



**Summary Data**  
**For**  
**ERDLVA-OR5G2G-CW-75MV-93**

Customer: \_\_\_\_\_ Tested By: Jim Hopson  
 SO No: \_\_\_\_\_ Temperature: -25C, 25C, 85C  
 Model No: ERDLVA-OR5G2G-CW-75MV-93 Date 4/30/2024  
 Serial No: PL45753/2418 Drawing No: 27643280 Rev: A1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	0.5 to 2.0 GHz	0.5 to 2.0 GHz	<b>PMI</b> <b>QA3</b>
2	VSWR:	2.5:1 MAX @ -20 dBm	1.88:1	
3	Input Power:	23 dBm Max.	Pass	
4	VIDEO OUT TSS:	-42 dBm MAX	-45 dBm MAX	
5	VIDEO OUT Dynamic Range:	-40 to +20 dBm	-40 to +20 dBm	
6	VIDEO OUT Log Slope Fixed:	75 ± 10mV/dB	75.1 mv	
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	50	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	16.8 ns	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	<25 ns	
11	VIDEO OUT Recovery Time:	500ns MAX	400 ns	
12	VIDEO OUT Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	1.8 db	



**Summary Data  
For  
ERDLVA-OR5G2G-CW-75MV-93**

		CW Immune Power -50 to -10 dBm	Pass	PMI QA3
13	VIDEO OUT CW Immunity:	CW Attack Time 1500us MAX	1400 us	
		CW Release Time 250us	< 100us	
17	Pulse droop	1dB Max for 250us pulses	<1 dB	
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	13.9 mv	
22	VIDEO OUT Propagation Delay:	35 ns MAX from RF 10% to 10% video (excluding cable)	<35 ns	
23	Power Supply	+12 V @ 250 mA MAX -12 V @ 250 mA MAX	+12 V @ 170 ma -12 V @ 70 ma	

QA/QC Approval: *H. [Signature]*

Date: 4-30-24



PLANAR MONOLITHICS INDUSTRIES  
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 Email: sales@pmi-rf.com | www.pmi-rf.com

LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-0R5G2G-CW-75MV-93V  
 TESTED BY: Jim Hopson  
 DATE: 04-28-24  
 SERIAL NO: PL45753  
 Test Temp: +25C

50 mv

Frequency

0.5 GHz	INTERCEPT (mV)	3336
	SLOPE (mV/DB)	76.7

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
291	663	1022	1403	1805	2155	2576	2988	3335	3668	4085	4496	4909
24	12	-13	-15	3	-30	7	35	-1	-52	-18	9	39
0.31	0.16	-0.16	-0.20	0.04	-0.40	0.09	0.46	-0.01	-0.67	-0.24	0.12	0.50

Measured Value (mV)	3336
Error (mV)	76.7
LINEARITY ERROR (DB)	

1.25 GHz	INTERCEPT (mV)	3428
	SLOPE (mV/DB)	75.1

427	817	1191	1567	1935	2261	2620	3036	3434	3812	4235	4564	4909
1	16	15	15	8	-41	-58	-17	6	8	56	10	-21
0.02	0.21	0.20	0.21	0.11	-0.55	-0.77	-0.22	0.08	0.11	0.75	0.13	-0.27

Measured Value (mV)	3428
Error (mV)	75.1
LINEARITY ERROR (DB)	

2 GHz	INTERCEPT (mV)	3370
	SLOPE (mV/DB)	73.6

405	797	1168	1544	1918	2247	2613	3008	3368	3741	4152	4480	4803
-21	3	6	14	20	-19	-21	6	-2	3	46	5	-40
-0.28	0.04	0.08	0.19	0.27	-0.26	-0.29	0.08	-0.03	0.04	0.62	0.07	-0.54

Measured Value (mV)	3370
Error (mV)	73.6
LINEARITY ERROR (DB)	

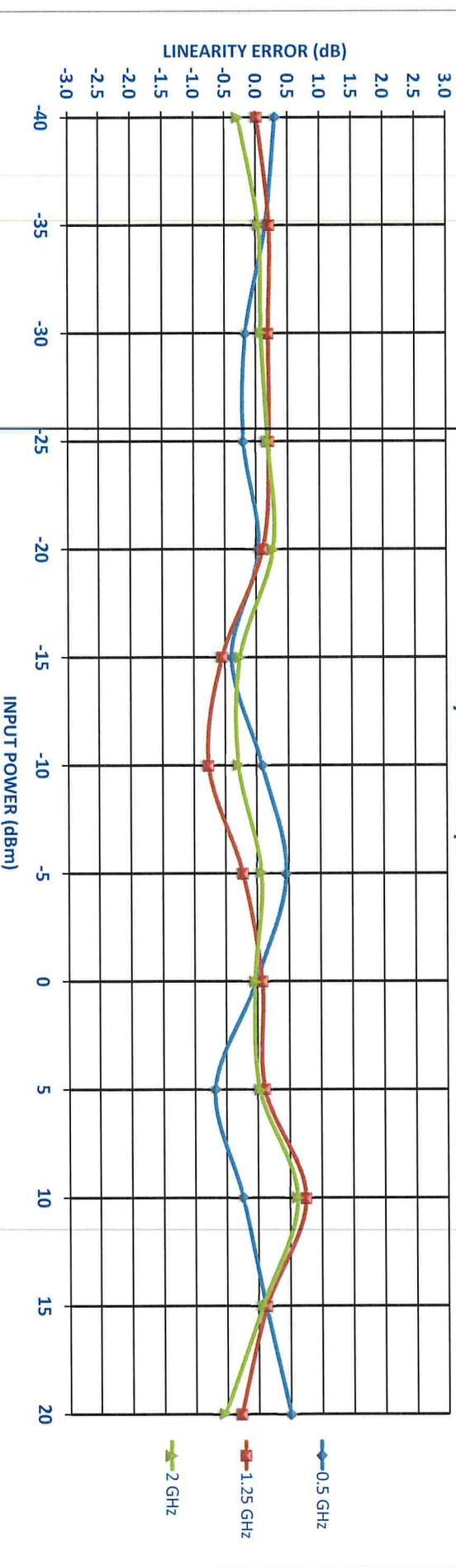
Flatness P-P

1.8	2.0	2.2	2.2	1.8	1.4	0.6	0.6	1.4	2.0	2.0	1.2	1.4
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Slope Avg(mv/DB)

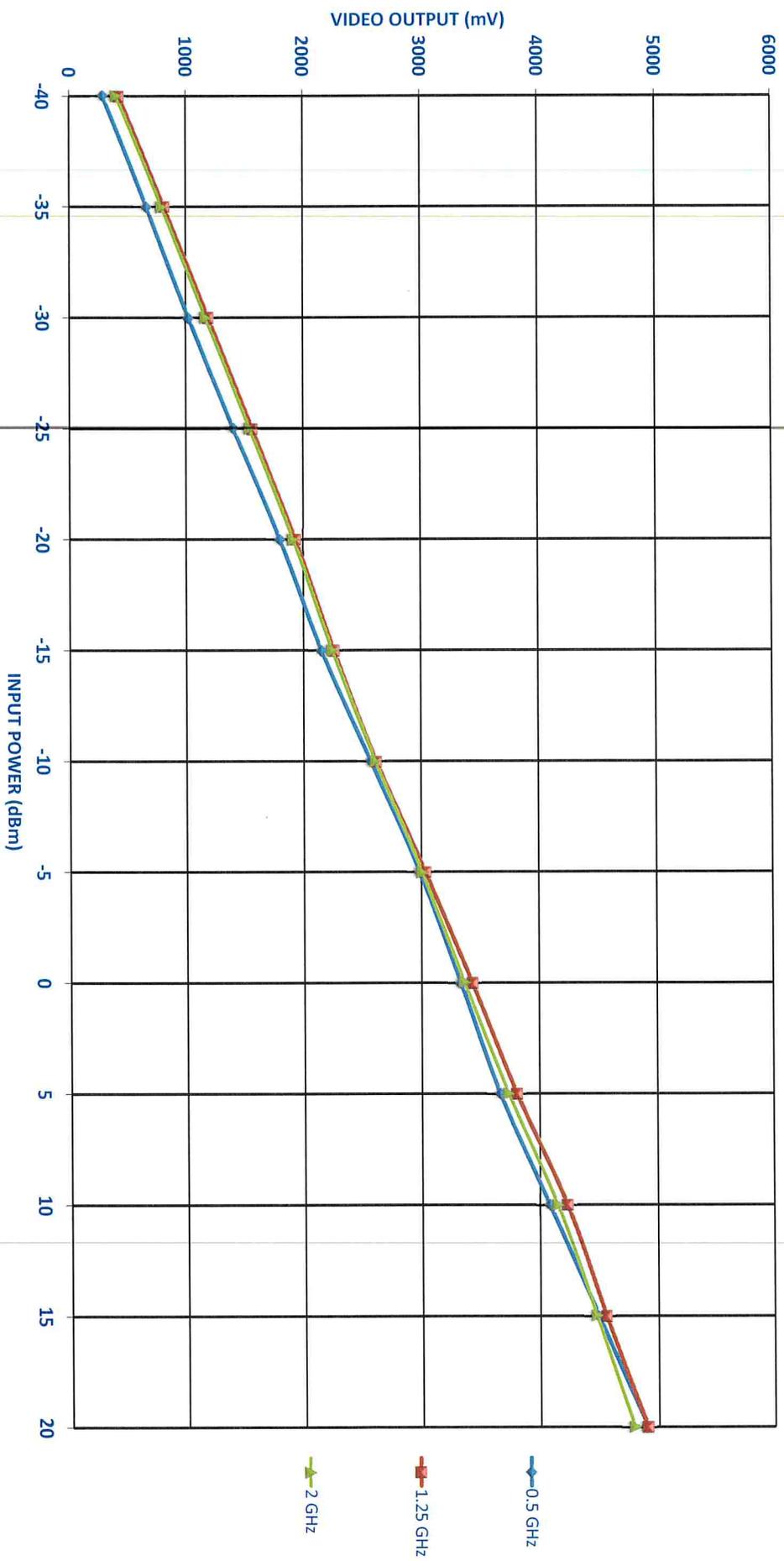
75.1

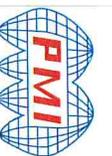
Linearity Error VS Input Power



LOG TRANSFER WITH FREQUENCY  
MODEL: ERDLVA-0R5G2G-CW-75MV-93V  
SERIAL NO: PL45753  
Test Temp: +25C

Video Out VS Input Power





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LOG TRANSFER WITH FREQUENCY

MODEL: ERDLVA-0R5G2G-CW-75MV-93V

TESTED BY: Jim Hopson

DATE: 04-28-24

SERIAL NO: PL45753

Test Temp: -25C

Frequency

0.5 GHz	INTERCEPT (mV)	3406
	SLOPE (mV/dB)	78.0

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
301	684	1051	1434	1853	2217	2645	3053	3406	3728	4175	4594	4993
17	9	-14	-21	8	-18	19	37	0	-68	-12	17	26
0.21	0.12	-0.18	-0.27	0.10	-0.24	0.25	0.48	0.00	-0.88	-0.15	0.22	0.33

Measured Value (mV)	3406
Error (mV)	0
LINEARITY ERROR (dB)	0.00

1.25 GHz	INTERCEPT (mV)	3498
	SLOPE (mV/dB)	76.3

449	838	1219	1609	1983	2320	2678	3093	3497	3885	4337	4662	4984
3	11	10	19	11	-33	-57	-23	-1	6	76	20	-40
0.04	0.14	0.13	0.24	0.14	-0.44	-0.75	-0.31	-0.01	0.07	1.00	0.26	-0.52

Measured Value (mV)	3497
Error (mV)	-1
LINEARITY ERROR (dB)	-0.01

2 GHz	INTERCEPT (mV)	3443
	SLOPE (mV/dB)	74.8

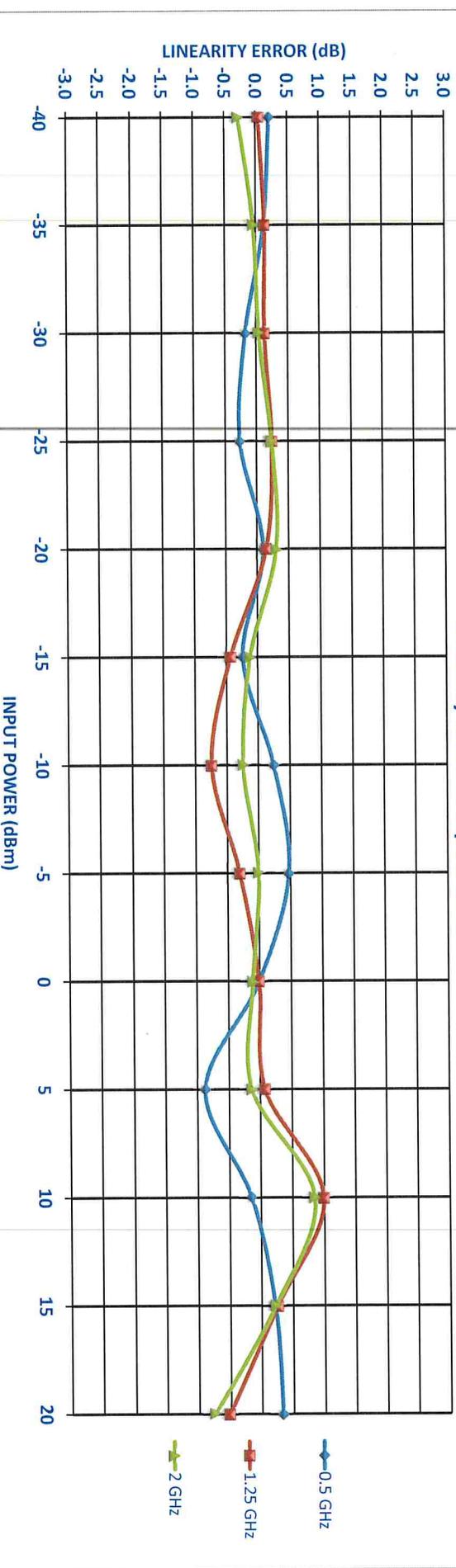
430	822	1202	1591	1970	2312	2677	3069	3435	3807	4255	4582	4883
-21	-3	3	18	23	-9	-18	0	-8	-10	64	17	-56
-0.28	-0.04	0.04	0.24	0.31	-0.12	-0.24	0.00	-0.11	-0.13	0.86	0.23	-0.75

Measured Value (mV)	3435
Error (mV)	-8
LINEARITY ERROR (dB)	-0.11

Flatness P-P

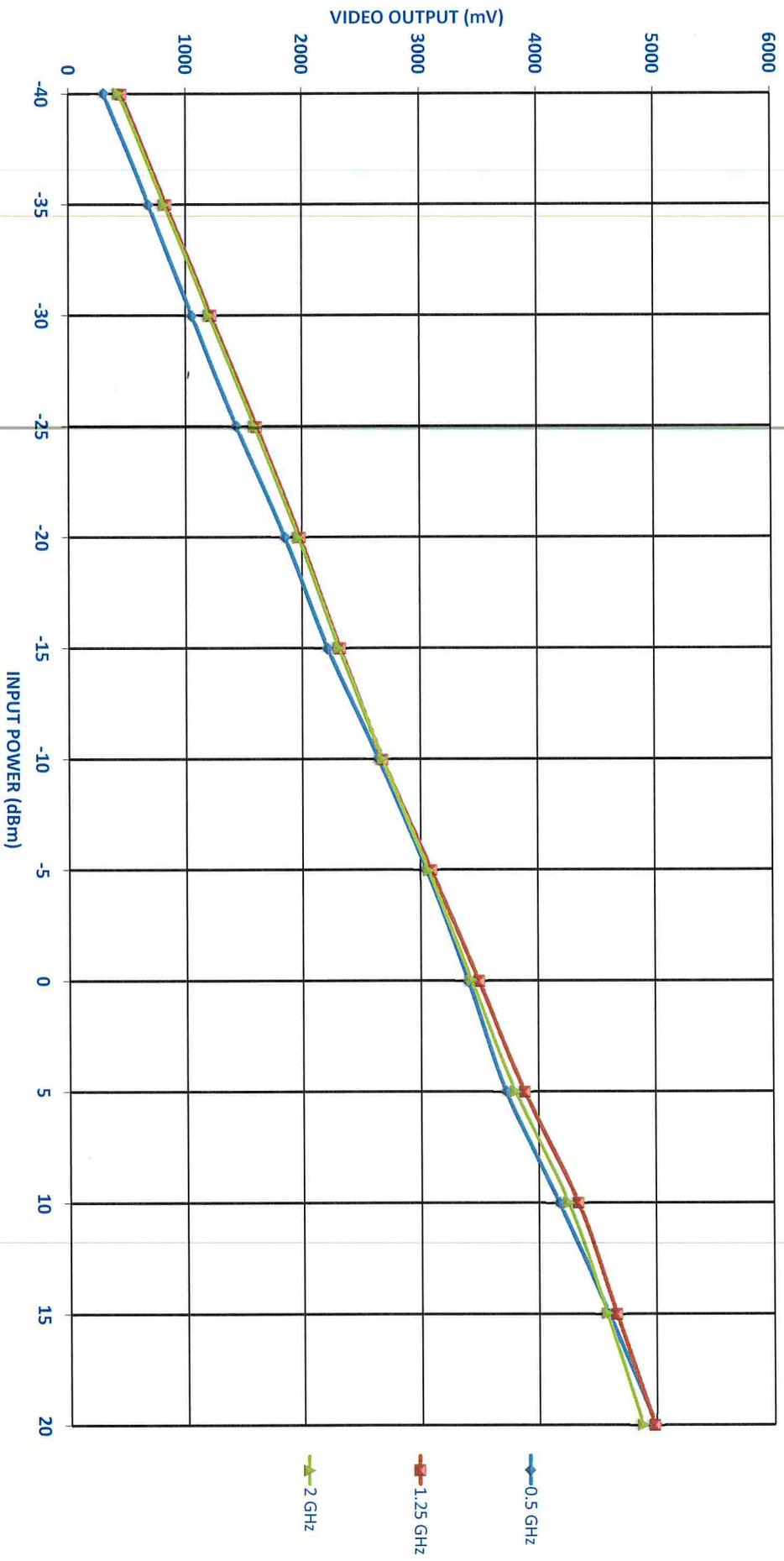
Slope Avg(mv/dB) 76.4

Linearity Error VS Input Power



LOG TRANSFER WITH FREQUENCY  
MODEL: ERDLVA-0R5G2G-CW-75MV-93V  
SERIAL NO: PL45753  
Test Temp: -25C

Video Out VS Input Power





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LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-0R5G2G-CW-75MV-93V  
 TESTED BY: Jim Hopson  
 DATE: 04-28-24  
 SERIAL NO: PL45753  
 Test Temp: +85C

Frequency

0.5 GHz	INTERCEPT (mV)	3195	172	545	923	1305	1693	2036	2432	2854	3203	3545	3930	4319	4742
	SLOPE (mV/dB)	75.7	4	-1	-2	2	11	-24	-6	37	8	-29	-22	-12	33
			0.06	-0.02	-0.02	0.03	0.15	-0.32	-0.08	0.49	0.10	-0.38	-0.29	-0.15	0.44

1.25 GHz	INTERCEPT (mV)	3293	285	708	1075	1448	1822	2132	2494	2922	3312	3688	4073	4396	4765
	SLOPE (mV/dB)	74.5	-27	23	17	18	19	-43	-54	2	19	23	35	-14	-18
			-0.37	0.31	0.23	0.24	0.26	-0.58	-0.72	0.02	0.26	0.30	0.47	-0.19	-0.24

2 GHz	INTERCEPT (mV)	3234	263	687	1052	1425	1803	2117	2480	2886	3244	3619	4000	4312	4653
	SLOPE (mV/dB)	73.1	-48	10	10	18	31	-21	-23	18	10	20	36	-18	-42
			-0.66	0.14	0.14	0.24	0.42	-0.29	-0.32	0.24	0.14	0.27	0.49	-0.24	-0.58

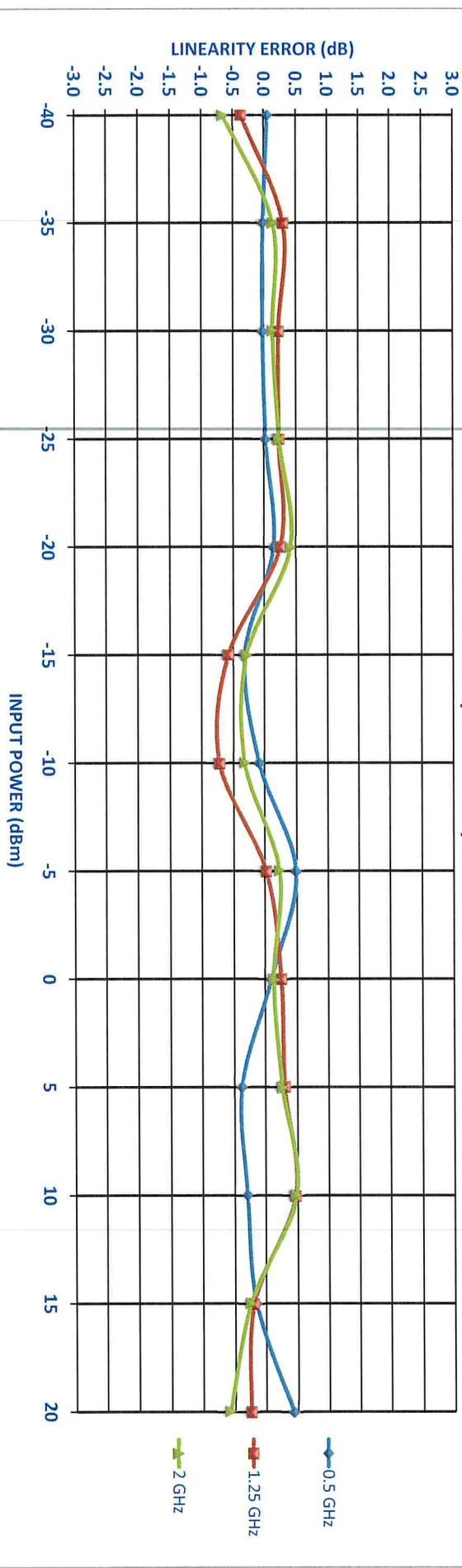
Flatness P-P

1.6	2.2	2.0	2.0	1.8	1.2	0.8	1.0	1.4	2.0	2.0	1.2	1.6
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Slope Avg(mv/dB)

74.4
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Linearity Error VS Input Power



RF Input Power (dBm)

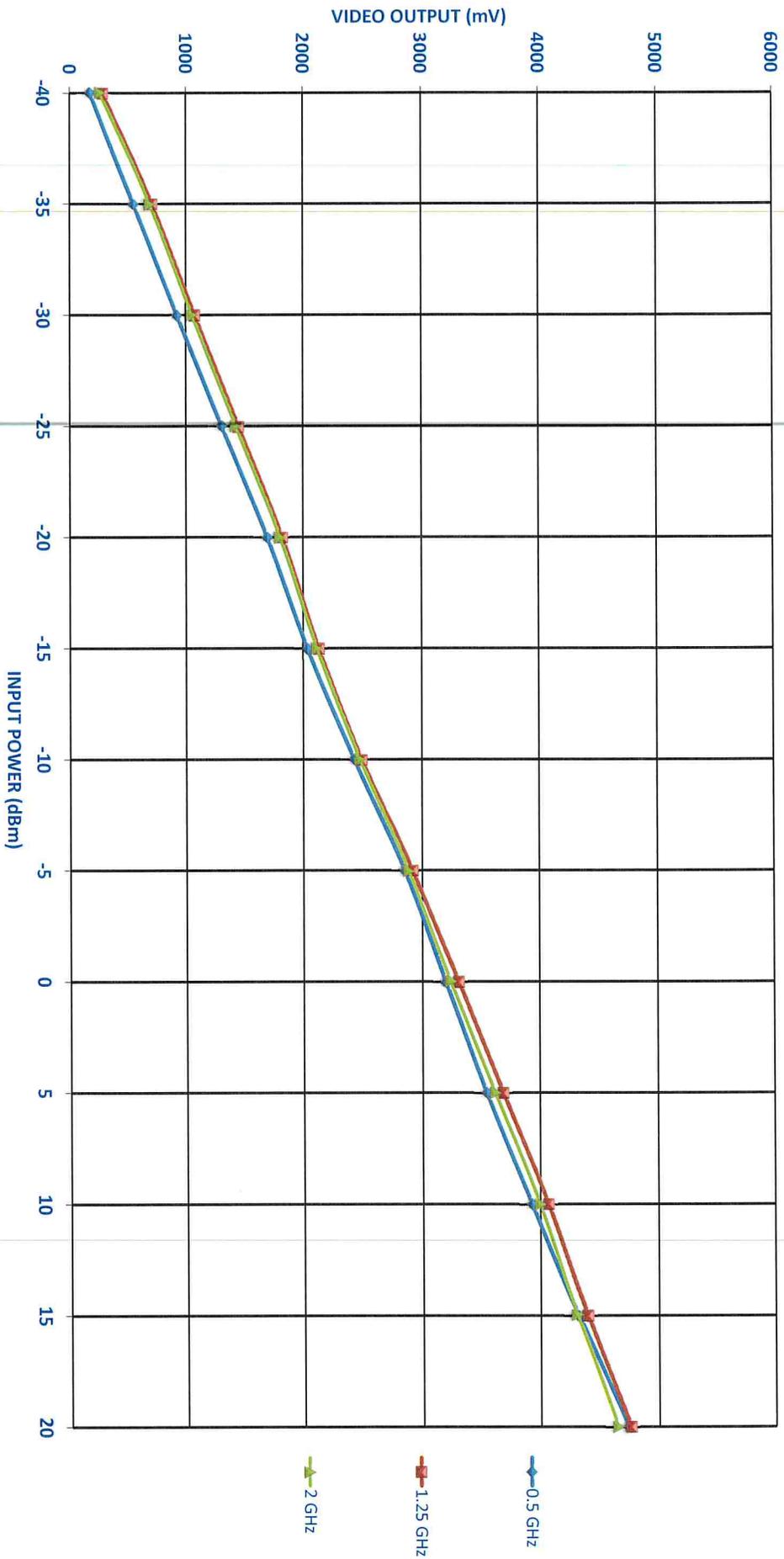
Measured Value (mV)  
 Error (mV)  
 LINEARITY ERROR (dB)

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

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

LOG TRANSFER WITH FREQUENCY  
MODEL: ERDLVA-0R5G2G-CW-75MV-93V  
SERIAL NO: PL45753  
Test Temp: +85C

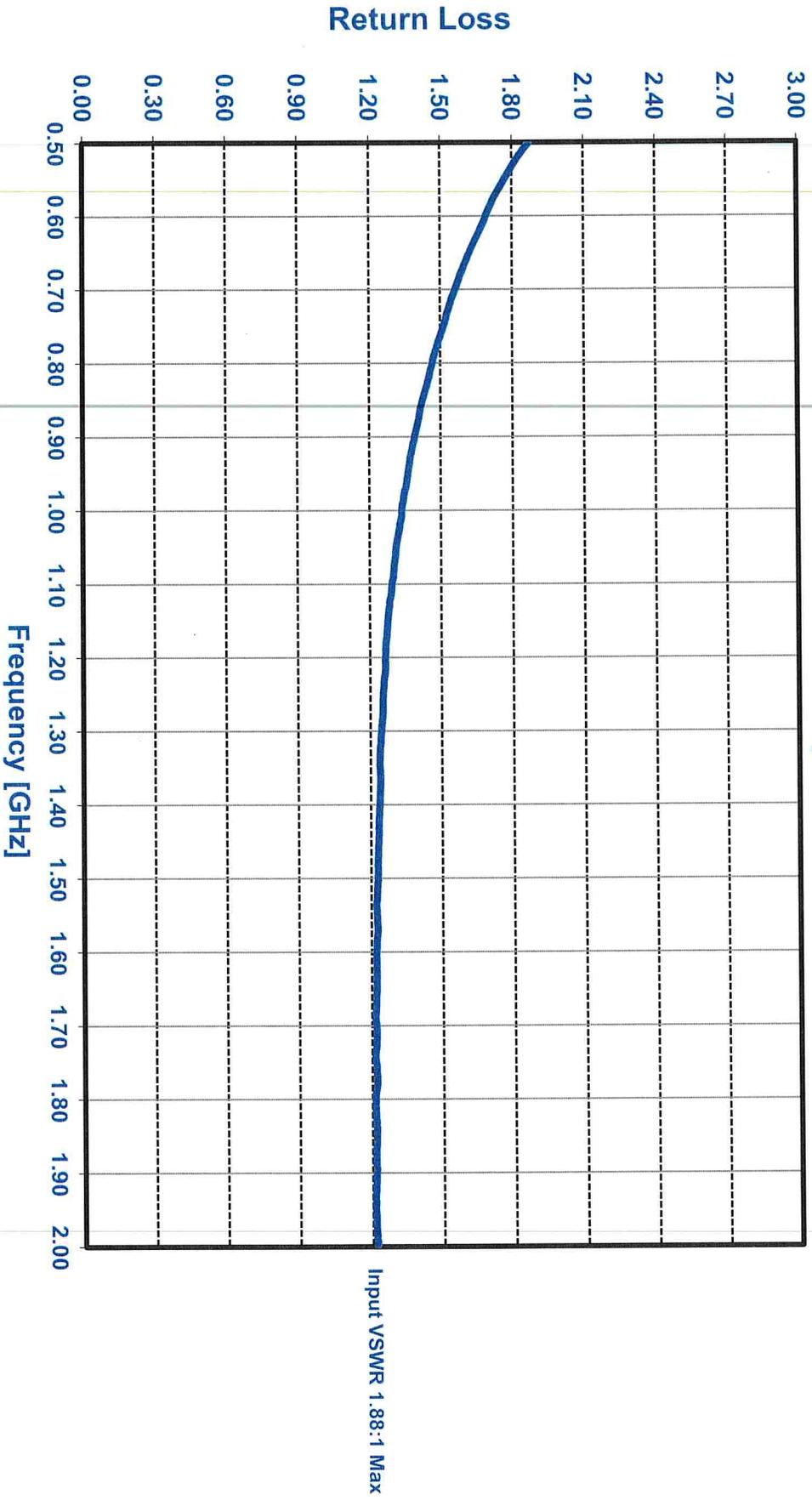
Video Out VS Input Power



Model Number: ERDLVA-OR5G2G-CW-75MV-93  
Serial Number: PL45753

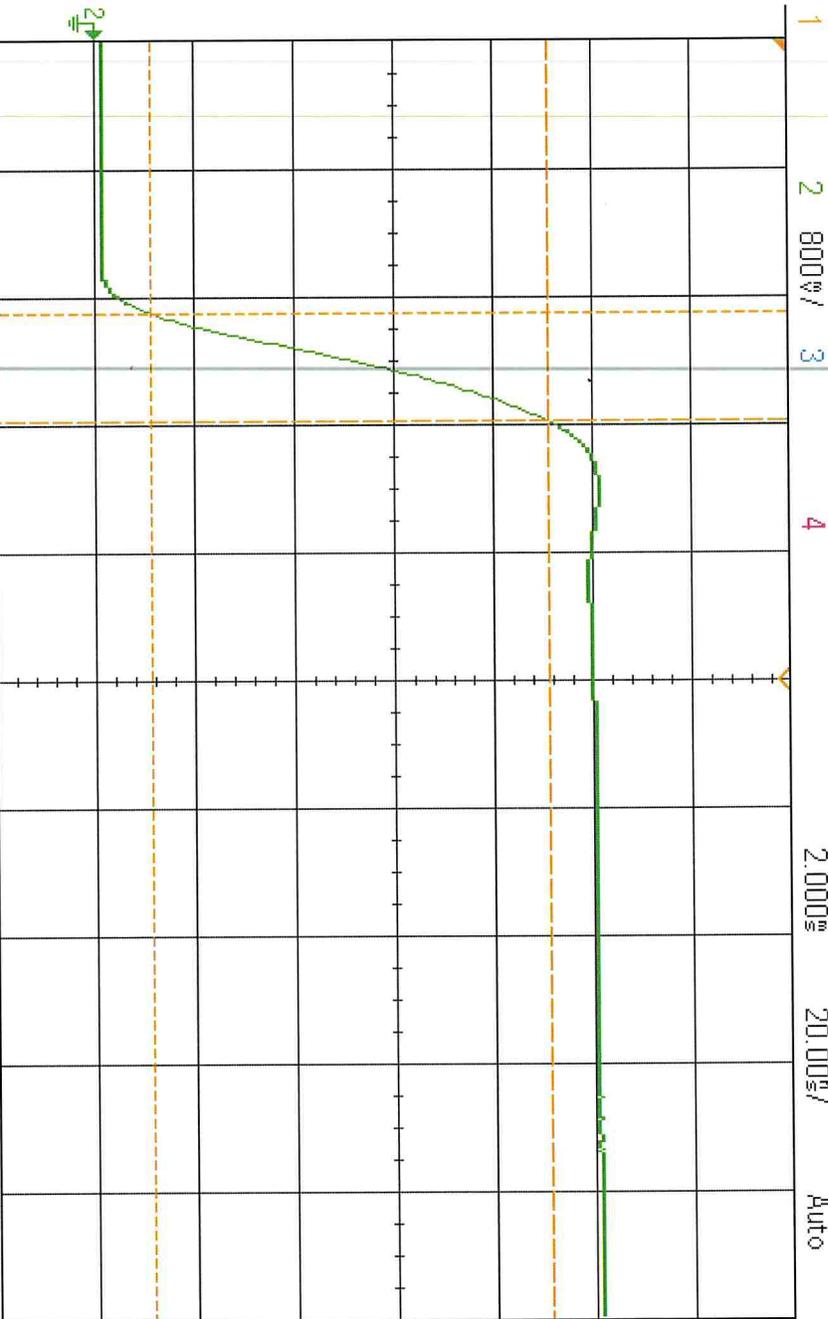
Temperature: +25C

## VSWR Graph



PL45753  
Settle / Rise Time

DSO-X 3034A, MW52394003, Mon Apr 29 13:31:42 2024



2.000 ns 20.00 ns/div Auto

4 4 3.38V

**KEYSIGHT**  
TECHNOLOGIES  
Acquisition  
Averaging: B4  
4.00GSa/s

Channels	
DC	1.00:1

Measurements  
AC RMS - FS[2]: 1.6493V  
Rise[2]: 16.8ns

Measurement Menu

Source 2

Type: Rise

Add Measurement

Settings

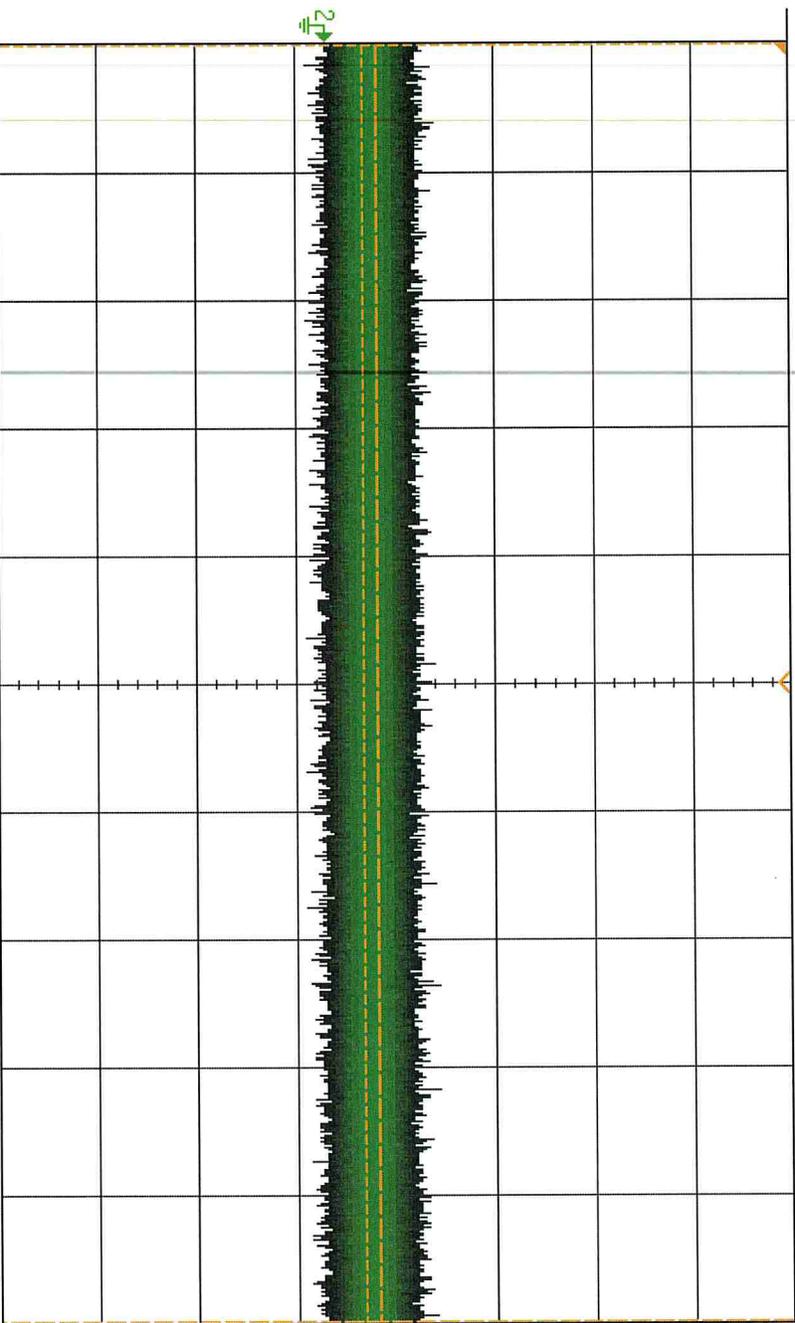
Clear Meas

Statistics

PL45753  
RMS noise

DSO X 3034A, MW52394003, Mon Apr 29 13:34:48 2024

1 2 100% / 3 4 2.051 $\mu$ s 200.0 $\mu$ s / Auto f 4 3.38V



KEYSIGHT TECHNOLOGIES	Acquisition	Normal
		1.00GSa/s
Channels	DC	1.00:1
	DC	1.00:1
	DC	1.00:1
Measurements	Rise[2]:	<93ns
	Fall[2]:	<93ns
	AC RMS - FS[2]:	13.88mV

Measurement Menu

Source 2

Type: AC RMS - FS

Add Measurement

Settings

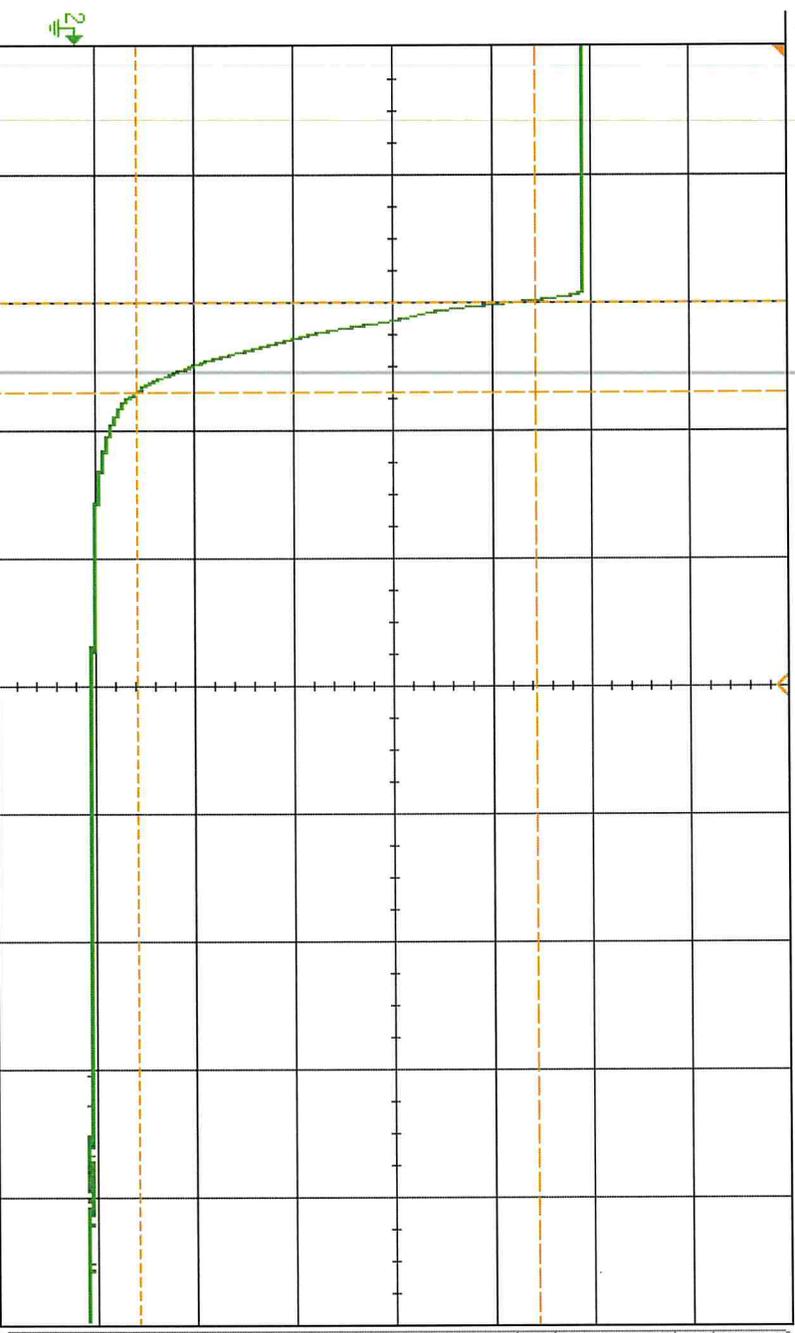
Clear Meas

Statistics

PL45753  
Recovery/Fall

DSO-X 3034A, MW52394003, Mon Apr 29 13:32:58 2024

1 2 800V/ 3 4 2.051µs 200.0%/ Auto f 4 3.38V



KEYSIGHT TECHNOLOGIES	
Acquisition	...
Averaging: 64	
4.00GSa/s	
Channels	...
DC	1.00:1
Measurements	...
AC RMS - FS[2]:	1.5987V
Rise[2]:	No edges
Fall[2]:	141.8ns

Measurement Menu

Source 2

Type: Fall

Add Measurement

Settings

Clear Meas

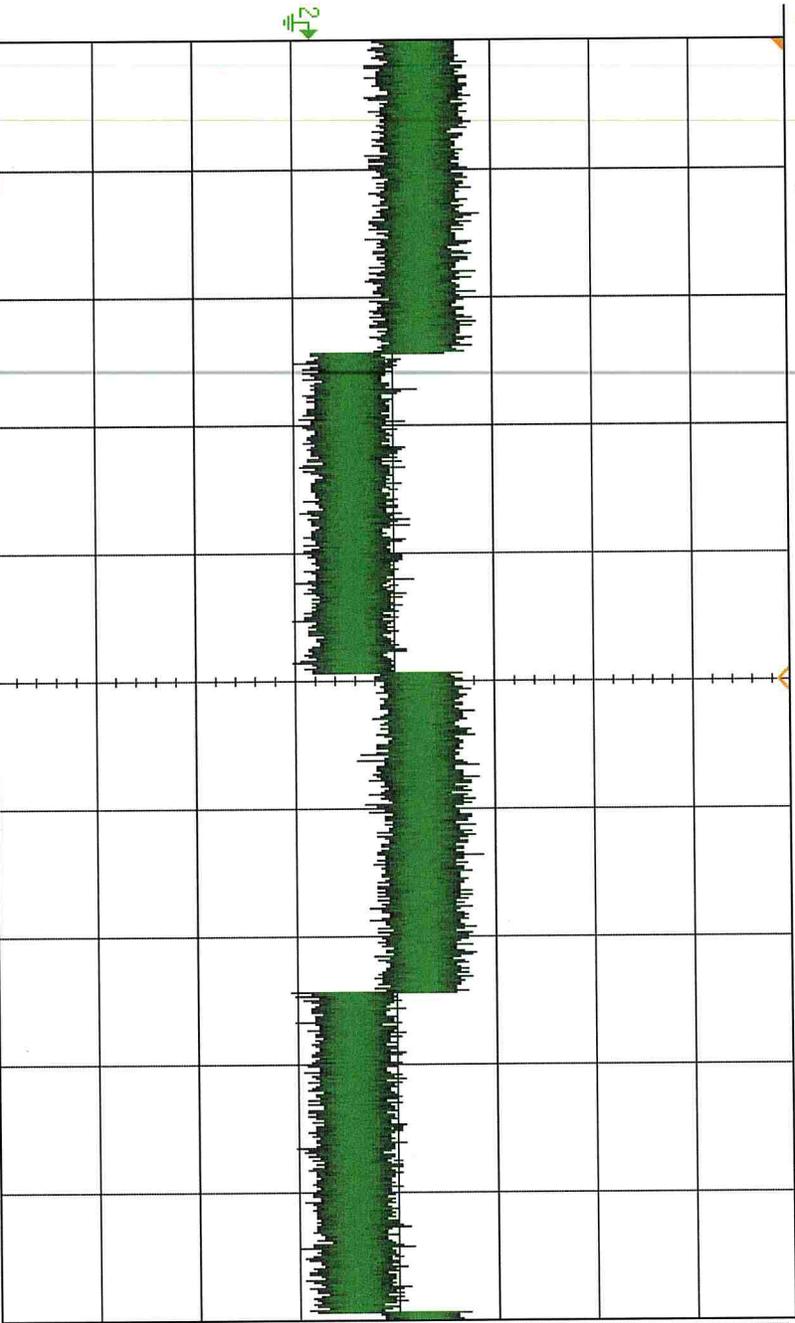
Statistics



PL45753  
TSS -45dbm

DSO-X 3034A, MW52394003: Mon Apr 29 13:29:54 2024

1 2 100% / 3 4 2.001ms 20.00ns / Auto 5 4 3.38V



**KEYSIGHT**  
TECHNOLOGIES

Acquisition  
Normal  
4.00GSa/s

Channels	
DC	1.00:1

Save to file = PL45753\_tss

Save

Recall

Default/Erase

Press to Save