


	DATE	10-04-13	SPECIFICATION
	PAGE	1/8	
<i>MODEL NAME: MIC-9745CD-P-41</i>			

SPECIFICATION FOR APPROVAL

C/microphone

Model Name	MIC-9745CD-P-41
Note	

Product Photo	
	DRAWING:
	CHECKED:
	APPROVED:

	DATE	10-04-13	SPECIFICATION
	PAGE	2/8	
MODEL NAME: MIC-9745CD-P-41			

1. Scope

The specifications should be applied to electret condenser microphone of DG09767CD

2. Storage And Judgement Conditions

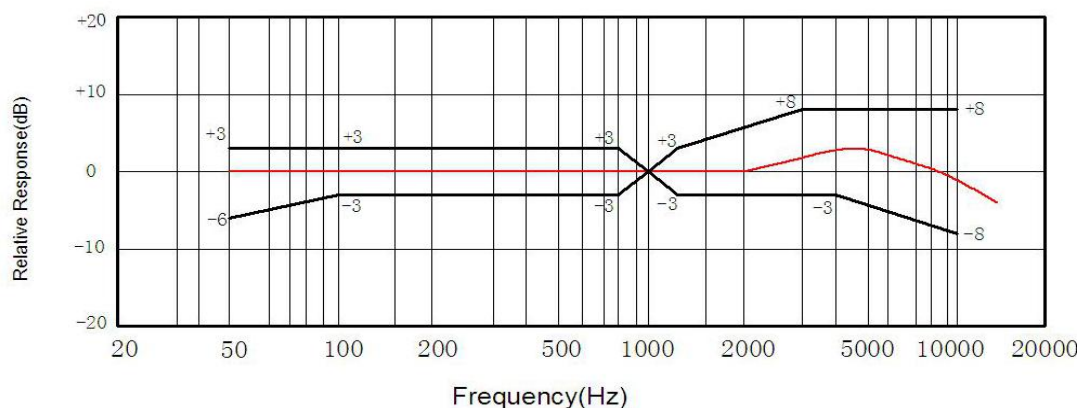
	Temperature Range(° C)	Rel. Humidity (%)	Static Pressure (kPa)
Judgement	19~21	60~70	86~106
Storage	-30~70		
Operating	-20~60		

3. Specifications

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

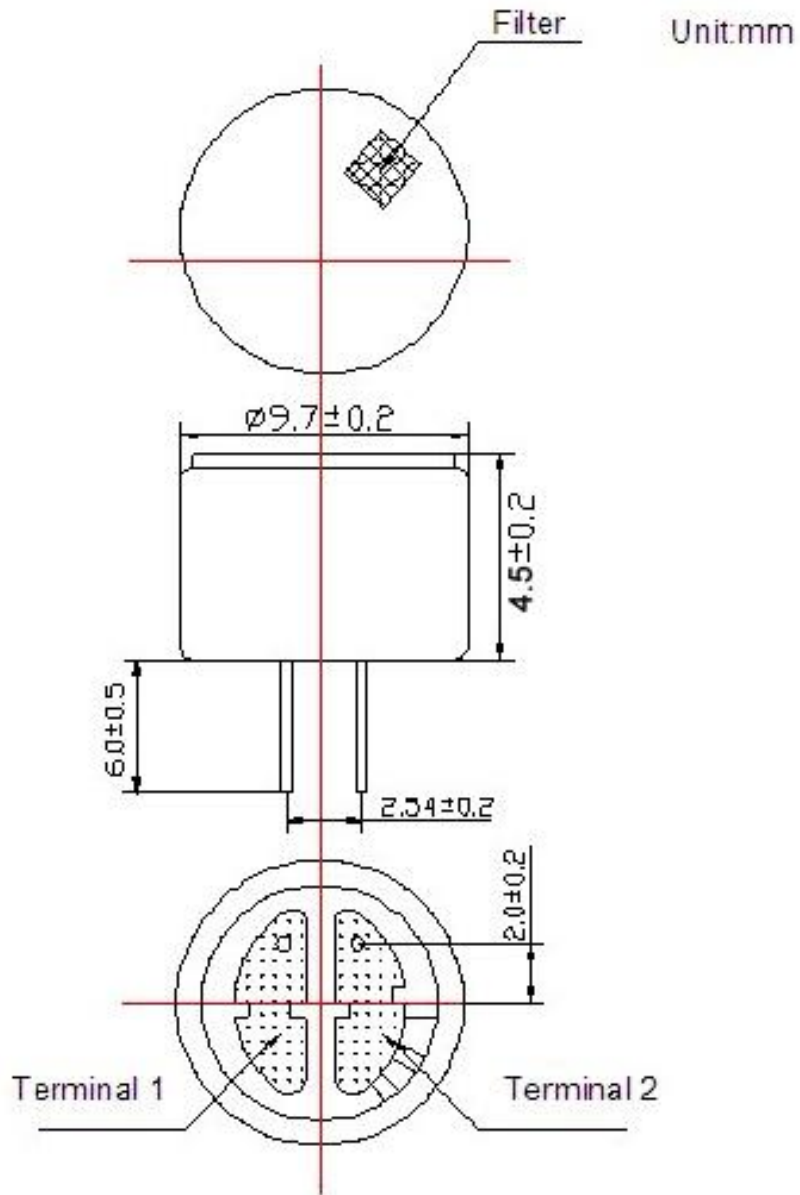
ITEM	Symbol	Test Conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz, S. P. L=1Pa	-38	-41	-44	dB 0dB=1V/Pa
Impedance	Z	f=1KHz, S. P. L=1Pa			2.2	K Ω
Directivity	Omni-directional					
Current Consumption	I				500	μA
Operation Voltage Range	Vs		1.0	4.5	10	V
S/N Ratio	S/N(A)	f=1KHz, S. P. L=1Pa A Curve	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



	DATE	10-04-13	SPECIFICATION
	PAGE	3/8	
MODEL NAME: MIC-9745CD-P-41			

5. APPEARANCE & DIMENSIONS

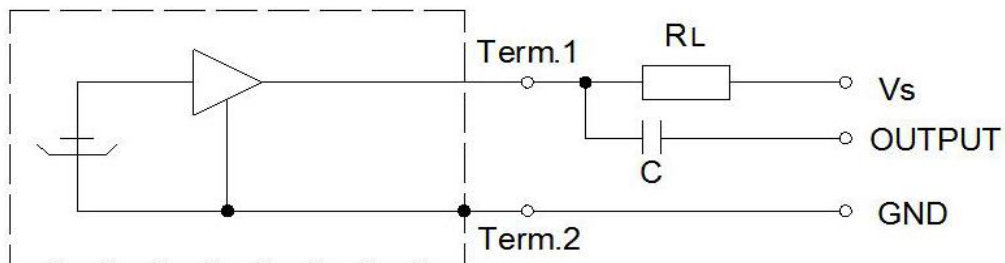


	DATE	10-04-13	SPECIFICATION
	PAGE	4/8	
MODEL NAME: MIC-9745CD-P-41			

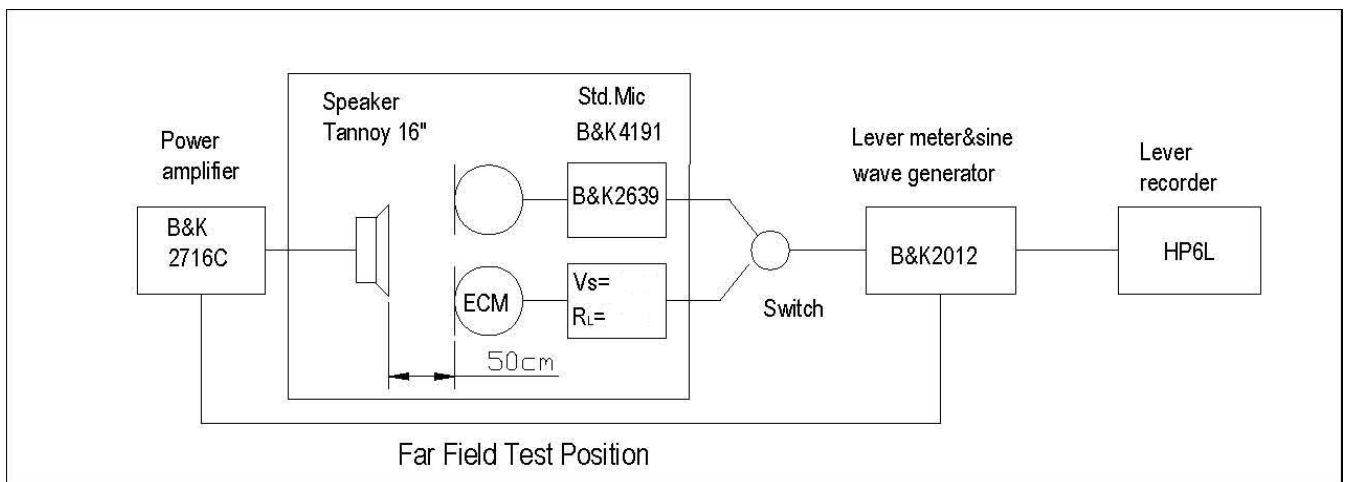
6. Test Circuit

Measurement Circuit

Vs:Source Voltage 4.5V R_L:Load Resistance 2.2KΩ



7. Test Setup Drawing



	DATE	10-04-13	SPECIFICATION
	PAGE	5/8	
<i>MODEL NAME: MIC-9745CD-P-41</i>			

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: +60°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: -25°C
High temperature: +60°C
Changeover time: 10min
Duration: 30min
Cycle: 32

8.4 Statical Humidity Test

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

	DATE	10-04-13	SPECIFICATION
	PAGE	6/8	
MODEL NAME: MIC-9745CD-P-41			

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.

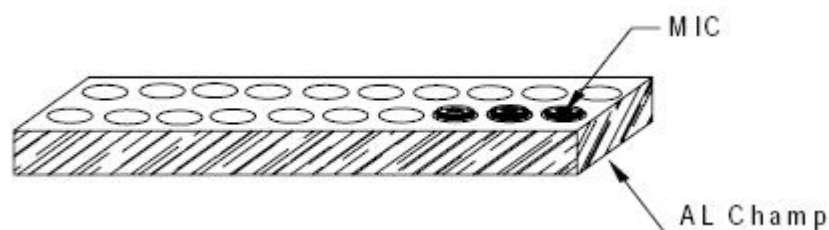
Height:	1.0 m
Cycle:	6

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.

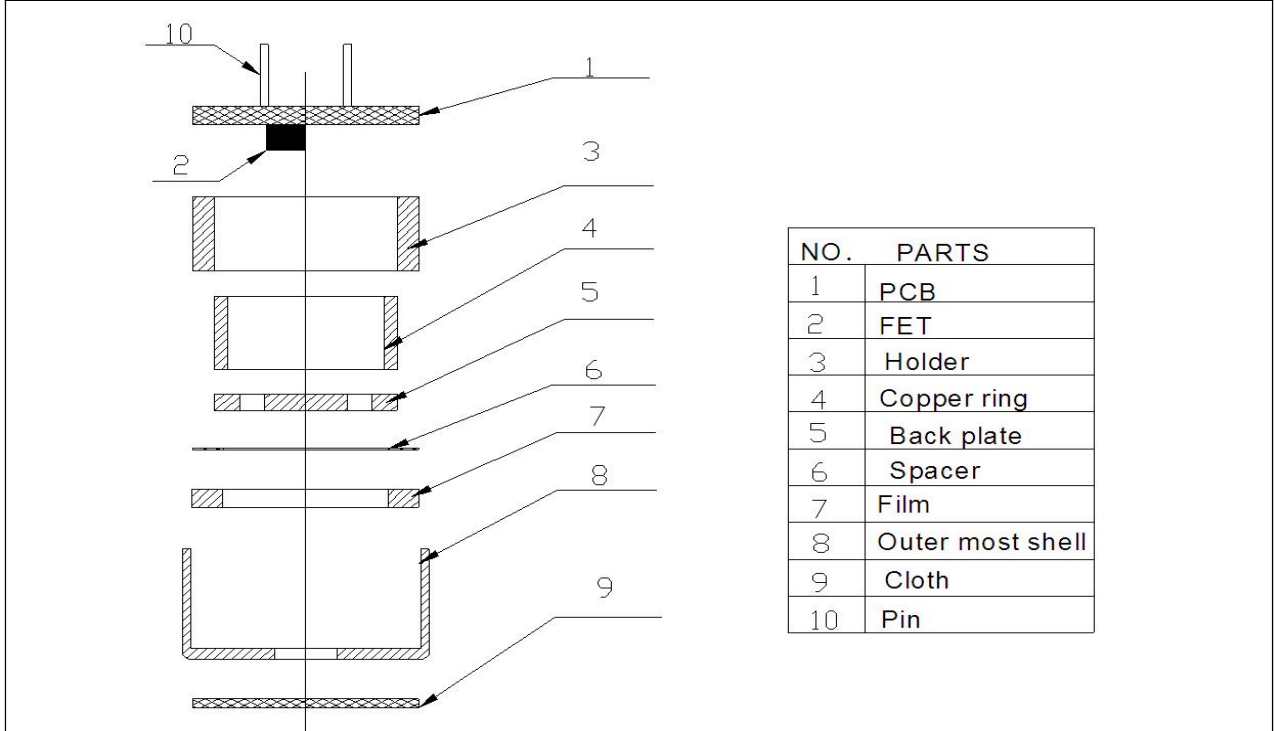
9. Regarding the Soldering operation

- a. Use 15~ 20W soldering iron and maintain 290°C~310°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.



DATE	10-04-13	SPECIFICATION
PAGE	7/8	
MODEL NAME: MIC-9745CD-P-41		

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	Pin

NO	Part name	Material Type	Qty	Origin	Manufacture	Remarks
1	PCB	FR-4	1			
2	FET	2SP1109	1			
3	Holder	POM	1			
4	Copper ring	Cu	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	Pin	Brass wire TZY6	2			

	DATE	10-04-13	SPECIFICATION
	PAGE	8/8	
<i>MODEL NAME: MIC-9745CD-P-41</i>			

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.