



Precision Ultra-Wide Band Bias Tee, 50 kHz - 110 GHz,
1.00mm(f) input, 1.00mm(m) output, SMC(m) bias

Bias Tees Technical Data Sheet

PE1661

Features

- Precision Ultra-Wide Band Bias Tee
- Metrology Grade
- 100 MHz to 110 GHz Frequency Range
- Insertion Loss: 1.5 dB typ
- Return Loss 12 dB typ
- Rating: 0.4A max DC Current and +16V max DC Voltage
- Rise Time 3.2 psec typ
- Group Delay 108 psec typ
- Leakage Current 80 pA typ
- RF Input Power Handling 1W max
- 50 Ohms Input and Output Matched
- W1 (1.0 mm) Female RF Input Connector
- W1 (1.0 mm) Male RF output Connector
- SMC Female Connector for DC Bias Port
- BNC Male to SMC Male Cable Assembly Included
- Meets MIL-STD-202F Environmental Test Conditions for Thermal Shock, Mechanical Shock, and Vibration
- RoHS Compliant Design

Applications

- High Frequency System and Instrumentation
- Base Stations and Radios
- Remote Antenna Amplifiers and other Devices

Description

The PE1661 is a Precision Ultra-Wide Band Bias Tee that operates from 50 KHz to 110 GHz. This high precision design incorporates Metrology-Grade quality with robust mechanical packaging. Bias Tee's are designed for applications where both DC and RF signals must be applied to the Device Under Test (DUT). The module is RoHS Compliant and designed for a 50 ohm input/output impedance with low insertion loss of 1.5 dB typ and good return loss of 12 dB typ. The Bias Tee is rated for 0.4 Amps max DC current and +16V maximum DC voltage. Maximum RF input power handling is 1W. The compact package uses a W1 (1.00mm) female connector at the RF input and a W1 (1.00mm) Male connector at the RF output. An SMC female connector is used for the DC Bias port. One (1) cable assembly (48 inch BNC male to SMC male) is included and used for making the DC Bias connection. Designed for high reliability the PE1661 is guaranteed and not tested to meet MIL-STD-202F environmental test conditions for Thermal Shock, Mechanical Shock, and Vibration.

Configuration

RF Port Connector	1.0mm Female
DC/RF Port Connector	BNC Male
DC Port Connector	SMC Female

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	50KHz		110	GHz
Impedance		50		Ohms
Return Loss		12		dB
Insertion Loss		1.5		dB
DC Voltage			16	Vdc
DC Current			0.4	mA
Input Power (CW)			1	Watt

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Precision Ultra-Wide Band Bias Tee, 50 kHz - 110 GHz, 1.00mm\(f\) input, 1.00mm\(m\) output, SMC\(m\) bias PE1661](#)



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Rise Time	3.2	ps
Leakage Current	80	pA
Group Delay	108	ps

Mechanical Specifications

Size

Length	2.39 in [60.71 mm]
Width	1.33 in [33.78 mm]
Height	0.48 in [12.19 mm]
Weight	0.325 lbs [147.42 g]

Environmental Specifications

Temperature

Operating Range	-20 to +60 deg C
Storage Range	-25 to +65 deg C

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

Plotted and Other Data

Notes:

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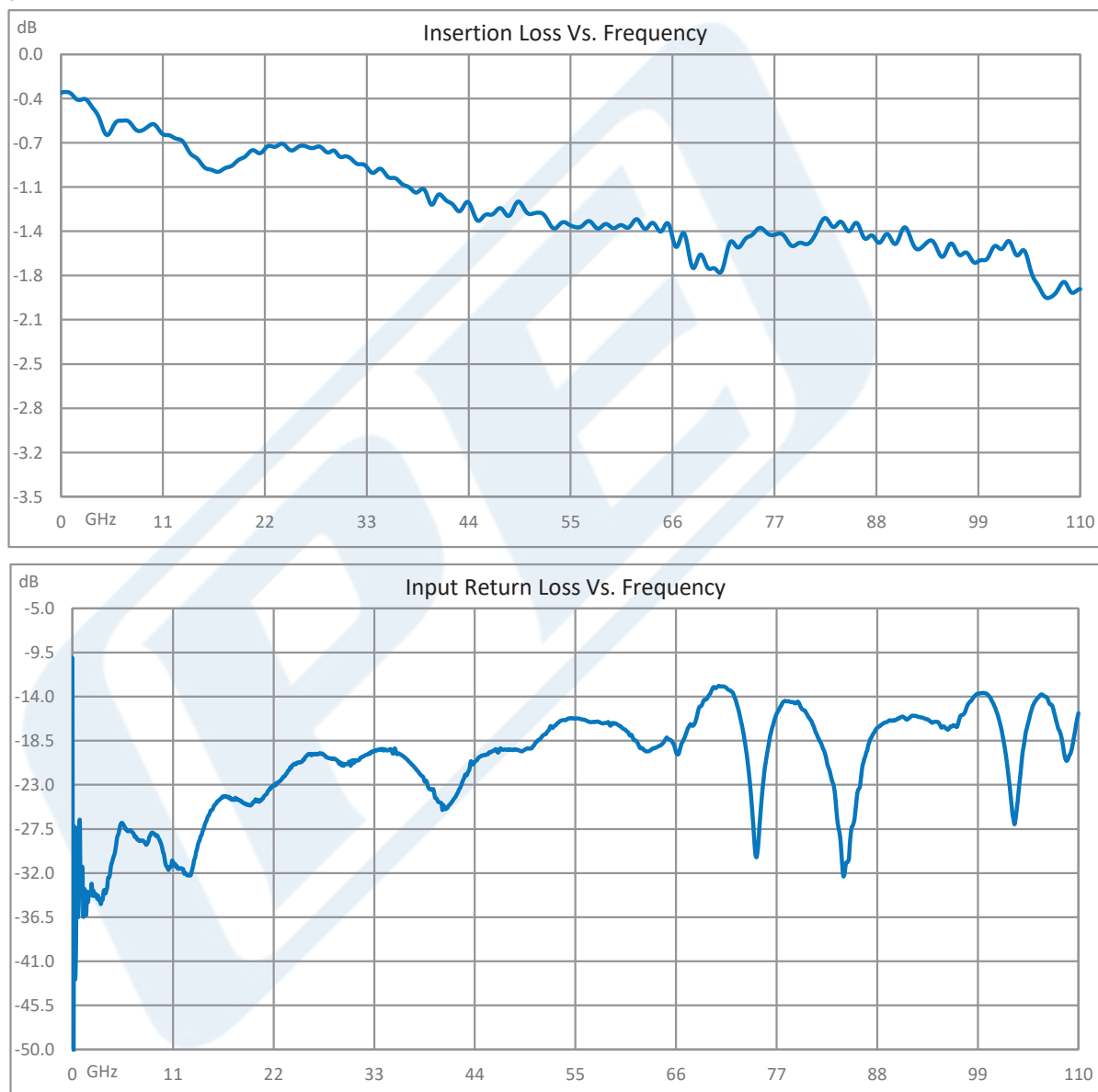


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Typical Performance Data



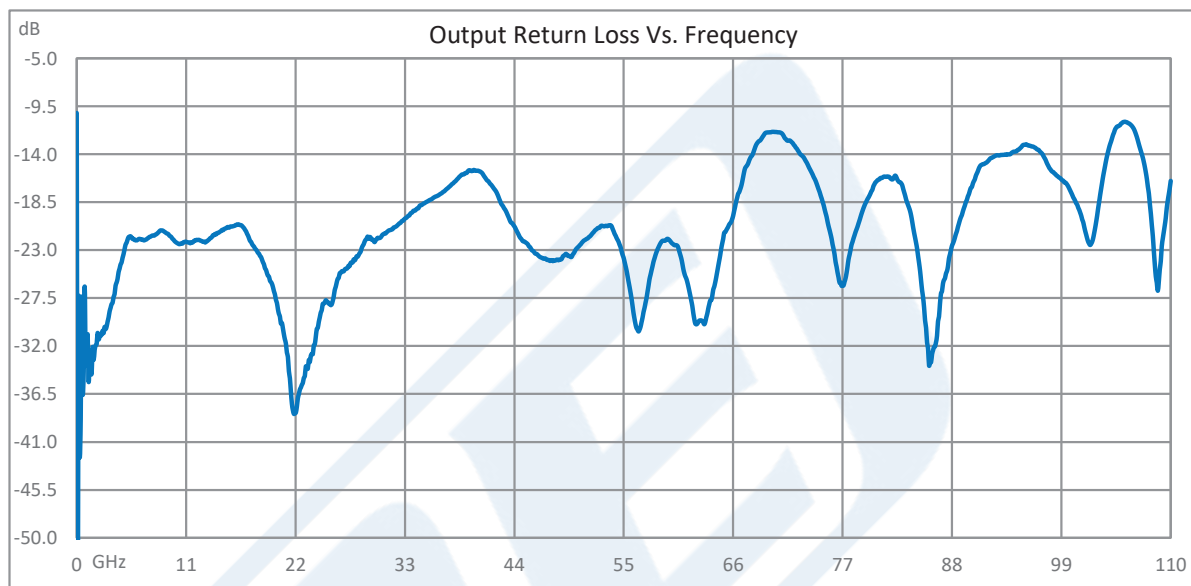
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Precision Ultra-Wide Band Bias Tee, 50 kHz - 110 GHz, 1.00mm(f) input, 1.00mm(m) output, SMC(m) bias from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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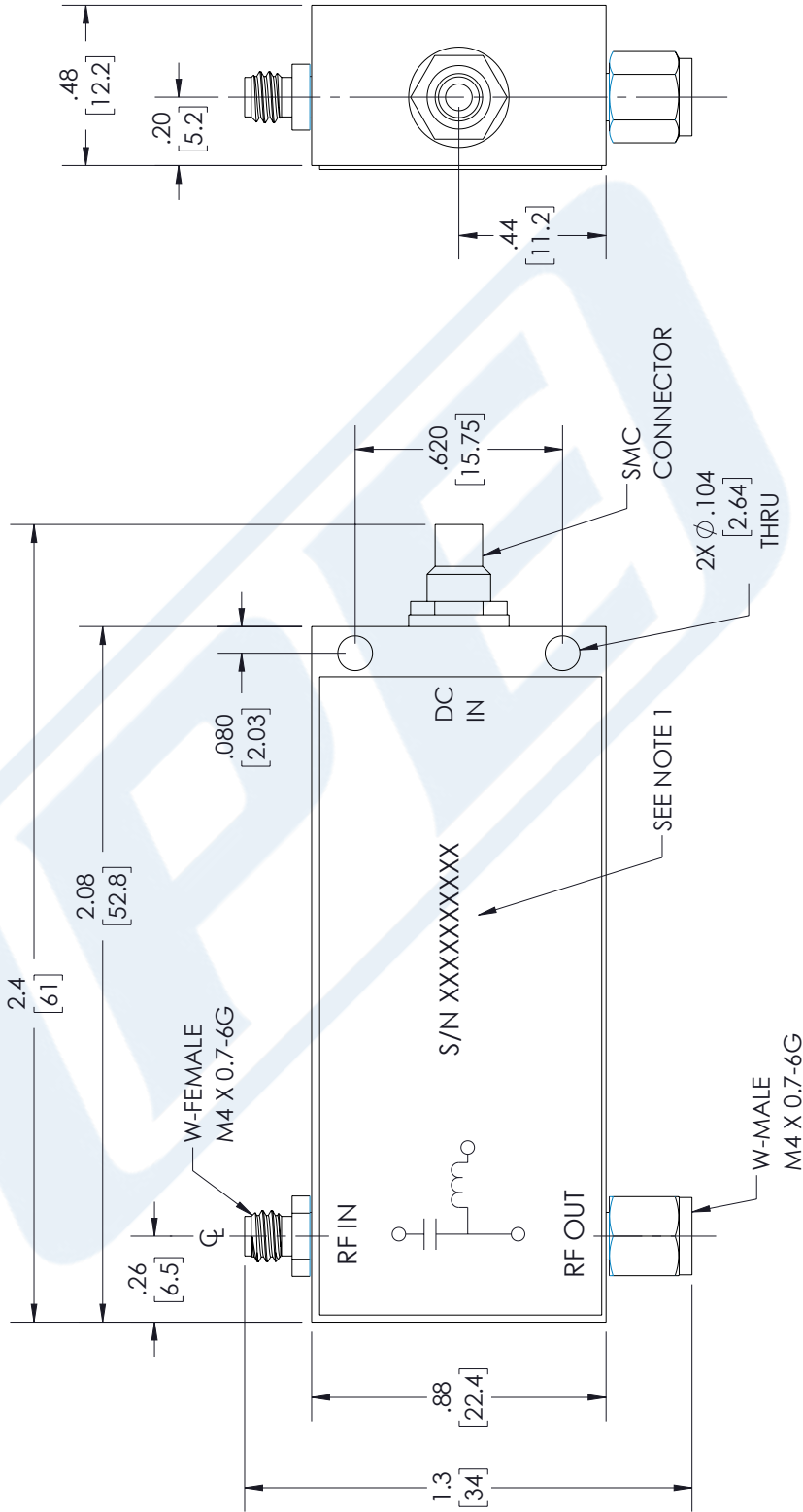
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE1661 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	06/28/2022	TGALLA



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

TOLERANCES:

X = ± .2	[5.08]	FRACTIONS
.XX = ± .02	[.51]	± 1/32
.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

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

PE PASTERNAK
an INFINITE brand

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SHEET 1 OF 1
SCALE N/A

SIZE A CAGE CODE 53919 DRAWN BY BPUCHASKI ITEM NO. PE1661 REV A

- NOTES:
- SERIAL NUMBER AND DATE CODE ARE COMBINED, EX. 2022310002
 - ONE 48 INCH CABLE ASSEMBLY PROVIDED
- REGULATORY COMPLIANCE:**
EU RoHS DIRECTIVE (MOST RECENT RELEASED VERSION)

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