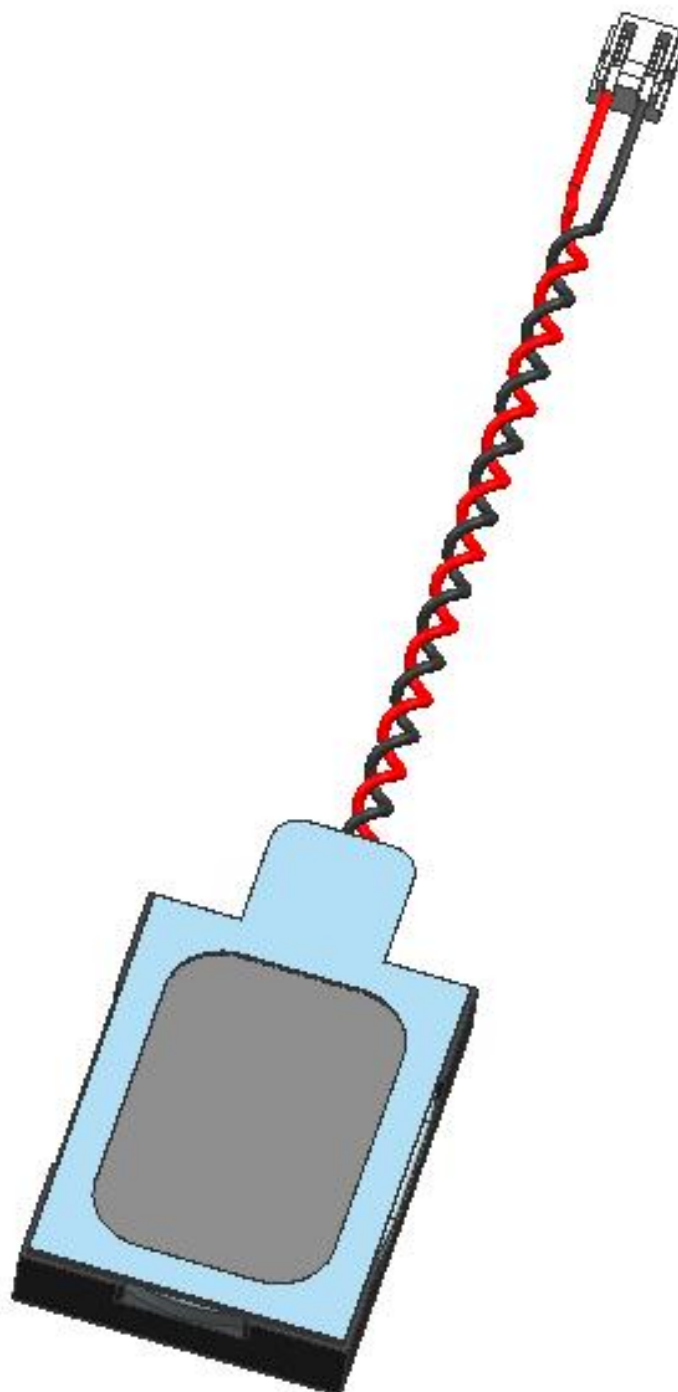


# SPECIFICATION

BMS1511T-11C-08H03RW063 LF





# APPROVAL SHEET FOR SMARTPHONE SPEAKER

TOTAL PAGE

13

[www.bestargroups.com](http://www.bestargroups.com)

RoHS

Customer		Model Name	BMS1511T-11C-08 H03RW063 LF
Customer P/N		Product No.	133003
Date	28 Aug.2015	Issue No.	BS/TES01.1552C
Page	02 of 13	Issue Date	2015/08/28

## 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

## **BESTAR HOLDING 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.bestargroups.com>

## BMS1511T-11C-08H03RW063 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 3.0(mm)
2.	AC Impedance	8 Ω ±15%(at 2KHz/1Vrms)
3.	Rated Input Power	1W(2.83Vrms)
4.	Maximum Input Power	2W(4Vrms)
5.	Resonance Frequency	1200Hz ±20% (in free air)
6.	Frequency Response	F0~20KHz
7.	S.P.L	92±3dB/0.1m/1W at 2KHz
8.	THD	≤15% (at 1.0~2.0KHz/1W) ; ≤10% (at 2.0~10KHz/1W)
9.	Buzzes & Rattles	Must be normal at sine wave 2.83Vrms (in free air)
10.	Polarity	Positive voltage to (+), Diaphragm moves forward
11.	Waterproof level	IP66
12.	Operating Temperature	-20~+ 70°C
13.	Storage Temperature	-20~+ 70°C
14.	Weight	~1.1g±0.2g

## 2. Description

2.1 Acoustic component Performance Specification

2.2 The present document specifies performance requirements for the acoustic characteristics of speaker

## 3. Characteristics

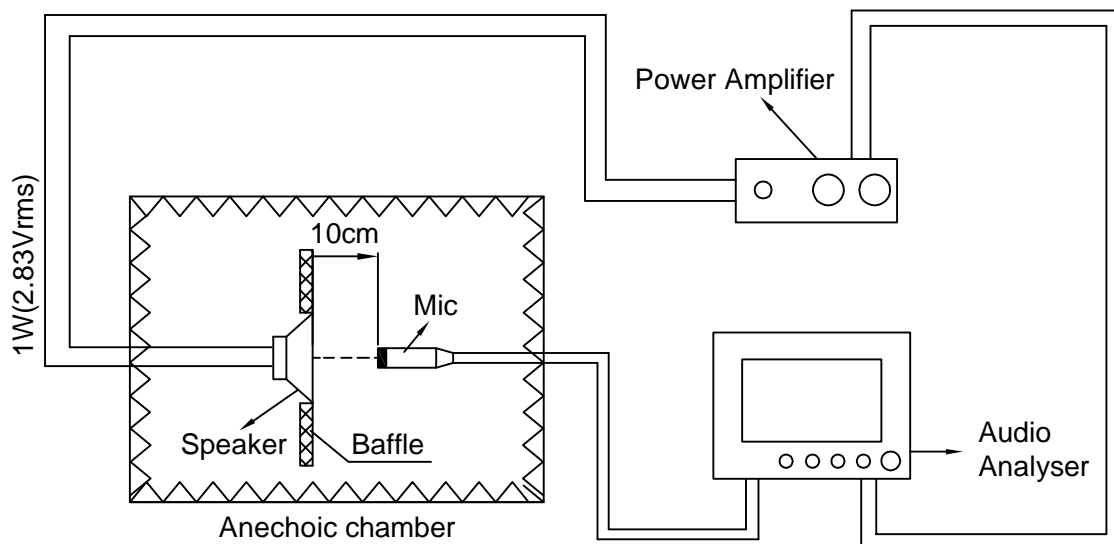
3.1 Electrical and Mechanical Characteristics

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF Speaker
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:03 of 13

## BMS1511T-11C-08H03RW063 LF

## 4. Test Setup

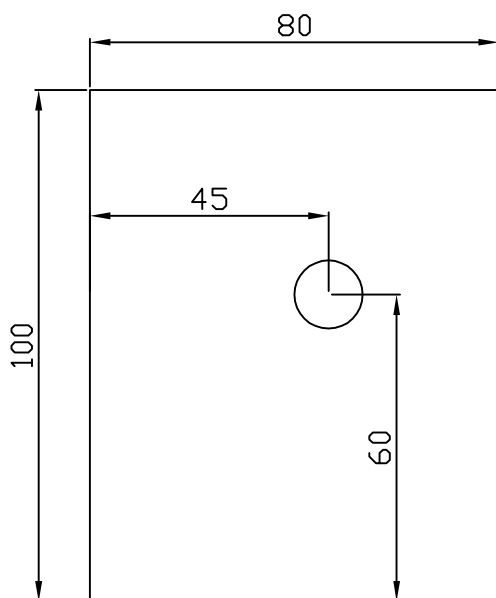
## 4.1 Speaker Measurement Circuit



## 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,

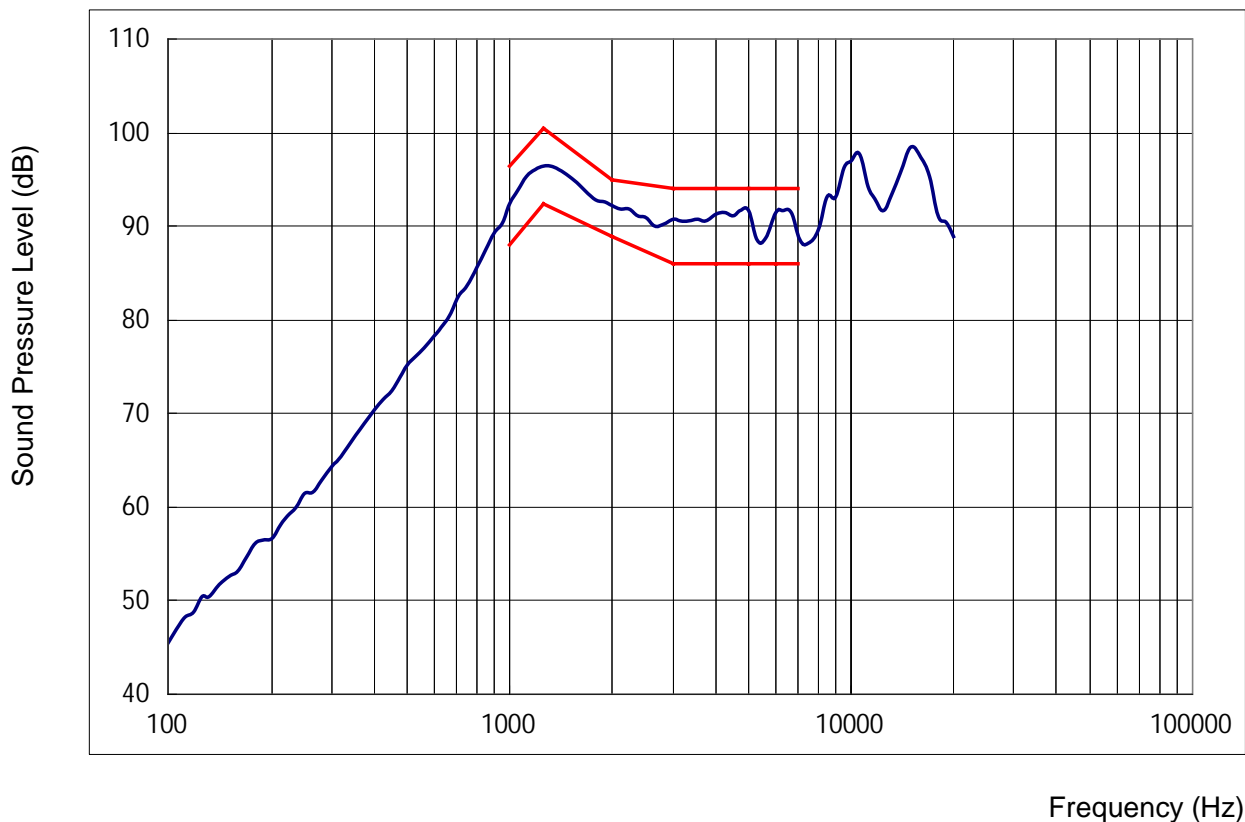
The measuring free-field microphone shall be placed 10cm from DUT, on axis.

The test voltage is 0.5W and swept sine-wave range is 100Hz~20KHz with a R80 of test sequence

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	Speaker
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:04 of 13

## BMS1511T-11C-08H03RW063 LF

## 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

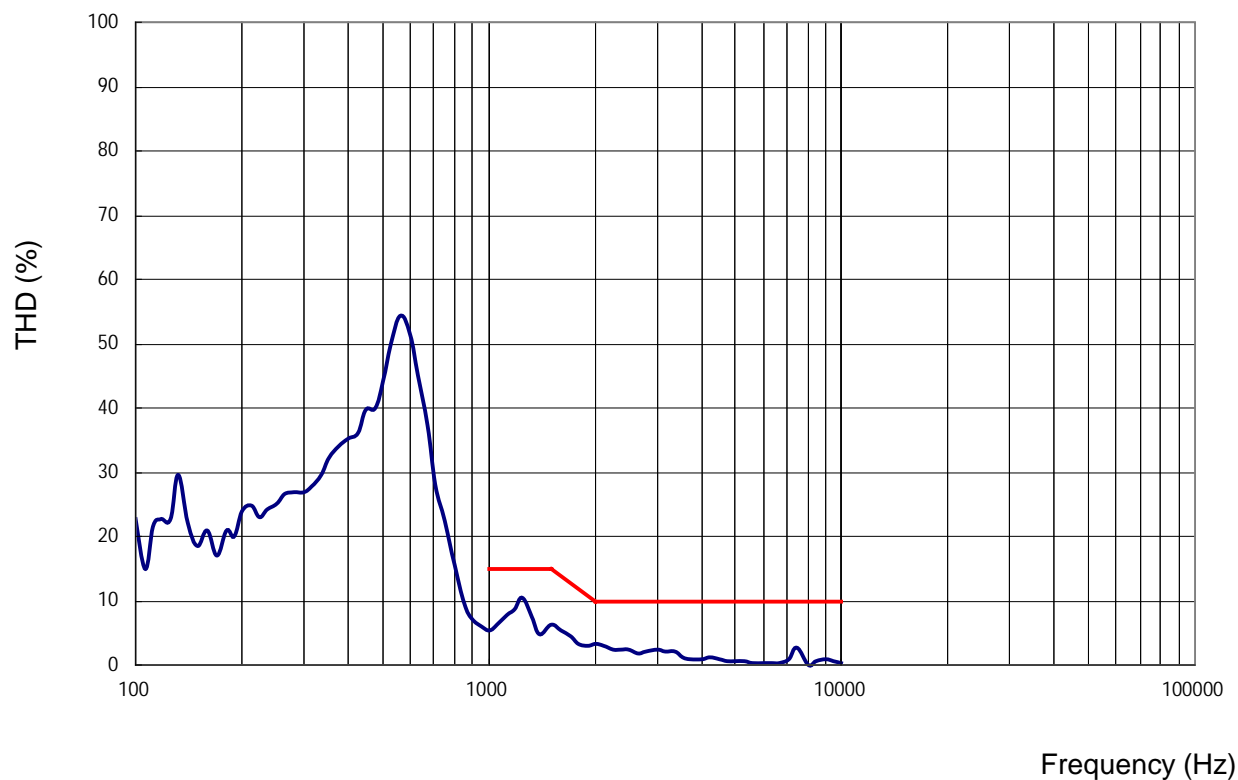
SPL is expressed in dB rel 20  $\mu$ Pa, computed according to IEC 268-5.  
Measurement set up according chapter 4.1 and parameters according chapter 4.4.

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

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	Speaker
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:05 of 13

## BMS1511T-11C-08H03RW063 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

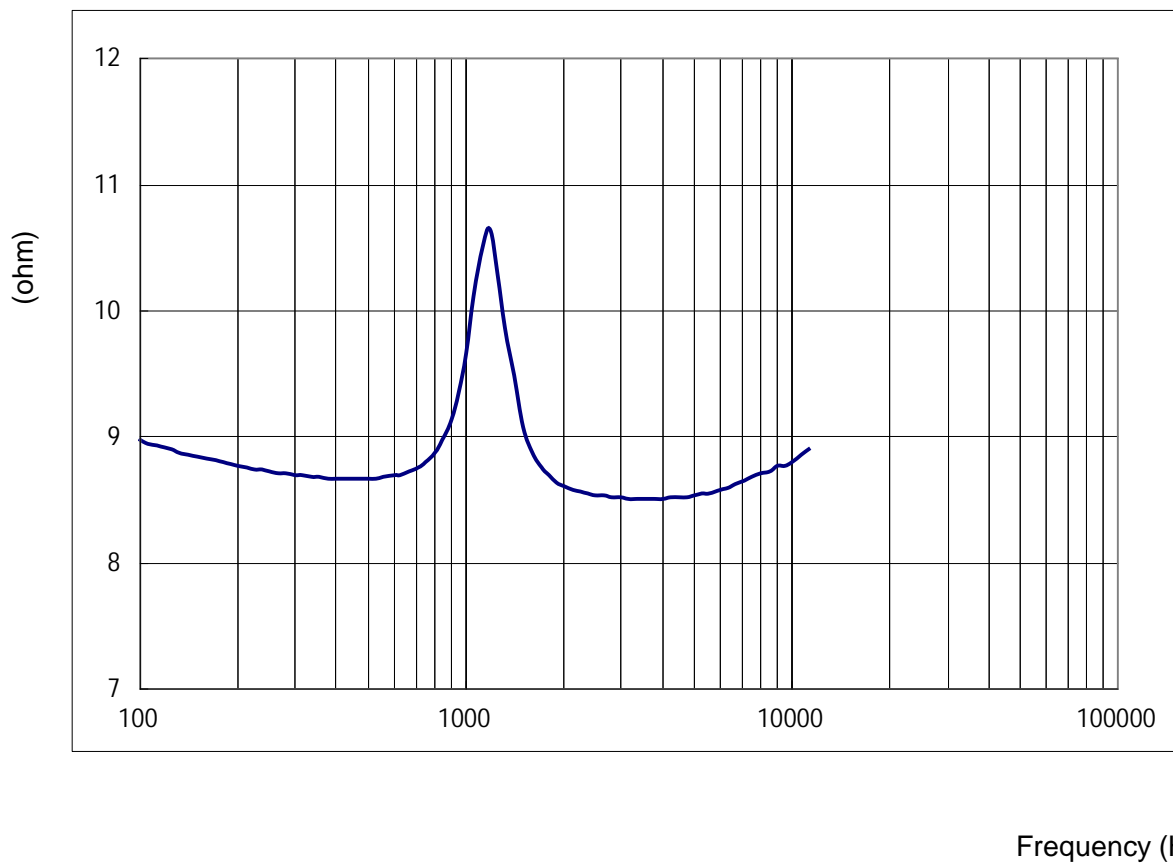
THD is measured according test set up in chapter 4.1 and parameters according chapter 4.5

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

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF Speaker
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:06 of 13

## BMS1511T-11C-08H03RW063 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

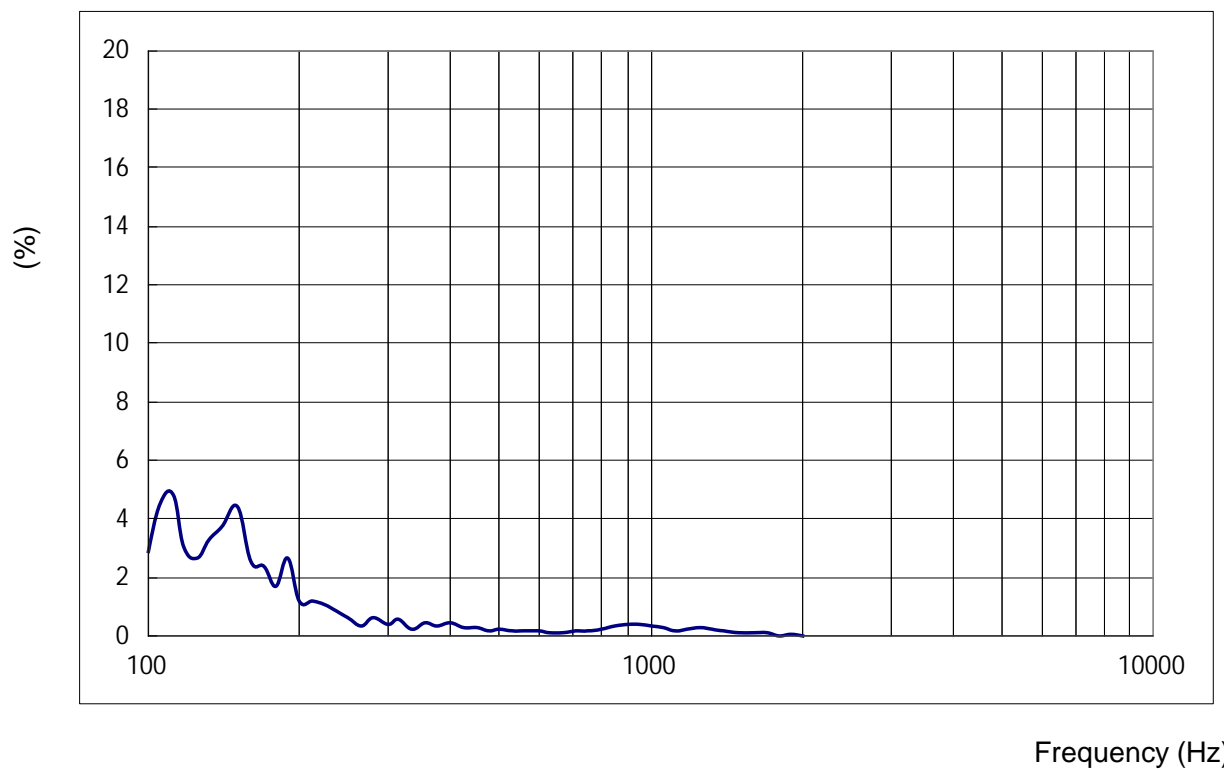
Resonance frequency is measured according test set up in chapter 4.1  
and parameters according chapter 4.6

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

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF Speaker
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:07 of 13

## BMS1511T-11C-08H03RW063 LF

## 4.7 R&amp;B Curve (only for reference)

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

## 4.7.1 R&amp;B

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

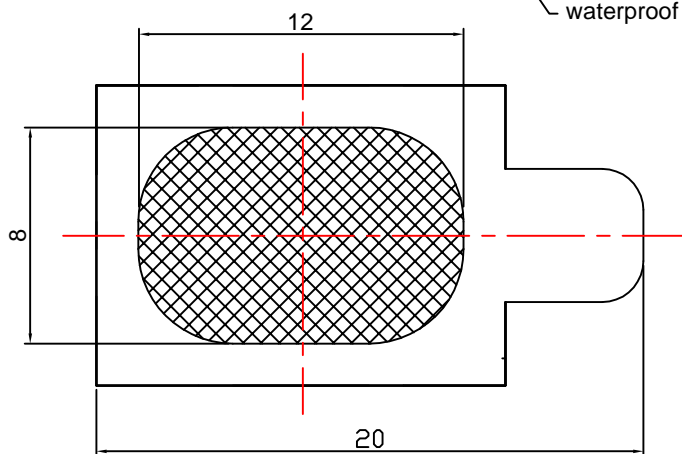
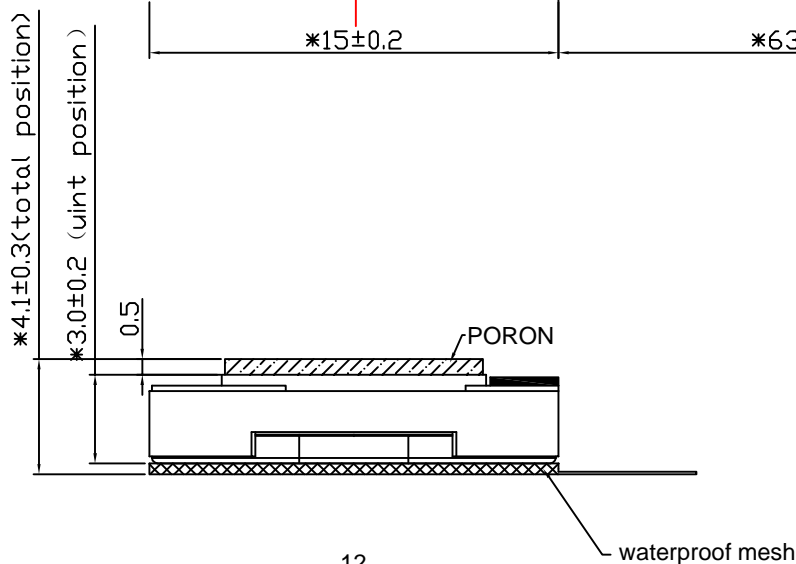
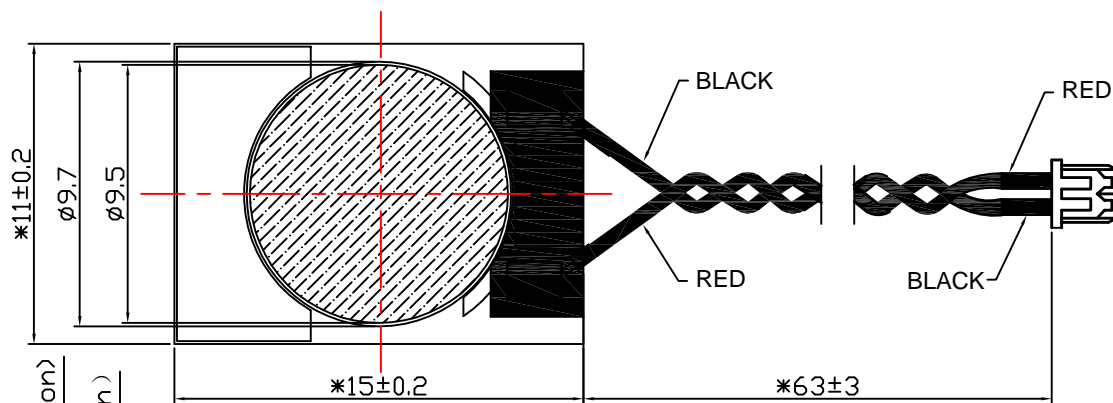
This test is performed on the production line by 100%.

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	Speaker
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:08 of 13



# BMS1511T-11C-08H03RW063 LF

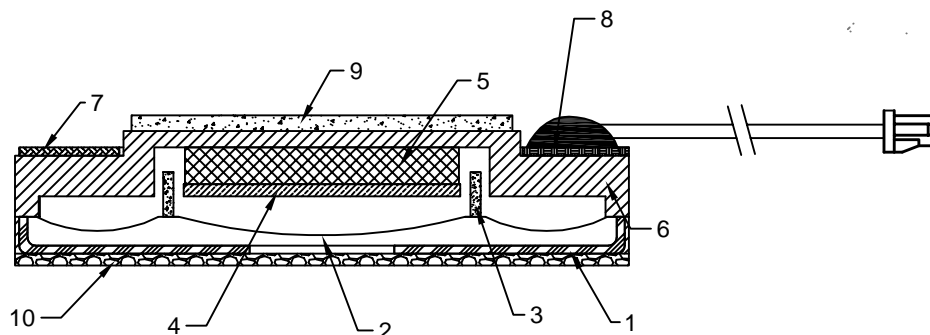
## 5. Drawing



cable:UL1571 AWG28#  
connector:molex51021-0200  
unit:mm  
tolerance: $\pm0.2$

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	Speaker
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:09 of 13

## BMS1511T-11C-08H03RW063 LF



No	Description of the part	Material
1	Front Cover	SUS
2	Diaphragm	Mylar
3	Coil	SDHT
4	Polar piece	SPCC
5	Magnet	Nd-Fe-B
6	Dust network	Non-woven
7	Frame	PPA+SPCC
8	PCB	S1155
9	poron	poron
10	Waterproof mesh	porov+polyester+porov
11	cable	UL1571 AWG28#
12	Connector	Nylon

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	Speaker
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:10 of 13

## BMS1511T-11C-08H03RW063 LF

## 6. Reliability Test

## 6.1 Load Test

Power (Nom) 1W( white noise)  
Duration 96hrs

## 6.2 High Temperature Test

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

## 6.3 Low Temperature Test

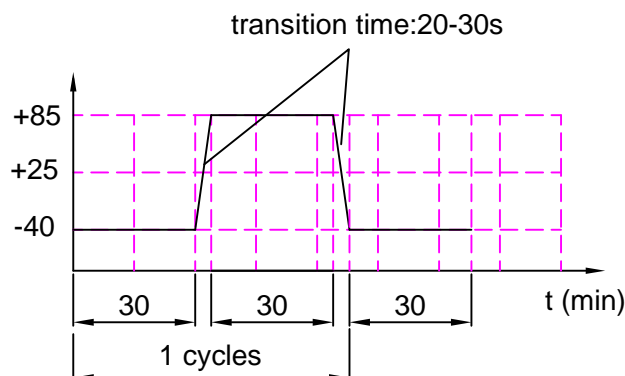
Temperature  $-20\pm 3^{\circ}\text{C}$   
Duration 96hrs

## 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 )

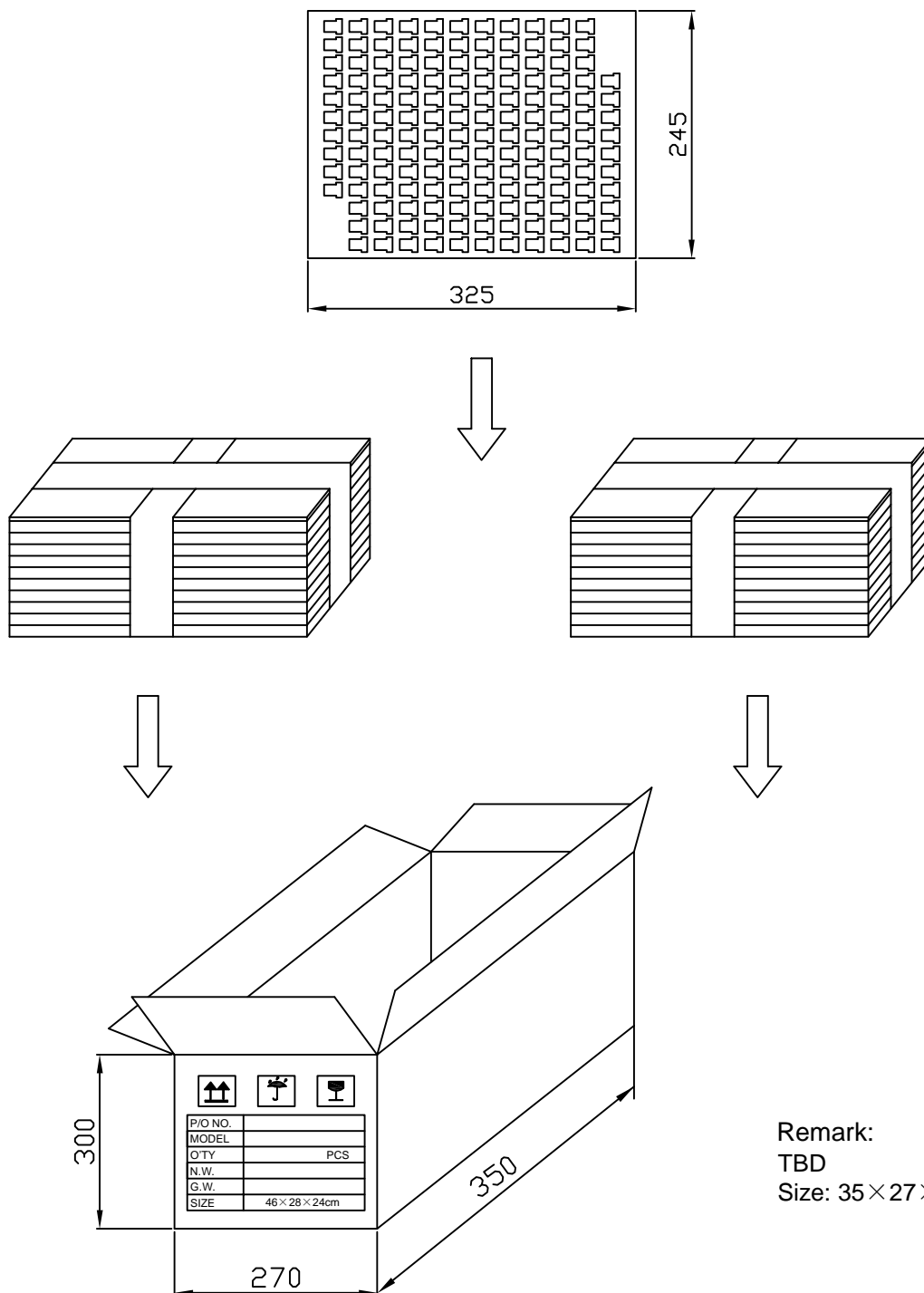
## Notice:

- 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.

C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF Speaker
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:11 of 13

# BMS1511T-11C-08H03RW063 LF

## 7. Packing



C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF
B	2015/08/13	任江凤		Drawn by:	任江凤	
A	2015/08/06	任江凤		Checked by:	任江凤	Speaker
Rev.	Date	Drawn	Note	Approved by:	汪珍珍	
BESTAR HOLDING CO.,LTD						DRG NO: BS/TES01.1552C
www.bestargroups.com wu@be-star.com						Page:12 of 13

## 8. History Change Record

[illegible]

A	C	2015/08/28	任江凤		Date:	2015/08/28	BMS1511T-11C-08H03RW063 LF
	B	2015/08/13	任江凤		Drawn by:	任江凤	
	A	2015/08/06	任江凤		Checked by:	任江凤	Speaker
	Rev.	Date	Drawn	Note	Approved by:	汪珍珍	
BESTAR HOLDING CO.,LTD <a href="http://www.bestargroups.com">www.bestargroups.com</a> <a href="mailto:wu@be-star.com">wu@be-star.com</a>							DRG NO: BS/TES01.1552C   Page:13 of 13