soberton inc.

GT MAGNETIC BUZZER

Acoustic Product Specification

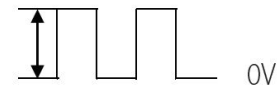
Product Number: GT-0915RP2

Release | Revision: C/2018

CONTENTS

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 ~ 2.0	
Mean Current	mA	80 Max.	At rated voltage, 2730 Hz square wave, ½ duty
Coil Resistance	Ω	6±1	
Sound Output	dB	85	At 10cm(A-weight free air), at rated voltage 2730Hz, square wave, ½ duty
Rated Frequency	Hz	2730	
Operating Temp	℃	-20 ~ +60	
Storage Temp	℃	-30 ~ +70	
Dimension	mm	φ 9.0×H4.3	See attached drawing
Weight	gram	0.6	
Material		PPO (Black)	
Terminal		Pin type (Plating Au)	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℃ for 3±1 seconds.	90% min. lead terminals shall be wet with solder. No interference in operation.
Soldering Heat Resistance	The product follows the reflow temperature curve to test its reflow thermal stability.	
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 3 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.	The SPL should be in ±10dBA compared with initial one.

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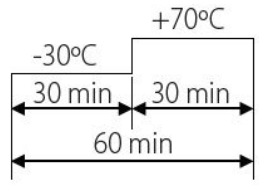
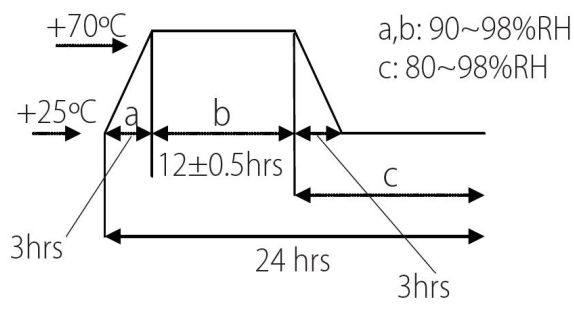
Environment Test

Item	Test condition	Evaluation standard
High Temp. Test	The part is placed in a chamber at +70℃ 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 96 hours of continuous operation at +25 ±10℃. **High Temperature** The part shall be subjected to 72 hours of continuous operation at +60℃ at 1.5V, 2730Hz applied. **Low Temperature** The part shall be subjected to 72 hours of continuous operation at -20℃ at 1.5V, 2730Hz 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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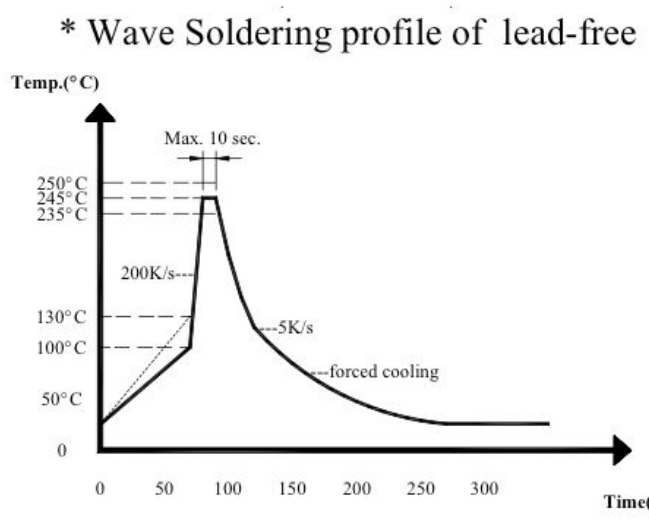
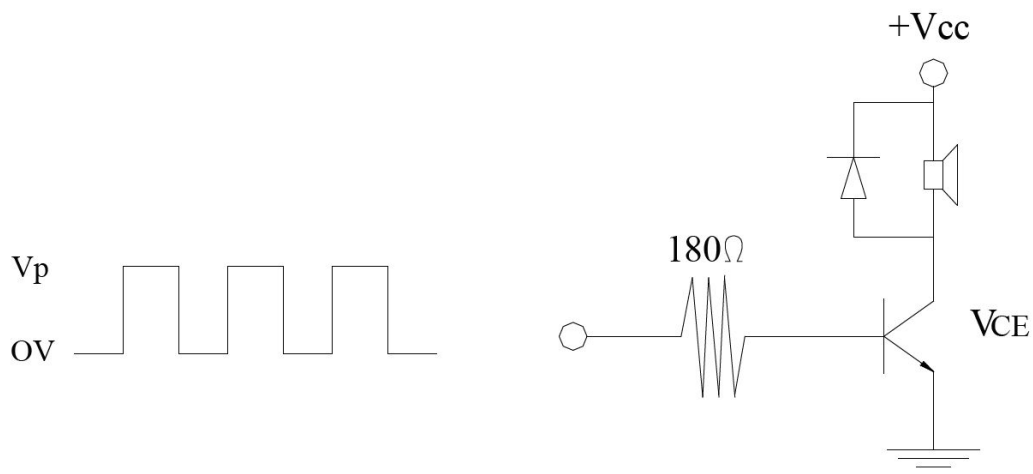
Recommended Temperature Profile for Reflow Oven

Recommendable wave soldering condition is as follows:
Note 1: It is requested that reflow soldering should be executed after heat of product goes down to normal temperature.
Note 2: Peak reflow temperature of 250˚C maximum of 10 seconds, with a maximum duration of 40-60 seconds between 220˚C and 250˚C

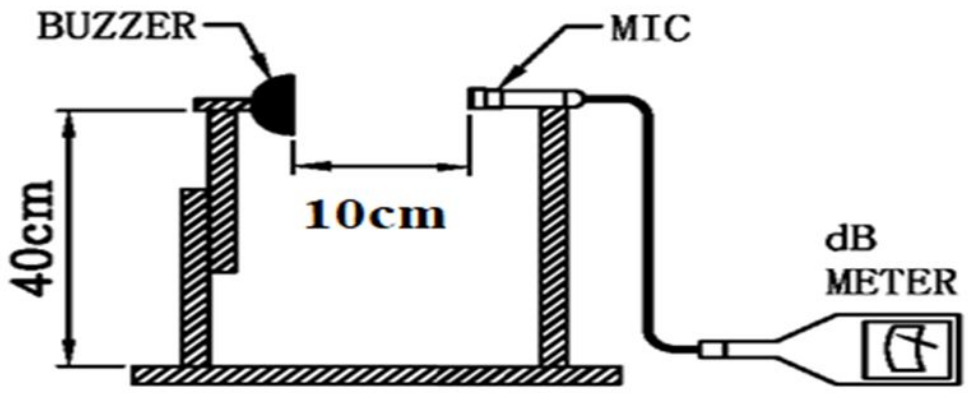


Measurement Test Circuit



Inspection Fixture

S.P.L Measuring Circuit
Input Signal : 1.5 Vo-p, square wave, ½ duty, 2730Hz



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

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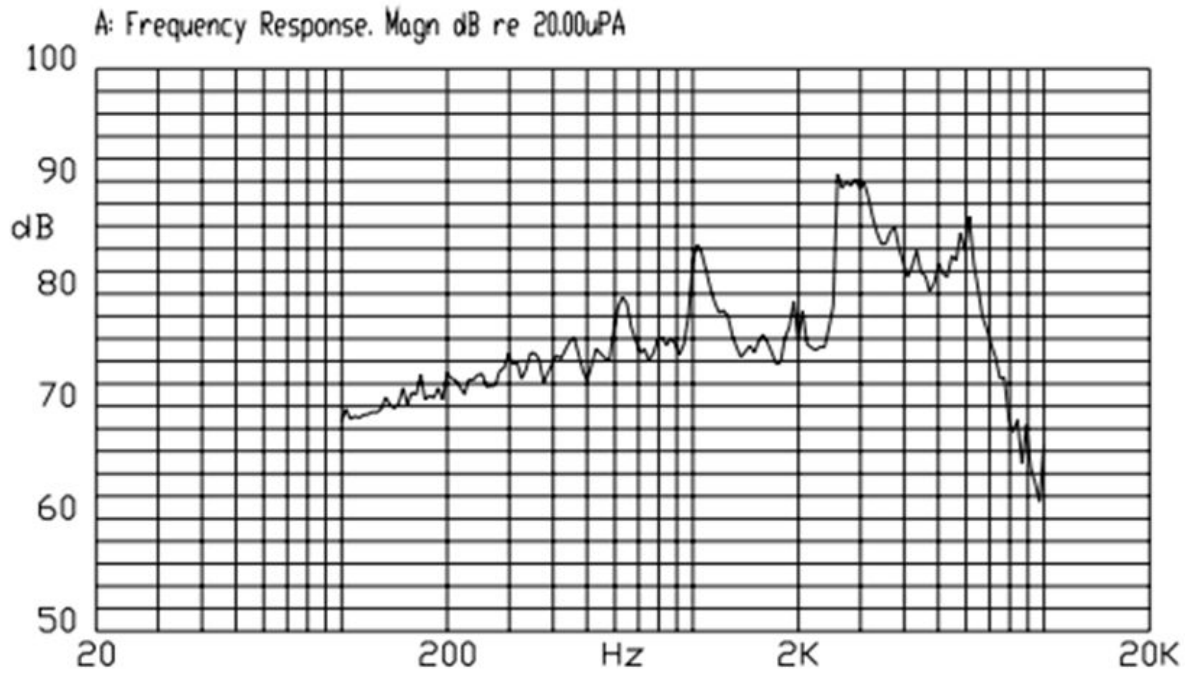
Frequency Response Curve



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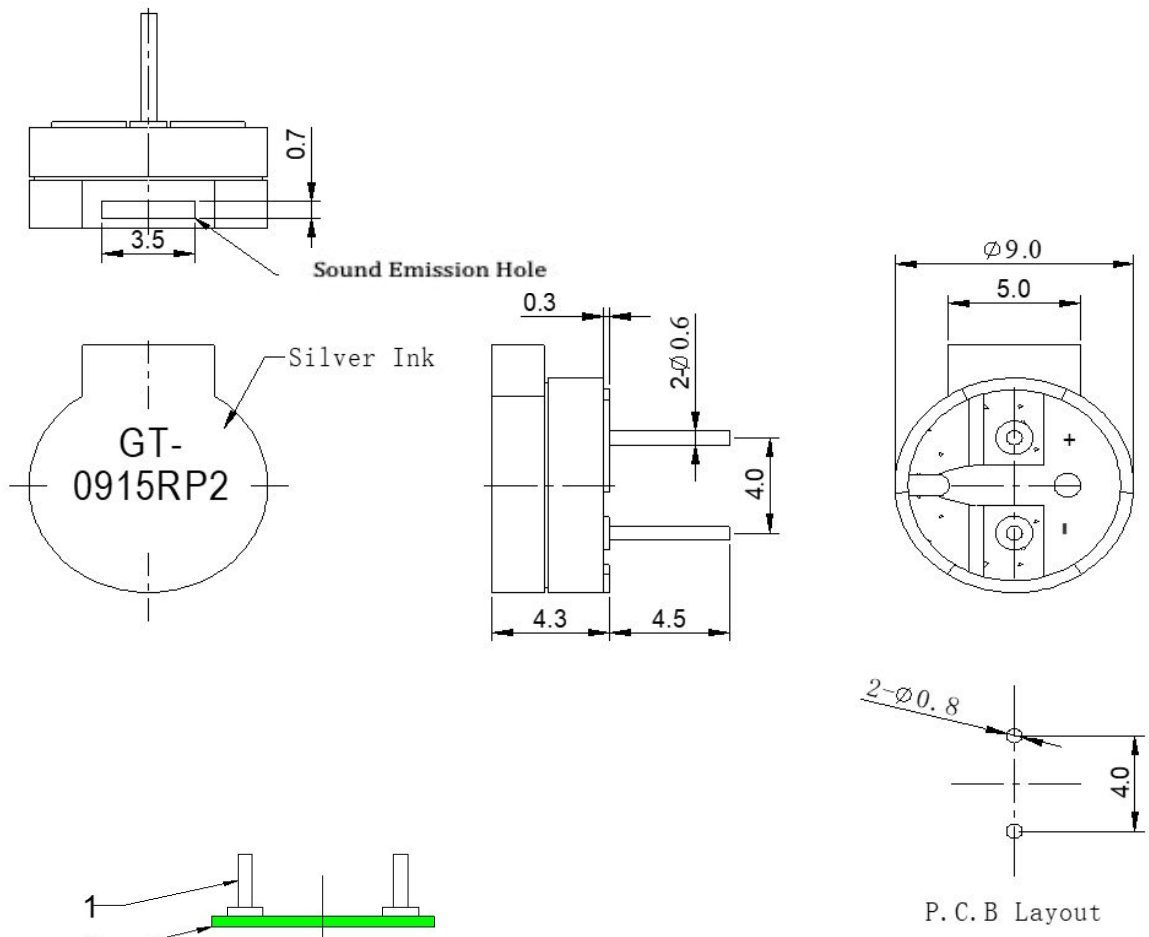
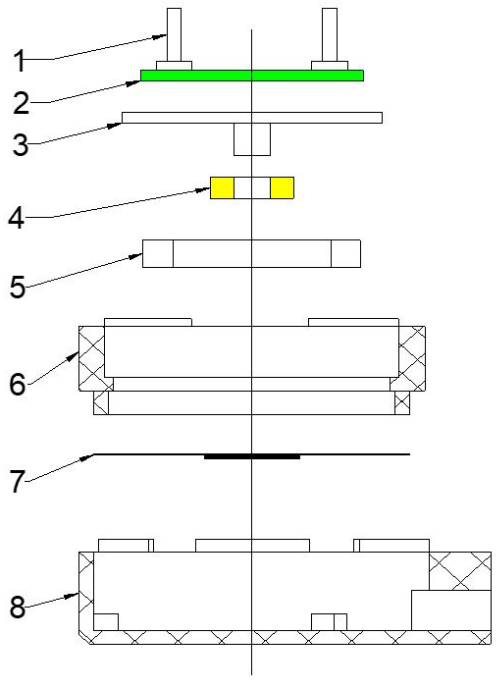
Dimensions

Tolerance: ±0.5 (unit: mm)





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

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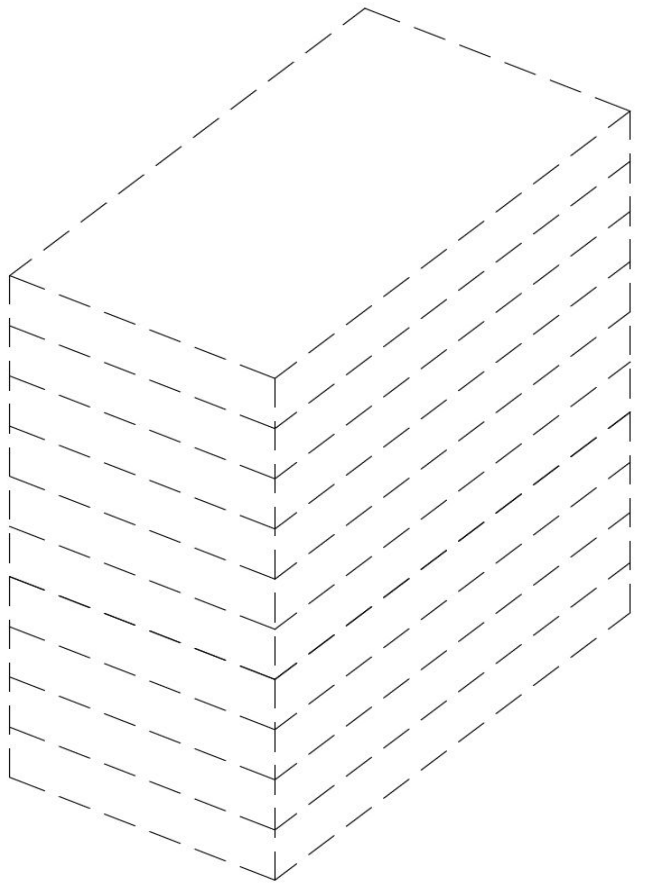
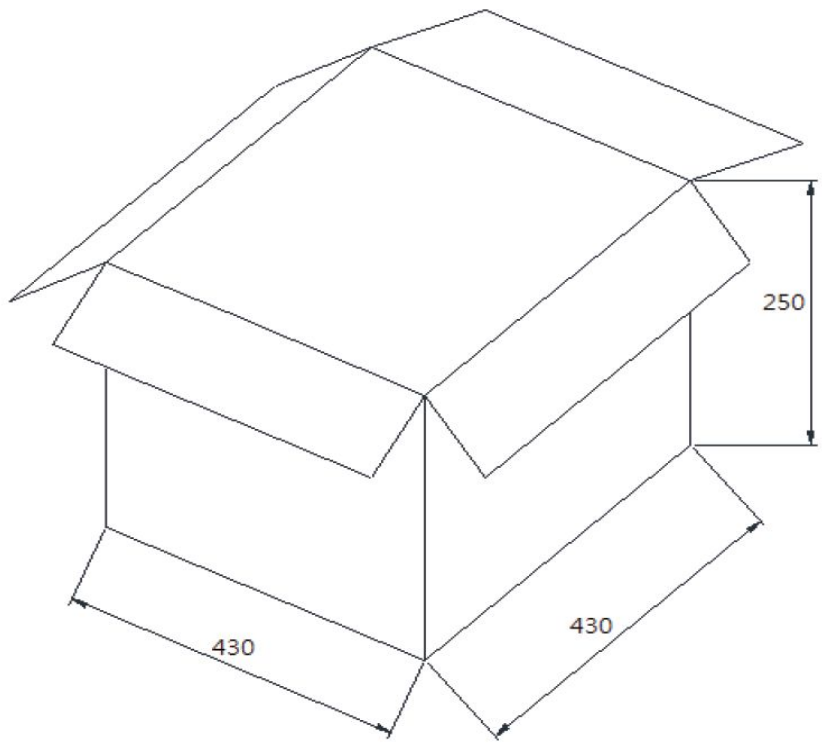
Packing





Packing Box	L x W x H (mm)	Pieces
Tray	190 x 190 x 25	100
Inner cartons	210 x 210 x 220	1,500
Outer cartons	430 x 430 x 250	6,000