

# DIRECTIONAL COUPLERS

## SURFACE-MOUNT



COUPLING (dB)	FREQUENCY RANGE LF-HF (MHz)	COUPLING FLATNESS (dB)	MAINLINE LOSS (dB)			DIRECTIVITY (dB)			VSWR TYP	PACKAGE	PIN-OUT (See Below)	MODEL
			LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN				
9.8 ± 0.8	10 - 2000	± 1.0	1.6/2.2	1.7/2.3	2.4/3.0	18/13	22/15	17/13	1.3:1	152	5	SDC-C7
10.5 ± 1.0	0.5 - 500	± 0.7	1.0/1.4	0.8/1.4	1.0/1.6	28/23	25/20	20/15	1.3:1	133	2	SDC-C1
10.5 ± 0.5	10 - 500	± 0.4	0.8/1.2	0.8/1.3	1.0/1.5	33/23	25/20	20/15	1.3:1	133	2	SDC-C2
10.7 ± 1.0	800 - 1550	± 1.0	2.0/3.5	2.0/3.5	2.0/3.5	20/10	20/10	20/10	1.5:1	147	4	SDC-M-3
11.0 ± 1.0	100 - 1000	± 0.6	1.6/2.0	1.6/2.0	1.6/2.0	20/15	20/15	20/15	1.3:1	147	4	SDC-M-2
11.5 ± 0.5	5 - 1000	± 0.5	1.5/1.8	1.6/1.9	1.7/2.0	25/20	24/18	22/15	1.3:1	133	2	SDC-C3
11.5 ± 0.5	850 - 950	± 0.4	1.6/2.0	1.6/2.0	1.6/2.0	25/20	25/20	25/20	1.2:1	133	2	SDC-C1-1
15.0 ± 0.75	40 - 860	± 0.7	1.0/1.5	---/---	1.0/1.5	18/15	---/---	18/15	1.35:1	133	2	SDC-C4
20.0 ± 1.0	100 - 1000	± 0.75	0.3/0.6	0.5/0.9	0.9/1.5	35/25	28/20	20/13	1.3:1	147	4	SDC-M-1
21.5 ± 1.0	800 - 1000	± 0.6	0.3/0.5	0.3/0.5	0.3/0.5	22/15	22/15	22/15	1.2:1	133	2	SDC-C5♣

## LEADED SURFACE-MOUNT



COUPLING (dB)	FREQUENCY RANGE LF-HF (MHz)	COUPLING FLATNESS (dB)	MAINLINE LOSS (dB)			DIRECTIVITY (dB)			VSWR TYP	PACKAGE	PIN-OUT (See Below)	MODEL
			LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN				
10.0 ± 0.5	30 - 1000	± 0.6	1.5/1.8	1.5/1.8	1.5/1.8	20/15	20/15	20/15	1.5:1	159	1	SCL-4B-75■
10.0 ± 0.5	30 - 1000	± 0.6	1.5/1.8	1.5/1.8	1.5/1.8	20/15	20/15	20/15	1.5:1	134J	1	SCZ-4B-75■
10.5 ± 0.5	10 - 500	± 0.4	0.8/1.2	0.8/1.3	1.0/1.5	33/23	25/20	20/15	1.3:1	134J	1	SCZ-2B
11.5 ± 0.5	5 - 1000	± 0.5	1.5/1.8	1.6/1.9	1.7/2.0	25/20	24/18	22/15	1.3:1	134J	1	SCZ-3B
11.5 ± 0.5	5 - 1000	± 0.5	1.5/1.8	1.6/1.9	1.7/2.0	25/20	24/18	22/15	1.3:1	159	1	SCL-3B
11.5 ± 0.5	850 - 950	± 0.4	1.6/2.0	1.6/2.0	1.6/2.0	25/20	25/20	25/20	1.2:1	134J	1	SCZ-1-1
15.0 ± 0.75	40 - 860	± 0.7	1.0/1.5	---/---	1.0/1.5	18/15	---/---	18/15	1.35:1	134J	1	SCZ-4C
20.0 ± 1.0	50 - 750	± 1.0	0.2/0.5	0.2/0.5	0.2/0.5	20/15	20/15	20/15	1.5:1	159	1	SCL-4D-75■
20.0 ± 1.0	50 - 750	± 1.0	0.2/0.5	0.2/0.5	0.2/0.5	20/15	20/15	20/15	1.5:1	134J	1	SCZ-4D-75■
20.0 ± 1.0	800 - 900	± 0.4	1.0/1.8	1.0/1.8	1.0/1.8	15/10	15/10	15/10	1.3:1	159	3	SCL-6D

Power rating (all models) = 1 Watt, max

■ 75 Ohm Models

Impedance, unless otherwise noted is 50 ohms.

♣ (UB) - Denotes full bandwidth specification

For pin location and package outline drawings, see back pages.

LB=LF to 10 L F  
MB=10 LF to HF/2  
UB=HF/2 to HF

PIN-OUT TABLE

	IN	OUT	COUPLED	GND	NO CONN.
#1	6	1	4	2,5	3
#2	1	2	3	4,5,6	-
#3	1	2	5	6,4,3	-
#4	1	2	3	-	4
#5	1	2	3	All Other	

# DIRECTIONAL COUPLERS



## THROUGH HOLE (8 Pin Relay)

COUPLING (dB)	FREQUENCY RANGE LF-HF (MHz)	COUPLING FLATNESS (dB)	MAINLINE LOSS (dB)			DIRECTIVITY (dB)			VSWR TYP	PACKAGE	PIN-OUT (See Below)	MODEL
			LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN				
6.0 ± 0.5	10 - 100	± 0.25	1.8/2.0	1.8/2.0	1.8/2.0	30/25	30/25	30/25	1.5:1	102	6	KAP-201
10.5 ± 0.5	1 - 2000	± 1.0	1.2/1.9	1.3/1.9	2.0/2.5	38/25	30/18	22/18	1.3:1	102	6	KBP-2A6***
10.5 ± 0.5	1 - 250	± 0.75	1.1/1.5	---/---	1.1/1.5	30/20	---/---	30/20	2.0:1	102	6	KBP-2A2■
10.5 ± 0.5	250 - 1000	± 0.6	---/---	---/---	1.6/2.0	---/---	---/---	25/15	1.5:1	102	6	KBP-2A4‡
11.0 ± 0.5	5 - 750	± 0.5	1.1/1.6	1.2/1.7	1.6/1.9	35/30	25/20	25/20	1.25:1	102	6	KBP-2B4
11.0 ± 0.75	5 - 1000	± 0.5	1.5/1.8	1.6/1.9	1.7/2.0	40/30	25/20	25/20	1.2:1	102	6	KBP-204
11.5 ± 0.5	0.5 - 500	± 0.6	.85/1.3	.65/1.0	.85/1.3	32/15	32/25	22/15	1.2:1	102	6	KBP-2A1
11.5 ± 0.5	1 - 500	± 0.6	0.9/1.2	0.8/1.2	1.1/1.3	25/20	25/18	23/15	1.2:1	102	6	KBP-203
15.0 ± 0.5	0.01 - 35	± 0.5	0.3/0.6	0.2/0.4	0.3/0.6	38/30	35/25	28/20	1.15:1	102	6	KCP-2B1
15.0 ± 0.75	0.5 - 1000	± 0.7	0.8/1.2	0.6/1.2	1.0/1.5	33/25	25/20	18/15	1.35:1	102	6	KCP-204
19.5 ± 0.5	1 - 150	± 0.75	.35/0.8	.35/0.8	.35/0.8	25/20	25/20	25/20	2.0:1	102	6	KDP-2B2■
19.5 ± 0.5	0.2 - 250	± 0.5	0.2/0.5	0.2/0.4	0.3/0.6	40/28	38/25	32/20	1.2:1	102	6	KDP-202
20.0 ± 0.5	0.5 - 1000	± 0.8	0.2/0.6	0.4/1.0	1.0/1.7	27/20	20/15	20/15	1.3:1	102	6	KDP-204
20.0 ± 1.0	5 - 500	± 0.7	0.2/0.5	0.3/0.8	0.4/1.0	35/25	25/18	20/15	1.3:1	102	6	KDP-203
21.0 ± 0.75	25 - 400	± 0.5	0.2/25	---/---	.35/0.5	25/20	---/---	25/20	1.25:1	102	6	KDP-213*

## THROUGH HOLE (4-Pin Mini Relay)



COUPLING (dB)	FREQUENCY RANGE LF-HF (MHz)	COUPLING FLATNESS (dB)	MAINLINE LOSS (dB)			DIRECTIVITY (dB)			VSWR TYP	PACKAGE	PIN-OUT (See Below)	MODEL
			LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN				
6.0 ± 0.5	10 - 100	± 0.25	1.8/2.0	1.8/2.0	1.8/2.0	30/25	30/25	30/25	1.5:1	106	7	KAP-301
6.3 ± 0.4	10 - 400	± 0.4	2.0/2.4	2.0/2.4	2.0/2.5	36/30	30/25	20/15	1.5:1	106	7	KAP-302
10.5 ± 0.5	1 - 400	± 0.5	0.8/1.0	0.9/1.2	1.0/1.5	30/23	25/20	20/15	1.4:1	106	7	KBP-313
10.5 ± 1.0	0.5 - 500	± 0.7	1.0/1.2	0.8/1.2	1.0/1.3	28/20	25/18	18/15	1.4:1	106	7	KBP-303
11.0 ± 0.5	5 - 1000	± 0.6	1.4/1.8	1.5/1.8	1.6/2.0	35/25	25/20	20/15	1.5:1	106	7	KBP-314
20.0 ± 1.0	5 - 500	± 0.7	0.2/0.5	0.3/0.8	0.4/1.0	35/25	25/18	20/15	1.3:1	106	7	KDP-303

### Notes (Through Hole Models only):

Power rating = 1 Watt, max

\* LB = 25 - 50 MHz, MB = 50 - 300 MHz, UB = 300 - 400 MHz

‡ (UB) - Denotes full bandwidth specification

\*\*\* Input Power = 0.5 Watts Max.

■ 75 Ohm models

For pin location and package outline drawings, see back pages.

PIN-OUT TABLE

	INPUT	OUTPUT	COUPLED	CASE GND	NO CONN
#6	1	4	3	2,5,7,8	6
#7	1	2	4	3	-

LB=LF to 10 LF  
MB=10 LF to HF/2  
UB=HF/2 to HF

# DIRECTIONAL COUPLERS



## COAXIAL CONNECTOR

COUPLING (dB)	FREQUENCY RANGE LF-HF (MHz)	COUPLING FLATNESS (dB)	MAINLINE LOSS (dB)			DIRECTIVITY (dB)			VSWR TYP	PACKAGE	PIN-OUT (See Below)	MODEL
			LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN				
10.0 ± 1.0	2 - 100	± 0.5	0.6/0.8	0.7/0.9	0.8/1.0	36/30	38/30	36/30	1.2:1	110	8	KBK-701*
10.5 ± 0.5	1 - 2000	± 1.0	1.2/1.9	1.3/1.9	2.0/2.5	38/25	30/18	22/18	1.3:1	110	8	KBK-7A6S***
10.5 ± 0.5	1 - 250	± 0.75	0.7/1.0	0.9/1.2	1.0/1.5	35/25	35/20	25/20	1.2:1	110	8	KBK-7A2B ■
11.0 ± 1.0	5 - 1000	± 1.0	1.8/2.0	1.6/2.0	1.4/2.0	32/25	28/23	26/20	1.4:1	110	8	KBK-704*
11.0 ± 0.5	1 - 1000	± 0.5	1.2/1.7	1.2/1.7	1.6/2.0	40/30	25/20	25/20	1.2:1	110	8	KBK-7C4*
11.25 ± 0.5	1 - 500	± 0.6	0.6/0.9	0.7/0.9	0.8/1.0	25/20	32/25	25/20	1.3:1	110	8	KBK-703*
11.5 ± 0.5	10 - 1000	± 0.75	1.4/1.6	1.4/1.7	1.5/1.7	40/30	35/25	28/23	1.5:1	110	8	KBK-705*
15.0 ± 0.5	0.01 - 35	± 0.5	0.3/0.6	0.2/0.4	0.3/0.6	38/30	35/25	28/20	1.15:1	110	8	KCK-7C1*
15.0 ± 1.0	2 - 100	± 0.5	.25/0.4	.25/0.4	.25/0.4	37/30	35/30	33/28	1.09:1	110	8	KCK-701*
15.0 ± 1.0	10 - 500	± 0.75	0.6/0.9	0.6/1.0	.75/1.15	33/25	35/25	30/25	1.3:1	110	8	KCK-703*
15.0 ± 1.0	5 - 1000	± 0.75	0.6/0.9	0.9/1.3	1.2/1.65	30/23	33/23	25/20	1.3:1	110	8	KCK-704*
19.5 ± 0.5	0.2 - 250	± 0.25	0.2/0.4	0.2/0.4	.22/0.6	40/30	40/25	35/20	1.1:1	110	8	KDK-702*
19.8 ± 0.5	1 - 1000	± 1.0	0.3/0.6	.35/0.7	1.2/1.5	35/28	32/25	24/18	1.3:1	110	9	KDK-704*
20.0 ± 1.0	0.5 - 120	± 0.5	.15/.20	.18/.23	.21/.25	40/30	35/30	33/30	1.08:1	110	8	KDK-701*
20.0 ± 1.0	10 - 500	± 0.8	0.2/0.4	0.2/0.6	0.3/0.8	35/30	35/28	35/25	1.2:1	110	8	KDK-703*
20.0 ± 1.0	1 - 1000	± 0.5	0.3/0.6	0.3/0.7	0.9/1.2	35/28	32/25	24/18	1.3:1	110	8	KDK-705*

Power rating (all models) = 1 Watt, max

\* Select female connector suffix: "S" = SMA, "B" = BNC, "N" = Type N, "T" = TNC

\*\*\* Input Power = 0.5 Watts Max.

For pin location and package outline drawings, see back pages.

■ 75 Ohm models

LB=LF to 10 LF  
MB=10 LF to HF/2  
UB=HF/2 to HF

PIN-OUT TABLE

	INPUT	OUTPUT	COUPLED	CASE GND	NO CONN
#8	3	1	2	-	-
#9	2	3	1	-	-