# Crystal Resonators

## JU206/308 KHZ 6K8 Series


# SPECIFICATION

**PN: KSE-6K832768K6Z240ZA3**

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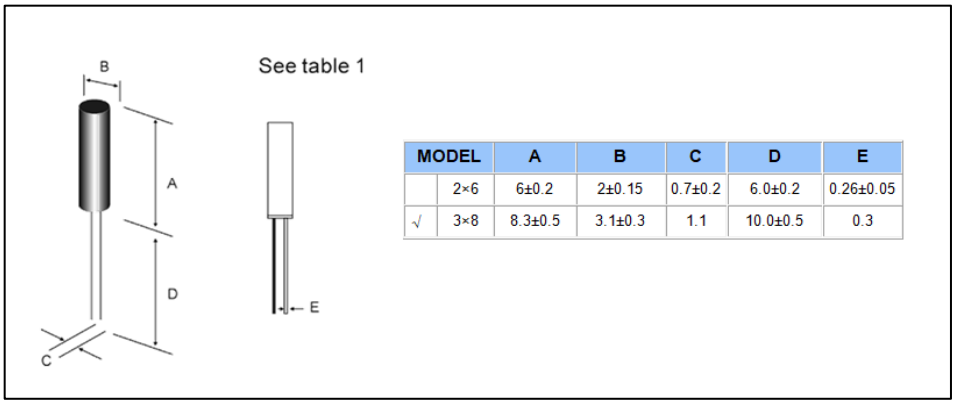
### FEATURE

- Best suited for portable devices with low current consumption.
- For a clock source in digital equipments.
- RoHS Compliant / Pb Free.

### ELECTRICAL SPECIFICATIONS（电气参数）

| | |
|---|---|
| Frequency range | 32.768KHz |
| Package | 3x8mm |
| Frequency Tolerance (at 25°C) | ±20ppm |
| ESR | 50KΩ Max |
| Turnover Temperature | 25 ± 5°C |
| Frequency Temperature Curve | [-0.035±0.01]ppm/°C² |
| OperableTemperature Range | -20°C to +70 °C |
| Storage Temperature Range | -40 °C to +85 °C |
| Shunt Capacitance (C0) | 1.75pF Typ |
| Dynamic Capacitance (C1) | 0.0035fF Typ |
| Driver Level (Typical) | 1 µW Max |
| Capacitance Ratio C0/C1 | 500 Typical |
| Quality Factor Q | 60000Typical |
| Load Capacitance(CL) | 6PF |
| Insulation Resistance | 500Mohm Min DC=100V±15V(Pin to Pin,Pin to case) |
| Aging @25°C 5st year (Max) | ±3ppm/year |

### Dimension（尺寸）（Unit：mm）




| MODEL | | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | 2×6 | 6±0.2 | 2±0.15 | 0.7±0.2 | 6.0±0.2 | 0.26±0.05 |
| √ | 3×8 | 8.3±0.5 | 3.1±0.3 | 1.1 | 10.0±0.5 | 0.3 |

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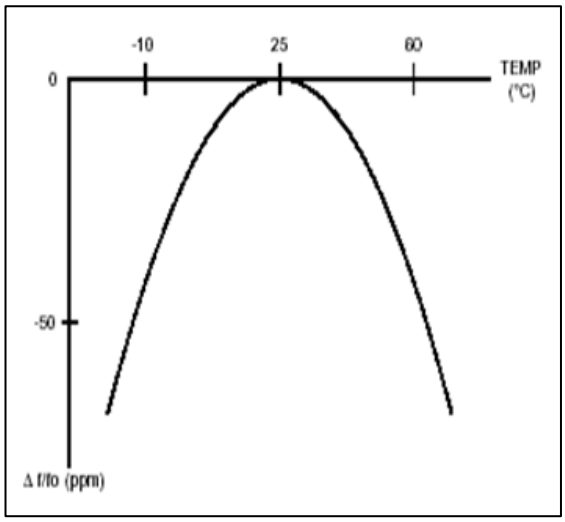
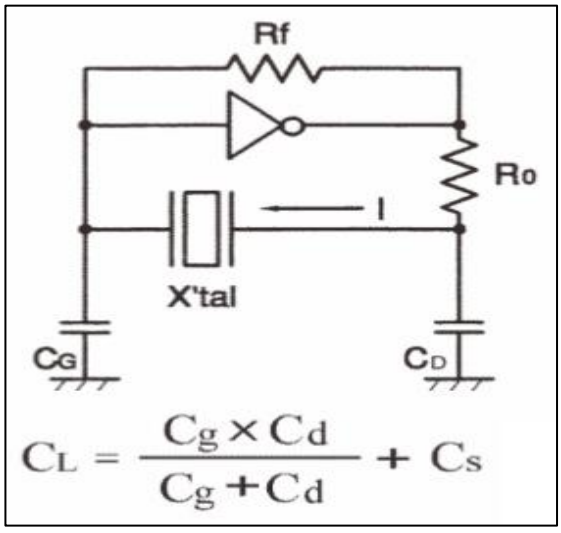
### Frequency VS Temperature Curve




### Oscillation Circuit(电路）



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### Environment-proof · Mechanical property

| No | Item | Specifications | Conditions | |
|---|---|---|---|---|
| 1 | High temperature storage | △f/f =±5 × 10-6 | After storage under 85℃ for 500 hrs, measure at room temperature. | 1 |
| 2 | Low temperature storage | △f/f =±5 × 10-6 | After storage under -40℃ for 500hrs, measure at room temperature | 1 |
| 3 | High temperature and high humidity storage | △f/f =±5 × 10-6 | After storage under 60℃±2℃, 90 to95% RH for 500 hrs, measure at room temperature。 | 1 |
| 4 | Thermal shock resistance | △f/f =±5 × 10-6 | Measured at room temperature after20 cycles. -25℃⇔ +80℃ for 30 minutes. | 1 |
| 5 | Mechanical shock resistance | △f/f =±5 × 10-6 | Measure after free drop of the RESONATOR three times from the height of 75cm onto a wooden board. | 2 |
| 6 | Vibration resistance | △f/f =±5 × 10-6 | Amplitude 1.5mm and 10～60Hz with cycle time 2～3 minutes in 3 direction (X,Y,and Z axis)each for 2 hrs. | 2 |
| 7 | Resistance to soldering heat | △f/f =±5 × 10-6 | Measured at room temperature after immersing the lead wire in a soldering bath of 300℃±10℃ for 5 seconds up to a position where it is2mm away from the root of the plug. | 1 |
| 8 | Tensile strength of lead wire | △f/f =±5 × 10-6 | Apply a load of 500g for 30 seconds in the lead wire's axial direction. | 2 |
| 9 | Bending strength of lead wire | △f/f =±5 × 10-6 | Bending cycle : 0 °→ 45 °→ 0 °→ 45 °→ 0 ° | 2 |
| 10 | Solderability of lead wire | A minimum 95% of the area to be coated with solder | Apply resin-flux contained-solder to a soldering iron of 280℃±5℃ for 5 seconds. | 2 |

Note:

1. The adove tests no. 1 to 9 must be conducted independently (not series tests)
2. *1: Measure after 24 hours soak at room temperature .
3. *2: Measure after 2 hours soak at room temperature .

**Precautions**

(1) Temperature for soldering the lead wire shall not exceed 300℃ and the soldering time shall be within 5 seconds.

(2) Position to be soldered : Solder only the position where the lead wire is1.0mm away from the glass seal.

Do not solder the case.

(3) Cutting, bending and
correction of lead wire: The glass seal shall be free of any crack or other damage which may deteriorate the characteristics of RESONATORS.