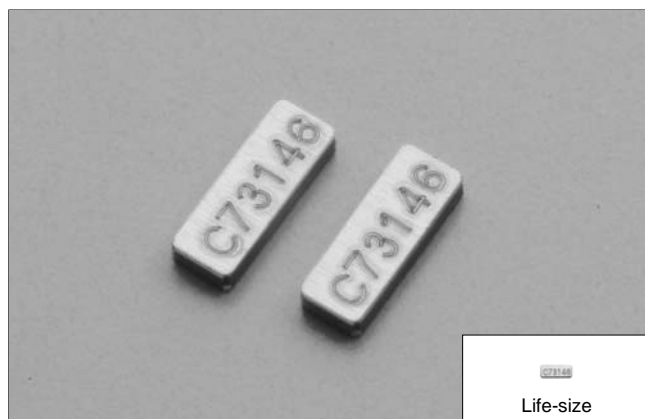


Tape & Reel 3Kpcs



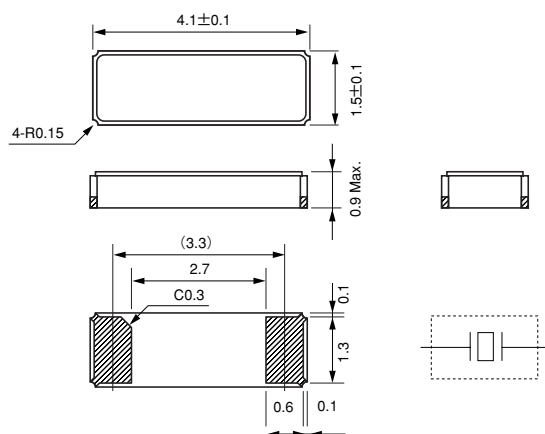
Tuning fork Crystal Unit



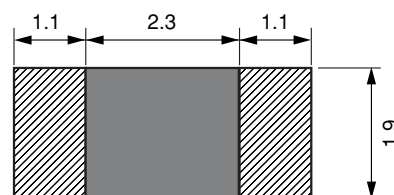
◆ Features

- Tuning fork crystal with ceramic packaged type.
High-density SMD type
- Light weight with small and thin packaging.
High-stability assured with tight vacuum sealing.
- Most appropriate for portable devices, automotive applications and mobile telecommunications devices.
- Complete Pb free product.

◆ Dimensions (mm)



◆ Solder pad layout (mm)



* Do not design any patterns on shaded area.

◆ Standard Specifications

Part Numbering system is in Page 14, [click here](#)

Item	Model	MXC415	Conditions
Nominal Frequency	f_0	32.768KHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 20\text{ppm}$	at 25°
Load capacitance	C	9.0pF, 12.5 pF	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±5°C	
Temperature Coefficient	β	-0.034±0.006ppm/°C ²	
Motional (series) resistance	R ₁	70K Ω Max.	at 25°C
Level of drive	DL	1 μ W Max.	
Aging (first year)	$\Delta f/f_0$	$\pm 3\text{ppm}$ Max.	25°C±3°C
Quality Factor	Q	53000 Typ.	
Shunt capacitance	C ₀	1.10pF Typ.	

MDX codification 32,768 KHz Crystals (Part Numbering System)



Case	Frequency code	Tolerance at 25°C (ppm)	Load capacitance	Packing Specification
MFS206	- 32	D	F	T
↓	↓	↓	↓	↓
MFS206 MXC200T MXC206J MXC200S MXC519 MXC415 MXC315 MXC212	32,768 KHz	D = +/- 20 ppm F = +/- 15 ppm E = +/- 10 ppm H = +/- 5 ppm	A = Series B = 6.0pF C = 9.0pF (STD) D = 9.5pF E = 12.0pF F = 12.5pF (STD) G = 13.0pF Q = 10.0pF S = 11.0pF V = 8.0pF Y = 7.0pF Z = Others	T = Tape & Reel B = Bulk