

Directional Coupler

ADC-18-4-75R+

75Ω

20 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	2,5
NOT USED	4

Features

- wideband, 20-1000 MHz
- good directivity, 25 dB typ.
- excellent VSWR, 1.15:1 typ.
- internal load, no external components required
- aqueous washable
- protected by US Patent 6,133,525 & 6,140,887

Applications

- CATV power tap

CASE STYLE: CD542

PRICE: \$7.95 ea. QTY (10-49)

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

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

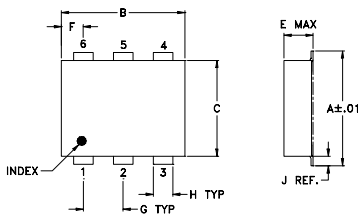
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)			DIRECTIVITY (dB)			VSWR (:1)	POWER INPUT, W						
	Nom.	Flatness	L	M	U	L	M	U								
f_L - f_U			Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Max.				
20-1000	17.7±0.5	±0.5	0.6	1.0	0.5	0.9	0.7	1.2	30	19	25	18	20	11	1.15	1.0

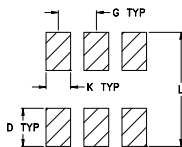
L= 20-200 MHz M= 200-500 MHz U= 500-1000 MHz

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

Outline Drawing



PCB Land Pattern

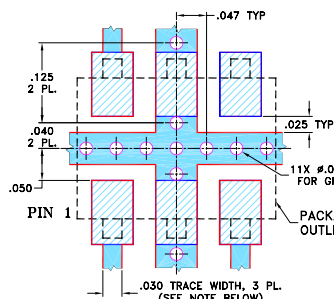


Suggested Layout, Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.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

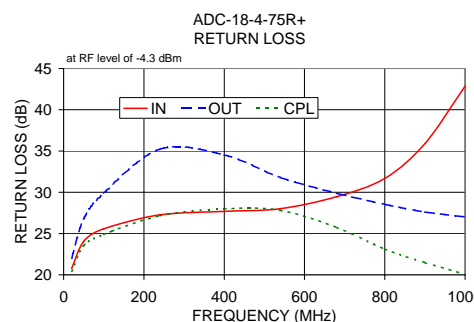
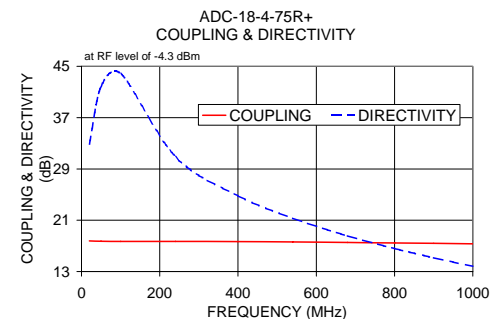
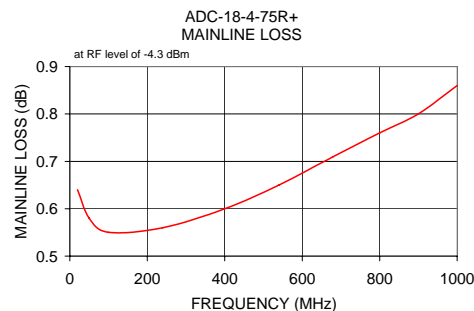
Demo Board MCL P/N: TB-356 Suggested PCB Layout (PL-213)



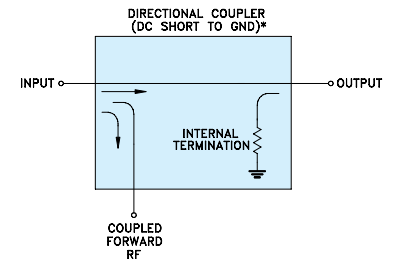
- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 3. DENOTES PCB COPPER LAYOUT WITH SMOBS (SOLDER MASK OVER BARE COPPER)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

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
20.00	0.64	17.79	32.89	20.76	22.00	20.42
50.00	0.58	17.73	41.84	24.04	26.77	23.55
100.00	0.55	17.70	43.88	25.58	29.90	24.90
240.00	0.56	17.71	30.92	27.26	35.24	27.17
400.00	0.60	17.67	24.83	27.68	34.53	28.00
540.00	0.65	17.63	21.34	28.01	31.80	27.82
680.00	0.71	17.55	18.57	29.46	29.91	25.76
800.00	0.76	17.47	16.59	31.69	28.56	23.12
900.00	0.80	17.40	15.17	35.90	27.62	21.50
1000.00	0.86	17.33	13.84	42.87	27.02	20.11



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

For detailed performance specs & shipping online see web site



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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ADC-18-4-75R+
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