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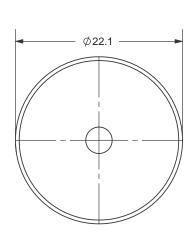
PART NUMBER: CPE-813 DESCRIPTION: piezo audio transducer

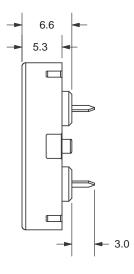
SPECIFICATIONS

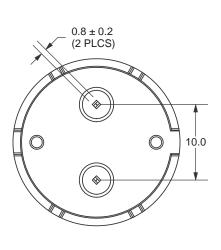
operating voltage	30 Vp-p max.	
current consumption	6 mA max.	at 10 Vp-p, sqaure wave, 4.0 Khz
sound pressure level	84 db min.	at 10 cm/10 Vp-p, sqaure wave, 4.0 Khz
electrostatic capacity	12,000 pF ± 30%	at 1 Khz/1 V
operating tempurature	-30 ~ +85° C	
storage tempurature	-40 ~ +95° C	
dimensions	Ø22.1 x H6.6 mm	
weight	2.5 g max.	
material	ABS UL-94 1/16" HB high I	neat (black)
terminal	pin type (Au plating)	
RoHS	yes	

APPEARANCE DRAWING

tolerance: ±0.5 units: mm







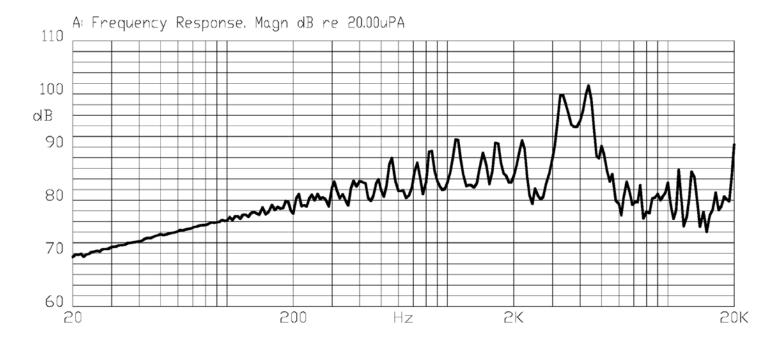


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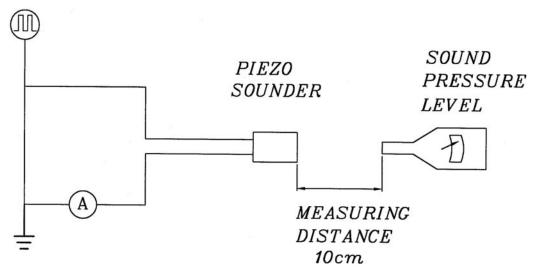
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FREQUENCY RESPONSE CURVE



MEASUREMENT METHOD



S.P.L. Measuring Circuit

Input Signal: 10 Vp-p, 4.0 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	90% min. of the lead terminals
	5 seconds and then immersed in solder bath	will be wet with solder
	of 270 ±5°C for 3 ±1 seconds.	(except the edge of the terminal).
soldering heat resistance	Lead terminals are immersed up to 1.5mm from	
-	buzzer's body in solder bath of 300 ±5°C for	No interference in operation.
	3 ± 0.5 seconds or 260 ± 5 °C for 10 ± 1 seconds.	·
terminal mechanical strength	For 10 seconds, the force of 9.8N (1.0kg) is	No damage or cutting off.
	applied to each terminal in axial direction.	
vibration	The buzzer shall be measured after applying	
	a vibration amplitude of 1.5 mm with 10 to	The value of oscillation
	55 Hz band of vibration frequency to each of	frequency/current consumption
	the 3 perpendicular directions for 2 hours.	should be ±10% of the initial
drop test	The part will be dropped from a height of	measurements. The SPL should
	75 cm onto a 40 mm thick wooden board 3	be within ±10dB compared with
	times in 3 axes (X, Y, Z) for a total of 9 drops.	the initial measurement.

Notes: 1. Not recommended for wave soldering

ENVIRONMENT TEST

item	test condition	evaluation standard
high temp. test	After being placed in a chamber at +95°C for 240 hours.	
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: +125°C +25°C -40°C 0.5hr 0.5hr 0.5hr 0.5hr 0.5hr 0.5hr 0.5hr 0.5hr	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.



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RELIABILITY TEST

item	test condition	evaluation standard
operating (life test)	1. Continuous life test:	The buzzer will be measured after
	The part will be subjected to 48 hours of	being placed at +25°C for 4
	continuous operation at +70°C with rated	hours. The value of the
	voltage applied.	oscillation frequency/current consumption should be ±10%
	2. Intermittent life test:	compared to the initial
	A duty cycle of 1 minute on, 1 minutes off, a minimum of 5,000 times at room temp	measurements. The SPL should be within ±10dB compared to
	(+25 ±2°C) with rated voltage applied.	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



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PACKAGING

