# BeStar Electrics Industry Co., Ltd.

Manufactruing various kinds of acoustic components like buzzer, speaker, receiver, alarm and specially of latest technology of SMD buzzer, mini receiver for mobilephone. Products widely used in telecommunication, automotive industry, household application, security system, music device and so on. Manufactruing various kinds of acoustic components like buzzer, speaker, receiver, alarm and specially of latest technology of SMD buzzer, mini receiver for mobile Products widely used telecommunication, autom industry, household appli security system, music d and so on. Manufactruing kinds of acoustic compo like buzzer, speaker, rcc alarm and specially of l technology of SMD buzz mini receiver for mobile Products widely used telecommunication, autom industry, household appli security system, music d and so on. Manufactruing kinds of acoustic compor likebuzzer, speaker, rece alarm and specially of l technology of SMD buzz mini receiver for mobile Products widely used in telecommunication, automotive industry, household application, security system, music device and so on. Manufactruing various kinds of acoustic components Like buzzer, speaker, receiver, alarm and specially of latest technology of SMD buzzer, mini receiver for mobilephone. Products widely used in telecommunication, automotive industry, household application, security system, music device and so on. Manufactruing various kinds of acoustic components Like buzzer, speaker, receiver, alarm and specially of latest technology of SMD buzzer, mini receiver for mobilephone. Products widely used in

BeStar Acoustic

## BeStar PC-Speaker

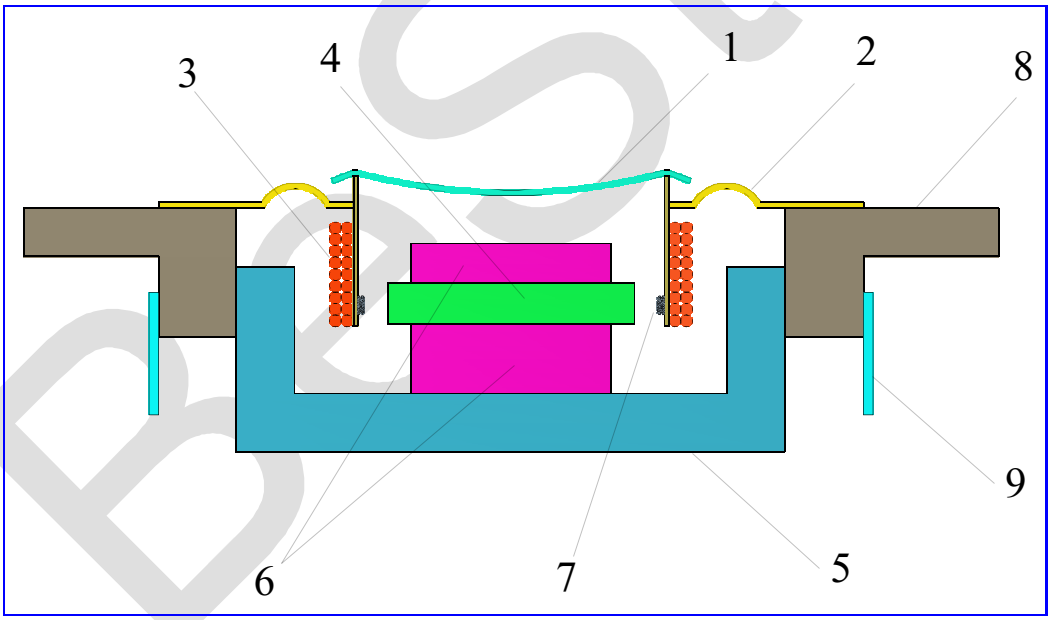
## Dynamic wider frequency Speaker for Laptop

Dynamic speaker is one kind of electronic component, which use electromotion theory to give off power. This is one kind of most popular speakers in world. BeStar applies the newest materials and advanced production method to develop and manufacture this speaker which has the specialty that could provide higher output power and wider frequency. And it can meet the demand in Laptop field and used in different kinds of Laptop, which can high-fidelity reduce the pronunciation and show various multimedia sound at normal work for Laptop.

## It is made of three parts

1. Vibration system includes membrane and coil etc
2. Magnetic circuit system includes magnet plate, magnetic bowl, Magnetic Fluid and etc.
3. Assistant system includes frame, terminal board and etc.

The structure is as following like Fig. 1:




1: dust cap 2: membrane 3: coil 4: magnetic plate 5: magnetic bowl 6: magnet 7: magnet fluid 8: frame 9: terminal board

Fig.1

## Working principle

The magnet creates a magnetic circuit by magnetic plate and magnetic bowl in annular air gap. And coil which connects with membrane is inserted into annular air gap. Coil is a longer and thinner reeled columnar object, which is made by metal wire. The magnetic circuit is caused because the current signal

from amplifier goes through coil.

When sound becomes current and goes through coil, creates different magnetic circuit based on the situation of current and frequency. Also the direction of magnetic circuit depends on Right Hand Law from Faraday. The magnetic powers from coil is changing due to current s situation, and vibrate with magnet together, then bring membrane to have movement and give out different sounds because of different frequencies. Please see Fig. 2.

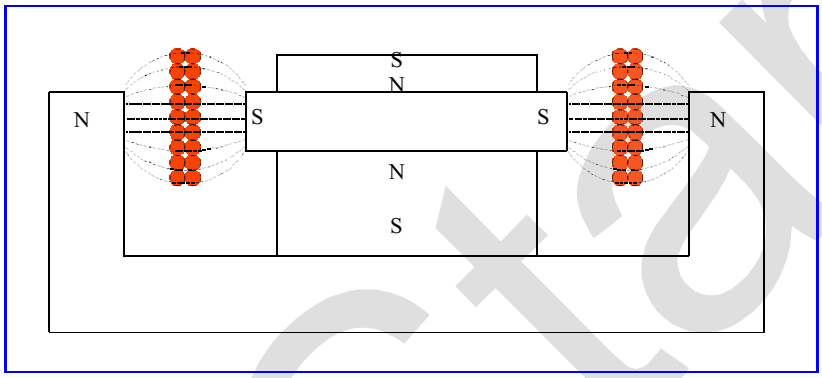
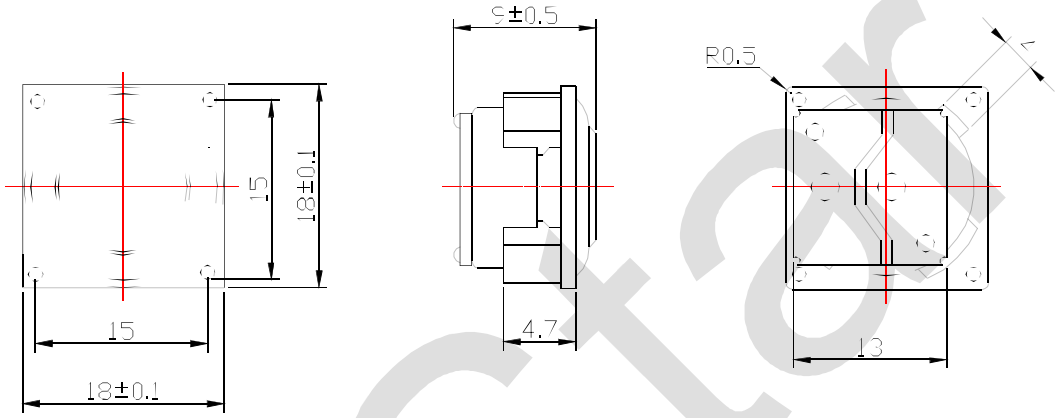



Fig.2

BeStar uses internal magnet structure. The magnet is covered by outside magnetic bowl, in order to avoid affecting from outside noise, and also could decrease influence from magnetic circuit to outside. By this way, assure Laptop s electrical circuit could work well without any influence from outside. The magnet is made of NdFeB instead of traditional ferrite or alnico. It can improve sensitivity of speaker and also can decrease using quantity from magnet. BeStar could make speaker much smaller, thinner, and lighter under stable power. The speaker is made with double magnets, so the power could be increased but not increase the volume of the speaker. Add high-quality magnetic liquid, could improve the autobalance of the coil, and the heat abstraction, In this way the speaker can bear the impact of higher-power.

BMS1818-11C-04H09 LF

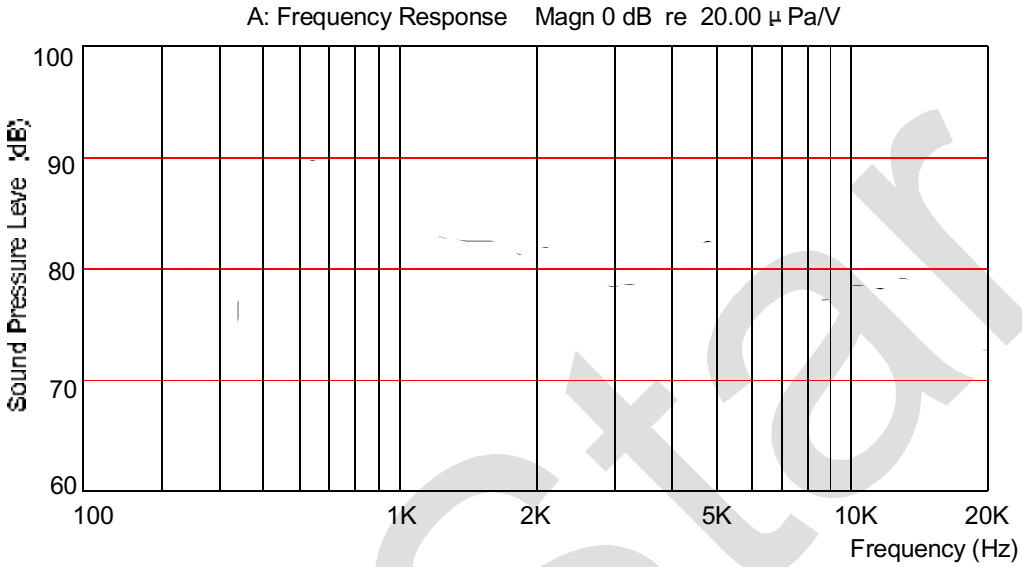
1 Drawing




2 Electrical and Mechanical Characteristics

| No. | Item | Specification |
|---|---|---|
| 1. | Impedance(at 1.5kHz) | 4±15%Ω |
| 2. | Rated Input Power | 2W |
| 3. | Maximum Input Power | 2.5W |
| 4. | Resonance Frequency | 520±104Hz |
| 5. | Frequency Response | F0…20KHz |
| 6. | Output SPL | 84±3dB/0.3M 1W at0.6,0.8,1.0,1.2KHz average |
| 7. | Distortion（at1kHz,2W） | ≤5% |
| 8. | Buzzes & Rattles | Must be normal at sine wave 2.83V |
| 9. | Operating Temperature | -20～+65°C |
| 10. | Storage Temperature | -20…+70°C |

3 Frequency response curve





**Factory Address:**
No.199.Huanghe West Road.New district,
Changzhou,Jiangsu Province,P.R.China
Postcard:213022
Tel:(086 519) 88222567 (086 519) 88222568
Fax:(086 519) 88222551
E-mail:wu@be-star.com
Homepage:http://www.be-star.com