Quantic PMI
PLANAR MONOLITHICS

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

CUSTOMER: _____ **TESTED BY:** Jim Hopson
SO: _____ **TEMPERATURE:** +25°C
MODEL NO: SDLVA-6G18G-CD-2-OPT218 **DATE:** 5/10/2024
SERIAL NO: PL46034/2420 **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 QA3
2	Flatness	± 2.0 dB Maximum	± 1.7 dB 25°C See Plots	
3	TSS	-70 dBm Minimum	-71dBm	
4	VSWR	2.0:1 (Input)	1.65:1	
5	Input Power	+17 dBm CW Maximum	Pass	
6	RF Out	+13 dBm ±3 dB Typical	14.0/12.4 dBm	
7	Log Slope	25 mV/dB (±10%) 50Ω	25.0 mV/dB See Plot	
8	Log Range	-70 to +5 dBm	See Plots	
9	Log Linearity	±2.5 dB (-40°C - +85°C)	1.72/-1.51 dB See Plots	
10	Pulse Range	30 ns to CW	Pass	
11	Rise Time	10 ns (6 ns Typical)	6.5 ns	
12	Recovery Time	60 ns Typical	60 ns Typical	
13	DC Supply	+15V or +12V @ 350 mA -15V or -12V @ 180 mA	280 mA 100 mA	

QA/QC Approval: K. Mutter Date: 5-13-24

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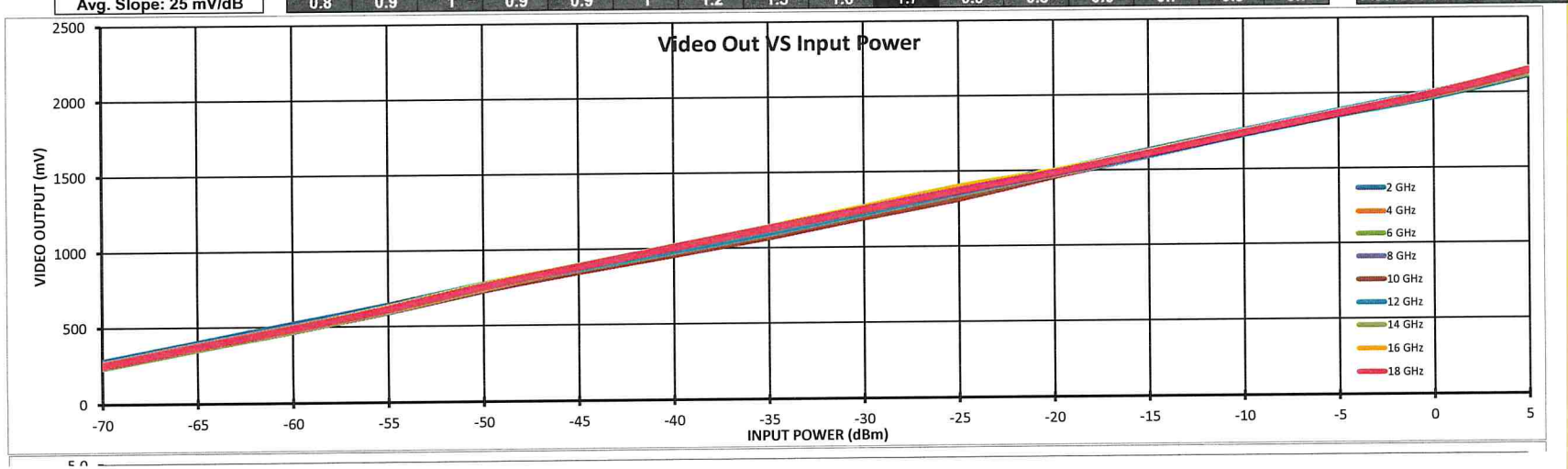
Email: sales@quanticpmi.com

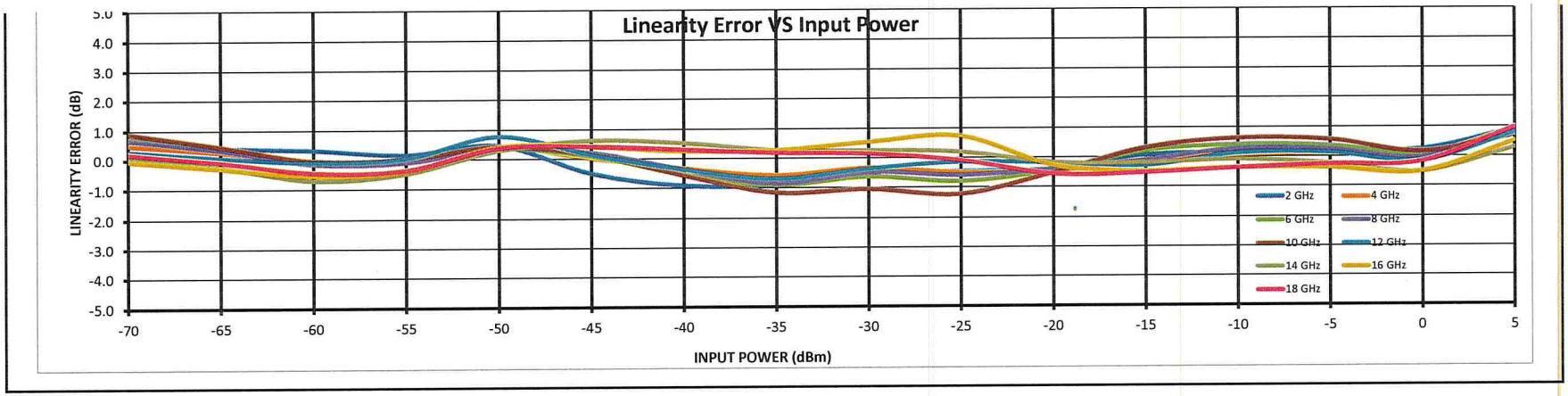
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL46034
Date: 5/10/24
Tested By: Jim Hopson
Test Temp: +25°C

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)	2003	280	398	520	640	772	872	986	1111	1245	1370	1496	1632	1758	1885	2009	2150	Measured Value (mV)
	SLOPE (mV/dB)	24.85	17	10	8	4	12	-13	-23	-22	-12	-12	-10	2	4	6	6	23	ERROR (mV)
	LIN. ERR. (dB)	0.9	0.67	0.42	0.33	0.16	0.47	-0.51	-0.92	-0.89	-0.50	-0.47	-0.40	0.07	0.14	0.25	0.24	0.92	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	1996	258	377	494	619	756	871	987	1106	1237	1358	1484	1618	1747	1873	1997	2144	Measured Value (mV)
	SLOPE (mV/dB)	25	13	7	-1	-1	11	1	-8	-14	-8	-12	-11	-2	2	3	1	23	ERROR (mV)
	LIN. ERR. (dB)	0.939	0.51	0.27	-0.05	-0.05	0.43	0.03	-0.33	-0.57	-0.34	-0.50	-0.46	-0.10	0.06	0.10	0.06	0.94	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	1985	238	356	470	596	733	852	962	1079	1212	1334	1469	1612	1743	1868	1987	2129	Measured Value (mV)
	SLOPE (mV/dB)	25.22	19	11	-1	-1	9	2	-14	-23	-16	-20	-11	6	10	9	2	18	Error (mV)
	LIN. ERR. (dB)	0.91	0.75	0.43	-0.05	-0.06	0.37	0.09	-0.55	-0.91	-0.64	-0.80	-0.45	0.22	0.42	0.37	0.09	0.72	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	1970	239	355	468	594	731	852	962	1075	1209	1331	1461	1593	1728	1852	1970	2118	Measured Value (mV)
	SLOPE (mV/dB)	24.98	17	8	-4	-3	10	6	-9	-21	-12	-15	-10	-3	7	6	0	23	ERROR (mV)
	LIN. ERR. (dB)	0.907	0.68	0.33	-0.15	-0.10	0.38	0.22	-0.37	-0.85	-0.48	-0.60	-0.40	-0.11	0.29	0.26	-0.02	0.91	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	1974	241	355	468	595	731	849	956	1067	1195	1316	1459	1606	1739	1863	1978	2118	Measured Value (mV)
	SLOPE (mV/dB)	25.08	23	12	-1	1	11	4	-14	-29	-26	-31	-13	9	16	15	4	19	Error (mV)
	LIN. ERR. (dB)	1.221	0.92	0.46	-0.03	0.03	0.46	0.16	-0.57	-1.15	-1.04	-1.22	-0.52	0.34	0.64	0.59	0.17	0.75	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	1978	266	383	502	628	769	876	986	1101	1232	1360	1482	1602	1735	1858	1974	2120	Measured Value (mV)
	SLOPE (mV/dB)	24.55	7	1	-2	1	19	3	-9	-17	-9	-4	-5	-7	3	3	-4	20	ERROR (mV)
	LIN. ERR. (dB)	0.797	0.29	0.06	-0.10	0.03	0.78	0.13	-0.39	-0.70	-0.37	-0.15	-0.19	-0.30	0.12	0.13	-0.15	0.80	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	1998	244	361	475	606	751	885	1008	1127	1252	1376	1492	1617	1745	1867	1985	2131	Measured Value (mV)
	SLOPE (mV/dB)	25.09	2	-6	-18	-12	7	16	14	7	7	5	-4	-5	-2	-6	-13	8	ERROR (mV)
	LIN. ERR. (dB)	0.703	0.09	-0.25	-0.70	-0.48	0.30	0.64	0.54	0.28	0.27	0.21	-0.17	-0.19	-0.09	-0.22	-0.52	0.30	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	2006	265	383	501	629	774	898	1018	1143	1274	1403	1502	1621	1748	1872	1993	2143	Measured Value (mV)
	SLOPE (mV/dB)	24.85	-1	-7	-14	-10	11	11	6	7	14	19	-7	-12	-9	-9	-13	13	ERROR (mV)
	LIN. ERR. (dB)	0.752	-0.04	-0.30	-0.55	-0.40	0.44	0.43	0.26	0.29	0.56	0.75	-0.26	-0.47	-0.36	-0.37	-0.50	0.53	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	2002	257	375	491	618	762	888	1010	1132	1256	1375	1488	1614	1743	1871	1998	2152	Measured Value (mV)
	SLOPE (mV/dB)	25	5	-2	-11	-9	10	11	8	5	4	-2	-14	-13	-9	-6	-4	25	ERROR (mV)
	LIN. ERR. (dB)	1	0.21	-0.07	-0.43	-0.35	0.41	0.45	0.33	0.21	0.16	-0.08	-0.56	-0.52	-0.36	-0.24	-0.16	1.00	LINEARITY ERROR (dB)
Avg. Slope: 25 mV/dB			0.8	0.9	1	0.9	0.9	1	1.2	1.5	1.6	1.7	0.9	0.8	0.6	0.7	0.8	0.7	Flatness dB: ±1.7 dB



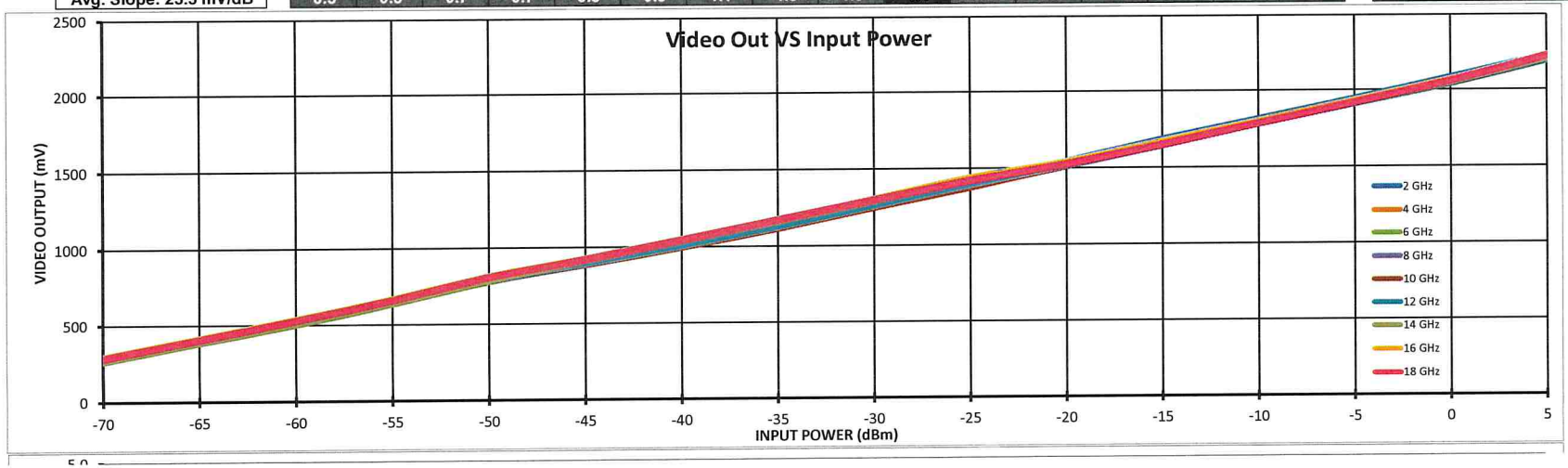
PL46034

25°C

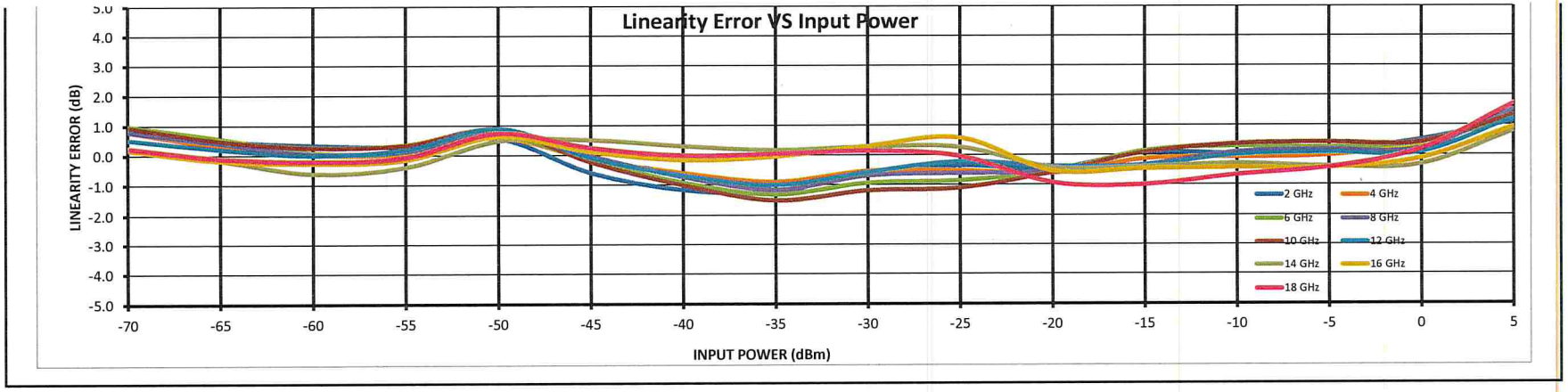

Linearity Error VS Input Power
LINEARITY ERROR (dB)
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
-70
-65
-60
-55
-50
-45
-40
-35
-30
-25
-20
-15
-10
-5
0
5
INPUT POWER (dBm)
2 GHz
4 GHz
6 GHz
8 GHz
10 GHz
12 GHz
14 GHz
16 GHz
18 GHz

Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL46034
Date: 5/10/24
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)	2073	289	409	534	662	798	897	1011	1138	1284	1419	1545	1688	1816	1947	2086	2231	Measured Value (mV)
	SLOPE (mV/dB)	25.79	22	13	9	8	15	-15	-30	-32	-15	-9	-12	2	1	3	13	29	ERROR (mV)
	LIN. ERR. (dB)	1.2	0.84	0.49	0.34	0.30	0.57	-0.59	-1.17	-1.25	-0.59	-0.35	-0.47	0.08	0.04	0.12	0.51	1.13	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	2061	282	398	519	649	791	901	1017	1138	1276	1405	1531	1672	1802	1932	2070	2223	Measured Value (mV)
	SLOPE (mV/dB)	25.7	20	8	0	2	15	-3	-16	-23	-14	-13	-16	-3	-2	0	9	34	ERROR (mV)
	LIN. ERR. (dB)	1.314	0.80	0.31	0.02	0.08	0.60	-0.12	-0.61	-0.90	-0.53	-0.51	-0.61	-0.12	-0.07	-0.01	0.36	1.31	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	2049	267	385	502	632	775	883	992	1111	1250	1381	1518	1665	1798	1926	2059	2210	Measured Value (mV)
	SLOPE (mV/dB)	25.82	25	14	2	3	17	-4	-24	-34	-24	-22	-14	4	8	6	10	32	Error (mV)
	LIN. ERR. (dB)	1.32	0.99	0.56	0.09	0.13	0.66	-0.15	-0.93	-1.32	-0.94	-0.86	-0.56	0.14	0.29	0.25	0.40	1.25	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	2030	273	390	508	637	780	887	996	1112	1251	1380	1508	1641	1779	1908	2036	2196	Measured Value (mV)
	SLOPE (mV/dB)	25.4	20	10	1	3	19	-1	-19	-30	-18	-16	-15	-9	2	5	6	39	ERROR (mV)
	LIN. ERR. (dB)	1.518	0.80	0.40	0.05	0.13	0.76	-0.03	-0.73	-1.17	-0.69	-0.61	-0.57	-0.34	0.10	0.18	0.22	1.52	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	2037	286	401	522	651	791	890	997	1111	1246	1375	1515	1659	1793	1921	2048	2198	Measured Value (mV)
	SLOPE (mV/dB)	25.36	24	12	7	9	22	-6	-26	-38	-30	-28	-15	2	10	11	11	34	Error (mV)
	LIN. ERR. (dB)	1.512	0.96	0.49	0.26	0.35	0.87	-0.23	-1.01	-1.51	-1.19	-1.10	-0.58	0.10	0.38	0.43	0.43	1.35	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	2039	287	405	526	657	801	902	1013	1131	1268	1403	1525	1652	1787	1915	2041	2196	Measured Value (mV)
	SLOPE (mV/dB)	25.22	13	5	0	5	23	-2	-17	-25	-14	-5	-10	-9	0	2	2	31	ERROR (mV)
	LIN. ERR. (dB)	1.234	0.53	0.21	0.00	0.20	0.91	-0.08	-0.68	-1.00	-0.57	-0.22	-0.38	-0.34	0.01	0.09	0.09	1.23	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	2060	268	387	504	638	789	918	1041	1166	1297	1425	1536	1665	1796	1922	2052	2209	Measured Value (mV)
	SLOPE (mV/dB)	25.67	5	-4	-16	-10	12	13	8	4	7	7	-11	-10	-7	-10	-8	20	ERROR (mV)
	LIN. ERR. (dB)	0.798	0.19	-0.17	-0.62	-0.40	0.48	0.51	0.30	0.17	0.27	0.26	-0.42	-0.39	-0.29	-0.38	-0.32	0.80	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	2069	294	412	537	667	814	928	1048	1178	1314	1448	1547	1676	1804	1931	2066	2220	Measured Value (mV)
	SLOPE (mV/dB)	25.42	4	-5	-7	-4	16	3	-4	-1	8	15	-13	-12	-11	-11	-3	24	ERROR (mV)
	LIN. ERR. (dB)	0.946	0.18	-0.18	-0.26	-0.15	0.63	0.12	-0.16	-0.05	0.30	0.57	-0.53	-0.46	-0.42	-0.42	-0.11	0.95	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	2058	292	410	534	664	811	925	1045	1173	1302	1424	1528	1653	1788	1921	2063	2228	Measured Value (mV)
	SLOPE (mV/dB)	25.32	6	-2	-5	-1	19	6	0	1	4	-1	-24	-25	-17	-10	5	44	ERROR (mV)
	LIN. ERR. (dB)	1.721	0.25	-0.09	-0.19	-0.06	0.75	0.25	-0.01	0.05	0.14	-0.04	-0.93	-0.99	-0.66	-0.41	0.20	1.72	LINEARITY ERROR (dB)
Avg. Slope: 25.5 mV/dB			0.5	0.5	0.7	0.7	0.8	0.9	1.1	1.3	1.3	1.4	0.8	0.9	0.7	0.8	1	0.7	Flatness dB: ±1.4 dB

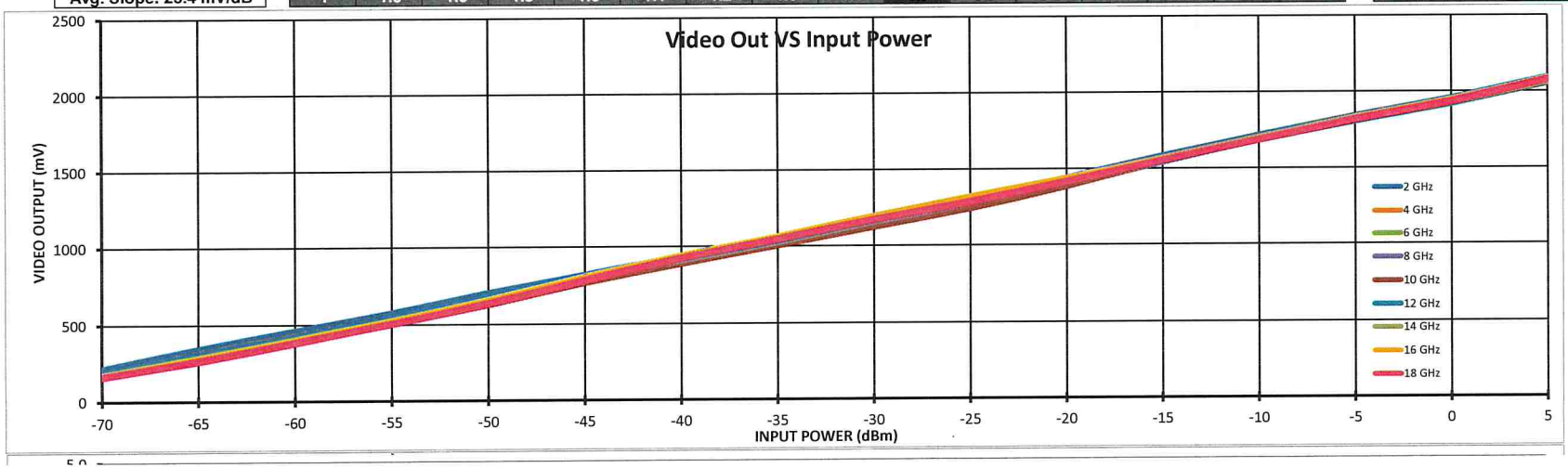


PL46034
-40°C


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

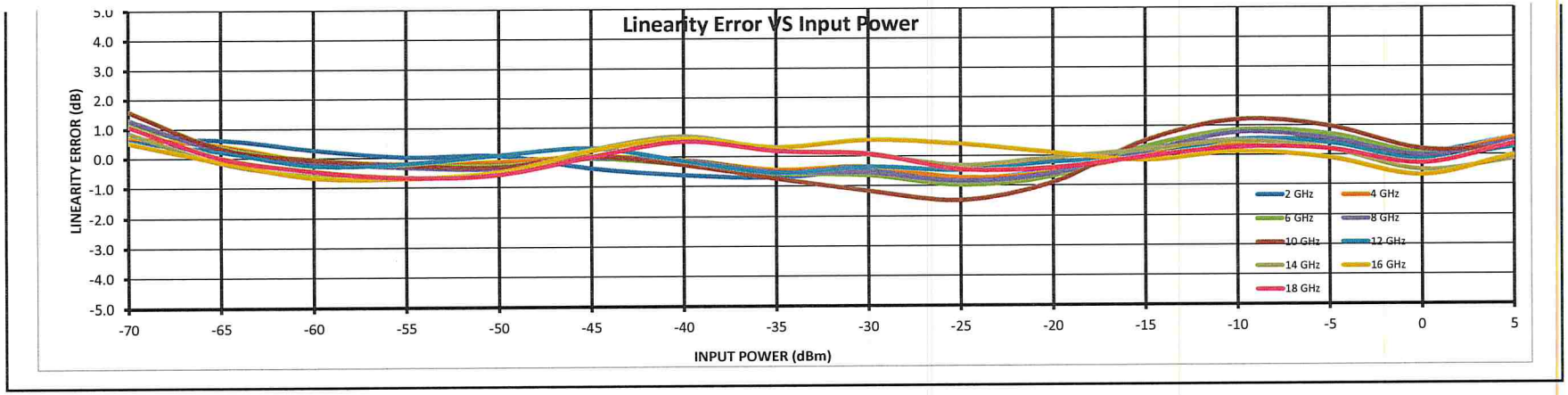
Model: SDLVA-6G18G-CD-2 - OPT218
Serial No: PL46034
Date: 5/10/24
Tested By: Jim Hopson
Test Temp: +85ºC

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)	1955	219	345	461	580	706	820	939	1062	1192	1310	1443	1585	1718	1842	1957	2095	Measured Value (mV)
	SLOPE (mV/dB)	25.01	15	16	7	1	2	-9	-16	-18	-13	-20	-12	5	13	12	2	15	ERROR (mV)
	LIN. ERR. (dB)	0.8	0.59	0.63	0.27	0.03	0.06	-0.38	-0.62	-0.70	-0.51	-0.79	-0.47	0.21	0.52	0.48	0.08	0.60	LINEARITY ERROR (dB)
4 GHz	INTERCEPT (mV)	1946	193	312	425	549	677	808	931	1049	1178	1295	1426	1567	1704	1830	1946	2088	Measured Value (mV)
	SLOPE (mV/dB)	25.31	19	11	-3	-5	-4	1	-3	-11	-9	-18	-14	0	11	10	0	15	ERROR (mV)
	LIN. ERR. (dB)	0.733	0.73	0.43	-0.10	-0.20	-0.15	0.03	-0.11	-0.45	-0.35	-0.73	-0.55	0.02	0.43	0.41	-0.01	0.60	LINEARITY ERROR (dB)
6 GHz	INTERCEPT (mV)	1932	173	281	397	521	648	781	903	1023	1149	1268	1403	1556	1698	1822	1933	2067	Measured Value (mV)
	SLOPE (mV/dB)	25.54	29	10	-2	-6	-6	-1	-7	-15	-16	-25	-18	8	22	18	1	8	Error (mV)
	LIN. ERR. (dB)	1.15	1.15	0.38	-0.08	-0.23	-0.25	-0.05	-0.27	-0.57	-0.64	-0.98	-0.69	0.30	0.86	0.71	0.06	0.30	LINEARITY ERROR (dB)
8 GHz	INTERCEPT (mV)	1919	167	268	385	508	634	771	895	1013	1140	1260	1394	1540	1684	1806	1919	2059	Measured Value (mV)
	SLOPE (mV/dB)	25.51	33	7	-4	-8	-10	0	-4	-13	-14	-22	-15	3	20	14	0	12	ERROR (mV)
	LIN. ERR. (dB)	1.312	1.31	0.27	-0.14	-0.32	-0.38	-0.01	-0.15	-0.53	-0.55	-0.84	-0.59	0.13	0.78	0.56	-0.01	0.48	LINEARITY ERROR (dB)
10 GHz	INTERCEPT (mV)	1917	166	262	380	503	629	766	886	1002	1119	1239	1382	1546	1692	1814	1922	2052	Measured Value (mV)
	SLOPE (mV/dB)	25.59	41	9	-1	-6	-8	1	-7	-19	-30	-38	-23	13	31	25	5	7	Error (mV)
	LIN. ERR. (dB)	1.593	1.59	0.34	-0.05	-0.24	-0.32	0.04	-0.28	-0.74	-1.17	-1.48	-0.90	0.51	1.22	0.98	0.20	0.28	LINEARITY ERROR (dB)
12 GHz	INTERCEPT (mV)	1926	188	304	417	544	676	807	921	1036	1166	1288	1420	1549	1689	1811	1922	2058	Measured Value (mV)
	SLOPE (mV/dB)	25.04	15	5	-7	-5	2	8	-3	-14	-9	-12	-5	-1	13	10	-4	7	ERROR (mV)
	LIN. ERR. (dB)	0.586	0.59	0.22	-0.27	-0.20	0.08	0.31	-0.14	-0.55	-0.35	-0.48	-0.21	-0.06	0.53	0.41	-0.16	0.27	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	1943	168	270	387	513	646	794	934	1050	1174	1293	1428	1563	1699	1820	1930	2068	Measured Value (mV)
	SLOPE (mV/dB)	25.68	22	-4	-15	-18	-13	6	18	6	1	-8	-2	5	13	5	-13	-4	ERROR (mV)
	LIN. ERR. (dB)	0.872	0.87	-0.16	-0.60	-0.69	-0.51	0.25	0.70	0.22	0.05	-0.32	-0.06	0.20	0.49	0.21	-0.51	-0.14	LINEARITY ERROR (dB)
16 GHz	INTERCEPT (mV)	1953	178	289	403	530	663	809	947	1067	1201	1325	1445	1566	1701	1823	1936	2081	Measured Value (mV)
	SLOPE (mV/dB)	25.55	14	-3	-17	-18	-13	6	16	8	14	11	3	-4	3	-2	-17	0	ERROR (mV)
	LIN. ERR. (dB)	0.696	0.53	-0.13	-0.67	-0.70	-0.49	0.22	0.62	0.32	0.56	0.41	0.11	-0.15	0.13	-0.10	-0.68	0.00	LINEARITY ERROR (dB)
18 GHz	INTERCEPT (mV)	1942	168	269	386	509	640	784	926	1046	1172	1287	1417	1555	1692	1819	1935	2081	Measured Value (mV)
	SLOPE (mV/dB)	25.75	28	0	-11	-17	-15	0	14	5	2	-11	-10	-1	7	6	-7	10	ERROR (mV)
	LIN. ERR. (dB)	1.094	1.09	0.02	-0.44	-0.66	-0.57	0.02	0.53	0.19	0.09	-0.45	-0.40	-0.04	0.28	0.22	-0.28	0.39	LINEARITY ERROR (dB)
Avg. Slope: 25.4 mV/dB			1	1.6	1.6	1.5	1.5	1.1	1.2	1.3	1.6	1.7	1.2	0.9	0.7	0.7	0.7	0.8	Flatness dB: ±1.7 dB



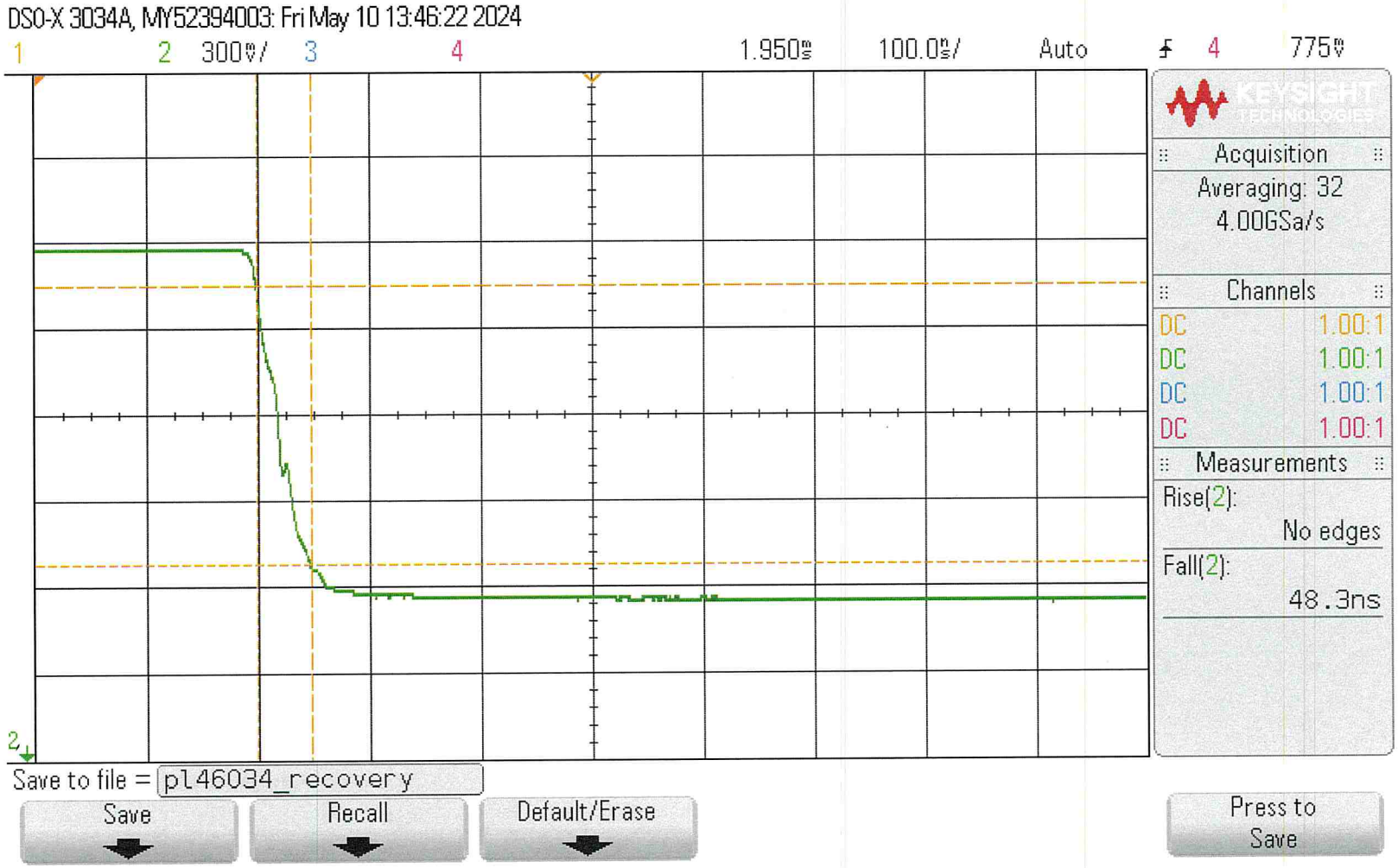
PL46034

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

PL46034
RiseTime

PL46034
Recovery/Fall



PL46034
TSS-71 dbm