

Features and Benefits

Better than +/- 200 ppb from -5°C to +85°C
 25MHz low noise clipped sine wave output
 3.3V supply; 3.5mA maximum
 Less than -135dBc/Hz @ 1KHz offset
 Less than -145dBc/Hz @ 10KHz offset

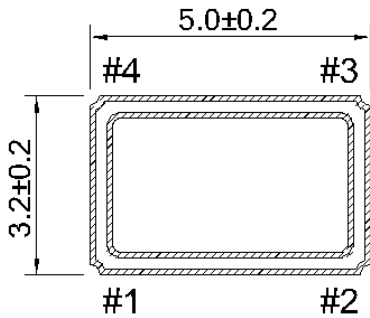
Typical Applications

Mobile Radio
 GPS Reference
 Beidou Navigation Systems

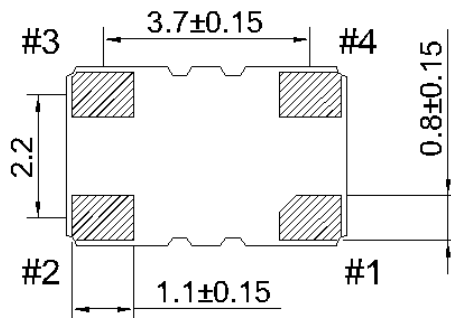
Mechanical Drawing & Pin Connections

Drawing No: MD140051-1

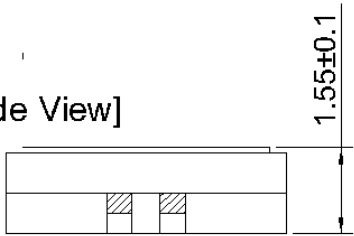
[Top View]



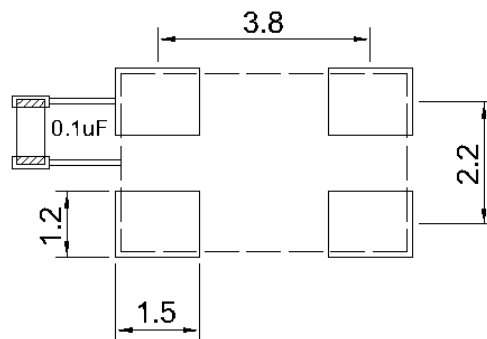
[Bottom View]



[Side View]



Recommended soldering pattern



| Pin | Function |
|-----|-----------------|
| #1 | Control Voltage |
| #2 | GND |
| #3 | Output |
| #4 | Supply Voltage |

Unit : mm

Specification

| Oscillator Specification | Sym | Condition | Value | | | Unit | Note |
|---------------------------------|---|---|--|-----------|-------|---------|------|
| | | | Min. | Typ. | Max. | | |
| Nominal Frequency | F _{nom} | | | 25.000000 | | MHz | |
| Output Wave Form | | | Clipped sine wave | | | | |
| Output Voltage Level | | | 0.8 | | 2.0 | Vp-p | |
| Output Load | | | | 10//10 | | Kohm/pF | |
| Start Time | | | | | 2.0 | ms | |
| Power Supply | | | | | | | |
| Supply Voltage | V _{cc} | | 3.135 | 3.3 | 3.465 | V | |
| Supply Current | | At maximum supply voltage | | | 3.5 | mA | |
| Frequency Control* | | | | | | | |
| Control Voltage Range | V _c | | 0.3 | 1.65 | 3.0 | V | |
| Tuning Range | | Reference to VCON at 1.65V | +/-5.0 | | | ppm | |
| Vcon Input Impedance | | Measured between VCON and GND pin | 100 | | | KOhm | |
| Linearity | | | | | 10.0 | % | |
| Frequency Stability | | | | | | | |
| VS. Temperature | | -5°C to +85°C (Ref. to the midpoint between min. and max. frequency value.) | -0.2 | | +0.2 | ppm | |
| Tolerance At 25°C | | Frequency @25°C, 1hour after 2 times reflow. | -2.0 | | +2.0 | ppm | |
| VS. Supply Voltage | | Supply voltage varied +/-5% at 25°C | -0.1 | | +0.1 | ppm | |
| VS. Load Change | | +/-10% load change | -0.2 | | +0.2 | ppm | |
| First Year Aging | | First year at 25°C | -1.0 | | +1.0 | ppm | |
| SSB Phase noise (typ.) | | 10 Hz | | -90 | | dBc/Hz | |
| | | 100 Hz | | -120 | | | |
| | | 1 KHz | | -135 | | | |
| | | 10 KHz | | -145 | | | |
| Environmental Conditions | | | | | | | |
| Parameter | Reference Std. | | Test Condition | | | | |
| Operating temperature range | -5°C to +85°C | | | | | | |
| Storage temperature range | -55°C to +125°C | | | | | | |
| Mechanical Shock | MIL-STD-883 2002 Condition B JESD22-B104 Condition B | | 1500G, half-sine, 0.5ms, each axis for 3 times | | | | |
| Vibration | MIL-STD-883 2007 Condition A JESD22-B103 Condition 1 | | 10-2000Hz, 1.52mm, 20G, each axis for 4hrs | | | | |
| Thermal Shock | MIL-STD-883 1010 Condition B JESD22-A104 Condition B | | -55°C, 125°C; soak time is 10 mins, with total 200 cycles. | | | | |