

N Directional Coupler 20 dB from 100 MHz to 400 MHz Rated to 500 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 FMCP1140-20 is a 20 dB directional coupler that operates from 100 to 400 MHz and can handle up to 500 Watts (CW) with 22 dB directivity minimum and 1.2:1 VSWR maximum. The package interface uses N female connectors.

The FMCP1140-20 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.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	100		400	MHz
Impedance		50		Ohms
Coupling	18.5	20	21.5	dB
Freq. Sensitivity		±0.8	±1	dB
Insertion Loss		0.2	0.35	dB
Directivity	22	24		dB
Main Line VSWR		1.1:1	1.2:1	
Sec. Line VSWR		1.15:1	1.2:1	
Input Power (CW)			500	Watts
Input Power (Peak) 1% Duty Cycle, 1us PW			5	kWatts

Mechanical Specifications

Size	
Length	12.54 in [318.52 mm]
Width/Dia.	1.52 in [38.61 mm]
Height	1.06 in [26.92 mm]
Weight	2.09 lbs [948.01 g]
Housing Material and Plating	Aluminum

Configuration

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

Environmental Specifications

Temperature	
Operating Range	-40 to +85 deg C
Storage Range	-50 to +105 deg C
Humidity	100% RH at 35°C, 95%RH at 40°C



Features:

- Directional Coupler
- N Female Connectorized Design
- 100 to 400 MHz Frequency Range
- Coupling 20±1.5 dB
- Directivity > 22 dB
- VSWR < 1.2:1
- Max Power 500 Watts (CW)

Applications:

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

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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.

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

Plotted and Other Data

Notes:

N Directional Coupler 20 dB from 100 MHz to 400 MHz Rated to 500 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: [N Directional Coupler 20 dB from 100 MHz to 400 MHz Rated to 500 Watts FMCP1140-20](#)

URL: <https://www.fairviewmicrowave.com/directional-standard-20-db-100-mhz-to-400-mhz-fmcp1140-20-p.aspx>

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