

Cryogenic Bias Tee

100KHz-18GHz /18V DC/SMA

Model: TLBT-100K18G-18-SS-Cryo

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

Features:

- Frequency range: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
Ruturn Loss		-15		dB
Isolation	35			dB
DC Voltage			18	V DC
DC Resistance		4		Ω
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	OFHC,Gold plated	
Finish	Bue Paint	
Size	30.7*16.2*12.7	mm

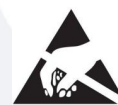
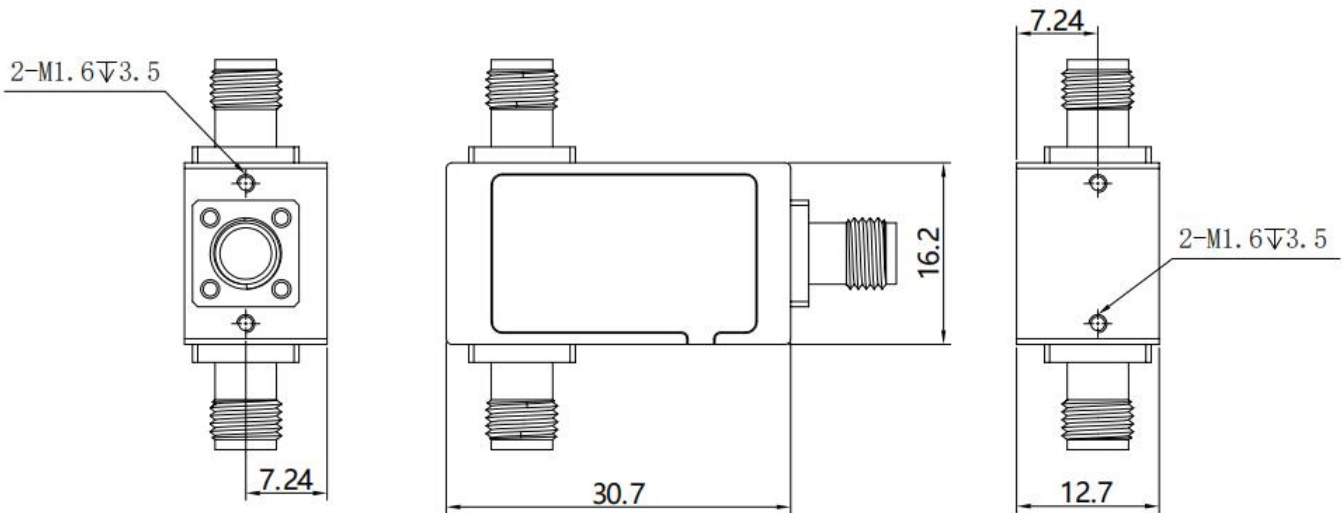
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+18 V
RF Input Power	+30 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

Regulatory Compliance:



ESD Protection: Strictly
adhere to ESD precautions
to prevent electrostatic
damage.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	10mK		+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			

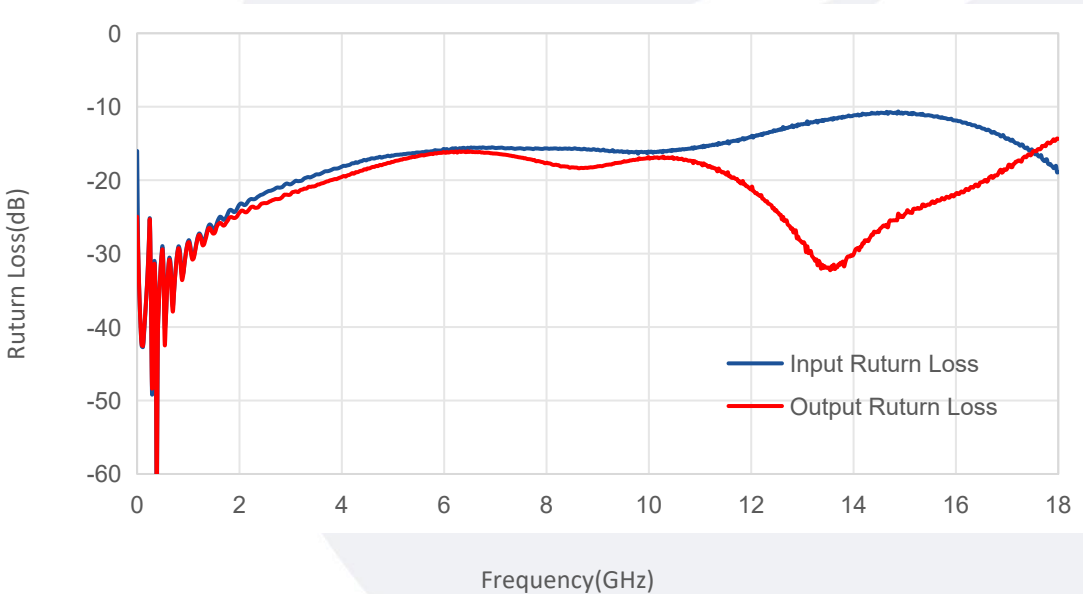
Ordering Information:

Base Number	Description	Revision
TLBT-100K18G-18-SS-Cryo	Cryogenic Bias Tee SMA,100KHz-18 GHz,+18V	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:

298K: **Return Loss vs Frequency**

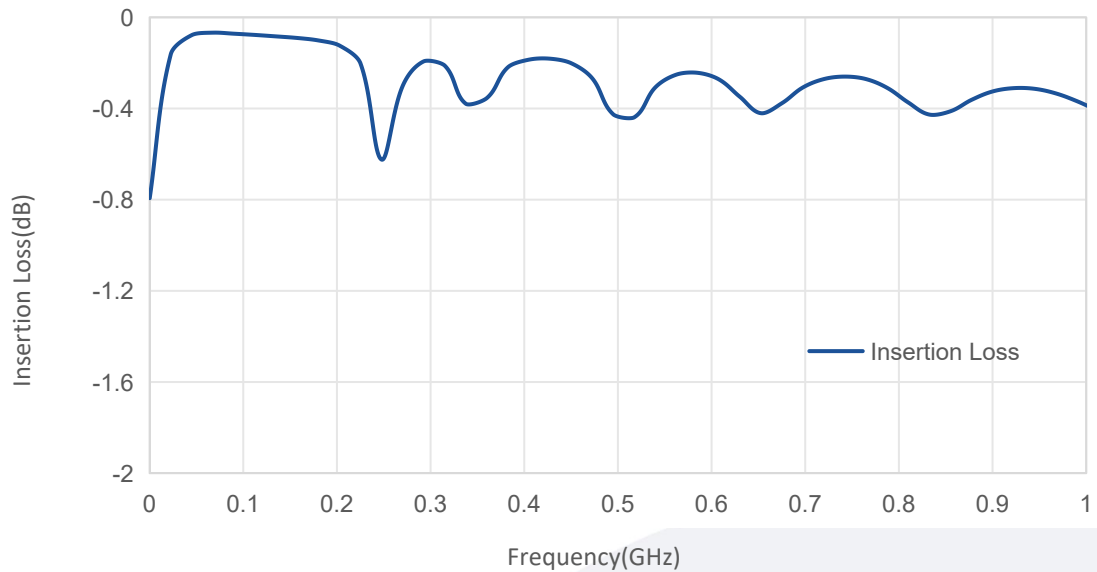


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

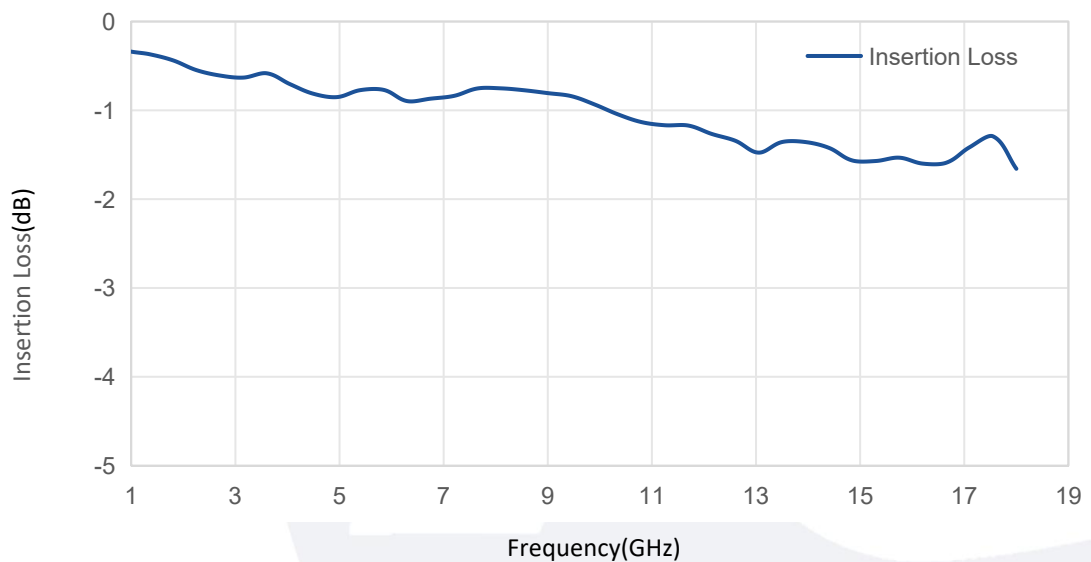
298K:

RF to Com Insertion Loss vs Frequency



298K:

RF to Com Insertion Loss vs Frequency

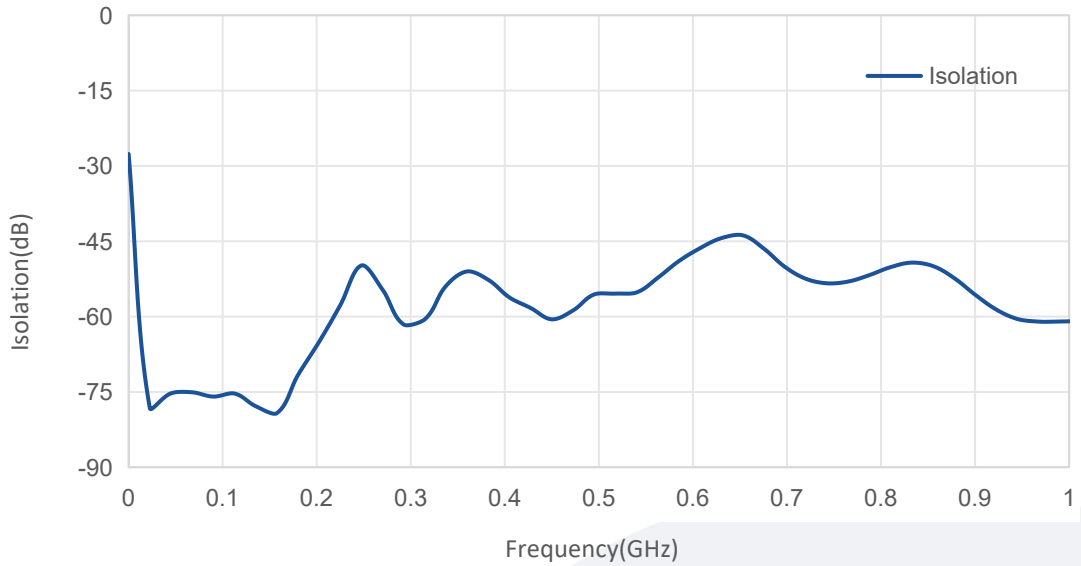


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

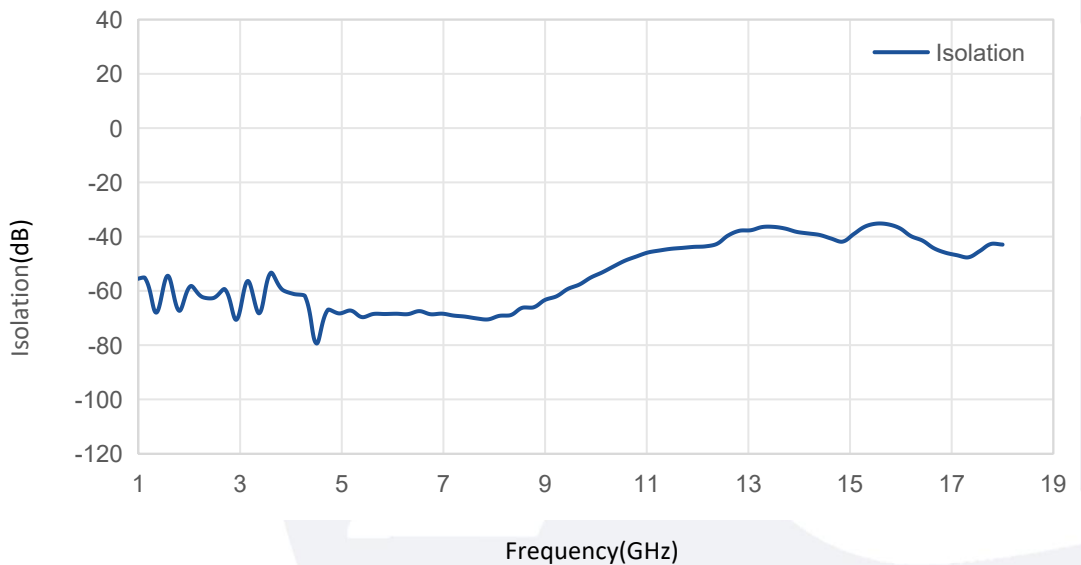
298K:

DC to Com Isolation vs Frequency



298K:

DC to Com Isolation vs Frequency

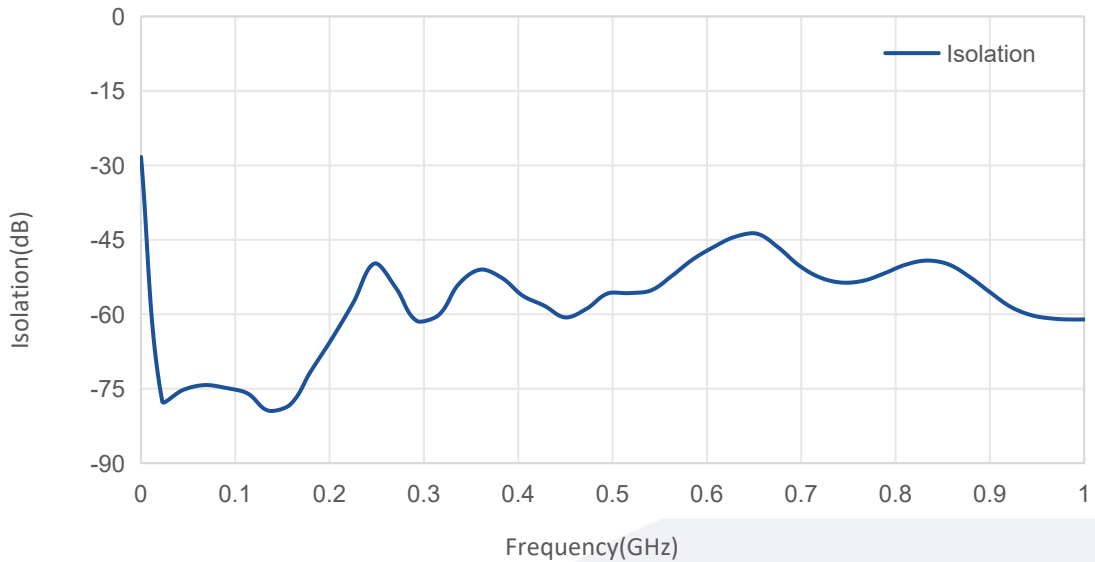


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

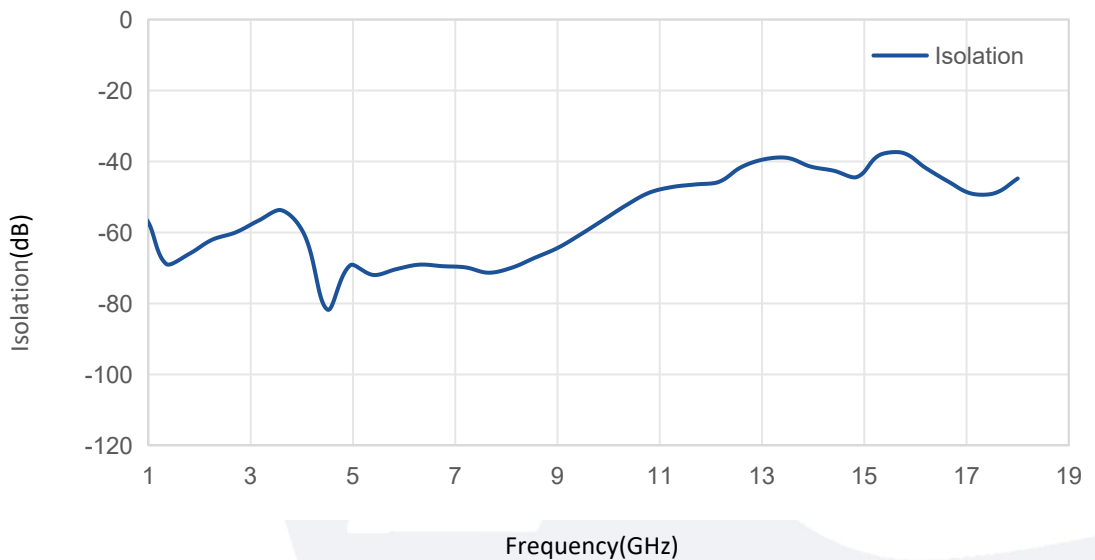
298K:

DC to RF Isolation vs Frequency



298K:

DC to RF Isolation vs Frequency

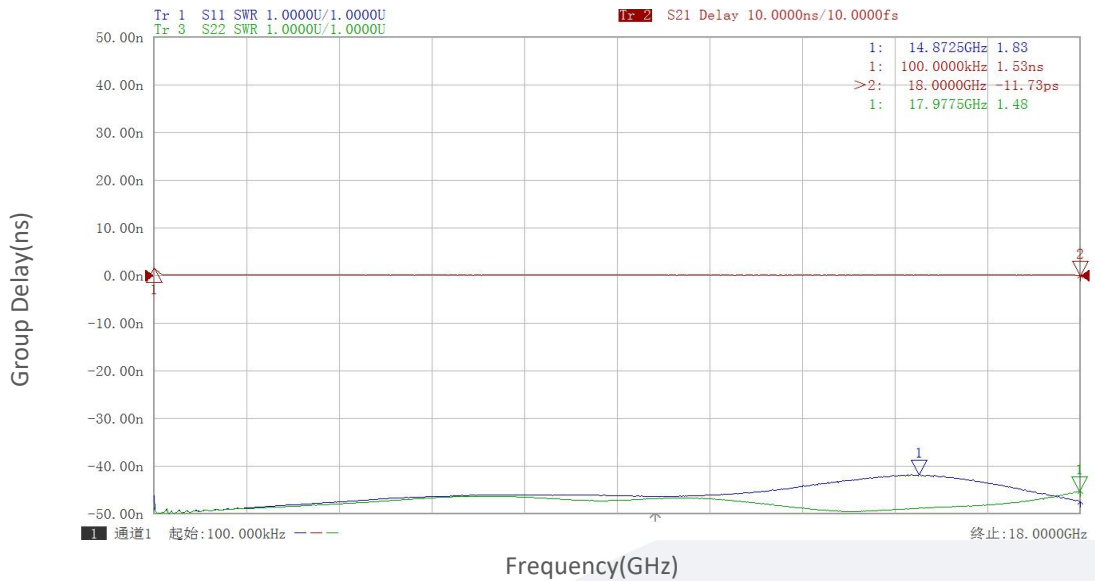


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

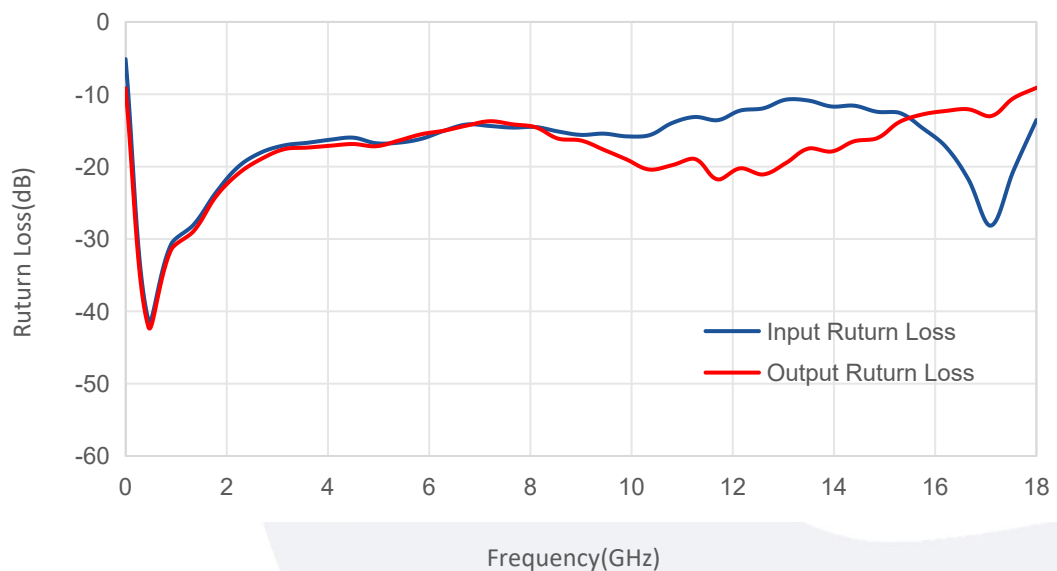
298K:

Group Delay vs Frequency



77K:

Return Loss vs Frequency

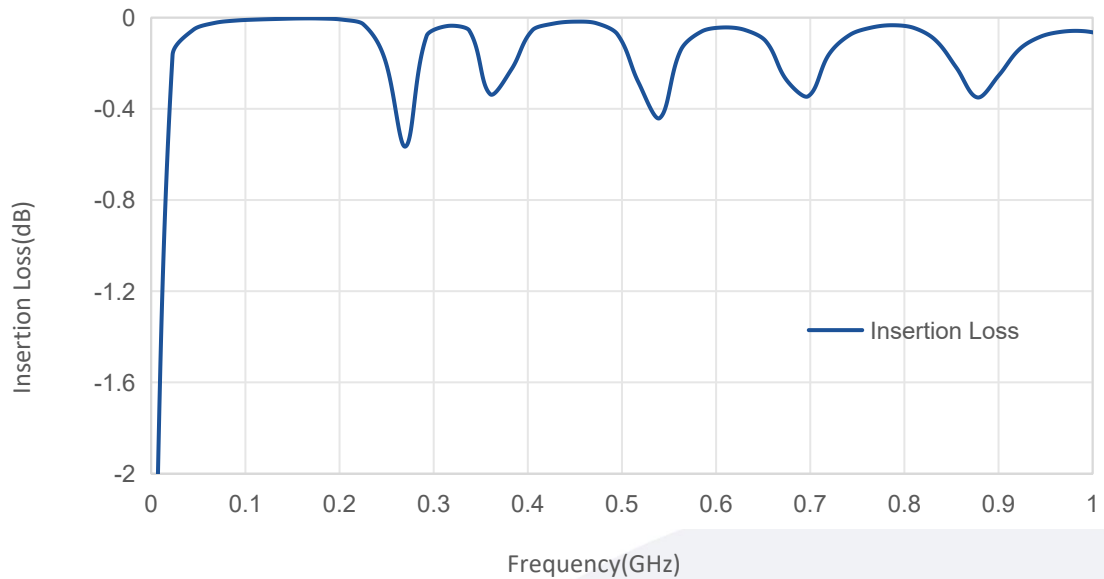


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

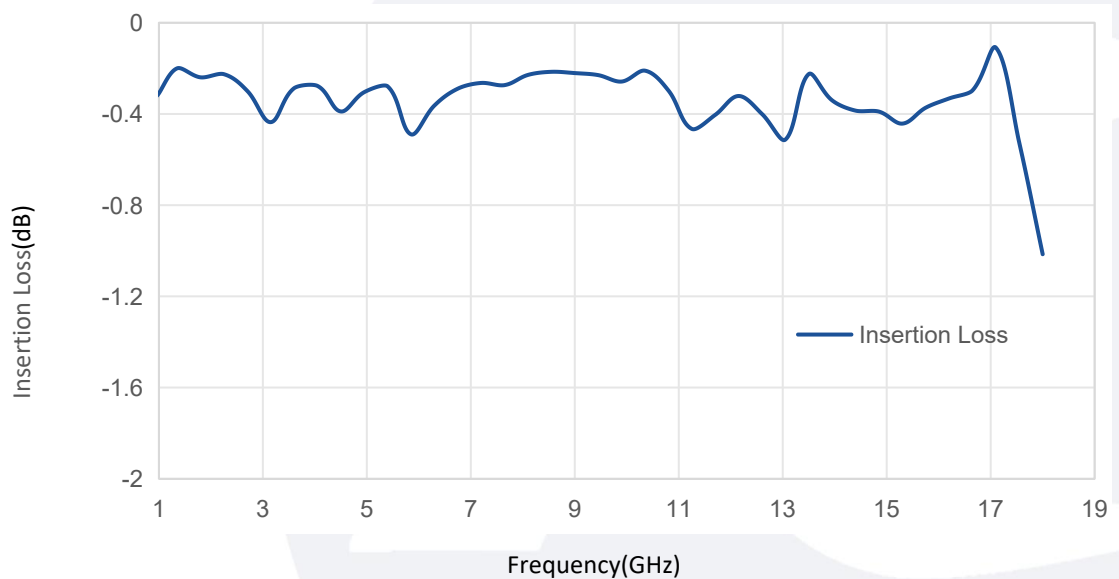
77K:

RF to Com Insertion Loss vs Frequency



77K:

RF to Com Insertion Loss vs Frequency

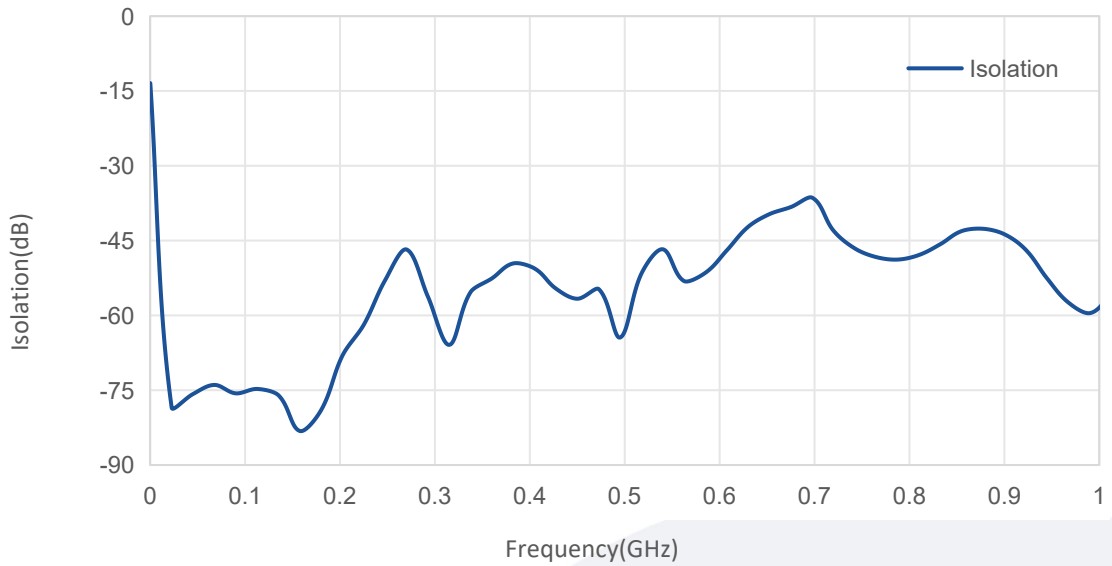


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

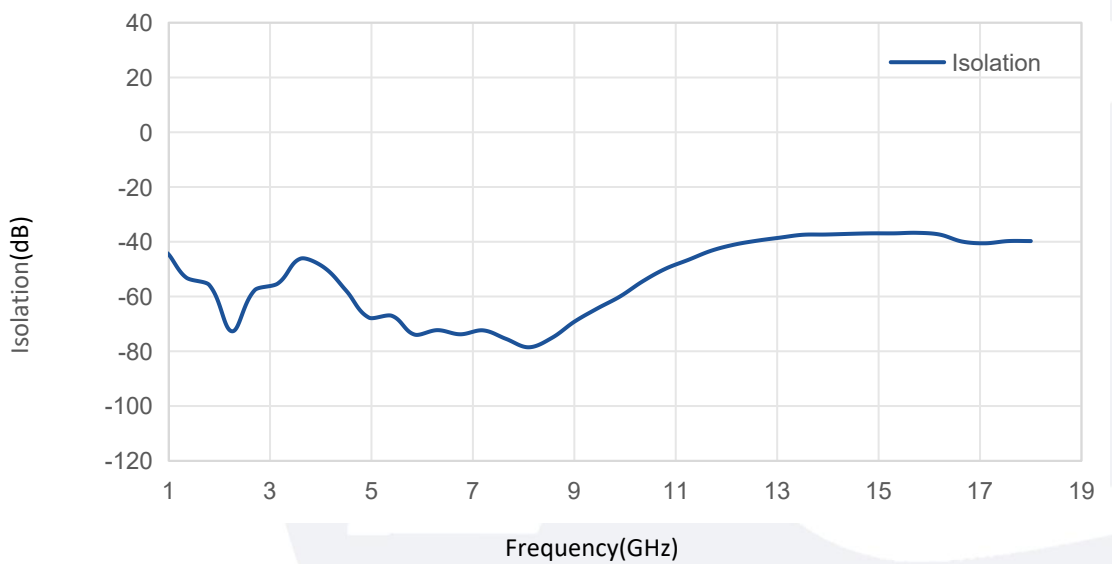
77K:

DC to Com Isolation vs Frequency



77K:

DC to Com Isolation vs Frequency

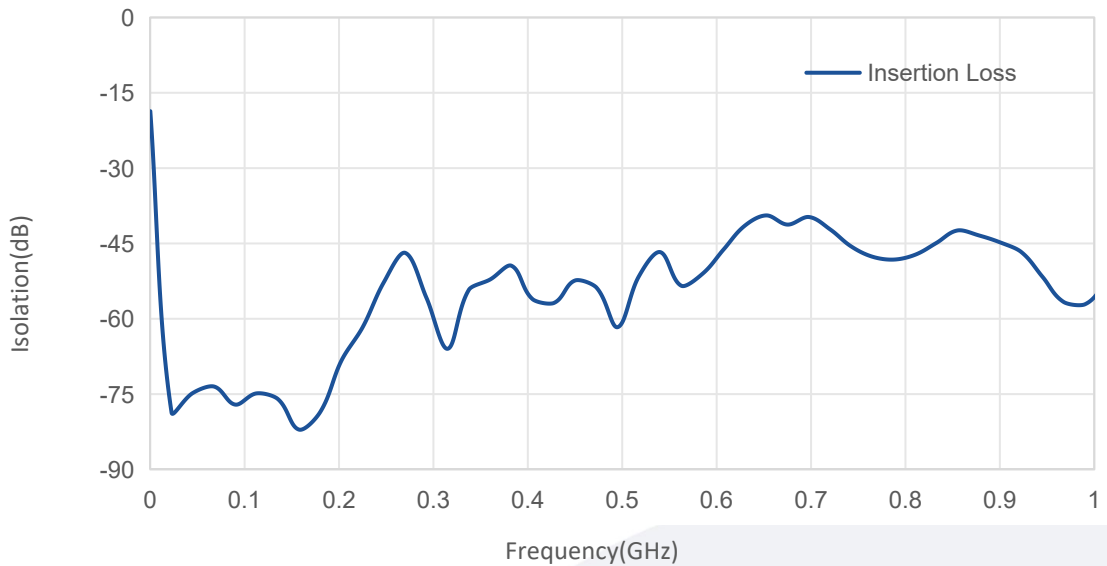


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

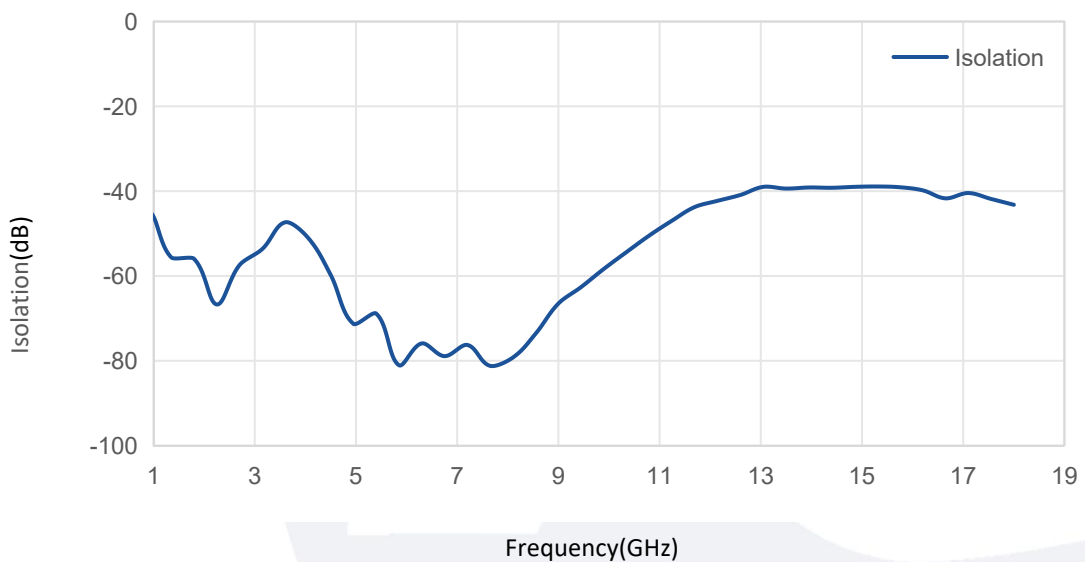
77K:

DC to RF Isolation vs Frequency



77K:

DC to RF Isolation vs Frequency

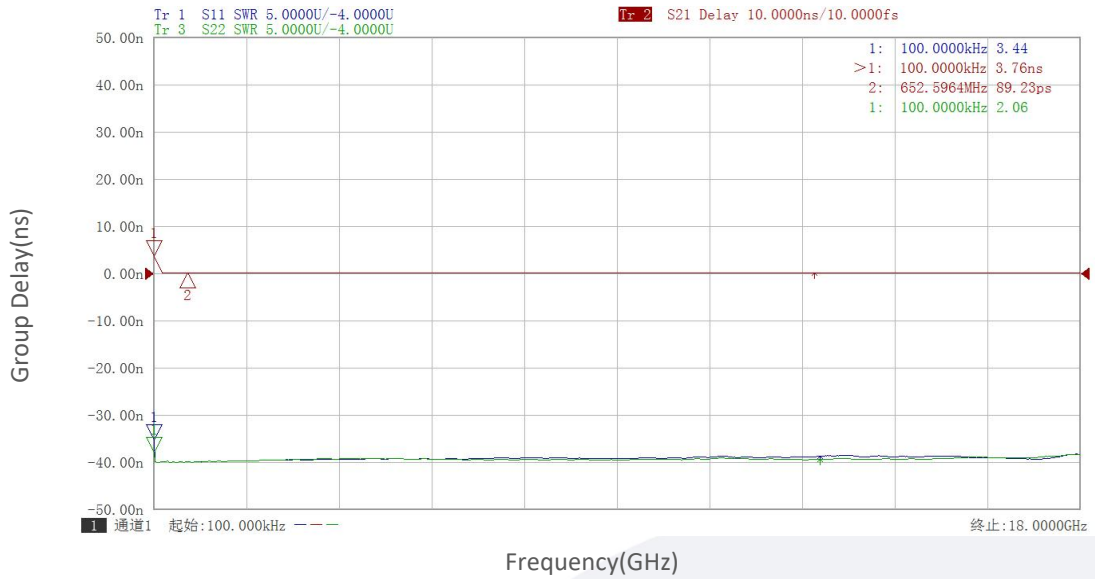


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

77K:

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.