

Surface Mount Directional Coupler

75Ω 5 to 600 MHz

LRDC-10-1-75+ LRDC-10-1-75



CASE STYLE: QQQ130
PRICE: \$11.95 ea. QTY (1-9)

+ 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.

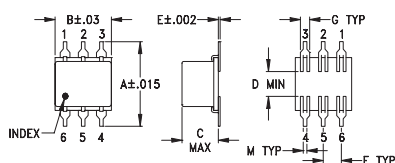
Maximum Ratings

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

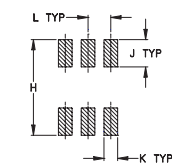
Pin Connections

INPUT	6
OUTPUT	1
COUPLED	4
GROUND	2,5
ISOLATE (DO NOT USE)	3

Outline Drawing



PCB Land Pattern

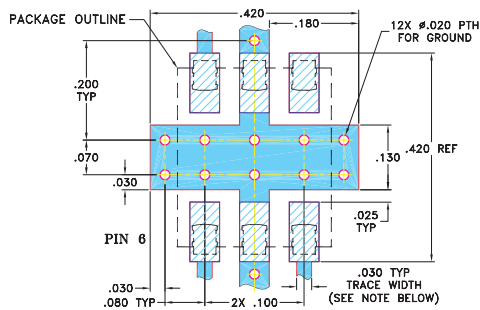


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch)

A	B	C	D	E	F	G
.400	.31	.200	.10	.010	.100	.050
10.16	7.87	5.08	2.54	0.25	2.54	1.27
H	J	K	L	M	wt	
.420	.120	.060	.100	.020	grams	
10.67	3.05	1.52	2.54	0.51	0.55	

Demo Board MCL P/N: TB-34 Suggested PCB Layout (PL-043)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; 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

- low mainline loss, 1.0 dB typ.
- high directivity, 21 dB typ.

Applications

- VHF/UHF
- reflective power measurements
- communications
- signal sampling

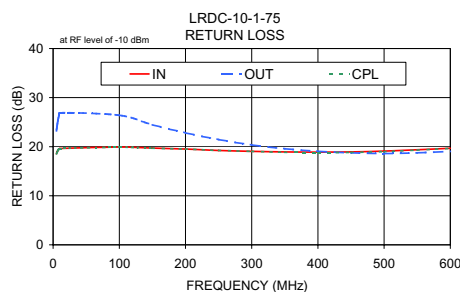
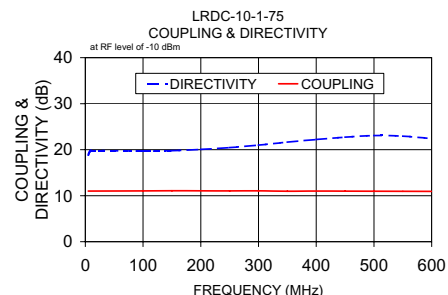
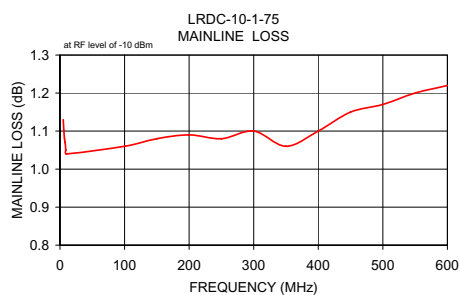
Directional Coupler Electrical Specifications

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.
f _L -f _U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
5-600	10.7±0.5	±0.5	1.1	1.5	1.0	1.4	1.2	1.8	19	15	21	17	21	16	1.3	1.0	1.0

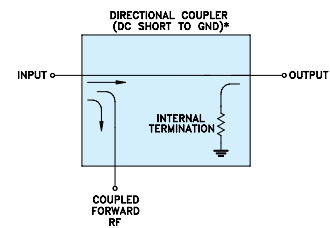
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	1.13	11.00	18.81	18.57	23.23	
6.00	1.10	11.00	19.15	18.92	24.29	
8.00	1.07	11.01	19.61	19.37	25.86	
10.00	1.04	11.01	19.82	19.64	26.95	
100.00	1.06	11.04	19.70	19.92	26.40	
200.00	1.09	11.06	20.07	19.52	22.83	
300.00	1.10	11.05	20.99	19.04	20.37	
400.00	1.10	11.00	22.22	18.89	19.07	
500.00	1.17	10.97	23.08	19.10	18.61	
600.00	1.22	10.94	22.42	19.69	19.05	



Electrical Schematic



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

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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

IF/RF MICROWAVE COMPONENTS

REV. B
M119986
LRDC-10-1-75
WZ/TD/CP/AM
081111