

SUMMARY TEST DATA ON SDLVA-6G18G-CD-2-OPT218

CUSTOMER: _____
SO: _____
MODEL NO: SDLVA-6G18G-CD-2-OPT218
SERIAL NO: PL42887/2347

TESTED BY: Jim Hopson
TEMPERATURE: +25°C
DATE: 11/20/2023
DRAWING NO: 27623906 REV: A1

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	2.0 GHz – 18.0 GHz	GHz - GHz	<i>F111</i> <i>QA3</i>
2	Flatness	± 2.0 dB Maximum	± 1.4dB 25°C See Plots	
3	TSS	-70 dBm Minimum	-71dBm	
4	VSWR	2.0:1 (Input)	1.66:1	
5	Input Power	+17 dBm CW Maximum	Pass	
6	RF Out	+13 dBm ±3 dB Typical	15.0/13.1 dBm	
7	Log Slope	25 mV/dB (±10%) 50Ω	25.1 mV/dB See Plot	
8	Log Range	-70 to +5 dBm	See Plots	
9	Log Linearity	±2.5 dB (-40°C - +85°C)	1.58/-1.52dB See Plots	
10	Pulse Range	30 ns to CW	Pass	
11	Rise Time	10 ns (6 ns Typical)	5.8 ns	
12	Recovery Time	60 ns Typical	60 ns Typical	
13	DC Supply	+15V or +12V @ 350 mA -15V or -12V @ 180 mA	220 mA 100 mA	

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

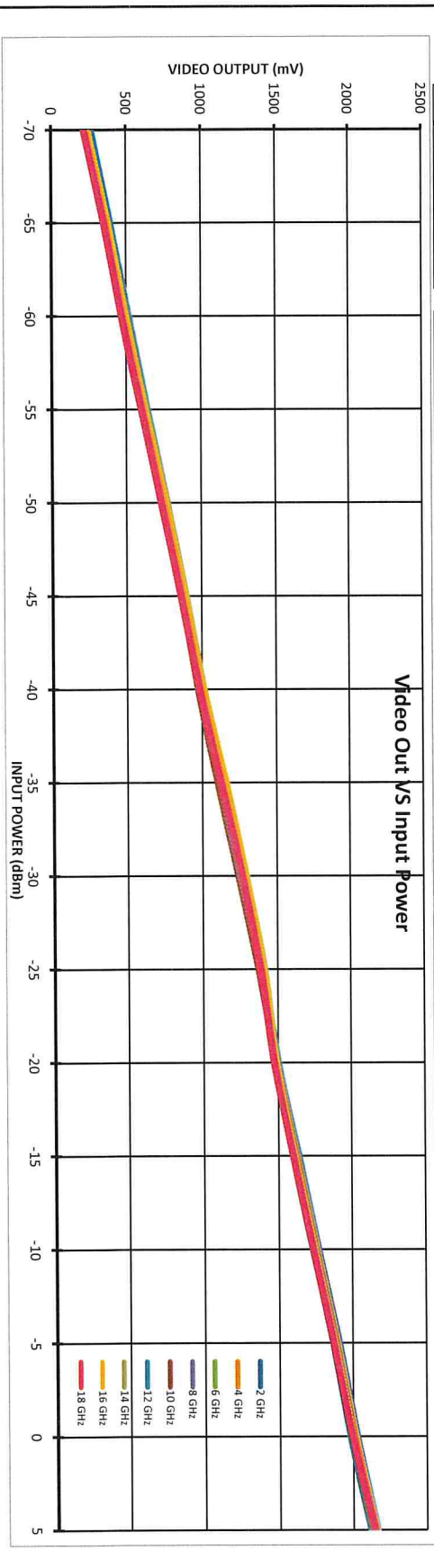
Date: 11-20-23

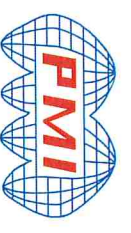
Model: SDLVA-6G18G-CD-2 - OPT18
 Serial No: PL 42887
 Date: 11/20/23
 Tested By: Jim Hopson
 Test Temp: +25°C



Frequency

Frequency	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
2 GHz	INTERCEPT (mV)	2029	269	398	522	642	770	878	991	1138	1274	1404	1507	1646	1776	1913
	SLOPE (mV/dB)	25.26	8	11	9	2	4	-14	-28	-7	3	7	-17	-4	0	11
	LN. ERR. (dB)	1.1	0.32	0.43	0.34	0.09	0.16	-0.56	-1.09	-0.27	0.12	0.26	-0.66	-0.16	-0.01	0.42
4 GHz	INTERCEPT (mV)	2019	259	393	517	640	771	884	996	1138	1270	1394	1497	1633	1763	1900
	SLOPE (mV/dB)	25.12	-1	7	6	3	8	-4	-18	-1	5	3	-19	-9	-4	7
	LN. ERR. (dB)	0.764	-0.05	0.29	0.22	0.12	0.34	-0.17	-0.71	-0.06	0.20	0.14	-0.76	-0.35	-0.18	0.28
6 GHz	INTERCEPT (mV)	2004	245	381	502	626	756	866	974	1107	1247	1379	1488	1623	1753	1889
	SLOPE (mV/dB)	25.15	2	12	7	5	10	-6	-24	-17	-2	4	-13	-4	1	11
	LN. ERR. (dB)	0.949	0.07	0.47	0.28	0.21	0.38	-0.24	-0.95	-0.66	-0.09	0.15	-0.51	-0.14	0.02	0.43
8 GHz	INTERCEPT (mV)	1992	248	383	505	630	761	869	976	1109	1244	1372	1479	1608	1741	1877
	SLOPE (mV/dB)	24.89	-2	9	6	7	13	-3	-20	-12	-1	2	-15	-11	-2	10
	LN. ERR. (dB)	0.82	-0.07	0.35	0.25	0.28	0.54	-0.12	-0.82	-0.48	-0.05	0.09	-0.61	-0.42	-0.08	0.38
10 GHz	INTERCEPT (mV)	2000	249	384	506	630	760	864	970	1099	1236	1370	1488	1625	1754	1888
	SLOPE (mV/dB)	25.07	4	13	10	9	13	-8	-27	-24	-12	-3	-11	1	5	13
	LN. ERR. (dB)	1.09	0.15	0.53	0.40	0.35	0.53	-0.32	-1.09	-0.94	-0.48	-0.13	-0.42	0.04	0.19	0.53
12 GHz	INTERCEPT (mV)	1989	253	387	510	636	771	881	989	1126	1261	1391	1483	1605	1737	1871
	SLOPE (mV/dB)	24.66	-10	1	0	3	15	1	-14	0	11	18	-13	-14	-6	5
	LN. ERR. (dB)	0.736	-0.41	0.03	0.01	0.12	0.60	0.06	-0.56	-0.01	0.47	0.74	-0.53	-0.59	-0.23	0.20
14 GHz	INTERCEPT (mV)	2012	238	375	498	627	768	896	1013	1159	1293	1412	1491	1617	1750	1883
	SLOPE (mV/dB)	25.06	-19	-8	-10	-6	9	12	4	24	33	27	-19	-11	-4	-13
	LN. ERR. (dB)	1.315	-0.78	-0.31	-0.40	-0.26	0.37	0.48	0.14	0.97	1.32	1.06	-0.79	-0.76	-0.45	-0.15
16 GHz	INTERCEPT (mV)	2012	247	382	503	629	766	897	1017	1167	1299	1414	1492	1619	1749	1883
	SLOPE (mV/dB)	24.97	-17	-6	-10	-9	3	9	4	29	37	27	-20	-18	-13	-4
	LN. ERR. (dB)	1.465	-0.66	-0.26	-0.41	-0.37	0.12	0.37	0.17	1.18	1.46	1.07	-0.81	-0.72	-0.51	-0.15
18 GHz	INTERCEPT (mV)	2005	216	352	471	601	732	863	984	1127	1267	1388	1476	1605	1738	1874
	SLOPE (mV/dB)	25.46	-7	2	-6	-4	0	4	-3	13	26	20	-20	-18	-12	-4
	LN. ERR. (dB)	1.015	-0.26	0.08	-0.25	-0.14	0.00	0.15	-0.10	0.52	1.01	0.77	-0.78	-0.71	-0.49	-0.15
Avg. Slope: 25.1 mV/dB																
Flatness: dB: 11.4 dB																





Frequency

-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
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2 GHz	INTERCEPT (mV)	2097
	SLOPE (mV/dB)	25.71
	LN. ERR. (dB)	1.2

299	433	563	690	820	924	1038	1194	1339	1469	1564	1703	1832	1971	2104	2240
2	7	9	7	9	-16	-31	-3	13	15	-19	-8	-8	2	7	14
0.07	0.28	0.34	0.28	0.33	-0.62	-1.19	-0.12	0.52	0.57	-0.73	-0.33	-0.31	0.10	0.27	0.56

4 GHz	INTERCEPT (mV)	2086
	SLOPE (mV/dB)	25.5
	LN. ERR. (dB)	0.858

298	431	561	691	824	932	1044	1194	1333	1459	1555	1691	1819	1958	2090	2234
-3	3	5	8	13	-6	-22	1	12	11	-21	-12	-12	0	4	21
-0.12	0.10	0.20	0.30	0.51	-0.25	-0.86	0.02	0.48	0.42	-0.82	-0.48	-0.46	-0.01	0.16	0.81

6 GHz	INTERCEPT (mV)	2071
	SLOPE (mV/dB)	25.48
	LN. ERR. (dB)	1.241

289	424	552	681	812	911	1020	1160	1307	1445	1548	1683	1810	1948	2075	2218
2	9	10	12	15	-13	-32	-19	1	11	-13	-6	-6	5	4	20
0.07	0.36	0.39	0.45	0.59	-0.52	-1.24	-0.75	0.02	0.44	-0.52	-0.22	-0.23	0.19	0.17	0.78

8 GHz	INTERCEPT (mV)	2058
	SLOPE (mV/dB)	25.14
	LN. ERR. (dB)	1.065

295	429	559	689	820	917	1026	1168	1308	1441	1539	1667	1797	1935	2061	2210
-4	5	9	13	19	-10	-27	-10	4	11	-17	-14	-10	2	3	26
-0.14	0.19	0.36	0.53	0.74	-0.40	-1.06	-0.42	0.15	0.44	-0.66	-0.57	-0.40	0.09	0.11	1.03

10 GHz	INTERCEPT (mV)	2067
	SLOPE (mV/dB)	25.18
	LN. ERR. (dB)	1.518

311	441	572	700	825	914	1022	1161	1304	1444	1551	1687	1813	1950	2074	2216
6	10	15	17	17	-20	-38	-25	-8	6	-13	-3	-3	9	7	23
0.24	0.41	0.61	0.69	0.66	-0.81	-1.52	-1.00	-0.32	0.24	-0.51	-0.11	-0.10	0.34	0.26	0.90

12 GHz	INTERCEPT (mV)	2059
	SLOPE (mV/dB)	25.33
	LN. ERR. (dB)	1.034

270	411	539	670	811	921	1031	1173	1316	1452	1541	1665	1794	1931	2052	2196
-16	-1	0	4	19	2	-15	1	17	26	-11	-14	-12	-1	-7	10
-0.62	-0.06	-0.01	0.17	0.73	0.07	-0.58	0.02	0.67	1.03	-0.45	-0.56	-0.47	-0.06	-0.28	0.40

14 GHz	INTERCEPT (mV)	2080
	SLOPE (mV/dB)	25.63
	LN. ERR. (dB)	1.539

263	406	534	668	814	936	1054	1206	1351	1471	1548	1676	1806	1942	2068	2217
-23	-9	-9	-3	15	9	-1	23	39	31	-20	-20	-18	-10	-12	8
-0.91	-0.33	-0.34	-0.11	0.59	0.35	-0.05	0.88	1.54	1.22	-0.77	-0.78	-0.71	-0.40	-0.48	0.33

16 GHz	INTERCEPT (mV)	2088
	SLOPE (mV/dB)	25.83
	LN. ERR. (dB)	1.584

258	402	528	659	802	935	1057	1213	1354	1473	1554	1686	1813	1949	2075	2218
-22	-7	-10	-8	6	9	2	29	41	31	-17	-15	-17	-10	-13	1
-0.84	-0.27	-0.39	-0.32	0.22	0.37	0.09	1.13	1.58	1.19	-0.67	-0.57	-0.65	-0.39	-0.51	0.03

18 GHz	INTERCEPT (mV)	2079
	SLOPE (mV/dB)	26.08
	LN. ERR. (dB)	1.181

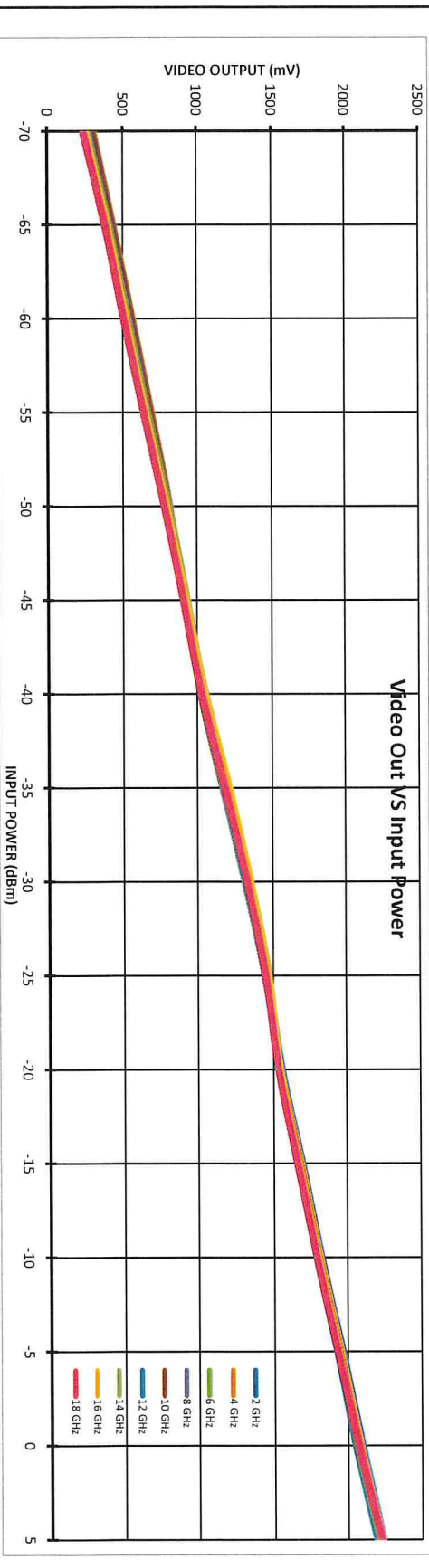
237	384	509	643	782	911	1031	1180	1327	1452	1537	1666	1797	1936	2074	2230
-16	1	-5	-1	7	6	-4	14	31	25	-20	-21	-21	-12	-5	21
-0.61	0.02	-0.18	-0.04	0.28	0.23	-0.17	0.54	1.18	0.97	-0.77	-0.82	-0.80	-0.47	-0.18	0.80

Avg. Slope: 25.5 mV/dB	
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1.4	1.1	1.2	1.1	0.8	0.5	0.7	1	1	0.6	0.5	0.7	0.7	0.8	1	0.9
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Measured Value (mV)	2079
ERROR (mV)	26.08
LINEARITY ERROR (dB)	1.181

Video Out Vs Input Power



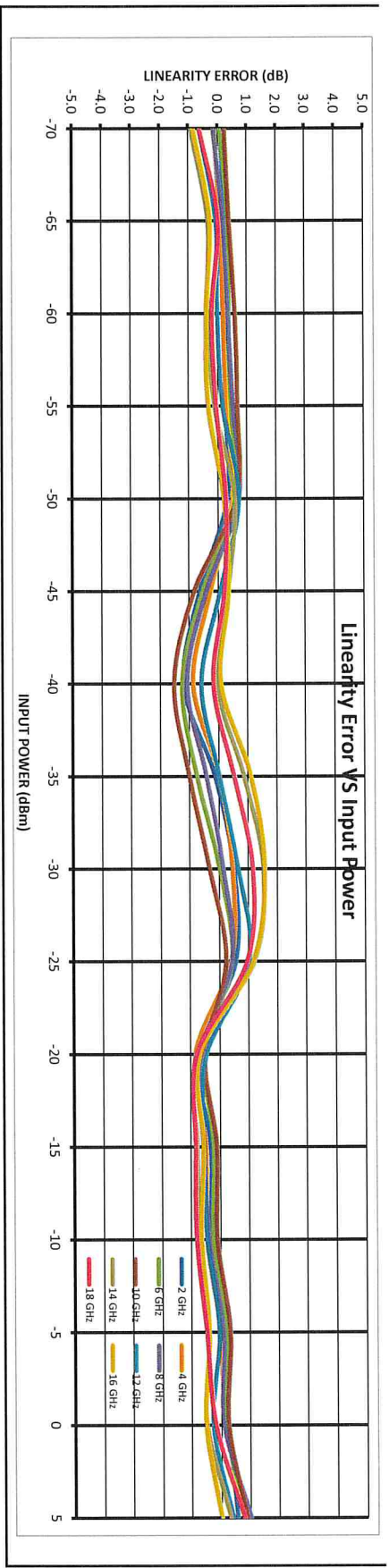
Measured Value (mV)	2079
ERROR (mV)	26.08
LINEARITY ERROR (dB)	1.181

Measured Value (mV)	2079
ERROR (mV)	26.08
LINEARITY ERROR (dB)	1.181

Flatness: dB: ±1.4 dB

PL42887

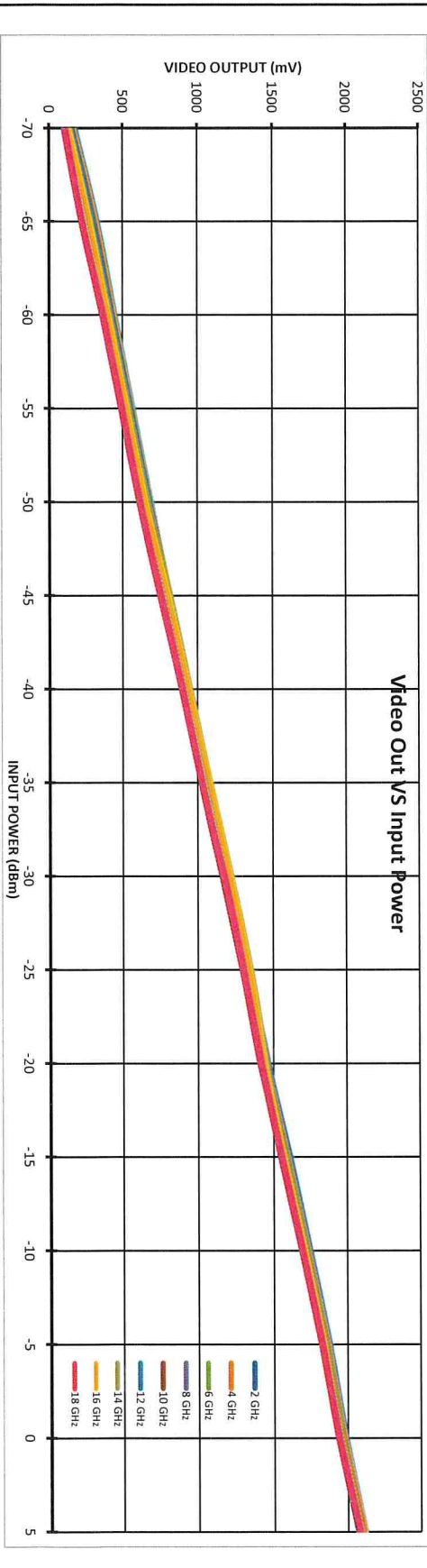
-40°C





Frequency

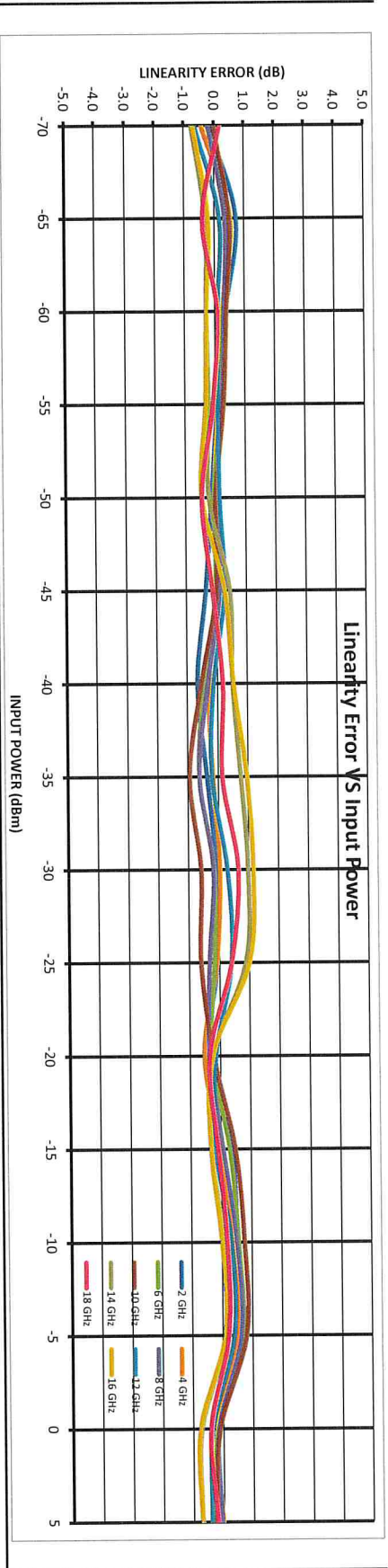
Frequency	Intercept (mV)	Slope (mV/dB)	Lin. Err. (dB)	RF Input Power (dBm)	Measured Value (mV)	Error (mV)	Linearity Error (dB)												
2 GHz	1994	25.92	0.7	-70	175	328	448												
4 GHz	1984	25.88	0.534	-65	162	316	438												
6 GHz	1974	26.02	0.667	-60	147	296	420												
8 GHz	1960	25.96	0.622	-55	137	281	410												
10 GHz	1966	26.15	0.935	-50	135	279	407												
12 GHz	1957	25.62	0.648	-45	147	296	422												
14 GHz	1978	26.07	0.976	-40	133	275	406												
16 GHz	1972	25.99	1.158	-35	135	278	406												
18 GHz	1956	26.47	0.657	-30	108	225	370												
Avg. Slope: 26 mV/dB				-70	1.3	2	1.5	1.4	1.4	1.1	0.9	1.2	1.1	1	0.9	1.1	1	0.8	0.8



RF Input Power (dBm)	Measured Value (mV)	Error (mV)	Linearity Error (dB)
-70	175	328	448
-65	162	316	438
-60	147	296	420
-55	137	281	410
-50	135	279	407
-45	147	296	422
-40	133	275	406
-35	135	278	406
-30	108	225	370
-25	1179	1305	1417
-20	1696	1829	1945
-15	1845	1953	2084
-10	1945	2083	2118
-5	1945	2083	2118
0	1945	2083	2118
5	1945	2083	2118

PL42887

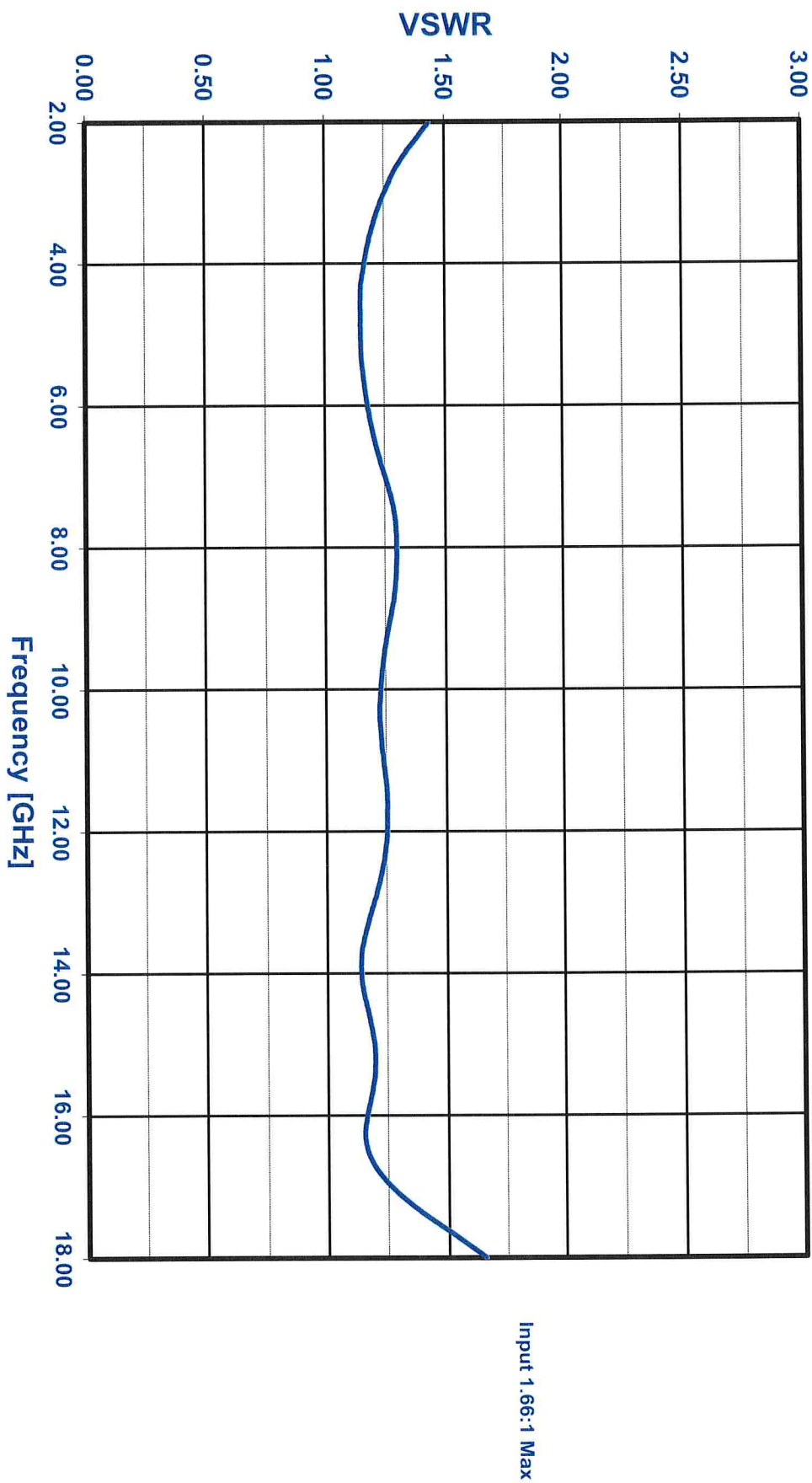
+85°C



Model Number: SDLVA-2G18G-CD-2-OPT218
Serial Number: PL42887

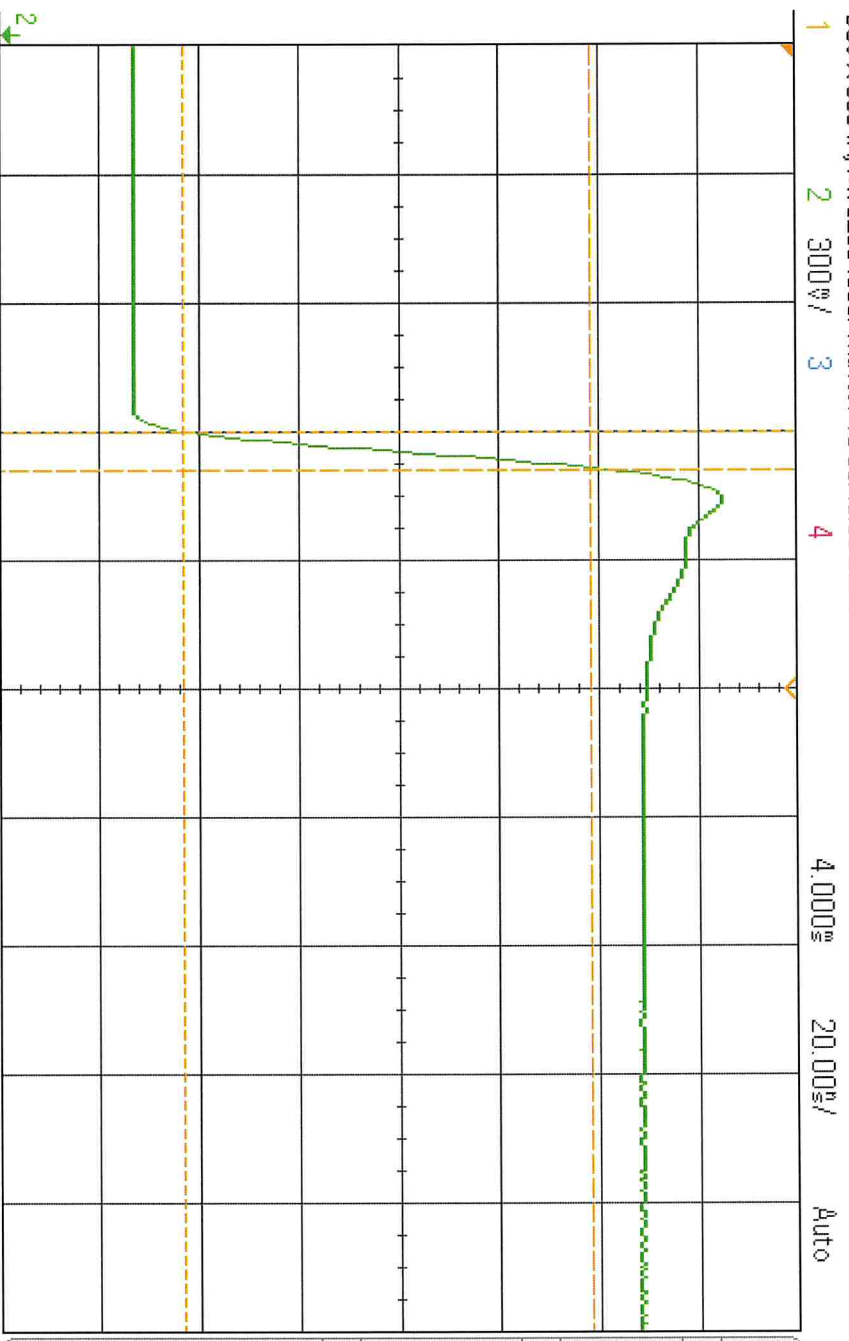
Temperature: +25C

VSWR GRAPH



PL42887
 Rise Time

DSO-X 3034A, MW52394003: Thu Nov 16 09:40:03 2023



Measurement Menu
 Source 2

Type: Rise

Add Measurement

Settings

Clear Meas

Statistics

KEYSIGHT
 TECHNOLOGIES

Acquisition ::
 Averaging: 32
 4.006Sa/s

Channels ::

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

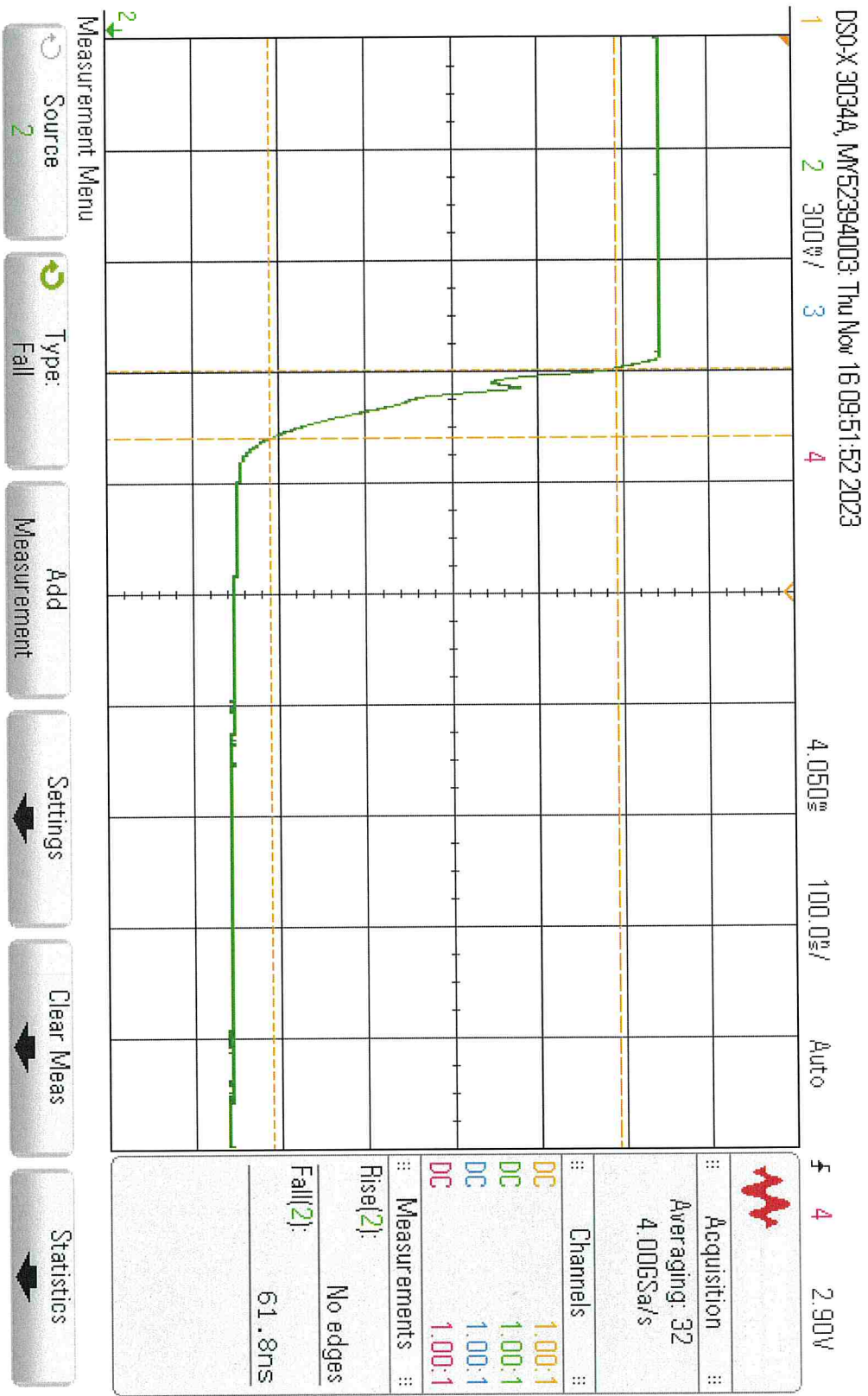
Measurements ::

Fall(2): No edges

Rise(2): 5.8ns

PL42887

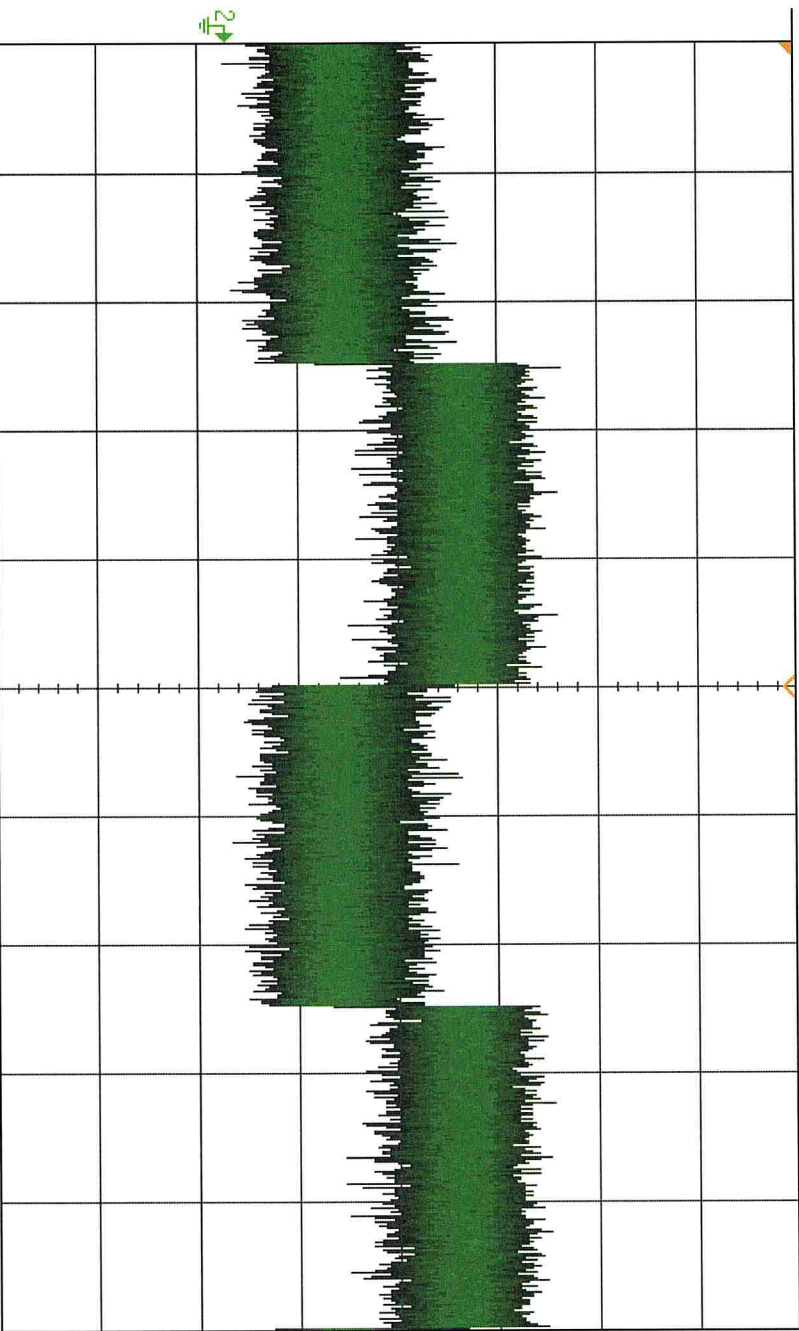
RECOVERY



PL42887
TSS -71

DSO-X 3034A, MW52394003 Thu Nov 16 09:53:17 2023

1 2 100% / 3 4 4.050µs 20.00µs / Auto f 4 2.88V



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

Acquire Menu

Acq Mode Normal

Avgs 32

Segmented