

Surface Mount Frequency Mixer

ADE-17H+ ADE-17H

Level 17 (LO Power +17 dBm) 100 to 1700 MHz



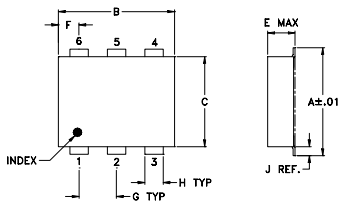
Maximum Ratings

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

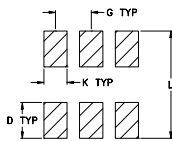
Pin Connections

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

Outline Drawing



PCB Land Pattern

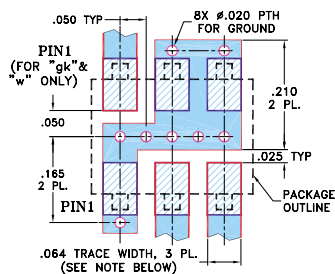


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54
H	J	K	L			wt
.030	.026	.065	.300			grams
0.76	0.66	1.65	7.62			0.20

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



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .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, 7.2 dB typ.
- excellent IP3, 25 dB typ.
- low profile package
- aqueous washable
- protected by US patent 6,133,525

Applications

- VHF/UHF TV

CASE STYLE: CD542

PRICE: \$8.95 ea. QTY (10-49)

+ 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)				
		L		U		L		U						
LO/RF f_L - f_U	Mid-Band m \bar{X} σ Max.	Total Range Max.		Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.				
100-1700	50-1500	7.2	0.10	8.5	9.5	32	20	36	22	32	20	37	22	25

1 dB COMP.: +14 dBm typ.

L = 100 - 850 MHz

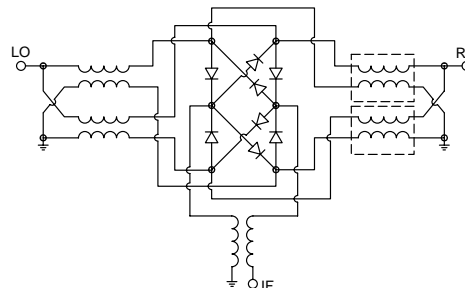
U = upper range [$f_U/2$ to f_L]

m = mid band [$2f_L$ 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
100.00	130.00	7.15	30.70	29.70	1.96	1.36
123.00	153.00	7.13	31.30	30.10	2.16	1.36
236.00	266.00	6.92	32.20	32.40	1.67	1.21
349.00	379.00	7.03	33.90	34.10	1.60	1.22
462.00	492.00	6.97	36.60	37.50	1.66	1.32
470.00	500.00	7.01	36.70	37.40	1.70	1.33
500.00	530.00	7.01	37.40	38.30	1.66	1.35
575.00	605.00	7.02	37.50	38.40	1.68	1.41
700.00	730.00	7.05	38.70	39.70	1.69	1.46
801.00	831.00	7.10	39.20	39.90	1.70	1.53
865.00	895.00	7.27	38.80	39.80	1.85	1.57
914.00	944.00	7.28	38.80	40.10	1.78	1.56
1000.00	1030.00	7.21	40.70	40.50	1.81	1.66
1027.00	1057.00	7.12	42.50	40.80	1.92	1.69
1140.00	1170.00	7.22	38.40	37.30	1.81	1.84
1253.00	1283.00	7.02	34.30	36.90	1.85	1.87
1470.00	1500.00	7.18	34.10	36.00	2.20	1.80
1500.00	1530.00	7.15	34.60	36.20	2.18	1.84
1592.00	1622.00	7.16	34.70	35.90	2.37	1.85
1705.00	1735.00	7.32	34.50	35.40	2.55	1.77

Electrical Schematic



Mini-Circuits

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Performance Charts

