



CUI INC

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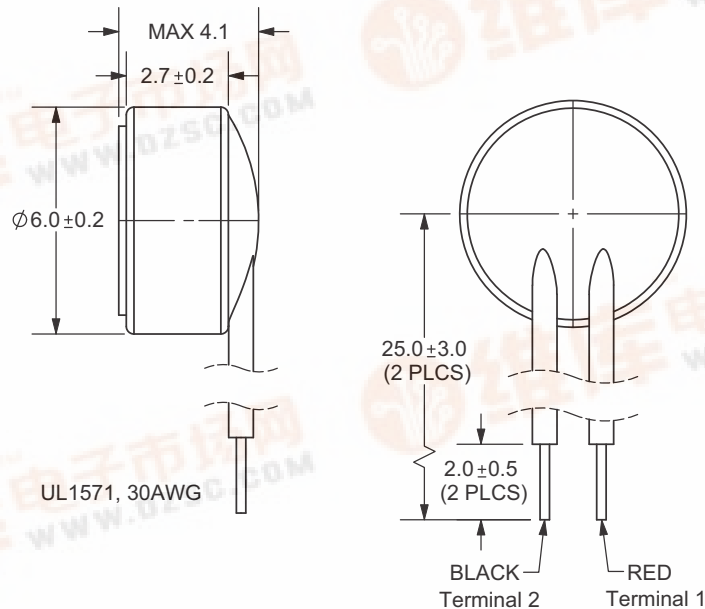
date 06/2008

**PART NUMBER:** CMC-2742WBL-25L**DESCRIPTION:** electret condenser microphone**SPECIFICATIONS**

|                                        |                                   |                                   |
|----------------------------------------|-----------------------------------|-----------------------------------|
| directivity                            | omnidirectional                   |                                   |
| sensitivity (S)                        | -42 $\pm$ 3 db                    | f = 1KHz, 1Pa 0dB = 1V/Pa         |
| sensitivity reduction ( $\Delta$ S-Vs) | -3 dB                             | f = 1KHz, 1Pa Vs = 2.0 ~ 1.5 V dc |
| operating voltage                      | 2 V dc (standard), 10 V dc (max.) |                                   |
| output impedance (Zout)                | 2.2 K $\Omega$                    | f = 1KHz, 1Pa                     |
| operating frequency (f)                | 100 ~ 20,000 Hz                   |                                   |
| current consumption (Idss)             | 0.5 mA max.                       | Vs = 2.0 V dc RL = 2.2K $\Omega$  |
| signal to noise ratio (S/N)            | 57 dBA                            | f = 1KHz, 1Pa A-weighted          |
| operating temperature                  | -20 ~ +70° C                      |                                   |
| storage temperature                    | -20 ~ +70° C                      |                                   |
| dimensions                             | $\varnothing$ 6.0 x 2.7 mm        |                                   |
| weight                                 | 0.22 g max.                       |                                   |
| material                               | Al                                |                                   |
| terminal                               | wire type (hand soldering only)   |                                   |
| RoHS                                   | yes                               |                                   |
| dustproof and waterproof level         | IP57                              |                                   |

note:

We use the "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C. (International Electrotechnical Commission). The sensitivity of "Pa" will increase 20dB compared to the "ubar" indication. Example: -60dB (0dB = 1V/ubar) = -40dB (1V/Pa)

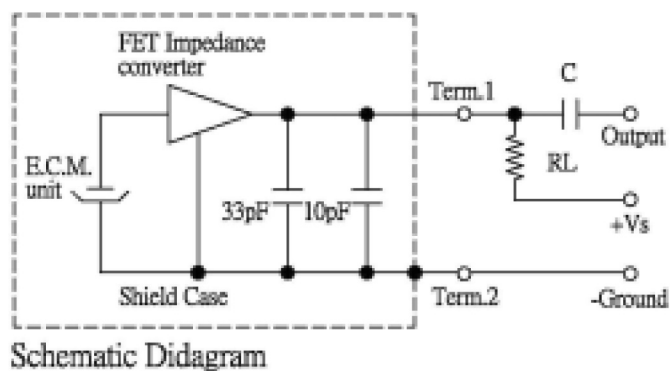
**APPEARANCE DRAWING**tolerances not shown:  $\pm$ 0.3mm

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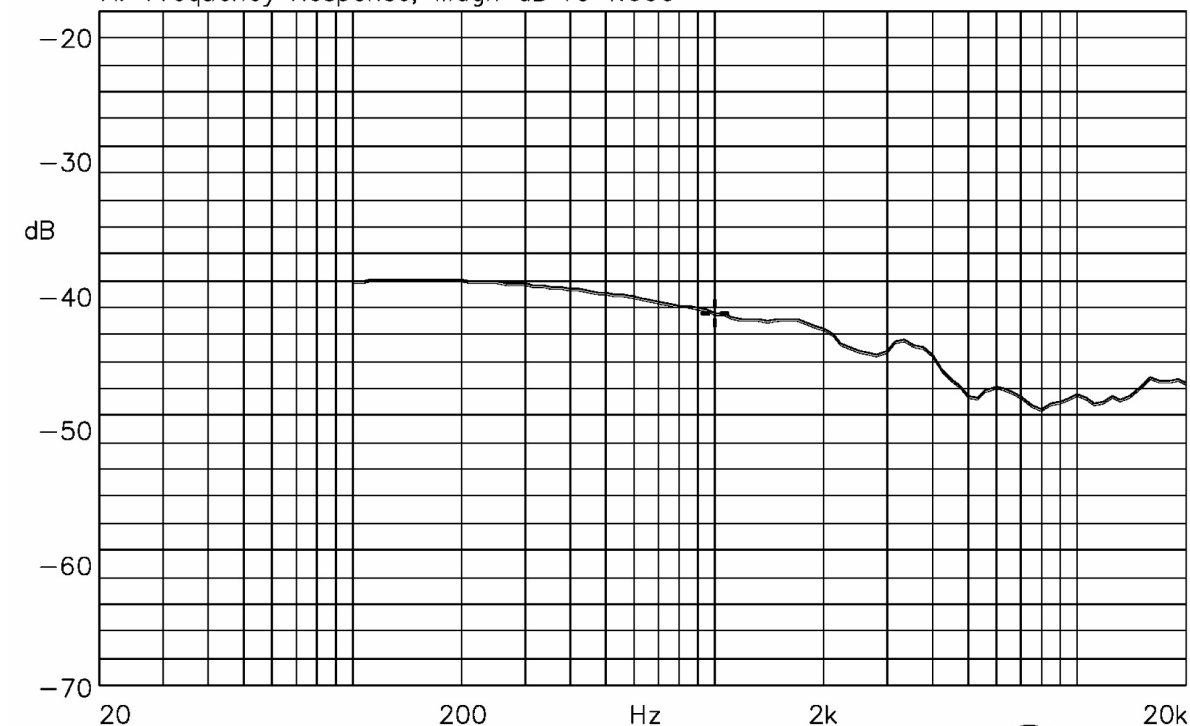
## MEASUREMENT CIRCUIT

$R_L = 2.2K\Omega$



## FREQUENCY RESPONSE CURVE

X: 1.0000kHz Y: -42.36dB ZA: Live Curve SSR Fund.  
A: Frequency Response, Magn dB re 1.000



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Mode: SSR



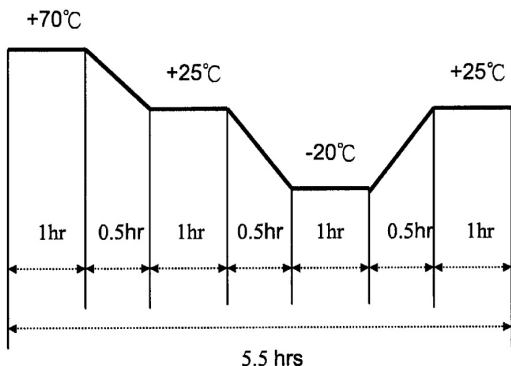
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## MECHANICAL CHARACTERISTICS

| item                                  | test condition                                                                                                                                                               | evaluation standard                                                                                     |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| solderability<br>(connector excepted) | Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in a solder bath of $270 \pm 5^{\circ}\text{C}$ for $3 \pm 0.5$ seconds.                  | 90% min. stripped wires will be wet with solder.<br>(except the edge of the terminal)                   |
| lead wire pull strength               | The pull force will be applied to double lead wire:<br>Horizontal 4.9N (0.5kg) for 30 seconds                                                                                | No damage or cutting off.                                                                               |
| vibration                             | The part will be measured after applying a vibration amplitude of 1.5 mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours. | After any tests, the sensitivity should be within $\pm 3\text{dB}$ compared to the initial measurement. |
| drop test                             | The part will be dropped from a height of 1 m onto a 20 mm thick wooden board 3 times in 3 axes (X, Y, Z) for a total of 9 drops.                                            |                                                                                                         |

## ENVIRONMENT TEST

| item             | test condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | evaluation standard                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| high temp. test  | After being placed in a chamber at $+70^{\circ}\text{C}$ for 72 hours.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | The part will be measured after being placed at $+25^{\circ}\text{C}$ for 6 hours. After any tests, the sensitivity should be within $\pm 3\text{dB}$ compared to the initial measurement. |
| low temp. test   | After being placed in a chamber at $-20^{\circ}\text{C}$ for 72 hours.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                            |
| humidity test    | After being placed in a chamber at $+40^{\circ}\text{C}$ and $90 \pm 5\%$ relative humidity for 240 hours.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                            |
| temp. cycle test | The part shall be subjected to 10 cycles. One cycle will consist of:<br><br> <p>The diagram shows a temperature cycle test waveform. It starts at <math>+70^{\circ}\text{C}</math> for 1hr, then ramps down to <math>+25^{\circ}\text{C}</math> in 0.5hr. It stays at <math>+25^{\circ}\text{C}</math> for 1hr, then ramps down to <math>-20^{\circ}\text{C}</math> in 0.5hr. It stays at <math>-20^{\circ}\text{C}</math> for 1hr, then ramps up to <math>+25^{\circ}\text{C}</math> in 0.5hr. Finally, it stays at <math>+25^{\circ}\text{C}</math> for 1hr. The total duration of one cycle is 5.5 hrs.</p> |                                                                                                                                                                                            |

## TEST CONDITIONS

|                          |                                               |                       |                            |
|--------------------------|-----------------------------------------------|-----------------------|----------------------------|
| standard test condition  | a) temperature: $+5 \sim +35^{\circ}\text{C}$ | b) humidity: 45 - 85% | c) pressure: 860-1060 mbar |
| judgement test condition | a) temperature: $+25 \pm 2^{\circ}\text{C}$   | b) humidity: 60 - 70% | c) pressure: 860-1060 mbar |

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## PACKAGING

