

Directional Coupler

75Ω

40 to 1000 MHz

ADC-20-4-75R+



CASE STYLE: CD636
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.

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	2,5
NOT USED	4

Features

- wideband, 40-1000 MHz
- low mainline loss, 0.6 dB typ.
- excellent VSWR, 1.1:1 typ.
- internal load, no external components required
- aqueous washable
- protected by US Patent 6,133,525 & 6,140,887

Applications

- CATV

Directional Coupler Electrical Specifications

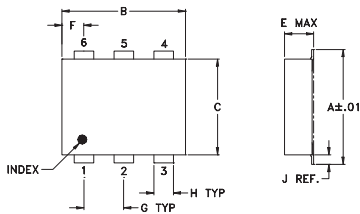
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W
	Nom.	Flatness	L		M		U		L		M		U			
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.		
40-1000	20.5±0.5	±0.8	0.5	0.8	0.6	0.9	0.7	1.2	24	17	20	15	17	12	1.10	1.0

L= 40-400 MHz M= 400-500 MHz U= 500-1000 MHz
1. Mainline loss includes theoretical power loss at coupled port.

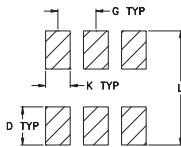
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
	In-Out	In			Out	Cpl	
40.00	0.57	20.74	24.46	24.97	25.29	25.60	
100.00	0.52	20.82	24.90	29.34	29.25	28.73	
220.00	0.50	20.87	23.92	28.31	29.17	31.75	
340.00	0.53	20.82	22.10	26.02	26.77	39.90	
450.00	0.56	20.73	20.26	24.23	25.60	41.94	
560.00	0.62	20.59	18.57	25.31	24.40	37.70	
680.00	0.68	20.42	17.84	30.01	23.08	36.42	
800.00	0.71	20.23	17.23	27.10	23.22	30.86	
900.00	0.74	20.07	16.93	23.57	23.74	28.67	
1000.00	0.77	19.86	16.53	25.62	24.50	27.23	

Outline Drawing



PCB Land Pattern

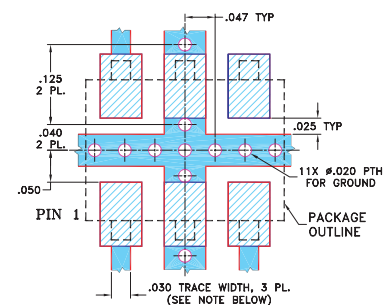


Suggested Layout, Tolerance to be within ±0.02

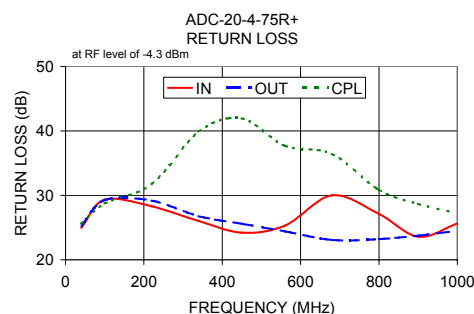
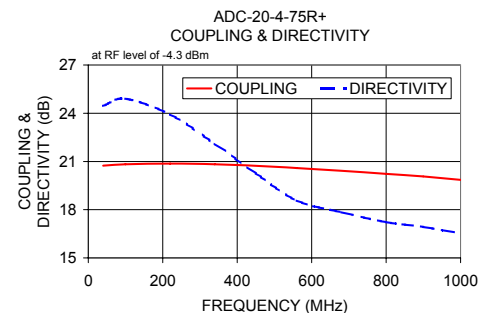
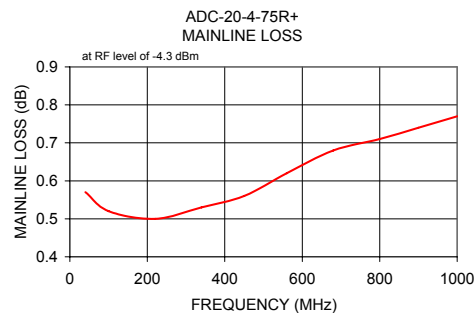
Outline Dimensions (inch/mm)

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

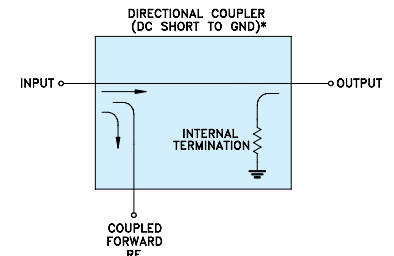
Demo Board MCL P/N: TB-356 Suggested PCB Layout (PL-213)



- 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.



Electrical Schematic



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



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The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

REV. A
M119986
ED-12356/2
ADC-20-4-75R+
DY/LC/CP/AM
081111