

Surface Mount Directional Coupler

ADC-20-12+ ADC-20-12

50Ω 100 to 1200 MHz

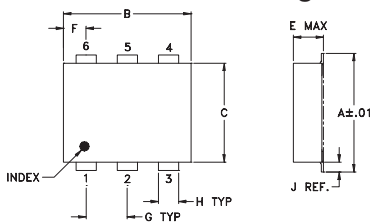
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

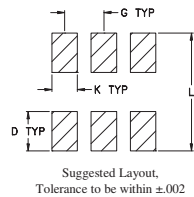
Pin Connections

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

Outline Drawing



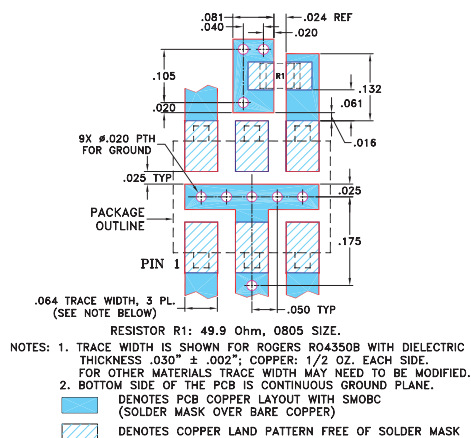
PCB Land Pattern



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

- useable to 1500 MHz
- low mainline loss, 0.5 dB typ.
- high directivity, 26 dB typ.
- aqueous washable
- protected by U.S Patents 6,133,525 & 6,140,887

Applications

- cable tv



CASE STYLE: CD542
PRICE:\$6.95 ea. QTY (10-49)

+ RoHS compliant in accordance
with EU Directive (2002/95/EC)

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

Directional Coupler Electrical Specifications

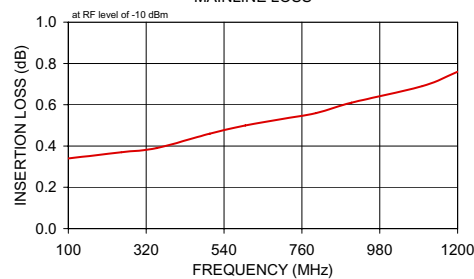
FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT, W	
	Nom.	Flatness	Typ.	Max.	Typ.	Min.		Typ.	L Max.
f _L -f _U									
100-1200	20±0.75	±0.7	0.5	1.1	26	13	1.17	1.0	1.0

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

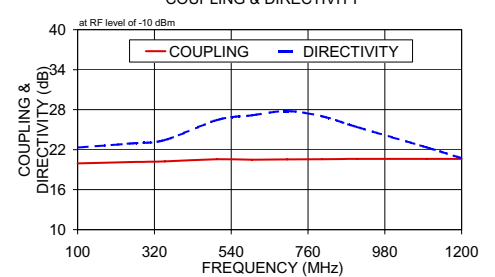
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
100.00	0.34	19.94	22.33	29.24	25.01	30.72
250.00	0.37	20.14	22.91	26.99	24.13	28.60
350.00	0.39	20.24	23.45	25.38	22.81	26.88
500.00	0.46	20.56	26.44	23.21	21.05	24.55
600.00	0.50	20.50	27.16	22.03	19.94	23.24
700.00	0.53	20.55	27.78	21.02	18.96	22.06
800.00	0.56	20.58	27.00	20.17	18.09	21.12
900.00	0.61	20.61	25.40	19.23	17.25	20.16
1100.00	0.69	20.61	22.34	17.44	15.64	18.19
1200.00	0.76	20.63	20.72	16.56	14.90	17.35

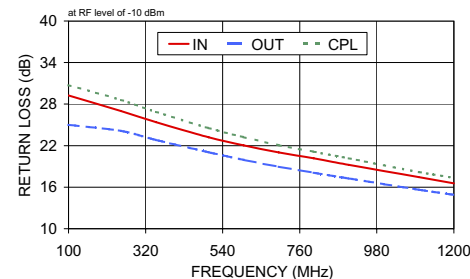
ADC-20-12
MAINLINE LOSS



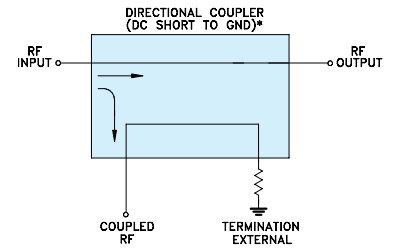
ADC-20-12
COUPLING & DIRECTIVITY



ADC-20-12
RETURN LOSS



Electrical Schematic



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

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IF/RF MICROWAVE COMPONENTS

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081111