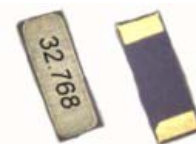


- Ultra-miniature ceramic package 4.1 x 1.5 x 0.7mm
- RoHS compliant
- Ideal for hand-held portable equipment



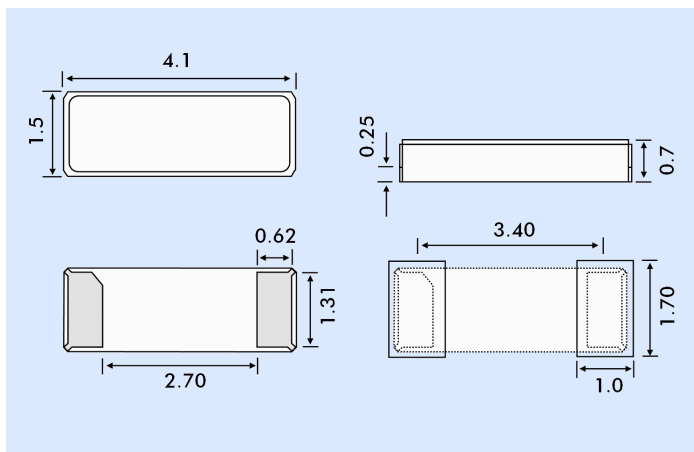
### DESCRIPTION

X4115 crystals are 32.768kHz in an ultra-miniature package. The part is designed to provide the smallest possible component size for real-time clock applications. Their miniature size and rugged construction make them ideal for battery powered, hand-held equipment.

### SPECIFICATION

Nominal Frequency:	32.7680kHz
Calibration Tolerance at 25°C:	±20ppm
Crystal Cut:	X-cut
Load Capacitance (CL):	12.5pF
Equivalent Series Resistance (ESR):	65k Ohms
Drive level:	0.5 microW max.
Temperature Coefficient:	-0.035±0.008ppm/°C <sup>2</sup> (Parabolic)
Turnover Temperature:	+25±5°C
Shunt Capacitance:	1.2pF typical
Ageing:	±5ppm max. in first year at 25°C
Insulation Resistance:	500M Ohm minimum @100VDC
Operating Temperature Range:	-40° to +85°C
Storage Temperature Range:	-55° to +125°C
Reflow Soldering:	10s maximum at 260°C twice or 180s at 230°C, once.
Shock:	±5ppm max, free drops x3 from 75cm height onto hard wood surface.
Packaging:	EIA tape and reel, 3k pieces/reel

### OUTLINE & DIMENSIONS



### PART NUMBER AND SPECIFICATION

Order part number: 32.768kHz X4115/20/--/-40+85/12.5pF

This provides a 32.768kHz crystal in X4115 package with ±20ppm calibration tolerance at 25°C, temperature stability according to the above parabolic coefficient at a load capacitance of 12.5pF.

### STABILITY OVER TEMPERATURE X-Cut Crystal

