

## FC CRYSTALS

5.0mm x 1.9mm x 0.9mm

### DESCRIPTION

FC crystals are ultra-miniature surface-mount crystals specifically designed to provide 32.768kHz for real-time clocks. With their ultra-small size and rugged construction they are ideal for battery-powered, hand held miniature equipment applications.

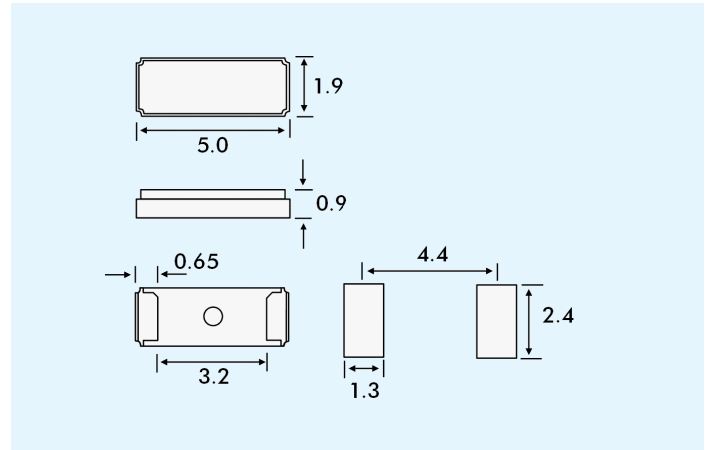
### FEATURES

- Frequency 32.768kHz
- Ultra-miniature size 5.0 x 1.9 x 0.9mm (height)
- Low mass and rugged construction
- Supplied on tape and reel

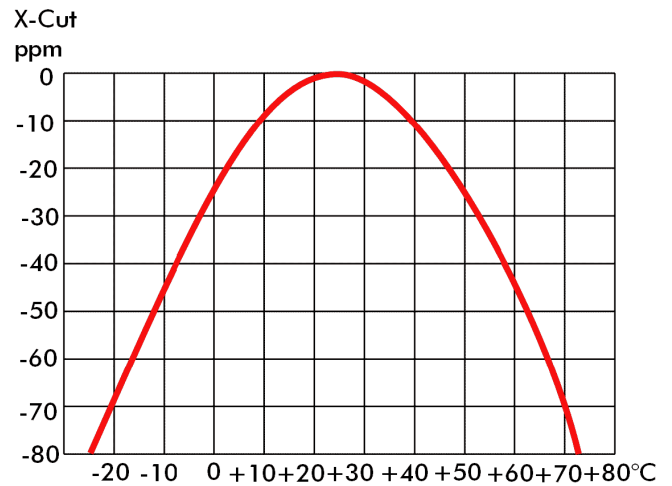
### GENERAL SPECIFICATION

Nominal Frequency:	32.7680kHz
Calibration Tolerance at 25°C:	±20ppm or ±50ppm (standard)
Load Capacitance (CL):	12.5pF standard or 7pF
Equivalent Series Resistance (R1)	65kΩ
Drive Level:	0.5mW max.
Temperature Coefficient:	-0.04ppm/°C <sup>2</sup>
Peak Temperature:	+25°C±5°C
Shunt Capacitance (C0):	0.8pF typical
Motional Capacitance (C1):	1.9fF typical
Ageing at 25°C:	±3ppm maximum, first year
Insulation Resistance:	500MΩ minimum @100VDC
Crystal Cut:	X-Cut
Operating Temperature Range:	-40° to 85°C
Storage Temperature Range:	-55° to +125°C
Reflow Soldering:	10s maximum @ +260°C, twice or <230°C for 180s.
Packaging:	16mm EIA Tape and Reel 3000 pieces per reel.

### OUTLINES AND DIMENSIONS



### STABILITY/TEMPERATURE PERFORMANCE



### PART NUMBERS

Frequency (kHz)	Load Capacitance	Part Number	Tolerance ±ppm/Temp. Range °C	ESR Max. (Ω)
32.768	12.5pF	PH32768S	±20/-40+85	65k
32.768	7pF	PH32768T	±20/-40+85	65k