

50 dB WR-187 Waveguide Loop Coupler, CPR187F Flange, N Female Coupled Port, 3.94 GHz to 5.99 GHz in Aluminum



FMWCP1103N-50

Features

- Three Port Broadwall Waveguide Coupler
- 50±0.7 dB Nominal Coupling Level
- Integrated N Female Connector coupled port
- 3.94 GHz to 5.99 GHz Frequency Range
- Main Line VSWR < 1.1:1
- Max Power 2kW (CW)

Applications

- Test Benches
- Radar
- Satellite
- Microwave Radio
- Attenuation Measurements
- Power Measurements
- Source Leveling

Description

The FMWCP1103N-50 is a WR-187 Directional Loop waveguide coupler with N female coupled port that operates in the frequency range of 3.94 to 5.99 GHz. This Waveguide component has a maximum VSWR of 1.4:1. These designs are made of painted aluminum and incorporate a Loop configuration that result in a mid-band nominal coupling value of 10, 20, 30, 40 or 50 dB. Common applications for this component would be where power measurements are required within a system for measuring/sampling power or frequency monitoring with minimal signal loss to the main transmission line. Fairview Microwave offers a complete family of waveguide Crossguide, Loop and Broadwall couplers that are in-stock and ship same day.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	3.94		5.99	MHz
Coupler				
Nominal Coupling Level		50		dB
Coupling Accuracy		±0.7		dB
Directivity	15			dB
Insertion Loss			0.2	dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.4:1	
Input Power (CW)			2	kWatts
Input Power, Peak			500	kWatts

Mechanical Specifications

Size

Length	5.511811 in [140 mm]
Width	3.5 in [88.9 mm]
Height	2.5 in [63.5 mm]
Weight	2 lbs [907.18 g]

Interface

Waveguide Size	WR-187
Flange Type	CPR-187F
Flange Material and Plating	Aluminum, Chromate Conversion
RF Connector Type	N Female

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Coupler Body Material and Plating

Aluminum, Chromate Conversion

Environmental Specifications

Temperature

Operating Range

-40 to +70 deg C

Storage Range

-55 to +85 deg C

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

Plotted and Other Data

Notes:

50 dB WR-187 Waveguide Loop Coupler, CPR187F Flange, N Female Coupled Port, 3.94 GHz to 5.99 GHz in Aluminum 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: [50 dB WR-187 Waveguide Loop Coupler, CPR187F Flange, N Female Coupled Port, 3.94 GHz to 5.99 GHz in Aluminum FMWCP1103N-50](#)

URL: <https://www.fairviewmicrowave.com/50db-wr187-waveguide-loop-coupler-coupler-cpr-187f-5.99mhz-fmwcp1103n-50-p.aspx>

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FMWCP1103N-50 CAD Drawing

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