Surface Mount

Directional Coupler

50Ω 5 to 750 MHz

JDC-10-2+
JDC-10-2

CASE STYLE: BH292
PRICE: $13.60 ea. QTY (25-49)

+ 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

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

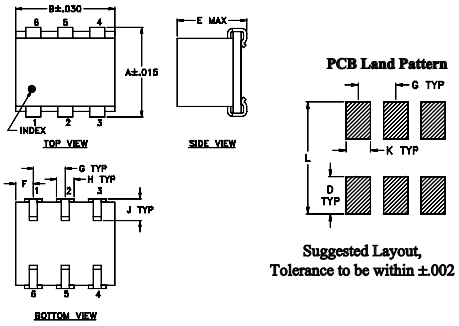
Features

- wideband, 5 to 750 MHz
- low mainline loss, 1.0 dB typ.
- high directivity, 20 dB typ.
- good VSWR, 1.13 typ.
- excellent solderability

Applications

- communications
- VHF/UHF

Outline Drawing

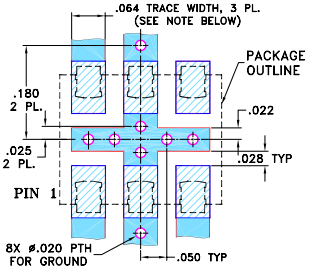


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.280	.310	--	.100	.225	.055	.100
7.11	7.87	--	2.54	5.72	1.40	2.54

H	J	K	L	wt
.047	.065	.065	.300	grams
1.19	1.65	1.65	7.62	0.45

Demo Board MCL P/N: TB-185
Suggested PCB Layout (PL-046)



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

Directional Coupler Electrical Specifications

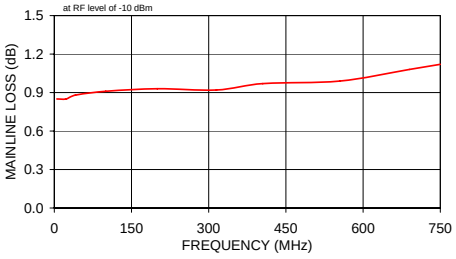
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS[1] (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U			L	MU
f_L-f_U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
5-750	10.0±0.5	±0.6	1.0	1.5	1.0	1.5	1.0	1.5	20	15	20	17	20	16	1.13	1.0	1.0

L = 5-50 MHz M = 50-375 MHz U = 375-750 MHz
1. Mainline loss includes theoretical power loss at coupled port.

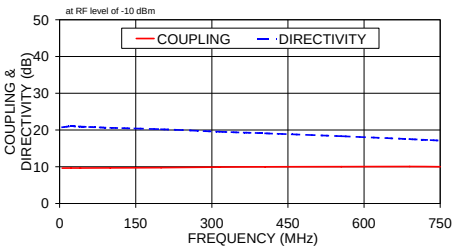
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In	Return Loss (dB) Out	Return Loss (dB) Cpl
5.00	0.85	9.64	20.74	22.23	32.79	21.36
23.00	0.85	9.66	21.03	22.49	34.45	21.91
41.00	0.88	9.65	20.93	22.53	34.69	21.90
100.00	0.91	9.69	20.61	22.82	34.29	21.73
200.00	0.93	9.77	20.21	23.77	32.59	21.09
315.00	0.92	9.91	19.55	25.35	30.59	20.08
405.00	0.97	9.98	19.10	26.82	29.48	19.17
555.00	0.99	10.02	18.32	29.22	28.21	17.76
690.00	1.08	10.06	17.53	30.09	27.10	16.66
750.00	1.12	10.01	17.13	29.75	26.46	16.22

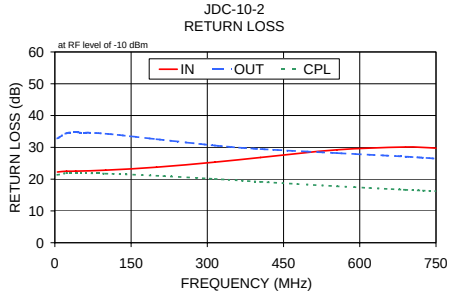
JDC-10-2
MAINLINE LOSS



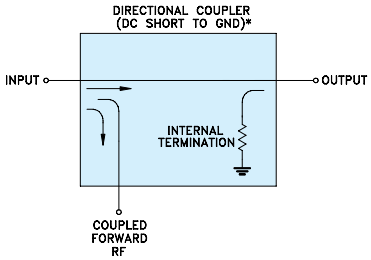
JDC-10-2
COUPLING & DIRECTIVITY



JDC-10-2
RETURN LOSS



Electrical Schematic



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

For detailed performance specs & shopping online see web site

REV. D
M119986
ED-4936
JDC-10-2
WZ/TD/CP/AM
090903