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	Revision No.	1.0
Model No. : KP1528SP2F100-6644	Drawing No.	KFC6644

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## 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 : 15 mm

2.2 Height : 2.8 mm

2.3 Weight : 1 g

2.4 Operating Temperature range:

-20~+70°C without loss of function

2.5 Store Temperature range:

-40~+85°C 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 2.0KHz)
2	Sound Pressure Level	87 dB ± 3dB (0.1W/0.1M at 1kHz)
3	Resonance Frequency	1000 Hz ± 20%
4	Frequency Range	Fo ~20KHz
5	Input Power	Rated 0.8 W / Max. 1 W
6	Distortion	<10% Max. at 2kHz/2Vrms
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.

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## 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\text{ }^\circ\text{C}</math> for 1 hour, then speaker shall be placed in a chamber at <math>-20\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> <div style="text-align: center;"> <p>The diagram shows a temperature profile for a thermal shock test cycle. It starts with a horizontal line at <math>+70\text{ }^\circ\text{C}</math> for a duration of 1 hour. This is followed by a downward-sloping line representing a ramp down to <math>-20\text{ }^\circ\text{C}</math>, with a green arrow and label indicating a ramp time of 20 seconds. After reaching <math>-20\text{ }^\circ\text{C}</math>, there is another horizontal line for a duration of 1 hour. 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 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 $1\text{ M}\Omega$

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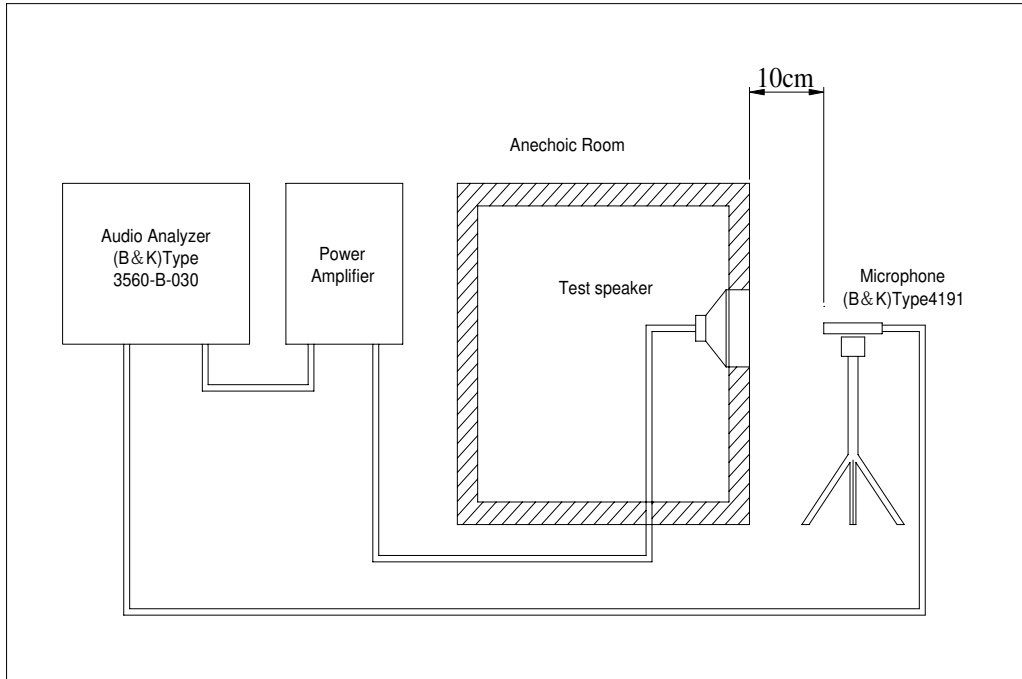
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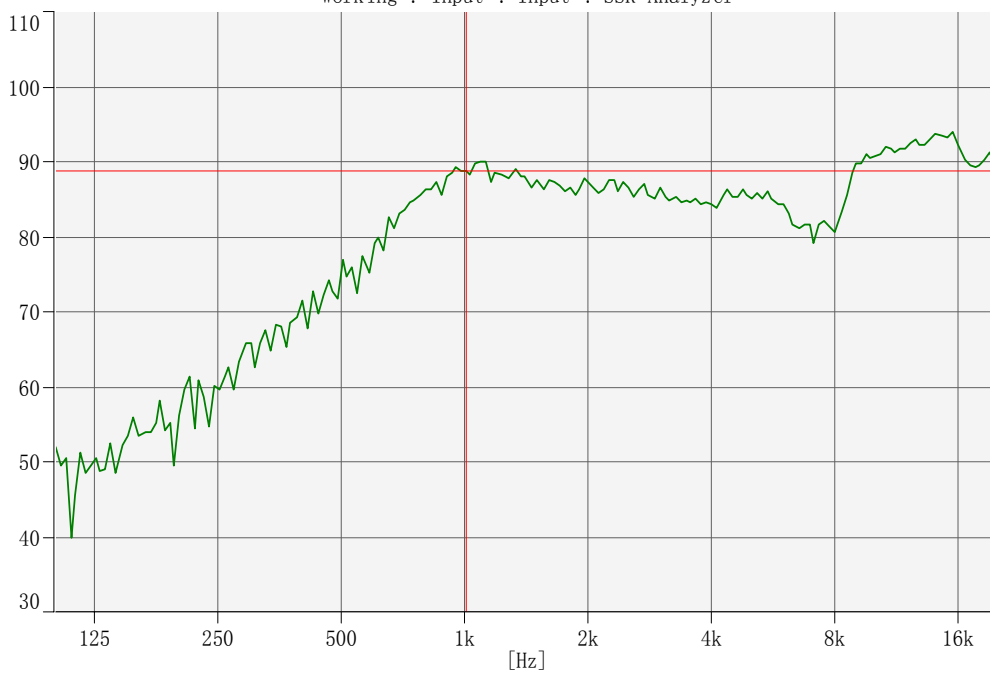
## 5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]

Output Response(Signal 1) - Input (Magnitude)

Working : Input : Input : SSR Analyzer



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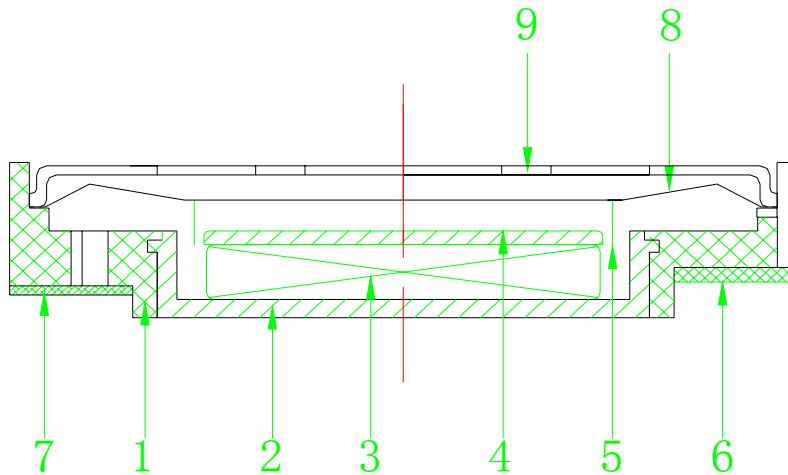
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## 6. Structure



9	Cap	1	SUS304	
8	Diaphragm	1	PEN	
7	Screen	1	3B	
6	Terminal	1	Epoxy PCB	
5	Voice Coil	1	Copper	
4	Plate	1	SPC	
3	Magnet	1	Nd-Fe-B	
2	Yoke	1	SPC	
1	Frame	1	PBT	
No.	Part Name	Q'ty	Material	Remarks

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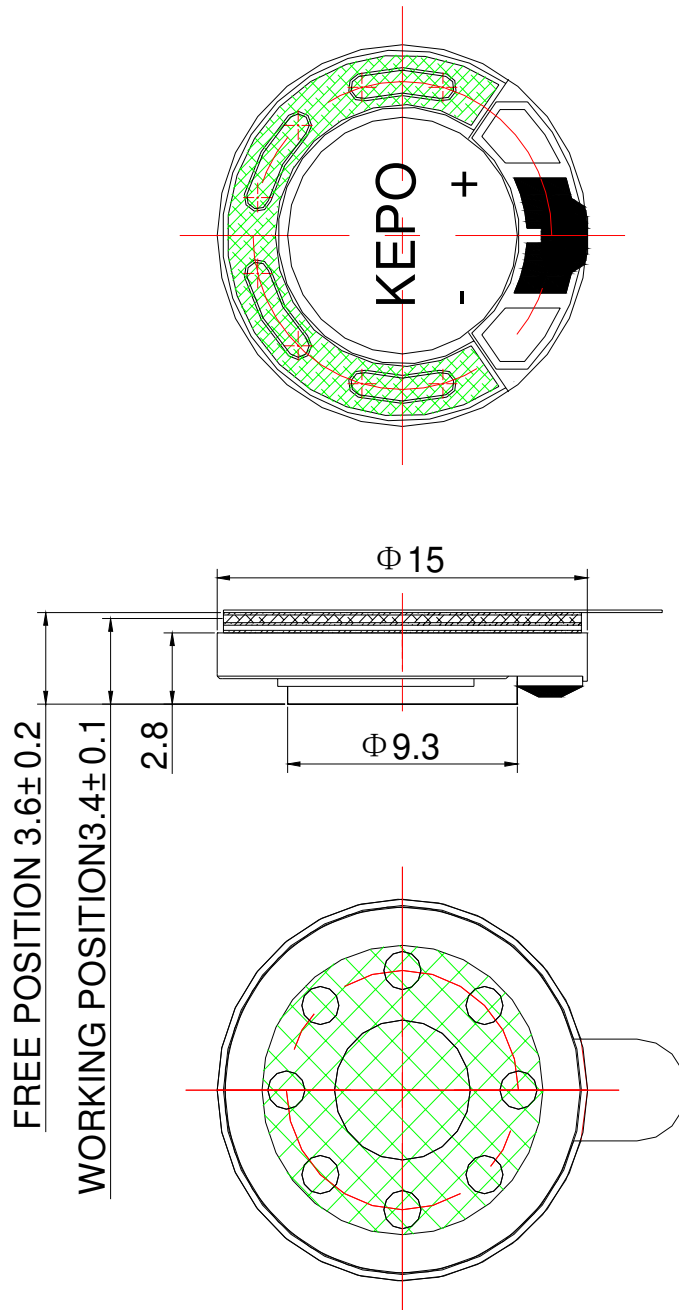
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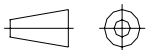
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## 7. Dimensions



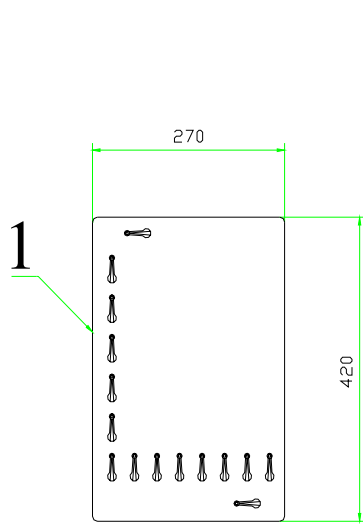
FIRST ANGLE PROJECTION



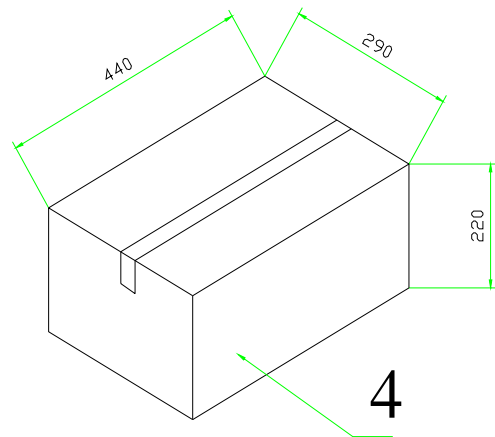
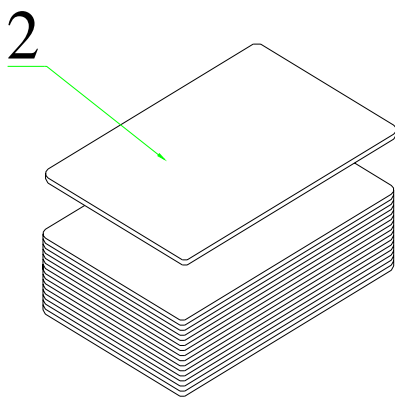
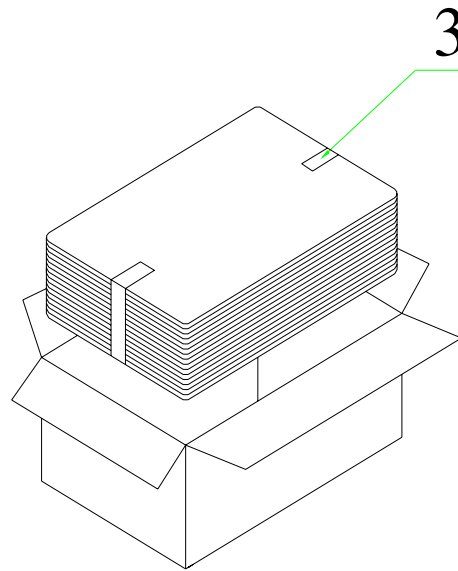
UNIT : mm

Tolerance :  $\pm 0.2$

### 8. Packing



100Pcs



QTY: 2000Pcs

440 x290 x220

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### 9. Revision

Rev. No.	DATE	PAGE	DESCRIPTION	BOM
1.0	2012-9-11		Primary	