MESSRS.

SPECIFICATION FOR APPROVAL
承 认 书

Product	**ELECTRET CONDENSER MICROPHONE**
Part No.	**AMB-O60G38-AB1(RoHS)**
Customer Part No.	
Customer Approval	

Approved By	Checked By	Made By
王台平 JAN-13-2015	曹丽萍 JAN-13-2015	LILY JAN-13-2015

常 州 华 龙 电 子 有 限 公 司
DRAGONSTATE ELECTRONIC CORPORATION

中国江苏省常州市新区电子园新四路 36 号
Tel: +86-519-85110078. 86-519-85106698, Fax: +86-519-85101081

EDITION:1.1

1. 变更记录（History change record）

Change Items	Date	Note	Drawn by	Checked by
	2009-08-15	First Issue	Lily	王台平 2012-08-15
规格书要求	2012-10-26	版本改为 1.0 版	Lily	王台平 2012-10-26
PCB 印字及颜色变更	2013-09-25	版本改为 2.0 版	Lily	王台平 2013-09-25
分解图修正	2015-01-13	版本改为 3.0 版	Lily	王台平 2015-01-13

2. 储藏与判断条件 (Storage And Judgement Conditions)

	Temperature Range(°C)	Rel. Humidity(%)	Static Pressure(kPa)
Judgement	19~21	60~70	86~106
Storage	-25~70		
Operating	-25~70		

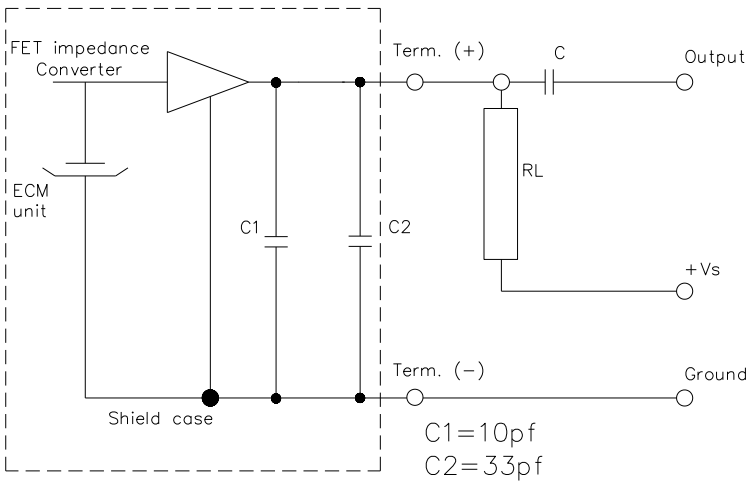
3. 规格 (Specifications)

Test conditions(V_S=2.0V R_L=2.2kΩ Temp=20±2℃ R.H=60±5%)

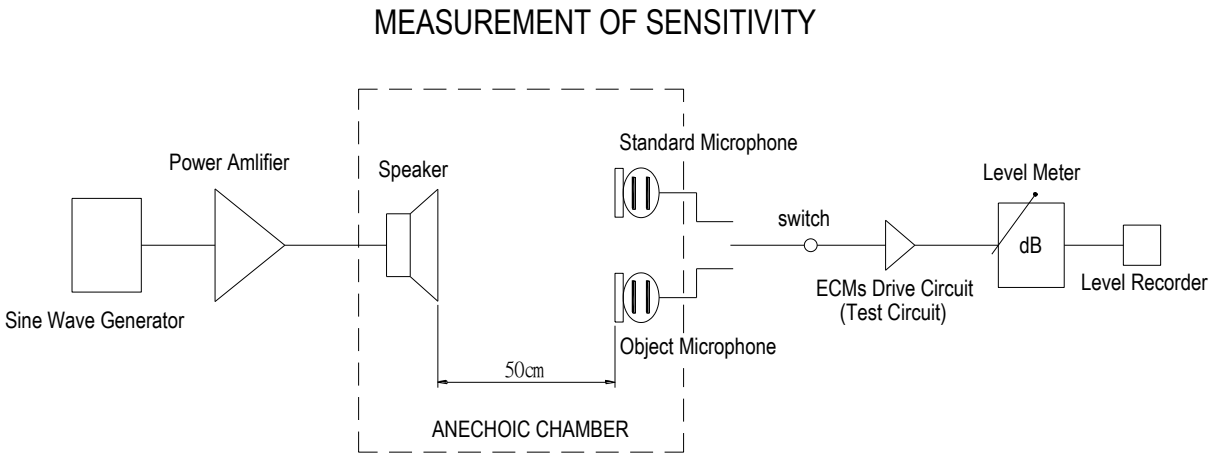
Item	Symbol	Test Conditions	Min	Standard	Max	Unit
灵敏度 Sensitivity	S	f=1kHz,Pin=1Pa	-41	-38	-35	dB (0dB=1V/Pa)
阻抗 Impedance	Z	f=1kHz,Pin=1Pa			2.2	kΩ
指向性 Directivity	Omni-directional					
消耗电流 Current Consumption	I		150		500	μA
工作电压 Operation Voltage Range	U		1.0	2.0	10	V
信噪比 S/N Ratio	S/N(A)	f=1kHz,Pin=1Pa A Curve	58			dB
降压特性 Decreasing Voltage Characteristic	ΔS	f=1kHz,Pin=1Pa V_S=2.0-1.5V			-3	dB
最大输入声压级 Max.Input Sound Level	MISPL	f=1kHz Distortion<1%			110	dB

4. 测试电路（Standard Test Circuit）

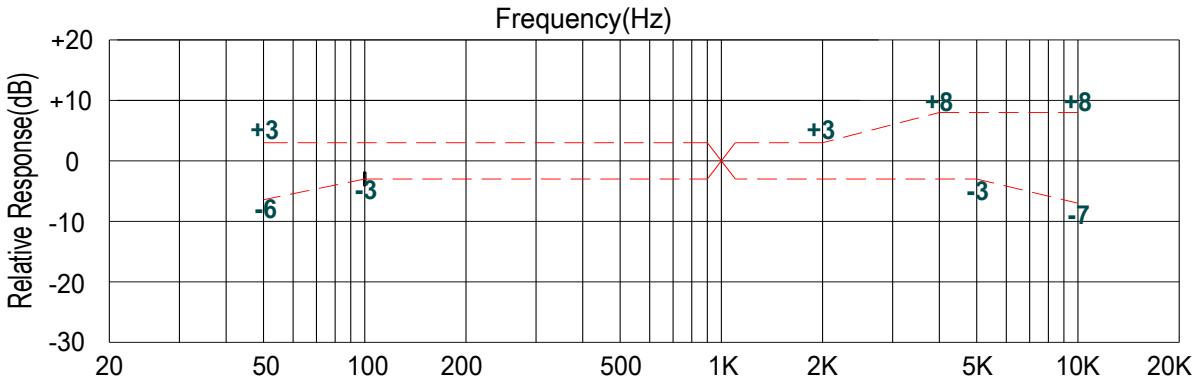
Vs=2.0V RL=2.2kΩ Te=20℃ R.H.=60%



5. 测试装备图（Standard Test Fixture）

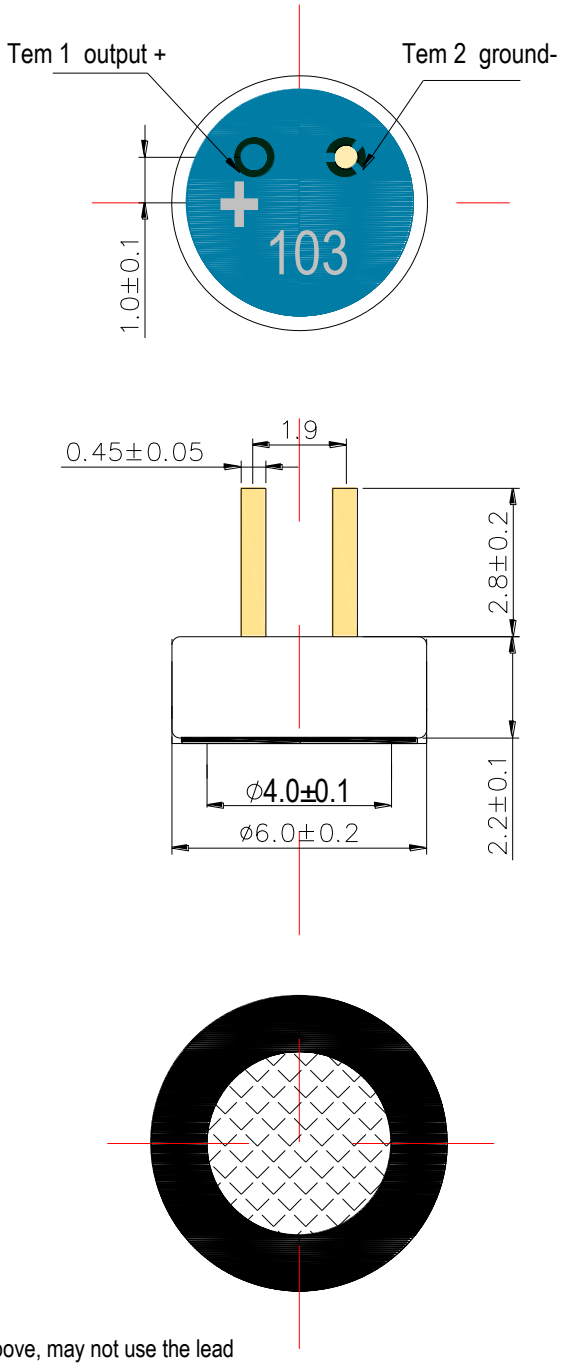


6 频响曲线（Frequency Response Curve）



7,外观图（Appearance Drawing）

REV NO.	REVISION NOTE	APPROVAL	DATE

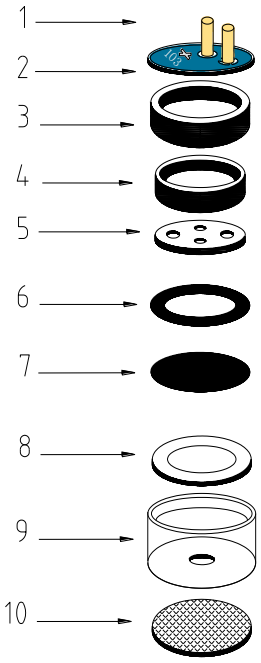


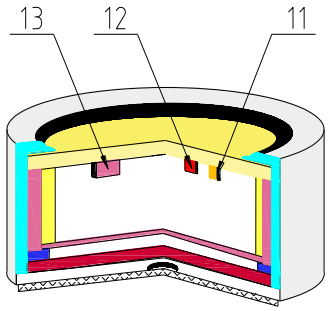
Sn-2Bi ＊The plating above, may not use the lead

TITLE: MICROPHONE		DRAWN: Lily 2013/09/25	SCALE: 5/1	SHEET: 1 : 1
PART NO. AMB-060C38-AB1	1	DESIGNED: R & D OF D.S.	UNITS: mm	
DWG NO. DTM-1023	REV	CHECKED: Emily	TOLERANCE ± 0.2	
		APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
		MATERIAL: *****		

DS DRAGONSTATE ELECTRONIC CORPORATION

8. 材料及结构清单 (List and Structure of Materials)





No. 序号	Part name 部件名称	Material Type 材料型号	Qty 数量	Origin 产地	Manufacture 协力厂商	Remarks 备注
1	PIN	Brass wire TZY6	2	China	Suzhou	
2	PCB	Epoxy FR-4	1	Hongkong	Suzhou	
3	Cavity	POM	1	Japan	Suzhou	
4	Copper ring	Brass AT65	1	China	Changzhou	
5	Back plate	H62 brass	1	China	Taicang	
6	Cushion plate	Mylar	1	China	Hebei	
7	Diaphragm	FEP 50A	1	USA	Dupont	
8	Brass	H62 brass	1	China	Suzhou	
9	Case	Magal	1	China	Shanghai	
10	Cloth	non-woven fabrics	1	Japan	Sanjing	
11	Capacitor	10pF 0402	1	Japan	Murata	
12	Capacitor	33pF 0402	1	Japan	Murata	
13	FET	RJN1123	1	Korea	RFsemi	

9.可靠性试验 (Reliability Test)

在下列试验完成后,在温度为 20℃,相对湿度为 65%的条件下恢复 3 小时后进行测试,灵敏度与初始灵敏度相差在±3dB 以内.

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

9.1 高温试验 (HIGH TEMPERATURE TEST)

温度(High temperature):	+60℃
放置时间(Duration):	200hours

9.2 低温试验 (LOW TEMPERATURE TEST)

温度(Low temperature):	-25℃
放置时间(Duration):	200 hours

9.3 温度循环试验(如图 1) (TEMPERATURE CYCLE TEST)(See in Fig.1)

低温(Low temperature):	-25℃
高温(High temperature):	+70℃
转化时间(Changeover time):	10min
放置时间(Duration):	30min
次数(Cycle):	5

9.4 湿度 (STATICAL HUMIDITY TEST)

温度(Temperature):	+40℃

相对湿度(Relative humidity): 90～95%

放置时间(Duration): 200 hours

9.5 振动试验 (VIBRATION TEST)

振幅(Amplitude): 1.52mm

持续时间(Duration): 1 分钟/面(minutes/plane)

频度范围(Freq.range): 10～55Hz

试验时间(Total time): 2 小时(hour)

9.6 跌落试验 (DROP TEST)

不带包装的跌落到 20mm 厚的地板上(Drop a unit unpacked onto a board of 20mm thick)

高度(Height): 1 m

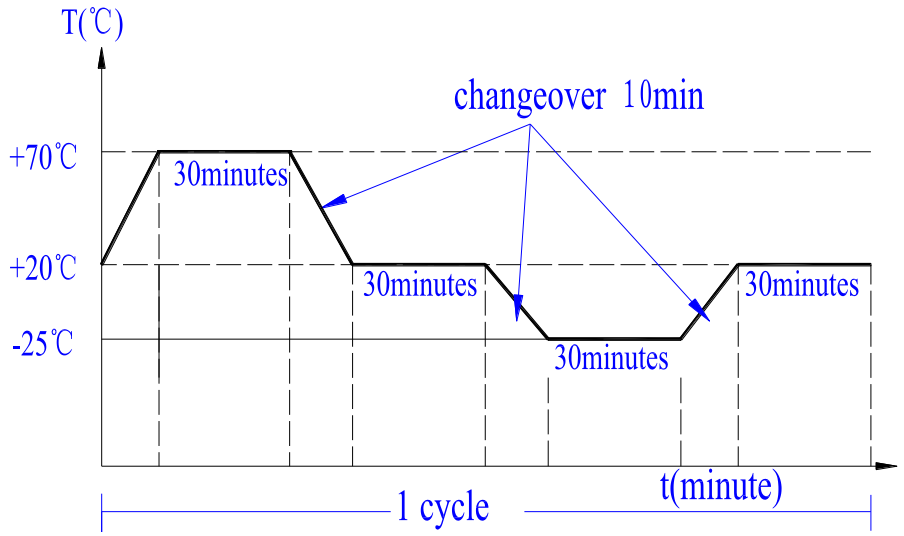
次数(Cycle): 6 (1 each plane)

9.7 静电测试 (ESD TEST)

在两次无杂质的静电释放暴露中放电.(接触:±8kV,空气:±15kV)麦克风在 10 次暴露后无干扰

The microphone under test must be discharged between each ESD exposure without ground.

(contact:±8 kV, air:±15 kV)There is no interference in operation after 10 times exposure.



10. 焊接要求 (Regarding the Soldering operation)

每个驻极体电容传声器在其麦克风上都有一个 FET,这种 FET 在过热和电流撞击时易损坏，所以对于焊接应遵

循以下操作：

- 要求使用 25W-35W 烙铁，并保持 350±10℃的温度范围 .

- 在每一个端的焊接应在 2 秒内完成，以防过热 .

- 禁止单体麦克风焊接 .(否则会影响驻极体电容传声器的灵敏度)

- 最理想的散热装置按以下设计.

Every ECM contains a FET with microphone body.

This FET easy to damageable from excessive heat and electrical shock. Proper attention for the soldering work is

required same as followings.

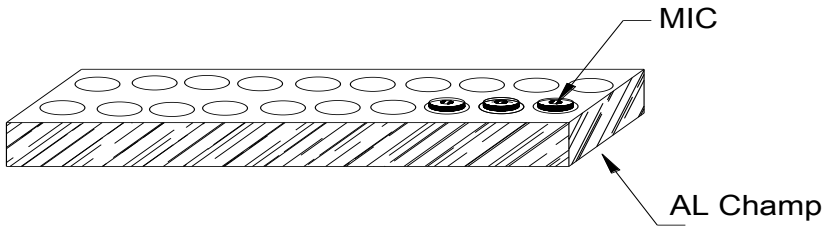
- Recommend to use 25W-35W ceramic soldering iron and apply 350±10℃ temperature range

- Soldering should be accomplished within 2 seconds at each terminal so as not to be overheated.

- Do not make a cavity at the surface of lead lump on the PCB. wiring board.

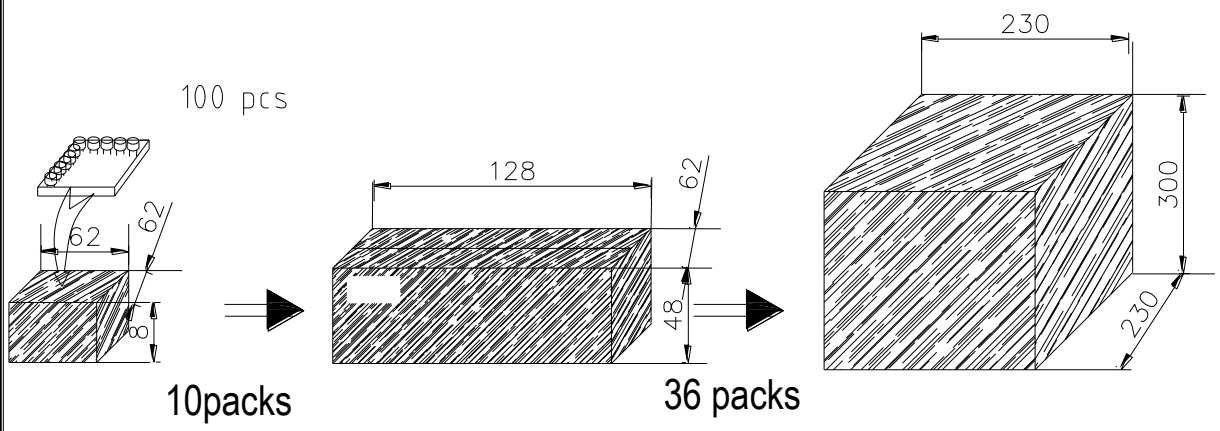
(Opened cavity will influence to the sensitivity of ECM)

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



11.包装规格 (Packing Specifications)

REV NO.	REVISION NOTE	APPROVAL	DATE



100pcs per plastic bag
N/W:13.5g G/W:17.2g
MODEL:
QTY:100PCS
LOT NO:

1000pcs per plastic box
N/W:135g G/W:186g
MODEL:
QTY:1000PCS
LOT NO:

36000pcs per out bag
N/W:6.7kG G/W:7.0kG
MODEL:
QTY:36000PCS
LOT NO:

TITLE: packing		DRAWN: Lily 2009/03/16	SCALE: 5/1	SHEET: 1 : 1
PART NO.	1	DESIGNED: R & D OF D.S.	UNITS: mm	
		CHECKED: Emily	TOLERANCE ± 0.2	
DWG NO.	REV	APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
		MATERIAL: *****		

DS DRAGONSTATE ELECTRONIC CORPORATION