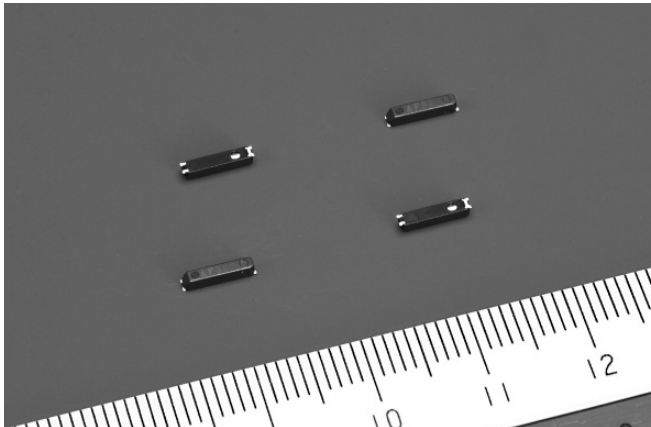


### SSP-T7-F



#### FEATURES

- Ultra thin type with height 1.4mm Max.
- SMD type suitable for automatic & high density surface mounting.
- Plastic mold package containing highly reliable tubular type quartz crystal.
- Excellent shock and heat resistance.
- RoHS directive compliant.

#### APPLICATIONS

Cellular Phones, PDA, DSC, Car Audio, GPS Module, FM Tuner Module, ZigBee, Glucose Meter, Payment Terminal, Clock Source for Micro-Computers, Portable Applications etc.

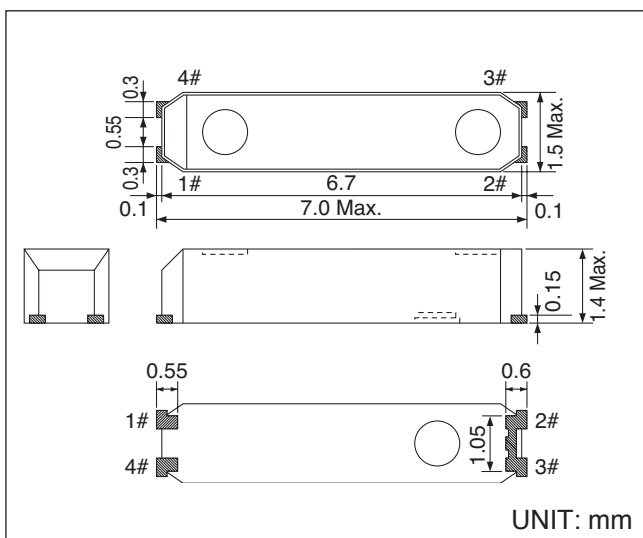
#### STANDARD SPECIFICATIONS

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

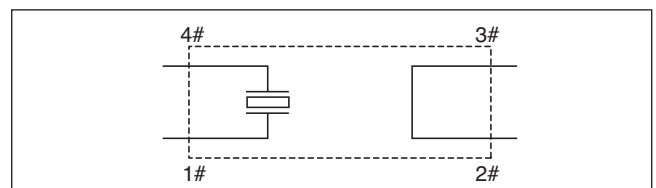
Item	Symbol	Specifications	Conditions / Notes
Nominal Frequency	f_nom	32.768kHz	
Frequency Tolerance	f_tol	±20 x 10 <sup>-6</sup> , ±50 x 10 <sup>-6</sup>	
Turnover Temperature	Ti	+25±5°C	
Parabolic Coefficient	B	(-3.5±1.0) x 10 <sup>-8</sup> /°C <sup>2</sup>	
Load Capacitance	CL	7.0 pF / 12.5pF	
Motional Resistance (ESR)	R1 typ./max.	44kΩ / 65kΩ	
Absolute Maximum Drive Level	DLmax	1μW	
Level of Drive	DL	0.1μW	
Shunt Capacitance	Co	0.8pF typ.	
Frequency Ageing	f_age	±3 x 10 <sup>-6</sup>	+25±3°C, First Year
Operating Temperature	T_use	-40°C to +85°C	
Storage Temperature	T_stg	-55°C to +125°C	Piece part basis

#### DIMENSIONS

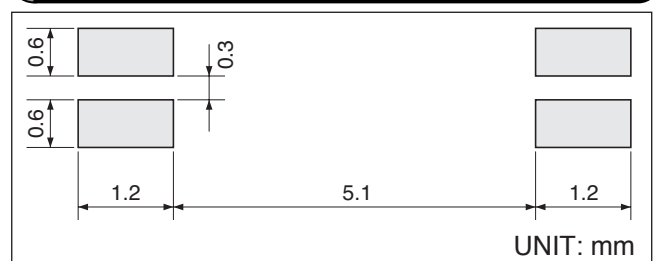
(For details, please refer to individual specification)



#### INTERNAL LEAD CONNECTION



#### RECOMMENDED SOLDERING PATTERN



- Remarks**
1. Do not connect #2 and #3 to external device and GND.
  2. The part of the cylinder inside resin mold may be sometimes exposed, however, it does not affect the characteristics of crystal unit.
  3. Please make sure that there is no pattern under SSP-T7-F on the circuit board.