



SPECIFICATION  
FOR MAGNETIC Transducer

TOTAL PAGE	07	<a href="http://www.be-star.com">www.be-star.com</a>	RoHS
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Customer		Model Name	SMT1212-03XH10 LF
Customer P/N		Product No.	050914
Date	15 Dec. 11	Issue No.	BS/TET01.363E
Page	01 of 07	Issue Date	11/12/15

Approval:

- 1.Characteristics
- 2.Dimension
- 3.Reliability test
- 4.Surface mounting condition
- 5.Packing
- 6.Notice
- 7.History change record

Drawn by	Checked by	Approved by	Customer approved
徐 波	赵 峰	王 平	

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# SMT1212-03XH10 LF

## 1. Characteristics:

### 1.1 Features

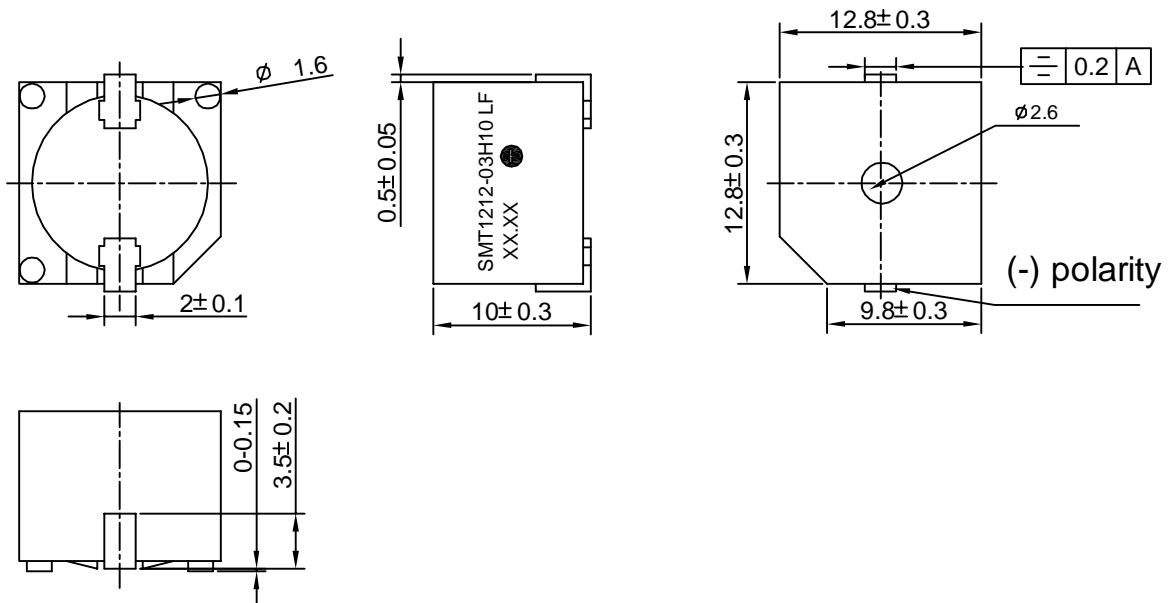
1. SMD; thinner , smaller size
2. High S.P.L.; and clear sound
3. Reflowable;RoHS compliant
4. Tape & Reel supply
5. Minimum quantity (one reel): 200 pcs.



### 1.2 Electrical and Mechanical Characteristics

No	Type	Specifications
1	Rated Voltage	3V
2	Operating Voltage	2~5V
3	a)Rated Current	Max 30mA
4	a) Sound Output at 10cm	Min 85 dB
5	a)Resonant Frequency	2300 ± 300 Hz
6	Temperature Range	-40~+85 °C
7	Storage Temperature	-40~+90 °C
8	Weight	3.5g
a)Value applying rated voltage(DC)		
Sound Output after reliability test more than 80 dB		

## 2.Dimension:



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## 3. Reliability Test

### 3.1 High temperature storage test

Temperature +90 °C  
Duration 96hrs

### 3.2 Low temperature storage test

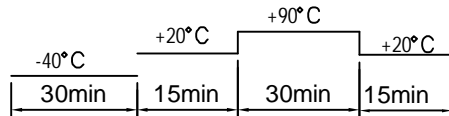
Temperature -40 °C  
Duration 96hrs

### 3.3 Life test in normal temperature

Power supply Rated voltage  
Duration 1000hrs

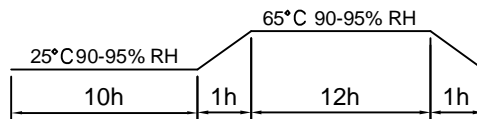
### 3.4 Temperature cycle test

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 °C  
Duration 3 sec

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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

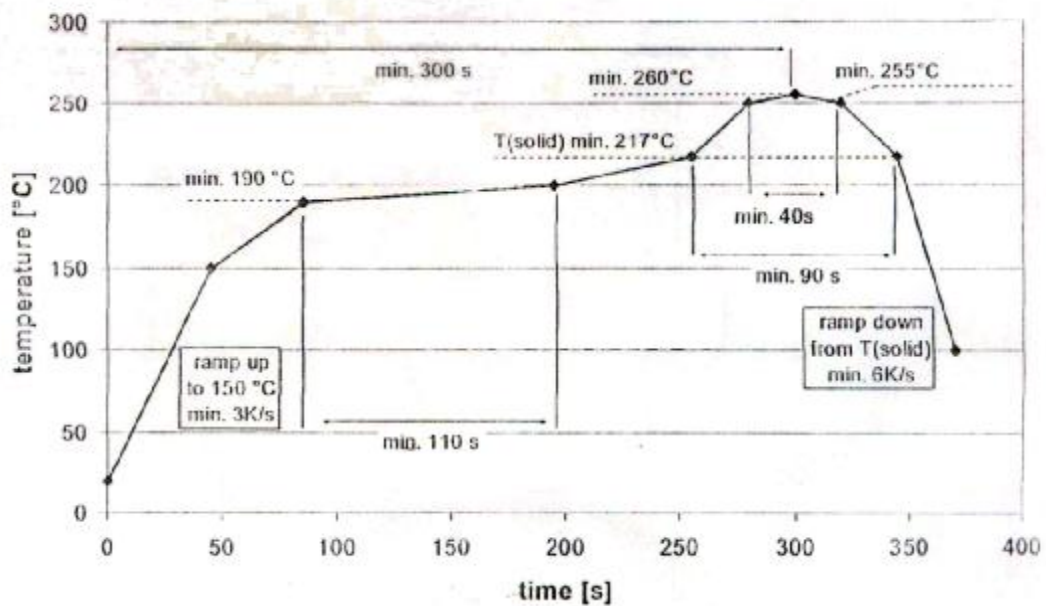


Fig. 1 Recommended soldering Temperature-Time profile (Reflow soldering)

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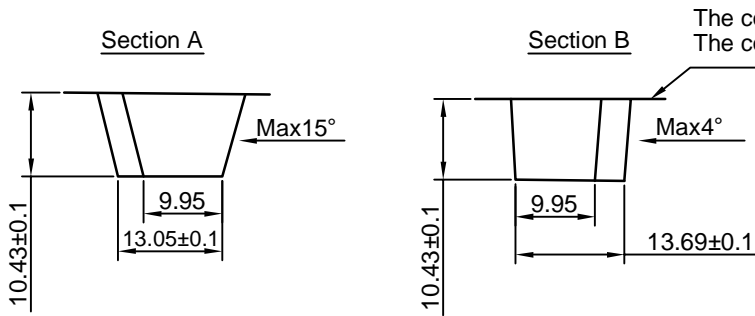
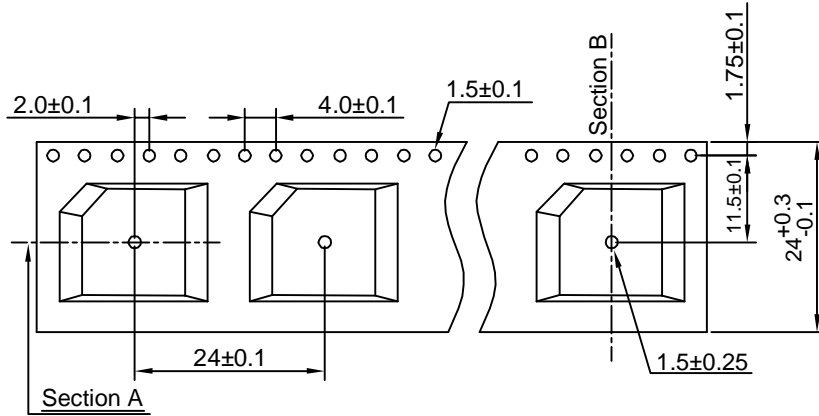
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## 5. Packing

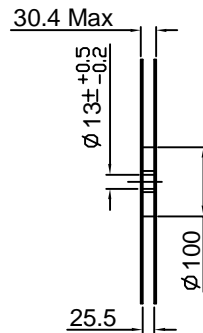
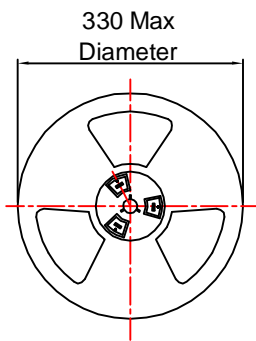
### 5.1 Tape on Reel Packing

#### 5.11 packing drawing

#### Dimensions of carrier tape



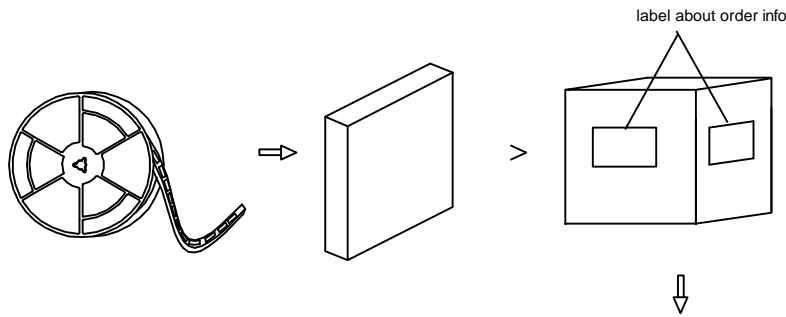
The cover film peel strength force 0.1-0.7N  
The cover film peel speed 300mm/min.



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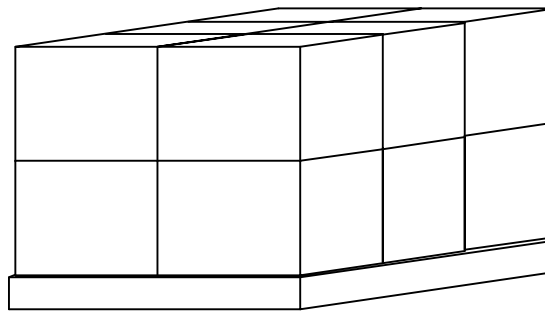
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## 5.12 Reel Packing

- 1) 200 pcs/reel
- 2) 5 reel/carton
- 3) 1000 pcs/carton in total
- 4) carton size 38 x 28 x 37cm



## 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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## 7. History change record

version No.	Change Items		Date	Drawn	Approved
	Before	After			
A			06/06/23	韩学慧	郭敏
B		change polarity	06/07/06	韩学慧	郭敏
C		Change product quantity per reel	06/08/07	韩学慧	郭敏
D		Change reel package	06/09/11	韩学慧	郭敏
E		Delete customer P/N	11/12/15	徐 波	王平

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