QTC2 Series

1.2x2.0 SMD Tuning Fork

Features

- Low frequency in smallest size SMD
- Seam sealed ceramic package offers excellent environmental & heat resistance
- Extended temperature -40 to +85°C for industrial applications

Applications

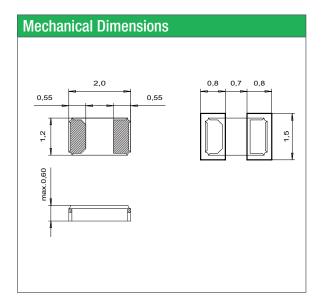
- Commercial and Industrial applications
- · Wireless communications
- PDA and Smartphone
- Time of day applications



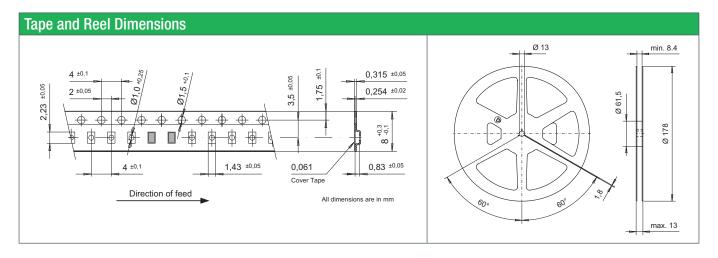




General Specifications			
Nominal Frequency	32.768kHz		
Frequency Tolerance at 25°C	±20ppm		
Temperature Coefficient	-0.034 ± 0.008ppm/Δ °C ²		
Temperature Range (Operating)	-40 to +85°C (-40 to +125°C available)		
Storage Temperature	-55 to +125°C		
Load Capacitance C _L	6pF, 7pF, 9pF, 12.5pF		
Shunt Capacitance C ₀	1.2pF typ.		
Motional Capacitance C ₁	4.0fF typ.		
Series Resistance (R ₁)	50 K Ω typ., 70 K Ω max.		
Drive Level	0.5μW max.		
Aging per Year	±3ppm max.		
Insulation Resistance (M Ω)	500 at 100Vdc ±15Vdc		
Quality Factor	70000 typ.		
Capacitance Ratio	450 typ.		



Part Numbering Guide								
Qantek Code	Package	Nominal Frequency (in kHz)	Load Capacitance	Operating Temperature Range	Frequency Tolerance	Packaging		
Q = Qantek	TC2 = 1.2x2.0 SMD Tuning Fork	32.768	06 = 6pF 07 = 7pF 09 = 9pF 12 = 12.5pF	B = -40 to +85°C D = -40 to +125°C	1 = ±10ppm 2 = ±20ppm	R = 3000pcs Tape&Reel		
Example: QTC232.76812B2R bold letters = recommended standard specification								



Marking Code Guide

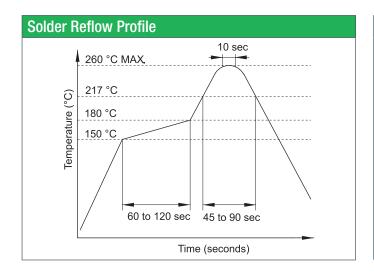
Contains manufacturer code / lot code



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

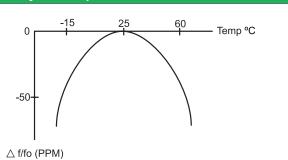
QTC2 Series

1.2x2.0 SMD Tuning Fork



All specifications are subject to change without notice.

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 $(-0.034 \text{ x } (\triangle^{\circ}\text{C})^{2}) = (-0.034 \text{ x } (20)^{2}) = -13.6 \text{ppm}$



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