

SPECIFICATION

For Electro-Magnet Transducer

Customer	
Customer P/N	
BeStar Model Name	SMT1212-12H6.5-03LF
Product No.	050625
Issue No.	BS/TET01.433A
Issue Date	07/02/11

Approval:

- 1.Characteristics
- 2.Dimension
- 3.Reliability Test
- 4.Surface Mounting Condition
- 5.Tape on Reel Packing
- 6.Notice
- 7.History change record

Drawn by	Checked by	Approved by	Customer approved

For conform to the European Union Directive on the Restriction of Hazardous Substances(RoHS), this type of productions forbid use all the hazardous substances as follow:

Lead
Cadmium
Mercury
Hexavalent chromium
Polybrominated biphenyls (PBB)
Polybrominated diphenyl ethers (PBDE)



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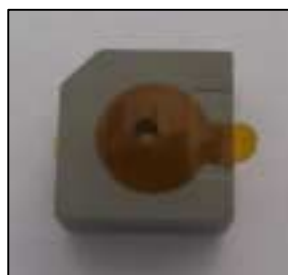
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SMT1212-12H6.5-03 LF

1. Characteristics

1.1 Features

1. SMD;thinner , smaller size
2. High S.P.L.; and clear sound
3. Reflowable;RoHS complant
4. Tape & Reel supply
5. Minimum quantity (one reel): 500 pcs.



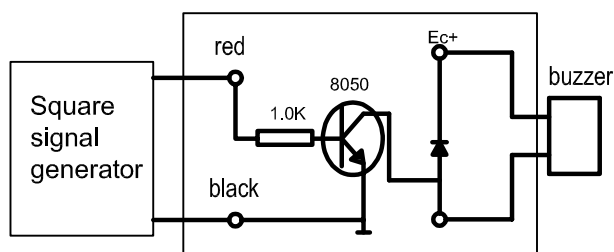
1.2 Electrical and Mechanical Characteristics

No.	Item	Specifications
1	Rated Voltage	12V
2	Operating Voltage	8...16V
3	* Rated Current	max.40mA
4	* Sound Output (at 10cm)	min.85dB
5	Resonance Frequency	2400Hz
6	Coil Resistance	120± 21 Ω
7	Operating Temp.	-30...+105 °C
8	Storage Temp.	-30...+105 °C
9	Weight	2 g
*Rate applying rated voltage (2400Hz, 1/2 duty,square wave)		

1.3 Test method:

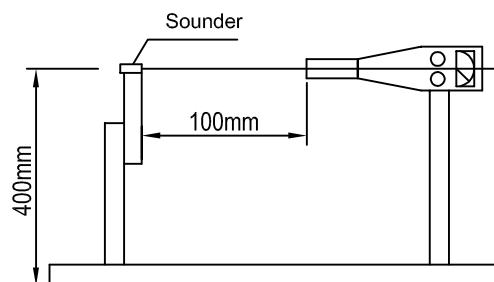
1.31.Recommended Circuit

the following are examples of externally driven circuits.



1.32.Standard test Fixture

No reaction in space with in 400mm in all direction



Date: 07.02.11

Drawn by: 魏奉玲

Checked by: 韩学慧

Approved by: 程久生

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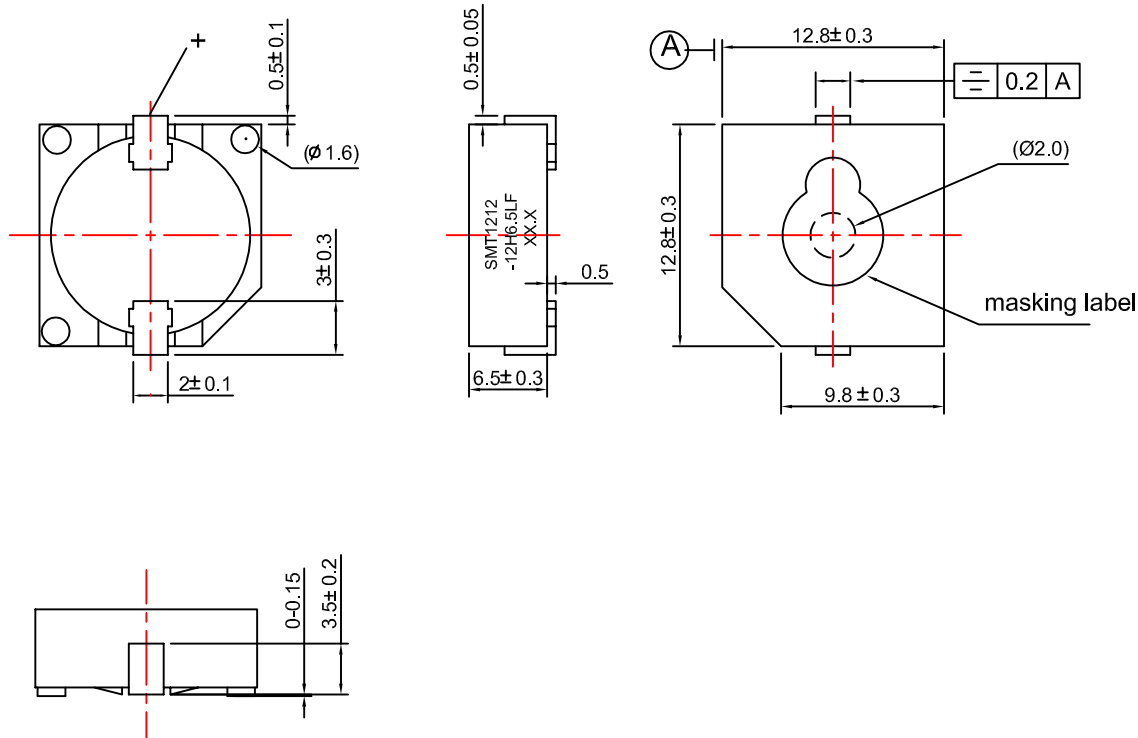
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2.Dimension



Unit: mm

Tolerance: ± 0.3

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3.Environmental Test

3.1 High temperature storage test

Temperature +105° C
Duration 96hrs

3.2 Low temperature storage test

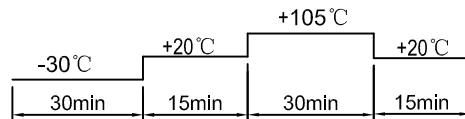
Temperature -30° C
Duration 96hrs

3.3 Life test in normal temperature

Power supply Rated voltage
Duration 240hrs

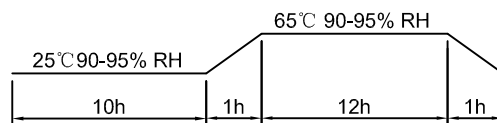
3.4 Temperature cycle test

Cycles 5



3.5 Humidity cycle test

Cycles 5



All these tests above should be measured after leaving normal temperature for 2hrs.

3.6 Vibration Test

Vibration Frequency 10~55Hz
Amplitude 1.53mm
Direction 3(x.y&z)
Duration 2hrs each direction (total 6 hrs)

3.7 Drop test

Height 70cm
(to 10mm thickness woodenboard)
Direction 3(x.y&z)

3.8 Solderability Test

1. Hand soldering system

Soldering Temperature 245 ± 5° C
Duration 3 ± 0.5sec

notice: All specifications must be satisfied in this condition.

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4.Surface Mounting Condition

In automated mounting of The SMD Sound Transducers on printed circuit boards,any bending,expanding and pulling forces or shocks against the SMD Sound Transducers shall be kept minimum to preven them from electrical failures and mechanical damages of the devices.

Soldering(Reflow)

- (1)Solderings of The SMD Sound Transducers shall conform to the soldering conditions in the individual specifications.
- (2)The SMD Sound Transducers are designed for"Reflow Solderings"
- (3)In the reflow solderings,too high soldering temperatures and too large tempearture gradient such as rapid heating or cooling may cause electrical failures and mechanical damages of the devices.

Follwing soldering conditions are recommend;Refer to Fig.1

Temperature profile for a lead-free reflow process

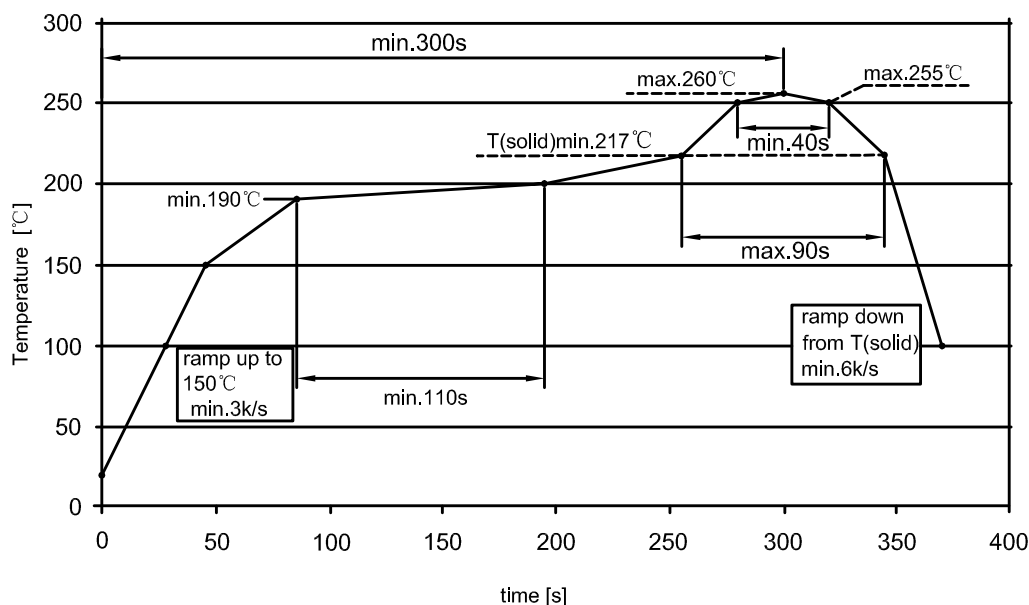
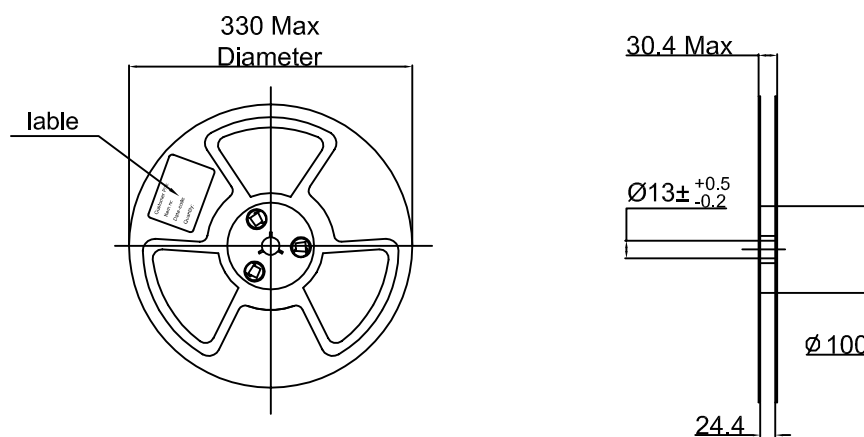
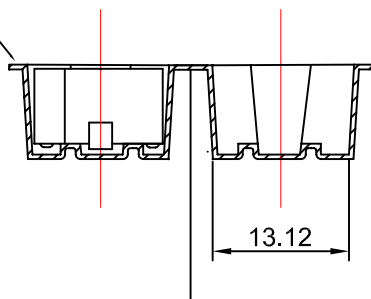
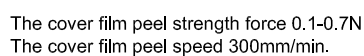


Fig. 1 Recommended soldering Temperature-Time profile (Reflow soldering)

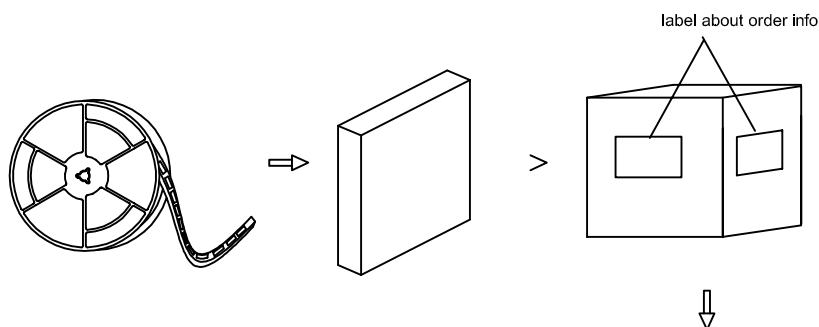
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Dimensions of carrier tape



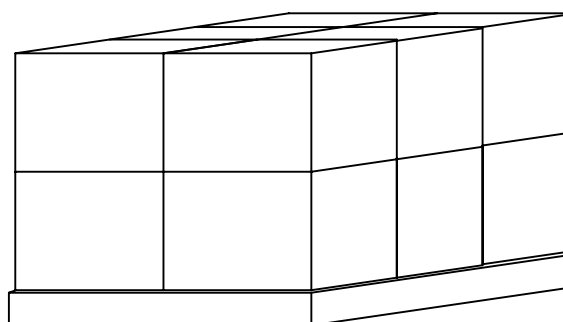
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5.2 packing quantity

- 5.21 500pcs/reel
- 5.22 5reel/carton
- 5.23 2500 pcs/carton in total
- 5.24 carton size 38x28x37cm
- 5.25 12carton/tray
- 5.26 tray size 85x77x74cm



6. Notice

6.1 The products mustn't be washed

6.2 Storage Condition

The products should be stored in the room, where the temperature/humidity is stable. And avoid such places where there are large temperature changes. Please store the products at the following conditions:

Temperature: -10 to +40°C Humidity: 15 to 85% R.H.

6.3 Expire Date on Storage

Expire date (Shelf life) of the products is six months after delivered under the conditions of a sealed and an unopened package. Please use the products within six months after delivered.

If you store the products for a long time (more than six months), use carefully because the products may be degraded in the solderability and/or rusty. Please confirm solderability and characteristics for the products regularly.

6.4 Notice on Product Storage

(1) Please do not store the products in a chemical atmosphere (Acids, Alkali, Bases, Organic gas, Sulfides and so on), because the characteristics may be reduced at quality, and/or be degraded in the solderability due to the storage in a chemical atmosphere.

(2) Please use the products immediately after the package is opened, because the characteristics may be reduced at quality, and/or be degraded in the solderability due to storage under the poor condition.

Date: 07.02.11

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