

# Surface Mount Frequency Mixer

# SCM-2500LH+ SCM-2500LH

Level 10 (LO Power +10 dBm) 500 to 2500 MHz



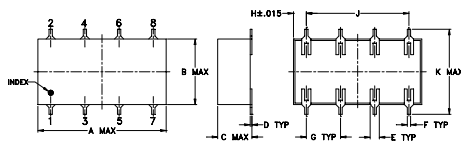
## Maximum Ratings

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

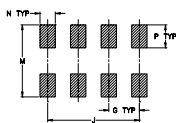
## Pin Connections

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

## Outline Drawing



### PCB Land Pattern

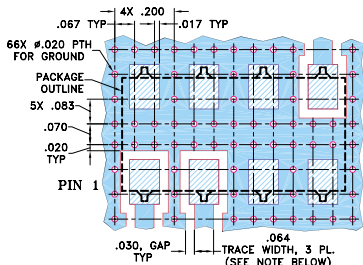


Suggested Layout,  
Tolerance to be within ±.002

## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.75	.38	.20	.010	.050	.020	.200
19.05	9.65	5.08	0.25	1.27	0.51	5.08
H	J	K	M	N	P	wt
.075	.600	.720	.740	.100	.150	grams
1.91	15.24	18.29	18.80	2.54	3.81	1.6

## Demo Board MCL P/N: TB-171 Suggested PCB Layout (PL-130)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 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, 5.6 dB typ.
- wide bandwidth, 500 to 2500 MHz
- high L-R isolation, 35 dB typ.

## Applications

- UHF
- cellular
- satellite distribution

CASE STYLE: YY109  
PRICE: \$13.95 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

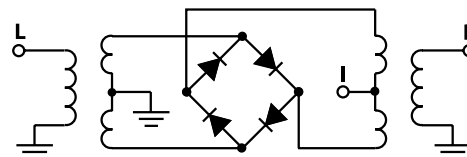
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
		Typ.	Min.	Typ.	Min.	
500-2500	DC-500	5.6	.20	6.8	10	16

1 dB COMP.: +5 dBm typ.  
m= mid band [2f<sub>L</sub> to f<sub>U</sub>/2]

## 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
500.00	530.00	5.89	65.85	31.29	3.95	2.63
622.45	652.45	5.56	55.50	29.50	2.87	2.52
744.90	774.90	5.48	50.54	27.28	2.24	2.54
867.35	897.35	5.13	42.15	25.72	2.22	2.62
1000.00	1030.00	5.61	37.79	23.23	2.74	2.67
1112.24	1142.24	5.70	35.91	20.77	2.97	2.54
1250.00	1280.00	5.48	36.78	19.31	3.08	2.36
1357.14	1387.14	5.65	38.10	20.17	3.27	2.32
1479.59	1509.59	5.62	36.72	22.37	3.56	2.18
1520.41	1490.41	5.85	37.24	23.28	3.76	2.07
1642.86	1612.86	6.30	36.49	25.51	4.39	1.78
1765.31	1735.31	6.79	36.28	24.69	5.09	1.61
1887.76	1857.76	7.25	35.20	21.72	5.70	1.69
2010.20	1980.20	7.54	34.85	19.66	5.94	1.99
2051.02	2021.02	7.48	34.66	19.44	5.96	2.11
2173.47	2143.47	7.34	35.19	18.10	5.72	2.33
2295.92	2265.92	7.20	37.02	17.55	5.89	2.75
2377.55	2347.55	6.78	34.65	17.01	5.28	2.94
2459.18	2429.18	6.65	32.10	16.12	4.51	3.17
2500.00	2470.00	6.69	32.24	15.44	4.25	3.32

## Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

REV. A  
M98898  
SCM-2500LH  
DJ/TD/CP  
070503  
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## Performance Charts

