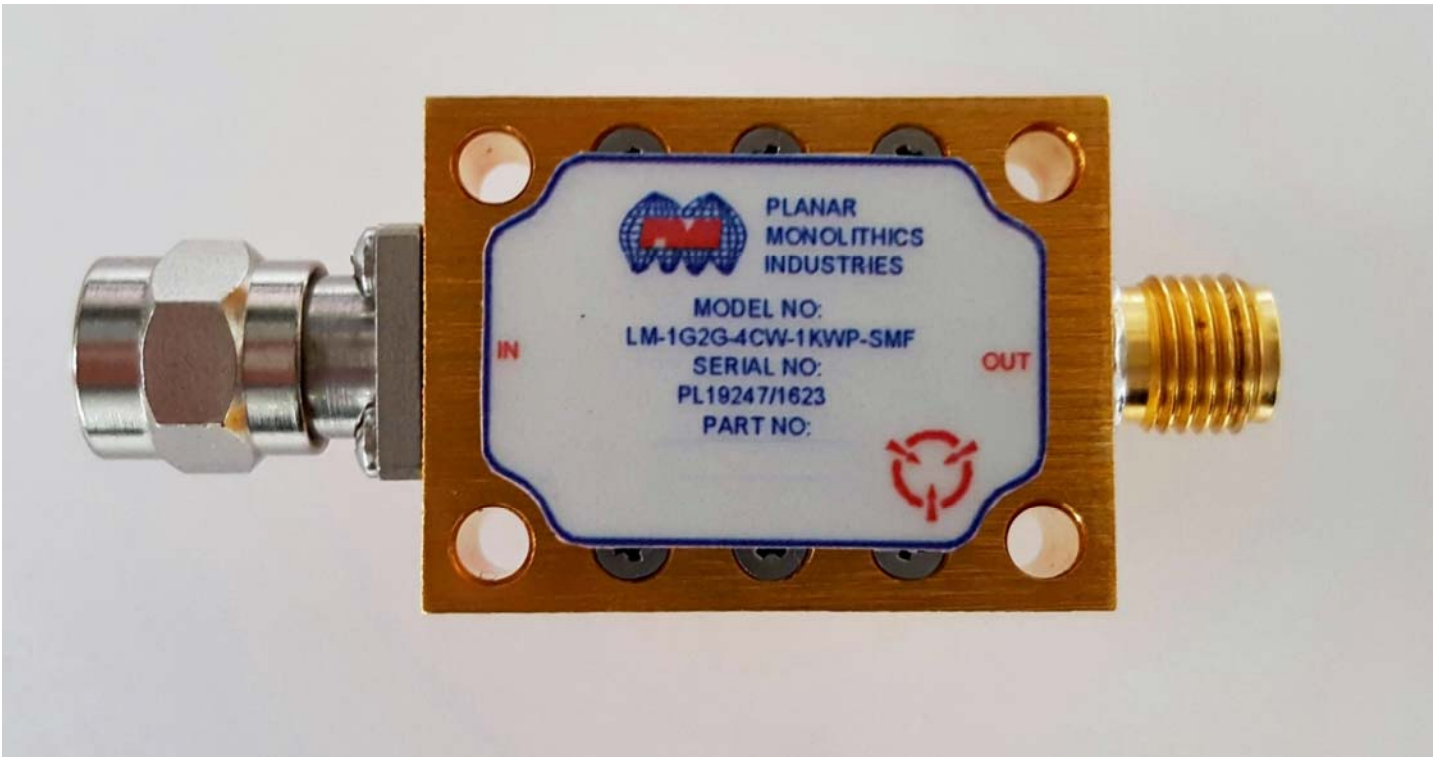




**TYPICAL CHARACTERISTICS  
ON  
LM-1G2G-4CW-1KWP-SMF**

**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  $\mu$ s 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  $\mu$ s MAXIMUM.**



May 17, 2016

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

Tested & Reported By:  
Hugo Gonzalez & Sebastian Palacio

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



## TYPICAL CHARACTERISTICS ON LM-1G2G-4CW-1KWP-SMF

### DESCRIPTION

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.

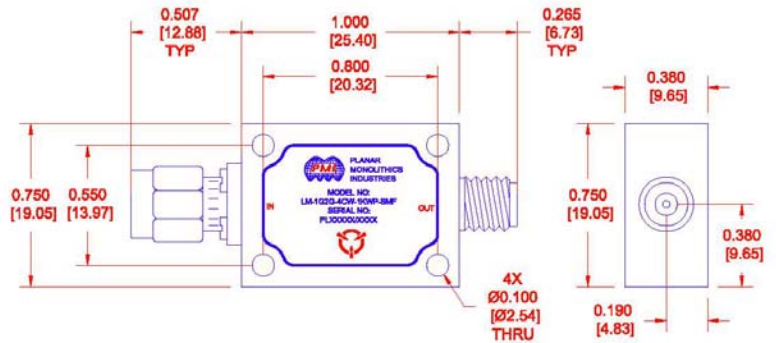
### SPECIFICATIONS

- FREQUENCY RANGE: 1 GHz TO 2 GHz
- INSERTION LOSS: 0.7 dB MAXIMUM
- INPUT/OUTPUT VSWR: 2.0:1 MAX @ -10 dBm INPUT
- IMPEDANCE: 50 Ω
- INPUT POWER: 4 W CW MIN  
1 kW PEAK (1% DUTY CYCLE, 1 μs MAX PULSE WIDTH)
- MAXIMUM FLAT LEAKAGE: 16 dBm (40 mW) MAXIMUM
- LIMITING THRESHOLD: 5 dBm MIN, 1 dB COMPRESSION
- RECOVERY TIME: 1 μs MAXIMUM
- CONNECTORS: INPUT: SMA MALE  
OUTPUT: SMA FEMALE
- 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.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	03/21/16	

### MECHANICAL OUTLINE



### ENVIRONMENTAL RATINGS

- TEMPERATURE: -55 °C TO +85 °C (OPERATING)  
-65 °C TO +95 °C (STORAGE)
- STABILIZATION BAKE: MIL-STD-883, METHOD 1008, COND. B
- THERMAL CYCLE: MIL-STD-883, METHOD 1010, COND. B
- VIBRATION: 0.1 inchpp or ±10 G, 5 - 500 Hz (MIL-E-5400R FIG 2, CURVE IV)
- SHOCK: 15 G, 11 ±1 ms
- RELATIVE HUMIDITY: 100%
- ALTITUDE: 70000 ft

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

PMI CONFIDENTIAL AND PROPRIETARY

ALL DIMENSIONS  
ARE IN INCHES (mm)  
TOLERANCES:  
X.XXX ±0.020  
X.XXXX ±0.010

**PLANAR MONOLITHICS INDUSTRIES, INC.**  
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FREDERICK, MARYLAND 21704 USA  
TEL: (301)-662-5019, FAX: (301)-662-1731  
WEB: [www.pmi-rf.com](http://www.pmi-rf.com), EMAIL: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)  
ISO 9001 CERTIFIED

APPROVALS	DATE
<i>M. Berry</i>	03/21/16
CHECKED	
ISSUED	

TITLE			
<b>PRODUCT FEATURE LM-1G2G-4CW-1KWP-SMF</b>			
SIZE	FORM NO.	DWG NO.	REV.
A	05XQ0	27029431-PMI	1
SCALE: N:S		SHEET 1 OF 1	

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**TYPICAL CHARACTERISTICS  
ON  
LM-1G2G-4CW-1KWP-SMF**

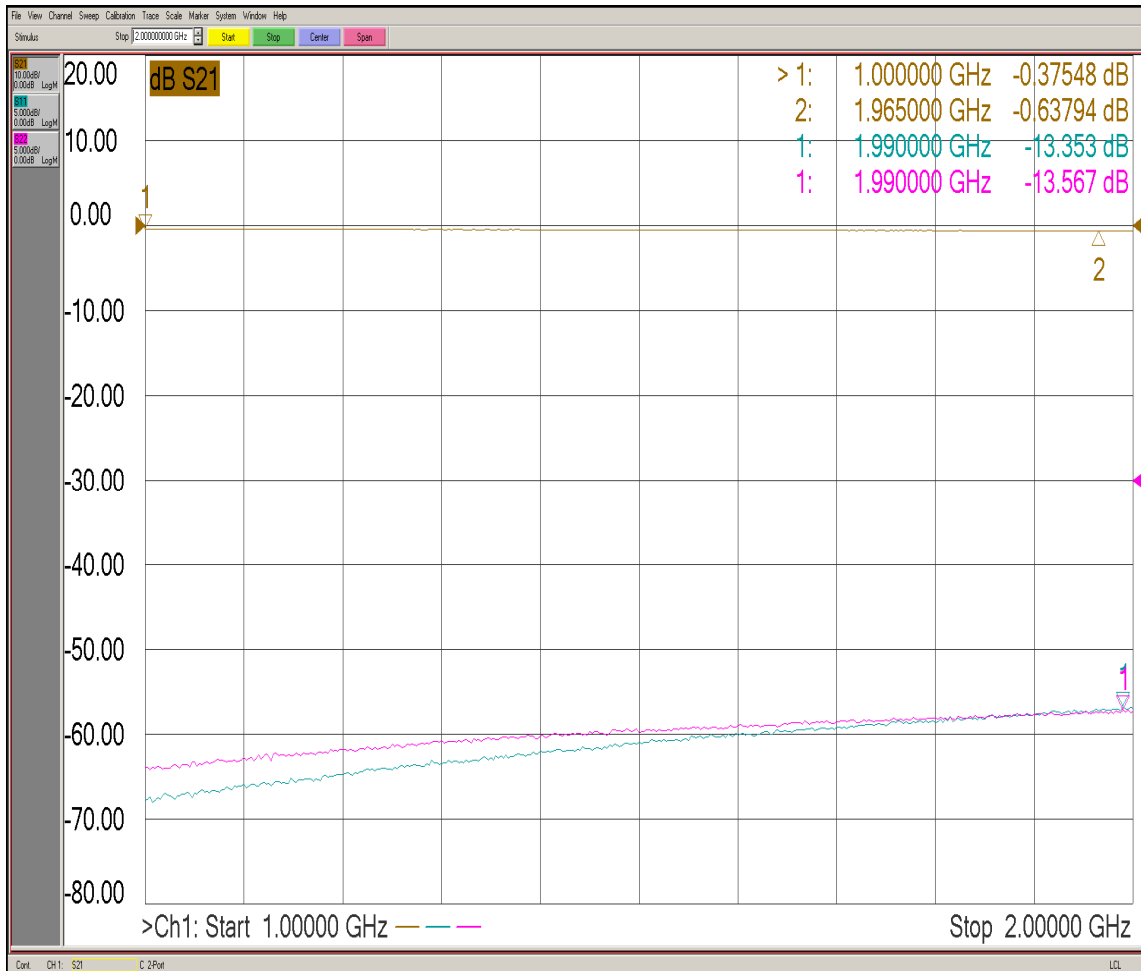
<b>TEST. ITEM NO</b>	<b>PARAMETERS</b>	<b>SPECIFIED VALUE</b>	<b>TEST RESULTS</b>	<b>QA QC</b>
1	Frequency Range	1.0 GHz To 2.0 GHz	<b>1.0 GHz To 2.0 GHz See Plot</b>	
2	Insertion Loss	0.7 dB Max	<b>0.64dB See Plot</b>	
3	Input/Output VSWR	2.0:1 Max @ -10 dBm Input	<b>1.54:1 See Plot</b>	
4	Impedance	50 $\Omega$	<b>Pass</b>	
5	Input Power	4 W CW Min 1 kW Peak (1% Duty Cycle, 1 $\mu$ s Max Pulse Width)	<b>4 W CW See Plots  1 kW Peak (1% Duty Cycle, 1 <math>\mu</math>s Max Pulse Width) Pass by Design</b>	
6	Maximum Flat Leakage	16 dBm (40 mW) Max	<b>15.35dBm See Plot</b>	
7	Limiting Threshold	5 dBm Min, 1 dB Compression	<b>12dBm Typ. See Plot</b>	
8	Recovery Time	1 $\mu$ s Max	<b>100ns See Plot</b>	
9	Weight	1 oz Typ.	<b>0.6 oz</b>	

1. EXTERNAL DC BLOCKS ARE REQUIRED FOR PROPER FUNCTION.



**TYPICAL CHARACTERISTICS  
ON  
LM-1G2G-4CW-1KWP-SMF**

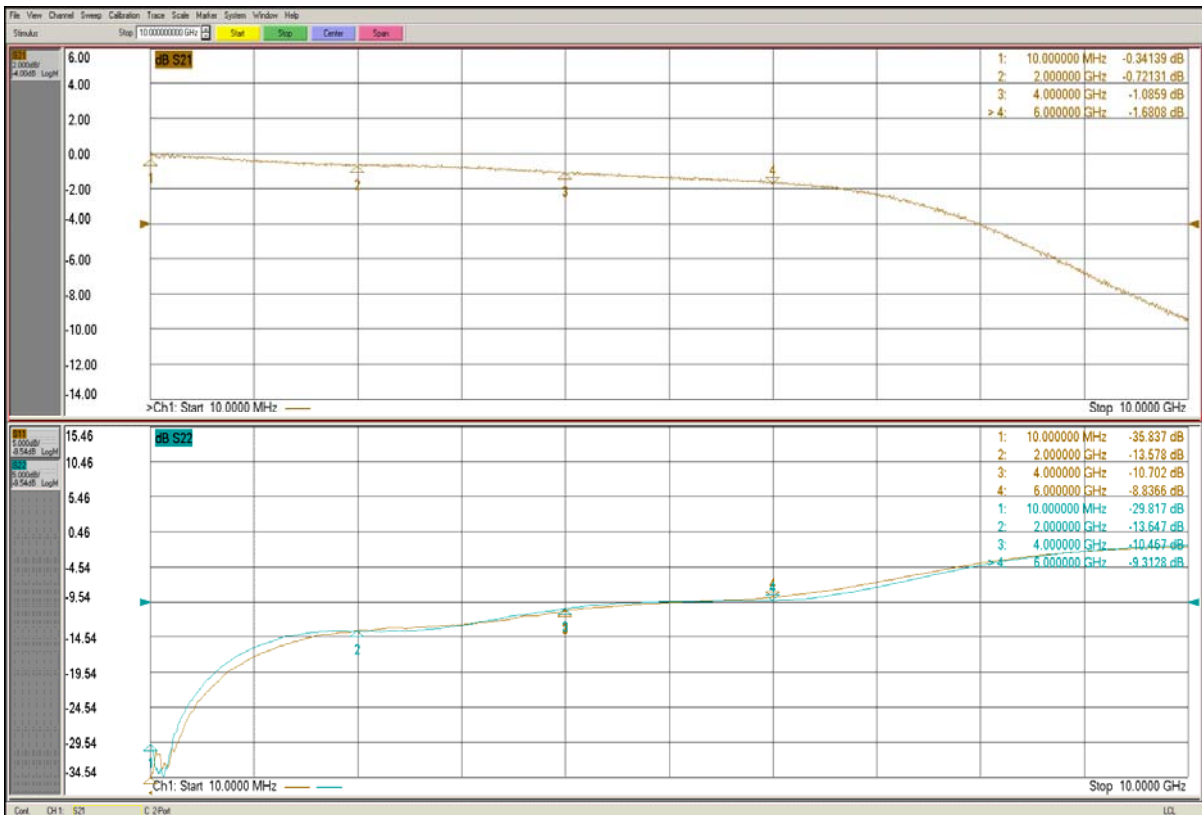
**Insertion Loss and Return Loss**





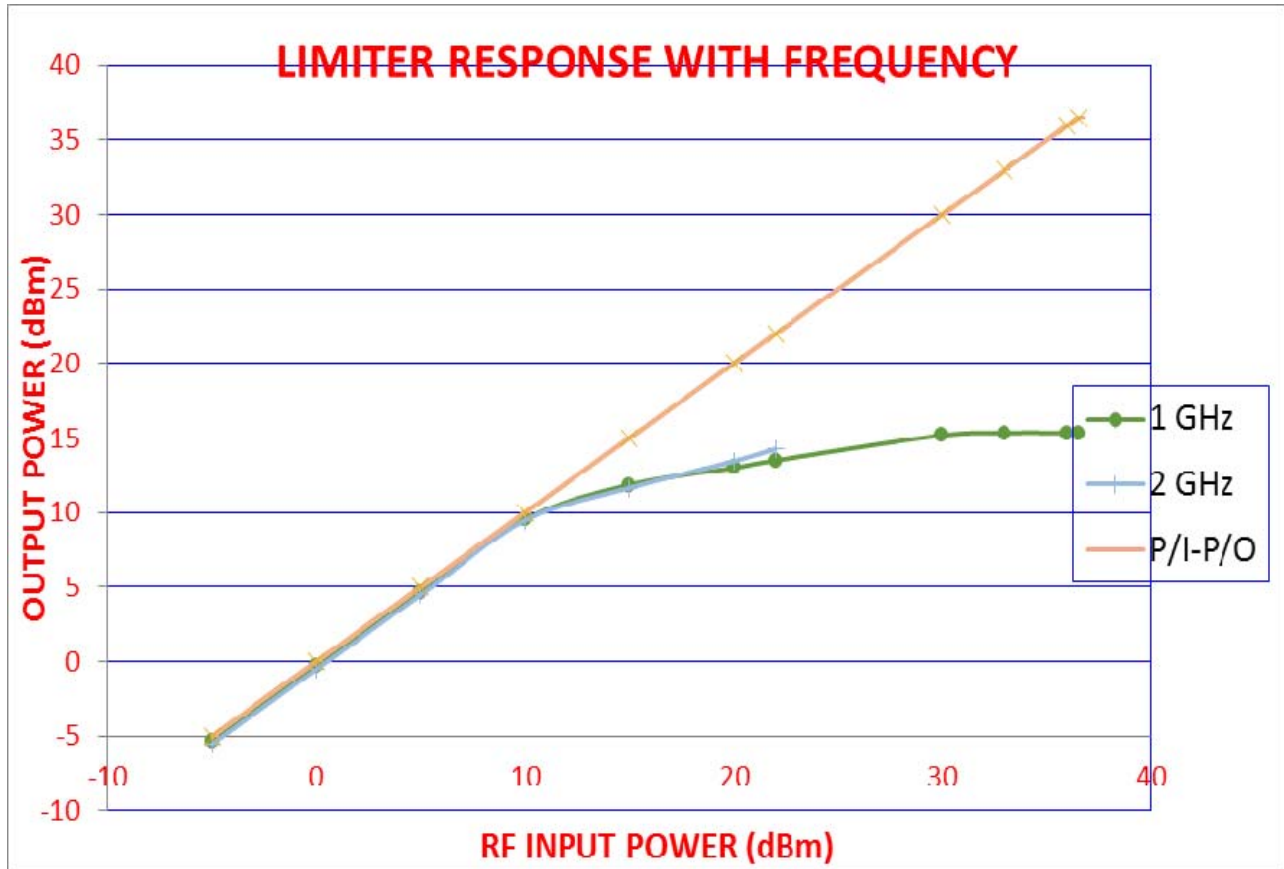
**TYPICAL CHARACTERISTICS  
ON  
LM-1G2G-4CW-1KWP-SMF**

**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**

Recovery  
50ns per Div.

DSO-X 3034A, MY52103312: Wed May 18 14:41:19 2016

