

Miniature Ceramic Fixed Attenuator

50Ω 1W 3dB DC to 7000 MHz

PAT-3+



Generic photo used for illustration purposes only

CASE STYLE: AF320

+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" 1000

Maximum Ratings

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

Features

- wideband, DC to 7000 MHz
- excellent VSWR, through entire band
- miniature size
- aqueous washable

Applications

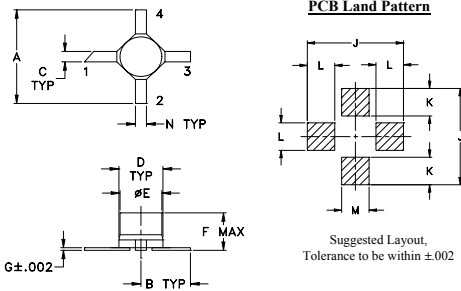
- power leveling
- impedance match improvement

Electrical Specifications at 25°C

| FREQ. RANGE (MHz) | ATTENUATION (dB) Flatness, Max. | VSWR (:1) Max. | | | MAX. INPUT POWER (W) |
|--------------------------------|------------------------------------|-------------------|------------|-----------------------|----------------------|
| | | DC-1 GHz | DC-2.5 GHz | DC-f _u GHz | |
| f _L -f _u | Norm. | DC-1 GHz | DC-2.5 GHz | DC-f _u GHz | |
| DC-7000 | 3±0.3 | 0.3 | 0.5 | 0.9 | 1 |

1. RF power at 25°C case temperature: 1 Watt. Derate linearly to 0.1 Watt at 100°C.

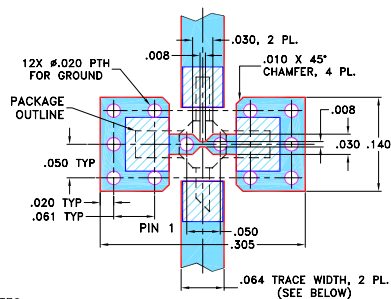
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G |
|------|------|------|------|------|------|-------|
| .200 | .100 | .020 | .070 | .068 | .057 | .005 |
| 5.08 | 2.54 | 0.51 | 1.78 | 1.73 | 1.45 | 0.13 |
| H | J | K | L | M | N | wt |
| -- | .230 | .065 | .060 | .080 | .040 | grams |
| -- | 5.84 | 1.65 | 1.52 | 2.03 | 1.02 | 0.04 |

Demo Board MCL P/N: TB-319 Suggested PCB Layout (PL-208)



- NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B 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

Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. 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

Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 50.00 | 3.13 | 1.03 |
| 796.25 | 3.18 | 1.04 |
| 1542.50 | 3.20 | 1.03 |
| 2288.75 | 3.24 | 1.03 |
| 3035.00 | 3.44 | 1.08 |
| 3781.25 | 3.28 | 1.09 |
| 4527.50 | 3.31 | 1.09 |
| 5273.75 | 3.41 | 1.08 |
| 6020.00 | 3.50 | 1.06 |
| 7015.00 | 3.76 | 1.15 |

