

Plug-In Directional Coupler

PDC-20-3+

50Ω 0.2 to 250 MHz

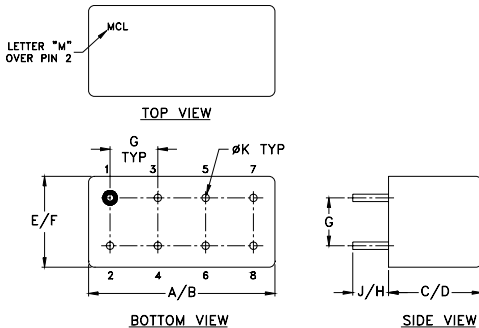
Maximum Ratings

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)

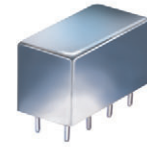
A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	5.2	

Features

- excellent directivity, 33 dB typ.
- low mainline loss, 0.25 dB typ.
- up to 4W power input
- good VSWR, 1.2:1 typ.
- rugged welded construction, hermetically sealed

Applications

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



CASE STYLE: A01
PRICE: \$18.20 ea. QTY. (1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS* (dB)						DIRECTIVITY (dB)			VSWR (:1)	POWER INPUT, W				
	Nom.	Flatness	L		M		U		L		M		U	Typ.	Max.	MU	
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.		Min.				
0.2-250	19.5±0.5	±0.5	0.35	0.6	0.25	0.5	0.35	0.6	36	30	33	25	25	20	1.2	1.5	4.0

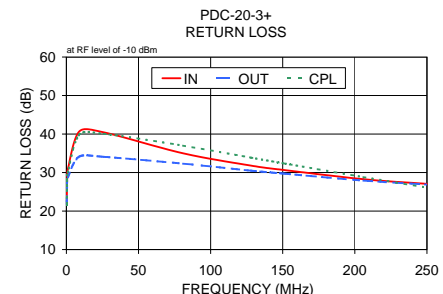
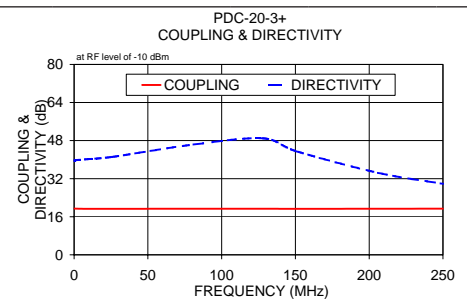
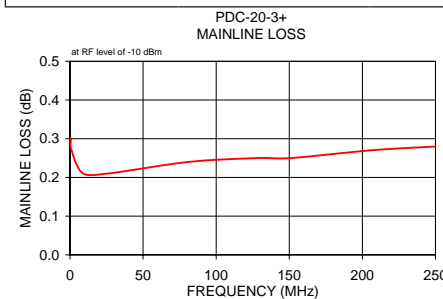
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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

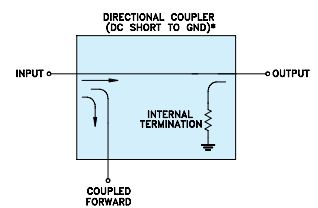
* Insertion loss specification in L range may degrade up to 1 dB at cold temperature, -55°C

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
0.20	0.29	19.42	39.65	22.30	21.91	21.73
0.60	0.30	19.43	39.51	28.91	27.26	28.15
1.00	0.27	19.39	39.77	30.93	28.75	30.08
9.00	0.21	19.33	40.19	40.70	34.16	39.85
26.00	0.21	19.34	41.15	40.44	34.09	40.06
81.00	0.24	19.35	46.36	35.00	32.30	36.98
128.00	0.25	19.36	48.96	31.81	30.48	33.86
151.00	0.25	19.34	43.44	30.66	29.73	32.37
206.00	0.27	19.37	34.46	28.27	27.91	28.82
250.00	0.28	19.40	29.83	27.05	26.87	26.10



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS THAT ROUTES DC FROM RF PORTS TO GROUND.

For detailed performance specs & shopping online see web site



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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