



Dual Directional 20 dB SMA Coupler From 4 GHz to 8 GHz Rated to 50 Watts

Couplers Technical Data Sheet

PE2221-20

Features

- Dual Directional Coupler
- 4 to 8 GHz Frequency Range
- Coupling 20±1.25 dB
- Directivity > 18 dB
- VSWR < 1.35:1
- Max Power 50 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 PE2221-20 is a 20 dB dual directional coupler that operates from 4 to 8 GHz and can handle up to 50 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 PE2221-20 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		20 ±1.25		dB
Frequency Sensitivity			±0.8	dB
Insertion Loss			0.6	dB
Directivity	18			dB
Main Line VSWR			1.35:1	
Secondary Line VSWR			1.35:1	
Input Power (CW)			50	Watts

Electrical Specification Notes:

Values at 25°C, sea level.

Insertion loss does not include coupled power.

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: [Dual Directional 20 dB SMA Coupler From 4 GHz to 8 GHz Rated to 50 Watts PE2221-20](#)



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Mechanical Specifications

Size

Length	2.1 in [53.34 mm]
Width/Dia.	0.38 in [9.65 mm]
Height	1.2 in [30.48 mm]
Weight	0.082 lbs [37.19 g]

Configuration

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

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)
Thermal Shock	MIL-STD-202, Method 107/B (-55°C to +85°C)

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

RoHS Compliant	
REACH Compliant	12/17/2015

Plotted and Other Data

Notes:

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Dual Directional 20 dB SMA Coupler From 4 GHz to 8 GHz Rated to 50 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.

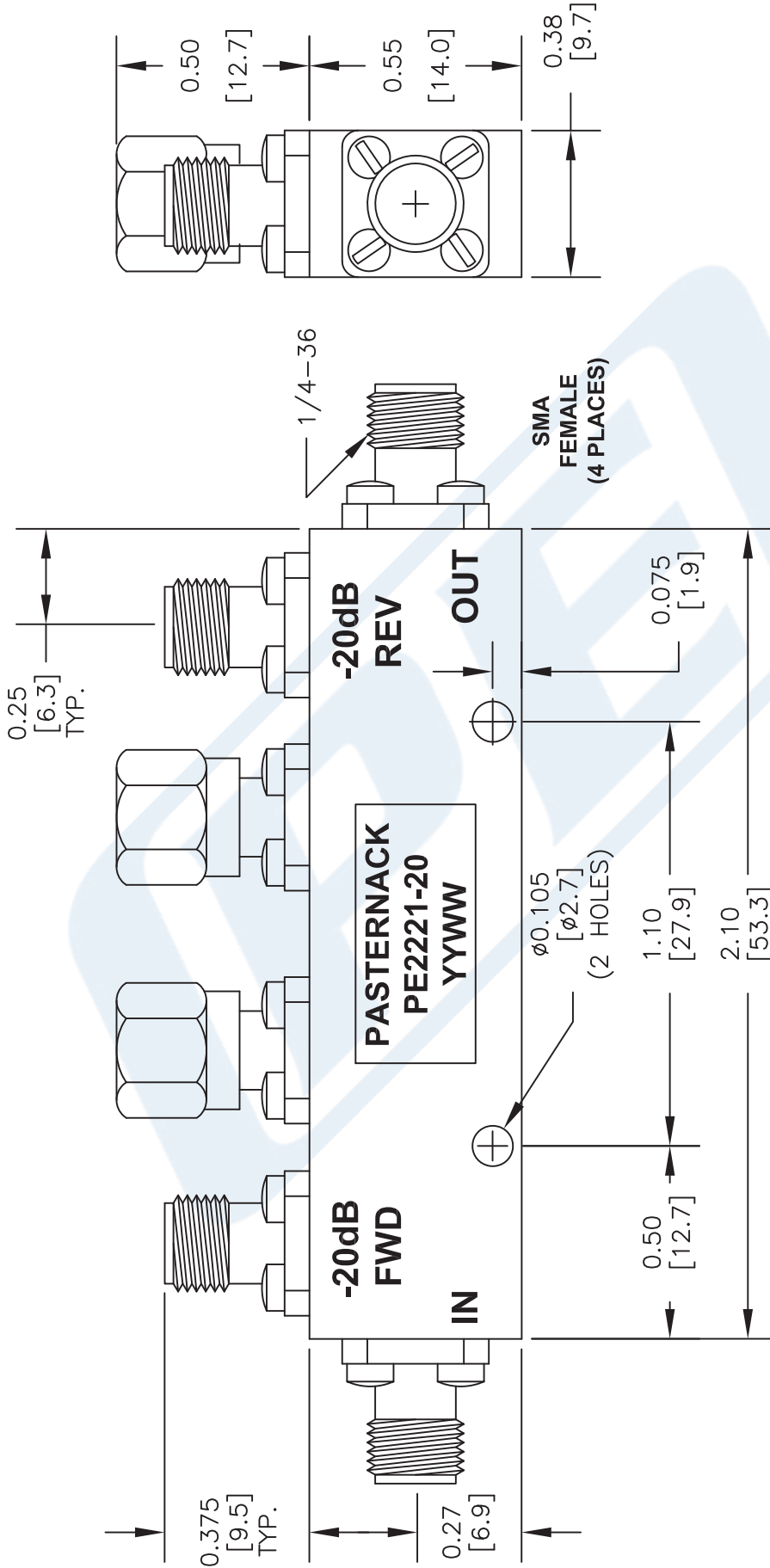
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Dual Directional 20 dB SMA Coupler From 4 GHz to 8 GHz Rated to 50 Watts PE2221-20](http://www.pasternack.com/dual-directional-20-db-sma-coupler-4-8-ghz-10-watts-pe2221-20-p.aspx)

URL: <http://www.pasternack.com/dual-directional-20-db-sma-coupler-4-8-ghz-10-watts-pe2221-20-p.aspx>

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.

PE2221-20 CAD Drawing

Dual Directional 20 dB SMA Coupler From 4 GHz to 8 GHz Rated to 50 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].
4. FITS MIL-C-17 AND EQUIVALENT CABLES.

DWG TITLE
PE2221-20

FSCM NO. 53919

CAD FILE 040116

SCALE N/A

SIZE A

3045

(PE) PASTERNAK®
THE ENGINEER'S RF SOURCE

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