

**MESSRS.**

**SPECIFICATION FOR APPROVAL**

**承 認 書**

<b>Product</b>	<b>ELECTRET CONDENSER MICROPHONE</b>
<b>Part No.</b>	<b>AMF-O97A44-NA-LF</b>
<b>Customer Approval</b>	
<b>Customer Part No.</b>	

<b>Approved By</b>	<b>Checked By</b>	<b>Made By</b>
 <p>工程 SKY ZHAO APR-16-2019</p>	 <p>工程 ZACK KUO APR-16-2019</p>	 <p>工程 SUNNY CHEN APR-16-2019</p>



**Advanced Acoustic Technology Corporation**  
昊宸股份有限公司 // 常州笠翔电子有限公司



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**RoHS**



# ADVANCED ACOUSTIC TECHNOLOGY CORP.

## 昊宸股份有限公司

REVISIONS			
PRODUCT		ELECTRET CONDENSER MICROPHONE	
PART NO.		AMF-O97A44-NA-LF	
REV.	REVISER	DATE	DESCRIPTION
1	JOHN	2005-04-19	Releasing new drawing SPEC.
2	JERRY	2014-03-06	1.更新公司名稱:昊宸股份有限公司 2.更新儲存溫度
3	SUNNY	2019-4-16	Yellow PCB → Green PCB

# 1. SPECIFICATIONS

AMF-O97A44-NA-LF

01	<b>Sensitivity</b>	-44±2dB (0dB=1V/Pa,1KHz)
02	<b>Standard Operation Voltage</b>	2.0 V
03	<b>Output Impedance</b>	2.2 KΩ
04	<b>Directivity</b>	Omni directional
05	<b>Frequency Range</b>	100 - 10K Hz
06	<b>Max. Operation Voltage</b>	10V
07	<b>Current Consumption</b>	Max.0.5mA
08	<b>Sensitivity Reduction</b>	Within -3dB 0dB=1V/Pa,1KHz Vs=2.0 to 1.5V
09	<b>S/N Ratio</b>	≥58dB
10	<b>Sound Pressure Level</b>	110 dB
11	<b>Operating Temperature</b>	-20~+60°C
12	<b>Storage Temperature</b>	-25~+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:**

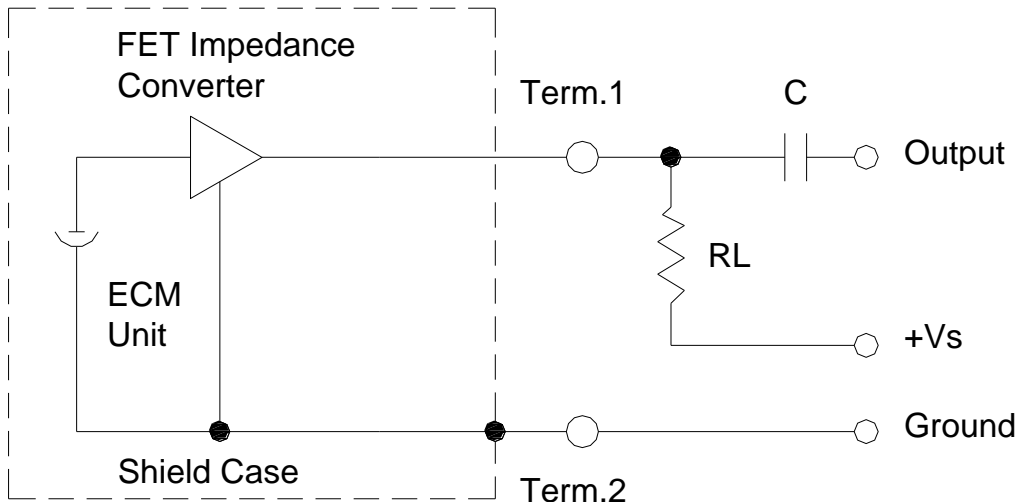
Temperature 20±2°C

Humidity 60~70%

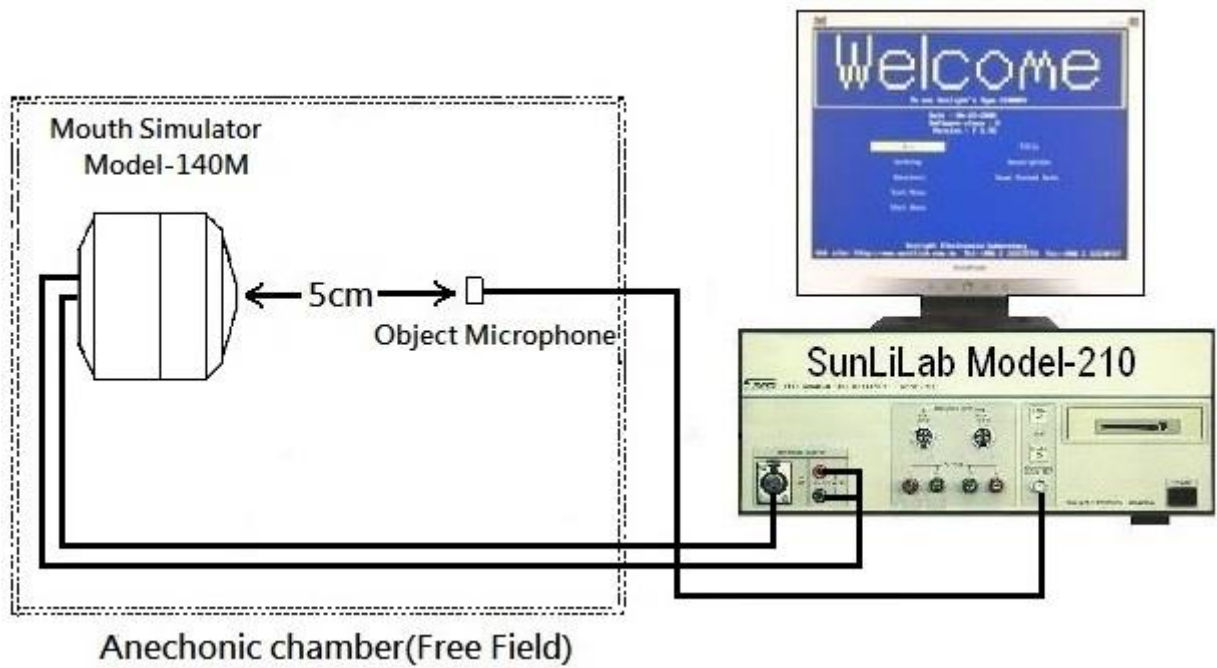
Generally Atmospheric Pressure 860~1060hpa

## 2-2. Standard Test Circuit

Vs=2.0V RL=2.2KΩ Te=20°C R.H.=60%



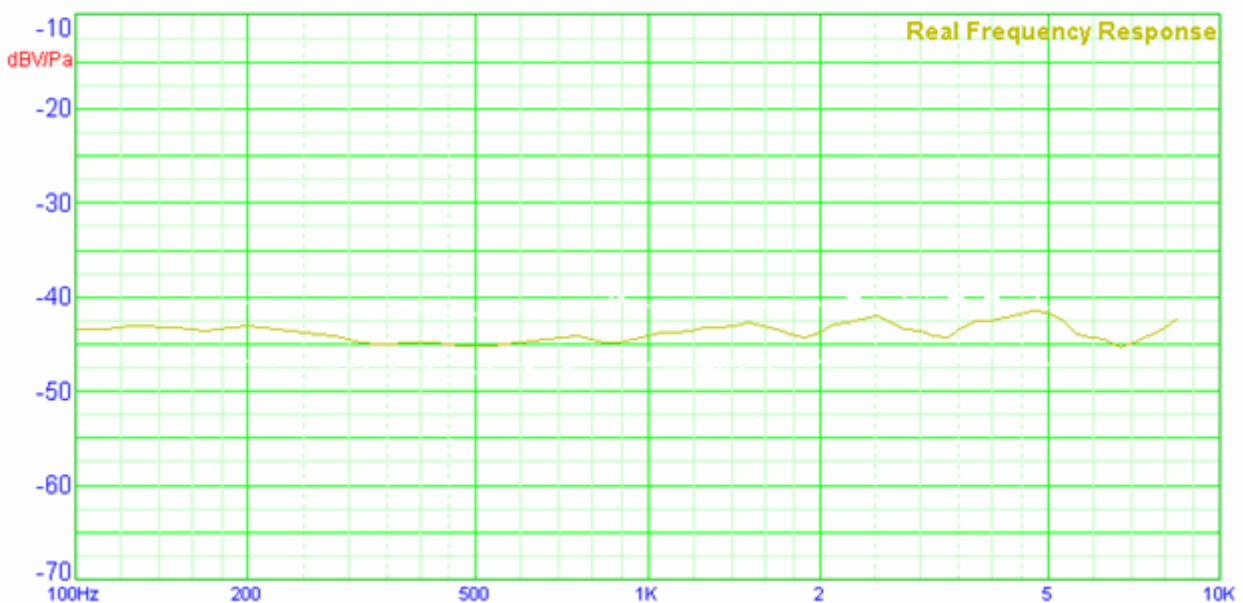
## 2-3. Standard Test Fixture



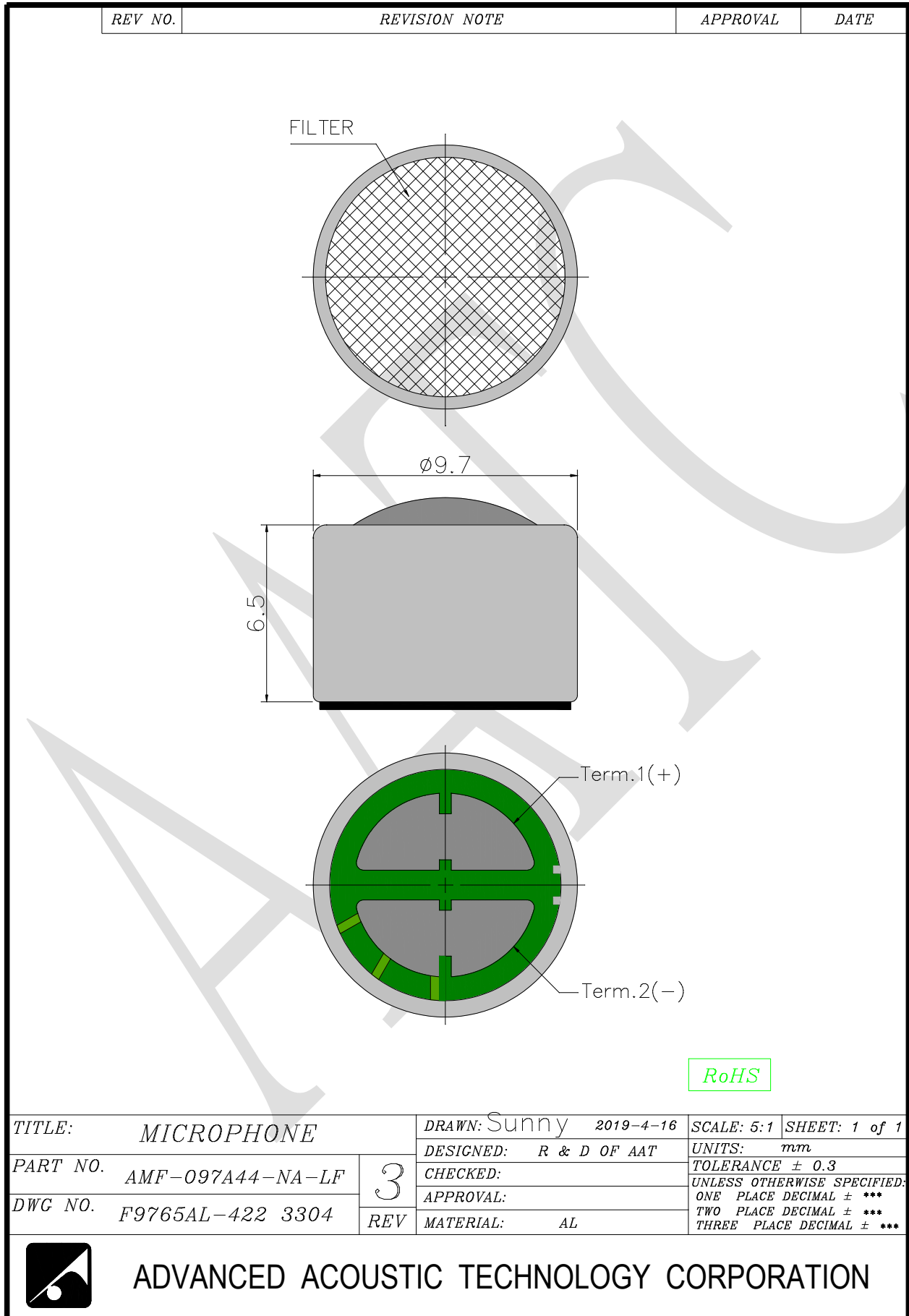
## 2-4. Frequency Response Curve

```
Type 2100T [Test Menu] Microphone Frequency Response Curve Test
Firm:MIC      Object:MIC      2100T      F 2.30  04-15-2019 23:24:34
Real 1000Hz sens.= -44.1dBV/Pa = -64.1dBV/ $\mu$ bar Pass SLR = -3.4dB Pass
F. R.:Pass (1KHz Normalize) DCV= 2.00V Load R= 2.21K $\Omega$ 
Start F.= 100Hz Stop F.= 8459Hz Step size: 1/12 Oct.
```

[100Hz vs 1KHz : .6dB]  
Microphone Frequency Response Curve Test



### 3.DIMENSIONS



## 4. RELIABILITY TEST

Item		Test Conditions	Evaluation Standard
01	High Temp. Test	After exposure at 70°C for 96 hours	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 96 hours	
03	Temp. Cycle Test	A After exposure at 70°C for 30 minutes, at room temp. for 10 minutes, at -25°C for 30 minutes, at room temp. for 10 minutes, at 5 cycles.	
04	Humidity Test	After exposure at 40°C and 90 $\pm$ 5% relative humidity for 96 hour.	
05	Vibration Test	10~50Hz for 1 minute full amplitude 1.52mm for 2 hours at three axis.	
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.	

### Criterion :

**1. AATC reserves the right to change product material without prior notice, guaranteeing the same specification. Materials are subject to change due to environmental regulations, sourcing, and process improvements.**

材料可能由於環境法規，物料及製程工藝精進而發生變動，AATC 保證相同的規格，並有權保留更改產品材料的權利，恕不另行通知。

**2. If you need more information, please contact our technology department, thank you.**


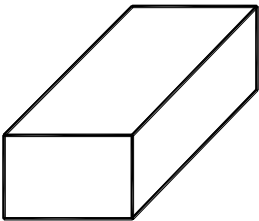
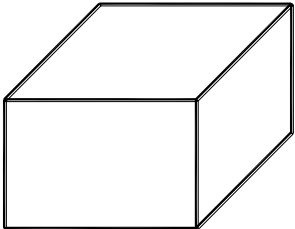
如您需要更多信息，請聯繫我們的技術部門，謝謝。

## 5. SOLDERING CONDITION

Every microphone 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 searing-iron in temperature range  $330\pm 5^{\circ}\text{C}$ .
- Soldering time **2** seconds.
- Don't stay any hole or dust when soldering.
- To avoid the microphone be broken by static electricity, the people and working station should install prevent static electricity equipment.

## 6. PACKING

	DRAWING	QTY(PCS)	SIZE(MM)	MATERIAL	MARKING
PACKING		100	100x100x8	Paper	
MIDDLE		1000	204x104x45	Paper	
OUTER BOX		10000	230x230x275	Paper	

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