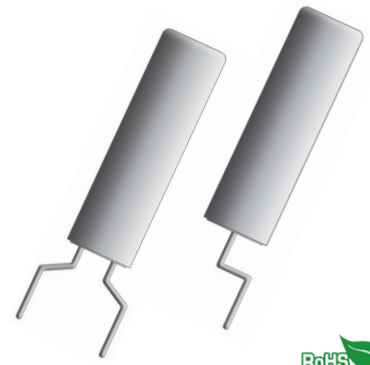


# QTM26S Series

2.0x6.0 Metal Cylindrical SMD Tuning Fork



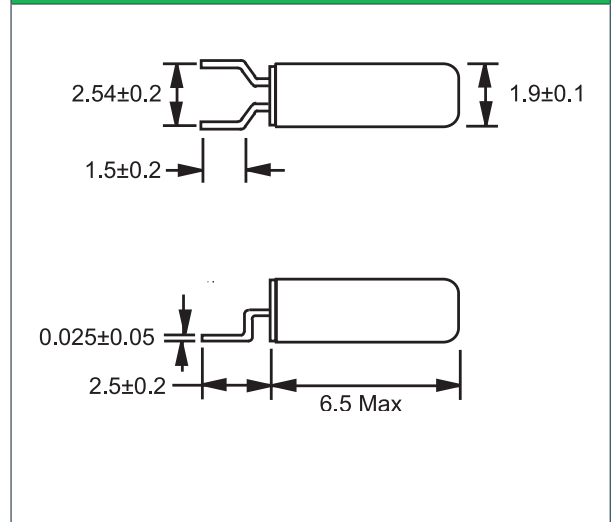
## Features

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

## General Specifications

Nominal Frequency	32.768 kHz
Frequency Tolerance at 25°C	±20ppm
Temperature Coefficient	-0.034 ppm/Δ °C <sup>2</sup>
Temperature Range (Operating)	-40 to +85°C
Storage Temperature	-55 to +125°C
Load Capacitance C <sub>L</sub>	6.0pF, 12.5pF
Shunt Capacitance C <sub>0</sub>	1.1pF typ.
Motional Capacitance C <sub>1</sub>	2.3fF typ.
Equivalent Series Resistance (ESR)	50KΩ max.
Drive Level	1μW max.
Aging per Year	±5ppm max.
Insulation Resistance (MΩ)	500 min.
Quality Factor	60000 typ.
Capacitance Ratio	450 typ.
Resistance to Shock	±5ppm maximum offset from 75cm drop test in all axes on to a hard surface
Turnover Temperatur	25°C ±5°C

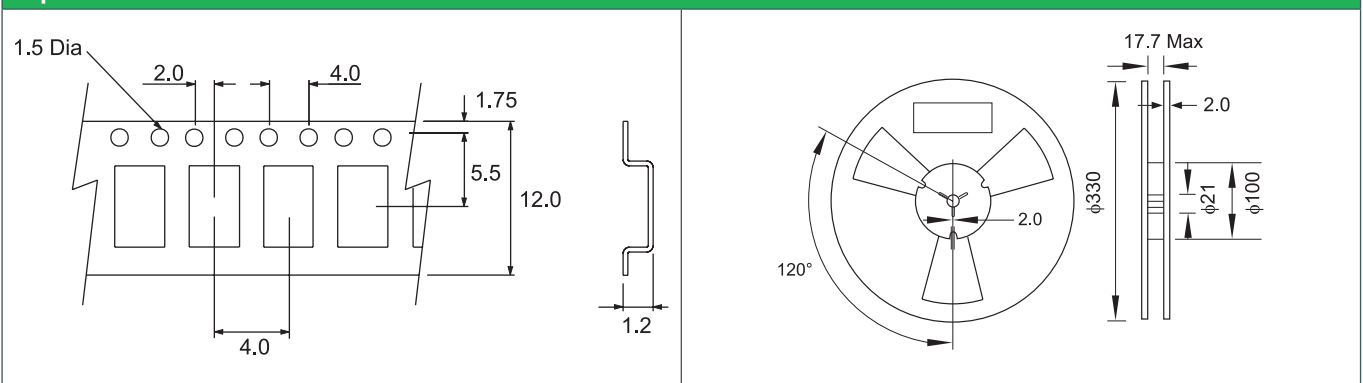
## Mechanical Dimensions



## Part Numbering Guide

Qantek Code	Package	Nominal Frequency (in kHz)	Load Capacitance	Operating Temperature Range	Frequency Tolerance	Packaging
Q = Qantek	TM26S = 2.0x6.0 Metal SMD	32.768	06 = 6pF 12 = 12.5pF	<b>B = -40 to +85°C</b>	<b>2 = ±20ppm</b>	R = 3000pcs Tape&Reel
Example: QTM26S32.76812B2R						bold letters = recommended standard specification

## Tape and Reel Dimensions



**QANTEK Technology Corporation**

Phone: +1 877-227-0440 (tollfree)

Fax: +1 877-227-0440 (tollfree)

www.qantek.com

info@qantek.com

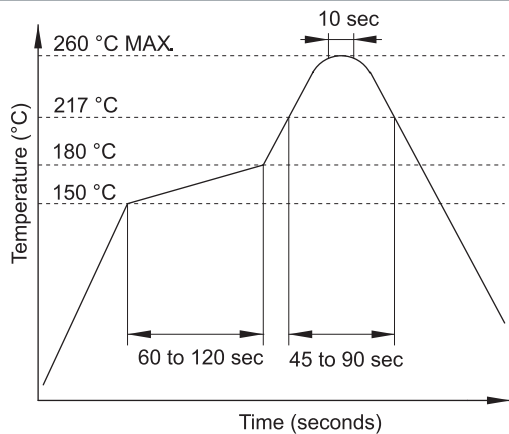
# QTM26 Series

2.0x6.0 Cylindrical Package Tuning Fork

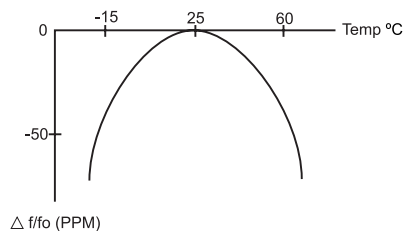
## Marking Code Guide

Contains manufacturer code / lot code

## Solder Reflow Profile



## Frequency vs. Temperature Characteristics



To calculate the frequency stability the parabolic curvature constant (K) is needed.

Example: Calculating the stability at 45°C

1- Change in temperature ( $\Delta T$ ) is  $(45-25) = +20^\circ\text{C}$

2- Change in frequency is  $(-0.035 \times (\Delta^\circ\text{C})^2) = (-0.035 \times (20)^2) = -13.6\text{ppm}$



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[www.qantek.com](http://www.qantek.com)

[info@qantek.com](mailto:info@qantek.com)