

# SC-32A

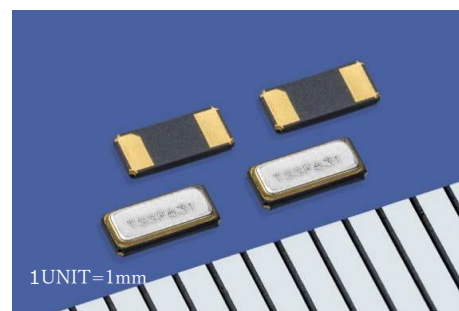
## 3215-Size 32 kHz Automotive-Grade Tuning Fork Crystal Resonator

### •Features

- Compliant with automotive standard AEC-Q200.
- Highly reliable ceramic package
- Excellent shock and heat resistance.
- Complies with EU RoHS directive (completely Pb-free)
- Built-in highly reliable photolithographic crystal Resonator

### •Applications

- Car audio system
- Car navigation sy
- Dashcam
- BMS, ADAS
- TPMS
- ECU, sub-clock

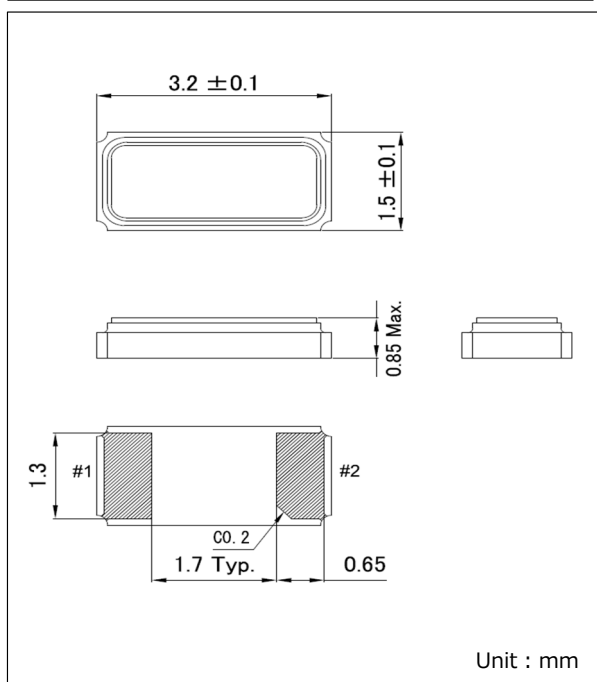


### •Specifications

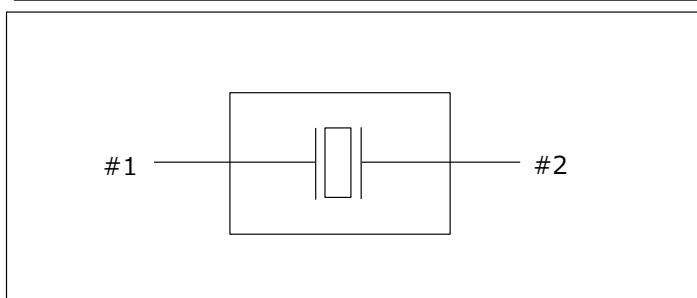
Conditions where not specified (Temperature: 25±2°C, DL;0.1μW)

| Item                      | Symbol | Specifications                                   | Conditions / Note                                  |
|---------------------------|--------|--------------------------------------------------|----------------------------------------------------|
| Nominal Frequency         | f_nom  | 32.768kHz                                        |                                                    |
| Frequency Tolerance       | f_tol  | ±20×10 <sup>-6</sup>                             | Other tolerance values are available upon request. |
| Turnover Temperature      | Ti     | 25±5°C                                           |                                                    |
| Parabolic Coefficient     | β      | (-0.030±10%) × 10 <sup>-6</sup> /°C <sup>2</sup> |                                                    |
| Load Capacitance          | CL     | 6pF, 7pF, 9pF, 12.5pF                            | For other CLs, please contact us.                  |
| Motional Resistance (ESR) | R1     | 70kΩ Max.                                        |                                                    |
| Absolute Max. Drive Level | DLmax. | 1.0μW Max.                                       |                                                    |
| Drive Level               | DL     | 0.1μW Typ.                                       |                                                    |
| Shunt Capacitance         | C0     | 1.0pF Typ.                                       | Reference value                                    |
| Frequency Ageing          | f_age  | ±3×10 <sup>-6</sup> /year                        | First year                                         |
| Operating Temperature     | T_use  | -55~+125°C                                       |                                                    |
| Storage Temperature       | T_stg  | -55~+125°C                                       | Store individually                                 |

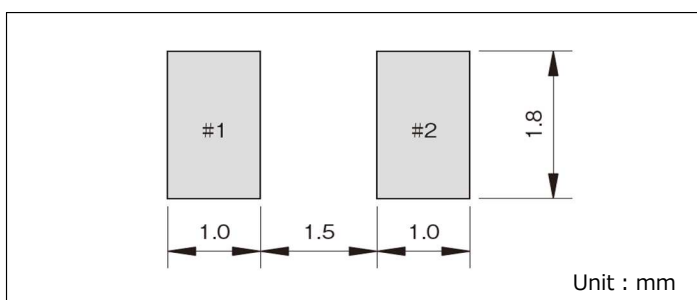
### •Dimensions



### •Internal Lead Connections



### •Recommended Soldering Pattern



Remark: When designing the circuit board, do not place circuit patterns on the crystal resonator mounting area (bottom surface).