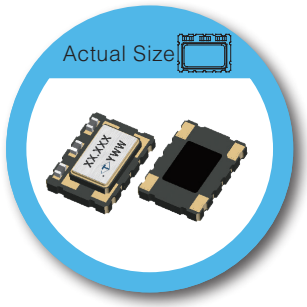
TAITIEN
Our Performation, Your Reputation

TT Type High Precision
7.0 x 5.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator



FEATURE

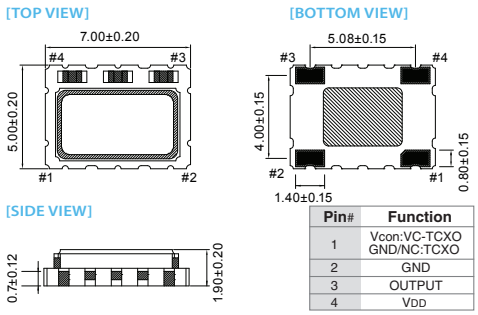
- Typical 7.0 x 5.0 x 1.9 mm ceramic SMD package.
- High Precision for -40°C ~ +95°C, ±0.1ppm , -40°C ~ +105°C ,±0.2ppm.
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional.

TYPICAL APPLICATION

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

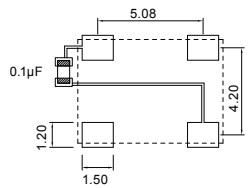
RoHS Compliant

DIMENSION (mm)



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 0.1µF as close to the part as possible between Vdd and GND pads.

ELECTRICAL SPECIFICATION

Parameter		2.5V		3.3V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)		VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range		10	52	10	52	MHz
Standard Frequency		10, 12.8, 16.384, 19.2, 19.44, 20, 25, 26				
Frequency Tolerance*		–	±2.0	–	±2.0	ppm
Frequency Stability						
Vs Supply Voltage (±5%) change		–	±0.1	–	±0.1	ppm
Vs Load (±10%) change		–	±0.1	–	±0.1	
Vs Aging (@1st year)		–	±1.0	–	±1.0	ppm / year
Supply Current (CMOS output)		–	8	–	8	mA
Supply Current (Clipped Sine Wave)		–	5	–	5	
Output Level (CMOS)	Output High (Logic "1")	90%VDD	–	90%VDD	–	V
	Output Low (Logic "0")	–	10%VDD	–	10%VDD	
	Duty	45	55	45	55	%
Output Level (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	–	±5.0	–	ppm
Vc Input Impedance (VCTCXO)		100	–	100	–	kΩ
Phase Noise @ 10 MHz	100 Hz	-130				dBc/Hz
	1 kHz	-145				
	10 kHz	-154				
Start time		–	10	–	10	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	±0.05	±0.1	±0.14	±0.2	±0.28	±0.5
-10 ~ +70	○	○	○	○	○	○
-20 ~ +70	○	○	○	○	○	○
-40 ~ +85	×	○	○	△	○	○
-40 ~ +95	×	△	△	△	○	○
-40 ~ +105	×	×	×	○	○	○

* ○: Available △:Conditional X: Not available

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

Specifications subject to change without notice.
www.taitien.com
sales@taitien.com.tw
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