

10 MHz to 3 GHz, Type N 75 Ohm Bias Tee, Rated 2.5 Amps and 100 Volts, DC Pin

The FMBT1649 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 0.4 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 an N Type Male connector at the RF input and an N Type Female connector at the RF output. A Solder Post Pin is used for the DC Connector. 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		0.4	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: N Male
- DC/RF Port Connector: N Female
- DC Port Connector: DC Pin

Features:

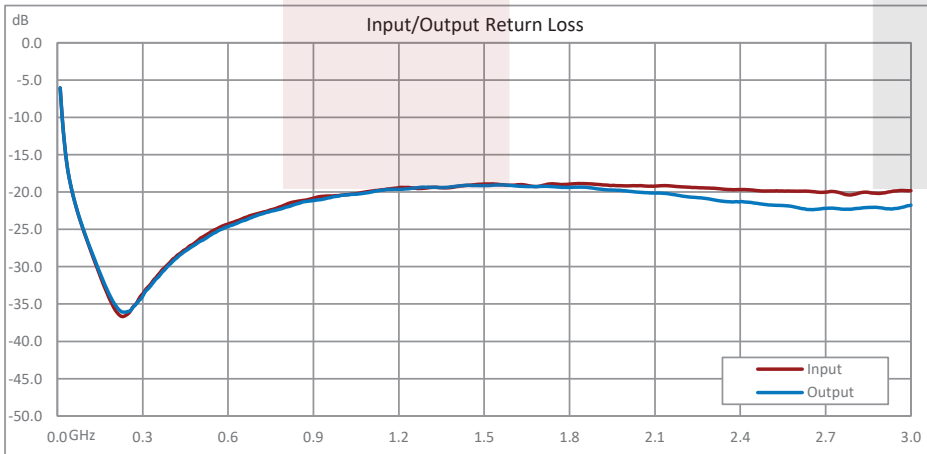
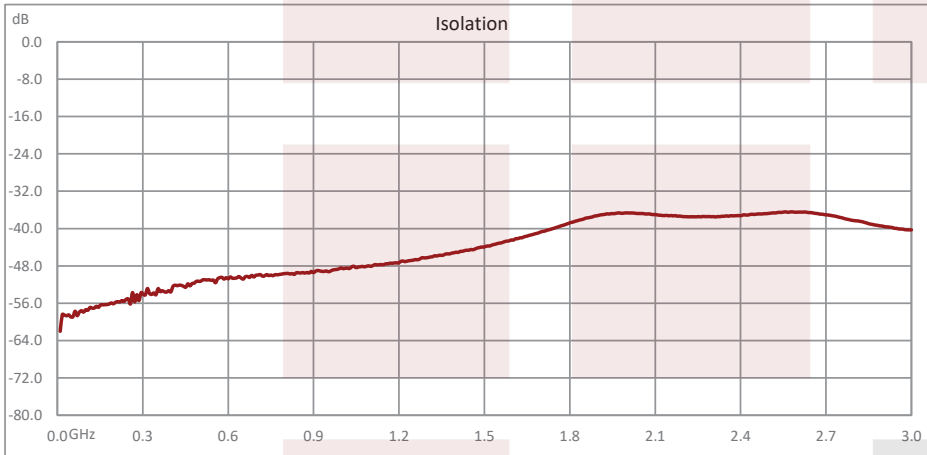
- 75 Ohm Broadband Bias Tee
- 10 MHz to 3 GHz Frequency Range
- Insertion Loss: 0.4 dB Typ
- Isolation: 45 dB typ
- VSWR: 1.5:1 typ
- 75 Ohms Input and Output Matched
- N Type Male RF Input Connector
- N Type Female RF Output Connector
- DC Connector: Solder Post Pin
- Operational Temperature: -55°C 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 N 75 Ohm Bias Tee, Rated 2.5 Amps and 100 Volts, DC Pin 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.

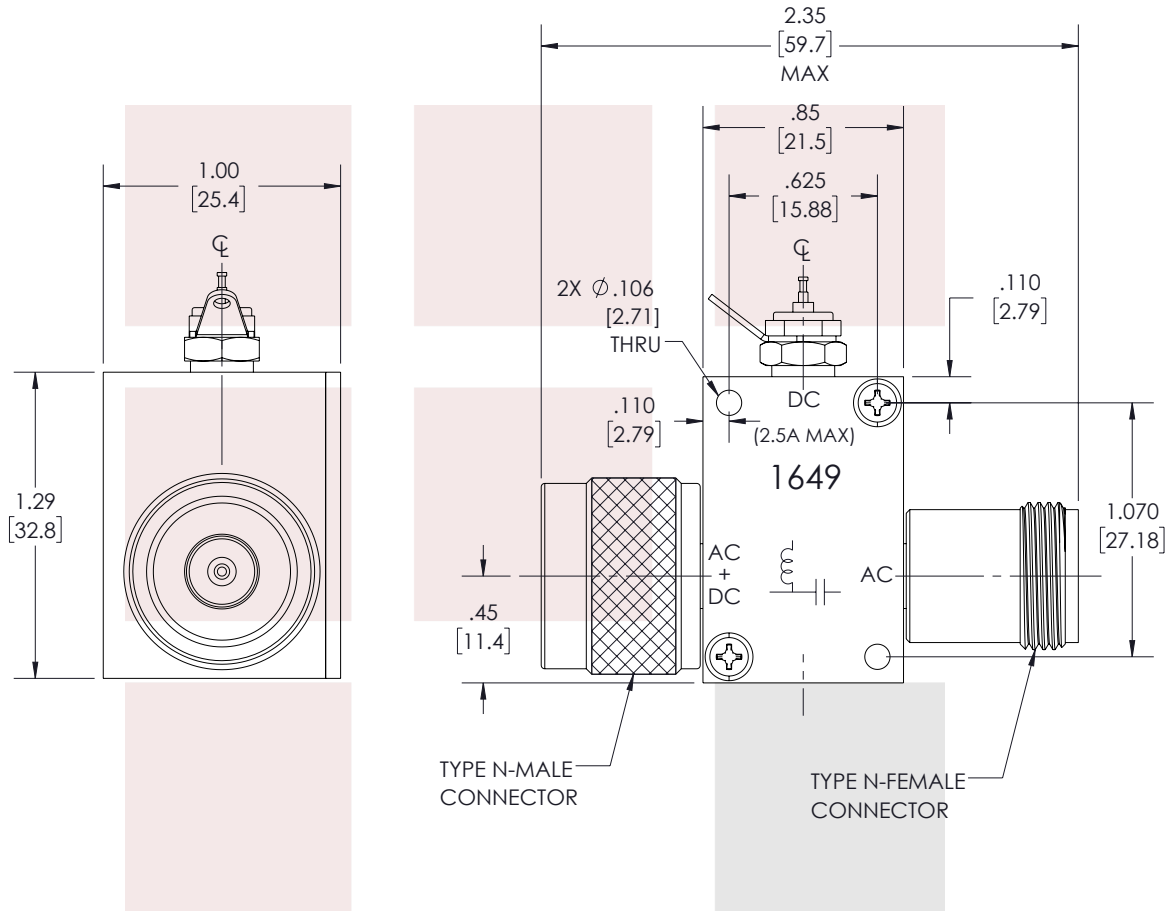
For additional information on this product, please click the following link: [10 MHz to 3 GHz, Type N 75 Ohm Bias Tee, Rated 2.5 Amps and 100 Volts, DC Pin FMBT1649](#)

URL: <https://www.fairviewmicrowave.com/n-bias-tee-10-mhz-3-ghz-2500-ma-100-volts-dc-fmbt1649-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



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:

.X = ±.2 [5.08] FRACTIONS ± 1/32
.XX = ±.02 [.51]
.XXX = ±.005 [.13] ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0
12 [305] < L ≤ 60 [1524] = +2 [51] / -0
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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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY BPUCHASKI	ITEM NO. FMBT1649	REV A
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