

## Bidirectional Couplers (Waveguide)

### FEATURES:

- ❖ Rugged construction
- ❖ High directivity
- ❖ Accurate Coupling
- ❖ Full Waveguide Bandwidth
- ❖ 26.5 – 110 GHz

### APPLICATIONS:

- ❖ Test equipment
- ❖ Subsystems
- ❖ Power sampling
- ❖ For balanced mixer work



**CBC Series**

### DESCRIPTION:

**Cernex CBC Series** multi-hole bidirectional couplers are offered for the frequency range of 26.5 to 110 GHz in six waveguide bands. The standard coupling levels are 3, 6, 10, 20, 30 and 40 dB with full waveguide operational bandwidth. The high directivity is achieved via low VSWR built-in termination. The couplers are typically used for power sampling or frequency monitoring with minimum signal loss on the main transmitting path. The multi-hole couplers are especially used in the test setups where power reflection measurement is required.

### SPECIFICATIONS:

#### WAVEGUIDE:

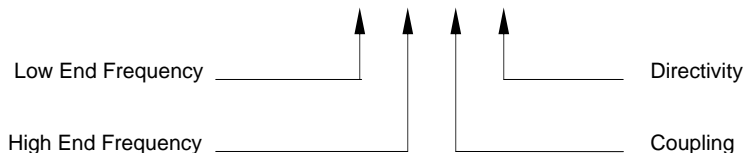
Waveguide Band	Ka	Q	U	V	E	W
Frequency Range (GHz)	26.5 to 40.0	33.0 to 50.0	40.0 to 60.0	50.0 to 75.0	60.0 to 90.0	75.0 to 110.0
Waveguide Size	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Coupling (dB, Typical)	3, 6, 10, 20, 30, 40					
Coupling Variation (dB)	±0.7	±0.7	±0.8	±1.0	±1.0	±1.0
Coupling Accuracy (dB)	±1.0	±1.0	±1.2	±1.5	±1.5	±1.5
Directivity (dB) Typical	30	30	30	30	30	30
Main Line VSWR	1.05	1.05	1.10	1.10	1.10	1.10
Secondary Line VSWR	1.15	1.15	1.20	1.20	1.20	1.20

Contact factory for other waveguide size or coupling level needs.

### HOW TO ORDER:

Specify Model Number

CBC- LF HF CC DD - XX ← To be specified by the factory



**Example:** To order a coupler with F1 at 33GHz and F2 at 50 GHz with coupler level of 20dB and a 30dB directivity, specify CBC-33502015-XX.

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