

## Waveguide Bandpass Filter, K-Band, 17.7 to 20.2 GHz

### Description:

**Model SWF-19303390-42-B2** is a K-band waveguide bandpass filter with a passband frequency from 17.7 to 20.2 GHz and rejection frequencies from DC to 17.2 GHz and 20.7 to 31 GHz. The filter provides a nominal passband insertion loss of 0.8 dB and typical passband return loss of 18 dB. The filter has a minimum rejection value of 50 dB from DC to 17.2 GHz and 20.7 to 31.0 GHz, and a typical rejection value of 90 dB from 27.5 to 30 GHz.



### Features:

- Low Insertion Loss
- High Rejection

### Applications:

- Communication Systems
- Instrumentations
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Passband Frequency	17.7 GHz		20.2 GHz
Passband Insertion Loss		0.8 dB	1.0 dB
Passband Return Loss		18 dB	
Rejection Frequency, Low Side	DC		17.2 GHz
Rejection, Low Side	50 dB		
Rejection Frequency, High Side	20.7 GHz		31.0 GHz
Rejection, High Side	50 dB		
Rejection from 27.5 to 31.0 GHz	50 dB	90 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+50 °C

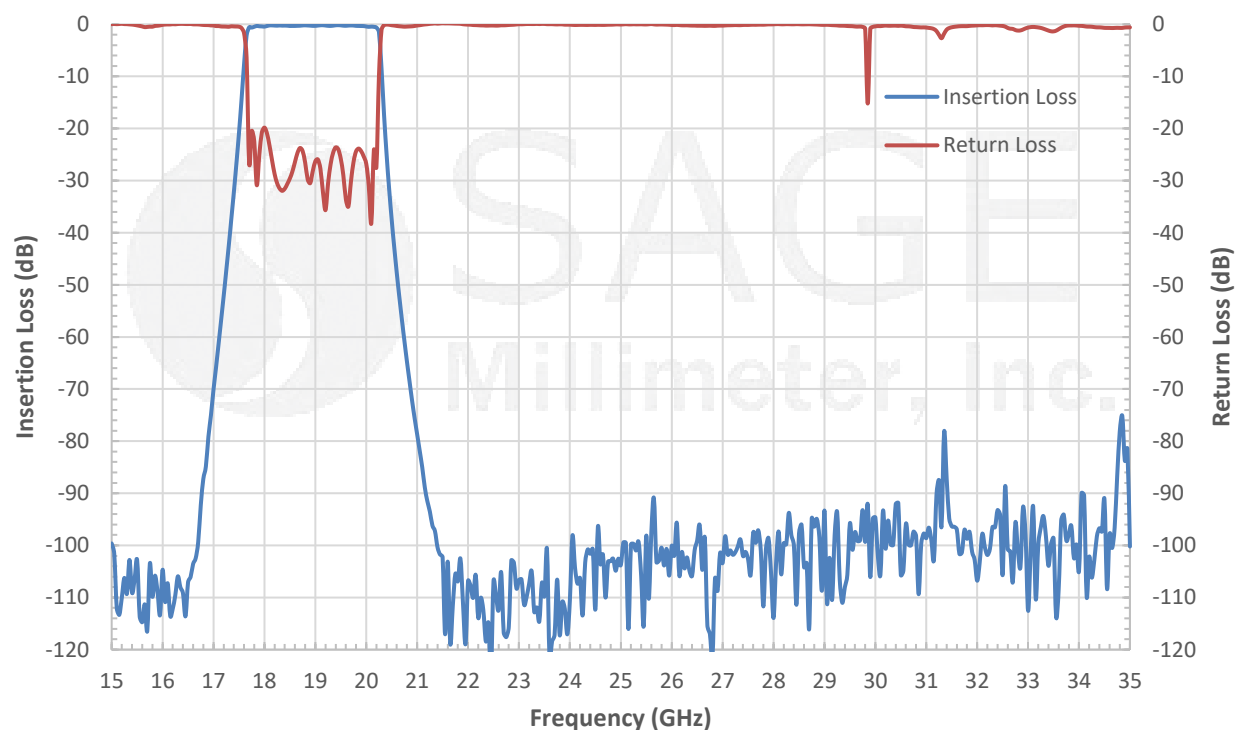
### Mechanical Specifications:

Item	Specification
Waveguide Port	WR-42 Waveguide with UG-595/U Compatible Flange
Insertion Length	3.7"
Material	Brass
Finish	Gold Plated
Weight	5.9 oz.
Outline	WF-BK-3.7-SX1

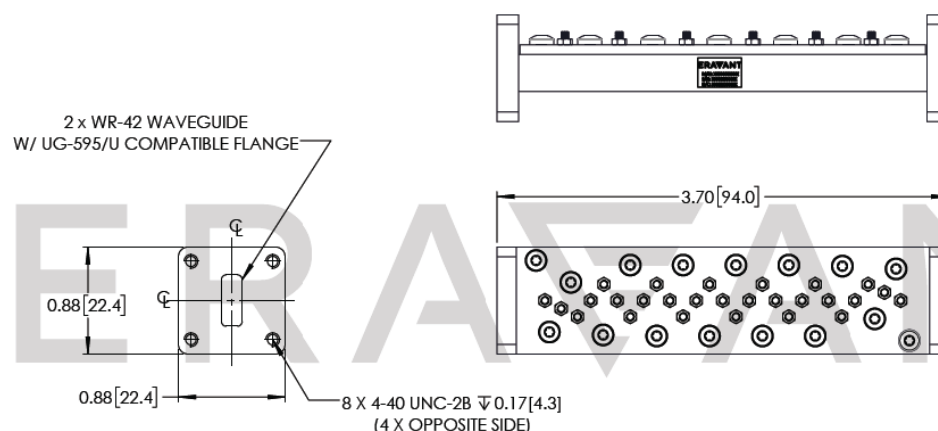


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## Typical Performance vs Frequency



**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:**

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



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