



Directional 10 dB SMA Coupler From 4 GHz to 18 GHz Rated to 50 Watts

Couplers Technical Data Sheet

PE2CP1104

Features

- 4 to 18 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 PE2CP1104 is an 10 dB RF coupler with 50 ohm SMA connectors operating from 4 to 18 GHz with a maximum input power of 50 Watts CW, and peak power handling of 1 kilowatt. The PE2CP1104 has a coupling factor of 1 dB, insertion loss of (excluding coupled power) and a maximum VSWR of 1.35:1. 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 | 4 | | 18 | GHz |
| Impedance | | 50 | | Ohms |
| Coupling | 9 | 10 | 11 | dB |
| Frequency Sensitivity | | | ±0.5 | dB |
| Insertion Loss | | | 0.5 | dB |
| Directivity | 12 | 15 | | dB |
| Main Line VSWR | | 1.25:1 | 1.35:1 | |
| Input Power (CW) | | | 50 | Watts |
| Input Power (Peak) | | | 1 | kWatts |

Mechanical Specifications

Size

| | |
|------------|--------------------|
| Length | 1.36 in [34.54 mm] |
| Width/Dia. | 0.38 in [9.65 mm] |
| Height | 0.6 in [15.24 mm] |

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 4 GHz to 18 GHz Rated to 50 Watts PE2CP1104](#)



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| | |
|------------------------------|---------------------|
| Weight | 0.058 lbs [26.31 g] |
| Finish | Gray |
| Housing Material and Plating | Aluminum |

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:

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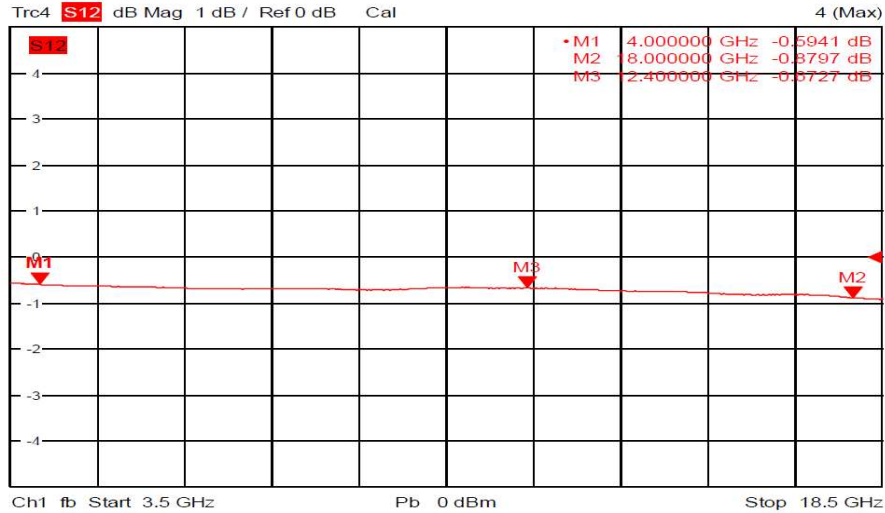
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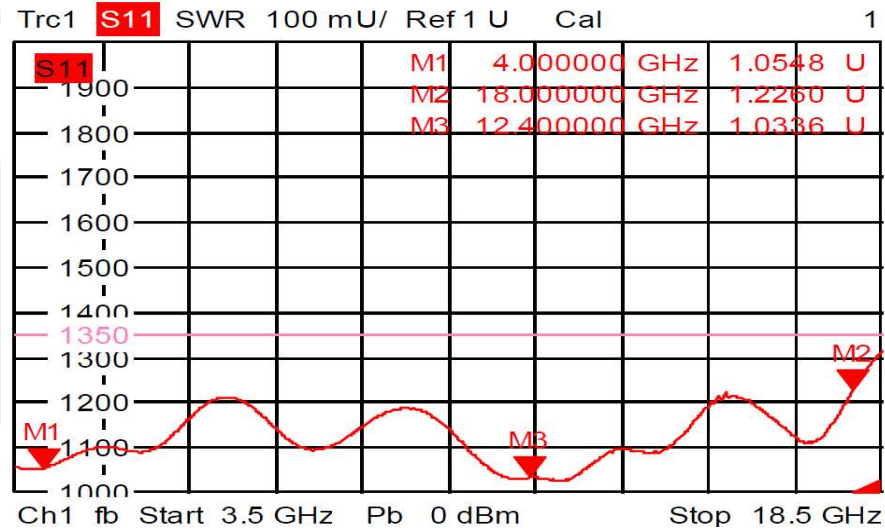
PE2CP1104

Typical Performance Data

Insertion Loss



Primary VSWR



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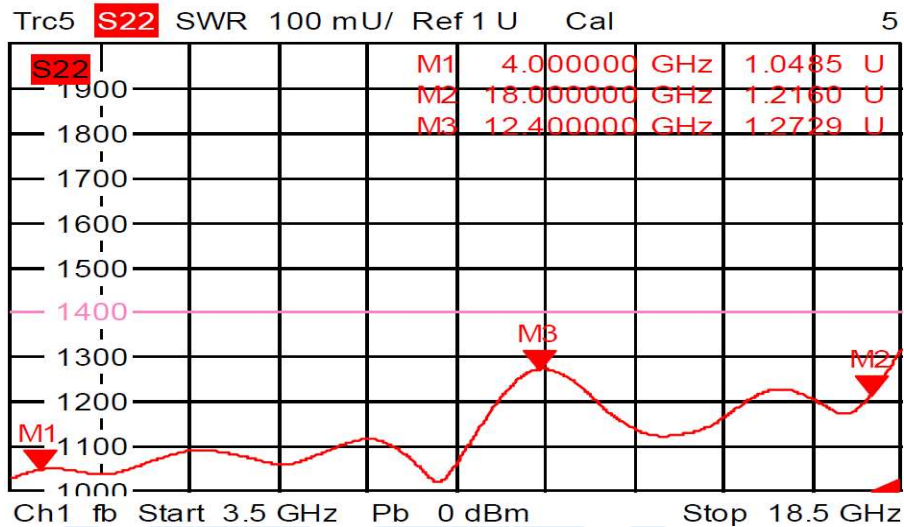


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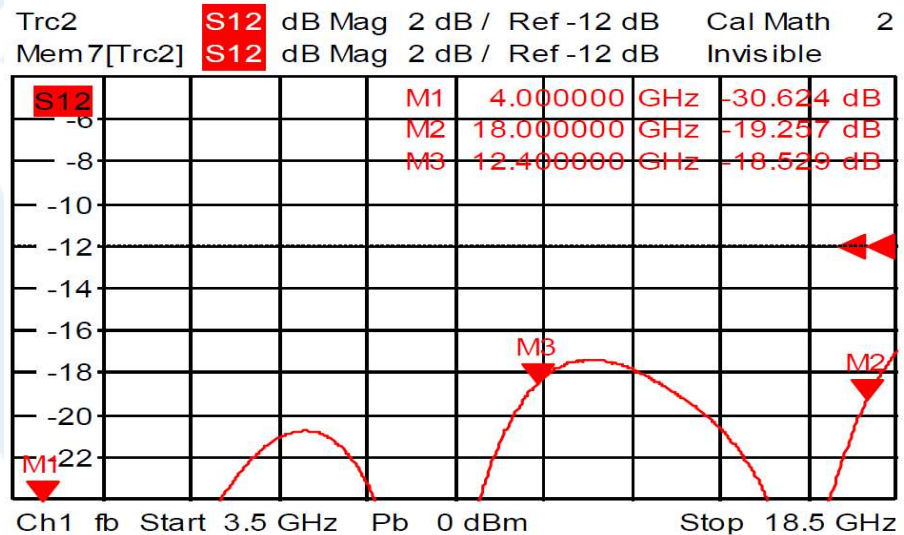
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Secondary VSWR



Directivity



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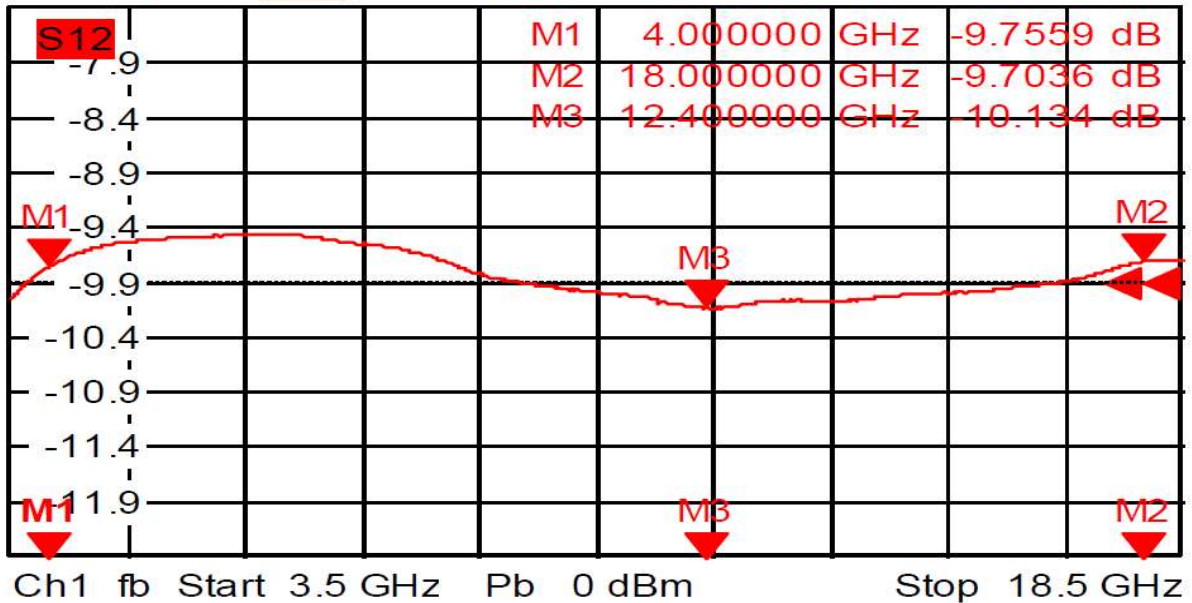
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Nominal Coupling

Trc4 **S12** dB Mag 0.5 dB / Ref -9.9 dB Cal 4
 Mem 6[Trc4] **S12** dB Mag 0.5 dB / Ref -9.9 dB



Directional 10 dB SMA Coupler From 4 GHz to 18 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 4 GHz to 18 GHz Rated to 50 Watts PE2CP1104](https://www.pasternack.com/directional-10-db-sma-coupler-18-ghz-pe2cp1104-p.aspx)

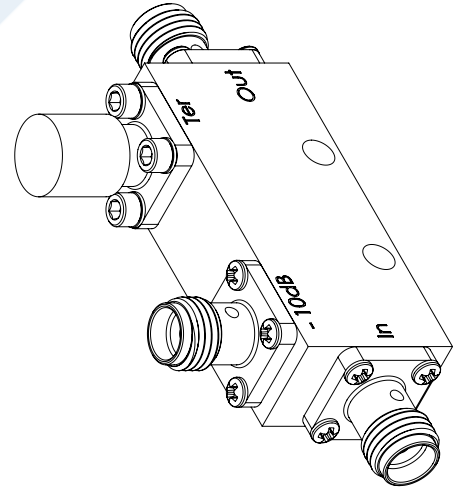
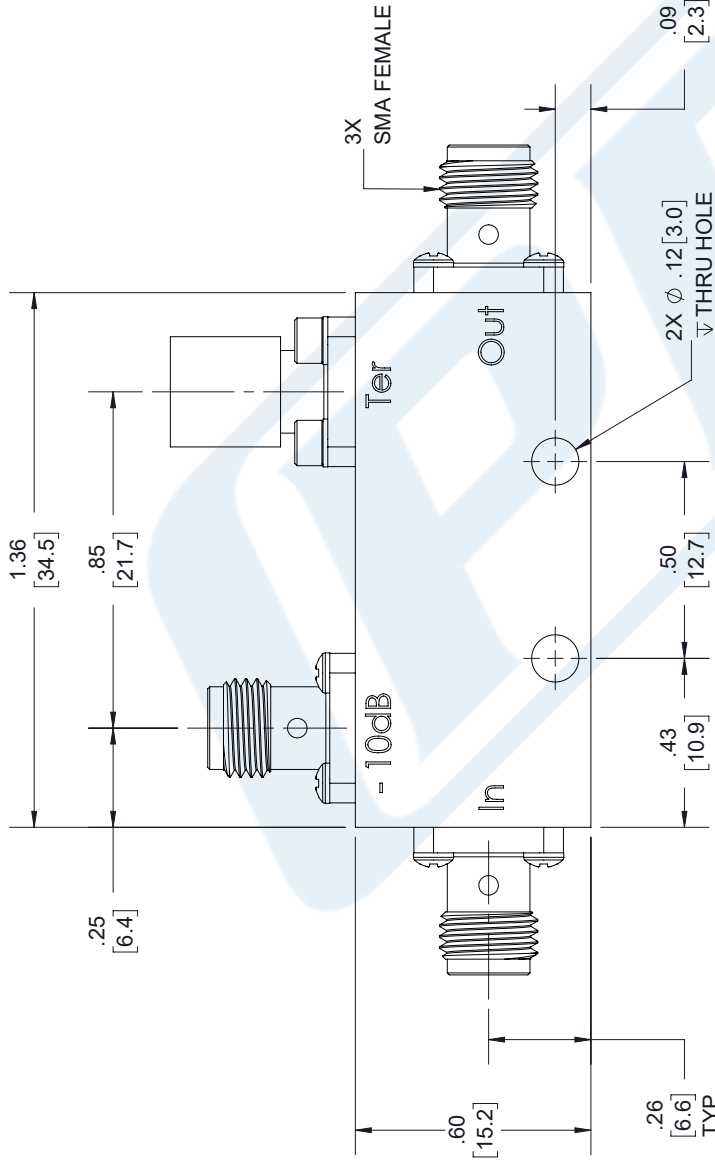
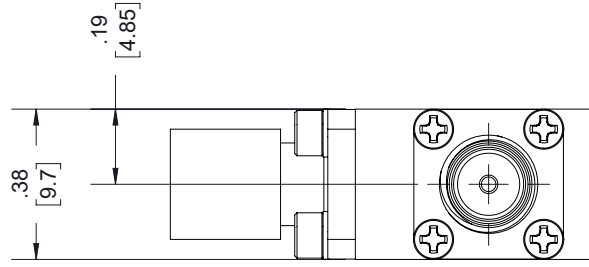
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PE2CP1104 CAD Drawing

Directional 10 dB SMA Coupler From 4 GHz to 18 GHz Rated to 50 Watts

| REVISIONS | | | |
|-----------|-----------------|----------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| A | INITIAL RELEASE | 4/6/2020 | S. PONG |



LABEL:

PASTERNAK
PE2CP1104
D/C: YYWW

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

TOLERANCES:
 .X = ±.2 [5.08]
 .XX = ±.02 [.51]
 .XXX = ±.005 [.13]
 FRACTIONS ± 1/32
 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%L / -0
 ALL DIMENSIONS SHOWN
 ARE FOR REFERENCE ONLY.



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SCALE N/A



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REV A