

## Broadband Bias Tee

100KHz-18GHz /50V DC/SMA mm

Model: TLBT-100K18G-50-SS

TLBT-100K18G-50-SS is a bias tee that operates from 100 KHz to 18 GHz. The bias tee offers 2.0 dB insertion loss and -15 dB typical return loss. The bias tee can handle up to +50 VDC bias voltage and 700 mA current. The all ports are equipped with SMA female connectors.

### Features:

- Ultra Wide Band:100KHz-18GHz
- Low Insertion Loss
- High Voltage
- High Current Capacity

### Applications:

- Test Lab
- Sub-assemblies
- System Integrations

### Electrical Characteristics:

| Parameter       | Min          | Typ | Max | Units    |
|-----------------|--------------|-----|-----|----------|
| Frequency range | 100KHz-18GHz |     |     |          |
| Insertion Loss  |              |     | 2   | dB       |
| Return Loss     |              | -15 |     | dB       |
| Isolation       | 35           |     |     | dB       |
| DC Voltage      |              |     | 50  | V DC     |
| DC Resistance   |              | 4   |     | $\Omega$ |
| DC Current      |              |     | 700 | mA       |
| RF Power        |              |     | 1   | W        |

### Mechanical Specifications:

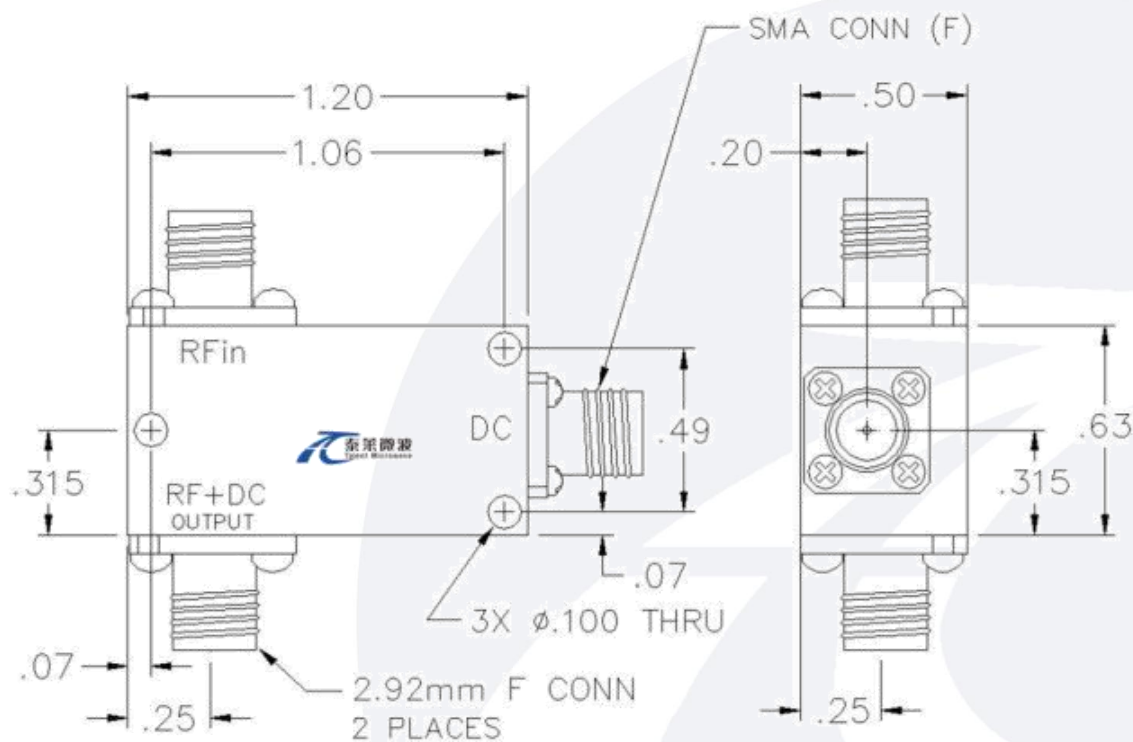
| Parameter               | Value                 | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female |       |
| DC Connector            | SMA Female            |       |
| Case Material           | Aluminum              |       |
| Finish                  | Bue Paint             |       |
| Size                    | 1.2*0.5*0.63          | Inch  |
| Weight                  | 45                    | g     |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +50 V                |
| RF Input Power        | +30 dBm              |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

### Environmental Conditions:

| Parameter                       | Min                                                 | Typ | Max  | Units |
|---------------------------------|-----------------------------------------------------|-----|------|-------|
| Operating Temperature           | -45                                                 |     | +85  | °C    |
| Non-operating Temperature       | -55                                                 |     | +125 | °C    |
| Relative humidity               |                                                     | 95  |      | %     |
| Altitude                        | 10,000                                              |     |      | feet  |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |      |       |
| Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |      |       |

### Ordering Information:

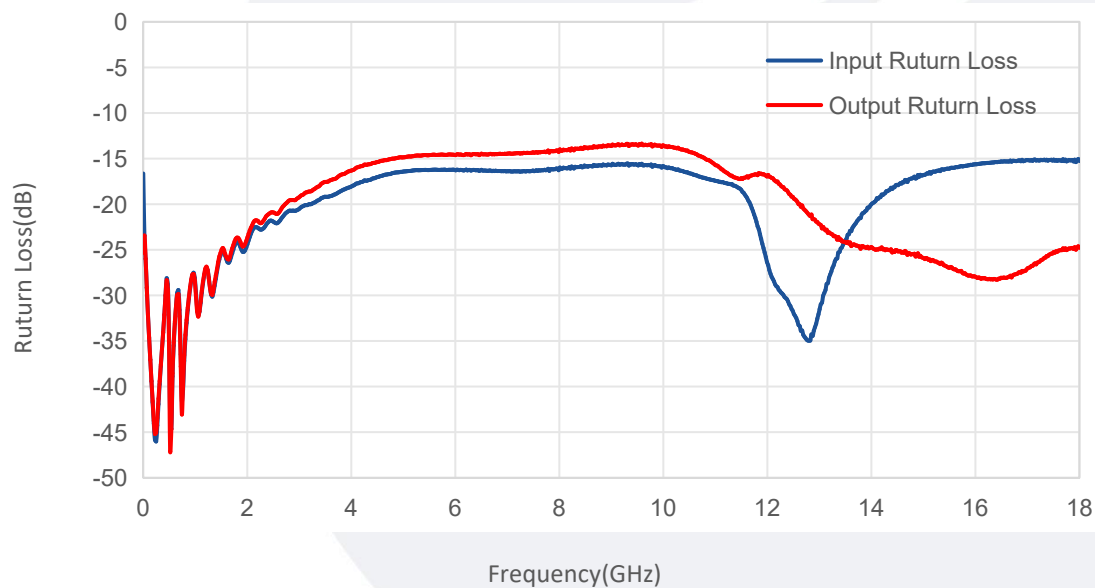
| Base Number        | Description                                  | Revision |
|--------------------|----------------------------------------------|----------|
| TLBT-100K18G-50-SS | Broadband Bias Tee<br>SMA,100KHz-18 GHz,+50V | Rev.1.1  |

**Notes:**

1. All data taken @ +23° C unless otherwise specified.
2. Dimensions and specifications may be changed without prior notice.

### Typical Performance Data:

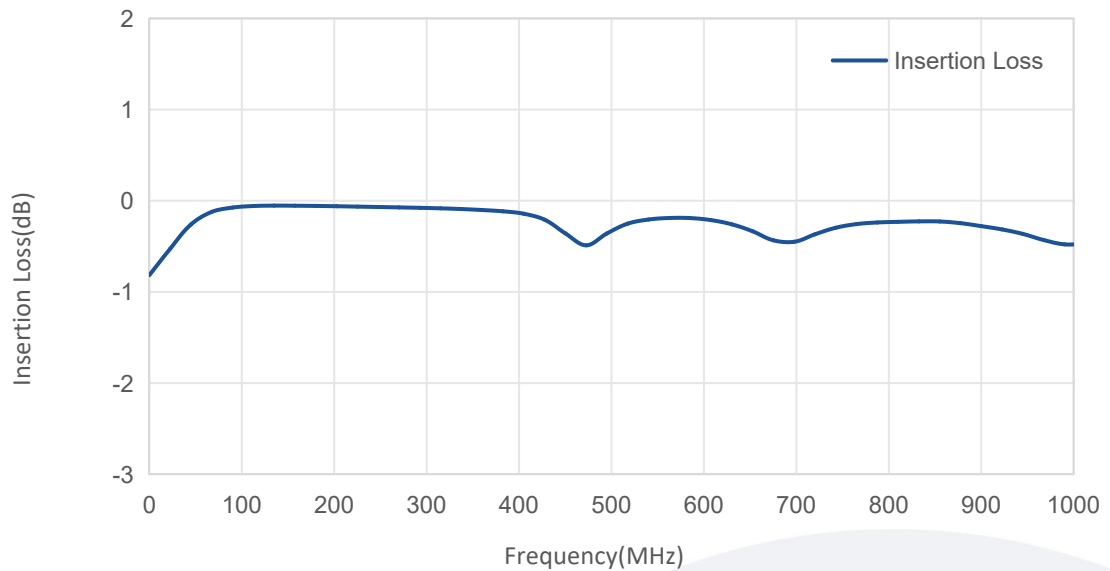
Return Loss vs Frequency



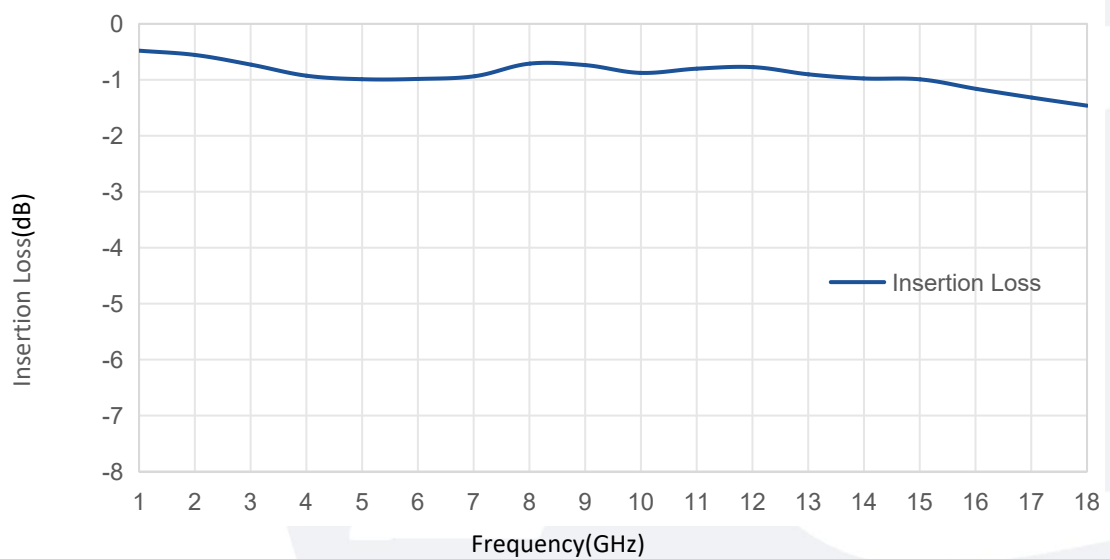
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### RF to Com Insertion Loss vs Frequency



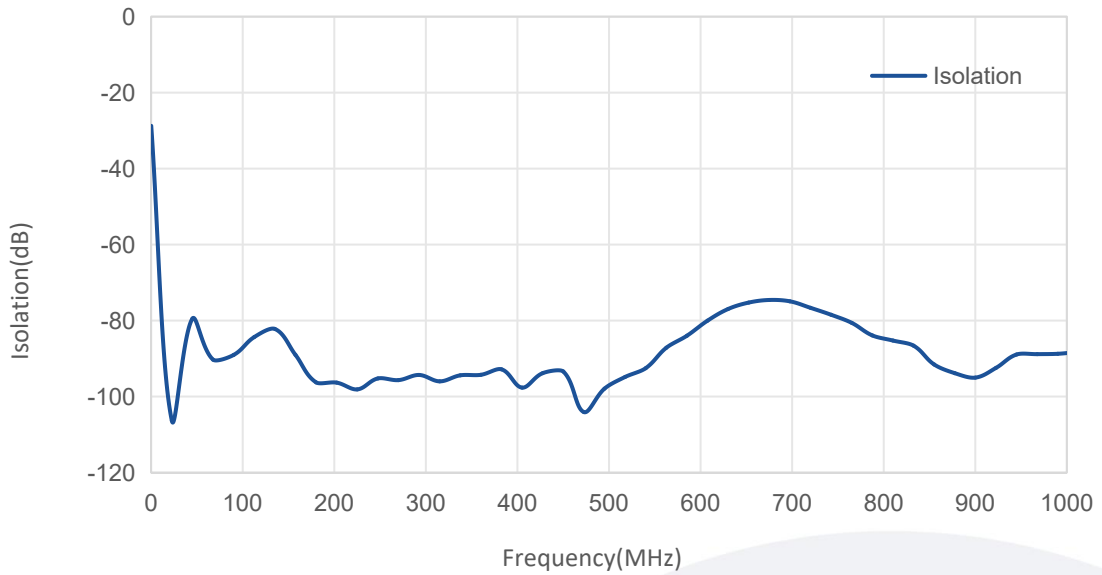
### RF to Com Insertion Loss vs Frequency



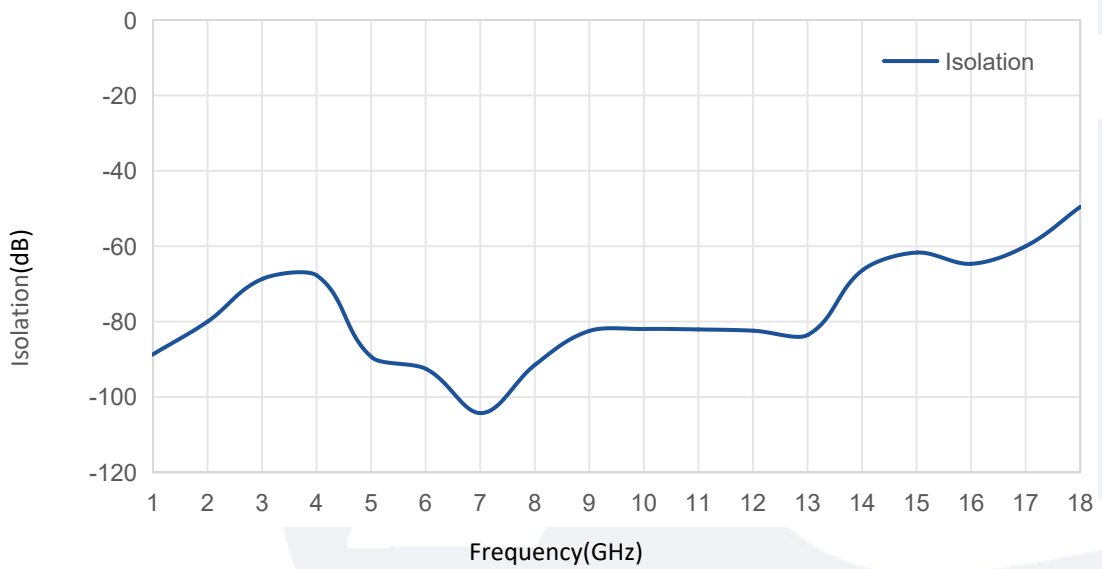
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### DC to Com Isolation vs Frequency



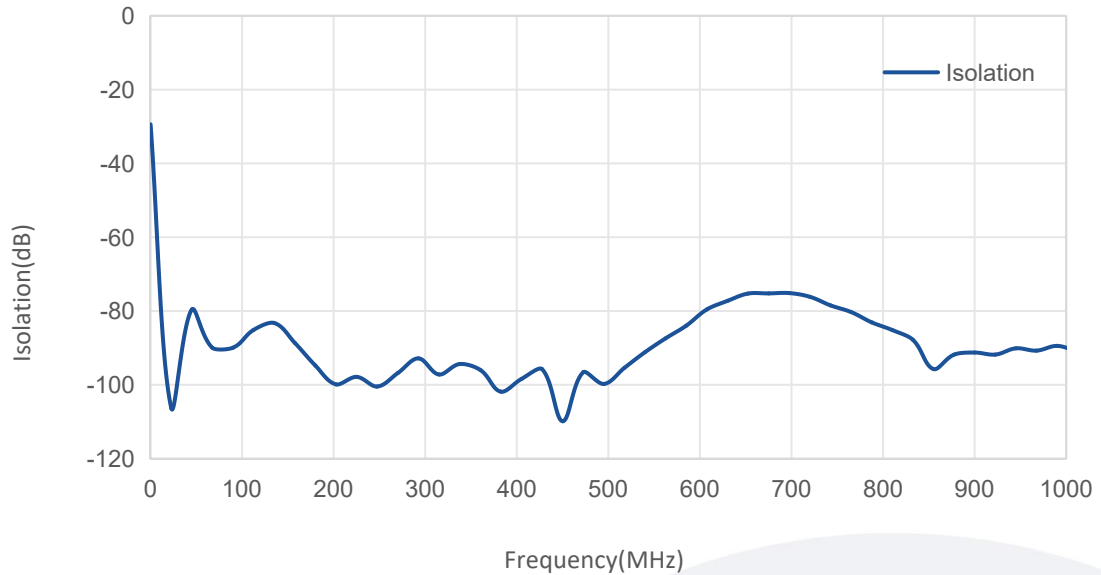
### DC to Com Isolation vs Frequency



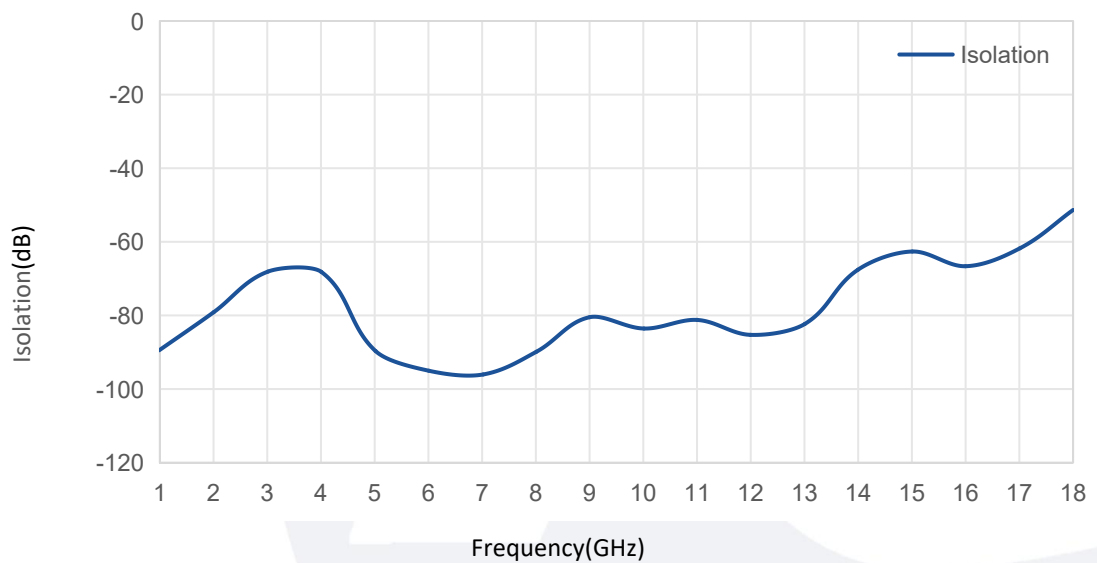
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### DC to RF Isolation vs Frequency



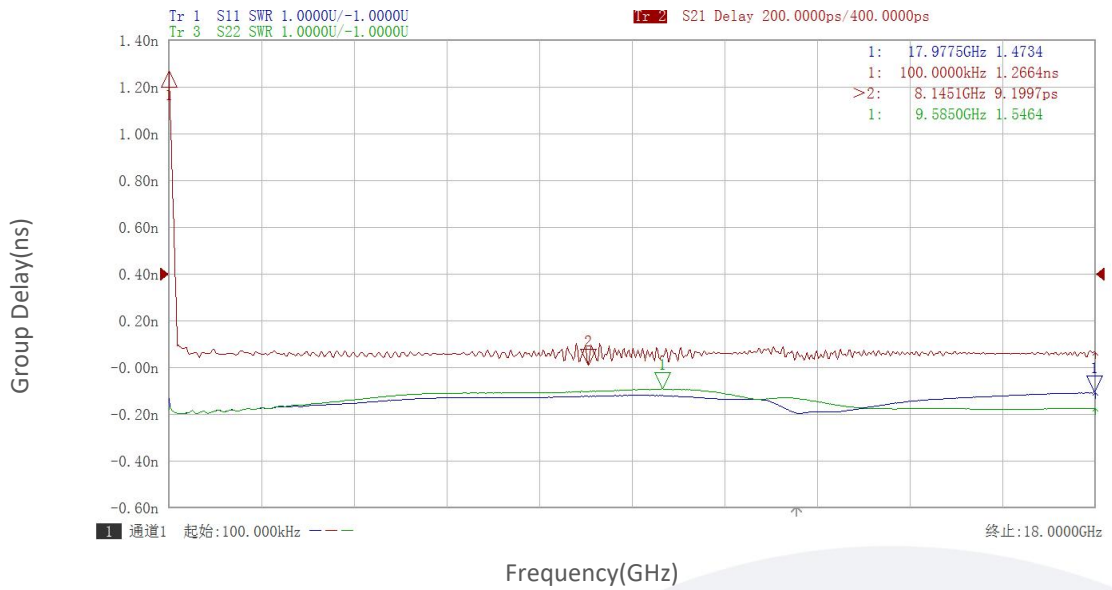
### DC to RF Isolation vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### Group Delay vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.