
SPECIFICATION FOR APPROVAL

| | |
|-------------------|------------------|
| Product | DYNAMIC SPEAKER |
| Part No. | AS-272052C04-R1T |
| Customer Approval | |

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



A & B Components

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

1. SPECIFICATION

AS-272052C04-R1T

| ITEM | | SPECIFICATIONS | |
|------|----------------------------|---|--------------------------------|
| 01 | Type | Dynamic speaker | |
| 02 | Dimension | External diameter 27X20 mm | |
| 03 | Rated Input Power | 2.0 W | |
| 04 | Max. Input Power | 3.0 W for 1 minute. | |
| 05 | Impedance | 4 ohm \pm 15% at 2K Hz | |
| 06 | Resonance Frequency (Fo) | 950 Hz \pm 20% at Fo, 1V | |
| 07 | Sensitivity (S.P.L.) | 72dB(1W/1m) \pm 3 dB | at AVE 1.0K,1.2K,1.5K,2.0K Hz. |
| | | 95dB(2W/0.1m) \pm 3dB | |
| 08 | Frequency Range | Fo – 20KHz | |
| 09 | Total Harmonics Distortion | Max. 10% at 1K Hz ,1.0W. | |
| 10 | Voice Coil | Diameter 11.5 mm | |
| 11 | Magnet | Rare earth permanent (Nd-Fe-B) magnet Φ 11x1.5mm | |
| 12 | Weight | 4.5g \pm 0.5g | |
| 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 2.0W | |
| 15 | Buzz, Rattle, etc. | Should not be audible at 2.83V 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 | |

2. MEASURING METHOD

2-1 .Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

JUDGEMENT

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

2-2 . Standard Test Fixture

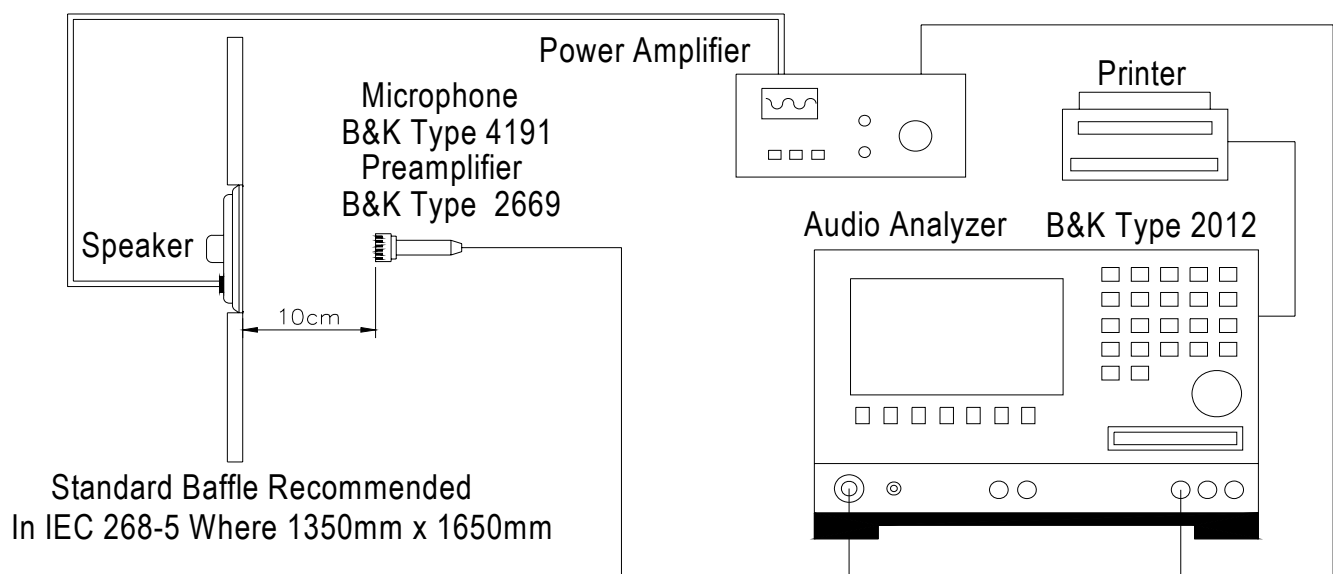
1.Input Power : 2.0W(2.83V)

2.Zero Level : -dB

3.Mode : SPEAKER

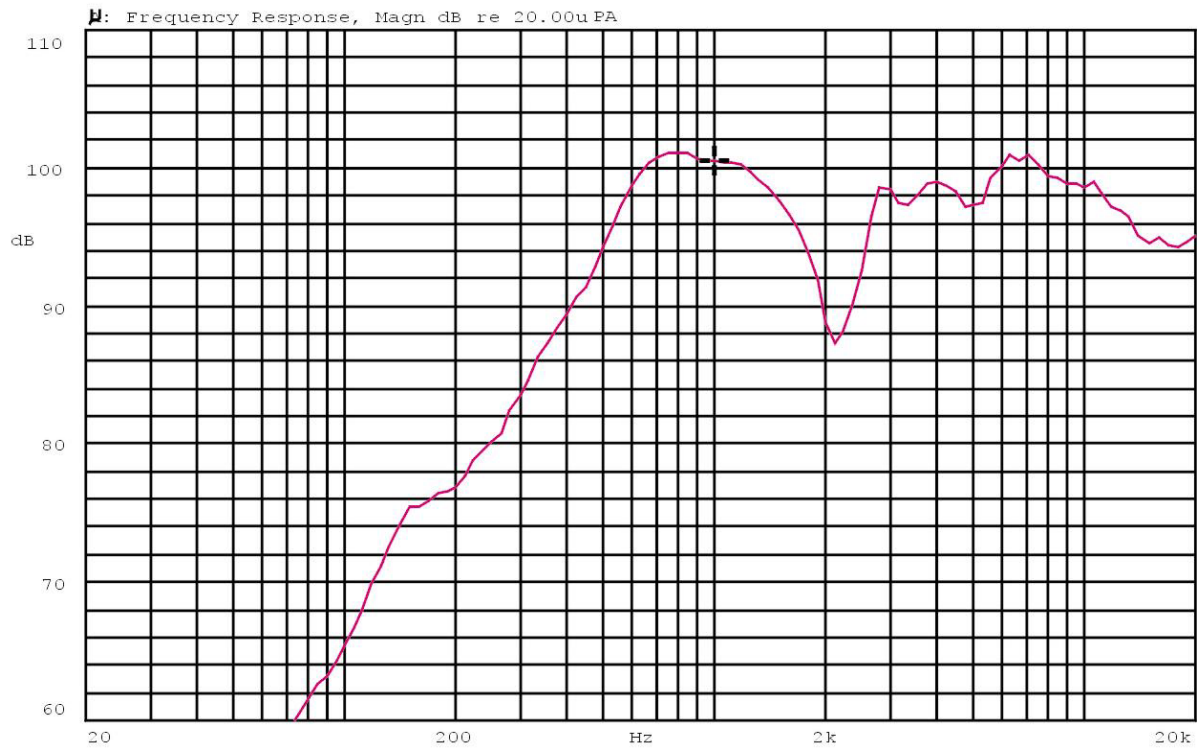
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



2-3. Frequency Response Curve

X:1.0000kHz *Y:100.55dB EA:Live Curve SSR Fund.



Mode: SPEAKER



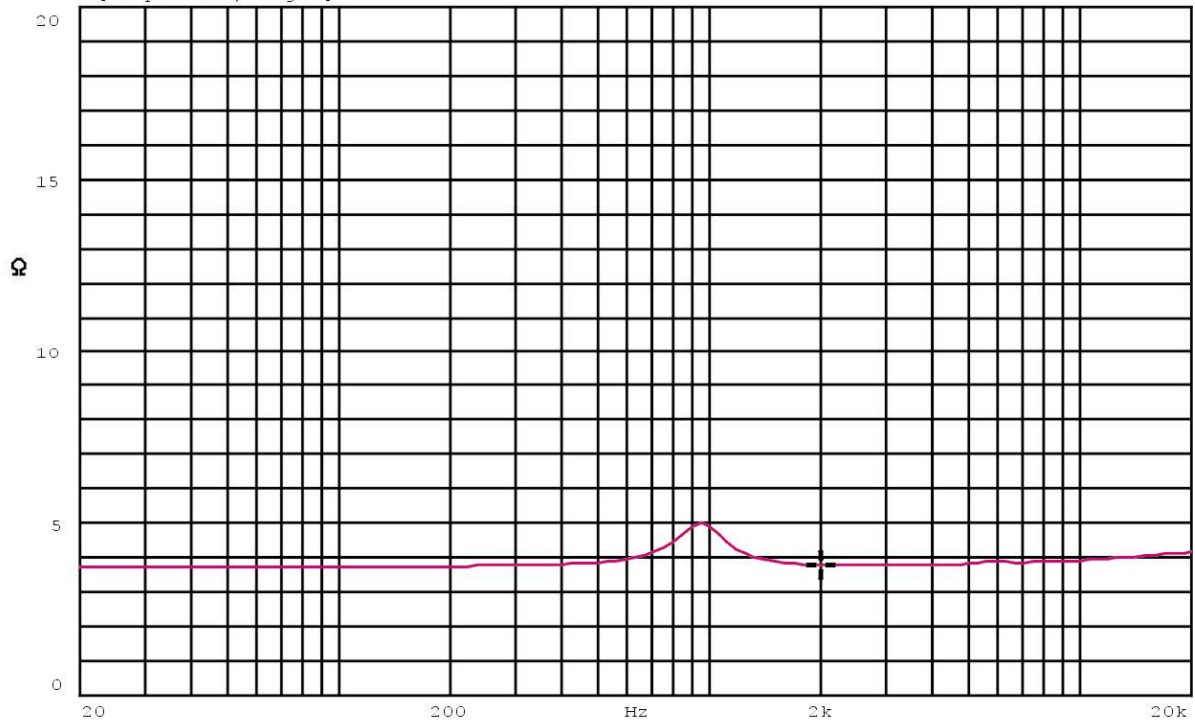
2-4. Impedance Curve

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

Ω EA:Live Curve Impedance

X:2.0000kHz Y:3.781 Ω

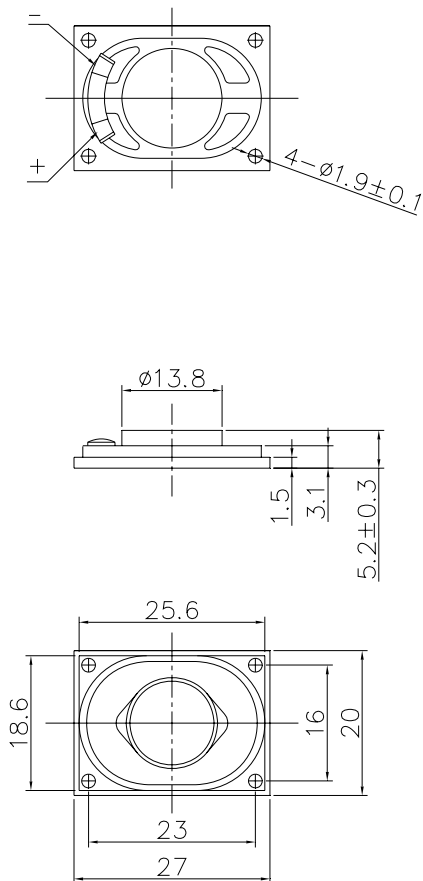
A: Impedance, Magn [



Mode: $Z(j\omega)$



| | | | |
|---------|---------------|----------|------|
| REV NO. | REVISION NOTE | APPROVAL | DATE |
|---------|---------------|----------|------|



CASE : Fe alloy .

DIAPHRAGM : SOFT PLASTIC .

| | | | | | | | |
|----------|------------------|-----------|--------------------|-------------------------------|-----|-----------|-----------|
| TITLE: | DYNAMIC SPEAKER | DRAWN: | Richard 04/17/2007 | SCALE: | 1:1 | SHEET: | 1 of 1 |
| PART NO. | AS-272052C04-R1T | DESIGNED: | R&D DEP. | UNITS: | mm | TOLERANCE | ± 0.2 |
| DWG NO. | DTS-1390 | 1 | CHECKED: | UNLESS OTHERWISE SPECIFIED: | | | |
| | | | APPROVAL: | ONE PLACE DECIMAL \pm *** | | | |
| | | REV | MATERIAL: | TWO PLACE DECIMAL \pm *** | | | |
| | | | ***** | THREE PLACE DECIMAL \pm *** | | | |

A & B Components

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 $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ 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 | Load test | Rated Power white noise is applied for 96 hours |
| 10 | Max Power test | Max power 1 min on – 2min off 10 cycles. |
| 11 | Terminal strength test | Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection. |

SOLDERING CONDITION

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

Soldering time 2 seconds.