

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

CUSTOMER: \_\_\_\_\_  
 SO: \_\_\_\_\_  
 MODEL NO: SDLVA-6G18G-CD-2-OPT218  
 SERIAL NO: PL42892/2347

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

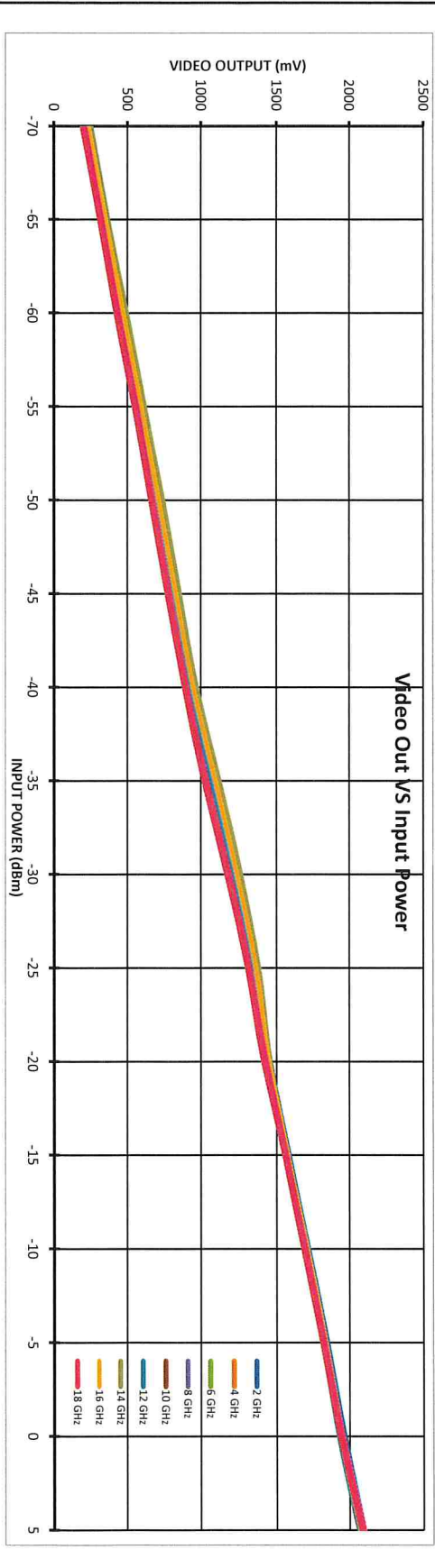
TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	2.0 GHz – 18.0 GHz	GHz - GHz	<b>PMI QA3</b>
2	Flatness	± 2.0 dB Maximum	± 1.6dB 25°C See Plots	
3	TSS	-70 dBm Minimum	-71dBm	
4	VSWR	2.0:1 (Input)	1.79 :1	
5	Input Power	+17 dBm CW Maximum	Pass	
6	RF Out	+13 dBm ±3 dB Typical	14.5/11.6 dBm	
7	Log Slope	25 mV/dB (±10%) 50Ω	24.9 mV/dB See Plot	
8	Log Range	-70 to +5 dBm	See Plots	
9	Log Linearity	±2.5 dB (-40°C - +85°C)	1.40/-1.66dB See Plots	
10	Pulse Range	30 ns to CW	Pass	
11	Rise Time	10 ns (6 ns Typical)	7.0 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



Frequency	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5		
2 GHz	INTERCEPT (mV)	1968	238	357	478	593	714	831	950	1102	1242	1371	1455	1587	1719	1850	1965	2097
	SLOPE (mV/dB)	24.9	12	7	3	-6	-10	-17	-23	5	20	25	-16	-8	0	6	-3	4
	LIN. ERR. (dB)	1.0	0.49	0.27	0.13	-0.25	-0.39	-0.69	-0.91	0.20	0.82	1.00	-0.62	-0.32	-0.02	0.24	-0.14	0.16
4 GHz	INTERCEPT (mV)	1953	216	329	458	578	699	818	933	1073	1213	1344	1443	1571	1705	1836	1950	2088
	SLOPE (mV/dB)	24.98	11	9	3	-1	-5	-11	-21	-6	9	15	-11	-8	1	8	-3	10
	LIN. ERR. (dB)	0.847	0.45	0.37	0.14	-0.06	-0.22	-0.45	-0.85	-0.24	0.36	0.61	-0.43	-0.31	0.06	0.30	-0.13	0.39
6 GHz	INTERCEPT (mV)	1949	195	317	433	558	682	804	920	1053	1198	1336	1440	1567	1702	1832	1944	2078
	SLOPE (mV/dB)	25.25	13	9	-9	-3	-9	-9	-19	-13	6	18	-4	-4	5	9	-5	2
	LIN. ERR. (dB)	0.765	0.52	0.35	-0.05	-0.10	-0.19	-0.36	-0.76	-0.50	0.25	0.71	-0.17	-0.14	0.21	0.35	-0.21	0.10
8 GHz	INTERCEPT (mV)	1943	199	320	436	558	680	804	921	1055	1193	1331	1435	1558	1696	1825	1938	2076
	SLOPE (mV/dB)	25.11	14	10	0	-4	-7	-9	-17	-9	4	16	-5	-8	4	8	-5	8
	LIN. ERR. (dB)	0.686	0.56	0.38	0.00	-0.14	-0.28	-0.35	-0.69	-0.35	0.15	0.64	-0.22	-0.32	0.18	0.31	-0.19	0.31
10 GHz	INTERCEPT (mV)	1951	204	326	442	564	686	806	919	1052	1192	1331	1443	1576	1708	1836	1947	2081
	SLOPE (mV/dB)	25.19	17	13	3	-1	-5	-11	-24	-17	-3	10	-4	3	9	11	-4	4
	LIN. ERR. (dB)	0.958	0.66	0.50	0.11	-0.05	-0.21	-0.44	-0.96	-0.68	-0.12	0.40	-0.16	0.12	0.36	0.44	-0.15	0.17
12 GHz	INTERCEPT (mV)	1945	228	349	470	591	717	828	940	1079	1220	1360	1445	1566	1700	1828	1936	2070
	SLOPE (mV/dB)	24.59	5	3	1	-1	2	-10	-21	-5	13	30	-8	-10	1	6	-9	2
	LIN. ERR. (dB)	1.225	0.19	0.11	0.03	-0.05	0.08	-0.41	-0.85	-0.20	0.53	1.23	-0.32	-0.40	0.05	0.26	-0.35	0.10
14 GHz	INTERCEPT (mV)	1955	242	361	486	608	733	848	964	1111	1253	1375	1449	1572	1707	1834	1945	2081
	SLOPE (mV/dB)	24.46	-1	-5	-2	-2	0	-7	-13	12	31	31	-17	-4	-4	1	-10	3
	LIN. ERR. (dB)	1.28	-0.06	-0.19	-0.08	-0.09	0.02	-0.28	-0.54	0.47	1.28	1.27	-0.68	-0.16	0.04	-0.42	0.14	
16 GHz	INTERCEPT (mV)	1957	229	350	471	591	712	830	950	1096	1236	1365	1449	1577	1709	1836	1949	2084
	SLOPE (mV/dB)	24.77	6	3	0	-4	-7	-12	-16	6	22	27	-13	-9	0	3	-8	3
	LIN. ERR. (dB)	1.093	0.23	0.12	0.00	-0.15	-0.27	-0.50	-0.66	0.23	0.89	1.09	-0.52	-0.35	-0.02	0.11	-0.33	0.12
18 GHz	INTERCEPT (mV)	1941	198	318	433	555	665	778	897	1030	1178	1314	1422	1562	1696	1824	1945	2090
	SLOPE (mV/dB)	25.29	27	21	10	5	-11	-25	-32	-26	-4	5	-13	0	8	9	4	22
	LIN. ERR. (dB)	1.279	1.09	0.83	0.38	0.20	-0.45	-0.98	-1.28	-1.02	-0.17	0.21	-0.52	0.01	0.31	0.37	0.15	0.89
Avg. Slope: 24.9 mV/dB																		
Flatness dB: ±1.6 dB																		









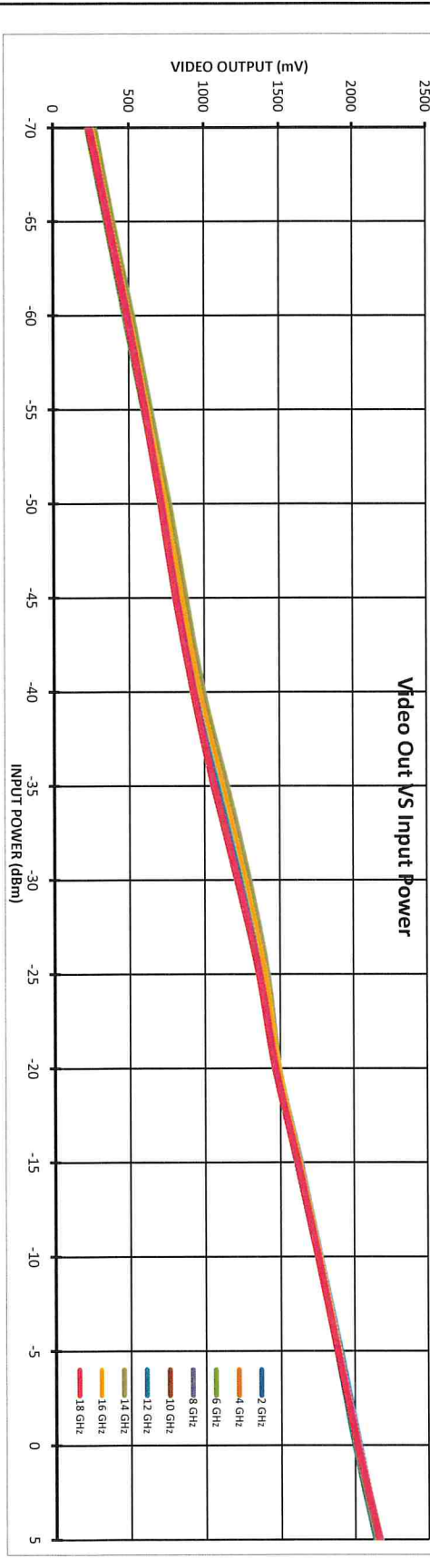
Frequency

Frequency	2 GHz	4 GHz	6 GHz	8 GHz	10 GHz	12 GHz	14 GHz	16 GHz	18 GHz
INTERCEPT (mV)	2030	2013	2012	2001	2011	2005	2016	2021	2003
SLOPE (mV/dB)	25.81	25.7	25.81	25.53	25.48	25.24	25.05	25.43	25.64
LINEARITY ERROR (dB)	1.2	1.24	1.333	1.256	1.551	1.24	1.151	1.261	1.966
Measured Value (mV)	239	234	227	235	251	251	270	258	244
Error (mV)	16	20	22	21	24	13	8	17	36
LINEARITY ERROR (dB)	0.60	0.78	0.85	0.81	0.93	0.51	0.31	0.66	1.40
Measured Value (mV)	362	356	349	356	371	371	387	376	364
Error (mV)	6	8	15	14	16	7	-1	8	28
LINEARITY ERROR (dB)	0.37	0.53	0.58	0.55	0.64	0.27	-0.02	0.30	1.08
Measured Value (mV)	610	602	595	600	615	620	642	627	607
Error (mV)	-1	3	6	8	6	3	4	4	14
LINEARITY ERROR (dB)	-0.02	0.10	0.11	0.11	0.22	0.13	0.16	0.17	0.56
Measured Value (mV)	734	727	722	724	737	746	764	747	716
Error (mV)	-6	-1	1	-1	0	3	1	-3	-5
LINEARITY ERROR (dB)	-0.22	-0.03	0.03	-0.03	0.01	0.12	0.03	-0.11	-0.19
Measured Value (mV)	847	837	831	834	839	851	872	852	811
Error (mV)	-22	-19	-19	-18	-25	-18	-16	-25	-38
LINEARITY ERROR (dB)	-0.84	-0.75	-0.75	-0.72	-0.99	-0.72	-0.66	-0.98	-1.49
Measured Value (mV)	966	953	945	948	952	964	989	972	927
Error (mV)	-4	2	-24	20	-27	-14	3	-8	-43
LINEARITY ERROR (dB)	-0.15	0.08	-0.95	-0.77	-1.05	-0.54	0.12	-0.32	-1.66
Measured Value (mV)	1123	1096	1084	1088	1092	1108	1142	1123	1063
Error (mV)	20	13	15	15	-6	10	29	14	-17
LINEARITY ERROR (dB)	0.78	0.49	0.60	0.59	-0.25	0.41	1.15	0.53	-0.66
Measured Value (mV)	1276	1244	1236	1233	1240	1258	1293	1272	1217
Error (mV)	24	13	2	2	8	26	25	19	-7
LINEARITY ERROR (dB)	0.93	0.66	0.60	0.59	0.33	0.33	0.98	0.76	0.04
Measured Value (mV)	1409	1383	1382	1378	1382	1400	1414	1405	1363
Error (mV)	-21	-7	-13	-15	-15	-16	-17	-5	6
LINEARITY ERROR (dB)	-0.82	-0.29	-0.49	-0.57	-0.59	-0.64	-0.67	-0.78	0.24
Measured Value (mV)	1636	1620	1623	1608	1629	1617	1623	1635	1617
Error (mV)	-7	1	-2	1	1	-9	-17	-5	-2
LINEARITY ERROR (dB)	-0.28	0.04	-0.07	-0.40	0.02	-0.37	-0.20	-0.19	0.06
Measured Value (mV)	1770	1757	1758	1748	1763	1753	1760	1768	1753
Error (mV)	4	8	4	2	7	0	-5	1	6
LINEARITY ERROR (dB)	0.14	0.30	0.32	0.08	0.28	0.02	0.03	0.04	0.24
Measured Value (mV)	1905	1892	1891	1881	1894	1885	1891	1898	1886
Error (mV)	4	5	8	8	11	6	1	4	11
LINEARITY ERROR (dB)	0.14	0.20	0.32	0.15	0.43	0.25	0.03	0.15	0.43
Measured Value (mV)	2034	2018	2016	2005	2017	2004	2014	2024	2022
Error (mV)	12	21	16	23	19	14	-2	3	39
LINEARITY ERROR (dB)	0.45	0.80	0.62	0.91	0.75	0.55	0.06	0.10	1.51
Measured Value (mV)	2171	2162	2157	2152	2157	2145	2158	2163	2170
Error (mV)	4	8	4	4	7	1	-2	14	14
LINEARITY ERROR (dB)	0.16	0.20	0.16	0.16	0.26	0.04	0.06	0.57	0.57

Avg. Slope: 25.5 mV/dB

RF Input Power (dbm)	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
Measured Value (mV)	0.8	0.7	1	0.9	0.9	1.2	1.2	1.5	1.5	1	0.5	0.5	0.4	0.5	0.6	0.5
Error (mV)																
LINEARITY ERROR (dB)																

Flatness dB: ±1.5 dB



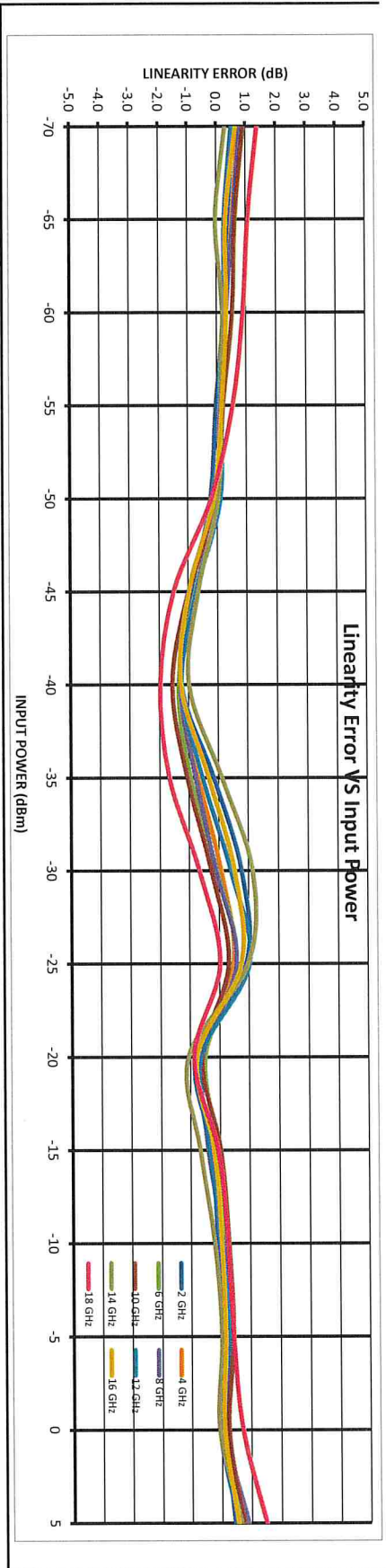
VIDEO OUTPUT (mV)

Video Out VS Input Power

Legend for frequencies:  
 2 GHz (Blue)  
 4 GHz (Orange)  
 6 GHz (Green)  
 8 GHz (Purple)  
 10 GHz (Red)  
 12 GHz (Cyan)  
 14 GHz (Light Blue)  
 16 GHz (Yellow)  
 18 GHz (Pink)

PL42892

-40°C

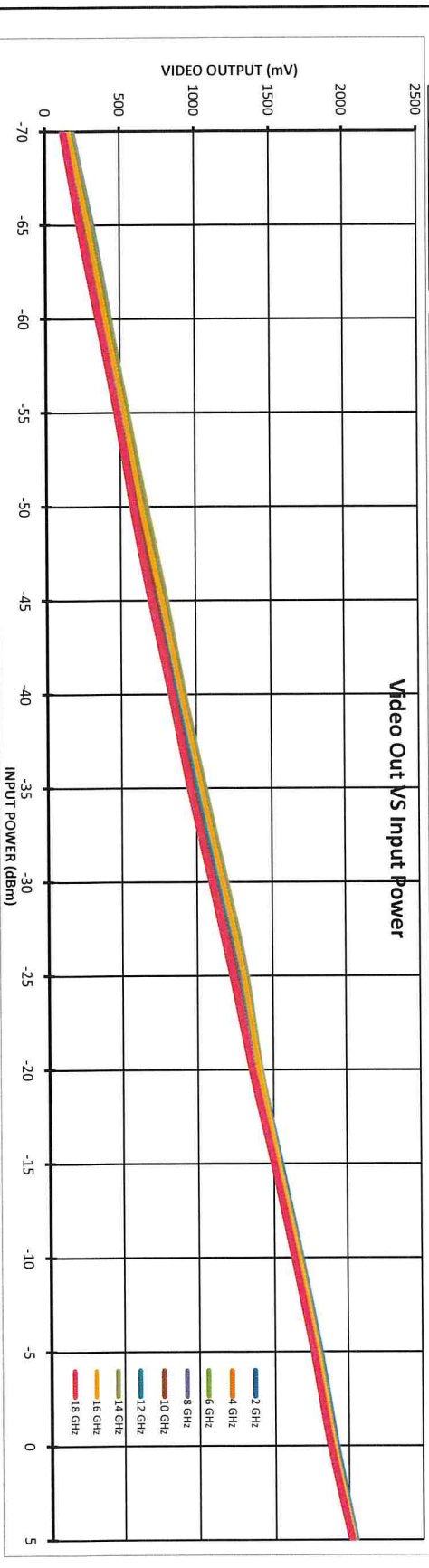






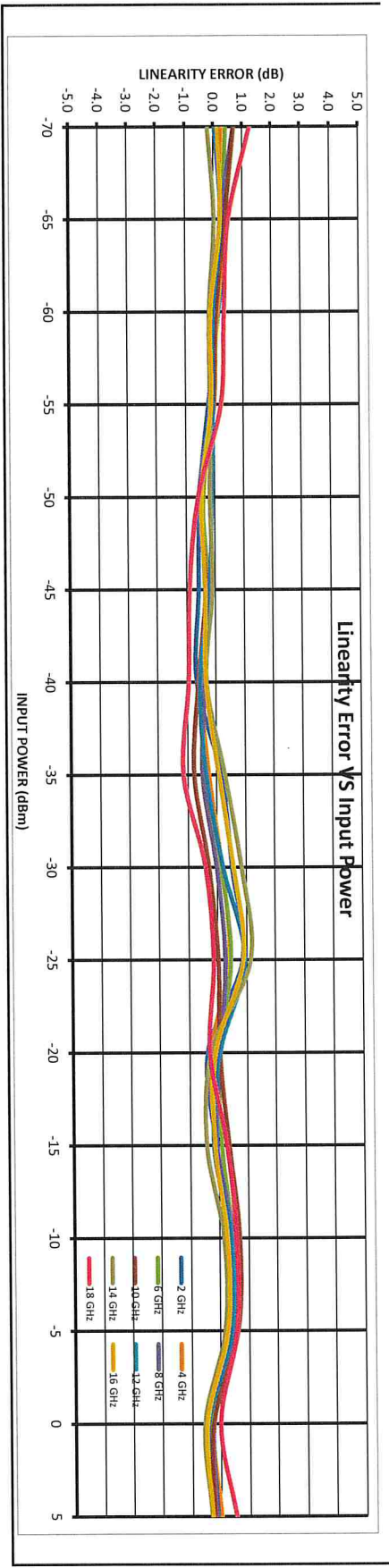
Frequency

Frequency	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
2 GHz	INTERCEPT (mV)	1929														
	SLOPE (mV/dB)	25.03														
	LN. ERR. (dB)	0.9														
4 GHz	INTERCEPT (mV)	1915														
	SLOPE (mV/dB)	25.22														
	LN. ERR. (dB)	0.536														
6 GHz	INTERCEPT (mV)	1914														
	SLOPE (mV/dB)	25.54														
	LN. ERR. (dB)	0.471														
8 GHz	INTERCEPT (mV)	1899														
	SLOPE (mV/dB)	25.56														
	LN. ERR. (dB)	0.707														
10 GHz	INTERCEPT (mV)	1910														
	SLOPE (mV/dB)	25.64														
	LN. ERR. (dB)	0.778														
12 GHz	INTERCEPT (mV)	1907														
	SLOPE (mV/dB)	24.97														
	LN. ERR. (dB)	0.931														
14 GHz	INTERCEPT (mV)	1918														
	SLOPE (mV/dB)	24.9														
	LN. ERR. (dB)	1.143														
16 GHz	INTERCEPT (mV)	1914														
	SLOPE (mV/dB)	25.18														
	LN. ERR. (dB)	0.888														
18 GHz	INTERCEPT (mV)	1882														
	SLOPE (mV/dB)	25.62														
	LN. ERR. (dB)	1.271														
Avg. Slope: 25.3 mV/dB																
Flatness dB: ±2 dB																



P442892

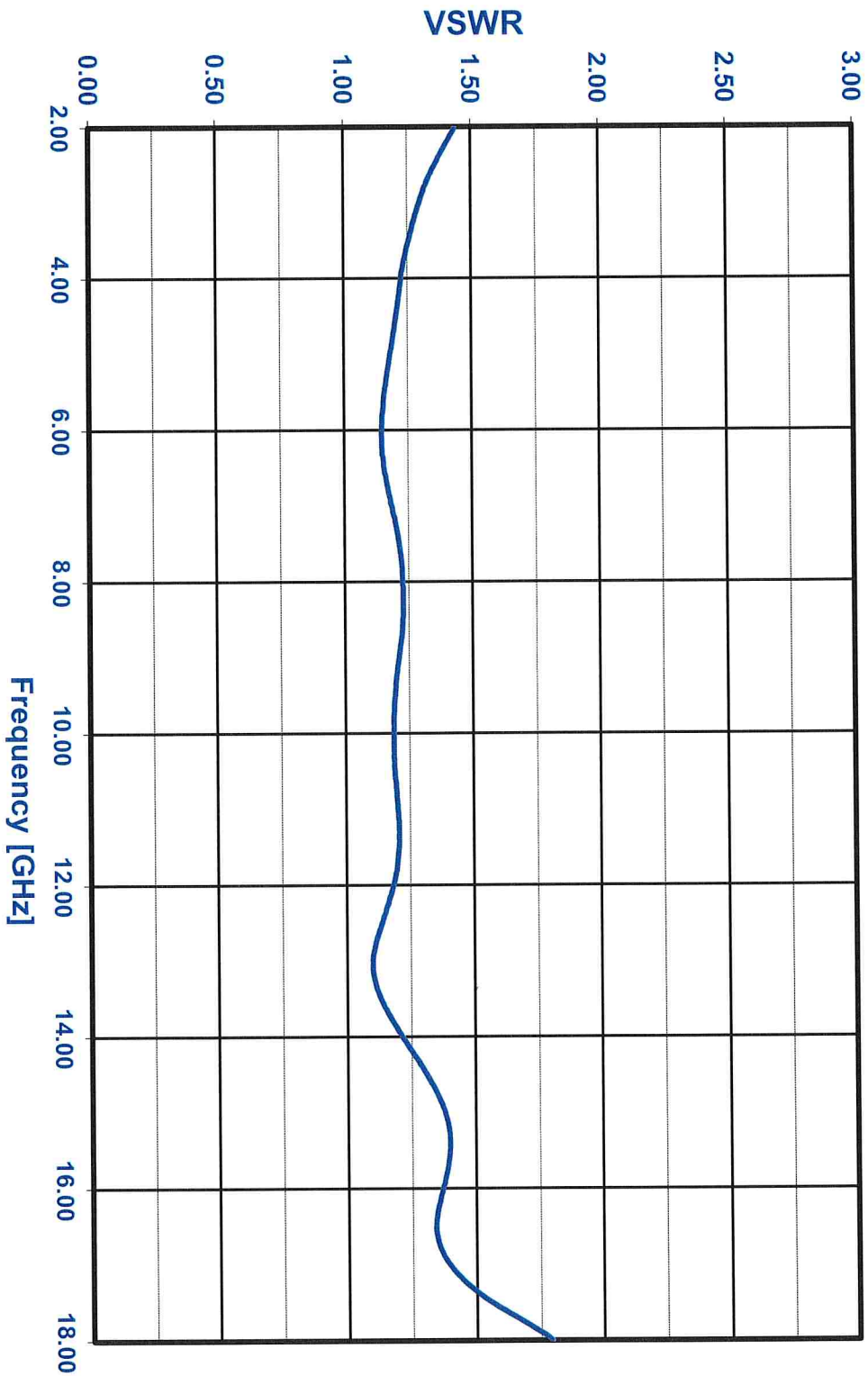
+85°C



Model Number: SDLVA-2G18G-CD-2-OPT218  
Serial Number: PL42892

Temperature: +25C

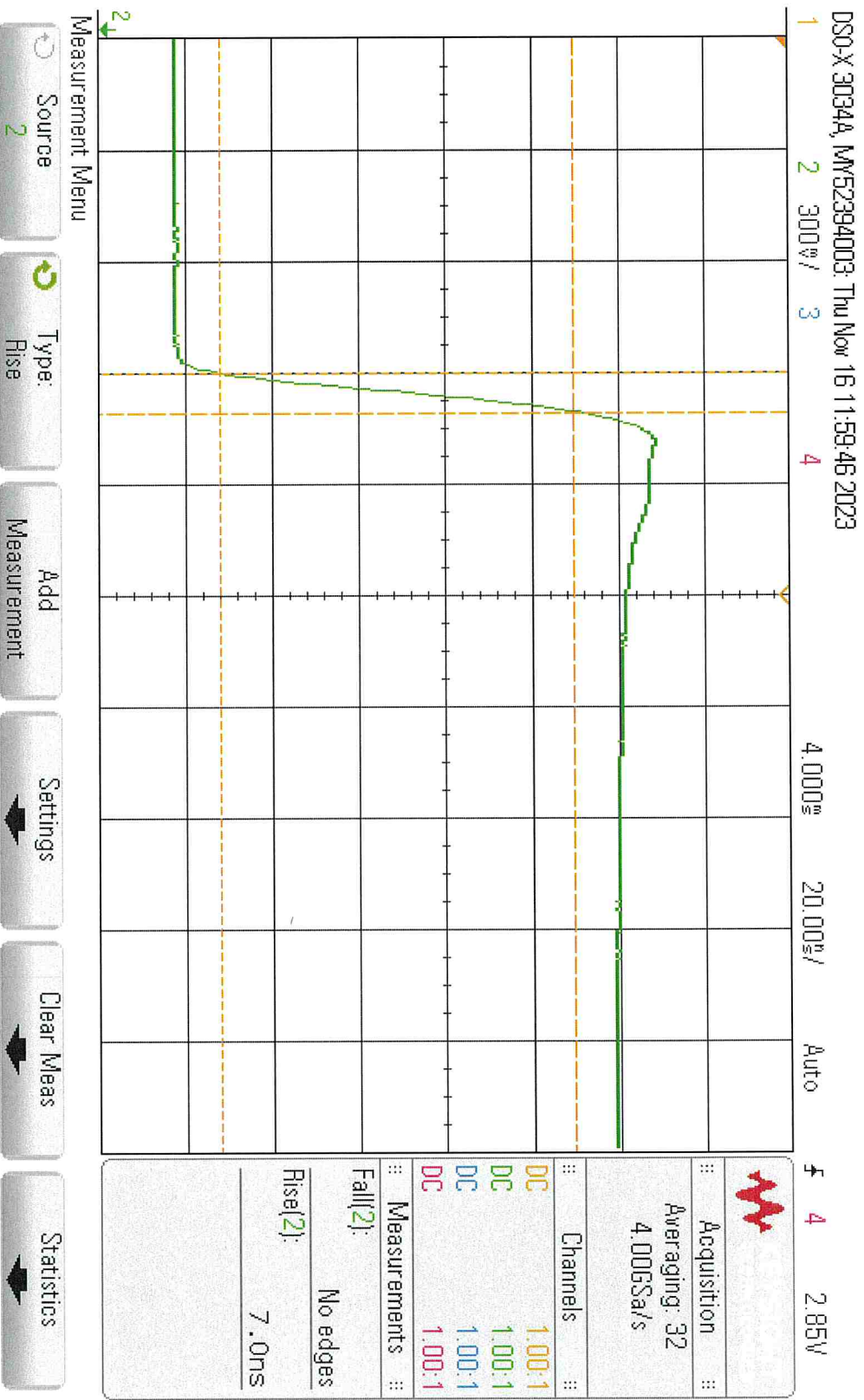
### VSWR GRAPH



Input 1.79:1 Max

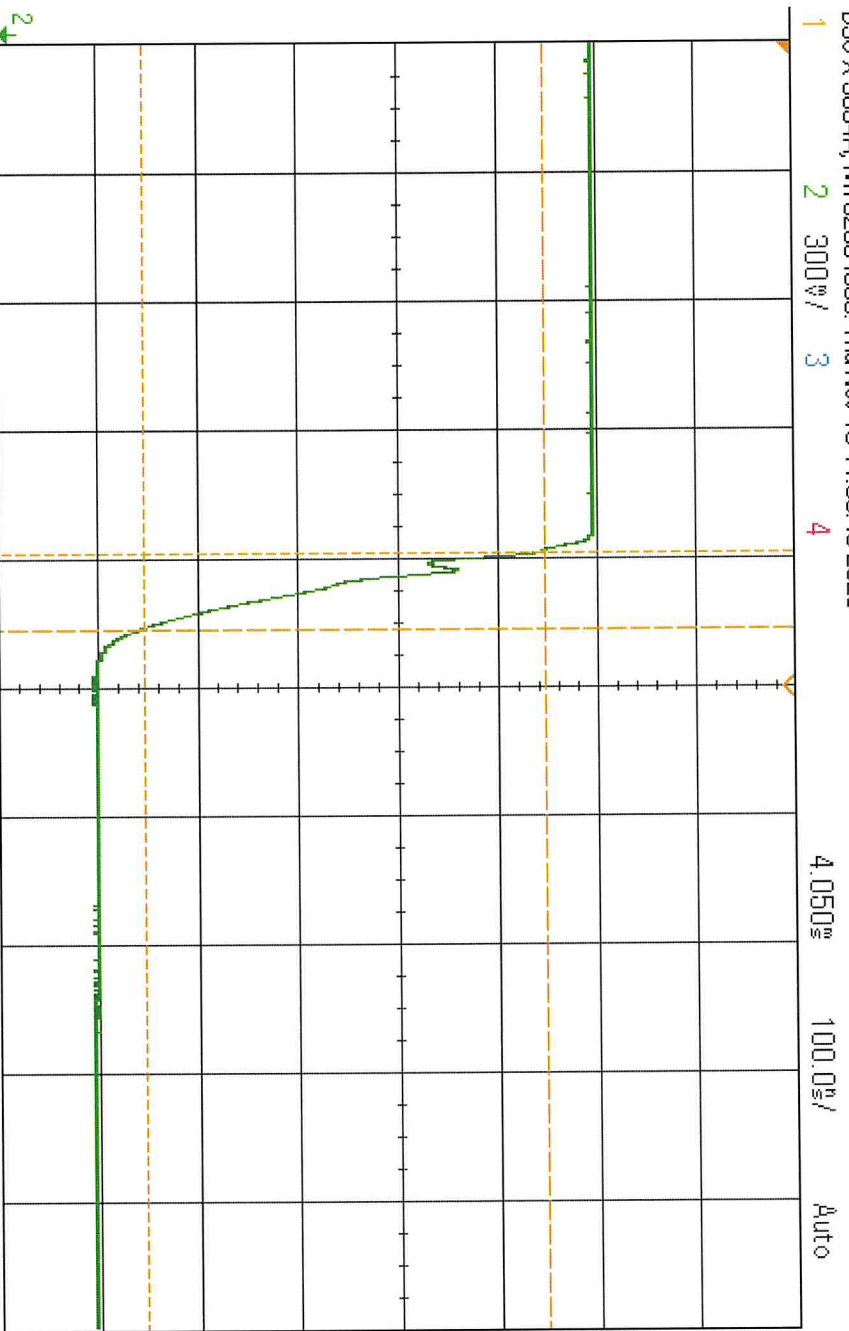


PL42892  
Rise Time



PL42892  
RECOVERY

DSO-X 3034A, MW52394003, Thu Nov 16 11:58:43 2023



f 4 2.85V

Acquisition  
Averaging: 32  
4.006Sa/s

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

Measurements  
Rise(2): No edges  
Fall(2): 59.3ns

Measurement Menu

Source 2

Type: Fall

Add Measurement

Settings

Clear Meas

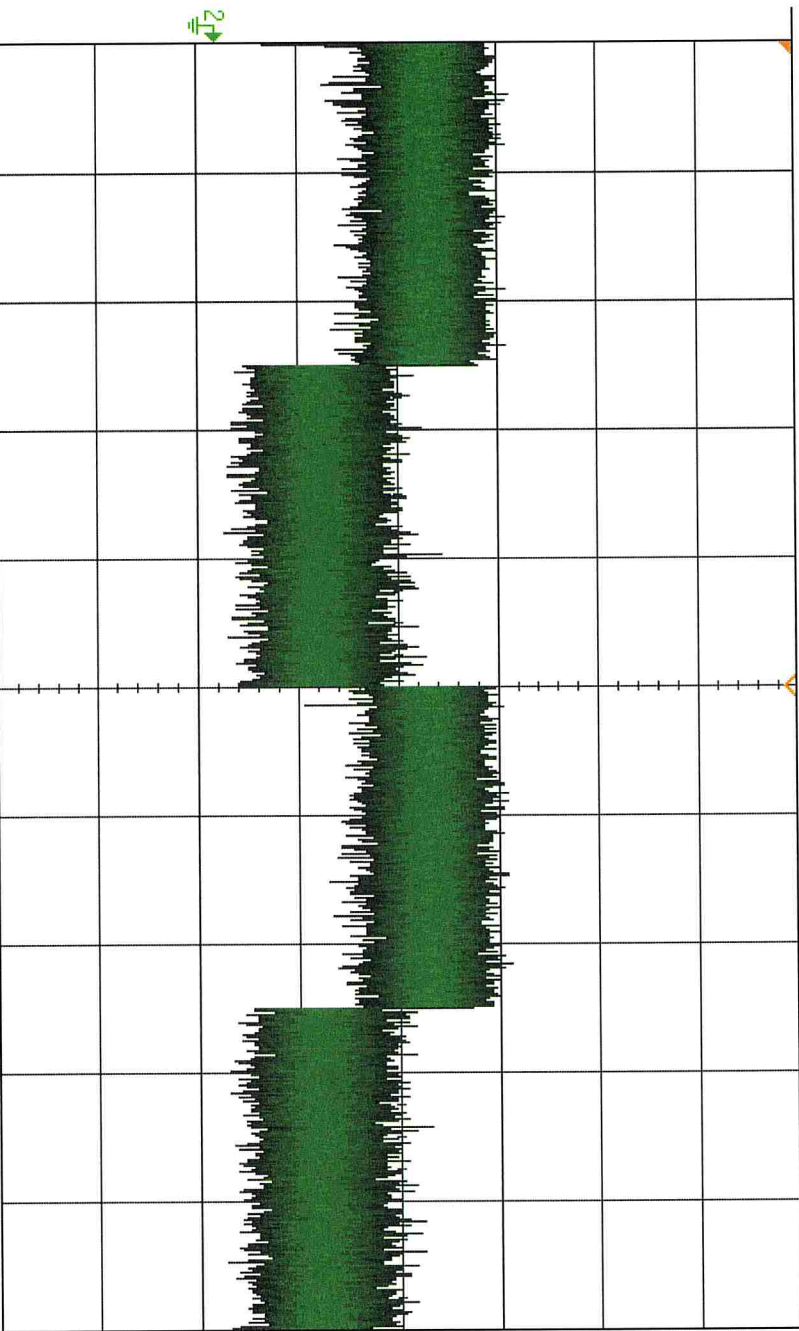
Statistics

PL42892

TSS - 71

DSO-X 3034A, MY52394003 Thu Nov 16 11:45:58 2023

1 2 100% / 3 4 4.000µs 20.00µs / Auto f 4 2.85V



**KEYSIGHT**  
TECHNOLOGIES

Acquisition ::  
Normal  
4.006Sa/s

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

Save to file = pl42892\_tss\_71

Save

Recall

Default/Erase

Press to Save