

TYPICAL CHARACTERISTICS
ON
LM-0R1G4G-100W-15DBM-SMF-ROHS

PMI MODEL: LM-0R1G4G-100W-15DBM-SMF-ROHS IS A HIGH POWER LIMITER THAT OPERATES OVER THE 0.1 TO 4.0 GHz FREQUENCY RANGE. THIS MODEL IS CAPABLE OF HANDLING AN INPUT OF 100 WATTS CW.



March 25, 2025

Tested By:
Alfredo L.

Reported By:
Matt L.

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OUTLINE DRAWING

DESCRIPTION:

PMI MODEL: LM-0R1G4G-100W-15DBM-SMF-ROHS IS A HIGH POWER LIMITER THAT OPERATES OVER THE 0.1 TO 4.0 GHz FREQUENCY RANGE. THIS MODEL IS CAPABLE OF HANDLING AN INPUT OF 100 WATTS CW.

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	10/24	

SPECIFICATIONS:

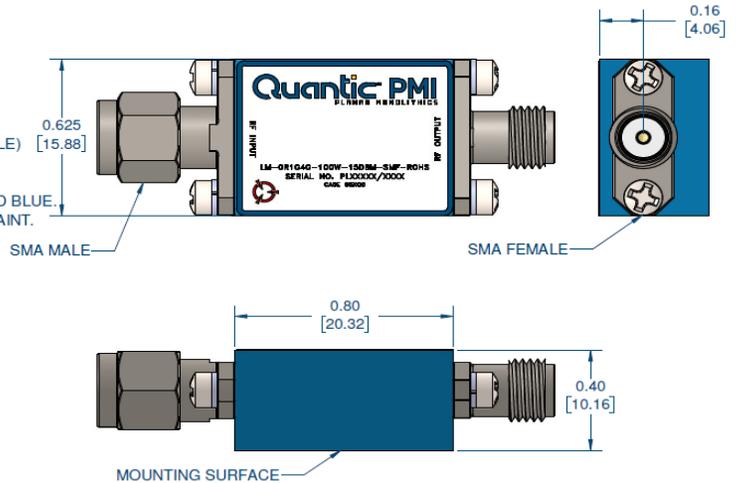
- FREQUENCY RANGE:..... 0.1 TO 4.0 GHz**
- RF INPUT POWER:..... +50 dBm CW (100W) MAX
- RF INPUT PEAK POWER:..... +60 dBm CW (1kW) MAX
1% DC 1us PW
- RF LEAKAGE (FLAT):..... +15 dBm MAX**
- RECOVERY TIME:..... 100 ns MAX
- INSERTION LOSS @ -10 dBm:..... 1.5 dB MAX**
- VSWR @ -10 dBm INPUT POWER:..... 2.0:1 MAX (INPUT/OUTPUT)**
- CONNECTORS:..... SMA MALE/FEMALE (REMOVEABLE)
- SIZE (EXCLUDING CONNECTORS):..... 15.88mm x 20.32mm x 10.16mm
0.625" x 0.80" x 0.40"
- FINISH:..... HERMETICALLY SEALED, PAINTED BLUE,
MOUNTING SURFACE FREE OF PAINT.
- WEIGHT:..... 2.0 OZ MAX

*NO DC BLOCKS ARE USED INSIDE THE LIMITER

**DATA REQUIREMENT PER UNIT

***TYPICAL CHARACTERISTICS REPORT WILL BE PREPARED TO VALIDATE

ALL CONDITIONS LISTED ON THE DRAWING INCLUDING TEMPERATURE.



ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -55°C TO +85°C (OPERATING)
-57°C TO +85°C (AVAILABLE)
-54°C TO +71°C (STORAGE)
- HUMIDITY:..... 100% RH (WITH CONDENSATION)
- SHOCK:..... MIL-HDBK-5400 4.6.2.6
- ALTITUDE:..... 43,000 FT
- VIBRATION:..... MIL-HDBK-5400 4.6.2.5 EQUIPMENT
DESIGNED FOR INSTILLATION IN JET
AIRCRAFT. W0=0.172G2/Hz (15.1Gms)

NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

PMI CONFIDENTIAL AND PROPRIETARY

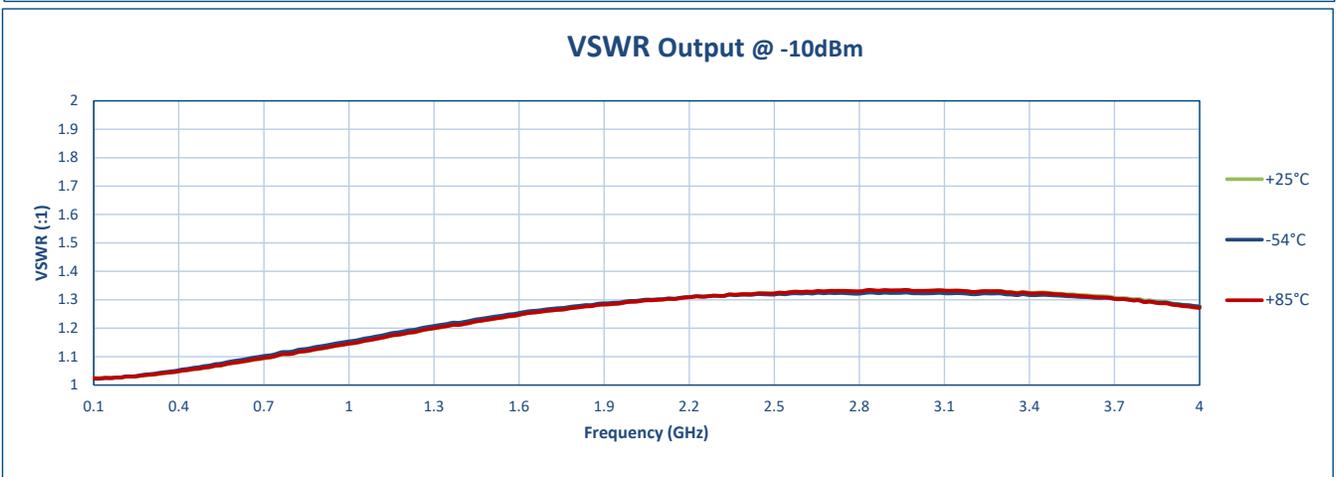
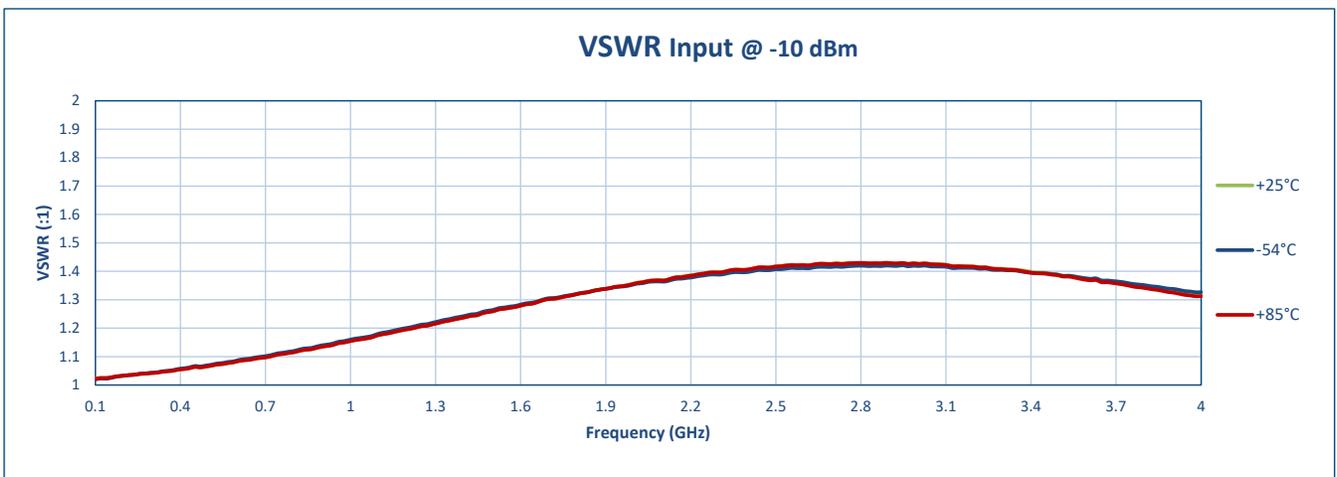
APPROVALS		DATE	TITLE
DESIGN	LAULIS	10/24	OUTLINE
TESTED			
SIZE	B	05XQ0	27049880
SCALE	2:1		SHEET 1 OF 1

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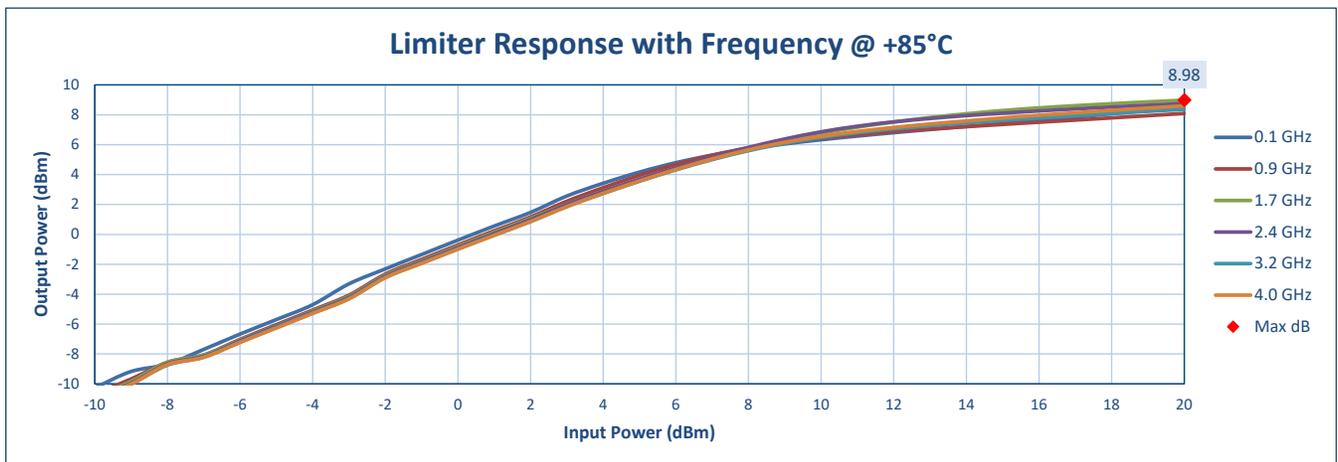
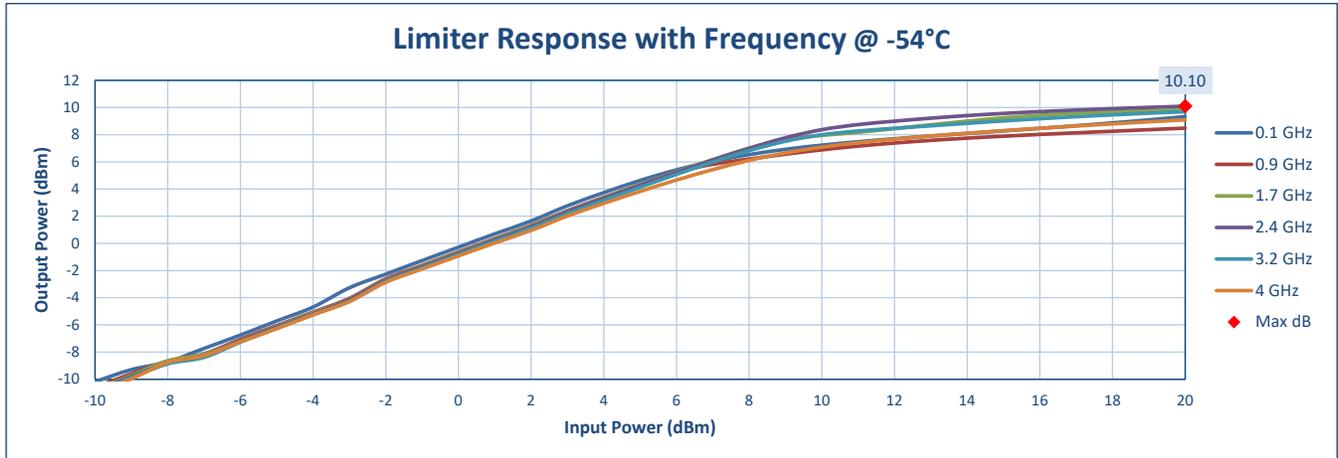
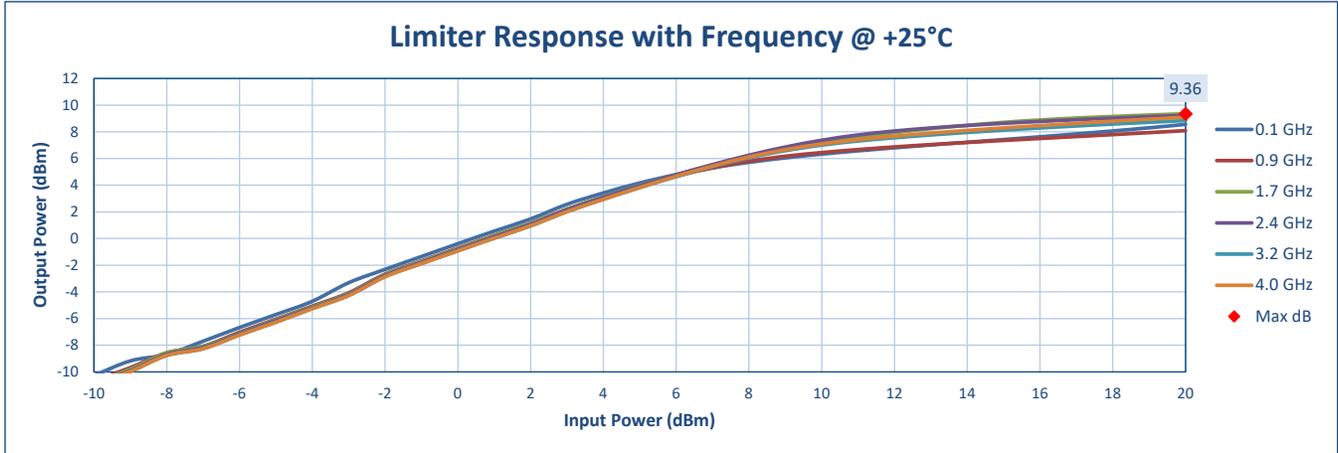
Technical Specifications

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	+25°C	-54° C	+85°C
1	Frequency Range:	0.1 GHz to 4 GHz	0.1 to 4 GHz	0.1 to 4 GHz	0.1 to 4 GHz
2	Insertion Loss:	1.5 dB Max.	0.7 dB See Graph	0.67 dB See Graph	0.72 dB See Graph
3	VSWR:	2.0:1 Max.	1.43:1 In 1.33:1 Out See Graph	1.42:1 In 1.33:1 Out See Graph	1.43:1 In 1.34:1 Out See Graph
4	Leakage: (Output Power)	+15 dBm Max. CW	14.63 dBm See Graph	14.68 dBm See Graph	14.5 dBm See Graph
5	Input Power:	+50 dBm Max. (100W CW)	50 dBm (100W CW) See Graphs	50 dBm (100W CW) See Graphs	50 dBm (100W CW) See Graphs
6	Peak Power:	+60 dBm Max. (1kW CW 1%1us PW)	Pass by Design	Pass by Design	Pass by Design
7	Recovery Time:	100 ns Max.	15.5 ns See Graph		

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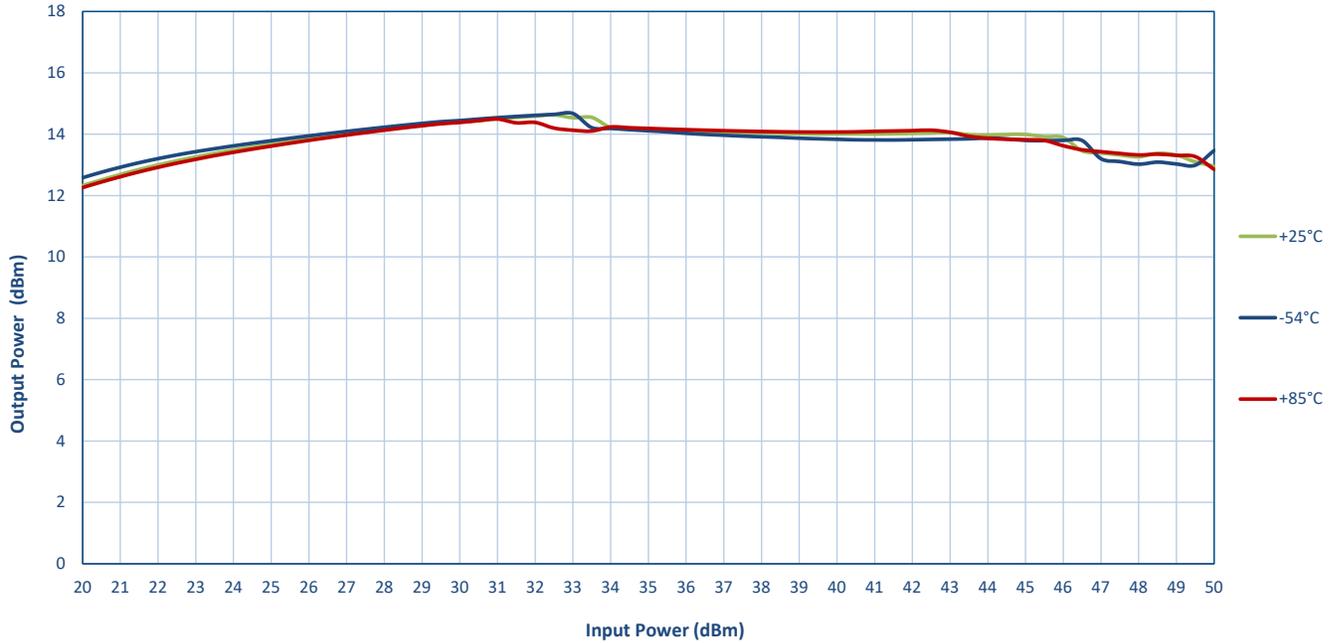


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High Power Test Graph @ 2 GHz (CW)



High Power Test Data @ 2GHz (CW)																							
+25°C								-54°C								+85°C							
Input Power (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (Watts)	Input Power (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (Watts)	Input Power (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (dBm)	Loss (dBm)	Output Power (Watts)		
20	12.327	7.67	12.583	7.42	12.261	7.74		35.5	14.144	21.36	14.076	21.42	14.168	21.33									
20.5	12.51	7.99	12.762	7.74	12.443	8.06		36	14.121	21.88	14.03	21.97	14.149	21.85									
21	12.688	8.31	12.924	8.08	12.613	8.39		36.5	14.1	22.40	13.994	22.51	14.131	22.37									
21.5	12.85	8.65	13.072	8.43	12.774	8.73		37	14.081	22.92	13.967	23.03	14.115	22.89									
22	12.998	9.00	13.204	8.80	12.92	9.08		37.5	14.062	23.44	13.938	23.56	14.101	23.40									
22.5	13.134	9.37	13.324	9.18	13.057	9.44		38	14.046	23.95	13.917	24.08	14.089	23.91									
23	13.26	9.74	13.431	9.57	13.181	9.82		38.5	14.031	24.47	13.897	24.60	14.079	24.42									
23.5	13.376	10.12	13.528	9.97	13.302	10.20		39	14.017	24.98	13.87	25.13	14.072	24.93									
24	13.482	10.52	13.62	10.38	13.41	10.59		39.5	14.007	25.49	13.851	25.65	14.07	25.43									
24.5	13.582	10.92	13.706	10.79	13.514	10.99		40	14.01	25.99	13.835	26.17	14.071	25.93									
25	13.675	11.33	13.787	11.21	13.612	11.39		40.5	14.01	26.49	13.818	26.68	14.077	26.42									
25.5	13.764	11.74	13.869	11.63	13.707	11.79		41	14.006	26.99	13.814	27.19	14.094	26.91									
26	13.852	12.15	13.946	12.05	13.8	12.20		41.5	14.015	27.49	13.812	27.69	14.105	27.40									
26.5	13.935	12.57	14.02	12.48	13.887	12.61		42	14.027	27.97	13.82	28.18	14.116	27.88									
27	14.013	12.99	14.092	12.91	13.972	13.03		42.5	14.04	28.46	13.83	28.67	14.131	28.37									
27.5	14.088	13.41	14.161	13.34	14.053	13.45		43	14.056	28.94	13.839	29.16	14.063	28.94									
28	14.161	13.84	14.228	13.77	14.131	13.87		43.5	13.989	29.51	13.85	29.65	13.933	29.57									
28.5	14.231	14.27	14.292	14.21	14.205	14.30		44	13.98	30.02	13.873	30.13	13.867	30.13									
29	14.297	14.70	14.353	14.65	14.275	14.73		44.5	13.992	30.51	13.848	30.65	13.836	30.66									
29.5	14.359	15.14	14.409	15.09	14.341	15.16		45	13.993	31.01	13.797	31.20	13.822	31.18									
30	14.4	15.60	14.446	15.55	14.383	15.62		45.5	13.922	31.58	13.791	31.71	13.796	31.70									
30.5	14.452	16.05	14.495	16.01	14.441	16.06		46	13.892	32.11	13.799	32.20	13.624	32.38									
31	14.501	16.50	14.54	16.46	14.495	16.51		46.5	13.456	33.04	13.795	32.71	13.491	33.01									
31.5	14.547	16.95	14.58	16.92	14.371	17.13		47	13.389	33.61	13.2	33.80	13.43	33.57									
32	14.591	17.41	14.615	17.39	14.384	17.62		47.5	13.324	34.18	13.109	34.39	13.373	34.13									
32.5	14.632	17.87	14.646	17.85	14.199	18.30		48	13.263	34.74	13.023	34.98	13.323	34.68									
33	14.536	18.46	14.675	18.33	14.13	18.87		48.5	13.38	35.12	13.09	35.41	13.35	35.15									
33.5	14.548	18.95	14.213	19.29	14.103	19.40		49	13.32	35.68	13.03	35.97	13.31	35.69									
34	14.216	19.78	14.188	19.81	14.236	19.76		49.5	13.1	36.40	12.99	36.51	13.27	36.23									
34.5	14.19	20.31	14.147	20.35	14.211	20.29		50	12.96	37.04	13.47	36.53	12.85	37.15	100 Watts								
35	14.167	20.83	14.111	20.89	14.189	20.81																	

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Recovery Time

(+50 dBm Input Power, Freq. 1 GHz, PW 1µs, Period 4µs, Duty Cycle 50%)



(+50 dBm Input Power, Freq. 1 GHz, PW 1µs, Period 4µs, Duty Cycle 50%)



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Full Pulse

(+50 dBm Input Power, Freq. 1 GHz, PW 1 μ s, Period 4 μ s, Duty Cycle 50%)

