

## Waveguide Bandpass Filter, V Band, 53.50 to 54.50 GHz

### Description:

**Model SWF-54301340-15-B1** is a V band waveguide bandpass filter with a passband frequency of 53.50 to 54.50 GHz and rejection frequencies from DC to 52.0 GHz and 55 to 65 GHz. The nominal insertion loss of the bandpass filter is 2.5 dB and the typical rejection is 40 dB. Since both low end and high end cut off frequencies can be selected by modifying the design, custom designs are available under different model numbers.



### 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	53.50 GHz		54.50 GHz
Passband Insertion Loss		2.5 dB	3.0 dB
Passband Ripple		±0.25 dB	
Rejection Frequency, Low Side	DC		52 GHz
Rejection Frequency, High Side	55 GHz		65 GHz
Rejection		40 dB	
Passband Return Loss		14 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

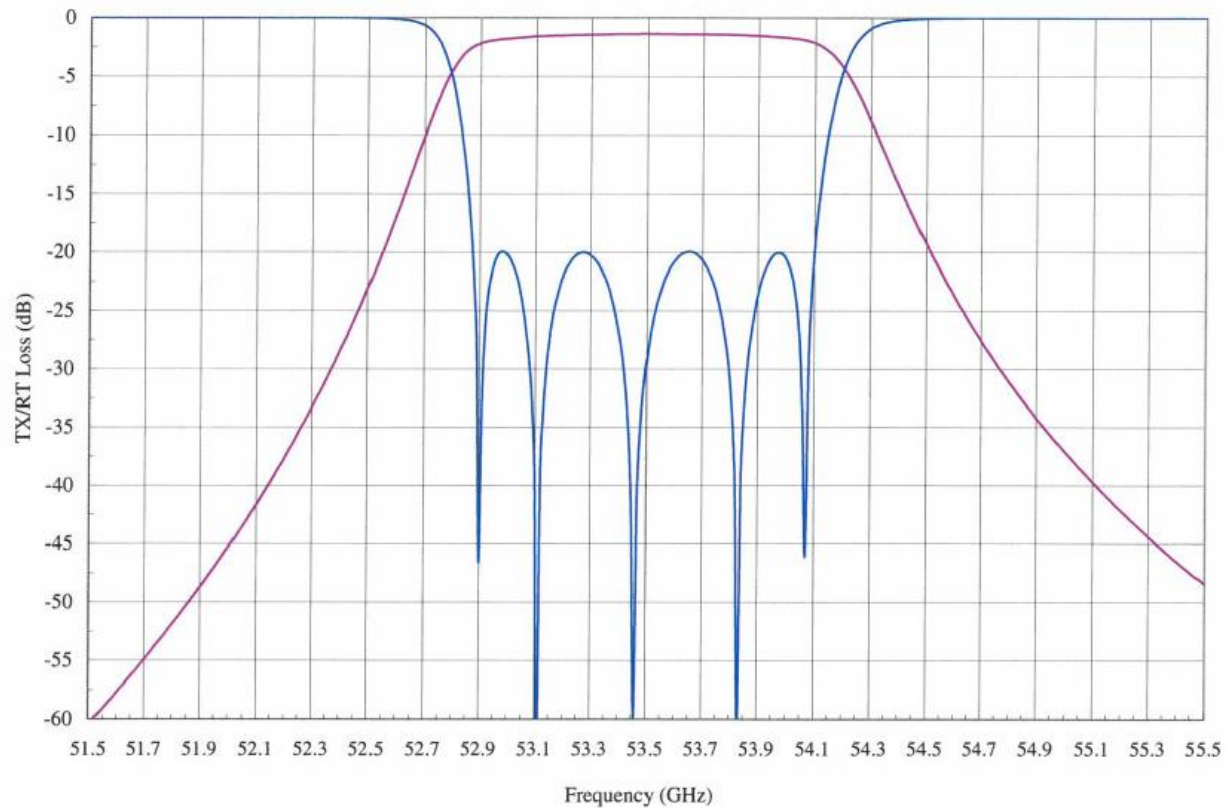
### Mechanical Specifications:

Item	Specification
Waveguide Port	WR-15 Waveguide with UG-385/U Flange
Material	Aluminum
Finish	Gold Plated
Weight	0.3 Oz
Size	1.20" (L) X 0.75" (Ø)
Outline	WF-BV

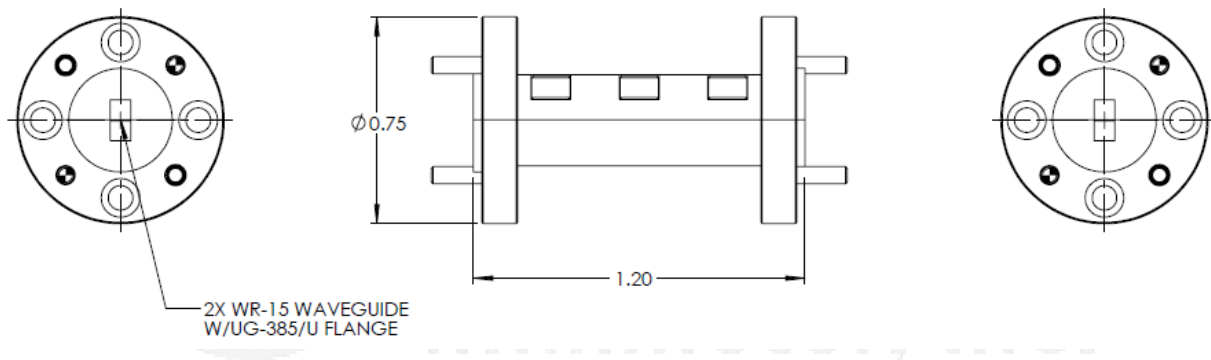


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### Typical Performance vs. Frequency



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



#### Note:

- All data presented is simulated. Actual data may vary, slightly.
- 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.



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