CUI INC

Part No: CEP-1172

Description: piezo audio transducer

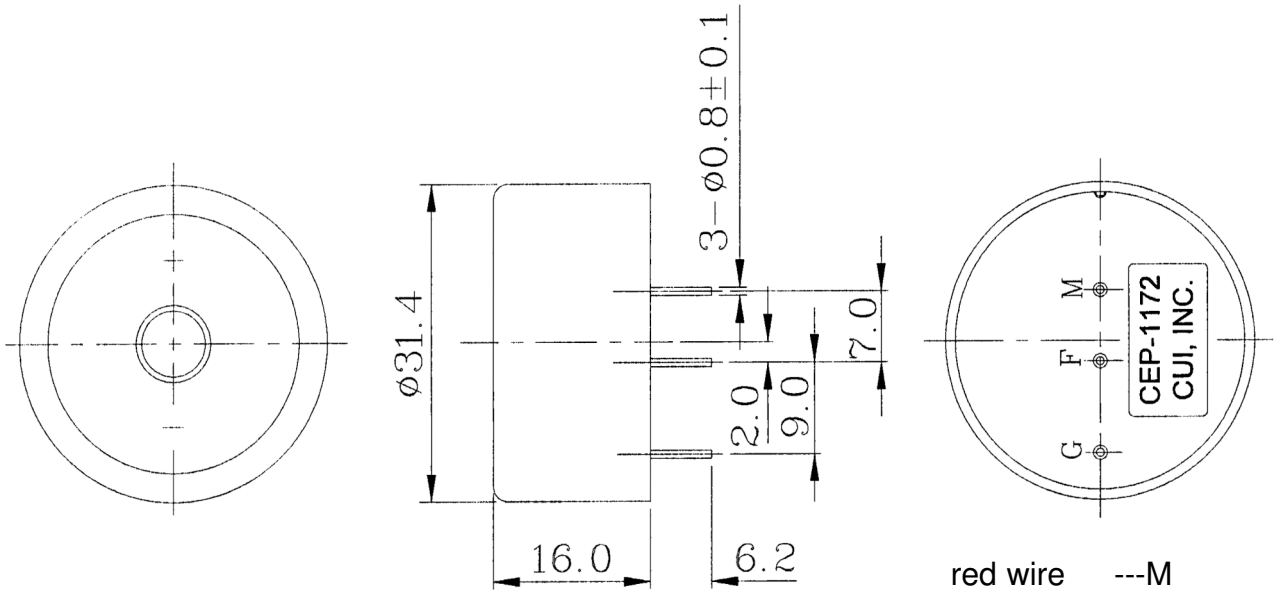
Date: 6/25/2007
Unit: mm

Specifications

Resonant frequency	3.3 KHz ± 0.5	
Operating voltage	3 ~ 28 V dc	
Current consumption	7 mA max.	at 12 V dc
Sound pressure level	81 db min.	at 30 cm / 12 V dc
Rated voltage	12 V dc	
Operating temperature	-30 ~ +85° C	
Storage temperature	-40 ~ +95° C	
Dimensions	ø31.4 x H16.0 mm	
Weight	6.7 g max.	
Material	ABS UL-94 1/16” HB (Black)	
Terminal	PIN type	
RoHS	no	

Appearance Drawing

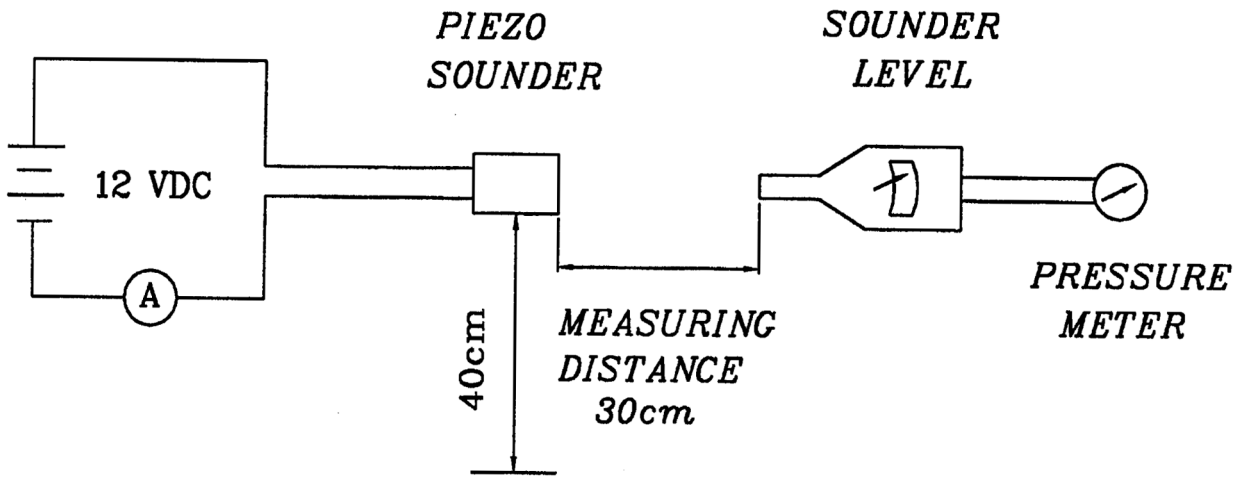
Tolerance: ±0.5



red wire ---M
blue wire ---F
black wire ---G

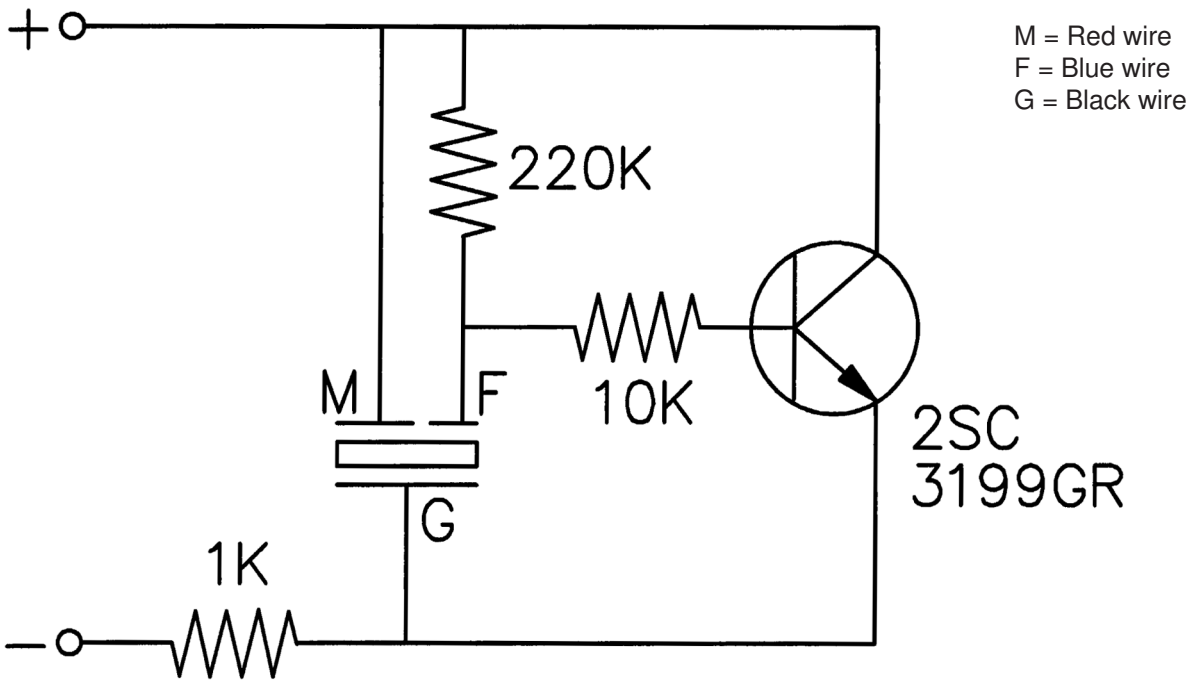
Measurement Method

1. S.P.L. Measuring Circuit



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

2.The current consumption and the sound pressure level are measured by using the recommend driving circuit shown as below（one example）



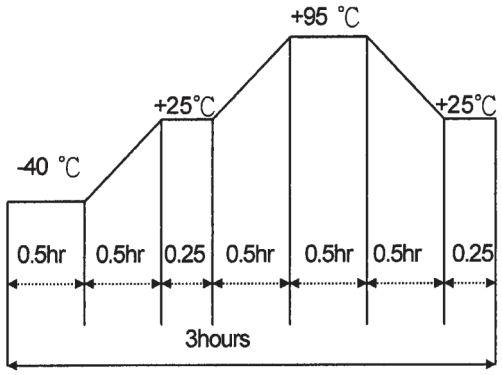
M = Red wire
F = Blue wire
G = Black wire

Mechanical Characteristics

Item	Test Condition	Evaluation Standard
Solderability[1]	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in a solder bath of +230 ±5°C for 3 ±0.5 seconds.	90% min. of the stripped wires will be wet with solder. (Except the edge of the terminal)
Soldering Heat Resistance	Lead terminals are immersed up to 1.5mm from insulation in solder bath of 300 ±5°C or 260 ±5°C for 10 ±1 seconds.	No interference in operation.
Terminal Mechanical Strength	The force of 9.8N is applied to each terminal in each axial direction for 10 seconds.	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 ±10% of the initial measurements. The SPL should be within ±10dB 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.	

Notes: 1. Not recommended for wave soldering

Environment Test

Item	Test Condition	Evaluation Standard
High temp. test	After being placed in a chamber at +95°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 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.	
Temp. cycle test	The part shall be subjected to 5 cycles. One cycle will consist of: 	

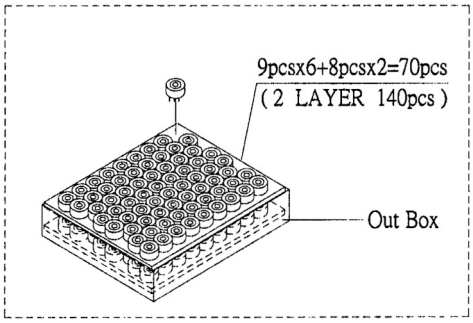
Reliability Test

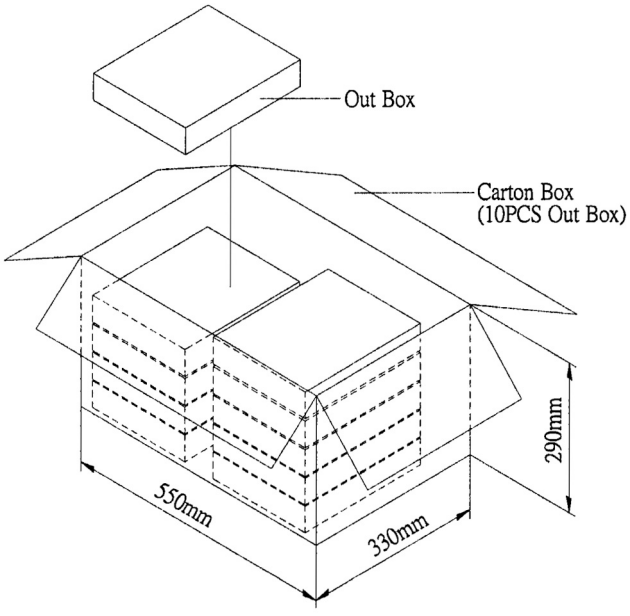
Item	Test Condition	Evaluation Standard
Operating (Life Test)	1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied. 2. Intermittent life test: A duty cycle of 1 minute on, 1 minute off, a minimum of 5,000 times at room temp (+25 ±2°C) with rated voltage applied.	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.

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

Measurement Method





Out Box	310mmx248mmx49mm	1x140PCS=140PCS
Carton Box	550mmx330mmx290mm	140PCSx10=1400PCS

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