



## Ka Band, Compact Bandpass Filter, 30 GHz Center Frequency, 2<sup>nd</sup> Harmonic Rejection

### Description:

**Model SWF-30302313-28-B1-C** is a Ka band iris resonance based compact bandpass filter with a passband center frequency of 30 GHz and rejection frequency at 60 GHz. It is designed for any oscillator with an output waveguide of WR-28 with a UG-599/U flange pattern to pass the fundamental frequency at 30 GHz and reject the second harmonic at 60 GHz. The nominal insertion loss of the filter at 30 GHz is 0.5 dB and the rejection at 60 GHz is 13 dB. This filter can be used with SAGE Millimeter's Ka band volume production oscillator with model number SOL-30312-28-G1 to suppress the second harmonic content at 60 GHz.



### Features:

- Low Cost
- Low Insertion Loss
- Compact Size

### Applications:

- Second Harmonic Rejection
- Waveguide Components
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Passband Frequency	29 GHz	30 GHz	31 GHz
Passband Insertion Loss		0.5 dB	
Passband Ripple		±0.5 dB	
Rejection Frequency, High Side		60 GHz	
Rejection (2 <sup>nd</sup> Harmonic)		13.0 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

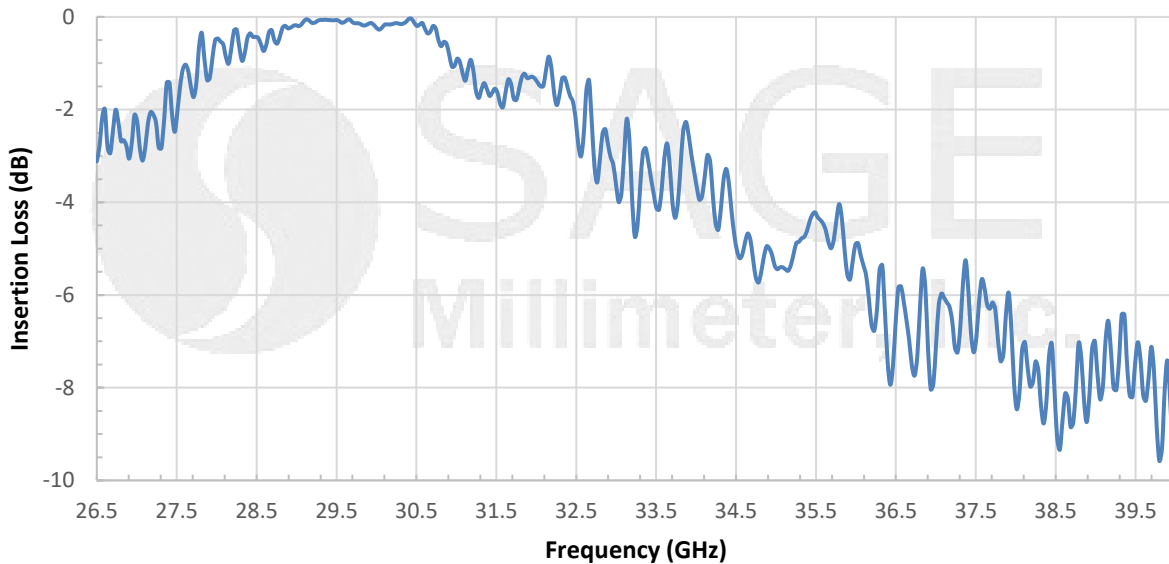
Item	Specification
Waveguide Port	WR-28 Waveguide with UG-599/U Flange
Material	Aluminum
Finish	Gold Chem Film
Weight	0.3 Oz
Size	0.750" (L) X 0.750" (L) X 0.050" (T)
Outline	WF-BA-C



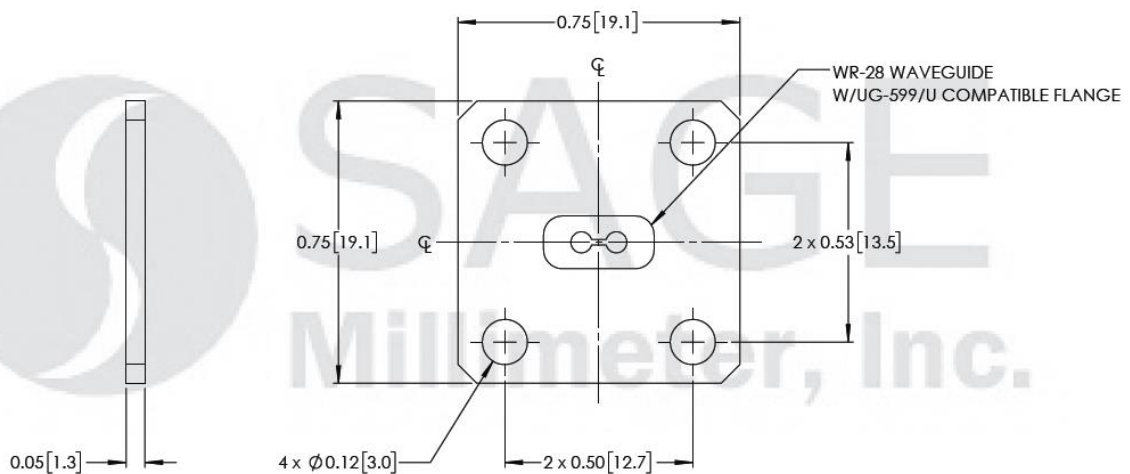


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### Measured Insertion Loss vs Frequency @ 30 GHz



### 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.
- All testing was performed under +25 °C room 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.

