# **EURO**QUARTZ

## X4918 SERIES CRYSTALS

## 4.9 x 1.8 x 1.0mm Miniature SMD

## 32.768kHz

- Ultra-miniature ceramic package 4.9 x 1.8 x 1.0mm
- **RoHS** compliant and lead free
- Low ageing, high shock and vibration resistance
- Uses include battery operated equipment

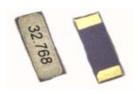
#### DESCRIPTION

X4918 crystals provide 32.768kHz in an ultra-miniature package. The part is designed to provide a small component size for real-time clock applications. The micro-miniature size and rugged construction make them ideal for real time clocks and battery powered, hand-held equipment.

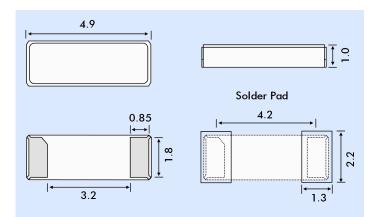
#### SPECIFICATION

| Nominal Frequency:                  | 32.7680kHz                            |
|-------------------------------------|---------------------------------------|
| Calibration Tolerance at 25°C:      | ±20ppm                                |
|                                     | ±30ppm (standard)                     |
|                                     | ±50ppm                                |
| Crystal Cut:                        | XY-cut                                |
| Load Capacitance (CL):              | 12.5pF, 9.0pF or 7.0pF                |
| Equivalent Series Resistance (ESR): | 65kΩ typical, 70kΩ max.               |
| Drive level:                        | 1.0μW max.                            |
| Temperature Coefficient:            | -0.034ppm/°C <sup>2</sup> (Parabolic) |
| Turnover Temperature:               | +25°±5°C                              |
| Quality Factor:                     | 40,000 min.                           |
| Shunt Capacitance:                  | 1.3pF typical                         |
| Motional Capacitance:               | 21fF typical                          |
| Capacitance Ration:                 | 619 typical                           |
| Ageing:                             | ±3ppm/year max.                       |
| Insulation Resistance:              | 500M $\Omega$ minimum @100VDC         |
| Operating Temperature Range:        | -40° to +85°C                         |
| Storage Temerature Range:           | -55° to +125°C                        |
| Reflow Soldering:                   | 10s max. at 250°C ±10°C               |
| Shock Resistance:                   | ±5ppm max, free drops x3 from         |
|                                     | 75cm height onto hard wood            |
|                                     | surface.                              |
| Packaging:                          | 12.0mm EIA tape, 4.0mm pitch,         |
|                                     | 180mm diameter reel, 3k               |
|                                     | pieces/reel                           |
|                                     |                                       |

# RoHS



#### **OUTLINE & DIMENSIONS**



#### PART NUMBER AND SPECIFICATION

Order part number: 32.768kHz X4918/30/--/-40+85/12.5pF

This provides a 32.768kHz crystal in X3215 package with ±20ppm calibration tolerance at 25°C, temperature stability according to the above parabolic coefficient at a load capacitance of 12.5pF.

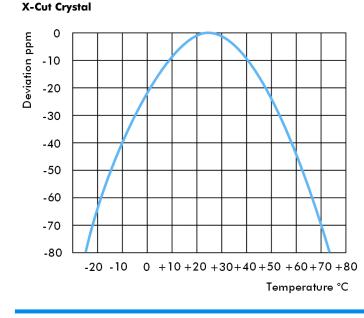
Options:

Calibration Tolerance: ±20ppm ±30ppm (standard) ±50ppm

Load Capacitance:

7.0pF

9.0pF 12.5pF (standard)



**STABILITY OVER TEMPERATURE** 

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