

Coaxial Bias-Tee

75Ω Wideband 10 to 3000 MHz

Maximum Ratings

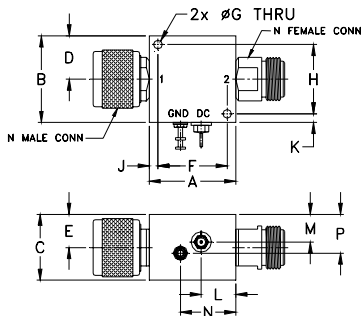
| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 30 dBm max. |
| Voltage at DC port | 30 V max. |
| Input Current | 200 mA |

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

Coaxial Connections

| | |
|---------|--------------------|
| RF | 2 (N-female) |
| RF & DC | 1 (N-male) |
| DC | (feed-through pin) |
| GROUND | GROUND |

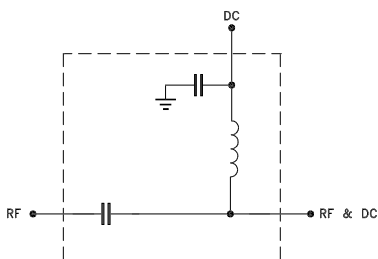
Outline Drawing



Outline Dimensions (inch mm)

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|
| A | B | C | D | E | F | G | H |
| 1.25 | 1.25 | .95 | .63 | .47 | 1.00 | .125 | 1.000 |
| 31.75 | 31.75 | 24.13 | 16.00 | 11.94 | 25.40 | 3.18 | 25.40 |
| J | K | L | M | N | P | wt | |
| .13 | .13 | .50 | .40 | .80 | .56 | grams | |
| 3.18 | 3.18 | 12.70 | 10.16 | 20.32 | 14.22 | 117.0 | |

Electrical Schematic



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

Features

- wideband, 10 to 3000 MHz
- low insertion loss, 0.15 dB typ.
- feed through terminal per DC port
- excellent VSWR, 1.13:1 typ.

Applications

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

ZFBT-33-75-FT+



Generic photo used for illustration purposes only

CASE STYLE: K1486
Connectors Model
N-Type ZFBT-33-75-FT+

+RoHS Compliant

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

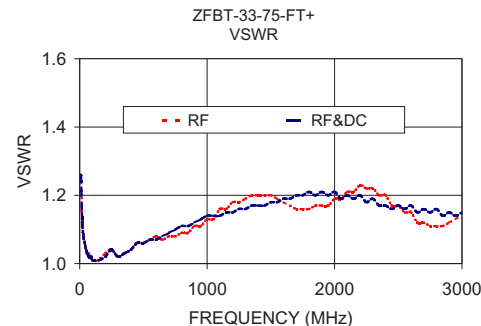
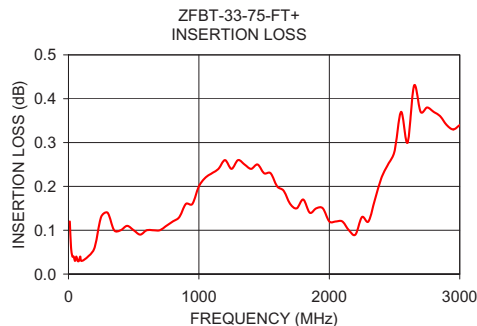
Electrical Specifications at 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|--------------------------------------------|-----------------|------|------|------|------|
| Frequency Range | | 10 | | 3000 | MHz |
| Insertion Loss¹ | 10-100 | — | 0.15 | 0.5 | |
| | 100-1500 | — | 0.15 | 0.6 | dB |
| | 1500-3000 | — | 0.2 | 0.8 | |
| VSWR¹ | 10-100 | — | 1.25 | 1.5 | |
| | 100-1500 | — | 1.13 | 1.35 | :1 |
| | 1500-3000 | — | 1.13 | 1.35 | |
| DC Resistance, DC to RF and DC port | 10 - 3000 | — | 1.0 | — | ohms |

1. Specifications and typical performance are relevant to input RF power up to +20dBm and DC Current up to 200mA.

Typical Performance Data

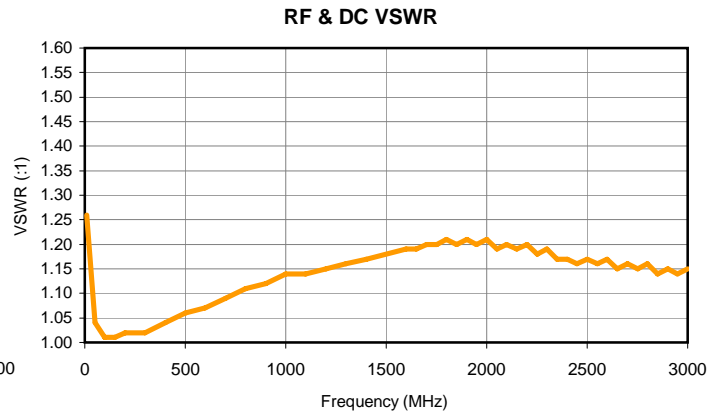
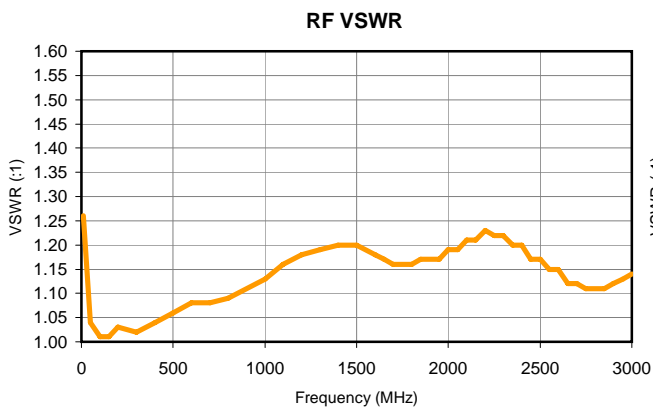
| Frequency (MHz) | INSERTION LOSS (dB) | VSWR (:1) | |
|-----------------|---------------------|-----------|-------|
| | | RF | RF&DC |
| 10.00 | 0.12 | 1.26 | 1.26 |
| 50.00 | 0.03 | 1.04 | 1.04 |
| 100.00 | 0.03 | 1.01 | 1.01 |
| 400.00 | 0.10 | 1.04 | 1.04 |
| 500.00 | 0.10 | 1.06 | 1.06 |
| 800.00 | 0.12 | 1.09 | 1.11 |
| 1000.00 | 0.20 | 1.13 | 1.14 |
| 1400.00 | 0.24 | 1.20 | 1.17 |
| 1500.00 | 0.23 | 1.20 | 1.18 |
| 1800.00 | 0.17 | 1.16 | 1.21 |
| 2000.00 | 0.12 | 1.19 | 1.21 |
| 2400.00 | 0.22 | 1.20 | 1.17 |
| 2500.00 | 0.28 | 1.17 | 1.17 |
| 2800.00 | 0.37 | 1.11 | 1.16 |
| 3000.00 | 0.34 | 1.14 | 1.15 |



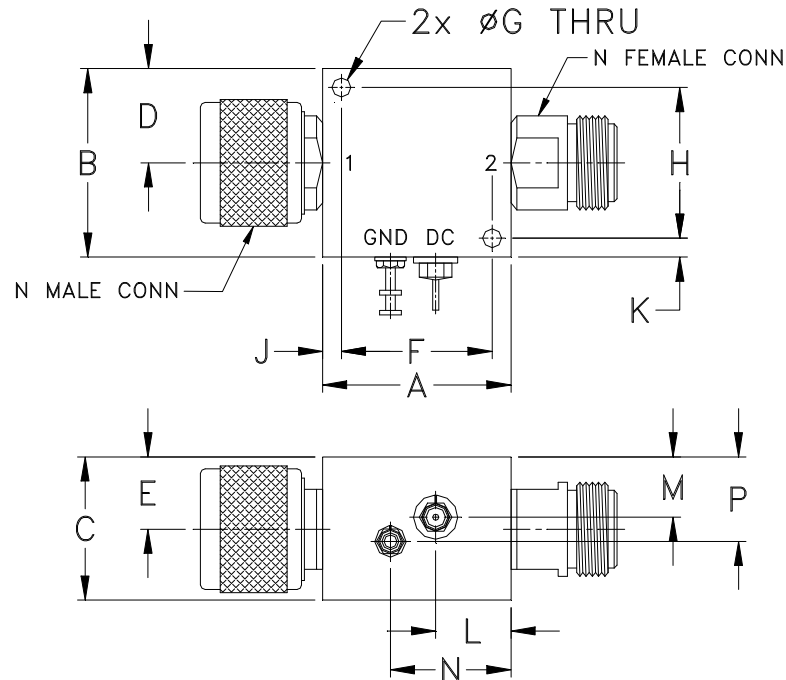
Typical Performance Data

| FREQ | INSERTION LOSS | VSWR | |
|--------|----------------|------|---------|
| | | RF | RF & DC |
| (MHz) | (dB) | (:1) | |
| 10.0 | 0.12 | 1.26 | 1.26 |
| 50.0 | 0.03 | 1.04 | 1.04 |
| 100.0 | 0.03 | 1.01 | 1.01 |
| 150.0 | 0.04 | 1.01 | 1.01 |
| 200.0 | 0.06 | 1.03 | 1.02 |
| 300.0 | 0.14 | 1.02 | 1.02 |
| 400.0 | 0.10 | 1.04 | 1.04 |
| 500.0 | 0.10 | 1.06 | 1.06 |
| 600.0 | 0.10 | 1.08 | 1.07 |
| 700.0 | 0.10 | 1.08 | 1.09 |
| 800.0 | 0.12 | 1.09 | 1.11 |
| 900.0 | 0.16 | 1.11 | 1.12 |
| 1000.0 | 0.20 | 1.13 | 1.14 |
| 1100.0 | 0.23 | 1.16 | 1.14 |
| 1200.0 | 0.26 | 1.18 | 1.15 |
| 1300.0 | 0.26 | 1.19 | 1.16 |
| 1400.0 | 0.24 | 1.20 | 1.17 |
| 1500.0 | 0.23 | 1.20 | 1.18 |
| 1600.0 | 0.20 | 1.18 | 1.19 |
| 1650.0 | 0.19 | 1.17 | 1.19 |
| 1700.0 | 0.16 | 1.16 | 1.20 |
| 1750.0 | 0.15 | 1.16 | 1.20 |
| 1800.0 | 0.17 | 1.16 | 1.21 |
| 1850.0 | 0.14 | 1.17 | 1.20 |
| 1900.0 | 0.15 | 1.17 | 1.21 |
| 1950.0 | 0.15 | 1.17 | 1.20 |
| 2000.0 | 0.12 | 1.19 | 1.21 |
| 2050.0 | 0.12 | 1.19 | 1.19 |
| 2100.0 | 0.12 | 1.21 | 1.20 |
| 2150.0 | 0.10 | 1.21 | 1.19 |
| 2200.0 | 0.09 | 1.23 | 1.20 |
| 2250.0 | 0.13 | 1.22 | 1.18 |
| 2300.0 | 0.12 | 1.22 | 1.19 |
| 2350.0 | 0.17 | 1.20 | 1.17 |
| 2400.0 | 0.22 | 1.20 | 1.17 |
| 2450.0 | 0.25 | 1.17 | 1.16 |
| 2500.0 | 0.28 | 1.17 | 1.17 |
| 2550.0 | 0.37 | 1.15 | 1.16 |
| 2600.0 | 0.30 | 1.15 | 1.17 |
| 2650.0 | 0.43 | 1.12 | 1.15 |
| 2700.0 | 0.37 | 1.12 | 1.16 |
| 2750.0 | 0.38 | 1.11 | 1.15 |
| 2800.0 | 0.37 | 1.11 | 1.16 |
| 2850.0 | 0.36 | 1.11 | 1.14 |
| 2900.0 | 0.34 | 1.12 | 1.15 |
| 2950.0 | 0.33 | 1.13 | 1.14 |
| 3000.0 | 0.34 | 1.14 | 1.15 |

Typical Performance Curves



Outline Dimensions



| CASE# | A | B | C | D | E | F | G | H | J | K | L | M | N |
|-------|-----------------|-----------------|----------------|----------------|----------------|------------------|----------------|------------------|---------------|---------------|----------------|----------------|----------------|
| K1486 | 1.25 (31.75) | 1.25 (31.75) | .95 (24.13) | .63 (16.00) | .47 (11.94) | 1.000 (25.40) | .125 (3.18) | 1.000 (25.40) | .13 (3.18) | .13 (3.18) | .50 (12.70) | .40 (10.16) | .80 (20.32) |

| CASE# | P | Q | WT. GRAMS |
|-------|----------------|----|-----------|
| K1486 | .56 (14.22) | -- | 117.0 |

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Refer to the individual model data sheet for the type of connectors available



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|----------------------------|----------------------------------------------------------------------------------------|--------------------------------------|
| Operating Temperature | -55° to 100°C Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Barometric Pressure | 100,000 Feet | MIL-STD-202, Method 105, Condition D |
| Humidity | 90% RH, 65°C Units may require bake-out after humidity to restore full performance. | MIL-STD-202, Method 103 |
| Thermal Shock | -65° to 125°C, 5 cycles | MIL-STD-202, Method 107, Condition B |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock | 100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18) | MIL-STD-202, Method 213, Condition I |