



## Dual Directional 10 dB SMA Coupler From 4 GHz to 8 GHz Rated to 10 Watts

### Couplers Technical Data Sheet

PE2221-10

#### Features

- Dual Directional Coupler
- 4 to 8 GHz Frequency Range
- Coupling  $10 \pm 1.25$  dB
- Directivity > 18 dB
- VSWR < 1.35:1
- Max Power 10 Watts (CW)

#### Applications

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

#### Description

Dual directional couplers are indispensable components for building a reflectometer as they can provide power measurements in both forward and reverse direction simultaneously. The PE2221-10 is a 10 dB dual directional coupler that operates from 4 to 8 GHz and can handle up to 10 Watts (CW) with 18 dB directivity minimum and 1.35:1 VSWR maximum. The package interface uses SMA female connectors, and is also REACH and RoHS compliant.

The PE2221-10 is part of Pasternack's family of directional/dual-directional couplers that offer coupling ratios up to 50 dB with excellent performance featuring high directivity, low insertion loss and VSWR. They are available in both narrow and broad bandwidths and can be used in a wide variety of applications including signal sampling, VSWR measurements, power combining and distribution.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	4		8	GHz
Impedance		50		Ohms
Coupling		$10 \pm 1.25$		dB
Frequency Sensitivity		$\pm 0.8$		dB
Main Line Loss		1.7		dB
Directivity	18			dB
Main Line VSWR			1.35:1	
Secondary Line VSWR			1.25:1	
Input Power (CW)			10	Watts
Input Power (Peak)			3	KWatts

#### Electrical Specification Notes:

Values at 25°C, sea level.

Coupling tolerance includes frequency sensitivity.

Main line loss is the difference in power level between input and output.

Max input power rated for load VSWR better than 1.22:1.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Dual Directional 10 dB SMA Coupler From 4 GHz to 8 GHz Rated to 10 Watts PE2221-10](#)



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### Mechanical Specifications

#### Size

Length	2.1 in [53.34 mm]
Width/Dia.	0.38 in [9.65 mm]
Height	1.01 in [25.65 mm]
Weight	0.096 lbs [43.54 g]

#### Configuration

Package Type	Connectorized
Input Connector	SMA Female
Output Connector	SMA Female
Coupled Connectors	SMA Female

### 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: [Dual Directional 10 dB SMA Coupler From 4 GHz to 8 GHz Rated to 10 Watts PE2221-10](#)

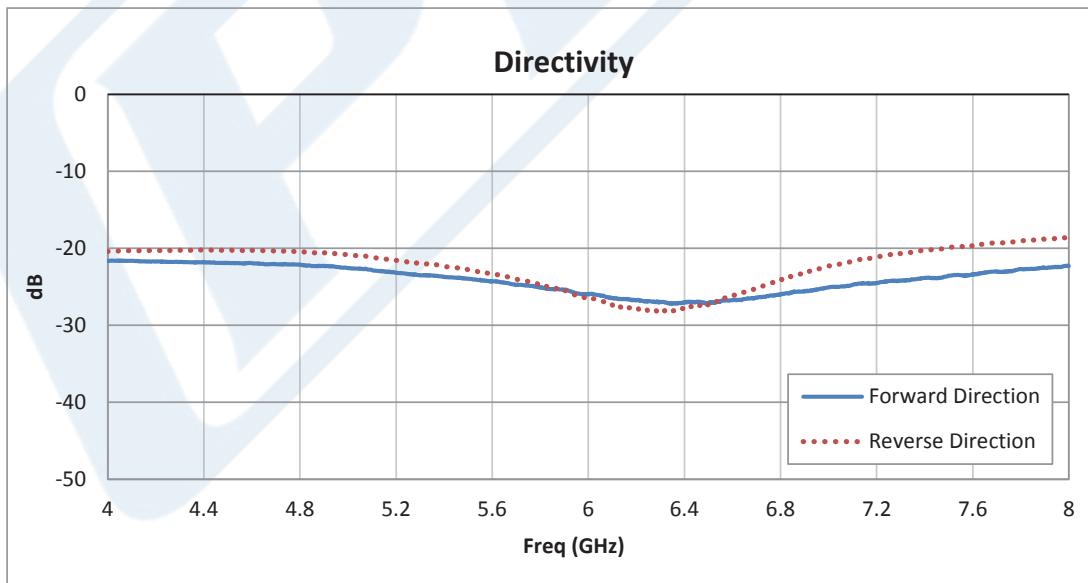
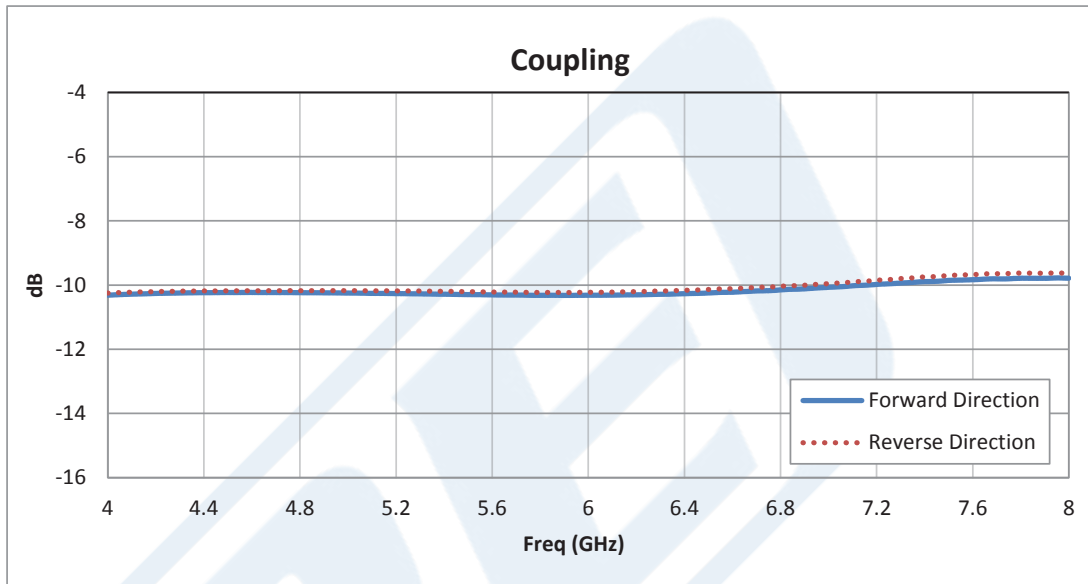


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Typical Performance Data



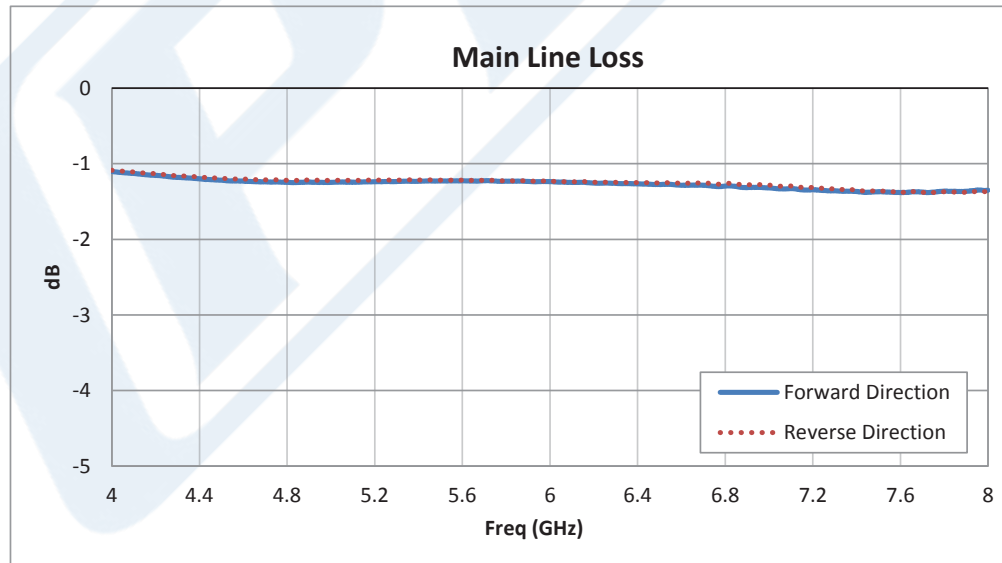
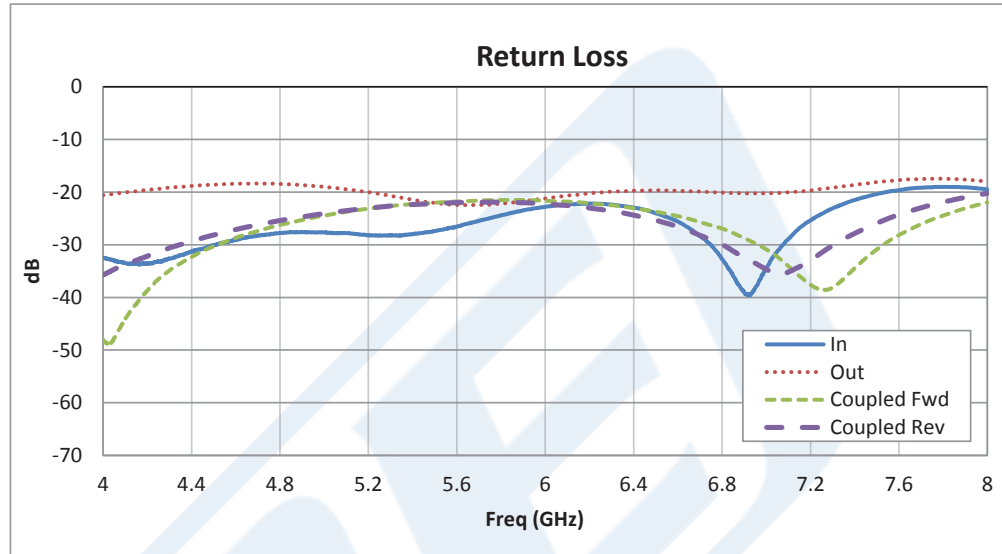
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Dual Directional 10 dB SMA Coupler From 4 GHz to 8 GHz Rated to 10 Watts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

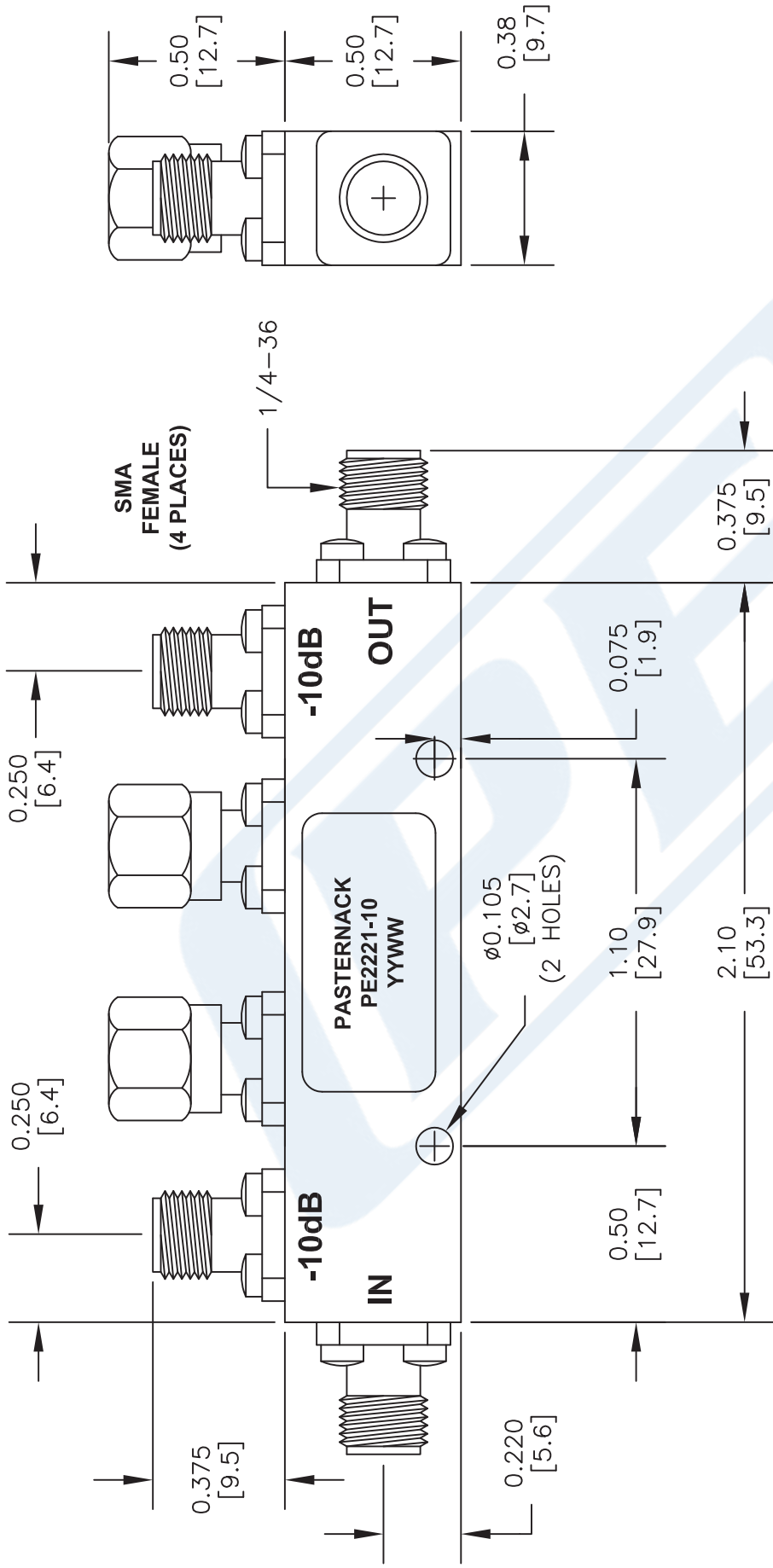
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Dual Directional 10 dB SMA Coupler From 4 GHz to 8 GHz Rated to 10 Watts PE2221-10](http://www.pasternack.com/dual-directional-10-db-sma-coupler-4-8-ghz-10-watts-pe2221-10-p.aspx)

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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.

# PE2221-10 CAD Drawing

Dual Directional 10 dB SMA Coupler From 4 GHz to 8 GHz Rated to 10 Watts



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.1
.XXX	±0.05

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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].

DWG TITLE  
**PE2221-10**

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FSCM NO. 53919

CAD FILE 033116 SCALE N/A SIZE A 3045