

3.2 x2.5 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

Feature

- Typical 3.2 x 2.5 x 0.9 mm SMD package
- Compactness and lightweight
- VCTCXO available
- Ultra thin



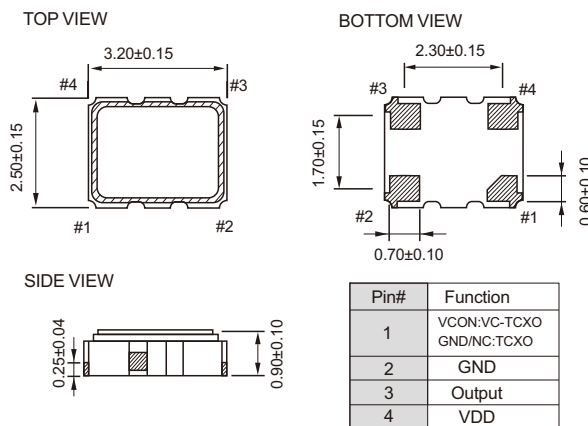
Electrical Specifications

| Parameter | 3.3/3.0/2.8V | | 2.5V | | 1.8V | | Unit | |
|----------------------------------|---|-------|------------|-------|------------|------|------|--------|
| | Min. | Max. | Min. | Max. | Min. | Max. | | |
| Supply Voltage Variation | 2.66 | 3.465 | 2.375 | 2.625 | 1.71 | 1.89 | V | |
| Frequency Range | 10 | 52 | 10 | 52 | 10 | 52 | MHz | |
| Standard Frequency | 10,12.8,13,16.367667,16.368,16.369,19.2, 20,25,26,27,30,30.72,32,38.4 | | | | | | | |
| Frequency Tolerance* | - | ±2.0 | - | ±2.0 | - | ±2.0 | ppm | |
| Frequency stability | VS Supply V(±5%) change | - | ±0.2 | - | ±0.2 | - | ±0.2 | ppm |
| | VS Load(±10%) change | - | ±0.2 | - | ±0.2 | - | ±0.2 | |
| | VS Aging(@1 st year) | - | ±1.0 | - | ±1.0 | - | ±1.0 | |
| Supply Current | 10MHz ≦ FO<26MHz | - | 1.5 | - | 1.5 | - | 1.5 | mA |
| | 26 MHz ≦ FO<52MHz | - | 2.0 | - | 2.0 | - | 2.0 | |
| Output Level (Clipped sine wave) | 0.8 | - | 0.8 | - | 0.8 | - | Vp-p | |
| Load | 10KΩ//10pF | | 10KΩ//10pF | | 10KΩ//10pF | | | |
| Control Voltage Range(VCTCXO) | 0.5 | 2.5 | 0.4 | 2.4 | 0.3 | 1.5 | V | |
| Pulling Range (VCTCXO) | ±5 | - | ±5 | - | ±5 | - | ppm | |
| Vc Input Impedance(VCTCXO) | 500 | - | 500 | - | 500 | - | kΩ | |
| Phase Noise @19.2MHz | 100Hz | -115 | | -115 | | -115 | | dBc/Hz |
| | 1KHz | -135 | | -135 | | -135 | | |
| | 10KHz | -148 | | -148 | | -148 | | |
| Start Time | - | 2 | - | 2 | - | 2 | mSec | |
| Storage Temp. Range | -55 | 125 | -55 | 125 | -55 | 125 | °C | |

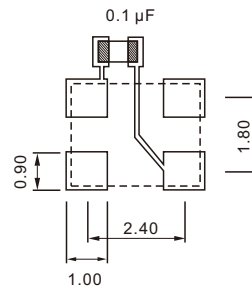
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position

*. Frequency at 25°C, 1 hour after reflow.

Dimension(mm)



Solder Pad Layout(mm)



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

FREQ. STABILITY vs. TEMP. RANGE

| ppm / Temp. (°C) | ±0.5 | ±1.0 | ±1.5 | ±2.0 | ±2.5 |
|------------------|------|------|------|------|------|
| -20 ~ +70 | ○ | ○ | ○ | ○ | ○ |
| -30 ~ +85 | ○ | ○ | ○ | ○ | ○ |
| -40 ~ +85 | ○ | ○ | ○ | ○ | ○ |

○: Available Δ :Conditional X: Not available