



## • 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.

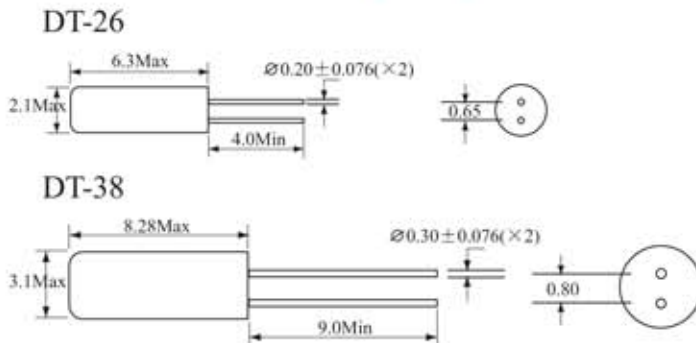
### FEATURES

- 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	$\Delta F / F_0$	$\pm 10\text{ppm}, \pm 20\text{ppm}, \pm 100\text{ppm}$ (At 25°C)	
Equivalent Series Resistance	ESR	50K $\Omega$ max.	35K $\Omega$ max.
Temperature Coefficient	K	$-0.042\text{ppm} * (\Delta T)^2$ max.	
Operating Temperature Range	T <sub>OPR</sub>	-10~+60°C	
Storage Temperature Range	T <sub>STG</sub>	-20~+70°C	
Shunt Capacitance	C <sub>0</sub>	0.85pF typ.	
Motional Capacitance	C <sub>1</sub>	2fF typ.	
Insulator Resistance	I <sub>R</sub>	500M $\Omega$ min. (At 100VDC)	
Drive Level	D <sub>L</sub>	1 $\mu$ W max.	
Aging	F <sub>a</sub>	$\pm 5\text{ppm}$ max. (At 25°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°C

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

### Parabolic Temperature Curve

