

# Surface Mount Frequency Mixer

# ADE-2ASK+ ADE-2ASK

Level 7 (LO Power +7 dBm) 1 to 1000 MHz



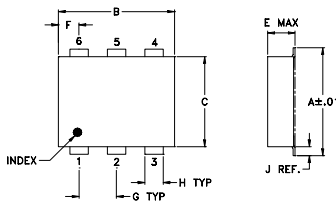
## Maximum Ratings

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

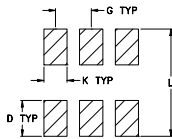
## Pin Connections

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

## Outline Drawing



### PCB Land Pattern

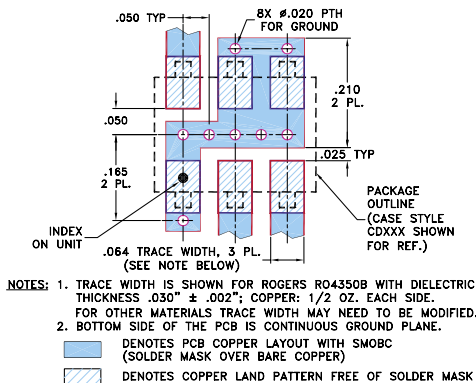


Suggested Layout,  
Tolerance to be within ±.002

## Outline Dimensions (inch)

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-03 Suggested PCB Layout (PL-052)



## Features

- low conversion loss, 5.4 dB typ.
- excellent L-R isolation, 45 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

## Applications

- VSAT systems
- instrumentation
- cellular

CASE STYLE: CD542

PRICE: \$4.25 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.

## Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)									
	LO/RF	IF	L	M	U	L	M	U										
1-1000	DC-1000	5.4	0.10	6.8	9.5	55	45	45	30	36	20	50	40	32	22	22	12	12

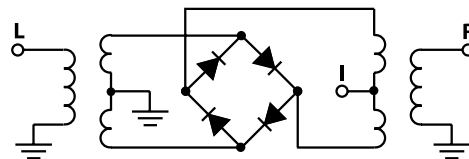
1 dB COMP.: +1 dBm typ.  
Phase detection, positive polarity

L = low range [ $f_c$  to  $10 f_c$ ]  
M = mid range [ $10 f_c$  to  $f_c/2$ ]  
U = upper range [ $f_c/2$  to  $f_c$ ]

## Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
1.00	31.00	6.13	67.70	64.10	1.38	2.58
2.00	32.00	5.68	67.90	64.20	1.22	2.55
2.18	32.18	5.68	67.90	64.00	1.21	2.52
4.73	34.73	5.45	66.90	64.10	1.12	2.55
10.29	40.29	5.40	66.00	63.10	1.09	2.52
22.37	52.37	5.49	63.30	61.10	1.07	2.52
48.66	78.66	5.44	59.70	57.50	1.04	2.52
105.82	135.82	5.42	54.50	52.40	1.00	2.52
230.13	260.13	5.49	48.90	47.20	1.05	2.61
500.50	530.50	5.96	46.80	38.20	1.25	2.88
556.00	586.00	6.18	47.40	36.40	1.20	2.92
600.00	630.00	6.29	45.90	35.20	1.21	2.96
611.50	641.50	6.31	45.10	35.00	1.21	2.88
667.00	697.00	6.43	42.60	31.90	1.26	3.21
722.50	752.50	6.81	41.00	30.90	1.38	3.01
778.00	808.00	6.93	38.60	29.20	1.58	3.21
833.50	863.50	7.22	36.80	28.10	1.78	3.38
889.00	919.00	7.46	35.20	28.60	1.99	3.16
944.50	974.50	7.58	33.10	26.60	2.25	3.64
1000.00	1030.00	7.83	30.70	24.00	2.49	3.64

## Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

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061227  
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# Performance Charts

# ADE-2ASK+ ADE-2ASK

