

# Glossary Terminology of Ceramic Crystal Resonators

- **Frequency Characteristics over Temperature**

Allowable deviation of frequency at room temperature, in parts per million( $\times 10^{-6}$ ). This is the maximum value within the operating temperature range.

- **Frequency Tolerance**

Allowable deviation from nominal at room temperature (25°C), indicated in parts per million ( $\times 10^{-6}$ ).

- **Fundamental Crystal Resonators**

Crystal resonator designed to oscillate in the lowest-order (fundamental) oscillation mode.

- **Operating Temperature Range**

Temperature range over which the crystal resonator can be operated within allowable deviation range.

- **Overtone Crystal Resonators**

Crystal resonator designed to oscillate in the overtone oscillation mode (third, fifth, and seventh).

- **Q-Factor**

A value which indicates the sharpness of the peak resonance. A crystal has a small loss of vibration energy and high purity.

- **Reflow**

A soldering method which melts the solder paste being applied to the connection pads of the PCB (Printed Circuit Board) to mount electric components.

- **Sealing**

A process in which the package is tightly closed to be leak proof. This process is done under nitrogen gas atmosphere or vacuum state for the prevention of frequency stability degradation over time. There are two methods: seam-welding and glass-sealing.

- **Seed Quartz**

A highly pure crystal stick or a plate used as a crystal nucleus for growing synthetic quartz bars. This crystal stick/plate serves as the seed for the recrystallization process.