

Specification for Speaker	Page	2/9
Model No. : KP50180SP1	Revision No.	1.0
	Drawing No.	KFC3549

CONTENTS

1. Scope
2. General
3. Electrical and Acoustic Characteristics.
4. Reliability Test
5. Measurement Block Diagram & Response curve
6. Structure
7. Dimensions
8. Packing
9. Cautions for Use
10. Revision

Specification for Speaker		Page	3/9
Model No. : KP50180SP1		Revision No.	1.0
		Drawing No.	KFC3549

1. Scope

This specification is applied to the dynamic speaker which is used all of the electrical acoustic product.

2. General

- 2.1 Out-Diameter : \varnothing 50 mm
- 2.2 Height : 17.5mm
- 2.3 Weight : 50 ± 5 gr.
- 2.4 Operating Temperature range:
-25~+70 $^{\circ}$ C without loss of function
- 2.5 Store Temperature range:
-25~+70 $^{\circ}$ C without loss of function

3. Electrical and Acoustic Characteristics.

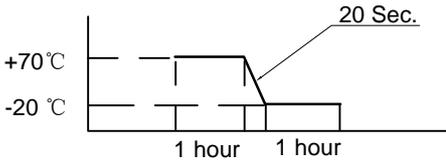
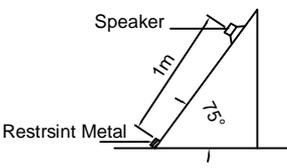
Test condition : 15 ~ 35 $^{\circ}$ C , 25% ~ 85% RH, 860~1060 mbar

	Items	Specification
1	Impedance	$8 \Omega \pm 15\%$ (at 1Vrms,1.0kHz)
2	Sound Pressure Level	88dB \pm 3dB(1W/1M AVG at 0.8,1.0,1.2,1.5KHz)
3	Resonance Frequency	450Hz \pm 20%
4	Frequency Range	F ₀ ~ 5.0kHz
5	Input Power	Rated 0.25W / Max.0.5W
6	Distortion	<10% Max. at 2kHz/2Vrms
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 1.41V sine wave signal swept at frequency range.
8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.

Specification for Speaker		Page	4/9
		Revision No.	1.0
Model No. :	KP50180SP1	Drawing No.	KFC3549

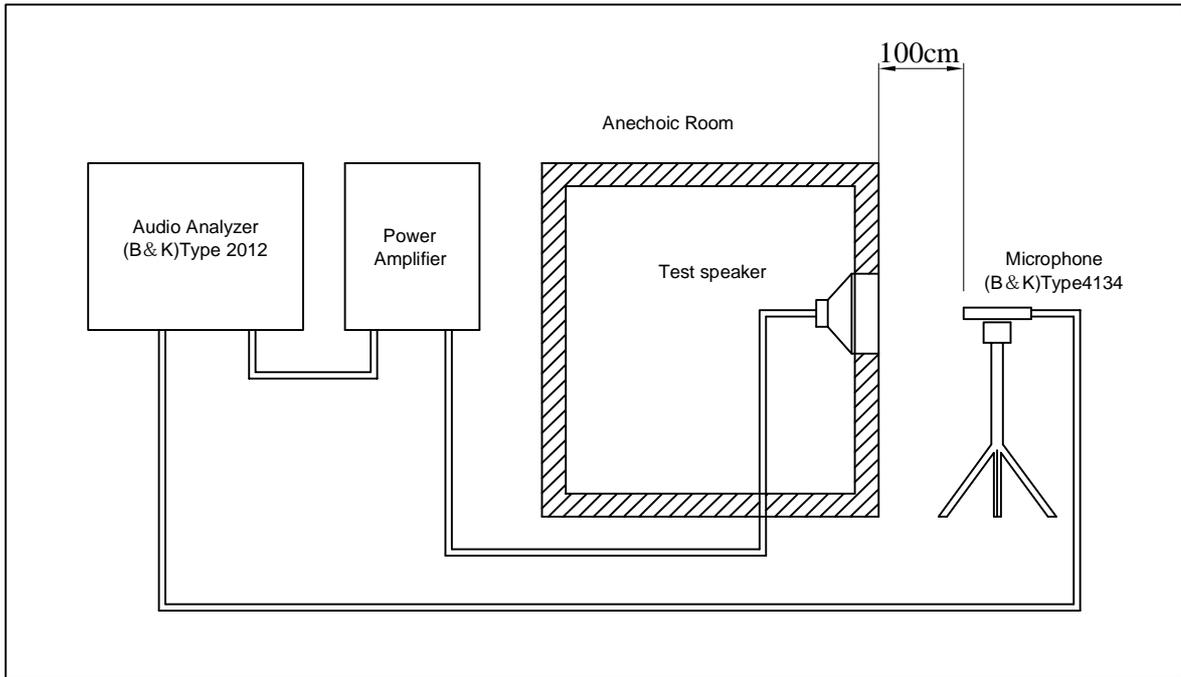
4. Reliability Test

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 $+70\pm 3\text{ }^\circ\text{C}$ for 240 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 $-25\pm 3\text{ }^\circ\text{C}$ for 240hours and then being placed in natural condition for 1 hour, speaker shall be measured.
3	Humidity Test	After being placed in a chamber with 90 to 95%R.H. at $+40\pm 2\text{ }^\circ\text{C}$ for 240 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 $+70\text{ }^\circ\text{C}$ for 1 hour, then speaker shall be placed in a chamber at $-20\text{ }^\circ\text{C}$ for 1 hour(1 cycle is the below diagram).</p> <p>After 100 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 2 hour, then placed in natural condition for 1 hour, speaker shall be measured.
6	Drop Test	<p>A speaker is dropped from 1m in length on 75° inclination and a magnetic circuit of speaker is hit to the restraint metal.</p> <p>After the test, magnetic circuit should not drop out and speaker should be measured.</p> 
7	Load test	After being applied loading white noise with input power 0.25W(1.41Vrms.) for 240 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

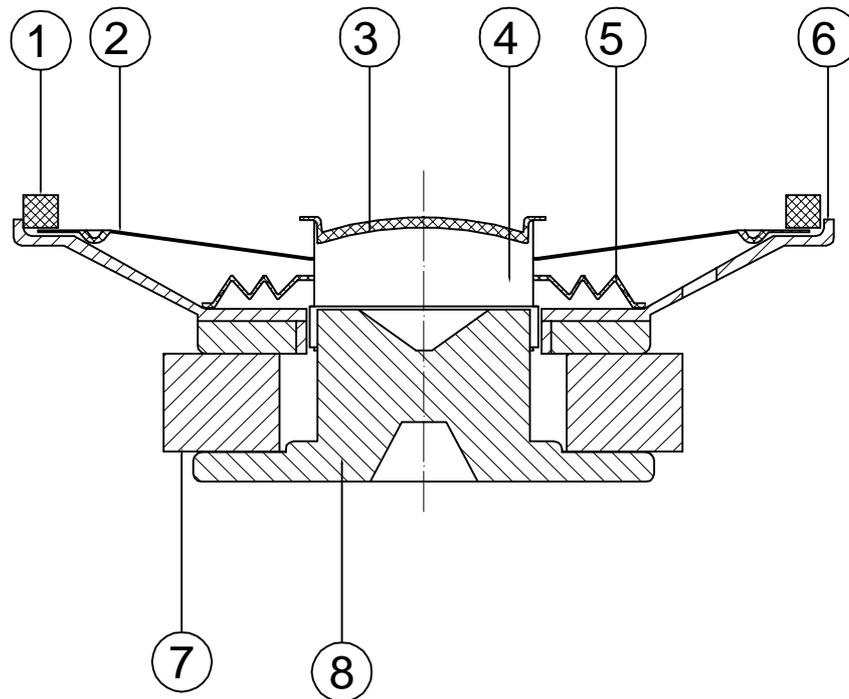
Specification for Speaker		Page	5/9
Model No. : KP50180SP1		Revision No.	1.0
		Drawing No.	KFC3549

5. Measurement Block Diagram & Response curve



Specification for Speaker		Page	6/9
		Revision No.	1.0
Model No. :	KP50180SP1	Drawing No.	KFC3549

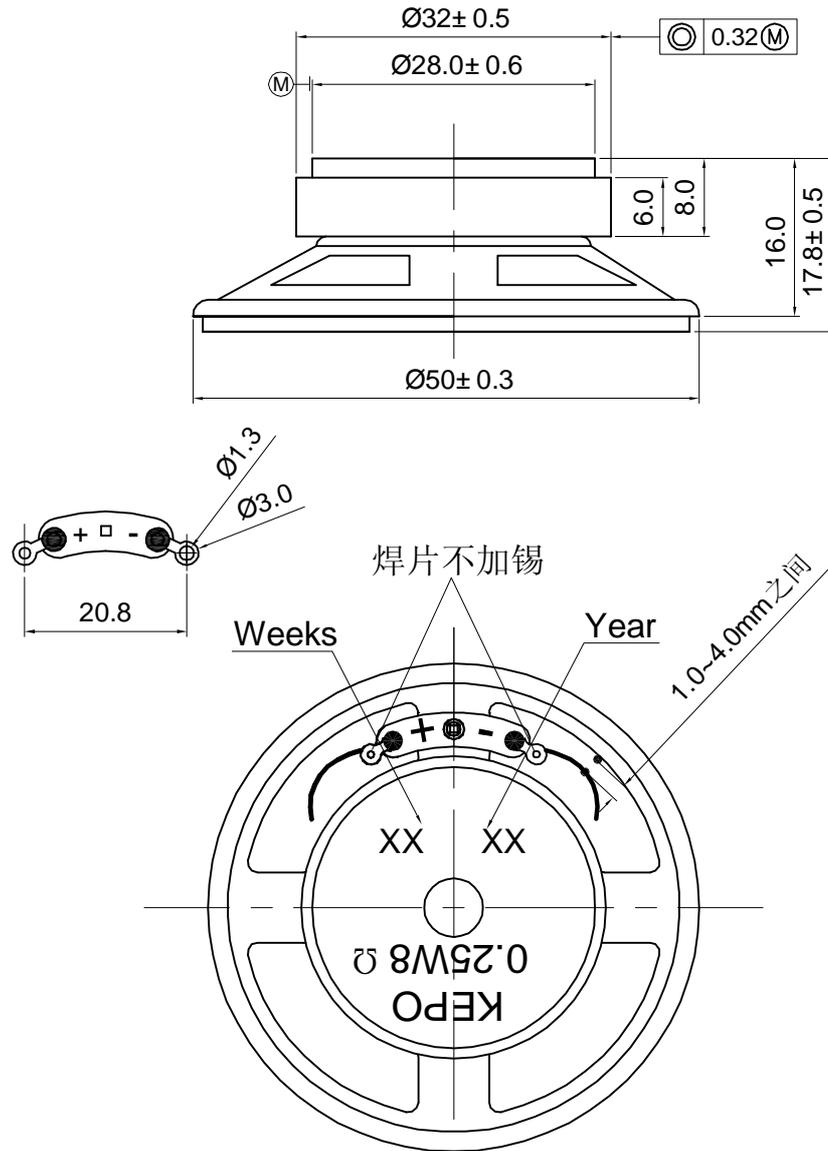
6. Structure



8	T yoke	1	SPCC	
7	Magnet	1	Y30	
6	Frame	1	SPCC	
5	Damper	1	Soft iron	
4	Vpice Coil	1	Cone Paper+foam edge	
3	Dust cap	1	Paper	
2	Diaphragm	1	Paper	
1	Gasket	1	Paper	
No.	Part Name	Q'TY	Material	Remarks

Specification for Speaker		Page	7/9
		Revision No.	1.0
Model No. :	KP50180SP1	Drawing No.	KFC3549

7. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm
Tolerance : ± 0.2

Specification for Two Mode Speaker		Page	8/10
		Revision No.	1.0
Model No. :	KP50180SP1	Drawing No.	KFC3549

8. Packing



50pcs



inner-tray:35X27X7cm
2layer/bundle



50pcs/layer
2layer/carton



QTY:100PCS
SIZE:35.5x27.5x14CM

Specification for Speaker	Page	9/10
Model No. : KP50180SP1	Revision No.	1.0
	Drawing No.	KFC3549

9. Cautions for Use

1 .When assemble the speaker, the frame brim must be hold by hand, and no outside force presses on frame 、 no sharp tool to damage the frame.

2 .Speaker must be used under rated power, and the speaker may broken if it is used out of rated power.

3.Speaker must be keep away from water or liquid.

4.Speaker can't be under the high temperature and high humidity.