

# 承 认 书

SPECIFICATION FOR APPROVAL

客户名称: Customer \_\_\_\_\_

货 名: Description SMD5032 石英晶体谐振器

客户料号: Part No \_\_\_\_\_

物料编号: Code No S5348000202040

频 率: Frequency 48.000MHz

日 期: Date 2020-06-09

备 注: RoHS compliance with Directive (EU) 2015/863

| 制作(Prepare by) | 检查(Check by) | 批准 (Approve by) |
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|                             |  |
|-----------------------------|--|
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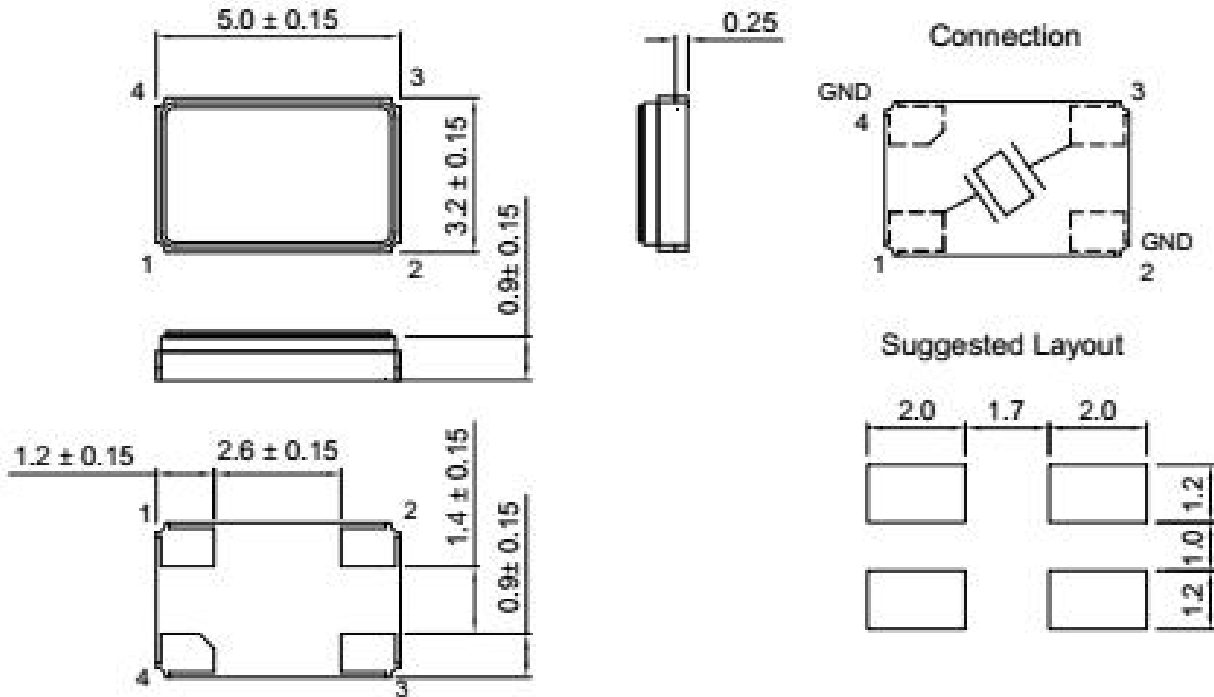
## 1、 Specifications

|    |                                      |                              |
|----|--------------------------------------|------------------------------|
| 1  | 规格型号 Holder Type                     | SMD5032                      |
| 2  | 标称频率 Nominal Frequency               | 48.000MHz                    |
| 3  | 振动模式 Mode of Oscillation             | Fundamental                  |
| 4  | 调整频差 Frequency Tolerance at 25°C     | ±20ppm                       |
| 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                | 20pF                         |
| 9  | 静电容 Shunt capacitance                | ≤7 pF                        |
| 10 | 等效电阻 Equivalent Series Resistance    | 40 Ω Max                     |
| 11 | 激励功率 Drive Level                     | 10uW                         |
| 12 | 绝缘阻抗 Insulation Resistance           | 500MΩ/100V±15V <sub>DC</sub> |
| 13 | 年老化率 Aging                           | ±3ppm/First year             |
| 14 | 测试仪器 Test machine                    | 250B                         |

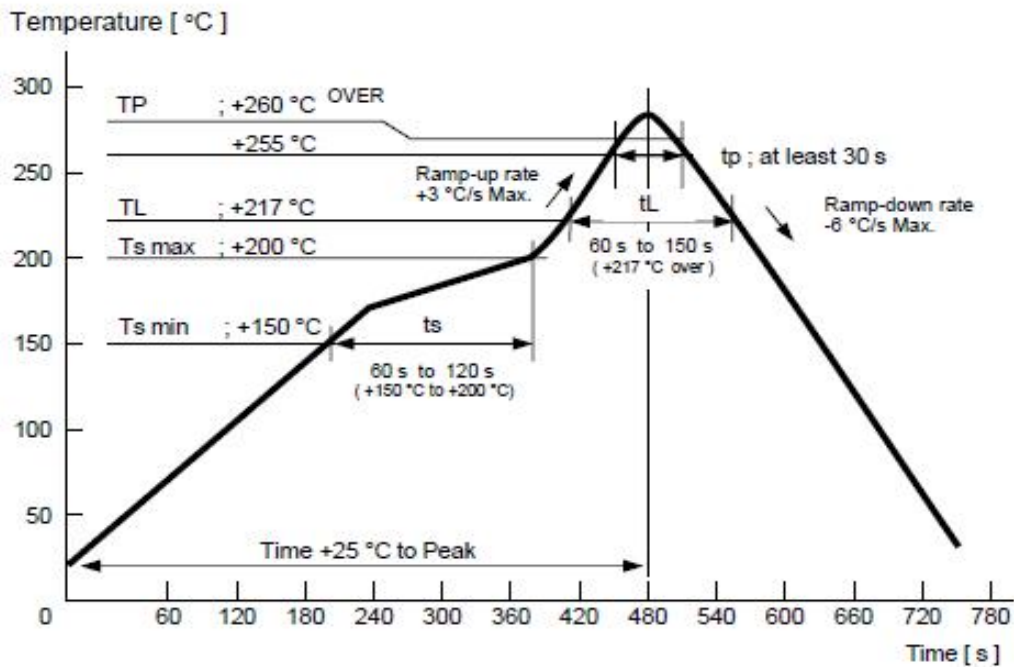
## 2. Frequency stability over temperature range (AT cut)

| 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)



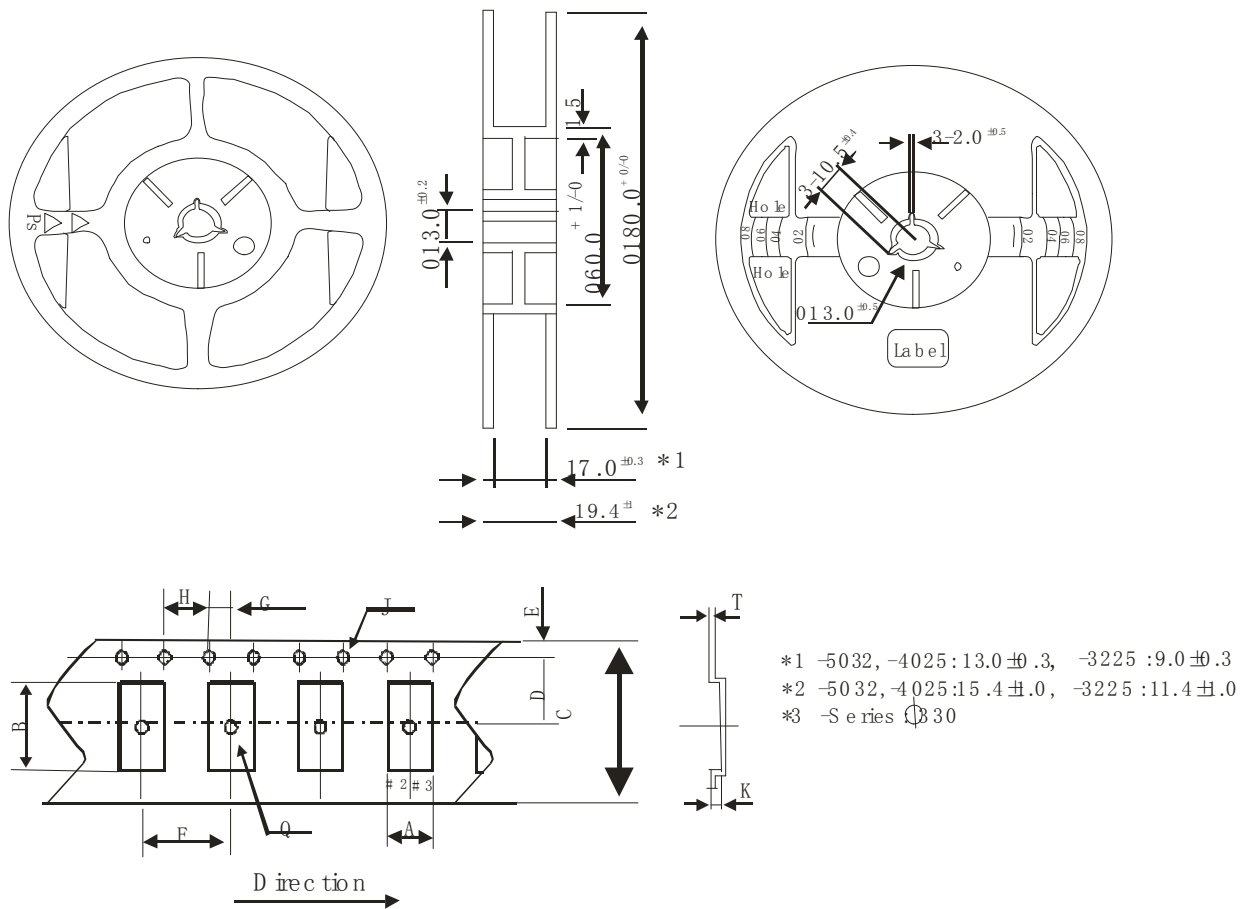
### 4. Recommended Reflow profile



## 5、Reliability specifications

| NO | Item                         | Condition                                                                                                                      | Standard                                           |
|----|------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| 1. | Drop Test                    | Free drop from 50cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)                           | Frequency change:<br>≤5ppm<br>Rr as specification  |
| 2. | Mechanical Shock             | Half sine wave, 1000G, 0.5mS, three times for all 3 directions                                                                 | Frequency change:<br>≤5ppm<br>Rr as specification  |
| 3. | Vibration                    | Frequency range:10~55hz<br>Amplitude:1.52mm<br>Sweep time:1mintutes<br>perpendicular axes each test time:2Hrs                  | Frequency change:<br>≤5ppm<br>Rr as specification  |
| 4. | Solderability                | Temperature:245℃±5℃<br>Immersing depth:0.5mm minimum<br>Immersion time:5±1sec.<br>Flux:Rosin resin methyl alcohol solvent(1:4) | 90% exhibit tin ok                                 |
| 5. | Resistance to soldering heat | Test temperature:260℃±5℃<br>Test time :10±1sec.                                                                                | Frequency change:<br>≤10ppm<br>Rr as specification |
| 6. | High Temp & Humidity         | 85±3℃ & RH85%, 500±12 hours                                                                                                    | Frequency change:<br>≤10ppm<br>Rr as specification |
| 7. | Low temperature storage      | -40±3℃, 500±12 hours                                                                                                           | Frequency change:<br>≤10ppm<br>Rr as specification |
| 8. | High temperature storage     | +85±3℃, 500±12 hours                                                                                                           | Frequency change:<br>≤10ppm<br>Rr as specification |
| 9. | Temperature cycling          | -40±3℃/10min~+85±3℃/10min, 100cycles                                                                                           | Frequency change:<br>≤10ppm<br>Rr as specification |

## 6、Packaging standard

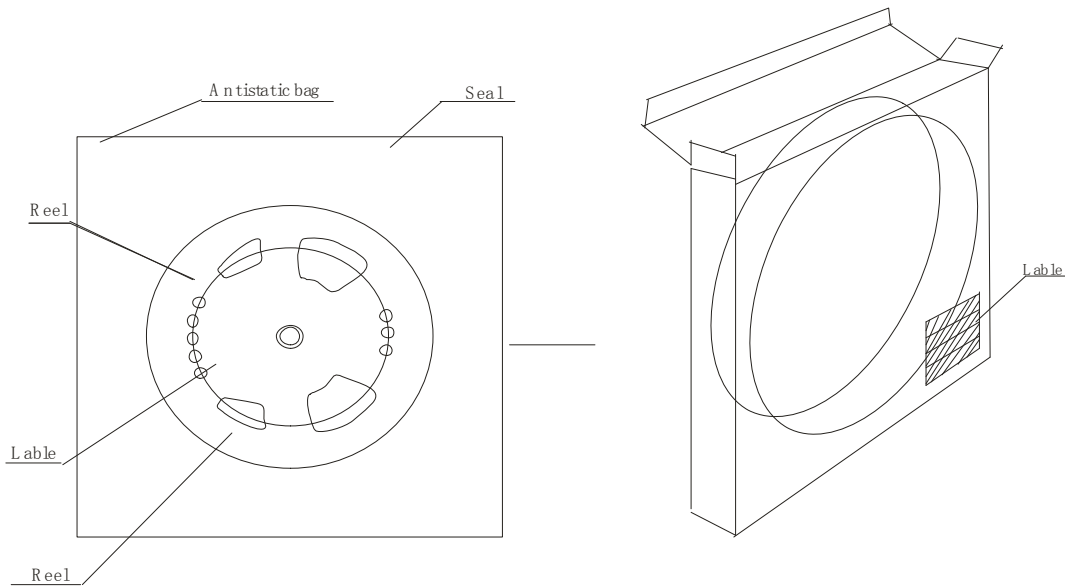


- Standard quantity of ST -3225 : 3,000 pcs/reel
- Standard quantity of SN -Series : 4,000 pcs/reel
- Standard quantity of others : 1,000 pcs/reel
- Carrier tape : Antistatic material (PS)
- Each reel can be recycled

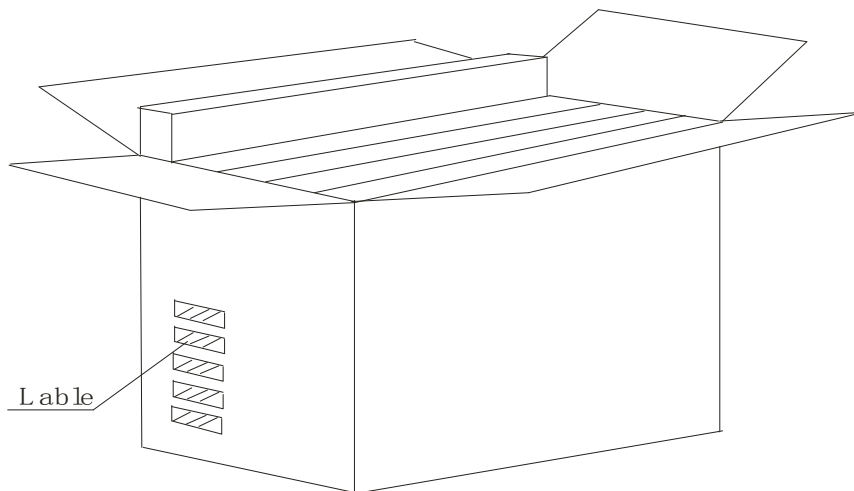
|   | SJ-7050<br>SN-7050 | SJ-6032<br>SN-6032 | SJ-5032        | SJ -5032       | SJ-4025         | SJ-3225         |
|---|--------------------|--------------------|----------------|----------------|-----------------|-----------------|
| A | $5.4^{±0.1}$       | $3.9^{±0.1}$       | $3.5^{±0.1}$   | $3.5^{±0.1}$   | $2.9^{±0.1}$    | $2.9^{±0.1}$    |
| B | $7.4^{±0.1}$       | $6.4^{±0.1}$       | $5.4^{±0.1}$   | $5.4^{±0.1}$   | $4.4^{±0.1}$    | $3.6^{±0.1}$    |
| C | $16.0^{±0.2}$      | $16.0^{±0.2}$      | $12.0^{±0.2}$  | $12.0^{±0.2}$  | $10.0^{±0.2}$   | $8.0^{±0.2}$    |
| D | $7.5^{±0.1}$       | $7.5^{±0.1}$       | $5.5^{±0.1}$   | $5.5^{±0.1}$   | $5.5^{±0.1}$    | $5.5^{±0.1}$    |
| E | $1.75^{±0.1}$      | $1.75^{±0.1}$      | $1.75^{±0.1}$  | $1.75^{±0.1}$  | $1.75^{±0.1}$   | $1.75^{±0.1}$   |
| F | $8.0^{±0.1}$       | $8.0^{±0.1}$       | $8.0^{±0.1}$   | $8.0^{±0.1}$   | $4.0^{±0.1}$    | $4.0^{±0.1}$    |
| G | $2.0^{±0.1}$       | $2.0^{±0.1}$       | $2.0^{±0.1}$   | $2.0^{±0.1}$   | $2.0^{±0.1}$    | $2.0^{±0.1}$    |
| H | $4.0^{±0.1}$       | $4.0^{±0.1}$       | $4.0^{±0.1}$   | $4.0^{±0.1}$   | $4.0^{±0.1}$    | $4.0^{±0.1}$    |
| J | $1.55^{±0.05}$     | $1.55^{±0.05}$     | $1.5^{+0.1/0}$ | $1.5^{+0.1/0}$ | $1.5^{±0.1/0}$  | $1.5^{±0.1/0}$  |
| K | $1.4^{±0.1}$       | $1.5^{±0.1}$       | $1.0^{±0.1}$   | $1.5^{±0.1}$   | $0.9^{±0.1}$    | $0.9^{±0.1}$    |
| Q | $1.6^{+0.1/0}$     | $1.55^{±0.05}$     | $1.6^{±0.1}$   | $1.6^{±0.1}$   | $1.5^{±0.1/0}$  | $1.5^{±0.1/0}$  |
| T | $0.3^{±0.05}$      | $0.3^{±0.05}$      | $0.25^{±0.05}$ | $0.25^{±0.05}$ | $0.25^{±0.05s}$ | $0.25^{±0.05s}$ |

| Item         |               | Empty Space    |
|--------------|---------------|----------------|
| Tapa Leader  | Cover Tape    | Min.500mm      |
|              | Empty Pockets | Min.20 pockets |
| Tape Trailer | Cover Tape    | Min.0mm        |
|              | Empty Pockets | Min.40mm       |

**7. Inner carton**



**OUTET CARTON**



**7-1. MARKING**

- (1) Marking Labels are affixed to reel, inner carton and outer carton.
- (2) Each label contains the following information.
  - (a) Manufacture's name or symbol
  - (b) Parts name or type
  - (c) Frequency
  - (d) Quantity
  - (e) Reel number
  - (f) Manufacturer's code (EIAJ code)

**7-2. QUANTITY**

1000pcs/reel (max.5reels in outer carton)

**7-3. STORAGE ENVIRONMENT**

- ✧ Storage the reel at normal temperature and humidity
- ✧ Open the packing just before using
- ✧ Do not expose the sun
- ✧ Do not storage with some erosive chemicals
- ✧ Nothing is allowed to put on the reel or carton to prevent mechanical damage

**7-4. HANDLING**

- ✧ Handle with care to prevent the damage of tape, reel and products.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JGHC\(晶光华\)](#)