Waveguide Bandpass Filters

**FEATURES**
- High rejection
- Low insertion loss
- Frequency up to 110 GHz
- Rugged mechanical construction

**APPLICATIONS**
- Outdoor Units
- Subsystems
- Transceivers

**DESCRIPTION**

PFB series waveguide bandpass filters are available in millimeterwave frequency bands up to 110 GHz and major communication frequency bands. There are two types of configurations employed in these bandpass filters. The cavity/tunable version offers best performance and design flexibility, while E-plane version offers low cost and large volume production solution. The typical pass band bandwidth is 2 to 10% and in band ripple is 0.1 to 0.5 dB.

**TYPICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequency Band</th>
<th>K</th>
<th>KA</th>
<th>Q</th>
<th>U</th>
<th>V</th>
<th>E</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waveguide</td>
<td>WR-42</td>
<td>WR-28</td>
<td>WR-22</td>
<td>WR-19</td>
<td>WR-15</td>
<td>WR-12</td>
<td>WR-10</td>
</tr>
<tr>
<td>Frequency Range (GHz)</td>
<td>18 to 26.5</td>
<td>26.5 to 40</td>
<td>33 to 50</td>
<td>40 to 60</td>
<td>50 to 75</td>
<td>60 to 90</td>
<td>75 to 110</td>
</tr>
<tr>
<td>Insertion Loss (dB)¹</td>
<td>0.8 to 1.2</td>
<td>0.8 to 1.2</td>
<td>0.8 to 1.5</td>
<td>1.0 to 1.5</td>
<td>1.0 to 1.8</td>
<td>1.2 to 1.8</td>
<td>1.2 to 2.0</td>
</tr>
<tr>
<td>Rejection (dB)²</td>
<td>30 to 50</td>
<td>30 to 50</td>
<td>30 to 50</td>
<td>30 to 50</td>
<td>30 to 50</td>
<td>30 to 50</td>
<td>30 to 50</td>
</tr>
<tr>
<td>Ripple in Passband</td>
<td>0.1 to 0.5</td>
<td>0.1 to 0.5</td>
<td>0.1 to 0.5</td>
<td>0.1 to 0.5</td>
<td>0.1 to 0.5</td>
<td>0.1 to 0.5</td>
<td>0.1 to 0.5</td>
</tr>
</tbody>
</table>

**Note:**
1. The pass band insertion loss is bandwidth related;
2. The out of band rejection is offset frequency related. Consult factory for you specific bandpass filter requirement.

**HOW TO ORDER**

Specify Model Number

Example: To order a WR-28 bandpass filter with 38 GHz center frequency, 2.2 GHz bandwidth and 45 dB rejection, specify PFB-28382245-XX.
WT-E-1

WT-E-2

WT-E-3

WT-E-4

WT-E-5

WT-E-6

The flange pattern shown is for illustration purpose. Refer to Technical Reference Section for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.
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