

# WATCH CRYSTALS 32.768kHz

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## Holder Style

- Watch crystals are press sealed. Four sizes are available: 3 x 8.2mm, 2 x 6mm, 1.5 x 5.1mm & 1.05 x 4.45mm

## General Specifications

- Load Capacitance ( $C_L$ ): 6pF to 15pF
- Drive Level: 1μW max
- Static Capacitance ( $C_0$ ): 1.6pF typical

## Standard Frequency Tolerances and Stabilities

- ±20ppm, ±30ppm, ±50ppm, ±70ppm, ±100ppm

## Operating Temperature Ranges

- 0 to 50°C      -20 to 70°C
- 10 to 60°C    -30 to 80°C

## Storage Temperature Range

- 55 to 125°C

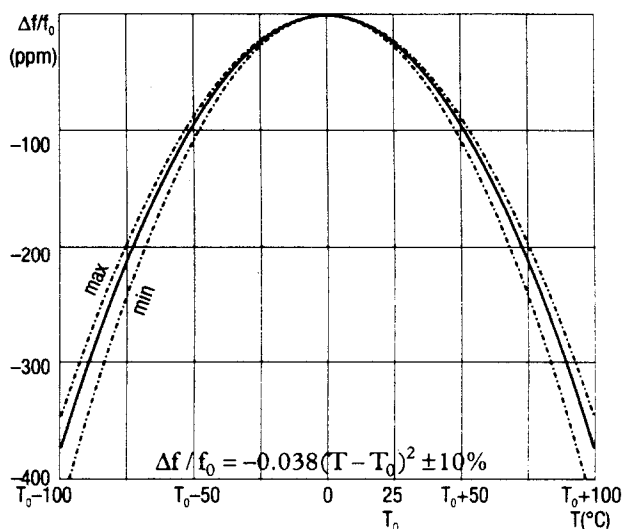
## Marking

- Frequency

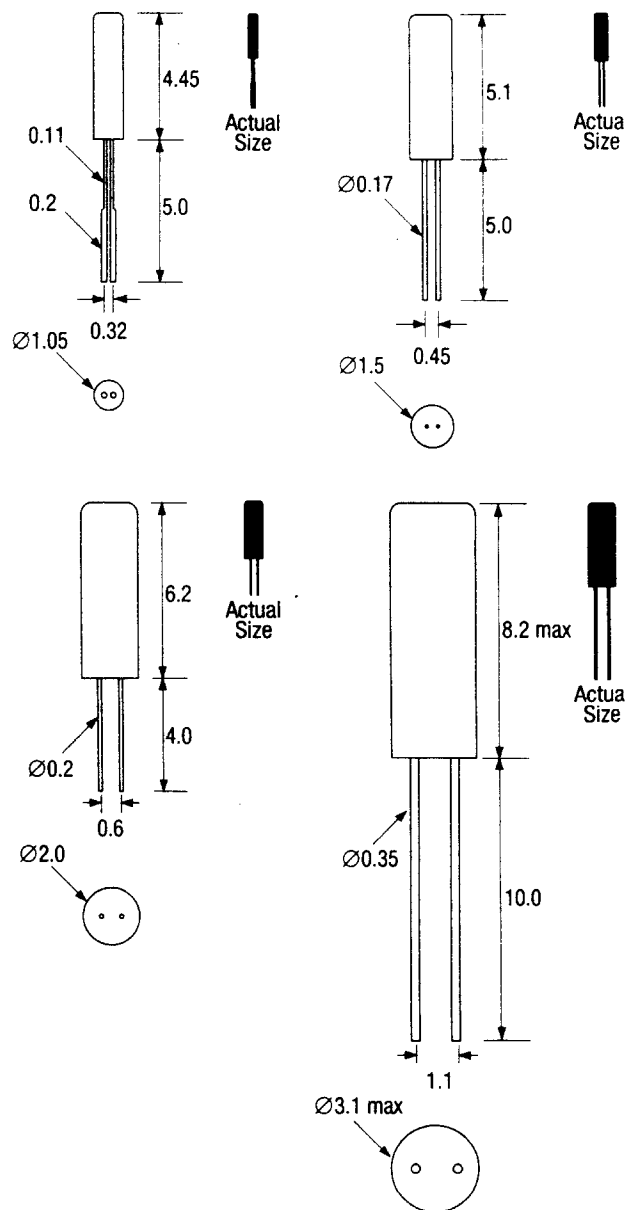
## Minimum Order Information Required

- Frequency + Holder + Frequency Tolerance @ 25°C + Operating Temperature Range + Circuit Condition

## Frequency Temperature Curve



## Outlines (mm) - (scale 3:1)



## Electrical Specification - maximum limiting values

Frequency Range	Frequency Tolerance @ 25°C ±2°C	Operating Temperature Range	Frequency Stability Available Over Operating Temperature		ESR Max	Vibration Mode
			Minimum	Maximum		
32.768kHz	±10ppm to ±100ppm	0 to 50°C	-25ppm	-100ppm	50kΩ	Fundamental
		-10 to 60°C	-50ppm	-100ppm		
		-20 to 70°C	-80ppm	-100ppm		
		-30 to 80°C	-120ppm	-500ppm		

1 Crystals in the 1.05 x 4.45mm holder have an ESR of 70kΩ max