

PART NUMBER: CMA-4544PF-W

DESCRIPTION: electret condenser microphone

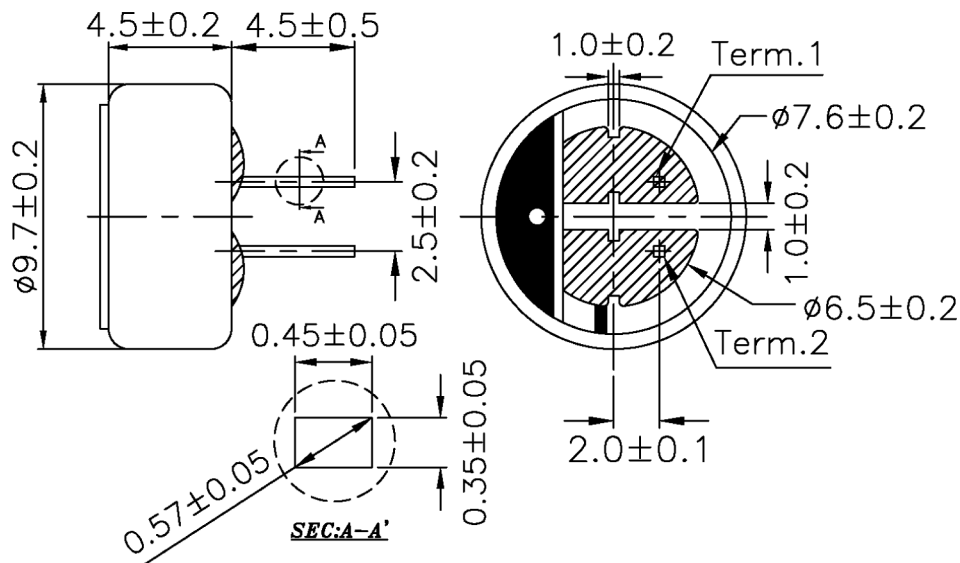
SPECIFICATIONS

| | | |
|-------------------------------|-----------------------------------|-----------------------------------|
| directivity | omnidirectional | |
| sensitivity (S) | -44 ±2 dB | f = 1KHz, 1Pa 0dB = 1V/Pa |
| sensitivity reduction (ΔS-Vs) | -3 dB | f = 1KHz, 1Pa Vs = 3.0 ~ 2.0 V dc |
| operating voltage | 3 V dc (standard), 10 V dc (max.) | |
| output impedance (Zout) | 2.2 KΩ | f = 1KHz, 1Pa |
| operating frequency (f) | 20 ~ 20,000 Hz | |
| current consumption (IDSS) | 0.5 mA max. | Vs = 3.0 V dc RL = 2.2KΩ |
| signal to noise ratio (S/N) | 60 dBA | f = 1KHz, 1Pa A-weighted |
| operating temperature | -20 ~ +70° C | |
| storage temperature | -20 ~ +70° C | |
| dimensions | ø9.7 x 4.5 mm | |
| weight | 0.80 g max. | |
| material | Al | |
| terminal | pin type (hand soldering only) | |
| RoHS | yes | |

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)

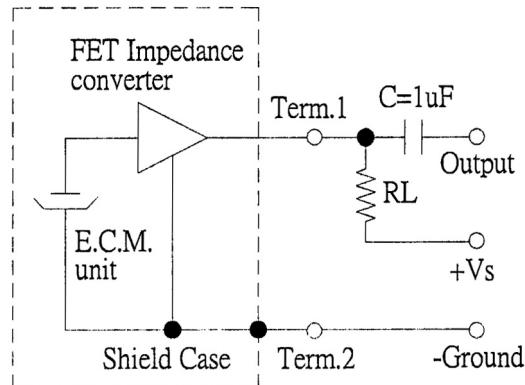
APPEARANCE DRAWING



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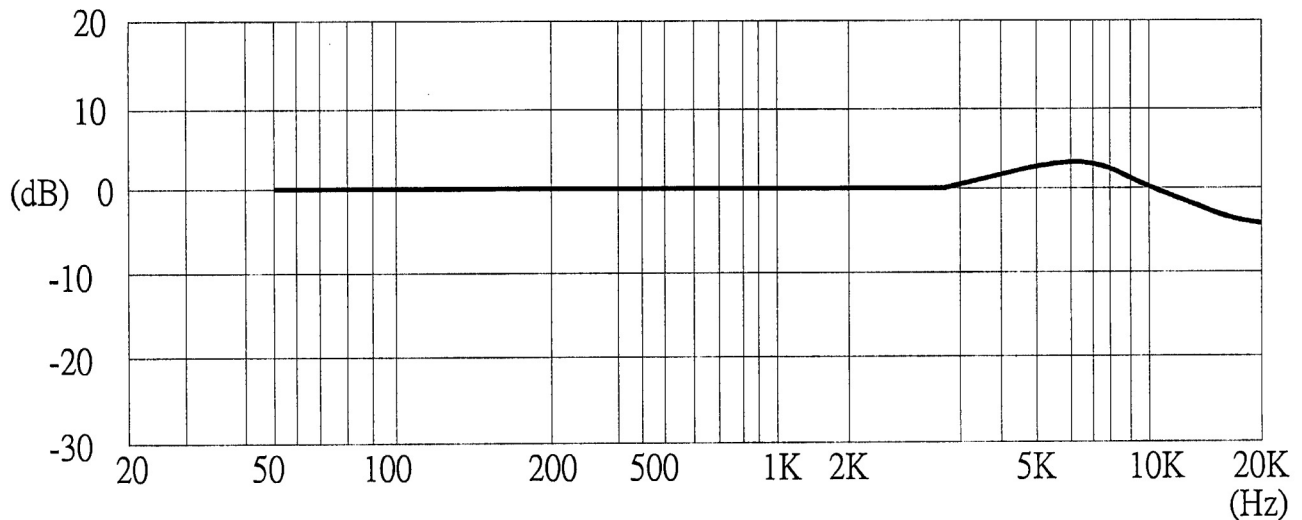
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MEASUREMENT CIRCUIT



Schematic Diagram **$R_L=2.2\text{K}\Omega$**

FREQUENCY RESPONSE CURVE



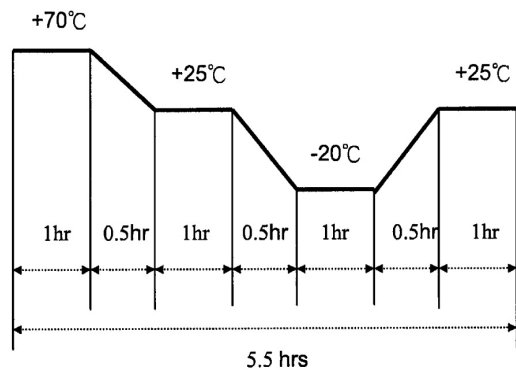
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MECHANICAL CHARACTERISTICS

| item | test condition | evaluation standard |
|---------------------------|--|---|
| soldering heat resistance | Lead terminals are immersed in solder bath of $270 \pm 5^{\circ}\text{C}$ for 2 ± 0.5 seconds. | No interference in operation. |
| PCB wire pull strength | The pull force will be applied to double lead wire: 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

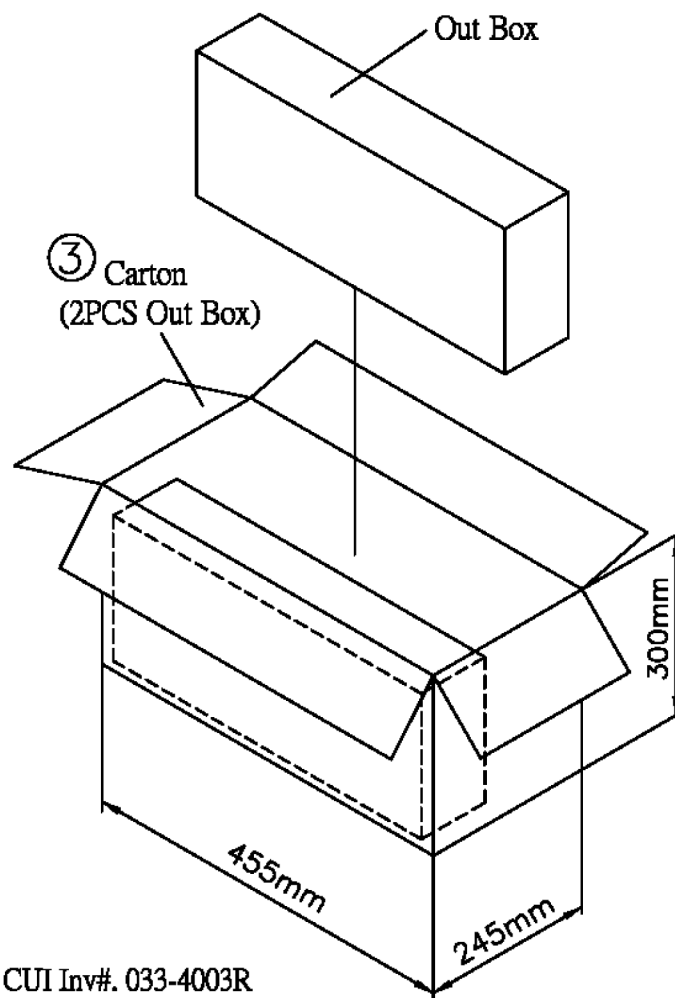
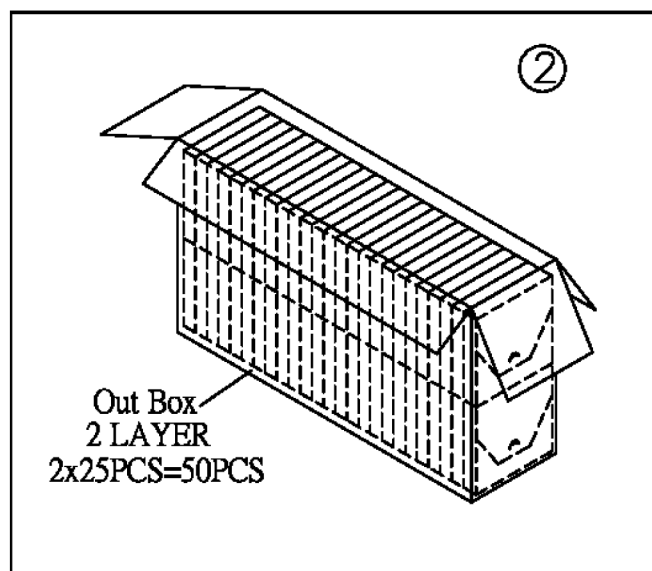
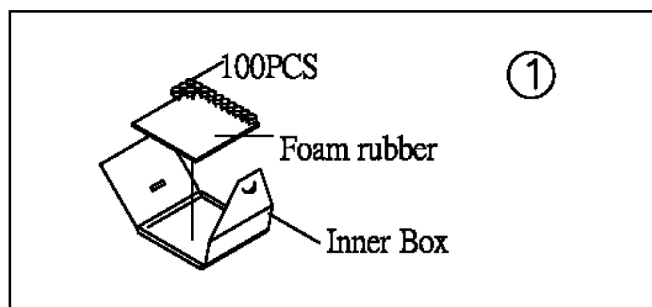
| item | test condition | evaluation standard |
|------------------|--|--|
| high temp. test | After being placed in a chamber at $+70^{\circ}\text{C}$ for 72 hours. | The part will be measured after being placed at $+25^{\circ}\text{C}$ for 6 hours. After any tests, the sensitivity should be within $\pm 3\text{dB}$ compared to the initial measurement. |
| low temp. test | After being placed in a chamber at -20°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:  | |

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


1. CUI Inv#. 033-4003R
CUI Part#. CMA-4544PF-W
2. RoHS Compliant

| | | |
|------------|-------------------|----------------------|
| Inner Box | 100mmx100mmx15mm | 100PCSx1=100PCS |
| Out Box | 435mmx120mmx280mm | 100PCSx50=5,000PCS |
| Carton Box | 455mmx245mmx300mm | 5,000PCSx2=10,000PCS |