

Plug-In Bi-Directional Coupler

PDC-20-1BD+ PDC-20-1BD

50Ω 0.5 to 200 MHz

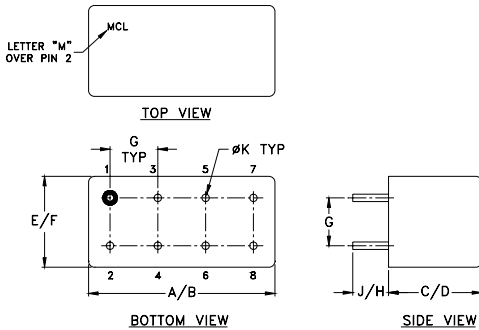
Maximum Ratings

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 (forward)	3
COUPLED (reverse)	6
GROUND	2,5,7,8
CASE GROUND	2,5,7,8

Outline Drawing



Outline Dimensions (inch/mm)

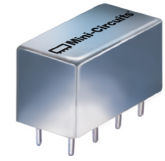
A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K		wt
.200	.20	.14	.031		grams
5.08	5.08	3.56	0.79		5.2

Features

- up to 5W power input
- excellent VSWR, 1.1:1 typ.
- very low mainline loss, 0.3 dB typ.
- excellent directivity, 35 dB typ.
- rugged welded construction, hermetically sealed

Applications

- HF/UHF
- communication receivers & transmitters
- amateur radio



CASE STYLE: A01
PRICE: \$24.20 ea. QTY. (1-9)

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

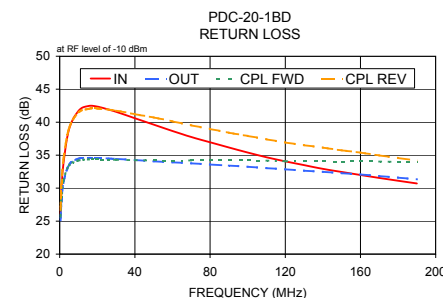
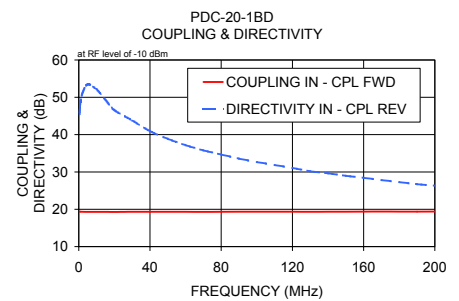
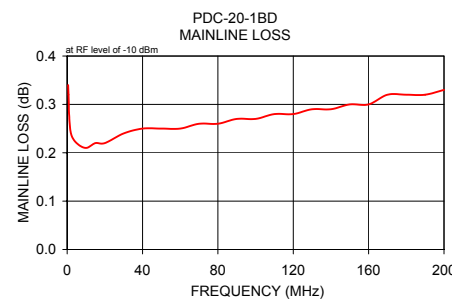
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	L		M		U		L		M		U			Typ.	L
f_L - f_U			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
0.5-200	19.2±0.5	±0.5	0.3	0.7	0.3	0.5	0.4	0.6	40	30	35	20	22	18	1.1	3.0	5.0

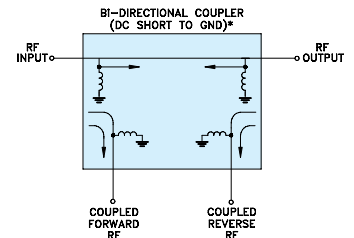
L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB)		Directivity (dB)		Return Loss (dB)			
	In-Out		In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd	Cpl Rev
0.50	0.34		19.38	19.40	60.80	45.48	26.08	25.12	25.68	26.72
1.00	0.28		19.35	19.35	61.66	48.74	29.86	28.08	28.62	30.56
5.00	0.22		19.30	19.31	59.50	53.47	38.93	33.54	33.43	39.10
10.00	0.21		19.30	19.30	58.75	52.11	41.72	34.47	34.19	41.47
20.00	0.22		19.29	19.29	57.01	46.56	42.36	34.57	34.35	42.07
50.00	0.25		19.32	19.33	50.59	38.89	39.63	34.07	34.20	40.71
100.00	0.27		19.35	19.39	42.93	32.65	35.40	33.24	34.20	37.92
130.00	0.29		19.33	19.43	39.14	30.18	33.49	32.64	34.07	36.51
160.00	0.30		19.38	19.47	35.48	28.44	31.99	32.08	34.04	35.39
200.00	0.33		19.40	19.56	31.91	26.30	30.32	31.08	33.89	33.80



Electrical Schematic



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

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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