

## N Directional Coupler 20 dB 4 GHz to 18 GHz Rated to 50 Watts

Directional couplers are indispensable components for isolating, separating and combining signals. For example, they provide a simple way of sampling microwave signals. They also can make accurate attenuator measurements since reflections are eliminated. The FMCP1114-20 is a 20 dB directional coupler that operates from 4 to 18 GHz and can handle up to 50 Watts (CW) with 12 dB directivity minimum and 1.5:1 VSWR maximum. The package interface uses N female connectors, and is also REACH and RoHS compliant.

The FMCP1114-20 is part of Fairview Microwave's family of directional/dual-directional couplers that offer coupling ratios up to 50 dB with excellent performance featuring high directivity, low insertion loss and VSWR. They are available in both narrow and broad bandwidths and can be used in a wide variety of applications including signal sampling, VSWR measurements, power combining and distribution.



### Features:

- Directional Coupler
- 4 to 18 GHz Frequency Range
- Coupling 20±1 dB
- Directivity > 12 dB
- VSWR < 1.5:1
- Max Power 50 Watts (CW)

### Applications:

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

### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	4		18	GHz
Impedance		50		Ohms
Coupling	19	20	21	dB
Freq. Sensitivity		±0.6	±0.8	dB
Insertion Loss		0.4	0.7	dB
Directivity	12	18		dB
Main Line VSWR		1.3:1	1.5:1	
Sec. Line VSWR		1.4:1	1.5:1	
Input Power (CW)			50	Watts
Input Power (Peak)			1	kWatts

### Mechanical Specifications

<b>Size</b>	
Length	1.54 in [39.12 mm]
Width/Dia.	0.79 in [20.07 mm]
Height	0.79 in [20.07 mm]

Finish	Gray
Housing Material and Plating	Aluminum

#### Configuration

Input Connector	N Female
Output Connector	N Female
Coupled Connectors	N 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
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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)

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

### Plotted and Other Data

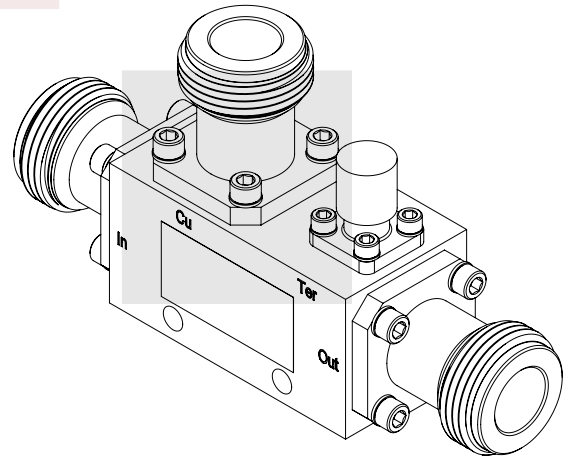
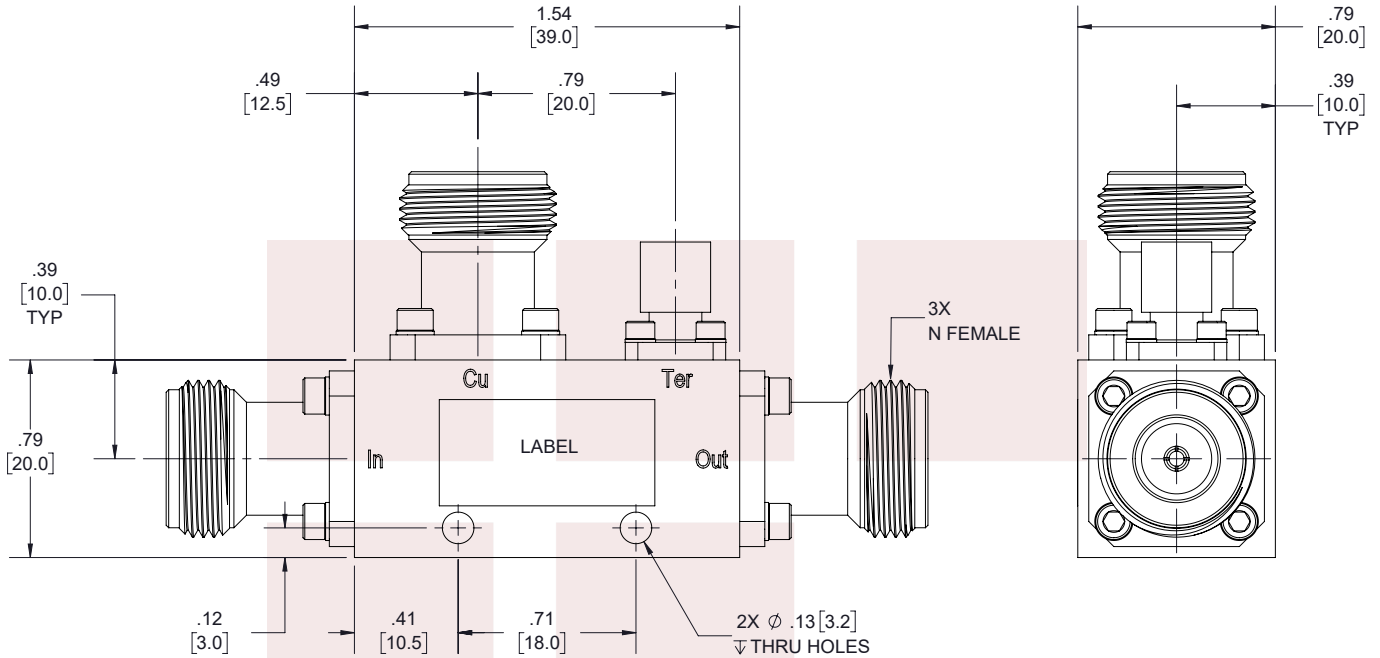
Notes:

N Directional Coupler 20 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 Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [N Directional Coupler 20 dB 4 GHz to 18 GHz Rated to 50 Watts FMCP1114-20](#)

URL: <https://www.fairviewmicrowave.com/n-directional-standard-20-db-18-ghz-fmcp1114-20-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.



**LABEL**

**FAIRVIEW MICROWAVE**  
**FMCP1114-20**  
 D/C: XXXX

**STANDARD TOLERANCES**

.X ±0.2  
 .XX ±0.01  
 .XXX ±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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  N Directional Coupler 20 dB 4 GHz to 18 GHz Rated to 50 Watts	DWG NO <b>FMCP1114-20</b>		CAGE CODE <b>3FKR5</b>			
	CAD FILE 01/28/19	SHEET 1 OF 1	SCALE N/A	SIZE A	7361	