

Dual Directional 30 dB N Coupler from 500 MHz to 1000 MHz Rated to 500 Watts



## Couplers Technical Data Sheet

**PE2CP1146-30**

### Features

- Dual-Directional Coupler
- N Female Connectorized Design
- 500 to 1,000 MHz Frequency Range
- Coupling  $30 \pm 0.8$  dB
- Directivity  $> 20$  dB
- Low VSWR  $< 1.2:1$
- Max Power 500 Watts (CW)

### Applications

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

### Description

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 PE2CP1145-10 is a 10 dB dual-directional coupler that operates from 500 to 1,000 MHz and can handle up to 500 Watts (CW) with 20 dB directivity minimum and 1.2:1 VSWR maximum. The package interface uses N female connectors.

The PE2CP1145-10 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              | 29.2    | 30        | 30.8      | dB     |
| Frequency Sensitivity |         | $\pm 0.3$ | $\pm 0.5$ | dB     |
| Insertion Loss        |         | 0.1       | 0.3       | dB     |
| Directivity           | 20      | 25        |           | dB     |
| Main Line VSWR        |         | 1.1:1     | 1.2:1     |        |
| Secondary Line VSWR   |         | 1.15:1    | 1.2:1     |        |
| Input Power (CW)      |         |           | 500       | 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: [Dual Directional 30 dB N Coupler from 500 MHz to 1000 MHz Rated to 500 Watts PE2CP1146-30](#)

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### Mechanical Specifications

#### Size

Length 9.84 in [249.94 mm]  
Width/Dia. 2.76 in [70.1 mm]  
Height 1.06 in [26.92 mm]

#### Weight

2.27 lbs [1.03 kg]

#### Housing Material and Plating

Aluminum

### Configuration

Input Connector N Female  
Output Connector N Female  
Coupled Connectors N 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:

Dual Directional 30 dB N Coupler from 500 MHz to 1000 MHz Rated to 500 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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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.

# PE2CP1146-30 CAD Drawing

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