soberton inc.

WST BUZZER

Acoustic Product Specification

Product Number: WST-1310S-1

Release | Revision: D/2018

CONTENTS

This document contains the technical specifications for the electromagnetic buzzer.

Specifications

Item	Unit	Specification	Condition
Rated Voltage	VDC	1.5	
Operating Voltage	VDC	1.0 ~ 3.0	
Mean Current	mA	30 Max.	At rated voltage
Sound Output	dBA	75	At 10cm at rated voltage
Rated Frequency	Hz	2400 ±400	
Operating Temp	℃	-20 ~ +70	
Storage Temp	℃	-30 ~ +80	
Dimension	mm	L12.8 xW12.8 x H10.0	See attached drawing
Weight	gram	2.8	
Material		PPS (Gray)	
Terminal		SMD Type (Plating Sn)	See attached drawing
Environmental Protection Regulation		RoHS	

Test condition:

Temperature: +25±2 ℃ **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 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.	

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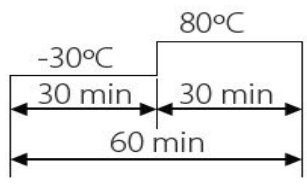
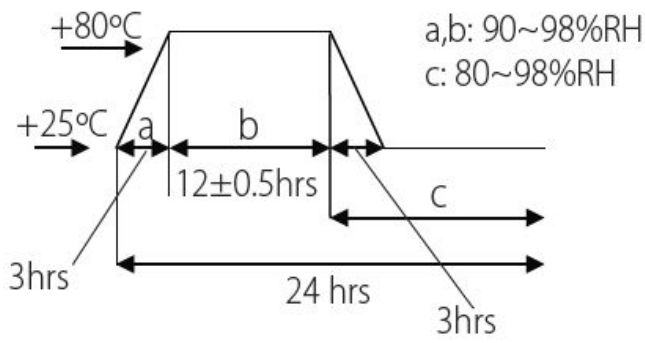
Environment Test		
Item	**Test condition**	**Evaluation standard**
High Temp. Test	The part is placed in a chamber at +80°C for 96 hours.	After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25°C, the SPL should be in ±10dBA 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. 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±10˚C. **High Temperature** The part shall be subjected to 72 hours of continuous operation at +60°C at 1.5V 2400 Hz applied. **Low Temperature** The part shall be subjected to 72 hours of continuous operation at -20°C at 1.5V, 2400 Hz applied. **High and Low Voltage** Applying 1.0 voltage and 3.0 voltage, available time 24 hours each.	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.

Standard test condition:

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

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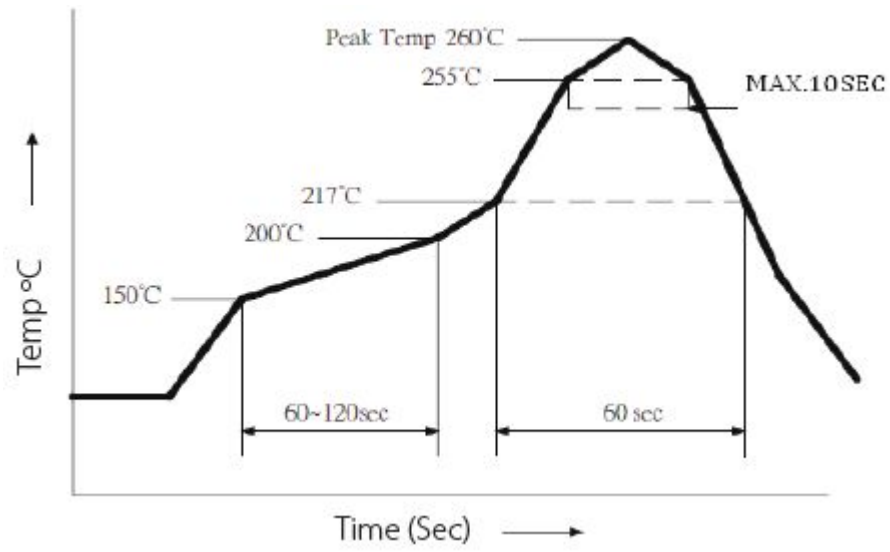
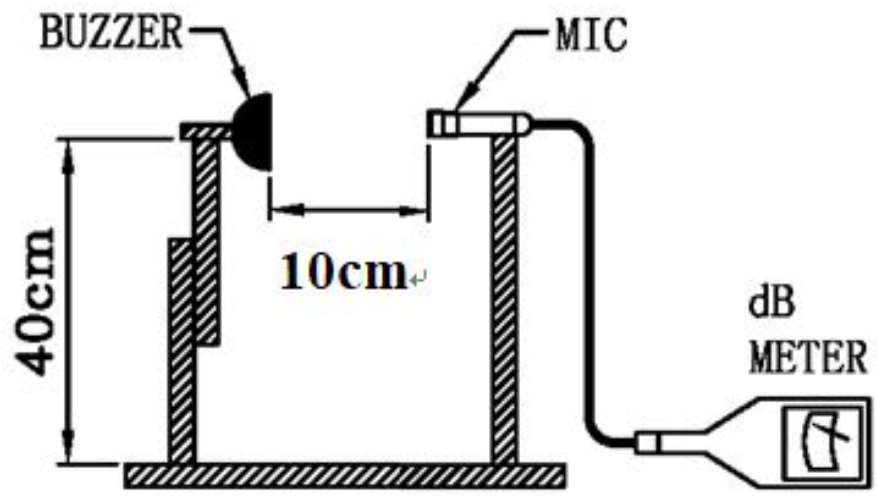
Recommended Temperature Profile for Reflow Oven



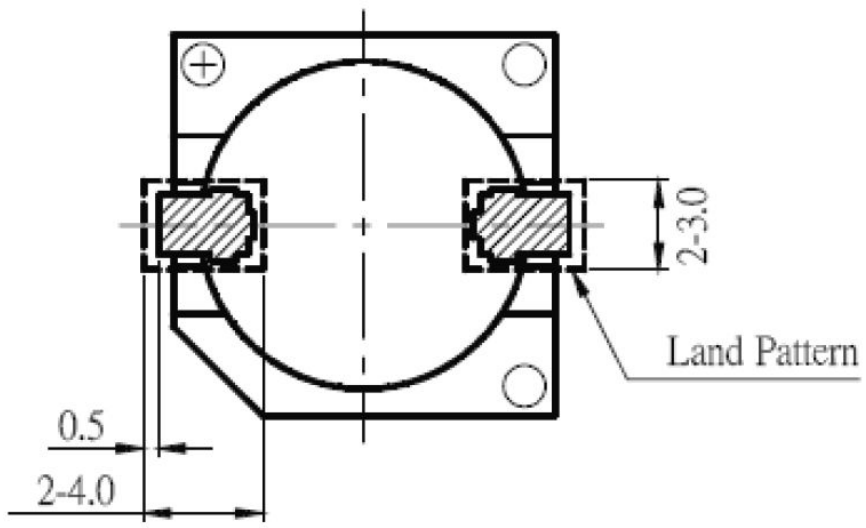
Inspection Fixture

Input Signal: 1.5 VDC, 2400Hz



Mic: RION S.P.L meter UC30 or equivalent
S.G: Hewlett Packard 33120A Function Generator or equivalent

Recommended Land Pattern/Pad Layout



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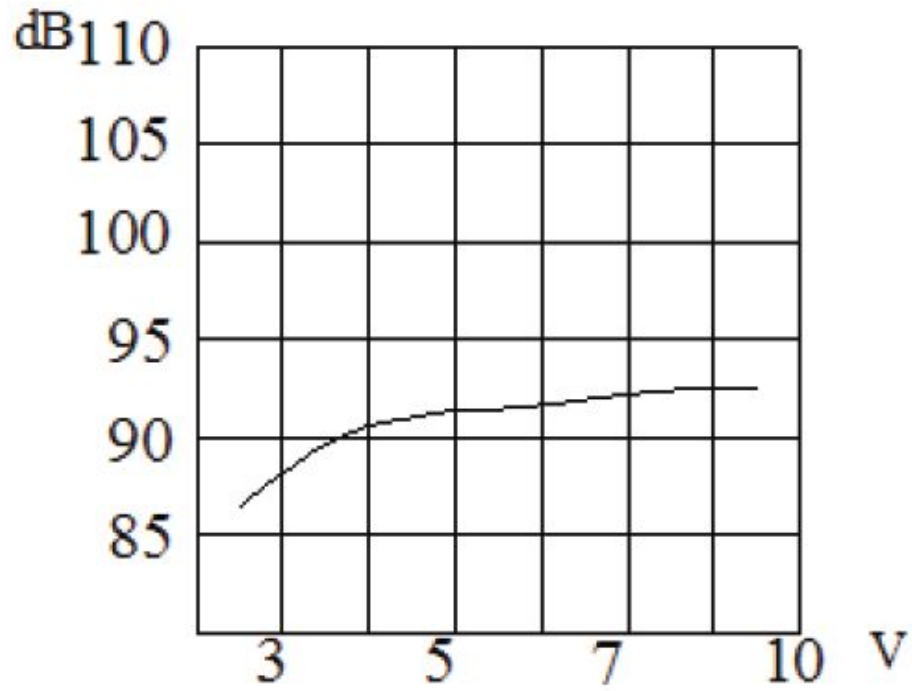
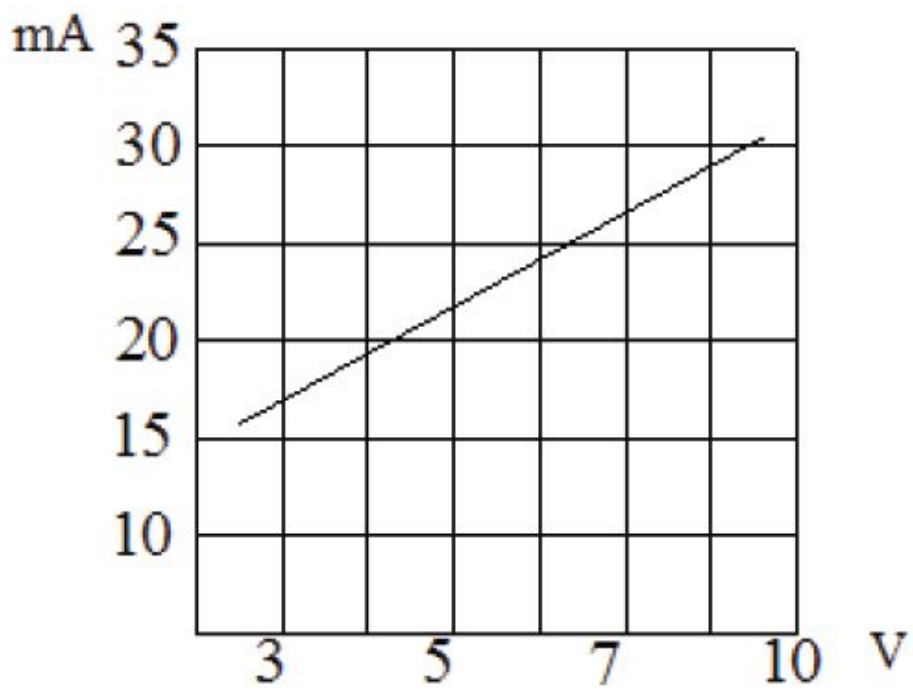
Typical Frequency Response Curve





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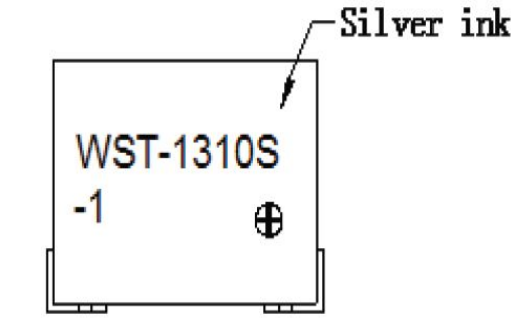
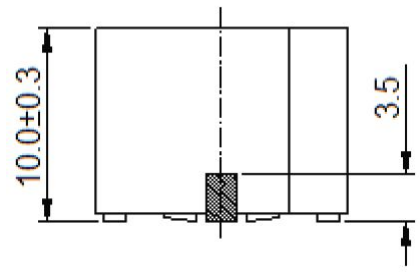
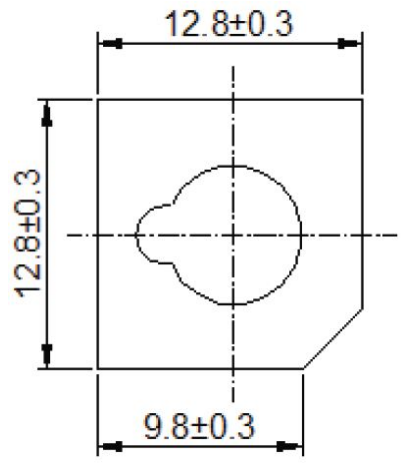
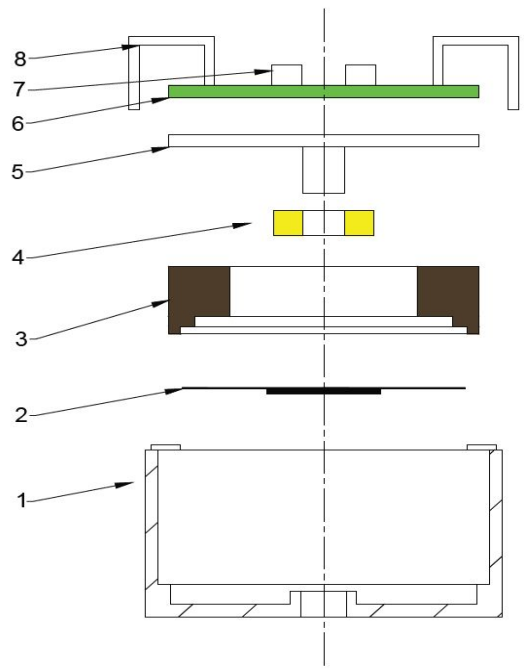
Dimensions

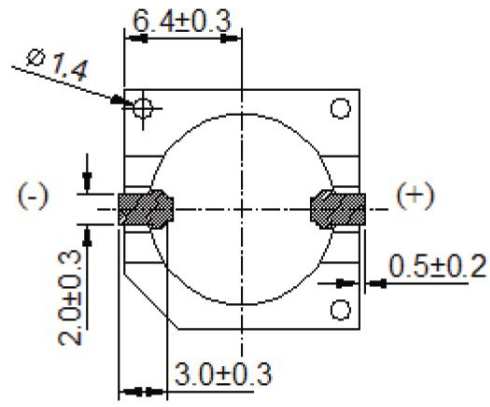
Tolerance: ±0.5 (unit: mm)











No.	Part Name	Material	Quantity
1	Case	PPS	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	Lead	Copper	2

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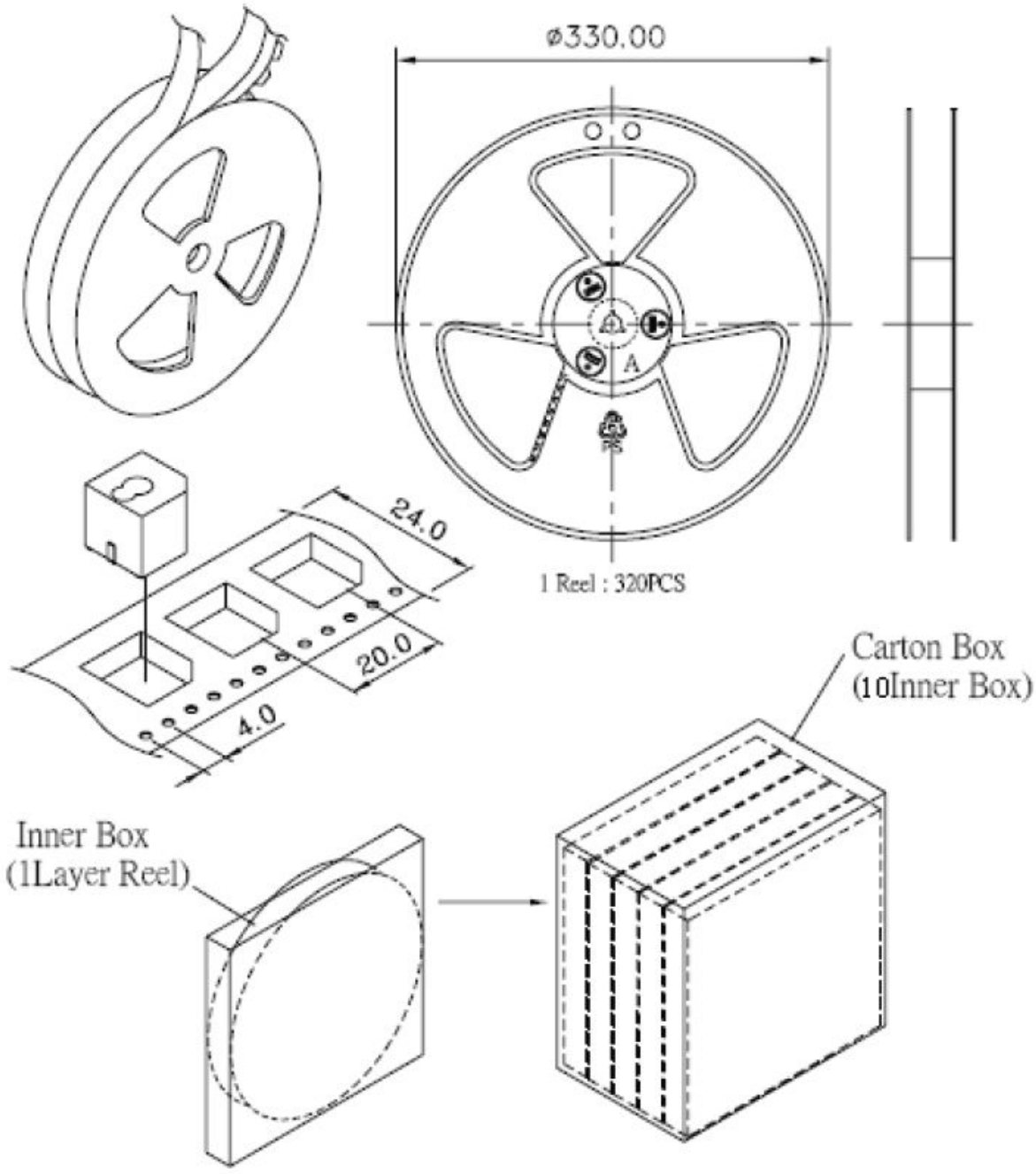
Packing



Packing Box	LxWxH (mm)	Pieces
Inner Box	340x340x40	1 x 320 = 320pcs
Carton Box	360 x 360 x 420	10 x 320 = 3,200pcs