

# 691 Series

# Unflanged Waveguides



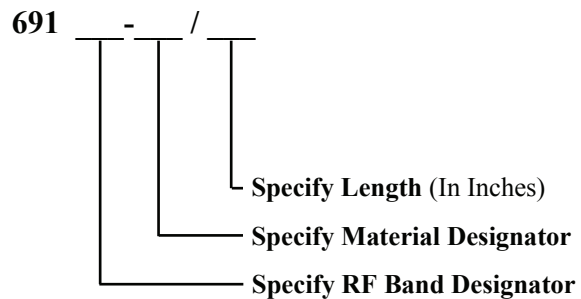
## Features

- Precise Fabrication

## Description 691 Unflanged Waveguides

***Mi-Wave***' 691 series unflanged waveguide is manufactured to precise specifications in accordance with MIL-W-85. It is available in various maximum lengths and optional materials. Typically, larger waveguide sizes are manufactured in larger lengths than the smaller sizes. Please consult ***Mi-Wave*** for maximum available lengths.

## Ordering Information



Material Designation	Material
CS	Coin Silver
SS	Stainless Steel (0.010" wall thickness)
OFC	Oxygen Free Copper
BR	Bronze
AL	Aluminum

Please Note: Other Materials available upon request.

## ***Mi-Wave***

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# Rectangular Waveguides

<i>mi-Wave</i> Band	Waveguide Designator(s) (JAN & WR)	Waveguide Inner Dimensions in Inches	Recommended Operating Range for TE <sub>10</sub> Mode		Cut-Off for TE <sub>10</sub> Mode		Theoretical Power CW Breakdown Lowest to Highest Frequency (KW)	Theoretical Attenuation Lowest to Highest Frequency (dB/ft)	Flange Type	Historic Designation	New MIL Part Number
			Frequency (GHz)	Wavelength (mm)	Frequency (GHz)	Wavelength (mm)					
<b>KU</b>	RG-91/U WR-62	0.622 x 0.311	12.4 - 18.0	24.2 - 16.6	9.486	31.60	400 - 600	.064 - .030	Cover <sup>1</sup> Choke	UG-419/U UG-541/U	M3922/53-4/005 M3922/59-2/001
<b>K</b>	RG-53/U WR-42	0.420 x 0.170	18.0 - 26.5	16.6 - 11.3	14.047	21.34	160 - 240	.17 - .11	Cover <sup>1</sup> Choke Cover	UG-595/U UG-596A/U UG-425/U	M3922/54-4/001 M3922/59-2/003 M3922/67-2/004
<b>A</b>	RG-96/U WR-28	0.280 x 0.140	26.5 - 40.0	11.3 - 7.5	21.081	14.22	95 - 145	0.22 - 0.15	Cover <sup>1</sup> Choke Cover	UG-599/U UG-600/U UG-381/U	M3922/54-4/003 M3922/59-2/005 M3922/67-2/005
<b>B</b>	RG-97/U WR-22	0.224 x 0.112	33.0 - 50.0	9.1 - 6.0	26.342	11.38	62 - 90	0.31 - 0.21	Cover <sup>1</sup> Cover Cover	UG-383/U 719 719T	M3922/67-2/006 N/A N/A
<b>U</b>	WR-19	0.188 x 0.094	40.0 - 60.0	7.5 - 5.0	31.357	9.56	47 - 64	0.39 - 0.27	Cover <sup>12</sup> Cover Cover	UG-383/U-M 710 720T	M3922/67-2/007 N/A N/A
<b>V</b>	RG-98/U WR-15	0.148 x 0.074	50.0 - 75.0	6.0 - 4.0	39.863	7.52	29 - 42	0.57 - 0.39	Cover <sup>1</sup>	UG-385/U	M3922/67-2/008
<b>E</b>	RG-99/U WR-12	0.122 x 0.061	60.0 - 90.0	5.0 - 3.3	48.350	6.20	20 - 29	0.78 - 0.53	Cover <sup>1</sup>	UG-387/U	M3922/67-2/009
<b>W</b>	WR-10	0.100 x 0.050	75.0 - 110.0	4.0 - 2.7	59.010	5.08	14 - 20	1.02 - 0.71	Cover <sup>12</sup>	UG-387/U-M	M3922/67-2/010
<b>F</b>	RG-138/U WR-8	0.080 x 0.040	90.0 - 140.0	3.3 - 2.1	73.764	4.06	8.5 - 13.5	1.52 - 0.98	Pin <sup>1</sup> Cover <sup>2</sup>	714 UG-387/U-M	M3922/74-001 N/A
<b>D</b>	RG-136/U WR-7	0.065 x 0.0325	110.0 - 170.0	2.7 - 1.8	90.786	3.30	5.8 - 9.0	2.12 - 1.35	Pin <sup>1</sup> Cover <sup>2</sup>	716 UG-387/U-M	M3922/74-002 N/A
<b>G</b>	RG-135/U WR-5	0.051 x 0.0255	140.0 - 220.0	2.1 - 1.4	115.71	2.59	3.7 - 6.1	3.05 - 1.93	Pin <sup>1</sup> Cover <sup>2</sup>	715 UG-387/U-M	M3922/74-003 N/A

1. Standard flange unless otherwise specified.

2. Modified (-M) means waveguide opening has been reduced appropriately. Screw and pin pattern are unchanged.