



SPECIFICATION

FOR APPROVAL

Customer : _____

Product Name : SMD Buzzer

Model Name : VS5020B

Drawing No. : VS20181215011

Signature of Voise

Approved by	Checkde by	Issued by	Date



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1. Revision

Rev.No	Date	Page	Description of Revision
1.0	2018/12/15		Preliminary



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2. Scope

This product specification is applied to the Magnetic 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 : 5x5 mm
- 3.2 Height : 2 mm
- 3.3 Weight : 0.3 g
- 3.4 Operating Temperature : -30~+60°C without loss of function
- 3.5 Store Temperature : -40~+80°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	Oscillation Frequency	4000Hz
2	Operating Voltage	2.0 ~4.0 Vo-p
3	Rated Voltage	3.0 Vo-p
4	Min Sound Pressure Level	80 at 10cm Rated Voltage
5	Max Current Consumption	100mA at Rated Voltage
6	Coil Resistance	12 ± 3Ω
7	Housing Material	LCP
8	Color	Black
9	Pad plating	Sn

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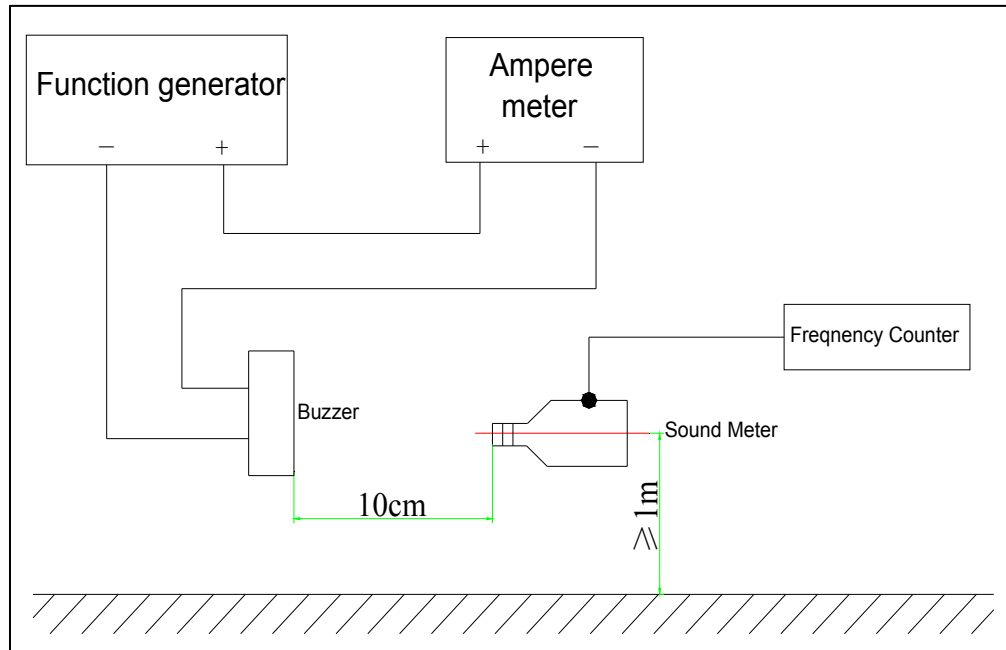
5. Reliability Test

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

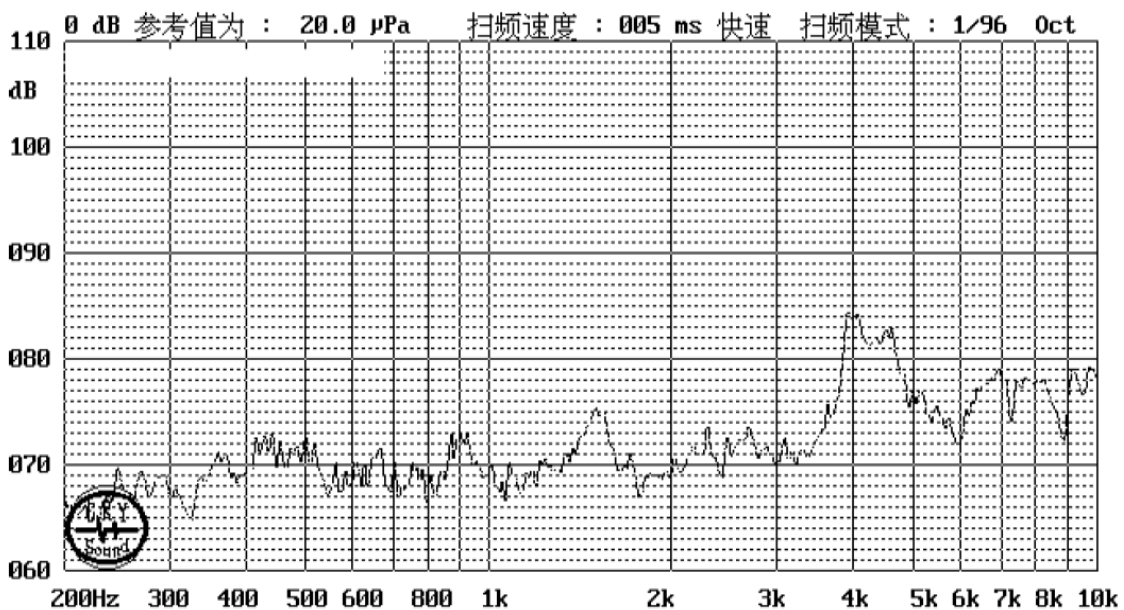
No	Items	Specification
1	High Temp.Test	After being placed in a chamber at $+60\pm 2\text{ }^\circ\text{C}$ for 96h and then being placed in natural condition for 4h, and then check.
2	Low Temp.Test	First being placed in a chamber at $-30\pm 2\text{ }^\circ\text{C}$ for 96h and then being placed in natural condition for 4h, and then check.
3	Temp./Humidity Test	The buzzer shall be subjected to 5 cycles One cycle shall be 24 hours and consist of and then being placed in natural for 4h, and then check.
4	Thermal Shock Test	After being worked in a chamber at $+60\pm 2\text{ }^\circ\text{C}$ 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 from 0.75 meter height to a board 40mm thick hard wood board 3 times in axes X.Y.Z. and be nothing mechanical damage. total 9 times.
7	Solderability	Lead terminals are immersed in solder bath of $+235\pm 5\text{ }^\circ\text{C}$ 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 temperature 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 behind the part for 10 seconds.No damage and cutting off.
10	Continuous life test	The part shall be subjected to 72 hours at $+60\text{ }^\circ\text{C}$ with 3V Vo-p, 4000Hz applied.after being placed in natural condition for 4 hour.and then check. The SPL shall be within $\pm 10\text{dB}$.
11	Intermittent life test	A duty cycle of 1 minute on, 1 minute off, a minimum of 5000 times at room temp.($25\pm 10\text{ }^\circ\text{C}$) with 3V Vo-p, 4000Hz applied. after being placed in natural condition for 4 hour.and then check. The SPL shall be within $\pm 10\text{dB}$.

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6. Measurement Method & Frequency Response curve

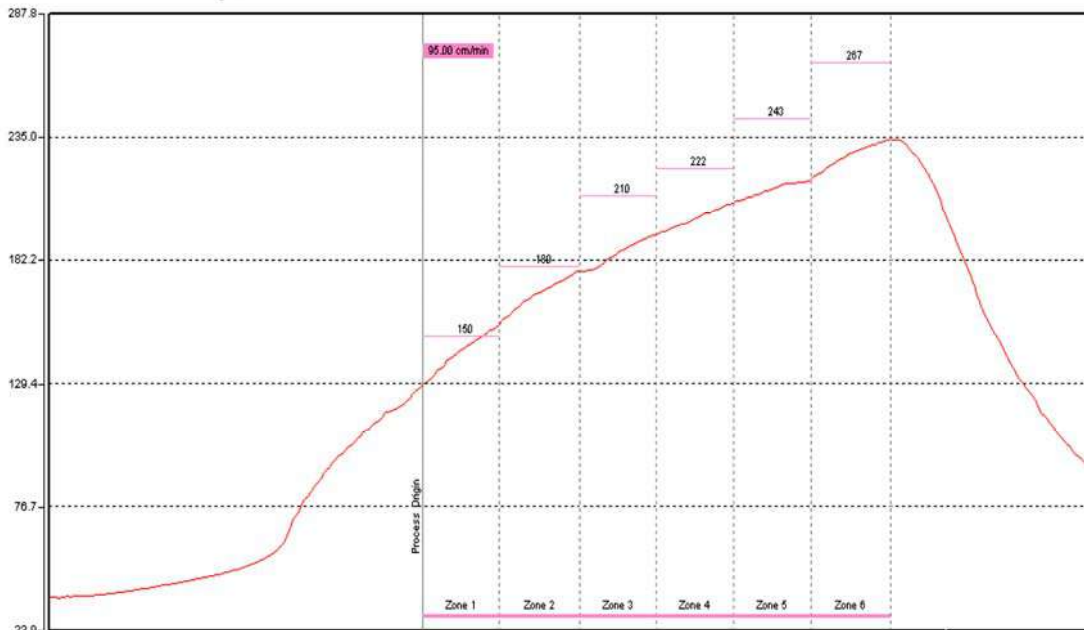


电压: 3000 mV $F_c = 04000\text{Hz}$ 083.97dB $F_c = 04000\text{Hz}$ dB $F_u =$ Hz Ω
 方波 $F_o = 03905\text{Hz}$ 084.53dB $F_o =$ Hz dB $F_o =$ Hz Ω

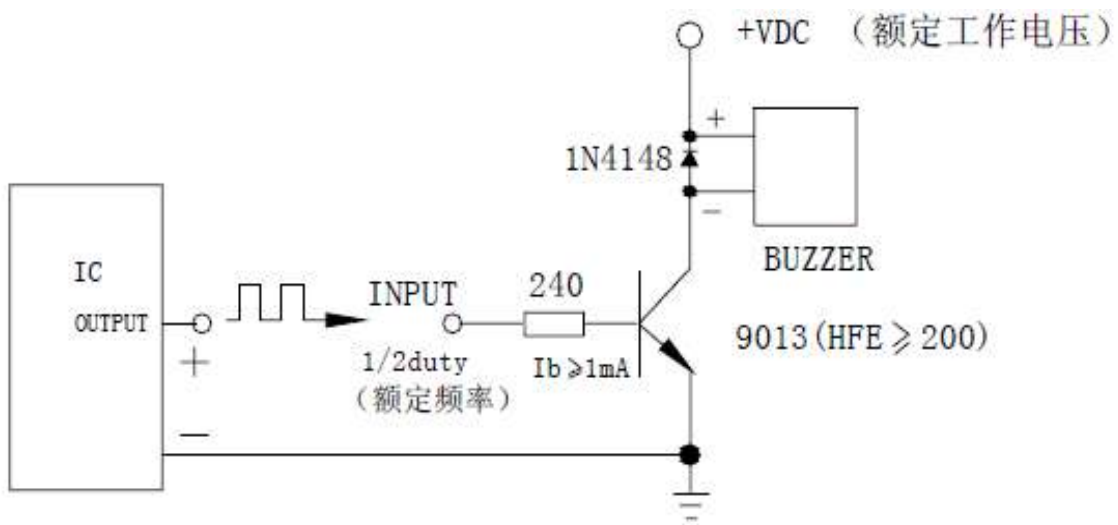


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7. Recommended temperature profile for reflow oven

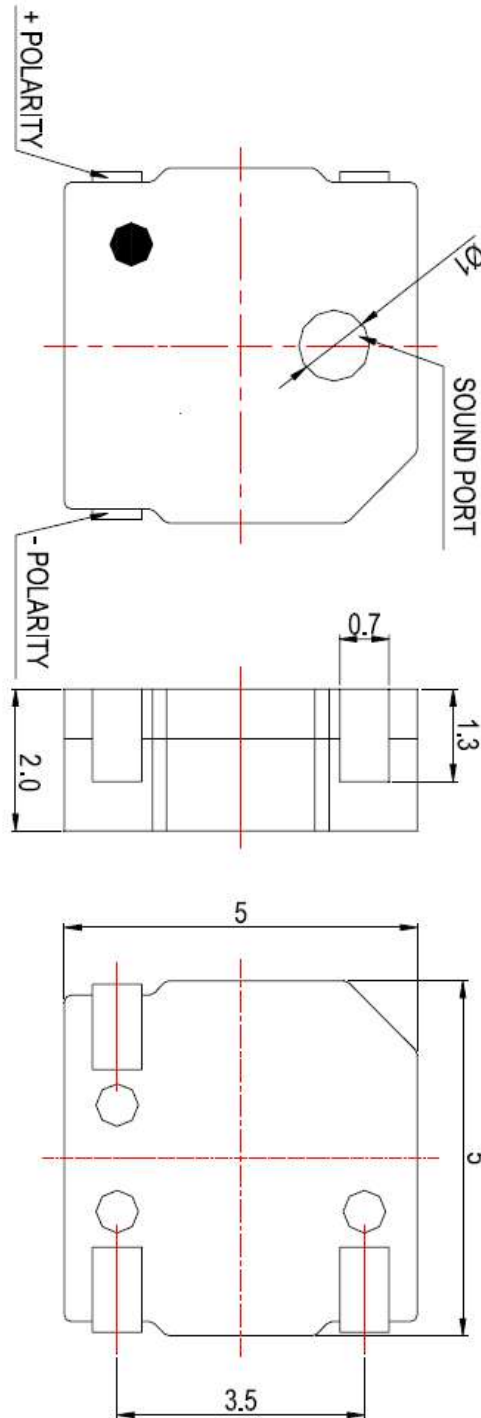


8. Recommended circuit

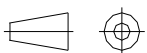


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9. Dimensions



FIRST ANGLE PROJECTION

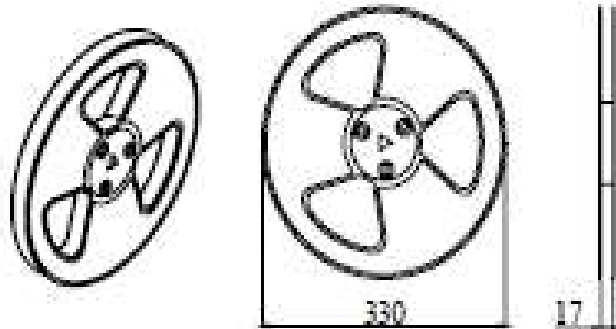
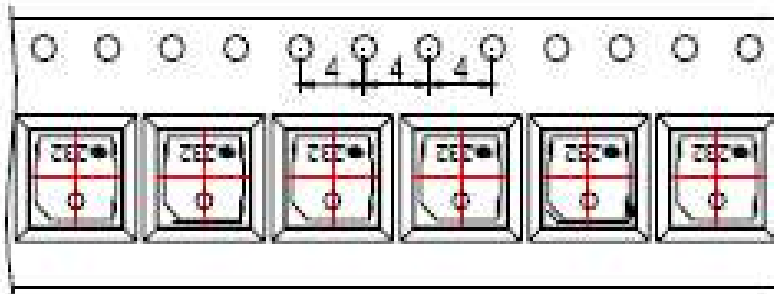


UNIT : mm

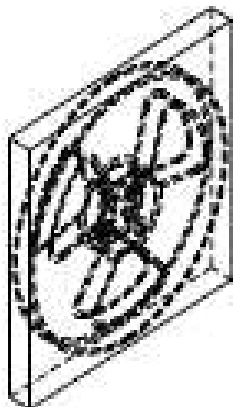
Tolerance : ± 0.2

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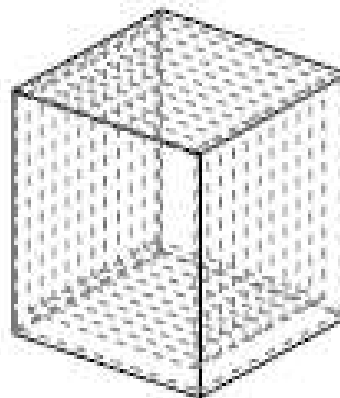
10. Packing



1 Reel: 2500 Pcs



Inner Box
1 Layer Reel



Carton Box
(10 Inner Box)

2500 pcs per Reel

10 inner box for unit, 10 units per carto

Total:25000 pcs per carton

Size:350X280X350mm