

## SMA 90 Degree Hybrid Coupler From 7 GHz to 18 GHz Rated To 30 Watts

The FMCP1022 is a 90° Hybrid Coupler that operates from 7 GHz to 18 GHz and can handle 30 watts of power with 18 dB isolation. The package is connectoized with field replaceable female SMA's and meets Military standard 202F for humidity, shock, vibration altitude, and temperature cycle. This coupler is a small unit that can handle a peak in power up to 1,000 Watts. This quadrature hybrid is an excellent option for any situation; to either equally split an input signal into two paths with a 90 degree phase shift between them or to combine two signals while maintaining high isolation between them.



### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	7		18	GHz
Impedance		50		Ohms
Phase Difference		90		Degrees
Insertion Loss			1.3	dB
Isolation	18			dB
VSWR			1.4:1	
Amplitude Balance			±0.5	dB
Phase Balance		±5		Degrees
Input Power (CW)			30	Watts
Input Power (Peak)			1	kWatts

### Features:

- 18 dB Isolation
- 7 GHz to 18 GHz Frequency Range
- Painted Body
- Field Replaceable SMA Female
- Meets MIL-STD-202F for Humidity, Shock, Vibration, Altitude, and Temperature Cycle

### Applications:

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

### Mechanical Specifications

<b>Size</b>	
Length	0.79 in [20.07 mm]
Width	1.22 in [30.99 mm]
Height	0.43 in [10.92 mm]
Weight	0.077 lbs [34.93 g]

<b>Configuration</b>	
RF Connector Type	SMA Female

### Environmental Specifications

<b>Temperature</b>	
Operating Range	-55 to +85 deg C
Storage Range	-65 to +125 deg C
Humidity	MIL-STD-202F METHOD 103B COND. B
Shock	MIL-STD-202F METHOD 213B COND. B
Vibration	MIL-STD-202F METHOD 204D COND. B
Altitude	MIL-STD-202F METHOD 105C COND. B
Temperature Cycling	MIL-STD-202F METHOD 107D COND. A

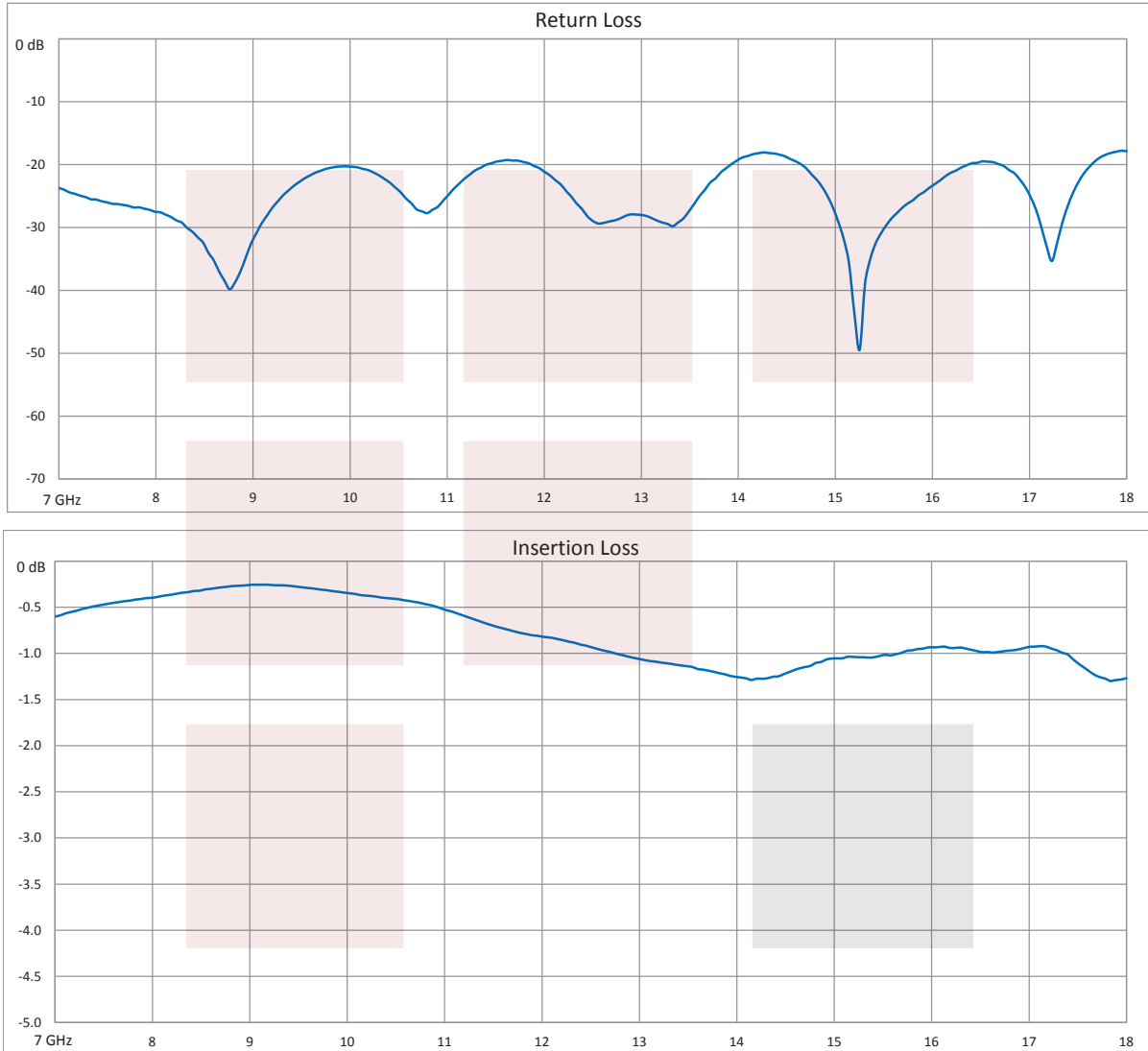
Fairview Microwave  
 301 Leora Ln., Suite 100  
 Lewisville, TX 75056  
 Tel: 1-800-715-4396 / (972) 649-6678  
 Fax: (972) 649-6689  
[www.fairviewmicrowave.com](http://www.fairviewmicrowave.com)  
[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

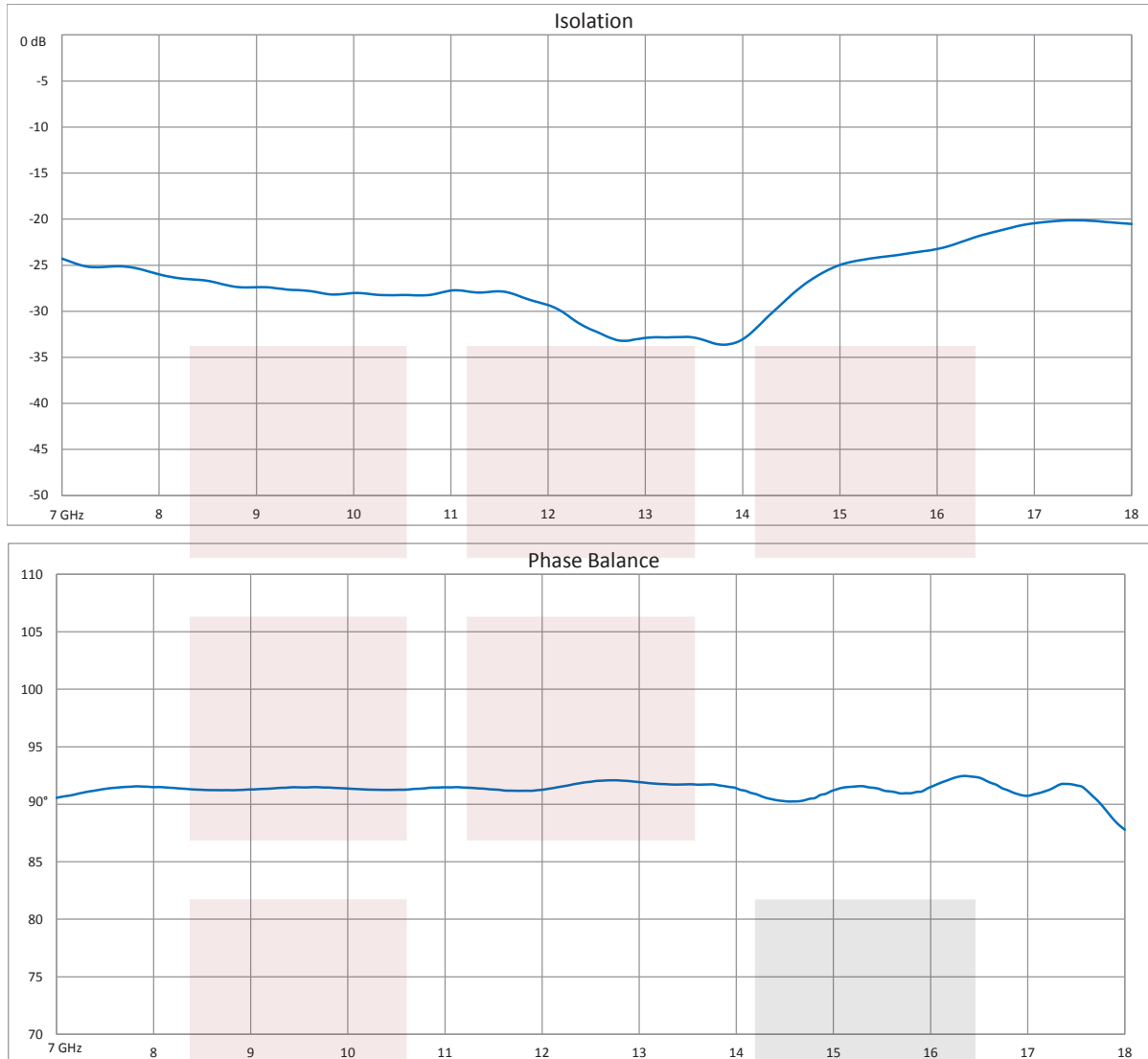
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**



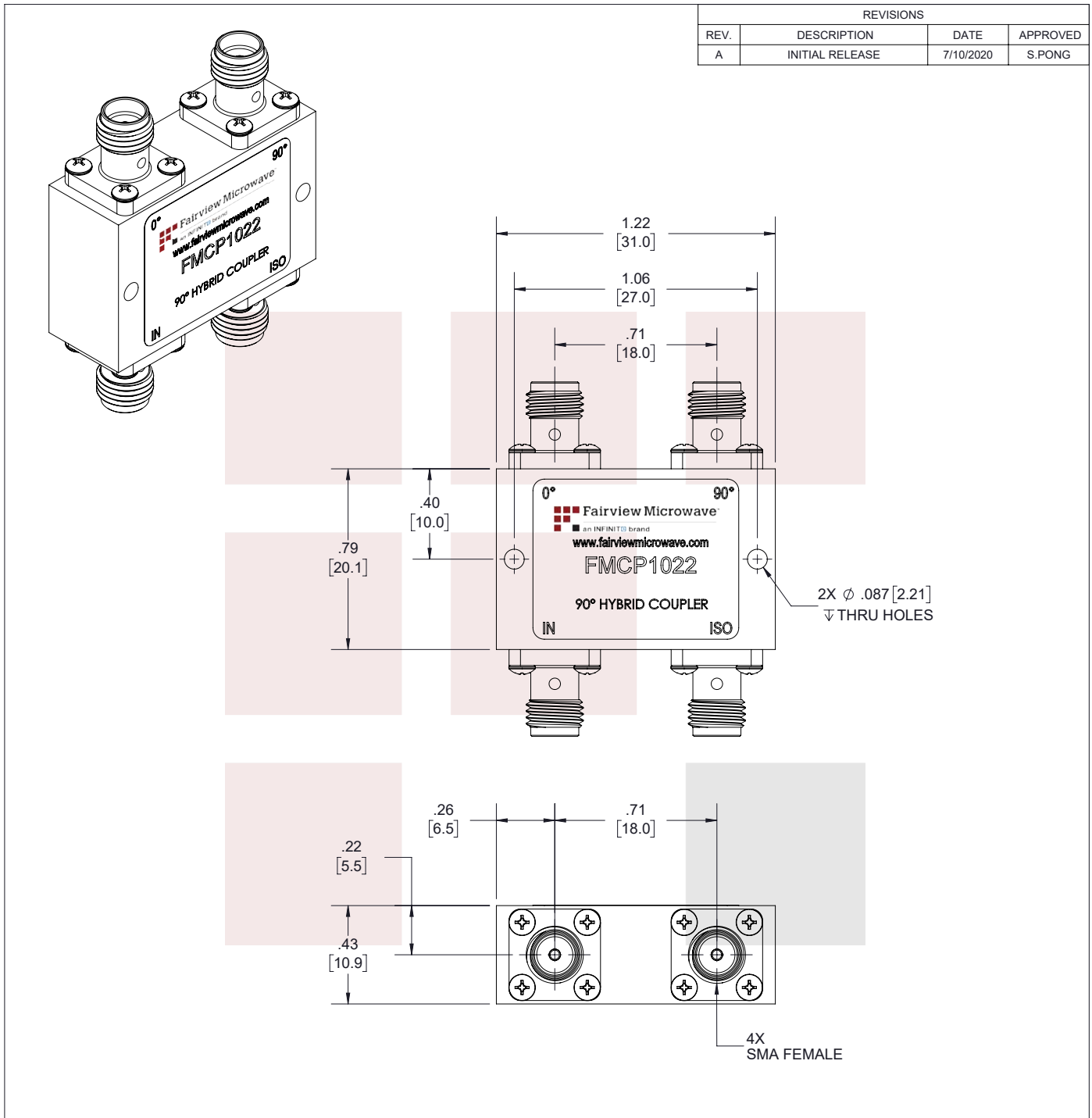


SMA 90 Degree Hybrid Coupler From 7 GHz to 18 GHz Rated To 30 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA 90 Degree Hybrid Coupler From 7 GHz to 18 GHz Rated To 30 Watts FMCP1022](https://www.fairviewmicrowave.com/sma-90-degree-hybrid-coupler-7-18-ghz-30-watts-fmcp1022-p.aspx)

URL: <https://www.fairviewmicrowave.com/sma-90-degree-hybrid-coupler-7-18-ghz-30-watts-fmcp1022-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	7/10/2020	S.PONG

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

**Fairview Microwave**  
an INFINITE brand

TITLE  
SMA 90 Degree Hybrid Coupler From 7 GHz to 18 GHz  
Rated To 30 Watts

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

TOLERANCES:      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

ANGLES ± 1°

THIRD-ANGLE PROJECTION

THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.

SHEET 1 OF 1

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.Dang	ITEM NO. FMCP1022	REV A
-----------	--------------------	--------------------	----------------------	----------

T-Rev.D