

# Plug-In Directional Coupler

50Ω

5 to 1000 MHz

## TDC-10-2+ TDC-10-2



CASE STYLE: B02  
PRICE: \$28.20 ea. QTY (1-9)

### Maximum Ratings

Operating Temperature -55°C to 100°C

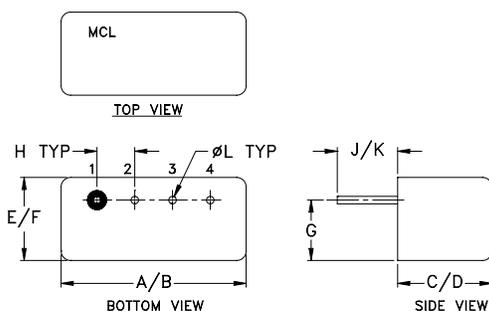
Storage Temperature -55°C to 100°C

\* Case temperature is defined as temperature on ground leads.  
Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

INPUT	1
OUTPUT	2
COUPLED	4
GROUND	3
CASE GROUND	3

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.480	.500	.240	.255	.210	.230
12.19	12.70	6.10	6.48	5.33	5.84
G	H	J	K	L	wt
.16	.100	.14	.20	.020	grams
4.06	2.54	3.56	5.08	0.51	1.9

### Features

- wideband, 5 to 1000 MHz
- excellent directivity, 25 dB typ.
- rugged welded case, hermetically sealed

### Applications

- VHF/UHF
- instrumentation
- communication receivers & transmitters

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

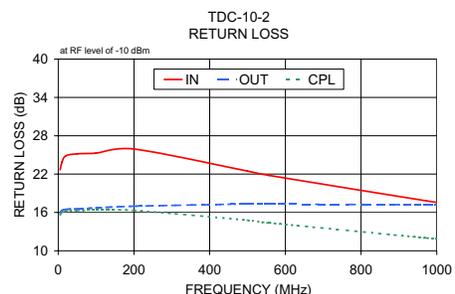
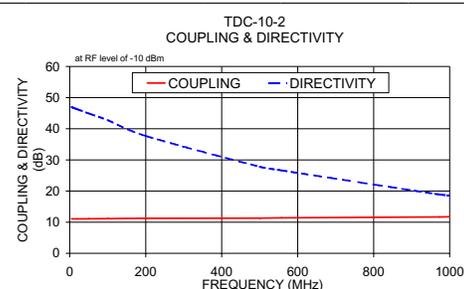
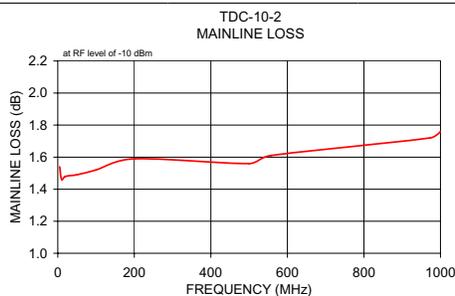
### Directional Coupler Electrical Specifications

FREQ. RANGE (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.				
$f_L$ - $f_U$	11.0±0.5	±0.6	1.4	1.8	1.5	1.8	1.6	2.0	50	35	25	20	20	15	1.5	0.5	0.5	

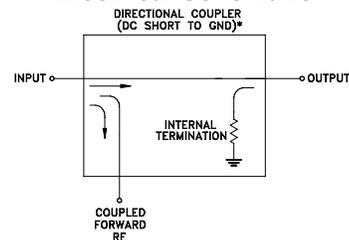
L = low range [ $f_L$  to 10  $f_L$ ] M = mid range [10  $f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]  
1. Mainline loss includes theoretical power loss at coupled port.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	1.54	11.12	46.98	22.70	15.85	15.65
10.00	1.46	11.07	46.73	23.89	16.30	16.03
20.00	1.48	11.07	46.28	24.86	16.48	16.22
50.00	1.49	11.09	44.93	25.17	16.57	16.32
100.00	1.52	11.13	42.76	25.29	16.72	16.38
200.00	1.59	11.25	37.70	25.93	16.98	16.31
500.00	1.56	11.29	27.82	22.47	17.33	14.79
557.11	1.61	11.38	26.63	21.79	17.30	14.37
972.94	1.72	11.67	18.90	17.81	17.20	12.01
1000.00	1.76	11.75	18.62	17.57	17.20	11.89



### 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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