

Low PIM Directional 6 dB 4.3-10 Coupler From 555 MHz to 6 GHz Rated to 300 Watts, IP65 Rated



PE2CP1166-6

Features

- Broadband frequency coverage from 555 MHz to 6 GHz
- 6 dB coupling value
- Low PIM performance of ≈ -160 dBc (Typical = -168 dBc)
- Tested using two 43 dBm carriers
- Low insertion loss 1.85dB
- High directivity 20 dB typ
- Excellent VSWR performance 1.25:1
- 300 watt (CW) input power handling
- 3000 watt peak power handling
- 50 Ohm impedance
- DC pass capability up to 2 A
- IP65-rated weather-resistant enclosure
- Operating temperature range from -40°C to $+75^{\circ}\text{C}$
- 4.3-10 Female connectors

Applications

- Distributed Antenna Systems (DAS)
- Cellular base stations
- 4G LTE and 5G wireless infrastructure
- Public safety communication systems
- CBRS deployments
- Private LTE and private 5G networks
- In-building wireless coverage
- Small cell installations
- RF signal monitoring
- RF power sampling
- Test and measurement systems
- Indoor and outdoor RF distribution networks

Description

The PE2CP1166-6 is a 6 dB Low PIM Directional Coupler designed for broadband wireless communication systems requiring precise signal monitoring and distribution with exceptional passive intermodulation performance. Operating from 555 MHz to 6 GHz, this directional coupler delivers accurate coupling, low insertion loss 1.85 dB, excellent VSWR 1.25:1, and 20 dB high directivity across multiple wireless frequency bands. With a Low PIM performance of -160 dBc maximum (-168 dBc typical) when tested with two 43 dBm carriers, it is ideally suited for modern cellular infrastructure, Distributed Antenna Systems (DAS), small cells, CBRS, and private wireless networks. The rugged IP65-rated enclosure, wide operating temperature range, and RoHS-compliant construction provide reliable performance in demanding indoor and outdoor environments.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.555		6	GHz
Impedance		50		Ohms
Coupling		6 ± 1.2		
Insertion Loss			1.85	dB
Directivity	18	20		dB
Main Line VSWR			1.25:1	
Passive Intermodulation 2x43dBm		-168	-160	dBc
Input Power (CW)			300	Watts
Input Power (Peak)			3	kWatts

Mechanical Specifications

Size

Length	4.57 in [116.08 mm]
Width/Dia.	1.41 in [35.81 mm]
Height	0.86 in [21.84 mm]

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Weight	0.44 lbs [199.58 g]
Housing Material and Plating	Brass, Copper-Tin-Zinc

Configuration

Input Connector	4.3-10 Female
Output Connector	4.3-10 Female
Coupled Connectors	4.3-10 Female

Environmental Specifications

Temperature

Operating Range	-40 to +75 deg C
Storage Range	-50 to +85 deg C
Humidity	<95%
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6-Fc
Altitude	<5000m
Thermal Shock	IEC 60068-2-14-Na
Salt Spray	168 hours

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

Plotted and Other Data

Notes:

Low PIM Directional 6 dB 4.3-10 Coupler From 555 MHz to 6 GHz Rated to 300 Watts, IP65 Rated 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: [Low PIM Directional 6 dB 4.3-10 Coupler From 555 MHz to 6 GHz Rated to 300 Watts, IP65 Rated PE2CP1166-6](#)

URL: <https://www.pasternack.com/directional-6-db-4.3-10-coupler-555-to-6-ghz-pe2cp1166-6-p.aspx>

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PE2CP1166-6 CAD Drawing

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