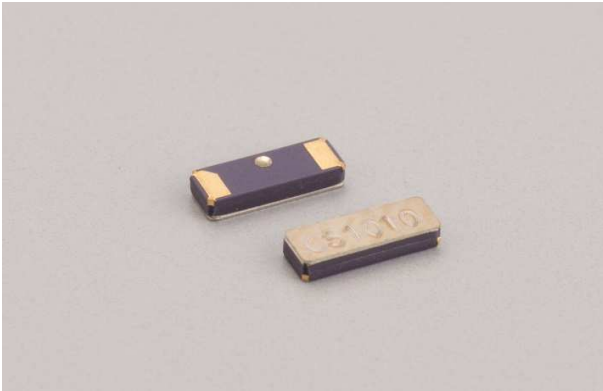


## TUNING FORK CRYSTAL UNIT (SMD · Ceramic Package)

RoHS compliant / Pb free

# CM415

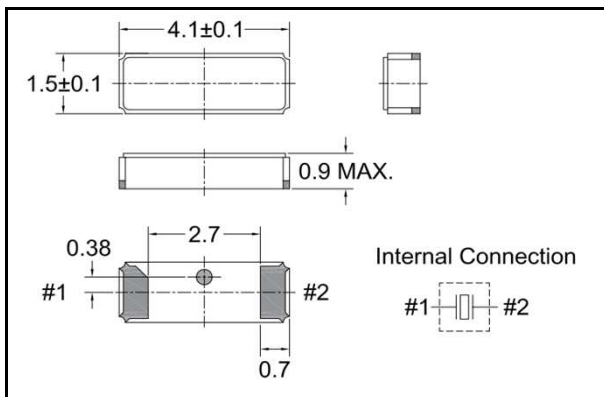
3,000pcs/reel



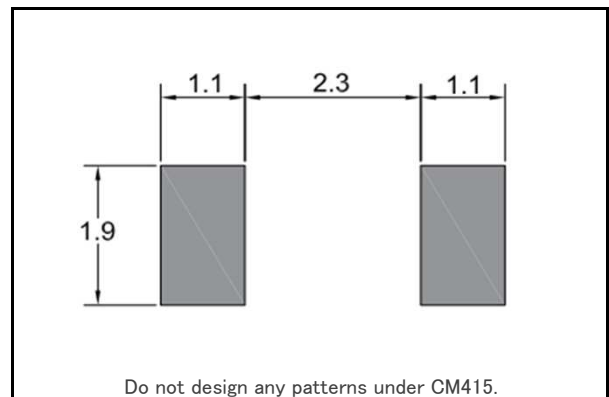
### FEATURES

- Frequency range : 32.768kHz
- External dimensions (mm)  
L : 4.1 x W : 1.5 x H : 0.9
- Applications  
Consumer products

### DIMENSION [mm]



### SOLDER PAD LAYOUT [mm]



### STANDARD SPECIFICATIONS

Item	Model	CM415	Conditions
Nominal Frequency	$f_0$	32.768kHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 10\text{ppm} / \pm 20\text{ppm}$	at 25°C
Load capacitance	$C_L$	6.0pF / 7.0pF / 9.0pF / 12.5pF	Please specify your requirement
Operating Temperature Range	$T_{OPR}$	-40°C ~ +85°C	
Storage Temperature Range	$T_{STR}$	-55°C ~ +125°C	
Turnover Temperature	$T_M$	25°C±5°C	
Temperature Coefficient	$\beta$	-0.034±0.006ppm/°C <sup>2</sup>	
Motional (series) resistance	$R_1$	70KΩ Max.	at 25°C
Level of drive	$D_L$	1 μW Max.	
Aging (first year)	$\Delta f/f_0$	±3ppm Max.	25°C±3°C
Shunt capacitance	$C_0$	1.10pF Typ.	

