

Surface Mount

Frequency Mixer

LRMS-1HJ

Level 17 (LO Power +17dBm) 2 to 500 MHz



Generic photo used for illustration purposes only

CASE STYLE: QQQ569

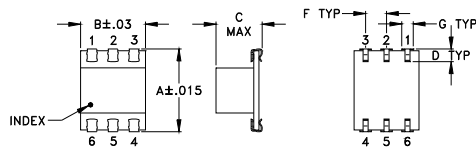
Maximum Ratings

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.	

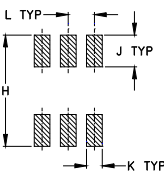
Pin Connections

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

Outline Drawing



PCB Land Pattern

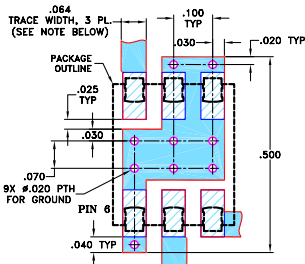


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.390	.31	.225	.060	--	.100	.045
9.91	7.87	5.72	1.52	--	2.54	1.14
H	J	K	L	M	wt	
.420	.120	.060	.100	--	grams	
10.67	3.05	1.52	2.54	--	0.50	

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



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS 0.030" ± 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

Notes

- A. 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.
 B. 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

- low conversion loss, 6.25 dB typ.
- excellent L-R isolation, 44 dB typ.
- aqueous washable
- J-leads for strain relief

Applications

- HF/VHF/UHF
- instrumentation

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							
2-500	DC-500	55	44	44	25	33	20	50	34	45	25	37	22	25

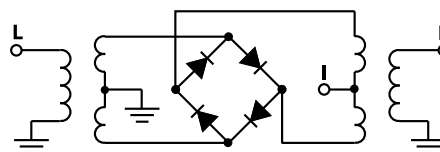
1 dB COMP.: +14 dBm typ.

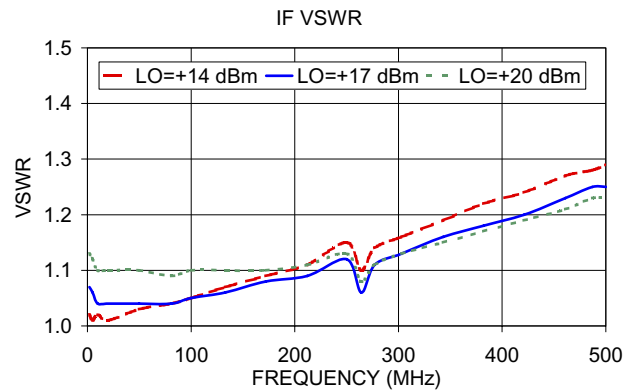
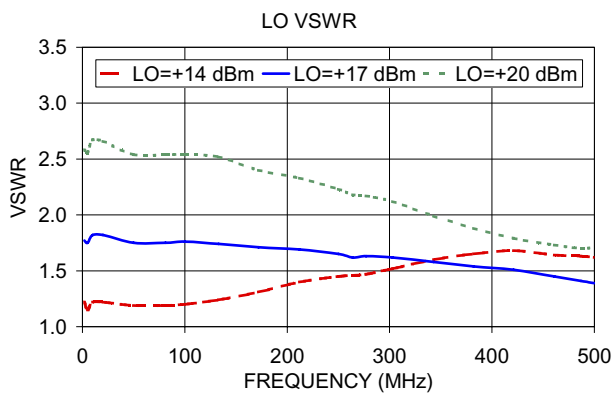
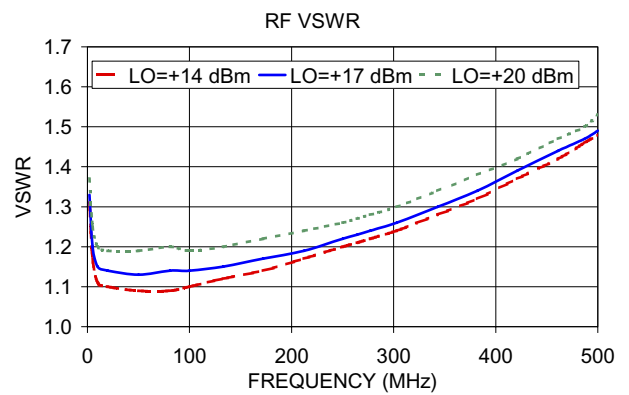
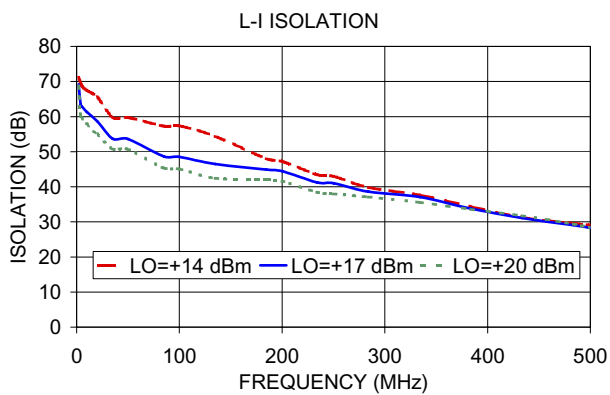
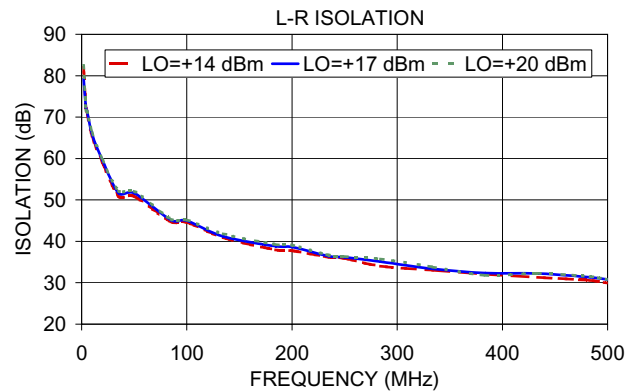
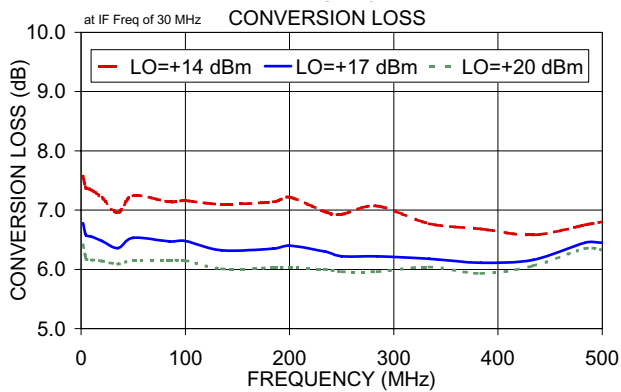
L = low range [f_1 to $10 f_1$] M = mid range [$10 f_1$ to $f_1/2$] U = upper range [$f_1/2$ to f_1]
 m = mid band [$2f_1$ to $f_1/2$]

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
2.00	32.00	6.78	79.29	69.19	1.33	1.77
4.00	34.00	6.60	72.35	63.39	1.20	1.75
5.00	35.00	6.57	71.51	62.98	1.15	1.82
10.00	40.00	6.55	65.84	61.30	1.14	1.82
20.00	50.00	6.48	59.50	58.68	1.13	1.75
35.20	65.20	6.36	51.64	53.67	1.14	1.75
50.00	80.00	6.53	51.61	53.63	1.14	1.76
85.00	55.00	6.47	45.13	48.67	1.15	1.74
100.00	70.00	6.48	44.98	48.52	1.17	1.71
134.80	104.80	6.32	41.19	46.50	1.19	1.69
184.60	154.60	6.35	38.78	44.90	1.22	1.65
200.00	170.00	6.40	38.62	44.42	1.23	1.62
234.40	204.40	6.30	36.44	41.20	1.24	1.63
250.00	220.00	6.22	36.14	41.01	1.26	1.62
284.20	254.20	6.22	35.11	38.57	1.30	1.58
334.00	304.00	6.18	33.38	37.07	1.34	1.54
383.80	353.80	6.11	32.33	33.77	1.39	1.51
433.60	403.60	6.16	32.22	31.10	1.44	1.45
483.40	453.40	6.45	31.29	29.09	1.47	1.41
500.00	470.00	6.45	30.80	28.30	1.49	1.39

Electrical Schematic





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