

Description: piezo audio transducer

Date: 1/19/2010

Unit: mm

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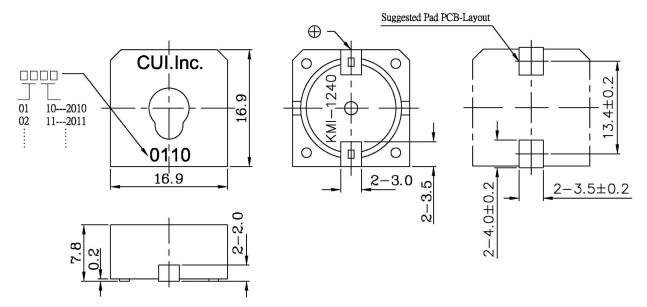


Specifications

| Operating voltage | 20 Vp-p max. | |
|---------------------------|-------------------------|--|
| Current consumption | 10 mA max. | at 10 Vp-p, square wave, 5 KHz |
| Sound pressure level | 88 db min. | at 10 cm / 10 Vp-p, square wave, 5 KHz |
| Electrostatic capacitance | 15,000 pF ±30% | at 1 KHz / 1 V |
| Operating temperature | -30 ~ +70° C | |
| Storage temperature | -40 ~ +80° C | |
| Dimensions | L16.9 x W16.9 x H7.8 mm | |
| Weight | 2.6 g max. | |
| Material | PPS UL-94 V-0 (Black) | |
| Terminal | SMD type (Au Plating) | |
| RoHS | yes | |
| | | |

Appearance Drawing

Tolerance: ±0.5



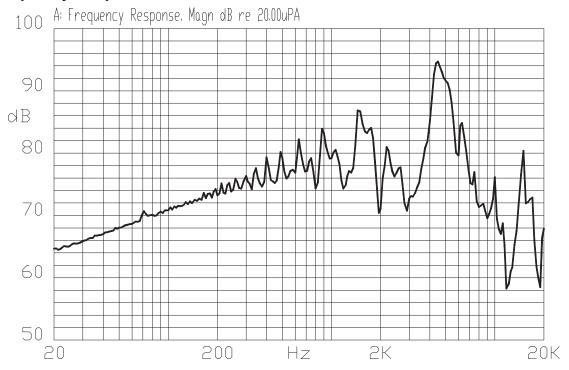


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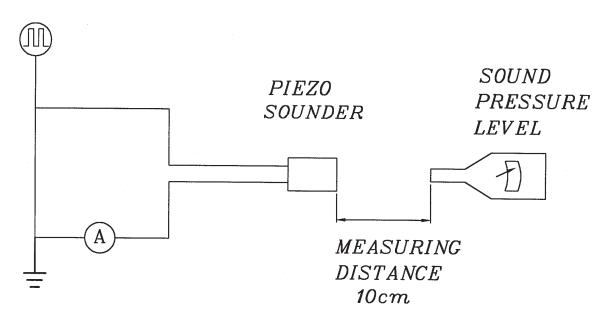
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Typical Frequency Response Curve



Measurement Method

S.P.L. Measuring Circuit Input Signal: 10Vp-p,5kHz, 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 | Lead terminals are immersed in solder bath | 95% of the surface must be | |
| • | of 270 ±5°C for 3 ±1 seconds. | covered with fresh solder. | |
| Soldering Heat Resistance | The product follows the reflow temperature | No interference in operation. | |
| | curve to test its reflow thermo stability. | | |
| Terminal Mechanical Strength | Lead pads should be soldered onto the pc | | |
| - | board and the force of 9.8N (1.0kg) should be | No damage or cutting off. | |
| | applied behind the part for 10 seconds. | | |
| Vibration | The buzzer should be measured after applying | The value of oscillation | |
| | a vibration amplitude of 1.5 mm with 10 to | frequency/current consumption | |
| | 55 Hz band of vibration frequency to each of | should be within ±10% of the | |
| | the 3 perpendicular directions for 2 hours. | initial measurements. The SPL | |
| Drop Test | The part will be dropped from a height of | should be within ±10dB compared | |
| | 75 cm onto a 40 mm thick wooden board 3 with the initial measureme | | |
| | 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 +80°C for | |
| | 240 hours. | |
| Low temp. test | After being placed in a chamber at -40°C for | |
| | 240 hours. | The buzzer will be measured after being placed at +25°C for 4 hours. The value of the |
| Humidity test | After being placed in a chamber at +40°C and | |
| • | 90±5% relative humidity for 240 hours. | |
| Temp. cycle test | The part should be subjected to 5 cycles. One | |
| | cycle will consist of: | |
| | +80°C +25°C -40°C 0.5hr 0.5hr 0.5hr 0.5hr 0.25 3hours | consumption should be within ±10% compared to the initial measurements. The SPL should be within ±10dB compared to the initial measurements. |



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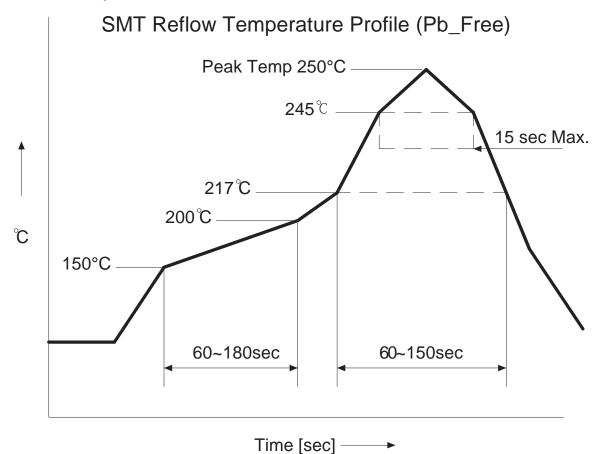
Reliability Test

| Item | Test Condition | Evaluation Standard |
|-----------------------|--|-----------------------------------|
| Operating (Life Test) | Continuous life test: | The buzzer will be measured after |
| | The part will be subjected to 48 hours of | being placed at +25°C for 4 |
| | continuous operation at +55°C with rated | hours. The value of the |
| | voltage applied. | oscillation frequency/current |
| | | consumption should be within |
| | Intermittent life test: | ±10% compared to the initial |
| | A duty cycle of 1 minute on, 1 minute off, a | measurements. The SPL should |
| | minimum of 5,000 times at room temp | be within ±10dB compared to |
| | (+25 ±2°C) with rated voltage applied. | the initial measurements. |

Test Conditions

| Standard Test Condition | a) Tempurature: +5 ~ +35°C | b) Humidity: 45 - 85% | c) Pressure: 860-1060 mbar |
|--------------------------|----------------------------|-----------------------|----------------------------|
| Judgement Test Condition | a) Tempurature: +25 ±2°C | b) Humidity: 60 - 70% | c) Pressure: 860-1060 mbar |

Recommended Temperature Profile for Reflow Oven





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Packaging

