OBO Pro.2	SPECIFICATIONS	MODEL NO OBO-M62EC-2B-014
	PART NAME ELECTRET CONDENSER MICROPHONE	SHEET 1 OF 7

ALTERNATION HISTORY

Marking	Date	ECN NO.	REV.	Description	Page	PREPARE BY	APPROVE BY
——	OCT,12,10	———	A	New Document	7	蔡爱国	

REV.	DATE	PREPARED BY	CHECKED BY	APPROVED BY
A	OCT,12,2010	蔡爱国	蔡爱国	10/12

MODEL NO : OBO-M62EC-2B-014

Features:Conformity RoHS Directive(2002/95/EC) Requests.

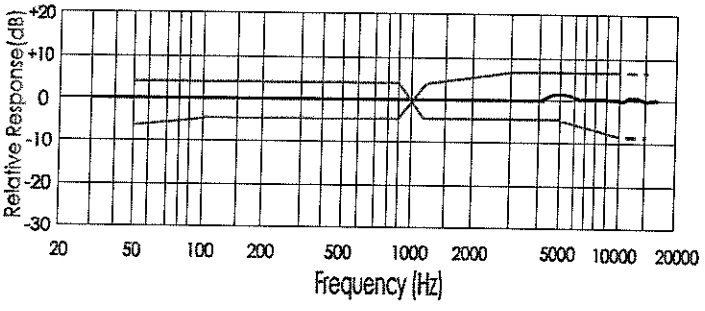
1. ELECTRICAL CHARACTERISTICS

Test Condition:(Vs=2.0 V,RL=2.2KΩ,Ta=20±2℃,R.H.=65±5%)

Directivity : Omnidirectional SMD Electret Condenser Microphone							
No	Parameter	Symbol	Condition	Limit			Unit
				Min	Center	Max	
1.1	Sensitivity	S	F=1KHz,S.P.L.=1Pa 0dB=1V/Pa	-47	-44	-41	dB
1.2	Output Impedance	Zout	F=1KHz			2.2	KΩ
1.3	Current Consumption	IDss	VS=2.0V, L=2.2KΩ			500	μA
1.4	Signal to Noise Ratio	S/N	S:(F=1KHz,S.P.L=1Pa) N:(A-Weighted Curve)	58			dB
1.5	Decreasing Voltage	△S-VS	VS=2.0V to 1.5V			-3	dB
1.6	Operating Voltage			1.4		5	V

1.7 Typical Frequency Response Curve Limit

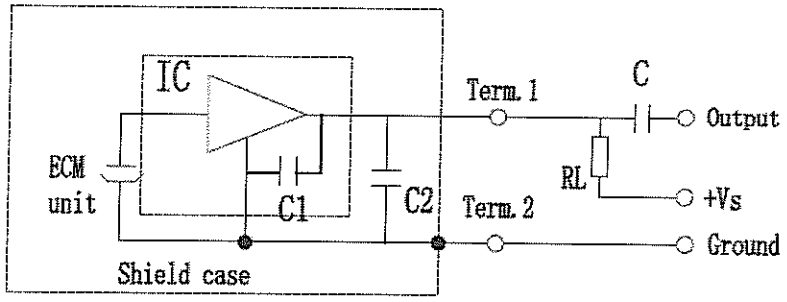
Frequency Response



Microphone Response Tolerance Window

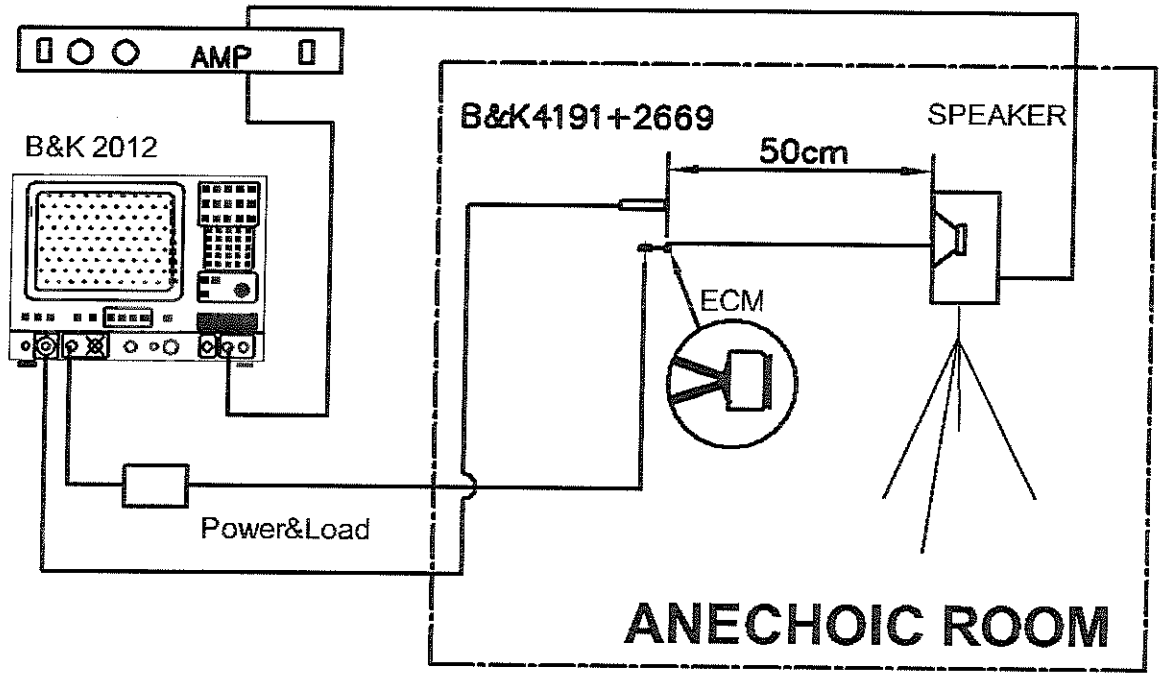
Frequency(Hz)	Lower Limit(dB)	Upper Limit(dB)
50	-6	+3
100	-3	+3
800	-3	+3
1000	0	0
1200	-3	+3
3000	-3	+8
5000	-3	+8
10000	-8	+8

2.MEASUREMENT CIRCUIT



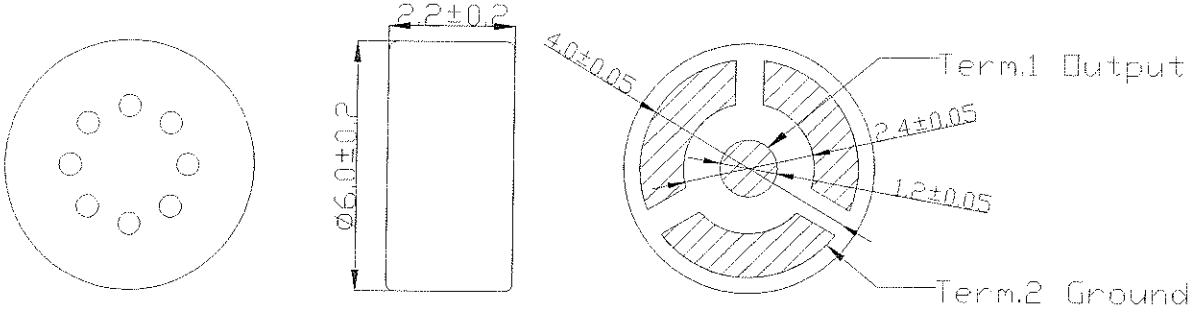
R_L=2.2K Ω
V_S =2.0V
C1=10PF
C2=33PF
C=1μF

3.MEASUREMENT METHOD

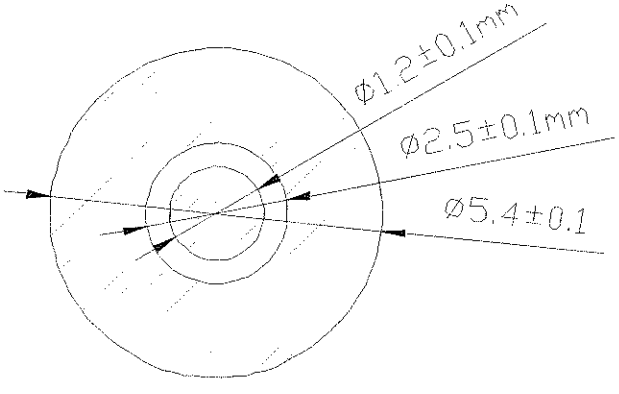


4. APPEARANCE DRAWING

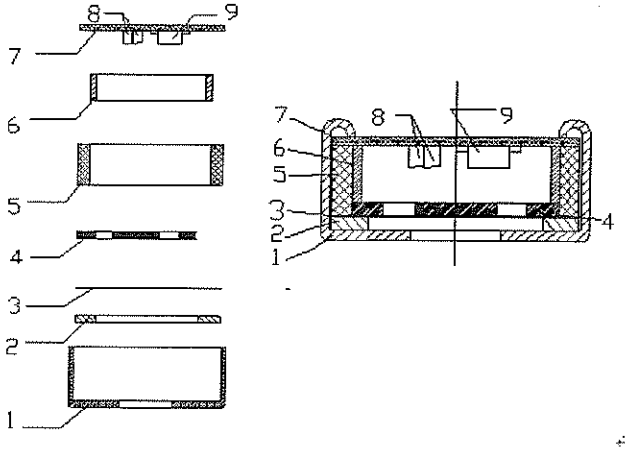
Unit: mm



5. Recommend assembly weld plate



6. Drawing



No.	Name	Material	QTY	Remark
9	FET		1	
8	CHIP CAPACITOR	10+33PF	2	0402
7	P.C.B		1	FR-4
6	Copper ring		1	
5	HOUSPING CHAMBER		1	
4	ELECTRET BACK		1	
3	SPACER		1	
2	POLARIZED DIAPHRAGM		1	
1	CASE	Copper	1	

7. TEMPERATURE CONDITIONS

7.1 Operating Temperature Range: -20℃ ~ +60℃

7.2 Storage Temperature Range: -40℃ ~ +75℃

8. RELIABILITY TEST

Vibration Test	The part shall be measured after being applied vibration of amplitude of 1.52mm with 10 to 55Hz band of vibration frequency to each of 3per-pendicular directions for 2hours.
Drop Test	The microphone unit without packaged must be subjected to each 3one time from 1 drops at 3 axises,the height of 1 meter to 20 mm thick wooden board.
Temperature	(a) After exposure at +70℃ for 72 hours, sensitivity to be within ±3dB from initial sensitivity. (b) After exposure at -20℃ for 72 hours, sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 6 hours of conditioning at 20℃)
Humidity Test	After exposure at +40℃ and 90%~95% relative humidity for 240hours. sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 6 hours of conditioning at 20℃)
Temperature Cycle Test	After exposure at +70℃ for 2 hr, from +70℃ to +25℃ for 1 hr ,at +25℃ for 2 hr, from +25℃ to-20 ℃ for 1 hr ,at -20℃ for 2 hr, from -20℃ to +25℃ for 1 hr , after 10 cycles , sensitvity to be within ±3dB from initial sensitivity. (The measurement to be done after 6 hours of conditioning at 20℃)

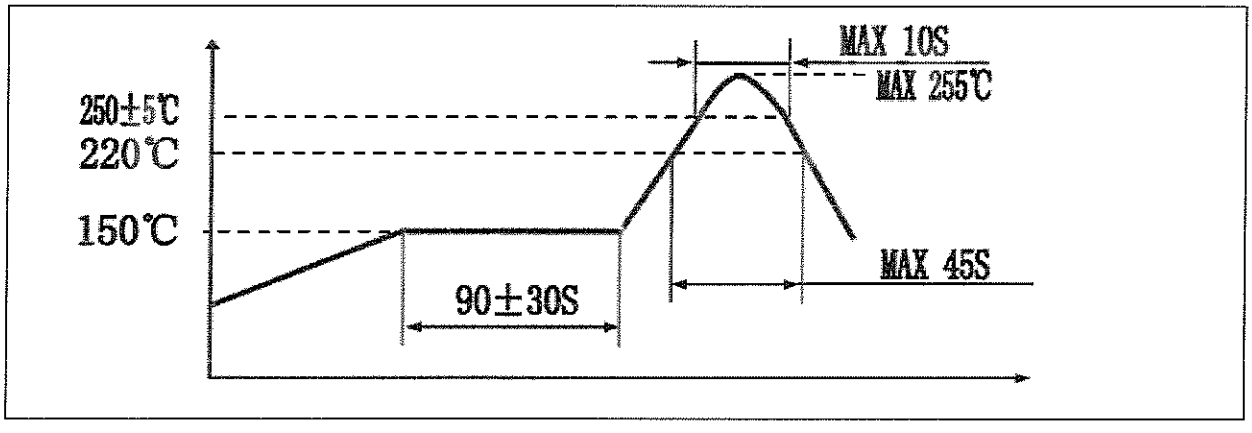
9. CONCEPT OF UNIT

The difference between concept of unit "Pascal" and the one of unit " μbar" can be explained as follows. in calibrating the sensitivity of ECMS. the sensitivity is manifested differently according as the unitis "Pascal" or " μbar". That is the sensitivity will be increased by 20dB in the usage of unit "Pascal". Example : -64dB(0dB=1V/μbar)=-44dB(0dB=1V/Pa)

10. REFLOW PROCESS CONDITION

The soldering profile depends on various parameters necessitating a set up for each application.
The data here is given only for guidance on solder re-flow. There are four zones:

1. Preheat Zone: This zone brings the temperature at a controlled rate, typically 1~2.5℃/s.
2. Equilibrium Zone: This zone brings the board to be a uniform temperature and also activates the flux. The duration in this zone (typically 2~3 minutes) will need to be adjusted to optimize the out gassing of the flux.
3. Re-flow Zone: The peak temperature should be high enough to achieve good wetting but not so high as to cause component discoloration or damage (255℃ for maximum 10 seconds).
Excessive soldering time can lead to inter-metallic growth which can result in a brittle joint.
4. Cooling Zone: The cooling rate should be fast, to keep the solder grains small which will give a longer lasting joint. Typically will be 2~5℃/s.
5. Sensitivity change should within ±3dB after re-flow process and at room temperature for 30 minutes at least.



11. PACKAGING

EQUIPMENT

a) ADHENSIVE TAPE MACHINE
b) AUTO PACKER

PACKING INTRODUCTION

a) 600PCS/ INHALE PLASTIC BOX
b) 1800PCS/MID PACKET
c) 14400PCS/PAPER CASE

QUANTITY INTRODUCTION

a) 1PC=0.24g
b) NET WEIGHT：3.5kg
GROSS WEIGHT：6.5kg

LABEL STIPULATION

a) LABELEDEVERY BOXES
(SEE THE CHART)
b) DIMENSIONSSHOULDBESEENEASILY.