

180° HYBRIDS

Click Package To
View Outline
Drawing



3 - PORT

SURFACE-MOUNT

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
5 - 400	28/23	28/23	25/20	1.1/1.6	1.5/2.0	1.9/2.3	2.0	4.0	4.0	0.3	0.5	0.7	152	2	SMJ-C2
50 - 750	22/17	20/15	18/13	1.5/2.2	1.6/2.4	1.9/2.7	4.0	4.0	4.0	0.5	0.4	0.7	152	2	SMJ-C4
20 - 1000	21/16	17/12	15/10	2.5/3.2	2.2/3.0	2.5/3.2	3.5	5.5	7.5	1.0	0.6	1.0	152	2	SMJ-C5



3 - PORT

LEADED SURFACE-MOUNT

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
2 - 200	25/20	30/20	25/20	1.0/1.3	0.8/1.0	1.0/1.3	1.0	3.0	5.0	0.3	0.3	0.3	159	1	SJL-113



4 - PORT

LEADED SURFACE-MOUNT

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
2 - 200	25/20	30/20	25/20	1.0/1.3	0.8/1.0	1.0/1.3	1.0	3.0	5.0	0.3	0.3	0.3	159	3	SJL-123

Power Rating (All Models) = 1 Watt, max.
Impedance is 50 Ohms

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

PIN-OUT TABLE

	INPUT	0° OUTPUT	180° OUTPUT	ISOLATED*	GROUND
#1	6	4	3	---	1,2,5
#2	3	1	2	---	4,5,6
#3	6	4	3	1	2,5

*Terminate Isolated Port in 50 Ohms
GROUND = Ground externally

180° HYBRIDS



3 - PORT

THROUGH HOLE MOUNT(8-Pin Relay Header)

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
0.01-20	25/20	30/25	27/23	0.5/0.8	0.3/0.5	0.5/0.7	2.0	2.0	2.0	0.2	0.2	0.2	102	1	DJP-201
1-200	35/30	35/25	30/23	.75/1.0	0.5/0.8	.75/1.2	2.0	2.5	4.0	.15	.15	0.3	102	1	DJP-2A2
5-200	30/25	30/25	30/25	1.0/1.2	1.0/1.2	1.0/1.4	2.0	3.0	4.0	0.1	0.2	0.2	102	1	DJP-203
5-400	28/23	28/23	25/20	0.9/1.4	1.2/1.7	1.7/2.0	1.5	3.0	6.0	0.3	0.4	0.5	102	1	DJP-204



3 - PORT

THROUGH HOLE MOUNT(TO-8)

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
0.01-20	25/20	30/25	27/23	0.5/0.8	0.3/0.5	0.5/0.7	2	2	2	0.2	0.2	0.2	122	2	DJP-601
5-200	30/25	30/25	30/25	1.0/1.2	1.0/1.2	1.0/1.4	2	3	4	0.1	0.2	0.2	122	2	DJP-603
5-400	28/23	28/23	25/20	0.9/1.4	1.2/1.7	1.7/2.0	1.5	3	6	0.3	0.4	0.5	122	2	DJP-604



4 - PORT

THROUGH HOLE MOUNT(8 Pin Relay Header)

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
2-200	30/25	28/23	25/20	0.5/0.9	0.7/1.0	0.8/1.2	1	2	3	0.1	0.2	0.3	102	3	DJP-202
2-400	22/18	23/18	20/15	1.4/1.8	1.2/2.0	1.6/2.5	1	3	5	0.1	0.2	0.3	102	3	DJP-205

Power Rating (All Models) = 1 Watt, max
Impedance is 50 Ohms
For pin location and package outline drawings, see back pages.

PIN-OUT TABLE

	INPUT	0° OUTPUT	180° OUTPUT	ISOLATED*	GROUND
#1	1	5	6	---	All other
#2	2	1	4	---	3
#3	1	5	6	2	All other

*Terminate Isolated Port in 50 Ohms
GROUND = Ground externally

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



180° HYBRIDS



3 - PORT

FLAT-PACK

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
5-200	30/25	30/25	30/25	1.0/1.2	1.0/1.2	1.0/1.4	2	3	4	0.1	0.2	0.2	101	1	DJF-103
5-400	28/23	28/23	25/20	0.9/1.4	1.2/1.7	1.7/2.0	1.5	3	6	0.3	0.4	0.5	101	1	DJF-104



4 - PORT

FLAT-PACK

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
2-200	30/25	28/23	25/20	0.5/0.9	0.7/1.0	0.8/1.2	1	2	3	0.1	0.2	0.3	101	2	DJF-102
2-400	22/15	23/18	20/15	1.4/1.8	1.2/2.0	1.6/2.5	1	3	5	0.1	0.2	0.3	101	2	DJF-105

Power Rating (All Models) = 1 Watt, max.

Impedance is 50 Ohms.

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

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

PIN-OUT TABLE

	INPUT	0° OUTPUT	180° OUTPUT	ISOLATED*	GROUND
#1	1	4	8	---	All other
#2	1	4	8	5	All other

*Terminate Isolated Port in 50 Ohms

GROUND = Ground externally

180° HYBRIDS



3 - PORT

COAXIAL CONNECTOR

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
0.01-20	25/20	30/25	27/23	0.5/0.8	0.3/0.5	0.5/0.7	2	2	2	0.2	0.2	0.2	110	1	DJK-701*
5-200	30/25	30/25	30/25	1.0/1.2	1.0/1.2	1.0/1.4	2	3	4	0.1	0.2	0.2	110	1	DJK-703*
5-400	28/23	28/23	25/20	0.9/1.4	1.2/1.7	1.7/2.0	1.5	3	6	0.3	0.4	0.5	110	1	DJK-704*
50 -1000	23/15	20/15	18/12	1.9/2.8	2.3/2.8	2.5/2.8	5	7	10	0.5	0.7	1.0	110	1	DJK-706*



4 - PORT

COAXIAL CONNECTOR

FREQUENCY RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB)			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			PACKAGE	PIN-OUT (See Below)	MODEL
	LB TYP/MIN	MB TYP/MIN	UB TYP/MIN	LB TYP/MAX	MB TYP/MAX	UB TYP/MAX	LB MAX	MB MAX	UB MAX	LB MAX	MB MAX	UB MAX			
2-200	30/25	28/23	25/20	0.5/0.9	0.7/1.0	0.8/1.2	1	2	3	0.1	0.2	0.3	113	2	DJK-702*
2-400	22/18	23/18	20/15	1.4/1.8	1.2/2.0	1.6/2.5	1	3	5	0.1	0.2	0.3	113	2	DJK-705*

*Select Connector Suffix: "B" = BNC, "S" = SMA, "N" = TYPE N, "T" = TNC

Power Rating (All Models) = 1 Watt, max

Impedance is 50 Ohms.

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

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

PIN-OUT TABLE

	INPUT	0° OUTPUT	180° OUTPUT	ISOLATED*	GROUND
#1	2	1	3	-	-
#2	1	2	4	3	-

*Terminate Isolated Port in 50 Ohms

GROUND = Ground externally