



## 90 Degree 2.92mm Hybrid Coupler from 10 GHz to 26.5 GHz Rated to 20 Watts

### Hybrids Technical Data Sheet

PE2CP1146

#### Features

- 90° Phase Shift Between Output Ports
- High power handling of 20 Watts CW
- 10 to 26.5 GHz Frequency Range
- VSWR 1.7:1 Typical
- High Isolation of 15 dB Minimum
- Low 1 dB Insertion Loss Typical
- 2.92mm Female Connectors
- Stable performance over Operating Temperature Range

#### Applications

- Test and Measurement
- Commercial Communications
- SATCOM
- Military Communications
- Wireless Communications

#### Description

The PE2CP1146 is a high power 90 degree hybrid coupler that operates from 10 to 26.5 GHz and can handle 15 Watts (CW) with 15 dB isolation minimum and 1.5:1 VSWR maximum. The package interface uses 2.92mm Female connectors.

The PE2CP1146 is part of Pasternack's family of 90 degree hybrid couplers that offer excellent performance featuring high isolation, low insertion loss and VSWR while maintaining great amplitude/phase balance over the entire operating frequency range. They are available in both narrow and broad bandwidths and can be used in a wide variety of applications including signal sampling, phased array radar, and any application that requires even power distribution with a 90 degree difference in phase.

#### Electrical Specifications

| Description        | Minimum | Typical | Maximum | Units   |
|--------------------|---------|---------|---------|---------|
| Frequency Range    | 10      |         | 26.5    | GHz     |
| Impedance          |         | 50      |         | Ohms    |
| Phase Difference   |         | 90      |         | Degrees |
| Coupling           |         | 3       |         | dB      |
| Insertion Loss     |         | 1       | 1.5     | dB      |
| Isolation          | 15      | 17      |         | dB      |
| VSWR               |         | 1.7:1   | 1.5:1   |         |
| Amplitude Balance  |         | ±0.4    | ±0.6    | dB      |
| Phase Balance      |         | ±5      | ±7      | Degrees |
| Input Power (CW)   |         |         | 20      | Watts   |
| Input Power (Peak) |         |         | 500     | Watts   |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [90 Degree 2.92mm Hybrid Coupler from 10 GHz to 26.5 GHz Rated to 20 Watts PE2CP1146](#)



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### Mechanical Specifications

#### Size

|        |                       |
|--------|-----------------------|
| Length | 1 in [25.4 mm]        |
| Width  | 0.43 in [10.92 mm]    |
| Height | 0.63 in [16 mm]       |
| Weight | 0.04985 lbs [22.61 g] |

#### Configuration

|                   |               |
|-------------------|---------------|
| RF Connector Type | 2.92mm Female |
|-------------------|---------------|

### Environmental Specifications

#### Temperature

|                 |                   |
|-----------------|-------------------|
| Operating Range | -45 to +85 deg C  |
| Storage Range   | -55 to +125 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

25gRMS (15 degrees 2KHz) endurance, 1 hour per axis

#### Altitude

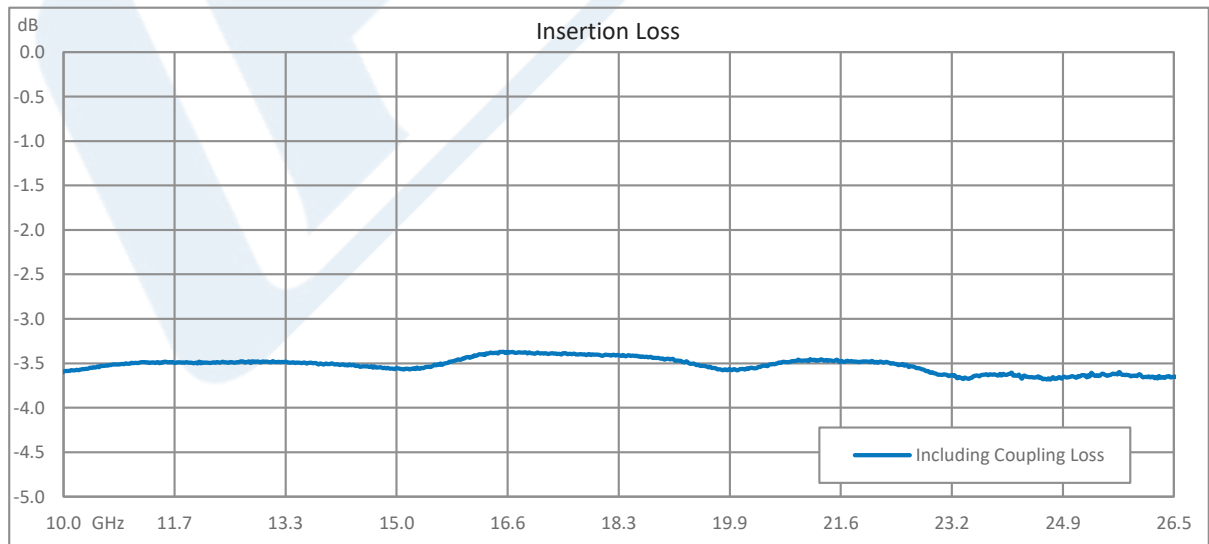
30,000 ft.

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

### Plotted and Other Data

Notes:

#### Typical Performance Data



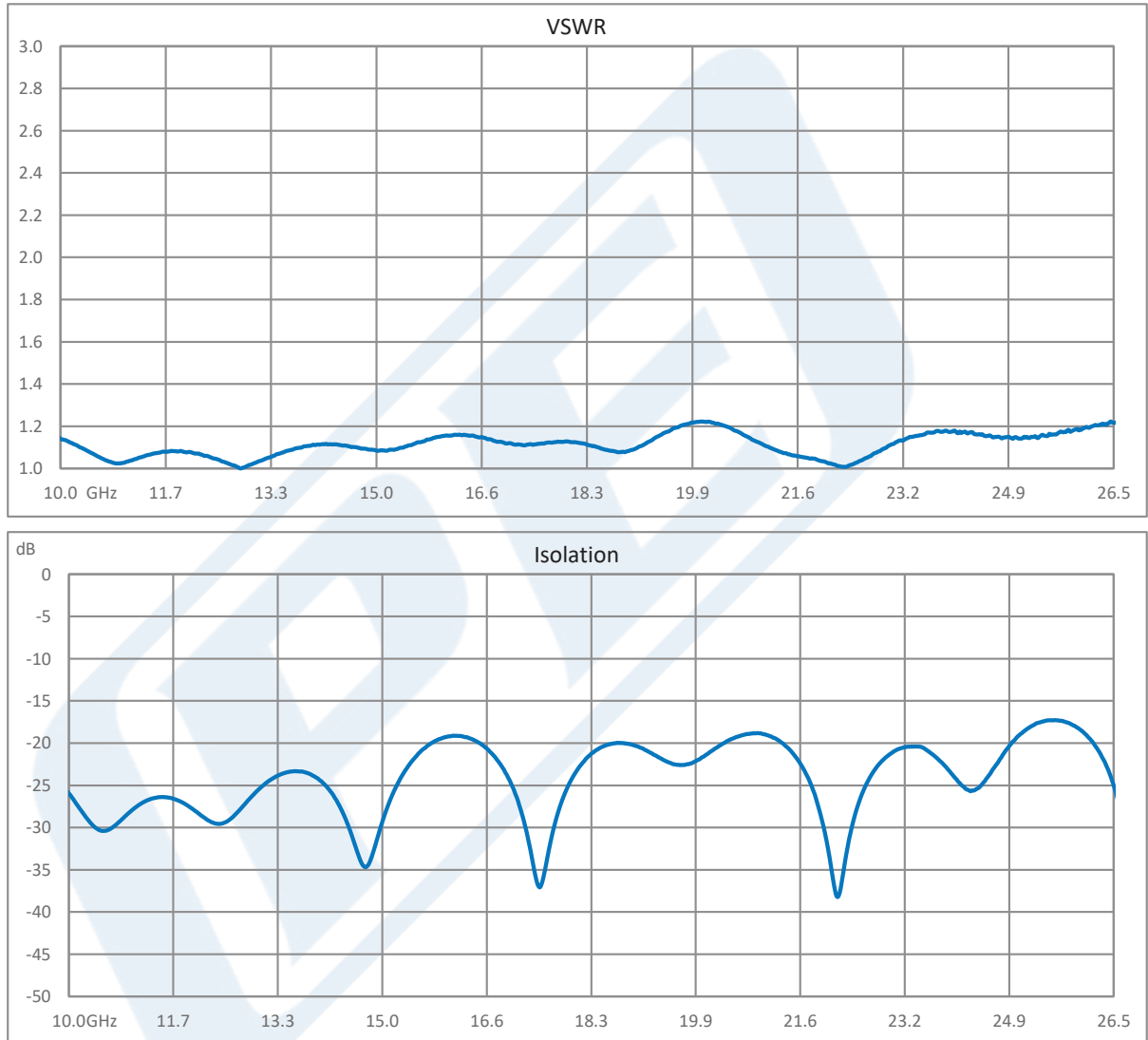
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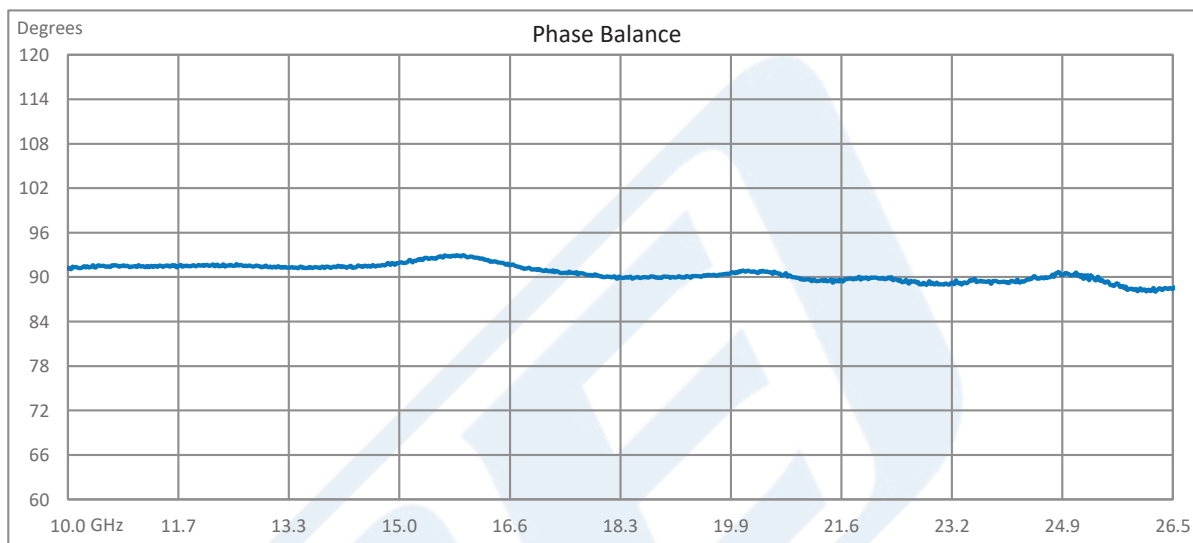
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90 Degree 2.92mm Hybrid Coupler from 10 GHz to 26.5 GHz Rated to 20 Watts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are 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: [90 Degree 2.92mm Hybrid Coupler from 10 GHz to 26.5 GHz Rated to 20 Watts PE2CP1146](https://www.pasternack.com/2.92mm-coupler-26.5-ghz-pe2cp1146-p.aspx)

URL: <https://www.pasternack.com/2.92mm-coupler-26.5-ghz-pe2cp1146-p.aspx>

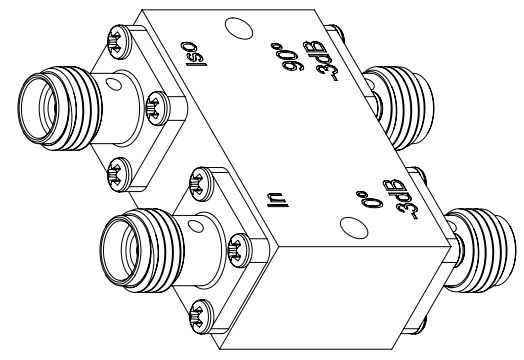
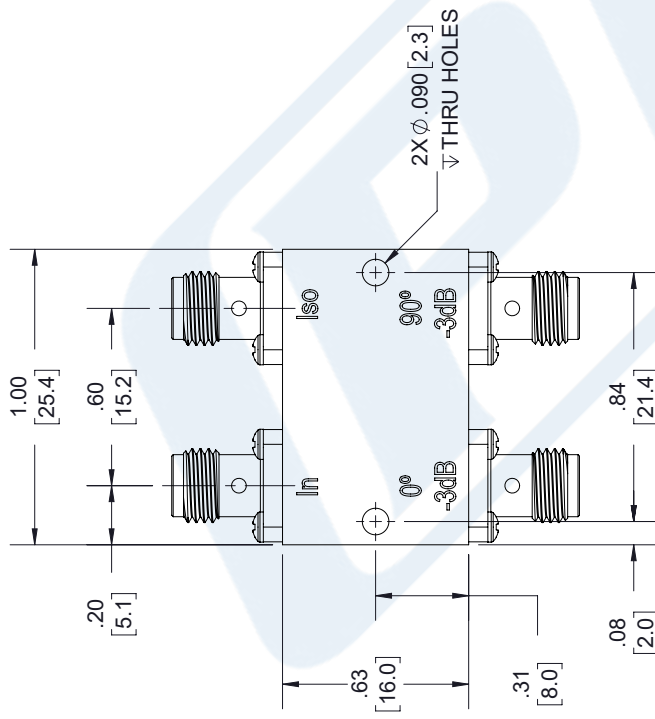
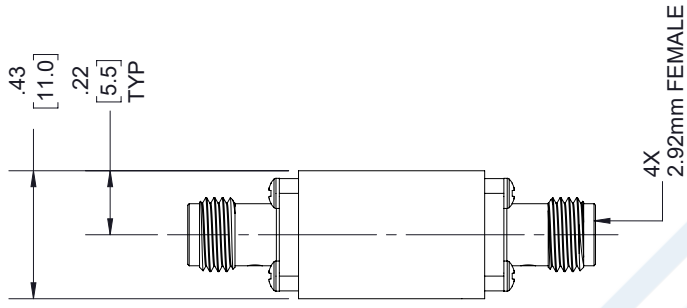
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# PE2CP1146 CAD Drawing

90 Degree 2.92mm Hybrid Coupler from 10 GHz to 26.5 GHz Rated to 20 Watts

| REV. | DESCRIPTION     | DATE      | APPROVED |
|------|-----------------|-----------|----------|
| A    | INITIAL RELEASE | 1/20/2020 | S.PONG   |

REVISIONS



PASTERNAK  
PE2CP1146  
D/C: YYWW

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

TOLERANCES:

|              |        |             |
|--------------|--------|-------------|
| .X = ±.2     | [5.08] | FRACTIONS   |
| .XX = ±.02   | [.51]  | ± 1/32      |
| .XXX = ±.005 | [.13]  | ANGLES ± 1° |

CABLE LENGTH (L) TOLERANCES:

|                      |        |                 |
|----------------------|--------|-----------------|
| L ≤ 12               | [305]  | = +1 [25] / -0  |
| 12 [305] < L ≤ 60    | [1524] | = +2 [51] / -0  |
| 60 [1524] < L ≤ 120  | [3048] | = +4 [102] / -0 |
| 120 [3048] < L ≤ 300 | [7620] | = +6 [152] / -0 |
| 300 [7620] < L       |        | = +5% / L / -0  |

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

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|      |           |          |           |
|------|-----------|----------|-----------|
| SIZE | CAGE CODE | DRAWN BY | ITEM NO.  |
| A    | 53919     | K.DANG   | PE2CP1146 |

REV A