

# Surface Mount Frequency Mixer

Level 17 (LO Power +17 dBm) 10 to 1000 MHz

## ADEX-10H+ ADEX-10H



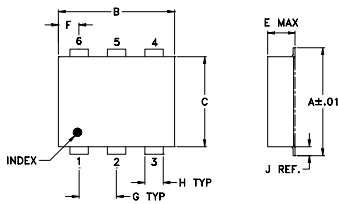
### Maximum Ratings

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

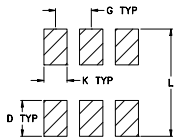
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

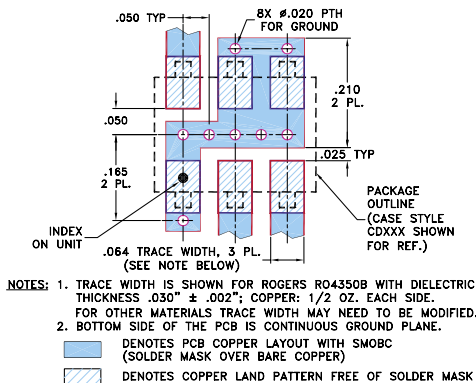
### Outline Dimensions (inch/mm)

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

- excellent L-R isolation, 55 dB typ.
- excellent conversion loss flatness, ±0.35 dB typ. over entire band
- low conversion loss, 7.0 dB typ.
- good VSWR, 1.4:1 typ. for LO, 1.6:1 typ. for RF, 1.4:1 typ. for IF
- good performance to 1500 MHz
- aqueous washable
- protected by U.S. Patents 6,133,525 and 6,947,717

### Applications

- cellular
- PCN

CASE STYLE: CD542

PRICE: \$3.45 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							
LO/RF $f_L - f_U$	Mid-Band $\bar{X}$ $\sigma$ Max. Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.						
10-1000	DC-800	68	55	55	40	47	31	46	30	32	20	26	13	22

1 dB COMP.: +14 dBm typ.

\*Conversion loss increases 0.5 dB when IF is above 150 MHz

L = low range [ $f_L$  to  $10 f_L$ ]

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

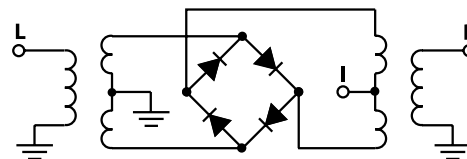
M = mid range [ $10 f_L$  to  $f_U/2$ ]

U = upper range [ $f_U/2$  to  $f_U$ ]

### 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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
10.0	40.0	7.3	74.1	50.8	1.6	1.1
22.0	52.0	7.2	71.8	48.3	1.6	1.1
40.0	70.0	7.3	69.3	45.9	1.6	1.1
52.0	82.0	7.3	68.1	44.5	1.6	1.2
70.0	100.0	7.3	66.7	42.7	1.5	1.2
88.0	118.0	7.3	66.0	41.2	1.5	1.2
94.0	124.0	7.2	65.8	40.8	1.5	1.2
100.0	130.0	7.2	65.5	40.4	1.5	1.2
160.0	190.0	7.2	61.7	36.8	1.5	1.3
220.0	250.0	7.0	58.6	34.0	1.5	1.3
280.0	310.0	7.1	56.7	32.8	1.5	1.3
400.0	430.0	7.2	57.3	32.2	1.5	1.3
460.0	490.0	7.2	53.7	31.8	1.5	1.4
520.0	550.0	7.2	50.0	31.5	1.5	1.4
580.0	610.0	7.3	49.1	30.6	1.5	1.4
700.0	730.0	7.7	45.6	29.9	1.6	1.5
760.0	790.0	7.8	44.2	28.5	1.6	1.7
820.0	850.0	7.7	41.9	26.5	1.5	1.7
940.0	970.0	7.5	36.6	23.5	1.4	1.9
1000.0	1030.0	7.4	35.4	22.5	1.3	2.0

### Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

REV. C  
M102713  
ADEX-10H  
ED-9813/1  
DJ/TD/CP/AM  
070412  
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## Performance Charts

