

BTL-0026SMG-1

Miniature Surface Mount Bias Tee

DEVICE OVERVIEW

General Description

The BTL-0026SMG is a packaged bias tee featuring excellent insertion loss and superior isolations over a broad 500 kHz to 26 GHz bandwidth. Tight fabrication tolerances allow for low unit to unit variation enabling accurate simulations using the provided s3p file taken from measured production units. The bias tee is available in a compact package and is suitable for applications such as amplifier biasing, diode biasing and DC level shifting.



[Download s-parameters here](#)

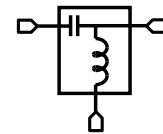
Features

- Frequency Range: 500 kHz to 26 GHz
- Frequency Range with External Coil: 5 kHz to 26 GHz
- 1 Watt RF Power Handling
- DC Current 500 mA
- Miniature Surface Mount Package
- Lead Free Assembly
- Reflow Solderable

Applications

- Test and Measurement Equipment

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
BTL-0026SMG-2	Miniature Surface Mount Bias Tee	SMG	RoHS REACH	Released	EAR99
BTL-0026SMG-1	Miniature Surface Mount Bias Tee	SMG	RoHS REACH	Released	EAR99

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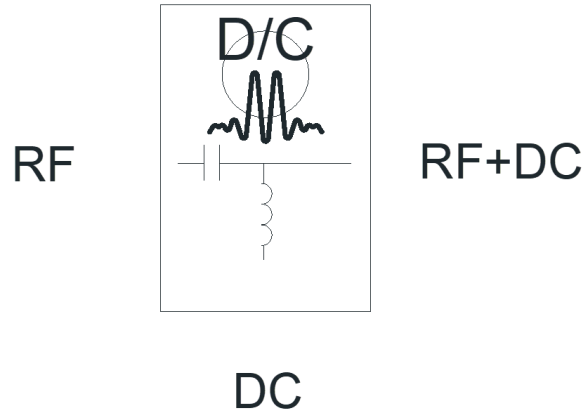
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Revision History

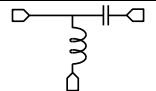
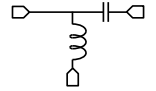
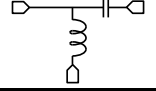
Revision Code	Revision Date	Comment
A	2021-04-01	DC-RF isolation plot added

Port Configuration and Functions

Port Diagram



Port Functions

Port	Function	Description	DC Equivalent Circuit
Common	RF+DC	This port is DC blocked to the RF port and DC connected to the DC port through an internal RF choke.	
DC	DC	This port is internally connected to an RF choke which is DC connected to the RF+DC port and DC blocked to the RF port.	
RF	RF	This port is internally DC blocked to the RF+DC and DC ports.	

Specifications

Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
DC Voltage	30	V
DC Current	0.5	A
RF Power Handling	1	W
Maximum Operating Temperature	100	°C
Minimum Storage Temperature	-65	°C
Maximum Storage Temperature	125	°C

Package Information

Parameter	Details	Rating
Dimensions	-	3.81 x 5.59 mm
Moisture Sensitivity Level	-	MSL 1

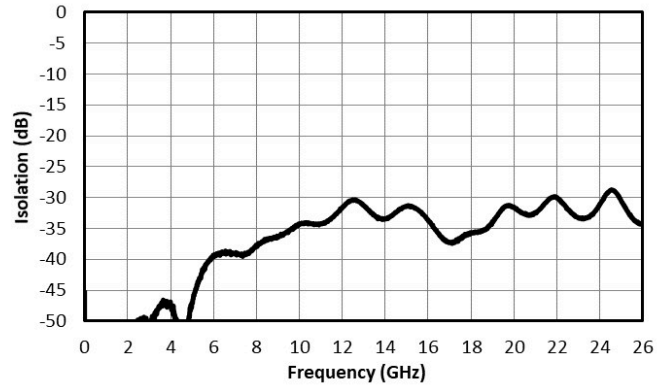
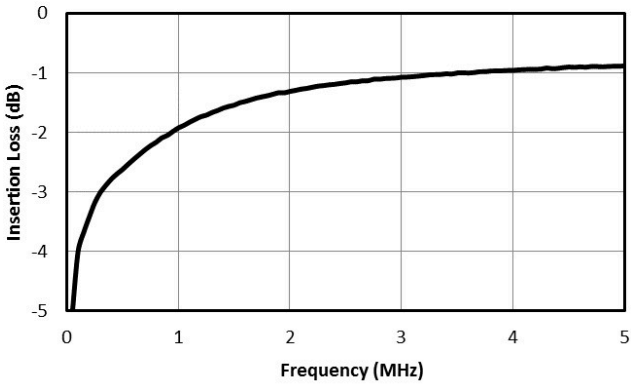
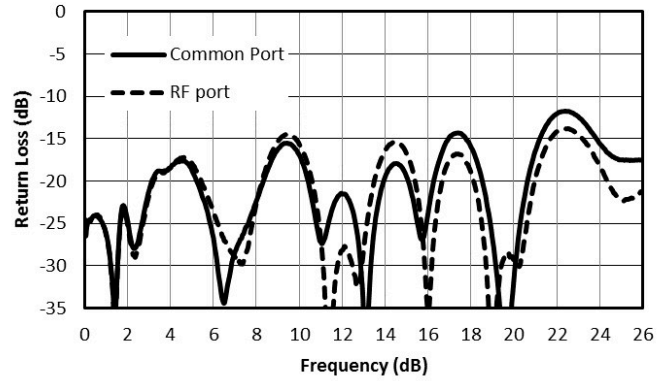
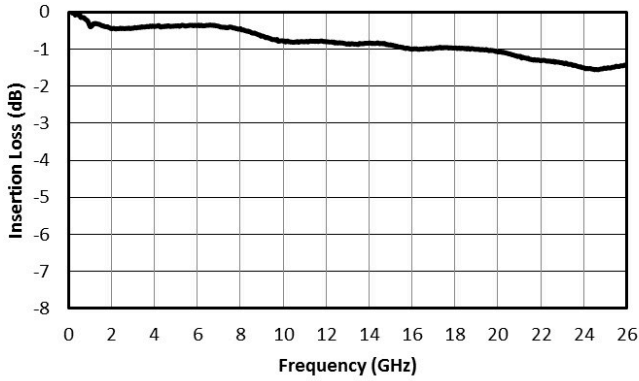
Electrical Specifications

Specifications guaranteed at +25C, measured in a 50-Ohm system

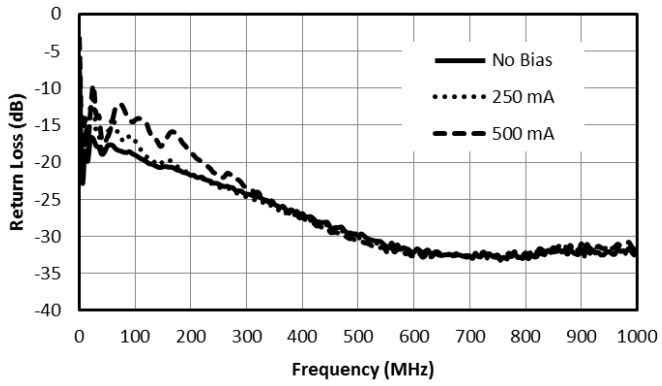
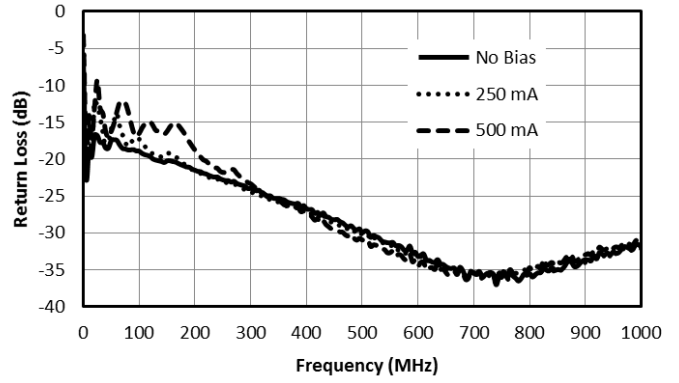
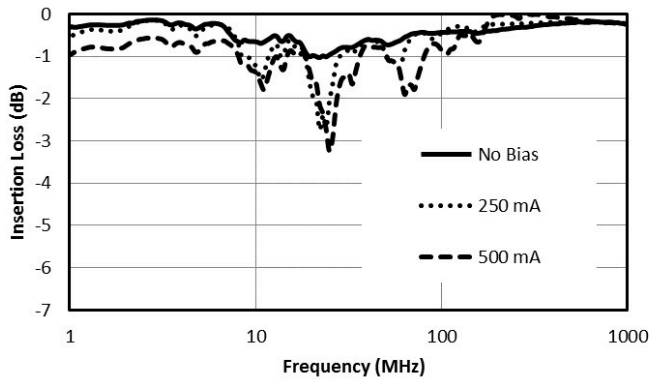
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Capacitance	-	0.0005	26	-	1	-	μF
DC Port Isolation	-	0.0005	26	-	35	-	dB
DC Resistance	-	0.0005	26	-	1.5	-	Ω
Inductance	-	0.0005	26	-	17	-	μH
Insertion Loss	-	0.0005	0.005	-	1	6	dB
Insertion Loss	-	20	26	-	1.5	2.5	dB
Insertion Loss	-	0.005	20	-	1	2	dB

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

Typical Performance Plots



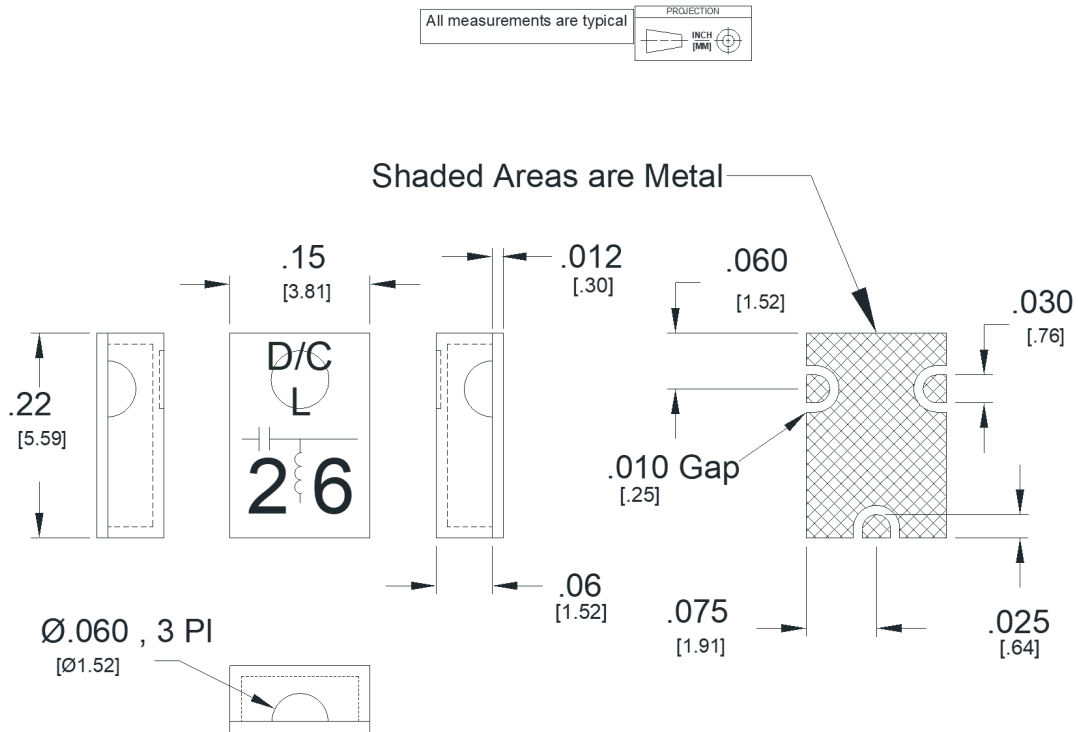
Typical Performance vs Bias Current at Low frequencies



Mechanical Data

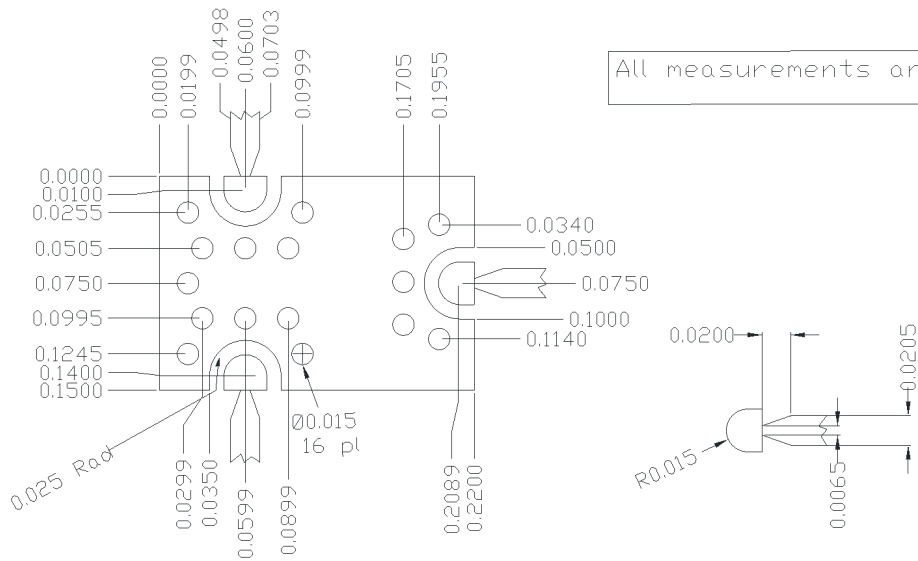
Outline Drawing

Download : [Outline 2D Drawing](#) | [Outline 3D Drawing](#) | [Outline 3D STP](#)



Footprint Image

Download : [Footprint Drawing](#)



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