
SPECIFICATION FOR APPROVAL

| | |
|-------------------|-----------------|
| Product | DYNAMIC SPEAKER |
| Part No. | AS-1335D04-A1W |
| Customer Approval | |

| Approved By | Checked By | Made By |
|-------------|------------|---------|
| | | |



A & B Components

<http://www.speaker-tw.com>

1.CHARACTER DATA

AS-1335D04-A1W

| ITEM | | SPECIFICATIONS | |
|------|----------------------------|---|-----------------------|
| 01 | Type | Dynamic speaker | |
| 02 | Dimension | External diameter 13 mm | |
| 03 | Rated Input Power | 0.5W (Long Time) | |
| 04 | Max. Input Power | 1.0W (Short Time) | |
| 05 | Impedance | 4 ohm \pm 15% at 1500Hz. | |
| 06 | Resonance Frequency (Fo) | 950Hz \pm 20% at Fo, 1V | |
| 07 | Sensitivity (S.P.L.) | 80dB(0.1W/0.1m) \pm 3 dB | at AVE 1.2 – 2.5 KHz. |
| | | 86dB (0.5W / 0.1m) \pm 3 dB | |
| 08 | Frequency Range | Fo – 20KHz | |
| 09 | Total Harmonics Distortion | Max 8 % at 1 KHz,0.5W. | |
| 10 | Voice Coil | Diameter 7.2 mm | |
| 11 | Magnet | Rare earth permanent (Nd-Fe-B) magnet Φ 6.5 x 1.0 mm | |
| 12 | Weight | 1.0g \pm 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 – 0.5W | |
| 15 | Buzz, Rattle, etc. | Should not be audible at 1.41V 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

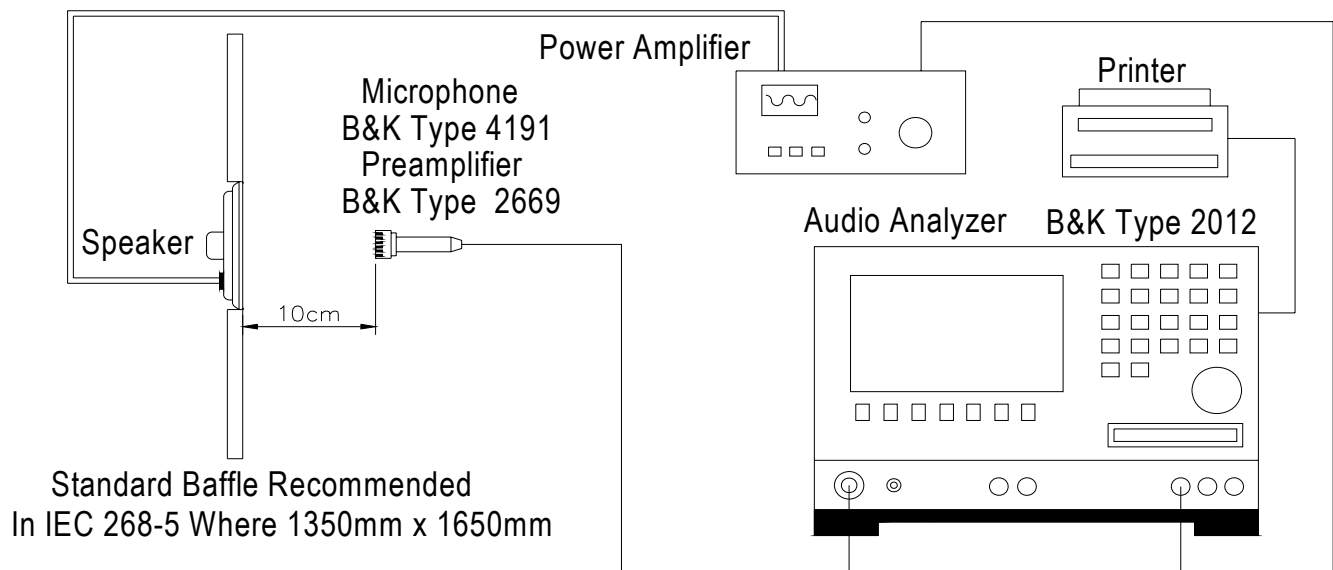
1.Input Power : 0.5W (1.41V)

2.Zero Level : -dB

3.Mode : SPEAKER

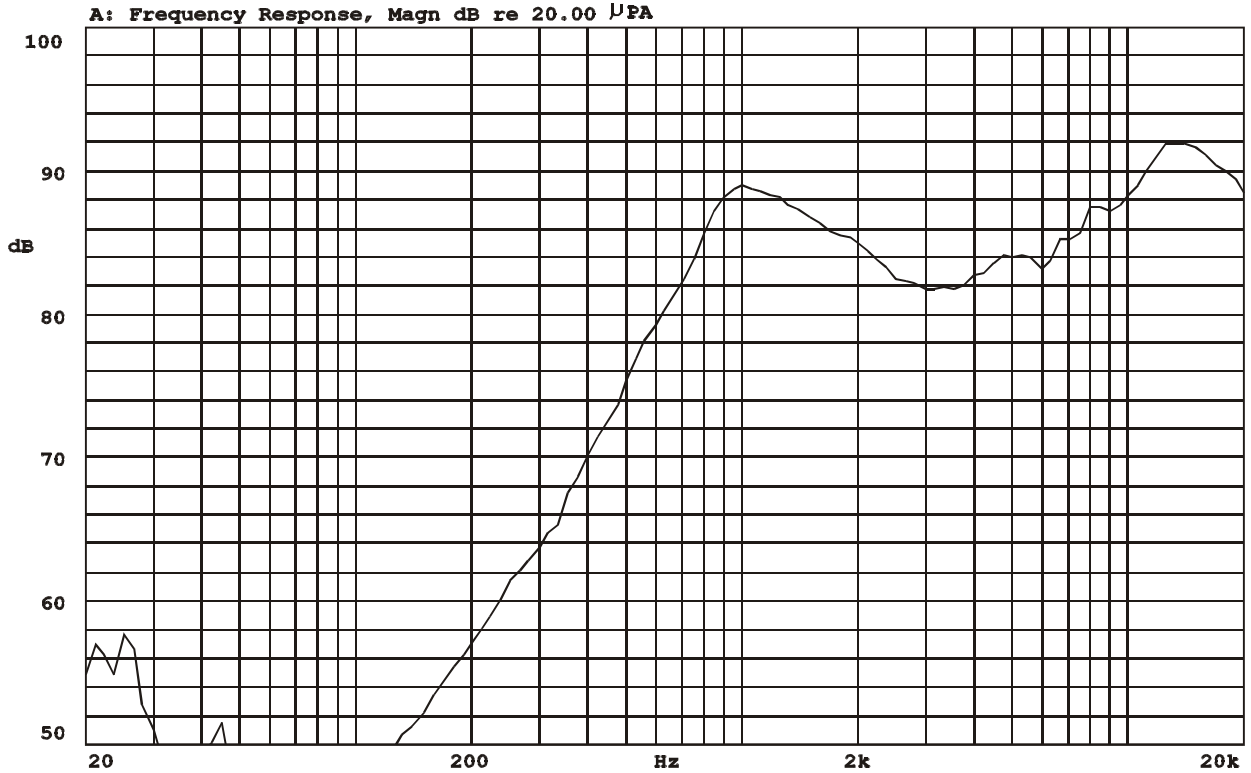
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



Frequency Response Curve

X:2.5000kHz *Y:82.41dB ZA:Live Curve SSR Fund.



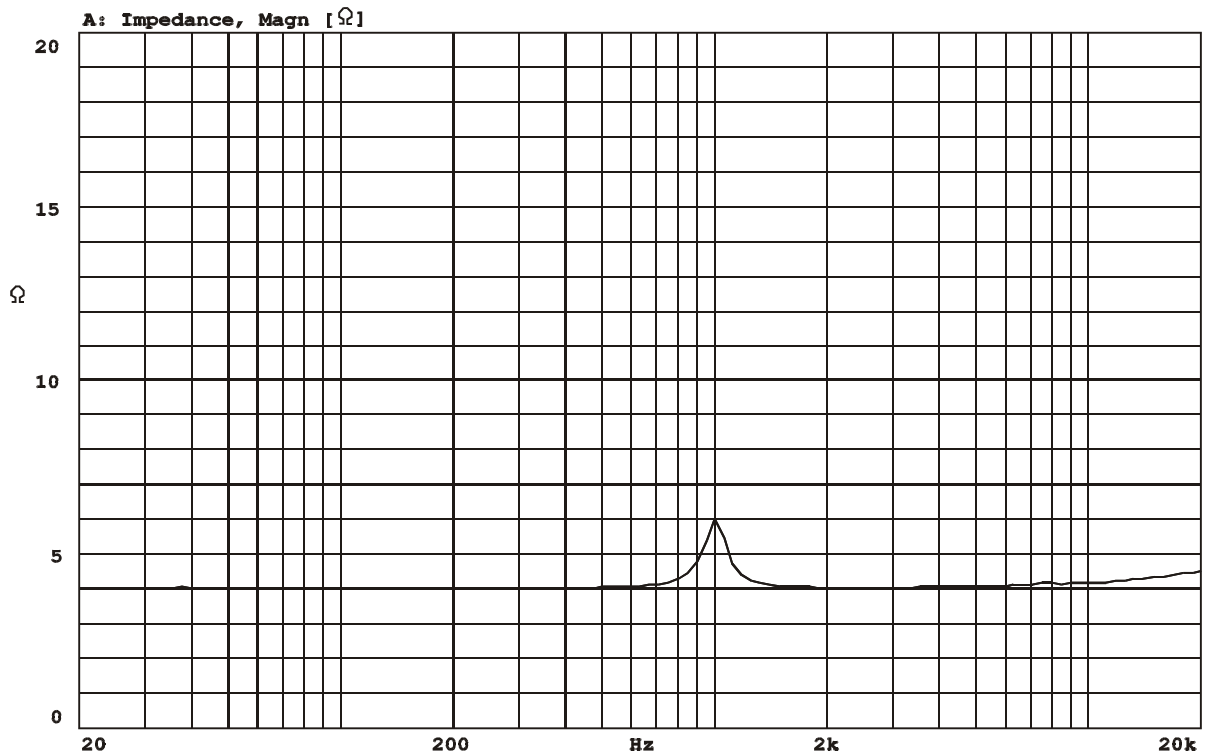
16-AUG-2006 12:49:57

Mode: SPEAKER



Impedance Curve

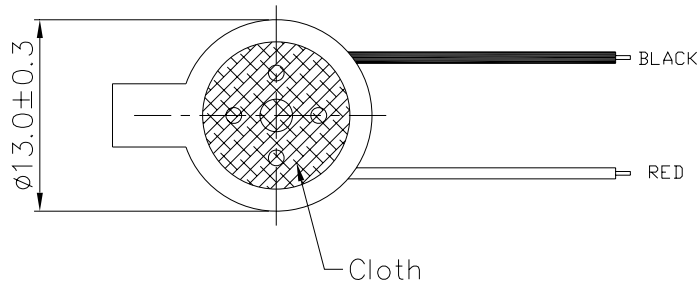
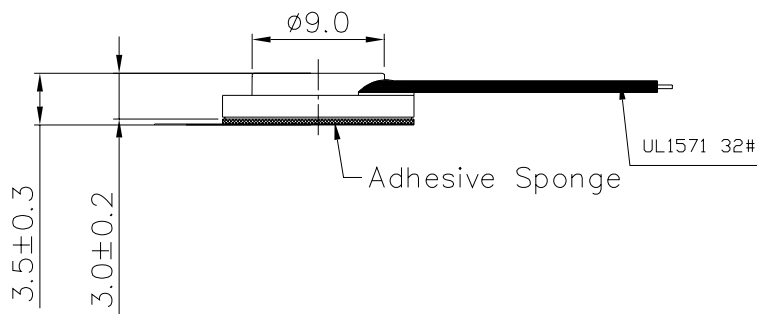
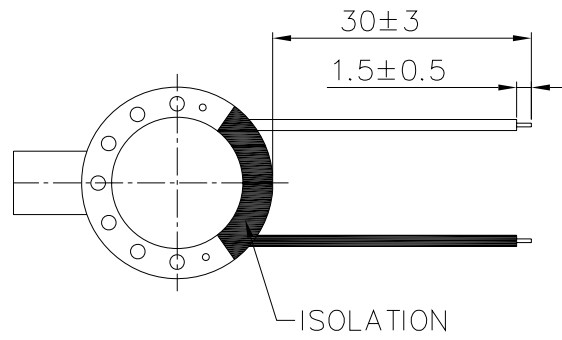
IMPEDANCE MEASUREMENTS: Measurement of Impedance $Z(j\omega)$



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Mode: Z(j ω)





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|--------------------------------|--|----------------------------------|--|---------------|
| TITLE: <i>DYNAMIC SPEAKER</i> | | DRAWN: <i>Richard</i> 2006/08/16 | SCALE: *** | SHEET: 1 of 1 |
| PART NO. <i>AS-1335D04-A1W</i> | | DESIGNED: <i>R&D DEP.</i> | UNITS: <i>mm</i> | |
| DWC NO. <i>DSE-1078</i> | | CHECKED: | TOLERANCE ± 0.2 | |
| | | APPROVAL: | UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± *** | |
| REV | | MATERIAL: <i>*****</i> | | |

A & B Components

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°C .

Soldering time not over 3 seconds.