

SPECIFICATION

FOR APPRORAL

Customer : _____

Product Name : Microphone _____

Model Name : VS9767PS40 _____

Drawing No. : VS20190517017 _____

Signature of Voise

| Approved by | Checkde by | Issued by | Date |
|-------------|------------|-----------|------|
| | | | |



Office Add:Haoyangguang B-302# No.968 Baizhang Road,Ningbo China
Factory add: Shishan Industrial Park Moushan Town Yuyao City China
Tel:86-0574-87471601 Fax:86-0574-87471603 P.C.315000
Http://www.nbvoise.com E-mail:sales@nbvoise.com

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2. Scope

This specification applies electret condenser microphone.

3. General Characteristics

- 3.1 Out-Diameter : 9.7 mm
- 3.2 Height : 6.5 mm
- 3.3 Weight : 1 g
- 3.4 Operating Temperature : -30~+70℃ without loss of function
- 3.5 Store Temperature : -40~+85℃ without loss of function

4. Electrical and Acoustic Characteristics.

Test condition :5 ~ 35 °C Temp., 35% ~85% RH,86~106 kPa Refer to IEC

| No | Items | Specification | Condition |
|----|----------------------------------|------------------|----------------------------|
| 1 | Directivity | Omni-directional | |
| 2 | Sensitivity (S) | -40dB±3dB | f=1KHZ, 0dB=1V/pa RL=2.2KΩ |
| 3 | Standard Voltage(Vs) | 4.5 V.D.C | |
| 4 | Output impedance (Zout) | 2.2 KΩ | f=1KHz, 1ubar |
| 5 | Operating Voltage | 1.5-10 V.D.C | |
| 6 | Decreasing Voltage (ΔS-Vs) | -3dB | Vc=4.5V to 3.0V |
| 7 | Frequency | 50-16,000Hz | |
| 8 | Max. Current Consumption (IDss) | 0.5 mA | Vc=4.5V , RL=2.2KΩ |
| 9 | Max input Sound Pressure Leve | 110 dB | |
| 10 | Min Signal to noise ration (S/N) | 58 dBA | f=1 KHZ , S.P.L=1Pa |
| 11 | Material | AL | |
| 12 | Environmental Regulations | No RoHS | |

We use "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C.(International Electro technical Commission).The Sensitivity of "Pa" will increase 20dB comparing with "ubar" indication.
Example: -60dB (0dB=1V/ubar) =-40dB (1V/Pa)

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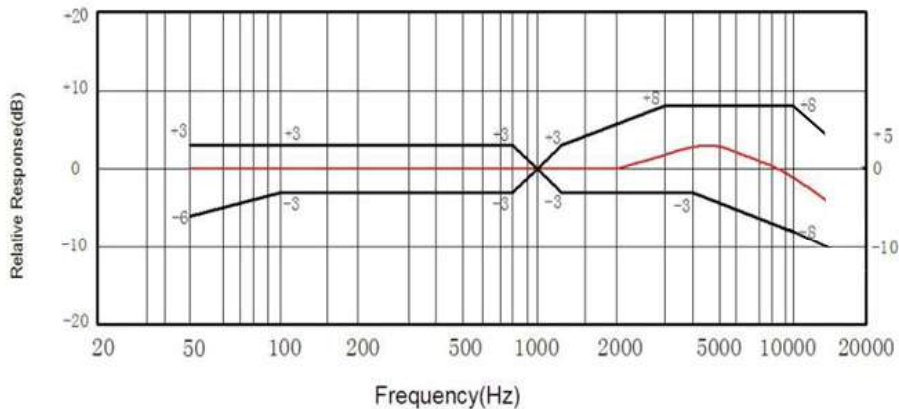
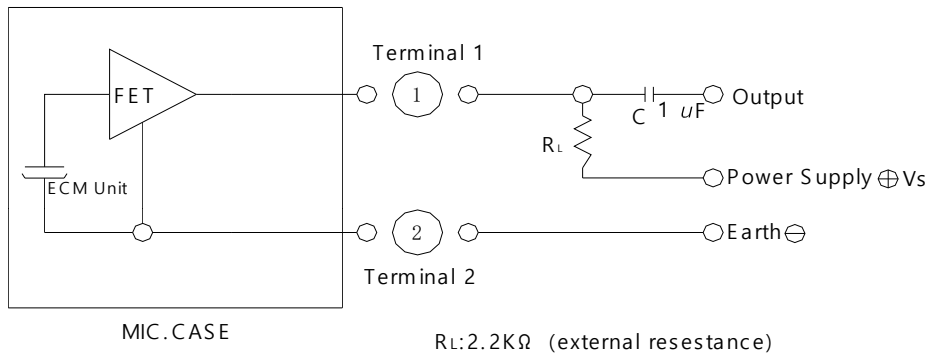
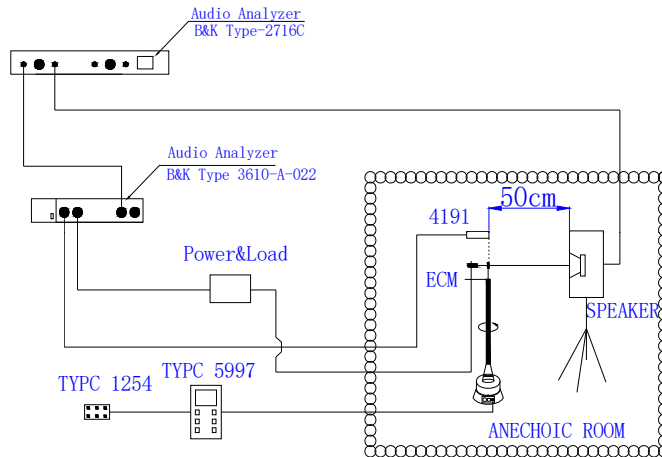
5. Reliability Test

After any following tests, the sensitivity of the microphone to be within $\pm 3\text{dB}$ of initial sensitivity after 3 hours of conditioning at 20°C

| No | Items | Specification |
|----|-------------------------|---|
| 1 | High Temp. Test | Keep 96 hours at $+70\pm 3^\circ\text{C}$, and leave 3 hours in normal temperature and then check. |
| 2 | Low Temp. Test | Keep 96 hours at $-40\pm 3^\circ\text{C}$, and leave 3 hours in normal temperature and then check. |
| 3 | Humidity Test | Keep 96 hours at $-45\pm 3^\circ\text{C}$, relative humidity 90 to 95% and leave 3 hours in normal temperature and then check. |
| 4 | Temperature Cycles Test | <p>According to the figure of temperature and time cycle, each 10 times</p> <p>The diagram illustrates a temperature cycle with the following segments: a 2-hour dwell at -40°C, a 1-hour ramp up to $+25^\circ\text{C}$, a 2-hour dwell at $+25^\circ\text{C}$, a 1-hour ramp up to $+85^\circ\text{C}$, and a final 2-hour dwell at $+85^\circ\text{C}$. The total duration of one cycle is 8 hours.</p> |
| 5 | Vibration Test | 1 minute frequency from 10Hz to 55Hz, amplitude 1.52mm, the vibration in three directions 2 hours |
| 6 | Drop Test | Three faces of package from 1 meters high free fall to the ground, each 10 times |
| 7 | Temperature Impact Test | $-20^\circ\text{C}\pm 3^\circ\text{C}$ for 30 minutes, and then $70^\circ\text{C}\pm 3^\circ\text{C}$ for 30 minutes, each 10 times |
| 8 | Solderability | The soldering copper of a type of 90W shall be applied, The temperature of the working surface of the soldering copper shall be $320\pm 10^\circ\text{C}$, Welding time is within 2 to 3 seconds. |
| 9 | Soldering Condition | ECM shall be soldered fixed on the metal block(heat sink)which has the higher radiation effects said heat sink |
| | | The pinhole after soldering shall be avoided |
| | | ECM may easily destroyed by the static electricity and the countermeasure for eliminating the static electricity (the ground for soldering copper, for worktable and for human body) shall be executed |

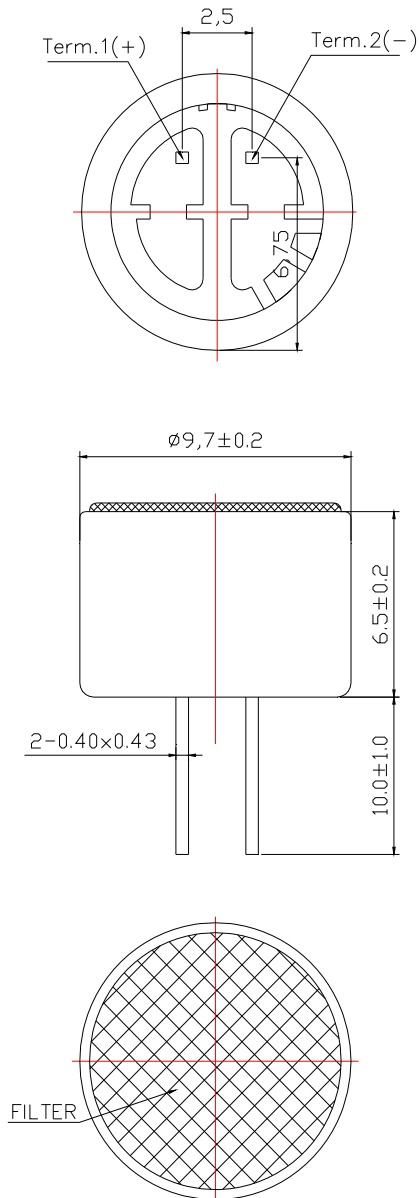
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6. Measurement Method & Frequency Response curve

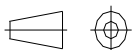


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7. Dimensions



FIRST ANGLE PROJECTION

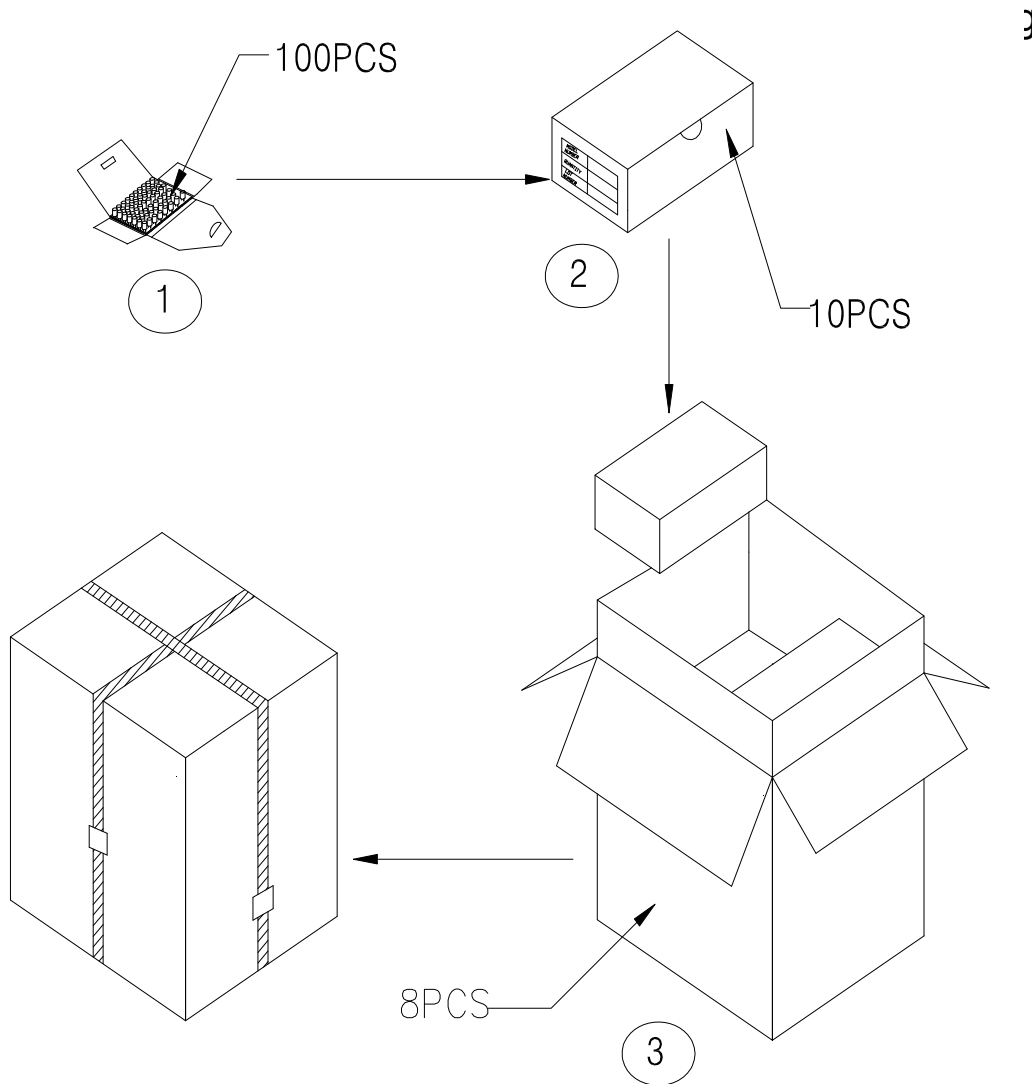


UNIT : mm

Tolerance : ±0.2

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8. Packing



| 序号 | 名称 | 规格 | 数量 |
|----|------|-------------------|-------------------|
| 1 | 小包装盒 | 100mmx100mmx13mm | 100PCSx1=100PCS |
| 2 | 中包装盒 | 205mmx105mmx75mm | 100PCSx10=1000PCS |
| 3 | 大包装盒 | 230mmx230mmx320mm | 1000PCSx8=8000PCS |