



## 3dB Hybrid Couplers (Coaxial)

### FEATURES:

- ❖ Low VSWR
- ❖ High Directivity
- ❖ High Power capability
- ❖ Low Cost

### APPLICATIONS:

- ❖ 3G Communication system
- ❖ Radar
- ❖ Indoor distribution system



**CHC Series**

### DESCRIPTION:

**Cernex CHC Series** 3dB Hybrid couplers are offered for the frequency range of 0.5 to 40 GHz. The standard coupling levels are 3, 6, 10, 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:

**90°**

Model Number	Frequency Range (MHz)	Insertion Loss (dB) Max.	Coupling (dB)	Isolation (dB) Min.	Power Avg (W) Max.	VSWR Max.	Connector Type	Case Type LXWXH (mm)
CHCU2U4U322T	200-400	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHCU2U5U322T	250-500	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHCU3U7U322T	350-700	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHCU3U5U322T	380-520	0.3	3±1.0	22	100	1.25:1	N-F	*
CHCU4U8U322T	400-800	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHCU4U9U322T	450-900	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHCU501U322T	500-1000	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHCU5070119K	500-7000	1.3	3±1.0	19	20	1.30:1	SMA-F	207x32x13
CHCU701U322T	750-1500	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHCU8U9U425S	800-960	0.4	3±1.0	25	150	1.2:1	N-F	144x62x32
CHCU801U322T	800-1000	0.3	3±1.0	22	100	1.25:1	N-F	*
CHCU8020323H	800-2500	3.5	3±0.5	23	150	1.2:1	N-F	*
CHCU802U322T	800-2500	0.3	3±1.0	22	100	1.3:1	N-F	*
CHCU803U820T	800-3000	0.8	3±1.0	20	100	1.3:1	SMA-F	*
CHCU8U80320S	870-880	3.5	3±1.0	20	100	1.3:1	SMA	95x75x25
CHCU9U90320S	935-960							
CHC0102U322T	1000-2000	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHC0104U820T	1000-4000	0.8	3±1.0	20	100	1.3:1	SMA-F	*
CHC01120120K	1000-12400	1.4	3±1.0	20	20	1.30:1	SMA-F	118x32x13
CHC01180217K	1000-18000	2.0	3±1.0	17	20	1.35:1	SMA-F	119x32x13
CHC0103U322T	1500-3000	0.3	3±1.0	22	100	1.2:1	SMA-F	*



## 3dB Hybrid Couplers (Coaxial)

Model Number	Frequency Range (MHz)	Insertion Loss (dB) Max.	Coupling (dB)	Isolation (dB) Min.	Power Avg (W) Max.	VSWR Max.	Connector Type	Case Type LXWXH (mm)
CHC0102U322T	1700-2500	0.3	3±1.0	22	120	1.25:1	N-F	63x40x23
CHC01010320S	1805-1880	3.5	3±1.0	20	100	1.3:1	SMA	95x56x33
CHC01010323S	1805-1880	3.2	3±1.0	23	250	1.15:1	N-F	84x62x32
CHC01010325S	1880-1920	3.2	3±1.0	25	100	1.15:1	N-F	60x60x24
CHC0204U322T	2000-4000	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHC02080118T	2000-8000	1.0	3±1.0	18	100	1.35:1	SMA-F	*
CHC0208U619K	2000-8000	0.65	3±1.0	19	20	1.25:1	SMA-F	72x28x10
CHC02180115T	2000-18000	1.8	3±1.0	15	100	1.6:1	SMA-F	*
CHC02180117K	2000-18000	1.4	3±1.0	17	20	1.35:1	SMA-F	72x28x13
CHC0205U322T	2600-5200	0.3	3±1.0	22	100	1.2:1	SMA-F	*
CHC0408U318T	4000-8000	0.35	3±1.0	18	100	1.35:1	SMA-F	*
CHC04180115T	4000-18000	1.6	3±1.0	15	100	1.6:1	SMA-F	*
CHC04050320H	4700-5300	3.5	3±0.5	20	100	1.25:1	SMA-F	*
CHC06180115T	6000-18000	1.4	3±1.0	15	30	1.6:1	SMA-F	*
CHC06200114K	6000-20000	1.0	3±1.0	14	20	1.45:1	SMA-F	32x22x11
CHC10260115K	10000-26500	1.3	3±1.0	15	20	1.61:1	K-F	26X16X13
CHC10400212K	10000-40000	2.0	3±1.0	12	20	1.80:1	K-F	26x16x13

OTHER FREQUENCIES AND DIVIDERS ARE ALSO AVAILABLE

- CONSULT THE FACTORY

## 90° DROP-IN

Model Number	Frequency Range (MHz)	Insertion Loss (dB) Max.	Coupling (dB)	Isolation (dB) Min.	Power Avg (W) Max.	VSWR Max.	Description	Case Type LXWXH (mm)
CHCV3V8U616T-D	30-88	0.60	3±1.0	16	100	1:301	2-way	*
CHCV5U1U323T-D	50-110	0.30	3±1.0	23	100	1:20:1	2-way	*
CHCU1U2U318T-D	100-200	0.30	3±1.0	18	100	1.20:1	2-way	*
CHCU1U2U320T-D	100-200	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU1U1U320T-D	108-174	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU1U2U320T-D	190-270	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU2U4U320T-D	200-400	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU2U5U320T-D	250-500	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU2U4U320T-D	225-400	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU2U5U320T-D	225-512	0.30	3±1.0	20	100	1.20:1	2-way	*



## 3dB Hybrid Couplers (Coaxial)

Model Number	Frequency Range (MHz)	Insertion Loss (dB) Max.	Coupling (dB)	Isolation (dB) Min.	Power Avg (W) Max.	VSWR Max.	Description	Case Type LXWXH (mm)
CHCU3U5U320T-D	380-512	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU4U8U320T-D	400-800	0.30	3±1.0	20	100	1.20:1	2-way	*
CHCU501U320T-D	500-1000	0.3	3±1.0	20	100	1.2:1	2-way	*
CHCU701U318T-D	750-1500	0.30	3±1.0	18	100	1.25:1	2-way	*
CHCU901U318T-D	950-1225	0.30	3±1.0	18	100	1.25:1	2-way	*
CHCU901U620T-D	965-1565	0.60	3±1.0	20	100	1.20:1	4-way	*
CHC0102U318T-D	1000-2000	0.3	3±1.0	18	100	1.25:1	2-way	*
CHC0101U320T-D	1200-1400	0.30	3±1.0	20	100	1.25:1	2-way	*
CHC0103U318T-D	1500-3000	0.35	3±1.0	18	100	1.3:1	2-way	*
CHC0103U317T-D	1700-3400	0.35	3±1.0	17	100	1.3:1	2-way	*
CHC0204U317T-D	2000-4000	0.35	3±1.0	17	100	1.3:1	2-way	*
CHC0202U317T-D	2200-2900	0.35	3±1.0	17	100	1.3:1	2-way	*
CHC0303U317T-D	3100-3400	0.35	3±1.0	17	100	1.3:1	2-way	*

## 90° Cavity

Model Number	Frequency Range (MHz)	Insertion Loss (dB) Max.	Coupling (dB)	Isolation (dB) Min.	Power Avg (W) Max.	VSWR Max.	Connector Type	Case Type LXWXH (mm)
CHCU3U5U225T	380-520	0.2	3±1.0	25	100	1.2:1	N-F	*
CHCU801U225T	800-1000	0.2	3±1.0	25	100	1.2:1	N-F	*
CHCU802U222T	800-2500	0.2	3±1.0	22	100	1.3:1	N-F	*
CHC0102U222T	1700-2500	0.2	3±1.0	22	100	1.25:1	N-F	*
CHCU3U5U225T	380-520	0.2	3±1.0	25	100	1.2:1	7/16 type	*
CHCU801U225T	800-1000	0.2	3±1.0	25	100	1.2:1	7/16 type	*
CHCU802U222T	800-2500	0.2	3±1.0	22	100	1.3:1	7/16 type	*
CHC0102U222T	1700-2500	0.2	3±1.0	22	100	1.25:1	7/16 type	*



## 3dB Hybrid Couplers (Coaxial)

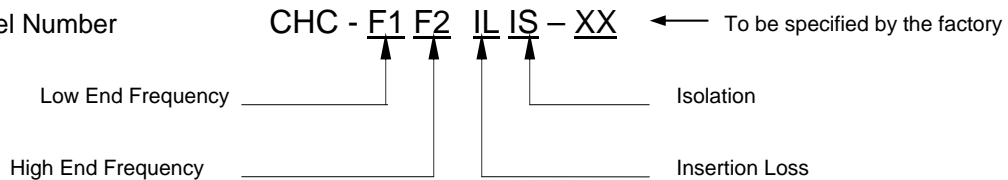
180°

Model Number	Frequency Range (MHz)	Insertion Loss (dB) Max.	Coupling (dB)	Isolation (dB) Min.	Power Avg (W) Max.	VSWR Max.	Connector Type	Case Type LXWXH (mm)
CHCU701U622T	750-1500	0.6	3±1.0	22	10	1.40:1	SMA-F	*
CHC0102U622T	1000-2000	0.6	3±1.0	22	10	1.40:1	SMA-F	*
CHC01120217K	1000-12400	2.10	3±1.0	17	20	1.60:1	SMA-F	140x34x10
CHC01180215K	1000-18000	2.9	3±1.0	15	20	1.70:1	SMA-F	140x34x10
CHC0204U620T	2000-4000	0.6	3±1.0	20	10	1.60:1	SMA-F	*
CHC02080118K	2000-8000	1.1	3±1.0	18	20	1.40:1	SMA-F	83x34x10
CHC02180215K	2000-18000	2.0	3±1.0	15	20	1.70:1	SMA-F	77x34x10
CHC02180214T	2000-18000	2.5	3±1.0	14	10	1.80:1	SMA-F	*
CHC0412U917K	4000-12400	0.9	3±1.0	17	20	1.60:1	SMA-F	48x32x10
CHC04180215T	4000-18000	2.0	3±1.0	15	10	1.80:1	SMA-F	*
CHC06200115K	6000-20000	1.2	3±1.0	15	20	1.70:1	SMA-F	38x32x10
CHC06260114K	6000-26500	1.6	3±1.0	14	20	1.70:1	SMA-F	40x40x10

OTHER FREQUENCIES AND DIVIDERS ARE ALSO AVAILABLE

### HOW TO ORDER:

Specify Model Number



**Example:** To order a 3dB Hybrid coupler with F1 at 1.8GHz and F2 at 1.9 GHz with Insertion Loss of 3.2dB and a Power of 100W, specify CHC-010132100-XX.

CERNEX RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE