



## 180 Degree SMA Hybrid Coupler from 4 GHz to 8 GHz Rated to 80 Watts

### Hybrids Technical Data Sheet

PE2CP1159

#### Features

- 180° Phase Shift Between Output Ports
- High power handling of 80 Watts CW
- 4 to 8 GHz Frequency Range
- VSWR 1.3:1 Typical
- High Isolation of 18 dB Minimum
- Low 0.5 dB Insertion Loss Typical
- SMA Female Connectors
- Stable performance over Operating Temperature Range

#### Applications

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

#### Description

The PE2CP1159 is a high power 180 degree hybrid coupler that operates from 4 to 8 GHz and can handle 18 Watts (CW) with 18 dB isolation minimum and 1.5:1 VSWR maximum. The package interface uses SMA Female connectors.

The PE2CP1159 is part of Pasternack's family of 180 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 180 degree difference in phase.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	4		8	GHz
Impedance		50		Ohms
Phase Difference		180		Degrees
Coupling		3		dB
Insertion Loss		0.5	0.6	dB
Isolation	18	20		dB
VSWR		1.3:1	1.5:1	
Amplitude Balance			±0.5	dB
Phase Balance		5	8	Degrees
Input Power (CW)			80	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: [180 Degree SMA Hybrid Coupler from 4 GHz to 8 GHz Rated to 80 Watts PE2CP1159](#)



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**Mechanical Specifications**

**Size**

Length	1.93 in [49.02 mm]
Width	1.42 in [36.07 mm]
Height	0.43 in [10.92 mm]
Weight	0.1433 lbs [65 g]

**Configuration**

RF Connector Type	SMA 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

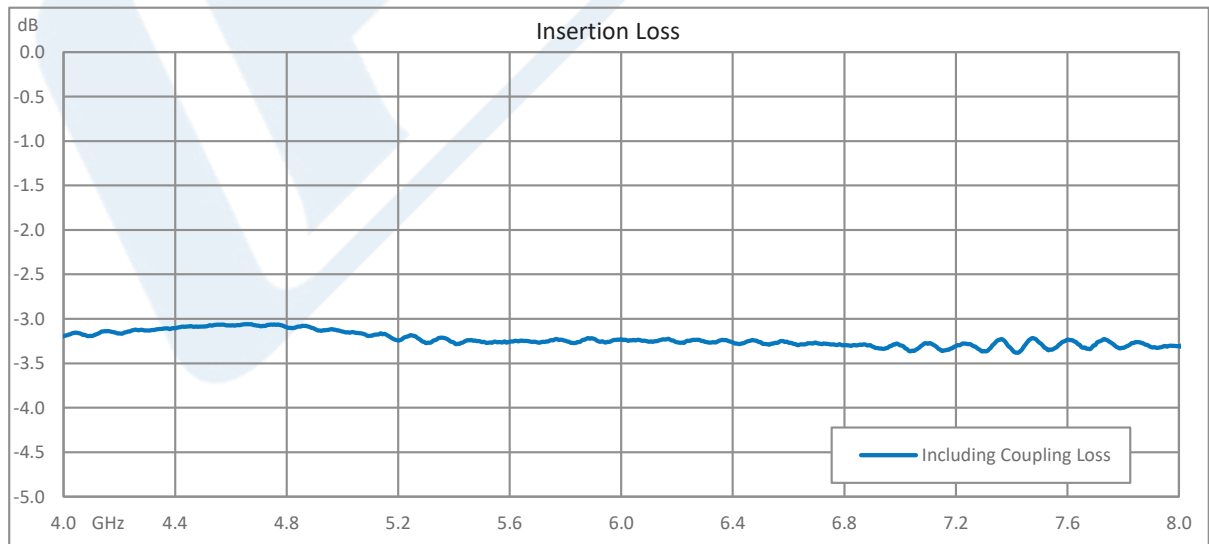
30,000 ft.

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



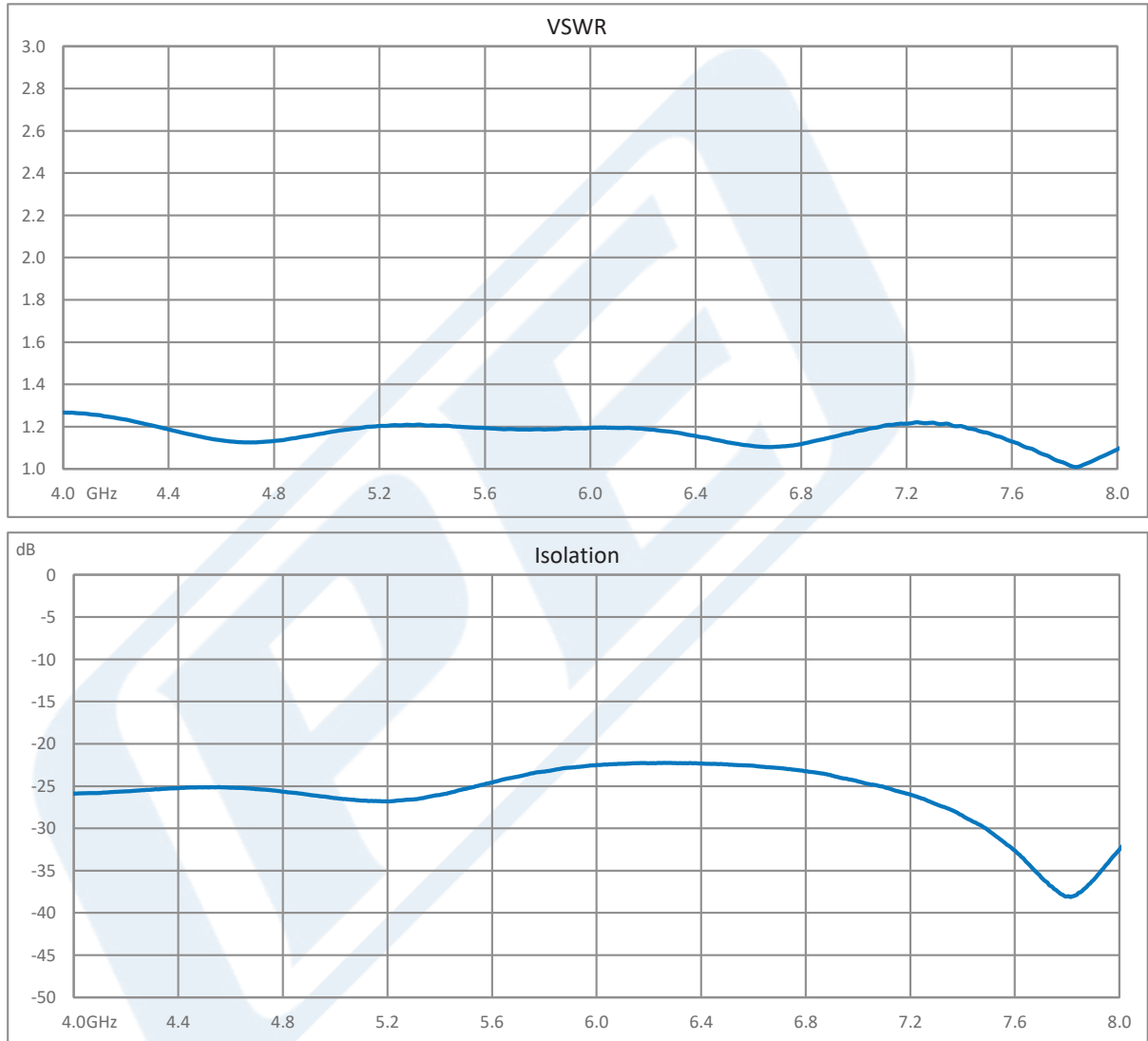
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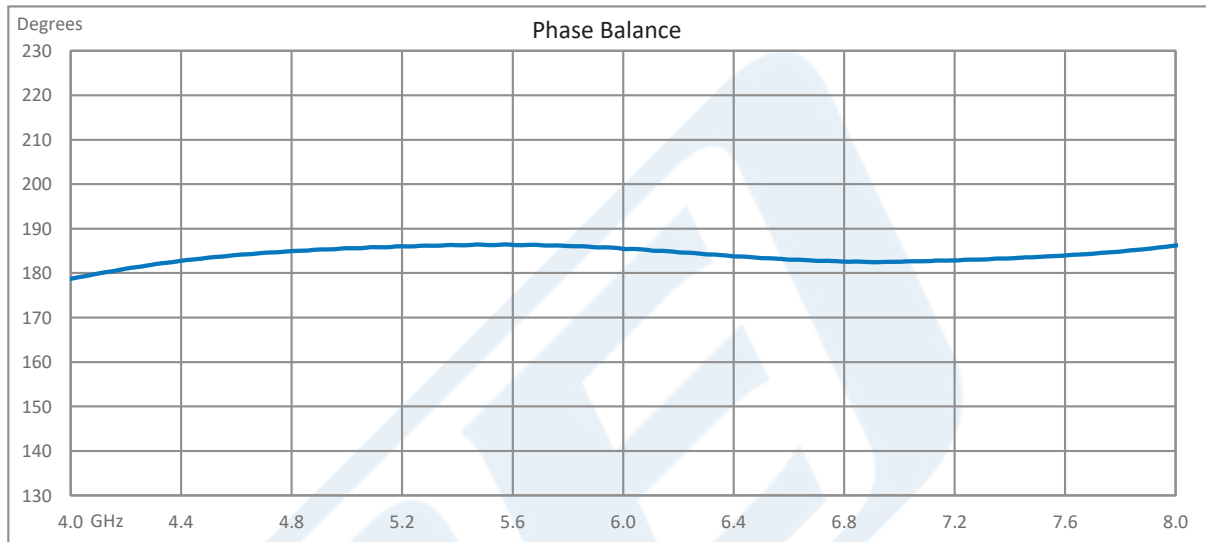
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180 Degree SMA Hybrid Coupler from 4 GHz to 8 GHz Rated to 80 Watts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of 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: [180 Degree SMA Hybrid Coupler from 4 GHz to 8 GHz Rated to 80 Watts PE2CP1159](https://www.pasternack.com/sma-coupler-8-ghz-pe2cp1159-p.aspx)

URL: <https://www.pasternack.com/sma-coupler-8-ghz-pe2cp1159-p.aspx>

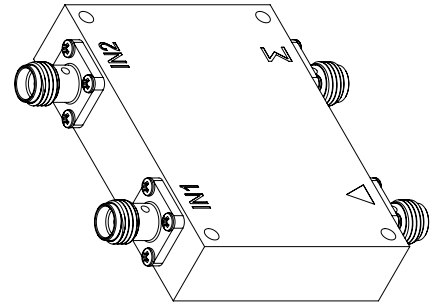
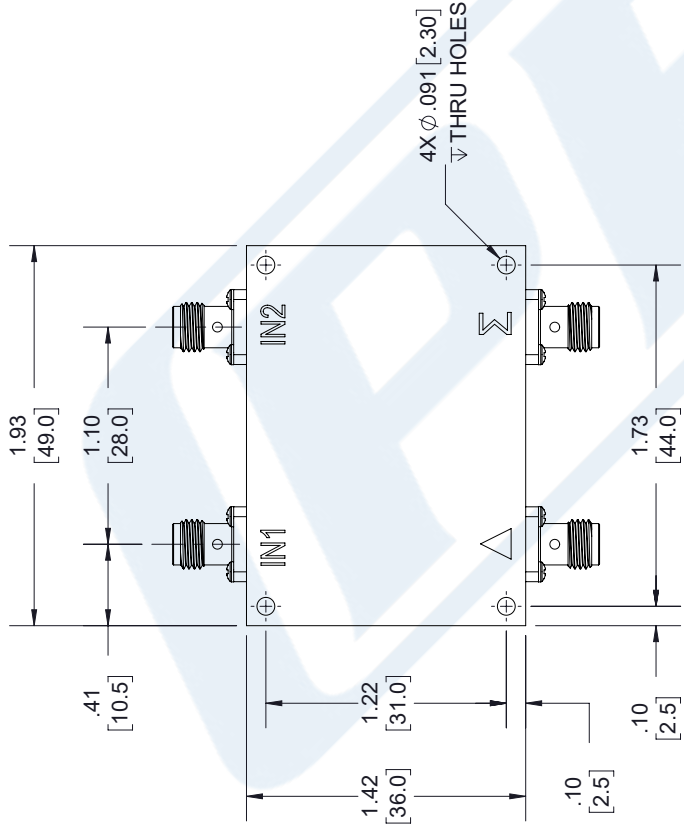
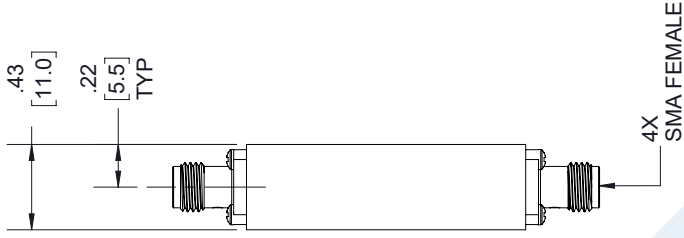
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# PE2CP1159 CAD Drawing

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REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	2/3/2020	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.

**PE PASTERNAK**  
an INFINIT® brand

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