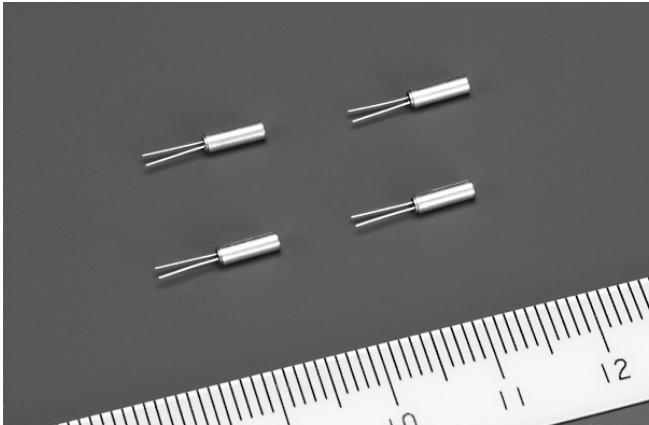


### VT-150-F/VT-200-F



#### 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

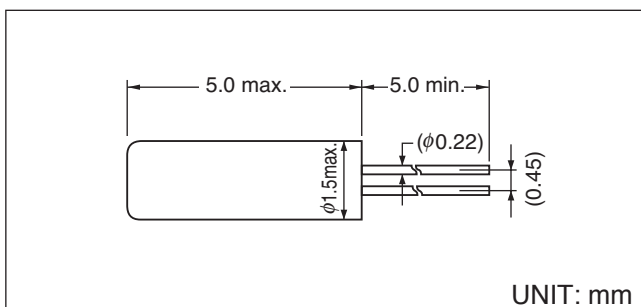
#### STANDARD SPECIFICATIONS

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

