CUI INC

PART NUMBER: CPE-3085

DESCRIPTION: PIEZO AUDIO TRANSDUCER

SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
operating frequency		3.1	3.6	4.1	K Hz
operating voltage		3		28	V dc
operating current	at 12 V dc			7	mA
sound pressure level	at 30 cm / 12 V dc	82			dB
rated voltage		12			V dc
tone	continuous				
operating temperature		-20		60	˚C
storage temperature		-30		70	˚C
dimenstions	ø29.5 x H10 mm				
weight				5.6	g
material	ABS UL-94 1/16" (HB)				
terminal	pin type (sn plating)				
RoHS	yes				

APPEARANCE DRAWING

⌀29.5 [1.161]

100°

130°
(2 PLCS)
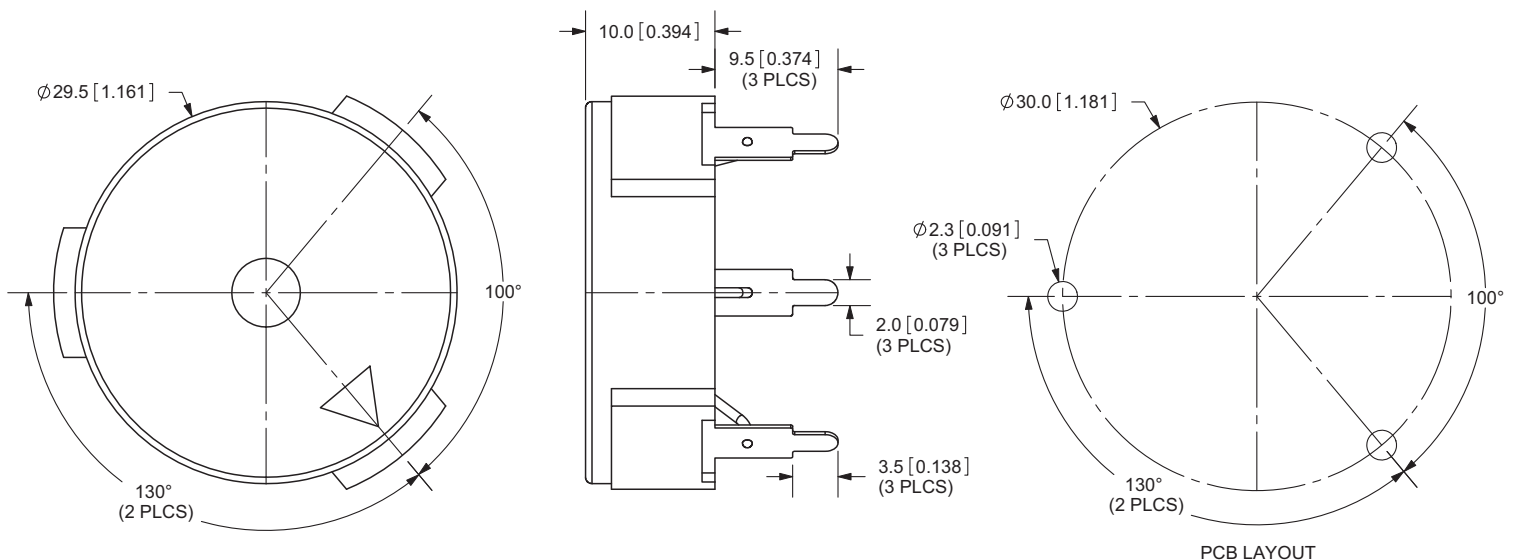
TOLERANCE:
±0.5mm UNLESS OTHERWISE
SPECIFIED

10.0 [0.394]

9.5 [0.374]
(3 PLCS)

⌀2.3 [0.091]
(3 PLCS)

2.0 [0.079]
(3 PLCS)

3.5 [0.138]
(3 PLCS)

⌀30.0 [1.181]

100°

130°
(2 PLCS)

PCB LAYOUT

20050 SW 112ᵗʰ Ave. Tualatin, Oregon 97062   phone 503.612.2300   fax 503.612.2383   www.cui.com
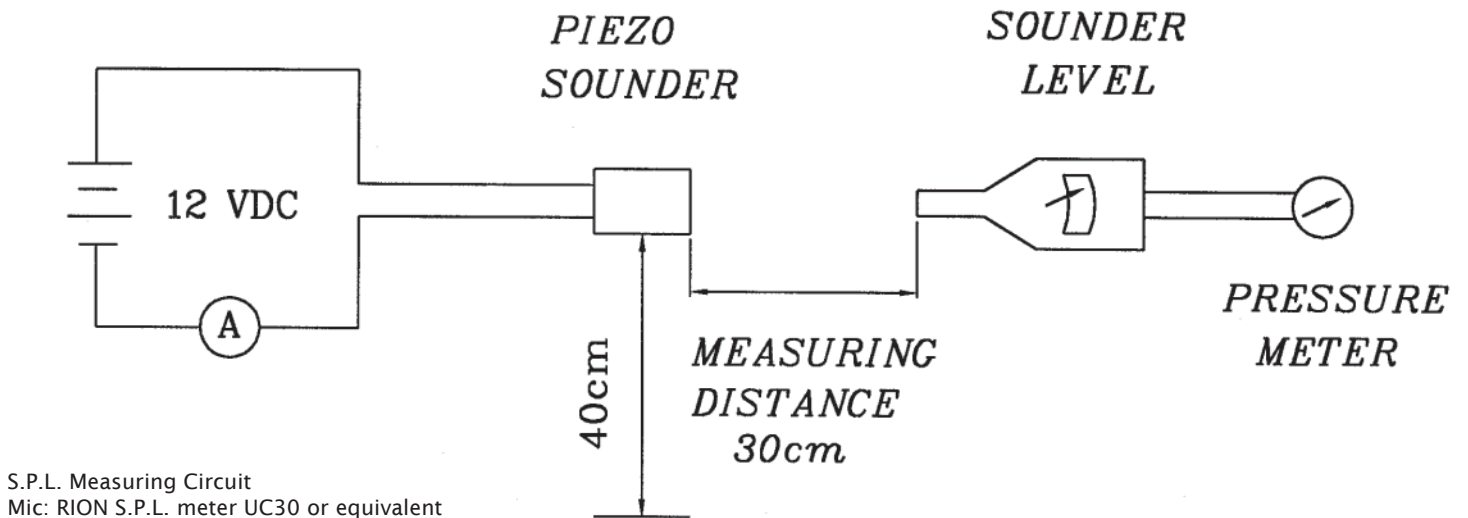
PART NUMBER: CPE-3085   **DESCRIPTION: PIEZO AUDIO TRANSDUCER**

VOLTAGE: SPL / CURRENT CONSUMPTION CHARACTERISTICS
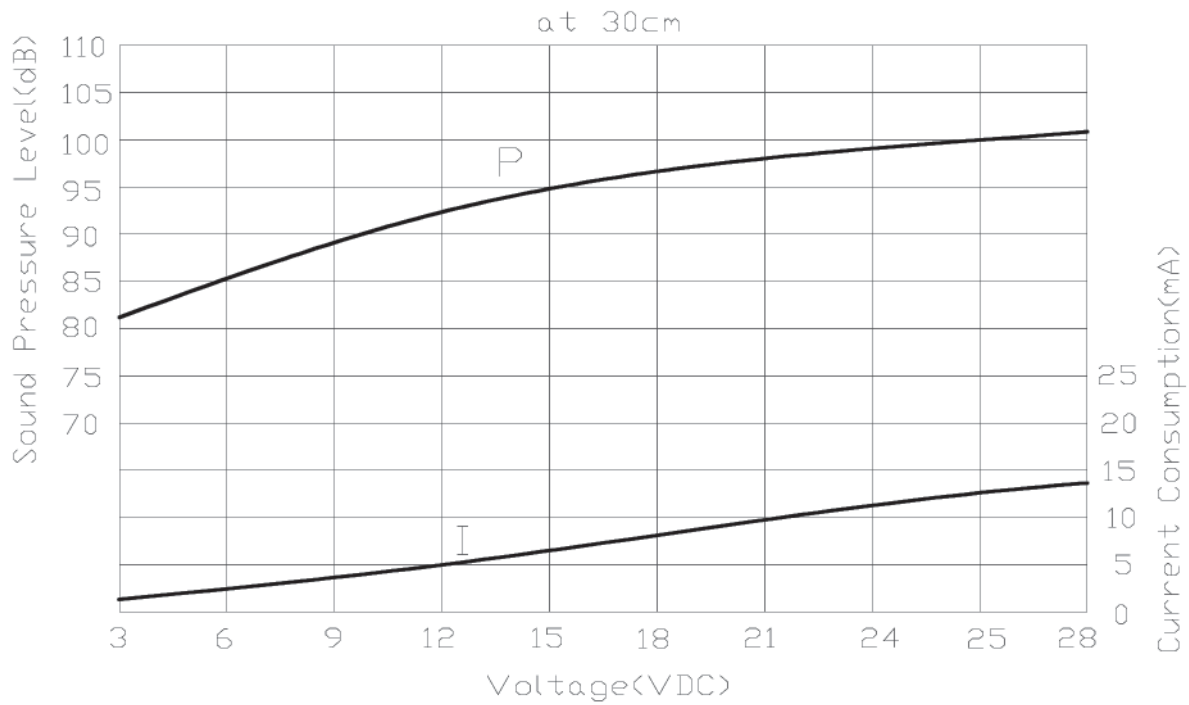
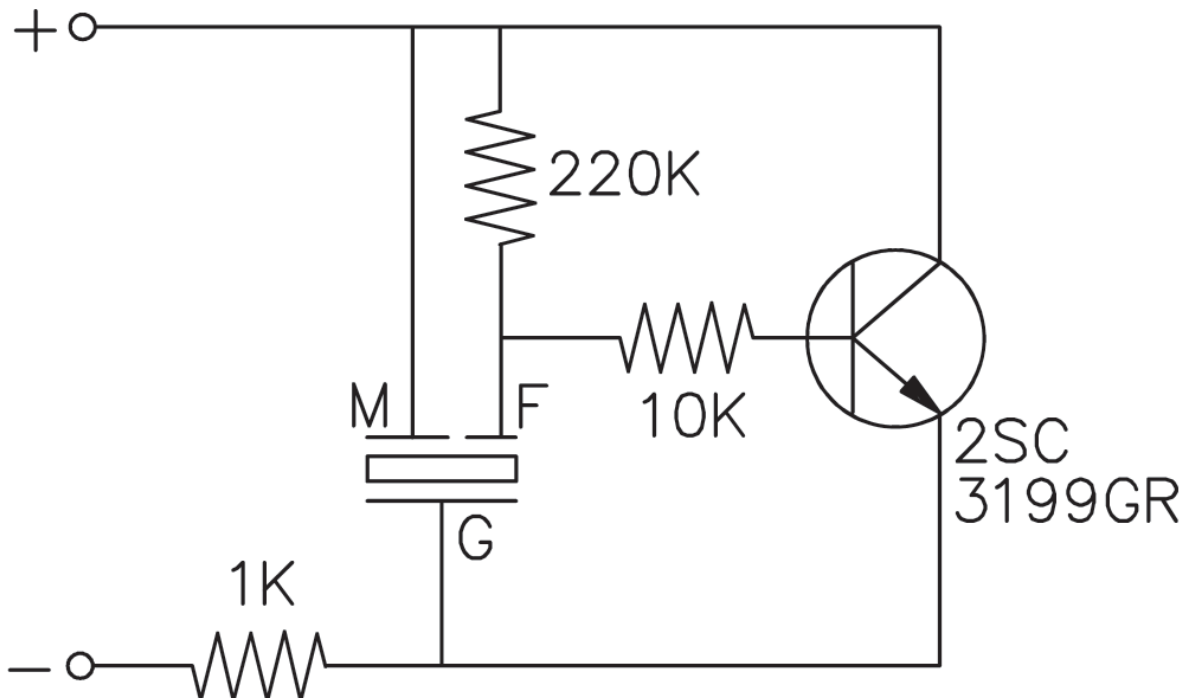**PART NUMBER: CPE-3085**   **DESCRIPTION: PIEZO AUDIO TRANSDUCER**

MEASUREMENT METHOD

1) S.P.L. measuring circuit

PIEZO
SOUNDER

SOUNDER
LEVEL

12 VDC

A

40cm

MEASURING
DISTANCE
30cm

PRESSURE
METER

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 recommended driving circuit
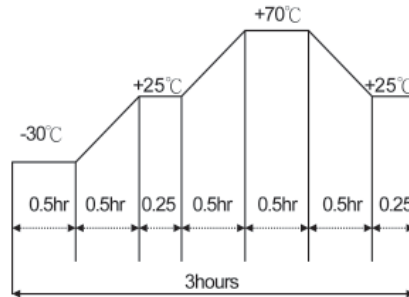as shown below.

220K

10K

M   F

G

1K

2SC
3199GR

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MECHANICAL CHARACTERISTICS

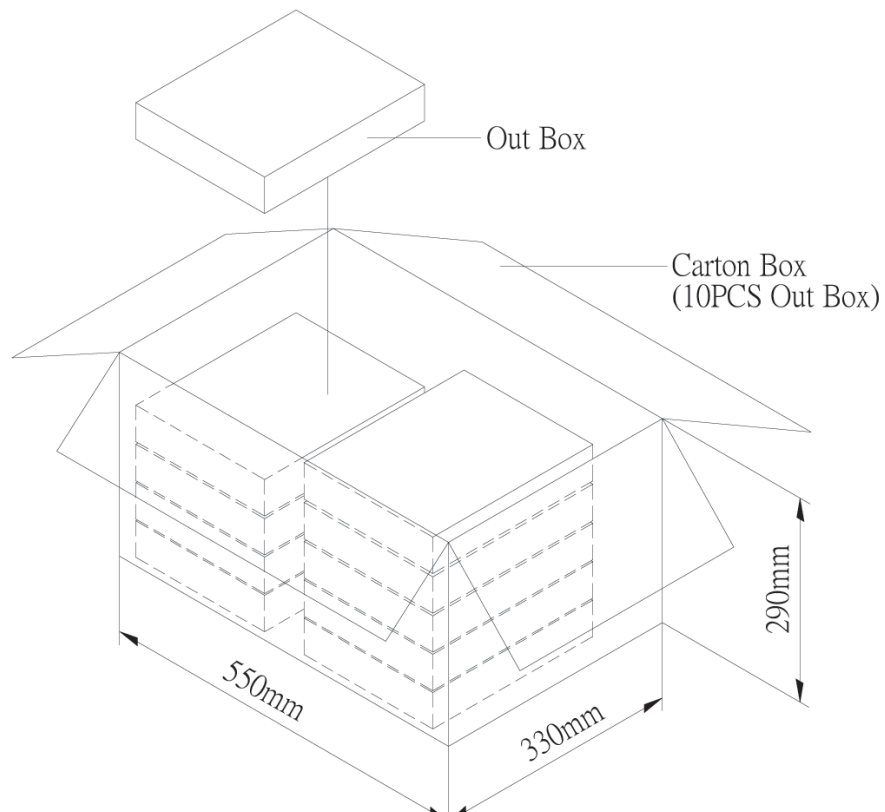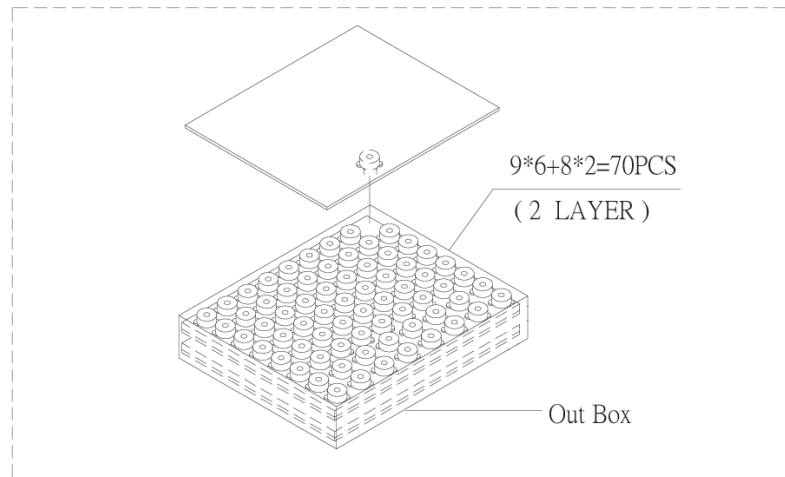| item	test condition	evaluation standard
solderability	Lead terminals are immersed in rosin for 5 seconds and then immersed in a solder bath of +230 ±5°C for 3 ±0.5 seconds.	90% min. of the lead terminals will be wet with solder. (except the edge of the terminal)
soldering heat resistance	Lead terminals are immersed up to 1.5 mm from the buzzer's body in a solder bath of 300 ±5°C for 3 ±0.5 seconds or 260 ±5°C for 10 ±1 second.	No interference in operation.
terminal pull strength	The force of 9.8 N is applied for 10 sec. to each terminal in axial direction.	No damage or cutting off.
vibration test	The buzzer should be measured after a vibration amplitude of 1.5 mm with 10 ~ 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 buzzer without packaging is subjected to 3 drops on each axis from the height of 75 cm onto a 40 mm thick wooden board.	

ENVIRONMENT TEST

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at +70°C for 240 hours.	
low temperature 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% RH for 240 hours.	
temperature cycle test	The part will be subjected to 5 cycles. One cycle will consist of: 	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.

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 45°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 conditions	a) Temperature: +5 ~ +35°C	b) Humidity: 45 ~ 85%	c) Pressure: 860 ~ 1060 mbar
judgement test conditions	a) Temperature: +25 ±2°C	b) Humidity: 60 ~ 70%	c) Pressure: 860 ~ 1060 mbar

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PACKAGING

9*6+8*2=70PCS
(2 LAYER)

Out Box

Out Box

Carton Box
(10PCS Out Box)

290mm

550mm

330mm

1. CUI Inv#. 037-4227R
   CUI Part#. CPE-3085
2. RoHS Compliant

Out Box	310mmx248mmx49mm	2x70PCS=140PCS
Carton Box	550mmx330mmx290mm	140PCSx10=1400PCS

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