

# SPECIFICATION

Customer : QUARTZ-1

Applied To :

Product Name : SPEAKER

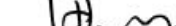

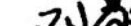
Model Name : KP1850SP1F500-4997

Drawing No. : KFC4997

Signature of Appronal

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Signature of KEPO

Approved by	Checkde by	Issued by	Date
			



宁波凯普电子有限公司

Ningbo Kepo Electronics Co.,Ltd.

宁波东钱湖镇东钱湖工业区宝源路 25 号

TEL:+86-574-88370330 FAX:+86-574-88370329

No.25 Baoyuan road Dongqian Lake, Industry Area, Dongqian town, Ningbo City,  
China(Post Code:315121)

*Sales@chinaacoustic.com      www.chinaacoustic.com*

Specification for Speaker		Page	2/9
Model No. : KP1850SP1F500-4997		Revision No.	1.0
		Drawing No.	KFC4997
<h2>CONTENTS</h2> <ol style="list-style-type: none"> <li>1. Scope</li> <li>2. General</li> <li>3. Electrical and Acoustic Characteristics.</li> <li>4. Reliability Test</li> <li>5. Measurement Block Diagram &amp; Response curve</li> <li>6. Structure</li> <li>7. Dimensions</li> <li>8. Packing</li> <li>9. Revision</li> </ol>			

Specification for Speaker		Page	3/9
Model No. : KP1850SP1F500-4997		Revision No.	1.0
		Drawing No.	KFC4997

### 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

:

18 mm

2.2 Height

:

5 mm

2.3 Weight

:

3.5 g

2.4 Operating Temperature range:

-20~+60℃ without loss of function

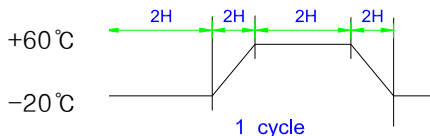
2.5 Store Temperature range:

-30~+70℃ without loss of function

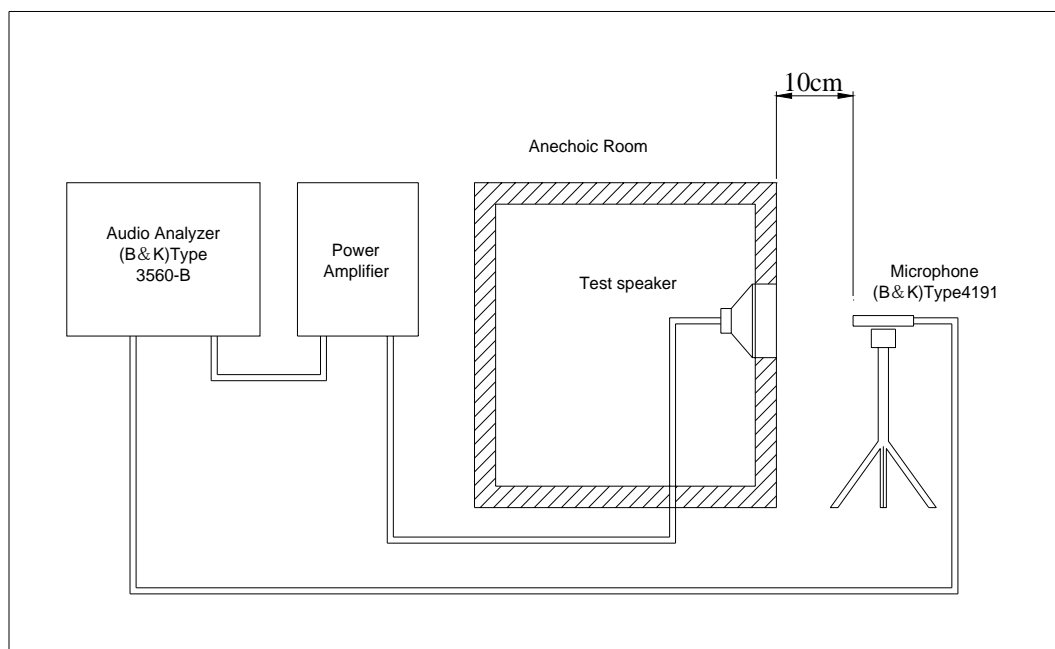
### 3. Electrical and Acoustic Characteristics.

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

No	Items	Specification
1	Impedance	8 Ω ± 15% (1Vrms at 1KHz)
2	Sound Pressure Level	83 dB ± 3dB (0.1W/0.1M- at 0.8k,1k,1.2k,1.5kHz AVE)
3	Resonance Frequency	550 Hz ± 20%
4	Frequency Range	Fo ~16KHz
5	Input Power	Rated 1 W / Max. 1.5 W
6	Distortion	5% Max. at 1kHz/2Vrms
7	Buss and Rattle	Should not be audible buzzes,rattles when the 2.83V 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
Model No. : KP1850SP1F500-4997		Revision No.	1.0
		Drawing No.	KFC4997
<h2>4. Reliability Test</h2> <p>After test(1~7item), the speaker S.P.L . difference shall be within <math>\pm 3\text{dB}</math>, and the appearance not exist any change to be harmful to normal operation (e.g. cracks,rusts,damages and especially distortion).</p>			
No	Items	Specification	
1	High Temperature Test	After being placed in a chamber with $+70\pm 3\text{ }^{\circ}\text{C}$ 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^{\circ}\text{C}</math> for 1 hour, then speaker shall be placed in a chamber at <math>-20^{\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 for one cycle. It starts at <math>+60^{\circ}\text{C}</math>, drops to <math>-20^{\circ}\text{C}</math>, and then returns to <math>+60^{\circ}\text{C}</math>. The time spent at <math>+60^{\circ}\text{C}</math> is labeled '2H' (2 hours), and the time spent at <math>-20^{\circ}\text{C}</math> is also labeled '2H'. The entire sequence is labeled '1 cycle'.</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 1W(2.83Vrms.) 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 $\Omega$	

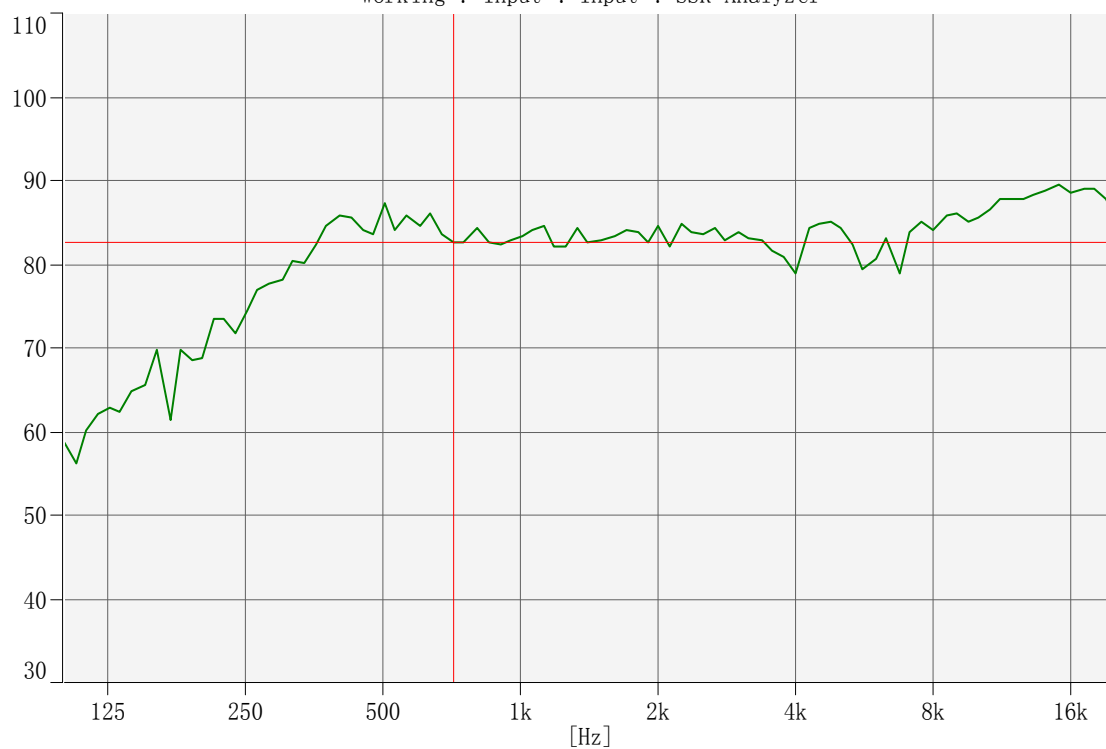
## 5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]

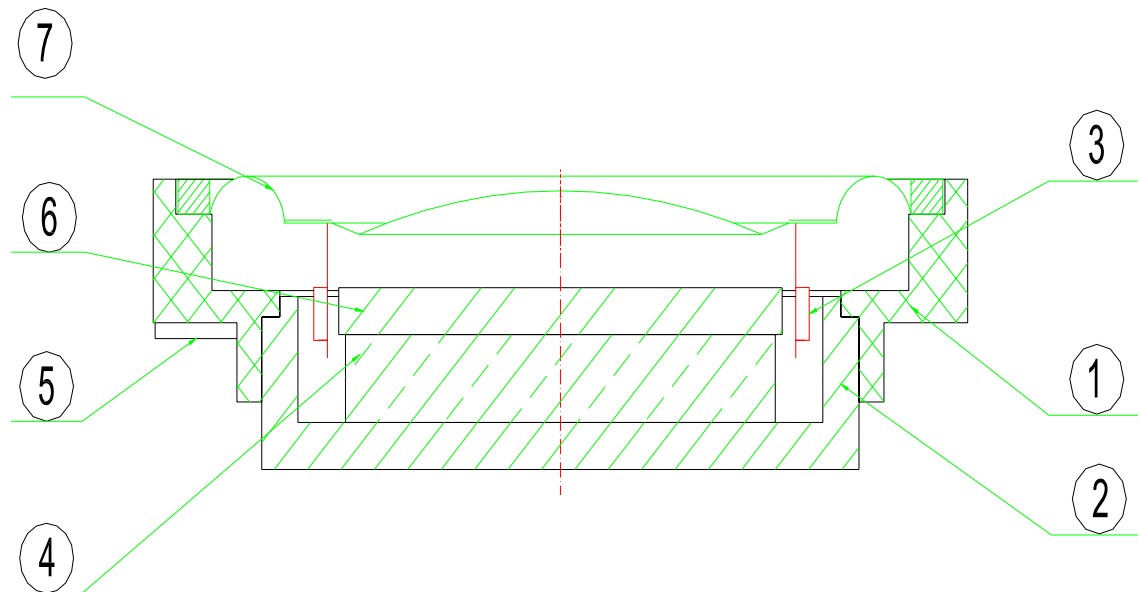
Output Response(Signal 1) - Input (Magnitude)

Working : Input : Input : SSR Analyzer



Specification for Speaker		Page	6/9
Model No. : KP1850SP1F500-4997		Revision No.	1.0
		Drawing No.	KFC4997

## 6. Structure



7	Diaphragm	1	PET+Pu	
6	Plate	1	Spcc	
5	PCB	1	Fr-4	
4	Magnet	1	Nd-Fe-B	
3	Bobbin Coil	1	Copper	
2	Yoke	1	Spcc	
1	Frame	1	PBT	
No.	Part Name	Q'ty	Material	Remarks

# Specification for Speaker

Page

7/9

Revision No.

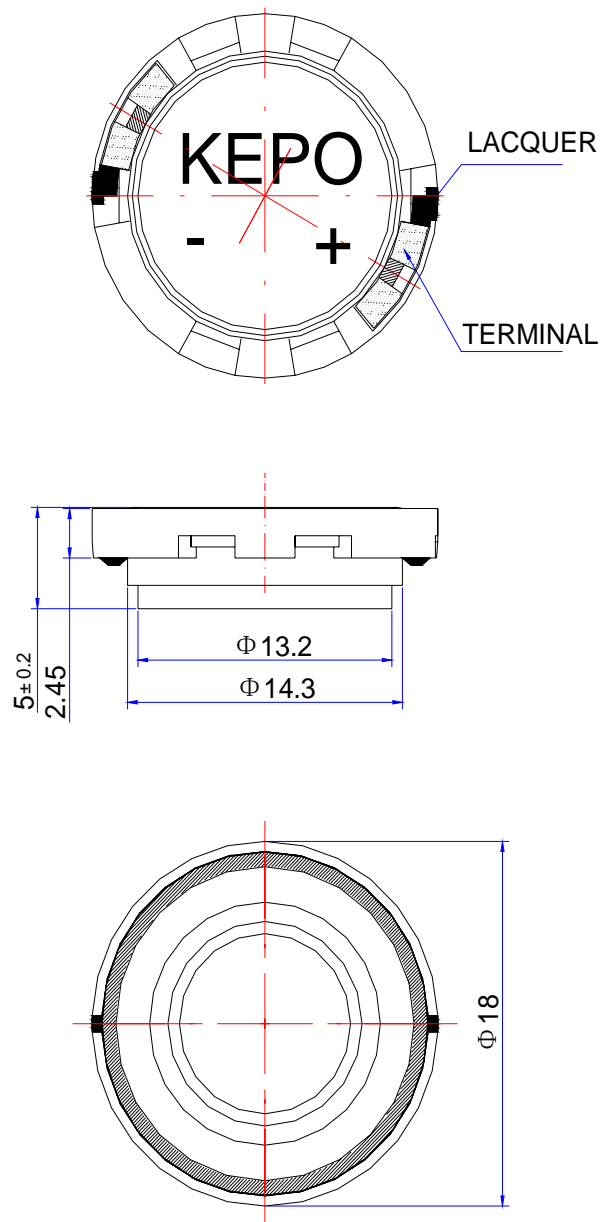
1.0

Model No. : KP1850SP1F500-4997

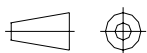
Drawing No.

KFC4997

## 7. Dimensions



FIRST ANGLE PROJECTION

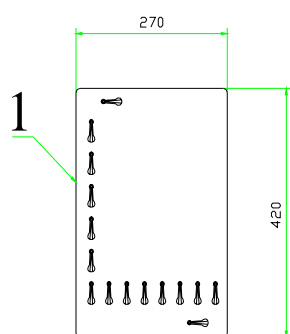


UNIT : mm

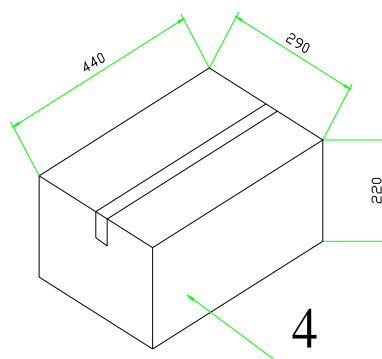
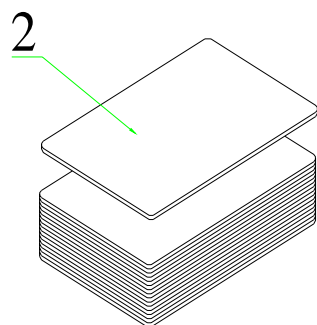
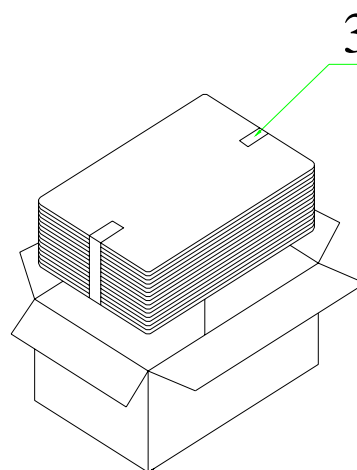
Tolerance :  $\pm 0.2$

Specification for Speaker Model No. : KP1850SP1F500-4997	Page	8/9
	Revision No.	1.0
	Drawing No.	KFC4997

## 8. Packing



100Pcs



QTY: 1500Pcs

440 x290 x220



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