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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 : 45 mm

2.2 Height : 6.3 mm

2.3 Weight : 13.3 g

2.4 Operating Temperature range:

-25~+55℃ without loss of function

2.5 Store Temperature range:

-30~+60℃ without loss of function

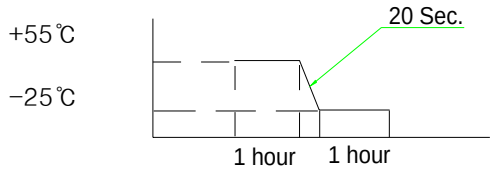
3. Electrical and Acoustic Characteristics.

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

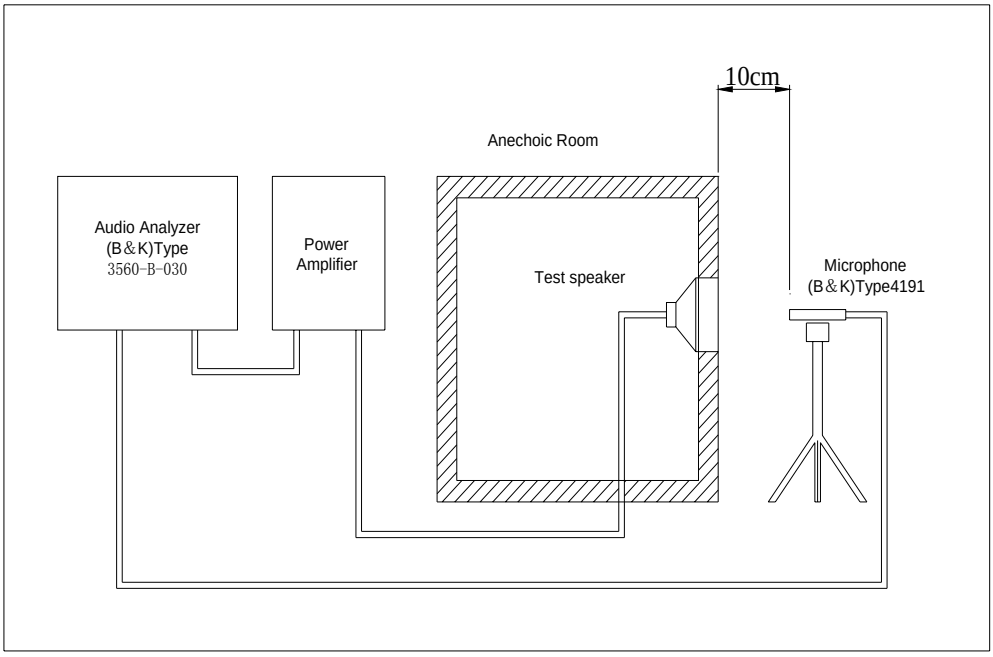
No	Items	Specification
1	Impedance	8 Ω ± 15% (1Vrms at 1.5KHz)
2	Sound Pressure Level	90 dB ± 3dB (1w/0.3m at average 1,1.2,1.5,2kHz)
3	Resonance Frequency	400 Hz ± 20%
4	Frequency Range	Fo ~4.5KHz
5	Input Power	Rated 1 W / Max. 1.5 W
6	Distortion	<5% Max. at 1kHz/0.85Vrms
7	Buzz and Rattle	Should not 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.

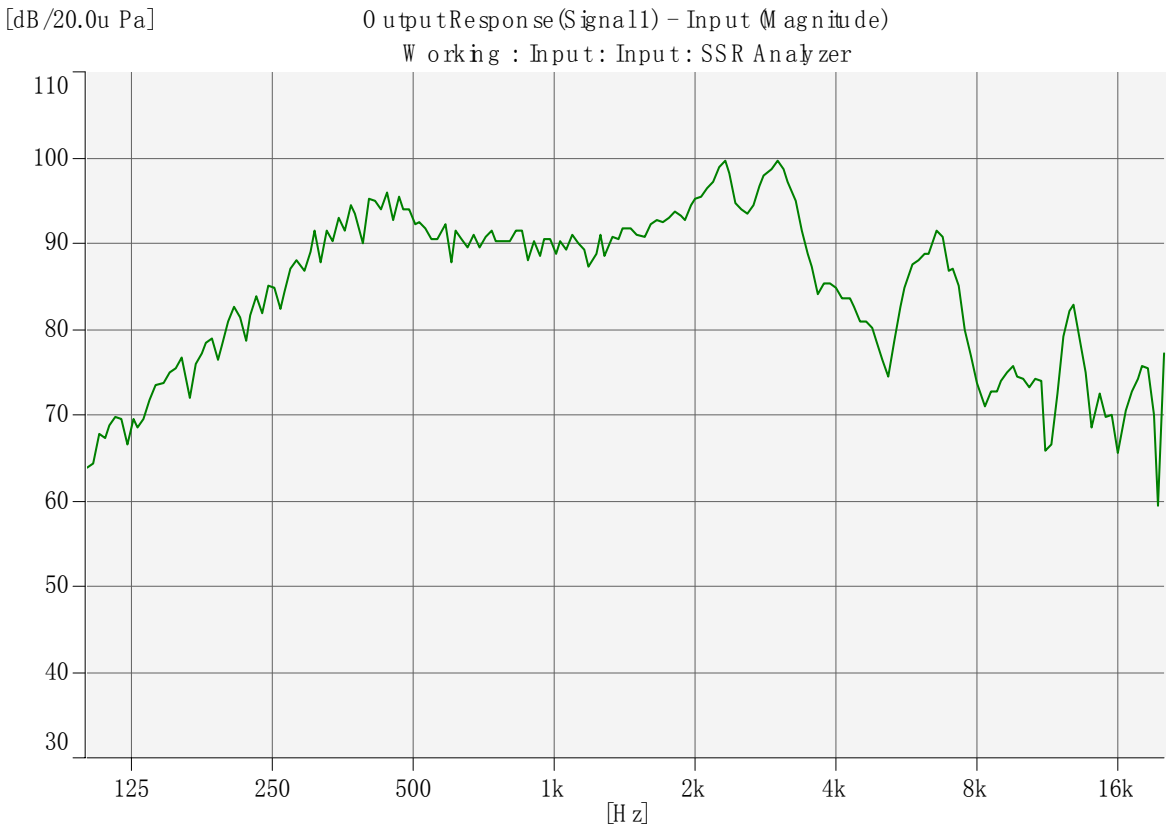
4. Reliability Test

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

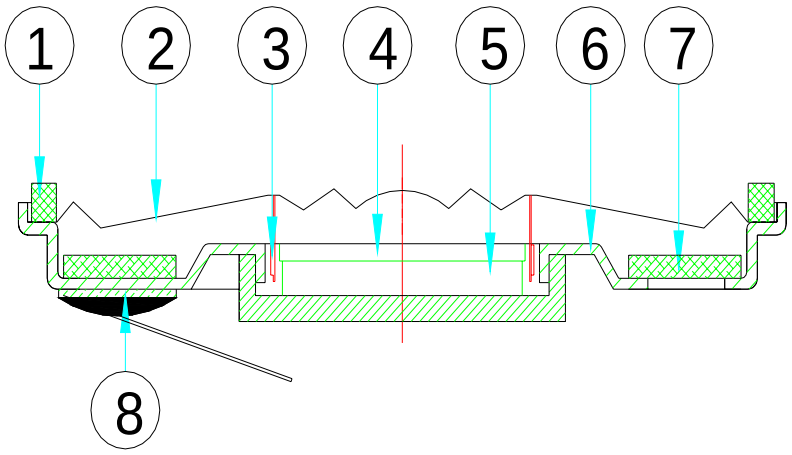
No	Items	Specification
1	High Temperature Test	After being placed in a chamber with +60±3 ℃ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
2	Low Temperature Test	After being placed in a chamber with −30±3 ℃ for 96 hours and then being placed in natural 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±2 ℃ for hours and then being placed in natural condition for 1 hour, speaker shall be measured.
4	Thermal Shock Test	After being placed in a chamber at +55℃ for 1 hour, then speaker shall b placed in a chamber at −25℃ 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. 
5	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to55Hz 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 MΩ

5. Measurement Block Diagram & Response curve



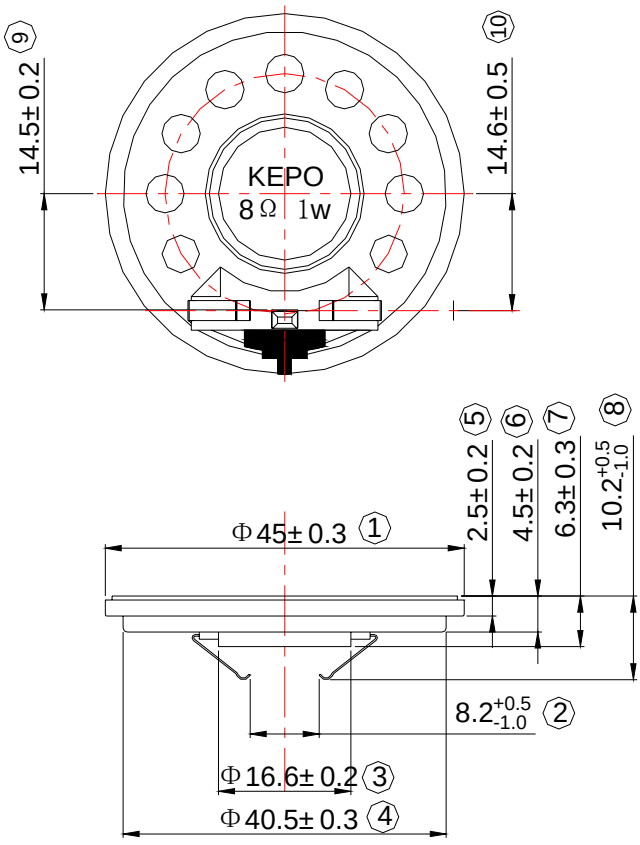


6. Structure

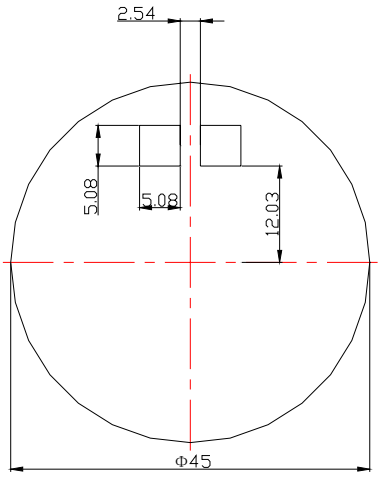


8	Terminal	1	Spring+PPA	
7	Screen	1	Unwoven fabric	
6	Frame	1	SPCC	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPCC	
3	V-coil	1	bobbin coil	
2	Diaphragm	1	PET	
1	Gasket	1	ABS	
No.	Part Name	Q'ty	Material	Remarks

7. Dimensions



1.Spring material: Stainless steel SUS301H, Thickness 0.2mm
2.Spring base material: PPA
3.Spring test: Spring power must be greater than 4N after compression at working position 48 hours.
4.Surface of the spring plated with gold: first plated with nickel(thickness 1.5~2.0 μ m),then with gold (thickness ≥ 0.03 μ m)

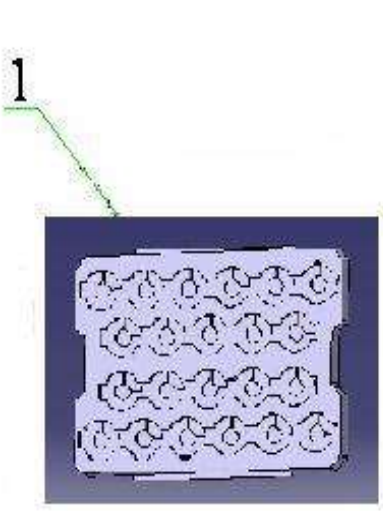


Required PCB PAD LOCATION & size.

FIRST ANGLE PROJECTION

UNIT : mm
Tolerance : ±0.2

8. Packing



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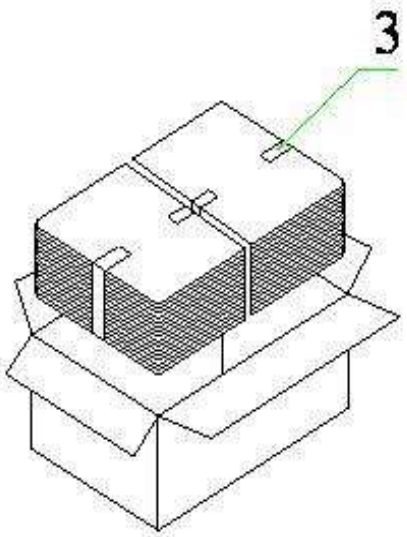
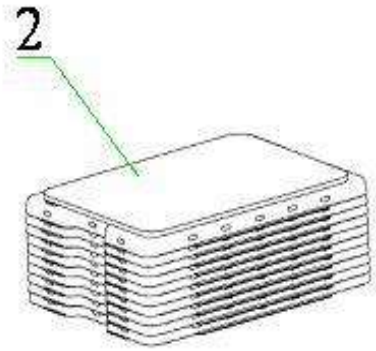
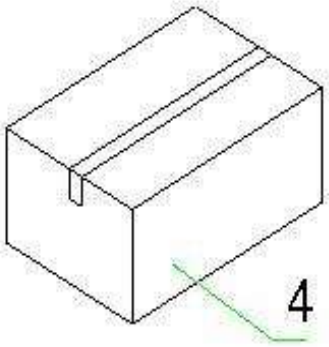




22X10SET=220



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