Directional 20 dB SMA Coupler From 500 MHz to 1,000 MHz Rated to 50 Watts

Couplers Technical Data Sheet

PE2200-20

Features
- Directional Coupler
- 0.5 to 1 GHz Frequency Range
- Coupling 20±1.25 dB
- Directivity > 25 dB
- Low VSWR < 1.1:1
- Max Power 50 Watts (CW)

Applications
- Test and Measurement
- Military Communications
- Commercial Communications
- Wireless Communications
- SATCOM

Description
Directional couplers are indispensable components for isolating, separating and combining signals. For example, they provide a simple way of sampling microwave signals. They also can make accurate attenuator measurements since reflections are eliminated. The PE2200-20 is a 20 dB directional coupler that operates from 0.5 to 1 GHz and can handle up to 50 Watts (CW) with 25 dB directivity minimum and 1.1:1 VSWR maximum. The package interface uses SMA female connectors, and is also REACH and RoHS compliant.

The PE2200-20 is part of Pasternack’s family of directional/dual-directional couplers that offer coupling ratios up to 50 dB with excellent performance featuring high directivity, low insertion loss and VSWR. They are available in both narrow and broad bandwidths and can be used in a wide variety of applications including signal sampling, VSWR measurements, power combining and distribution.

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>Frequency Range</td>
<td>500</td>
<td>1,000</td>
<td></td>
<td>MHz</td>
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<tr>
<td>Impedance</td>
<td>50</td>
<td></td>
<td></td>
<td>Ohms</td>
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<tr>
<td>Coupling</td>
<td>20 ±1.25</td>
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<td></td>
<td>dB</td>
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<tr>
<td>Frequency Sensitivity</td>
<td>±0.75</td>
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<td>dB</td>
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<td>Main Line Loss</td>
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<td>Insertion Loss</td>
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<td></td>
<td>dB</td>
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<tr>
<td>Directivity</td>
<td>25</td>
<td></td>
<td></td>
<td>dB</td>
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<tr>
<td>Main Line VSWR</td>
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<td>1.1:1</td>
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<tr>
<td>Secondary Line VSWR</td>
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<tr>
<td>Input Power (CW)</td>
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<td></td>
<td>Watts</td>
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<tr>
<td>Reverse Power (CW)</td>
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<td></td>
<td>Watts</td>
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<td>Input Power (Peak)</td>
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<td></td>
<td>KWatts</td>
</tr>
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</table>

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: Directional 20 dB SMA Coupler From 500 MHz to 1,000 MHz Rated to 50 Watts PE2200-20
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Electrical Specification Notes:
Values at 25°C, sea level.
Coupling tolerance includes frequency sensitivity.
Main line loss is the difference in power level between input and output.
Insertion loss excludes coupled power from main line loss.

Mechanical Specifications
Size
Length 3.1 in [78.74 mm]
Width/Dia. 0.38 in [9.65 mm]
Height 1.01 in [25.65 mm]
Weight 0.096 lbs [43.54 g]

Configuration
Package Type Connectorized
Input Connector SMA Female
Output Connector SMA Female
Coupled Connectors SMA Female

Compliance Certifications (visit www.Pasternack.com for current document)
RoHS Compliant
REACH Compliant 12/17/2015

Plotted and Other Data
Notes:

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Typical Performance Data

**Coupling**

![](image)

Freq (GHz)

**Directivity**

![](image)

Freq (GHz)

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Pasterack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • Fax: (949) 261-7451
Sales@Pasterack.com • Techsupport@Pasterack.com

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