**Drop-in Ferrite Isolators and Circulators**

**FEATURES**
- Low cost, high quality
- Compact size, light weight
- High performance
- Wide operation temperature range
- Common Radar and wireless bands

**APPLICATIONS**
- Ports isolation
- Module integration
- Transceiver subsystems

**DESCRIPTION**

FID and FCD series narrow band drop-in isolators and circulators cover common Radar and wireless communication frequency bands up to 20 GHz. The isolator is an ideal device where the port isolation is required, while the circulator is commonly used as a duplexer for transceiver subsystems where the transmitter and receiver ports share a single antenna port. They are often used in amplifiers, oscillators, integrated modules and transceiver subsystems. The low cost FID and FCD series isolators and circulators offer very compact sizes that can be easily inserted into the sub-assembly with minimum size increase. While the standard specifications are shown below, the custom ones with wider bandwidth and higher isolation are available.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequency Range (GHz)</th>
<th>0.8 to 1.2</th>
<th>1.2 to 2.4</th>
<th>2.0 to 3.5</th>
<th>3.5 to 5.0</th>
<th>5.0 to 8.0</th>
<th>8.0 to 18.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth (MHz min)</td>
<td>25</td>
<td>70</td>
<td>200</td>
<td>400</td>
<td>500</td>
<td>100</td>
</tr>
<tr>
<td>Isolation (dB min)</td>
<td>23</td>
<td>20</td>
<td>23</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Insertion Loss (dB max)</td>
<td>0.3</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
</tr>
<tr>
<td>VSWR (max)</td>
<td>1.20</td>
<td>1.25</td>
<td>1.20</td>
<td>1.25</td>
<td>1.20</td>
<td>1.25</td>
</tr>
<tr>
<td>Power Handling (W, min)</td>
<td>60</td>
<td>125</td>
<td>120</td>
<td>125</td>
<td>120</td>
<td>125</td>
</tr>
</tbody>
</table>

**HOW TO ORDER**

Specify Model Number

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FXD - CF BW IL IS - XX
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I = Isolator
C = Circulator
Center Frequency in GHz

Example: To order a center frequency 4.0 GHz isolator with 0.3 GHz bandwidth, 0.3 dB maximum insertion loss and 30 dB minimum isolation, specify FID-04030330-XX.
Ferrite Device Outline Drawings

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.