



## Waveguide Bandpass Filter, Q Band, 30 to 50 GHz

### Description:

**Model SWF-40320340-22-B1** is a Q band waveguide bandpass filter with a passband frequency of 30 to 50 GHz and rejection frequencies from DC to 25 GHz and 56 to 100 GHz. The nominal insertion loss of the bandpass filter is 1.5 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:

- Communication Systems
- Radar Systems
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Passband Frequency	30 GHz		50 GHz
Passband Insertion Loss		1.5 dB	
Passband Ripple		± 0.25 dB	
Rejection Frequency, Low Side	DC		25 GHz
Rejection Frequency, High Side	56 GHz		100 GHz
Rejection		40 dB	
Passband Return Loss		14 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

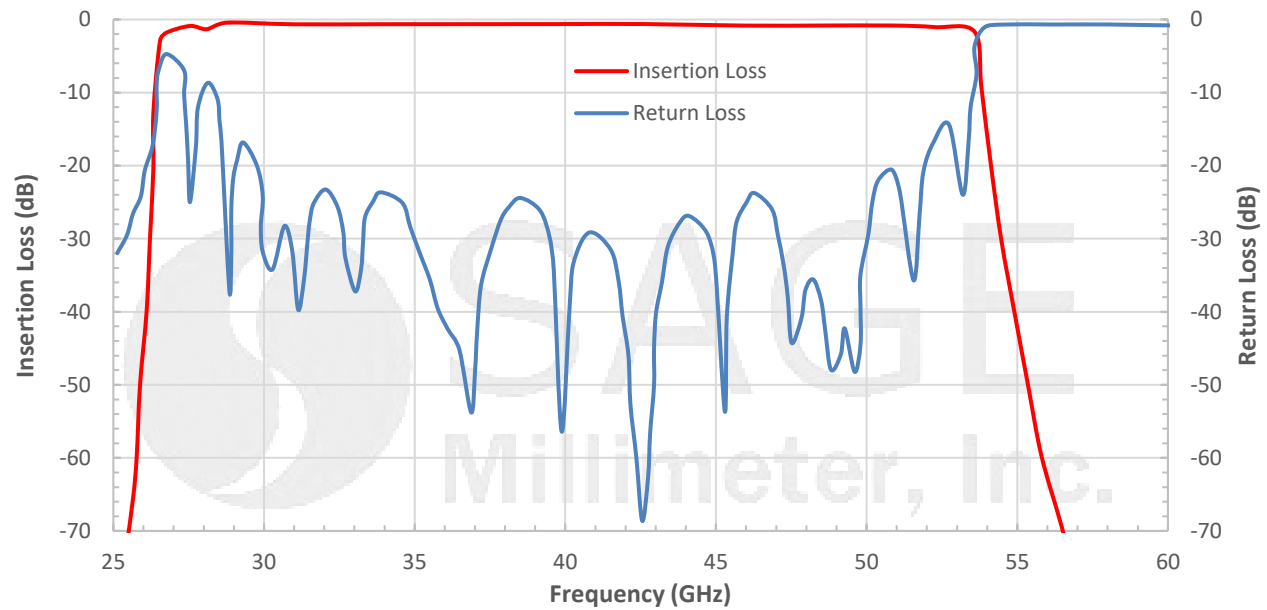
Item	Specification
Waveguide	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	6.2 Oz
Size	1.80" (L) X 1.13" (W) X 1.13" (H)
Outline	WF-LQ-A



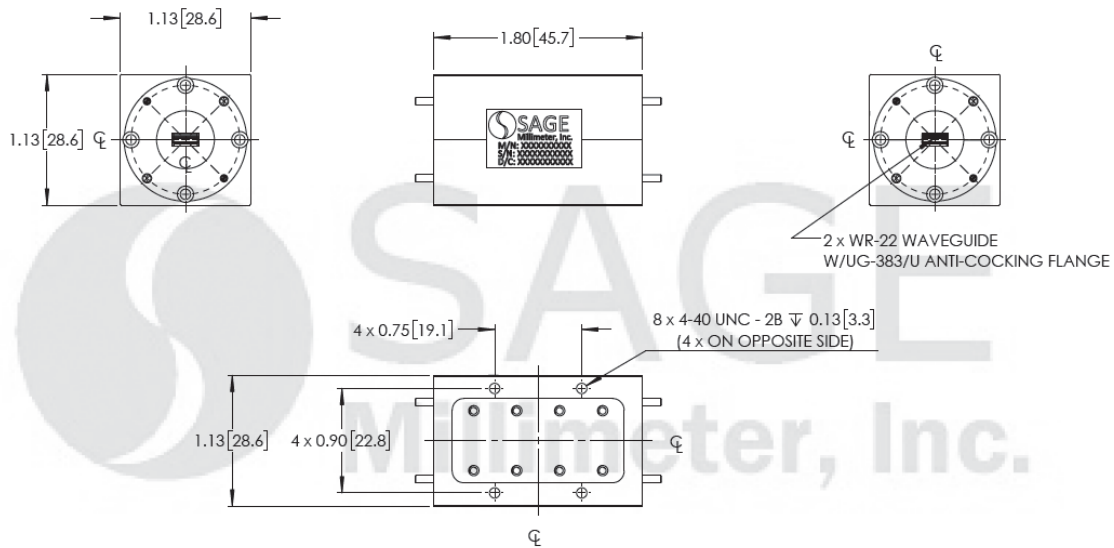


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### Typical Performance vs. Frequency



### 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:

- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

