

TA Type

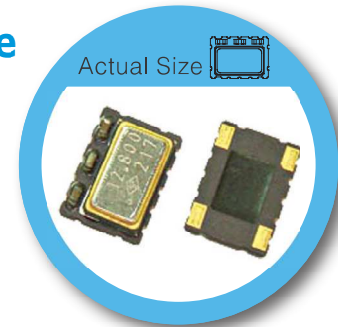
7.0 x 5.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

FEATURE

- Typical 7.0 x 5.0 x 1.9 mm ceramic SMD package.
- For automatic assembly.
- Compactness and light weight.
- Low power consumption.
- VCTCXO available.

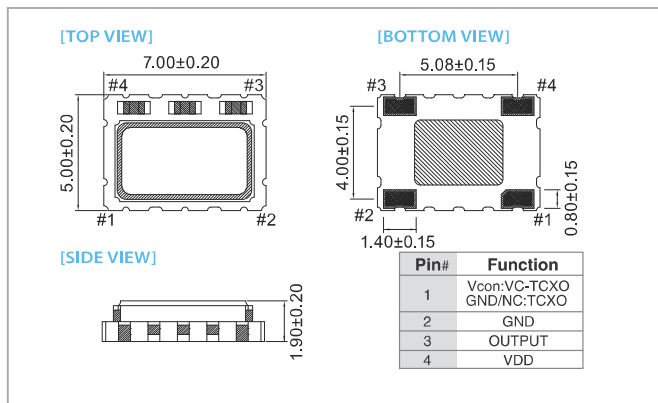
TYPICAL APPLICATION

- Femtocell , Base Stations
- WLAN/WiMAX/WIFI, Wireless Communications
- Mobile Phone

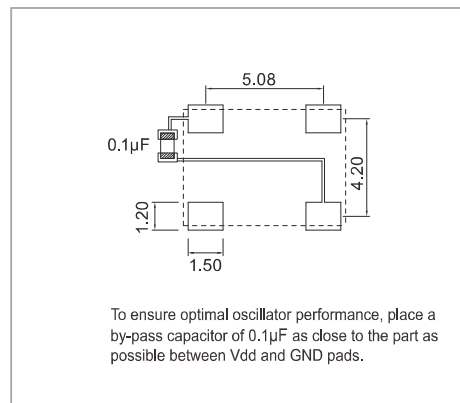


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	3.3 V		2.5 V		Unit
	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD) ±5%	3.135	3.465	2.4	2.75	V
Frequency Range	5	52	5	52	MHz
Standard Frequency (for CMOS)	5, 6.4, 8, 8.192, 10, 12.5, 12.8, 16, 16.384, 19.44, 25, 26, 40				
Standard Frequency (for Clipped Sine Wave)	8, 8.192, 10, 12.5, 12.8, 16, 16.384, 19.44, 25, 26, 40				
Frequency Tolerance*	—	±2.0	—	±2.0	ppm
Frequency stability					
Vs Supply Voltage (±5%) change	—	±0.1	—	±0.1	ppm
Vs Load (±10%) change	—	±0.2	—	±0.2	
Vs Aging	—	±1.0	—	±1.0	
Supply Current (CMOS output)	—	6	—	6	mA
Supply Current (Clipped Sine Wave)	—	3.5	—	3.5	
Output Level (CMOS)					
Output High (Logic "1")	2.97	—	2.25	—	V
Output Low (Logic "0")	—	0.33	—	0.25	
Duty	45	55	45	55	%
Output (Clipped Sine Wave)	0.8	—	0.8	—	Vp-p
Load (CMOS)	15pF		15pF		
Load (Clipped Sine Wave)	10 KΩ // 10pF		10 KΩ // 10pF		
Control Voltage Range (VCTCXO)	0.5	2.5	0.5	2.5	V
Pulling Range (VCTCXO)	±5.0	±12.0	±5.0	±12.0	ppm
Vc Input Impedance (VCTCXO)	100	—	100	—	kΩ
Phase Noise @ 12.8 MHz	100 Hz	-115	100 Hz	-115	dBc / Hz
	1 kHz	-135	1 kHz	-135	
	10 kHz	-148	10 kHz	-148	
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.

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	±0.5	±1.0
0 ~ +55	○	○	○
-10 ~ +60	○	○	○
-20 ~ +70	○	○	○
-30 ~ +85	△	○	○
-40 ~ +85	△	○	○

* ○: Available △: Conditional X: Not available

" 10~26MHz and Pulling <8ppm available

Note: not all combination of options are available. Other specifications may be available upon request.