

20 dB WR-12 Waveguide Broadwall Coupler with UG-387/U Round Cover Flange and E-Plane Coupled Port from 60 GHz to 90 GHz, Copper Gold



FM-W12CP003A-20

Features

- 20 dB Nominal Coupling Level
- E-Plane Waveguide Coupler
- 60 GHz to 90 GHz Frequency Range
- Body and Flanges made of Copper Gold
- Gold Waveguide
- 1.15:1 VSWR typical

Applications

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

Description

The FM-W12CP003A-20 is a millimeter-wave directional waveguide coupler that operates in the frequency range of 60 to 90 GHz (E Band). This E Band component offers a nominal coupling level of 20 dB, mean coupling accuracy of ± 1.5 , coupling flatness of 1 dB, and has a maximum VSWR level of 1.15:1. The design is made of copper, gold and incorporates a multi-hole configuration that results in typical directivity of 40 dB. Common applications for this millimeter wave component involve test setups where power reflection measurements are required that might involve power sampling and frequency monitoring with minimal signal loss to the main transmission path. This E plane coupler uses integrated WR-12 waveguide ports with UG 387/U flanges. Fairview Microwave offers a complete family of waveguide millimeter wave directional couplers that are in-stock for same day shipment.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	60		90	GHz
Impedance		50		Ohms
Coupler				
Nominal Coupling Level		20		dB
Coupling Accuracy		± 1.5		dB
Directivity		40		
Insertion Loss		1		dB
Main Line VSWR		1.1:1		
Secondary Line VSWR		1.15:1		
Coupling Flatness		1		dB

Mechanical Specifications

Size

Length	5.5 in [139.7 mm]
Width	0.75 in [19.05 mm]
Height	1.13 in [28.7 mm]
Weight	0.014 lbs [6.35 g]

Interface

Waveguide Size	WR-12
Flange Type	Round Cover
Flange Designation	UG-387/U

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Flange Material and Plating	Copper, Gold
Coupler Body Material and Plating	Copper, Gold

Environmental Specifications

Temperature Operating Range	-15 to +60 deg C
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

20 dB WR-12 Waveguide Broadwall Coupler with UG-387/U Round Cover Flange and E-Plane Coupled Port from 60 GHz to 90 GHz, Copper Gold 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-12 Waveguide Broadwall Coupler with UG-387/U Round Cover Flange and E-Plane Coupled Port from 60 GHz to 90 GHz, Copper Gold FM-W12CP003A-20](#)

URL: <https://www.fairviewmicrowave.com/20db-wr12-waveguide-broadwall-coupler-ug387-round-e-90ghz-fm-w12c-p003a-20-p.aspx>

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FM-W12CP003A-20 CAD Drawing

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