

## Description

HZ-THZ BT-7K50K is a SMA bias tee (also known as bias T) that operates from 7 KHz to 50 KHz with a bias rating of 50 VDC and 500 mA. This bias tee is configured with SMA inputs on the RF ports and SMA on the bias port. BT-7K50K SMA bias T offers good electrical performance featuring 0.2 dB insertion loss and 30 dB isolation. Bias tees are typically used to inject a DC signal into an RF path such as when biasing an amplifier or any other active device, supplying power to the connected output without disrupting the RF signal. They can also be used as DC returns to provide a ground return path for the input device or DC blocks to prevent direct current signals from flowing through the output device. HZ-THZ bias tees are available in various connector configurations over different frequency bands to fit your needs, all of which shipped worldwide the same day.

## Features

- Broadband: 7 KHz to 50 KHz
- Low Insertion Loss
- Isolation 30 dB
- 500 mA / 50 VDC Bias
- RF Power 10 W Max

## Applications

- Amplifier Biasing
- Coax
- Wireless Systems
- DC Return / Block
- Test and Measurement
- Transmitting Power With a Single
- Communication Systems

## Configuration

RF Port Connector	SMA Female
DC/RF Port Connector	SMA Female
DC Port Connector	SMA Female

## Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.000007		0.00005	GHz
Impedance		50		Ohms
VSWR		1.2	1.5	: 1
Insertion Loss		0.2	0.5	dB
RF to Bias Isolation		30		dB
DC Current			500	mA
DC Voltage			50	Vdc
RF Power			10	W
DC Resistance		1		$\Omega$
Inductance		4700		$\mu$ H
Capacitance		22		$\mu$ F
Risetime/Falltime		10		ps
Operating Temperature	-55		+105	$^{\circ}$ C
Storage Temperature	-55		+125	$^{\circ}$ C

Electrical Specification Notes:

Values at +25 $^{\circ}$ C, sea level.

## Mechanical Specifications

### Size

Length 1.29 in [32.80 mm]

Width 0.71 in [18.00 mm]

Height 0.55 in [14.00 mm]

Weight 0.07 lbs [30.00 g]

Package Type Customized

## Outline Drawings

Unit: mm

Tolerance:  $\pm$ 0.05 mm

