

Surface Mount Frequency Mixer

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

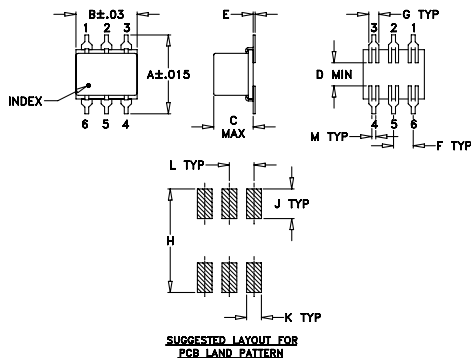
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

Pin Connections

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

Outline Drawing

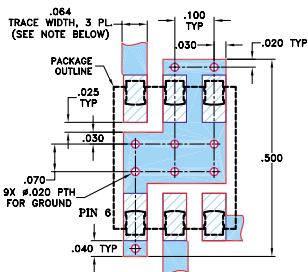


Outline Dimensions (inch)

A	B	C	D	E	F	G
.400	.31	.200	.10	.010	.100	.050
10.16	7.87	5.08	2.54	0.25	2.54	1.27

H	J	K	L	M	wt
.420	.120	.060	.100	.020	grams
10.67	3.05	1.52	2.54	0.51	0.55

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



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS $0.030" \pm 0.002"$; 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

Features

- low conversion loss, 5.65 dB typ.
- excellent L-R isolation, 44 dB typ.

Applications

- VHF/UHF
- instrumentation

LRMS-1MH+ LRMS-1MH



CASE STYLE: QQQ130
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.

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				
		\bar{X}	σ	Max.			Typ.	Min.	Typ.	Min.		Typ.	Min.	Typ.	Min.	Typ.	Min.	
2-500	DC-500	5.65	.08	7.0	8.0	58	45	44	25	30	20	55	40	36	25	28	17	23

1 dB COMP.: +14 dBm typ.

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

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

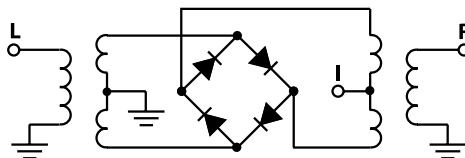
1 dB COMP.: +14 dBm typ.

L = low range [f_L to $10 f_L$]
m = mid band [$2 f_L$ to $f_U/2$]
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)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO					
		LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
2.00	32.00	6.87	74.51	65.71	1.13	2.10
5.00	35.00	5.99	68.76	61.00	1.06	2.01
10.00	40.00	6.21	63.07	55.80	1.02	2.15
20.00	50.00	6.21	57.31	49.78	1.01	2.20
32.18	62.18	6.13	52.98	45.20	1.02	2.17
50.00	80.00	6.10	49.34	40.85	1.04	2.08
77.45	47.45	6.18	47.86	38.28	1.06	2.06
100.00	70.00	6.00	47.68	37.14	1.09	2.04
122.73	92.73	6.08	47.59	36.20	1.11	2.00
168.00	138.00	6.07	45.07	34.10	1.13	1.98
198.18	168.18	6.11	42.15	31.58	1.16	1.99
228.36	198.36	6.11	39.78	30.31	1.18	1.98
250.00	220.00	6.27	37.93	29.36	1.20	1.98
273.64	243.64	6.21	35.54	27.74	1.23	2.01
303.82	273.82	6.26	32.56	25.93	1.25	2.01
349.09	319.09	6.39	29.95	24.88	1.28	2.01
379.27	349.27	6.47	28.87	23.78	1.33	2.01
409.46	379.46	6.45	27.89	22.58	1.36	2.03
454.73	424.73	6.64	25.80	20.47	1.41	2.07
500.00	470.00	7.03	23.97	18.39	1.45	2.09

Electrical Schematic



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Performance Charts

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