



soberton inc.

# PIEZOELECTRIC CERAMIC ELEMENT

Acoustic Product Specification

Product Number: PT-1407T



Release | Revision: A/2022

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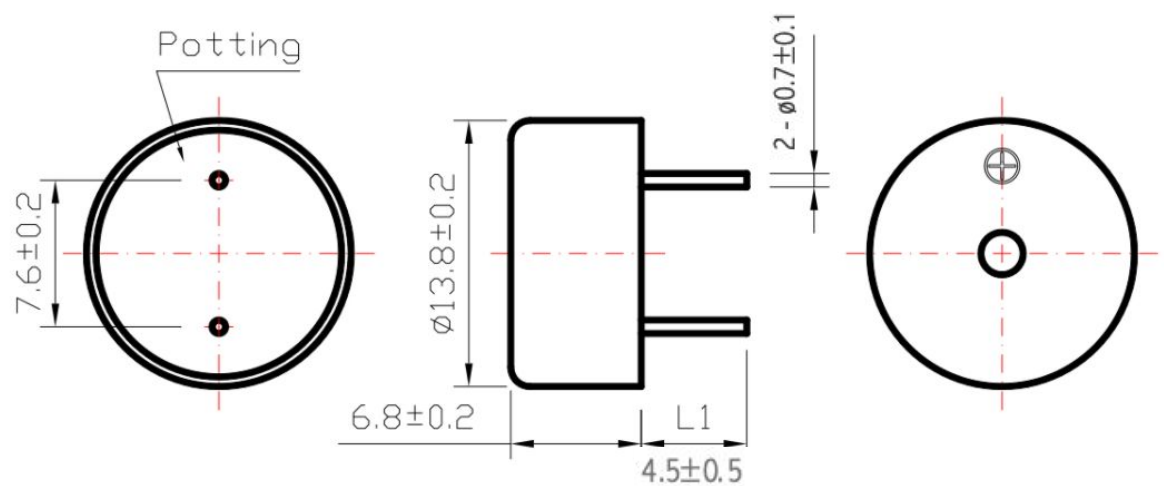
## Specifications

Item	Unit	Specification
Resonant Frequency	Hz	4000±500
Operating Voltage	Vp-p	1 ~ 25
Rated Voltage	Vp-p	5
Rated Current	mA	Max. 5 at 4.0KHz 50% duty cycle, square wave, 5 Vp-p
Sound Output	dB	Min. 85 at 4.0KHz 50% duty cycle, square wave, 5 Vp-p
Capacitance	pF	12000±30% at 120Hz
Operating Temperature	°C	-20 ~ +70
Storage Temperature	°C	-30 ~ +80
Terminal		Pin Type
Pin Length	mm	L1=4.5±0.5, Φ=0.7±0.1
Dimensions	mm	Φ13.8×H6.8
Housing Material		Black Noryl
Net Weight	gram	Approx. 1.0
Environmental Protection Regulation		RoHS 2.0

## Dimensions

Unit: mm

Tolerance: ±0.5mm, except where specified



Housing Material: Black Noryl



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## Reliability Test

After any of following tests the part shall meet specifications without any degradation in appearance and performance except SPL. SPL shall meet the specifications and shall not deviate more than -10dB from the initial value.

### Standard Temperature Life Test

The part shall be subjected to 96 hours at  $25 \pm 10^\circ\text{C}$ .

**Input rated voltage:** 5 Vp-p

**Resonant frequency:** 4000Hz, 50% duty cycle, square wave

### High Temperature Test

The part shall be capable of withstanding a storage temperature of  $+80^\circ\text{C}$  for 96 hours.

### Low Temperature Test

The part shall be capable of withstanding a storage temperature of  $-30^\circ\text{C}$  for 96 hours.

### Humidity Test

**Temperature**  $+40^\circ\text{C} \pm 3^\circ\text{C}$

**Relative Humidity** 90% ~ 95%

**Duration** 48 hours and exposure to room temperature for 6 hours

### Temperature Shock Test

**Per cycle**

$70^\circ\text{C}/1 \text{ hour} \rightarrow 25^\circ\text{C}/3 \text{ hours} \rightarrow -30^\circ\text{C}/1 \text{ hour} \rightarrow 25^\circ\text{C}/3 \text{ hours}$

**Total cycle** 10 cycles

### Drop Test

Standard Packaging from 1.2m

Drop on hardwood or board of 5cm thick, three sides, six plain

### Vibration Test

**Vibration** 1000 cycles /minute

**Amplitude** 1.5mm

**Duration** 1 hour in each 3 axes

### Note

Please make sure that any foreign materials (e.g. magnetic powder, washing solvent, flux, corrosive gas) do not enter this product in your production processes. Contamination may result in a loss of some or all audio output.



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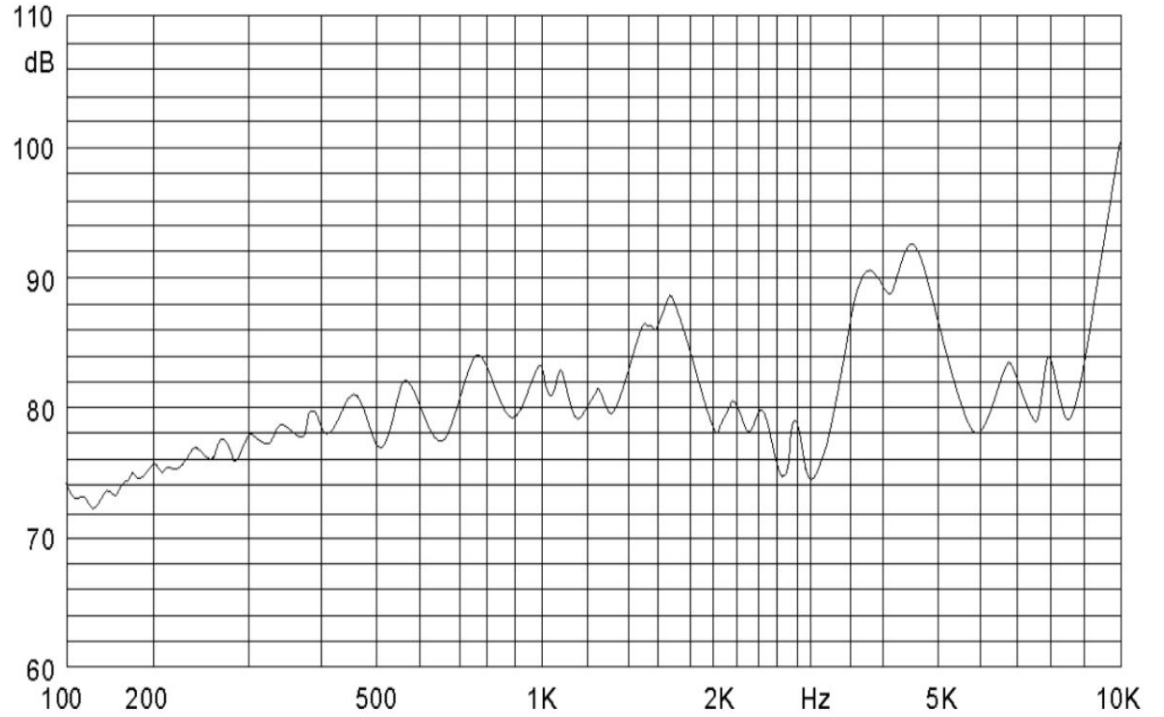
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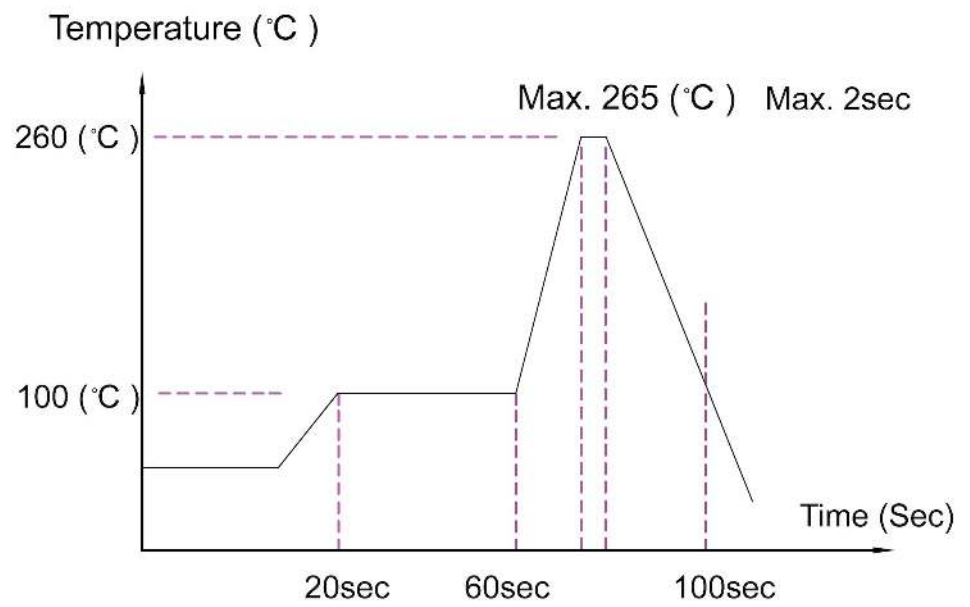
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## Frequency Response

5 Vp-p, 50% duty cycle, square wave, at 10cm

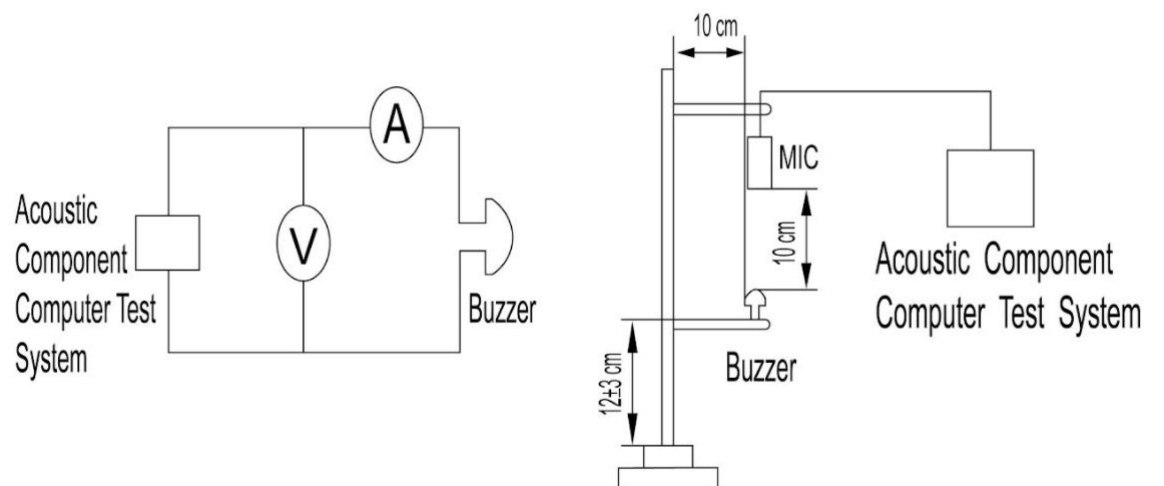


## Recommended Wave Soldering Temperature



## Electrical And Acoustical Measuring Condition

### Recommended Setting





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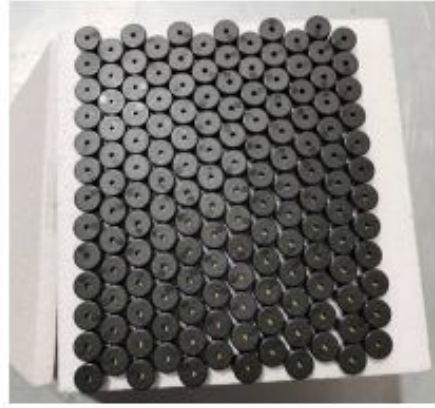
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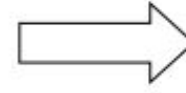
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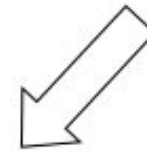
## Packing



150pcs



150pcsx10 = 1500pcs



1500pcs



1500pcsx4 = 6000pcs

Package Item	Package Qty
Tray	150 pcs
Bundle	1500 pcs
Carton	4 Bundles
Carton	6000 pcs