

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](#)

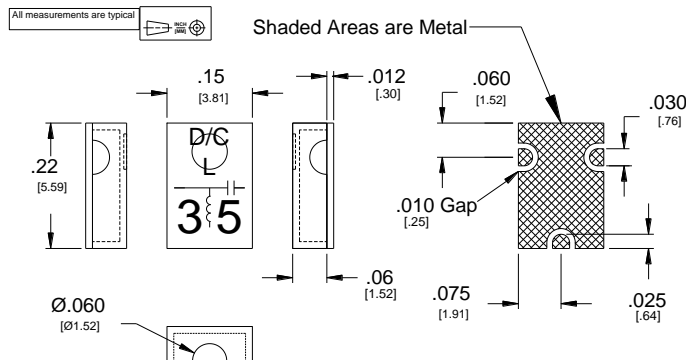


Electrical Specifications - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system

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 ¹	Description
BTL-0035SMG-1 BTL-0035SMG-2	500 kHz - 35 GHz Bias Tee, Surface Mount, LEAD-FREE/RoHS COMPLIANT

¹Default 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.

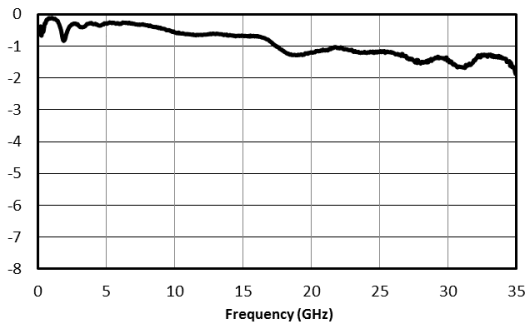


Fig. 1. Insertion loss.

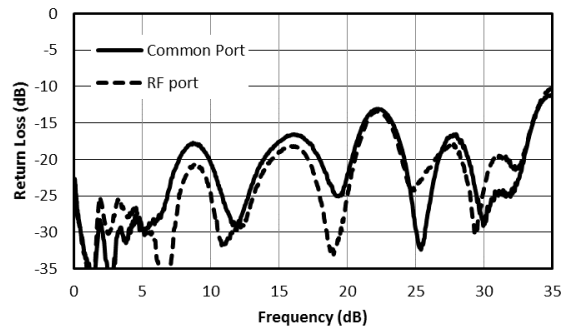


Fig. 2. Return loss

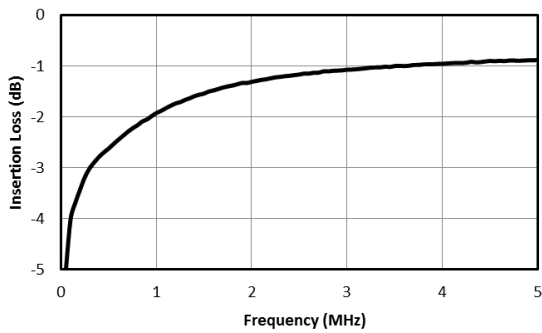


Fig. 3. Low Frequency RF Response

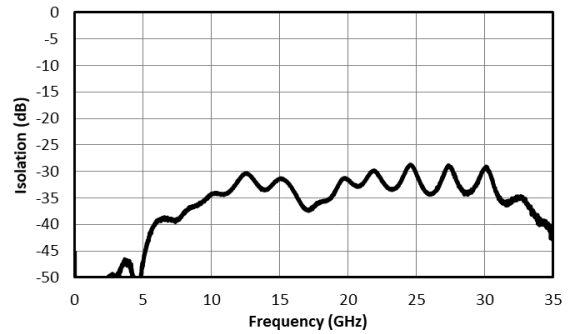


Fig. 4. DC- RF Isolation

Typical Performance vs Bias Current at Low frequencies

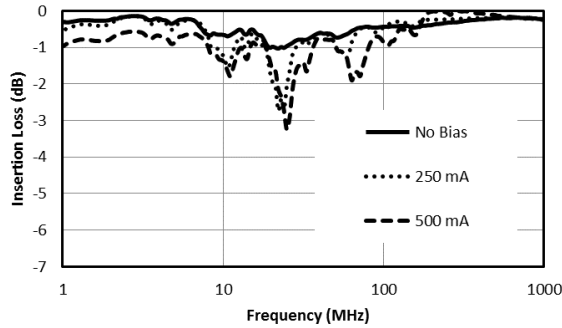


Fig. 4. Insertion loss vs Bias Current.

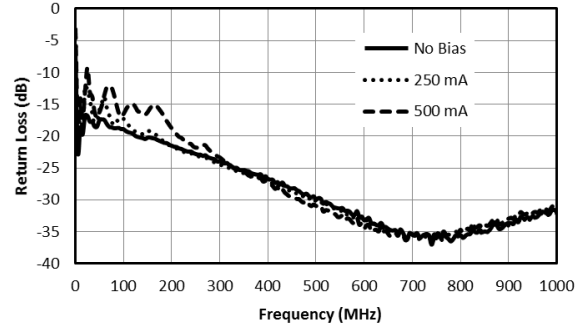


Fig. 5. Common Return Loss vs Bias Current

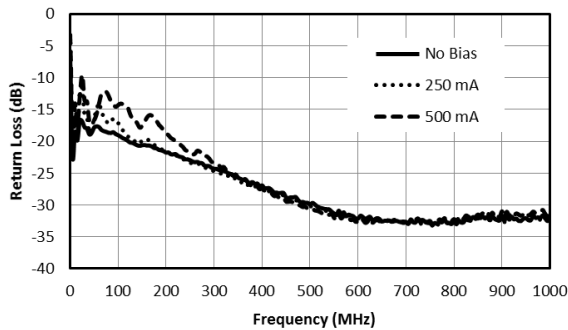


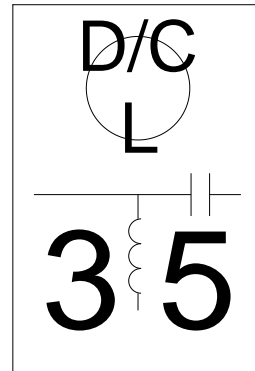
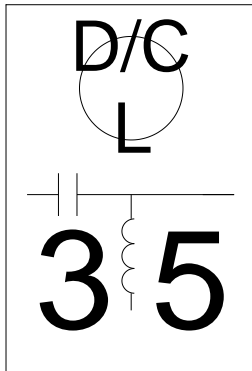
Fig. 6. RF Return Loss vs Bias Current

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Port Configuration Option



BTL-0035SMG-1

BTL-0035SMG-2

Revision History

Revision code	Revision Date	Comment
A	4/2021	DC-RF Isolation Plot added

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