

# Directional 6 dB SMA Coupler From 2 GHz to 8 GHz Rated to 50 Watts

## Couplers Technical Data Sheet

## PE2CP004-6

### Features

- Directional Coupler
- 2 to 8 GHz Frequency Range
- Coupling 6±1 dB
- Directivity > 20 dB
- VSWR < 1.2:1
- 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 PE2CP004-6 is a 6 dB directional coupler that operates from 2 to 8 GHz with 20 dB directivity minimum and 1.2:1 VSWR maximum. The package interface uses SMA female connectors, and is also RoHS compliant.

The PE2CP004-6 is part of Pasternack's family of directional/dual-directional couplers that offer coupling ratio 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

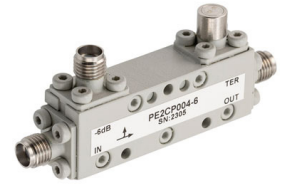
Description	Minimum	Typical	Maximum	Units
Frequency Range	2		8	GHz
Impedance		50		Ohms
Coupling		6 ±1		dB
Frequency Sensitivity			±1	dB
Insertion Loss		0.5		dB
Directivity	20			dB
Main Line VSWR			1.2:1	
Input Power (CW)			50	Watts

Electrical Specification Notes:  
Values at 25°C, sea level.

### Mechanical Specifications

<b>Size</b>	
Length	1.69 in [42.93 mm]
Width/Dia.	0.59 in [14.99 mm]
Height	0.43 in [10.92 mm]
Weight	0.0755 lbs [34.25 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Directional 6 dB SMA Coupler From 2 GHz to 8 GHz Rated to 50 Watts PE2CP004-6](#)



Directional 6 dB SMA Coupler From 2 GHz  
to 8 GHz Rated to 50 Watts

## Couplers Technical Data Sheet

**PE2CP004-6**

### Configuration

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

### Environmental Specifications

#### Temperature

Operating Range	-55 to 85 deg C
Storage Range	-55 to 100 deg C

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

### Plotted and Other Data

Notes:

Directional 6 dB SMA Coupler From 2 GHz to 8 GHz 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.

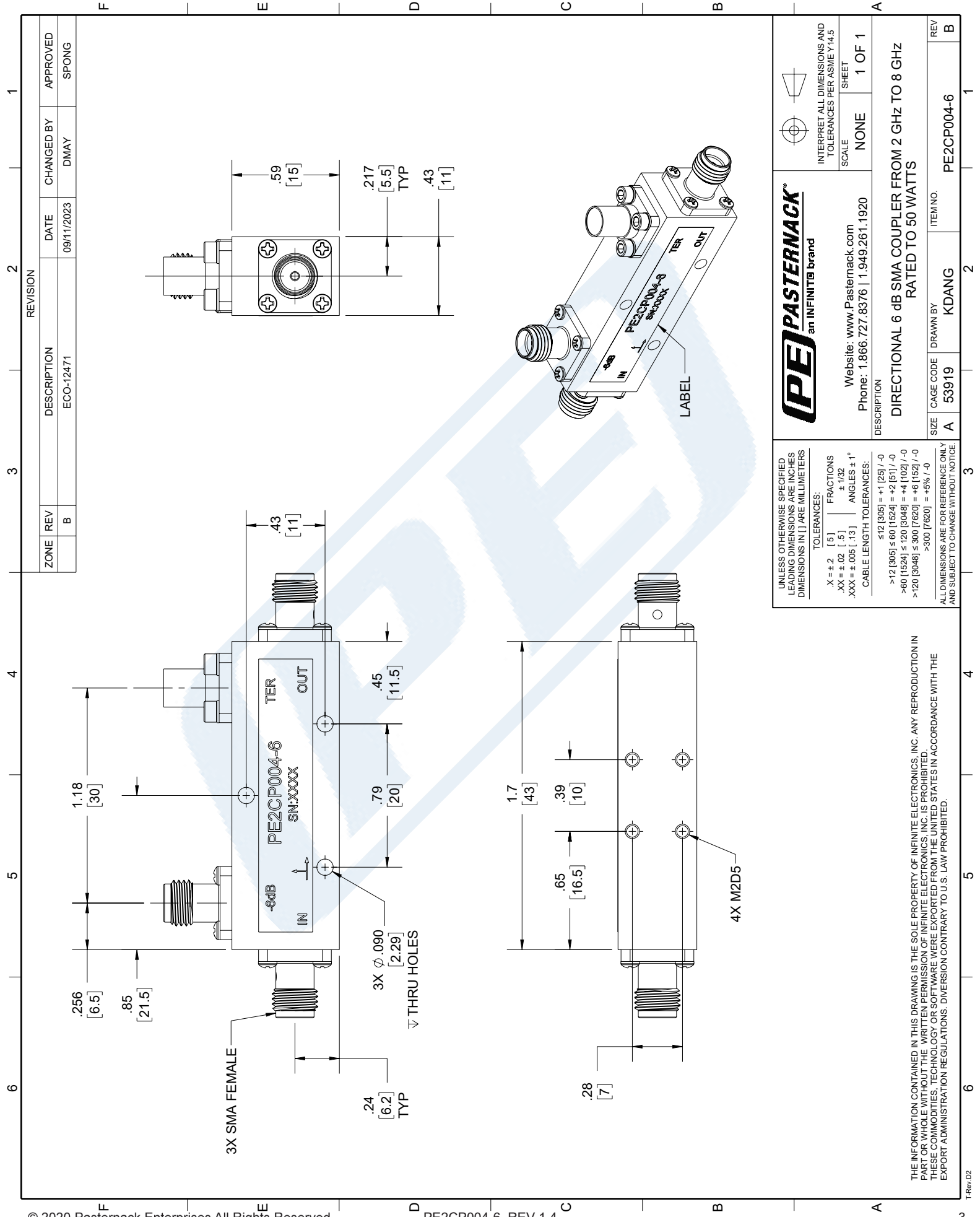
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Directional 6 dB SMA Coupler From 2 GHz to 8 GHz Rated to 50 Watts PE2CP004-6](#)

URL: <https://www.pasternack.com/directional-6-db-sma-coupler-8-ghz-pe2cp004-6-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.

# PE2CP004-6 CAD Drawing

Directional 6 dB SMA Coupler From 2 GHz to 8 GHz Rated to 50 Watts



ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	B	ECO-12471	09/11/2023	DMAY	SPONG

**PE PASTERNAK**  
an INFINITIB brand

Website: [www.Pasternack.com](http://www.Pasternack.com)  
Phone: 1.866.727.8376 | 1.949.261.1920

DESCRIPTION  
**DIRECTIONAL 6 dB SMA COUPLER FROM 2 GHz TO 8 GHz  
RATED TO 50 WATTS**

SCALE: NONE SHEET: 1 OF 1

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:  
 .X = ±.2 [5] | FRACTIONS ± 1/32  
 .XX = ±.02 [.5] | ANGLES ± 1°  
 .XXX = ±.005 [.13]  
 CABLE LENGTH TOLERANCES:  
 ≤12 [305] = +1 [25] / -0  
 >12 [305] ≤ 60 [1524] = +2 [51] / -0  
 >60 [1524] ≤ 120 [3048] = +4 [102] / -0  
 >120 [3048] ≤ 300 [7620] = +6 [152] / -0  
 >300 [7620] = +5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE

REV	ITEM NO.	DESCRIPTION	DATE
B	PE2CP004-6		

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.