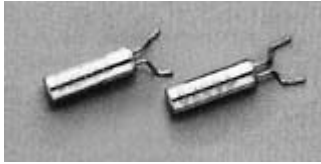


CMR200T

(2,000pcs/reel)



■ FEATURES:

- Because of their excellent shock resistance and low power consumption, the units are ideal for portable equipment.
- Features superior characteristics indigenous to tuning fork-type quartz crystal units.
- Ideal for low cost SMD applications.
- Provided in Tape and Reel.

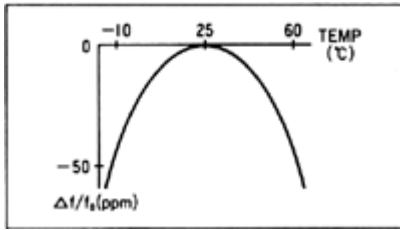
■ APPLICATIONS:

- Permits use as a clock source for communication equipment, AV equipment, OA equipment, measuring instruments and various types of clocks.

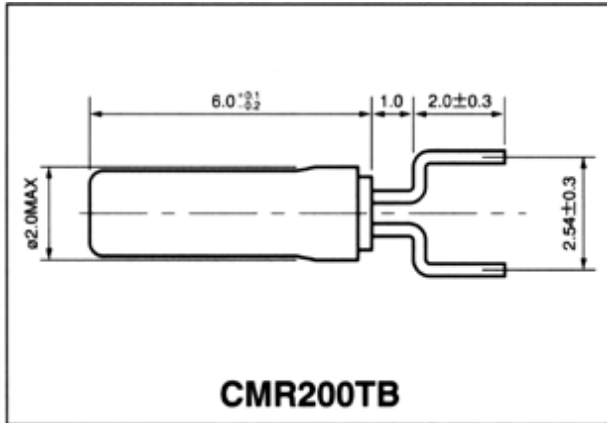
■ STANDARD SPECIFICATIONS

| Item | | CM200T | Conditions |
|---|----------------|---|------------------|
| Nominal frequency | f_0 | 32.768kHz | |
| Frequency tolerance | $\Delta f/f_0$ | $\pm 20\text{ppm}$ | At 25°C |
| Frequency vs. Temperature Characteristics | $\Delta f/f_0$ | See drawing | -10°C to +60°C |
| Turnover temperature | T_m | 25°C \pm 5°C | |
| Temperature coefficient | beta | -0.034 \pm 0.006ppm/°C ² | |
| Operating temperature range | T_{opr} | -40°C to +85°C | |
| Storage temperature range | T_{stg} | -55°C to +125°C | |
| Equivalent series resistance | R_1 | 35k ohm MAX. | At 25°C |
| Load capacitance | C_L | 12.5pF TYP. | Please specify |
| Motional capacitance | C_1 | 0.0030pF TYP. | |
| Shunt capacitance | C_0 | 1.35pF TYP. | |
| Capacitance ratio | gamma | 450 TYP. | |
| Drive level | DL | 1 μ W MAX. | |
| Insulation resistance | IR | 500M ohm MIN. | DC100V \pm 15V |
| Aging (First year) | $\Delta f/f_0$ | $\pm 3\text{ppm}$ MAX. | 25°C \pm 3°C |
| Sealing | | 1 x 10 ⁻² μ Pa·m ³ /s MAX. | |
| Shock resistance | | $\pm 5\text{ppm}$ MAX. Drop test of 3 times on a hard board from 75cm height or shock test of 3000G x 0.3ms x 1/2sin wave x 3 directions | |

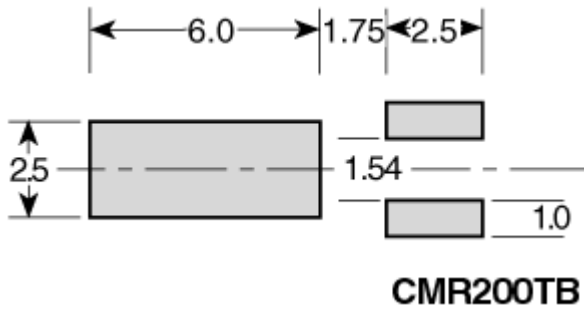
■ FREQUENCY vs TEMPERATURE CURVE



■ DIMENSIONS: (UNIT=mm)



■ RECOMENDED SOLDERING PATTERN: (UNIT=mm)



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