

### WR-12 Waveguide Magic Tee, 71 to 86 GHz

**SWM-71386320-12-SB** is an E band magic tee that covers the frequency range of 71 to 86 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 0.4 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.



### **Electrical Specifications:**

Parameter		Minimum	Typical	Maximum
Frequency Range		71 GHz		86 GHz
Insertion Loss			0.4 dB	
Isolation	Sum and Difference Ports		30 dB	
	Collinear Ports		20 dB	
Return Loss		12 dB	15 dB	
Specification Temperature			+25°C	
Operating Temperature		-40°C		+85°C

# **Mechanical Specifications:**

Item	Specification		
RF Ports	WR-12 Waveguide with UG-387/ Flange		
Material	Aluminum		
Finish	Gold Plated		
Weight	3.8 Oz		
Outline	WM-BE		

**ECCN** 

EAR99

#### **FEATURES**

- · Low Insertion Loss
- High Isolation
- Compact Package

#### **APPLICATIONS**

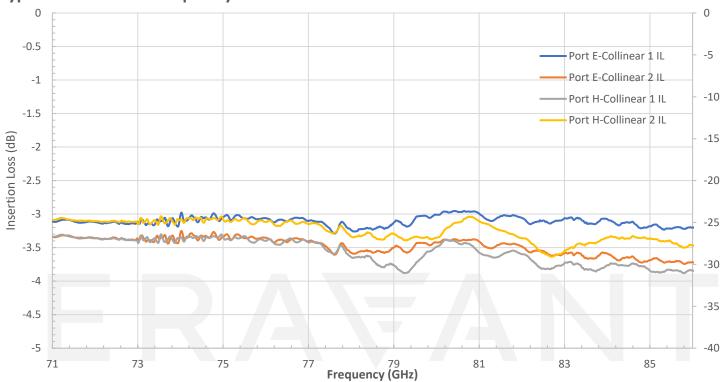
- Test Labs
- Test Instrumentation
- Sub-assemblies

#### **SUPPLEMENTAL DETAILS**

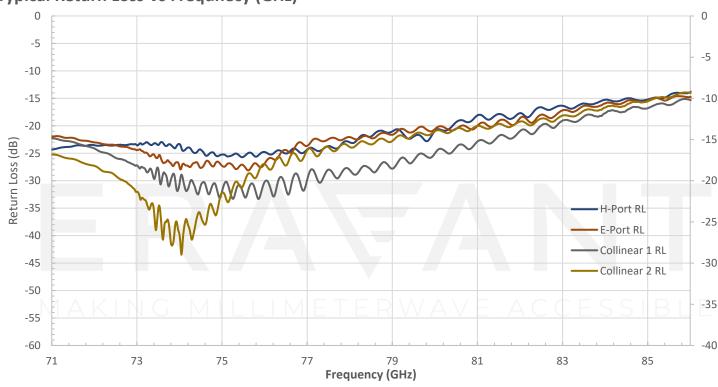


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## **Typical Insertion Vs Frequency**

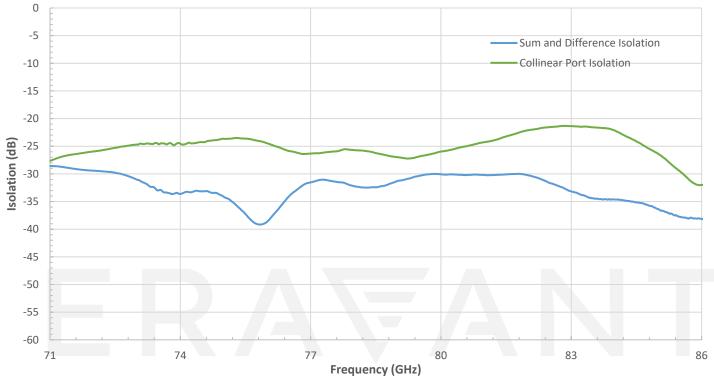


# Typical Return Loss Vs Frequnecy (GHz)

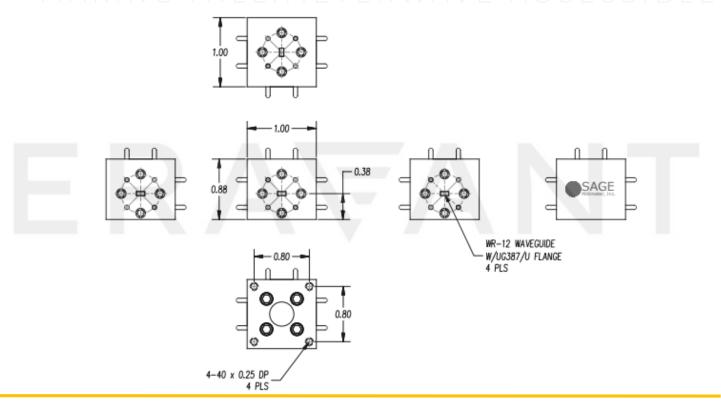


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## **Typical Isolation Vs Frequency**



Mechanical Outline: Unless otherwise specified, all dimensions are in inches [millimeters]





#### NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All
  testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

#### **CAUTION:**

• If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.

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