

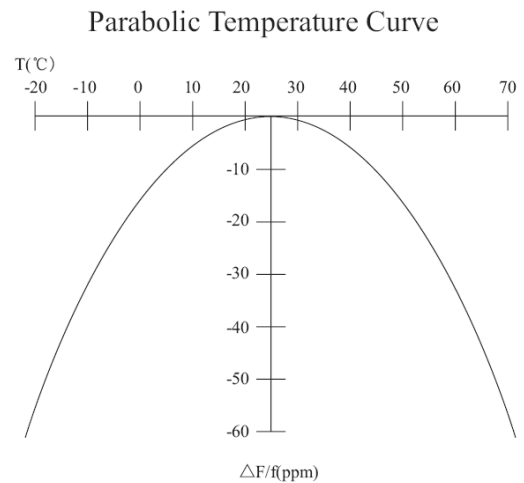
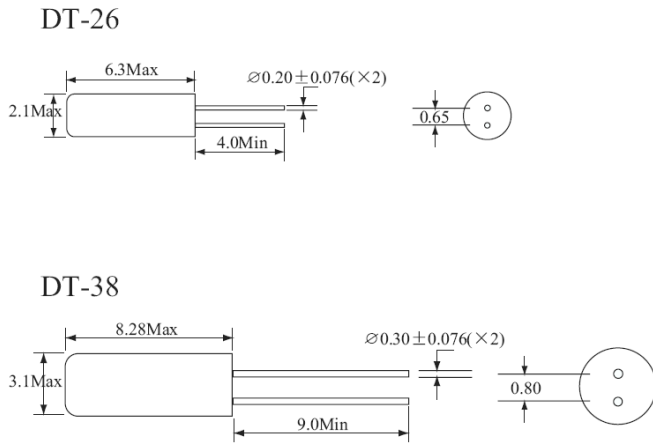
## TUNING FORK QUARTZ UNITS

### DT15 & DT26 & DT38 Series

#### Electrical Specifications

Parameter	Symb	Condition	Min	Typ	Max	Units
Frequency Range	Fo		30	32.768	100	KHz
Frequency Tolerance	$\Delta F / F_0$	AT 25°C	$\pm 10$	$\pm 20$	$\pm 100$	ppm
Temperature Coefficient	K	REF TO 25°C			-0.042	ppm/( $\Delta T$ ) <sup>2</sup>
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>			0.85	2	pF
Motional Capacitance	C <sub>1</sub>		1	2	4	fF
Load Capacitance	CL		6	12.5	Series	pF
Insulation Resistance	IR	100V <sub>DC</sub>	500			MΩ
Drive Level	DL				1	μW
Aging(First year)	F <sub>a</sub>	AT 25°C ± 3°C	-5.0		+5.0	ppm
Equivalent Series Resistance(ESR)	R <sub>s</sub>	DT-38			35	KΩ
		DT-26			50	KΩ

#### Mechanical Dimensions(mm)



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

- change in T(°C)=45-25=20°C
- Change in frequency = -0.042ppm\*( $\Delta T$ )<sup>2</sup>  
= -0.042ppm\*(20)<sup>2</sup>  
= -16.8ppm(max)

#### DT36-A20C18-32K768

Package	Frequency Stability	Frequency Tolerance	Operating temperature Range	Load Capacitance	Nominal Frequency (In MHz)
DT15	A=±10ppm	10=±10ppm	A=0 to +70°C	00=series	25M000=25.000MHz
DT26	B=±20ppm	20=±20ppm	B=-20 to +70°C	10=10pF	32K768=32.768KHz
DT39	C=±30ppm	30=±30ppm	C=-40 to +85°C	18=18pF	
	D=±50ppm	50=±50ppm	D=-40 to +105°C	32=32pF	
	E=±100ppm	00=±100ppm			

Tuning Fork Crystal Units Part Numbering System