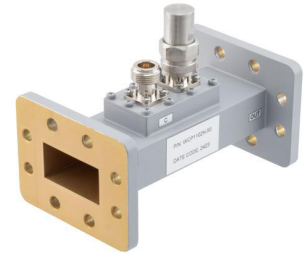


50 dB WR-159 Waveguide Loop Coupler, CPR159F Flange, N Female Coupled Port, 4.64 GHz to 7.05 GHz in Aluminum



FMWCP1102N-50

Features

- Three Port Broadwall Waveguide Coupler
- 50±0.7 dB Nominal Coupling Level
- Integrated N Female Connector coupled port
- 4.64 GHz to 7.05 GHz Frequency Range
- Main Line VSWR < 1.1:1
- Max Power 1.8kW (CW)

Applications

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

Description

The FMWCP1102N-50 is a WR-159 Directional Loop waveguide coupler with N female coupled port that operates in the frequency range of 4.64 to 7.05 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	4.64		7.05	GHz
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)			1.8	kWatts
Input Power, Peak			500	kWatts

Mechanical Specifications

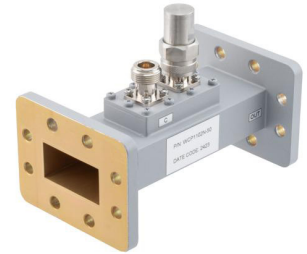
Size

Length	5.12 in [130.05 mm]
Width	3.19 in [81.03 mm]
Height	2.44 in [61.98 mm]
Weight	1.1 lbs [498.95 g]

Interface

Waveguide Size	WR-159
Flange Type	CPR-159F
Flange Material and Plating	Aluminum, Chromate Conversion
RF Connector Type	N Female

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FMWCP1102N-50

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-159 Waveguide Loop Coupler, CPR159F Flange, N Female Coupled Port, 4.64 GHz to 7.05 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-159 Waveguide Loop Coupler, CPR159F Flange, N Female Coupled Port, 4.64 GHz to 7.05 GHz in Aluminum FMWCP1102N-50](#)

URL: <https://www.fairviewmicrowave.com/50db-wr159-waveguide-coupler-cpr-159f-7.05ghz-fmwcp1102n-50-p.aspx>

The information contained within 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 liability arising out of the use of any part or document.

FMWCP1102N-50 CAD Drawing

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