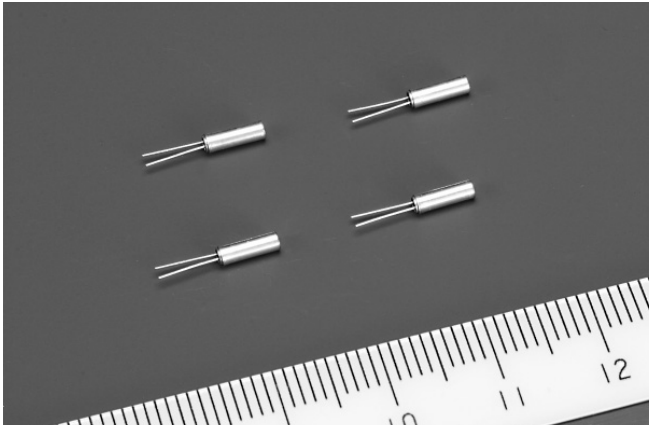


### VT-150-F/VT-200-F



#### FEATURES

- Compact tubular package.
- Photolithographic process.
- Excellent shock resistance and environmental characteristics.
- RoHS directive compliant.
- Complete Pb-free.

#### APPLICATIONS

Real Time Clocks, Timers, Water/Electricity/Gas Meter, Remote-Controllers, Portable Applications

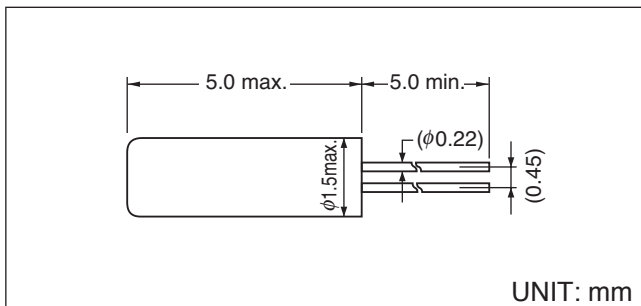
#### STANDARD SPECIFICATIONS

Conditions without notice (Temperature: +25±2°C, DL: 0.1μW)

| Item                         | Symbol       | Specifications  | Conditions / Notes  |
|------------------------------|--------------|---|---------------------|
| Nominal Frequency            | f_nom        | 32.768kHz   |                     |
| Frequency Tolerance          | f_tol        | (±5 x 10 <sup>-6</sup> ), ±10 x 10 <sup>-6</sup> , ±20 x 10 <sup>-6</sup> |                     |
| Turnover Temperature         | Ti           | +25±5°C   |                     |
| Parabolic Coefficient        | B            | (-3.5±0.8) x 10 <sup>-8</sup> /°C <sup>2</sup>                            |                     |
| Load Capacitance             | CL           | 4.5 to 12.5pF   |                     |
| Motional Resistance (ESR)    | R1 typ./max. | 30kΩ / 50kΩ   |                     |
| Absolute Maximum Drive Level | DLmax        | 1μW   |                     |
| Level of Drive               | DL           | 0.1μW   |                     |
| Shunt Capacitance            | Co           | 0.9pF typ.  |                     |
| Frequency Ageing             | f_age        | ±5 x 10 <sup>-6</sup>   | +25±3°C, First Year |
| Operating Temperature        | T_use        | -10°C to +60°C  |                     |
| Storage Temperature          | T_stg        | -30°C to +70°C  | Piece part basis    |

#### DIMENSIONS

VT-150-F



VT-200-F

