

深圳市晶力源科技有限公司

Shenzhen Jingliyuan Technology Co., Ltd.

产品规格书

SPECIFICATION

CUSTOMER(客户): _____
PRODUCT TYPE(型号): SMD-1.6*1.2MM(1612)
NOMINAL FREQ(频率): 27.000MHZ
JLY P/N(料号): Y161227MBBCX
Brand(品牌): JLYE晶力源
CUSTOMER P/N(客户料号): _____

| Client Opinion (客户意见) | | | |
|-----------------------|-----------------|------------------|-----------------------|
| Hardware PL (工程) | QPM/SQE (品质) | Approval (核准) | Recognition (承认日期) |

| Provider (供应商) | | | |
|----------------|---------------|------------------|------------------------|
| Drawn (制作) | Check (审核) | Approval (核准) | Submitted Date (日期) |
| 刘来凤 | 徐超 | 李元 | 2025-12-22 |

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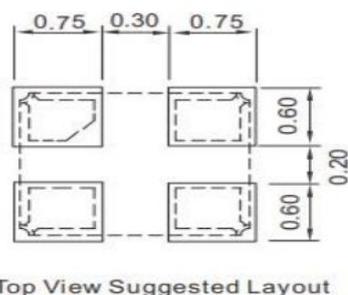
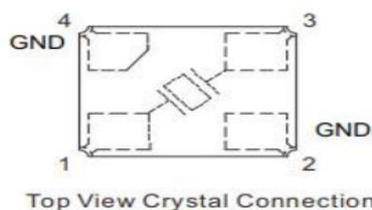
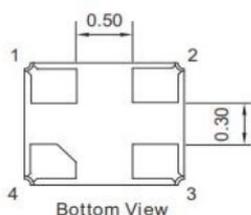
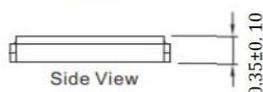
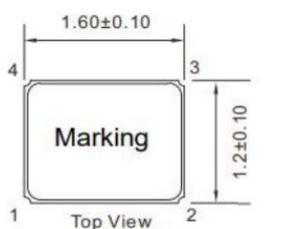
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● 石英晶体参数规格 (QUARTZ CRYSTAL UNIT SPECIFICATION)

| NO | 项目 Item | 代码 Symbol | 电气特性规格 | | | | 备注 Notes |
|----|--|--------------|-------------|------------|------------|-------------|--|
| | | | 下限 Min. | 中心 Typ. | 上限 Max. | 单位 Units | |
| 1 | 标称频率Nominal Frequency | F0 | 27.000 | | | MHz | |
| 2 | 振荡模式Oscillation Mode | - | Fundamental | | | - | |
| 3 | 负载电容Load Capacitance | CL | 7 | | | pF | |
| 4 | 推荐匹配电容范围 Recommended matching capacitance range | | - | - | - | pF | |
| 5 | 频率公差Frequency Tolerance | - | -10 | - | 10 | ppm | At 25°C±3°C |
| 6 | 等效串联电阻Equivalent Series Resistance | ESR | - | - | 100 | Ω | |
| 7 | 驱动功率Drive Level | DL | - | - | 100 | μW | |
| 8 | 频率稳定度Frequency Stability | TC | -20 | - | 20 | ppm | Over Operating Temp. Range(Ref. to 25°C) |
| 9 | 工作温度Operating Temperature | - | -40 | - | 85 | °C | |
| 10 | 储存温度Storage Temperature | - | -55 | - | 125 | °C | |
| 11 | 老化率Aging | - | -3 | - | 3 | ppm | Per Year |
| 12 | 绝缘阻抗Insulation Resistance | - | 500 | - | - | MΩ | At DC 100V |
| 13 | 并联电容Shunt Capacitance | C0 | - | - | 3 | pF | |

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



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● 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 温度: 85°C±3°C Relative Humidity: 85%RH 相对湿度: 85%RH Time: 96 Hours 时间: 96小时 | JIS C5023 |
| 2 | High Temperature Storage (高温储存) | Temperature: 125°C±3°C 温度: 125°C±3°C Time: 96 Hours 时间: 96小时 | MIL-STD-883E Method 1005.8 |
| 3 | Low Temperature Storage (低温储存) | Temperature: -40°C±3°C 温度: -40°C±3°C Time: 96Hours 时间: 96小时 | MIL-STD-883E Method 1013 |
| 4 | Thermal Shock (温度冲击) | Temperature1: -55°C±5°C 温度1: -55°C±5°C Temperature2: 85°C±5°C 温度2: 85°C±5°C Temperature change between T1 and T2 5 min T1和T2温度在5分钟内改变 10cycles maintain T1 and T2 for 30 minutes each mone cy 每次循环30分钟共10次 | MIL-STD-202F Method 107 Condition A |
| 5 | RESISTANCE TO SOLDER HEAT (耐焊接热) | Solder Temperature: 260°C±5°C 焊槽温度: 260°C±5°C Time: 10±1 Seconds 时间: 10±1秒 | MIL-STD-202F Method 210E |
| 6 | Solderability(可焊性) | The solder pot temperature is 245±5°C, dwell time 5±0.5sec 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 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 半正弦波, 加速度1000G 3 Times for all 3 directions X、Y、Z 三个相互垂直方向各三次 | MIL-STD-202F Method 213B |
| 9 | Vibration (机械振动) | Frequency Range: 10Hz~55Hz 频率范围: 10Hz~55Hz Amplitude: 0.75mm 振幅: 0.75mm 2 Hours in each direction, total 6 Hours X、Y、Z 三个相互垂直方向各振动2小时 | MIL-STD-883E Method 2007.3 |
| 10 | Leakage Test (气密性) | Take measurements with a helium Leakage detector 氦质检漏 Leakage Rate ≤ 1×10 ⁻³ Pa cm ³ /s 漏率 ≤ 1×10 ⁻³ Pa cm ³ /s | MIL-STD-883E |

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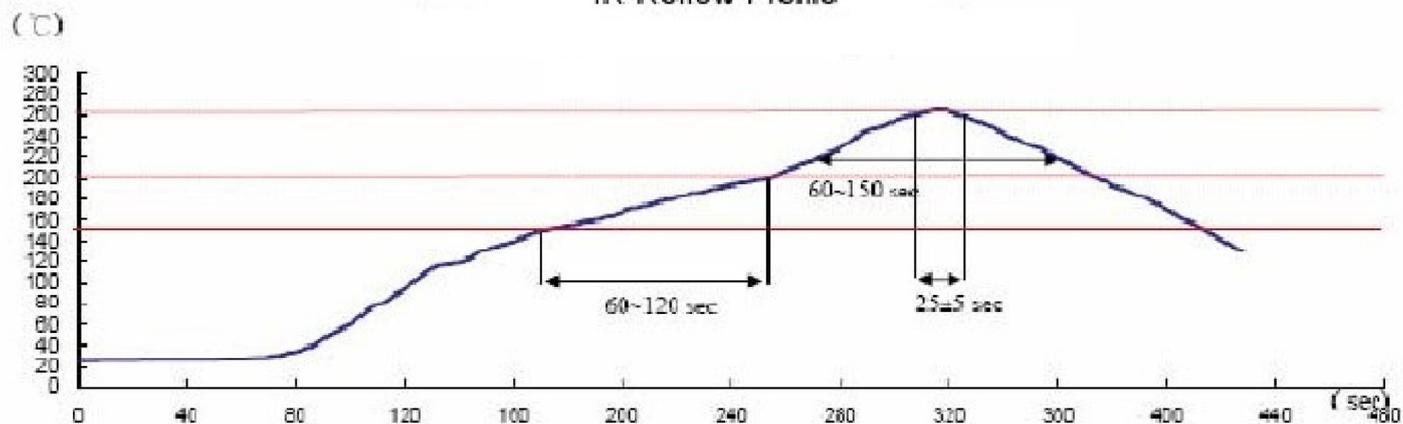
● SUGGESTED REFLOW PROFILE (回流焊曲线图)

Total time:200sec.Max. (总时间: 200秒 最大)

Solder melting point:220°C (熔点220 °C)

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

IR-Reflow Profile



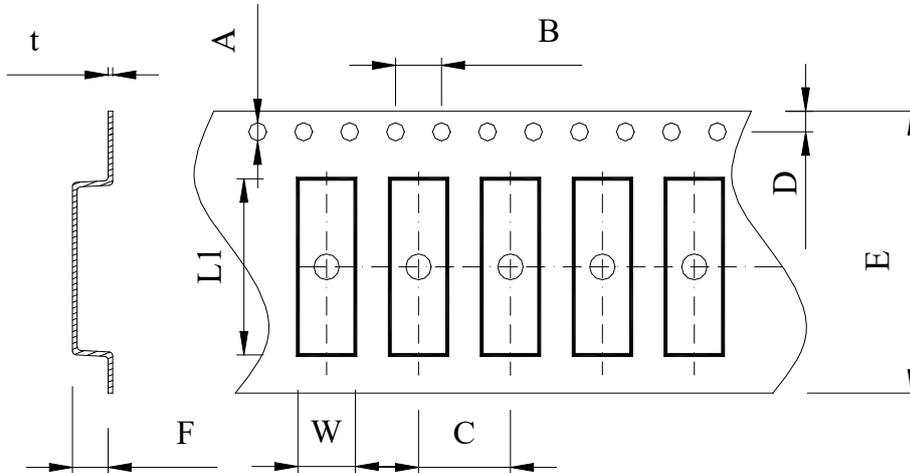
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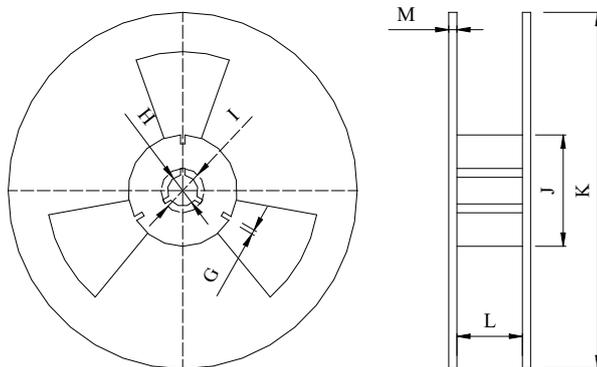
● PACKAGE

Tape Dimensions(unit : mm)



| A | B | C | D | E | F | L1 | W | T |
|-----|-----|-----|------|-----|-----|-----|-----|-----|
| 1.5 | 4.0 | 4.0 | 1.75 | 8.0 | 1.0 | 3.6 | 2.9 | 0.3 |

● Reel Dimensions(unit: mm)



| G | H | I | J | K | L | M |
|-----|------|------|------|-------|-----|-----|
| 2.5 | 13.5 | 21.6 | 60.0 | 180.0 | 9.5 | 1.6 |

*3000pcs/Reel

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