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# SPECIFICATION FOR APPROVAL

Product	ELECTRET CONDENSER MICROPHONE
Part No.	AM-N60G51-NT
Customer Approval	

Approved By	Checked By	Made By



**A & B Components**

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

## 1. SPECIFICATIONS

AM-N60G51-NT

01	Electret Type	Back type
02	Sensitivity	$-51 \pm 4.5\text{dB}$ ( $0\text{dB}=1\text{V/Pa}, 1\text{KHz}$ ) Band form 300 to 3K Hz
03	Output Impedance (Max)	$2.2\text{K}\Omega$
04	Directivity	Noise Cancelling
05	Frequency Range	70 - 20K Hz
06	Max. Operation Voltage	10V
07	Standard Operation Voltage	2.0V
08	Current Consumption	Max.0.5mA
09	Sensitivity Reduction	Within $-3\text{dB}$ $0\text{dB}=1\text{V/Pa}, 1\text{KHz}$ $V_s=2.5$ to $2.0\text{V}$
10	S/N Ratio	$> 55\text{dB}$
11	Operating Temperature	$-20 \sim +60^\circ\text{C}$
12	Storage Temperature	$-30 \sim +70^\circ\text{C}$

## 2. MEASURING METHOD

### 2-1. Test Condition

Standard Conditions:

Generally Temperature  $15 \sim 35^\circ\text{C}$

Generally Humidity  $45 \sim 85\%$

Generally Atmospheric Pressure  $860 \sim 1060\text{hpa}$

Basic Test Conditions:

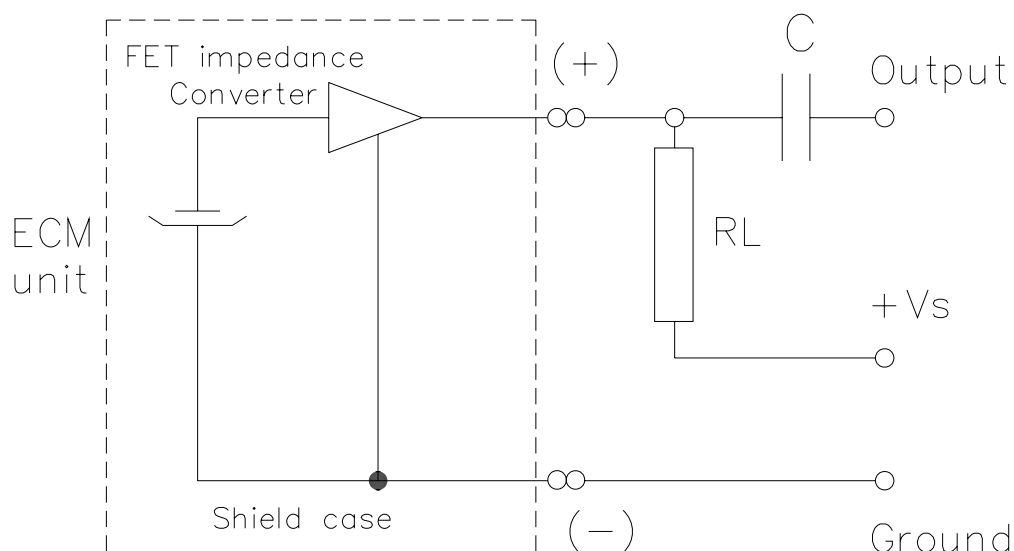
Temperature  $20 \pm 2^\circ\text{C}$

Humidity  $60 \sim 70\%$

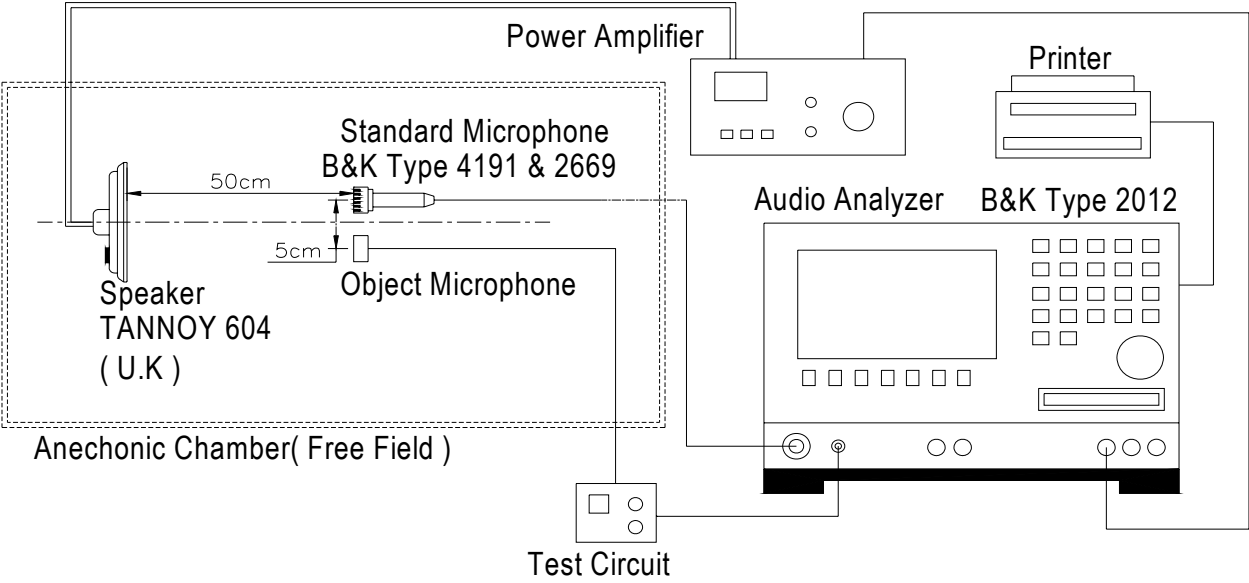
Generally Atmospheric Pressure  $860 \sim 1060\text{hpa}$

### 2-2. Standard Test Circuit

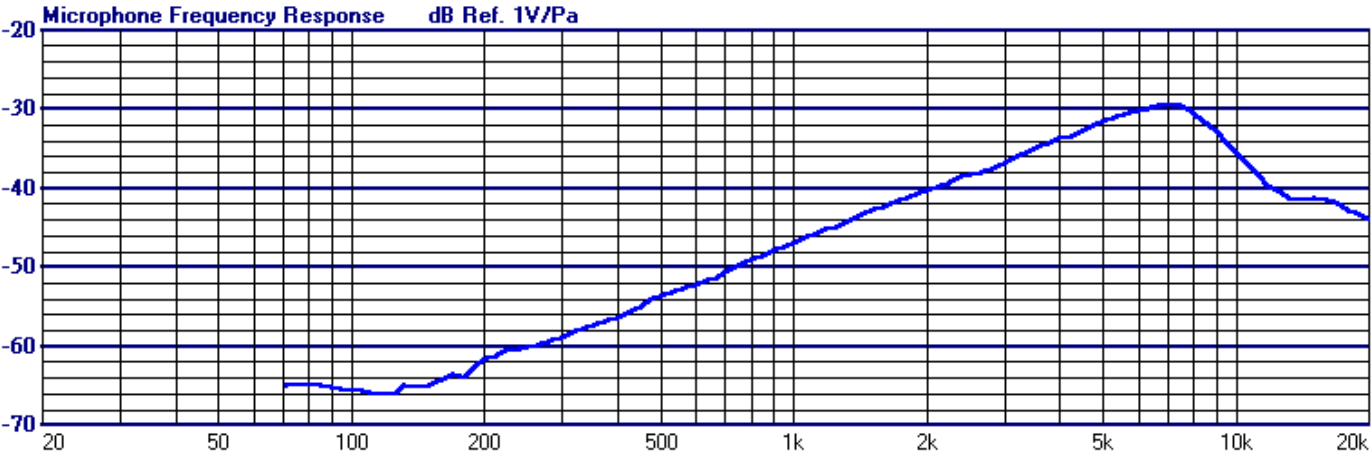
$V_s=2.0\text{V}$   $R_L=2.2\text{K}\Omega$   $T_e=20^\circ\text{C}$  R.H.=60%



2-3. Standard Test Fixture



2-4. Frequency Response Curve



## 2-5. Noise Cancelling Characteristic

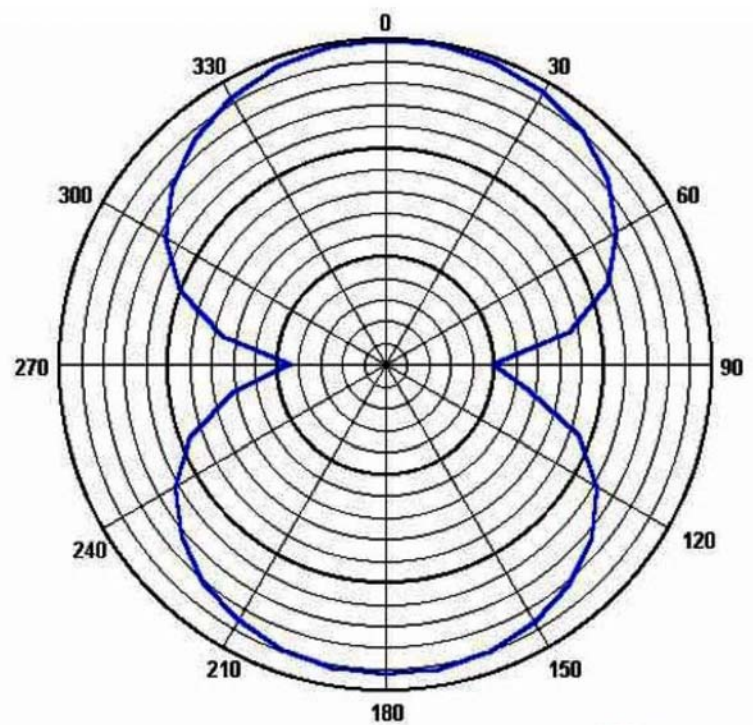
Frequency : 1000 Hz

Microphone Directional Characteristic

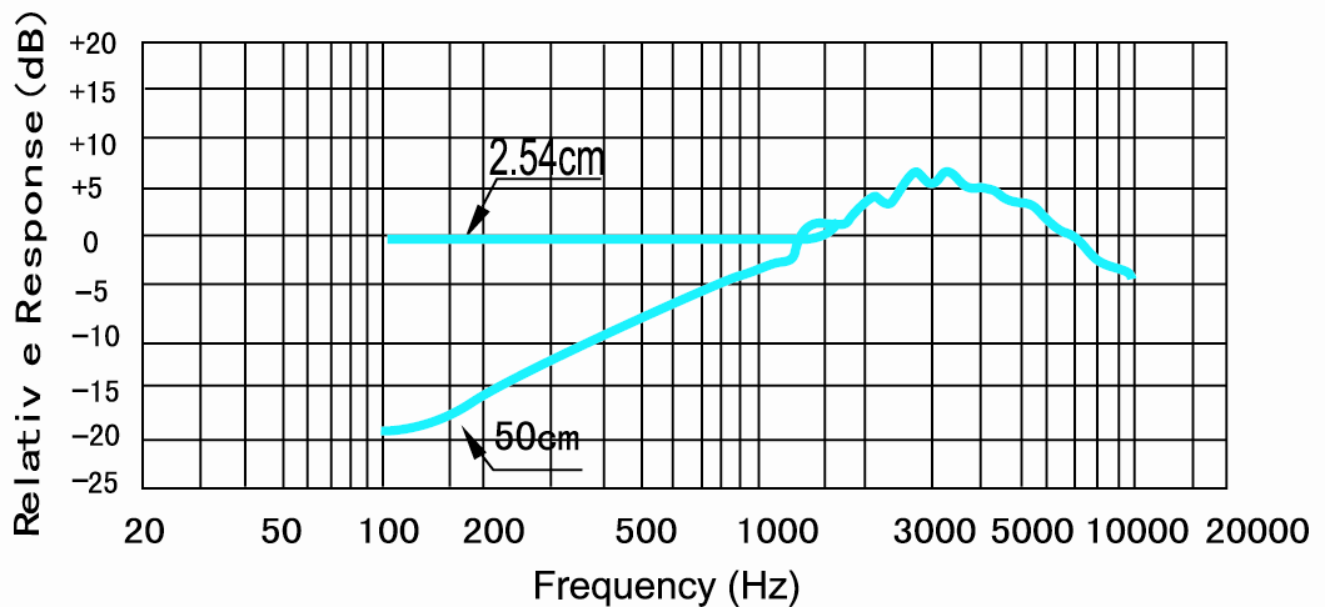
Range : 30 dB

Frequency : 1000 Hz

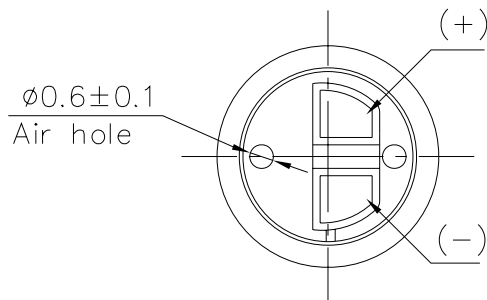
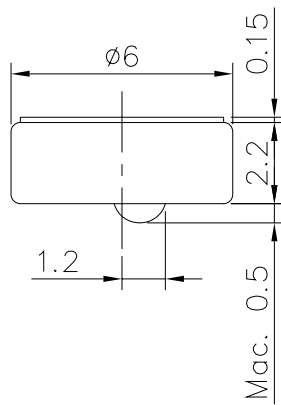
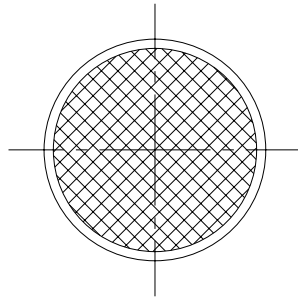
Source Level : 0.1 Pa



Measure Distance : 50 cm  
Test Instrument : Bruel & Kjaer 2012 & 9640



REV NO.	REVISION NOTE	APPROVAL	DATE
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TITLE: <i>MICROPHONE</i>		DRAWN: <i>Richard</i> 08/18/2006	SCALE: 5:1	SHEET: 1 of 1
PART NO. <i>AM-N60G51-NT</i>	1 REV	DESIGNED: <i>R &amp; D DEP.</i>	UNITS: <i>mm</i>	
DWG NO. <i>DTM-1300</i>		CHECKED:	TOLERANCE $\pm 0.2$	
		APPROVAL:	UNLESS OTHERWISE SPECIFIED:	
		MATERIAL: <i>*****</i>	ONE PLACE DECIMAL $\pm$ ***	
			TWO PLACE DECIMAL $\pm$ ***	
			THREE PLACE DECIMAL $\pm$ ***	

*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 -30°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 -30°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 :

- Recommend using constant branding iron in 30W, and in temperature range 320 $\pm$ 10°C.
- Soldering time 2 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.