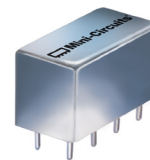


Plug-In Directional Coupler

50Ω 25 to 400 MHz

PDC-20-1+



CASE STYLE: A01

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

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

+RoHS Compliant

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

Directional Coupler Electrical Specifications

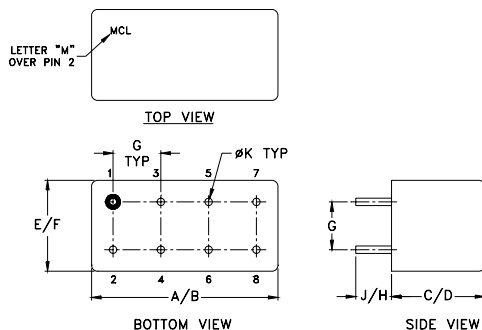
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W	
			L		M		U		L		M		U			L	MU
	f _L -f _U	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.		Min.	Typ.
25-400	21.0±0.75	±0.5	0.2	0.25	0.3	0.35	0.35	0.5	25	20	35	25	25	20	1.25	3.0	5.0

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

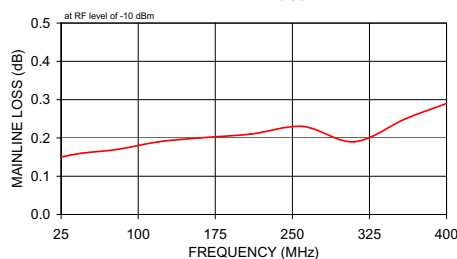
Outline Drawing



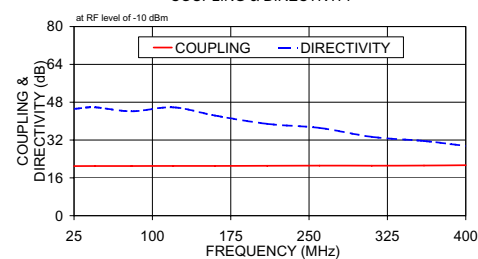
Outline Dimensions (inch/mm)

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

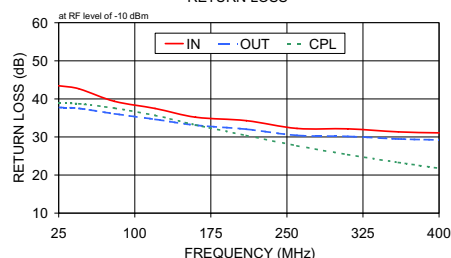
PDC-20-1+
MAINLINE LOSS



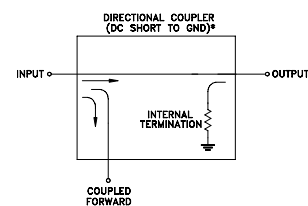
PDC-20-1+
COUPLING & DIRECTIVITY



PDC-20-1+
RETURN LOSS



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR 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.
- 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/MCLStore/terms.jsp



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. D
M153690
PDC-20-1+
WZ/TD/CP/AM
151118