

# Plug-In Directional Coupler

50Ω 0.005 to 20 MHz

PDC-10-6+  
PDC-10-6



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

## 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

- excellent directivity, 40 dB typ.
- low mainline loss, 0.4 dB typ.
- rugged welded construction, hermetically sealed

## Applications

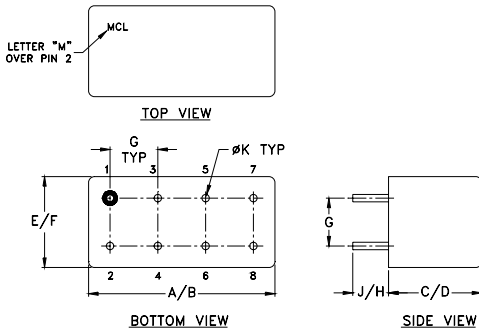
- HF
- amateur radio
- instrumentation

## Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W		
	Nom.	Flatness	L		M		U		L		M		U			Typ.	L	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
$f_L$ - $f_U$																		
0.005-20	11.0±0.5	±0.5	0.4	1.2	0.4	0.8	0.4	1.0	40	30	40	30	35	25	1.3	1.5	3.0	

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.

## Outline Drawing

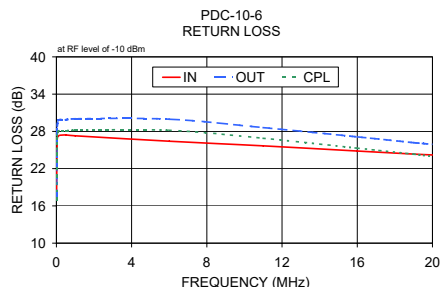
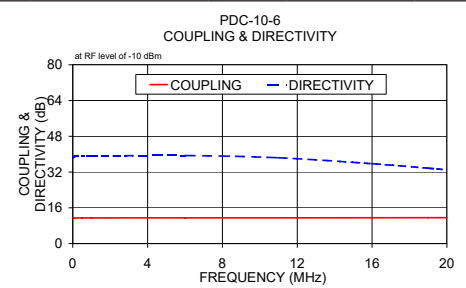
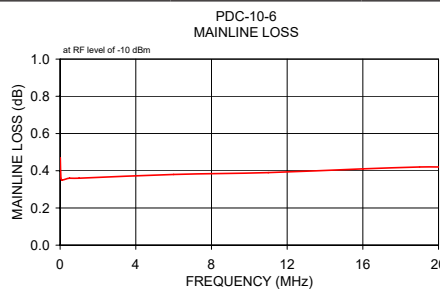


## Outline Dimensions (inch/mm)

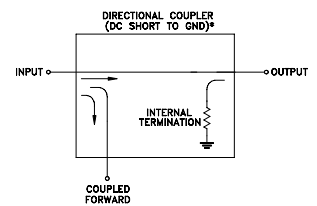
A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K		wt
.200	.20	.14	.031		grams
5.08	5.08	3.56	0.79		5.2

## Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
0.005	0.47	11.60	38.37	17.44	17.44	17.05
0.04	0.36	11.47	38.70	26.71	28.77	27.26
0.10	0.35	11.46	39.03	27.29	29.80	28.07
0.50	0.36	11.47	39.15	27.43	29.88	28.13
1.00	0.36	11.47	39.21	27.29	30.04	28.19
6.00	0.38	11.50	39.42	26.42	29.96	28.19
11.00	0.39	11.53	38.41	25.67	28.62	26.90
16.00	0.41	11.56	35.76	24.84	27.12	25.30
19.00	0.42	11.59	33.75	24.34	26.19	24.33
20.00	0.42	11.60	33.02	24.21	25.92	23.97



## 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.
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