

SMA Directional Coupler 6 dB 4 GHz to 18 GHz Rated to 50 Watts

The FMCP1100 is an 6 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 0.3 kilowatt. The FMCP1100 has a coupling factor of 1 dB, insertion loss of (excluding coupled power) and a maximum VSWR of 1.5:1. 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	5.5	6	7	dB
Freq. Sensitivity		±0.5	±0.7	dB
Insertion Loss			0.5	dB
Directivity	12	14		dB
Main Line VSWR		1.4:1	1.5:1	
Input Power (CW)			50	Watts
Input Power (Peak)			300	Watts

Features:

- 4 to 18 GHz
- 50 Watts CW Max Power
- 6 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

Mechanical Specifications

Size

Length	1.3 in [33.02 mm]
Width/Dia.	0.43 in [10.92 mm]
Height	0.59 in [14.99 mm]
Weight	0.064 lbs [29.03 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)

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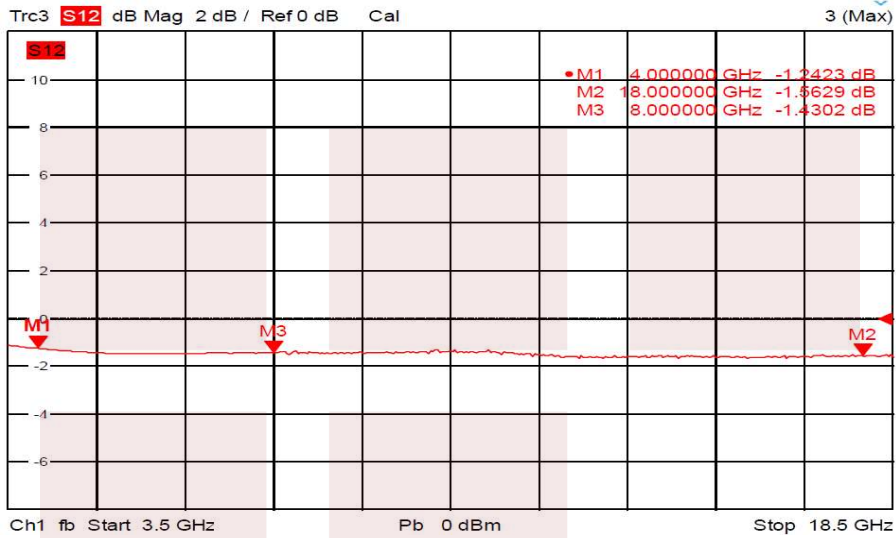
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

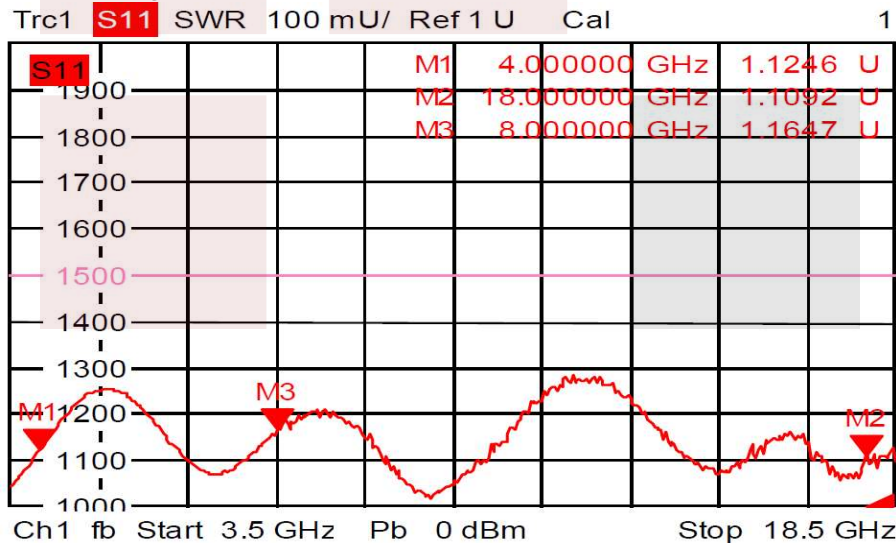
Notes:

Typical Performance Data

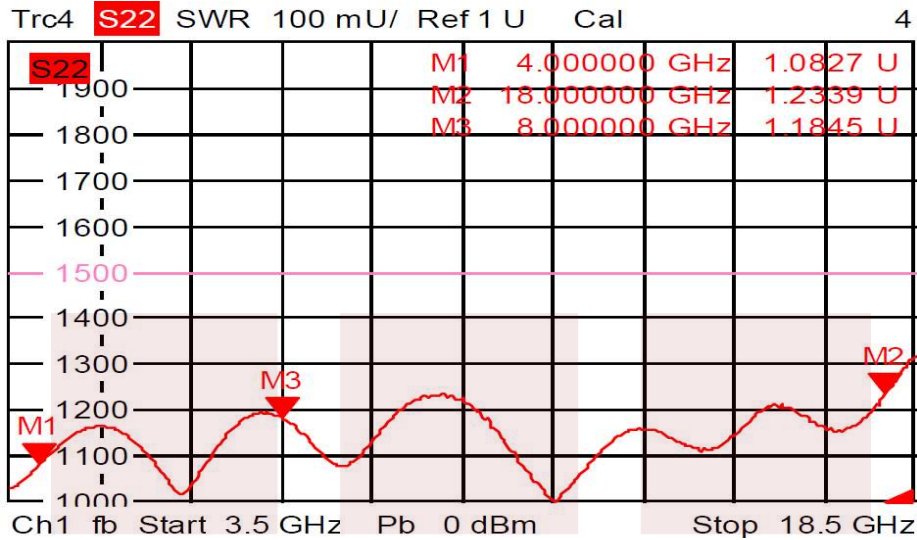
Insertion Loss



Primary VSWR

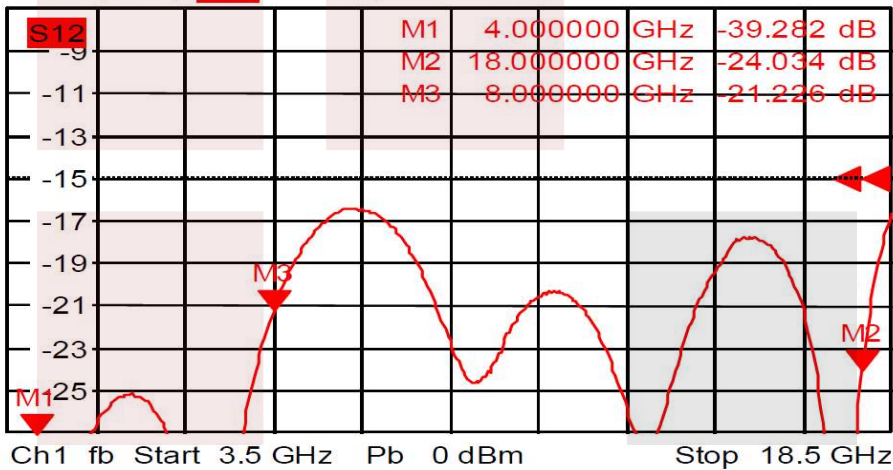


Secondary VSWR



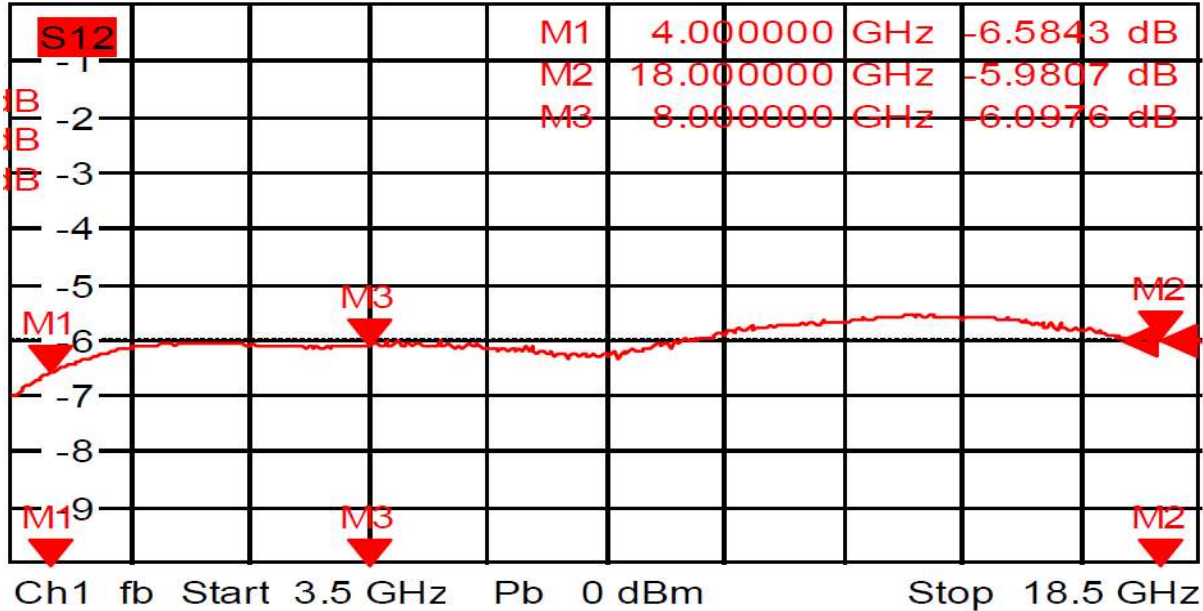
Directivity

Trc2 **S12** dB Mag 2 dB / Ref -15 dB Cal Math 2
 Mem6[Trc2] **S12** dB Mag 2 dB / Ref -15 dB Invisible



Nominal Coupling

Trc3 **S12** dB Mag 1 dB / Ref -6 dB Cal 3
 Mem5[Trc3] **S12** dB Mag 1 dB / Ref -6 dB



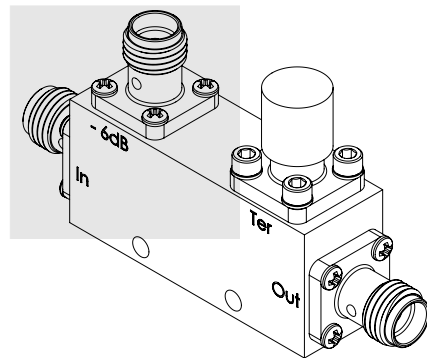
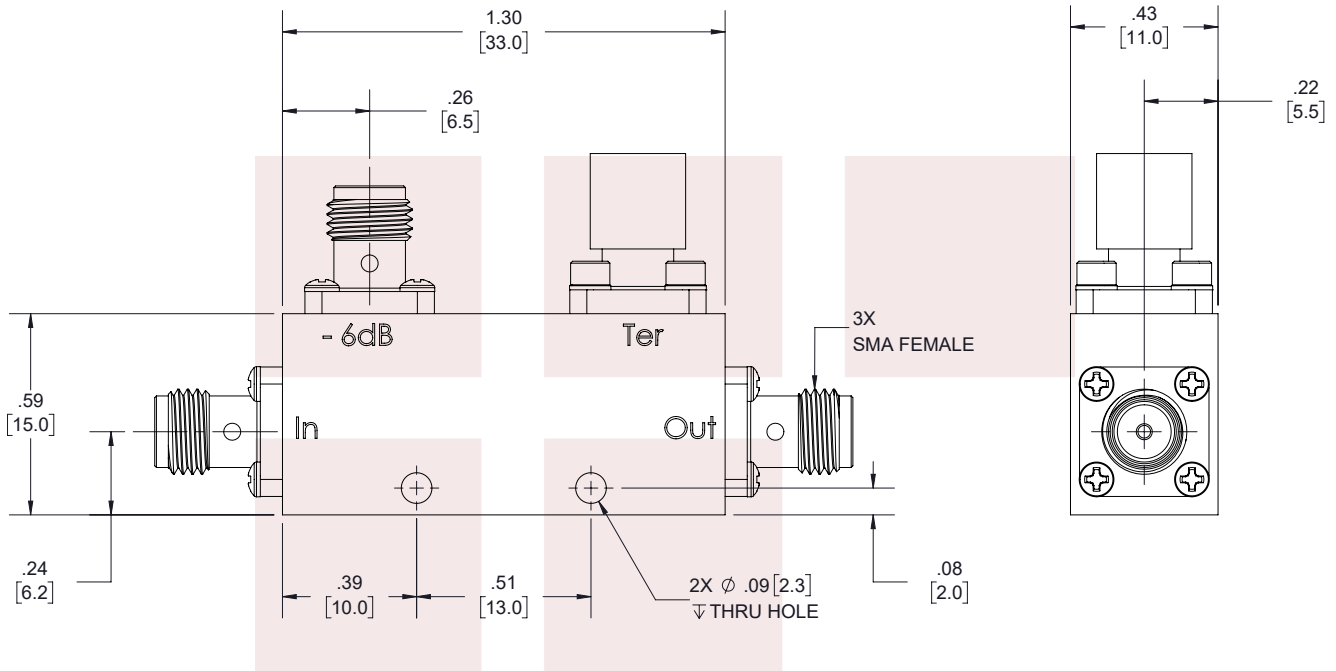
SMA Directional Coupler 6 dB 4 GHz to 18 GHz Rated to 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Directional Coupler 6 dB 4 GHz to 18 GHz Rated to 50 Watts FMCP1100](#)

URL: <https://www.fairviewmicrowave.com/sma-directional-standard-6-db-18-ghz-fmcp1100-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	4/2/2020	S.PONG



LABEL:

FAIRVIEW MICROWAVE
FMCP1100
D/C: YYWW

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TITLE

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

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]	ANGLES ± 1°	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

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.Dang	ITEM NO. FMCP1100	REV A
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T-Rev.D