

# SPECIFICATION


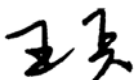

受 控

Customer :  
Applied To :  
Product Name : SPEAKER  
Model Name : KP1530SP1-7104  
Drawing No. : KFC7104

Signature of Appronal

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Signature of KEPO

Approved by	Checkde by	Issued by	Date
			



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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 : 3.4 mm
- 2.3 Weight : 2.2 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 2KHz)
2	Sound Pressure Level	86 dB ± 3dB (0.1W/0.1M at 1,1.2,1.5,2kHz AVG)
3	Resonance Frequency	850 Hz ± 20%
4	Frequency Range	Fo ~20KHz
5	Input Power	Rated 0.5 W/ Max. 0.7 W
6	Distortion	<5% Max. at 2kHz/2Vrms
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 2V sine wave signal swept at frequency range.
8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.
9	water-proof	防水等级IP54
10	Inductance	200±60μH

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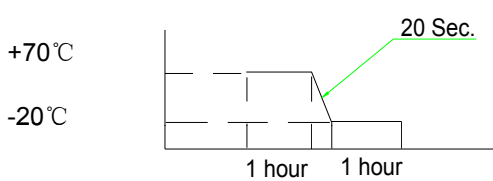
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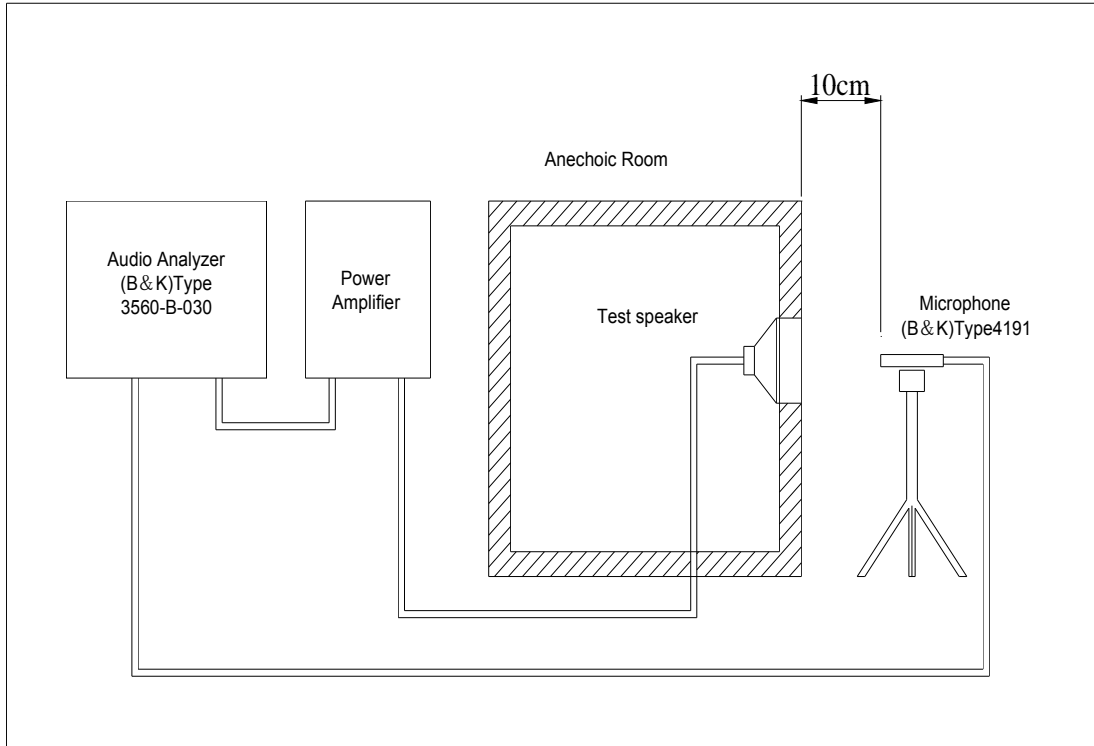
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## 4. Reliability Test

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). After 6 above cycles, speaker shall be measured after being placed in natural condition for 1 hour.</p>  <p style="text-align: center;"> <math>+70\text{ }^\circ\text{C}</math>  <math>-20\text{ }^\circ\text{C}</math> </p> <p style="text-align: center;">             20 Sec.              1 hour    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(2Vrms.) 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 $1\text{ M}\Omega$

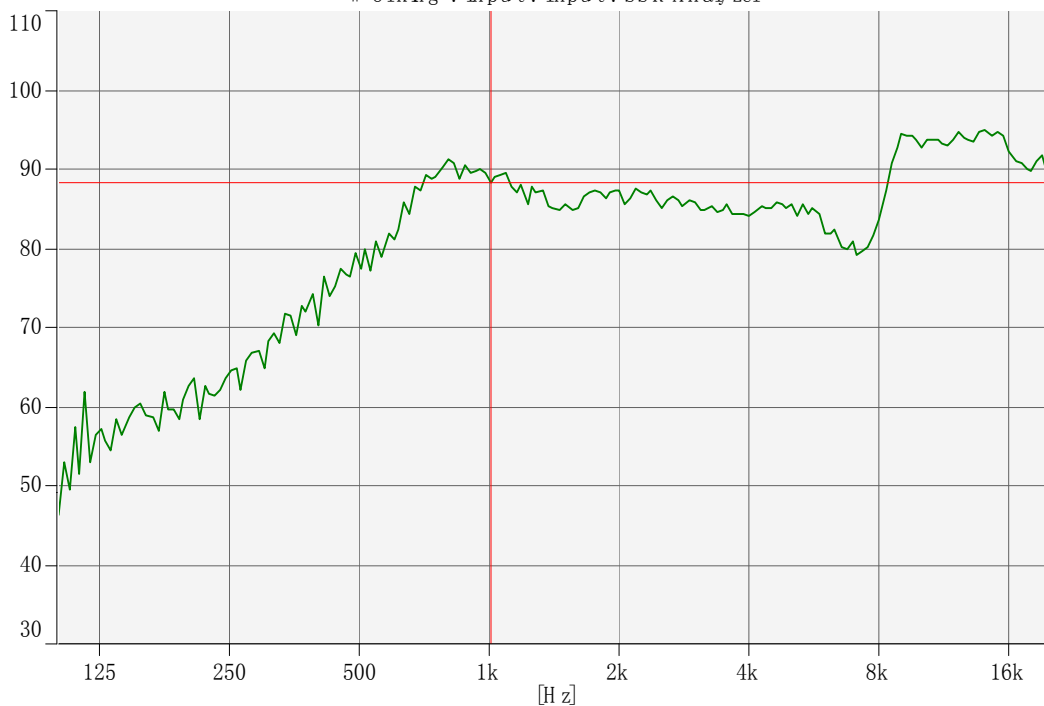
### 5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]

Output Response (Signal1) - Input Magnitude

Working : Input : Input : SSR Analyzer



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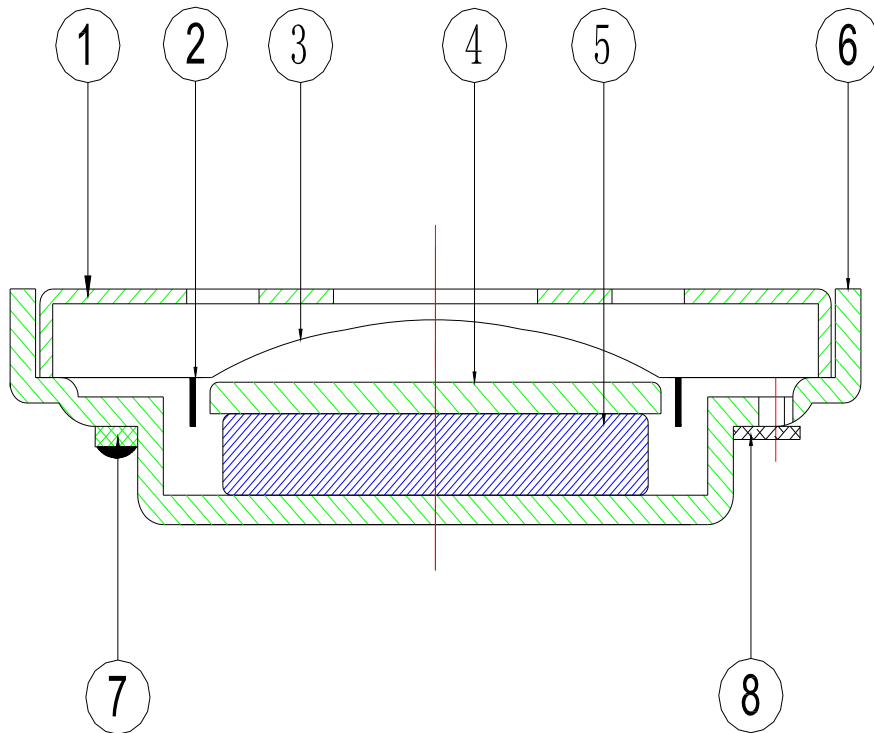
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## 6. Structure



No.	Part Name	Q'ty	Material	Remarks
8	Screen	1	Net	With wet adhesive
7	Terminal	1	Epoxy PCB	
6	Frame	1	SPCC	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPCC	
3	Diaphragm	1	PEN	
2	Voice Coil	1	Copper	
1	Cap	1	SUS304	

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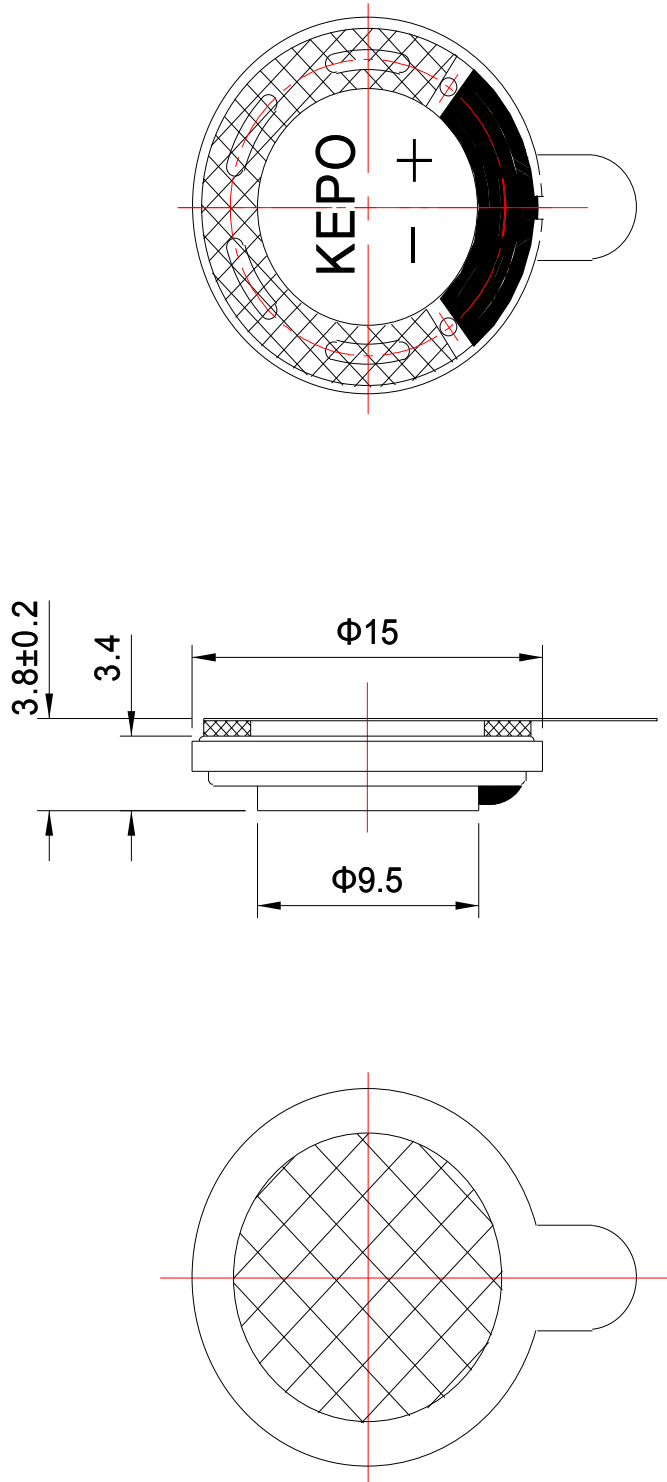
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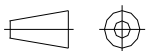
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## 7. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm

Tolerance :  $\pm 0.2$

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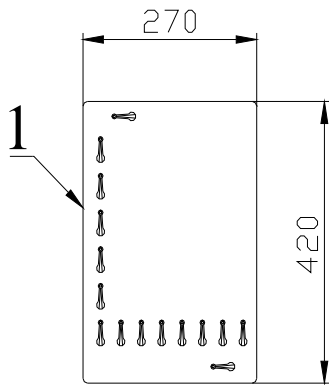
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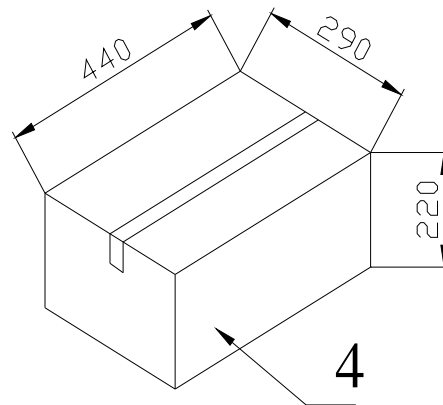
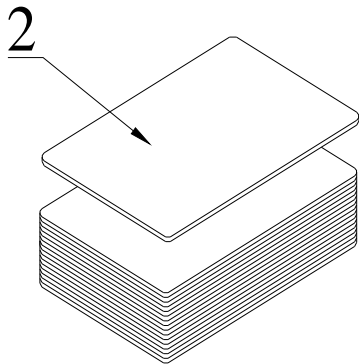
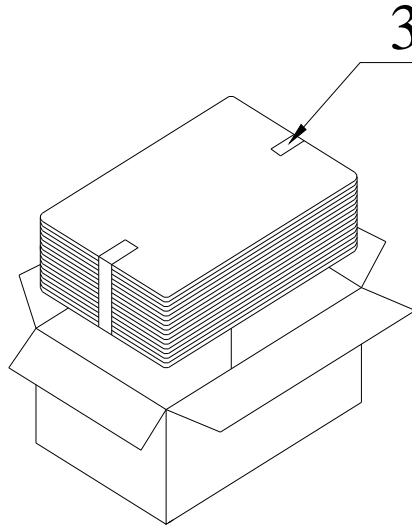
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## 8. Packing



100Pcs



QTY: 1800Pcs

440 x290 x220



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**9. Revision**

Rev. No.	DATE	PAGE	DESCRIPTION	BOM
1.0	2013-4-19		Primary	
1.1	2014-6-12		Add Connector	
1.2	2014-10-17		Delete Connector	