

# SPECIFICATION

Customer : QUARTZ

受 控

Applied To :

Product Name : SPEAKER

Model Name : KP4050SP2F450R50-7829

Drawing No. : KFC7829

Signature of Appraisal

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Signature of KEPO

Approved by	Checkde by	Issued by	Date
			



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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 : 40 mm

2.2 Height : 5 mm

2.3 Weight : 9.5 g

2.4 Operating Temperature range:

-20 ~+60 °C without loss of function

2.5 Store Temperature range:

-30 ~+75 °C 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	50 Ω ± 15% (1Vrms at 1.0KHz)
2	Sound Pressure Level	92 dB ± 3dB (0.1w/0.1m at average 0.8,1.0,1.2,1.5KHz)
3	Resonance Frequency	500 Hz ± 20%
4	Frequency Range	Fo ~8KHz
5	Input Power	Rated 0.5 W / Max. 1 W
6	Distortion	10% Max. at 1kHz/1Vrms
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 5V 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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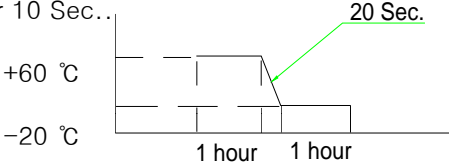
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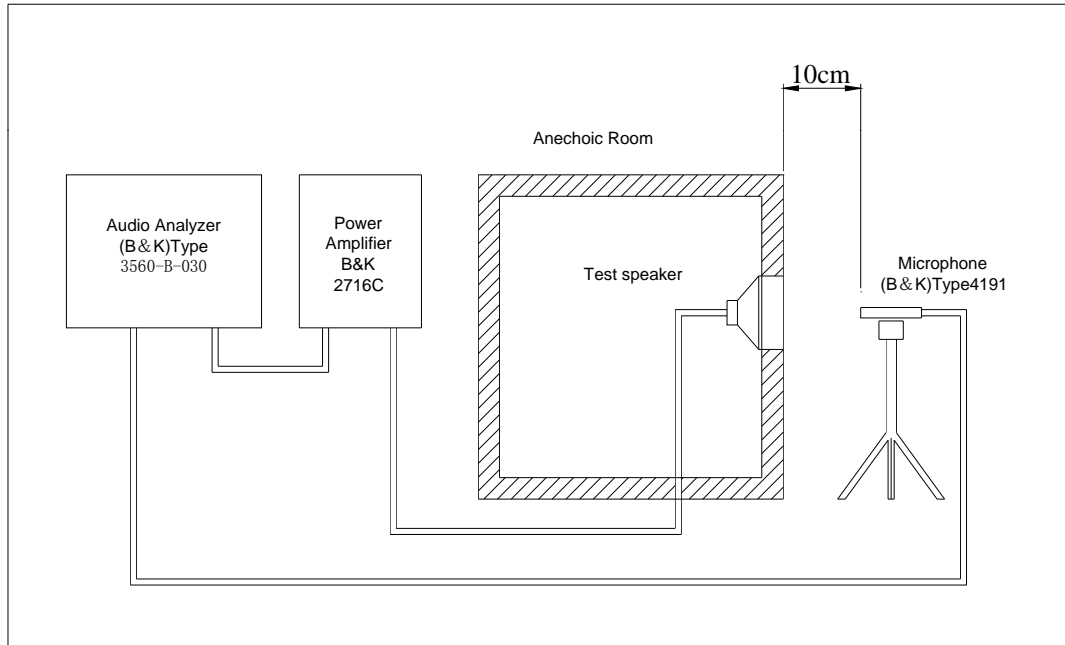
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## 4. Reliability Test

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).

No	Items	Specification
1	High Temperature Test	After being placed in a chamber with $+75 \pm 3 \text{ }^\circ\text{C}$ 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 $-30 \pm 3 \text{ }^\circ\text{C}$ 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 85 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 4 above cycles, speaker shall be measured after being placed in natural condition for 10 Sec..</p>  <p>The diagram shows a temperature profile starting at <math>+60 \text{ }^\circ\text{C}</math> for a 1-hour dwell. A green line indicates a ramp down to <math>-20 \text{ }^\circ\text{C}</math> over a 20-second period. At <math>-20 \text{ }^\circ\text{C}</math>, there is another 1-hour dwell period.</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(5Vrms.) 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 $1 \text{ M}\Omega$

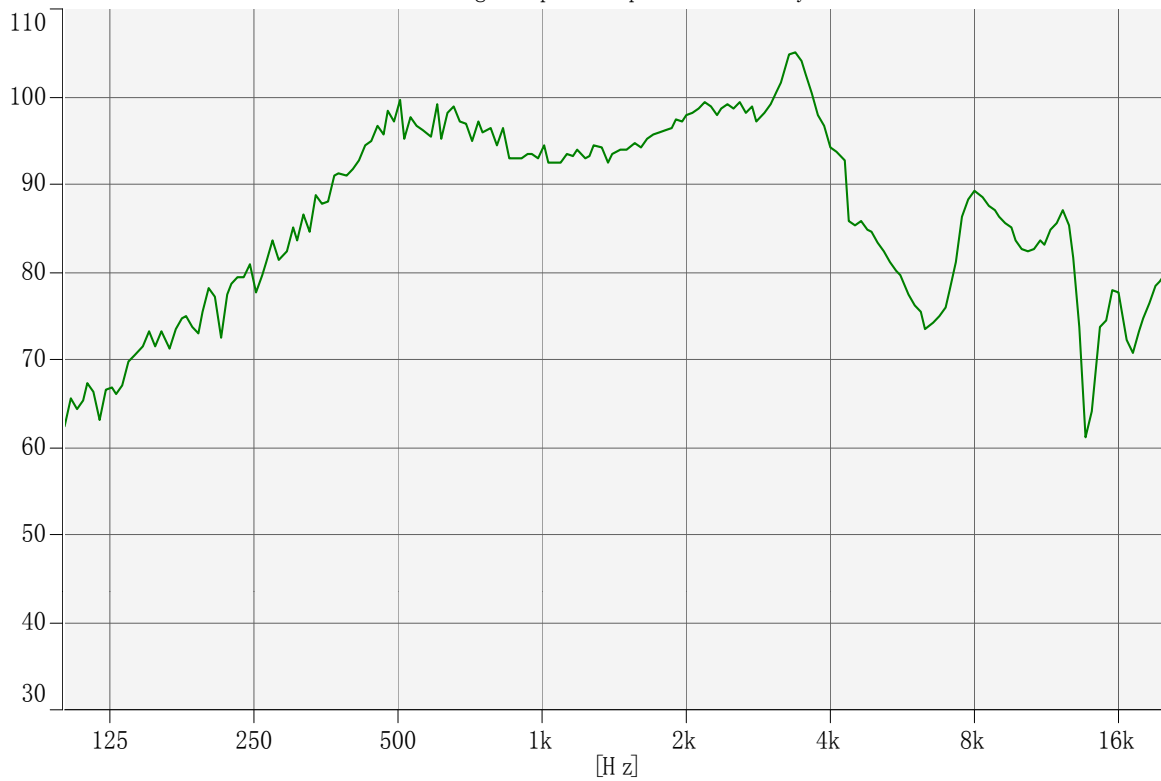
### 5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]

Output Response (Signal) - Input (Magnitude)

Working : Input : Input : SSR Analyzer



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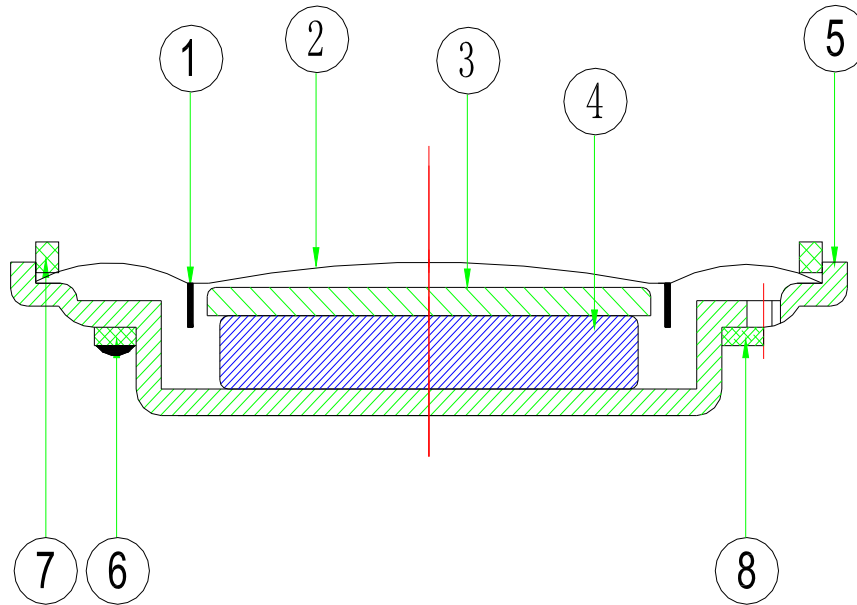
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## 6. Structure



8	Screen	1	unwoven fabric	
7	Gasket	1	Paper	
6	Terminal	1	Epoxy PCB	
5	Frame	1	SPC	
4	Magnet	1	Nd-Fe-B	
3	Plate	1	SPC	
2	Diaphragm	1	PET	
1	Voice Coil	1	Copper	
No.	Part Name	Q'ty	Material	Remarks

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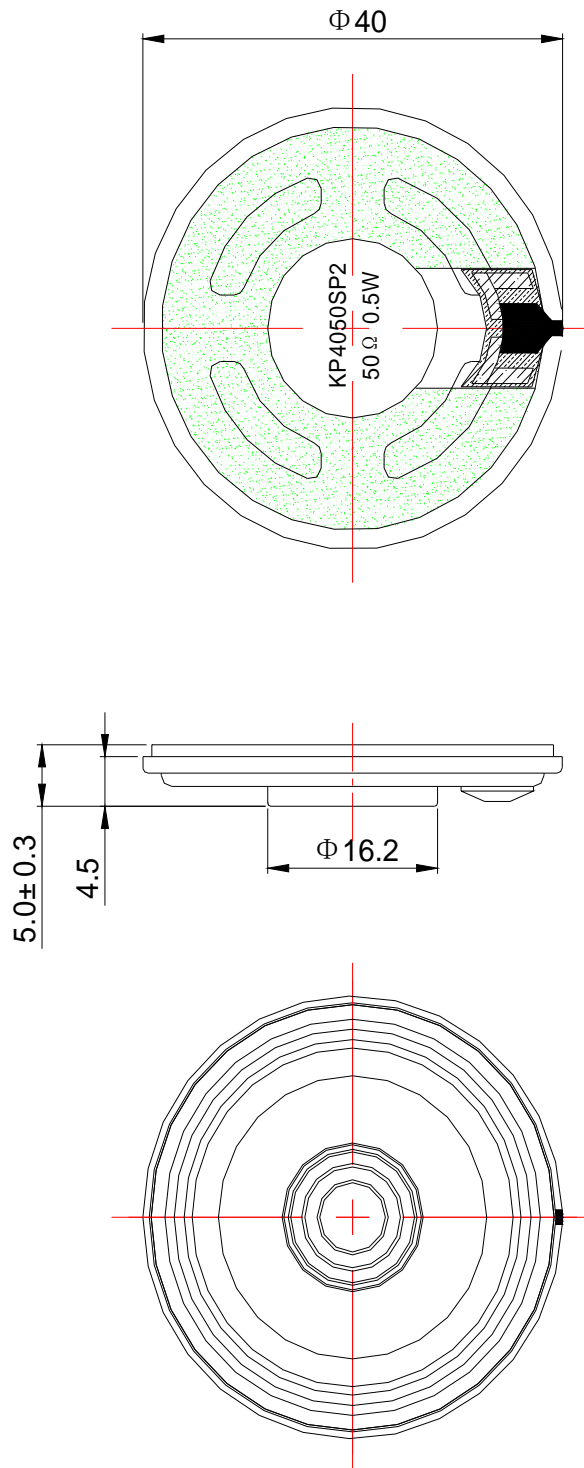
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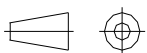
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## 7. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm

Tolerance :  $\pm 0.2$

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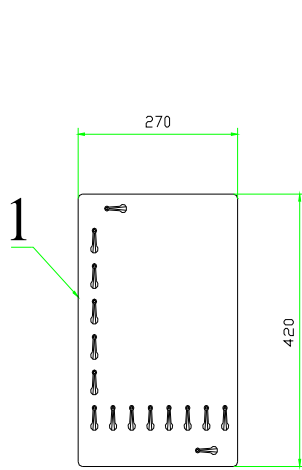
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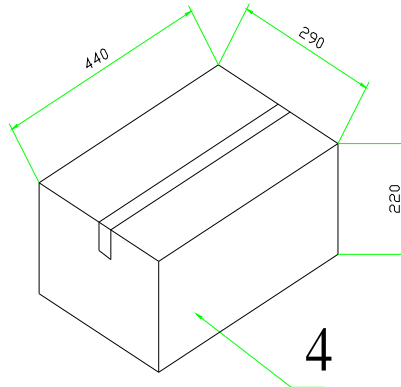
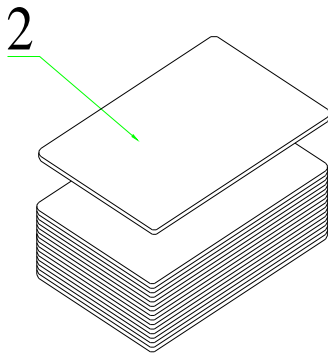
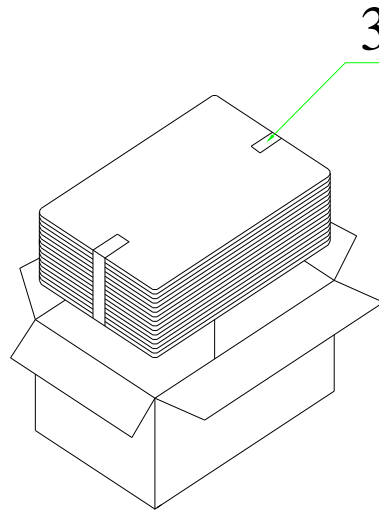
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## 8. Packing



35Pcs



QTY:490Pcs

440 x290 x220



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### 9. Revision

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1.0	2015-11-3		Primary	