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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
 : 20 mm

 2.2 Height
 : 4 mm

 2.3 Weight
 : 2.3 g

2.4 Operating Temperature range:

-20~+70℃ without loss of function

2.5 Store Temperature range:

-30~+85℃ 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	$8~\Omega~\pm 15\%~$ (1Vrms at 1KHz)		
2	Sound Pressure Level	89 dB $\pm$ 3dB (0.1W/0.1M at 1kHz)		
3	Resonance Frequency	600 Hz ± 20%		
4	Frequency Range	Fo ~20KHz		
5	Input Power	Rated 0.8 W / Max. 1 W		
6	Distortion	<10% Max. at 2kHz/1Vrms		
7	Buss and Rattle	Should not be audible buzzes,rattles when the 2.53V 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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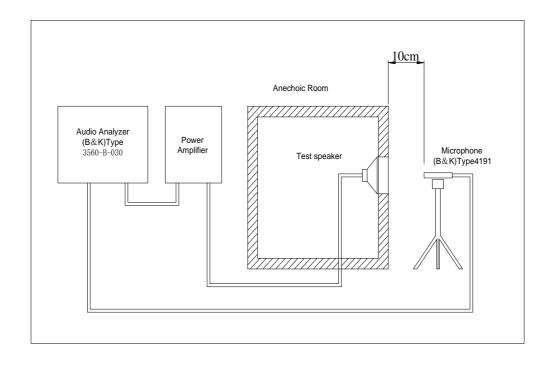
## 4. Reliability Test

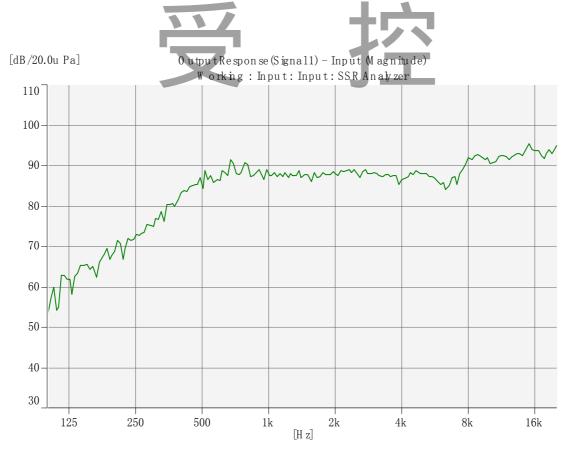
After test(1~7item), the speaker S.P.L . difference shall be within  $\pm 3 dB$ , and the appearance not exist any change to be harmful to normal operation (e.g. cracks,rusts,damages and especially distortion).

No	Items	Specification
1	High Temperature Test	After being placed in a chamber with +85±3 °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 -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 $\pm$ 2 °C 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 +70°C for 1 hour, then speaker shall b placed in a chamber at -20°C 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.  +70°C  -20°C  1 hour 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 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 $M\Omega$

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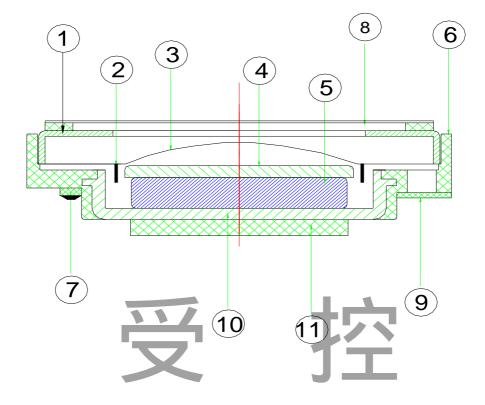
## 5. Measurement Block Diagram & Response curve





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# 6. Structure



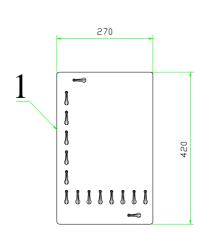
11	Cushion	1	paper	800+PSR0. 2+800
10	Yoke	1	SPC	
9	Screen	1	3B	
8	Gasket	1	unwoven fabric	800+2B+800+PSR0.3
7	Terminal	1	Epoxy PCB	
6	Frame	1	PBT	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPC	
3	Diaphragm	1	PEN	
2	Voice Coil	1	Copper	
1	Cap	1	SUS304	
No.	Part Name	Q'ty	Material	Remarks

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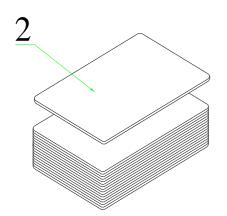
# 7. Dimensions Ф20 UL1571 AWG32# Red(+) UL1571 AWG32# Black(-) Ф12.0 4.6(working position) 4.9(free position) $20\pm 2$ $1.0 \pm 0.3$ FIRST ANGLE PROJECTION UNIT : mm Tolerance: ±0.2

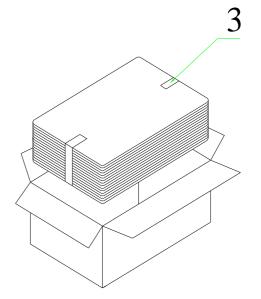
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## 8. Packing

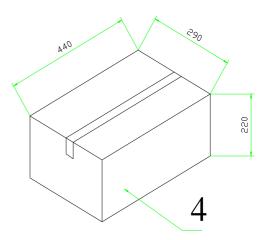












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9. Revision							
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