

Surface Mount Frequency Mixer

Level 13 (LO Power +13 dBm) 2 to 500 MHz

JMS-1MH+
JMS-1MH



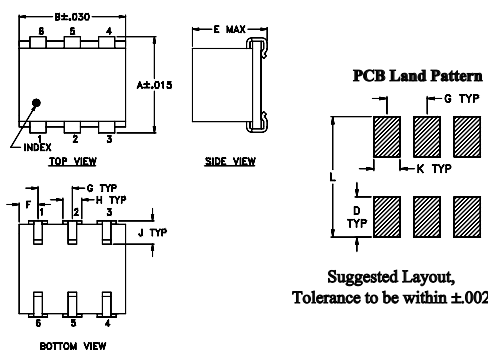
Maximum Ratings

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

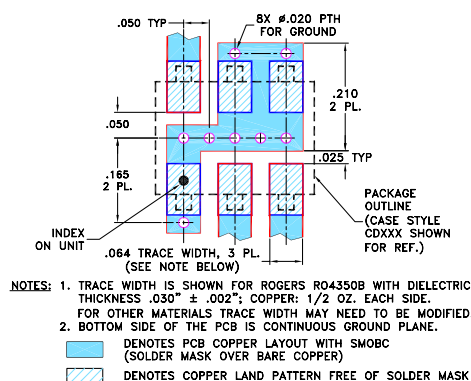


Outline Dimensions (inch)

A	B	C	D	E	F	G
.280	.310	--	.100	.225	.055	.100
7.11	7.87	--	2.54	5.72	1.40	2.54

H	J	K	L	wt
.047	.065	.065	.300	grams
1.19	1.65	1.65	7.62	0.45

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



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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Features

- low conversion loss, 5.75 dB typ.
- miniature surface mount
- J-leads for strain relief and excellent solderability

Applications

- up & down converters for receivers & transmitters
- VHF/UHF

CASE STYLE: BH292

PRICE: \$9.45 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)
LO/RF f_L - f_U	IF	Mid-Band m		Total Range Max.		L		M		U		L		M		U		
		$\overline{X}$	σ			Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.		
2-500	DC-500	5.75	0.10	7.0	8.0	70	55	60	40	44	25	55	42	45	25	35	20	22

1 dB COMP.: +9 dBm typ.

L = low range [f_L to 10 f_L]
m = mid band [$2f_L$ to $f_L/2$]

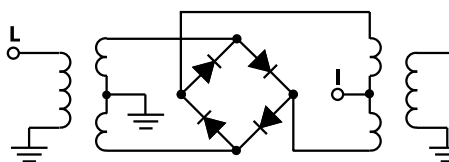
M = mid range [$10 f_L$ to $f_U/2$]

U = upper range [$f_U/2$ to f_U]

Typical Performance Data

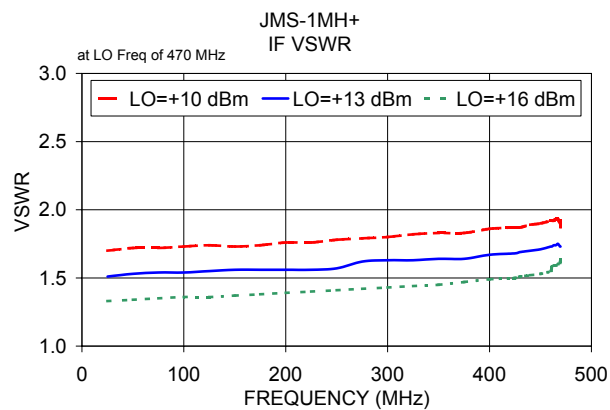
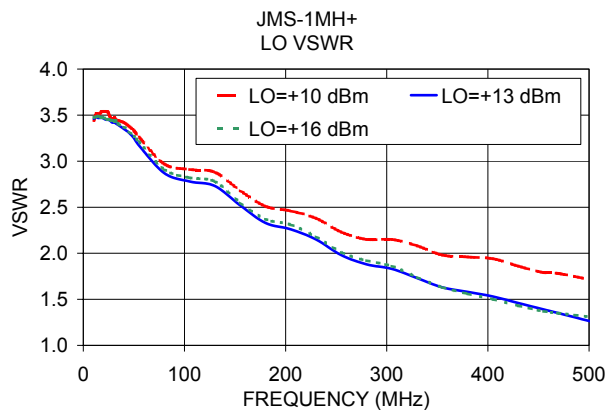
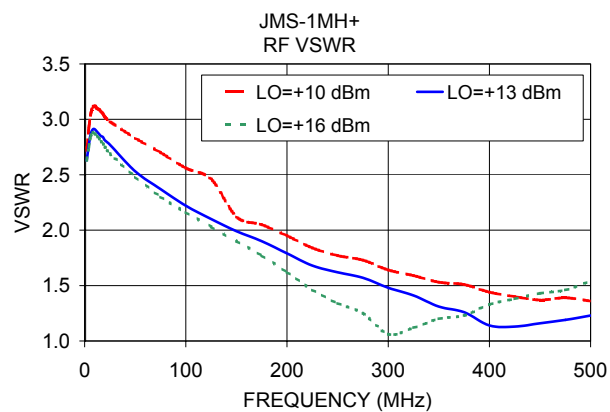
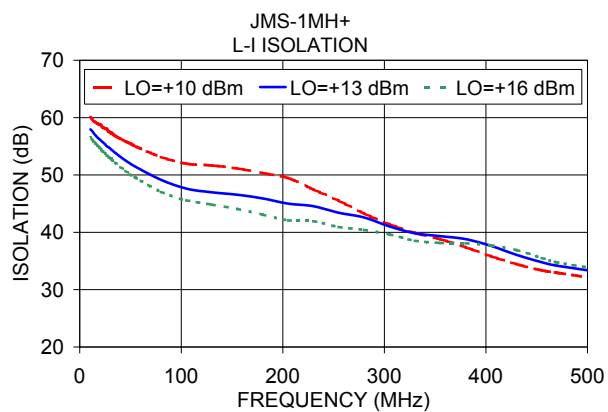
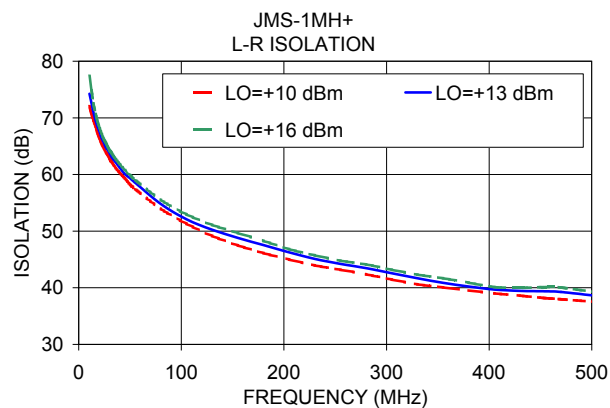
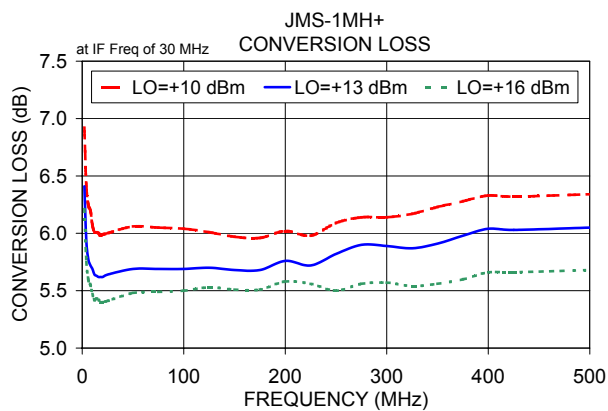
Frequency (MHz)		Conversion Loss (dB)	VSWR RF Port (:1)	Frequency (MHz)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO Port (:1)
RF	LO						
		LO +13dBm	LO +13dBm		LO +13dBm	LO +13dBm	LO +13dBm
2.10	32.10	6.41	2.63	10.50	74.25	57.95	3.46
4.10	34.10	5.93	2.77	14.50	70.86	57.12	3.47
6.10	36.10	5.77	2.87	20.50	67.46	56.08	3.46
10.10	40.10	5.69	2.91	24.50	65.62	55.44	3.45
14.10	44.10	5.63	2.87	30.50	63.62	54.54	3.42
18.10	48.10	5.62	2.84	35.00	62.38	53.86	3.39
20.10	50.10	5.62	2.81	40.10	61.17	53.14	3.35
25.10	55.10	5.64	2.77	50.10	59.33	51.94	3.25
50.10	80.10	5.69	2.53	80.10	54.77	49.14	2.87
100.10	130.10	5.69	2.22	105.10	52.09	47.63	2.78
125.10	155.10	5.70	2.10	155.10	48.81	46.55	2.52
150.10	180.10	5.68	1.99	205.10	46.26	45.01	2.26
175.10	205.10	5.68	1.90	255.10	44.21	43.40	1.98
200.10	230.10	5.76	1.79	305.10	42.56	41.02	1.83
250.10	280.10	5.82	1.62	330.10	41.67	39.83	1.73
300.10	330.10	5.89	1.48	355.10	40.88	39.32	1.63
350.10	380.10	5.91	1.31	405.10	39.68	37.64	1.53
400.10	430.10	6.04	1.14	430.10	39.45	36.07	1.46
425.10	455.10	6.03	1.13	455.10	39.38	34.77	1.39
500.00	470.00	6.05	1.23	470.00	39.26	34.19	1.35

Electrical Schematic



Performance Charts

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