Quantic PMI
PLANAR MONOLITHICS

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

CUSTOMER: [redacted]
SO:
MODEL NO: SDLVA-6G18G-CD-2-OPT218
SERIAL NO: PL42890/2347

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

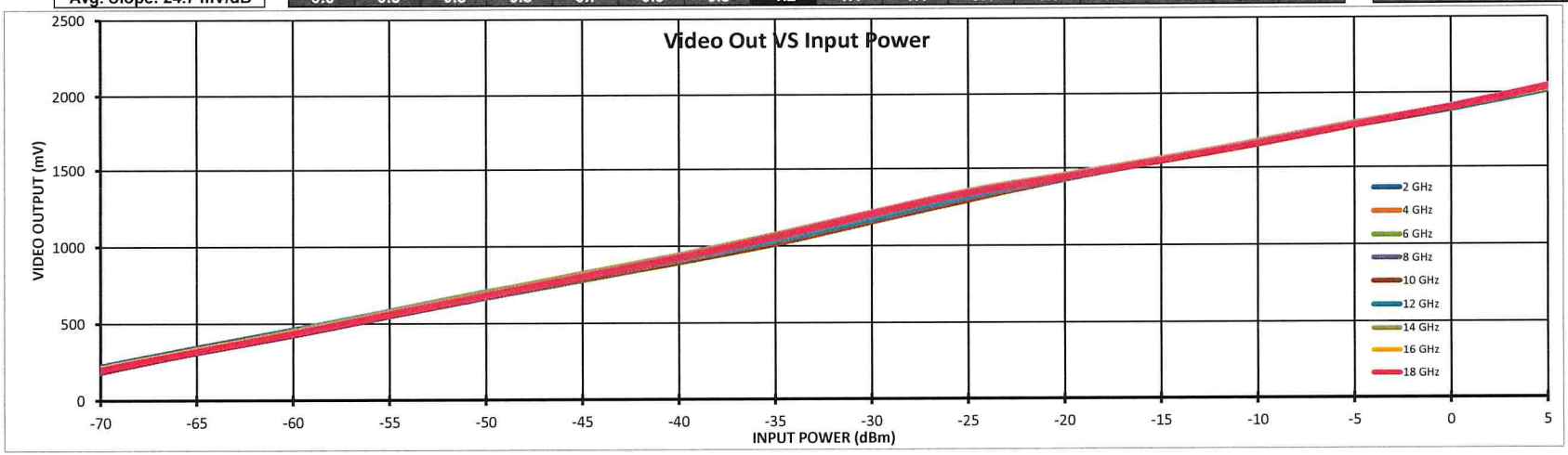
TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	2.0 GHz – 18.0 GHz	GHz - GHz	PMI QA
2	Flatness	± 2.0 dB Maximum	± 1.2 dB 25°C See Plots	
3	TSS	-70 dBm Minimum	-71dBm	
4	VSWR	2.0:1 (Input)	1.71:1	
5	Input Power	+17 dBm CW Maximum	Pass	
6	RF Out	+13 dBm ±3 dB Typical	14.6/12.6dBm	
7	Log Slope	25 mV/dB (±10%) 50Ω	24.7 mV/dB See Plot	
8	Log Range	-70 to +5 dBm	See Plots	
9	Log Linearity	±2.5 dB (-40°C - +85°C)	1.73/-1.40dB See Plots	
10	Pulse Range	30 ns to CW	Pass	
11	Rise Time	10 ns (6 ns Typical)	7.3 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. Hutton Date: 11-20-23

7309-A Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 FAX: (301)662-1731
Email: sales@quanticpmi.com

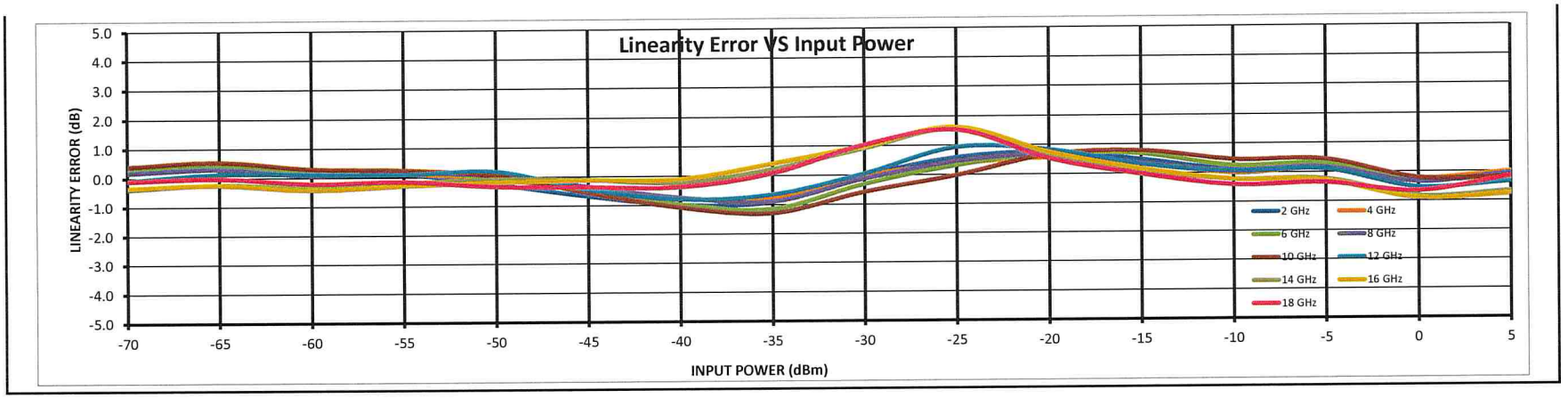
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL42890
Date: 11/20/23
Tested By: Jim Hopson
Test Temp: +25ºC

Frequency			-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
2 GHz	INTERCEPT (mV)	1920	182	308	425	549	665	779	896	1023	1170	1310	1439	1557	1673	1801	1913	2039	Measured Value (mV)
	SLOPE (mV/dB)	24.97	10	12	4	3	-6	-17	-25	-23	0	15	19	12	3	6	-7	-6	ERROR (mV)
	LIN. ERR. (dB)	1.0	0.42	0.46	0.15	0.11	-0.24	-0.68	-0.99	-0.91	-0.02	0.59	0.75	0.48	0.12	0.25	-0.27	-0.22	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	1917	180	309	428	552	671	787	903	1026	1170	1304	1433	1552	1668	1796	1911	2041	Measured Value (mV)
	SLOPE (mV/dB)	24.88	5	9	4	4	-2	-10	-19	-20	0	9	14	8	0	4	-6	0	ERROR (mV)
	LIN. ERR. (dB)	0.804	0.19	0.37	0.16	0.14	-0.07	-0.41	-0.75	-0.80	-0.02	0.37	0.56	0.34	0.00	0.15	-0.23	0.00	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	1914	178	305	423	548	668	781	893	1013	1159	1299	1433	1557	1671	1797	1908	2033	Measured Value (mV)
	SLOPE (mV/dB)	24.92	8	11	4	5	0	-12	-24	-29	-7	8	17	17	6	8	-6	-6	Error (mV)
	LIN. ERR. (dB)	1.157	0.34	0.43	0.17	0.18	0.00	-0.47	-0.97	-1.16	-0.30	0.32	0.70	0.67	0.25	0.30	-0.24	-0.23	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	1908	179	306	424	550	671	785	899	1019	1162	1300	1429	1545	1662	1788	1899	2030	Measured Value (mV)
	SLOPE (mV/dB)	24.76	4	8	2	4	1	-9	-18	-22	-3	11	17	9	2	4	-9	-1	ERROR (mV)
	LIN. ERR. (dB)	0.893	0.18	0.31	0.07	0.16	0.05	-0.35	-0.74	-0.89	-0.12	0.46	0.67	0.35	0.08	0.17	-0.35	-0.05	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	1915	187	315	433	556	675	784	895	1014	1156	1294	1435	1562	1678	1802	1910	2035	Measured Value (mV)
	SLOPE (mV/dB)	24.83	10	14	8	6	1	-14	-27	-32	-14	0	16	19	11	11	-5	-4	Error (mV)
	LIN. ERR. (dB)	1.294	0.40	0.55	0.31	0.26	0.05	-0.56	-1.09	-1.29	-0.57	-0.02	0.66	0.78	0.45	0.44	-0.21	-0.17	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	1910	206	333	454	575	699	805	918	1043	1182	1325	1444	1553	1668	1791	1897	2023	Measured Value (mV)
	SLOPE (mV/dB)	24.31	-2	3	3	2	5	-11	-19	-16	1	23	20	8	1	3	-13	-8	ERROR (mV)
	LIN. ERR. (dB)	0.942	-0.08	0.14	0.12	0.09	0.19	-0.45	-0.80	-0.66	0.06	0.94	0.84	0.32	0.05	0.11	-0.53	-0.35	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	1926	195	322	443	569	695	817	937	1071	1211	1350	1451	1560	1675	1798	1906	2033	Measured Value (mV)
	SLOPE (mV/dB)	24.6	-10	-6	-8	-5	-2	-3	-6	5	22	38	16	3	-5	-5	-20	-16	ERROR (mV)
	LIN. ERR. (dB)	1.564	-0.40	-0.23	-0.31	-0.19	-0.07	-0.11	-0.23	0.22	0.91	1.56	0.67	0.10	-0.22	-0.22	-0.83	-0.67	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	1924	187	313	432	559	685	810	934	1070	1208	1347	1449	1558	1672	1794	1902	2029	Measured Value (mV)
	SLOPE (mV/dB)	24.7	-9	-6	-11	-7	-5	-3	-3	10	24	40	18	4	-5	-7	-22	-19	ERROR (mV)
	LIN. ERR. (dB)	1.618	-0.35	-0.25	-0.43	-0.29	-0.19	-0.13	-0.10	0.40	0.99	1.62	0.75	0.16	-0.22	-0.28	-0.91	-0.77	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1923	190	316	435	560	679	802	925	1060	1207	1343	1442	1552	1666	1791	1907	2043	Measured Value (mV)
	SLOPE (mV/dB)	24.72	-3	0	-5	-4	-8	-9	-9	2	25	38	13	-1	-10	-9	-16	-4	ERROR (mV)
	LIN. ERR. (dB)	1.525	-0.11	-0.01	-0.20	-0.15	-0.33	-0.36	-0.38	0.08	1.02	1.52	0.53	-0.02	-0.41	-0.35	-0.66	-0.16	LINEARITY ERROR (dB)
Avg. Slope: 24.7 mV/dB			0.6	0.6	0.6	0.5	0.7	0.8	0.9	1.2	1.1	1.1	0.4	0.3	0.3	0.3	0.3	0.4	Flatness dB: ±1.2 dB



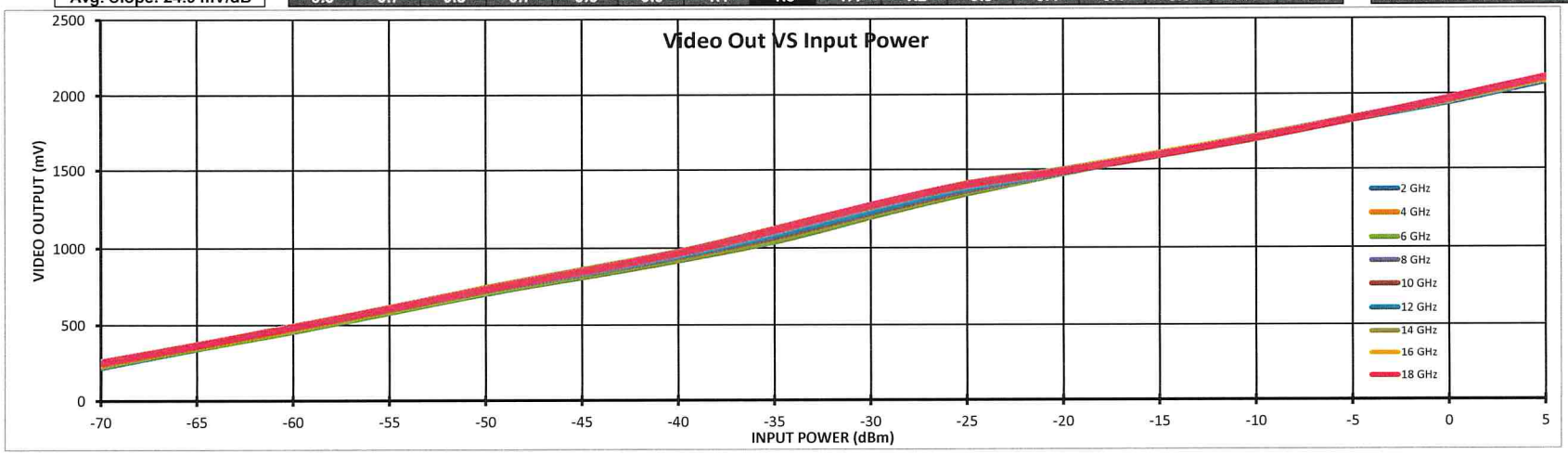
PL42890

25°C


Linearity Error VS Input Power
LINEARITY ERROR (dB)
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
-70
-65
-60
-55
-50
-45
-40
-35
-30
-25
-20
-15
-10
-5
0
5
INPUT POWER (dBm)
2 GHz
4 GHz
6 GHz
8 GHz
10 GHz
12 GHz
14 GHz
16 GHz
18 GHz

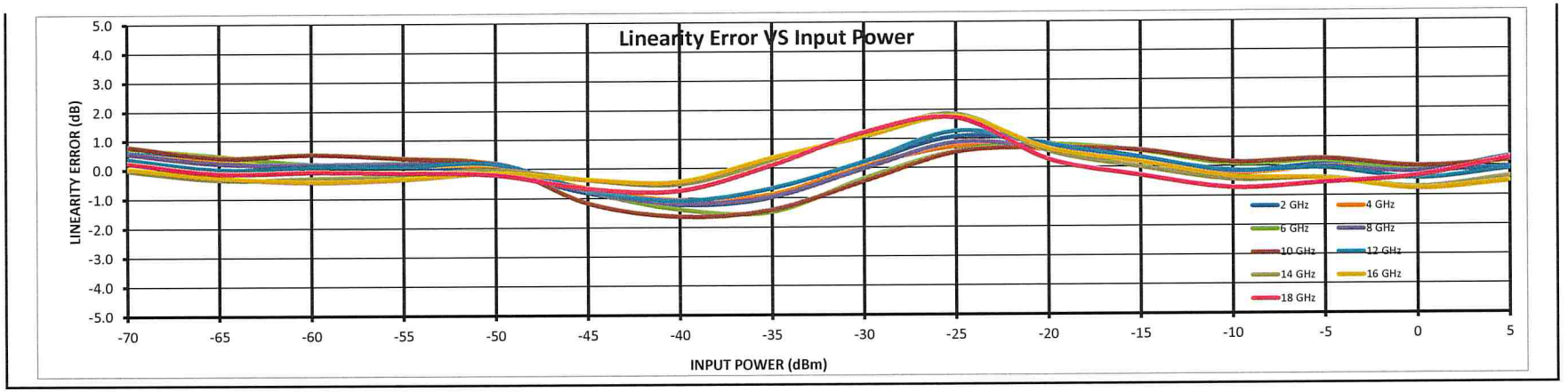
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL42890
Date: 11/20/23
Tested By: Jim Hopson
Test Temp: -40°C

Frequency			-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
2 GHz	INTERCEPT (mV)	1972	216	336	457	583	705	813	929	1062	1217	1367	1487	1601	1715	1847	1968	2097	Measured Value (mV)
	SLOPE (mV/dB)	25.3	15	8	3	2	-2	-21	-31	-25	4	27	21	8	-4	1	-4	-2	ERROR (mV)
	LIN. ERR. (dB)	1.2	0.58	0.33	0.11	0.09	-0.09	-0.82	-1.24	-0.98	0.15	1.08	0.82	0.33	-0.17	0.05	-0.17	-0.07	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	1966	226	344	466	591	715	822	937	1067	1216	1358	1480	1596	1710	1840	1963	2097	Measured Value (mV)
	SLOPE (mV/dB)	25.05	14	6	3	3	2	-17	-27	-22	2	18	15	6	-5	-1	-3	6	ERROR (mV)
	LIN. ERR. (dB)	1.073	0.54	0.25	0.12	0.11	0.06	-0.66	-1.07	-0.88	0.06	0.73	0.60	0.24	-0.21	-0.02	-0.11	0.24	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	1952	220	338	456	582	706	808	917	1040	1193	1341	1472	1591	1704	1832	1949	2082	Measured Value (mV)
	SLOPE (mV/dB)	25.01	19	12	4	5	4	-19	-35	-37	-9	14	20	14	2	5	-3	5	Error (mV)
	LIN. ERR. (dB)	1.475	0.74	0.46	0.18	0.21	0.17	-0.75	-1.39	-1.48	-0.36	0.56	0.80	0.55	0.07	0.19	-0.14	0.18	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	1957	239	354	477	601	725	825	938	1067	1214	1360	1478	1590	1705	1832	1952	2088	Measured Value (mV)
	SLOPE (mV/dB)	24.73	14	5	4	5	5	-19	-29	-24	-1	22	16	4	-4	-1	-5	8	ERROR (mV)
	LIN. ERR. (dB)	1.186	0.55	0.20	0.17	0.19	0.20	-0.76	-1.19	-0.97	-0.03	0.88	0.65	0.18	-0.17	-0.04	-0.18	0.32	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	1966	257	371	497	617	735	826	938	1067	1214	1362	1489	1610	1723	1849	1966	2094	Measured Value (mV)
	SLOPE (mV/dB)	24.7	20	10	13	9	4	-29	-40	-35	-11	13	17	14	4	6	0	4	Error (mV)
	LIN. ERR. (dB)	1.628	0.80	0.42	0.52	0.38	0.15	-1.16	-1.63	-1.40	-0.45	0.54	0.68	0.58	0.16	0.26	-0.01	0.18	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	1962	249	363	488	611	736	837	951	1084	1229	1378	1489	1600	1712	1837	1951	2082	Measured Value (mV)
	SLOPE (mV/dB)	24.59	9	0	2	2	4	-18	-27	-17	5	31	19	7	-4	-2	-11	-3	ERROR (mV)
	LIN. ERR. (dB)	1.27	0.37	0.00	0.08	0.08	0.17	-0.73	-1.09	-0.68	0.21	1.27	0.78	0.30	-0.15	-0.07	-0.43	-0.11	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	1977	241	357	482	608	737	852	972	1115	1262	1403	1495	1605	1718	1843	1959	2092	Measured Value (mV)
	SLOPE (mV/dB)	24.79	-1	-9	-8	-6	-1	-9	-13	6	29	46	14	0	-11	-10	-18	-9	ERROR (mV)
	LIN. ERR. (dB)	1.846	-0.03	-0.35	-0.31	-0.22	-0.02	-0.38	-0.54	0.23	1.16	1.85	0.56	0.00	-0.45	-0.40	-0.72	-0.36	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	1979	232	349	470	597	727	846	969	1114	1257	1399	1496	1609	1721	1844	1960	2091	Measured Value (mV)
	SLOPE (mV/dB)	24.98	1	-7	-11	-9	-4	-9	-11	9	27	44	16	4	-9	-10	-19	-13	ERROR (mV)
	LIN. ERR. (dB)	1.767	0.04	-0.28	-0.43	-0.35	-0.14	-0.38	-0.45	0.36	1.08	1.77	0.65	0.18	-0.34	-0.42	-0.77	-0.53	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1976	247	362	487	610	732	844	966	1111	1263	1399	1487	1597	1710	1838	1967	2106	Measured Value (mV)
	SLOPE (mV/dB)	24.77	6	-3	-2	-3	-5	-17	-19	3	31	43	7	-7	-18	-14	-9	7	ERROR (mV)
	LIN. ERR. (dB)	1.728	0.23	-0.13	-0.08	-0.12	-0.19	-0.67	-0.75	0.10	1.24	1.73	0.28	-0.28	-0.72	-0.55	-0.34	0.27	LINEARITY ERROR (dB)
Avg. Slope: 24.9 mV/dB			0.8	0.7	0.8	0.7	0.6	0.9	1.1	1.5	1.4	1.2	0.5	0.4	0.4	0.3	0.4	0.5	Flatness dB: ±1.5 dB



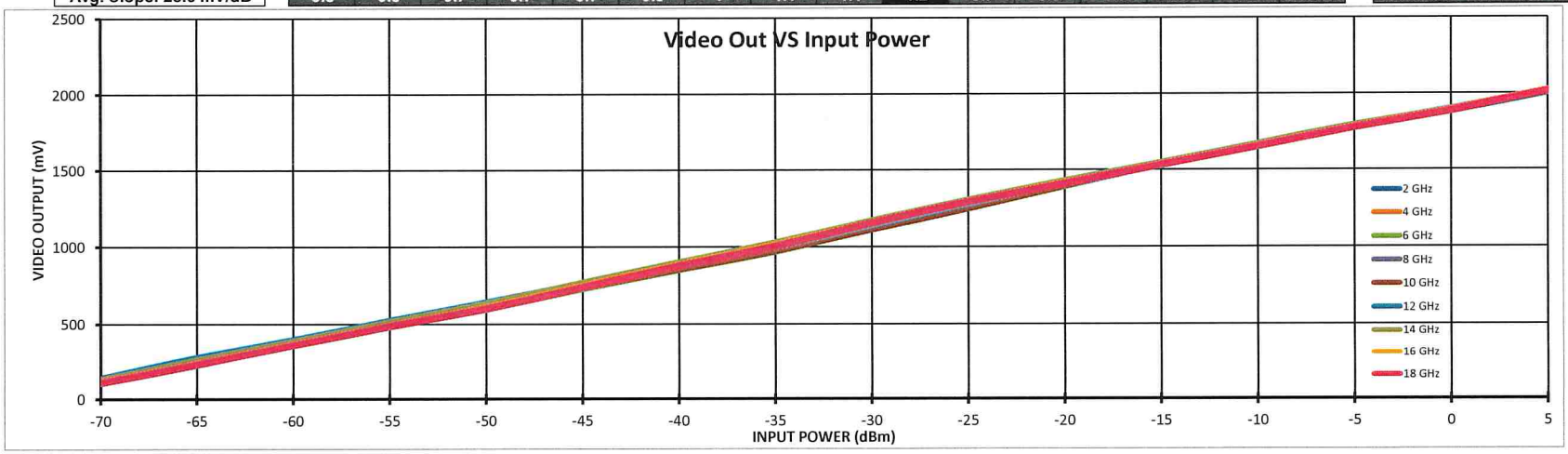
PL42890

-40°C


Linearity Error VS Input Power
LINEARITY ERROR (dB)
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
-70
-65
-60
-55
-50
-45
-40
-35
-30
-25
-20
-15
-10
-5
0
5
INPUT POWER (dBm)
2 GHz
4 GHz
6 GHz
8 GHz
10 GHz
12 GHz
14 GHz
16 GHz
18 GHz

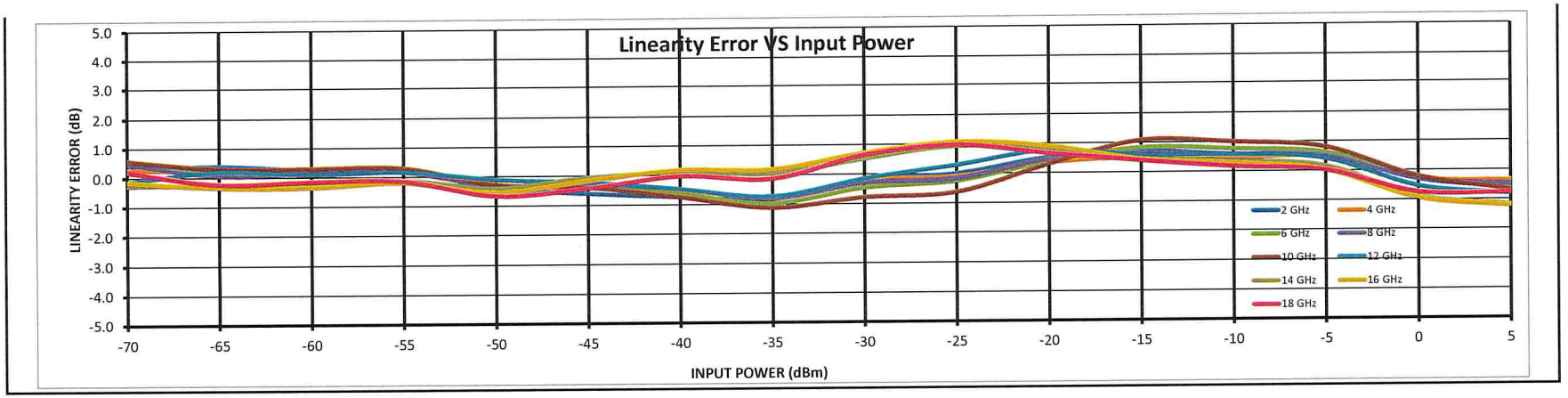
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL42890
Date: 11/20/23
Tested By: Jim Hopson
Test Temp: +85ºC

Frequency			-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
2 GHz	INTERCEPT (mV)	1910	120	251	376	504	616	739	864	990	1135	1268	1410	1543	1668	1795	1902	2023	Measured Value (mV)
	SLOPE (mV/dB)	25.67	8	10	7	6	-10	-15	-19	-21	-4	0	14	18	15	14	-8	-15	ERROR (mV)
	LIN. ERR. (dB)	0.8	0.29	0.40	0.27	0.25	-0.39	-0.60	-0.73	-0.82	-0.17	0.01	0.54	0.72	0.59	0.53	-0.30	-0.59	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	1906	117	245	373	501	615	742	867	989	1131	1262	1402	1534	1661	1790	1899	2025	Measured Value (mV)
	SLOPE (mV/dB)	25.65	7	7	6	6	-8	-9	-13	-19	-5	-2	9	13	12	13	-7	-9	ERROR (mV)
	LIN. ERR. (dB)	0.738	0.27	0.26	0.25	0.24	-0.32	-0.37	-0.49	-0.74	-0.20	-0.09	0.36	0.51	0.46	0.49	-0.26	-0.35	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	1894	106	225	356	484	600	726	848	968	1110	1244	1389	1529	1656	1781	1888	2006	Measured Value (mV)
	SLOPE (mV/dB)	25.73	14	4	6	6	-7	-10	-16	-25	-12	-6	10	21	20	16	-6	-16	Error (mV)
	LIN. ERR. (dB)	0.968	0.53	0.16	0.25	0.22	-0.27	-0.37	-0.63	-0.97	-0.45	-0.24	0.39	0.83	0.77	0.63	-0.22	-0.63	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	1897	107	225	356	485	602	731	855	975	1117	1249	1394	1527	1654	1781	1889	2013	Measured Value (mV)
	SLOPE (mV/dB)	25.74	12	2	4	4	-7	-7	-12	-21	-7	-4	12	16	15	13	-8	-12	ERROR (mV)
	LIN. ERR. (dB)	0.802	0.48	0.07	0.15	0.17	-0.29	-0.28	-0.46	-0.80	-0.29	-0.16	0.47	0.64	0.57	0.51	-0.30	-0.48	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	1902	111	233	362	491	605	731	851	970	1108	1241	1394	1543	1670	1794	1897	2014	Measured Value (mV)
	SLOPE (mV/dB)	25.8	15	8	8	8	-7	-10	-19	-29	-20	-16	8	28	26	21	-5	-17	Error (mV)
	LIN. ERR. (dB)	1.121	0.59	0.32	0.32	0.31	-0.27	-0.38	-0.73	-1.12	-0.77	-0.62	0.31	1.09	1.01	0.81	-0.19	-0.66	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	1900	133	268	391	519	638	761	881	1000	1141	1278	1416	1537	1663	1785	1887	2006	Measured Value (mV)
	SLOPE (mV/dB)	25.2	-4	5	2	4	-3	-6	-12	-19	-3	8	20	15	15	11	-13	-20	ERROR (mV)
	LIN. ERR. (dB)	0.81	-0.14	0.22	0.10	0.18	-0.10	-0.22	-0.46	-0.73	-0.14	0.30	0.78	0.58	0.58	0.42	-0.53	-0.81	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	1915	121	250	377	508	629	765	897	1023	1163	1301	1425	1544	1669	1792	1893	2013	Measured Value (mV)
	SLOPE (mV/dB)	25.53	-7	-6	-6	-3	-10	-1	3	1	14	24	20	12	9	4	-22	-30	ERROR (mV)
	LIN. ERR. (dB)	1.178	-0.28	-0.23	-0.25	-0.12	-0.38	-0.06	0.11	0.05	0.53	0.94	0.79	0.45	0.35	0.17	-0.88	-1.18	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	1910	113	236	364	496	615	753	890	1018	1160	1297	1421	1537	1661	1783	1886	2007	Measured Value (mV)
	SLOPE (mV/dB)	25.62	-4	-9	-9	-5	-14	-4	5	5	19	28	23	11	7	1	-24	-31	ERROR (mV)
	LIN. ERR. (dB)	1.214	-0.14	-0.34	-0.34	-0.19	-0.54	-0.16	0.19	0.18	0.73	1.07	0.91	0.44	0.28	0.04	-0.94	-1.21	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1907	109	227	358	487	602	737	876	1002	1151	1288	1409	1531	1654	1779	1888	2016	Measured Value (mV)
	SLOPE (mV/dB)	25.76	5	-5	-3	-3	-17	-11	0	-3	17	25	17	11	5	1	-19	-20	ERROR (mV)
	LIN. ERR. (dB)	0.978	0.21	-0.21	-0.13	-0.12	-0.65	-0.41	-0.02	-0.13	0.66	0.98	0.68	0.41	0.19	0.04	-0.73	-0.76	LINEARITY ERROR (dB)
Avg. Slope: 25.6 mV/dB			0.5	0.8	0.7	0.7	0.7	0.8	1	1.1	1.1	1.2	0.7	0.3	0.3	0.3	0.3	0.4	Flatness dB: ±1.2 dB



PL42890

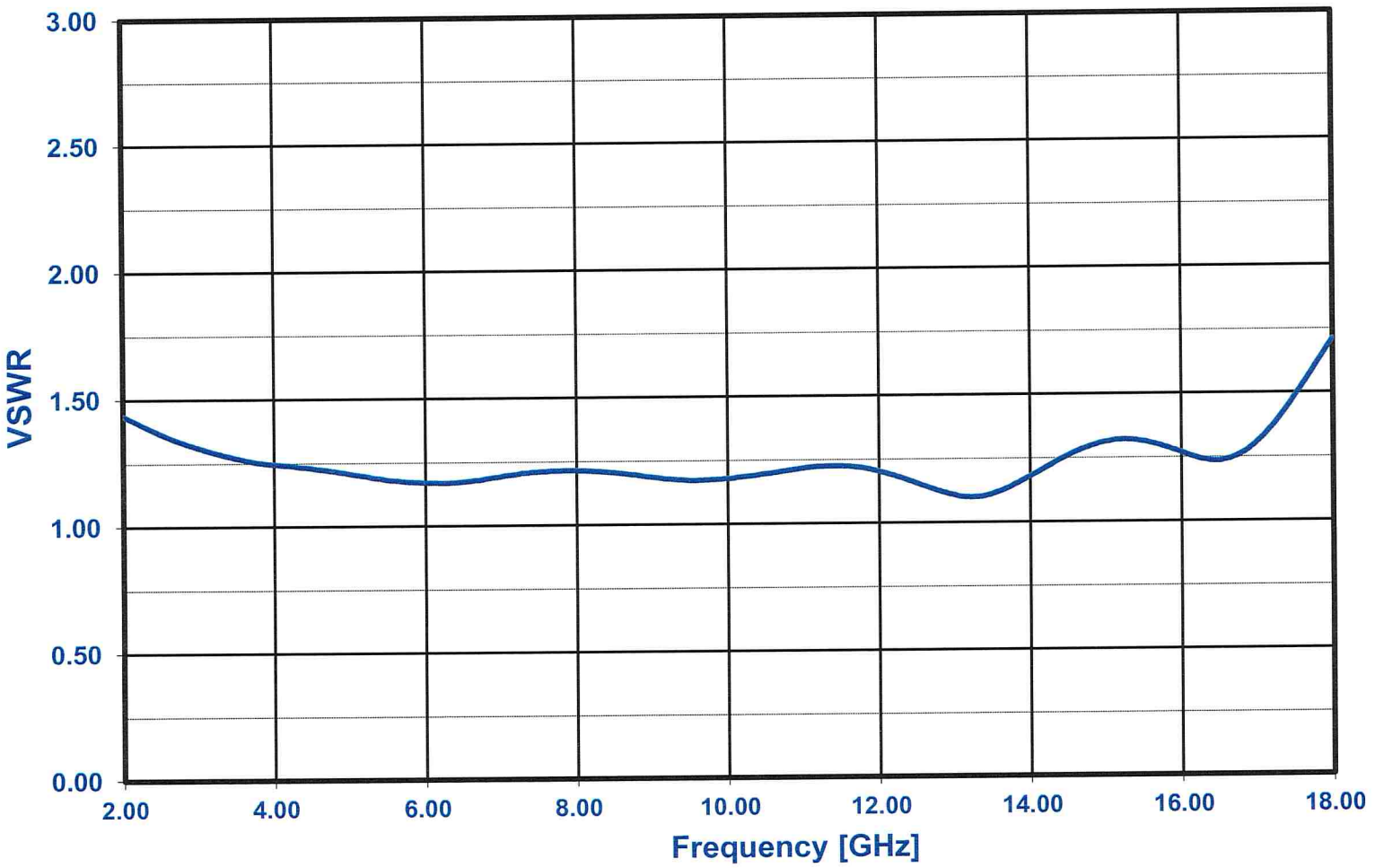
+85°C


Linearity Error VS Input Power
LINEARITY ERROR (dB)
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
-70
-65
-60
-55
-50
-45
-40
-35
-30
-25
-20
-15
-10
-5
0
5
INPUT POWER (dBm)
2 GHz
4 GHz
6 GHz
8 GHz
10 GHz
12 GHz
14 GHz
16 GHz
18 GHz

Model Number: SDLVA-2G18G-CD-2-OPT218
Serial Number: PL42890

Temperature: +25C

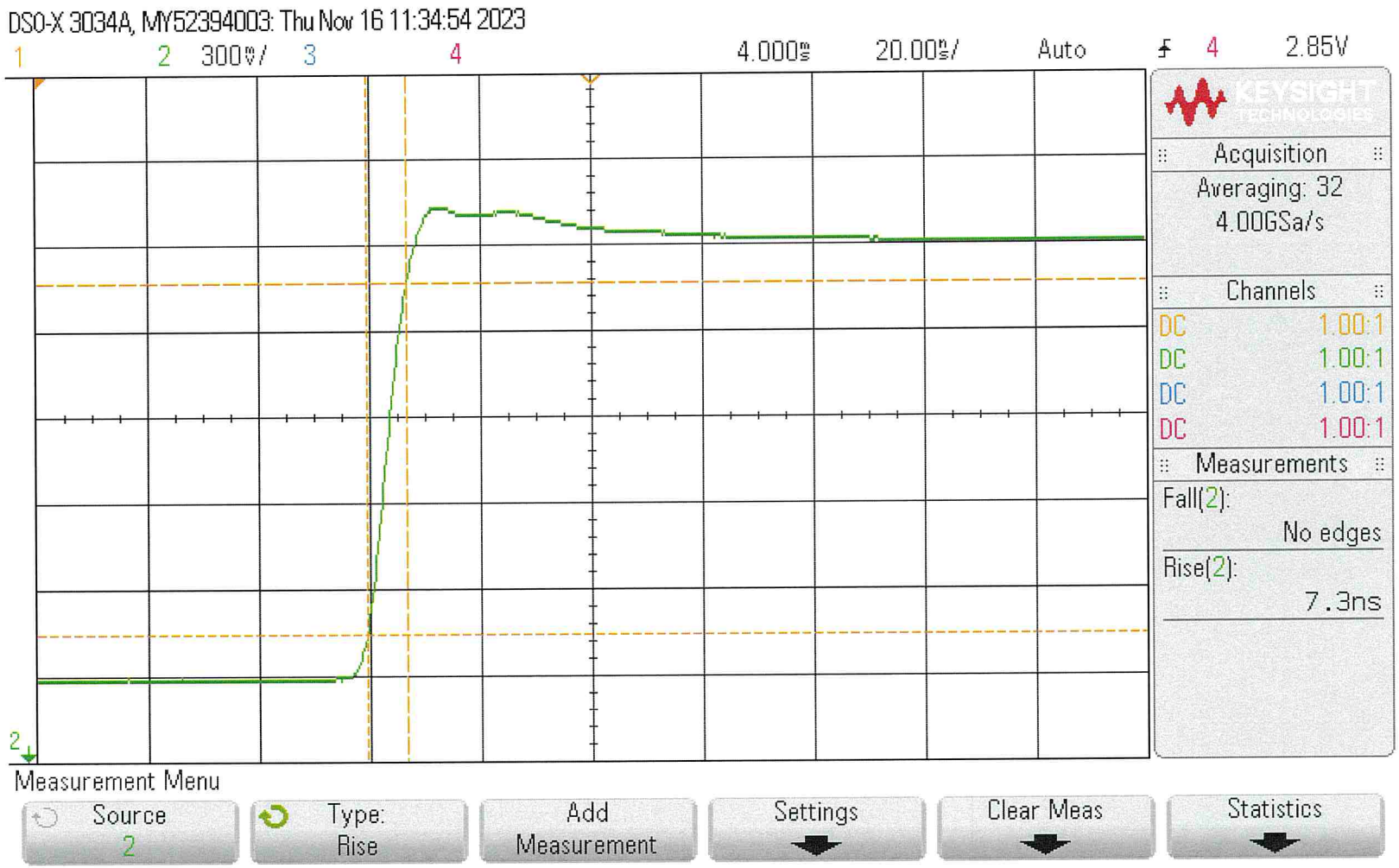
VSWR GRAPH



Input 1.71:1 Max

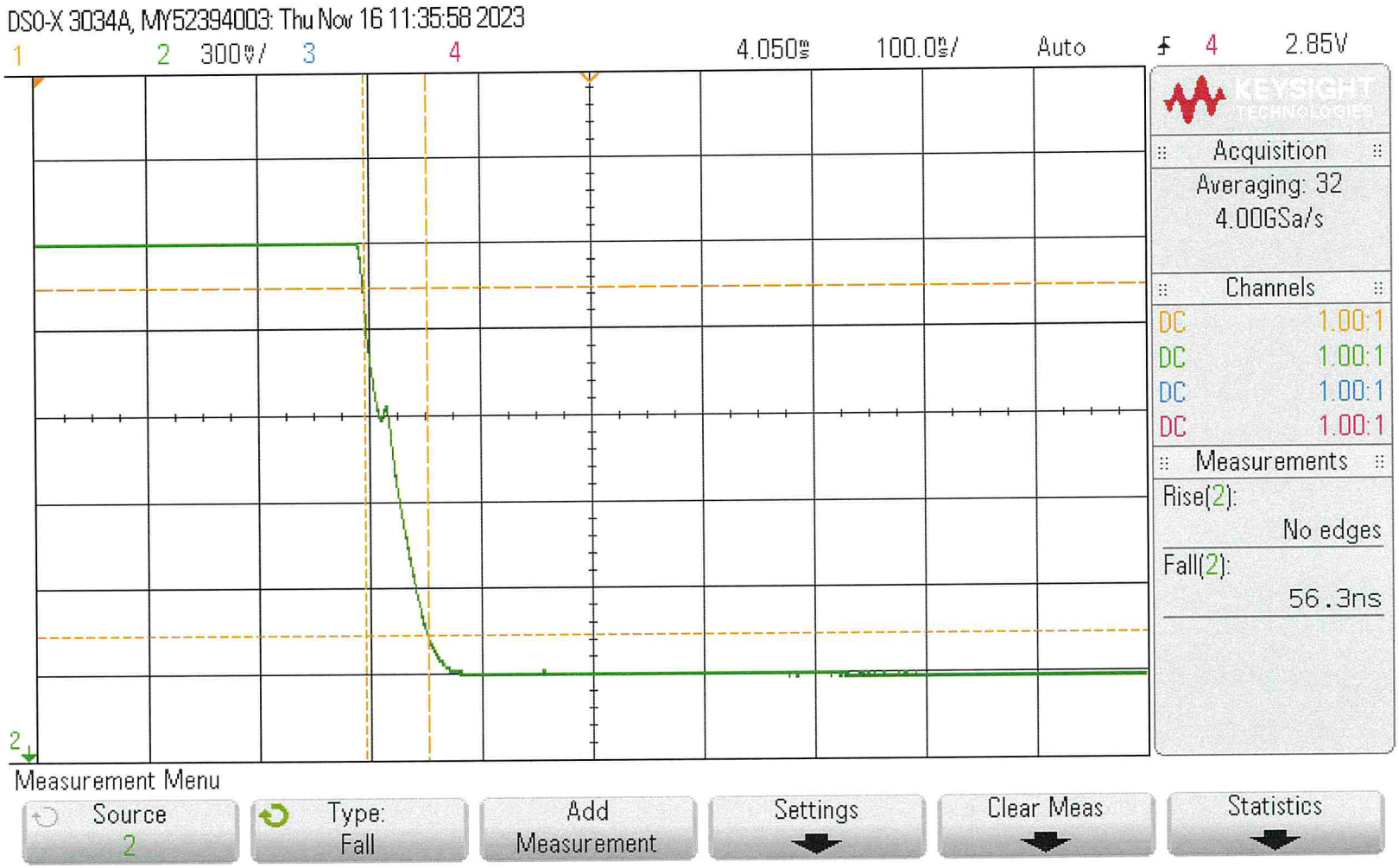
PL42890.

RiseTime



PL42890

Recovery



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TSS -71