

Surface Mount Directional Coupler

50Ω 5 to 1000 MHz

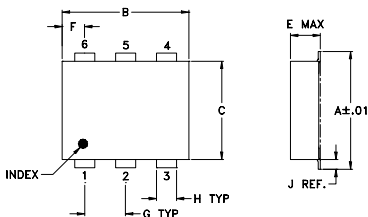
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are exceeded.	

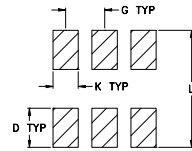
Pin Connections

INPUT	1
OUTPUT	6
COUPLED	3
GROUND	2
50Ω TERM EXTERNAL	4
ISOLATE (DO NOT USE)	5

Outline Drawing



PCB Land Pattern

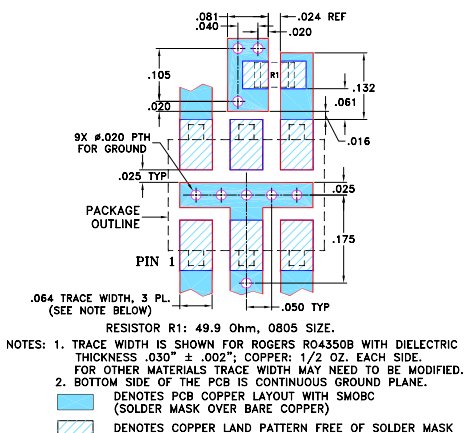


Suggested Layout,
Tolerance to be within ±0.02

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54
H	J	K	L		wt	
.030	.026	.065	.300		grams	
0.76	0.66	1.65	7.62		0.20	

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

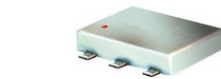


Features

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

Applications

- communications
- cable tv



CASE STYLE: CD542

PRICE:\$6.95 ea. QTY (10-49)

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

The +Suffix identifies RoHS Compliance. See our web site
for RoHS Compliance methodologies and qualifications.

Directional Coupler Electrical Specifications

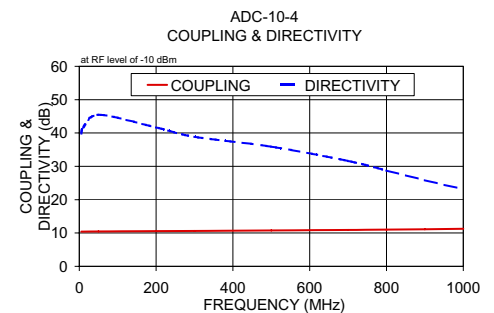
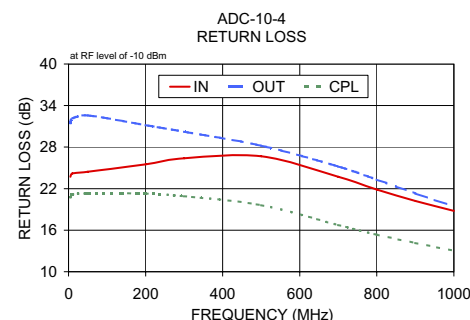
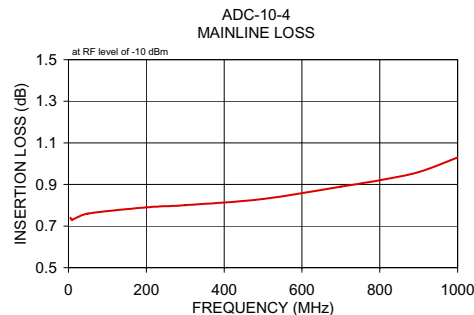
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)			DIRECTIVITY (dB)			VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	L Typ. Max.	M Typ. Max.	U Typ. Max.	L Typ. Min.	M Typ. Min.	U Typ. Min.		L Max.	MU Max.
5-1000	10.5±0.5	±1.0	0.8 1.3	0.8 1.2	1.0 1.5	40 23	40 20	25 13	1.2	1	1

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

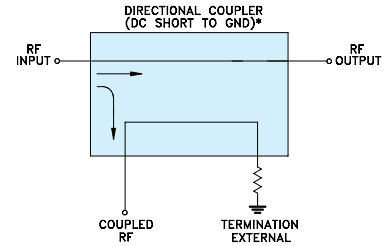
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				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



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL
COUPLER WITH INTERNAL TRANSFORMER(S) AND
EXTERNAL TERMINATION.

For detailed performance specs
& shipping online see web site

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