

Directional Coupler

[查询ADC-20-4-75R+代理商](#)

ADC-20-4-75R+

75Ω

40 to 1000 MHz



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

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.

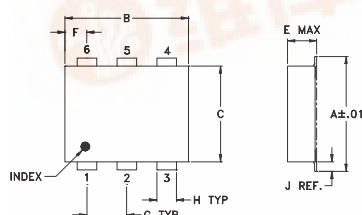
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS' (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W
			L		M		U		L		M		U			
	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
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

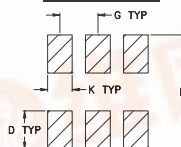
L= 40-400 MHz M= 400-500 MHz U= 500-1000 MHz

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

Outline Drawing



PCB Land Pattern

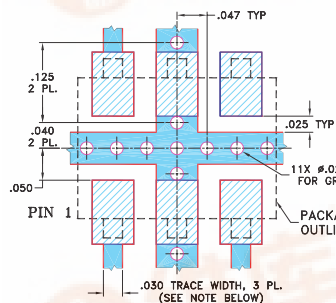


Suggested Layout,
Tolerance to be within ±.002

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		

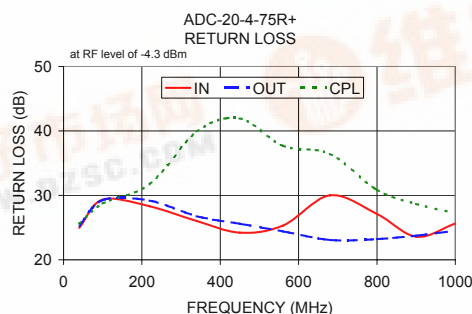
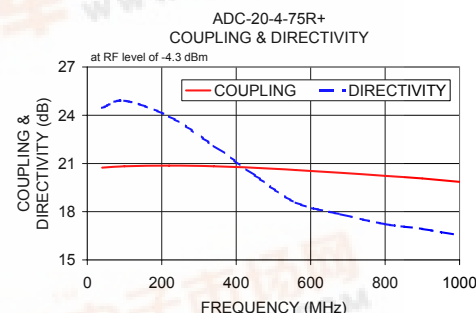
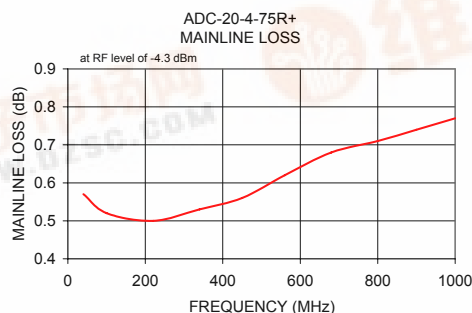
Demo Board MCL P/N: TB-356 Suggested PCB Layout (PL-213)



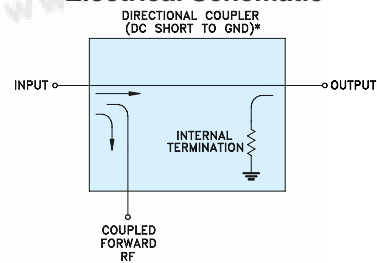
- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. DENOTES PCB BOARD LAYOUT WITH SMOBS (SOLDER MASK OVER BARE COPPER)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

Typical Performance Data

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



Electrical Schematic



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

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IF/RF MICROWAVE COMPONENTS

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