



COAXIAL

# Bias-Tee

## ZFBT-4R2GW+

50Ω 0.1 to 4200 MHz Wideband SMA Male/ Female Bracket (Option "B")

### KEY FEATURES

- Wideband, 0.1 to 4200 MHz
- Low Insertion Loss, 0.6 dB Typ.
- Good Isolation, 40 dB Typ.

### APPLICATIONS

- Biasing Amplifiers
- Biasing of Laser Diodes
- Biasing of Active Antennas
- DC Return
- DC Blocking
- Test Accessory

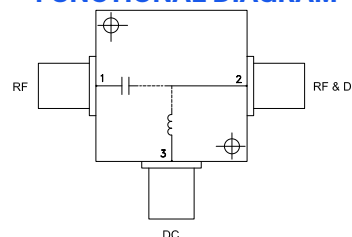
### PRODUCT OVERVIEW

Mini-Circuits' ZFBT-4R2GW+ is coaxial bias tee providing low insertion loss for applications over a very wide frequency range from 0.1 to 4200 MHz. It provides 40 dB typical DC-RF isolation and handles up to 0.5A DC current at the input. This model features rugged shielded construction with SMA connectors, providing excellent durability.



Generic photo used for illustration purposes only

### FUNCTIONAL DIAGRAM



### ELECTRICAL SPECIFICATIONS<sup>1,2</sup> AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range	—	0.1	—	4200	MHz
Insertion Loss	0.1 - 1	—	0.15	0.8	dB
	1 - 2100	—	0.6	1.2	
	2100 - 4200	—	0.6	1.6	
Return Loss (RF Port)	0.1 - 1	12.7	30	—	dB
	1 - 2100	17.7	24	—	
	2100 - 4200	17.7	24	—	
Return Loss (RF & DC Port)	0.1 - 1	12.7	30	—	dB
	1 - 2100	17.7	24	—	
	2100 - 4200	17.7	24	—	
Isolation (RF to DC Port)(RF&DC Port to DC Port)	0.1 - 1	15	25	—	dB
	1 - 2100	20	40	—	
	2100 - 4200	20	50	—	
DC Resistance (DC to RF & DC Port)	—	—	4.5	—	Ohm

1. Insertion Loss 1.5 dB Max. and Isolation 7 dB Min. 0.1 to 0.3 MHz.  
 Insertion Loss and Isolation are guaranteed up to 20 dBm-RF power and 200mA DC current.  
 2. Return loss measured with open and short at DC port.

### ABSOLUTE MAXIMUM RATINGS<sup>3</sup>

Operating Case Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
Input Power	30 dBm max.
Voltage at DC Port	30 V max.
Current at DC Port	500 mA

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

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 ECO-025025  
 ZFBT-4R2GW+  
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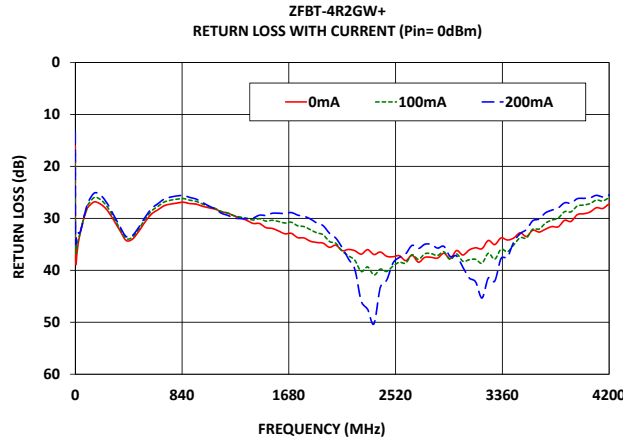
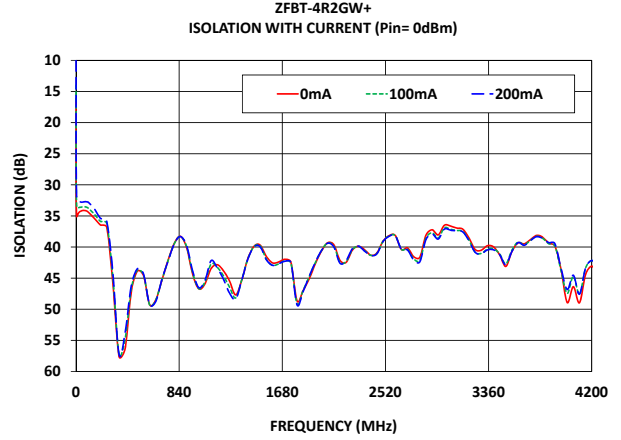
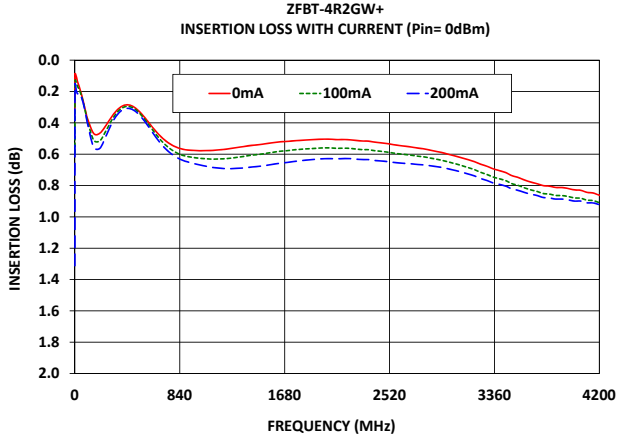
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### TYPICAL PERFORMANCE GRAPHS





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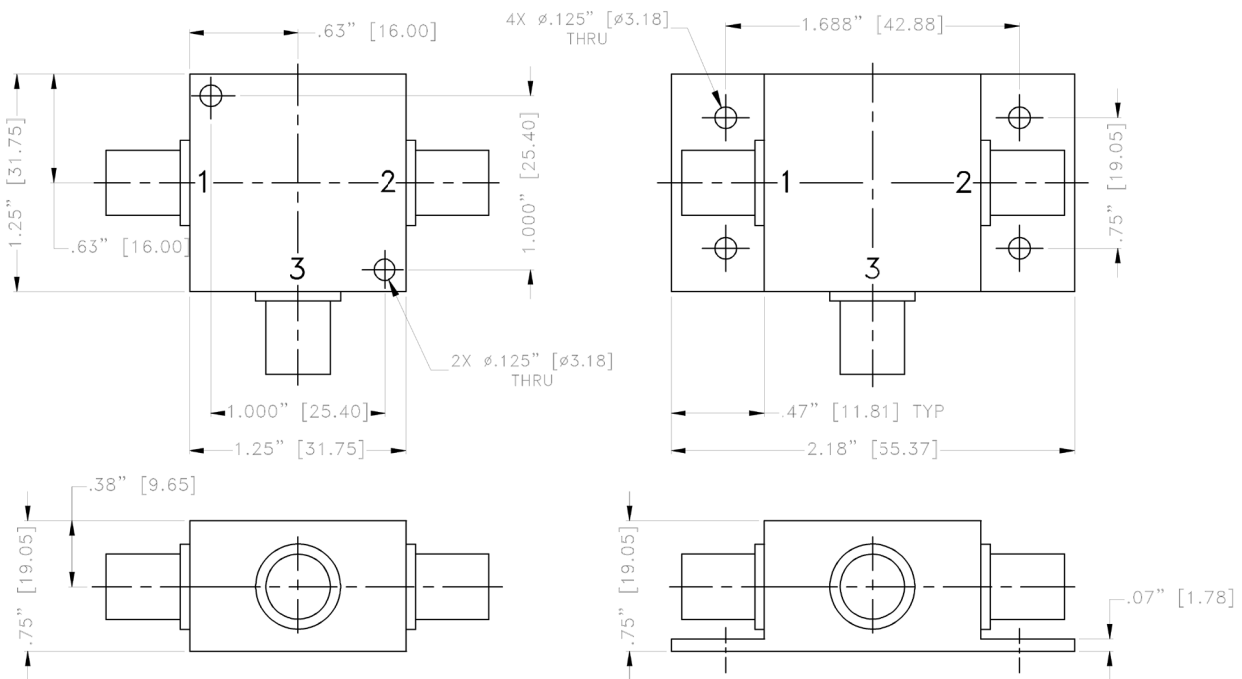
### COAXIAL CONNECTIONS

Description	RF PORT	RF & DC PORT	DC PORT	GROUND
Connector Type	SMA Female	SMA Male	SMA Female	—
Orientation	1	2	3	—

### CASE STYLE DRAWING

STANDARD

OPTION "B"



**Weight: 70 gram**

**Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015**

### PRODUCT MARKING\*: ZFBT-4R2GW+

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





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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data Graphs S-Parameter (S3P Files) Data Set (.zip file)
Case Style	K18
RoHS Status	Compliant
Environmental Ratings	ENV28

#### 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-Circuit's 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/terms/viewterm.html](http://www.minicircuits.com/terms/viewterm.html)

