soberton inc.

WT BUZZER

Acoustic Product Specification

Product Number: WT-1201

Release | Revision: E/2018

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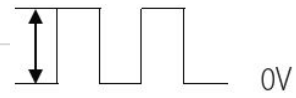
This document contains the technical specifications for the electromagnetic buzzer.

Specifications

Item	Unit	Specification	Condition
Rated Voltage	Vo-p	1.5	Vo-p 
Operating Voltage	Vo-p	1.0 ~ 3.0	
Mean Current	mA	50 Max.	At rated voltage
Coil Resistance	Ω	16 ±4	
Sound Output	dB	80	At 10cm at rated voltage
Rated Frequency	Hz	2400	Vo-p= ½ duty, square wave
Operating Temp	℃	-20 ~ +70	
Storage Temp	℃	-30 ~ +80	
Dimension	mm	Ø12.0×H9.5	See attached drawing
Weight	gram	2.0	
Material		PBT	
Terminal		PIN 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 the solder bath at +250±5℃ for 3±1 seconds.	90% min. lead terminals shall be wet with solder.
Soldering Heat Resistance	The product follows the reflow temperature curve to test its reflow thermal stability.	No interference in operation.
Terminal Mechanical Strength	The force of 9.8N is applied to each terminal in axial direction For 10 seconds.	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). A total 6 hours.	After the test, the part shall meet specifications without any damage in appearance and performance except SPL. The SPL should be in ±10dBA compared with initial one.
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). A total of 9 times.	

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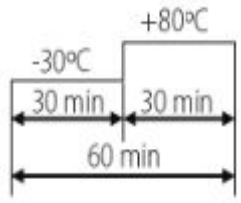
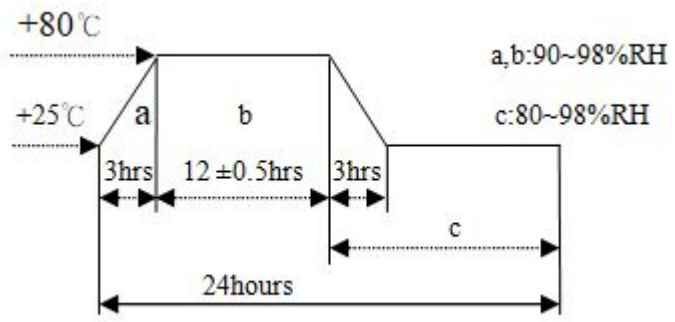
Environment Test

Item	Test condition	Evaluation standard
High Temp. Test	The part is placed in a chamber at +80℃ 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℃, the SPL should be in ±10dBA compared with initial one.
Low Temp. Test	The part is placed in a chamber at -30℃ 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 72 hours of continuous operation at +25˚C±10˚C at 1.5V, 2400Hz applied. **High Temperature** The part shall be subjected to 72 hours of continuous operation at +70℃ at 1.5V, 2400Hz applied. **Low Temperature** The part shall be subjected to 72 hours of continuous operation at -20℃ at 1.5V, 2400Hz applied.	After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25℃, 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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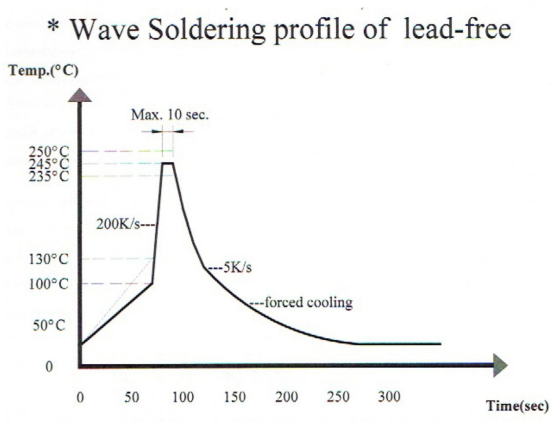
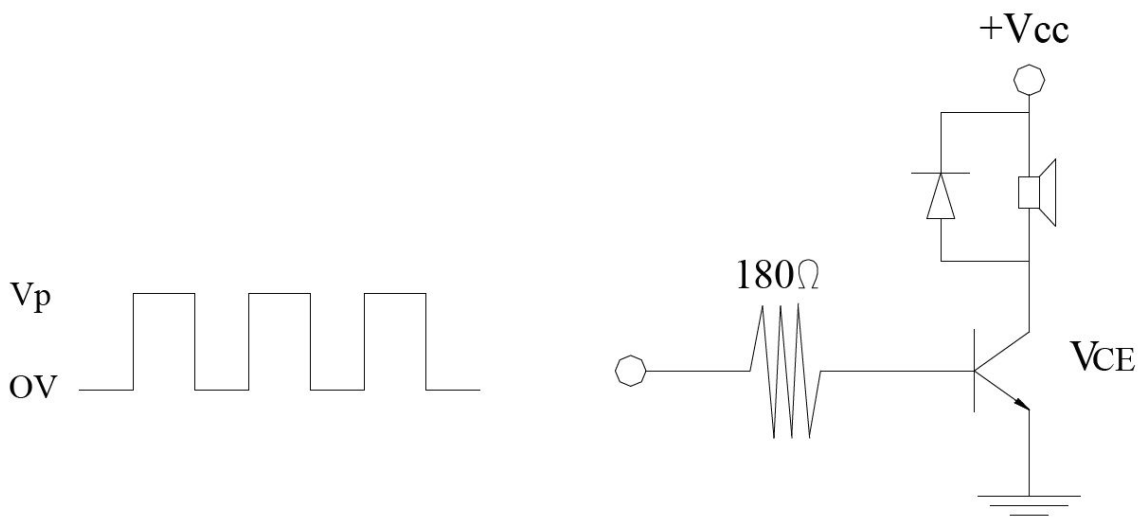
Recommended Wave Soldering Temperature Curve

RECOMMENDED TEMPERATURE PROFILE



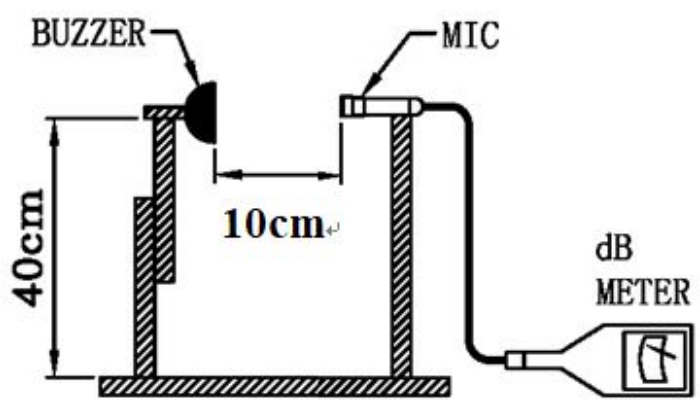
Recommendable wave soldering condition is as follows:
Note 1: It is requested that wave soldering should be executed after heat of product goes down to normal temperature.
Note 2: Peak wave temperature of 235˚C maximum of 10 seconds.

Measurement Test Circuit



Inspection Fixture

S.P.L Measuring Circuit
Input Signal: 1. 5 Vo-p, square wave, ½ duty, 2400 Hz



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

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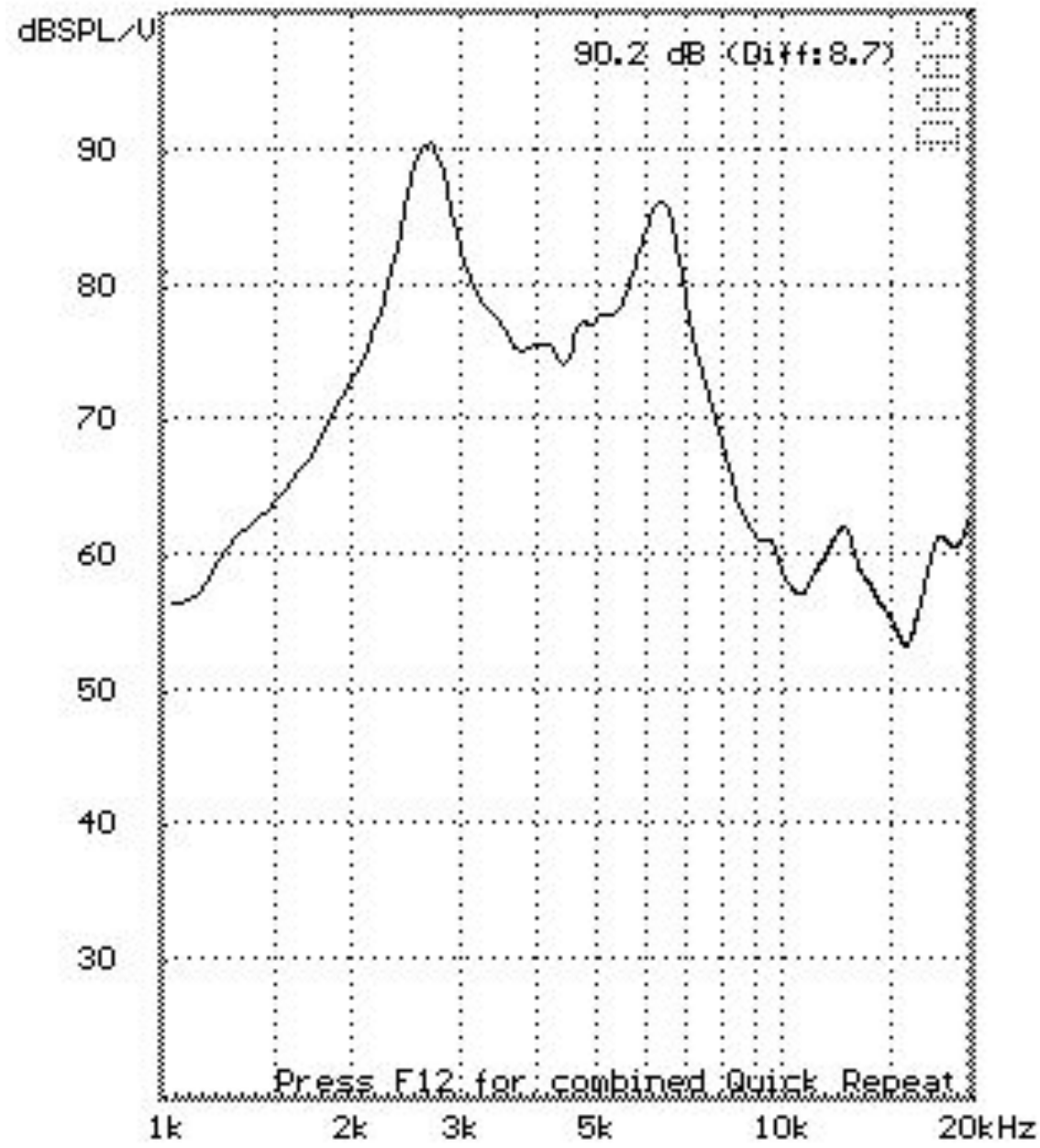
Typical Frequency Response Curve



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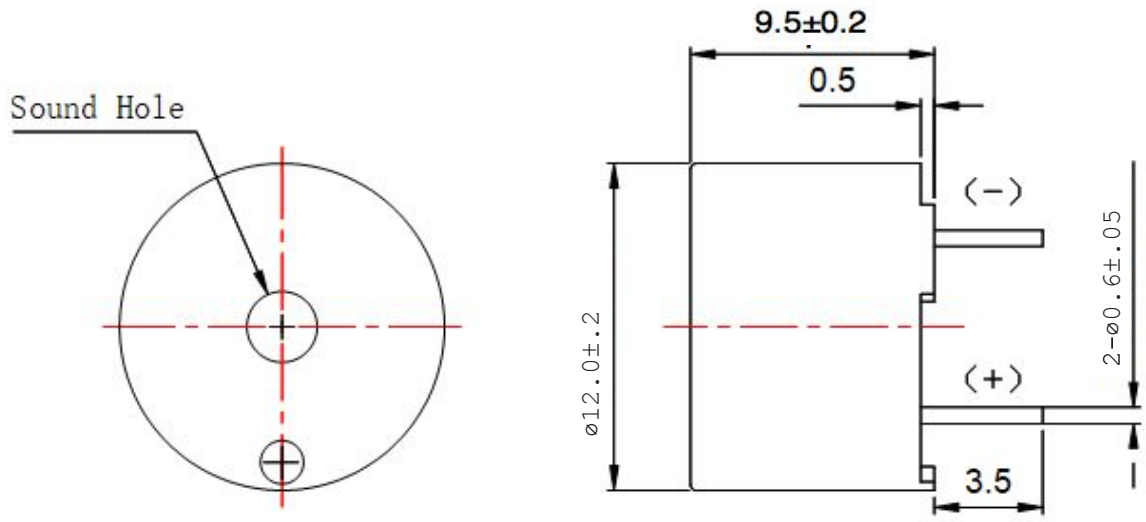
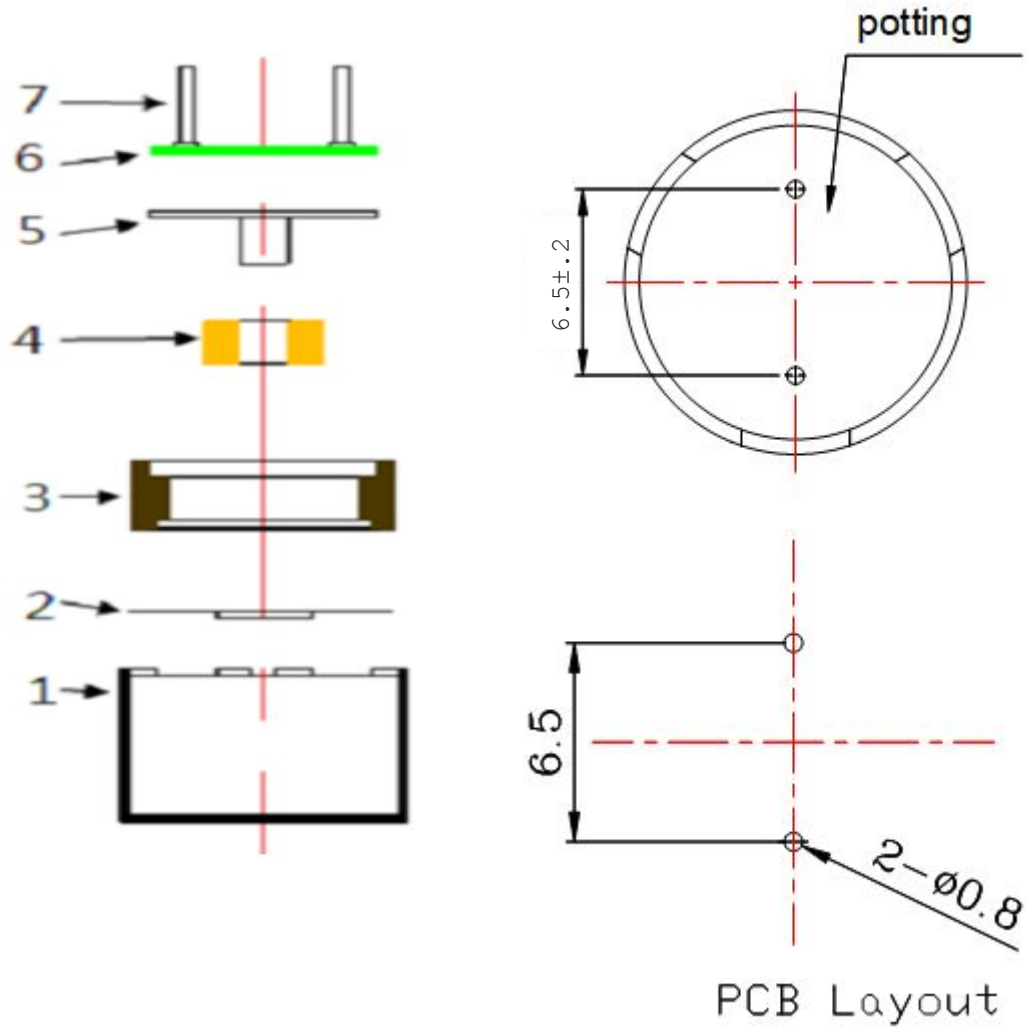
Dimensions

Tolerance: ±0.5 (unit: mm)





No.	Part Name	Material	Quantity
1	Cover	PBT	1
2	Diaphragm	Iron	1
3	Magnet	Nylon + Iron	1
4	Coil	Copper	1
5	Core	Iron	1
6	PCB	Epoxy Glass Fiber Cloth + Copper	1
7	PIN	copper	2

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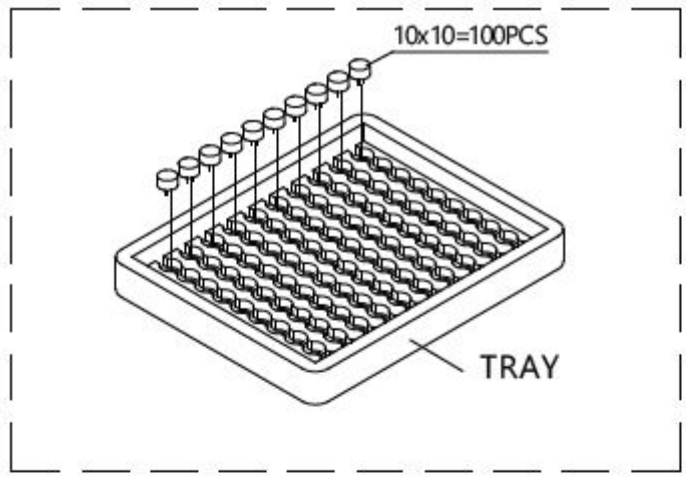
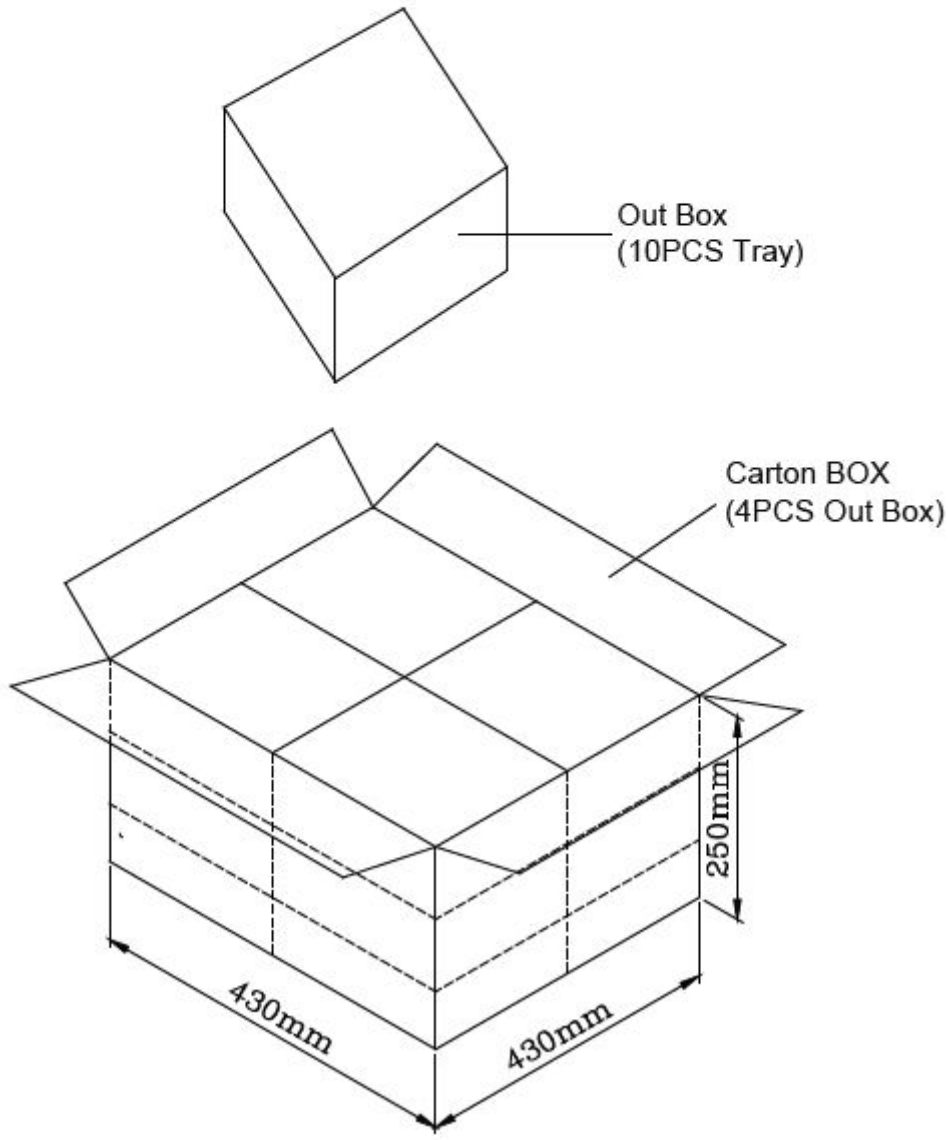
Packing





packing box	L x W x H (mm)	pieces
Tray	190 x 190 x 25	1 x 100 = 100pcs
Out box	210 x 210 x 220	10 x 100 = 1,000pcs
Carton box	430 x 430 x 250	4 x 1000 = 4,000pcs