CMR250T

(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.

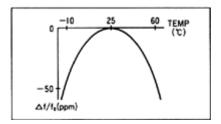
### ■ APPLICATIONS:

• Permits use as a clock source for communication equipment, AV equipment, OA equipment, measuring instruments and pagers.

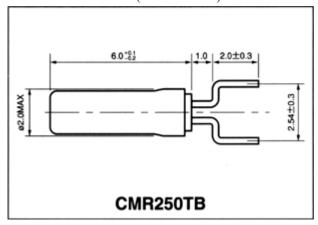
## ■ STANDARD SPECIFICATIONS

Item		CM250T	Conditions
Nominal frequency	fo	30kHz to165kHz	
Frequency tolerance	delta f/fo	± 30ppm	At 25°C
Frequency vs.Temperature Characteristics	delta f/fo	See drawing	-10°C to +60°C
Turnover temperature	Tm	$25^{\circ}\text{C} \pm 5^{\circ}\text{C}$	
Temperature coefficient	beta	-0.034 ± 0.006ppm/°C2	
Operating temperature range	Topr	-40°C to + 85°C	
Storage temperature range	Tstg	-55°C to +125°C	
Equivalent series resistance	R <sub>1</sub>	35k ohm to 50k ohm	At 25°C
Load capacitance	Cl	12.5pF TYP.	Please specify
Motional capacitance	C <sub>1</sub>	0.001 to 0.004pF TYP.	
Shunt capacitance	C <sub>0</sub>	0.8 to1.7pF TYP.	
Capacitance ratio	gamma	425 to 800 TYP.	
Drive level	DL	1 μ W MAX.	
Insulation resistance	IR	500M ohm MIN.	$DC100V \pm 15V$
Aging (First year)	delta f/fo	± 5ppm MAX.	$25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
Sealing		1 x 10-2 μ Pa·m3 /s MAX.	
Shock resistance	±5ppm 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		

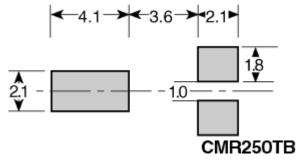
### ■ FREQUENCY vs TEMPERATURE CURVE



# ■ DIMENSIONS: (UNIT=mm)



# ■ RECOMENDED SOLDERING PATTERN: (UNIT=mm)



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