soberton inc.

GT MAGNETIC BUZZER

Acoustic Product Specification

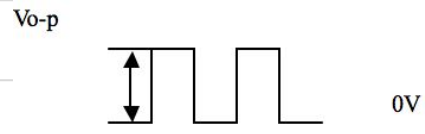
Product Number: GT-0904

Release | Revision: C/2021

CONTENTS

This document contains the technical specifications for the magnetic buzzer.

Specifications

Item	Unit	Specification	Condition
Rated Voltage	Vo-p	4.5	
Operating Voltage	Vo-p	2.5 ~ 5.0	
Mean Current	mA	120 Max.	At rated voltage, 2730Hz, square wave, ½ duty
Coil Resistance	Ω	15 ±3	
Sound Pressure Level	dB	85	At 10cm at rated voltage
Oscillation Frequency	Hz	2730±500	
Operating Temp	℃	-20 ~ +70	
Storage Temp	℃	-30 ~ +80	
Dimension	mm	φ9.0 × H4.0	See Dimensions
Weight	gram	0.6	
Housing Material		PBT(Black)	
Terminal		PIN type	
Environmental Protection Regulation		RoHS 2.0	

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 +260±5℃ for 3±1 seconds.	90% min. lead terminals shall be wet with solder. (Except the edge of terminal)
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 buzzer shall be measured after a vibration of amplitude of 1.5mm with 10Hz to 55Hz band of vibration frequency is applied to each of 3 perpendicular directions for 2 hours. A total of 6 hours.	The value of oscillation frequency current consumption shall be in ±10% compared with initial ones. The SPL should be in ±10dB 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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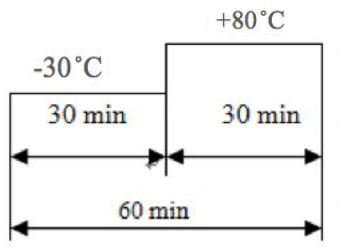
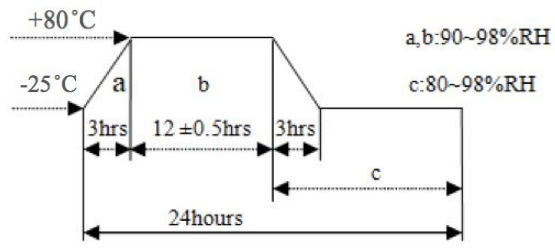
Environment Test

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˚C, the SPL should be in ±10dB 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 Test	The part shall be subjected to 5 cycles. One cycle shall be 24 hours and shall consist of: 	

Reliability Test

Item	Test Condition	Evaluation Standard
Operating Life Test	**1. Continuous Life Test** 48 hours of continuous operation at +55˚C with Maximum rated voltage applied. **2. Intermittent Life Test** A duty cycle of 1 minute on, 1 minute off, a minimum of 1000 times at +25±2˚C and the maximum rated voltage 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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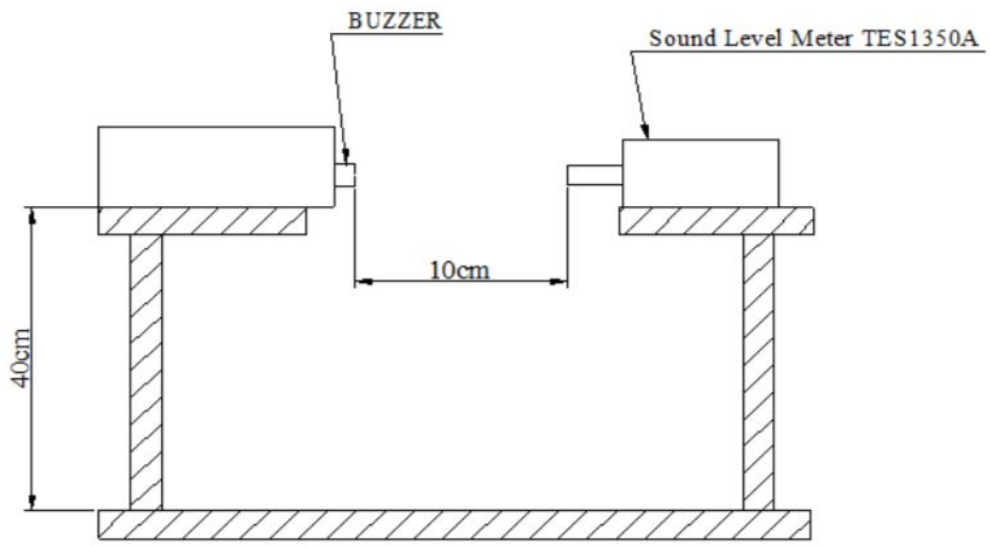
Measuring Method (Speaker Mode)

S.P.L Measuring Circuit

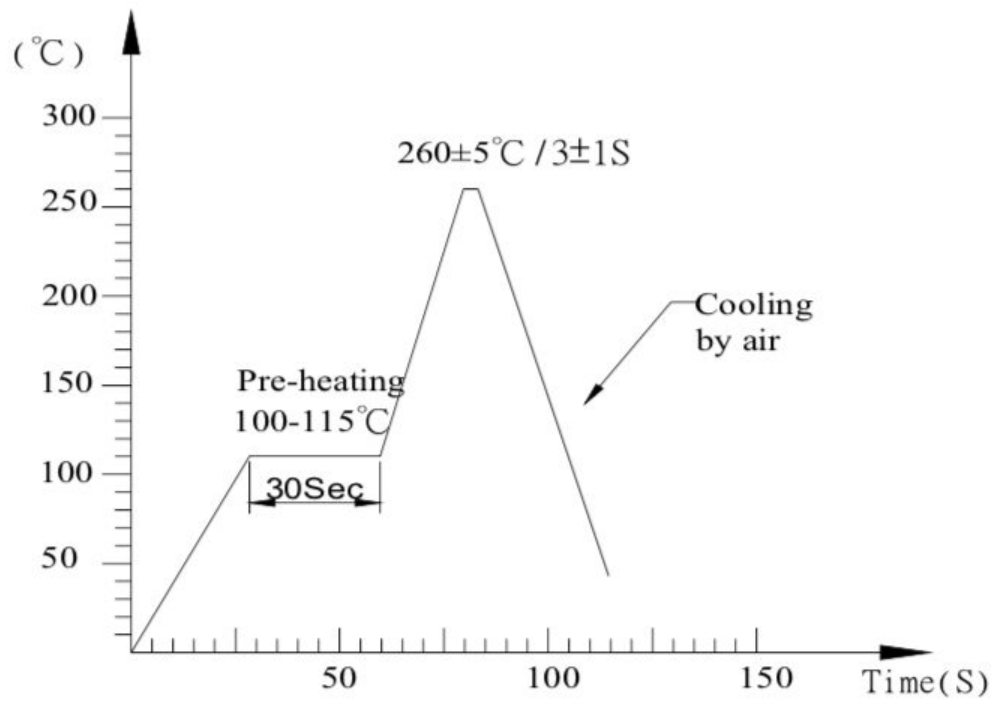
Input Signal: 4.5 Vo-p, Square Wave, ½ duty, 2730Hz



MIC: S.P.L meter TES 1351B or equivalent

Recommended Temperature Profile

Recommended Wave Soldering Temperature Curve



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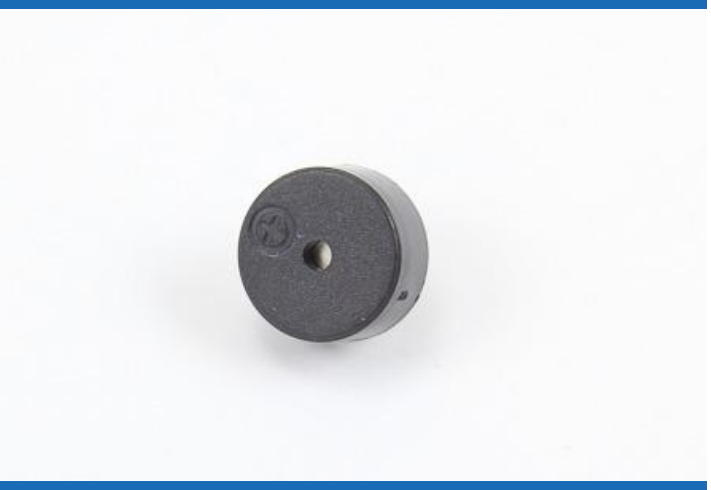

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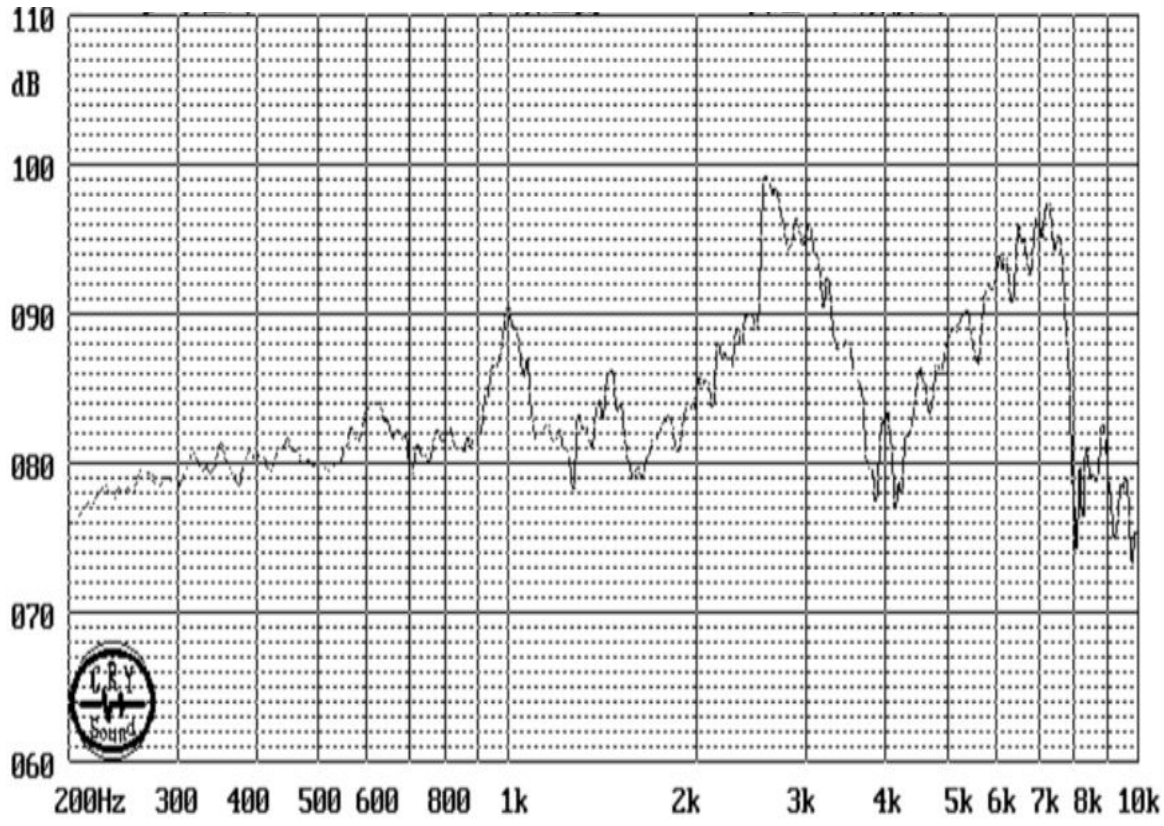
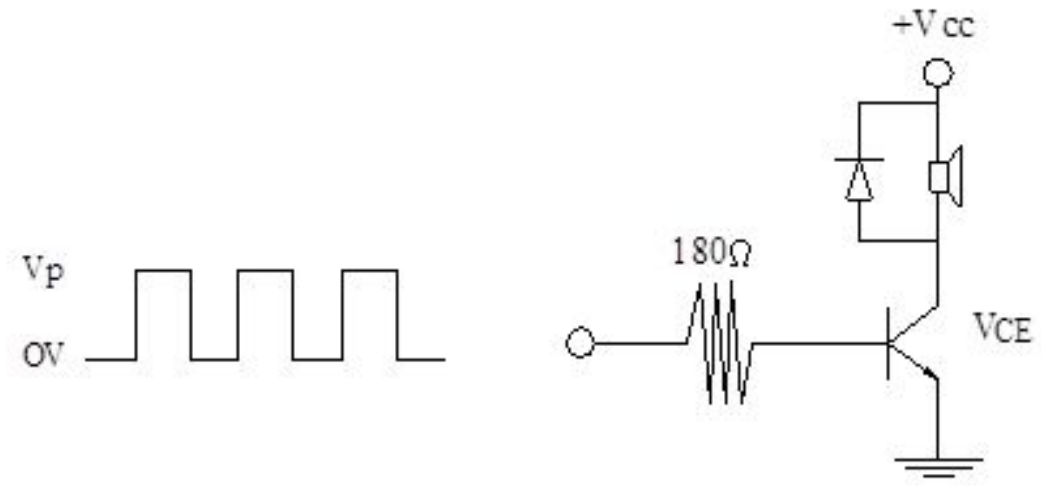
Frequency Response Curve



Measuring Test Circuit

S.P.L Measuring Circuit

Input Signal: 4.5 Vo-p



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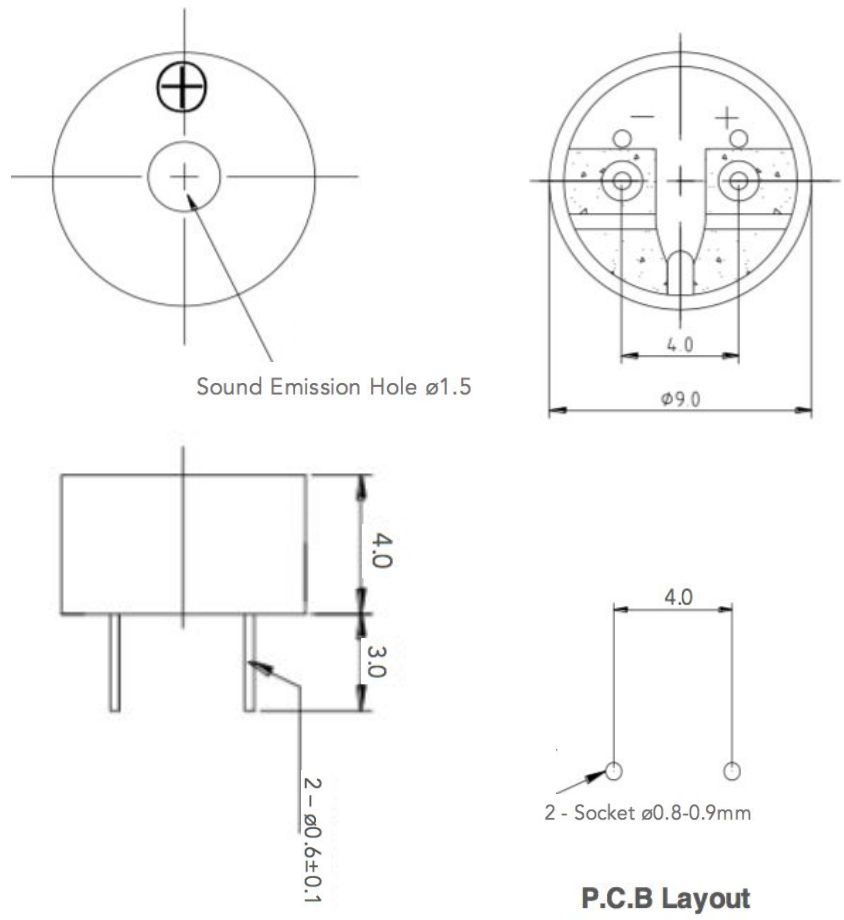
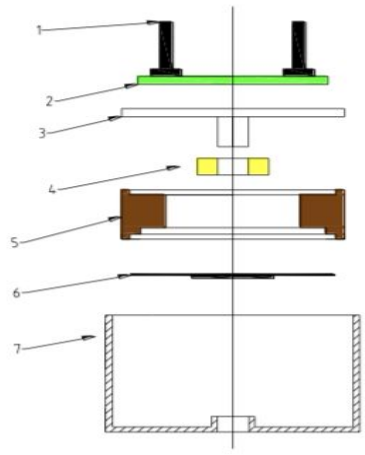
Dimensions

Tolerance: ±0.5 (unit: mm)



P.C.B Layout



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	Poly + Ferrite	1
6	Diaphragm	Ferrum	1
7	Case	PBT	1

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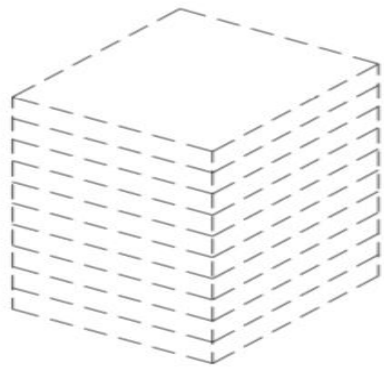
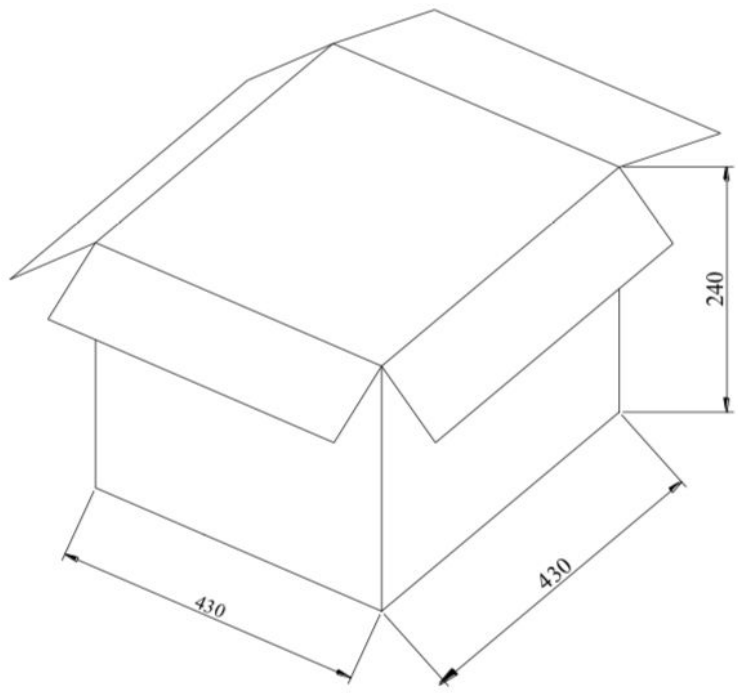
Packing





Details

	Size (mm)	Quantity (pcs)
Per Tray	190 x 190 x 25	100
Small Box	210 x 210 x 220	1,500
Carton Box	430 x 430 x 240	6,000