



# **Dynamic Gut**

## **For module only**

**34 × 11 × 4.0 mm**

**CR3411S040BN4**

### **Revision**

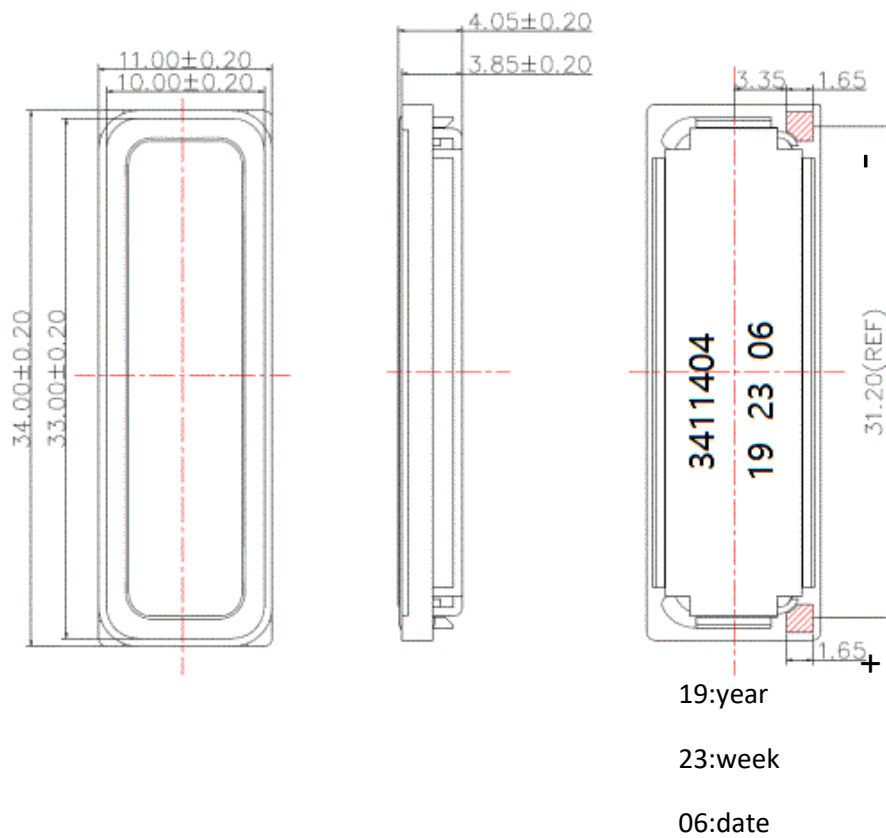
| <b>Date</b> | <b>Version</b> | <b>Status</b> | <b>Changes</b>                                           | <b>Approver</b> |
|-------------|----------------|---------------|----------------------------------------------------------|-----------------|
| 2019/9/17   | V0.1           | Draft         | Initial release                                          | AX              |
| 2020/5/13   | V0.2           | Draft         | Update testing condition                                 | AX              |
| 2020/6/24   | V0.3           | Draft         | Add free air testing result & update package information | AX              |
| 2021/4/9    | V0.4           | Draft         | Add overshoot parameter                                  | AX              |
| 2021/4/20   | V0.5           | Draft         | Add polarity mark                                        | AX              |
| 2022/4/8    | V0.6           | Draft         | Add printing code                                        | AX              |
| 2022/07/08  | V0.7           | Draft         | Update acoustic parameter & package information          | AX              |
| 2023/7/4    | V0.8           | Draft         | First release                                            | AX              |

| Parameter                     | Conditions/Description                                          | Values  | Units |
|-------------------------------|-----------------------------------------------------------------|---------|-------|
| Rated Input Power             | In 5cc box                                                      | 2.0     | W     |
|                               | In Free air                                                     | 0.1     | W     |
| Max Input Power               | In 5cc box                                                      | 3.0     | W     |
|                               | In Free air                                                     | 0.2     | W     |
| Impedance                     |                                                                 | 4±15%   | Ω     |
| Sound Pressure Level (S.P.L.) | at 2.0KHz in 2.0V/0.1M average IN 5CC BOX(0dB SPL=20μPa)        | 94±3    | dB    |
|                               | at 2.0KHz in 0.632V/0.1M average IN Free air(0dB SPL=20μPa)     | 84±3    | dB    |
| Resonant Frequency (Fo)       | IN 5CC BOX                                                      | 700±20% | Hz    |
|                               | IN Free air                                                     | 500±20% | Hz    |
| Frequency Range               | Output S.P.L. -10dB                                             | Fo~20K  | Hz    |
| Distortion                    | at 1K Hz, input 2.0W, IN 5CC BOX                                | < 10%   | -     |
| Magnet                        | NdFeB                                                           |         | mm    |
| Buzz, Rattle, etc.            | must be normal at sine wave between Fo ~ 5K Hz IN 5CC BOX       | 2.83    | V     |
| Polarity                      | cone will move forward with positive dc current to "+" terminal |         |       |
| Weight                        |                                                                 |         | g     |
| Operating Temperature         |                                                                 | -25~+60 | °C    |
| Storage Temperature           |                                                                 | -25~+60 | °C    |
| Waterproof                    |                                                                 | N/A     |       |

Above Measuring condition under temperature : 15~35°C R.H. 25 ~75%.86 kPa to 106 kPa (860 mbar to 1 060 mbar According to standard GB/T 9397—200X and IEC 60268-1

## MECHANICAL DRAWING

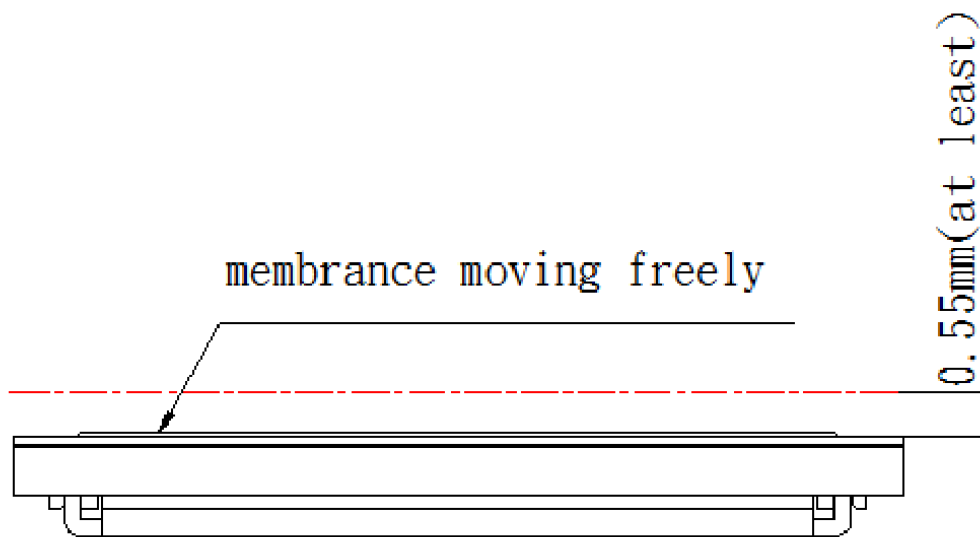
Units: mm

Tolerance:  $\pm 0.5\text{mm}$ 

## CONSTRUCTION DETAIL

| No. | Part Name        | Materia        | Qty. | Treatment | Remark |
|-----|------------------|----------------|------|-----------|--------|
| 1   | Frame            | Plastic+ Steel | 1    |           |        |
| 2   | Front cover      | Copper         | 1    |           |        |
| 3   | Diaphragm        | Polymer        | 1    |           |        |
| 4   | Magnet           | Nd-Fe-B        | 1    |           |        |
| 5   | Inner pole plate | Steel          | 1    |           |        |
| 6   | Outer pole shoe  | Steel          | 1    |           |        |
| 7   | Voice coil       | Copper         | 1    |           |        |
| 8   | Leaf spring pad  | Steel          | 2    |           |        |

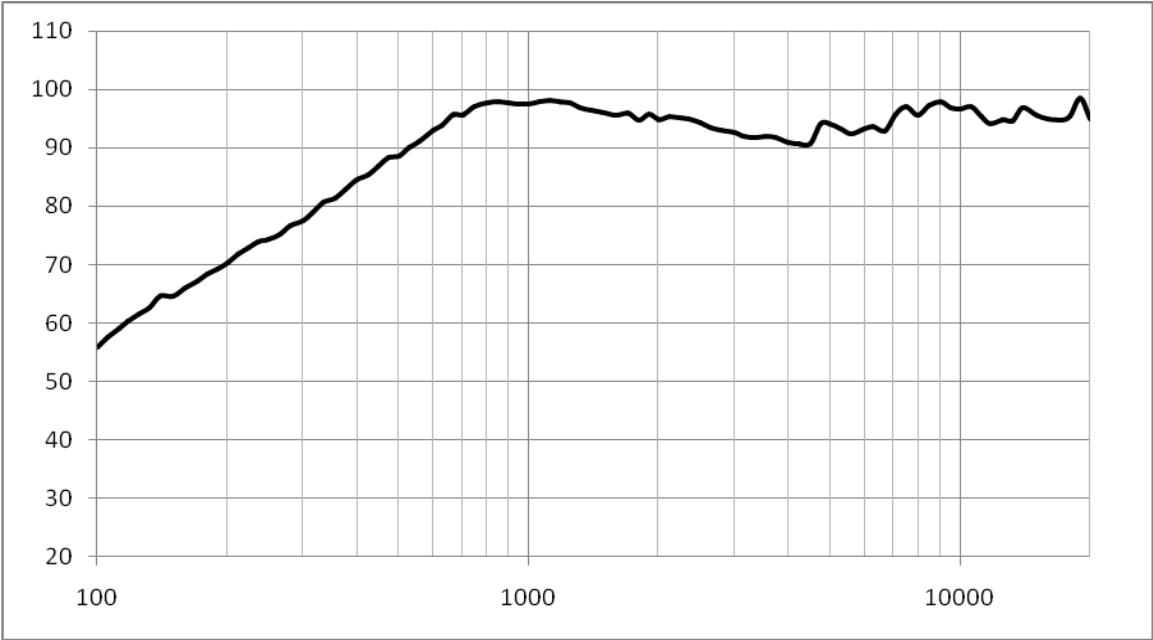
Keep clearance in front of the speaker, at least leave 0.55mm for membrane moving freely.



RESPONSE CURVES

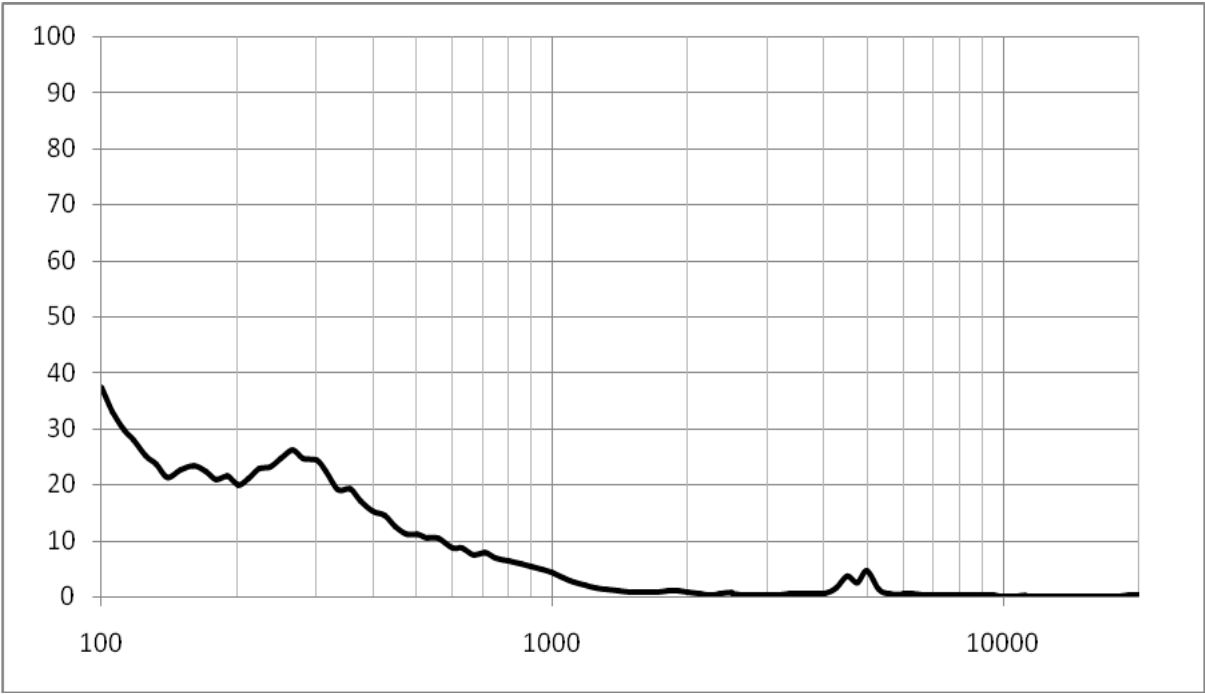
Frequency Response Curve

Test condition: 2.0V/0.1M, in 5CCBOX

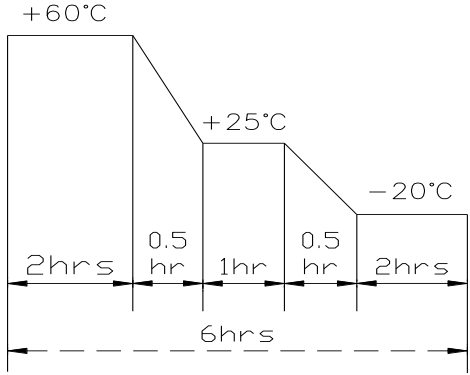


Total Harmonic Distortion Curve

Test condition: 2.0V/0.1M, in 5CCBOX



## RELIABILITY TEST

|   |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Reliability Test Performance           | After any following test, parts should conform to original performance within $\pm 3$ dB tested with Rated Power, after 6 hours of recovery period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2 | High Temperature Operation and Storage | $+ 60 \pm 2$ °C Humidity Random for 96 Hours. (GB/T 9397—200X)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3 | Low Temperature Operation and Storage  | $- 25 \pm 2$ °C Humidity Random for 96 Hours. (GB/T 9397—200X)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4 | Humidity Test                          | $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Relative Humidity(RH)90~95% 48 Hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5 | Temp Cycle                             | <p>The part shall be subjected 4cycles. One cycle shall be 6 hours and consist of (GB5170.18-87)</p>  <p>The diagram illustrates a temperature cycle profile. It starts at <math>+60^{\circ}\text{C}</math> for a duration of 2 hours. This is followed by a 0.5-hour ramp down to <math>+25^{\circ}\text{C}</math>, where it remains for 1 hour. Another 0.5-hour ramp down leads to <math>-20^{\circ}\text{C}</math>, which is maintained for 2 hours. The total duration of one cycle is 6 hours, indicated by a dashed line at the bottom.</p> |
| 6 | Vibration Test                         | Frequency $30 \pm 15$ Hz, Amplitude 1.5 mm for 3 Hours. (GB11606.8-89)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 7 | Drop Test                              | 75 CM free falling on Concrete floor, 10 times. (GB2423. 8-81)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 8 | Load test                              | Must perform normal with program White-Noise source at Rated Power for 96 Hours(GB/T 9397—200X)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 9 | Termination Strength                   | Apply 3.0N(0.306kg) to each terminal in horizontal direction for 30 seconds;<br>Apply 2.0N(0.204kg) to each terminal in vertical direction for 30 seconds;                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

MEASURING METHOD

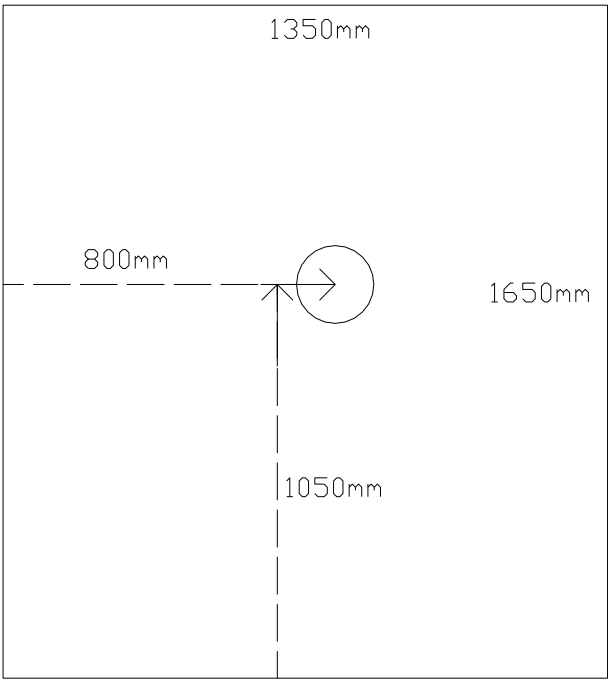
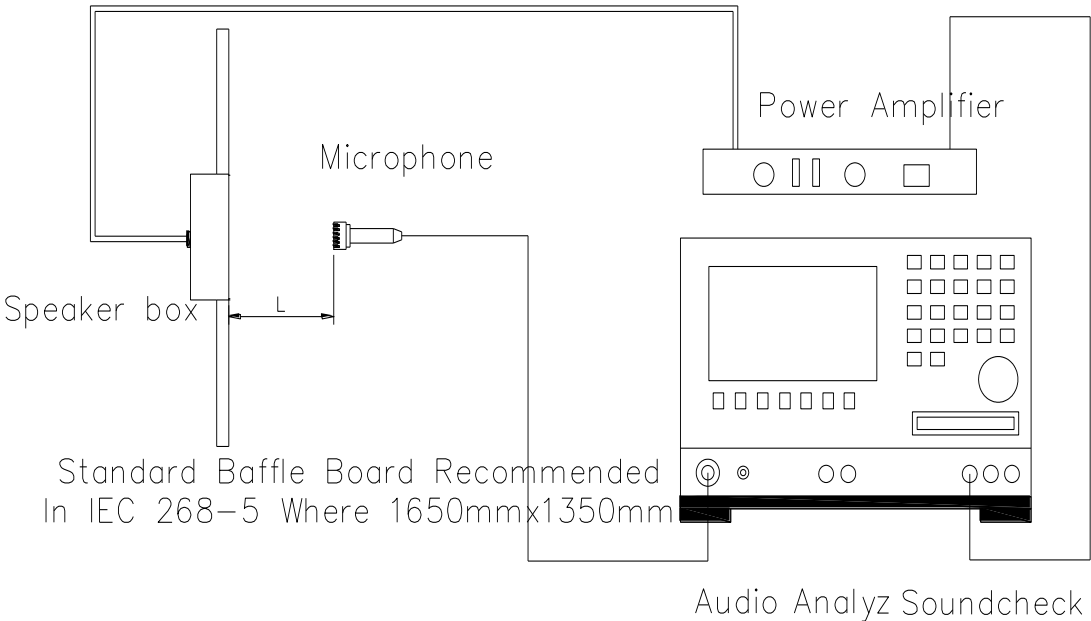


Fig. 1 Block Diagram for Measurement Method

Standard test condition of speaker



L=10cm

Fig. 2 Speaker Test Condition

## PACKAGING

Storage conditions:

Speakers should be well packed.

The temperature should be as stable as possible and between -10° C and +40° C.

The relative humidity should be below 90%.

There should be no acid or other harmful gases in the surrounding air (GB/T 9397—200X)

**每盘 60 个**      60pcs of speaker in each tray

**每箱 20 盘**      20 trays in one carton

**总计:1200 个 / 1 箱** Total:1200 pcs / 1 carton

**毛重: 6.5KGS**      Gross Weight:6.5KGS

**净重: 5.0KGS**      Net Weight: 5.0KGS

