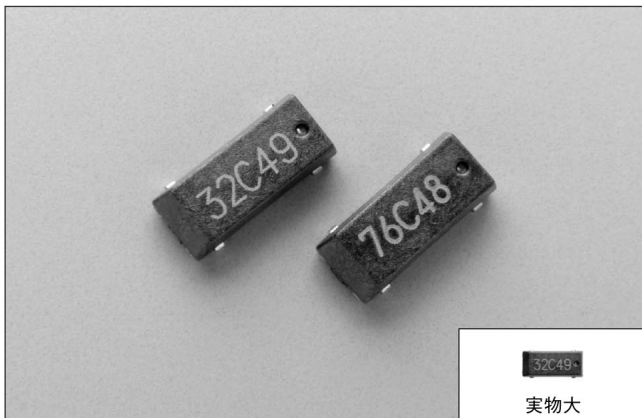


# TUNING FORK CRYSTAL UNITS (SMD • Plastic Package)

RoHS Compliant Optional

## CM200S • CM250S

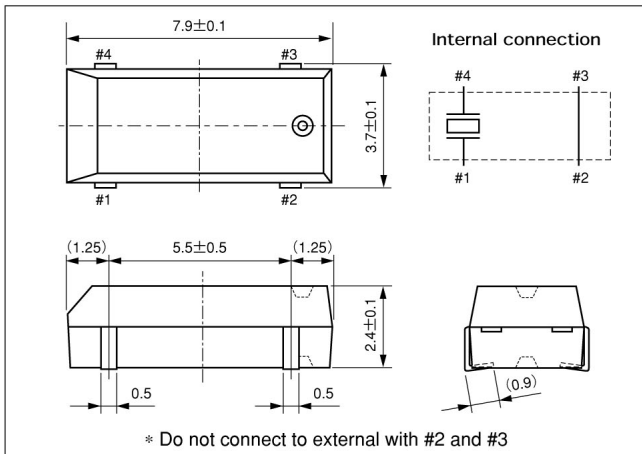
3000pcs/reel



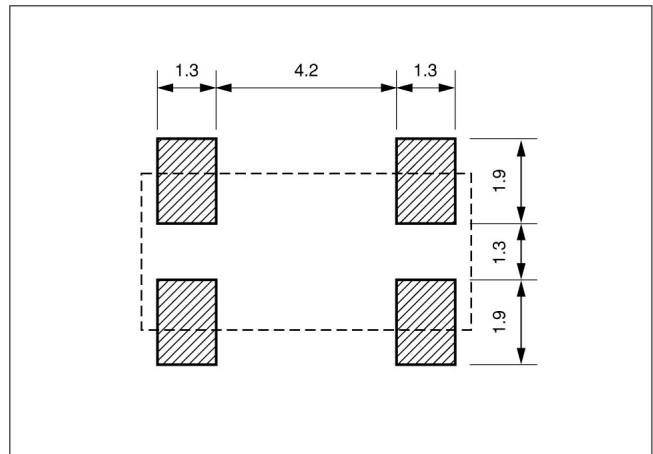
### FEATURES

- Embedded with heat resistant cylinder type crystal bring highly stable characteristics.
- Automatic mounting and reflowable Type.
- Most appropriate for clock source for portable and automotive equipment with low power consumption.

### DIMENSION [mm]



### SOLDER PAD LAYOUT [mm]



### STANDARD SPECIFICATIONS

Item	Model	CM200S	CM250S	Conditions
Nominal Frequency	$f_0$	32.768kHz	30kHz~100kHz	Need to contact us for the available frequency in CM250S
Frequency Tolerance	$\Delta f/f_0$	$\pm 20\text{ppm}$	$\pm 30\text{ppm}$	at 25°C
Load capacitance	$C_L$	12.5pF		Need to 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 $\pm$ 5°C		See figure 2 in P4
Temperature Coefficient	$\beta$	$-0.034 \pm 0.006\text{ppm}/^\circ\text{C}^2$		
Motional (series) resistance	$R_1$	50K $\Omega$ Max.		at 25°C
Level of drive	$D_L$	1 $\mu$ W Max.		
Aging (first year)	$\Delta f/f_0$	$\pm 3\text{ppm}$ Max.	$\pm 5\text{ppm}$ Max.	25°C $\pm$ 3°C
Quality Factor	Q	70000 Typ.	70000 ~ 100000 Typ.	Depend on frequency
Shunt capacitance	$C_0$	1.35pF Typ.	0.8pF ~ 1.7pF Typ.	Depend on frequency