

Tuning Fork Crystal



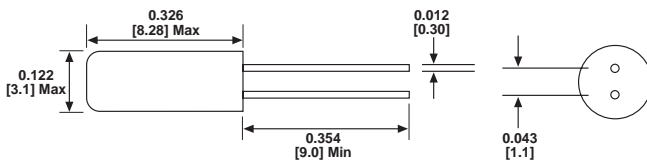
FEATURES

- Miniature package
- Low cost
- KHz frequency
- Tight tolerance

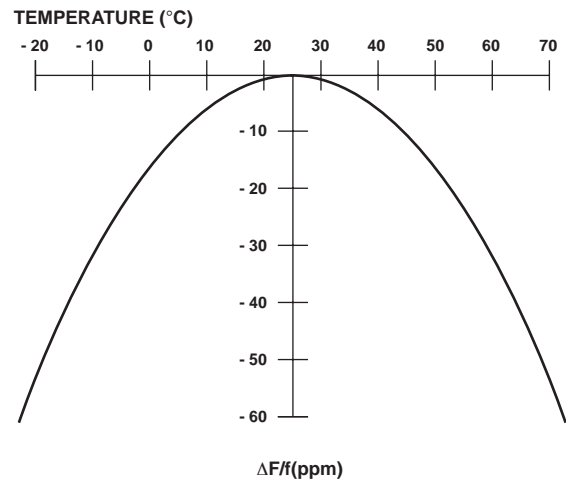
The tuning fork type quartz crystal provides ultimate in size, performance and economic trade-offs. So it is used as a clock source in communication equipment, measuring instrument, microprocessor and other time management applications.

STANDARD ELECTRICAL SPECIFICATIONS						
PARAMETER	SYMBOL	CONDITION	UNIT	MIN	TYPICAL	MAX
Frequency Range	F _O		KHz		32.768	
Frequency Tolerance	ΔF/F _O	at 25°C	ppm		± 20	
Frequency Coefficient	K	ref to 25°C	ppm/(Δ°C) ²			- 0.042
Operating Temperature Range	T _{OPR}		°C	- 10		+ 60
Storing Temperature Range	T _{STG}		°C	- 20		+ 70
Shunt Capacitance	C _O		pF		0.85	2
Motional Capacitance	C ₁		fF	1	2	4
Load Capacitance	CL		pF		12.5	
Insulation Resistance	IR	100V _{DC}	MΩ	500		
Drive Level	DL		μW			1
Aging (first year)	Fa	at 25°C ± 3°C	ppm	- 5.0		+ 5.0
Equivalent Series Resistance(ESR)	Rs		KΩ			35

DIMENSIONS in inches [millimeters]



PARABOLIC TEMPERATURE CURVE



To determine frequency stability, use parabolic curvature (k).
For example: What is stability at 45°C?

- 1) Change in Temperature (°C) = 45 - 25 = 20°C
- 2) Change in Frequency = - 0.042ppm*(Δ°C)
= - 0.042ppm*(20)²
= - 16.8ppm(max)

ORDERING INFORMATION	
XT38T	32.768KHz
MODEL	FREQUENCY/KHz