CUI INC

date 06/2010
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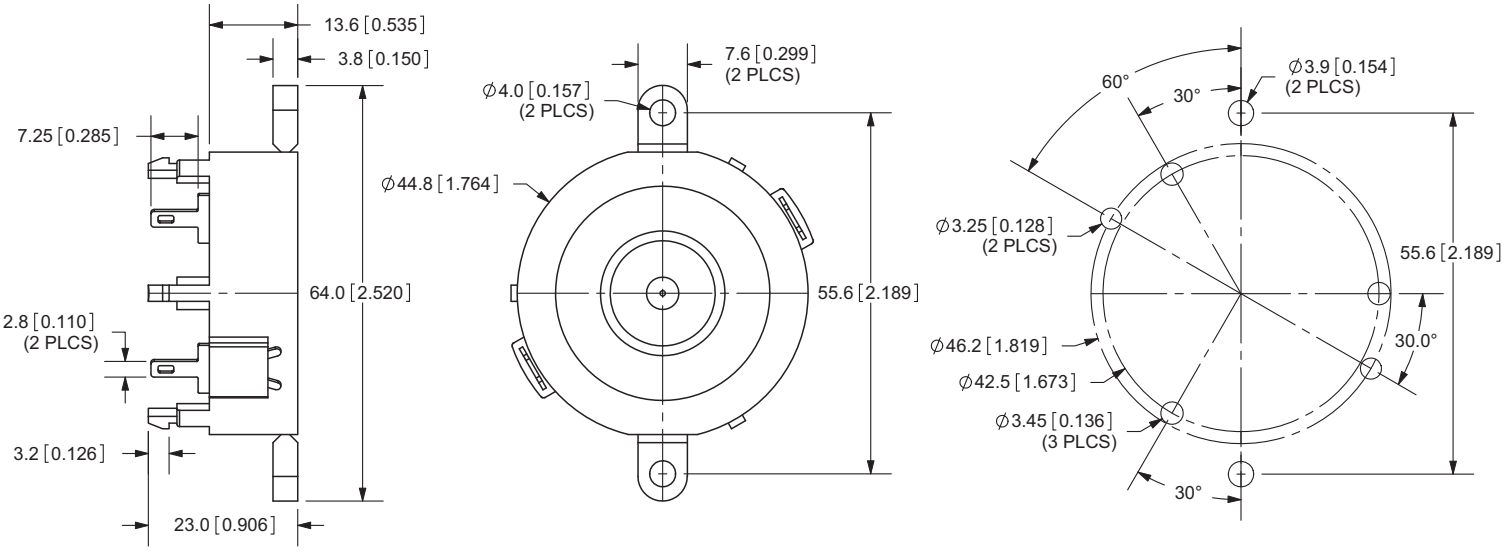
PART NUMBER: CPE-4485 **DESCRIPTION: PIEZO AUDIO TRANSDUCER**

SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
operating frequency		2.2		4	K Hz
operating voltage	continuous sine wave continuous square wave intermittent sine wave intermittent square wave		85 50 100 60		V p-p V p-p V p-p V p-p
sound pressure level	at 30 cm / 12 V p-p, square wave, 3000 Hz	100			dBA
electrostatic capacity	at 120 Hz, 1 V	0.1645	0.235	0.3055	uF
operating temperature		-40		105	˚C
storage temperature		-40		105	˚C
dimenstions	ø44.8 x H13.6 mm				
weight				11.5	g
material	PBT + 15% GLASS UL94 V-0 (black)				
terminal	pin type				
RoHS	yes				

APPEARANCE DRAWING



TOLERANCE:
±0.5mm UNLESS OTHERWISE SPECIFIED

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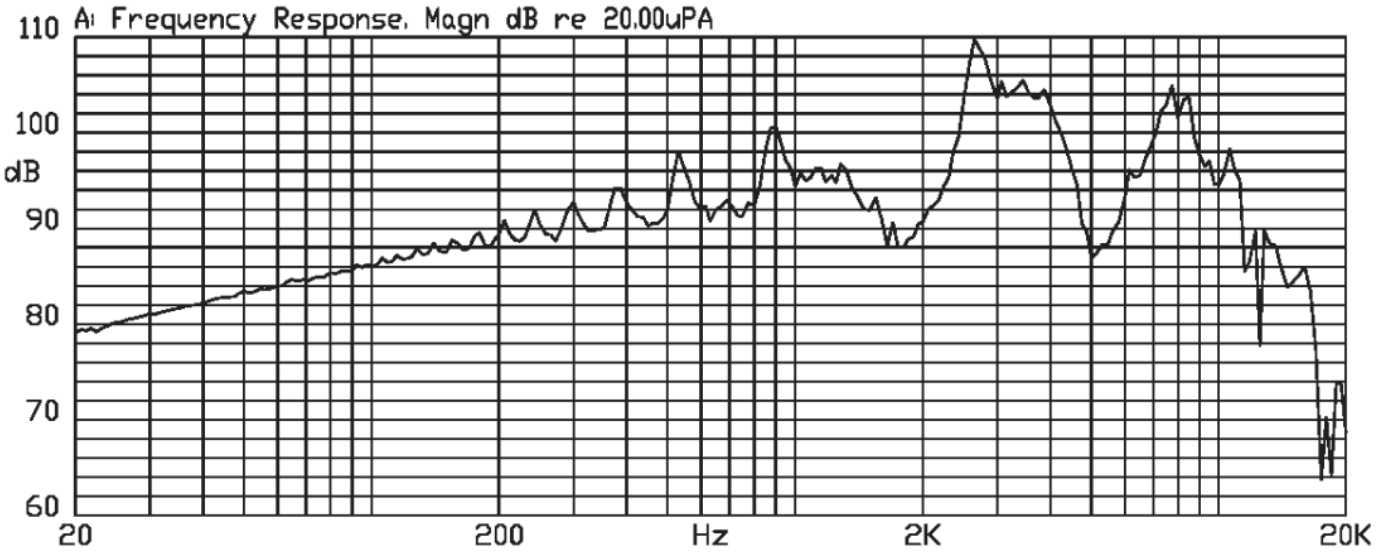
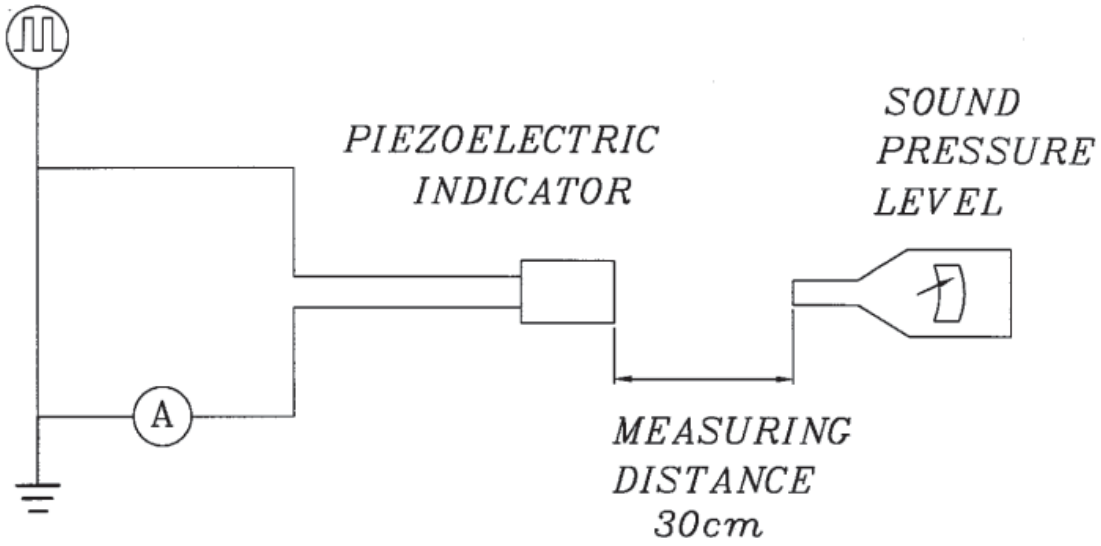
FREQUENCY RESPONSE



MEASUREMENT METHOD



S.P.L. Measuring Circuit
Input signal: 12 V p-p, 3.0 kHz, square wave
Mic: RION S.P.L. meter UC30 or equivalent
S.G.: Hewlett Packard 33120A function generator or equivalent

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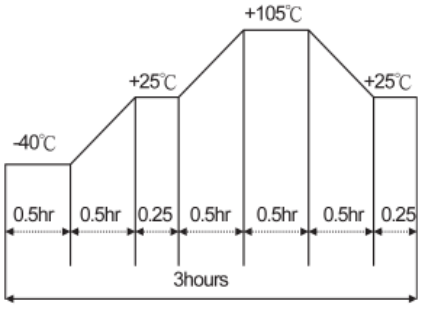
MECHANICAL CHARACTERISTICS

item	test condition	evaluation standard
solderability[1]	Lead terminals are immersed in rosin for 5 seconds and then immersed in a solder bath of +270 ±5˚C for 3 ±1.0 second.	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 260 ±5˚C for 3 ±1 seconds.	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 buzzer will be measured after being placed at +25˚C for 4 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.	

Notes: 1. Not recommended for wave soldering

ENVIRONMENT TEST

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at +105˚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 temperature 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% RH for 240 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)	1. Continuous life test: The part will be subjected to 48 hours of continuous operation at 90˚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 oscillation frequency / current consumption should be ±10% of the initial measurements. The SPL should be within ±10dB compared with the initial measurement.

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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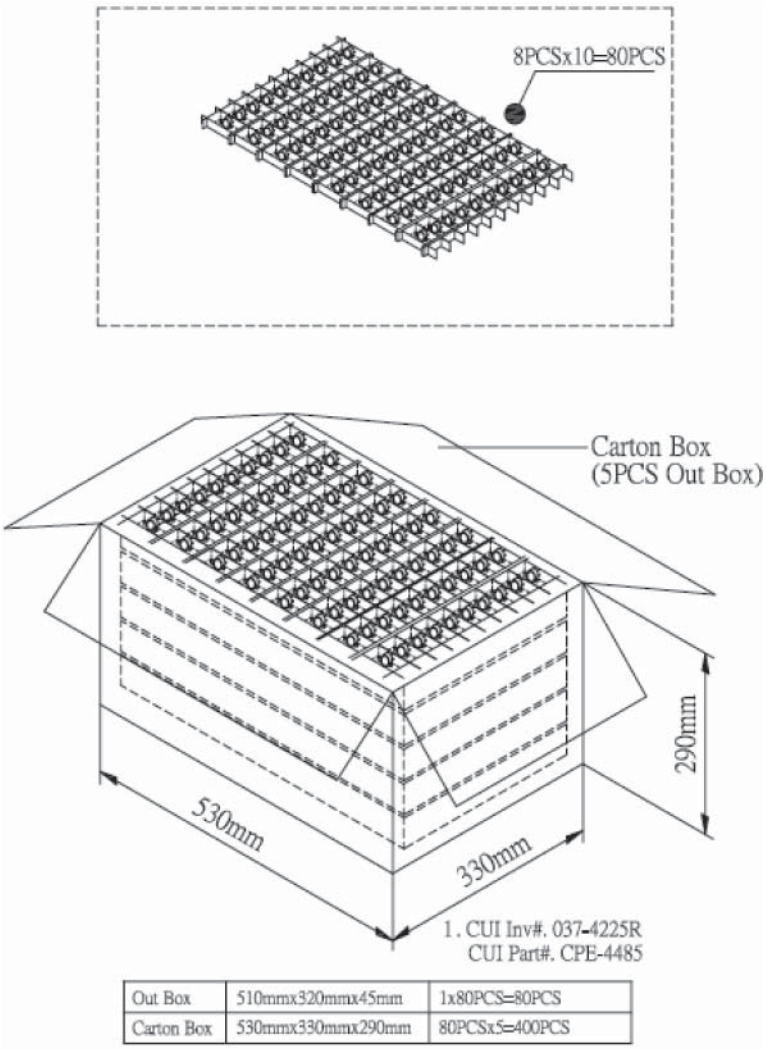
PACKAGING



Out Box	510mmx320mmx45mm	1x80PCS=80PCS
Carton Box	530mmx330mmx290mm	80PCSx5=400PCS