

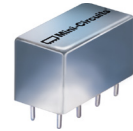
Plug-In

NON-CATALOG

# Directional Coupler

PDC20-970HP

50Ω 860 to 970 MHz



## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

## Pin Connections

INPUT	1
OUTPUT	4
COUPLED	3
GROUND	2,5,7,8
CASE GROUND	2,5,7,8
NOT USED	6

## Features

- high power, up to 5W power input
- low mainline loss, 0.25 dB typ.
- excellent directivity, 24 dB typ.
- rugged welded construction, hermetically sealed

CASE STYLE: A01  
PRICE: Contact Sales Dept.

## Applications

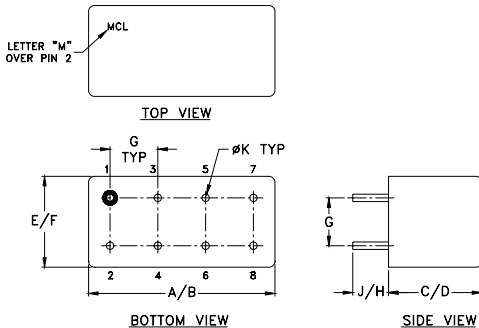
- cellular
- power levelling & monitoring
- VSWR measurement

## Directional Coupler Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT, W
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		
860-970	20.2±0.6	±0.5	0.25	0.5	24	20	1.1	5.0

1. Mainline loss includes theoretical power loss at coupled port.  
External heat sinking is recommended to reduce case temperature.

## Outline Drawing



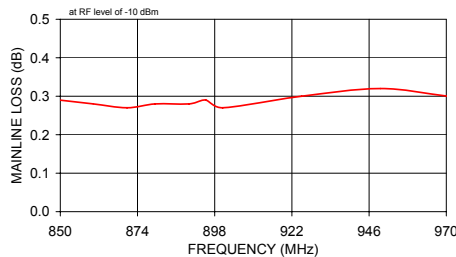
## Outline Dimensions (inch/mm)

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	

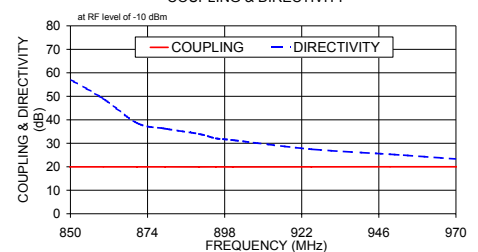
## Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
849.75	0.29	19.95	57.27	23.08	25.72	18.88
860.25	0.28	19.95	48.96	22.83	25.40	18.79
870.75	0.27	19.95	38.63	22.61	25.07	18.71
879.50	0.28	19.96	36.22	22.24	24.82	18.65
890.00	0.28	19.94	33.98	22.23	24.54	18.58
895.25	0.29	19.97	32.11	22.15	24.42	18.54
900.50	0.27	19.94	31.38	22.05	24.26	18.51
925.00	0.30	19.97	27.48	21.62	23.64	18.36
949.50	0.32	19.98	25.33	21.25	23.12	18.23
970.50	0.30	19.99	23.29	20.95	22.65	18.12

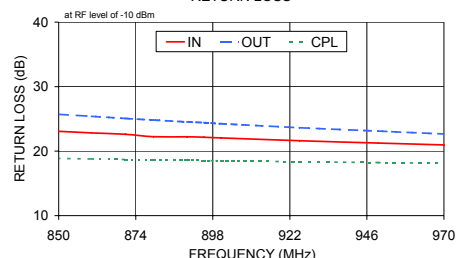
PDC20-970HP  
MAINLINE LOSS



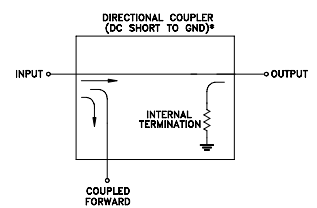
PDC20-970HP  
COUPLING & DIRECTIVITY



PDC20-970HP  
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.
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