

# Surface Mount Frequency Mixer

## MBA-35LH

Level 10 (LO Power +4 dBm) 3000 to 4000 MHz

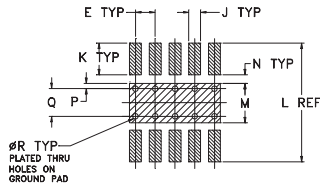
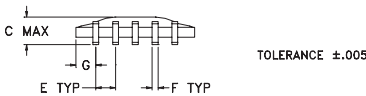
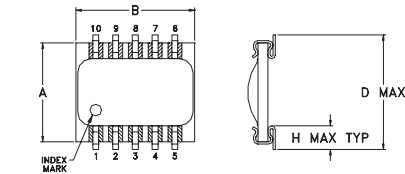
### Maximum Ratings

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

### Pin Connections

LO	10
RF	5
IF	3
GROUND	1,2,4,6,7,8,9
ISOLATE	—

### Outline Drawing

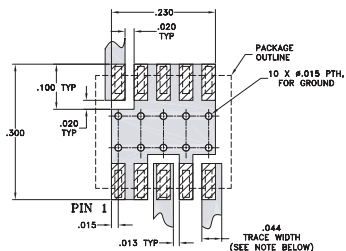


SUGGESTED LAYOUT FOR PCB PATTERN

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.250	.300	.070	.290	.050	.015	.050	.060	.030
6.35	7.62	1.78	7.37	1.27	.38	1.27	1.52	.76
K	L	M	N	P	Q	R	wt.	
.080	.300	.100	.020	.015	.070	.014	grams	
2.03	7.62	2.54	.51	.38	1.78	.36	.3	

### Demo Board MCL P/N: TB-99 Suggested PCB Layout (PL-066)



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.020" ± 0.0015", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

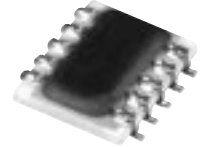
□ DENOTES PCB COPPER LAYOUT  
▨ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- excellent temperature stability
- performance repeatability
- solder plated leads with strain relief
- very low cost
- ultra low height, 0.07"

### Applications

- wireless local loop
- satellite communication
- PCMCIA



CASE STYLE: SM2  
PRICE: \$6.95 ea. QTY (10-49)



### Mixer Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3@ center band Typ. (dBm)	
	LO/RF f <sub>L</sub> -f <sub>U</sub>	IF	Mid-Band m	Total Range Max.	L	M	U	L	M	U		
MBA-35LH	3000-4000	DC-700	4.8	0.1	—	8.5	26(typ.)	18(min.)	—	13(typ.)	7(min.)	10

1 dB COMP.: +4 dBm typ.  
L = low range [f<sub>L</sub> to 10 f<sub>L</sub>]  
M = mid range [10 f<sub>L</sub> to f<sub>U</sub>/2] U = upper range [f<sub>U</sub>/2 to f<sub>U</sub>]  
m = mid band [2f<sub>L</sub> to f<sub>U</sub>/2]

### Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO port (:1)	VSWR RF port (:1)
RF MHz	LO MHz	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
3000.00	3030.00	5.60	27.00	9.70	1.71	1.91
3070.00	3100.00	5.58	26.80	10.00	1.75	1.80
3100.00	3130.00	5.53	26.80	10.30	1.75	1.69
3200.00	3230.00	5.26	26.20	10.90	1.84	1.45
3250.00	3280.00	5.22	25.80	11.10	1.88	1.34
3300.00	3330.00	5.11	25.70	11.30	1.92	1.22
3400.00	3430.00	4.90	25.60	12.20	1.97	1.06
3430.00	3460.00	4.85	25.50	12.30	1.94	1.05
3450.00	3480.00	4.81	25.40	12.50	1.94	1.06
3500.00	3530.00	4.87	25.20	12.70	1.96	1.09
3550.00	3580.00	4.89	25.10	13.00	1.92	1.16
3600.00	3630.00	4.90	25.00	13.40	1.91	1.21
3610.00	3640.00	4.96	24.90	13.40	1.91	1.22
3650.00	3680.00	4.93	24.50	13.40	1.92	1.25
3700.00	3730.00	4.99	24.30	13.90	1.89	1.29
3800.00	3830.00	5.13	24.00	14.40	1.89	1.37
3850.00	3880.00	5.09	23.70	14.90	1.92	1.42
3900.00	3930.00	5.16	23.50	15.40	1.87	1.49
3950.00	3980.00	5.15	23.30	16.00	1.85	1.60
4000.00	4030.00	5.23	22.90	16.90	1.82	1.73

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