## 1. Scope

The specifications should be applied to electret condenser microphone of L-KLS3-MM6027PP-443

## 2. Storage And Judgement Conditions

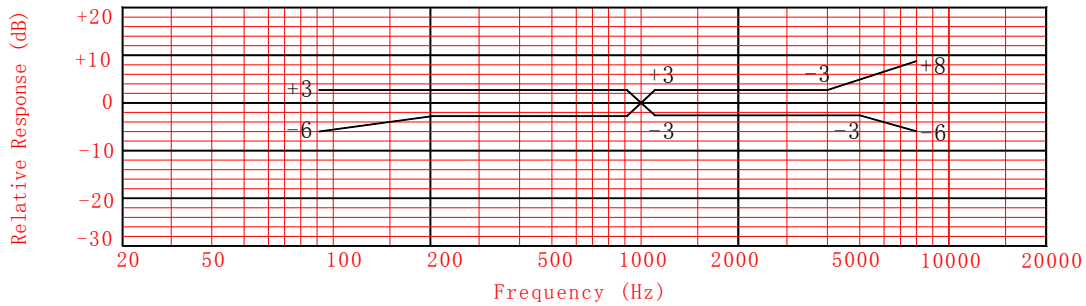
| | Temperature Range(° C) | Rel. Humidity (%) | Static Pressure (kPa) |
|---|---|---|---|
| Judgement | 19～21 | 60～70 | 86～106 |
| Storage | -30～70 | | |
| Operating | -20～60 | | |

## 3. Specifications

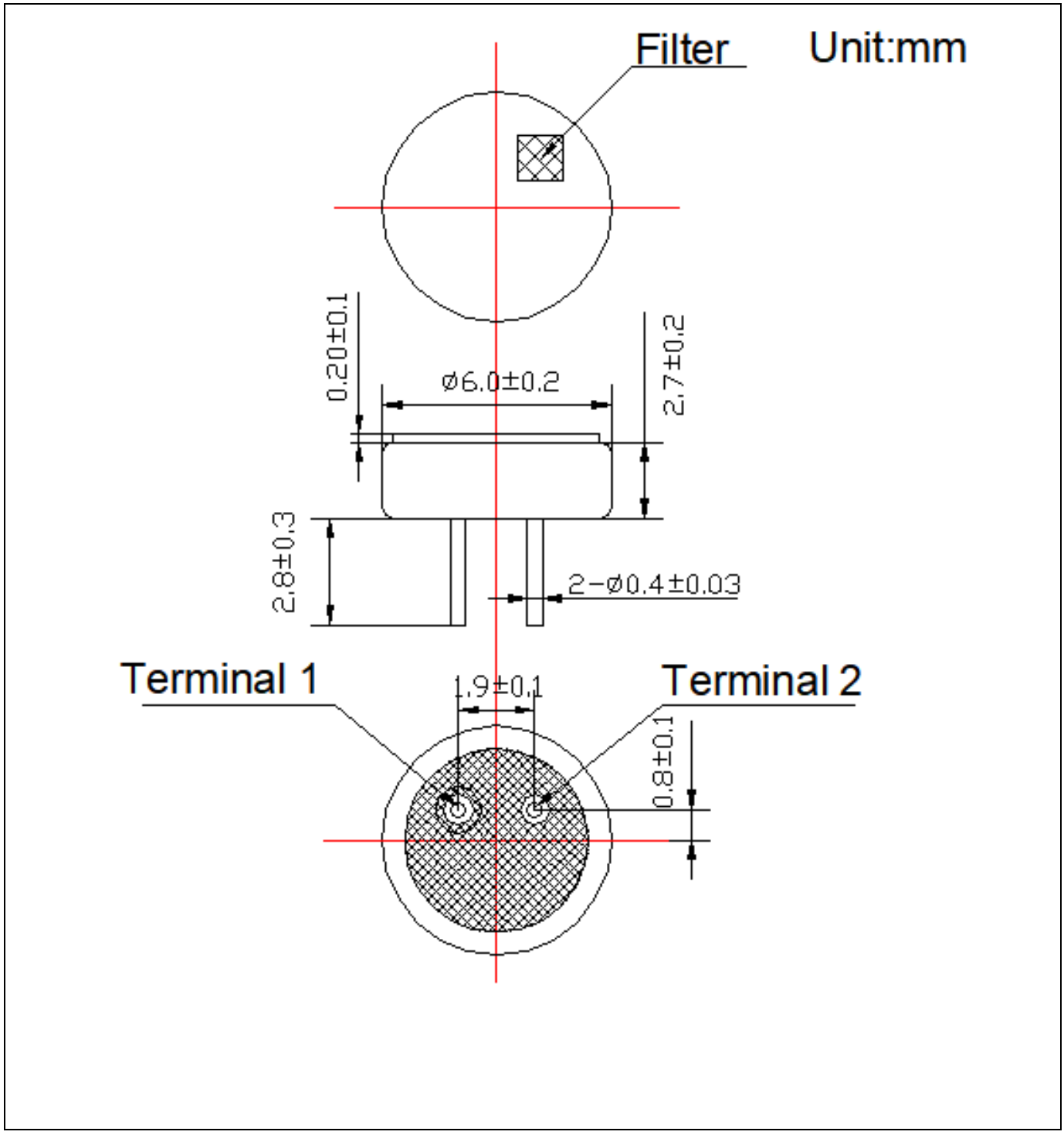
Test Conditions: $V_S$=2.0V, $R_L$=2.2KΩ, Temp=20±2° C, R.H=60±5%

| ITEM | Symbol | Test Conditions | Min | Standard | Max | Unit |
|---|---|---|---|---|---|---|
| Sensitivity | S | f=1KHz,<br>S.P.L=1Pa | -47 | -44 | -41 | dB<br>0dB=1V/PA |
| Impedance | Z | f=1KHz,<br>S.P.L=1Pa | | | 2.2 | KΩ |
| Directivity | Omni-directional | | | | | |
| Current Consumption | I | | | | 370 | μA |
| Operation Voltage Range | VS | | 1.0 | 2.0 | 10 | V |
| S/N Ratio | S/N(A) | f=1KHz, pin=1Pa<br>A Curve | 55 | | | dB |
| Decreacing Voltage Characteristic | △S | f=1KHz, pin=1Pa<br>VS=2.0-1.5V | | | -3 | dB |
| Max. Input Sound Level | MISPL | f=1KHz,<br>Distortion≤3% | | | 110 | dB |

## 4. Frequency Response



5. APPEARANCE & DIMENSIONS

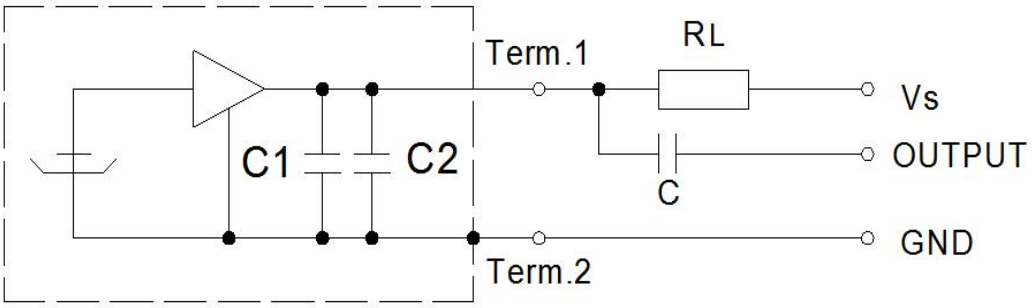


## 6. Test Circuit

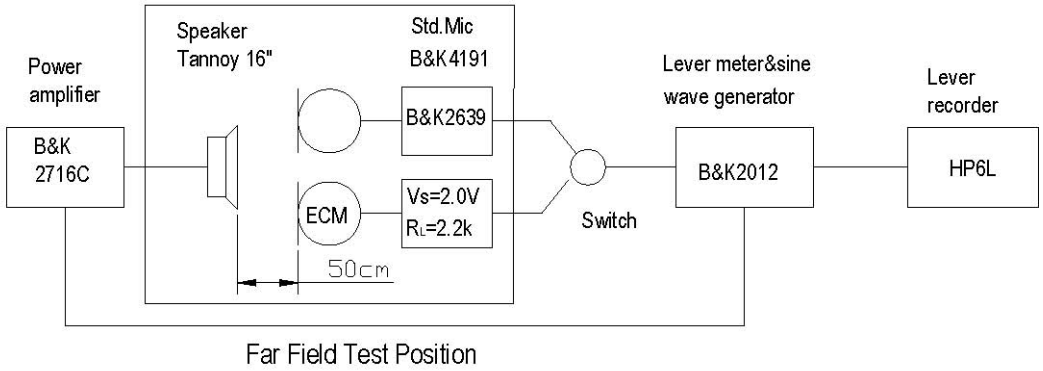
Measurement Circuit

Vs:Source Voltage2.0V　RL:Load Resistance2.2KΩ

C1=10pF　C2=33pF




## 7. Test Setup Drawing



## 8. Reliability Test

All tests should be done after 2 hours of conditioning at 20℃, R. H65% , while the sensitivity is to be within ±3dB from the initial sensitivity after the following experiments.

### 8.1 High Temperature Test

| | |
| --- | --- |
| High temperature: | +80℃ |
| Duration: | 72 hours |

### 8.2 Low Temperature Test

| | |
| --- | --- |
| Low temperature: | -40℃ |
| Duration: | 72 hours |

### 8.3 Temperature Cycle Test (See in Fig.1)

| | |
| --- | --- |
| Low temperature: | -40℃ |
| High temperature: | +80℃ |
| Changeover time: | 10min |
| Duration: | 30min |
| Cycle: | 32 |

### 8.4 Statical Humidity Test

| | |
| --- | --- |
| Temperature: | +40℃ |
| Relative humidity: | 90～95% |
| Duration: | 72hours |

## 8.5 Vibration Test

| | |
|---|---|
| Amplitude : | 1.52mm |
| Duration: | 1minutes /plane |
| Freq.range: | 10～55 Hz |
| Total time: | 2 hours |

## 8.6 Dropping Test

Drop a unit unpacked onto a board of 20mm thick.

| | |
|---|---|
| Height: | 1.0 m |
| Cycle: | 6 |

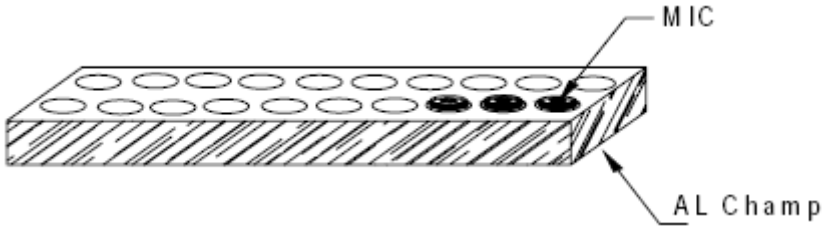
## 9. Regarding the Soldering operation

a. Use 25~ 30W soldering iron and maintain 310℃~330℃ in operation.

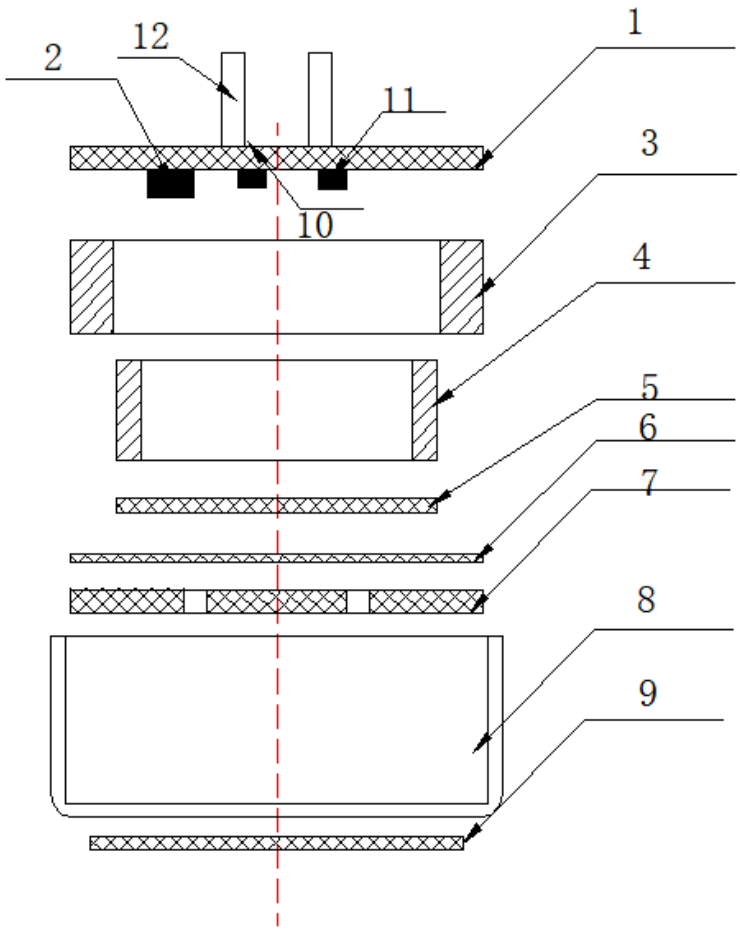
b. Operators who work in the solder fixture and the soldering iron must be statically grounded under each soldering process.

C. Soldering should be accomplished within two seconds at each terminal so as not to be overheated.

d . Optimal design for heat sink pad is same as below.



## 10. List and Structure of Materials




| NO. | PARTS |
|---|---|
| 1 | PCB |
| 2 | FET |
| 3 | Holder |
| 4 | Connecter |
| 5 | Diaphragm |
| 6 | Spacer |
| 7 | Back plate |
| 8 | Outer most shell |
| 9 | Cloth |
| 10 | Capacitor |
| 11 | Capacitor |
| 12 | Pin |

## 11. HANDLING INSTRUCTION

1、Assembly process

a)、After connector and holder are once disassembled , they should not be re-used.

b)、Do not touch outer springs directly(except for PCB or proper terminal set at nominal height.

c)、Do not give any mechanical shocks to the micphone(e.g. dropping to floor)

2、General information

2-1: This microphone shall not be operated or stored in following environment.

>where liquid(water,solvent and so on)splashes.

>where the air has a high concentration of corrosive gas .

>where is too dusty.

>where temperature changes rapidly.

2-2: Frequency response especially in high frequency region is dependent on the structure of enclosure.

Please remove additional acoustic mass or cavity in front of the microphone to the utmost.

2-3:do not put mechanical pressure more than 2 kg to the microphone.

2-4: microphone should not be in state of outgoing packing for a long-term storage.

2-5: all the soldering procedures upon microphone must be complete in a metallic device,the temperature of the soldering irons must be limited as 320℃ and less 3 s ,the operators、the solder fixtures and the soldering irons must be statically grounded under each soldering process.