

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-6050F351-001 |
| FUNCTION. 产品功能 | MICROPHONE |
| SPEC. NO. 规格书号: | DSM102-2017 |

| 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

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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 |
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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 Ω |
| 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

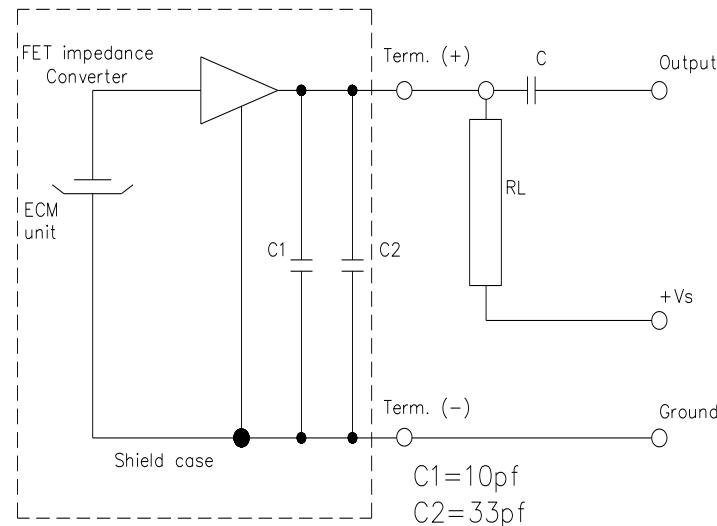
Humidity 60~70%

Generally Atmospheric Pressure 860~1060hpa

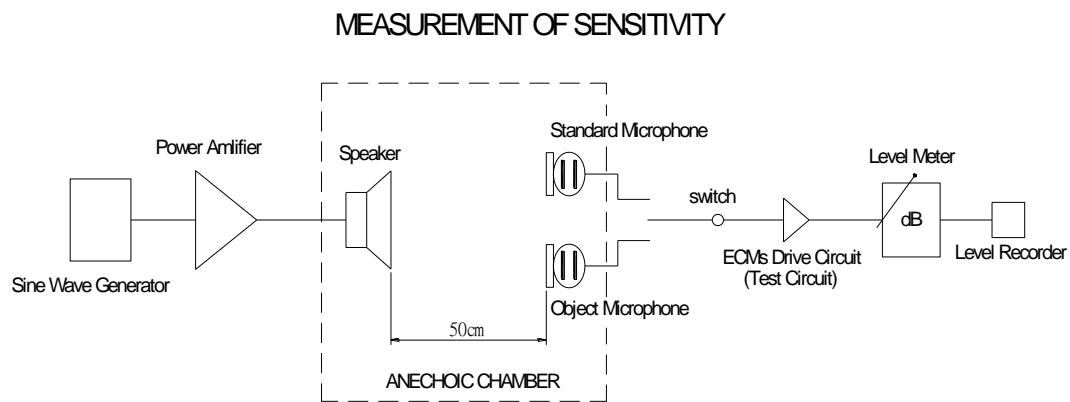
Electrical Characteristics Test Condition:

Vs=2.0V RL=2.2K Ω Te=20°C R. H.=60%

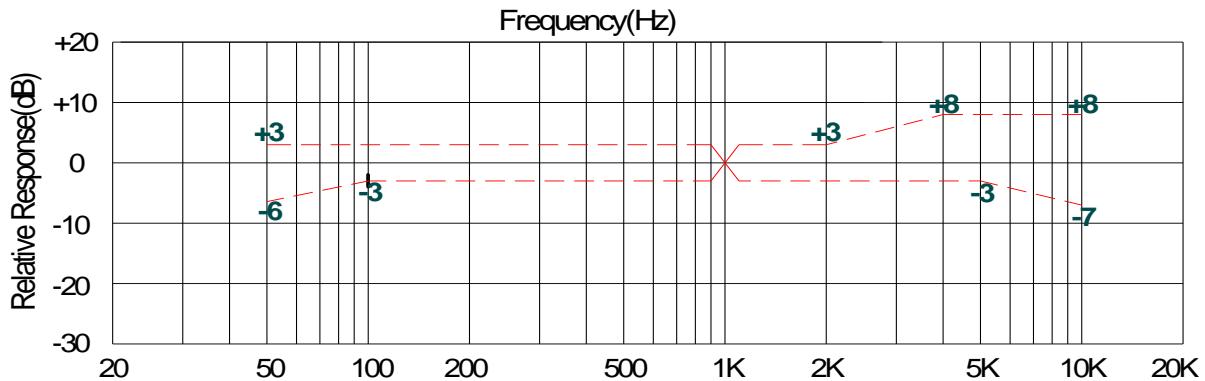
Standard Test Circuit



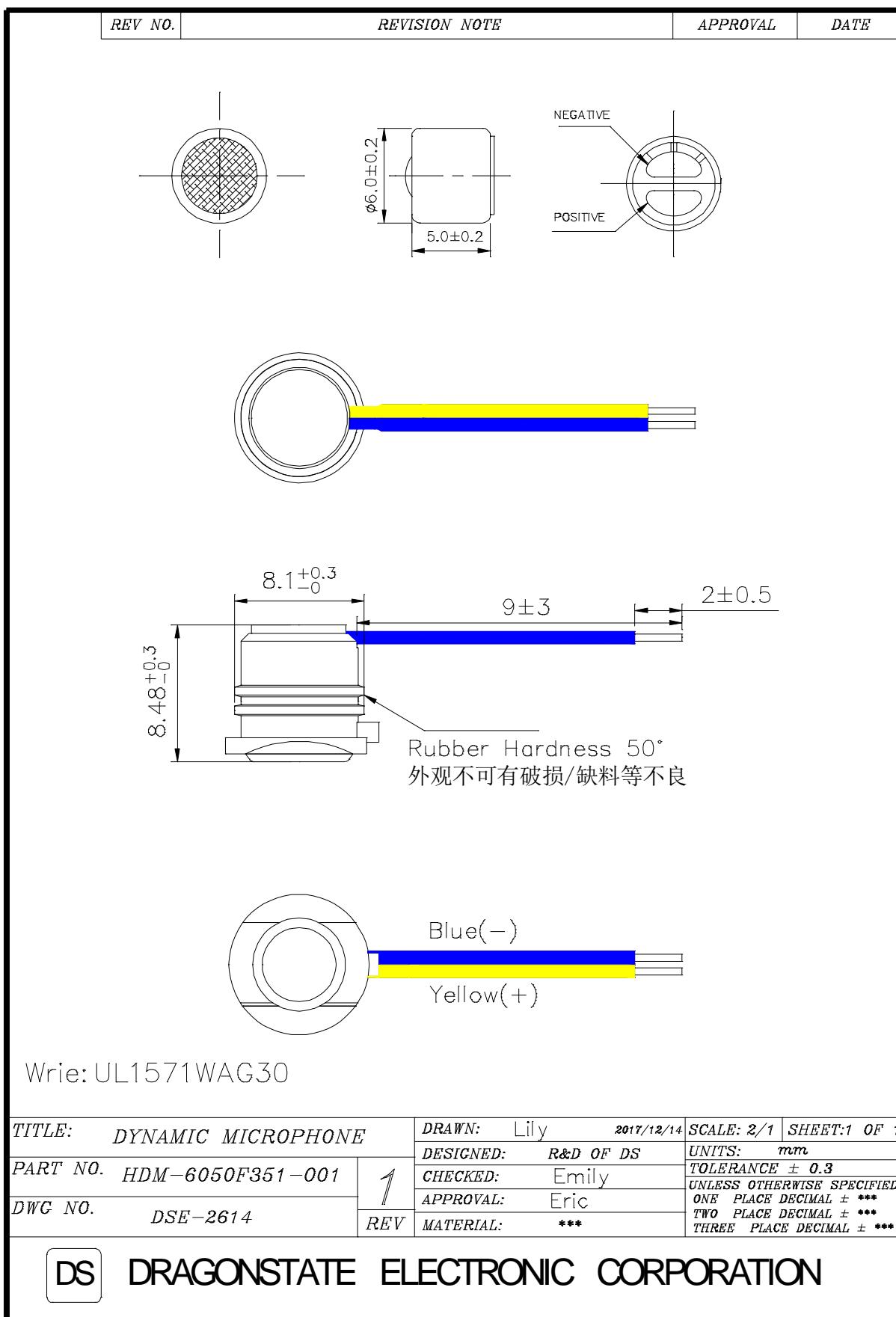
Standard Test Condition Of Microphone



3. Frequency Response Tolerance Window



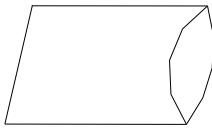
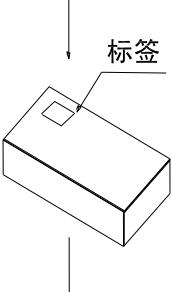
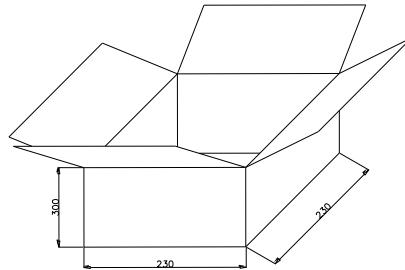
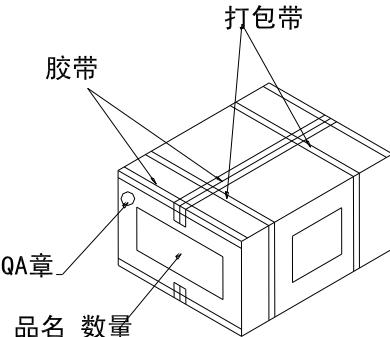
4. Dimension



5. 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 ± 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 ± 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 ± 3 dB from initial sensitivity. | After any tests , the sensitivity to be within ± 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 ± 5 % relative humidity for 240 hours, and expose to room temperature for 6 hours, sensitivity to be within ± 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 |
|--|---|---|------|
|  <div style="display: flex; justify-content: space-between; align-items: center;"> Bag(100*100mm) 100pcs Material: Plastic </div> | | | |
|  <div style="display: flex; justify-content: space-between; align-items: center;"> 标签 Middle(215*105*55mm) 1000pcs(10*100pcs) Material: Paper </div> | | | |
|  <div style="display: flex; justify-content: space-between; align-items: center;"> Outer Box(230*230*300mm) 10000pcs(10*1000pcs) Material: Paper </div> | | | |
|  <div style="display: flex; justify-content: space-between; align-items: center;"> 打包带 胶带 QA章 品名 数量 </div> | | | |
| TITLE: 包装方式 | | DRAWN: Lily 2014/07 SCALE: 1:10 SHEET: 1 of 1 | |
| PART NO. | | DESIGNED: R & D of D.S. UNITS: mm | |
| DWG NO. | | CHECKED: Emily TOLERANCE: ±5 APPROVAL: Eric UNLESS OTHERWISE SPECIFIED: REV MATERIAL: 纸类 ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± *** | |
| DS | DRAGONSTATE ELECTRONIC CORPORATION | | |