



# APPROVAL SHEET FOR SMARTPHONE SPEAKER

TOTAL PAGE

08

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RoHS

Customer		Model Name	BMS2209-11C-08H3.7 LF
Customer P/N		Product No.	139502
Date	23 Aug. 2016	Issue No.	BS/TES01.861C
Page	01 of 08	Issue Date	2016/08/23

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Drawn by	Checked by	Approved by	Customer approved
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## BMS2209-11C-08H3.7 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	22 x 9 x3.7 (mm)
2.	AC Impedance	8 $\Omega$ $\pm$ 15% at 2KHz
3.	Rated Input Power	0.5W
4.	Maximum Input Power	1.0W
5.	Resonance Frequency	900Hz $\pm$ 20%
6.	Frequency Response	F0~20KHz
7.	S.P.L	90 $\pm$ 3dB/0.5W / 10cm at 2.0KHz
8.	T.H.D	$\leq$ 18% (0.5W,850~3KHz)
9.	Buzzes & Rattles	Must be normal at sine wave 2.0Vrms
10.	Operating Temperature	-20~+ 70°C
11.	Storage Temperature	-40~+ 85°C
12.	Polarity	Positive voltage to (+),Diaphragm moves forward
13.	Weight	~1.5g

## 2. Description

2.1 Acoustic component Performance Specification

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

## 3. Characteristics

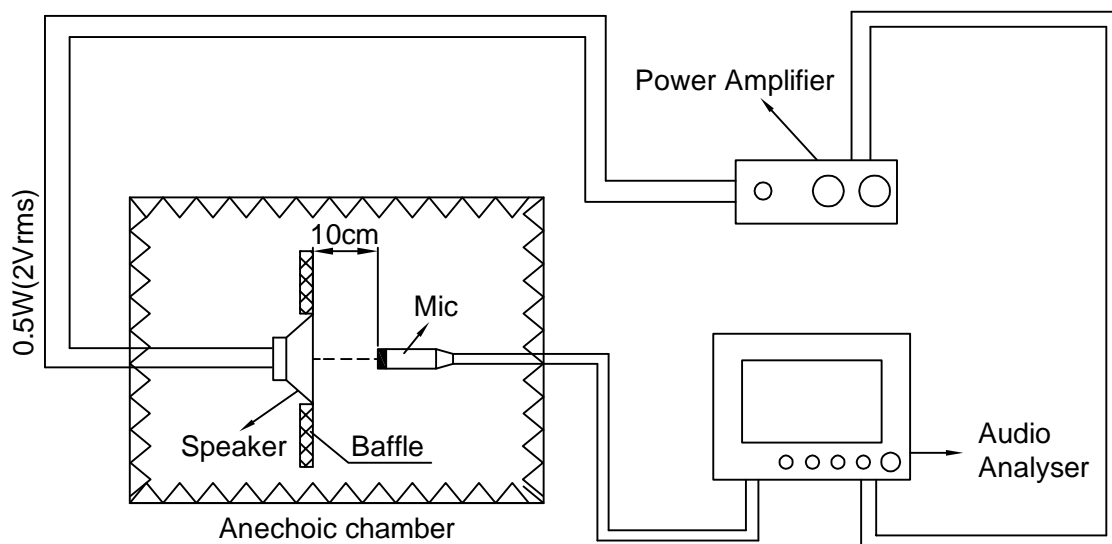
3.1 Electrical and Mechanical Characteristics

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## 4. Test Setup

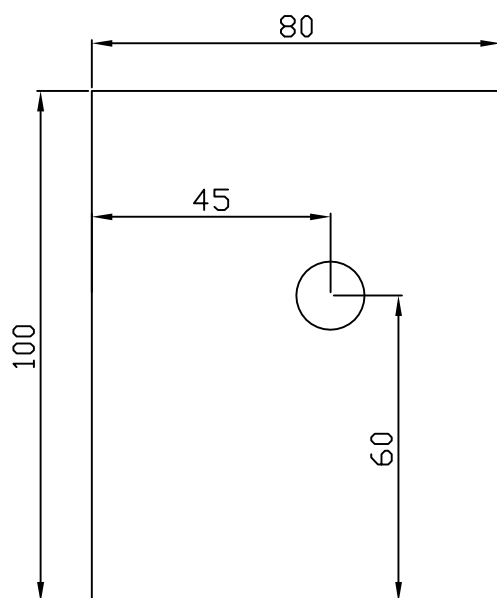
## 4.1 Speaker Measurement Circuit



## 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.

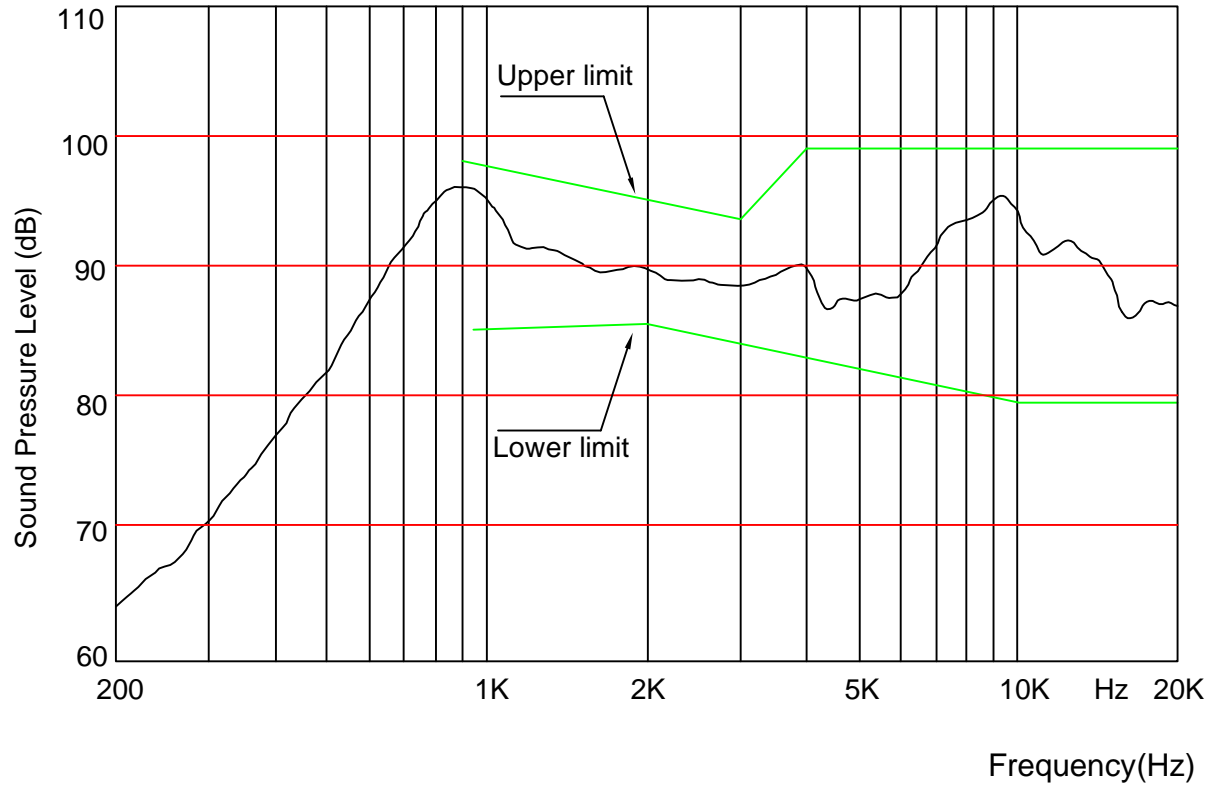
The test voltage is 0.7W and swept sine-wave range is 100Hz~20KHz with a R80 of test sequence

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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.

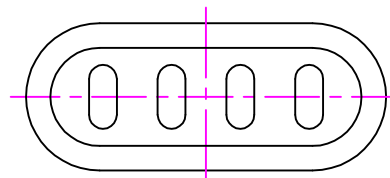
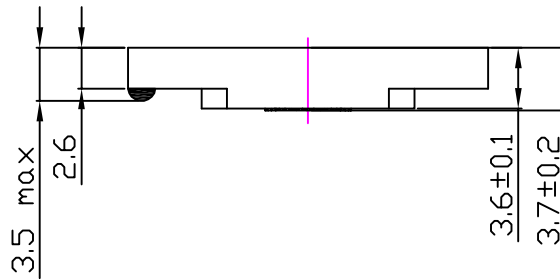
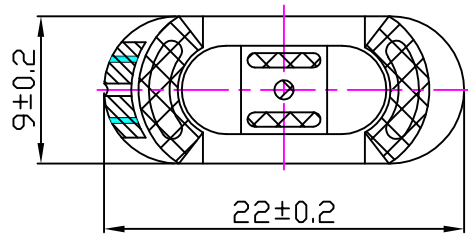
Measurement set up according chapter 4.1 and parameters according chapter 4.4.

This test is performed for 100% of products in the production line.

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## 5. Drawing



unit:mm  
tolerance:±0.2

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## BMS2209-11C-08H3.7 LF

## 6. Reliability Test

## 6.1 Load Test

Power (Nom)

0.5W(pink noise)

Duration

96hrs

## 6.2 High Temperature Test

Temperature

 $+80\pm 3^{\circ}\text{C}$ 

Duration

96hrs

## 6.3 Low Temperature Test

Temperature

 $-40\pm 3^{\circ}\text{C}$ 

Duration

96hrs

## 6.4 Damp Heat

Temperature

 $40\pm 3^{\circ}\text{C}$ 

Relative Humidity

90%-95%RH

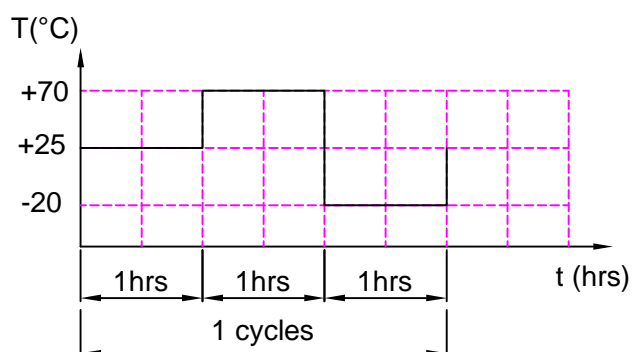
Duration

96hrs

## 6.5 Temperature Cycle Test

Cycles

10



## 6.6 Drop Test

Height

100cm (in state of packing)

Times

10 (Drop onto hardwood board)

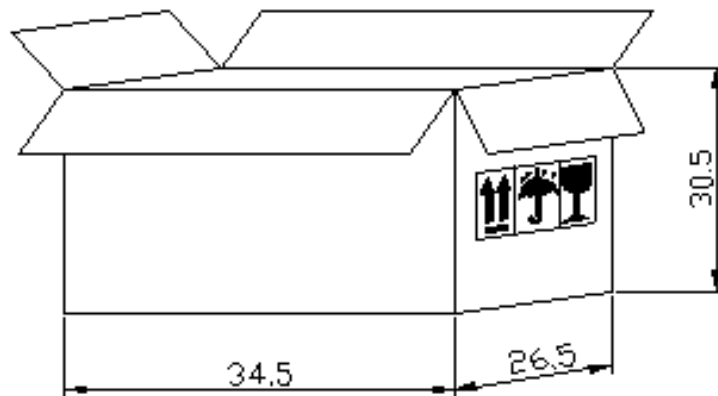
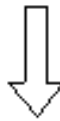
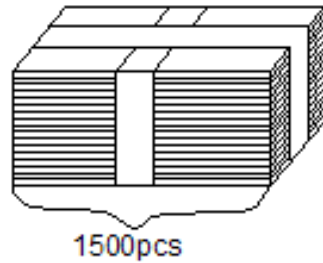
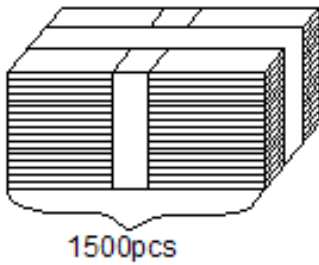
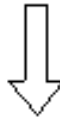
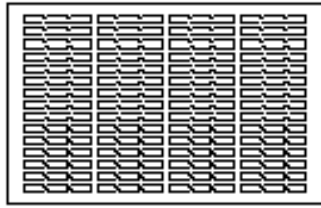
## Notice:

- 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 F0~5.0KHz shall be within  $\pm 3\text{dB}$  from initial value after test.

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## 7. Packing



Remark:  
150 pcs per tray 10 trays for unit  
2 units per carton  
Total 3000pcs per box  
Size: 34.5\*26.5\*30.5(cm)

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## 8. History Change Record

[illegible]

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