APPROVAL SHEET
FOR SMARTPHONE SPEAKER

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Customer		Model Name	BMS1511F-11C-08H03P LF
Customer P/N		Product No.	139706
Date	8 Sep.2011	Issue No.	BS/TES01.1170A
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Drawn by	Checked by	Approved by	Customer approved

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BMS1511F-11C-08H03P 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

2.Description

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

3.Characteristics

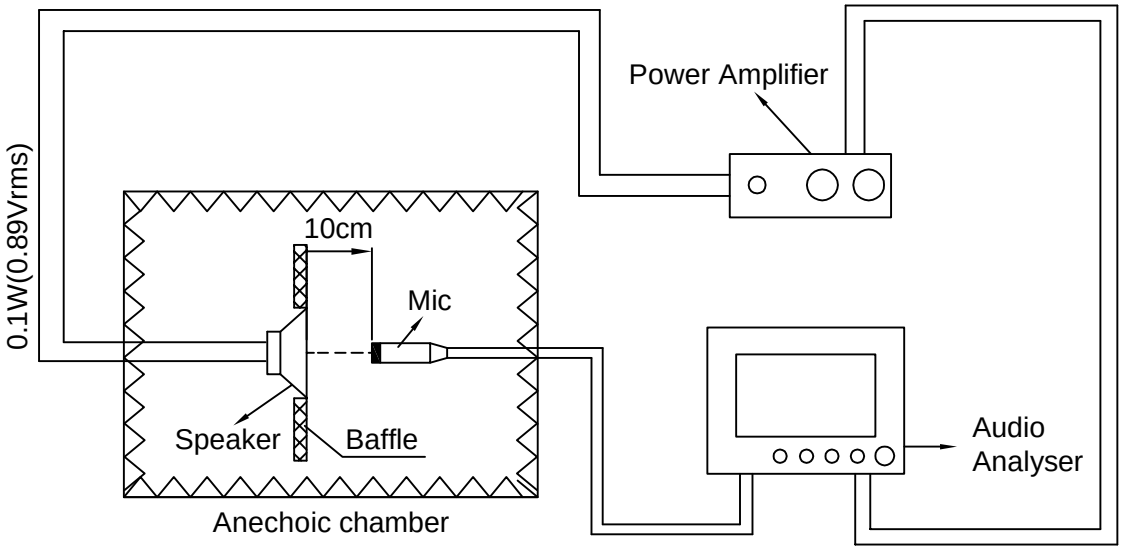
3.1 Electrical and Mechanical Characteristics

No.	Item	Specification
1.	Dimension	15 x11 x 3.0(mm)
2.	AC Impedance	8 Ω ±15%(at 2KHz/1Vrms)
3.	Rated Input Power	0.5W(2.0Vrms/in 1cc box)
4.	Maximum Input Power	1.0W(2.83Vrms/in 1cc box)
5.	Resonance Frequency	550Hz ±20% (in free air)
6.	Resonance Frequency	850Hz ±20% (in 1.0cc box)
7.	Frequency Response	F0~20KHz
8.	S.P.L	82±3dB/0.1m/0.1W at 2~5KHz average
9.	THD	≤5% (at 1.0~10KHz/0.1W)
10.	Buzzes & Rattles	Must be normal at sine wave 0.89Vrms (in free air)
		/2.0Vrms(in 1.0cc box) from 300~10KHz
11.	Polarity	Positive voltage to (+),Diaphragm moves forward
12.	Operating Temperature	-20~+ 70°C
13.	Storage Temperature	-40~+ 85°C
14.	Weight	~1.5g±0.3g

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4. Test Setup

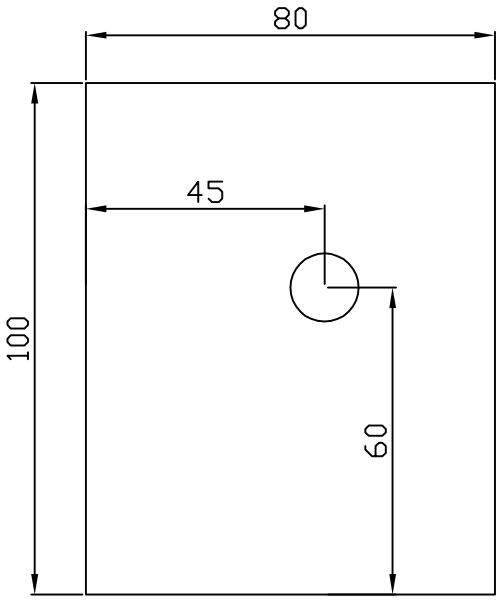
4.1 Speaker Measurement Circuit



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,

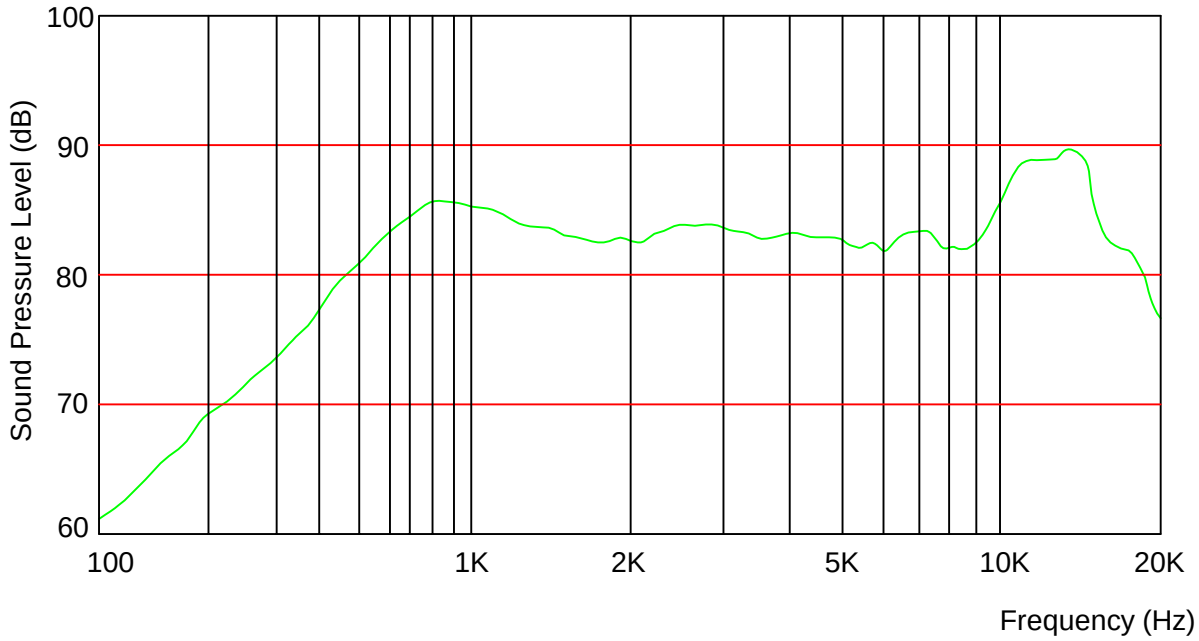
The measuring free-field microphone shall be placed 10cm from DUT,on axis.

The test voltage is 0.1W and swept sine-wave range is 200Hz~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 µ Pa/V 1/12Oct



4.4.1 Sensitivity

SPL is expressed in dB rel 20 µPa,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.

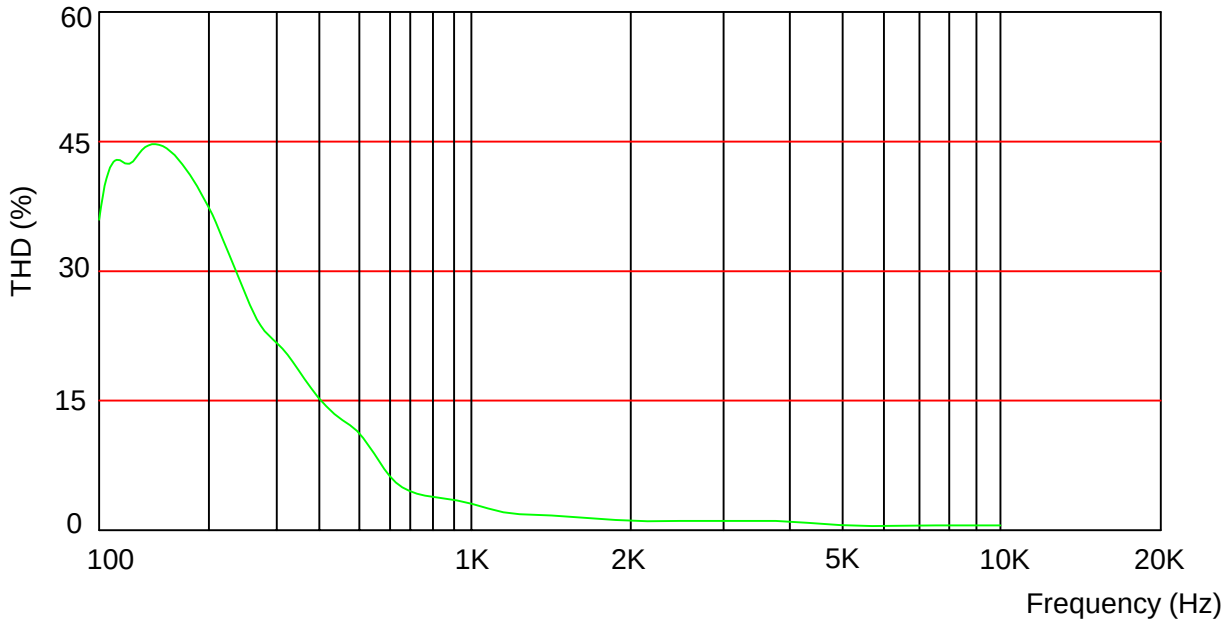
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4.5 Total Harmonic Distortion (only for reference)

A: Frequency Response Magn 0 dB re 20.00 µPa/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 for 100% of products in production line

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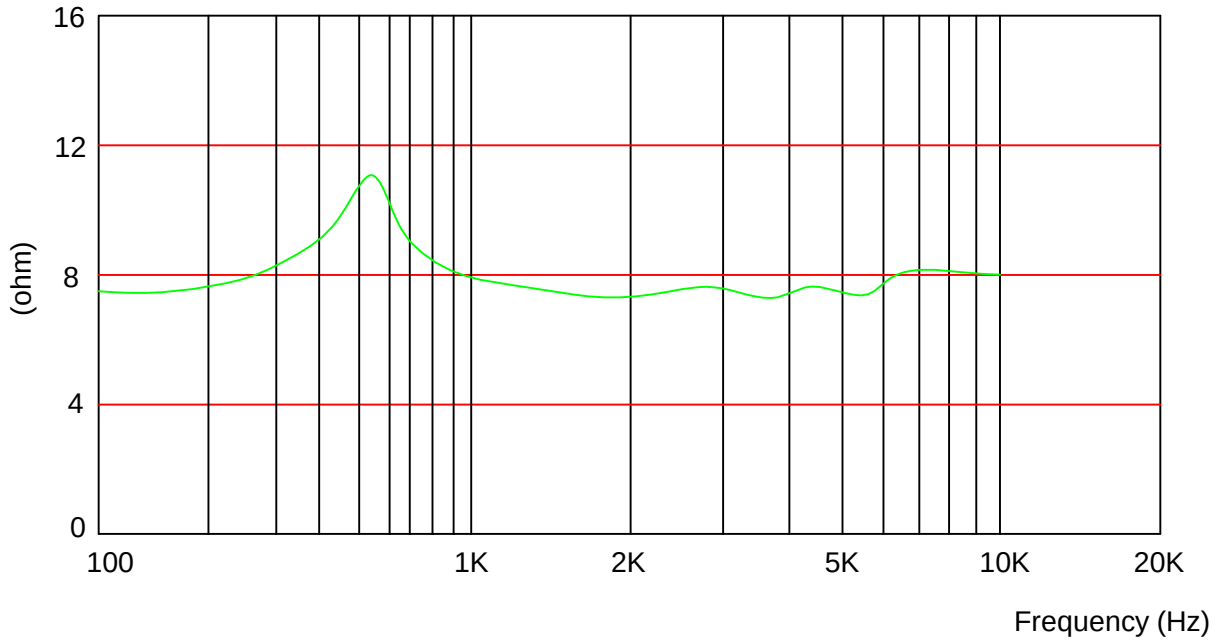
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4.6 F0 Curve (only for reference)

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



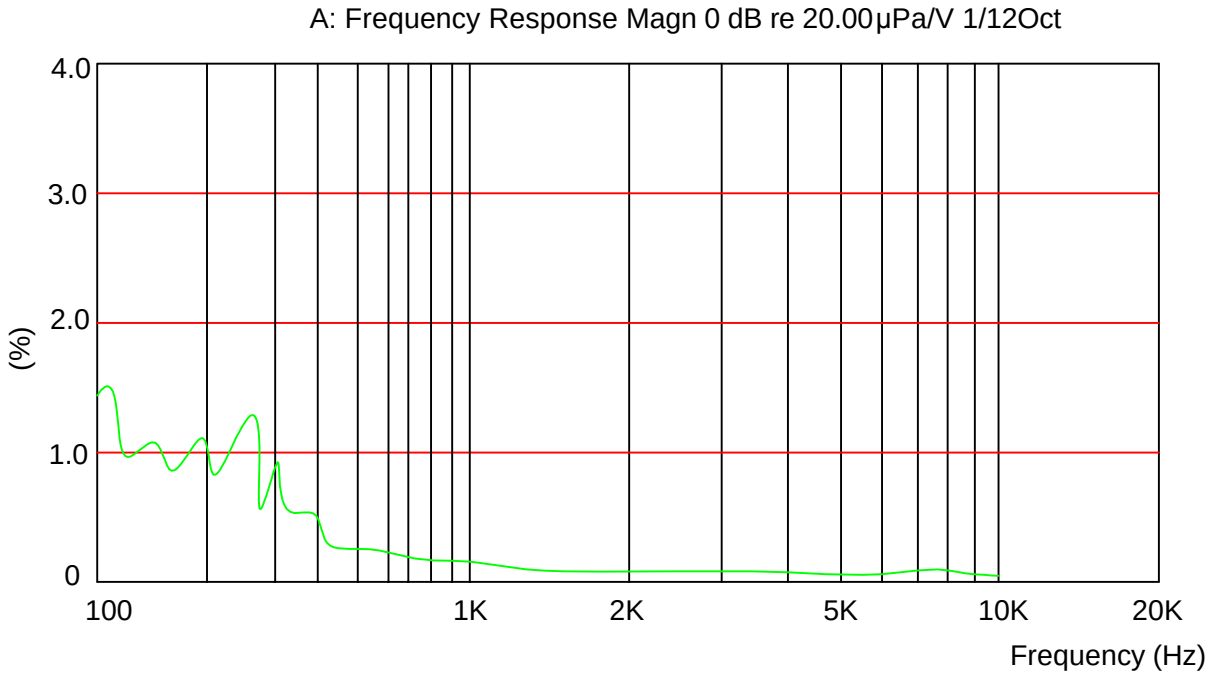
4.6.1 Resonance Frequency

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

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

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4.7 R&B Curve (only for reference)



4.7.1 R&B

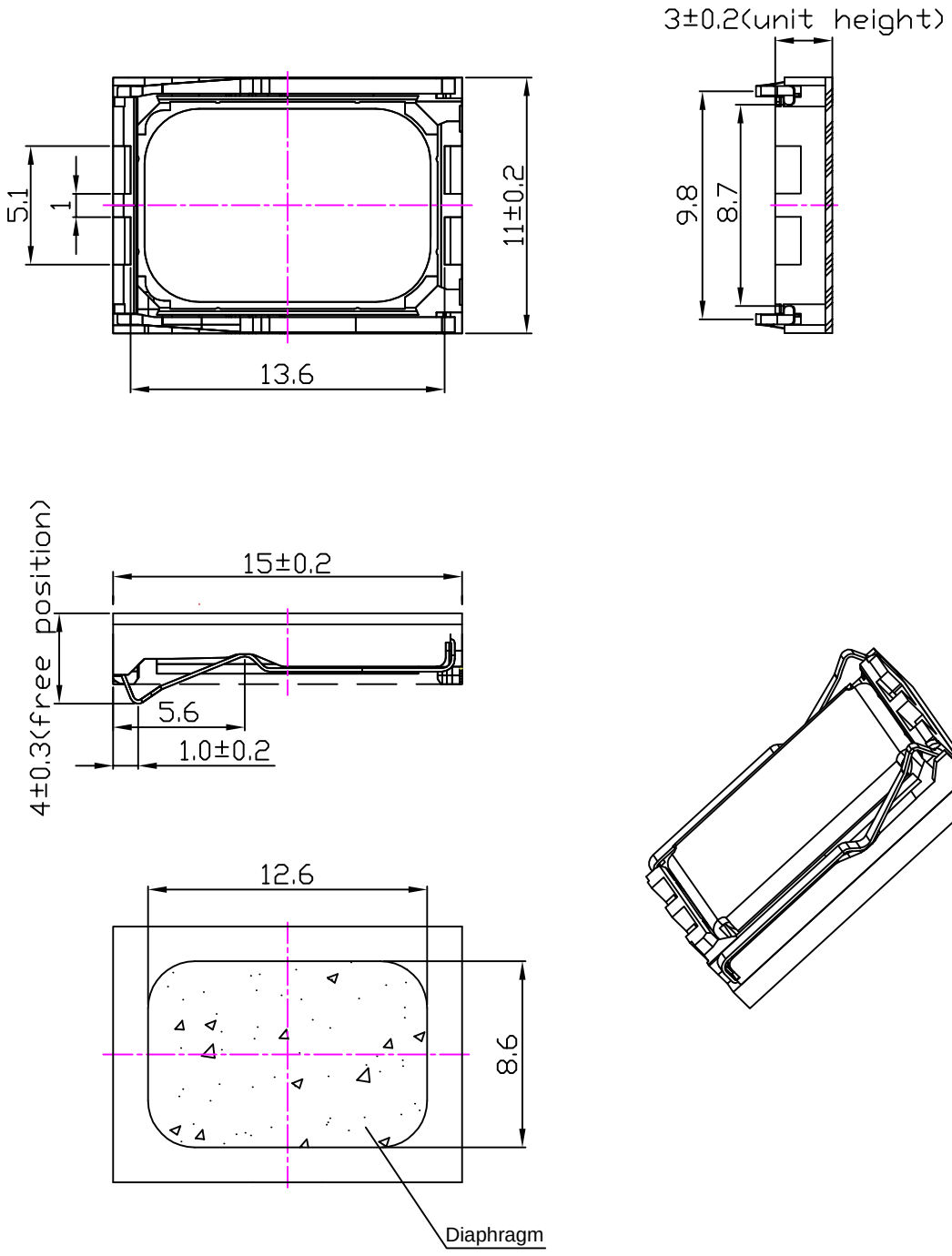
R&B is measured according test set up in chapter 4.1 and parameters according chapter 4.7

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

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5. Drawing



unit:mm
tolerance:±0.2

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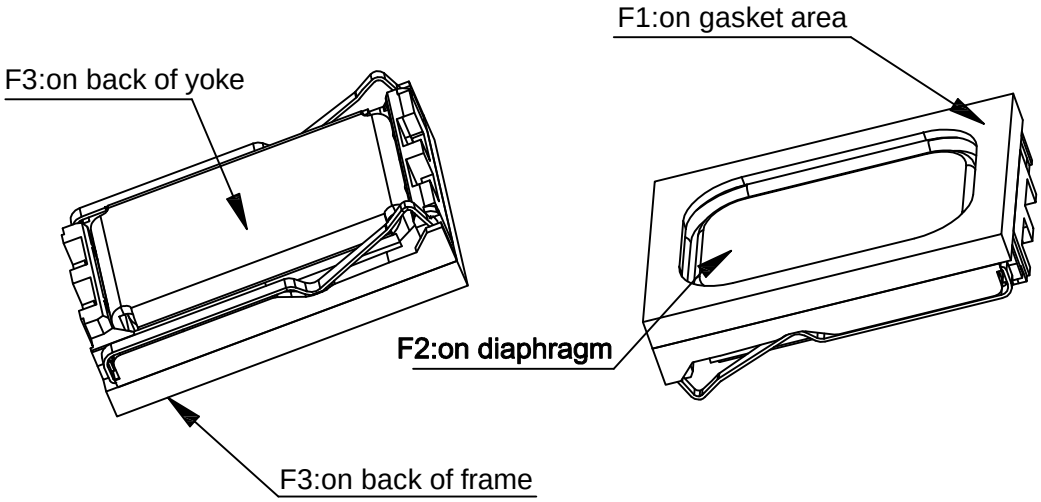
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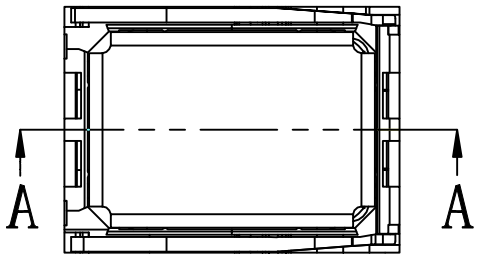
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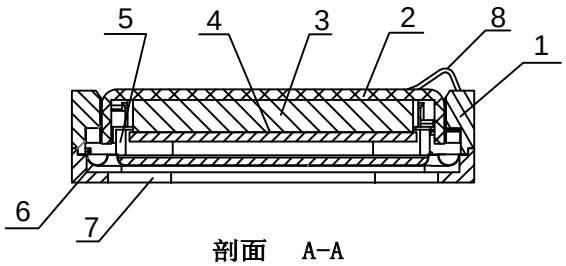
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★Permited Force to Speaker



Max Permited Comperssion Force			
No	From	To	Max Force
1	F1	F3	10N
2	F2		0
3	F3	F1	10N





剖面 A-A

No	Description of the part
1	Frame
2	Yoke
3	Magnet
4	Plate
5	Coil
6	Diaphragm
7	Grill
8	Terminal

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6. Reliability Test

6.1 Load Test

Power (Nom)	0.5W(Pink noise in 1cc box)
Duration	96hrs

6.2 High Temperature Test

Temperature	+70±3°C
Duration	96hrs

6.3 Low Temperature Test

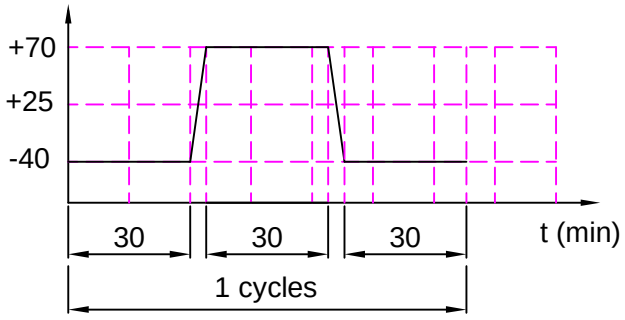
Temperature	20±3°C
Duration	96hrs

6.4 Damp Heat

Temperature	40±3°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 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

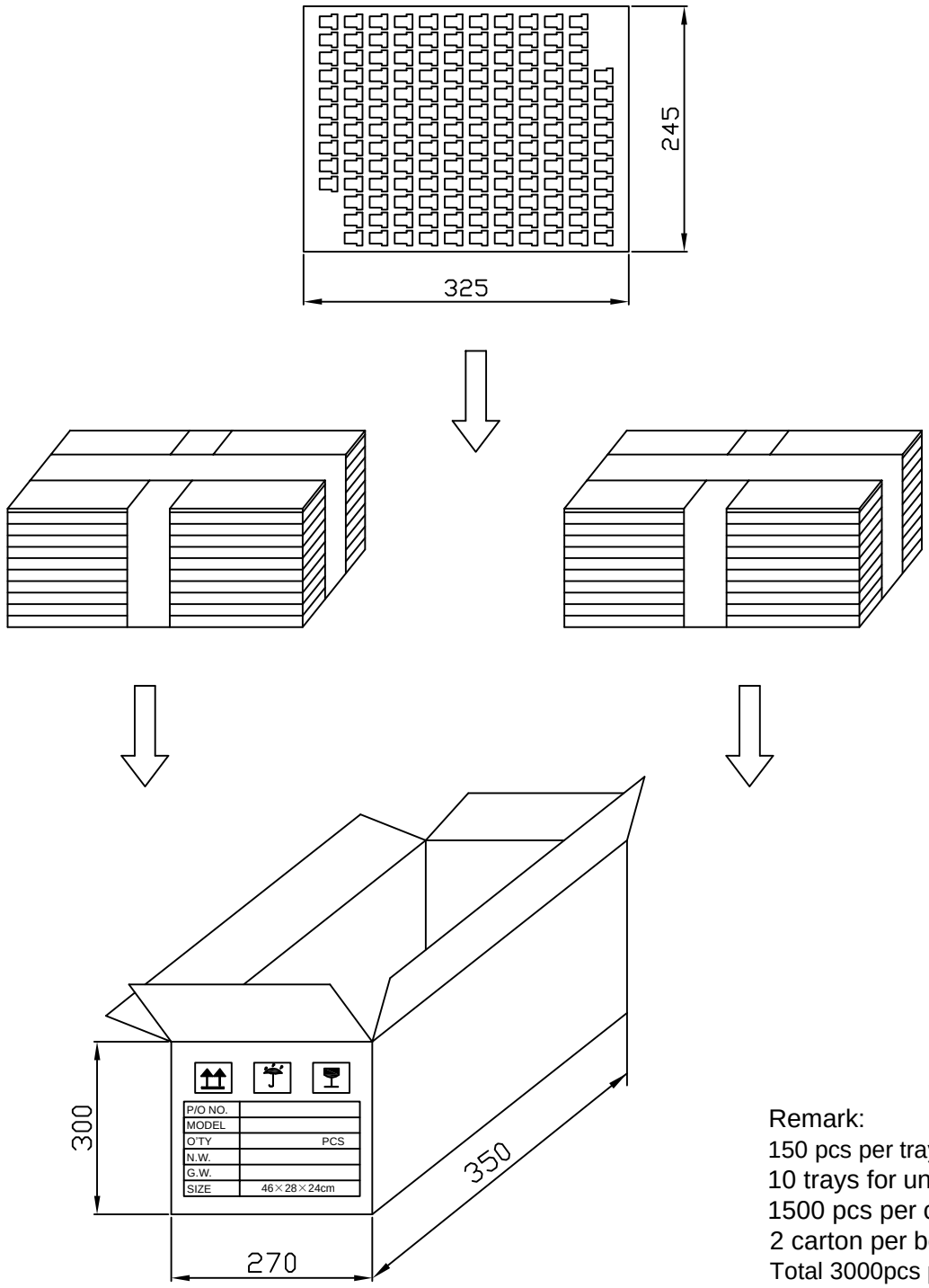
3.Sensitivity difference at 2~5KHz shall be within ±3dB from initial value after test.

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7. Packing



Remark:
150 pcs per tray
10 trays for unit
1500 pcs per carton
2 carton per box
Total 3000pcs per box
Size: 35×27×30(cm)

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8. History Change Record

version No.	Change Items		Date	Drawn	Approved
	Before	After			
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