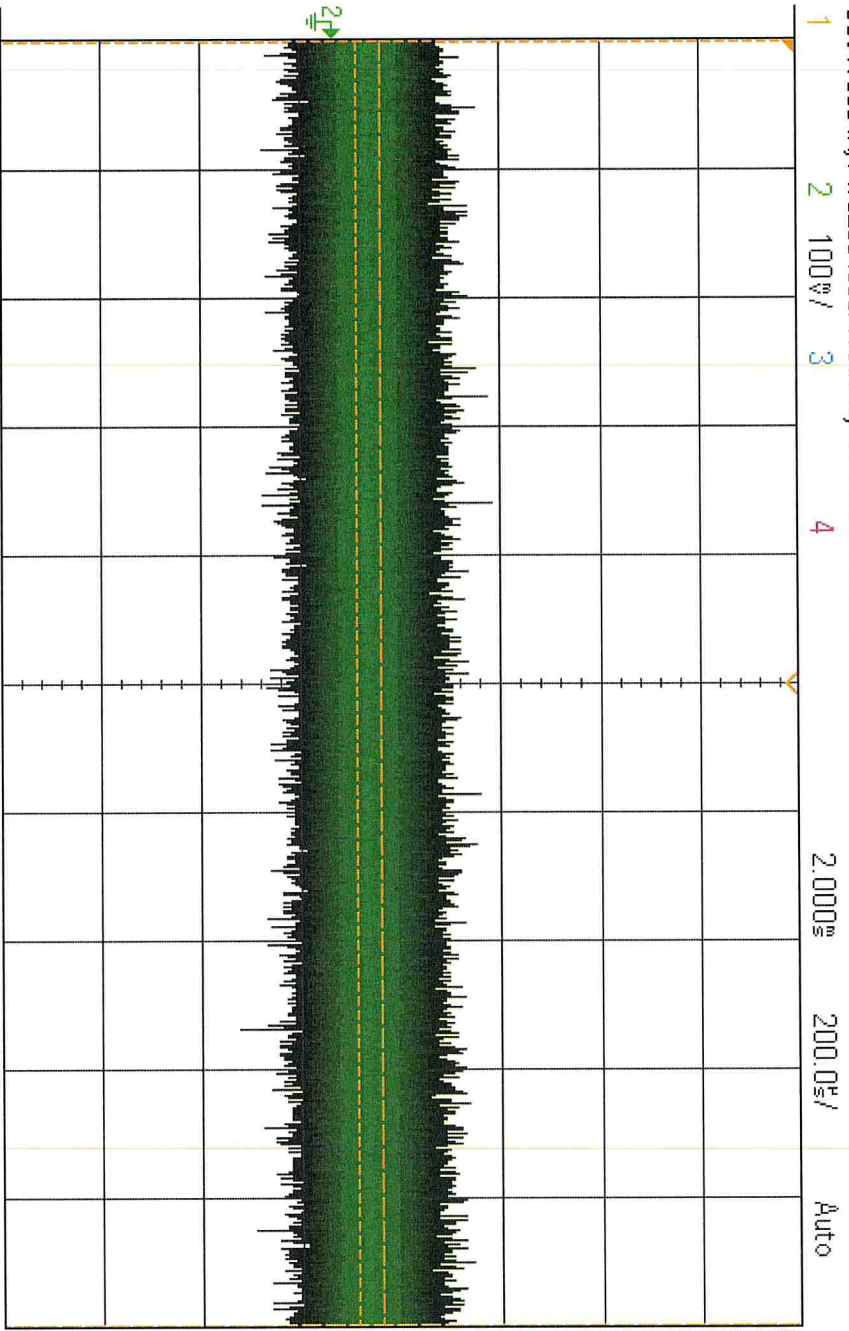
Fall(2):  
 No edges

Rise(2):  
 42.0ns

- Measurement Menu
- Source 2
  - Type: Rise
  - Add Measurement
  - Settings
  - Clear Meas
  - Statistics

PL45184  
RMS noise

DSO-X 3034A, MV52394003: Wed May 01 11:12:47 2024



1 2 100% / 3 4 2.000ns 200.0ns / Auto F 4 1.50V

Measurement Menu

Source 2

Type: AC RMS - FS

Add Measurement

Settings

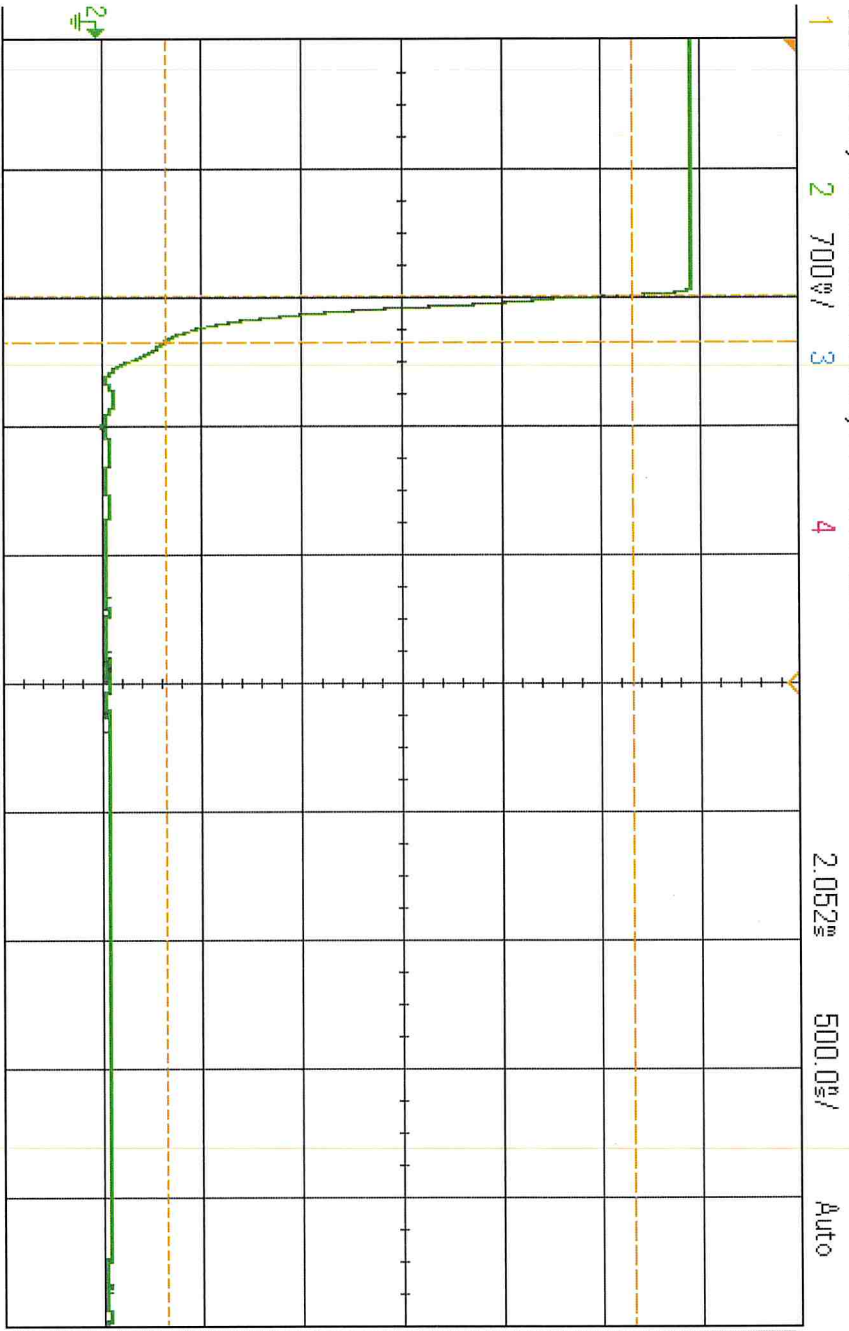
Clear Meas

Statistics

KEYSIGHT TECHNOLOGIES	
Acquisition	Normal
	1.00GSa/s
Channels	
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1
Measurements	
Fall(2):	<93ns
Rise(2):	<93ns
AC RMS - FS(2):	23.10mV

PLH5184  
Recovery/Fall

DSO-X 3034A, MY52394003: Wed May 01 11:15:14 2024



F 4 1.60V

**KEYSIGHT**  
TECHNOLOGIES

Acquisition  
Averaging: 1024  
4.00GSa/s

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

Measurements

AC RMS - FS(2): 1.6472V

Rise(2): No edges

Fall(2): 179.1ns

Measurement Menu

Source 2

Type: Fall

Add Measurement

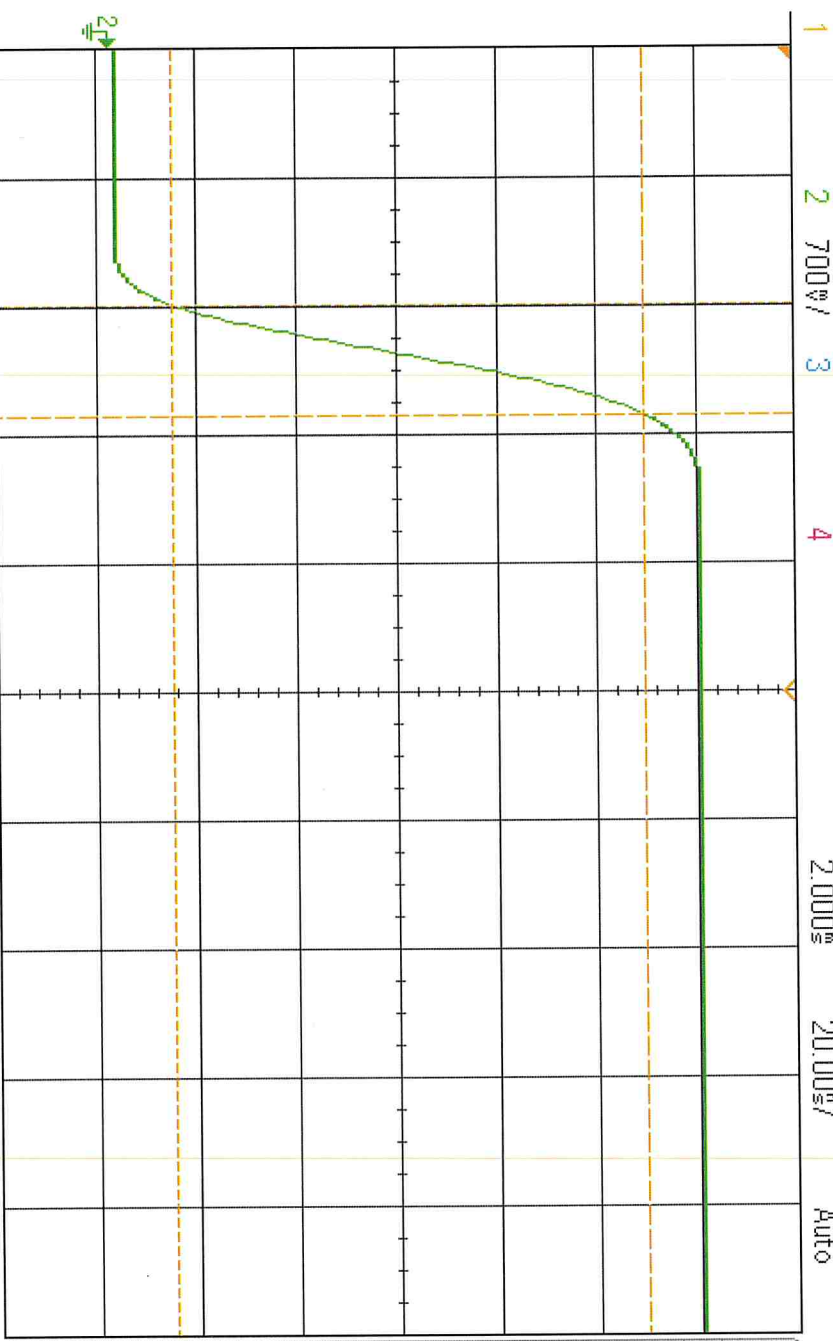
Settings

Clear Meas

Statistics

PL 45184  
settle

DSO-X 3034A, MW52394003, Wed May 01 11:14:05 2024



f 4 1.60V

KEYSIGHT TECHNOLOGIES  
Acquisition  
Averaging: 1024  
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): 1.6674V

Rise(2): 17.3ns

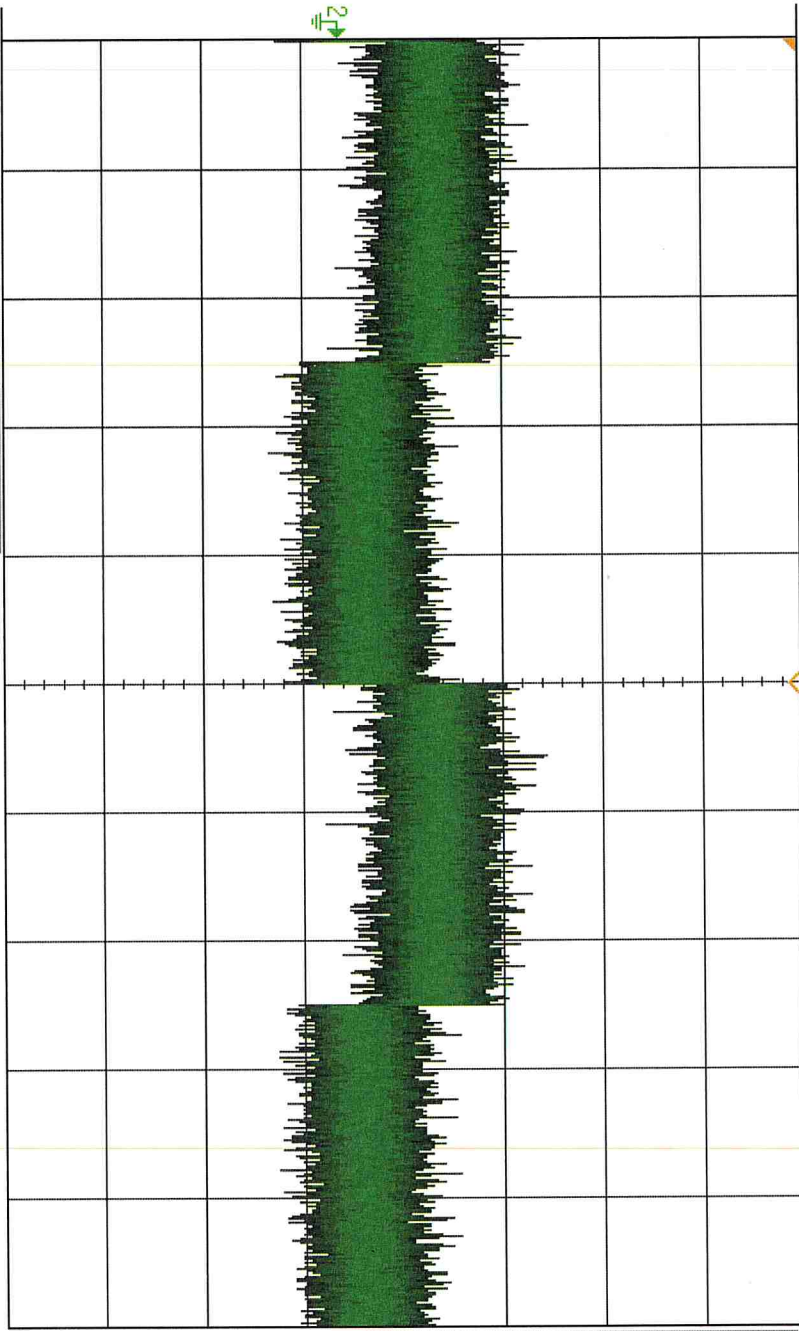
Measurement Menu

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

PL45184  
TSS - 71dbm

DSO-X 3034A, MW52394003: Wed May 01 11:09:24 2024

1 2 100% / 3 4 2.000ms 20.00ns / Auto F 4 1.60V



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

Save to file = pl45184\_tss\_71

Save

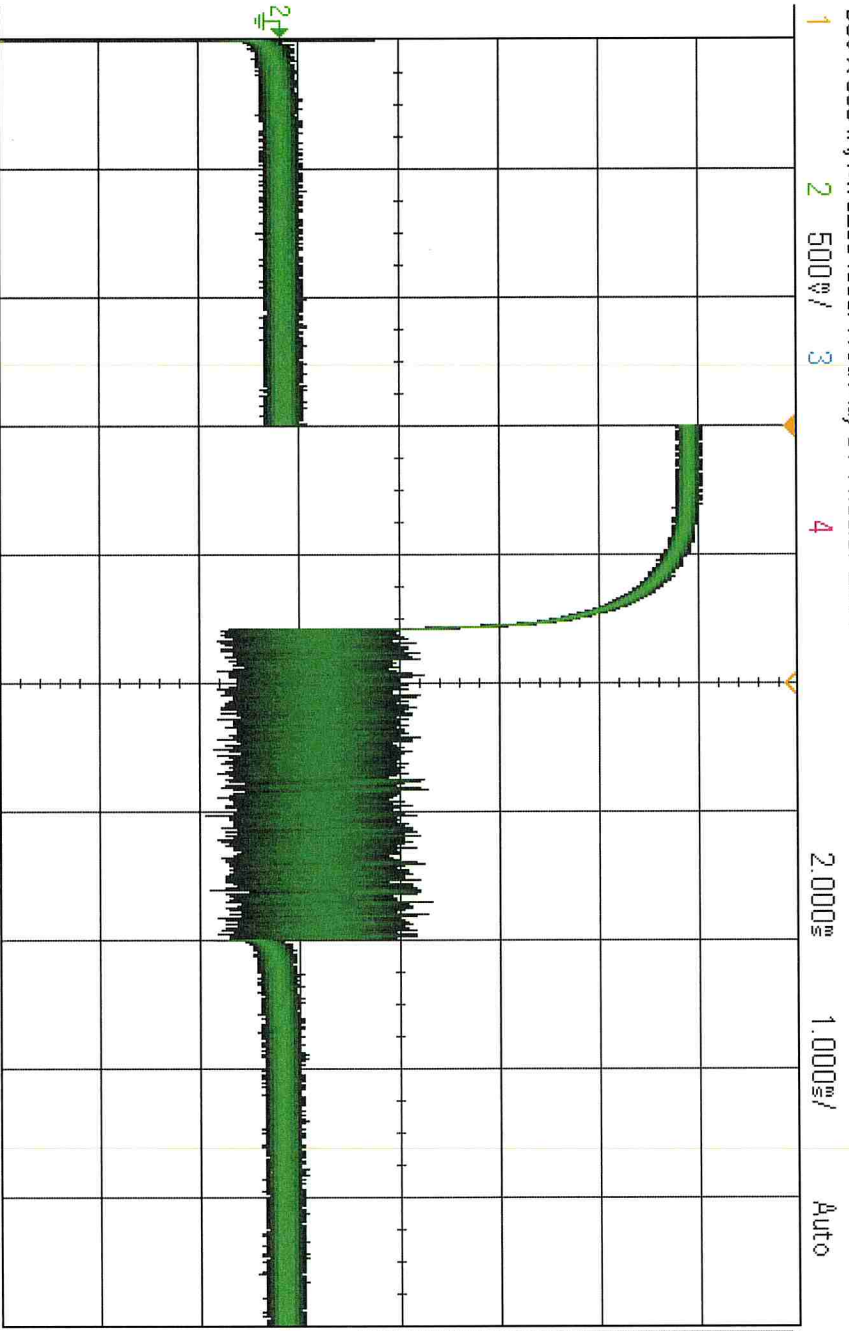
Recall

Default/Erase

Press to Save

PL45184  
CW Immune

DSO-X 3034A, MW52394003: Wed May 01 11:08:07 2024



f 4 1.50V

Acquisition	Normal
Channels	DC 1.00:1
	DC 1.00:1
	DC 1.00:1
	DC 1.00:1

Save to file = pl45184\_cw Immune

Save

Recall

Default/Erase

Press to Save