



# SPECIFICATION FOR AUTOMOTIVE SPEAKER

TOTAL PAGE 08

[www.be-star.com](http://www.be-star.com)

RoHS

Customer		Model Name	FE23100PCW-03
Customer P/N		Product No.	060310
Date	26 Aug. 10	Issue No.	BS/TES01.486D
Page	01 of 08	Issue Date	10/08/26

### 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
莫丽丽	侍 啸	陶红仲	

## **BESTAR ELECTRONICS INDUSTRY CO.,LTD**

No.199 HuangHe West Road.New district,ChangZhou,JiangSu Province,P.R.China

**Tel:** +86 519 88222567

**Fax:** +86 519 88222551

**E-mail:** [wu@be-star.com](mailto:wu@be-star.com)

**<http://www.be-star.com>**

# FE23100PCW-03

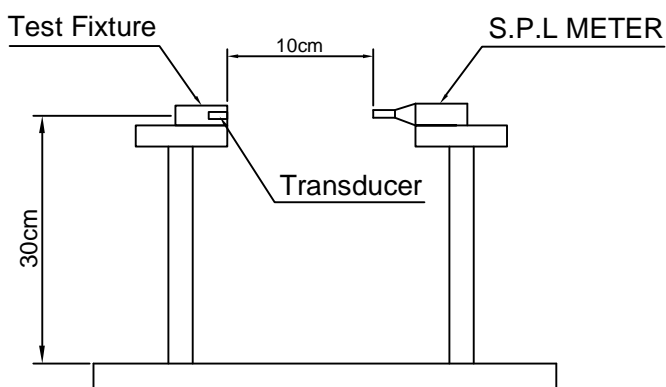


## 1. Characteristics

### 1.1 Electrical and Mechanical Characteristics

No.	Item	Specifications
1-1)	Impedance (1V,*2kHz)	100 ±10 % Ω
1-2)	Rated input power	0.15W
1-3)	Max Input	0.3W
1-4)	Frequency response	1000...4000Hz
1-5)	Sound pressure level	≥90dB( at 0.25W/10cm/1000Hz square wave)
		≥95dB( at 0.25W/10cm/2000Hz square wave)
1-6)	Buzzes and Rattles	Must be normal
		sine wave 3.87V
1-7)	Operating temperature	-40...+85℃
1-8)	Weight	9g

picture 1



This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written consent

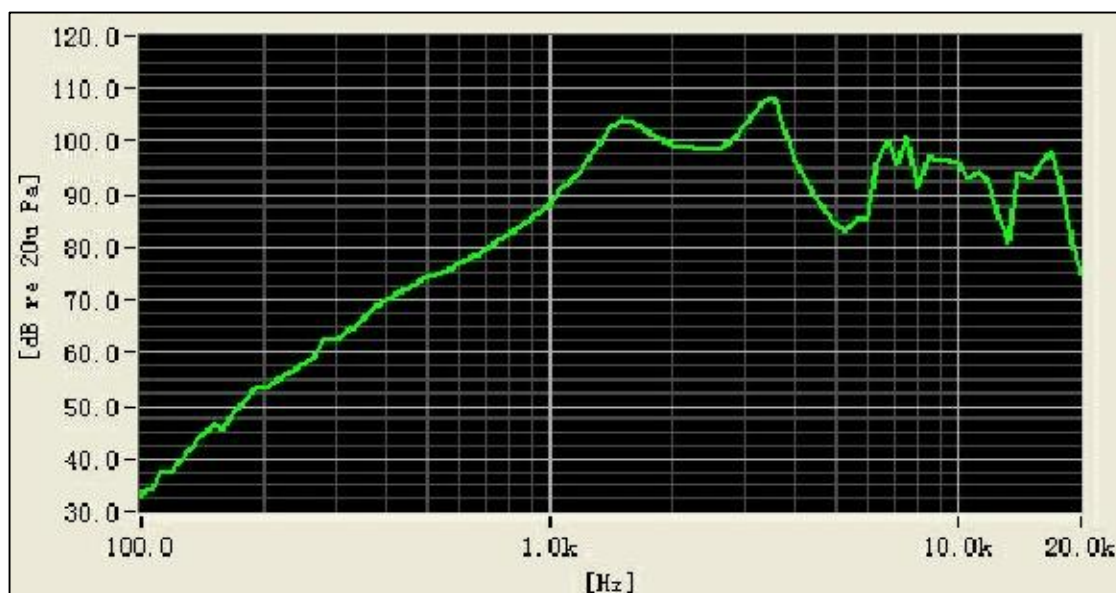
				Date:	10/08/26	FE23100PCW-03	
D	10/08/26	莫丽丽		Drawn by:	莫丽丽		
C	09/10/13	莫丽丽		Checked by:	侍 啸	Speaker	
Rev.	Date	Drawn	Note	Approved by:	陶红仲		
BESTAR ELECTRONICS INDUSTRY CO.,LTD						DRG NO: BS/TES01.486D	Page:02 of 08
www.be-star.com wu@be-star.com							

# FE23100PCW-03

## Test conditions

The test assembly is in free field or a test room with min 2m×2m ground and 2m high  
 Distance between loudspeaker and SPL meter=10cm  
 Trigger voltage is 10Vp-p, 50% duty square wave signal  
 The trigger signal comes from a function generator FG100. The trigger voltage is adjusted to 10Vp-p constant voltage.(in case of load)

## 1.2 Frequency response curve(Sine wave 0.15W,10cm testing)



This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

				Date:	10/08/26	FE23100PCW-03	
D	10/08/26	莫丽丽		Drawn by:	莫丽丽		
C	09/10/13	莫丽丽		Checked by:	侍啸	Speaker	
Rev.	Date	Drawn	Note	Approved by:	陶红仲		
BESTAR ELECTRONICS INDUSTRY CO.,LTD						DRG NO: BS/TES01.486D	Page:03 of 08
www.be-star.com wu@be-star.com							

# FE23100PCW-03

## 2. Notice

### 2.1 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: -10 to + 40° C Humidity: 15 to 85% R.H.

### 2.2 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.

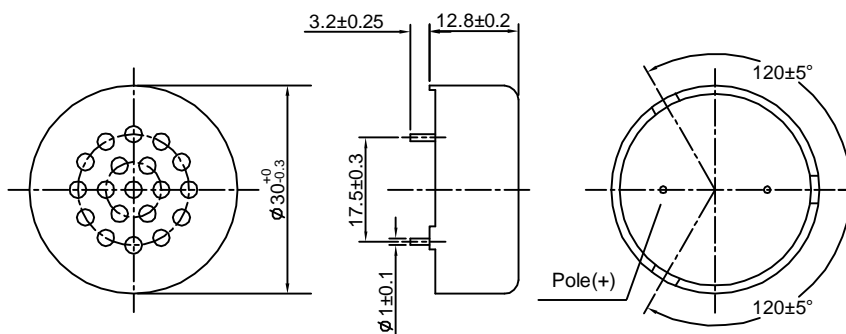
If you store the products for a long time (more than six months), use carefully because the products may be degraded in the solderability and/or rusty. Please confirm solderability and characteristics for the products regularly.

### 2.3 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.

## 3. Drawing

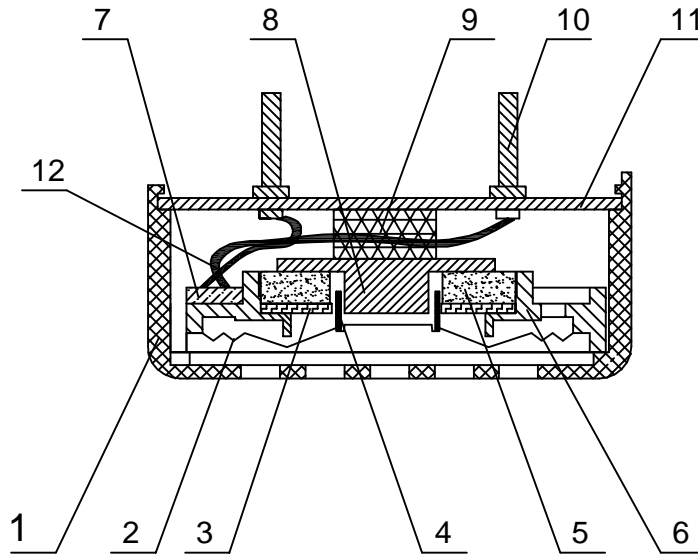


This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

				Date:	10/08/26	FE23100PCW-03	
D	10/08/26	莫丽丽		Drawn by:	莫丽丽		
C	09/10/13	莫丽丽		Checked by:	侍 啸	Speaker	
Rev.	Date	Drawn	Note	Approved by:	陶红仲		
BESTAR ELECTRONICS INDUSTRY CO.,LTD						DRG NO: BS/TE01.486D	Page:04 of 08
www.be-star.com wu@be-star.com							

# FE23100PCW-03

## 4. Bill of Material



12	Connect wire	Cu and PVC
11	Plugboard	Epoxy and Cu
10	Pin	CuΦ1.0 (plating tin)
9	Mat	Sponge
8	Yoke	SPCC
7	PCB	Epoxy and Cu
6	Frame	Plastic MPPO+20%GF
5	Magnet	Nd-Fe-B N35H
4	Voice Coil	∅ 0.03 Cu
3	Piece	SPCC
2	Diaphragm	PEI
1	Housing	Plastic MPPO+20%GF
No	Parts Name	Material

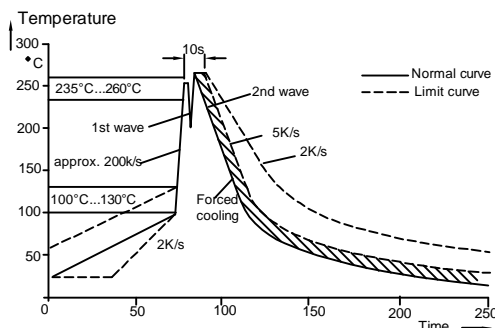
This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

			Date:	10/08/26	FE23100PCW-03	
D	10/08/26	莫丽丽	Drawn by:	莫丽丽		
C	09/10/13	莫丽丽	Checked by:	侍 啸	Speaker	
Rev.	Date	Drawn	Note	Approved by:		陶红仲
BESTAR ELECTRONICS INDUSTRY CO.,LTD					DRG NO: BS/TES01.486D	Page:05 of 08
www.be-star.com wu@be-star.com						

# FE23100PCW-03

## 5. Reliability test

1. Endurance test
  - Duration 240hrs
  - at square wave,duty cycle:50% asymmetric,Un=8.9Vp-p f=2048Hz
  - Temperature cycle -40...+85°C with cycle duration 4h; 10s on/off
2. High temperature durability acc. to IEC 60068 part2-2
  - Temperature +85°C
  - Duration 1000h
3. Low temperature durability acc. to IEC 60068 part 2-1
  - Temperature -40°C
  - Duration 500h
4. Humidity durability acc.to IEC 60068 part2-3
  - Temperture 40°C
  - Rel.humidity 93%RH
  - Duration 56days
5. Temperature shock durability acc.to IEC60068 part2-14
  - Low Temperature -40°C
  - Upper Temperature +85°C
  - each duration 30minutes
  - Transfer time from lower to upper temperature <10s
  - Number of cycles 100cycles
6. Shock test acc. to IEC 60068 part2-27
  - 100g for each free mutually perpendicular directions to each of 3times by sine-wave
7. Vibration test acc. to IEC 60068 part 2 -6
  - sine-wave excitation; 8...300Hz,2g,1 octave/min; test time 16h each axis
  - Additional requirements:
  - Test of solderability and resistance to soldering heat acc. to VDON4.3643.001
  - X-ray solderpoint inspection according to VDON 4.4814.001
  - Washability:not washable
  - Cadmium prohibited as per DIN 5.5000.1
8. Wave soldering



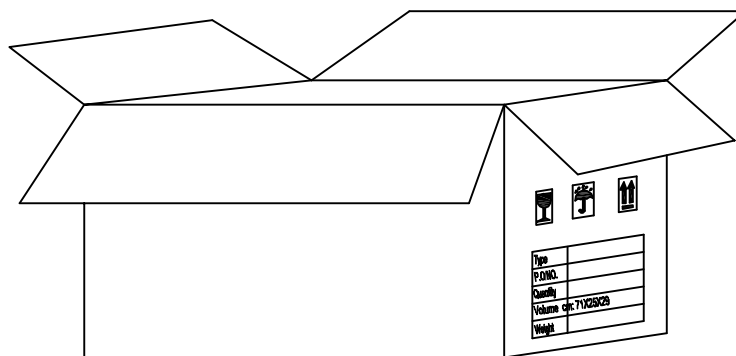
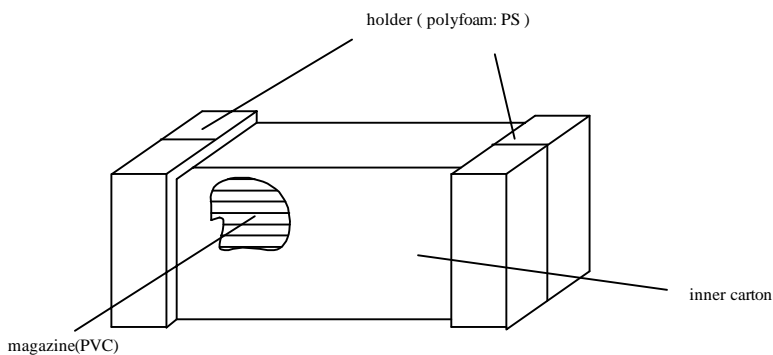
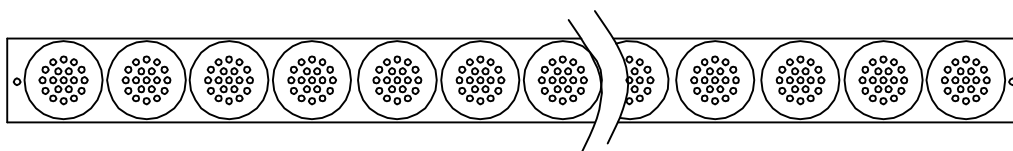
This print and information there in are propriety to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

				Date:	10/08/26	<b>FE23100PCW-03</b>
D	10/08/26	莫丽丽		Drawn by:	莫丽丽	
C	09/10/13	莫丽丽		Checked by:	侍 啸	<b>Speaker</b>
Rev.	Date	Drawn	Note	Approved by:	陶红仲	
BESTAR ELECTRONICS INDUSTRY CO.,LTD <a href="http://www.be-star.com">www.be-star.com</a> <a href="mailto:wu@be-star.com">wu@be-star.com</a>						DRG NO: BS/TES01.486D Page:06 of 08

# FE23100PCW-03

## 6.Packing

### 6.1 Packing Drawing



### 6.2 packing quantity

- 1) 20pcs per tube,
- 2) 40pcs tube per carton
- 3) 800pcs per carton,
- 4) inner carton size: 64x18x21 cm
- 5) carton size: 71X25X29cm

This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

				Date:	10/08/26	<b>FE23100PCW-03</b>
D	10/08/26	莫丽丽		Drawn by:	莫丽丽	
C	09/10/13	莫丽丽		Checked by:	侍 啸	Speaker
Rev.	Date	Drawn	Note	Approved by:	陶红仲	
BESTAR ELECTRONICS INDUSTRY CO.,LTD						DRG NO: BS/TES01.486D
<a href="http://www.be-star.com">www.be-star.com</a> <a href="mailto:wu@be-star.com">wu@be-star.com</a>						Page:07 of 08

# FE23100PCW-03

## 7. History change record

version No.	Change Items		Date	Drawn	Approved
	Before	After			
A			07/09/04	丁小军	张秀琴
B		change terminal wire method	08/10/13	丁小军	侍 啸
C		add pole"+"	09/10/13	莫丽丽	陶红仲
D		change PCB	10/08/26	莫丽丽	陶红仲

This print and information there in are propriety to Bestar Electronics Industry Co., Ltd and shall not be used in whole or in part without its written content

				Date:	10/08/26	FE23100PCW-03
D	10/08/26	莫丽丽		Drawn by:	莫丽丽	
C	09/10/13	莫丽丽		Checked by:	侍 啸	
Rev.	Date	Drawn	Note	Approved by:	陶红仲	Speaker
BESTAR ELECTRONICS INDUSTRY CO.,LTD						DRG NO: BS/TES01.486D
<a href="http://www.be-star.com">www.be-star.com</a> <a href="mailto:wu@be-star.com">wu@be-star.com</a>						Page:08 of 08