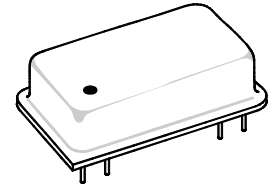




HO1301

**750.0 MHz
SAW
Oscillator**



Dip 14-8 Case

- **SAW Frequency Stabilization**
- **Fundamental-Mode Oscillation at 750.0 MHz**
- **0.8" x 0.5" x 0.25" Metal Dip Case**

This general-purpose oscillator is stabilized by surface-acoustic-wave (SAW) technology. Fundamental oscillation at 750.0 MHz eliminates all internally generated spurious outputs except integral harmonics of 750.0 MHz. The compact size of the rugged, metal, hermetically-sealed case makes this oscillator suitable for a variety of applications.

Absolute Maximum Ratings

| Rating | | Value | Units |
|---------------------|---------|------------|-------|
| DC Supply Voltage | | 0 to +13 | VDC |
| Ambient Temperature | Powered | -40 to +70 | °C |
| | Storage | -40 to +85 | |

Electrical Characteristics

| Characteristic | | Sym | Notes | Minimum | Typical | Maximum | Units |
|--------------------------------------|----------------------------|--------------|---------|-----------------|---------|-----------|----------|
| Operating Frequency | Absolute Frequency | f_o | 1, 7 | 749.750 | 750.0 | 750.250 | MHz |
| | Tolerance from 750.0 MHz | Δf_o | | | | ± 250 | |
| RF Output Power | | P_o | 3, 6 | +7 | +11 | +13 | dBm |
| Spurious Outputs | Second Harmonics | | 3, 6, 7 | | | -15 | dBc |
| | Third and Higher Harmonics | | | | | -20 | |
| | Nonharmonic | | | | <-80 | -60 | |
| RF Impedance | Nominal Impedance | Z_o | 3 | | 50 | | Ω |
| | Operating Load VSWR | G_L | 3, 5 | | | 1.5:1 | |
| DC Power Supply | Operating Voltage | V_{CC} | 3, 6 | 7.9 | 8.4 | 8.9 | VDC |
| | Operating Current | I_{CC} | | | | 30 | 40 |
| Operating Ambient Temperature | | T_A | 3, 6 | -20 | | +60 | °C |
| Lid Symbolization (YY=Year, WW=Week) | | | | RFM HO1301 YYWW | | | |

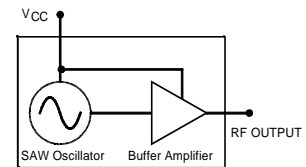


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling. COCOM CAUTION: Approval by the U.S. Department of Commerce is required prior to export of this device.

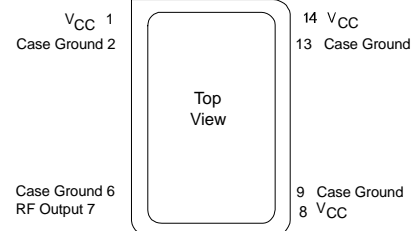
Notes:

1. One or more of the following United States patents apply: 4,616,197; 4,610,681; and 4,761,616.
2. Unless noted otherwise, all specifications are listed at $T_A = +25^\circ\text{C} \pm 2^\circ\text{C}$, $V_{CC} =$ nominal voltage ± 0.01 VDC, and load impedance = 50Ω with VSWR $\leq 1.5:1$.
3. The design, manufacturing process, and specification of this device are subject to change without notice.
4. Applies to oscillator only and not to sidebands caused by external electrical or mechanical sources. (Dedicated external voltage regulation with low-frequency filtering for the DC power supply and proper circuit board layout are recommended for optimum spectral purity.)
5. For specified maximum operating load VSWR (any angle) at F_o . (No instability or damage will occur for any passive load impedance.)
6. For any combination of V_{CC} and T_A within the specified operating ranges.
7. Applies for any combination of Note 5 and 6 conditions.

BLOCK DIAGRAM

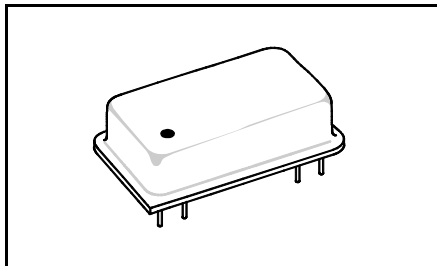


ELECTRICAL CONNECTIONS



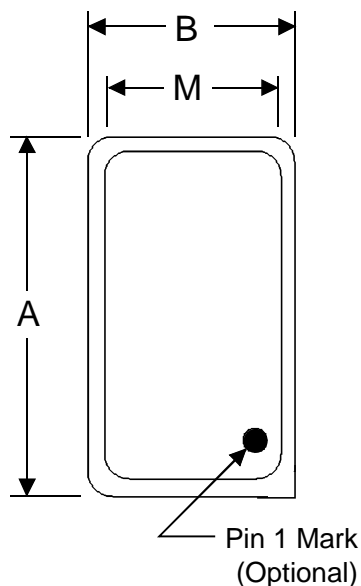
DIP14-8

Metal Dual-Inline Package with 8 leads in a 14-lead DIP configuration



| Dimension | mm | | Inches | |
|-----------|---------------|-------|---------------|-------|
| | MIN | MAX | MIN | MAX |
| A | — | 20.45 | — | 0.805 |
| B | — | 12.83 | — | 0.505 |
| C | — | 6.35 | — | 0.250 |
| D | 0.40 | 0.51 | 0.016 | 0.020 |
| E | 0.64 Nominal | | 0.025 Nominal | |
| F | 7.62 Nominal | | 0.300 Nominal | |
| G | 2.54 Nominal | | 0.100 Nominal | |
| H | 15.24 Nominal | | 0.600 Nominal | |
| K | 5.97 | 6.73 | 0.235 | 0.265 |
| L | 1.30 | — | 0.051 | — |
| M | — | 11.18 | — | 0.440 |
| N | — | 18.80 | — | 0.740 |
| R | 1.75 | 2.26 | 0.069 | 0.089 |

Top View



Bottom View

