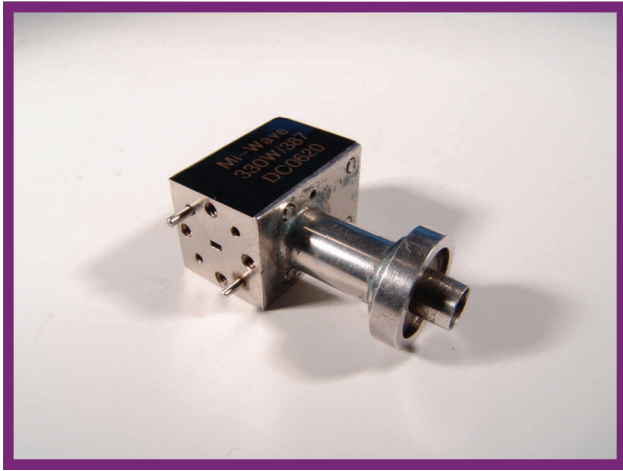


330 Series

Mode Transitions



Features

- Minimum VSWR
- Minimum Insertion Loss
- Optional Pressurized Models Available
- Efficient Conversion from TE₁₀ Mode Rectangular Waveguide to TE₀₁ Mode Circular Waveguide

Ordering Information

330 ___ - ___ - XXX / ___
| | | |
A B C D

- A) RF Band Designator
- B) Three Digit Pipe Inside Diameter (See Appendix L)
- C) Circular Waveguide Flange: Male (M) or Female (F)
- D) Rectangular Waveguide Flange (See Appendix A)

Description 330 Series Mode Transitions

Mi-Wave's 330 Series TE₀₁ mode transitions are available for operation from 18.0 to 140.0 GHz. These reciprocal devices have a standard rectangular TE₁₀ mode waveguide input and a circular TE₀₁ mode output. Because of the different frequency ranges of circular TE₀₁ mode waveguide, it is possible for a standard sized rectangular waveguide input to have one of several different circular waveguide size outputs.

The 330 series circular mode waveguide features low VSWR and insertion loss. The flanges used for circular waveguide output are **Mi-Wave's** standard male/female type. For maximum mode purity, filtering is recommended for all TE₀₁ propagation (please refer to Appendix L).

Applications

The 330 series rectangular-to-circular waveguide transitions are useful in millimeter wave radar systems or laboratory setups where long transmission lines are required. These transitions will provide efficient conversion from the TE₁₀ rectangular waveguide mode to the TE₀₁ circular waveguide mode for high-power, low-loss transmission.

Please specify center frequency at time of order.

For Example: 330A-M-688/599 is a mode transition in A-band with a UG/599/U flange and an 0.688 inside diameter circular waveguide with a male circular flange.

Please Note: Due to the non-standardization of this product line, we recommend that you contact **Mi-Wave** for more specific information about your requirements.

Mi-Wave

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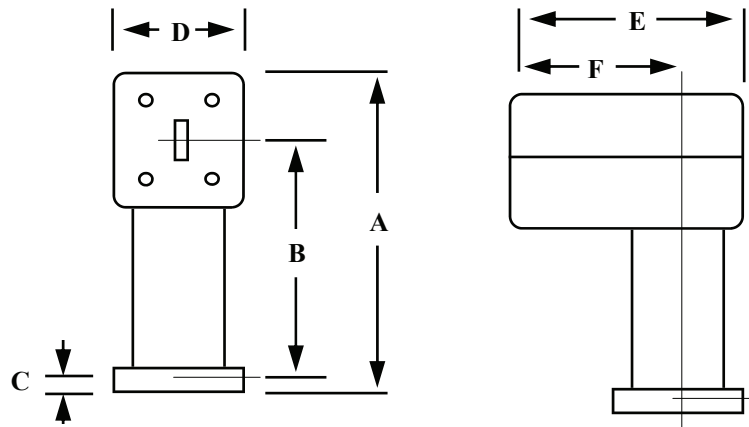
330 Series

Mode Transitions

Technical Specifications

Model Number	330KU	330K	330A	330B	330U	330V	330E	330W	330F
Frequency Band (GHz)	12.4-18.0	18.0-26.5	26.5-40.0	33.0-50.0	40.0-60.0	50.0-75.0	60.0-90.0	75.0-110.0	90.0-140.0
Insertion Loss TE ₀₁ (dB) Max. ¹	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.8
VSWR Max.	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.50	1.60
Bandwidth	6%	6%	6%	6%	5%	5%	4%	4%	3%
Average Power (Watts) ²	4000	2000	1000	1000	600	400	200	100	50
Peak Power (kW) ²	20	10	5	4	3	2	1	0.5	0.2
Weight (oz) ³	40	30	25	25	25	10	5	5	4

1. Loss measured using two 330 series and 340 series mode filters.
2. Estimated
3. Average: Weight varies with circular waveguide size and flange configuration



Dimensional Specifications

Model No.	A		B		C		D		E		F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
330KU	5.17	131.3	4.46	113.3	.267	6.78	2.00	50.80	5.14	130.6	2.75	130.6
330K	3.50	88.9	2.56	65.02	.267	6.78	1.25	31.75	*		*	
330A,B,U	3.62	91.95	2.79	70.87	.267	6.78	1.12	28.45	2.25	57.15	1.30	33.02
330V	2.00	50.80	1.41	35.81	.211	5.36	.75	19.05	1.16	29.46	.59	14.99
330E, W	1.98	50.29	1.39	35.31	.211	5.36	.75	19.05	1.16	29.46	.59	14.99
330F	1.98	50.29	1.39	35.31	.211	5.36	.75	19.05	1.16	29.46	.59	14.99

* Varies Per Frequency Range

Mi-Wave

Millimeter Wave Products, Inc.

* Dimension Varies

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