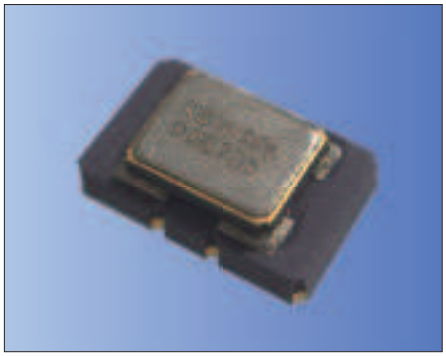
Temperature Compensated Crystal Oscillators (TCXO, VCTCXO)

Surface Mount Type TCXO (LSI Type) KT5032 Series for Smallcell/ Stratum3

5.0×3.2mm



RoHS Compliant

Features

- High stability and high reliability
- 2.3 to 3.63V drive available
- Clipped sine wave or CMOS level output
- Low phase noise

Applications

- 5G, Smallcell, Stratum3
- SONET/ SDH/ Ethernet

How to Order

KT5032F 20000 □ A □ 33 T xx

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series
② Output Frequency
③ Frequency Tolerance
④ Lower Operating Temp.
⑤ Upper Operating Temp.

	③	④	⑤
KAW	±0.28×10^{-6}	−40°C	+85°C
KAY	±0.28×10^{-6}	−40°C	+105°C
AAY	±0.10×10^{-6}	−40°C	+105°C

⑥ Supply Voltage

33	3.3V

⑦ Voltage Control Function

T	TCXO
Spec. Code*	VCTCXO

*Please contact us for Spec. Code.

⑧ Individual Specification

Packaging (Tape & Reel 1000 pcs./ reel)

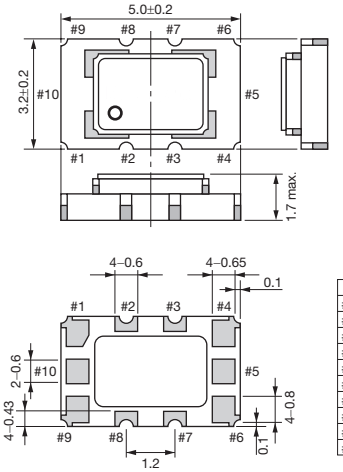
Specifications

Item	Symbol	Conditions		Min.	Max.	Units
Output Frequency Range	fo	Standard Frequency: 10, 19.2, 20, 24.576, 26, 30.72, 38.88, 40		10	40	MHz
Frequency Tolerance	f_tol	vs Temperature (−10 to +105°C) [±(fmax-fmin)/ 2fo]		−0.1	+0.1	×10^{-6}
		vs Temperature (−40 to +85°C/ +105°C) [±(fmax-fmin)/ 2fo]		−0.28	+0.28	
		vs Voltage		−0.1	+0.1	
Supply Voltage	Vcc			+2.3	+3.63	V
Current Consumption	Icc	CMOS Output		—	6	mA
Frequency Aging	f_age	20years aging @40°C Including temp characteristics, initial tolerance, rated power supply voltage change and load change.		−4.6	+4.6	×10^{-6}
Voltage Control Range	f_cont	Positive *100k ohm min		±5	±20	×10^{-6}
Output Level	Vpp	Clipped Sine*, Load: 10k ohm // 10pF		0.8	—	Vp-p
Low Level Output Voltage	VOL	CMOS, Load: 15pF IOL = 4mA		—	10% Vcc	V
High Level Output Voltage	VOH	CMOS, Load: 15pF IOH = −4mA		90% Vcc	—	V
Rise / Fall Time (10%Vcc to 90%Vcc)	tr/ tf	CMOS, Load: 15pF		—	8	ns
Symmetry	SYM	50% Vcc		45	55	%
Phase Noise	—	@20MHz	@10Hz offset	—	−90	dBc/ Hz
			@100Hz offset	—	−120	
			@1kHz offset	—	−140	
			@10kHz offset	—	−150	
			@100kHz offset	—	−150	

* : A DC-cut capacitor is not embedded in this crystal oscillator. In case of clipped sine output, connect a DC-cut capacitor (≥1nF) to the line-out terminal of the oscillator.
* Please contact us for other specifications.

Dimensions

(Unit: mm)



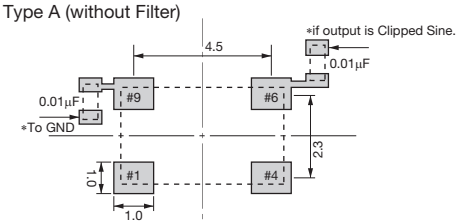
	Pin Configuration
#1pin	Voltage Control (VCTCXO), GND (TCXO)
#2pin	Do not connect
#3pin	Do not connect
#4pin	GND
#5pin	GND
#6pin	Output
#7pin	Vcfilter/ N/ C
#8pin	Do not connect
#9pin	Vcc
#10pin	GND

Recommended Land Pattern

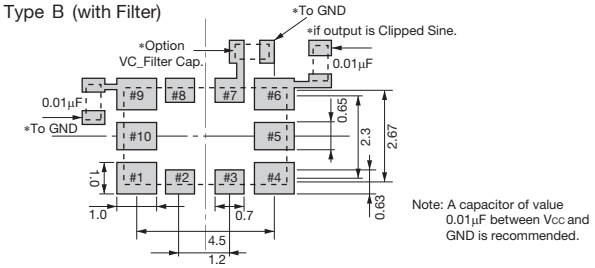
(Unit: mm)

Top view

Type A (without Filter)



Type B (with Filter)



Note: A capacitor of value 0.01μF between Vcc and GND is recommended.

As of March 2018