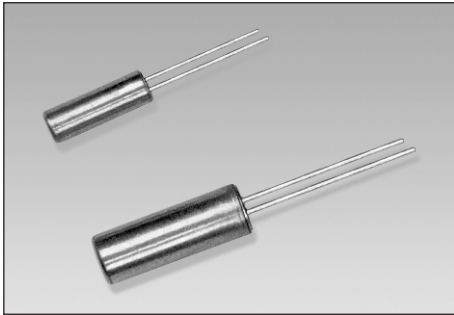




# TUNING FORK QUARTZ CRYSTAL UNITS



## • 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.

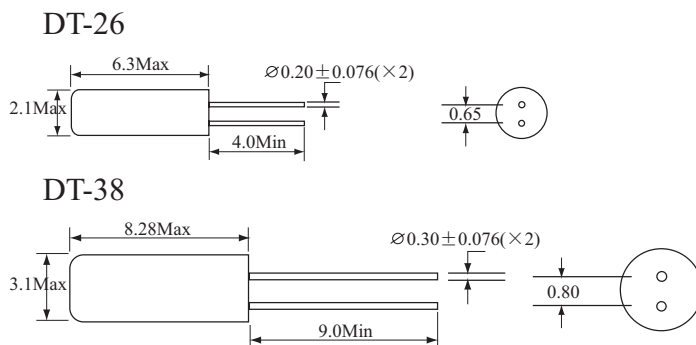
### FEATURES

- Miniature Package
- Low Cost
- KHz Frequency
- Tight Tolerance
- SMD Type SM308

## Electrical Specifications

Item	Type	DT-26	DT-38
Frequency Range	Fo	32.768KHz(30~100KHz)	32.768KHz(30~100KHz)
Load Capacitance	CL	12.5pF	
Frequency Tolerance	$\Delta F / F_0$	$\pm 10\text{ppm}, \pm 20\text{ppm}, \pm 100\text{ppm}(\text{At } 25^\circ\text{C})$	
Equivalent Series Resistance	ESR	50K $\Omega$ max.	35K $\Omega$ max.
Temperature Coefficient	K	$-0.042\text{ppm} * (\Delta^\circ\text{C})^2$ max.	
Operating Temperature Range	T <sub>OPR</sub>	-10~+60 $^\circ\text{C}$	
Storage Temperature Range	T <sub>STG</sub>	-20~+70 $^\circ\text{C}$	
Shunt Capacitance	C <sub>O</sub>	0.85pF typ.	
Motional Capacitance	C <sub>1</sub>	2fF typ.	
Insulator Resistance	I <sub>R</sub>	500M $\Omega$ min. (At 100V <sub>DC</sub> )	
Drive Level	D <sub>L</sub>	1 $\mu\text{W}$ max.	
Aging	F <sub>a</sub>	$\pm 5\text{ppm}$ max. (At 25 $^\circ\text{C}$ , Frist year)	
Packing Unit		1000pcs/bag	

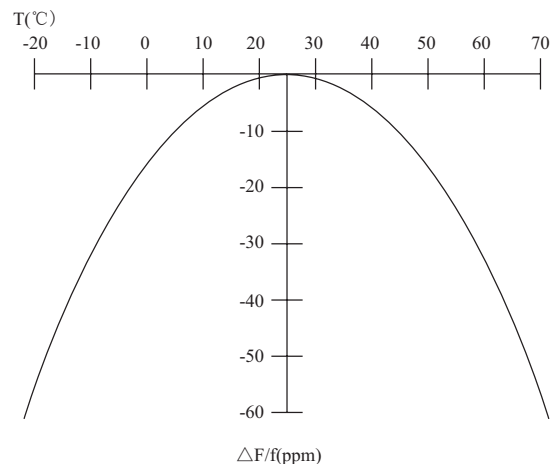
## Mechanical Dimensions(mm)



To determine frequency stability, use parabolic curvature(k).  
For example: What is stability at 45 $^\circ\text{C}$

- 1).change in T( $^\circ\text{C}$ )=45-25=20 $^\circ\text{C}$
- 2).Change in frequency =  $-0.042\text{ppm} * (\Delta^\circ\text{C})^2$   
=  $-0.042\text{ppm} * (20)^2$   
= -16.8ppm(max)

### Parabolic Temperature Curve



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Specifications are subject to change without notice