



## 90 Degree 2.92mm Hybrid Coupler from 8 GHz to 43.5 GHz Rated to 20 Watts

### Hybrids Technical Data Sheet

PE2CP1149

#### Features

- 90° Phase Shift Between Output Ports
- High power handling of 20 Watts CW
- 8 to 43.5 GHz Frequency Range
- VSWR 1.6:1 Typical
- High Isolation of 12 dB Minimum
- Low 1.6 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 PE2CP1149 is a high power 90 degree hybrid coupler that operates from 8 to 43.5 GHz and can handle 12 Watts (CW) with 12 dB isolation minimum and 1.8:1 VSWR maximum. The package interface uses 2.92mm Female connectors.

The PE2CP1149 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	8		43.5	GHz
Impedance		50		Ohms
Phase Difference		90		Degrees
Coupling		3		dB
Insertion Loss		1.6	2	dB
Isolation	12	15		dB
VSWR		1.6:1	1.8:1	
Amplitude Balance		±0.5	±0.7	dB
Phase Balance		±6	±10	Degrees
Input Power (CW)			20	Watts
Input Power (Peak)			300	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 8 GHz to 43.5 GHz Rated to 20 Watts PE2CP1149](#)



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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	0.05005 lbs [22.7 g]

**Configuration**

RF Connector Type	2.92mm Female
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**Environmental Specifications**

**Temperature**

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

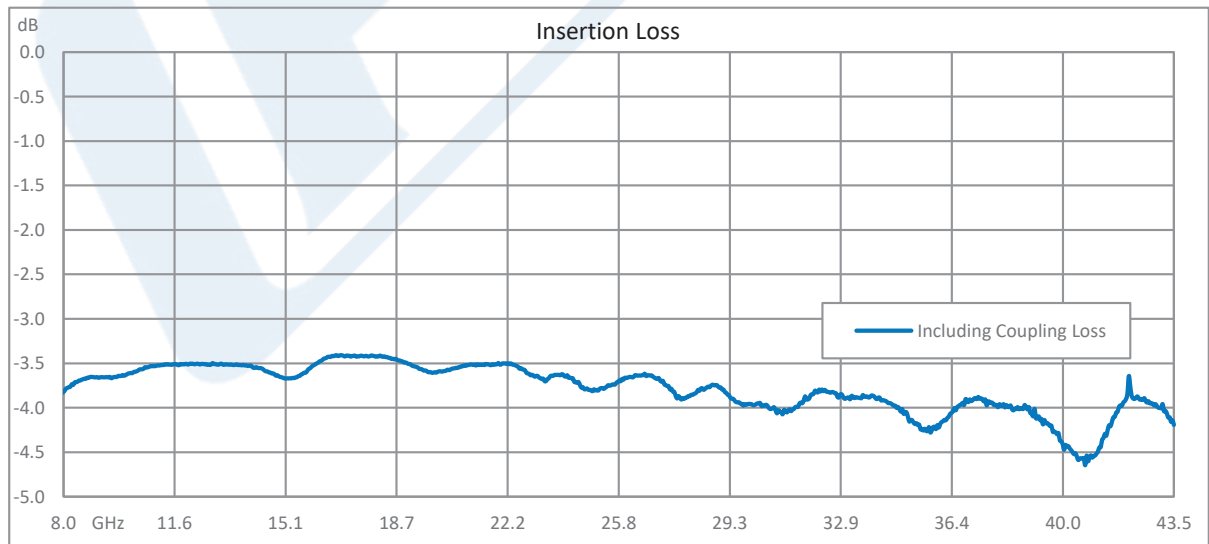
Humidity	100% RH at 35°C, 95% RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions
Vibration	25gRMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft.

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



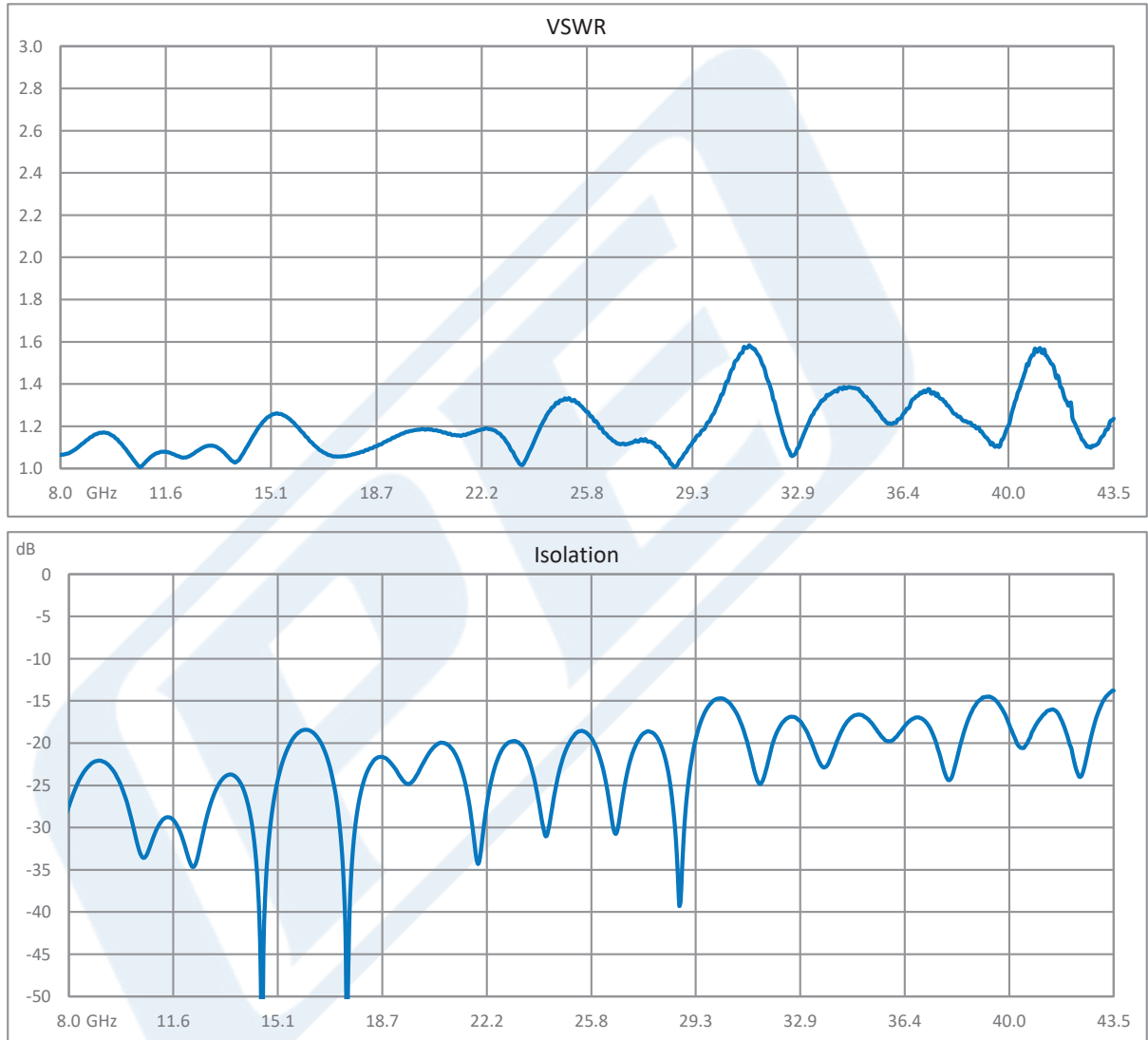
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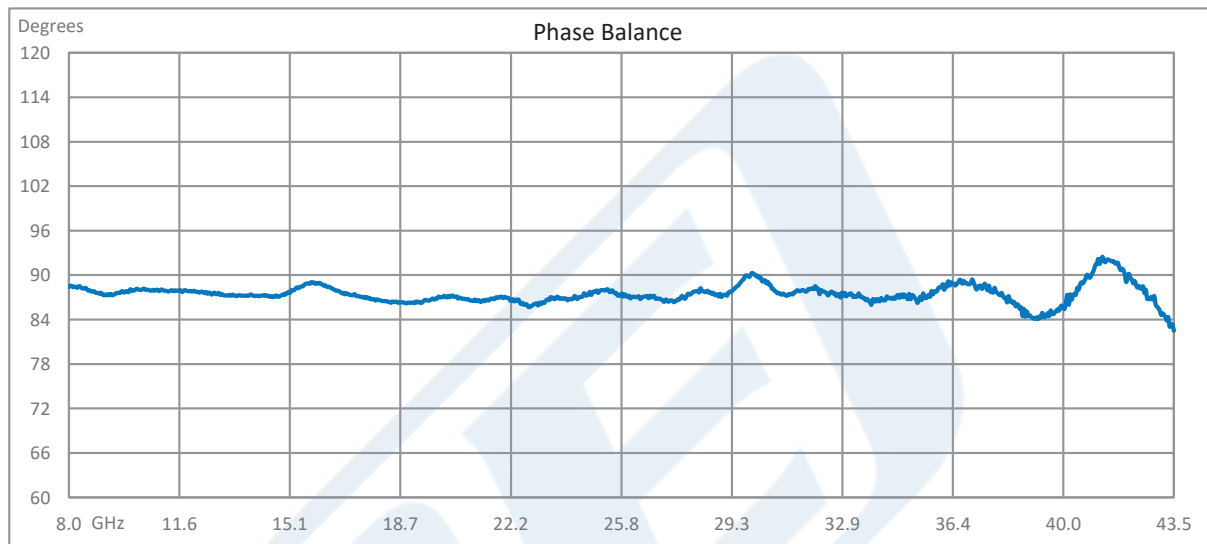
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90 Degree 2.92mm Hybrid Coupler from 8 GHz to 43.5 GHz Rated to 20 Watts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part 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 8 GHz to 43.5 GHz Rated to 20 Watts PE2CP1149](https://www.pasternack.com/2.92mm-coupler-43.5-ghz-pe2cp1149-p.aspx)

URL: <https://www.pasternack.com/2.92mm-coupler-43.5-ghz-pe2cp1149-p.aspx>

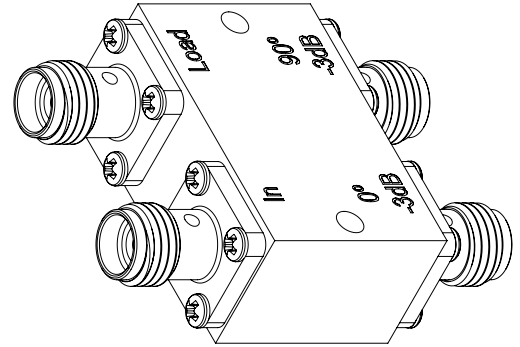
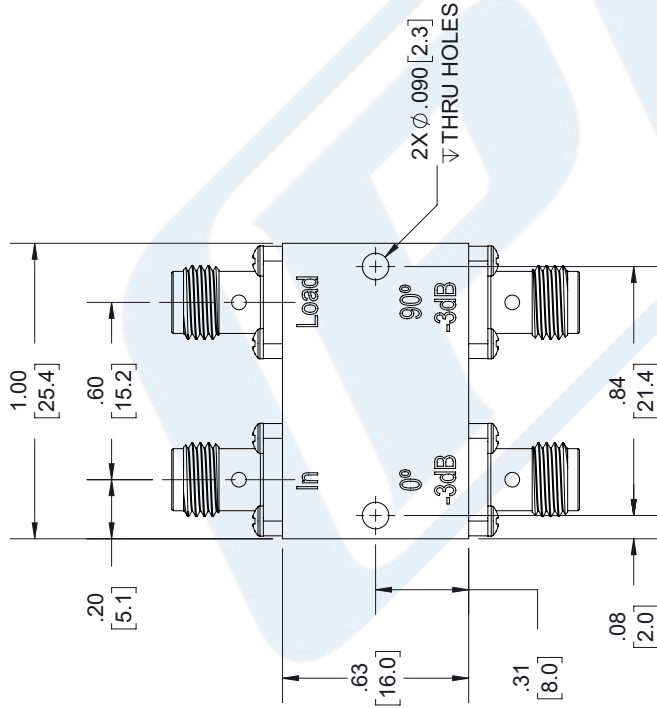
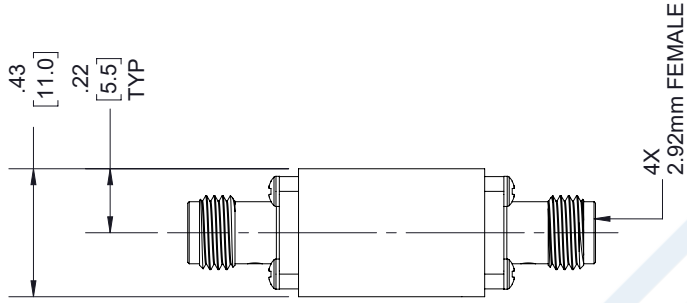
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# PE2CP1149 CAD Drawing

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

## REVISIONS



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

TOLERANCES:

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

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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV	REV
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ITEM NO. PE2CP1149

SIZE A

CAGE CODE 53919

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