# DEVETECH ELECTRONICS CO. LTD

# DYNAMIC SPEAKER
# CUSTOMER: DACHS ELECTRONICA
# P/N: DVS5090R8F200P20

| | |
|---|---|
| DESIGNED BY | |
| CHECKED BY | |
| APPROVED BY | |

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## 1. Revision

| Rev. No | Date | Page | Description of Revision |
|---|---|---|---|
| 1.0 | 31/03/2016 | | Preliminary |
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## 2. Scope

This document contains required environmental, electrical, acoustic, mechanical, package and reliability test requirements.

## 3. General Characteristics

2.1 Out-Diameter: 50x90mm
2.2 Height: 31.5mm
2.3 Weight: 109g
2.4 Operating Temperature: -20~+50°C without loss of function
2.5 Store Temperature: -30~+70°C without loss of function

## 4. Electrical and Acoustic Characteristics

Test condition: 15 ~ 35 °C Temperature: 25% ~ 75% RH,86~106 kPa
Refer to IEC60268-1

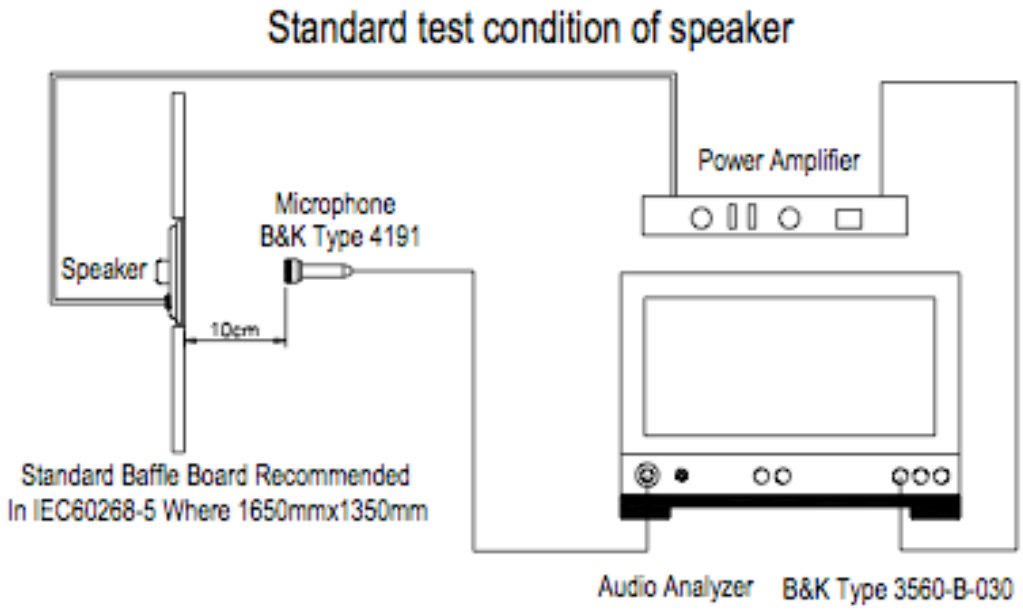
| | **Items** | **Specification** |
|---|---|---|
| 1 | Impedance | 8 Ω ± 15% (1Vrms at 400Hz) |
| 2 | Sound Pressure Level | 88 dB ± 3dB (0.5m/1w at 0.6, 0.8, 1.0, 1.2kHz average) |
| 3 | Resonance Frequency (fo) | 200 Hz ± 20% at 1V |
| 4 | Frequency Range | fo~10KHz |
| 5 | Input Power | Rated 20 W / Max. 20 W |
| 6 | Distortion | <5% at 1KHz 1W |
| 7 | Buzz and Rattle | Should not be audible buzzes, rattles when the 12.65V sine wave signal swept at frequency range. |
| 8 | Polarity | When a positive DC current is applied to the voice coil terminal marked (+) , the diaphragm shall move to forward. |

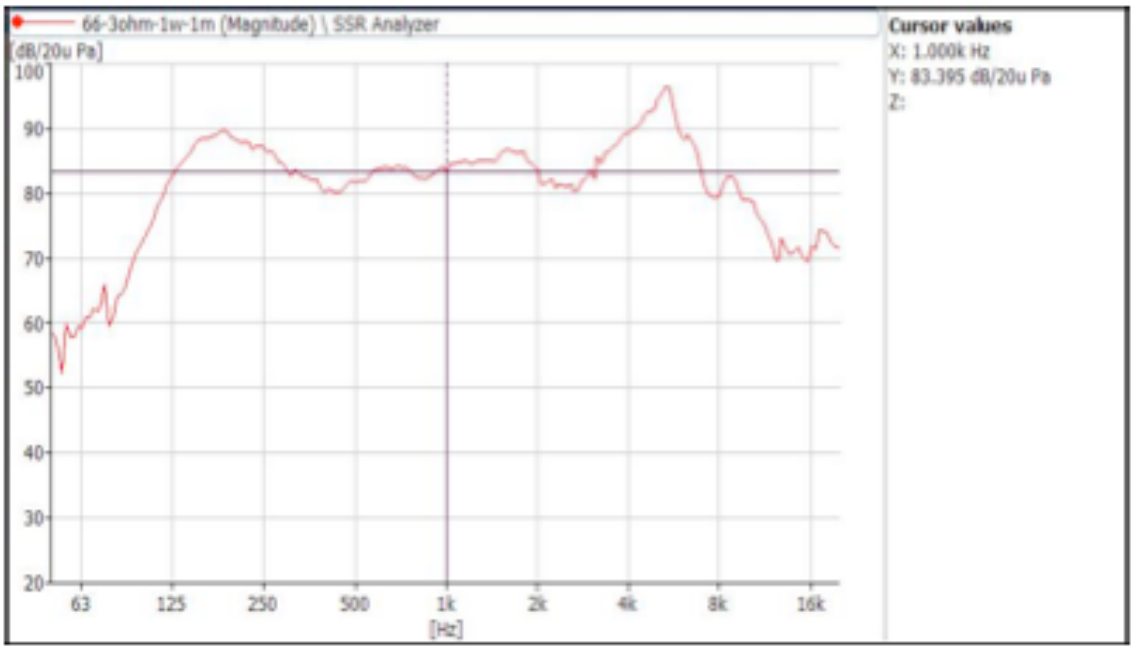
## 5. Reliability Test

After test (1~7item), the speaker S.P.L difference shall be within ±3dB, and the appearance not exist any change to be harmful to normal operation.

| No | Items | Specification |
|---|---|---|
| 1 | High Temp. Test | Keep 24 hours at +60±3 °C, and leave 3 hours in normal temperature and then check. |
| 2 | Low Temp. Test | Keep 24 hours at -30±3 °C, and leave 3 hours in normal temperature and then check. |
| 3 | Humidity Test | Keep 24 hours at -30±3 °C, relative humidity 85 to 90% and leave 4 hours in normal temperature and then check. |
| 4 | Thermal Shock Test | Each temperature cycle shall consist of 1 hour at +25±3 °C followed by 1 hour at +60±3 °C, and followed by 1 hour at -30±3 °C with a 20 to 40 minutes transition time between each 2 temperature extremes. The test duration is for 3 cycles. |
| 5 | Vibration Test | Being applied vibration of amplitude of 1.5mm with 10-55-10Hz band of vibration frequency, X.Y.Z. 3 direction. 2 hours each, total 3 hours. |
| 6 | Drop Test | Free drop from 1.0 meter height to a board 20mm thick hard wood board and be nothing mechanical damage. Total 3 times. |
| 7 | Load test | Loading white noise with input rate power for 24 hours, then placed in natural condition for 1 hour and then check. |

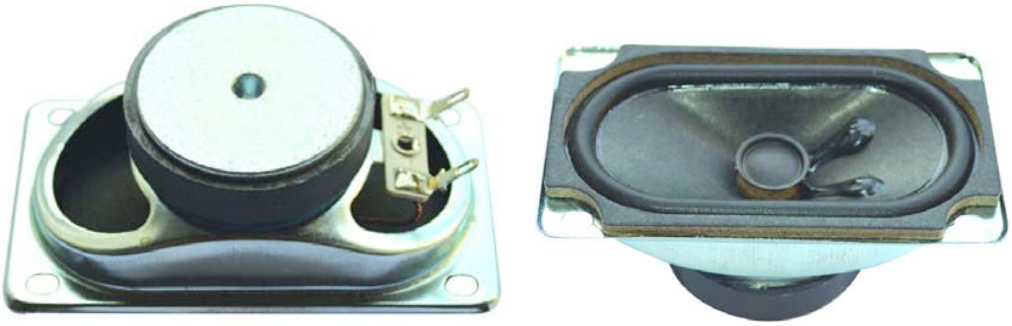
# 6. Measurement Method and Frequency Response Curve

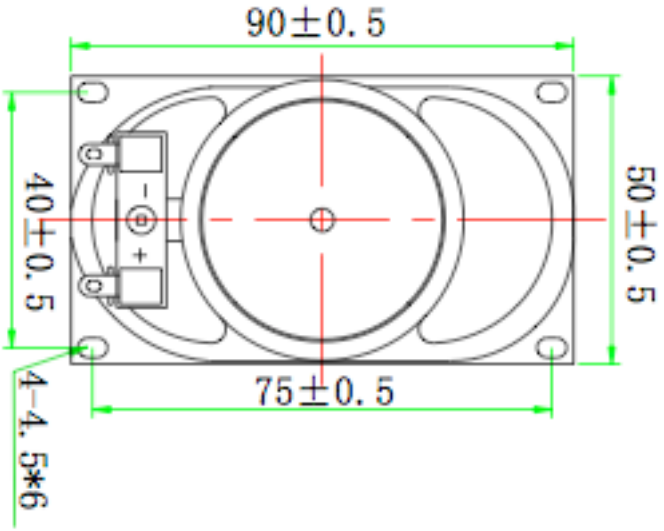


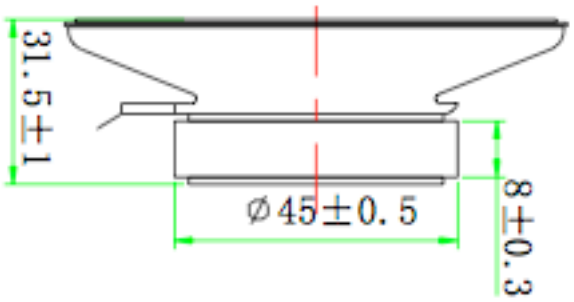



## 7. Dimensions – Magnet out Plastic Frame

Unit: mm  Tolerance: ±0.2





## 9. Packing

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with part number, quantity and outgoing inspection number.
There shall be no mechanical damage on products during in storage.

## NOTES