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

May 25, 2018

DESIGNED BY:
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TESTED & REPORTED BY:
E. Kretz
TYPICAL CHARACTERISTICS
ON
LM-0518-10-1W-SHS-1-SMF

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

SPECIFICATIONS
- FREQUENCY RANGE: 0.5 TO 18 GHz
- INSERTION LOSS
  @-20dBm INPUT: 2.0dB MAX, 1.5dB TYP
  @-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,
  1us PULSE, 0.1% DUTY CYCLE DERATED TO 20% AT 125°C
- LIMITING THRESHOLD: +10dBm TYP
- CONNECTORS: SMA (F/M)
- FINISH: PAINTED BLUE
- SIZE: 0.5" X 0.5" X 0.22"

ENVIRONMENTAL RATINGS
- TEMPERATURE: -54°C TO +85°C (OPERATING)
- HUMIDITY: -40°C TO +125°C (STORAGE)
- Solder: MIL-STD-202F, METHOD 103B COND. B
- Vibration: MIL-STD-202F, METHOD 2040 COND. B
- Altitude: MIL-STD-202F, METHOD 105C COND. B
- Temperature cycle: MIL-STD-202F, METHOD 1070 COND. A

NOTE: SPECIFICATIONS WILL VARY OUTSIDE OPERATING TEMPERATURE RANGES. SPECIFICATIONS ARE SUBJECT TO CHANGE AT ANYTIME.
## TYPICAL CHARACTERISTICS
ON
LM-0518-10-1W-SHS-1-SMF

<table>
<thead>
<tr>
<th>TEST. ITEM NO</th>
<th>PARAMETERS</th>
<th>SPECIFIED VALUE</th>
<th>TEST RESULTS</th>
<th>QA QC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frequency Range:</td>
<td>0.5 GHz TO 18GHz</td>
<td>0.5 GHz TO 18GHz See Plot</td>
<td>PASS</td>
</tr>
<tr>
<td>2</td>
<td>Insertion Loss @ -20dBm Input:</td>
<td>2.0 dB Max 1.5 dB Typ.</td>
<td>1.96dB See Plot</td>
<td>PASS</td>
</tr>
<tr>
<td>3</td>
<td>VSWR @ -20dBm Input:</td>
<td>2.0:1 Max 1.5:1 Typ.</td>
<td>Input 1.65:1 Output 1.66:1 See Plot</td>
<td>PASS</td>
</tr>
<tr>
<td>4</td>
<td>Leakage @ 1 Watt CW Input:</td>
<td>+14dBm Max +10dBm Typ.</td>
<td>+12.8dBm Max. See Graph</td>
<td>PASS</td>
</tr>
<tr>
<td>5</td>
<td>Speed:</td>
<td>10ns</td>
<td>&lt;10ns See Plots</td>
<td>PASS</td>
</tr>
<tr>
<td>6</td>
<td>Input Power:</td>
<td>1 Watt CW, 100 Watts Peak, 1us Pulse, 0.1% Duty Cycle, Derated to 20% @ 125°C</td>
<td>Pass</td>
<td>PASS</td>
</tr>
<tr>
<td>7</td>
<td>Limiting Threshold:</td>
<td>+10dBm Typ.</td>
<td>+5dBm Typ. See Graph</td>
<td>PASS</td>
</tr>
</tbody>
</table>

### Insertion Loss & Return Loss
TYPICAL CHARACTERISTICS
ON
LM-0518-10-1W-SHS-1-SMF

Power
Input vs. Output
TYPICAL CHARACTERISTICS
ON
LM-0518-10-1W-SHS-1-SMF

Recovery Time
1Watt @ 6GHz (1MHz - 50% Duty Cycle) - Pulse IN
TYPICAL CHARACTERISTICS
ON
LM-0518-10-1W-SHS-1-SMF