

Surface Mount Frequency Mixer

Level 4 (LO Power +4 dBm) 4950 to 5900 MHz

MBA-591L+
MBA-591L



Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

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

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

- satellite communication
- ISM band
- PCMCIA
- wireless networking

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

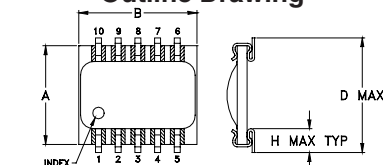
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	$\bar{X}$	σ	Max.	Typ.	Min.	Typ.	Min.	
4950-5900	DC-1000	7.0	0.1	9.0	35	25	26	17	15

1 dB COMP.: +1 dBm typ.

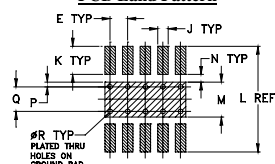
Typical Performance Data

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
4950.00	4980.00	6.89	33.96	29.95	4.86	1.72
5000.00	5030.00	6.87	34.62	29.17	4.56	1.57
5050.00	5080.00	6.89	35.52	28.59	4.26	1.44
5100.00	5130.00	6.91	36.87	27.78	3.97	1.37
5150.00	5180.00	6.95	37.05	27.40	3.83	1.35
5200.00	5230.00	6.99	37.99	26.67	3.83	1.37
5250.00	5280.00	7.04	39.35	25.96	3.86	1.48
5300.00	5330.00	7.09	41.07	25.71	4.09	1.59
5350.00	5380.00	7.24	42.93	25.54	4.35	1.73
5400.00	5430.00	7.39	45.44	25.10	4.72	1.92
5450.00	5480.00	7.73	46.52	25.18	5.58	2.07
5500.00	5530.00	7.95	48.04	25.03	6.42	2.26
5550.00	5580.00	8.06	48.90	25.07	6.77	2.36
5600.00	5630.00	8.22	47.96	25.02	7.12	2.41
5700.00	5730.00	8.45	44.04	24.55	6.03	2.82
5750.00	5780.00	8.65	41.87	24.50	5.59	3.08
5800.00	5830.00	8.72	39.79	24.13	4.86	3.67
5850.00	5880.00	9.04	38.02	24.07	4.42	4.22
5870.00	5900.00	9.02	37.36	23.92	4.18	4.78
5900.00	5930.00	9.20	36.37	23.87	4.07	5.15

Outline Drawing



PCB Land Pattern

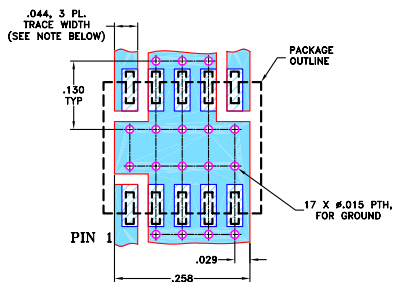


Suggested Layout,
Tolerance to be within ±.002
ADJACENT GROUND PINS SHALL BE CONNECTED
TO EACH OTHER AND TO GROUND PAD

Outline Dimensions (inch mm)

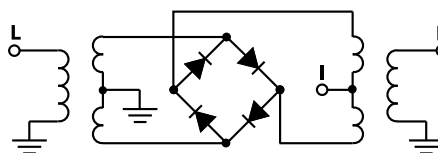
A	B	C	D	E	F	G	H	
.250	.300	.095	.290	.050	.015	.050	.060	
6.35	7.62	2.41	7.37	1.27	0.38	1.27	1.52	
J	K	L	M	N	P	Q	R	wt
.030	.080	.300	.100	.020	.015	.070	.014	grams
0.76	2.03	7.62	2.54	0.51	0.38	1.78	0.36	0.3

Demo Board MCL P/N: TB-74
Suggested PCB Layout (PL-067)



- 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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Schematic



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Performance Charts

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