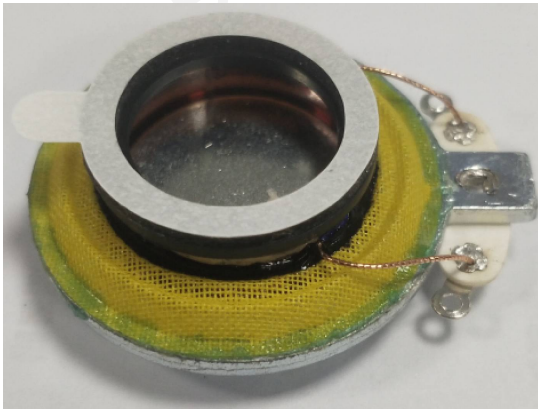


**DYNAMIC SPEAKER**

Product No. 139533

BTD33-12-04H12-01

Issue No. BS/TES01.2142



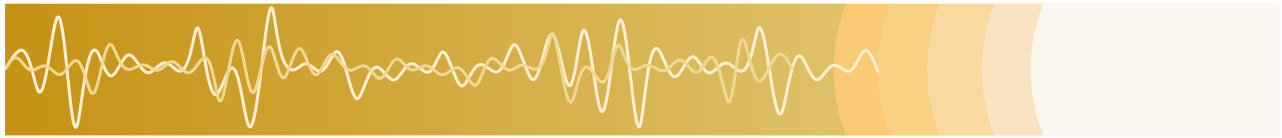
**Features:**

- Large power
- Loud sound output
- RoHS

| Drawn by   | Checked by  | Approved by | Customer approved |
|------------|-------------|-------------|-------------------|
| Litra.Yang | Peter.Huang | Jason.zhang |                   |

BESTAR Holdings Co., Ltd.

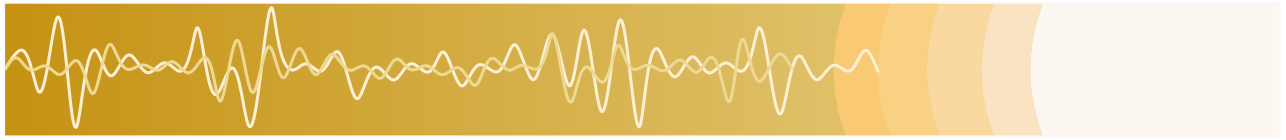
www.be-star.com | info@be-star.com



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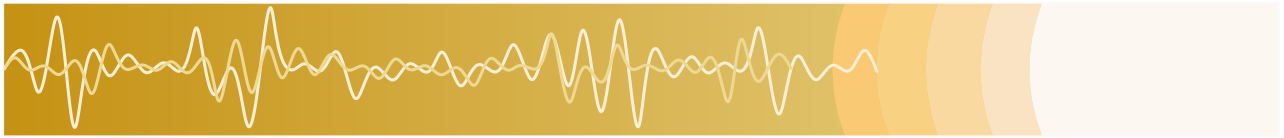


## 1.Characteristics

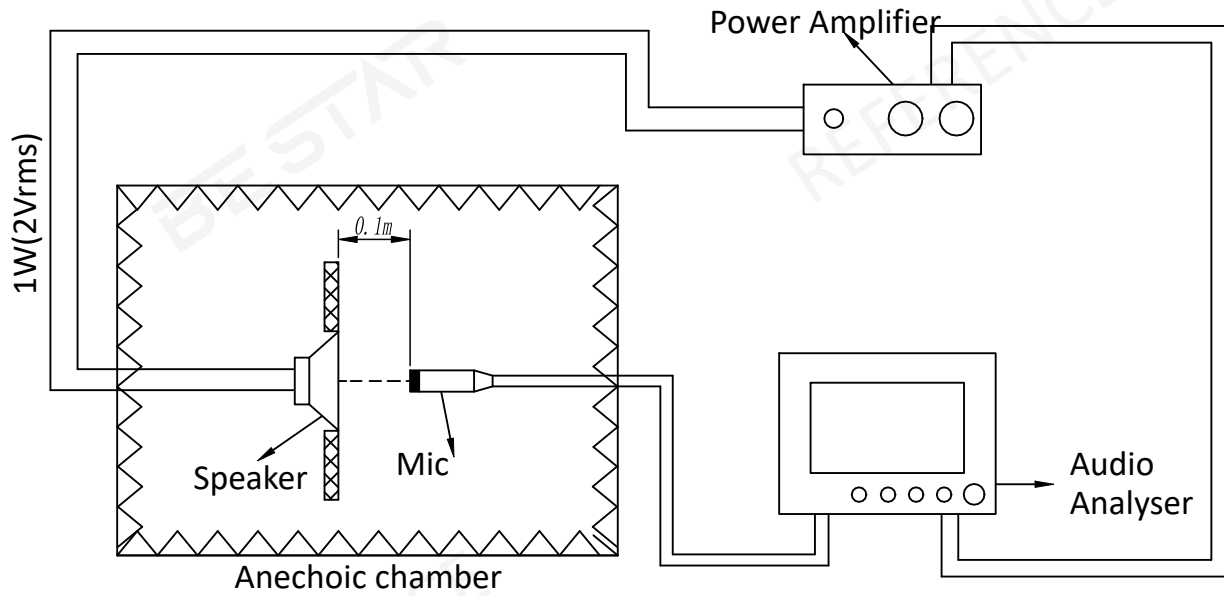
### 1.1Technical terms

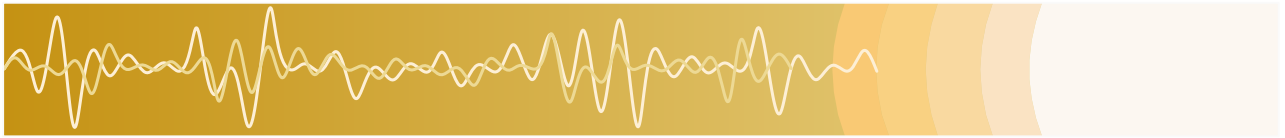
|                                      |   |
|--------------------------------------|---|
| 1. Size                              | See Product drawing                             |
| 2. Impedance at 1KHz                 | $4\Omega\pm 15\%$                               |
| 3. Lowest Resonance frequency        | $350\pm 20\% \text{Hz}$                         |
| 4. Rated input power                 | 5W  |
| 5. Maximum input power               | 6W  |
| 6. Frequency Response                | 200~20KHz                                       |
| 7. Buzz & Rattle(at sine wave 4.47V) | must be normal                                  |
| 8. Polarity                          | Positive voltage to (+),Diaphragm moves forward |
| 9. Operating temperature             | -40...+85°C                                     |
| 10. Storage temperature              | -40...+85°C                                     |
| 11.Weight                            | $\approx 27\text{g}$                            |





## 1.2 Test method:





### 1.3 F0 Curve (only for reference)

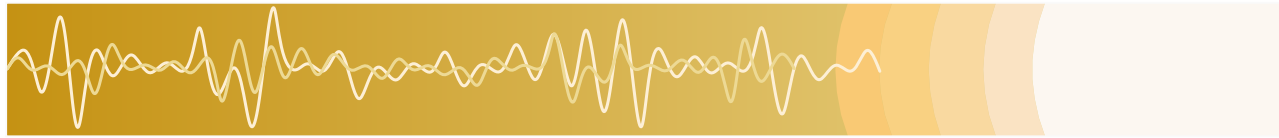
A: Frequency Response Magn 0 dB re 20.00  $\mu$ Pa/V 1/12Oct



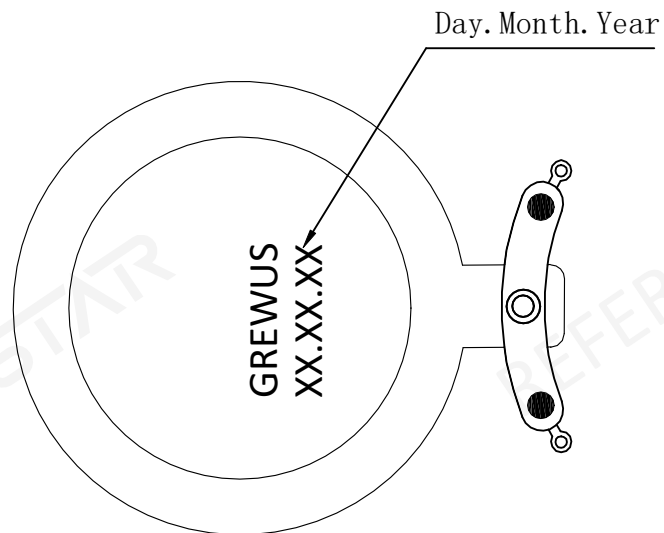
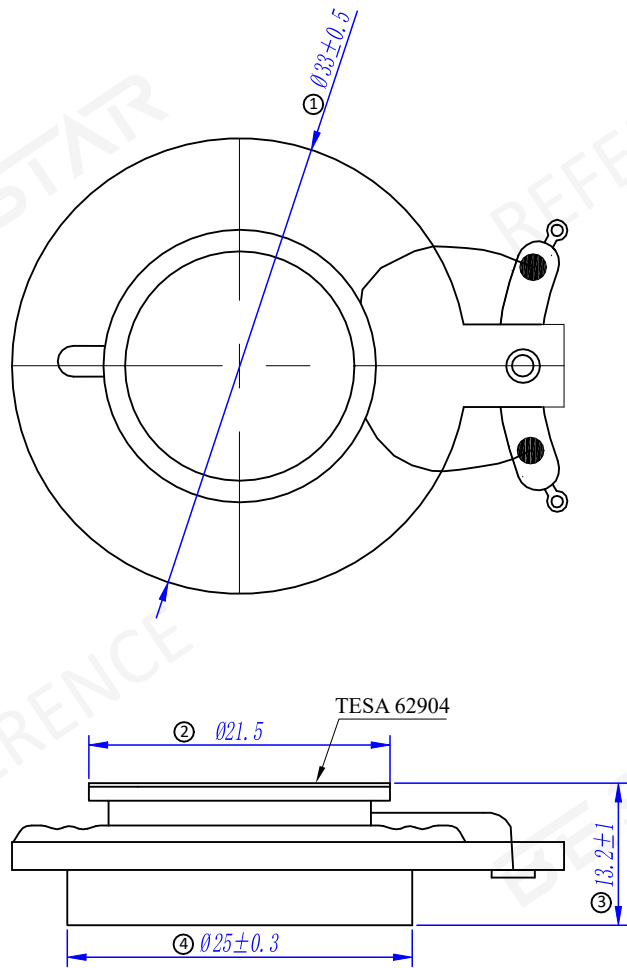
#### 1.3.1 Resonance Frequency

Resonance frequency is measured according test set up in chapter 1.2 and parameters according chapter 1.3



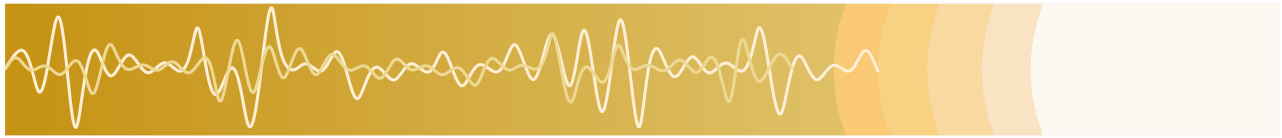


## 2. Dimension



**Tolerance: ±0.3mm**





### 3. Reliability test

#### 3.1 Load Test

|             |                    |
|-------------|--------------------|
| Power (Nom) | 4.47V(white noise) |
| Duration    | 96hrs              |

#### 3.2 High Temperature Test

|             |         |
|-------------|---------|
| Temperature | +85±2°C |
| Duration    | 96hrs   |

#### 3.3 Low Temperature Test

|             |         |
|-------------|---------|
| Temperature | -40±2°C |
| Duration    | 96hrs   |

#### 3.4 Damp Heat

|                   |           |
|-------------------|-----------|
| Temperature       | 40±2°C    |
| Relative Humidity | 90%-95%RH |
| Duration          | 96hrs     |

#### 3.5 Drop Test

|           |                                |
|-----------|--------------------------------|
| Height    | 75cm                           |
| Drop face | free falling on concrete floor |
| Times     | 10 times                       |

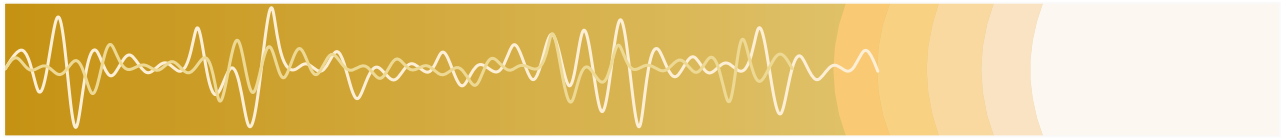
#### 3.6 Vibration Test

Amplitude : 10~50Hz      X,Y,Z 3 directions 24 hours each

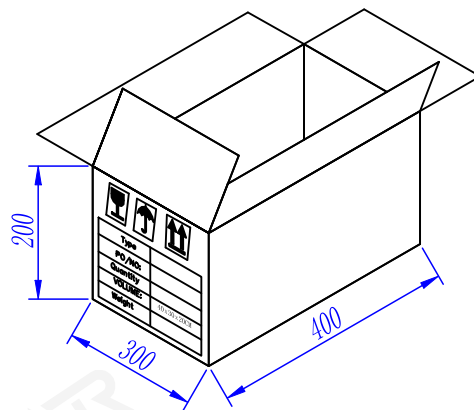
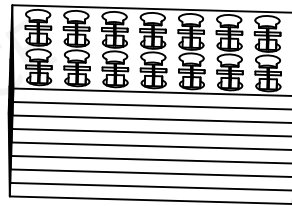
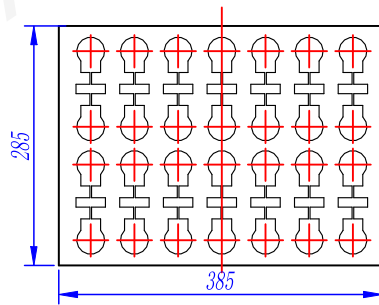
#### Notice :

After test leave at room temperature for 1 hours,SPL shall not deviate by ±3dB from pre-test measurement,and meet above spec.item 5,6,7,8,9.





## 4. Packing

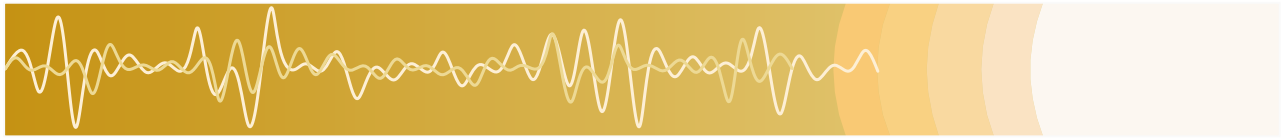


### 4.2 Packing quantity

- 1) 28 pcs per tray
- 2) 8 trays for unit
- 3) Total 224 pcs per carton
- 4) Size: 400×300×200(mm)







## 5. History change record

| Version | Change Items  | Date       | Drawn      | Checked     | Approved    |
|---------|---------------|------------|------------|-------------|-------------|
| A0      | First Edition | 2022.06.16 | Litra.Yang | Peter.Huang | Jason.zhang |
|         |               |            |            |             |             |
|         |               |            |            |             |             |

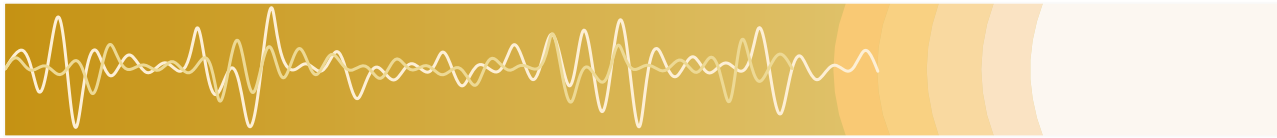
REFERENCE

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REFERENCE





## 6. Important Notice

### 6.1 The products mustn't be washed

### 6.2 Storage Condition (Packaging)

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.

### 6.3 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.

### 6.4 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.

### 6.5 Rated and Max input power

Rated input power

Rated input power is the maximum (limit) value which can be input to the component intentionally. If the actual input power to component keeps exceeding Rated Input power, it will damage the component acoustic performances and reliability. In the worst case, the component will get broken and no sound.

Max input power

Max input power is the maximum (limit) value for unexpected input power which is caused in the customer's circuit like surge voltage. If the actual input power to component keeps exceeding Maximum input power, it will break the component and cause no sound in a short time. Please note that component will have a risk to get broken if the unexpected input power continues.

The value of input power is set based on the sinusoidal power in the normal speaker use. If the special signal is input to component, the values of Rated and Max input power will be different. Please make a well-investigation at your laboratory in the case of the special signal input.

