

# Surface Mount Frequency Mixer

Level 13 (LO Power +13 dBm) 2000 to 3000 MHz

**MBA-25MH+**  
**MBA-25MH**



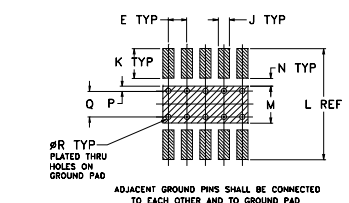
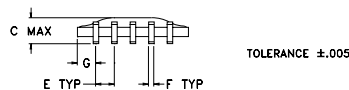
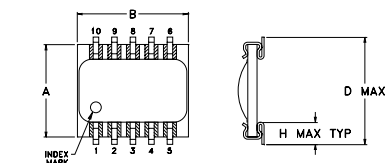
## Maximum Ratings

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

## Pin Connections

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

## Outline Drawing

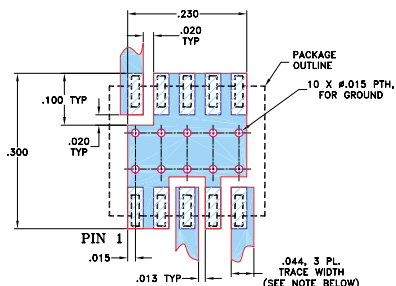


SUGGESTED LAYOUT FOR PCB PATTERN

## Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	
.250	.300	.070	.290	.050	.015	.050	.060	
6.35	7.62	1.78	7.37	1.27	0.38	1.27	1.52	
J	K	L	M	N	P	Q	R	wt
.030	.080	.300	.100	.020	.015	.070	.014	grams
0.76	2.03	7.62	2.54	0.51	0.38	1.78	0.36	0.3

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



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- excellent temperature stability
- excellent performance repeatability
- leads with strain relief
- very low cost
- ultra low height, 0.07"
- protected by US Patent 5,534,830

## Applications

- wireless local loop
- satellite communication
- PCMCIA

CASE STYLE: SM2  
PRICE: \$7.95 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

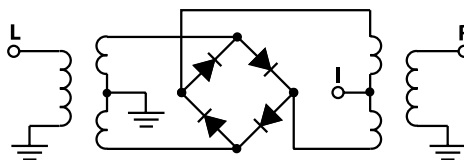
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	IP3 at center band (dBm)
LO/RF $f_L - f_U$	$\bar{X}$ $\sigma$ Max.	Typ. Min.	Typ. Min.	Typ.
2000-3000 DC-500	6.5 0.1 8.6	36 18	20 7	18

1 dB COMP.: +8 dBm typ.

## Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO Port (:1)	VSWR RF Port (:1)
RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
2000.00	2030.00	7.77	25.90	11.00	2.43
2050.00	2080.00	7.55	26.10	11.40	2.35
2100.00	2130.00	7.34	26.70	12.30	2.25
2150.00	2180.00	7.08	27.60	13.10	2.12
2200.00	2230.00	6.94	28.30	14.10	2.03
2250.00	2280.00	6.93	29.60	15.10	1.97
2300.00	2330.00	7.02	31.20	16.10	1.88
2350.00	2380.00	6.80	32.30	17.30	1.84
2400.00	2430.00	6.90	34.40	18.60	1.69
2470.00	2500.00	6.76	37.50	20.60	1.56
2500.00	2530.00	6.70	38.40	21.40	1.51
2550.00	2580.00	6.57	36.30	23.10	1.48
2600.00	2630.00	6.25	31.70	24.90	1.43
2650.00	2680.00	6.32	29.20	25.90	1.46
2700.00	2730.00	6.48	27.70	27.20	1.46
2750.00	2780.00	6.53	27.70	28.80	1.44
2800.00	2830.00	6.72	28.30	30.70	1.48
2850.00	2880.00	6.74	28.70	35.10	1.47
2900.00	2930.00	6.68	29.40	40.90	1.48
3000.00	3030.00	6.64	32.10	30.50	1.54

## Electrical Schematic



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# Performance Charts

## MBA-25MH+ MBA-25MH

