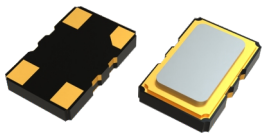
5.0 x 3.2 mm SMD High Precision VCTC Crystal Oscillator

Feature

- Typical 5.0 x 3.2 x 1.55 mm ceramic SMD package.
- ±0.28ppm, -40°C~+85°C ; ±0.05ppm, -10°C~+70°C
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional



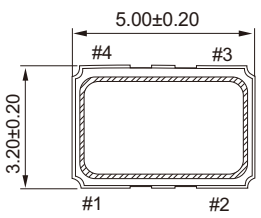
Electrical Specifications

Parameter		5.0V		3.3V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation		VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range		10	52	10	52	MHz
Standard Frequency		10,12.8,13,19.2,20,25,26,30.72				MHz
Frequency Tolerance*		-	±2.0	-	±2.0	ppm
Frequency stability	Vs Supply Voltage(±5%) change	-	±0.3	-	±0.3	ppm
	Vs Load(±10%) change	-	±0.2	-	±0.2	
	Vs Aging (@1st year)	-	±0.1	-	±0.1	
Supply Current	CMOS 10MHz≦F0≦40MHz	-	6	-	6	mA
	CMOS 40MHz＞F0≦52MHz	-	8	-	8	
	Clipped Sine Wave	-	3.5	-	3.5	
Output Level (CMOS)	Output High	90% VDD	-	90% VDD	-	V
	Output Low		10% VDD		10% VDD	
	Duty	45	55	45	55	%
Output Level (Clipped Sine Wave)		0.8	-	0.8	-	Vp-p
Load	CMOS	15pF		15pF		
	Clipped Sine Wave	10KΩ//10pF		10KΩ//10pF		
Control Voltage Range(VCTCXO)		0.5	2.5	0.5	2.5	V
Pulling Range (VCTCXO)		±5	-	±5	-	ppm
Vc Input Impedance(VCTCXO)		100	-	100	-	kΩ
Phase Noise @10.0MHz	100Hz	-125				dBc/Hz
	1KHz	-145				
	10KHz	-150				
Start Time		-	2	-	2	mSec
Storage Temp.Range		-55	125	-55	125	°C

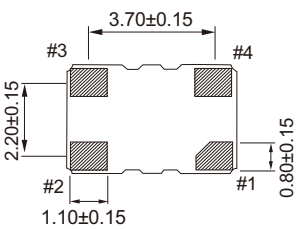
Standard frequencies are frequencies which the crystal has been desaigned and does not imply a stock position.
*Frequency at 25℃,1 hour after reflow.

Dimension(mm)

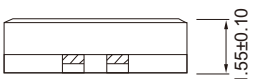
TOP VIEW



BOTTOM VIEW

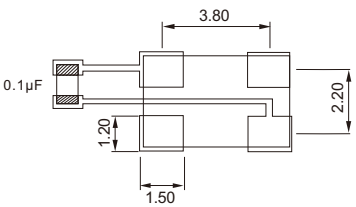


SIDE VIEW



PIN#	Function
1	VCON:VC-TCXO GND/NC:TCXO
2	GND
3	Output
4	VDD

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)	±0.05	±0.1	±0.2	±0.28	±0.5
-10 ~ +70	O	O	O	O	O
20 ~ +70	X	O	O	O	O
-40 ~ +85	X	X	△	O	O

O: Available △:Conditional X: Not available