

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.

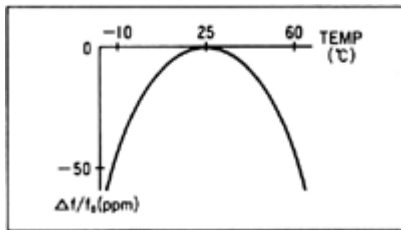
■ APPLICATIONS:

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

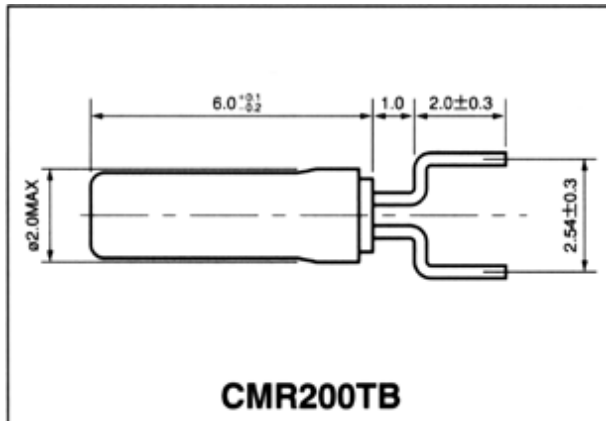
■ STANDARD SPECIFICATIONS

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		

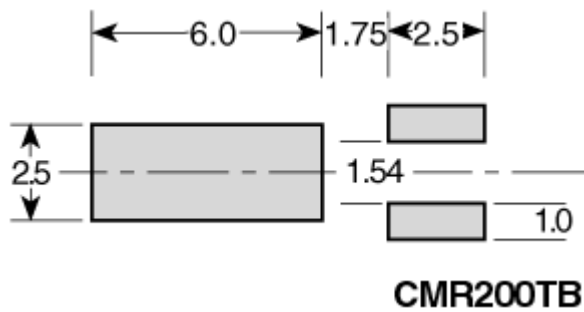
■ FREQUENCY vs TEMPERATURE CURVE



■ **DIMENSIONS: (UNIT=mm)**



■ **RECOMENDED SOLDERING PATTERN: (UNIT=mm)**



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