



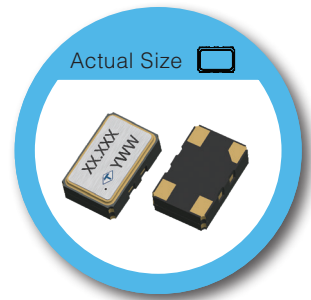
TW Type < for Stratum 3 > 5.0 x 3.2 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

FEATURE

- Typical 5.0 x 3.2 x 1.85 mm ceramic SMD package.
- Stratum 3 (Overall ± 4.6 ppm including 20 years aging.)
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional.

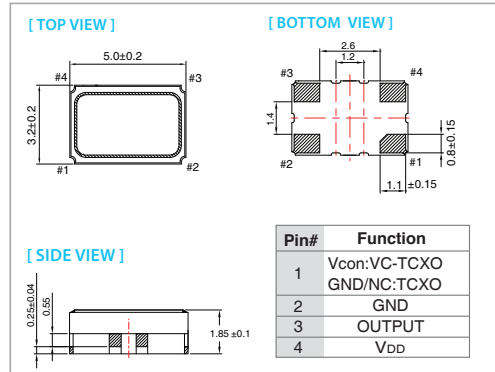
TYPICAL APPLICATION

- Base Stations, Stratum 3
- Femtocell

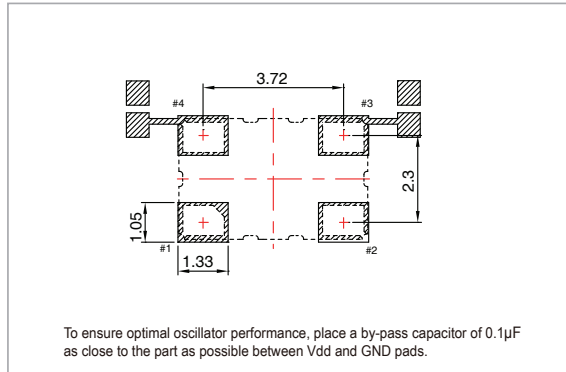


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



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, 20, 25, 26				
Operating Temp. Range	-20 ~ 70 -40 ~ 85				°C
Frequency Stability (Overall, 20 Years)*	-	± 4.6	-	± 4.6	ppm
Frequency Stability Vs Temp. Range (Ref. to (FMAX+Fmin)/2)	-	± 0.1 (-20~+70°C) ± 0.28 (-40~+85°C)	-	± 0.1 (-20~+70°C) ± 0.28 (-40~+85°C)	ppm
Holdover Stability*	-	0.37	-	0.37	ppm
Supply Current (CMOS output)	-	7.5	-	8	mA
Supply Current (Clipped Sine Wave)	-	4.5	-	5	
Output Level (CMOS) Output High (Logic "1")	90%VDD	-	90%VDD	-	V
Output Level (CMOS) 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 K Ω // 10pF		10 K Ω // 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	-	k Ω
Phase Noise @10 MHz	100 Hz	-126			dBc/Hz
	1 kHz	-140			
	10 kHz	-155			
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.

* Including calibration @ 25°C, supply voltage VDD $\pm 5\%$, load $\pm 10\%$, reflow soldering, 20 years aging and frequency stability over temperature.

+ Including 24hours aging, supply voltage VDD $\pm 5\%$ and frequency stability over temperature.

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