

# HC-49USM Crystal (FOUR PADS)

## ●Part Number Guide

T-M-FF.FFFM-LC-FTFS-OT-ESR

T (Type型号): MB=HC-49USM 4 Pads with height of 5.0mm Max  
 MB2=HC-49USM 4 Pads with height of 4.5mm Max  
 M (Mode of Operation振荡模式): F=Fundamental T=Third Overtone, etc  
 F (Frequency标称频率): Normal - 5 digitals of Frequency, e.g. 8.0000M, 12.000M  
 Special - All digitals of Frequency, e.g. 13.225625M  
 LC (Load Capacitance负载电容): 20=20pf 00=series, etc  
 FT (Frequency Tolerance调整频差): 30=±30 ppm, etc  
 FS (Frequency Stability温度频差): 50=±50 ppm, etc  
 OT (Operating Temperature工作温度): 1060=-10°C to +60°C 4085=-40°C to +85°C, etc  
 ESR (Equivalent Series Resistance等效阻抗)



Pb Free    RoHS Compliant  
 Directive 2002/95/EC

## ●Electrical Specifications 电气参数

| Item 项目                    | Spec 规格                                   | Condition 条件  |       |
|----------------------------|---|---|-------|
| Frequency Range 频率范围       | 3.2768MHz~40.68MHz                        | For further questions regarding specifications, please feel free to contact us.<br>对于超出标准的规格, 请联系我们 |       |
| Operation Temperature 工作温度 | -40~85°C, -55~125°C                       |   |       |
| Drive Level 激励功率           | 100 μw max                                | It is recommended to use 1 μw~100 μw<br>推荐1 μw~100 μw   |       |
| Load Capacitance 负载电容      | 7pF~∞                                     | For further questions regarding specifications, please feel free to contact us.<br>对于超出标准的规格, 请联系我们 |       |
| Frequency Tolerance 调整频差   | ±30ppm Standard<br>(±10~±50ppm Available) |   |       |
| Frequency Stability 温度频差   | ±30ppm@-40~85°C<br>±50ppm@-55~125°C       |   |       |
| Aging 老化率                  | ±5ppm                                     |   |       |
| Storage Temperature 储存温度   | -55~125°C                                 |   |       |
| ESR 等效阻抗 (Ω)               | 3.2768MHz ≤ F0 < 4MHz                     |   | 150 Ω |
|                            | 4MHz ≤ F0 < 5MHz                          |   | 120 Ω |
|                            | 5MHz ≤ F0 < 6MHz                          | 100 Ω   |       |
|                            | 6MHz ≤ F0 < 7MHz                          | 80 Ω  |       |
|                            | 7MHz ≤ F0 < 10MHz                         | 60 Ω  |       |
|                            | 10MHz ≤ F0 < 14MHz                        | 50 Ω  |       |
|                            | 14MHz ≤ F0 < 20MHz                        | 40 Ω  |       |
|                            | 20MHz ≤ F0 < 40.68MHz                     | 30 Ω  |       |

## ●Mechanical Dimensions 外型尺寸

Drawing For MB

