



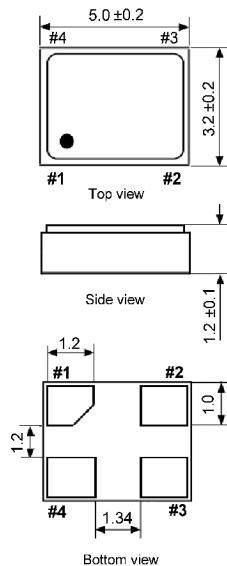
## Clock Oscillator

SMD-version

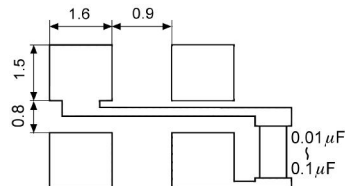
+3.3 V

|                                     |                                              |
|-------------------------------------|----------------------------------------------|
| part no.                            | 12.94604                                     |
| model                               | KXO-V99                                      |
| frequency                           | 50.0 MHz                                     |
| frequency stability at -20° ~ +70°C | ±50 ppm                                      |
| operating temperature               | -20° ~ +70°C                                 |
| storage temperature                 | -55° ~ +125°C                                |
| symmetry                            | 45 % / 55 % ±10 % at ½ V <sub>DD</sub> level |
| rise & fall time max.               | 4 ns                                         |
| "O" level max.                      | V <sub>DD</sub> x 0.1 V                      |
| "1" level min.                      | V <sub>DD</sub> x 0.9 V                      |
| input voltage V <sub>DD</sub>       | +3.3 V ±5 %                                  |
| input current                       | 6.0 mA typ., 11.0 mA max.                    |
| output load                         | 15 pF                                        |
| start up time max.                  | 10 ms                                        |
| tristate function                   | yes                                          |
| disable delay time max.             | 50 µs                                        |
| enable delay time max.              | 4 ms                                         |
| stand by current max.               | 10 µA                                        |
| phase jitter                        | (12 kHz – 20 MHz) with 1 ps                  |
| random jitter max.                  | 7 ps                                         |
| peak to peak jitter max.            | 40 ps                                        |
| contents of reel                    | 1000 pcs.                                    |

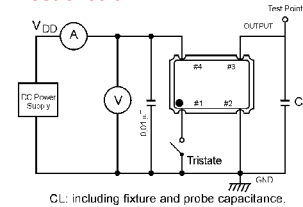
### Dimensions (mm):



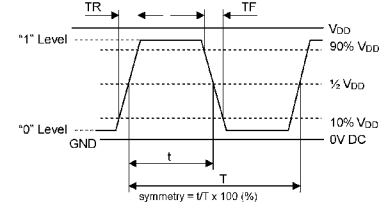
### Suggested soldering pad:



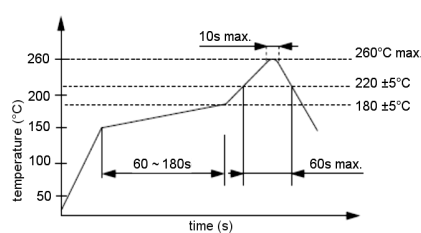
### Test circuit:



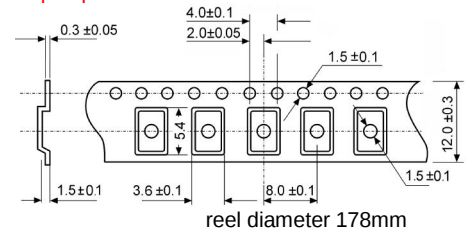
### Output waveform:



### Reflow soldering condition:



### Tape specification:



| PIN | Connection           |
|-----|----------------------|
| 1   | "L" (0V) "H" or OPEN |
| 2   | GND                  |
| 3   | Z OUTPUT             |
| 4   | V <sub>DD</sub>      |

Z: high impedance