

## 20 dB WR-90 Waveguide Broadwall Coupler with UG Cover Flange and N-Type Female Coupled Port from 8.2 GHz to 12.5 GHz in Copper

The FMW90CP001-20 is a WR-90 Directional Broadwall 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 1.25:1. These designs are made of painted copper alloy and incorporate a broad wall 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 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
<b>Coupler</b>				
Nominal Coupling Level		20		dB
Directivity	35			dB
Insertion Loss			0.15	dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.25:1	
Coupling Flatness			±0.7	dB
Input Power (CW)			300	Watts
Input Power Peak			20	kWatts

### Mechanical Specifications

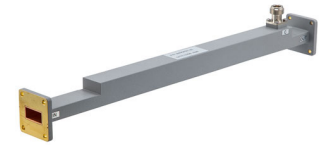
<b>Size</b>	
Length	14.96 in [379.98 mm]
Width	1.63 in [41.4 mm]
Height	1.63 in [41.4 mm]
Weight	1.32 lbs [598.74 g]
Flange Type	UG Cover
Flange Material and Plating	Copper, Passivated
RF Connector Type	N Female
Coupler Body Material and Plating	Copper, Passivated

### Environmental Specifications

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

### Plotted and Other Data

Notes:



### Features:

- Three Port Broadwall Waveguide Coupler
- 20±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 300W (CW)

### Applications:

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

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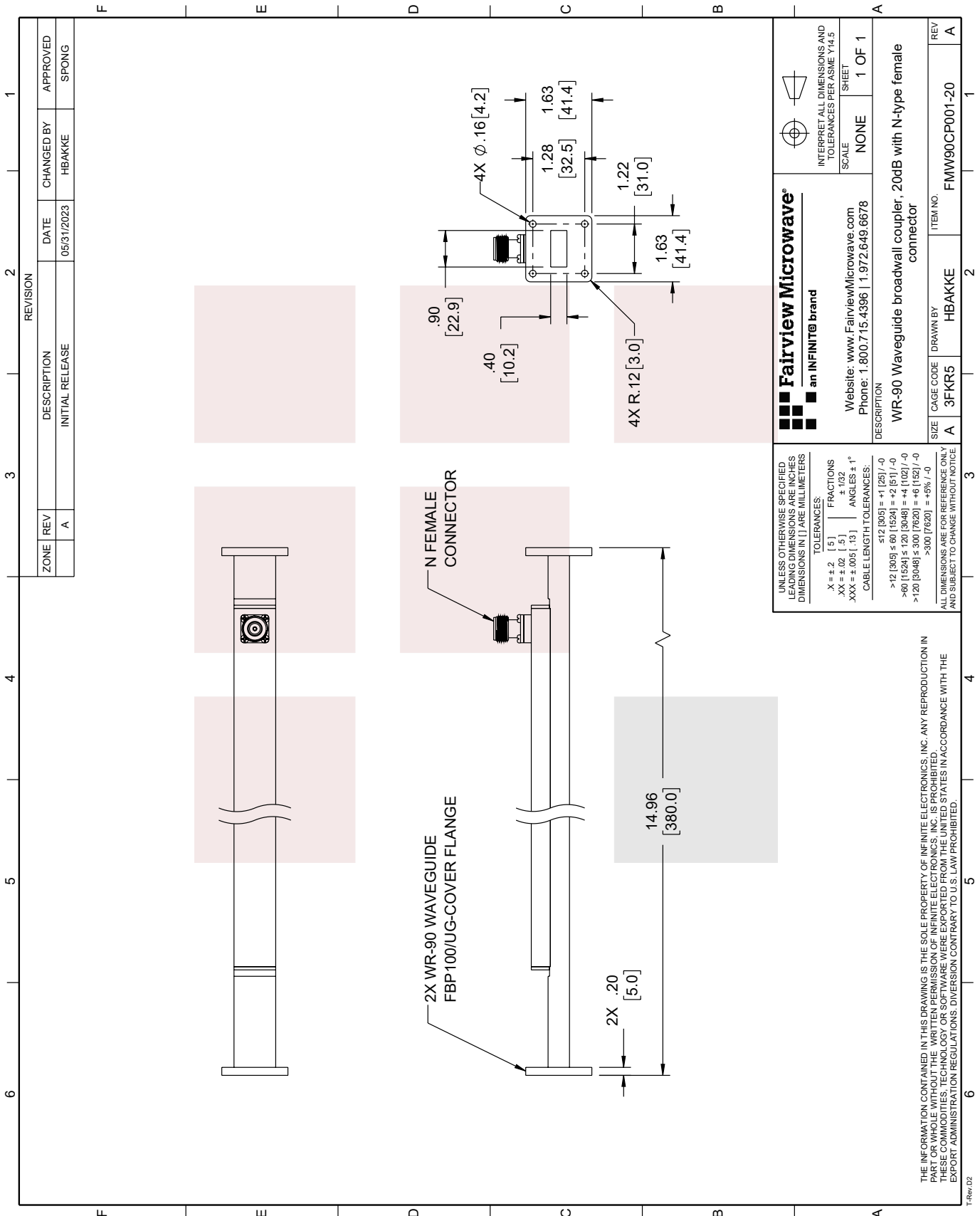
20 dB WR-90 Waveguide Broadwall Coupler with UG Cover Flange and N-Type Female Coupled Port from 8.2 GHz to 12.5 GHz in Copper from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [20 dB WR-90 Waveguide Broadwall Coupler with UG Cover Flange and N-Type Female Coupled Port from 8.2 GHz to 12.5 GHz in Copper FMW90CP001-20](#)

URL: <https://www.fairviewmicrowave.com/20db-wr90-waveguide-broadwall-coupler-ug-12.5mhz-fmw90cp001-20-p.aspx>

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ZONE		REVISION		DATE		CHANGED BY		APPROVED	
1	A	INITIAL RELEASE		05/31/2023	HBAKKE	SPONG			

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an INFINITE® brand

Website: [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com)  
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DESCRIPTION: WR-90 Waveguide broadband coupler, 20dB with N-type female connector

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5  
SCALE: NONE  
SHEET: 1 OF 1

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	HBAKKE	FMW90CP001-20

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

TOLERANCES:  
 .X = ±.2 [5] | FRACTIONS ±.132 | ANGLES ± 1°  
 .XX = ±.02 [.5] | .XXX = ±.005 [.13]  
 CABLE LENGTH TOLERANCES:  
 ≤12 [305] ≤ 60 [1524] = +2 [51] / -0  
 >60 [1524] ≤ 120 [3048] = +4 [102] / -0  
 >120 [3048] ≤ 300 [7620] = +6 [152] / -0  
 >300 [7620] = +5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE

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