

SMA Directional Coupler 10 dB 4 GHz to 18 GHz Rated to 50 Watts

The FMCP1104 is an 10 dB RF coupler with 50 ohm SMA connectors operating from 4 to 18 GHz with a maximum input power of 50 Watts CW, and peak power handling of 1 kilowatt. The FMCP1104 has a coupling factor of 1 dB, insertion loss of (excluding coupled power) and a maximum VSWR of 1.35:1. The coupler operates over a temperature range of -45° to 85° C and meets environmental standard for humidity, shock, vibration, and altitude. Couplers have many Applications and perform several functions within the RF/Microwave industry such as circuit feedback and signal sampling for measurement or monitoring.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	4		18	GHz
Impedance		50		Ohms
Coupling	9	10	11	dB
Freq. Sensitivity			±0.5	dB
Insertion Loss			0.5	dB
Directivity	12	15		dB
Main Line VSWR		1.25:1	1.35:1	
Input Power (CW)			50	Watts
Input Power (Peak)			1	kWatts

Mechanical Specifications

Size	
Length	1.36 in [34.54 mm]
Width/Dia.	0.38 in [9.65 mm]
Height	0.6 in [15.24 mm]
Weight	0.057 lbs [25.85 g]
Finish	Gray
Housing Material and Plating	Aluminum

Configuration

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

Environmental Specifications

Temperature

Operating Range	-45 to +85 deg C
Storage Range	-55 to +125 deg C

Humidity	100% RH at 35°C, 95% RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)



Features:

- 4 to 18 GHz
- 50 Watts CW Max Power
- 10 dB Coupling Value
- Directional SMA Coupler
- Meets Standards for Humidity, Shock, Vibration, Altitude

Applications:

- Communications Systems
- CDMA, GSM, LTE
- Amplifier Systems
- Amplifier Power Dividing
- Aviation/Aerospace
- Defense Applications
- Wireless Telecommunications

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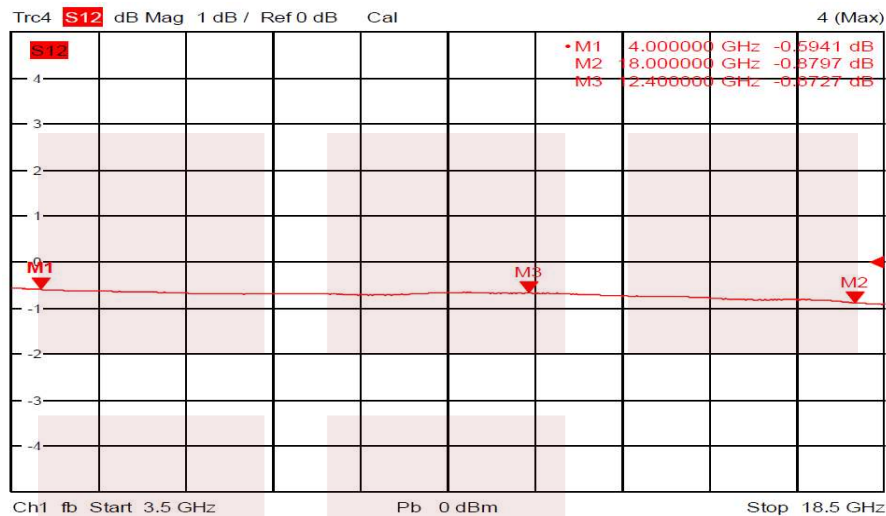
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

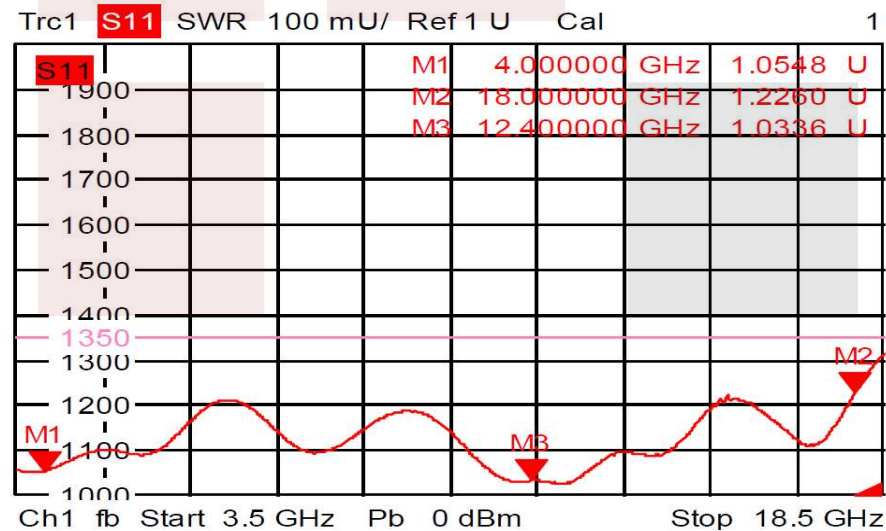
Notes:

Typical Performance Data

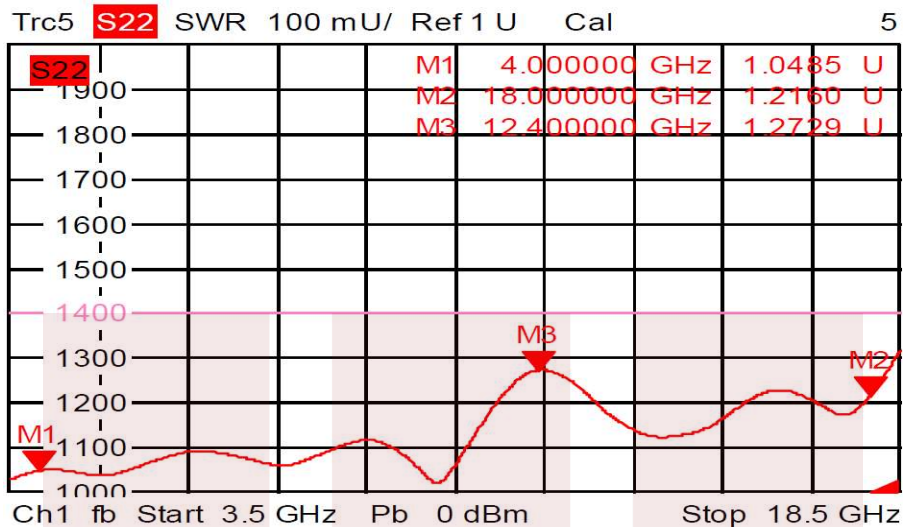
Insertion Loss



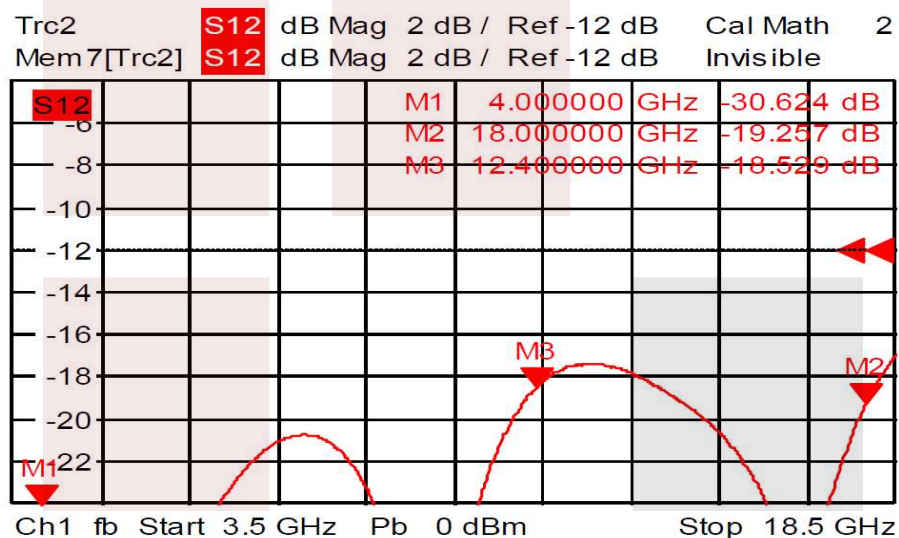
Primary VSWR



Secondary VSWR



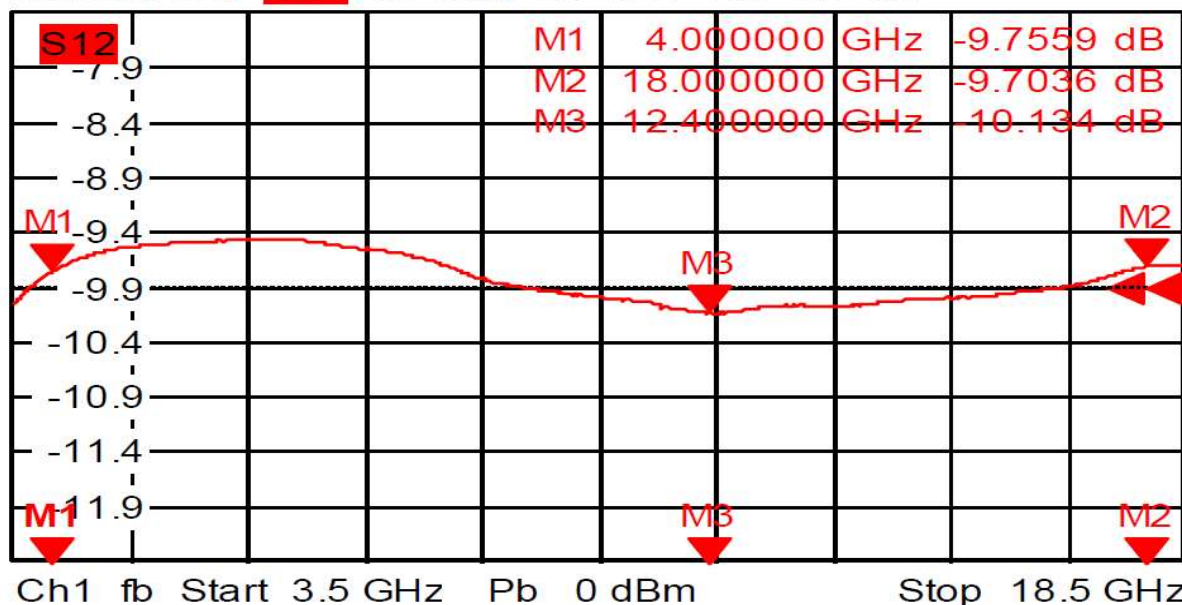
Directivity



Nominal Coupling

Trc4 **S12** dB Mag 0.5 dB / Ref -9.9 dB Cal 4

Mem 6[Trc4] **S12** dB Mag 0.5 dB / Ref -9.9 dB



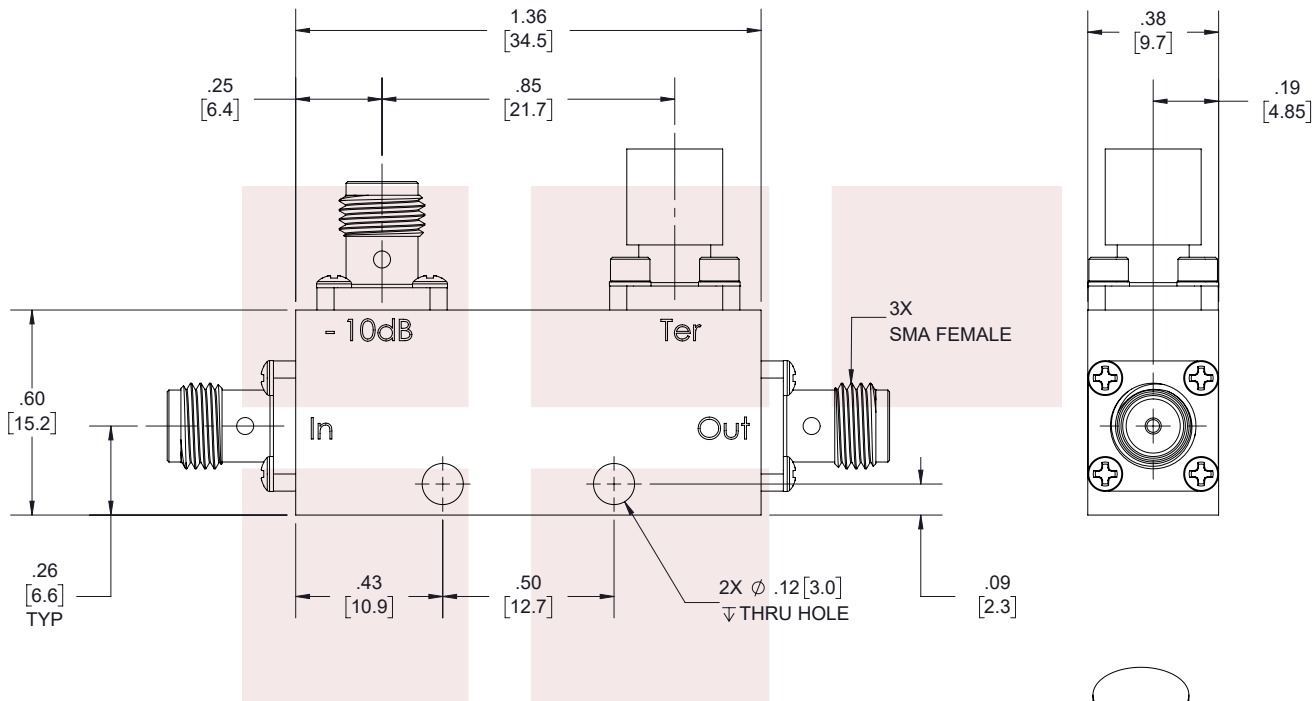
SMA Directional Coupler 10 dB 4 GHz to 18 GHz Rated to 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Directional Coupler 10 dB 4 GHz to 18 GHz Rated to 50 Watts FMCP1104](#)

URL: <https://www.fairviewmicrowave.com/sma-directional-standard-10-db-18-ghz-fmcp1104-p.aspx>

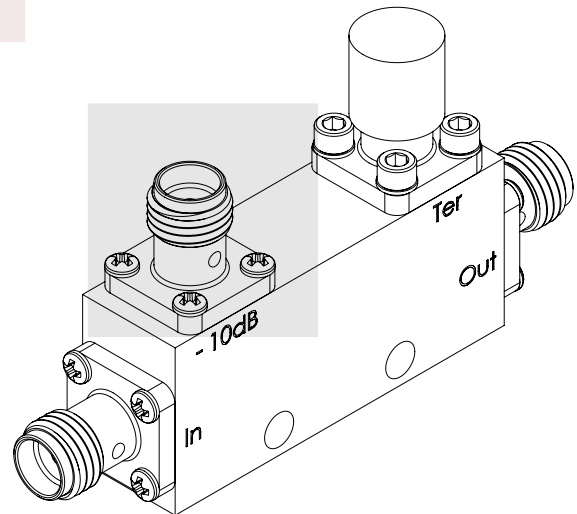
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	4/6/2020	S.PONG



LABEL:

FAIRVIEW MICROWAVE
FMCP1104
D/C: YYWW



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TITLE

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

TOLERANCES:

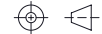
X = ± 2 [5.08]
.XX = ± .02 [.51]
.XXX = ± .005 [.13]

FRACTIONS
± 1/32
ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0
12 [305] < L ≤ 60 [1524] = +2 [51] / -0
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

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	3FKR5	K.Dang	FMCP1104	A

T-Rev.D