Surface Mount

Directional Coupler

50Ω 300 to 1100 MHz

LRDC-20-2J+
LRDC-20-2J



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

Pin Connections

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

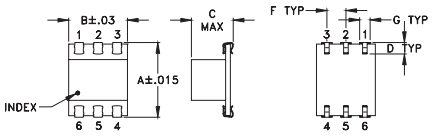
Features

- low mainline loss, 0.25 dB typ.
- high directivity, 17 dB typ.
- aqueous washable
- J-leads for strain relief and excellent solderability

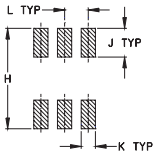
Applications

- VHF/UHF
- cellular
- communications
- signal sampling

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

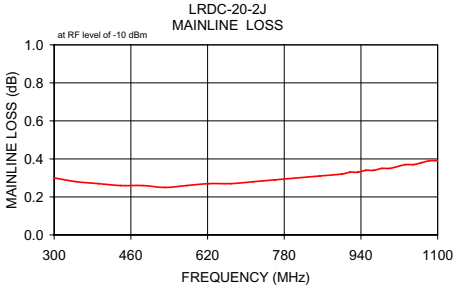
Directional Coupler Electrical Specifications

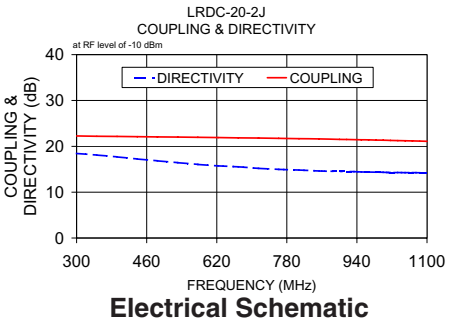
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS[1] (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT, W	
f_L-f_U	Nom.	Flatness	Typ.	Max.	Typ.	Min.	Typ.	L Max.	MU Max.
300-1100	20.5±1.0	±1.3	0.25	0.6	17	10	1.2	2.0	2.0

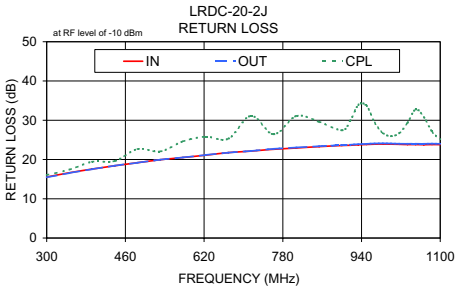
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

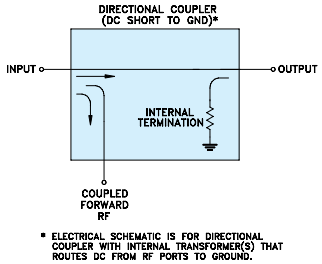
Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In	Return Loss (dB) Out	Return Loss (dB) Cpl
300.00	0.30	22.27	18.46	15.52	15.46	16.06
438.46	0.26	22.11	17.25	18.41	18.43	19.61
576.92	0.26	21.96	16.06	20.51	20.53	24.62
715.38	0.28	21.80	15.20	22.14	22.18	31.13
807.69	0.30	21.67	14.83	22.93	23.08	31.10
900.00	0.32	21.51	14.54	23.56	23.66	27.46
950.00	0.34	21.43	14.42	23.84	24.00	33.75
1000.00	0.35	21.33	14.34	23.91	24.09	25.94
1050.00	0.37	21.21	14.26	23.80	24.04	32.75
1100.00	0.39	21.10	14.24	23.78	24.01	25.15





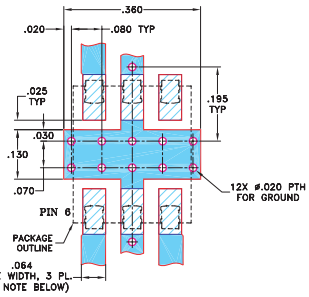


Electrical Schematic



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

Demo Board MCL P/N: TB-31
Suggested PCB Layout (PL-087)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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