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	Revision No.	1.3
Model No. : KP1027SP3F120C-4298	Drawing No.	KFC4298

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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 : 9.9 mm

2.2 Height : 2.8 mm

2.3 Weight : 0.6 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 ℃, 25% ~ 85% RH, 860~1060 mbar

No	Items	Specification
1	Impedance	8 Ω ± 15% (1Vrms at 1.5KHz)
2	Sound Pressure Level	86 dB ± 3dB (0.1W/0.1M at 1.0KHz)
3	Resonance Frequency	1.1K Hz ± 20%
4	Frequency Range	Fo ~20KHz
5	Input Power	Rated 0.3 W / Max. 0.5 W
6	Distortion	<10% Max. at 2kHz/2Vrms
7	Buss and Rattle	Should not be audible buzzes,rattles when the 1.55V 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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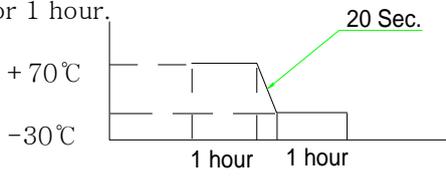
Model No. : KP1027SP3F120C-4298

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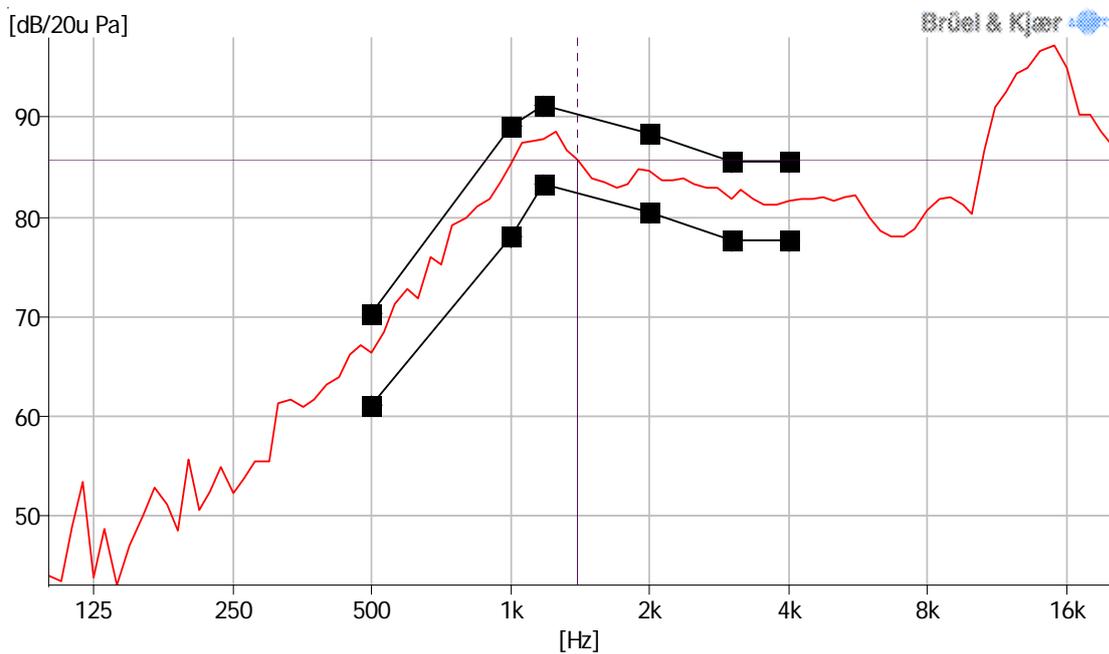
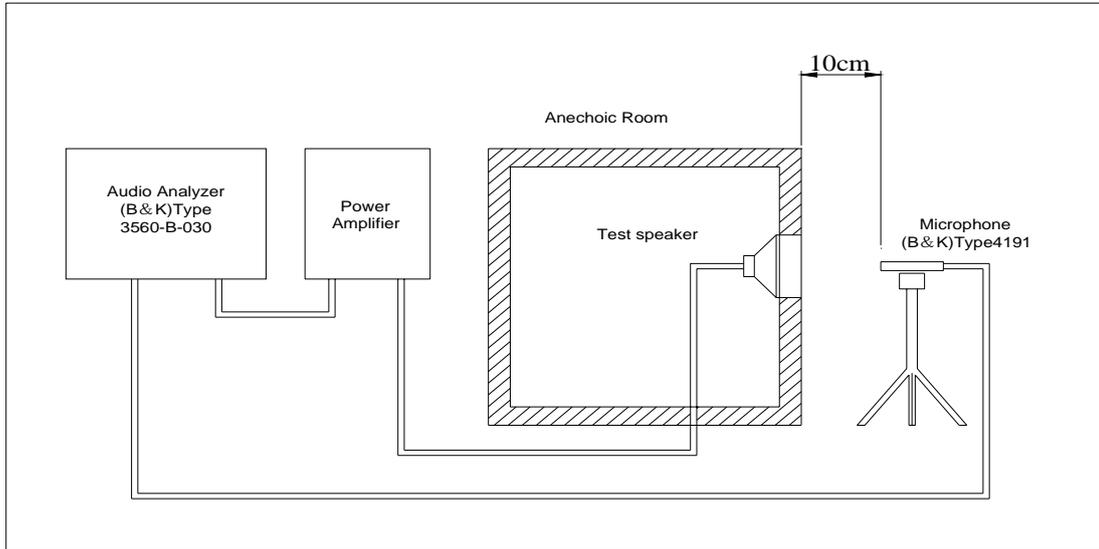
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## 4. Reliability Test

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>-30\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 0.3W(1.55Vrms.) 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



Frequency(Hz)	500	1000	1180	2000	3000	4000
Upper Limit(dB)	70.4	89	91.3	88.4	85.6	85.6
Lower Limit(dB)	62.4	83	83.3	80.4	77.6	77.4

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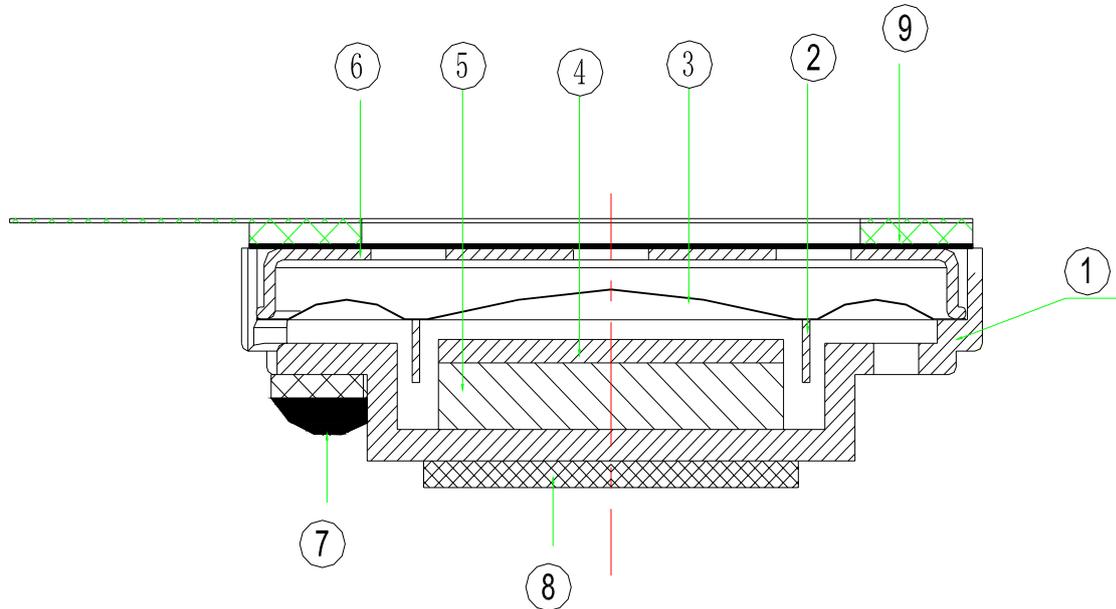
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## 6. Structure



9	Gasket	1	Polyester net	800+2B+800
8	Cushion	1	unwoven fabric	800+SRS0.8
7	Terminal	1	FR-4	
6	Front Cap	1	SUS304	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPC	
3	Diaphragm	1	PEN	
2	Voice Coil	1	Copper	
1	Frame	1	SPC	
No.	Part Name	Q'ty	Material	Remarks

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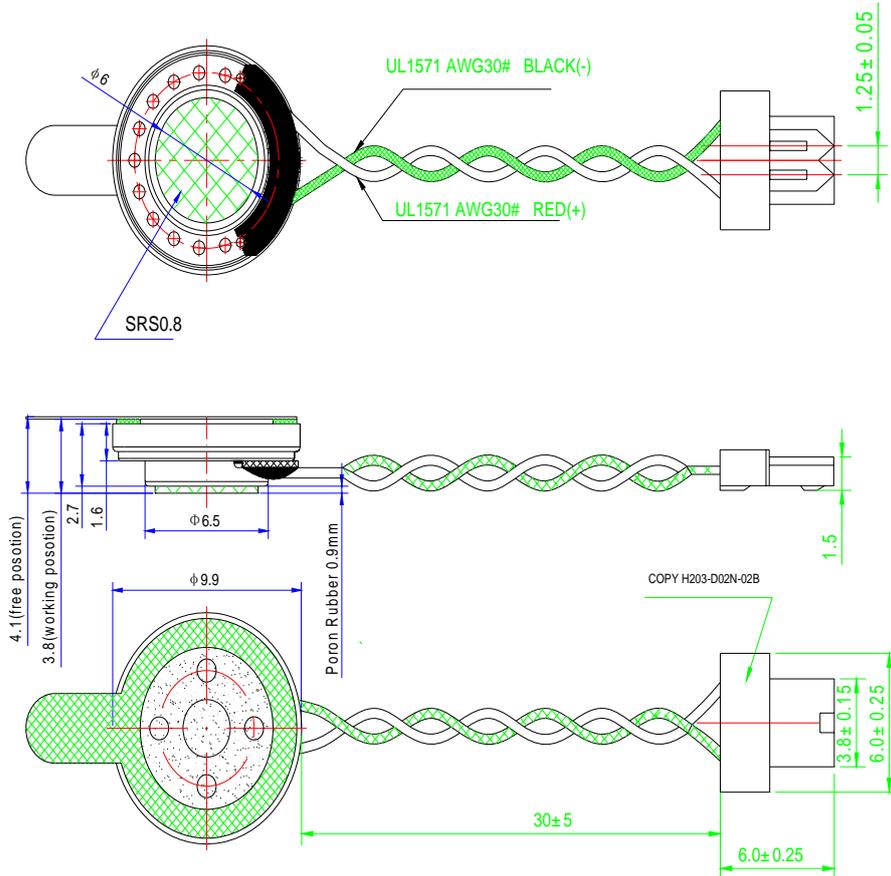
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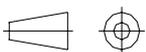
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## 7. Dimensions



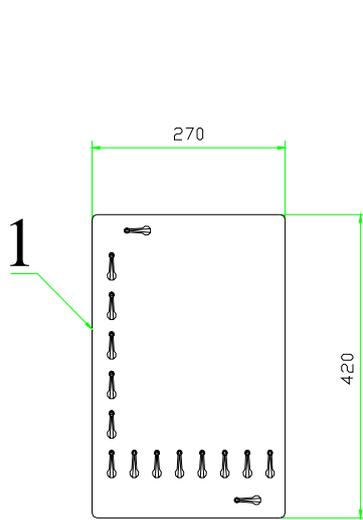
FIRST ANGLE PROJECTION



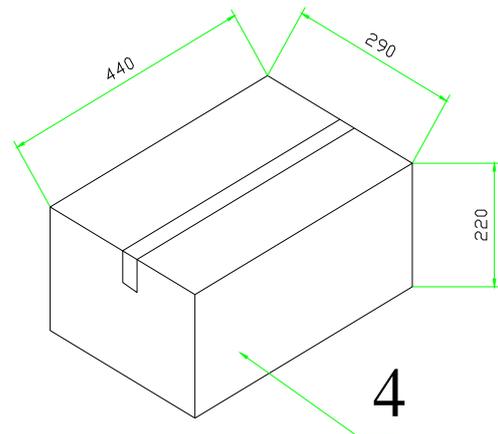
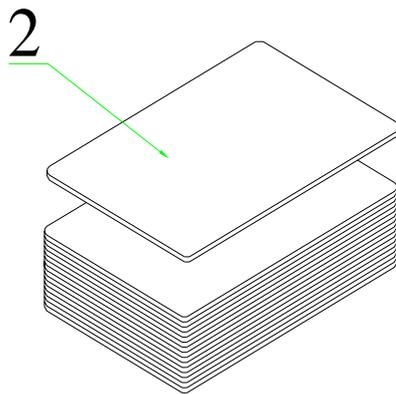
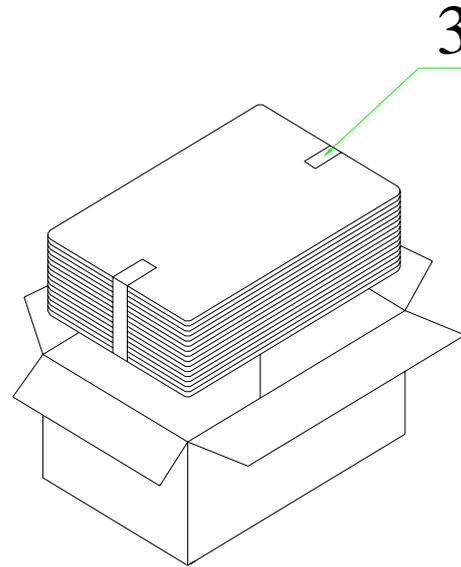
UNIT : mm

Tolerance :  $\pm 0.2$

### 8. Packing



100Pcs



QTY: 2000Pcs

440 x290 x220

