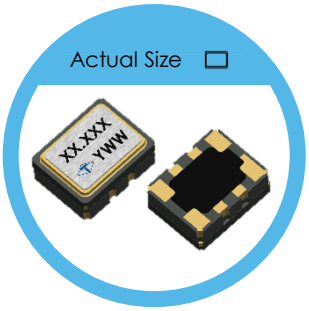
TAITIEN
Our Performance, Your Reputation

TP Type High Precision and Low G-Sensitivity
3.2 x 2.5 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator



RoHS Compliant

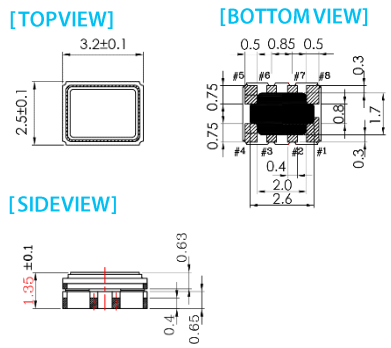
FEATURES

- Typical 3.2 x 2.5 x 1.35 mm ceramic SMD package.
- High Precision for ±0.05ppm @ -20˚C~+70˚C, ±0.1ppm @ -40˚C~+85˚C, ±0.2ppm @ -40˚C~+105˚C
- Low G Sensitivity: < 0. 5ppb/g
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional.

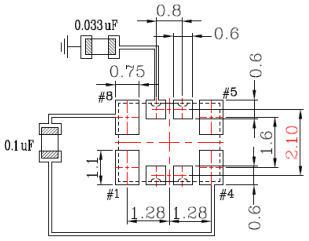
TYPICAL APPLICATION

- Microwave Communication, Femtocell, Base Stations, Telecom Systems
- Test & Measurement

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



Recommended Soldering Pattern
To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between V_{DD} and GND Pads.

PIN FUNCTION (mm)

PIN#	FUNCTION
1	V_{CON}:VC-TCXO GND or NC:TCXO
2	Do not Connect
3	Do not Connect
4	GND
5	Output
6	Tri-State
7	Filter
8	V_{DD}

ELECTRICAL SPECIFICATION

Parameter			2.5V / 3.3V				Test Condition
			Min.	Typ.	Max.	Unit	
Supply Voltage Variation (V_{DD})			V_{DD} – 5%		V_{DD} + 5%	V	
Frequency Range			10		52	MHz	
Standard Frequency			10, 20, 25, 40			MHz	Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.
Supply Current	CMOS				7.5	mA	
	Clipped Sine Wave				5	mA	
Output Level	CMOS	Output High (Logic "1")	90%V_{DD}			V	
		Output Low (Logic "0")			10%V_{DD}	V	
		Duty	45		55	%	
	Clipped Sine Wave		0.8			Vp-p	
Load	CMOS			15pF			
	Clipped Sine Wave			10 KΩ // 10pF			
Phase Noise @ 10MHz	@ 100Hz				-130	dBc/Hz	Please add filter capacitor as suggested, and 33nF at pin7
	@ 1kHz				-145	dBc/Hz	
	@ 10kHz				-155	dBc/Hz	
G Sensitivity				0.3	0.5	ppb/G	Each Axis, 20-2000Hz
Start Time					10	mSec	
Storage Temp. Range			-55		+125	˚C	
VCTCXO	Control Voltage Range		0.5		2.5	V	
	Pulling Range		±5.0			ppm	
	Vc Input Impedance		100			kΩ	

FREQ. STABILITY vs. TEMP. RANGE

ppm / Temp.(°C)	±0.05	±0.1	±0.2	±0.28
-20 ~ +70	△	○	○	○
-40 ~ +85	X	○	○	○
-40 ~ +105	X	X	○	○

○: Available △:Conditional X: Not Available
Inclusive of calibration @ 25˚C ,operating temperature rrange,input Voltage variation,load variation,aging (1st year),shock,and vibration

Note: not all combination of options are available. Other specifications may be available upon request.
Specifications subject to change without notice.