

WR-12 Waveguide 20 dB Broadwall Coupler, UG-387/U Round Cover Flange, E-Plane Coupled Port, 60 GHz to 90 GHz, Copper Gold



PE-W12CP003A-20

Features

- 20 dB Nominal Coupling Level
- E-Plane Waveguide Coupler
- 60 GHz to 90 GHz Frequency Range
- Body and Flanges made of Copper Gold
- Gold Waveguide
- 1.15:1 VSWR typical

Applications

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

Description

The PE-W12CP003A-20 is a millimeter-wave directional waveguide coupler that operates in the frequency range of 60 to 90 GHz (E Band). This E Band component offers a nominal coupling level of 20 dB, mean coupling accuracy of +/- 1.5, coupling flatness of 1 dB, and has a maximum VSWR level of 1.15:1. The design is made of gold brass copper and incorporates a multi-hole configuration that results in typical directivity of 40 dB. Common applications for this millimeter wave component involve test setups where power reflection measurements are required that might involve power sampling and frequency monitoring with minimal signal loss to the main transmission path. This E plane coupler uses integrated WR-12 waveguide ports with UG 387/U flanges. Pasternack offers a complete family of waveguide millimeter wave directional couplers that are in-stock for same day shipment.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	60		90	GHz
Impedance		50		Ohms
Coupler				
Nominal Coupling Level		20		dB
Coupling Accuracy		±1.5		dB
Directivity		40		
Insertion Loss		1		dB
Main Line VSWR		1.1:1		
Secondary Line VSWR		1.15:1		
Coupling Flatness		1		dB

Mechanical Specifications

Size

Length	5.5 in [139.7 mm]
Width	0.75 in [19.05 mm]
Height	1.13 in [28.7 mm]
Weight	0.014 lbs [6.35 g]

Interface

Waveguide Size	WR-12
Flange Type	Round Cover
Flange Designation	UG-387/U

WR-12 Waveguide 20 dB Broadwall Coupler, UG-387/U Round Cover Flange, E-Plane Coupled Port, 60 GHz to 90 GHz, Copper Gold



PE-W12CP003A-20

Flange Material and Plating
Coupler Body Material and Plating

Copper, Gold
Copper, Gold

Environmental Specifications

Temperature
Operating Range

-15 to +60 deg C

Compliance Certifications (see product page for current document)

Plotted and Other Data

Notes:

WR-12 Waveguide 20 dB Broadwall Coupler, UG-387/U Round Cover Flange, E-Plane Coupled Port, 60 GHz to 90 GHz, Copper Gold 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-12 Waveguide 20 dB Broadwall Coupler, UG-387/U Round Cover Flange, E-Plane Coupled Port, 60 GHz to 90 GHz, Copper Gold PE-W12CP003A-20](#)

URL: <https://www.pasternack.com/wr12-waveguide-20db-broadwall-coupler-ug387-round-e-90ghz-pe-w12cp003a-20-p.aspx>

The information contained within 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 Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

PE-W12CP003A-20 CAD Drawing

WR-12 Waveguide 20 dB Broadwall Coupler, UG-387/U Round Cover Flange, E-Plane Coupled Port, 60 GHz to 90 GHz, Copper Gold

