High Pass Filter (Waveguide & Coaxial)

FEATURES:
- Up to 220GHz
- Low Cost
- Wide Bandwidths
- Low Insertions Loss
- Low VSWR in Band

APPLICATIONS:
- Side Band Filters
- Frequency Diplexers
- Telecommunications Systems

DESCRIPTION:
Cernex’s CHF series high pass filters use a simple yet effective waveguide cut-off filter technique. This design is useful for eliminating unwanted side bands in upconverters and out-of-band frequencies in communication systems. These filters are small in size and compact by design. The CHF series can be designed for any frequency range from 0.1 to 220 GHz. Low insertion losses from 0.15 dB and cut off rejections of up to 80 dB are possible. Consult Cernex for dimensions due to the wide range of waveguide sizes and frequency ranges.

SPECIFICATIONS:

**LC:**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Passband Frequency (MHz)</th>
<th>Insertion Loss (dB)</th>
<th>Stopband (MHz)</th>
<th>Rejection (dB)</th>
<th>Case Type (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF060040B</td>
<td>1100-6000</td>
<td>*</td>
<td>DC-950</td>
<td>40@DC-950</td>
<td>*</td>
</tr>
<tr>
<td>CHF080075B</td>
<td>3400-8100</td>
<td>*</td>
<td>DC-460</td>
<td>75@DC-460</td>
<td>40.4 x 12 x 10</td>
</tr>
</tbody>
</table>

OTHER FREQUENCY BANDS AND ATTENUATION VALUES ARE ALSO AVAILABLE.
*CONSULT THE FACTORY

**Suspended Substrate:**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Cutoff Frequency (MHz)</th>
<th>Insertion Loss (dB)</th>
<th>Stopband (MHz)</th>
<th>Rejection (dB)</th>
<th>Case Type (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF050035B</td>
<td>1500-5000 (-1.5dB)</td>
<td>*</td>
<td>1000</td>
<td>35@1000MHz</td>
<td>149 x 34 x 10.5</td>
</tr>
<tr>
<td>CHF060040B</td>
<td>2300-6000 (-0.5dB)</td>
<td>*</td>
<td>1800</td>
<td>40@1800MHz</td>
<td>52 x 35 x 10</td>
</tr>
</tbody>
</table>

OTHER FREQUENCY BANDS AND ATTENUATION VALUES ARE ALSO AVAILABLE.
*CONSULT THE FACTORY
High Pass Filter (Waveguide & Coaxial)

Waveguide:

<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 Size</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>Passband (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>Cut off Frequency Range (GHz)</td>
<td>14 to 23</td>
<td>21 to 36</td>
<td>26 to 45</td>
<td>31 to 54</td>
<td>40 to 68</td>
<td>48 to 82</td>
<td>59 to 100</td>
</tr>
<tr>
<td>Pass band Loss (dB)</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>0.9</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Stop band Rejection (dB)</td>
<td>45</td>
<td>45</td>
<td>45</td>
<td>45</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>

1. The pass band insertion loss and stop band rejection is cut off frequency and filter physical length related. The longer the length, the higher the rejection in the stop bands.
2. Other waveguide band highpass filters are available upon request.

HOW TO ORDER:

**WAVEGUIDE:**

Specify Model Number

CHF – WG HF IL RJ -- XX

To be specified by the factory

Waveguide

High End Cutoff Frequency

Rejection

Insertion Loss

**COAXIAL:**

Specify Model Number

CHF – HF IL RJ -- XX

To be specified by the factory

High End Cutoff Frequency

Rejection

Insertion Loss

Example: To order WR-28 High pass Filter with a high End Cut Off frequency band of 29Ghz and a rejection of 40dB, specify CHF-282910-XX.

CERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE.