SWM-60390320-12-SB

Rev. 1.1

Full Waveguide E-Band Magic Tee, 60 to 90 GHz

Description:

Model SWM-60390320-12-SB is an E band magic tee that covers the frequency range of 60 to 90 GHz. This magic tee is a four-port hybrid coupler and/or power divider with two collinear arms, an E-plane (difference) arm, and an H-plane (sum) arm. The magic tee offers a 0.35 dB nominal insertion loss and high isolation between the two collinear arms and between the sum and difference arms. All waveguide ports have standard WR-12 waveguides with UG-387/U flanges.

Features:

- Full Waveguide Operation
- Low Insertion Loss and High Isolation
- Compact Package

Applications:

- Test Labs
- Test Instrumentation
- Sub-assemblies

Electrical Specifications:

Parameter		Minimum	Typical	Maximum
Frequency		60 GHz		90 GHz
Insertion Loss			0.35 dB	
Isolation	Sum and Difference Ports		30 dB	
	Collinear Ports		20 dB	
Power Imbalance			± 0.3 dB	± 0.5 dB
Phase Imbalance			±2 °	±4 °
VSWR			1.5:1	
Specification Temperature			+25°C	
Operating Temperature		-40°C		+85°C

Mechanical Specifications:

Item	Specification
Sum and Difference Ports	WR-12 Waveguide with UG-387/U Flange
Collinear Ports	WR-12 Waveguide with UG-387/U Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.3 Oz
Outline	WM-BE

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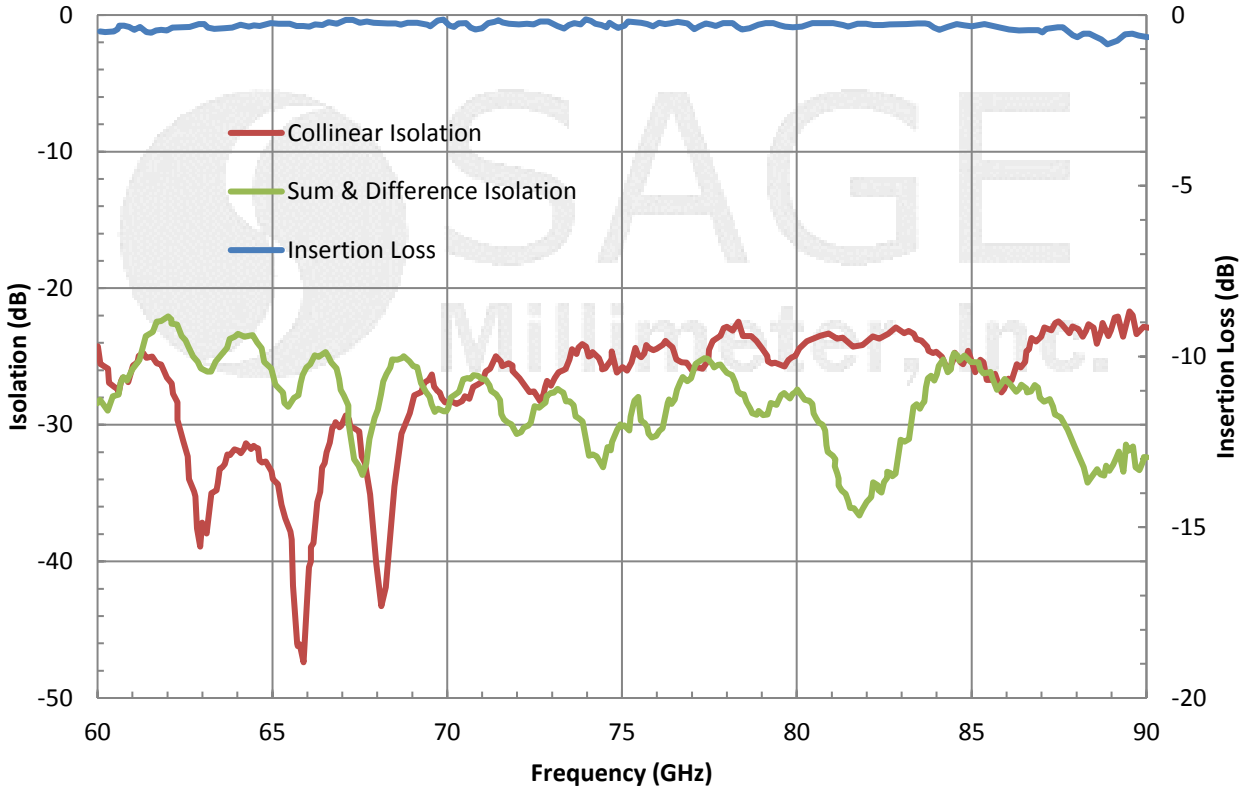
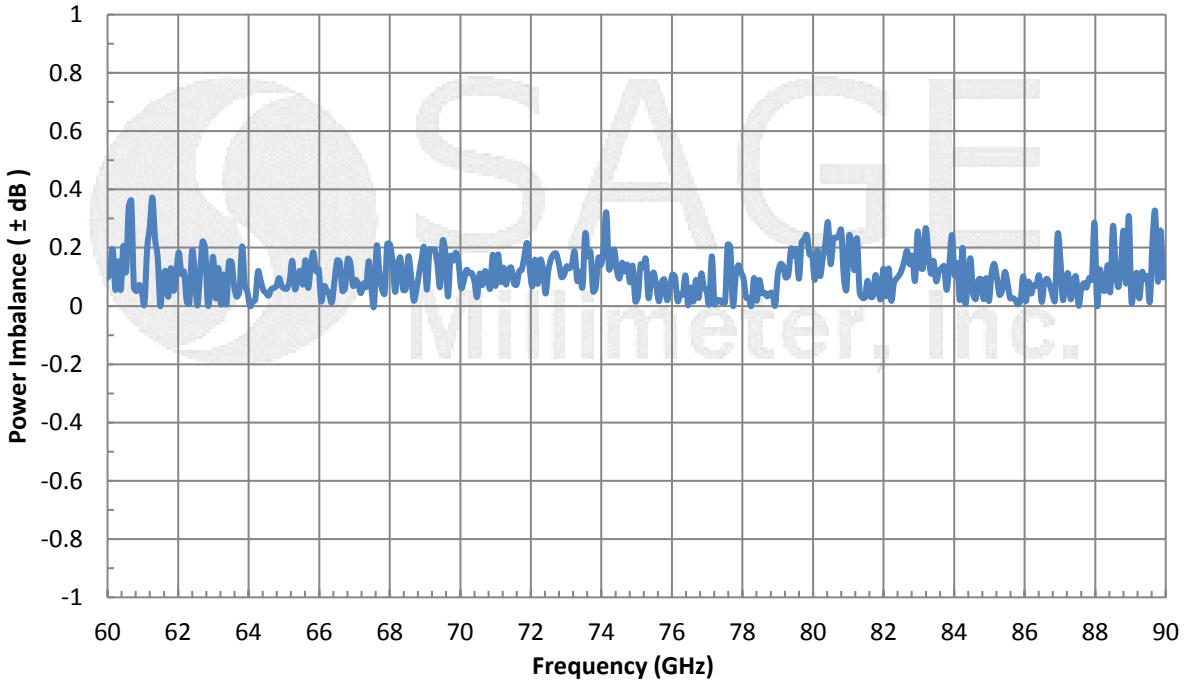
Typical Isolation and Insertion Loss vs. Frequency



Typical Power Imbalance vs. Frequency



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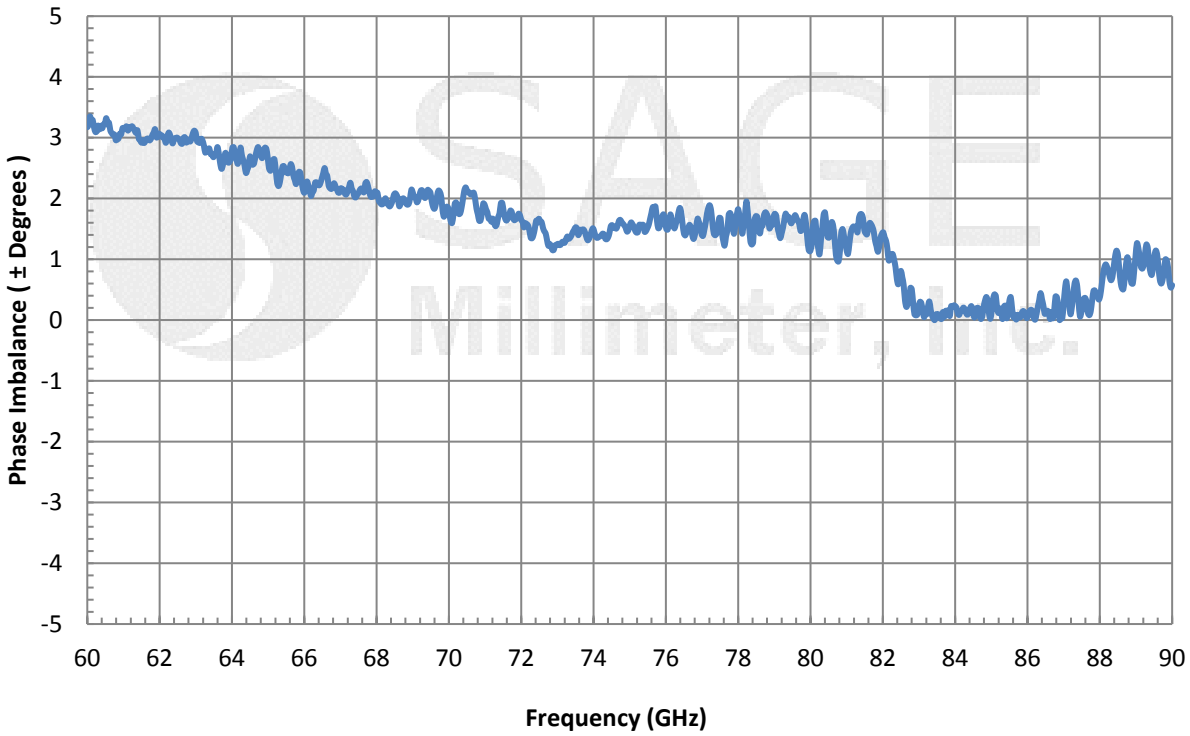
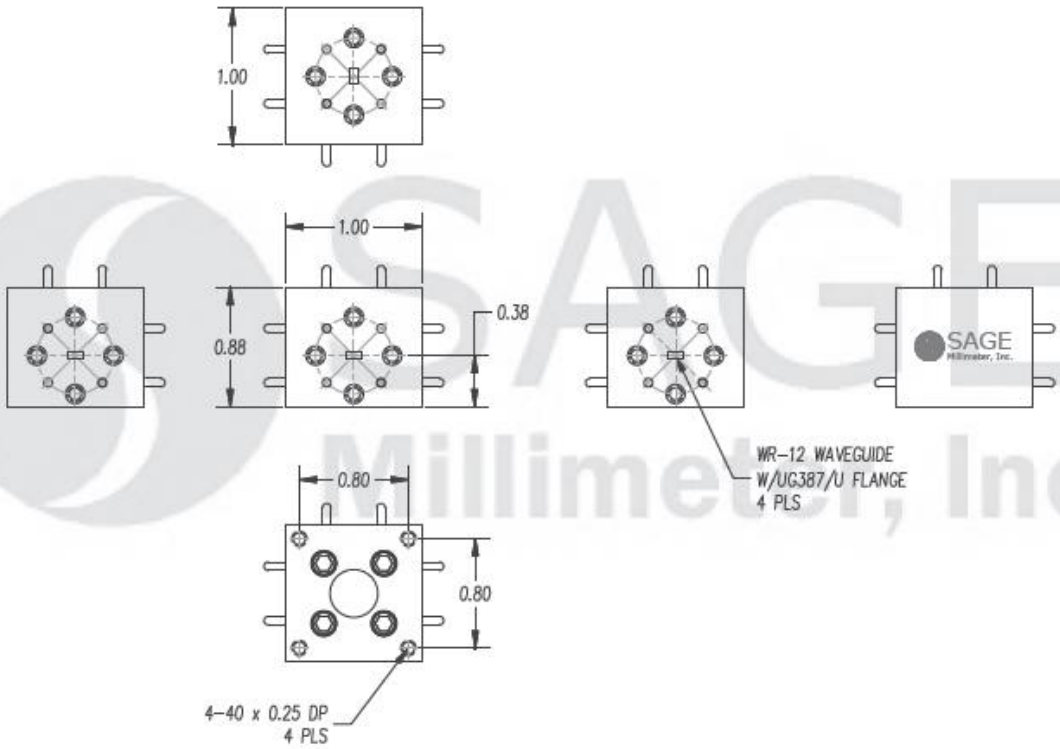
Typical Phase Imbalance vs. Frequency



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



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Note:

- All data are presented using a limited sample lot. Actual data may vary unit to unit.
- All testing was performed under +25˚C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- Any foreign objects in the waveguide will degrade performance and/or damage the device.

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