

MESSRS.**SPECIFICATION FOR APPROVAL****承 認 书**

Product	DYNAMIC SPEAKER
Part No.	HDK-352508ZA-11W (RoHS)
Customer	
Customer Part No.	

Approved By	Checked By	Made By
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1.SPECIFICATION
HDK-352508ZA-11W(RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 35 × 25 mm	
03	Rated Input Power	2.0W	
04	Max. Input Power	2.3W	
05	Impedance	8 ohm ± 15% at 1500Hz.	
06	Resonance Frequency (Fo)	850Hz ± 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	98dB(1.0W/0.1m) ± 3dB	at AVE 0.8,1.0,1.2,1.5 KHz.
08	Frequency Range	Fo – 20KHz	
09	Total Harmonics Distortion	Max 20% at 2KHz,2.3W.	
10	Voice Coil	Diameter 13.3mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet 12.6*2.2mm	
12	Weight	11g ± 0.3g	
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 – 2.3W	
15	Buzz, Rattle, etc.	Should not be audible at 4.28V 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: -30°C to +70°C	

Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

BASIC

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

Standard Test Fixture

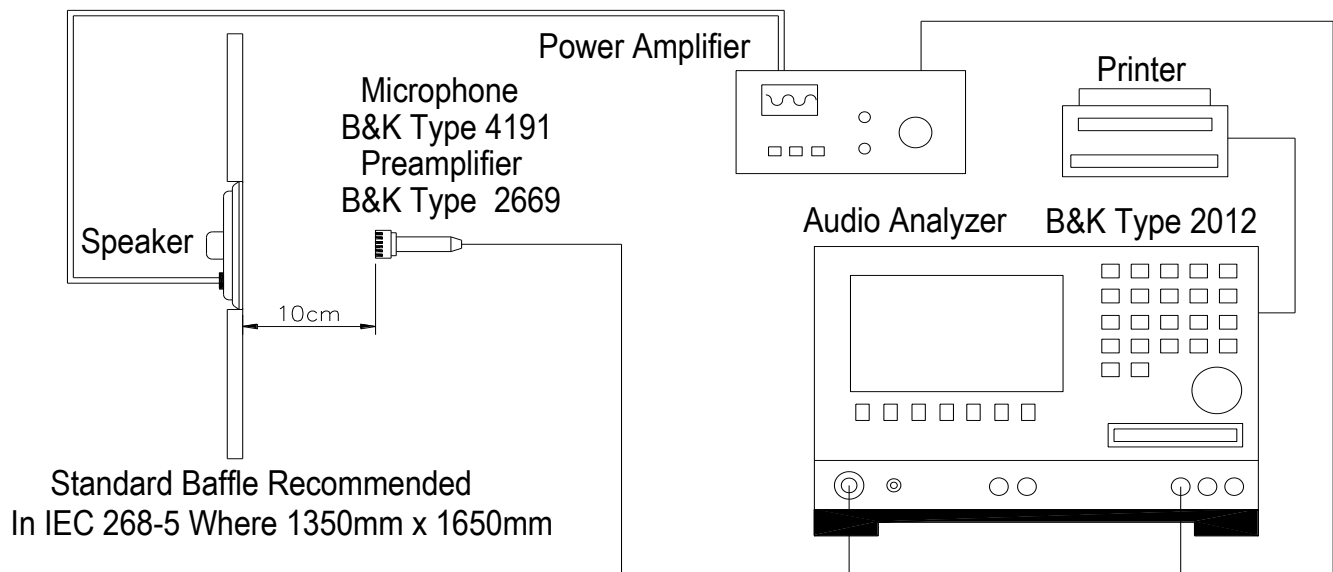
1.Input Power : 1.0W (2.83V)

2.Zero Level : -dB

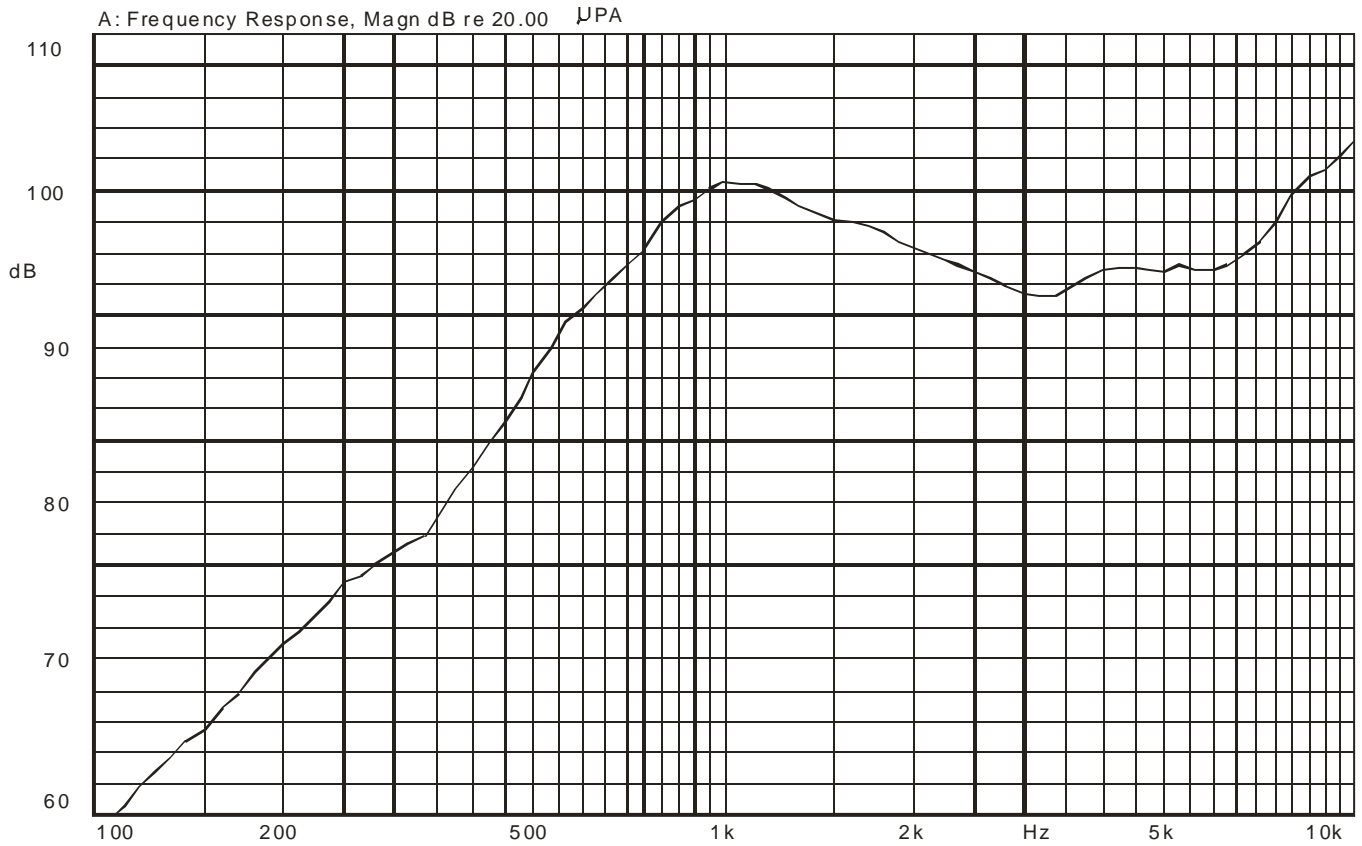
3.Mode : SPEAKER

4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



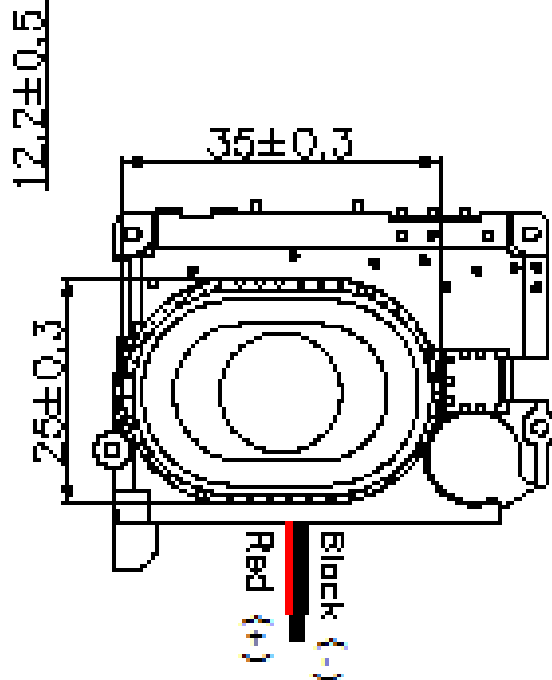
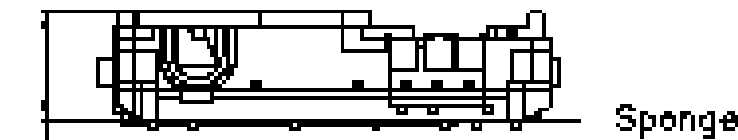
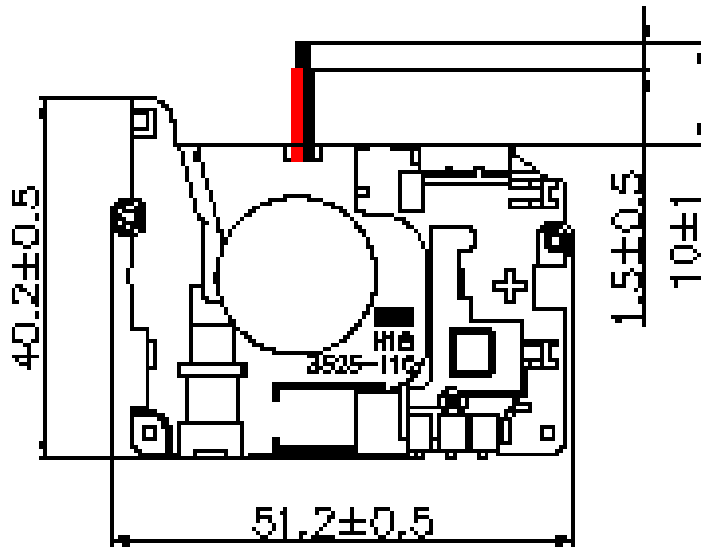
2-3. Frequency Response Curve



Mode: SPEAKER



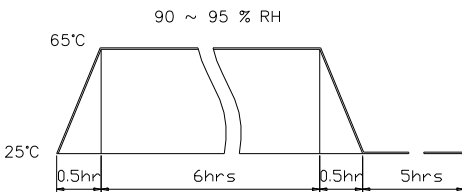
REF. NO.	DESCRIPTION	APPROVAL	DATE
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Wire: UL1571 WAG32

TITLE: DYNAMIC SPEAKER		DESIGNED: <i>[Signature]</i>	DATE: 11/11/08	SCALE: 2/1	SHEET: 01 OF 1
PART NO. HDE-3586082A-11W		APPROVED: <i>[Signature]</i>	DATE: 09/28	CHECKED: <i>[Signature]</i>	
DWC NO. DSE-1748		APPROVAL: <i>[Signature]</i>	DATE: 11/11/08	REVISION: 1.0	
REF: 3586082A		APPROVAL: <i>[Signature]</i>	DATE: 11/11/08	REVISION: 1.0	

4.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 $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ 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> 
05	Thermal cycle test.	Low temperature: $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$, 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	Rated Power test	Rated Power white noise is applied for 96 hours
10	Max Power test	Max power 1 min on – 2 min off 10 cycles.
11	Terminal strength test	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.
<p>Criterion:</p> <p>After these test , the change of S.P.L shall be within ± 3 dB .</p>		

SOLDERING CONDITION

Recommend using constant branding iron in **15 ~ 30W**, and in temperature range **$350 \pm 10^{\circ}\text{C}$** .

Soldering time not over **3** seconds