

SPECIFICATIONS

FOR

APPROVAL

Part name : electret condenser microphone

Model(KLS) : L-KLS3-MM9767PP-363

Model(customer):

Doc.number :

Submit date :

PREPARED	CHECKED	APPROVED

Please be informed to return to us with your
Signature within 14 days.

DATE	
PREPARED BY	
AUTHORIZED BY	

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PRODUCT SPECIFICATION

TYPE: ECM

PART No: L-KLS3-MM9767PP-363

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1、Scope

The specifications should be applied to electret condenser microphone of L-KLS3-MM9767PP-363

2、Storage And Judgement Conditions

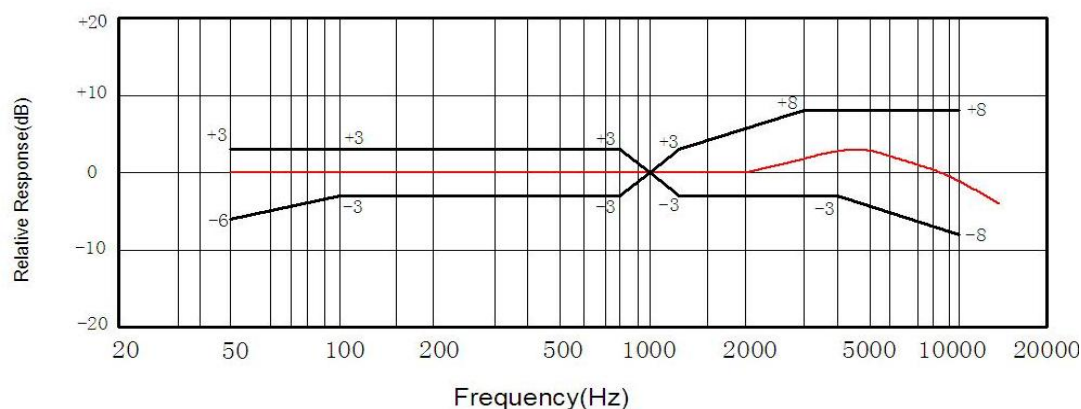
	Temperature Range(° C)	Rel. Humidity (%)	Static Pressure (kPa)
Judgement	19~21	60~70	86~106
Storage	-30~70		
Operating	-20~60		

3、Specifications

Test Conditions: $V_s=4.5V$, $R_L=2.2K\Omega$, $Temp=20\pm 2^{\circ}C$, $R.H=60\pm 5\%$

ITEM	Symbol	Test Conditions	Min	Standard	Max	Unit
Sensitivity	S	$f=1KHz$, S. P. L=1 μ Bar	-39	-36	-33	dB 0dB=1V/ μ Bar
Impedance	Z	$f=1KHz$, S. P. L=1 μ Bar			2.2	K Ω
Directivity		Omni-directional				
Current Consumption	I				500	μ A
Operation Voltage Range	V _S		1.0	4.5	10	V
S/N Ratio	S/N(A)	$f=1KHz$, S. P. L=1Pa A Curve	55			dB
Decreasing Voltage Characteristic	ΔS	$f=1KHz$, S. P. L=1Pa $V_s=4.5-3.0V$			-3	dB
Max. Input Sound Level	MISPL	$f=1KHz$, Distortion $\leq 3\%$			115	dB

4、Frequency Response



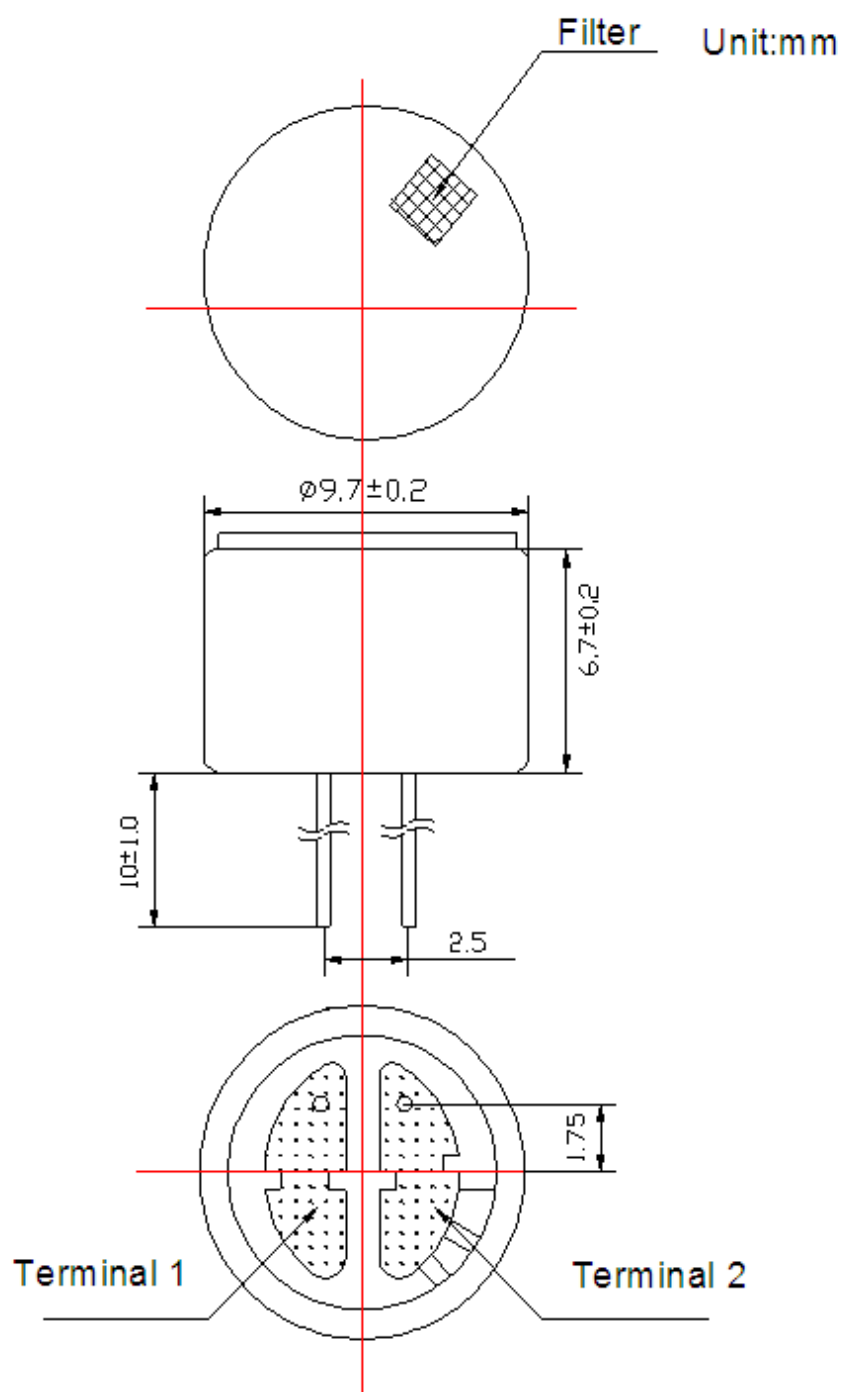
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5、APPEARANCE & DIMENSIONS



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TYPE: ECM

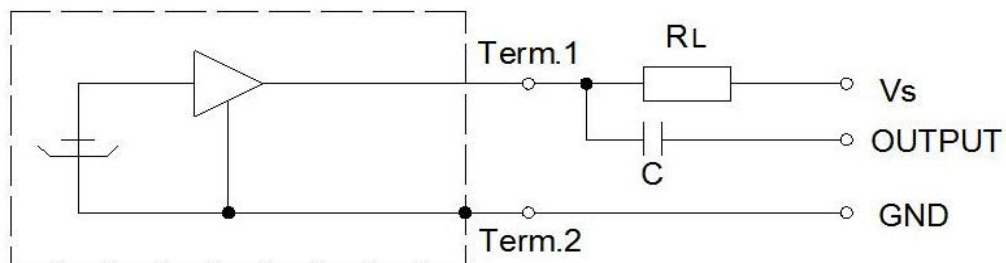
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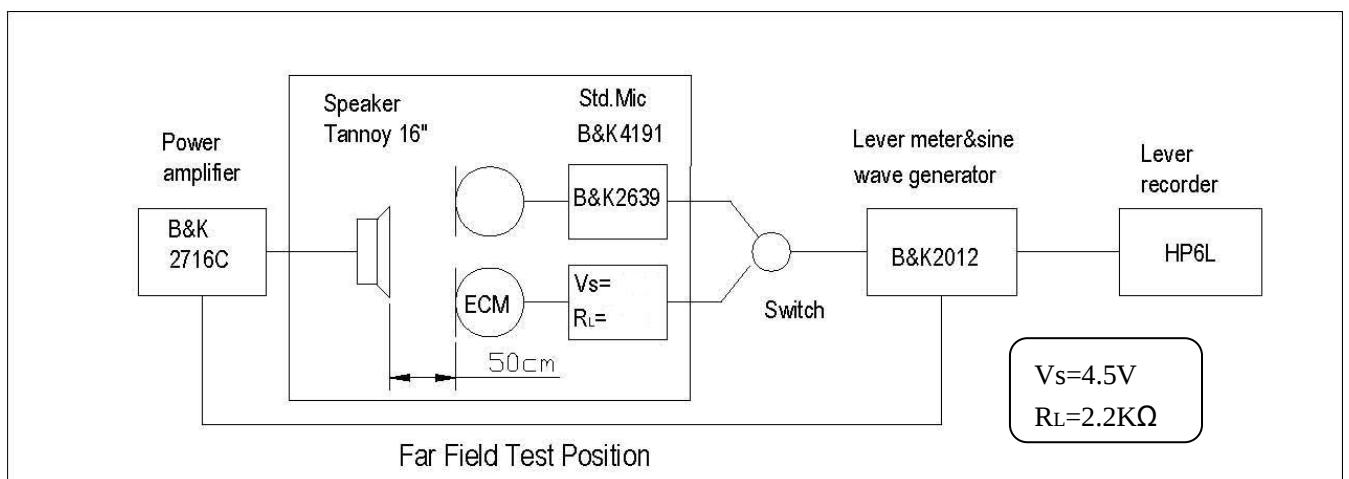
6、Test Circuit

Measurement Circuit

V_s :Source Voltage 4.5V R_L :Load Resistance 2.2K Ω



7、Test Setup Drawing



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8、 Reliability Test

All tests should be done after 2 hours of conditioning at 20℃, 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:	+60℃
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:	-25℃
High temperature:	+60℃
Changeover time:	10min
Duration:	30min
Cycle:	32

8.4 Statical Humidity Test

Temperature:	+40℃
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.

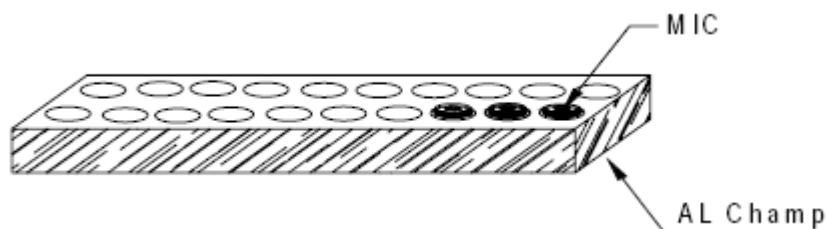
Height: 1.0 m
Cycle: 6

8.7 ESD Test

The microphone under test must be discharged between each ESD exposure without ground.
(contact: $\pm 6KV$, air: $\pm 8KV$) There is no interference in operation after 10 times exposure.

9、 Regarding the Soldering operation

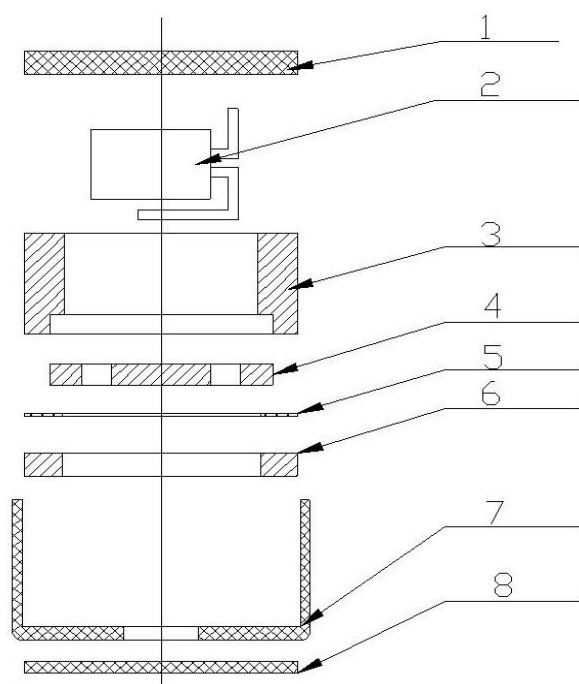
- a. Use 15~ 20W soldering iron and maintain $290^{\circ}C \sim 310^{\circ}C$ in operation.
- b. Operators who work in the solder fixture and the soldering iron must be statically grounded under each soldering process.
- C. Soldering should be accomplished within two seconds at each terminal so as not to be overheated.
- d . Optimal design for heat sink pad is same as below.



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10、 List and Structure of Materials



NO.	PARTS
1	PCB
2	FET
3	Holder
4	Back plate
5	Spacer
6	Film
7	Outer most shell
8	Cloth

NO	Part name	Material Type	Qty	Origin	Manufacture	Remarks
1	PCB	FR-1	1			
2	FET	K596	1			
3	Holder	ABS	1			
4	Back plate	Cu	1			
5	Spacer	Mylar	1			
6	Film	FEP	1			
7	Outer most shell	AL	1			
8	Cloth	Fabrics	1			

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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 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.