

雅晶鑫電子

Shenzhen Yajingxin Electron Co.,Ltd

| | |
|------------------------|---------------------------------|
| Customer | |
| Production Name | SMD CRYSTAL SEAM 3.2*2.5 |
| Customer P/N | N/A |
| P/N | TX322512M4DBDE2T |
| Revision | A |
| Print Date | 2022-12-06 |

| Drawn | Checked | Approved |
|---|---|--|
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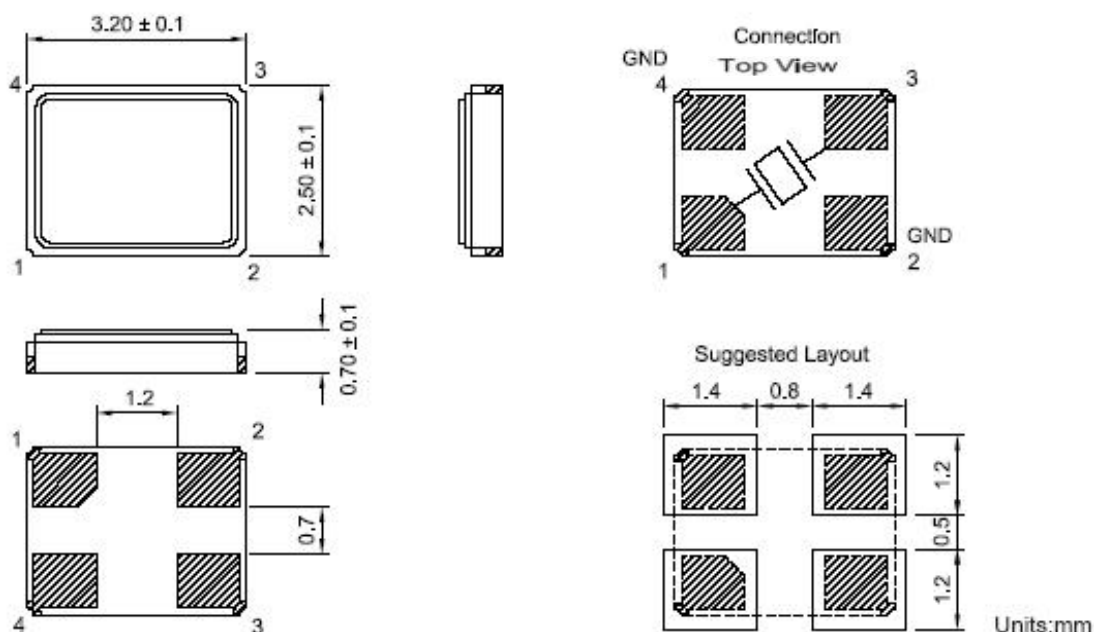
RoHS Compliant



● ELECTRICAL PARAMETERS

| 谐振器产品技术指标 | | Min | Max | Units |
|---|-----|-----------------|-----|----------|
| 1.Holder Type(型号规格) | | SEAM 3.2*2.5 | | |
| 2.Mode of Oscillation (振动模式) | | Fundamental | | |
| 3. Frequency (标称频率) | | 12.000000 | | MHz |
| 4.Load Capacitance (CL) (负载电容) | | 10 | | pF |
| 5.Drive Level (激励功率) | | 100 | | uw |
| 6.Equivalent Resistance (谐振电阻) | | | 60 | Ω |
| 7.Shunt Capacitance (Co) (静态电容) | | 0 | 5 | pF |
| 8.Motional Capacitance (C1) (动态电容) | | N/A | | fF |
| 9.Frequency Tolerance at 25°C (调整频差) | | -10 | 10 | ppm |
| 10.Stability over operation temperance (温度频差) | | ± 30 | | ppm |
| 11.Insulation Resistance (at DC 100V) (绝缘电阻) | | 500MΩ Min @100V | | MΩ |
| 12.Operating Temperature Range (工作温度范围) | | -30 | 85 | °C |
| 13. Storage Temperature Range (储存温度范围) | | -40 | 85 | °C |
| 14. Aging (老化率) | | ± 5 | | ppm/year |
| 15. DLD2 | N/A | | N/A | Ω |
| 16. FLD2 | | | N/A | ppm |
| 17. RLD2 | | | N/A | Ω |
| 18. SPDB | N/A | | N/A | db |
| 19. Other(其它) | | N/A | | |

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



● SUGGESTED REFLOW PROFILE (回流焊曲线图)

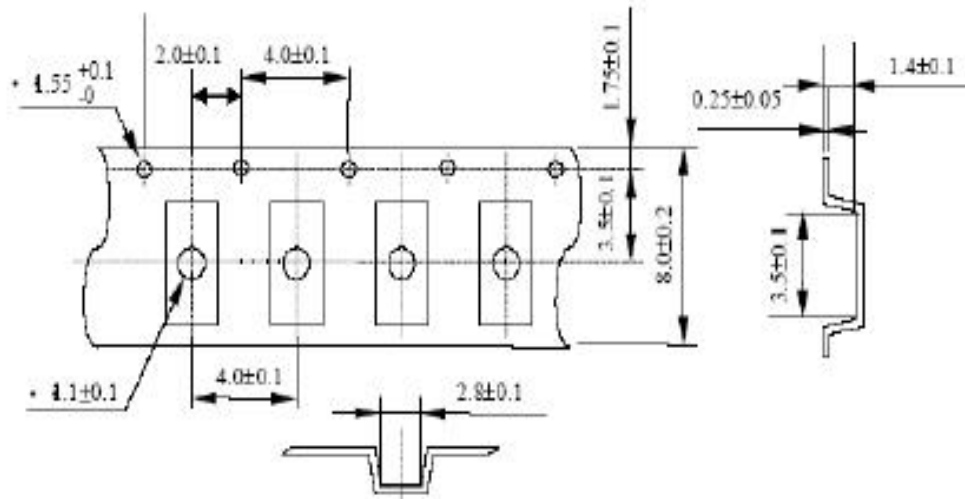
Total time:200sec.Max. (总时间: 200秒 最大)

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 |



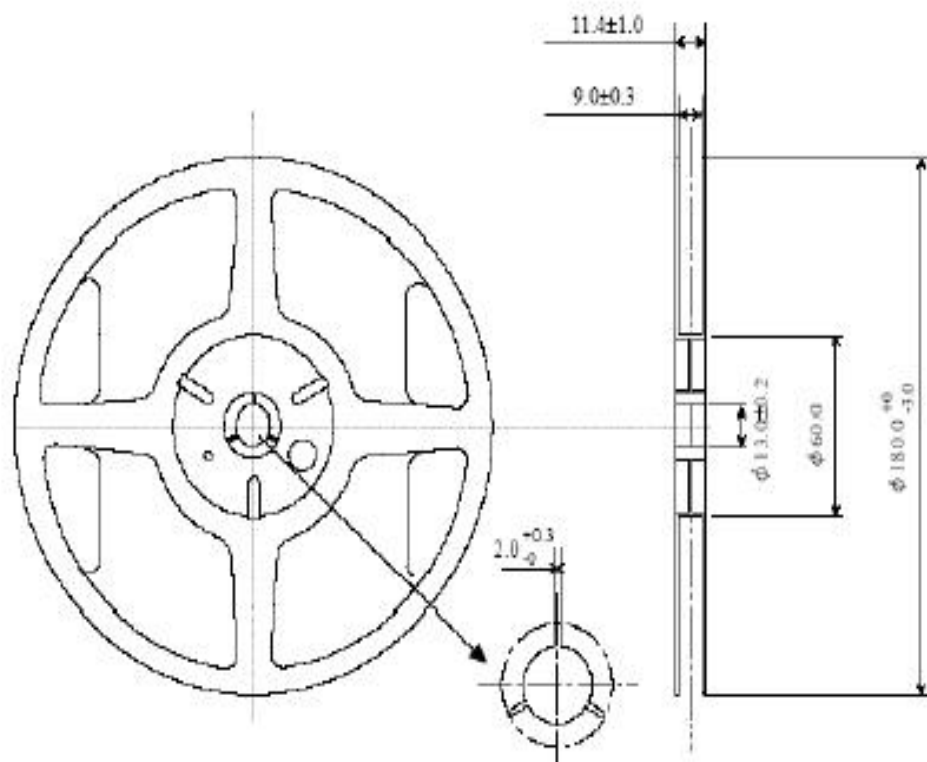
●● PACKING (包裝) 3Kpcs/REEL



[Size in mm]

8.3. Reel dimension & Outline drawing

Material of the Reel : PS



● 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 mon 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 tim 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 |