

LO2 mixer

Surface Mount Frequency Mixer

ADE-2+ ADE-2

Level 7 (LO Power +7 dBm) 5 to 1000 MHz



Maximum Ratings

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

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

Pin Connections

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

Features

- excellent L-R isolation, 47 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

Applications

- cellular
- PCS

CASE STYLE: CD542
PRICE: \$1.99 ea. QTY (20)

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

Available Tape and Reel at no extra cost

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

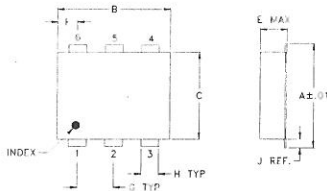
Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)										
		L	M	U	L	M	U											
5-1000	DC-1000	6.67	0.26	8.0	9.5	60	40	47	25	32	22	62	35	45	25	32	20	20

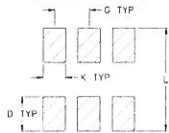
1 dB COMP: +1 dBm typ.

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 $f_U/2$]

Outline Drawing



PCB Land Pattern



Suggested Layout, Tolerance to be within ±.002

Outline Dimensions (inch/mm)

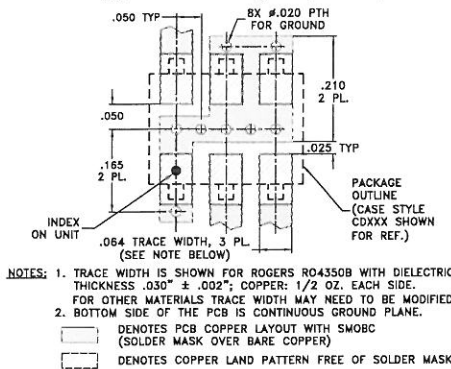
A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54

H	J	K	L	wt
.030	.026	.065	.300	grams
0.76	0.66	1.65	7.62	0.20

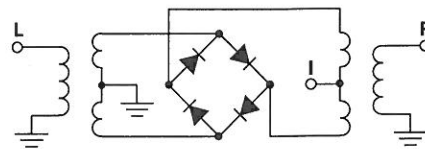
Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-1 (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
5.0	35.0	7.24	67.56	1.74	2.77
14.0	44.0	6.89	66.00	1.40	2.76
23.0	53.0	6.84	64.66	1.35	2.75
32.0	62.0	6.85	63.45	1.34	2.74
41.0	71.0	6.86	62.35	1.33	2.73
50.0	80.0	6.83	61.27	1.33	2.72
200.0	230.0	6.78	50.90	1.35	2.79
350.0	380.0	6.78	45.63	1.37	2.87
500.0	530.0	6.85	42.11	1.40	2.76
502.5	532.5	6.81	42.09	1.41	2.76
586.0	616.0	6.87	40.83	1.44	2.77
632.0	662.0	6.91	39.73	1.47	2.92
678.0	708.0	6.96	39.35	1.47	2.90
724.0	754.0	6.98	38.67	1.50	3.11
770.0	800.0	7.08	37.90	1.52	3.08
816.0	846.0	7.09	37.06	1.52	3.26
862.0	892.0	7.14	36.56	1.54	3.24
908.0	938.0	7.22	35.71	1.53	3.28
954.0	984.0	7.26	35.35	1.49	3.28
1000.0	1030.0	7.37	35.01	1.50	3.23

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



Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED
The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com
IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

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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-Circuits' 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' web site at www.minicircuits.com/MCLStore/terms.jsp.

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Performance Charts

