N Directional Coupler 20 dB Coupled Port From 800 MHz to 2.5 GHz Rated To 60 Watts

The FMCP1023-20 is an 20 dB RF coupler with 50 ohm N connectors operating from 0.8 to 2.5 GHz with a maximum input power of 60 Watts, and peak power handling of 1 kilowatt. The FMCP1023-20 has a coupling factor of 1 dB, insertion loss of 0.4 (excluding coupled power) and a maximum VSWR of 1.25. The coupler operates over a temperature range of -55° to 125° C and meets military environmental standard for humidity, shock, vibration, altitude and temperature. Couplers have many application and perform many valuable functions within the RF/Microwave world such as circuit feedback and signal sampling for measurement or monitoring.

**Electrical Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>0.8</td>
<td></td>
<td>2.5</td>
<td>GHz</td>
</tr>
<tr>
<td>Impedance</td>
<td>50</td>
<td></td>
<td></td>
<td>Ohms</td>
</tr>
<tr>
<td>Coupling</td>
<td>20 ±1</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Freq. Sensitivity</td>
<td>±0.7</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>0.4</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Directivity</td>
<td>20</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Main Line VSWR</td>
<td></td>
<td></td>
<td>1.25:1</td>
<td></td>
</tr>
<tr>
<td>Input Power (CW)</td>
<td></td>
<td>60</td>
<td></td>
<td>Watts</td>
</tr>
<tr>
<td>Input Power (Peak)</td>
<td></td>
<td></td>
<td>1</td>
<td>KWatts</td>
</tr>
</tbody>
</table>

**Mechanical Specifications**

**Size**
- Length: 5.63 in [143 mm]
- Width/Dia.: 0.825 in [20.96 mm]
- Height: 1.94 in [49.28 mm]
- Weight: 0.5305 lbs [240.63 g]

**Configuration**
- Package Type: Connectorized
- Input Connector: N Female
- Output Connector: N Female
- Coupled Connectors: N Female

**Environmental Specifications**

**Temperature**
- Operating Range: -55 to +85 deg C
- Storage Range: -65 to +125 deg C

**Humidity**
MIL-STD-202F METHOD 103B COND. B

**Shock**
MIL-STD-202F METHOD 213B COND. B

**Vibration**
MIL-STD-202F METHOD 204D COND. B

**Altitude**
MIL-STD-202F METHOD 105C COND. B

**Temperature Cycle**
MIL-STD-202F METHOD 107D COND. A
Compliance Certifications (see product page for current document)

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

Typical Performance Data

![Graph of Return Loss](image)

![Graph of Insertion Loss](image)
N Directional Coupler 20 dB Coupled Port From 800 MHz to 2.5 GHz Rated To 60 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: N Directional Coupler 20 dB Coupled Port From 800 MHz to 2.5 GHz Rated To 60 Watts FMCP1023-20

URL: https://www.fairviewmicrowave.com/n-directional-coupler-20-db-2.5-ghz-60-watts-fmcp1023-20-p.aspx

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.
FMCP1023-20
DATA SHEET

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NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].