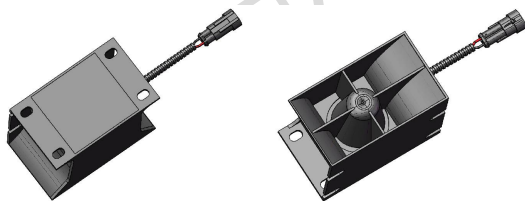


## Speaker Alarm

Product No. 112173

BUS112PW-04

Issue No. BS/TEA01.861



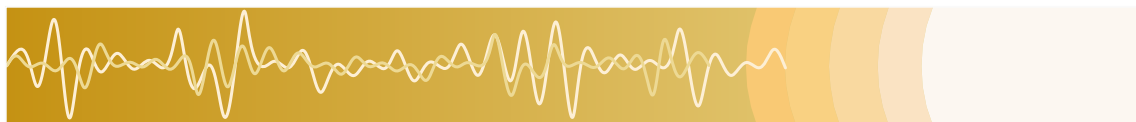
### Features:

- IP65 waterproof rating
- Loud sound output
- RoHS

BESTAR Holdings Co., Ltd.

[www.be-star.com](http://www.be-star.com) | [info@be-star.com](mailto:info@be-star.com)

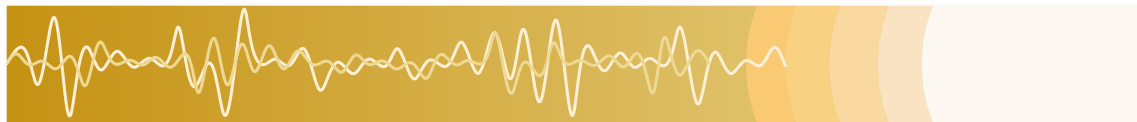




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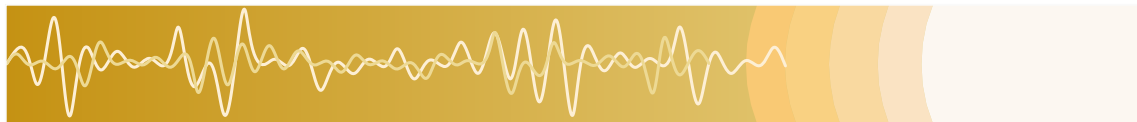


## 1. Characteristic

### 1.1 Technical terms

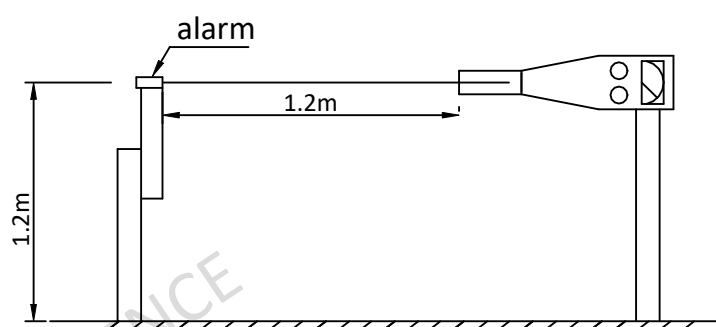
1. Rated Voltage	24VDC
2. Operating Voltage	9-32VDC
3. Current Consumption	$\leq 0.8\text{A}$ at 24VDC
4. SPL at 1.2m 24V	112 $\pm$ 4dB
5. Tone	Pulse tone
6. ON-OFF-cycles	66C/M $\pm$ 5
7. Resonant Frequency	1400 $\pm$ 200Hz
8. Temperature Range	-40 $\sim$ +85 $^{\circ}\text{C}$
9. Storage Range	-40 $\sim$ +85 $^{\circ}\text{C}$
10.IP-rating	IP65



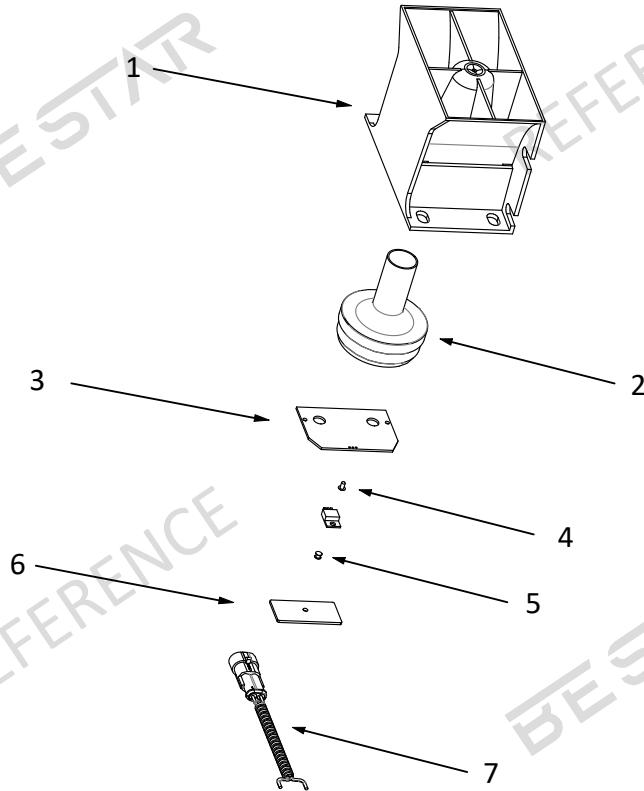


## 1.2 Test method:

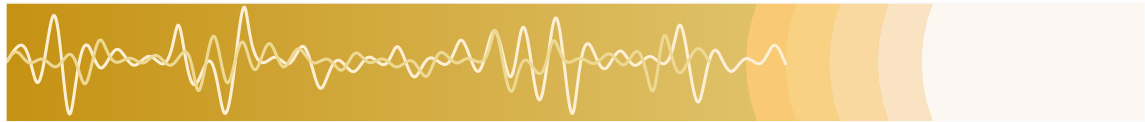
The alarm is located in a free field or an equivalent fully anechoic room. The microphone is directed toward the alarm sound output opening along the zero degree axis and at the distance specified by the test requirement.



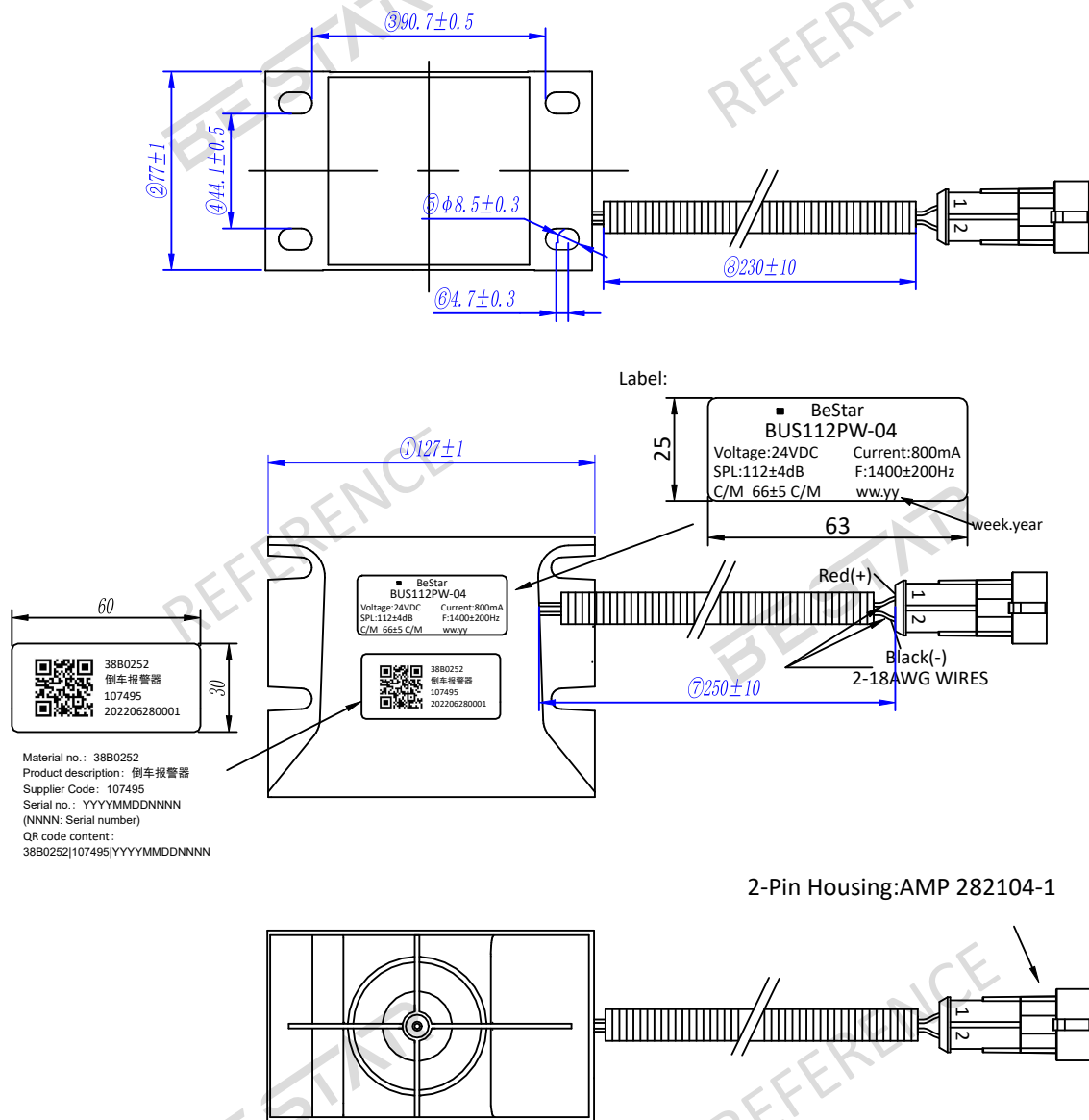
## 2.Part List



7.Plug cord	AMP 282104-1
6.Heat sink	Aluminum
5.Self-plugging Rivet	Aluminum
4.Self-tapping screw	Carbon steel
3.PCBA	FR-4
2.Speaker	Horn loudspeaker
1.Housing	PBT

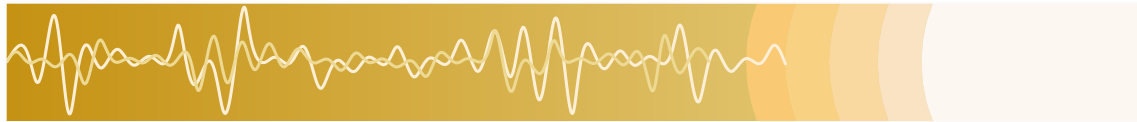


### 3.Dimension



\*Other dimension tolerance:  $\pm 0.5\text{mm}$





## 4. Reliability test

### 4.1 Temperature Test

#### 4.1.1 Low Temperature, System Voltage Extremes (Test standard: SAE J994 7.1)

Rated Voltage	Extreme Low System Voltage : 9VDC Extreme High System Voltage : 32VDC Nominal System Voltage : 28VDC
Duration	2hrs
Temperature	$-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$

#### 4.1.2 High Temperature, System Voltage Extremes (Test standard: SAE J994 7.2)

Rated Voltage	Extreme Low System Voltage : 9VDC Extreme High System Voltage : 32VDC Nominal System Voltage : 28VDC
Duration	2hrs
Temperature	$+85^{\circ}\text{C} \pm 3^{\circ}\text{C}$

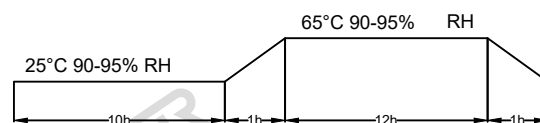
### 4.2 Temperature cycle test

Cycles	5
--------	---

The diagram illustrates a temperature cycle test profile. It consists of four rectangular blocks representing different temperature levels and their durations. The first block is at  $-40^{\circ}\text{C}$  for 30 minutes. The second block is at  $+20^{\circ}\text{C}$  for 15 minutes. The third block is at  $+85^{\circ}\text{C}$  for 30 minutes. The fourth block is at  $+20^{\circ}\text{C}$  for 15 minutes. Arrows indicate the sequence of the test.

### 4.3 Humidity cycle test

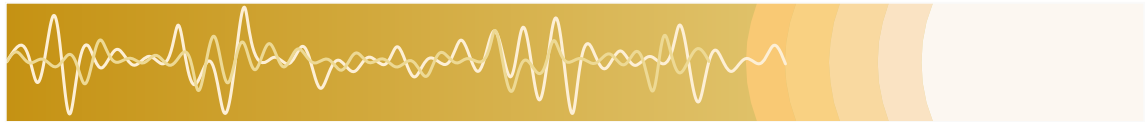
Cycles	5
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### 4.4 Drop test

High	1m to the ground
Direction	3





## 4. Reliability test

### 4.5 Life test (Test standard: SAE J994 8)

#### 4.5.1 Endurance Test at Low Temperature (Test standard: SAE J994 8.1)

Power	30s ON then 30s OFF
Rated voltage	9±0.2 VDC
Temperature	-40°C±3°C
Duration	4hrs

#### 4.5.2 Endurance Test at High Temperature (Test standard: SAE J994 8.2)

Rated voltage	32±0.2 VDC
Temperature	+85°C±3°C
Duration	4hrs

#### 4.5.3 Room Temperature Endurance Test (Test standard: SAE J994 8.3)

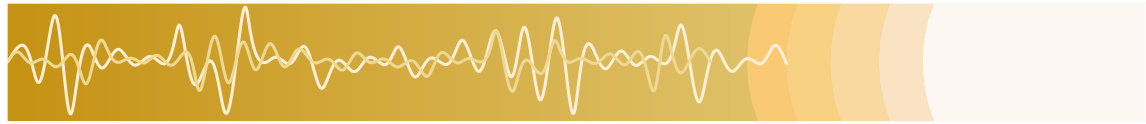
Rated voltage	28±0.2 VDC
Temperature	+25°C±11°C
Duration	100hrs

Notice: All specification must be satisfied in this condition.

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







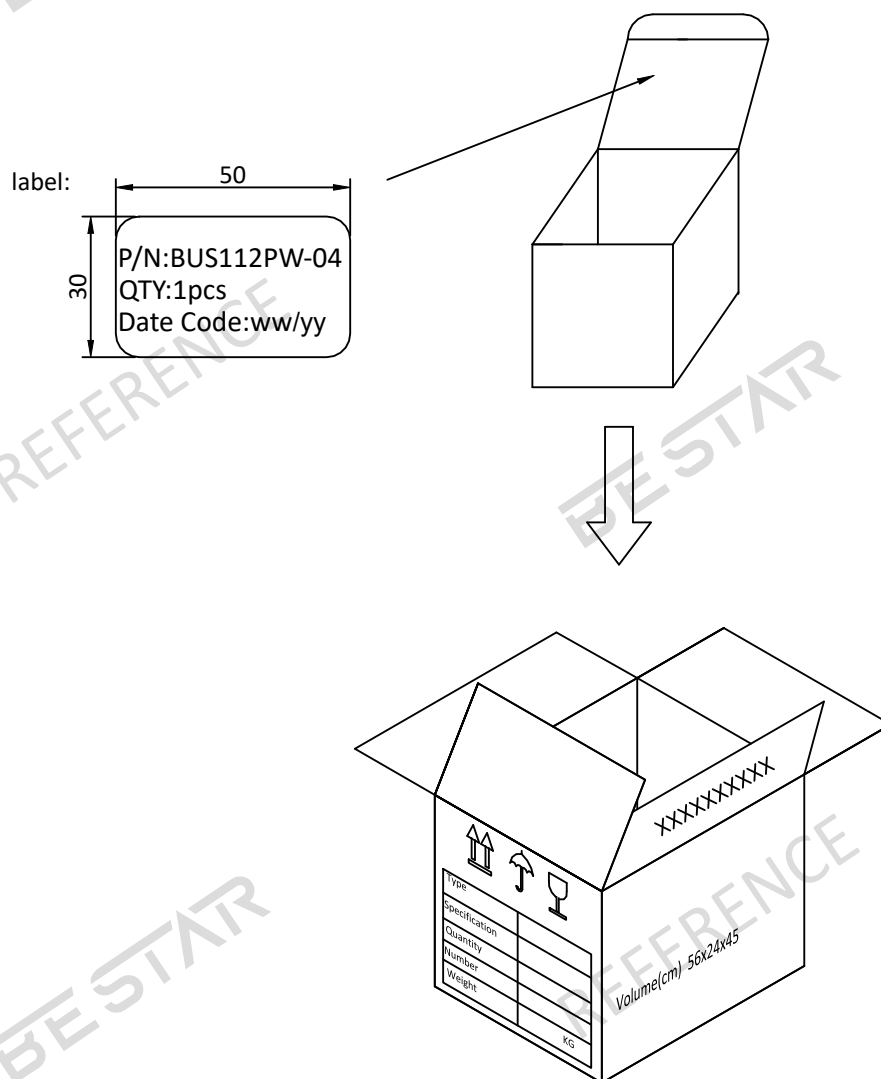
## 5. Packing

Packing Quantity :1 pcs per small box

Box size:105\*85\*130mm

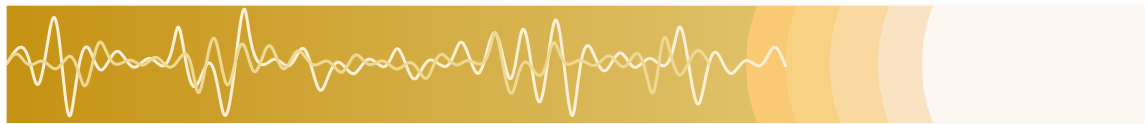
40 pcs per carton

Carton size:560\*240\*450mm



Notice:outer size 56x24x45cm

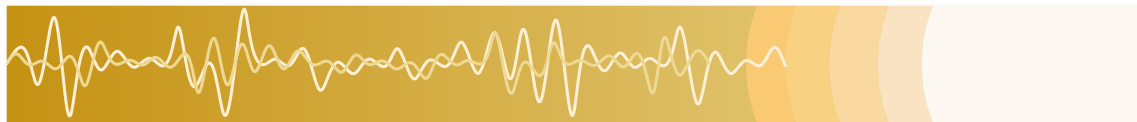




## 6. History change record

Version	Change Items	Date	Drawn	Checked	Approved
A0	First Edition	2020.11.5	Micca.Chen	Claire.Fu	Simon.Zhao
A1	Add week/year on the label	2021.01.04	Micca.Chen	Claire.Fu	Simon.Zhao
A2	Update ON-OFF-cycles from 80±10C/M to 66±5C/M Update the product label	2021.05.10	Micca.Chen	Claire.Fu	Simon.Zhao
A3	The length of plug wire is changed from 100 ± 10 mm to 250 ± 10 mm; The casing length was changed from 80 ± 10 mm to 230 ± 10 mm.	2021.07.20	Jacob.Tian	Claire.Fu	Alisa.Xu
A4	Add the QR code label	2022.06.28	Kaylee.Zhuang	Claire.Fu	Richard.Cheng





## 7.Important Notice

### 7.1 The products mustn't be washed

### 7.2 Store 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.

### 7.3 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.

### 7.4 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.

