

Surface Mount Frequency Mixer

LRMS-5H+ LRMS-5H

Level 17 (LO Power +17dBm) 10 to 1500 MHz



CASE STYLE: QQQ130
PRICE: \$17.95 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.

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

- low conversion loss, 6.36 dB typ.
- good L-R isolation, 36 dB typ.

Applications

- cellular
- satellite distribution
- VHF/UHF

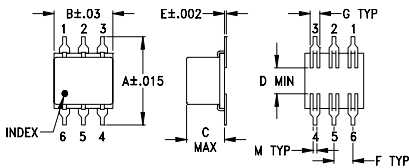
Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)						
		L	M	U	L	M	U							
10-1500	DC-900	65	40	36	20	22	15	50	30	30	18	17	7	22

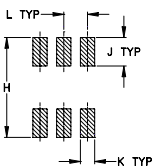
1 dB COMP.: +14 dBm typ.

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]

Outline Drawing



PCB Land Pattern

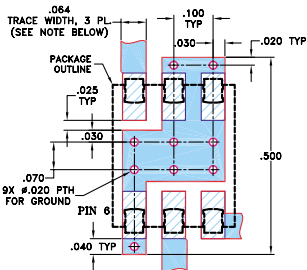


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch)

A	B	C	D	E	F	G
.400	.31	.200	.10	.010	.100	.050
10.16	7.87	5.08	2.54	0.25	2.54	1.27
H	J	K	L	M	wt	
.420	.120	.060	.100	.020	grams	
10.67	3.05	1.52	2.54	0.51	0.55	

Demo Board MCL P/N: TB-44 Suggested PCB Layout (PL-083)

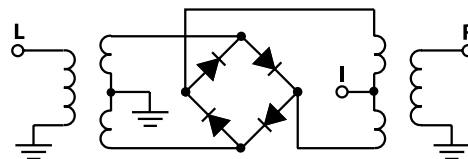


- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS $0.030" \pm 0.002"$; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
10.00	40.00	6.95	70.78	61.92	2.20	1.53
20.00	50.00	6.58	65.19	63.52	1.63	1.56
50.00	80.00	6.34	58.27	59.11	1.47	1.51
100.00	70.00	6.16	57.50	49.97	1.49	1.50
149.69	119.69	6.25	57.97	51.05	1.52	1.49
200.00	170.00	6.35	58.46	44.60	1.57	1.47
289.38	259.38	6.44	45.97	40.19	1.66	1.45
429.06	399.06	6.52	35.99	40.36	1.85	1.48
500.00	470.00	6.57	33.86	35.13	1.96	1.52
568.75	538.75	6.70	31.80	31.81	2.07	1.65
708.44	678.44	7.17	28.34	25.09	2.42	1.79
750.00	720.00	7.33	27.82	23.34	2.56	1.80
848.13	818.13	7.63	27.14	20.18	2.79	1.94
987.81	957.81	7.85	25.28	17.43	2.98	2.02
1000.00	970.00	7.86	25.09	16.91	3.00	2.12
1127.50	1097.50	7.96	23.28	14.89	3.16	2.21
1267.19	1237.19	8.09	21.51	13.36	3.15	2.57
1406.88	1376.88	8.10	20.40	11.73	2.97	2.82
1453.44	1423.44	8.28	20.09	11.57	2.99	2.97
1500.00	1470.00	8.50	19.62	11.46	2.94	3.15

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 CERTIFIED

ALL NEW
minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

REV. B
M102713
LRMS-5H
DJ/FL/CP/AM
061229
Page 1 of 2

Performance Charts

