

Plug-In Directional Coupler

PDC20-400HP+

50Ω 40 to 400 MHz

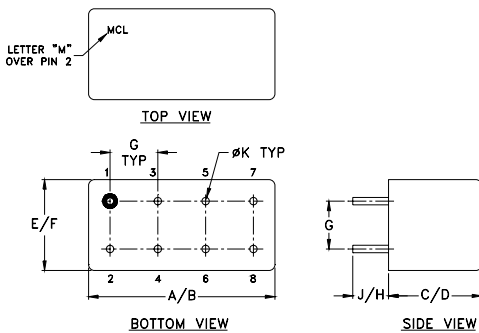
Maximum Ratings

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	2
COUPLED	5
GROUND	3,4,6,7,8
CASE GROUND	3,4,6,7,8

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

- high power, up to 10W power input
- wideband, 40 to 400 MHz
- low mainline loss, 0.2 dB typ.
- excellent directivity, 30 dB typ.
- rugged welded construction, hermetically sealed

Applications

- power levelling
- military & defense communications
- VSWR measurement



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.	Typ.	Max.
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.					
f _L -f _U																			
40-400	21.5±0.5	±0.6	0.1	0.3	0.2	0.4	0.2	0.5	30	20	30	20	27	18	1.1	10.0	10.0		

L = 40-100 MHz M = 100-200 MHz U = 200-400 MHz

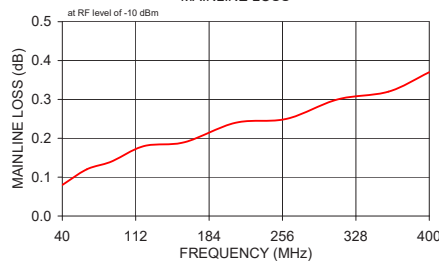
1. Mainline loss includes theoretical power loss at coupled port.

External heat sinking is recommended to reduce case temperature

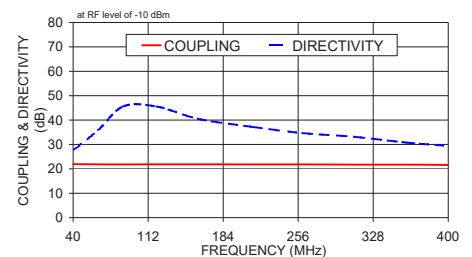
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		Cpl
				In	Out	
40.00	0.08	21.91	27.54	25.40	25.17	25.48
64.00	0.12	21.84	35.86	30.09	31.45	29.93
88.00	0.14	21.81	45.58	32.95	37.18	32.12
120.00	0.18	21.84	45.56	35.19	42.43	33.49
160.00	0.19	21.84	40.49	36.89	40.19	34.73
210.00	0.24	21.83	37.31	36.89	35.12	35.99
260.00	0.25	21.81	34.65	34.69	31.80	37.34
310.00	0.30	21.73	33.12	31.93	29.39	39.03
360.00	0.32	21.72	30.76	29.36	27.46	41.34
400.00	0.37	21.62	29.41	27.52	26.13	43.97

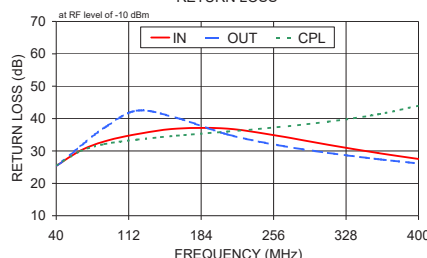
PDC20-400HP+ MAINLINE LOSS



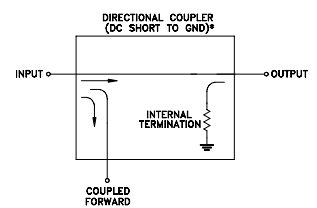
PDC20-400HP+ COUPLING & DIRECTIVITY



PDC20-400HP+ 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/WCLStore/terms.jsp



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