

# 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



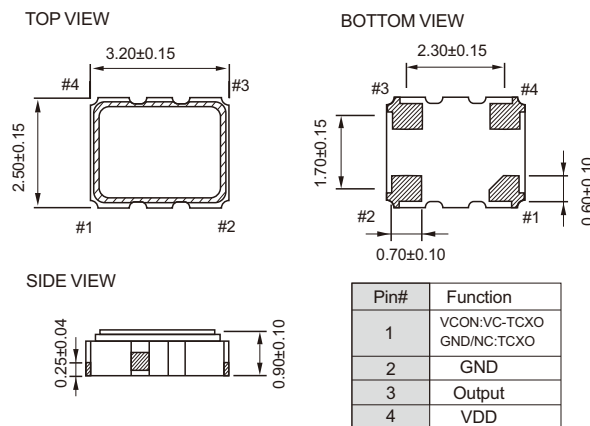
## Electrical Specifications

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 <sup>st</sup> 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	-115	-115	dBc/Hz	
	1KHz	-135	-135	-135	-135	-135		
	10KHz	-148	-148	-148	-148	-148		
Start Time	-	2	-	2	-	2	mSec	
Storage Temp. Range	-55	125	-55	125	-55	125	°C	

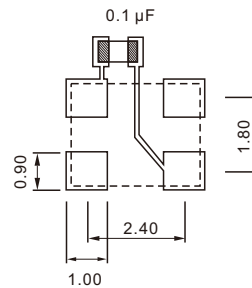
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position

\*. 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