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	Revision No.	1.3
Model No. : KP40x20SP2F450-5594	Drawing No.	KFC5594

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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 : 40x20 mm

2.2 Height : 8.2 mm

2.3 Weight : 5.8 g

2.4 Operating Temperature range:

-20~+50℃ without loss of function

2.5 Store Temperature range:

-40~+60℃ 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 1KHz)
2	Sound Pressure Level	91 dB ± 3dB (0.1W/0.1M at 0.8, 1.0, 1.5, 2kHz)
3	Resonance Frequency	450 Hz ± 150Hz
4	Frequency Range	300 ~10KHz
5	Input Power	Rated 1 W / Max. 1.5 W
6	Distortion	<5% Max. at 1kHz/1Vrms
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 2.83V 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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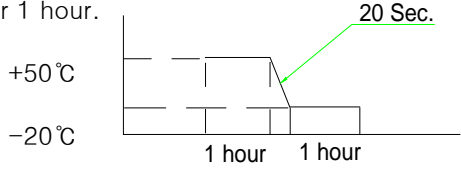
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## 4. Reliability Test

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 $+60\pm 3\text{ }^\circ\text{C}$ 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>+50\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> 
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 1W(2.83Vrms.) 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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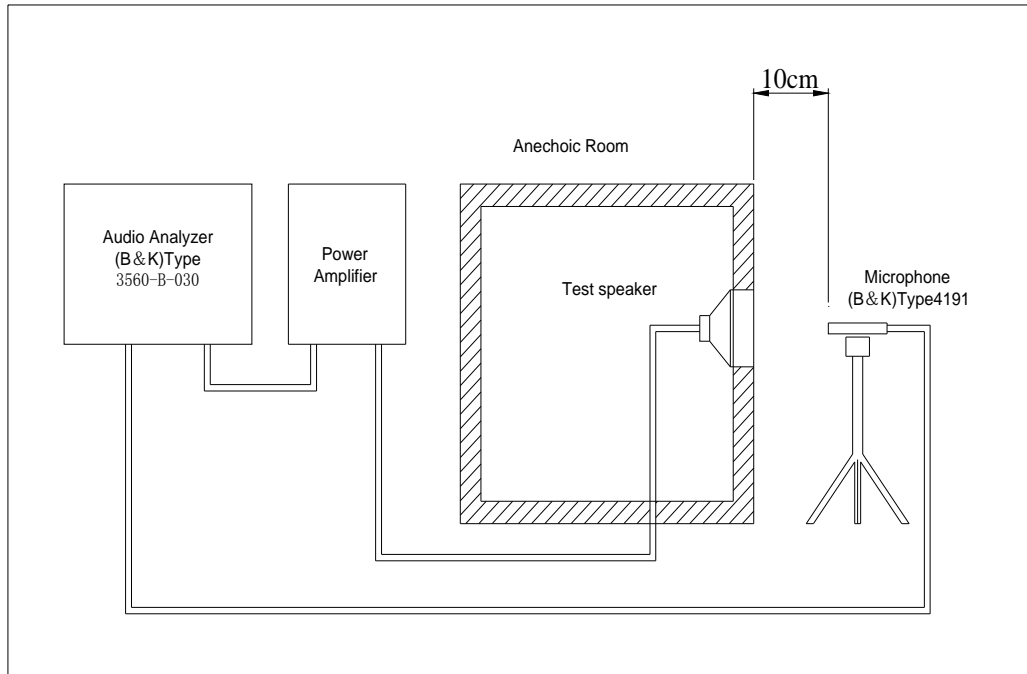
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## 5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]

Output Response (Signal) - Input (Magnitude)

Working : Input : Input : SSR Analyzer



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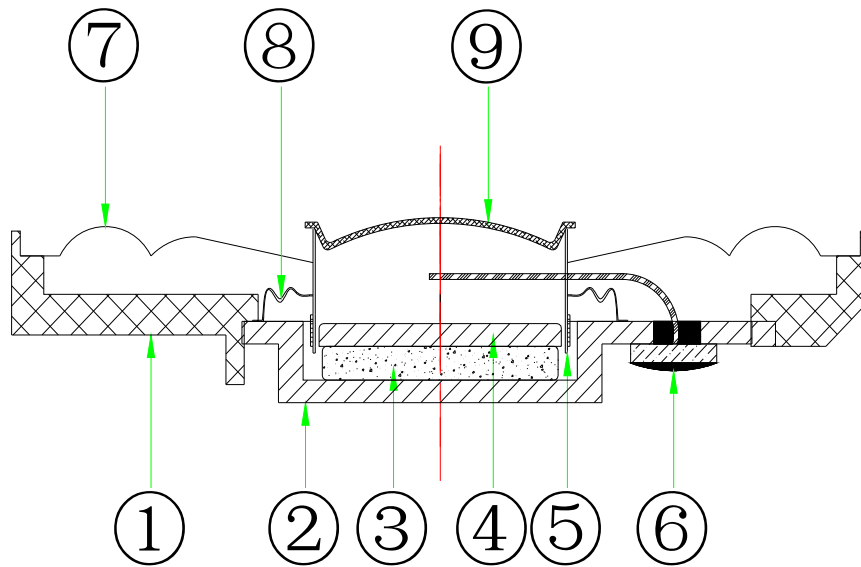
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## 6. Structure



9	Dust Cap	1	Kraft Paper	
8	Damper	1	Silk	
7	Diaphragm	1	Tetoron	
6	Terminal	1	White Fiber	
5	V-coil	1	Lock bobbin	
4	Plate	1	SPCC	
3	Magnet	1	Nd-Fe-B	
2	YOKE	1	SPCC	
1	Frame	1	ABS	
No.	Part Name	Q'ty	Material	Remarks

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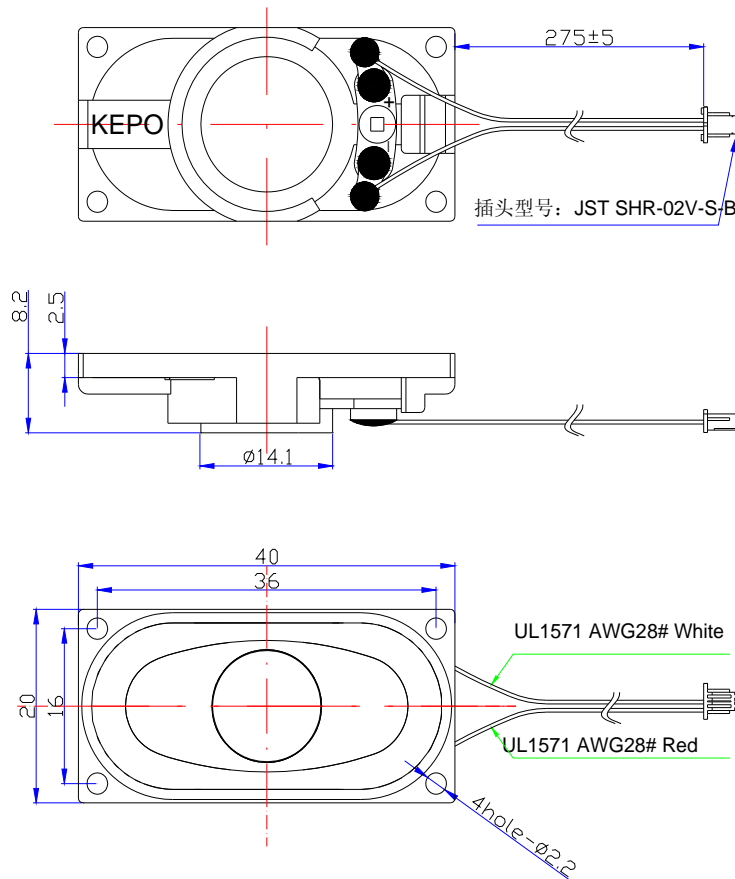
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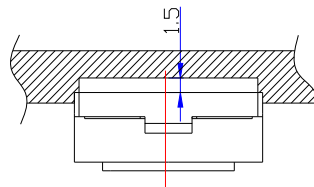
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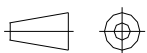
## 7. Dimensions



Speaker shall be free from striking the baffle when a 1.5mm gap is allowed between the baffle board and the speaker front  
喇叭前必须保留1.5mm的间隙



FIRST ANGLE PROJECTION



UNIT : mm

Tolerance :  $\pm 0.2$

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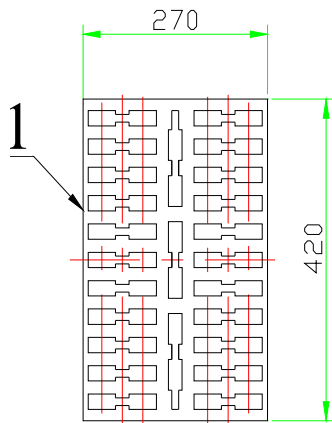
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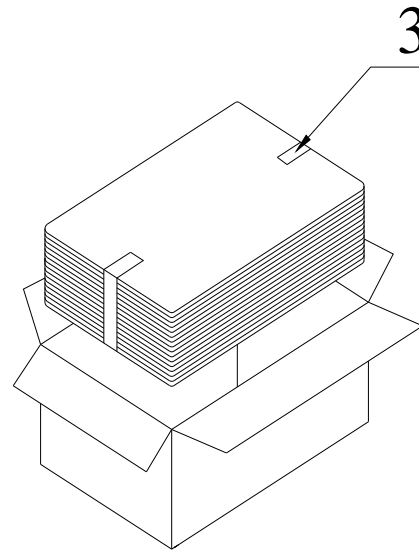
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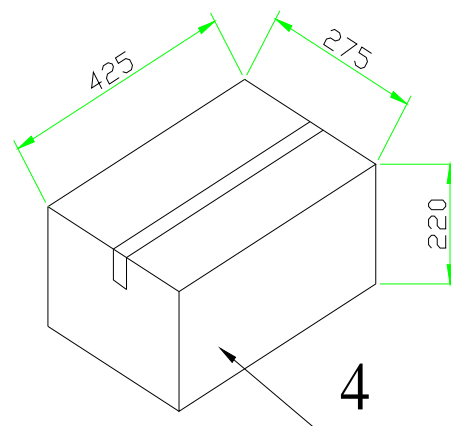
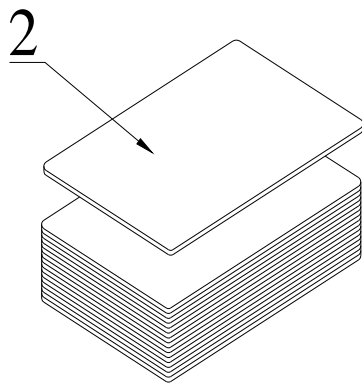
## 8. Packing



50Pcs



装入气泡袋后，  
再装进CARTON BOX



QTY: 800Pcs  
425 x275 x220