

High Reliability Mixer

ADE-R1LH+

Level 10 (LO Power +10 dBm) 1 to 500 MHz



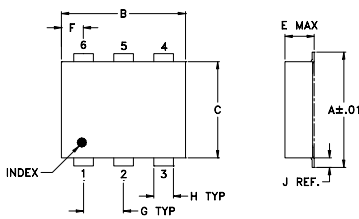
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

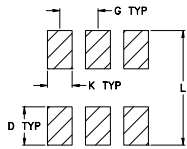
Pin Connections

LO	6
RF	3
IF	2
GROUND	1,4,5

Outline Drawing



PCB Land Pattern

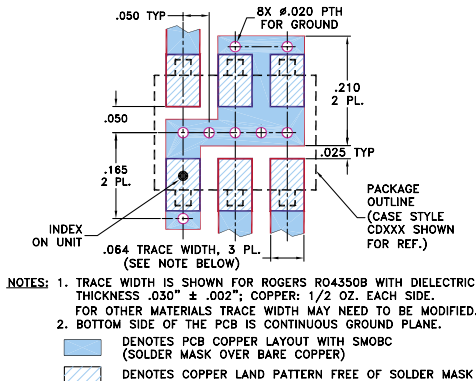


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.162	.055	.100
6.91	7.87	5.59	2.54	4.11	1.40	2.54
H	J	K	L	wt		
.030	.026	.065	.300	grams		
0.76	0.66	1.65	7.62	0.25		

Demo Board MCL P/N: TB-03 Suggested PCB Layout (PL-052)



Features

- hermetically sealed ceramic quad
- low conversion loss, 5.2 dB typ.
- excellent L-R isolation, 60 dB typ. and L-I isolation, 45 dB typ.
- good IP3, 15 dBm typ.
- low profile package
- aqueous washable
- protected by US Patent 6,133,525

Applications

- VHF/UHF receivers

Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)										
		L	M	U	L	M	U											
1-500	DC-500	5.2	0.10	6.5	8.2	70	55	60	45	47	32	65	45	45	28	34	20	15

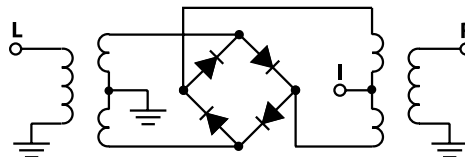
1 dB COMP.: +5 dBm typ.

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]
m = mid band [$2f_L$ to $f_U/2$]

Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)		Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
	LO	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
1.00	31.00	5.74	67.64	54.38	1.43	2.25
2.80	32.80	5.29	67.42	53.90	1.24	2.25
6.40	36.40	5.07	66.61	53.33	1.19	2.25
8.20	38.20	5.01	65.84	52.86	1.18	2.25
10.00	40.00	4.86	65.97	52.56	1.18	2.25
12.00	42.00	4.98	66.11	52.18	1.18	2.24
37.00	67.00	5.01	63.03	47.76	1.15	2.24
62.00	92.00	5.02	61.12	44.77	1.14	2.22
87.00	117.00	5.05	59.81	42.86	1.12	2.21
112.00	142.00	5.07	58.70	41.66	1.11	2.26
120.00	150.00	5.08	58.36	41.21	1.11	2.27
210.00	180.00	5.16	58.09	40.10	1.08	2.26
250.00	220.00	5.20	55.11	38.90	1.06	2.31
300.00	270.00	5.30	54.56	38.23	1.05	2.34
350.00	320.00	5.47	49.49	36.88	1.03	2.47
400.00	370.00	5.58	45.89	35.18	1.05	2.41
425.00	395.00	5.56	44.38	33.02	1.09	2.43
450.00	420.00	5.61	43.62	30.95	1.11	2.56
475.00	445.00	5.63	43.19	29.44	1.09	2.52
500.00	470.00	5.73	42.63	28.27	1.06	2.53

Electrical Schematic



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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RF/IF MICROWAVE COMPONENTS

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M109914
ADE-R1LH+
ED-12873/10
WL/TD/QL
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