

TK Type

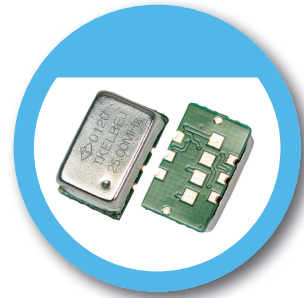
14.3 x 8.7 mm Voltage Controlled Temperature Compensated Crystal Oscillator

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.

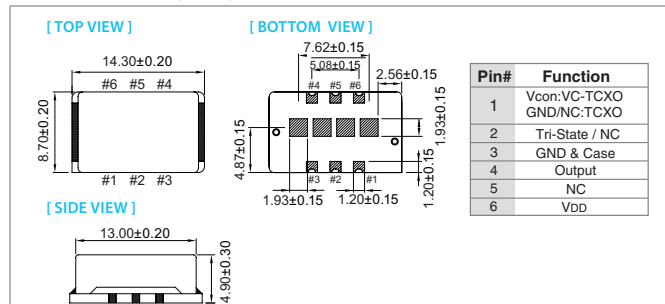
TYPICAL APPLICATION

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

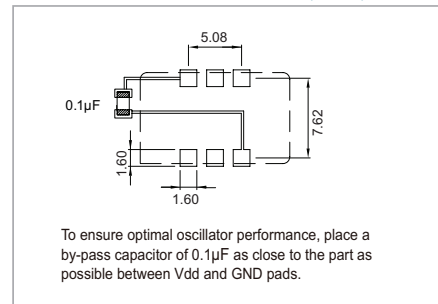


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter		5.0 V		3.3 / 3.0 V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)		VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range		5	40	5	40	MHz
Standard Frequency (for CMOS)		5, 6.4, 8, 8.192, 10, 12.5, 12.8, 16, 16.384, 19.44, 20, 25				
Standard Frequency (for Clipped Sine Wave)		8.192, 10, 12.5, 12.8, 16, 16.384, 19.44, 20, 25				
Frequency Tolerance*		—	±2.0	—	±2.0	ppm
Frequency Stability						
Vs Supply Voltage (±5%) change		—	±0.2	—	±0.2	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)	Output High (Logic “1”)	90%VDD	—	90%VDD	—	V
	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 @ 12.8 MHz	100 Hz	-120		-120		dBc/Hz
	1 kHz	-140		-140		
	10 kHz	-148		-148		
Start time		—	2	—	2	mSec
Tri-State (option)		—		—		V
	Disable	1.5		0.99		
	Enable	3.5	—	2.31	—	
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	±0.14	±0.2	±0.28	±0.37	±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.

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Specifications subject to change without notice.