# SNW-9931041015-10-C1

Advanced

## W Band Waveguide Junction Circulator, 99 to 101 GHz

### Description:

**Model SNW-9931041015-10-C1** is a W band waveguide junction circulator that covers the frequency range of 99 to 101 GHz. Compared with a Faraday isolator, the waveguide junction circulator offers a lower insertion loss of 1.0 dB nominal and a much shorter insertion length for system integration. As a tradeoff, the waveguide junction isolator only offers a typical isolation of 15 dB. The input and output ports are WR-10 waveguide with UG-387/U-M flanges.

### Features:

- Low Insertion Loss
- Moderate Isolation
- Compact Configuration

### Applications:

- Port Isolation
- Module Integration

### Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---|---|---|---|
| Frequency | 99 GHz | | 101 GHz |
| Insertion Loss | | 1.0 dB | |
| Isolation | | 15 dB | |
| Return Loss | | 15 dB | |
| Forward Power Handling | | 2 W (CW) | 3 W (CW) |
| Reverse Power Handling | | 0.5 W (CW) | 1 W (CW) |
| Specification Temperature | | +25 ˚C | |
| Operating Temperature | -45 ˚C | | +85 ˚C |

### Mechanical Specifications:

| Item | Specification |
|---|---|
| RF Ports | WR-10 Waveguide with UG-387/U-M Flange |
| Body Material | Aluminum |
| Body Finish | Gold Plated |
| Cover Finish | Black Anodized |
| Weight | 0.8 Oz |
| Size | 1.00” (L) X 1.00” (W) X 0.85” (H) |
| Outline | NW-CW |

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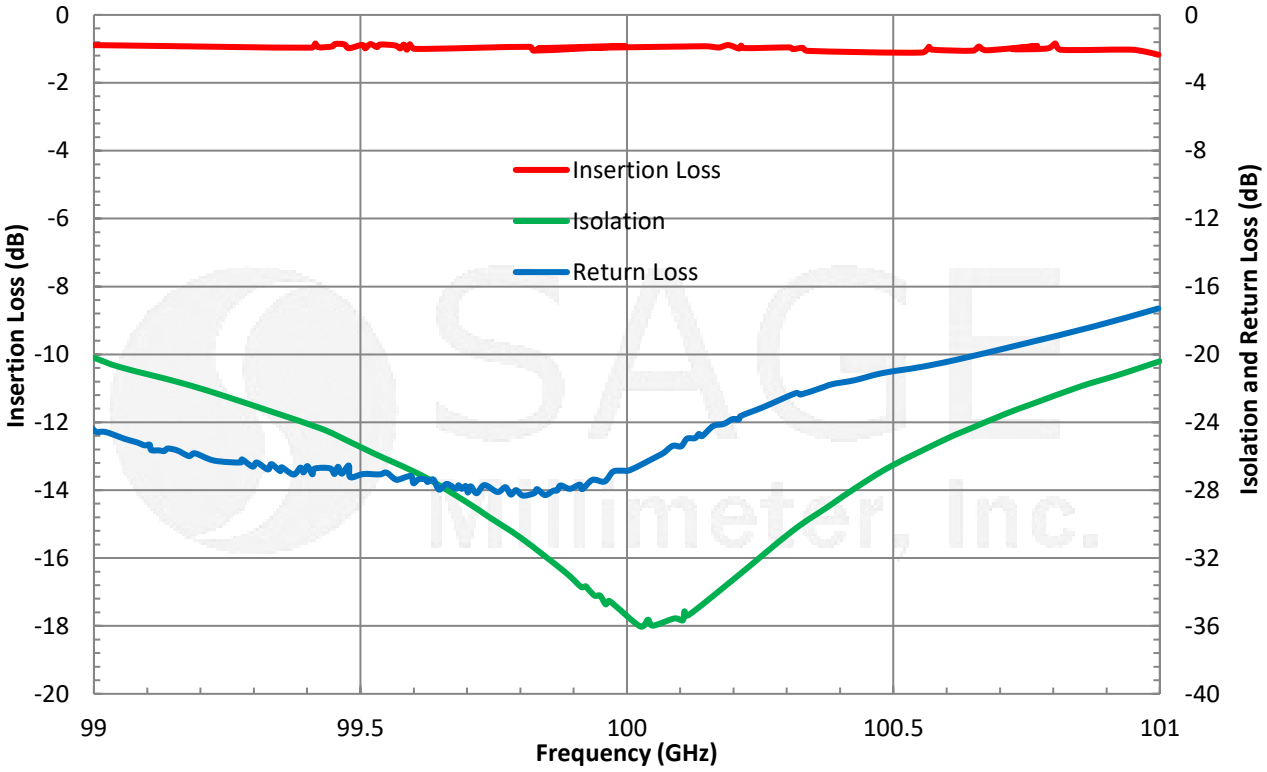
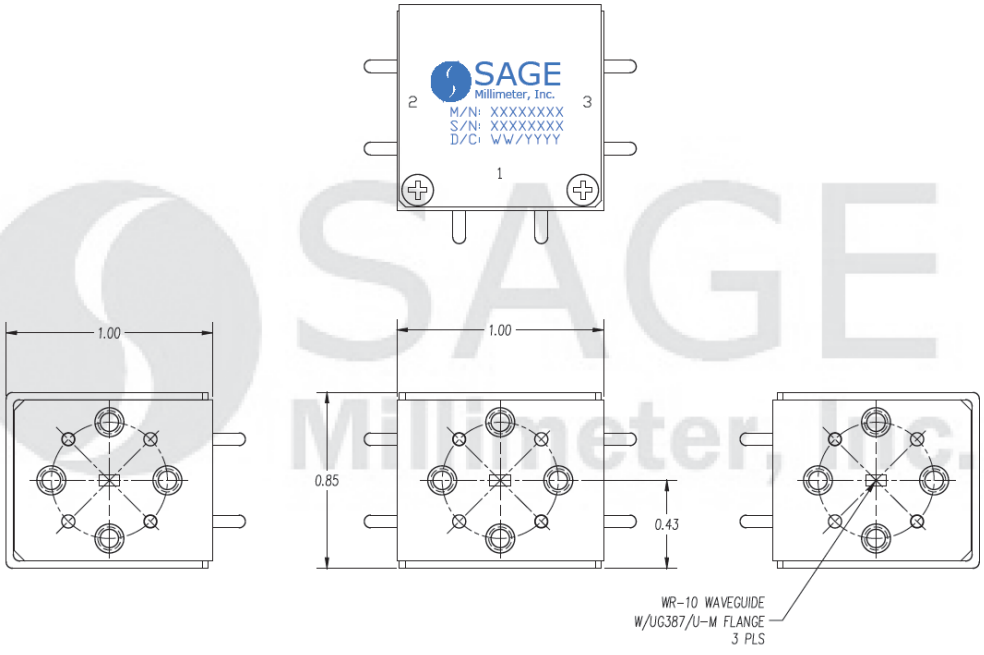
### Typical Insertion Loss, Isolation and Return Loss vs. Frequency




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

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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:**

- Exceeding absolute maximum ratings will damage the device.
- This device is magnetic sensitive. Keep the device at least 6” away from magnetic fields.
- Any foreign objects in the waveguide will degrade the performance and/or damage the device.



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