



actual size

# Quartz Crystal · SMQ32SL

SMD Tuning Fork Crystal · 8.0 x 3.8 mm

- 32.768 kHz standard
- reflow soldering temperature: 260 °C max.
- package height 2.5 mm max.



## General Data

type	SMQ32SL
frequency	32.768 kHz (30.0 ~ 100.0 kHz on request)
frequency tolerance at 25 °C ± 5 °C	±20 ppm / ±30 ppm ±10 ppm (ask if available)
load capacitance $C_L$	12.5 pF std. (6 pF ~ 16 pF on request)
temperature constant ( $T_C$ )	$T_C = -0.04 \text{ ppm} / ^\circ\text{C}^2 \text{ max.}$ $T_C = -0.034 \text{ ppm} / ^\circ\text{C}^2 \text{ typical}$
frequency temperature characteristic	$\Delta f = T_C \cdot (T_A - T_{TP})^2$ in [ppm] $T_A$ = actual ambient temperature $T_{TP} = 25 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$ $T_{TP}$ = turning point temperature
operating temperature range	-20 °C ~ +70 °C / -40 °C ~ +85 °C
shunt capacitance $C_0$	1.3 pF typical
series resistance max. (ESR)	50 kΩ (35 kΩ ask if available)
storage temperature	-40 °C ~ +90 °C
drive level max.	1 μW
aging first year	< ± 3 ppm

## Frequency Stability vs. Temperature

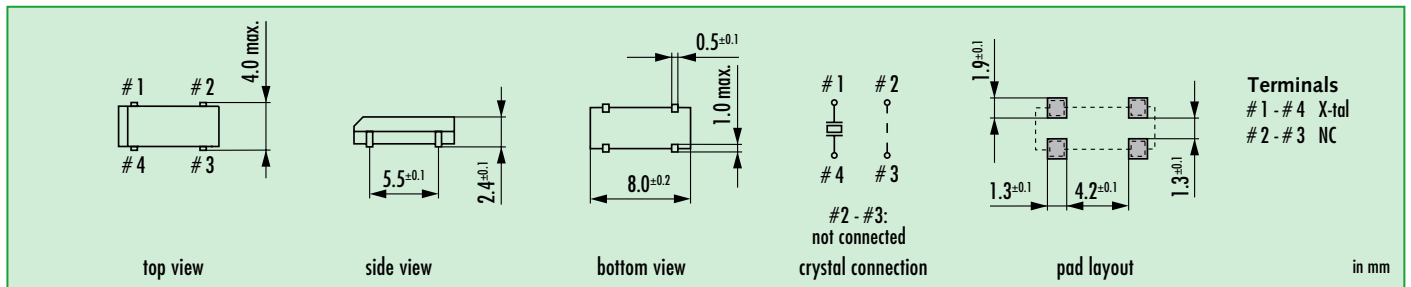
		- 80 ppm	- 160 ppm
-20 °C ~ +70 °C	STD.	●	
-40 °C ~ +85 °C	T1		●

● standard

## Marking

frequency (optional)  
internal code / date code

## Dimensions



## Order Information

