

TYPE	I C E M	DRAWN	K.Hirabayashi	PRIMO COMPANY LIMITED ENGINEERING DEPARTMENT	Release No							
MODEL NO	EM 1 6 6 K - M 2	CHECKED			0	1	2	3	4			
PUB. DATE	Jan - 21 - 2009	APPROVED		SPECIFICATION NO 2 C - 8 5 2 7				5	6	7	8	9

1. This specification is applied to Primo back electret condenser microphone unit Model EM166K-M2.
2. Measuring conditions : Temperature 20 °C ±2 °C , humidity 60 % ~ 70 %.
3. Appearance and dimension : as per Fig.1
4. Electrical Specification :
  - 4- 1) Directional Characteristic : Non-Directional
  - 4- 2) Sensitivity..... -43 dB ±3 dB at 1 kHz  
-43 dB +6/-4 dB at 40 Hz  
(0 dB = 1 V/Pascal) R<sub>L</sub>=15 kΩ , V<sub>cc</sub>=2 V
  - 4- 3) Phase Difference..... -182deg ± 15deg at 40Hz  
Between this microphone and reference microphone.
  - 4- 4) Impedance..... 1 kΩ ± 30 % at 1 kHz (R<sub>L</sub> = 15 kΩ )
  - 4- 5) Frequency Response..... as per Fig.3
  - 4- 6) S / N Ratio..... above 58 dB at 1 kHz ( 1 Pascal, A weighted network )
  - 4- 7) Max Input Sound Level..... 115 dB s.p.L.
  - 4- 8) Operating Voltage..... 2 V ( 1.5 V ~ 5 V )
  - 4- 9) Circuit Current..... 200 μA max ( V<sub>cc</sub> = 2 V )
  - 4-10) Terminal Locations..... as per Fig.1
  - 4-11) Electrical Circuit..... as per Fig.2
  - 4-12) Capacitor..... 33 pF
  - 4-13) Resistor..... 150 Ω
  - 4-14) Storage Temperature..... -40 °C ~ +105 °C
  - 4-15) Operating Temperature..... -30 °C ~ +80 °C

5. Environmental Specification :  
After any following tests, the sensitivity of the microphone unit shall not change more than ±3dB from initial value, and shall keep their initial operation and appearance.

- 5-1) High Temperature Test...The microphone unit must be subjected to +105 °C for 240 Hours, and expose to room temperature for 6 Hours.
- 5-2) Low Temperature Test...The microphone unit must be subjected to -40 °C for 240 Hours, and expose to room temperature for 6 Hours.
- 5-3) Temperature Cycle Test...The microphone unit must be subjected to following condition  
【+105 °C 1H ~ room temp 1H ~ -40 °C 1H ~ room temp 1H 】  
at 5 cycle, and expose to room temp for 6 Hours.
- 5-4) Humidity Test.....The microphone unit must be subjected to +70 °C, 95 % RH for 240 Hours, and expose to room temp for 6 Hours.

4						10						
3						9						
2						8						
1						7						
No		PAGE	DATE	S I G N	APPROVED	6						
<b>CHANGES</b>						5						

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- 5-5) Drop Test.....The microphone unit without package must be subjected to each 3 drops at three axes from the height of 1 meter to 20 mm thick hardwood board.
- 5-6) Vibration Test.....The microphone unit must be subjected to each 30 minutes vibrations at three axes 3 mm dynamic range, 1000 cycle/minute.

Fig.1 : Appearance and dimension ( Dimension : mm , Scale : 4/1 )

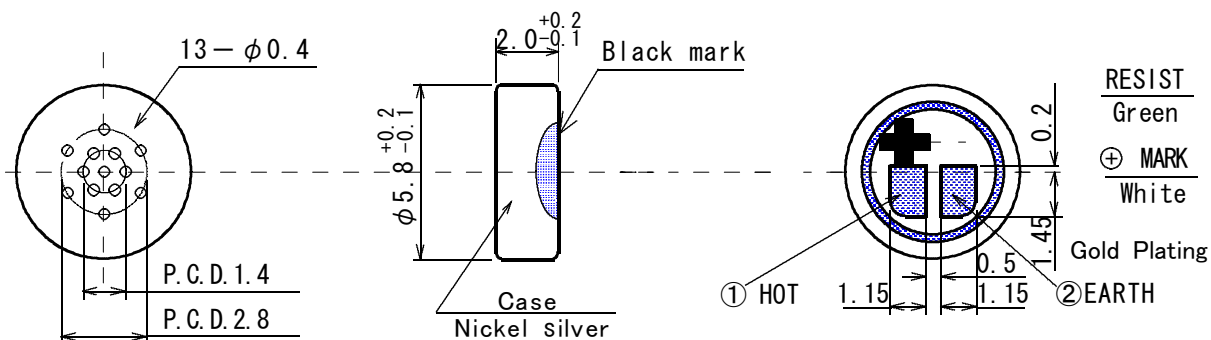


Fig.2 : Electrical circuit

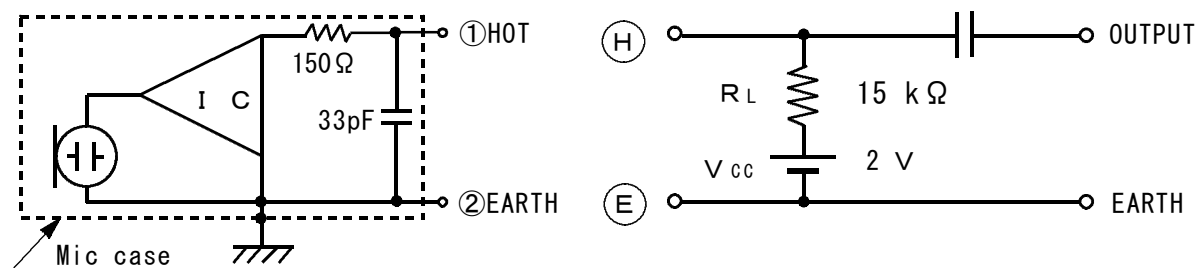
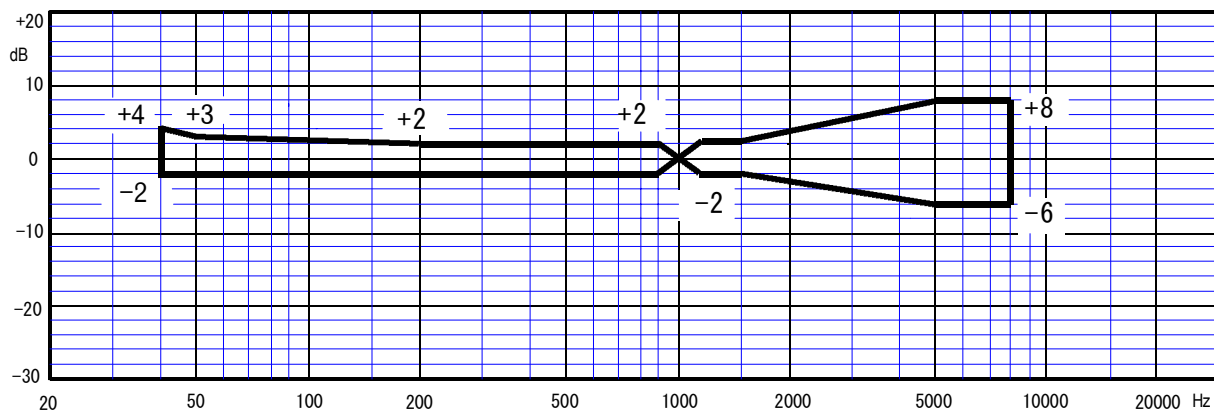
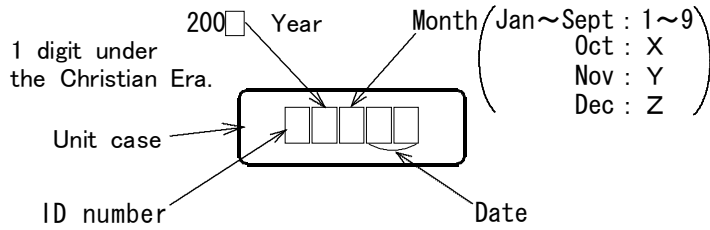


Fig.3 : Frequency response



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6. Production date number :



7. Packing : 500 pcs mic.units in one package box (BUA4).

