



### Features and Benefits

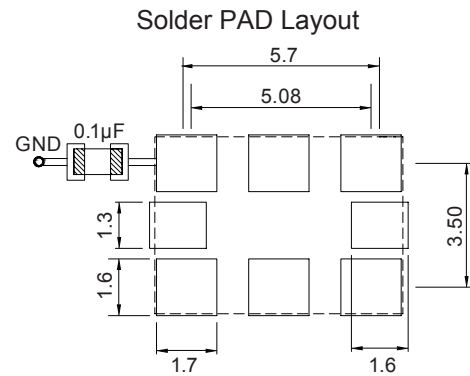
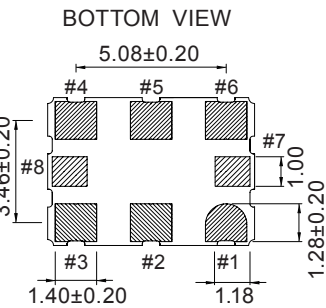
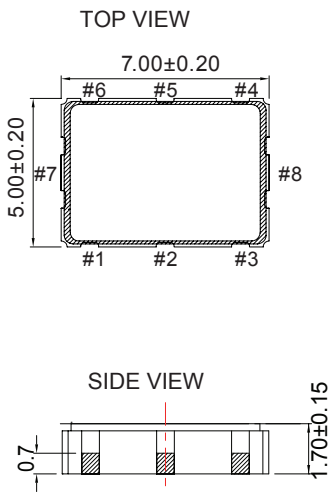
- Low Power Supply Voltage: 3.3, 2.5, 1.8V supply options
- Clock Output: CMOS
- Output frequency support from 15MHz to 250MHz
- Ultra Low Noise, Phase Jitter < 300 fs
- (Typical: 150 fs at 12kHz to 20MHz frequency offsets)
- Tri-state enable / disable mode.
- Temperature Range: -40°C to +85°C
- Pb-free/RoHS Compliant

### Typical Applications

- SONET/SDH
- Gigabit Ethernet.
- Storage Area Networking (SAN)
- SD/HD video
- FPGA clock generation

### Mechanical Drawing & Pin Connections

**Drawing No: MD200033-2**



#### Pin Assignment

| Pin# | Functions |
|------|-----------|
|      | CMOS      |
| 1    | NC        |
| 2    | OE        |
| 3    | GND       |
| 4    | Output    |
| 5    | NC        |
| 6    | VDD       |
| 7    | NC        |
| 8    | NC        |

To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

Unit in mm  
1mm = 0.0394 inches



**Specifications**

| Specification             | Condition            | 3.3V  |                      | 2.5V                |                     | 1.8V                |                     | Unit |
|---------------------------|----------------------|---|----------------------|---------------------|---------------------|---------------------|---------------------|------|
|                           |                      | Min.  | Max.                 | Min.                | Max.                | Min.                | Max.                |      |
| Supply Voltage Variation  | V <sub>DD</sub> ±5%  | -   | -                    | -                   | -                   | 1.71                | 1.89                | V    |
| Supply Voltage Variation  | V <sub>DD</sub> ±10% | 3.63  | 2.97                 | 2.25                | 2.75                | -                   | -                   | V    |
| Frequency Range           |                      | 15  | 250                  | 15                  | 250                 | 15                  | 250                 | MHz  |
| Standard Frequency        |                      | 100, 106.25, 125, 156.25, 187.5, 200, 212.5, 266, 300, 312.5, 400 |                      |                     |                     |                     |                     | MHz  |
| Supply Current            |                      | -   | 90                   | -                   | 80                  | -                   | 70                  | mA   |
| Duty Cycle                | F<100MHz             | 45  | 55                   | 45                  | 55                  | 45                  | 55                  | %    |
|                           | F>100MHz             | 40  | 60                   | 40                  | 60                  | 40                  | 60                  | %    |
| Output Level              | Output High          | 0.9xV <sub>DD</sub>   | -                    | 0.9xV <sub>DD</sub> | -                   | 0.9xV <sub>DD</sub> | -                   | V    |
|                           | Output Low           | -   | 0.1xV <sub>DD</sub>  | -                   | 0.1xV <sub>DD</sub> | -                   | 0.1xV <sub>DD</sub> |      |
| Transition Rise/Fall Time | 20%-80%              | -   | 1.2                  | -                   | 1.5                 | -                   | 2.0                 | nSec |
| Start Time                |                      | -   | 8                    | -                   | 8                   | -                   | 8                   | mSec |
| Tri-State(Input to Pin2)  | Enable               | 0.7xV <sub>DD</sub>   | -                    | 0.7xV <sub>DD</sub> | -                   | 0.7xV <sub>DD</sub> | -                   | V    |
|                           | Disable              | -   | 0.3x V <sub>DD</sub> | -                   | 0.3xV <sub>DD</sub> | -                   | 0.3xV <sub>DD</sub> |      |
| Period Jitter             |                      | -   | 100                  | -                   | 100                 | -                   | 100                 | ps   |

**Frequency Stability vs. Temperature**

|                | ±20PPM        | ±25PPM      | ±30PPM    | ±50PPM    |
|----------------|---------------|-------------|-----------|-----------|
| -20°C to +70°C | Conditional   | Available   | Available | Available |
| -40°C to +85°C | Not Available | Conditional | Available | Available |

Note: Inclusive of calibration @25°C, operating temperature range, input voltage variation, load variation, aging (1<sup>st</sup> year), shock and vibration.