# Direct-Reading Precision Attenuators

## FEATURES

- Low VSWR
- Direct Reading
- Low Insertion Loss
- Anti-Backlash Drive
- Negligible Phase Shift
- Precision Construction
- Frequency Independent

**CDA Series**

## APPLICATIONS

- Test bench
- Instrumentation

## DESCRIPTION

**CernexWave's CDA** series direct-reading precision attenuators provide 0 to 50 dB of calibrated attenuation by rotation of a resistive vane mounted in a circular waveguide section. These units are often referred to as "precision rotary vane attenuators."

## SPECIFICATIONS

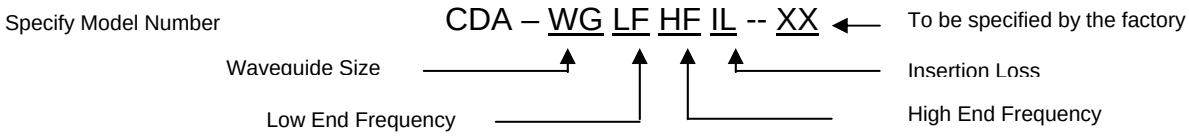
| Waveguide Band | - | X | - | Ku | K | Ka | Q | U | V | E | W | F | D | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Waveguide Size | WR-137* | WR-90 | WR-75* | WR-62 | WR-42 | WR-28 | WR-22 | WR-19 | WR-15 | WR-12 | WR-10 | WR-8 | WR-6 | WR-5 |
| Frequency Range (GHz) | 5.85 to 8.2 | 8.2 to 12.4 | 10 to 15 | 12.4 to 18.0 | 18 to 26.5 | 26.5 to 40 | 33 to 50 | 40 to 60 | 50 to 75 | 60 to 90 | 75 to 110 | 90 to 140 | 110 to 170 | 140 to 220 |
| Insertion Loss (dB) Typ | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 | 1.5 | 1.8 |
| VSWR Typ | 1.2 | 1.15 | 1.2 | 1.3 | 1.3 | 1.15 | 1.15 | 1.15 | 1.20 | 1.20 | 1.20 | 1.25 | 1.25 | 1.25 |
| Average Power (Watts) | 5.0 | 1.0 | 5.0 | 1.0 | 1.0 | 0.5 | 0.5 | 0.4 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 |

**The following specifications are common to all bands.**

| Description | Specification | |
|---|---|---|
| Attenuation Range | 0 dB to 50 dB (Above Residual Attenuation) over entire waveguide band | |
| Accuracy | 0.1 dB or 4% typical of reading, whichever is greater | |
| Scale Length | 21 inches | |
| Scale Increments | 0 dB to 0.1dB – 0.01 dB<br>0.1 dB to 1.0 dB – 0.05 dB<br>1.0 dB to 10.0 dB – 0.10 dB<br>10.0 dB to 20.0 dB – 0.20 dB | 20.0 dB to 30.0 dB – 0.5 dB<br>30.0 dB to 50.0 dB – 1.0 dB<br>Max Setting 50 dB Typical |
| Phase Shift vs. Attenuation | Negligible | |

*WR-137 and WR-75 Attenuation Range: 0 to 50dB Min

## HOW TO ORDER:




**Example:** To order WR-15 Direct reading precision attenuator, specify CDA-5075-XX.

ERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE