

DATASHEET

BIT-1500-385 Bias Tee 50-6000 MHz SMA F



The BIT-1500-385 is a Bias Tee network used to supply DC power through a coaxial cable, usually to drive a remote Low Noise Amplifier or Radio Frequency system (sensor, detector, etc.) It is a 3 port (connector) device, each port carrying the following signals: (1) RF+DC, (2) DC only and (3) RF only. Port (1) is connected to the remote device, providing it with power and with a means to deliver an RF output simultaneously. Although both signals share the same coaxial cable, they are isolated from each other. Port (2) is connected to a suitable power supply to provide the necessary energy to run the remote system. Port (3) is connected to a radio device, often a receiver, which may be sensitive to the presence of DC voltages or may be shunted for ESD (Electro-Static Discharge). For these reasons, this port is void of the DC voltage (DC voltage is equal to the natural voltage present at the radio device's connector, typically 0 volt).

A bias "T" allows you the ability to insert DC power into a coaxial cable carrying radio signals, in a controlled fashion. The insertion loss or signal penalty for enjoying this capability is low (typically 1 dB). Attempting to just "connect" DC power and the RF signal without a bias "T" results in unpredictable RF performance. It may even be harmful to the radio device you might be using (it can destroy or fatigue the gate channel of a sensitive FET amplifier often found in receiver front ends).

TECHNICAL SPECIFICATIONS (Preliminary)

- ❑ **Frequency range:** 50-6000 MHz
- ❑ **Insertion Loss:** 1 dB
- ❑ **Nominal Impedance:** 50 ohm (RF) IN/OUT
- ❑ **RF Power Handling:** 1W (+30 dBm) Maximum
- ❑ **VSWR:** 2.0
- ❑ **DC isolation (RF only port):** 100 Volts
- ❑ **DC Current capability:** 300 mA
- ❑ **Max. DC Voltage (Power port):** 50 VDC
- ❑ **Connector:** SMA Female on all ports
- ❑ **Dimensions:** 38 mm (1.5") x 38 mm (1.5") x 6.5 mm (0.25"), not including connectors
- ❑ **Mounting:** Direct mount or 2-4 M3 (4-40) screws
- ❑ **Operating Temperatures:** -40C to +85C
- ❑ **Weight:** 200 g / 0.4 lbs
- ❑ **Shipping Weight:** 250 g / 0.5 lbs
- ❑ **Color:** Black

NOTES:

- Specifications and prices are subject to change without notice

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