

Directional 20 dB SMA Coupler from 500 MHz
to 1000 MHz Rated to 50 Watts



Couplers Technical Data Sheet

PE2CP1137-20

Features

- Directional Coupler
- SMA Female Connectorized Design
- 500 to 1000 MHz Frequency Range
- Coupling 20 ± 1.25 dB
- Directivity > 25 dB
- 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 PE2CP1137-20 is a 20 dB directional coupler that operates from 500 to 1000 MHz 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.

The PE2CP1137-20 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

Description	Minimum	Typical	Maximum	Units
Frequency Range	500		1,000	MHz
Impedance		50		Ohms
Coupling	18.75	20	21.25	dB
Frequency Sensitivity			± 0.75	dB
Coupled Loss			0.05	dB
Insertion Loss			0.2	dB
Directivity	25			dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.1:1	
Input Power (CW)			50	Watts
Input Power (Peak)			3	kWatts

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 1000 MHz Rated to 50 Watts PE2CP1137-20](#)

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Mechanical Specifications

Size

Length

3.1 in [78.74 mm]

Width/Dia.

0.5 in [12.7 mm]

Height

0.38 in [9.65 mm]

Weight

0.09 lbs [40.82 g]

Housing Material and Plating

Aluminum

Configuration

Input Connector

SMA Female

Output Connector

SMA Female

Coupled Connectors

SMA Female

Environmental Specifications

Temperature

Operating Range

-40 to +85 deg C

Storage Range

-50 to +105 deg C

Humidity

100% RH at 35°C, 95%RH at 40°C

Shock

20G for 11msec half sine wave, 3 axis both directions

Vibration

25g RMS (15 degrees 2KHz) endurance, 1 hour per axis

Altitude

30,000 ft.

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Directional 20 dB SMA Coupler from 500 MHz to 1000 MHz Rated to 50 Watts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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URL: <https://www.pasternack.com/directional-20-db-coupler-500-mhz-to-1-ghz-pe2cp1137-20-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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE2CP1137-20 CAD Drawing

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