

WR-90 Waveguide 20 dB Broadwall Coupler, UG Cover Flange,  
N-Type Female Coupled Port, 8.2 GHz to 12.5 GHz, Copper

**Waveguide Couplers Technical Data Sheet**

**PEW90CP001-20**

The PEW90CP001-20 is a WR-90 Directional Broadwall waveguide coupler with N female coupled port that operates in the frequency range of 8.2 to 12.5 GHz. This Waveguide component has a maximum VSWR of 1.25:1. These designs are made of painted copper alloy and incorporate a broad wall configuration that result in a mid-band nominal coupling value of 10, 20, 30, 40 or 50 dB. Common applications for this component would be where power measurements are required within a system for measuring/sampling power or frequency monitoring with minimal signal loss to the main transmission line. Pasternack offers a complete family of waveguide Crossguide and Broadwall couplers that are in-stock and ship same day.

**Features**

- Three Port Broadwall Waveguide Coupler
- 20±0.7 dB Nominal Coupling Level
- Integrated N Female Connector coupled port
- 8.2 GHz to 12.5 GHz Frequency Range
- Main Line VSWR < 1.1:1
- Max Power 300W (CW)

**Applications**

- Test Benches
- Radar
- Satellite
- Microwave Radio
- Attenuation Measurements
- Power Measurements
- Source Leveling

**Electrical Specifications**

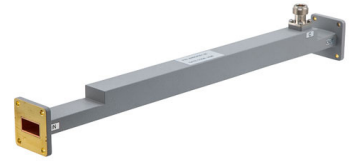
Description	Minimum	Typical	Maximum	Units
Frequency Range	8.2		12.5	GHz
<b>Coupler</b>				
Nominal Coupling Level		20		dB
Directivity	35			dB
Insertion Loss			0.15	dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.25:1	
Coupling Flatness			±0.7	dB
Input Power (CW)			300	Watts
Input Power, Peak			20	kWatts

**Mechanical Specifications**

**Size**

Length	14.96 in [379.98 mm]
Width	1.63 in [41.4 mm]
Height	1.63 in [41.4 mm]
Weight	1.315 lbs [596.47 g]
Flange Type	UG Cover

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Waveguide 20 dB Broadwall Coupler, UG Cover Flange, N-Type Female Coupled Port, 8.2 GHz to 12.5 GHz, Copper PEW90CP001-20](#)



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Flange Material and Plating	Copper, Passivated
RF Connector Type	N Female
Coupler Body Material and Plating	Copper, Passivated

### Environmental Specifications

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

### Plotted and Other Data

Notes:

WR-90 Waveguide 20 dB Broadwall Coupler, UG Cover Flange, N-Type Female Coupled Port, 8.2 GHz to 12.5 GHz, Copper 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.

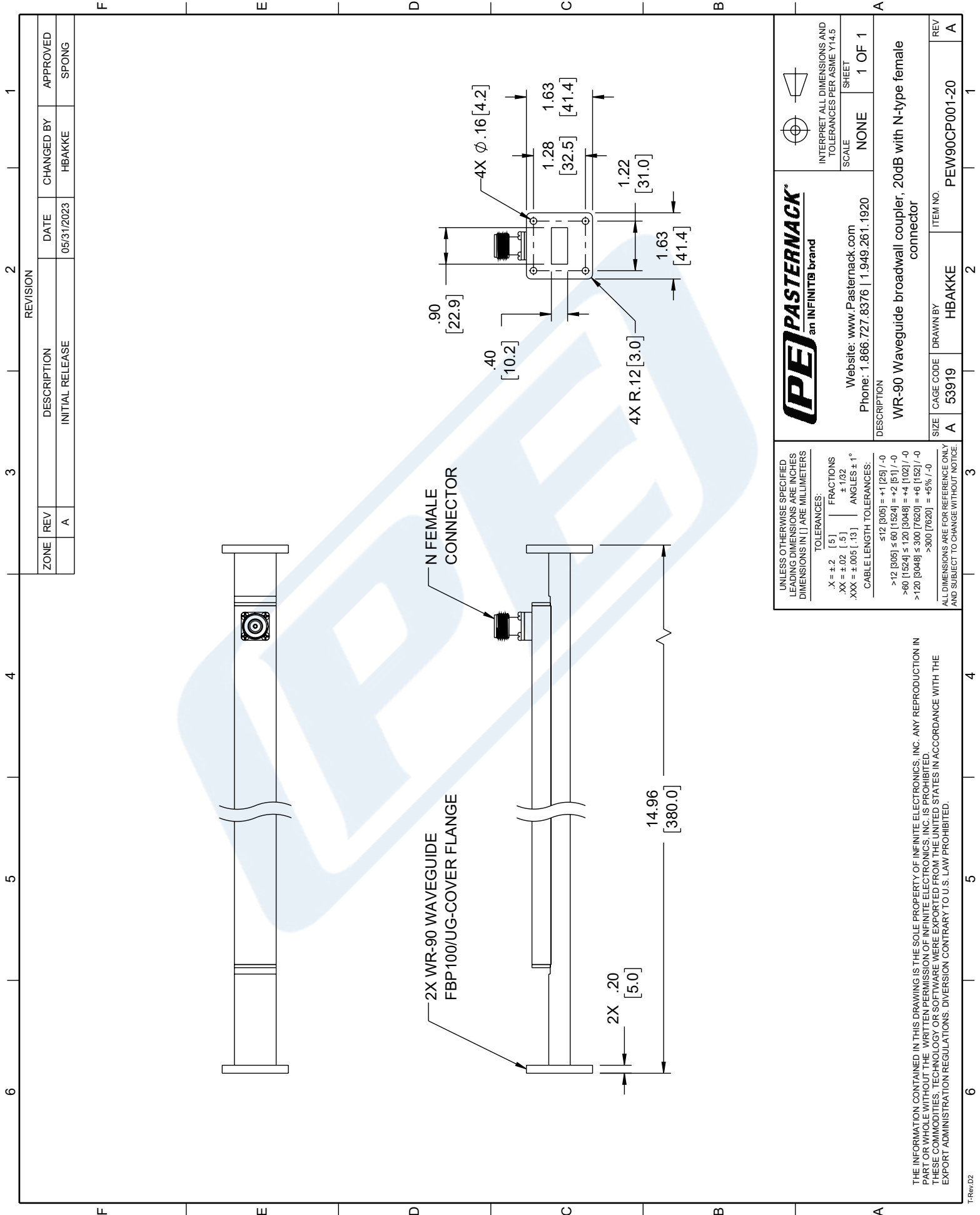
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Waveguide 20 dB Broadwall Coupler, UG Cover Flange, N-Type Female Coupled Port, 8.2 GHz to 12.5 GHz, Copper PEW90CP001-20](#)

URL: <https://www.pasternack.com/wr90-waveguide-20db-broadwall-coupler-ug-12.5mhz-pew90cp001-20-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.

# PEW90CP001-20 CAD Drawing

WR-90 Waveguide 20 dB Broadwall Coupler, UG Cover Flange, N-Type Female Coupled Port, 8.2 GHz to 12.5 GHz, Copper



ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	05/31/2023	HBAKKE	SPONG

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an INFINIT® brand

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

DESCRIPTION: WR-90 Waveguide broadwall coupler, 20dB with N-type female connector

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE: NONE

SHEET: 1 OF 1

ITEM NO.: PEW90CP001-20

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.

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