

SMA Directional Coupler 20 dB Coupled Port From 500 MHz to 12.4 GHz Rated To 30 Watts

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 MC0512-20 is a 20 dB directional coupler that operates from 500 MHz to 12.4 GHz with 15 dB directivity minimum and can handle up to 30 Watts of CW power. The package interface has SMA inputs on all of the ports.

The MC0512-20 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.



Features:

- Directional Coupler
- 500 MHz to 12.4 GHz Frequency Range
- Coupling 20±1.25 dB
- Directivity > 15 dB
- Max Power 30W (CW)

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.5		12.4	GHz
Impedance		50		Ohms
Coupling		20 ±1.25		dB
Freq. Sensitivity		±1		dB
Directivity	15			dB
Main Line VSWR			1.22:1	
Sec. Line VSWR			1.22:1	
Input Power (CW)			30	Watts
Input Power (Peak)			3	KWatts

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.5 to 4	4 to 8	8 to 12.4			GHz
Insertion Loss, Typ	0.5	0.7	1.13			dB
Directivity, Typ	20	17	17			dB

Electrical Specification Notes:
 Values specified at +25°C, sea level.
 Coupling includes frequency sensitivity.

Mechanical Specifications

Size	
Length	4.4 in [111.76 mm]
Width/Dia.	0.6 in [15.24 mm]
Height	0.38 in [9.65 mm]
Weight	0.137 lbs [62.14 g]

Configuration

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

Applications:

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

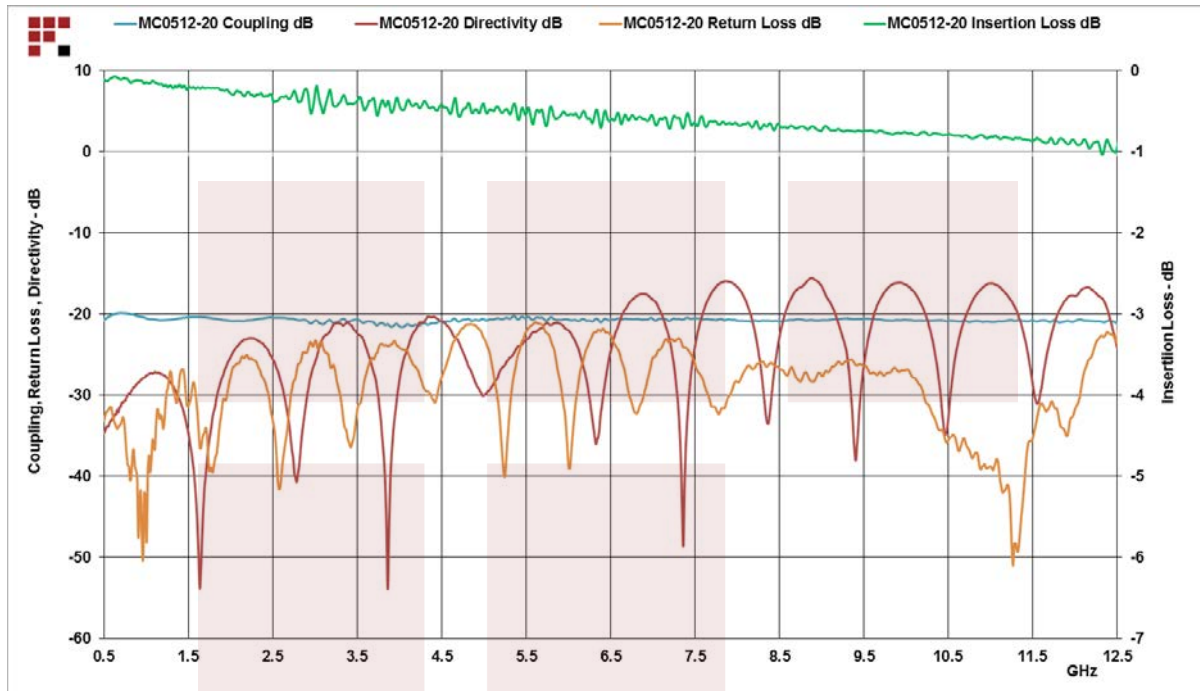
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data

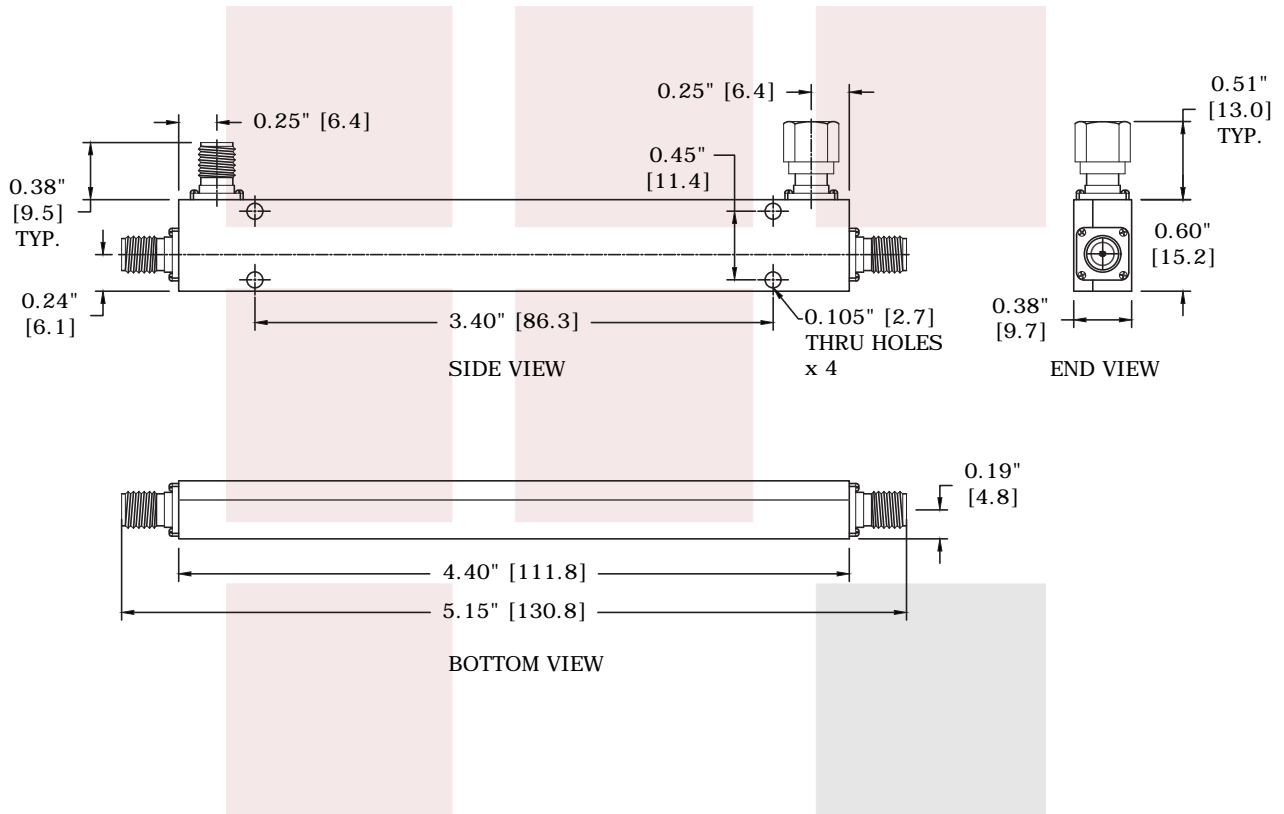


SMA Directional Coupler 20 dB Coupled Port From 500 MHz to 12.4 GHz Rated To 30 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Directional Coupler 20 dB Coupled Port From 500 MHz to 12.4 GHz Rated To 30 Watts MC0512-20](#)

URL: <https://www.fairviewmicrowave.com/sma-directional-coupler-20-db-12.4-ghz-50-watts-mc0512-20-p.aspx>

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TITLE SMA Directional Coupler 20 dB Coupled Port From 500 MHz to 12.4 GHz Rated To 30 Watts		DWG NO MC0512-20		CAGE CODE 3FKR5	
CAD FILE	011415	SHEET	SCALE	N/A	SIZE A 5568