# VT-822

Temperature Compensated Crystal Oscillator


## Description

Vectron's VT-822 Temperature Compensated Crystal Oscillator (TCXO) is a quartz stabilized, CMOS output, analog temperature compensated oscillator, operating off either a 2.5 or 3.3 volt supply, in a hermetically sealed 3.2x2.5 ceramic package.

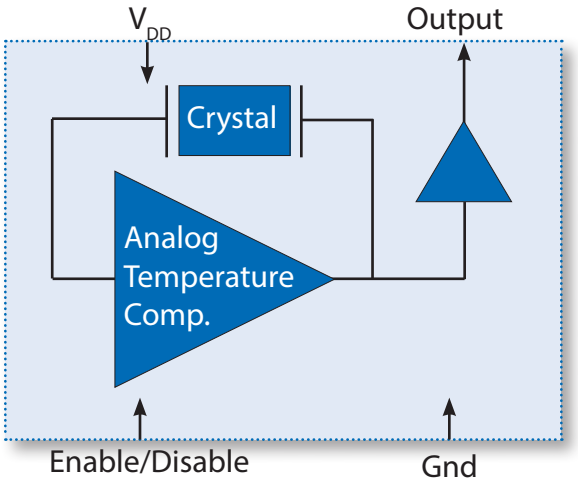
## Features

- CMOS Output
- Output Frequencies to 54 MHz
- Enable Disable Function
- Fundamental Crystal Design
- Hermetically Sealed Ceramic SMD package
- Product is compliant to RoHS directive and fully compatible with lead free assembly

## Applications

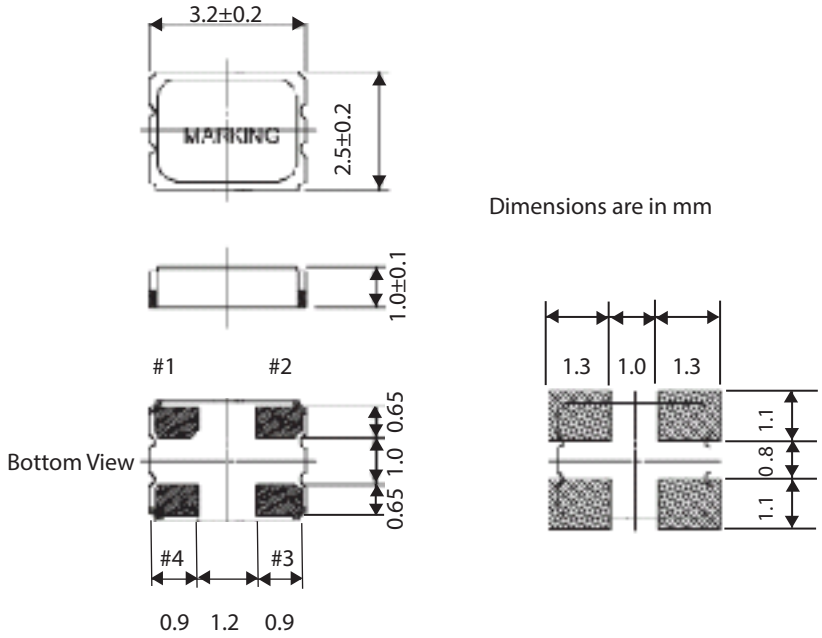
- WiMAX, Wi-Fi,Wi-LAN
- Wireless Communications
- Base Stations
- Point to point radios
- Broadband Access
- Test Equipment
- Handsets
- Networking

## Block Diagram



## Outline Drawing and Recommended Layout

| Table 2. Pinout | | |
|---|---|---|
| Pin # | Symbol | Function |
| 1 | E/D | Enable/Disable |
| 2 | GND | Electrical and Lid Ground |
| 3 | $f_o$ | Output Frequency |
| 4 | $V_{DD}$ | Supply Voltage |




## Maximum Ratings

**Absolute Maximum Ratings and Handling Precautions**
Stresses in excess of the absolute maximum ratings can permanently damage the device. Functional operation is not implied or any other excess of conditions represented in the operational sections of this data sheet. Exposure to absolute maximum ratings for extended periods may adversely affect device reliability.

Although ESD protection circuitry has been designed into the VT-822, proper precautions should be taken when handling and mounting, VI employs a Human Body Model and Charged Device Model for ESD susceptibility testing and design evaluation.
ESD thresholds are dependent on the circuit parameters used to define the model. Although no industry standard has been adopted for the CDM a standard resistance of 1.5kOhms and capacitance of 100pF is widely used and therefor can be used for comparison purposes.

| Table 3. Maximum Ratings | | | |
|---|---|---|---|
| Parameter | Symbol | Rating | Unit |
| Storage Temperature | $T_{STORE}$ | -40/125 | °C |
| Supply Voltage | $V_{DD}$ | -0.3/4 | V |
| Enable Disable Voltage | E/D | $V_{DD}$ | V |
| ESD, Human Body Model | HBM | 1500 | V |
| ESD, Charged Device Model | CDM | 1000 | V |