**Rev 1.1** 

# 8-Way Waveguide Power Divider, 75 to 105 GHz

### **Description:**

Model SWP-75311408-10-E2-H is a W band, 8-way in-line waveguide power divider that operates across the frequency range of 75 to 105 GHz. The power divider offers a typical insertion loss of 4.0 dB at each output port and a typical isolation of 20 dB. The ports are well balanced and in phase for either power dividing or power combining applications across the band. The power divider features a 90° twist between the input and output ports for convenient sub-assembly configurations. All ports are WR-10 waveguides and UG-387/U-M flanges. Other configurations are available under different model numbers.



### **Features:**

- 90° H-Plane to E-Plane Twist
- High Isolation
- Inline Package

### **Applications:**

- Power Combining and Dividing
- Power Amplifiers
- Sub-assemblies

### **Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		105 GHz
Power Unbalance		±0.5 dB	
Insertion Loss		4.0 dB	
Isolation (Adjacent Ports)		20 dB	
Isolation (Non Adjacent Ports)	20 dB	30 dB	
Input / Output Return Loss	_ //	14 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

### **Mechanical Specifications:**

Item	Specification	
Input	WR-10 Waveguide with UG-387/U-M Flange	
Outputs	WR-10 Waveguide with UG-387/U-M Flange	
Dimension	2.20" (L) X 14.5" (W) X 1.00" (H)	
Output Port Separation	1.85"	
Material	Brass	
Finish	Gold Plated	
Weight	104 Oz	
Outline	WP-W8I-T-1.85	



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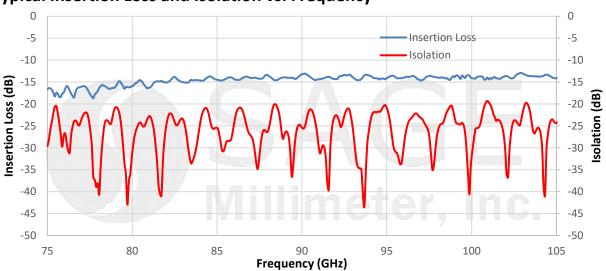
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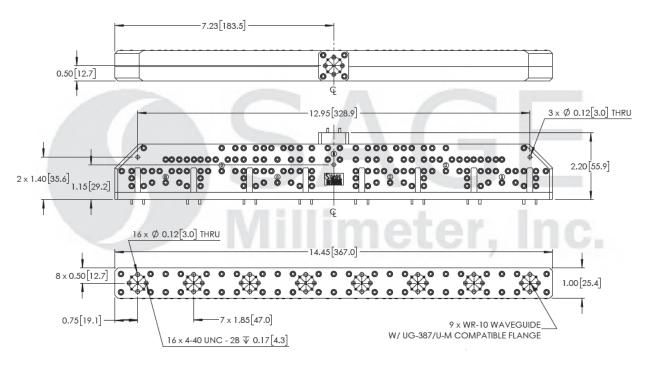
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### Typical Insertion Loss and Isolation vs. Frequency



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



#### Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25°C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

### **Caution:**

Any foreign objects in the waveguide will degrade performance and/or damage the device.



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