





# SPECIFICATIONS

MODEL NO  
OBO-45KP-2B-07K

PART NAME  
ELECTRET CONDENSER MICROPHONE

SHEET  
2 OF 6

MODEL NO : OBO-45KP-2B-07K

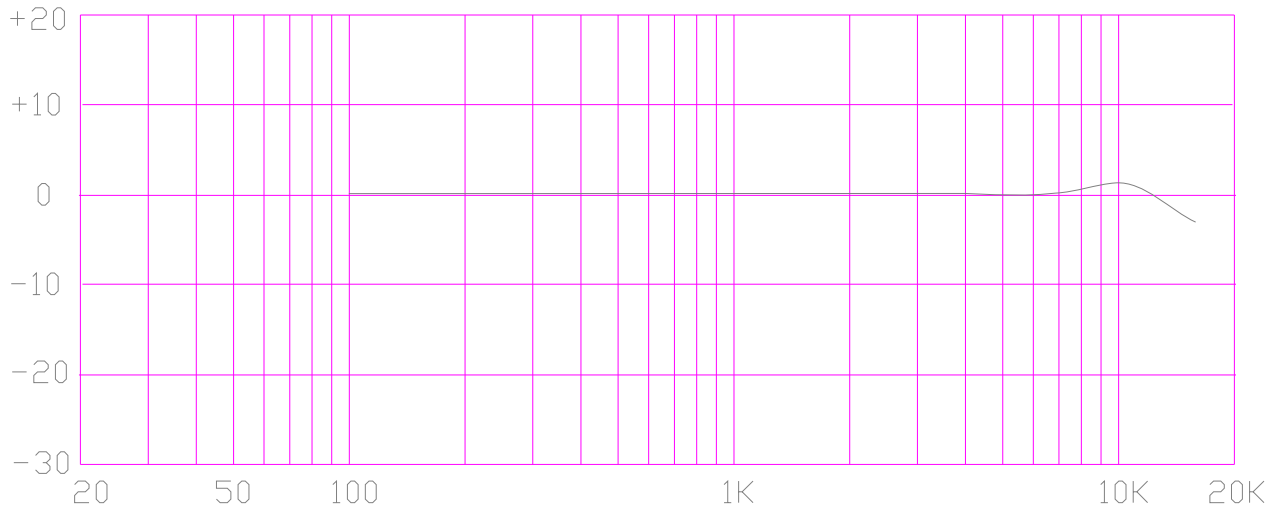
Features:Conformity RoHS Directive(2002/95/EC) Requests.

## 1. ELECTRICAL CHARACTERISTICS

Test Condition:(Vs=3.0V,RL=2.2KΩ,Ta=25±5°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	-41	-38	-35	dB
1.2	Output Impedance	Zout	F=1KHz 1Pa			2.2	KΩ
1.3	Current Consumption	IDss	VS=3.0V			0.5	mA
1.4	Signal to Noise Ratio	S/N	S:(F=1KHz,S.P.L=1Pa) N:(A-Weighted Curve)	60			dB
1.5	Sensitivity reduction	△S-VS	VS=1.5V to 3.0V			-3	dB

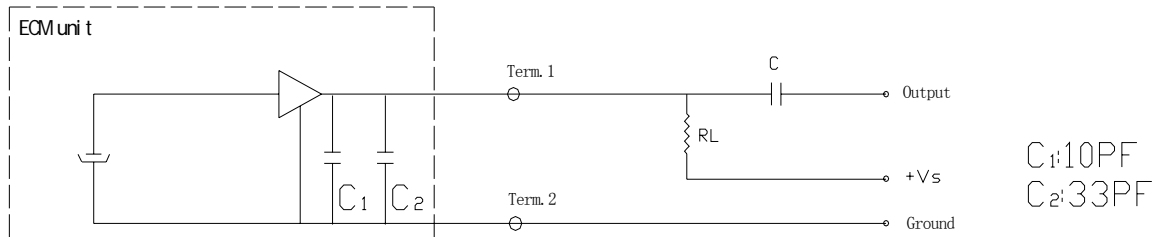
### 1.6 Typical Frequency Response Curve Limit



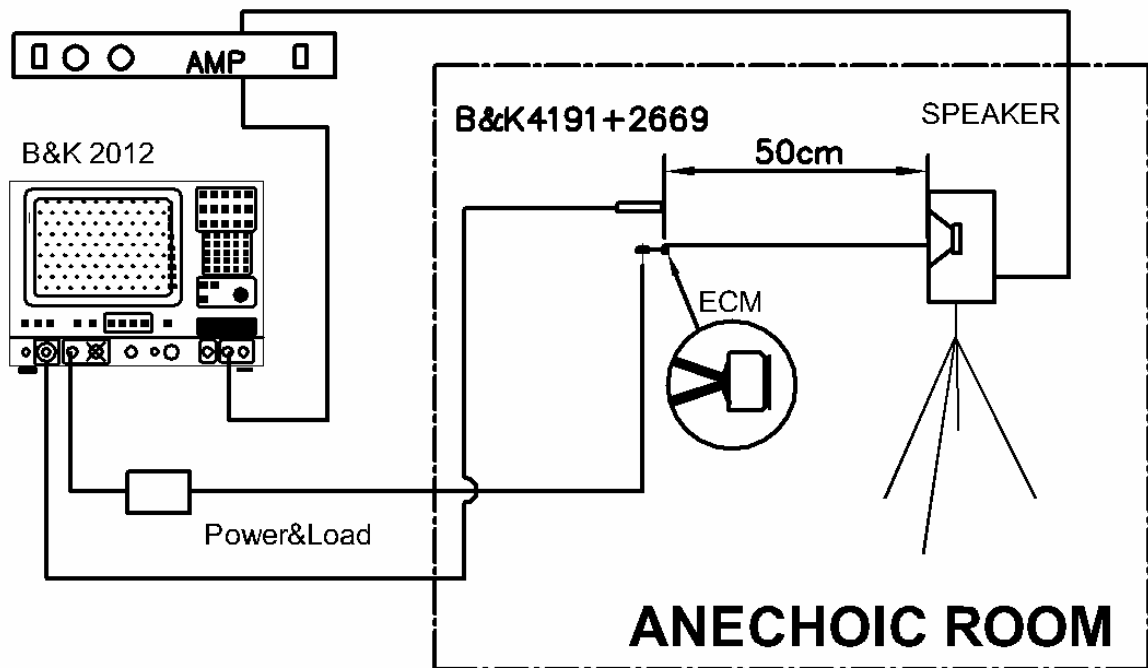
©Frequency: 50~16,000Hz

©Max. Operating Voltage: 10V

**2.MEASUREMENT CIRCUIT**



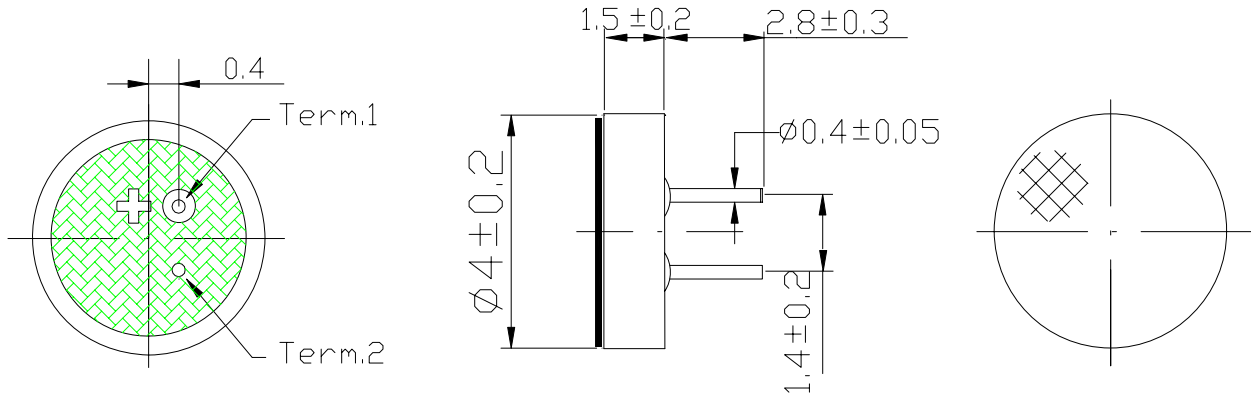
**3.MEASUREMENT METHOD**



**4. ASS'Y DRAWING**4.1 Soldering Standard :  $330 \pm 5^\circ\text{C}$  / Max.  $2 \pm 0.5$  seconds

4.2 Mechanical Layout and Dimensions :

Unit: mm

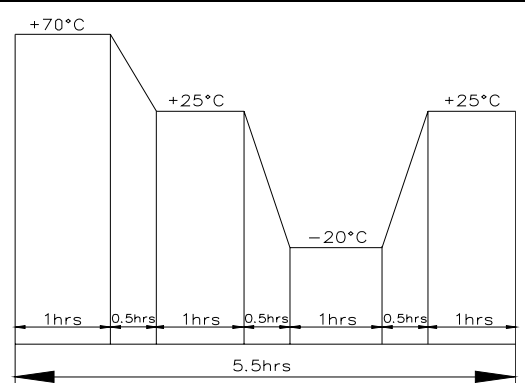


**5. TEMPERATURE CONDITIONS**

5.1 Operating Temperature Range: -20°C ~ +60°C

5.2 Storage Temperature Range: -25°C ~ +70°C

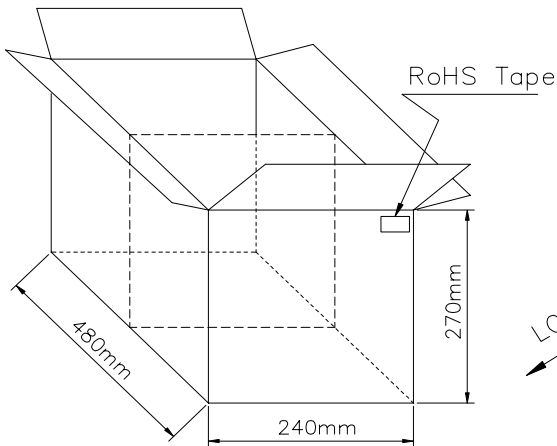
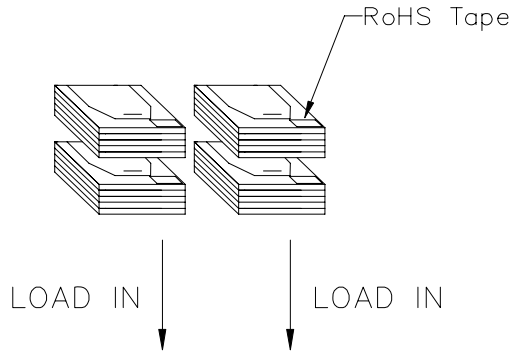
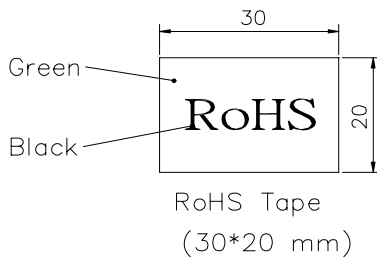
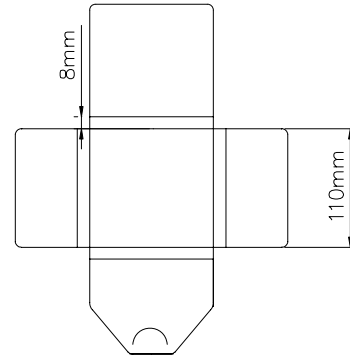
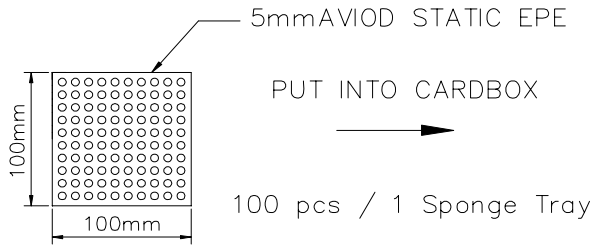
**6. RELIABILITY TEST**

Vibration Test	The part shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours.
Drop Test	The microphone unit without packaged must be subjected to each 3 drops at 3 axes from the height of 1 meter to 20 mm thick wooden board.
Temperature	(a) High Test:After exposure at +70°C for 72 hours, sensitivity to be within ±3dB from initial sensitivity. (b) Low Test: After exposure at -25°C for 72 hours, sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 6 hours of conditioning at 25°C)
Humidity Test	After exposure at +60°C and 85%~95% relative humidity for 240hours. (The measurement to be done after 6 hours of conditioning at 25°C)
Temperature Cycle Test	The part shall be subjected to 10cycles.One cycle shall be consist of: 

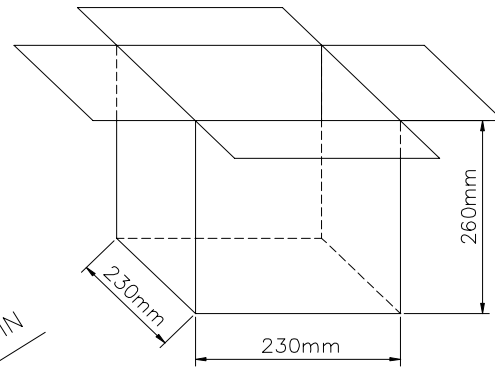
**7. CONCEPT OF UNIT**

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 : -58dB(0dB=1V/μbar)=-38dB(0dB=1V/Pa)

**8. PACKAGING**



LOAD IN



10 CARDBOX / PER  
MIDDLE OUTSIDE BOX(10000 pcs)  
(IMPORTED CARTON MATERIAL)

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