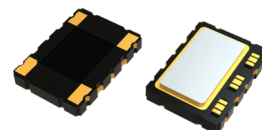


7.0x5.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

Feature

- Typical 7.0 x 5.0 x 1.9 mm ceramic SMD package
- High Precision for -40°C~+85°C, ±0.28ppm, -40°C~+105°C, ±2ppm
- CMOS and Clipped Sine wave(without DC-cut capacitor) output optional



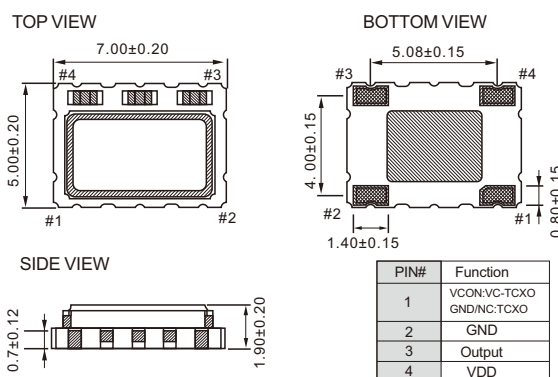
Electrical Specifications

Parameter	5.0V		3.3V		Unit
	Min.	Max.	Min.	Max.	
Supply Voltage Variation	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range	5	52	5	52	MHz
Standard Frequency	10,12.8,16.384,19.2,19.44,20,25,26				MHz
Frequency Tolerance*	-	±2.0	-	±2.0	ppm
Frequency stability	VS Supply V(±5%) change	±0.1	-	±0.05	ppm
	VS Load(±10%) change	±0.05	-	±0.05	
	VS Aging(@1 st year)	±1.0	-	±1.0	
Supply Current	CMOS output	6	-	6	mA
	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	45	55	%
		55	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	-130	-130		dBc/Hz
	1KHz	-145	-145		
	10KHz	-154	-154		
Start Time	-	2	-	2	mSec
Storage Temp. Range	-55	125	-55	125	°C

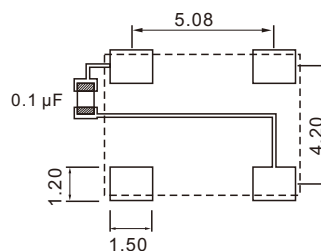
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position

* 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)	±0.05	±0.1	±0.14	±0.2	±0.28	±0.5	±2
-10 ~ +70	o	o	o	o	o	o	o
-20 ~ +70	X	o	o	o	o	o	o
-40 ~ +85	X	X	X	△	o	o	o
-40 ~ +95	X	X	X	X	X	△	o
-40 ~ +105	X	X	X	X	X	X	o

o: Available △: Conditional X: Not available