

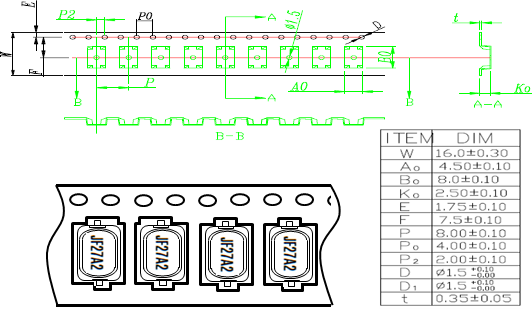
# 产品参数

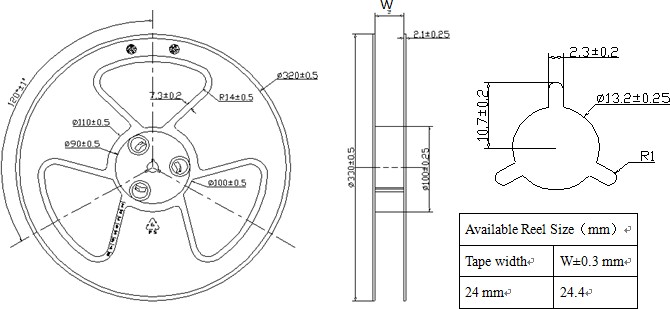
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| **1** | 标称频率 Nominal Frequency | 24.000MHz |
| **2** | 振动模式 Mode of Oscillation | AT 切FUND |
| **3** | 调整频差 Frequency Tolerance | ±10PPM |
| **4** | 温度频差 Temperature Tolerance | ±30PPM |
| **5** | 工作温度 Operating Temperature Range | -20℃～+70℃ |
| **6** | 贮存温度 Storage Temperature | -40℃～+85℃ |
| **7** | 等效电阻 Equivalency Resistance | ≤40Ω |
| **8** | 负载电容 Load Capacitance | 12PF |
| **9** | 激励功率 Drive Level | 10μ W |
| **10** | 静 电 容 Shunt Capacitance | ≤7.0 pF |
| **11** | 绝缘阻抗 Insulation Resistance | ≥500MΩ at DC 100V±15V |
| **12** | 老 化 率 Aging | ≤±5ppm/year |
| **13** | 盒 型 Hold Type 单位: mm |  |
| **14** | 标 志 Marking | **24.000**  24.000 Nominalfrequency |

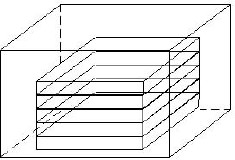
**Product reliability**

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| A. 1 | Low temperature resistance (cold resistance) test  Put quartz crystal in a constant temperature box of - 40 ℃ ± 5 ℃ for 500 hours ± 2 hours, and then put it in the room temperature naturally  Test after cooling for 1 hour. | | （Ⅰ） |
| A. 2 | High temperature resistance (heat resistance) test  The quartz crystal is placed in a constant temperature box of + 100 ℃± 5 ℃ for 500 hours ± 2 hours, and then placed at room temperature  However, it shall be tested after cooling for 1 hour. | | （Ⅰ） |
| A. 3 | Salt spray test  Spray salt water (salt concentration 5%) at 35 ℃ ± 2 ℃ to quartz crystal for 48 hours ± 2 hours, and then  Clean with water and check the appearance. | | （Ⅴ） |
| A. 4 | Humidity test  Place the quartz crystal in a constant temperature box with a temperature of 60 ℃± 2 ℃ and a relative humidity of 90-98% for 500 hours ± 2 hours, and then place it in the room temperature for natural cooling for 1 hour before testing. | | （Ⅰ） |
| A. 5 | Temperature cycle  Put quartz crystal in - 40 ℃± 2 ℃ incubator for 30 minutes ± 1 minute, and then put it in + 85 ℃± 2 ℃ incubator  Within 30 minutes ± 1 minute, 100 times in total, after completion, put it in room temperature for natural cooling for 2 hours. | | （Ⅰ） |
| **Item** | **Mechanical performance conditions** | |  |
| B．1 | Drop Test  Quartz crystal falls freely in the height of 75cm ± 5cm and the thickness of the board is more than 3cm for three times, and is placed for one hour for testing | | （Ⅰ） |
| B．2 | Vibration test  Cycle number 10-55hz, amplitude 1.5mm. The product vibrates along X, y, Z axis for 2 hours, and is placed for 1 hour for test | | （Ⅰ） |
| B．3 | Terminal bending strength test  Fix the body and twist it 45 degrees, and then slowly recover. | | （Ⅱ） |
| B．4 | Terminal strength  After the base plate is installed, it shall be pressurized for 5 seconds ± 1 second at a speed of 0.5mm/s and a bending degree of 2mm. | | （Ⅱ） |
| B．5 | Fusion test  After the terminal is pasted with soldering aid (7-10%) for about 5 seconds, put it in a melting pot at 230 ± 5 ℃ for 3 seconds | | (Ⅲ) |
| B．6 | Sealing test  The quartz crystal is immersed in 85 ℃± 5 ℃ warm water for 5 minutes, and the crystal is covered with warm water about 20cm | | （Ⅳ） |
| B．7 | Heat resistance of fusion welding  The quartz crystal is placed on the tin furnace at 265 ± 5 ℃, the distance between the crystal and the tin surface of the tin furnace is 2.0 ± 0.2mm, and the distance between the crystal and the tin surface of the tin furnace is 2.0mm ± 0.2mm, 3 ± 0.5 for 3 minutes (twice)  Second (2 times in total), after completion, the crystal is placed in room temperature and cooled naturally for 2 hours | | （Ⅰ） |
|  | | | |
|  | | **Specification requirements** | |
| (Ⅰ) | | Frequency change: ± 5ppm resistance change: ± 20% Ω | |
| (Ⅱ) | | Lead wire is not broken and meets the requirements of (IV) | |
| (Ⅲ) | | Tin coverage is higher than 90% | |
| (Ⅳ) | | No bubble precipitates or emerges from the surface of crystal | |
| （Ⅴ） | | Qualified product appearance | |

1. **packaging appearance**

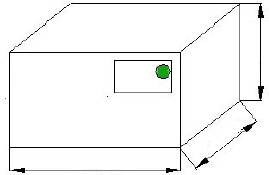
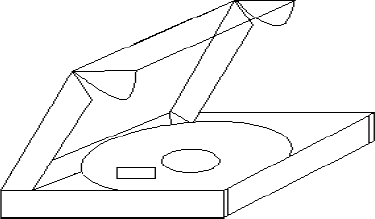






5 boxes in the outer box（15000PCS）

One box for one plate（3000PCS）



Label