

# Plug-In Directional Coupler

## TDC-6-1+

50Ω

10 to 400 MHz



Generic photo used for illustration purposes only

CASE STYLE: B02

**+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

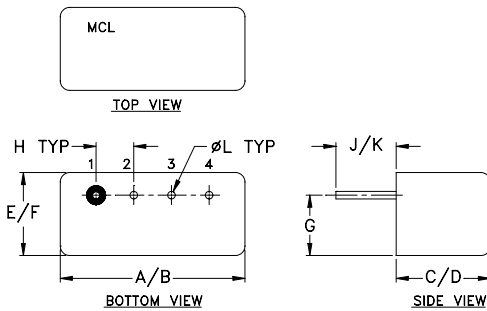
Storage Temperature -55°C to 100°C

\* 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

- excellent directivity, 30 dB typ.
- rugged welded case, hermetically sealed

### Applications

- VHF/UHF
- instrumentation
- communication receivers & transmitters

### Directional Coupler Electrical Specifications

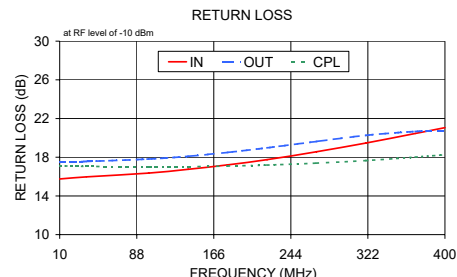
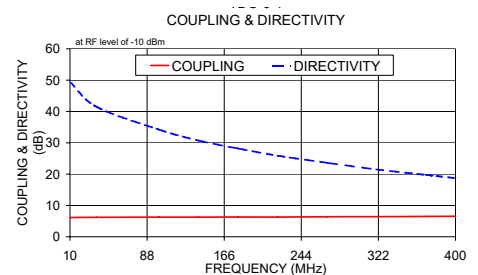
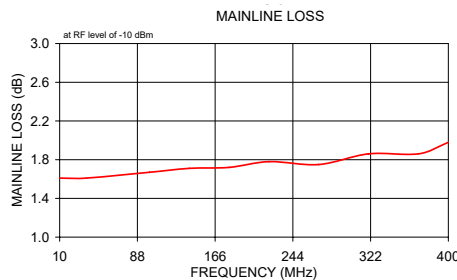
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT, W		
	Nom.	Flatness	L		M		U		L		M		U			Typ.	L	MU
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
10-400	6.3±0.4	±0.4	2.0	2.4	2.0	2.4	2.0	2.5	36	30	30	25	20	15	1.5	1.0	2.0	

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  $f_U$ ]

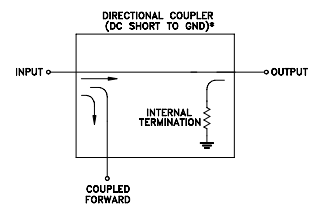
1. Mainline loss includes theoretical power loss at coupled port.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
10.00	1.61	6.13	49.37	15.75	17.54	17.12
37.00	1.61	6.21	41.47	15.97	17.57	17.06
100.00	1.67	6.25	34.23	16.36	17.82	17.02
140.00	1.71	6.27	30.72	16.75	18.10	17.03
180.00	1.72	6.30	28.19	17.21	18.50	17.09
220.00	1.78	6.28	25.90	17.75	18.98	17.19
270.00	1.75	6.38	23.63	18.57	19.63	17.39
320.00	1.86	6.40	21.51	19.47	20.27	17.66
370.00	1.86	6.48	19.76	20.46	20.67	18.02
400.00	1.98	6.54	18.72	21.06	20.73	18.27



### 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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