

Surface Mount Directional Coupler

JDC-10-4-75+

75Ω 10 to 1000 MHz



CASE STYLE: BH292

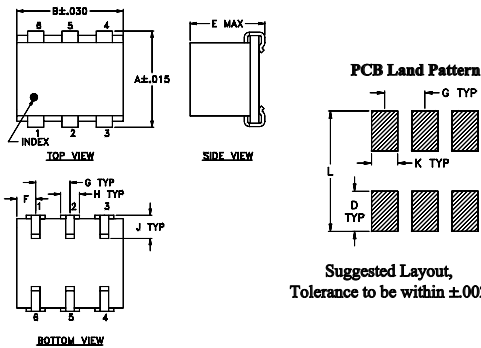
Maximum Ratings

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

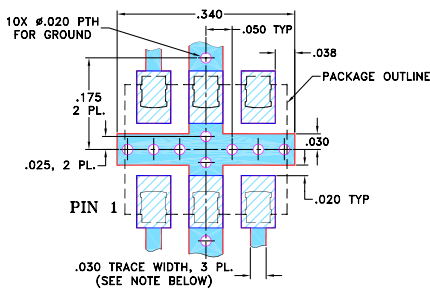


Outline Dimensions (inch/mm)

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.
[Legend: Blue box = DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER); White box = DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK]

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.
C. The parts covered by this specification document 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/WCLStore/terms.jsp

Features

- low mainline loss, 1.4 dB typ.
- high directivity, 25 dB typ.
- excellent solderability

Applications

- catv
- VHF/UHF

Directional Coupler Electrical Specifications

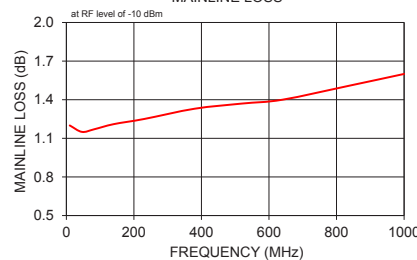
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	L		M		U		L		M		U			L	MU
f _L -f _U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
10-1000	10.5±0.5	±0.5	1.2	1.6	1.4	1.7	1.6	2.0	27	18	25	18	28	18	1.3	1.0	1.0

L = 10-100 MHz M = 100-500 MHz U = 500-1000 MHz
1. Mainline loss includes theoretical power loss at coupled port.

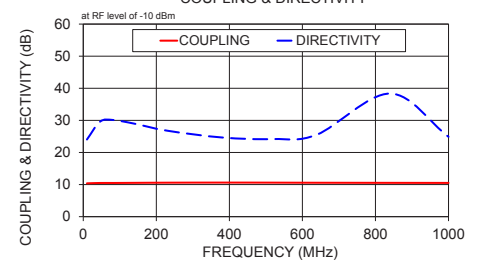
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
10.00	1.20	10.39	24.04	20.65	25.38	15.96
46.00	1.15	10.50	29.61	22.15	37.36	18.91
82.00	1.17	10.50	30.11	21.77	31.35	18.86
140.00	1.21	10.54	28.97	21.13	26.70	18.92
230.00	1.25	10.59	26.78	20.02	22.30	20.07
380.00	1.33	10.62	24.67	18.47	18.65	23.45
520.00	1.37	10.60	24.18	18.48	17.83	29.75
640.00	1.40	10.57	25.57	20.57	18.18	37.16
840.00	1.51	10.54	38.35	23.88	21.08	28.50
1000.00	1.60	10.52	24.89	29.38	22.15	23.68

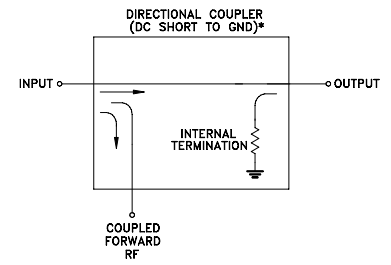
JDC-10-4-75+
MAINLINE LOSS



JDC-10-4-75+
COUPLING & DIRECTIVITY



Electrical Schematic



JDC-10-4-75+
RETURN LOSS

