

PART NUMBER: CPE-503

DESCRIPTION: piezo audio transducer

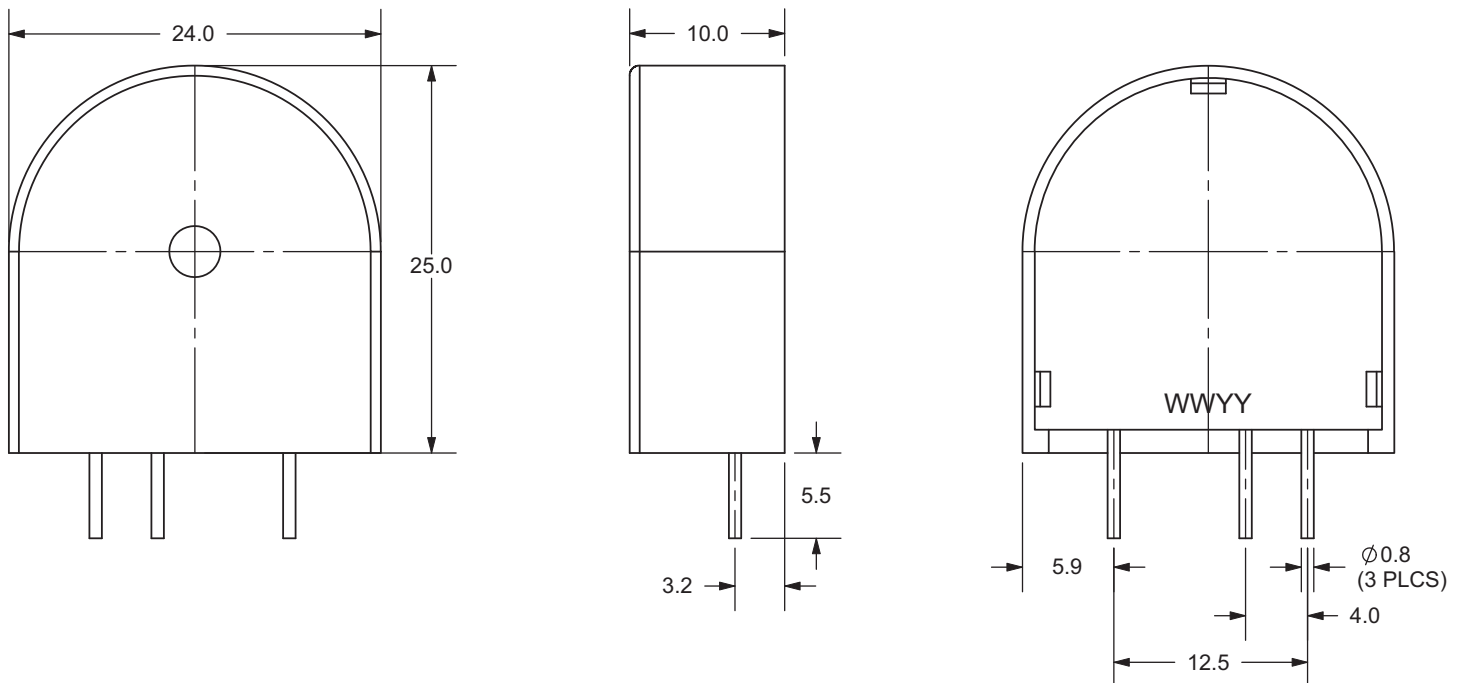
SPECIFICATONS

| | |
|-------------------------|-----------------------------|
| operating frequency | 3.2 KHz \pm 0.5 |
| operating voltage range | 3 ~ 28 V DC |
| operating current | 7 mA max. at 12 V DC |
| sound pressure level | 72 db min. at 30 cm/12 V DC |
| rated voltage | 12 V DC |
| tone | continuous |
| operating temperature | -30 ~ +115° C |
| storage temperature | -40 ~ +125° C |
| dimensions | L25.0 x W24.0 x H10.0 mm |
| weight | 3.7 g max. |
| material | PC 10% glass (black) |
| terminal | pin type (Au plating) |
| RoHS | yes |

APPEARANCE DRAWING

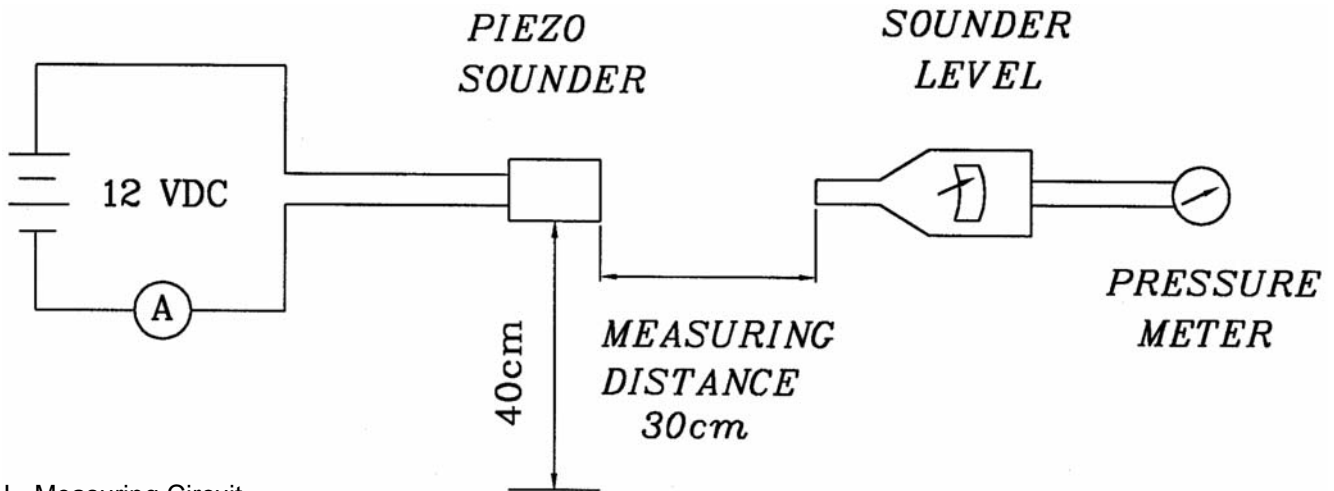
 tolerance: ± 0.5

units: mm

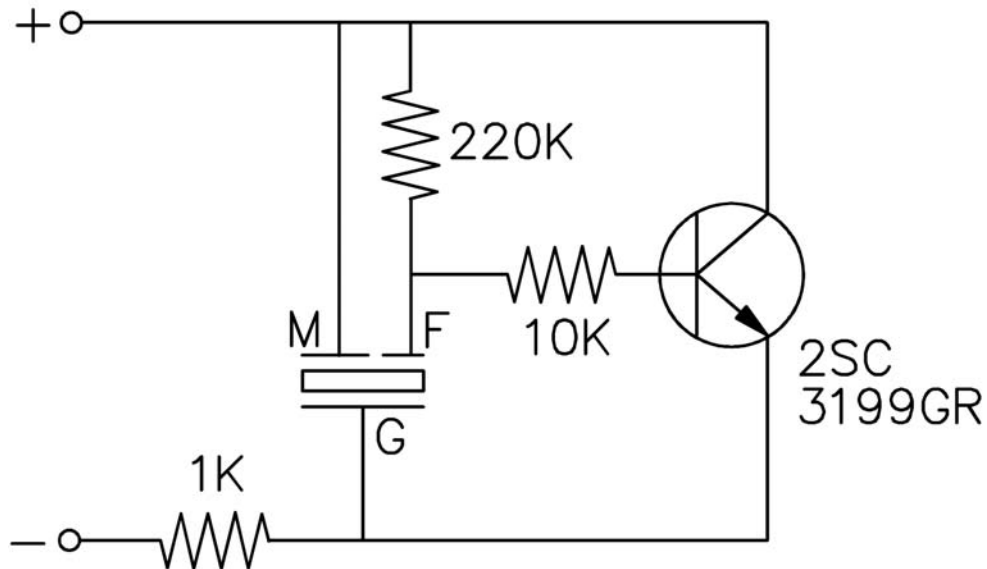


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MEASUREMENT METHOD


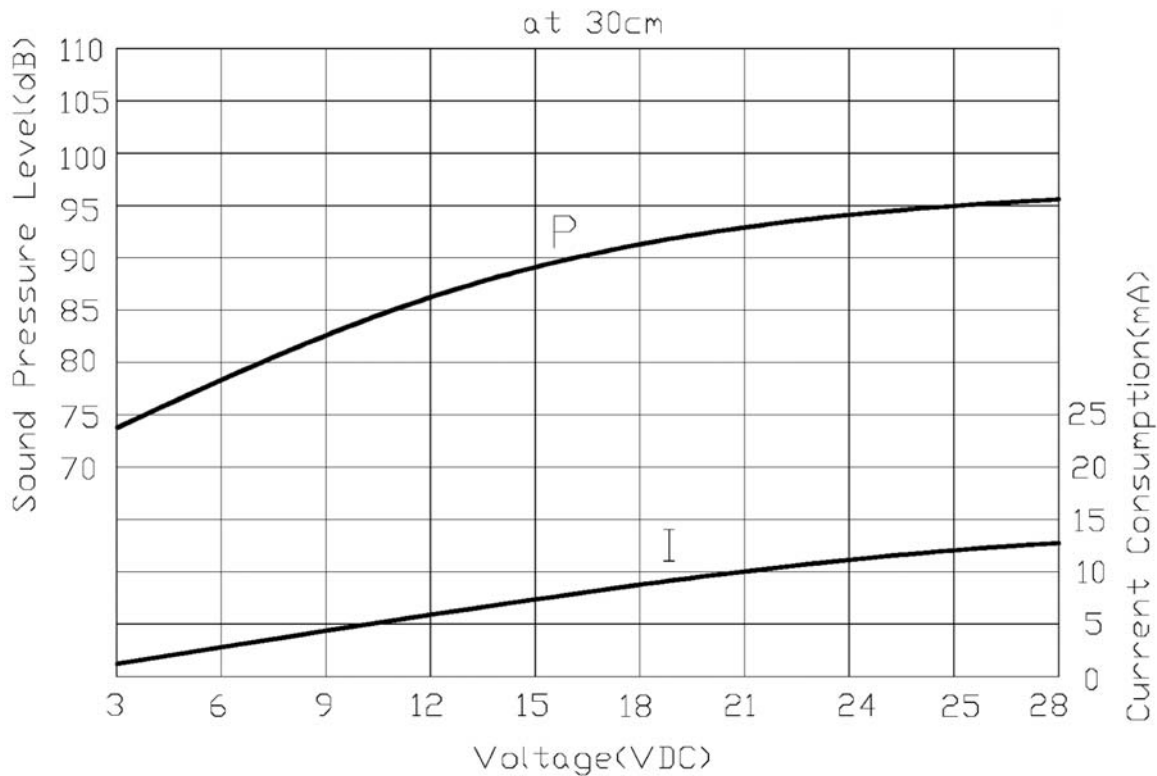
S.P.L. Measuring Circuit
 Mic: RION S.P.L. meter UC30 or equivalent



The current consumption and the sound pressure level are measured by using the recommended driving circuit shown above.

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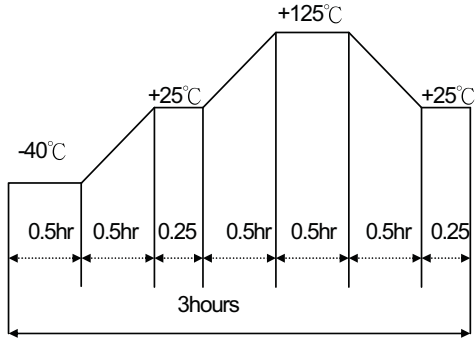
MEASUREMENT METHOD

MECHANICAL CHARACTERISTICS

| item | test condition | evaluation standard |
|------------------------------|---|--|
| solderability | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $270 \pm 5^\circ\text{C}$ for 3 ± 1 seconds. | 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 1.5mm from buzzer's body in solder bath of $300 \pm 5^\circ\text{C}$ for 3 ± 0.5 seconds or $260 \pm 5^\circ\text{C}$ for 10 ± 1 seconds. | No interference in operation. |
| terminal mechanical strength | For 10 seconds, the force of 9.8N (1.0kg) is applied to each terminal in axial direction. | No damage or cutting off. |
| vibration | The buzzer shall 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. | The value of oscillation frequency/current consumption should be $\pm 10\%$ of the initial measurements. The SPL should be within $\pm 10\text{dB}$ compared with the initial measurement. |
| drop test | The part will be dropped from a height of 75 cm onto a 40 mm thick wooden board 3 times in 3 axes (X, Y, Z) for a total of 9 drops. | |

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ENVIRONMENT TEST

| item | test condition | evaluation standard |
|------------------|--|---|
| high temp. test | After being placed in a chamber at +125°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 $\pm 10\%$ compared to the initial measurements. The SPL should be within $\pm 10\text{dB}$ compared to the initial measurements. |
| low temp. 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 \pm 5% relative humidity for 240 hours. | |
| temp. cycle test | The part shall be subjected to 5 cycles. One cycle will consist of:  | |

RELIABILITY TEST

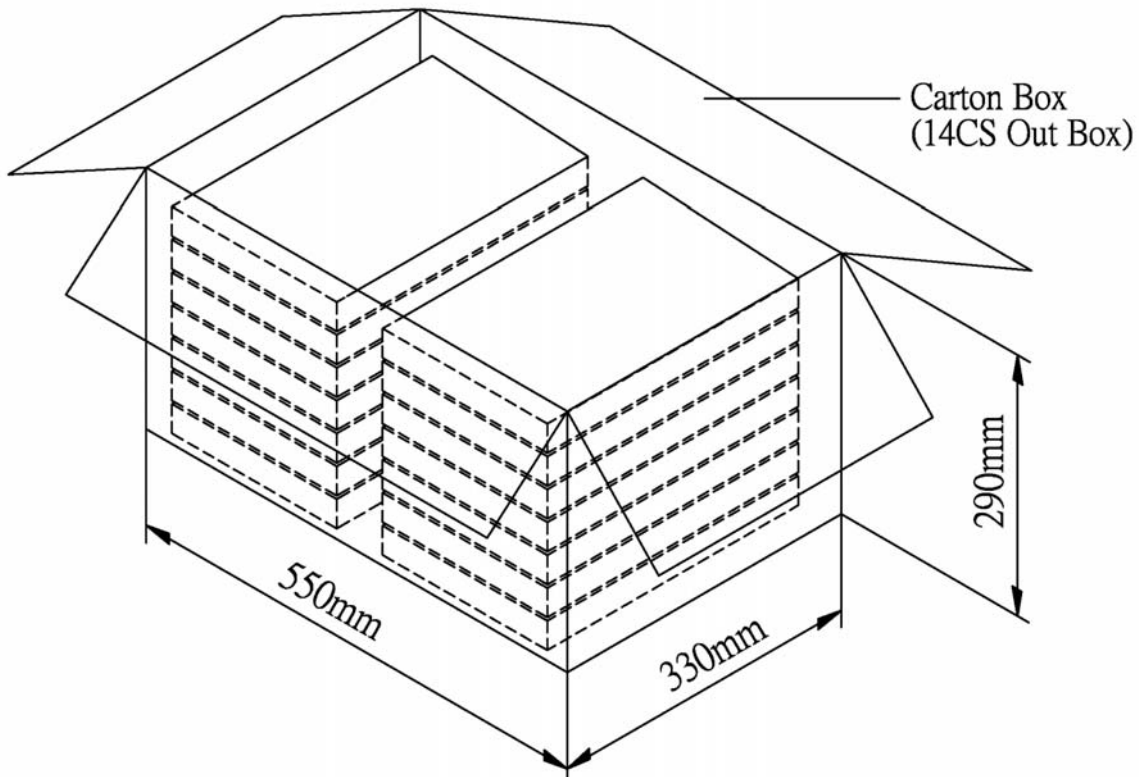
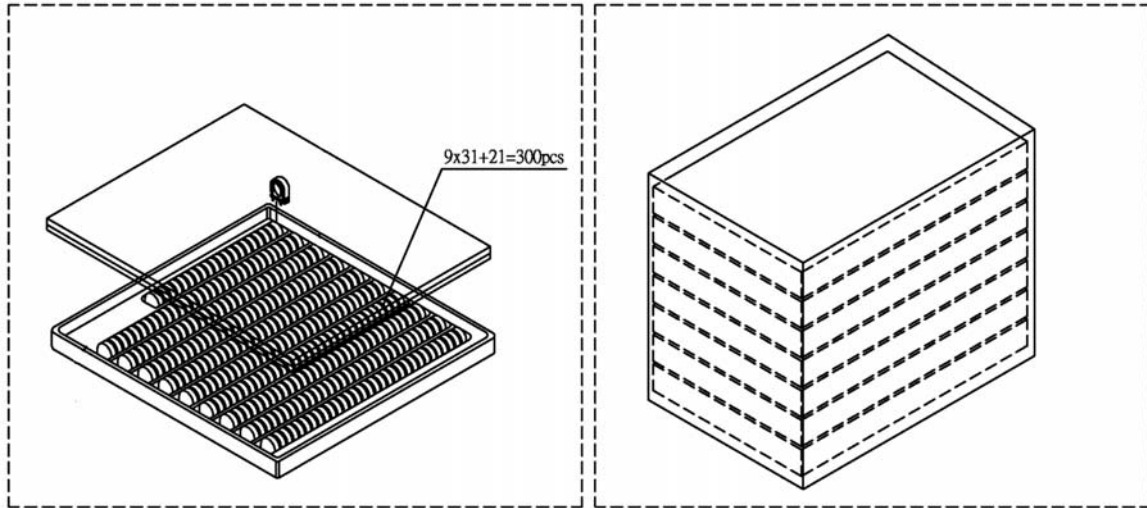
| item | test condition | evaluation standard |
|-----------------------|---|---|
| operating (life test) | 1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +100°C with rated voltage applied. 2. Intermittent life test: A duty cycle of 1 minute on, 1 minutes off, a minimum of 5,000 times at room temp (+25 \pm 2°C) with rated voltage applied. | The buzzer will be measured after being placed at +25°C for 4 hours. The value of the oscillation frequency/current consumption should be $\pm 10\%$ compared to the initial measurements. The SPL should be within $\pm 10\text{dB}$ compared to the initial measurements. |

TEST CONDITIONS

| | | | |
|--------------------------|-------------------------------|-----------------------|----------------------------|
| standard test condition | a) temperature: +5 ~ +35°C | b) humidity: 45 - 85% | c) pressure: 860-1060 mbar |
| judgement test condition | a) temperature: +25 \pm 2°C | b) humidity: 60 - 70% | c) pressure: 860-1060 mbar |

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PACKAGING


| | | |
|------------|--------------------|--------------------|
| Out Tray | 306mmx246mmx50.5mm | 1x300PCS=300PCS |
| Carton Box | 550mmx330mmx290mm | 300PCSx14=4,200PCS |