

**Drop-In 90 Degree Hybrid Coupler From 20 MHz to 1,000 MHz Rated To 150 Watts**

The FMCP1027 operates from 20 MHz to 1,000 MHz and can handle 150 watts of power with 16 dB isolation. The package is 2.2 inch by 3 inch with gold plated silver leads and can be attached to a heat sink and PCB by screws. Gold plated leads are resistant to oxidation for ease of soldering and ensuring superior electrical performance of 1.3:1 VSWR and an insertion loss of 0.9 dB.

The FMCP1027 is part of Fairview Microwave's family of 90 degree hybrid couplers in drop-in packages. These couplers feature small drop-in packages that can handle power up to 1,000 Watts. They are available in both narrow and broad bandwidths. These quadrature hybrids are excellent for any situation to either equally split an input signal into two paths with a 90 degree phase shift between them or to combine signals while maintaining high isolation between them.

**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	20		1,000	MHz
Impedance		50		Ohms
Phase Difference		90		Degrees
Insertion Loss			0.9	dB
Isolation	16			dB
VSWR			1.3:1	
Amplitude Balance		±0.25		dB
Phase Balance		±12		Degrees
Input Power (CW)			150	Watts

**Mechanical Specifications**

**Size**

Length	2.2 in [55.88 mm]
Width	0.94 in [23.88 mm]
Height	3 in [76.2 mm]
Weight	0.42 lbs [190.51 g]
Body Plating Specification	MIL-DTL-5541

**Configuration**

RF Connector Type	Pin
Contact Material and Plating	Silver, Gold

**Environmental Specifications**

**Temperature**

Operating Range	-55 to +85 deg C
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**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

RoHS Compliant	
REACH Compliant	12/17/2015

**Plotted and Other Data**

Notes:



**Features:**

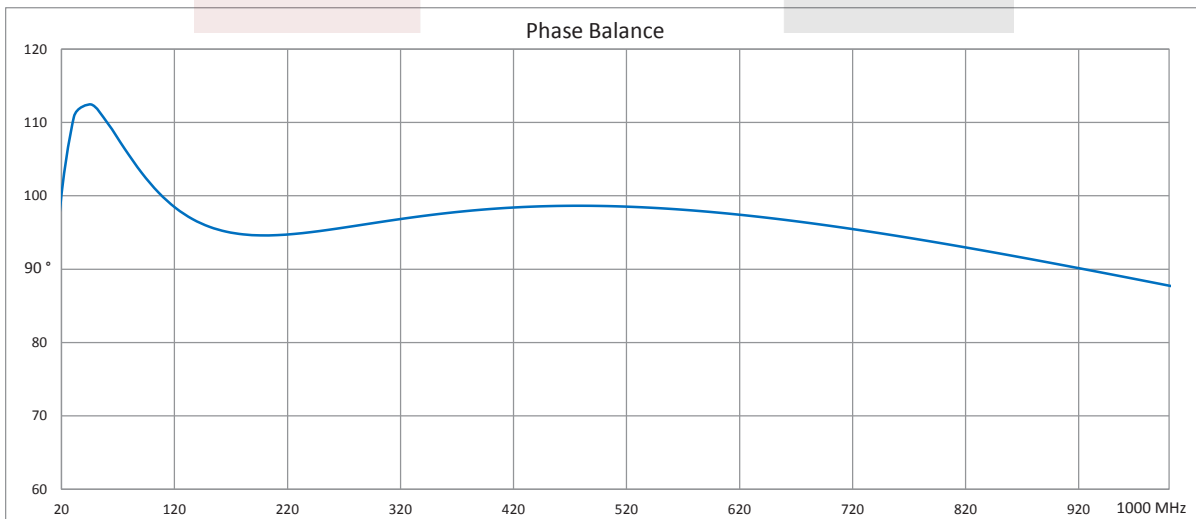
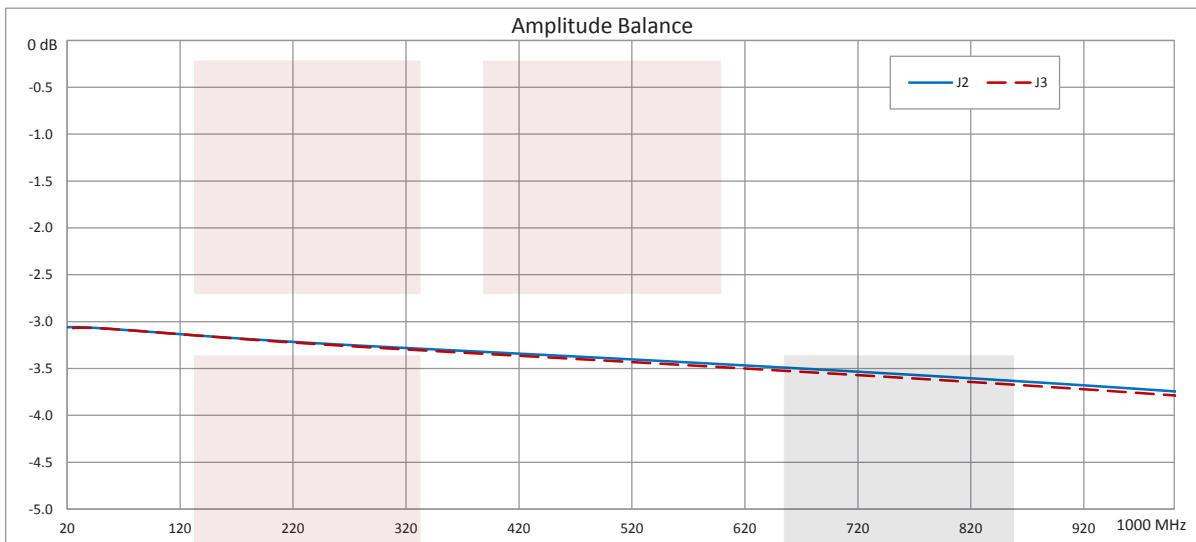
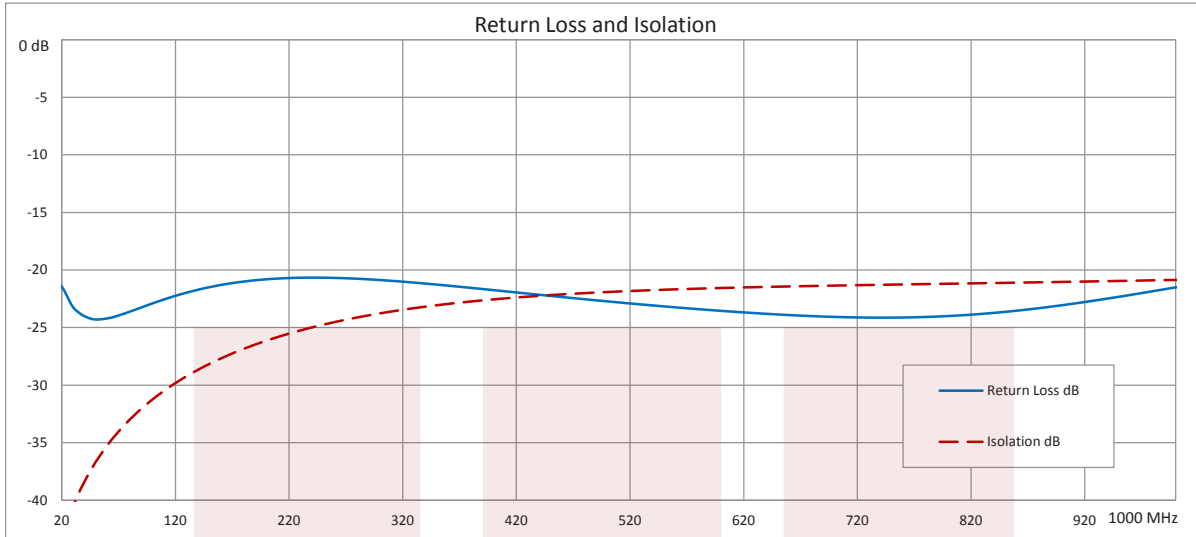
- High Power
- 16 dB isolation
- 20 MHz to 1,000 MHz Frequency Range
- Gold Plated Silver Leads
- 2.2 inch by 3 inch package
- Clear Chem Film Per MIL-DTL-5541

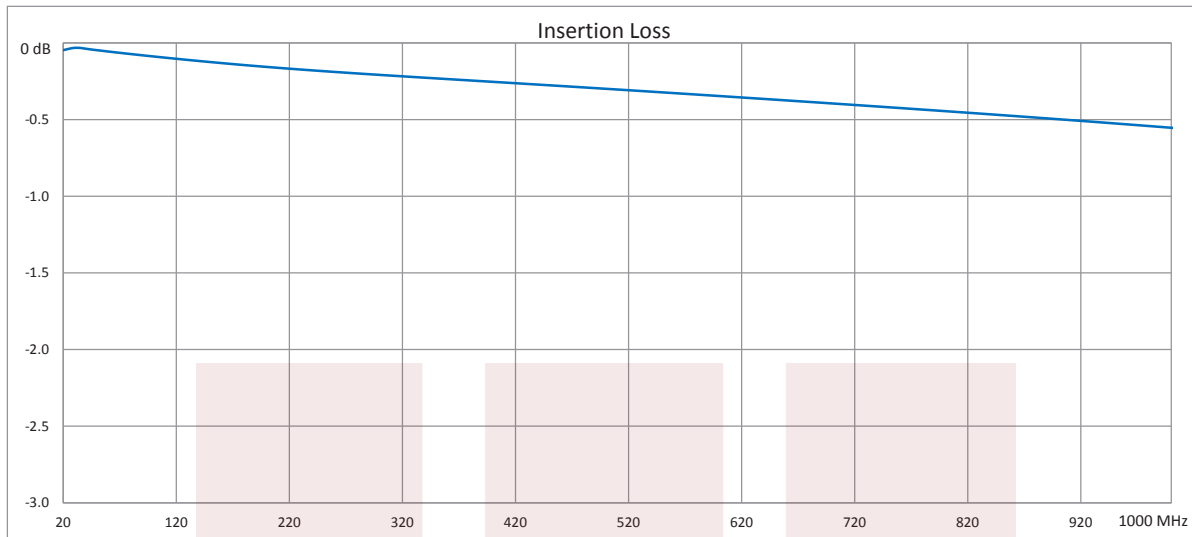
**Applications:**

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

Fairview Microwave  
 1130 Junction Dr. #100  
 Allen, TX 75013  
 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)

**Typical Performance Data**



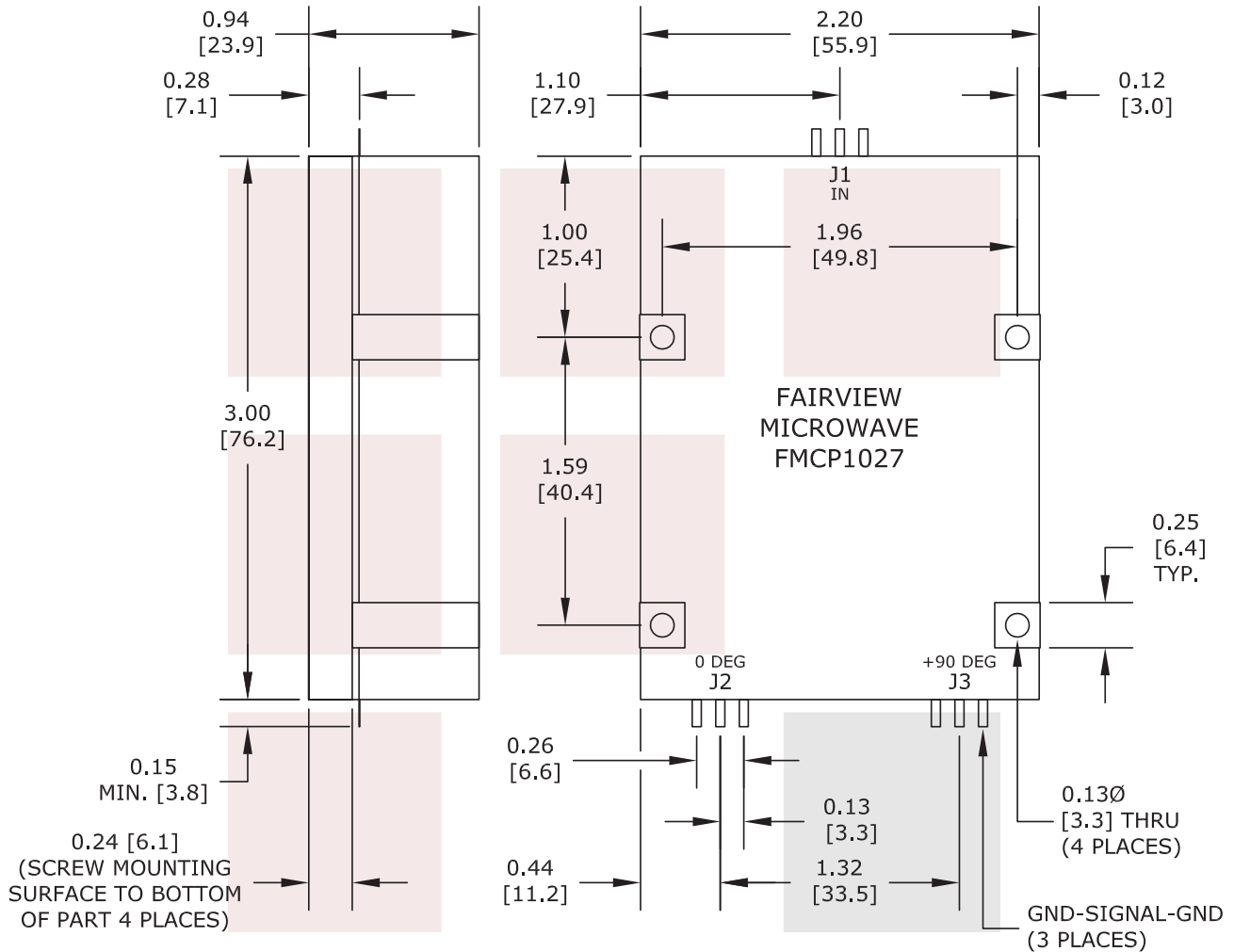


Drop-In 90 Degree Hybrid Coupler From 20 MHz to 1,000 MHz Rated To 150 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Drop-In 90 Degree Hybrid Coupler From 20 MHz to 1,000 MHz Rated To 150 Watts FMCP1027](#)

URL: <http://www.fairviewmicrowave.com/pin-90-degree-hybrid-coupler-20-1000-mhz-150-watts-fmcp1027-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.



TOLERANCE .XX ± .02  
 .XXX ± .010  
 ANG. ± 1/2°

\* THESE DIMENSIONS AND TOLERANCES  
 SUPERSEDE NOTE #1 ON TITLE BLOCK.

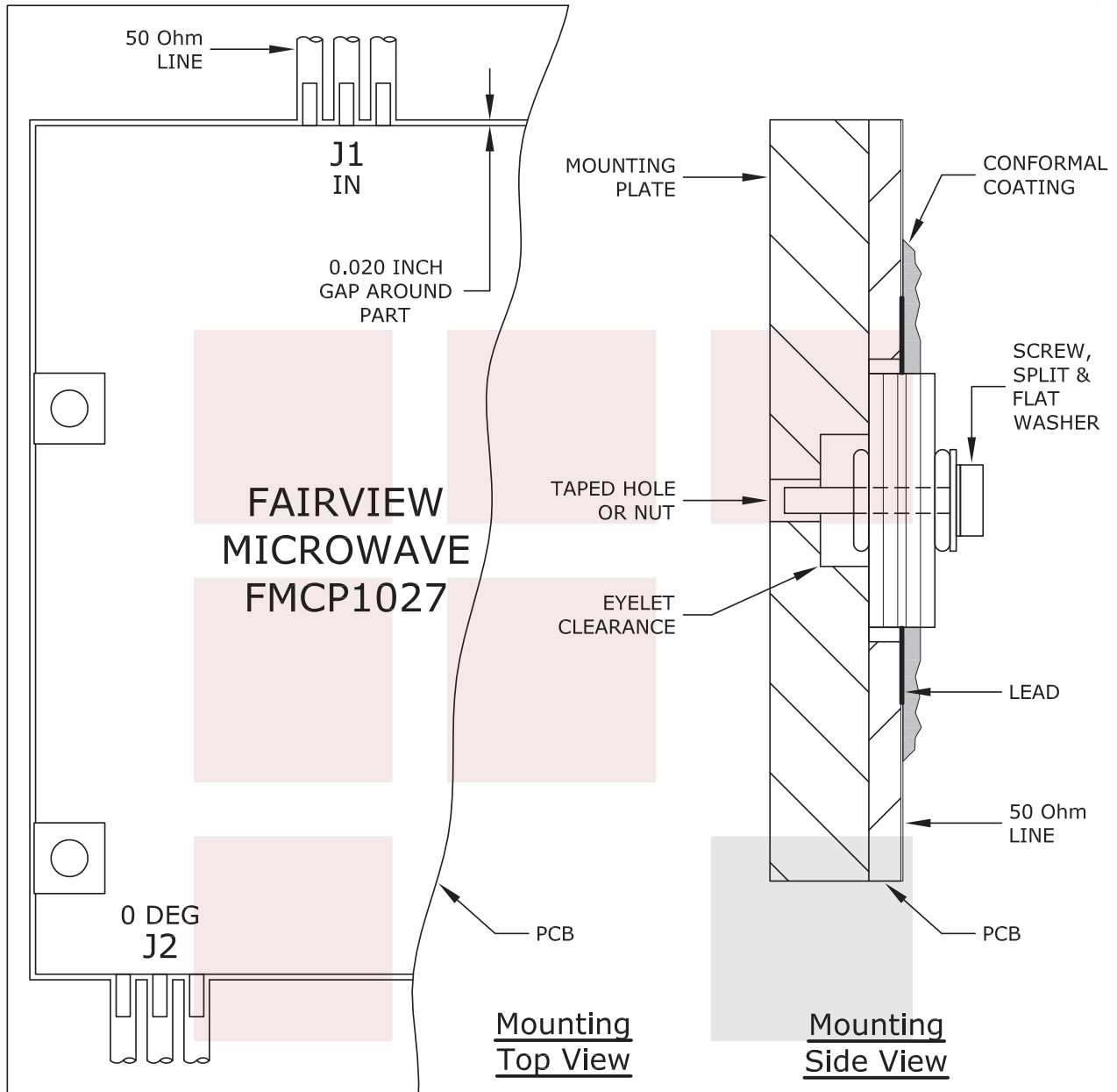
PORT CONFIGURATION			
INPUT	J1	J2	J3
J1	---	-3dB<-90 DEG	-3dB<0 DEG

**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  
 Drop-In 90 Degree Hybrid Coupler From 20 MHz to  
 1,000 MHz Rated To 150 Watts

DWG NO	FMCP1027	CAGE CODE	3FKR5		
CAD FILE	040816	SHEET	SCALE	N/A	SIZE A 2233



**NOTE:**

1. CONFORMAL COATING IS RECOMMENDED AT THE LEAD / 50 Ohm LINE INTERFACE FOR HIGH POWER APPLICATIONS TO PREVENT VOLTAGE ARCING.
2. TO INSURE PROPER GROUNDING THE BOTTOM PLATE OF COUPLER MUST LAY FLAT ON MOUNTING SURFACE. PLEASE ALLOW CLEARANCE FOR ALL EYELET PROJECTIONS IN BASE PLATE.
3. SOLDER LEADS TO 50 Ohm LINES USING LEAD FREE OR Sn63 ALLOY.
4. TORQUE STAINLESS STEEL SCREW, SPLIT AND FLAT WASHER TO 2.5 in-lbs.

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