

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 compliant.

APPLICATIONS

- Cellular Phones, PDA, DVC, Radio Communication Equipment, Portable Applications etc.

Under Development

Scheduled to be complete Pb-free in June, 2006

STANDARD SPECIFICATIONS

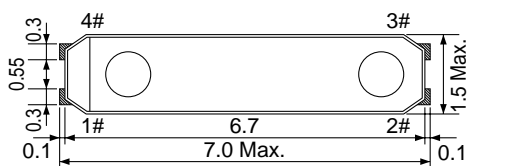
Conditions without notice (Temperature: +25±2°C, DL: 0.1μW)

| Item | Symbol | Specifications | Conditions / Notes |
|------------------------------|----------------|---|---------------------|
| Nominal Frequency | f_nom | 32.768kHz | |
| Frequency Tolerance | f_tol | ±20 x 10 ⁻⁶ , ±50 x 10 ⁻⁶ | |
| Turnover Temperature | Ti | +25±5°C | |
| Parabolic Coefficient | B | (-3.5±1.0) x 10 ⁻⁸ /°C ² | |
| 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 | C ₀ | 0.8pF typ. | |
| Frequency Ageing | f_age | ±3 x 10 ⁻⁶ | +25±3°C, First Year |
| Operating Temperature | T_use | -40°C to +85°C | |
| Storage Temperature | T_stg | -55°C to +125°C | Store a pcs. part |

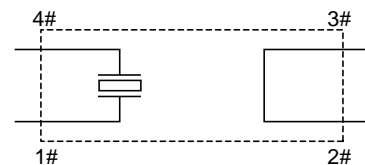
DIMENSIONS

(For details, please refer to individual specification)

UNIT: mm

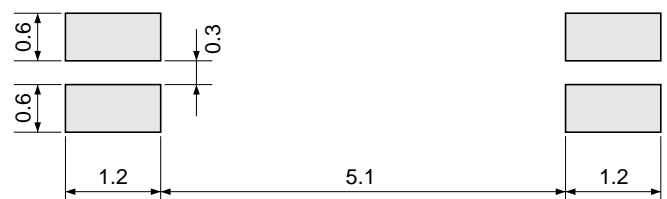


INTERNAL LEAD CONNECTION



RECOMMENDED SOLDERING PATTERN

UNIT: mm



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.