

# Surface Mount Frequency Mixer

## ADE-30+ ADE-30

Level 7 (LO Power +7 dBm) 200 to 3000 MHz



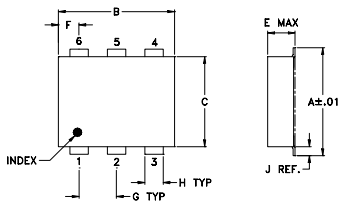
### Maximum Ratings

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

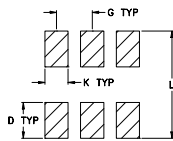
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

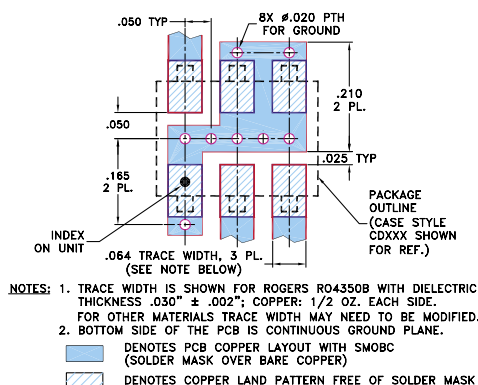
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.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, 4.5 dB typ.
- excellent L-R isolation, 35 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

### Applications

- cellular
- PCN
- instrumentation
- ISM

### Electrical Specifications

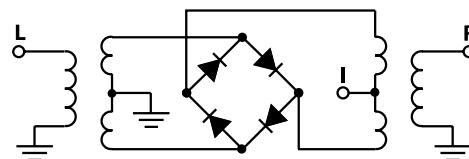
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
		Typ.	Min.	Typ.	Min.	
200-3000	4.5	35	20	20	7	14

1 dB COMP.: +1 dBm typ.  
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)
200.00	5.93	51.00	48.50	2.80	8.08
350.00	4.87	45.33	40.83	1.43	6.17
500.00	4.84	42.83	37.83	1.13	3.26
850.00	5.24	38.17	45.00	2.46	2.51
1050.00	6.02	38.50	34.67	3.69	2.04
1250.00	5.80	40.67	23.67	2.51	1.95
1450.00	5.34	38.50	19.00	2.20	2.17
1650.00	6.12	40.83	15.66	2.28	2.28
1850.00	6.38	40.00	14.77	2.46	2.37
2000.00	6.66	39.00	13.50	2.86	2.51
2250.00	7.17	35.50	12.83	3.68	2.93
2450.00	6.79	33.67	12.00	3.57	3.17
2650.00	6.39	37.00	11.16	3.68	3.36
2850.00	5.69	40.67	10.50	2.86	3.95
3000.00	5.30	37.17	11.17	2.01	3.17

### Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

REV. C  
M102713  
ADE-30  
ED-6218/6  
DJ/TD/CP/AM  
070412  
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## Performance Charts

