SPECIFICATION
FOR PIEZO ELECTRIC SOUNDER

Customer	
Customer P/N	
BeStar Model Name	BSP1109-05H1.7 LF
Product No.	056400
Issue No.	BS/TEP01.448B
Issue Date	07/06/15

Approval:

1.Characteristics
2.Dimension
3.Reliability Test
4.Tape on Reel Packing
5.Notice
6.History change record

Drawn by	Checked by	Approved by	Customer approved
杨红烨	韩学慧	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 Acoustic
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BSP1109-05H1.7 LF

1. Characteristics

1.1 Features



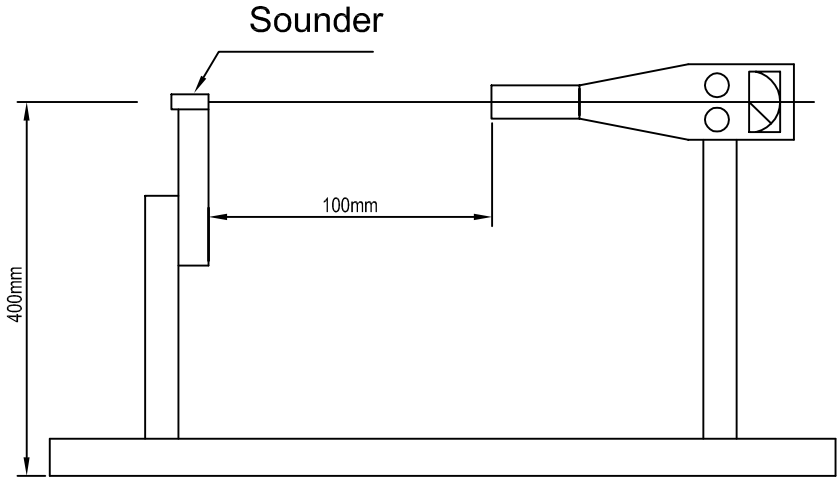
1. SMD;thinner , smaller size
2. High S.P.L.; and clear sound
3. Reflowable;RoHS complant
4. Tape & Reel supply
5. Minimum quantity (one reel): 1000 pcs.

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.1mA
4.	Capacitance at 120Hz	10± 30%nF
5.	a)Sound Output at 4.1KHz,10cm	Min.70dB(after reflow no changes)
6.	Resonant Frequency	4.1 KHz
7.	Operating Temperature	-20...+70 ° C
8.	Storage Temperature	-30...+80 ° C
9.	Weight	1.6g ±25%
	a)Value applying at rated voltage.(5Vp-p square wave,1/2duty)	

1.3 Standard test Fixture

No reaction in space with in 400mm in all direction



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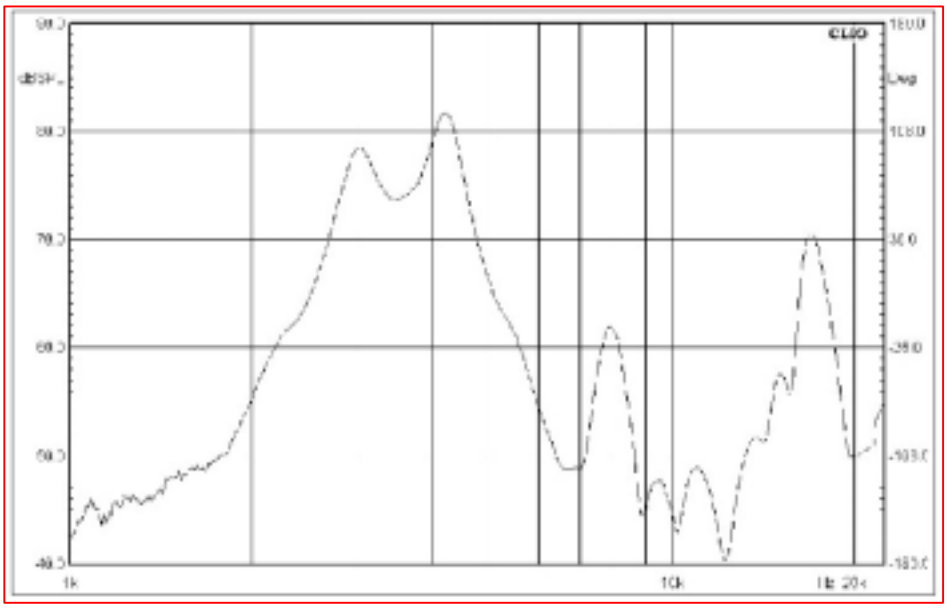
Rev.	Date	Drawn	Note			
B	07/06/15	杨红烨		Date:	07/06/15	BSP1109-05H1.7 LF
				Drawn by:	杨红烨	
				Checked by:	韩学慧	Piezo Sounder
				Approved by:	程久生	

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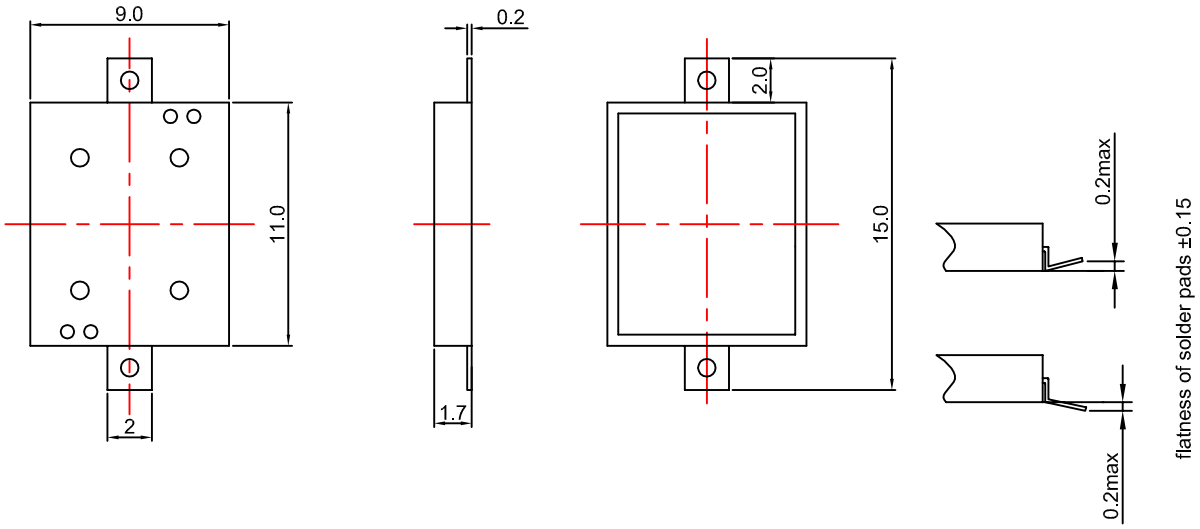
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1.4 Frequency Response(Square wave 5Vp-p 10cm)



2. Dimension

Tolerance:± 0.3 Unit:mm



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3. Reliability test

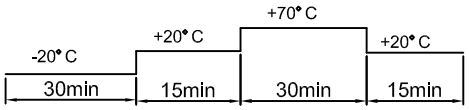
3.1 high temperature test

Temperature	+80° C
Duration	96hrs

3.2 low temperature test

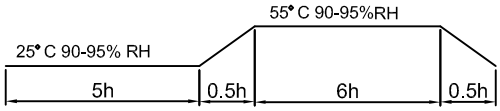
Temperature	-30° C
Duration	96hrs

3.3temperature cycle test



Cycles 2

3.4 Humidity test



Cycles 10

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

3.5 Life test

Rated Voltage with the rated frequency	
Duration	1000hrs

3.6 Vibration Test

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

3.7 Drop test

Height	700cm
(to 10mm thickness woodenboard)	
Direction	3

3.8 Solderability

Temperature	255± 5° C
Duration	3± 0.5sec

3.9 Solder Heat Resistance

Temperature	250± 10° C
Duration	30sec

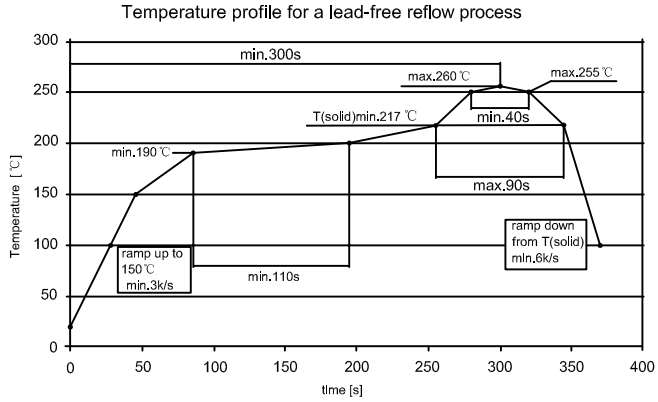
Notice: All specification must be satisfied in this condition.
SPL: allowable deviation ± 5dB of the initial value after testing

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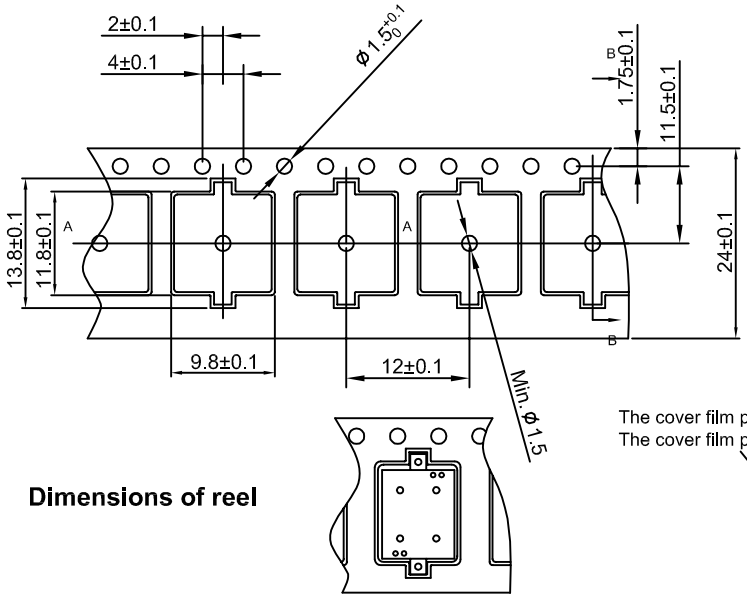
3.10 Recommended Temp. Profile for Reflow Oven

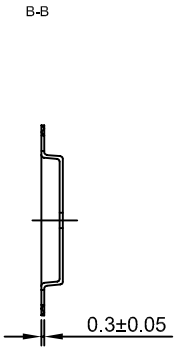


4. Tape on Reel Packing

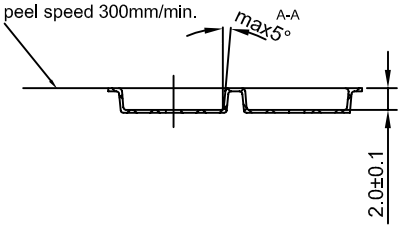
4.1 packing drawing

Dimensions of carrier tape

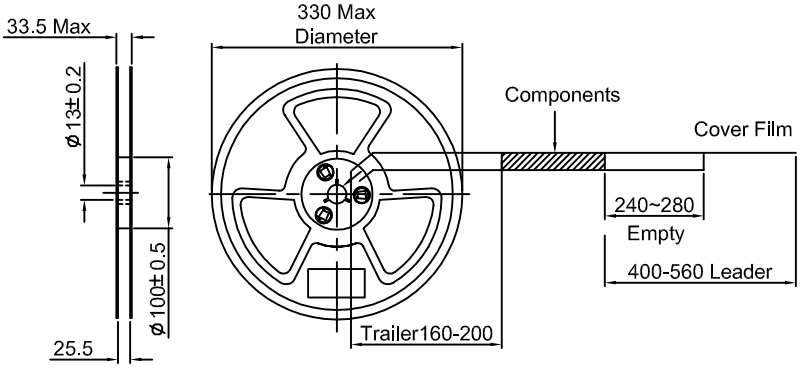




The cover film peel strength force 0.1-0.7N
The cover film peel speed 300mm/min.



Dimensions of reel



Unit:mm

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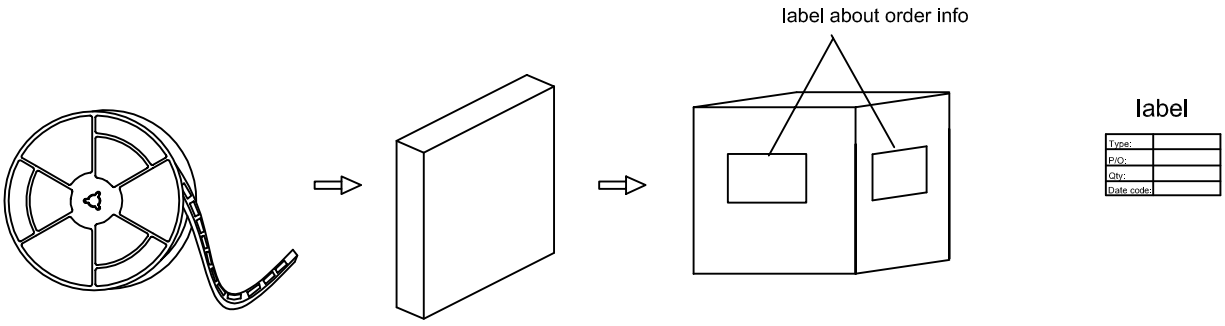
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4.2 packing quantity

4.21 2500pcs/reel
4.22 5reel/carton
4.23 12500 pcs/carton in total
4.24 carton size 38x28x37cm

5.Notice

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			06/11/30	杨红烨	程久生
B	packing quantity 1000 pcs / reel	packing quantity 2500 pcs / reel	07/06/15	杨红烨	程久生

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