PMI MODEL: LM-0518-10-1W-SHS-1-SFM IS A HIGH SPEED, HIGH POWER HARD DIODE-LIMITER. IT OPERATES OVER THE FREQUENCY RANGE OF 0.5 TO 18GHz.

June 23, 2019

Designed By: PMI Engineering

Tested and Reported By:
Alfredo Lopez
Typical Characteristics
ON
LM-0518-10-1W-SHS-1-SMF

Outline Drawing

DESCRIPTION
PMI MODEL: LM-0518-10-1W-SHS-1-SFM IS A HIGH SPEED, HIGH POWER HARD DIODE–LIMITER. IT OPERATES OVER THE FREQUENCY RANGE OF 0.5 TO 18 GHz

SPECIFICATIONS
- FREQUENCY RANGE: 0.5 TO 18 GHz
- INSERTION LOSS
  @-20dBm INPUT: 2.0dB MAX, 1.5dB TYP
  VSWR @-20dBm INPUT: 2.0:1 MAX, 1.5:1 TYP
- LEAKAGE @ 1 WATT
  CW INPUT: +14dBm MAX, +10dBm TYP
  SPEED: 10ns
- INPUT POWER:
  1 WATT CW, 100 WATTS PEAK,
  1µs PULSE, 0.1% DUTY CYCLE
- LIMITING THRESHOLD: +10dBm TYP
- CONNECTORS: SMA (M/F)
- FINISH: PAINTED BLUE
- SIZE: 0.5” X 0.5” X 0.22”

ENVIRONMENTAL RATINGS
- TEMPERATURE: -54°C TO +85°C (OPERATING)
  -85°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 1038 COND. B
- SHOCK: MIL-STD-202F, METHOD 2138 COND. B
- VIBRATION: MIL-STD-202F, METHOD 2040 COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISE.
## Technical Specifications

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(J1-J2) Insertion Loss and Return loss
Graph High Power Test (CW)
## Typical Characteristics

ON
LM-0518-10-1W-SHS-1-SMF

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**+25°C**

P1DB

Page 6 of 13
7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com
Graph High Power Test (CW)

-54 °C

Plot of Power Output (dBm) vs. Power Input (dBm) at different frequencies: 500 MHz, 8 GHz, and 18 GHz.
## Data High Power Test (CW)

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1W
Graph High Power Test (CW)
## Typical Characteristics

**ON**

LM-0518-10-1W-SHS-1-SMF

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P1DB
Graph Peak Power Test (Pulsed)

### Pulsed 1us / 1KHz / DC 0.1%

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<th>Loss</th>
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<th>Loss</th>
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| **50**            | **12.58**          | **37.42**| **50**            | **7.60**           | **4240**| 100W

Typical Characteristics
ON
LM-0518-10-1W-SHS-1-SMF
Typical Characteristics
ON
LM-0518-10-1W-SHS-1-SMF

Rise Time (7.99ns)
Pulsed PW 1us - PRF 1KHz – DC 0.1%
5 ns Per Div.

Fall Time (8.79ns)
Pulsed PW 1us - PRF 1KHz – DC 0.1%
10ns Per Div.
Full Pulse
Pulsed PW 1us - PRF 1KHz – DC 0.1%
500 ns Per Div.