

# Miniature Plastic Fixed Attenuator

50Ω 0.5W 30dB DC to 3000 MHz

## GAT-30+

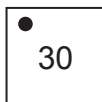
### Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -45°C to 85°C  |
| Storage Temperature                                             | -55°C to 100°C |
| Permanent damage may occur if any of these limits are exceeded. |                |

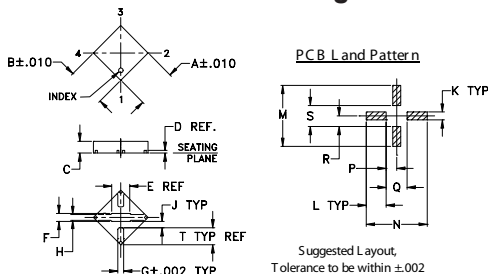
### Pin Connections

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

### Product Marking



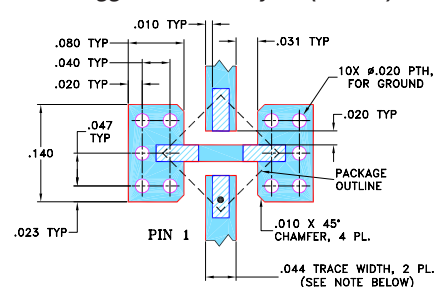
### Outline Drawing



### Outline Dimensions (inch)

| A     | B     | C     | D     | E     | F     | G     | H     | J     |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.118 | 0.118 | 0.035 | 0.008 | 0.07  | 0.024 | 0.017 | 0.018 | 0.021 |       |
| 3.00  | 3.00  | 0.89  | 0.20  | 1.78  | 0.61  | 0.43  | 0.46  | 0.53  |       |
| K     | L     | M     | N     | P     | Q     | R     | S     | T     | wt    |
| 0.024 | 0.061 | 0.186 | 0.186 | 0.032 | 0.064 | 0.032 | 0.064 | 0.05  | grams |
| 0.61  | 1.55  | 4.72  | 4.72  | 0.81  | 1.63  | 0.81  | 1.63  | 1.27  | 0.02  |

### Demo Board MCL P/N: TB-154 Suggested PCB Layout (PL-126)



#### NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- 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

### Features

- miniature package MCLP™ 3x3 mm
- specified to 3000 MHz, useable to 8000 MHz
- excellent VSWR, 1:15:1 typ.

### Applications

- cellular
- PCS
- communications
- radar
- defense



CASE STYLE: FG873

#### +RoHS Compliant

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

| Reel Size | Devices/Reel                |
|-----------|-----------------------------|
| 7"        | 20, 50, 100, 200, 500, 1000 |
| 13"       | 2000, 4000                  |

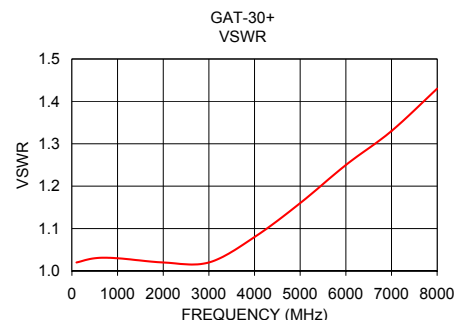
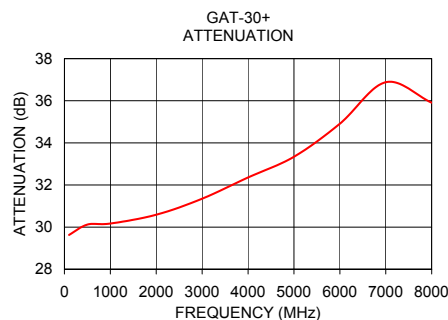
### Electrical Specifications at 25°C

| FREQ. RANGE (MHz) | ATTENUATION (dB) |         | VSWR (:1) |         | MAX. INPUT POWER <sup>1</sup> (W) |
|-------------------|------------------|---------|-----------|---------|-----------------------------------|
|                   | DC-1 GHz         | 1-3 GHz | DC-1 GHz  | 1-3 GHz |                                   |
| $f_L - f_U$       | Nom.             | Typ.    | Typ.      | Max.    |                                   |
| DC-3000           | 30±0.9           | 0.5     | 1.2       | 1.05    | 0.5                               |

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

### Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 100.00          | 29.63            | 1.02      |
| 500.00          | 30.12            | 1.03      |
| 1000.00         | 30.17            | 1.03      |
| 2000.00         | 30.59            | 1.02      |
| 3000.00         | 31.35            | 1.02      |
| 4000.00         | 32.36            | 1.08      |
| 5000.00         | 33.34            | 1.16      |
| 6000.00         | 34.91            | 1.25      |
| 7000.00         | 36.88            | 1.33      |
| 8000.00         | 35.91            | 1.43      |



#### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document 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](http://www.minicircuits.com/MCLStore/terms.jsp)



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