APPROVAL SHEET
FOR
MICROPHONE

深 圳 市 銳 創 達 電 子 有 限 公 司

TAT ELECTRONICS CO. LTD.

CUSTOMER: 比特

PART NUMBER: **EM9767-38dB 加 12V 稳压管**

CUSTOMER PART NO.: **M163138113110**

CUSTOMER	APPROVED	CHECKED
	钟云莎	郑飞
SIGNECTURE (Customer)		SIGNECTURE (Company)

Add: Rm1610 Pengji Wisdom Center,No 50 Bagua 1st Rd,Hualin Community,Yuanling Avenue, Futian Dist,Shenzhen City
深圳市福田区八卦一路 50 号鹏基商务时空大厦
Tel:+86-755-8950 9282, 25913372, 82370515;
Fax:+86-755-8950 9880
Email: tatspeaker@tatelec.com; sales@tatelec.com
Http:// www.tatelec.com

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1. Scope

The specifications should be applied to electret condenser microphone of DG0B4015DD(-P)C1033

2. Storage And Judgement Conditions

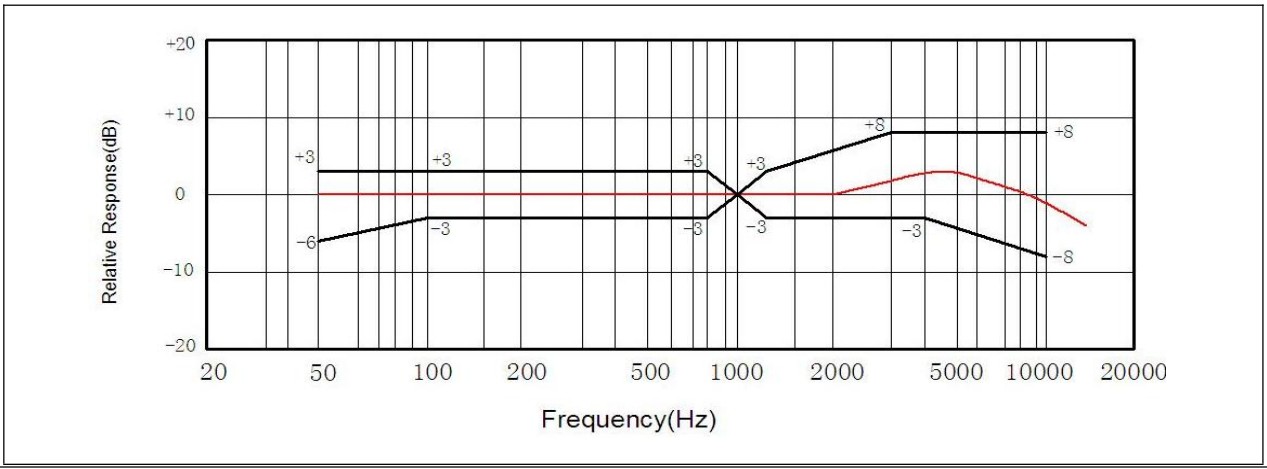
	Temperature Range(° C)	Rel. Humidity (%)	Static Pressure (kPa)
Judgement	19～21	60～70	86～106
Storage	-40～80		
Operating	-20～70		

3. Specifications

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

ITEM	Symbol	Test Conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz, S.P.L=1Pa	-40	-38	-36	dB 0dB=1V/Pa
Impedance	Z	f=1KHz, S.P.L=1μBar			2.2	KΩ
Directivity	Omni-directional					
Current Consumption	I		50		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
Decreacing Voltage Characteristic	△S	f=1KHz,S.P.L=1Pa Vs=1.5-1.0V			-3	dB
Max.Input Sound Level	MISPL	f=1KHz, Distortion≤3%			115	dB

4. Frequency Response



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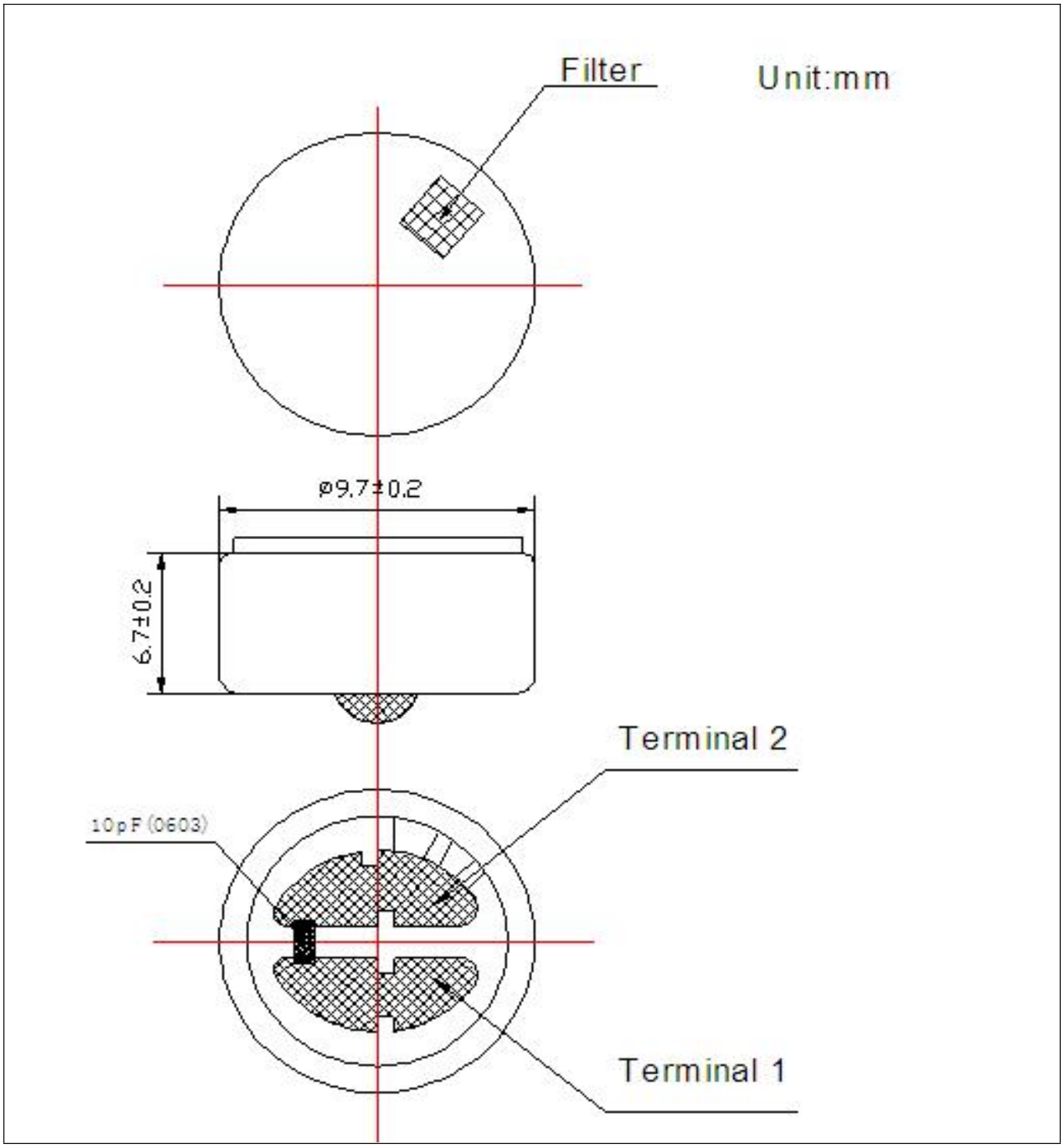
5. APPEARANCE & DIMENSIONS



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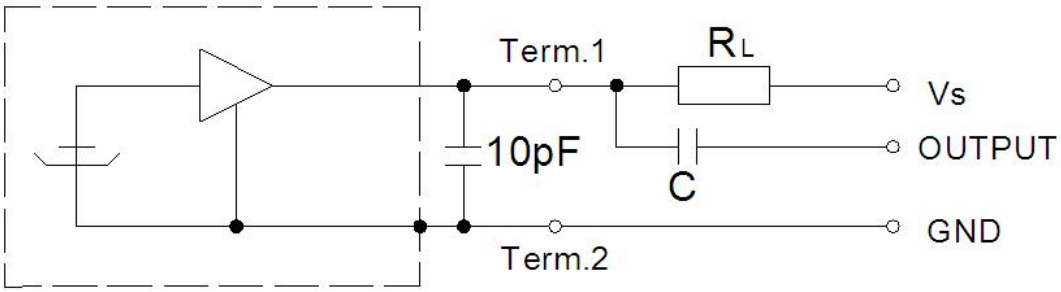
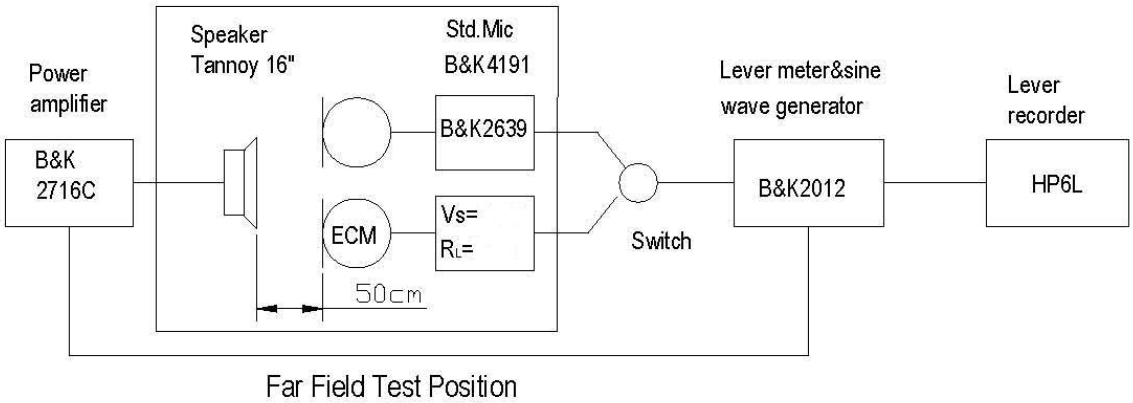
6. Test Circuit

Measurement Circuit

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



7. Test Setup Drawing



Vs=4.5V

R_L=2.2kΩ

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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 ±3dB 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:±6KV, air:±8KV)There is no interference in operation after 10 times exposure.

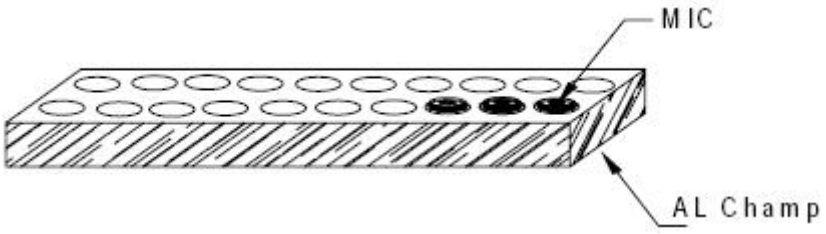
9. Regarding the Soldering operation

a. Use 15~ 20W soldering iron and maintain 290℃~310℃ 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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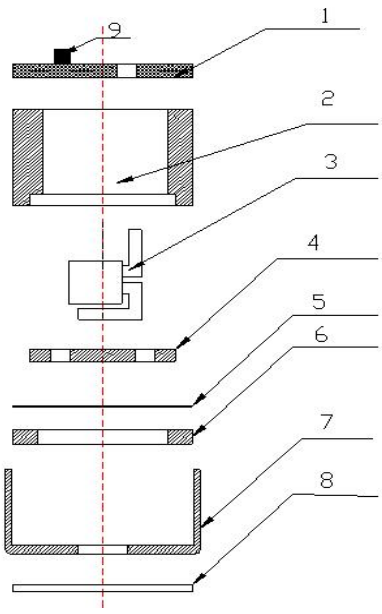
10. List and Structure of Materials



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

NO.	Part name	Material Type	Qty	Origin	Manufacture	Remarks
1	PCB	FR-1	1			
2	Holder	ABS	1			
3	FET	K596	1			
4	Back plate	Cu	1			
5	Spacer	Mylar	1			
6	Film	FEP	1			
7	Outer most shell	AL	1			
8	Protection fleece	Fabrics	1			
9	Capacitor	0603 10pF	1			

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.

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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.