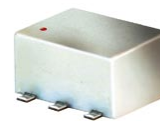


Surface Mount Directional Coupler

50Ω 5 to 900 MHz

ADC-10-1R+ ADC-10-1R



CASE STYLE: CD542
PRICE: \$7.95 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.

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
ISOLATE (DO NOT USE)	4

Features

- wideband, 5-900 MHz
- low insertion loss, 0.8 db typ.
- excellent coupling flatness, ±0.2 typ.
- aqueous washable
- protected by U.S Patents 6,133,525 & 6,140,887

Applications

- communications
- cable tv

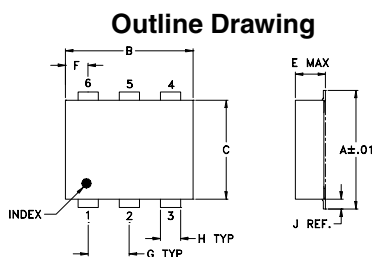
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)			VSWR (:1)	POWER INPUT, W			
	Nom.	Flatness	L		M		U		L		M		U	Typ.	L	MU
f_L - f_U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Max.	Max.
5-900	10.5±0.5	±0.5	0.7	1.2	0.8	1.2	0.9	1.5	40	25	30	20	18	12	1.3	1.0 1.0

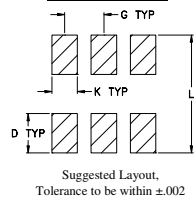
L= 5-50 MHz M= 50-450 MHz U= 450-900 MHz
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	0.73	10.46	39.26	23.33	32.99	20.92
25.00	0.73	10.47	41.83	23.80	33.86	21.15
50.00	0.72	10.46	42.49	23.65	33.70	20.95
100.00	0.72	10.46	41.16	23.19	31.77	20.42
200.00	0.76	10.54	35.13	21.89	27.73	18.85
300.00	0.82	10.62	30.28	20.41	24.77	17.13
450.00	0.75	10.54	24.90	18.54	21.73	14.98
600.00	0.86	10.71	20.67	17.18	19.54	13.38
750.00	0.80	10.63	17.31	16.29	17.92	12.21
900.00	1.03	10.88	14.39	15.79	16.77	11.46



PCB Land Pattern

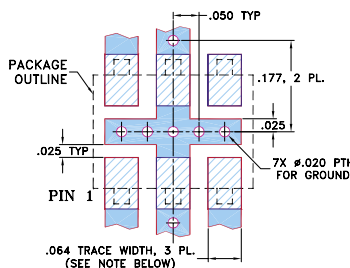


Suggested Layout,
Tolerance to be within ±0.02

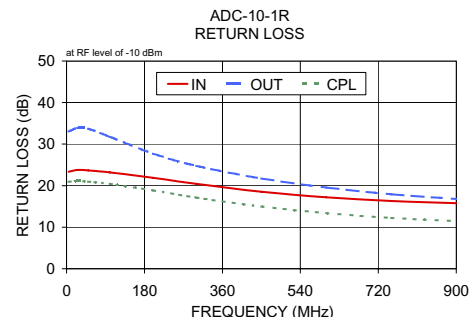
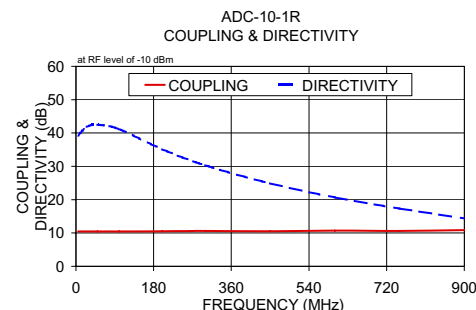
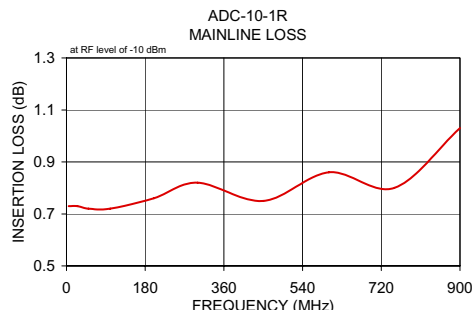
Outline Dimensions (inch/mm)

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		

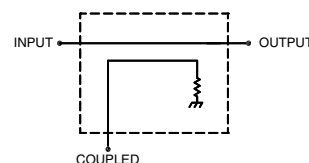
Demo Board MCL P/N: TB-32 Suggested PCB Layout (PL-094)



- 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



electrical schematic



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060615