

MESSRS.

SPECIFICATION FOR APPROVAL

承 認 書

| | |
|-------------------|-------------------------------|
| Product | ELECTRET CONDENSER MICROPHONE |
| Part No. | AHD-304 |
| Customer Approval | |

| Approved By | Checked By | Made By |
|-------------|------------|---------|
| | | |



ADVANCED ACOUSTIC TECHNOLOGY CORP.

荳 翔 科 技 股 份 有 限 公 司



ISO 9001 Certified

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SPECIFICATIONS

| | | |
|----|----------------------------|---|
| 01 | Electret Type | Foil type |
| 02 | Sensitivity | -58±3dB (0dB=1V/Pa,1KHz) |
| 03 | Output Impedance (Max) | 2.2KΩ |
| 04 | Directivity | Omnidirectional |
| 05 | Frequency Range | 200-5KHz |
| 06 | Max.Operation Voltage | 5V |
| 07 | Standard Operation Voltage | 2.0V |
| 08 | Current Consumption | Max.0.5mA |
| 09 | Sensitivity Reduction | Within -3dB 0dB=1V/Pa,1KHz Vs=2.0 to 1.5V |
| 10 | S/N Ratio | > 45dB |
| 11 | Operating Temperature | -25~+70°C |
| 12 | Storage Temperature | -40~+70°C |

Standard Conditions:

Generally Temperature 15~35°C

Generally Humidity 45~85%

Generally Atmospheric Pressure 860~1060hpa

Basic Test Conditions:

Temperature 20±2°C

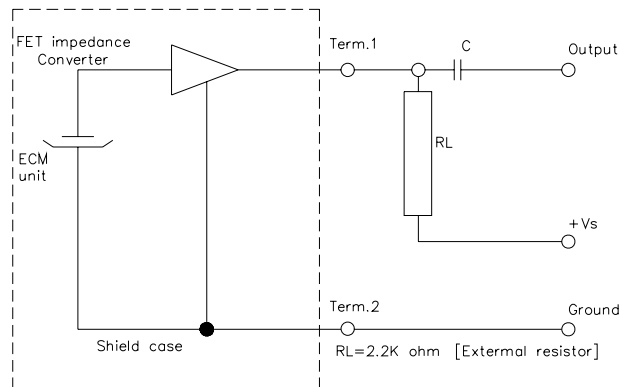
Humidity 60~70%

Generally Atmospheric Pressure 860~1060hpa

Electrical Characteristics Test Condition:

Vs=2.0V RL=2.2KΩ Te=20°C R.H.=60%

Standard Test Circuit



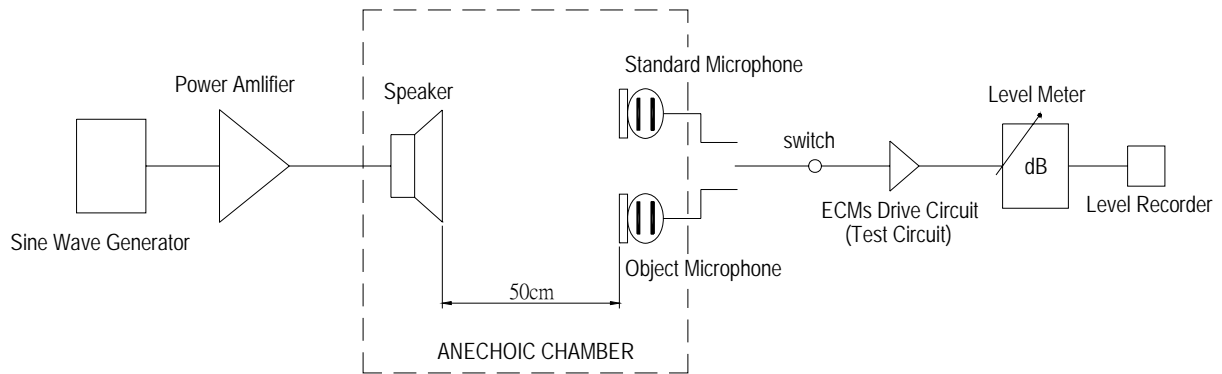
Every Mic. has installed FET.,

The FET. is easy broken by strong heat and static electricity, so when you working on, pls be attention that :

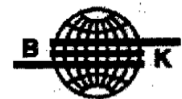
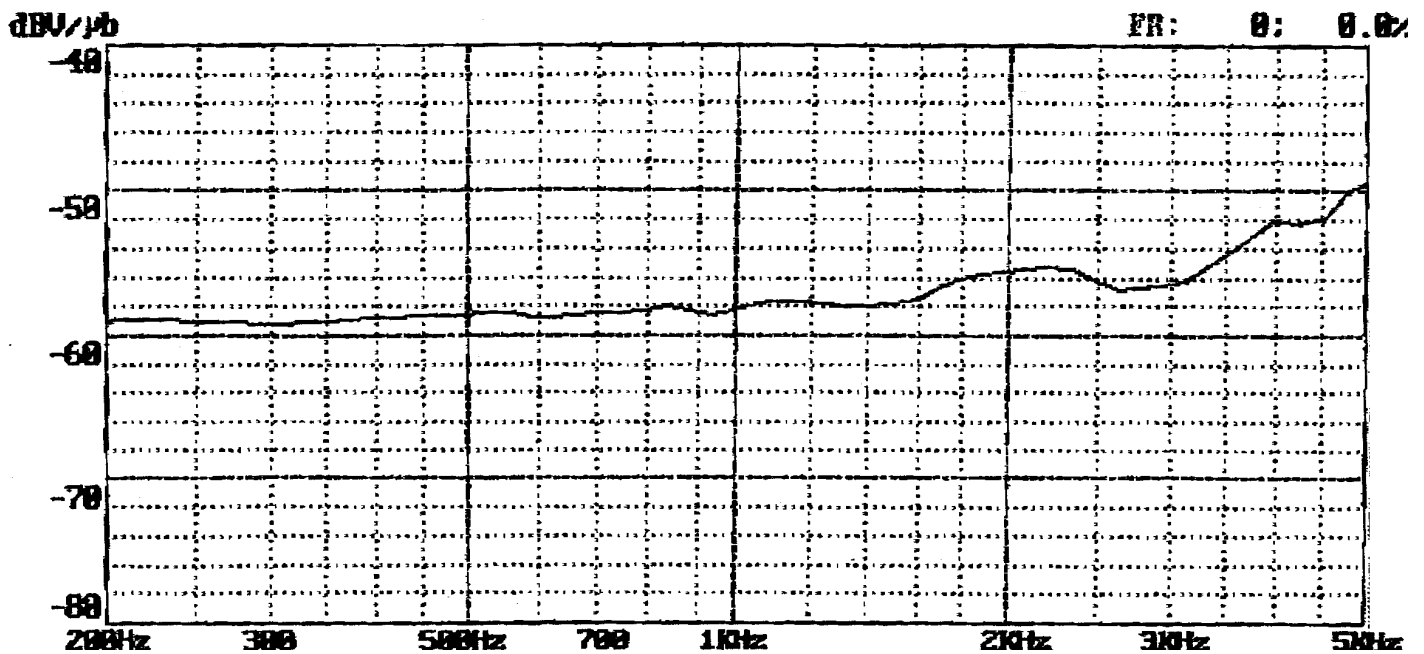
- Recommend using constant branding iron in 15 ~ 30W, and in temperature range 240 ~ 270°C.
- Soldering time not over 3 seconds.
- Don't stay any hole or dust when soldering.
- To avoid the Mic. be broken by static electricity, the people and working station should install prevent static electricity equipment.

Standard Test Condition Of Microphone

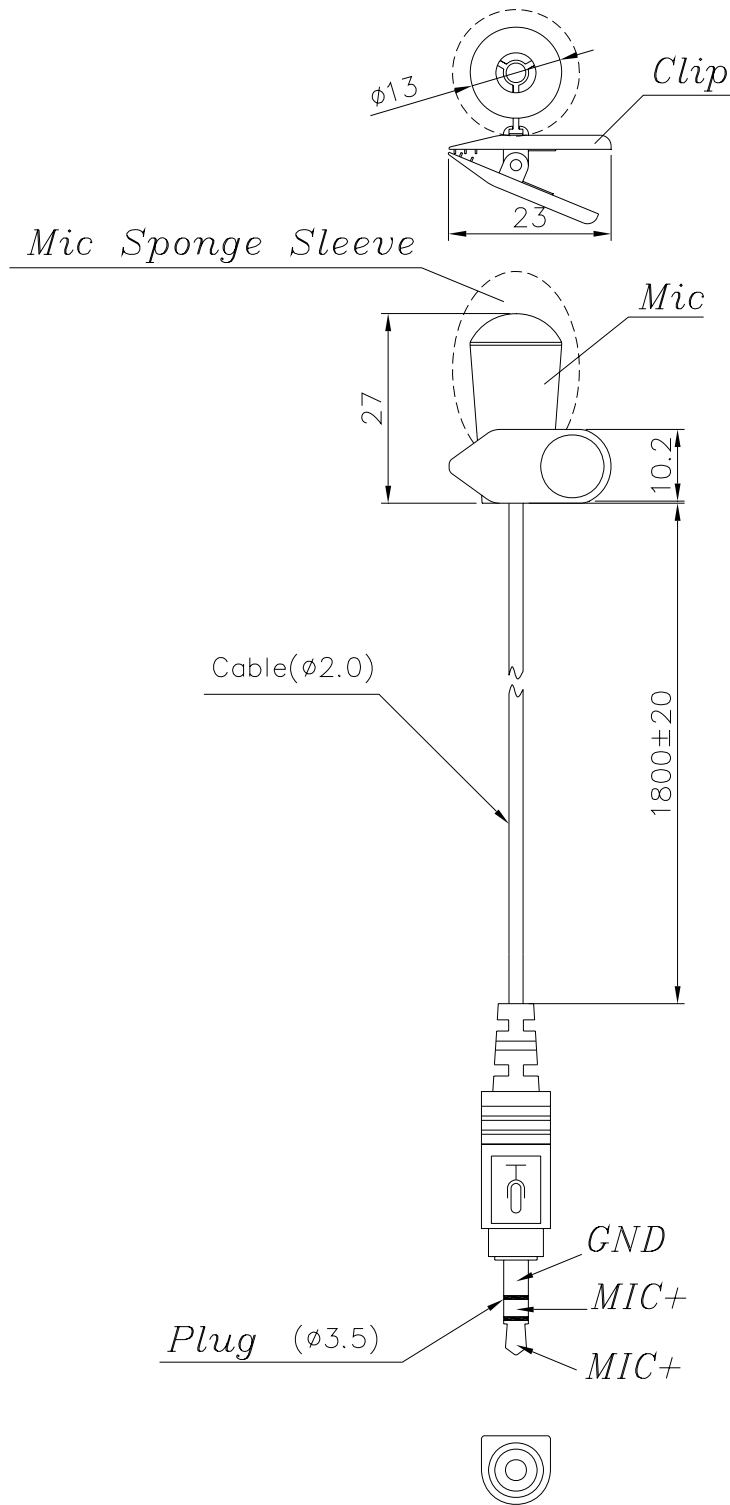
MEASUREMENT OF SENSITIVITY



Frequency Response Curve



| | | | |
|---------|---------------|----------|------|
| REV NO. | REVISION NOTE | APPROVAL | DATE |
|---------|---------------|----------|------|



| | | | | | |
|-------------------|--|----------------------|------------|-----------------------------|--------------|
| TITLE: MICROPHONE | | DRAWN: JOSEN | 12/19/2002 | SCALE: 1/1 | SHEET: 1 : 1 |
| PART NO. AHD-304 | | DESIGNED: R&D OF AAT | | UNITS: mm | |
| DWG NO. DTM-1276 | | CHECKED: | | TOLERANCE ± 0.5 | |
| | | APPROVAL: | | UNLESS OTHERWISE SPECIFIED: | |
| | | MATERIAL: ***** | | ONE PLACE DECIMAL ± *** | |
| | | | | TWO PLACE DECIMAL ± *** | |
| | | | | THREE PLACE DECIMAL ± *** | |



苙翔科技股份有限公司
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RELIABILITY TEST

AHD-304

| Item | | Test Conditions | Evaluation Standard |
|------|--------------------|---|---|
| 01 | High Temp. Test | After exposure at 70°C for 100 hours, and expose to room temperature for 6 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. | After any tests , the sensitivity to be within $\pm 3\text{dB}$ of initial sensitivity after 3 hours of conditioning at 20°C and shall keep their initial operation and appearance. |
| 02 | Low Temp. Test | After exposure at -25°C for 100 hours, and expose to room temperature for 6 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. | |
| 03 | Temp.Cycle Test | After exposure at 70°C for 1 hour, at room temp. for 1 hour, at -25°C for 1 hour, at room temp. for 1 hour, at 10 cycles, and expose to room temp. for 6 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. | |
| 04 | Humidity Test | After exposure at 40°C and 90 \pm 5% relative humidity for 240 hours, and expose to room temperature for 6 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. | |
| 05 | Vibration Test | The microphone unit must be subjected to each 30 minutes vibrations at three axes 3 mm dynamic rang. 1000cycles/minute. | |
| 06 | Drop test | The microphone unit without packaged must be subjected to each 3 drops at three axes from the height of 1 meter to 20mm thick hardwood. | |
| 07 | Pull Strength Test | The microphone assembly shall suffer no change from a pull strength of 0.5 kg for 3 seconds applied between the connector and the microphone. | |
| | | | Application of the "pin" type |

BILL OF MATERIALS

| NO | PART NO | QTY | DESCRIPTION |
|----|-------------------|-----|--|
| 1 | CABLE | 1 | L=1800±20mm (reveal dimension), Φ 2.0mm |
| 2 | PLUG | 1 | Φ 3.5, 3 polarity |
| 3 | TOP CLIP | 1 | Material: PC |
| 4 | DOWN CLIP | 1 | Material: PC |
| 5 | SPRING | 1 | Spring Ni |
| 6 | BOLT | 1 | Material: PC |
| 7 | MIC | 1 | Φ 9.7*6.7mm, -58±3dB |
| 8 | MIC SPONGE SLEEVE | 1 | Black |
| 9 | MIC SIDE COVER | 1 | Material: ABS |
| 10 | MIC TOP COVER | 1 | Material: ABS |
| 11 | MIC DOWN COVER | 1 | Material: ABS |
| 12 | MIC BOTTOM COVER | 1 | Material: ABS |

Cable Specification

| Item | Conditions | Specifications |
|------------------|---|--|
| Cord | The cable shall be a straight type with a molded strain relief at both ends. Cord Length : Diameter : Color : Conductors - Microphone : Resistance : Continuous current / Conductor : Insulation material : Insulation voltage - Microphone cable : Insulation resistance - Microphone cable : | 1800 ± 20mm 2.0 mm(microphone) Black mat. Single Mic+ and Mic- 0.6 Ω/m 0.2A Outer : PVC / Inner : PP AC 500V / min. 20 MΩ / km min. |
| Tensile Strength | Cord , single cable <i>Strain relief :</i> Plug /cord Microphone housing/cord Permitted changes | 1kg/1Min 2kg/1Min 1kg/Min None ; Normal after test With 1 minute static load |
| Bending Strength | <p style="text-align: center;">Cord :</p> Cord , single cable <i>Strain relief :</i> Plug /cord Microphone housing/cord Permitted changes Bending angle Permitted changes | 250 g load , 30 times/min , 3000 times 250 g load , 30 times/min , 3000 times 250 g load , 30 times/min ,3000 times 120 degrees Max. 200 mΩ change |