

## Q Band Waveguide Junction Isolator, 43 to 46 GHz

### Description:

**Model SNW-4334630518-22-IJ-599** is a Q band waveguide junction isolator that covers the frequency range of 43 to 46 GHz. Compared with a Faraday isolator, the waveguide junction isolator offers a lower insertion loss of 0.5 dB nominal and a much shorter insertion length for system integration. As a tradeoff, the waveguide junction isolator only offers an isolation of 18 dB typical. The input and output ports are WR-22 waveguides with UG-599/U flanges. Various configurations and frequency ranges are offered under different model numbers.



### Features:

- Low Insertion Loss
- Moderate Isolation
- Compact Configuration

### Applications:

- Port Isolation
- Module Integration

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	43 GHz		46 GHz
Insertion Loss		0.5 dB	
Isolation		18 dB	
Return Loss		17 dB	
Power Handling		5 W (CW)	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

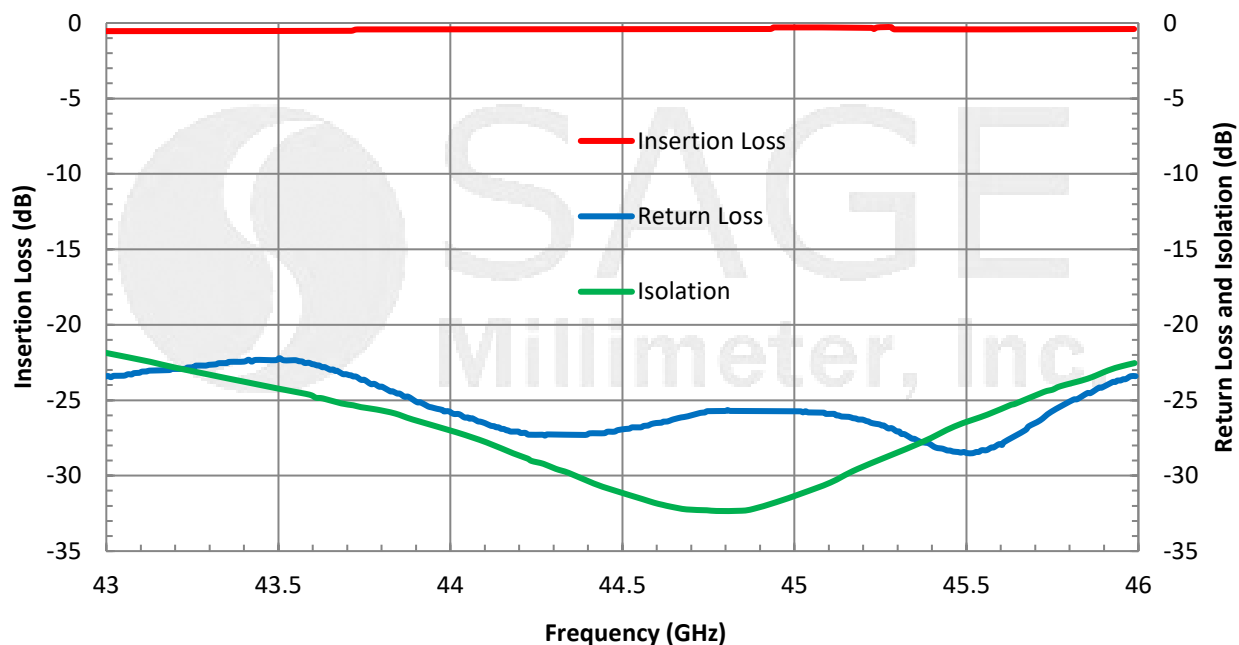
### Mechanical Specifications:

Item	Specification
RF Ports	WR-22 Waveguide with UG-599/U Flange, 4-40 Threaded Holes
Material	Aluminum
Finish	Chem Film, Clear
Weight	0.2 Oz
Insertion Length	0.40"
Outline	NW-IQ-SX1

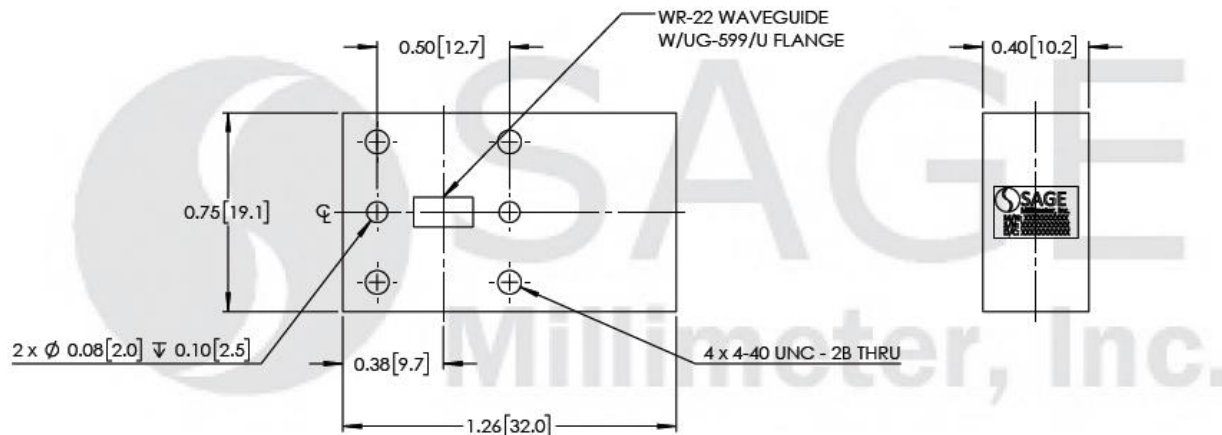


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## Typical Performance vs. Frequency



**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:**

- 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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