



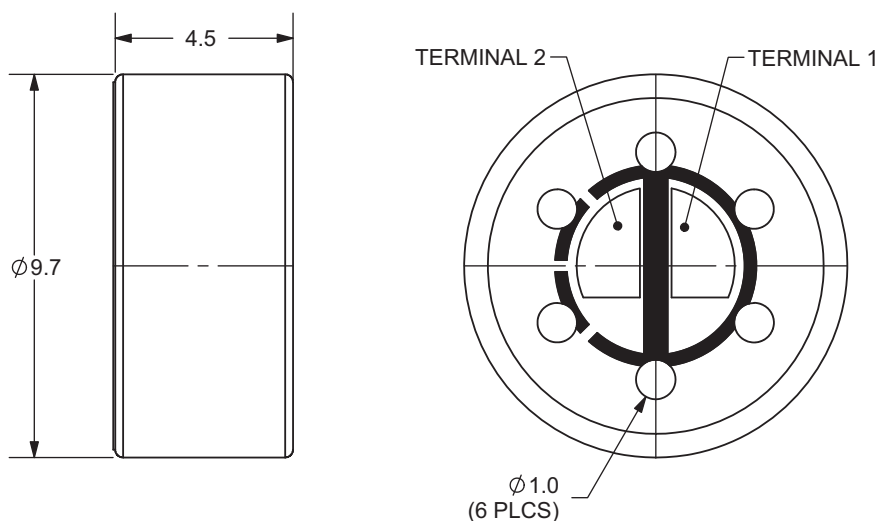
**PART NUMBER: CMI-4537-SN69**

**DESCRIPTION: ELECTRET CONDENSER MICROPHONE**

## SPECIFICATIONS

| parameter              | conditions/description                | min  | nom | max    | units |
|------------------------|---------------------------------------|------|-----|--------|-------|
| directivity            | unidirectional                        |      |     |        |       |
| sensitivity            | f= 1 KHz, 1Pa 0 dB= 1 V/Pa            | -40  | -37 | -34    | dB    |
| operating voltage      |                                       |      | 1.5 | 9      | V dc  |
| output impedance       | f= 1 KHz, 1Pa                         | 1.26 | 1.8 | 2.34   | KΩ    |
| sensitivity reduction  | f= 1 KHz, 1Pa Vs=1.5 V dc to 1.1 V dc |      | -3  |        | dBa   |
| frequency              |                                       | 100  |     | 12,000 | Hz    |
| current consumption    | Vs=1.5 V dc RL=2.0 KΩ                 |      |     | 0.4    | mA    |
| signal to noise ration | f= 1 KHz, 1 Pa A weighted             |      | 69  |        | dBa   |
| operating temperature  |                                       | -20  |     | 70     | °C    |
| storage temperature    |                                       | -20  |     | 70     | °C    |
| dimenstions            | ø9.7 x H4.5 mm                        |      |     |        |       |
| weight                 |                                       |      |     | 0.8    | g     |
| material               | Aluminum                              |      |     |        |       |
| terminal               | terminal type                         |      |     |        |       |
| RoHS                   | yes                                   |      |     |        |       |

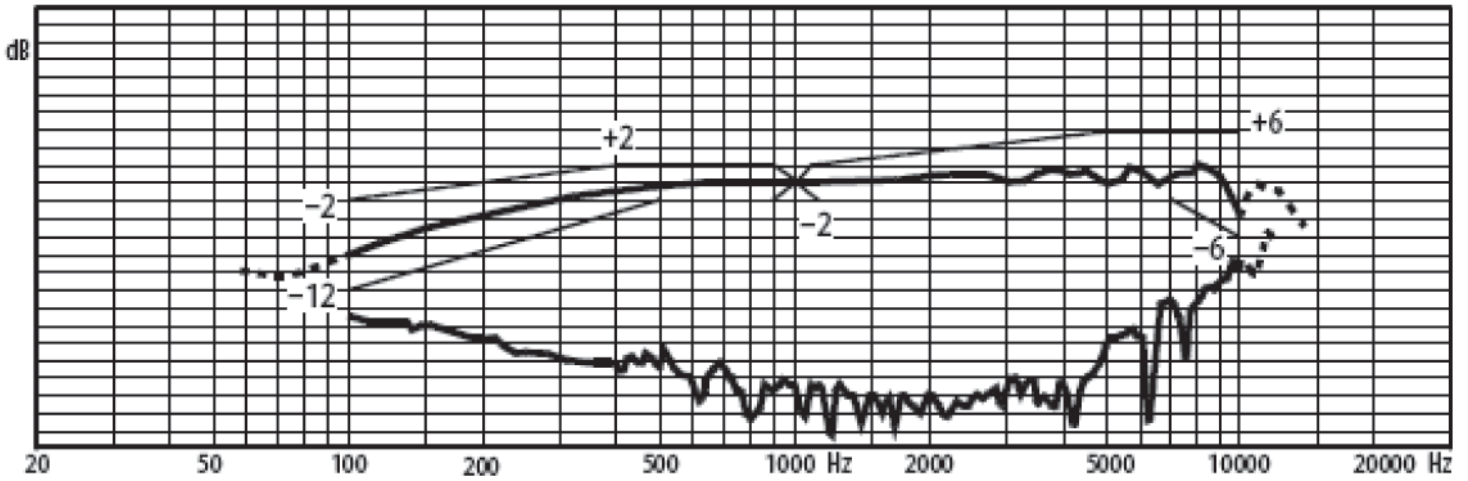
## APPEARANCE DRAWING



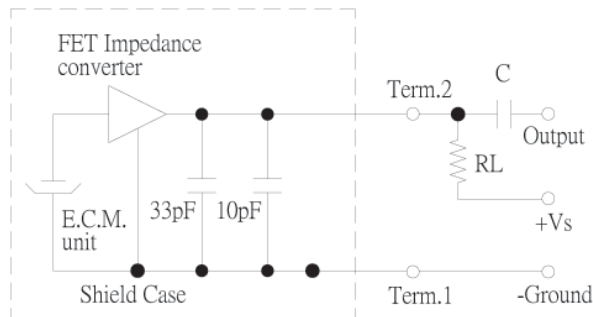
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**FREQUENCY RESPONSE CURVE**



**MEASUREMENT CIRCUIT**



Schematic Diagram

**RL=2.0KΩ**



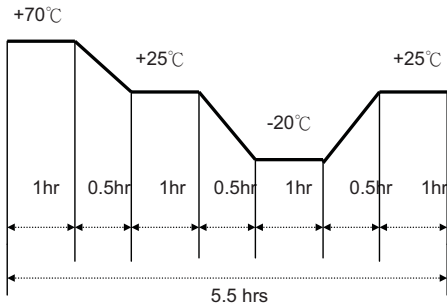
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## MECHANICAL CHARACTERISTICS

| item                      | test condition   | evaluation standard  |
|---------------------------|--|--|
| soldering heat resistance | Soldering iron with $270 \pm 5^\circ\text{C}$ should be applied on the terminal for $2 \pm 0.5$ seconds.   | No interference in operation.  |
| PCB wire pull strength    | The force of 4.9 N is applied for 30 sec. to double lead wire.   | No damage or cutting off.  |
| vibration test            | The microphone should be measured after a vibration amplitude of 1.5 mm with 10 ~ 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours. | The sensitivity should be within $\pm 3\text{dB}$ compared with the initial measurement. |
| drop test                 | The microphone without packaging is subjected to 3 drops on each axis from the height of 1 m onto a 10 mm thick wooden board.  |  |

## ENVIRONMENT TEST

| item                   | test condition   | evaluation standard  |
|------------------------|--|--|
| high temperature test  | After being placed in a chamber at $+70^\circ\text{C}$ for 72 hours.   | The microphone will be measured after being placed at $+25^\circ\text{C}$ for 6 hours. The value of the oscillation frequency should be $\pm 10\%$ compared to the initial measurements. The SPL should be within $\pm 3\text{dB}$ compared to the initial measurements. |
| low temperature 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 $90 \pm 5\%$ RH for 240 hours.  |  |
| temperature cycle test | The part will be subjected to 10 cycles. One cycle will consist of:<br> |  |

## TEST CONDITIONS

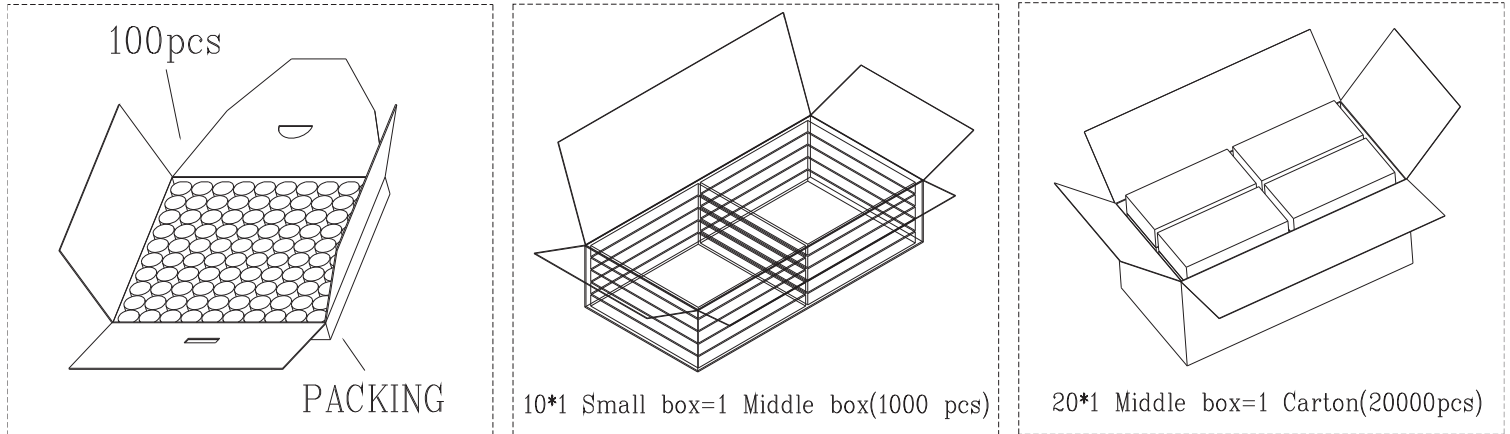
|                           |   |                       |                              |
|---------------------------|---|-----------------------|------------------------------|
| standard test conditions  | a) Temperature: $+5 \sim +35^\circ\text{C}$ | b) Humidity: 45 ~ 85% | c) Pressure: 860 ~ 1060 mbar |
| judgement test conditions | a) Temperature: $+25 \pm 2^\circ\text{C}$   | b) Humidity: 60 ~ 70% | c) Pressure: 860 ~ 1060 mbar |



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**PACKAGING**



1. CUI Inv.# 033-4034R  
CUI Part#. CMI-4537-SN69
2. RoHS Compliant

|             |                   |                    |
|-------------|-------------------|--------------------|
| Small box   | 100mm*100mm*10mm  | 100PCS/Smallbox    |
| Middle box  | 205mm*105mm*50mm  | 1000PCS/Middle box |
| Carton size | 420mm*230mm*255mm | 20000PCS/ Carton   |