



**SPECIFICATIONS**

**MODEL NO**  
OBO-04FN-0B-004

**PART NAME**  
ELECTRET CONDENSER MICROPHONE

**SHEET**  
1 OF 6

**ALTERNATION HISTORY**

Marking	Date	ECN NO.	REV.	Description	Page	PREPARE BY	APPROVE BY
※1	MAR.09,2010	DG1003007	C	Change the Packing	6	杨冉	谢明福
※2	MAY.31,2018	DG1805005	D	Change PCB material	6	徐潇	林建宏

REV.	DATE	PREPARED BY	CHECKED BY	APPROVED BY
D	MAY.31,2018	徐 潇	林建宏	林建宏



# SPECIFICATIONS

MODEL NO  
OBO-04FN-0B-004

PART NAME  
ELECTRET CONDENSER MICROPHONE

SHEET  
2 OF 6

MODEL NO : OBO-04FN-0B-004

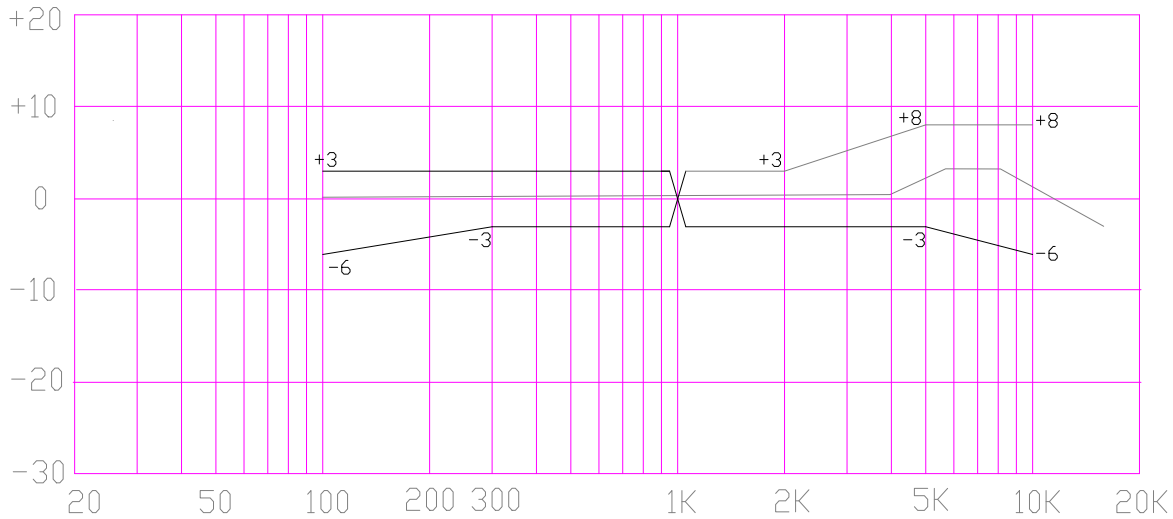
Features:Conformity RoHS Directive(2011/65/EU) Requests.

## 1. ELECTRICAL CHARACTERISTICS

Test Condition:(Vs=4.5 V,RL=1.0KΩ,Ta=20±2°C,R.H.=65±5°C)

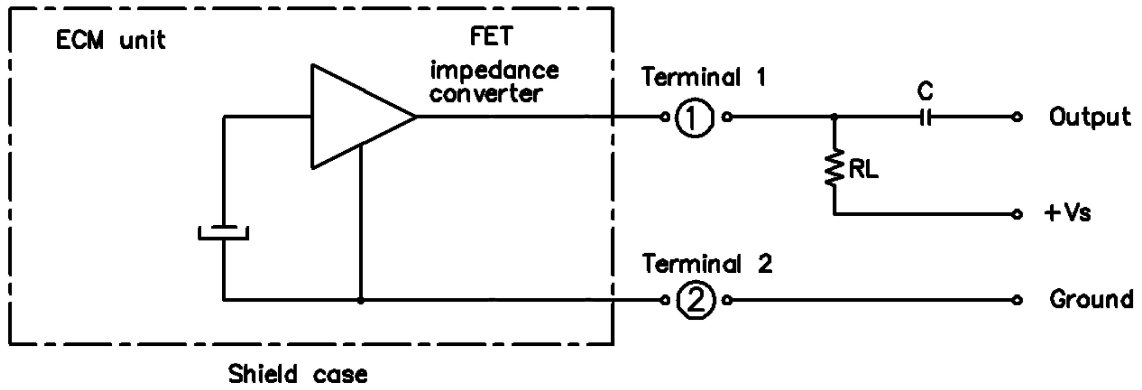
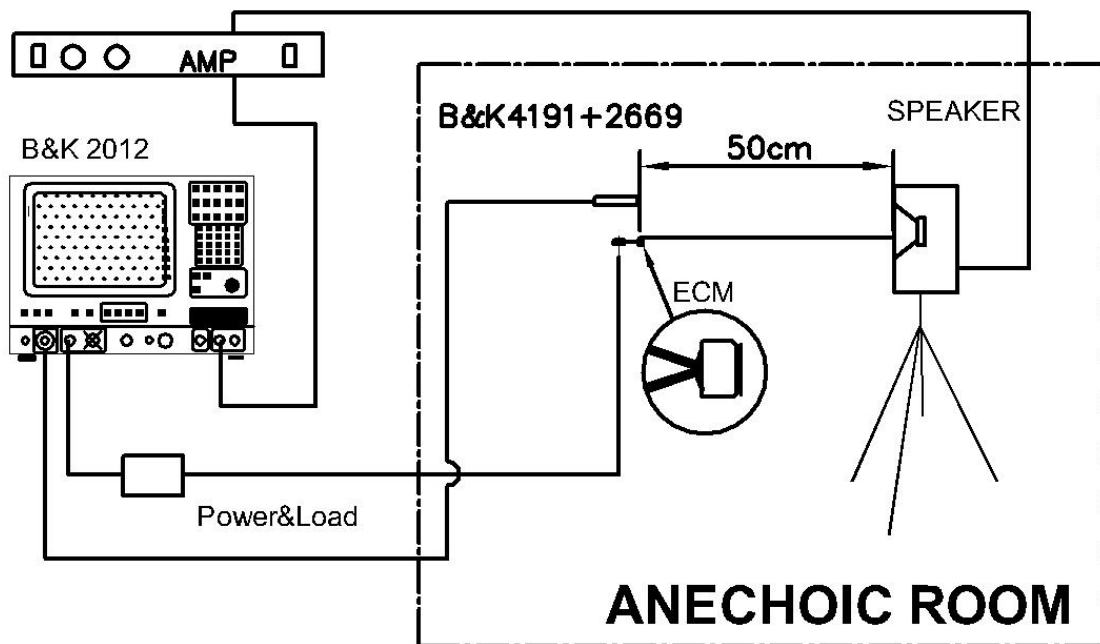
Directivity : Omnidirectional							
No	Parameter	Symbol	Condition	Limit			Unit
				Min	Center	Max	
1.1	Sensitivity	S	F=1KHz,S.P.L.=1Pa 0dB=1V/Pa	-47	-44	-41	dB
1.2	Output Impedance	Zout	F=1KHz			1.0	KΩ
1.3	Current Consumption	IDss	VS=4.5V, L=1.0KΩ			500	μA
1.4	Signal to Noise Ratio	S/N	S:(F=1KHz,S.P.L.=1Pa) N:(A-Weighted Curve)	60			dB
1.5	Decreasing Voltage	ΔS-VS	VS=3.0V to 1.5V			-3	dB

### 1.6 Typical Frequency Response Curve Limit



©Frequency: 50~16,000Hz

©Max Operatint Voltage: 10V

**2. MEASUREMENT CIRCUIT****3. MEASUREMENT METHOD**

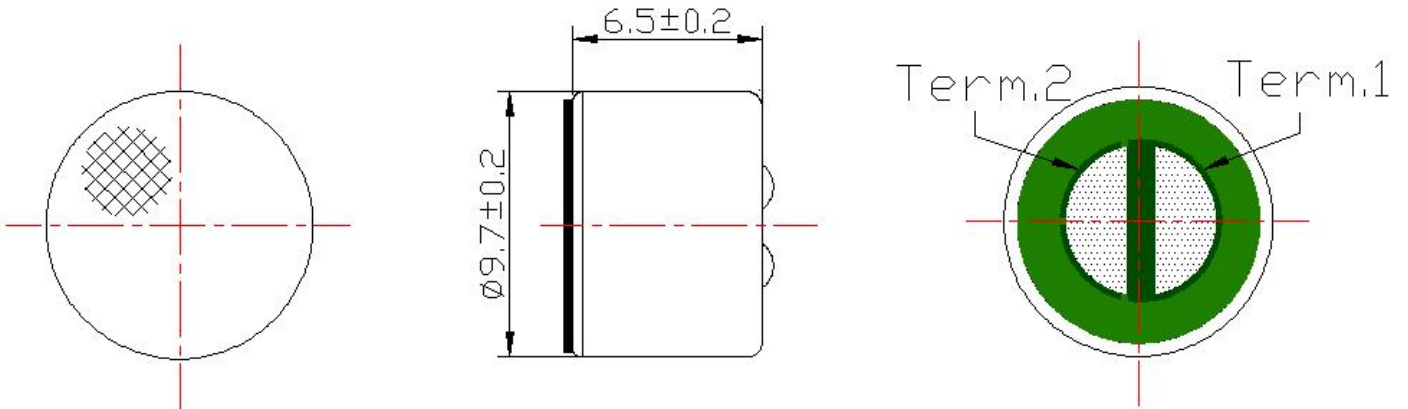
**4.ASS'Y DRAWING**

4.1 Soldering Standard :  $330\pm 5^{\circ}\text{C}$  / Max. 2 seconds

4.2 Mechanical Layout and Dimensions :

※2

Unit: mm

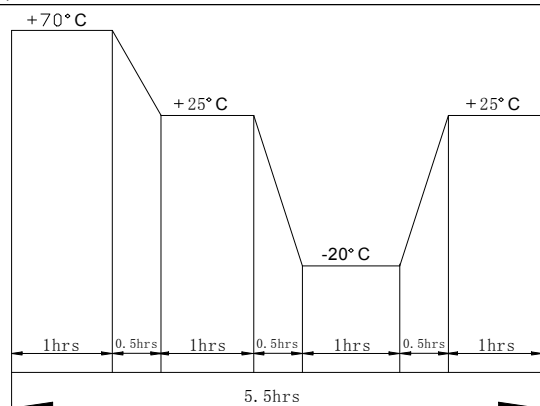


## 5. TEMPERATURE CONDITIONS

5.1 Operating Temperature Range:  $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

5.2 Storage Temperature Range:  $-25^{\circ}\text{C} \sim +70^{\circ}\text{C}$

## 6. RELIABILITY TEST

Vibration Test	To be no interference in operation after vibrations, 10Hz to 55Hz for 1 minute full amplitude 1.5mm, for 2 hours at 3 axes .
Drop Test	The microphone unit without packaged must be subjected to each 3drops at 3 axes,the height of 1 meter to 20 mm thick wooden board.
Temperature	(a) After exposure at $+70^{\circ}\text{C}$ for 72 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (b) After exposure at $-25^{\circ}\text{C}$ for 72 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (The measurement to be done after 6 hours of conditioning at $25^{\circ}\text{C}$ )
Humidity Test	After exposure at $+60^{\circ}\text{C}$ and 90%~95% relative humidity for 240hours. sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (The measurement to be done after 6 hours of conditioning at $25^{\circ}\text{C}$ )
Temperature Cycle Test	

## 7. CONCEPT OF UNIT

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

**8. PACKAGING**

