

Description: piezo audio transducer

Date: 9/18/2006 Unit: mm Page No: 1 of 5

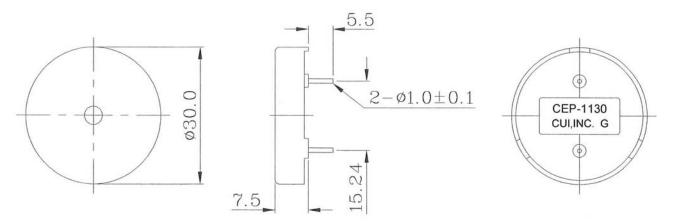


Specifications

| Operating voltage | 30 Vp-p max. | |
|---------------------------|-----------------------|------------------------------------------|
| Current consumption | 10 mA max. | at 10 Vp-p, square wave, 3.0 KHz |
| Sound pressure level | 90 db min. | at 10 cm / 10 Vp-p, square wave, 3.0 KHz |
| Electrostatic capacitance | 18,000 pF ±30% | at 1 KHz / 1 V |
| Operating temperature | -30 ~ +80° C | |
| Storage temperature | -40 ~ +80° C | |
| Dimensions | ø30.0 x H7.5 mm | |
| Weight | 4.4 g max. | |
| Material | ABS UL-94 1/16" HB I | High Heat (Black) |
| Terminal | Pin type (Sn Plating) | |
| RoHS | yes | |
| | | |

Appearance Drawing

Tolerance: ±0.5

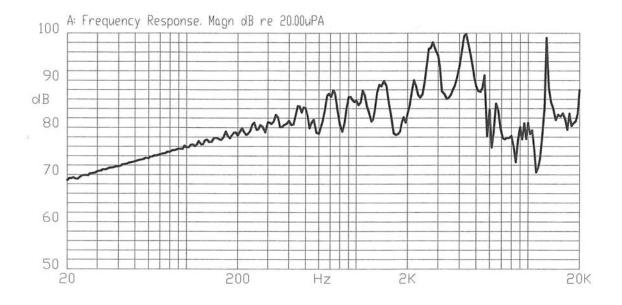




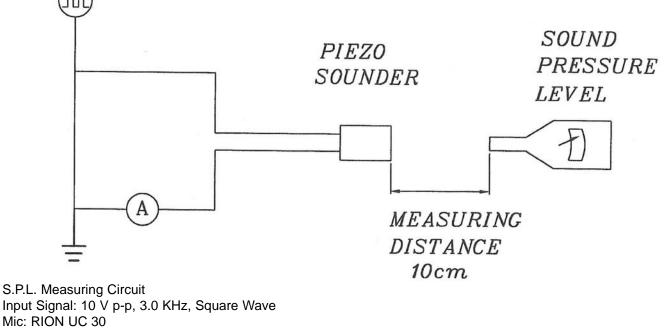
Date: 9/18/2006 Unit: mm Page No: 2 of 5

Description: piezo audio transducer

Typical Frequency Response Curve



Measurement Method



S.G.: Hewlett Packard 33120A Function Generator or equivalent



Description: piezo audio transducer

Date: 9/18/2006 Unit: mm Page No: 3 of 5

Mechanical Characteristics

| Item | Test Condition | Evaluation Standard |
|------------------------------|---------------------------------------------------|----------------------------------|
| Solderability | Lead terminals are immersed in rosin for | 90% min. of the lead terminals |
| | 5 seconds and then immersed in solder bath | will be wet with solder. (Except |
| | of 270 \pm 5°C for 3 \pm 1 seconds. | 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 ±5°C for | No interference in operation. |
| | 3 ±0.5 or 260 ±5°C for 10 ±1 seconds. | |
| Terminal Mechanical Strength | For 10 seconds, the force of 9.8N (1.0kg) is | No damage or cutting off. |
| _ | applied to each terminal in axial direction. | |
| 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 ±10% of the initial |
| | the 3 perpendicular directions for 2 hours. | measurements. The SPL should |
| Drop Test | The part will be dropped from a height of | be within ±10dB compared with |
| | 75 cm onto a 40 mm thick wooden board 3 | the initial measurement. |
| | 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. | | |
| Humidity test | After being placed in a chamber at +40°C and 90±5% relative humidity for 240 hours. | The buzzer will be measured after | |
| Temp. cycle test | The part shall be subjected to 5 cycles. One cycle will consist of: | 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. | |



Description: piezo audio transducer

Date: 9/18/2006 Unit: mm Page No: 4 of 5

Reliability Test

| Item | Test Condition | Evaluation Standard |
|-----------------------|----------------------------------------------------|----------------------------------|
| Operating (Life Test) | 1. Continuous life test: | The buzzer will be measured afte |
| | The part will be subjected to 250 hours of | being placed at +25°C for 4 |
| | continuous operation at +80°C with rated | hours. The value of the |
| | voltage applied. | oscillation frequency/current |
| | | consumption should be ±10% |
| | 2. Intermittent life test: | compared to the initial |
| | A duty cycle of 1 minute on, 5 minutes off, a | measurements. The SPL should |
| | minimum of 10,000 times at room temp | be within ±10dB compared to |
| | $(+25 \pm 2^{\circ}C)$ 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 |



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Date: 9/18/2006 Unit: mm Page No: 5 of 5

Packaging

