



四川索斯特电子有限公司  
Sichuan Source-Set Electronics Co., Ltd  
石英晶体规格书



规 格 书  
**SPECIFICATIONS**

规格书编号/ID: \_\_\_\_\_

物料描述/

Product Description: SMD CRYSTAL SEAM 1.6\*1.2

料号/

Part Number: SCOYR48X00000LBPM

制作人/

Approved by: 陈 丽

审核人/

Checked by: 陈晓群

日期/

Date: 2025/6/21

盖章/

Stamp: \_\_\_\_\_

客户签署/

**Customer signature required**

公司名称/

Company: \_\_\_\_\_

客户料号/

Customer Part Number: \_\_\_\_\_

承认人/

Approved by: \_\_\_\_\_

批准人/

Confirmed by: \_\_\_\_\_

日期/

Date: \_\_\_\_\_

盖章/

Stamp: \_\_\_\_\_

● ELECTRICAL PARAMETERS

地址/Addr: 四川省泸州市泸县工业园 B 区明星路 204 号(坤羽)五、六栋

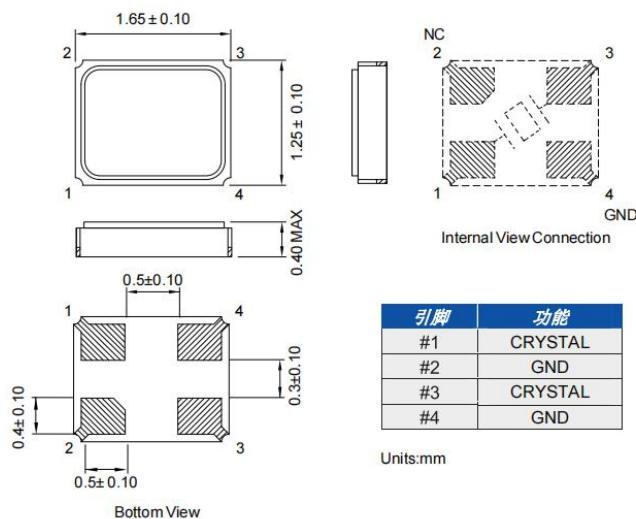
电话/Tel: 0830-8172777、8106299

传真/FAX: 0830-8106266

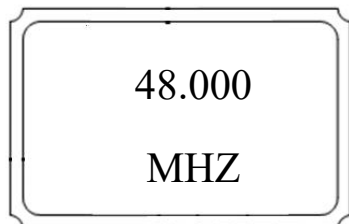
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| 谐振器产品技术指标                                     | Min                                         | Max | Units      |
|-----------------------------------------------|---------------------------------------------|-----|------------|
| 1.Holder Type(型号规格)                           | SEAM 1.6*1.2                                |     |            |
| 2.Mode of Oscillation (振动模式)                  | Fundamental                                 |     |            |
| 3.Frequency (标称频率)                            | 48.000000                                   |     | MHz        |
| 4.Load Capacitance (CL) (负载电容)                | 8                                           |     | pF         |
| 5.Shunt Capacitance (Co) (静态电容)               | 0                                           | 2   | pF         |
| 6.Equivalent Resistance (谐振电阻)                |                                             | 40  | $\Omega$   |
| 7.Frequency Tolerance at 25°C (调整频差)          | -10                                         | 10  | ppm        |
| 8.Stability over operation temperance (温度频差)  | $\pm 20$                                    |     | ppm        |
| 9.Insulation Resistance (at D.C. 100V) (绝缘电阻) | 500                                         |     | M $\Omega$ |
| 10.Drive Level (激励功率)                         | 100                                         |     | uw         |
| 11.Operating Temperature Range (工作温度范围)       | -40                                         | 85  | °C         |
| 12.Storage Temperature Range (储存温度范围)         | -40                                         | 125 | °C         |
| 13.Aging (老化率)                                | $\pm 3$                                     |     | ppm/year   |
| 14.Other(其他)                                  | Moisture Sensitivity Level (零件湿敏等级) Level 1 |     |            |

#### OUTLINE DIMENSIONS(UNIT:mm) 外形尺寸 (单位: mm)



#### ● Marking (标记)

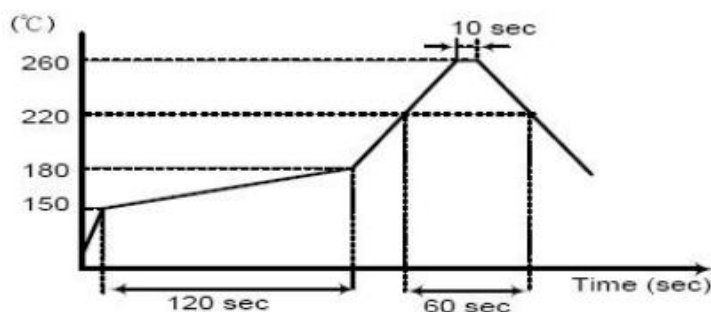


● SUGGESTED REFLOW PROFILE (回流焊曲线图)

Total time: 200sec. Max. (总时间: 200秒 最大)

Solder melting point: 220℃ (熔点 220℃)

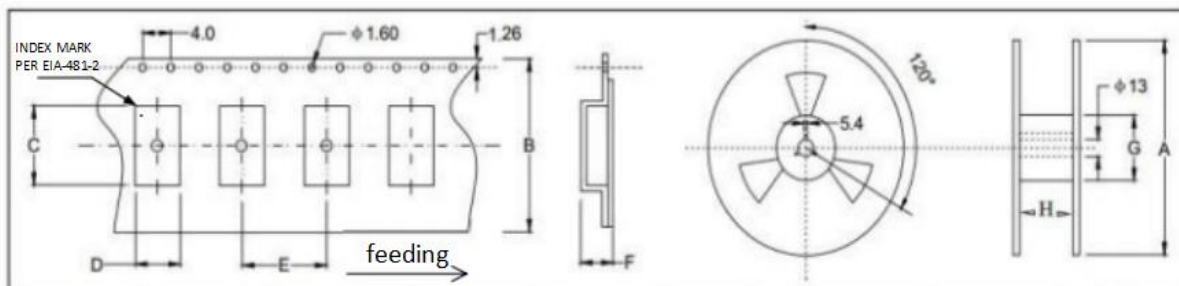
| Profiles Feature (特性)                         |              | Pb-Free Assembly |
|-----------------------------------------------|--------------|------------------|
| Average Ramp-up Rate(Ts max to Tp)            | 平均升温速度       | 3℃/second Max    |
| Preheat                                       | 预热           |                  |
| ■ Temperature Min (Ts min)                    | 最低温度         | 125℃             |
| ■ Temperature Max (Ts max)                    | 最高温度         | 200℃             |
| ■ Time (ts min to ts max)                     | 从最低到最高时间     | (60~180) seconds |
| Time maintained above                         | 维持上述时间       |                  |
| ■ Temperature(T1)                             | 温度           | 217℃             |
| ■ Time(tp)                                    | 时间           | (60~150) seconds |
| Peak/Classification Temperature(Tp)           | 最高点温度        | 260℃             |
| Time within 5℃ of actual Peak Temperature(tp) | 高温维持时间       | (20~40) seconds  |
| Ramp-down rate                                | 降温速度         | 6℃/second max    |
| Time 25℃ to Peak Temperature                  | 从25℃到最高温度的时间 | 8 minutes max    |
| Suggest reflow times                          | 建议 reflow次数  | 3 Times max      |



- PACKING (包装) 3Kpcs/REEL

## 编带尺寸图

Taping Dimensions



| Size              | A       | B       | C        | D        | E       | F        | G        | H       |
|-------------------|---------|---------|----------|----------|---------|----------|----------|---------|
| SMD-1612          | 180±2.0 | 8.0±0.3 | 1.85±0.1 | 1.45±0.1 | 4.0±0.1 | 0.45±0.1 | 61.0±1.0 | 8.0±1.0 |
| 3000 pcs per reel |         |         |          |          |         |          |          |         |

| ● RELIABILITY SPECIFICATIONS (信赖度试验) |                                                   |                                                                                                                                                                                                                                    |                                      |
|--------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| No                                   | Test Item (测试项目)                                  | Test Conditions (测试条件)                                                                                                                                                                                                             | Reference (参考)                       |
| 1                                    | High Temperature High Humidity Storage (高温、高湿、储存) | Temperature: 85°C±3°C<br>温度: 85°C±3°C<br>Relative Humidity: 85%RH<br>相对湿度: 85%RH<br>Time: 96 Hours<br>时间: 96小时                                                                                                                     | JIS C5023                            |
| 2                                    | High Temperature Storage (高温储存)                   | Temperature: 125°C±3°C<br>温度: 125°C±3°C<br>Time: 96 Hours<br>时间: 96小时                                                                                                                                                              | MIL-STD-883E<br>Method 1005.8        |
| 3                                    | Low Temperature Storage (低温储存)                    | Temperature: -40°C±3°C<br>温度: -40°C±3°C<br>Time: 96Hours<br>时间: 96小时                                                                                                                                                               | MIL-STD-883E<br>Method 1013          |
| 4                                    | Thermal Shock (温度冲击)                              | Temperature1: -55°C±5°C<br>温度1: -55°C±5°C<br>Temperature2: 85°C±5°C<br>温度2: 85°C±5°C<br>Temperature change between T1 and T2 5 min<br>T1和T2温度在5分钟内改变<br>10cycles maintain T1 and T2 for 30 minutes each mone cycle<br>每次循环30分钟共10次 | MIL-STD-202F<br>Method 107 Condition |
| 5                                    | RESISTANCE TO SOLDER HEAT (耐焊接热)                  | Solder Temperature: 260°C±5°C<br>焊槽温度: 260°C±5°C<br>Time: 10±1 Seconds<br>时间: 10±1秒                                                                                                                                                | MIL-STD-202F<br>Method 210E          |
| 6                                    | Solderability(可焊性)                                | The solder pot temperature is 245±5°C, dwell time 5±0.5sec<br>245±5°C焊锡槽浸润5±0.5秒                                                                                                                                                   | J-STD-002B                           |
| 7                                    | Drop Test (落下试验)                                  | 3 Times Free Fall from 75cm height table to 3cm thickness hard wood board<br>从75cm高度3次跌落到3cm厚硬质木板上                                                                                                                                 | JIS C6701                            |
| 8                                    | MECHANICAL SHOCK (机械冲击)                           | Half sine wave, 1000 G<br>半正弦波, 加速度1000G<br>3 Times for all 3 directions<br>X、Y、Z 三个相互垂直方向各三次                                                                                                                                      | MIL-STD-202F<br>Method 213B          |
| 9                                    | Vibration (机械振动)                                  | Frequency Range: 10Hz~55Hz<br>频率范围: 10Hz~55Hz<br>Amplitude: 0.75mm<br>振幅: 0.75mm<br>2 Hours in each direction, total 6 Hours<br>X、Y、Z 三个相互垂直方向各振动2小时                                                                               | MIL-STD-883E<br>Method 2007.3        |
| 10                                   | Leakage Test (气密性)                                | Take measurements with a helium<br>Leakage detector<br>氦质检漏<br>Leakage Rate ≤ 1×10 <sup>-3</sup> Pa cm <sup>3</sup> /s<br>漏率 ≤ 1×10 <sup>-3</sup> Pa cm <sup>3</sup> /s                                                            | MIL-STD-883E                         |