
SPECIFICATION FOR APPROVAL

| | |
|-------------------|-------------------------------|
| Product | ELECTRET CONDENSER MICROPHONE |
| Part No. | AM-O40S44-CP |
| Customer Approval | |

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



A & B Components

<http://www.speaker-tw.com>

1. SPECIFICATIONS

AM-O40S44-CP

| | | |
|----|----------------------------|--|
| 01 | Electret's Type | Back type |
| 02 | Sensitivity | -44±3dB (0dB=1V/Pa,1KHz)Band form 300 to 3K Hz |
| 03 | Output Impedance (Max) | 2.2KΩ |
| 04 | Directivity | Omni directional |
| 05 | Frequency Range | 70-20,000Hz |
| 06 | Max. Operation Voltage | 10V |
| 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 | > 58dB |
| 11 | Operating Temperature | -25~+70°C |
| 12 | Storage Temperature | -40~+70°C |

2. MEASURING METHOD

2-1. Test Condition

Standard Conditions:

Generally Temperature 15~35°C

Generally Humidity 45~85%

Generally Atmospheric Pressure 860~1060hpa

Basic Test Conditions:

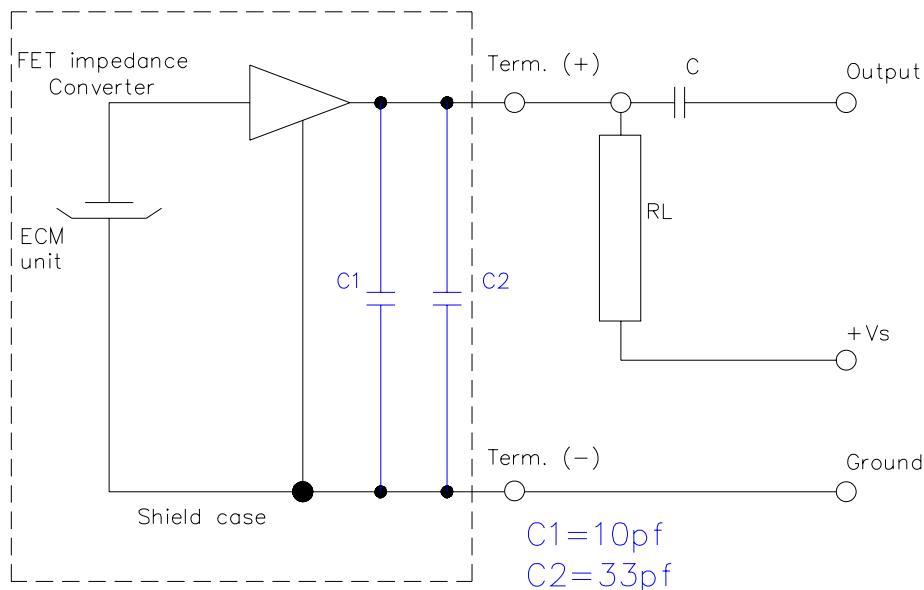
Temperature 20±2°C

Humidity 60~70%

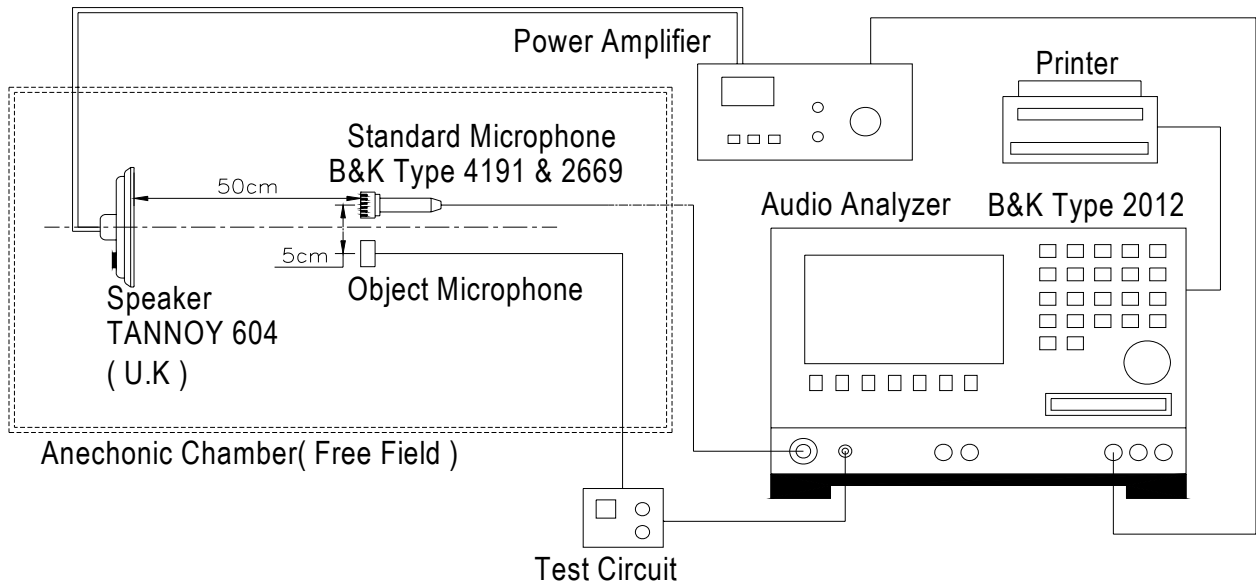
Generally Atmospheric Pressure 860~1060hpa

2-2. Standard Test Circuit

Vs=2.0V RL=2.2KΩ Te=20°C R.H.=60%

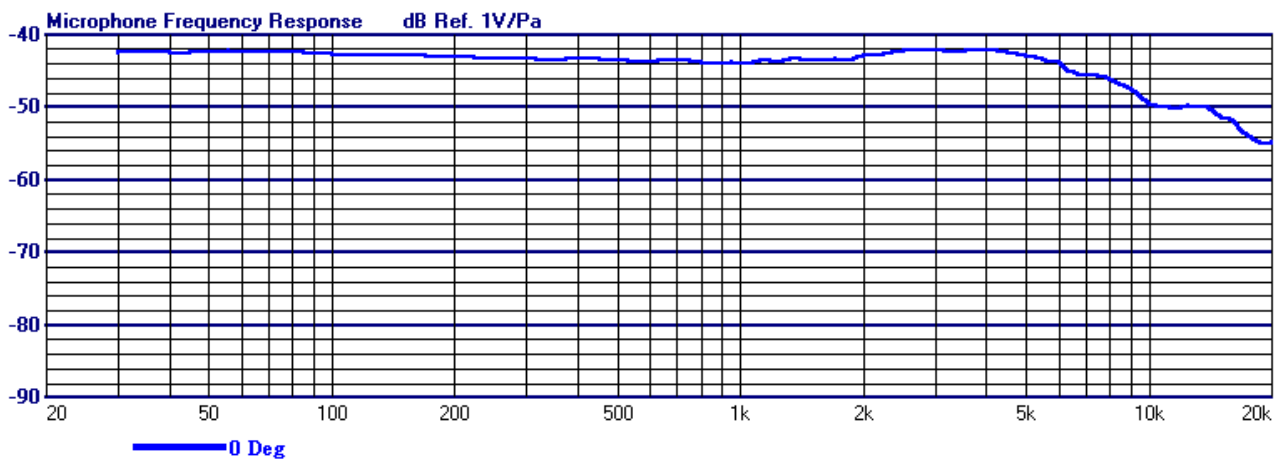


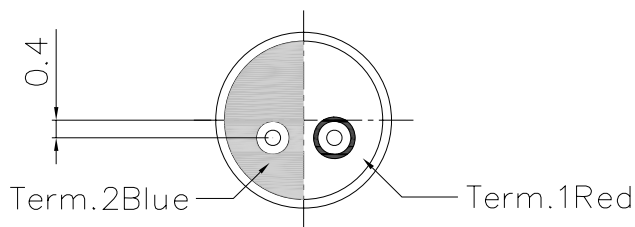
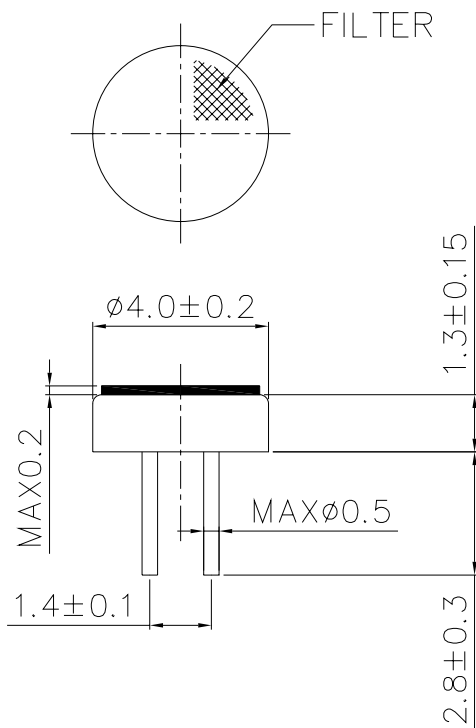
2-3. Standard Test Fixture



2-4. Frequency Response Curve

X : 1000 Hz **Y : -43.9 dBV/Pa**
Y : -41.7 dBm/Pa
D : 0.0 dB





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|------------------------------|--|----------------------------------|--|---------------|
| TITLE: <i>MICROPHONE</i> | | DRAWN: <i>Richard</i> 2006-06-21 | SCALE: *** | SHEET: 1 of 1 |
| PART NO. <i>AM-040S44-CP</i> | | DESIGNED: <i>R & D DEP.</i> | UNITS: <i>mm</i> | |
| DWC NO. <i>DTM-1294</i> | | 1 REV | TOLERANCE ± 0.2 | |
| | | | UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL \pm *** TWO PLACE DECIMAL \pm *** THREE PLACE DECIMAL \pm *** | |
| | | CHECKED: | | |
| | | APPROVAL: | | |
| | | MATERIAL: ***** | | |

A & B Components

4.RELIABILITY TEST

| 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 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 "pin" type |

5. SOLDERING CONDITION

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 320°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.