CUI INC

date 11/12/2007

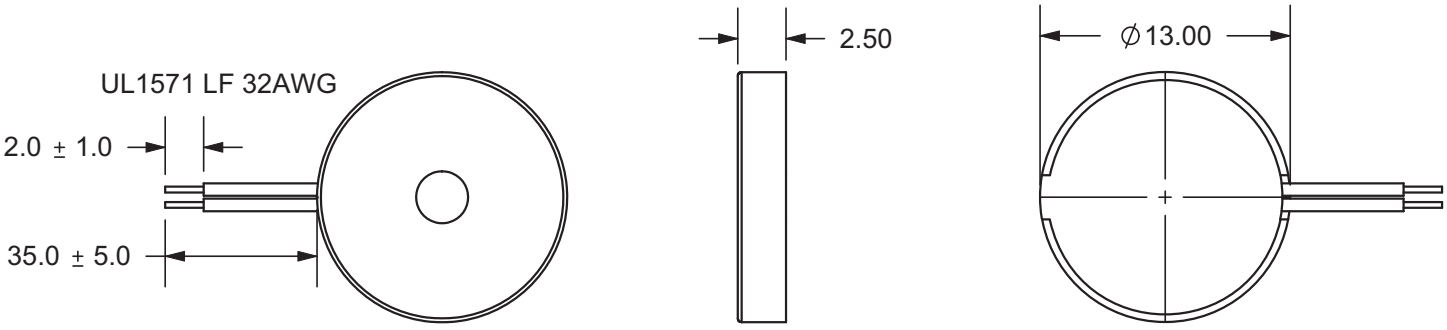
PART NUMBER: CPE-163 **DESCRIPTION:** piezo audio transducer

SPECIFICATONS

operating voltage	30 Vp-p max.	
current consumption	10 mA max.	at 10 Vp-p, sqaure wave, 4.8 Khz
sound pressure level	80 db min.	at 10 cm/10 Vp-p, sqaure wave, 4.8 Khz
electrostatic capacity	14,000 ± 30%	at 1 Khz/1 V
operating tempurature	-30 ~ +85° C	
storage tempurature	-40 ~ +95° C	
dimensions	Ø13.0 x H2.5 mm	
weight	.35 g max.	
material	ABS UL-94 1/16” HB high heat (black)	
terminal	wire type	
RoHS	yes	

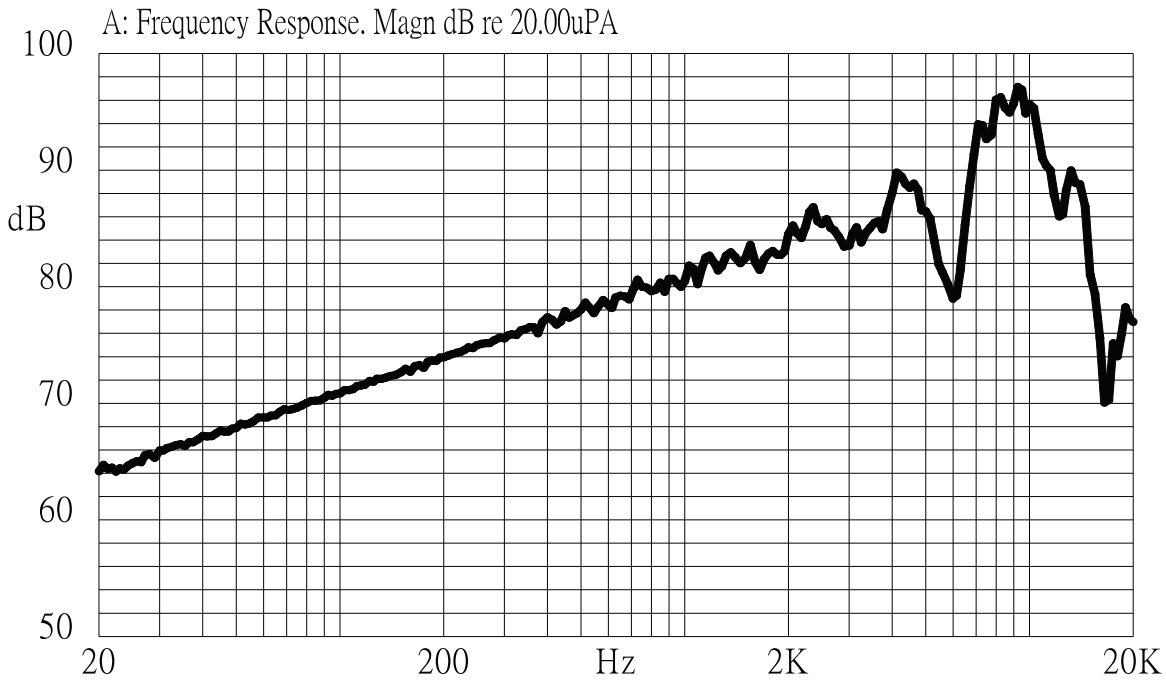
APPEARANCE DRAWING

tolerance: ±0.5
units: mm

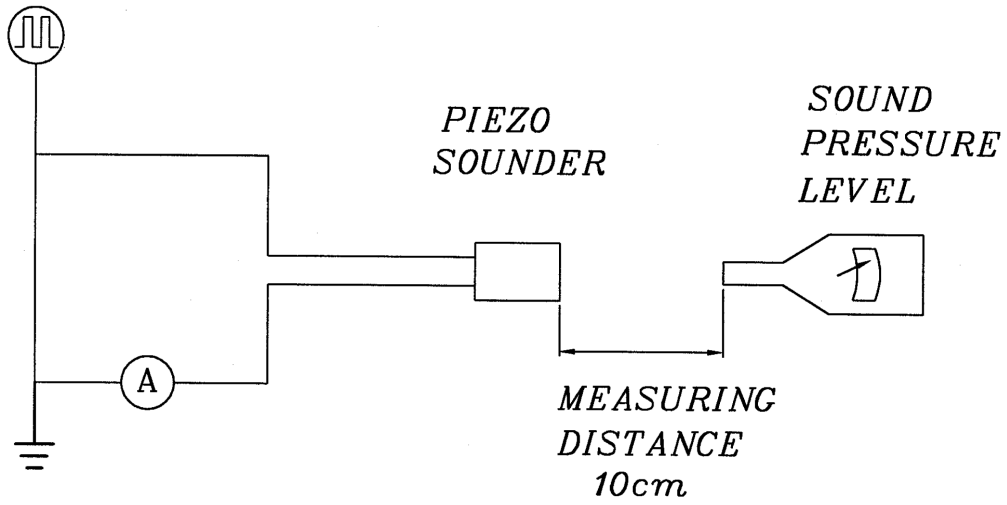


PART NUMBER: CPE-163 **DESCRIPTION:** piezo audio transducer

FREQUENCY RESPONSE CURVE



MEASUREMENT METHOD



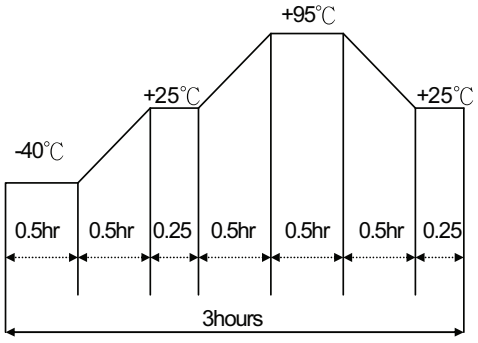
S.P.L. Measuring Circuit
Input Signal: 10 Vp-p, 4.8 KHz, square wave
Mic: RION S.P.L. meter UC30 or equivalent
S.G.: Hewlett Packard 33120A function generator or equivalent

PART NUMBER: CPE-163 **DESCRIPTION:** piezo audio transducer

MECHANICAL CHARACTERISTICS

item	test condition	evaluation standard
solderability	Stripped wires are immersed in rosin for 5 seconds and then immersed in solder bath of 230 ±5°C for 3 ±1 seconds.	90% min. of the lead terminals will be wet with solder (except the edge of the terminal).
soldering heat resistance	Stripped wires are immersed up to 1.5mm from buzzer's body in solder bath of 300 ±5°C for 3 ±0.5 seconds or 260 ±5°C for 10 ±1 seconds.	No interference in operation.
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 ±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.	

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:  	

PART NUMBER: CPE-163 **DESCRIPTION:** piezo audio transducer

RELIABILITY TEST

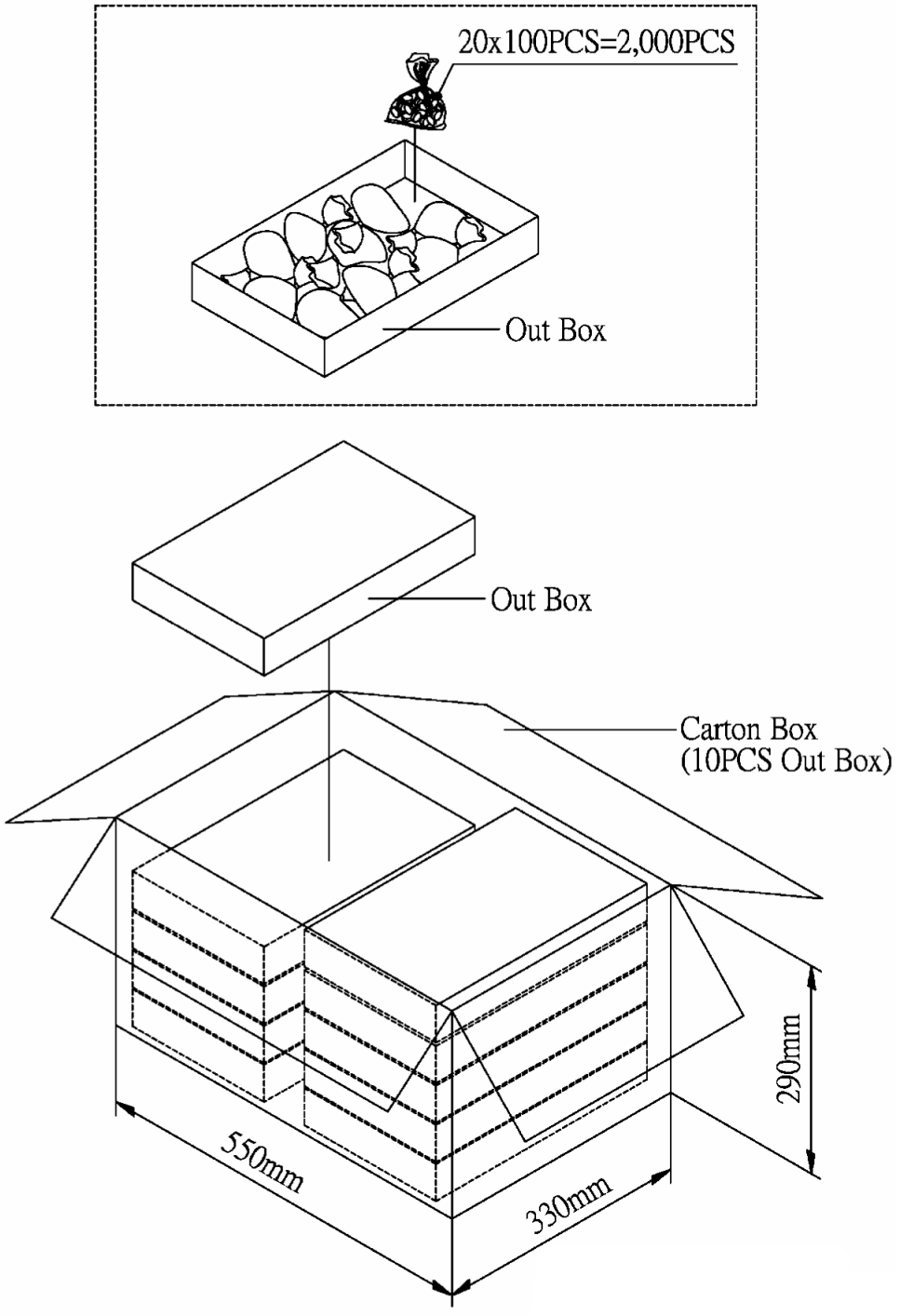
item	test condition	evaluation standard
operating (life test)	1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied. 2. Intermittent life test: A duty cycle of 1 minute on, 1 minutes off, a minimum of 5,000 times at room temp (+25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

PART NUMBER: CPE-163 **DESCRIPTION:** piezo audio transducer

PACKAGING



Out Box	310mmx248mmx49mm	20x100PCS=2,000PCS
Carton Box	550mmx330mmx290mm	2,000PCSx10=20,000PCS