

SPECIFICATION

FOR APPROVAL

Customer : _____

Product Name : SMD Piezo Buzzer _____

Model Name : VS1230AF40 _____

Drawing No. : VS20200228012 _____

Signature of Voise

| Approved by | Checkde by | Issued by | Date |
|-------------|------------|-----------|------|
| | | | |

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| | | Revision No. | 1.0 |
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1. Revision

| Rev.No. | Date | Page | Description of Revision |
|---------|-----------|------|-------------------------|
| 1.0 | 2020/2/28 | | Preliminary |
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2. Scope

This product specification is applied to the Piezo Buzzer in alarm systems. Please contact us when using this product for any other applications than described in the above.

3. General Characteristics

- 3.1 Dimension : 12x12 mm
- 3.2 Height : 3 mm
- 3.3 Weight : 0.5 g
- 3.4 Operating Temperature : -30~+80°C without loss of function
- 3.5 Store Temperature : -40~+85°C without loss of function
- 3.6 Environmental protection rule :RoHS

4. Electrical and Acoustic Characteristics.

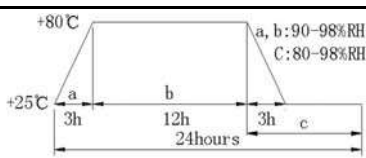
Test condition :15 ~ 35 °C Temp., 45% ~ 85% RH,86~106 kPa Refer to IEC60268-1

| No | Items | Specification |
|----|--------------------------|---------------------------------------|
| 1 | Operating Voltage | 5 Vo-p |
| 2 | Max.Allowable Voltage | 25 Vo-p |
| 3 | Max Current Consumption | 5 mA at 5Vo-p/Square Wave/4.0kHz |
| 4 | Min Sound Preesure Level | 80dB at 10cm 5Vo-p/4.0kHz,Square wave |
| 5 | Capacitance | 16000± 30%pF at 120Hz |
| 6 | Operating Frequency | 4000± 500Hz |
| 7 | Housing Material | LCP |
| 8 | Color | Black |
| 9 | Pad plating | Sn |

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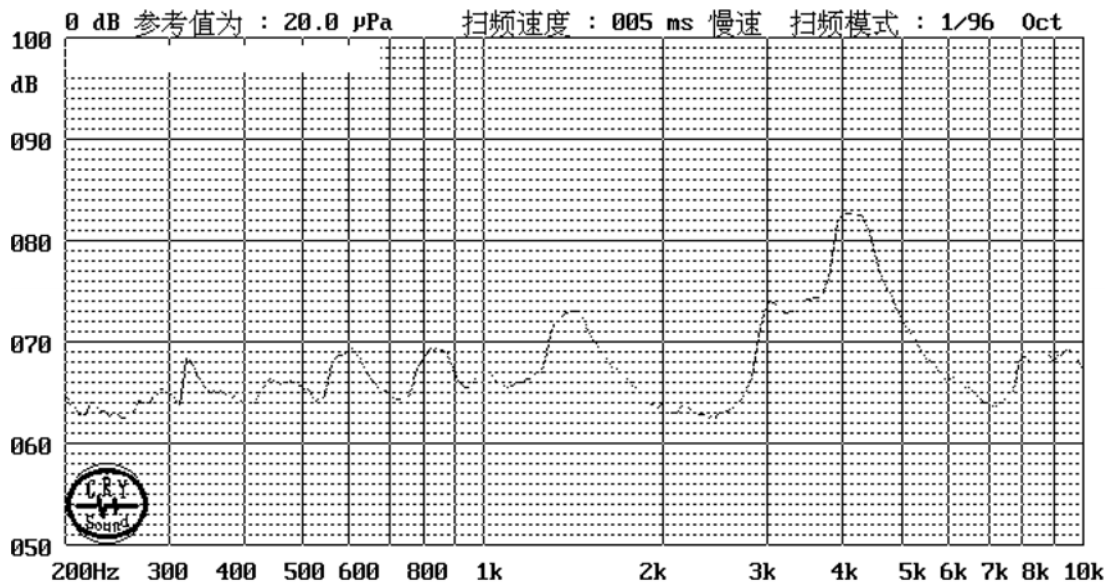
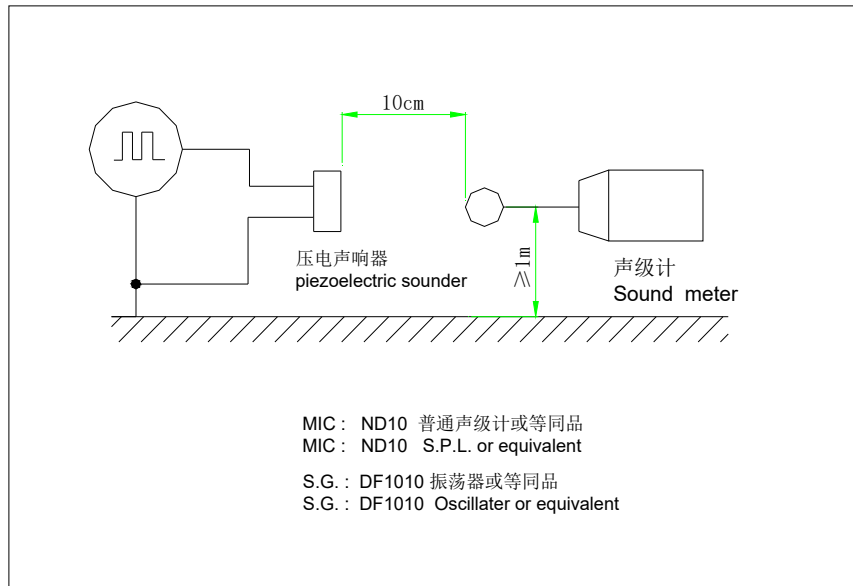
5. Reliability Test

After test(1~5item), the buzzer S.P.L . difference shall be within $\pm 10\text{dB}$, and the appearance not exist any change to be harmful to normal operation

| No | Items | Specification |
|----|---------------------------|---|
| 1 | High Temp.Test | After being placed in a chamber at $+85\pm 2\text{ }^\circ\text{C}$ for 96h and then being placed in natural condition for 4h, and then check. |
| 2 | Low Temp.Test | First being placed in a chamber at $-40\pm 2\text{ }^\circ\text{C}$ for 96h and then being placed in natural condition for 4h, and then check. |
| 3 | Temp./Humidity Test | The buzzer shall be subjected to 5 cycle: One cycle shall be 24 hours and of and then being placed in natural for 4h ,and then check.  |
| 4 | Thermal Shock Test | After being worked in a chamber at $+80\pm 2\text{ }^\circ\text{C}$ for 0.5 hour, then sounder shall be placed in a chamber at $-30\pm 2\text{ }^\circ\text{C}$ for 0.5 hour(1 cycle is the below diagram).The test duration is for 10 cycle.after being placed in natural condition for 4 hour.and then check. |
| 5 | Vibration Test | Being applied vibration of amplitude of 1.5mm with 10-55Hz band of vibration frequency,X.Y.Z.3 direction.2 hours each, total 6 hours. |
| 6 | Drop Test | Free drop fram 0.75 meter height to a board 40mm thick hard wood board 3 times in axes X.Y.Z. and be nothing mechanical damage. tatol 9 times. |
| 7 | Solderability | Lead terminals are immersed in solder bath of $+300\pm 5\text{ }^\circ\text{C}$ for 3 ± 1 seconds.95% surface of lead pads must be covered with fresh solder. |
| 8 | Soldering Heat Resistance | The product is followed the reflow temperation curve to test its reflow thermostability.No interference in operation. |
| 9 | Terminal Strength Pulling | Lead pads shall be soldered on the pc board, and the force 9.8N(1.0kg) shall be applied behaid the part for 10 seconds.No damage and cutting off. |
| 10 | Continuous life test | The part shall be subjected to 72 hours at $+65\text{ }^\circ\text{C}$ with 5V Vp-p, 4000Hz applied.after being placed in natural condition for 1000 hour.and then check. The SPL shall be within $\pm 10\text{dB}$. |

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6. Measurement Method & Frequency Response curve

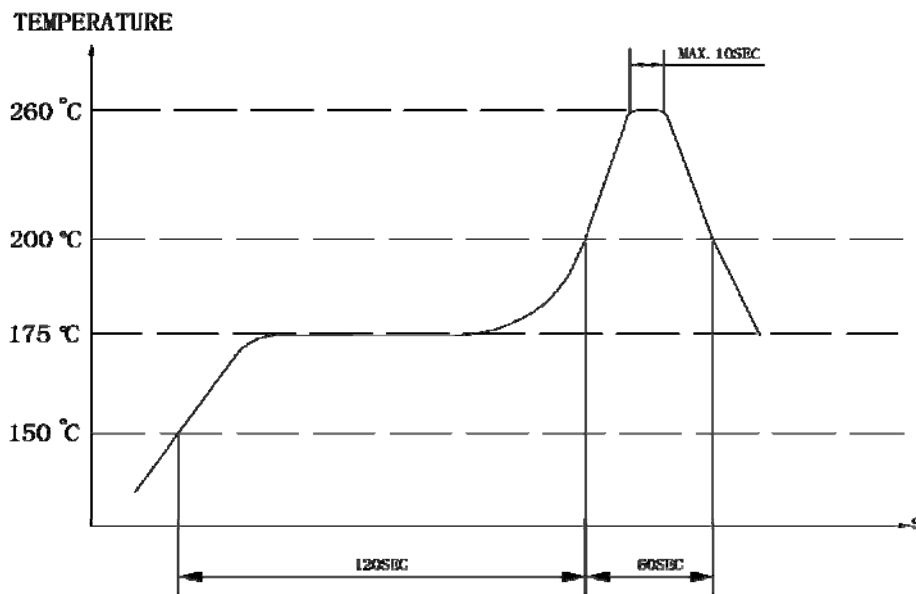


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7. Recommended temperature profile for reflow oven

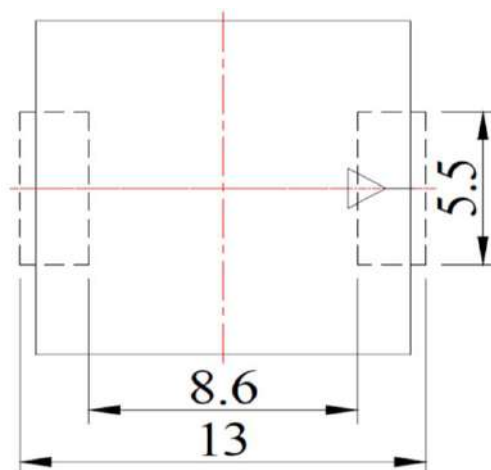
Recommendable reflow soldering condition is as follows (Reflow soldering is twice)

Note:It is requested that reflow soldering should be executed after heat of product goes down to normal.



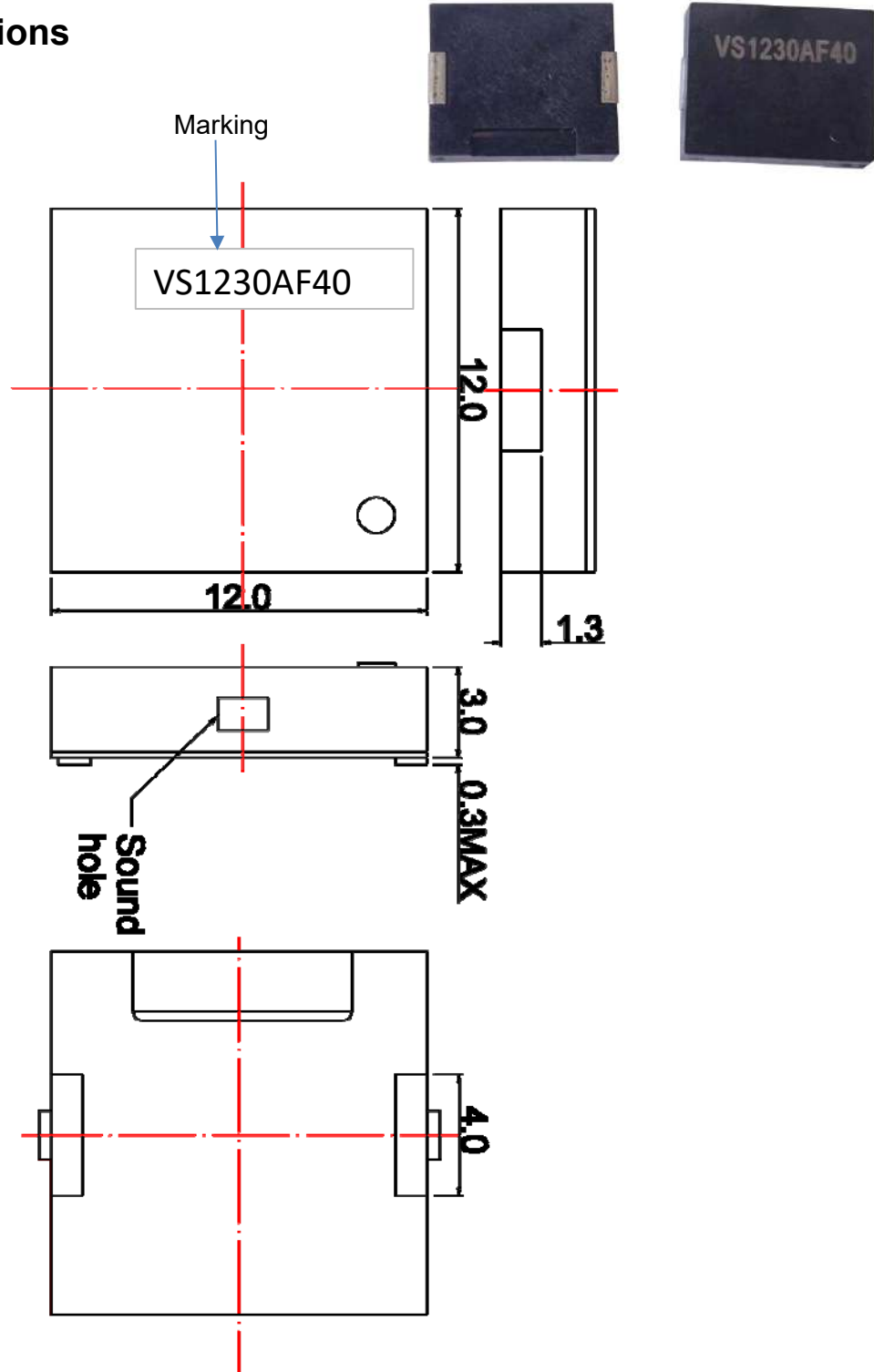
Heat resistant line (Used when heat resistant reliability test is performed)

8. Recommended land pattern

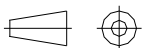


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9. Dimensions



FIRST ANGLE PROJECTION

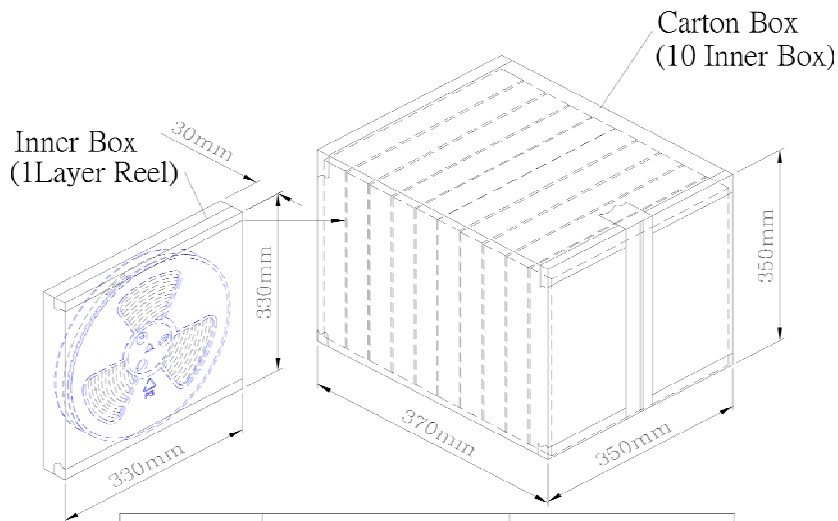
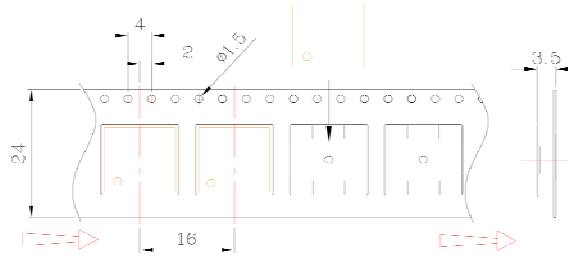
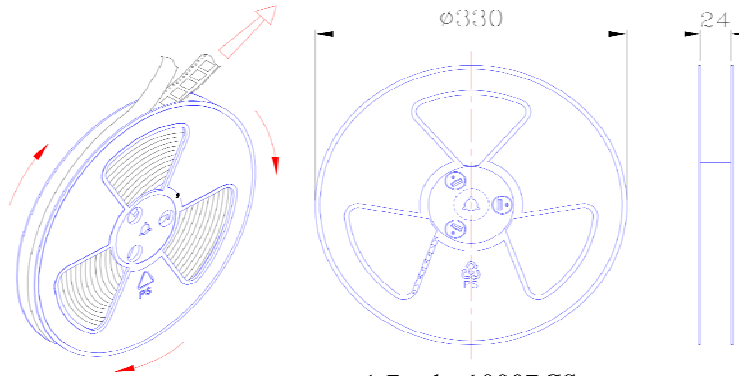


UNIT : mm

Tolerance : ±0.2

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10. Packing



| | | |
|------------|-------------------|----------------------|
| Inner Box | 330mmx330mmx30mm | 1x1000PCS=1000PCS |
| Carton Box | 350mmx350mmx370mm | 10x1000PCS=10,000PCS |

1000 pcs per Reel

10 inner box for unit, 10 units per carton

Total:10000 pcs per carton

Size:370X350X350mm