

OBO Pro.2	SPECIFICATIONS	MODEL NO. OBO-04FN-0A-007
	PART NAME ELECTRET CONDENSER MICROPHONE	SHEET 1 OF 6

ALTERNATION HISTORY

Marking	Date	ECN NO.	REV.	Description	Page	PREPARE BY	APPROVE BY
※1	SEP,06'06	0609001	B	Conformity RoHS Directive (2002/95/EC) Requests.	6	馮仁如	陳達台

REV.	DATE	PREPARED BY	CHECKED BY	APPROVED BY
B	SEP,06,2006	LULU	陳達台	陳達台

OBO Pro.2	SPECIFICATIONS	MODEL NO. OBO-04FN-0A-007
	PART NAME ELECTRET CONDENSER MICROPHONE	SHEET 2 OF 6

MODEL NO : OBO-04FN-0A-007

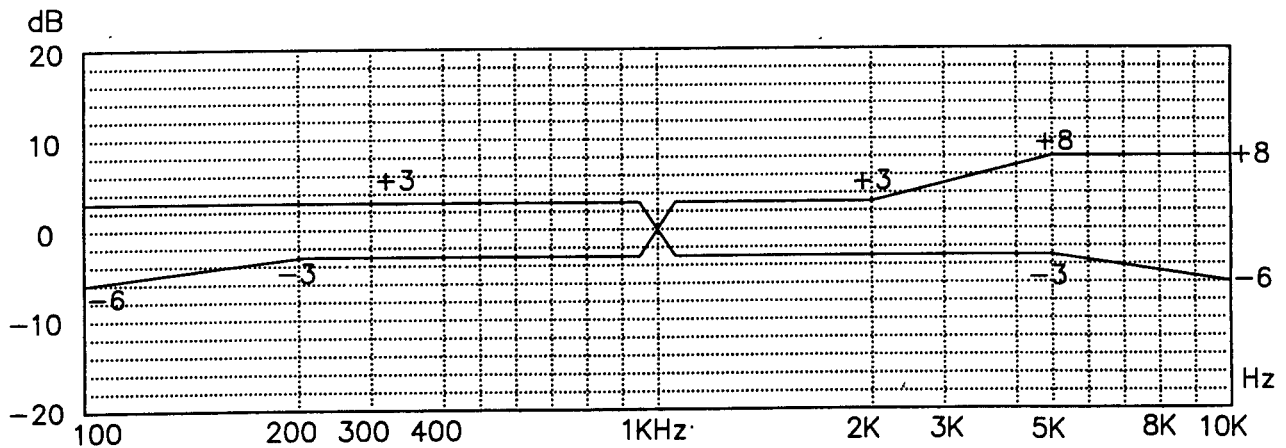
Features : Conformity RoHS Directive (2002/95/EC) Requests. ※1

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	-46	-44	-42	dB
1.2	Output Impedance	Zout	F=1KHz			1.5	KΩ
1.3	Current Consumption	I _{loss}	VS=1.5V, RL=1.5KΩ			500	μA
1.4	Signal to Noise Ratio ※1	S/N	S:(F=1KHz, S.P.L=1Pa) N:(A-Weighted Curve)	58			dB
1.5	Decreasing Voltage ※1	Δ S-VS	VS=3.0V to 2.2V			-3	dB

1.6 Typical Frequency Response Curve Limit



◎ Frequency : 50~16,000Hz

◎ Operating Voltage : 1.1V to 10V

OBO Pro.2

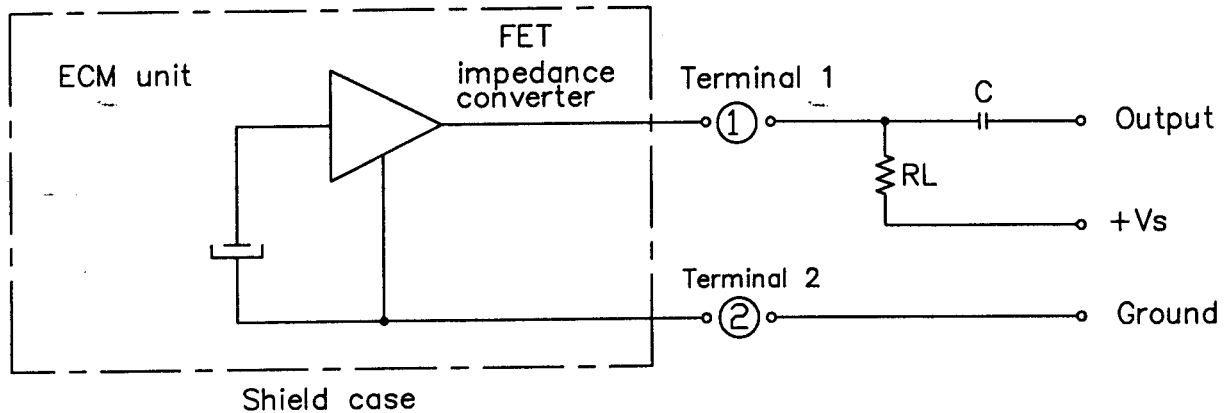
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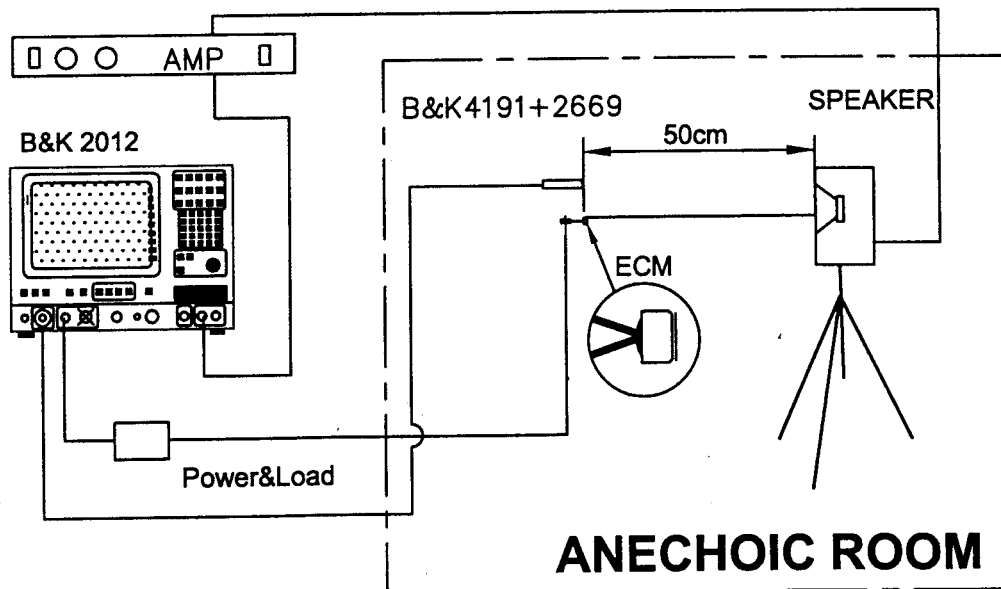
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2. MEASUREMENT CIRCUIT



3. MEASUREMENT METHOD



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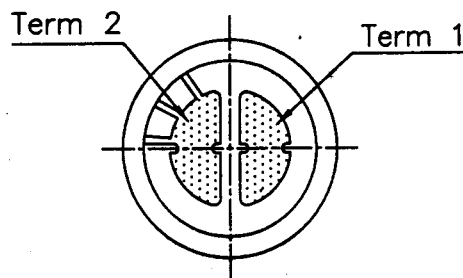
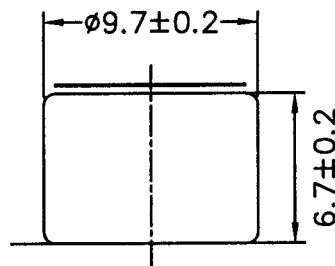
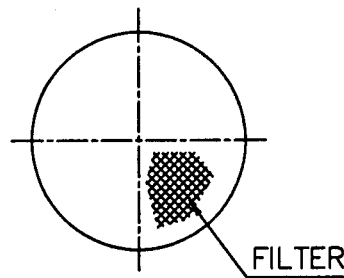
4.MECHANICAL CHARACTERISTICS

4.1 Soldering Standard : $300 \pm 20^{\circ}\text{C}$ / Max. 2 seconds ※1

4.2 Weight : Appr.1.0g

4.3 Mechanical Layout and Dimensions :

Unit : mm



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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 3 drops at 3 axes, the height of 1 meter to 20 mm thick wooden board.
Temperature Test	(a) After exposure at 70°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°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 : $-62\text{dB}(0\text{dB}=1\text{V}/\mu\text{bar})=-42\text{dB}(0\text{dB}=1\text{V}/\text{Pa})$.

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8. PACKAGING ※1

