



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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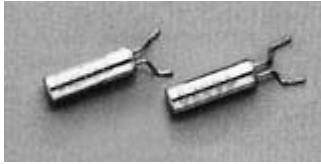
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# CMR250T

(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.

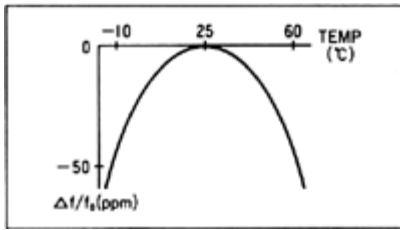
## ■ APPLICATIONS:

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

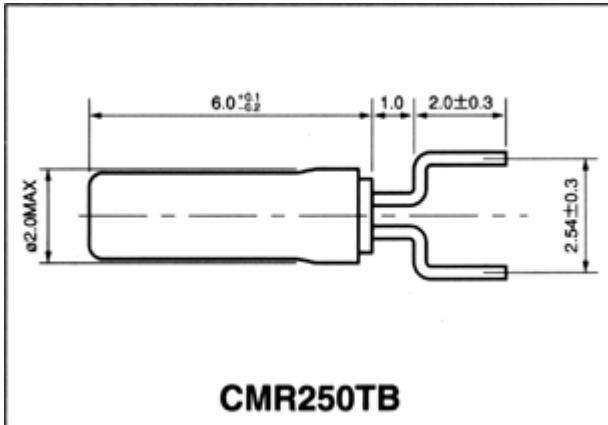
## ■ STANDARD SPECIFICATIONS

Item		CM250T	Conditions
Nominal frequency	$f_0$	30kHz to 165kHz	
Frequency tolerance	$\Delta f/f_0$	$\pm 30\text{ppm}$	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 <sup>2</sup>	
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 to 50k ohm	At 25°C
Load capacitance	$C_L$	12.5pF TYP.	Please specify
Motional capacitance	$C_1$	0.001 to 0.004pF TYP.	
Shunt capacitance	$C_0$	0.8 to 1.7pF TYP.	
Capacitance ratio	gamma	425 to 800 TYP.	
Drive level	DL	1 $\mu$ W MAX.	
Insulation resistance	IR	500M ohm MIN.	DC100V $\pm$ 15V
Aging (First year)	$\Delta f/f_0$	$\pm 5\text{ppm}$ MAX.	25°C $\pm$ 3°C
Sealing		1 x 10 <sup>-2</sup> $\mu$ Pa·m <sup>3</sup> /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	

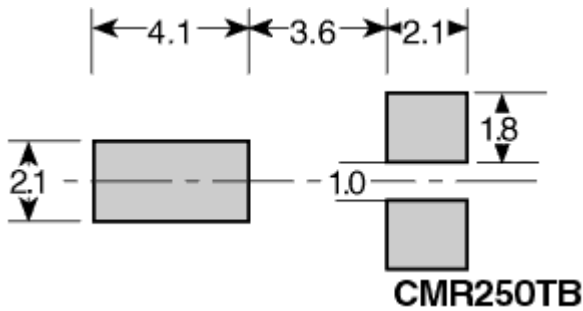
## ■ FREQUENCY vs TEMPERATURE CURVE



■ DIMENSIONS: (UNIT=mm)



■ RECOMENDED SOLDERING PATTERN: (UNIT=mm)



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