

晶体谐振器 Crystal Resonator: KX49M4 KX49M4G

Feature 特征

- Low aging rate for long-term frequency stability 老化率低
- AT or BT cut crystal for superior thermal characteristics AT 或 BT 切割晶体
- Excellent vibration and shock resistance 抗振动和抗冲击能力强
- High stability and reliability for industrial applications 高稳定性与高可靠性



General Specifications 规格参考

PARAMETER	性能参数	KX49M4	KX49M4G
Frequency Range	频率范围	3.5MHz ~ 70MHz	
Oscillation Mode	振荡方式	基频/泛音	
Frequency Tolerance (25°C±3°C)	调整频差	±5ppm ~ ±30ppm	
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	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	年老化率	±3ppm/year ~ ±5ppm/year	

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

Temp. Code	Temp. ppm	±10	±20	±30	±50	±100
B	-20~70°C	○	○	○	○	○
C	-40~85°C		○	○	○	○
D	-55~85°C			○	○	○
E	-55~105°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>KX49M4G</u>	-	<u>12.000</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
'4': 引脚数
'G': 引脚 2 和 3 接地或 N.C.

(In MHz)

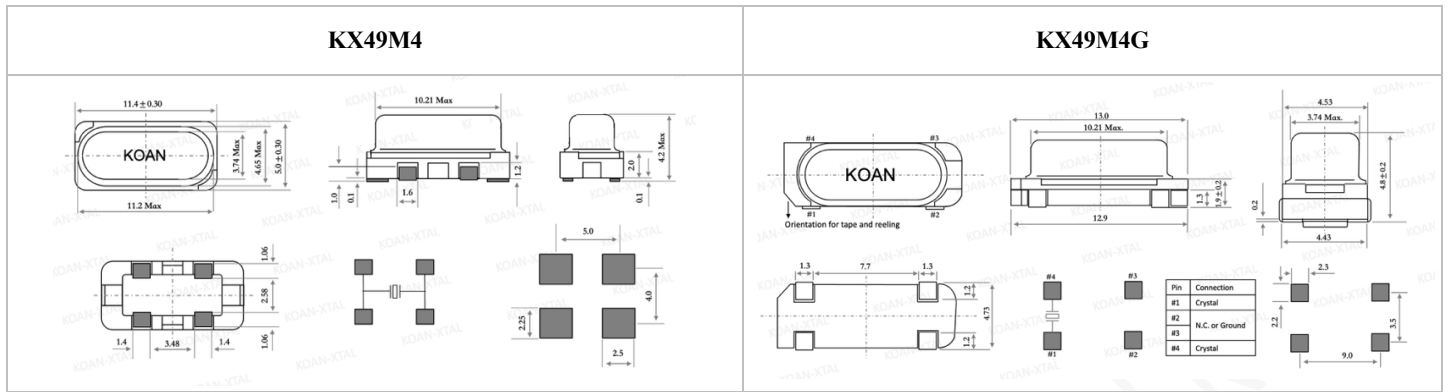
F-基频
T-泛音

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

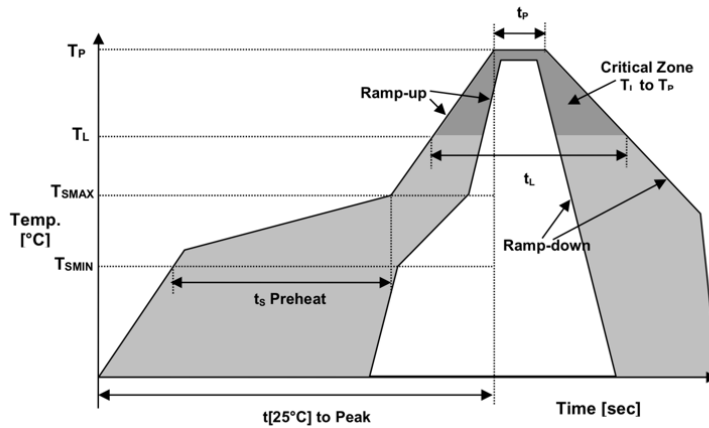
05 = ±5ppm
10 = ±10ppm
15 = ±15ppm
20 = ±20ppm
30 = ±30ppm

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

■ Revision 版本

版本 Rev.	修改页 Revise Page	修改内容 Revise Contents	日期 Date	修改人 Reviser
0	N/A	Initial issue	2025.06.23	JZ