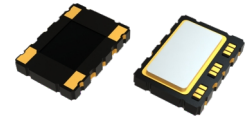


7.0 x 5.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

Feature

- Typical 7.0 x 5.0 x 1.9 mm SMD package
- High Precision and High Temperature for -40 ~ +95°C
±0.1ppm, -40 ~ +105°C, ±0.2ppm
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional



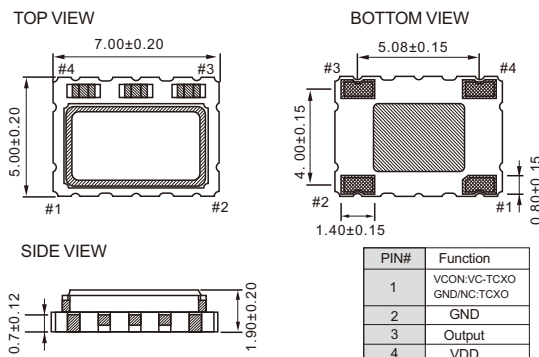
Electrical Specifications

Parameter		3.3V		2.5V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation		V _{DD} -5%	V _{DD} +5%	V _{DD} -5%	V _{DD} +5%	V
Frequency Range		10	52	10	52	MHz
Standard Frequency		10,19,2,20				MHz
Frequency Tolerance*		-	±1.5	-	±1.5	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	ppm/year
Supply Current (Clipped Sine Wave)		-	5.0	-	4.5	mA
Supply Current (CMOS output)		-	7.5	-	7	mA
Load	CMOS	15pF				
	(Clipped Sine Wave)	10kΩ//10pF		10kΩ//10pF		
Output Level CMOS	Output High	0.9V _{DD}	-	0.9V _{DD}	-	V
	Output Low	-	0.1V _{DD}	-	0.1V _{DD}	V
	Duty	45	55	45	55	%
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 @20MHz	100Hz	-130				dBc/Hz
	1KHz	-148				
	Clipped Sine	-156				
Start Time		-	2	-	2	mSec
Storage Temp.Range		-55	125	-55	125	°C

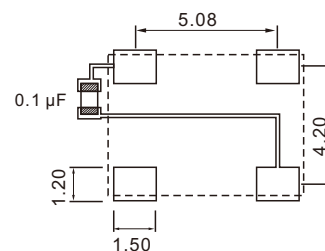
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position

* 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 V_{dd} and GND pads.

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C) \ ppm	±0.05	±0.1	±0.2	±0.28	±0.5	±2
-40 ~ +85	△	○	○	○	○	○
-40 ~ +95	△	△	○	○	○	○
-40 ~ +105	X	△	○	○	○	○

○: Available △: Conditional X: Not available