

# Surface Mount Frequency Mixer

## ADE-25MH+ ADE-25MH

Level 13 (LO Power +13 dBm) 5 to 2500 MHz



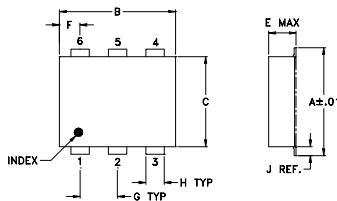
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

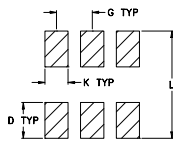
### Pin Connections

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

### Outline Drawing



#### PCB Land Pattern

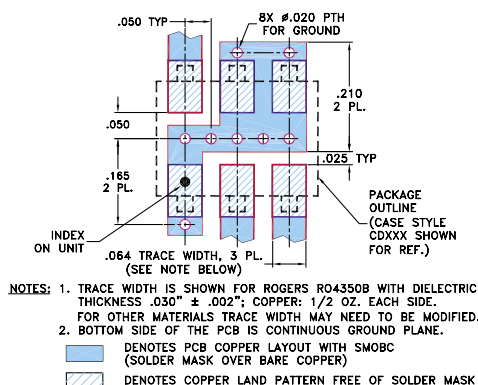


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	
.272	.310	.220	.100	.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, 6.9 dB typ.
- good L-R isolation, 34 dB typ.; L-I isolation, 32 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

### Applications

- PCS
- MMDS
- ISM
- instrumentation

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.

### 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						
5-2500	6.9	47	28	34	34	23	34	23	32	20	23	17	18

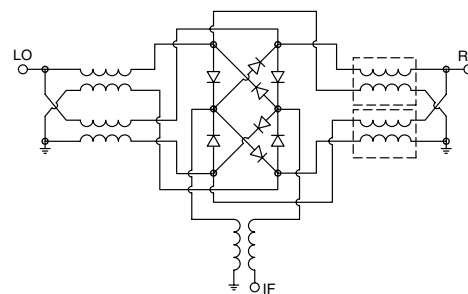
1 dB COMP.: +9 dBm typ.

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  $f_U$ ]  
 $\bar{X}$  = Mid-Band  $\sigma$  = Total Range

### 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 +13dBm
5.00	35.00	7.36	49.90	34.20	1.35	2.37
25.00	55.00	6.76	51.40	34.10	1.20	2.32
75.00	105.00	6.54	54.00	33.90	1.20	2.25
100.00	130.00	6.52	52.70	34.00	1.19	2.30
250.00	280.00	7.05	42.40	33.80	1.10	2.18
500.00	530.00	7.02	35.40	31.50	1.10	2.16
884.28	914.28	7.09	32.20	27.50	1.55	1.91
1000.00	1030.00	7.22	32.20	26.30	1.64	1.91
1326.38	1356.38	7.87	33.40	24.70	2.37	1.84
1547.43	1577.43	7.39	35.80	24.00	2.40	1.81
1768.47	1798.47	7.30	38.90	23.00	2.16	1.78
2000.00	2030.00	7.30	40.00	23.30	2.04	1.63
2431.62	2461.62	7.45	39.50	24.20	2.18	1.30
3000.00	2970.00	7.66	31.10	24.50	2.20	1.56

### Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

REV. F  
M102713  
ADE-25MH  
ED-6859/1  
DJ/TD/CP/AM  
070412  
Page 1 of 2

## Performance Charts

