

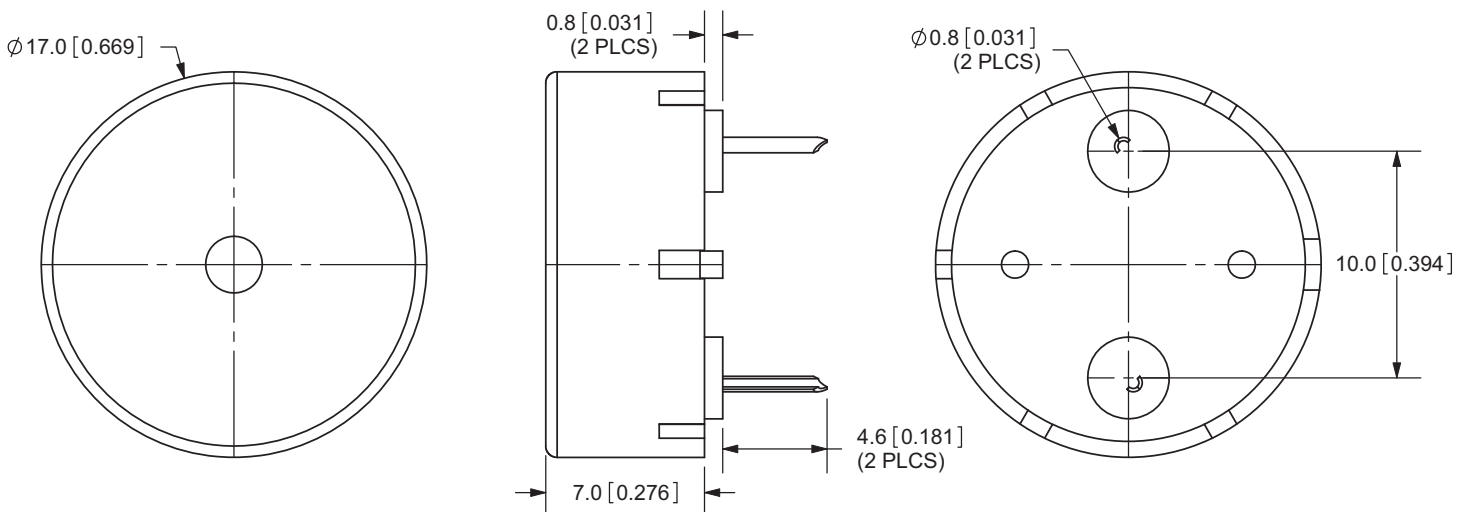
**PART NUMBER: CPE-1785**

**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

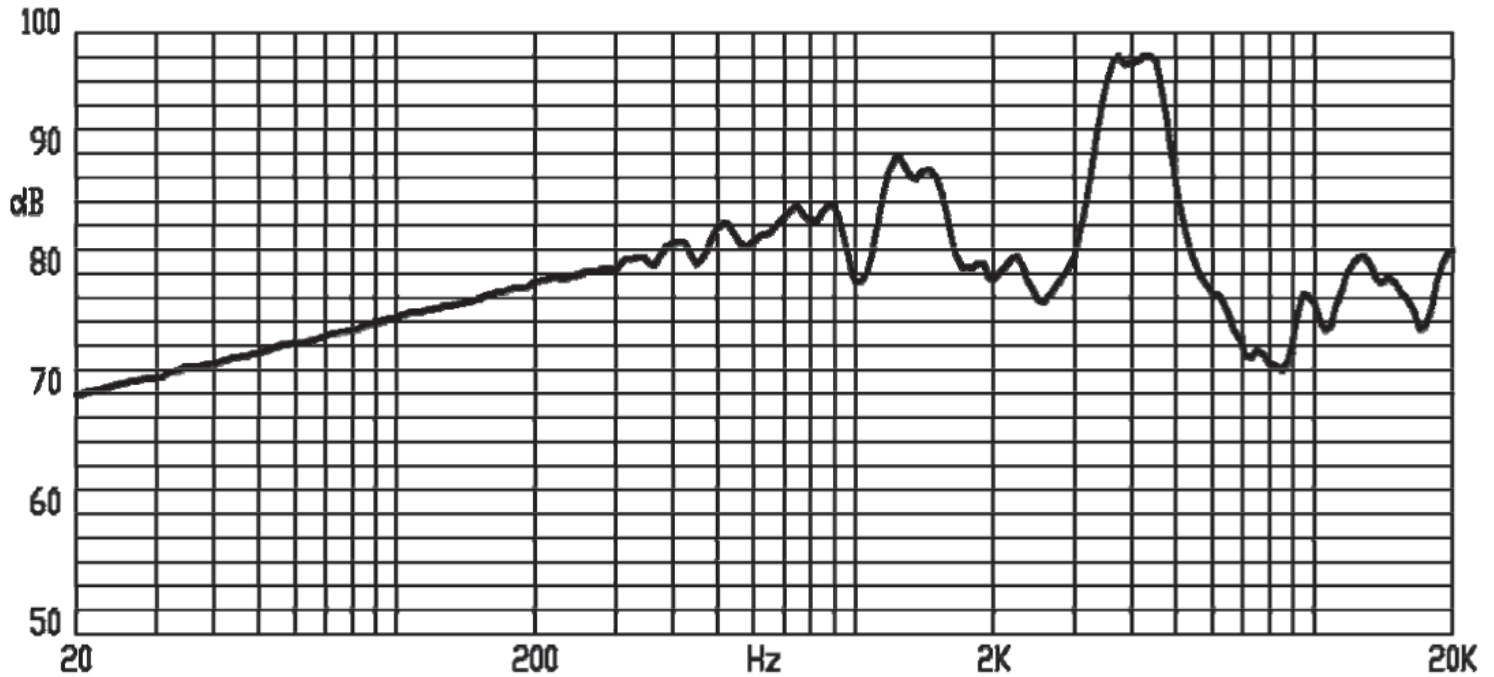


TOLERANCE:  
±0.5mm UNLESS OTHERWISE  
SPECIFIED

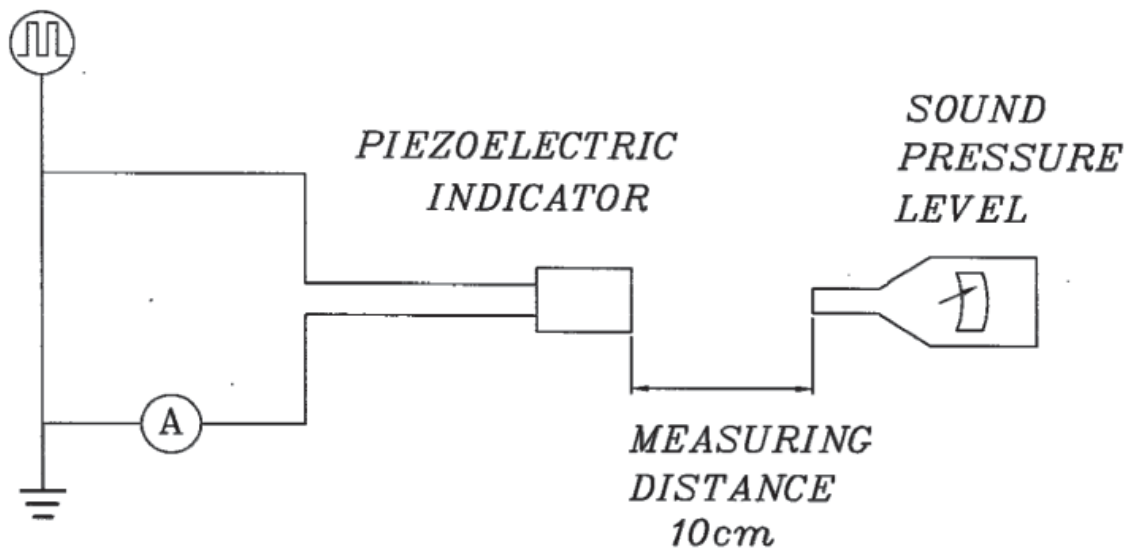
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### FREQUENCY RESPONSE CURVE



### 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



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## MECHANICAL CHARACTERISTICS

item	test condition	evaluation standard
solderability <sup>1</sup>	Lead terminals are immersed in rosin for 5 seconds and then immersed in a solder bath of $+270 \pm 5^\circ\text{C}$ for $3 \pm 1$ 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 $3 \pm 0.5$ seconds or $260 \pm 5^\circ\text{C}$ for $10 \pm 1$ 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 $-30^\circ\text{C}$ 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:	

## RELIABILITY TEST

item	test condition	evaluation standard
operating (life test)	<p>1. Continuous life test: The part will be subjected to 48 hours of continuous operation at <math>55^\circ\text{C}</math> with rated voltage applied.</p> <p>2. Intermittent life test: A duty cycle of 1 minute on, 1 minute off, a minimum of 5,000 times at room temp (<math>+25 \pm 2^\circ\text{C}</math>) with rated voltage applied.</p>	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.

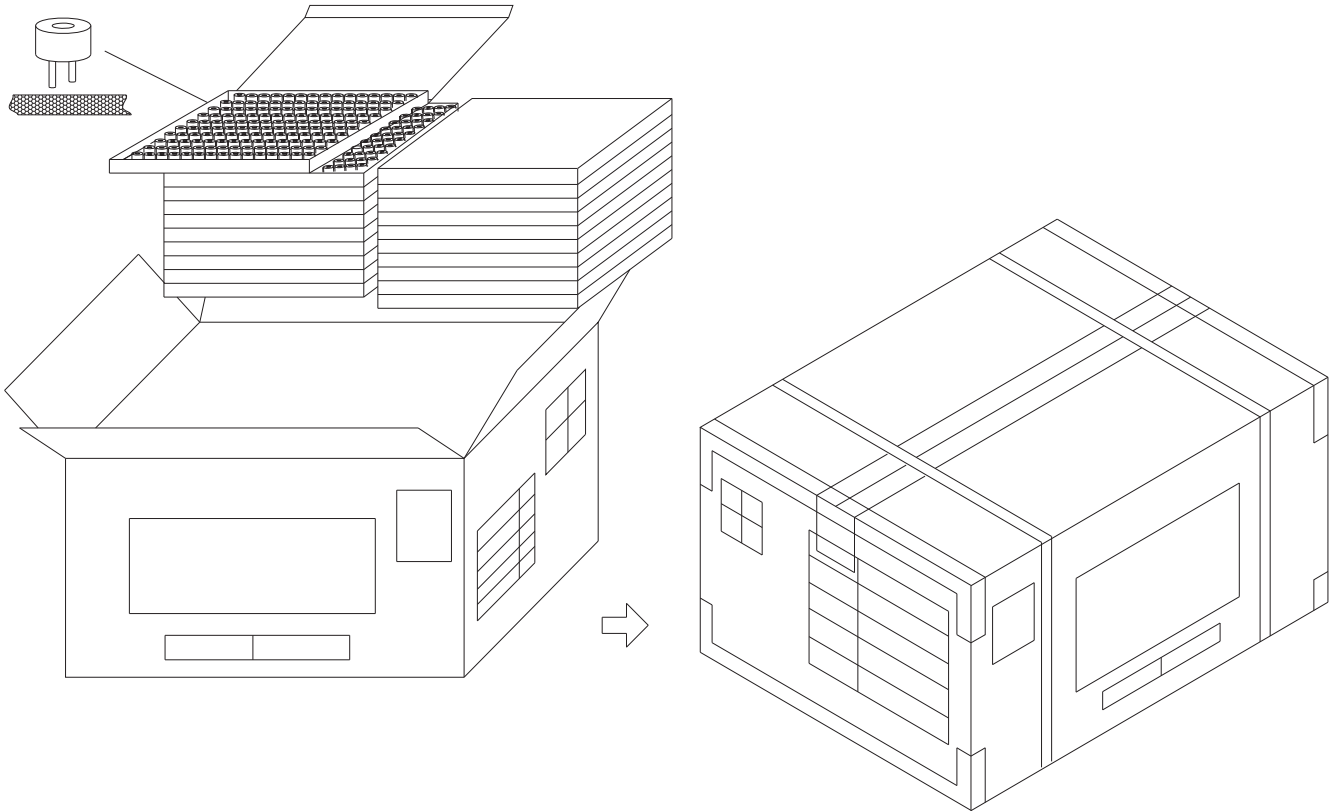
## TEST CONDITIONS

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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**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