



WR-42 Waveguide 10 dB Broadwall Coupler, UG-595/U Square Cover Flange, H-Plane Coupled Port, 18 GHz to 26.5 GHz, Brass Copper

## Waveguide Couplers Technical Data Sheet

**PE-W42CP002-10**

The PE-W42CP002-10 is a millimeter-wave directional waveguide coupler that operates in the frequency range of 18 to 26.5 GHz (K Band). This K band component offers a nominal coupling level of 10 dB, mean coupling accuracy of  $\pm 0.8$ , coupling flatness of 1 dB, and has a maximum VSWR level of 1.2:1. The design is made of gold 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-42 waveguide ports with UG 595/U flanges. Pasternack offers a complete family of waveguide millimeter wave directional couplers that are in-stock for same day shipment.

### Features

- 10 dB Nominal Coupling Level
- H-Plane Waveguide Coupler
- 18 GHz to 26.5 GHz Frequency Range
- Body and Flanges made of Brass Copper
- Gold Waveguide
- 1.2:1 VSWR

### Applications

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

### Electrical Specifications

| Description            | Minimum | Typical | Maximum   | Units |
|------------------------|---------|---------|-----------|-------|
| Frequency Range        | 18      |         | 26.5      | GHz   |
| <b>Coupler</b>         |         |         |           |       |
| Nominal Coupling Level |         | 10      |           | dB    |
| Coupling Accuracy      |         |         | $\pm 0.8$ | dB    |
| Directivity            |         | 30      |           | dB    |
| Insertion Loss         |         |         | 1         | dB    |
| Main Line VSWR         |         |         | 1.2:1     |       |
| Secondary Line VSWR    |         |         | 1.2:1     |       |
| Coupling Flatness      |         |         | $\pm 1$   | dB    |
| <b>Termination</b>     |         |         |           |       |

### Mechanical Specifications

#### Size

|        |                     |
|--------|---------------------|
| Length | 11 in [279.4 mm]    |
| Width  | 0.88 in [22.35 mm]  |
| Height | 1.94 in [49.28 mm]  |
| Weight | 0.44 lbs [199.58 g] |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide 10 dB Broadwall Coupler, UG-595/U Square Cover Flange, H-Plane Coupled Port, 18 GHz to 26.5 GHz, Brass Copper PE-W42CP002-10](#)



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### Interface

|                                   |                    |
|-----------------------------------|--------------------|
| Waveguide Size                    | WR-42              |
| Flange Type                       | Square Cover       |
| Flange Designation                | UG-595/U           |
| Flange Material and Plating       | Brass Copper, Gold |
| Coupler Body Material and Plating | Brass Copper, Gold |

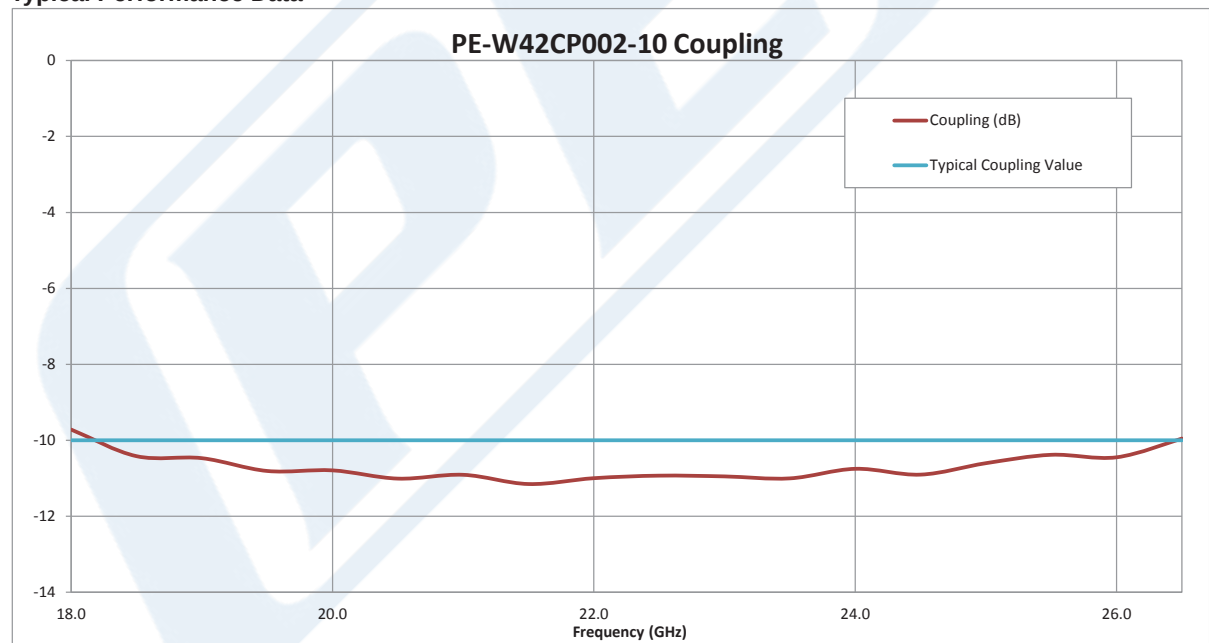
### Environmental Specifications

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

### Plotted and Other Data

Notes:

#### Typical Performance Data



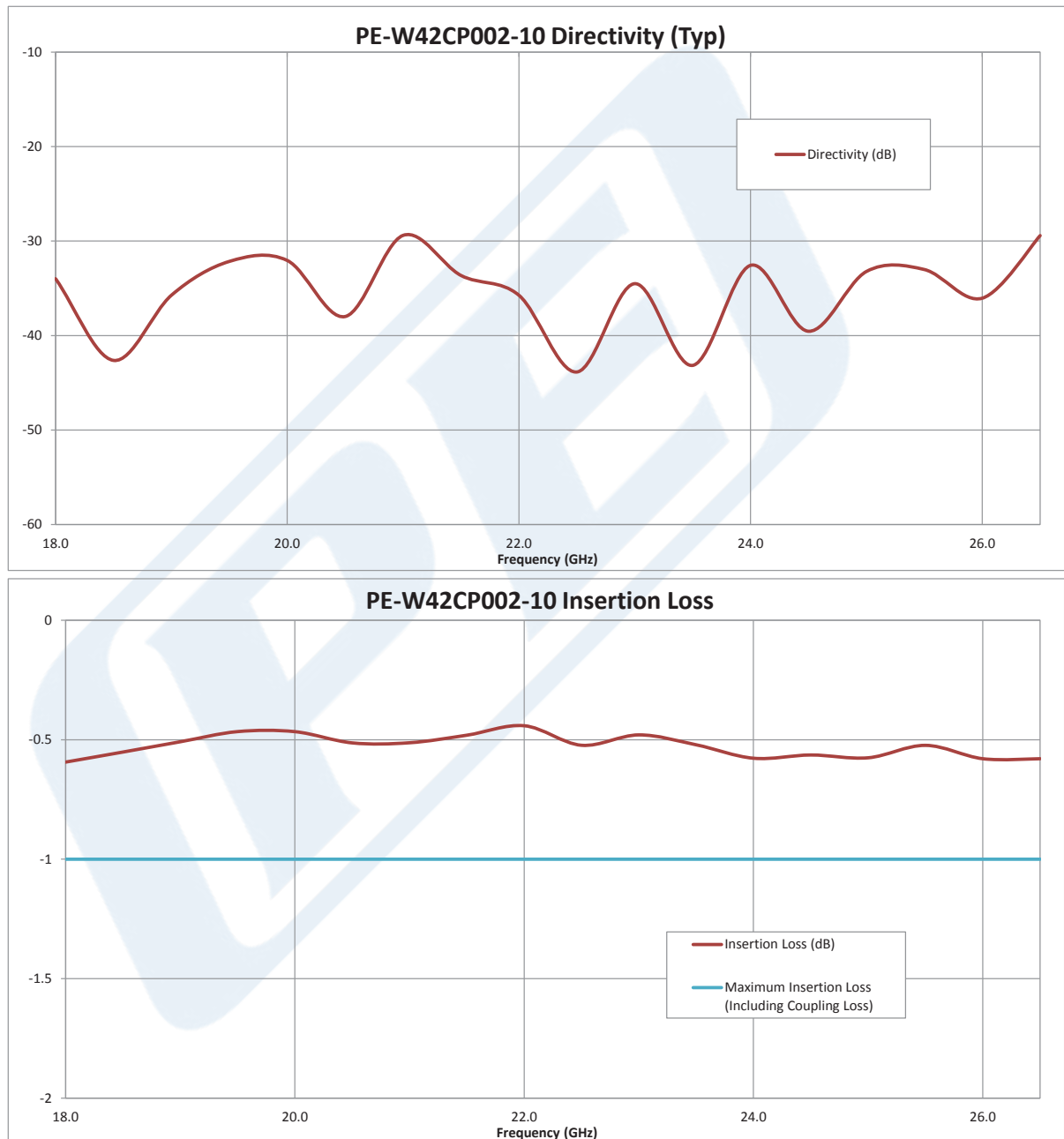
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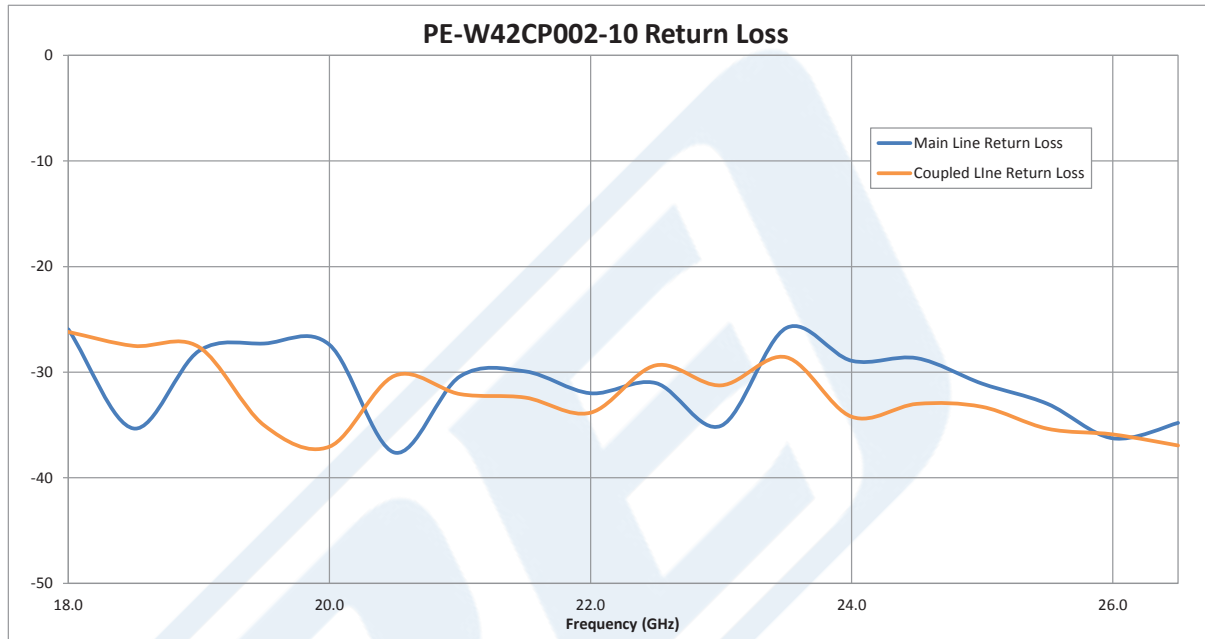
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WR-42 Waveguide 10 dB Broadwall Coupler, UG-595/U Square Cover Flange, H-Plane Coupled Port, 18 GHz to 26.5 GHz, Brass Copper from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

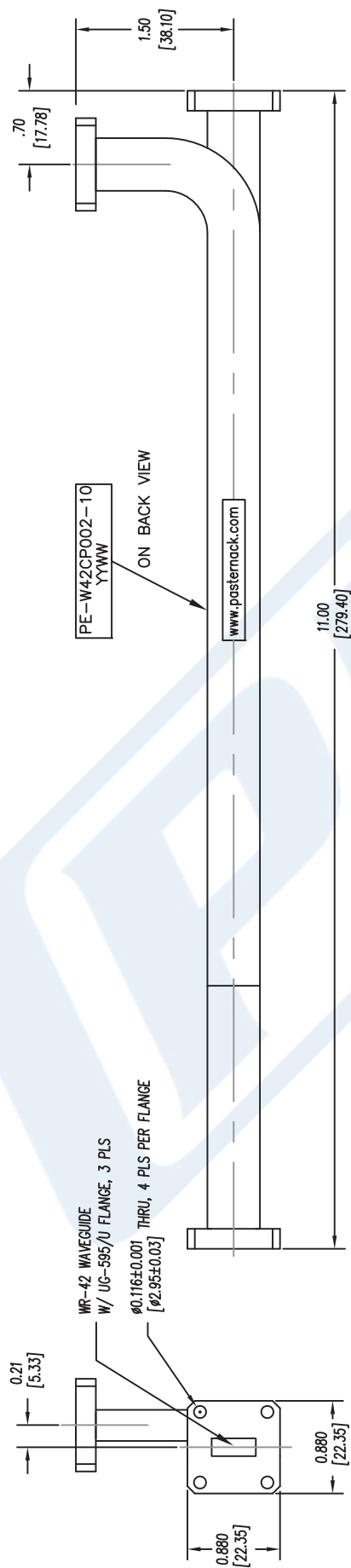
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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-W42CP002-10 CAD Drawing

WR-42 Waveguide 10 dB Broadwall Coupler, UG-595/U Square Cover  
Flange, H-Plane Coupled Port, 18 GHz to 26.5 GHz, Brass Copper



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

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

**PE PASTERNAK®**  
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Website: www.pasternack.com | E-Mail: sales@pasternack.com

DWG TITLE  
**PE-W42CP002-10**

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].

FSCM NO. 53919

CAD FILE 041715

SCALE N/A

SIZE A

2233