

Surface Mount Frequency Mixer

LRMS-1MHJ+ LRMS-1MHJ

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



CASE STYLE: QQQ569
PRICE: \$8.95 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.

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

Features

- low conversion loss, 6.13 dB typ.
- excellent L-R isolation, 44 dB typ.
- aqueous washable
- J-leads for strain relief

Applications

- VHF/UHF
- instrumentation

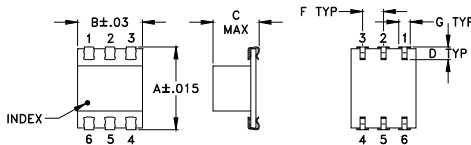
Electrical Specifications

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	6.13	.08	7.0	8.0	58	45	44	25	30	20	55	40	36	25	28	17	23

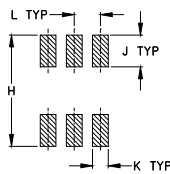
1 dB COMP.: +9 dBm typ.

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 [$2f_L$ to $f_U/2$]

Outline Drawing



PCB Land Pattern

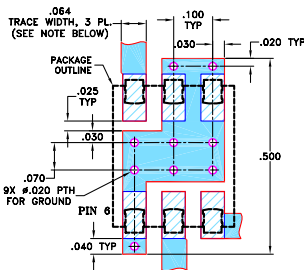


Suggested Layout,
Tolerance to be within ±.002

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)

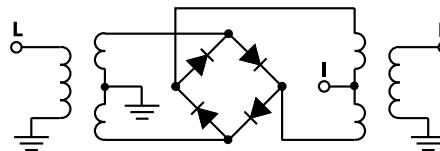


- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
□ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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	LO +13dBm
2.10	32.10	7.12	2.48	10.50	72.10	51.18	1.82
4.10	34.10	6.54	2.67	14.50	69.04	48.42	1.82
6.10	36.10	6.35	2.78	20.50	66.13	45.46	1.81
10.10	40.10	6.24	2.84	24.50	64.29	43.96	1.81
14.10	44.10	6.13	2.85	30.50	62.15	42.08	1.81
18.10	48.10	6.17	2.82	35.00	61.00	40.87	1.81
20.10	50.10	6.17	2.81	40.10	59.59	39.68	1.82
25.10	55.10	6.15	2.77	50.10	57.26	37.80	1.83
50.10	80.10	6.19	2.65	80.10	52.29	33.74	1.81
100.10	130.10	6.19	2.37	105.10	49.20	31.29	1.81
125.10	155.10	6.21	2.28	155.10	45.02	28.06	1.84
150.10	180.10	6.20	2.15	205.10	41.68	25.76	1.84
175.10	205.10	6.28	2.06	255.10	38.45	24.37	1.90
200.10	230.10	6.33	2.00	305.10	35.47	23.37	1.95
250.10	280.10	6.35	1.85	330.10	34.14	23.10	1.99
300.10	330.10	6.41	1.75	355.10	33.10	23.00	1.98
350.10	380.10	6.52	1.68	405.10	31.53	22.77	2.05
400.10	430.10	6.52	1.58	430.10	30.84	22.89	2.07
425.10	455.10	6.59	1.53	455.10	30.16	23.02	2.03
500.00	470.00	6.67	1.52	470.00	29.64	23.13	2.08

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs
& shopping online see web site

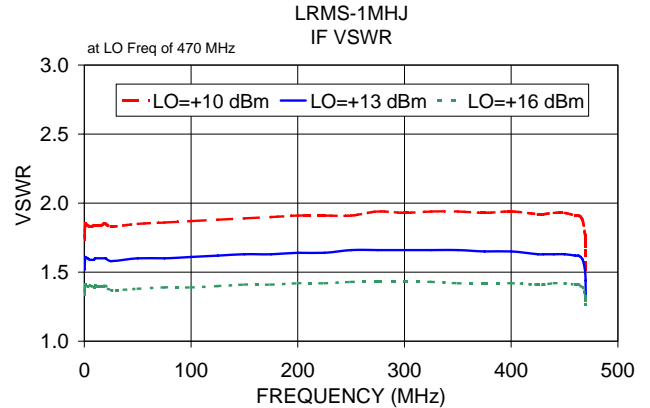
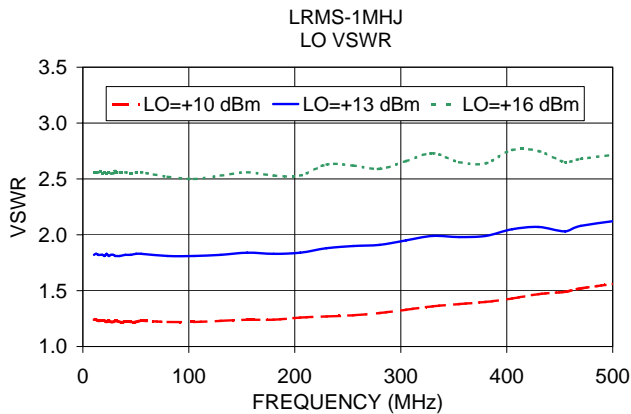
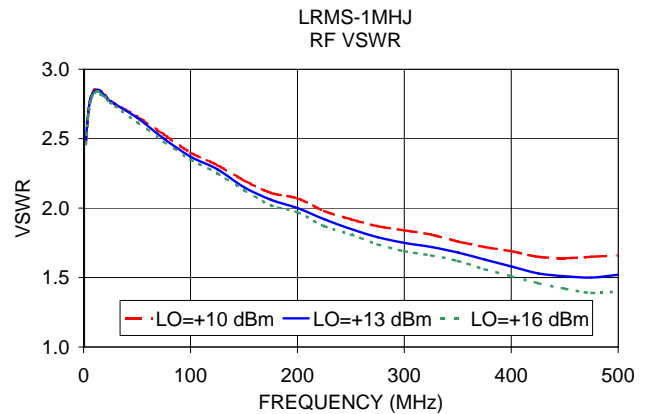
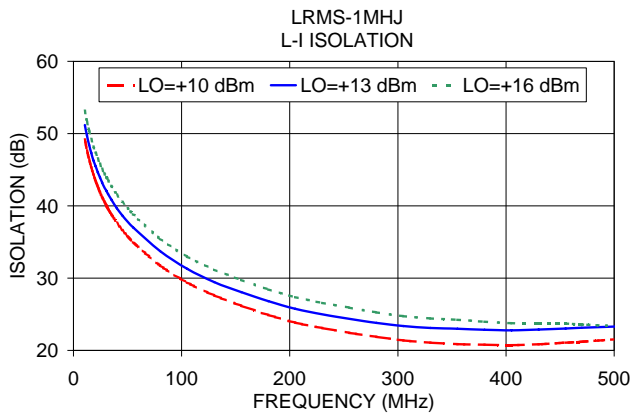
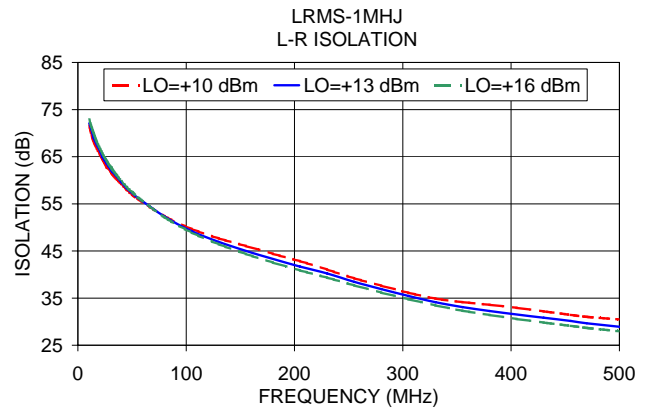
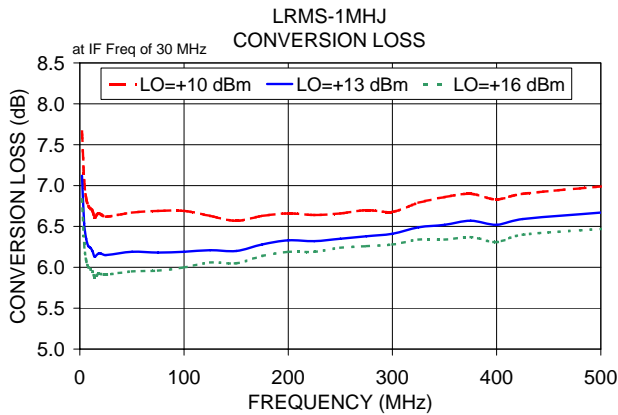
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IF/RF MICROWAVE COMPONENTS

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Performance Charts

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