SPECIFICATION
FOR PIEZO ELECTRIC SOUNDER

Customer	
Customer P/N	
BeStar Model Name	BSP1313-05H2.5 LF
Product No.	055900
Issue No.	BS/TEP01.086A
Issue Date	06/03/20

Approval:

1.Characteristics
2.Dimension
3.Reliability Test
4.Tape on Reel Packing
5.MSL rating and Notice
6.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)

Bestar Acoustic
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BSP1313-05H2.5 LF

1. Characteristics



Colour: black

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): 1000 pcs.

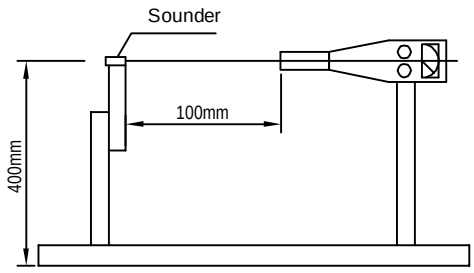
1.2 Electrical and Mechanical Characteristics

No.	Item	Specification
1.	Rated Voltage(Square Wave)	5 Vp-p
2.	Operating Voltage	1...25Vp-p
3.	a)Rated Current	max.5mA
4.	Capacitance at 120Hz	16± 30%nF
5.	a)Sound Output at 4.1KHz,10cm	Min.75dB
6.	Resonant Frequency	4.1±0.5 KHz
7.	Operating Temperature	-40...+105 °C
8.	Storage Temperature	-40...+105 °C
9.	Weight	0.5g ±25%
	a)Value applying at rated voltage.(5Vp-p square wave,1/2duty)	

1.3 Test method:

Standard test Fixture

No reaction in space with in 400mm in all direction



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A	06/03/20	杨红烨		Checked by:	王善梅	Piezo Sounder
Rev.	Date	Drawn	Note	Approved by:	郭 敏	
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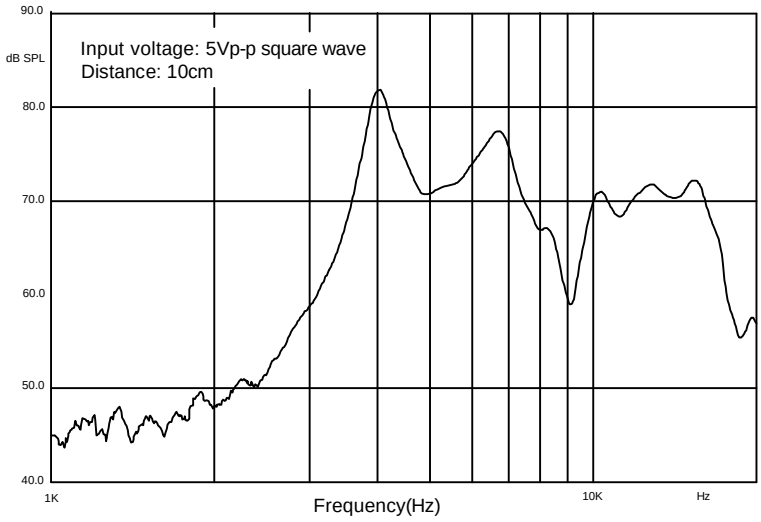
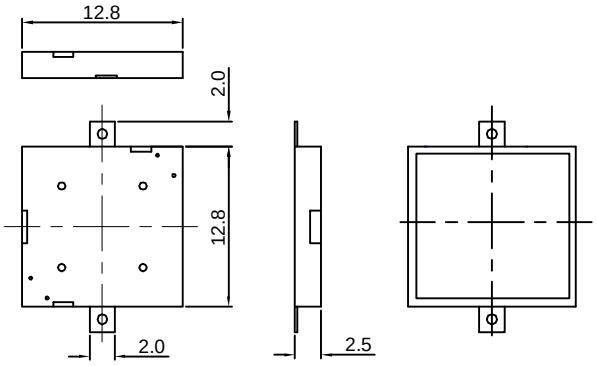
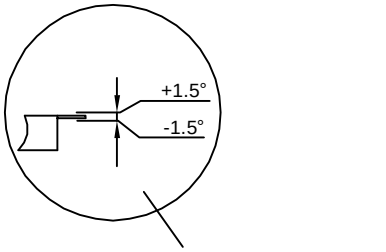
1.4 Frequency Response(Square wave 5Vp-p 10cm)



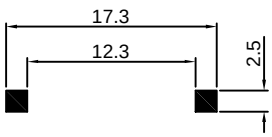
2. Dimension

Tolerance:±0.3 Unit:mm





land pattern



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REV.	Date	Drawn	Note	Approved by:	郭 敏	
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3. Reliability test

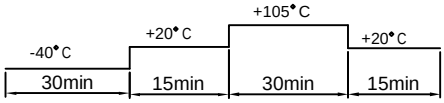
3.1 high temperature test

Temperature	+105 ° C
Duration	240hrs

3.2 low temperature test

Temperature	-40 ° C
Duration	240hrs

3.3temperature cycle test



Cycles	5

3.4 Humidity test

Temperature	+40 ° C
Relative Humidity	90~95%
Duration	240hrs

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

3.5 Vibration Test

Vibration Frequency	10~55Hz
Amplitude	1.52mm
Duration	2hrs each of 3 axis

3.6 Drop test

Height	100cm
(to 10mm thickness woodenboard)	
Direction	3

3.7 Solderability

Temperature	255 ± 5° C
Duration	3 ± 0.5sec

3.8 Operating Life

Rated input voltage and frequency	
Duration	96hours

Notice: All specification must be satisfied in this condition.
SPL: allowable deviation ± 5dB of the initial value after testing

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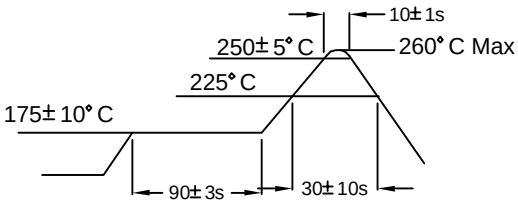
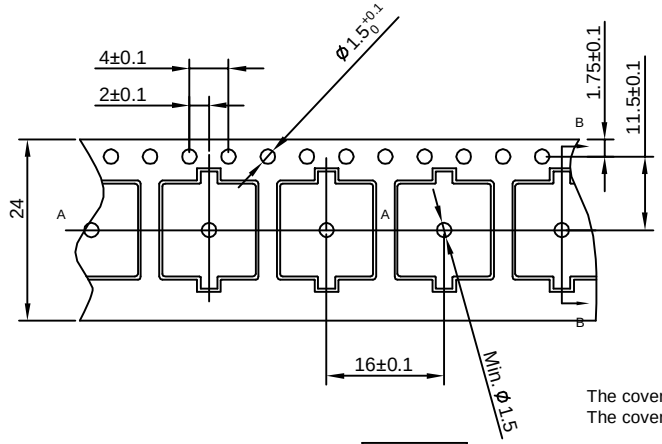
3.11 Recommended Temp. Profile for Reflow Oven

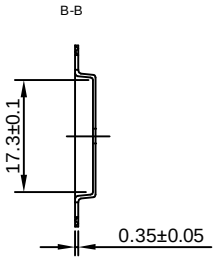


4. Tape on Reel Packing

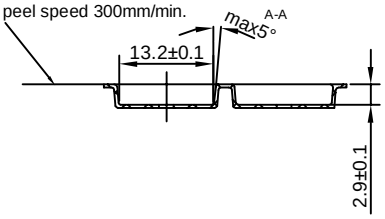
4.1 packing drawing

Dimensions of carrier tape

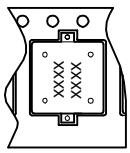


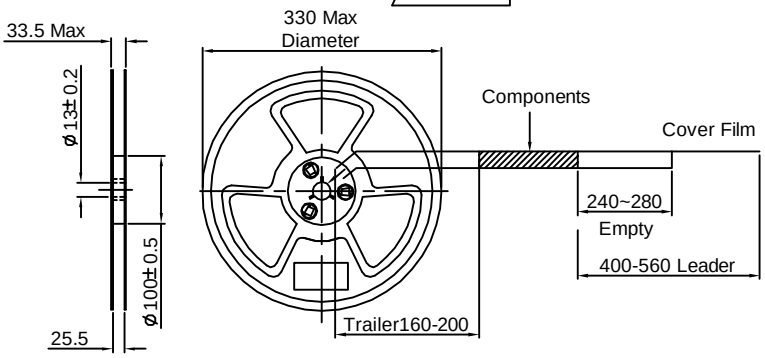


The cover film peel strength force 0.1-0.7N
The cover film peel speed 300mm/min.



Dimensions of reel







Unit:mm

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	REV.	Date	Drawn	Approved by:	郭 敏	
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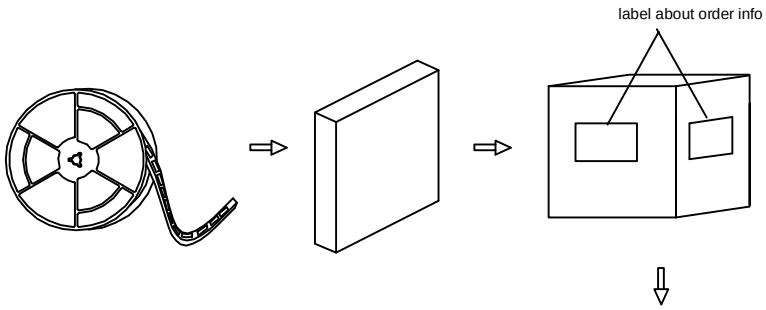

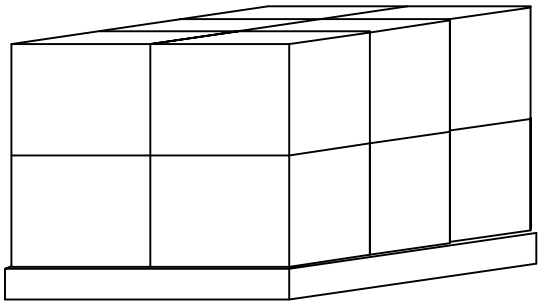

4.2 packing quantity

4.21 1000pcs/reel
4.22 5reel/carton
4.23 5000 pcs/carton in total
4.24 carton size 38x28x37cm
4.25 12carton/tray
4.26 tray size 85x77x74cm

5.MSL rating and Notice

Level	Floor Life(out of bag) at Factory Ambient ≤30°C/60% RH or as Stated
2	1 year

5.1 The products mustn't be washed
5.2 **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.
5.3 **Expire Date on Storage**
Expire date (Shelf life) of the products is six months after deliveried under the conditions of a sealed and an unopened package. Please use the products within six months after deliveried.
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.
5.4 **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.
(3) Please do not drop the products to avoid cracking of ceramic element.

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6. History change record

version No.	Change Items		Date	Drawn	Approved
	Before	After			
A			06/03/20	杨红烨	郭敏

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