

20 dB WR-51 Waveguide Crossguide Coupler with UG Square Flange and SMA Female Coupling Port from 16 GHz to 17.5 GHz in Brass



FMWCP1097S-20

Features

- Three Port Crossguide Waveguide Coupler
- 20±0.7 dB Nominal Coupling Level
- Integrated SMA Female Connector for the coupled port
- 16 GHz to 17.5 GHz Frequency Range
- Low VSWR < 1.2:1

Applications

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

Description

The FMWCP1097S-20 is a 20 dB WR-51 three port crossguide Coupler with integrated SMA Female connector for the coupled port. This coupler can be mounted directly into the waveguide signal path, connected via coax to allow signal sampling /monitoring. The coupler has a typical VSWR of 1.1:1 and are made of Brass with UG Square flanges. The FMWCP1097S-20 is part of a family of cross guide couplers offered by Fairview Microwave with coupling values ranging from 20 to 50 dB.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	16		17.5	GHz
Impedance		50		Ohms
Coupler				
Nominal Coupling Level		20		dB
Coupling Accuracy		±0.7		dB
Directivity	20			dB
Insertion Loss			0.1	dB
Main Line VSWR			1.1:1	
Secondary Line VSWR			1.2:1	
Input Power (CW)			350	Watts
Input Power, Peak			20	kWatts

Mechanical Specifications

Size

Length	2.76 in [70.1 mm]
Width	2.36 in [59.94 mm]
Height	1.31 in [33.27 mm]
Weight	1 lbs [453.59 g]

Interface

Waveguide Size	WR-51
Flange Type	UG Square Flange
Flange Material and Plating	Brass Copper, Passivated Stainless Steel
RF Connector Type	SMA Female

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Coupler Body Material and Plating
Coupler Body Plating Specification

Brass Copper, Passivated Stainless Steel
Anticorrosion grey paint

Environmental Specifications

Temperature

Operating Range
Storage Range

-40 to +70 deg C
-55 to +85 deg C

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

Plotted and Other Data

Notes:

20 dB WR-51 Waveguide Crossguide Coupler with UG Square Flange and SMA Female Coupling Port from 16 GHz to 17.5 GHz in Brass 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-51 Waveguide Crossguide Coupler with UG Square Flange and SMA Female Coupling Port from 16 GHz to 17.5 GHz in Brass FMWCP1097S-20](#)

URL: <https://www.fairviewmicrowave.com/20db-wr51-waveguide-crossguide-coupler-ug-square-flange-17.5ghz-fm-wcp1097s-20-p.aspx>

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FMWCP1097S-20 CAD Drawing

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