

## 承 认 书

SPECIFICATION FOR APPROVAL

客户名称: Customer \_\_\_\_\_

货 名: Description SMD 3225 GLASS 石英晶体谐振器

客户料号: Part No \_\_\_\_\_

物料编号: Code No G3236864062060A频 率: Frequency 36.864MHz日 期: Date 2020-09-22备 注: RoHS 豁免条款 7 (a)

制作(Prepare by)	检查(Check by)	批准 (Approve by)
郭静	甘瑛	张刚

客户批准 Approve by customer	
批准日期 Approval date	

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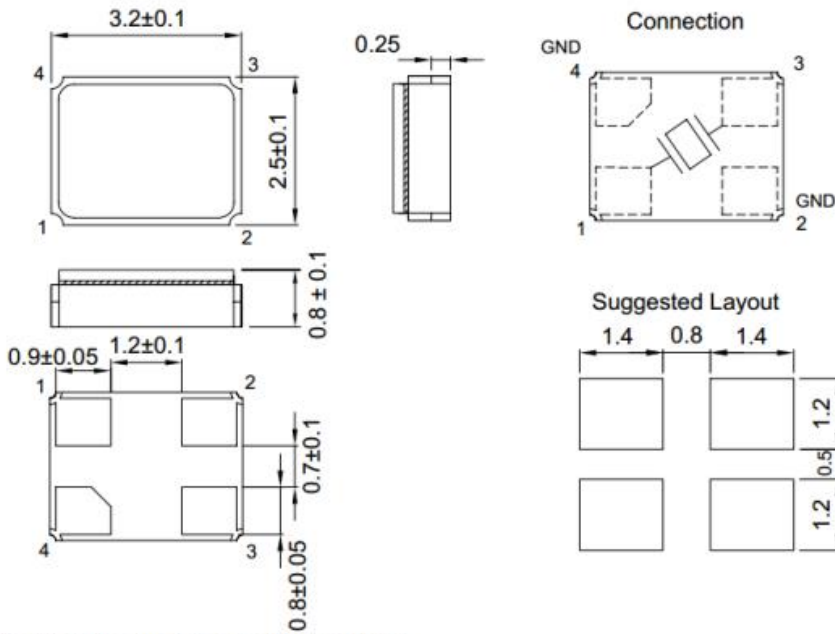
## 1、 Specifications

1	规格型号 <b>Holder Type</b>	SMD GLASS 3225
2	标称频率 <b>Nominal Frequency</b>	36.864MHz
3	振动模式 <b>Mode of Oscillation</b>	Fundamental
4	调整频差 <b>Frequency Tolerance at 25°C</b>	±20ppm
5	温度频差 <b>Temperature Frequency Stability</b>	±30ppm
6	工作温度 <b>Operating Temperature Range</b>	-40~85°C
7	贮存温度 <b>Storage Temperature Range</b>	-40~90°C
8	负载电容 <b>Load Capacitance</b>	6 pF
9	静电容 <b>Shunt capacitance</b>	≤7 pF
10	等效电阻 <b>Equivalent Series Resistance</b>	60Ω Max
11	激励功率 <b>Drive Level</b>	10 uW
12	绝缘阻抗 <b>Insulation Resistance</b>	500MΩ/100V±15V <sub>DC</sub>
13	年老化率 <b>Aging</b>	±3ppm/First year
14	测试仪器 <b>Test machine</b>	250B

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

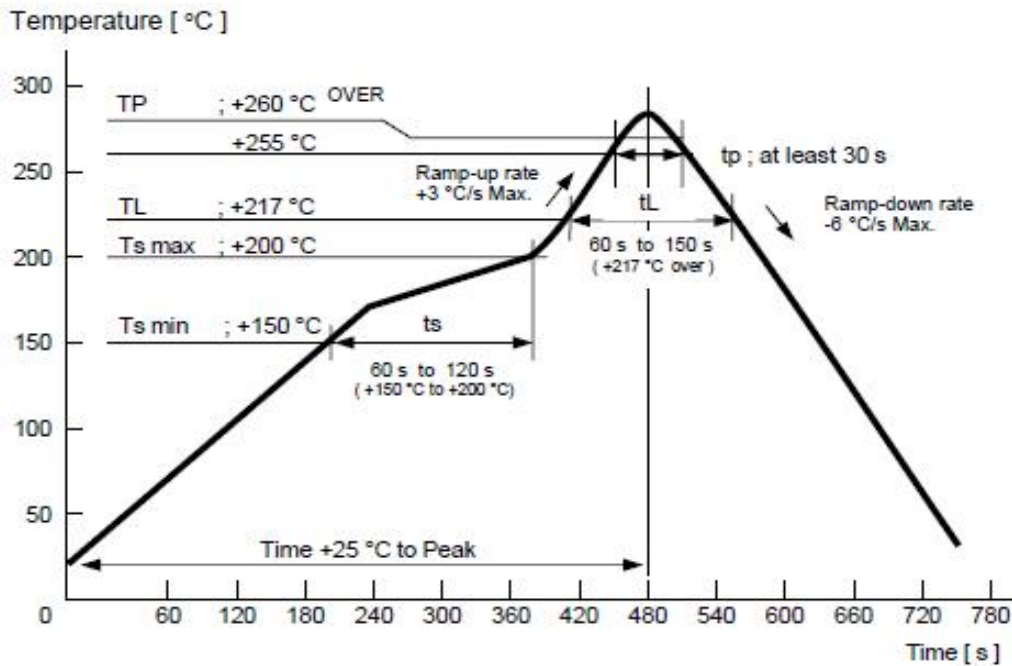
Temperature Range	Frequency Stability							
	±3PPM	±5PPM	±7.5PPM	±10PPM	±20PPM	±30PPM	±50PPM	±70PPM
0°C~+50°C	☆	☆	☆	☆	☆	☆	☆	☆
-10°C~+60°C			☆	☆	☆	☆	☆	☆
-20°C~+70°C				☆	☆	☆	☆	☆
-30°C~+70°C					☆	☆	☆	☆
-40°C~+85°C						☆	☆	☆
-40°C~+125°C						☆	☆	☆

### 3. Dimensions (unit:mm)



\*Coplanarity of solderable areas Camber 0.10 mm Max

### 4. Recommended Reflow profile

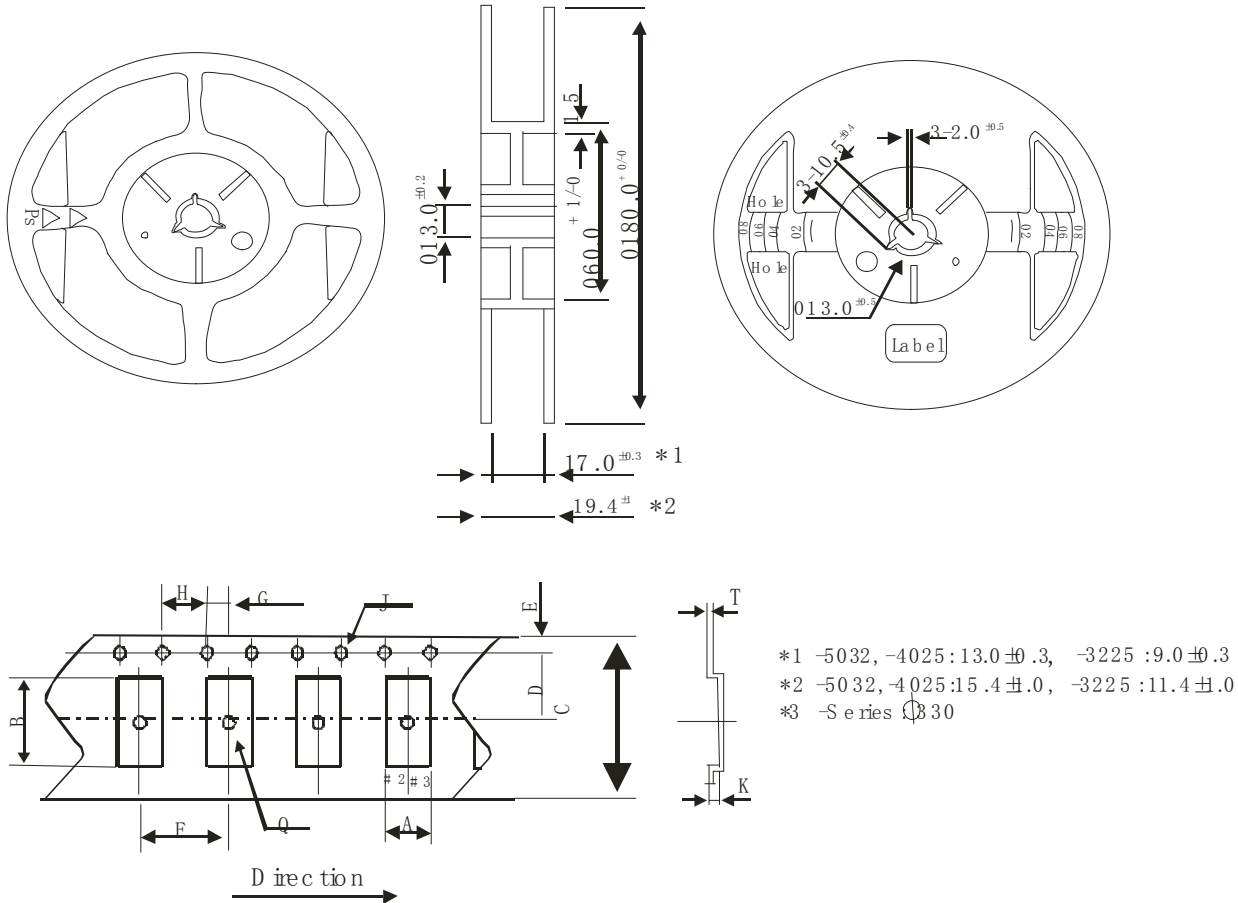


### 5. Reliability specifications

Item	Condition	Standard
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1.	Drop characteristics	Free drop from 75cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)	Frequency change: ≤5ppm Rr as specification
2..	Shake characteristics	Shake frequency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
3.	Airproof characteristics	Put crystal into the pressure cabin with alcohol, keep pressure 0.4~0.5mpa 10 minutes, then take out and blow for 5 minutes	IR≥500MΩ
4.	Weld characteristics	260±5℃, 3 seconds	90% exhibit tin ok
5.	Humidity characteristics	+40±2℃ & 90%~95% R.H. 250 hours	Frequency change: ≤5ppm Rr as specification
6.	Low temperature characteristics	-30±2℃, 250 hours, put in room temperature, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
7.	High temperature characteristics	+85±2℃, 250 hours, put in room temperature, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
8.	Temperature cycling	-30±3℃/30±3 min~+85±2℃/30±3min, 5 cycles	Frequency change: ≤5ppm Rr as specification

## 6、Packaging standard



\*1 -5032, -4025:13.0 $\pm$ 0.3, -3225 :9.0 $\pm$ 0.3  
 \*2 -5032, -4025:15.4 $\pm$ 0.0, -3225 :11.4 $\pm$ 0.0  
 \*3 -S e r i e s 330

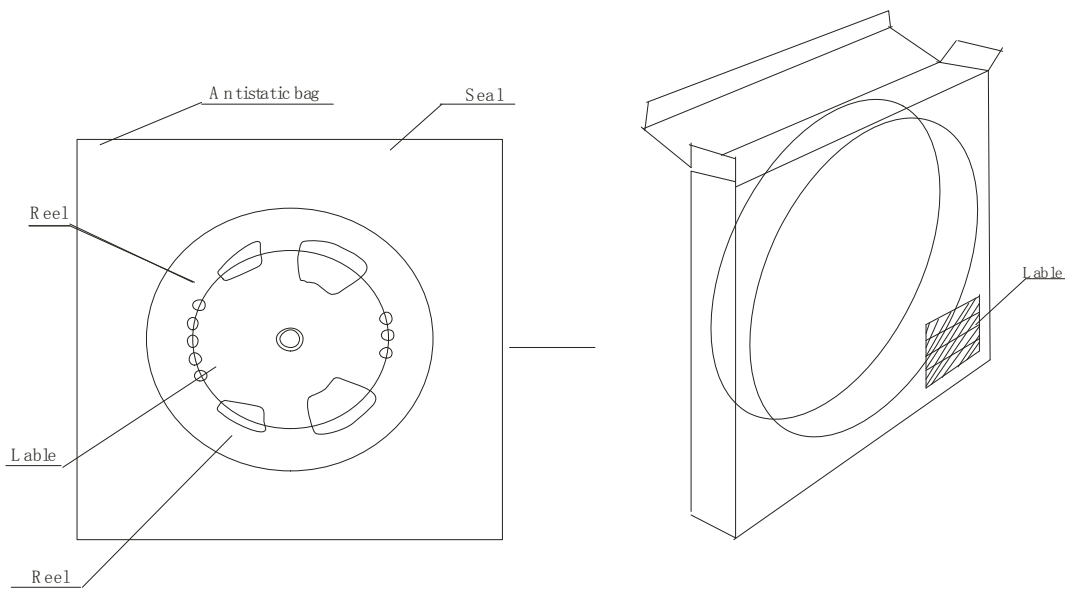
- Standard quantity of ST -3225 : 3,000 pcs/reel
- Standard quantity of SN -Series : 4,000 pcs/reel
- Standard quantity of others : 1,000 pcs/reel
- Carrier tape : Antistatic material (PS)
- Each reel can be recycled

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

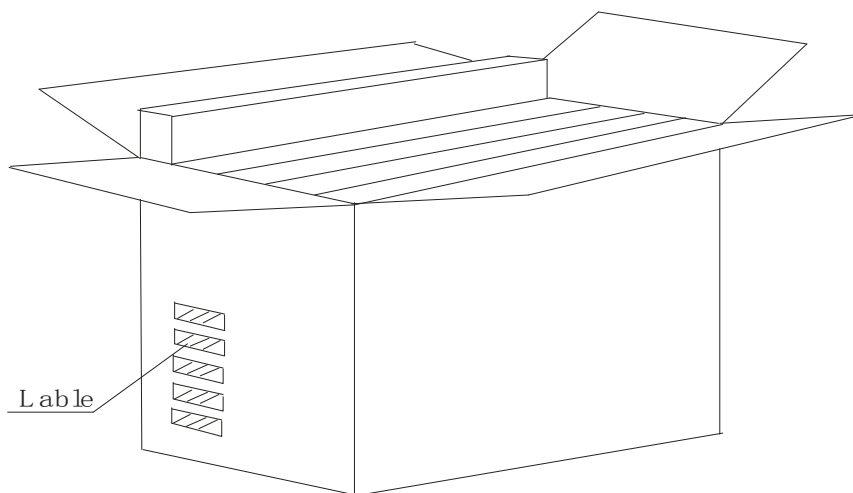
Item	Empty Space
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<b>Tapa Leader</b>	<b>Cover Tape</b>	<b>Min.500mm</b>
	<b>Empty Pockets</b>	<b>Min.20 pockets</b>
<b>Tape Trailer</b>	<b>Cover Tape</b>	<b>Min.0mm</b>
	<b>Empty Pockets</b>	<b>Min.40mm</b>

**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**

3000pcs/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.