



2.0 × 1.6mm for Mobile Communications



PSL: R4Y



RoHS Compliant

MSL1

Features

- Miniature 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

- Consumer Products
- Wireless Comm. (Mobile Communications, GNSS)
- Industrial Equipment

How to Order

CT2016DB 19200 ☐ ☐ ☐ ☐ ☐ ☐ CC

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

Packaging (Tape & Reel 12000 pcs./ reel)

Specifications

Item	Symbol	Specification	Unit	Remarks
Frequency Range	f _{nom}	19200 / 38400	kHz	
Overtone Order	OT	Fundamental	—	
Load Capacitance	CL	7	pF	
Frequency Tolerance	f _{tol}	± 10	× 10 ⁻⁶	25° C ± 3° C
Motional Series Resistance	R ₁	Table 1	ohm	
Drive Level	DL	10	μ W	100 μ W max.
Operating Temp. Range	T _{use}	- 30 to +85	° C	
Storage Temp. Range	T _{stg}	- 40 to +105	° C	
Frequency Temp. Characteristics	f _{tem}	± 12	× 10 ⁻⁶	Freq. deviation from the value at 32° C
Thermistor Resistance	—	Table 2	ohm	25° C
Thermistor B-Constant	—	Table 3	K	25° C to 50° C

Please contact us for other specifications.

Table 1 Motional Series Resistance

Frequency Range	Motional Series Resistance
19200/ 38400kHz	80 Ω max.

Table 2 Thermistor Resistance

Resistance	Specification
100kΩ	± 1%

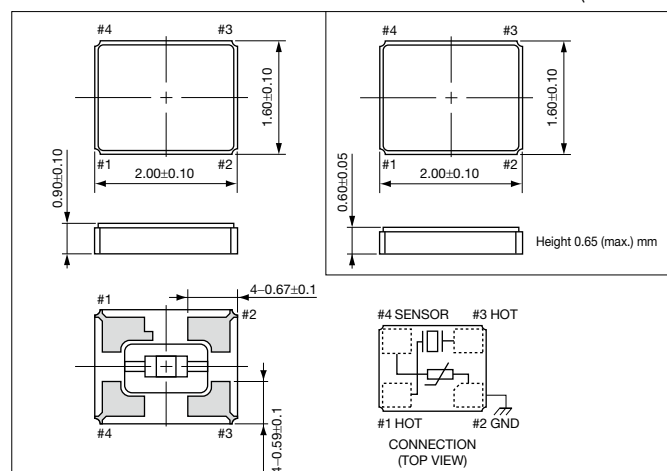
Table 3 Thermistor B-Constant

B-Constant	Specification
4250K	± 1%

Crystal Units

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

