PMI MODEL: LM-1G2G-4CW-1KWP-SMF IS A RF LIMITER THAT OPERATES OVER THE 1 GHz TO 2 GHz FREQUENCY RANGE. THIS LIMITER CAN HANDLE 4 W CW AND 1 kW PEAK (1% DUTY CYCLE, 1 µs MAXIMUM PULSE WIDTH) INPUT POWER AND PROVIDES A MAXIMUM LEAKAGE OF +16 dBm (40 mW). THIS MODEL HAS A LOW INSERTION LOSS OF 0.7 dB AND A RECOVERY TIME OF 1 µs MAXIMUM.

December 13, 2017

Designed By:
Dr. Ashok Gorwara, Mathew Berry & Sebastian Palacio

Tested & Reported By:
Hugo Gonzalez & Sebastian Palacio
**TYPICAL CHARACTERISTICS ON LM-1G2G-4CW-1KWP-SMF**

**DESCRIPTION**

LM-1G2G-4CW-1KWP-SMF is a RF LIMITER that operates over the 1 GHz to 2 GHz frequency range. This LIMITER can handle 4 W CW and 1 kW PEAK (1% DUTY CYCLE, 1 µs MAXIMUM PULSE WIDTH) INPUT POWER and provides a MAXIMUM LEAKAGE of +18 dBm (40 mW). This model has a LOW INSERTION LOSS of 0.7 dB and a RECOVERY TIME of 1 µs MAXIMUM.

**SPECIFICATIONS**

- **FREQUENCY RANGE:** 1 GHz to 2 GHz
- **INSERTION LOSS:** 0.7 dB MAXIMUM
- **INPUT/OUTPUT VSWR:** 2:1 MAX @ -10 dBm INPUT
- **IMPEDANCE:** 50 Ω
- **INPUT POWER:** 4 W CW MIN, 1 kW PEAK (1% DUTY CYCLE, 1 µs MAXIMUM PULSE WIDTH)
- **MAXIMUM FLAT LEAKAGE:** 16 dBm (40 mW) MAXIMUM
- **LIMITING THRESHOLD:** 5 dBm MIN, 1 dB COMPRESSION
- **RECOVERY TIME:** 1 µs MAXIMUM
- **CONNECTORS:** SMA MALE IN; SMA FEMALE OUT
- **SIZE:** 1.00" x 0.75" x 0.38"
  25.40 mm x 19.05 mm x 9.65 mm (EXCLUDING CONNECTORS)
- **FINISH:** GOLD PLATED

*EXTERNAL DC BLOCKS ARE REQUIRED FOR PROPER FUNCTION.*

**ENVIRONMENTAL RATINGS**

- **TEMPERATURE:** -55 °C to +85 °C (OPERATING)
- **STABILIZATION BAKE:** -85 °C to +185 °C (STORAGE)
- **THERMAL CYCLE:** MIL-STD-883, METHOD 1006, COND. B
- **VIBRATION:** 0.1 in chp or ±1 G, 5-500 Hz (MIL-E-5460R FIG 2, CURVE IV)
- **SHOCK:** 15 G, 11 ms
- **RELATIVE HUMIDITY:** 100%
- **ALTITUDE:** 70000 ft

**NOTES:**
- SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE.
- THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION.

**PLANAR MONOLITHICS INDUSTRIES, INC.**

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: (301)-662-5019, FAX: (301)-662-1731
WEB: www.pmi-rf.com, EMAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com
<table>
<thead>
<tr>
<th>TEST. ITEM NO</th>
<th>PARAMETERS</th>
<th>SPECIFIED VALUE</th>
<th>TEST RESULTS</th>
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<td>2</td>
<td>Insertion Loss</td>
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<td>Input/Output VSWR</td>
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<td>Input Power</td>
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<td>1 kW Peak</td>
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<td>(1% Duty Cycle, 1 µs Max Pulse Width)</td>
<td>1 kW Peak</td>
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<td>(1% Duty Cycle, 1 µs Max Pulse Width)</td>
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<td>Maximum Flat Leakage</td>
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<td>12dBm Typ.</td>
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<td>Recovery Time</td>
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<tr>
<td>9</td>
<td>Weight</td>
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1. EXTERNAL DC BLOCKS ARE REQUIRED FOR PROPER FUNCTION.
TYPICAL CHARACTERISTICS
ON
LM-1G2G-4CW-1KWP-SMF

Insertion Loss and Return Loss
TYPICAL CHARACTERISTICS
ON
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Broad-Band Data
Insertion Loss and Return Loss – 10MHz to 10GHz
TYPICAL CHARACTERISTICS ON LM-1G2G-4CW-1KWP-SMF
TYPICAL CHARACTERISTICS ON LM-1G2G-4CW-1KWP-SMF

Output Power vs. Input Power vs. Freq.

Output Power (dBm)

Input Power (dBm)

Temp. = 25 °C

CW

0.05 GHz 0.2 GHz 1.0 GHz 2.0 GHz
3.0 GHz 4.0 GHz 5.0 GHz 6.0 GHz

Output Power vs. Frequency vs. Temp.

Output Power (dBm)

Frequency (GHz)

- 40 °C
+25 °C
+85 °C

P_{IN} = 30 dBm
Recovery
50ns per Div.