



## Waveguide Lowpass Filter, W Band, 70 to 118 GHz

### Description:

**Model SWF-12412460-10-L1** is an W band waveguide lowpass filter with a passband frequency from 70 to 118 GHz and a rejection frequency from 123 to 200 GHz. Due to the corrugated design of the WR-10 waveguide, the filter also has a low side rejection frequency from DC to 59 GHz. As such, this filter can also be accepted as a bandpass filter. The filter provides a nominal insertion loss of 2.5 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:

- Full Band Operation
- Low Insertion Loss
- High Rejection

### Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Passband Frequency	70 GHz		118 GHz
Passband Insertion Loss		2.5 dB	
Rejection Frequency, Low Side	DC		59 GHz
Rejection Frequency, High Side	123 GHz		200 GHz
Rejection		60 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

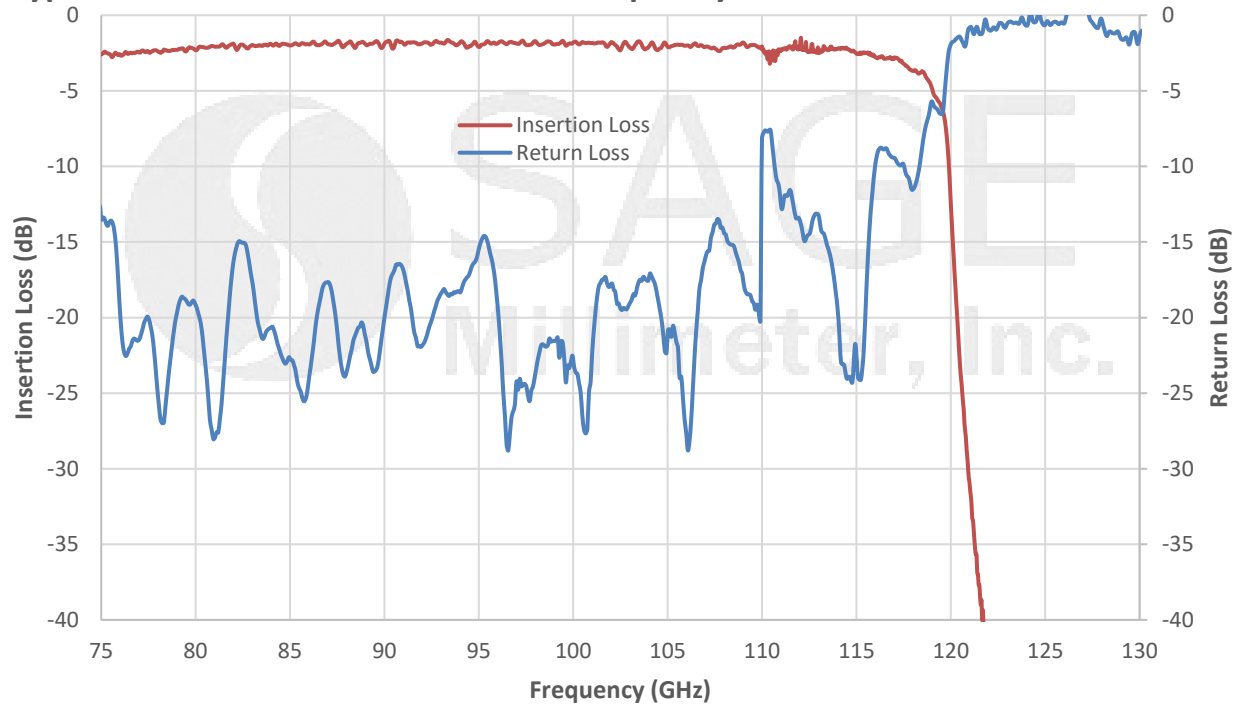
Item	Specification
Waveguide	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	4.0 Oz
Size	1.60" (L) X 0.75" (W) x 0.75" (H)
Outline	WF-LW-A-1.6



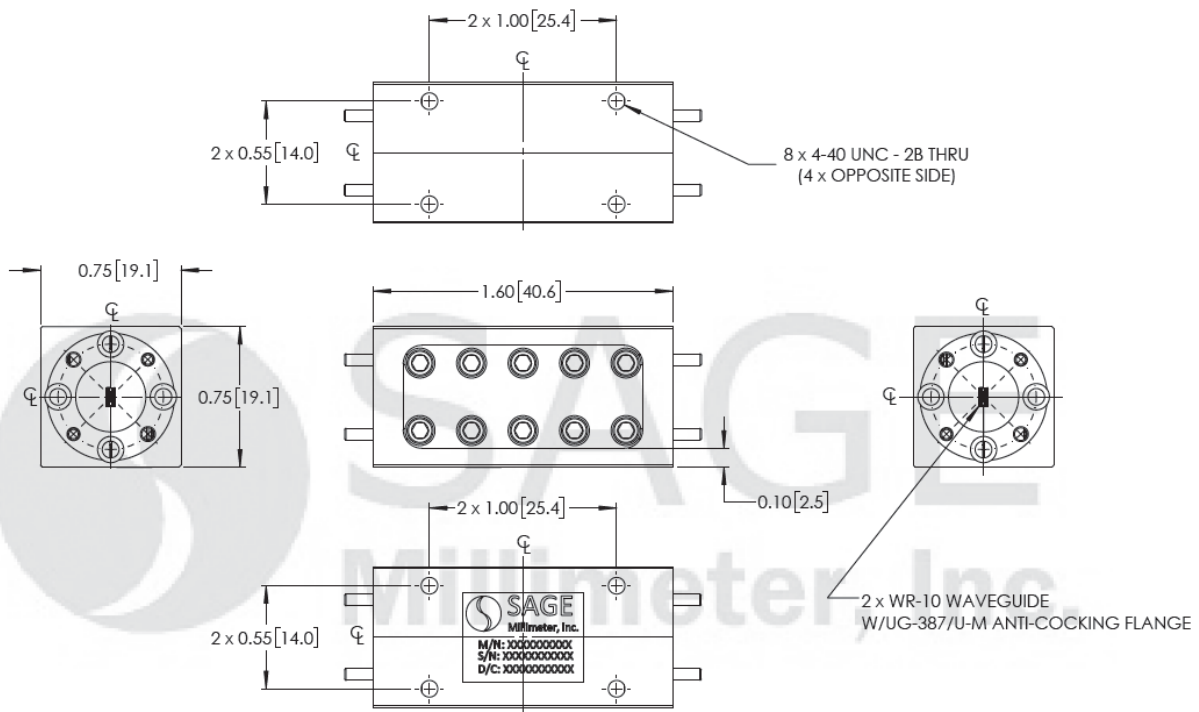


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Typical Insertion and Return Loss vs Frequency



**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])



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### 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 degrade performance and/or damage the device.

