

# Waveguide Bandpass Filter, E Band, 81 to 87 GHz

### **Description:**

Model SWF-84306350-12-B1-WP is an E band waveguide bandpass filter with a passband frequency of 81 to 87 GHz and rejection frequencies from DC to 78 GHz and 90 to 108 GHz. The nominal insertion loss of the bandpass filter is 2.0 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             | 81 GHz  |              | 87 GHz  |
| Passband Insertion Loss        |         | 2.0 dB       |         |
| Rejection Frequency, Low Side  | DC      |              | 78 GHz  |
| Rejection Frequency, High Side | 90 GHz  |              | 108 GHz |
| Rejection                      | A       | 50 dB        |         |
| Specification Temperature      | _ // \  | +25°C        |         |
| Operating Temperature          | -40°C   | and a second | +85°C   |

# **Mechanical Specifications:**

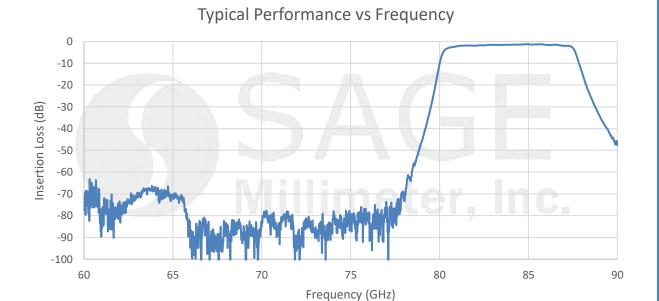
| Item      | Specification                        |
|-----------|--------------------------------------|
| Waveguide | WR-12 Waveguide with UG-387/U Flange |
| Material  | Aluminum                             |
| Finish    | Gold Plated                          |
| Weight    | 0.4 Oz               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



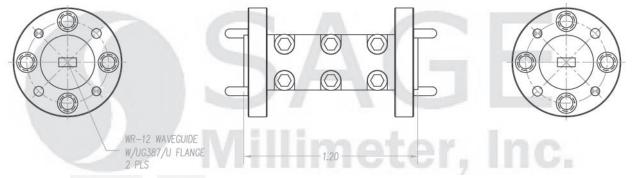
www.eravant.com | 501 Amapola Avenue, Torrance, CA 90501 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com



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



#### Note:

- All data presented is collected from a sample lot, actual data may vary unit to unit.
- All testing was performed under 25°C case temperature.
- Eravant 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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