



90 Degree SMA Hybrid Coupler From 500 MHz to 1,000 MHz Rated to 100 Watts

Hybrids Technical Data Sheet

PE2050

Features

- 90° Hybrid Coupler
- High Power
- 500 to 1,000 MHz Frequency Range
- Isolation > 28 dB
- Max Power 100 Watts (CW)

Applications

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

Description

The PE2050 is a high power 90 degree hybrid coupler that operates from 500 to 1,000 MHz and can handle up to 100 Watts (CW) with 28 dB isolation minimum and 1.15:1 VSWR maximum. The package interface uses SMA female connectors, and REACH and RoHS compliant.

The PE2050 is part of Pasternack's family of 90 degree hybrid couplers in connectorized packages. These quadrature hybrids are excellent for any situation to either equally split an input signal into two paths with a 90 degree phase shift between them or to combine signals while maintaining high isolation between them.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	500		1,000	MHz
Impedance		50		Ohms
Phase Difference		90		Degrees
Coupling		3.2 ±0.3		dB
Isolation	28			dB
VSWR			1.15:1	
Amplitude Balance			±1.2	dB
Phase Balance			±3	Degrees
Input Power (CW)			100	Watts

Mechanical Specifications

Size

Length	3.06 in [77.72 mm]
Width	0.5 in [12.7 mm]
Height	0.38 in [9.65 mm]
Weight	0.082 lbs [37.19 g]

Configuration

RF Connector Type	SMA Female
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Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [90 Degree SMA Hybrid Coupler From 500 MHz to 1,000 MHz Rated to 100 Watts PE2050](#)



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Environmental Specifications

Temperature

Operating Range

-25 to +80 deg C

Storage Range

-55 to +150 deg C

Humidity

MIL-STD-202, Method 106 (90% relative humidity, +65°C)

Shock

MIL-STD-202, Method 213/I (100 G's, 6 ms)

Vibration

MIL-STD-202, Method 204/D (10 to 2,000 Hz, 20 G's, 12 hours)

Altitude

MIL-STD-202, Method 105/E (150,000 feet)

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant

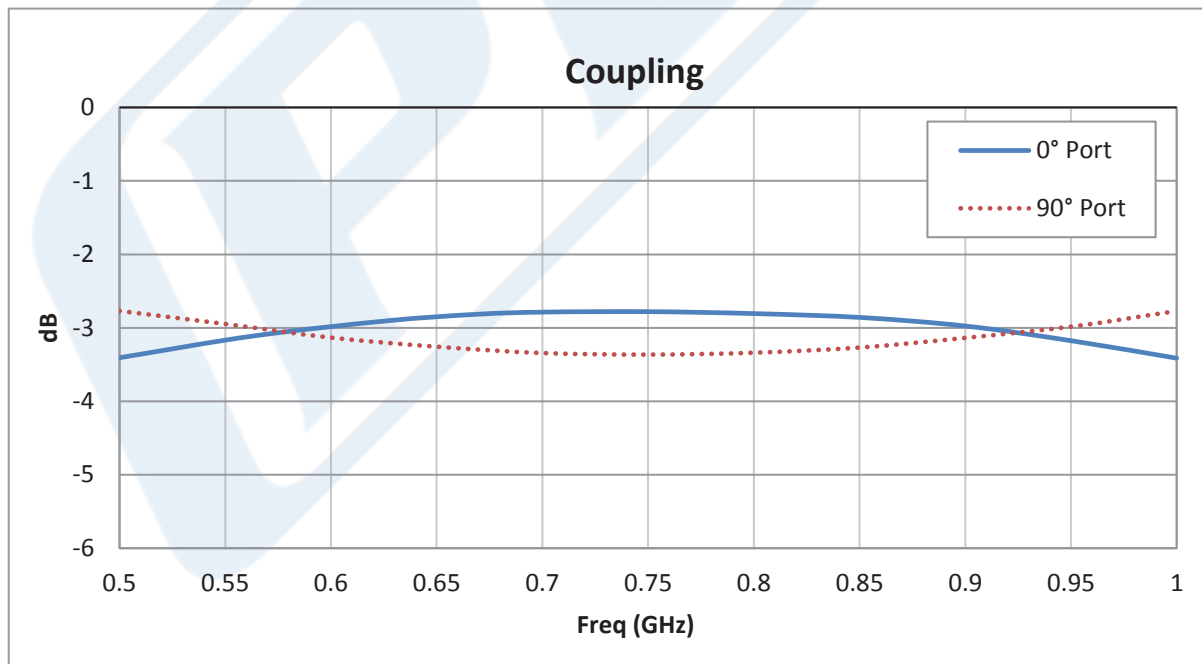
REACH Compliant

12/17/2015

Plotted and Other Data

Notes:

Typical Performance Data



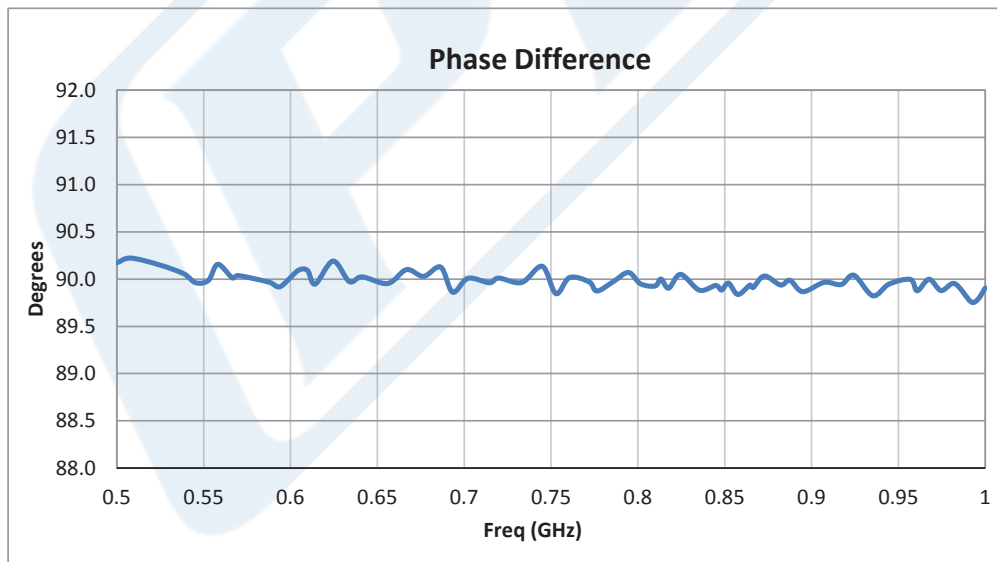
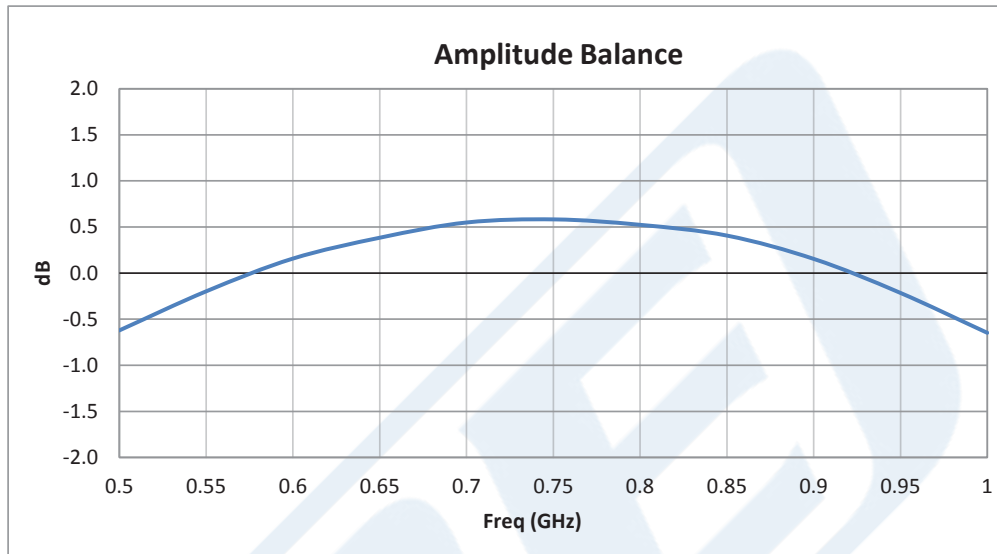
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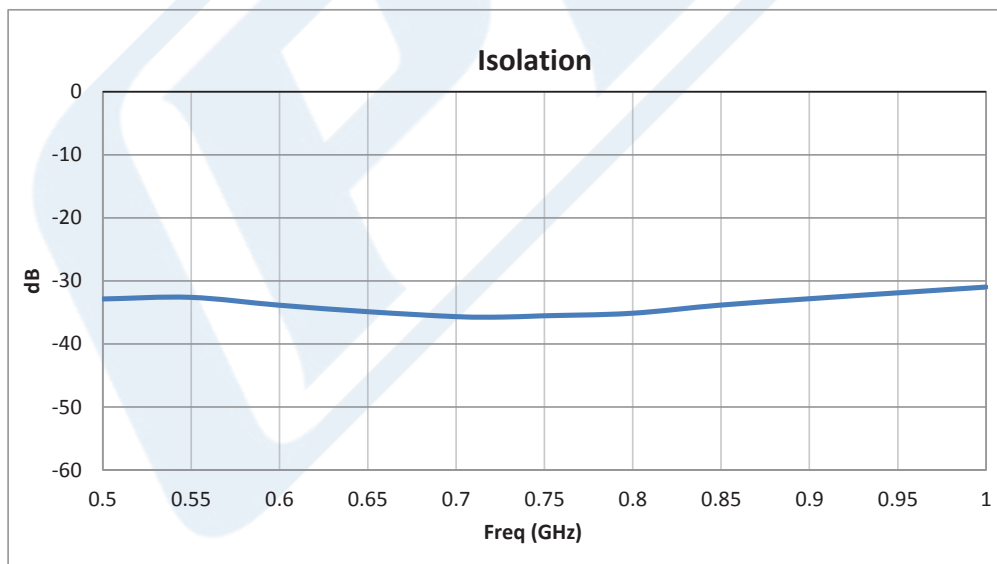
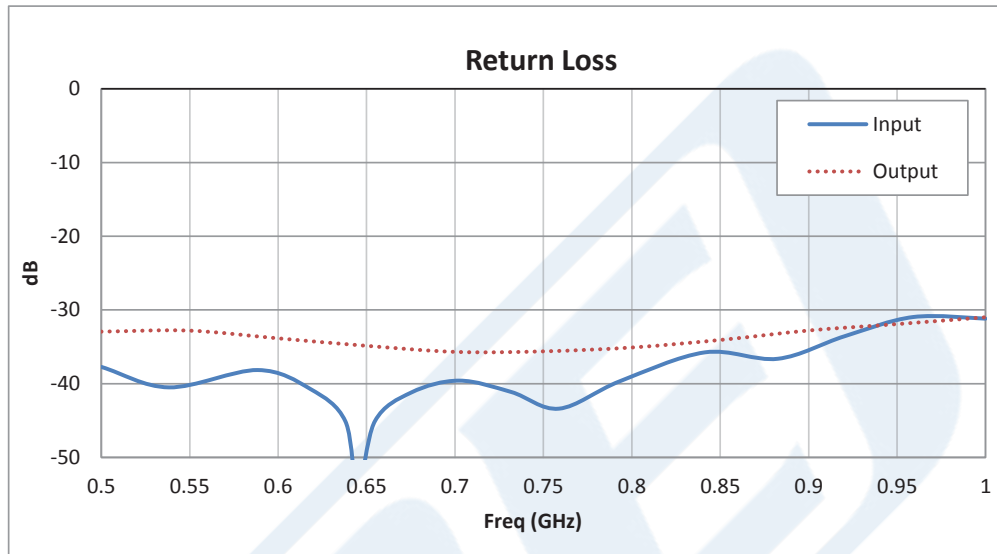
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90 Degree SMA Hybrid Coupler From 500 MHz to 1,000 MHz Rated to 100 Watts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part 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: [90 Degree SMA Hybrid Coupler From 500 MHz to 1,000 MHz Rated to 100 Watts PE2050](#)



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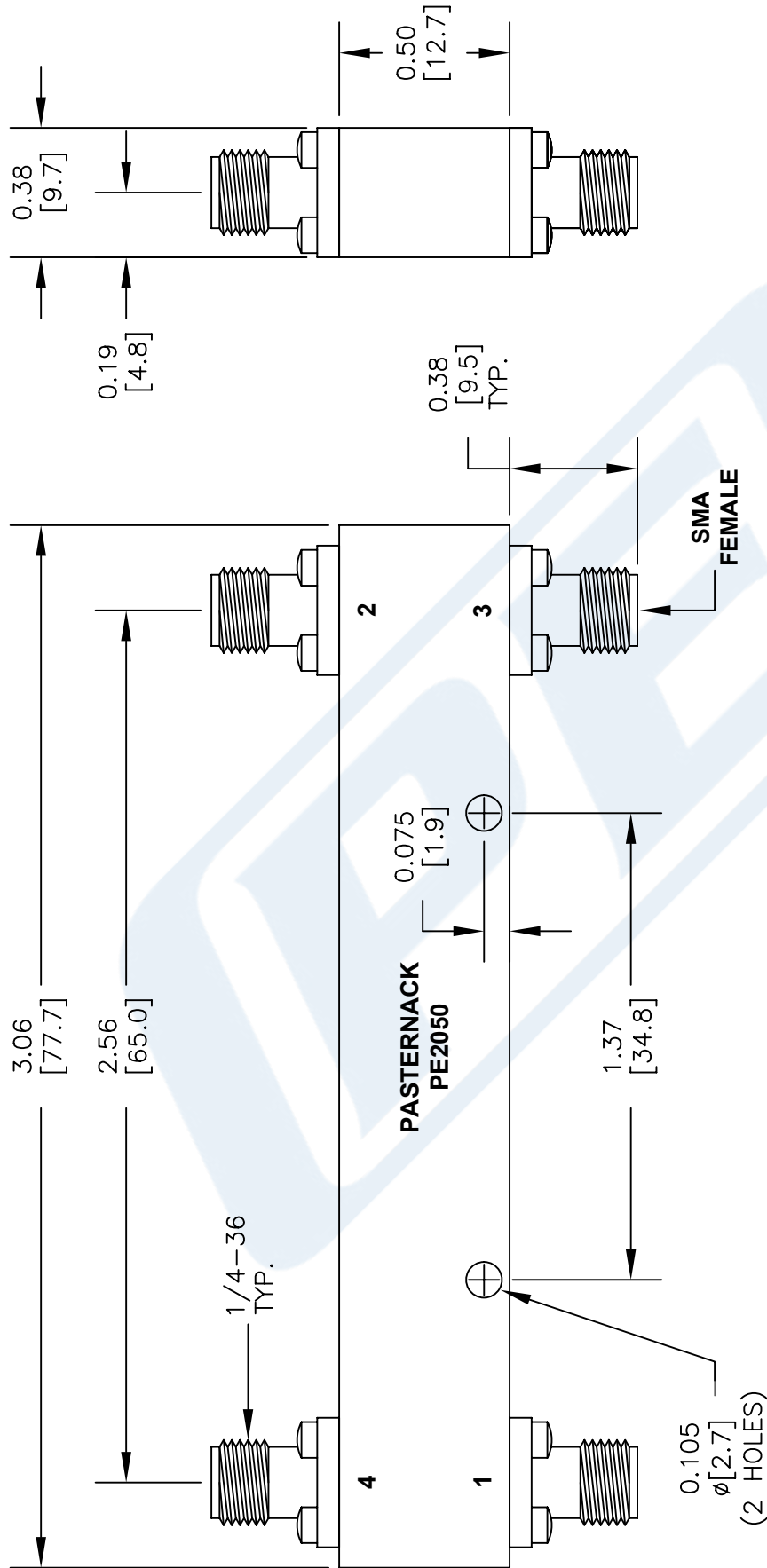
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [90 Degree SMA Hybrid Coupler From 500 MHz to 1,000 MHz Rated to 100 Watts PE2050](http://www.pasternack.com/hybrid-directional-3-db-sma-coupler-500-1000-mhz-50-watts-pe2050-p.aspx)

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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.

PE2050 CAD Drawing

90 Degree SMA Hybrid Coupler From 500 MHz to 1,000 MHz Rated to 100 Watts



STANDARD TOLERANCES

DECIMAL

.XX ±0.02

.XXX ±0.010

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

PORT CONFIGURATION

INPUT	90° OUTPUT	0° OUTPUT	ISOLATED
1	4	2	3

DWG TITLE

PE2050

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].

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FSCM NO. 53919

CAD FILE 041516

SCALE N/A

SIZE A

3045