

# WS-2800100WG

## WR-28 Straight Waveguide, 26.5GHz to 40GHz, 1 in

### DEVICE OVERVIEW

#### General Description

WR-28 Straight Waveguide 1", Square Flange. Custom lengths available upon request. Marki Microwave straight waveguides 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.



#### Features

- 26.5 to 40GHz operation
- EIA WR-28 rectangular waveguide
- UG-599/U input and output flanges
- Copper construction
- Brass flanges
- Gold plated
- Very low loss

#### Applications

- 5G
- Radar
- Satellite Communications
- Digital Communications

#### Functional Block Diagram



#### Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
WS-2800100WG	WR-28 Straight Waveguide, 26.5GHz to 40GHz, 1 in	WR-28	REACH RoHS	Released	EAR99
WS-2800100WGS	WR-28 Straight Waveguide 1 in.	WR-28	REACH RoHS	Released	EAR99
WS-2800200WGS	WR-28 Straight Waveguide 2 in.	WR-28	REACH RoHS	Released	EAR99
WS-2800300WG	WR-28 Straight Waveguide 3". Custom lengths available upon request.	WR-28	REACH RoHS	Released	EAR99
WS-2800300WGS	WR-28 Straight Waveguide 3 in.	WR-28	REACH RoHS	Released	EAR99
WS-2800600WG	WR-28 Straight Waveguide 6". Custom lengths available upon request.	WR-28	REACH RoHS	Released	EAR99
WS-2800200WG	WR-28 Straight Waveguide 2". Custom lengths available upon request.	WR-28	REACH RoHS	Released	EAR99

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Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
WS-2800200WG	WR-28 Straight Waveguide 2". Custom lengths available upon request.	WR-28	REACH RoHS	Released	EAR99

### Table Of Contents

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

### Revision History

Revision Code	Revision Date	Comment
-	2025-04-21	Initial Release

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### Port Configuration and Functions

#### Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
Port 1	RF Input / Output	-	RF input/output port	-
Port 2	RF Input / Output	-	RF input/output port	-

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### Specifications

#### Package Information

Parameter	Details	Rating
Dimensions	-	WR-28

**Electrical Specifications**

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Insertion Loss <sup>1</sup>	-	26.5	40	-	0.1	-	dB
Return Loss	-	26.5	40	-	37	-	dB

<sup>[1]</sup> Typical insertion loss per inch.

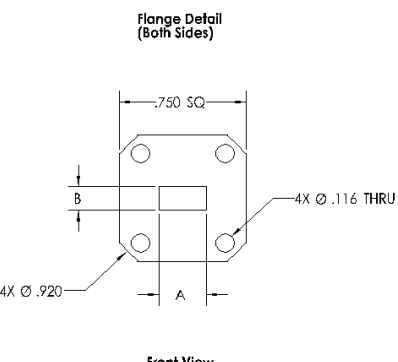
### Mechanical Data

### Outline Drawing

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

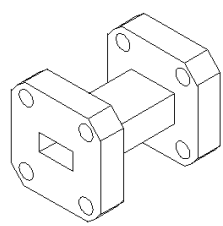
SIZE	DRAWING #	WAVEGUIDE MATERIAL	DIM. A	DIM. B	DIM. C	DIM. D	REVISIONS				
WR-19	WS-190010SWG	COPPER	0.188"	0.094"	0.268"	0.174"	ECH	R <sup>1</sup>	DESCRIPTION	DATE	APPROVED
WR-22	WS-220010SWG	COPPER	0.224"	0.112"	0.304"	0.192"	-	A	INITIAL RELEASE	1 / 23/23	GK
WR-28	WS-2800100WG	COPPER	0.280"	0.140"	0.360"	0.220"					

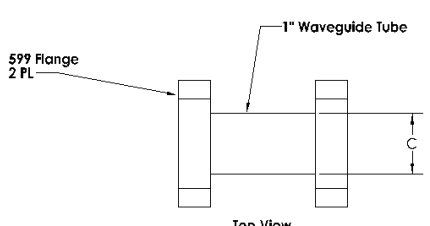
**\*Note: All X's in Drawing Number Determined By Waveguide Interior Dimensions A & B And Exterior Dimensions C & D**



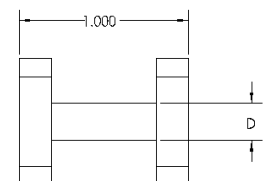
Flange Detail (Both Sides)

Front View





Top View



Side View

**NOTES: UNLESS OTHERWISE SPECIFIED**

1. Flange Material: Half Hard Brass
2. Finish: 100 microinches bright nickel, 10 microinches gold

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: HOLE SIZE: +.0007 / -.001 OTHER: .001 / .002 ANGLES: ±1°	INTERPRET IN ACCORDANCE WITH: ASME Y14.100-2017, Y14.5-2018 & ASME Y14.5M-2009	<b>Marki</b> www.markimicrowave.com DRAWN BY: GK DATE: 04/21/2023 CHECKED:	TITLE: Outline, Waveguide 1" Straight, UG-599 Flange SIZE: B CAGE CODE: 0UC32 DRAWING NO.: WS-XX0010XWG-599-OUT SCALE: NONE SHEET 1 OF 1
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