


RoHS 2015/863/EU ✓ REACH compliant ✓ Conflict minerals free ✓

GEYER quartz technology

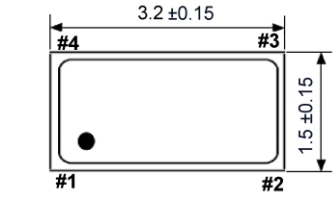
# Clock Oscillator SMD-version

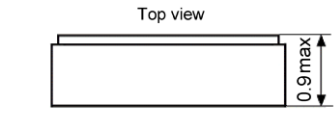
+3.3 V

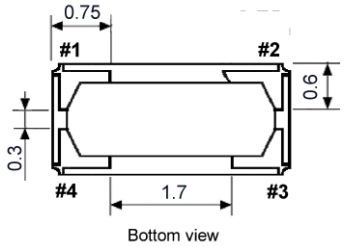
| | |
|---|---|
| part no. | 12.75003 |
| model | KXO-V32T |
| frequency | 32.768 kHz |
| frequency tolerance at +25°C | ±3 ppm |
| frequency stability max. at -40° ~ +85°C | ±20 ppm |
| operating temperature | -40° ~ +85°C |
| storage temperature | -40° ~ +105°C |
| symmetry | 40 % / 60% ±10 % at 30 pF load |
| rise & fall time max. | 40 ns at output level 10 ~ +90 % with 30 pF load |
| "O" level max. | VOL: 0.1 $V_{DD}$ max. IOL 0.1 mA at $V_{DD}$ 1.5 V |
| "1" level min. | VOH: $V_{DD}$ 0.9 $V_{DD}$ min. IOH -0.1 mA at $V_{DD}$ 1.5 V |
| input voltage $V_{DD}$ | +3.3 V DC ±5 % |
| tri-state control voltage (Pin#1) | VIH: $V_{DD}$ x 0.8 min.<br>VIL: $V_{DD}$ 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.

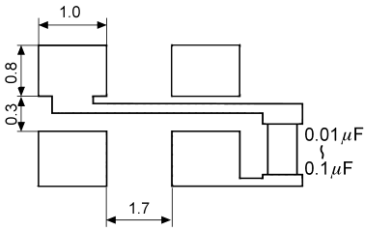
## Dimensions (mm):



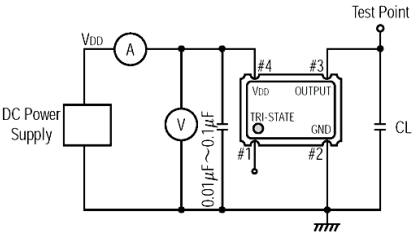




## Suggested soldering pad:

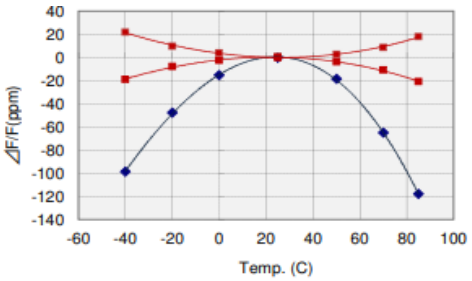



## Test circuit:




CL : including fixture and probe capacitance.

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

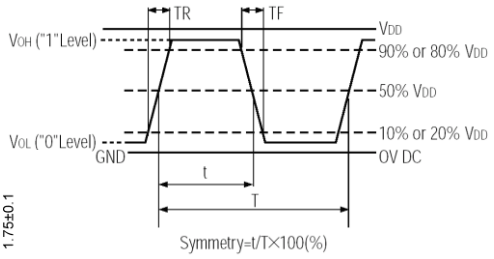



Blue – regular crystal
Red – KXO-V32T

| PIN | CONNECTION | |
|---|---|---|
| 1 | "L" | "H" |
| 2 | GND | |
| 3 | Z | OUTPUT |
| 4 | $V_{DD}$ | |

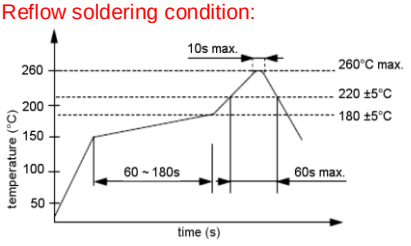
Z: high impedance

## Output waveform:

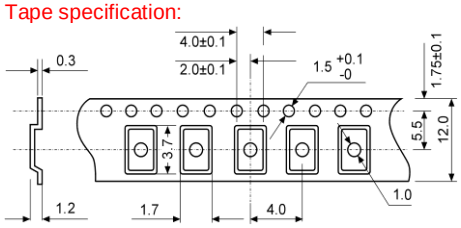



Symmetry=t/T×100(%)

## Reflow soldering condition:




## Tape specification:




reel diameter 178 mm