

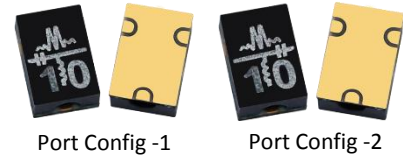
## LEAD-FREE / RoHS-COMPLIANT

### MINIATURE SURFACE MOUNT BIAS TEE

### BT-0010SMG

#### Features

- Frequency Range 20 MHz to 10 GHz
- 1 Watt RF Power Handling
- Miniature Surface Mount Package
- [Reflow Solderable](#)

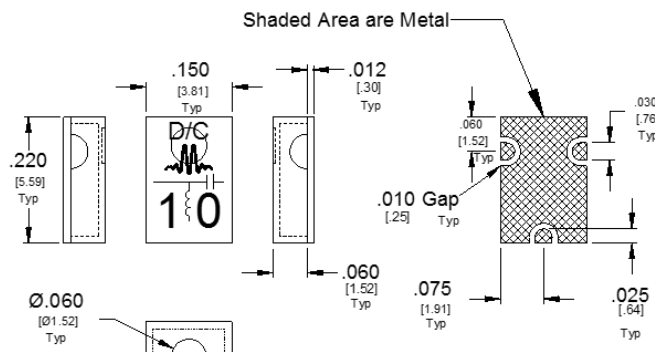


#### Electrical Specifications - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system

Parameter	Frequency Range	Min	Typ	Max
Insertion Loss (dB)	20 MHz to 30 MHz		2.5	
	30 MHz to 100 MHz		1	2.5
	100 MHz to 3 GHz		0.5	0.8
	3 GHz to 7 GHz		0.8	1
	7 GHz to 10 GHz		1	2
DC Current (mA)	20 MHz to 10 GHz			500
DC Resistance(Ohms)			<1	
Capacitance (uF)			1	
Inductance (nH)			320	
DC Port Isolation (dB)			40	
DC Voltage Maximum (V)				30
RF Power Maximum (W)				1

Model Number <sup>1</sup>	Description
BT-0010SMG-1 BT-0010SMG-2	20 MHz - 10 GHz Bias Tee, Surface Mount, <b>LEAD-FREE/RoHS COMPLIANT</b>

<sup>1</sup>Default is -2 when not specified.  
Connectorized test fixtures available. Consult factory.



Substrate material is 12-mil thick Rogers 4003, ½ Oz Electrodeposited Cu both sides.  
I/O Pads & Ground Plane Finish is 100-200 μ-inches per QQ-N-290A, Enig  
[Click here for suggested PCB layout.](#)

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# MINIATURE SURFACE MOUNT BIAS TEE

# BT-0010SMG

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## Typical Performance

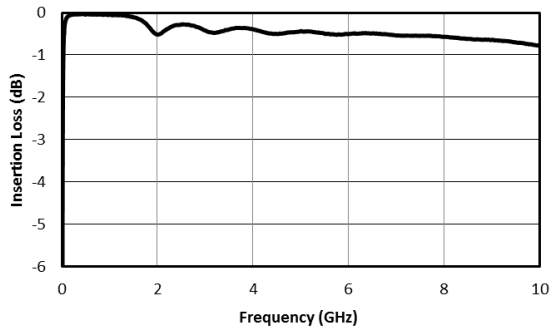


Fig. 1. RF insertion loss.

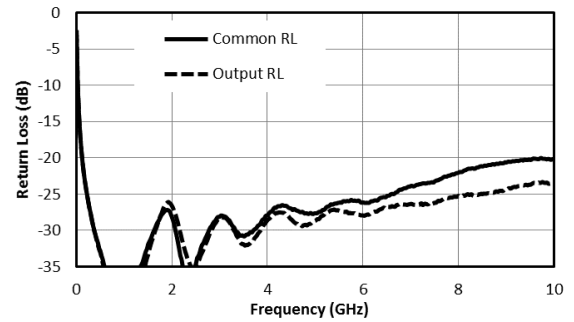


Fig. 2. Return loss.

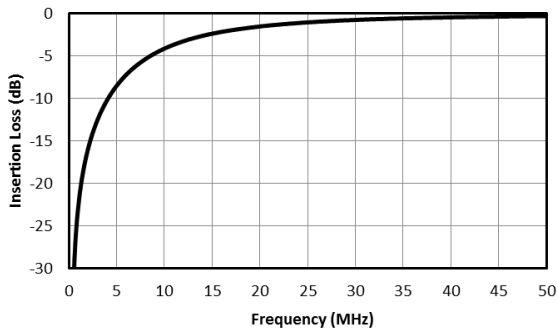


Fig. 3. Low frequency RF response.

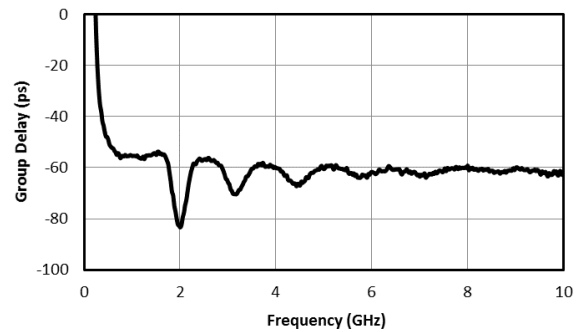


Fig. 4. Group delay.

**Typical Performance vs Bias Current at Low frequencies**

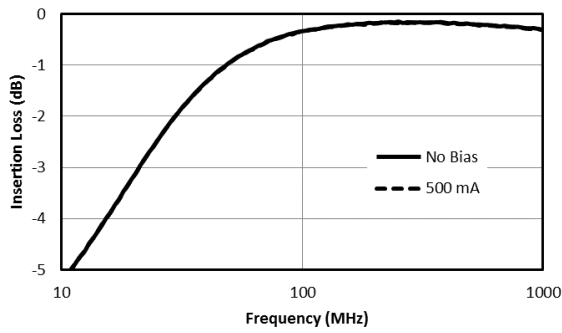


Fig. 5. Insertion Loss vs Bias Current.

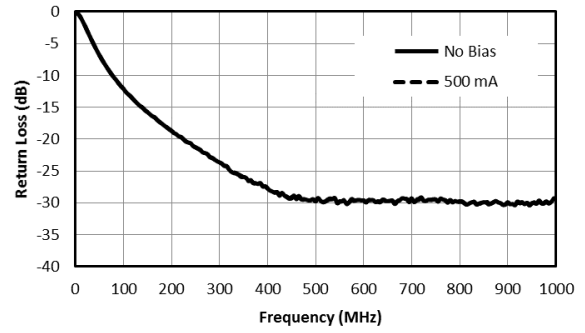


Fig. 6. Common Return Loss vs Bias Current.

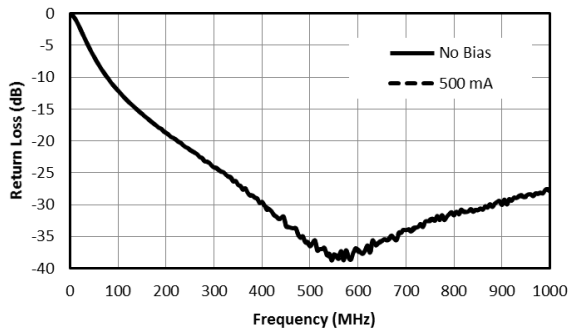


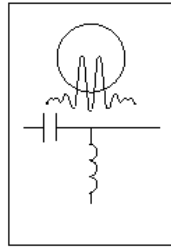
Fig. 7. RF Return Loss vs Bias Current.

**MINIATURE SURFACE MOUNT BIAS TEE**

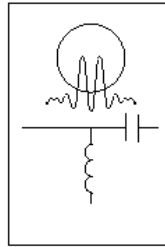
**BT-0010SMG**

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**Port Configuration Option**



BT-0010SMG-1



BT-0010SMG-2

**Revision History**

Revision code	Revision Date	Comment
B	10/20	Bias Current plots added

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