JYEG

RoHS Compliant

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# APPROVAL SHEET

Customer :

Part Number :

JYEG P/N : JYGD5

Holder : SMD5032 GLASS

Frequency : 8.000~54.000MHZ

Manufacturer : Guoxin Jingyuan Electronics

Date : 2025/12/30

| Prepared | Checked | Approved |
|---|---|---|
| Huang Mingxing | Yang Tiesheng | Zhang Liqiang |

**(For Customer Use)**

| Acceptable | Non-Acceptable |
|---|---|
| | |

## Revision History

| No. | Revised Date | Change Content | Approved | Remark |
|---|---|---|---|---|
| V1.0 | 25.12.30 | Initial release | Yang Tiesheng | |
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**1.This specification applies to SMD quartz crystal unit with a frequency of 8.000~54.000MHz.**

**2. Electrical characteristics**

| ITEM/TYPE | SMD5032 GLASS |
|---|---|
| Frequency Range | 8.000~54.000MHz |
| Mode of Vibration | Fundamental |
| Frequency Tolerance (at 25°C) | ±15ppm,or specify |
| Frequency Stability Over Operating Temperature Range | ±30ppm/-40~85°C, ±50ppm, ±100ppm/-40~125°C, or specify |
| Shunt Capacitance | 5pF Max. |
| Load Capacitance | 6~50pF or Series |
| Resonance Resistance | As per below table1. |
| Drive Level | 300μW Max. |
| Aging | ±3ppm/year |
| Insulation Resistance | 500MΩ@DC100V |
| Storage Temperature Range | -55~125°C |

| Frequency | Resonance Resistance |
|---|---|
| 7.3728~16.000MHz | 100Ω Max. |
| 16.000~54.000MHz | 30Ω Max. |

**3. Construction**

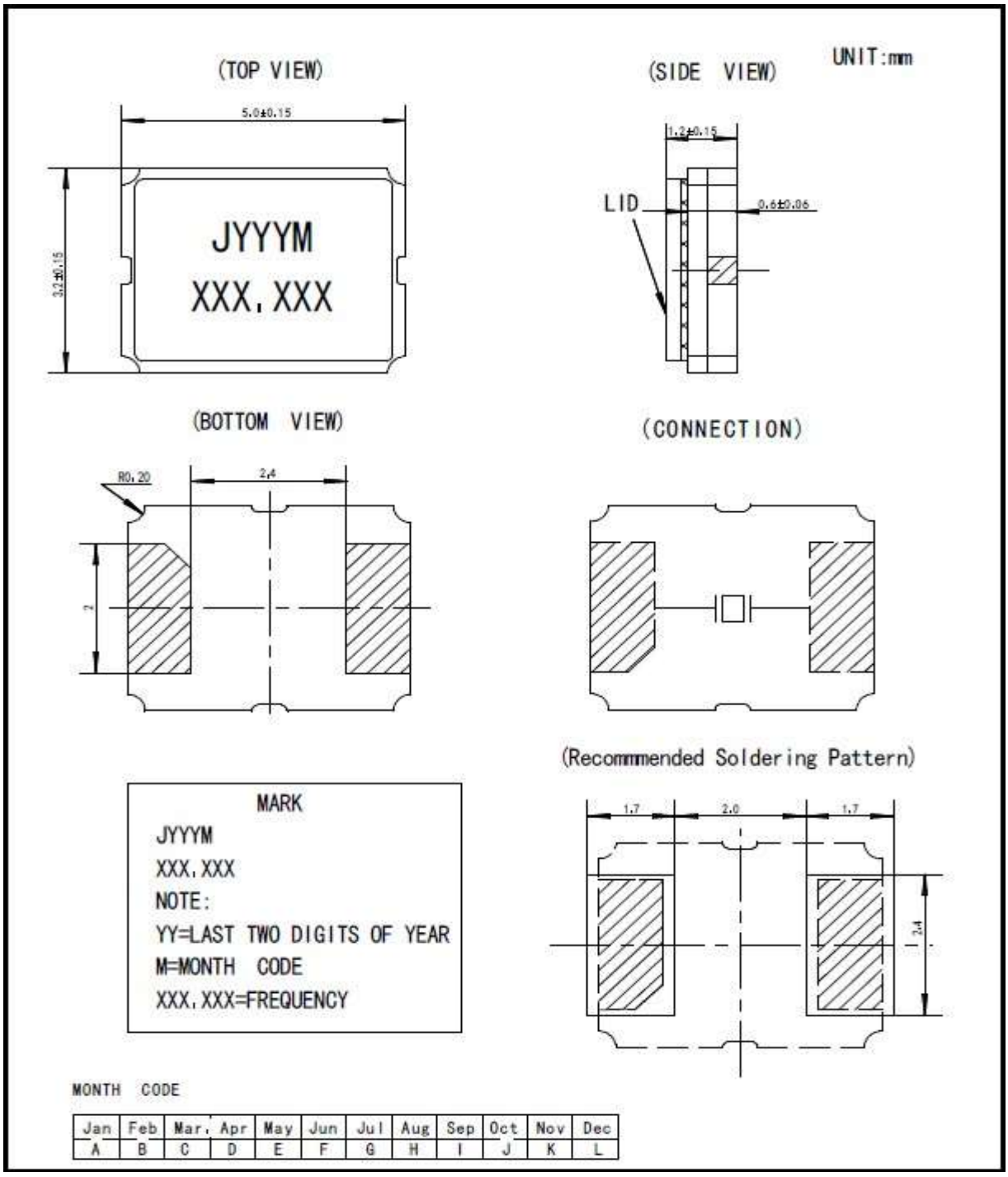
3.1 Crystal enclosure seal:

■ Seam seal ☐ resistance weld ☐ cold weld

3.2 crystal enclosure medium

■ nitrogen ☐ vacuum ☐ dry air

**4.Dimension:**



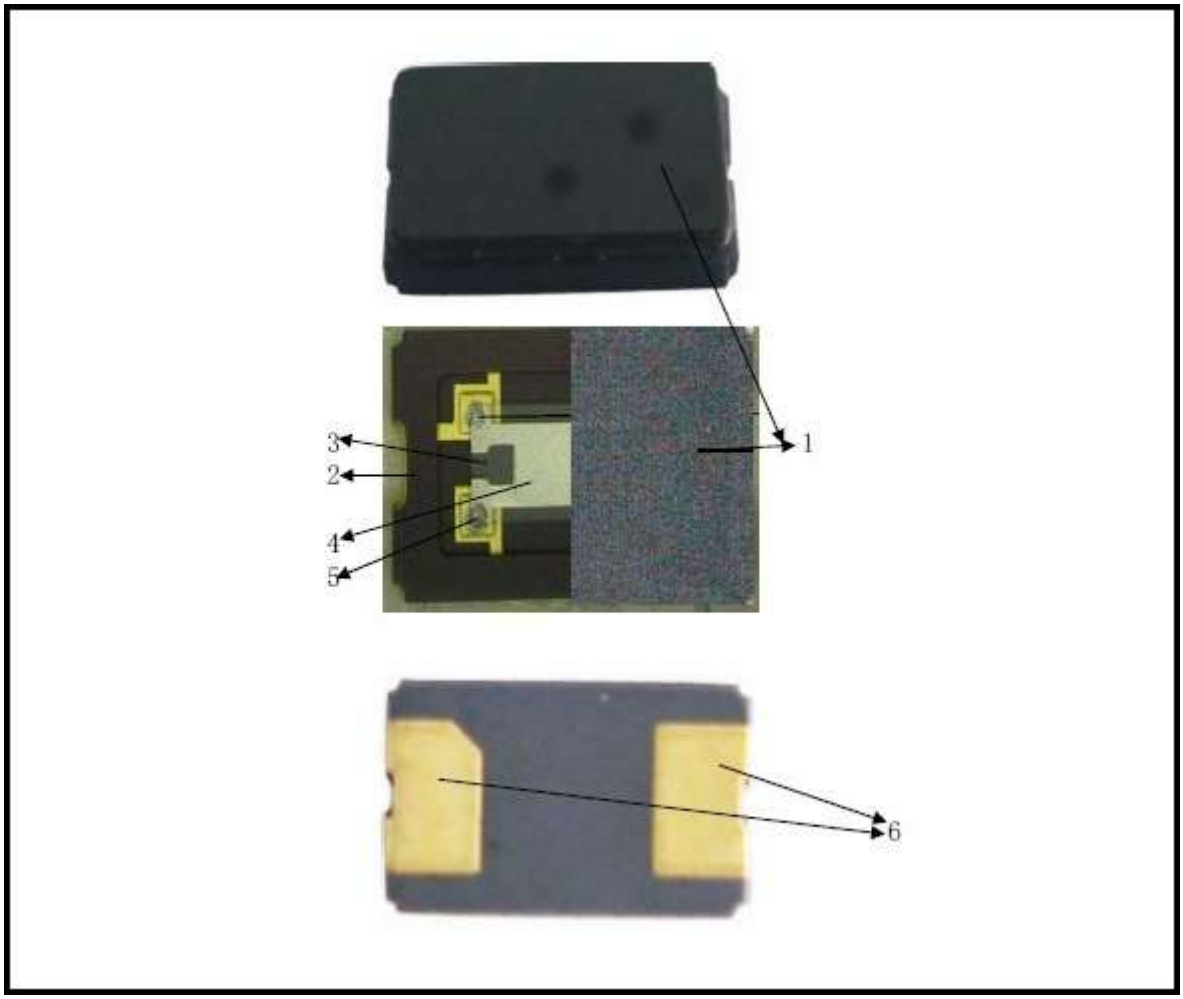

MONTH CODE

| Jan | Feb | Mar. | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L |

**5. Marking**

■ Laser Marking ☐ Ink Marking

**6.Inside Structure**



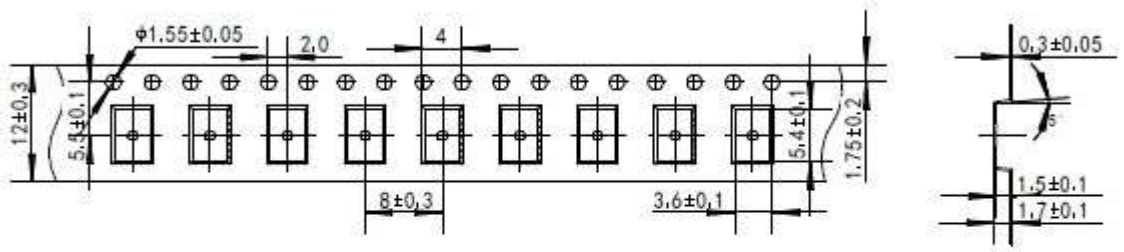

| No. | Name | Material |
|---|---|---|
| (1) | Can | Ceramic |
| (2) | Base | Ceramic |
| (3) | Blank | Quartz |
| (4) | Electrode | Ag |
| (5) | Epoxy | Silicon based |
| (6) | Soldering Pads | Au plated |

**7.Taping Dimension and Packing Instruction**

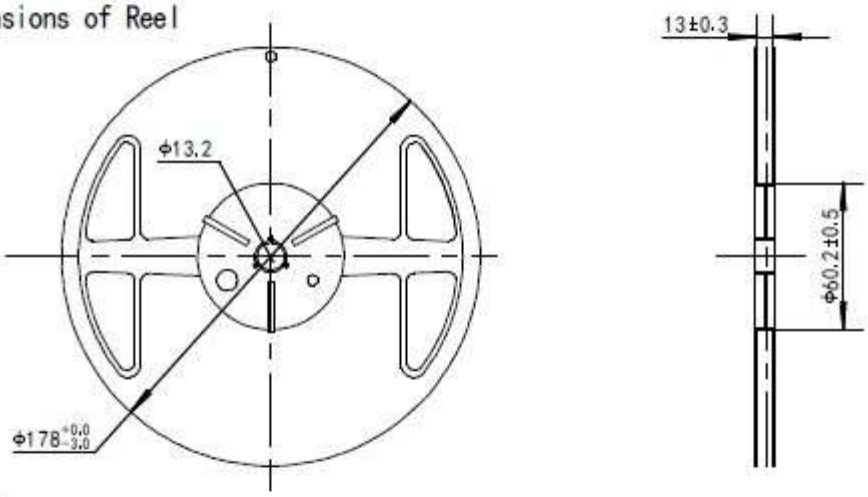
7.1

UNIT:mm

1.Dimensions of Carrier Tape



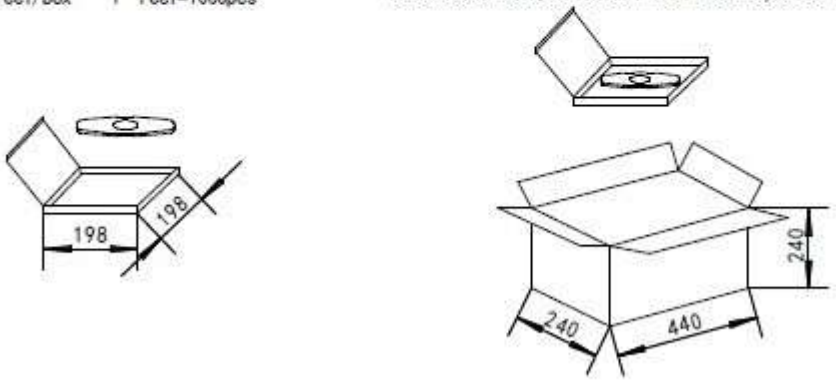

2.Dimensions of Reel




3.Packing

1 reel/box 1 reel=1000pcs

10 boxes/carton(the carton with bubble pad on four sides)



7.2

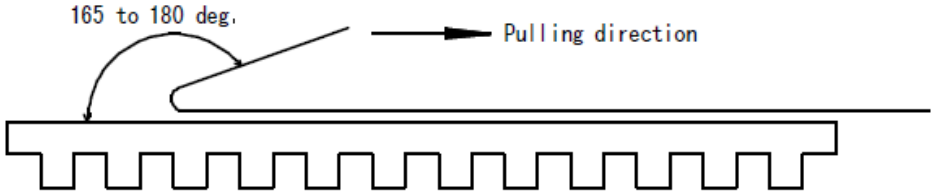
Release strength of cover tape

It has to between 30g to 90g under following condition.

Pulling direction : 165 deg. to 180 deg.

Speed : 300mm/min.

Otherwise unless specified.



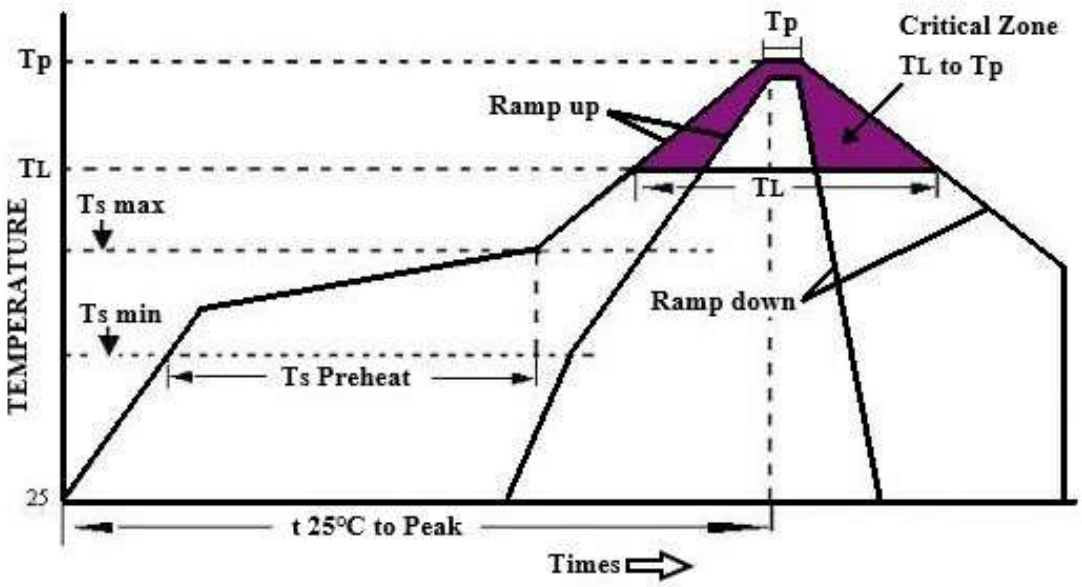

**8.Reliability characteristic:**

| | Item | Condition | Specifications |
|---|---|---|---|
| 8.1 | Solderability | Solder bath temperature:260℃ , dwell time:5 seconds,<br>Solder: 100% tin | A new uniform coating of solder shall cover a minimum of 95% of the surface being immersed. |
| 8.2 | Resistance to soldering heat | Solder temperature 260+/-3℃,Immersion time:10 S<br>Solder bath composition:100% tin | △F≤+/-5ppm<br>△R≤+/-15%+3Ω |
| 8.3 | Vibration | The entire frequency range: 10Hz to 55Hz ,Amplitude:1.5mm<br>This motion shall be applied for a period of 2 h in each of 3 mutually perpendicular axes(a total of 6h) | △F≤+/-5ppm<br>△R≤+/-15%+3Ω |
| 8.4 | Drop test | Drop from 75cm height on 3cm hard wooden board for 6 times | △F≤+/-5ppm<br>△R≤+/-15%+3Ω |
| 8.5 | Cold Storage | The quartz crystal unit shall be stored at a temperature of –40+/-3℃ for 1000 h.then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. | △F≤+/-5ppm<br>△R≤+/-15%+3Ω |

<table>
<tr><td>8.6</td><td>High temperature high humidity storage (steady state)</td><td>The quartz crystal unit shall be stored at a temperature of 40+/-2℃ with relative humidity of 95% for 1000h, then it shall be subjected to standard atmospheric conditions for 2h after which measurement shall be made.</td><td>△F≤+/-5ppm<br>△R≤+/-15%+3Ω</td></tr>
<tr><td>8.7</td><td>Thermal shock</td><td>The quartz crystal unit shall be subjected to 50 successive<br>Change of temperature cycles. Each as shown in table below ,then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made.
<table>
<tr><td></td><td>Temperature</td><td>Duration</td></tr>
<tr><td>1.</td><td>-40+/-3℃</td><td>15minutes</td></tr>
<tr><td>2.</td><td>100+/-2℃</td><td>15minutes</td></tr>
<tr><td>3.</td><td>Transition time</td><td>Within 10 seconds</td></tr>
</table></td><td>△F≤+/-5ppm<br>△R≤+/-15%+3Ω</td></tr>
<tr><td>8.8</td><td>Sealing</td><td>Helium leakage detector shall used to measure the leakage rate of gas through any faulty seal. Pressure:500Kpa, duration:120 minutes</td><td>Leakage rate≤$1*10^{-9}$ Pa.$m^3$/S</td></tr>
<tr><td>8.9</td><td>High temperature Life test</td><td>The quartz crystal unit shall be stored at a temperature of 85+/-3℃ for 720h ,then it shall be subjected to standard atmospheric condition for 1h after which measurement shall be made.</td><td>△F≤+/-5ppm<br>△R≤+/-15%+3Ω</td></tr>
</table>

**9.All products are RoHs compliant**

**10. Reflow Profile**




High Temperature Infrared /Convection

Note:Temperature shown are applied to body of device

| | |
|---|---|
| Ts max to $T_L$(Ramp-up Rate) | 3℃/second max |
| Preheat<br>Temperature Min(Ts Min)<br>Temperature Typical( Ts Typ)<br>Temperature Max.(Ts Max)<br>Time(ts) | <br>150℃<br>175℃<br>200℃<br>60-180 seconds |
| Ram-up Rate($T_L$ to Tp) | 3℃/second Max |
| Time Maintained Above:<br>--Temperature($T_L$)<br>--Time($T_L$) | <br>217℃<br>60-150seconds |
| Peak Temperature (Tp) | 260℃ Max for 10 seconds |
| Time within 5℃ of actual peak($t_p$) | 20-40 seconds |
| Ramp-down Rate | 6℃/seconds Max |
| Tune 25℃ to Peak Temperature(t) | 8 minutes Max |
| Moisture Sensitivity Level | Level 1 |

High Temperature Manual Soldering

Note:Temperature shown are applied to body of device

260℃ Max for 10 seconds Max, 4 times Max

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## JYEG:

JYD2A1Z3F4-10-25.000000 JYD5A1C7GZ-20-9.830400 JYD5A1G7G6-20-25.000000
JYGD3A1E7G8-18-12.288000 JYD2A1G7G9-18-25.000000 JYD5A1G7GZ-18-25.000000
JYGD5A1E3D6-20-25.000000 JYOD2H7H3C5Y-25.000000 JYOD5H7G3C5Y-25.000000
JYD5A1C2C4-10-12.288000 JYD5A1G7G8-20-25.000000 JYD5A1Z2C4-10-27.000000
JYGD5A1G3D8-18-9.830400 JYD3A1C2C4-10-32.000000 JYGD5A1E1B6-18-25.000000
JYOD7E7G3C5Y-12.288000 JYD3A1C7G6-9-32.000000 JYD5A1C5G5-10-25.000000
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JYD5A1G3D9-13-25.000000 JYD2A1G3D9-10-25.000000 JYOD7H7G3C5Y-10.000000
JYD3A1C7G5-14-26.000000 JYD5A1C7GZ-12-13.225625 JYD5A1E7G8-18-25.000000
JYD5A1Z7GZ-20-25.000000 JYGD3A1G2C8-10-26.000000 JYGD5A1E7G6-18-9.830400