

承 认 书

SPECIFICATION FOR APPROVAL

客户名称: Customer _____

货 名: Description SMD2016 石英晶体谐振器

客户料号: Part No _____

物料编号: Code No S2132000101080频 率: Frequency 32.000MHZ日 期: Date 2023-04-14备 注: RoHS compliance with Directive (EU) 2015/863

| 制作(Prepare by) | 检查(Check by) | 批准 (Approve by) |
|----------------|--------------|-----------------|
| 江丹娜 | 甘瑛 | 张刚 |

| | |
|-----------------------------|--|
| 客户批准 Approve by customer | |
| 批准日期 Approval date | |

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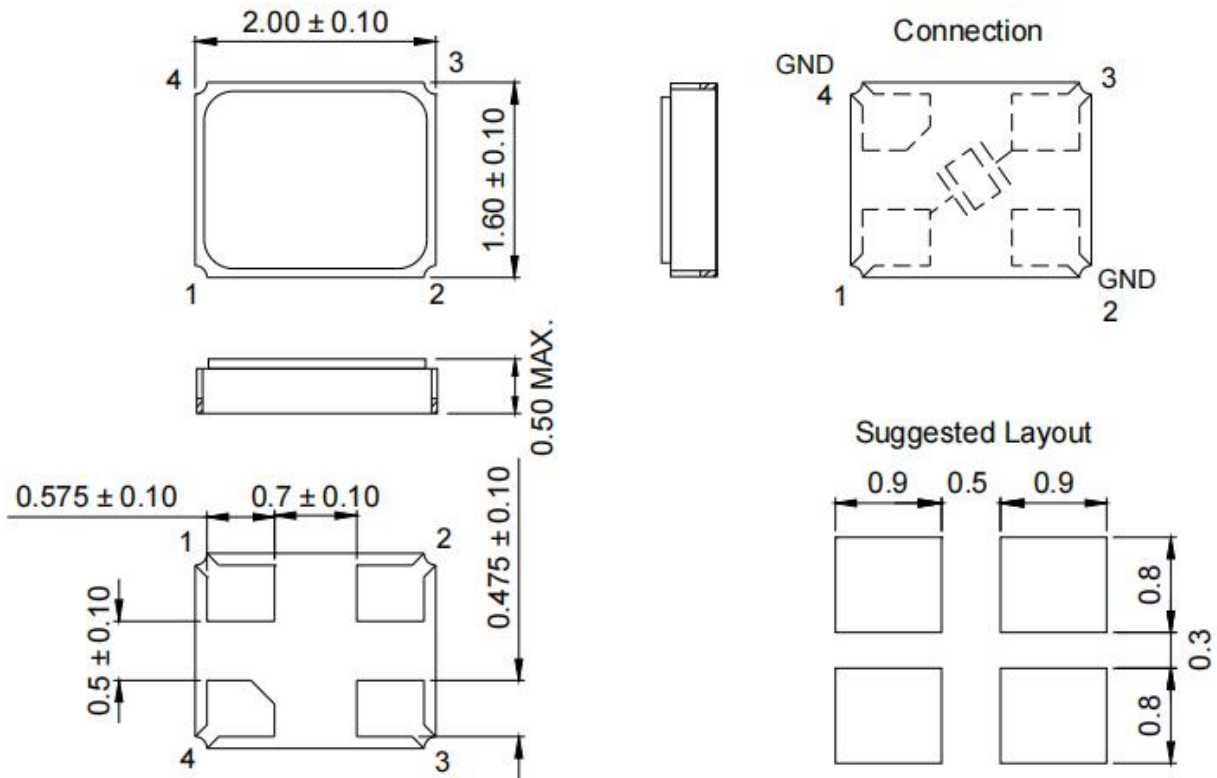
1、 Specifications

| | | |
|----|--------------------------------------|------------------------------|
| 1 | 规格型号 Holder Type | SMD2016 |
| 2 | 标称频率 Nominal Frequency | 32.000MHz |
| 3 | 振动模式 Mode of Oscillation | Fundamental |
| 4 | 调整频差 Frequency Tolerance at 25°C | ±10ppm |
| 5 | 温度频差 Temperature Frequency Stability | ±30ppm |
| 6 | 工作温度 Operating Temperature Range | -40~85°C |
| 7 | 贮存温度 Storage Temperature Range | -40~90°C |
| 8 | 负载电容 Load Capacitance | 10 pF |
| 9 | 静电容 Shunt capacitance | ≤5 pF |
| 10 | 等效电阻 Equivalent Series Resistance | 80 Ω Max |
| 11 | 激励功率 Drive Level | 10uW |
| 12 | 绝缘阻抗 Insulation Resistance | 500MΩ/100V±15V _{DC} |
| 13 | 年老化率 Aging | ±3ppm/First year |
| 14 | 测试仪器 Test machine | 250B |

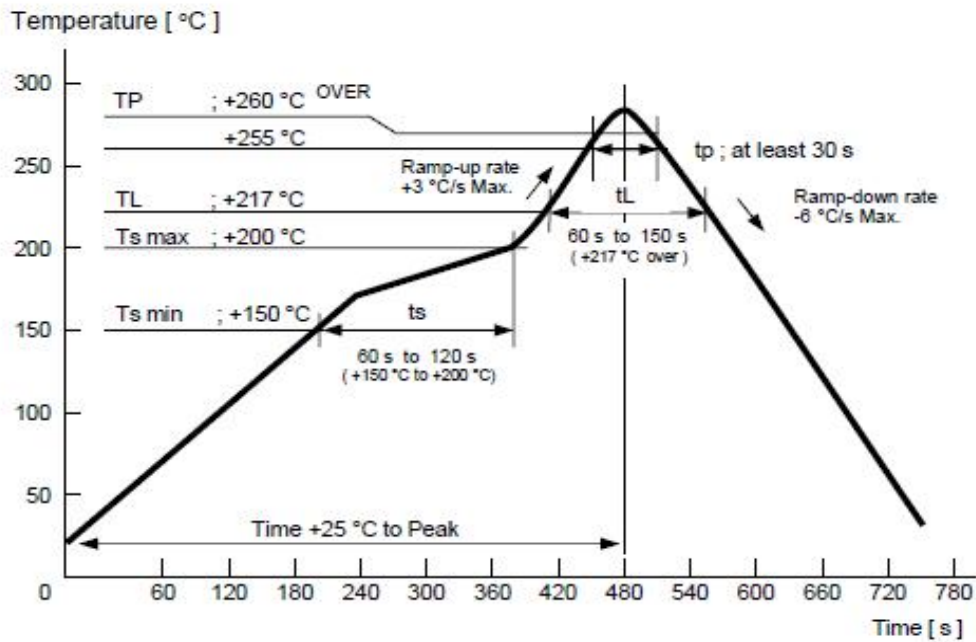
2. Frequency stability over temperature range (AT cut)

| Temperature Range | Frequency Stability | | | | | | | |
|-------------------|---------------------|-------|---------|--------|--------|--------|--------|--------|
| | ±3PPM | ±5PPM | ±7.5PPM | ±10PPM | ±20PPM | ±30PPM | ±50PPM | ±70PPM |
| 0°C~+50°C | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| -10°C~+60°C | | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| -20°C~+70°C | | | | ☆ | ☆ | ☆ | ☆ | ☆ |
| -30°C~+70°C | | | | | ☆ | ☆ | ☆ | ☆ |
| -40°C~+85°C | | | | | | ☆ | ☆ | ☆ |
| -40°C~+125°C | | | | | | ☆ | ☆ | ☆ |

3. Dimensions (unit:mm)



4.Recommended Reflow profile

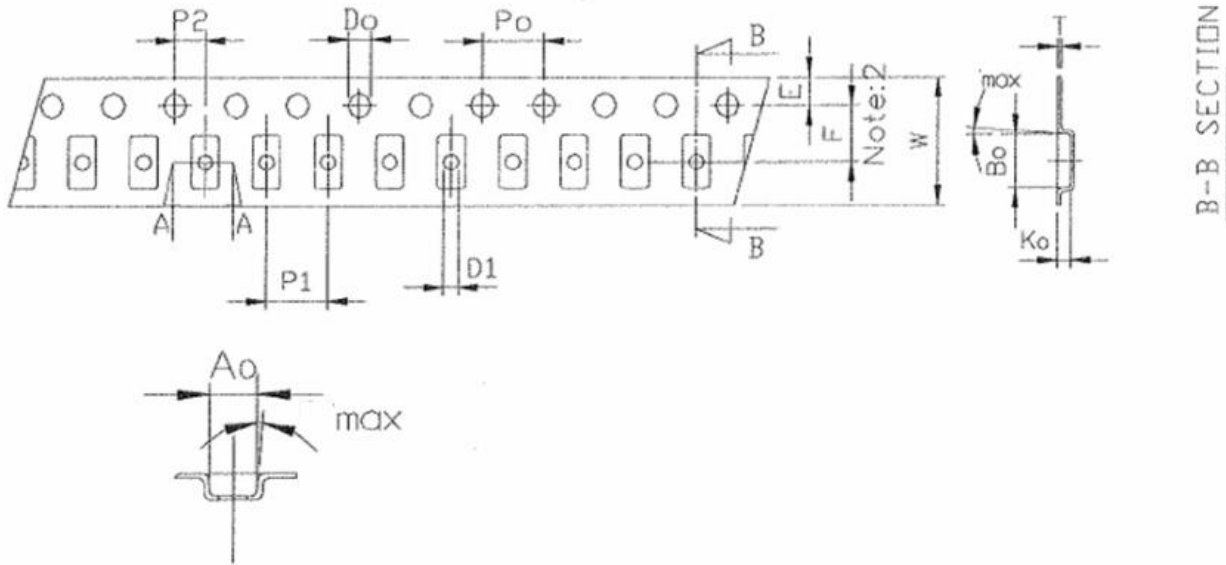


Pre-heat: $+150^\circ\text{C} \sim +200^\circ\text{C}$ $60 \sim 120$ sec. Heating: $+217^\circ\text{C}$ over $60 \sim 120$ sec.
 Peak temperature at least: 260°C $+255^\circ\text{C}$ over: minimum 30 sec.

5、Reliability specifications

| NO | Item | Condition | Standard |
|----|------------------------------|--|--|
| 1. | Drop Test | Free drop from 75 cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.) | Frequency change: ≤5ppm Rr as specification |
| 2. | Mechanical Shock | Half sine wave, 1000G, 0.5mS, three times for all 3 directions | Frequency change: ≤5ppm Rr as specification |
| 3. | Vibration | Frequency range:10~55hz Amplitude:1.52mm Sweep time:1mintutes perpendicular axes each test time:2Hrs | Frequency change: ≤5ppm Rr as specification |
| 4. | Solderability | Temperature:245℃±5℃ Immersing depth:0.5mm minimum Immersion time:5±1sec. Flux:Rosin resin methyl alcohol solvent(1:4) | 90% exhibit tin ok |
| 5. | Resistance to soldering heat | Test temperature:260℃±5℃ Test time :10±1sec. | Frequency change: ≤10ppm Rr as specification |
| 6. | High Temp & Humidity | 85±3℃ & RH85%, 500±12 hours | Frequency change: ≤10ppm Rr as specification |
| 7. | Low temperature storage | -40±3℃, 500±12 hours | Frequency change: ≤10ppm Rr as specification |
| 8. | High temperature storage | +85±3℃, 500±12 hours | Frequency change: ≤10ppm Rr as specification |
| 9. | Temperature cycling | -40±3℃/10min~+85±3℃/10min, 100cycles | Frequency change: ≤10ppm Rr as specification |

6、Packaging standard



| Dimension PKG Type | Unit : mm | | | | | | |
|-----------------------|-----------|---------|----------|-----------|-------|----------|---------|
| | A0 | B0 | K0 | T | W | E | F |
| 2016(8mm) | 1.9±0.1 | 2.3±0.1 | 0.65±0.1 | 0.25±0.05 | 8±0.3 | 1.75±0.2 | 3.5±0.1 |
| | P1 | P2 | D1 | D0 | P0 | | |
| | 4±0.1 | 2±0.1 | 1±0.05 | 1.55±0.05 | 4±0.1 | | |

Standard Reel Quantity is 3,000 pcs per reel.

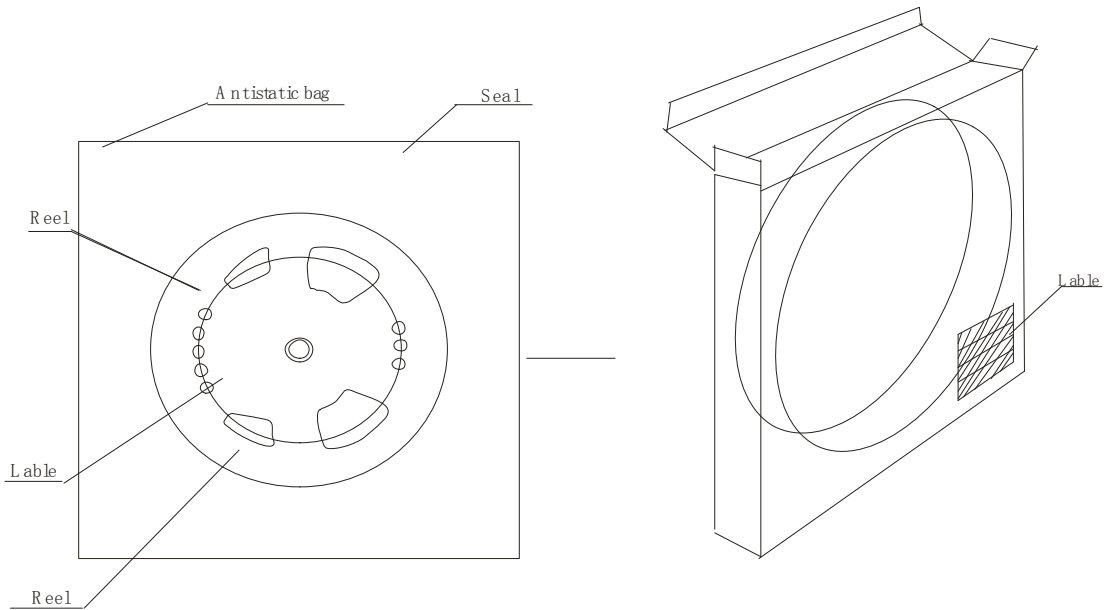
THE INSPECTION FOR TAPE TENSION

| ITEM | Defect | Method |
|--------------|--|---|
| Appearance | ALL | 1.The tape is not coincidence 2.The bubble |
| Tape Tension | 8045、7050 6035-12mm 5032-12mm 3225-12mm | overstep 61±6g(55~67g) |
| | 3225-8mm | overstep 40±5g(35~45g) |
| | 2520-8mm | overstep 55±6g(49~61g) |
| | 2016-8mm | overstep 34±6g(28~40g) |
| | 1612-8mm | overstep 34±6g(28~40g) |
| | 6035-16mm | overstep 60±6g(54~66g) |
| | 5032-16mm | |
| | | Visual inspection |
| | | Pull test |

REMARK : NA

7. Packaging standard

Inner carton



OUTER CARTON

