

Surface Mount Bias-Tee

TCBT-2R5G+ TCBT-2R5G

Wideband 20 to 2500 MHz

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 25dBm max. |
| Voltage at DC port | 25V max. |
| Input Current | 100mA |

Pad Terminations

| | |
|--------------------------|---|
| RF | 4 |
| RF&DC | 3 |
| DC | 1 |
| ISOLATE (see PCB Layout) | 2 |

Features

- wideband, 20-2500 MHz
- low insertion loss, 0.4 dB typ.
- miniature surface mount 0.15"x0.15"
- protected by US Patent 7,012,486

Applications

- biasing amplifiers
- biasing of laser diodes
- biasing of active antennas



CASE STYLE: GU1041
PRICE: \$6.95 ea. QTY (10-49)

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

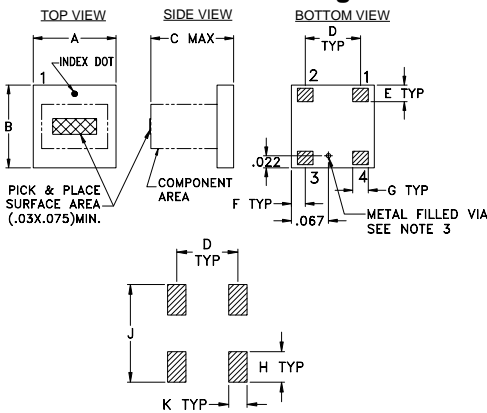
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

| MODEL NO. | FREQ. RANGE (MHz) | INSERTION LOSS (dB) | | | ISOLATION (dB) | | | VSWR (:1) | | | | | | | | | | | |
|--------------|-------------------|---------------------|-----------|-----------|---|-----------|-----------|-----------|-----------|-----------|----|----|----|------|-----|------|-----|-----|------|
| | | L | M | U | (RF port to DC port) (RF&DC port to DC port) | | | L | M | U | | | | | | | | | |
| | f_L - f_U | Typ. Max. | Typ. Max. | Typ. Max. | Typ. Min. | Typ. Min. | Typ. Min. | Typ. Max. | Typ. Max. | Typ. Max. | | | | | | | | | |
| TCBT-2R5G(+) | 20-2500 | 0.2 | 0.8 | 0.35 | 0.8 | 0.7 | 1.2 | 65 | 40 | 44 | 25 | 25 | 20 | 1.05 | 1.5 | 1.05 | 1.2 | 1.1 | 1.25 |

L= 20-200 MHz M=200-1250 MHz U=1250-2500 MHz
External C1(0.01µF) is required. See electrical schematic and PCB layout.

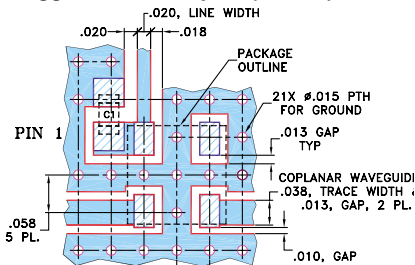
Outline Drawing



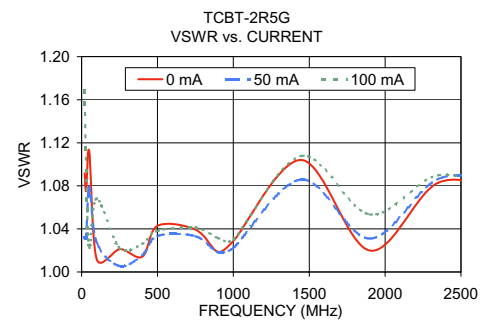
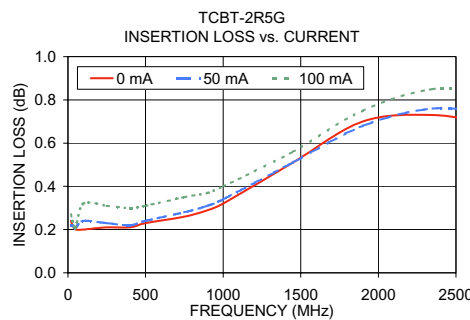
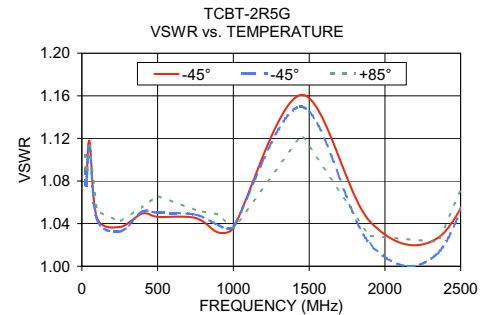
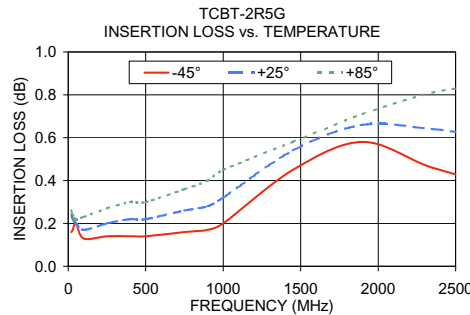
Outline Dimensions (inch/mm)

| | | | | | | |
|------|------|------|------|-------|------|------|
| A | B | C | D | E | F | G |
| .150 | .150 | .150 | .100 | .030 | .025 | .028 |
| 3.81 | 3.81 | 3.81 | 2.54 | 0.76 | 0.64 | 0.71 |
| H | J | K | | wt | | |
| .050 | .160 | .030 | | grams | | |
| 1.27 | 4.06 | 0.76 | | 0.10 | | |

Demo Board MCL P/N: TB-268 Suggested PCB Layout (PL-146)



- CAPACITOR C1: .010 µF, 0603 SIZE
- NOTE: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". 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



Functional Schematic

