

SPECIFICATION FOR AUTOMOTIVE SPEAKER

Customer	
Customer P/N	
BeStar Model Name	BMS3450-02 LF
Product No.	132010
Issue No.	BS/TES01.579A
Issue Date	06/03/25

Approval:

- 1.Characteristics
- 2.Notice
- 3.Dimension
- 4.Bill of Material
- 5.Reliability Test
- 6.Packing
- 7.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)

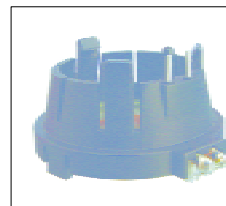


BESTAR ELECTRONICS INDUSTRY CO.,LTD
No.199 HuangHe West Road.New district,changzhou,
jiangsu Province,P.R.China
Tel:86-519-8222567 Fax:86-519-8222551
Http:www.be-star.com
E-mail: wu@be-star.com, info@be-star.com

BMS3450-02 LF

1. Characteristics

1.1 Electrical and Mechanical Characteristics



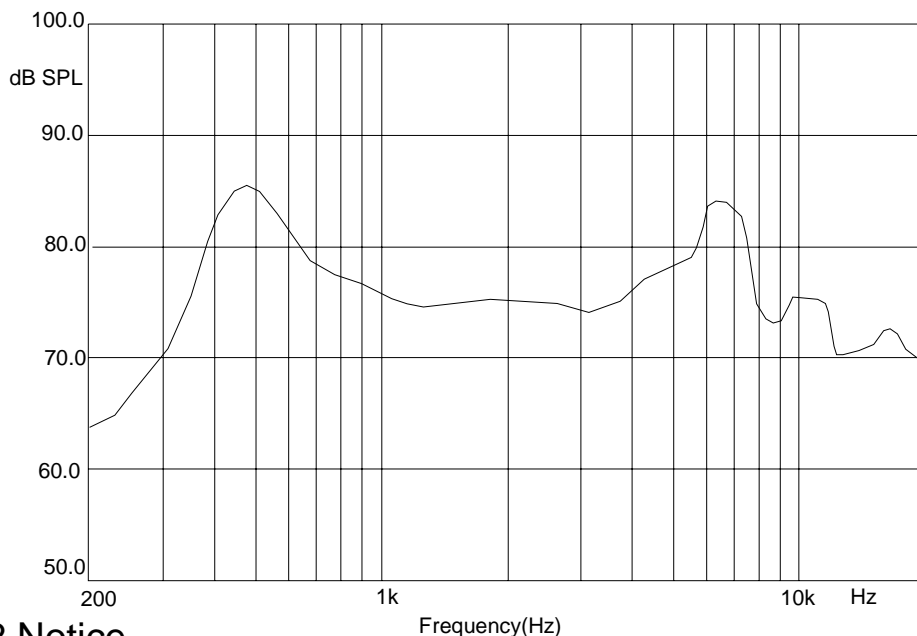
No.	Item	Specifications
1.	Rated input	0.3W
2.	Maximum input	0.5W
3.	Resonance Frequency	$400 \pm 15\%$ Hz
4.	Frequency Response	f0...5KHz
5.	Impedance(at 1000Hz,1V)	50ohm $\pm 15\%$
6.	Coil resistance	45ohm $\pm 5\%$
7.	Output SPL (6.4V,square wave)	75 ± 3 dB at 3000Hz,600Hz
8.	Buzzes & rattles	must be normal at sine wave 3.87V
9.	Magnet	Nd-Fe-B \varnothing 12.5X1.5mm
10.	Polarity	Positive voltage to (+), the diaphragm move forward
11.	Frame	PC
12.	Storage temperature	-40 °C...+90 °C
13.	Operation temperature	-40 °C...+90 °C
14.	Weight	11g

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A	A	06/03/25	王善梅	Checked by:	莫丽丽	Speaker	
	Rev.	Date	Drawn	Note	Approved by:		
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BMS3450-02 LF

1.2 Frequency Response Curve



2. Notice

2.2 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: -40 to +90° C Humidity: 15 to 85% R.H.

2.3 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.

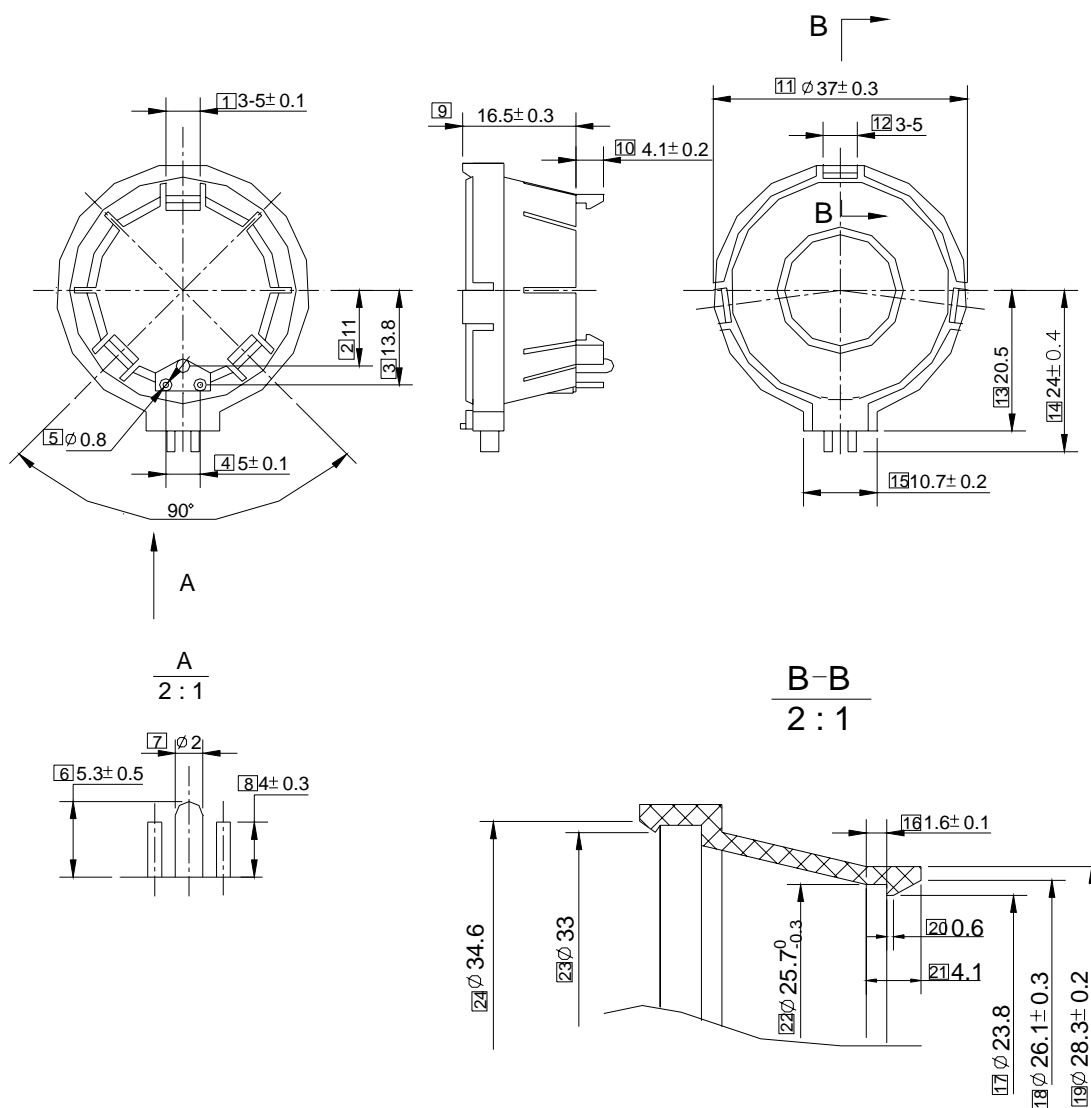
2.4 Notice on Product Storage

(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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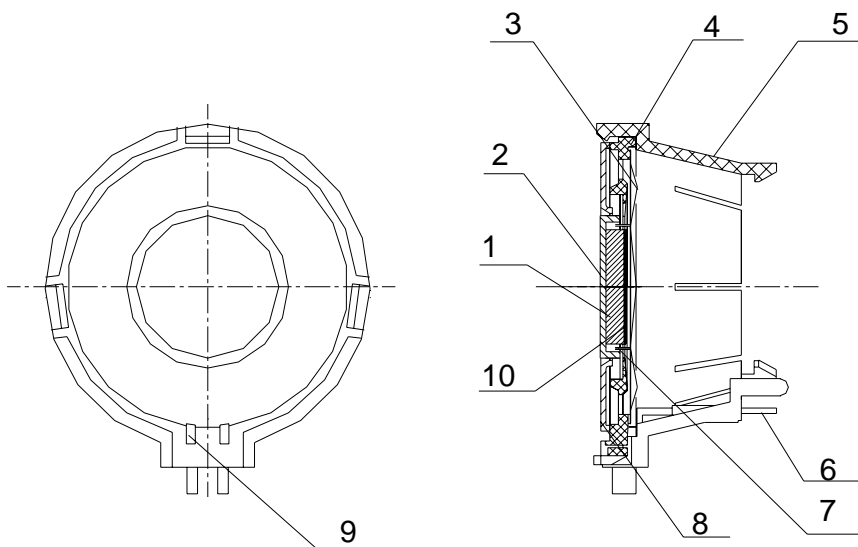
3.Dimension



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4.Bill of Material



10	metal plate	SPCC
9	Weld plate	Cu and Sn
8	Cover	PC
7	Voice Coil	Ø 0.05Cu
6.	Pin	Cu and Sn
5	Housing	Nylon
4	Frame	PC
3	Diaphragm	PEI
2	magnet bowl	SPCC
1	Magnet	N35H
No	Parts Name	Material

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5. Reliability test

5.1 High temperature test

Temperature +85 °C
Duration ≥1000hrs

5.2 Low temperature test

Temperature -40 °C
Duration ≥500hrs

5.3 Humidity test

Temperature +40 °C
Humidity 90-95 %RH
Duration ≥56days

5.4 Temperature cycle durability:

-40°C/+85° C ≥100cycle (1 cycle=4h)
After each test of 5.2-5.5, the sound pressure level requirement must be fulfilled.

5.5 Impact resistance:

100g for each three mutually perpendicular directions to each of 3 times by sine-wave:
no damage, no alternation of specified parameters

5.6 Proofness due vibrations:

sine-wave excitation; 8...300Hz ,2g,
1 octaves/min; test time 16h each axes

5.7 Noise test :

10 -200Hz: 0.01g²/Hz, acceleration 1 .9g
200 - 1000Hz: -6dB / Oct.
Test time 8h each axes.

5.8.1 Shelf Life :

VPP=7.0V rectangle pulse shape, alternating ON for 10 sec./ OFF for 10secs
(equivalent to 180 cycle /h) low or 1st control frequency is 600 Hz ,high or 2nd control frequency is 3000Hz
Switch-on time(total) for 1st control frequency : 60h (10800 cycles)
Including 42.5h (7650 cycles) at T amb=+20° C
10h (1800 cycles) at T amb=+85° C
7.5h (1350 cycles) at T amb=-40° C
Switch-on time(total) for 2nd control frequency : 17h (3060 cycles)
Including 9h (1620 cycles) at T amb=+20° C
4.5h (810cycles) at T amb=+85° C
3.5h (630cycles) at T amb=-40° C

After these and the following tests the values of loudness (± 2dB) and sound (distortion)
must be within the specification.

5.8.2 Function of indicator:

Us=6.4V rectangle pulse shape, 10 times on/off, pause for 10sec. according one indicator phase.(note diagram fig 1)
Total 150000 indicator phase
Including 100000 indicator phase at T amb=+20° C
25000 indicator phase at T amb=+85° C
25000 indicator phase at T amb=-40° C

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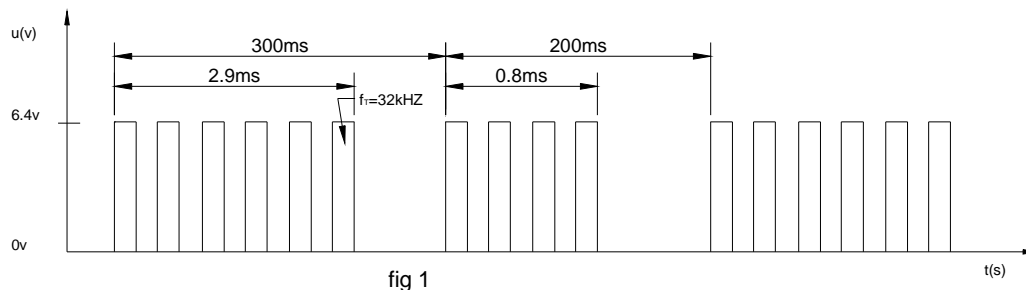
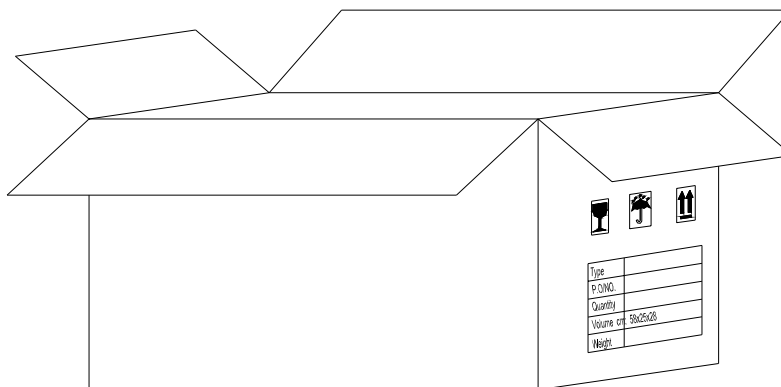
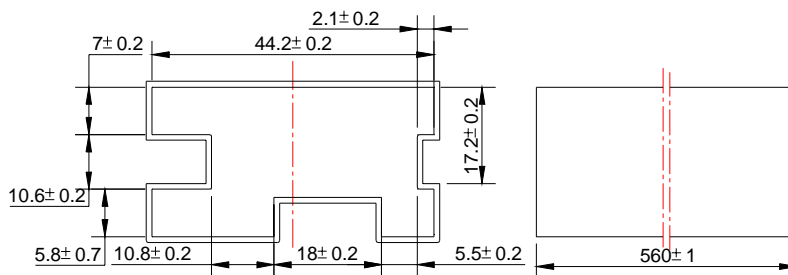


fig 1

6. Packing

6.1 Packing Drawing



6.2 packing quantity

- 1) 14pcs per magazine
- 2) 50 magazines per carton
- 3) 700pcs per carton,
- 4) carton size: 58X25X28cm

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7. History change record

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