

# SPECIFICATION

Customer : 优美

Applied To :

Product Name : Speaker

Model Name : KP1838M1F-U01C-4074

Drawing No. : KFC4074

Signature of Approval

|  |
|--|
|  |
|--|

Signature of KEPO

| Approved by | Checked by | Issued by | Date |
|-------------|------------|-----------|------|
|             |            |           |      |



**Ningbo KePO Electronics Co.,Ltd.**

*Address: No.25 Baoyuan Road Dongqian Lake Industrial Area  
Dongqian Lake, Ningbo315121, China*

*Tel: +86(574)88371186, 88370330 Fax: +86(574)88370329  
http://www.chinaacoustic.com E-mail: Sales@kepo.com.cn*

|                                 |              |         |
|---------------------------------|--------------|---------|
| Specification for Speaker       | Page         | 2/10    |
| Model No. : KP1838M1F-U01C-4074 | Revision No. | 1.1     |
|                                 | Drawing No.  | KFC4074 |

## 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         | 3/10    |
|                           |                     | Revision No. | 1.1     |
| Model No. :               | KP1838M1F-U01C-4074 | Drawing No.  | KFC4074 |

## 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 :  $\Phi 18$  mm
- 2.2 Height : 4.0mm
- 2.3 Weight : 2.00gr.
- 2.4 Operating Temperature range:  
-20~+70 $^{\circ}$ C without loss of function
- 2.5 Store Temperature range:  
-40~+85 $^{\circ}$ C without loss of function

## 3. Electrical and Acoustic Characteristics.

Test condition : 15 ~ 35  $^{\circ}$ C, 25% ~ 85% RH, 860~1060 mbar

|   | Items                | Specification   |
|---|----------------------|---|
| 1 | Impedance            | $8 \Omega \pm 15\%$ (at 1Vrms,1.5kHz)   |
| 2 | Sound Pressure Level | 90dB $\pm$ 3dB( 1kHz/0.1W/0.1M )  |
| 3 | Resonance Frequency  | 1000Hz $\pm$ 20%  |
| 4 | Frequency Range      | $F_0 \sim 20$ kHz   |
| 5 | Input Power          | Rated 0.5W / Max. 0.8W  |
| 6 | Distortion           | <10% Max. at 2kHz/0.1W  |
| 7 | Buzz and Rattle      | Should not be audible buzzes,rattles when the 0.5W sine wave signal swept at frequency range. |

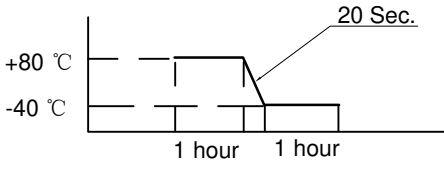
### 3.2 Receiver

|   | Items                | Specification  |
|---|----------------------|--|
| 1 | Impedance            | $8 \Omega \pm 15\%$ (at 1Vrms,1.5kHz)  |
| 2 | Sound Pressure Level | 120dB $\pm$ 3dB( 1kHz/100mV )  |
| 3 | Frequency Range      | 300~3400Hz   |
| 4 | Input Power          | Rated 10mW / Max. 30mW   |
| 5 | Distortion           | <3% Max. at 1kHz/1Vrms   |
| 6 | Buzz and Rattle      | Should not be audible buzzes,rattles when the 0.28V sine wave signal swept at frequency range. |

|                                 |  |              |         |
|---------------------------------|--|--------------|---------|
| Specification for Speaker       |  | Page         | 4/10    |
| Model No. : KP1838M1F-U01C-4074 |  | Revision No. | 1.1     |
|                                 |  | Drawing No.  | KFC4074 |

## 4. Reliability Test

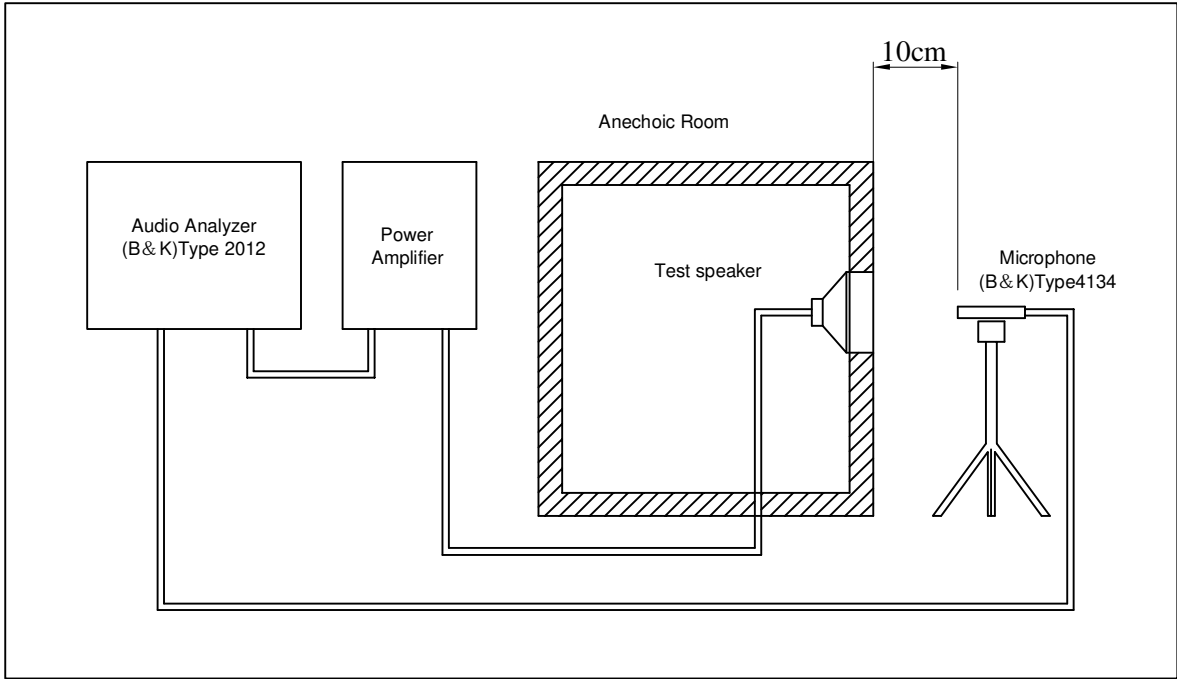
After test(1~7item), the speaker S.P.L . difference shall be within  $\pm 3\text{dB}$ , and the appearance not exist any change to be harmful to normal operation(e.g. cracks,rusts,damages and especially distortion).

|   | Item                  | Specification  |
|---|-----------------------|--|
| 1 | High Temperature Test | After being placed in a chamber with $+85\pm 3\text{ }^\circ\text{C}$ 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 $-40\pm 3\text{ }^\circ\text{C}$ 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 96 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 <math>+80\text{ }^\circ\text{C}</math> for 1 hour, then speaker shall be placed in a chamber at <math>-40\text{ }^\circ\text{C}</math> for 1 hour(1 cycle is the below diagram).</p> <p>After 6 above cycles, speaker shall be measured after being placed in natural condition for 1 hour.</p>  |
| 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 0.5W 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 M $\Omega$   |

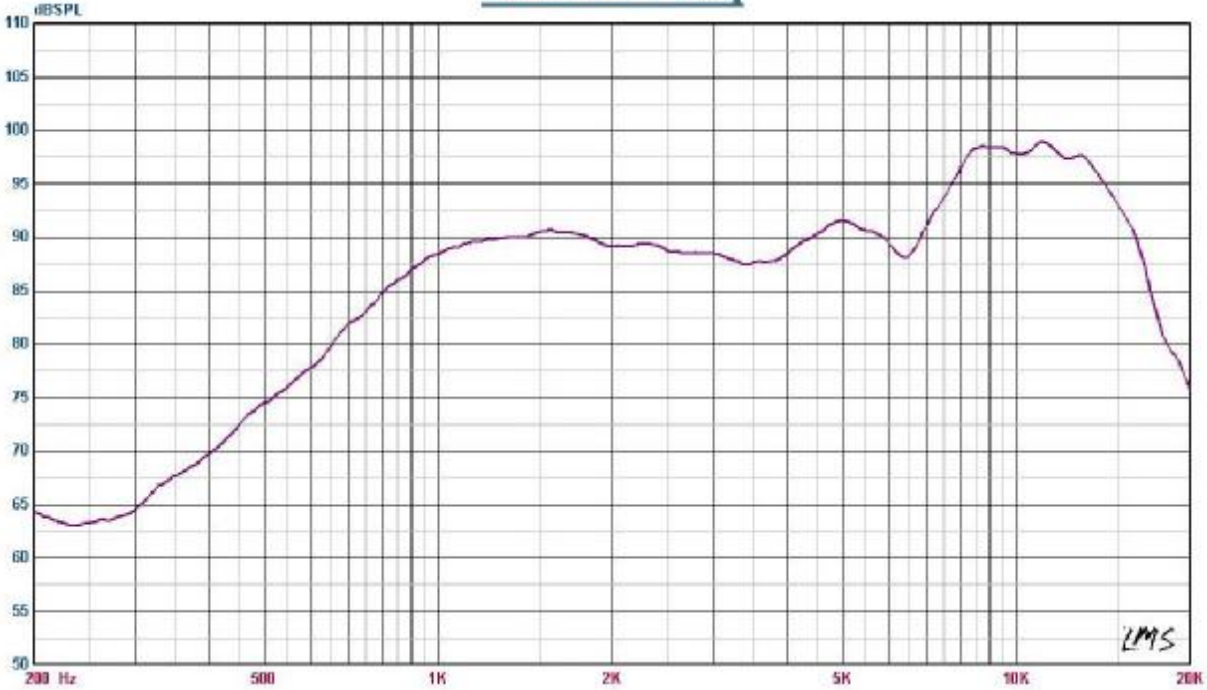
|                                 |  |              |         |
|---------------------------------|--|--------------|---------|
| Specification for Speaker       |  | Page         | 5/10    |
| Model No. : KP1838M1F-U01C-4074 |  | Revision No. | 1.1     |
|                                 |  | Drawing No.  | KFC4074 |

# 5. Measurement Block Diagram & Response curve

## 5.1 Speaker



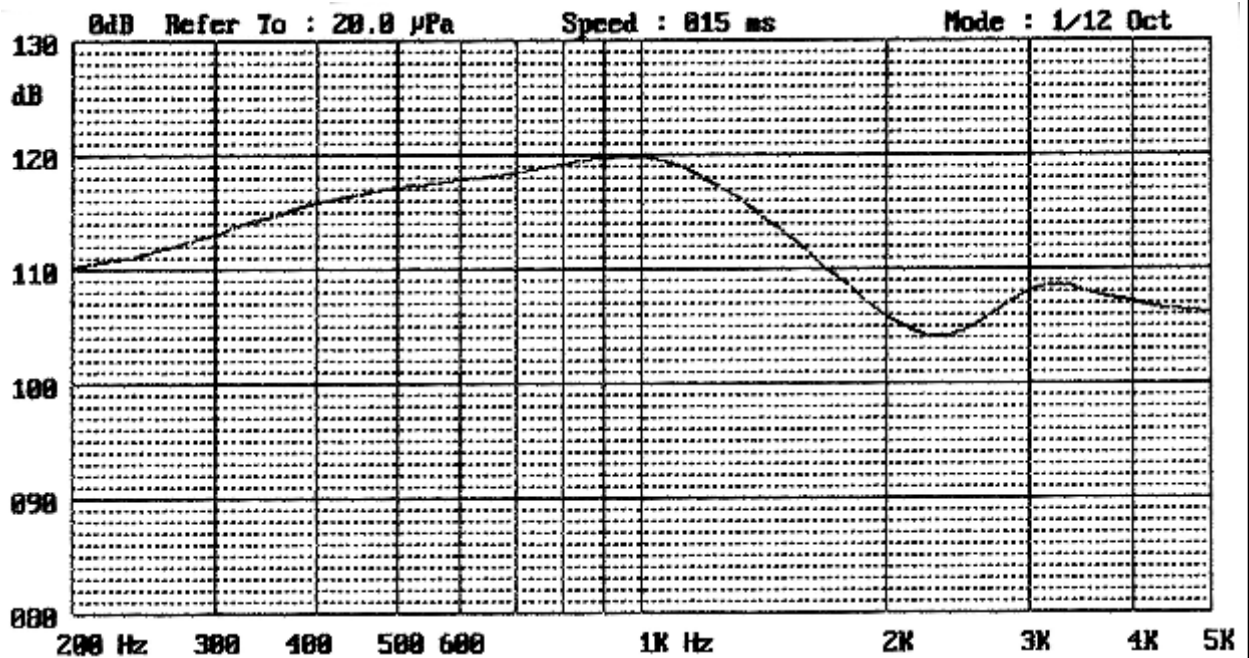
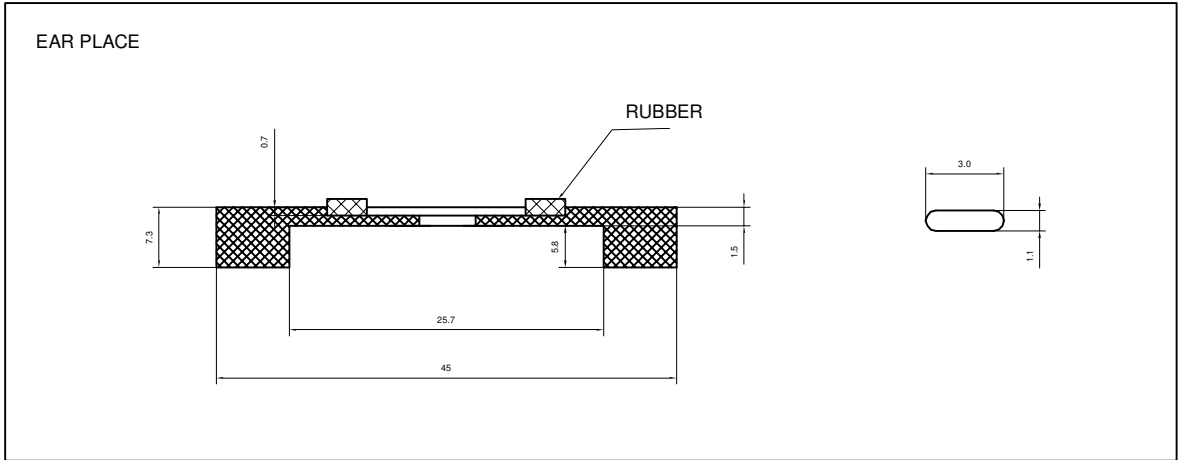
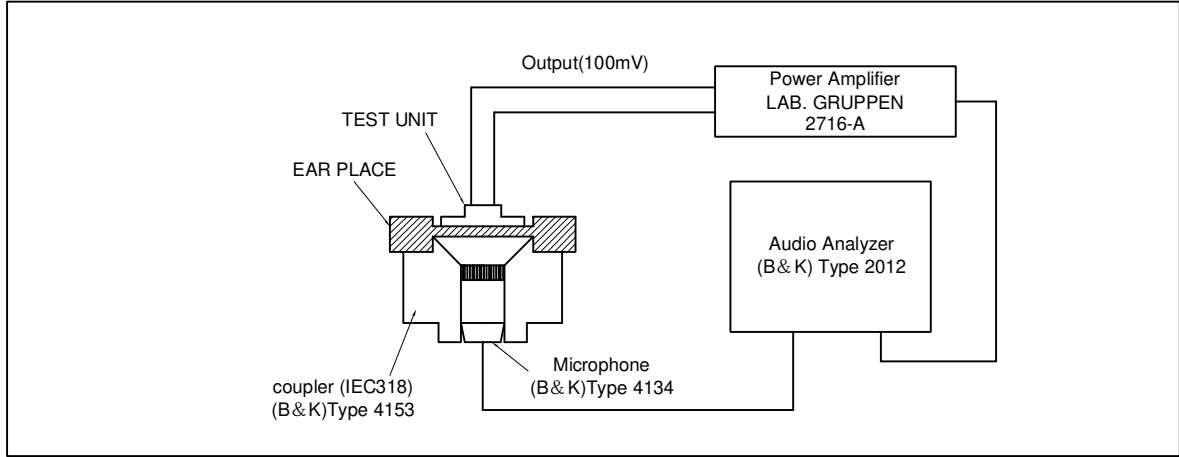
**SPL vs Freq**



|                           |              |         |
|---------------------------|--------------|---------|
| Specification for Speaker | Page         | 6/10    |
|                           | Revision No. | 1.1     |
|                           | Drawing No.  | KFC4074 |

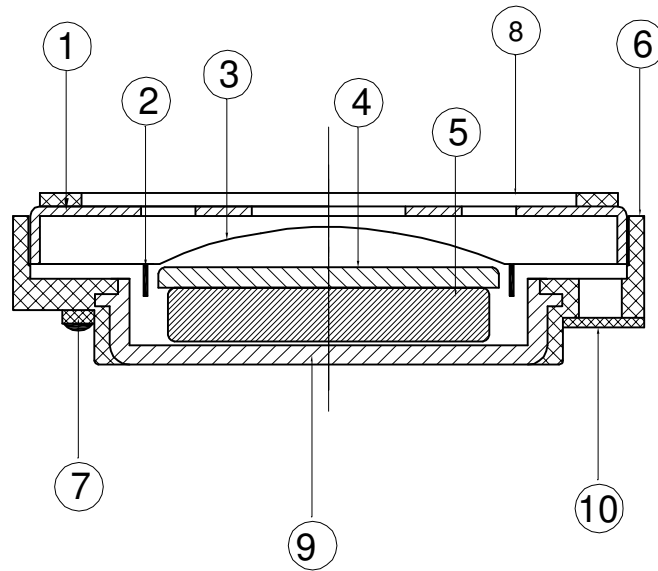
Model No. : KP1838M1F-U01C-4074

## 5.2 Receiver



|                           |                     |              |         |
|---------------------------|---------------------|--------------|---------|
| Specification for Speaker |                     | Page         | 7/10    |
|                           |                     | Revision No. | 1.1     |
| Model No. :               | KP1838M1F-U01C-4074 | Drawing No.  | KFC4074 |

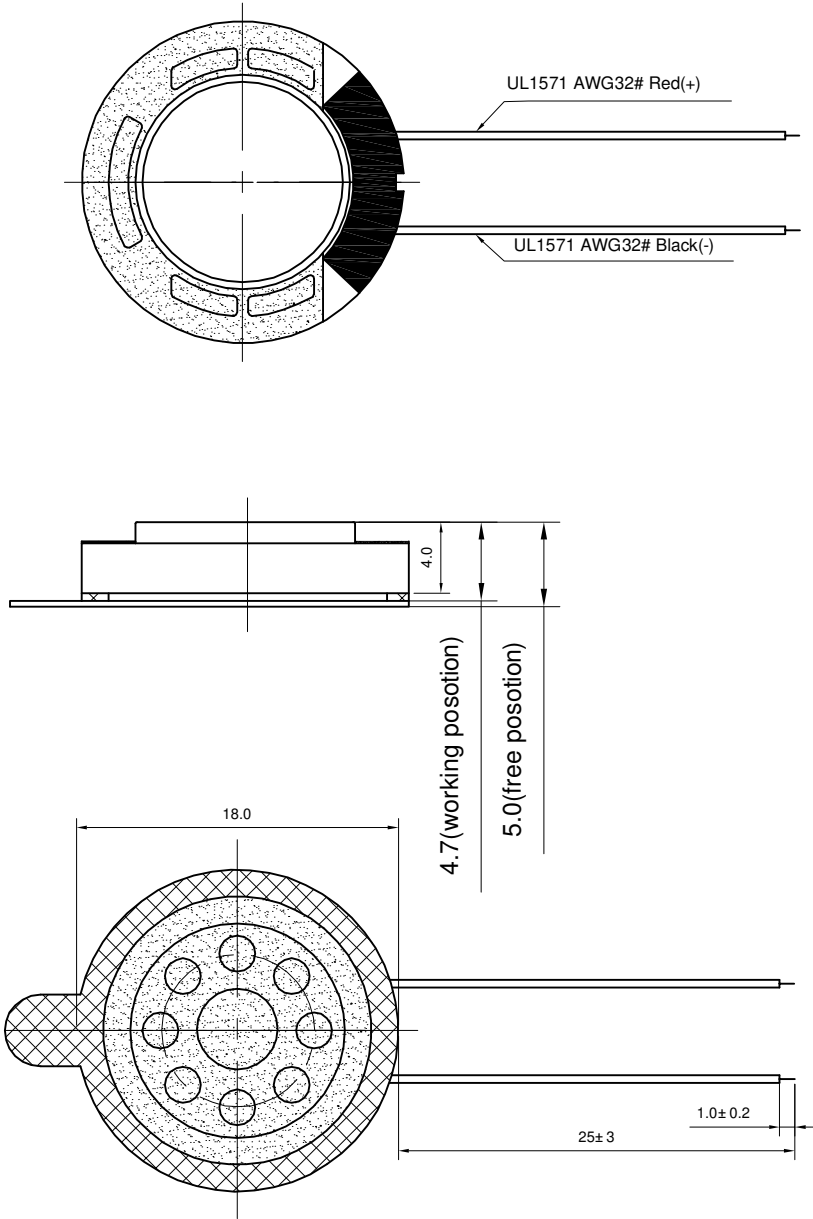
## 6. Structure



| 10  | Screen    | 1    | 3B             |                       |
|-----|-----------|------|----------------|-----------------------|
| 9   | U YOKE    | 1    | SPC            |                       |
| 8   | Gasket    | 1    | unwoven fabric | 800+2B+800+PSR0.7+800 |
| 7   | Terminal  | 1    | Epoxy PCB      |                       |
| 6   | Frame     | 1    | PBT            |                       |
| 5   | Magnet    | 1    | Nd-Fe-B        |                       |
| 4   | Plate     | 1    | SPC            |                       |
| 3   | Diaphragm | 1    | PEN            |                       |
| 2   | Coil      | 1    | Copper         |                       |
| 1   | Cap       | 1    | SUS304         |                       |
| No. | Part Name | Q'TY | Material       | Remarks               |

|                                 |              |         |
|---------------------------------|--------------|---------|
| Specification for Speaker       | Page         | 8/10    |
|                                 | Revision No. | 1.1     |
| Model No. : KP1838M1F-U01C-4074 | Drawing No.  | KFC4074 |

### 7. Dimensions



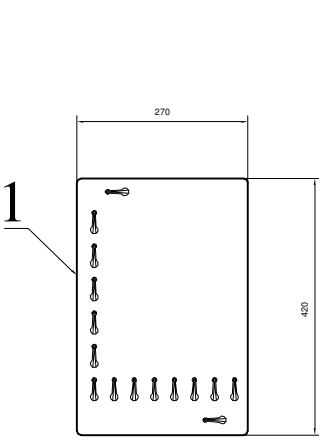
FIRST ANGLE PROJECTION

UNIT : mm  
Tolerance : ±0.2

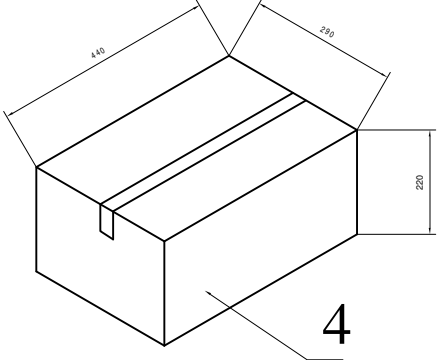
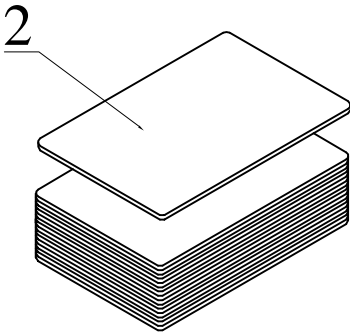
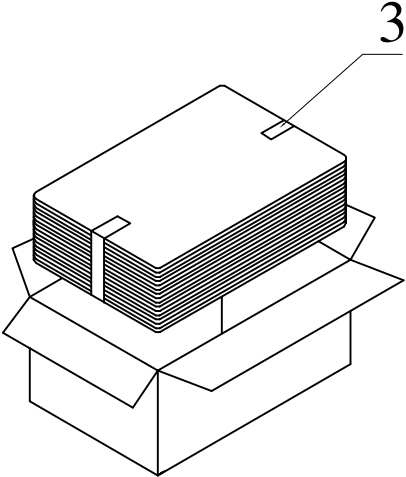


|                           |                     |              |         |
|---------------------------|---------------------|--------------|---------|
| Specification for Speaker |                     | Page         | 9/10    |
|                           |                     | Revision No. | 1.1     |
| Model No. :               | KP1838M1F-U01C-4074 | Drawing No.  | KFC4074 |

### 8. Packing



100Pcs



QTY: 2000Pcs  
440 x290 x220

