

Surface Mount Directional Coupler

75Ω 30 to 1200 MHz

LRDC-10-2W-75J+ LRDC-10-2W-75J



CASE STYLE: QQQ569
PRICE: \$15.95 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.

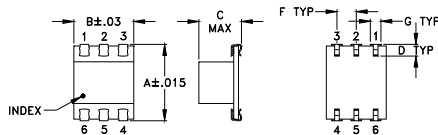
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are exceeded.	

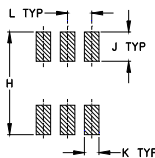
Pin Connections

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

Outline Drawing



PCB Land Pattern

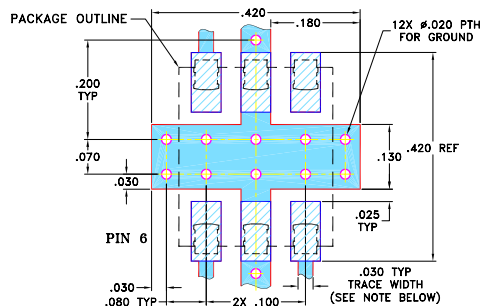


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.390	.31	.225	.060	--	.100	.045
9.91	7.87	5.72	1.52	--	2.54	1.14
H	J	K	L	M	wt	
.420	.120	.060	.100	--	grams	
10.67	3.05	1.52	2.54	--	0.50	

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



- NOTES:
- 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.
 - 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, 1.1 dB typ.
- high directivity, 22 dB typ.
- aqueous washable
- J-leads for strain relief and excellent solderability

Applications

- VHF/UHF
- cellular
- 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
f _L -f _U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
30-1200	10.0±0.5	±0.8	1.0	1.5	1.1	1.6	1.3	2.0	21	17	22	17	18	15	1.3	1.0	1.0

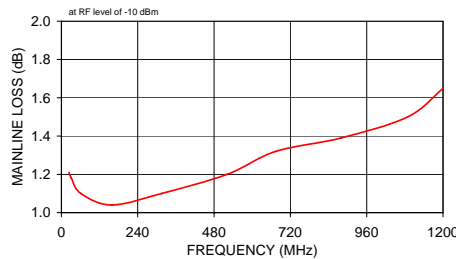
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]

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

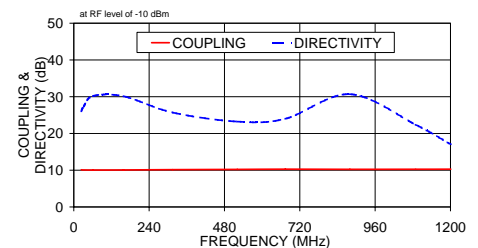
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
23.68	1.21	10.10	26.05	21.46	17.01	17.25
31.16	1.18	10.06	27.31	23.65	17.77	17.99
61.06	1.10	10.05	30.20	31.44	19.11	19.37
158.23	1.04	10.06	30.12	28.87	19.46	19.51
315.21	1.10	10.15	25.69	20.41	17.63	17.24
520.77	1.20	10.22	23.25	16.78	15.56	15.15
674.01	1.32	10.29	23.99	15.97	14.88	14.50
879.57	1.39	10.25	30.70	17.10	15.37	14.92
1088.87	1.50	10.27	22.42	21.86	17.37	17.06
1201.00	1.65	10.28	17.05	27.27	18.70	19.19

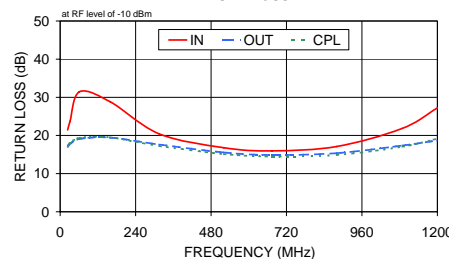
LRDC-10-2W-75J
MAINLINE LOSS



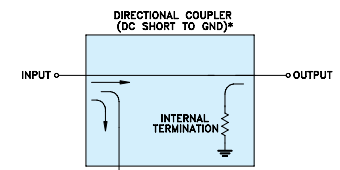
LRDC-10-2W-75J
COUPLING & DIRECTIVITY



LRDC-10-2W-75J
RETURN LOSS



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

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

For detailed performance specs
& shipping online see web site

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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