

Surface Mount Frequency Mixer

Level 7 (LO Power +7 dBm) 2400 to 6700 MHz

**MBA-671+
MBA-671**



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

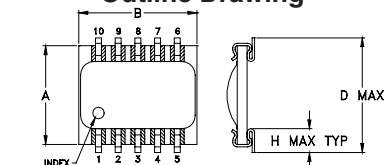
CASE STYLE: SM2

PRICE: \$8.95 ea. QTY (10-49)

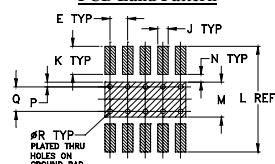
**+ RoHS compliant in accordance
with EU Directive (2002/95/EC)**

The +Suffix identifies RoHS Compliance. See our web site
for RoHS Compliance methodologies and qualifications.

Outline Drawing



PCB Land Pattern

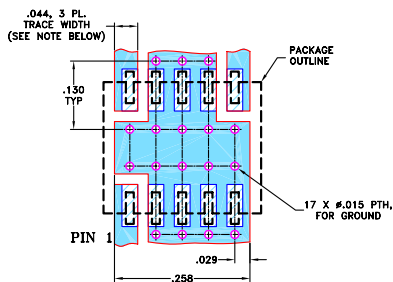


Suggested Layout,
Tolerance to be within ±.002
ADJACENT GROUND PINS SHALL BE CONNECTED
TO EACH OTHER AND TO GROUND PAD

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 Specifications

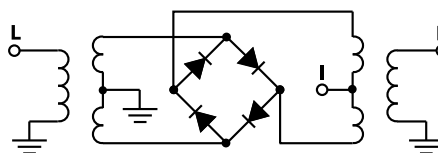
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	$\bar{X}$	σ	Max.	Typ.	Min.	Typ.	Min.	
2400-6700	DC-1000	6.5	0.1	9.2	36	20	26	17	10

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
2400.00	2430.00	6.94	35.14	22.53	4.95	6.58
2597.00	2627.00	6.11	33.16	23.57	3.25	7.31
2895.00	2925.00	5.11	31.10	23.98	1.88	5.83
3000.00	3030.00	4.90	31.11	23.73	1.61	5.23
3300.00	3330.00	4.58	31.80	23.98	1.28	4.61
3492.50	3522.50	4.70	33.07	24.97	1.61	4.78
3700.00	3730.00	4.92	33.70	26.25	2.10	4.21
3791.00	3821.00	5.01	34.34	26.80	2.31	3.90
4000.00	4030.00	5.32	36.66	27.71	2.84	2.86
4388.00	4418.00	5.93	38.33	28.33	3.16	1.70
4500.00	4530.00	6.11	39.03	28.13	3.22	1.49
4985.00	5015.00	6.08	40.18	26.99	4.02	1.31
5000.00	5030.00	6.10	40.38	27.03	4.07	1.33
5400.00	5430.00	6.57	38.38	26.96	4.09	2.08
5500.00	5530.00	7.20	38.33	26.75	4.95	2.32
5582.00	5612.00	7.42	38.54	26.53	5.13	2.45
6000.00	6030.00	8.02	38.49	25.53	4.39	2.75
6179.00	6209.00	7.79	39.55	25.30	4.47	3.99
6500.00	6530.00	8.20	38.33	25.09	5.81	5.89
6776.00	6806.00	8.23	32.58	24.62	6.44	9.08

Electrical Schematic



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Performance Charts

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