

# Surface Mount Directional Coupler

75Ω 50 to 750 MHz

## JDC20-1W-75+ JDC20-1W-75



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.

### 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

### 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

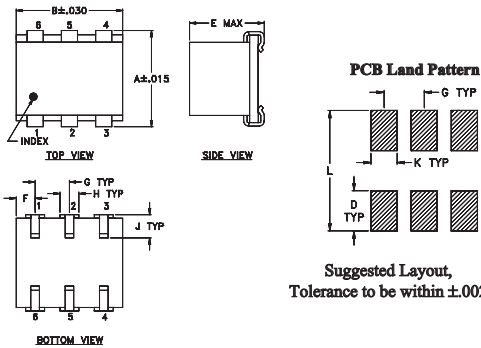
### Directional Coupler Electrical Specifications

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.
$f_L$ - $f_U$			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	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.

### Outline Drawing

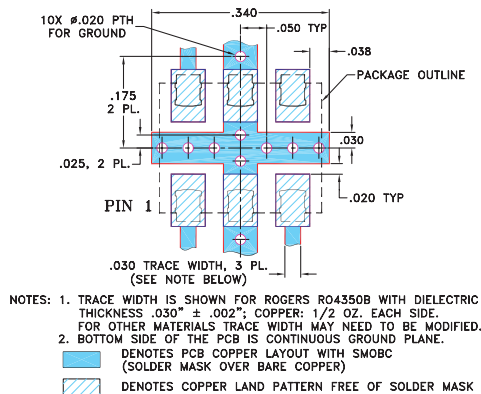


Suggested Layout, Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

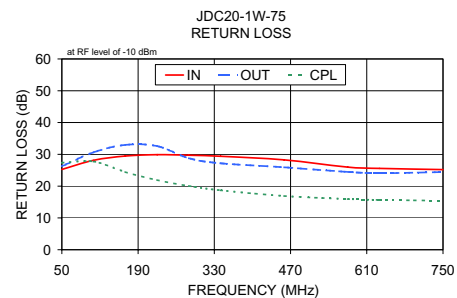
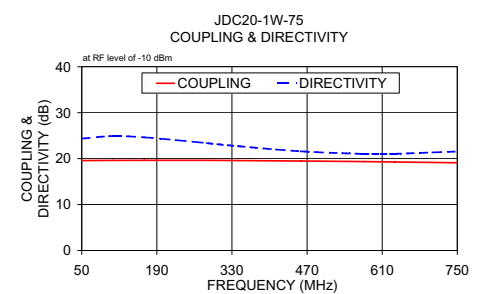
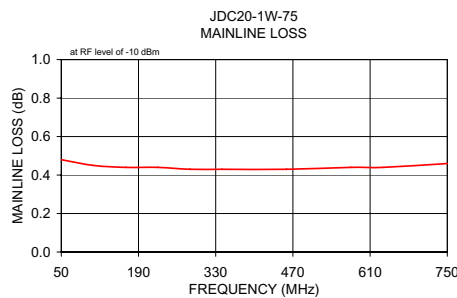
A	B	C	D	E	F	G	H	J	K	L	wt
.280	.310	--	.100	.225	.055	.100	.047	.065	.065	.300	grams
7.11	7.87	--	2.54	5.72	1.40	2.54	1.19	1.65	1.65	7.62	0.45

### Demo Board MCL P/N: TB-33 Suggested PCB Layout (PL-044)

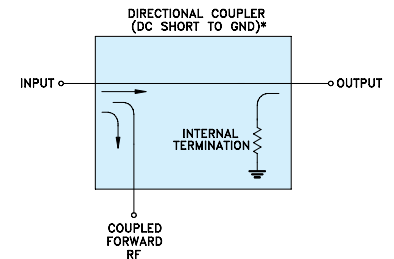


### Typical Performance Data

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.

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IF/RF MICROWAVE COMPONENTS

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