

Surface Mount Frequency Mixer

MBA-25L+ MBA-25L

Level 4 (LO Power +4 dBm) 2000 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	10
RF	5
IF	3
GROUND	1,2,4,6,7,8,9

Features

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

Applications

- PCN/PCS/wideband CDMA
- satellite communication
- PCMCIA

CASE STYLE: SM2
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

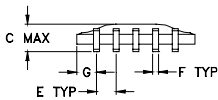
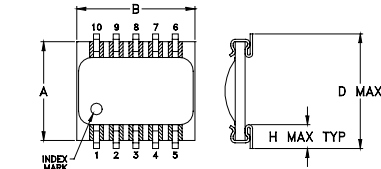
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	\bar{X}	σ	Max.	Typ.	Min.	Typ.	Min.	Typ.
2000-3000	DC-600	6.2	0.15	8.6	28	18	15	7	10

1 dB COMP.: 0 dBm typ.

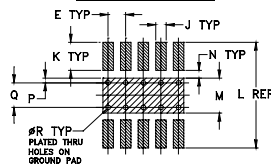
Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +4dBm	LO +4dBm	LO +4dBm	LO +4dBm	LO +4dBm
2000.00	2030.00	6.98	26.60	11.00	2.84	1.80
2030.00	2060.00	6.83	27.10	11.30	2.68	1.80
2100.00	2130.00	6.63	28.20	12.70	2.30	1.66
2162.50	2192.50	6.42	28.20	13.70	2.14	1.58
2200.00	2230.00	6.51	28.00	14.20	2.04	1.60
2300.00	2330.00	6.37	26.50	15.30	1.84	1.54
2400.00	2430.00	6.34	24.70	16.90	1.65	1.52
2427.50	2457.50	6.30	24.30	17.40	1.58	1.50
2500.00	2530.00	6.33	22.60	18.60	1.41	1.43
2560.00	2590.00	6.16	22.40	19.30	1.27	1.38
2600.00	2630.00	6.20	22.10	19.40	1.17	1.33
2692.50	2722.50	6.33	22.10	19.30	1.07	1.33
2700.00	2730.00	6.27	22.10	19.30	1.08	1.33
2800.00	2830.00	6.41	22.10	19.20	1.24	1.28
2825.00	2855.00	6.38	22.10	19.30	1.30	1.27
2900.00	2930.00	6.35	22.60	19.00	1.43	1.20
2957.50	2987.50	6.36	23.40	18.50	1.53	1.14
3000.00	3030.00	6.35	23.80	18.00	1.57	1.11
3090.00	3120.00	6.47	24.60	16.60	1.71	1.04
3200.00	3230.00	6.66	25.20	14.80	1.82	1.07

Outline Drawing



PCB Land Pattern

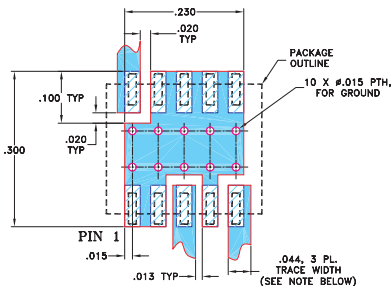


Suggested Layout,
Tolerance to be within ±.002
ADJACENT GROUND PINS SHALL BE CONNECTED TO EACH OTHER AND TO GROUND PAD

Outline Dimensions (inch/mm)

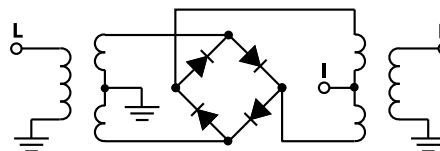
A	B	C	D	E	F	G	H	wt
.250	.300	.095	.290	.050	.015	.050	.060	
6.35	7.62	2.41	7.37	1.27	0.38	1.27	1.52	
J	K	L	M	N	P	Q	R	grams
.030	.080	.300	.100	.020	.015	.070	.014	0.3
0.76	2.03	7.62	2.54	0.51	0.38	1.78	0.36	

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

Electrical Schematic



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IF/RF MICROWAVE COMPONENTS

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Performance Charts

