

SPECIFICATION

For Electro-Magnet Transducer

Customer	
Customer P/N	
BeStar Model Name	SMT1010-12XH05 LF
Product No.	052202
Issue No.	BS/TET01.474A
Issue Date	07/06/19

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
韩学慧	朱成兴	程久生	

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)



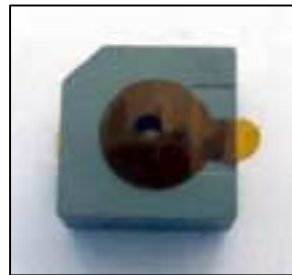
BESTAR ELECTRONICS INDUSTRY CO.,LTD
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SMT1010-12XH05 LF

1. Characteristics

1.1 Features

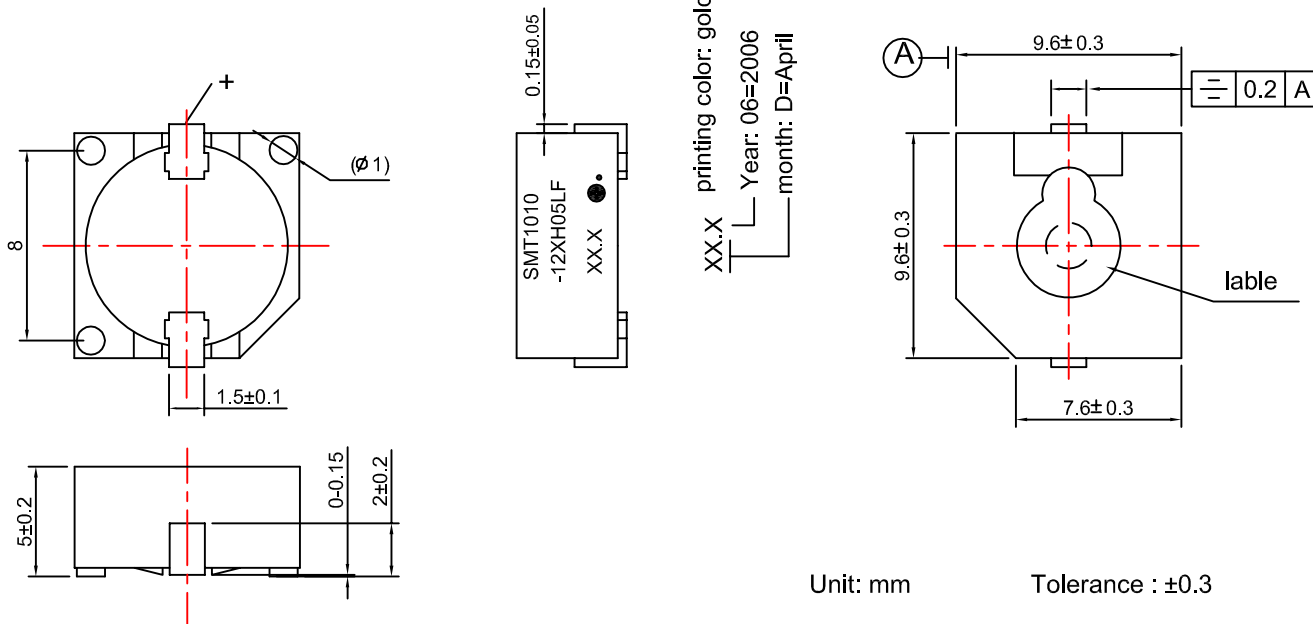
1. SMD buzzer
2. High S.P.L.; and clear sound
3. Reflowable;RoHS compliant
4. Tape & Reel supply
5. Minimum quantity (one reel): 750 pcs.



1.2 Electrical and Mechanical Characteristics

No	Type	Specifications
1	Rated Voltage	12V
2	Operating Voltage	8~15V
3	a)Rated Current	Max 30mA
4	a) Sound Output at 10cm	Min 85 dB
5	a)Resonant Frequency	2700±300 Hz
6	Temperature Range	-30~+85 ° C
7	Storage Temperature	-40~+90 ° C
8	Weight	1g
9	Housing material	PPS(grey)
a)Value applying rated voltage(DC)		
Sound Output after reliability test more than 80 dB		

2. Dimensions



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3. Reliability Test

3.1 High temperature test

Temperature	+90±2 °C (no function)
Duration	96hrs
Power supply	Rated voltage
Temperature	+85±2 °C (function)
Duration	96hrs

3.2 Low temperature test

Temperature	-40±2 °C (no function)
Duration	96hrs
Power supply	Rated voltage
Temperature	-30±2 °C (function)
Duration	96hrs

3.3 Life test in normal temperature

Power supply	Rated voltage
Duration	1000hrs

3.4 Temperature cycle test

Cycles	5
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3.5 Humidity cycle test

Cycles	10
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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)

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3. Reliability Test

3.7	Drop test	
	Height	750mm
	(to 10mm thickness woodenboard)	
	Direction	3(x.y&z)
3.8	Soldering Heat Resistance	
	Soldering Temperature	250 ± 5 °C
	Duration	10 ± 1sec
3.9	Solderability Test	
	Soldering Temperature	245 ± 5 °C
	Duration	3 ± 1sec

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 prevent 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 temperature gradient such as rapid heating or cooling may cause electrical failures and mechanical damages of the devices.

Following soldering conditions are recommended; Refer to Fig.1

Temperature profile for a lead-free reflow process

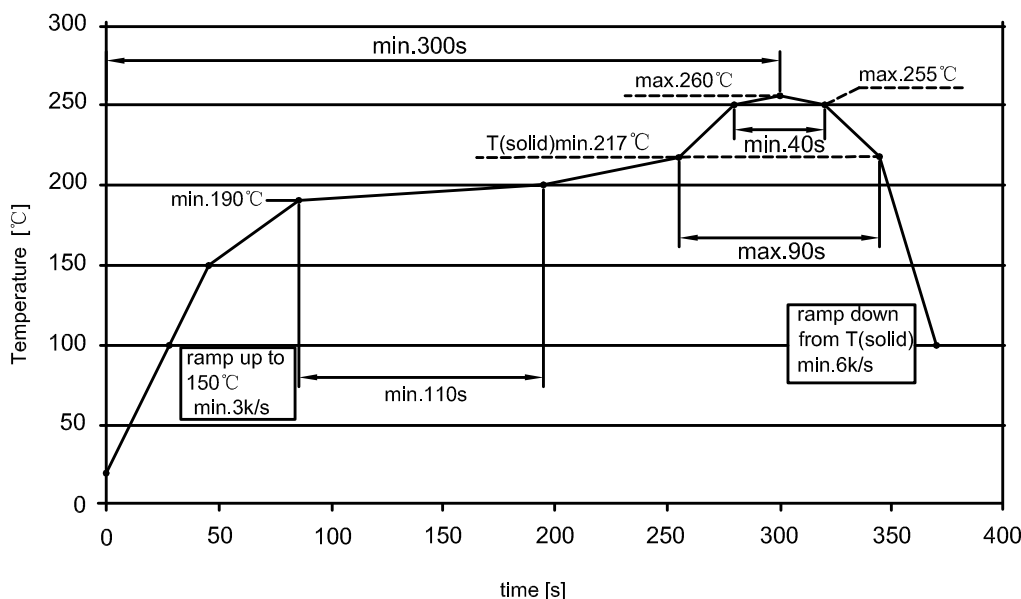


Fig. 1 Recommended soldering Temperature-Time profile (Reflow soldering)

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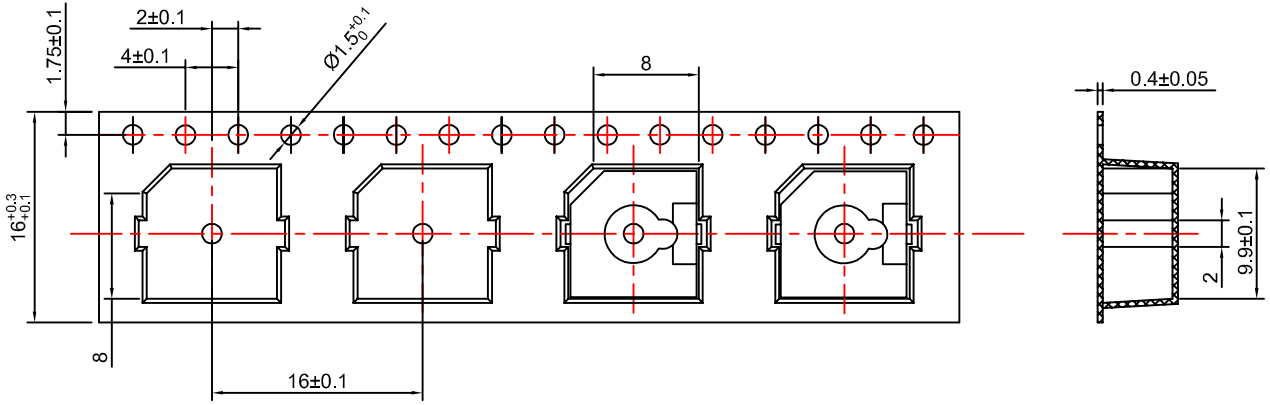
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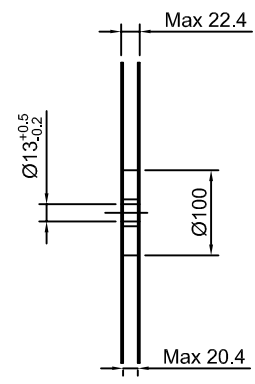
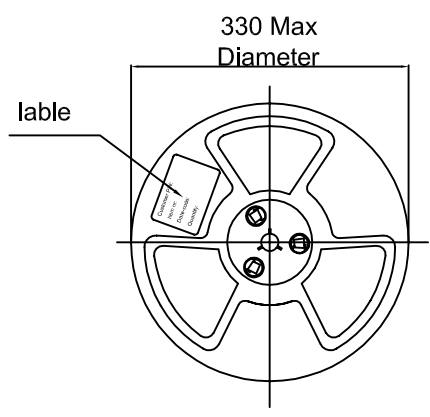
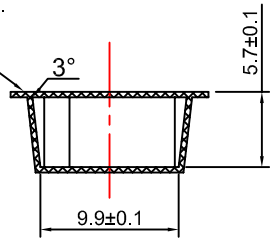
5. Tape on Reel Packing

5.1 packing drawing

Dimensions of carrier tape



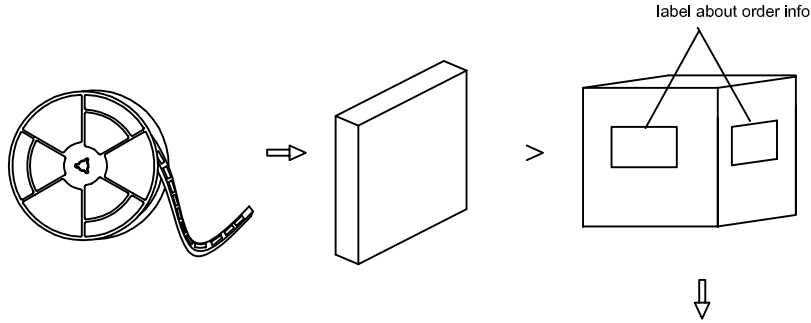
The cover film peel strength force 0.1-0.7N
The cover film peel speed 300mm/min.



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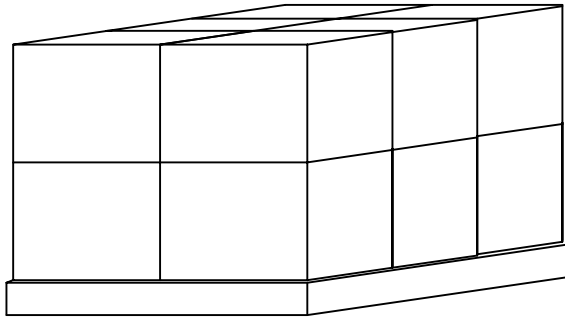
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5.2 packing quantity

- 5.21 750pcs/reel
- 5.22 5reel/carton
- 5.23 3750 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.

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