

# SPECIFICATION

Customer : QUARTZ-1

Applied To :

Product Name : Speaker

Model Name : KP3040SP2

Drawing No. : KFC3401

Signature of Approval

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Signature of KEPO

Approved by	Checked by	Issued by	Date



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## 1. Scope

This specification is applied to the two side 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 : Ø30 mm
- 2.2 Height : 4.5mm
- 2.3 Weight : 6.0gr.
- 2.4 Operating Temperature range:  
-20~+60℃ without loss of function
- 2.5 Store Temperature range:  
-25~+60℃ without loss of function

## 3. Electrical and Acoustic Characteristics.

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

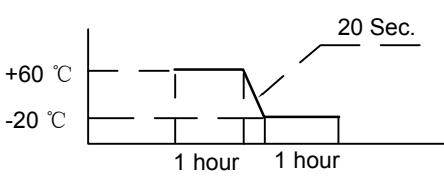
### 3.1 Speaker

	Items	Specification
1	Impedance	8 Ω ± 15%(at 1Vrms,1.5kHz)
2	Sound Pressure Level	90dB ± 3dB( 1kHz/0.1W/0.1M )
3	Resonance Frequency	380Hz ± 15%
4	Frequency Range	F <sub>o</sub> ~ 20.0kHz
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.

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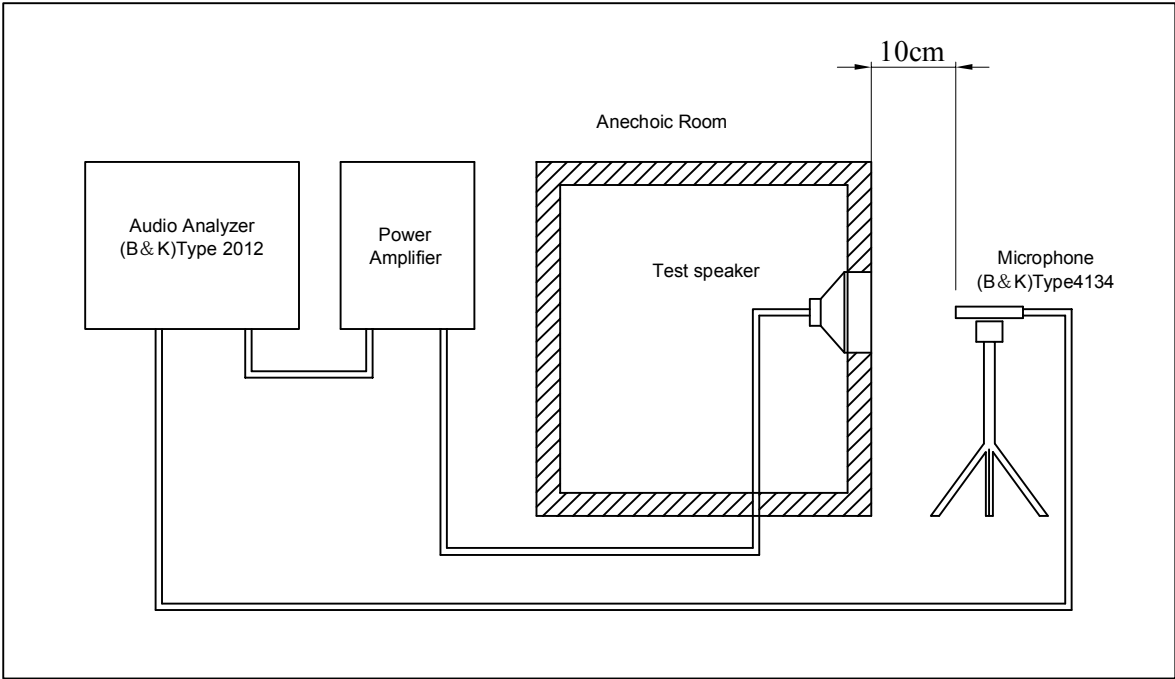
## 4. Reliability Test

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).

	Item	Specification
1	High Temperature Test	After being placed in a chamber with $+60\pm 3\text{ }^\circ\text{C}$ 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 $-20\pm 3\text{ }^\circ\text{C}$ 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 60 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 <math>+60\text{ }^\circ\text{C}</math> for 1 hour, then speaker shall be placed in a chamber at <math>-20\text{ }^\circ\text{C}</math> 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 0.5W(2.0Vrms.) 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 $\Omega$

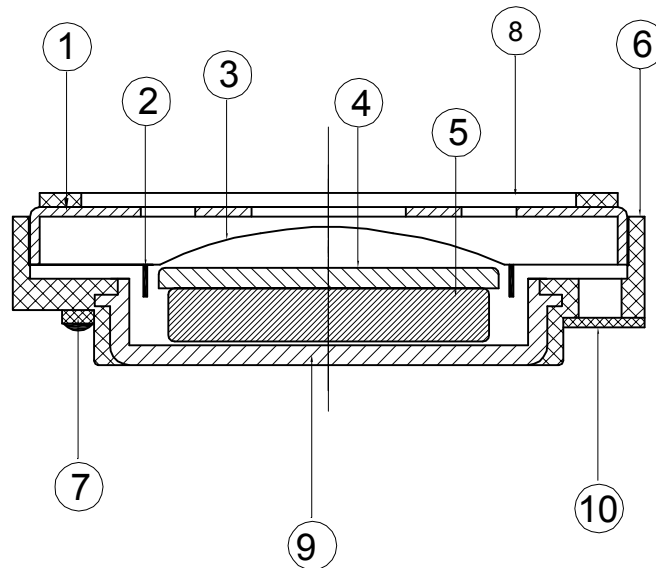
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### 5. Measurement Block Diagram & Response curve



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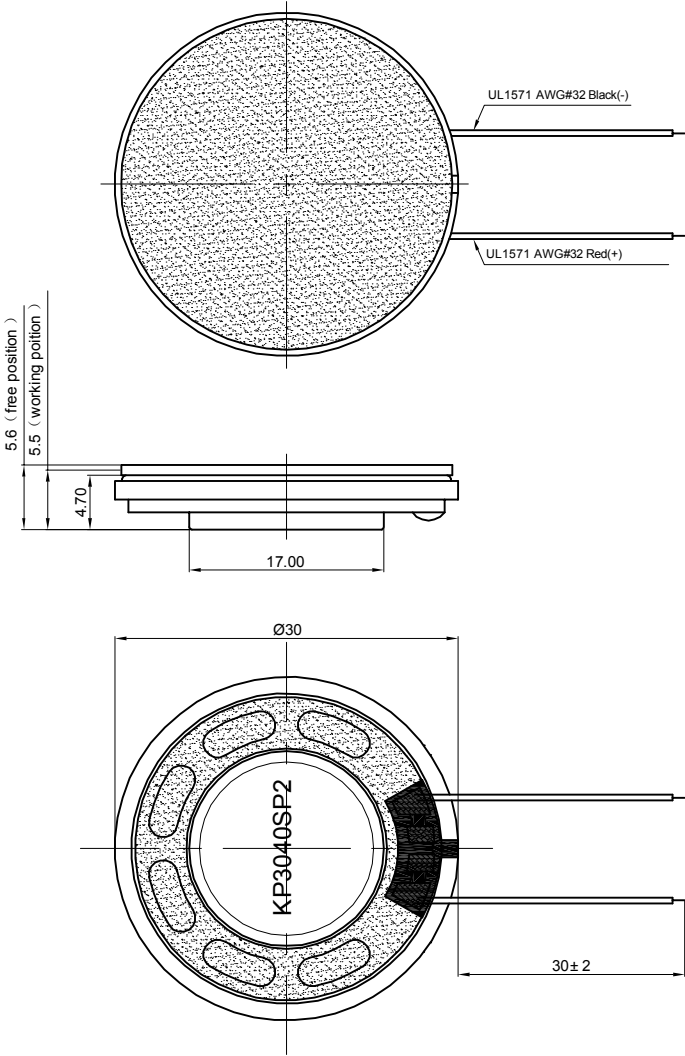
## 6. Structure



10	Screen	1	3B	
9	U YOKE	1	SPC	
8	Gasket	1	unwoven fabric	800+PSR0.5
7	Terminal	1	Epoxy PCB	
6	Frame	1	PBT	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPC	
3	Diaphragm	1	PET	
2	Coil	1	Copper	
1	Cap	1	PBT	
No.	Part Name	Q'TY	Material	Remarks

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### 7. Dimensions



FIRST ANGLE PROJECTION

UNIT : mm  
Tolerance :  $\pm 0.5$

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## 8. Packing

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number.

There shall be no mechanical damage on products during transportation and/or in storage.



