

晶体谐振器 Crystal Resonator: KX49M KX49M3

Feature 特征

- Surface mount technology for easy and reliable PCB assembly 表面贴装技术，方便电路板组装
- Wide frequency range to support diverse application needs 宽频率范围，满足多样化应用需求
- Excellent aging ensuring long-term frequency stability 极佳老化性能，保证长期稳定
- The third leg provides improved grounding to reduce electromagnetic interference 第三引脚用于接地以减少电磁干扰



General Specifications 规格参考

| PARAMETER | 性能参数 | KX49M | KX49M3 |
|--------------------------------|--------|------------------------------|----------------|
| Frequency Range | 频率范围 | 3.5MHz ~ 80MHz | 3.5MHz ~ 70MHz |
| Oscillation Mode | 振荡方式 | 基频/泛音 | |
| Frequency Tolerance (25°C±3°C) | 调整频差 | ±10ppm, ±20ppm, ±30ppm (max) | |
| Load Capacitance | 负载电容 | Series or Parallel (8~32pF) | |
| Frequency Stability | 温度频差 | 见下表 | |
| Operating Temperature Range | 温度范围 | 见下表 | |
| Equivalent Series Resistance | 谐振电阻 | 20~200 Ω | |
| Drive Level | 激励电平 | 100μW typical, 300μW max | |
| Shunt Capacitance | 静电容 | 5pF max | 7pF max |
| Insulation Resistance | 绝缘电阻 | 500MΩ min | |
| Storage Temperature Range | 储存温度范围 | -55°C to +125°C | |
| Aging Per Year | 年化率 | ±3ppm/year ~ ±5ppm/year | |

Frequency Stability 温度频差 VS Operating Temperature Range 温度范围

| Temp. Code | Temp.\ppm | ±20 | ±25 | ±30 | ±50 | ±100 |
|------------|-----------|-----|-----|-----|-----|------|
| B | -20~70°C | ○ | ○ | ○ | ○ | ○ |
| C | -40~85°C | | ○ | ○ | ○ | ○ |
| E | -40~105°C | | | | ○ | ○ |
| F | -55~125°C | | | | | ○ |

NOTE: Please consult for other specifications 若有其它规格需求请告知

Part Number Guide 产品编号

| | | | | | | | | | | | | | | |
|--------------|---|---------------|---|----------|---|-----------|---|----------|---|-----------|---|-----------|---|-----------|
| <u>KX49M</u> | - | <u>24.576</u> | - | <u>F</u> | - | <u>20</u> | - | <u>C</u> | - | <u>30</u> | - | <u>30</u> | - | <u>NS</u> |
| ↓ | | ↓ | | ↓ | | ↓ | | ↓ | | ↓ | | ↓ | | ↓ |
| 型号 | - | 标称频率 | - | 振荡方式 | - | 负载 | - | 工作温度 | - | 调整频差 | - | 温度频差 | - | 特殊要求 |

'KX': 产品系列
'49M': 封装尺寸
MHz

(In MHz)

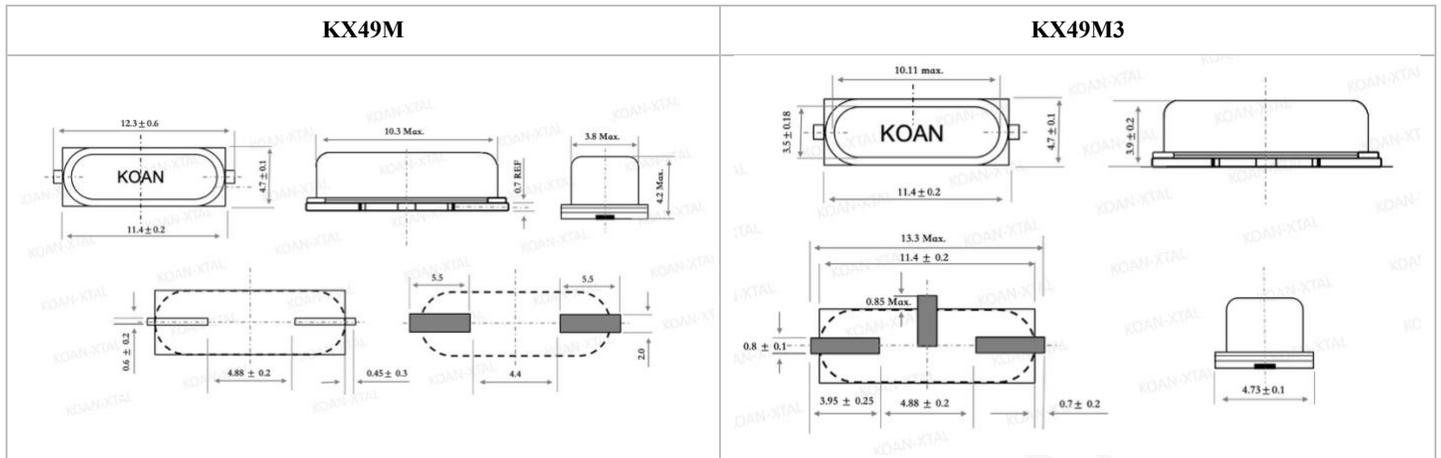
F-基频
T-泛音

B: -20~+70°C
C: -40~+85°C
E: -40~+105°C
F: -55~+125°C

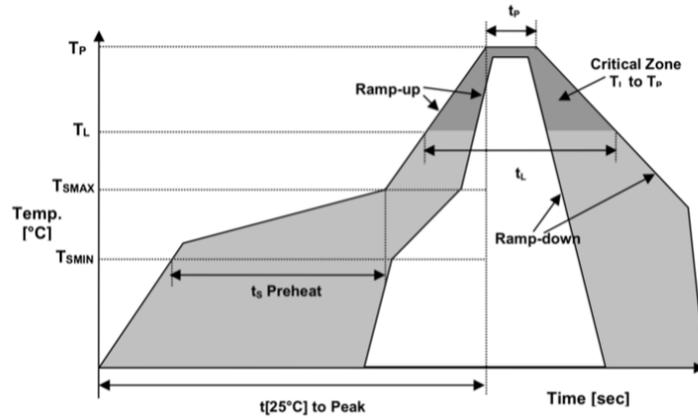
10 = ±10ppm
20 = ±20ppm
30 = ±30ppm

10 = ±10ppm
20 = ±20ppm
30 = ±30ppm
50 = ±50ppm
100 = ±100ppm

Outline Dimensions (Unit: mm) 外形尺寸



Reflow Profile 回流焊



| | | | |
|-------------------------------------|------------|-------------------|-------------|
| Temperature Min Preheat | 最低预热温度 | T_{smin} | 150°C |
| Temperature Max preheat | 最高预热温度 | T_{smax} | 200°C |
| Time (T_{smin} to T_{smax}) | 时间差 | T_s | 60~120 sec |
| Temperature | 温度 | T_L | 217°C |
| Peak Temperature | 最高温 | T_p | 260 °C |
| Ramp-up Rate | 升温速度 | R_{up} | 3°C/sec max |
| Ramp-down Rate | 降温速度 | R_{down} | 6°C/sec max |
| Time within 5°C of Peak Temperature | 最高温度停留时间 | t_p | 30 sec |
| Time $t[25°C]$ to peak temperature | 25度到最高温度时间 | $t[25°C]$ to peak | 480 sec |
| Time | 时间 | t_L | 60~150 sec |