

Surface Mount Directional Coupler

50Ω 5 to 1000 MHz

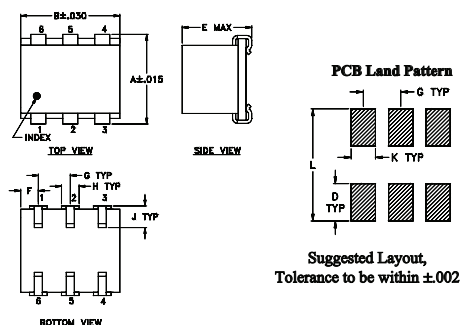
Maximum Ratings

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

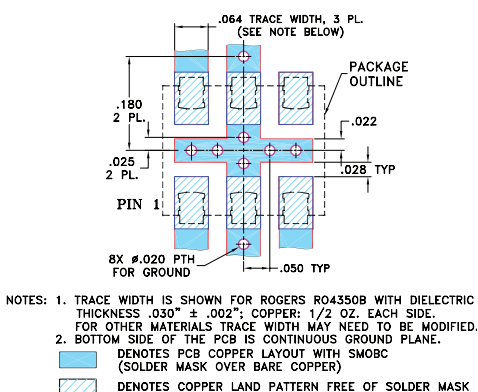


Outline Dimensions (inch/mm)

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

JDC-10-4+
JDC-10-4



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

+RoHS Compliant

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	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	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

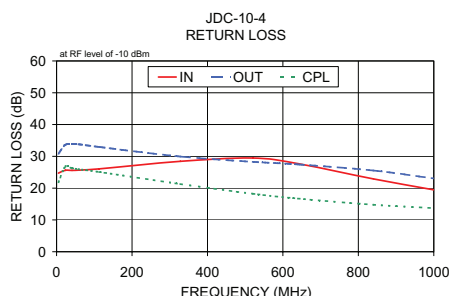
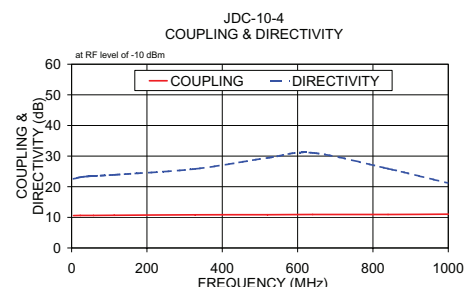
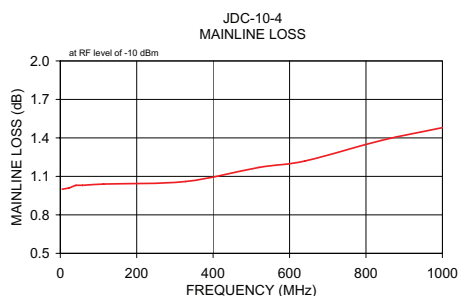
L = 5-50 MHz M = 50-500 MHz U = 500-1000 MHz

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

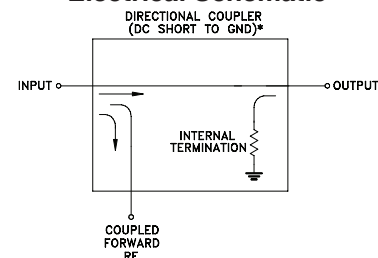
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl

5.00	1.00	10.57	22.57	24.73	30.83	21.85
23.00	1.01	10.63	23.10	25.60	33.61	26.74
41.00	1.03	10.63	23.37	25.58	33.93	26.28
58.00	1.03	10.63	23.51	25.65	33.82	25.95
113.00	1.04	10.66	23.89	26.05	32.96	25.10
328.00	1.06	10.82	25.82	28.44	29.96	21.30
520.00	1.17	10.85	29.42	29.47	28.27	18.25
640.00	1.22	10.92	31.06	27.71	27.46	16.72
840.00	1.38	10.92	25.91	22.90	25.56	14.79
1000.00	1.48	11.04	21.18	19.46	23.05	13.72



Electrical Schematic



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

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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www.minicircuits.com P.O. Box 35166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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