

Plug-In Directional Coupler

PDC-20-1+

50Ω 25 to 400 MHz

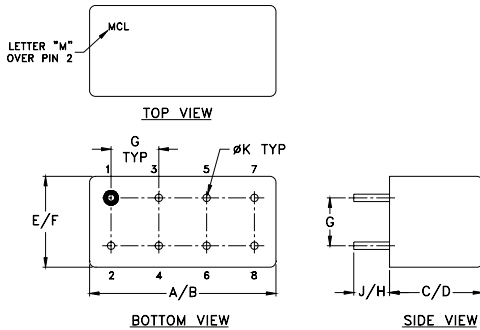
Maximum Ratings

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

- wideband, 25 to 400 MHz
- excellent directivity, 35 dB typ.
- low mainline loss, 0.3 dB typ.
- up to 5 watts power input
- rugged welded construction, hermetically sealed

Applications

- VHF/UHF
- communications transmitters & receivers
- instrumentation



Generic photo used for illustration purposes only

CASE STYLE: A01

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

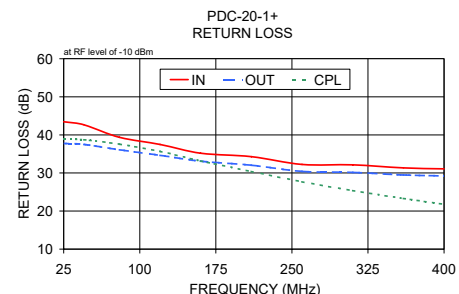
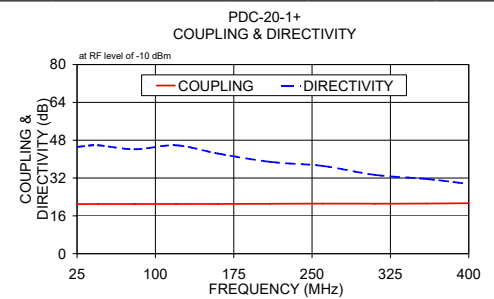
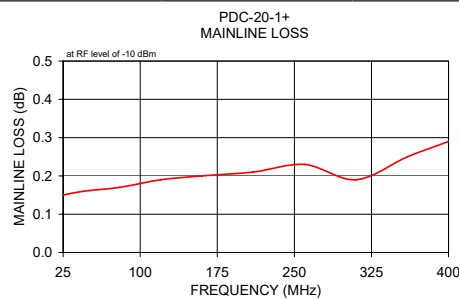
Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W		
	Nom.	Flatness	L		M		U		L		M		U			Typ.	Max.	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
f _L -f _U																		
25-400	21.0±0.75	±0.5	0.2	0.25	0.3	0.35	0.35	0.5	25	20	35	25	25	20	1.25	3.0	5.0	

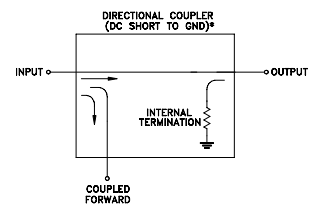
L = 25-50 MHz M = 50-300 MHz U = 300-400 MHz
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
25.00	0.15	20.99	45.17	43.44	37.76	38.85
45.00	0.16	21.00	45.84	42.64	37.50	38.72
80.00	0.17	21.01	44.19	39.35	36.10	37.56
120.00	0.19	21.03	45.85	37.48	34.64	35.68
160.00	0.20	21.03	42.38	35.18	33.11	33.17
210.00	0.21	21.10	38.85	34.28	32.05	30.41
260.00	0.23	21.18	37.15	32.25	30.42	27.69
310.00	0.19	21.15	33.37	32.14	30.15	25.38
360.00	0.25	21.21	31.62	31.33	29.48	23.31
400.00	0.29	21.37	29.49	31.08	29.23	21.80



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TERMINATION(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.
- The parts covered by this specification document 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/WCLStore/terms.jsp

