

Low-Loss Transmission up to 110 GHz

Waveguide-to-Coaxial Adaptors

TEST & MEASUREMENT





Waveguide-to-Coaxial Adaptors

For low-loss transmissions Rosenberger has developed a diversified range of waveguide-to-coaxial adaptors to allow an efficient transition between the rectangular waveguide and the coaxial connector.

- Circular and rectangular flanges
- Straight and right angle adaptors
- Frequency range from 7.05 GHz to 110 GHz in 11 waveguide bands
- WR-112 to WR-10 (R84 to R900) waveguides
- SMA, RPC-2.92, RPC-1.85, RPC-1.35 and RPC-1.00 coaxial interfaces



Product Portfolio

Rosenberger No.	Version	Connector Interface	Frequency Range	Return Loss
32K084-051	Right angle	SMA female – WR-112	7.05 GHz to 10 GHz	≥ 19 dB
32K100-039	Right angle	SMA female – WR-90	8.2 GHz to 12.5 GHz	
32K120-UBR	Right angle	SMA female – WR-75	10 GHz to 14 GHz	
32K140-419	Right angle	SMA female – WR-62	12.4 GHz to 18 GHz	
02K220-UBR	Right angle	RPC-2.92 female – WR-42	17.5 GHz to 26.5 GHz	
02K320-599	Right angle	RPC-2.92 female – WR-28	26.5 GHz to 40 GHz	≥ 15 dB
08K400-383	Right angle	RPC-1.85 female – WR-22	32.9 GHz to 50.1 GHz	≥ 20 dB
08K500-383	Straight	RPC-1.85 female – WR-19	40 GHz to 60 GHz	
08S500-383	Straight	RPC-1.85 male – WR-19	50 GHz to 70 GHz	≥ 18 dB
08K620-385	Straight	RPC-1.85 female – WR-15		
08S620-385	Straight	RPC-1.85 male – WR-15	50 GHz to 75 GHz	≥ 16 dB
P9K620-385	Straight	RPC-1.35 female – WR-15		
P9S620-385	Straight	RPC-1.35 male – WR-15	60 GHz to 90 GHz	
P9K740-387	Straight	RPC-1.35 female – WR-12		
P9S740-387	Straight	RPC-1.35 male – WR-12	75 GHz to 110 GHz	
01K740-387	Straight	RPC-1.00 female – WR-12		
01S740-387	Straight	RPC-1.00 male – WR-12	75 GHz to 110 GHz	
01K900-387	Straight	RPC-1.00 female – WR-10		
01S900-387	Straight	RPC-1.00 male – WR-10		

For specific details refer to the technical data sheets in our online catalog.
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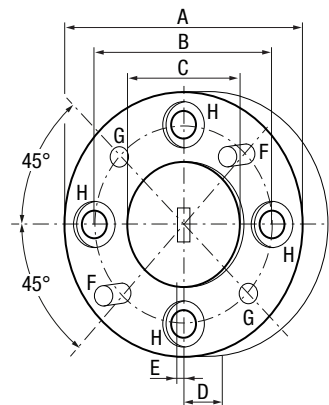
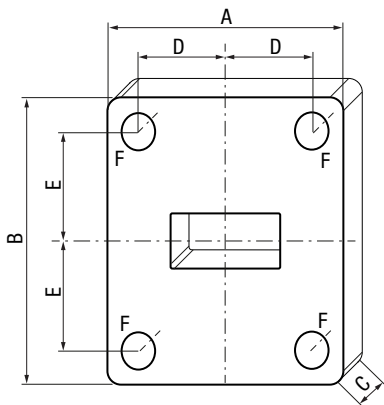
Technical Data

Waveguide Designations			Basic Inner Dimensions (mm)	Rosenberger Standard Flange	Frequency Range (GHz)	Frequency Band Name
EIA	IEC	UK				
WR-112	R 84	WG 15	28.449 x 12.624	UG-51/U	6.58 – 10.0	X _b band
WR-90	R 100	WG 16	22.860 x 10.160	UG-39/U	8.20 – 12.5	X band
WR-75	R 120	WG 17	19.050 x 9.525	UBR 120	9.84 – 15.0	M band
WR-62	R 140	WG 18	15.799 x 7.899	UG-419/U	11.9 – 18.0	K _u band
WR-42	R 220	WG 20	10.668 x 4.318	UBR 220	17.6 – 26.7	K band
WR-28	R 320	WG 22	7.112 x 3.556	UG-599/U	26.3 – 40.0	K _a band
WR-22	R 400	WG 23	5.690 x 2.845	UG-383/U	32.9 – 50.1	Q band
WR-19	R 500	WG 24	4.775 x 2.388	UG-383/U-M ¹⁾	39.2 – 59.6	U band
WR-15	R 620	WG 25	3.759 x 1.880	UG-385/U	49.8 – 75.8	V band
WR-12	R 740	WG 26	3.099 x 1.549	UG-387/U	60.5 – 91.9	E band
WR-10	R 900	WG 27	2.540 x 1.270	UG-387/U-M ¹⁾	73.8 – 112	W band

¹⁾ Flange UG-38X/U-M means that only the waveguide size is reduced.
All other flange parameters remain the same as UG-38X/U



Dimensions



Rectangular Flanges

	UG-51/U	UG-39/U	UBR 120
A	47.80 mm	41.40 mm	38.00 mm
B	47.80 mm	41.40 mm	38.00 mm
C	5.00 mm	5.00 mm	5.00 mm
D	17.17 mm	15.49 mm	13.21 mm
E	18.72 mm	16.25 mm	14.25 mm
Hole F	Ø 4.20 mm	Ø 4.17 mm	Ø 4.00 mm

	UG-419/U	UBR 220	UG-599/U
A	33.30 mm	22.40 mm	19.10 mm
B	33.30 mm	22.40 mm	19.10 mm
C	5.00 mm	4.00 mm	3.00 mm
D	12.62 mm	8.13 mm	6.73 mm
E	12.13 mm	8.51 mm	6.35 mm
Hole F	Ø 4.20 mm	Ø 3.00 mm	Ø 3.00 mm

Circular Flanges

	UG-383/U	UG-385/U	UG-387/U
A	ø 28.58 mm	ø 19.05 mm	ø 19.05 mm
B	ø 23.812 mm	ø 14.288 mm	ø 14.288
C	ø 12.7 mm	ø 9.52 mm	ø 9.52 mm
D	3.30 mm	3.30 mm	3.30 mm
E	0.76 mm	0.76 mm	0.76 mm
Pin F	ø 1.562 mm	ø 1.562 mm	ø 1.562 mm
Hole G	ø 1.70 mm	ø 1.70 mm	ø 1.70 mm
Hole H	4-40 UNC-2B Ø 3.56 Counter bore Deep 0.76 mm	4-40 UNC-2B Ø 3.56 Counter bore Deep 0.76 mm	4-40 UNC-2B Ø 3.56 Counter bore Deep 0.76 mm