



SMD QUARTZ CRYSTAL RESONATOR

石英晶体谐振器



SMD Tuning Fork Crystal 2.0×6.0 mm

- Tuning fork crystal in standard package
- 32.768 KHz standard
- ±10 ppm available
- Excellent Reliability Performance
- Reflow soldering temperature: 250°C max



RoHS compliant

★ PARAMETERS

技术参数

PARAMETERS	参数	SPECIFICATION 规格
Frequency Range	频率范围	32.768KHz standard, 20.000~160.000KHz
Loading Capacitance	负载电容	12.5pF Std. 6 to 20pF Series available
Drive Level	激励电平	1.0 μ W Max
Frequency Tolerance	频率偏差	±10ppm~±30ppm (at 25°C)
Equivalent Resistance	谐振电阻	50K Ω Max
Temperature coefficient	温度曲线系数	-0.04×10 ⁻⁶ /°C ² max
Operating Temp. Range:	工作温度范围	-20~+70°C / -40~+85°C
Storage Temp. Range:	储存温度范围	-55~+125°C
Aging (25°C, First Year)	年老化率	±3ppm max

○ All specification subject change without notice. 规格变化, 恕不另行通知。

★ FREQUENCY STABILITY VS. TEMPERATURE 频率温度特性

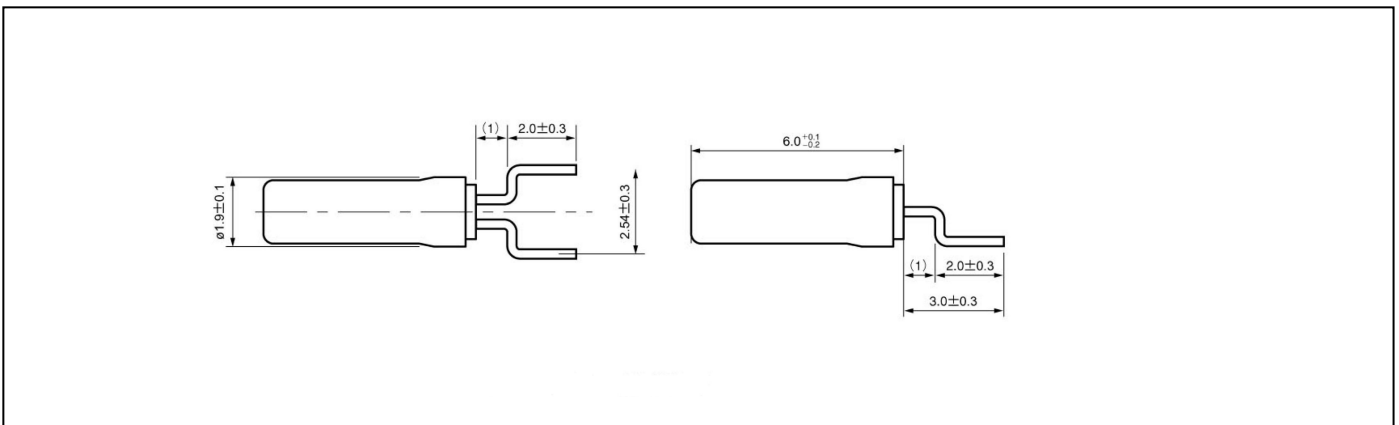
★ ESR (SERIES RESISTANCE RS)

Operation Temperature Range	Frequency Stability	
	-80ppm	-160ppm
-20°C~+70°C	●	
-40°C~+85°C		●

Frequency	20-30KHz	30-40KHz	40-70KHz	70-160KH
ESR	X)	X)	X)	X)

● standard ○ available

★ DIMENSIONS & LAND PATTERN LAYOUT (Unit: mm) 外形尺寸



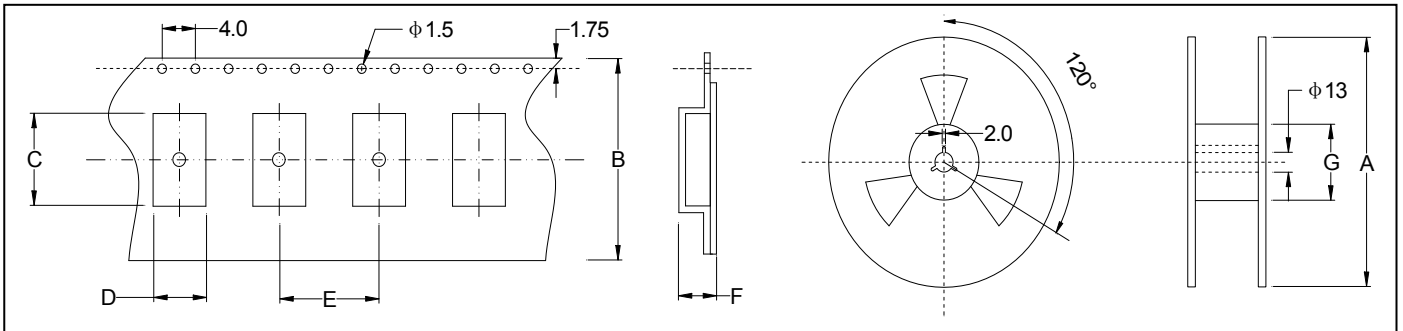
★ PART NUMBER GUIDE 部件号示例

e.g. HLX32.768K12.5FM206-20 (*FM206=2.0×6.0mm SMD)

	Quartz Crystal Resonator 石英晶体谐振器	Frequency 频率	Load Capacitance 负载电容	Package 盒型	Frequency Tolerance 常温频差 ppm
HL	X	32.768KHz	12.5	FM206	20

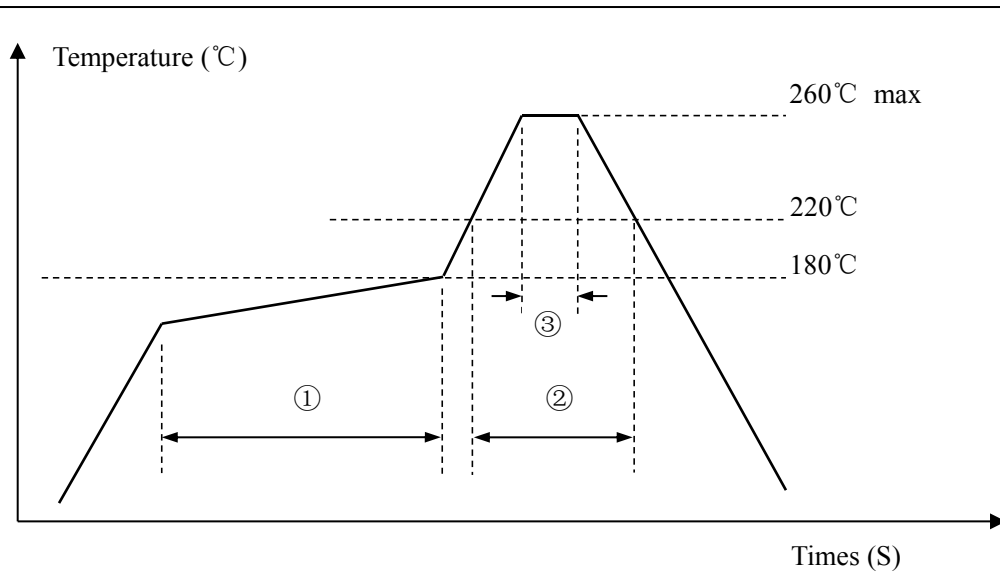


★ TAPING SPECIFICATION (Unit: mm) 编带规格



	A	B	C	D	E	F	G
FM206	178±2.0	16.0±0.3	8.4±0.1	4.0±0.1	8.0±0.1	2.8±0.1	60.5±1.0
1000 pcs per reel							

★ REFLOW SOLDERING PROFILE 回流焊特性



Pb free reflow A	①	Preheat	160~180°C	100sec. max
	②	Primary heat	220°C	35sec. max
	③	Peak	260°C	10sec. max