



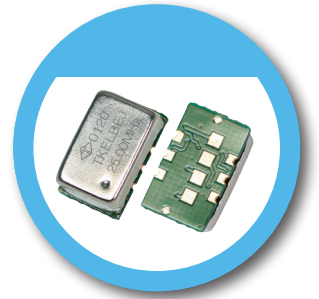
# TK Type 14.3 x 8.7 mm Voltage Controlled Temperature Compensated Crystal Oscillator

## FEATURE

- Typical 14.3 x 8.7 x 4.9 mm.
- Metal cover, FR-4 PCB based.
- Output: TTL/CMOS or Clipped Sine Wave.
- Low current option (2mA for Clipped Sine Wave o/p).
- VCTCXO available.

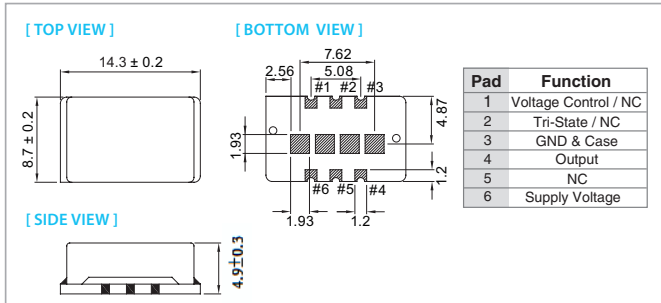
## TYPICAL APPLICATION

- Large-Scale equipment
- WLAN/WIMAX
- Mobile Phone

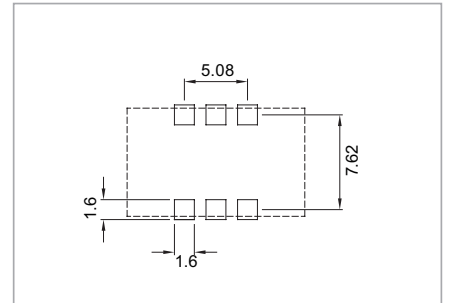


RoHS Compliant Standard

## DIMENSION (mm)



## SOLDER PAD LAYOUT (mm)



## ELECTRICAL SPECIFICATION

Parameter	5.0 V		3.3 V		Unit
	Min.	Max.	Min.	Max.	
Supply Voltage Variation (V <sub>DD</sub> ) 5%	4.75	5.25	3.135	3.465	V
Frequency Range	5		40		MHz
Standard Frequency (for CMOS)	5, 6.4, 8, 8.192, 10, 12.5, 12.8, 16, 16.384, 19.44, 25				
Standard Frequency (for Clipped Sine)	8.192, 10, 12.5, 12.8, 16, 16.384, 19.44, 25				
Frequency Tolerance*	-	±2.0	-	±2.0	ppm
Frequency Stability					
Vs Supply Voltage (±5%) change (for CMOS)	-	±0.3	-	±0.3	ppm
Vs Load (±10%) change	-	±0.2	-	±0.2	
Vs Aging (@ 1st year)	-	±1.0	-	±1.0	
Supply Current (CMOS output)	-	6	-	6	mA
Supply Current (Clipped Sine Wave)	-	3.5	-	3.5	
Output Level (CMOS)	90%V <sub>DD</sub>	-	90%V <sub>DD</sub>	-	V
Output High (Logic "1")	-	10%V <sub>DD</sub>	-	10%V <sub>DD</sub>	
Output Low (Logic "0")	45	55	45	55	%
Duty	0.8	-	0.8	-	
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 @ 12.8 MHz	100 Hz	-120	-120	-120	dBc/Hz
	1 KHz	-140	-140	-140	
	10 KHz	-148	-148	-148	
Start time	-	2	-	2	mSec
Tri-State (option)	Disable	-	-	0.3V <sub>DD</sub>	V
	Enable	0.7V <sub>DD</sub>	-	-	
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.

Packing: Tape & Reel, 500 pcs per Reel.

## FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	±0.05	±0.1	±0.14	±0.2	±0.28	±0.37	±0.5
0 ~ +55	○	○	○	○	○	○	○	○
-10 ~ +60	○	○	○	○	○	○	○	○
-20 ~ +70	△	○	○	○	○	○	○	○
-40 ~ +85	×	×	×	△	○	○	○	○

\* ○: Available △: Conditional X: Not available

Specifications subject to change without notice.