

HC-49USM Crystal (TWO PADS)

Part Number Guide

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

T (Type 型号): M-HC-49USM with height of 4.0mm Max
 M2-HC-49USM with height of 3.5mm Max
 M3-HC-49USM with height of 3.2mm Max
 M4-HC-49USM with height of 3.0mm Max

M (Mode of Operation 振荡模式): F-Fundamental T-Third Overtone, etc
 F (Frequency 标称频率): Normal - 5 digits of Frequency, e.g. 8.0000M, 12.000M
 Special - All digits of Frequency, e.g. 13.225625M

LC (Load Capacitance 负载电容): 20-20pF 00-series, etc

FT (Frequency Tolerance 调整频率): 30±±30 ppm, etc

FS (Frequency Stability 温度频率): 50±±50 ppm, etc

OT (Operating Temperature 工作温度): 1050±±10°C to +60°C 4050±±40°C to +85°C, etc

ESR (Equivalent Series Resistance 等效阻抗)

TR (Tape and Reel 编带)

S (Special Requirement 特殊要求)



Pb Free RoHS Compliant
 Directive 2002/95/EC

Electrical Specifications 电气参数

| 型号 | Holder Type | HC - 49USM |
|--------|--|-------------------------------------|
| 频率范围 | Frequency Range | 3.5700MHz to 130.00MHz ※(See Notes) |
| 调整频率 | Frequency Tolerance (ΔF) (at 25°C) | ±10ppm to ±100ppm |
| 温度频率 | Frequency Stability | ±10ppm to ±100ppm |
| 工作温度范围 | Operating Temperature Range | -10°C ~ +60°C to -40°C ~ +85°C |
| 储存温度范围 | Storage Temperature Range | -40°C ~ +85°C / -55°C ~ +125°C |
| 老化 | Aging (25°C) | ±5ppm/year Maximum |
| 静电容 | Shunt Capacitance (C0) | 7pF Maximum |
| 激励功率 | Drive Level | 100µW Typical |
| 绝缘阻抗 | Insulation Resistance (Ra) | 500 Megohms Minimum at D.C 100V |
| 负载电容 | Load Capacitance (CL) | Suggested by customer |

※Notes: For 3.0mm height, lowest frequency is 10 MHz

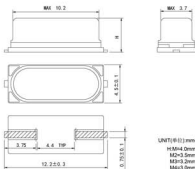
For 3.2mm & 3.5mm height, lowest frequency is 6 MHz

Equivalent Series Resistance and Mode of Operation 等效阻抗和振荡模式

| Frequency Range 频率范围 | ESR (Ω) 等效阻抗 | Mode 振荡模式 |
|----------------------|--------------------|----------------|
| 3,5700 - 4,0000MHz | 150Max | Fundamental |
| 4,0000 - 5,0000MHz | 120Max | Fundamental |
| 5,0000 - 6,0000MHz | 100Max | Fundamental |
| 6,0000 - 7,0000MHz | 80Max | Fundamental |
| 7,0000 - 10,000MHz | 60Max | Fundamental |
| 10,000 - 14,000MHz | 50Max | Fundamental |
| 14,000 - 20,000MHz | 40Max | Fundamental |
| ≥20,000MHz | 30/40 (BT cut) Max | Fundamental |
| 24,000 - 35,000MHz | 100Max | Third Overtone |
| ≥35,000MHz | 80Max | Third Overtone |

Mechanical Dimensions 外型尺寸

Drawing For M



UNIT: (mm) (毫米)
 M4=4.0mm MAX
 M3=3.5mm MAX
 M2=3.2mm MAX
 M=3.0mm MAX

Reflow Condition 回流焊条件

