



**SUMMARY TEST DATA
ON
SDLVA-212-65-16MV-12DBM**

Customer: _____	Tested By: <u>Jim Hopson</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>SDLVA-212-65-16MV-12DBM</u>	Date: <u>09/30/24</u>
Serial No: <u>PL46794/2440</u>	Drawing No: <u>27626223</u> Rev: <u>A2</u>

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	2 GHz to 12 GHz	2 GHz to 12 GHz	PMI QA3
2	TSS	-64 dBm max	-64 dBm	
3	Input Power Handling	+20 dBm	Pass	
4	Simultaneous Signal Suppression	Simultaneous signal, 5 dB lower at RF input, shall be 5 dB lower at output with -45 dBm Min input signal	-5.5 Typ.	
5	Output Harmonics	-9 dBc	-10dBc Typ.	
6	Video Log Range	-55 dBm to +10 dBm	-55 dBm to +10 dBm	
7	Video Log Linearity	+2.2 dB	1.19/-1.37 dB	
8	Video Log Slope	16.0 ±2.0 mV/dB nom	15.17/16.93 mV/dB	
9	Video Freq Flatness	±4 dB max	±2.55 dB	
10	Pulse Width Range	25 nsec to CW	25 nsec to CW	
11	Video Rise Time	10 nsec max	4.3 nsec	

4921 Robert J. Mathews Parkway, Suite 1, El Dorado Hills, CA, 95762 Phone: (916) 542-1401 Fax: (916) 265-2597 Email: sales@pmi-rf.com



**SUMMARY TEST DATA
ON
SDLVA-212-65-16MV-12DBM**

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
12	Video Fall Time	15 nsec max	7.3 nsec	PMI QA3
13	Recovery Time	30 nsec max	<25 nsec	
14	Delay	<2 nsec	<2 nsec	
15	Video Output Impedance	35Ω Nominal	Pass	
16	RF In/Out Impedance	50Ω	Pass	
17	Input VSWR (50Ω)	2.0:1 max	1.82:1	
18	DC Supply	+15 V @ 800 mA -15 V @ 200 mA	500 mA 30 mA	

QA/QC Approval: K. Klauwzy Date: 10-1-24

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Email: sales@pmi-rf.com

LOG TRANSFER WITH FREQUENCY
 MODEL: SDLVA-212-65-16MV-12DBM
 TESTED BY: Jim Hopson
 DATE: 9-30-2024
 SERIAL NO: PL46794

Test Temp: 25C

PLANAR MONOLITHICS INDUSTRIES
 4921 Robert J. Mathews Parkway STE 1
 TEL: 916-542-1401 FAX: 301-662-1731
 EMAIL: SALES@PML-RF.COM
 ISO 9001:2000 CERTIFIED



Frequency

-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10
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2000 MHz	INTERCEPT (mV)	-896.1
	SLOPE (mV/dB)	-15.17

-70	-146	-221	-298	-370	-425	-499	-572	-652	-735	-825	-913	-990	-1050
-9	-9	-8	-9	-5	16	18	21	17	9	-5	-17	-18	-2
0.56	0.57	0.52	0.59	0.32	-1.06	-1.18	-1.37	-1.09	-0.62	0.31	1.12	1.19	0.15
0.90	0.58	0.20	-0.07	-0.65	-2.27	-2.71	-3.22	-3.29	-3.18	-2.64	-2.22	-2.48	-3.79

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

7250 MHz	INTERCEPT (mV)	-966.6
	SLOPE (mV/dB)	-16.63

-58	-134	-220	-304	-390	-464	-545	-626	-704	-795	-887	-976	-1057	-1133
-6	1	-2	-3	-6	4	6	8	13	5	-4	-9	-7	0
0.37	-0.06	0.11	0.16	0.33	-0.22	-0.35	-0.48	-0.79	-0.32	0.21	0.57	0.44	0.00
0.14	-0.18	0.11	0.29	0.58	0.14	0.12	0.11	-0.09	0.51	1.18	1.65	1.64	1.32

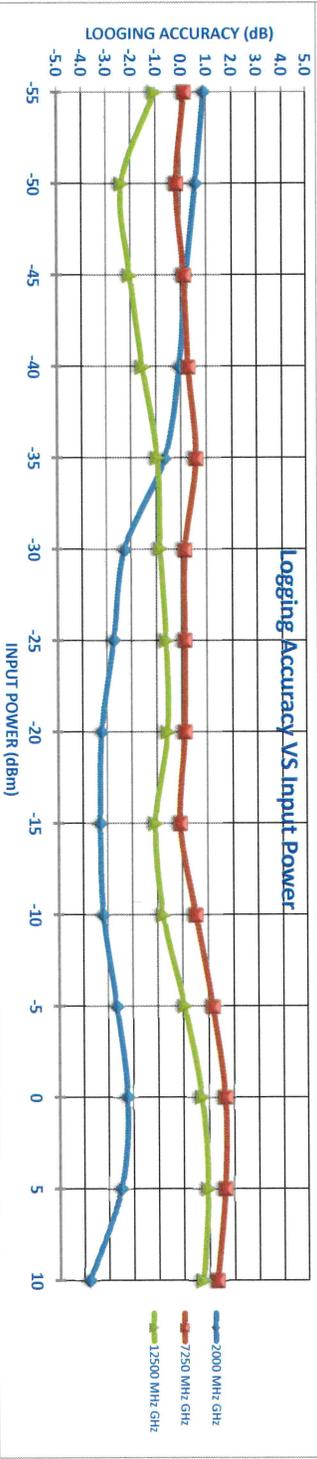
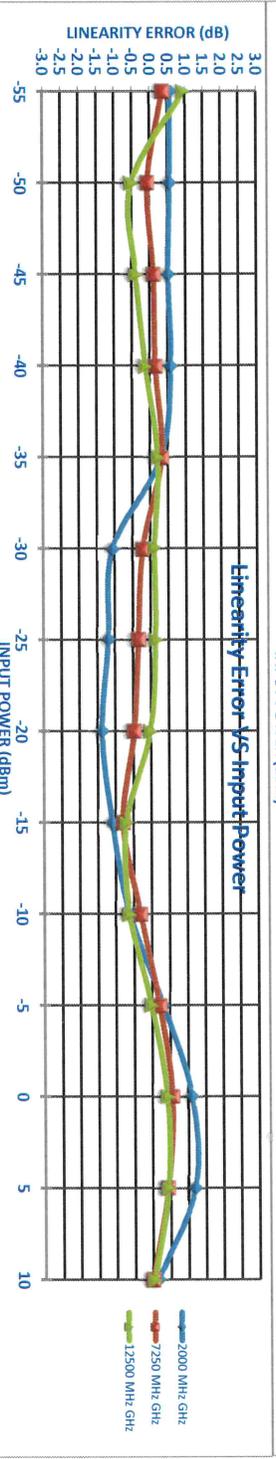
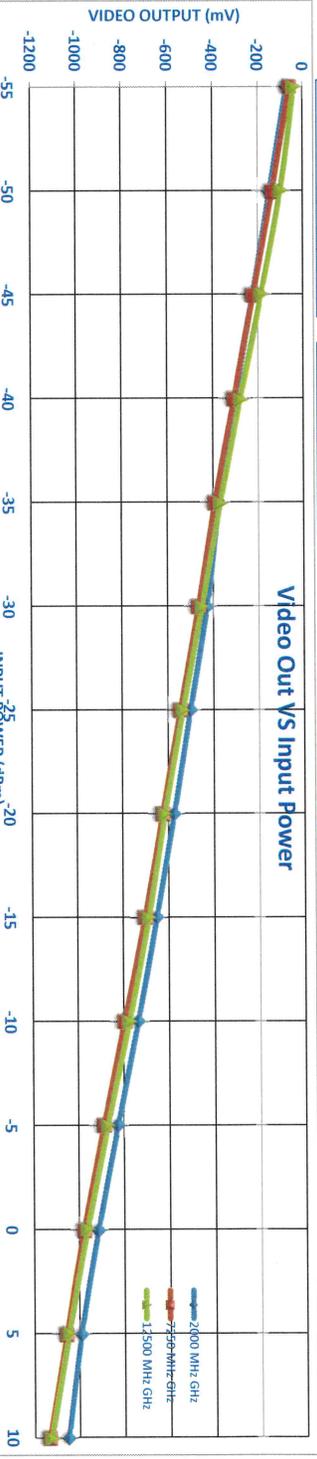
Measured Value (mV)	Error (mV)
LINEARITY ERROR (dB)	
ACCURACY ERROR (dB)	

12500 MHz	INTERCEPT (mV)	-953.8
	SLOPE (mV/dB)	-16.93

-39	-99	-185	-275	-365	-448	-533	-615	-688	-774	-869	-961	-1046	-1124
-16	9	7	2	-4	-2	-2	0	12	11	0	-7	-8	-1
0.96	-0.51	-0.40	-0.12	0.22	0.13	0.15	-0.01	-0.70	-0.62	-0.01	0.42	0.44	0.05
-1.04	-2.36	-2.03	-1.53	-0.96	-0.62	-0.57	-0.62	-1.08	-0.78	0.07	0.73	0.96	0.77

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

Flatness dB	+/-	0.97	1.47	1.11	0.91	0.77	1.20	1.42	1.66	1.60	1.85	1.91	1.94	2.06	2.55
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LOG TRANSFER WITH FREQUENCY
 MODEL: SDLVA-212-65-16MV-12DBM
 TESTED BY: Jim Hopson
 DATE: 9-30-2024
 SERIAL NO: PL46794

Test Temp: 0C

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

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

2000 MHz	INTERCEPT (mV)	-900.7
	SLOPE (mV/dB)	-15.53

-57	-134	-210	-288	-361	-419	-494	-569	-651	-736	-828	-917	-996	-1060
-10	-9	-8	-8	-4	16	19	21	17	9	-5	-16	-18	-4
0.64	0.60	0.49	0.54	0.24	-1.02	-1.19	-1.36	-1.08	-0.61	0.32	1.05	1.14	0.26
0.92	0.59	0.21	-0.03	-0.59	-2.07	-2.51	-2.96	-2.97	-2.81	-1.82	-2.02	-3.13	

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

7250 MHz	INTERCEPT (mV)	-961.7
	SLOPE (mV/dB)	-16.78

-44	-123	-209	-295	-380	-454	-536	-617	-696	-789	-882	-971	-1053	-1130
-5	0	0.14	0.24	0.33	-0.26	-0.37	-0.55	-0.84	-0.29	0.25	0.56	0.44	0.03
0.32	0.00	0.14	0.24	0.33	-0.26	-0.37	-0.55	-0.84	-0.29	0.25	0.56	0.44	0.03
0.17	-0.06	0.18	0.37	0.56	0.06	0.04	-0.04	-0.24	0.41	1.06	1.46	1.45	1.12

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

12500 MHz	INTERCEPT (mV)	-948.6
	SLOPE (mV/dB)	-17.08

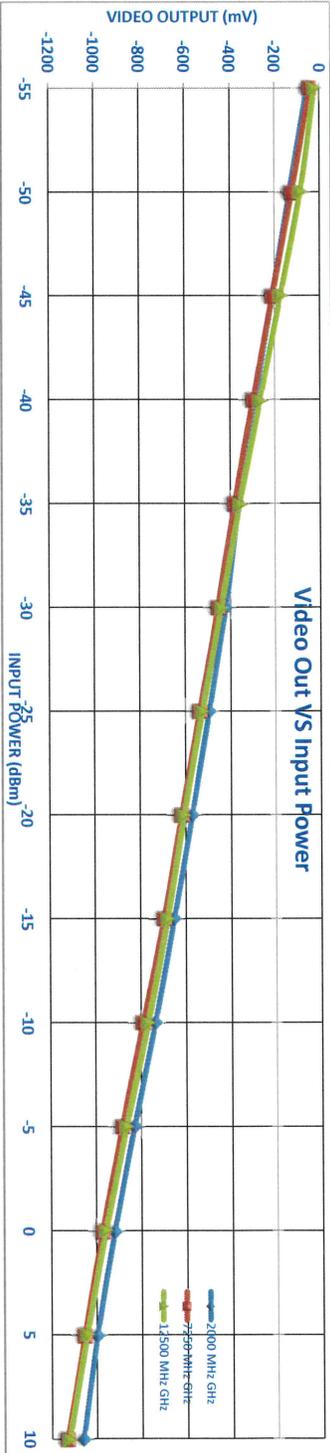
-24	-86	-174	-265	-355	-438	-524	-606	-680	-767	-863	-956	-1041	-1121
-15	8	6	1	-4	-2	-2	1	-12	11	0	-7	-7	-2
0.85	-0.48	-0.34	-0.04	0.25	0.11	0.14	-0.06	-0.72	-0.63	-0.01	0.43	0.41	0.09
-1.09	-2.28	-1.94	-1.45	-0.96	-0.91	-0.69	-0.71	-1.21	-0.93	-0.10	0.55	0.72	0.58

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

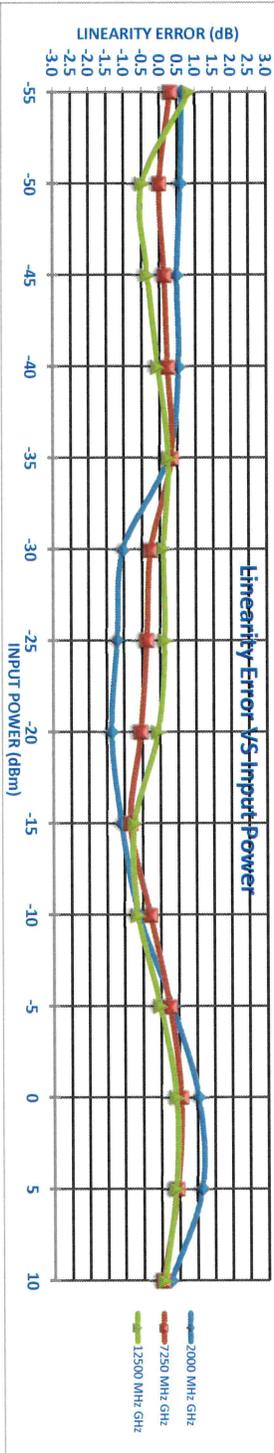
Flatness dB	+/-
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1.00	1.44	1.08	0.91	0.76	1.06	1.28	1.46	1.37	1.61	1.64	1.64	1.73	2.13
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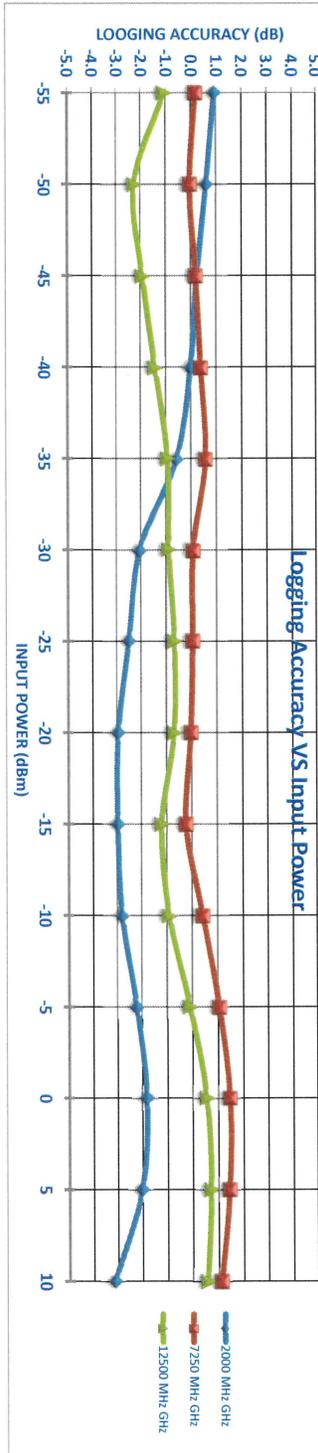
Video Out VS Input Power



Linearity Error VS Input Power



Logging Accuracy VS Input Power



LOG TRANSFER WITH FREQUENCY
 MODEL: SDLVA-212-65-16MV-12DBM
 TESTED BY: Jim Hoppson
 DATE: 9-30-2024
 SERIAL NO.: PL46794

Test Temp: +85C

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

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

2000 MHz	INTERCEPT (mV)	-879
	SLOPE (mV/dB)	-14.19

-106	-175	-250	-322	-391	-440	-508	-576	-647	-725	-808	-891	-963	-1035
-7	-5	-9	-11	-9	13	16	19	19	12	0	-12	-13	-14
0.52	0.35	0.66	0.75	0.61	-0.94	-1.15	-1.35	-1.35	-0.85	0.00	0.84	0.92	0.99
0.89	0.27	0.08	-0.31	-0.91	-2.78	-3.44	-4.09	-4.56	-4.58	-4.28	-3.98	-4.38	-4.78

Measured Value (mV)	-1035
Error (mV)	-14
LINEARITY ERROR (dB)	0.99
ACCURACY ERROR (dB)	-4.78

7250 MHz	INTERCEPT (mV)	-975.3
	SLOPE (mV/dB)	-16.23

-93	-159	-244	-326	-414	-487	-565	-645	-719	-807	-897	-983	-1064	-1138
-11	5	1	0	-7	1	4	6	13	6	-3	-8	-8	0
0.55	-0.30	-0.05	0.00	0.42	-0.08	-0.28	-0.35	-0.79	-0.37	0.18	0.47	0.46	0.92
0.07	-0.74	-0.29	-0.06	0.56	0.22	0.20	0.31	0.04	0.66	1.41	1.90	2.07	1.80

Measured Value (mV)	-1138
Error (mV)	-8
LINEARITY ERROR (dB)	0.92
ACCURACY ERROR (dB)	1.80

12500 MHz	INTERCEPT (mV)	-963
	SLOPE (mV/dB)	-16.55

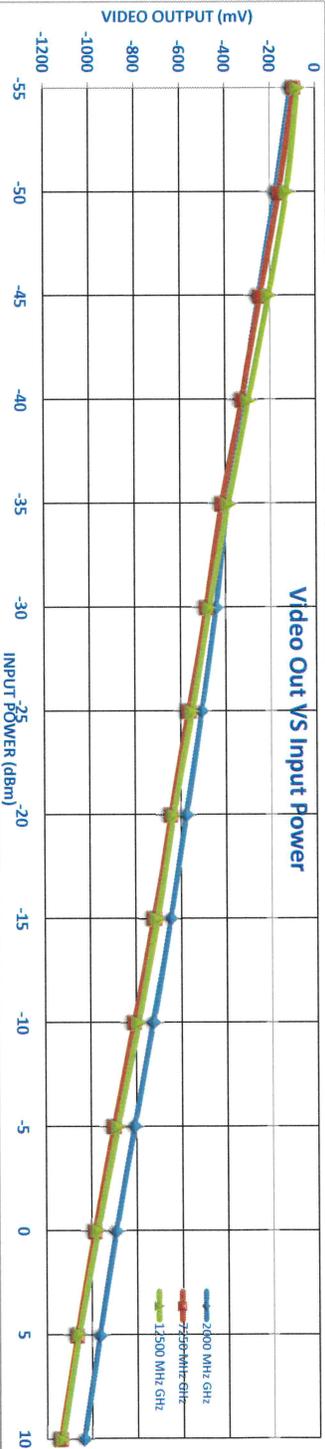
-77	-126	-206	-296	-386	-471	-550	-632	-704	-786	-880	-970	-1055	-1130
-25	10	12	5	-2	-5	-1	0	11	12	0	-7	-9	-1
1.48	-0.58	-0.74	-0.33	0.14	0.28	0.05	0.00	-0.65	-0.69	-0.92	0.42	0.56	0.09
-0.95	-2.84	-2.73	-2.01	-1.23	-0.80	-0.75	-0.52	-0.92	-0.68	0.32	1.07	1.50	1.29

Measured Value (mV)	-1130
Error (mV)	-1
LINEARITY ERROR (dB)	0.09
ACCURACY ERROR (dB)	1.29

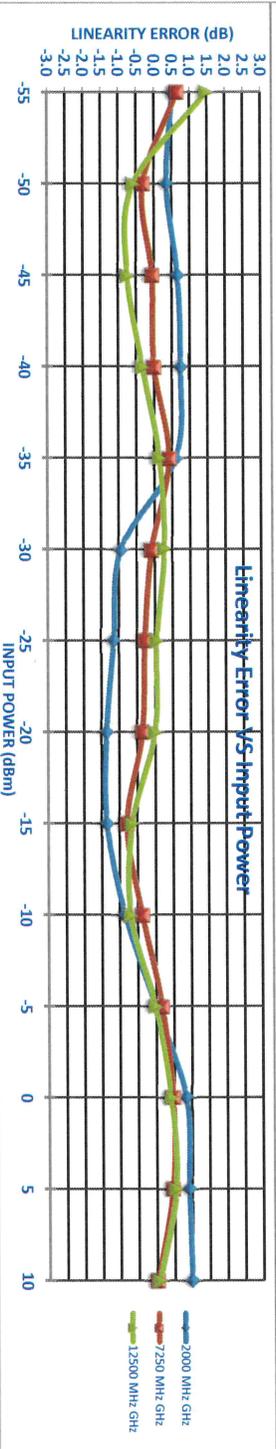
Flatness dB	+/-
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0.92	1.56	1.40	0.97	0.89	1.50	1.82	2.20	2.30	2.62	2.84	2.94	3.23	3.29
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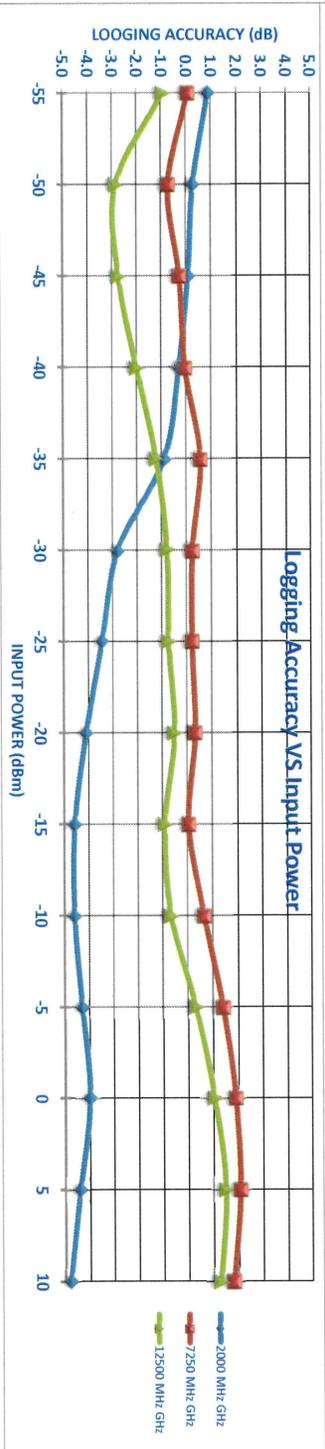
Video Out VS Input Power



Linearity Error VS Input Power



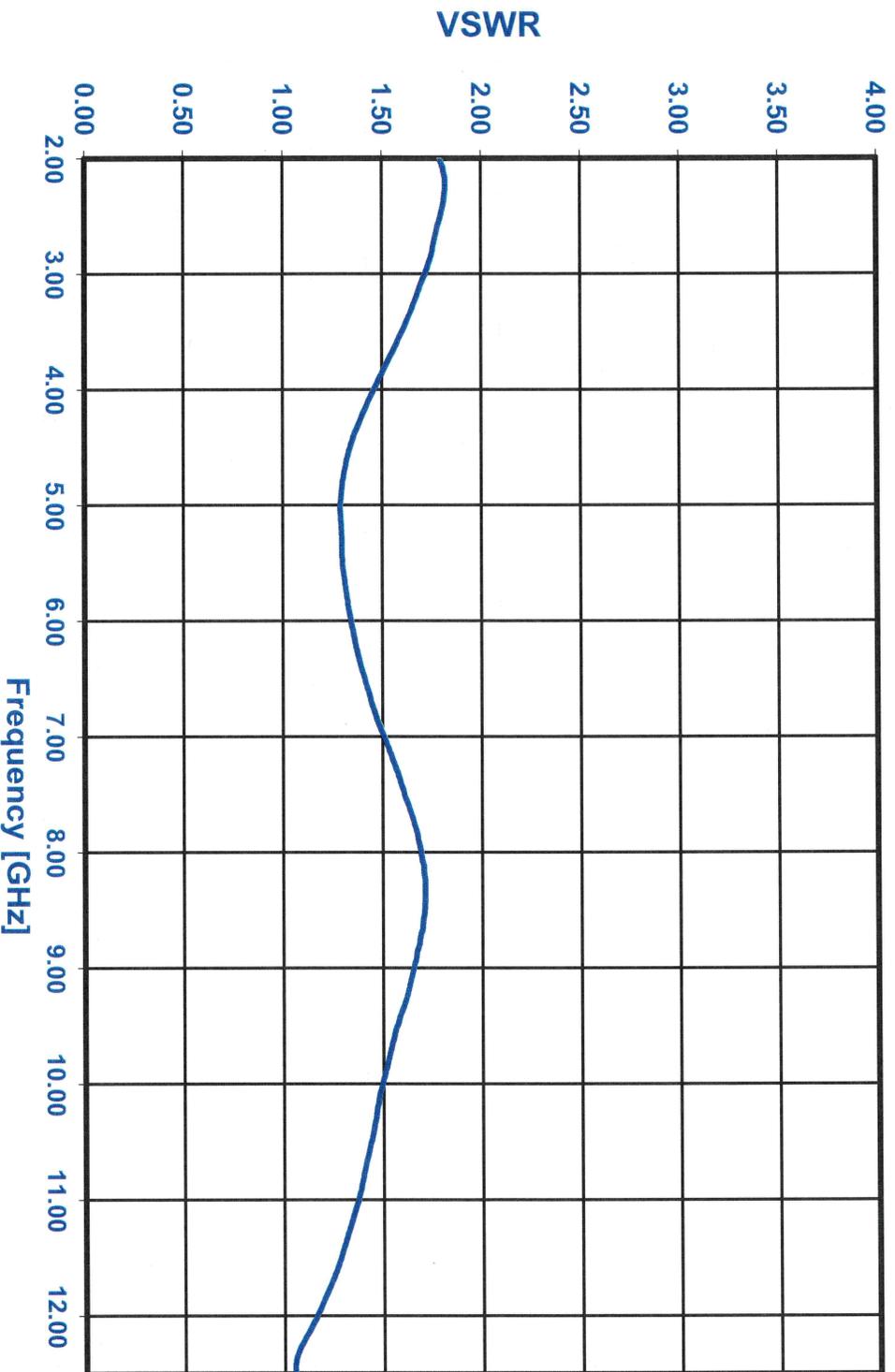
Logging Accuracy VS Input Power



Model Number: SDL VA-212-65-16MV-12DBM
Serial Number: PL46794

Temperature: +25C

VSWR GRAPH



VSWR

Frequency [GHz]

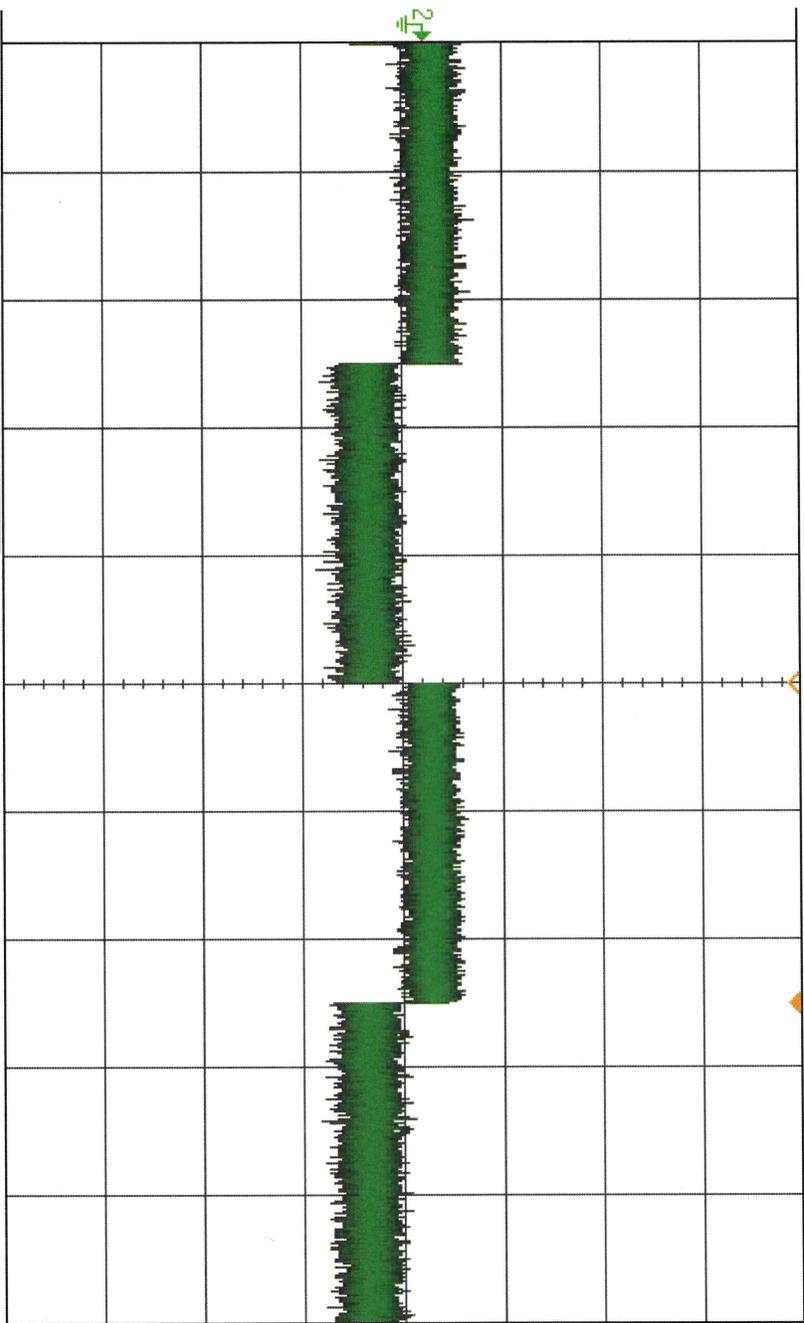
Input 1.82:1 Max

@ -20dBm

PL46794
TSS - 64 dbm

DSO-X 3034A, MW52394003: Wed Sep 25 11:52:15 2024

1 2 10% 3 4 -49.91% 20.00%/ Stop f E 2.23V



KEYSIGHT
TECHNOLOGIES

Acquisition
Normal
4.00GSa/s

Channels	
DC	1.00:1

Save to file = pl46794_tss_64

Save

Recall

Default/Erase

Press to Save

P446794
Rise Time

DSO-X 3034A, MW52394003, Wed Sep 25 11:54:19 2024

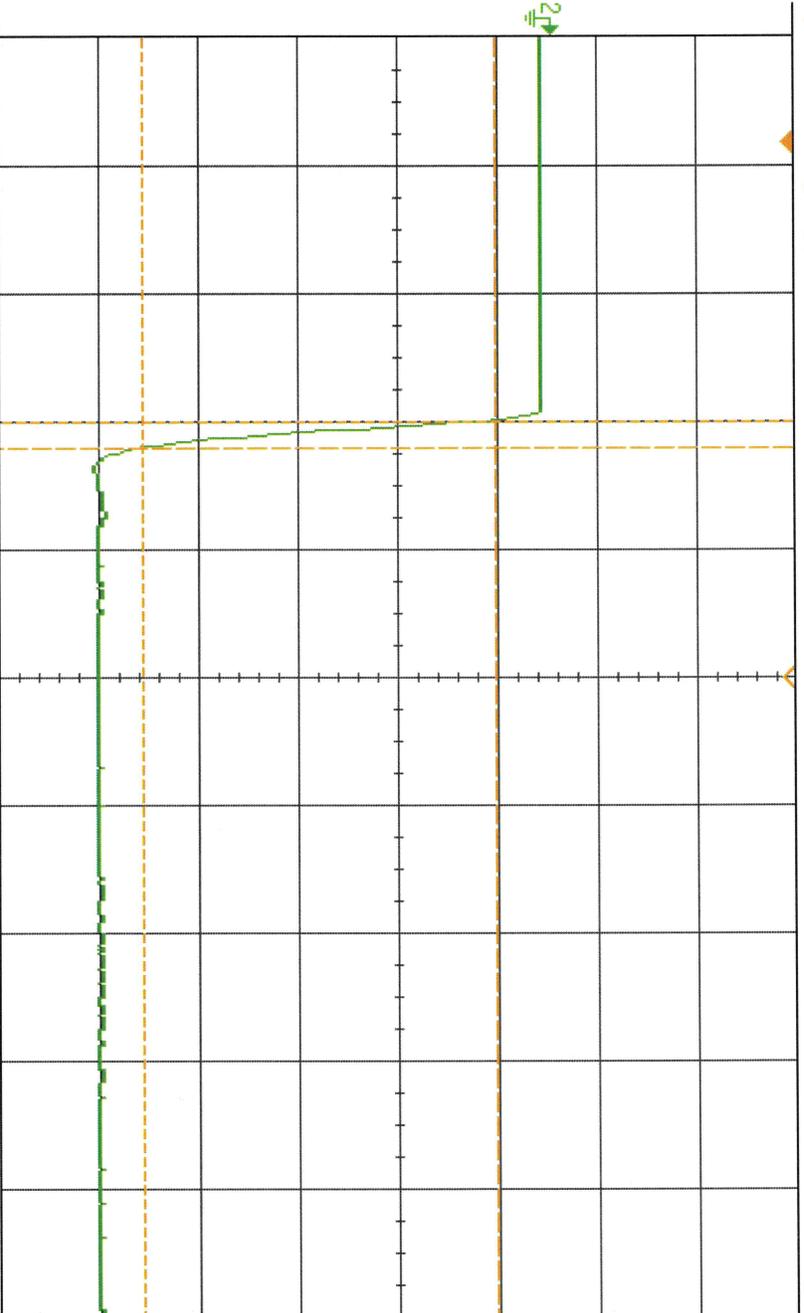
1 2 250mV 3 4

83.60%

20.00%/

Auto

f E 2.23V



Measurement Menu

Source 2

Type: Fall

Add Measurement

Settings

Clear Meas

Statistics

KEYSIGHT
TECHNOLOGIES

Acquisition
Averaging: 16
4.00GSa/s

Channels

DC	1.00:1

Measurements

Rise(2): No edges

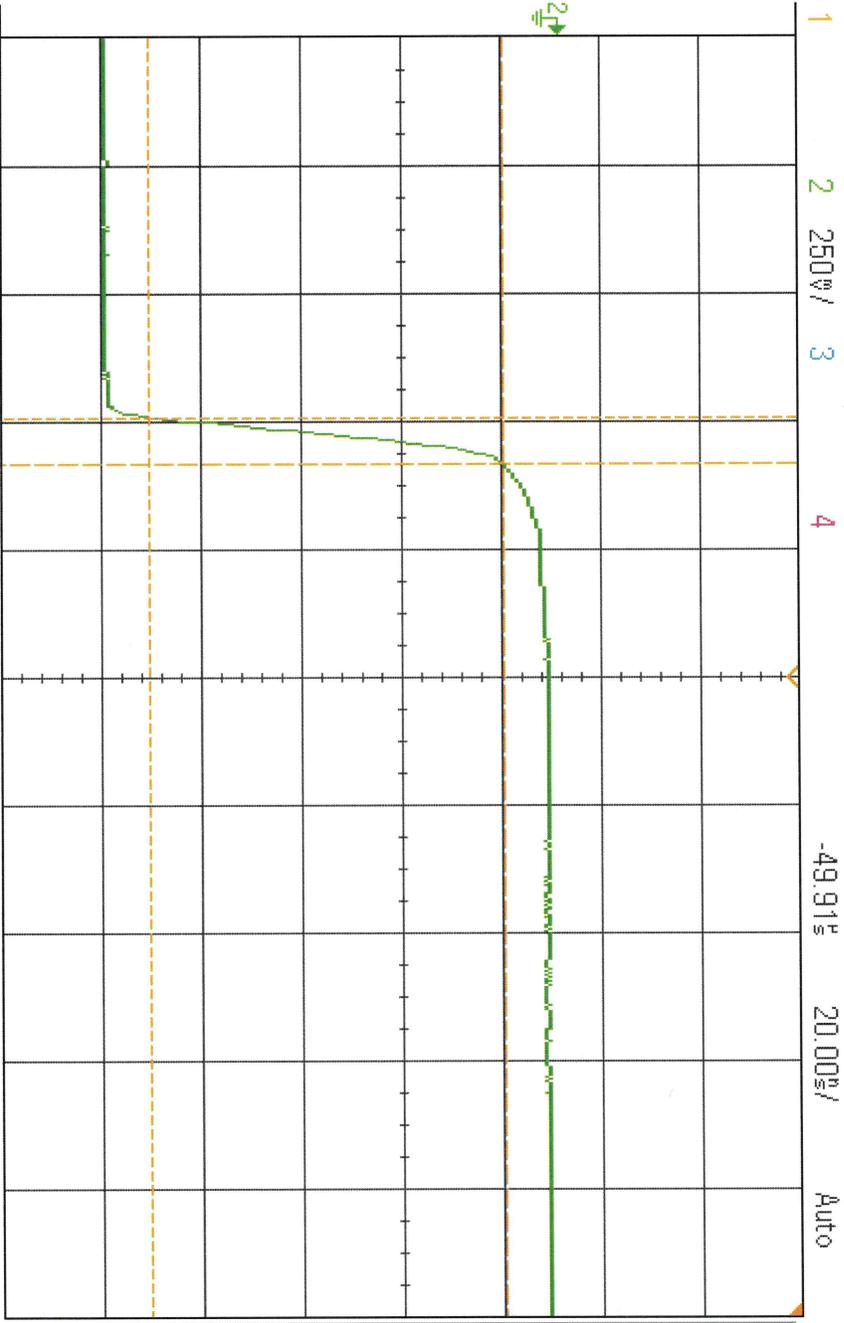
Fall(2):

Rise 4.3ns

A/D 1/9/30/24

PL46794 Fall & Recovery

DSO-X 3034A, MW52394003, Wed Sep 25 11:53:31 2024



1 2 250%/ 3 4 -49.91mV 20.00ns/ Auto F E 2.23V

Measurement Menu

Source 2

Type: Rise

Add Measurement

Settings

Clear Meas

Statistics

KEYSIGHT TECHNOLOGIES

Acquisition ::
Averaging: 16
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
Rise(2): 7.3ns
Fall 119D
9/30/24

SDLVA-212-65-16MV-12DBM

SN# PL46794

Power

FREQ	-55 dbm	+10 dbm P-SAT
2GHZ	12.8 dbm	14.7 dbm
3GHZ	14.2 dbm	14.8 dbm
4GHZ	14.7 dbm	14.7 dbm
5GHZ	14.5 dbm	14.9 dbm
6GHZ	14.2 dbm	14.9 dbm
7GHZ	14.3 dbm	14.7 dbm
8GHZ	14.2 dbm	14.8 dbm
9GHZ	14 dbm	14.7 dbm
10GHZ	13.9 dbm	14.6 dbm
11GHZ	14 dbm	14.6 dbm
12.5GHZ	14 dbm	15.1 dbm