

Surface Mount Frequency Mixer

RMS-5L+ RMS-5L

Level 3 (LO Power +3 dBm) 400 to 1400 MHz



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	1
RF	4
IF	5
GROUND	2,3,6

Features

- good conversion loss, 7.0 dB typ.
- small size, 0.25"x0.31"x0.2"
- wide bandwidth, 400-1400 MHz

Applications

- cellular
- ISM/GSM
- satellite distribution

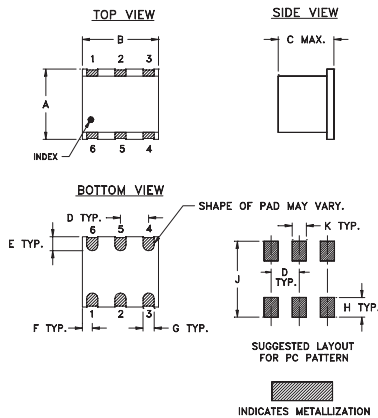
CASE STYLE: TT240

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.

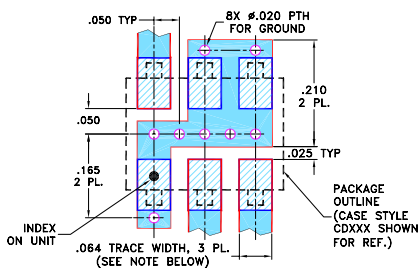
Outline Drawing



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 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.	Typ.
$f_L - f_U$				
400-1400 DC-800	7.0 0.2 9.8	22 14	22 6	9

1 dB COMP.: -3 dBm typ.
For phase detection, DC output positive with in-phase RF & LO.

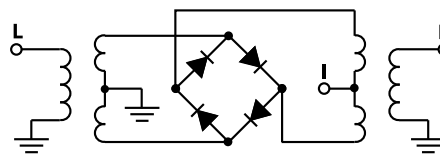
L = low range [f_L to $10 f_L$]
m = mid band [$2 f_L$ to $f_U/2$]

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
400.00	430.00	7.74	39.94	28.82	1.50	1.45
476.92	506.92	6.92	43.12	28.11	1.40	1.53
553.85	583.85	6.37	56.16	27.98	1.38	1.56
605.13	635.13	6.19	41.52	27.30	1.28	1.64
630.77	660.77	6.10	37.96	26.89	1.19	1.71
707.69	737.69	5.93	29.29	24.68	1.16	1.75
733.33	763.33	5.89	27.74	24.04	1.17	1.78
810.26	840.26	5.81	24.32	21.96	1.17	1.80
835.90	865.90	5.95	23.55	21.29	1.18	1.85
887.18	917.18	6.28	22.39	20.26	1.20	1.93
912.82	942.82	6.26	21.89	19.74	1.24	2.03
989.74	959.74	6.84	20.56	17.73	1.26	2.10
1066.67	1036.67	7.26	19.47	15.58	1.27	2.18
1117.95	1087.95	7.40	18.97	14.31	1.29	2.28
1143.59	1113.59	7.64	18.77	13.78	1.30	2.34
1220.51	1190.51	7.63	18.25	12.26	1.32	2.51
1297.44	1267.44	7.75	17.96	10.95	1.32	2.68
1348.72	1318.72	7.73	17.87	10.20	1.33	2.89
1374.36	1344.36	7.64	17.90	9.72	1.34	2.98
1400.00	1370.00	7.79	17.92	9.13	1.35	3.06

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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Performance Charts

