

Surface Mount Frequency Mixer

RMS-1LH+ RMS-1LH

Level 10 (LO Power +10 dBm) 2 to 500 MHz

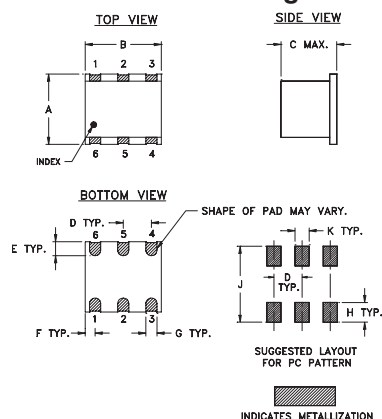
Maximum Ratings

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

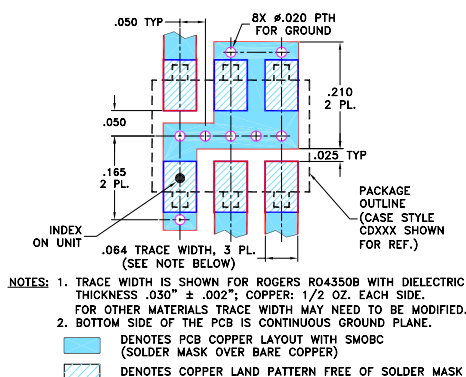
Outline Drawing



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	L	M
.040	.070	.270	.050		
1.02	1.78	6.86	1.27		
				wt	
				grams	
					0.50

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



Features

- excellent L-R isolation, 44 dB typ.
- conversion loss, 5.68 dB typ.
- small size, 0.25"x0.31"x0.2"

Applications

- HF & VHF communications
- intermediate frequency for down converters



CASE STYLE: TT240
PRICE: \$7.95 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)
		L	M	U	L	M	U	
f _L -f _U	$\bar{X}$ σ Max. Total Range Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ.
2-500 DC-500	5.68 0.11 7.0 8.0	58 45	44 25	30 20	55 40	40 25	28 17	15

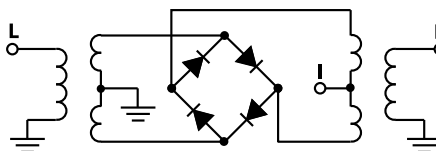
1 dB COMP.: +5 dBm typ.
For phase detection, DC output positive with in-phase RF & LO.

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 +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
10.10	40.10	5.60	74.28	45.84	1.06	2.46
49.80	79.80	5.69	60.16	43.26	1.04	2.50
89.50	119.50	5.68	55.26	41.54	1.05	2.36
129.20	159.20	5.75	52.39	40.39	1.06	2.46
168.90	198.90	5.77	50.72	39.56	1.07	2.38
208.60	238.60	5.78	49.03	38.78	1.09	2.45
248.30	278.30	5.86	48.01	37.59	1.09	2.47
287.90	317.90	5.87	46.41	36.30	1.10	2.47
327.60	357.60	5.93	45.92	34.99	1.10	2.57
367.30	397.30	5.98	44.83	33.07	1.10	2.54
407.00	437.00	5.98	42.83	31.78	1.12	2.62
446.70	476.70	6.02	41.37	31.24	1.13	2.66
486.40	516.40	6.07	40.02	30.07	1.14	2.69
526.10	556.10	6.14	38.49	29.39	1.14	2.78
565.80	595.80	6.18	37.45	27.46	1.15	2.79

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs
& shopping online see web site

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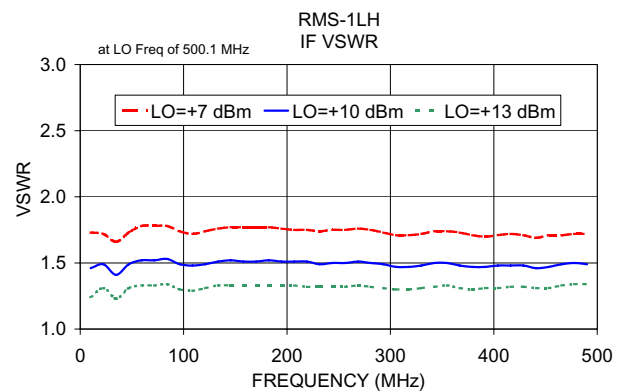
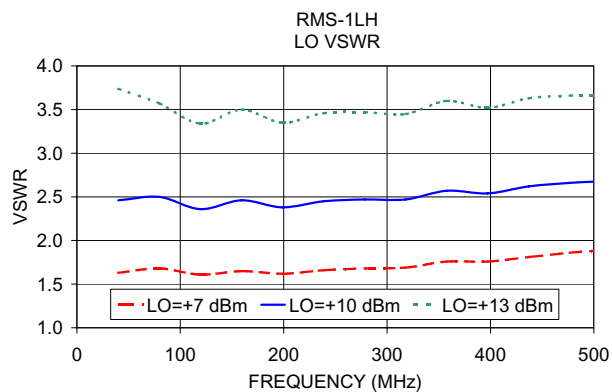
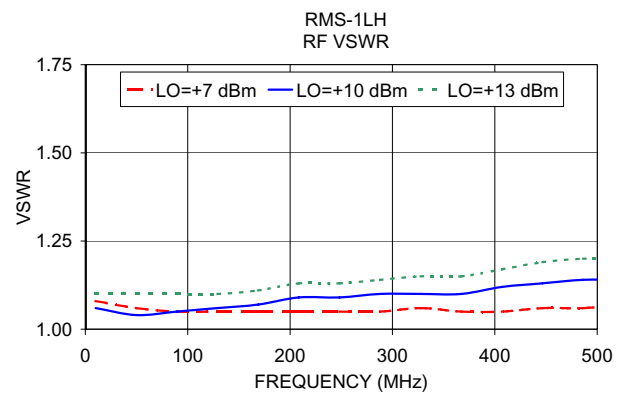
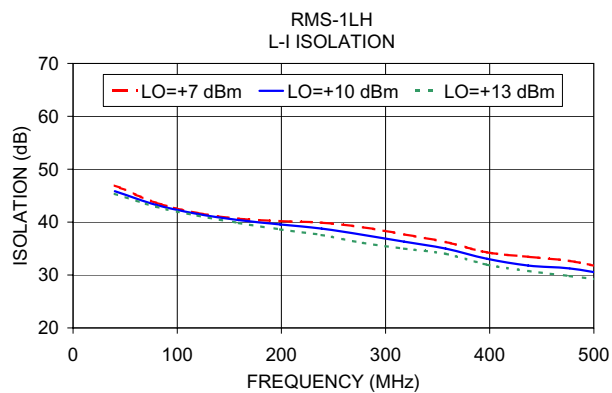
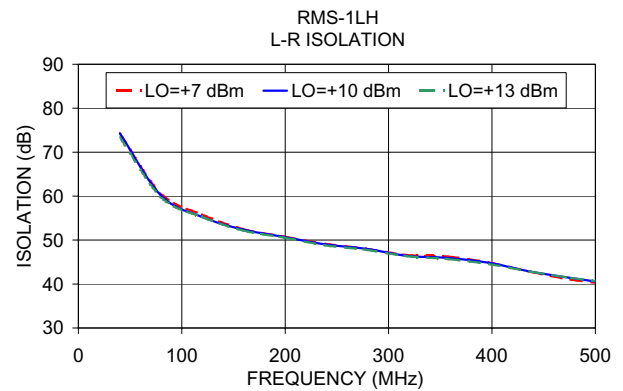
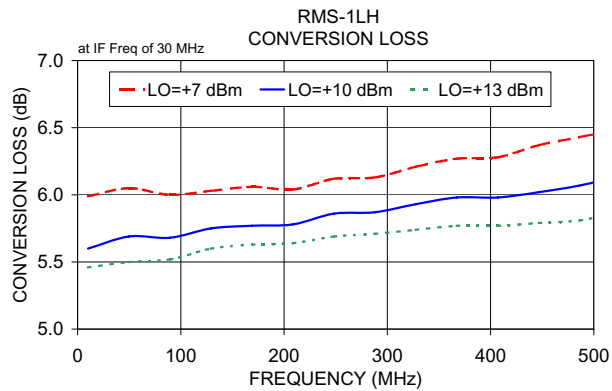
IF/RF MICROWAVE COMPONENTS

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

RMS-1LH+ RMS-1LH



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