

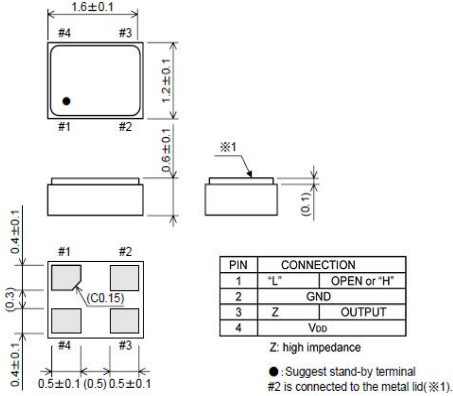


## Clock Oscillator SMD-version

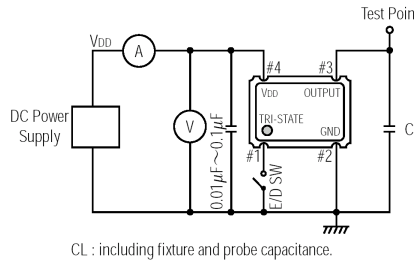
+1.8V / +2.5V / +3.3V

|                                                           |                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| part no.                                                  | 12.xxxxx                                                           |
| model                                                     | KXO-V93T                                                           |
| frequency range                                           | 1.0 ~ 80.0 MHz                                                     |
| frequency stability<br>at -40° ~ +85°C<br>at -20° ~ +70°C | ±50 ppm<br>±30 ppm                                                 |
| operating temperature                                     | standard -40° ~ +85°C<br>available -20° ~ +70°C (KXO-V93)          |
| storage temperature                                       | -40° ~ +85°C                                                       |
| symmetry                                                  | 50% ~ 50% at V <sub>DD</sub> level                                 |
| rise & fall time max.                                     | 4.5 ns (10% V <sub>DD</sub> ~ 90% V <sub>DD</sub> level)           |
| "0" level max.                                            | VOL: 10% V <sub>DD</sub>                                           |
| "1" level min.                                            | VOH: 90% V <sub>DD</sub>                                           |
| supply voltage range                                      | 1.60V ~ 3.63V                                                      |
| input voltage V <sub>DD</sub>                             | +1.8V DC ±5%, +2.5V DC ±5% or +3.3V DC ±5%                         |
| tri-state control voltage (Pin#1)                         | VIH: V <sub>DD</sub> x 0.7 min.<br>VIL: V <sub>DD</sub> x 0.3 max. |
| input current max.                                        | 2 mA at 40 MHz V <sub>DD</sub> +3V, no load                        |
| output load max.                                          | 15 pF (HCMOS)                                                      |
| start up time max.                                        | 5 ms at +1.8V<br>2 ms at +3.3V                                     |
| disable delay time max.                                   | 200 ns                                                             |
| enable delay time max.                                    | 5 ms                                                               |
| stand by current max.                                     | 10 µA (Pin #1=VIL)                                                 |
| random jitter                                             | 2.9 ps typ. at V <sub>DD</sub> +3.3V                               |
| total jitter                                              | 40 ps at V <sub>DD</sub> +3.3V                                     |
| contents of reel                                          | 5000 pcs.                                                          |

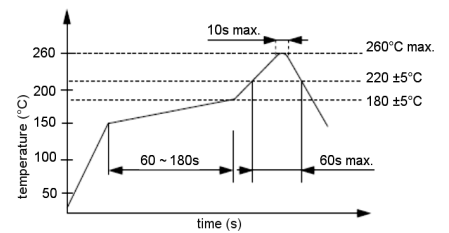
### Dimensions (mm):



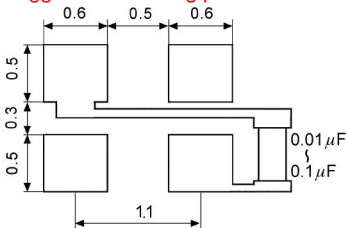
### Test circuit:



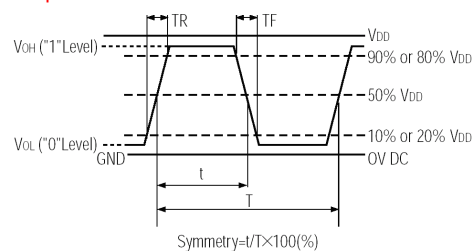
### Reflow soldering condition:



### Suggested soldering pad:



### Output waveform:



### Tape specification:

