

2.0×1.6mm for Mobile Communications



RoHS Compliant

**Features**

- Crystal Unit with Thermistor
- Height 0.65 (max.) mm is also available
- Reference frequency for telecommunication systems
- Reflow compatible
- Using ceramic package resulting in high reliability

**Applications**

- Mobile Communications, GPS

**How to Order**

CT2016DB 19200

- ① Series
  - ② Frequency
  - ③ Load Capacitance
  - ④ Frequency Tolerance
  - ⑤ Operating Temp. Range
  - ⑥ Frequency Temp. Stability
  - ⑦ Individual Specification
- |           |      |      |          |                         |      |
|-----------|------|------|----------|-------------------------|------|
| <b>B0</b> | 6 pF | —    | <b>F</b> | $\pm 10 \times 10^{-6}$ | Std. |
| <b>C0</b> | 7 pF | Std. | <b>G</b> | $\pm 15 \times 10^{-6}$ | —    |
- |           |               |   |
|-----------|---------------|---|
| <b>PF</b> | -40 to +85°C  | $\pm 10 \times 10^{-6}$ (at -25 to +85°C) |
| <b>RH</b> | -40 to +105°C | $\pm 12 \times 10^{-6}$ (at -30 to +85°C) |

Packaging (Tape & Reel 12000 pcs./ reel)

**Specifications**

| Item                            | Symbol           | Specification  | Units             | Remarks                                |
|---------------------------------|------------------|----------------|-------------------|--|
| Frequency Range                 | f <sub>nom</sub> | 19200 to 60000 | kHz               |  |
| Overtone Order                  | OT               | Fundamental    | —                 |  |
| Load Capacitance                | CL               | 7              | pF                |  |
| Frequency Tolerance             | f <sub>tol</sub> | ±10            | ×10 <sup>-6</sup> | 25°C±3°C                               |
| Motional Series Resistance      | R1               | Table 1        | ohm               |  |
| Drive Level                     | DL               | 10             | μW                | 100μW max.                             |
| Operating Temp. Range           | T <sub>use</sub> | -30 to +85     | °C                |  |
| Storage Temp. Range             | T <sub>stg</sub> | -40 to +105    | °C                |  |
| Frequency Temp. Characteristics | f <sub>tem</sub> | ±12            | ×10 <sup>-6</sup> | Freq. deviation from the value at 32°C |
| Thermistor Resistance           | —                | Table 2        | ohm               | 25°C                                   |
| Thermistor B-Constant           | —                | Table 3        | K                 | 25°C-50°C                              |

Please contact us for other specifications.

**Table 1 Motional Series Resistance**

| Frequency Range   | Motional Series Resistance |
|-------------------|----------------------------|
| 19200 to 25999kHz | 80Ω max.                   |
| 26000 to 29999kHz | 60Ω max.                   |
| 30000 to 60000kHz | 50Ω max.                   |

**Table 2 Thermistor Resistance**

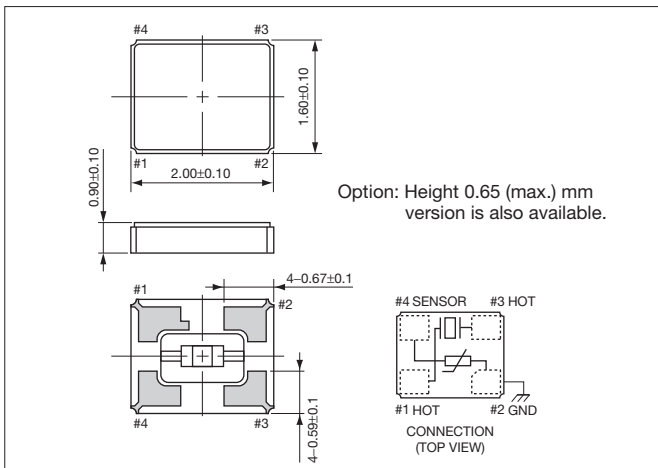
| Resistance | Specification |
|------------|---------------|
| 100kΩ      | ±1%           |

**Table 3 Thermistor B-Constant**

| B-Constant | Specification |
|------------|---------------|
| 4250K      | ±1%           |

**Dimensions**

(Unit: mm)



**Recommended Land Pattern**

(Unit: mm)

