

SPECIFICATION

受控

Customer:

Applied To:

Product Name: SPEAKER

Model Name: KP2342ST1R50-6991

Drawing No.: KFC6991

Compliance with ROHS (本品符合 ROHS 指令)

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Signature of KEPO

Issued by	Checked by	Approved by	Date
忻容荣	王真		



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1.5	2016-3-9		Change Speaker Structure	
1.4	2015-1-23		Add Pack	
1.3	2014-10-8		Add retrospect number	
1.2	2014-6-19		Change Reliability Test	
1.1	2013-1-23		Add spring size	
1.0	2012-12-13		Primary	
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Revision 履历表				

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1. Scop

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: Φ 23mm
- 2.2 Height: 4.1mm
- 2.3 Weight: 4.5g
- 2.4 Operating Temperature range:
-40~+85°C without loss of function
- 2.5 Store Temperature range:
-40~+90°C without loss of function

3. Electrical and Acoustic Characteristics

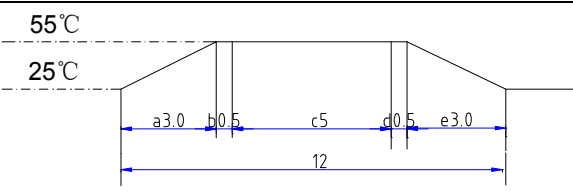
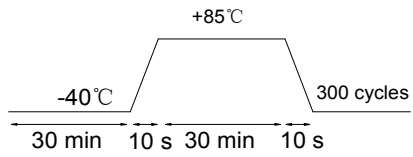
Test condition : 15 ~ 35 °C , 25% ~ 85% RH, 860~1060 mbar

	Item	Specification
3.1	Impedance	50 Ω ±15%(1Vrms at 1.5kHz)
3.2	Sound Pressure Level	68dB±3dB @0.1W/1M average at 0.8,1.0,1.5,2.0kHz
3.3	Resonance Frequency	500Hz±20%
3.4	Frequency Range	300Hz~20KHz
3.5	Input Power	Rated 0.6W/ Max 1.0W
3.6	Distortion	<5% Max. at 1kHz/0.1w
3.7	Buzz and Rattle	Should not be audible buzzes, rattles when the 5.48V sine wave signal swept at frequency range.
3.8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.
3.9	Flammability	he material of the membrane has to be of low flammability. The maximum burn-rate Bmax has to be less than 100mm-minute

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4. Reliability Test

After test(1~10item), 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).

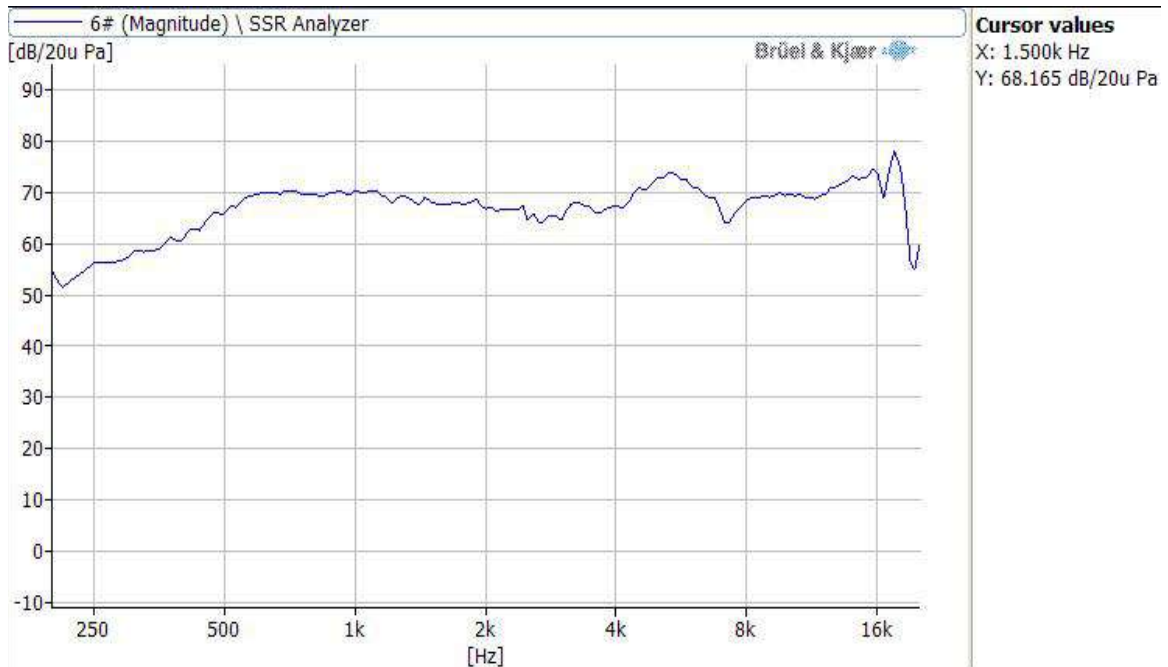
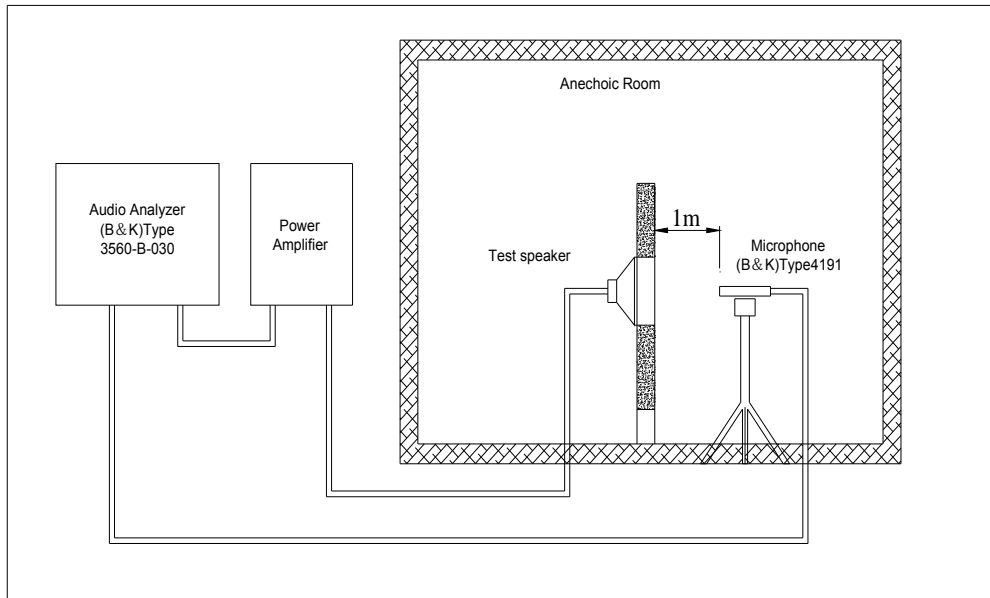
	Item	Specification
4.1	High Temperature Test	After being placed in a chamber with $+90\pm 3\text{ }^{\circ}\text{C}$ for 1000 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
4.2	Low Temperature Test	After being placed in a chamber with $-40\pm 3\text{ }^{\circ}\text{C}$ for 1000 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
4.3	Humidity Test	 <p style="text-align: center;">a,e:95-100%RH,c:90-96%RH b,d:90-100%RH Unit:hours 6 cycles</p>
4.4	Thermal Shock Test	<p>After being placed in a chamber at $+85^{\circ}\text{C}$ for 30 min, then speaker shall be placed in a chamber at -40°C for 30 min(1 cycle is the below diagram). After 300 above cycles, speaker shall be measured"</p> 
4.5	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.
4.6	Drop Test	The speaker free drop, shall with stand 4 times random drops from a height of 1.0 meter to a concrete floor faced with 5mm thick hard wood board.and be nothing mechanical damage.
4.7	Operation at high temperature Test	Put product in $+85\pm 3^{\circ}\text{C}$ enviromental for 656Hours,and take out in normal air pressure for 1 hour, and then test signal:7.75Vpp,800Hz square wave 50% Duty Cycle
4.8	Operation at low temperatures Test	Put product in $-40\pm 3^{\circ}\text{C}$ enviromental for 24Hours,and take out in normal air pressure for 1 hour, and then test signal:7.75Vpp,800Hz square wave 50% Duty Cycle

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4.9	320 h Thermal cycling El. Load Test	<p>condition: -40°C working for 1 hours, arise temperature for 2hours, +90°C working for 1 hour and lower down temperature for 2 hours, speaker parallel connection for continually working signal: 7.75Vpp,800Hz square wave 50% duty cycle. one cycle:1 minutes pulse, working 75ms,stop 294ms,and then continually working 2 mins,stop 8 mins,total cycle 320hours</p>
4.10	Shrapnel vibration test	<ol style="list-style-type: none"> 1. slice position is apply for actually field working position:vibration from 5.6mm-6.9mm (9.0+/-1 as free position before experiment) 2.Frequency:5Hz 3. 56h.

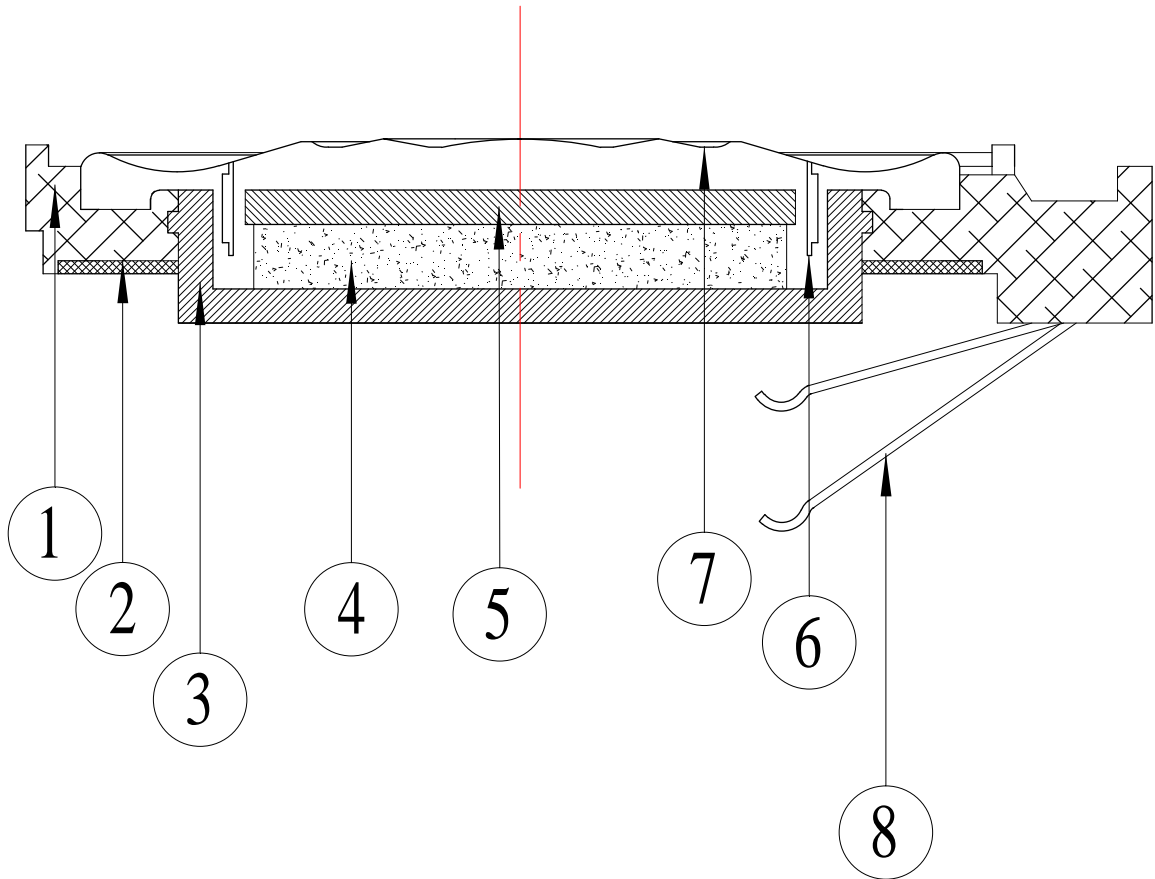
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5. Measurement Block Diagram & Response curve



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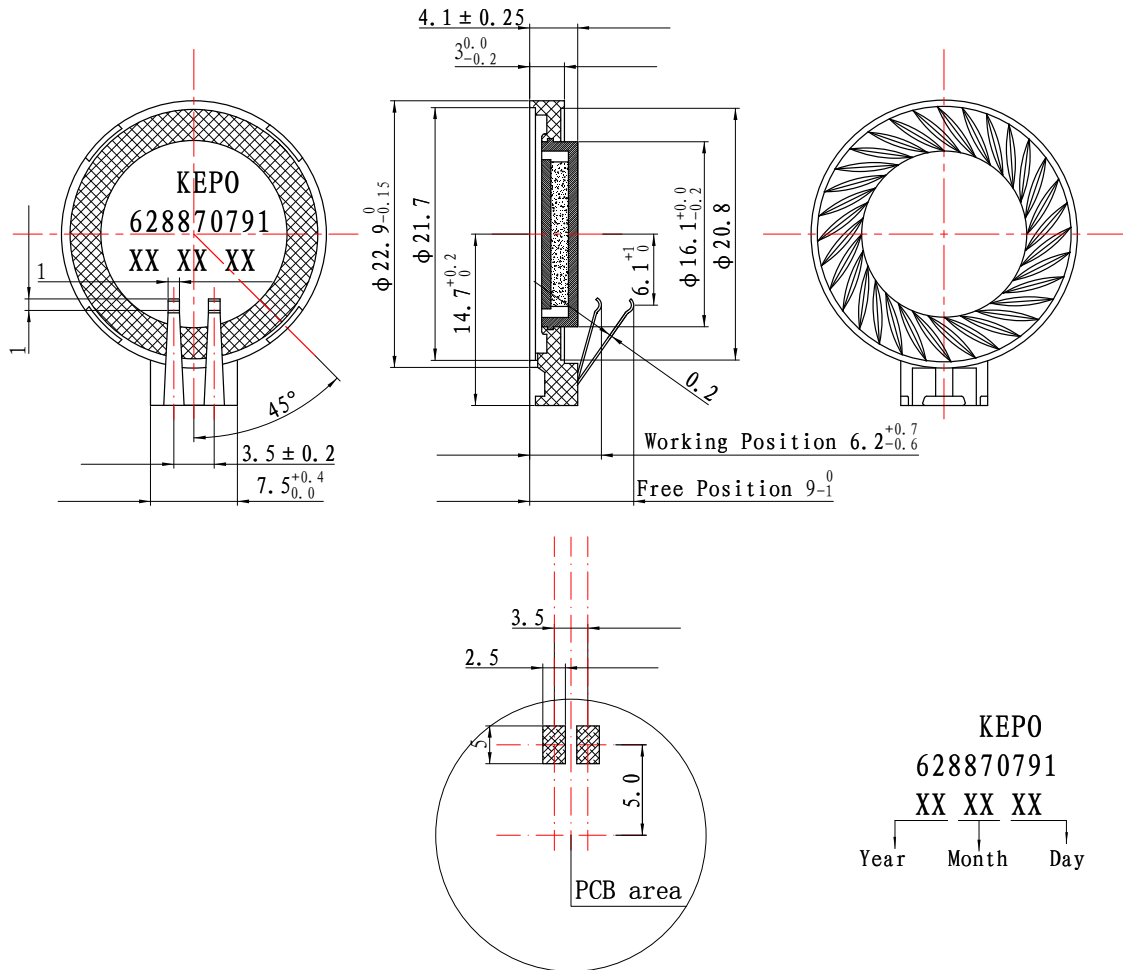
6. Structure



No.	Part Name	Q'ty	Material	Remarks
8	Spring	1	SUS301 3/4H	
7	Diaphragm	1	PEI	
6	Voice Coil	1	Copper	
5	Plate	1	SPCC	
4	Magnet	1	Nd-Fe-B	
3	U YOKE	1	SPCC	
2	Screen	1	Unwoven Fabric	
1	Frame	1	PPA	

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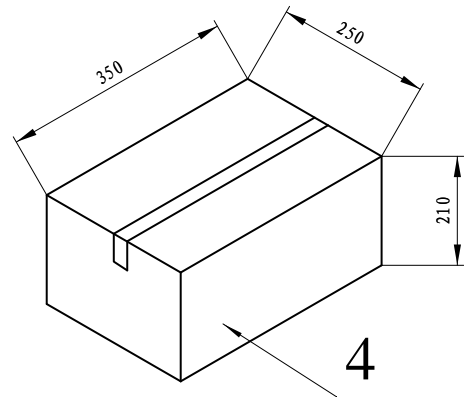
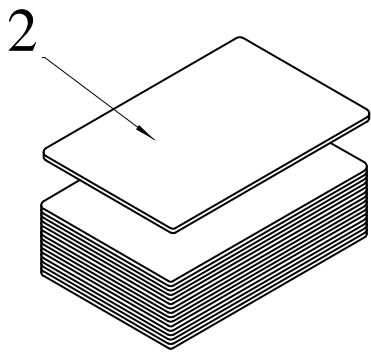
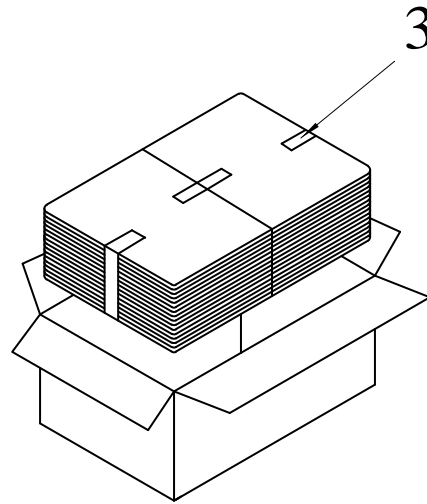
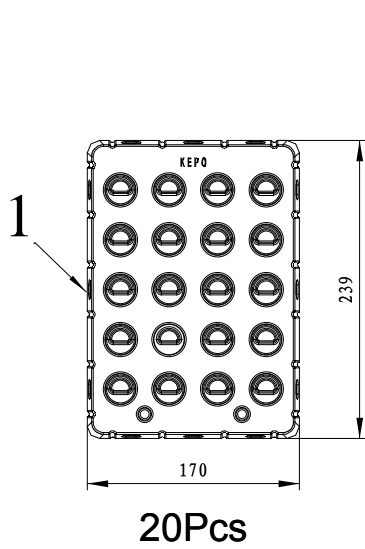
7. Dimensions



PCB接触区域布局图

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8. Packing



QTY: 440Pcs
350x250 x210