CONTENTS

1. Scope

This specification is applied to the two mode 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 : 1710 mm

2.2 Height : 3.7mm

2.3 Weight : 1.0 gr.

2.4 Operating Temperature range:

-20~+70℃ without loss of function

2.5 Store Temperature range:

-40~+85℃ without loss of function

3. Electrical and Acoustic Characteristics.

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

3.1 Speaker

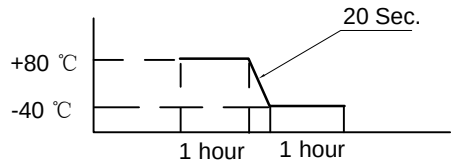
	Items	Specification
1	Impedance	8Ω ± 15%(at 1Vrms,1.5kHz)
2	Sound Pressure Level	86dB ± 3dB(1kHz/0.1W/0.1M)
3	Resonance Frequency	1000 Hz ± 20%
4	Frequency Range	F_0 ~ 10.0kHz
5	Input Power	Rated 0.5W / Max. 0.8W
6	Distortion	<10% Max. at 2kHz/2Vrms
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 2.0V sine wave signal swept at frequency range.
8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.

3.2 Receiver

	Items	Specification
1	Impedance	8Ω ± 15%(at 1Vrms,1.5kHz)
2	Sound Pressure Level	118 dB ± 3dB(1kHz/100mV)
3	Frequency Range	300~3400Hz
4	Input Power	Rated 10mW / Max. 30mW
5	Distortion	<3% Max. at 1kHz/1Vrms
6	Buzz and Rattle	Should not be audible buzzes,rattles when the 0.28V sine wave signal swept at frequency range.

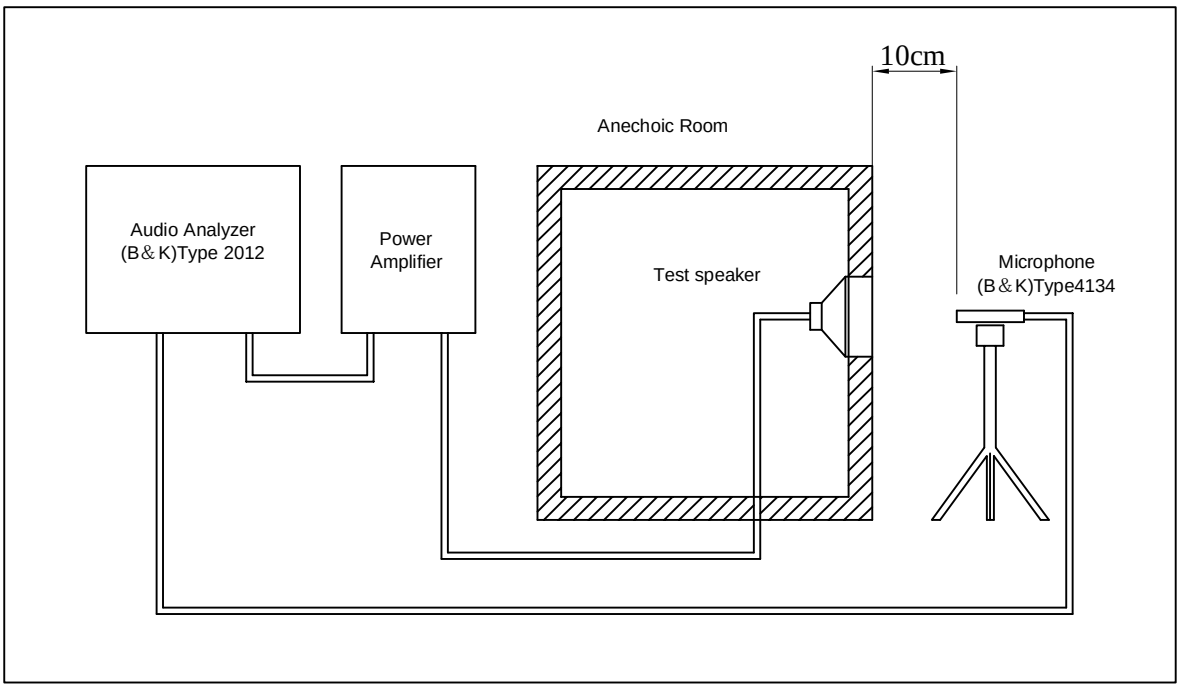
4. Reliability Test

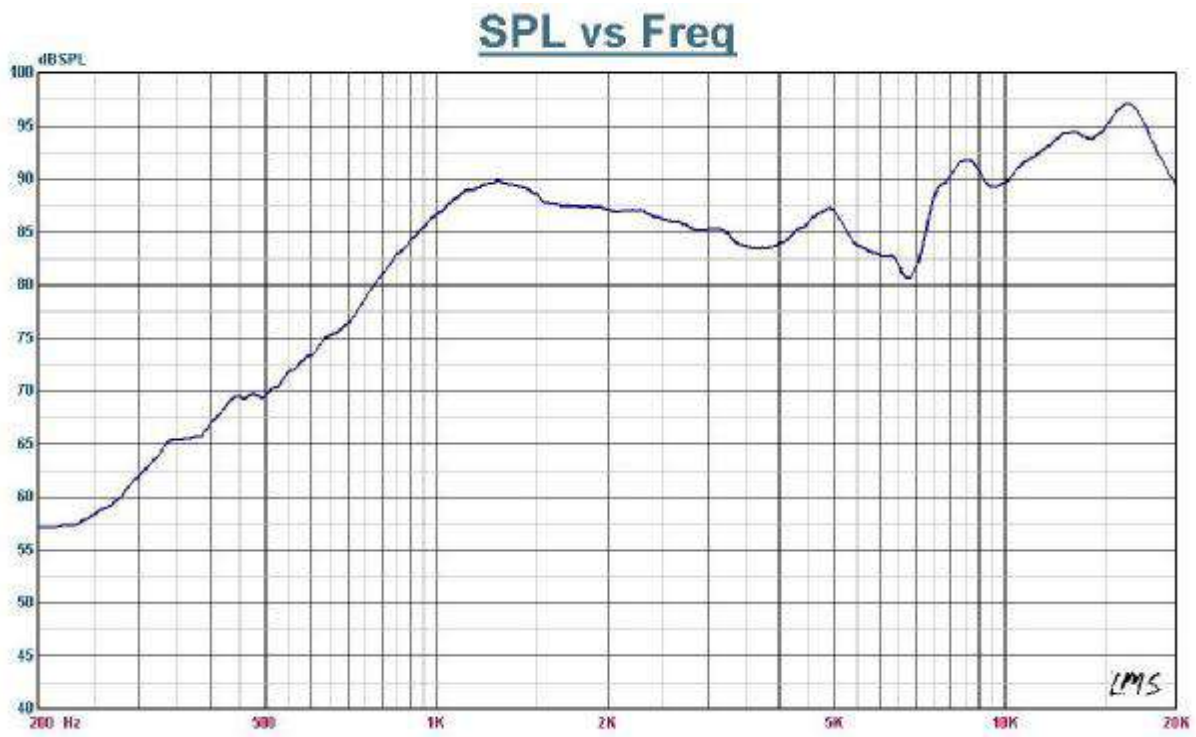
After test(1~7item), the speaker S.P.L . difference shall be within ± 3dB, and the appearance not exist any change to be harmful to normal operation(e.g. cracks,rusts,damages and especially distortion).

	Item	Specification
1	High Temperature Test	After being placed in a chamber with +85± 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 -40± 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 96 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 +80 ℃ for 1 hour, then speaker shall be placed in a chamber at -40 ℃ 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	The speaker after being applied loading white noise with input power 0.5W(2.0Vrms.) for 96 hours, then placed in natural condition for 1 hour, speaker shall be measured.
		The receiver after being applied loading white noise with input power 10mW(0.28Vrms.) 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

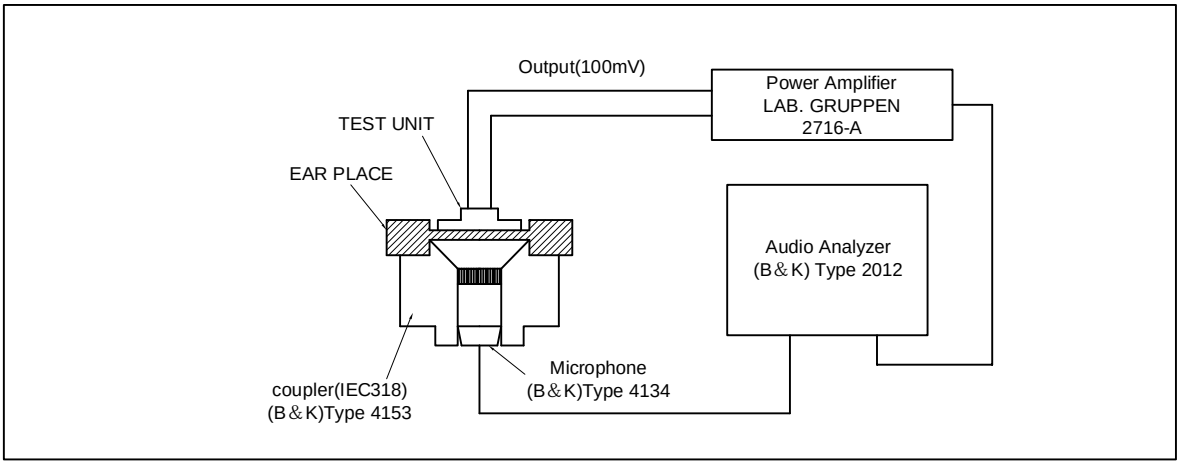
5. Measurement Block Diagram & Response curve

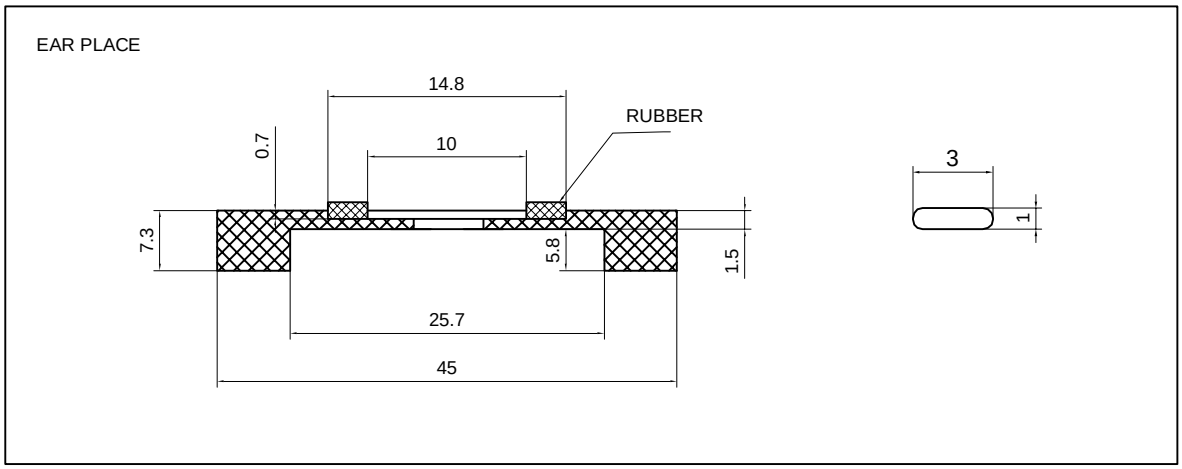
5.1 Speaker

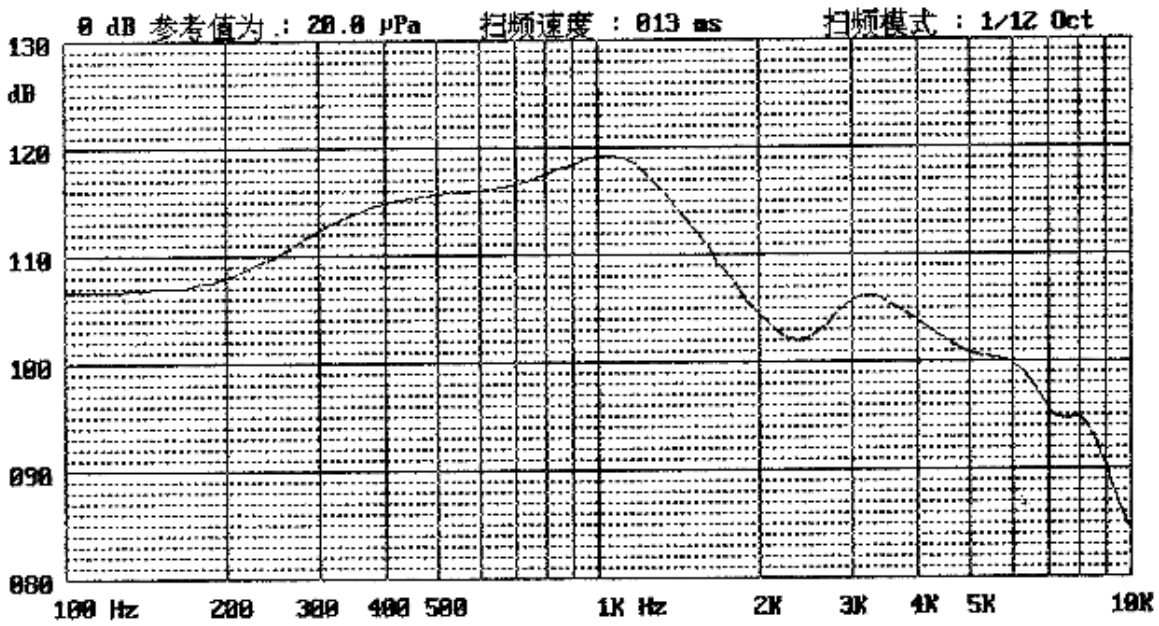




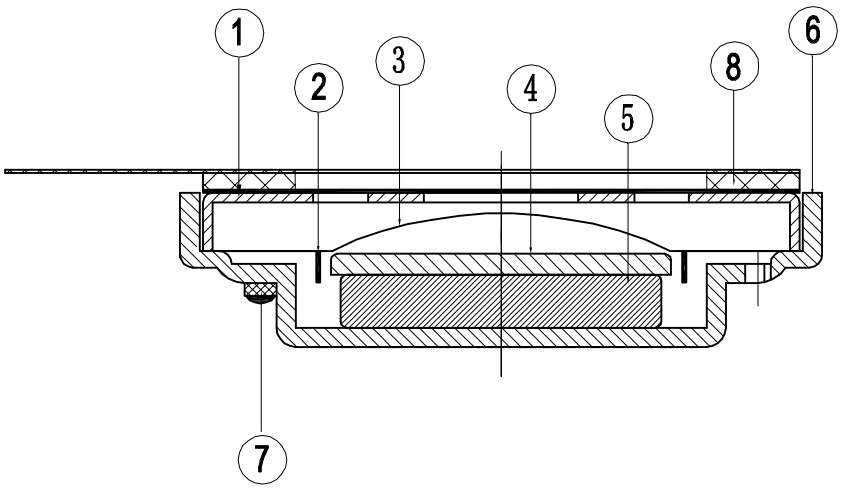
5.2 Receiver


Output(100mV)
Power Amplifier
LAB. GRUPPEN
2716-A
TEST UNIT
EAR PLACE
Audio Analyzer
(B&K) Type 2012
Microphone
(B&K)Type 4134
coupler(IEC318)
(B&K)Type 4153


EAR PLACE
14.8
RUBBER
10
0.7
3
7.3
5.8
1.5
1
25.7
45

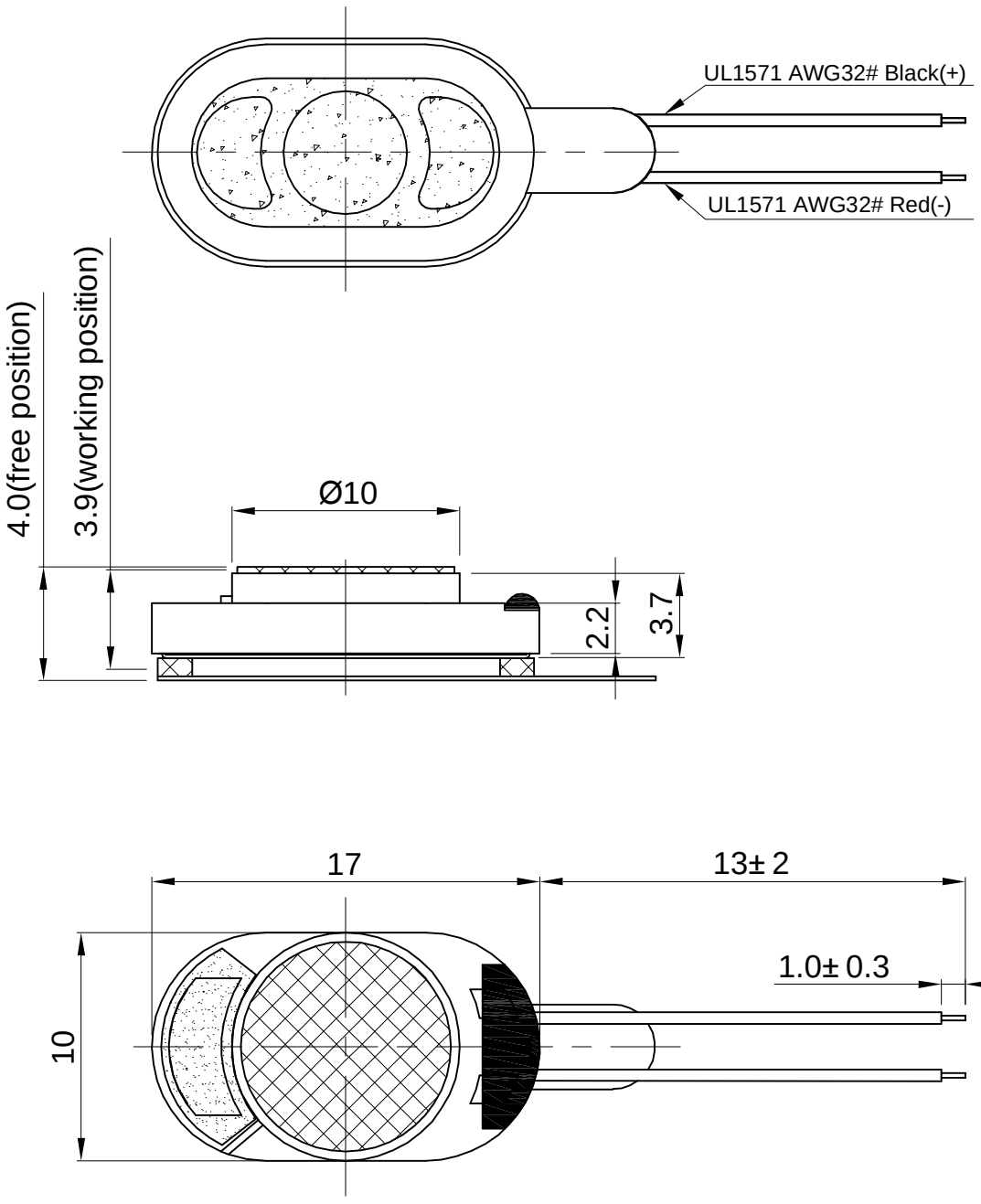

0 dB 参考值为 : 20.0 μPa
扫频速度 : 013 as
扫频模式 : 1/12 Oct
130
dB
120
110
100
090
080
100 Hz
200
300
400
500
1K Hz
2K
3K
4K
5K
10K

6. Structure



No.	Part Name	Q'TY	Material	Remarks
8	Gasket	1	unwoven fabric	800+2B+800
7	Terminal	1	Epoxy PCB	
6	Frame	1	SPC	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPC	
3	Diaphragm	1	PEI	
2	Coil	1	Copper	
1	Cap	1	SUS304	

7. Dimensions

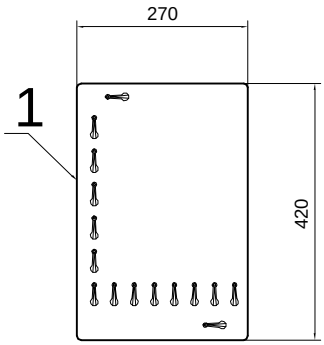


FIRST ANGLE PROJECTION

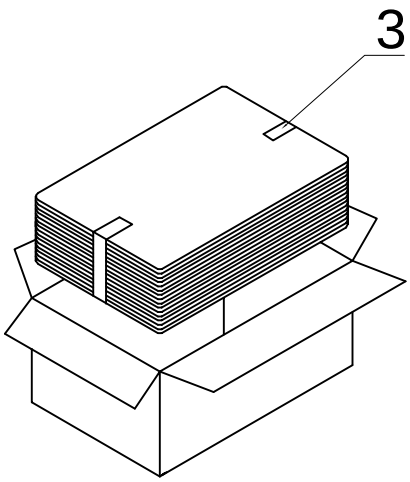
UNIT : mm

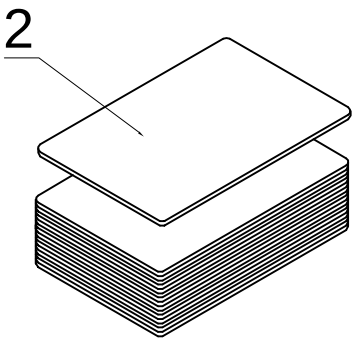
Tolerance : ± 0.2

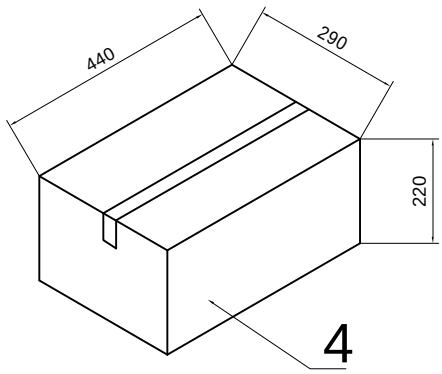
8. Packing



100Pcs







QTY: 2000Pcs

440 x290 x220

9. Revision

Rev. No.	DATE	PAGE	DESCRIPTION	SIGN
1.0	2006.09.19		Primary	
1.1	2006.09.21		Gasket change	