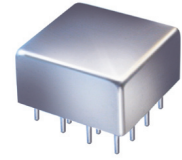


# Plug-In Directional Coupler

50Ω 5 to 1000 MHz

P4DC-30A-2



CASE STYLE: C07  
PRICE: \$37.20 ea. QTY. (1-9)

## 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	8
OUTPUT	12
COUPLED	2,1,13,14*
CASE GROUND	all other pins

\*4-coupled ports #1,#2,#3,#4 consecutively

## Features

- wideband, 5 to 1000 MHz
- 4 coupled ports
- low mainline loss, 0.7 dB typ.
- rugged welded construction

## Applications

- cellular
- power levelling
- instrumentation
- military defense communications

## Directional Coupler Electrical Specifications

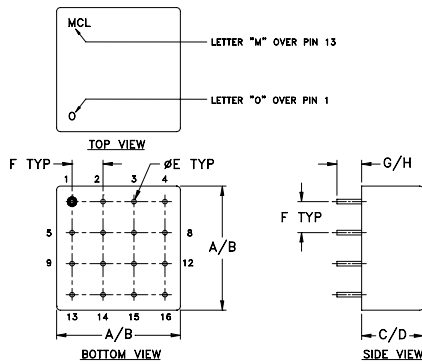
FREQ. (MHz)	COUPLING (dB)	MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W			
		L		M		U		L		M		U			Typ.	L	MU	
5-1000	30.5±0.5	±1.0		0.7	1.2	0.7	1.2	0.8	1.5	30	15	32	20	20	10	1.15	1.0	2.0

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.

4-coupled ports, isolation between coupled ports, 25 dB min.

## Outline Drawing

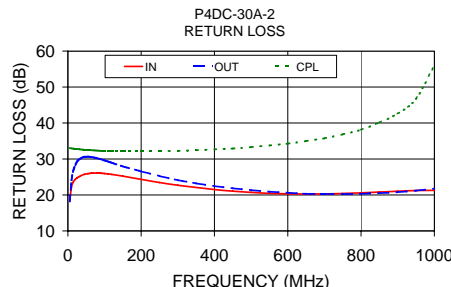
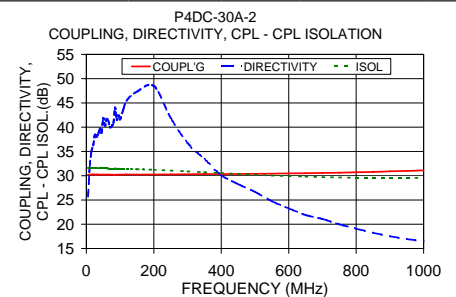
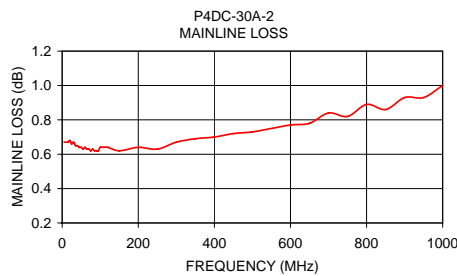


## Outline Dimensions (inch/mm)

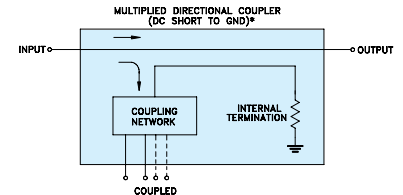
A	B	C	D	E
.770	.810	.380	.410	.030
19.56	20.57	9.65	10.41	0.76

## Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Isolation (dB)		Return Loss (dB)	
				Cpl-Cpl	In	Out	Cpl
5.00	0.67	30.20	25.73	31.63	18.19	18.21	33.04
10.00	0.67	30.22	32.07	31.60	22.26	24.15	32.96
20.00	0.68	30.26	36.24	31.59	24.30	28.27	32.83
50.00	0.64	30.23	41.81	31.54	25.83	30.62	32.54
100.00	0.64	30.23	41.63	31.47	25.95	29.62	32.25
200.00	0.64	30.25	48.50	31.23	24.32	26.57	32.21
500.00	0.73	30.39	26.67	30.21	20.72	21.35	33.32
700.00	0.84	30.57	21.10	29.73	20.29	20.29	35.77
900.00	0.93	30.89	17.53	29.55	21.02	20.78	42.62
1000.00	1.00	31.11	16.48	29.58	21.28	21.76	56.05



## Electrical Schematic



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

For detailed performance specs & shopping online see web site

**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

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](http://www.minicircuits.com/MCLStore/terms.jsp).

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