

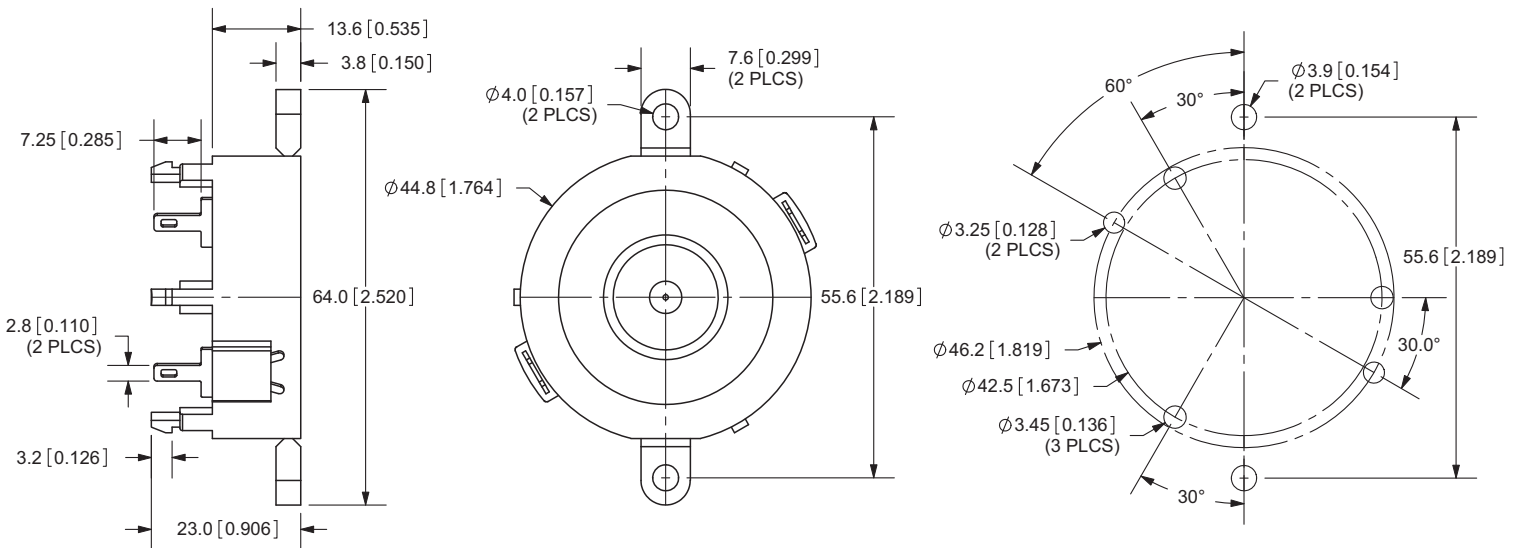
PART NUMBER: CPE-4485

DESCRIPTION: PIEZO AUDIO TRANSDUCER

SPECIFICATIONS

| parameter | conditions/description | min | nom | max | units |
|------------------------|--|--------|-----------------------|--------|----------------------------------|
| operating frequency | | 2.2 | | 4 | K Hz |
| operating voltage | continuous sine wave continuous square wave intermittent sine wave intermittent square wave | | 85 50 100 60 | | V p-p V p-p V p-p V p-p |
| sound pressure level | at 30 cm / 12 V p-p, square wave, 3000 Hz | 100 | | | dBa |
| electrostatic capacity | at 120 Hz, 1 V | 0.1645 | 0.235 | 0.3055 | uF |
| operating temperature | | -40 | | 105 | °C |
| storage temperature | | -40 | | 105 | °C |
| dimensions | ø44.8 x H13.6 mm | | | | |
| weight | | | | 11.5 | g |
| material | PBT + 15% GLASS UL94 V-0 (black) | | | | |
| terminal | pin type | | | | |
| RoHS | yes | | | | |

APPEARANCE DRAWING

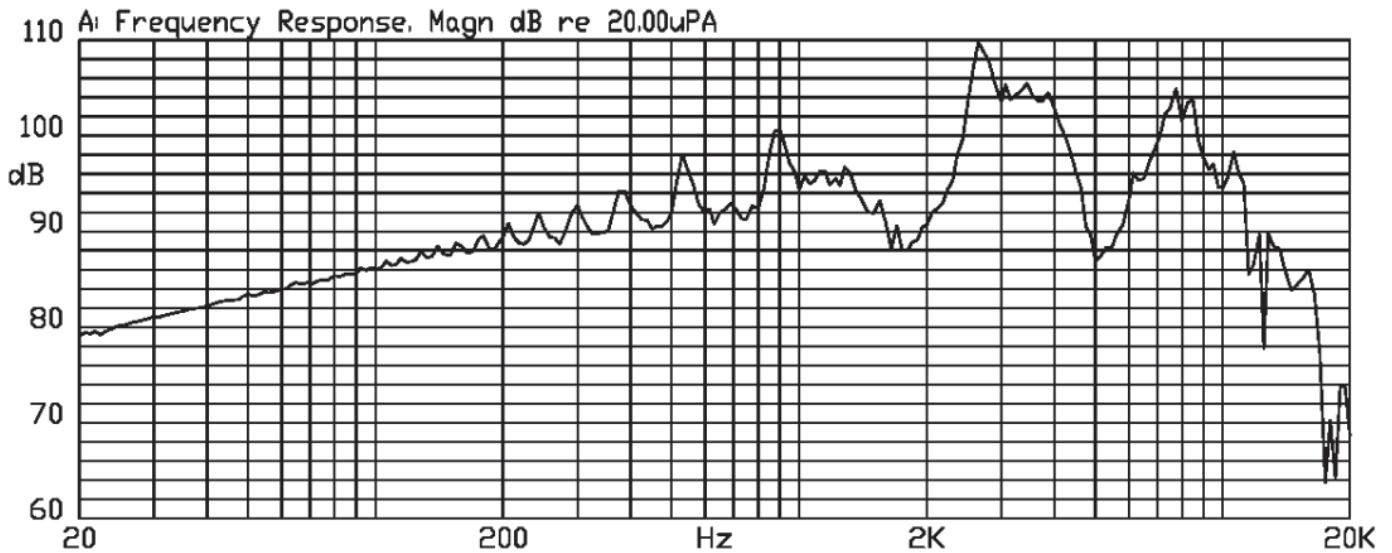


TOLERANCE:
±0.5mm UNLESS OTHERWISE
SPECIFIED

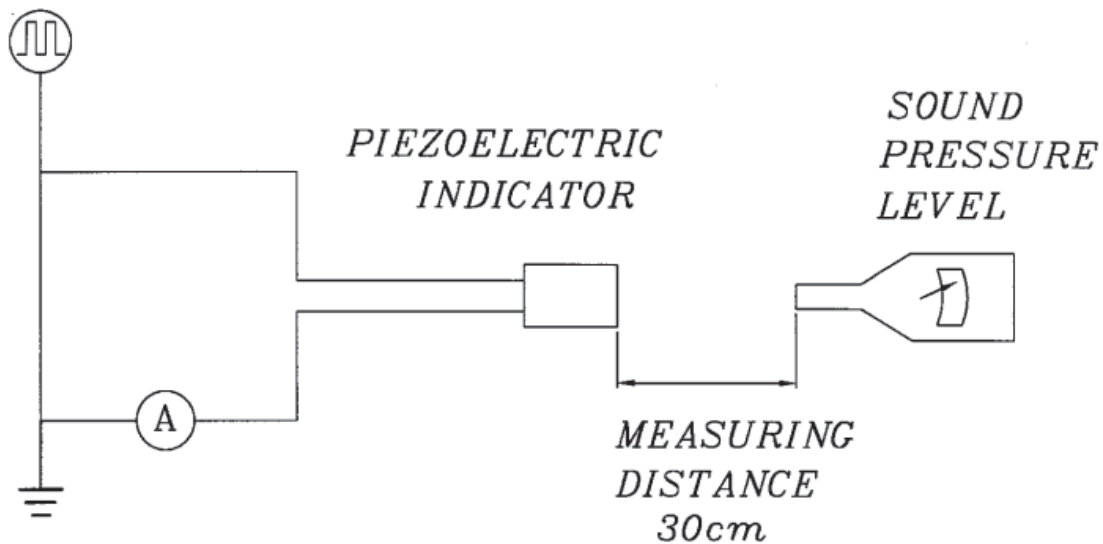
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FREQUENCY RESPONSE



MEASUREMENT METHOD



S.P.L. Measuring Circuit
Input signal: 12 V p-p, 3.0 kHz, square wave
Mic: RION S.P.L. meter UC30 or equivalent
S.G.: Hewlett Packard 33120A function generator or equivalent



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MECHANICAL CHARACTERISTICS

| item | test condition | evaluation standard |
|----------------------------|--|---|
| solderability ¹ | Lead terminals are immersed in rosin for 5 seconds and then immersed in a solder bath of +270 ±5°C for 3 ±1.0 second. | 90% min. of the lead terminals will be wet with solder. (except the edge of the terminal) |
| soldering heat resistance | Lead terminals are immersed up to 1.5 mm from the buzzer's body in a solder bath of 260 ±5°C for 3 ±1 seconds. | No interference in operation. |
| terminal pull strength | The force of 9.8 N is applied for 10 sec. to each terminal in axial direction. | No damage or cutting off. |
| vibration test | The buzzer 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 buzzer will be measured after being placed at +25°C for 4 hours. The value of oscillation frequency / current consumption should be ±10% of the initial measurements. The SPL should be within ±10dB compared with the initial measurement. |
| drop test | The buzzer without packaging is subjected to 3 drops on each axis from the height of 75 cm onto a 40 mm thick wooden board. | |

Notes: 1. Not recommended for wave soldering

ENVIRONMENT TEST

| item | test condition | evaluation standard |
|------------------------|---|---|
| high temperature test | After being placed in a chamber at +105°C for 240 hours. | The buzzer will be measured after being placed at +25°C for 4 hours. The value of the oscillation frequency / current consumption should be ±10% compared to the initial measurements. The SPL should be within ±10dB compared to the initial measurements. |
| low temperature test | After being placed in a chamber at -40°C for 240 hours. | |
| humidity test | After being placed in a chamber at +40°C and 90 ±5% RH for 240 hours. | |
| temperature cycle test | The part will be subjected to 5 cycles. One cycle will consist of: | |

RELIABILITY TEST

| item | test condition | evaluation standard |
|-----------------------|--|---|
| operating (life test) | <p>1. Continuous life test: The part will be subjected to 48 hours of continuous operation at 90°C with rated voltage applied.</p> <p>2. Intermittent life test: A duty cycle of 1 minute on, 1 minute off, a minimum of 5,000 times at room temp (+25 ±2°C) with rated voltage applied.</p> | The buzzer will be measured after being placed at +25°C for 4 hours. The value of oscillation frequency / current consumption should be ±10% of the initial measurements. The SPL should be within ±10dB compared with the initial measurement. |

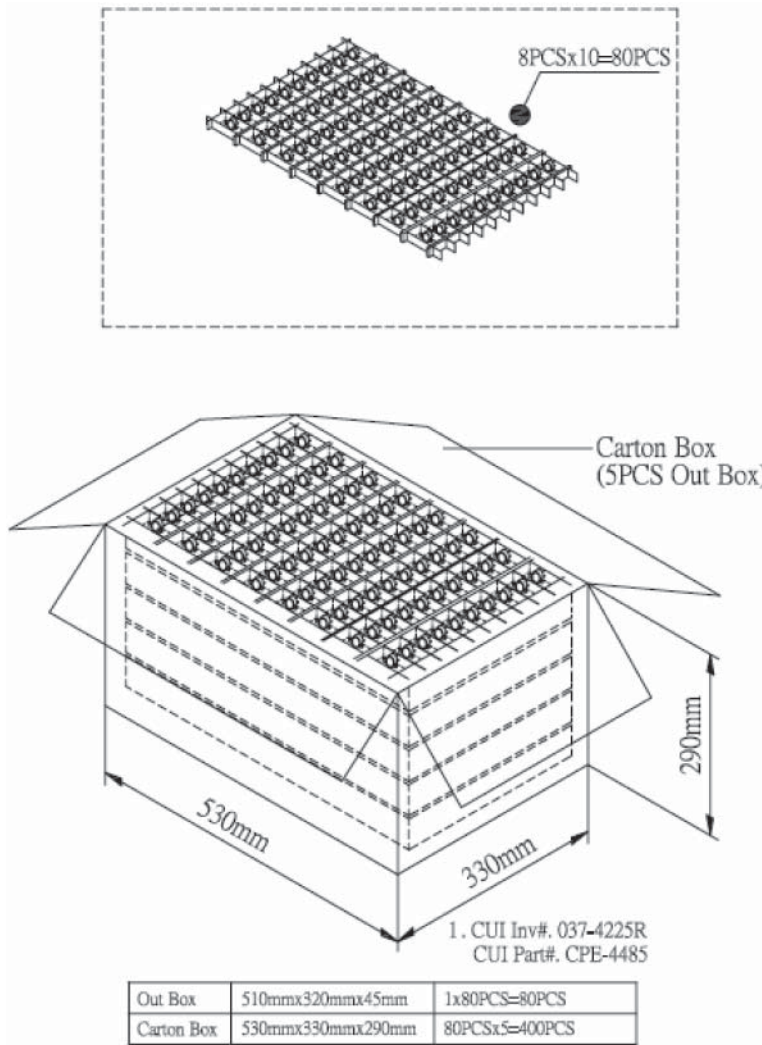
TEST CONDITIONS

| | | | |
|---------------------------|----------------------------|-----------------------|------------------------------|
| standard test conditions | a) Temperature: +5 ~ +35°C | b) Humidity: 45 ~ 85% | c) Pressure: 860 ~ 1060 mbar |
| judgement test conditions | a) Temperature: +25 ±2°C | b) Humidity: 60 ~ 70% | c) Pressure: 860 ~ 1060 mbar |

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PACKAGING



| | | |
|------------|-------------------|----------------|
| Out Box | 510mmx320mmx45mm | 1x80PCS=80PCS |
| Carton Box | 530mmx330mmx290mm | 80PCSx5=400PCS |