

Directional Coupler

ADC-25-4-75+

75Ω

5 to 1000 MHz



CASE STYLE: CD636
PRICE:\$6.95 ea. QTY (10)

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200, 500
13"	1000

Maximum Ratings

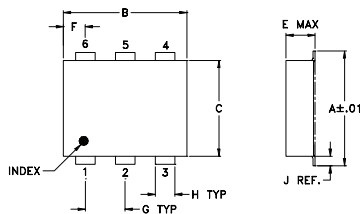
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

Permanent damage may occur if any of these limits are exceeded.

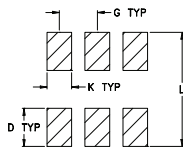
Pin Connections

INPUT	1
OUTPUT	6
COUPLED	3
GROUND	2
75Ω TERM EXTERNAL	4
NOT USED	5

Outline Drawing



PCB Land Pattern

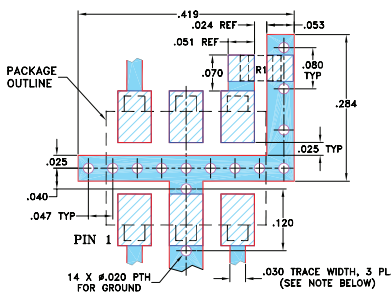


Suggested Layout, Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.162	.055	.100
6.91	7.87	5.59	2.54	4.11	1.40	2.54
H	J	K	L	wt		
.030	.026	.065	.300	grams		
0.76	0.66	1.65	7.62	0.25		

Demo Board MCL P/N: TB-08 Suggested PCB Layout (PL-042)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- wideband, 5-1000 MHz
- low mainline loss, 0.3 dB typ.
- high coupling, 25 dB typ.
- excellent VSWR, 1.2:1 typ.
- aqueous washable
- protected by US patents 6,133,525 & 6,140,887

Applications

- CATV

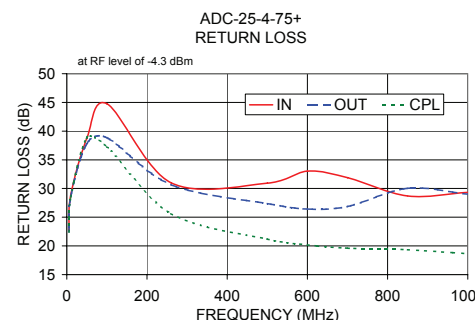
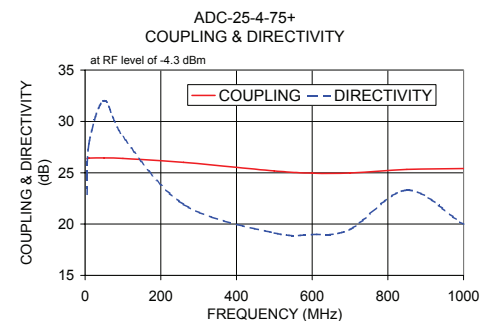
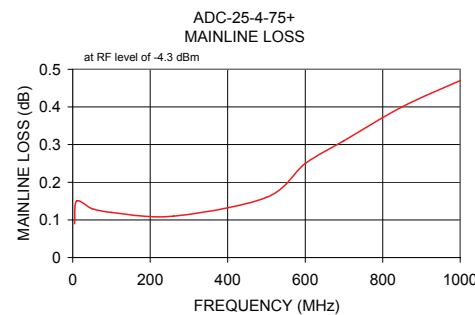
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W
	Nom.	Flatness	L		M		U		L		M		U			
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
5-1000	25±1.0	±2.0	0.1	0.5	0.1	0.4	0.3	0.7	27	13	25	14	20	12	1.2	0.5

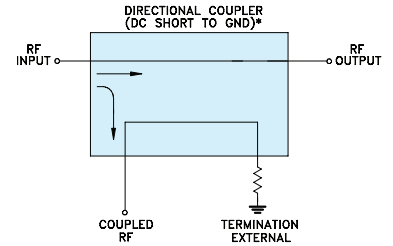
L= 5-50 MHz M= 50-500 MHz U= 500-1000 MHz
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	0.09	26.38	22.91	22.68	22.47	22.43
10.00	0.15	26.42	27.82	28.87	28.63	28.52
50.00	0.13	26.44	32.03	38.74	37.83	38.85
100.00	0.12	26.39	28.51	44.75	38.86	37.28
260.00	0.11	26.01	21.92	31.00	30.67	25.64
500.00	0.16	25.18	19.14	30.93	27.38	21.21
600.00	0.25	24.96	18.98	33.03	26.45	20.18
700.00	0.31	24.98	19.48	31.89	26.89	19.63
850.00	0.40	25.33	23.30	28.69	30.04	19.36
1000.00	0.47	25.41	19.99	29.32	29.04	18.66



Electrical Schematic



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

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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