

# Surface Mount Frequency Mixer

Level 7 (LO Power +7dBm) 2 to 750 MHz

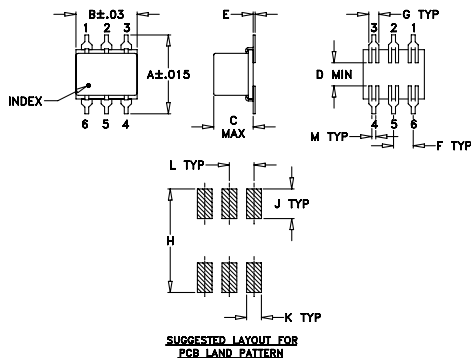
## Maximum Ratings

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

## Pin Connections

LO	1
RF	4
IF	5
GROUND	2,3,6

## Outline Drawing



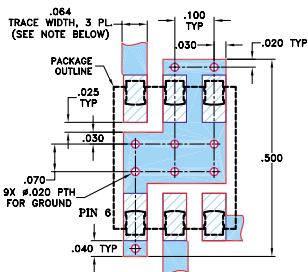
## Outline Dimensions (inch)

A	B	C	D	E	F	G
.400	.31	.200	.10	.010	.100	.050
10.16	7.87	5.08	2.54	0.25	2.54	1.27

H	J	K	L	M	wt
.420	.120	.060	.100	.020	grams
10.67	3.05	1.52	2.54	0.51	0.55

## Demo Board MCL P/N: TB-44 Suggested PCB Layout (PL-083)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS  $0.030" \pm 0.002"$ ; 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

- low conversion loss, 5.83 dB typ.
- excellent L-R isolation, 45 dB typ.

## Applications

- HF/VHF/UHF
- instrumentation
- cellular



CASE STYLE: QQQ130  
PRICE: \$6.75 ea. QTY (1-9)

+ 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)					
		L		M		U		L		M		U	
		Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
2-750	DC-750	5.83	.21	7.5	8.5	70	45	28	38	22	60	45	40

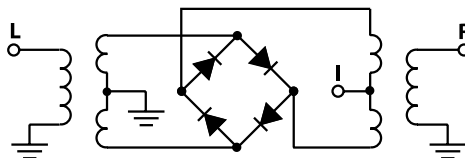
1 dB COMP.: +1 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ]  
M = mid range [ $10 f_L$  to  $f_U/2$ ]  
U = upper range [ $f_U/2$  to  $f_U$ ]

## 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
2.00	32.00	6.15	77.45	62.05	1.16	2.41
4.00	34.00	5.93	77.30	61.60	1.10	2.36
5.00	35.00	5.89	76.89	61.49	1.08	2.47
10.00	40.00	5.90	74.36	60.26	1.09	2.39
20.00	50.00	5.87	69.48	56.77	1.10	2.40
50.00	80.00	5.90	62.05	50.51	1.11	2.40
100.00	70.00	5.85	55.01	45.08	1.15	2.41
101.73	71.73	5.87	55.00	44.99	1.21	2.41
200.00	170.00	5.82	46.91	40.52	1.23	2.36
201.47	171.47	5.83	46.83	40.31	1.31	2.37
301.20	271.20	5.81	42.24	36.71	1.39	2.32
351.07	321.07	5.79	40.24	34.89	1.42	2.34
375.00	345.00	5.79	39.86	34.22	1.49	2.46
400.93	370.93	5.74	39.23	33.67	1.58	2.54
500.00	470.00	5.85	37.51	30.15	1.59	2.56
500.67	470.67	5.84	37.49	30.16	1.70	2.57
600.40	570.40	5.98	36.08	29.20	1.83	2.92
700.13	670.13	6.31	33.78	27.21	2.01	3.30
725.07	695.07	6.49	33.46	26.43	2.07	3.35
750.00	720.00	6.55	33.11	25.85	2.13	3.43

## Electrical Schematic



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## Performance Charts

