# SWF-50305230-15-B1

### Waveguide Bandpass Filter, V Band, 49.75 to 50.25 GHz

### **Description:**

**Model SWF-50305230-15-B1** is a V band waveguide bandpass filter with a passband frequency of 49.75 to 50.25 GHz and rejection frequencies from DC to 49 GHz and 51 to 60 GHz. The nominal insertion loss of the bandpass filter is 2.5 dB and the typical rejection is 30 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:**

- IEEE 802.11ad WiGig Systems
- Communication Systems
- Radar Systems
- Sub-assemblies

### **Electrical Specifications:**

| Parameter                      | Minimum   | Typical  | Maximum   |
|--------------------------------|-----------|----------|-----------|
| Passband Frequency             | 49.75 GHz |          | 50.25 GHz |
| Passband Insertion Loss        |           | 2.5 dB   | 3.0 dB    |
| Passband Ripple                |           | ±0.25 dB |           |
| Rejection Frequency, Low Side  | DC        |          | 49GHz     |
| Rejection Frequency, High Side | 51 GHz    |          | 60 GHz    |
| Rejection                      |           | 30 dB    |           |
| Passband VSWR                  |           | 1.5:1    |           |
| Specification Temperature      |           | +25°C    |           |
| Operating Temperature          | -40°C     |          | +85°C     |

### **Mechanical Specifications:**

| ltem      | Specification                        |  |
|-----------|--------------------------------------|--|
| Waveguide | WR-15 Waveguide with UG-385/U Flange |  |
| Size      | 1.20" (L) X 0.75" (Ø)                |  |
| Material  | Aluminum                             |  |
| Finish    | Gold Plated                          |  |
| Weight    | 0.3 Oz                               |  |
| Outline   | WF-BV                                |  |



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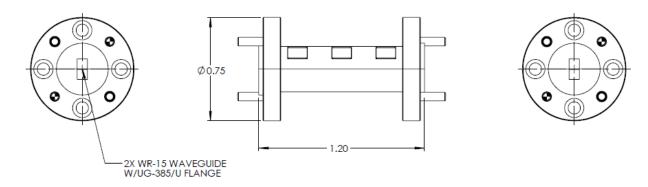
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#### 0 -5 -10 -15 -20 TX/RT Loss (dB) -25 -30 -35 -40 -45 -50 50.0 48.6 48.8 49.0 49.2 49.4 49.6 49.8 50.2 50.4 50.6 50.8 51.0 51.2 51.4 Frequency (GHz)

### **Simulated Data**

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



### Note:

- All data presented were simulated. Actual data may vary.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

### **Caution:**

RoHS

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

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