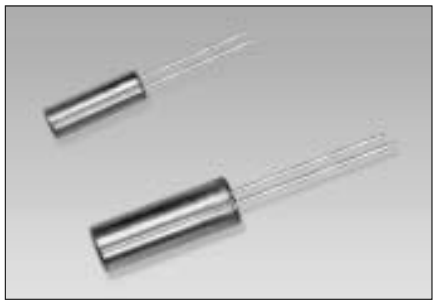
TUNING FORK QUARTZ CRYSTAL

• DT-26 & DT-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

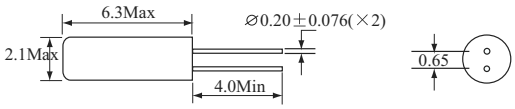
- Miniature Package
- Low Cost
- KHz Frequency
- Tight Tolerance

Electrical Specifications

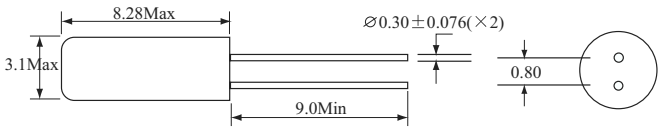
Parameter	Symb	Condition	Min	Typ	Max	Units
Frequency Range	F_O		30	32.768	100	KHz
Frequency Tolerance	$\triangle F/F_O$	AT 25℃	±10	±20	±100	ppm
Temperature Cofficient	K	REF TO 25℃			-0.042	ppm/(△℃)^2
Operating Temperature Range	T_{OPR}		-10		+60	℃
Storage Temperature Range	T_{STG}		-20		+70	℃
Shunt Capacitance	C_O			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)	Fa	AT 25℃±3℃	-5.0		+5.0	ppm
Equivalent Series Resistance(ESR)	Rs	DT-38			35	KΩ
		DT-26			50	KΩ

Mechanical Dimensions(mm)

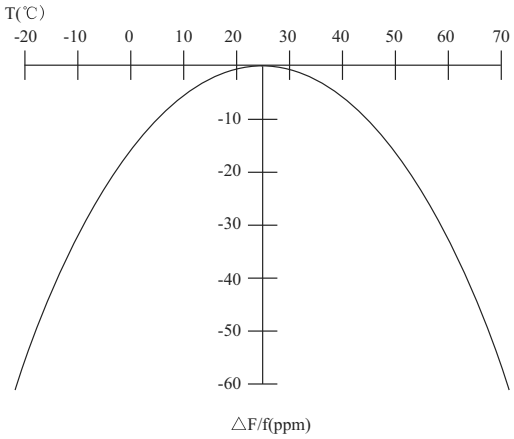
DT-26



DT-38



Parabolic Temperature Curve



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

1).change in T(℃)=45-25=20℃
2).Change in frequency = -0.042ppm*(△℃)^2
= -0.042ppm*(20)^2
= -16.8ppm(max)