

Surface Mount Directional Coupler

50Ω 50 to 750 MHz

JDC-20-1W+ JDC-20-1W



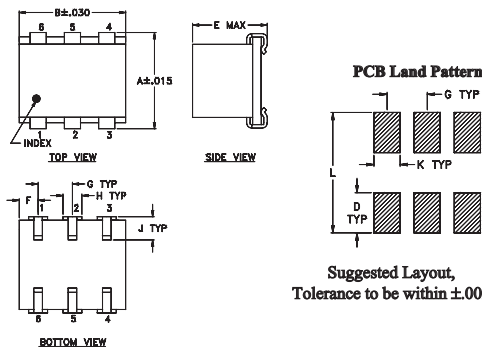
Maximum Ratings

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

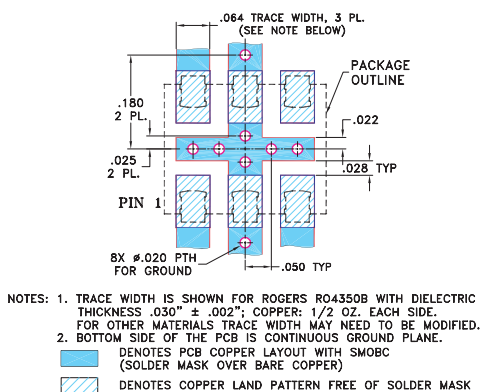
Outline Drawing



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-185 Suggested PCB Layout (PL-046)



Features

- wideband, 50 to 750 MHz
- low mainline loss, 0.5 dB typ.
- excellent solderability

Applications

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

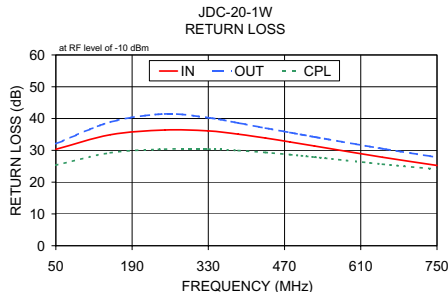
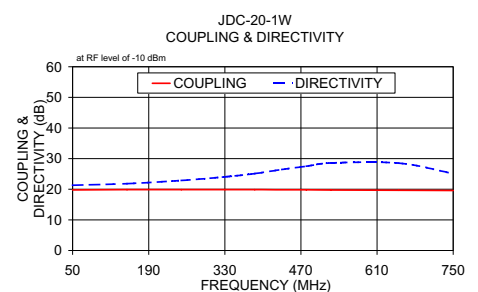
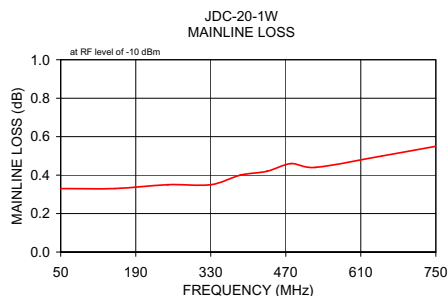
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT, W
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
f _L -f _U								
50-750	19.5±0.5	±0.5	0.5	0.9	22	15	1.2	0.5

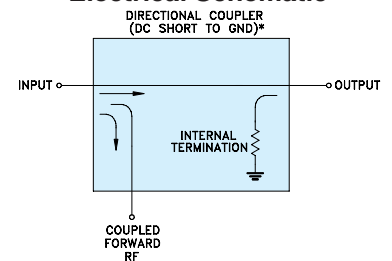
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
50.00	0.33	19.77	21.32	30.32	32.06	25.34
150.00	0.33	19.87	21.83	34.90	38.90	29.25
250.00	0.35	19.87	22.89	36.40	41.45	30.37
330.00	0.35	19.87	24.06	36.11	40.25	30.40
385.00	0.40	19.87	25.12	35.07	38.62	29.96
435.00	0.42	19.82	26.45	33.87	37.00	29.35
480.00	0.46	19.83	27.52	32.62	35.61	28.65
525.00	0.44	19.76	28.59	31.36	34.22	27.88
650.00	0.50	19.68	28.53	27.83	30.53	25.66
750.00	0.55	19.59	25.15	25.26	27.85	24.06



Electrical Schematic



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

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