



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

PL46226/2422

Customer: _____	Tested By: <u>Jim Hopson</u>
SO No: _____	Temperature: <u>-25°C +25C +85C</u>
Model No: <u>ERDLVA-218-CW-75MV-93</u>	Date: <u>5/29/2024</u>
Serial No: <u>PL46226/2422</u>	Drawing No: <u>2 74240</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	PMI QAS
2	VSWR:	2.5:1 MAX @ -20 dBm	1.95:1 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	73.1-77.7mV/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	30mV	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	19.8ns	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	<0.5dB	

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Email: sales@pmi-rf.com



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ON
ERDLVA-218-CW-75MV-93**

PL46226/2422

11	VIDEO OUT Recovery	500ns MAX	400ns	PMI QA?
12	Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	1.20dB 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	37.2mV	
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	H. V. 5-30-24

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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV-93
 TESTED BY: Jim Hopson
 DATE: 5-29-24
 SERIAL NO: PL46226
 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)	3431
	SLOPE (mV/DB)	75.5

370	766	1157	1541	1936	2324	2715	3076	3456	3829	4188	4534	4890
-39	-21	-8	-1	16	26	39	23	25	20	2	-30	-52
-0.52	-0.28	-0.10	-0.02	0.21	0.35	0.52	0.30	0.33	0.27	0.02	-0.40	-0.68

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

4.67 GHz	INTERCEPT (mV)	3404
	SLOPE (mV/DB)	77.7

281	676	1053	1447	1848	2251	2681	3048	3433	3805	4171	4532	4932
-16	-9	-21	-15	-3	12	53	32	29	12	-10	-38	-26
-0.20	-0.12	-0.27	-0.20	-0.03	0.15	0.69	0.41	0.37	0.16	-0.13	-0.49	-0.34

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

7.33 GHz	INTERCEPT (mV)	3431
	SLOPE (mV/DB)	75.7

372	772	1165	1545	1930	2309	2699	3059	3443	3814	4183	4544	4932
-32	-10	4	6	12	13	25	6	12	4	-5	-23	-13
-0.42	-0.13	0.06	0.08	0.16	0.17	0.33	0.08	0.16	0.06	-0.07	-0.30	-0.17

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

10 GHz	INTERCEPT (mV)	3436
	SLOPE (mV/DB)	76.8

339	739	1125	1510	1909	2302	2709	3069	3455	3827	4191	4552	4963
-26	-10	-8	-7	8	18	41	17	19	7	-13	-36	-9
-0.33	-0.12	-0.10	-0.09	0.11	0.23	0.53	0.22	0.24	0.09	-0.17	-0.47	-0.12

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

12.67 GHz	INTERCEPT (mV)	3353
	SLOPE (mV/DB)	74.4

342	744	1127	1505	1894	2251	2602	2978	3355	3717	4096	4453	4845
-34	-4	7	13	30	15	-6	-2	2	-8	-1	-16	4
-0.45	-0.05	0.09	0.17	0.40	0.20	-0.09	-0.03	0.03	-0.10	-0.01	-0.21	0.05

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

15.33 GHz	INTERCEPT (mV)	3365
	SLOPE (mV/DB)	74.4

361	761	1153	1529	1906	2251	2605	2977	3358	3726	4106	4467	4878
-30	-1	19	23	28	1	-16	-16	-7	-11	-3	-13	26
-0.40	-0.02	0.25	0.31	0.38	0.02	-0.22	-0.22	-0.09	-0.14	-0.03	-0.18	0.35

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

18 GHz	INTERCEPT (mV)	3320
	SLOPE (mV/DB)	73.1

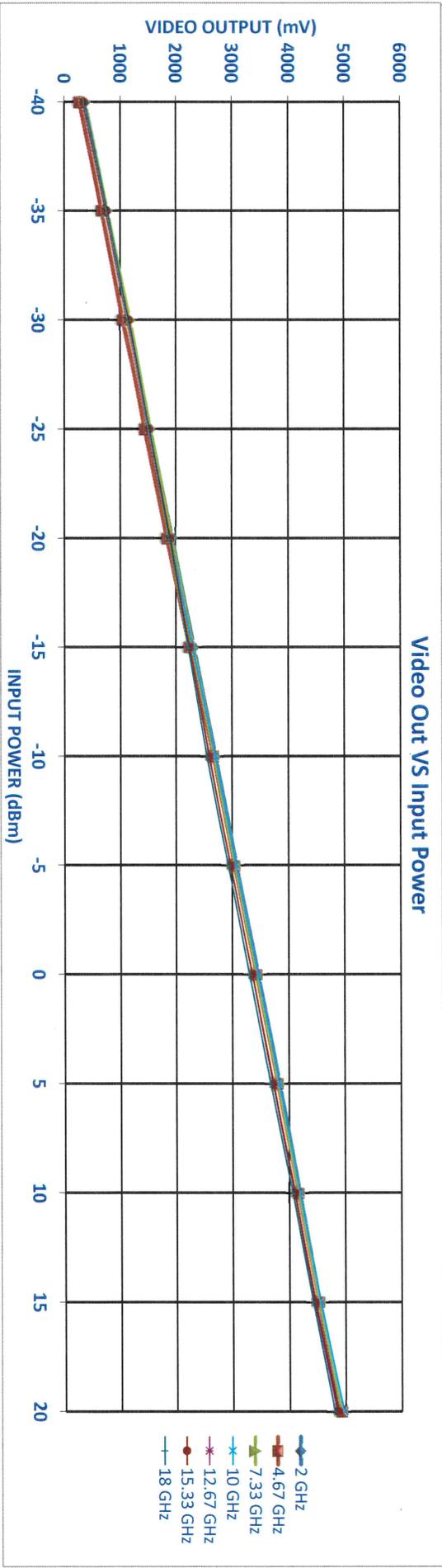
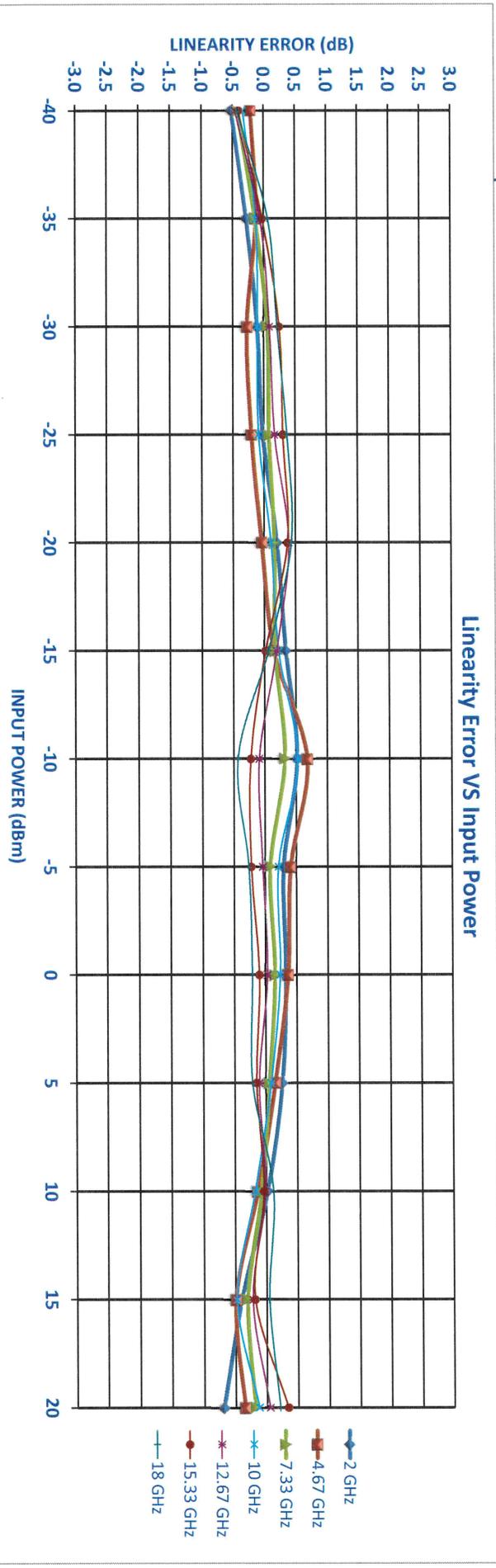
367	768	1144	1521	1891	2229	2558	2936	3305	3670	4059	4419	4797
-31	5	15	27	32	5	-32	-19	-15	-15	8	3	16
-0.42	0.07	0.21	0.37	0.44	0.06	-0.43	-0.26	-0.21	-0.21	0.12	0.04	0.22

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

Flatness P-P

1.2	1.2	1.4	1.4	1.2	1.2	2.0	1.8	2.0	2.2	1.8	1.8	2.2
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Slope Avg(mv/db) 75.4





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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV-93
 TESTED BY: Jim Hopson
 DATE: 5-29-24
 SERIAL NO.: PL46226
 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)	3336
	SLOPE (mV/dB)	74.9

268	695	1085	1472	1870	2251	2639	2986	3356	3716	4075	4422	4791
-71	-19	-3	9	33	39	52	25	20	6	-10	-37	-43
-0.95	-0.25	-0.04	0.12	0.43	0.52	0.70	0.33	0.27	0.08	-0.13	-0.50	-0.57

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

4.67 GHz	INTERCEPT (mV)	3288
	SLOPE (mV/dB)	77.6

152	543	946	1345	1744	2144	2586	2945	3317	3676	4044	4405	4813
-33	-30	-14	-3	8	20	74	45	29	0	-20	-47	-27
-0.42	-0.38	-0.19	-0.04	0.10	0.25	0.95	0.58	0.37	0.00	-0.26	-0.61	-0.35

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

7.33 GHz	INTERCEPT (mV)	3297
	SLOPE (mV/dB)	75.9

203	625	1020	1407	1806	2185	2588	2939	3311	3667	4040	4400	4799
-57	-15	0	8	27	27	50	22	14	-9	-16	-35	-16
-0.76	-0.20	0.01	0.10	0.36	0.35	0.66	0.29	0.19	-0.12	-0.21	-0.47	-0.21

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

10 GHz	INTERCEPT (mV)	3285
	SLOPE (mV/dB)	77.4

145	548	953	1348	1753	2149	2582	2937	3311	3667	4035	4395	4817
-43	-27	-9	-1	16	25	71	39	26	-5	-24	-51	-16
-0.56	-0.35	-0.12	-0.02	0.21	0.33	0.92	0.51	0.34	-0.07	-0.31	-0.66	-0.21

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

12.67 GHz	INTERCEPT (mV)	3212
	SLOPE (mV/dB)	74.9

156	569	969	1359	1756	2119	2492	2855	3215	3569	3946	4300	4710
-59	-21	5	20	42	31	29	18	3	-17	-15	-36	0
-0.79	-0.28	0.06	0.27	0.57	0.41	0.39	0.24	0.04	-0.23	-0.20	-0.47	0.00

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

15.33 GHz	INTERCEPT (mV)	3200
	SLOPE (mV/dB)	75.6

127	527	941	1332	1725	2086	2479	2840	3200	3558	3940	4297	4723
-49	-27	9	22	37	20	35	18	0	-20	-16	-37	11
-0.65	-0.36	0.12	0.29	0.49	0.26	0.46	0.23	0.00	-0.27	-0.22	-0.50	0.14

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

18 GHz	INTERCEPT (mV)	3133
	SLOPE (mV/dB)	75.0

97	477	889	1280	1665	2028	2412	2782	3128	3489	3874	4231	4630
-37	-32	5	21	31	20	29	24	-5	-19	-8	-26	-2
-0.50	-0.43	0.07	0.28	0.42	0.26	0.38	0.32	-0.06	-0.25	-0.11	-0.35	-0.03

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

Flatness P-P

2.2	2.8	2.6	2.6	2.8	3.0	3.0	2.6	3.0	3.0	2.6	2.6	2.4
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Slope Avg(mV/dB) 75.9



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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV-93
 TESTED BY: Jim Hopson
 DATE: 5-29-24
 SERIAL NO.: PL46226
 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)	3497	406	808	1206	1594	1986	2378	2771	3145	3530	3912	4267	4607	4948
	SLOPE (mV/DB)	76.2	-45	-23	-6	1	12	24	36	29	33	34	9	-32	-72
	INTERCEPT (mV)	3476	-0.59	-0.31	-0.08	0.01	0.16	0.31	0.47	0.38	0.44	0.45	0.11	-0.42	-0.94
	SLOPE (mV/DB)	78.2	332	727	1112	1505	1909	2320	2748	3120	3512	3891	4253	4609	4996
	INTERCEPT (mV)	3476	-18	-14	-20	-18	-4	16	53	34	36	24	-5	-40	-44
	SLOPE (mV/DB)	78.2	-0.23	-0.18	-0.25	-0.22	-0.06	0.20	0.68	0.44	0.45	0.30	-0.06	-0.51	-0.56

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

7.33 GHz	INTERCEPT (mV)	3509	442	840	1242	1624	2000	2376	2768	3137	3526	3906	4270	4625	5002
	SLOPE (mV/DB)	75.9	-32	-13	9	12	8	5	17	7	17	17	2	-23	-25
	INTERCEPT (mV)	3525	-0.42	-0.18	0.12	0.15	0.11	0.06	0.23	0.09	0.22	0.23	0.02	-0.30	-0.33
	SLOPE (mV/DB)	76.7	429	823	1225	1609	1997	2386	2788	3155	3544	3926	4283	4639	5043
	INTERCEPT (mV)	3525	-27	-17	2	2	7	12	31	14	19	18	-9	-36	-16
	SLOPE (mV/DB)	76.7	-0.35	-0.22	0.02	0.03	0.09	0.16	0.40	0.18	0.25	0.23	-0.11	-0.47	-0.21

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

12.67 GHz	INTERCEPT (mV)	3420	395	795	1186	1565	1951	2307	2659	3045	3432	3798	4174	4529	4904
	SLOPE (mV/DB)	74.8	-33	-7	10	15	27	9	-13	-1	12	4	6	-14	-13
	INTERCEPT (mV)	3420	-0.44	-0.10	0.13	0.20	0.36	0.12	-0.18	-0.02	0.16	0.05	0.07	-0.18	-0.17
	SLOPE (mV/DB)	74.8	395	795	1186	1565	1951	2307	2659	3045	3432	3798	4174	4529	4904
	INTERCEPT (mV)	3420	-33	-7	10	15	27	9	-13	-1	12	4	6	-14	-13
	SLOPE (mV/DB)	74.8	-0.44	-0.10	0.13	0.20	0.36	0.12	-0.18	-0.02	0.16	0.05	0.07	-0.18	-0.17

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

15.33 GHz	INTERCEPT (mV)	3443	447	838	1245	1622	1983	2318	2665	3049	3440	3815	4190	4548	4946
	SLOPE (mV/DB)	74.2	-27	-7	29	35	25	-11	-35	-23	-3	1	5	-8	19
	INTERCEPT (mV)	3443	-0.36	-0.09	0.39	0.47	0.33	-0.15	-0.48	-0.30	-0.04	0.01	0.07	-0.11	0.25
	SLOPE (mV/DB)	74.2	447	838	1245	1622	1983	2318	2665	3049	3440	3815	4190	4548	4946
	INTERCEPT (mV)	3443	-27	-7	29	35	25	-11	-35	-23	-3	1	5	-8	19
	SLOPE (mV/DB)	74.2	-0.36	-0.09	0.39	0.47	0.33	-0.15	-0.48	-0.30	-0.04	0.01	0.07	-0.11	0.25

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

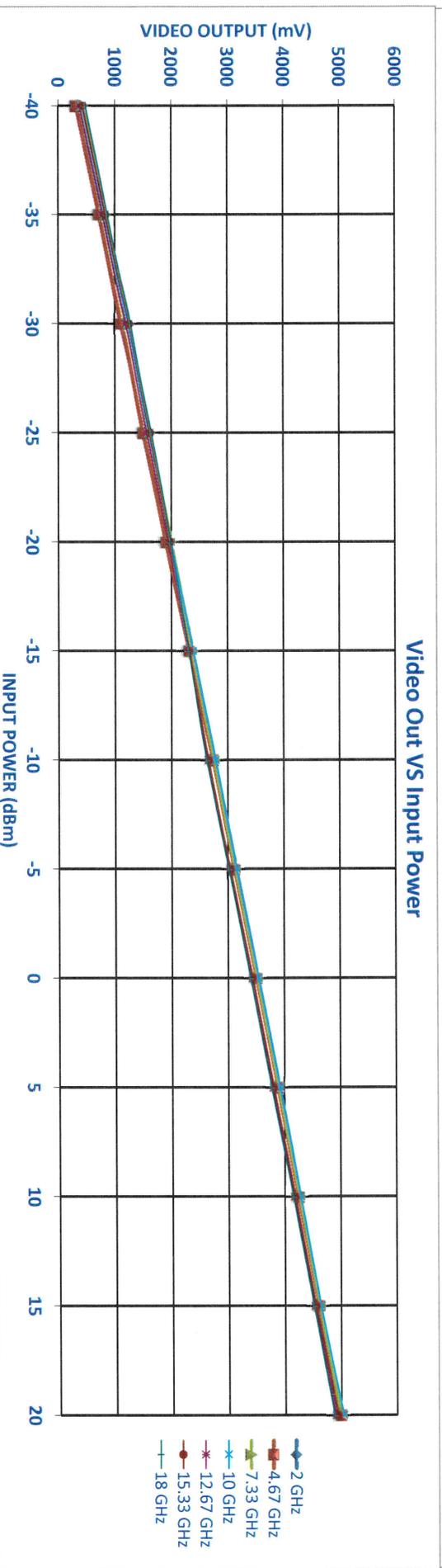
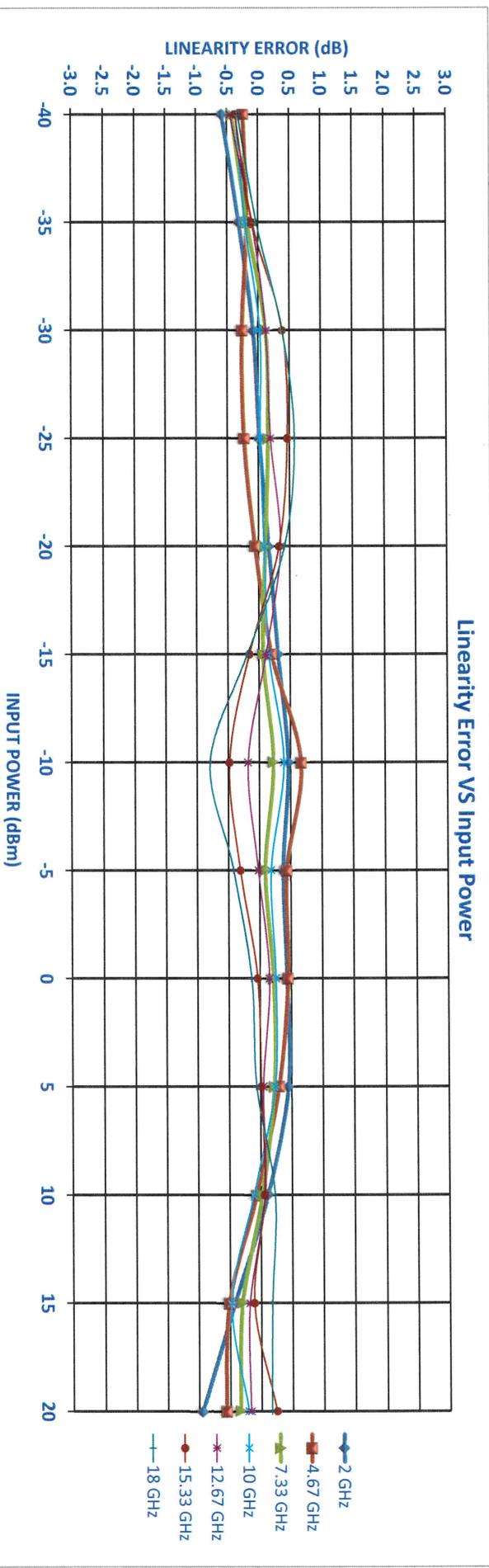
18 GHz	INTERCEPT (mV)	3411	485	869	1262	1639	1990	2309	2628	3018	3401	3769	4153	4512	4874
	SLOPE (mV/DB)	72.6	-23	-2	28	42	30	-13	-57	-30	-10	-5	16	13	12
	INTERCEPT (mV)	3411	-0.32	-0.03	0.39	0.58	0.42	-0.19	-0.79	-0.42	-0.14	-0.07	0.23	0.17	0.16
	SLOPE (mV/DB)	72.6	485	869	1262	1639	1990	2309	2628	3018	3401	3769	4153	4512	4874
	INTERCEPT (mV)	3411	-23	-2	28	42	30	-13	-57	-30	-10	-5	16	13	12
	SLOPE (mV/DB)	72.6	-0.32	-0.03	0.39	0.58	0.42	-0.19	-0.79	-0.42	-0.14	-0.07	0.23	0.17	0.16

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

Slope Avg(mv/db) **75.5**

Flatness P-P	2.0	1.8	2.0	1.8	1.2	1.0	2.2	1.8	1.8	2.0	1.8	1.6	2.2
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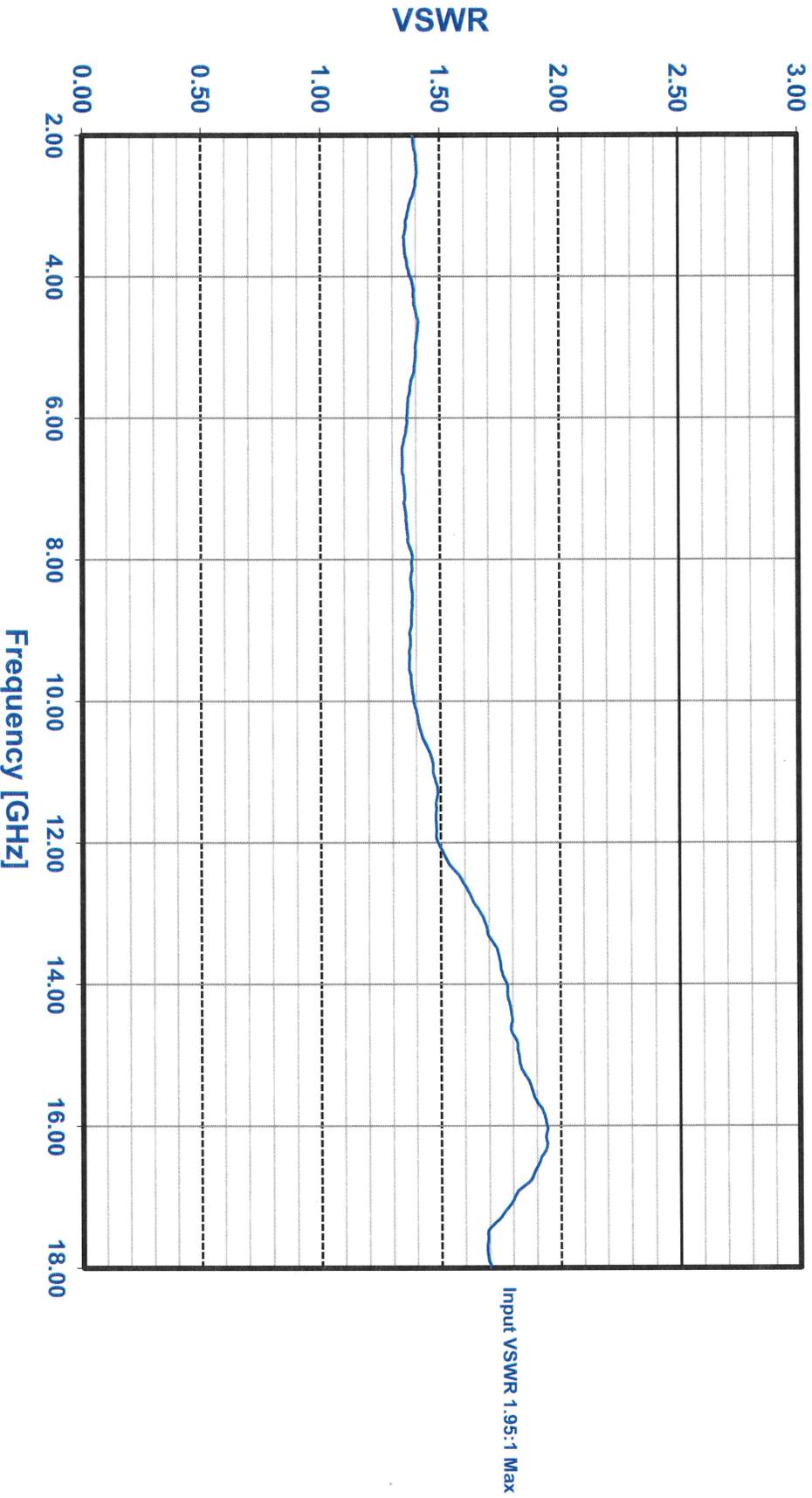
LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV-93
 SERIAL NO: PL46226
 Test Temp: -25C



Model Number: ERDLVA-2G18G-CW-75MV
Serial Number: PL46226
Date: 5/29/2024

Temperature: +25C

VSWR GRAPH

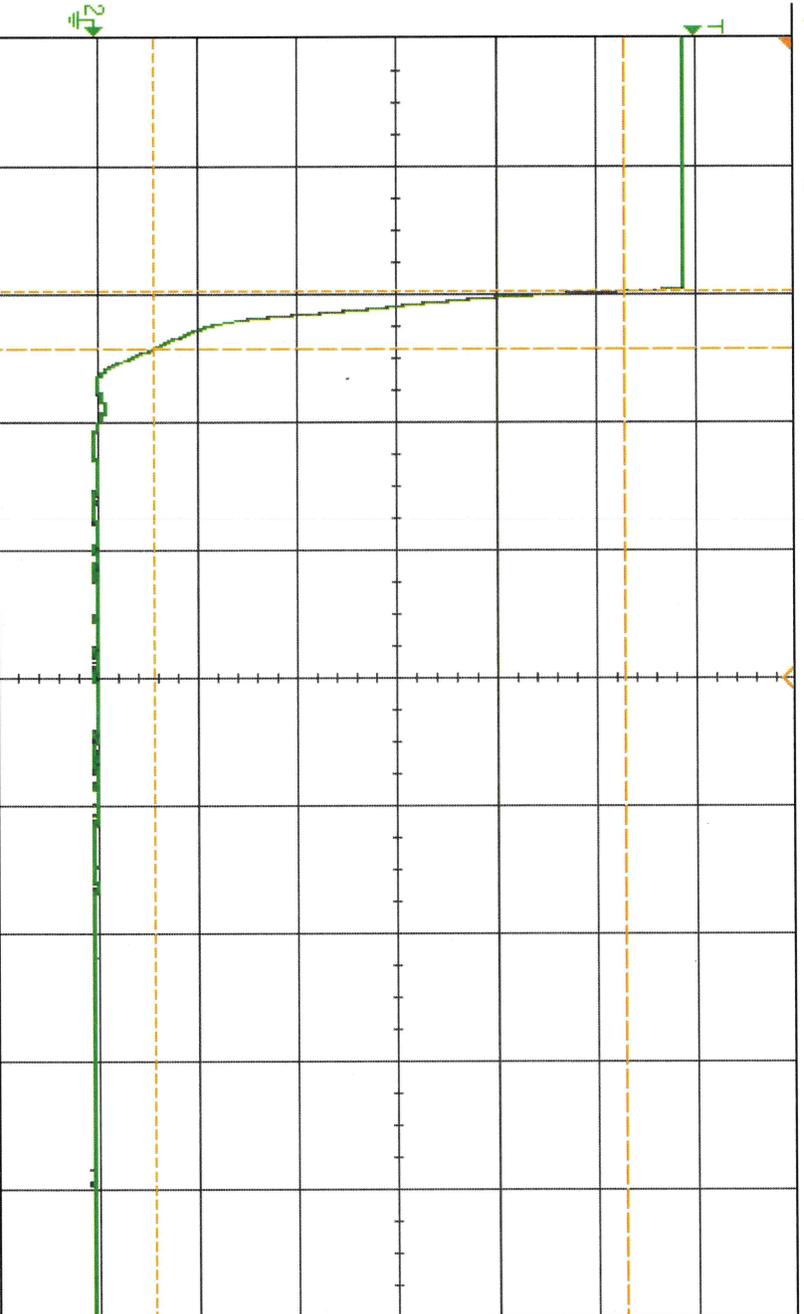


PL46226

Recovery

DSO-X 3034A, MW52394003: Wed May 29 11:17:58 2024

1 2 700V/ 3 4 51.48V 500.0V/ Auto f 2 4.21V



Measurement Menu

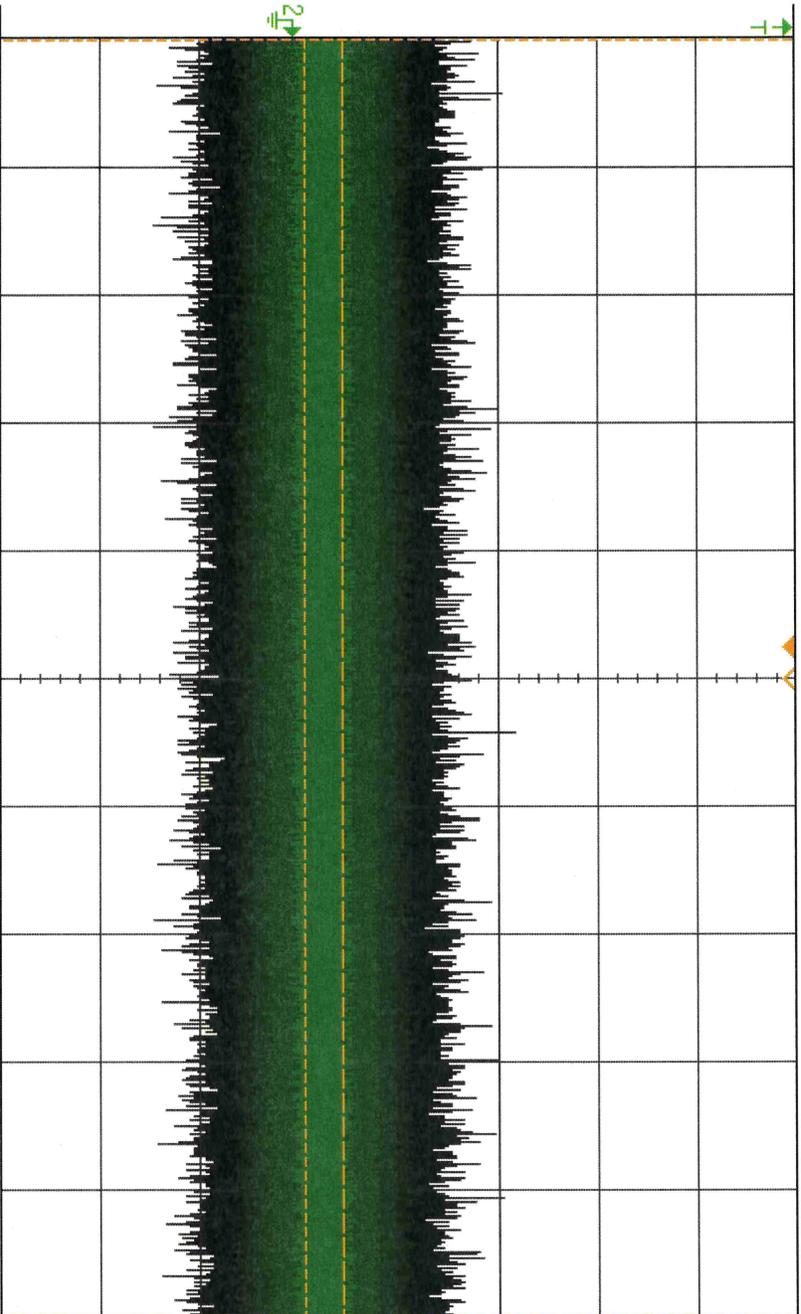
Source 2 Type: Fall Add Measurement Settings Clear Meas Statistics

KEYSIGHT TECHNOLOGIES	Acquisition	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)	1.6590V
	Fall(3)	No signal
	Rise(2)	No edges
	Fall(2)	223.8ns

PL46226
RMS noise

DSO-X 3034A, MW52394003: Wed May 29 11:19:20 2024

1 2 100% / 3 4 51.48% 200.0% / Auto? f 2 705%



Measurement Menu

Source 2

Type: AC RMS - FS

Add Measurement

Settings

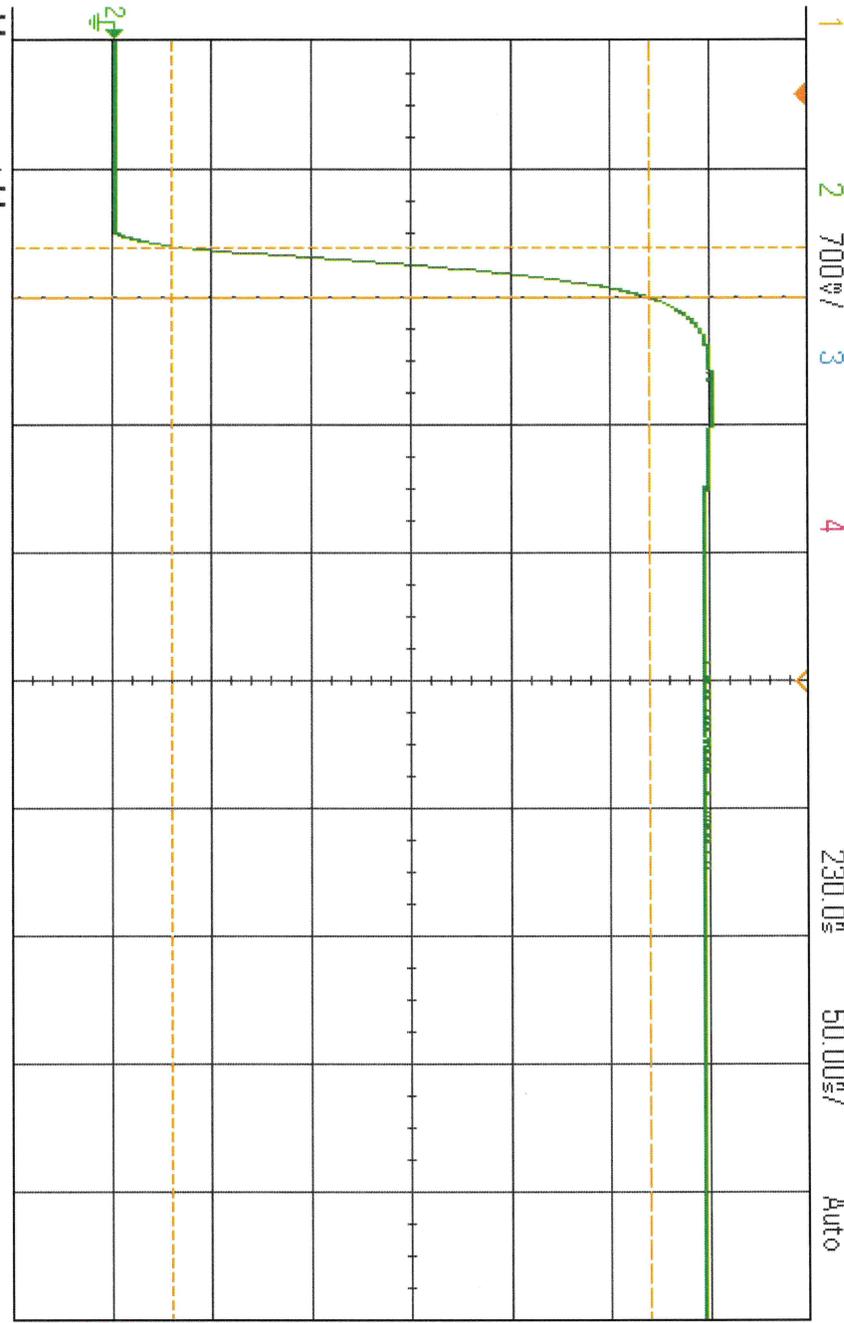
Clear Meas

Statistics

Channels	DC	1.00:1
DC	DC	1.00:1
DC	DC	1.00:1
DC	DC	1.00:1
Measurements	DC	1.00:1
Fall(3):	No signal	
Rise(2):	<93ns	
Fall(2):	<93ns	
AC RMS - FS(2):	37.22mV	

PL46226.
SETTLE / RISE

DSO-X 3034A, MW52394003, Wed May 29 11:24:55 2024



f E 2.12V

Acquisition
Averaging: 64
4.00GSa/s

Channels	
DC	1.00:1

Measurements

Fall[3]: No signal
Fall[2]: No edges

AC RMS - FS[2]: 1.5521V

Rise[2]: 19.8ns

Measurement Menu

Source 2

Type: Rise

Add Measurement

Settings

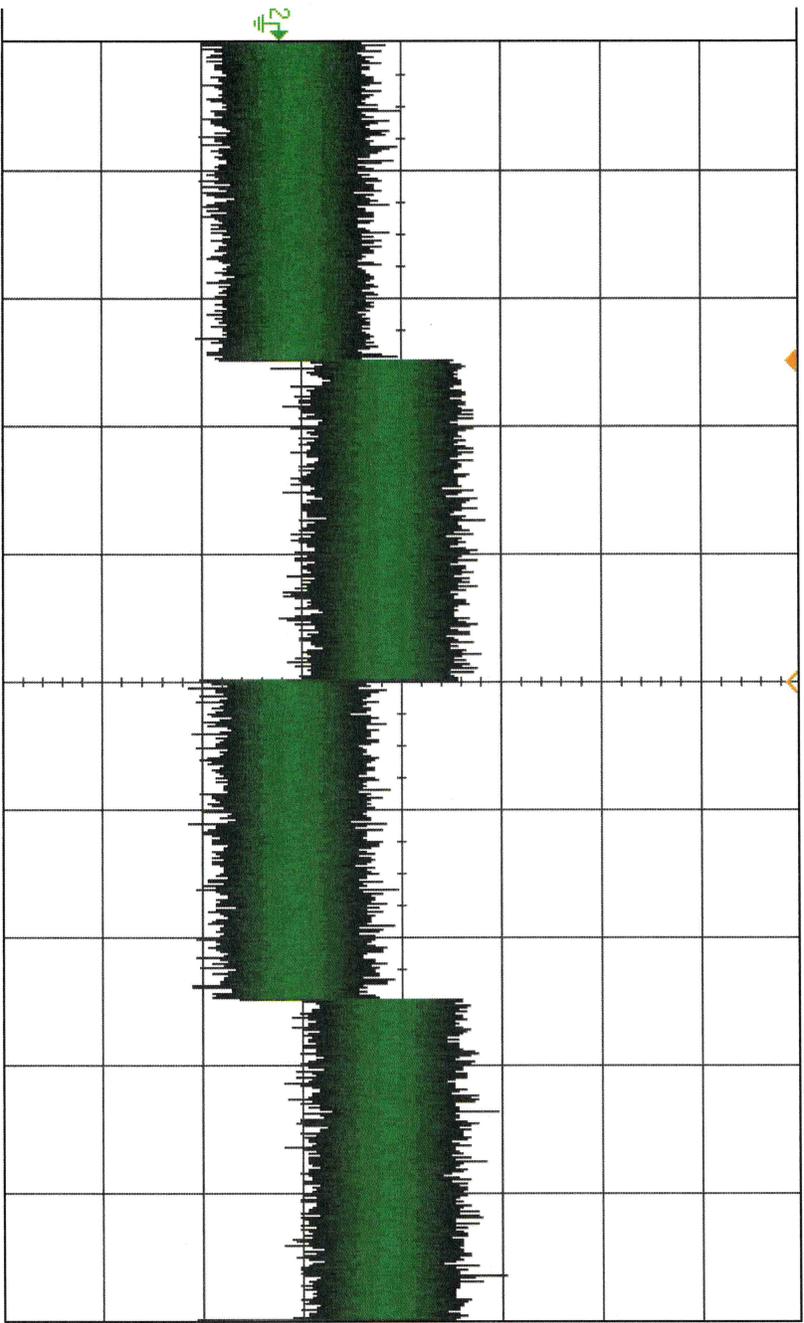
Clear Meas

Statistics

PL46226
TSS - 43 dbm

DSO-X 3034A, MW52394003: Wed May 29 11:21:45 2024

50.40% 20.00% / Auto f E 2.12V



Channels	Scale
DC	1.00:1

Cursors Menu
Mode
Off

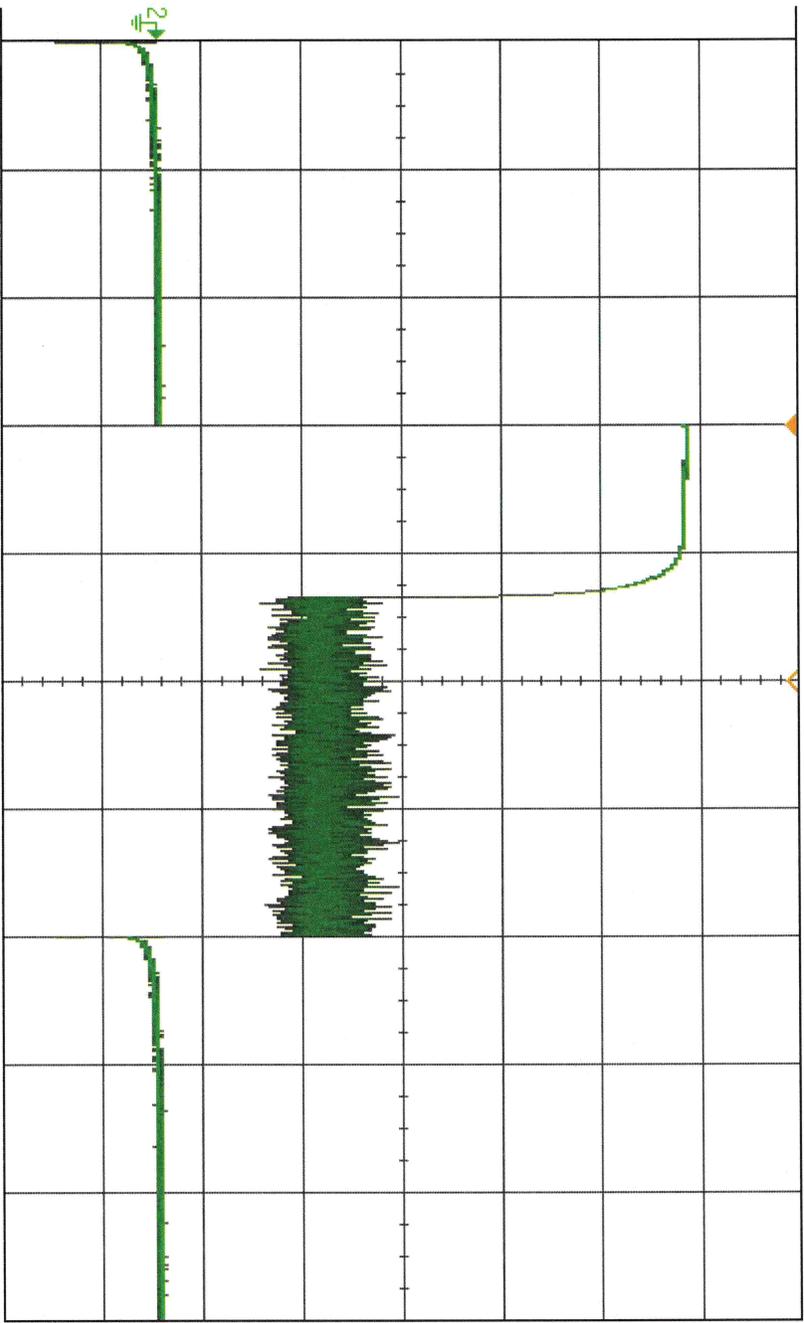
To turn on cursors, press the [Cursors] key on the front panel.

PL46226

car Immune

DSO-X 3034A, MW52394003: Wed May 29 11:27:58 2024

1 2 500mV / 3 4 2.000ms 1.000ms / Auto f E 2.12V



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.