


CUI INC
date 09/2010

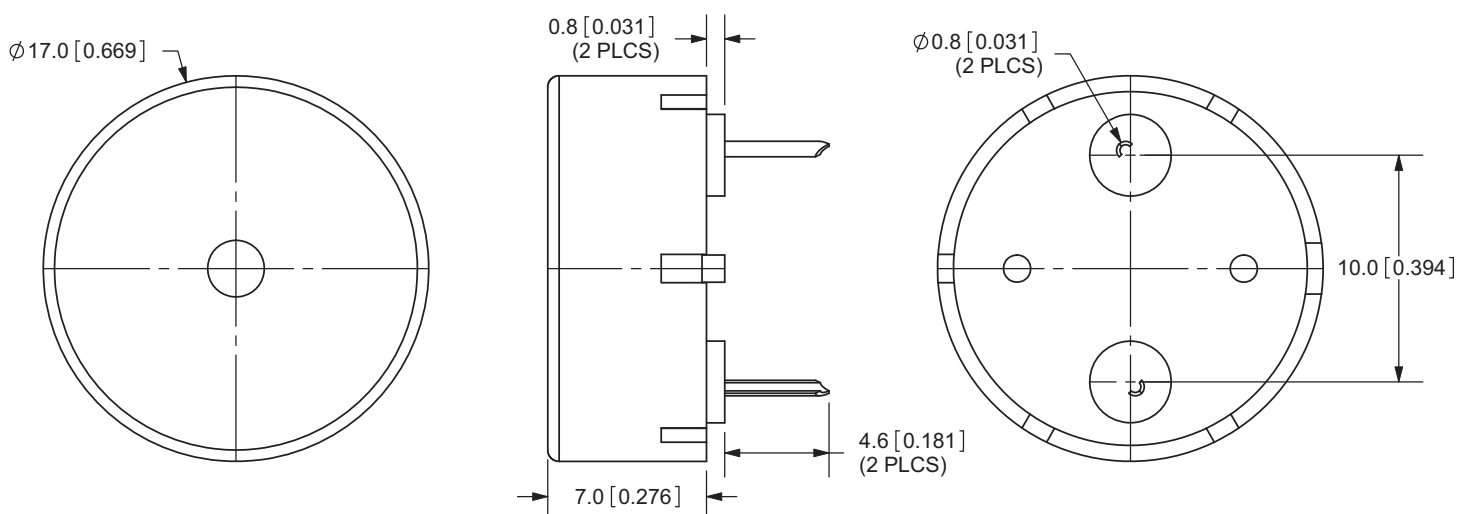
page 1 of 4

PART NUMBER: CPE-1785
DESCRIPTION: PIEZO AUDIO TRANSDUCER

SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
operating voltage				20	V p-p
current consumption	at 10 V p-p, square wave, 4.0 K Hz			8	mA
sound pressure level	at 10 cm / 10 V p-p, square wave, 4.0 K Hz	85			dB
electrstatic capacity	at 1 K Hz / 1 V	9,800	14,000	18,200	pF
operating temperature		-30		80	°C
storage temperature		-30		80	°C
dimenstions	ø17 x H7 mm				
weight				1.25	g
material	noryl (black)				
terminal	pin type (Sn plating)				
RoHS	yes				

APPEARANCE DRAWING



TOLERANCE:
 $\pm 0.5\text{mm}$ UNLESS OTHERWISE
 SPECIFIED



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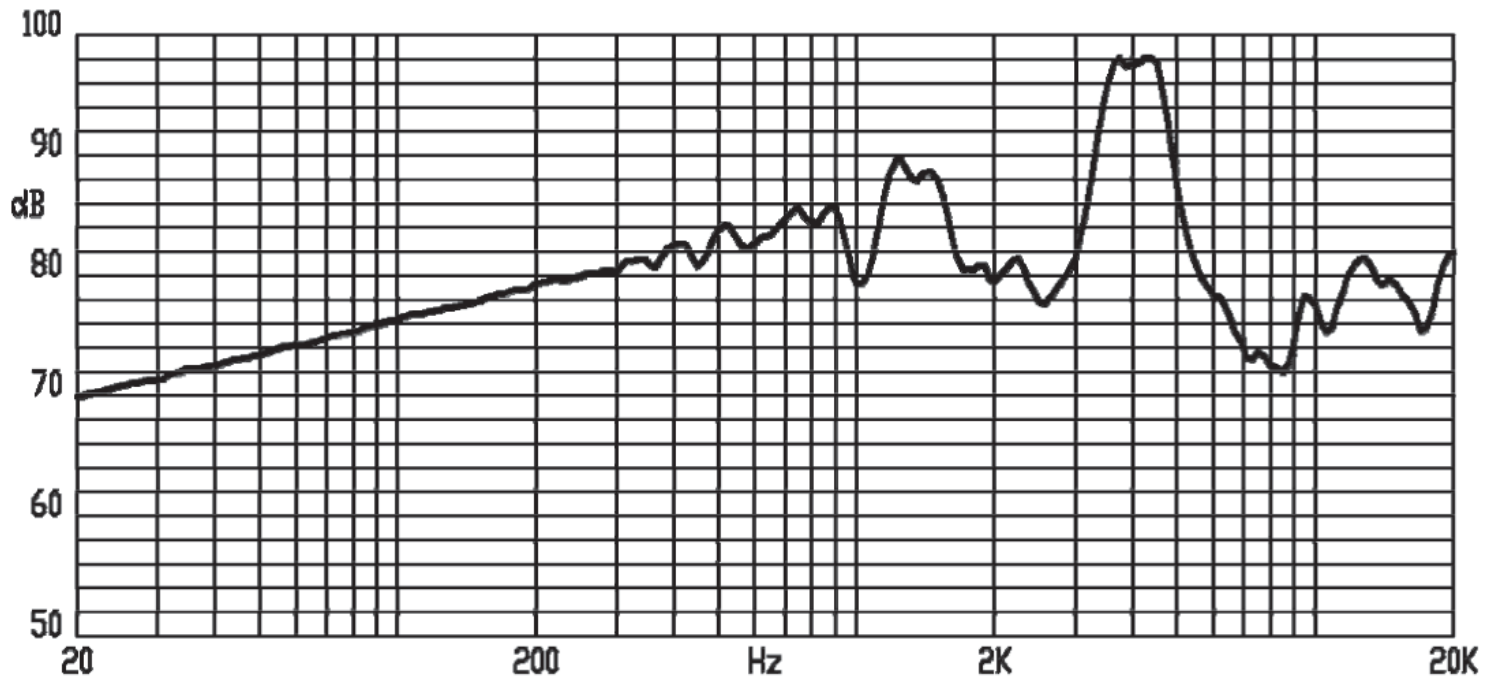
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page 2 of 4

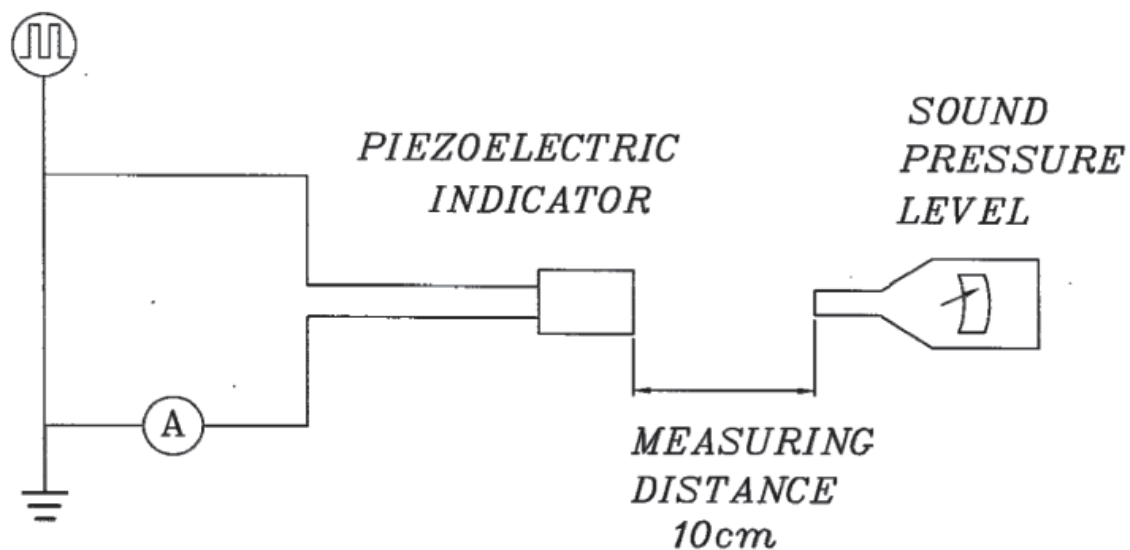
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FREQUENCY RESPONSE CURVE



MEASUREMENT METHOD



S.P.L. Measuring Circuit

Input signal: 10 V p-p, square wave, 4,000 Hz

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

S.G.: Hewlett Packard 33120A function generator or equivalent

PART NUMBER: CPE-1785**DESCRIPTION: PIEZO AUDIO TRANSDUCER****MECHANICAL CHARACTERISTICS**

item	test condition	evaluation standard
solderability ¹	Lead terminals are immersed in rosin for 5 seconds and then immersed in a 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)
soldering heat resistance	Lead terminals are immersed up to 1.5 mm from the buzzer's body in a solder bath of $300 \pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds or $260 \pm 5^{\circ}\text{C}$ for 10 ± 1 second.	No interference in operation.
terminal mechanical 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 0.75 mm with 10 ~ 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 0.5 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 buzzer without packaging is subjected to 3 drops on each axis from the height of 70 cm onto a 10 mm thick wooden board.	

Notes: 1. Not recommended for wave soldering

ENVIRONMENT TEST

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at $+80^{\circ}\text{C}$ for 96 hours.	The buzzer will be measured after being placed at $+25^{\circ}\text{C}$ 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 temperature test	After being placed in a chamber at -30°C for 96 hours.	
humidity test	After being placed in a chamber at $+40^{\circ}\text{C}$ and $90 \pm 5\%$ RH for 96 hours.	
temperature cycle test	The part will be subjected to 5 cycles. One cycle will consist of: The diagram illustrates a temperature cycle test profile. It shows a sequence of four temperature steps: $-30 \pm 5^{\circ}\text{C}$ for 30 minutes, $+25 \pm 5^{\circ}\text{C}$ for 10 minutes, $+80 \pm 2^{\circ}\text{C}$ for 30 minutes, and $+25 \pm 5^{\circ}\text{C}$ for 10 minutes. This sequence is repeated for 5 cycles. A bracket below the first cycle indicates '1 Cycle', and a longer bracket below the entire sequence indicates '5 Cycles'.	

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 55°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 ($+25 \pm 2^{\circ}\text{C}$) with rated voltage applied.	The buzzer will be measured after being placed at $+25^{\circ}\text{C}$ 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.

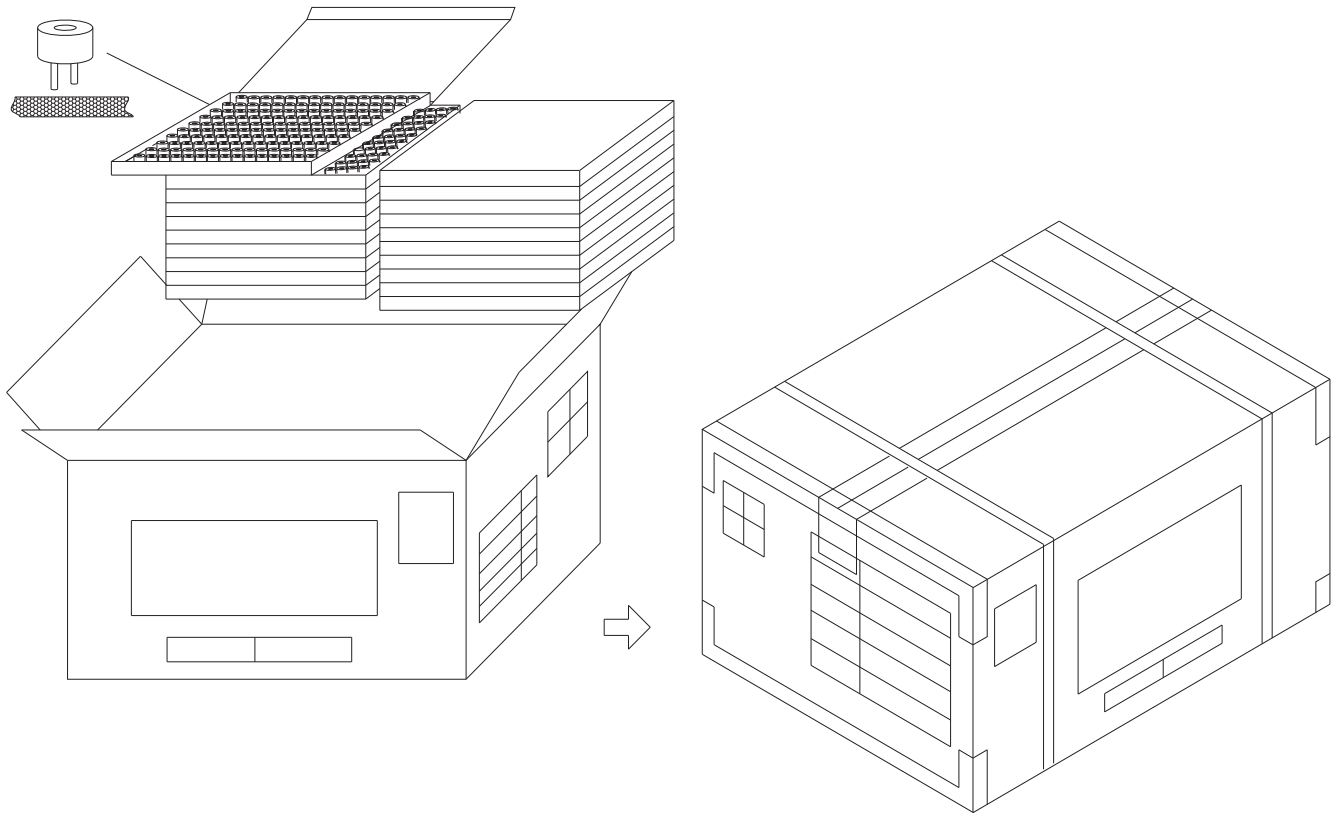
TEST CONDITIONS

standard test conditions	a) Temperature: $+5 \sim +35^{\circ}\text{C}$	b) Humidity: 45 ~ 85%	c) Pressure: 860 ~ 1060 mbar
judgement test conditions	a) Temperature: $+25 \pm 2^{\circ}\text{C}$	b) Humidity: 60 ~ 70%	c) Pressure: 860 ~ 1060 mbar

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DESCRIPTION: PIEZO AUDIO TRANSDUCER

PACKAGING



Tray		1x150PCS=150PCS
Out Box		10LAYERx150PCS=1500PCS
Carton Box	510mmx255mmx260mm	1500PCSx2=3,000PCS

1. CUI Inv#. 037-4226R
CUI Part#. CPE-1785
2. RoHS Compliant