



## 90 Degree SMA Hybrid Coupler From 6 GHz to 12.4 GHz Rated to 100 Watts

### Hybrids Technical Data Sheet

PE2055

#### Features

- 90° Hybrid Coupler
- High Power
- 6 to 12.4 GHz Frequency Range
- Isolation > 17 dB
- Max Power 100 Watts (CW)

#### Applications

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

#### Description

The PE2055 is a high power 90 degree hybrid coupler that operates from 6 to 12.4 GHz and can handle up to 100 Watts (CW) with 17 dB isolation minimum and 1.4:1 VSWR maximum. The package interface uses SMA female connectors, and is REACH and RoHS compliant.

The PE2055 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	6		12.4	GHz
Impedance		50		Ohms
Phase Difference		90		Degrees
Coupling		3.4 ±0.8		dB
Isolation	17			dB
VSWR			1.4:1	
Amplitude Balance			±1.4	dB
Phase Balance			±6	Degrees
Input Power (CW)			100	Watts

#### Electrical Specification Notes:

Max input power rated for load VSWR better than 1.20: 1

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 6 GHz to 12.4 GHz Rated to 100 Watts PE2055](#)



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### Mechanical Specifications

#### Size

Length	1 in [25.4 mm]
Width	0.5 in [12.7 mm]
Height	0.38 in [9.65 mm]
Weight	0.041 lbs [18.6 g]

#### Configuration

RF Connector Type	SMA Female
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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)
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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)
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### Compliance Certifications (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant	
REACH Compliant	12/17/2015

### Plotted and Other Data

Notes:

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 6 GHz to 12.4 GHz Rated to 100 Watts PE2055](#)

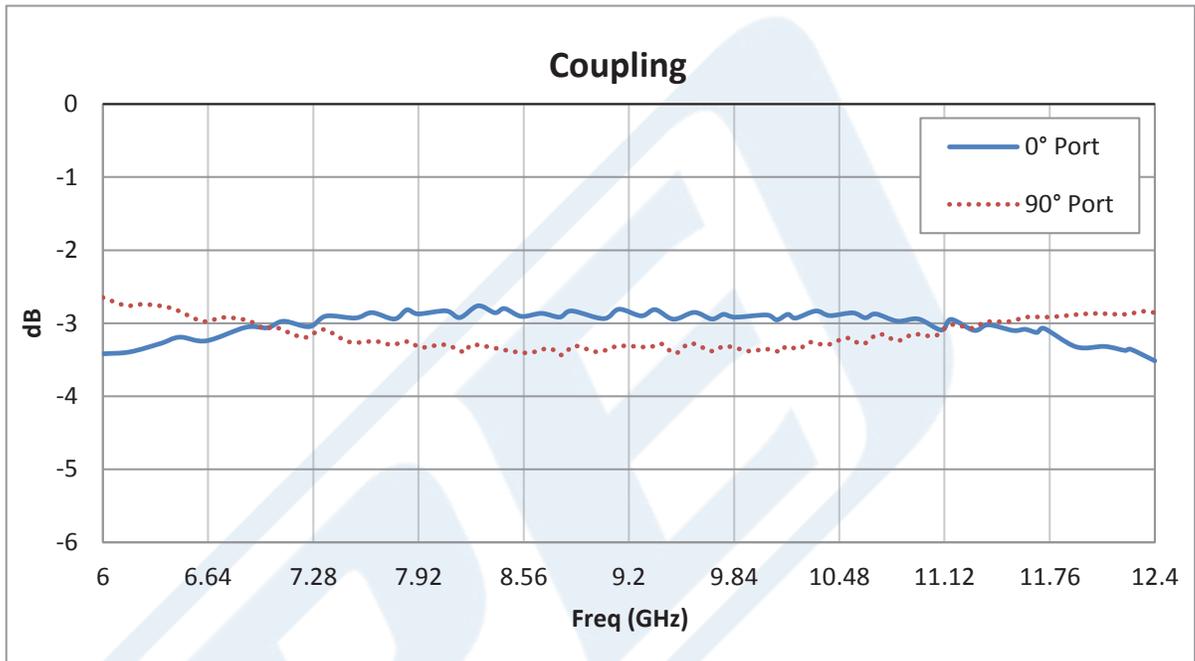


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Typical Performance Data



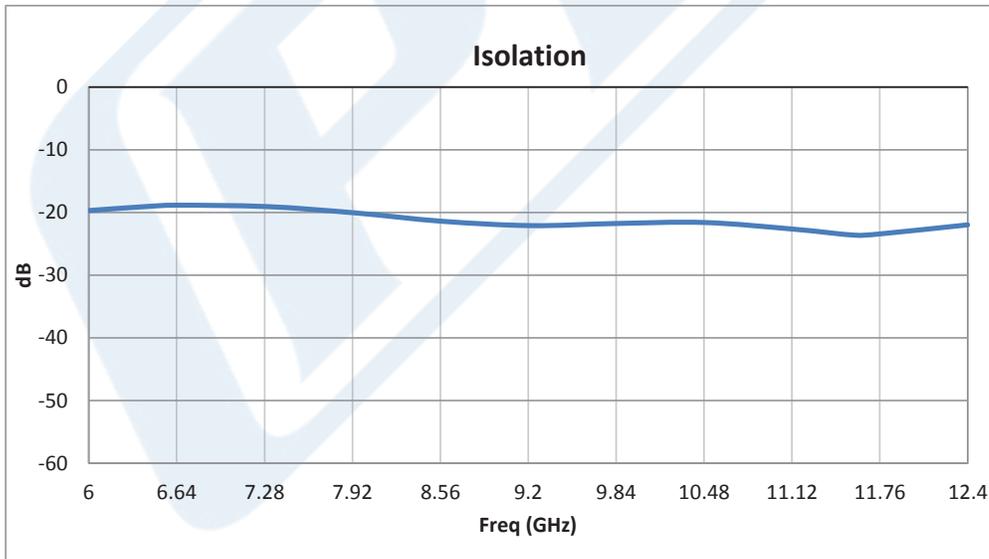
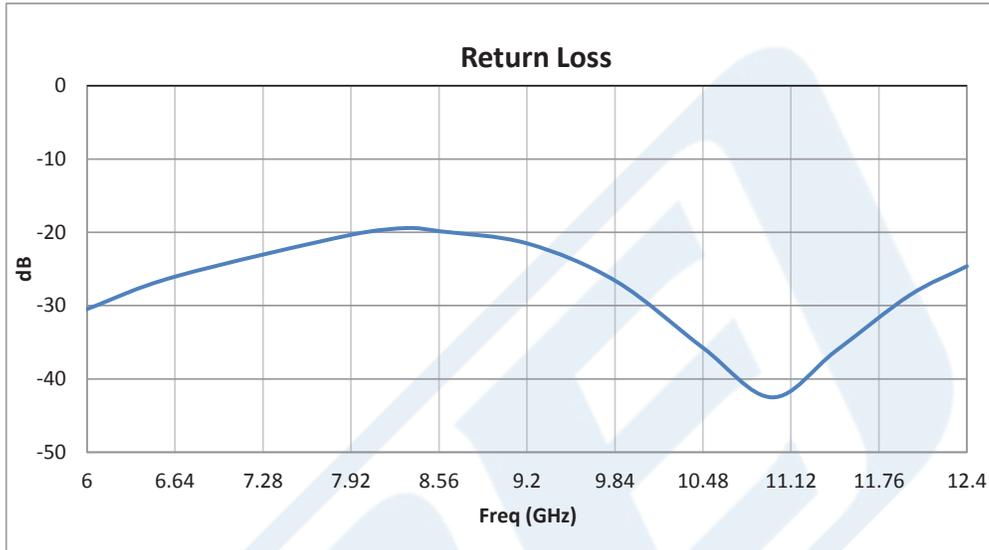
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90 Degree SMA Hybrid Coupler From 6 GHz to 12.4 GHz Rated to 100 Watts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

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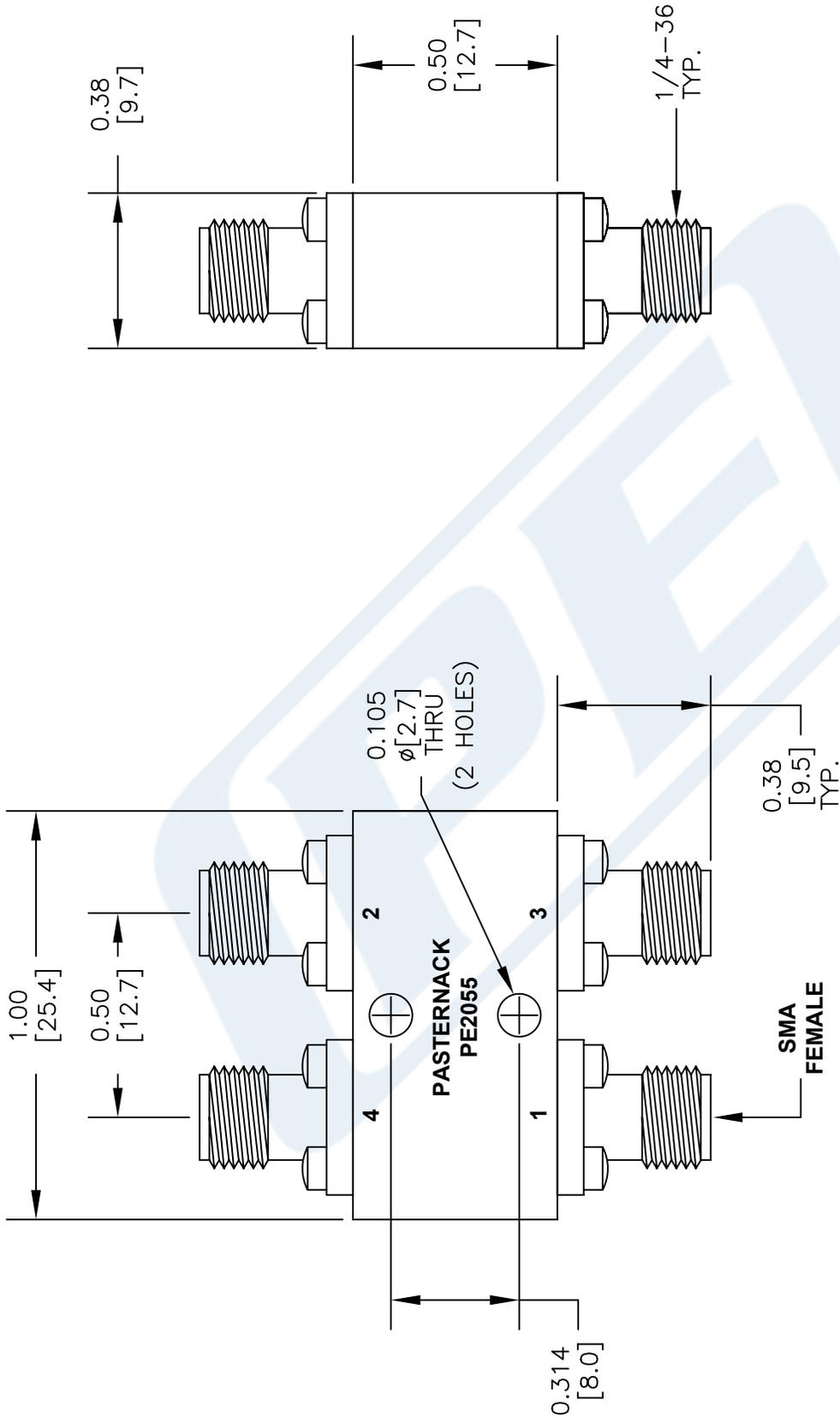
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [90 Degree SMA Hybrid Coupler From 6 GHz to 12.4 GHz Rated to 100 Watts PE2055](http://www.pasternack.com/hybrid-directional-3-db-sma-coupler-6-12.4-ghz-50-watts-pe2055-p.aspx)

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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.

# PE2055 CAD Drawing

90 Degree SMA Hybrid Coupler From 6 GHz to 12.4 GHz 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
1	4	2
		ISOLATED
		3

DWG TITLE

**PE2055**

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].

**PE PASTERNAK®**  
 THE ENGINEER'S RF SOURCE  
 Pasternack Enterprises, Inc.  
 P.O. Box 16759 | Irvine | CA | 92623  
 Phone: (949) 261-1920 | Fax: (949) 261-7451  
 Website: www.pasternack.com | E-Mail: sales@pasternack.com

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CAD FILE 040116

SCALE N/A

SIZE A

3045