



### Features and Benefits

- 32.768 KHz
- Ultra-low power (1.5uA@+3.3V)
- 3.2x2.5mm SMD
- 55°C to +150°C
- +1.8V to +5.5V

### Description

High Temperature materials, assembly techniques, and testing methods are combined to offer a REAL TIME CLOCK module @ 32.768 KHz capable of continuous operation @ +150C using only uA of DC current , ultra-low power .

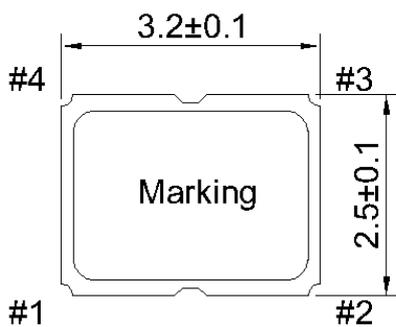
### Typical Applications

Extreme Temperature such as downhole tools

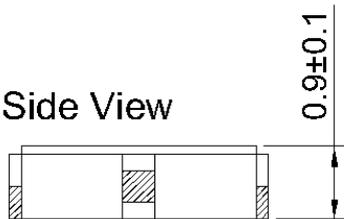
### Mechanical Drawing & Pin Connections

**Drawing No:** MD150061-1

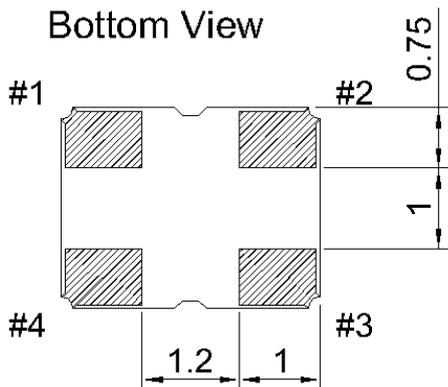
Top View



Side View



Bottom View

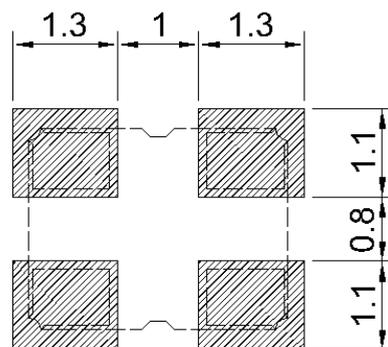


Pin Functions:

Pad	Function
1	Output Enable
2	Case Ground
3	Output
4	Supply Voltage (Vdd)

Unit : mm

Recommended Land Pattern





### Specifications

Parameter	Specification	Note
Frequency Range	32.768KHz	
Frequency Tolerance@+25°C	+/-5PPM to +/-20PPM	+3.3V supply voltage
Frequency Stability vs. Temperature	-90PPM to +10PPM @-20°C to +70°C -140PPM to +10PPM @-40°C to +85°C -360PPM to +25PPM @-55°C to +125°C -600PPM to +25PPM @-55°C to +150°C	
Supply Voltage(Vdd)	3.3V(+/-10%) or 5.5V	Option: 1.8V to +5.5V
Input Current	2.8uA max. @+3.3V	
Logic	CMOS	
Rise & Fall Time	200ns Max.	
Symmetry(Duty Cycle)	40%/60%	
Tri-State Control:	Output "0" Level Output "1" Level or Open	Output disable Oscillation
Start-up Time	1000ms Max. @+3.3V @+25°C	
Hi-Rel Screening Available / Tested	MIL-PRF-55310	
Operating Temperature Range	-40°C to +85°C	Available: -55°C to +150°C
Storage Temperature Range	-65°C to +150°C	

### Shock & Vibration

Shock: 500g, 0.5 msec, half-sine, 3-axis  
Vibration: 10g, 20Hz to 2KHz Random

