



soberton inc.

GT MAGNETIC BUZZER

Acoustic Product Specification

Product Number: GT-1405A



Release | Revision: D/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 Wave Soldering Profile

Measurement Test Circuit

Inspection Fixture

Page 4

Typical Frequency Response Curve


Page 5

Dimensions

Page 6

Packing

Specifications

Item	Unit	Specification	Condition
Rated Voltage	Vo-p	3.0	Vo-p 
Operating Voltage	Vo-p	2.0 ~ 4.0	
Mean Current	mA	35 Max.	At rated voltage, 2000Hz square wave, 1/2 duty
Coil Resistance	Ω	40±5	
Sound Output	dB	85	At 10cm(A-weight free air), at rated voltage 2000Hz, square wave, 1/2 duty
Rated Frequency	Hz	2000	
Operating Temp	°C	-20 ~ +60	
Storage Temp	°C	-30 ~ +70	
Dimension	mm	φ 14.0×H5.0	See attached drawing
Weight	gram	1.6	
Material		PPO (Black)	
Terminal		Pin type (Plating Au)	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±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. 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). Total of 9 times.	



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Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Recommended Wave Soldering Profile

Measurement Test Circuit

Inspection Fixture

Page 4

Typical Frequency Response Curve

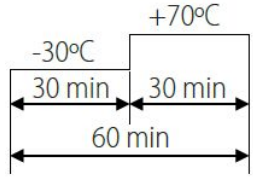
Page 5

Dimensions

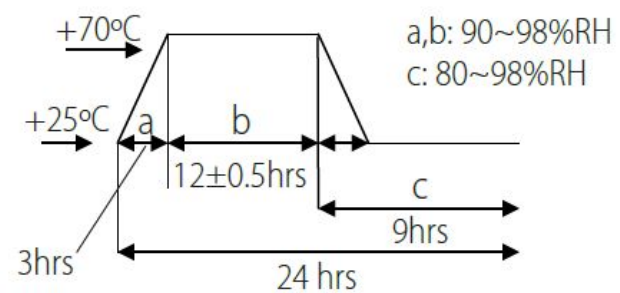
Page 6

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 $+25\pm 10^\circ\text{C}$.	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 3.0V, 2000Hz applied.	
	Low Temperature The part shall be subjected to 72 hours of continuous operation at -20°C at 3.0V, 2000Hz applied.	

Standard test condition:

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



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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 Wave Soldering Profile

Measurement Test Circuit

Inspection Fixture

Page 4

Typical Frequency Response Curve

Page 5

Dimensions

Page 6

Packing

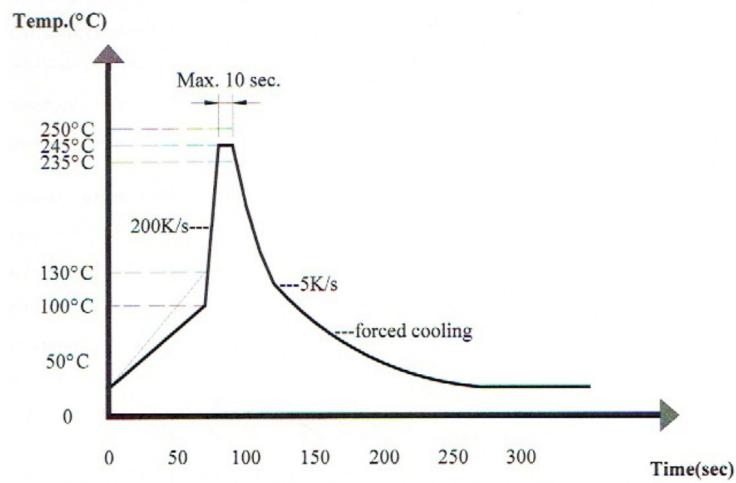
Recommended Temperature Profile for Reflow Oven

Recommendable wave soldering condition is as follows:

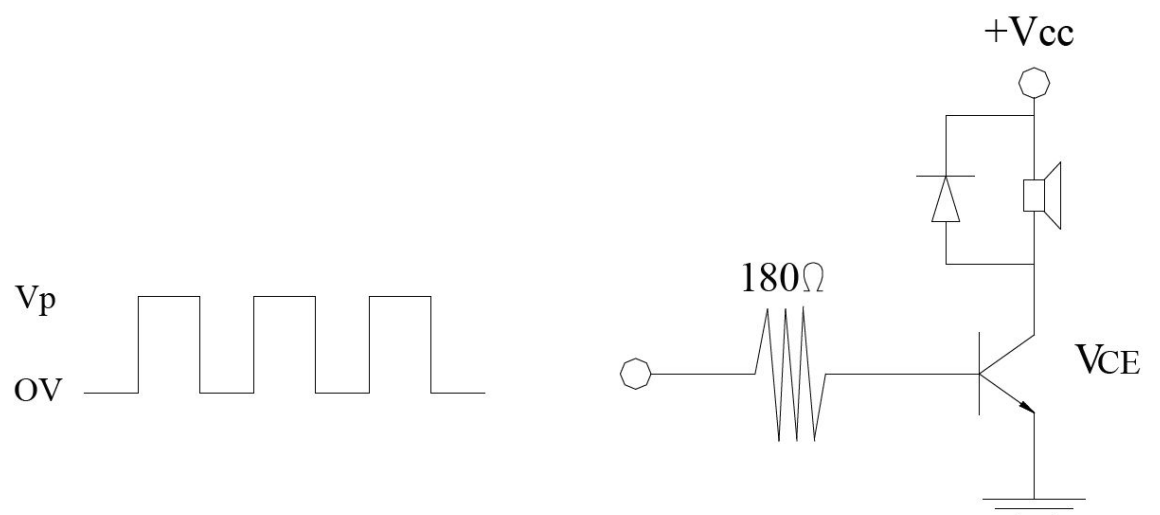
Note 1: It is requested that reflow soldering should be executed after heat of product goes down to normal temperature.

Note 2: Peak wave temperature of 235°C maximum of 10 seconds.

* Wave Soldering profile of lead-free



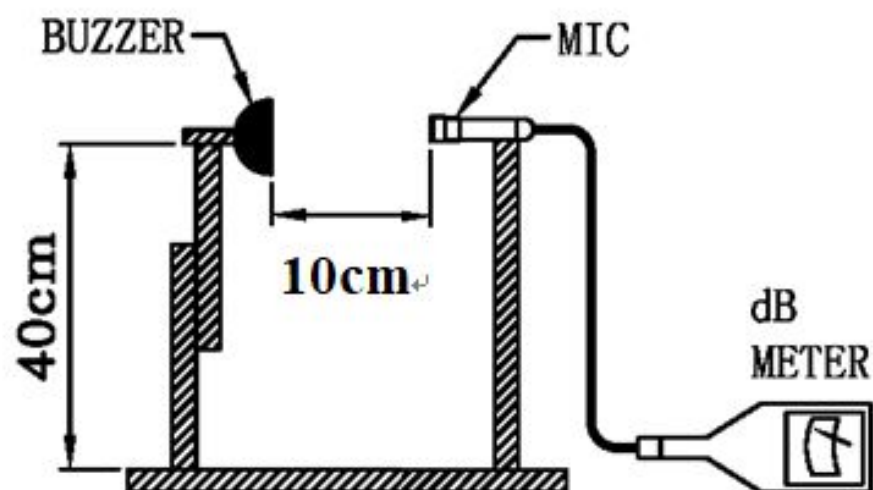
Measurement Test Circuit



Inspection Fixture

S.P.L Measuring Circuit

Input Signal: 3.0 Vo-p, square wave, ½ duty, 2000Hz



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

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



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Release | Revision: D/2018

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This document contains the technical specifications for the electromagnetic buzzer.

Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Recommended Wave Soldering Profile

Measurement Test Circuit

Inspection Fixture

Page 4

Typical Frequency Response Curve

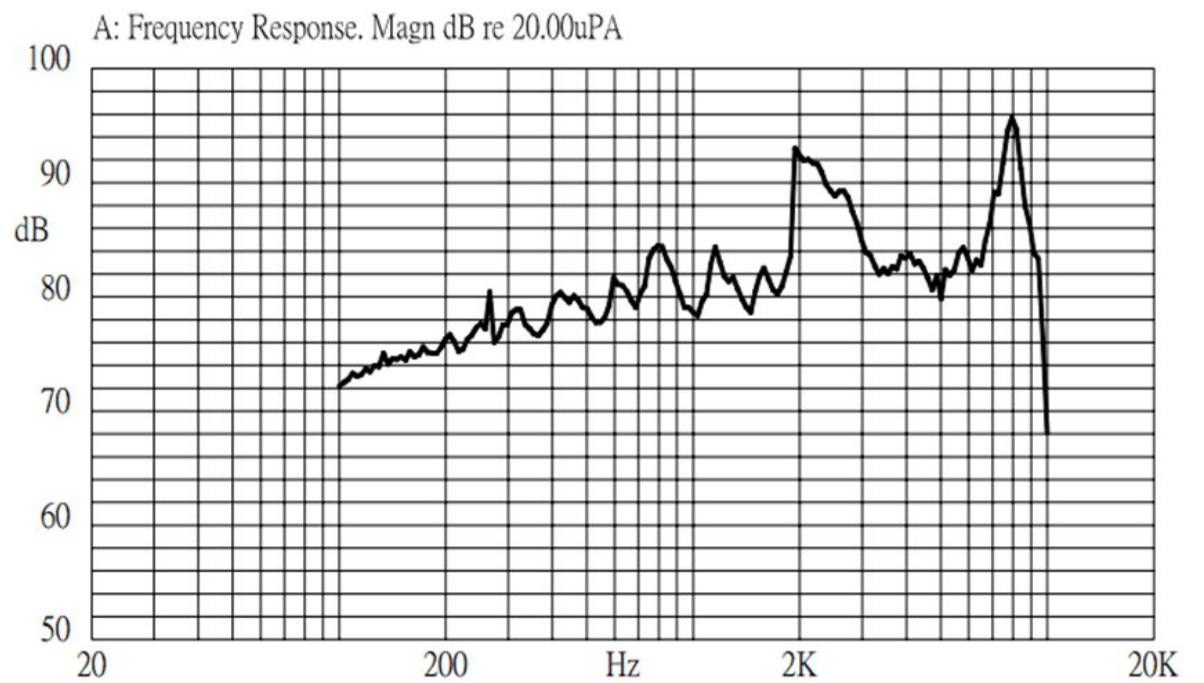
Page 5

Dimensions

Page 6

Packing

Typical Frequency Response Curve





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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 Wave Soldering Profile

Measurement Test Circuit

Inspection Fixture

Page 4

Typical Frequency Response Curve

Page 5

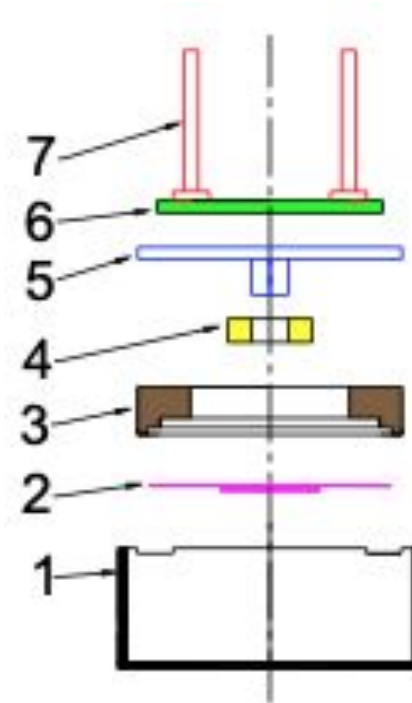
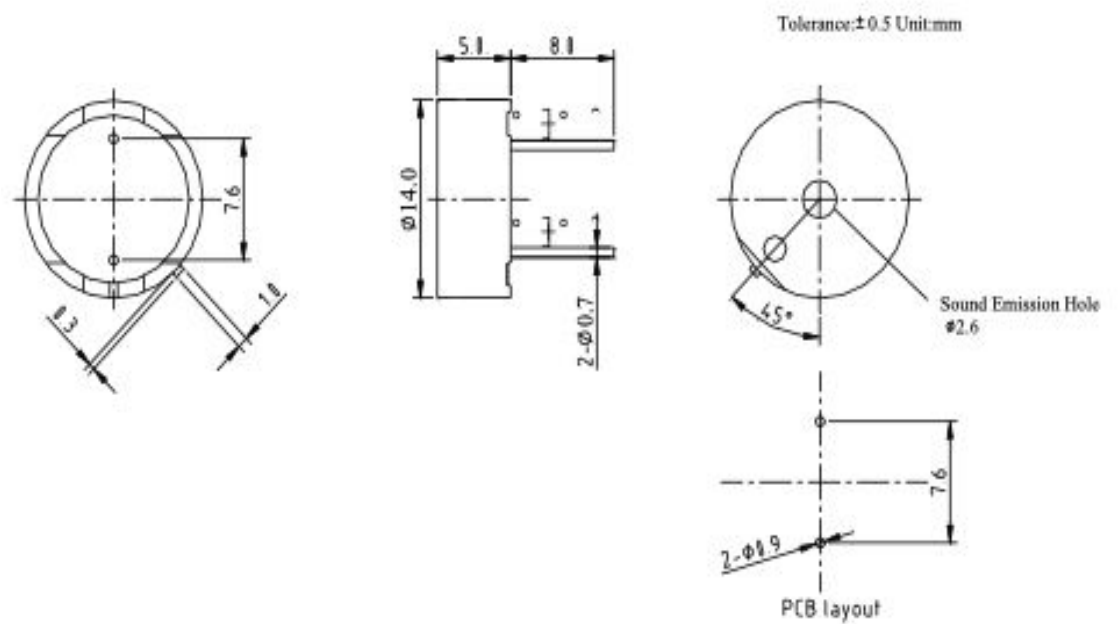
Dimensions

Page 6

Packing

Dimensions

Tolerance: ± 0.5 (unit: mm)



No.	Part Name	Material	Quantity
1	Case	PPO	1
2	Diaphragm	Ferrum	1
3	Magnet	Poly + Ferrite	1
4	Coil	Copper	1
5	Frame	Ferrum	1
6	PCB	Epoxy Glass Fiber Cloth + Copper	1
7	PIN	Copper	2



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Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Recommended Wave Soldering Profile

Measurement Test Circuit

Inspection Fixture

Page 4

Typical Frequency Response Curve

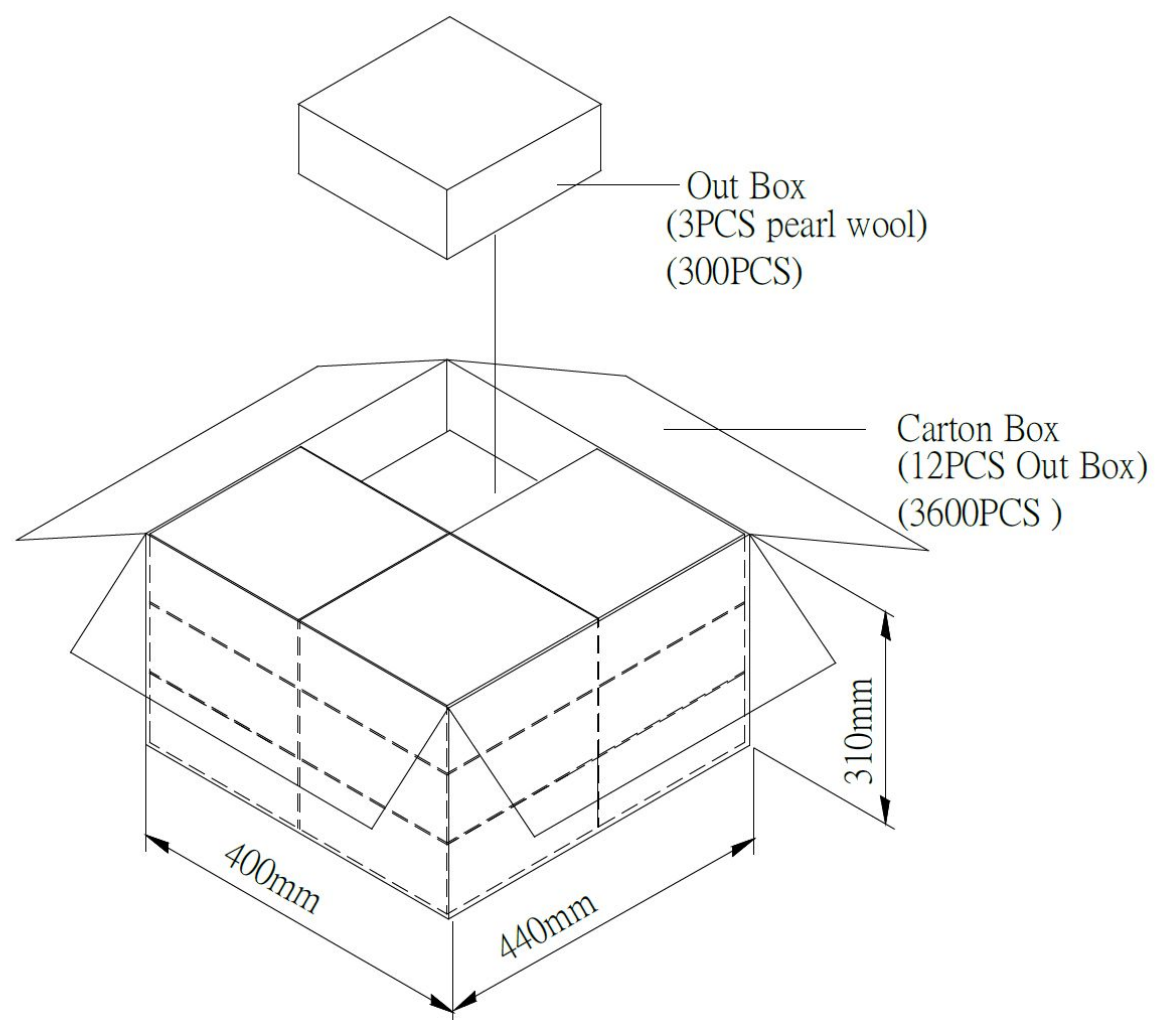
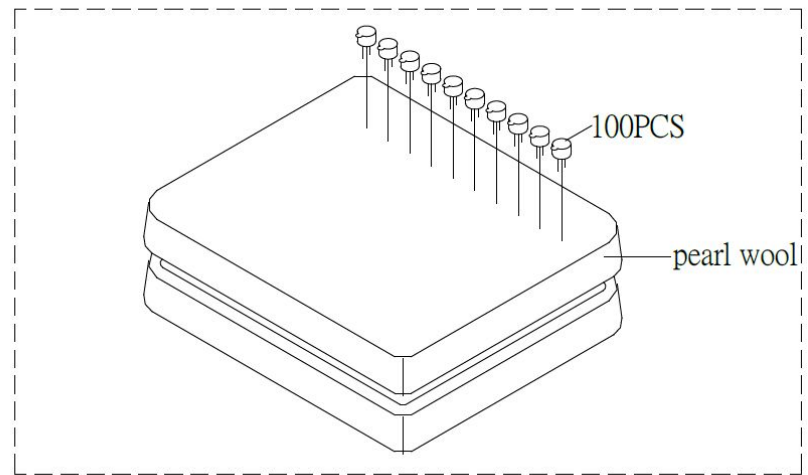
Page 5

Dimensions

Page 6

Packing

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Packing Box	L x W x H (mm)	Pieces
Per tray	184 x 184 x 23	100
Inner Box	200x 190 x 100	300
Outer Cartons	440 x 400 x 310	3,600