



soberton inc.

# WST BUZZER

## Acoustic Product Specification

Product Number: WST-1203UX



Release | Revision: D/2019

### CONTENTS

This document contains the technical specifications for the electromagnetic buzzer.

**Page 1**  
Specifications

Mechanical Characteristics

**Page 2**  
Environment Test

Reliability Test

**Page 3**  
Recommended Temperature Profile

Inspection Fixture

**Page 4**  
Frequency Response Curve

**Page 5**  
Dimensions

**Page 6**  
Packing

## Specifications

Item	Unit	Specification	Condition
Rated Voltage	VDC	3.0	
Operating Voltage	VDC	2.0 ~ 4.0	
Mean Current	mA	30 Max	At rated voltage
Sound Output	dBA	82	At 10cm at rated voltage
Rated Frequency	Hz	2300 ±400	
Operating Temp	°C	-40 ~ +70	
Storage Temp	°C	-40 ~ +70	
Dimension	mm	φ12.0×H7.5	See attached drawing
Weight	gram	2.0	
Material		PPO (Black)	
Terminal		PIN Type	See attached drawing
Environmental Protection Regulation		RoHS	

### Test condition:

Temperature: +25±2 °C    Related humidity: 65±5%    Air pressure: 86-106KPa

## Mechanical Characteristics

Item	Test condition	Evaluation standard
Solderability	Lead terminals are immersed in rosin for 5 seconds and then immersed in the solder bath at +250±5°C for 3±0.5 seconds.	90% min. lead terminals shall be wet with solder.
Soldering Heat Resistance	Lead terminal are immersed in the soldering bath at +250±5°C for 2±0.5 seconds.	No interference in operation.
Terminal Mechanical Strength	Apply the terminal with 1KG tension for 1 minute.	No damage and cutting off.
Vibration	The part shall be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3G). The vibration test shall consist of 2 hours per axis in each three axes(X,Y,Z). Total 6 hours.	After the test, the part shall meet specifications without any damage in appearance and performance except SPL.
Drop Test	The part only is dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes(X,Y,Z). Total of 9 times.	



soberton inc.

# WST BUZZER

## Acoustic Product Specification

Product Number: WST-1203UX



Release | Revision: D/2019

### CONTENTS

This document contains the technical specifications for the electromagnetic buzzer.

#### Page 1

Specifications

Mechanical Characteristics

#### Page 2

Environment Test

Reliability Test

#### Page 3

Recommended Temperature Profile

Inspection Fixture

#### Page 4

Frequency Response Curve

#### Page 5

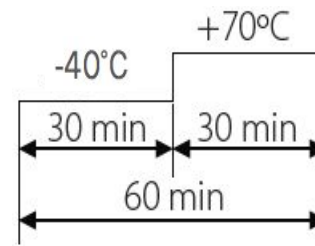
Dimensions

#### Page 6

Packing

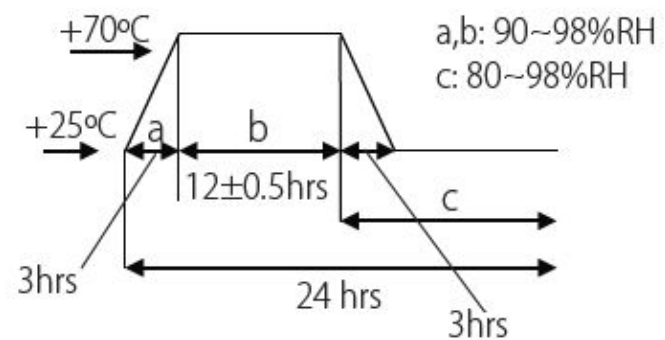
### Environment Test

Item	Test condition	Evaluation standard
High Temp. Test	The part is placed in a chamber at +70°C for 96 hours.	After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25°C, the SPL should be in $\pm 10\text{dBA}$ compared with initial one.
Low Temp. Test	The part is placed in a chamber at -40°C for 96 hours.	
Thermal Shock	The part shall be subjected to 10 cycles. Each cycle shall consist of:	



Temp./Humidity Cycle

The part shall be subjected to 10 cycles. One cycle shall be 24 hours and consist of:



### Reliability Test

Item	Test condition	Evaluation standard
Operating Life Test	<b>Ordinary Temperature</b> The part shall be subjected to 96 hours of continuous operation at $+25^\circ\text{C} \pm 10^\circ\text{C}$ .	After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25°C, the SPL should be in $\pm 10\text{dBA}$ compared with initial one.
	<b>High Temperature</b> The part shall be subjected to 72 hours of continuous operation at +70°C at 3.0V applied.	
	<b>Low Temperature</b> The part shall be subjected to 72 hours of continuous operation at -40°C at 3.0V applied.	
	<b>High and Low Voltage</b> Applying 2.0 voltage and 4.0 voltage, available time 24 hours each.	

#### Standard test condition:

- a) Temperature:  $+5 \sim +35^\circ\text{C}$
- b) Humidity: 45~85%
- c) Pressure: 86~106KPa



soberton inc.

# WST BUZZER

Acoustic Product Specification

Product Number: WST-1203UX



Release | Revision: D/2019

## CONTENTS

This document contains the technical specifications for the electromagnetic buzzer.

### Page 1

Specifications

Mechanical Characteristics

### Page 2

Environment Test

Reliability Test

### Page 3

Recommended Temperature Profile

Inspection Fixture

### Page 4

Frequency Response Curve

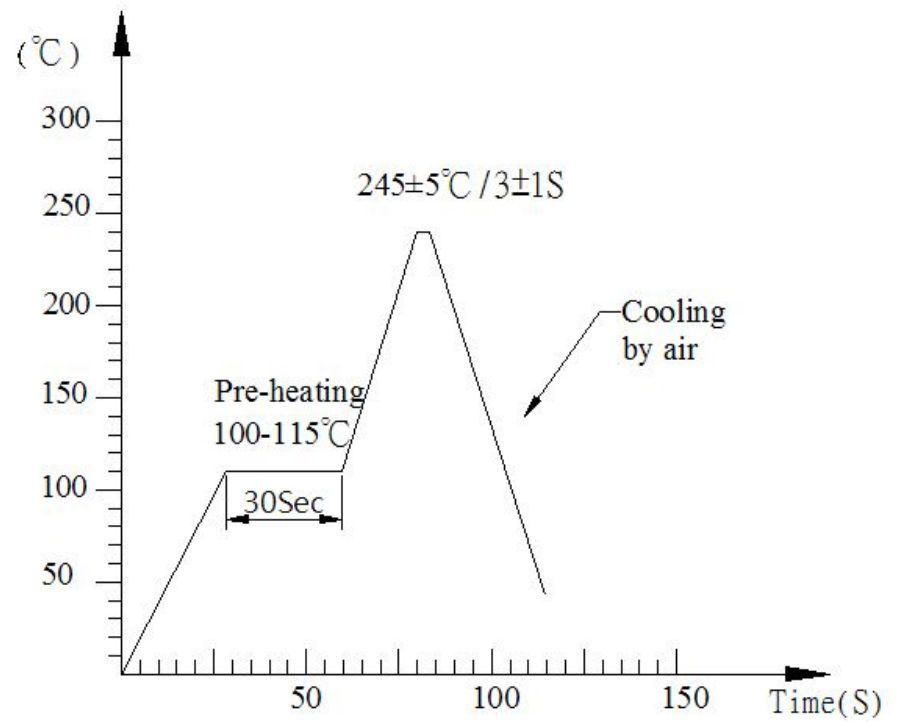
### Page 5

Dimensions

### Page 6

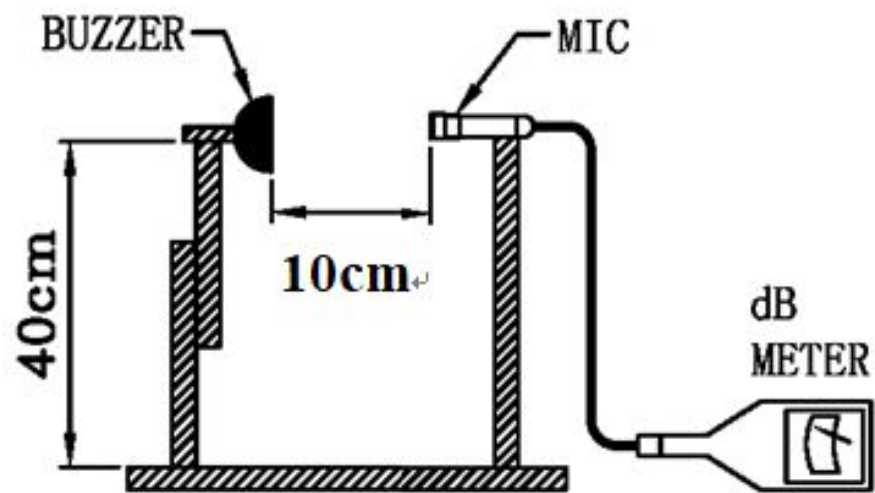
Packing

## Recommended Wave Soldering Temperature Curve



## Inspection Fixture

S.P.L. Measuring Circuit  
Input Signal: 3.0 VDC



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



soberton inc.

# WST BUZZER

Acoustic Product Specification

Product Number: WST-1203UX



Release | Revision: D/2019

### CONTENTS

This document contains the technical specifications for the electromagnetic buzzer.

#### Page 1

Specifications

Mechanical Characteristics

#### Page 2

Environment Test

Reliability Test

#### Page 3

Recommended Temperature Profile

Inspection Fixture

#### Page 4

Frequency Response Curve

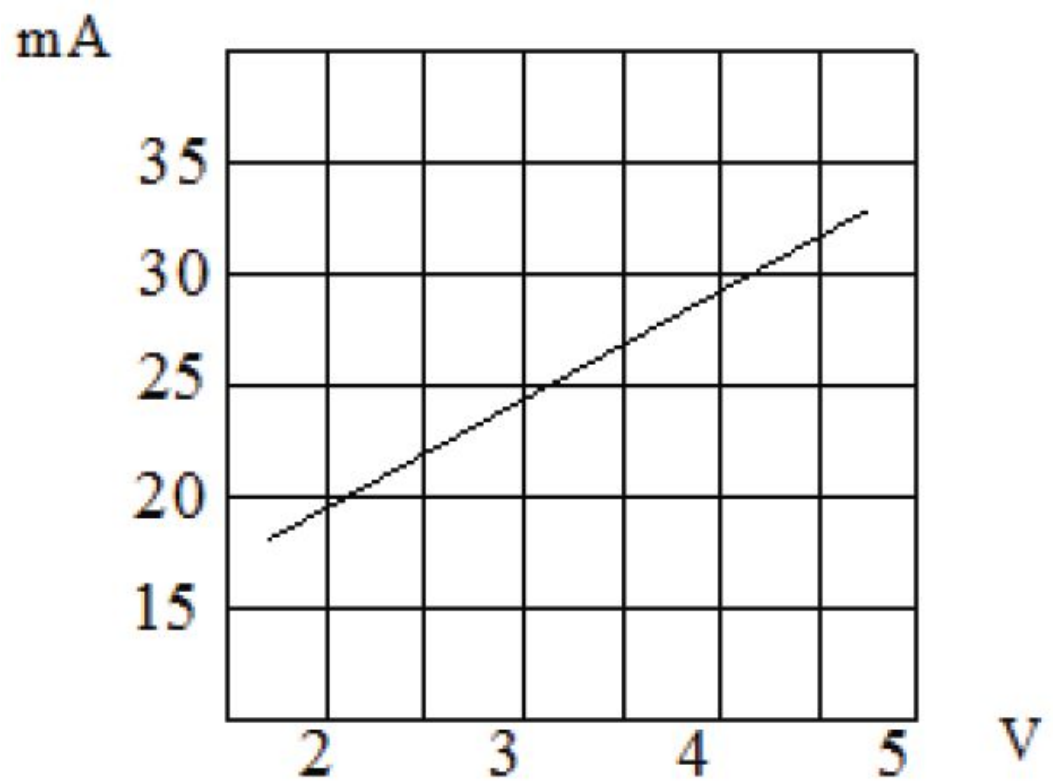
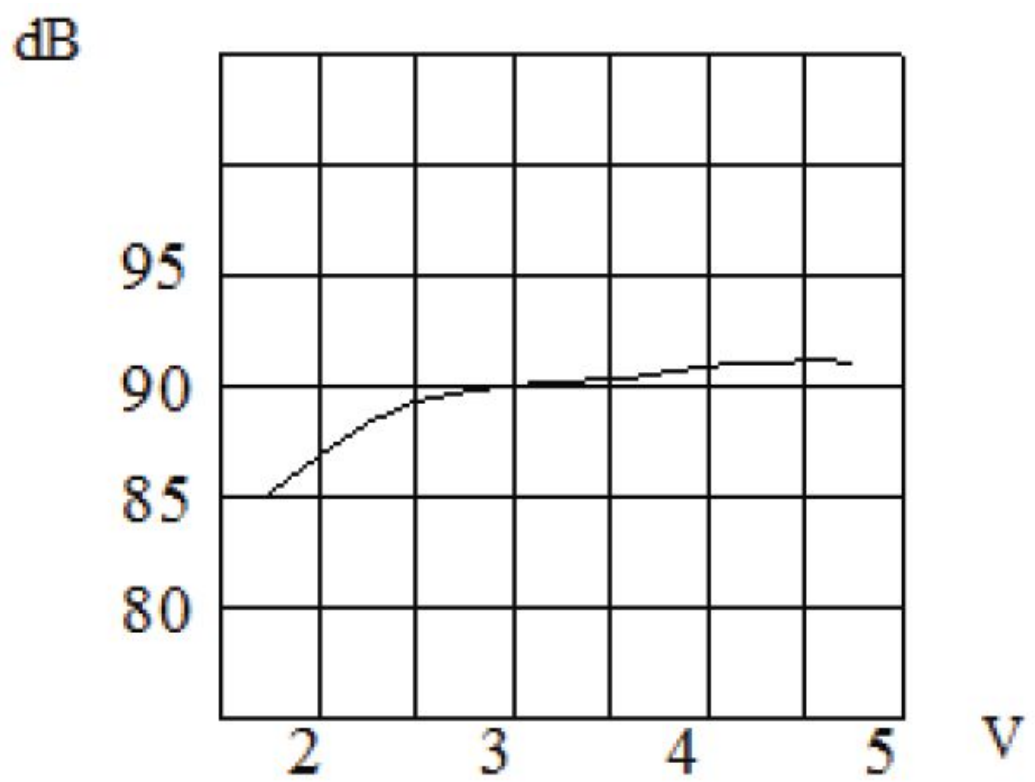
#### Page 5

Dimensions

#### Page 6

Packing

## Typical Frequency Response Curve





soberton inc.

# WST BUZZER

Acoustic Product Specification

Product Number: WST-1203UX



Release | Revision: D/2019

## CONTENTS

This document contains the technical specifications for the electromagnetic buzzer.

### Page 1

Specifications

Mechanical Characteristics

### Page 2

Environment Test

Reliability Test

### Page 3

Recommended Temperature Profile

Inspection Fixture

### Page 4

Frequency Response Curve

### Page 5

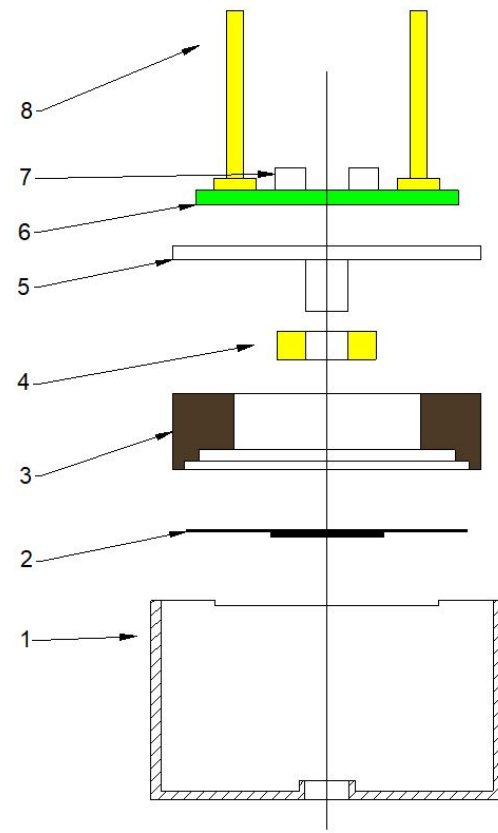
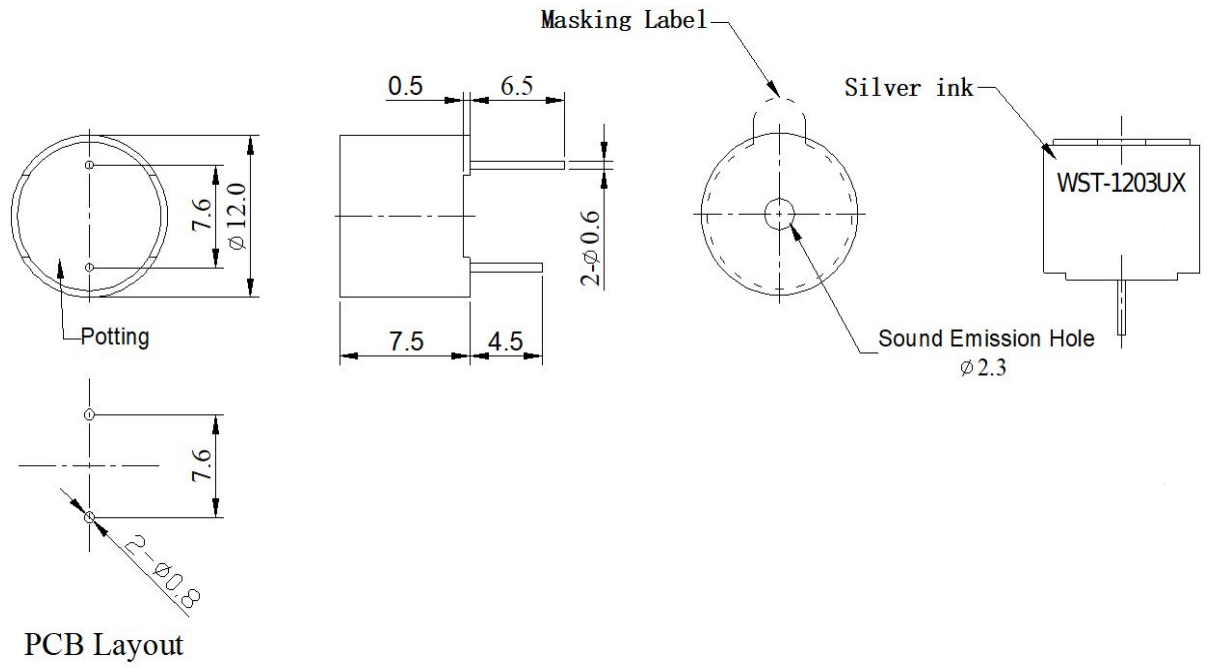
Dimensions

### Page 6

Packing

## Dimensions

Tolerance:  $\pm 0.5$  (unit: mm)



No.	Part Name	Material	Quantity
1	Case	PPO	1
2	Diaphragm	Ferrum	1
3	Magnet Ring	Poly + Ferrite	1
4	Coil	Copper	1
5	Core	Ferrum	1
6	PCB	Epoxy Glass Fiber Cloth + Copper	1
7	Transistor	Epoxy + Copper	2
8	PIN	Copper	2



soberton inc.

# WST BUZZER

Acoustic Product Specification

Product Number: WST-1203UX



Release | Revision: D/2019

### CONTENTS

This document contains the technical specifications for the electromagnetic buzzer.

#### Page 1

Specifications

Mechanical Characteristics

#### Page 2

Environment Test

Reliability Test

#### Page 3

Recommended Temperature Profile

Inspection Fixture

#### Page 4

Frequency Response Curve

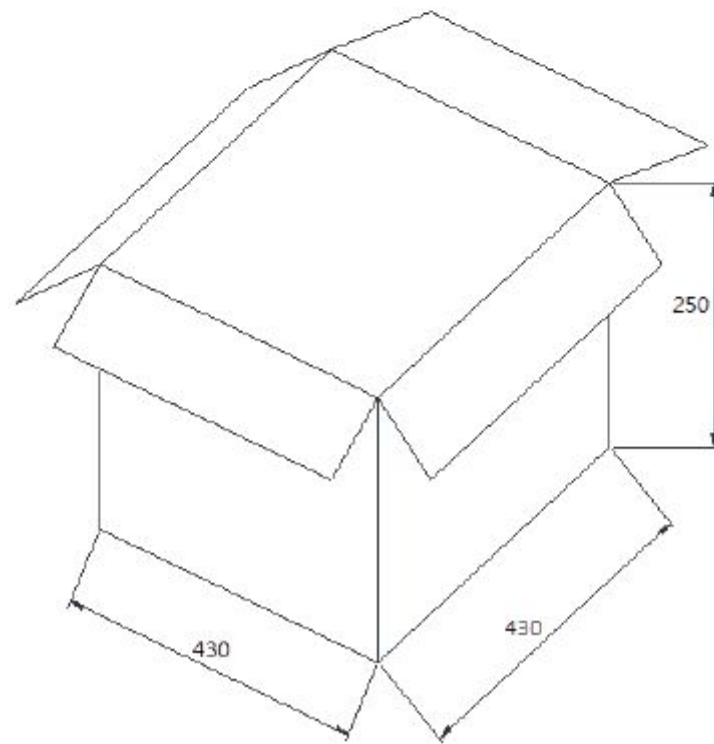
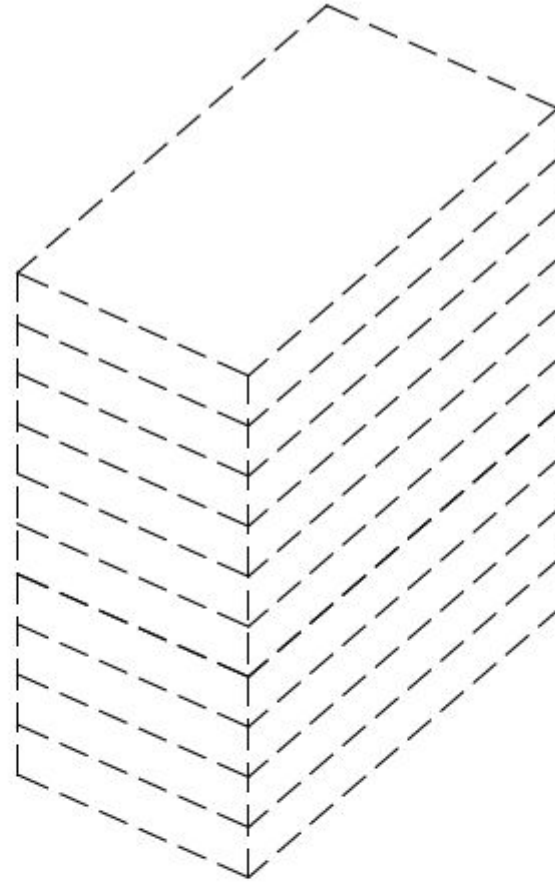
#### Page 5

Dimensions

#### Page 6

Packing

## Packing



Packing Box	LxWxH (mm)	Pieces
Tray	190x190x25	100
Inner Carton	210x210x220	1,000
Outer Carton	430x430x250	4,000