SPECIFICATION

Customer : QUARTZ-1

Applied To :

Product Name : Speaker

Model Name : KP20DM01F800-4998

Drawing No. : KFC4998

Signature of Approval

Signature of KEPO

Approved by	Checked by	Issued by	Date

宁波凯普电子有限公司

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ISO9001 Certificate

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CONTENTS

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 : Φ20 mm
2.2 Height : 4.8mm
2.3 Weight : 4.2 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

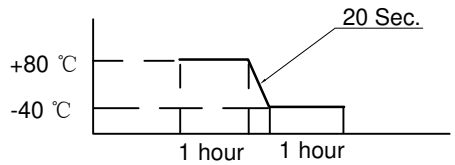
	Items	Specification
1	Impedance	8Ω ± 15%(at 1Vrms,1.5kHz)
2	Sound Pressure Level	90dB ± 3dB(1KHz/0.1W/0.1M)
3	Resonance Frequency	800Hz ± 20%
4	Frequency Range	F_0 ~ 20kHz
5	Input Power	Rated 0.5W / Max. 0.8W
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 0.3W sine wave signal swept at frequency range.
8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.

Vibration Requirements

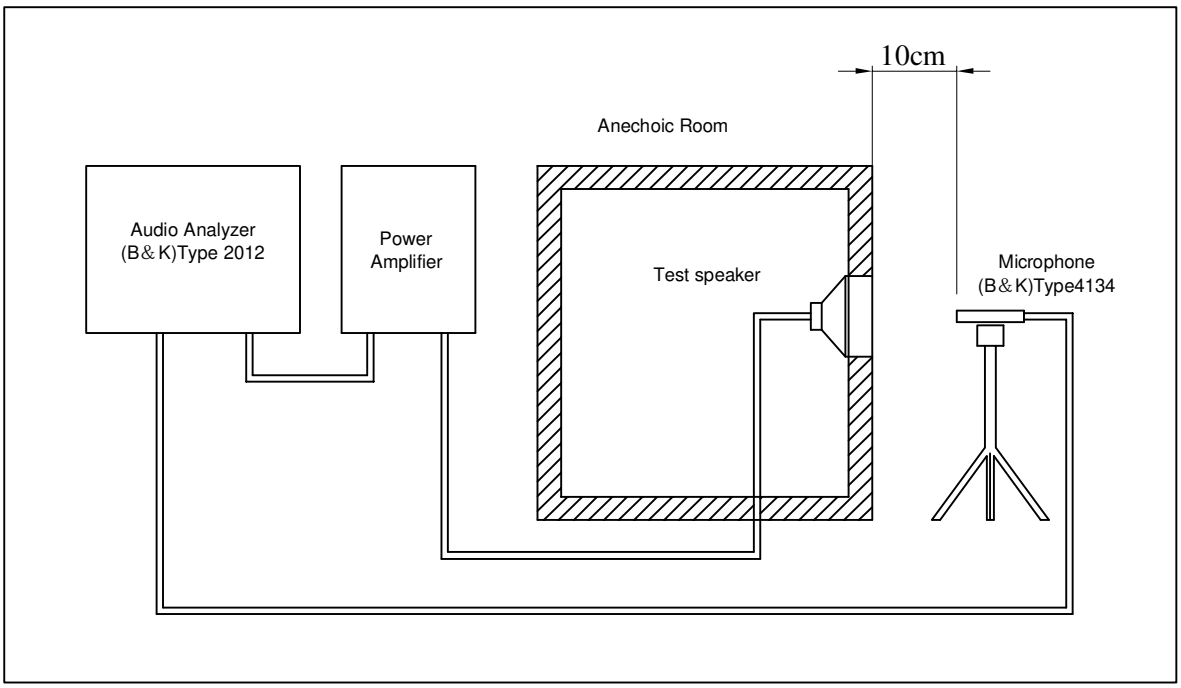
	Items	Specification
1	Vibration Resonance Frequency	160Hz ± 5%
2	Vibration Level for 100g block	134dB rms re 1x10^(-6)m.s^(-2)minimum,12dBVrms,160Hz,25 ℃ 128dB rms re 1x10^(-6)m.s^(-2)minimum,12dBVrms,160Hz,25 ℃
3	Level Response	A plot of vibration level versus input voltage level shall be provided for the rang(-26dBV to -6dBV) for the test block masses 100g at 160Hz

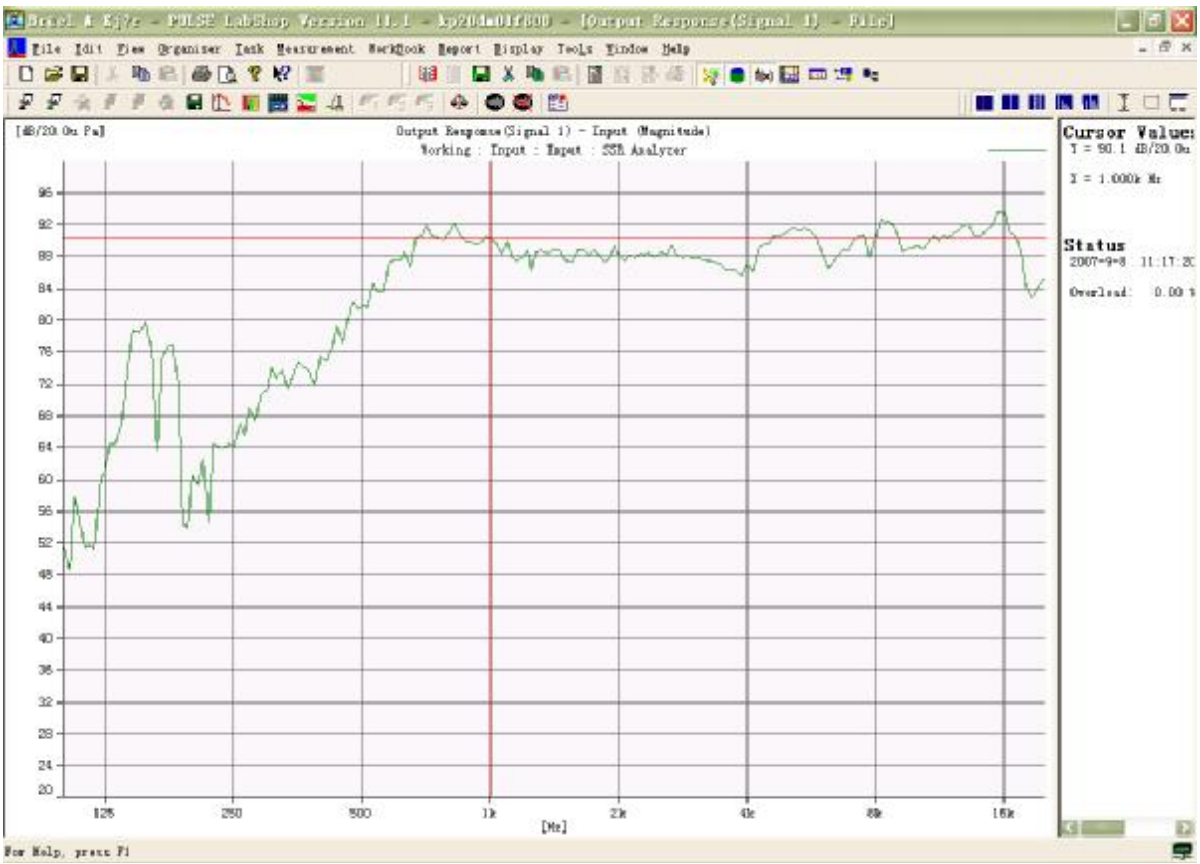
4. Reliability Test

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).

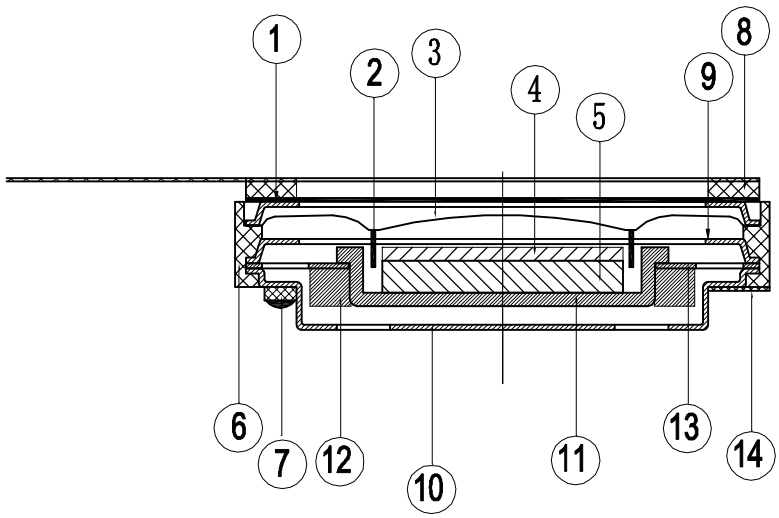
	Item	Specification
1	High Temperature Test	After being placed in a chamber with +85± 3 ℃ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
2	Low Temperature Test	After being placed in a chamber with -40± 3 ℃ for 96 hours and then being placed in natural condition 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	After being applied loading white noise with input power 0.5W 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



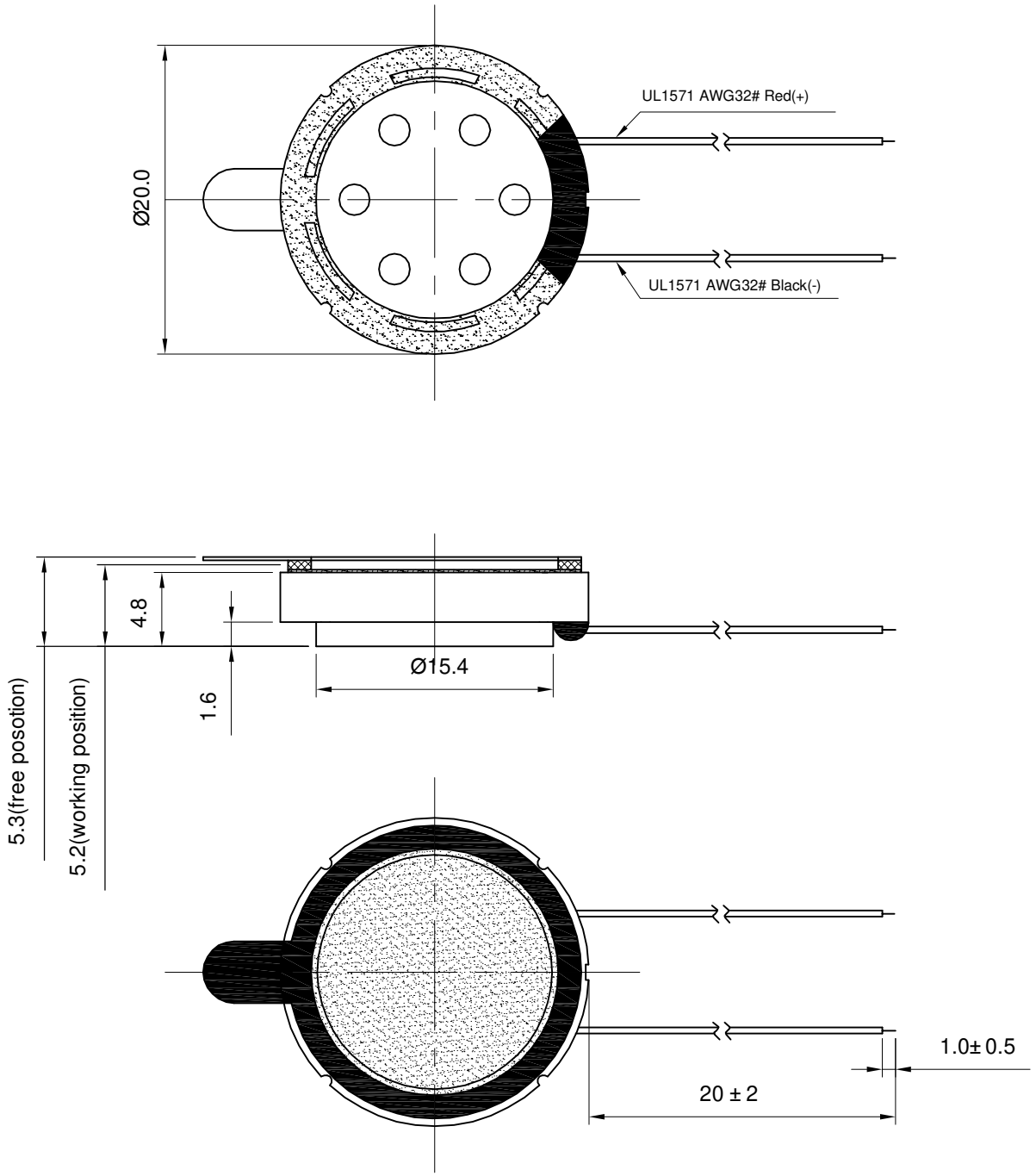


6. Structure



No.	Part Name	Q'TY	Material	Remarks
14	Screen	1	3B	
13	Plate	1	SUS 304	
12	Plate	1	SPCC	
11	U yoke	1	SPCC	
10	Cap	1	SUS 304	
9	Cap	1	SUS 304	
8	Gasket	1	unwoven fabric	800+2B+800
7	Terminal	1	Epoxy PCB	
6	Frame	1	PBT	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPCC	
3	Diaphragm	1	PEN	
2	Voice Coil	1	Copper	
1	Cap	1	SUS 304	

7. Dimensions

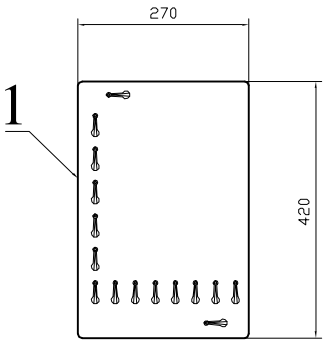


FIRST ANGLE PROJECTION

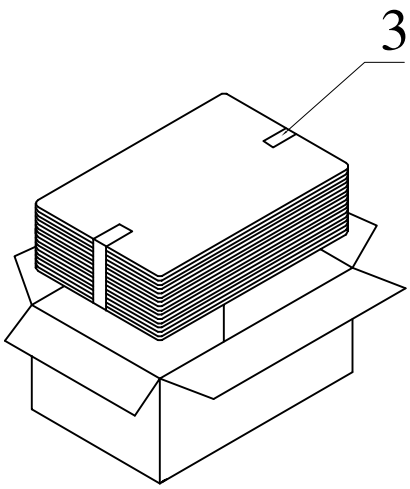
UNIT : mm

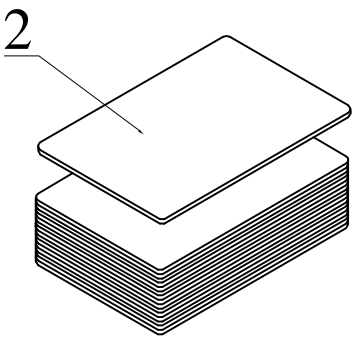
Tolerance : ± 0.2

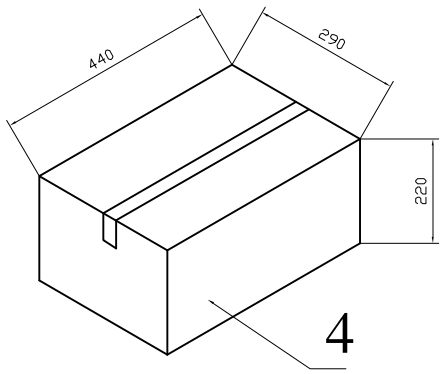
8. Packing



100Pcs







QTY: 2000Pcs

440 x290 x220

9. Revision

Rev. No.	DATE	PAGE	DESCRIPTION	BOM
1.0	2009.06.05		Primary	1.0