

OBO PRO.2 INC.
 啓弘股份有限公司

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Specification for Approval
 NO.:

Part Name : Electret Condenser Microphone
 Model No. : OBO-54LN-OB-0FK
 Date : NOV.05,2003

Page	Cover Page	1	2	3	4	5	6	7	8	9	10	11	12
Version	A	A	A	A	A								

CHANGES

No.	Date	ECN. No.	Version	Description	Sign
--	NOV.05,03	----	A	New Document	Penny Wu

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

(請對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

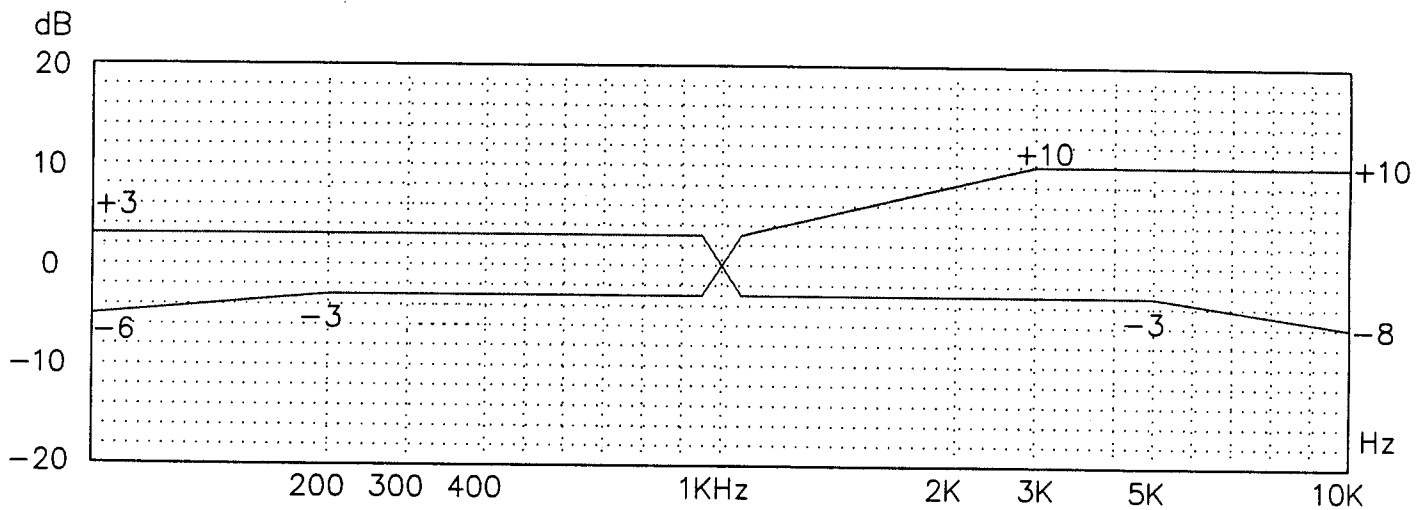
Model No. : OBO-54LN-0B-0FK

1.ELECTRICAL CHARACTERISTICS

Test Condition : (Vs=1.5V,RL=1.5 KΩ,Ta=20±2°C,R.H.=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	-41	-38	-35	dB
1.2	Output Impedance	Zout	F=1KHz			1.5	KΩ
1.3	Current Consumption	IDss	VS=1.5V, RL=1.5KΩ			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	Δ S-VS	VS=3.0V to 1.5V			-3	dB

1.6 Typical Frequency Response Curve

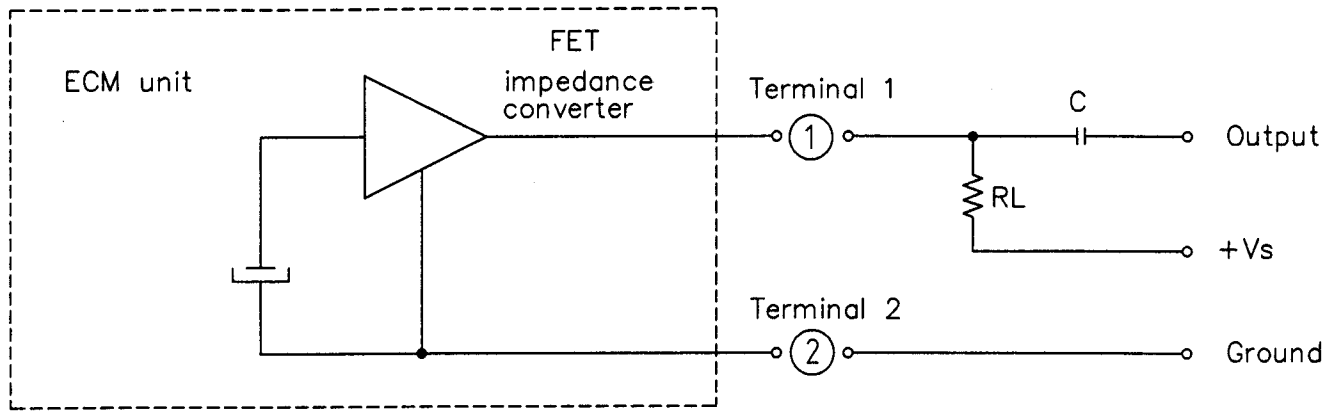


◎ Frequency : 50~16,000Hz

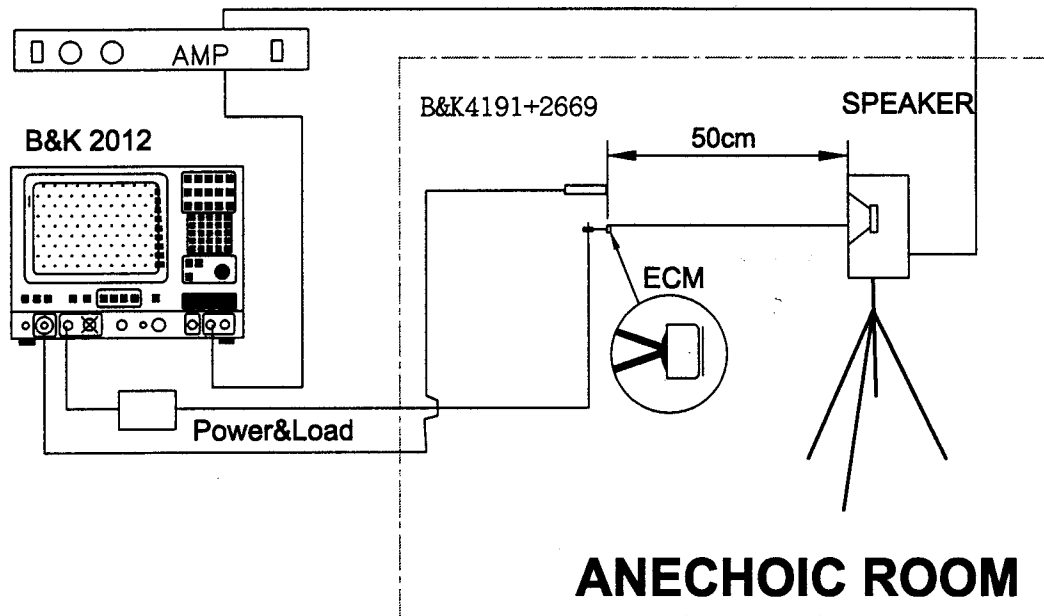
◎ Operating Voltage : 1V to 10V

Drawing by	Checked by	Approved by	Page No.	Model No.	Version	Date
吳蓓寧	陳建合 11/5	啓弘 92.11.5	1	54LN-0B-0FK	A	NOV.05,2003

2. MEASUREMENT CIRCUIT



3. MEASUREMENT METHOD

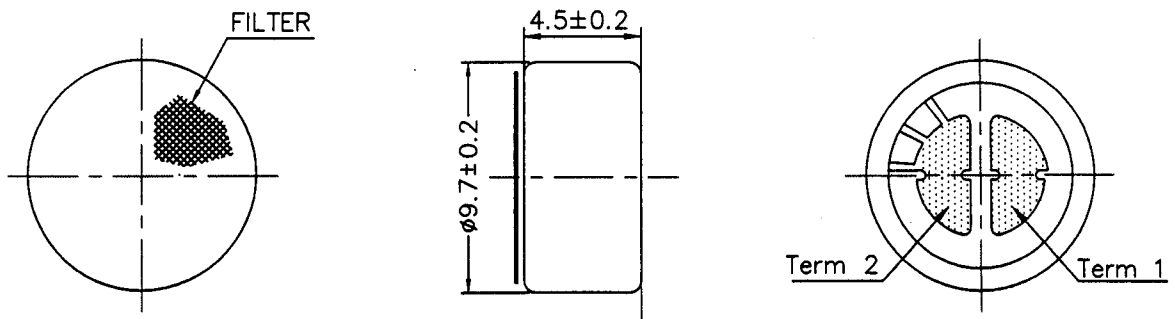


4. MECHANICAL CHARACTERISTICS

4.1 Soldering Standard : $260 \pm 5^\circ\text{C}$ / Max. 2 seconds

4.2 Weight : Appr. 0.7g

4.3 Mechanical Layout and Dimensions :



Unit: mm

Drawing by	Checked by	Approved by	Page No.	Model No.	Version	Date
吳蓓寧 PENNY 92.11.05	陳建台 11/05	吳永興 92.11.5	2	54LN-0B-0FK	A	NOV.05,2003

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 full amplitude 1.5mm, for 2 hours at 3 axes.
Drop Test	The microphone unit without packaged must be subjected to each 3 drops at 3 axes, the height of 1 meter to 20 mm thick wooden board.
Temperature Test	(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 $90 \pm 5\%$ relative humidity for 240 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 .)
Temperature Cycle Test	After exposure at $+70^{\circ}\text{C}$ for 1 hr, from $+70^{\circ}\text{C}$ to $+25^{\circ}\text{C}$ for 0.5hr, at $+25^{\circ}\text{C}$ for 1hr, from $+25^{\circ}\text{C}$ to -20°C for 0.5hr, at -20°C for 1hr, from -20°C to $+25^{\circ}\text{C}$ for 0.5hr, at $+25^{\circ}\text{C}$ for 1hr, after 10 cycles, the 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 unit is "Pascal" or " μbar ". That is the sensitivity will be increased by 20dB in the usage of unit "Pascal". Example : $-62\text{dB}(0\text{dB}=1\text{V}/\mu\text{bar})=-42\text{dB}(0\text{dB}=1\text{V}/\text{Pa})$

Drawing by	Checked by	Approved by	Page No.	Model No.	Version	Date
吳蓓寧 PENNY 92.11.05	陳建合 11/5/03	啓弘 92.11.5 吳永英	3	54LN-0B-0FK	A	NOV.05,2003

8. PACKAGING

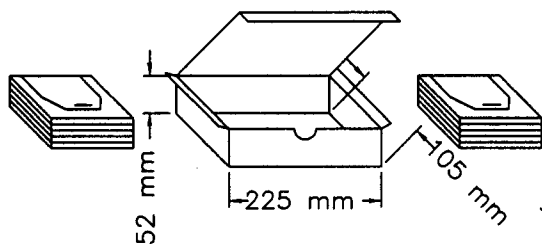
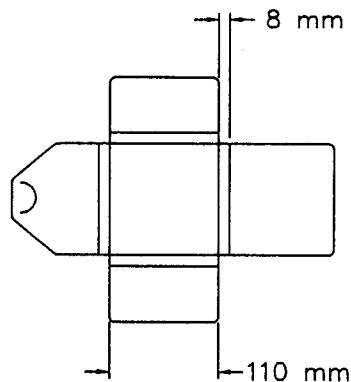


MIC

PUT INTO CARDBOX

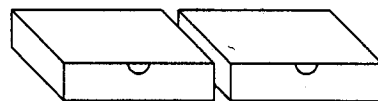


100 pcs / 1 CARDBOX



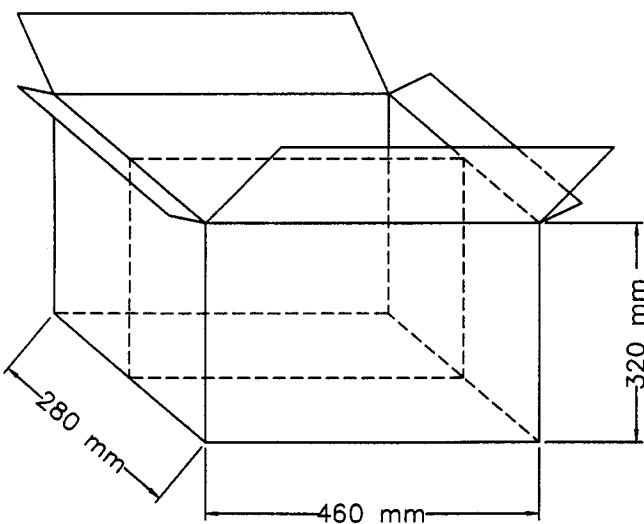
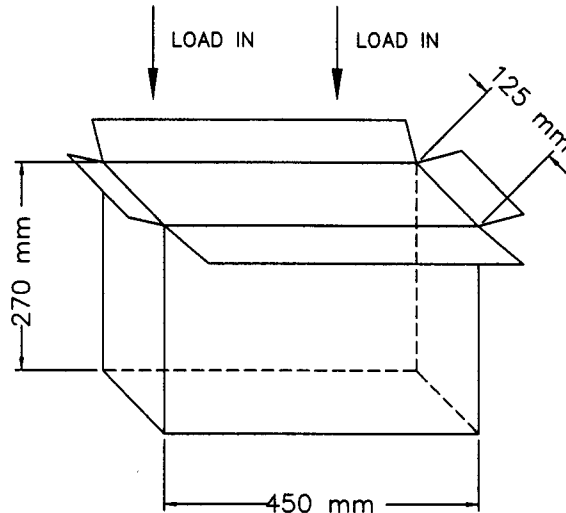
10 CARDBOXES / PER SMALL BOX(1000 pcs)

LOAD IN



LOAD IN

LOAD IN



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

LOAD IN

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

Drawing by	Checked by	Approved by	Page No.	Model No.	Version	Date
吳蓓寧	陳建台 11/05	曾弘 92.11.5	4	54LN-OB-0FK	A	NOV.05,2003
PENNY 92.11.05						