

Directional Coupler

PDC-20-3-75

75Ω 1 to 150 MHz

Maximum Ratings

Operating Temperature -55°C to 100°C

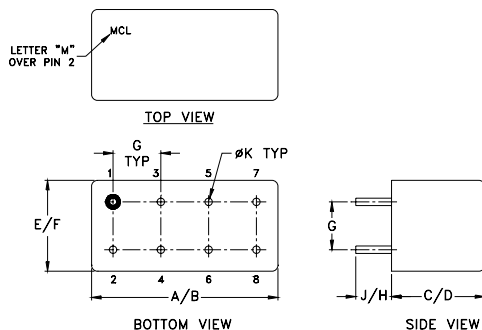
Storage Temperature -55°C to 100°C

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

INPUT	1
OUTPUT	4
COUPLED	3
GROUND	2,5,7,8
CASE GROUND	2,5,7,8
NOT USED	6

Outline Drawing



Outline Dimensions (inch/mm)

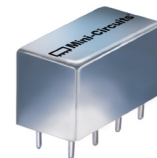
A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K		wt
.200	.20	.14	.031		grams
5.08	5.08	3.56	0.79		5.2

Features

- excellent directivity, 25 dB typ.
- low mainline loss, 0.35 dB typ.
- up to 4W power input
- rugged welded construction, hermetically sealed

Applications

- HF/VHF
- amateur radio
- defense & federal communications
- power levelling



CASE STYLE: A01

Directional Coupler Electrical Specifications

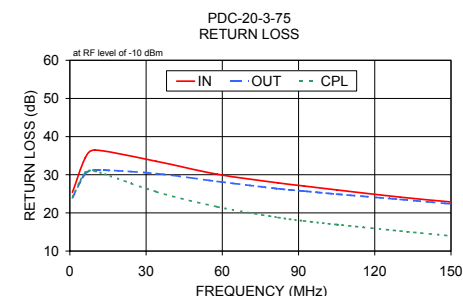
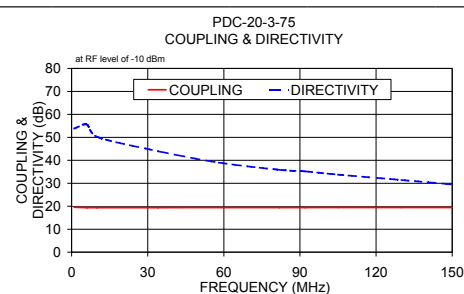
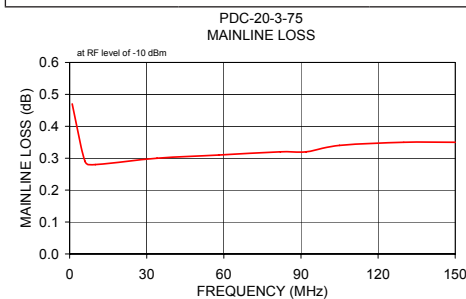
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U			L	MU
	f_L - f_U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.			
1-150	19.5±0.5	±0.75	0.35	0.8	0.35	0.8	0.35	0.8	25	20	25	20	25	20	2.0	2.0	4.0

L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

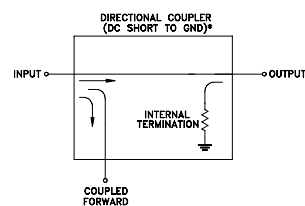
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
1.00	0.47	19.56	53.81	25.39	24.00	24.09
6.00	0.29	19.39	55.58	34.37	30.23	30.60
10.00	0.28	19.37	50.24	36.47	31.25	30.96
34.00	0.30	19.38	43.99	33.52	30.33	25.57
58.00	0.31	19.40	39.03	30.14	28.27	21.60
82.00	0.32	19.41	35.85	27.86	26.35	18.80
92.00	0.32	19.40	35.20	27.07	25.73	17.92
105.00	0.34	19.43	33.78	26.02	24.93	16.95
130.00	0.35	19.43	31.43	24.13	23.55	15.26
150.00	0.35	19.44	29.51	22.86	22.37	13.99



Electrical Schematic



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

Notes

A. 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.

B. 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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