

# SWP-50366308-15-E1

Rev. 1.0

## 8-Way Waveguide Power Divider, 50 to 66 GHz

### Description:

**Model SWP-50366308-15-E1** is a V band, 8-way in-line waveguide power divider that operates across the frequency range of 50 to 66 GHz. The power divider offers a typical insertion loss of 1.7 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 full band. This model offers an end launch design with WR-15 waveguides and UG-385/U flanges. Other configurations are available under different model numbers.



### Features:

- Low Insertion Loss
- High Isolation
- Inline Package

### Applications:

- IEEE 802.11.ad WiGig Systems
- Power Combining and Dividing
- Power Amplifiers
- Sub-assemblies

### Electrical Specifications:

| Parameter                      | Minimum | Typical | Maximum |
|--------------------------------|---------|---------|---------|
| Frequency                      | 50 GHz  |         | 66 GHz  |
| Power Unbalance                |         | ±0.4 dB | ±0.5 dB |
| Insertion Loss*                |         | 1.7 dB  |         |
| Isolation (Adjacent Ports)     |         | 20 dB   |         |
| Isolation (Non Adjacent Ports) | 20 dB   | 30 dB   |         |
| Input/Output VSWR              |         |         | 1.5:1   |
| Specification Temperature      |         | +25°C   |         |
| Operating Temperature          | -40°C   |         | +85°C   |

Note: The insertion loss does not include the power splitting loss.

### Mechanical Specifications:

| Item                   | Specification                        |
|------------------------|--------------------------------------|
| Input                  | WR-15 Waveguide with UG-385/U Flange |
| Outputs                | WR-15 Waveguide with UG-385/U Flange |
| Output Port Separation | 1.15"                                |
| Material               | Aluminum                             |
| Finish                 | Gold Plated                          |
| Weight                 | 10.2 Oz                              |
| Dimension              | 2.00" (L) X 9.20" (W) X 0.75" (H)    |
| Outline                | WP-V8I                               |



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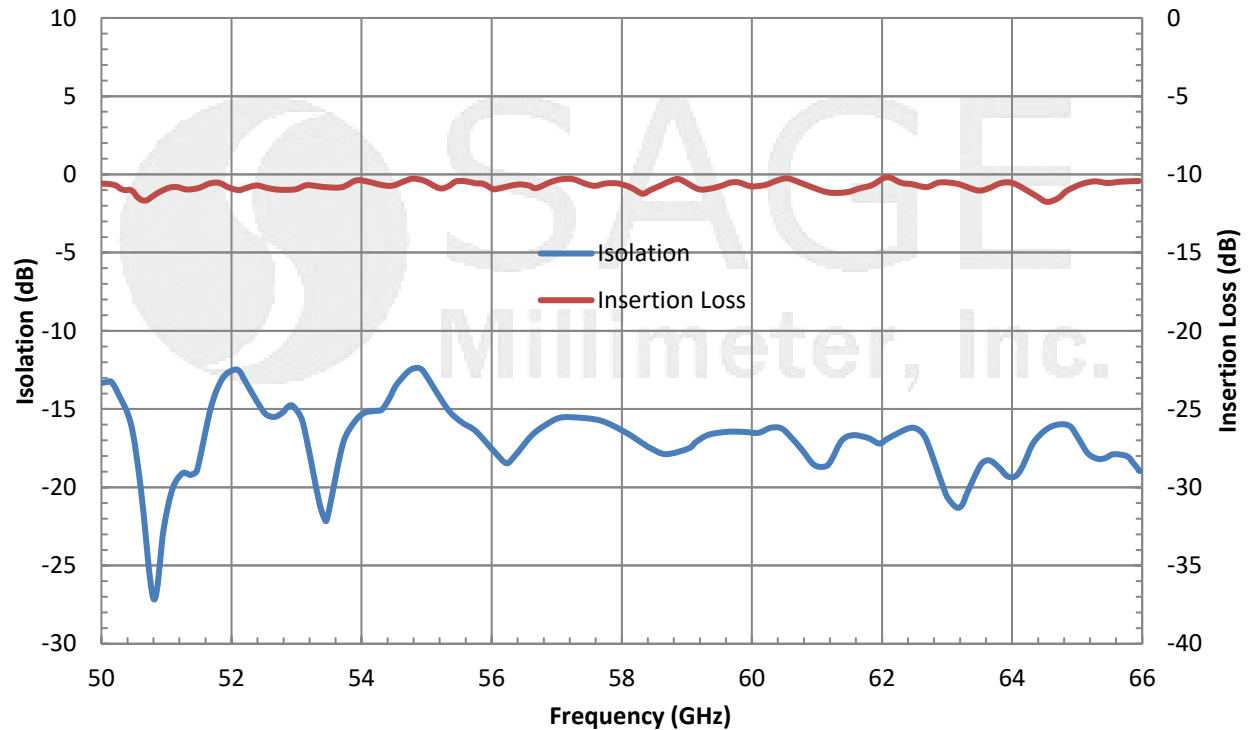
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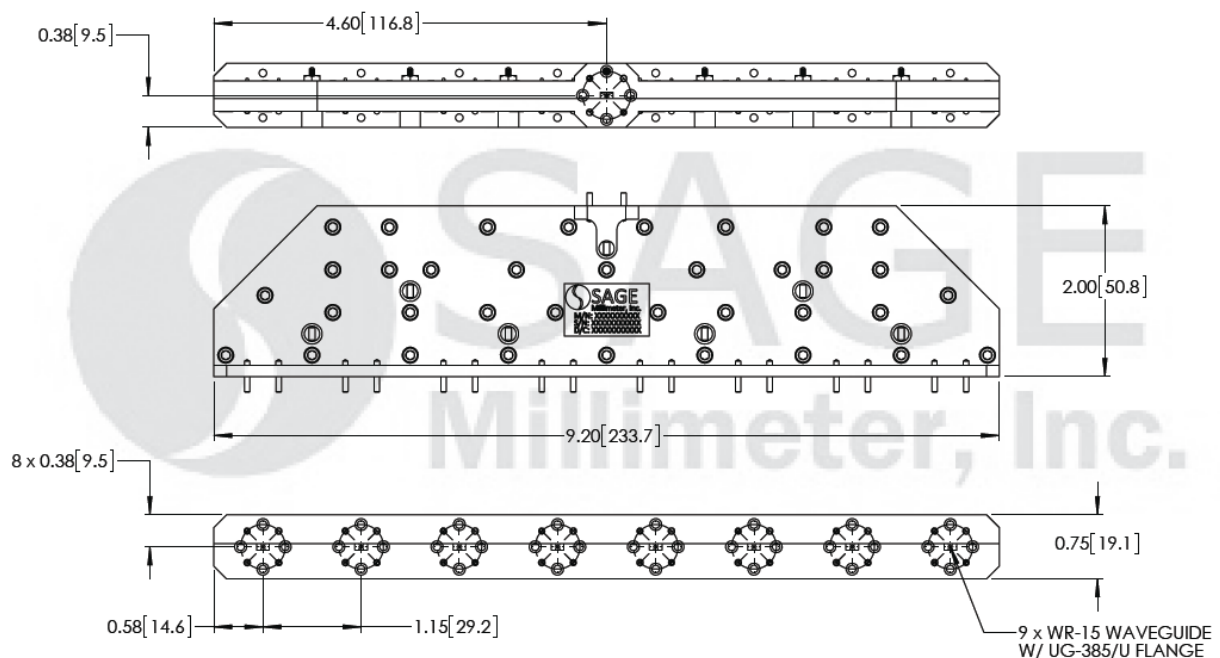
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### Typical Port Isolation and Insertion Loss vs. Frequency

Isolation was tested between adjacent ports (i.e. 1-2, 3-4, 5-6 and 7-8)



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



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**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.

