

Surface Mount Frequency Mixer

www.DataSheet4U.com
RMS-25MH

Level 13 (LO Power +13 dBm) 5 to 2500 MHz



Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

Pin Connections

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

Features

- excellent L-R isolation, 32 dB typ.
- conversion loss, 7.0 dB typ.
- small size, 0.25"x0.31"x0.2"

Applications

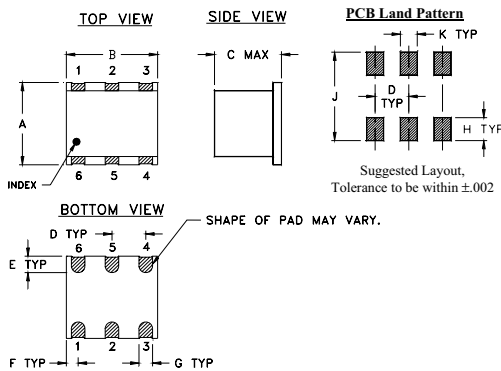
- cellular
- satellite distribution
- GPS

CASE STYLE: TT240
PRICE: \$9.95 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.

Outline Drawing



Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)				
		L		M		U		L		M		U						
LO/RF $f_L - f_U$	IF \bar{X} σ Max.	Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.					
5-2500	5-1500	7.0	.20	8.5	9.8	54	28	32	23	32	20	34	23	32	25	28	17	17

1 dB COMP.: +9 dBm typ.
For phase detection, DC output positive with in-phase RF & LO.

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]

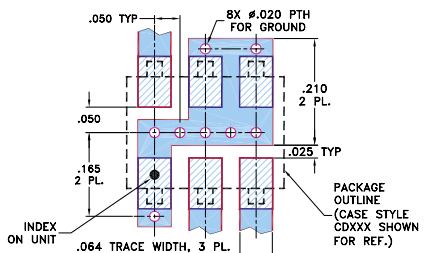
Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +13 dBm	LO +13 dBm	LO +13 dBm	LO +13 dBm	LO +13 dBm
5.00	35.00	6.60	43.66	31.16	1.43	2.14
10.10	40.10	6.47	48.02	33.66	1.42	2.07
20.18	50.18	6.42	53.20	34.80	1.42	2.09
33.51	63.51	6.47	56.82	34.60	1.42	2.09
49.03	79.03	6.46	59.20	34.63	1.42	2.08
81.42	111.42	6.50	57.10	34.59	1.42	2.06
135.23	165.23	6.58	52.43	34.78	1.45	2.08
224.60	194.60	6.60	46.08	35.72	1.52	2.08
373.01	343.01	6.77	40.43	37.11	1.71	1.95
480.71	450.71	6.88	38.16	36.46	1.86	1.92
545.72	515.72	6.82	37.54	35.91	1.95	1.80
798.38	768.38	6.92	36.87	32.89	2.23	1.71
906.34	876.34	6.92	37.27	31.38	2.32	1.62
1168.03	1138.03	7.19	36.90	30.53	2.35	1.61
1250.00	1220.00	7.10	38.52	31.35	2.37	1.62
1505.28	1475.28	6.78	39.76	30.96	2.27	1.65
1800.00	1770.00	6.85	31.84	27.67	2.24	1.57
2000.00	1970.00	7.07	28.62	28.09	2.19	1.62
2200.00	2170.00	7.09	25.62	28.13	2.18	1.77
2500.00	2470.00	7.52	22.96	26.44	1.95	1.99

Outline Dimensions (inch/mm)

A	B	C	D	E	F
.250	.31	.20	.100	.050	.055
6.35	7.87	5.08	2.54	1.27	1.40
G	H	J	K		wt
.040	.070	.270	.050		grams
1.02	1.78	6.86	1.27		0.50

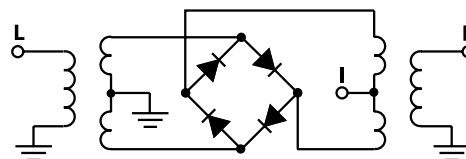
Demo Board MCL P/N: TB-03
Suggested PCB Layout (PL-052)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .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

Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

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Performance Charts

