

MESSRS

SPECIFICATION FOR APPROVAL

承 認 書

| | |
|-------------------|-----------------|
| Product | DYNAMIC SPEAKER |
| Part No. | AK-402008CC-6 |
| Customer Approval | |

| Approved By | Checked By | Made By |
|---------------------------|---------------------------|---------------------------|
| 工程部 王台平 MAY-23-2005 | 工程部 劉民祥 MAY-23-2005 | 工程部 許俊程 MAY-23-2005 |



ADVANCED ACOUSTIC TECHNOLOGY CORP.

苙 翔 科 技 股 份 有 限 公 司



ISO 9001 Certified

2F, No.207, Sec. 6, Chung Shan N. Rd., Taipei

Tel: +886-2-88665255

Fax: +886-2-88665250

<http://www.aatc.com.tw>

1. SPECIFICATION

AK-402008CC-6

| ITEM | | SPECIFICATIONS | |
|------|----------------------------|---|---------------------------------|
| 01 | Type | Dynamic speaker | |
| 02 | Dimension | External diameter 40 X 20mm | |
| 03 | Rated Input Power | 2.0 W | |
| 04 | Impedance | 8 ohm \pm 15% at 1000Hz | |
| 05 | Resonance Frequency (Fo) | 400 Hz \pm 20% at Fo, 1V | |
| 06 | Sensitivity (S.P.L.) | 72dB(W/m) \pm 3 dB | at AVE 0.6K,0.8K,1.0K,1.2K(Hz). |
| | | 95dB(2.0W/0.1m) \pm 3 dB | |
| 07 | Frequency Range | Fo – 2.2KHz | |
| 08 | Total Harmonics Distortion | Less than 8 % at 1 KHz ,1.0V | |
| 09 | Max. Input Power | Must be normal at 3.0W white noise for 1 minute. | |
| 10 | Voice Coil | Diameter 12.8 mm | |
| 11 | Magnet | Rare earth permanent (NeFeB) magnet ϕ 11 x 1.5mm | |
| 12 | Weight | 7.6 \pm 0.5 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 2.0W | |
| 15 | Buzz, Rattle, etc. | Should not be audible at 4V 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(4.0V)

2.Zero Level : -dB

3.Mode : SPEAKER

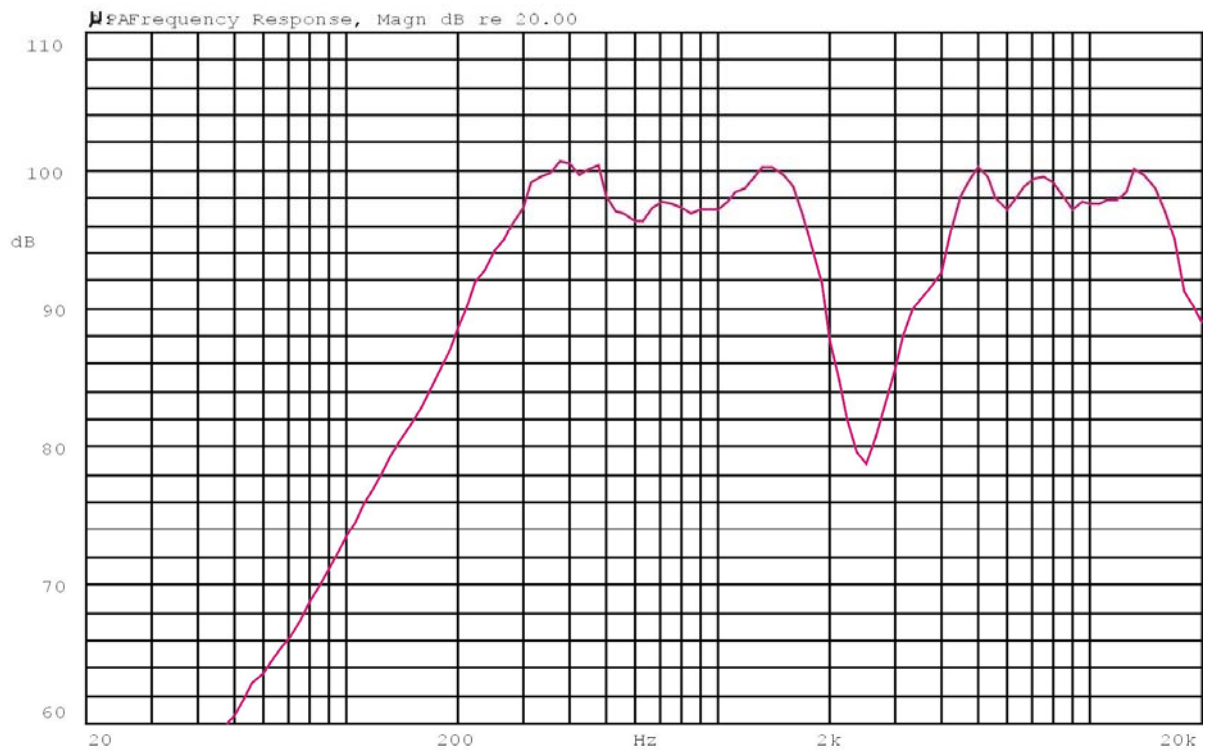
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



2-3. Frequency Response Curve

AK-402008CC-6
X: Y: ZA:2.0000 No Curve

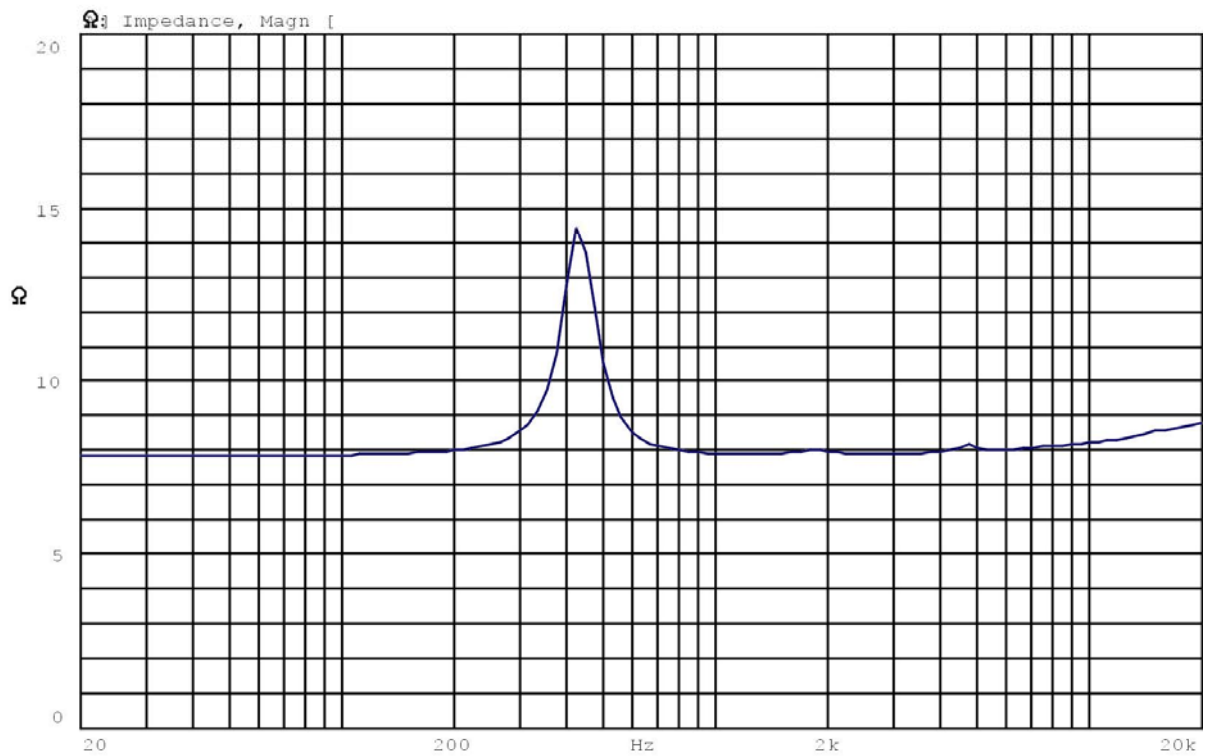


Mode: SPEAKER



2-4. Impedance Curve

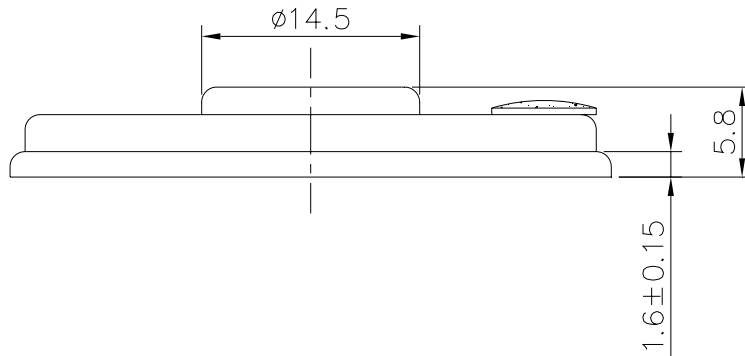
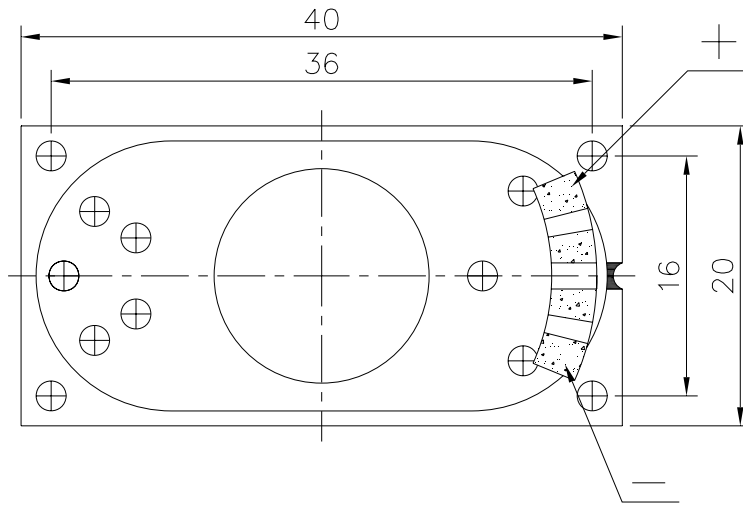
IMPEDANCE MEASUREMENTS: Measurement of Impedance Z(jw)
X: Y: ZA:2.0000 No Curve



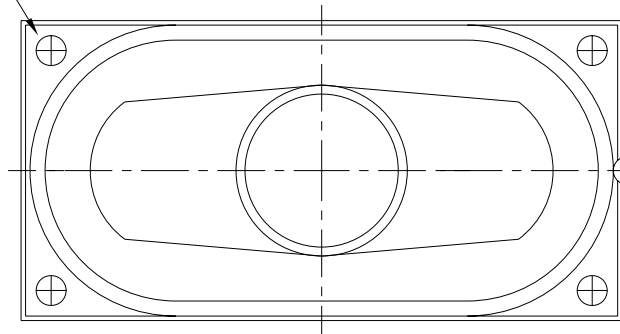
Mode: Z(jw)



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



4- $\phi 2 \pm 0.2$ HOLES



| | | | |
|------------------------|-------------------------|-------------------------------|---------------------|
| TITLE: DYNAMIC SPEAKER | DRAWN: JOSEV 05/23/2005 | SCALE: 2:1 | SHEET: 1 of 1 |
| PART NO. AK-402008CC-6 | DESIGNED: R&D OF AAT | UNITS: mm | TOLERANCE ± 0.3 |
| DWG NO. DTS-1373 | CHECKED: | UNLESS OTHERWISE SPECIFIED: | |
| | APPROVAL: | ONE PLACE DECIMAL \pm *** | |
| | MATERIAL: ***** | TWO PLACE DECIMAL \pm *** | |
| | | THREE PLACE DECIMAL \pm *** | |



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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 style="text-align: center;"> 65°C $90 \sim 95 \% \text{ RH}$ 25°C 0.5hr 6hrs 0.5hr 5hrs </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 | Load 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. |