

# Product Specification

Number: L-KLS3-MM6035P-403

Name: Mini microphone

Specification: \_\_\_\_\_

Customer: D02

Date: 2021-01-27

Customer Signature:



[WWW.KLSELE.COM](http://WWW.KLSELE.COM)

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Compile	Check	Review	Approval
Jenny	Jack.C		

# PRODUCT SPECIFICATION

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## 1. Scope

The specifications should be applied to electret condenser microphone of L-KLS3-MM6035P-403

## 2. Storage And Judgement Conditions

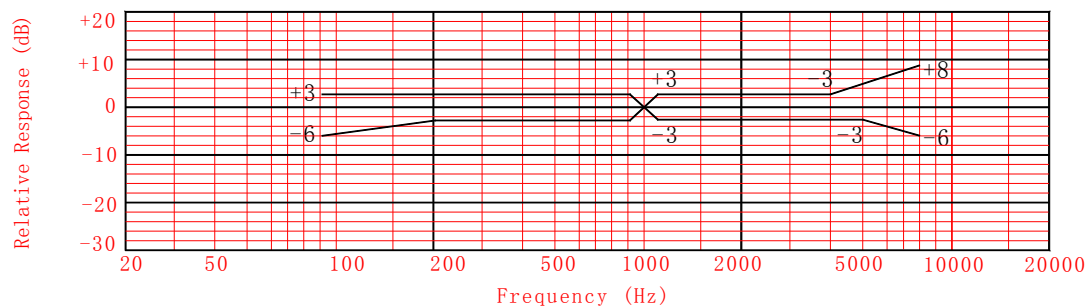
	Temperature Range(° C)	Rel. Humidity (%)	Static Pressure (kPa)
Judgement	19~21	60~70	86~106
Storage	-30~70		
Operating	-20~60		

## 3. Specifications

Test Conditions:  $V_S=3.0V$ ,  $R_L=2.2K\Omega$ ,  $Temp=20\pm2^\circ C$ ,  $R.H=60\pm5\%$

ITEM	Symbol	Test Conditions	Min	Standard	Max	Unit
Sensitivity	S	$f=1KHz$ , $p_{in}=1Pa$	-43	-40	-37	dB 0dB=1V/Pa
Impedance	Z	$f=1KHz$ , $p_{in}=1Pa$			2.2	K $\Omega$
Directivity		Omni-directional				
Current Consumption	I				500	$\mu A$
Operation Voltage Range	$V_S$		1.0	3.0	10	V
S/N Ratio	S/N(A)	$f=1KHz$ , $p_{in}=1Pa$ A Curve	58			dB
Decreasing Voltage Characteristic	$\Delta S$	$f=1KHz$ , $p_{in}=1Pa$ $V_S=4.5-3.0V$			-3	dB
Max. Input Sound Level	MISPL	$f=1KHz$ , Distortion<3%			110	dB

## 4. Frequency Response



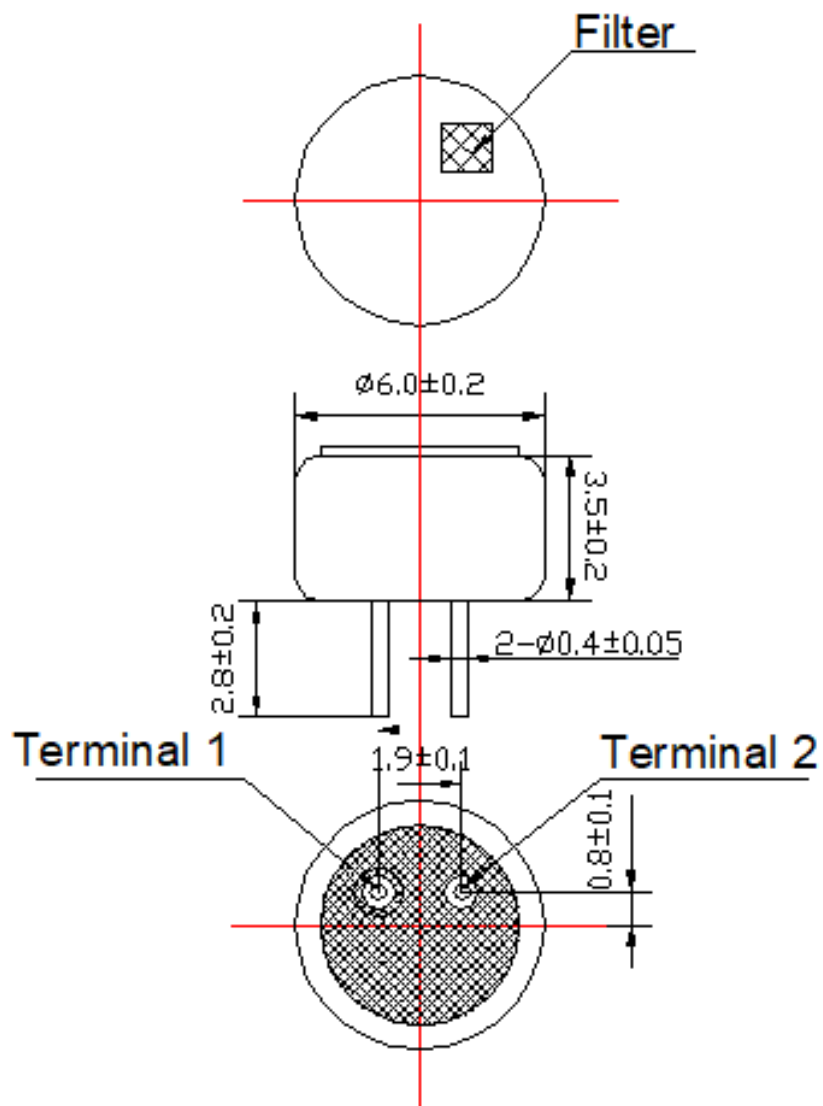
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### 5. APPEARANCE & DIMENSIONS



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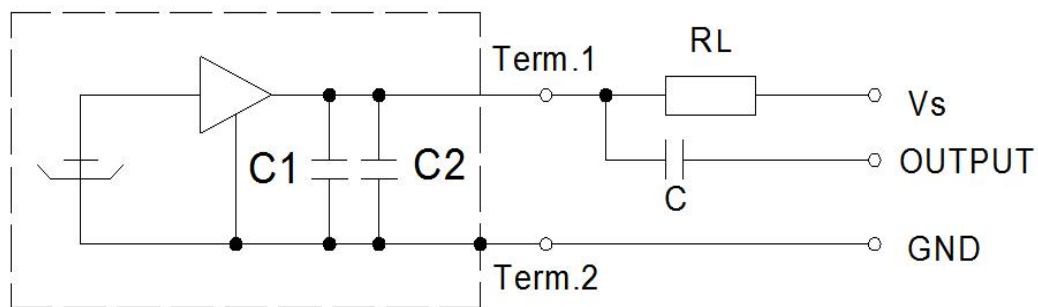
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## 6. Test Circuit

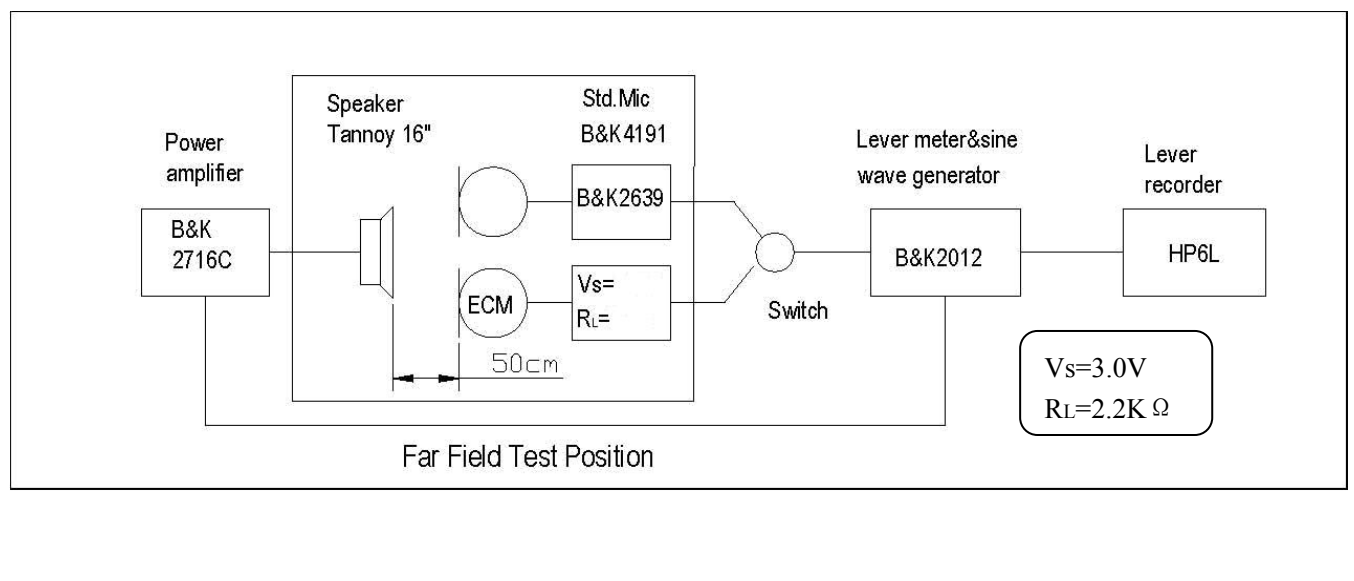
### Measurement Circuit

$V_s$ :Source Voltage3.0V  $R_L$ :Load Resistance2.2K  $\Omega$

$C_1=10\text{pF}$   $C_2=33\text{pF}$



## 7. Test Setup Drawing



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## 8. Reliability Test

All tests should be done after 2 hours of conditioning at 20°C, R. H65% , while the sensitivity is to be within  $\pm 3\text{dB}$  from the initial sensitivity after the following experiments.

### 8.1 High Temperature Test

High temperature:	+80°C
Duration:	72 hours

### 8.2 Low Temperature Test

Low temperature:	-40°C
Duration:	72 hours

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

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

### 8.4 Statical Humidity Test

Temperature:	+40°C
Relative humidity:	90~95%
Duration:	72hours

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### 8.5 Vibration Test

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

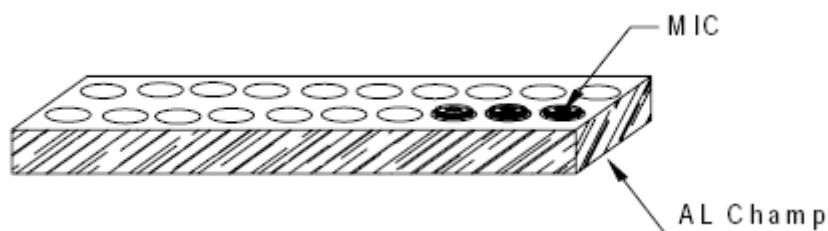
### 8.6 Dropping Test

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

Height:	1.0 m
Cycle:	6

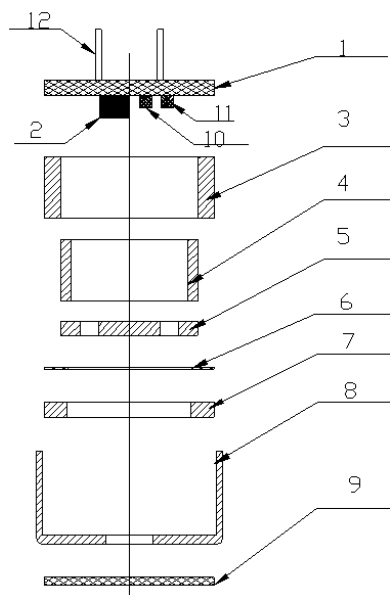
### 9. Regarding the Soldering operation

- Use 25~ 30W soldering iron and maintain 310℃~330℃ in operation.
- Operators who work in the solder fixture and the soldering iron must be statically grounded under each soldering process.
- Soldering should be accomplished within two seconds at each terminal so as not to be overheated.
- Optimal design for heat sink pad is same as below.



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**10. List and Structure of Materials**

NO.	PARTS
1	PCB
2	FET
3	Holder
4	Copper ring
5	Back plate
6	Spacer
7	Film
8	Outer most shell
9	Cloth
10	Capacitor
11	Capacitor
12	Pin

NO	Part name	Material Type	Qty	Origin	Manufacture	Remarks
1	PCB	FR-4	1			
2	FET	J35	1			
3	Holder	POM	1			
4	Copper ring	Copper	1			
5	Back plate	Cu	1			
6	Spacer	Mylar	1			
7	Film	FEP	1			
8	Outer most shell	AL	1			
9	Cloth	Fabrics	1			
10	Capacitor	10pF 0402	1			
11	Capacitor	33pF 0402	1			
12	Pin	Brass wire TZY6	2			

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### 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 microphone(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.