

# Surface Mount Directional Coupler

## JDC-20-3-75+ JDC-20-3-75

75Ω      2 to 250 MHz



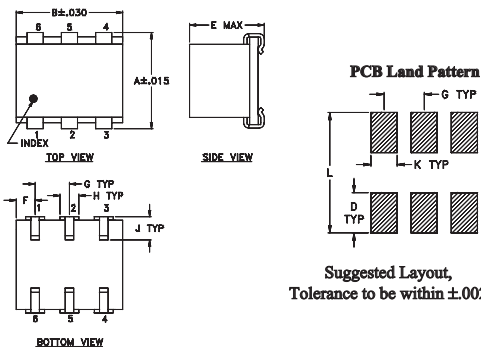
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

### Pin Connections

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

### Outline Drawing



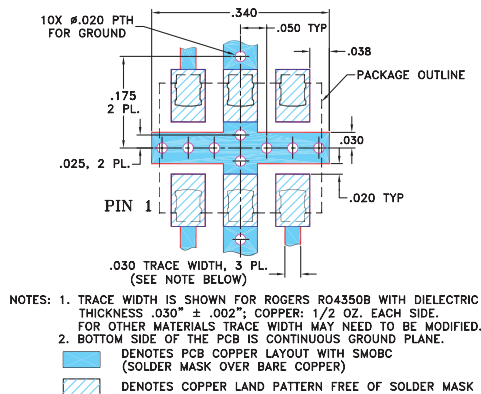
### Outline Dimensions (inch/mm)

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)



### Features

- low mainline loss, 0.3 dB typ.
- high directivity, 30 dB typ.
- excellent solderability

### Applications

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

### Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	L		M		U		L		M		U			Typ.	Max.
2-250	19.2±0.5	±0.5	0.4	0.8	0.3	0.7	0.4	0.7	24	16	30	20	20	15	1.1	0.5	1.0

L = 2-20 MHz    M = 20-125 MHz    U = 125-250 MHz  
1. Mainline loss includes theoretical power loss at coupled port.

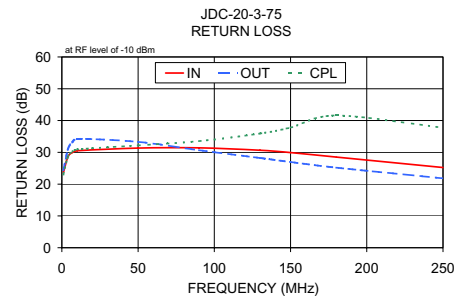
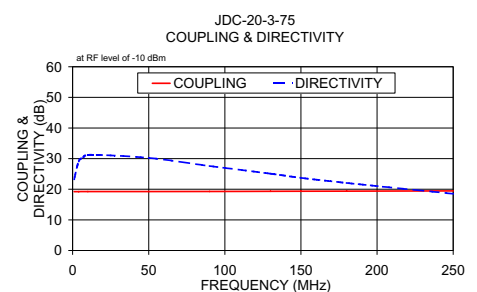
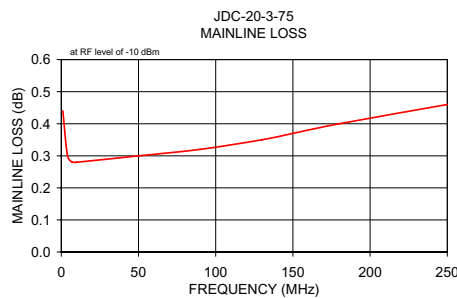
CASE STYLE: BH292  
PRICE: \$ 13.60 ea. QTY (25-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

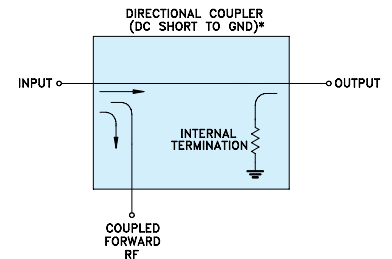
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
1.00	0.44	19.22	23.26	23.55	24.40	23.02
4.00	0.30	19.23	29.11	28.64	31.07	28.66
7.00	0.28	19.24	30.46	29.97	33.28	30.26
10.00	0.28	19.24	31.30	30.50	34.28	30.94
50.00	0.30	19.26	30.27	31.34	33.32	32.19
90.00	0.32	19.28	27.59	31.42	30.68	33.55
130.00	0.35	19.32	25.09	30.66	28.22	35.94
150.00	0.37	19.35	23.75	29.92	26.97	37.80
180.00	0.40	19.38	22.06	28.50	25.21	41.60
250.00	0.46	19.45	18.52	25.22	21.84	37.78



### Electrical Schematic



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

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