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# SPECIFICATION FOR APPROVAL

Product	ELECTRET CONDENSER MICROPHONE
Part No.	AM-O40R42-CT
Customer Approval	

Approved By	Checked By	Made By



**A & B Components**

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

# 1. SPECIFICATIONS

AM-O40R42-CT

01	Electret Type	Back type
02	Sensitivity	-42±3dB (0dB=1V/Pa,1KHz)Band form 300 to 3K Hz
03	Output Impedance (Max)	2.2KΩ
04	Directivity	Omnidirectional
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	> 56dB
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:

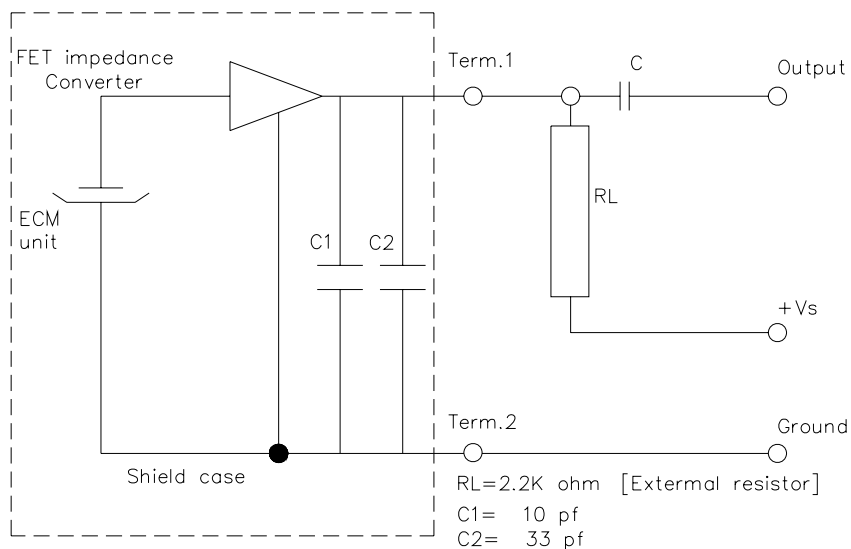
Temperature 20±2°C

Humidity 60~70%

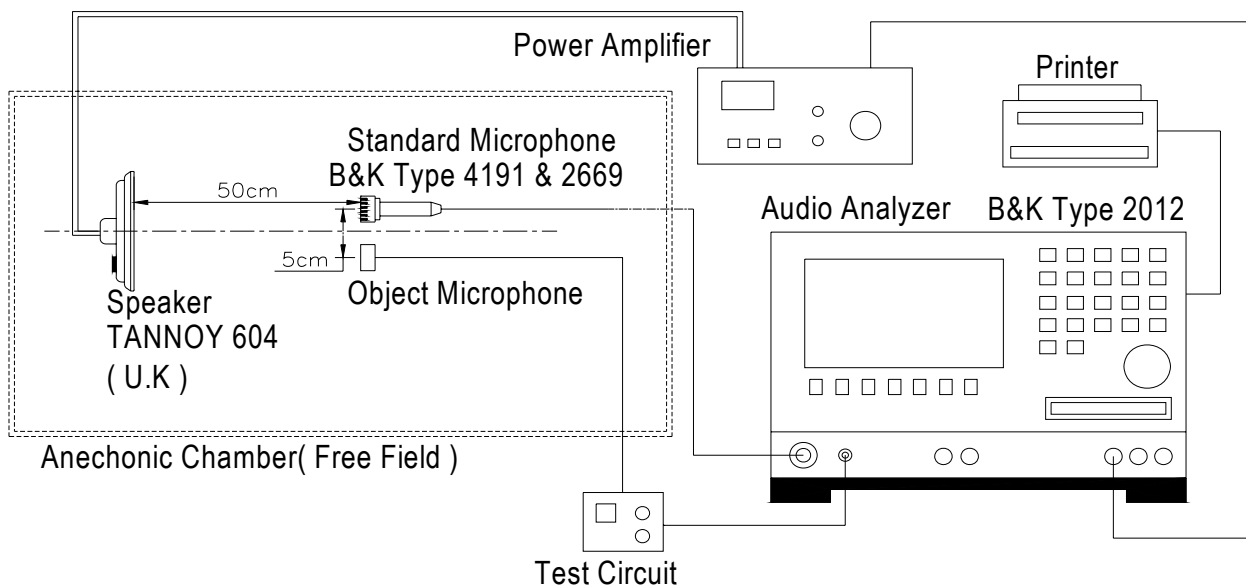
Generally Atmospheric Pressure 860~1060hpa

## 2-2. Standard Test Circuit

Vs=2.0V RL=2.2KΩ Te=20°C R.H.=60%

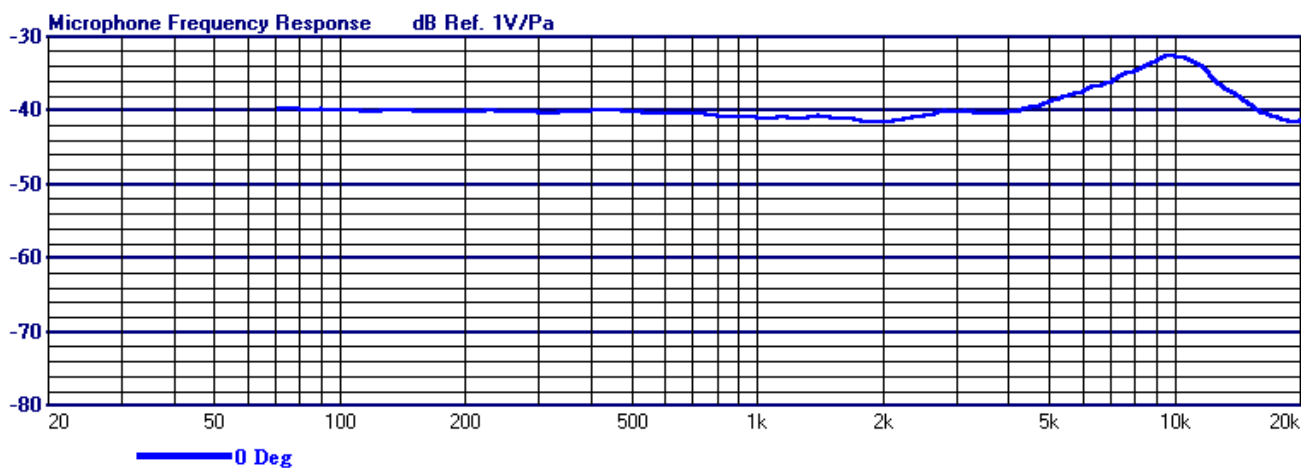


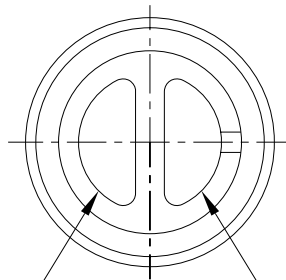
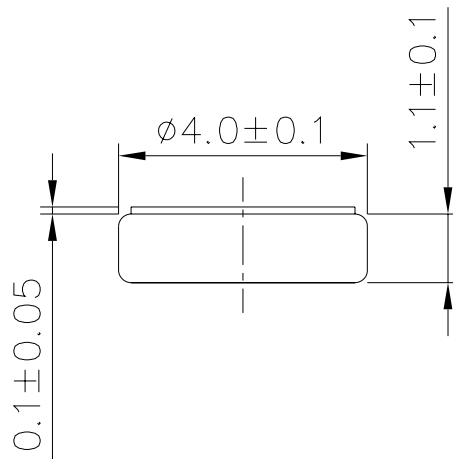
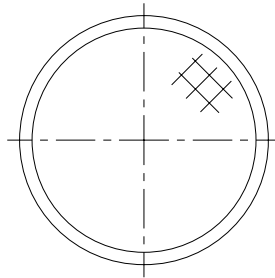
## 2-3. Standard Test Fixture



## 2-4. Frequency Response Curve

**X : 1000 Hz**      **Y : -41.0 dBV/Pa**  
**Y : -38.8 dBm/Pa**  
**D : 0.0 dB**





Term.1(+)      Term.2(-)

TITLE: <i>MICROPHONE</i>		DRAWN: <i>Richard</i> 2006/01/06	SCALE: 5:1	SHEET: 1 of 1
PART NO. <i>AM-040R42-CT</i>		DESIGNED: <i>R &amp; D DEP.</i>	UNITS: <i>mm</i>	
DWG NO. <i>DME-1126</i>	1 REV	CHECKED:	TOLERANCE $\pm 0.2$	
		APPROVAL:	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL $\pm$ *** TWO PLACE DECIMAL $\pm$ *** THREE PLACE DECIMAL $\pm$ ***	
		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 $\pm 3$ dB from initial sensitivity.	After any tests , the sensitivity to be within $\pm 3$ 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 $\pm 3$ 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 $\pm 3$ 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 $\pm 3$ 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 :

- 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.