

50 dB WR-90 Waveguide Crossguide Coupler with CPR-90G Flange and N Female Coupled Port from 8.2 GHz to 12.4 GHz in Bronze

The FMWCT1083 is a 50 dB WR-90 four port crossguide coupler with one coupled port terminated (making it a three port coupler) and a coax adapter on the opposite 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 1.05:1 and are made of bronze with brass CPR-90G flanges. The FMWCT1083 is part of a family of cross guide couplers offered by Fairview with coupling values ranging from 20 to 50 dB. There is also a full family of top wall (broad wall) couplers. For the three port version of this coupler (terminated but no coax adapter) please see the FMWCT1027. For the four port version of this coupler (no termination, no coax adapter) please see the FMWCP1062.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	8.2		12.4	GHz
Impedance		50		Ohms

Coupler

Nominal Coupling Level		50		dB
Directivity		10		dB
Insertion Loss		0.1		dB
Main Line VSWR		1.05:1		

Termination

Input Power (CW)			4	Watts
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Waveguide to Coax Adapters

VSWR		1.25:1		
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Mechanical Specifications

Interface

Waveguide Size	WR-90
Flange Type	CPR-90G
Flange Material and Plating	Brass
RF Connector Type	N Female
Coupler Body Material and Plating	Bronze
Termination Body Material and Plating	Bronze

Environmental Specifications

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

Plotted and Other Data

Notes:



Features:

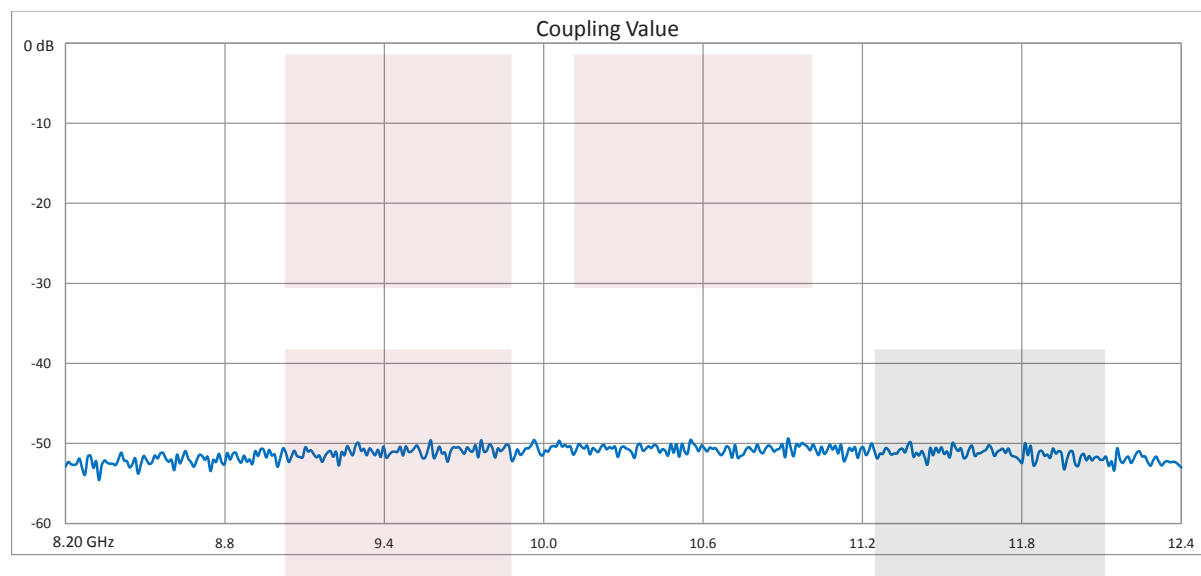
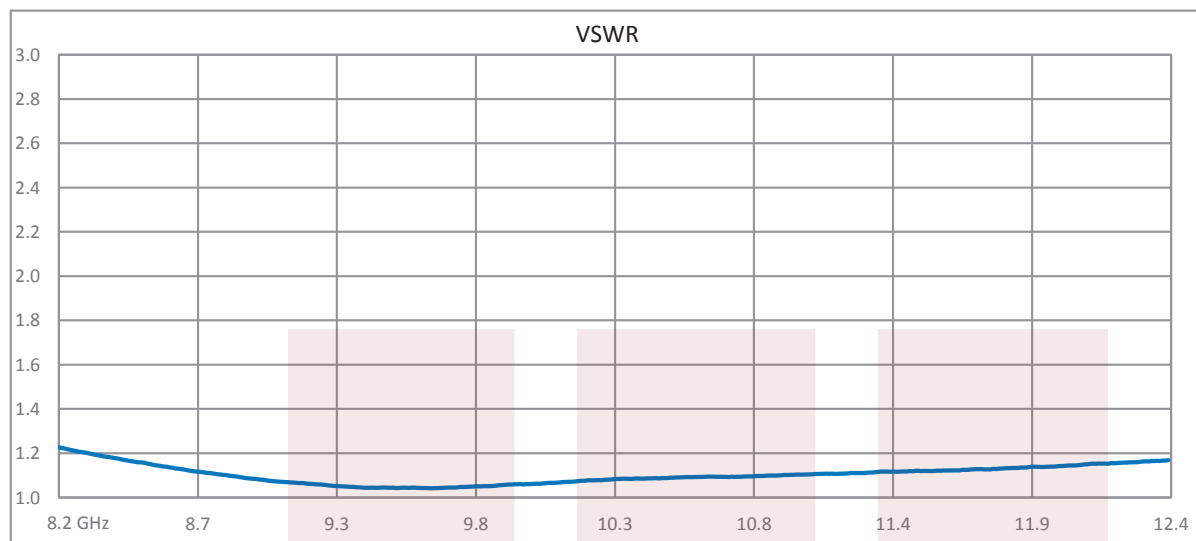
- Three Port
- Crossguide Waveguide Coupler
- Terminated
- 50 dB Nominal Coupling Level
- N Female Coax Adapter
- 8.2 GHz to 12.4 GHz Frequency Range
- Waveguide Body made of Bronze with Brass Flanges
- Low VSWR

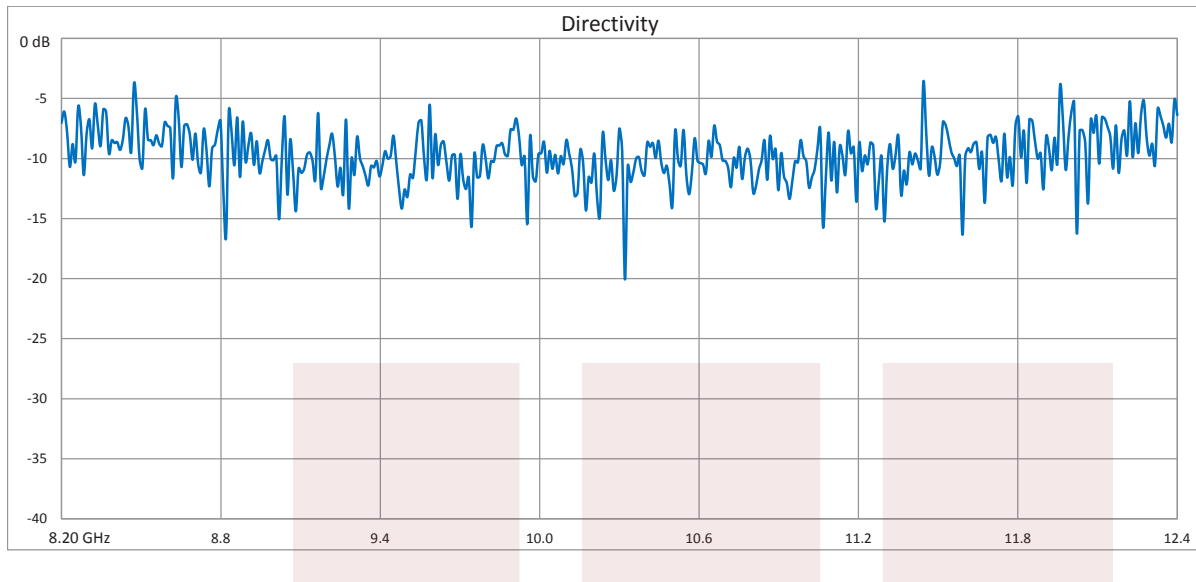
Applications:

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

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Typical Performance Data



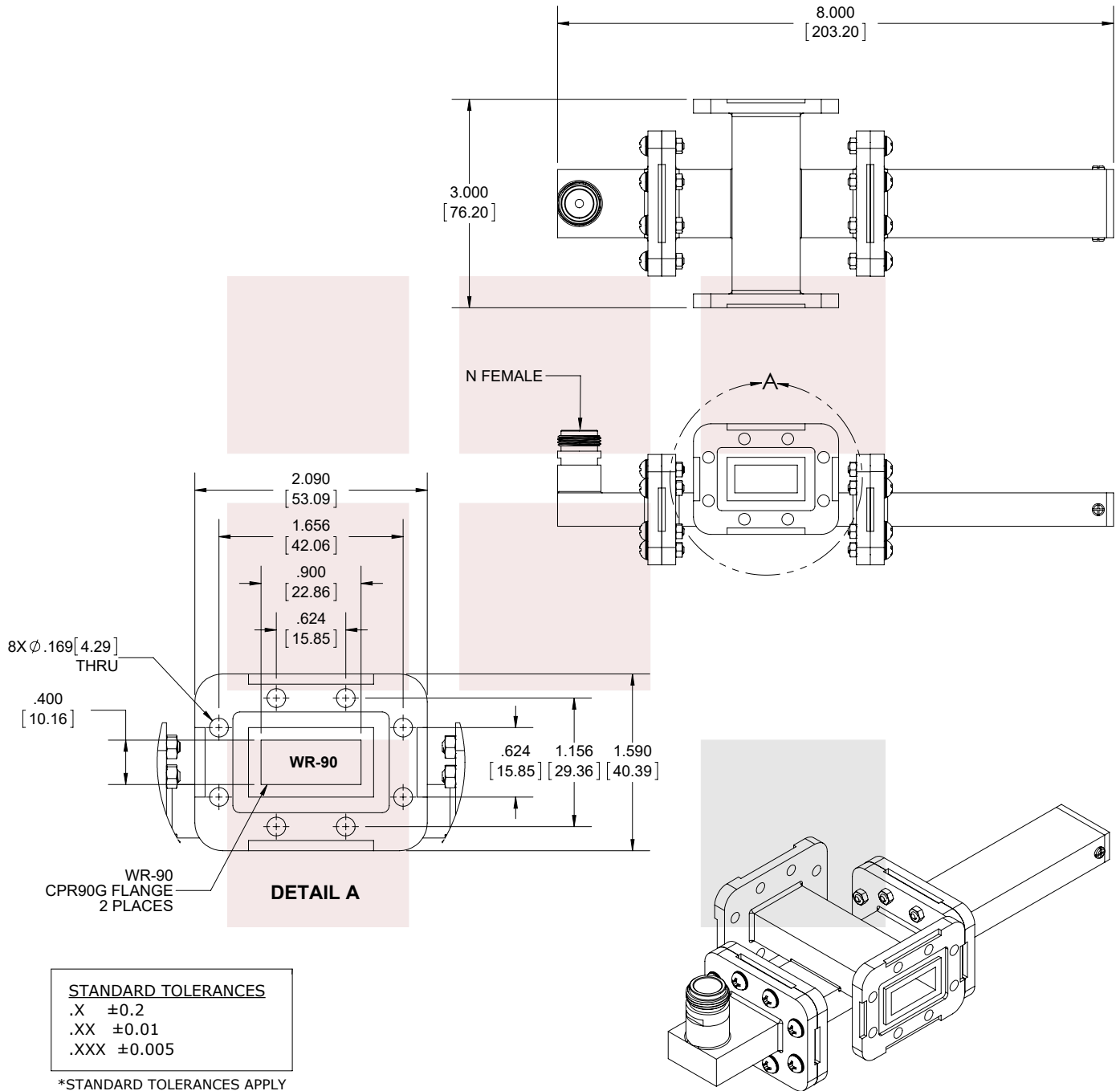


50 dB WR-90 Waveguide Crossguide Coupler with CPR-90G Flange and N Female Coupled Port from 8.2 GHz to 12.4 GHz in Bronze from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [50 dB WR-90 Waveguide Crossguide Coupler with CPR-90G Flange and N Female Coupled Port from 8.2 GHz to 12.4 GHz in Bronze FMWCT1083](https://www.fairviewmicrowave.com/50db-wr90-waveguide-crossguide-coupler-cpr-90g-n-12.4ghz-fmwct1083-p.aspx)

URL: <https://www.fairviewmicrowave.com/50db-wr90-waveguide-crossguide-coupler-cpr-90g-n-12.4ghz-fmwct1083-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



STANDARD TOLERANCES

.X ± 0.2
.XX ± 0.01
.XXX ± 0.005

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES

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TITLE

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NOTES:

1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

DWG NO

FMWCT1083

CAGE CODE

3FKR5

CAD FILE 062717

SHEET 1 OF 1

SCALE N/A

SIZE A

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