

Surface Mount Directional Coupler

JDC-20-5+ JDC-20-5

50Ω 50 to 1500 MHz

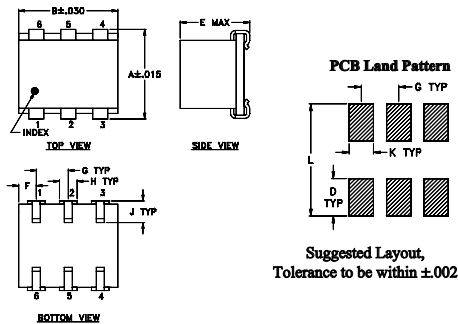
Maximum Ratings

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
50 OHM TERM EXTERNAL	4

Outline Drawing

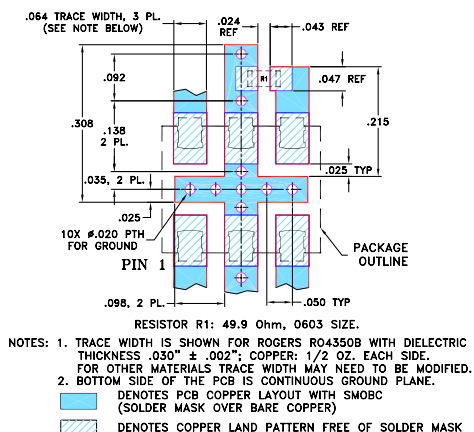


Outline Dimensions (inch/mm)

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-176 Suggested PCB Layout (PL-041)



Features

- wideband, 50 to 1500 MHz
- low mainline loss, 0.5 dB typ.
- excellent solderability

Applications

- VHF/UHF
- satellite distribution
- cellular
- ISM/GSM



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

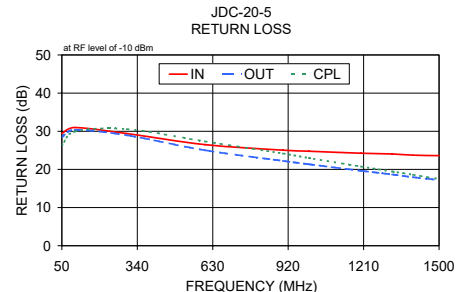
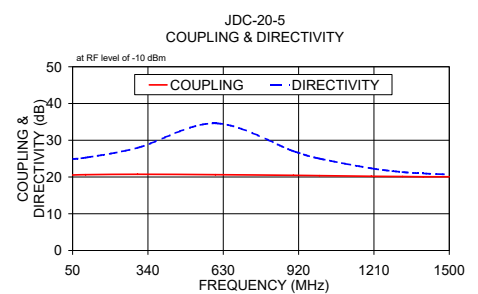
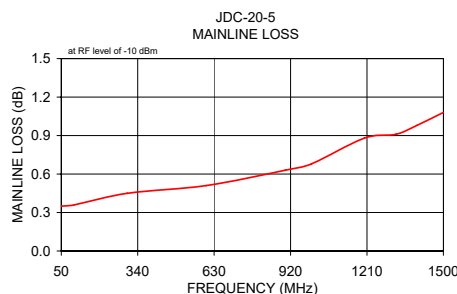
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	L		M		U		L		M		U			Typ.	Max.
50-1500	20.5±0.5	±0.75	0.4	0.8	0.5	0.9	1.0	1.5	25	18	22	16	20	13	1.2	0.5	0.5

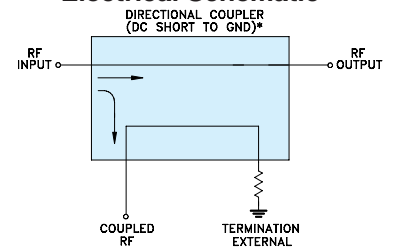
L = 50-500 MHz M = 500-750 MHz U = 750-1500 MHz
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
50.00	0.35	20.55	24.91	29.45	28.54	26.32
100.00	0.36	20.62	25.28	30.98	30.40	29.94
300.00	0.45	20.74	27.95	29.40	28.96	30.58
600.00	0.51	20.63	34.60	26.50	25.05	27.36
900.00	0.63	20.46	27.05	25.05	22.25	24.18
1000.00	0.68	20.37	25.02	24.77	21.36	22.99
1200.00	0.88	20.20	22.37	24.24	19.64	20.77
1320.00	0.91	20.12	21.35	24.06	18.68	19.46
1400.00	0.98	20.06	20.97	23.74	17.96	18.59
1500.00	1.08	20.07	20.69	23.62	17.22	17.51



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) AND EXTERNAL TERMINATION.

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.
- 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



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. F
M151107
JDC-20-5
WZ/TD/CP/AM
200413