Quantic PMI
PLANAR MONOLITHICS

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

CUSTOMER: [redacted]
SO: [redacted]
MODEL NO: SDLVA-6G18G-CD-2-OPT218
SERIAL NO: PL42813/2346

TESTED BY: Jim Hopson
TEMPERATURE: +25°C
DATE: 11/14/2023
DRAWING NO: 27623906 **REV:** A1

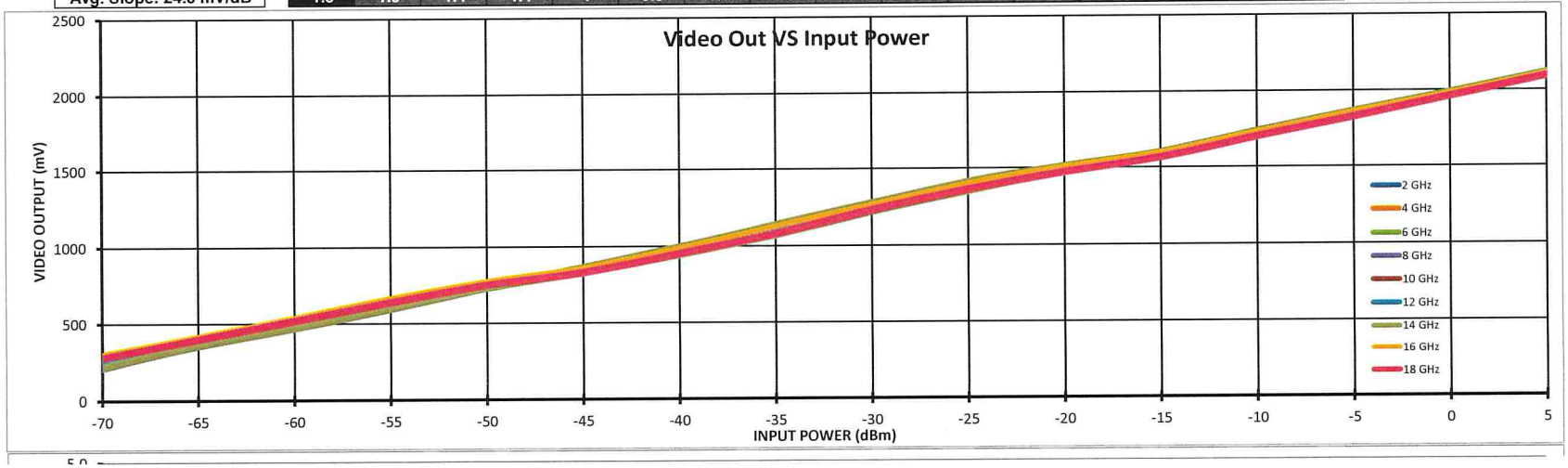
TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	2.0 GHz – 18.0 GHz	GHz - GHz	PMI QA
2	Flatness	± 2.0 dB Maximum	± 1.8dB 25°C See Plots	
3	TSS	-70 dBm Minimum	-71dBm	
4	VSWR	2.0:1 (Input)	1.48:1	
5	Input Power	+17 dBm CW Maximum	Pass	
6	RF Out	+13 dBm ±3 dB Typical	14.5/11.8dBm	
7	Log Slope	25 mV/dB (±10%) 50Ω	24.8mV/dB See Plot	
8	Log Range	-70 to +5 dBm	See Plots	
9	Log Linearity	±2.5 dB (-40°C - +85°C)	1.75/-1.63dB See Plots	
10	Pulse Range	30 ns to CW	Pass	
11	Rise Time	10 ns (6 ns Typical)	5.8ns	
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: 11-14-23

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

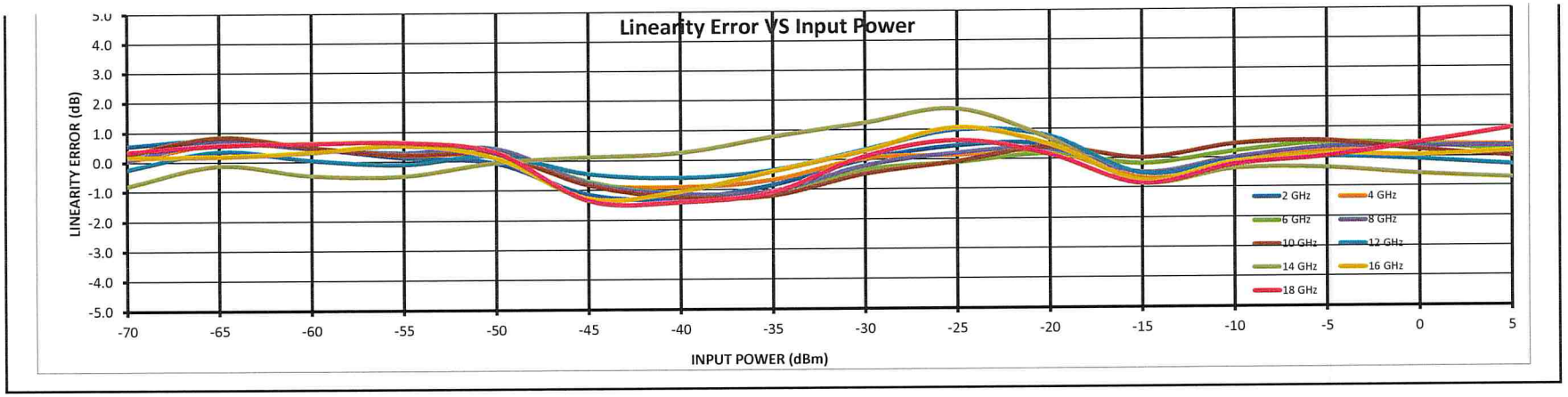
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL42813
Date: 11/08/23
Tested By: Jim Hopson
Test Temp: +25°C

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)	1975	255	384	501	616	735	832	952	1087	1232	1367	1491	1590	1725	1859	1986	2106	Measured Value (mV)
	SLOPE (mV/dB)	24.76	14	19	12	3	-2	-28	-32	-21	0	11	12	-13	-2	8	11	8	ERROR (mV)
	LIN. ERR. (dB)	1.3	0.55	0.76	0.48	0.13	-0.06	-1.15	-1.30	-0.85	0.01	0.46	0.47	-0.53	-0.08	0.33	0.46	0.31	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	1976	237	376	496	614	738	838	959	1089	1231	1358	1485	1588	1724	1857	1986	2110	Measured Value (mV)
	SLOPE (mV/dB)	24.86	1	16	12	5	5	-19	-22	-17	1	4	6	-15	-3	6	10	10	ERROR (mV)
	LIN. ERR. (dB)	0.903	0.05	0.64	0.47	0.22	0.21	-0.77	-0.90	-0.67	0.04	0.15	0.26	-0.60	-0.13	0.22	0.41	0.40	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	1977	217	361	478	599	727	826	941	1067	1213	1345	1478	1595	1731	1864	1988	2108	Measured Value (mV)
	SLOPE (mV/dB)	25.19	3	21	12	7	9	-18	-29	-29	-9	-3	5	-4	6	13	11	5	Error (mV)
	LIN. ERR. (dB)	1.14	0.12	0.83	0.48	0.28	0.36	-0.70	-1.14	-1.14	-0.34	-0.10	0.18	-0.18	0.22	0.50	0.43	0.19	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	1973	229	370	488	609	737	832	947	1074	1220	1355	1483	1587	1724	1857	1982	2107	Measured Value (mV)
	SLOPE (mV/dB)	24.94	2	18	11	8	11	-19	-29	-26	-5	5	9	-12	0	9	9	9	ERROR (mV)
	LIN. ERR. (dB)	1.143	0.07	0.72	0.45	0.30	0.44	-0.75	-1.14	-1.05	-0.20	0.22	0.35	-0.48	0.01	0.34	0.36	0.37	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	1983	229	369	486	605	731	830	945	1072	1216	1352	1490	1606	1743	1871	1989	2109	Measured Value (mV)
	SLOPE (mV/dB)	25.16	7	21	13	6	6	-21	-32	-30	-12	-2	10	1	12	14	6	1	Error (mV)
	LIN. ERR. (dB)	1.253	0.28	0.85	0.50	0.23	0.24	-0.82	-1.25	-1.20	-0.48	-0.07	0.41	0.02	0.47	0.56	0.25	0.02	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	1982	229	369	486	607	739	848	969	1100	1242	1383	1502	1595	1730	1858	1980	2100	Measured Value (mV)
	SLOPE (mV/dB)	24.96	-6	9	1	-3	5	-11	-15	-9	9	25	19	-13	-3	1	-2	-7	ERROR (mV)
	LIN. ERR. (dB)	0.992	-0.25	0.36	0.05	-0.10	0.19	-0.44	-0.60	-0.35	0.34	0.99	0.76	-0.51	-0.10	0.03	-0.09	-0.28	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	2001	207	351	469	595	733	864	994	1134	1272	1410	1511	1600	1738	1865	1986	2109	Measured Value (mV)
	SLOPE (mV/dB)	25.33	-21	-3	-12	-12	-1	3	7	20	31	43	17	-21	-9	-9	-15	-18	ERROR (mV)
	LIN. ERR. (dB)	1.684	-0.81	-0.13	-0.47	-0.49	-0.04	0.13	0.26	0.79	1.24	1.68	0.67	-0.81	-0.37	-0.35	-0.57	-0.72	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	1980	295	416	540	666	776	863	989	1126	1263	1402	1509	1600	1735	1862	1981	2105	Measured Value (mV)
	SLOPE (mV/dB)	24.13	4	5	8	13	3	-31	-26	-9	7	26	12	-18	-3	3	1	5	ERROR (mV)
	LIN. ERR. (dB)	1.281	0.18	0.19	0.33	0.55	0.11	-1.28	-1.06	-0.38	0.30	1.06	0.49	-0.73	-0.14	0.12	0.06	0.20	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1949	270	396	518	639	751	832	951	1079	1229	1362	1471	1567	1703	1830	1961	2093	Measured Value (mV)
	SLOPE (mV/dB)	24.11	9	14	15	16	7	-32	-34	-26	3	15	4	-21	-5	1	12	23	ERROR (mV)
	LIN. ERR. (dB)	1.406	0.35	0.58	0.64	0.66	0.30	-1.34	-1.41	-1.10	0.12	0.64	0.16	-0.86	-0.22	0.05	0.48	0.95	LINEARITY ERROR (dB)
Avg. Slope: 24.8 mV/dB			1.8	1.3	1.4	1.4	1	0.8	1.1	1.3	1.2	1.3	0.8	0.8	0.8	0.8	0.6	0.3	Flatness dB: ±1.8 dB



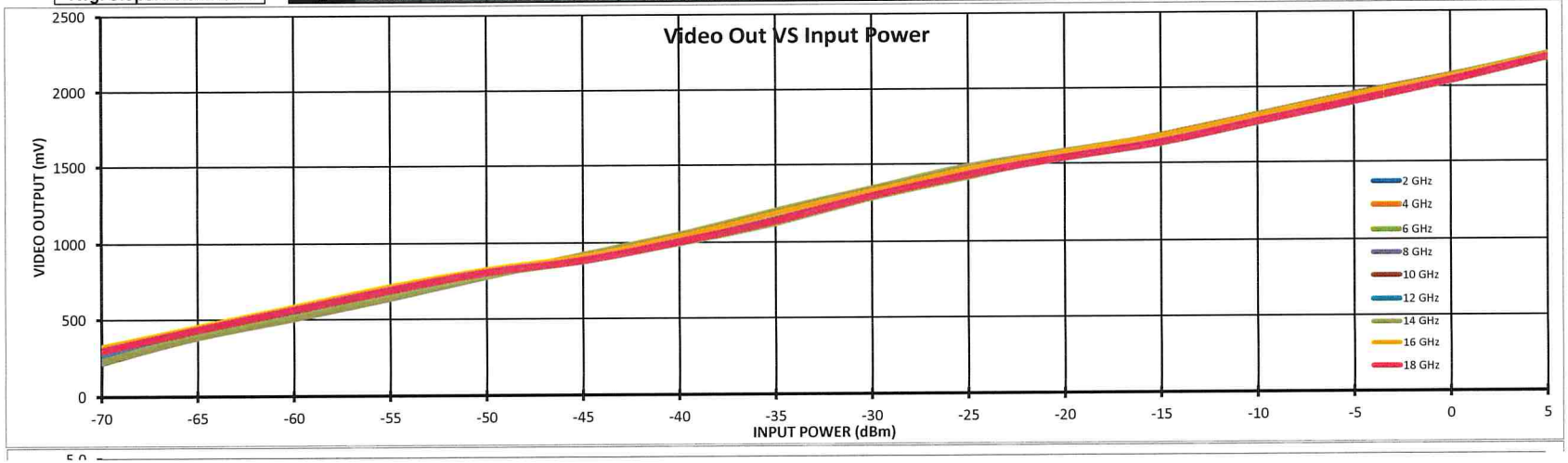
PL42813

+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

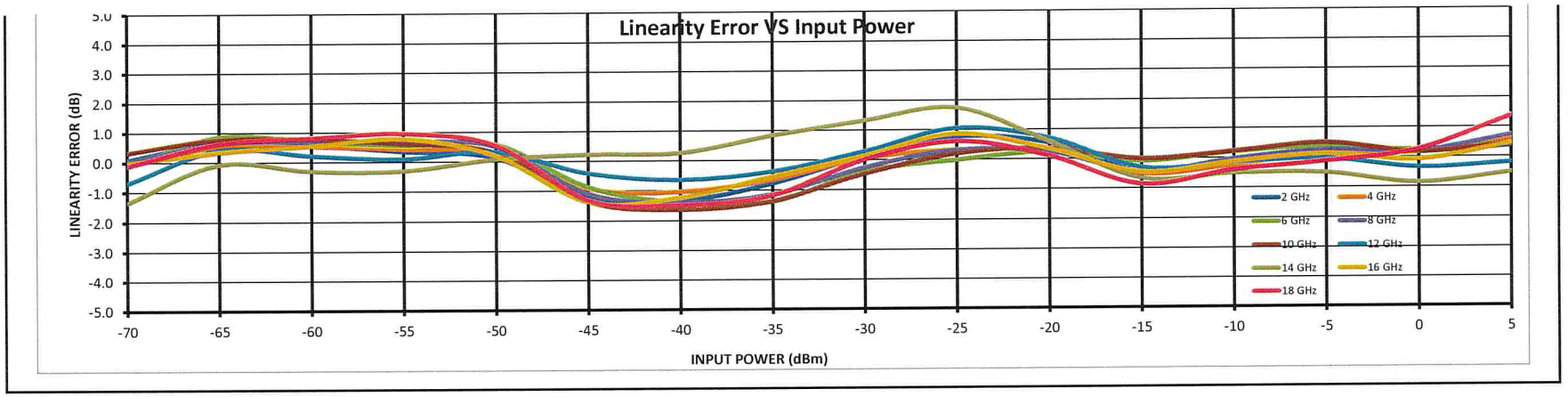
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL42813
Date: 11/09/23
Tested By: Jim Hopson
Test Temp: -40°C

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)	2070	284	427	552	674	796	890	1014	1156	1307	1451	1573	1675	1809	1947	2074	2207	Measured Value (mV)
	SLOPE (mV/dB)	25.54	2	17	15	9	3	-30	-34	-20	3	20	14	-12	-5	5	4	9	ERROR (mV)
	LIN. ERR. (dB)	1.3	0.08	0.68	0.57	0.35	0.13	-1.19	-1.34	-0.78	0.13	0.77	0.55	-0.46	-0.21	0.19	0.16	0.37	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	2066	285	428	555	679	803	899	1023	1160	1305	1439	1565	1672	1806	1942	2070	2208	Measured Value (mV)
	SLOPE (mV/dB)	25.41	-2	14	14	11	8	-23	-26	-16	2	8	7	-13	-6	3	4	15	ERROR (mV)
	LIN. ERR. (dB)	1.037	-0.08	0.55	0.55	0.43	0.31	-0.92	-1.04	-0.65	0.06	0.33	0.29	-0.50	-0.22	0.13	0.17	0.60	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	2057	255	409	533	658	787	878	993	1122	1276	1414	1549	1669	1805	1938	2063	2197	Measured Value (mV)
	SLOPE (mV/dB)	25.69	-3	22	18	14	15	-22	-36	-35	-10	0	6	-2	5	10	6	12	Error (mV)
	LIN. ERR. (dB)	1.398	-0.12	0.87	0.70	0.56	0.58	-0.87	-1.40	-1.38	-0.38	-0.01	0.24	-0.09	0.21	0.38	0.25	0.46	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	2060	288	431	558	685	807	893	1012	1145	1294	1435	1560	1669	1806	1940	2065	2205	Measured Value (mV)
	SLOPE (mV/dB)	25.32	0	17	17	18	13	-28	-35	-29	-6	8	6	-11	-1	7	5	19	ERROR (mV)
	LIN. ERR. (dB)	1.39	0.01	0.66	0.68	0.69	0.51	-1.09	-1.39	-1.14	-0.25	0.32	0.26	-0.44	-0.03	0.27	0.20	0.73	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	2071	300	439	566	689	808	893	1013	1147	1297	1441	1572	1690	1823	1957	2076	2210	Measured Value (mV)
	SLOPE (mV/dB)	25.42	8	20	20	16	8	-34	-41	-35	-12	5	9	0	6	13	5	12	Error (mV)
	LIN. ERR. (dB)	1.628	0.33	0.79	0.79	0.63	0.31	-1.35	-1.63	-1.36	-0.46	0.21	0.36	0.00	0.23	0.50	0.18	0.45	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	2073	248	406	530	656	791	901	1024	1160	1306	1455	1575	1678	1811	1943	2064	2197	Measured Value (mV)
	SLOPE (mV/dB)	25.81	-18	11	6	3	9	-10	-17	-10	7	27	18	-8	-4	-1	-9	-5	ERROR (mV)
	LIN. ERR. (dB)	1.061	-0.71	0.41	0.22	0.10	0.33	-0.41	-0.64	-0.37	0.29	1.06	0.71	-0.30	-0.14	-0.03	-0.34	-0.19	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	2089	219	384	509	640	781	916	1048	1194	1338	1480	1581	1679	1814	1945	2067	2207	Measured Value (mV)
	SLOPE (mV/dB)	26.21	-36	-2	-8	-8	2	6	7	22	35	46	16	-17	-13	-13	-22	-13	ERROR (mV)
	LIN. ERR. (dB)	1.748	-1.36	-0.07	-0.30	-0.30	0.08	0.23	0.27	0.84	1.33	1.75	0.60	-0.66	-0.51	-0.51	-0.86	-0.51	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	2069	320	454	584	715	825	911	1039	1181	1323	1466	1578	1683	1816	1947	2067	2205	Measured Value (mV)
	SLOPE (mV/dB)	24.97	-1	9	14	20	5	-34	-31	-14	3	22	9	-11	-3	3	-2	11	ERROR (mV)
	LIN. ERR. (dB)	1.36	-0.02	0.34	0.55	0.79	0.20	-1.36	-1.23	-0.55	0.14	0.86	0.35	-0.45	-0.12	0.12	-0.07	0.46	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	2033	290	433	562	690	804	882	1002	1134	1288	1427	1539	1639	1775	1906	2040	2192	Measured Value (mV)
	SLOPE (mV/dB)	24.86	-3	16	21	24	14	-32	-37	-29	1	15	3	-21	-10	-3	7	35	ERROR (mV)
	LIN. ERR. (dB)	1.477	-0.12	0.64	0.82	0.97	0.56	-1.30	-1.48	-1.17	0.03	0.62	0.12	-0.86	-0.38	-0.12	0.27	1.39	LINEARITY ERROR (dB)
Avg. Slope: 25.5 mV/dB			2	1.4	1.5	1.5	0.9	0.7	1.1	1.4	1.2	1.3	0.8	1	0.9	1	0.7	0.4	Flatness dB: ±2 dB



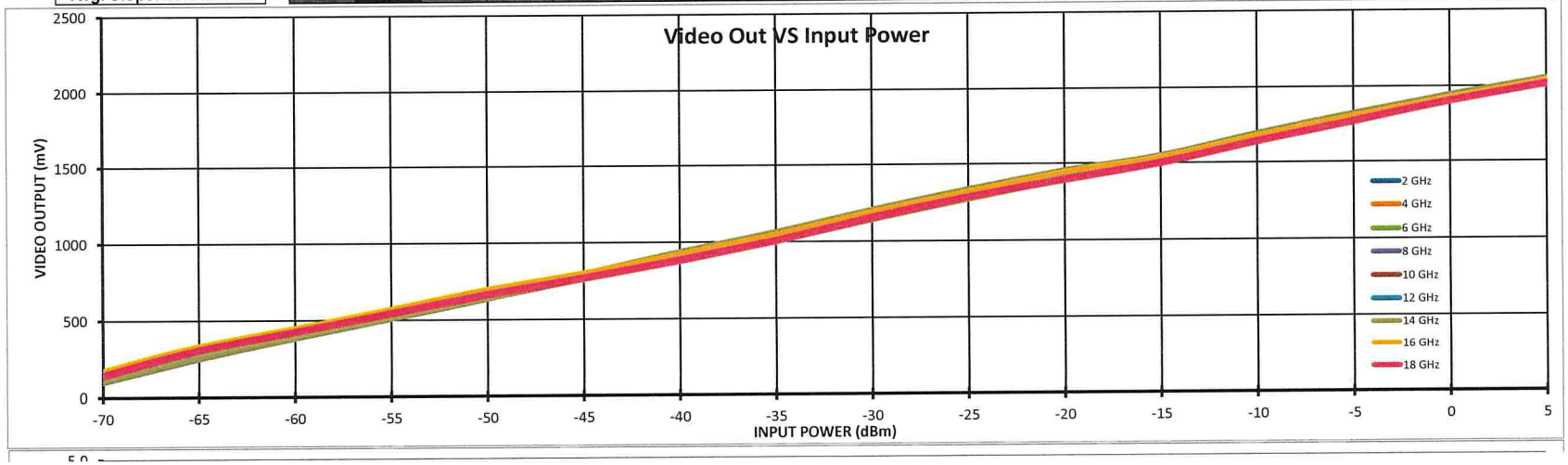
PL42813

-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

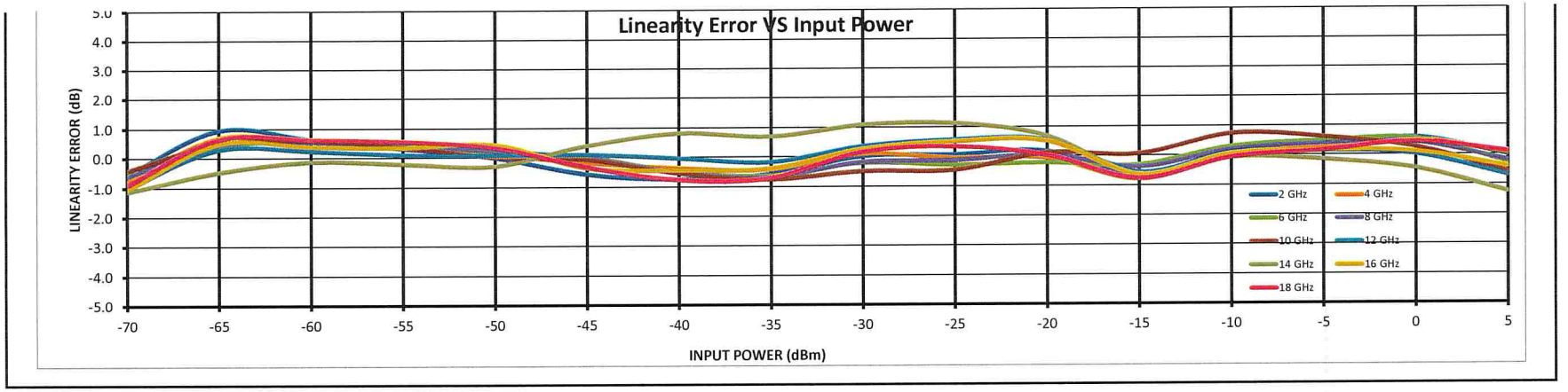
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL42813
Date: 11/09/23
Tested By: Jim Hopson
Test Temp: +85°C

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)	1923	158	321	438	555	672	783	904	1033	1173	1299	1427	1531	1675	1806	1938	2048	Measured Value (mV)
	SLOPE (mV/dB)	25.02	-14	24	16	8	0	-14	-18	-15	0	1	4	-17	2	8	15	0	ERROR (mV)
	LIN. ERR. (dB)	1.0	-0.56	0.96	0.64	0.31	-0.01	-0.57	-0.74	-0.58	0.02	0.05	0.17	-0.67	0.08	0.32	0.60	-0.01	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	1924	139	303	426	546	666	785	906	1031	1170	1292	1418	1526	1671	1805	1937	2051	Measured Value (mV)
	SLOPE (mV/dB)	25.21	-20	18	15	9	3	-4	-9	-10	2	-2	-2	-20	-1	7	13	1	ERROR (mV)
	LIN. ERR. (dB)	0.805	-0.81	0.70	0.58	0.34	0.10	-0.18	-0.38	-0.42	0.10	-0.06	-0.06	-0.78	-0.02	0.29	0.53	0.05	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	1916	107	259	392	517	638	762	877	1002	1141	1267	1397	1523	1667	1800	1930	2037	Measured Value (mV)
	SLOPE (mV/dB)	25.64	-14	10	15	12	5	0	-13	-16	-5	-8	-6	-8	8	13	14	-7	Error (mV)
	LIN. ERR. (dB)	0.629	-0.53	0.40	0.58	0.46	0.18	0.01	-0.50	-0.63	-0.21	-0.30	-0.23	-0.31	0.30	0.49	0.56	-0.27	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	1923	114	270	400	525	648	770	885	1009	1150	1279	1412	1529	1672	1805	1934	2046	Measured Value (mV)
	SLOPE (mV/dB)	25.61	-16	12	14	11	6	0	-13	-17	-5	-4	1	-10	5	10	11	-5	ERROR (mV)
	LIN. ERR. (dB)	0.682	-0.62	0.47	0.54	0.42	0.22	-0.01	-0.52	-0.68	-0.18	-0.14	0.05	-0.38	0.20	0.39	0.43	-0.20	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	1930	110	263	395	518	638	765	882	1006	1142	1272	1416	1544	1691	1817	1937	2044	Measured Value (mV)
	SLOPE (mV/dB)	25.85	-11	13	16	10	0	-2	-14	-19	-13	-12	3	2	19	16	7	-15	Error (mV)
	LIN. ERR. (dB)	0.754	-0.42	0.50	0.61	0.37	0.01	-0.07	-0.55	-0.75	-0.49	-0.46	0.11	0.07	0.75	0.63	0.27	-0.59	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	1932	122	282	408	532	659	787	911	1035	1176	1309	1436	1535	1679	1808	1932	2041	Measured Value (mV)
	SLOPE (mV/dB)	25.49	-25	7	6	2	2	2	-1	-5	9	15	14	-14	2	4	0	-18	ERROR (mV)
	LIN. ERR. (dB)	0.994	-0.99	0.28	0.23	0.09	0.07	0.09	-0.04	-0.18	0.35	0.57	0.55	-0.56	0.09	0.15	0.01	-0.71	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	1950	100	247	386	514	642	790	931	1058	1198	1329	1448	1543	1688	1816	1938	2048	Measured Value (mV)
	SLOPE (mV/dB)	26.01	-29	-12	-4	-6	-8	10	21	18	28	29	18	-17	-2	-4	-12	-32	ERROR (mV)
	LIN. ERR. (dB)	1.233	-1.13	-0.48	-0.13	-0.21	-0.29	0.40	0.82	0.70	1.09	1.12	0.70	-0.65	-0.07	-0.15	-0.46	-1.23	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	1926	167	329	450	573	699	803	925	1050	1190	1320	1444	1539	1680	1807	1929	2040	Measured Value (mV)
	SLOPE (mV/dB)	24.76	-26	12	9	9	11	-9	-11	-10	7	13	13	-16	1	4	3	-10	ERROR (mV)
	LIN. ERR. (dB)	1.048	-1.05	0.49	0.38	0.35	0.44	-0.36	-0.44	-0.39	0.26	0.51	0.52	-0.64	0.05	0.18	0.11	-0.41	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1890	137	299	422	544	662	769	882	1007	1152	1280	1396	1500	1641	1770	1901	2016	Measured Value (mV)
	SLOPE (mV/dB)	24.72	-22	16	16	14	8	-8	-19	-17	4	8	1	-19	-1	4	11	3	ERROR (mV)
	LIN. ERR. (dB)	0.893	-0.89	0.66	0.64	0.57	0.34	-0.33	-0.76	-0.70	0.16	0.34	0.03	-0.76	-0.05	0.16	0.46	0.11	LINEARITY ERROR (dB)
Avg. Slope: 25.4 mV/dB			1.3	1.6	1.3	1.2	1.2	0.8	1.1	1.1	1.1	1.2	1	0.9	1	0.9	0.7	0.7	Flatness dB: ±1.6 dB



PL42813

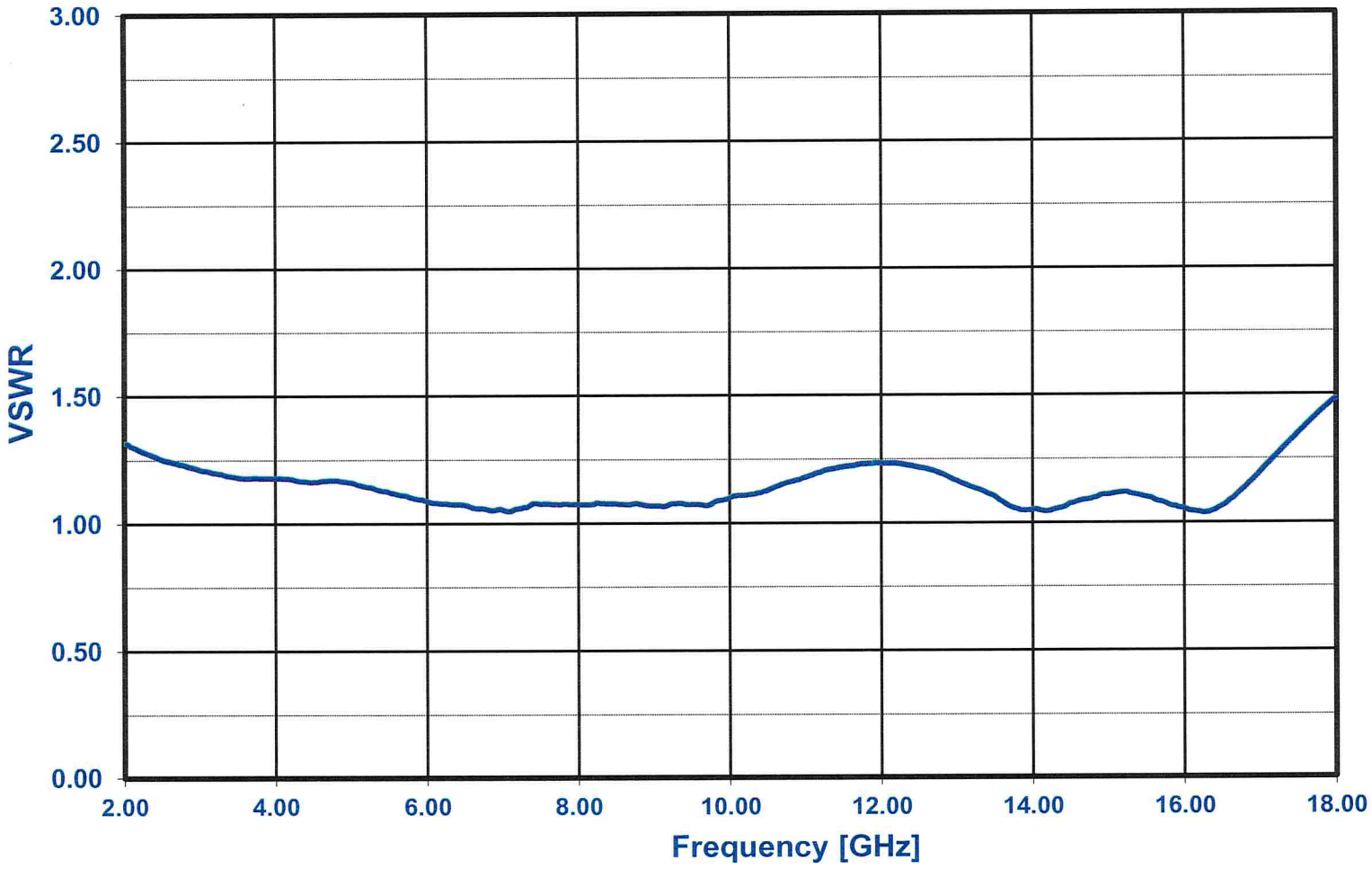
+85°C


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: PL42813

Temperature: +25C

VSWR GRAPH

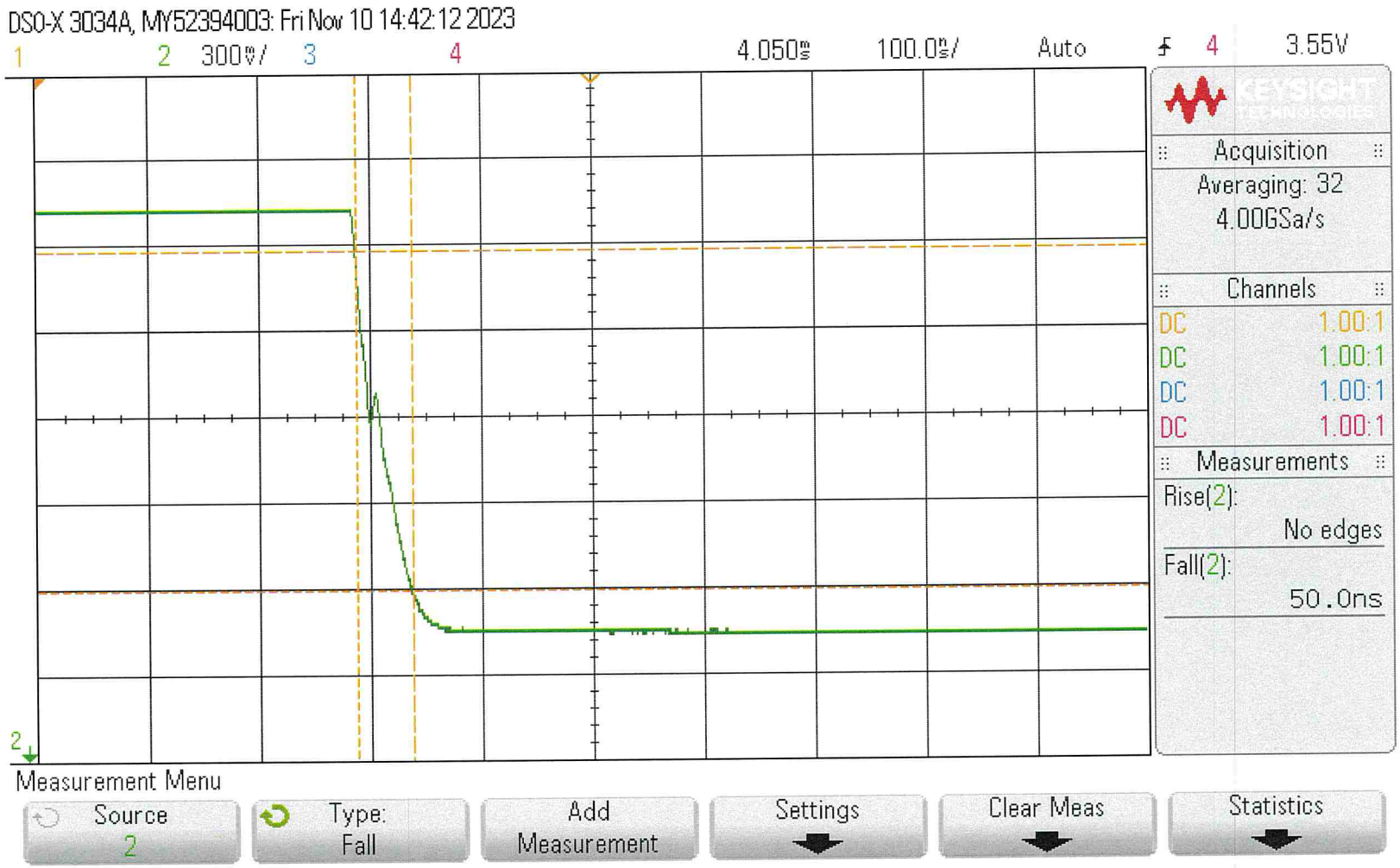


Input 1.48:1 Max

PL42813
Rise Time

PL42813

Recovery



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TSS -71