

Tuning Fork Crystal



Features

- Designed for time of day clocks applications
- Small compact size with performance and economy
- Excellent shock and environmental characteristics
- Cost effective



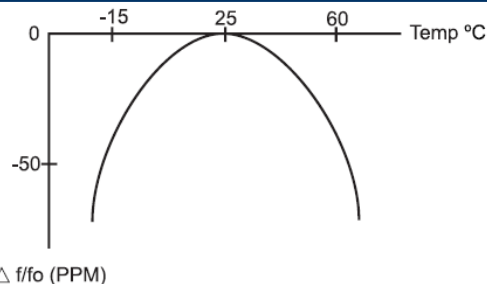
Electrical Specifications

		WT26	WT38	
Normal Frequency		32.768		KHz
Frequency Tolerance at 25°C	Standard	±20		PPM
	Optional	± 15 to ±5		
Aging		±3 (first year)		
Turnover Temperature		25 ±5		°C
Temperature Coefficient		-0.034 ±0.006PPM / Δ°C ²		
Temperature Range (Operating)	Standard	-20 to +70		
	Optional	-40 to +85		
Temperature Range (Storage)	Standard	-55 to +125		
Equivalent Series Resistance		30	35	K Ohm Max
Load Capacitance	Standard	12.5		pF
	Optional	6.0		
Shunt Capacitance		1.6		pF Typ
Motional Capacitance		3.5	2.5	fF Typ
Drive Level		1.0		uW Max
Insulation Resistance		500 at 100Vdc (±15Vdc)		M Ohm Min
Quality Factor		90000	70000	Typ
Capacitance Ratio		460		
Resistance to Shock		±5PPM maximum offset from 75cm drop test in all axes on to a hard surface		-

Frequency Range vs. ESR Values

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 (Δ° C)²) = (-0.034 x (20)²) = -13.6 PPM



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

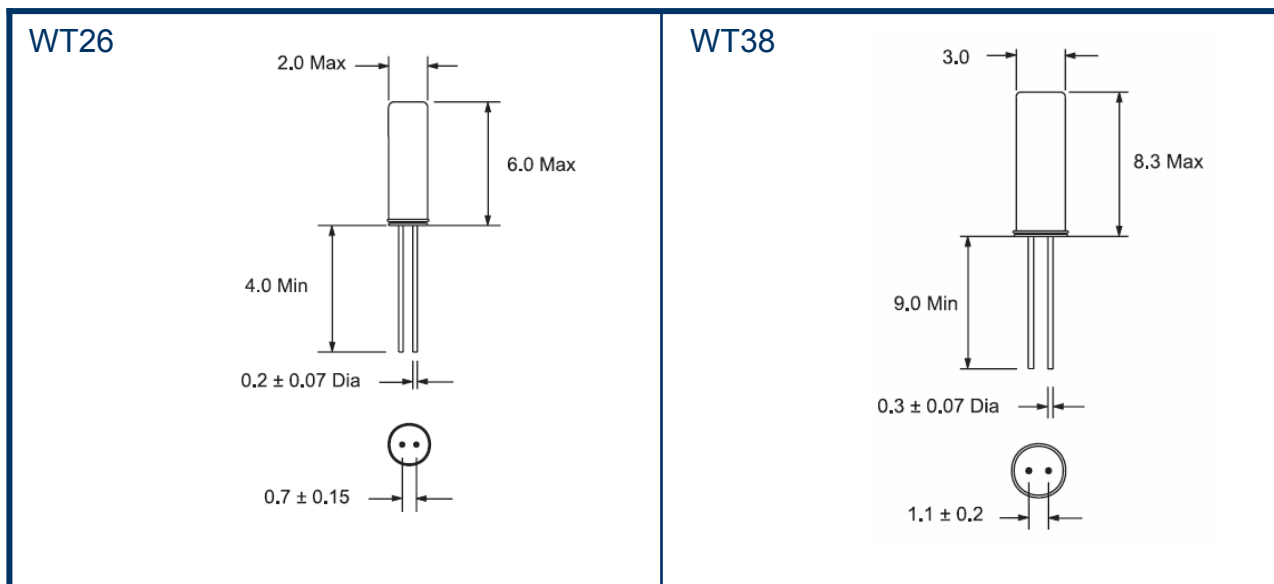
Δ f/fo (PPM)

Part Numbering System

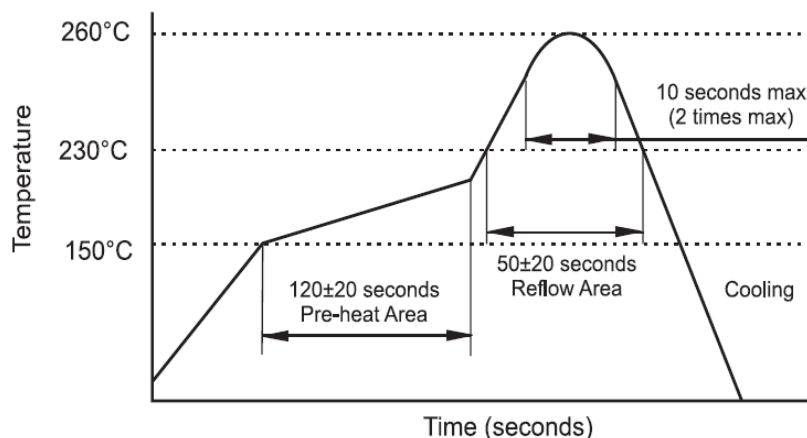
Type	Frequency	Load Capacitance	Tolerance(*1)	Extended Temperature
WT26 WT38	in MHz	in pF	20 PPM (± 5 to ±15PPM)	EXT (only 20PPM)

Examples : WT26-32.768-20 or WT26-32.768-12.5-10PPM or WT38-32.768-12.5-EXT

Mechanical Outline



Solder Reflow Characteristics



Notes:

- 1 - Standard Tolerance do not need to be included in Part Number description.
- 2 - Manual or hand soldering is 350°C max for 3 seconds
- 3 - Product is shipped in bulk package. Each bulk contains 1000 pieces.
- 4 - Specification subject to change without notice.