

# 常州华龙电子有限公司

## SPECIFICATION FOR APPROVAL 规格承认书

Customer 客户:	
Customer Part No. 客户型号:	
PART NO. 产品型号:	HDM-6050F351-002
FUNCTION. 产品功能	MICROPHONE
SPEC. NO. 规格书号:	DSM103-2017

Drawn by 制作	Checked by 审核	Approved by 批准	Customer approved 客户承认
Lily 2017-12-14	曹丽萍 2017-12-14	王台平 2017-12-14	

Our products meet the latest RoHS compliance  
我司生产产品均符合欧盟 RoHS 最新要求

总公司地址: 台北市北投区中央南路 2 段 33 号 3 楼  
 大陆分公司地址: 中国江苏省常州市新北区电子园新四路 36 号  
 一厂: 江苏省常州市新北区电子园新四路 36 号  
 二厂: 江苏省常州市溧阳市社渚经济开发区社农路 1 号  
 电话: +86-519-85106698 85111259 85110078  
 传真: +86-519-85101081 85107616  
 网址: [www.dshualong.com](http://www.dshualong.com)



**Approval 承認內容:**

1. History change record 变更记录
2. Characteristics 技术参数
3. Typical Frequency Response Curve 频率曲线
4. Dimension 外观尺寸
5. Reliability Test 可靠性测试
6. Packing 包裝

**2. History change record**

Change Items	Date	Note	Drawn by	Checked by
	2017-12-14	First Issue	Lily	王台平 2017-12-14

## 2. Characteristics

Standard Conditions:

Generally Temperature 15~35°C

Generally Humidity 45~85%

01	Electret Type	Foil type
02	Sensitivity	$-35 \pm 1 \text{dB}$ (0dB=1V/Pa,1KHz)
03	Output Impedance (Max)	2.2K $\Omega$
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	$\geq 58 \text{dB}$
11	Operating Temperature	-25~+70°C
12	Storage Temperature	-40~+70°C

Generally Atmospheric Pressure 860~1060hpa

Basic Test Conditions:

Temperature 20±2°C

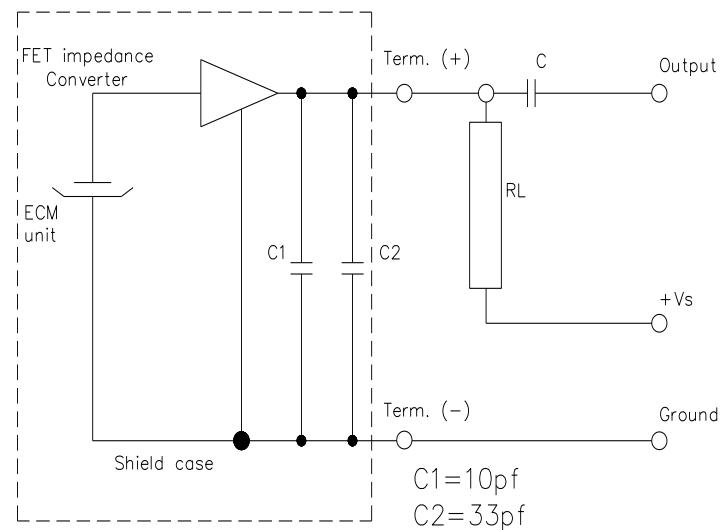
Humidity 60~70%

Generally Atmospheric Pressure 860~1060hpa

Electrical Characteristics Test Condition:

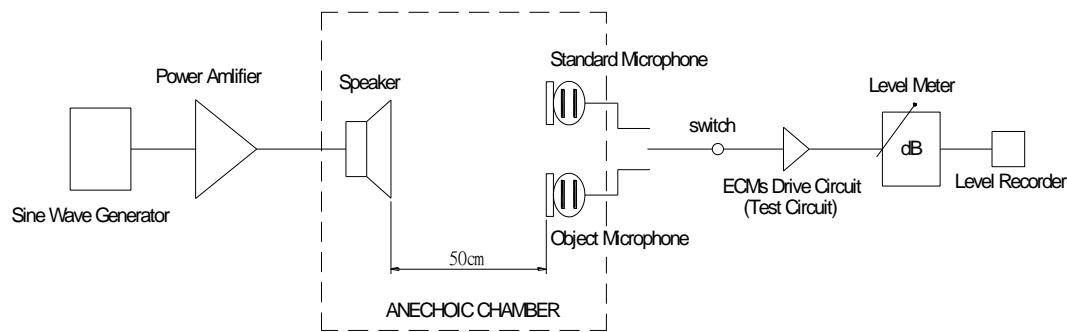
Vs=2.0V RL=2.2K  $\Omega$  Te=20°C R. H.=60%

## Standard Test Circuit

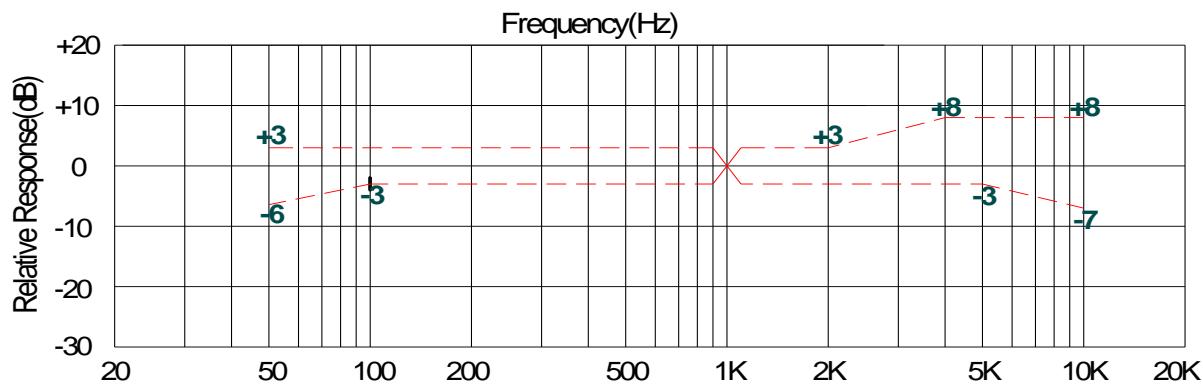


## Standard Test Condition Of Microphone

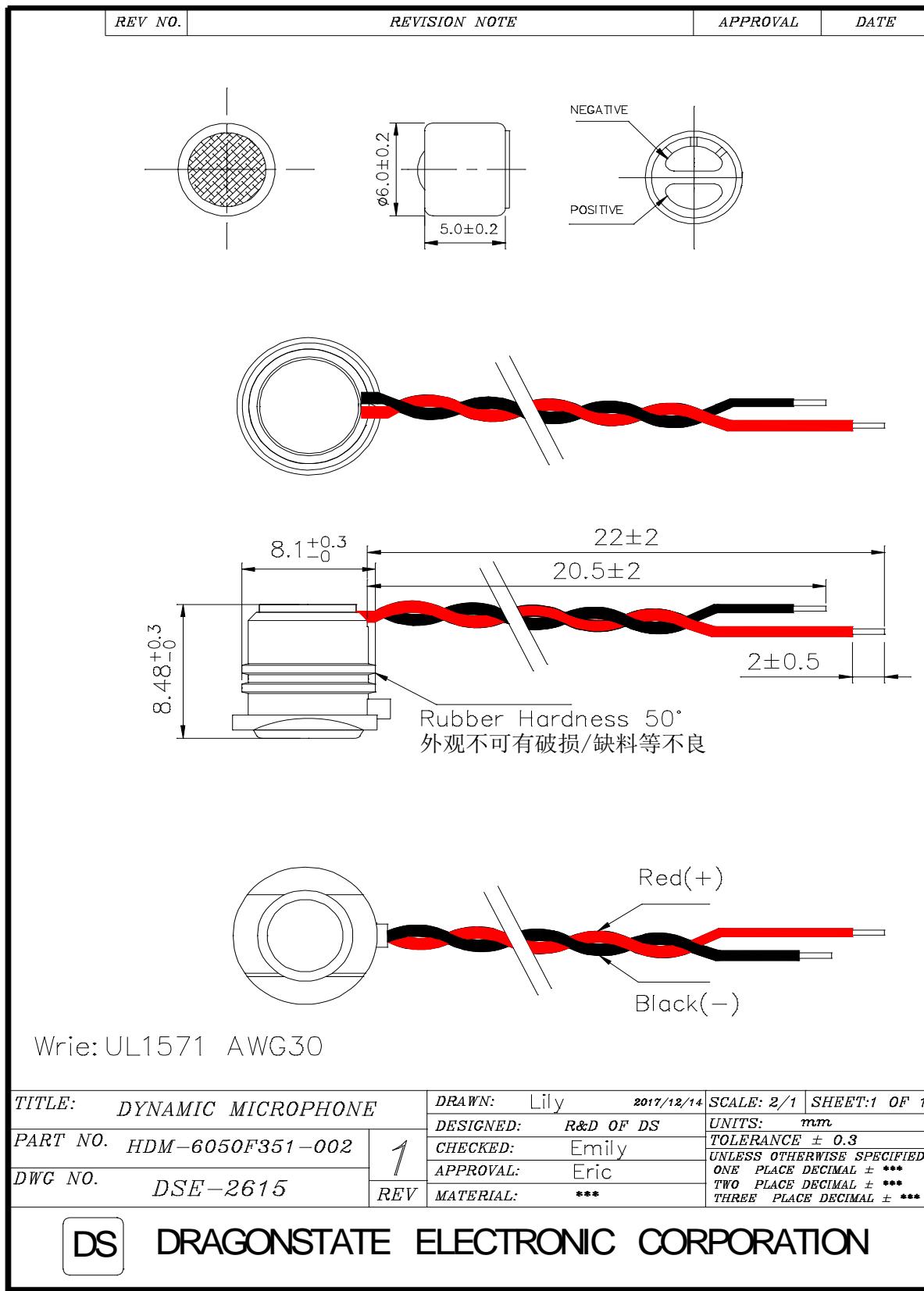
### MEASUREMENT OF SENSITIVITY



### 3. Frequency Response Tolerance Window



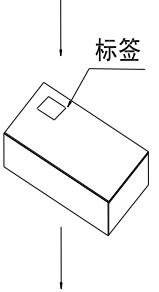
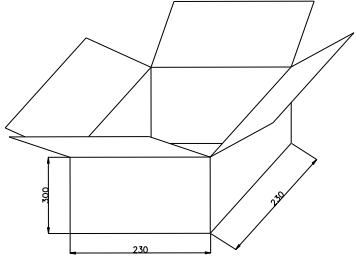
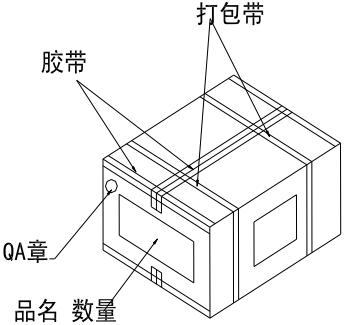
#### 4. Dimension



## 5. Reliability tests

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.	
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.	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.
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 axes 3 mm dynamic rang. 1000cycles/minute.	
06	Drop test	The microphone unit without packaged must be subjected to each 3 drops at three axes 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

## 6. Packing

REV NO.	REVISION NOTE	APPROVAL	DATE																																
 <p>Bag(100*100mm) 100pcs Material: Plastic</p>																																			
 <p>Middle(215*105*55mm) 1000pcs(10*100pcs) Material: Paper</p>																																			
 <p>Outer Box(230*230*300mm) 10000pcs(10*1000pcs) Material: Paper</p>																																			
																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">TITLE:</td> <td style="width: 30%;">包装方式</td> <td style="width: 10%;">DRAWN:</td> <td>Lily</td> <td>2014/07/07</td> <td>SCALE: 1:10</td> <td>SHEET: 1 of 1</td> </tr> <tr> <td>PART NO.</td> <td></td> <td>DESIGNED:</td> <td colspan="2">R &amp; D of D.S.</td> <td>UNITS:</td> <td>mm</td> </tr> <tr> <td rowspan="3">DWG NO.</td> <td rowspan="3">1</td> <td>CHECKED:</td> <td colspan="2">Emily</td> <td colspan="2">TOLERANCE ±5</td> </tr> <tr> <td>APPROVAL:</td> <td colspan="2">Eric</td> <td colspan="2">UNLESS OTHERWISE SPECIFIED:</td> </tr> <tr> <td>REV</td> <td>MATERIAL:</td> <td colspan="2">纸类</td> <td colspan="2">ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***</td> </tr> </table>				TITLE:	包装方式	DRAWN:	Lily	2014/07/07	SCALE: 1:10	SHEET: 1 of 1	PART NO.		DESIGNED:	R & D of D.S.		UNITS:	mm	DWG NO.	1	CHECKED:	Emily		TOLERANCE ±5		APPROVAL:	Eric		UNLESS OTHERWISE SPECIFIED:		REV	MATERIAL:	纸类		ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
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