

SPECIFICATION

Customer :

Applied To :

Product Name : SPEAKER

Model Name : KP2415DM01

Drawing No. : KF3.001.320

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 : 24x15 mm

2.2 Height : 5.2 mm

2.3 Weight : 4 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 1KHz)
2	Sound Pressure Level	85 dB ± 3dB (0.1W/0.1M at 0.5K, 0.8K, 1.0K, 1.5K, 2K)
3	Resonance Frequency	900 Hz ± 20%
4	Vibration Frequency	200 Hz ± 20%
5	Frequency Range	Fo ~20KHz
6	Input Power	Rated 0.8 W / Max. 1 W
7	Distortion	< 5 % Max. at 2kHz/2Vrms
8	Buss and Rattle	Should not be audible buzzes,rattles when the 2.53V sine wave signal swept at frequency range.
9	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.

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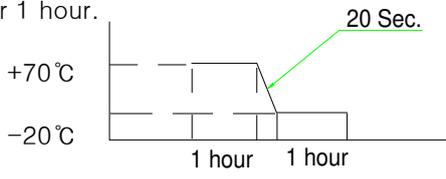
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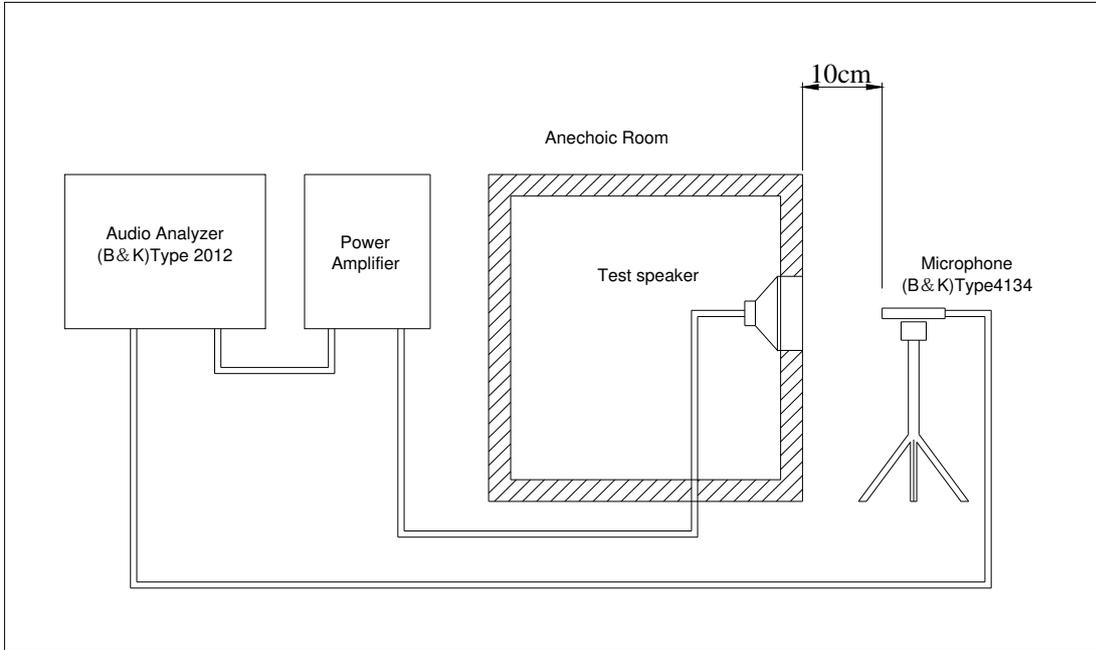
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4. Reliability Test

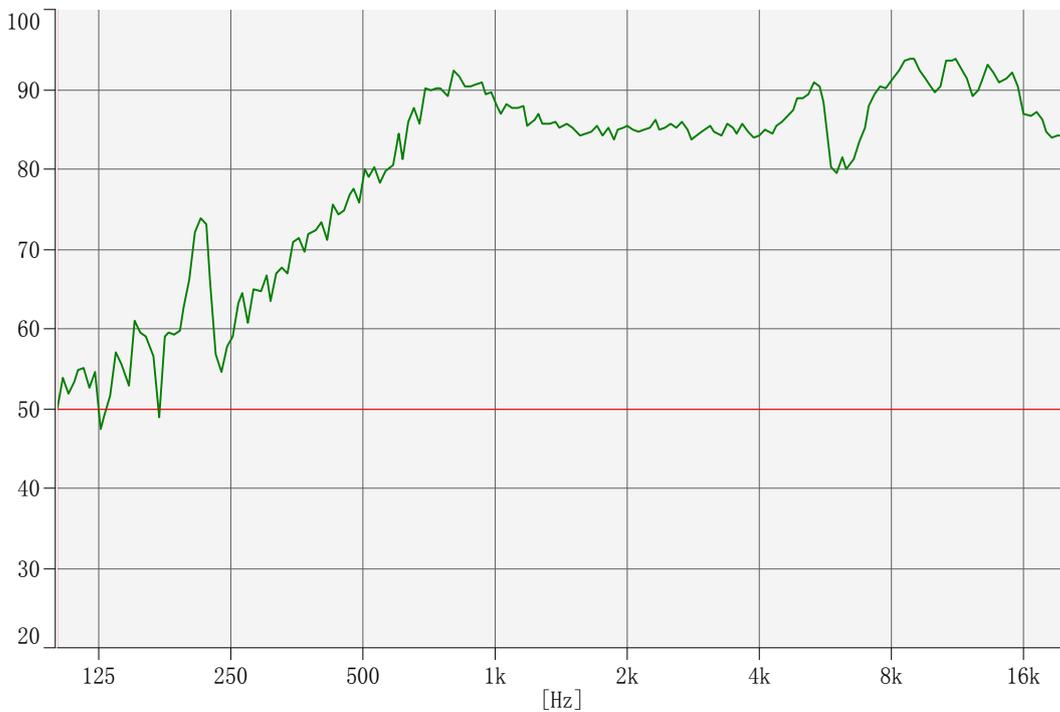
After test(1~7item), the speaker S.P.L . difference shall be within $\pm 3\text{dB}$, and the appearance not exist any change to be harmful to normal operation (e.g. cracks,rusts,damages and especially distortion).

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 $+70^\circ\text{C}$ for 1 hour, then speaker shall be placed in a chamber at -20°C 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 0.8W(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 $1\text{ M}\Omega$

5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]



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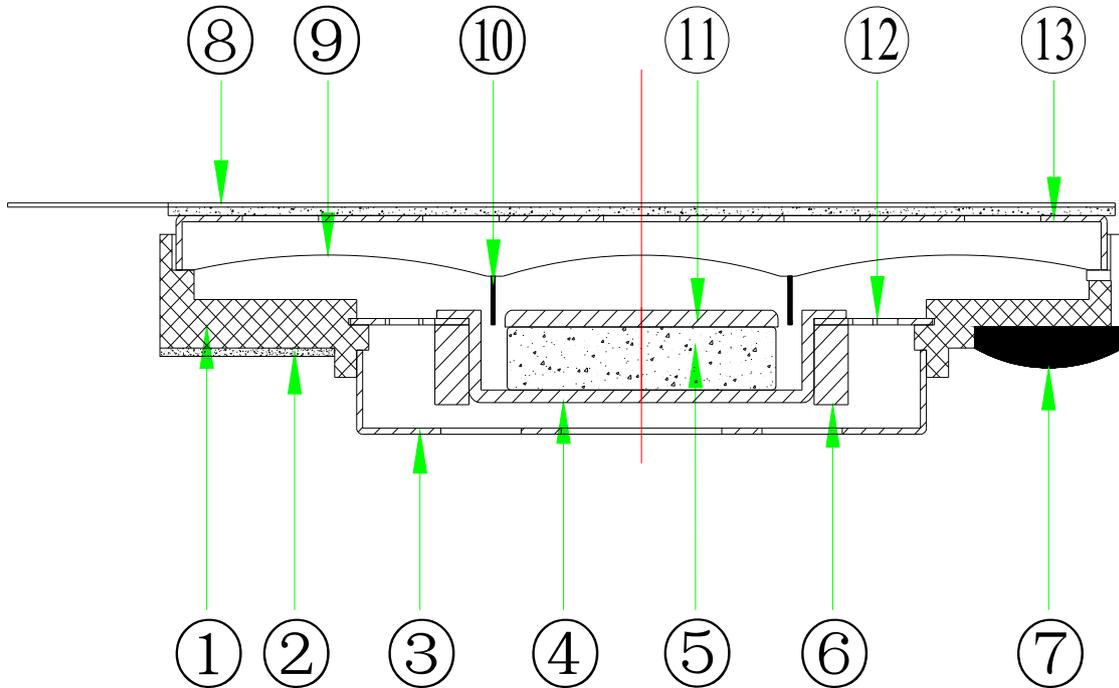
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6. Structure



13	Front Cap	1	SUS304	
12	Damper	1	SUS304	
11	Plate2	1	SPC	
10	Voice Coil	1	Copper	
9	Diaphragm	1	PEN	
8	Gasket	1	2B	
7	Terminal	1	Epoxy PCB	
6	Plate1	1	SPC	
5	Magnet	1	Nd-Fe-B	
4	Yoke	1	SPC	
3	Back Cap	1	SUS304	
2	Screen	1	3B	
1	Frame	1	PBT	
No.	Part Name	Q'ty	Material	Remarks

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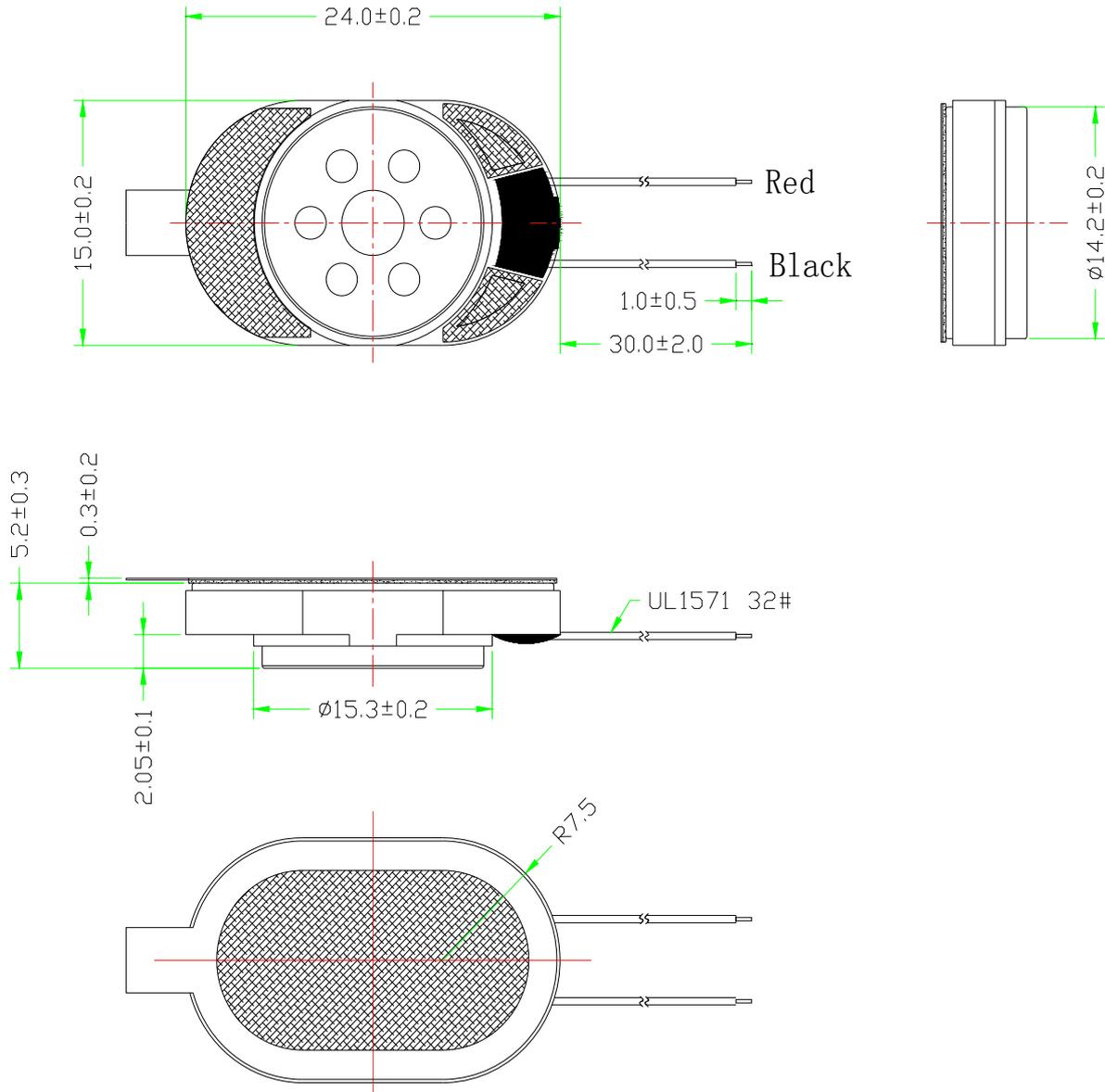
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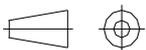
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7. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm

Tolerance : ± 0.2

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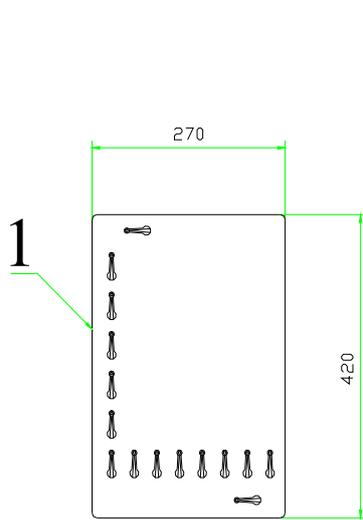
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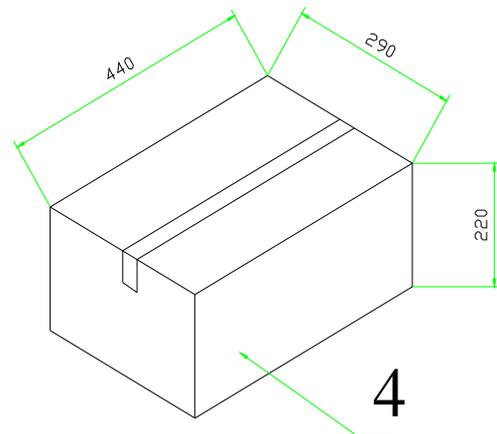
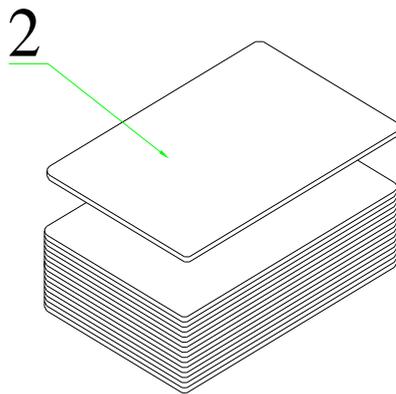
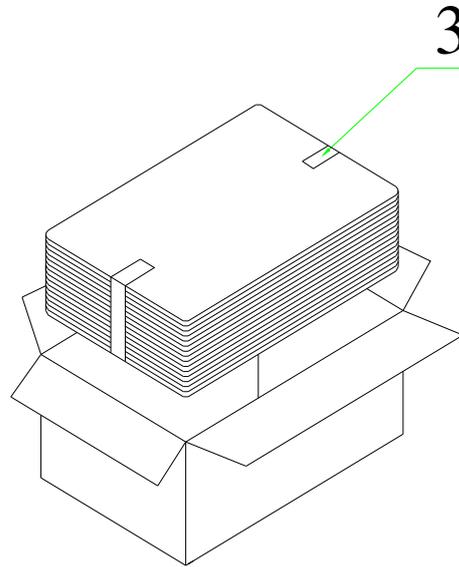
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8. Packing



100Pcs



QTY: 2000Pcs

440 x290 x220

