

## Waveguide Highpass Filter, V Band

### Description:

**Model SWF-50346340-15-H1-WP** is a V band waveguide highpass filter with a passband frequency of 50 GHz and higher and a rejection frequency from DC to 46 GHz. The filter provides a nominal insertion loss of 1.0 dB across its passband with a low ripple and a typical rejection of 40 dB. Since the low end cutoff frequency can be changed by modifying the design, custom designs can be offered under different model numbers. **This particular model features an optimized stepped impedance transformer design and E-plane cut for a smoother transition from the rejection band to the passband.**



### Features:

- Low Cost
- Low Insertion Loss
- High Rejection

### Applications:

- IEEE 802.11ad WiGig Systems
- Communication Systems
- Radar Systems
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Passband Frequency	50 GHz		
Passband Insertion Loss		1.0 dB	
Passband Ripple		±0.3 dB	
Passband Return Loss		15 dB	
Rejection Frequency	DC		46 GHz
Rejection		40 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

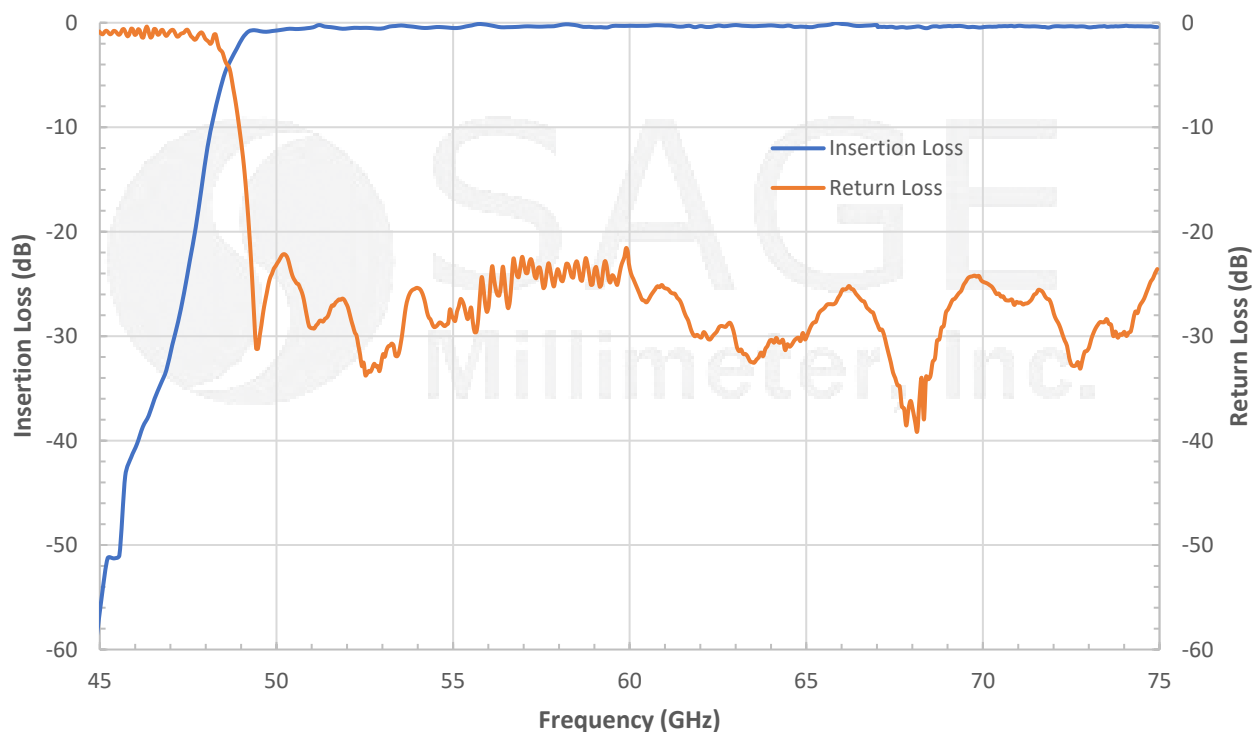
### Mechanical Specifications:

Item	Specification
Waveguide	WR-15 with UG-385/U Anti-Cocking Flange
Size	1.20" (L) X 0.75" (Ø)
Material	Aluminum
Finish	Gold Plated
Weight	0.4 Oz
Outline	WF-HV-A-2

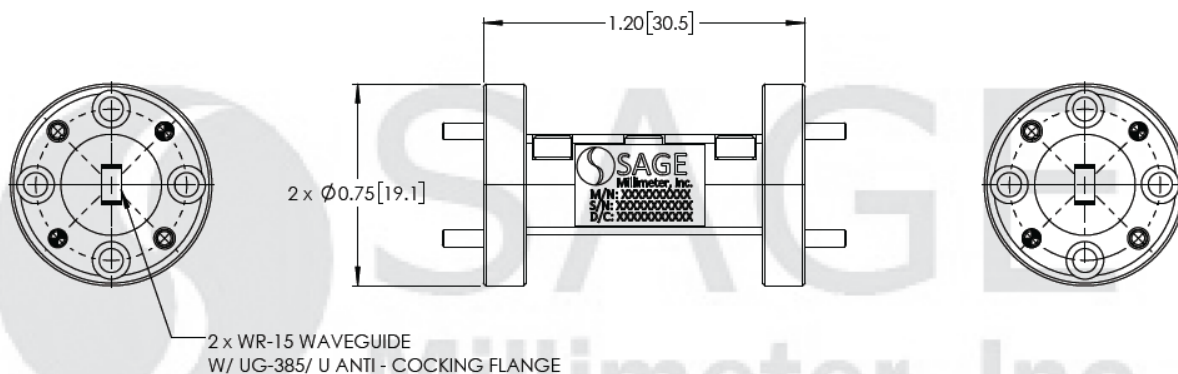


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## Typical Insertion and Return Loss vs Frequency



**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:**

- Any foreign objects in the waveguide will degrade performance and/or damage the device.



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