

## SMA Directional Coupler 30 dB Coupled Port From 500 MHz to 1,000 MHz Rated To 50 Watts



### MC2011-30

#### Features

- Directional Coupler
- 500 MHz to 1,000 MHz Frequency Range
- Coupling  $30 \pm 1.25$  dB
- Directivity > 25 dB
- Max Power 50W (CW)

#### Applications

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

#### Description

Directional couplers are indispensable components for isolating, separating and combining signals. For example, they provide a simple way of sampling microwave signals. They also can make accurate attenuator measurements since reflections are eliminated. The MC2011-30 is a 30 dB directional coupler that operates from 500 MHz to 1,000 MHz with 25 dB directivity minimum and can handle up to 50 Watts of CW power. The package interface has SMA inputs on all of the ports.

The MC2011-30 is part of Fairview Microwave's family of directional/dual-directional couplers that offer coupling ratio 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	Min	Typ	Max	Units
Frequency Range	500		1,000	MHz
Impedance		50		Ohms
Coupling		$30 \pm 1.25$		
Freq. Sensitivity			$\pm 0.75$	dB
Insertion Loss			0.2	dB
Directivity	25			dB
Main Line VSWR			1.2:1	
Sec. Line VSWR			1.2:1	
Input Power (CW)			50	Watts

#### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Isolation, Min					1,000	

Electrical Specification Notes:  
Values specified at +25°C, sea level.  
Power rating is specified for a load VSWR of 1.2:1 or better.

#### Mechanical Specifications

Size  
Length 3.1 in [78.74 mm]

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Width/Dia.	0.38 in [9.65 mm]
Height	0.55 in [13.97 mm]
Weight	0.0955 lbs [43.32 g]
Finish	Blue
<b>Configuration</b>	
Input Connector	SMA Female
Output Connector	SMA Female
Coupled Connectors	SMA Female

Environmental Specifications

<b>Temperature</b>	
Operating Range	-25 to +80 deg C
Storage Range	-55 to +150 deg C
Humidity	MIL-STD-202, Method 106 (90% RH, +25°C)
Shock	MIL-STD-202, Method 213I (100 G's, 6 ms)
Vibration	MIL-STD-202, Method 204D (10 to 2000 Hz, 12 G's, 12 Hours)
Altitude	MIL-STD-202, Method 105E (150,000 ft)
Thermal Shock	MIL-STD-202, Method 107B (-55°C to +85°C)

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

Plotted and Other Data

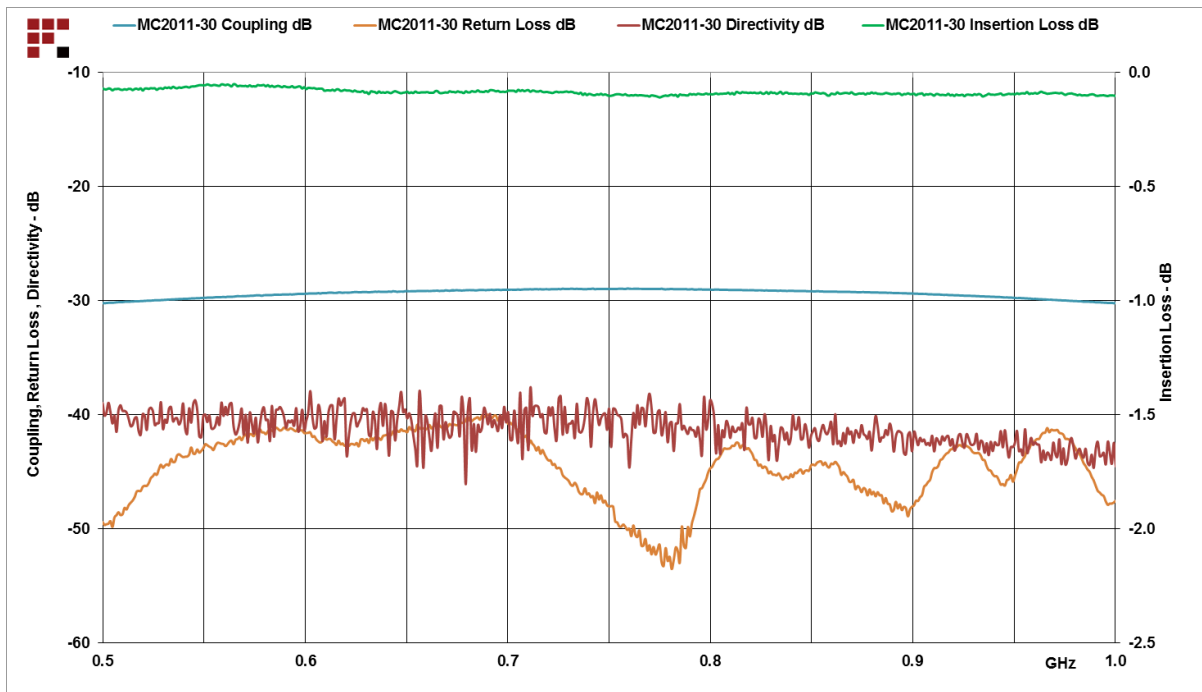
Notes:

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#### Typical Performance Data



SMA Directional Coupler 30 dB Coupled Port From 500 MHz to 1,000 MHz Rated To 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Directional Coupler 30 dB Coupled Port From 500 MHz to 1,000 MHz Rated To 50 Watts MC2011-30](https://www.fairviewmicrowave.com/sma-directional-coupler-30-db-1000-mhz-50-watts-mc2011-30-p.aspx)

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MC2011-30 CAD Drawing

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