



## Q Band Waveguide Junction Isolator, 42 to 46 GHz

### Description:

**Model SNW-4234630620-22-IJ1** is a Q band waveguide junction isolator that covers the frequency range of 42 to 46 GHz. Compared with a Faraday isolator, the waveguide junction isolator offers a lower insertion loss of 0.6 dB typical and a much shorter insertion length for system integration. As a tradeoff, the waveguide junction isolator only offers a minimum isolation of 15 dB. The input and output ports are WR-22 waveguides with UG-383/U flanges.



### Features:

- Low Insertion Loss
- Moderate Isolation
- Compact Configuration

### Applications:

- Port Isolation
- Module Integration

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency Range	42 GHz		46 GHz
Insertion Loss		0.6 dB	
Isolation	15 dB	20 dB	
Return Loss		18 dB	
Forward Power Handling			1 W (CW)
Reverse Power Handling			0.1 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

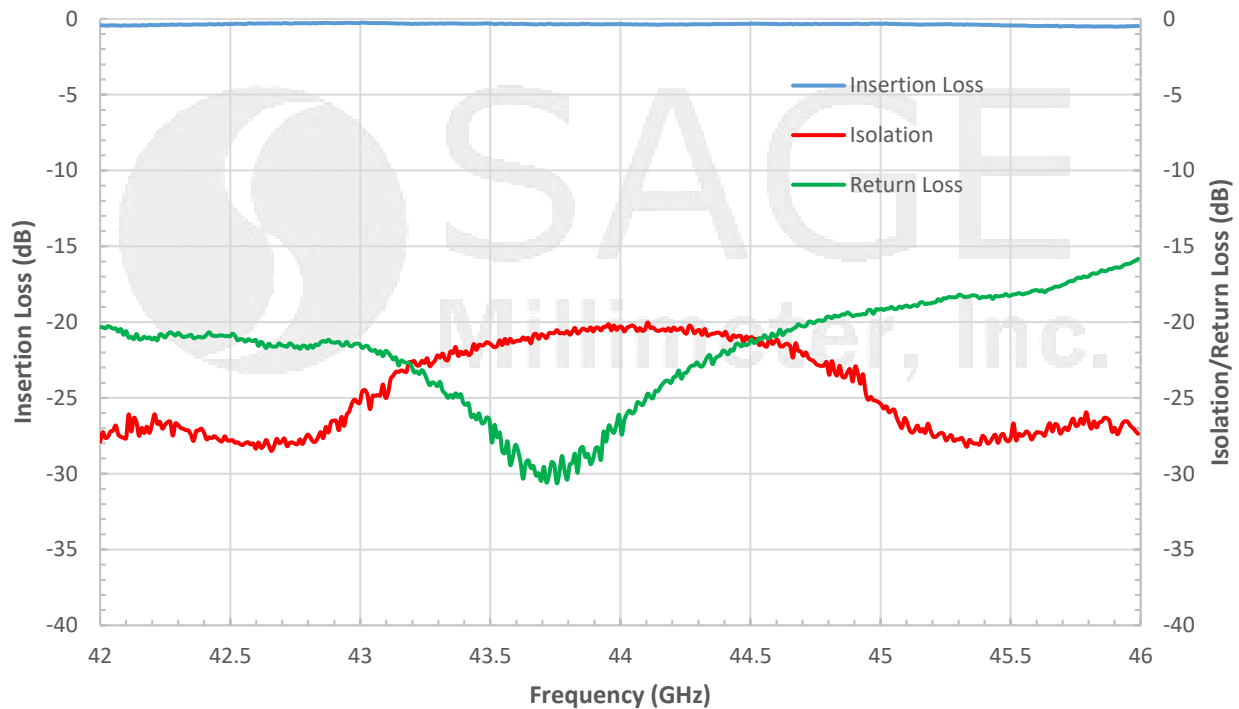
Item	Specification
RF Input and Output	WR-22 Waveguide with UG-383/U Flange
Body Material	Aluminum
Body Finish	Gold Plated
Cover Finish	Black Anodized
Weight	0.7 Oz
Insertion Length	0.75"
Size	1.25" (L) X 1.5" (W) X 1.14" (H)
Outline	NW-IQ-DB1



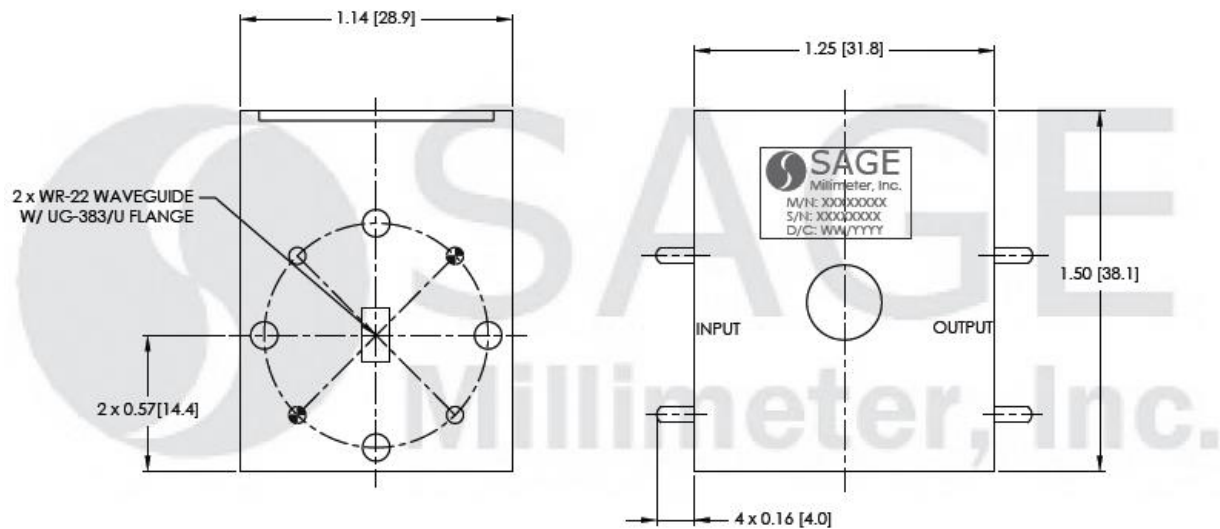


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### Typical Performance vs. Frequency



**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.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505  
 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

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**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.

