



soberton inc.

WST BUZZER

Acoustic Product Specification

Product Number: WST-1212S



Release | Revision: B/2018

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	12.0	
Operating Voltage	VDC	10.0 ~ 14.0	
Mean Current	mA	40 Max.	At rated voltage
Sound Output	dBa	85	At 10cm at rated voltage
Rated Frequency	Hz	2300 ±300	
Operating Temp	°C	-20 ~ +70	
Storage Temp	°C	-30 ~ +80	
Dimension	mm	φ12.0×H9.5	See attached drawing
Weight	gram	2.0	
Material		PPO (Black)	
Terminal		PIN Type Plating Sn	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 terminals 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 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-1212S



Release | Revision: B/2018

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

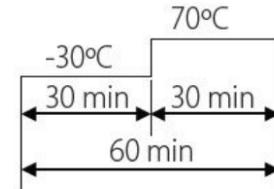
Dimensions

Page 6

Packing

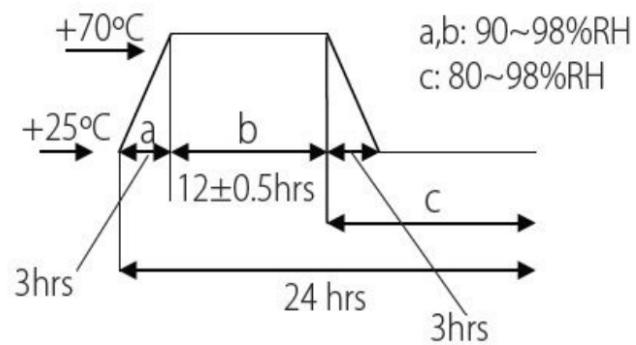
Environment Test

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 -30°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	Ordinary Temperature The part shall be subjected to 96 hours of continuous operation at +25°C \pm 10°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.
	High Temperature The part shall be subjected to 72 hours of continuous operation at +60°C at 12.0V applied.	
	Low Temperature The part shall be subjected to 72 hours of continuous operation at -20°C at 12.0V applied.	
	High and Low Voltage Applying 10.0 voltage and 14.0 voltage, available time 24 hours each.	

Standard test condition:

- a) Temperature: +5~+35°C
- b) Humidity: 45~85%
- c) Pressure: 86~106KPa



soberton inc.

WST BUZZER

Acoustic Product Specification

Product Number: WST-1212S



Release | Revision: B/2018

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

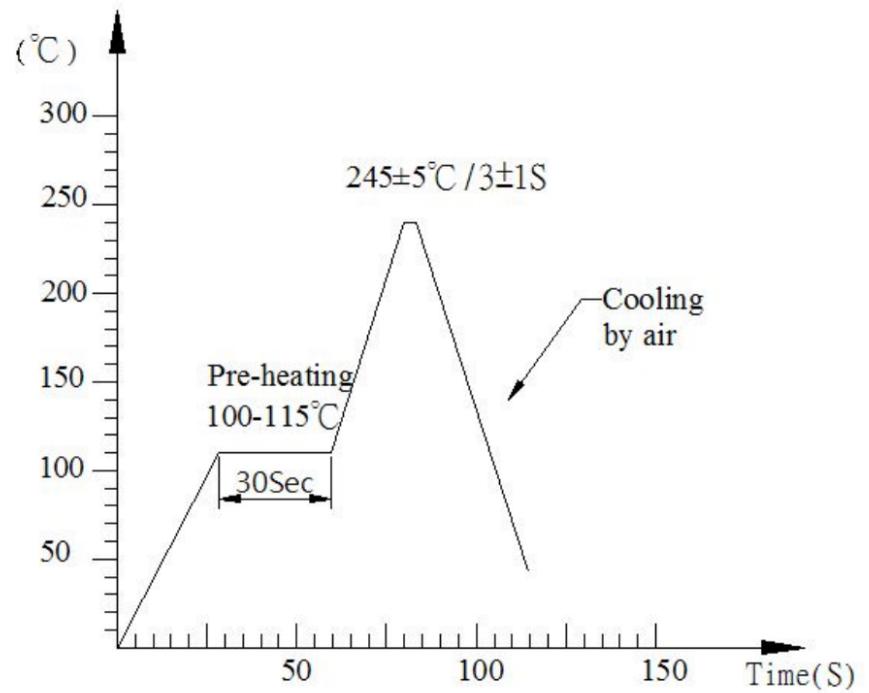
Page 5

Dimensions

Page 6

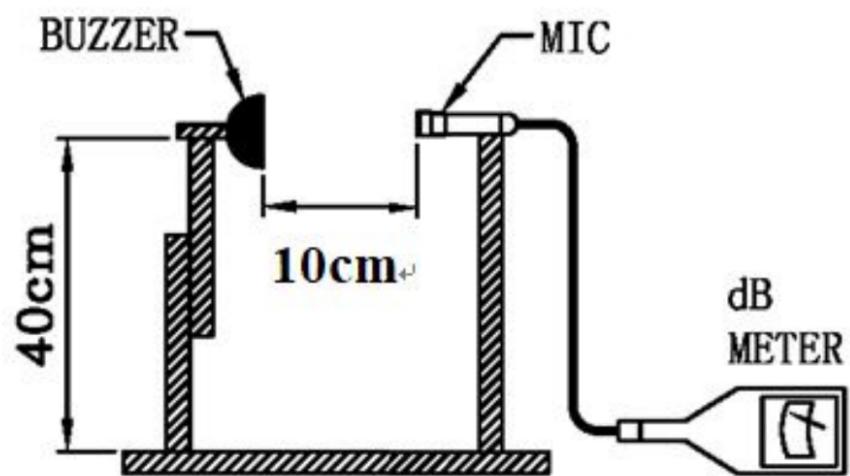
Packing

Recommended Wave Soldering Temperature Curve



Inspection Fixture

Input Signal: 12 VDC, 2300Hz



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

S.G: Hewlett Packard 33120A Function Generator or equivalent



soberton inc.

WST BUZZER

Acoustic Product Specification

Product Number: WST-1212S



Release | Revision: B/2018

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

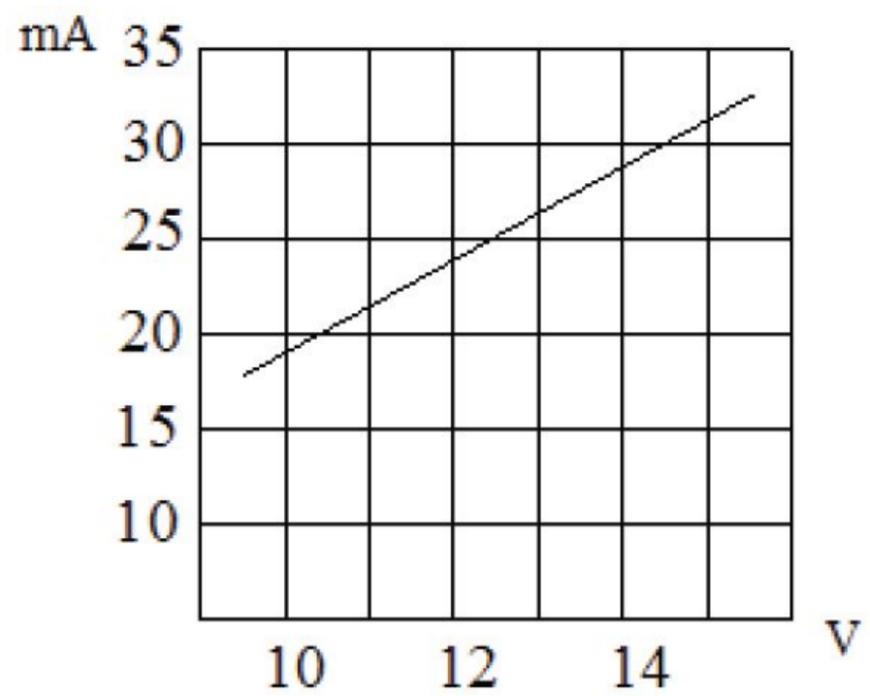
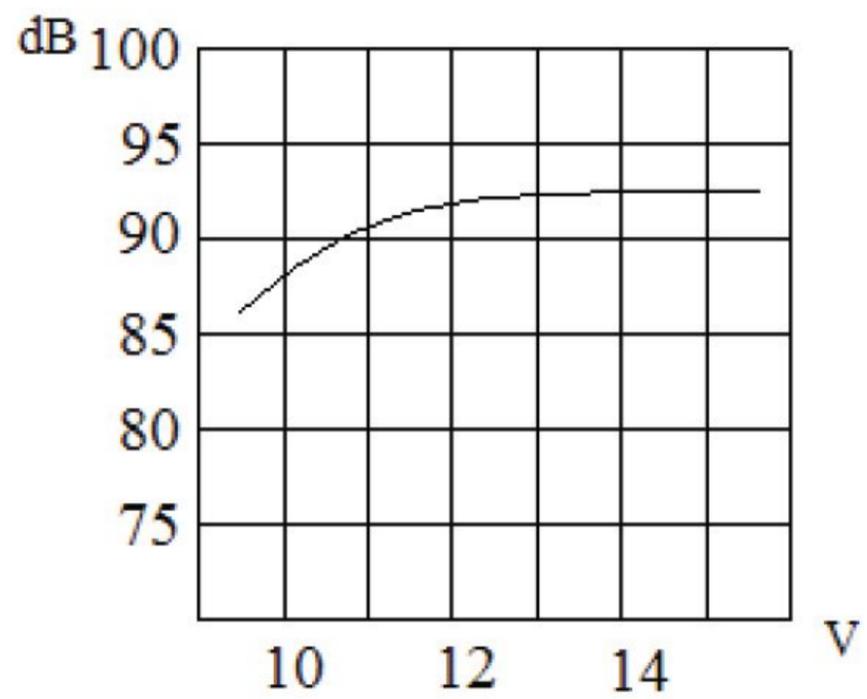
Page 5

Dimensions

Page 6

Packing

Typical Frequency Response Curve





soberton inc.

WST BUZZER

Acoustic Product Specification

Product Number: WST-1212S



Release | Revision: B/2018

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

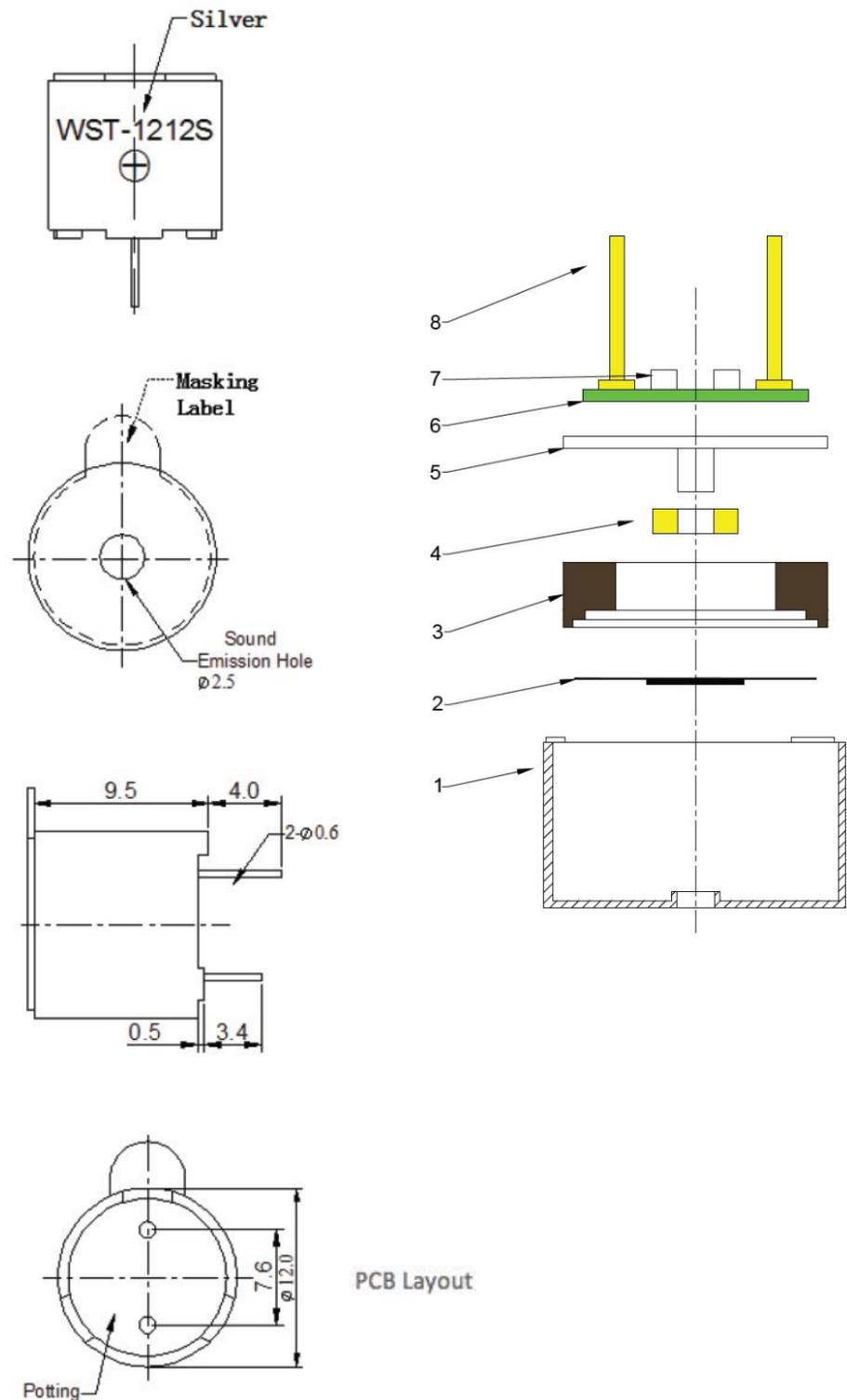
Dimensions

Page 6

Packing

Dimensions

Tolerance: ± 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-1212S



Release | Revision: B/2018

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

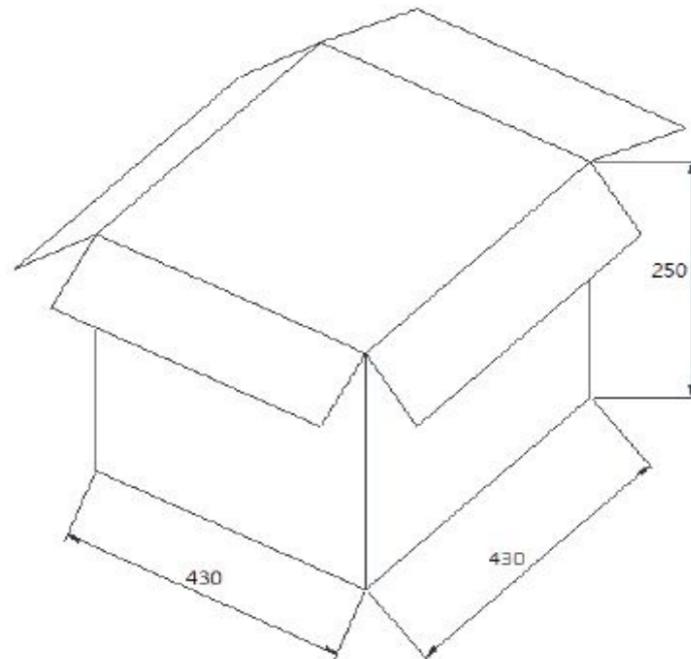
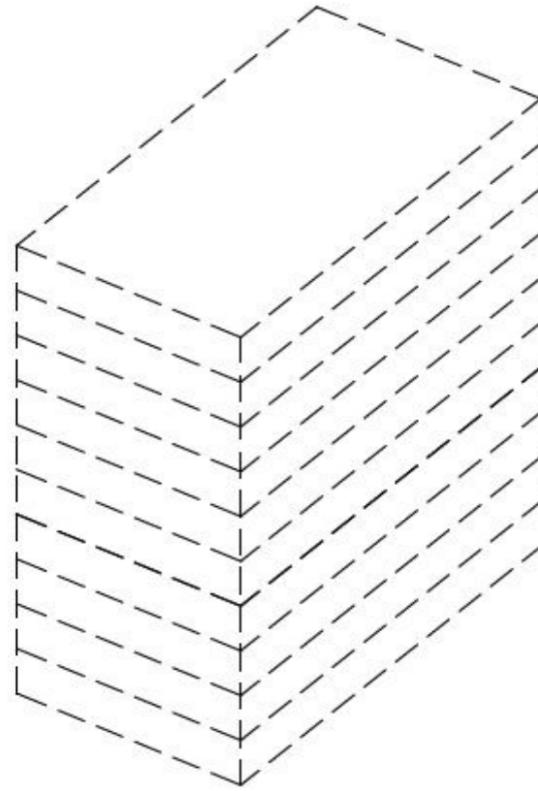
Page 5

Dimensions

Page 6

Packing

Packing



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