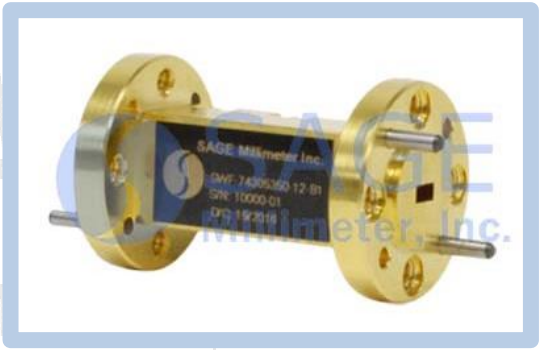
# SWF-77303350-12-B1

Rev. 1.0

## Waveguide Bandpass Filter, E Band, 75 to 78 GHz

### Description:

**Model SWF-77303350-12-B1** is an E band waveguide bandpass filter with a passband frequency of 75 to 78 GHz and rejection frequencies from DC to 71 GHz and 82 to 100 GHz. The nominal insertion loss of the bandpass filter is 1.5 dB and the typical rejection is 50 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:

- E Band Communication Systems
- Automotive Radar Systems
- Sub-assemblies

### Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---|---|---|---|
| Passband Frequency | 75 GHz | | 78 GHz |
| Passband Insertion Loss | | 1.5 dB | 2.5 dB |
| Passband Ripple | | ±0.3 dB | |
| Rejection Frequency, Low Side | DC | | 71 GHz |
| Rejection Frequency, High Side | 82 GHz | | 100 GHz |
| Rejection | | 50 dB | |
| Passband VSWR | | 1.5:1 | |
| Specification Temperature | | +25˚C | |
| Operating Temperature | -40˚C | | +85˚C |

### Mechanical Specifications:

| Item | Specification |
|---|---|
| Waveguide | WR-12 Waveguide with UG-387/U Flange |
| Size | 1.20” (L) X 0.75” (Ø) |
| Material | Aluminum |
| Finish | Gold Plated |
| Weight | 0.4 Oz |
| Outline | WF-BE |

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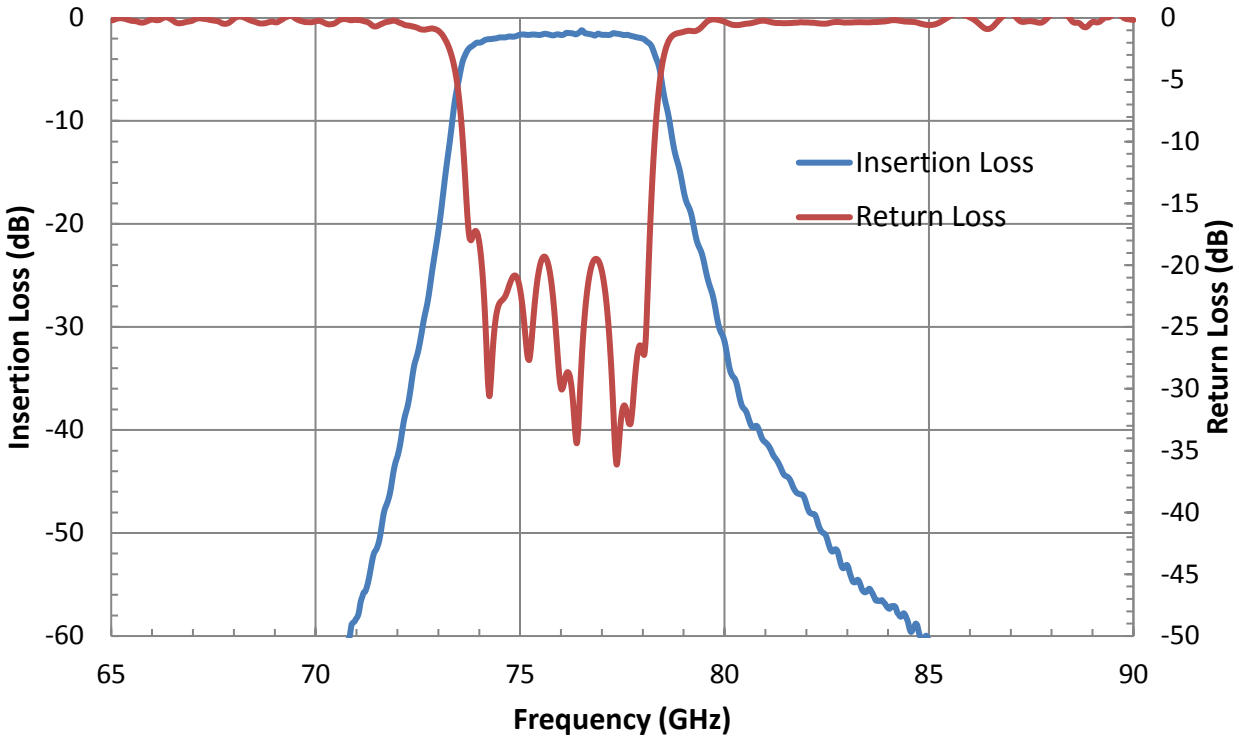
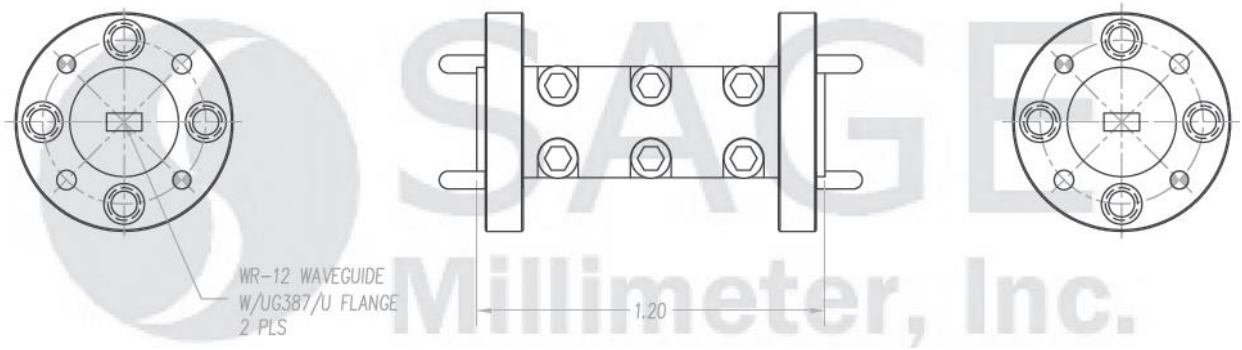
### Typical Performance vs. Frequency




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




**Note:**

- All data are presented using a limited 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.

**Caution:**

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

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