

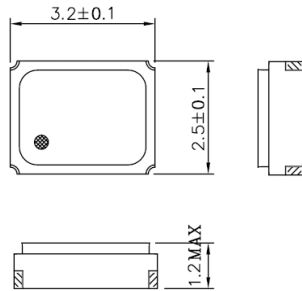
# TCXO HCMOS

SMD-version +1.8 / +2.5 / +3.3 V

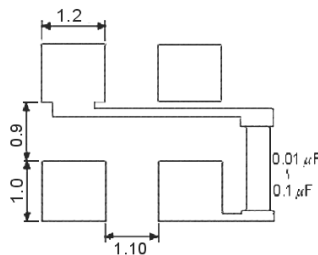
Temperature Compensated Crystal Oscillator

|                                |   |   |
|--------------------------------|---|---|
| part no.                       | 12.xxxxx  |   |
| model                          | KXO-84  |   |
| frequency range                | 9.5 ~ 60.0 MHz  |   |
| frequency tolerance max.       | ±2 ppm (after 2 reflows)  |   |
| frequency stability            | vs. temp.range  | ±2.5 ppm over -30°C ~ +85°C (referred to +25°C) |
|                                | vs. input voltage   | ±0.2 ppm at V <sub>DD</sub> ±5 % DC             |
|                                | vs. load max.   | ±0.2 ppm  |
|                                | vs. aging max.  | ±1 ppm / year at +25°C                          |
| output                         | load  | 15 pF   |
|                                | waveform  | HCMOS   |
| operating temperature range    | -30°C ~ +85°C   |   |
| storage temperature range      | -40°C ~ +85°C   |   |
| supply voltage range           | 1.8 V ~ 3.3 V   |   |
| supply voltage V <sub>DD</sub> | +1.8 V DC ±5 %, +2.5 V DC ±5 % or +3.3 V DC ±5 %  |   |
| supply current max.            | 10 mA (no load)   |   |
| start-up time max.             | 10 ms   |   |
| symmetry                       | 45 % ~ 55 % at ½ V <sub>DD</sub> level  |   |
| rise and fall time max.        | 5 ns (10 % V <sub>DD</sub> ~ 90 % V <sub>DD</sub> level)  |   |
| "0" level max.                 | V <sub>OL</sub> : 10 % V <sub>DD</sub>  |   |
| "1" level min.                 | V <sub>OH</sub> : 90 % V <sub>DD</sub>  |   |
| phase noise max.               | -80 dBc/Hz at 10 Hz<br>-110 dBc/Hz at 100 Hz<br>-130 dBc/Hz at 1 kHz<br>-145 dBc/Hz at 10 kHz<br>-150 dBc/Hz at 100 kHz<br>-150 dBc/Hz at 1 MHz |   |
| contents of reel               | 1000 pcs.   |   |

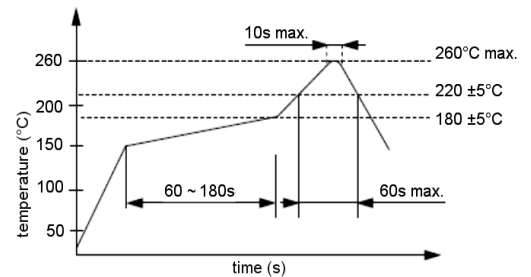
**Dimensions (mm):**



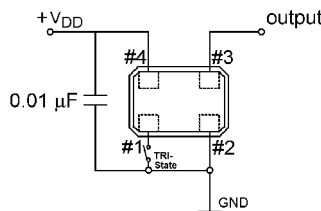
**Suggested soldering pad:**



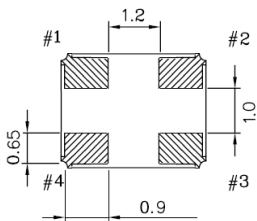
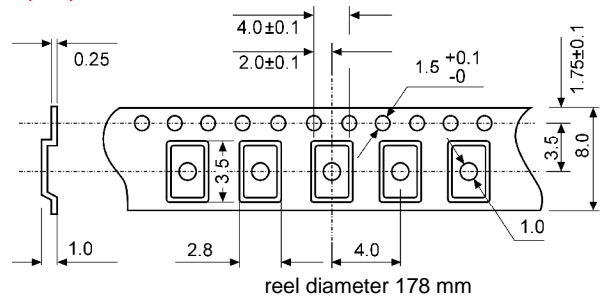
**Reflow soldering condition:**



**Test circuit:**



**Tape specification:**



| Pin | Connection        |
|-----|-------------------|
| 1   | „L“   Open or „H“ |
| 2   | GND               |
| 3   | Z   OUTPUT        |
| 4   | V <sub>DD</sub>   |

Z: High Impedance