

C10-1200WG

WR-12 High Directivity Waveguide Coupler, 10dB, 60-90GHz

DEVICE OVERVIEW

General Description

The C10-1200WG is a WR12 10dB waveguide coupler featuring high directivity over a 60-90GHz operational bandwidth. These waveguide components are built with high precision and then gold plated for high corrosion resistance. They have very low loss and excellent VSWR. Manufactured to rigid specifications, these transmission line components provide minimum detrimental effects on overall system VSWR.



[Download s-parameters here](#)

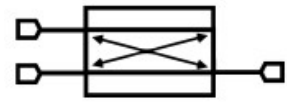
Features

- 10dB Coupling
- High Directivity
- WR-12 Waveguide
- UG-387/U Input and Output Flanges

Applications

- mmWave Applications
- High Power Applications

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
C10-1200WG	WR-12 High Directivity Waveguide Coupler, 10dB, 60-90GHz	WR-12	RoHS	Released	EAR99

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Revision History

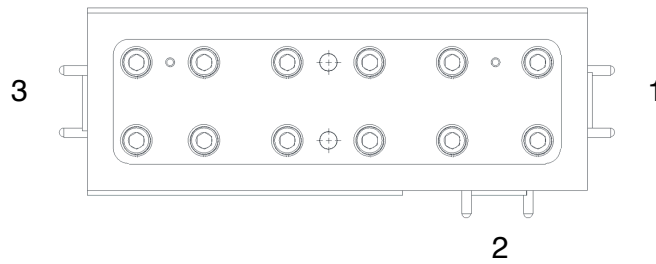
Revision Code	Revision Date	Comment
-	2024-03-15	Datasheet Initial Release

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Port Configuration and Functions

Port Diagram



Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
Port 1	Input	-	-	-
Port 2	Coupled	-	-10dB coupled output port	-
Port 3	Output	-	-	-

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Specifications

Absolute Maximum Ratings

The Absolute Maximum Ratings indicate limits beyond which damage may occur to the device. If these limits are exceeded, the device may be inoperable or have a reduced lifetime.

Parameter	Maximum Rating	Unit
Maximum Operating Temperature	85	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-40	°C
Minimum Storage Temperature	-55	°C

Package Information

Parameter	Details	Rating
ESD	This device is not sensitive to ESD.	N/A
Dimensions	-	85.85 x 30.48 x 21.96 mm

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Electrical Specifications

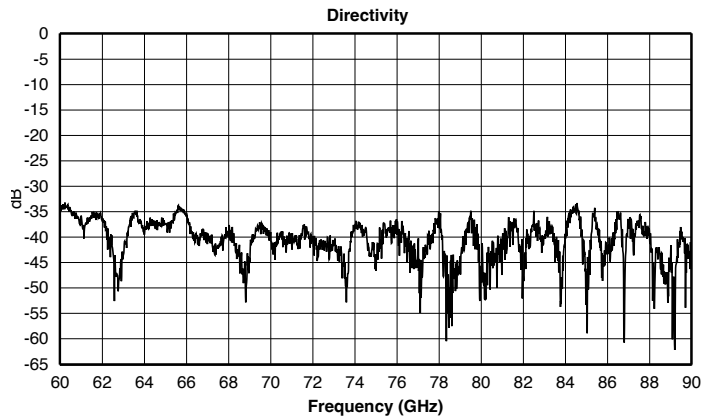
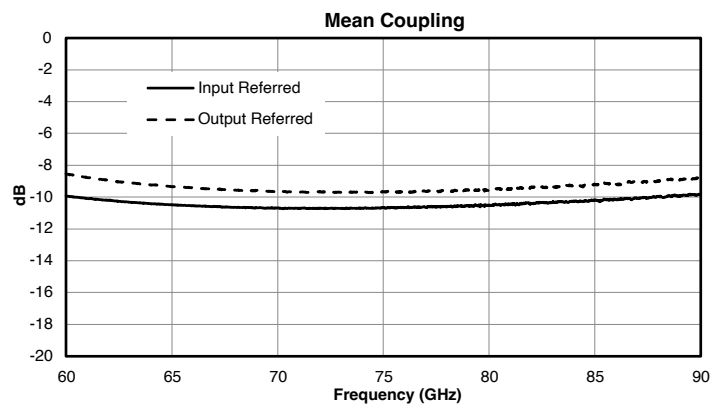
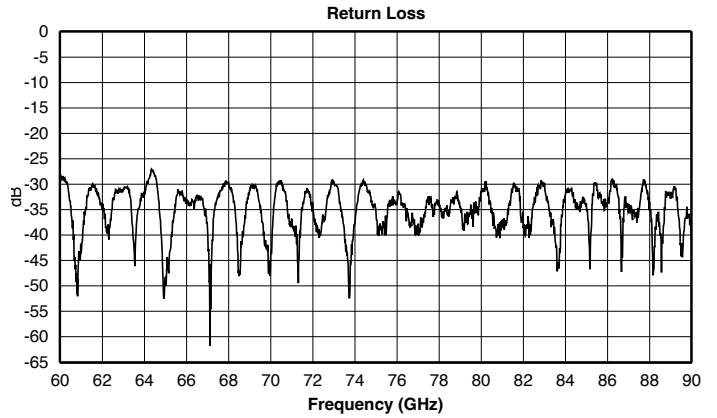
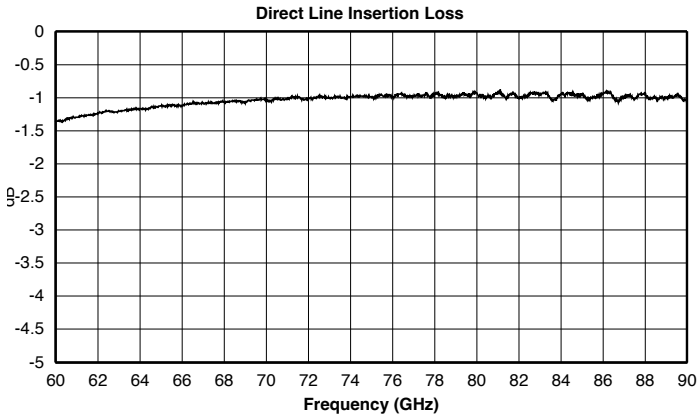
Min and Max limits are guaranteed at Ta = 25°C

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Mean Coupling	Output Referred	60	90	-	9	-	dB
Mean Coupling (Input Referred)	-	60	90	-	10.5	-	dB
Directivity	-	60	90	30	40	-	dB
Direct Line Insertion Loss	-	60	90	-	1.1	-	dB
Return Loss	-	60	90	20	35	-	dB

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Typical Performance Plots



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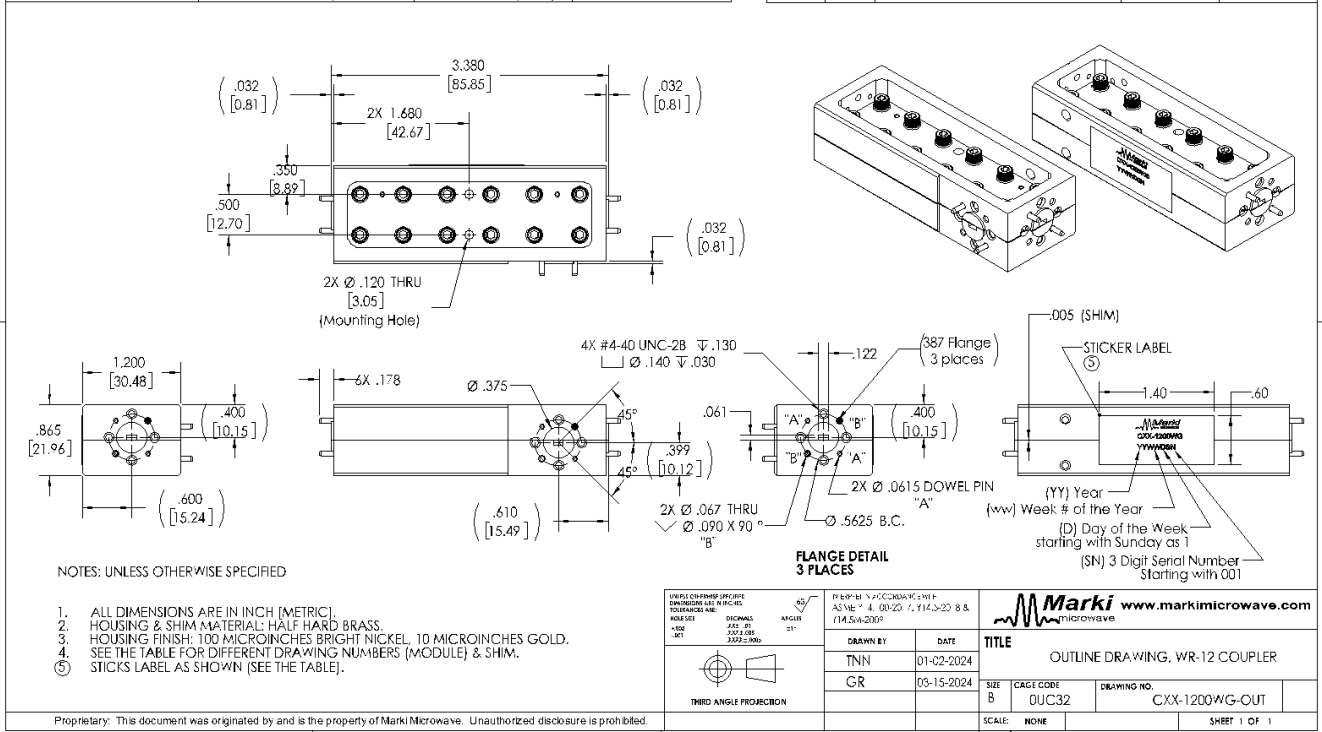
Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#) | [Outline 3D Drawing](#) | [Outline 3D STP](#)


MODULE #	DESCRIPTION	SHIM	STICKER LABEL
C10-1200WG	Outline, WR-12 Coupler, 10dB	421-117601-10 (10dB)	961-09695-1210
C20-1200WG	Outline, WR-12 Coupler, 20dB	421-117701-20 (20dB)	961-09695-1220
C30-1200WG	Outline, WR-12 Coupler, 30dB	421-117801-30 (30dB)	961-09695-1230
C40-1200WG	Outline, WR-12 Coupler, 40dB	421-117901-40 (40dB)	961-09695-1240

REVISIONS				
ECN	REV.	DESCRIPTION	DATE	APPROVED
	A	INITIAL RF PART	03-15-2024	THV/CP



NOTES: UNLESS OTHERWISE SPECIFIED

- ALL DIMENSIONS ARE IN INCH [METRIC].
- HOUSING & SHIM MATERIAL: HALF HARD BRASS.
- HOUSING FINISH: 100 MICROINCHES BRIGHT NICKEL, 10 MICROINCHES GOLD.
- SEE THE TABLE FOR DIFFERENT DRAWING NUMBERS (MODULE) & SHIM.
- STICKER LABEL AS SHOWN (SEE THE TABLE).

<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</small> <small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS</small> <small>1"=25.4MM</small>		<small>FINISH: 100 MICROINCHES BRIGHT NICKEL, 10 MICROINCHES GOLD</small> <small>AS PER MIL-STD-883C METHOD 2000 B & C</small> <small>(14.5.4A-2000)</small>	 www.markimicrowave.com
<small>THIRD ANGLE PROJECTION</small>	<small>DRAWN BY</small> TNN	<small>DATE</small> 01-02-2024	<small>TITLE</small> OUTLINE DRAWING, WR-12 COUPLER
	<small>GR</small> GR	<small>DATE</small> 05-15-2024	<small>SIZE</small> B
			<small>CAGE CODE</small> 0UC32
			<small>DRAWING NO.</small> CXX-1200WG-OUT
			<small>SCALE</small> NONE
			<small>SHEET 1 OF 1</small>

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