

# Miniature Surface Mount Fixed Attenuator

## LAT-2+

50Ω 0.5W 2dB DC to 2500 MHz



### Maximum Ratings

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

### 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

CASE STYLE: MMM168  
PRICE: \$1.95 ea. QTY (10-49)

*+ RoHS compliant in accordance with EU Directive (2002/95/EC)*

*The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.*

### Applications

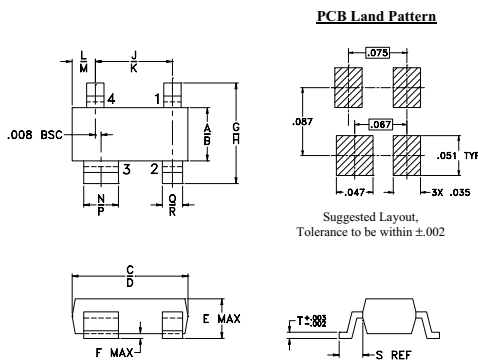
- cellular
- PCS
- ISM
- VHF/UHF

### Electrical Specifications at 25°C

| FREQ. RANGE (MHz)              | ATTENUATION (dB)<br>Flatness, Max. |          |            | VSWR (:1)<br>Max. |          |            | MAX. INPUT POWER <sup>1</sup> (W) |     |
|--------------------------------|------------------------------------|----------|------------|-------------------|----------|------------|-----------------------------------|-----|
|                                | DC-0.5 GHz                         | DC-1 GHz | DC-2.5 GHz | DC-0.5 GHz        | DC-1 GHz | DC-2.5 GHz |                                   |     |
| f <sub>L</sub> -f <sub>U</sub> | Nom.                               |          |            |                   |          |            |                                   |     |
| DC-2500                        | 2±0.3                              | 0.3      | 0.4        | 0.7               | 1.2      | 1.3        | 1.5                               | 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

### Outline Drawing



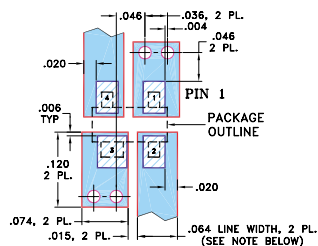
### Outline Dimensions (inch)

| 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 | .24  | .030 | .036 | .015 | .021 | .023 | .005 | grams |      |
| 0.46 | 6.10 | 0.76 | 0.91 | 0.38 | 0.53 | 0.58 | 0.13 |       | 0.01 |

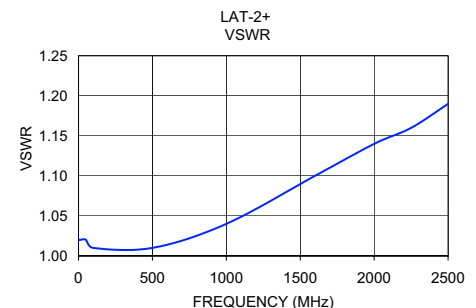
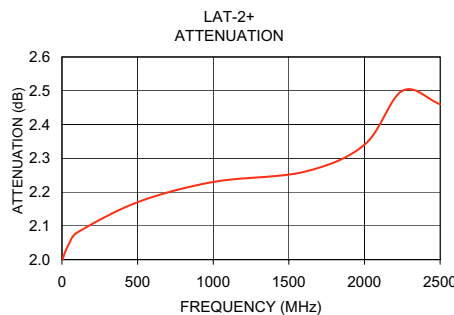
### Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 1.00            | 1.99             | 1.02      |
| 10.00           | 2.01             | 1.02      |
| 50.00           | 2.05             | 1.02      |
| 100.00          | 2.08             | 1.01      |
| 500.00          | 2.17             | 1.01      |
| 1000.00         | 2.23             | 1.04      |
| 1600.00         | 2.26             | 1.10      |
| 2000.00         | 2.34             | 1.14      |
| 2250.00         | 2.50             | 1.16      |
| 2500.00         | 2.46             | 1.19      |

### 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



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