

Miniature Surface Mount Fixed Attenuator

50Ω 0.5W 10dB DC to 2500 MHz

LAT-10+



CASE STYLE: MMM168

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



Available Tape and Reel
at no extra cost

Reel Size Devices/Reel
7" 3000

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 85°C |
| Storage Temperature | -55°C to 100°C |

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

| | |
|--------|-----|
| INPUT | 4 |
| OUTPUT | 2 |
| GROUND | 1,3 |

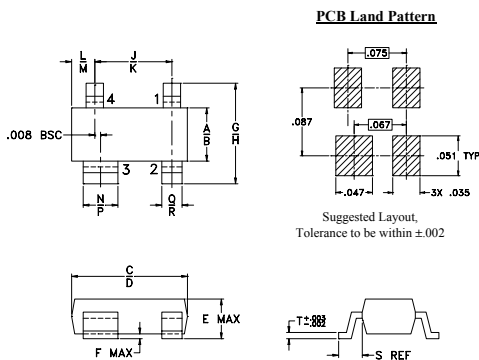
Features

- wideband, DC to 2500 MHz
- excellent VSWR, through entire band
- miniature size, SOT143 package
- aqueous washable

Applications

- cellular
- PCS
- ISM
- VHF/UHF

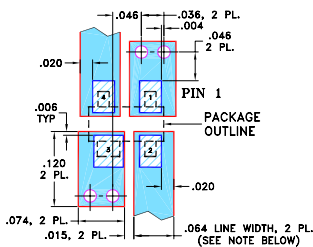
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | |
|------|------|------|------|------|------|------|------|------|------|-------|
| .045 | .055 | .105 | .120 | .047 | .005 | .083 | .104 | .070 | .080 | |
| 1.14 | 1.40 | 2.67 | 3.05 | 1.19 | 0.13 | 2.11 | 2.64 | 1.78 | 2.03 | |
| L | M | N | P | Q | R | S | T | | | wt |
| .018 | .024 | .030 | .036 | .015 | .021 | .023 | .005 | | | grams |
| 0.46 | 0.61 | 0.76 | 0.91 | 0.38 | 0.53 | 0.58 | 0.13 | | | 0.01 |

Demo Board MCL P/N: TB-39 Suggested PCB Layout (PL-225)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Specifications at 25°C

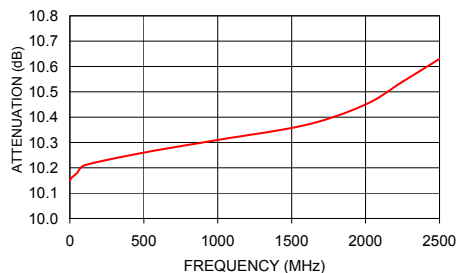
| FREQ. RANGE (MHz) | ATTENUATION (dB) Flatness, Max. | VSWR (:1) Max. | | | MAX. INPUT POWER ¹ (W) |
|-------------------|------------------------------------|----------------|----------|------------|-----------------------------------|
| | | DC-0.5 GHz | DC-1 GHz | DC-2.5 GHz | |
| f_L - f_U | Norm. | DC-0.5 GHz | DC-1 GHz | DC-2.5 GHz | |
| DC-2500 | 10±0.5 | 0.3 | 0.5 | 0.8 | 0.5 |

1. RF power at 25°C case temperature: ½Watt. Derate linearly to 0.2 Watt at 85°C.
2. Flatness= variation over band divided by 2

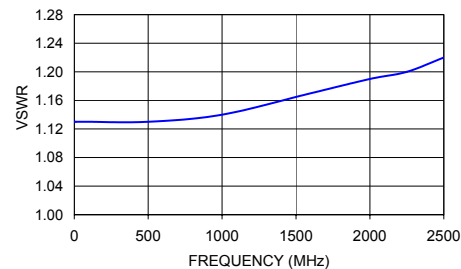
Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 1.00 | 10.15 | 1.13 |
| 10.00 | 10.16 | 1.13 |
| 50.00 | 10.18 | 1.13 |
| 100.00 | 10.21 | 1.13 |
| 500.00 | 10.26 | 1.13 |
| 1000.00 | 10.31 | 1.14 |
| 1600.00 | 10.37 | 1.17 |
| 2000.00 | 10.45 | 1.19 |
| 2250.00 | 10.54 | 1.20 |
| 2500.00 | 10.63 | 1.22 |

LAT-10+
ATTENUATION



LAT-10+
VSWR



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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