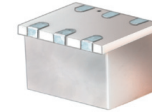


Surface Mount Frequency Mixer

RMS-1H+ RMS-1H

Level 17 (LO Power +17 dBm) 2 to 500 MHz



Maximum Ratings

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

- excellent L-R isolation, 44 dB typ.
- conversion loss, 6.25 dB typ.
- small size, 0.25"x0.31"x0.2"

Applications

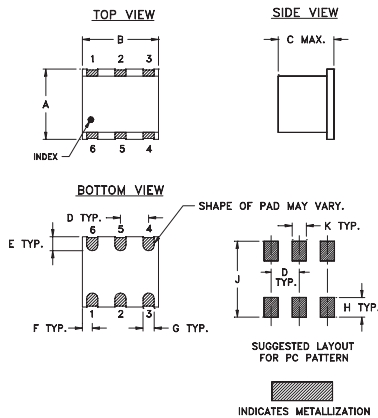
- HF & VHF communications
- intermediate frequency for downconverters

CASE STYLE: TT240
PRICE: \$10.95 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.

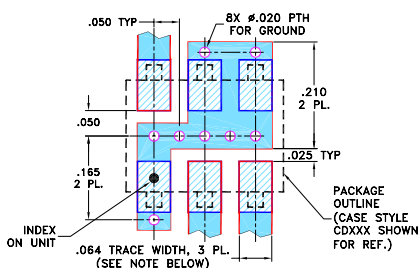
Outline Drawing



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

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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		
$f_L - f_U$	\bar{X} σ Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
2-500 DC-500	6.25 .034 7.0 8.5	55	44	44	25	33	20	50	34	45	25	37	22	22

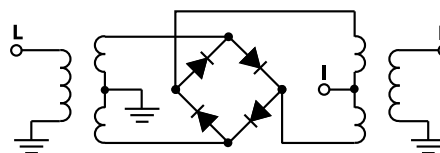
1 dB COMP: +14 dBm typ.
For phase detection, DC output positive with in-phase RF & LO.

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)
2.00	32.00	6.78	79.29	69.19	1.33
4.00	34.00	6.60	72.35	63.39	1.20
5.00	35.00	6.57	71.51	62.98	1.15
10.00	40.00	6.55	65.84	61.30	1.14
20.00	50.00	6.48	59.50	58.68	1.13
35.20	65.20	6.36	51.64	53.67	1.14
50.00	80.00	6.53	51.61	53.63	1.14
85.00	55.00	6.47	45.13	48.67	1.15
100.00	70.00	6.48	44.98	48.52	1.17
134.80	104.80	6.32	41.19	46.50	1.19
184.60	154.60	6.35	38.78	44.90	1.22
200.00	170.00	6.40	38.62	44.42	1.23
234.40	204.40	6.30	36.44	41.20	1.24
250.00	220.00	6.22	36.14	41.01	1.26
284.20	254.20	6.22	35.11	38.57	1.30
334.00	304.00	6.18	33.38	37.07	1.34
383.80	353.80	6.11	32.33	33.77	1.39
433.60	403.60	6.16	32.22	31.10	1.44
483.40	453.40	6.45	31.29	29.09	1.47
500.00	470.00	6.45	30.80	28.30	1.49

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuits' applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

REV. B
M102713
RMS-1H
061228
Page 1 of 2

Performance Charts

