

SPECIFICATION

FOR APPRONAL

Customer : _____

Product Name : Microphone module _____

Model Name : VSM9750S3.5C85 _____

Drawing No. : VS202505019 _____

Signature of Voise

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

 福爱斯电子有限公司
VOISE ELECTRONICS CO.,LTD.

Address:No 96 Mogao Dongqian Lake Industial Area ningbo,China,
Tel:0086-0574-87773030;Fax:0086-0574-87471600 P.C.315121
<http://www.nbvoise.com> Email:sales@nbvoise.com

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| Specification for Microphone | | Page | 3/7 |
| | | Revision No. | 1.0 |
| Model No.: | VSM9750S3.5C85 | Drawing No. | VS202505019 |

2. Scope

This specification applies electret condenser microphone.

3. General Characteristics

- 3.1 Out-Diameter : 30x12 mm
- 3.2 Height : 12.9 mm
- 3.3 Weight : 8 g
- 3.4 Operating Temperature : -40~+85°C without loss of function
- 3.5 Store Temperature : -40~+95°C without loss of function

4. Electrical and Acoustic Characteristics.

Test condition :15 ~ 35 °C Temp., 45% ~85% RH,86~106 kPa Refer to IEC

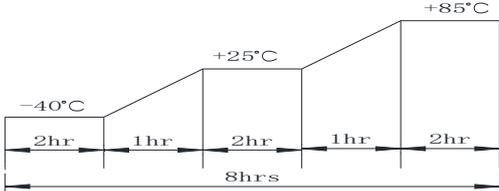
| No | Items | Specification | Condition |
|----|--|-----------------|------------------------------|
| 1 | Directivity | Uni-directional | |
| 2 | Sensitivity (S) | -3.5dB±3dB | f=1KHZ, 0dB=1V/pa |
| 3 | Standard Voltage(Vs) | 8 V.D.C | 680Ω |
| 4 | Output impedance (Zout) | 680 Ω | f=1KHz,1ubar |
| 5 | Operating Voltage | 5-10 V.D.C | |
| 6 | MaxTotal Harmonic Distortion | 3% | 94dBSPL @1kHz |
| 7 | Max. Current Consumption (I _{DDS}) | 10 mA | V _s =8V , RL=680Ω |
| 8 | Min Directivity | 15 dB | @1kHz |
| 9 | Min Signal to noise ration (S/N) | 60 dBA | A weighted |
| 10 | Material | ABS+PC | |
| 11 | Environmental Regulations | 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)

| | | | |
|------------------------------|----------------|--------------|-------------|
| Specification for Microphone | | Page | 4/7 |
| | | Revision No. | 1.0 |
| Model No.: | VSM9750S3.5C85 | Drawing No. | VS202505019 |

5. Reliability Test

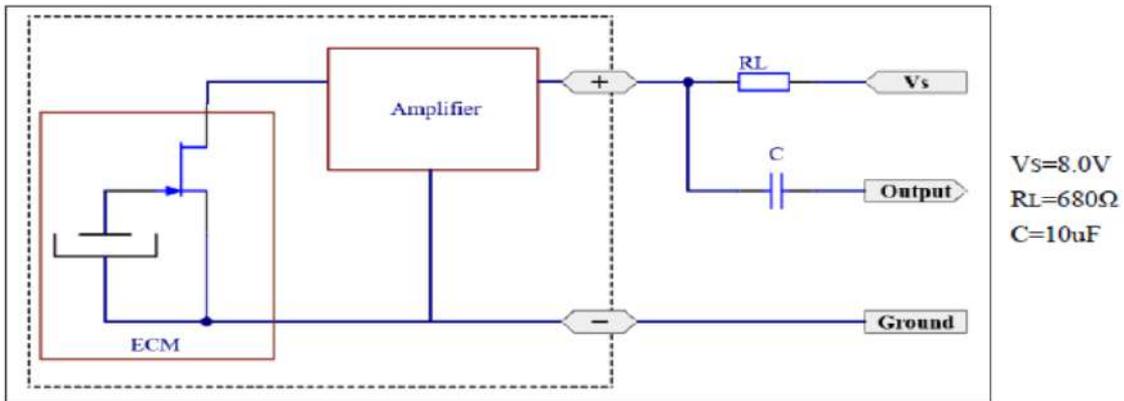
After any following tests, the sensitivity of the microphone to be within $\pm 3\text{dB}$ of initial sensitivity after 3 hours of conditioning at 20°C

| No | Items | Specification |
|----|-------------------------|--|
| 1 | High Temp.Test | Keep 96 hours at $+85\pm 3^\circ\text{C}$,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>  |
| 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 | $-40^\circ\text{C}\pm 3^\circ\text{C}$ for 30 minutes, and then $85^\circ\text{C}\pm 3^\circ\text{C}$ for 30 minutes, each 10 times |

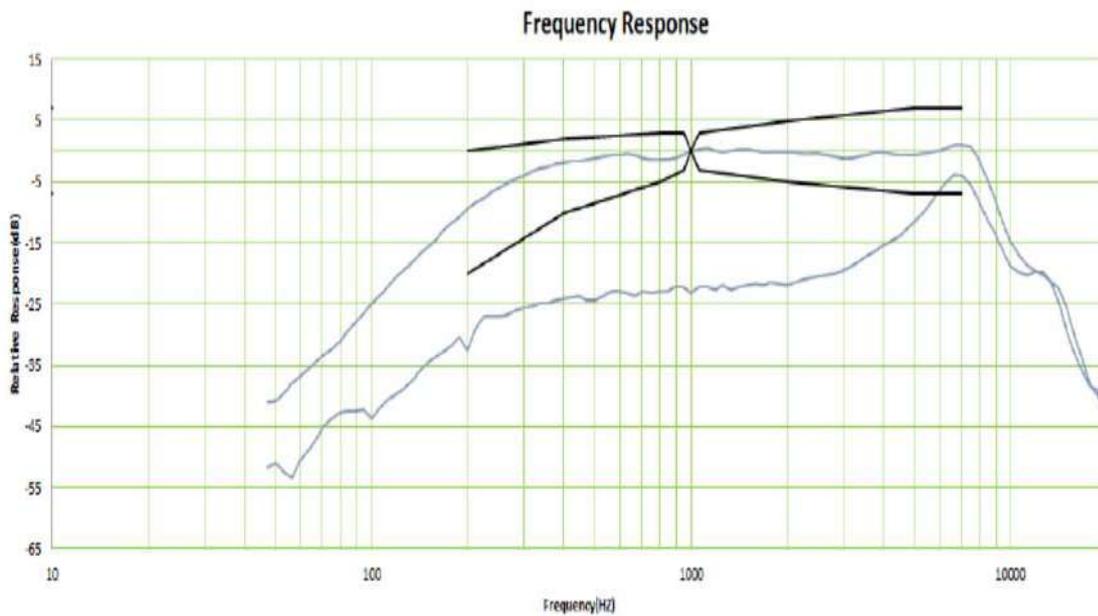
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|------------------------------|----------------|--------------|-------------|
| Specification for Microphone | | Page | 5/7 |
| | | Revision No. | 1.0 |
| Model No.: | VSM9750S3.5C85 | Drawing No. | VS202505019 |

6. Measurement Method & Frequency Response curve

Schematic Diagram



Frequency Response

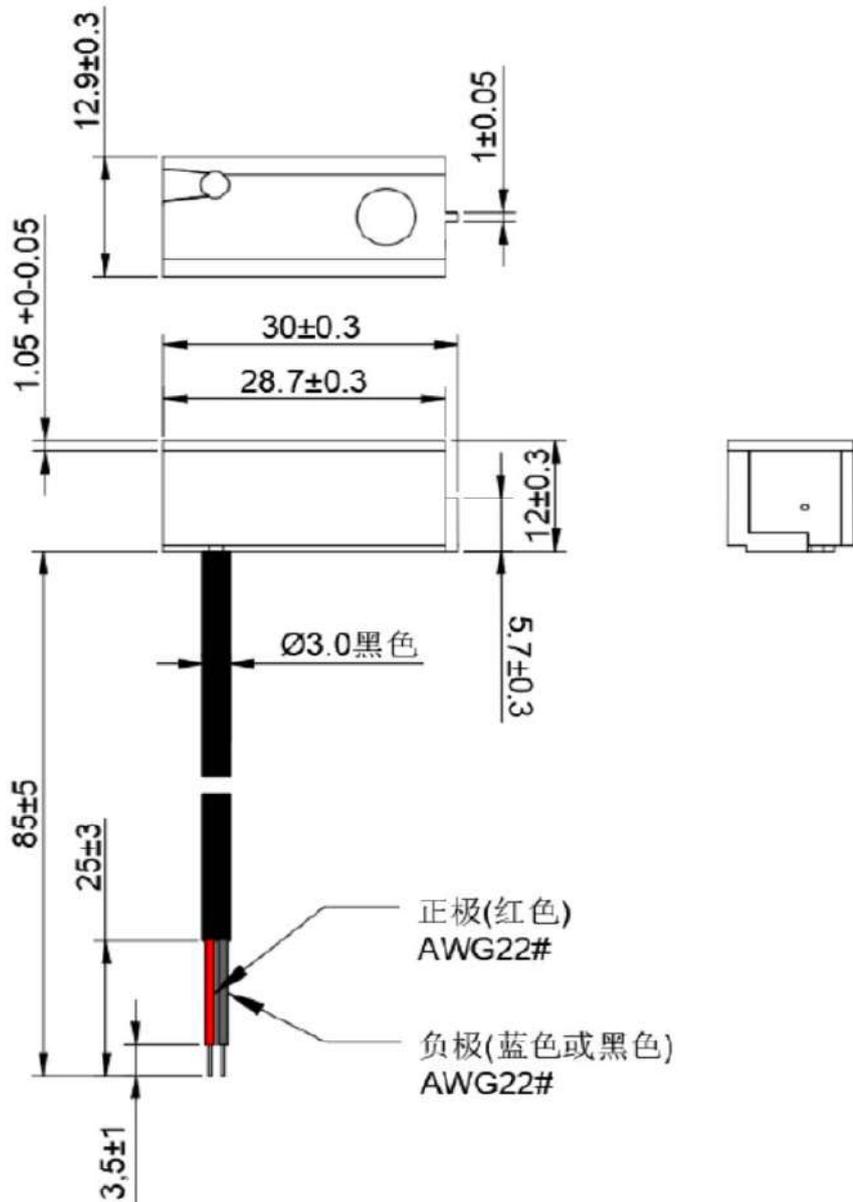


Frequency Response Limit

| Frequency(Hz) | 200 | 400 | 800 | 950 | 1000 | 1060 | 2000 | 5000 | 7000 |
|-----------------|-----|-----|-----|-----|------|------|------|------|------|
| Upper Limit(dB) | 0 | 2 | 3 | 3 | 0 | 3 | 5 | 7 | 7 |
| Lower Limit(dB) | -20 | -10 | -5 | -3 | 0 | -3 | -5 | -7 | -7 |

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|------------------------------|----------------|--------------|-------------|
| Specification for Microphone | | Page | 6/7 |
| | | Revision No. | 1.0 |
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7. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm

Tolerance : ±0.2

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|------------------------------|----------------|--------------|-------------|
| Specification for Microphone | | Page | 7/7 |
| | | Revision No. | 1.0 |
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8. 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.