SPECIFICATION
FOR PIEZO ELECTRIC SOUNDER

Customer	
Customer P/N	
BeStar Model Name	BSP1212-05H2.5LF
Product No.	055500
Issue No.	BS/TEP01.212C
Issue Date	06/02/09

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

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)

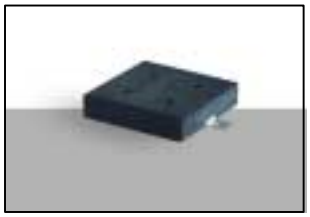
Bestar Acoustic
BESTAR ELECTRONICS INDUSTRY CO.,LTD
No.199 HuangHe West Road.New district,changzhou,
jiangsu Province,P.R.China
Tel:86-519-8222567 Fax:86-519-8222551
Http:www.be-star.com
E-mail: wu@be-star.com, info@be-star.com

BSP1212-05H2.5 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): 1000 pcs.

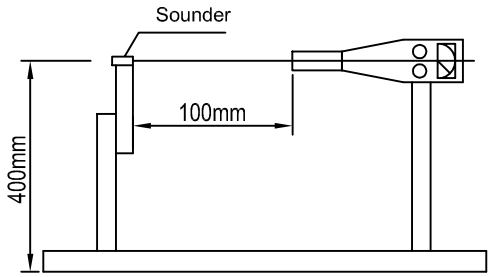


1.2 Electrical and Mechanical Characteristics

No.	Item	Specifications
1.	Rated Voltage(Square Wave)	5Vp-p
2.	Operating Voltage	1...25Vp-p
3.	a)Rated Current	max 3mA
4.	Capacitance at 1kHz	16nF ±30%
5.	a)Sound Output at 4.1KHz,10cm	78dB
6.	Resonant Frequency	4.1 KHz
7.	Operating Temperature	-20...+105°C
8.	Storage Temperature	-30...+105°C
9.	Weight	0.4g
a)Value applying at rated voltage.		

1.3 Test method:

No reaction in space with in 400mm in all direction



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				Date:	06/02/09
C	06/02/09	杨红烨		Drawn by:	杨红烨
A	03/08/30	王善梅		Checked by:	王善梅
				Approved by:	郭 敏

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www.be-star.com wu@be-star.com

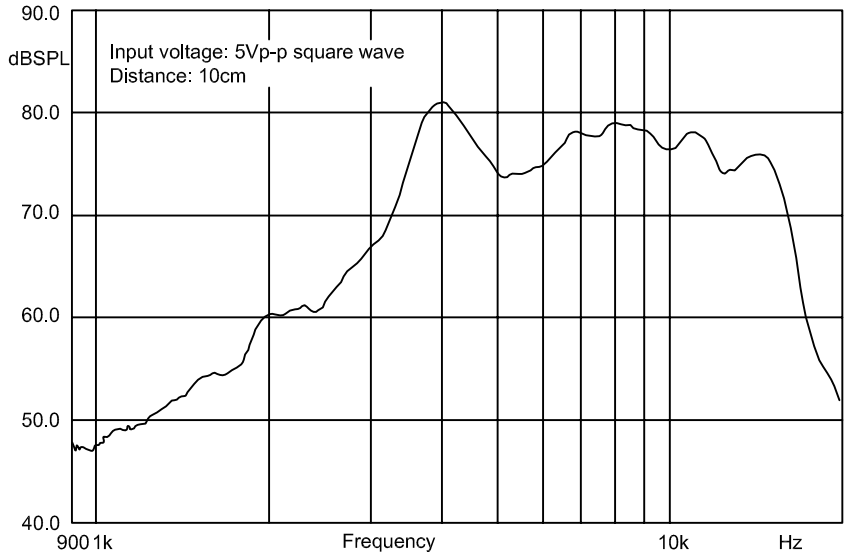
BSP1212-05H2.5LF

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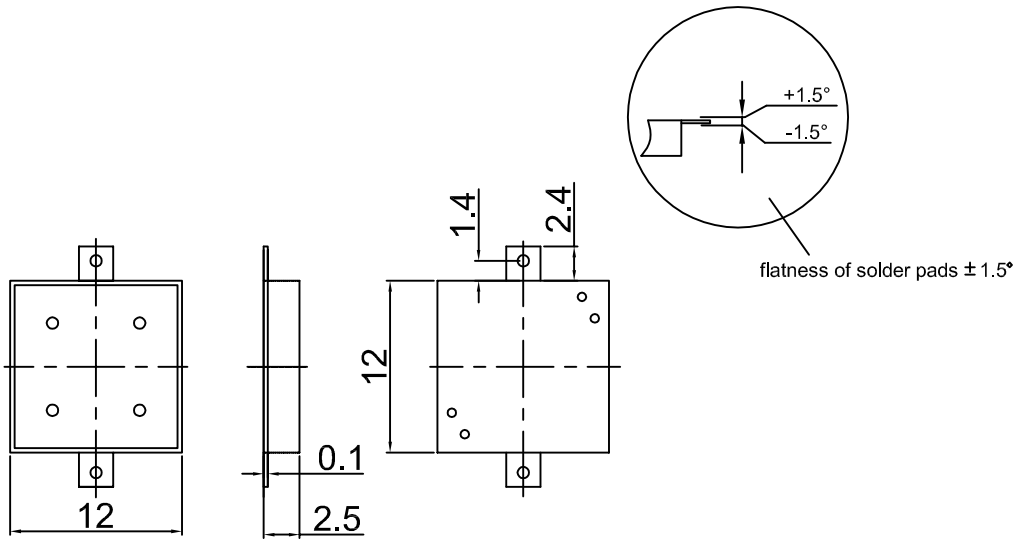
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1.4 Frequency Response Curve(Square wave 5Vp-p 10cm)



2. Dimension

Tolerance:± 0.3 Unit:mm



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www.be-star.com wu@be-star.com

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3. Reliability test

3.1 high temperature test

Temperature	+80° C
Duration	4hrs

3.2 low temperature test

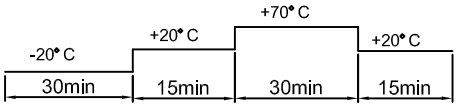
Temperature	-30° C
Duration	48hrs

3.3 life test in normal temperature

Power supply	rated voltage
Duration	1000hrs

3.4 temperature cycle test

Cycles 5



3.5 Humidity test

Temperature	+40° C
Relative Humidity	93 %
Duration	48hrs

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

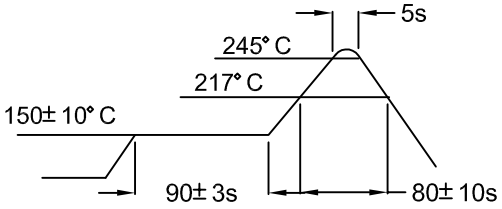
3.6 Drop test

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

3.7 Solderability

Temperature	250± 5° C
Duration	3±0.5sec

3.8 Recommended Temp. Profile for Reflow Oven



Notice: All specification must be satisfied in this condition.
SPL: allowable deviation 4dB of the initial value after testing

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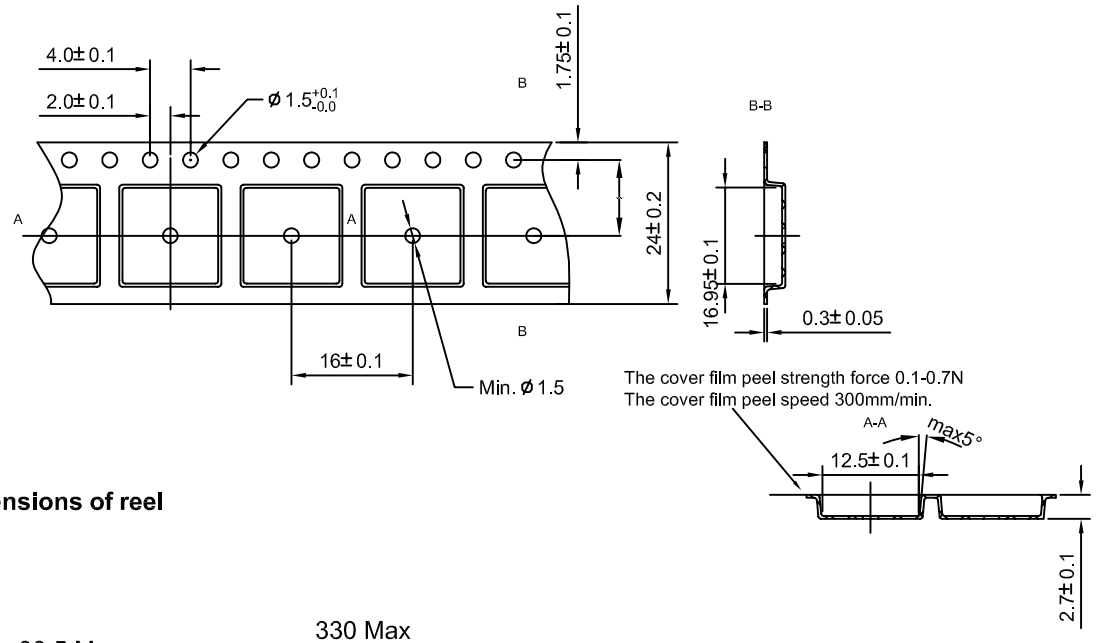
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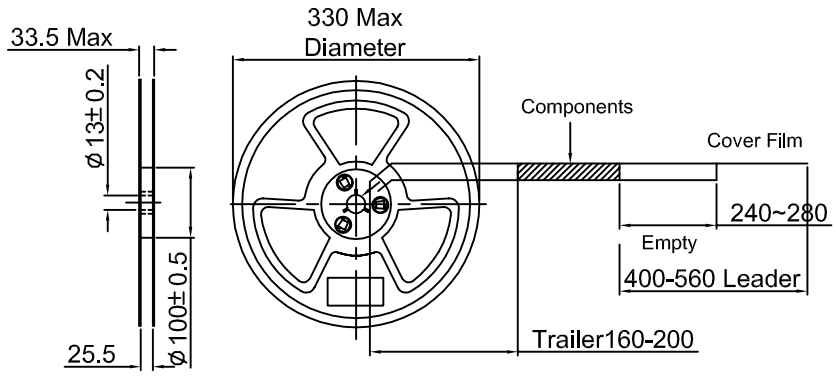
4.Tape on Reel Packing

4.1 packing drawing

Dimensions of carrier tape



Dimensions of reel





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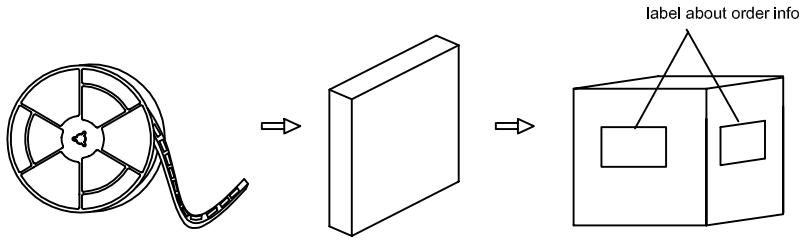
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4.2 packing quantity

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.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			03/08/30	王善梅	郭敏
B		RoHS	05/07/25	杨红烨	郭敏
C	230 ° C for 10s 200 - 230° C for 30s	245 ° C for 5s 217 - 245° C for 80s	06/02/09	杨红烨	郭敏

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