

OBO PRO.2 INC.

啓弘股份有限公司

No. 224-9, LANE 105, YUNG-FENG ROAD, PA-TE CITY, TAOYUAN, TAIWAN, R.O.C.  
TEL: 886-3-361-4436 FAX: 886-3-361-4437  
E-MAIL: obo@obopro2.com Website: www.obo.com.tw

Specification for Approval

NO.:

Part Name : Electret Condenser Microphone  
Model No. : OBO-62EC-0B-004  
Date : JAN.25,2002

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Please kindly make approval of our samples,  
And return this form by fax or airmail, Thanks  
for your kind attention and co-operation

(請與我們公司樣品給予承認,承認後加蓋承認章以傳真或郵寄方式回覆,謝謝貴公司的支持與合作)

Customer Name : \_\_\_\_\_  
Customer Part No. : \_\_\_\_\_

Designed By	Checked By	Approval By

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SPECIFICATION

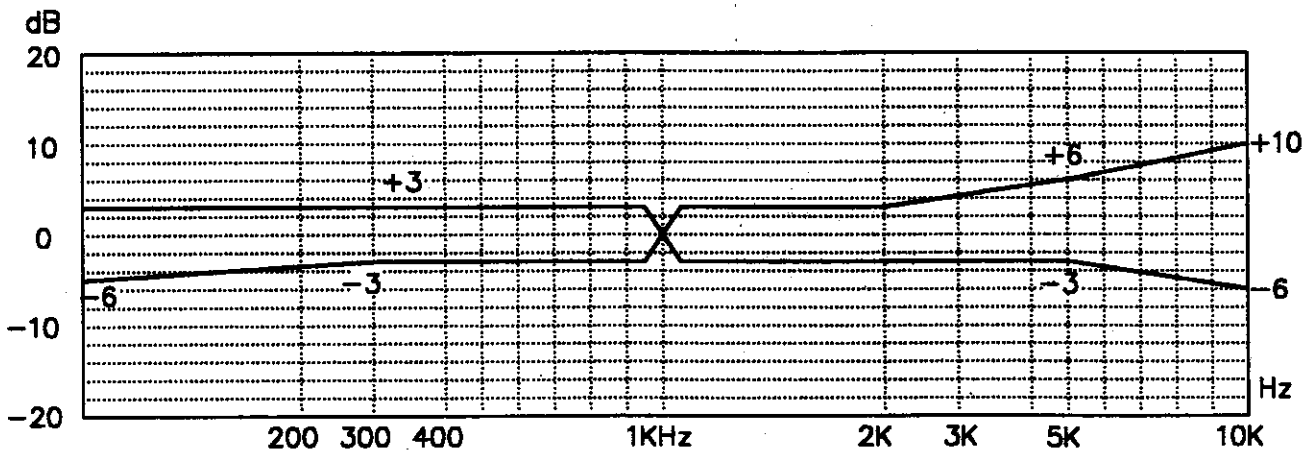
1. ELECTRICAL CHARACTERISTICS

Model No. : OBO-62EC-0B-004

TEMP=20±2° Room Humidity=65±5%

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			2.0	KΩ
1.3	Current Consumption	I <sub>oss</sub>	V <sub>S</sub> =2.0V, R <sub>L</sub> =2.2KΩ			500	μA
1.4	Signal to Noise Ratio	S/N	S: (F=1KHz, S.P.L=1Pa) N: (A-Weighed Curve)	60			dB
1.5	Decreasing Voltage	Δ S-V <sub>S</sub>	V <sub>S</sub> =3.0V to 1.5V			-3	dB

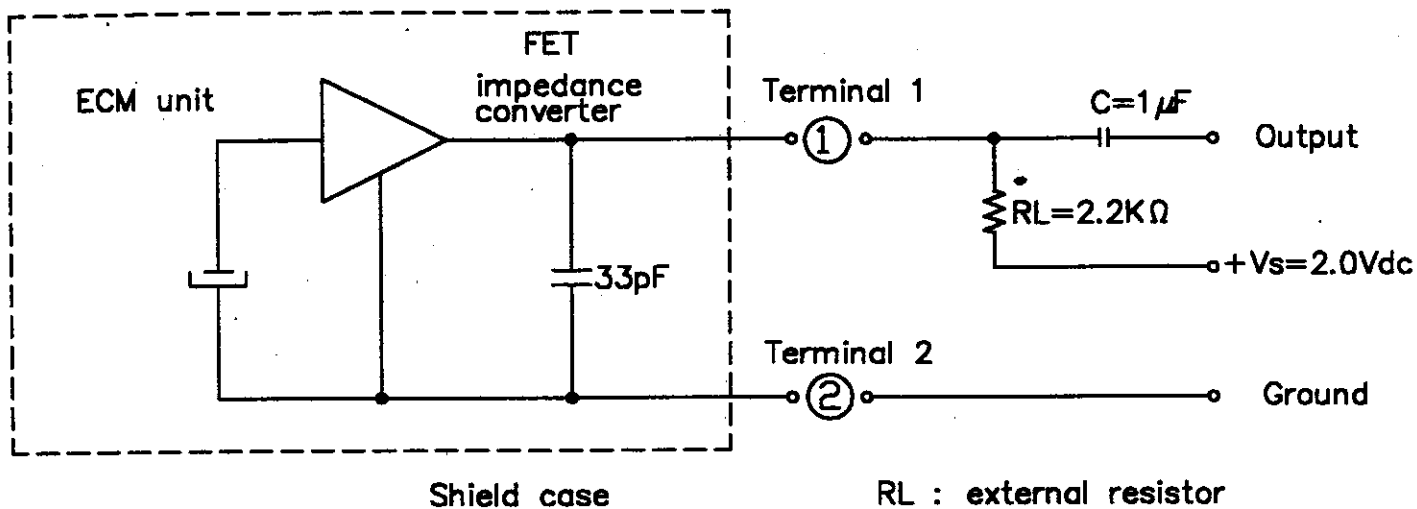
1.6 Typical Frequency Response Curve



- Frequency : 50~16,000Hz
- Operating Voltage : 1V to 10V
- Max. Input S.P.L. : 110dB

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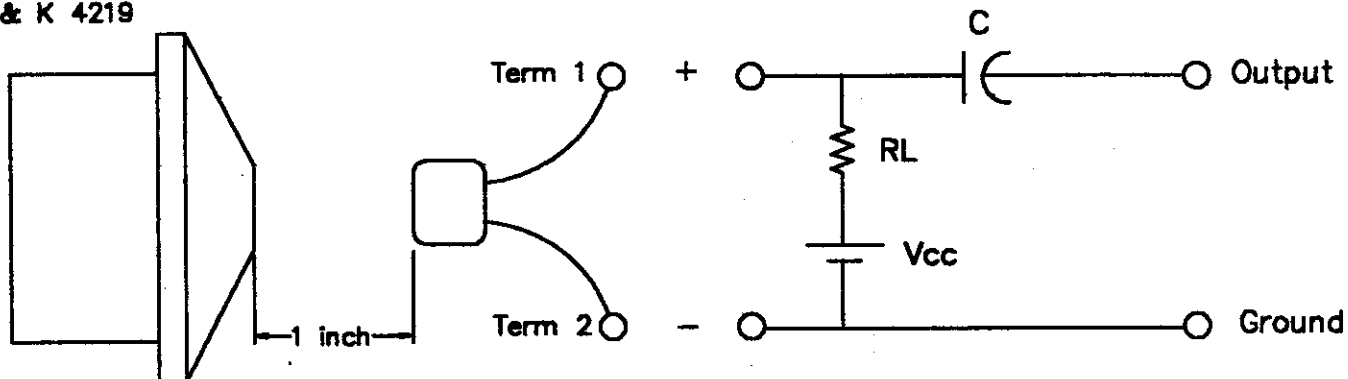
### 1.7 Measurement Circuit and Method



### 1.8 Measurement Method

Artificial Mouth  
B & K 4219

● NEAR FIELD POSITION

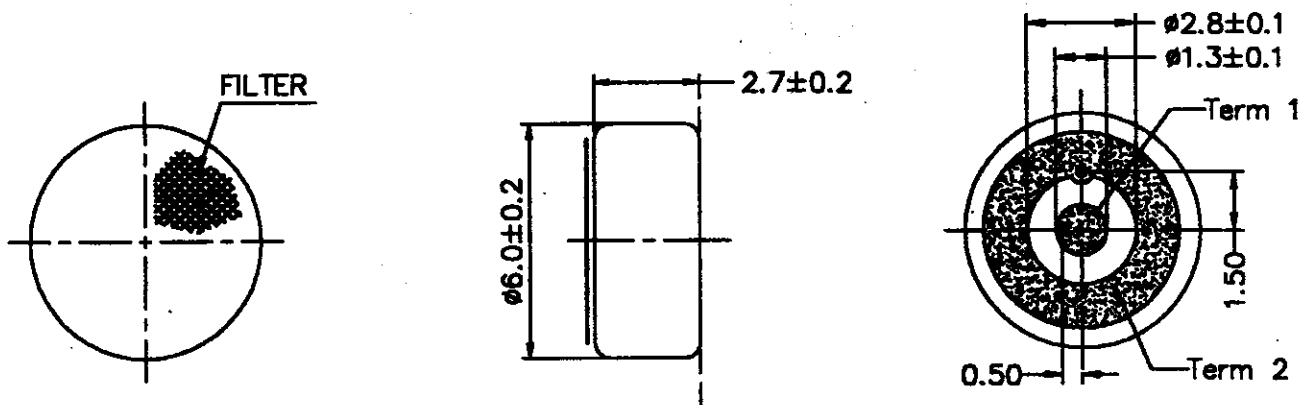


Pressure at microphone position to be constant at 0dBPa

## 2. MECHANICAL CHARACTERISTICS

2.1 Weight : Appr. 0.25g

2.2 Mechanical Layout and Dimensions :



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### 3. TEMPERATURE CONDITIONS

3.1 Operating Temperature Range :  $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$

3.2 Storage Temperature Range :  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

### 4. RELIABILITY TEST

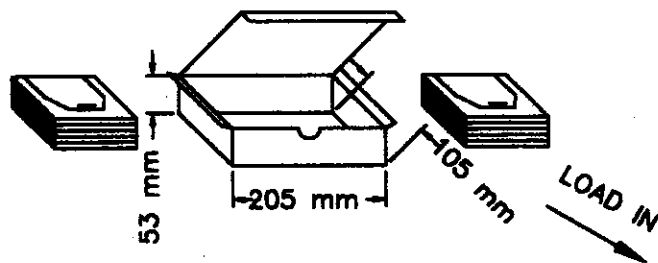
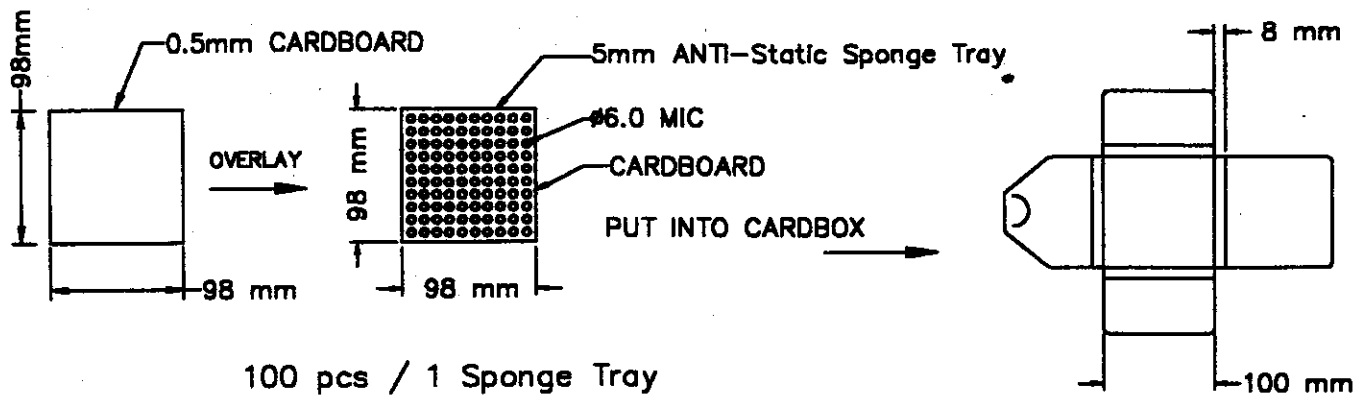
Vibration Test	To be no interference in operation after vibrations, 10Hz to 55Hz for 1 minute full amplitude 1.52mm, for 2 hours at 3 axes.
Drop Test	To be no interference in operation after dropped to concrete floor each one time from 1 meter height at three directions in state of packing.
Temperature Test	(a) After exposure at $85^{\circ}\text{C}$ for 240 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (b) After exposure at $-40^{\circ}\text{C}$ for 240 hours, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (The measurement to be done after 2 hours of conditioning at $20^{\circ}\text{C}$ .)
Humidity Test	After exposure at $40^{\circ}\text{C}$ and 90~95% relative humidity for 240 hours. sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (The measurement to be done after 2 hours of conditioning at $20^{\circ}\text{C}$ .)
Temperature Cycle Test	After exposure at $-20^{\circ}\text{C}$ for 1 hour, at $20^{\circ}\text{C}$ for 10 minutes, at $+70^{\circ}\text{C}$ for 1 hour, at $20^{\circ}\text{C}$ for 10 minutes, 5 cycles, sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. (The measurement to be done after 2 hours of conditioning at $20^{\circ}\text{C}$ .)

### 5. CONCEPT OF UNIT

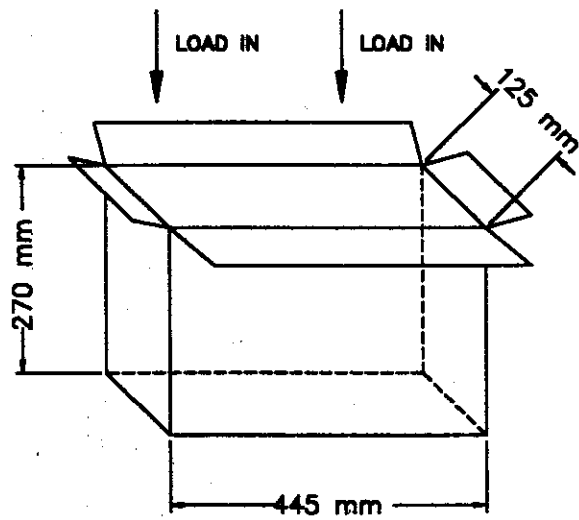
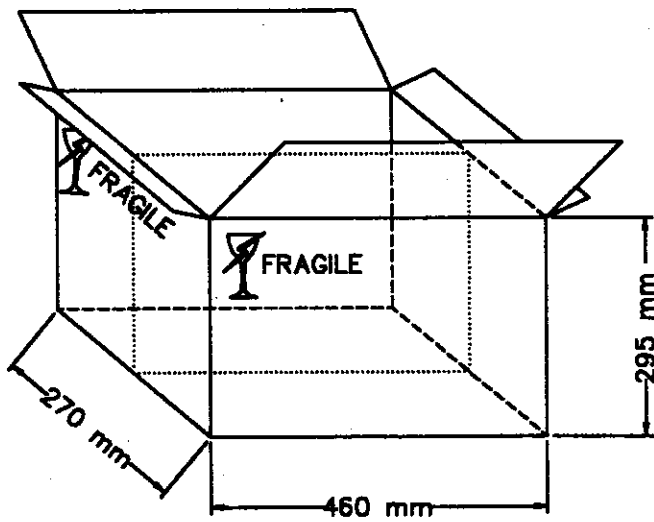
The difference between concept of unit "Pascal" and the one of unit " $\mu\text{bar}$ " can be explained as follows. In calibrating the sensitivity of ECMS, the sensitivity is manifested differently according as the unit is "Pascal" or " $\mu\text{bar}$ ". That is the sensitivity will be increased by 20dB in the usage of unit "Pascal". Example :  $-62\text{dB}(0\text{dB}=1\text{V}/\mu\text{bar}) = -42\text{dB}(0\text{dB}=1\text{V}/\text{Pa})$

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6. PACKAGING



10 CARDBOXES / PER SMALL BOX(1000 pcs)



2 MIDDLE BOXES / PER CARTON (20000 pcs)  
(IMPORTED CARTON MATERIAL)



10 SMALL BOXES / PER MIDDLE BOX(10000 pcs)  
(IMPORTED CARTON MATERIAL)

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