11 Section Bandpass Filter With SMA Female Connectors Operating From 1 GHz to 2 GHz With a 1,000 MHz Passband

Bandpass Filters Technical Data Sheet

**Features**
- Pass band of 1000 MHz
- 1 GHz to 2 GHz
- Eleven section
- Combline filter design
- 55 dB rejection at 650 MHz and 3 GHz (1.5 GHz from band center)
- Typical insertion loss of 1.5 dB
- Female SMA connectors

**Applications**
- Satellite communications

**Description**
The PE87FL1012 is an eleven section band pass filter. It is part of a family of filters that is useful for satellite communications. The pass band is 1000 MHz wide, from 1 GHz to 2 GHz. Implemented using a Combline design, the filter has excellent rejection of 55 dB at 650 MHz and 3 GHz, or ±1.5 GHz from mid band. It has a maximum insertion loss of 2 dB. The PE87FL1012 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 GHz</td>
<td>2 GHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td>50 Ohms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insertion Loss</td>
<td></td>
<td>1.5 dB</td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Passband VSWR</td>
<td>1.7:1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rejection at 650 MHz</td>
<td>55 dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rejection at 3 GHz</td>
<td>55 dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Power, CW</td>
<td></td>
<td>2 Watts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Mechanical Specifications**

**Size**
- Length: 1.6 in [40.64 mm]
- Width: 0.55 in [13.97 mm]
- Height: 0.44 in [11.18 mm]

**Configuration**
- Design: Combline
- Number of Sections: 11
- Package Style: Connectorized
- Connector 1: SMA Female
- Connector 2: SMA Female
- Connector Option: Field Replaceable

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 11 Section Bandpass Filter With SMA Female Connectors Operating From 1 GHz to 2 GHz With a 1,000 MHz Passband PE87FL1012

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PE87FL1012 REV 1.0
11 Section Bandpass Filter With SMA Female Connectors Operating From 1 GHz to 2 GHz With a 1,000 MHz Passband

**Bandpass Filters Technical Data Sheet** PE87FL1012

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

06/14/2014

**Plotted and Other Data**

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

**Typical Performance Data**

![Passband Graph](image)

![Insertion Loss Graph](image)

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications:

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11 Section Bandpass Filter With SMA Female Connectors Operating From 1 GHz to 2 GHz With a 1,000 MHz Passband

Bandpass Filters Technical Data Sheet PE87FL1012

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4PE87FL1012  REV 1.0

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PE87FL1012 CAD Drawing

PE87FL1012

1.60
[40.6]

0.55
[14.0]

0.28
[7.0]

0.21
[5.3]

0.44
[11.2]

0.20
[5.1]

0.09
[2.3]

0.37
[9.4]

SMA FEMALE
FIELD REPLACEABLE
TYP.

2X MOUNTING (0.086")
2-56 UNC-2B
.12 DEEP

TOLERANCE
XX ±.01
XXX ±.005
XXXX ±.0010

* THESE DIMENSIONS AND TOLERANCES SUPERSede NOTE #1 ON TITLE BLOCK.

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. DIMENSIONS ARE IN MILLIMETERS.