



## U Band Waveguide, Lowpass Filter, 36 to 90 GHz

### Description:

**Model SWF-90311460-19-L1** is a U band waveguide lowpass filter with a passband frequency from 36 to 90 GHz and a rejection frequency 120 to 200 GHz. Due to the waveguide cut off nature, the low side of the filter has rejection range of DC to 30 GHz. The filter provides a nominal insertion loss of 1.5 dB across its passband and a typical rejection of 60 dB.



Since the high end cutoff frequency can be changed by modifying the design, custom designs can be offered under different model numbers.

### Features:

- Low Insertion Loss
- High Rejection

### Applications:

- Test Labs
- Instrumentation
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Passband Frequency	36 GHz		90 GHz
Passband Insertion Loss		1.5 dB	
Rejection Frequency, Low Side	DC		30 GHz
Rejection Frequency, High Side	120 GHz		200 GHz
Rejection		60 dB	
Passband Return Loss		14 dB	
Power Handling			100 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

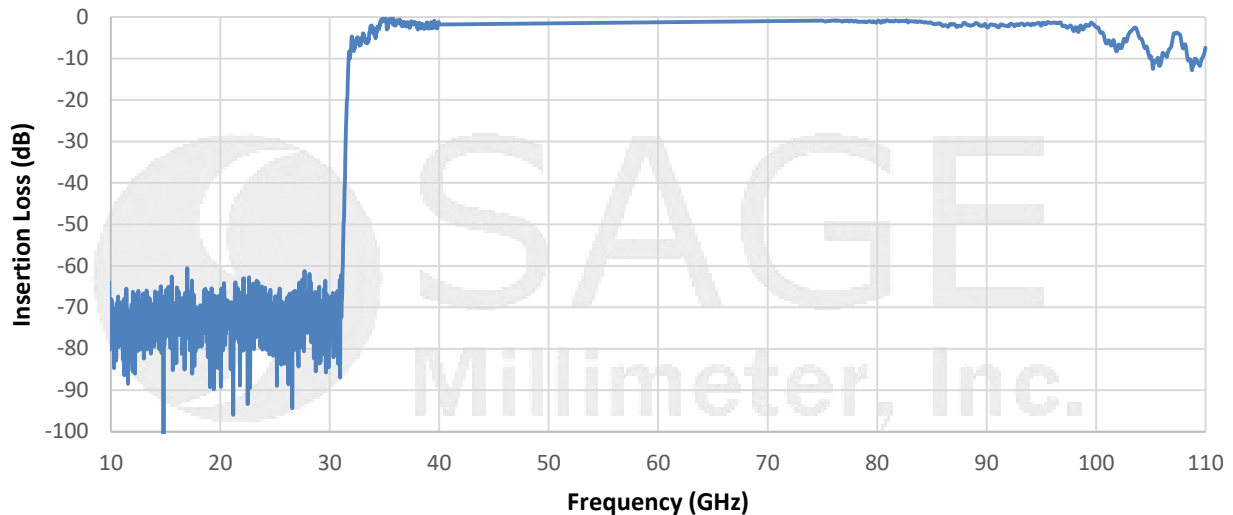
Item	Specification
Waveguide	WR-19 Waveguide with UG-383/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	7.6 Oz
Size	1.50" (L) X 1.13" (W) X 1.13" (H)
Outline	WF-LU-A-1.5



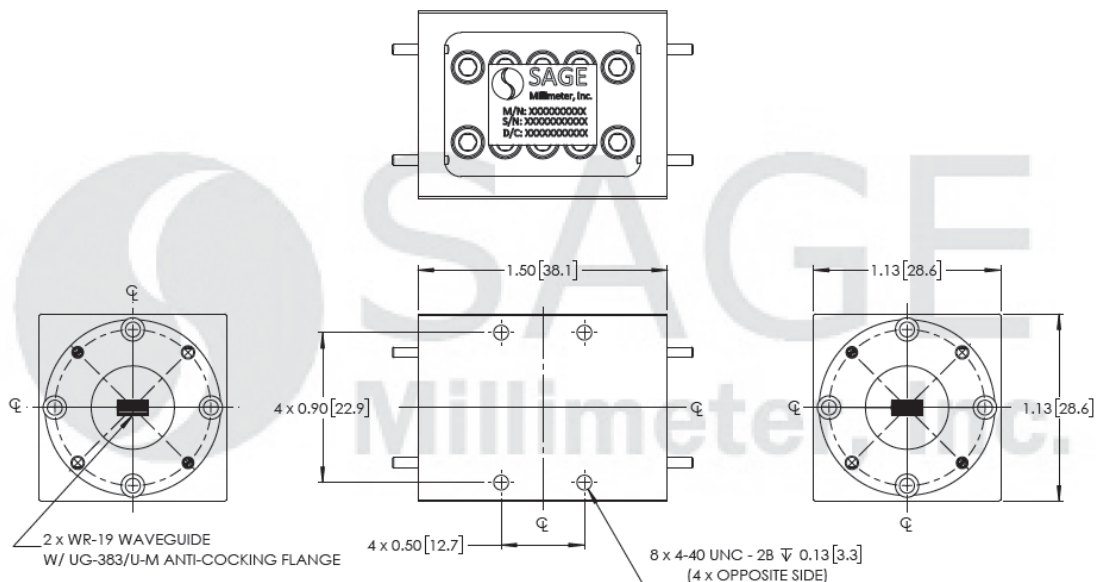


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### Insertion Loss vs. Frequency



**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.
- Actual rejection value is higher than shown due to the dynamic range of the VNA being used.
- 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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