

Specification for Speaker	Page	2/9
	Revision No.	1.0
Model No. : KP3642SP4F650C-4542	Drawing No.	KFC4542

CONTENTS

1. Scope
2. General
3. Electrical and Acoustic Characteristics.
4. Reliability Test
5. Measurement Block Diagram & Response curve
6. Structure
7. Dimensions
8. Packing
9. Revision

Specification for Speaker

Page

3/9

Model No. : KP3642SP4F650C-4542

Revision No.

1.0

Drawing No.

KFC4542

1. Scope

This specification is applied to the dynamic speaker which is used all of the electrical acoustic product.

-- compact, rich sound

-- applications: mobile phone, PDA, notebook computer, etc. ...

2. General

2.1 Out-Diameter : 36 mm

2.2 Height : 5.6 mm

2.3 Weight : 5.8 g

2.4 Operating Temperature range:

-20~+60℃ without loss of function

2.5 Store Temperature range:

-30~+70℃ without loss of function

3. Electrical and Acoustic Characteristics.

Test condition : 15 ~ 35 °C, 25% ~ 85% RH, 860~1060 mbar

No	Items	Specification
1	Impedance	8 Ω ± 15% (1Vrms at 1KHz)
2	Sound Pressure Level	92 dB ± 3dB (1W/0.5M/fo Hz~4.5KHz Average)
3	Resonance Frequency	650 Hz ± 20%
4	Frequency Range	Fo ~4.5KHz
5	Input Power	Rated 1 W / Max. 2 W
6	Distortion	<5% Max. at 2kHz/2Vrms
7	Buss and Rattle	Should not be audible buzzes,rattles when the 2.83V sine wave signal swept at frequency range.
8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.

Specification for Speaker

Page

4/9

Revision No.

1.0

Model No. : KP3642SP4F650C-4542

Drawing No.

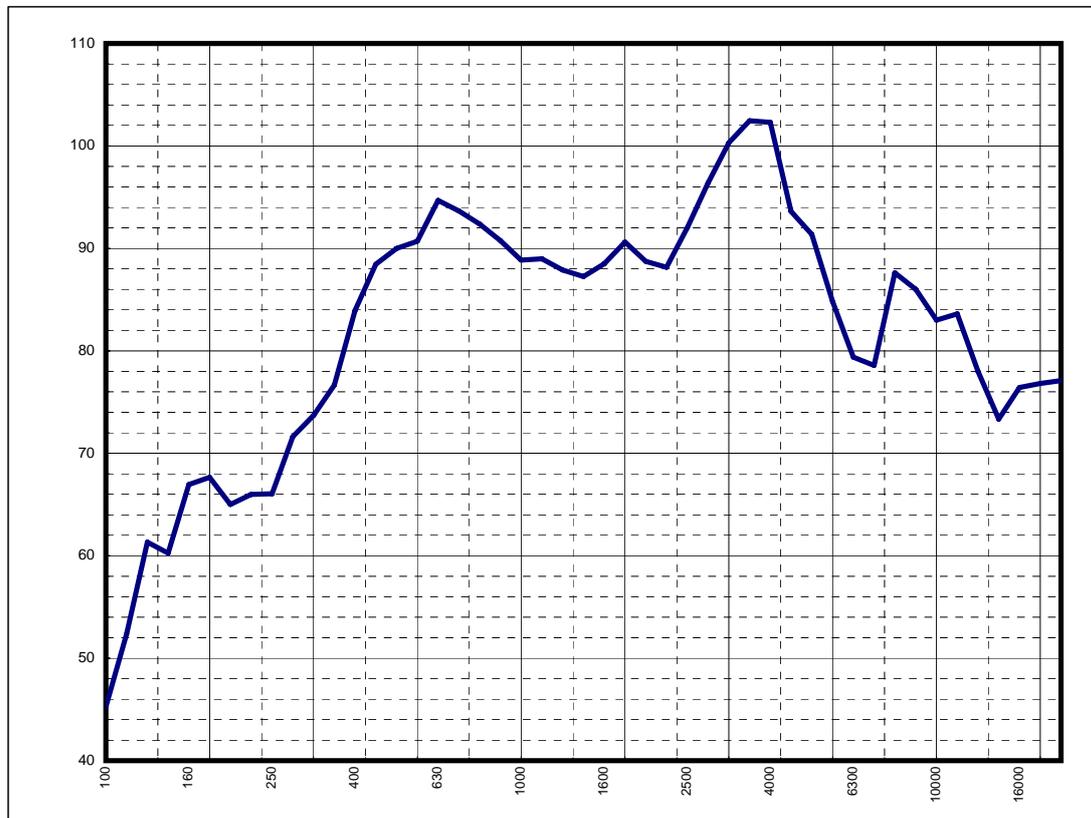
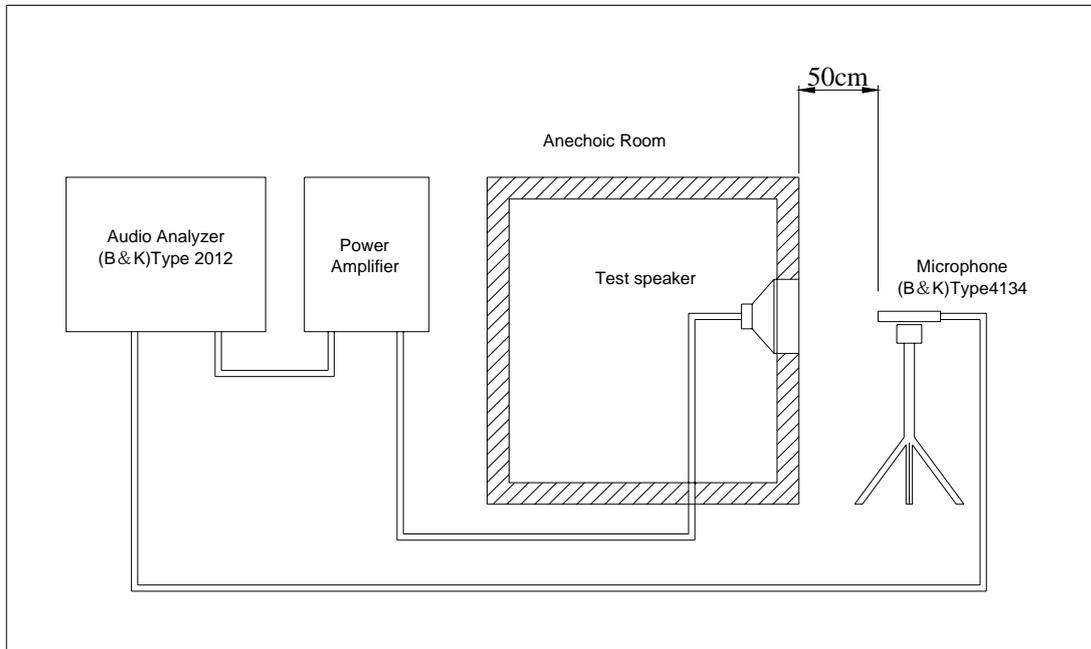
KFC4542

4. Reliability Test

After test(1~7item), the speaker S.P.L . difference shall be within $\pm 3\text{dB}$, and the appearance not exist any change to be harmful to normal operation (e.g. cracks,rusts,damages and especially distortion).

No	Items	Specification
1	High Temperature Test	After being placed in a chamber with $+70\pm 3\text{ }^\circ\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
2	Low Temperature Test	After being placed in a chamber with $-30\pm 3\text{ }^\circ\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
3	Humidity Test	After being placed in a chamber with 85 to 90%R.H. at $+40\pm 2\text{ }^\circ\text{C}$ for hours and then being placed in natural condition for 1 hour, speaker shall be measured.
4	Thermal Shock Test	<p>After being placed in a chamber at $+60\text{ }^\circ\text{C}$ for 1 hour, then speaker shall be placed in a chamber at $-20\text{ }^\circ\text{C}$ for 1 hour(1 cycle is the below diagram). After 6 above cycles, speaker shall be measured after being placed in natural condition for 1 hour.</p> <div style="text-align: center;"> <p>The diagram illustrates a thermal shock cycle. It starts with a horizontal line at $+60\text{ }^\circ\text{C}$ for a 1-hour dwell period. This is followed by a downward ramp labeled '20 Sec.' leading to a horizontal line at $-20\text{ }^\circ\text{C}$ for another 1-hour dwell period. The cycle then repeats.</p> </div>
5	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular directions for 1 hour, then placed in natural condition for 1 hour, speaker shall be measured.
6	Drop Test	The speaker when mounted in the jig which weight 85g~100g, shall with stand 15 times random drops from a height of 1.5 meter to a concrete floor faced with 5mm thick hard wood board.and be nothing mechanical damage.
7	Load test	After being applied loading white noise with input power 1W(2.83Vrms.) for 96 hours, then placed in natural condition for 1 hour, speaker shall be measured.
8	Insulation test	When they are measured with DC 100V the insulation resistance between v.c. terminal and frame must be more than $1\text{ M}\Omega$

5. Measurement Block Diagram & Response curve



Specification for Speaker

Page

6/9

Revision No.

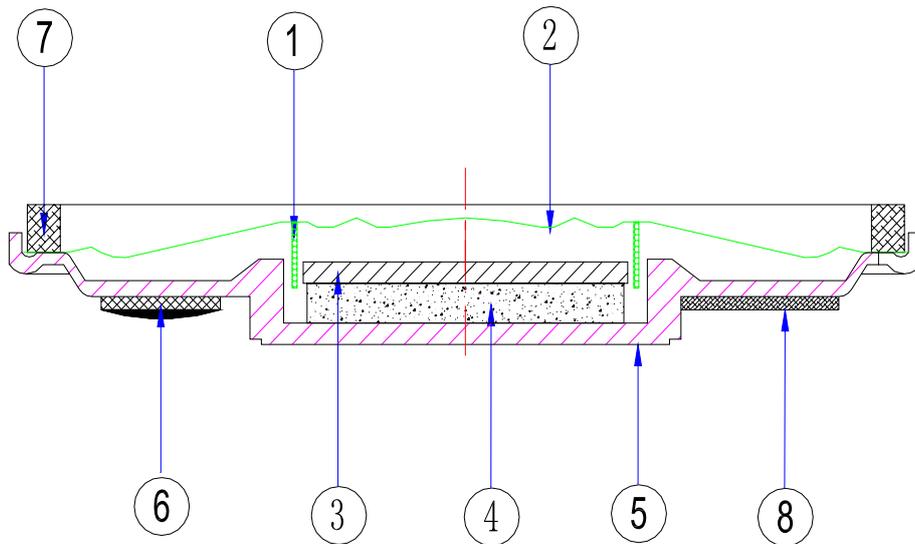
1.0

Model No. : KP3642SP4F650C-4542

Drawing No.

KFC4542

6. Structure



No.	Part Name	Q'ty	Material	Remarks
10				
9				
8	Screen		2B	
7	Gasket	1	ABS	
6	Terminal	1	PCB	
5	Frame	1	SPCC	
4	Magnet	1	Nd-Fe-B	
3	Plate	1	SPCC	
2	Diaphragm	1	Film	
1	V-coil	1	Copper	with paper
No.	Part Name	Q'ty	Material	Remarks

Specification for Speaker

Page

7/9

Model No. : KP3642SP4F650C-4542

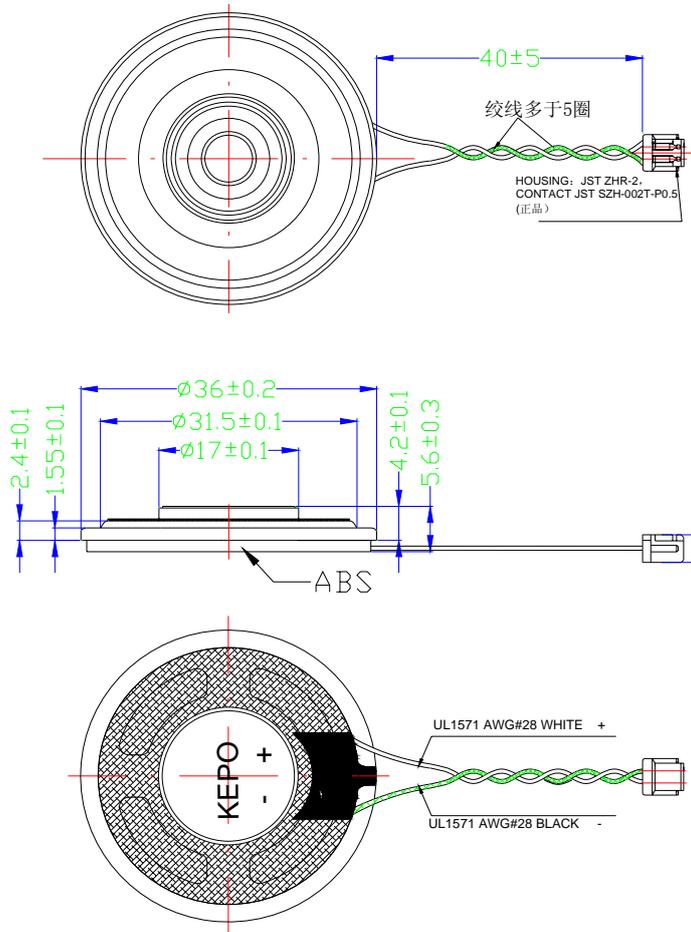
Revision No.

1.0

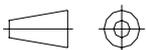
Drawing No.

KFC4542

7. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm

Tolerance : ± 0.2

Specification for Speaker

Page

8/9

Model No. : KP3642SP4F650C-4542

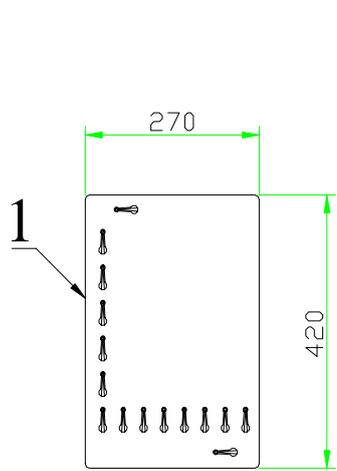
Revision No.

1.0

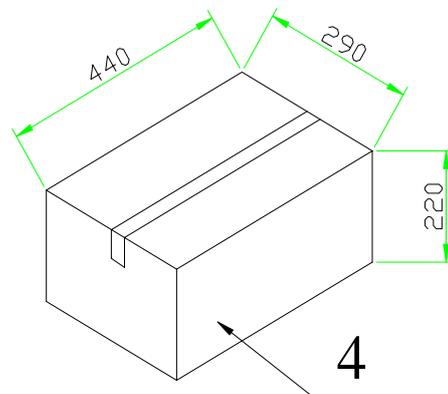
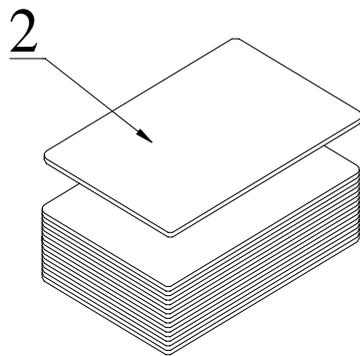
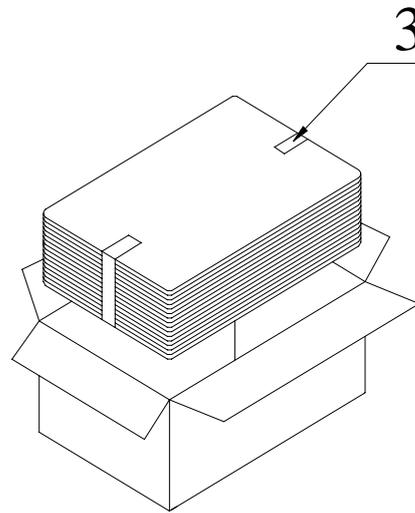
Drawing No.

KFC4542

8. Packing



35Pcs



QTY: 500Pcs

440 x290 x220