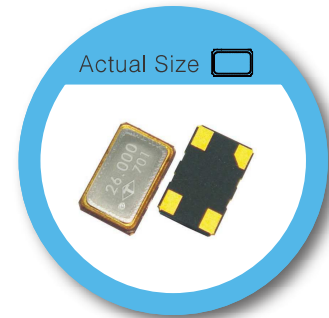


TW Type

5.0 x 3.2 mm SMD High Precision Voltage Controlled Temperature Compensated Crystal Oscillator



FEATURE

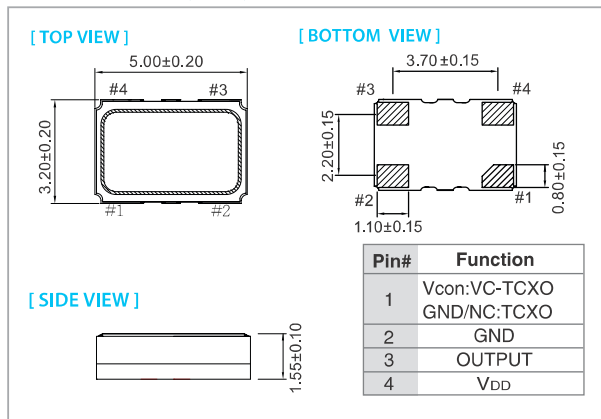
- Typical 5.0 x 3.2 x 1.55 mm ceramic SMD package.
- ± 0.2 ppm, $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$; ± 0.05 ppm, $-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional.

TYPICAL APPLICATION

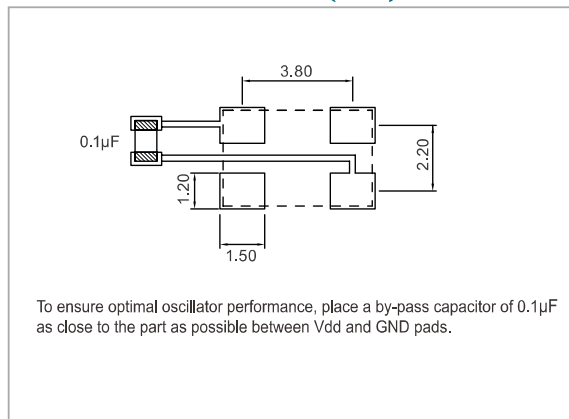
- Base Stations, Stratum 3
- Femtocell

RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	5.0 V		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 (for CMOS)	10, 12.8, 13, 19.2, 20, 25, 26, 30.72				
Standard Frequency (for Clipped Sine Wave)	10, 12.8, 13, 19.2, 20, 25, 26, 30.72				ppm
Frequency Tolerance*	-	±2.0	-	±2.0	
Frequency Stability					ppm
Vs Supply Voltage (±5%) change	-	±0.3	-	±0.3	
Vs Load (±10%) change	-	±0.2	-	±0.2	
Vs Aging (@ 1st year)	-	±1.0	-	±1.0	
Supply Current (CMOS output)					mA
10 MHz ≥ Fo ≥ 40 MHz	-	6	-	6	
40 MHz > Fo ≥ 52 MHz	-	8	-	8	
Supply Current (Clipped Sine Wave)	-	3.5	-	3.5	V
Output Level (CMOS) Output High (Logic "1")	90%VDD	-	90%VDD	-	
Output Low (Logic "0")	-	10%VDD	-	10%VDD	
Duty	45	55	45	55	%
Output Level (Clipped Sine Wave)	0.8	-	0.8	-	Vp-p
Lead (CMOS)	15pF		15pF		
Lead (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	-125	100 Hz	-125	dBc/Hz
1 kHz	-	-145	-	-145	
10 kHz	-	-150	-	-150	
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				
	±0.05	±0.1	±0.2	±0.28	±0.5
-10 ~ +70	○	○	○	○	○
-20 ~ +70	×	○	○	○	○
-40 ~ +85	×	×	○	○	○

* ○: 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.

Rev(6)04/2017
www.tai tien.com
sales@tai tien.com

Model Numbering Guide – VCTCXO / TCXO

Available options

Type	package (mm)	Supply Voltage (V)	Pulling Range (ppm)	Freq. Stability (ppm)	Temp. Range(°C)	Output Logic And Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
T: TCXO	Z: 2.0x1.6 Y: 2.5x2.0 X: 3.2x2.5 S: 7.0x5.0 (10Pads) A: 7.0x5.0 (4Pads) K: 14.3x8.4 F: 20.4x12.8 (Dip)	C: 5.0 E: 2.8/3.0/3.3 J: 2.5 K: 1.8 (TX / TY)	A: ± 5 B: ± 8 C: ± 10 T: TCXO Vcon range: 0.5V to 2.5V	A: ±0.5 B: ±1.0 P: ±1.5 C: ±2.0 D: ±2.5 Q: ±0.05 M: ±0.1 J : ±0.14 R: ±0.2 K: ±0.28 L : ±0.37 T : ±4.6 (Including 20 Years Aging)	B: 0~+55 I : -10~+60 J: -10~+70 C: -20~+70 H: -30~+75 D: -30~+85 L : -40~+85	A: TTL 15pF / 50±5% J: CMOS 15pF / 50±5% K: CMOS 15pF / 50±10% S: Clipped sine wave 10KΩ//10pF	A: AT Fundamental Not selectable by customer	N: Normal	F: RoHs Compliant	-	XX.XXXXXX
T: TCXO (High Precision /Stratum 3)	W: 5.0x3.2 S: 7.0x5.0 (10Pads) T: 7.0x5.0 (4Pads)	C: 5.0 E: 3.3									

T X E C D D S A N F – 26.000000

*Not all combinations of options are available.

Example: TXECDDSANF-26.000000

Type	VCTCXO
Package	3.2 x 2.5 mm
Supply Voltage(V)	3.0 V
Pulling Range	±10 ppm
Freq. Stability	±2.5 ppm
Temp Range	-30~+85 °C
Output	Clipped sine wave
Oscillator Mode	AT Fundamental
Appearance	Normal Appearance
Lead Free	RoHs Compliant
Frequency	26.000000 MHz