

Surface Mount Frequency Mixer

RMS-2U+ RMS-2U

Level 7 (LO Power +7 dBm) 10 to 1000 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, 40 dB typ.
- conversion loss, 6.79 dB typ.
- small size, 0.25"x0.31"x0.2"

Applications

- cellular
- ISM/GSM

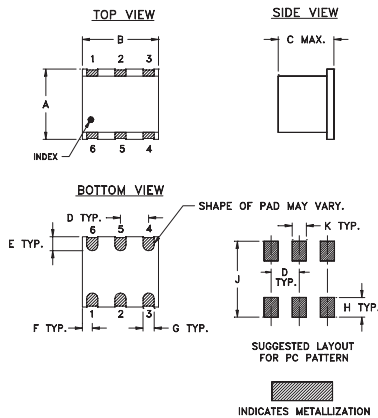
CASE STYLE: TT240

PRICE: \$11.45 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.

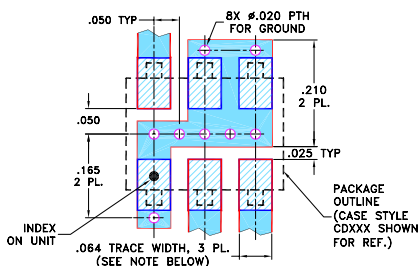
Outline Drawing



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)				
		L		M		U		L		M		U						
10-1000	10-750	6.79	.16	8.0	9.5	55	40	40	30	30	25	55	30	35	25	30	22	10

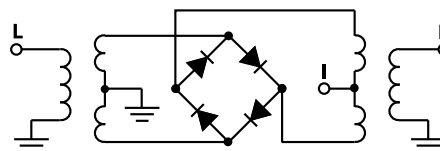
1 dB COMP: +1 dBm typ.
For phase detection, DC output positive with in-phase RF & LO.

L = low range [f_1 to $10 f_1$]
M = mid range [$10 f_1$ to $f_1/2$]
U = upper range [$f_1/2$ to f_1]

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
10.00	40.00	5.69	55.08	57.44	1.73	2.45
20.00	50.00	5.78	53.83	52.73	1.63	2.59
39.12	69.12	5.90	51.99	47.22	1.61	2.49
50.00	80.00	5.88	51.27	45.11	1.63	2.47
68.24	98.24	5.83	49.27	42.51	1.67	2.44
100.00	70.00	5.82	46.22	39.55	1.72	2.43
126.47	96.47	5.90	44.61	37.77	1.81	2.44
155.59	125.59	6.04	43.33	35.95	1.87	2.40
230.00	170.00	6.28	42.36	34.23	1.89	2.35
242.94	212.94	6.39	42.52	32.47	1.97	2.33
301.18	271.18	6.60	42.44	31.27	2.12	2.29
330.29	300.29	6.58	42.50	30.71	2.25	2.25
388.53	358.53	6.70	42.62	29.23	2.31	2.23
446.77	416.77	6.58	38.36	28.68	2.47	2.21
500.00	470.00	6.61	35.52	27.43	2.20	2.29
592.35	562.35	6.89	34.35	28.33	2.43	2.28
708.82	678.82	7.34	34.65	29.18	2.57	2.29
796.18	766.18	7.61	30.87	28.03	2.83	2.31
912.65	882.65	7.98	29.10	26.37	3.03	2.30
1000.00	970.00	8.28	28.18	24.07	3.42	2.32

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

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.

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Performance Charts

