



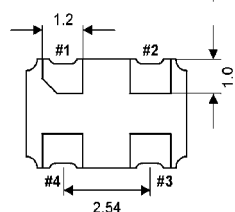
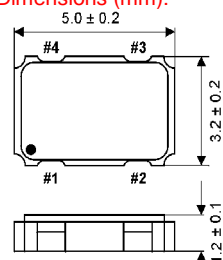
Clock Oscillator

SMD-version

1.8V / 2.5V / 3.0V / 3.3V

| | | | | |
|---|--|---------------------------|---------------------------|---------------------------|
| part no. | 12.xxxxx | | | |
| model | KXO-V99 | | | |
| frequency range | 1.0 ~ 200.0 MHz | | | |
| frequency stability at -20° ~ + 70°C at -40° ~ + 85°C at -40° ~ +105°C | ± 50 ppm ±100 ppm ±120 ppm | | | |
| operating temperature | standard -20° ~ + 70°C available -40° ~ + 85°C (=KXO-V99T) available -40° ~ +105°C (=KXO-V99E) | | | |
| storage temperature | -55° ~ +125°C | | | |
| supply voltage range | +1.8V ~ +3.3V | | | |
| input voltage V _{DD} | standard +3.3V DC ±5% available +1.8V DC ±5%, +2.5V DC ±5%, +3.0V DC ±5% | | | |
| input current | | +1,8V | +2,5V | +3,0V/+3,3V |
| | 1.0 ~ 20.0MHz | 3.5 mA typ., 6.0 mA max. | 4.0 mA typ., 6.0 mA max. | 4.0 mA typ., 6.0 mA max. |
| | 20.1 ~ 50.0MHz | 4.5 mA typ., 6.0 mA max. | 4.0 mA typ., 11.0 mA max. | 6.0 mA typ., 11.0 mA max. |
| | 50.1 ~ 80.0MHz | 6.0 mA typ., 11.0 mA max. | 6.0 mA typ., 11.0 mA max. | 9.0 mA typ., 16.0 mA max. |
| | 80.1 ~ 125.0MHz | 30 mA typ., 50 mA max. | 30 mA typ., 50 mA max. | 30 mA typ., 50 mA max. |
| | 125.1 ~ 165.0MHz | 50 mA typ., 65 mA max. | 50 mA typ., 65 mA max. | 50 mA typ., 65 mA max. |
| 165.1 ~ 200.0MHz | 60 mA typ., 75 mA max. | 60 mA typ., 75 mA max. | 60 mA typ., 75 mA max. | |
| symmetry at 1.0 ~ 70.0 MHz at 70.1 ~ 200.0 MHz | 45%/55% ±10% at ½ V _{DD} level 40%/60% ±10% at ½ V _{DD} level | | | |
| rise & fall time max. | 5 ns | | | |
| "0" level max. | V _{DD} x 0.1V | | | |
| "1" level min. | V _{DD} x 0.9 V | | | |
| output load | 15 pF HCMOS | | | |
| start up time max. | 10 ms | | | |
| tri-state 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. | 7pS | | | |
| peak to peak jitter max. | 40pS | | | |
| contents of reel | 1000 pcs. | | | |

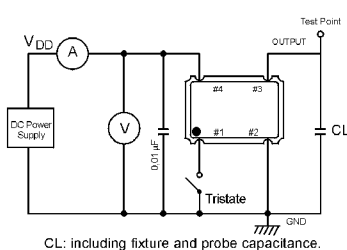
Dimensions (mm):



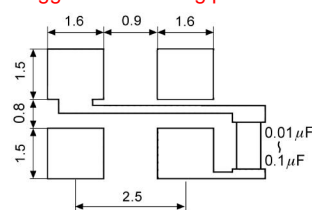
| PIN | Connection |
|-----|----------------------|
| 1 | "L" (0V) "H" or OPEN |
| 2 | GND |
| 3 | OUTPUT |
| 4 | V _{DD} |

Z: high impedance

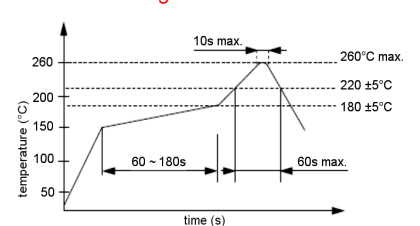
Test circuit:



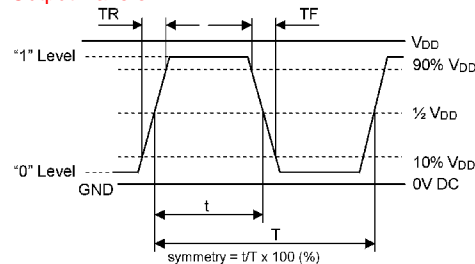
Suggested soldering pad:



Reflow soldering condition:



Output waveform:



Tape specification:

