

40 dB WR-90 Waveguide Loop Coupler, UG Cover Flange, N Female Coupled Port, 8.2 GHz to 12.5 GHz in Aluminum



FMWCP1100N-40

Features

- Three Port Broadwall Waveguide Coupler
- 40±0.7 dB Nominal Coupling Level
- Integrated N Female Connector coupled port
- 8.2 GHz to 12.5 GHz Frequency Range
- Main Line VSWR < 1.1:1
- Max Power 1kW (CW)

Applications

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

Description

The FMWCP1100N-40 is a WR-90 Directional Loop waveguide coupler with N female coupled port that operates in the frequency range of 8.2 to 12.5 GHz. This Waveguide component has a maximum VSWR of 1.35:1. 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	8.2		12.5	GHz
Coupler				
Nominal Coupling Level		40		dB
Coupling Accuracy		±0.7		dB
Directivity	15			dB
Insertion Loss			0.2	dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.35:1	
Input Power (CW)			1	kWatts
Input Power, Peak			100	kWatts

Mechanical Specifications

Size

Length	3.94 in [100.08 mm]
Width	1.63 in [41.4 mm]
Height	1.63 in [41.4 mm]
Weight	1.12 lbs [508.02 g]

Interface

Waveguide Size	WR-90
Flange Type	UG Cover
Flange Material and Plating	Aluminum, Chromate Conversion
RF Connector Type	N Female

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Coupler Body Material and Plating	Aluminum, Chromate Conversion
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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:

40 dB WR-90 Waveguide Loop Coupler, UG Cover Flange, N Female Coupled Port, 8.2 GHz to 12.5 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.

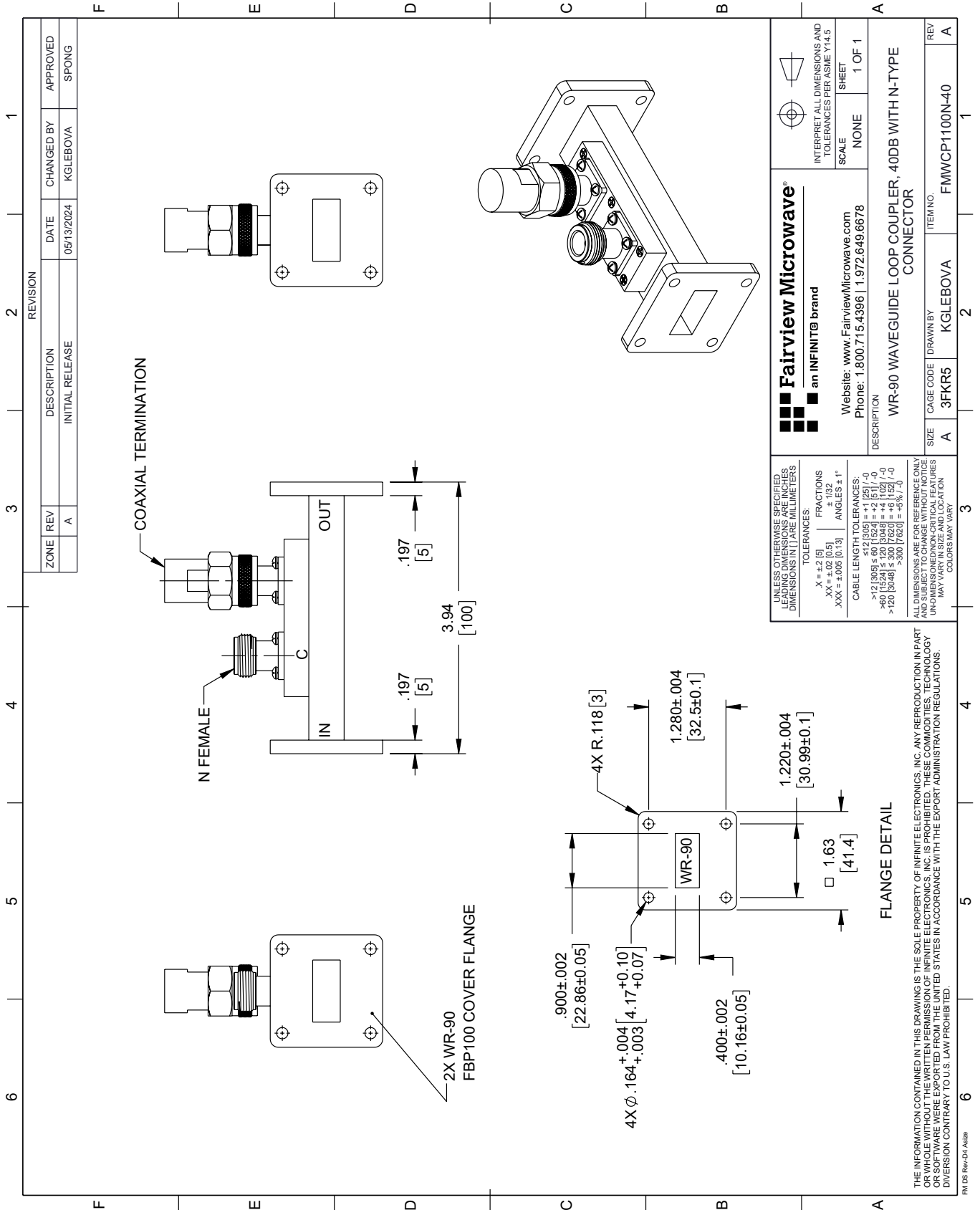
For additional information on this product, please click the following link: [40 dB WR-90 Waveguide Loop Coupler, UG Cover Flange, N Female Coupled Port, 8.2 GHz to 12.5 GHz in Aluminum FMWCP1100N-40](#)

URL: <https://www.fairviewmicrowave.com/40db-wr90-waveguide-coupler-ug-12.5ghz-fmwcp1100n-40-p.aspx>

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FMWCP1100N-40 CAD Drawing

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REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV	DESCRIPTION	INITIAL RELEASE	
	A			SPONG

 an INFINIT® brand		Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678	INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE: NONE SHEET: 1 OF 1
DESCRIPTION: WR-90 WAVEGUIDE LOOP COUPLER, 40DB WITH N-TYPE CONNECTOR			
SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	KGLEBOVA	FMWCP1100N-40
REV			A

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE MILLIMETERS.

TOLERANCES: .X = ±.2 [5] FRACTIONS ± 1/32 .XX = ±.02 [0.5] .XXX = ±.005 [0.13] ANGLES ± 1°

CABLE LENGTH TOLERANCES: <12 [305] ≤ 60 [1524] = ±.1 [25] / -0 >60 [1524] ≤ 120 [3048] = ±.1 [25] / -0 >120 [3048] ≤ 300 [7620] = ±.5 [12.7] / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED/NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

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