

Part No: CEP-4411AC

Description: piezo audio indicator

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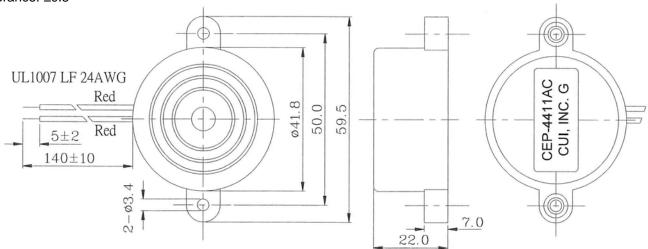


#### **Specifications**

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Resonant frequency	2.8 ± 0.5 KHz		
Operating voltage	3.0 ~ 120.0 V ac/V dc		
Current consumption	7 mA max.	at 110 V ac	
Sound pressure level	88 db min.	at 30 cm / 110 V ac	
Rated Voltage	110 V ac		
Tone	Continuous		
Operating tempurature	-20 ~ +60° C		
Storage tempurature	-30 ~ +70° C		
Dimensions	ø41.8 x H22.0 mm	See attached drawing	
Weight	22.2 g max.		
Material	ABS UL-94 1/16" HB H	igh Heat (Black)	
Terminal	Wire type	See attached drawing	
RoHS	yes		

# **Appearance Drawing**

Tolerance: ±0.5



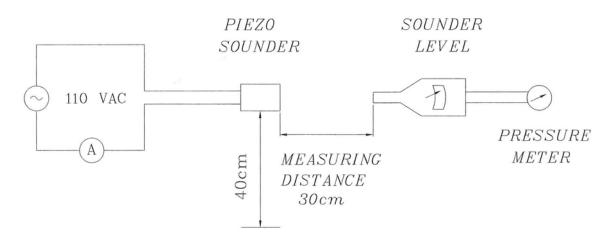


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#### **Measurement Method**



S.P.L. Measuring Circuit Mic: RION S.P.L. meter UC 30 or equivalent S.G.: Hewlett Packard 33120A Function Generator or equivalent

#### **Mechanical Characteristics**

Item	Test Condition	Evaluation Standard
Solderability	Stripped wires of lead wires are immersed in	90% min. of the stripped wires
	rosin for 5 seconds and then immersed in	will be wet with solder.
	a solder bath of +270 ±5°C for 3 ±0.5 seconds.	(Except the edge of the terminal)
Terminal Mechanical Strength	The pull force should be applied to the double	
-	lead wire:	No damage or cutting off.
	Horizontal 3.0N (0.306kg) for 30 seconds	
	Vertical 2.0N (0.204kg) for 30 seconds	
Vibration	The buzzer will 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 75 cm	be within ±10dB compared with
	onto a 40 mm thick wooden board 3 times in	the initial measurement.
	3 axis (X, Y, Z) for a total of 9 drops.	



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## **Environment Test**

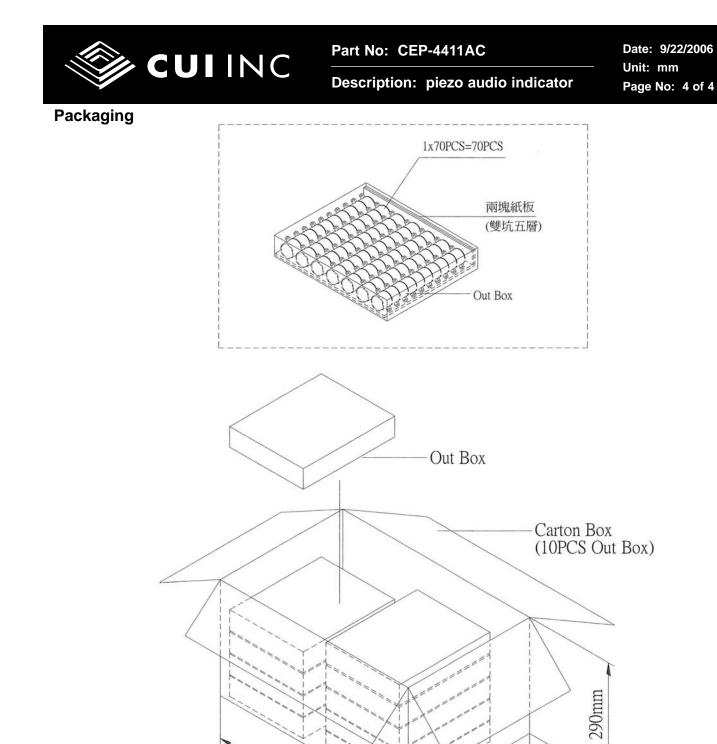
Item	Test Condition	Evaluation Standard
High temp. test	After being placed in a chamber at +70°C for	
	240 hours.	
Low temp. test	After being placed in a chamber at -30°C for	
	240 hours.	
Humidity test	After being placed in a chamber at +40°C and	
	90±5% relative humidity for 240 hours.	The buzzer will be measured after
Temp. cycle test	The part shall be subjected to 5 cycles. One	being placed at +25°C for 4 hours. The value of the
	cycle will consist of:	
	+70°C +25°C -30°C 0.5hr 0.5hr 0.25 0.5hr 0.5hr 0.5hr 0.5hr 0.25 3hours	oscillation frequency/current consumption should be within ±10% compared to the initial measurements. The SPL should be within ±10dB compared to the initial measurements.

# **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 48 hours of	being placed at +25°C for 4
	continuous operation at +45°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 ±10dB compared to the initial
	(+25±2°C) with rated voltage applied.	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



Out Box	310mmx248mmx49mm	1x70PCS=70PCS
Carton Box	550mmx330mmx290mm	70PCSx10=700PCS

330mm

1.CEP-4411AC 2. RoHS Compliant

SSOmm