QTP8 Series
3.8x8.7 Plastic SMD Tuning Fork

QTP8 Series

Features
- Excellent environmental and heat resistance plastic package with reflow capability
- Extended temperature -40 to +85°C for industrial applications

Applications
- Wide range in communication and measuring equipment
- Commercial and Industrial applications
- Wireless communications
- Time of day Applications

RoHS Compliant
Pb lead-free

General Specifications

Nominal Frequency	32.768 kHz
Frenquency Tolerance at 25°C	±20ppm
Temperature Coefficient	-0.035 ±0.008ppm/Δ °C²
Temperature Range (Operating)	-40 to +85ºC
Storage Temperature	-55 to +125°C
Load Capacitance C_L	6pF, 12.5pF
Shunt Capacitance C_0	1.5pF typ.
Motional Capacitance C_1	3.0fF typ.
Equivalent Series Resistance (ESR)	50KΩ max.
Drive Level	1µW max.
Aging per Year	±3ppm max.
Insulation Resistance (MΩ)	500 at 100Vdc ±15Vdc
Quality Factor	70000 typ.
Capacitance Ratio	450 typ.

Mechanical Dimensions

Pin Connection: **#1** Crystal, **#2** N/C, **#3** N/C, **#4** Crystal
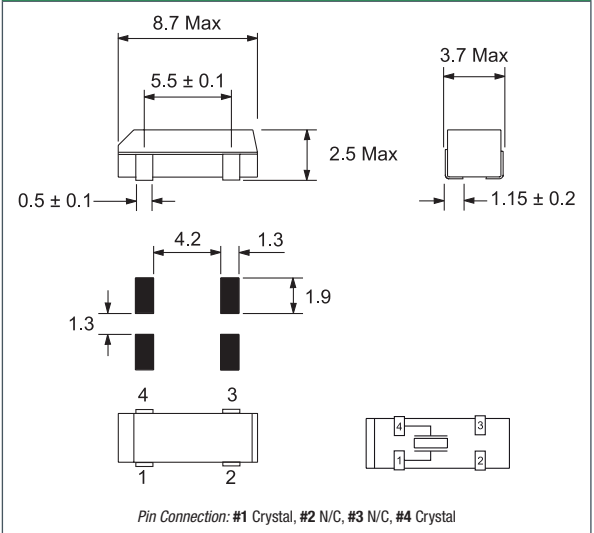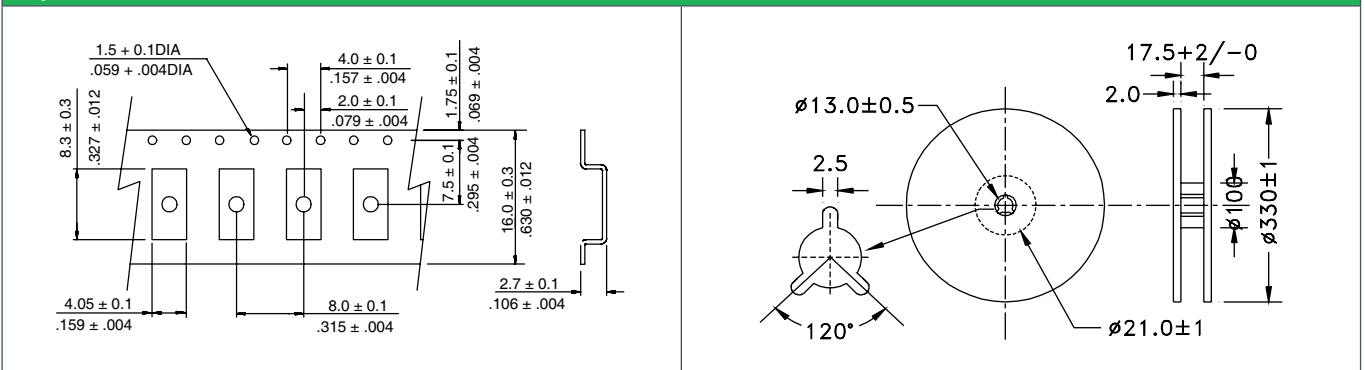
Part Numbering Guide

Qantek Code	Package	Nominal Frequency (in kHz)	Load Capacitance	Operating Temperature Range	Frequency Tolerance	Packaging
Q = Qantek	TP8 = 3.8x8.7 Plastic SMD	32.768	06 = 6pF **12 = 12.5pF**	**B = -40 to +85°C**	10 = ±10ppm 15 = ±15ppm **20 = ±20ppm**	R = 3000pcs Tape&Reel

Example: QTP832.76812B20R   bold letters = recommended standard specification

Tape and Reel Dimensions

QANTEK Technology Corporation
Phone: +1 877-227-0440 (tollfree)   www.qantek.com
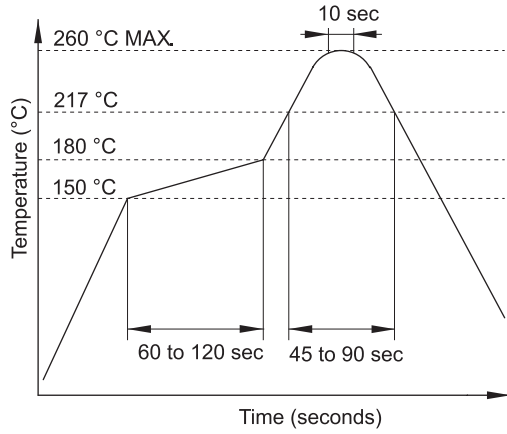Fax: +1 877-227-0440 (tollfree)   info@qantek.com
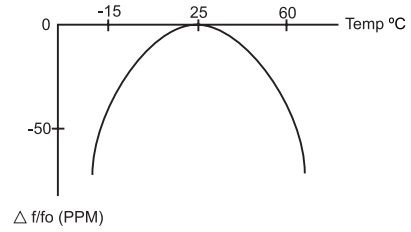
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Marking Code Guide

Contains manufacturer code / lot code

Solder Reflow Profile

Frequency vs. Temperature Characteristics

To calculate the frequency stability the parabolic curvature constant (K) is needed.
For calculating the stability at 45°C?
1- Change in temperature (ΔT) is (45-25) = +20°C
2- Change in frequency is (-0.034 x ($\Delta°C$)²) = (-0.035 x (20)² = -14.0ppm

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