

Plug-In

Bi-Directional Coupler

50Ω 0.2 to 250 MHz

PDC-20-3BD



CASE STYLE: A01
PRICE: \$20.20 ea. QTY. (1-9)

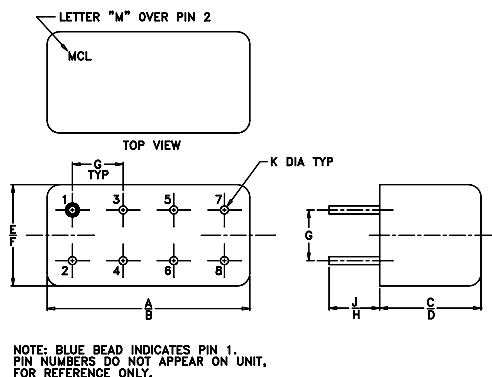
Maximum Ratings

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

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 4W power input
- excellent VSWR, 1.1:1 typ.
- very low insertion loss, 0.25 dB typ.
- excellent directivity, 40 dB typ.
- rugged welded construction, hermetically sealed

Applications

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

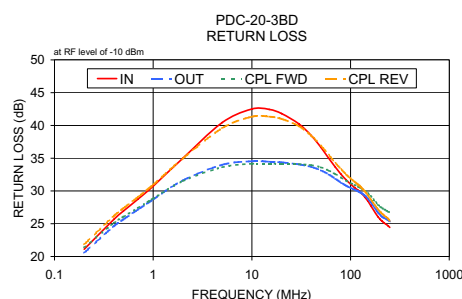
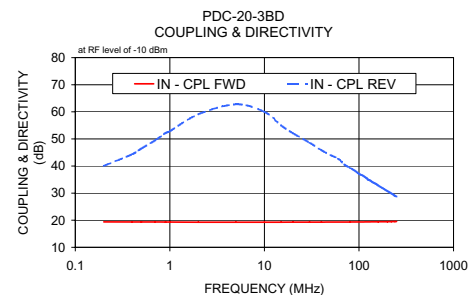
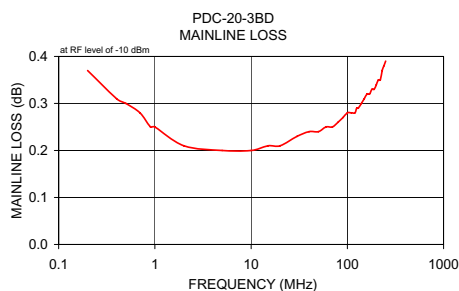
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U				
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.
0.2-250	19.5±0.5	±0.5	0.3	1.0	0.25	0.9	0.35	0.7	47	25	40	25	30	20	1.1	1.5	4.0

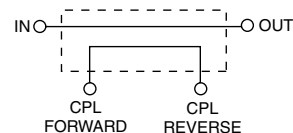
L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)	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
0.20	0.37	19.39	19.45	59.26	40.06	21.10	20.56	21.39	21.84
0.50	0.30	19.37	19.39	59.12	46.47	26.95	25.66	26.07	27.37
1.00	0.25	19.33	19.32	60.43	52.88	30.73	28.71	28.84	30.94
5.00	0.20	19.27	19.28	58.69	62.79	40.44	34.00	33.63	39.59
10.00	0.20	19.27	19.27	57.23	60.02	42.50	34.54	34.16	41.33
20.00	0.21	19.29	19.28	55.96	52.13	41.82	34.37	34.15	41.00
50.00	0.24	19.32	19.32	49.80	44.08	36.66	33.15	33.62	36.92
100.00	0.28	19.36	19.40	41.57	37.13	31.05	30.48	31.22	31.92
200.00	0.34	19.45	19.63	31.52	30.76	25.65	26.34	27.61	26.80
250.00	0.39	19.54	19.83	28.07	28.71	24.44	25.35	26.62	25.46



electrical schematic



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