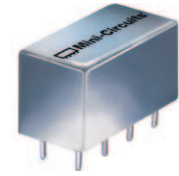


Plug-In Directional Coupler

PDC-10-21+

50Ω 1 to 1000 MHz



CASE STYLE: A01
PRICE: \$35.20 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	1
OUTPUT	4
COUPLED	3
GROUND	2,5,7,8
CASE GROUND	2,5,7,8
NOT USED	6

Features

- wideband, 1 to 1000 MHz
- excellent directivity, 25 dB typ.
- rugged welded construction, hermetically sealed

Applications

- VHF/UHF
- cellular
- communications
- power levelling monitoring

+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.	L	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
f_L - f_U																		
1-1000	11.0±0.5	±0.5	1.2	1.7	1.2	1.7	1.6	2.0	40	30	25	20	25	20	1.3	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]

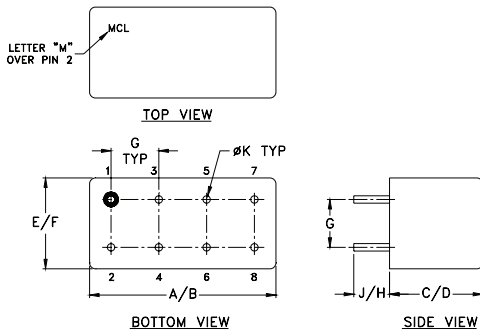
1. Mainline loss includes theoretical power loss at coupled port.

* Upper range coupling ±0.75 dB

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)		Return Loss (dB)		Cpl
			In	Out	In	Out	
1.00	1.30	11.23	62.01	19.71	15.71	14.37	
5.00	1.05	10.76	57.11	31.10	18.98	17.90	
9.00	1.05	10.73	53.48	35.13	19.15	18.46	
127.00	1.20	10.82	30.42	27.00	18.33	18.02	
283.00	1.22	10.94	24.19	21.83	17.43	17.05	
440.00	1.38	11.08	21.95	19.86	16.88	17.33	
580.00	1.39	11.13	21.83	19.45	16.96	19.49	
780.00	1.42	11.27	26.01	20.01	17.93	30.79	
928.00	1.52	11.49	30.86	20.19	19.03	23.53	
1000.00	1.59	11.60	24.46	19.91	19.64	19.50	

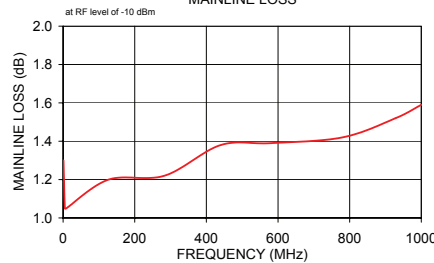
Outline Drawing



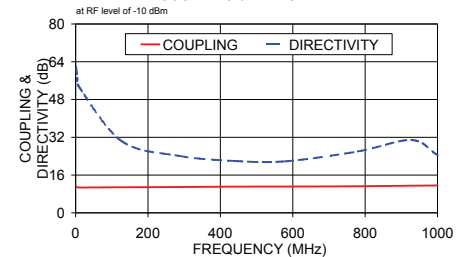
Outline Dimensions (inch/mm)

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	

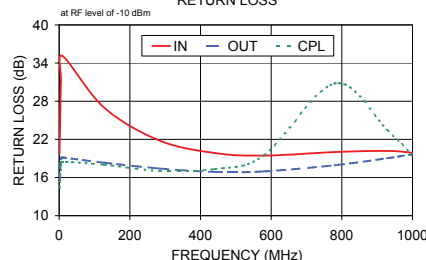
PDC-10-21+ MAINLINE LOSS



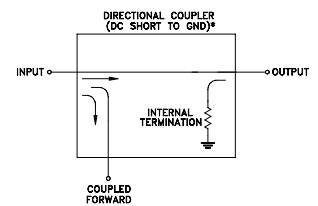
PDC-10-21+ COUPLING & DIRECTIVITY



PDC-10-21+ 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-Circuits' 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

