



SUMMARY TEST DATA
ON
SDLVA-8G18G-40-5-SFF

PL28820/2018

CUSTOMER:

SO:

MODEL NO: SDLVA-8G18G-40-5-SFF

SERIAL NO: PL28820/2018

TESTED BY: H. Gonzales

TEMPERATURE: +25°C, -54°C, +95°C

DATE: Tuesday, April 28, 2020

DRAWING NO: 27615839

REV: A1

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	8 to 18 GHz	8 to 18 GHz	PMI QA 1
2	Frequency Flatness	±2.0 dB	±1.7 dB (See Plots)	
3	Log Linearity Over Temp.	±1.0 dB (P _{in} = -30dBm @ -54°C to +85°C)	± 0.13dB (See Plots)	
4	Logging Range	-40 to +0 dBm	-40 to +0 dBm (See Plots)	
5	Input VSWR	2.5:1 Max.	2.19:1 (See Plot)	
6	Max. RF Input	+10 dBm CW (Survival)	Pass (See Typical Characteristics)	
7	Log Video Output Voltage	10mV to 2.25V	104mV to 1.95V (See Plots)	
8	Log Video Output Slope	50mV/dB ±6.0mV/dB Max.	44.90mV/dB (See Plots)	
9	Log Video Output Rise Time	25ns Max. (P _{in} = -20dBm @ 10% to 90%)	9.90ns (See Plots)	
10	Log Video Output Fall Time	30ns Max. (P _{in} = -20dBm @ 90% to 10%)	12.70ns (See Plot)	
11	Log Video Recovery Time	40ns Max. (P _{in} = -20dBm @ 90% to 10%)	38.28ns (see Plot)	
12	Operating Voltage	+5V ±5% (Max. Ripple 100 mV pk-pk, 20 MHz BW)	Pass	
13	Operating Current	130 mA Max.	130mA @ 5 Volts	PMI QA 1

QA/QC Approval:

 PMI QA 1

Date:

4/29/20



SUMMARY TEST DATA ON SDLVA-8G18G-40-5-SFF +25°C

PL28820/2018

LOG TRANSFER VS FREQUENCY
 MODEL: SDLVA-8G18G-40-5-SFF OPTION :
 TESTED BY: H. Gonzales Tuesday, April 28, 2020
 SERIAL No. PL28820/2018 9:56 AM
 Temp: 25°C

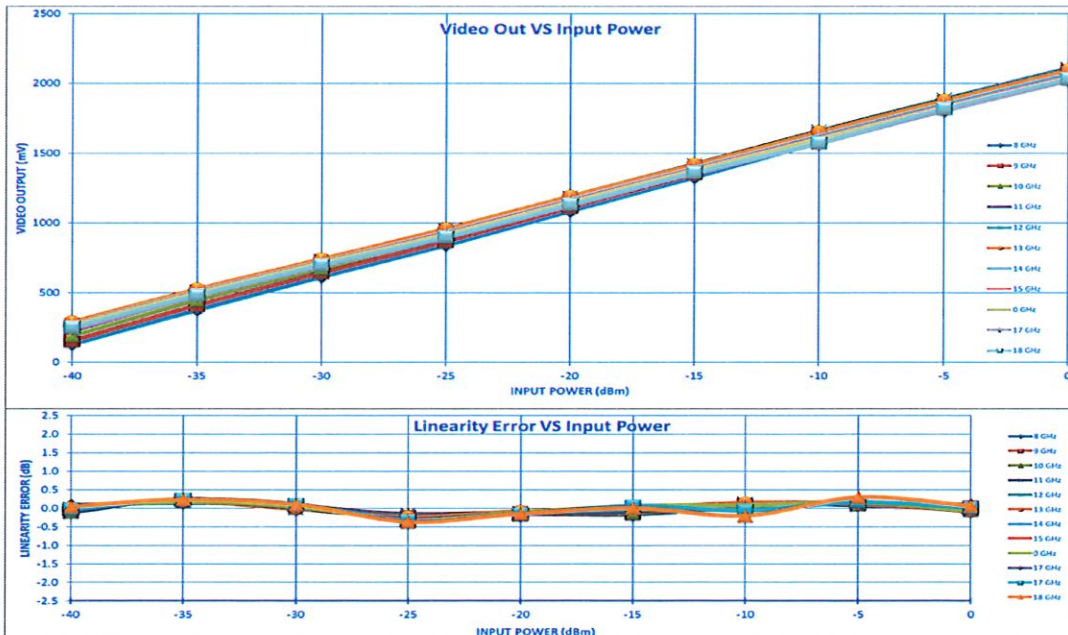


Frequency

Frequency	Intercept (mV)	Slope (mV/dB)	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
8 GHz	2060	46.4	129	374	613	840	1085	1327	1578	1825	2065	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
9 GHz	2078	46.1	153	408	640	865	1109	1350	1601	1844	2079	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
10 GHz	2096	47.6	189	443	672	898	1138	1376	1625	1864	2095	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
11 GHz	2102	46.8	225	476	701	925	1161	1395	1641	1871	2099	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
12 GHz	2113	46	278	514	733	955	1188	1422	1660	1889	2111	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
13 GHz	2098	45.2	288	522	739	956	1189	1418	1652	1876	2094	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
14 GHz	2065	44.8	273	506	722	932	1164	1393	1621	1847	2062	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
15 GHz	2049	44.5	289	500	717	923	1154	1384	1608	1834	2044	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
0 GHz	2035	44.3	264	492	709	913	1144	1373	1598	1821	2031	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
17 GHz	2016	44.4	237	471	688	890	1121	1353	1569	1802	2017	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
18 GHz	2028	44.5	248	479	696	898	1130	1360	1573	1818	2030	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)

Average Slope	45.9
Flatness ± dB	
Average Offset	232

1.7	1.6	1.4	1.3	1.1	1	1	1	1
129	374	613	840	1085	1327	1569	1802	2017
288	522	739	956	1189	1422	1660	1889	2111





SUMMARY TEST DATA ON SDLVA-8G18G-40-5-SFF -54°C

PL28820/2018

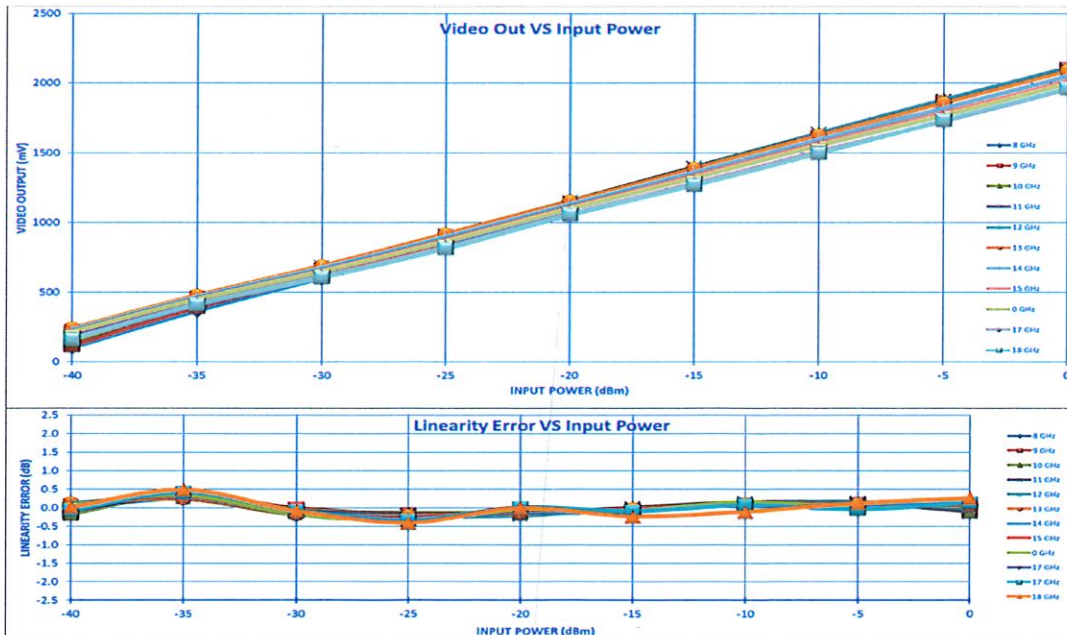
LOG TRANSFER VS FREQUENCY
 MODEL: SDLVA-8G18G-40-5-SFF OPTION :
 TESTED BY: H. Gonzales Tuesday, April 28, 2020
 SERIAL No. PL28820/2018 10:04 AM
 Temp: -54°C



Frequency			-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
8 GHz	INTERCEPT (mV)	2103	104	367	603	845	1096	1349	1609	1859	2103	Measured Value (mV)
	SLOPE (mV/dB)	50	-1	13	-1	-9	-8	-5	5	6	0	Error (mV)
9 GHz	INTERCEPT (mV)	2108	-0.02	0.25	-0.01	-0.18	-0.16	-0.10	0.11	0.12	-0.01	LINEARITY ERROR (dB)
	SLOPE (mV/dB)	49.6	116	389	618	858	1108	1360	1615	1864	2103	Measured Value (mV)
10 GHz	INTERCEPT (mV)	2115	-7	18	-1	-9	-7	-2	5	6	-3	Error (mV)
	SLOPE (mV/dB)	49	-0.15	0.35	-0.02	-0.17	-0.13	-0.04	0.10	0.12	-0.06	LINEARITY ERROR (dB)
11 GHz	INTERCEPT (mV)	2115	148	419	644	884	1129	1380	1631	1877	2110	Measured Value (mV)
	SLOPE (mV/dB)	48.2	-4	16	-4	-8	-8	0	7	7	-5	Error (mV)
12 GHz	INTERCEPT (mV)	2108	-0.17	0.37	-0.05	-0.15	-0.13	-0.01	0.11	0.13	-0.11	LINEARITY ERROR (dB)
	SLOPE (mV/dB)	47.2	183	443	665	901	1143	1392	1640	1881	2110	Measured Value (mV)
13 GHz	INTERCEPT (mV)	2084	-4	16	-4	-8	-8	0	7	7	-5	Error (mV)
	SLOPE (mV/dB)	46.3	-0.08	0.32	-0.08	-0.18	-0.17	0.00	0.14	0.14	-0.09	LINEARITY ERROR (dB)
14 GHz	INTERCEPT (mV)	2045	224	489	688	917	1154	1400	1642	1880	2107	Measured Value (mV)
	SLOPE (mV/dB)	45.6	0.08	0.26	-0.13	-0.23	-0.21	-0.01	0.12	0.16	-0.03	Error (mV)
15 GHz	INTERCEPT (mV)	2011	240	475	688	917	1152	1389	1626	1857	2097	LINEARITY ERROR (dB)
	SLOPE (mV/dB)	44.9	6	11	-9	-10	-7	-1	4	4	2	Measured Value (mV)
16 GHz	INTERCEPT (mV)	1989	0.13	0.23	-0.19	-0.22	-0.16	-0.03	0.10	0.08	0.05	Error (mV)
	SLOPE (mV/dB)	44.5	232	466	673	896	1130	1359	1594	1820	2051	LINEARITY ERROR (dB)
17 GHz	INTERCEPT (mV)	1951	6	13	-8	-12	-6	-4	4	2	6	Measured Value (mV)
	SLOPE (mV/dB)	44.4	217	452	655	875	1109	1334	1568	1786	2016	Error (mV)
18 GHz	INTERCEPT (mV)	1949	0.07	0.30	-0.18	-0.29	-0.07	-0.06	0.13	-0.01	0.10	LINEARITY ERROR (dB)
	SLOPE (mV/dB)	44.7	213	446	646	862	1097	1318	1551	1766	1994	Measured Value (mV)
			4	15	-8	-15	-2	-4	7	-1	5	Error (mV)
			0.08	0.33	-0.18	-0.34	-0.05	-0.09	0.15	-0.02	0.11	LINEARITY ERROR (dB)
			170	414	614	824	1062	1280	1509	1727	1957	Measured Value (mV)
			-3	19	-4	-15	0	-4	3	-2	6	Error (mV)
			-0.07	0.42	-0.08	-0.35	0.01	-0.09	0.07	-0.04	0.13	LINEARITY ERROR (dB)
			162	406	604	813	1055	1269	1497	1731	1981	Measured Value (mV)
			1	21	-4	-18	0	-11	-5	5	11	Error (mV)
			0.01	0.48	-0.09	-0.41	-0.01	-0.24	-0.11	0.12	0.25	LINEARITY ERROR (dB)

Average Slope	46.7
Flatness ± dB	
Average Offset	182.6

1.5	1.2	0.9	1.1	1.1	1.4	1.5	1.6	1.6
104	367	603	813	1055	1269	1497	1727	1957
240	475	688	917	1154	1400	1642	1881	2110





SUMMARY TEST DATA ON SDLVA-8G18G-40-5-SFF +95°C

PL28820/2018

LOG TRANSFER VS FREQUENCY
 MODEL: SDLVA-8G18G-40-5-SFF OPTION : Tuesday, April 28, 2020
 TESTED BY: H. Gonzales 10:06 AM
 SERIAL No. PL28820/2018
 Temp: 95°C

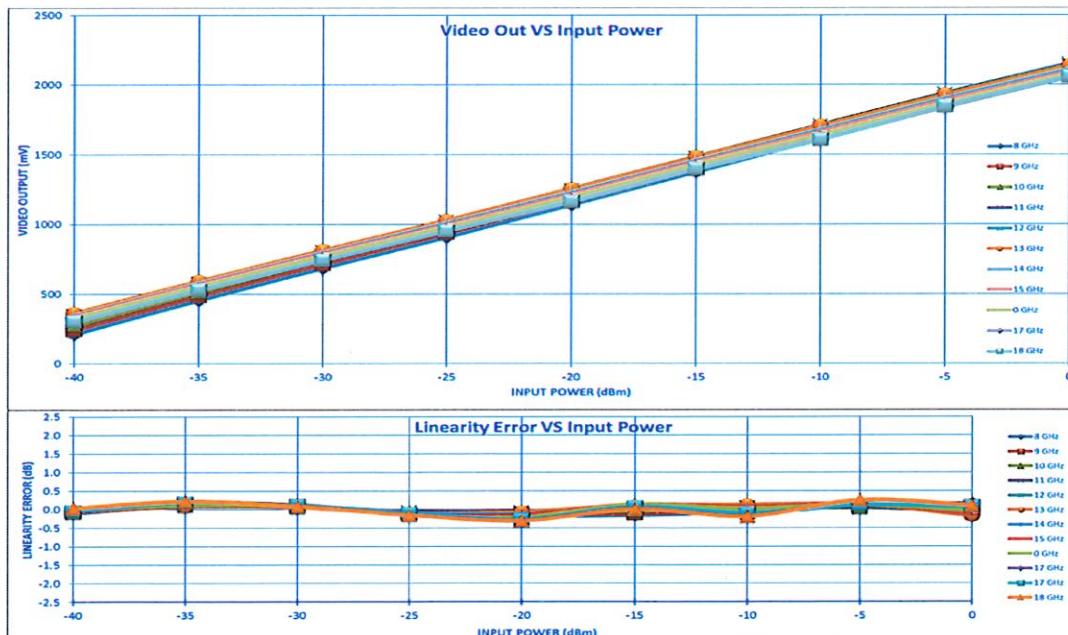


Frequency

Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	-40	-35	-30	-25	-20	-15	-10	-5	0	RF Input Power (dBm)
8 GHz	2084	46.8	212	455	686	908	1140	1375	1613	1855	2092	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
9 GHz	2100	46.4	239	482	712	933	1165	1397	1635	1870	2103	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
10 GHz	2122	46.2	271	512	741	964	1195	1427	1661	1893	2122	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
11 GHz	2140	45.7	306	544	771	994	1222	1454	1685	1914	2137	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
12 GHz	2158	45.1	351	582	807	1024	1252	1482	1710	1938	2152	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
13 GHz	2145	44.5	381	569	811	1026	1251	1481	1704	1928	2136	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
14 GHz	2115	44.2	346	574	795	1006	1226	1456	1676	1901	2110	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
15 GHz	2098	43.9	340	566	786	994	1213	1445	1661	1885	2091	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
16 GHz	2076	43.7	326	551	769	977	1192	1425	1639	1862	2073	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
17 GHz	2052	43.9	295	525	740	950	1162	1396	1608	1837	2055	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)
18 GHz	2054	43.9	299	526	740	949	1162	1395	1606	1845	2058	Measured Value (mV) Error (mV) LINEARITY ERROR (dB)

Average Slope	44.9
Flatness ± dB	
Average Offset	304.2

1.6	1.5	1.4	1.3	1.2	1.2	1.2	1.1	1.1
212	455	686	908	1140	1375	1606	1837	2055
361	589	811	1026	1252	1482	1710	1938	2152

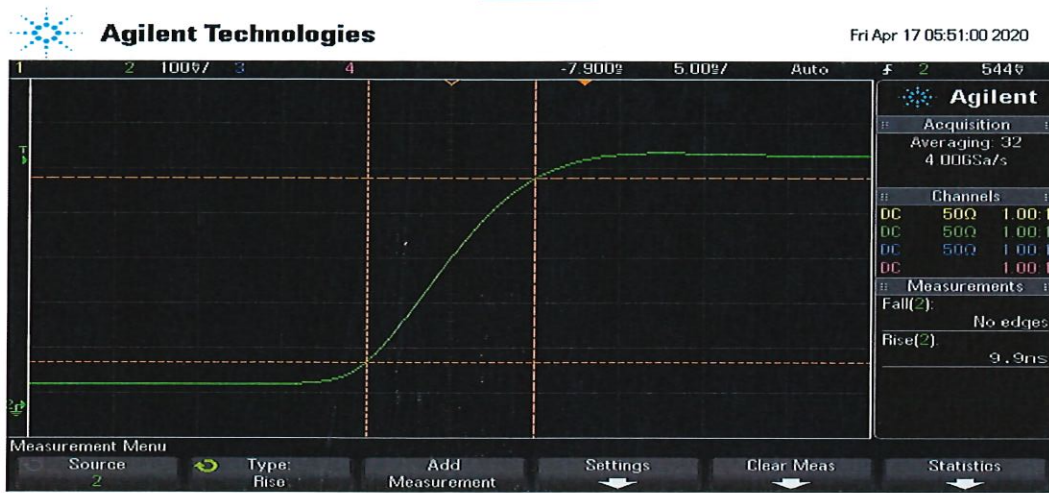




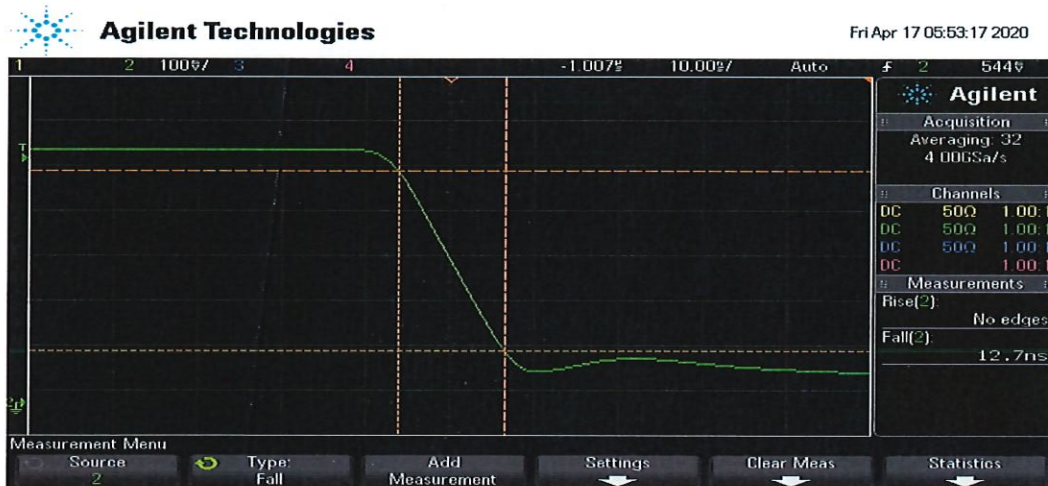
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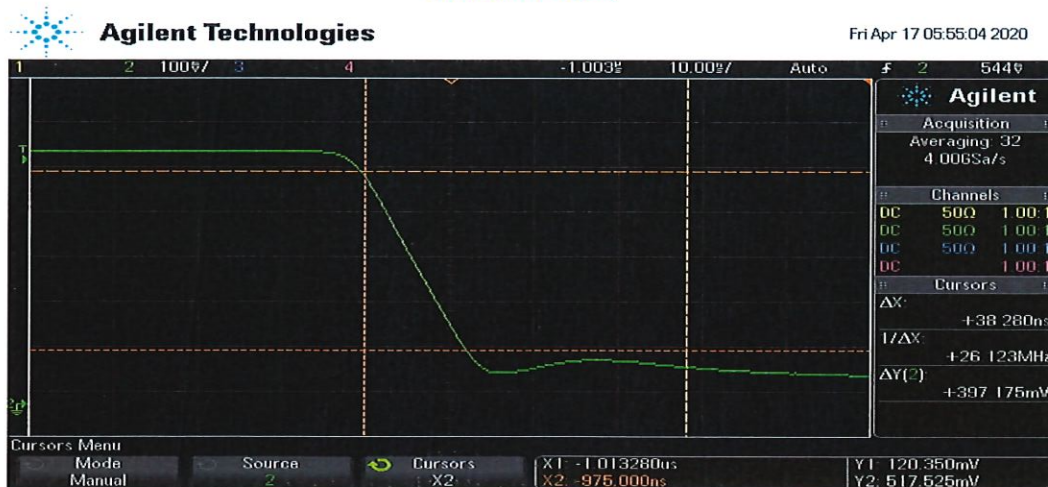
Rise Time



Fall Time



Recovery Time





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PL28820/2018

VSWR

