



## W Band Waveguide Junction Isolator, 89 to 91 GHz

### Description:

**Model SNW-8939131018-10-I1** is a W band waveguide junction isolator that covers the frequency range of 89 to 91 GHz. Compared with a Faraday isolator, the waveguide junction isolator 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 18 dB. The input and output ports are WR-10 waveguides 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	89 GHz		91 GHz
Insertion Loss		1.0 dB	
Isolation	16 dB	18 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:

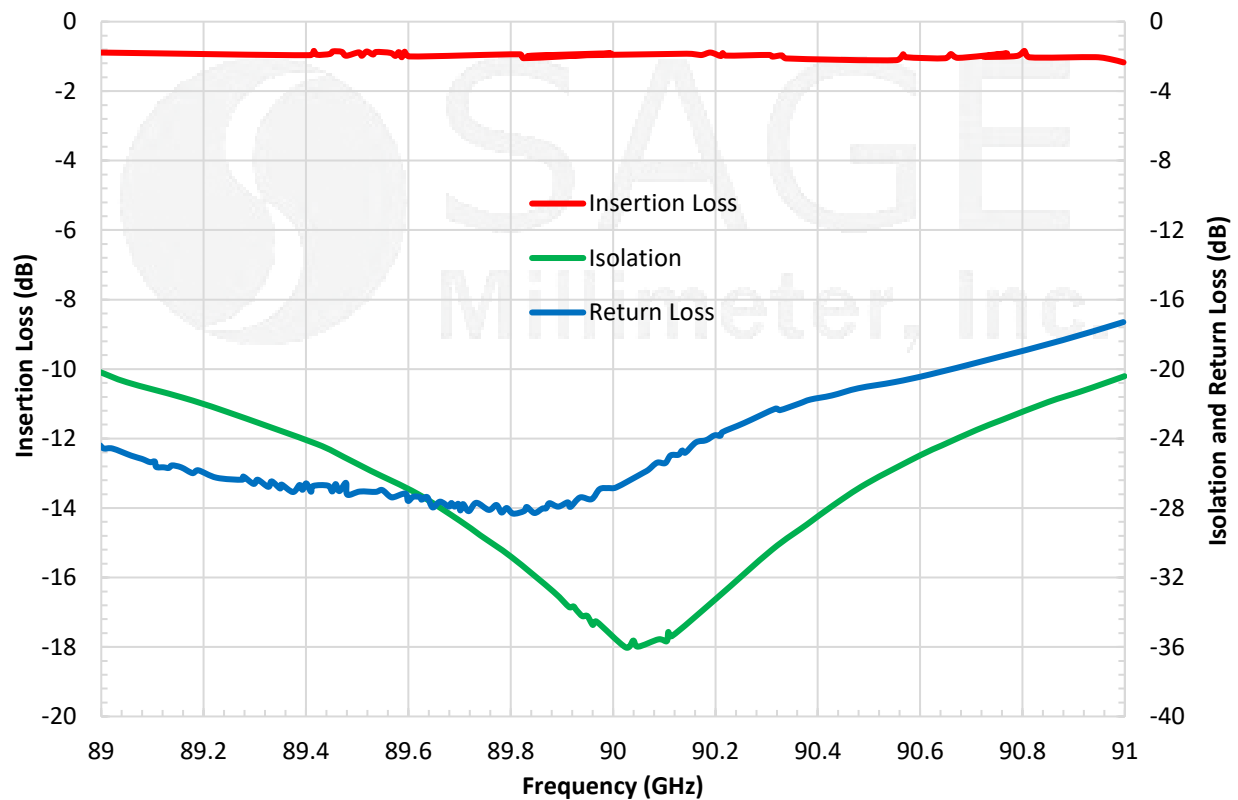
Item	Specification
RF Ports	WR-10 Waveguide with UG-387/U-M Flange
Body Material	Aluminum
Body Finish	Gold Plated
Cover Finish	Black Anodized
Weight	0.8 Oz
Insertion Length	0.75"
Outline	NW-IW



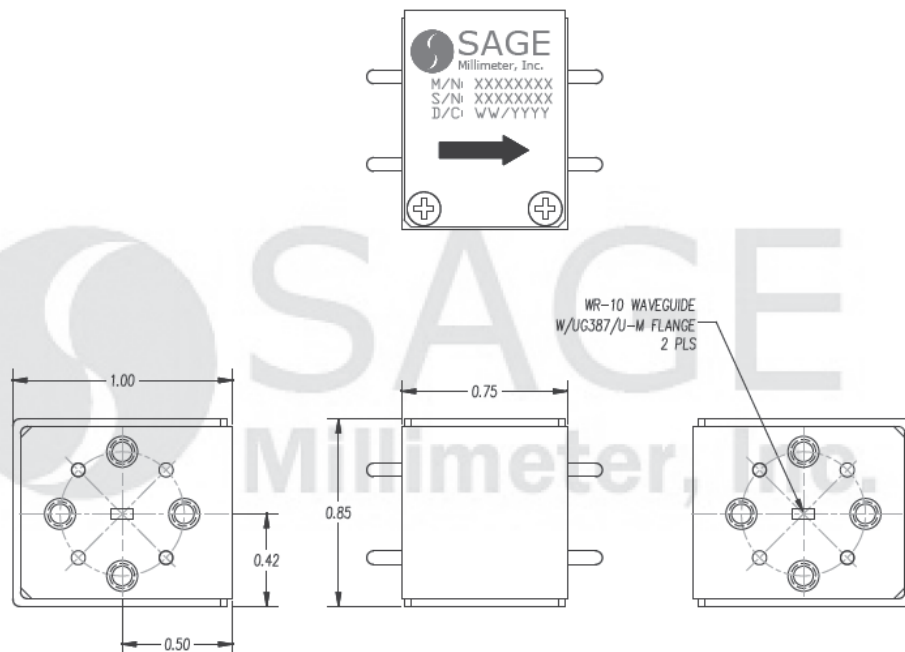


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Typical Insertion Loss, Isolation and Return Loss vs. Frequency



**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.

