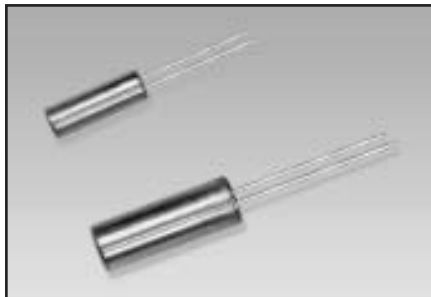


TUNING FORK QUARTZ CRYSTAL

• TC-26 & NC-38 Series



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 application.

FEATURES

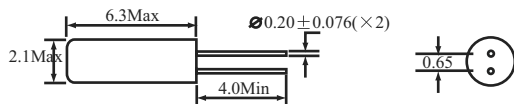
- Miniature Package
- Low Cost
- KHz Frequency
- Tight Tolerance

Electrical Specifications

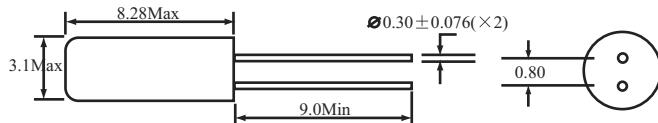
Parameter	Symb	Condition	Min	Typ	Max	Units
Frequency Range	F ₀		30	32.768	100	KHz
Frequency Tolerance	ΔF/ F ₀	AT 25°C	±10	±20	±100	ppm
Temperature Coefficient	K	REF TO 25°C			-0.042	ppm/(Δ°C) ²
Operating Temperature Range	T _{OPR}		-10		+60	°C
Storage Temperature Range	T _{STG}		-20		+70	°C
Shunt Capacitance	C ₀			0.85	2	pF
Motional Capacitance	C ₁		1	2	4	fF
Load Capacitance	CL		6	12.5	Series	pF
Insulation Resistance	IR	100V _{DC}	500			MΩ
Drive Level	DL				1	μW
Aging(First year)	F _a	AT 25°C ±3°C	-5.0		+5.0	ppm
Equivalent Series Resistance(ESR)	R _s	DT-38			35	KΩ
		DT-26			50	KΩ

Mechanical Dimensions(mm)

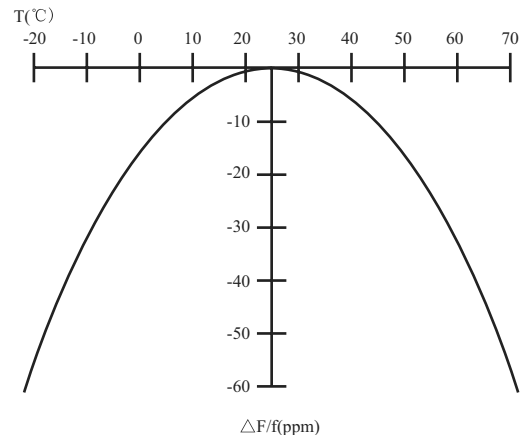
TC-26



NC-38



Parabolic Temperature Curve



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

- 1).change in T(°C)=45-25=20°C
- 2).Change in frequency = -0.042ppm*(Δ°C)²
= -0.042ppm*(20)²
= -16.8ppm(max)