Waveguide-to-waveguide adapters

Waveguide-to-waveguide adapters are designed to connect waveguide devices with various cross-sections and flange types. The adapters are made of aluminum alloy and nickel plated. Machining quality of waveguide flanges in combination with geometrical parameters of the waveguide provide low loss and reflection level, high stability of microwave characteristics and absence of energy loss in flanged connection.

Resistance to external influences

Mechanical influences

Sinusoidal vibration	
Frequency, Hz	10...2 000
Acceleration amplitude, m/s^2 (g)	200 (20)
Single shocks *	
Peak shock acceleration, m/s^2 (g)	5 000 (500)
Duration, ms	0.2...15
Multiple shocks	
Peak shock amplitude, m/s^2 (g)	150 (15)
Duration, ms	1...5

Climatic influences

Increased ambient temperature	
Maximum operating temperature, °C	+110
Maximum storage and transporting temperature, °C	+40
Decreased ambient temperature	
Minimum operating temperature, °C	−60
Ambient temperature variation *	
Temperature range, °C	−60...+110
Increased air humidity *	
Operating (t = 25 °C), %, max	93 ± 3
Decreased atmospheric pressure	
Operating atmospheric pressure, Pa (mmHg)	6×10^4 (450)
Maximum transporting atmospheric pressure, Pa (mmHg)	1.2×10^4 (90)

* Products are resistant to the impact factor.

Specifications

Model	Cross section, mm (flange type)		L, mm	Frequency range (guaranteed value), GHz	Frequency range (extended value) *, GHz	VSWR, max	Insertion loss, dB, max	Fig.
	Flange A	Flange B						
PVV1-28.5×12.6-WR112	28.5×12.6	28,499×12,624 (UG-51/U)	45	6,85...9,93	6,57...9,99	1,02	0,15	1
PVV1-23×10-WR90	23×10	22,860×10,160 (UG-39/U)	40	8,2...12,05	8,15...12,5	1,02	0,15	1
PVV1-23×10-23×5	23×10	23×5	100	9...11	8,15...12,05	1,09	0,2	2
PVV1-23×10-23×3	23×10	23×3	150	9...11	8,15...12,05	1,11	0,2	2
PVV1-23×10-23×2	23×10	23×2	150	9...11	8,15...12,05	1,16	0,2	2
PVV1-16×8-WR62	16×8	15,799×7,899 (UG-419/U)	35	12,05...17,44	11,9...18	1,02	0,15	1
PVV1-19×9.5-WR75	19×9.5	19,05×9,525 (UBR120)	40	9,93...14,71	9,84...15	1,03	0,15	1
PVV1-11×5.5-WR42	11×5.5	10,668×4,318 (UG-595/U)	39	17,6...25,95	17,44...26,7	1,04	0,15	1
PVV1-7.2×3.4-WR28	7.2×3.4	7,112×3,556 (UG-599/U)	27	26,3...37,5	25,95...40	1,02	0,15	1
PVV1-5.2×2.6-WR22	5.2×2.6	5,690×2,845 (UG-383/U)	27,7	37,5...50,1	32,9...53,57	1,03	0,2	3
PVV1-5.2×2.6Sh-WR22	5.2×2.6	5,690×2,845 (UG-383/U)	27,7	37,5...50,1	32,9...53,57	1,03	0,2	4
PVV1-4.4×2.2-WR19	4.4×2.2	4,775×2,388 (UG-383/U mod)	40	44,09...59,2	39,2...63,79	1,04	0,2	3
PVV1-4.4×2.2Sh-WR19	4.4×2.2	4,775×2,388 (UG-383/U mod)	40	44,09...59,2	39,2...63,79	1,04	0,2	4
PVV1-3.6×1.8-WR15	3.6×1.8	3,759×1,88 (UG-385/U)	30	53,57...75,8	49,8...78,33	1,1	0,3	3
PVV1-3.6×1.8Sh-WR15	3.6×1.8	3,759×1,88 (UG-385/U)	30	53,57...75,8	49,8...78,33	1,1	0,3	4
PVV1-3×1.5-WR12	3×1.5	3,098×1,549 (UG-387/U)	30	63,79...91,9	60,5...94,28	1,12	0,3	3
PVV1-3×1.5Sh-WR12	3×1.5	3,098×1,549 (UG-387/U)	30	63,79...91,9	60,5...94,28	1,12	0,3	4
PVV1-WR10-WR10	2.54×1.27 (UG-387/U mod)	2,54×1,27 (UG-387/U mod)	20	73,8...112	-	1,10	0,35	5
PVV1-WR12-WR12	3.0988×1.5494 (UG-387/U)	3,0988×1,5494 (UG-387/U)	30	60,5...91,9	-	1,10	0,35	5
PVV1-WR19-WR19	4.775×2.388 (UG-383/U mod)	4,775×2,388 (UG-383/U mod)	40	39,2...59,6	-	1,10	0,35	5

* Electrical parameters outside of guaranteed value can vary from what is listed.

Dimensions

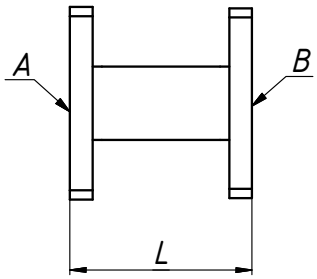

Fig. 1

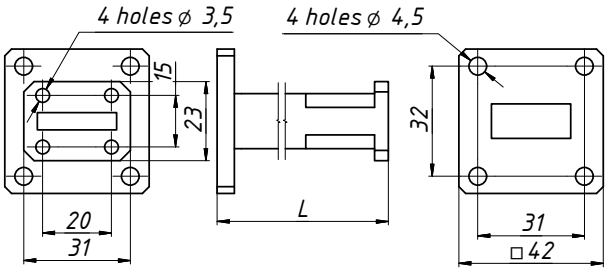

Fig. 2

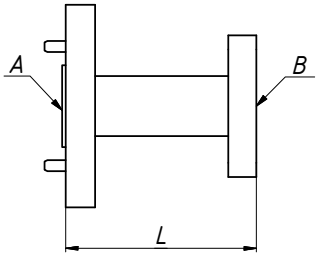

Fig. 3

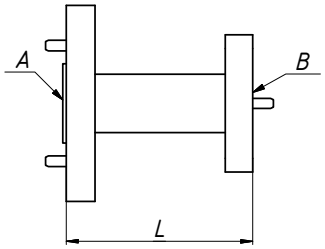

Fig. 4

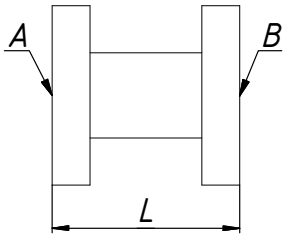

Fig. 5

Ordering example

— PVV5.2 × 2.6-WR22 Waveguide-to-waveguide adapter.