

# Surface Mount Directional Coupler

## JDC-6-1+ JDC-6-1

50Ω 5 to 400 MHz

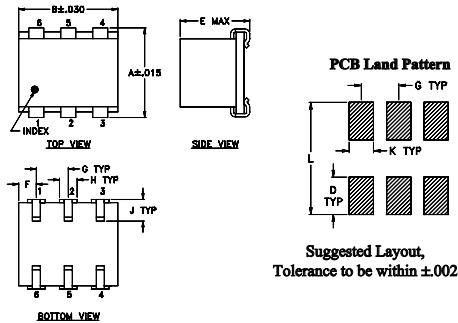
### Maximum Ratings

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



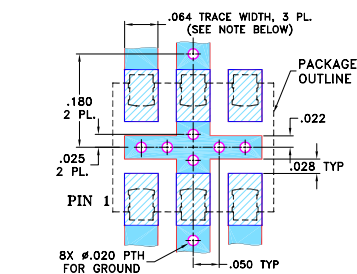
### Outline Dimensions (inch/mm)

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 400 MHz
- low mainline loss, 1.7 dB typ.
- high directivity, 25 dB typ.
- good VSWR, 1.25 typ.
- excellent solderability

### Applications

- communications
- VHF/UHF



Generic photo used for illustration purposes only

CASE STYLE: BH292

**+RoHS Compliant**

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

### Directional Coupler Electrical Specifications

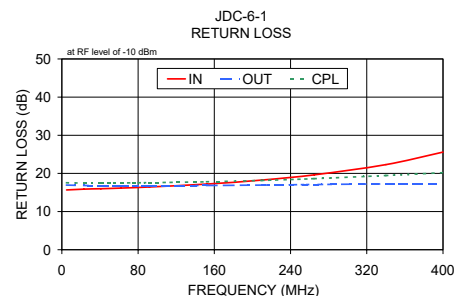
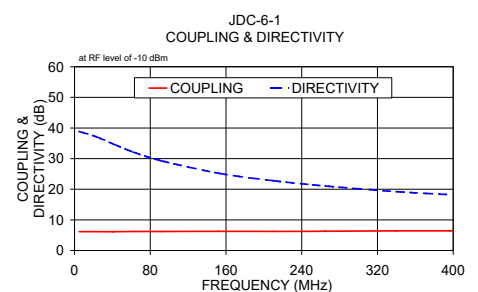
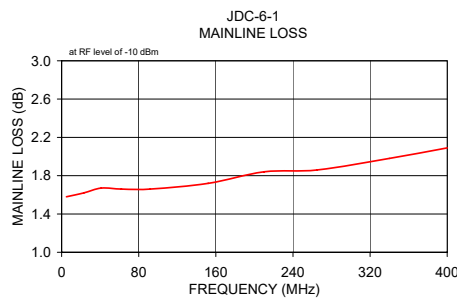
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	L		M		U		L		M		U			Typ.	Max.
f <sub>L</sub> -f <sub>U</sub>			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
5-400	6.5±0.5	±0.5	1.6	2.0	1.7	2.4	2.0	2.4	35	30	25	20	20	15	1.25	0.5	0.5

L = 5-40 MHz M = 40-200 MHz U = 200-400 MHz

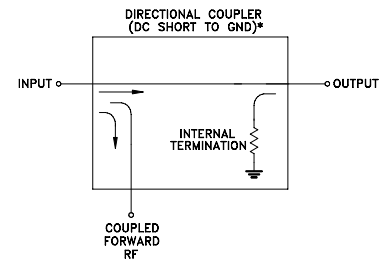
1. Mainline loss includes theoretical power loss at coupled port.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)	
				In	Out
5.00	1.58	6.15	38.87	15.68	16.95
23.00	1.62	6.15	37.15	15.87	16.85
41.00	1.67	6.14	34.77	15.99	16.83
62.00	1.66	6.20	32.17	16.15	16.81
92.00	1.66	6.22	29.29	16.44	16.80
152.00	1.72	6.27	25.25	17.21	16.85
210.00	1.84	6.24	22.81	18.27	16.96
265.00	1.86	6.29	21.09	19.62	17.11
340.00	1.98	6.42	19.22	22.31	17.25
400.00	2.09	6.41	18.19	25.59	17.25



### Electrical Schematic



### Notes

- 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.
- 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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