

10 MHz to 3 GHz, Type F 75 Ohm Bias Tee, Rated 2.5 Amps and 100 Volts, DC BNC Connector

The FMBT1647 is a 75 Ohm Broadband Bias Tee that operates from 10 MHz to 3 GHz. This general purpose Bias Tee is used in applications that require a source of DC voltage and current to be injected into an RF circuit without affecting the RF signal through the main transmission path. The module is designed for a 75 ohm input/output impedance and displays impressive typical performance that includes 1 dB insertion loss, 45 dB RF to Bias Port Isolation, and 1.5:1 VSWR. The Bias Tee is rated for 2.5 Amps and +100 Volts max DC voltage. The compact package uses a Type F Male connector at the RF input and a Type F Female connector at the RF output. A female BNC Connector is used for the DC Port. Operational Temperature is -55°C to +105°C.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.01		3	GHz
Impedance		75		Ohms
VSWR		1.5:1	1.8:1	
Insertion Loss		1	3	dB
RF to Bias Isolation		45		dB
DC Voltage			100	Vdc
DC Current			2.5	A
Bias Path Resistance		0.04	0.05	Ohm
3dB Bandwidth	0.005		6	GHz

Electrical Specification Notes:
Values at +25°C, sea level.

Mechanical Specifications

Size	
Length	1.29 in [32.77 mm]
Width	0.85 in [21.59 mm]
Height	1 in [25.4 mm]
Weight	0.11 lbs [49.9 g]

Environmental Specifications

Temperature	
Operating Range	-55 to +105 deg C
Storage Range	-60 to +90 deg C

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:



Configuration:

- RF Port Connector: F Male
- DC/RF Port Connector: F Female
- DC Port Connector: BNC Female

Features:

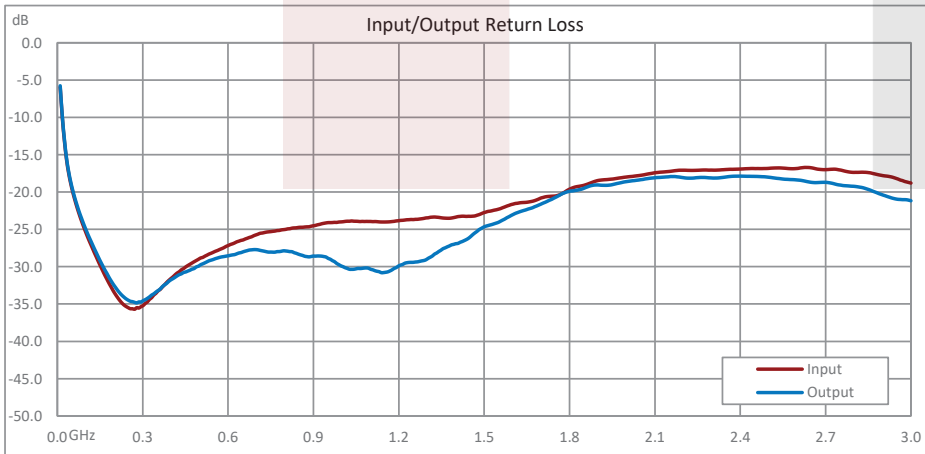
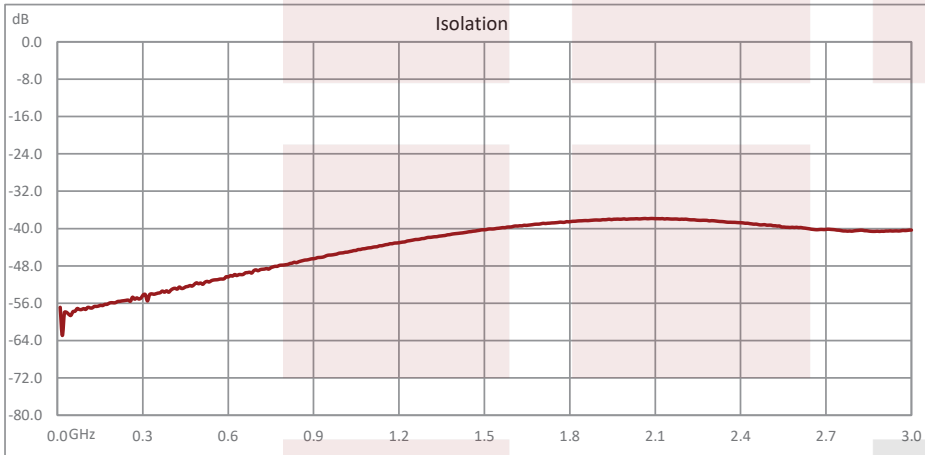
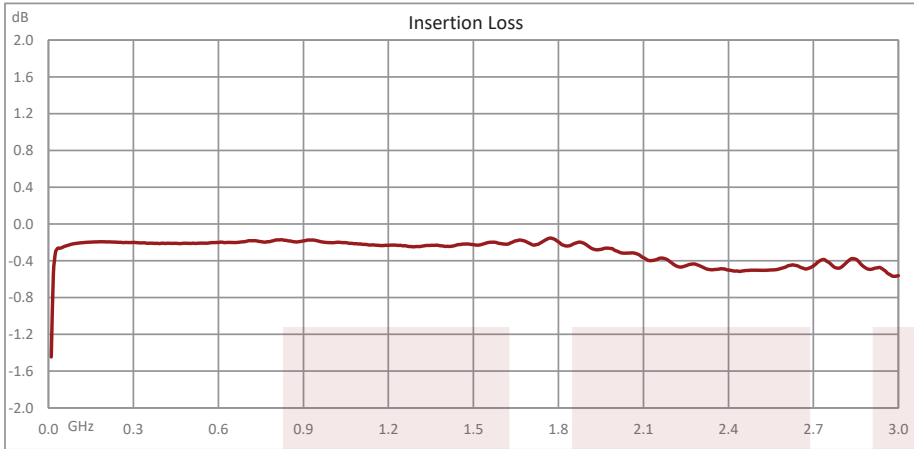
- 75 Ohm Broadband Bias Tee
- 10 MHz to 3 GHz Frequency Range
- Insertion Loss: 1 dB Typ
- Isolation: 45 dB typ
- VSWR: 1.5:1 typ
- 75 Ohms Input and Output Matched
- Type F Male RF Input Connector
- Type F Female RF Output Connector
- DC Connector: BNC Female
- Operational Temperature: -55°C to +105°C
- Rating: 2.5 Amps DC Current and +100V max DC Voltage

Applications:

- Biasing for Antenna Amplifiers, Laser Diodes, Photo Diodes, Optical Modulators
- Test & Measurement
- SATCOM
- Wireless Communications Systems
- Power over Ethernet
- Base Stations and Radios

Fairview Microwave
301 Leora Ln., Suite 100
Lewisville, TX 75056
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Typical Performance Data



10 MHz to 3 GHz, Type F 75 Ohm Bias Tee, Rated 2.5 Amps and 100 Volts, DC BNC Connector from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

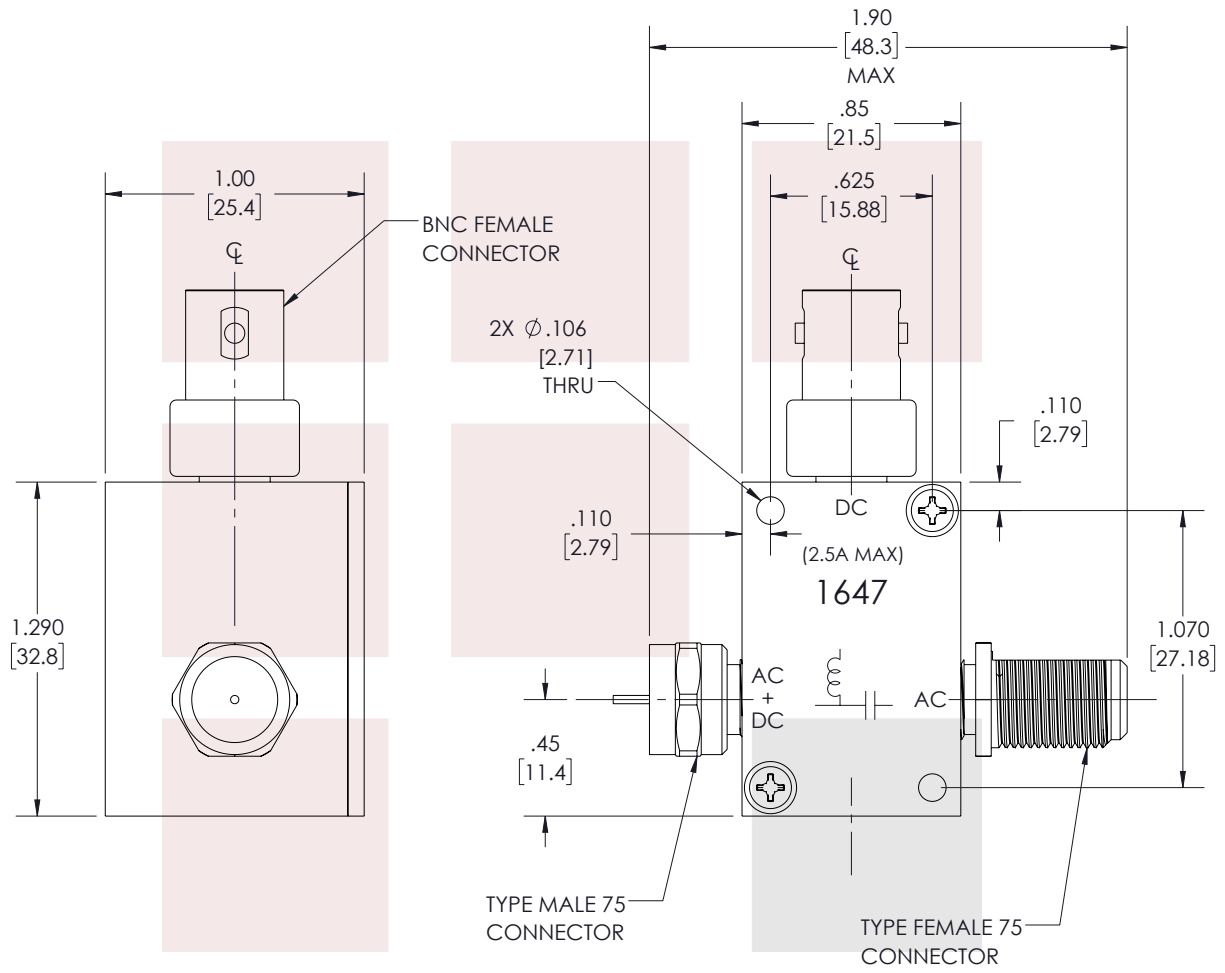
For additional information on this product, please click the following link: [10 MHz to 3 GHz, Type F 75 Ohm Bias Tee, Rated 2.5 Amps and 100 Volts, DC BNC Connector FMBT1647](#)

URL: <https://www.fairviewmicrowave.com/f-bias-tee-10-mhz-3-ghz-2500-ma-100-volts-dc-fmbt1647-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	06/03/2022	TGALLA



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TITLE
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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:		CABLE LENGTH (L) TOLERANCES:	
.X = ±.2 [5.08]	FRACTIONS ± 1/32	L ≤ 12 [305] = +1 [25] / -0	
.XX = ±.02 [.51]	ANGLES ± 1°	12 [305] < L ≤ 60 [1524] = +2 [51] / -0	
.XXX = ±.005 [.13]		60 [1524] < L ≤ 120 [3048] = +4 [102] / -0	
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0	
		300 [7620] < L = +5%L / -0	

THIRD-ANGLE PROJECTION
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ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.				SCALE N/A	
SIZE A	CAGE CODE 3FKR5	DRAWN BY BPUCHASKI	ITEM NO. FMBT1647	REV A	SHEET 1 OF 1

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