

Surface Mount Directional Coupler

75Ω 50 to 750 MHz

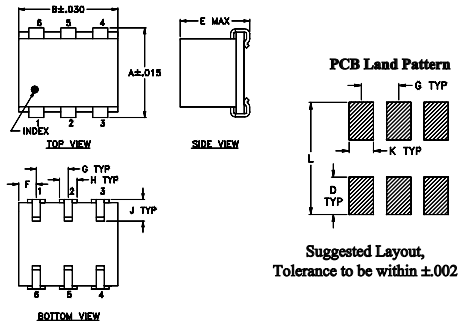
Maximum Ratings

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

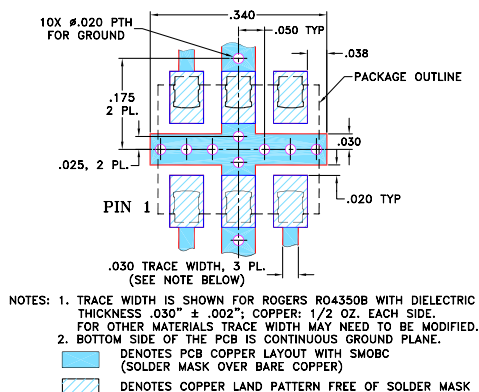


Outline Dimensions (inch mm)

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-33 Suggested PCB Layout (PL-044)



- 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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- low mainline loss, 0.5 dB typ.
- high directivity, 23 dB typ.
- excellent solderability

Applications

- communications
- level detecting
- signal sampling
- reflective power measurements
- cable tv



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

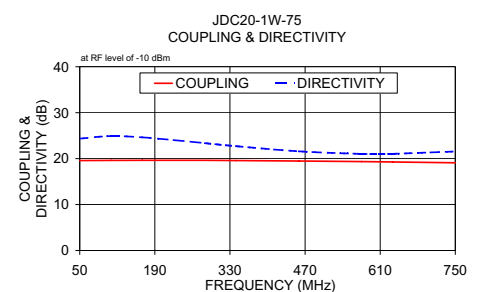
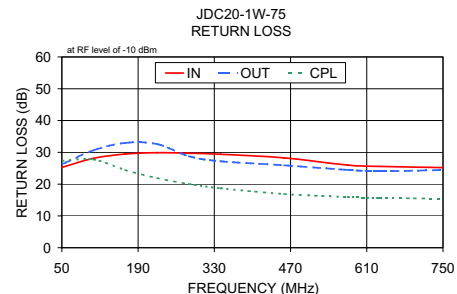
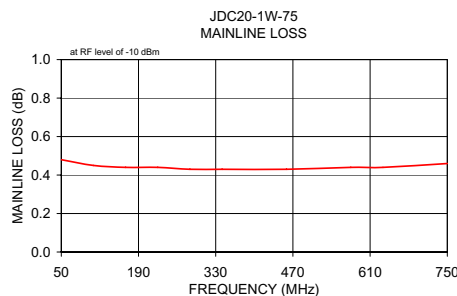
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
50-750	19.5±0.5	±0.5	0.5	0.9	0.5	0.7	0.5	0.9	25	18	23	15	20	15	1.2	0.5	0.5

L = 50-100 MHz M = 100-375 MHz U = 375-750 MHz

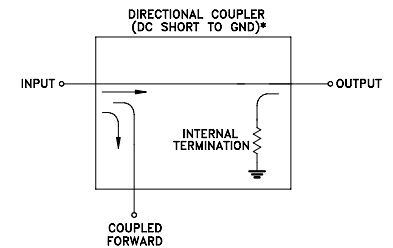
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
50.00	0.48	19.58	24.37	25.24	26.25	27.37
108.33	0.45	19.62	24.92	28.13	30.65	27.75
166.66	0.44	19.64	24.65	29.48	32.97	24.47
225.00	0.44	19.64	24.06	29.91	32.60	21.93
283.33	0.43	19.63	23.38	29.72	28.79	20.07
341.66	0.43	19.58	22.71	29.40	27.19	18.71
458.33	0.43	19.48	21.60	28.25	25.93	16.90
575.00	0.44	19.36	21.05	25.97	24.48	15.96
633.33	0.44	19.27	21.06	25.57	24.08	15.67
750.00	0.46	19.09	21.56	25.20	24.45	15.43



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-Circuit's applicable established test performance criteria and measurement instructions.
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www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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