



WR-22 20 dB Directional Waveguide Coupler  
With UG-383/U Flange and H-Plane Coupled  
Port From 33 GHz to 50 GHz Q Band

TECHNICAL DATA SHEET

PE-W22CP001-20

The PE-W22CP001-20 is a millimeter-wave directional waveguide coupler that operates in the frequency range of 33 to 50 GHz (Q Band). This Q band component offers a nominal coupling level of 20 dB, mean coupling accuracy of +/- 1, coupling flatness of 1.2 dB, and has a maximum VSWR level of 1.2:1. The design is made of gold plated brass copper and incorporates a multi-hole configuration that results in typical directivity of 30 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 H plane coupler uses integrated WR-22 waveguide ports with UG 383/U flanges. Pasternack offers a complete family of waveguide millimeter wave directional couplers that are in-stock for same day shipment.

**Features**

- 20 dB Nominal Coupling Level
- E-Plane Waveguide Coupler
- 33 GHz to 50 GHz Frequency Range
- Body and Flanges made of Brass Copper
- Gold Plated Waveguide
- 1.2:1 VSWR

**Applications**

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

**Configuration**

Waveguide Size	WR-22
Flange 1	UG-383/U
Flange 2	UG-383/U
Flange 3	UG-383/U
Design	Directional Coupler

**Electrical Specifications** (Values at 25°C, sea level)

Description	Minimum	Typical	Maximum	Units
Frequency Range	33		50	GHz
Directivity		30		dB
Insertion Loss			0.8	dB
Input VSWR			1.2:1	
Secondary Line VSWR			1.2:1	
Nominal Coupling Level		20		dB
Mean Coupling Accuracy			±1	dB
Coupling Flatness			±1.2	dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-22 20 dB Directional Waveguide Coupler With UG-383/U Flange and H-Plane Coupled Port From 33 GHz to 50 GHz Q Band PE-W22CP001-20](#)



WR-22 20 dB Directional Waveguide Coupler  
With UG-383/U Flange and H-Plane Coupled  
Port From 33 GHz to 50 GHz Q Band

TECHNICAL DATA SHEET

PE-W22CP001-20

**Mechanical Specifications**

**Size**

Length	8 in [203.2 mm]
Width/Dia.	1.125 in [28.58 mm]
Height	1.7625 in [44.77 mm]

**Waveguide**

Size	WR-22
Material	Brass Copper
Plating	Gold
Color	Gold

Description	Flange 1	Flange 2	Flange 3
Interface	UG-383/U	UG-383/U	UG-383/U
Material	Brass Copper	Brass Copper	Brass Copper
Plating	Gold	Gold	Gold
Color	Gold	Gold	Gold

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant	
REACH Compliant	06/20/2013

**Plotted and Other Data**

Notes:

- Values at 25 °C, sea level

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-22 20 dB Directional Waveguide Coupler With UG-383/U Flange and H-Plane Coupled Port From 33 GHz to 50 GHz Q Band PE-W22CP001-20](#)

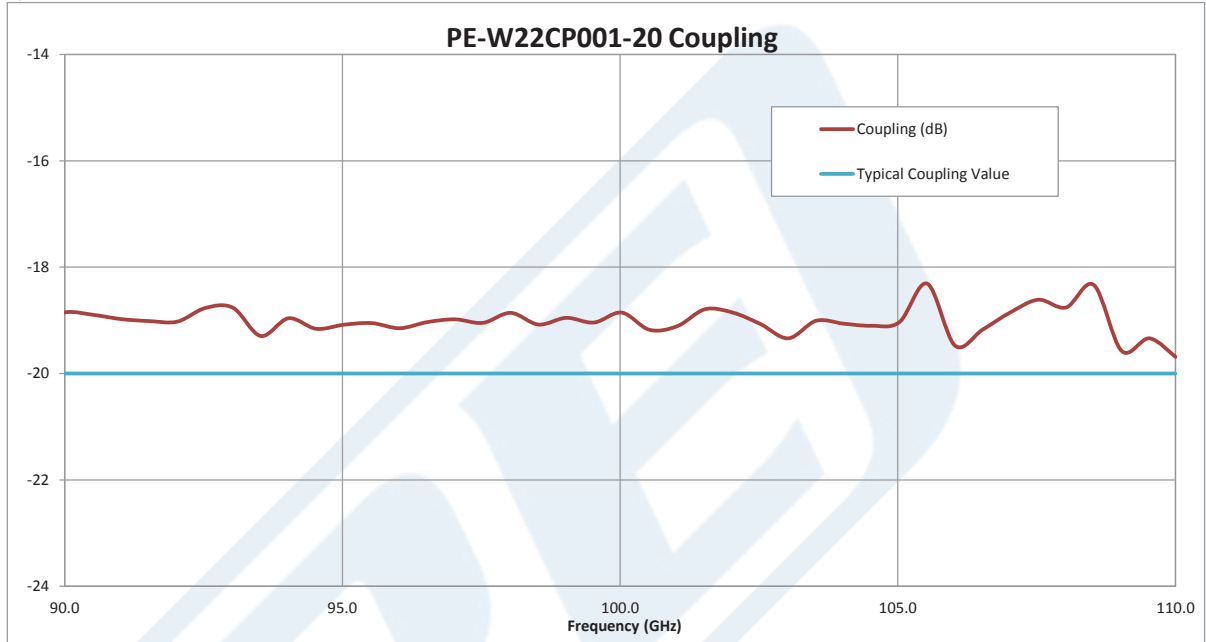


WR-22 20 dB Directional Waveguide Coupler  
With UG-383/U Flange and H-Plane Coupled  
Port From 33 GHz to 50 GHz Q Band

TECHNICAL DATA SHEET

PE-W22CP001-20

Typical Performance Data



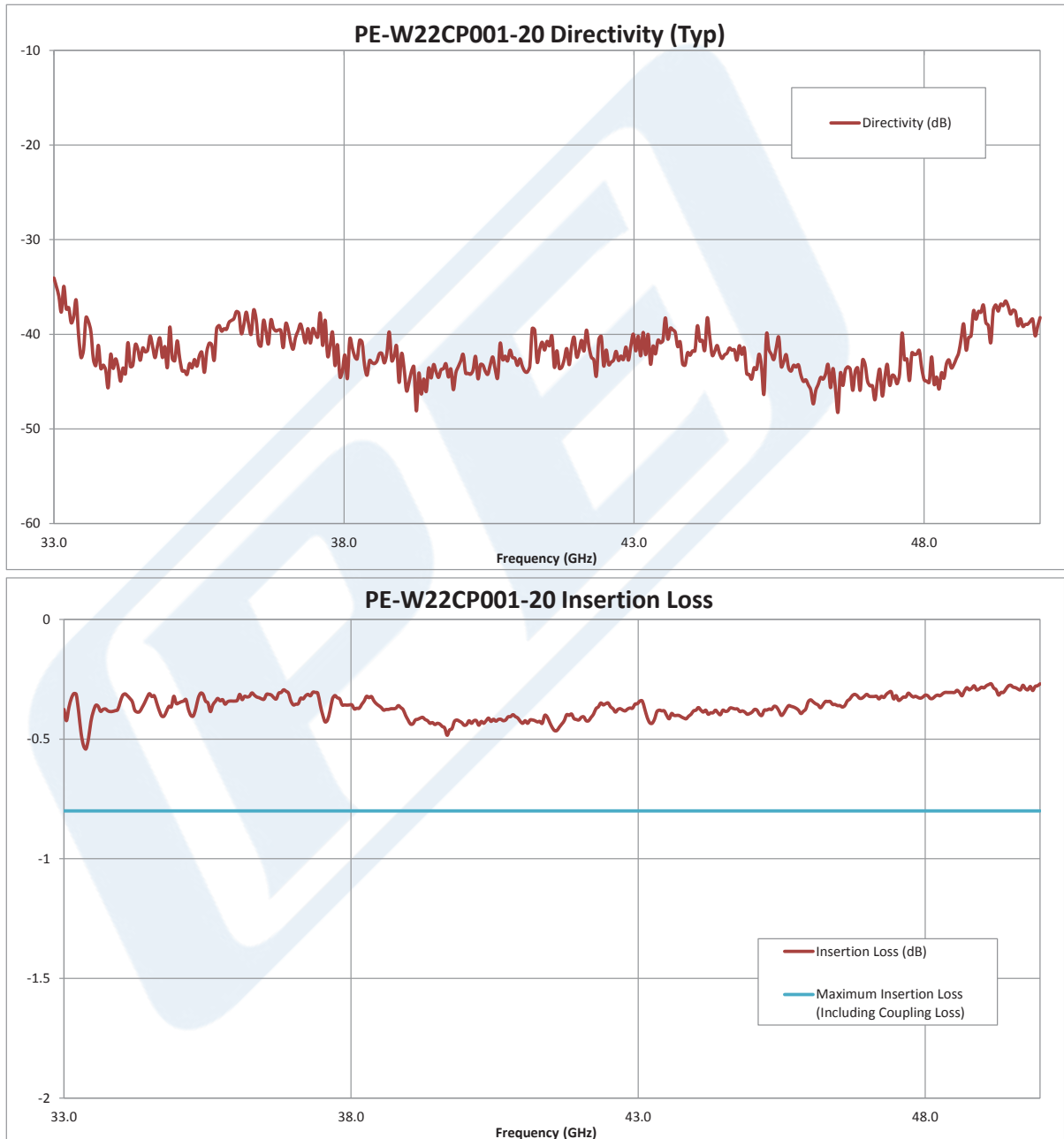
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-22 20 dB Directional Waveguide Coupler With UG-383/U Flange and H-Plane Coupled Port From 33 GHz to 50 GHz Q Band PE-W22CP001-20](#)



WR-22 20 dB Directional Waveguide Coupler  
With UG-383/U Flange and H-Plane Coupled  
Port From 33 GHz to 50 GHz Q Band

TECHNICAL DATA SHEET

PE-W22CP001-20



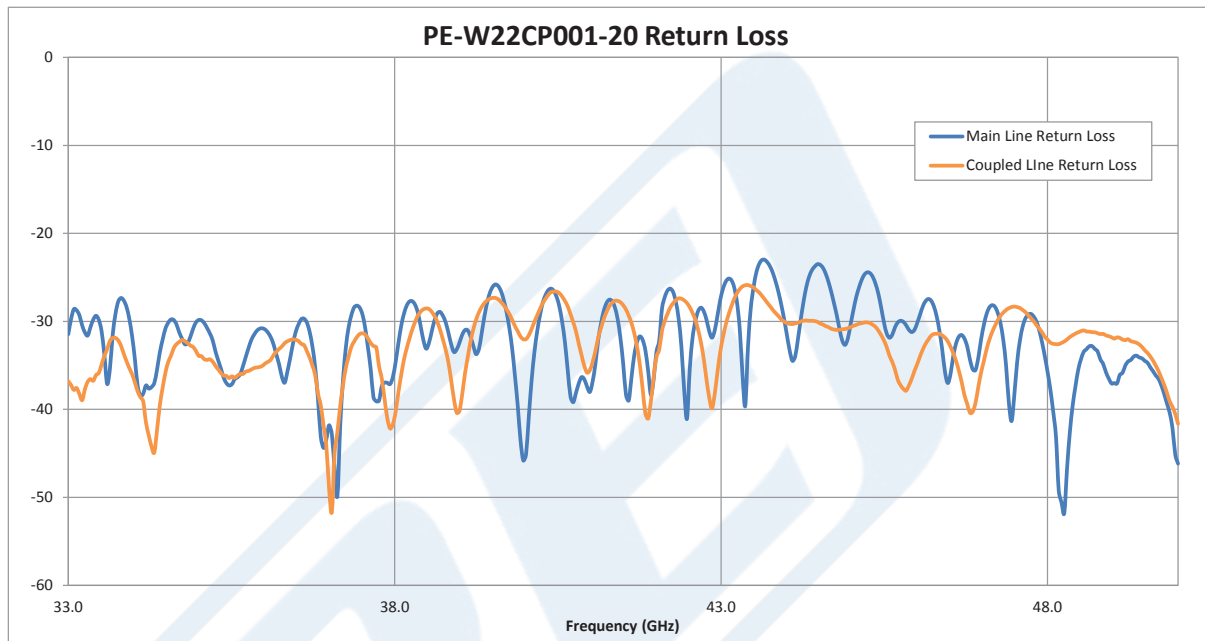
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-22 20 dB Directional Waveguide Coupler With UG-383/U Flange and H-Plane Coupled Port From 33 GHz to 50 GHz Q Band PE-W22CP001-20](#)



WR-22 20 dB Directional Waveguide Coupler  
With UG-383/U Flange and H-Plane Coupled  
Port From 33 GHz to 50 GHz Q Band

TECHNICAL DATA SHEET

PE-W22CP001-20



WR-22 20 dB Directional Waveguide Coupler With UG-383/U Flange and H-Plane Coupled Port From 33 GHz to 50 GHz Q Band from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

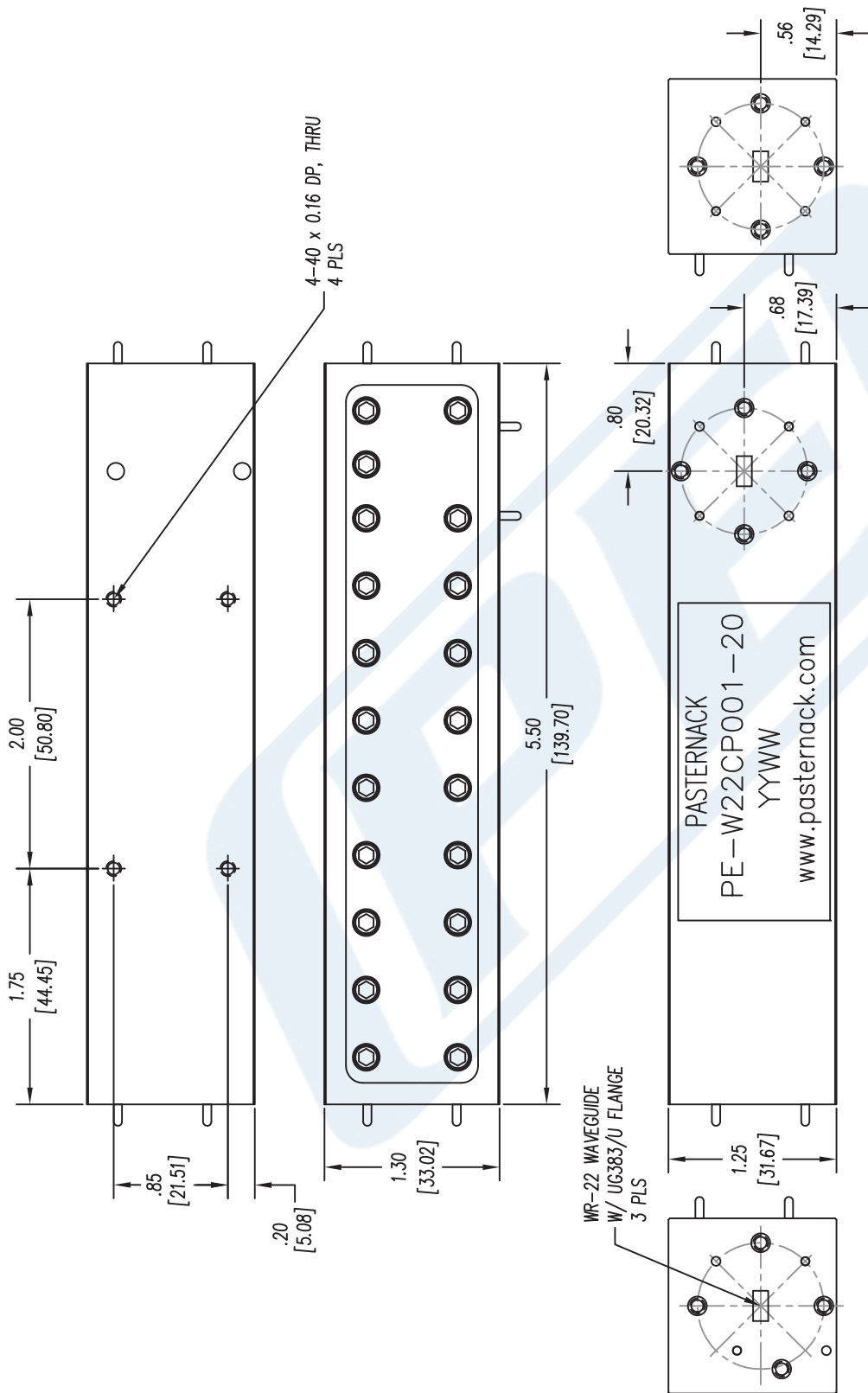
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-22 20 dB Directional Waveguide Coupler With UG-383/U Flange and H-Plane Coupled Port From 33 GHz to 50 GHz Q Band PE-W22CP001-20](http://www.pasternack.com/wr-22-20db-directional-waveguide-coupler-ug-383-h-bend-pe-w22cp001-20-p.aspx)

URL: <http://www.pasternack.com/wr-22-20db-directional-waveguide-coupler-ug-383-h-bend-pe-w22cp001-20-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.

# PE-W22CP001-20 CAD Drawing

WR-22 20 dB Directional Waveguide Coupler With UG-383/U Flange and H-Plane Coupled Port From 33 GHz to 50 GHz Q Band



UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN: inches [mm]  
 TOLERANCES ARE:  
 .XX ± .02 [±.51]  
 .XX ± .005 [±.13]

\* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

**PE PASTERNAK**  
 THE ENGINEER'S RF SOURCE  
 Pasternack Enterprises, Inc.  
 P.O. Box 16759 | Irvine | CA | 92623  
 Phone: (949) 261-1920 | Fax: (949) 261-7451  
 Website: www.pasternack.com | E-Mail: sales@pasternack.com

DWG TITLE  
**PE-W22CP001-20**  
 FSCM NO. 53919

NOTES:  
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.  
 3. DIMENSIONS ARE IN INCHES [mm].

CAD FILE 050415 SCALE N/A SIZE A 2233