

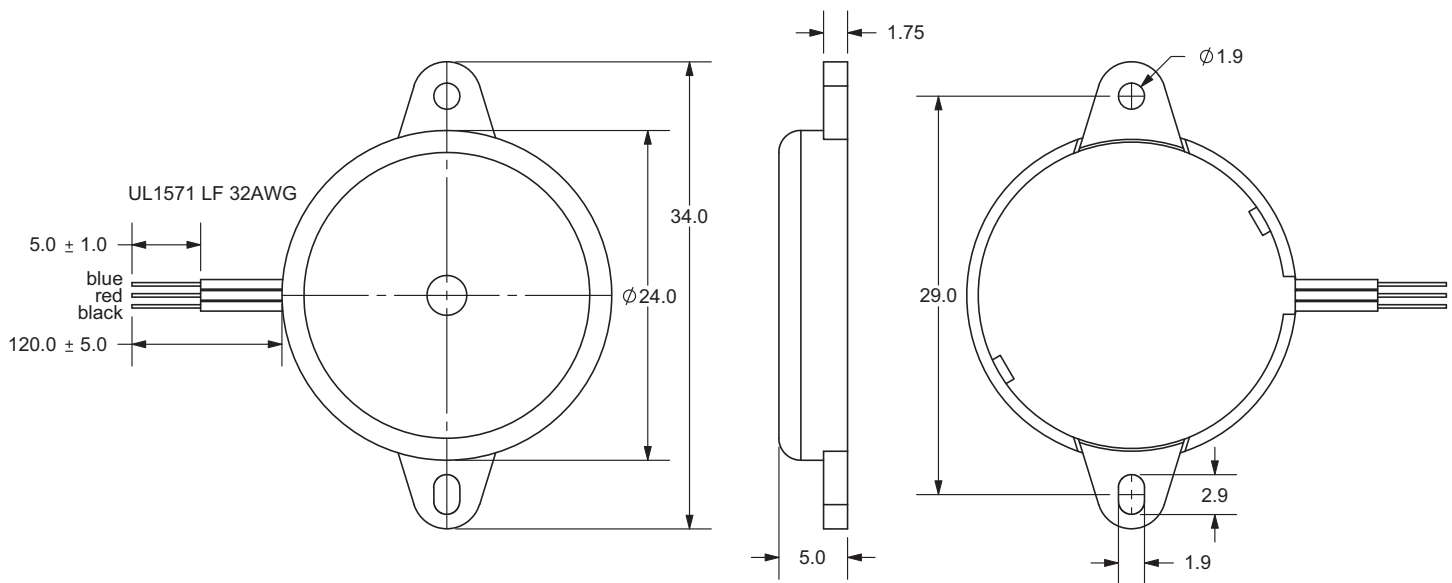
PART NUMBER: CPE-121

DESCRIPTION: piezo audio transducer

SPECIFICATONS

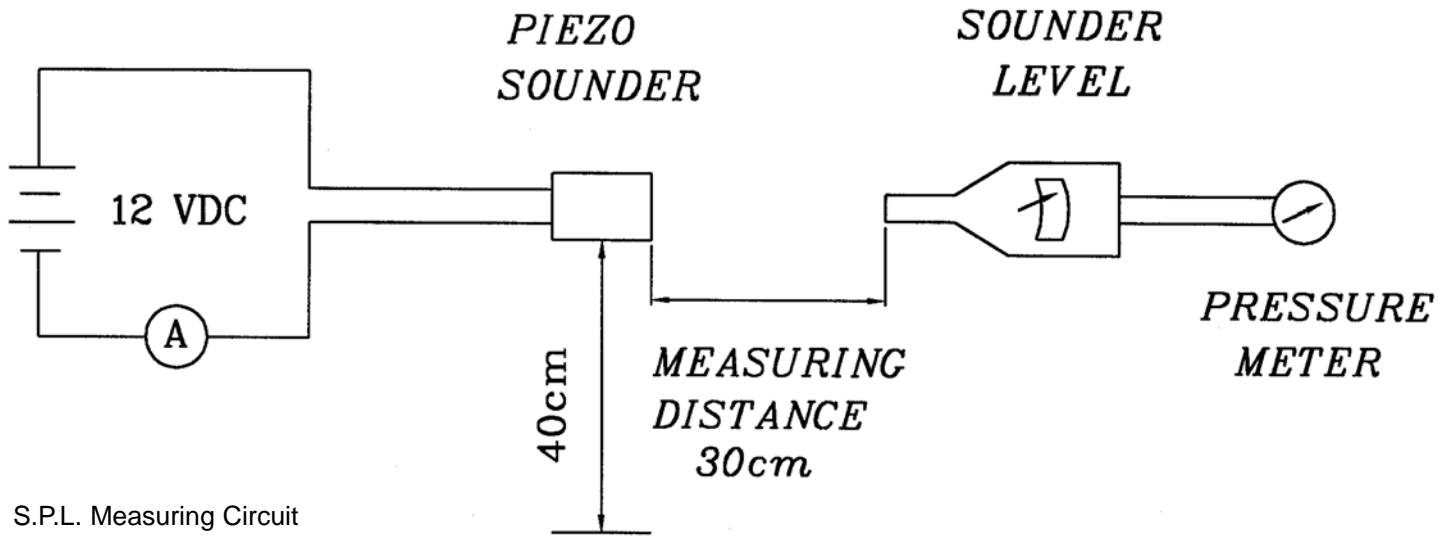
resonant frequency	4.5 KHz \pm 0.5
operating voltage range	3 ~ 28 V DC
current consumption	13 mA max. at 12 V DC
sound pressure level	83 db min. at 30 cm/12 V DC
rated voltage	12 V DC
tone	continuous
operating temperature	-30 ~ +85° C
storage temperature	-40 ~ +95° C
dimensions	\varnothing 24.0 x H5.0 mm
weight	7.4 g max.
material	ABS UL-94 1/16" hight heat (black)
terminal	wire type
RoHS	yes

APPEARANCE DRAWING

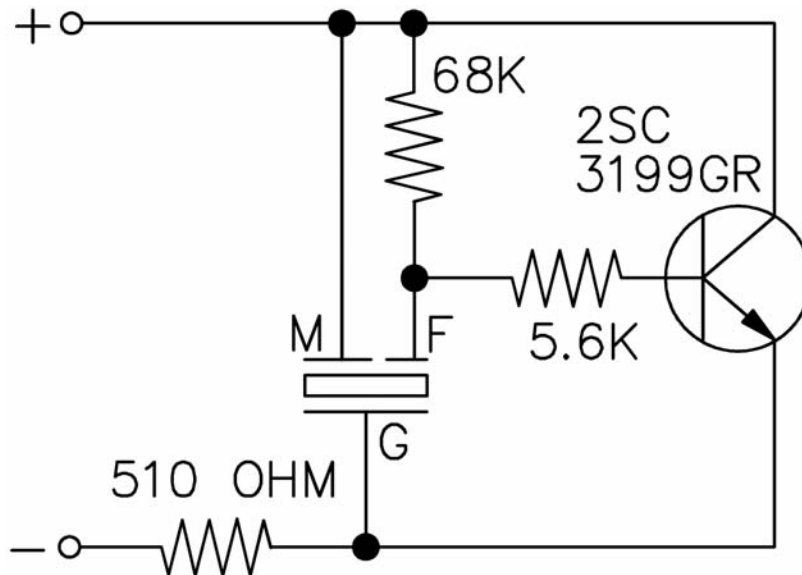
 tolerance: \pm 0.5
 units: mm


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MEASUREMENT METHOD


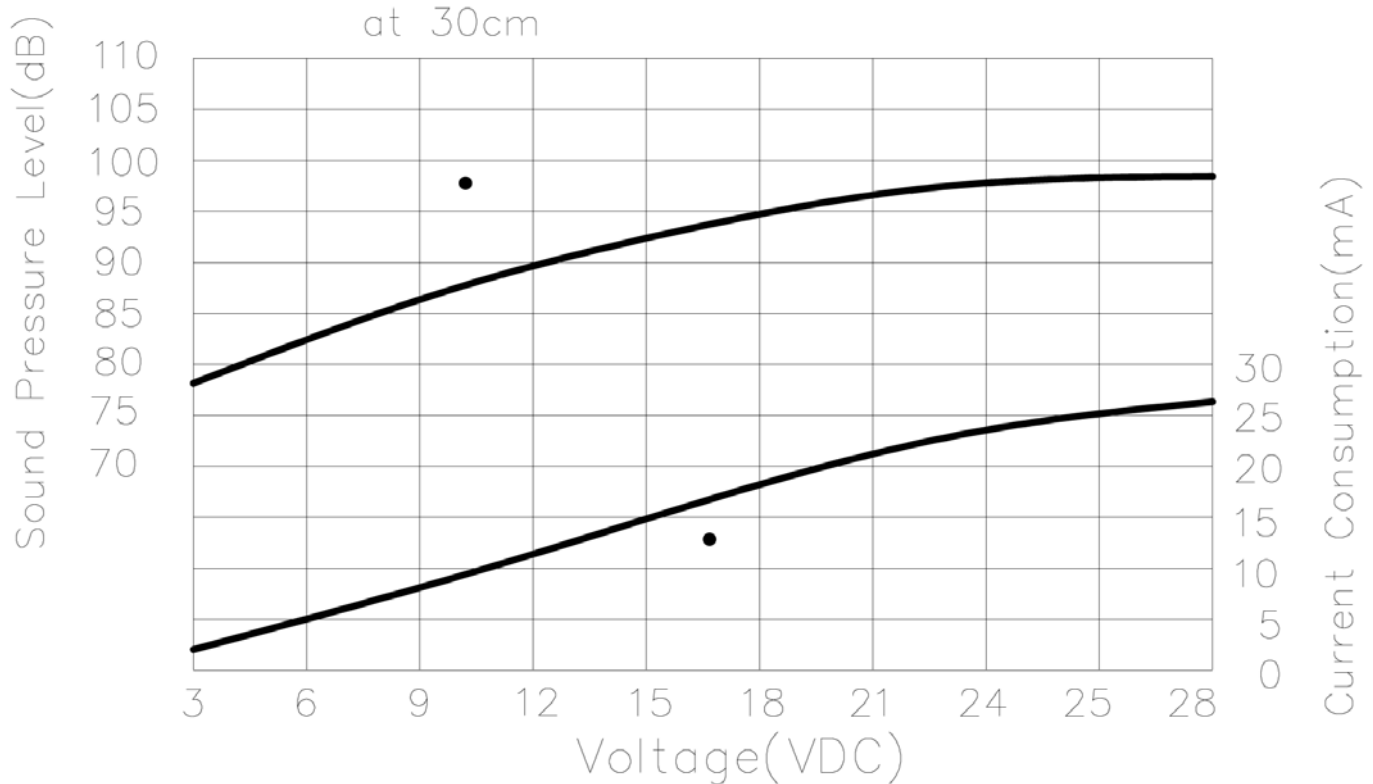
S.P.L. Measuring Circuit
 Mic: RION S.P.L. meter UC30 or equivalent



The current consumption and the sound pressure level are measured by using the recommended driving circuit shown above.

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MEASUREMENT METHOD

MECHANICAL CHARACTERISTICS

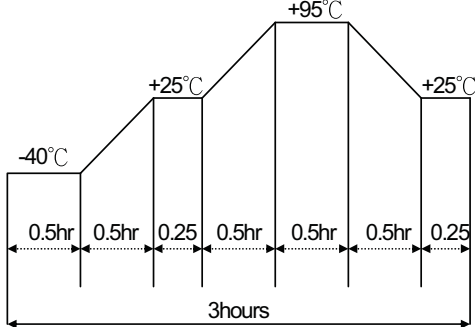
item	test condition	evaluation standard
solderability	Stripped wires are immersed in rosin for 5 seconds and then immersed in solder bath of $270 \pm 5^\circ\text{C}$ for 3 ± 1 seconds.	90% min. of the lead terminals will be wet with solder (except the edge of the terminal).
lead wire pull strength	The pull force shall be applied to lead wire: Horizontal 3.0N for 30 seconds Vertical 2.0N for 30 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 $\pm 10\%$ of the initial measurements. The SPL should be within $\pm 10\text{dB}$ 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.	

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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 $\pm 10\%$ 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 -40°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:	



The diagram illustrates a temperature cycle over a total duration of 3 hours. It starts at -40°C for 0.5 hours, then ramps up to +25°C in 0.5 hours. At +25°C, there is a 0.25-hour dwell, followed by a 0.5-hour ramp to +95°C. At +95°C, there is a 0.5-hour dwell, followed by a 0.5-hour ramp down to +25°C. At +25°C, there is another 0.5-hour dwell, followed by a 0.25-hour ramp back to -40°C. The total cycle time is 3 hours.

RELIABILITY TEST

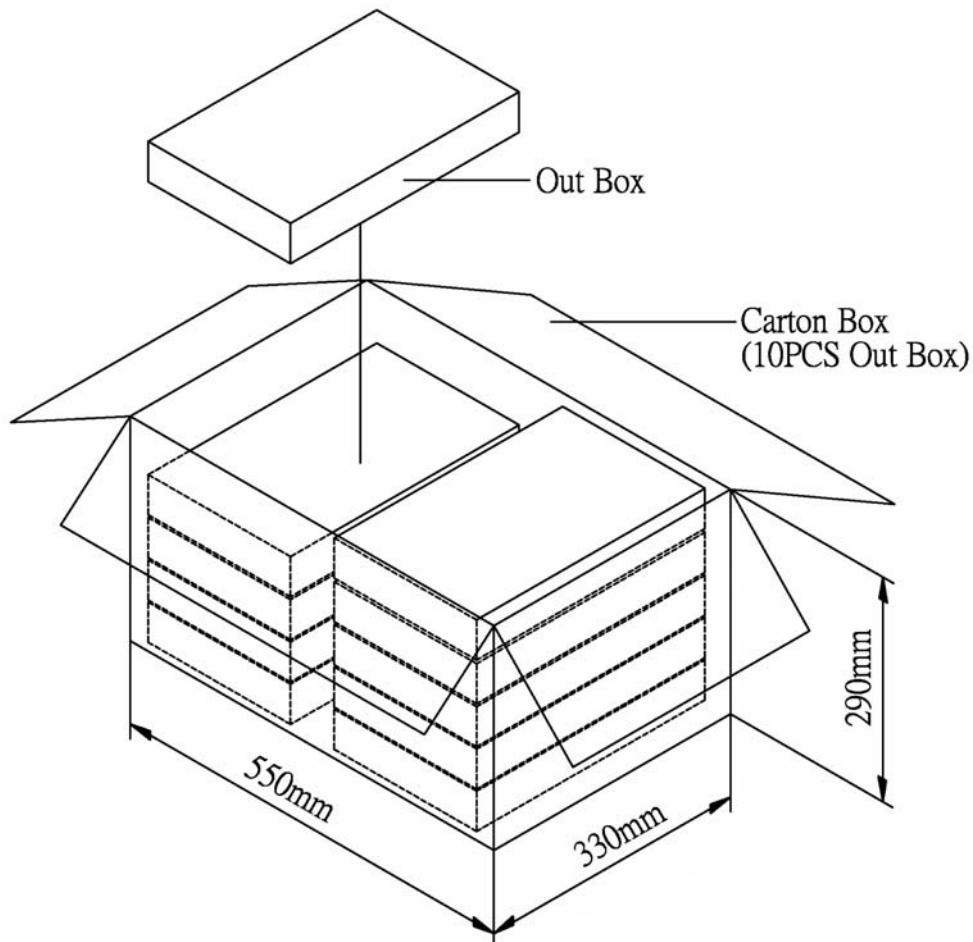
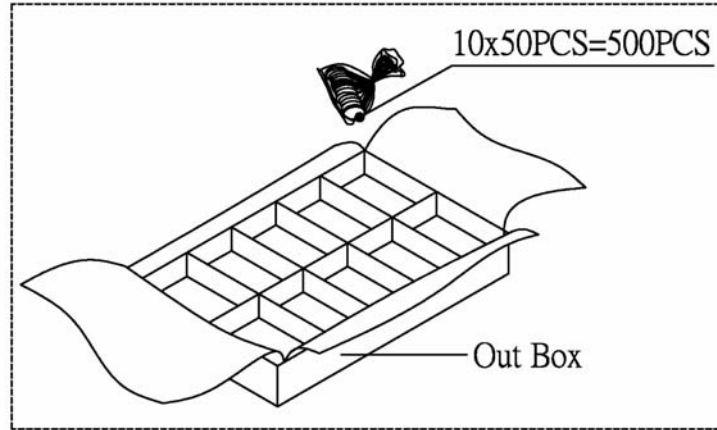
item	test condition	evaluation standard
operating (life test)	1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied. 2. Intermittent life test: A duty cycle of 1 minute on, 1 minutes off, a minimum of 5,000 times at room temp (+25 \pm 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 $\pm 10\%$ 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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PACKAGING


Out Box	310mmx248mmx49mm	10x50PCS=500PCS
Carton Box	550mmx330mmx290mm	500PCSx10=5,000PCS