

SMA Directional Coupler 20 dB 12.4 GHz Rated to 50 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 MC0412-20 is a 20 dB directional coupler that operates from 4 GHz to 12.4 GHz with 17 dB directivity and can handle up to 50 Watts of CW power. The package interface has SMA inputs on all of the ports.

The MC0412-20 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
- 4 GHz to 12.4 GHz Frequency Range
- Coupling 20±1 dB
- Directivity 17 dB
- Max Power 50W (CW)

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	4		12.4	GHz
Impedance		50		Ohms
Coupling		20 ±1		dB
Freq. Sensitivity		±1		dB
Insertion Loss		1.25		dB
Directivity		17		dB
Main Line VSWR			1.35:1	
Sec. Line VSWR			1.35:1	
Input Power (CW)			50	Watts
Input Power (Peak)			3	kWatts

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	1.22 in [30.99 mm]
Width/Dia.	0.6 in [15.24 mm]
Height	0.38 in [9.65 mm]
Weight	0.0655 lbs [29.71 g]

Configuration

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

Environmental Specifications

Temperature	
Operating Range	-55 to +85 deg C

Applications:

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

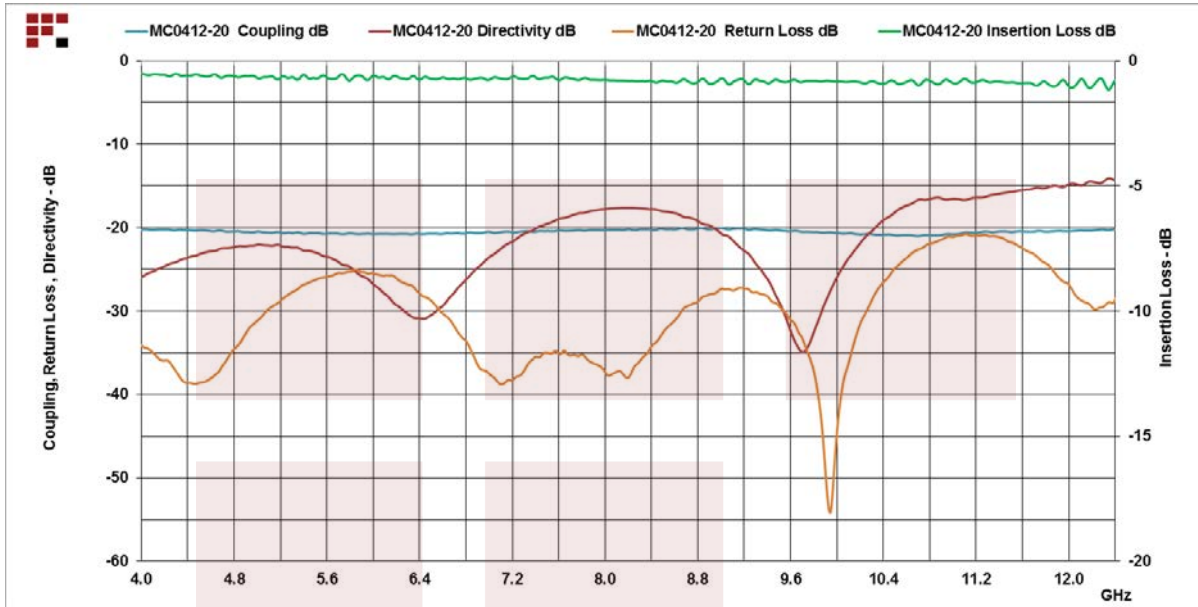
Fairview Microwave
 301 Leora Ln., Suite 100
 Lewisville, TX 75056
 Tel: 1-800-715-4396 / (972) 649-6678
 Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

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

Plotted and Other Data

Notes:

Typical Performance Data

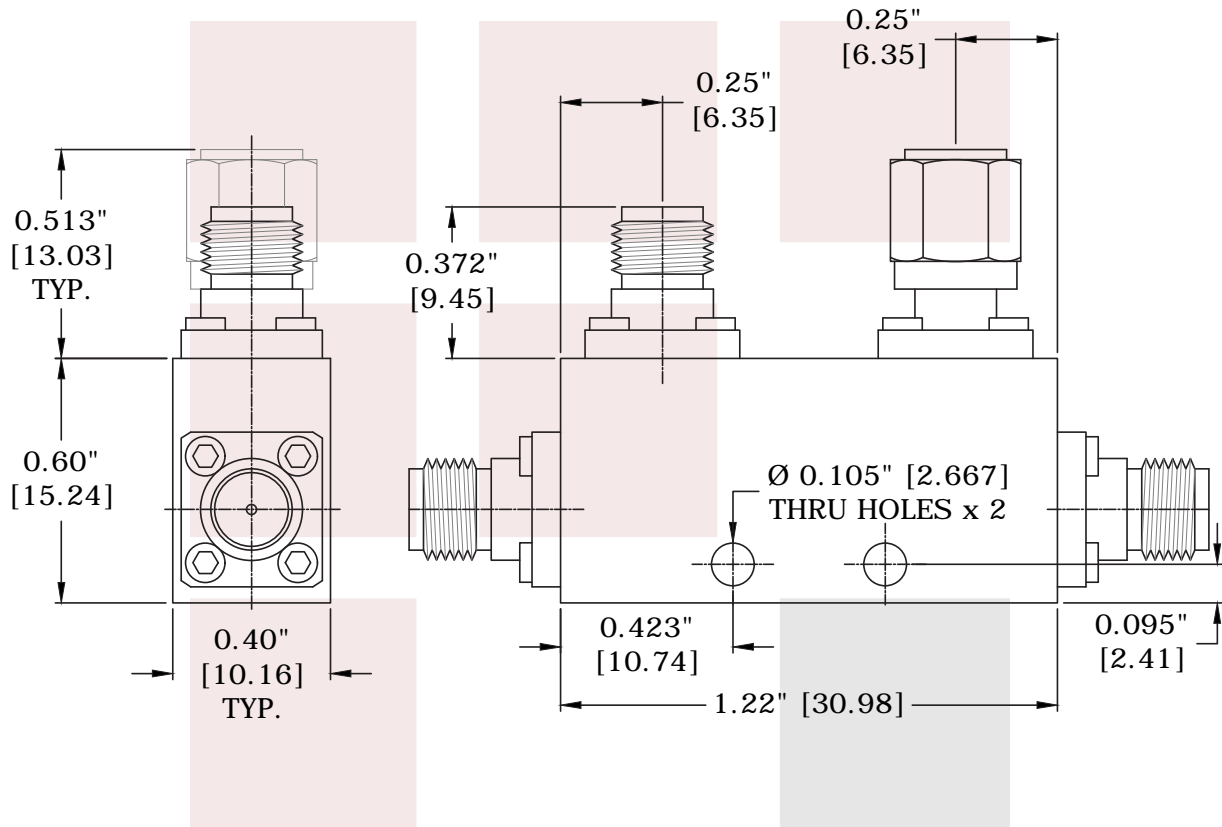


SMA Directional Coupler 20 dB 12.4 GHz Rated to 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Directional Coupler 20 dB 12.4 GHz Rated to 50 Watts MC0412-20](#)

URL: <https://www.fairviewmicrowave.com/sma-directional-coupler-20-db-12.4-ghz-50-watts-mc0412-20-p.aspx>

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FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].				
TITLE SMA Directional Coupler 20 dB 12.4 GHz Rated to 50 Watts		DWG NO MC0412		CAGE CODE 3FKR5		
		CAD FILE 052716	SHEET	SCALE N/A	SIZE A	5568