



DEVETECH ELECTRONICS CO. LTD

**DYNAMIC SPEAKER
CUSTOMER: DACHS ELECTRONICA
P/N: DVSPK50170R8F700P05**

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|-------------|--|
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1. Revision

| Rev. No | Date | Page | Description of Revision |
|----------------|-------------|-------------|--------------------------------|
| 1.0 | 12/11/2015 | | 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 : 50 mm

2.2 Height : 170 mm

2.3 Weight : 45g

2.4 Operating Temperature : -20~+60°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 \pm 15% (1Vrms at 2KHz) |
| 2 | Sound Pressure Level | 92 dB \pm 3dB (0.1m/0.1w at 0.8,1.0,1.2,1.5kHz Average) |
| 3 | Resonance Frequency(fo) | 700 Hz \pm 20% at 1V |
| 4 | Frequency Range | fo ~5KHz |
| 5 | Input Power | Rated 0.5 W / Max. 1 W |
| 6 | Distortion | Less than 5% at 1kHz 0.5W |
| 7 | Buzz and Rattle | Should not be audible buzzes,rattles when the 2V sine wave signal swept at frequency range. |
| 8 | Polarity | When a ppsitive DC current is applied to the voice coil terminal marked (+) , the diaphragm shall move to forward. |

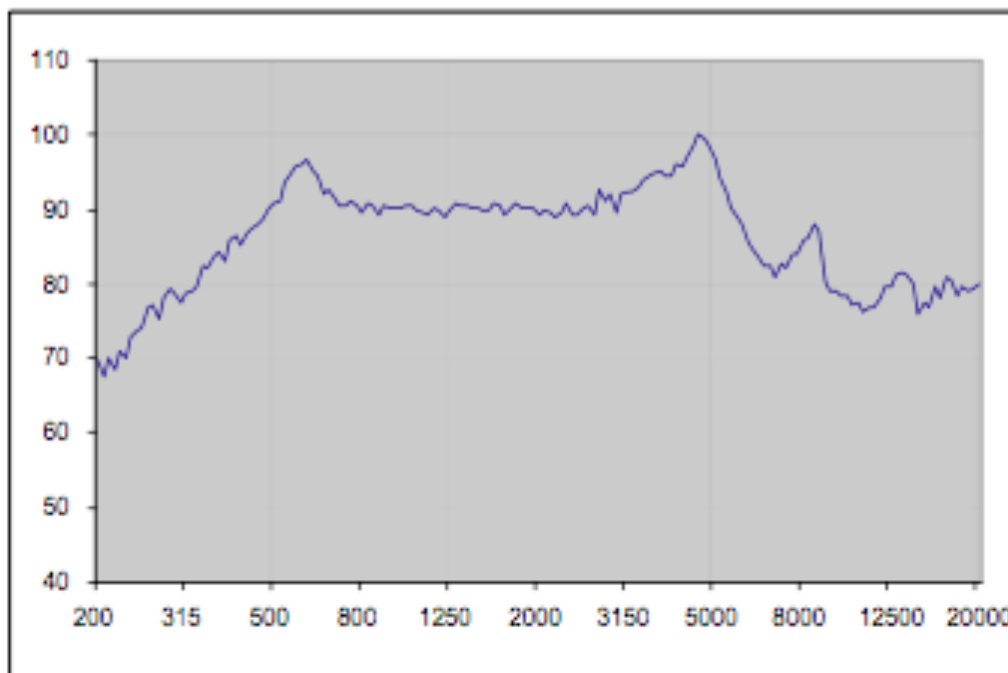
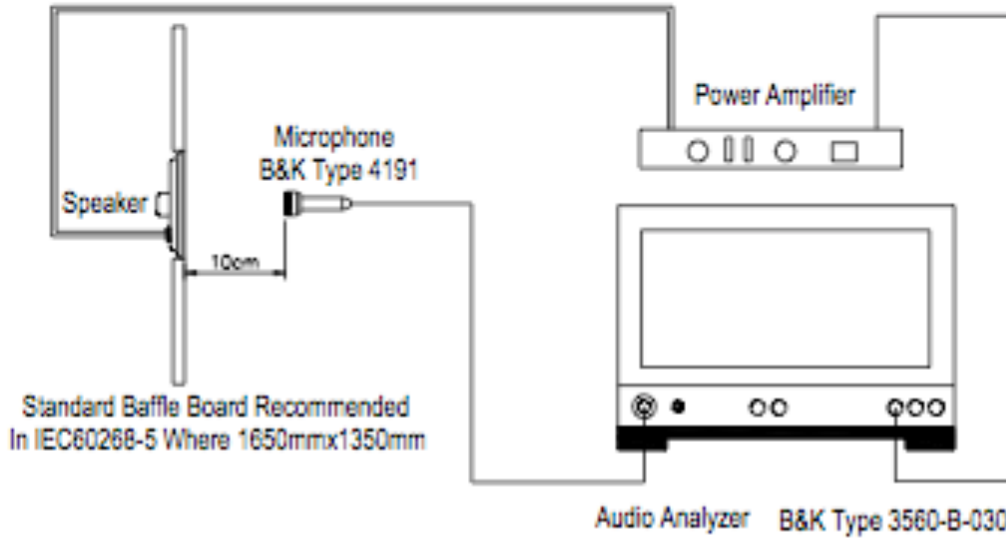
5. Reliability Test

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

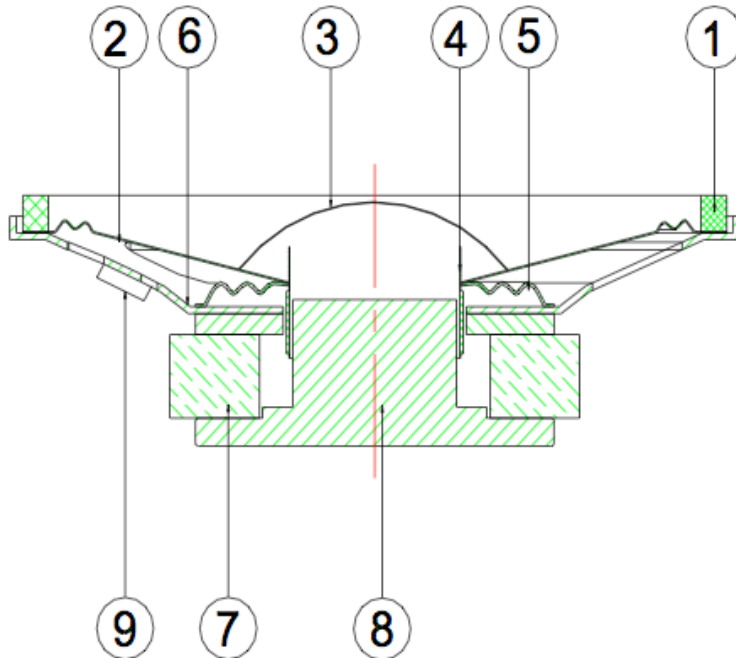
| No | Items | Specification |
|----|--------------------|--|
| 1 | High Temp.Test | Keep 100 hours at $+60\pm 3\text{ }^\circ\text{C}$,and leave 3 houres in normal temperature and then check. |
| 2 | Low Temp.Test | Keep 100 hours at $-30\pm 3\text{ }^\circ\text{C}$,and leave 3 houres in normal temperature and then check. |
| 3 | Humidity Test | Keep 100 hours at $-30\pm 3\text{ }^\circ\text{C}$,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 2 hours at $+25\pm 3\text{ }^\circ\text{C}$ followed by 2hours at $+60\pm 3\text{ }^\circ\text{C}$,and followed by 2hours at $-30\pm 3\text{ }^\circ\text{C}$ with a 20 to 40 minutes transition time between each 2 temperature extremes. The test duration is for 10 cycle. |
| 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 6 hours. |
| 6 | Drop Test | Free drop fram 1.0 meter height to a board 20mm thick hard wood board. and be nothing mechanical damage. tatol 6 times. |
| 7 | Load test | Loading white noise with input rate power for 100 hours, then placed in natural condition for 1 hour and then check. |

6. Measurement Method and Frequency Response Curve

Standard test condition of speaker



7. Mechanical Layout



| No. | Part Name | Q'ty | Material | Remarks |
|-----|------------|------|------------------|---------|
| 1 | Gasket | 1 | Paper | |
| 2 | Cone | 1 | Mylar | |
| 3 | Dust Cap | 1 | Mylar | |
| 4 | Voice Coil | 1 | Kraft paper + QA | |
| 5 | Spider | 1 | Cotton Yam | |
| 6 | Frame | 1 | SPCC | |
| 7 | Magnet | 1 | Ferrite Y30 | |
| 8 | T-Yorke | 1 | SPCC | |
| 9 | Terminal | 1 | White fiber | |

8. Dimensions

Unit: mm Tolerance: ± 0.2

