

Surface Mount Directional Coupler

50Ω 5 to 1000 MHz

JDC-10-4+ JDC-10-4



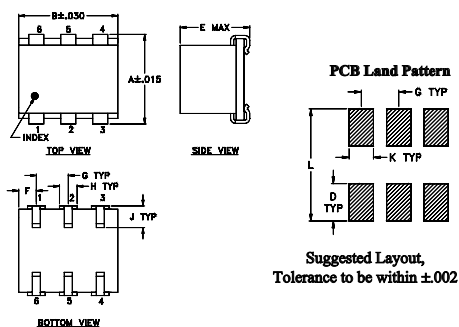
Maximum Ratings

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

Outline Drawing

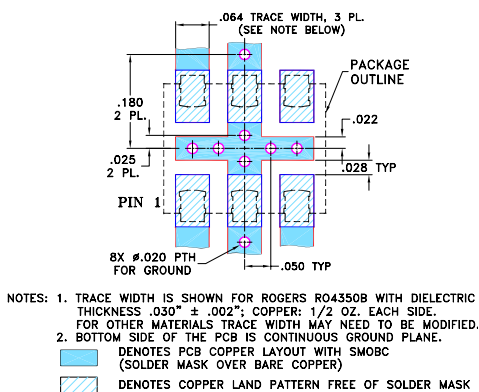


Outline Dimensions (inch/mm)

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)



Features

- wideband, 5 to 1000 MHz
- low mainline loss, 1.0 dB typ.
- high directivity, 23 dB typ.
- good VSWR, 1.15 typ.
- excellent solderability

Applications

- communications
- VHF/UHF

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.

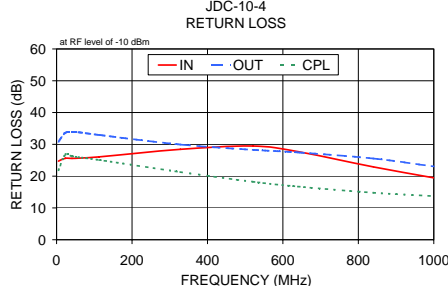
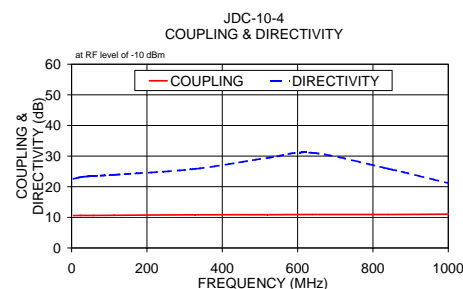
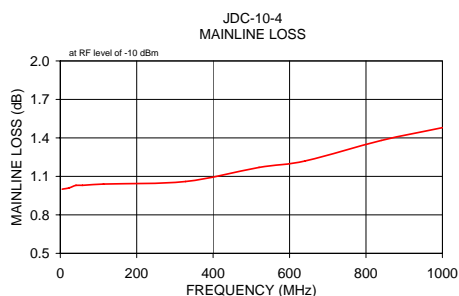
Directional Coupler Electrical Specifications

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.	Typ.	Max.
f _L -f _U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
5-1000	10.5±0.5	±0.6	1.0	1.5	1.0	1.5	1.3	1.8	23	18	23	18	24	15	1.15	1.0	1.0		

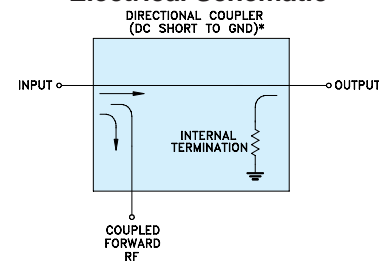
L = 5-50 MHz M = 50-500 MHz U = 500-1000 MHz
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)	
				In	Out
5.00	1.00	10.57	22.57	24.73	30.83
23.00	1.01	10.63	23.10	25.60	33.61
41.00	1.03	10.63	23.37	25.58	33.93
58.00	1.03	10.63	23.51	25.65	33.82
113.00	1.04	10.66	23.89	26.05	32.96
328.00	1.06	10.82	25.82	28.44	29.96
520.00	1.17	10.85	29.42	29.47	28.27
640.00	1.22	10.92	31.06	27.71	27.46
840.00	1.38	10.92	25.91	22.90	25.56
1000.00	1.48	11.04	21.18	19.46	23.05



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

Mini-Circuits
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I/F/R/F MICROWAVE COMPONENTS

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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-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp.

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