



## Directional 10 dB SMA Coupler From 7 GHz to 12.4 GHz Rated to 50 Watts

### Couplers Technical Data Sheet

PE2CP1105

#### Features

- 7 to 12.4 GHz
- 50 Watts CW Max Power
- 10 dB Coupling Value
- Directional SMA Coupler
- Meets Standards for Humidity, Shock, Vibration, Altitude

#### Applications

- Communications Systems
- CDMA, GSM, LTE
- Amplifier Systems
- Amplifier Power Dividing
- Aviation/Aerospace
- Defense Applications
- Wireless Telecommunications

#### Description

The PE2CP1105 is an 10 dB RF coupler with 50 ohm SMA connectors operating from 7 to 12.4 GHz with a maximum input power of 50 Watts CW, and peak power handling of 3 kilowatt. The PE2CP1105 has a coupling factor of 1 dB, insertion loss of (excluding coupled power) and a maximum VSWR of 1.3:1. The coupler operates over a temperature range of -45° to 85° C and meets environmental standard for humidity, shock, vibration, and altitude. Couplers have many Applications and perform several functions within the RF/Microwave industry such as circuit feedback and signal sampling for measurement or monitoring.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	7		12.4	GHz
Impedance		50		Ohms
Coupling	9	10	11	dB
Frequency Sensitivity		±0.4	±0.5	dB
Insertion Loss		0.2	0.3	dB
Directivity	17	19		dB
Main Line VSWR		1.25:1	1.3:1	
Input Power (CW)			50	Watts
Input Power (Peak)			3	kWatts

#### Mechanical Specifications

##### Size

Length	1 in [25.4 mm]
Width/Dia.	0.38 in [9.65 mm]
Height	0.5 in [12.7 mm]

Finish	Gray
Housing Material and Plating	Aluminum

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Directional 10 dB SMA Coupler From 7 GHz to 12.4 GHz Rated to 50 Watts PE2CP1105](#)



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**Configuration**

Input Connector	SMA Female
Output Connector	SMA Female
Coupled Connectors	SMA Female

**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	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

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

**Plotted and Other Data**

Notes:

Directional 10 dB SMA Coupler From 7 GHz to 12.4 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 99.4% 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: [Directional 10 dB SMA Coupler From 7 GHz to 12.4 GHz Rated to 50 Watts PE2CP1105](#)

URL: <https://www.pasternack.com/directional-10-db-sma-coupler-12.4-ghz-pe2cp1105-p.aspx>

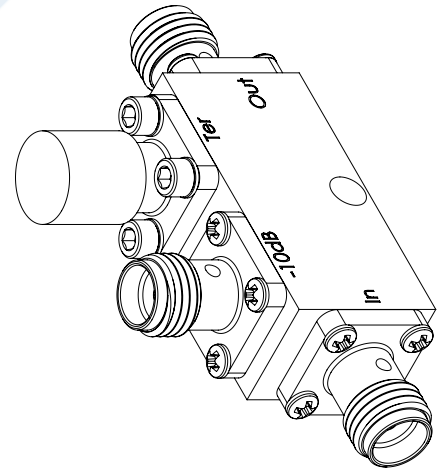
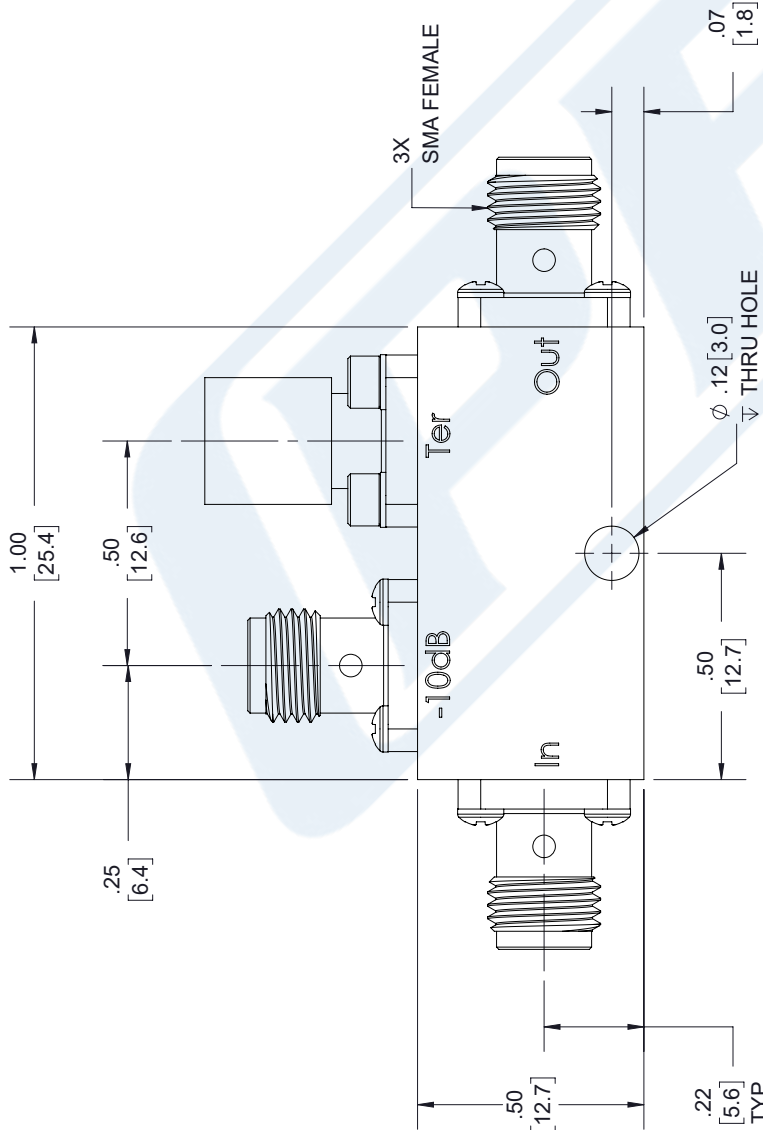
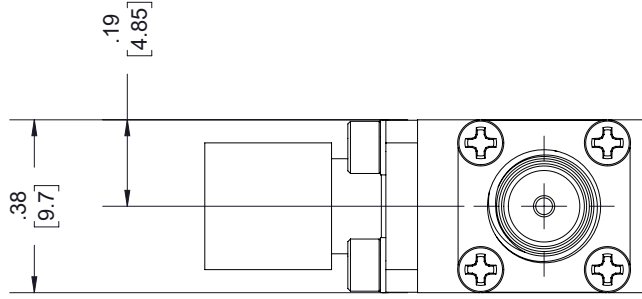
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such 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.

# PE2CP1105 CAD Drawing

Directional 10 dB SMA Coupler From 7 GHz to 12.4 GHz Rated to 50 Watts

### REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	PCR PE2CP1105	4/2/2020	S. PONG



LABEL:

PASTERNAK  
PE2CP1105  
D/C: YYWW

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS  
.XX = ±.02 [.51] ±.1/32  
.XXX = ±.005 [.13] ANGLES ± 1°

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% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

**PE PASTERNAK**  
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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1  
SCALE N/A

REV A  
ITEM NO. PE2CP1105  
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