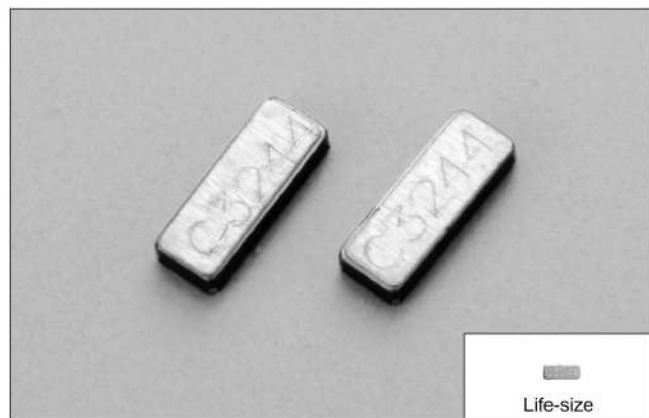


**TUNING FORK CRYSTAL UNIT** (SMD • Ceramic Package)

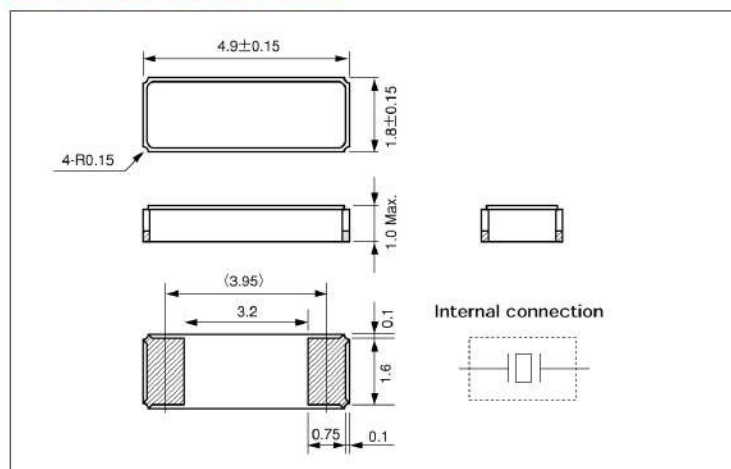
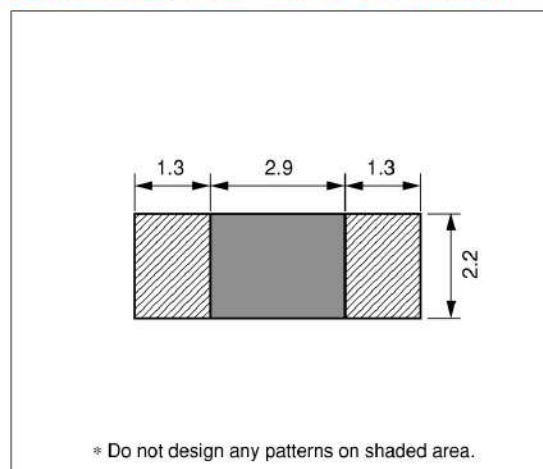
RoHS Compliant Standard

**CM519**

3000pcs/reel

**FEATURES**

- Tuning fork crystal with ceramic packaged type.
- Small & thin packaging and light weight.
- Most appropriate for portable devices and mobile telecommunications devices.
- Complete Pb free product.

**DIMENSION [mm]****SOLDER PAD LAYOUT [mm]****STANDARD SPECIFICATIONS**

Item	Model	CM519	Conditions
Nominal Frequency	$f_0$	32.768kHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 20$ 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 $\pm$ 0.006ppm/°C <sup>2</sup>	
Motional (series) resistance	$R_1$	70K $\Omega$ Max.	at 25°C
Level of drive	$D_L$	1 $\mu$ W Max.	
Aging (first year)	$\Delta f/f_0$	$\pm 3$ ppm Max.	25°C $\pm$ 3°C
Quality Factor	$Q$	65000 Typ.	
Shunt capacitance	$C_0$	1.33pF Typ.	