

Surface Mount Frequency Mixer

Level 13 (LO Power +13 dBm) 5 to 1500 MHz

JMS-5MH+ JMS-5MH



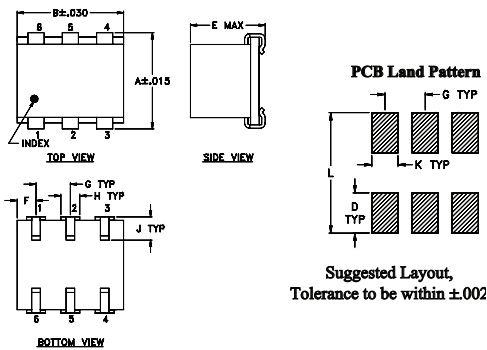
Maximum Ratings

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	6
RF	3
IF	2
GROUND	1,4,5

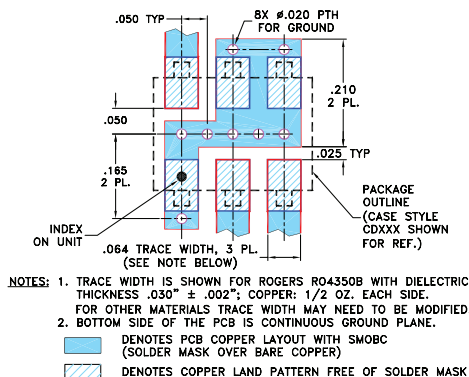
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	wt
.280	.310	--	.100	.225	.055	.100					grams
7.11	7.87	--	2.54	5.72	1.40	2.54					0.45

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



Features

- low conversion loss, 5.7 dB typ.
- miniature surface mount
- J-leads for strain relief and excellent solderability

Applications

- up & down converters for receivers & transmitters
- satellite distribution
- cellular/ISM/GSM

CASE STYLE: BH292
PRICE: \$11.95 ea. QTY (1-9)

+RoHS Compliant
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							
5-1500	DC-1000	67	40	57	25	35	20	60	40	35	18	15	8	19

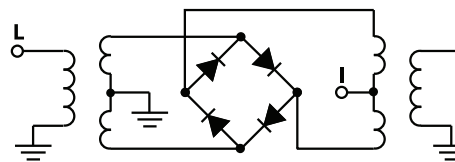
1 dB COMP: +9 dBm typ.
Phase detection, positive polarity

L = low range [f_L to $10 f_L$]
M = mid band [$2f_L$ 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 +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
10.00	40.00	5.67	72.72	71.62	1.72	2.09
20.00	50.00	5.34	69.32	67.42	1.47	2.05
50.00	80.00	5.13	64.80	61.00	1.39	2.09
100.00	70.00	4.84	57.53	52.99	1.40	2.06
149.69	119.69	4.83	51.47	47.61	1.43	1.99
200.00	170.00	4.84	45.11	42.45	1.48	1.97
289.38	259.38	5.23	42.74	40.45	1.59	1.97
382.50	352.50	5.65	40.00	38.72	1.72	1.98
429.06	399.06	5.74	38.30	38.06	1.79	2.07
500.00	470.00	5.96	36.54	37.26	1.91	2.06
568.75	538.75	6.21	36.02	36.79	2.02	2.11
661.88	631.88	6.31	34.63	31.64	2.18	2.23
750.00	720.00	6.75	32.69	27.81	2.32	2.32
801.56	771.56	7.02	32.12	26.48	2.41	2.44
894.69	864.69	7.51	31.35	22.10	2.56	2.61
1000.00	970.00	8.06	29.45	18.64	2.72	2.70
1127.50	1097.50	8.09	27.46	16.61	2.85	2.90
1267.19	1237.19	8.18	26.47	13.75	3.03	3.14
1406.88	1376.88	8.33	26.08	12.44	3.25	3.52
1500.00	1470.00	8.59	25.44	11.30	3.40	3.82

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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

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-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp.

REV. B
M102713
JMS-5MH
ED-3494
DJ/CP/AM
130328
Page 1 of 2

Performance Charts

