Ⅰ晶振电性能 Electrical Characteristics

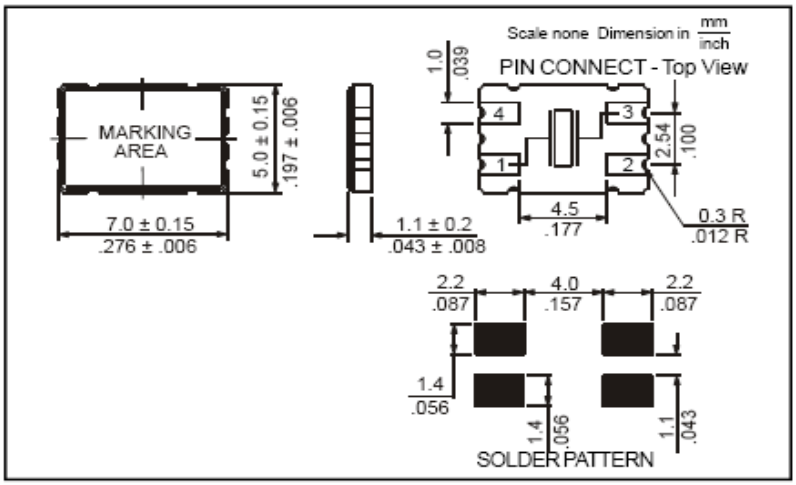
1. 标称频率 Nominal Frequency: 14.7456 MHZ
2. 振动模式 Mode of vibration: 基频 / AT 切
3. 工作温度范围 Operating Temperature Range: － 20 ℃～＋ 70 ℃
4. 保存温度范围 Storage Temperature Range: －55℃～＋125℃
5. 频率偏差 Adjustment Tolerance: ± 20 ppm Max
6. 温度偏差 Tolerance over the Temperature Range: ± 30 ppm Max
7. 等效电阻 Equivalent Series Resistance: 50 Ω Max. at 25℃
8. 静电容 Shunt Capacitance: 5.0 pF Max
9. 气密性测试 Leakage: Gross Leak: $1.3*10^{-5}Pa.m^3/s$ Max; Fine Leak: $2.1*10^{-9}Pa.m^3/s$ Max
10. 老化率 Aging: ±5ppm Max/Y
11. 外形尺寸 Dimensions: 7.0*5.0*1.1mm

Ⅱ. 测试条件 Test Condition

1. 负载电容 Load Capacitance: 18.0 pF
2. 激励功率 Level of Drive: 100 μ W
3. 测试仪表 Equipment: HP-E5100 Net analysis meter/AX-150U; Heli0t-706/w Helium Leak Test

SMD7050 晶体外型尺寸　Dimensions　　UNIT: mm

● OUTLINE DRAWING



SMD7050 晶体外型尺寸（mm）

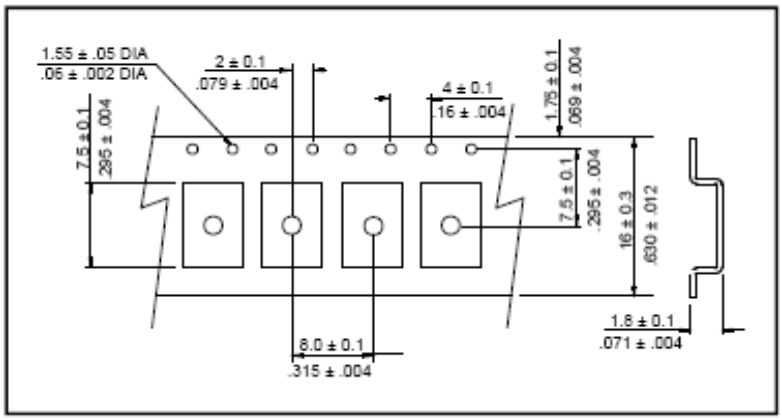
包装　PACKING

每 1000 只晶体进行编带包装，每 1 万只晶体放入一包装盒内。同时，包装形式也依赖于具体数量而更改。

Deposit 1000 pieces of the quartz crystal units in tape model, and pack enough bags in a packing case to make a 10,000 pieces package. The packing format may be subject to change by quantity.

SMD7050 编带尺寸图

● CARRIER TAPE DIMENSIONS



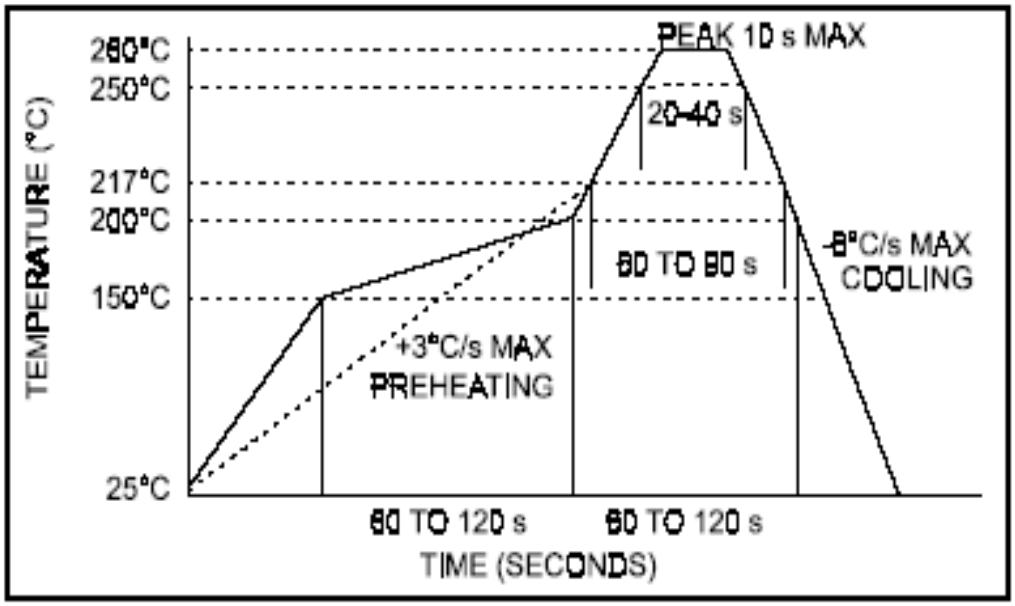
Ⅷ．可靠性试验项目　　Reliability Test Items

1．机械性能试验　Mechanical Performance Tests

试 验 项 目 Test Item		试 验 方 法 Test Method	规格 No. Spec. No
1-1	耐冲击 shock	从 75 厘米高，3 次，自由落在 3 厘米的硬木板上 Orient the sample in any attitude and drop it three times from a height of 75 cm onto a hardwood board with a thickness of 3 cm	A
1-2	耐振性 Vibration	振动频率 10～55Hz,振幅 1.5mm 时间 1.5 分钟循环,在 X、Y、Z 轴方向各 2 小时，总计 6 小时。 Subject the sample to 1.5-minute cycles of frequencies of 10 to 55 Hz and amplitudes of 1.5mm for two hours in each of the X,Y, and Z directions, or 6 hours in total.	A
1-3	气密性 Leaking Test	用氦质谱仪测试或加压测绝缘电阻 Take measurements with a helium leakage detector，or measure insulation resistance under pressure.	E

1．回流焊曲线图

● SOLDER REFLOW PROFILE



Ⅷ. 可靠性试项目　　Reliability Test Items

3. 环境测试　Environmental　Tests

试 验 项 目 Test　Item		试 验 方 法 Test Method	规格 No. Spec. No.
2-1	耐寒性 Cold	在-40℃环境中非工作状态放置 500 小时 Expose the sample in an inoperative mode to 500 hours in a -40℃	A
2-2	耐热性 Dry heat	在+85℃环境中非工作状态放置 500 小时 Expose the sample in an inoperative mode to 500 hours in a 85℃	B
2-3	耐湿性 Damp heat	在温度+65℃，湿度 95%环境中非工作状态放置 500 小时 Expose the sample in an inoperative mode to 500 hours in a 65℃，and 95%RH	B
2-4	热冲击 Thermal shock	在-40℃保持 30 分钟，100℃保持 30 分钟，循环 5 次。 Subject the sample to 5 temperature variation cycles at -40℃ for 30 minutes and +100℃ for the next 30 minutes in each cycles.	A

SPECIFICATIONS 规格

规格 No. Spec No.	规　　格 Specification
A	试验前后,频率变化在±5ppm 以内,等效电阻变化在要求范围内。 Any variation between the pre- and post-test frequencies shall remain within ±5ppm. The post-test equivalent series resistance shall remain within its specified tolerance range.
B	试验前后,频率变化在±10ppm 以内,等效电阻变化在要求范围内。 Any variation between the pre- and post-test frequencies shall remain within ±10ppm. The post-test equivalent series resistance shall remain within its specified tolerance range.
C	试验前后,外观未见明显损伤，气密性未破坏。 After each test, no visible damage shall be manifested, nor shall the hermetic seal break down.
D	上锡量至少在 90%以上. At least 90% of each dipped area shall be covered by fresh solder
E	1×10^{-2} μPa．m^3/s　Max　or　IR≥500MΩ

※测试在室温 25±2℃环境中进行，每次试验后，样品必须在 25±2℃环境中恢复 2 小时以上。

※ Measurements shall be taken at 25±2℃,and after each test, the sample be exposed to two hours at　25±2℃