

Waveguide Parameters

Rigid Rectangular Waveguide Data

Frequency Range (GHz) For TE ₁₀ Mode	Cut-off Freq (GHz) For TE ₁₀ Mode	Band Designation			WG Designation				Internal Dimensions		Theoretical Peak Power Rating (MW)	Theoretical Attenuation dB/30m /A, /B, /S*
		UK	USA	New	53-IEC R	RCSC WG	EIA WR	US (JAN)	Inches	mm approx		
0.32-0.49	0.256			B	3	00	2300		23.0 x 11.5	584.0 x 292.0	153.0-212.0	0.051-0.031/A
0.35-0.53	0.281			B, C	4	0	2100		21.0 x 10.5	533.0 x 267.0	120.0-173.0	0.054-0.034/A
0.41-0.62	0.328			B, C	5	1	1800	RG-201/U	18.0 x 9.0	457.0 x 229.0	93.4-131.9	0.056-0.038/A
0.49-0.75	0.393			C	6	2	1500	RG-202/U	15.0 x 7.5	381.0 x 191.0	67.6-93.3	0.069-0.050/A
0.64-0.98	0.513	P		C	8	3	1150	RG-203/U	11.5 x 5.75	292.0 x 146.0	35.0-53.8	0.128-0.075/A
0.76-1.15	0.605			C, D	9	4	975	RG-204/U	9.75 x 4.875	248.0 x 124.0	27.0-38.5	0.137-0.095/A
0.96-1.46	0.766			D	12	5	770	RG-205/U	7.7 x 3.85	196.0 x 98.0	17.2-24.1	0.201-0.136/A
1.14-1.73	0.908	L	L	D	14	6	650	RG-69/U	6.5 x 3.25	165.1 x 82.55	11.9-17.2	0.317-0.212/B 0.269-0.178/A
1.45-2.20	1.157			D, E	18	7	510		5.1 x 2.55	129.54 x 64.77	7.5-10.7	
1.72-2.61	1.372		LS, R	E	22	8	430	RG-104/U	4.3 x 2.15	109.22 x 54.61	5.2-7.5	0.588-0.385/B 0.501-0.330/A
2.17-3.30	1.736			E, F	26	9A	340	RG-112/U	3.4 x 1.7	86.36 x 43.18	3.1-4.5	0.877-0.572/B 0.751-0.492/A
2.60-3.95	2.078	S	S	E, F	32	10	284	RG-48/U	2.84 x 1.34	72.14 x 34.04	2.2-3.2	1.102-0.752/B 0.940-0.641/A
3.22-4.90	2.577			F, G	40	11A	229		2.29 x 1.145	58.17 x 29.083	1.6-2.2	
3.94-5.99	3.152	C	C	F, G	48	12	187	RG-49/U	1.872 x 0.872	47.55 x 22.149	1.4-2.0	2.08-1.44/B 1.77-1.12/A
4.64-7.05	3.711			G, H	58	13	159		1.590 x 0.795	40.39 x 20.193	0.79-1.0	
5.38-8.18	4.301			H	70	14	137	RG-50/U	1.372 x 0.622	34.85 x 15.799	0.56-0.71	2.87-2.30/B 2.45-1.94/A
6.58-10.0	5.259			I	84	15	112	RG-51/U	1.122 x 0.497	28.499 x 12.624	0.35-0.46	4.12-3.21/B 3.50-2.74/A
8.20-12.50	6.557	X	X	I, J	100	16	90	RG-52/U	0.9 x 0.4	22.86 x 10.16	0.20-0.29	6.45-4.48/B
9.84-15.00	7.868			J	120	17	75		0.75 x 0.375	19.05 x 9.525	0.17-0.23	5.49-3.83/A
11.90-18.00	9.486	J	Ku	J	140	18	62	RG-91/U	0.622 x 0.311	15.799 x 7.899	0.12-0.16	9.51-8.31/B-/A 6.14-5.36/S
14.50-22.00	11.574			J, K	180	19	51		0.510 x 0.255	13.0 x 6.48	0.080-0.107	
17.60-26.70	14.047			J, K	220	20	42	RG-53/U	0.420 x 0.170	10.668 x 4.318	0.043-0.058	20.7-14.8/B 17.6-12.6/A
21.70-33.00	17.328			K	260	21	34		0.340 x 0.170	8.636 x 4.318	0.034-0.048	13.3-9.5/S
26.40-40.10	21.081	Q	Ka	K	320	22	28	RG-96/U	0.280 x 0.140	7.112 x 3.556	0.022-0.031	-/B -/A 21.9-15.0/S
33.00-50.10	26.342			K, L	400	23	22	RG-97/U	0.224 x 0.112	5.69 x 2.845	0.014-0.020	-/B 31.0-20.9/S
39.30-59.70	31.357			L	500	24	19		0.188 x 0.094	4.775 x 2.388	0.011-0.015	
49.90-75.80	39.863		V	L, M	620	25	15	RG-98/U	0.148 x 0.074	3.759 x 1.880	0.0063-0.0090	-/B 52.9-39.1/S
60.50-92.00	48.350	O	E	M	740	26	12	RG-99/U	0.122 x 0.061	3.099 x 1.549	0.0042-0.0060	-/B 93.3-52.2/S
73.80-112.0	59.010		W	M	900	27	10		0.100 x 0.050	2.54 x 1.27	0.0030-0.0041	
92.30-140.00	73.840			M	1200	28	8	RG-138/U	0.080 x 0.040	2.032 x 1.016	0.0018-0.0026	152-99/S
114.0-173.00	90.840				1400	29	6	RG-136/U	0.065 x 0.0325	1.651 x 0.826	0.0012-0.0017	163-137/S
145.00-220.00	115.750		T		1800	30	5	RG-135/U	0.051 x 0.0255	1.295 x 0.648	0.00071-0.00107	308-193/S
172.00-261.00	131.520				2200	31	4	RG-137/U	0.043 x 0.0215	1.1 x 0.55	0.00052-0.00075	384-254/S
217.00-330.00	173.280				2600	32	3	RG-139/U	0.034 x 0.017	0.87 x 0.44	0.00035-0.00047	512-348/S

* Suffix /A, /B or /S denotes material alloy of aluminium, brass or silver