

Description: piezo audio transducer

Date: 9/22/2006

Unit: mm Page No: 1 of 4

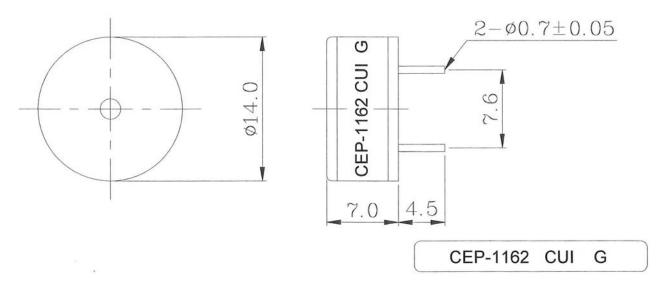


**Specifications** 

Operating voltage	20 Vp-p max.	
Current consumption	7 mA max.	at 10 Vp-p, square wave, 4.0 KHz
Sound pressure level	80 db min.	at 10 cm / 10 Vp-p, square wave, 4.0 KHz
Electrostatic capacity	14,000 pF ±30%	at 120 Hz / 1 V
Operating tempurature	-20 ~ +85° C	
Storage tempurature	-30 ~ +90° C	
Dimensions	ø14.0 x H7.0 mm	
Weight	0.85 g max.	
Material	PP UL-94 V-1 (Grey)	
Terminal	Pin type	
RoHS	yes	

# **Appearance Drawing**

Tolerance: ±0.5



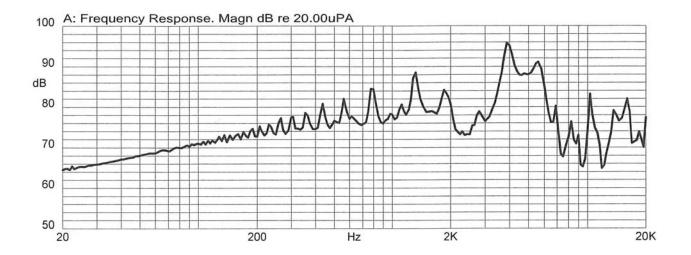


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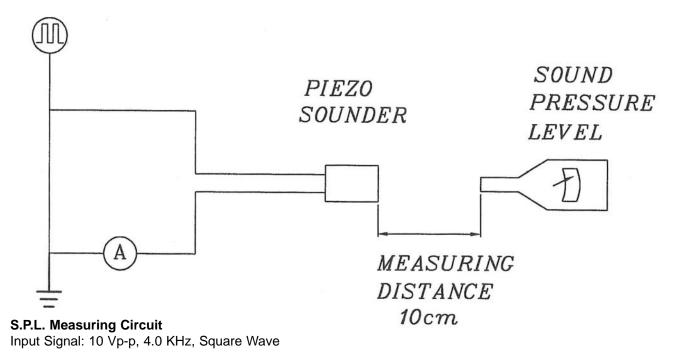
Date: 9/22/2006

Unit: mm Page No: 2 of 4

## **Typical Frequency Response Curve**



#### **Measurement Method**



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

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



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Date: 9/22/2006

Unit: mm Page No: 3 of 4

#### **Mechanical Characteristics**

Item	Test Condition	Evaluation Standard
Solderability <sup>1</sup>	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.
	of 270 ±5°C for 3 ±1 seconds.	(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 ±5°C or	No interference in operation.
	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 shall be measured after applying	
	a vibration amplitude of 1.5 mm with 10 to	The value of oscillation
	55 Hz band of vibration frequency to each of	frequency/current consumption
	the 3 perpendicular directions for 2 hours.	should be ±10% of the initial
Drop Test	The part will be dropped from a height of	measurements. The SPL should
	75 cm onto a 40 mm thick wooden board 3	be within ±10dB compared with
	times in 3 axes (X, Y, Z) for a total of 9 drops.	the initial measurement.

Notes: 1. Not recommended for wave soldering

#### **Environment Test**

Item	Test Condition	Evaluation Standard
High temp. test	After being placed in a chamber at +90°C for 240 hours.	
Low temp. test	After being placed in a chamber at -30°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.
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:  +90°C  -30°C  -30	



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Unit: mm Page No: 4 of 4

**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 250 hours of	being placed at +25°C for 4
	continuous operation at +60°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, 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

### **Packaging**

Each minimum unit will be individually packaged and be placed ina carton box. The box will be clearly marked with Part Number, Quantity, and Outgoing Inspection Number. There will be no mechanical damage on products during transportation and/or in storage.