



Directional 20 dB N Coupler from 500 MHz to 1000 MHz Rated to 500 Watts

## Couplers Technical Data Sheet

**PE2CP1142-20**

### Features

- Directional Coupler
- N Female Connectorized Design
- 500 to 1000 MHz Frequency Range
- Coupling 20±0.8 dB
- Directivity > 20 dB
- VSWR < 1.2:1
- Max Power 500 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 PE2CP1142-20 is a 20 dB directional coupler that operates from 500 to 1000 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 PE2CP1142-20 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	19.2	20	20.8	dB
Frequency Sensitivity		±0.3	±0.5	dB
Insertion Loss		0.1	0.3	dB
Directivity	20	22		dB
Main Line VSWR		1.1:1	1.2:1	
Secondary Line VSWR		1.1:1	1.2:1	
Input Power (CW)			500	Watts
Input Power (Peak) 10% Duty Cycle, 10us PW			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 N Coupler from 500 MHz to 1000 MHz Rated to 500 Watts PE2CP1142-20](#)



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### Mechanical Specifications

#### Size

Length	9.75 in [247.65 mm]
Width/Dia.	2.067 in [52.5 mm]
Height	1.092 in [27.74 mm]
Weight	1.44 lbs [653.17 g]
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:

Directional 20 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.

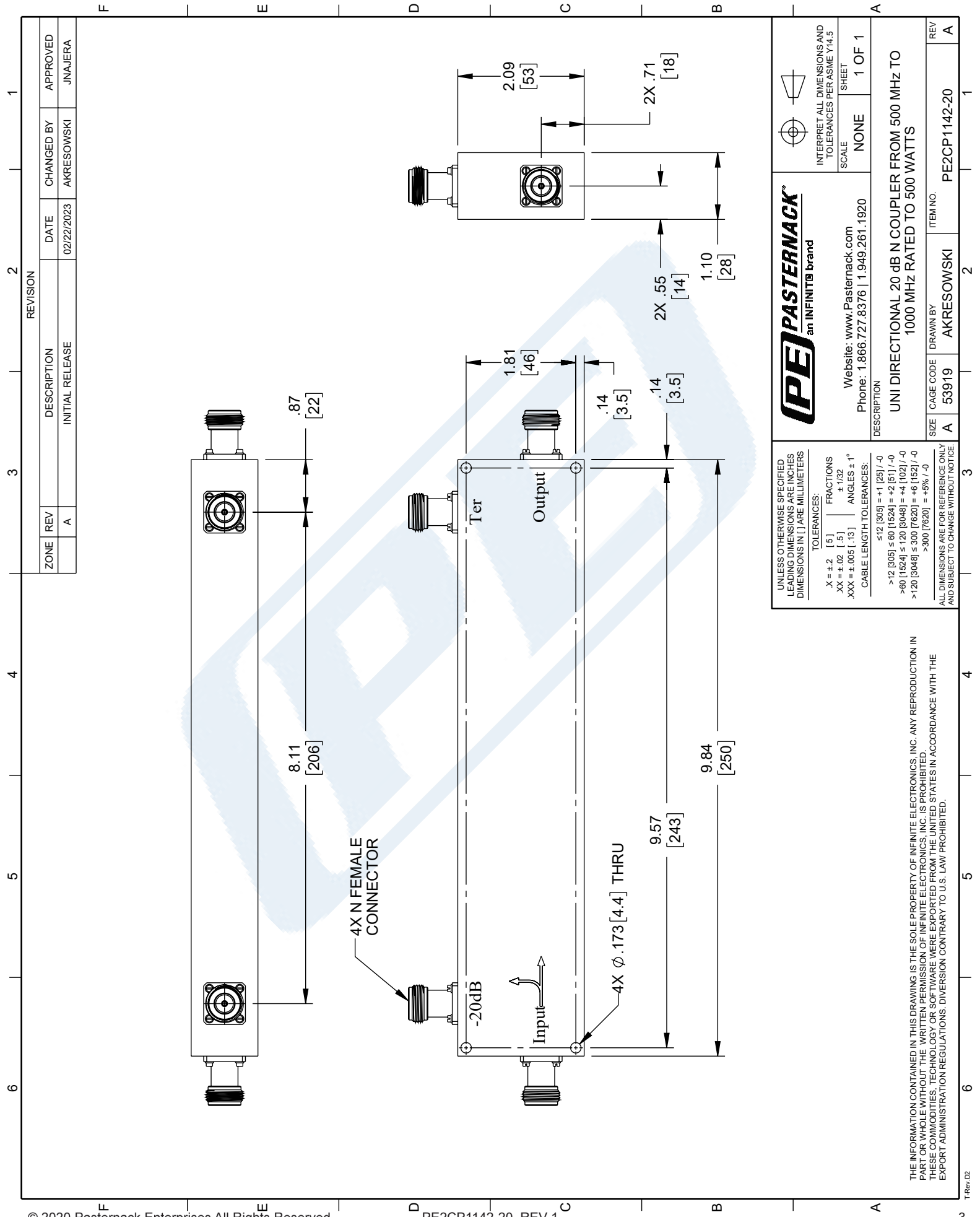
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Directional 20 dB N Coupler from 500 MHz to 1000 MHz Rated to 500 Watts PE2CP1142-20](#)

URL: <https://www.pasternack.com/directional-20-db-coupler-500-mhz-to-1-ghz-pe2cp1142-20-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.

# PE2CP1142-20 CAD Drawing

Directional 20 dB N Coupler from 500 MHz to 1000 MHz Rated to 500 Watts



ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	02/22/2023	AKRESOWSKI	JNAJERA

REVISION

	INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE NONE SHEET 1 OF 1
	Website: <a href="http://www.Pasternack.com">www.Pasternack.com</a> Phone: 1.866.727.8376   1.949.261.1920
DESCRIPTION <b>UNI DIRECTIONAL 20 dB N COUPLER FROM 500 MHz TO 1000 MHz RATED TO 500 WATTS</b>	
SIZE A CAGE CODE A DRAWN BY 53919 AKRESOWSKI	ITEM NO. PE2CP1142-20

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

TOLERANCES:  
 X = ±.2 [5] | FRACTIONS ±.005 [0.13] | ANGLES ± 1°  
 XX = ±.02 [.5] | ± 1/32  
 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

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