

# Directional Coupler

## ADC-10-4+ ADC-10-4

50Ω

5 to 1000 MHz

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-54151736  
 勝特力电子(深圳) 86-755-83298787  
 Http://www.100y.com.tw



CASE STYLE: CD542

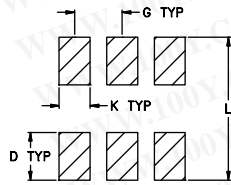
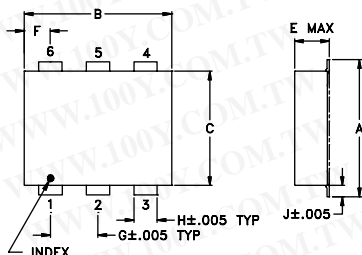
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

### Pin Connections

INPUT	1
OUTPUT	6
COUPLED	3
GROUND	2
50Ω TERM EXTERNAL	4
ISOLATE (DONOT USE)	5

### Outline Drawing



FOOT PRINT FOR PC DESIGN

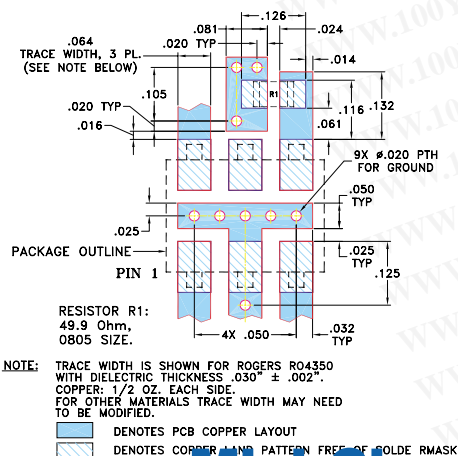
### Outline Dimensions (inch mm)

A	B	C	D	E	F	G
.280	.310	.220	.100	.112	.055	.100
7.11	7.87	5.59	2.54	2.84	1.40	2.54

H	J	K	L	wt
.030	.030	.065	.300	grams
0.76	0.76	1.65	7.62	0.20

### Demo Board MCL P/N: TB-05 Suggested PCB Layout (PL-095)



### Features

- wideband, 5-1000 MHz
- low insertion loss, 0.8 dB typ.
- high directivity, 40 dB typ.
- aqueous washable
- protected by US Patents 6,133,525 & 6,140,887

### Applications

- communications
- cable tv

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

See our web site for RoHS Compliance methodologies and qualifications.

### Directional Coupler Electrical Specifications

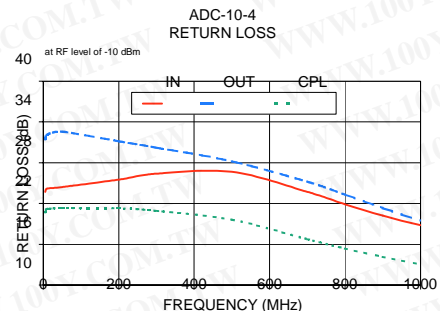
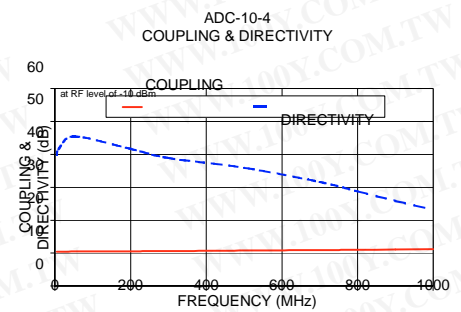
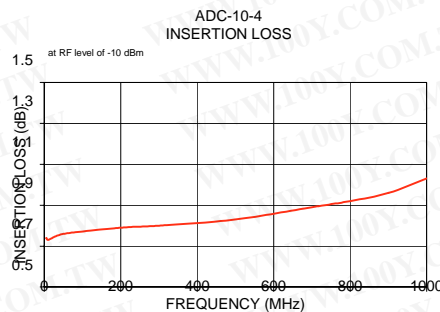
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)			DIRECTIVITY (dB)			VSWR (:1)	POWER INPUT, W							
	Nom.	Flatness	L	M	U	L	M	U		L	MU						
$f_L$ - $f_U$			Typ. Max.	Typ. Max.	Typ. Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ.	Max.	Max.						
5-1000	10.5±0.5	±1.0	0.8	1.3	0.8	1.2	1.0	1.5	40	23	40	20	25	13	1.2	1	1

L= 5-50 MHz M=50-500 MHz U= 500-1000 MHz

1. Mainline loss includes theoretical power loss at coupled port.

### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Coupling (dB)	Directivity (dB)	Return Loss (dB)		
	In-Out	In-Cpl			In	Out	Cpl
5.00	0.74	10.44	39.83	23.72	31.43	20.70	
10.00	0.73	10.43	41.65	24.20	32.13	21.20	
50.00	0.76	10.48	45.47	24.43	32.57	21.30	
200.00	0.79	10.55	41.69	25.51	31.16	21.29	
300.00	0.80	10.60	38.88	26.39	30.23	20.91	
500.00	0.83	10.76	35.93	26.67	28.20	19.60	
700.00	0.89	10.92	31.62	23.71	25.20	16.74	
800.00	0.92	11.00	28.76	21.88	23.31	15.37	
900.00	0.96	11.12	25.83	20.21	21.32	14.15	
1000.00	1.03	11.25	23.20	18.78	19.45	13.03	



### electrical schematic

