

Table of Rectangular Waveguide Standards

Model	Frequency range (GHz)	J I S Standard					Frequency range (GHz)	E I A J Standard				Name of equivalent IEC Standard	MIL type description	AN type description	EIA type description
		Nominal inner size (a × b)	Tolerance, Class 0	Tolerance, Class 1	Tolerance, Class 2	Wall thickness		E I A J Model	Nominal inner size a × b	Tolerance, Precision class	Tolerance, Standard class				
							0.32~0.49	WRI-3	584.2 × 292.1			R3			WR2300
							0.35~0.53	WRI-4	533.4 × 266.7			R4			WR2100
							0.41~0.62	WRI-5	457.2 × 228.6			R5			WR1800
							0.49~0.75	WRI-6	381.0 × 190.5			R6			WR1500
							0.64~0.98	WRI-8	292.10 × 146.05			R8			WR1150
							0.76~1.15	WRI-9	247.65 × 123.82			R9			WR975
							0.96~1.46	WRI-12	195.58 × 97.79			R12			WR770
							1.14~1.73	WRI-14	165.10 × 82.55	0.25	0.33	R14	M85/1-017	RG-69/U	WR650
							1.45~2.20	WRI-18	129.54 × 64.77	0.19	0.26	R18	M85/1-023	RG-337/U	WR510
WRJ-2*	1.70~2.60	109.220 × 54.610	0.11	0.16	0.20	2.03	1.72~2.61	WRI-22	109.22 × 54.61	0.16	0.22	R22	M85/1-031	RG-104/U	WR430
							2.17~3.30	WRI-26	86.36 × 43.18	0.13	0.17	R26	M85/1-037	RG-112/U	WR340
WRJ-3	2.60~3.95	72.100 × 34.000	0.07	0.13		2.00	2.60~3.95	WRI-32	72.14 × 34.04	0.11	0.14	R32	M85/1-043	RG-48/U	WR284
WRJ-4	3.30~4.90	58.100 × 29.100	0.05	0.10		1.60	3.22~4.90	WRI-40	58.17 × 29.083	0.087	0.12	R40	M85/1-049	RG-340/U	WR229
WRJ-5	3.95~5.85	47.550 × 22.150	0.05	0.10		1.60	3.94~5.99	WRI-48	47.55 × 22.149	0.071	0.095	R48	M85/1-055	RG-49/U	WR187
WRJ-6	4.90~7.05	40.000 × 20.000	0.04	0.06	+0.06 -0.14	1.60	4.64~7.05	WRI-58	40.39 × 20.193	0.061	0.081	R58	M85/1-061	RG-343/U	WR159
WRJ-7	5.85~8.20	34.850 × 15.850		0.05	+0.05 -0.15	1.60	5.38~8.17	WRI-70	34.85 × 15.799	0.052	0.07	R70	M85/1-067	RG-50/U	WR137
WRJ-9	7.05~10.00	28.500 × 12.600		0.05	+0.05 -0.15	1.60	6.57~9.99	WRI-84	28.499 × 12.624	0.043	0.057	R84	M85/1-073	RG-51/U	WR112
WRJ-10	8.20~12.40	22.900 × 10.200		0.04	+0.04 -0.12	1.25	8.20~12.5	WRI-100	22.86 × 10.16	0.04	0.046	R100	M85/1-079	RG-52/U	WR90
WRJ-120*	9.84~15.00	19.050 × 9.525		±0.048		1.27	9.84~15.0	WRI-120	19.050 × 9.525	0.038	0.046	R120	M85/1-085	RG-346/U	WR75
WRJ-140*	11.90~18.00	15.799 × 7.899		±0.031	±0.050	1.02	11.9~18.0	WRI-140	15.799 × 7.899	0.031	0.046	R140	M85/1-089	RG-91/U	WR62
WRJ-180*	14.50~22.00	12.954 × 6.477		±0.026	±0.045	1.02	14.5~22.0	WRI-180	12.954 × 6.477	0.026	0.039	R180	M85/1-096	RG-353/U	WR51
WRJ-220*	17.60~26.70	10.668 × 4.318		±0.021	±0.040	1.02	17.6~26.7	WRI-220	10.668 × 4.318	0.021	0.032	R220	M85/1-102	RG-53/U	WR42
WRJ-260*	21.70~33.00	8.636 × 4.318		±0.020	±0.035	1.02	21.7~33.0	WRI-260	8.636 × 4.318	0.02	0.03	R260	M85/1-109	RG-354/U	WR34
WRJ-320*	26.40~40.10	7.112 × 3.556		±0.020	±0.030	1.02	26.4~40.0	WRI-320	7.112 × 3.556	0.02	0.03	R320	M85/3-008	RG-271/U	WR28
WRJ-400*	33.00~50.10	5.690 × 2.845		±0.020	±0.030	1.02	32.9~50.1	WRI-400	5.690 × 2.845	0.02	0.03	R400	M85/3-012	RG-272/U	WR22
WRJ-500*	39.30~59.70	4.775 × 2.388		±0.020	±0.025	1.02	39.2~59.6	WRI-500	4.775 × 2.388	0.02	0.03	R500	M85/3-016	RG-358/U	WR19
WRJ-620*	49.90~75.80	3.759 × 1.880		±0.020	±0.025	1.02	49.8~75.8	WRI-620	3.759 × 1.880	0.02	0.03	R620	M85/3-019	RG-273/U	WR15
WRJ-740*	60.50~92.00	3.099 × 1.550		±0.020		1.02	60.5~91.9	WRI-740	3.099 × 1.549	0.02	0.03	R740	M85/3-022	RG-274/U	WR12
WRJ-900*	73.80~112.00	2.540 × 1.270		±0.020		1.02	73.8~112	WRI-900	2.540 × 1.270	0.02	0.03	R900	M85/3-025	RG-359/U	WR10
WRJ-1200*	92.30~140.00	2.032 × 1.016		±0.020		1.02	92.2~140	WRI-1200	2.032 × 1.016	0.02	0.03	R1200	M85/3-028		
							114~173	WRI-1400	1.651 × 0.826			R1400	M85/3-031		
							145~220	WRI-1800	1.295 × 0.648			R1800	M85/3-034		
							172~261	WRI-2200	1.092 × 0.546			R2200	M85/3-037		
							217~330	WRI-2600	0.864 × 0.432			R2600	M85/3-040		

Note: Items marked by * are for the EIAJ Standard (former CES Standard).

Table of EIAJ Standard Flat Waveguides and Flanges

Series description	Frequency range (GHz)	Waveguide standard				Flange standard
		Type description	Nominal inner size (a × b) mm	Tolerance		
				General class	Precision class	
WFI Series	1.72~2.61	WFI-22	109.22 × 13.100	0.22	0.110	FUGF 22
	2.17~3.30	WFI-26	86.36 × 10.400	0.17	0.086	FUGF 26
	2.60~3.95	WFI-32	72.14 × 8.600	0.14	0.072	FUGF 32
	3.22~4.90	WFI-40	58.17 × 7.000	0.12	0.058	FUGF 40
	3.94~5.99	WFI-48	47.55 × 5.700	0.095	0.048	FUGF 48
	4.64~7.05	WFI-58	40.39 × 5.000	0.081	0.040	FUGF 58
	5.38~8.17	WFI-70	34.85 × 5.000	0.070	0.035	FUGF 70
	6.57~9.99	WFI-84	28.49 × 5.000	0.057	0.028	FUGF 84
WMI Series	1.72~2.61	WMI-22	109.22 × 27.300	0.22	0.110	FUGM 22
	2.17~3.30	WMI-26	86.36 × 21.600	0.17	0.086	FUGM 26
	2.60~3.95	WMI-32	72.14 × 18.000	0.14	0.072	FUGM 32
	3.22~4.90	WMI-40	58.17 × 14.500	0.12	0.058	FUGM 40
	3.94~5.99	WMI-48	47.55 × 11.900	0.095	0.048	FUGM 48
	4.64~7.05	WMI-58	40.39 × 10.100	0.081	0.040	FUGM 58
	5.88~8.17	WMI-70	34.85 × 8.700	0.070	0.035	FUGM 70
	8.20~12.5	WMI-100	22.86 × 5.000	0.046	0.023	FUGM 100

Remarks (1) The ratio of longer vs. shorter inner sides of a waveguide is as follows: WF1 Series 8.33:1, and WM1 Series 4:1.