

**SUMMARY TEST DATA  
ON  
SDLVA-18G40G-CD-1**

Customer: \_\_\_\_\_ Tested By: Anton L.  
 SO No: \_\_\_\_\_ Temperature: +25°C, -40°C, +85°C  
 Model No: SDLVA-18G40G-CD-1 Date: 10/10/2024  
 Serial No: PL49234/2441 Drawing No: 27618630 Rev: A1

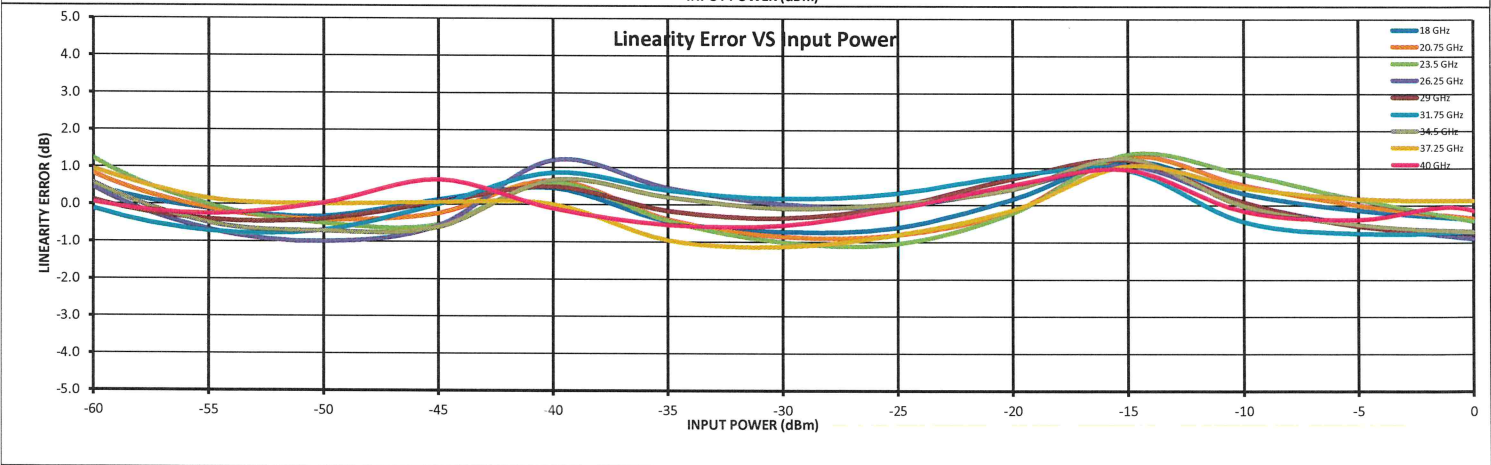
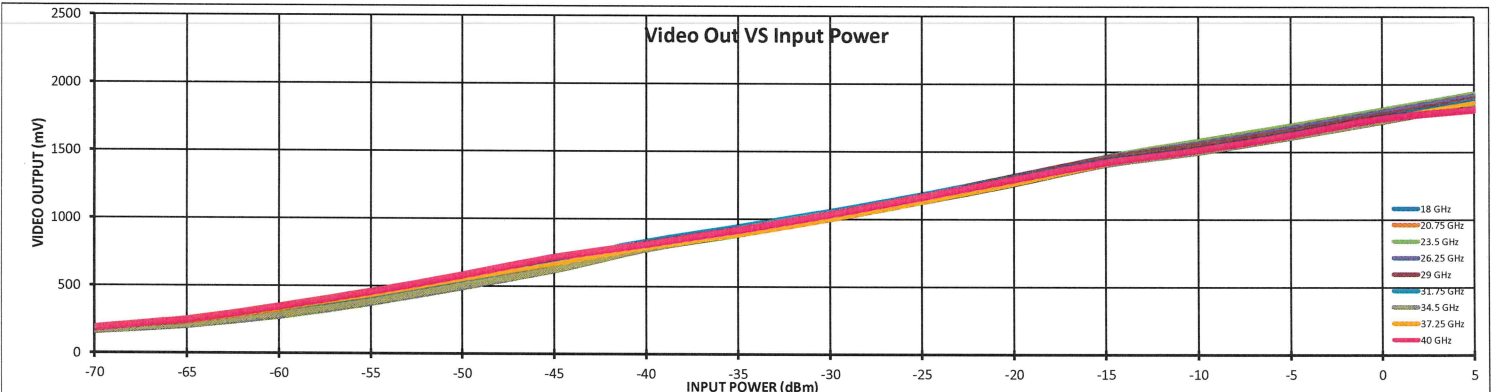
TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency:	18 GHz – 40 GHz	18 GHz – 40 GHz See Plots	PMI QA3
2	RF Gain (Small Signal):	50 dB Typical	58.91 dB Avg.	
3	Video Flatness Over Frequency:	± 2.5 dB Maximum	±1.9 dB @+25°C See Plots	
4	TSS:	-70 dBm Typical, -68 dBm Maximum	-71.9 dBm	
5	VSWR:	2.5:1 Maximum	2.05:1 (Input)	
6	Psat:	+12 dBm Typical	12.69 dBm Avg.	
7	Power Input:	+17 dBm CW Maximum	Pass	
8	Log Slope:	25 mV/dB Typical (50Ω Load)	24.8 mV/dB See Plots	
9	Log Range:	-70 to +5 dBm	-70 to +5 dBm See Plots	
10	Log Linearity:	±2.5 dB (-60 to 0 dBm, -40°C to +85°C)	±1.5 dB See Plots	
11	DC Offset:	150 mV ± 50 mV	137 mV	
12	Pulse Range:	30 ns to CW	Pass	
13	Rise Time:	5 ns Typical, 10 ns Maximum	7.8 ns	
14	Recovery Time:	40 ns Typical, 60 ns Maximum	55.3 ns	
15	DC Supply:	+15V or +12V @ 500 mA Maximum -15V or -12V @ 180 mA Maximum	+12V @ 400 mA -12V @ 160 mA	

QA/QC Approval: *K. Klauing* Date: 10-14-24

**Log Transfer Over Frequency +25°C**

Video offset: 137 mA

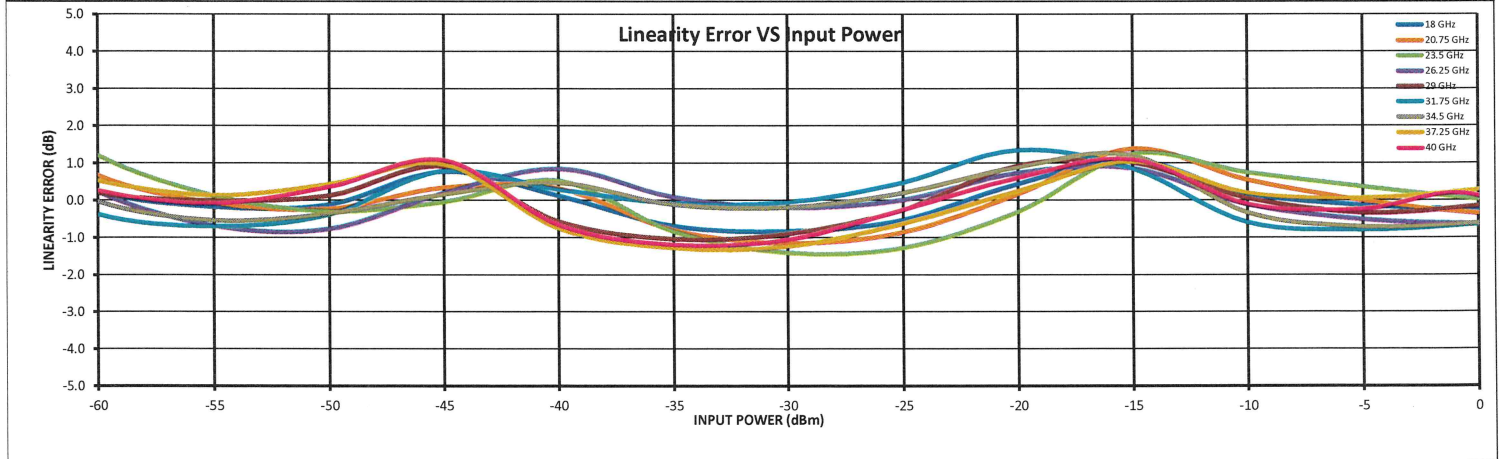
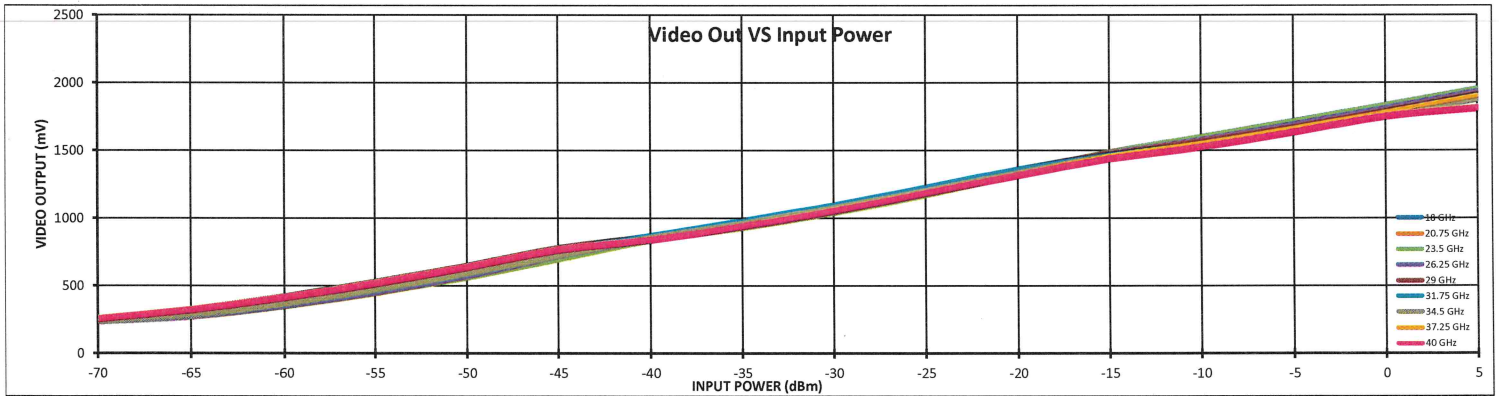
Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	LIN. ERR. (dB)	RF Input Power (dBm)																
18 GHz	1799	24.8	1.2	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	
	184	233	323	432	551	686	818	920	1037	1164	1307	1457	1559	1672	1790	1910	Measured Value (mV)			
	121	46	12	-3	-8	3	11	-11	-18	-15	4	30	8	-3	-9	-13	ERROR (mV)			
20.75 GHz	1797	25.3	1.3	176	219	298	401	520	651	800	900	1015	1143	1286	1450	1557	1670	1788	1909	
	152	69	21	-3	-10	-6	16	-10	-22	-20	-4	33	14	0	-9	-14	Measured Value (mV)			
	6.01	2.70	0.82	-0.11	-0.41	-0.24	0.65	-0.40	-0.86	-0.81	-0.16	1.31	0.54	0.00	-0.34	-0.56	ERROR (mV)			
23.5 GHz	1821	26.4	1.4	167	203	269	368	487	618	780	885	1002	1133	1287	1461	1579	1693	1810	1931	
	195	99	33	0	-13	-15	15	-12	-27	-28	-5	36	22	4	-11	-22	Measured Value (mV)			
	7.37	3.73	1.23	-0.02	-0.51	-0.55	0.59	-0.44	-1.01	-1.05	-0.22	1.37	0.84	0.16	-0.41	-0.83	ERROR (mV)			
26.25 GHz	1816	25.8	1.2	168	207	277	377	498	638	813	923	1041	1169	1311	1456	1559	1673	1793	1916	
	161	71	12	-18	-26	-15	31	12	0	-1	12	28	2	-14	-23	-29	Measured Value (mV)			
	6.23	2.74	0.45	-0.68	-1.00	-0.58	1.19	0.45	0.01	-0.03	0.46	1.07	0.06	-0.53	-0.88	-1.13	ERROR (mV)			
29 GHz	1791	24.6	1.2	179	229	320	430	553	687	820	927	1045	1176	1317	1452	1547	1654	1772	1894	
	107	35	3	-10	-10	1	12	-4	-9	-1	18	30	2	-14	-19	-19	Measured Value (mV)			
	4.37	1.41	0.12	-0.40	-0.40	0.06	0.48	-0.17	-0.36	-0.03	0.72	1.21	0.08	-0.56	-0.75	-0.79	ERROR (mV)			
31.75 GHz	1765	24.1	0.9	177	228	318	424	545	682	823	932	1047	1171	1303	1427	1514	1627	1748	1871	
	97	27	-3	-17	-17	0	21	9	4	7	19	23	-11	-18	-17	-15	Measured Value (mV)			
	4.02	1.14	-0.13	-0.72	-0.69	0.00	0.85	0.38	0.16	0.31	0.79	0.95	-0.44	-0.75	-0.72	-0.61	ERROR (mV)			
34.5 GHz	1748	24.7	1.3	165	207	281	378	496	622	777	889	1005	1132	1265	1409	1501	1612	1731	1854	
	145	64	14	-12	-18	-15	16	5	-3	1	11	31	0	-13	-17	-18	Measured Value (mV)			
	5.88	2.58	0.58	-0.50	-0.72	-0.61	0.66	0.20	-0.10	0.04	0.43	1.26	-0.02	-0.52	-0.70	-1.18	ERROR (mV)			
37.25 GHz	1743	24.0	1.1	178	232	324	425	542	663	782	879	995	1123	1259	1408	1514	1627	1746	1867	
	117	51	23	4	0	1	0	-23	-27	-19	-3	26	11	4	3	4	Measured Value (mV)			
	4.87	2.11	0.94	0.15	0.02	0.05	0.01	-0.96	-1.13	-0.80	-0.14	1.06	0.48	0.18	0.13	0.17	ERROR (mV)			
40 GHz	1749	23.4	1.0	185	246	344	454	578	710	809	916	1033	1161	1293	1420	1511	1623	1746	1814	
	77	20	1	-6	1	16	-3	-13	-13	-2	13	22	-4	-9	-3	-52	Measured Value (mV)			
	3.27	0.87	0.05	-0.25	0.04	0.67	-0.11	-0.55	-0.55	-0.09	0.54	0.95	-0.16	-0.39	-0.14	-2.24	ERROR (mV)			
Avg. Slope: 24.8 mV/dB				0.4	0.9	1.5	1.7	1.8	1.9	0.9	1.1	1	1.1	1.2	1.1	1.6	1.6	1.6	2.4	Flatness dB: ±1.9 dB



**Log Transfer Over Frequency -40°C**

Video offset: 215 mV

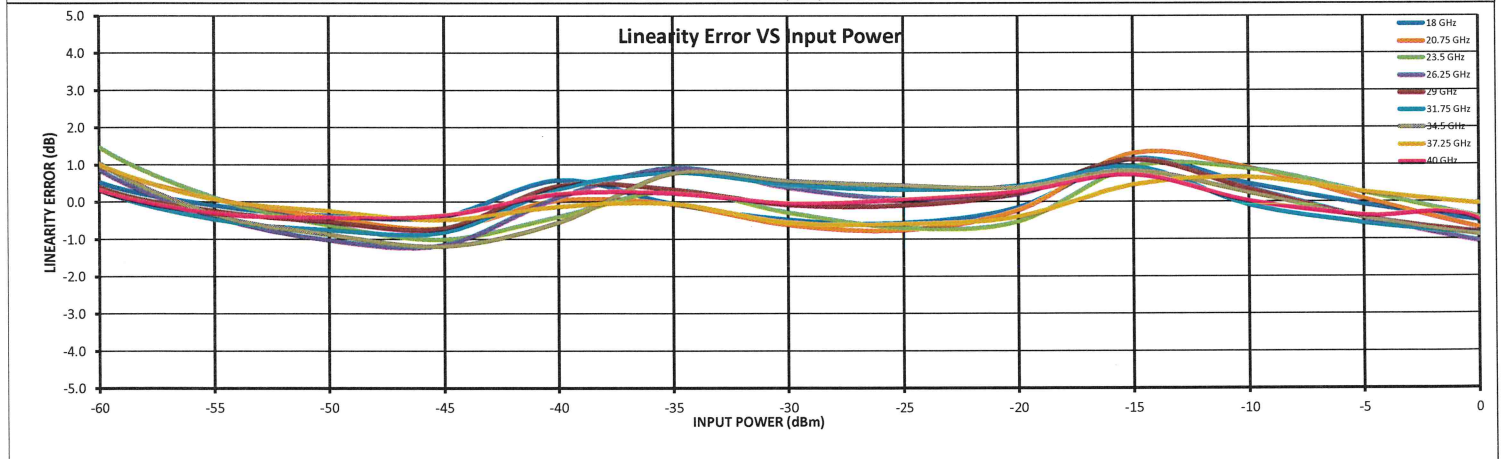
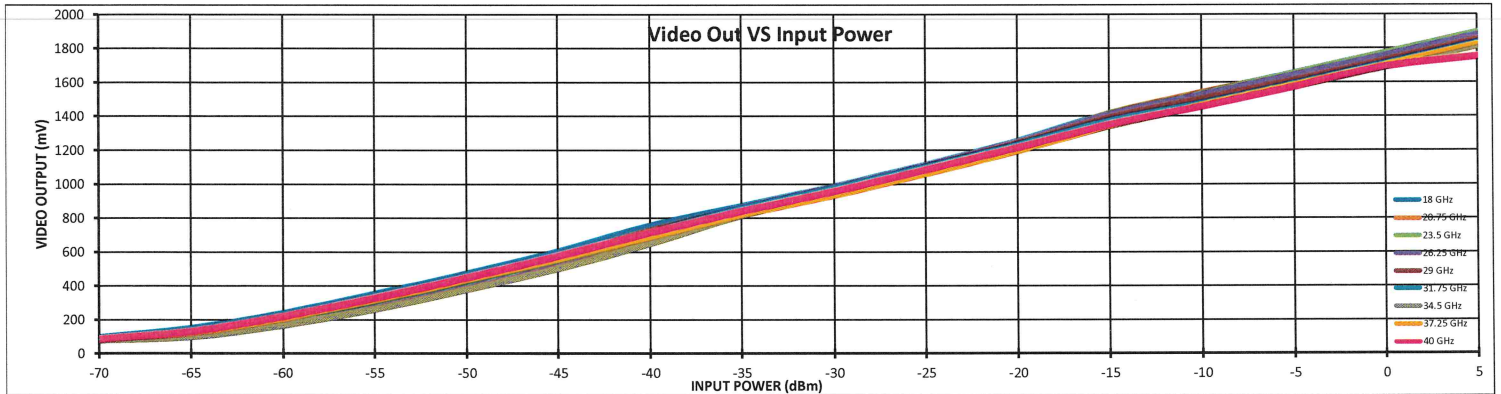
Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	LIN. ERR. (dB)	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
18 GHz	1814	24.1	1.1	244	290	373	483	605	747	852	953	1070	1198	1342	1478	1577	1690	1808	1928	Measured Value (mV)
				118	44	6	-4	-3	18	3	-17	-20	-13	10	26	4	-4	-6	-7	ERROR (mV)
				4.91	1.82	0.26	-0.18	-0.13	0.76	0.11	-0.70	-0.85	-0.54	0.43	1.07	0.17	-0.15	-0.25	-0.28	LINEARITY ERROR (dB)
20.75 GHz	1823	24.7	1.4	235	275	355	460	580	718	841	937	1052	1183	1332	1486	1589	1699	1814	1933	Measured Value (mV)
				144	61	17	-2	-6	9	8	-20	-28	-21	4	34	14	0	-9	-14	ERROR (mV)
				5.83	2.45	0.68	-0.08	-0.23	0.35	0.32	-0.80	-1.15	-0.86	0.17	1.39	0.55	0.00	-0.35	-0.55	LINEARITY ERROR (dB)
23.5 GHz	1831	25.3	1.4	232	267	343	442	558	691	832	924	1036	1166	1317	1483	1597	1714	1832	1953	Measured Value (mV)
				173	81	31	3	-8	-1	13	-21	-36	-33	-8	31	19	9	1	-5	ERROR (mV)
				6.82	3.21	1.21	0.12	-0.30	-0.05	0.52	-0.84	-1.42	-1.28	-0.32	1.24	0.74	0.36	0.02	-0.20	LINEARITY ERROR (dB)
26.25 GHz	1830	24.8	0.9	232	269	348	449	571	719	859	964	1081	1210	1352	1479	1579	1693	1814	1938	Measured Value (mV)
				138	51	6	-17	-19	5	21	2	-5	0	18	21	-3	-13	-16	-18	ERROR (mV)
				5.55	2.04	0.23	-0.69	-0.77	0.20	0.84	0.08	-0.20	0.00	0.73	0.85	-0.11	-0.52	-0.63	-0.63	LINEARITY ERROR (dB)
29 GHz	1797	23.0	1.0	258	329	422	532	650	783	864	968	1085	1216	1358	1475	1568	1674	1793	1917	Measured Value (mV)
				71	27	5	0	3	21	-13	-24	-21	-6	21	23	1	-8	-4	6	ERROR (mV)
				3.08	1.16	0.21	-0.01	0.13	0.91	-0.56	-1.04	-0.91	-0.25	0.92	1.01	0.06	-0.33	-0.15	0.24	LINEARITY ERROR (dB)
31.75 GHz	1787	23.3	1.3	241	292	379	488	612	756	861	969	1086	1215	1352	1457	1540	1652	1772	1895	Measured Value (mV)
				86	21	-9	-17	-9	18	7	-2	-2	11	31	20	-14	-19	-15	-9	ERROR (mV)
				3.70	0.88	-0.39	-0.71	-0.40	0.78	0.28	-0.09	-0.07	0.46	1.34	0.84	-0.60	-0.80	-0.65	-0.38	LINEARITY ERROR (dB)
34.5 GHz	1771	23.4	1.2	239	285	369	474	595	724	848	951	1066	1192	1325	1449	1530	1638	1757	1879	Measured Value (mV)
				103	32	-1	-13	-8	4	11	-3	-5	5	21	28	-8	-17	-14	-9	ERROR (mV)
				4.40	1.37	-0.03	-0.54	-0.36	0.16	0.47	-0.12	-0.20	0.20	0.89	1.20	-0.33	-0.71	-0.62	-0.40	LINEARITY ERROR (dB)
37.25 GHz	1776	22.8	1.3	256	326	419	524	645	771	846	948	1063	1191	1325	1457	1552	1663	1782	1904	Measured Value (mV)
				77	33	12	3	10	22	-17	-29	-28	-14	6	24	5	1	6	14	ERROR (mV)
				3.39	1.46	0.53	0.14	0.44	0.96	-0.75	-1.28	-1.24	-0.63	0.25	1.03	0.20	0.06	0.28	0.63	LINEARITY ERROR (dB)
40 GHz	1749	22.4	1.2	256	323	412	516	638	766	839	939	1054	1184	1315	1438	1523	1632	1752	1814	Measured Value (mV)
				74	29	6	-2	8	24	-15	-27	-24	-5	14	25	-2	-5	3	-47	ERROR (mV)
				3.30	1.30	0.27	-0.08	0.37	1.08	-0.65	-1.19	-1.05	-0.24	0.61	1.10	-0.10	-0.23	0.13	-2.10	LINEARITY ERROR (dB)
Avg. Slope: 23.8 mV/dB				0.5	1.3	1.7	1.9	1.9	1.9	0.7	0.9	1.1	1.1	0.9	1	1.6	1.7	1.7	2.9	Flatness dB: ±1.9 dB



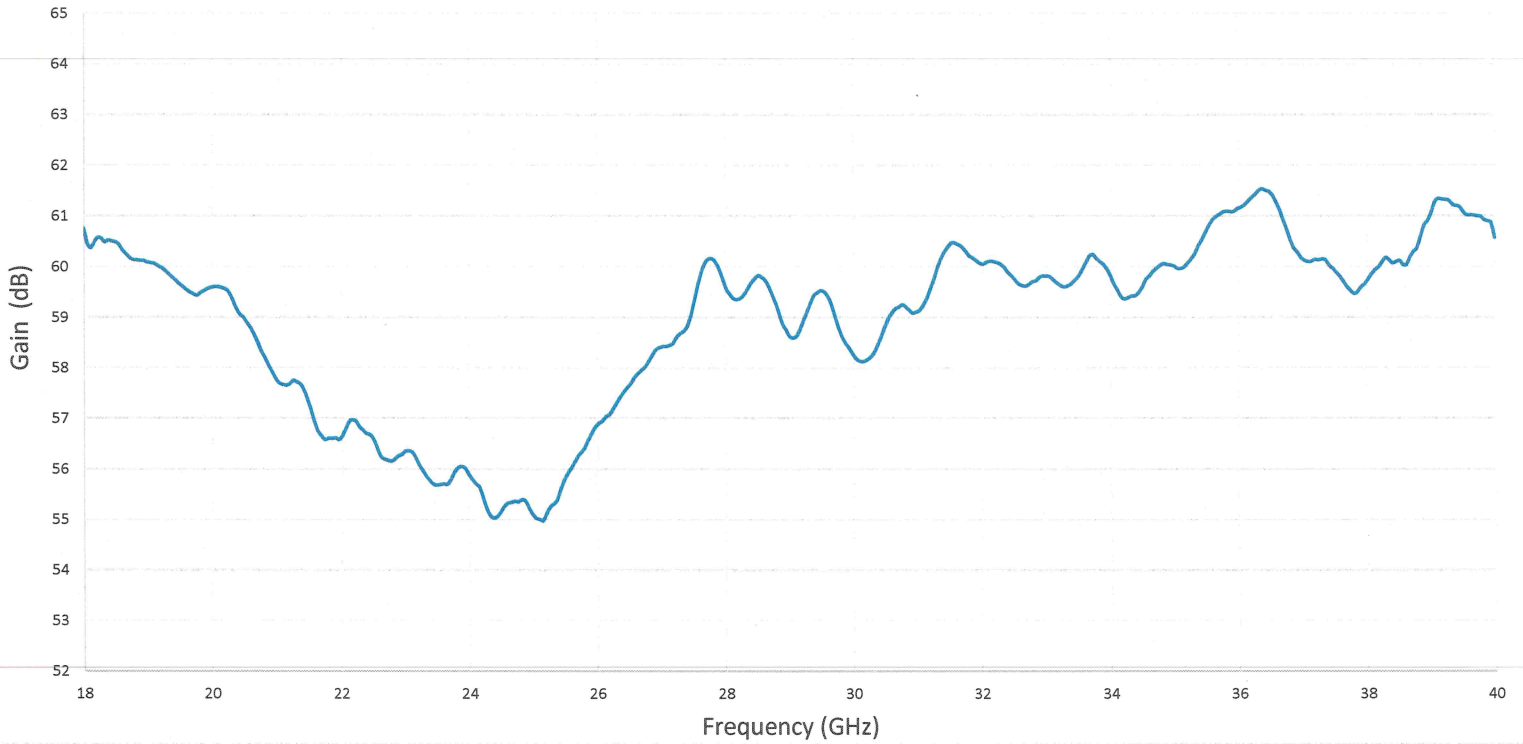
Log Transfer Over Frequency +85°C

Video offset: 73 mA

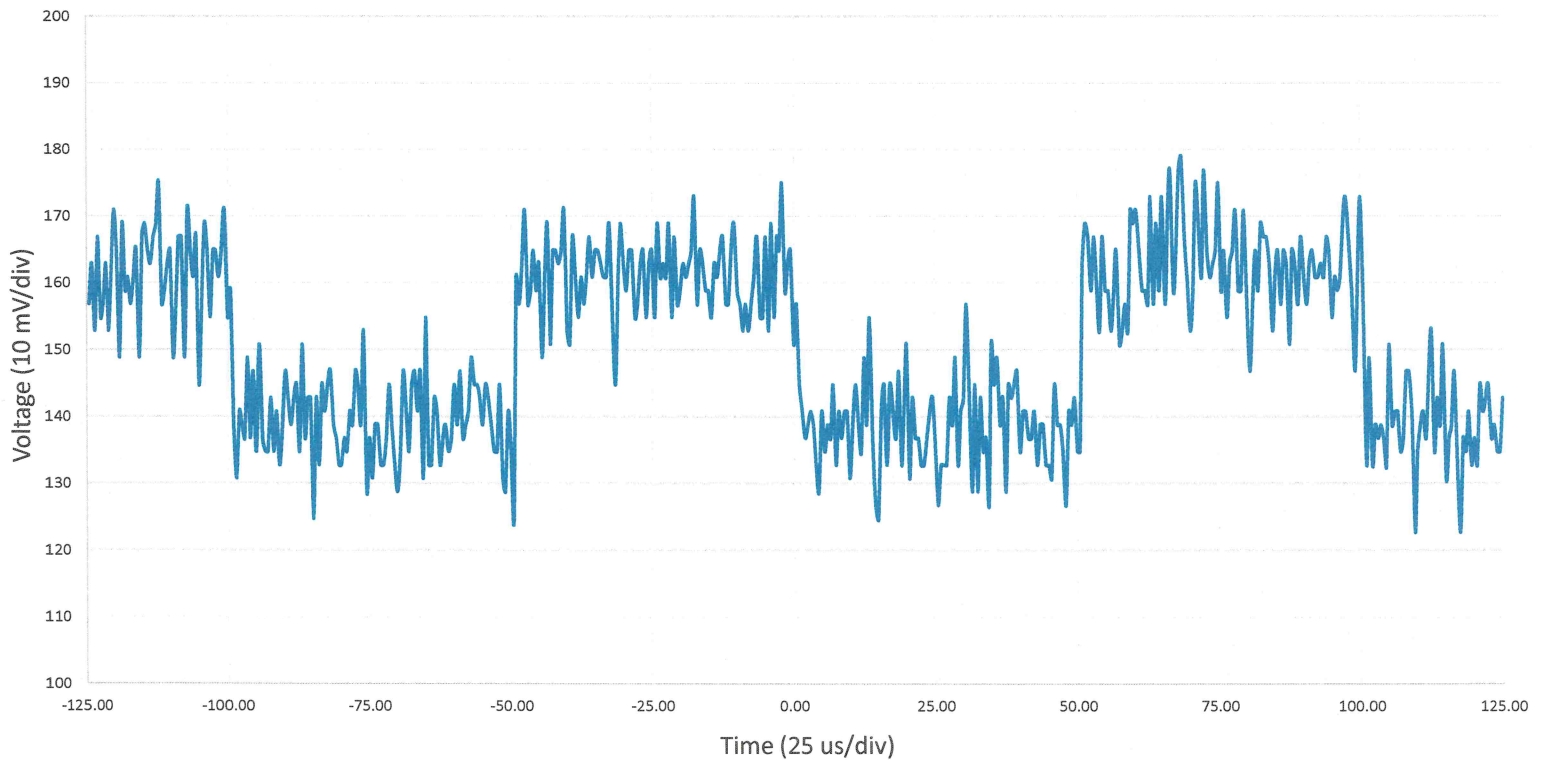
Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	LIN. ERR. (dB)	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)	Measured Value (mV)	Error (mV)	LINEARITY ERROR (dB)
18 GHz	1774	25.8	1.1	94	148	237	350	472	601	755	868	986	1113	1253	1416	1528	1643	1761	1880				
	1784	26.8	1.3	129	54	14	-3	-10	-10	15	-1	-13	-15	-4	30	12	-2	-13	-23				
	5.00	2.08	0.53	-0.10	-0.38	-0.39	0.57	-0.06	-0.49	-0.58	-0.16	1.15	0.48	-0.07	-0.50	-0.90							
20.75 GHz	1784	26.8	1.3	87	122	205	315	435	561	715	846	965	1095	1243	1418	1541	1653	1766	1883				
	1786	27.5	1.5	219	105	41	3	-17	-28	-11	8	-8	-19	-15	26	24	2	-18	-35				
	6.58	2.89	0.99	0.10	-0.41	-0.71	0.05	-0.06	-0.61	-0.76	-0.23	1.31	0.91	0.09	-0.68	-1.31							
23.5 GHz	1786	27.5	1.5	82	105	178	278	395	522	676	833	954	1080	1222	1400	1536	1656	1775	1895				
	1793	27.3	1.2	198	85	24	-11	-28	-31	3	25	10	2	6	31	10	-12	-29	-44				
	7.98	3.82	1.48	0.11	-0.63	-1.01	-0.40	0.31	-0.29	-0.70	-0.54	0.94	0.89	0.26	-0.41	-1.05							
26.25 GHz	1793	27.3	1.2	81	105	180	282	401	534	705	863	985	1113	1253	1415	1530	1645	1764	1885				
	1755	25.9	1.1	143	54	10	-6	-14	-18	11	9	-2	-2	6	29	9	-11	-21	-29				
	7.24	3.12	0.87	-0.39	-1.03	-1.15	0.12	0.91	0.38	0.07	0.21	1.14	0.36	-0.42	-1.06	-1.63							
29 GHz	1755	25.9	1.1	85	125	211	324	446	571	730	857	976	1105	1243	1396	1505	1615	1734	1856				
	1732	25.7	0.9	149	53	8	-12	-20	-21	9	20	12	8	11	24	-2	-15	-22	-29				
	5.81	2.06	0.33	-0.47	-0.76	-0.82	0.33	0.78	0.45	0.32	0.42	0.94	-0.09	-0.57	-0.86	-1.12							
31.75 GHz	1732	25.7	0.9	83	115	199	307	428	555	713	853	973	1098	1229	1371	1473	1589	1710	1832				
	1715	26.3	1.2	202	90	28	-9	-23	-31	-15	20	15	11	10	22	6	-11	-23	-33				
	7.70	3.43	1.05	-0.33	-0.88	-1.19	-0.56	0.76	0.56	0.43	0.38	0.83	0.24	-0.42	-0.89	-1.24							
34.5 GHz	1715	26.3	1.2	79	98	167	262	379	502	650	816	942	1070	1200	1343	1459	1573	1692	1814				
	1710	25.6	1.0	164	69	26	2	-6	-12	-3	-1	-14	-15	-10	12	17	7	-1	-8				
	6.40	2.89	1.01	0.07	-0.24	-0.48	-0.12	-0.05	-0.55	-0.59	-0.40	0.46	0.66	0.27	-0.04	-0.32							
37.25 GHz	1710	25.6	1.0	82	115	200	304	424	546	683	813	928	1055	1188	1338	1471	1589	1709	1830				
	1706	24.9	0.7	123	43	8	-8	-10	-9	6	6	-1	2	7	18	1	-9	-11	-76				
	4.95	1.71	0.32	-0.30	-0.41	-0.35	0.22	0.24	-0.03	0.07	0.28	0.74	0.03	-0.36	-0.46	-3.05							
40 GHz	1706	24.9	0.7	85	129	219	328	450	576	715	840	958	1085	1215	1351	1458	1573	1695	1755				
	Avg. Slope: 26.2 mV/dB			0.3	1	1.3	1.7	1.8	1.9	2	1	1.1	1.1	1.2	1.5	1.6	1.6	1.6	2.7				
																							Flatness dB: ±2 dB



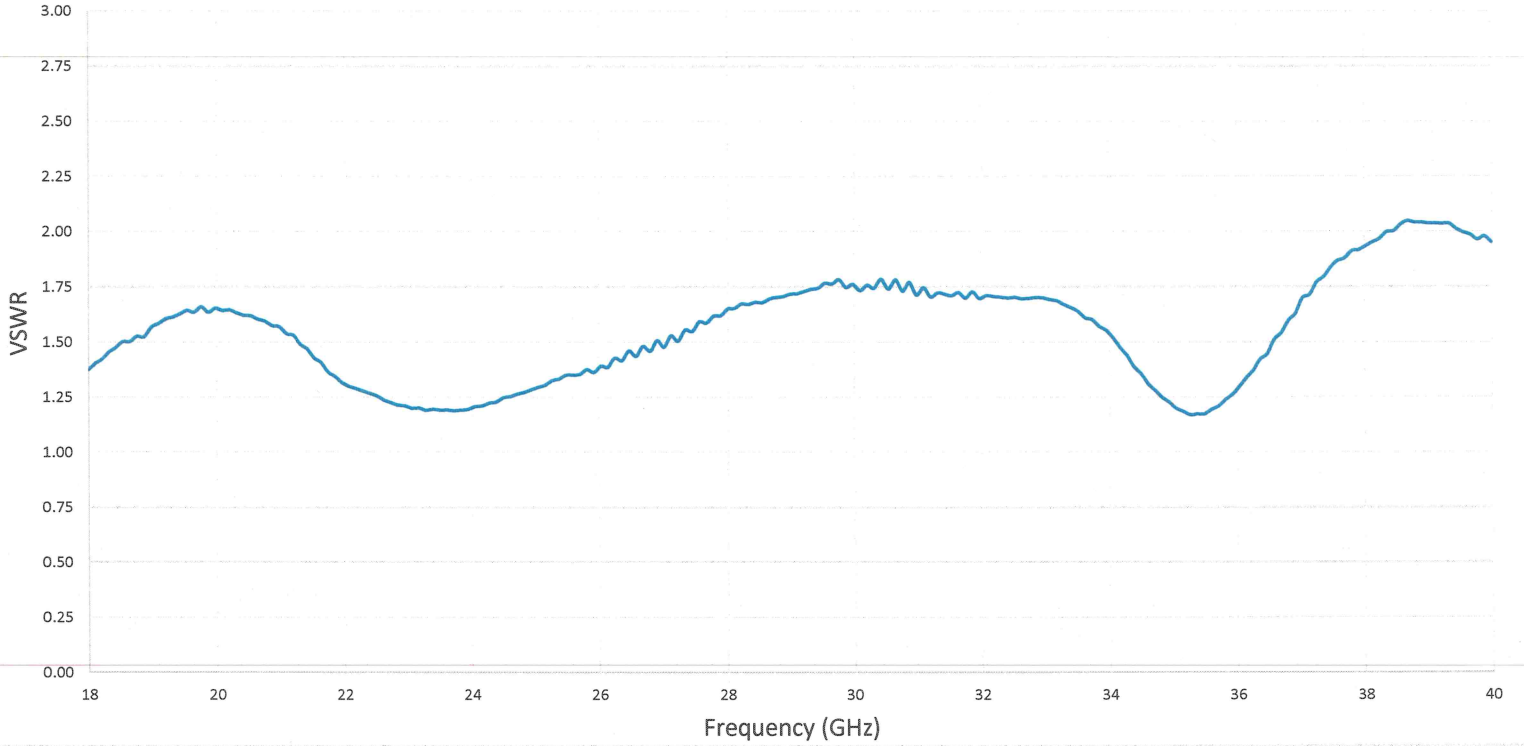
Typical Gain 58.91 dB (@+25°C)



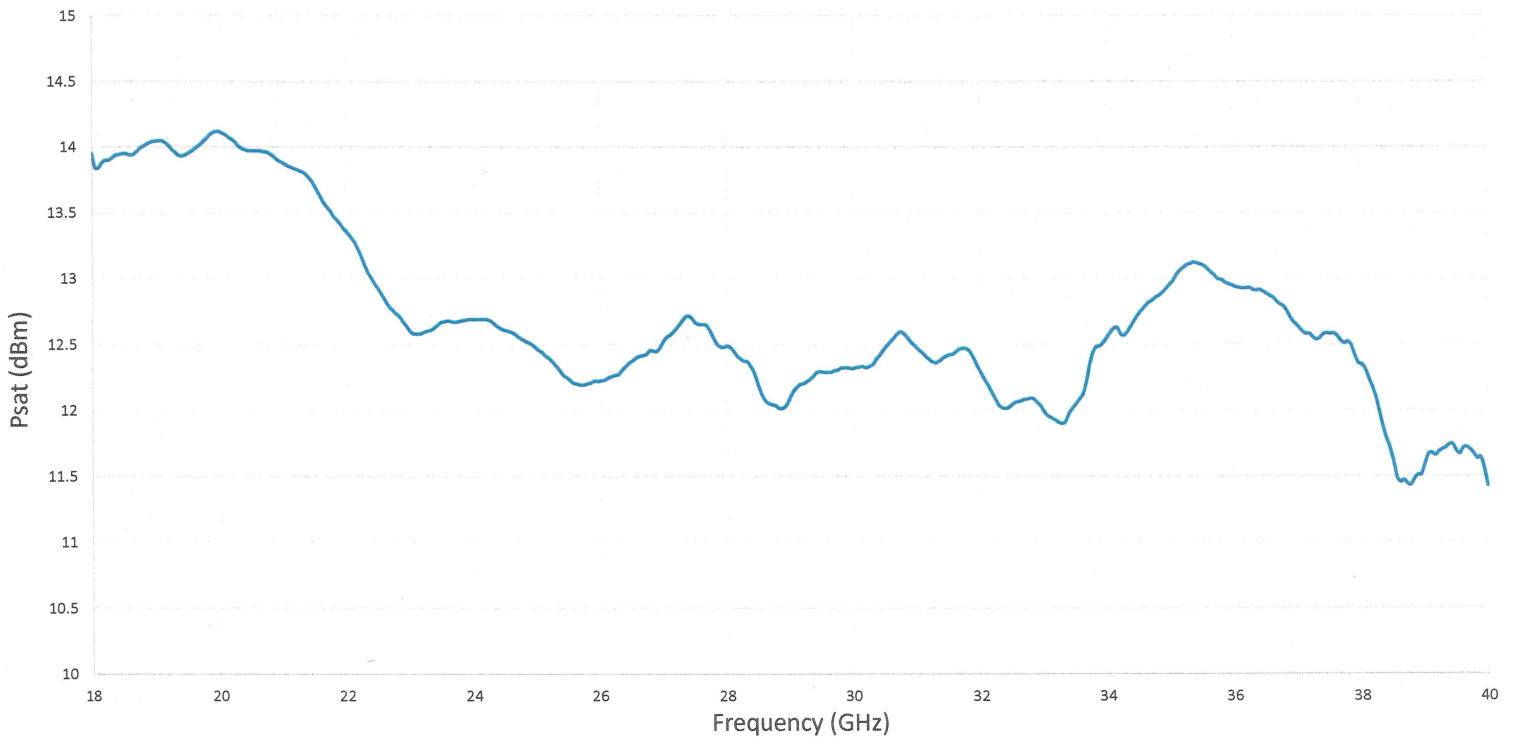
TSS @ -71.9 dBm (@+25°C)



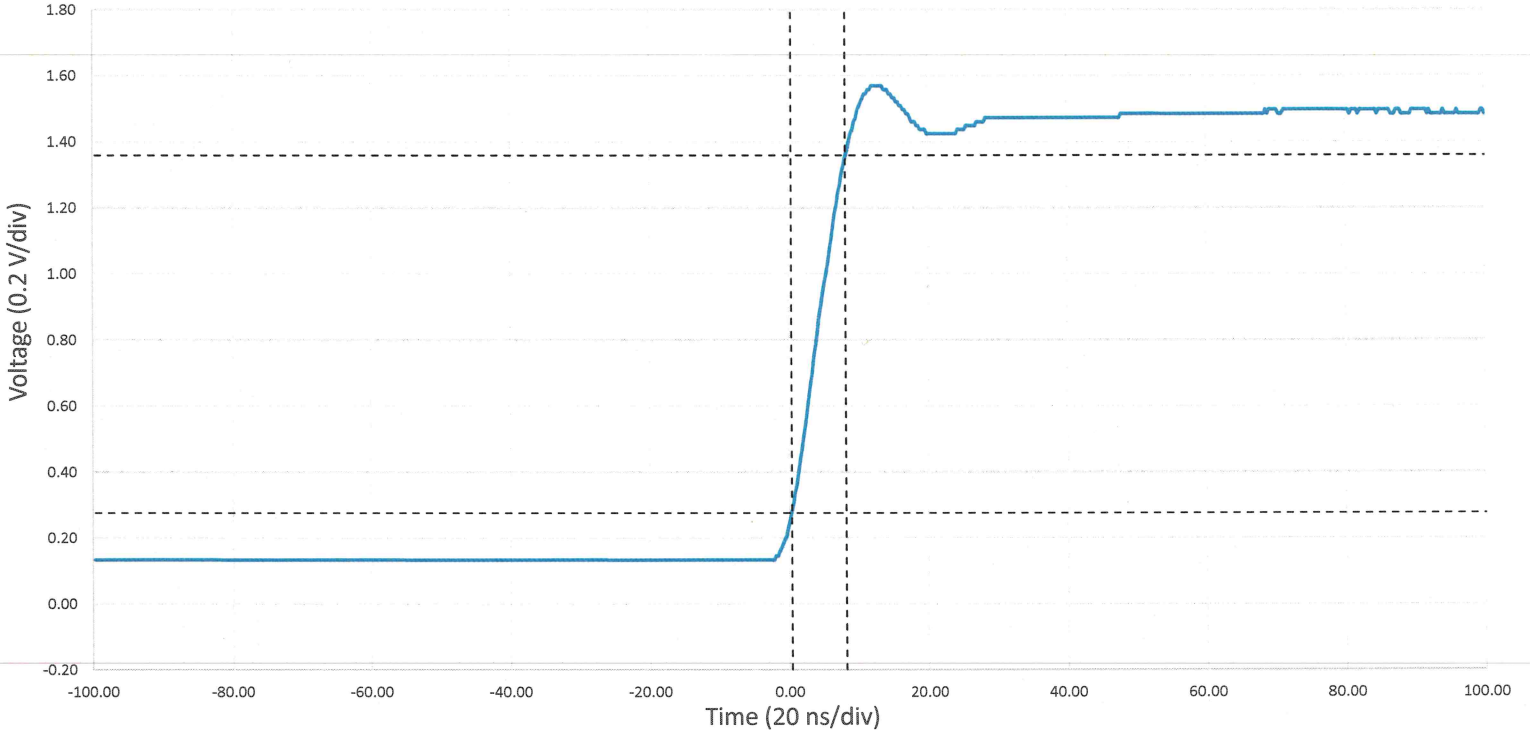
VSWR 2.05:1 (@+25°C)



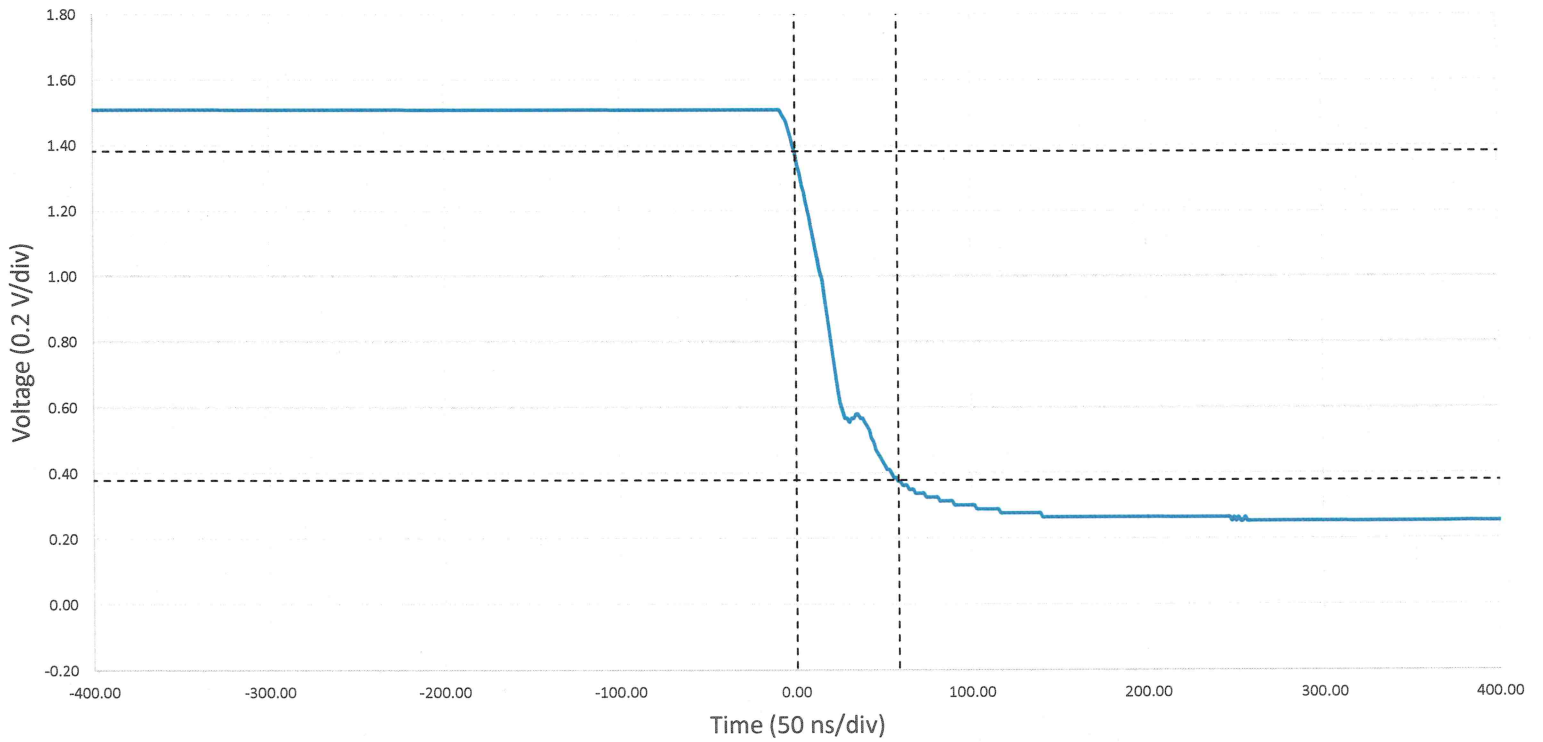
Typical Psat 12.69 dBm (@+25°C)



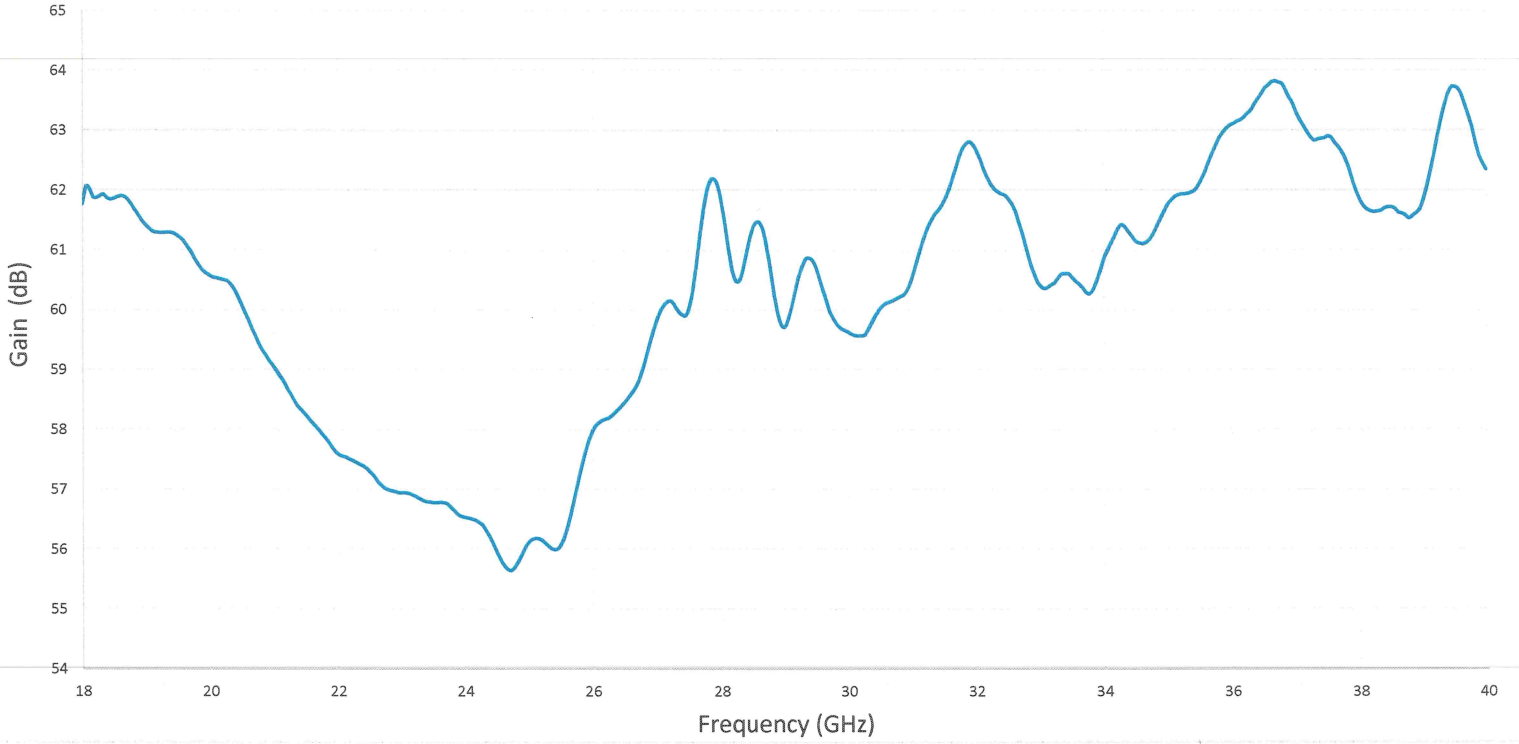
Rise time 7.8 ns (@+25°C)



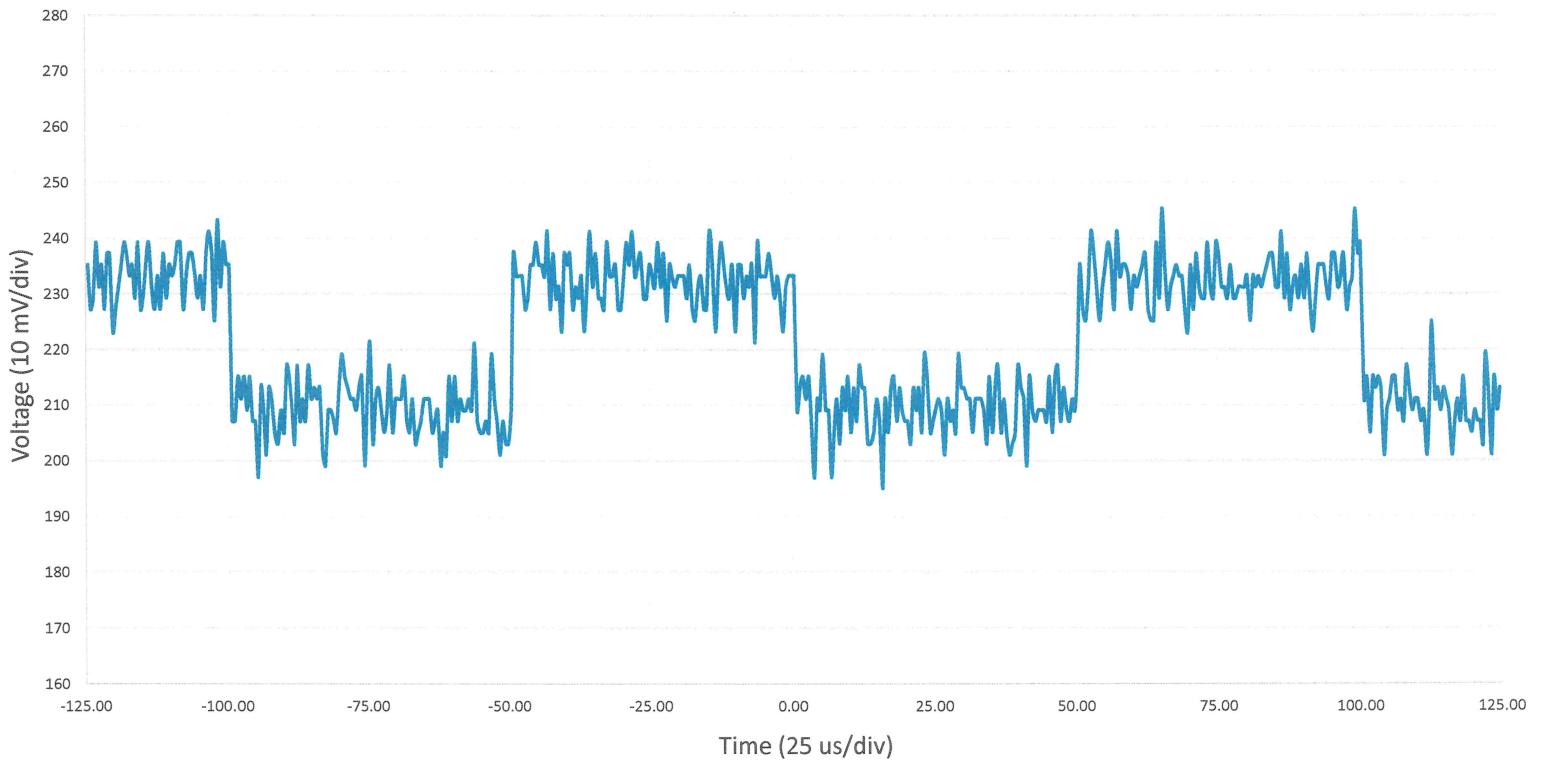
Recovery time 55.3 ns (@+25°C)



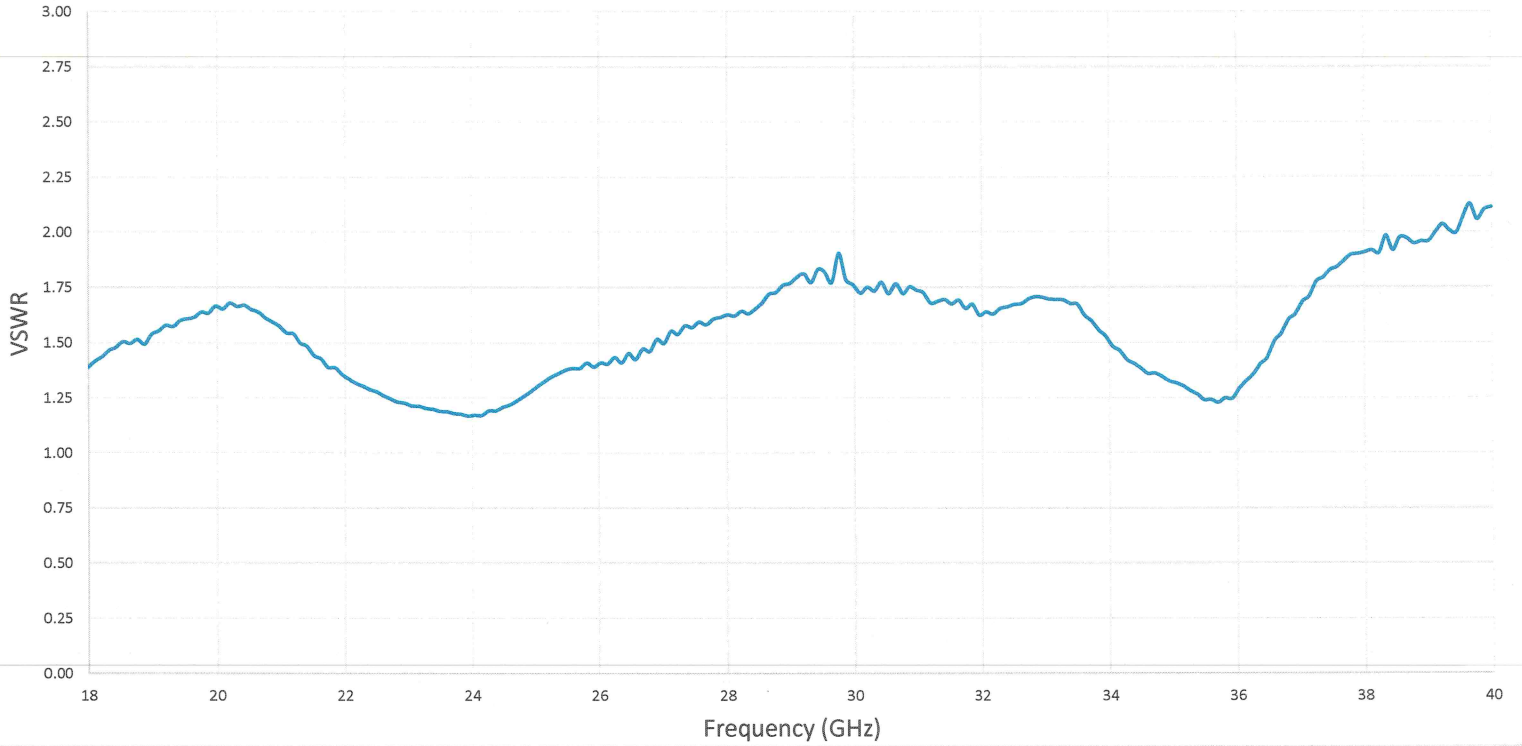
Typical Gain 60.3 dB (@-40°C)



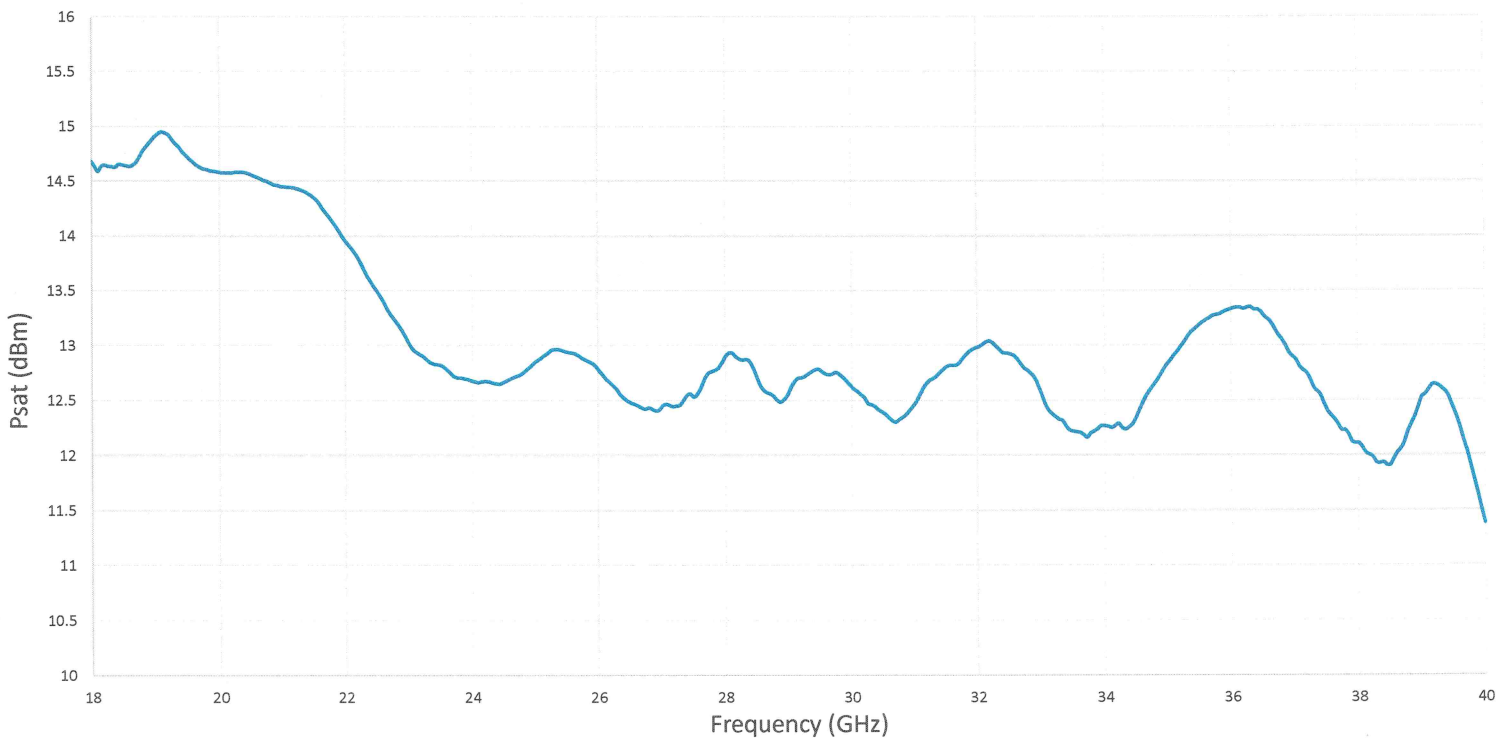
TSS @ -71.5 dBm (@-40°C)



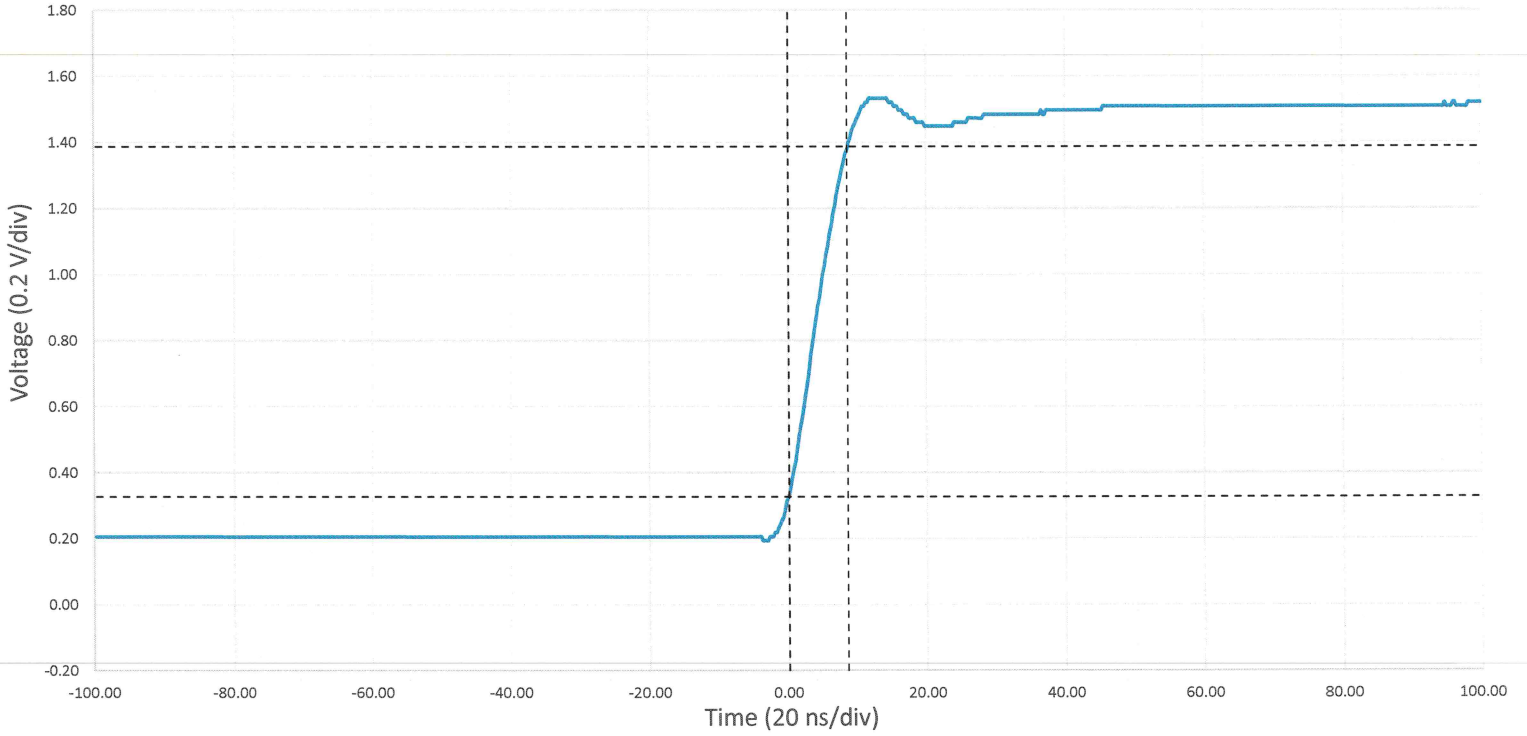
VSWR 2.13:1 (@-40°C)



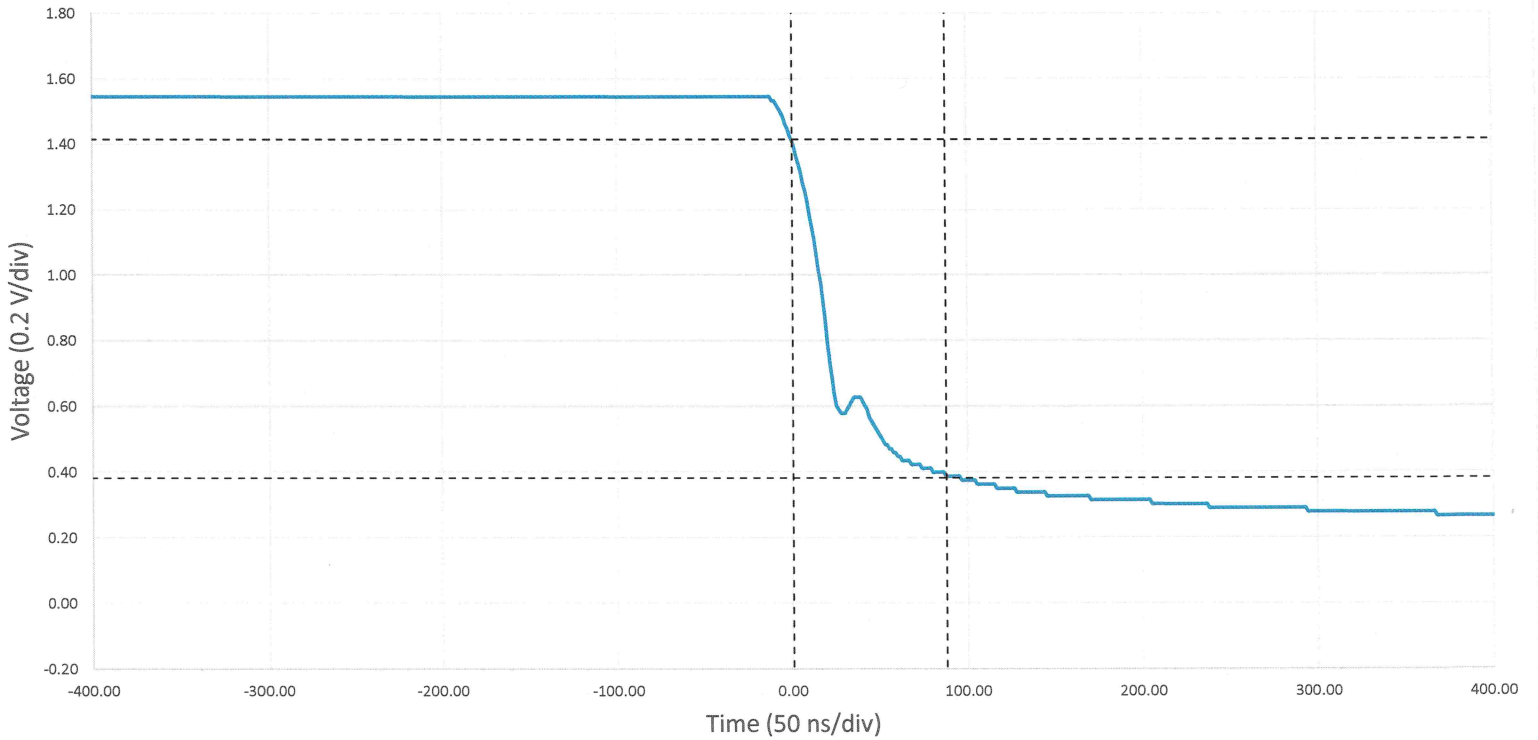
Typical Psat 13.03 dBm (@-40°C)



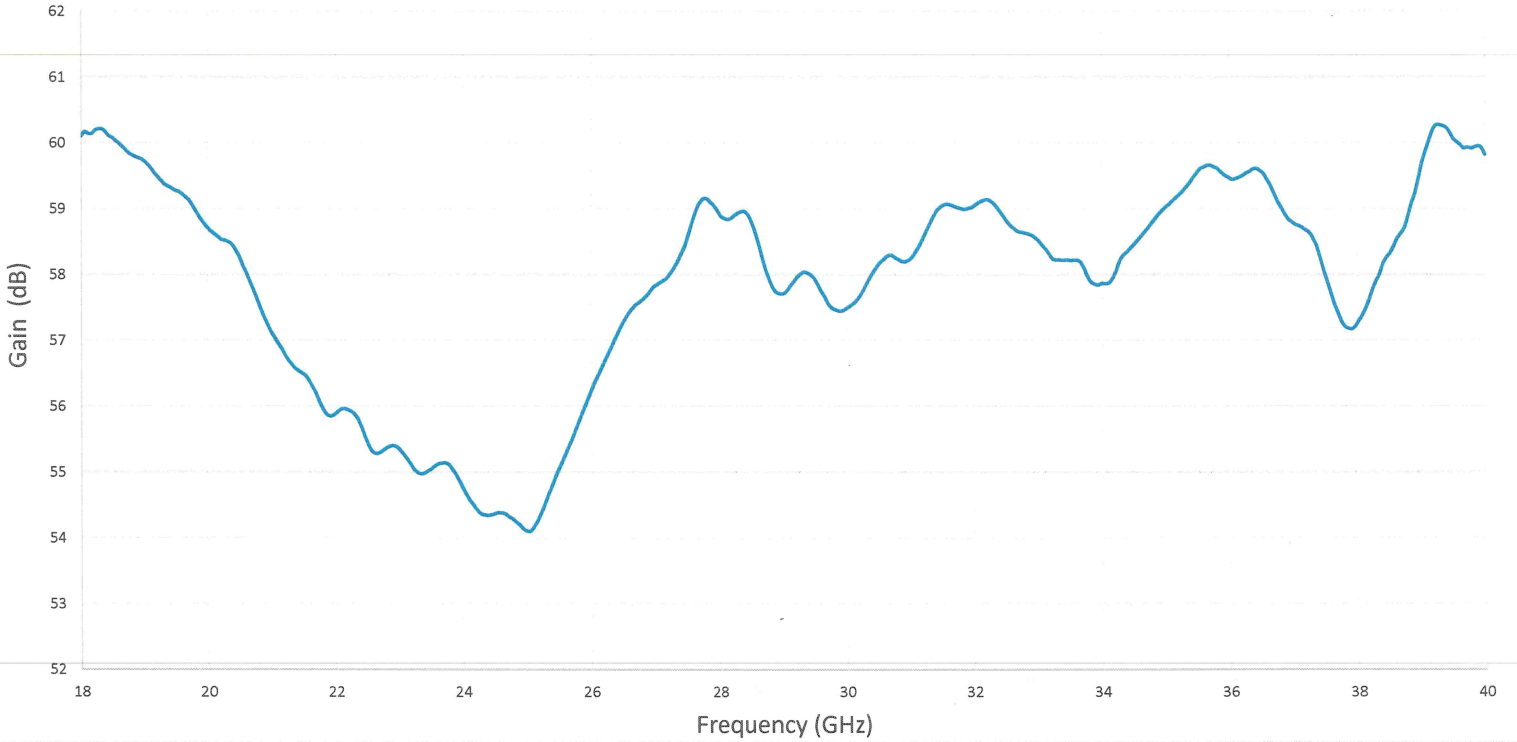
Rise time 8.3 ns (@-40°C)



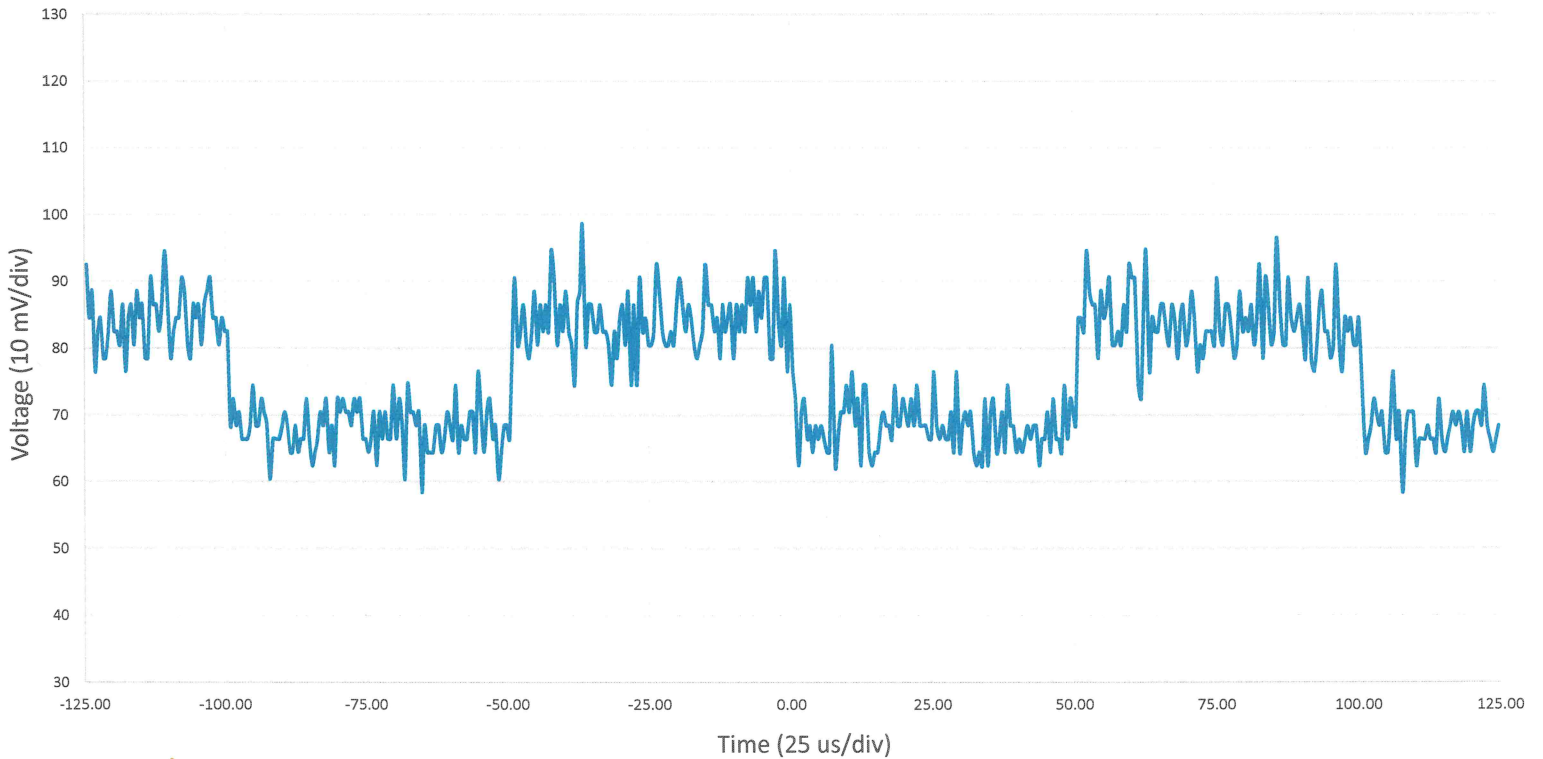
Recovery time 86.5 ns (@-40°C)



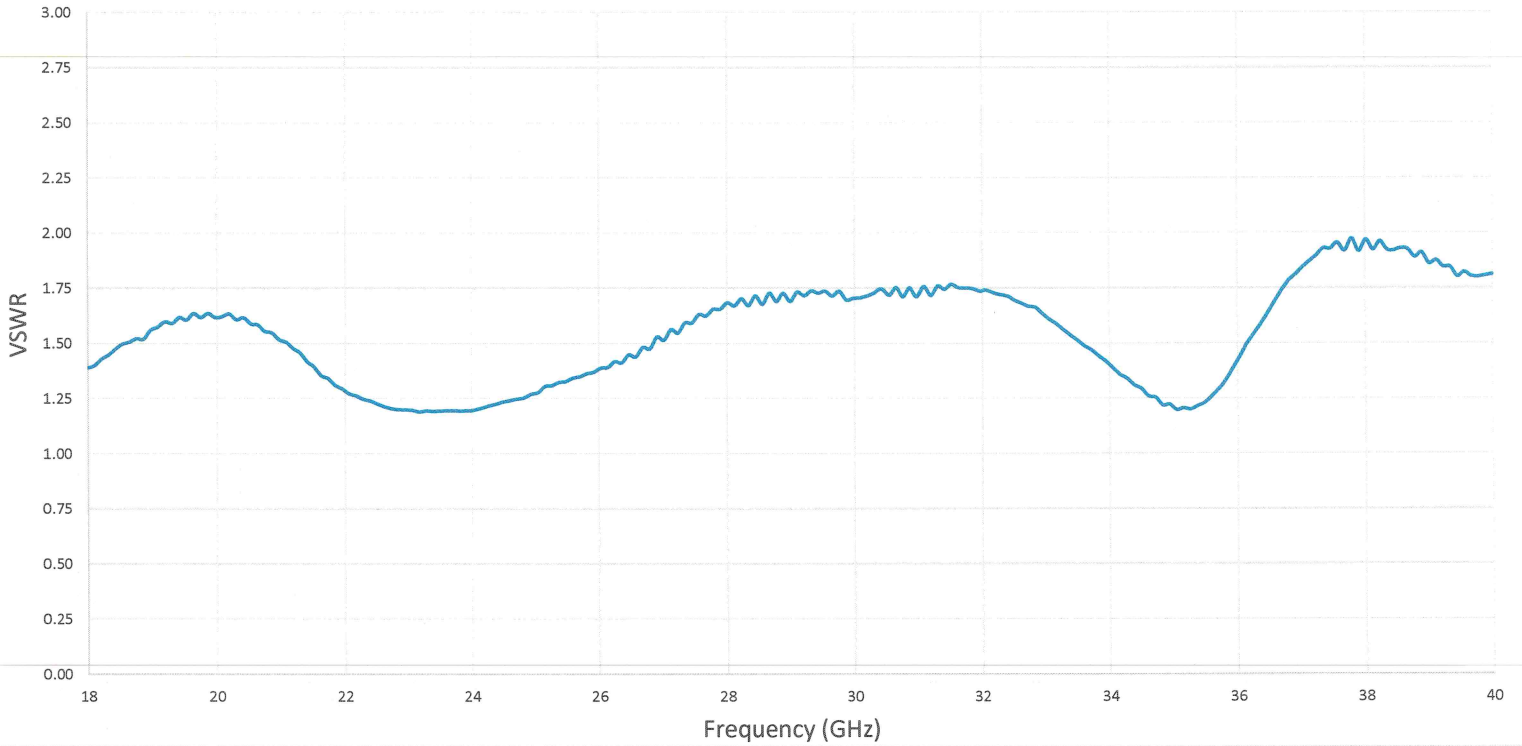
Typical Gain 57.87 dB (@+85°C)



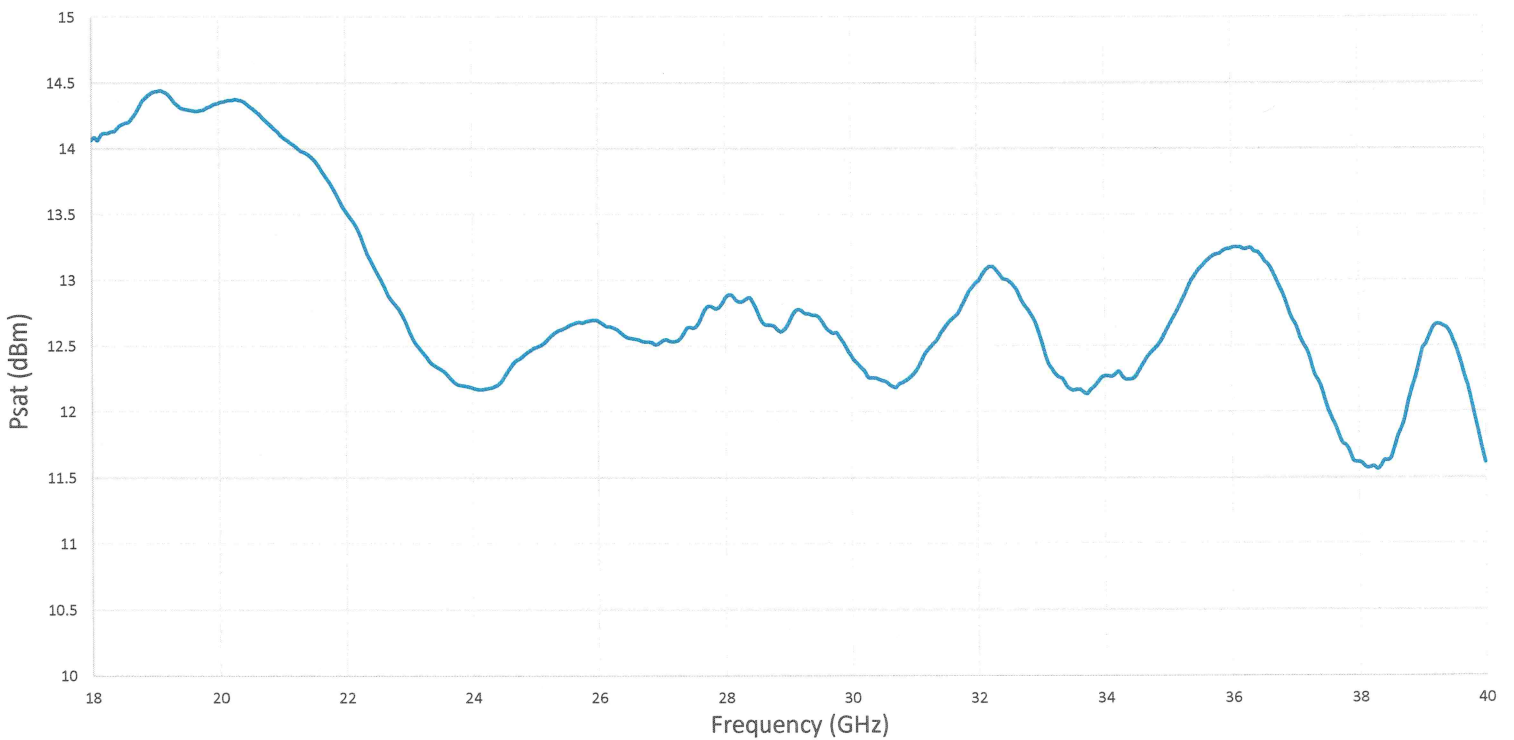
TSS @ -68.4 dBm (@+85°C)



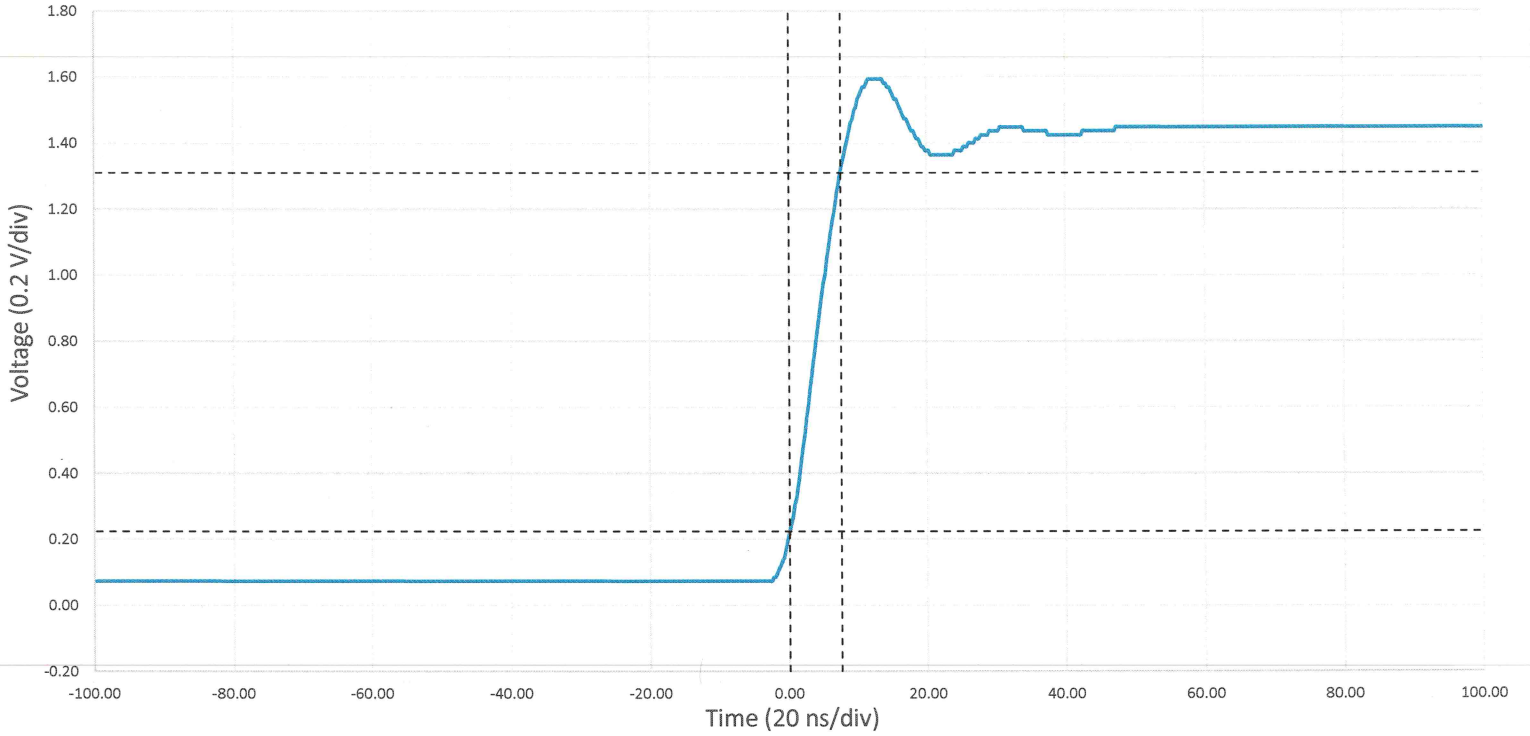
VSWR 1.97:1 (@+85°C)



Typical Psat 12.84 dBm (@+85°C)



Rise time 7.5 ns (@+85°C)



Recovery time 41.3 ns (@+85°C)

