

SMA Directional Coupler 10 dB 3 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 MC053SA-10 is a 10 dB directional coupler that operates from 0.5 to 3 GHz and can handle up to 50 Watts (CW) with 18 dB directivity minimum and 1.3:1 VSWR maximum. The package interface uses SMA female connectors, and is also REACH and RoHS compliant.

The MC053SA-10 is part of Fairview Microwave's family of directional/dual-directional couplers that offer coupling ratios 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	0.5		3	GHz
Impedance		50		Ohms
Coupling		10 ±1.5		dB
Insertion Loss			1	dB
Directivity	18			dB
Main Line VSWR			1.3:1	
Sec. Line VSWR			1.3:1	
Input Power (CW)			50	Watts

Electrical Specification Notes:
 Values at 25°C, sea level.

Mechanical Specifications

Size	
Length	4.724 in [119.99 mm]
Width/Dia.	0.402 in [10.21 mm]
Height	1.181 in [30 mm]
Weight	0.241 lbs [109.32 g]
Housing Material and Plating	Aluminum

Configuration

Package Type	Connectorized
Input Connector	SMA Female
Output Connector	SMA Female
Coupled Connectors	SMA Female

Environmental Specifications

Temperature	
Operating Range	-30 to +85 deg C



Features:

- Directional Coupler
- 0.5 to 3 GHz Frequency Range
- Coupling 10±1.5 dB
- Directivity > 18 dB
- VSWR < 1.3:1
- Max Power 50 Watts (CW)

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:

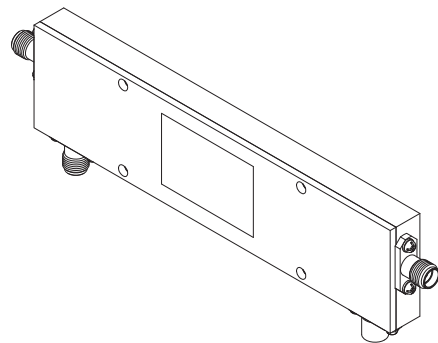
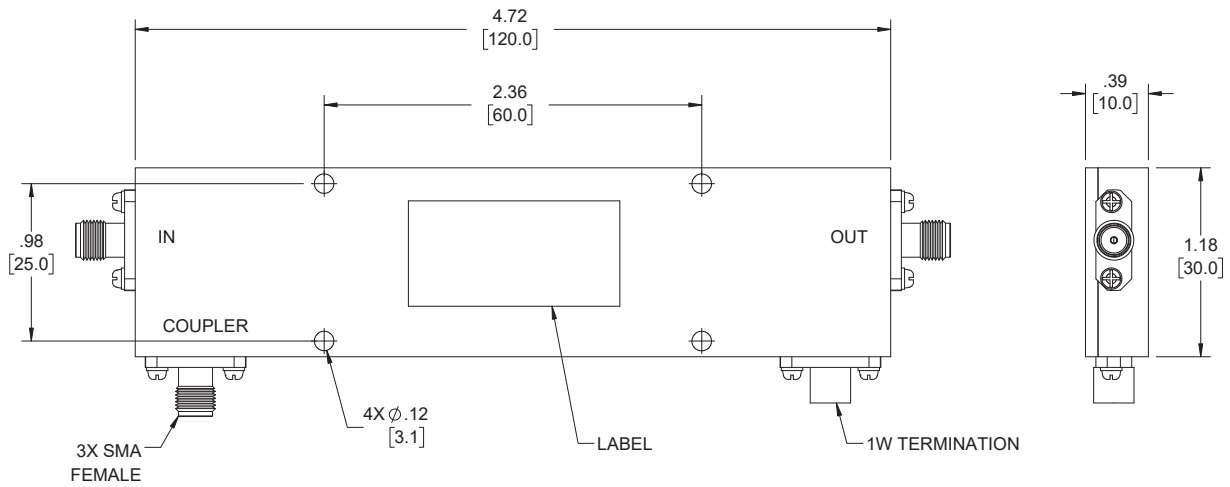
SMA Directional Coupler 10 dB 3 GHz Rated To 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Directional Coupler 10 dB 3 GHz Rated To 50 Watts MC053SA-10](#)

URL: <https://www.fairviewmicrowave.com/sma-directional-standard-10-db-3-ghz-mc053sa-10-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	02/04/2020	T.GALLA



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TITLE
SMA Directional Coupler 10 dB 3 GHz Rated To 50 Watts

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

TOLERANCES:		CABLE LENGTH (L) TOLERANCES:	
.X = ± 2 [5.08]	FRACTIONS ± 1/32	L ≤ 12 [305]	= +1 [25] / -0
.XX = ± .02 [.51]	ANGLES ± 1°	12 [305] < L ≤ 60 [1524]	= +2 [51] / -0
.XXX = ± .005 [.13]		60 [1524] < L ≤ 120 [3048]	= +4 [102] / -0
		120 [3048] < L ≤ 300 [7620]	= +6 [152] / -0
		300 [7620] < L	= +5%L / -0

THIRD-ANGLE PROJECTION
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SHEET 1 OF 1
SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.			
SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	DFRISIELLO	MC053SA-10

REV A

T-Rev.D