CERNEX, Inc.

Crossguide Directional Couplers

FEATURES:

- Rugged low cost construction
- Moderate performance
- Low insertion loss
- Low cost

APPLICATIONS:

- Test equipment
- Subsystems
- Power sampling

CCC Series

DESCRIPTION:

CCC Series crossguide directional couplers are offered for the frequency range of 18 to 110 GHz in seven waveguide bands. The standard coupling level is 20 dB with moderate operation bandwidth and directivity. The couplers are typically used for power sampling or frequency monitoring with minimum signal loss on the main transmitting path. The crossguide couplers have a similar system function while delivering a much shorter insertion length and lower insertion loss compared to their counterpart, multi-hole directional couplers. Because of its unique features, these directional couplers are ideal candidates for system integration.

SPECIFICATIONS:

Waveguide Band	K	Ka	Q	U	V	E	W
Frequency Range (GHz)	18 to 26.5	26.5 to 40	33.0 to 50	40 to 60	50 to 75	60 to 90	75 to 110
Waveguide Size	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Bandwidth (Typical)	6	8	10	12	15	18	20
Coupling Level (dB @ Fo, Typical)	15 to 30	15 to 30	15 to 30	15 to 30	15 to 30	15 to 30	15 to 30
Coupling Flatness (dB, Maximum)	± 1.5	± 1.5	± 1.6	± 1.6	± 1.6	± 1.8	± 1.8
Insertion Loss (dB, Maximum)	0.5	0.5	0.7	0.7	0.8	1.0	1.0
Directivity (dB, Typical)	16	16	16	15	15	15	15
Main Line VSWR (Maximum)	1.2:1	1.2:1	1.2:1	1.2:1	1.2:1	1.25:1	1.25:1
Secondary Line VSWR (Maximum)	1.2:1	1.2:1	1.2:1	1.2:1	1.2:1	1.25:1	1.3:1

Contact factory for other frequency bands,

HOW TO ORDER:

Specify Model Number

CCC-LF HF CC DD –XX ← To be determined by the factory

Low End

High End Frequency

Directivity

Coupling

Example: To order a WR42 crossguide coupler with a frequency band of 18-26.5Ghz, 20 dB coupling level, a 15 dB minimum directivity, specify CCC-18262015-XX.

CERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE