# SPECIFICATION FOR APPROVAL

| Product  | ELECTRET CONDENSER MICROPHONE |
|----------|-------------------------------|
| Part No. | AM-N60C46-NP7                 |
| Customer |                               |
| Approval |                               |

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



A & B Components

http://www.speaker-tw.com

| SPECIFICATIONS                |   |  |  |  |
|-------------------------------|---|--|--|--|
| 01 Electret Type              | Foil type                                 |  |  |  |
| 02 Sensitivity                | -46±3dB (0dB=1V/Pa,1KHz)                  |  |  |  |
| 03 Output Impedance (Max)     | 2.2K Ω                                    |  |  |  |
| 04 Directivity                | Noise Canceling                           |  |  |  |
| 05 Frequency Range            | 70-20,000Hz                               |  |  |  |
| 06 Max. Operation Voltage     | 10V                                       |  |  |  |
| 07 Standard Operation Voltage | 10V                                       |  |  |  |
| 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                  | > 50dB                                    |  |  |  |
| 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

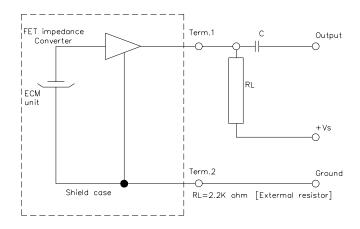
Humidity 60~70%

Generally Atmospheric Pressure 860~1060hpa

### **Electrical Characteristics Test Condition:**

Vs=2.0V RL=2.2K  $\Omega$  Te=20 $^{\circ}$ C R.H.=60 $^{\circ}$ 

**Standard Test Circuit** 



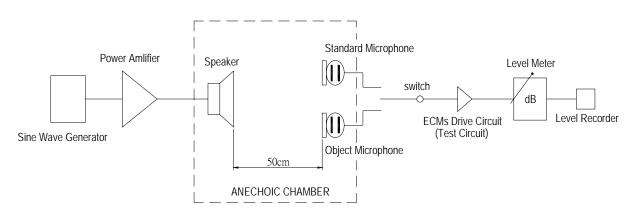
### Every Mic. has installed FET.,

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

- a. Recommend using constant branding iron in 15 ~ 30W, and in temperature range 240 ~ 270°C.
- b. Soldering time not over 3 seconds.
- c. Don't stay any hole or dust when soldering.
- d. 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**

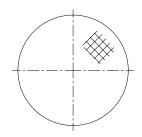
### MEASUREMENT OF SENSITIVITY

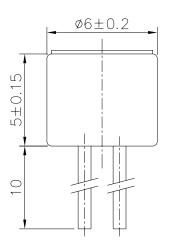


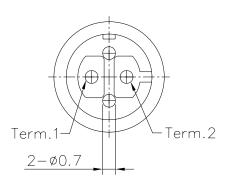
### Frequency Response Curve











| TITLE:         | MICROPHONE        |           | DRAWN:    | Richard | 08/08/2002 | SCALE: 5:1              | SHEET:                         | 1 of 1   |
|----------------|-------------------|-----------|-----------|---------|------------|-------------------------|--------------------------------|----------|
| 11101401110111 |                   | DESIGNED. | R & D     | DEP.    | CIVII D.   | mm                      |                                |          |
| $PART\ NO_{P}$ | 4M - N60C46 - NP7 | 1         | CHECKED:  |         |            | TOLERANCE<br>UNLESS OTH |                                | ecielen. |
| DWG NO.        | D. F. 1 0 5 0     |           | APPROVAL: |         |            | ONE PLACE               | $DECIMAL \pm$                  | ***      |
| DTM-1253       |                   | REV       | MATERIAL: | ****    | *          | TWO PLACE THREE PLACE   | <i>DECIMAL ±</i><br>CE DECIMAL |          |

A & B Components

# **RELIABILITY TEST**

# AM-N60C46-NP7

| 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 ±3dB from initial sensitivity.   |  |
| 02   | Low Temp. Test     | After exposure at -25°C for 100 hours, and expose to room temperature for 6 hours, sensitivity to be within ±3dB from initial sensitivity.  |  |
| 03   | Temp .Cycle Test   | After exposure at $70^{\circ}$ C for 1 hour, at room temp. for 1 hour, at $-25^{\circ}$ 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 $\pm 3$ dB from initial sensitivity. | After any tests, the sensitivity to be within ±3dB of initial sensitivity after 3 hours of |
| 04   | Humidity Test      | After exposure at 40°C and 90±5% relative humidity for 240 hours, and expose to room temperature for 6 hours, sensitivity to be within ±3dB from initial sensitivity.   | keep their initial operation and   |
| 05   | Vibration Test     | The microphone unit must be subjected to each 30 minutes vibrations at three axis 3 mm dynamic rang. 1000cycles/minute.   |  |
| 06   | Drop test          | The microphone unit without packaged must be subjected to each 3 drops at three axis 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 "pip" type  |