

WS-1900100WG

WR-19 Straight Waveguide 1 in.

DEVICE OVERVIEW

General Description

WR-19 1" Marki Microwave Straight Waveguides, operating from 40-60 GHz, are built with high precision and 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.



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Features

- Copper waveguide
- Brass UG-383/U flanges
- Gold plated
- Very low loss

Applications

- 5G
- Radar
- Satellite Communications
- Communication Systems

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
WS-190030SWG	WR-19 Straight Waveguide 3", Square Flange. Custom lengths available upon request.	-	REACH RoHS	Released	EAR99
WS-1900100WG	WR-19 Straight Waveguide 1 in.	WR-19	REACH RoHS	Released	EAR99
WS-1900200WG	WR-19 Straight Waveguide 2 in.	WR-19	REACH RoHS	Released	EAR99
WS-190010SWG	WR-19 Straight Waveguide 1", Square Flange. Custom lengths available upon request.	-	REACH RoHS	Released	EAR99
WS-1900600WG	WR-19 Straight Waveguide 6 in.	WR-19	REACH RoHS	Released	EAR99
WS-190020SWG	WR-19 Straight Waveguide 2", Square Flange. Custom lengths available upon request.	-	REACH RoHS	Released	EAR99
WS-190060SWG	WR-19 Straight Waveguide 6", Square Flange. Custom lengths available upon request.	-	REACH RoHS	Released	EAR99

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
<u>WS-190060SWG</u>	WR-19 Straight Waveguide 6", Square Flange. Custom lengths available upon request.	-	REACH RoHS	Released	EAR99
<u>WS-1900300WG</u>	WR-19 Straight Waveguide 3 in.	WR-19	REACH RoHS	Released	EAR99

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Revision History

Revision Code	Revision Date	Comment
-	2024-05-01	Initial Release

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.	-

Specifications

Package Information

Parameter	Details	Rating
Dimensions	-	L = 1 in.

Electrical Specifications

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Insertion Loss ¹	-	40	60	-	0.1	-	dB
Return Loss	-	40	60	-	37	-	dB

^[1] Typical insertion loss per inch.

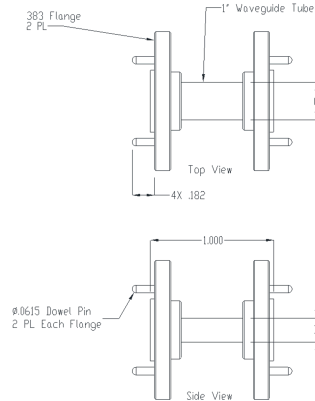
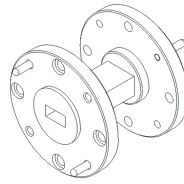
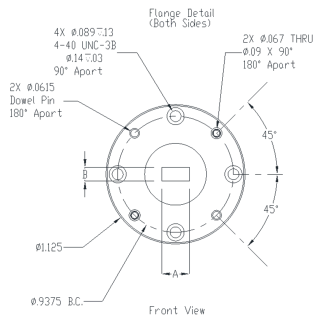
Mechanical Data

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				
							ECN	REV.	DESCRIPTION	DATE	APPROVED
WR-19	WS-1900100WG	COPPER	0.188"	0.094"	0.268"	0.174"	-	A	INITIAL RELEASE	11/16/23	OK
WR-22	WS-2200100WG	COPPER	0.224"	0.112"	0.304"	0.192"					
WR-28	WS-2800100WG	COPPER	0.280"	0.140"	0.360"	0.220"					

*Note: XX Drawing Number Determined By Waveguide Interior Dimensions A & B And Exterior Dimensions C & D



NOTES: UNLESS OTHERWISE SPECIFIED

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

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