High Power

Directional Coupler

NEW!

JYDC-7-1HP

50Ω 30 to 500 MHz

CASE STYLE: BJ1051
PRICE: $17.95 ea. QTY. (10-49)

Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C

Pin Connections

INPUT	1
OUTPUT	8
COUPLED	3
GROUND	2,7
50Ω TERM (EXTERNAL)	6
ISOLATE (DO NOT USE)	4,5

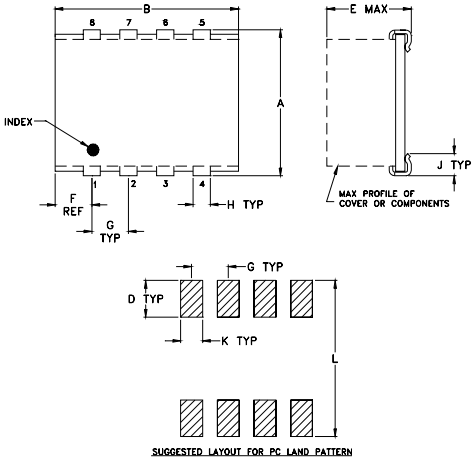
Features

- high power handling, 5 watts
- low insertion loss, 1.3 dB typ.
- excellent VSWR, 1.25:1 typ.
- good flatness, ±0.1 dB typ.
- protected by patent 6,140,887

Applications

- VHF/UHF receivers
- cellular

Outline Drawing

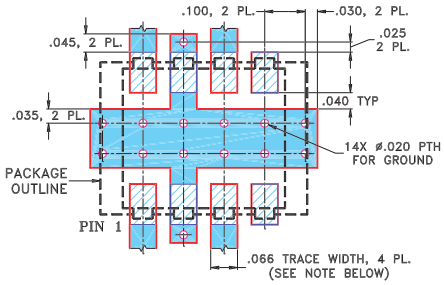


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.395	.500	—	.100	.230	.100	.100
10.03	12.70	—	2.54	5.84	2.54	2.54

H	J	K	L	wt.
.047	.065	.065	.425	grams
1.19	1.65	1.65	10.80	.71

Demo Board MCL P/N: TB-282
Suggested PCB Layout (PL-157)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.030 ± 0.002, 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.

DENOTES PCB COPPER LAYOUT
DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

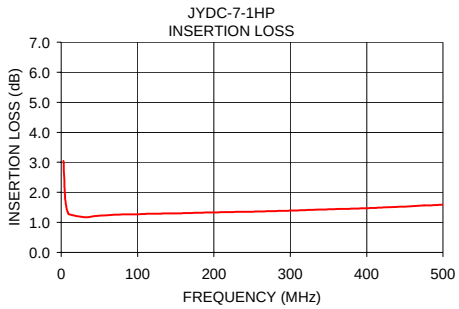
Directional Coupler Electrical Specifications

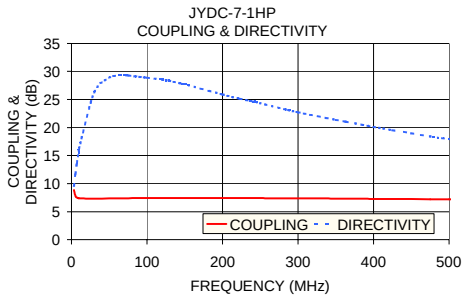
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS* (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U				
f_L-f_U	Nom.	Max. Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	L Max.	MU Max.
30-500	7.3±0.4	±0.2	1.3	1.6	—	—	1.4	1.9	30	22	—	—	20	15	1.25	5.0	5.0

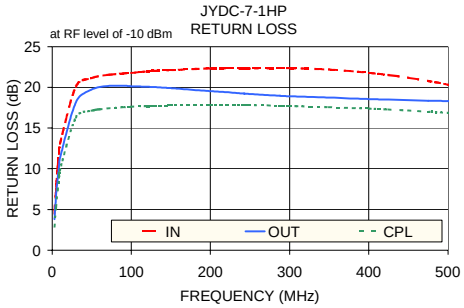
L= 30-200 MHz U= 200-500 MHz
* include the theoretical loss = 0.9 dB.

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In	Out	Cpl
30.00	1.17	7.33	26.24	20.09	18.15	16.30
100.00	1.27	7.42	28.87	21.78	20.14	17.62
150.00	1.30	7.44	27.70	22.10	19.90	17.78
200.00	1.33	7.44	25.89	22.33	19.53	17.84
245.00	1.35	7.42	24.50	22.30	19.21	17.83
300.00	1.39	7.39	22.71	22.35	18.90	17.72
350.00	1.43	7.35	21.38	22.18	18.74	17.56
400.00	1.47	7.30	20.11	21.78	18.56	17.39
450.00	1.52	7.25	18.98	21.18	18.42	17.16
500.00	1.59	7.20	17.94	20.33	18.31	16.87







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