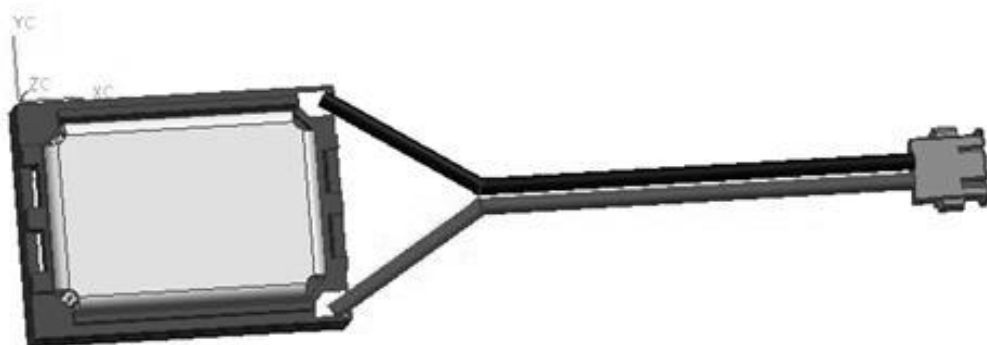


# SPECIFICATION

BMS1511F-11C-08H3.5W018 LF





# APPROVAL SHEET FOR SMARTPHONE SPEAKER

TOTAL PAGE	13	www.bestargroups.com	RoHS
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Customer		Model Name	BMS1511F-11C-08H3.5W018 LF
Customer P/N		Product No.	*****
Date	19 Jan.2016	Issue No.	BS/TES01.****A
Page	02 of 13	Issue Date	2016/01/19

### Table of Contents:

- 1.Test Climatic Condition
- 2.Description
- 3.Characteristics
- 4.Test Setup
- 5.Drawing
- 6.Reliability Test
- 7.Packing
- 8.History Change Record

Drawn by	Checked by	Approved by	Customer approved

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# BMS1511F-11C-08H3.5W018 LF

## 1. Test Climatic Condition

- 1.1 Ambient Temperature :15°C~35°C, Preferably at 20°C
- 1.2 Relative Humidity:25% to 75%
- 1.3 Air Pressure:86kPa~106kPa

No.	Item	Specification
1.	Dimension	15 x11 x 3.5(mm)
2.	AC Impedance	8 Ω ±15%(at 2KHz/1Vrms)
3.	Rated Input Power	0.7W(2.37Vrms/in 1cc box)
4.	Maximum Input Power	1.0W(2.83Vrms/in 1cc box)
5.	Resonance Frequency	500Hz ±20% (in free air)
6.	Resonance Frequency	800Hz ±20% (in 1.0cc box)
7.	Frequency Response	F0~20KHz
8.	S.P.L	89±3dB/0.1m/0.7W at 2KHz
9.	THD	≤10% (at 1.0~10KHz/0.7W)
10.	Buzzes & Rattles	Must be normal at sine wave 1.4Vrms (in free air) /2.37Vrms(in 1.0cc box) from 200~3400Hz
11.	Polarity	Positive voltage to (+),Diaphragm moves forward
12.	Operating Temperature	-20~+ 70°C
13.	Storage Temperature	-20~+ 70°C
14.	Weight	~1.7g±0.3g

## 2. Description

- 2.1 Acoustic component Performance Specification
- 2.2 The present document specifies performance requirements for the acoustic characteristics of speaker

## 3. Characteristics

- 3.1 Electrical and Mechanical Characteristics

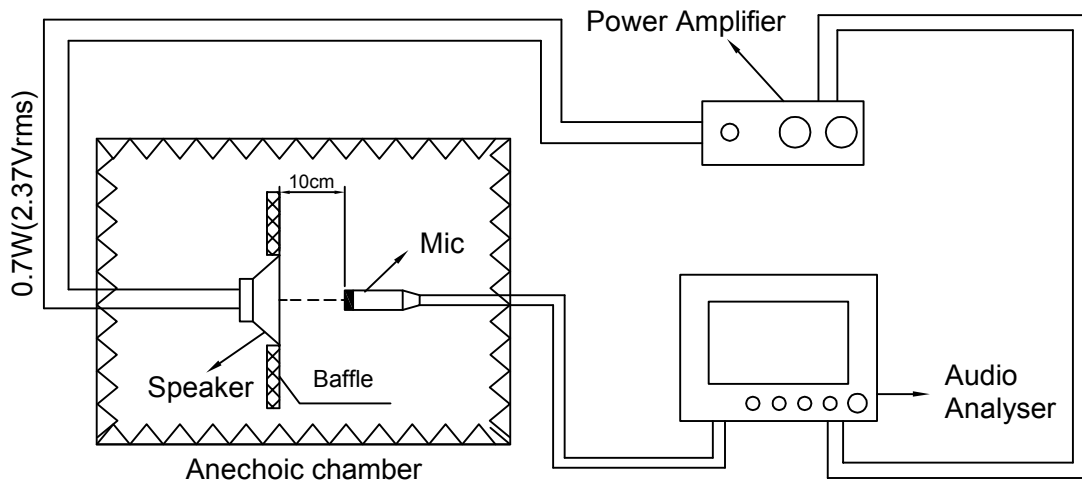
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# BMS1511F-11C-08H3.5W018 LF

## 4. Test Setup

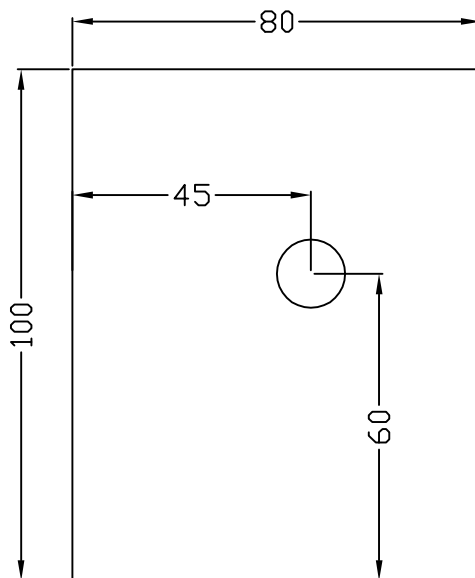
### 4.1 Speaker Measurement Circuit



### 4.2 Baffle Drawing

unit:cm

tolerance:±2



### 4.3 Test Method

The speaker shall be mounted in a baffle of the dimensions 80X100cm show figure 4.2,

The measuring free-field microphone shall be placed 10cm from DUT, on axis.

The test voltage is 0.7W and swept sine-wave range is 100Hz~20KHz with a R80 of test sequence

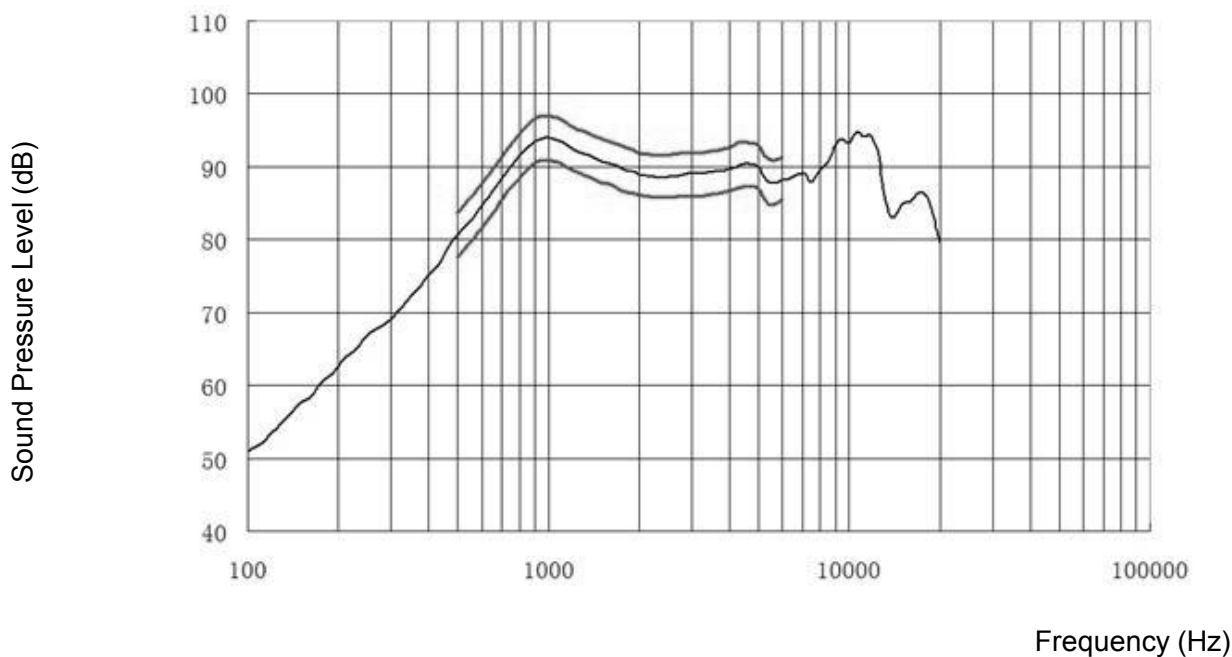
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## 4.4 Frequency Response Curve (only for reference)

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



### 4.4.1 Sensitivity

SPL is expressed in dB rel 20  $\mu$ Pa, computed according to IEC 268-5. Measurement set up according chapter 4.1 and parameters according chapter 4.4.

This test is performed on the production line by 100%.

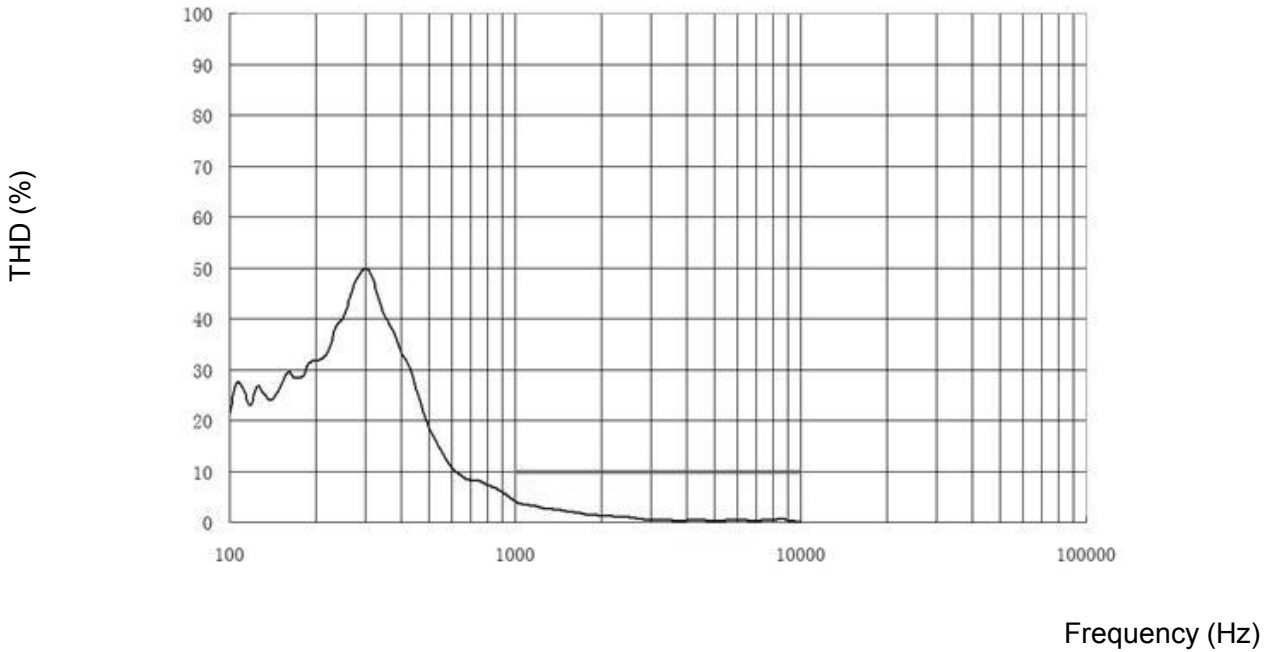
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# BMS1511F-11C-08H3.5W018 LF

## 4.5 Total Harmonic Distortion (only for reference)

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



### 4.5.1 THD

THD is measured according test set up in chapter 4.1 and parameters according chapter 4.5

This test is performed on the production line by 100%.

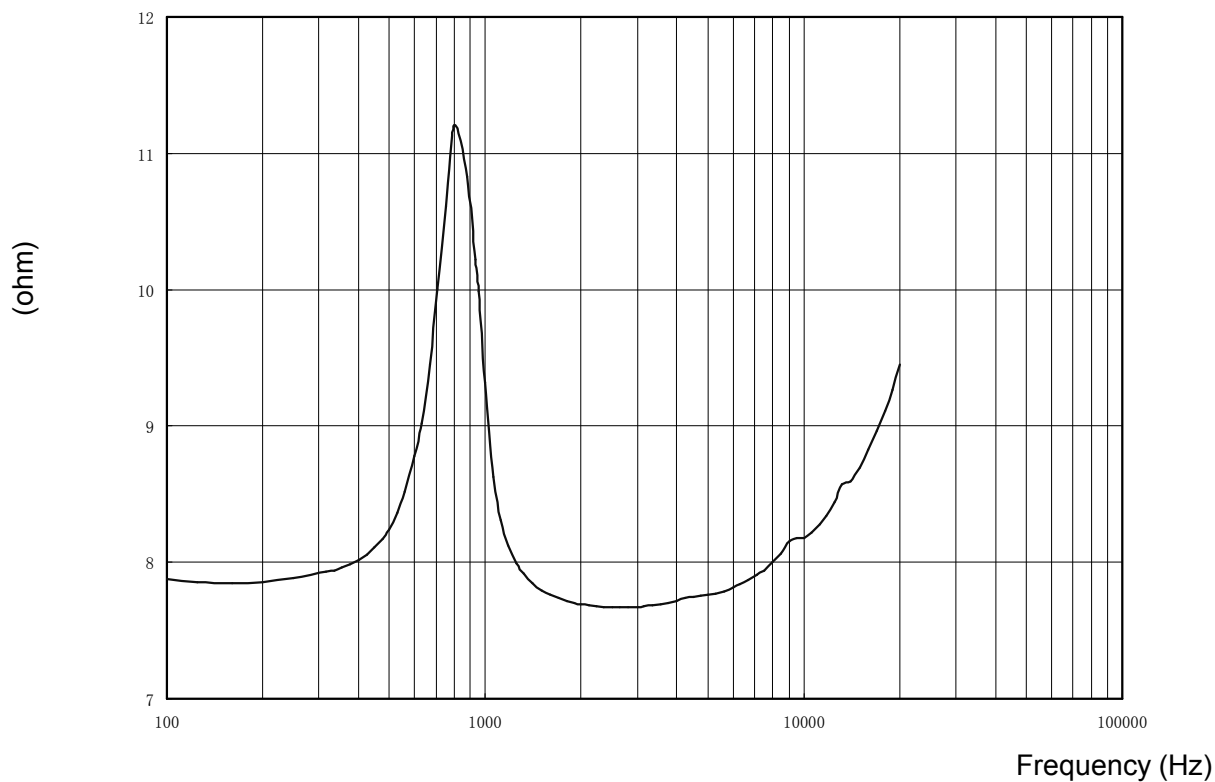
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# BMS1511F-11C-08H3.5W018 LF

## 4.6 F0 Curve (only for reference)

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



### 4.6.1 Resonance Frequency

Resonance frequency is measured according test set up in chapter 4.1 and parameters according chapter 4.6  
This test is performed on the production line by 100%.

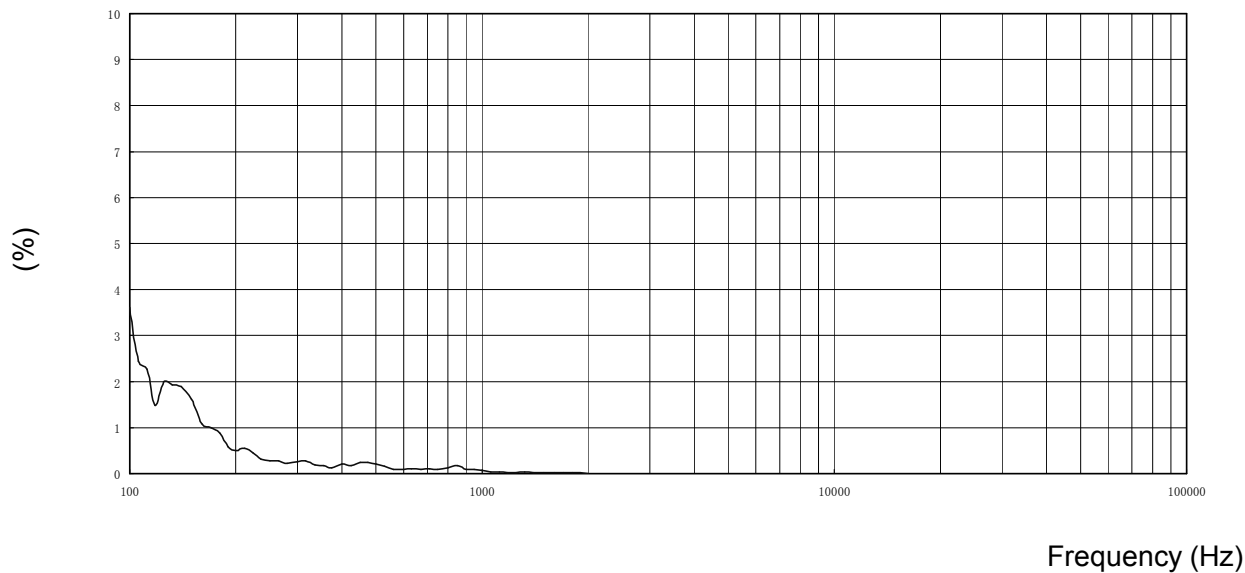
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4.7 R&B Curve (only for reference)

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



## 4.7.1 R&B

R&B is measured according test set up in chapter 4.1 and parameters according chapter 4.7

This test is performed on the production line by 100%.

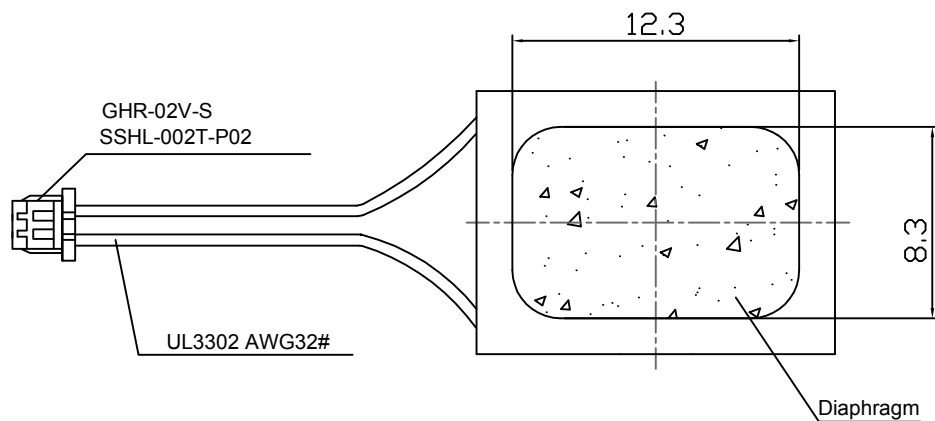
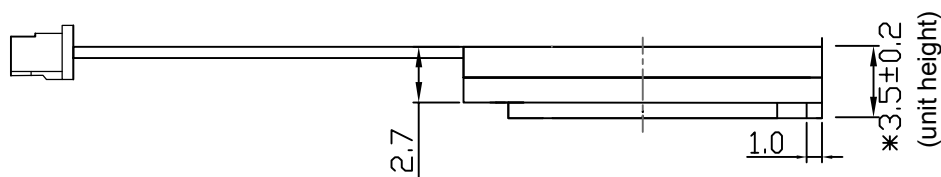
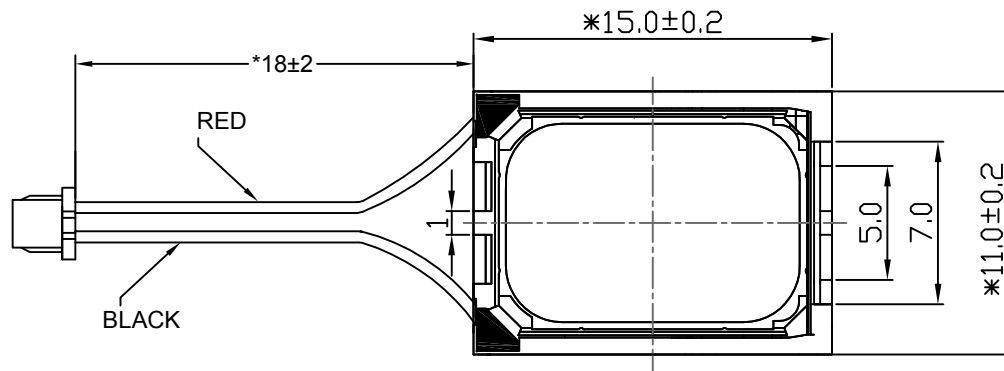
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## 5. Drawing



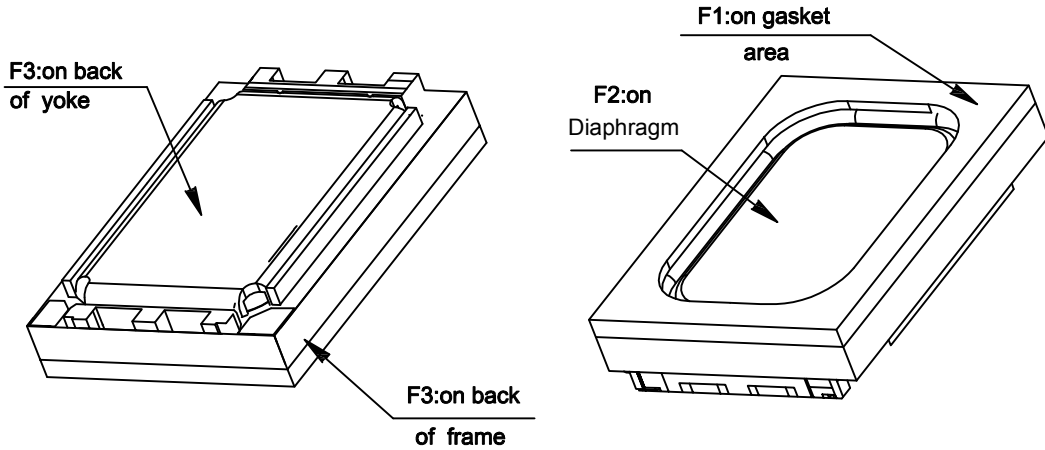
unit:mm  
tolerance:±0.2

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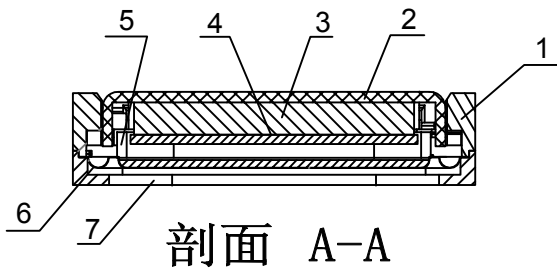
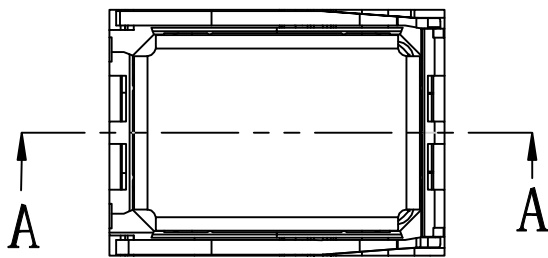
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## 5.1 Permitted Force to Speaker



Max Permitted Compression Force			
No	From	To	Max Force
1	F1	F3	10N
2	F2		0
3	F3	F1	10N



No	Description of the part	Material
1	Frame	PPA BLK
2	Yoke	SPCC
3	Magnet	Nd-Fe-B N45M
4	Plate	SPCC
5	Coil	0.07
6	Diaphragm	PEEK
7	Front Cover	PBT+20%GF

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# BMS1511F-11C-08H3.5W018 LF

## 6. Reliability Test

### 6.1 Load Test

Power (Nom) 0.7W(in White noise in 1cc box)  
 Duration 96hrs

### 6.2 High Temperature Test

Temperature  $+70\pm 3^{\circ}\text{C}$   
 Duration 96hrs

### 6.3 Low Temperature Test

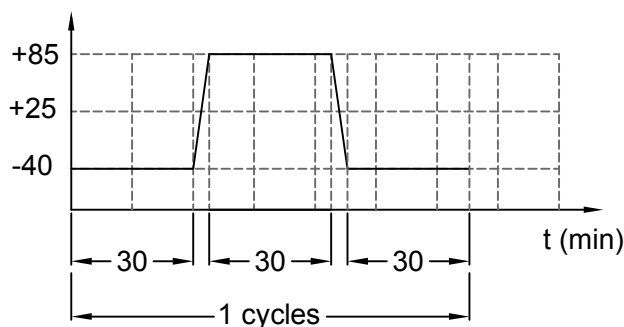
Temperature  $-20\pm 3^{\circ}\text{C}$   
 Duration 96hrs

### 6.4 Damp Heat

Temperature  $40\pm 3^{\circ}\text{C}$   
 Relative Humidity 90%-95%RH  
 Duration 96hrs

### 6.5 Temperature Cycle Test

Cycles 10



### 6.6 Drop Test

Height 1.0m  
 Drop face thick ness wooden board (20mm)  
 Times 10  
 (three times in each direction )

### Notice:

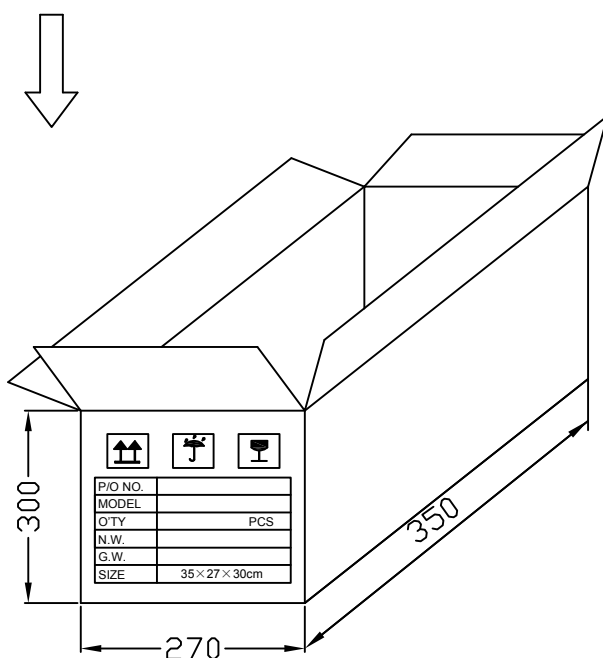
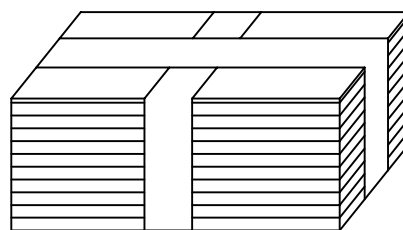
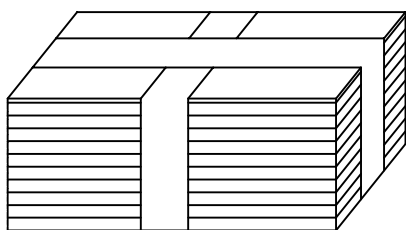
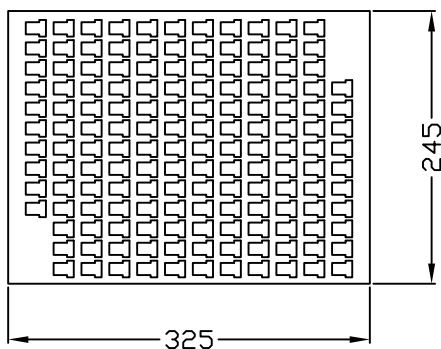
- 1.Immediately after reliability test,the samples shall be stored under climatic conditions such as normally exist in ordinary rooms or laboratories.Unless otherwise noted,the recovery period shall be 4hrs at least before performance testing.
2. After reliability test ,all samples must be meet the requirements specified
- 3.Sensitivity difference at 2~5KHz shall be within  $\pm 3\text{dB}$  from initial value after test.

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# BMS1511F-11C-08H3.5W018 LF

## 7. Packing



Remark:  
 150 pcs per carton  
 20 carton per box  
 Total 3000pcs per box  
 Size: 35×27×30(cm)

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