



CUI INC

Part No: CMT-1303

Date: 9/12/2006

Description: piezo audio transducer

Unit: mm

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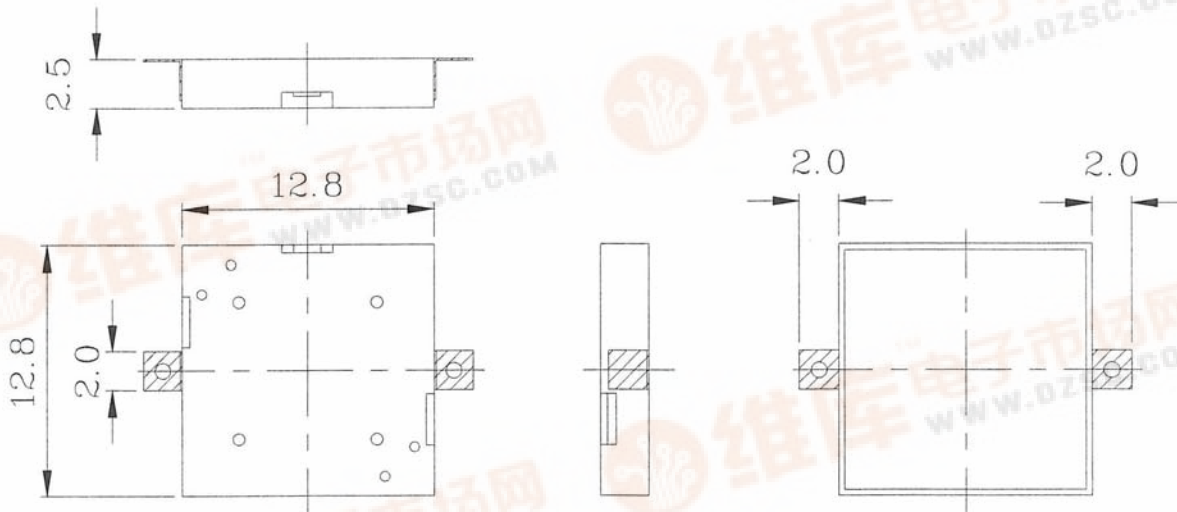


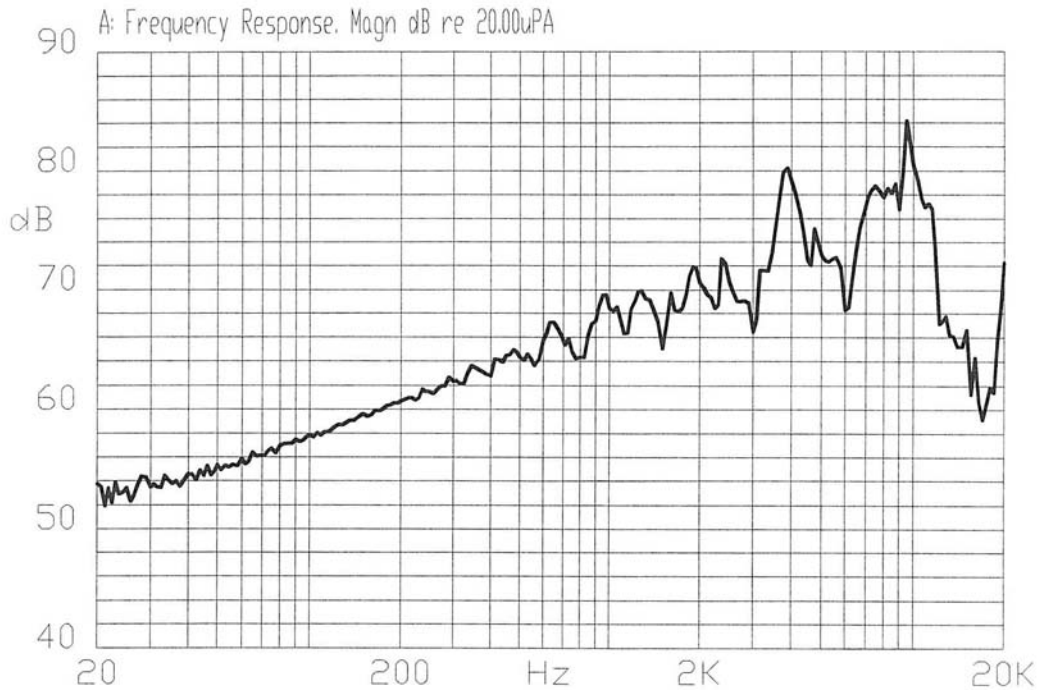
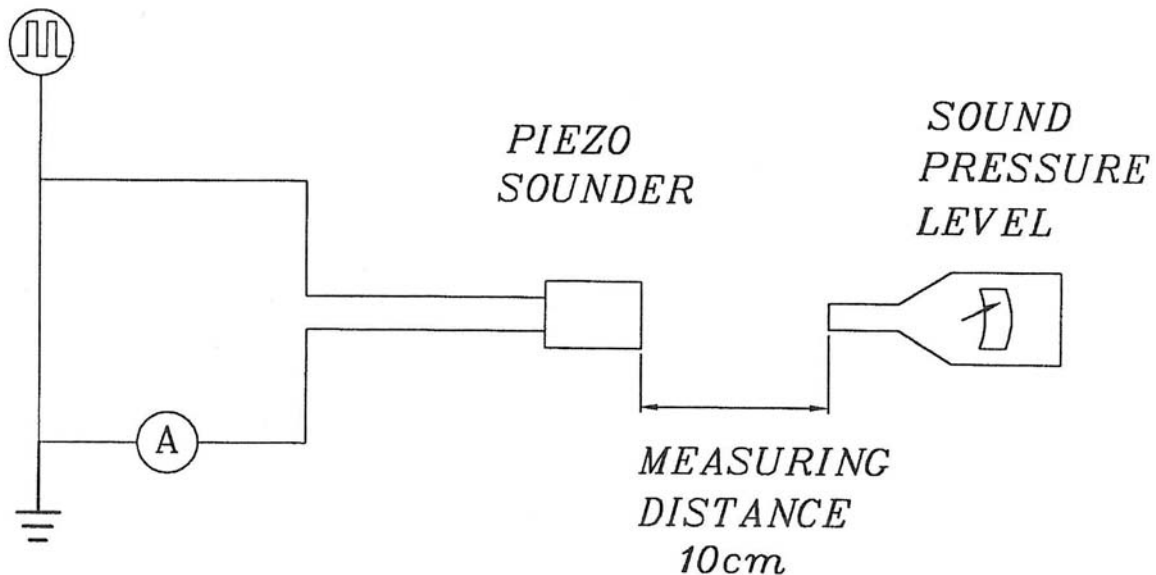
Specifications

Operating voltage	25 Vp-p max.	
Current consumption	5 mA max.	at 5 Vp-p, square wave, 4.1 KHz
Sound pressure level	70 db min.	at 10 cm / 5 Vp-p, square wave, 4.1 KHz
Electrostatic capacitance	16,000 pF ±30%	at 1 KHz / 1 V
Operating temperature	-20 ~ +70° C	
Storage temperature	-30 ~ +80° C	
Dimensions	ø12.8 x W12.8 x H2.5 mm	
Weight	0.5 g max.	
Material	LCP (White)	
Terminal	SMD Type	
RoHS	yes	

Appearance Drawing

Tolerance: ±0.2



Typical Frequency Response Curve

Measurement Method


S.P.L. Measuring Circuit

Input Signal: 5 V p-p, 4.1 KHz, Square Wave

Mic: RION UC 30

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



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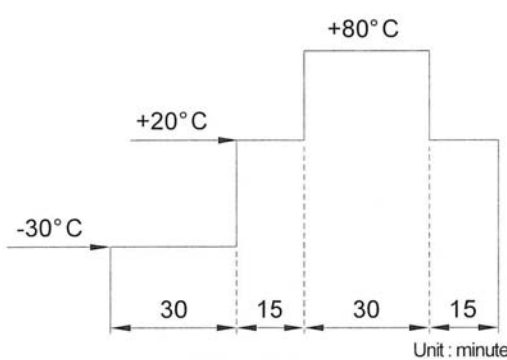
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Mechanical Characteristics

Item	Test Condition	Evaluation Standard
Solderability	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $230 \pm 5^{\circ}\text{C}$ for 2 ± 0.5 seconds.	95% of the surface of the lead pads must be covered with fresh solder.
Soldering Heat Resistance	1) IR Reflow Pre-heating conditions should be $140\sim 160^{\circ}\text{C}$ for 60 to 120 seconds. Ascending time up to 200°C should be longer than 30 seconds. Heating conditions should be within 10 seconds at 230°C min. Peak temperature should be 235°C . Then, place leave the buzzer in natural conditions for 1 hour before measuring. 2) Soldering Iron Soldering iron of $270 \pm 5^{\circ}\text{C}$ should be placed 0.5mm above the buzzer's electrode. Melting solder through the soldering iron should be applied to the electrode for 3 ± 1 seconds. Then, place the buzzer in natural conditions for 4 hours before measuring.	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 1.55 mm with 10 to 55 Hz band of vibration frequency for 1 minute 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.

Environment Test

Item	Test Condition	Evaluation Standard
High temp. test	After being placed in a chamber at +80°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 -30°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)	<p>1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +55°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 \pm2°C) with rated voltage applied.</p>	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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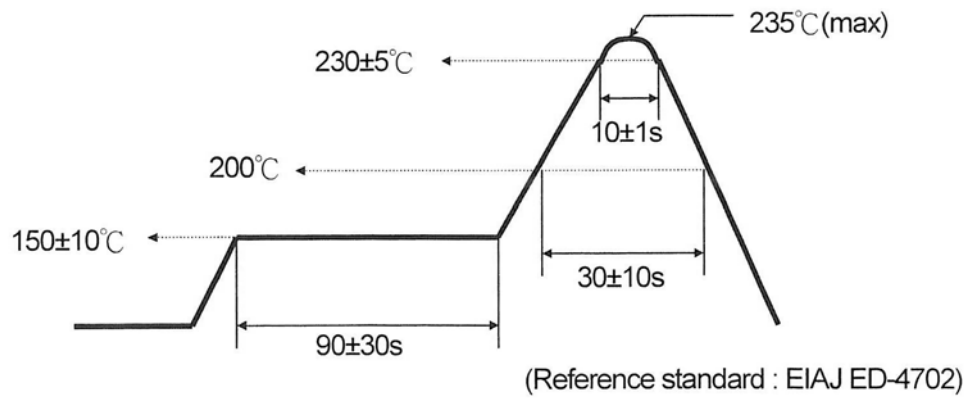
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Recommended Temperature Profile for Reflow Oven





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Packaging

