WT9640

Wavetron

Surface Mount Tuning Fork Crystal Unit
9.6 x 4.0mm package

Pb RoHS Compliant

Features

- Suitable for time of day clock
- Small and compact package
- Ideal for pick and place assembly
- Excellent for automatic and high density surface mounting
- RoHS Compliant

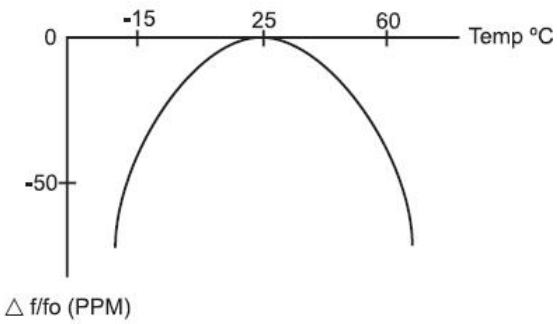
Electrical Specifications

Normal Frequency		32.768	KHz
Frequency Tolerance at 25°C	Standard	±20	PPM
	Optional	± 15	
Aging		±5 (first year)	
Turnover Temperature		25 ±5	°C
Temperature Coefficient		-0.035 ±0.008 PPM/Δ °C²	
Operating Temperature Range	Standard	-40 to +85	
Storage Temperature Range		-55 to +125	
Equivalent Series Resistance (ESR)		35	K Ohm Max
Load Capacitance	Standard	12.5	pF
	Optional	6.0	
Shunt Capacitance		1.6	pF Typ
Motional Capacitance		3.0	fF Typ
Drive Level		1.0	uW Max
Insulation Resistance		500 at 100Vdc (±15Vdc)	M Ohm Min
Quality Factor		70000	Typ
Capacitance Ratio		520	
Resistance to Shock		±5 PPM maximum offset from 75cm drop test in all axes on to a hard surface	

Frequency vs.Temp. Characteristics

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

For Calculating the stability at 45°C?
1 – Chang in temperature (ΔT)is (45-25) = +20°C
2 – Change in frequency is (-0.035x (Δ °C)²) = (-0.035 x (20) ²) = -14PPM



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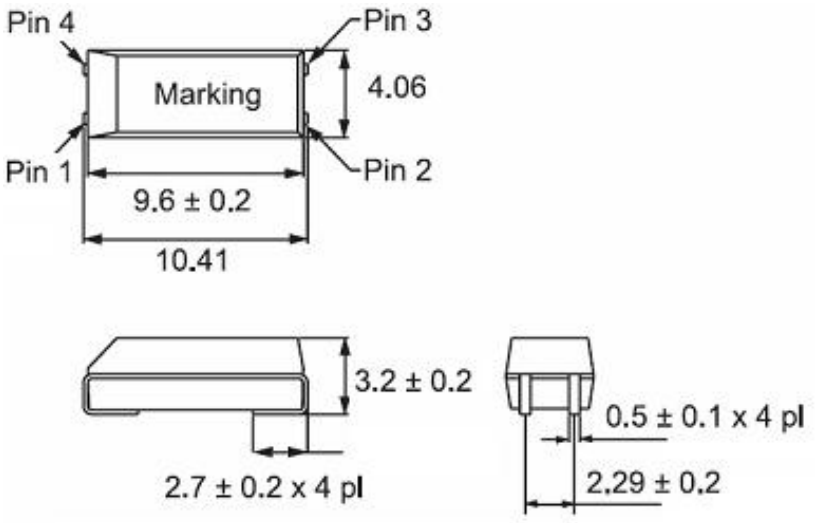
Part Numbering System

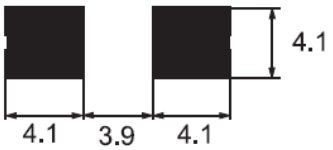
Type		Frequency KHz		Load Capacitance (pF)		Frequency Tolerance		Tape & Reel
WT9640	-	32.768	-	12.5 (Standard) 6 (Option)	-	20 (±20PPM) 15 (±15PPM) (Option)	-	TR

Examples : WT9640-32.768-12.5-TR or WT9640-32.768-6-15-TR

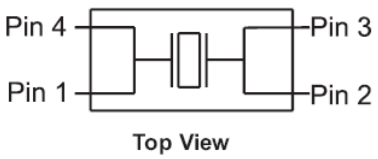
Mechanical Outline



PCB Solder Pad Layout

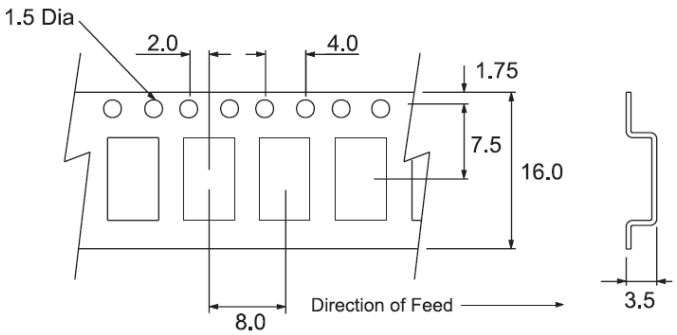


Pad Connection

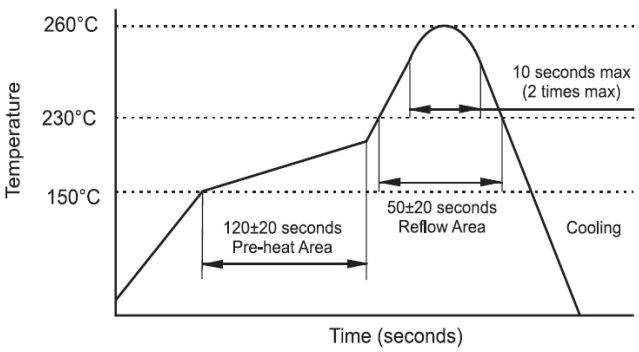


Package is Thermoplastic.
Dimensions are millimeters.

Carrier Tape Dimensions



Solder Reflow Characteristics



Notes:
1 – Standard Temperature Range does not need to be included in Part Number description.
2 – Product is shipped in Tape and Reel configuration. Each reel contains 1000 pieces.
3 – Specification subject to change without notice.

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