# SWP-50375304-15-E1

## 4-Way Waveguide Power Divider, 50 to 65 GHz

### **Description:**

**Model SWP-50375304-15-E1** is a V band, 4-way waveguide power divider that operates across the frequency range of 50 to 65 GHz. The power divider offers a typical insertion loss of 1.0 dB at each output port and a typical adjacent port isolation of 15 dB and non-adjacent port 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 comes as an inline design with WR-15 waveguides and UG-385/U anticocking flanges. Other configurations are available under different model numbers.



#### **Features:**

- Full Waveguide Band Operation
- Low Insertion Loss
- High Isolation
- Inline Configuration

# Applications:

- IEEE 802.11ab, WiGig
- Power Combining and Dividing
- Test Instrumentation
- Sub-assemblies

### **Electrical Specifications:**

| Parameter                 |                    | Minimum | Typical  | Maximum |
|---------------------------|--------------------|---------|----------|---------|
| Frequency                 |                    | 50 GHz  |          | 65 GHz  |
| Insertion Loss            |                    |         | 1.0 dB   |         |
| Power Unbalance           |                    |         | ±0.20 dB |         |
| Isolation                 | Adjacent Ports     |         | 15 dB    |         |
|                           | Non-Adjacent Ports |         | 20 dB    |         |
| Return Loss               | Input Port         |         | 15 dB    |         |
|                           | Output Ports       |         | 15 dB    |         |
| Specification Temperature |                    |         | +25 °C   |         |
| Operating Temperature     |                    | -40 °C  |          | +85 °C  |

### **Mechanical Specifications:**

| Item            | Specification                                     |  |
|-----------------|---|--|
| Waveguide Ports | WR-15 Waveguide with UG-385/U Anti-Cocking Flange |  |
| Port Separation | 1.15″   |  |
| Material        | Aluminum  |  |
| Finish          | Gold Plated                                       |  |
| Weight          | 3.4 Oz  |  |
| Outline         | WP-V4I-A2   |  |

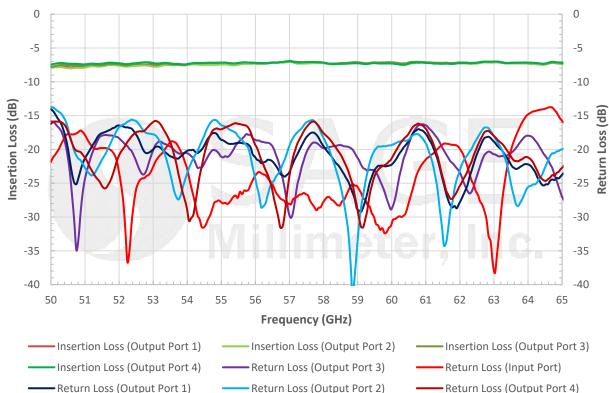


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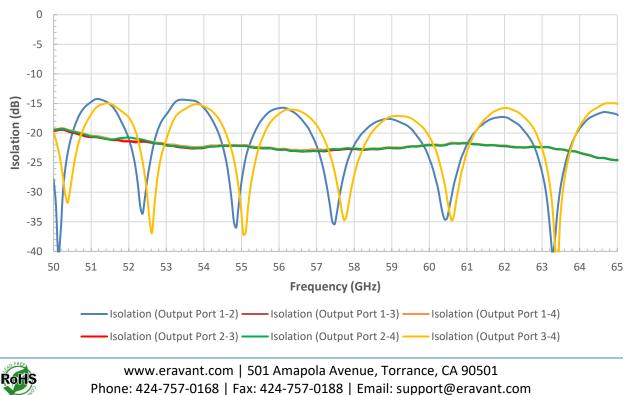
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**Typical Insertion and Return Loss vs Frequency** 

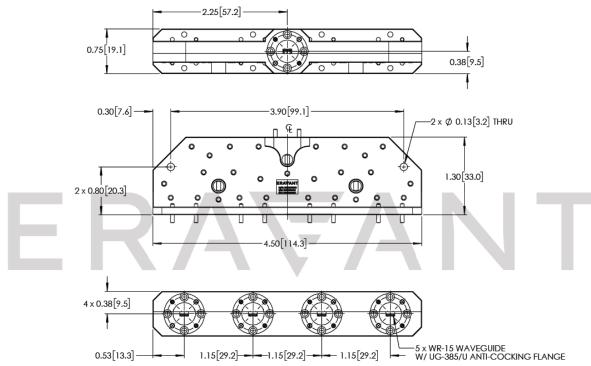


**Typical Isolation vs Frequency** 



## 4-Way Waveguide Power Divider, 50 to 65 GHz

**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.
- Eravant 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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