

Surface Mount Directional Coupler

ADC-20-12+ ADC-20-12

50Ω 100 to 1200 MHz



Maximum Ratings

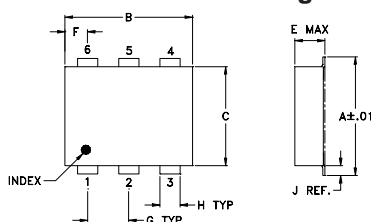
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

Permanent damage may occur if any of these limits are exceeded.

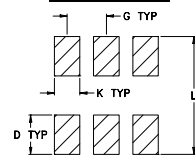
Pin Connections

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

Outline Drawing



PCB Land Pattern

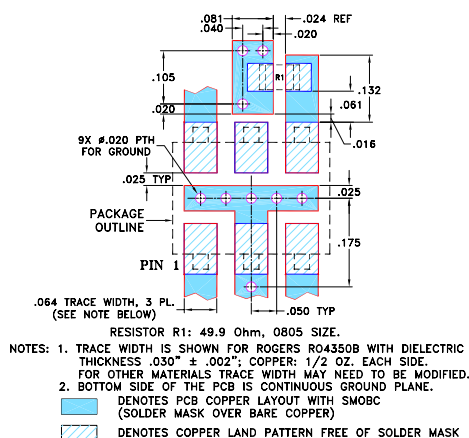


Suggested Layout,
Tolerance to be within ±.002

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.

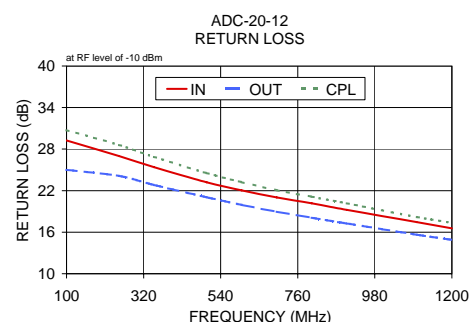
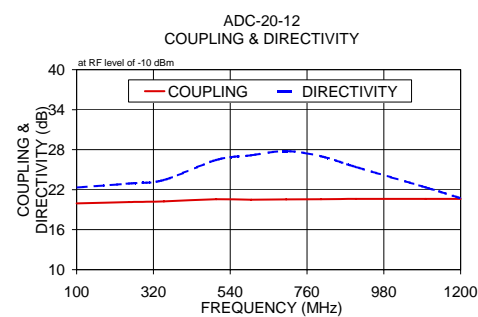
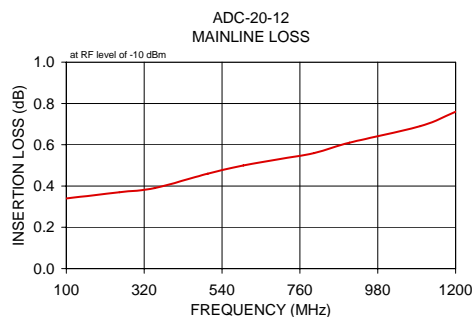
Directional Coupler Electrical Specifications

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

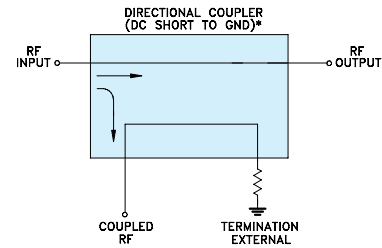
1. Mainline loss includes theoretical power loss at coupled port.

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



Electrical Schematic



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

For detailed performance specs
& shopping online see web site

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

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