

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



FMWCP1100S-50

Features

- Three Port Broadwall Waveguide Coupler
- 50±0.7 dB Nominal Coupling Level
- Integrated SMA 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 FMWCP1100S-50 is a WR-90 Directional Loop waveguide coupler with SMA 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		50		dB
Coupling Accuracy		±0.7		dB
Directivity	15			dB
Insertion Loss			0.2	dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.35:1	
Input Power (CW)			1	kWatts
Input Power, Peak			100	kWatts

Mechanical Specifications

Size

Length	3.54 in [89.92 mm]
Width	1.63 in [41.4 mm]
Height	2.26 in [57.4 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	SMA 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-90 Waveguide Loop Coupler, UG Cover Flange, SMA 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.

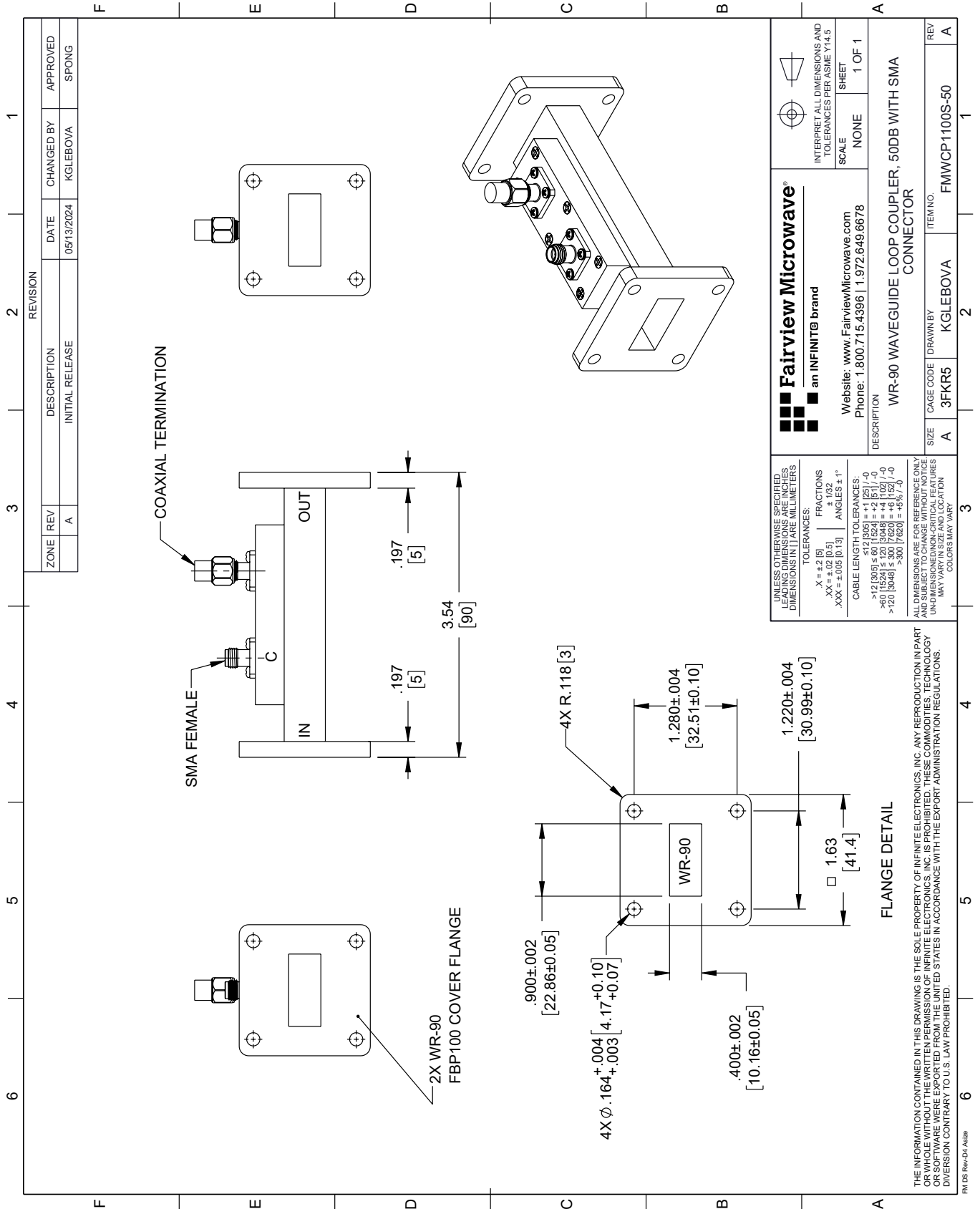
For additional information on this product, please click the following link: [50 dB WR-90 Waveguide Loop Coupler, UG Cover Flange, SMA Female Coupled Port, 8.2 GHz to 12.5 GHz in Aluminum FMWCP1100S-50](#)

URL: <https://www.fairviewmicrowave.com/50db-wr90-waveguide-coupler-ug-12.5ghz-fmwcp1100s-50-p.aspx>

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FMWCP1100S-50 CAD Drawing

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

 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, 50DB WITH SMA CONNECTOR		
SIZE	CAGE CODE	ITEM NO.
A	3FKR5	FMWCP1100S-50
REV	A	