

Cylindrical 'watch' crystal

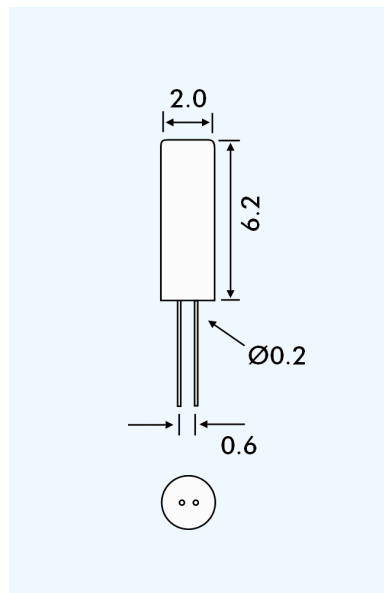
- An industry-standard source of 32.768kHz clock signals
- Fully RoHS compliant
- Excellent shock resistance and environmental capability
- A high build quality component at low cost



SPECIFICATION

Frequency:	32.7680kHz
Calibration Tolerance at 25°C:	from ± 5 ppm to ± 50 ppm
Temperature Coefficient:	Inverse Parabolic -0.035 ppm/°C ²
Peak Temperature:	25°C ± 5 °C
Operating Temperature Range:	-20 to +70°C
	-40 to +85° available
Storage Temperature:	-55°~+105°C
Effective Series Resistance:	45kOhms max.
Shunt Capacitance (C0):	0.8pF typical
Motional Capacitance:	4.0fF max.
Load Capacitance (CL):	6pF or 12.5pF
Ageing:	< ± 5 ppm per year at +25°C
Maximum Drive level:	1.0 microW max.
Reflow Soldering:	10s maximum at 250°C twice or 180s at 230°C, once.
Insulation Resistance:	100MOhm min.
Shock Resistance:	± 5 ppm max. (Drop test 3 times onto a hard board from 75cm)

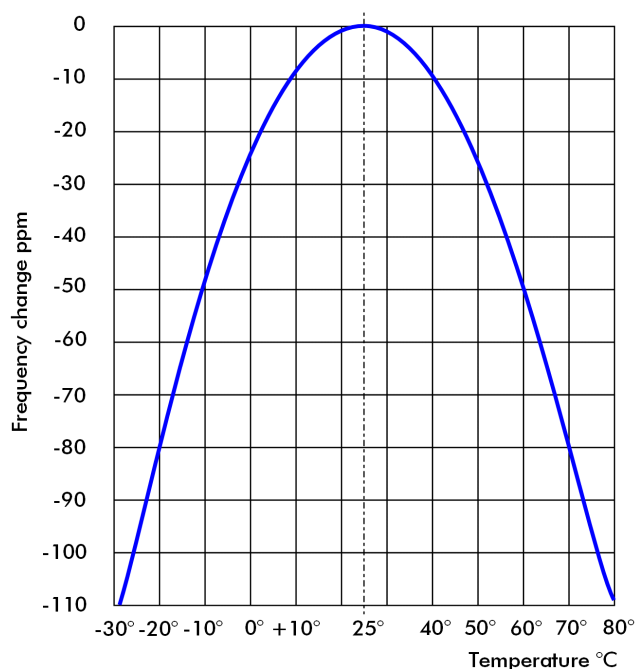
OUTLINE & DIMENSIONS



STOCK NUMBERS/SPECIFICATIONS

Stock Number	Frequency	Calibration	CL (pF)
MH32768C	32.768kHz	± 20 ppm	12.5
MH32768L	32.768kHz	± 20 ppm	6.0

Frequency Change vs. Temperature X-Cut Crystal



$$\text{Function} = \Delta f / f_0 = -0.035(T - T_0)^2 \pm 10\%$$