



Features

High Stability
Small Size and Low Profile
Excellent Reliability and Aging



Specifications

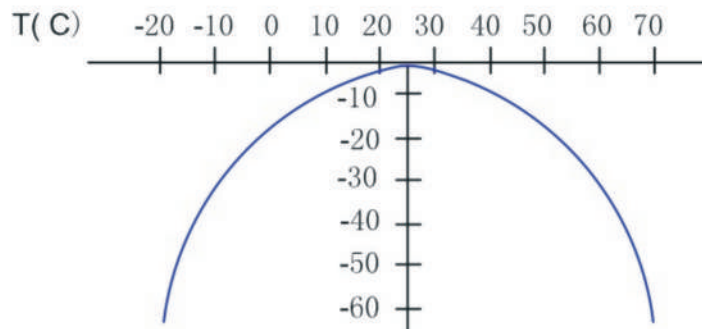
Type		MC146/MC306
频率范围 Frequency Range(KHz)	Tuning fork	32.768KHz
调整频差 (ppm)	Frequency Tolerance (at 25°C)	±20 ~ ±50ppm
温度特性	Temperature Characteristics	
拐点温度 (°C)	Turnover Temperature	25°C ±5°C
二次温度系数	Parabolic Curvature constant	-0.034±0.006 ppm/°C ²
工作温度 (°C)	Operating Temperature	-10°C ~ +60°C
储存温度 (°C)	Storage Temperature Range	-30°C ~ +85°C
等效电阻 (Ω)	Equivalent Series Resistance	65KΩ MAX
静态电容 (pF)	Shunt Capacitance	1.2~2.0pF
负载电容 (pF)	Load Capacitance	12.5pF (Standard)
绝缘电阻 (MΩ)	Insulation Resistance	≥500MΩ//DC100V ± 10V
激励功率 (mW)	Drive Level	1.0 μ W Max
老化率 (ppm/y)	Aging	±5ppm/year

Options Available

Options Available	Item
V	Reel packing/ ammo packing
V	Different reel size options available
V	Special Frequency Tolerance requirement
V	Special ESR

Tuning Fork SMD 32.768KHz(MC146/MC306)

■ Parabolic Temperature Curve



To determine frequency stability, use parabolic curvature
For example: What is the stability at 45°C

- 1) Change in T(°C) = 45 - 25 = 20°C
- 2) Change in frequency = $-0.04 \text{ PPM} \times (\Delta T)^2$
 $= -0.04 \text{ PPM} \times (20)^2$
 $= -16.0 \text{ PPM}$

■ Dimension (Unit: mm)

