

# 200A Series

## 8.0 x 3.8mm Watch crystal

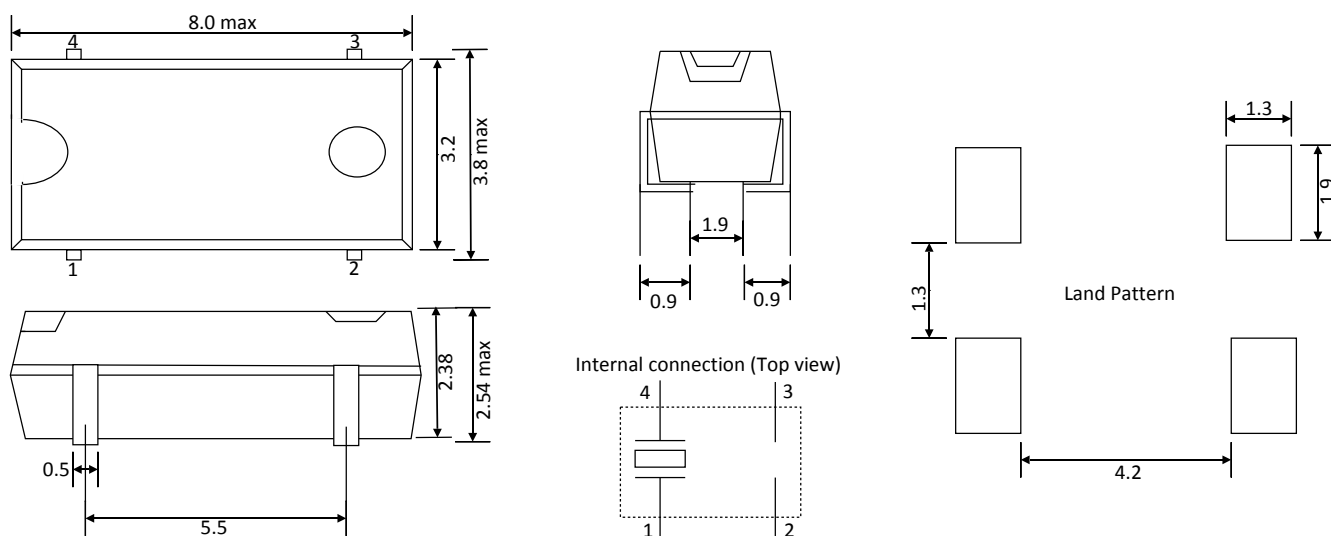


REACH and RoHS compliant  
Plastic encapsulated watch crystal



Parameters		Specification	Remarks
Frequency	F_nom	32.768kHz	
Frequency tolerance	F_tol	±5ppm, ±10ppm, ±20ppm	At 25°C ± 3°C
Operating temperature range	T_use	-40°C ~ +85°C	
Storage temperature	T_stg	-55°C ~ +125°C	
Temperature coefficient	K	-0.04ppm/°C <sup>2</sup>	
Turnover temperature	Ti	25°C ± 5°C	
Load capacitance	CL	6pF, 12.5pF	
Equivalent series resistance	ESR	50KΩ max	
Shunt capacitance	CO	0.9pF typical	
Motional capacitance	C1	1.8fF typical	
Drive level	DL	1.0μW max	
Frequency aging	F_age	±3.0ppm max	First year

### Dimensions (mm)



Note: Internally crystal connect between pad 1 and pad 4. Metal may be exposed through surface of the device. This will not affect the characteristic of crystal.

### Part number generation

EK	00003	G	I	H	D	-PF
ACT Series Code	Frequency (KHz)	Frequency Tolerance (±ppm)	Operating Temperature Range (°C)	Load capacitance (CL)	Packaging (Tape & Reel)	RoHS
EK	32.768kHz = 00003	±5 = A ±10 = C ±20 = G	-40 ~ +85 = I	6.0pF = N 12.5pF = H	Loose = L 3000pcs = D	RoHS = -PF

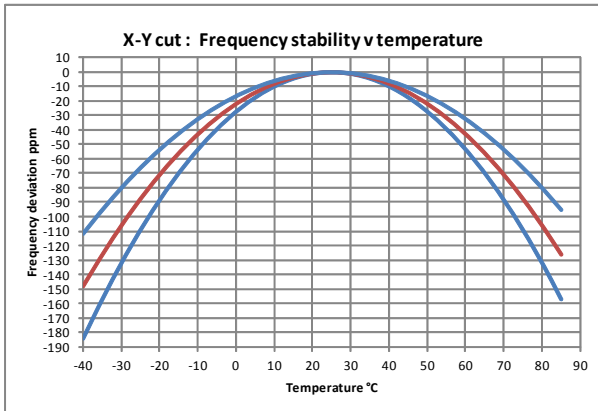
Note: It is important to suffix the above part number with full frequency required to give a completed part number as illustrated below. Full Example Part Number : **EK00003GIHD-PF (32.768kHz)**

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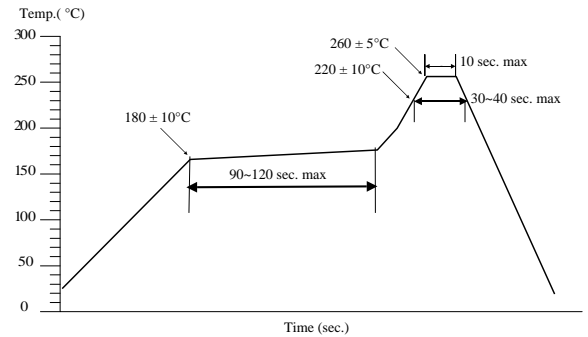
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## Frequency stability vs Temperature



## Soldering profile



Drawing control: (Internal use only)  
Issue number : N1  
Date : 01/02/2017  
Commodity code : 854160 00 00  
Internal reference : E2