

Surface Mount Directional Coupler

50Ω 5 to 1000 MHz

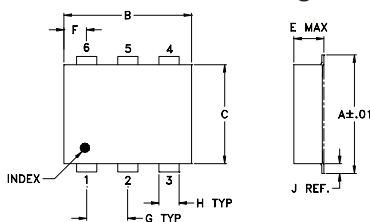
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are exceeded.	

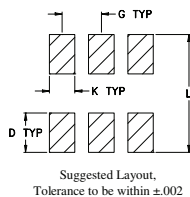
Pin Connections

INPUT	1
OUTPUT	6
COUPLED	3
GROUND	2
50Ω TERM EXTERNAL	4
ISOLATE (DO NOT USE)	5

Outline Drawing



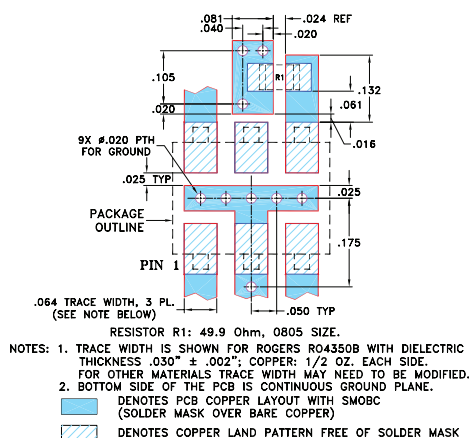
PCB Land Pattern



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54
H	J	K	L			wt
.030	.026	.065	.300			grams
0.76	0.66	1.65	7.62			0.20

Demo Board MCL P/N: TB-05 Suggested PCB Layout (PL-095)



Features

- wideband, 5-1000 MHz
- low mainline loss, 0.6 dB typ.
- high directivity, 24 dB typ.
- aqueous washable
- protected by U.S. Patents 6,133,525 & 6,140,887

Applications

- cable tv
- communications

ADC-15-4+
ADC-15-4



CASE STYLE: CD542
PRICE:\$6.95 ea. QTY (10)

+RoHS Compliant

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

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200, 500
13"	500, 1000

Directional Coupler Electrical Specifications

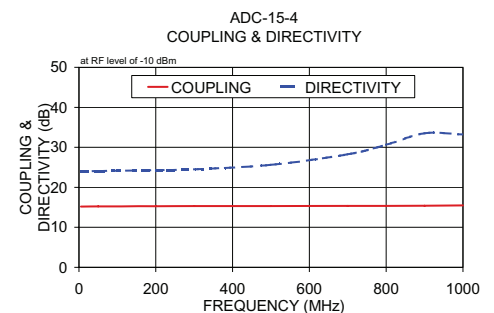
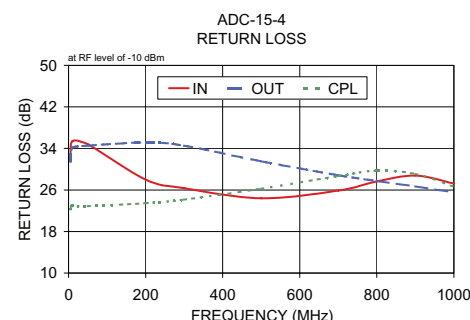
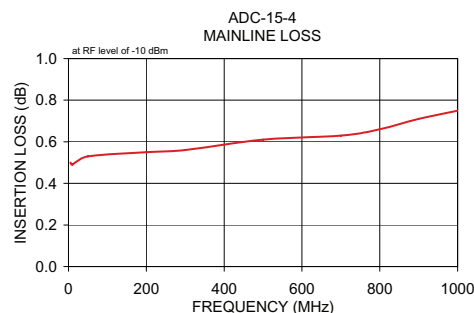
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)			DIRECTIVITY (dB)			VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	L	M	U	L	M	U		L	MU
f _L -f _U			Typ. Max.	Typ. Max.	Typ. Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ.	Max.	Max.
5-1000	15.5±0.5	±0.5	0.6 1.0	0.6 1.0	0.8 1.2	23 20	24 20	28 17	1.20	1.0	1.0

L= 5-50 MHz M= 50-500 MHz U= 500-1000 MHz

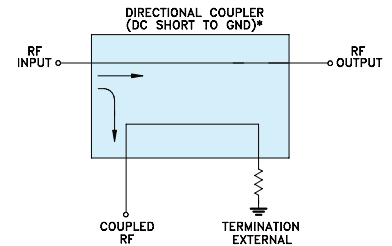
1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)	
				In	Out
5.00	0.50	15.21	24.01	31.88	31.38
10.00	0.49	15.19	23.99	35.41	34.12
50.00	0.53	15.23	24.08	34.79	34.52
200.00	0.55	15.28	24.31	28.00	35.16
300.00	0.56	15.30	24.52	26.35	34.54
500.00	0.61	15.32	25.64	24.41	31.51
700.00	0.63	15.34	28.27	25.88	28.84
800.00	0.66	15.36	30.62	27.63	27.73
900.00	0.71	15.42	33.51	28.77	26.69
1000.00	0.75	15.49	33.23	27.25	25.54



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) AND EXTERNAL TERMINATION.

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.
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