

**Ningbo NingBo Best Group Co.,Ltd**

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**APPROVAL SHEET (承認書)**

Product: Electret Condenser Microphone (駐機體電容式傳聲器)

Model	EM6050P
Customer name	
Sensitivity	-32±2dB
Test Condition	4.5V 2.2KΩ

DESIGNED BY	
REVISED BY	
APPROVED BY	
SUBMISSION DATE	

**CUSTOMER:**

P/N of Customer:

APPROVED BY	APPROVED DATE

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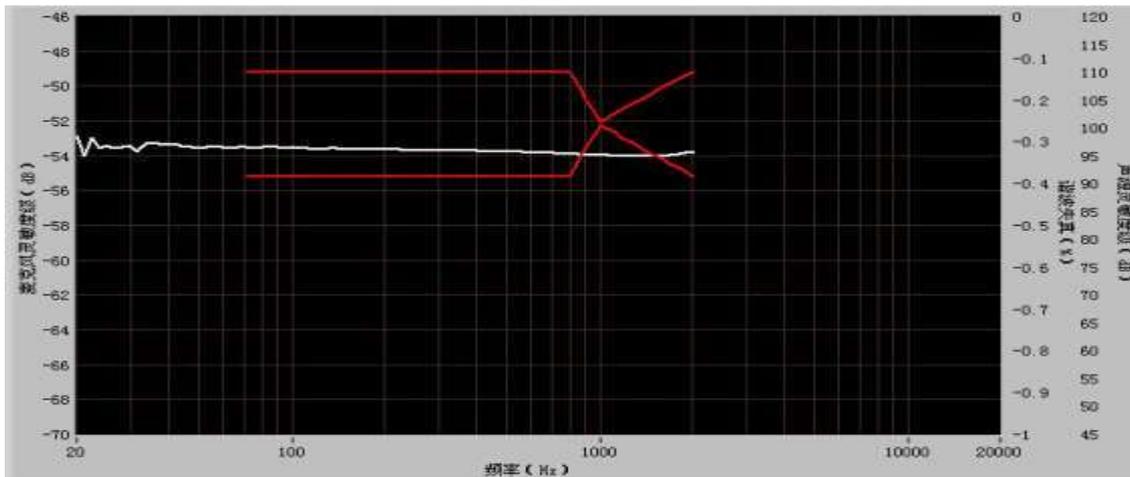
# Electret Condenser Microphone Specification

## 1、 Electrical Characteristics:

Test Condition ( $V_s=4.5V$   $R_L=2.2K\Omega$   $T_a=20^\circ C$  R.H.=70%)

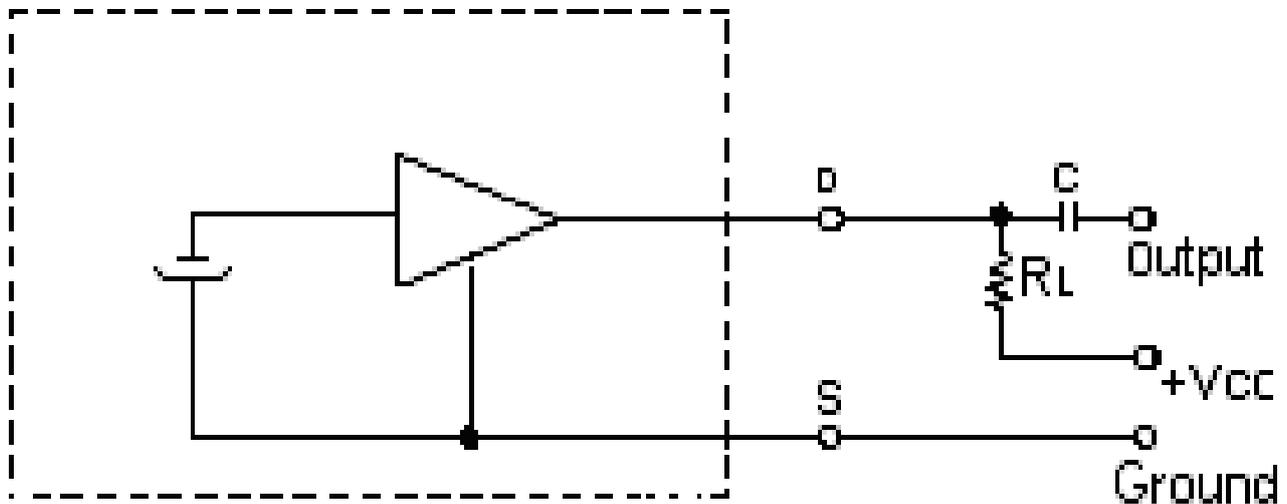
Item	Symbol	Test Conditions	Minimum	Standard	Maximum	Unit
Sensitivity	S	$P_{in}=1 Pa$ , $f=1kHz$	-34	-32	-30	dB
Output Impedance	$Z_{out}$	Low Impedance				
Directivity		Unidirectional				
Current consumption	I				500	$\mu A$
S/N ratio (A)	S/N (A)	$P_{in}=1 Pa$ , $f=1kHz$ (A Curve)	32			dB
Decreasing Voltage Characteristic	$\Delta S$	$P_{in}=1 Pa$ , $f=1kHz$ $V_s=2.0\sim 1.5V$			-3	dB
Operating Voltage		DC	1.5	4.5	10	V
Charging Type	Diaphragm					

## 2、 Frequency Response Curve



Frequency(Hz)	100	200	900	1000	1200	2000	4000	5000	8000
Upper Limit(dB)	3	3	3	0	3	5	6	6	6
Lower Limit(dB)	-3	-3	-3	0	-3	-3	-3	-3	-5

## 4. Standard test circuit:



$R_L=2.2k\Omega$  (External resistor)

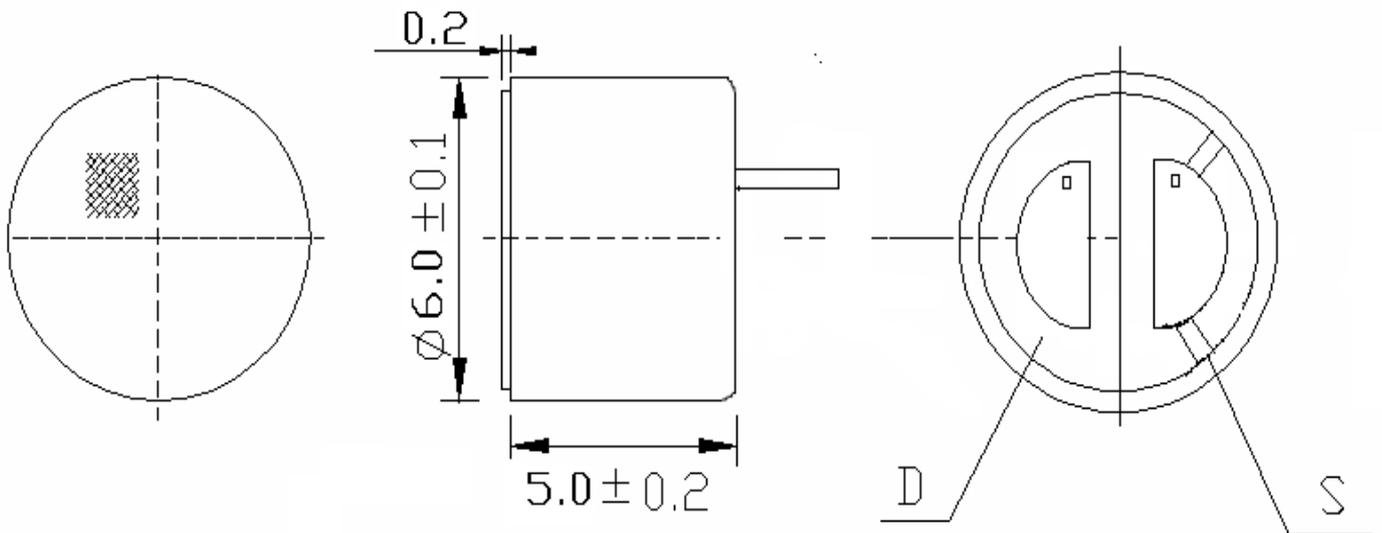
$+V_{CC}=4.5V$

$C=1\mu F$

## 5、 Mechanical Characteristics

Dimension	See appearance drawing
Weight	Less than 1.0g
Operation Temperature	-30°C to +70°C
Storage Temperature	-40°C to +85°C

## 6、 Appearance Drawing (Unit:mm)



## 7. Reliability Tests

Vibration Test	Vibration cycle of 10 to 50 Hz/min, for 2 hours, full Amplitude 1.52mm, in 3 directions.  The sensitivity change within $\pm 3$ dB relative to initial value.
Drop Test	To be no interference in operation after drop from 1.5 Meter height onto a concrete surface, each time at three direction in state of packing, The sensitivity change within $\pm 3$ dB relative to initial value.
Operating Life	Subject samples to $+70^{\circ}\text{C}$ for 1000 hours under full rated power.

## 7. Reliability Tests

High Temperature Test	The Microphone exposure at $70^{\circ}\text{C}$ for 200 hours, then measuring the sensitivity after depositing 2 hours of conditioning at room temperature.  The sensitivity change within $\pm 3$ dB relative to initial value.
Low Temperature Test	The Microphone exposure at $-30^{\circ}\text{C}$ for 200 hours, then measuring the sensitivity after depositing 2 hours of conditioning at room temperature.  The sensitivity change within $\pm 3$ dB relative to initial value.
Static Humidity	Condition part at $+25^{\circ}\text{C}$ for 1 hour. Then expose to $+70^{\circ}\text{C}$ with 95% relative humidity for 240 hours. Finally allow to dry at room ambient for 4 hours before taking final measurements, The

	sensitivity change within $\pm 3$ dB relative to initial value.
Temperature	32 cycles of the following:
Shock	30 minutes at $-40^{\circ}\text{C}$ followed by 30 minutes at $85^{\circ}\text{C}$ with a 20 second maximum transition time between temperature extremes, The sensitivity change within $\pm 3$ dB relative to initial value. 32 cycles of the following: 30 minutes at $-40^{\circ}\text{C}$ followed by 30

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## 7. Reliability Tests

	minutes at $85^{\circ}\text{C}$ with a 20 second maximum transition time between temperature extremes, The sensitivity change within $\pm 3$ dB relative to initial value.
Lead Pull Test (If applicable)	Subject test leads to an increasing pull force (between the wire or lead and the transducer) until destruction occurs. Record the point of destruction. The minimum pull strength is 1Kg (2.2 pounds).
Solder Heat Resistance (If applicable)	Flux the terminations using a RMA solder flux, then manually immerse the terminations into a $260 \pm 5^{\circ}\text{C}$ solder pot containing 63/37 solder for 10 to 11 seconds.

## 8. Packing Specification

A、Small Packet 100pcs 65mmx65mmx5mm

(小包裝盒 100 只/盒)

B、Middle Packet 1000pcs 130mmx65mmx75mm

(中包裝盒 1000 只/盒)

C、Paper Case 10000pcs 230mmx220mmx300mm

(大包裝盒 23000 只/盒)

