

SPECIFICATION FOR ELECTRO-MAGNET TRANSDUCER

Customer	
Customer P/N	
BeStar Model Name	SMT5555-03H2.5 LF
Product No.	050719
Issue No.	BS/TET01.552A
Issue Date	08/09/20

Approval:

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

Drawn by	Checked by	Approved by	Customer approved
魏奉玲	徐波	陶红仲	

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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SMT5555-03H2.5 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): 1800 pcs.



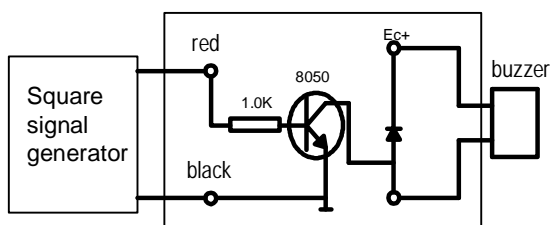
1.2 Electrical and Mechanical Characteristics

No.	Item	Specifications
1	Rated Voltage	3Vo -p
2	Operating Voltage range	2.5-4.5Vo -p
3	Rated Frequency	3100Hz
4	Rated Current	max.120mA
5	Coil Resistance	10±1.5 Ω
6	a) Sound Pressure Level at 5cm	min.87dB
7	Operating Temperature	-40...+85 °C
8	Storage Temp.	-40...+85 °C
9	Weight	0.6 g
a)Value applying rated voltage (3100Hz,1/2 duty,square wave)		

1.3 Test method:

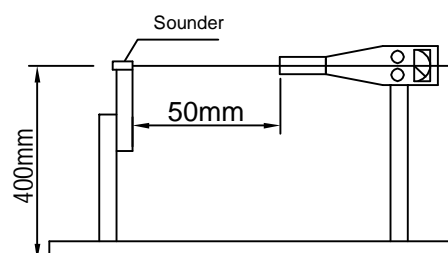
1.31.Recommended Circuit

the following are examples of externally driven circuits.



1.32.Standard test Fixture

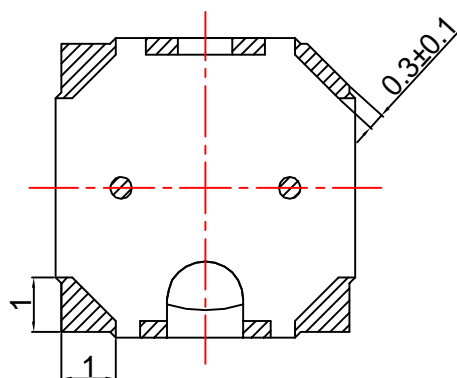
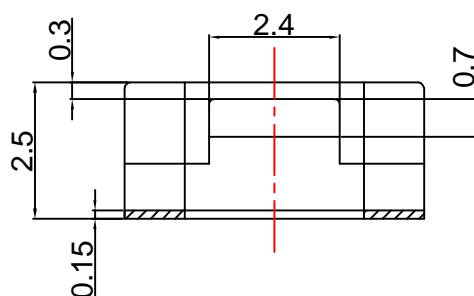
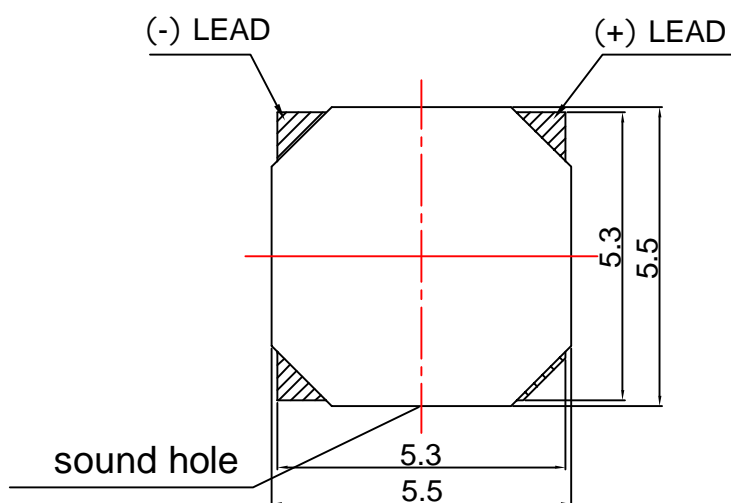
No reaction in space with in 400mm in all direction



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SMT5555-03H2.5 LF

2.Dimension



Unit:mm Tolerance:±0.2

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3. Reliability Test

3.1 high temperature test

Temperature +85°C
Duration 240hrs

3.2 low temperature test

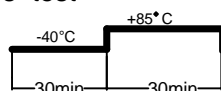
Temperature -40°C
Duration 240hrs

3.3 life test in high temperature

Temperature +85°C
Power supply 3.0Vo-p square wave 1/2 duty 3.1KHz
Duration 1000hrs

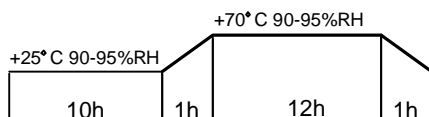
3.4 Temperature Cycles test

32



3.5 Humidity cycle test

Cycles 10



Note: All these tests above should be measured after leaving normal temperature for 4 hours.

3.6 Vibration

Frequency 10 ~ 200 ~ 10Hz
Amplitude 1.5mm
Direction X,Y&Z
Duration 2hrs each, total 6hrs

3.7 Fixed drop

Drop height 152mm
Duration every 6 surface 5 times (total 30 times)

3.8 Drop test

Drop height 100cm
Duration 6 every surface 1 time

3.9 Solderability

Solder temp. 255±5°C
Soaking time 2±0.5sec

Note: After the above tests, there should be no problems with appearance and performance except S.P.L, S.P.L shall be 85dB or more.

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SMT5555-03H2.5 LF

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

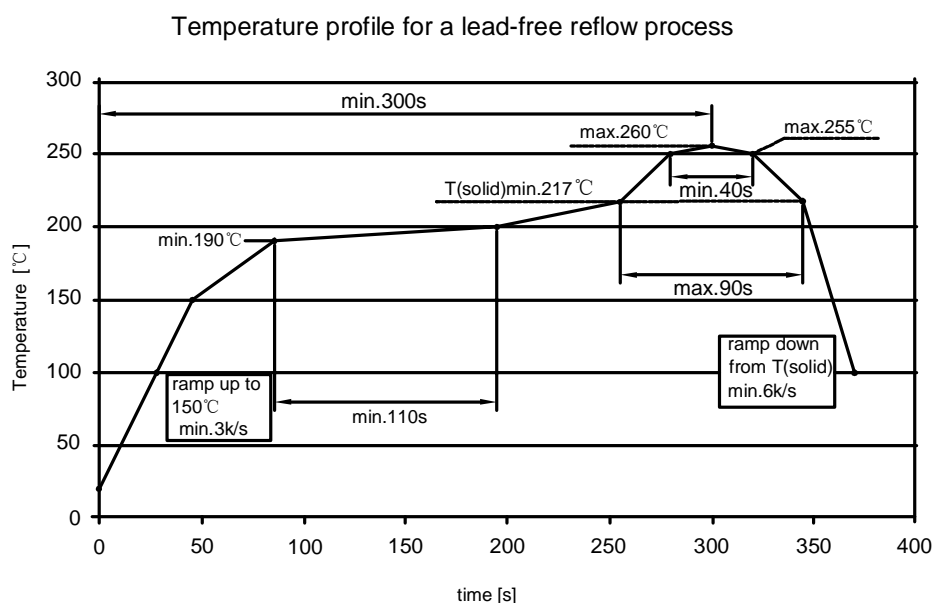


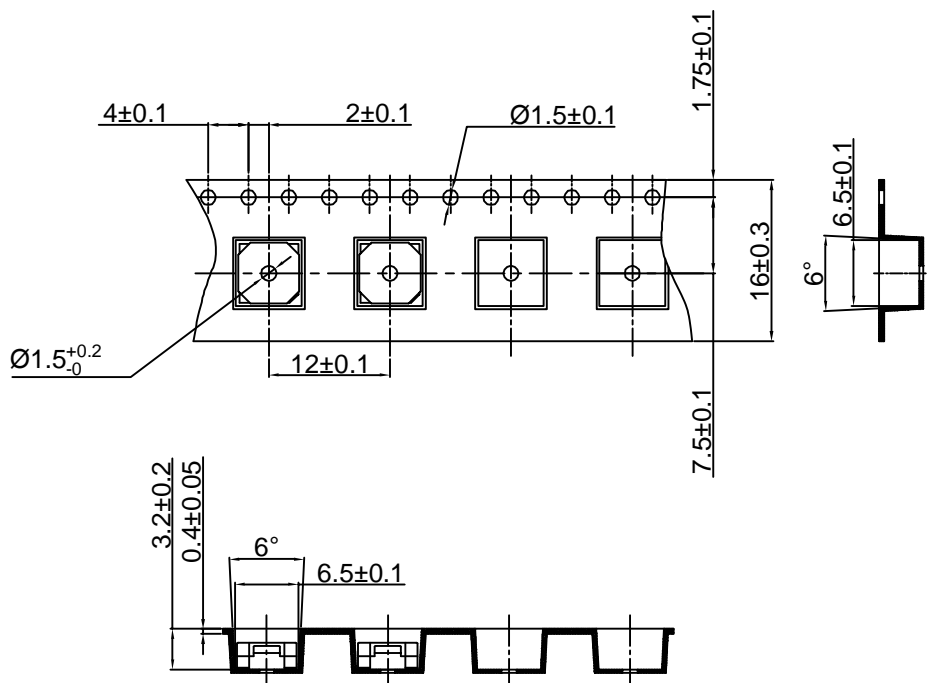
Fig. 1 Recommended soldering Temperature-Time profile (Reflow soldering)

Notice: After reflow soldering test the part shall meet specifications without any degrance and performance except S.P.L, S.P.L shall be 85dB or more.

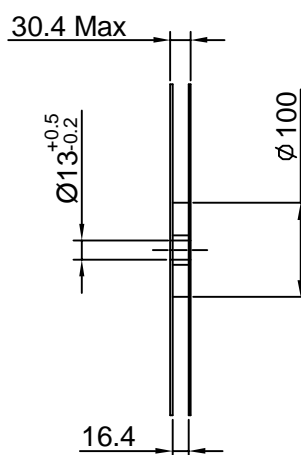
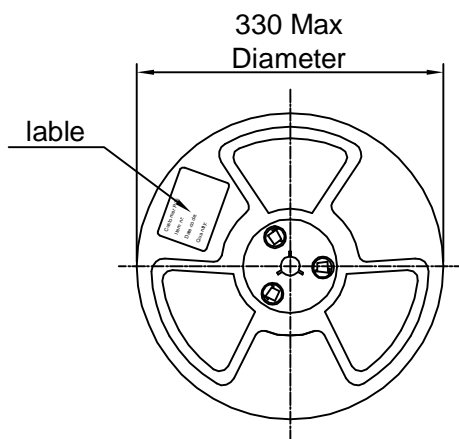
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SMT5555-03H2.5 LF

5.Reel Packing



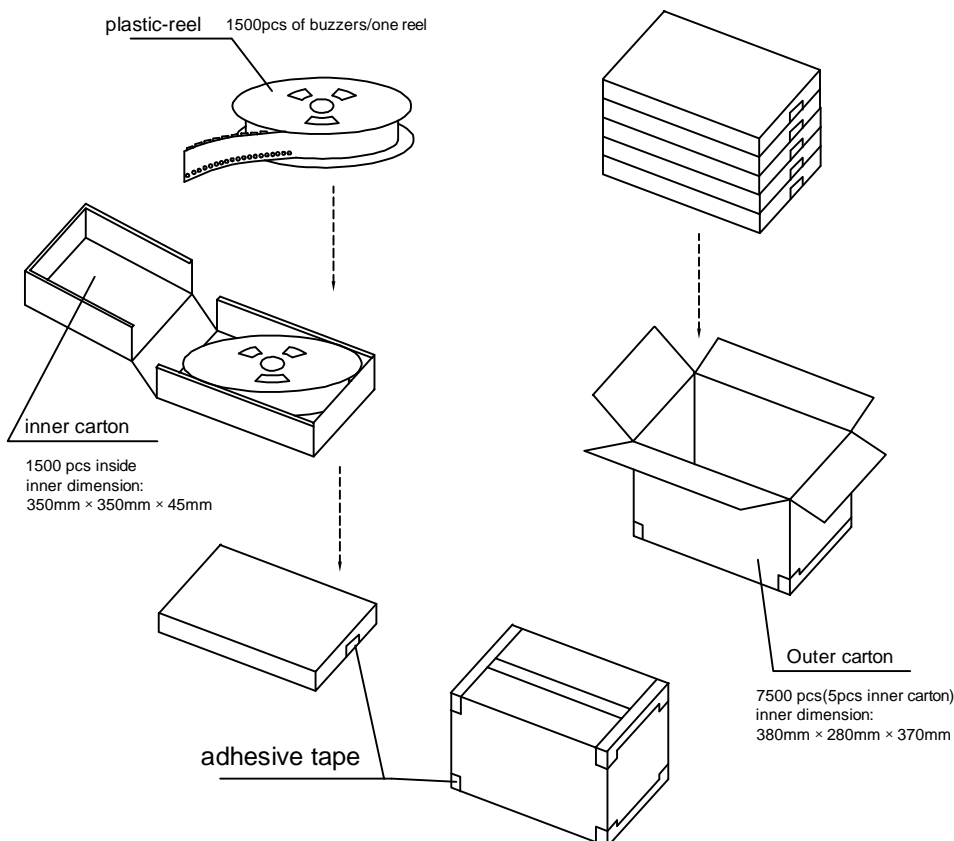
The cover film peel strength force 0.1-0.7N
The cover film peel speed 300mm/min.



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SMT5555-03H2.5 LF



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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SMT5555-03H2.5 LF

7. History change record

version No.	Change Items		Date	Drawn	Approved
	Before	After			
A			08/09/20	魏奉玲	陶红仲

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