

Frequency Mixer

Level 10 (LO Power +10 dBm) 20 to 1000 MHz

Maximum Ratings

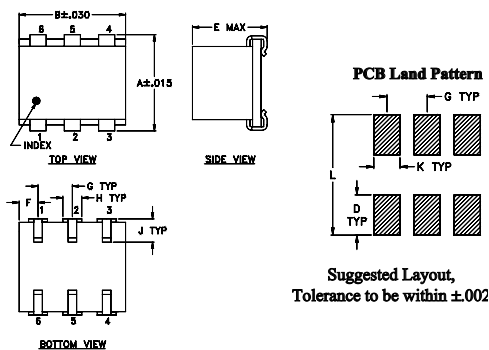
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

LO	6
RF	3
IF	2
GROUND	1,4,5

Outline Drawing

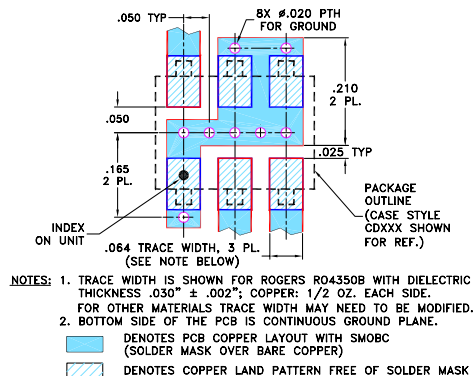


Outline Dimensions (inch)

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-Circuit's applicable established test performance criteria and measurement instructions.
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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



Generic photo used for illustration purposes only

CASE STYLE: BH292

+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	
LO/RF f_L - f_U	Mid-Band m $\bar{X}$ σ Max. Total Range Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ.
20-1000 DC-1000	6.5 .10 7.5 9.0	60 40 48 25 37 20	45 30 35 20 27 11	20				20

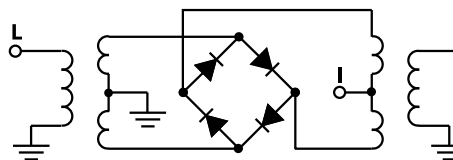
1 dB COMP: +5 dBm typ.
Phase detection, positive polarity

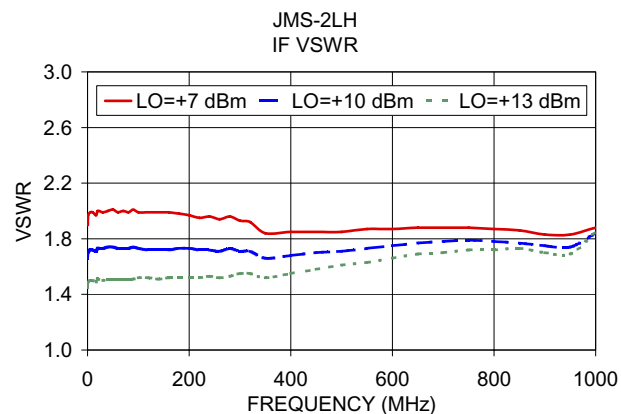
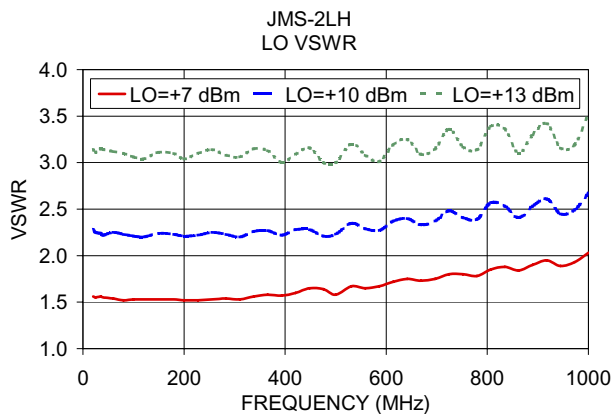
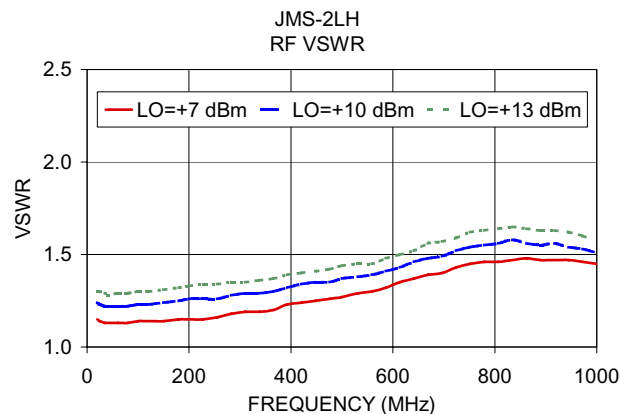
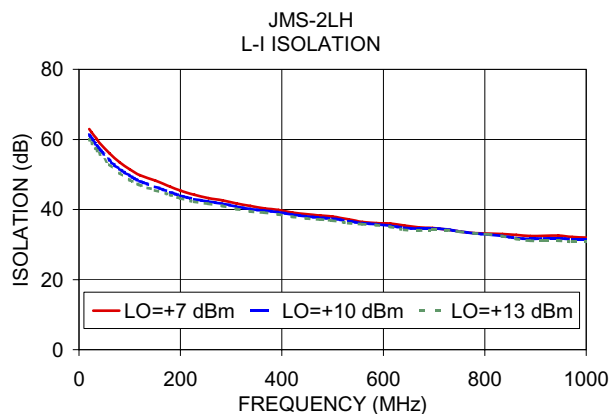
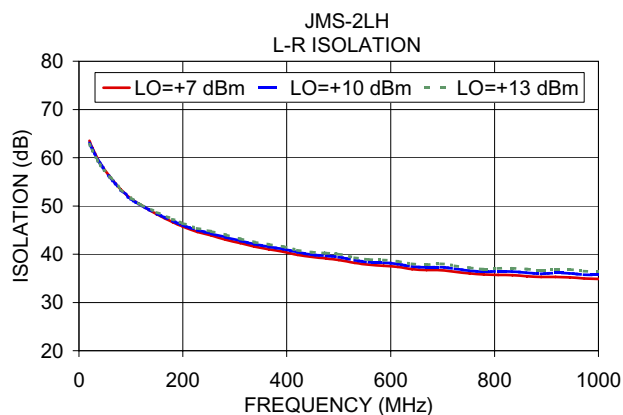
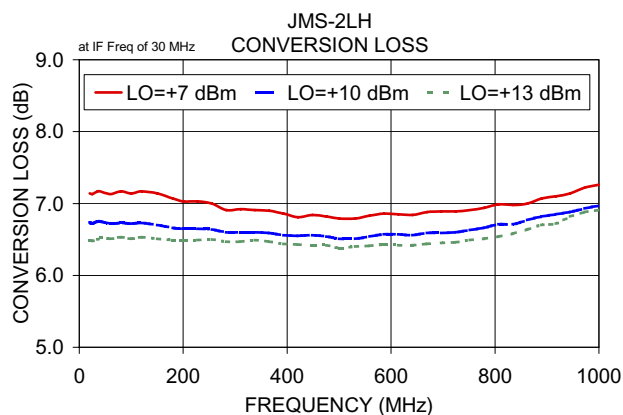
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]
m = mid band [$2 f_L$ to $f_U/2$]

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





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