

**TYPICAL CHARACTERISTICS  
ON  
LM-10M18G-16-20W-AL-OPT418**



**Thursday, September 28, 2023**

**Designed and Reported By: M. Laulis**

**Tested By:  
John R.**

**Outline Drawing**

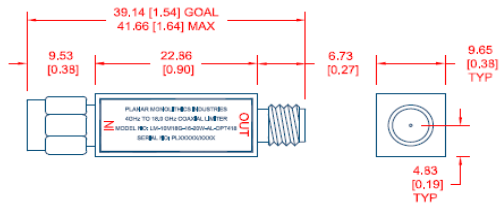
**DESCRIPTION**

PMI MODEL: LM-10M18G-16-20W-AL-OPT418 IS A COAXIAL LIMITER WITH AN OPERATING RANGE OF 4.0 TO 18.0 GHz. THIS LIMITER IS OUTFITTED WITH SMA CONNECTORS

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	07/17/23	

**SPECIFICATIONS**

- FREQUENCY RANGE: 4 GHz TO 18.0 GHz
- RF POWER HANDLING: 20W CW MAX  
500W PEAK MAX (10 μs PW / 1kHz PRF)
- INSERTION LOSS: 2.0 dB @ -10 dBm INPUT POWER
- RECOVERY TIME (3 dB): 250 ns MAX
- LEAKAGE POWER: +15 dBm TYP
- IMPEDANCE: 50 Ω
- VSWR: 2.0:1 MAX @ -10 dBm INPUT POWER
- LIMITING THRESHOLD: +5 dBm NOM (1 dB COMPRESSION)
- CONNECTORS: INPUT: SMA MALE  
OUTPUT: SMA FEMALE
- WEIGHT: 20g [0.705 oz] MAX
- SIZE: (L) 22.86mm x (W) 9.65mm x (H) 9.65mm MAX  
(L) 0.90" x (W) 0.38" x (H) 0.38" MAX  
EXCLUDING CONNECTORS
- FINISH: PAINTED BLUE



**ENVIRONMENTAL RATINGS**

**IAW MIL-E-5400, CLASS 2 EQUIPMENT**

- TEMPERATURE: -55 °C TO +85 °C (OPERATING)  
-82 °C TO +95 °C (STORAGE)
- VIBRATION: 0.1 Inchpp OR ± 10G, 5 ~ 500 Hz  
(FIGURE 2, SHEET 1 OF 3, CURVE IV)
- SHOCK: 20G, 11±1 ms
- HUMIDITY: 100%
- ALTITUDE: 70,000 FT

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

**PMI CONFIDENTIAL AND PROPRIETARY**

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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE			REV.
DRAWN	<i>MJD</i>	07/17/23	PRODUCT FEATURE LM-10M18G-16-20W-AL-OPT418			
REDRAWN			SIZE	FIGM NO.	DWG NO.	
ISSUED			A	05XQ0	27046900	A1
			SCALE	SHEET		1 OF 1
			N:S			

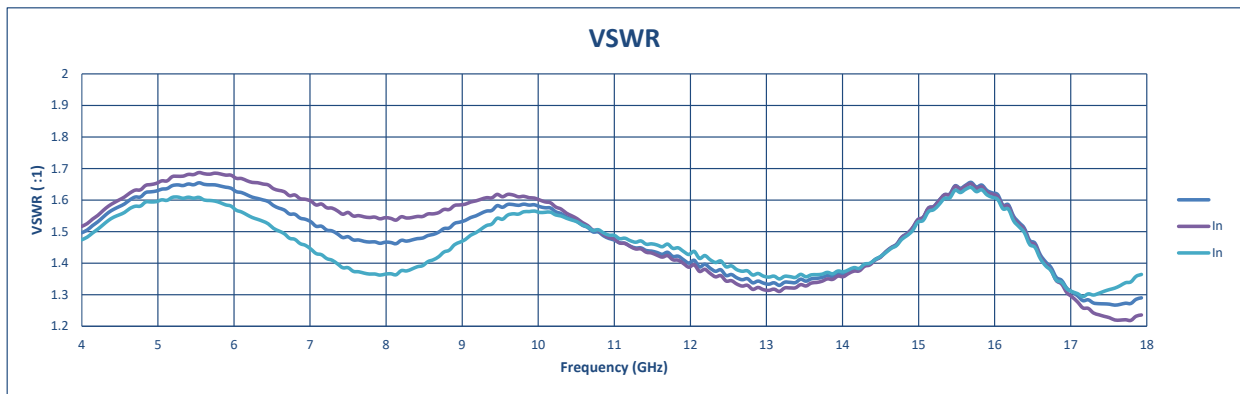
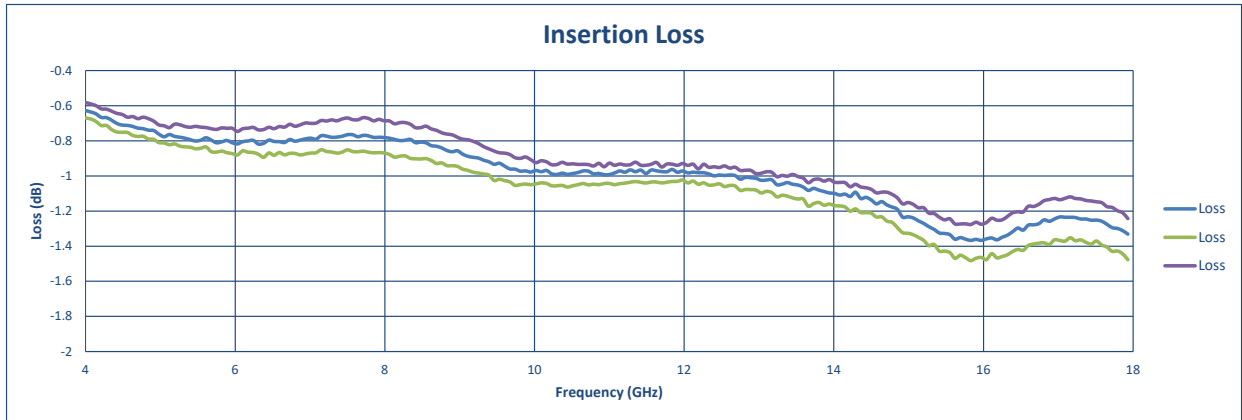


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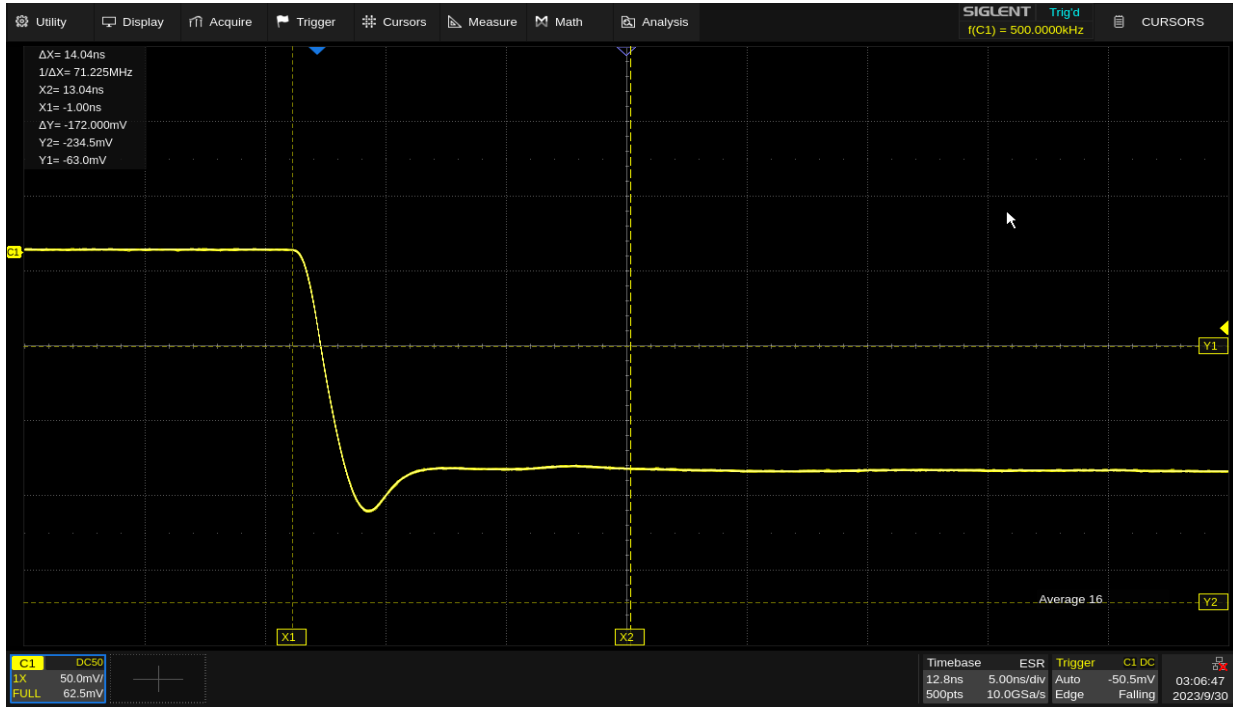
TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	Test Results			QA QC
			+25°C	+85°C	-55°C	
1	Frequency Range:	4 GHz to 18 GHz	4 GHz to 8 GHz	4 GHz to 8 GHz	4 GHz to 8 GHz	
2	Insertion Loss:	2.0 dB Max. @ -10 dBm Input Power	1.37 dB See Graph	1.49 dB See Graph	1.28 dB See Graph	
3	VSWR:	2.0:1 Max. @ -10 dBm Input Power	1.66:1 See Graph	1.69:1 See Graph	1.64:1 See Graph	
4	RF Power Handling:	20 W CW MAX 500 W PEAK MAX (1 $\mu$ s PW / 1kHz POWER)	20 W CW	20 W CW	20 W CW	
5	Impedance	50 $\Omega$	50 $\Omega$			
6	Limiting Threshold:	+5dBm MIN (1 dB Compression)	+ 9 dBm See Graph	+ 7 dBm See Graph	+ 11 dBm See Graph	
7	Leakage Power:	+15 dBm TYP	15.5 dBm	15.19 dBm	14.93 dBm	
8	Recovery Time (3dB) :	250 ns MAX	14 ns			

7309-A Grove Road Frederick, MD 21704 USA Phone: (301) 662-5019 Fax: (301) 662-1731  
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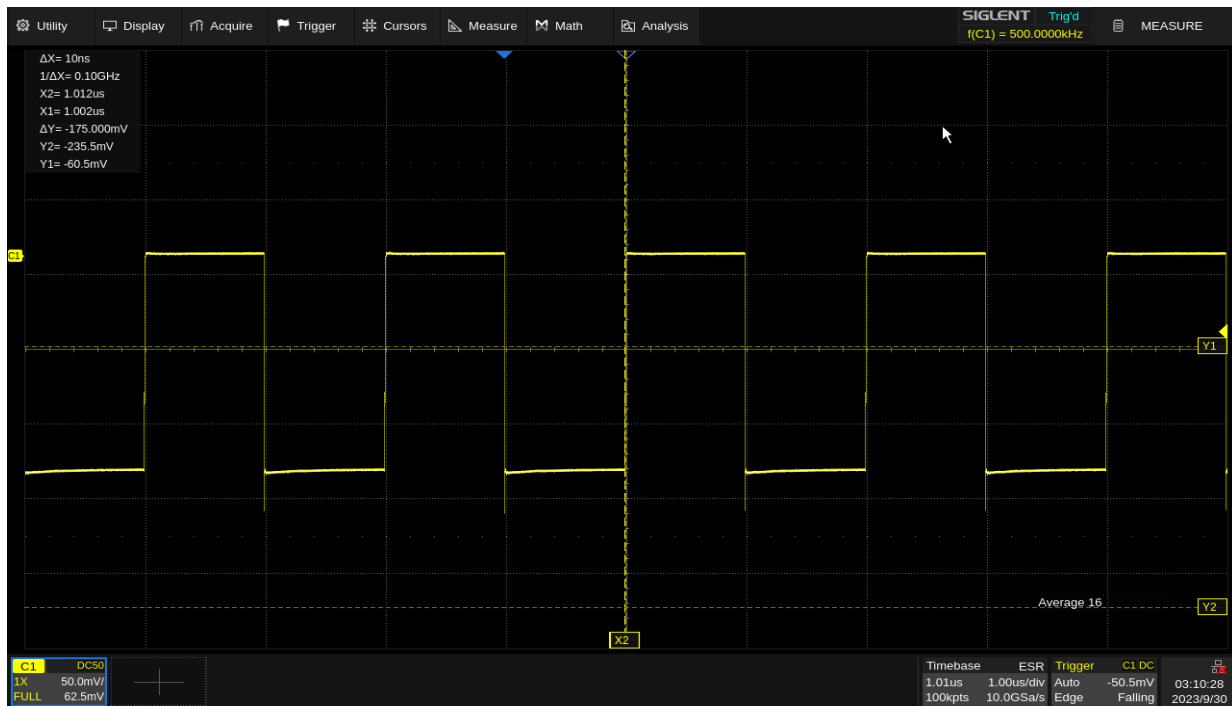
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Recovery Time



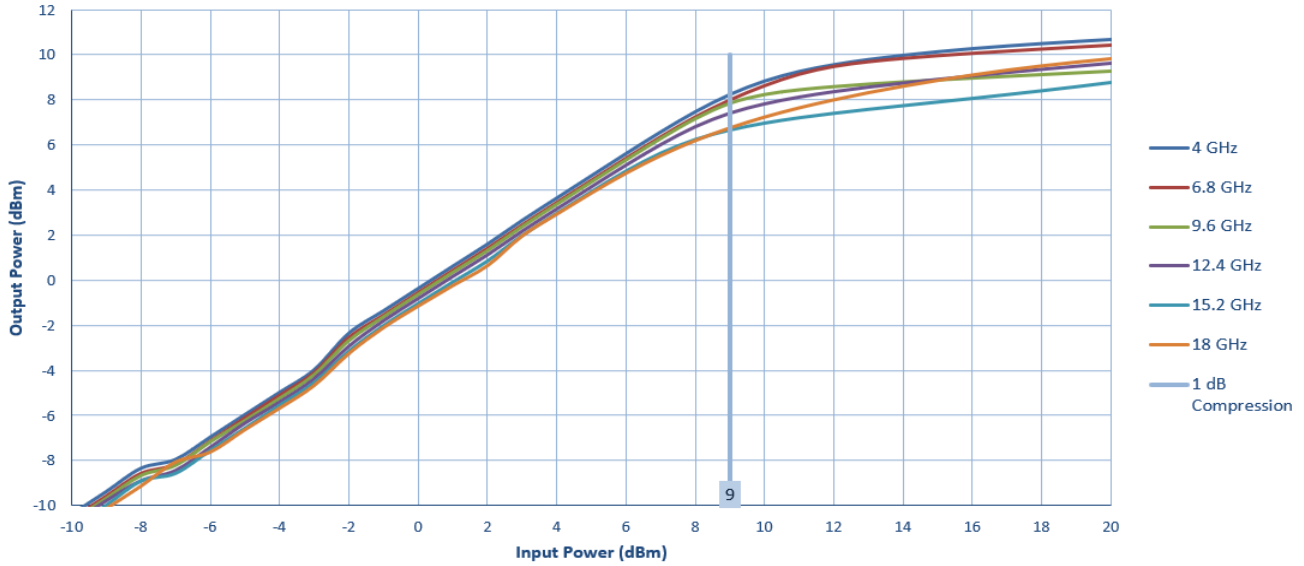
Full Pulse



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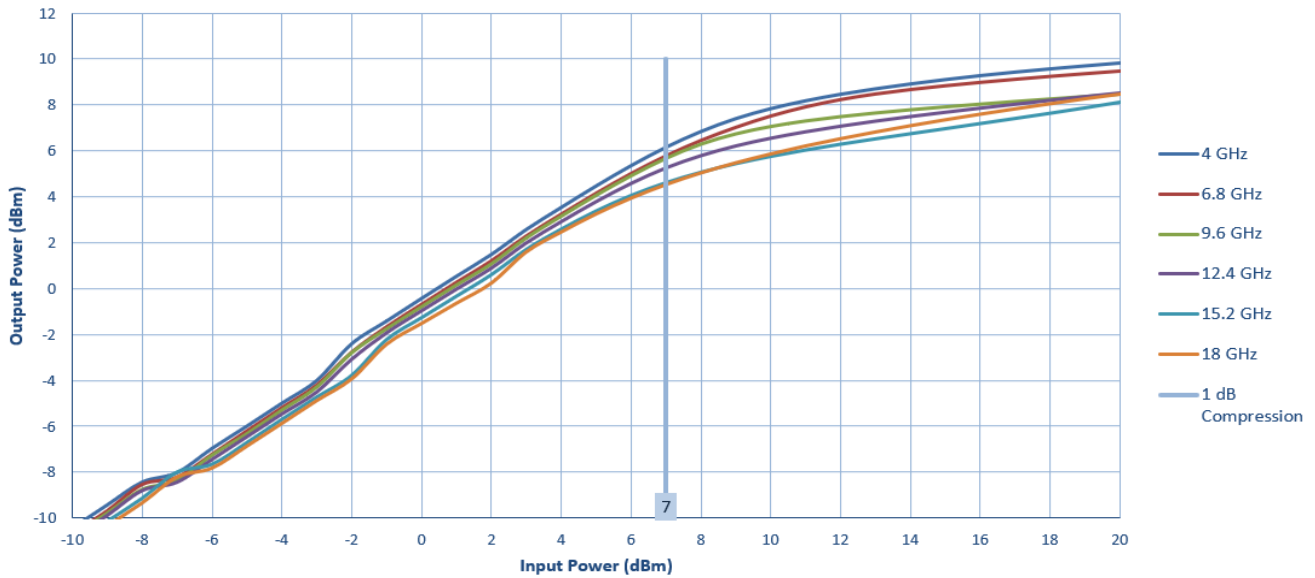
**Limiter Response  
25°C**

**Limiter Response with Frequency**



**85°C**

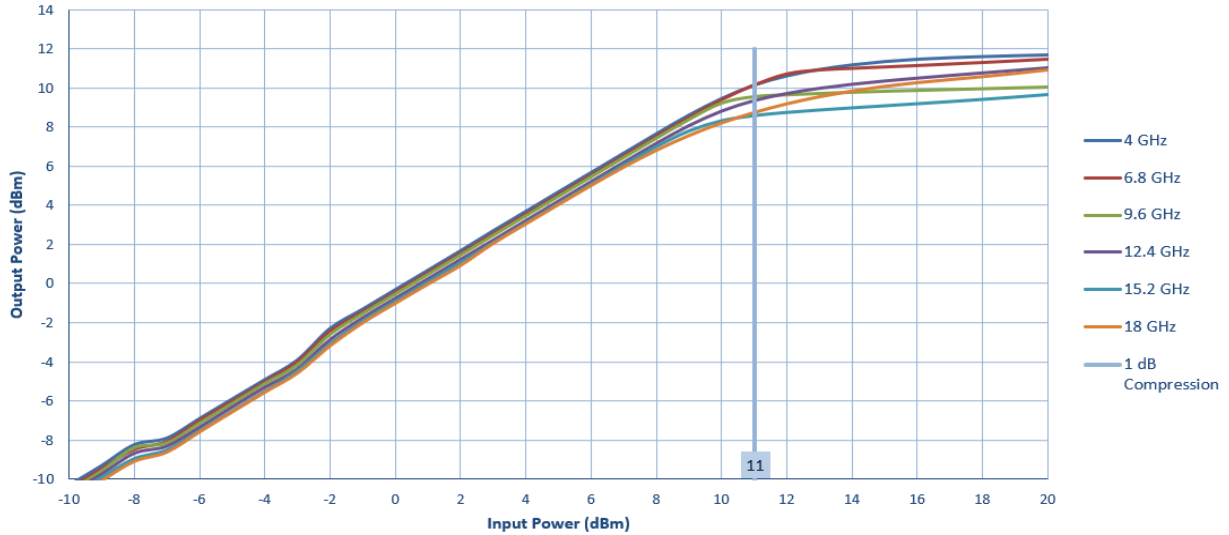
**Limiter Response with Frequency**



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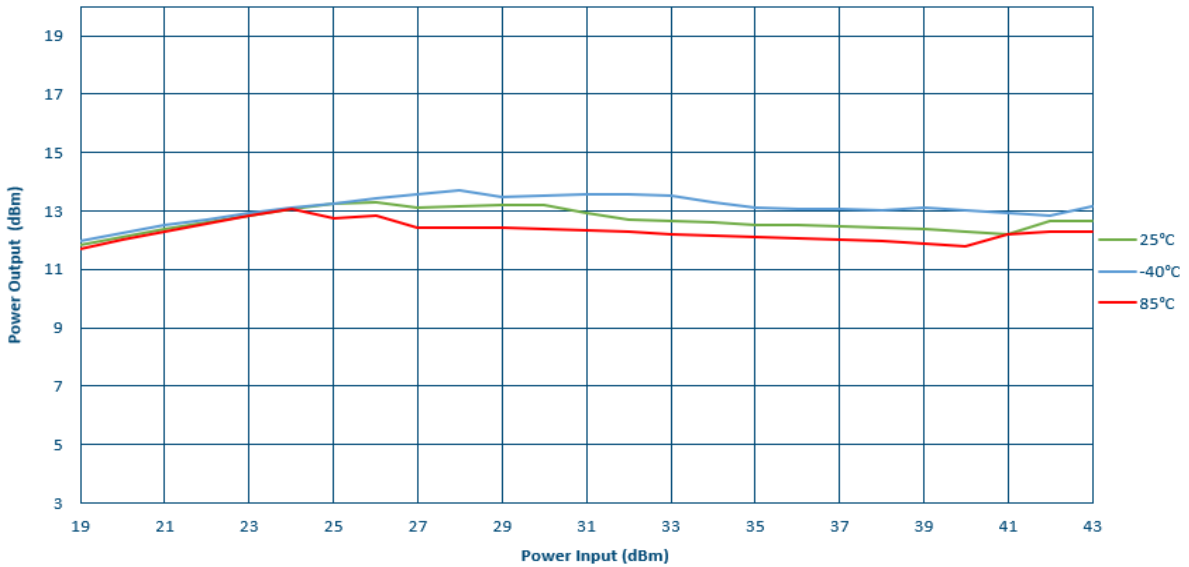
**-55°C**

**Limiter Response with Frequency**



**Leakage Power**

**High Power Test Graph @ 4 GHz**



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High Power Test Graph @ 18 GHz

