



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 K A W 33 T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

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

	③	④	⑤
KAW	$\pm 0.28 \times 10^{-6}$	-40°C	+85°C

⑥Supply Voltage	⑦Voltage Control Function
33 3.3V	T TCXO Spec. Code* VCTCXO

*Please contact us for Spec. Code.

⑧Individual Specification

Packaging (Tape & Reel 1000 pcs./ reel)

Specifications

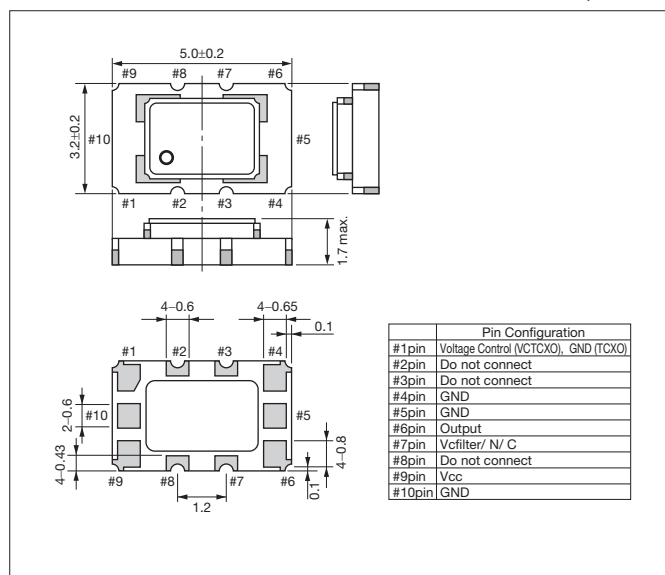
Item	Symbol	Conditions		Min.	Max.	Unit
Output Frequency Range	f _o	Standard Frequency: 10, 19.2, 20, 24.576, 26, 30.72, 38.88, 40		10	40	MHz
Frequency Tolerance	f _{tol}	vs Temperature (−40 to +85°C) [±(fmax-fmin)/ 2fo]		−0.28	+0.28	×10 ^{−6}
		vs Voltage		−0.1	+0.1	
Supply Voltage	V _{CC}			+2.3	+3.63	V
Current Consumption	I _{CC}	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	V _{pp}	Clipped Sine*, Load: 10k ohm // 10pF		0.8	—	Vp-p
Low Level Output Voltage	V _{OL}	CMOS, Load: 15pF I _{OL} =4mA		—	10% V _{CC}	V
High Level Output Voltage	V _{OH}	CMOS, Load: 15pF I _{OH} =−4mA		90% V _{CC}	—	V
Rise / Fall Time (10%V _{CC} to 90%V _{CC})	Tr/ Tf	CMOS, Load: 15pF		—	8	ns
Symmetry	SYM	50% V _{CC}		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 ($\geq 1\text{nF}$) to the line-out terminal of the oscillator.

* Please contact us for other specifications.

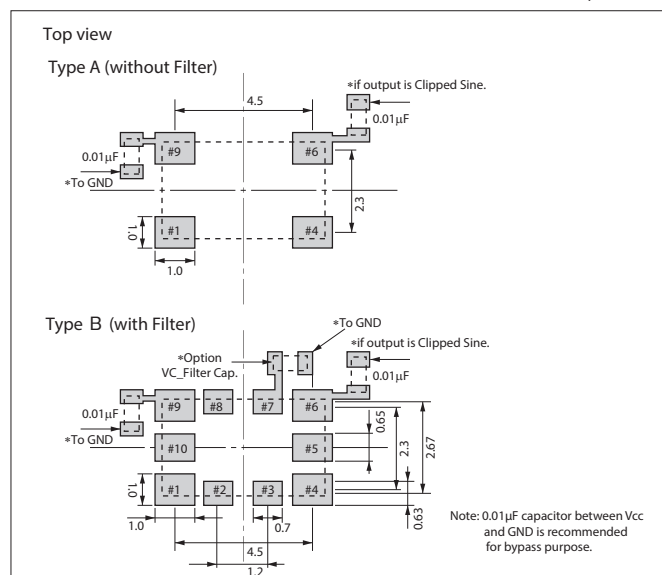
Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)



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