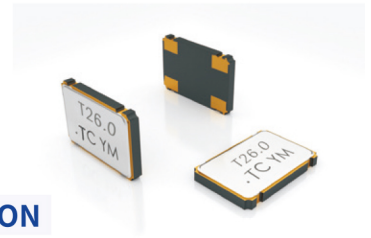


## 5.5 TC5032



### 5.0 x 3.2 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator VCTCXO

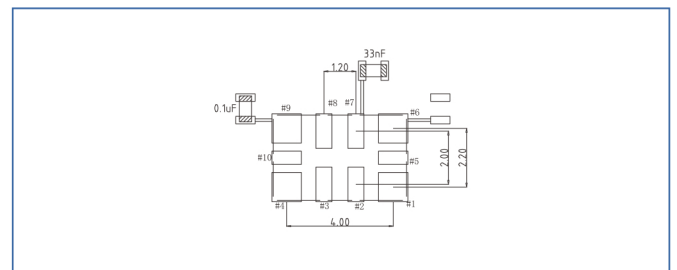
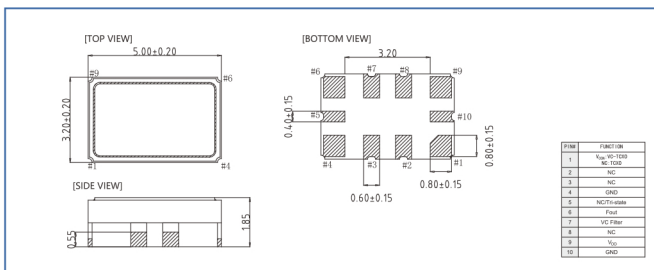
#### FEATURES

- Typical 5.0 x 3.2 x 1.85 mm ceramic SMD package
- High Stability for Stratum III
- High Precision for  $\pm 0.1\text{ppm}$  @  $-40 \sim +85^\circ\text{C}$ ,  $\pm 0.2\text{ppm}$  @  $-40 \sim +105^\circ\text{C}$
- Frequency support from 10MHz to 52MHz
- Wide temperature range
- Tri-state Enable/Disable function
- Pb-free/RoHS compliant

#### TYPICAL APPLICATION

- Time Synchronization
- Microwave Communication
- Test & Measurement
- Telecom Systems
- Satellite Commuication

#### DIMENSIONS



#### ELECTRICAL SPECIFICATION

Parameter		3.3V		2.5V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)		V <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V
Frequency Range		10	52	10	52	MHz
Frequency Tolerance (at 25°C)		—	±1.0	—	±1.0	ppm
Frequency stability	Vs Supply Voltage (±5%) change	—	±0.1	—	±0.1	ppm
	Vs Load (±10%) change	—	±0.05	—	±0.05	
	Vs Aging (@1st year)	—	±1.0	—	±1.0	
Output Waveform		CMOS				
Supply Current	10 MHz ≤ F <sub>o</sub> ≤ 38 MHz	—	6.5	—	6.5	mA
	38 MHz < F <sub>o</sub> ≤ 52 MHz	—	7.5	—	7.5	
Supply Current(Clipped Sine) 10 MHz ≤ F <sub>o</sub> ≤ 52 MHz		—	3.5	—	3.5	mA
Output Level	Output High	90%V <sub>DD</sub>	—	90%V <sub>DD</sub>	—	V
	Output Low	—	10%V <sub>DD</sub>	—	10%V <sub>DD</sub>	
Transition Time (10% ~ 90%)	Rise Time	—	6.5	—	6.5	nSec
	Fall Time	—	6.5	—	6.5	
Duty Cycle		45	55	45	55	%
Load		—	15	—	15	pF
Output Waveform		Clipped sine wave				
Supply Current	10 MHz ≤ F <sub>o</sub> ≤ 38 MHz	—	4.5	—	4.5	mA
	38 MHz < F <sub>o</sub> ≤ 52 MHz	—	5.0	—	5.0	
Output Level		0.8	—	0.8	—	V <sub>p-p</sub>
Load		10KΩ // 10pF		10KΩ // 10pF		

Parameter		3.3V		2.5V		Unit
		Min.	Max.	Min.	Max.	
Tri-State Control	Enable	80%Vdd	—	80%Vdd	—	V
	Disable	—	20%Vdd	—	20%Vdd	
Startup time		—	5	—	5	mS ec
Control Voltage Range(VCTCXO)		0.5	2.5	0.5	2.5	V
Pulling Range(VCTCXO)		±5.0	—	±5.0	—	ppm
Vc Input Impedance		100	—	100	—	KΩ
Phase Noise @TCXO VDD=3.3 V, Fout=20 MHz	100 Hz	-122		-122		dBc/Hz
	1 kHz	-142		-142		
	10 kHz	-154		-154		
	100 kHz	-157		-157		
	1 MHz	-159		-159		

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 ~ +60		○	○	○	○	○
-20 ~ +70		○	○	○	○	○
-40 ~ +85		△	○	○	○	○
-40 ~ +95		△	△	○	○	○
-40 ~ +105		×	△	○	○	○

\*o: Available △: Condition X: Not available

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