4 Section Bandpass Filter With SMA Female Connectors Operating From 1.565 GHz to 1.585 GHz With a 20 MHz Passband

**Features**
- Pass band of 20 MHz
- 1.565 GHz to 1.585 GHz
- Four section
- Combline filter design
- 50 dB rejection at 1.475 GHz and 1.675 GHz (about 90 MHz from band edge)
- Typical insertion loss of 1.5 dB
- Female SMA connectors

**Applications**
- GPS L1

**Description**
The PE8703 is a four section band pass filter that is useful for filtering for GPS L1 uses. The pass band is 20 MHz, or 1.565 to 1.585 GHz. Implementing a combline design, the filter has excellent rejection of 50 dB at 1.475 GHz and 1.675 GHz, or about 90 MHz from the band edges. It has a typical insertion loss of 1.5 dB. The PE8703 has SMA female connectors.

**Electrical Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passband Frequency</td>
<td>1.565</td>
<td>1.585</td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Impedance</td>
<td>50</td>
<td></td>
<td></td>
<td>Ohms</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>1.5</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Passband VSWR</td>
<td>1.5:1</td>
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<td></td>
</tr>
<tr>
<td>Rejection at 1.475 GHz</td>
<td>50</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Rejection at 1.675 GHz</td>
<td>50</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Input Power, CW</td>
<td></td>
<td></td>
<td>5</td>
<td>Watts</td>
</tr>
</tbody>
</table>

**Electrical Specification Notes:** Values at 25°C, sea level.

**Mechanical Specifications**

<table>
<thead>
<tr>
<th>Size</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>1.55 in [39.37 mm]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>2.25 in [57.15 mm]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>0.53 in [13.46 mm]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.15 lbs [68.04 g]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Configuration**
- Design: Combline
- Number of Sections: 4
- Package Style: Connectorized Module
- Connector 1: SMA Female
- Connector 2: SMA Female

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 4 Section Bandpass Filter With SMA Female Connectors Operating From 1.565 GHz to 1.585 GHz With a 20 MHz Passband PE8703
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Bandpass Filters Technical Data Sheet PE8703

Environmental Specifications

Compliance Certifications (visit www.Pasternack.com for current document)
RoHS Compliant
REACH Compliant

Plotted and Other Data
Notes:
• Values at 25°C, sea level.

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**Bandpass Filters Technical Data Sheet** PE8703

**Typical Performance Data**

**Passband Ripple**

-5.0 dB

**Rejection**

-120 dB

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PE8703 CAD Drawing

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