

## Frequency Mixer

LAVI-9VH+

Level 19 (LO Power +19dBm) 820 to 870 MHz

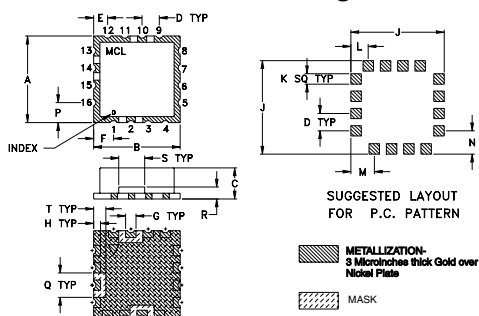
## Maximum Ratings

|                       |                |
|-----------------------|----------------|
| Operating Temperature | -45°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| LO Power              | +22 dBm        |
| RF Power              | +24 dBm        |

## Pin Connections

|        |                                |
|--------|--------------------------------|
| LO     | 10                             |
| RF     | 2                              |
| IF     | 14                             |
| GROUND | 1,3,4,5,6,7,8,9,11,12,13,15,16 |

## Outline Drawing

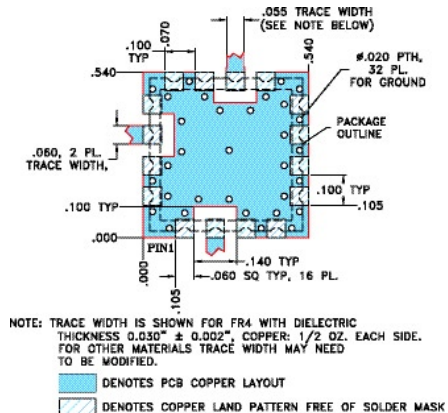


## Outline Dimensions (inch)

| A     | B     | C    | D    | E    | F    | G    | H    | J     |
|-------|-------|------|------|------|------|------|------|-------|
| .500  | .500  | .180 | .100 | .080 | .115 | .060 | .040 | .540  |
| 12.70 | 12.70 | 4.57 | 2.54 | 2.03 | 2.92 | 1.52 | 1.02 | 13.72 |

| K    | L    | M    | N    | P    | Q    | R    | S    | T    | wt.   |
|------|------|------|------|------|------|------|------|------|-------|
| .060 | .100 | .135 | .135 | .115 | .140 | .070 | .150 | .070 | grams |
| 1.52 | 1.50 | 3.43 | 3.43 | 2.92 | 3.56 | 1.78 | 3.81 | 1.78 | 1.0   |

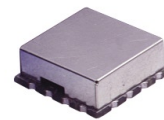
Demo Board MCL P/N: TB-10  
Suggested PCB Layout (PL-012)

## Features

- RoHS compliant
- very high IP3, 36 dBm typ.
- 1 dB compression, +23 dBm
- excellent L-R isolation, 46 dB typ. and L-I isolation, 46 dB typ.
- good VSWR all ports
- shielded metal cover
- dual double balanced FET mixer
- U.S. patent 6,807,407

## Applications

- cellular base station



CASE STYLE: CK605

PRICE: \$ 15.95 ea. QTY. (1-9)

\$ 13.95 ea. QTY. (100)

+ RoHS compliant in accordance  
with EU Directive (2002/95/EC)

The +suffix has been added in order to identify RoHS Compliance. There has been no change to the model's material, form, fit, or function. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications (T<sub>AMB</sub>=25°C)

| FREQUENCY (MHz) |          |         | CONVERSION LOSS (dB) |      |      | RF in at 1dB Compr (dBm) | IP3 (dBm) | LO-RF ISOLATION (dB) |      | LO-IF ISOLATION (dB) |      |
|-----------------|----------|---------|----------------------|------|------|--------------------------|-----------|----------------------|------|----------------------|------|
| RF              | LO       | IF      | Typ.                 | σ    | Max. | Typ.                     | Typ.      | Typ.                 | Min. | Typ.                 | Min. |
| 820-870         | 990-1040 | 120-220 | 7.2                  | 0.12 | 8.5  | +23                      | 36        | 46                   | 40   | 46                   | 37   |

## Typical Performance Data

| Frequency (MHz) |         | Conversion Loss (dB) | IP3 (dBm) | Isolation L-R (dB) | Isolation L-I (dB) | VSWR LO (:1) | RF Freq. (MHz) | VSWR RF (:1) | IF Freq. (MHz) | VSWR IF (:1) |
|-----------------|---------|----------------------|-----------|--------------------|--------------------|--------------|----------------|--------------|----------------|--------------|
| RF              | LO      | LO                   | LO        | LO                 | LO                 | LO           |                | LO           |                | LO           |
|                 |         | +19dBm               | +19dBm    | +19dBm             | +19dBm             | +19dBm       |                | +19dBm       |                | +19dBm       |
| 820.13          | 990.13  | 7.66                 | 36.27     | 45.15              | 48.68              | 1.10         | 820.13         | 1.65         | 120.00         | 1.35         |
| 823.26          | 993.26  | 7.64                 | 35.76     | 45.27              | 48.66              | 1.06         | 823.26         | 1.61         | 130.00         | 1.32         |
| 826.38          | 996.38  | 7.61                 | 36.91     | 45.40              | 48.66              | 1.06         | 826.38         | 1.60         | 150.00         | 1.33         |
| 829.51          | 999.51  | 7.58                 | 36.19     | 45.53              | 48.70              | 1.09         | 829.51         | 1.61         | 155.00         | 1.33         |
| 832.63          | 1002.63 | 7.56                 | 36.72     | 45.67              | 48.73              | 1.14         | 832.63         | 1.62         | 158.96         | 1.33         |
| 835.76          | 1005.76 | 7.54                 | 36.76     | 45.86              | 48.67              | 1.19         | 835.76         | 1.63         | 161.00         | 1.34         |
| 838.88          | 1008.88 | 7.51                 | 36.71     | 46.02              | 48.69              | 1.25         | 838.88         | 1.64         | 166.00         | 1.34         |
| 842.01          | 1012.01 | 7.49                 | 36.98     | 46.21              | 48.73              | 1.31         | 842.01         | 1.65         | 169.00         | 1.35         |
| 845.13          | 1015.13 | 7.46                 | 36.42     | 46.45              | 48.69              | 1.37         | 845.13         | 1.67         | 172.00         | 1.35         |
| 848.26          | 1018.26 | 7.43                 | 37.07     | 46.65              | 48.72              | 1.44         | 848.26         | 1.68         | 175.00         | 1.36         |
| 851.38          | 1021.38 | 7.40                 | 37.25     | 46.84              | 48.66              | 1.50         | 851.38         | 1.70         | 178.96         | 1.37         |
| 854.51          | 1024.51 | 7.38                 | 37.26     | 47.09              | 48.69              | 1.57         | 854.51         | 1.72         | 181.00         | 1.37         |
| 857.63          | 1027.63 | 7.37                 | 37.05     | 47.26              | 48.65              | 1.64         | 857.63         | 1.75         | 190.00         | 1.40         |
| 860.76          | 1030.76 | 7.35                 | 36.85     | 47.42              | 48.51              | 1.72         | 860.76         | 1.77         | 200.00         | 1.43         |
| 863.88          | 1033.88 | 7.34                 | 37.19     | 47.70              | 48.49              | 1.79         | 863.88         | 1.87         | 210.00         | 1.46         |
| 867.01          | 1037.01 | 7.33                 | 37.23     | 47.90              | 48.44              | 1.86         | 867.01         | 1.96         | 215.00         | 1.50         |
| 870.13          | 1040.13 | 7.31                 | 36.75     | 48.17              | 48.42              | 1.93         | 870.13         | 2.04         | 220.00         | 1.54         |

## electrical schematic

