



soberton inc.

# WST BUZZER

## Acoustic Product Specification

Product Number: WST-1612S



Release | Revision: C/2018

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## 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 ~ +60	
Storage Temp	°C	-30 ~ +70	
Dimension	mm	φ16.0 xH14.0	See attached drawing
Weight	gram	4.6	
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 of +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.	



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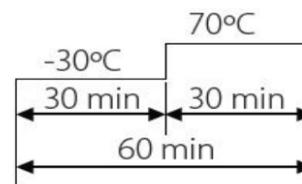
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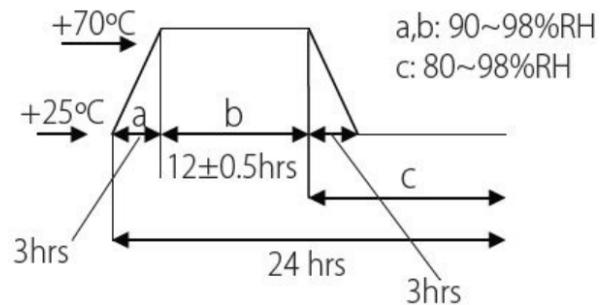
## Environment Test

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 ±10dBA 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. One 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°C±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 ±10dBA compared with initial one.
	<b>High Temperature</b> The part shall be subjected to 72 hours of continuous operation at +60°C at 12.0V applied.	
	<b>Low Temperature</b> The part would be subjected to 72 hours of continuous operation at -20°C at 12.0V applied.	
	<b>High and Low Voltage</b> 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



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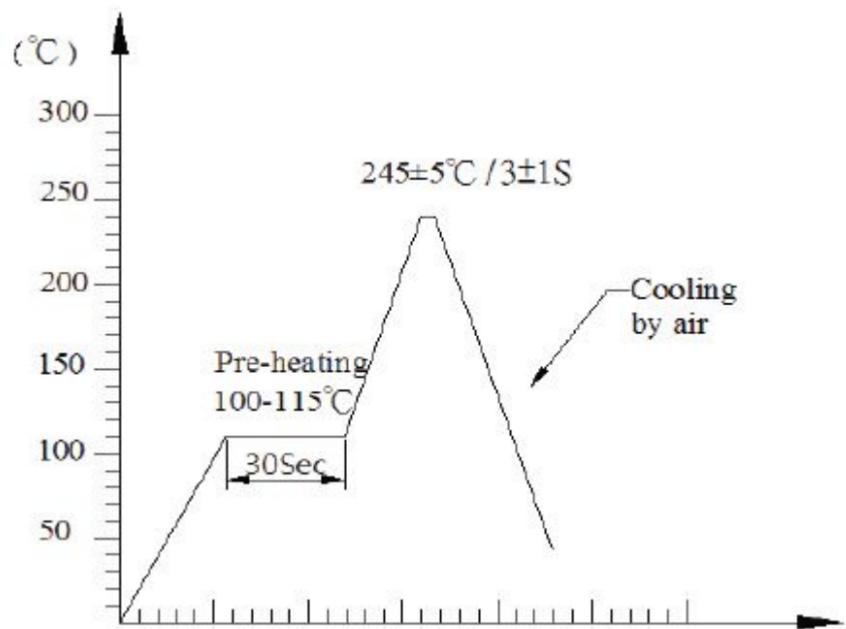
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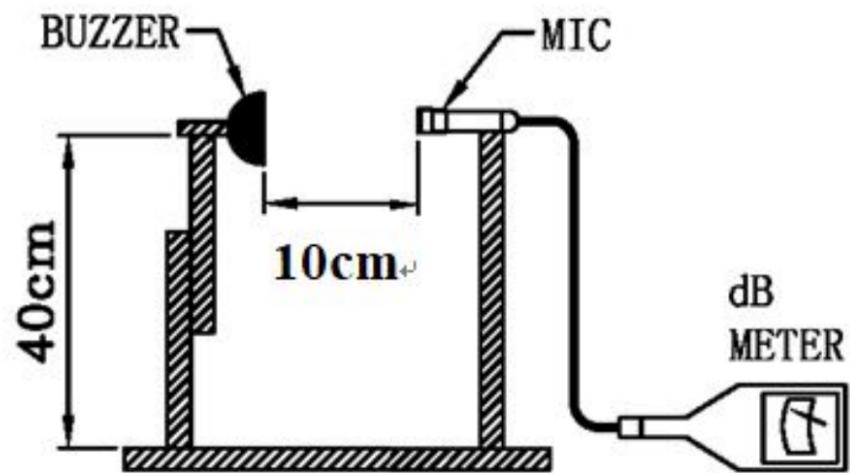
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## Recommended Wave Soldering Temperature Curve



## Inspection Fixture

Input Signal: 12.0 VDC, 2300Hz



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

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



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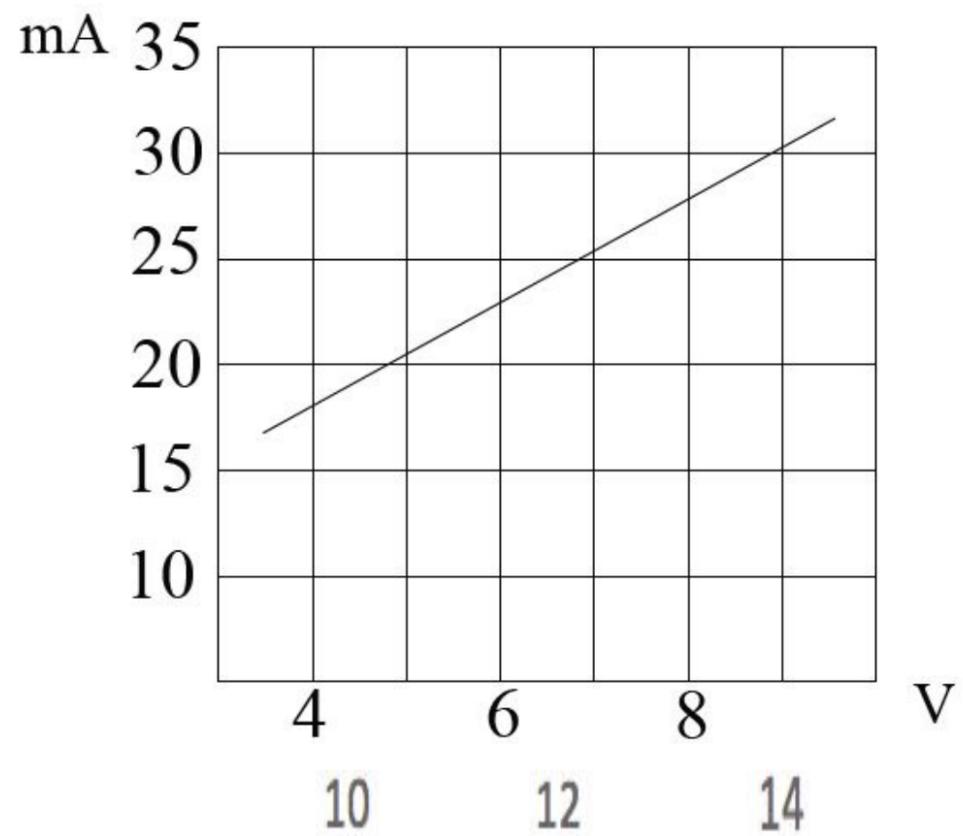
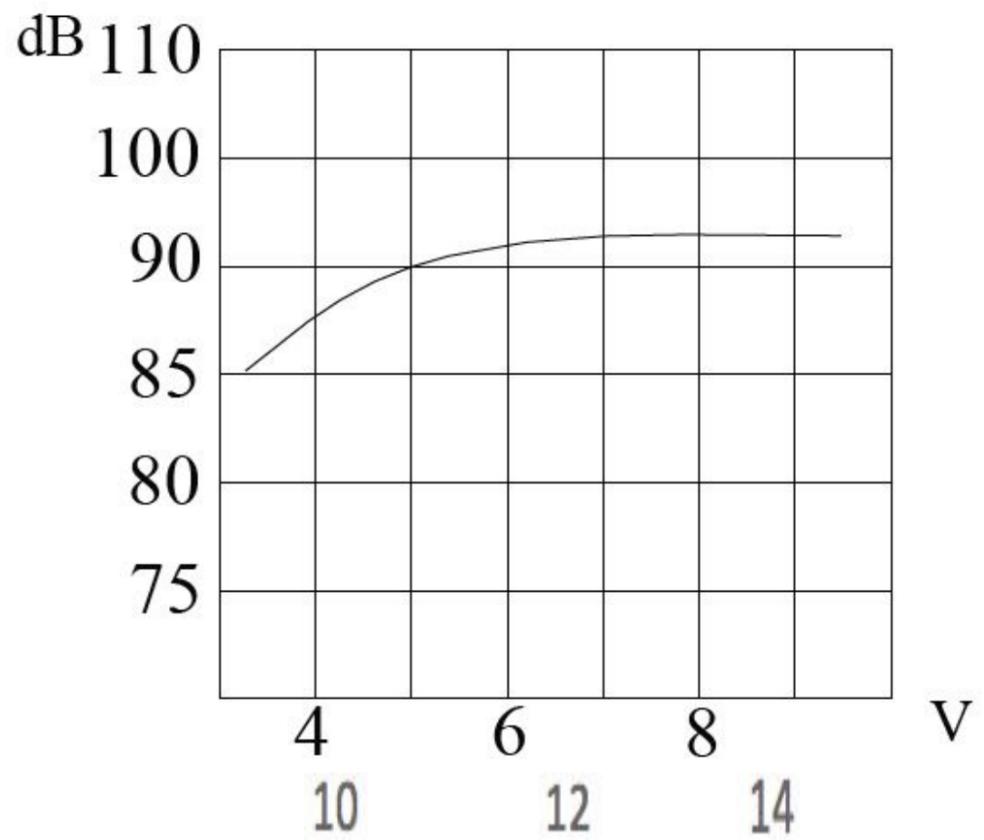
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## Typical Frequency Response Curve





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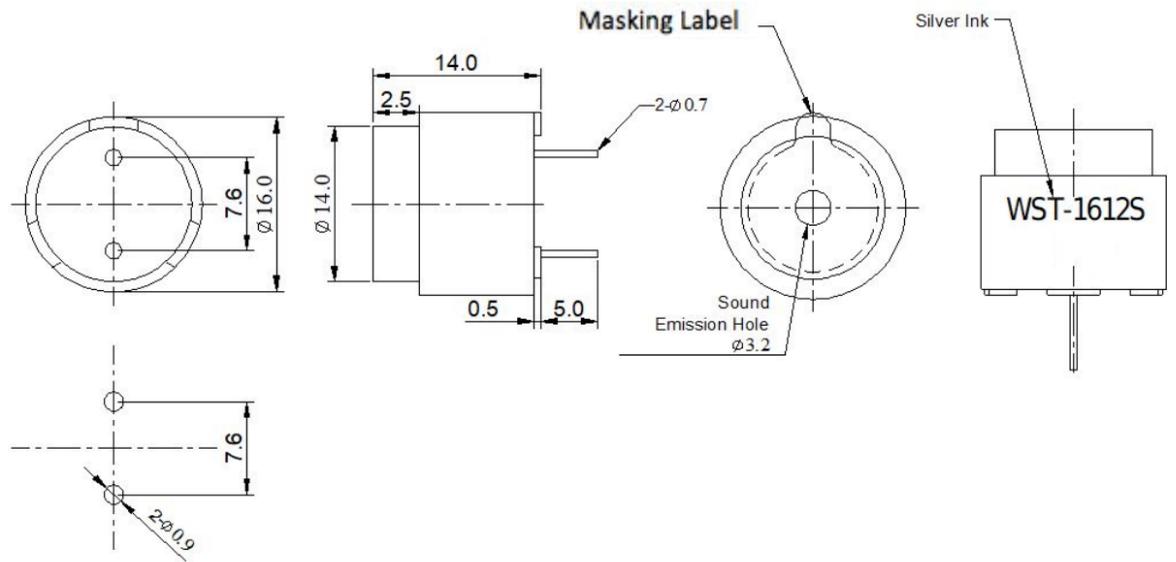
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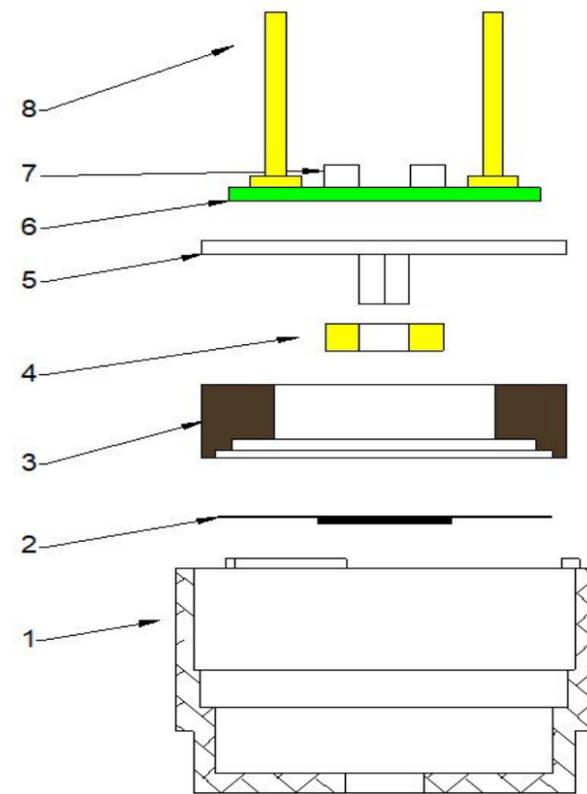
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## Dimensions

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



## PCB layout



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



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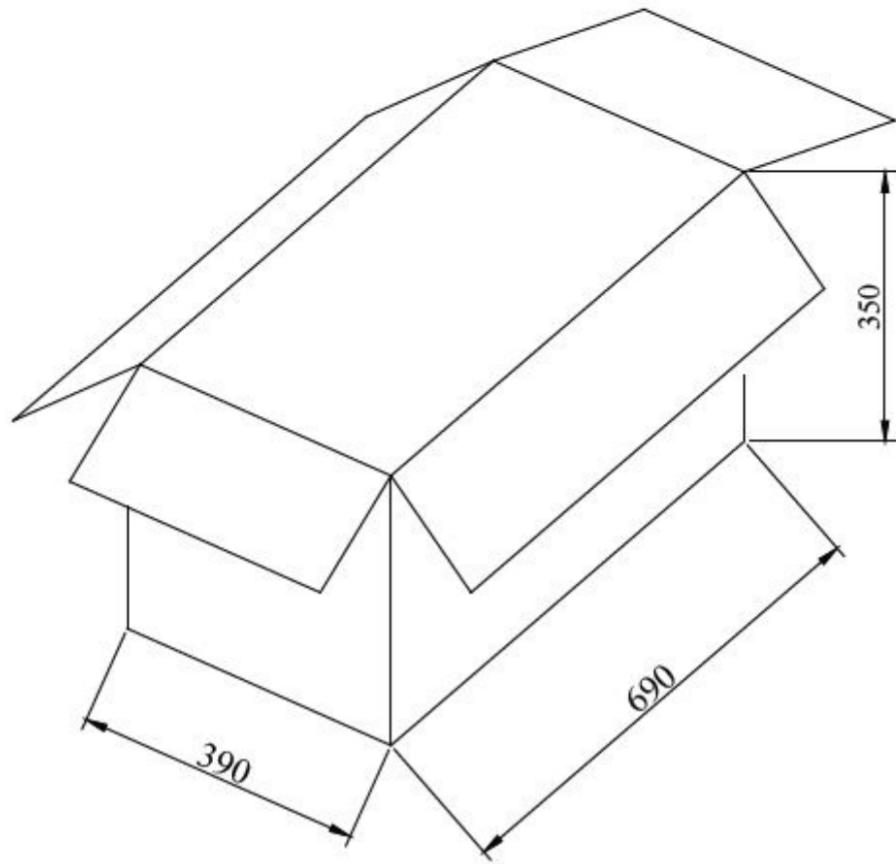
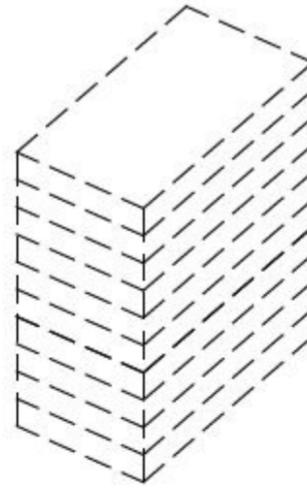
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## Packing



Packing Box	LxWxH (mm)	Pieces
Tray	320 x 170 x 28	50
Inner Carton	340 x 190 x 310	500
Outer Carton	690 x 390 x 350	2,000