



Mini-Circuits

COAXIAL

Wideband Bias-Tee

ZBT-44-1A-FT+

50Ω 10 MHz to 43.5 GHz 2.92 mm Male to 2.92 mm Female

KEY FEATURES

- Wideband coverage, 10 MHz to 43.5 GHz
- Low insertion loss, 1.2 dB typ.
- Excellent return loss, 15 dB typ.
- Excellent isolation, 40 dB typ.
- High DC input current, 1.3 A max.

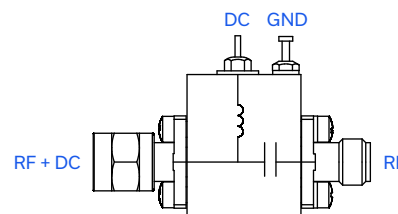


Generic photo used for illustration purposes only

APPLICATIONS

- Broadband communication
- Wideband test & measurement
- 4G LTE & 5G FR1 infrastructure
- 5G FR2 millimeter wave testing
- Aerospace and defense

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

Mini-Circuits' ZBT-44-1A-FT+ is a wideband coaxial bias-tee covering frequencies from 10 MHz to 43.5 GHz with low insertion loss, excellent return loss, and high DC to RF isolation over its entire frequency range. This model is capable of handling up to +30 dBm (1 W) RF input power and DC input current up to 1.3 A, and is ideal for applications such as biasing amplifiers, laser diodes, active antennas and more.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
Frequency Range	-	0.01	-	43.5	GHz
Insertion Loss	0.01 - 0.05	-	2.0	-	dB
	0.05 - 24.00	-	1.0	2.0	
	24.00 - 43.50	-	1.5	2.5	
Input Return Loss	0.01 - 0.05	-	11.5	-	dB
	0.05 - 24.00	11.0	22.0	-	
	24.00 - 43.50	9.5	15.0	-	
Output Return Loss	0.01 - 0.05	-	11.5	-	dB
	0.05 - 24.00	11.0	22.0	-	
	24.00 - 43.50	9.5	20.0	-	
Isolation ¹	0.01 - 43.5	-	40	-	dB
DC Resistance, DC to RF and DC port	-	-	0.12	-	Ohm

1. Isolation (RF+DC port to DC port) is tested with a 50 Ohm 2.92 mm connector at the DC input port.

ABSOLUTE MAXIMUM RATINGS²

Operating Case Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RF Power	+30 dBm max.
Input Current ³ (Operational)	1.3 A
Voltage at DC Port ⁴	+24 V max.

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

3. Current derates by 9 mA per °C above +50 °C.

4. Derate to +16 V max. for DC coupled RF load.

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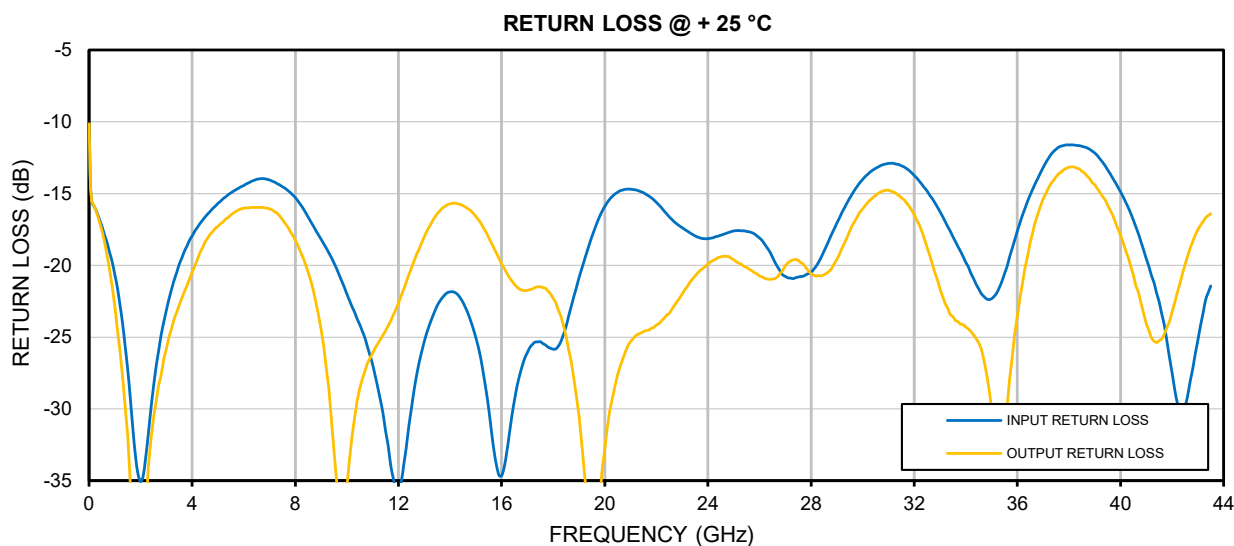
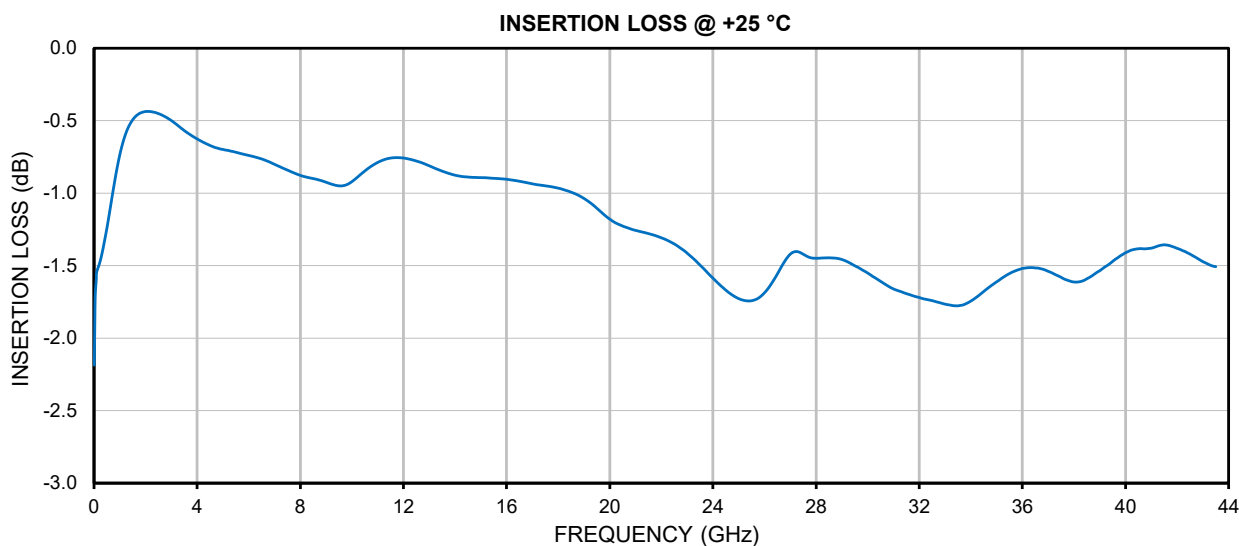
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10 MHz to 43.5 GHz

2.92 mm Male to 2.92 mm Female

TYPICAL PERFORMANCE GRAPHS





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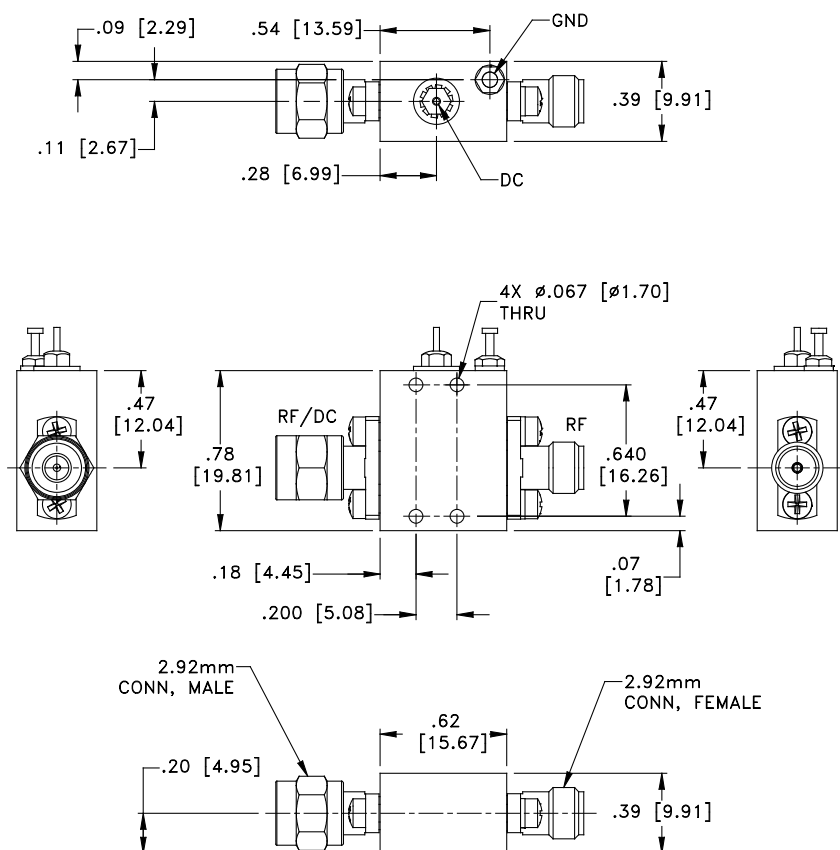
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50Ω 10 MHz to 43.5 GHz 2.92 mm Male to 2.92 mm Female

CONNECTOR SPECIFICATIONS

Description	RF & DC PORT	RF PORT	DC PORT
Connector Type	2.92 mm Male	2.92 mm Female	Filtered Feedthrough

CASE STYLE DRAWING



Weight: 32 grams

Dimensions are in inches [mm]. Tolerances: 2 Pl. ±.03; 3 Pl. ±.015 Inches

PRODUCT MARKING*: ZBT-44-1A-FT+

*Marking may contain other features or characters for internal lot control.





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2.92 mm Male to 2.92 mm Female

ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file)
Case Style	Y3206-4
RoHS Status	Compliant
Environmental Ratings	ENV135

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-Circuits' 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/terms/viewterm.html

