

## ■ Features

- ★ Appropriate for high density circuit board
- ★ Highly stable characteristics
- ★ Suitable for small mobile telecommunication devices

## ■ Application

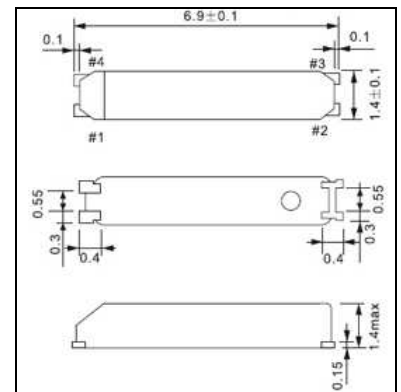
- ★ Watch and Clock
- ★ Remote Control
- ★ Telecommunication equipment
- ★ Consumer Electronics
- ★ Instrumentation
- ★ Audio/Video



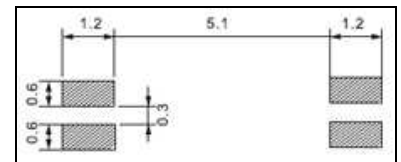
## ■ Specification (Characteristics)

Item	Specification
Frequency Range	32.768 KHz
Load Capacitance	5 ~ 30 pF
Drive Level	1.0 μW Max.
Frequency Tolerance	±10 ppm ~ ±100 ppm
Series Resistance	65 KΩ Max
Turnover Temperature	25 ± 5 °C
Temperature Coefficient	[-0.035 ± 0.01] ppm/°C <sup>2</sup>
Operating Temperature Range	-40 ~ +85 °C
Storage Temperature Range	-55 ~ +125 °C
Motional Capacitance	0.0028 pF Typical
Shunt Capacitance	0.8 pF Typical
Aging at first year	± 3 ppm Max.
Insulation Resistance	500MΩ Min.
Packing Unit	3000 pcs/reel

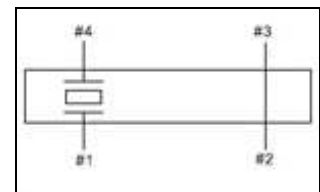
## ■ Dimension (Unit: mm)



## ■ Recommended Soldering



## ■ Internal Connections



## ■ Part Number and Ordering

Part Number Code	Holder Type + Frequency + Tolerance + CL
Ordering Code	Same as Above
Example	ZM146-32.768K-20-12.5P