CERNEX, Inc.

Single and Triple Hybrid Rings

FEATURES:

- Low VSWR
- High Isolation
- Minimum Size
- High Reliability
- Equal Power Split
- Low Insertion Loss
- Rugged Construction

APPLICATIONS:

- Precision Power Splitting
- Precision Phase Insertion

CHR Series

DESCRIPTION:

Cernex's CHR series hybrid rings are four-port, inherently matched 3dB power splitting devices. Available in standard waveguide sizes from 18.0 to 220.0 GHz, these units are capable of both in-phase and out-of-phase splitting.

SPECIFICATIONS:

Single and Triple Hybrid Rings:

Waveguide Band	K	Ka	Q	U	V	E	W	F	D	G
Waveguide Size	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10	WR-8	WR-7	WR-5
Frequency Range (GHz)	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	110.0 to 170.0	140.0 to 220.0
Isolation (dB) Max.	20	20	20	20	20	20	20	20	20	20
Insertion Loss (dB) Max.	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.8	0.8
Power Imbalance Max. (dB)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
VSWR Max.	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.30
Bandwidth (%)	5	5	5	5	5	5	5	5	5	4

PORT CONFIGURATIONS

Input	Power Split	Phase Relation
1	2,4	180 degrees out
2	1,3	In-phase
3	2,4	In-phase
4	1,3	180 degrees out

HOW TO ORDER:

Specify Model Number

CHR – LF HF IL IS X-- XX ← To be specified by the factory

- LF: Low End Frequency
- HF: High End Frequency
- IL: Insertion Loss
- IS: Isolation
- X: S for Single, T for Triple

Example: To order WR-15 Triple Hybrid Ring, specify CHR-50750520T-XX.

CERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE