# Dynamic Loudspeaker

# with spring

# & waterproof

# 15×11×2.5 mm

# CR1511L025YN8WP

## Revision

| Date | Version | Status | Changes | Approver |
|---|---|---|---|---|
| 2019/8/5 | V0.1 | Draft | Initial release | AX |
| 2019/10/11 | V0.2 | Draft | Update drawing for speaker testing | AX |
| 2020/5/20 | V0.3 | Draft | Add PCB layout & overshoot & print code | AX |
| 2020/6/15 | V0.4 | Draft | Add THD curves | AX |

| Parameter | Conditions/Description | Values | Units |
|---|---|---|---|
| Rated Input Power | in 1cc closed box | 0.8 | W |
| Max Input Power | in 1cc closed box | 1.2 | W |
| Rated Impedance | 1V input | 8±15% | Ω |
| Sound Pressure Level | 2.53V/0.1M at 2.0K Hz，in 1cc closed box | 93±3 | dB |
| Resonant Frequency (Fo) | In Free air<br>in 1.0cc closed box | 550±20%<br>850±20% | Hz |
| Frequency Range | | F0-20k | Hz |
| Distortion | at 1K Hz, input 1.0V，in 1cc box | ＜10% | - |
| Magnet | NdFeB | | |
| Buzz, Rattle, etc. | must be normal at sine wave between Fo ~ 20 kHz, in 1cc box | 2.53 | V |
| Polarity | cone will move forward with positive dc current to “+” terminal | | |
| Weight | | 1.5 | g |
| maximum | | 0.35 | mm |
| Operating | | -20~+60 | ℃ |
| Storage Temperature | | -30-+70 | ℃ |
| WaterProof | | IP67 | |

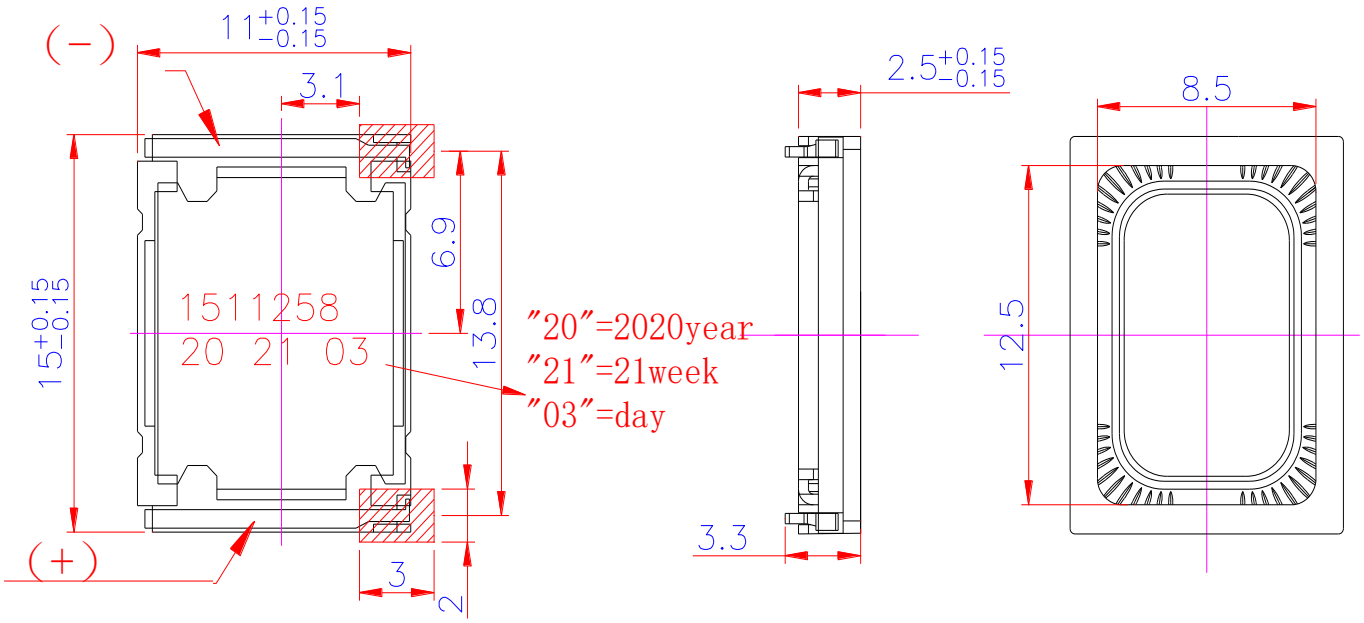
Notes: All specifications measured at 5~35°C, humidity at 45~85%, under 86~106 kPa pressure, unless otherwise noted.

## MECHANICAL DRAWING

Units: mm

Tolerance: ±0.15mm

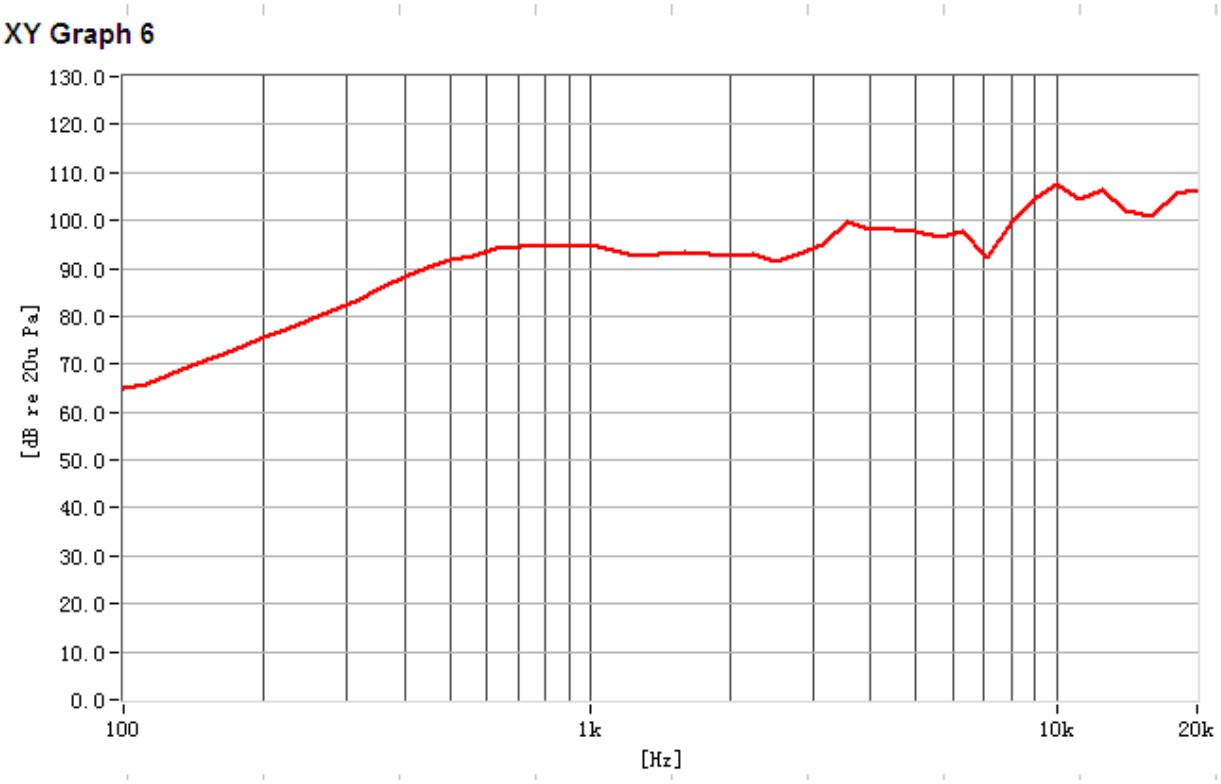



## CONSTRUCTION DETAIL

| | | | | |
|---|---|---|---|---|
| 5 | Diaphragm | 1 | PEEK | |
| 4 | VOICE COIL | 1 | COPPER WIRE | |
| 3 | Plate | 1 | SPCC | |
| 2 | Magnet | 3 | NdFeB | |
| 1 | Frame | 1 | PPA | |
| The material must be meet to GU-001 | | | | |
| PART NO. | PART NAME | Q'TY | MATERIAL | REMARK |

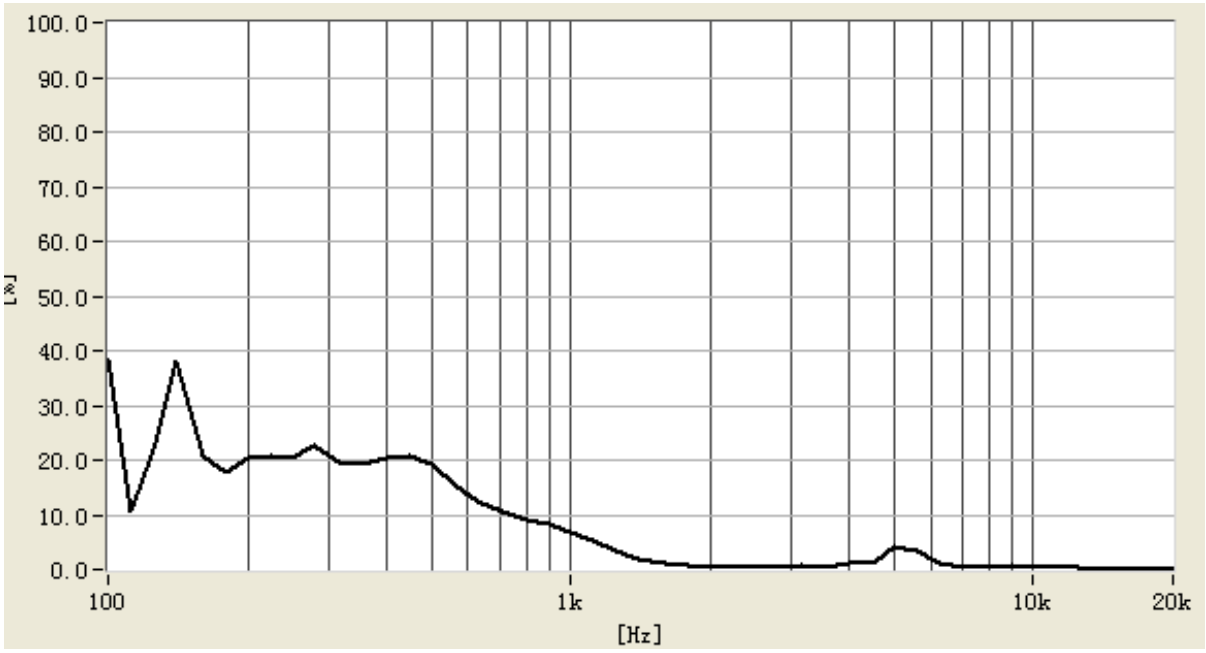
## RESPONSE CURVES

### Frequency Response Curve




0.8W , 10cm, with 1cc closed box

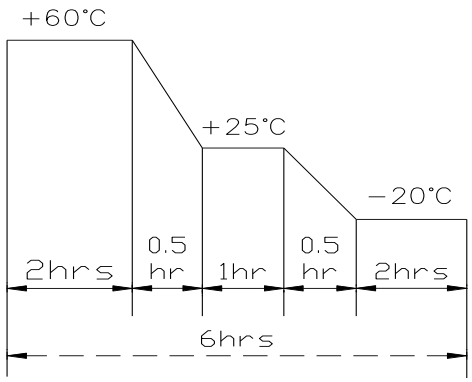
### THD




0.8W , 10cm, with 1cc closed box

## RELIABLITY TEST

| | | |
|---|---|---|
| 1 | Reliability Test Performance | After any following test, parts should conform to original performance within ±3 dB tested with Rated Power, after 6 hours of recovery period. |
| 2 | High Temperature Test | 96 hours at +60℃ |
| 3 | Low Temperature Test | 96 hours at -20℃ |
| 4 | Humidity Test | 96 hours at +30℃±3℃, 92-95% RH |
| 5 | Temp./Humidity Cycle | The part shall be subjected 5 cycles. One cycle shall be 6 hours and consist of   |
| 6 | Vibration Test | Frequency: 10~55~10Hz Oct/min Amplitude: 1.5mm<br>Duration: 2 hours each of 3 perpendicular directions |
| 7 | Drop Test | Drop the speaker contained in normal box onto the surface of 40mm thick board 10 times from the height of 75cm |
| 8 | Operation Life Test | Must perform normal with program Pink-Noise source at Rated Power for 96 Hours |
| 9 | Termination Strength | Apply 3.0N(0.306kg) to each terminal in horizontal direction for 30 seconds; Apply 2.0N(0.204kg) to each terminal in vertical direction for 30 seconds; |

## MEASURING METHOD

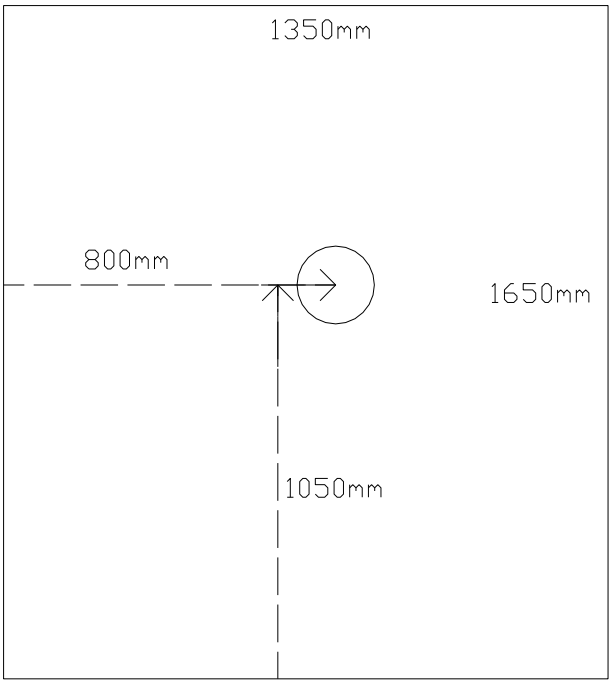



**Fig. 1 Block Diagram for Measurement Method**

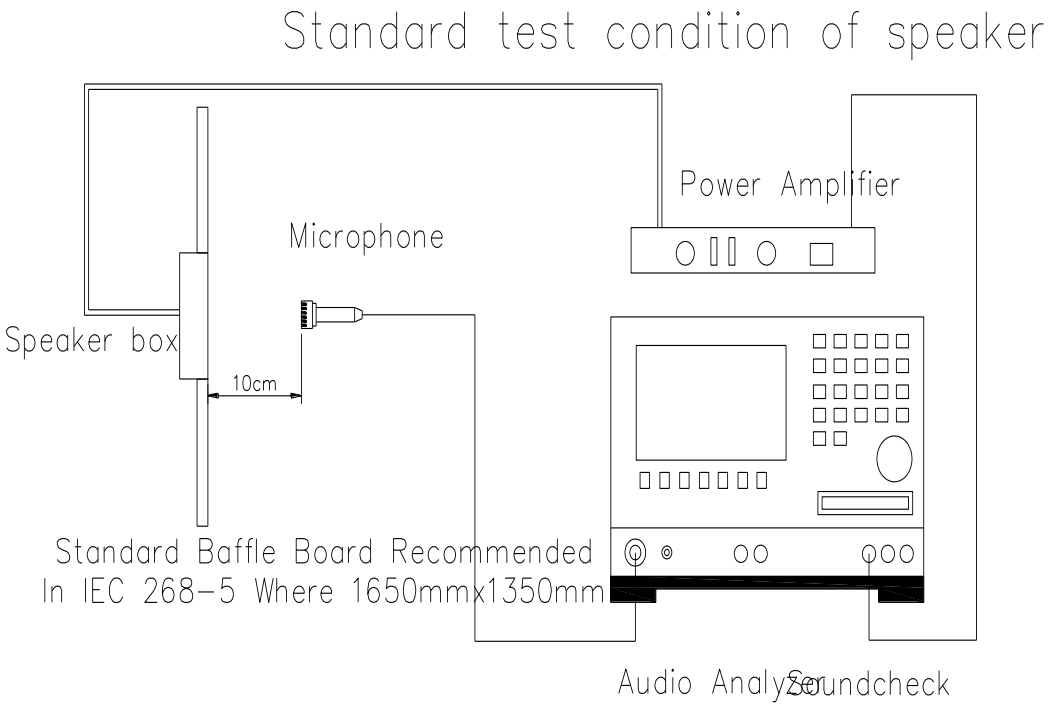



**Fig. 2 Speaker Test Condition**

## PACKAGING

units: mm

**每盘 100 个** 100pcs of speaker in each tray

**每箱 20 盘** 20 trays in one carton

**总计:2000 个 / 1 箱** Total:2000 pcs / 1 carton

**毛重: 4.5KGS** Gross Weight:4.5KGS

**净重: 3.0KGS** Net Weight: 3.0KGS