

DIRECTIONAL COUPLERS

50 & 75Ω

Surface Mount

6 to 23.5 dB COUPLING 2 MHz to 2600 MHz



ADC



D

MODEL◆ NO.	FREQ. RANGE MHz	COUPLING dB		MAINLINE LOSS ¹ dB						DIRECTIVITY dB						VSWR (:1)	POWER INPUT, W		CASE STYLE	CON- NECTION	PCB Lay- out PL	PRICE \$ ea. Qty. (10-49)	
	f _L -f _U	Nom.	Flatness	L		MP		U		L		MP		U		Typ.	L Max.	MU Max.	Note B				
				Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.								
ADC -6-1R*	5-200	6.2±0.3	±0.3	1.6	2.0	1.7	2.0	1.7	2.1	35	22	25	18	17	13	1.33	.5	.5	C D 542	hz	094	7.95	
ADC -10-1R*	5-900	10.5±0.5	±0.5	0.7	1.2	0.8	1.2	0.9	1.5	40	25	30	20	18	12	1.3	1	1	C D 542	hz	094	7.95	
■ ADC -6-10-75*	20-1000	6.6±0.5	±0.5	2.1	2.8	2.1	2.5	2.2	2.8	15	12	15	12	15	9	1.3	.5	.5	C D 542	kd	042	6.95	
ADC -6-13*	200-1300	6.3±0.5	±0.9			1.8	2.5					17	10			1.3	.5	.5	C D 542	lt	041	6.95	
ADC -8-4-75*	5-1000	7.9±0.5	±0.5	1.55	2.6	1.6	2.2	2.0	2.7	18	14	17	14	16	10	1.2	1	1	C D 542	kd	042	6.95	
ADC -10-4*	5-1000	10.5±0.5	±1.0	0.8	1.3	0.8	1.2	1.0	1.5	40	23	40	20	25	13	1.2	1	1	C D 542	kd	095	6.95	
■ ADC -10-4-75*	5-1000	10.5±0.5	±0.5	0.85	1.4	0.9	1.4	1.0	1.4	40	20	18	12	12	8	1.2	1	1	C D 542	kd	042	6.95	
ADC -12-4-75*	20-1000	12.6±0.5	±0.5	0.8	1.2	0.9	1.3	1.2	1.8	28	20	23	15	17	10	1.2	1	1	C D 542	kd	042	6.95	
ADC -15-4*	5-1000	15.5±0.5	±0.5	0.6	1.0	0.6	1.0	0.8	1.2	23	20	24	20	28	17	1.2	1	1	C D 542	kd	095	6.95	
ADC -15-4-75*	5-1000	15.5±0.5	±0.5	0.7	1.2	0.7	1.0	0.8	1.2	23	18	20	14	16	11	1.2	1	1	C D 542	kd	042	6.95	
■ ADC -16-4-75*	5-1000	16.2±0.5	±0.5	0.7	1.2	0.7	1.0	0.8	1.2	38	25	30	16	18	12	1.15	.5	1	C D 542	kd	042	6.95	
ADC -18-4-75*	20-1000	17.4±0.5	±0.5	0.4	0.8	0.4	1.0	0.5	1.2	17	14	18	14	17	12	1.15	1	1	C D 542	kd	042	6.95	
ADC -20-4*	5-1000	20.0±0.5	±0.8	0.4	0.8	0.5	1.0	0.7	1.3	20	18	21	17	21	15	1.1	1	1	C D 542	kd	095	6.95	
ADC -20-4-75*	5-1000	19.7±0.5	±0.5	0.5	0.8	0.5	1.0	0.6	1.2	22	18	23	15	20	13	1.15	1	1	C D 542	kd	042	6.95	
ADC -20-12*	100-1200	20±0.75	±0.7			0.5	1.1					26	13			1.17	1	1	C D 542	kd	095	6.95	
D 20C	810-960	19.2±1.6	—			0.3	0.5					15	7			1.1	1	(2)	1	C A 531	jn	064	0.99
D 19G	1420-1660	18.2±1.2	—			0.3	0.5					15	10			1.2	1	(2)	1	C A 531	jn	064	0.99
D 18P	1710-1990	18.0±1.8	—			0.3	0.5					15	10			1.2	1	(2)	1	C A 531	jn	064	0.99
D 17I	2300-2600	17.5±1.3	—			0.5	0.8					14	9			1.3	1	(2)	1	C A 531	jn	064	0.99

L = low range [f_L to $10f_L$] M = mid range [$10f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

features

- ADC & TCD, extremely flat bandwide coupling
- ADC low height 0.112" max.
- low insertion loss
- wideband frequency
- TCD & JDC models solder plated leads for strain relief & excellent solderability.

applications

- communications
- cable tv
- level detecting
- signal sampling
- reflective power measurements

NOTES:

- ◆ Aqueous washable. For non-aqueous requirements, LRDC units available in case style Q Q Q 130.
- Denotes 75 ohm models.
- ⊛ When specification for only M range given, specification applies to entire frequency range. JYDC -7-1HP, L=30-200 MHz, U=200-500 MHz; JYDC -23-1HP, L=30-250 MHz, U=250-500 MHz
- * JYDC & TCD models protected under U.S. Patent 6140887; ADC models protected under U.S. Patents 6140887, 6133525
- A. Environmental specifications and re-flow soldering information available in General Information Section.
- B. Units are non-hermetic unless otherwise noted. For details on case dimensions & finishes see "Case Styles & Outline Drawings".
- C. Prices and Specifications subject to change without notice.
- 1. Mainline Loss includes theoretical power loss at coupled port.
- 2. 4W CW when operating with a 2.0:1 maximum VSWR on all ports.

NSN GUIDE

MCL NO. NSN
ADC -10-4 5985-01-483-0465

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JDC



JYDC-BJ1051



JYDC-BJ937



LRDC-J



SCDC



TCD

MODEL NO.	FREQ. RANGE MHz f _L -f _U	COUPLING dB		MAINLINE LOSS dB						DIRECTIVITY dB						VSWR (:1)	POWER INPUT, W		CASE STYLE	CONNECTION	PCB Lay-out PL	PRICE \$ ea. Qty. (10-49)
		Nom.	Flatness	L Typ. Max.	M ^P Typ. Max.	U Typ. Max.	L Typ. Min.	M ^P Typ. Min.	U Typ. Min.	L Typ. Min.	M ^P Typ. Min.	U Typ. Min.	Typ.	L Max.	MJ Max.		Note B					
JDC-6-1	5-400	6.5±0.5	±0.5	1.6	2.0	1.7	2.4	2.0	2.4	35	30	25	20	20	15	1.25	.5	.5	BH292	hz	046	14.95
JDC-10-2	5-750	10.0±0.5	±0.6	1.0	1.5	1.0	1.5	1.0	1.5	20	15	20	17	20	16	1.13	1	1	BH292	hz	046	14.95
JDC-10-4	5-1000	10.5±0.5	±0.6	1.0	1.5	1.0	1.5	1.3	1.8	23	18	23	18	24	15	1.15	1	1	BH292	hz	046	14.95
■ JDC-10-4-75	10-1000	10.5±0.5	±0.5	1.2	1.6	1.4	1.7	1.6	2.0	27	18	25	18	28	15	1.3	1	1	BH292	hz	044	14.95
■ JDC-20-3-75	2-250	19.2±0.5	±0.5	0.4	0.8	0.3	0.7	0.4	0.7	24	16	30	20	20	15	1.1	.5	1	BH292	hz	044	14.95
JDC-20-1W	50-750	19.5±0.5	±0.5			0.5	0.9					22	15			1.2	.5	.5	BH292	hz	046	14.95
■ JDC-20-1W-75	50-750	19.5±0.5	±0.5	0.5	0.9	0.5	0.7	0.5	0.9	25	18	23	15	20	15	1.2	.5	.5	BH292	hz	044	14.95
JDC-20-2	400-900	20.5±1.0	±1.0			0.2	0.6					19	13			1.15	2	2	BH292	hz	046	14.95
JDC-20-5	50-1500	20.5±0.5	±0.75	0.4	0.8	0.5	0.9	1.0	1.5	25	18	22	16	20	13	1.2	.5	.5	BH292	lt	041	17.95
◆ LRDC-10-1J	5-500	10.7±0.5	±0.5	0.9	1.4	0.9	1.4	1.2	1.9	31	25	30	20	25	16	1.2	1	1	Q Q Q 569	cz	087	15.95
◆ LRDC-20-2J	300-1100	20.5±1.0	±1.3			0.25	0.6					22	10			1.2	2	2	Q Q Q 569	cz	087	15.95
◆ LRDC-10-1-75J	5-600	10.7±0.5	±0.5	1.1	1.5	1.0	1.4	1.2	1.8	19	15	21	17	21	16	1.3	1	1	Q Q Q 569	cz	043	11.95
◆ LRDC-10-2-75J	30-1000	10.0±0.5	±0.6	1.0	1.5	1.1	1.5	1.3	1.8	21	17	22	17	19	15	1.3	1	1	Q Q Q 569	cz	043	13.95
◆ LRDC-10-2W-75J	30-1200	10.0±0.5	±0.8	1.0	1.5	1.1	1.6	1.3	2.0	21	17	22	17	18	15	1.3	1	1	Q Q Q 569	cz	043	15.95
◆ LRDC-12-1-75J	5-600	12.2±0.5	±0.6	0.4	0.8	0.5	1.0	0.8	1.5	20	17	21	18	20	12	1.3	1	1	Q Q Q 569	cz	043	11.95
SCDC-11-2	500-1100	11.3±0.5	±0.6			1.1	1.8					20	10			1.4	2	2	YY161	cx	096	11.95
Qty.(25)																						
◆ TC D-9-1W*	5-1000	8.9±0.5	±0.6	1.2	2.1	1.2	1.8	1.5	2.1	21	17	17	10	13	—	1.30	0.5	1	DB714	mm	009	1.49
◆ TC D-9-1W-75*	1000-2000	8.3±0.5	±0.6	—	—	2.5	—	—	—	—	—	10	—	—	—	1.60	—	1	DB714	mm	010	1.49
	5-1000	8.9±0.5	±0.6	1.3	2.1	1.3	2.0	1.8	2.4	21	17	15	—	10	—	1.30	0.5	1				
	1000-2000	8.5±0.5	±0.6	—	—	2.5	—	—	—	—	—	10	—	—	—	1.60	—	1				
◆ TC D-10-1W*	10-750	10.3±0.5	±0.8	1.3	2.1	1.2	1.6	1.4	2.0	22	17	18	14	15	—	1.30	0.5	1	DB714	mm	009	1.49
◆ TC D-10-1W-75*	10-750	10.5±0.5	±0.7	1.6	2.1	1.4	1.9	1.5	2.0	22	17	18	14	14	—	1.30	0.5	1	DB714	mm	010	1.49
◆ TC D-13-4*	5-1000	13.0±0.5	±0.6	0.7	1.3	0.7	1.3	0.8	1.5	21	17	18	12	15	—	1.20	0.5	1	DB714	mm	009	1.49
◆ TC D-13-4-75*	5-1000	13.0±0.5	±0.9	1.0	1.8	0.8	1.3	1.1	1.5	22	17	15	—	12	—	1.20	0.5	1	DB714	mm	010	1.49
◆ TC D-18-4*	5-1000	17.9±0.5	±0.6	0.7	1.3	0.7	1.1	1.0	1.4	22	11	20	15	18	—	1.20	1	1	DB714	mm	009	1.49
◆ TC D-18-4-75*	10-1000	18.0±0.5	±0.9	0.9	1.3	0.7	1.2	0.8	1.3	20	15	22	15	18	—	1.20	1	1	DB714	mm	010	1.49
◆ TC D-20-4*	5-1000	20.0±0.5	±0.8	0.3	0.9	0.4	0.8	0.7	1.1	20	11	21	15	15	—	1.20	1	1	DB714	mm	009	1.49
L = low range [f _L to 10f _L] M = mid range [10 f _L to f _U /2] U = upper range [f _U /2 to f _U]																						

L = low range [f_L to $10f_L$]

M = mid range [$10f_L$ to $f_U/2$]

U = upper range [$f_U/2$ to f_U]

High Power

NEW JYDC-7-1HP*	30-500	7.3±0.4	±0.2	1.3	1.6	NEW	—	—	1.4	1.9	30	22	—	—	20	15	1.25	5	5	BJ1051	ph	157	17.95
NEW JYDC-23-1HP*	30-500	23.5±1.0	±1.2	0.1	0.3	NEW	—	—	0.2	0.4	26	20	—	—	23	19	1.10	10	10	BJ937	pz	166	22.95

pin connections

See case style outline drawing for pin locations

PORT	cx	cz	hz	jn	kd**	lt**	mm**	ph**	pz**
INPUT	1	6	1	4	1	1	3	1	1
OUTPUT	2	1	6	6	6	6	4	8	7
COUPLED (forward)	5	4	3	3	3	3	1	3	3
NOT USED (isolate)	3,6	3	4	—	5	—	5	4,5	—
TERMINATION	—	—	—	—	4	4	6	6	5
GND	4,7,8	2,5	2,5	1,2,5	2	2,5	2	2,7	2,4,6,8
DEMO BOARD	TB-35	TB-31(50Ω) TB-34(75Ω)	TB-32(ADC) TB-185(JDC) 50Ω TB-33(JDC) 75Ω	TB-13	TB-05(50Ω) TB-08(75Ω)	TB-176	TB-71(50Ω) TB-72(75Ω)	TB-282	TB-194

**external resistor required



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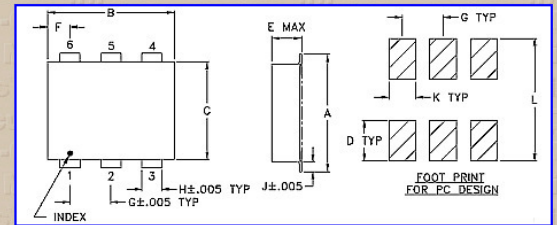
CD542^(inch mm)

A	B	C	D	E	F	G	H	J	
.272	.310	.220	.100	.112	.055	.100	.030	.026	
6.909	7.874	5.588	2.540	2.845	1.397	2.540	0.762	0.660	
K	L	M	N	P	Q	R	S	T	wt. grams.
.065	.300								0.200
1.651	7.620								

Tolerance: x ± .1 .xx ± .03 .xxx ± .015 inch.

Notes:

- Material and Finish:
 - Case material: plastic.
 - Lead Finish: For RoHS Models: - Tin Plate over Nickel or Tin-Silver-Nickel plate.
 - For Non-RoHS Models: - Tin-Lead Plate or Tin Plate or Tin-silver-Nickel plate.
- Packaging:



UNIT ORIENTATION



Packaging information:

Tape Width (mm): 16.0
Reel Size (inches): 13.0
Device Cavity Pitch (mm): 12.0
Devices Per Reel: 1000