

## LEAD-FREE / RoHS-COMPLIANT

### MINIATURE SURFACE-MOUNT BIAS-TEE

### BTL-0035SMG

#### Features

- Frequency Range: 500 kHz to 35 GHz
- Frequency Range with [External Coil](#): 5 kHz to 35 GHz
- 1 Watt RF Power Handling
- Miniature Surface Mount Package
- Lead Free Assembly
- [Reflow Solderable](#)

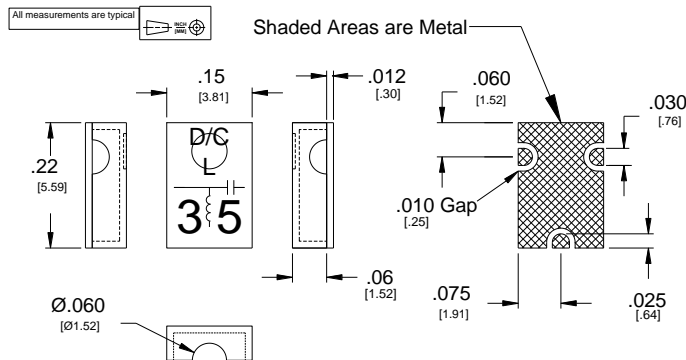


**Electrical Specifications** - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system

Parameter	Frequency Range	Min	Typ	Max
Insertion Loss (dB)	500 kHz to 5 MHz		1	6
	5 MHz to 28 GHz		1	2.5
	28 to 35 GHz		2	
DC Current (mA)	500 kHz to 35 GHz			500
DC Resistance (Ohms)			<1.5	
Capacitance (uF)			1	
Inductance (uH)			17	
DC Port Isolation (dB)			35	
DC Voltage Maximum (V)				30
RF Power Maximum (W)				1

Model <sup>1</sup>	Description
BTL-0035SMG-1 BTL-0035SMG-2	500 kHz - 35 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.  
ENIG, Gold 2-8 μ-inches, over solderable electroplated nickel, 100-200 μ-inches per QQ-N-290A  
[Click here for suggested PCB layout.](#)

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**Typical Performance**

Insertion Loss data was taken using TRL de-embedding procedures.

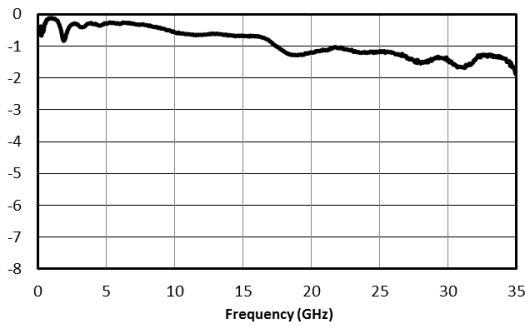


Fig. 1. Insertion loss.

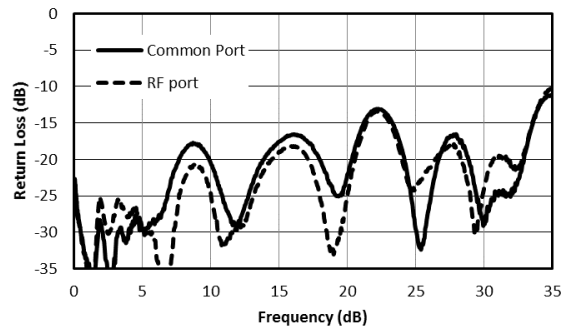


Fig. 2. Return loss

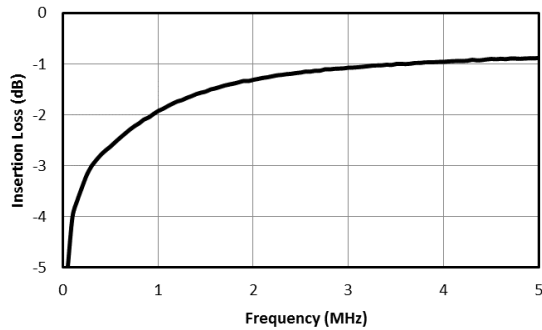


Fig. 3. Low Frequency RF Response

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

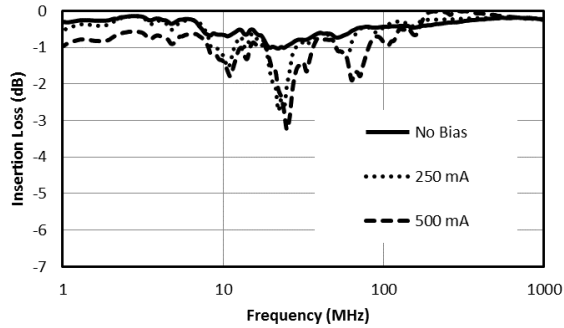


Fig. 4. Insertion loss vs Bias Current.

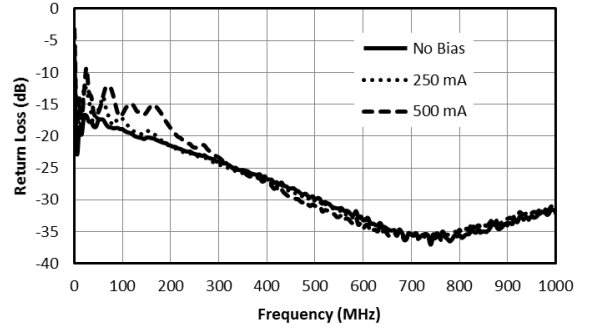


Fig. 5. Common Return Loss vs Bias Current

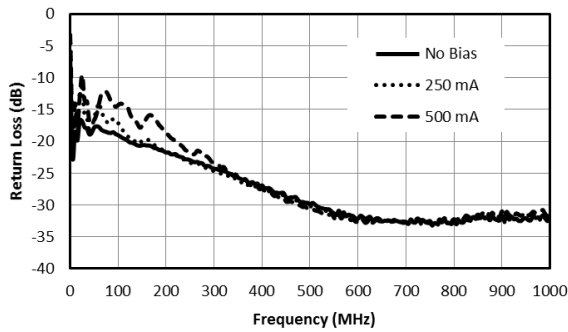


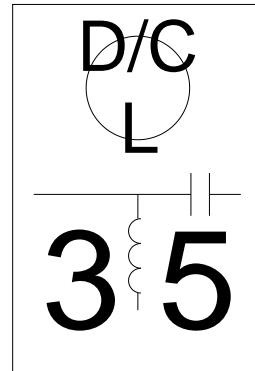
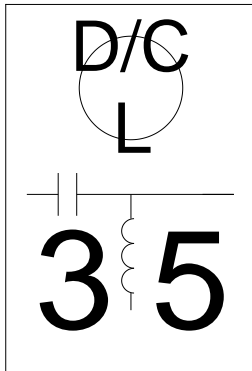
Fig. 6. RF Return Loss vs Bias Current

**MINIATURE SURFACE MOUNT BIAS TEE**

**BTL-0035SMG**

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Port Configuration Option



**BTL-0035SMG-1**

**BTL-0035SMG-2**

Revision History

Revision code	Revision Date	Comment
-	1/2021	Datasheet Initial Release

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