WGF-12 / WGF-6 / WGF-461 / WGF-4

WAVEGUIDE FILTER

Overview
The WGF series provide a way of bringing pre-terminated fiber optic cables into a shielded enclosure while maintaining the enclosure’s radio frequency isolation integrity. All versions except the WGF-4 feature a patented design with removable center plug so that connectorized fiber optic cables can be inserted into the peripheral cable-sized slots when the plug is removed.

WGF-12
The WGF-12 has twelve bores to accept pre-terminated fiber optic cables with attached connectors.

WGF-6
The WGF-6 has six bores to accept pre-terminated fiber optic cables with attached connectors.

WGF-461
The WGF-461 was designed to meet MIL-461 EMC specifications by providing 100 dB attenuation for frequencies up to 40 GHz. It has six bores to accept pre-terminated fiber optic cables with attached connectors.

WGF-4
The WGF-4 accepts up to four pre-terminated fiber optic cables with either LC or ST connectors through fixed bores. It is accepts up to four pre-terminated fiber optic cables with attached connectors.

Features:
- 4, 6, or 12 Channel Waveguide Filter
- WGF-12, WGF-6 and WGF-461 exceed NSA 65-6 shielding specifications
- WGF-12, WGF-6 and WGF-461 have patented removable core to allow easy pass through of pre-terminated cable
- WGF-461 meets MIL-461 EMC specification

Applications:
- SCIF / TEMPEST Enclosures
- EMC Testing
- RF Testing
- Manufacturing
- MRI / Medical
- Anechoic Chambers
WGF-12 / WGF-6 / WGF-461 / WGF-4

WAVEGUIDE FILTER

Typical Applications

Specifications

**THEORETICAL ATTENUATION (dB)**

<table>
<thead>
<tr>
<th>Model</th>
<th>43 GHz</th>
<th>40 GHz</th>
<th>35 GHz</th>
<th>30 GHz</th>
<th>25 GHz</th>
<th>20 GHz</th>
<th>18 GHz</th>
<th>15 GHz</th>
<th>10 GHz</th>
<th>4 GHz</th>
<th>100 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGF-12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>60.32</td>
<td>114.91</td>
<td>128.39</td>
<td>144.63</td>
<td>162.11</td>
<td>176.02</td>
<td>176.02</td>
</tr>
<tr>
<td>WGF-6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>63.32</td>
<td>-</td>
<td>131.59</td>
<td>147.63</td>
<td>165.77</td>
<td>179.02</td>
<td>179.02</td>
</tr>
<tr>
<td>WGF-461</td>
<td>64.67</td>
<td>123.02</td>
<td>179.33</td>
<td>217.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WGF-4</td>
<td>70.33</td>
<td>106.69</td>
<td>155.63</td>
<td>178.88</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**PHYSICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Cut-Off Frequency</th>
<th>Waveguide Bore Qty</th>
<th>Waveguide Bore Diameter</th>
<th>Body Thread Size</th>
<th>Clearance Hole Diameter</th>
<th>Effective Length</th>
<th>Overall Length</th>
<th>Plug Bore Diameter</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGF-12</td>
<td>27 GHz</td>
<td>12</td>
<td>0.257 x 0.159 in (6.5 x 4.0 mm)</td>
<td>1-5/8&quot;, 20 NEF</td>
<td>1-21/32 in (42 mm)</td>
<td>1.5 in (38 mm)</td>
<td>2.31 in (59 mm)</td>
<td>1.0 in (25.5 mm)</td>
<td>Steel, Electroless Nickel Finish</td>
</tr>
<tr>
<td>WGF-6</td>
<td>27 GHz</td>
<td>6</td>
<td>0.257 x 0.159 in (6.5 x 4.0 mm)</td>
<td>1-1/8&quot;, 18 NEF</td>
<td>1-5/32 in (29.5 mm)</td>
<td>1.5 in (38 mm)</td>
<td>2.15 in (54 mm)</td>
<td>0.5 in (12.7 mm)</td>
<td>n/a</td>
</tr>
<tr>
<td>WGF-461</td>
<td>44.2 GHz</td>
<td>6</td>
<td>0.157 x 0.118 in (4.0 x 3.0 mm)</td>
<td>1-1/8&quot;, 18 NEF</td>
<td>1-5/32 in (29.5 mm)</td>
<td>1.5 in (38 mm)</td>
<td>2.25 in (57 mm)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WGF-4</td>
<td>18.5 GHz</td>
<td>4</td>
<td>-</td>
<td>1-1/8&quot;, 18 NEF</td>
<td>1-5/32 in (29.5 mm)</td>
<td>1.5 in (38 mm)</td>
<td>2.25 in (57 mm)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>