



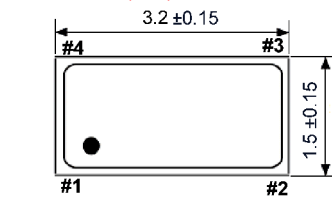
## Clock Oscillator SMD-version

+3.3 V

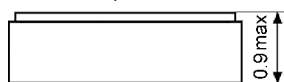
part no.	12.75003
model	KXO-V32T
frequency	32.768 kHz
frequency tolerance at +25°C	±3 ppm
frequency stability max. at -40° ~ +85°C	±20 ppm
operating temperature	-40° ~ +85°C
storage temperature	-40° ~ +105°C
symmetry	40 % / 60% ±10 % at 30 pF load
rise & fall time max.	40 ns at output level 10 ~ +90 % with 30 pF load
"0" level max.	VOL: 0.1 V <sub>DD</sub> max. IOL 0.1 mA at V <sub>DD</sub> 1.5 V
"1" level min.	VOH: V <sub>DD</sub> 0.9 V <sub>DD</sub> min. IOH -0.1 mA at V <sub>DD</sub> 1.5 V
input voltage V <sub>DD</sub>	+3.3 V DC ±5 %
tri-state control voltage (Pin#1)	VIH: V <sub>DD</sub> x 0.8 min. VIL: V <sub>DD</sub> x 0.2 max.
input current max.	1.3 µA typ., 2.5 µA max., at +3.3 V, no load
output load max.	30 pF (HCMOS)
start up time at +25°C max.	0.5 sec
contents of reel	3000 pcs

\* When the supply voltage drops to 1.5 or less, the frequency compensation is inactive. The compensation interval is 2 sec.

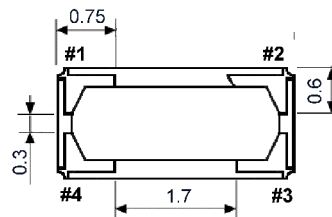
### Dimensions (mm):



Top view

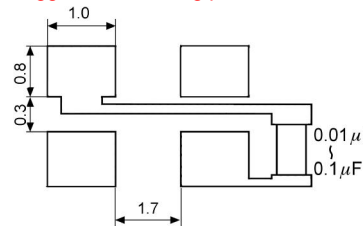


Side view

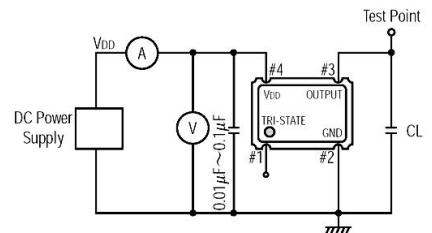


Bottom view

### Suggested soldering pad:

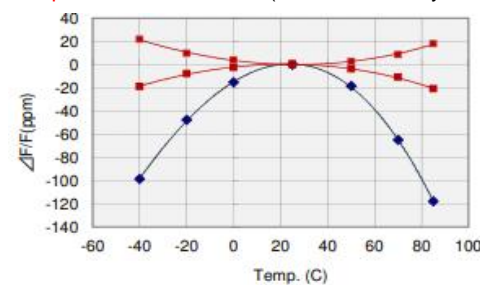


### Test circuit:



CL : including fixture and probe capacitance.

### Temperature characteristic (for reference only 3.3V):

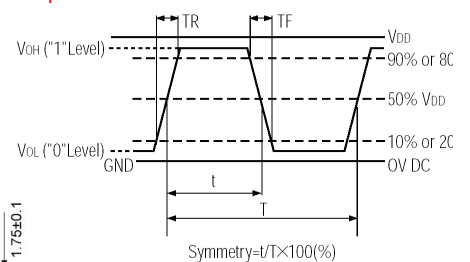


Blue – regular crystal  
Red – KXO-V32T

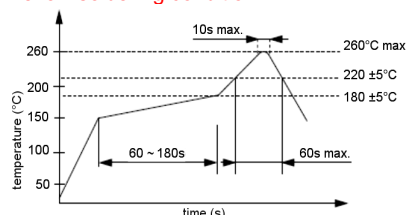
PIN	CONNECTION
1	"L" "H"
2	GND
3	Z OUTPUT
4	V <sub>DD</sub>

Z: high impedance

### Output waveform:



### Reflow soldering condition:



### Tape specification:

