

OBO Pro.2

SPECIFICATIONS

MODEL NO
OBO-08DN-0C-117

PART NAME
ELECTRET CONDENSER MICROPHONE

SHEET
1 OF 6

ALTERNATION HISTORY

| Marking | Date | ECN NO. | REV. | Description | Page | PREPARE BY | APPROVE BY |
|---------|-------------|---------|------|--------------|------|------------|------------|
| -- | MAR,02,2010 | --- | A | New Document | 6 | | Jason |
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| REV. | DATE | PREPARED BY | CHECKED BY | APPROVED BY |
|------|-------------|-------------|------------|-------------|
| A | MAR,02,2010 | | | David |

MODEL NO : OBO-08DN-0C-117

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

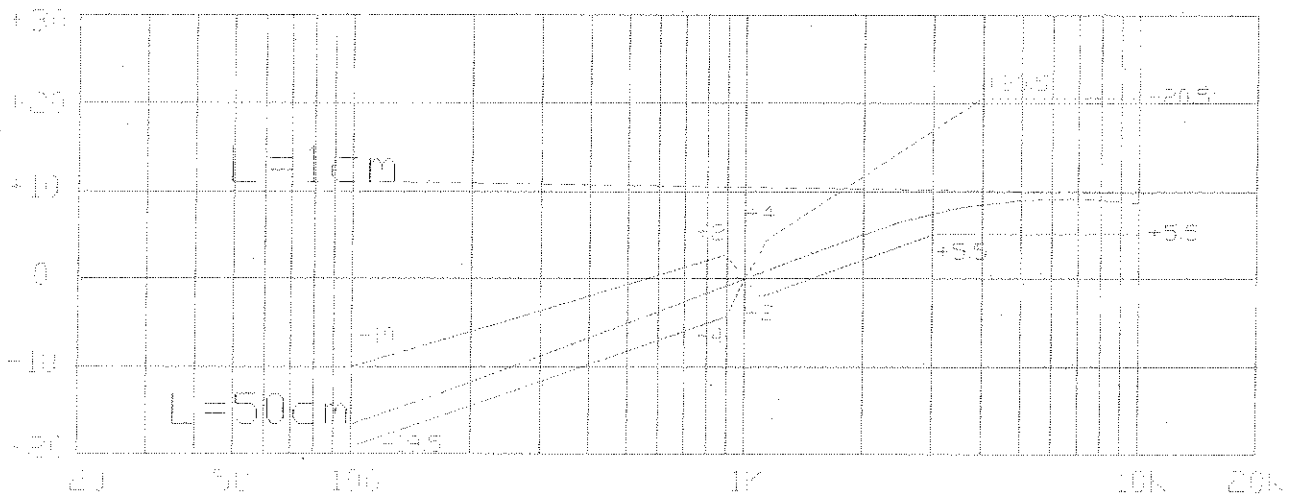
1. ELECTRICAL CHARACTERISTICS

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

Directivity : Noise Cancelling

| No | Parameter | Symbol | Condition | Limit | | | Unit |
|-----|-----------------------|--------|-----------------------------------------------|-------|--------|-----|------|
| | | | | Min | Center | Max | |
| 1.1 | Sensitivity | S | F=1KHz,S.P.L.=1Pa 0dB=1V/Pa | -51 | -47 | -43 | 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) | 60 | | | dB |
| 1.5 | Decreasing Voltage | ΔS-VS | VS=1.5V to 3.0V | | | -3 | dB |

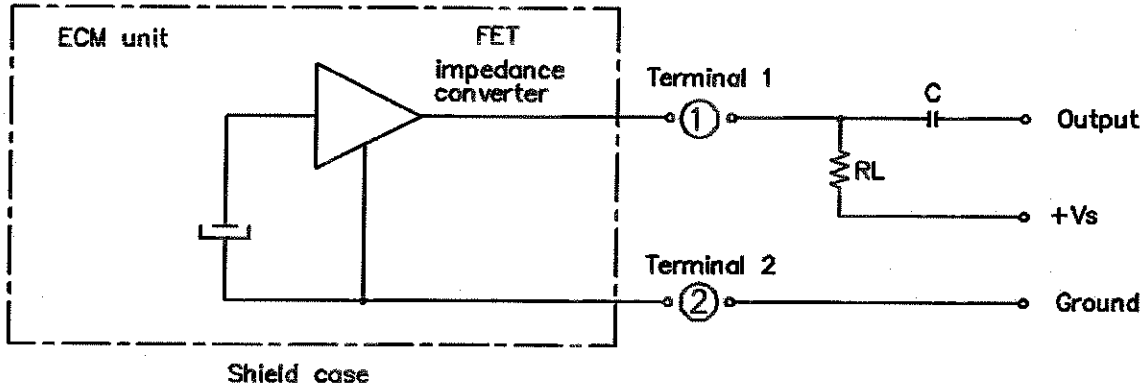
1.6 Typical Frequency Response Curve Limit



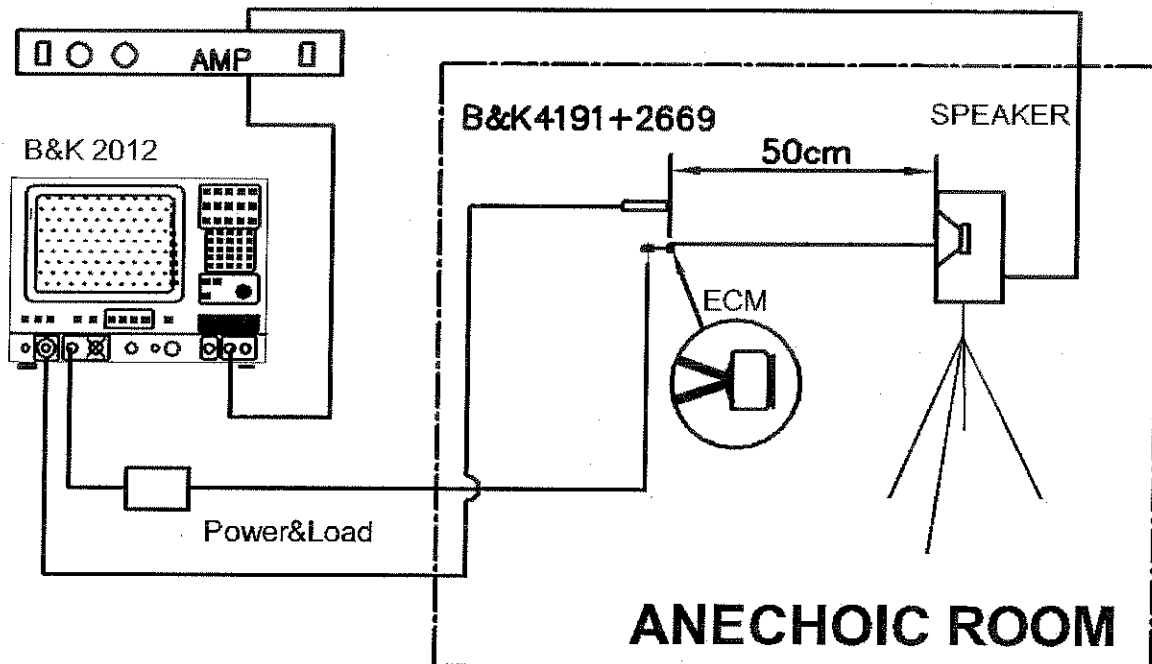
©Frequency: 50~16,000Hz

©Max Operatint Voltage: 10V

2. MEASUREMENT CIRCUIT



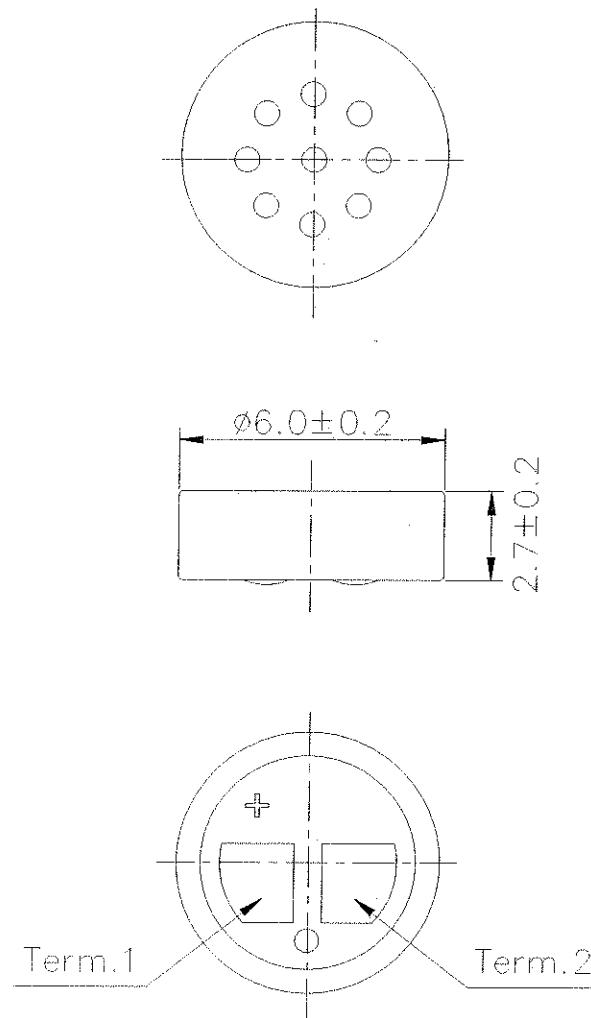
3. MEASUREMENT METHOD



4. ASS'Y DRAWING4.1 Soldering Standard : $330 \pm 5^\circ\text{C}$ / Max. 2 seconds

4.2 Mechanical Layout and Dimensions :

Unit: mm



5. TEMPERATURE CONDITIONS5.1 Operating Temperature Range: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$ 5.2 Storage Temperature Range: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$ **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 3one time from 1 drops 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°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°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°C) |
| Temperature Cycle Test | After exposure at $+70^{\circ}\text{C}$ for 1 hr, from $+70^{\circ}\text{C}$ to $+25^{\circ}\text{C}$ for 0.5 hr ,at $+25^{\circ}\text{C}$ for 1 hr, from $+25^{\circ}\text{C}$ to -20°C for 0.5 hr ,at -20°C for 1 hr, from -20°C to $+25^{\circ}\text{C}$ for 0.5 hr , after 10 cycles , sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (The measurement to be done after 6 hours of conditioning at 25°C) |

7. 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 : $-67\text{dB}(0\text{dB}=1\text{V}/\mu\text{bar})=-47\text{dB}(0\text{dB}=1\text{V}/\text{Pa})$

8. PACKAGING

