



**SUMMARY TEST DATA
ON
SDLVA-218-71-70MV-1**

PL38756

Customer: _____
 Job No: _____
 Model No: SDLVA-218-71-70MV-1
 Serial No: PL38756

Tested By: Dan Almond
 Temperature: 25C
 Date: 04/19/2023

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	PASS	QA
			FAIL	QC
1	Frequency Range:	2 GHz – 18 GHz	2 GHz – 18 GHz	<i>PMI</i> <i>QA3</i>
2	CW Level: Pulse peak loss at -40 dbm	-40 dBm: 2.0 dB	PASS <2dB	
4	Flatness:	± 2.0 dB Max.	+/-1.40dB (See Plots)	
5	Log Linearity @25C	± 1.0 dB Max.	+0.89/-0.97 (See Plot)	
6	Log Range:	-66 to +5 dBm	-66 to +5dB (See Plots)	
7	Log Slope	70mV/dB nominal	69.8mV/dB (See Plot)	
8	Log accuracy from 70mV / dB @ 25C	± 2.0 dB Max.	+1.41/-1.58dB (See Plot)	
9	VSWR:	2.0:1 Max.	1.72:1 (See Plot)	
10	Rise Time:	25nS Max.	23nS	
11	Settling time	50nS Max	<50nS	
12	Recovery Time:	500nS Max.	290nS	
13	Noise level	75mV(RMS)	69mV	
14	DC offset	± 70mV Max	-11mV	
15	Video output @ -66dBm	350± 140mV	373mV	
16	Pulse droop @ 300uS pulse @ -65dBm	70mV Max	PASS <70mV	

Test Data Sheet: 27619583 Rev B1

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17	Peak & baseline variation with duty cycle up 50% @ 2uS PW	70mV Max	PASS <70mV	PMI QA3
18	TSS:	-72 dBm Min. @15MHz video BW	-72dBm	
19	DC Supply:	+15VDC @ 400 mA -15VDC @ 150 mA	+15 VDC @ 333mA -15 VDC @ 92mA	

QA/QC Approval: *H. Watson* Date: 4-19-23

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PAGE #1

MODEL: SDLVA-218-71-70MV-1
TESTED BY: E.BENSON
DATE: 04-18-23
SERIAL NO: PL38756
Test Temp: +25C



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TABULATED LOG LINEARITY AND LOGGING ACCURACY

Frequency

		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
2 GHz	INTERCEPT (mV)	4973															Measured Value (mV)
	SLOPE (mV/dB)	70.56															Error (mV)
		373	743	1101	1429	1802	2132	2518	2864	3222	3544	3867	4285	4658	4996	5292	LINEARITY ERROR (dB)
		-13	4	9	-16	5	-18	15	8	13	-18	-47	18	38	23	-34	ACCURACY ERROR (dB)
		-0.19	0.06	0.13	-0.22	0.06	-0.26	0.21	0.11	0.19	-0.25	-0.67	0.25	0.54	0.33	-0.48	
		-1.42	-1.14	-1.02	-1.34	-1.01	-1.29	-0.78	-0.84	-0.72	-1.12	-1.51	-0.54	-0.21	-0.38	-1.15	
3 GHz	INTERCEPT (mV)	5006															Measured Value (mV)
	SLOPE (mV/dB)	69.49															Error (mV)
		463	817	1189	1516	1877	2208	2579	2943	3300	3627	3964	4356	4665	4993	5299	LINEARITY ERROR (dB)
		-26	-20	5	-16	-2	-19	5	22	31	11	0	45	6	-13	-55	ACCURACY ERROR (dB)
		-0.38	-0.29	0.07	-0.23	-0.03	-0.27	0.07	0.31	0.45	0.15	0.00	0.64	0.09	-0.19	-0.79	
		-0.14	-0.08	0.23	-0.09	0.06	-0.21	0.09	0.29	0.39	0.06	-0.12	0.48	-0.11	-0.42	-1.05	
4 GHz	INTERCEPT (mV)	5015															Measured Value (mV)
	SLOPE (mV/dB)	68.46															Error (mV)
		546	884	1261	1593	1933	2271	2618	2981	3333	3646	3946	4345	4668	5015	5352	LINEARITY ERROR (dB)
		-19	-23	12	2	-1	-5	0	20	30	1	-42	15	-4	0	-5	ACCURACY ERROR (dB)
		-0.27	-0.33	0.17	0.02	-0.01	-0.07	-0.01	0.30	0.44	0.01	-0.61	0.22	-0.06	0.01	-0.07	
		1.05	0.88	1.26	1.01	0.86	0.69	0.65	0.83	0.86	0.33	-0.38	0.32	-0.07	-0.11	-0.29	
5 GHz	INTERCEPT (mV)	5007															Measured Value (mV)
	SLOPE (mV/dB)	68.98															Error (mV)
		518	864	1236	1561	1908	2243	2590	2938	3297	3606	3926	4314	4658	5027	5379	LINEARITY ERROR (dB)
		-6	-5	22	3	5	-5	-3	0	14	-22	-47	-4	-5	20	27	ACCURACY ERROR (dB)
		-0.08	-0.07	0.33	0.04	0.07	-0.08	-0.05	0.00	0.20	-0.32	-0.68	-0.05	-0.07	0.28	0.39	
		0.65	0.59	0.91	0.55	0.51	0.29	0.25	0.22	0.35	-0.24	-0.67	-0.12	-0.21	0.06	0.09	
6 GHz	INTERCEPT (mV)	5053															Measured Value (mV)
	SLOPE (mV/dB)	69.24															Error (mV)
		557	894	1266	1594	1934	2275	2620	2976	3335	3667	3990	4351	4690	5075	5415	LINEARITY ERROR (dB)
		5	-4	21	3	-3	-8	-9	0	13	-1	-24	-9	-17	22	18	ACCURACY ERROR (dB)
		0.07	-0.06	0.31	0.05	-0.04	-0.12	-0.14	0.01	0.19	-0.02	-0.35	-0.14	-0.24	0.32	0.23	
		1.21	1.02	1.33	1.02	0.88	0.75	0.68	0.76	0.89	0.63	0.25	0.41	0.25	0.75	0.61	
7 GHz	INTERCEPT (mV)	5066															Measured Value (mV)
	SLOPE (mV/dB)	70.02															Error (mV)
		510	858	1230	1558	1907	2242	2610	2979	3342	3691	3997	4377	4700	5070	5405	LINEARITY ERROR (dB)
		-5	-7	15	-7	-8	-23	-5	14	27	25	-19	11	-16	4	-11	ACCURACY ERROR (dB)
		-0.07	-0.10	0.22	-0.10	-0.11	-0.33	-0.08	0.19	0.38	0.36	-0.27	0.16	-0.23	0.06	-0.16	
		0.53	0.51	0.82	0.51	0.49	0.28	0.53	0.81	0.99	0.98	0.35	0.78	0.39	0.68	0.46	
8 GHz	INTERCEPT (mV)	5077															Measured Value (mV)
	SLOPE (mV/dB)	72.55															Error (mV)
		362	734	1083	1421	1793	2123	2533	2923	3311	3690	4000	4378	4736	5042	5375	LINEARITY ERROR (dB)
		1	10	-3	-28	-19	-52	-4	23	48	64	12	27	22	-35	-65	ACCURACY ERROR (dB)
		0.02	0.14	-0.05	-0.39	-0.26	-0.71	-0.06	0.31	0.66	0.89	0.16	0.37	0.30	-0.48	-0.89	
		-1.58	-1.27	-1.28	-1.45	-1.14	-1.42	-0.57	0.01	0.55	0.96	0.39	0.79	0.91	0.28	0.03	
9 GHz	INTERCEPT (mV)	5066															Measured Value (mV)
	SLOPE (mV/dB)	69.84															Error (mV)
		508	858	1230	1562	1916	2258	2628	2989	3356	3689	4015	4391	4692	5051	5399	LINEARITY ERROR (dB)
		-18	-17	5	-12	-7	-14	7	18	36	20	-3	23	-25	-15	-16	ACCURACY ERROR (dB)
		-0.26	-0.25	0.08	-0.17	-0.10	-0.20	0.09	0.26	0.52	0.28	-0.05	0.34	-0.35	-0.21	-0.23	
		0.51	0.51	0.82	0.56	0.62	0.51	0.79	0.95	1.19	0.95	0.61	0.98	0.28	0.41	0.38	
10 GHz	INTERCEPT (mV)	5056															Measured Value (mV)
	SLOPE (mV/dB)	69.62															Error (mV)
		505	860	1234	1567	1925	2262	2624	2979	3341	3671	4013	4381	4668	5055	5398	LINEARITY ERROR (dB)
		-26	-19	7	-8	2	-9	5	12	26	8	1	21	-40	-1	-6	ACCURACY ERROR (dB)
		-0.37	-0.27	0.10	-0.11	0.03	-0.13	0.07	0.17	0.37	0.11	0.02	0.31	-0.57	-0.01	-0.08	
		0.46	0.53	0.88	0.63	0.75	0.56	0.73	0.81	0.98	0.69	0.58	0.83	-0.07	0.46	0.36	

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Email: sales@pmi-rf.com



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PAGE #2

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TESTED BY: E.BENSON
DATE: 04-18-23
SERIAL NO: PL38756
Test Temp: +25C



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TABULATED LOG LINEARITY AND LOGGING ACCURACY

Frequency

			-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
11 GHz	INTERCEPT (mV)	5072	513	862	1238	1567	1923	2263	2639	3015	3371	3697	4025	4389	4716	5067	5373	Measured Value (mV)
	SLOPE (mV/dB)	69.76	-24	-24	3	-17	-9	-18	9	36	43	21	0	15	-7	-5	-47	Error (mV)
			-0.35	-0.34	0.05	-0.24	-0.13	-0.26	0.13	0.52	0.62	0.30	0.00	0.21	-0.10	-0.07	-0.68	LINEARITY ERROR (dB)
			0.58	0.56	0.93	0.63	0.72	0.58	0.95	1.32	1.41	1.06	0.75	0.95	0.62	0.63	0.01	ACCURACY ERROR (dB)
12 GHz	INTERCEPT (mV)	5062	447	811	1176	1499	1868	2207	2605	3004	3359	3689	4022	4386	4695	5037	5346	Measured Value (mV)
	SLOPE (mV/dB)	70.55	-29	-18	-6	-35	-19	-33	12	59	61	38	18	30	-14	-25	-69	Error (mV)
			-0.41	-0.25	-0.08	-0.50	-0.27	-0.47	0.18	0.83	0.86	0.54	0.26	0.42	-0.20	-0.35	-0.97	LINEARITY ERROR (dB)
			-0.37	-0.17	0.05	-0.34	-0.07	-0.22	0.46	1.16	1.23	0.95	0.71	0.91	0.32	0.21	-0.38	ACCURACY ERROR (dB)
13 GHz	INTERCEPT (mV)	5071	449	809	1175	1504	1873	2210	2607	2994	3338	3679	4007	4365	4688	5067	5402	Measured Value (mV)
	SLOPE (mV/dB)	70.84	-17	-11	0	-25	-10	-27	16	48	38	25	-1	3	-29	-4	-23	Error (mV)
			-0.24	-0.16	0.01	-0.35	-0.14	-0.38	0.22	0.68	0.54	0.35	-0.02	0.04	-0.40	-0.05	-0.33	LINEARITY ERROR (dB)
			-0.34	-0.19	0.03	-0.27	0.01	-0.18	0.49	1.02	0.93	0.81	0.49	0.61	0.22	0.63	0.42	ACCURACY ERROR (dB)
14 GHz	INTERCEPT (mV)	5061	476	833	1200	1526	1889	2239	2634	2994	3319	3651	3989	4368	4698	5068	5394	Measured Value (mV)
	SLOPE (mV/dB)	70.27	-18	-12	4	-22	-10	-11	32	41	15	-5	-18	10	-12	7	-19	Error (mV)
			-0.25	-0.17	0.05	-0.31	-0.14	-0.16	0.46	0.58	0.21	-0.07	-0.26	0.14	-0.17	0.10	-0.26	LINEARITY ERROR (dB)
			0.05	0.15	0.39	0.05	0.23	0.23	0.88	1.02	0.66	0.41	0.23	0.65	0.36	0.65	0.31	ACCURACY ERROR (dB)
15 GHz	INTERCEPT (mV)	4968	515	863	1235	1555	1918	2281	2654	2979	3304	3631	3944	4288	4598	4956	5285	Measured Value (mV)
	SLOPE (mV/dB)	67.68	-54	-44	-10	-29	-4	20	55	42	28	17	-8	-3	-31	-12	-21	Error (mV)
			-0.79	-0.65	-0.15	-0.43	-0.06	0.30	0.81	0.62	0.42	0.25	-0.13	-0.04	-0.46	-0.17	-0.31	LINEARITY ERROR (dB)
			0.61	0.58	0.89	0.46	0.65	0.83	1.16	0.81	0.45	0.12	-0.41	-0.49	-1.07	-0.95	-1.25	ACCURACY ERROR (dB)
16 GHz	INTERCEPT (mV)	4961	480	837	1201	1526	1893	2247	2619	2926	3260	3592	3923	4288	4610	4962	5283	Measured Value (mV)
	SLOPE (mV/dB)	68.27	-43	-27	-5	-21	4	17	48	13	6	-3	-14	10	-10	1	-19	Error (mV)
			-0.63	-0.40	-0.07	-0.31	0.06	0.25	0.70	0.20	0.09	-0.05	-0.20	0.14	-0.14	0.02	-0.28	LINEARITY ERROR (dB)
			0.11	0.21	0.41	0.05	0.29	0.35	0.66	0.05	-0.18	-0.44	-0.71	-0.49	-0.89	-0.87	-1.28	ACCURACY ERROR (dB)
17 GHz	INTERCEPT (mV)	5016	433	806	1164	1500	1861	2204	2613	2952	3291	3648	3962	4325	4638	5008	5345	Measured Value (mV)
	SLOPE (mV/dB)	69.90	-40	-16	-8	-21	-10	-16	43	33	22	30	-6	8	-29	-8	-21	Error (mV)
			-0.57	-0.24	-0.11	-0.31	-0.14	-0.23	0.62	0.47	0.32	0.42	-0.08	0.11	-0.41	-0.12	-0.30	LINEARITY ERROR (dB)
			-0.57	-0.24	-0.12	-0.32	-0.17	-0.27	0.58	0.42	0.26	0.36	-0.15	0.03	-0.49	-0.21	-0.39	ACCURACY ERROR (dB)
18 GHz	INTERCEPT (mV)	4997	380	756	1098	1443	1812	2153	2571	2890	3235	3595	3915	4285	4619	5003	5355	Measured Value (mV)
	SLOPE (mV/dB)	70.71	-21	2	-10	-18	-3	-15	49	15	6	13	-21	-5	-24	6	5	Error (mV)
			-0.29	0.03	-0.14	-0.26	-0.04	-0.22	0.70	0.21	0.09	0.18	-0.30	-0.06	-0.34	0.09	0.07	LINEARITY ERROR (dB)
			-1.32	-0.95	-1.07	-1.14	-0.87	-0.99	-0.02	-0.47	-0.54	-0.39	-0.82	-0.54	-0.77	-0.28	-0.25	ACCURACY ERROR (dB)
Output Vos(mV)= -11.0																		
Avg Slope(mV/dB)= 69.8			557	894	1266	1594	1934	2281	2654	3015	3371	3697	4025	4391	4736	5075	5415	Max Measured (mV)
Max Slope(mV/dB)= 72.6			362	734	1083	1421	1793	2123	2518	2864	3222	3544	3867	4285	4598	4956	5283	Min Measured (mV)
Min Slope(mV/dB)= 67.7			1.40	1.15	1.31	1.24	1.01	1.13	0.97	1.08	1.07	1.10	1.13	0.76	0.99	0.85	0.95	FLATNESS ERROR (+/-dB)

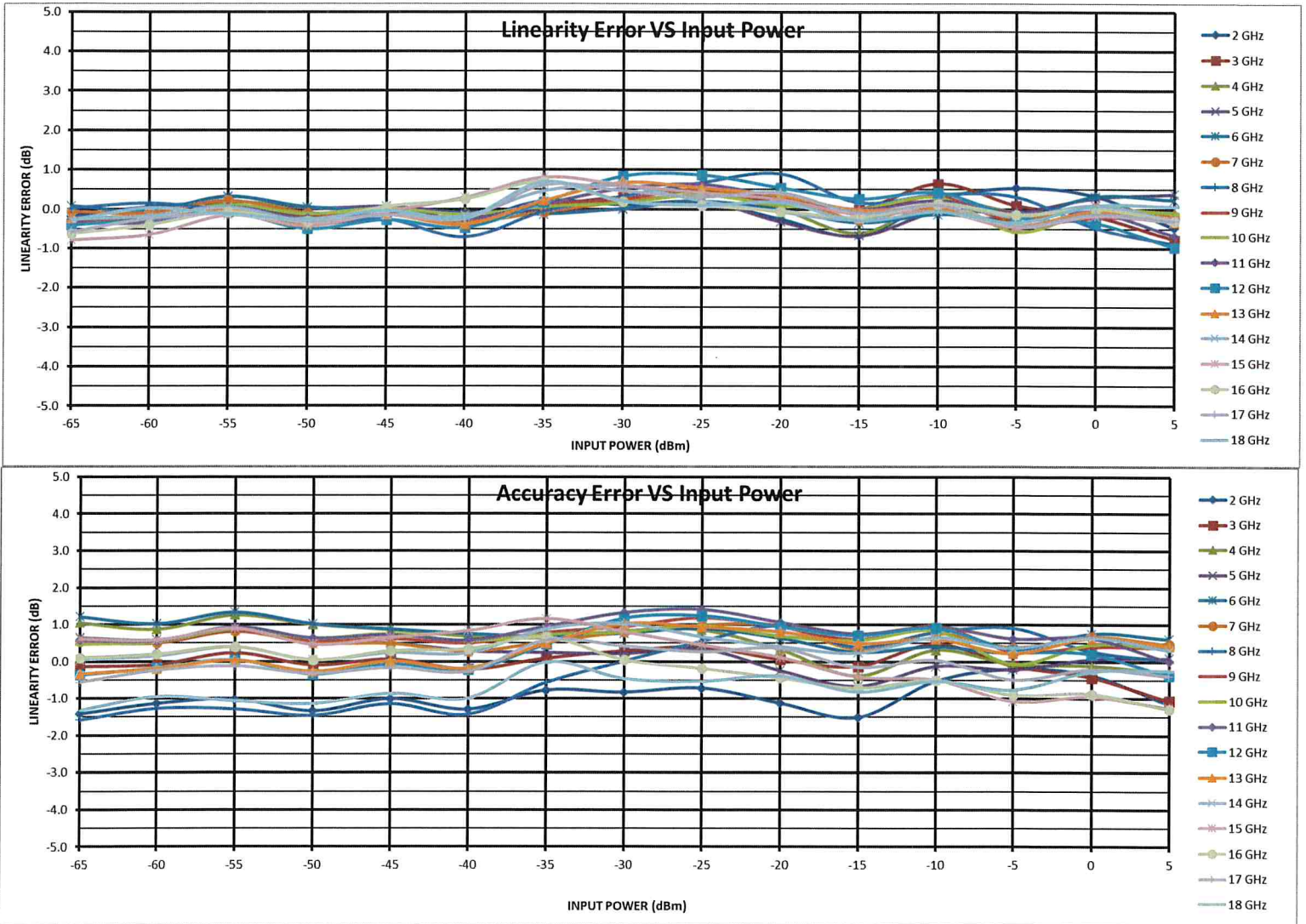
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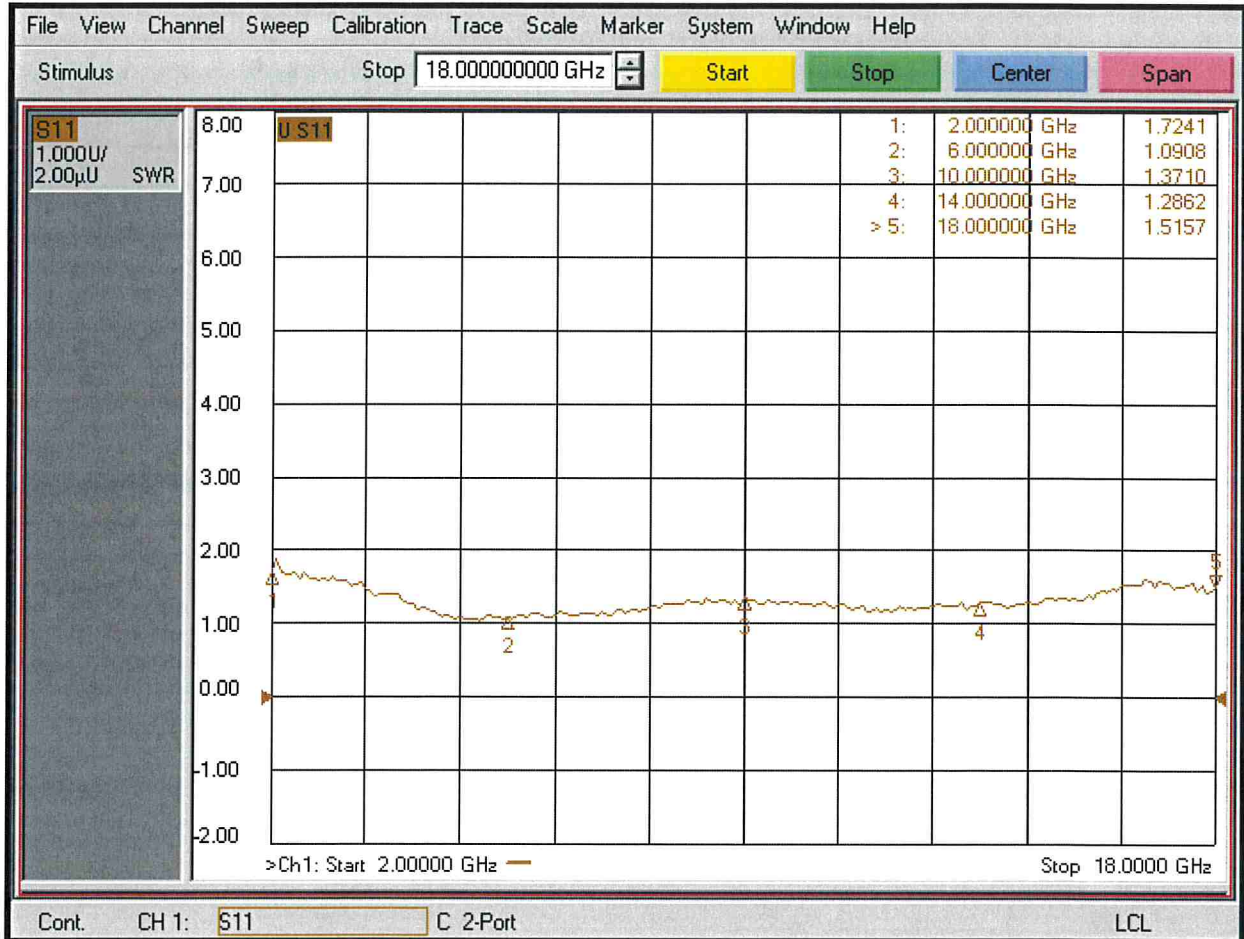
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VSWR 1.72:1



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RISE TIME 23nS



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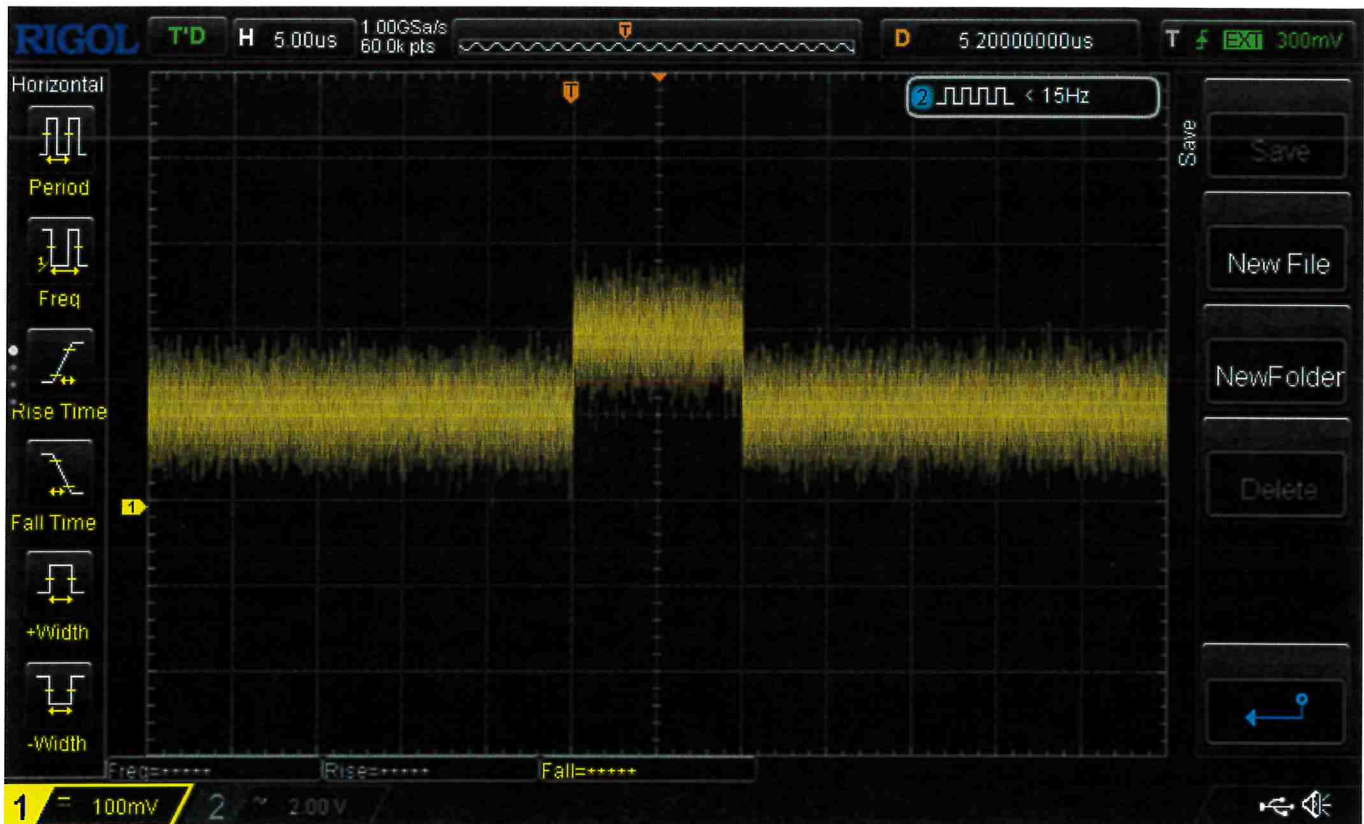
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TSS -72dBm



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