

**Drop-In 90 Degree Hybrid Coupler From 960 MHz to 1.22 GHz Rated To 125 Watts**

The FMCP1048 operates from 960 MHz to 1,220 MHz and can handle 125 watts of power with 20 dB isolation. The package is 1.35 inch by 0.5 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 1.2:1 VSWR and an insertion loss of 0.25 dB.

The FMCP1048 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 two signals while maintaining high isolation between them.



**Features:**

- High Power
- 20 dB isolation
- 960 MHz to 1220 MHz Frequency Range
- Gold Plated Silver Leads
- 1.35 inch by 0.5 inch package
- Clear Chem Film Per MIL-DTL-5541

**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	0.96		1.22	GHz
Impedance		50		Ohms
Phase Difference		90		Degrees
Insertion Loss			0.25	dB
Isolation	20			dB
VSWR			1.2:1	
Amplitude Balance		±0.4		dB
Phase Balance		±5		Degrees
Input Power (CW)			125	Watts

**Applications:**

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

**Mechanical Specifications**

<b>Size</b>	
Length	1.35 in [34.29 mm]
Width	0.13 in [3.3 mm]
Height	0.5 in [12.7 mm]
Weight	0.01 lbs [4.54 g]
Body Plating Specification	MIL-DTL-5541
<b>Configuration</b>	
RF Connector Type	Pin
Contact Material and Plating	Silver, Gold

**Environmental Specifications**

<b>Temperature</b>	
Operating Range	-55 to +85 deg C

**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

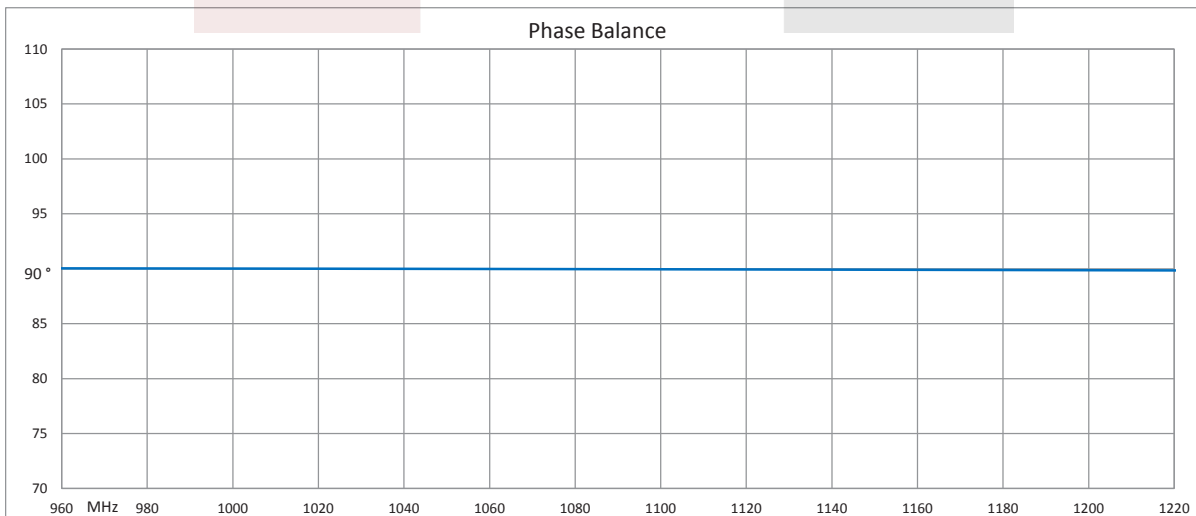
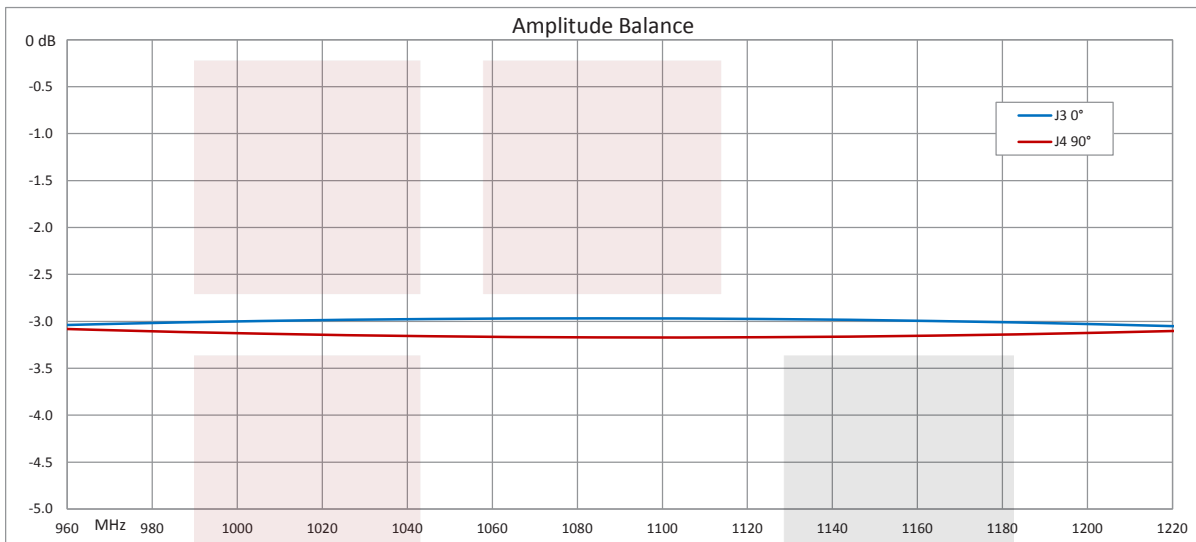
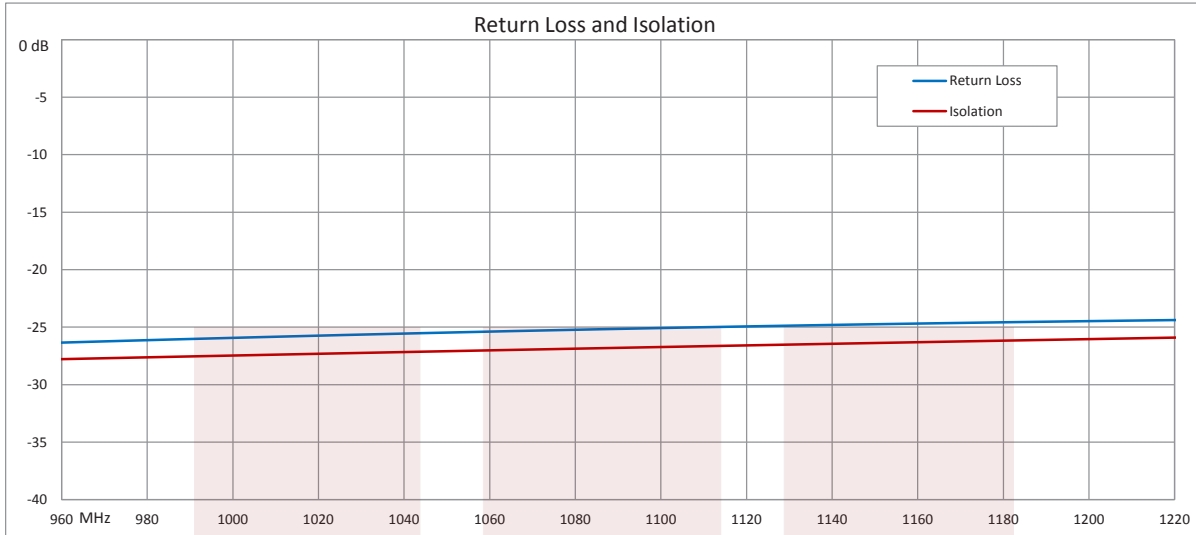
RoHS Compliant	
REACH Compliant	12/17/2015

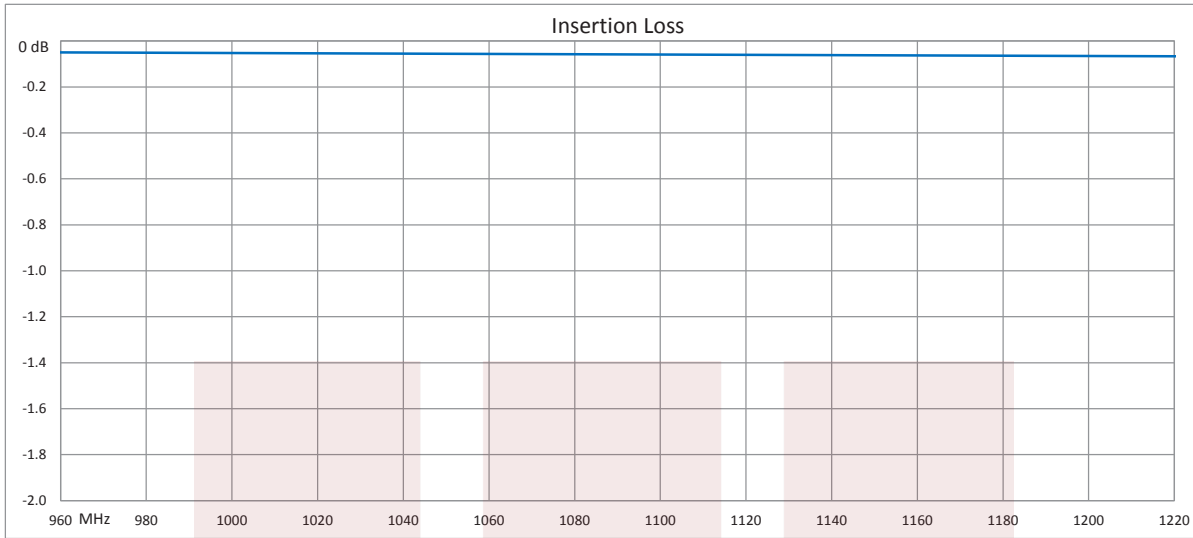
**Plotted and Other Data**

Notes:

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**



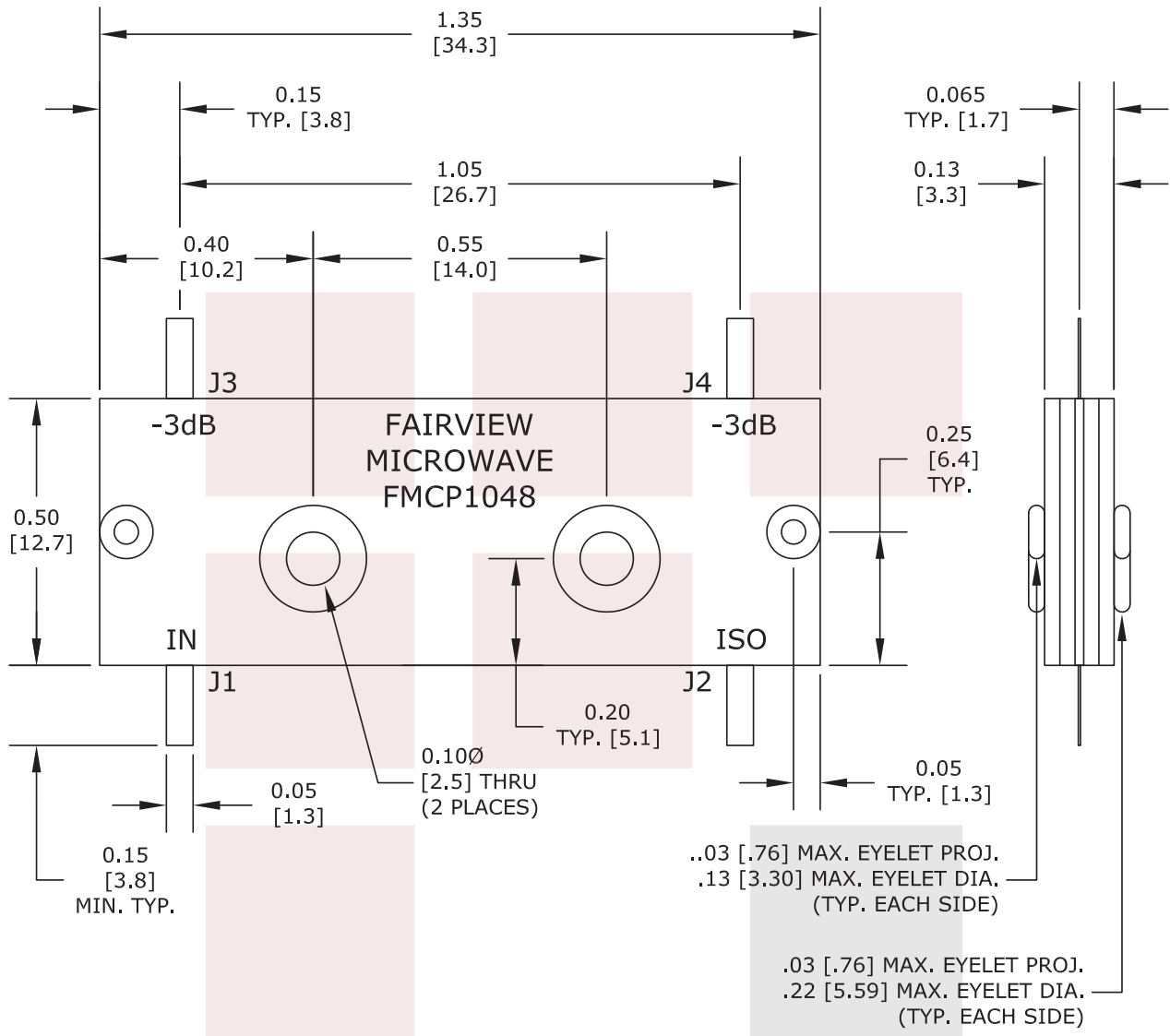


Drop-In 90 Degree Hybrid Coupler From 960 MHz to 1.22 GHz Rated To 125 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Drop-In 90 Degree Hybrid Coupler From 960 MHz to 1.22 GHz Rated To 125 Watts FMCP1048](#)

URL: <http://www.fairviewmicrowave.com/pin-90-degree-hybrid-coupler-960-mhz-1.22-ghz-125-watts-fmcp1048-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 [.50]
IN [mm]	.XXX ± .005 [.127]
ANG.	± 1/2°

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

PORT CONFIGURATION				
INPUT	J1	J2	J3	J4
J1	---	ISOLATION	-3dB<0 DEG	-3dB<90 DEG
J2	ISOLATION	---	-3dB<90 DEG	-3dB<0 DEG
J3	-3dB<0 DEG	-3dB<90 DEG	---	ISOLATION
J4	-3dB<90 DEG	-3dB<0 DEG	ISOLATION	---

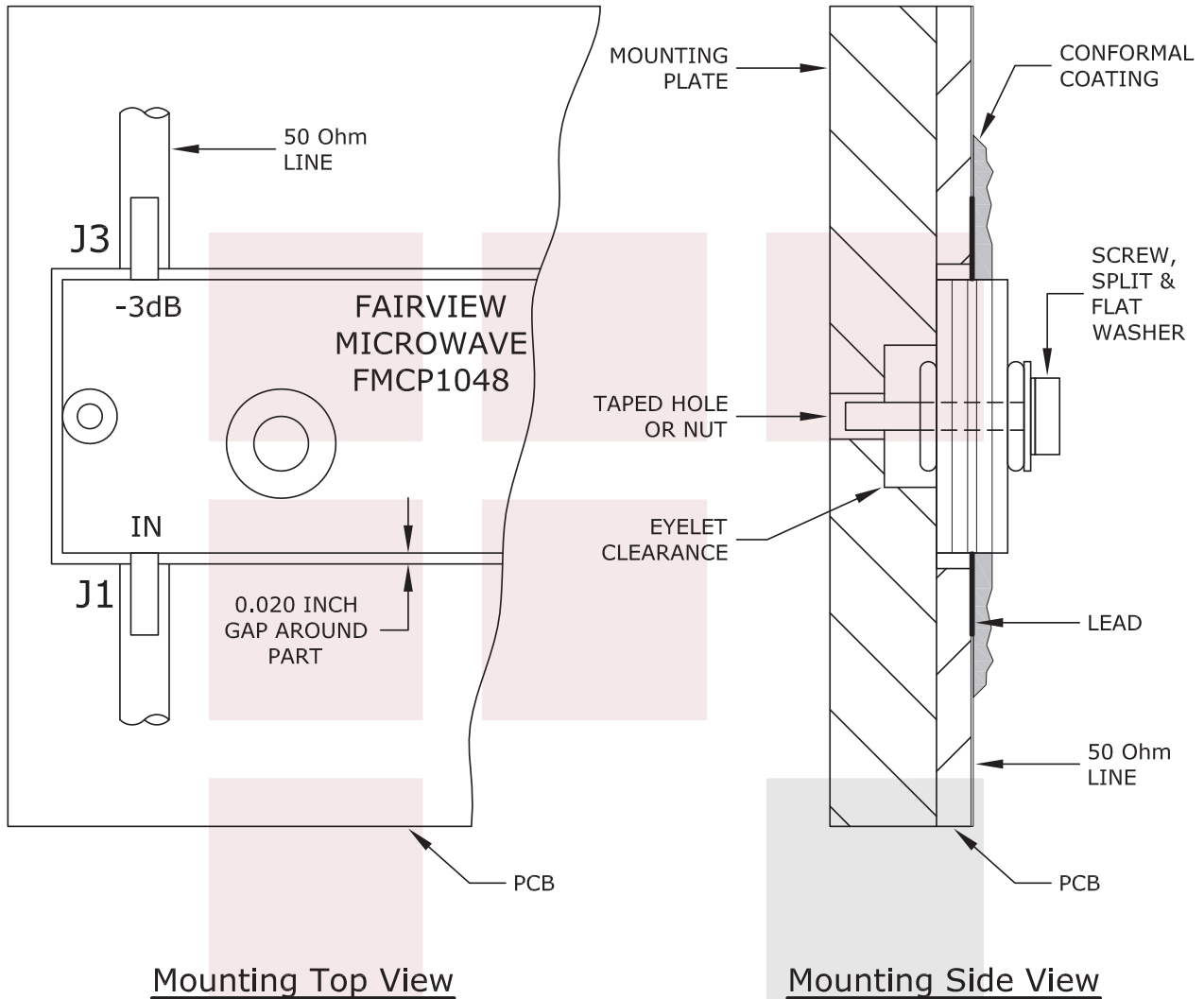
**FAIRVIEW MICROWAVE INC.**  
ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM

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 960 MHz to 1.22 GHz Rated To 125 Watts

DWG NO FMCP1048 CAGE CODE 3FKR5

CAD FILE 121115 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.

<b>FAIRVIEW MICROWAVE INC.</b> 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 960 MHz to 1.22 GHz Rated To 125 Watts		DWG NO FMCP1048		CAGE CODE 3FKR5	
CAD FILE	121115	SHEET	SCALE	N/A	SIZE A 2233