

MESSRS.

SPECIFICATION FOR APPROVAL

承 认 书

Product	DYNAMIC SPEAKER
Part No.	ADK-10204ZC-1(RoHS)
Customer Approval	

Approved By	Checked By	Made By
王台平 SEP-09-2013	曹丽萍 SEP-09-2013	Lily SEP-09-2013

常 州 华 龙 电 子 有 限 公 司

DRAGONSTATE ELECTRONIC CORPORATION

中国江苏省常州市新区电子园新四路 36 号

Tel: +86-519-85110078. 86-519-85106698, Fax: +86-519-85101081

EDITION:1.1

1. SPECIFICATION

ADK-10204ZC-1(RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 102*34 mm	
03	Rated Input Power	10W	
04	Max. Input Power	12W for 1 minute	
05	Impedance	4ohm \pm 15% at 500Hz.	
06	Resonance Frequency (Fo)	150Hz \pm 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	88dB (1.0W / 0.5m) \pm 3 dB	at AVE 1.0KHz
08	Frequency Range	Fo – 10KHz	
09	Total Harmonics Distortion	Max 7 % at 1 KHz, 1.0W.	
10	Voice Coil	Diameter 16mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 60X Φ 32X8 mm	
12	Weight	260g \pm 10%g	
13	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
14	Operation Test	Must be normal at program source – 10W	
15	Buzz, Rattle, etc.	Should not be audible at 6.32V sine Wave between Fo to 20KHz	
16	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
17	Terminal Strength	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.	
18	Temperature	Operating temperature: -20°C to +60°C Storage temperature: -25°C to +70°C	

2. MEASURING METHOD

2-1 .Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

JUDGEMENT

Temperature : $20 \pm 3^\circ\text{C}$

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

2-2 . Standard Test Fixture

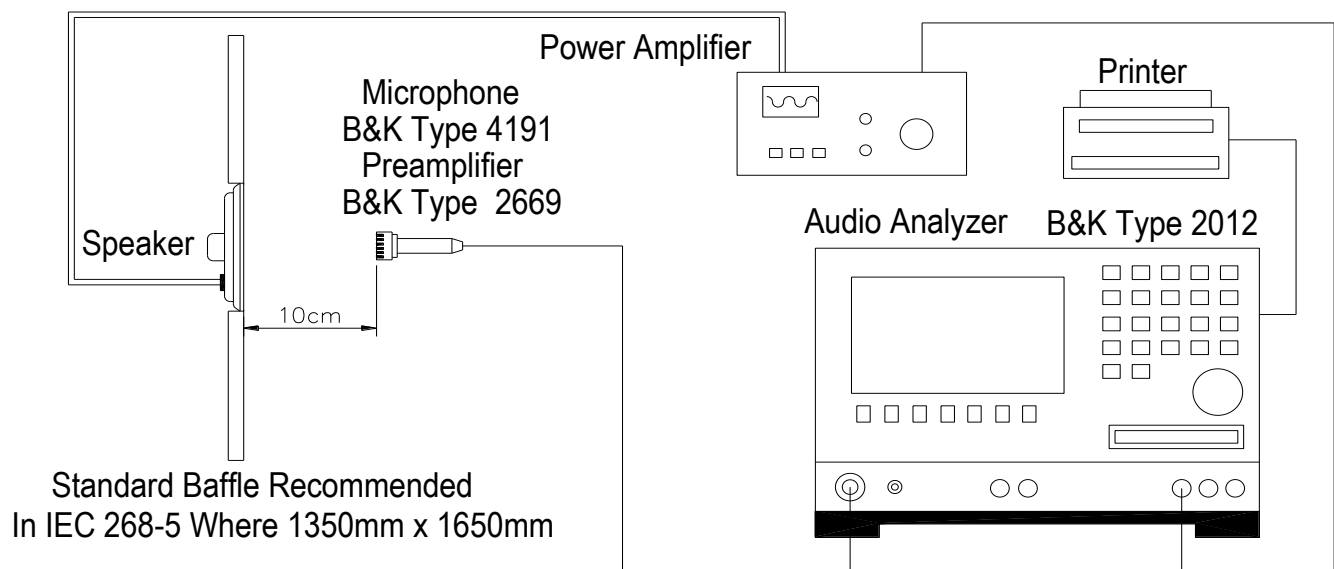
1.Input Power : 1.0W(2.0V)

2.Zero Level : -dB

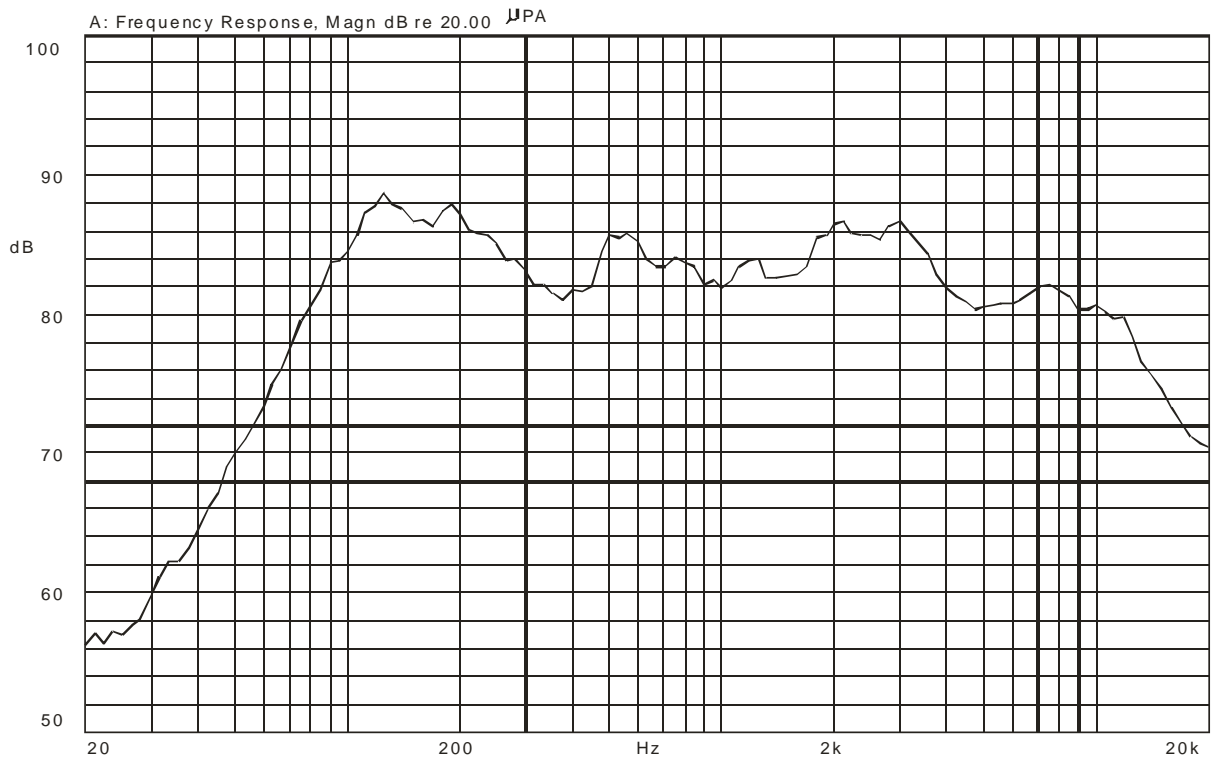
3.Mode : SPEAKER

4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



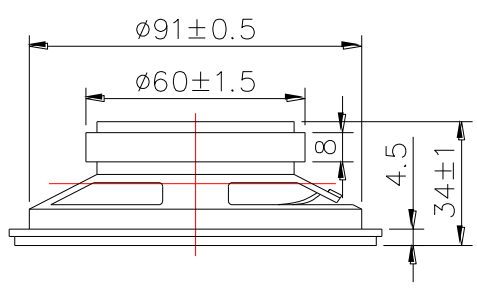
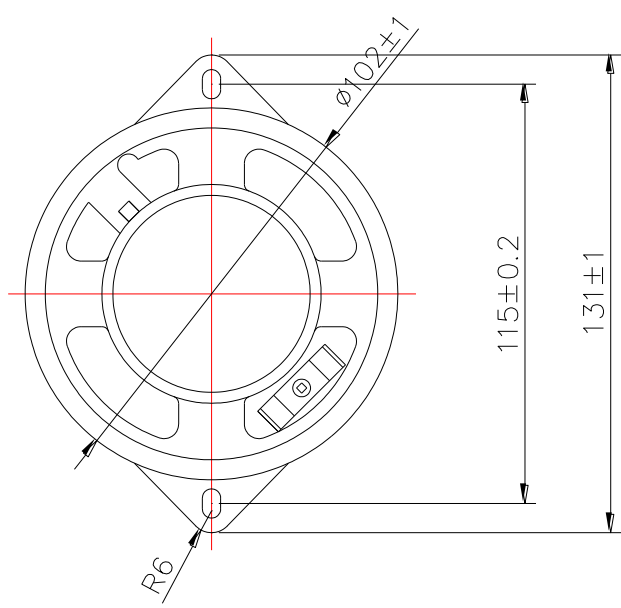
2-3. Frequency Response Curve



Mode: SPEAKER



REV NO.	REVISION NOTE	APPROVAL	DATE
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TITLE: DYNAMIC SPEAKER		DRAWN: Lily	2013/09/09	SCALE: 1:2	SHEET: 1 of 1
PART NO. ADK-10204ZC-1		DESIGNED: R&D OF D.S.	UNITS: mm		
DWG NO. DTS-1587	1 REV	CHECKED: Emily	TOLERANCE ± 0.2		
		APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED:		
		MATERIAL: *****	ONE PLACE DECIMAL ± ***		
			TWO PLACE DECIMAL ± ***		
			THREE PLACE DECIMAL ± ***		

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3. RELIABILITY TESTS

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-20^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	Humidity test	Keep 96 hours at $+60^{\circ}\text{C}\pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	Temp./Humidity cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of;</p> <p>The graph illustrates a temperature and humidity cycle. The temperature starts at 25°C, rises to 65°C in 0.5 hours, stays at 65°C for 6 hours, then falls back to 25°C in 0.5 hours. The humidity is 90-95% RH during the 6-hour high temperature plateau. After the 0.5-hour cooling phase, there is a 5-hour dwell at 25°C.</p>
05	Thermal cycle test.	Low temperature: $-40^{\circ}\text{C}\pm 3^{\circ}\text{C}$, temperature: $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$, cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
06	Vibration	10~200~10Hz sin-wave sweep 15min. 5G(constant) X,Y, Z 3 direction. 2 hours each, total 6 hours.
07	Fix drop test	Fix on jig. Then drop from 152cm height to the concrete floor X,y, z 6 direction. 5 times each, total 30 times.
08	Free drop test	Free drop from 100cm height to the concrete floor X,y, z 6 direction. 1 times each, total 6 times.
09	DC Voltage test	DC 11.0V for 1 hour.
10	Load test	Rated Power white noise is applied for 96 hours
11	Max Power test	Max power 1 min on – 1 min off 10 cycles.
12	Terminal strength test	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.