

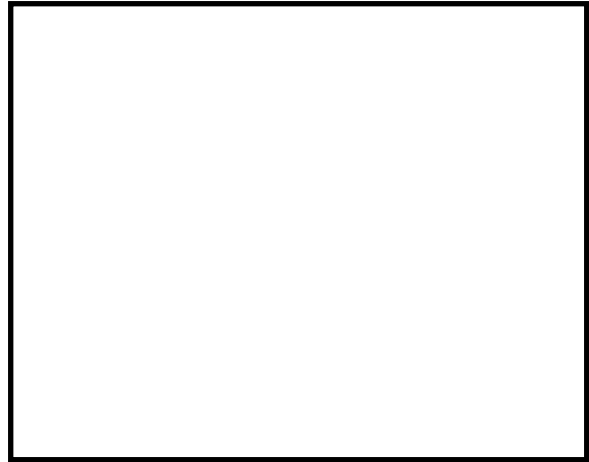
Rectangular-to-Circular Waveguide Transitions

FEATURES:

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

APPLICATIONS:

- ❖ Radar Systems
- ❖ Test Setup



DESCRIPTION:

CRC Series

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

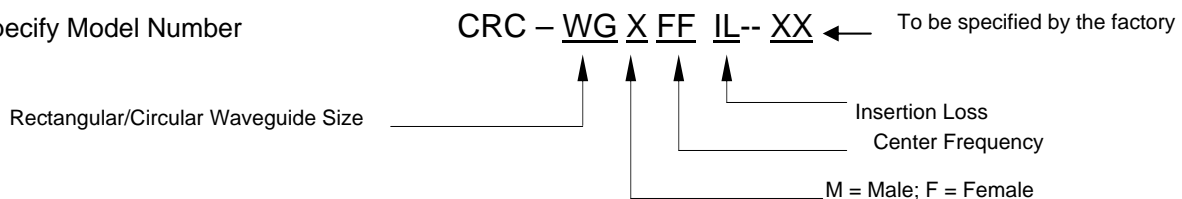
SPECIFICATIONS:

| Waveguide Band | Ku | K | Ka | Q | U | V | E | W | F |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| Waveguide Size | WR-62 | WR-42 | WR-28 | WR-22 | WR-19 | WR-15 | WR-12 | WR-10 | WR-8 |
| Frequency Range (GHz) | 12.4 to 18.0 | 18.0 to 26.5 | 26.5 to 40.0 | 33.0 to 50.0 | 40.0 to 60.0 | 50.0 to 75.0 | 60.0 to 90.0 | 75.0 to 110.0 | 90.0 to 140.0 |
| Insertion Loss TE ₀₁ (dB) Max. | 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) ¹ | 4000 | 2000 | 1000 | 1000 | 600 | 400 | 200 | 100 | 50 |
| Peak Power (kW) ¹ | 20 | 10 | 5 | 4 | 3 | 2 | 1 | 0.5 | 0.2 |
| Weight (oz) ² | 40 | 30 | 25 | 25 | 25 | 10 | 5 | 5 | 4 |

Notes: 1. Estimated 2. Average: Weight varies with circular waveguide size and flange configuration.

HOW TO ORDER:

Specify Model Number



Example: To order WR-15 waveguide mode with male waveguide output, a frequency band of 50-55GHz, and an insertion loss of 0.5db, specify CRC-1515M5505-XX.

CERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE