

# Surface Mount Frequency Mixer

## JMS-2LH+ JMS-2LH

Level 10 (LO Power +10 dBm) 20 to 1000 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	6
RF	3
IF	2
GROUND	1,4,5

### Features

- excellent L-R isolation, up to 60 dB typ.
- miniature surface mount
- J-leads for strain relief and excellent solderability

### Applications

- up & down converters for receivers & transmitters
- UHF TV
- cellular/ISM/GSM

CASE STYLE: BH292  
PRICE: \$9.45 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.

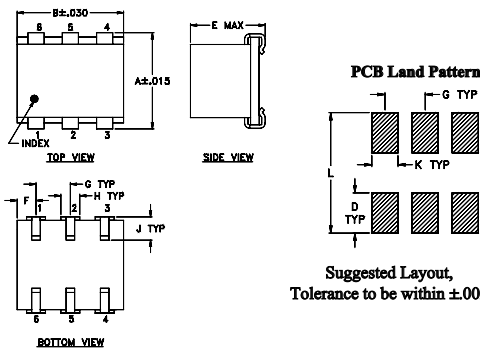
### Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)
		L	M	U	L	M	U	
LO/RF $f_L$ - $f_U$	Mid-Band $m$ $\bar{X}$ $\sigma$ Max. Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
20-1000	DC-1000	60	40	48	25	37	20	45
		6.5	.10	7.5	9.0			

1 dB COMP: +5 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  $f_U$ ]

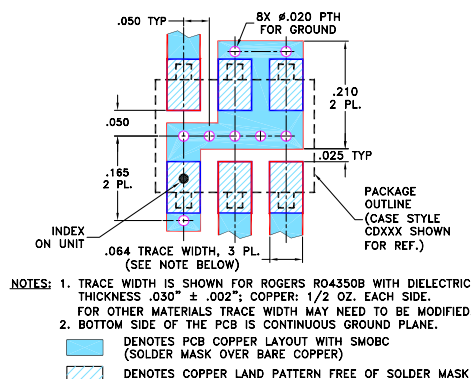
### Outline Drawing



### 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

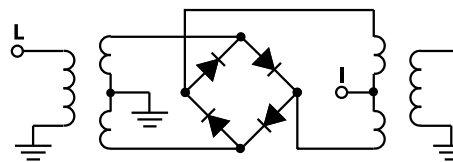
### Demo Board MCL P/N: TB-03 Suggested PCB Layout (PL-052)



### 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
20.10	50.10	6.74	62.98	61.31	1.24	2.28
40.10	70.10	6.75	58.93	57.30	1.22	2.22
100.10	130.10	6.72	51.46	49.64	1.23	2.21
150.10	180.10	6.70	48.38	46.49	1.24	2.24
200.10	230.10	6.65	46.01	43.92	1.26	2.21
255.27	285.27	6.64	44.26	42.27	1.26	2.25
310.45	340.45	6.60	42.75	40.85	1.29	2.20
365.62	395.62	6.59	41.54	39.67	1.30	2.27
420.79	450.79	6.55	40.42	38.53	1.34	2.28
475.96	505.96	6.54	39.69	37.65	1.35	2.21
500.10	530.10	6.51	39.42	37.42	1.37	2.23
558.72	588.72	6.54	38.36	36.11	1.39	2.29
613.89	643.89	6.57	37.95	35.34	1.43	2.37
669.07	699.07	6.59	37.29	34.51	1.48	2.33
724.24	754.24	6.60	36.99	34.33	1.52	2.48
779.41	809.41	6.66	36.37	33.21	1.55	2.39
834.58	864.58	6.71	36.41	32.42	1.58	2.53
889.76	919.76	6.82	35.95	31.60	1.55	2.53
944.93	974.93	6.88	36.03	31.80	1.54	2.45
1000.10	1030.10	6.97	35.70	31.47	1.51	2.67

### Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

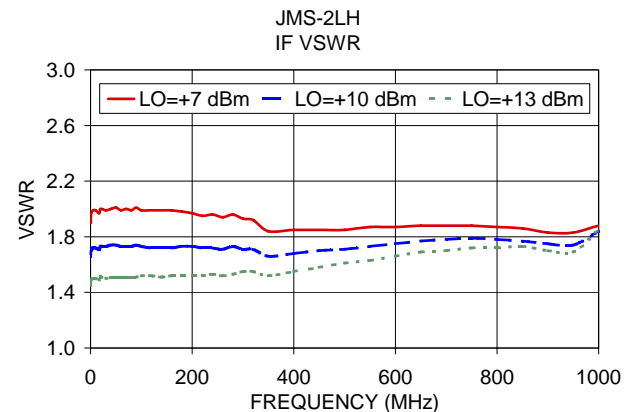
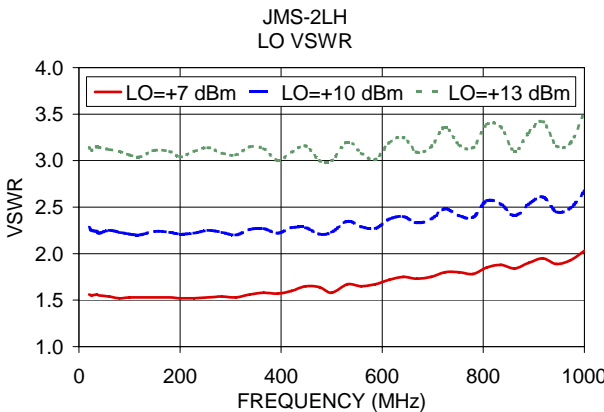
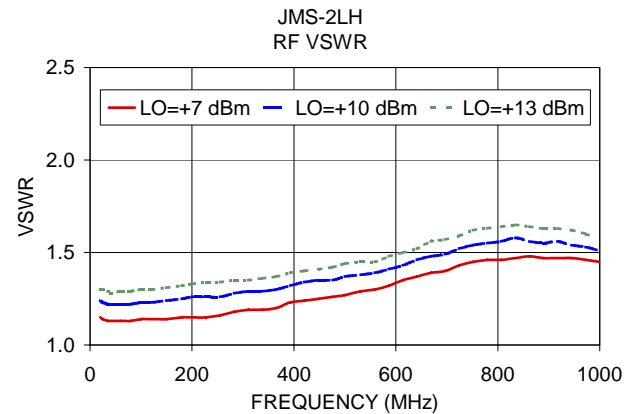
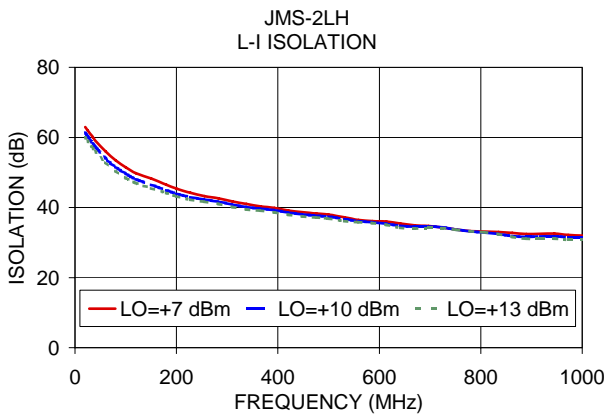
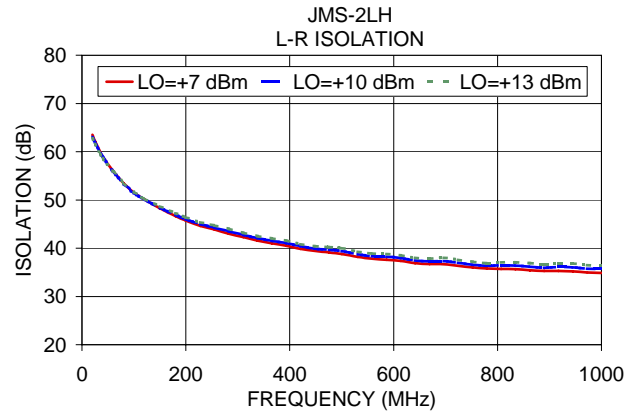
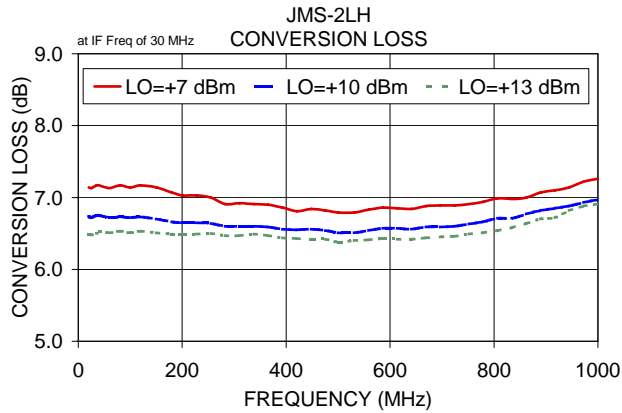
For detailed performance specs & shopping online see web site

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# Performance Charts

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For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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