MICRO SPEAKER

Product No. 132338

BMS20-12-08H3.2W038J-WP7

Issue no. BS/TES01.1975



Features:

- Loud sound output
- RoHS

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1.Characteristics

1.1 Technical terms

1. Size	ϕ20*3.2mm(uint)
2. Impedance at 2KHz/1Vrms	8±15%Ω
3. Lowest Resonance frequency	850±20%Hz
4. Frequency Response	F0~20KHz
5. Rated input power	1W
6. Maximum input power	1.2W
7. Buzz & Rattle(at sine wave 2.83V)	must be normal between 300~3400Hz
8. SPL(0.1W 10cm sine wave)	87±3dB at AVE 1.0K,1.2K,1.5K,2.0KHz
9. THD(0.1W 10cm sine wave)	≤10% at 1kHz
10. Weight	≈2.0g
11.Operating temperature	-20...+60℃
11.Storage temperature	-30...+70℃
12.Waterproof level	IP67

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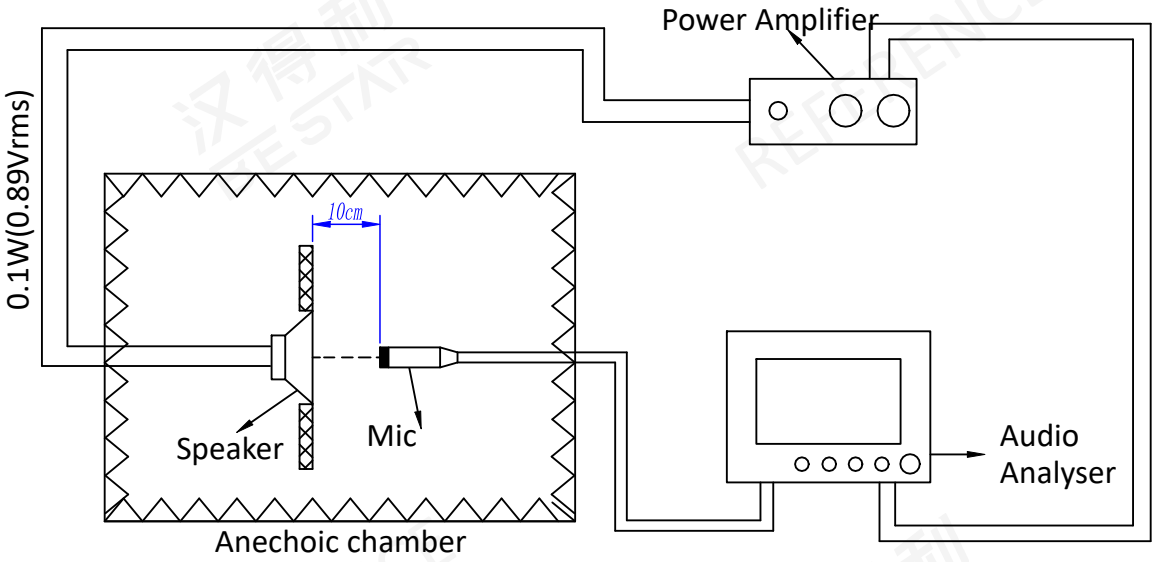
1.2 Test method:



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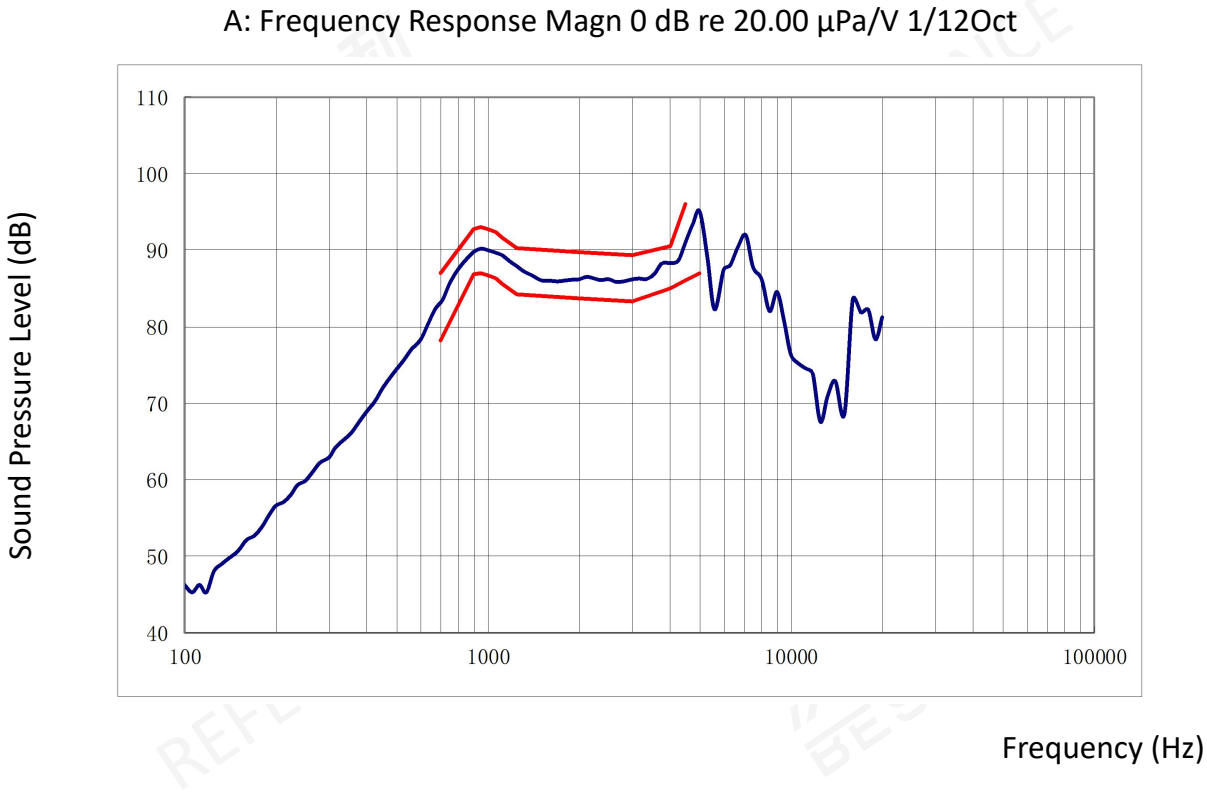
1.3 Frequency Response Curve (only for reference)



1.3.1 Sensitivity

SPL is expressed in dB rel 20 µPa,computed according to IEC 268-5.
Measurement set up according chapter 1.2 and parameters according chapter 1.3.

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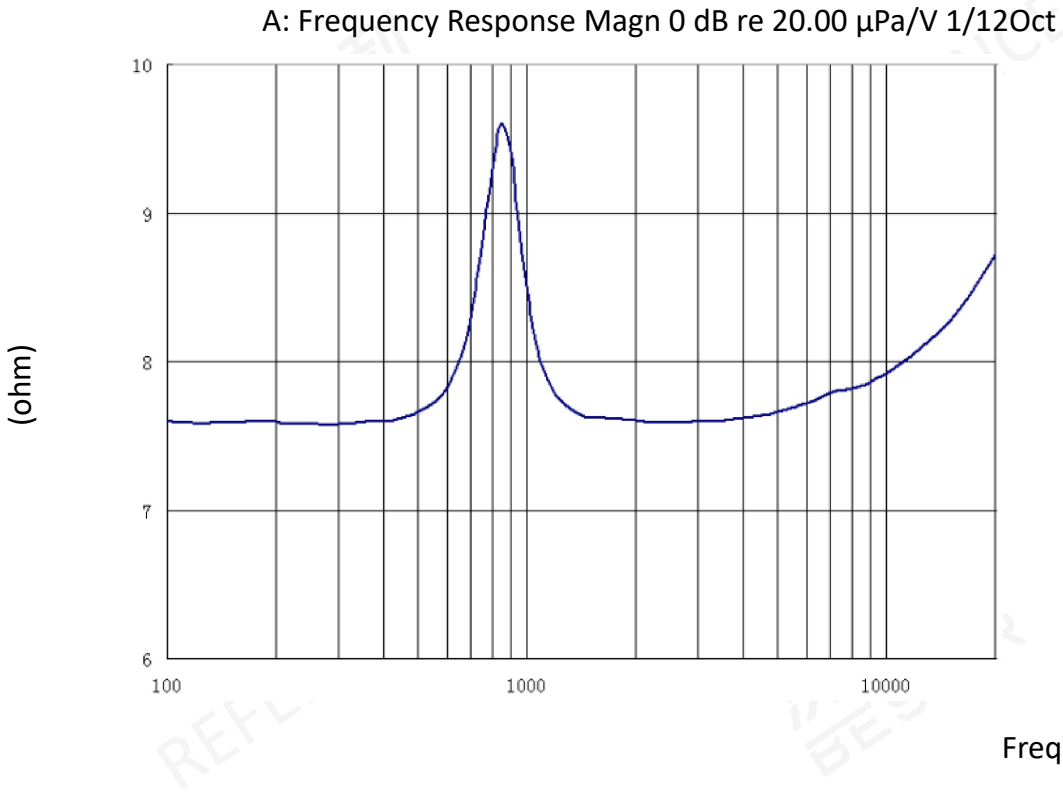
1.4 F0 Curve (only for reference)



1.4.1 Resonance Frequency

Resonance frequency is measured according test set up in chapter 1.2 and parameters according chapter 1.4

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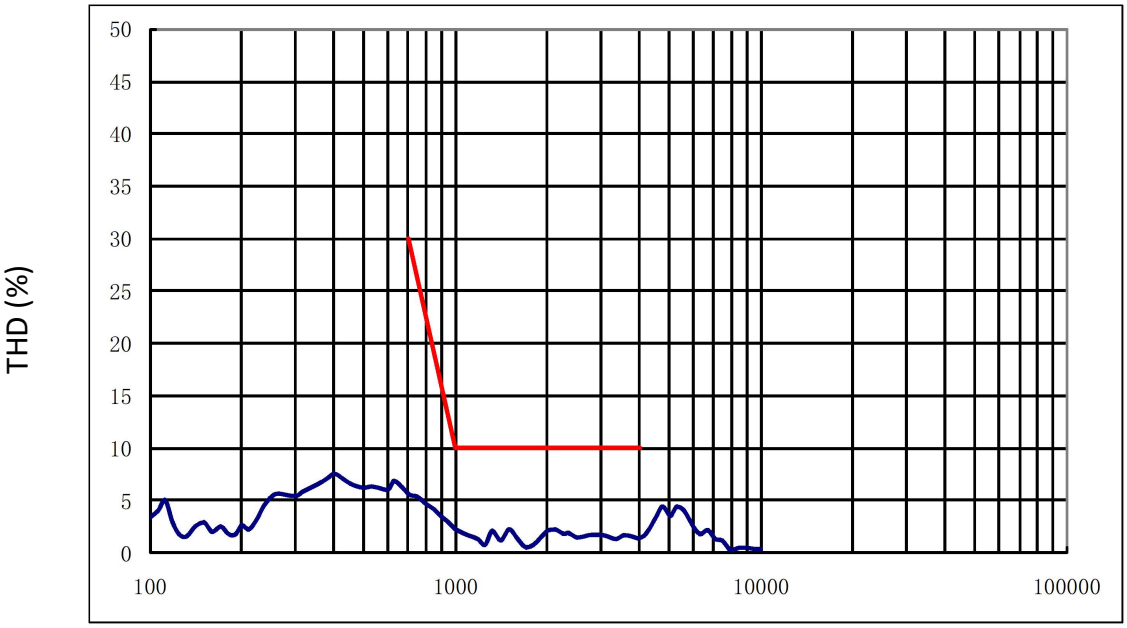
1.5 Total Harmonic Distortion (only for reference)

A: Frequency Response Magn 0 dB re 20.00 µPa/V 1/12Oct



1.5.1 THD

THD is measured according test set up in chapter 1.2 and parameters according chapter 1.5

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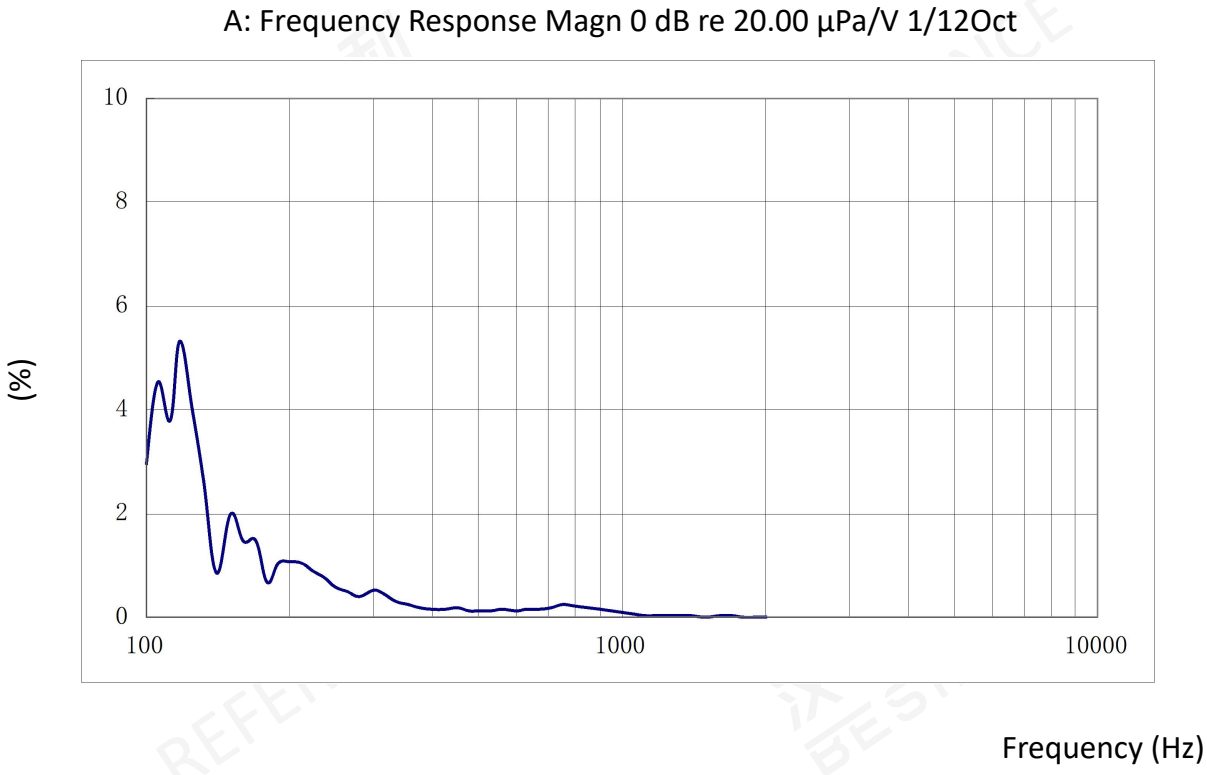
1.6 R&B Curve (only for reference)



1.6.1 R&B

R&B is measured according test set up in chapter 1.2 and parameters according chapter 1.6

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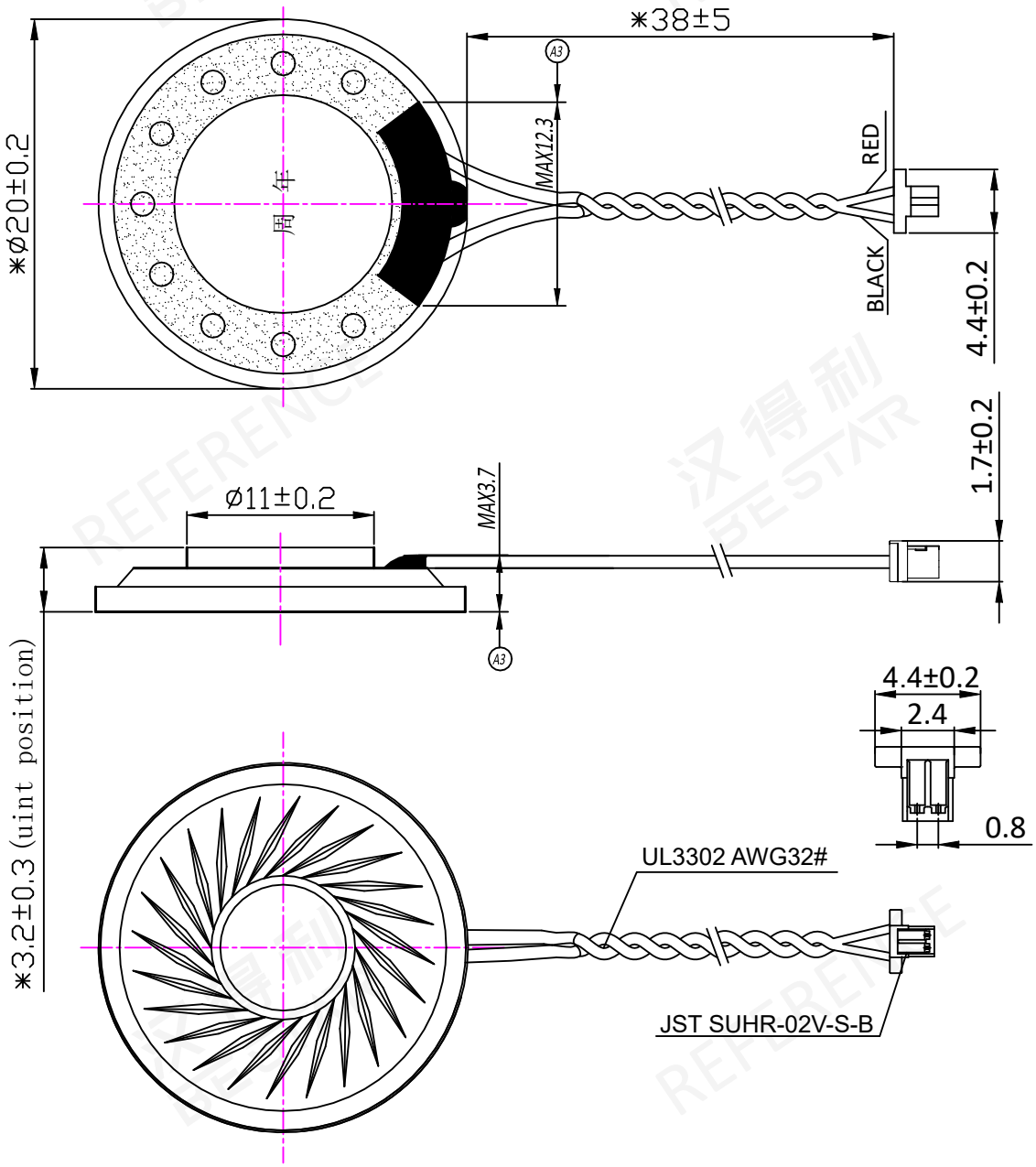
2. Dimension

Tolerance:±0.2mm



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3. Reliability test

3.1 High temperature preservation test

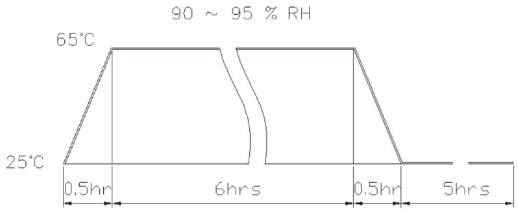
Temperature	+70℃
Duration	96hrs

3.2 Low temperature preservation test

Temperature	-20℃
Duration	96hrs

3.3 Thermal shock test

Cycles	5



3.4 Damp Heat

Temperature	40±3°C
Relative Humidity	92%-95%RH
Duration	96hrs

3.5 Ordinary Temperature Life

Power (Nom)	1W
Signal	White noise/ FO~10KHz
Duration	96hrs

3.6 Drop Test

Height	75cm
Drop face	thick ness wooden board (40mm)
Times	three times in each direction

3.7 Waterproof Test (Short time immersion test)

Test equipment	Soak test box
Test conditions	The top of the product is 0.15 - 1m away from the water surface for 30 minutes without affecting the performance and water leakage.

Notice:

1.Immediately after reliability test,the samples shall be stored under climatic conditions such as normally exist in ordinary rooms or laboratories.Unless otherwise noted,the recovery period shall be 4hrs at least before performance testing.After the waterproofing test, the sample should be stored immediately under the usual weather conditions in ordinary room or laboratory, and the test should be carried out 24 hours after recovery.

2.After any of the above tests the response at 2~5KHz shall not deviate more than ±3 dB from the initial value.

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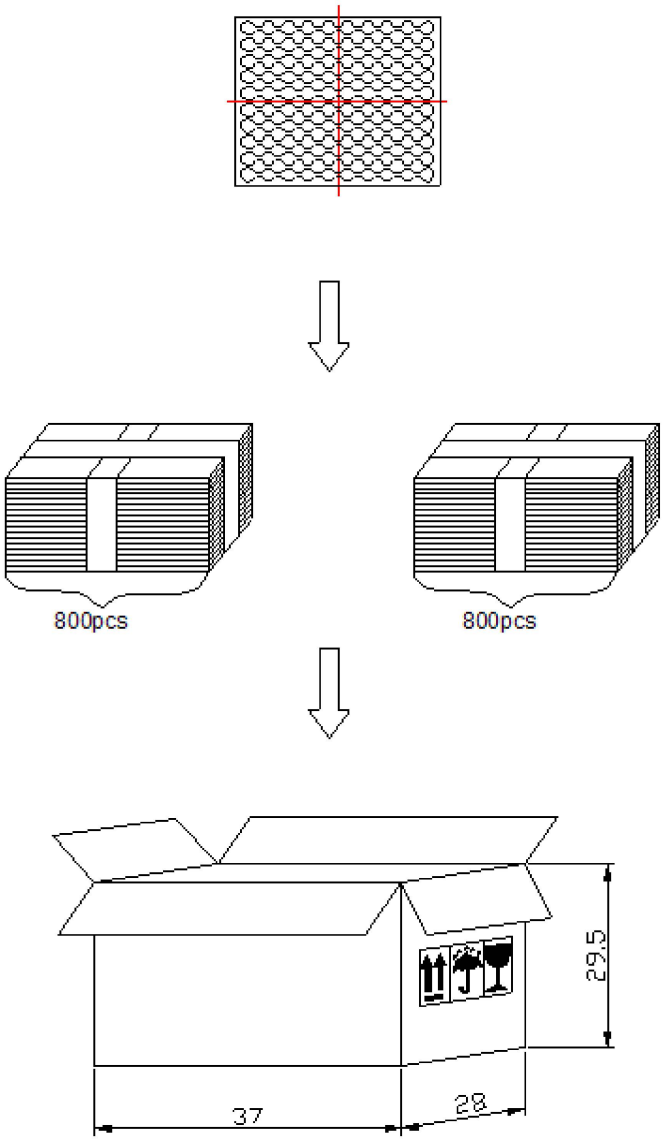
4. Packing

4.1 Packing drawing (unit:mm)



4.2 Packing quantity

1) 80pcs per carton
2) 20pcs carton per box
3) total 1600pcs per box,
4) box size: 370X280X295mm

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5. History change record

Version	Change Items	Date	Drawn	Checked	Approved
A0	First Edition	2020.11.16	Judy. Yang	Peter.Huang	Jason.Zhang
A1	Change terminal size	2024.01.18	Judy. Yang	Emma.Ren	Jason.Zhang
A2	Increase solder joint size	2024.04.03	Judy. Yang	Emma.Ren	Jason.Zhang
A3	Change the company logo	2024.05.27	Judy. Yang	Emma.Ren	Jason.Zhang

REFERENCE 汉得利 BESTAR

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6.Important Notice

6.1 The products mustn't be washed

6.2 Storage Condition （Packing）

The products should be stored in the room ,where the temperature/humidity is stable. And avoid suchplaces where there are large temperature changes. Please store the products at the following conditions: Temperature: -10 to + 40℃ Humidity: 15 to 85% R.H.

6.3 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.

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.

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