

Specification for Speaker	Page	2/9
	Revision No.	1.5
Model No. : KP2644SP1F-4475	Drawing No.	KFC4475

## 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. : KP2644SP1F-4475

Revision No.

1.5

Drawing No.

KFC4475

## 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 : 26 mm

2.2 Height : 4.7 mm

2.3 Weight : 5.6 g

2.4 Operating Temperature range:

-30~+70℃ without loss of function

2.5 Store Temperature range:

-40~+85℃ 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	90 dB ± 3dB 0.1W/0.1M at (AVG 0.8,1.0,1.2,1.5kHz)
3	Resonance Frequency	500 Hz ± 20% at 1V
4	Frequency Range	Fo ~20KHz
5	Input Power	Rated 0.8 W / Max. 1.0 W
6	Distortion	<10% Max. at 2kHz/,0.1W/0.1m
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 2.53V 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.

1.5

Model No. : KP2644SP1F-4475

Drawing No.

KFC4475

## 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 $+85\pm 3\text{ }^\circ\text{C}$ 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>+70^\circ\text{C}</math> for 1 hour, then speaker shall be placed in a chamber at <math>-30^\circ\text{C}</math> 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 <math>+70^\circ\text{C}</math>. A green line indicates a ramp down to <math>-30^\circ\text{C}</math> over a period of 20 seconds. This is followed by a horizontal dwell at <math>-30^\circ\text{C}</math> for 1 hour. The cycle then repeats with a ramp up back to <math>+70^\circ\text{C}</math> and a 1-hour dwell at that temperature.</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 0.8W(2.53Vrms.) 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 $1\text{ M}\Omega$

# Specification for Speaker

Page

5/9

Model No. : KP2644SP1F-4475

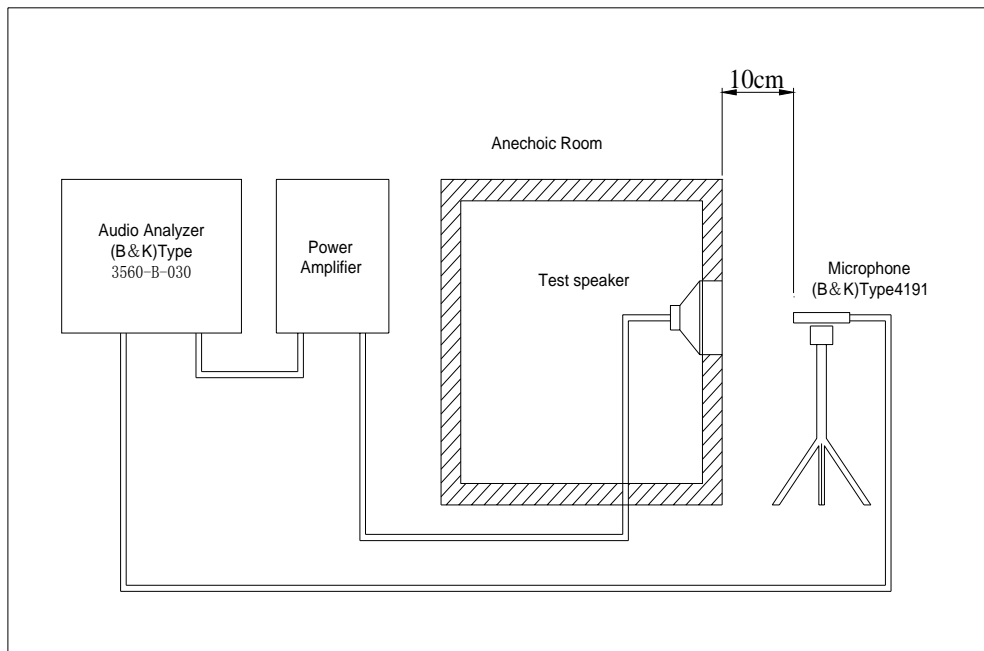
Revision No.

1.5

Drawing No.

KFC4475

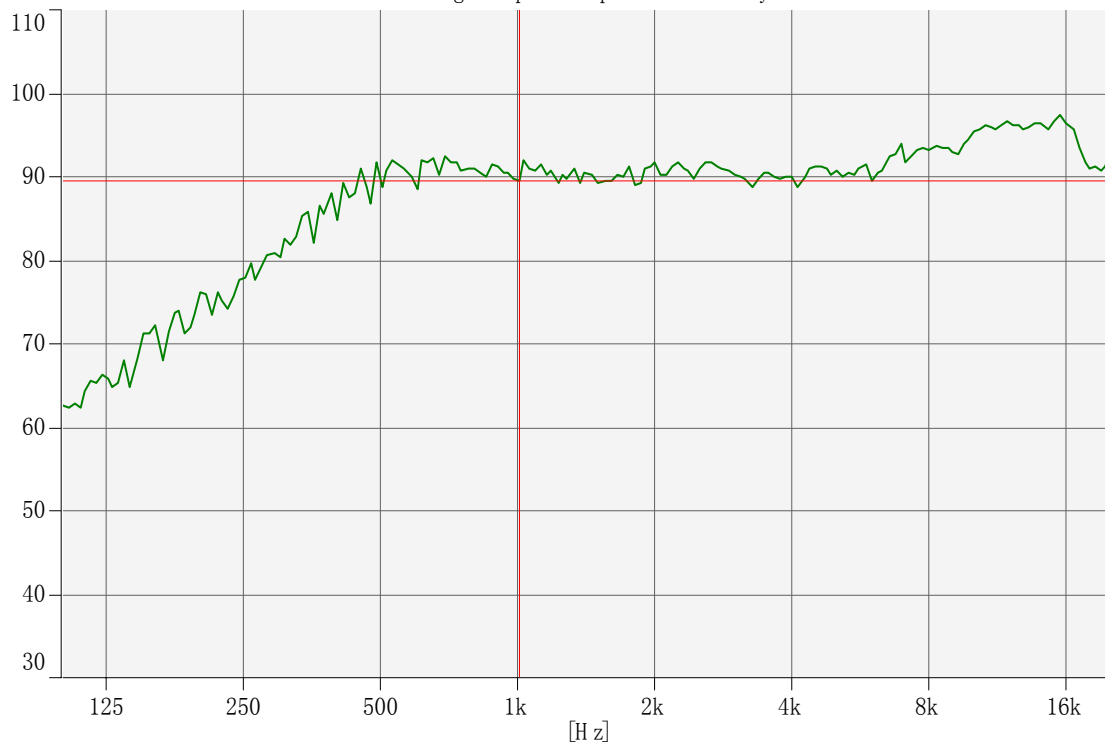
## 5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]

Output Response (Signal) - Input (Magnitude)

Working : Input : Input : SSR Analyzer



# Specification for Speaker

Page

6/9

Revision No.

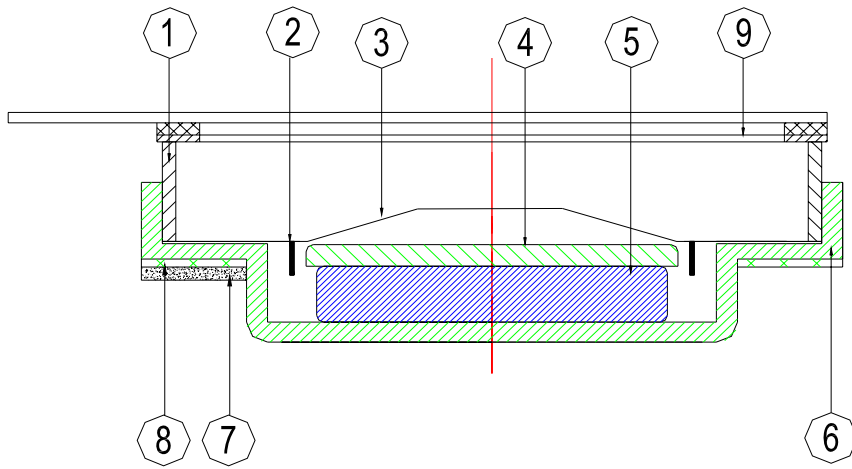
1.5

Model No. : KP2644SP1F-4475

Drawing No.

KFC4475

## 6. Structure



9	Gasket	1	PE	
8	Screen	1	unwoven fabric	
7	Terminal	1	Epoxy PCB	
6	Frame	1	SPC	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPC	
3	Diaphragm	1	PEN	
2	Voice Coil	1	Copper	
1	Gasket	1	Paper	
No.	Part Name	Q'ty	Material	Remarks

# Specification for Speaker

Page

7/9

Model No. : KP2644SP1F-4475

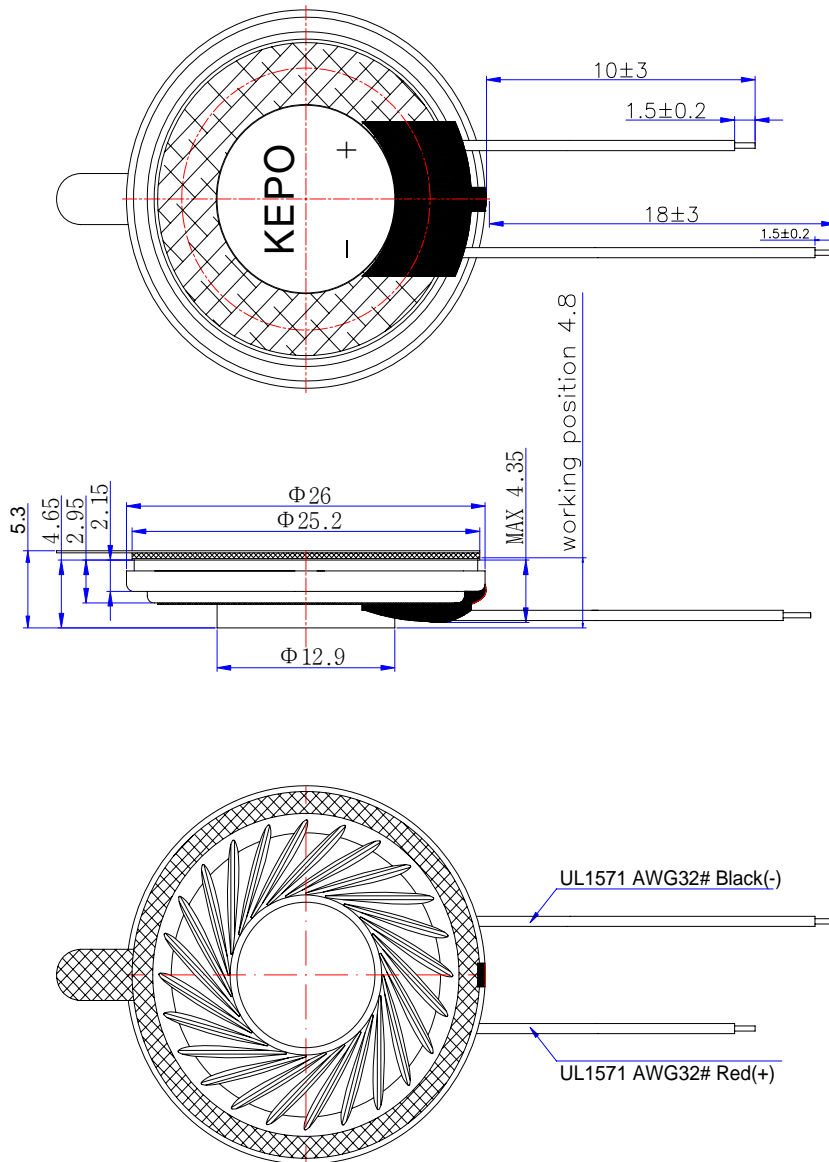
Revision No.

1.5

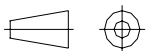
Drawing No.

KFC4475

## 7. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm

Tolerance :  $\pm 0.2$

# Specification for Speaker

Page

8/9

Model No. : KP2644SP1F-4475

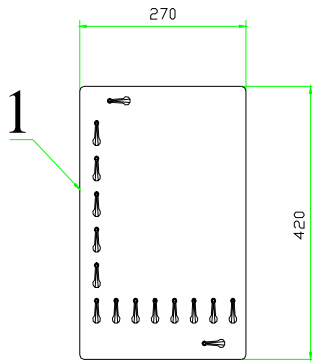
Revision No.

1.5

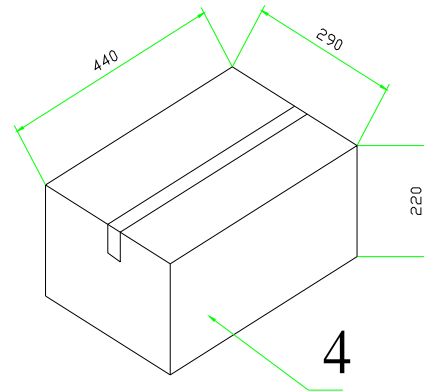
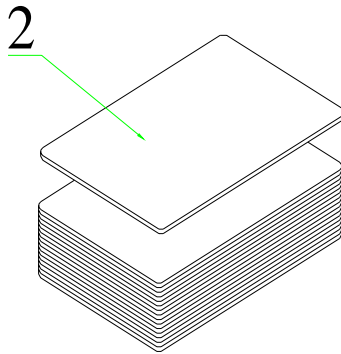
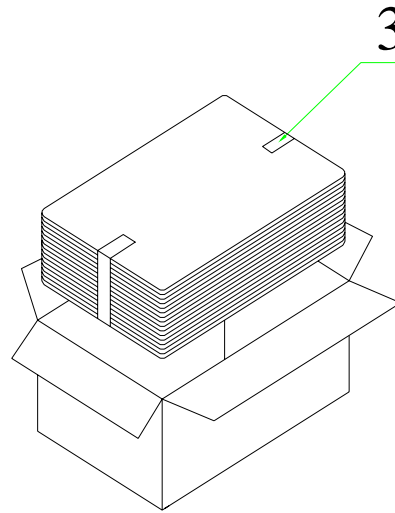
Drawing No.

KFC4475

## 8. Packing



75Pcs



QTY: 1500Pcs

440 x290 x220

