

# C10-2200WG

## WR-22 High Directivity Waveguide Coupler, 10 dB 33-50 GHz

### DEVICE OVERVIEW

#### General Description

The C10-2200WG is a WR22 10dB waveguide coupler featuring high directivity over a 33-50GHz 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](#)

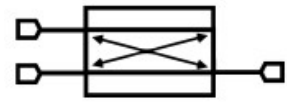
#### Features

- 10dB Coupling
- Low Loss
- High Directivity
- WR-22 Waveguide
- UG-383/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
C10-2200WG	WR-22 High Directivity Waveguide Coupler, 10 dB 33-50 GHz	WR-22	RoHS	Released	EAR99

## C10-2200WG

WR-22 High Directivity Waveguide Coupler, 10 dB  
33-50 GHz

### Table Of Contents

- **Device Overview**
  - General Description
  - Features
  - Applications
  - Functional Block Diagram
- **Port Configuration and Functions**
  - Port Functions
- **Revision History**
- **Specifications**
  - Absolute Maximum Ratings
  - Package Information
  - Electrical Specifications
  - Typical Performance Plots
- **Mechanical Data**
  - Outline Drawing

### Revision History

Revision Code	Revision Date	Comment
-	2024-07-15	Initial Release

## C10-2200WG

WR-22 High Directivity Waveguide Coupler, 10 dB  
33-50 GHz

### Port Configuration and Functions

#### Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
Port 1	Input	WR-22-UG-383/U	-	-
Port 2	Coupled	WR-22-UG-383/U	-10dB coupled output port	-
Port 3	Output	WR-22-UG-383/U	-	-

## C10-2200WG

WR-22 High Directivity Waveguide Coupler, 10 dB  
33-50 GHz

### 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

## C10-2200WG

WR-22 High Directivity Waveguide Coupler, 10 dB  
33-50 GHz

### Electrical Specifications

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

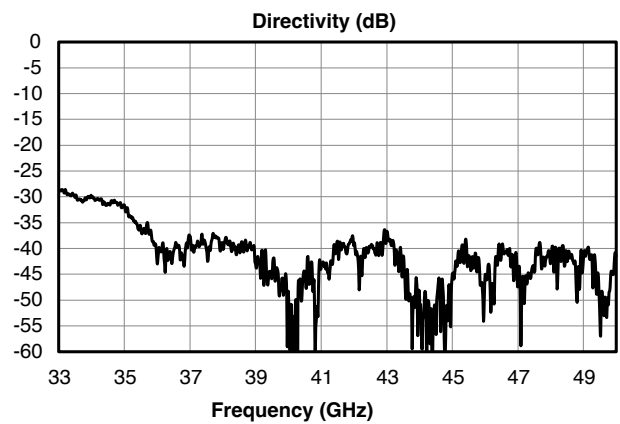
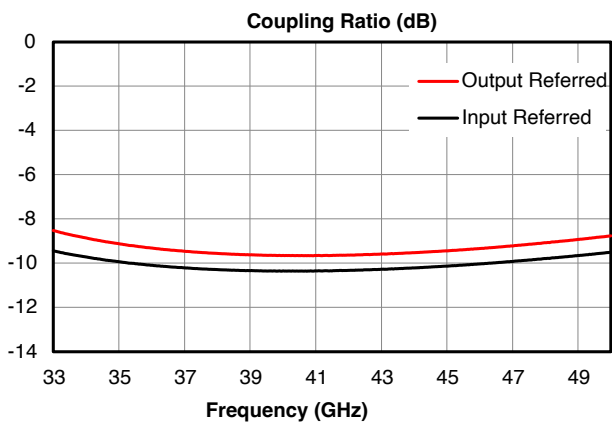
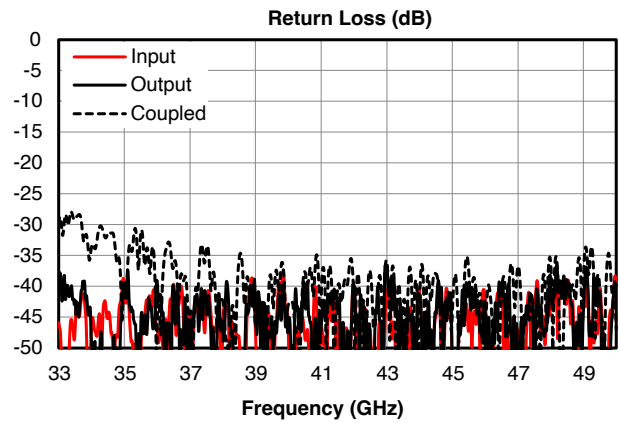
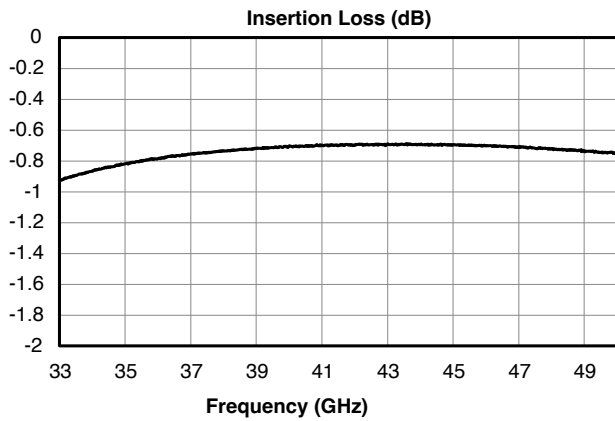
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Amplitude Flatness <sup>1</sup>	-	33	50	-	1	-	dB
Directivity	-	33	50	-	40	-	dB
Direct Line Insertion Loss	-	33	50	-	0.75	-	dB
Mean Coupling	Output Referred	34	50	-	9	-	dB
Mean Coupling (Input Referred)	-	33	50	-	10	-	dB
Return Loss	-	33	50	-	45	-	dB

<sup>[1]</sup> Deviation from Average Coupling

## C10-2200WG

WR-22 High Directivity Waveguide Coupler, 10 dB  
33-50 GHz

### Typical Performance Plots



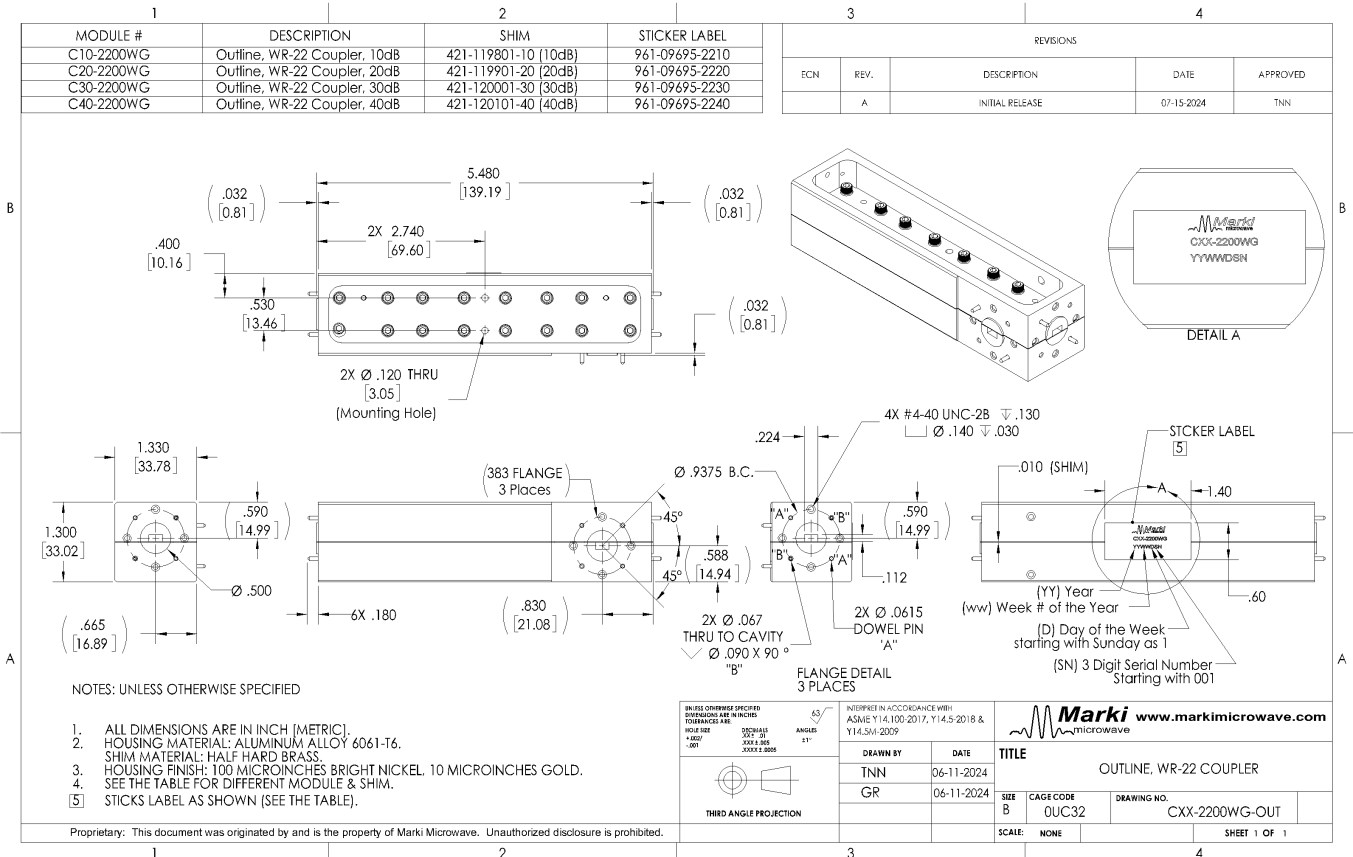
# C10-2200WG

## WR-22 High Directivity Waveguide Coupler, 10 dB 33-50 GHz

### Mechanical Data

### Outline Drawing

Download : [Outline 2D Drawing](#)



**DISCLAIMER**

MARKI MICROWAVE, INC., ("MARKI") PROVIDES TECHNICAL SPECIFICATIONS AND DATA (INCLUDING DATASHEETS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, AND OTHER INFORMATION AND RESOURCES "AS IS" AND WITH ALL FAULTS. MARKI DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. These resources are intended for developers skilled in the art designing with Marki products. You are solely responsible for (1) selecting the appropriate products for your application, (2) designing, validating, and testing your application, and (3) ensuring your application meets applicable standards and other requirements. Marki makes no guarantee regarding the suitability of its products for any particular purpose, nor does Marki assume any liability whatsoever arising out of your use or application of any Marki product.

Marki grants you permission to use these resources only for development of an application that uses Marki products. Other reproduction or use of these resources is strictly prohibited. No license is granted to any other Marki intellectual property or to any third-party intellectual property. Marki reserves the right to make changes to the product(s) or information contained herein without notice.

MARKI MICROWAVE and T3 MIXER are trademarks or registered trademarks of Marki Microwave, Inc. All other trademarks used are the property of their respective owners.

© 2024, Marki Microwave, Inc