soberton inc.

PB PIEZO AUDIO BUZZER

Acoustic Product Specification

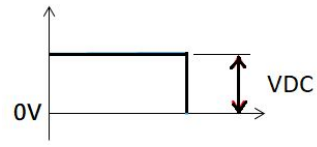
Product Number: PB-4314

Release | Revision: C/2018

CONTENTS

This document contains the technical specifications for the Piezo Audio Buzzer.

Specifications

Item	Unit	Specification	Condition
Rated Voltage	VDC	12.0	
Operating Voltage	VDC	5.0 ~ 15.0	
Mean Current	mA	20 Max.	At rated voltage
Sound Output	dB	90	At 10cm at rated voltage.
Rated Frequency	Hz	2800±500	
Operating Temp	℃	-20 ~ +70	
Storage Temp	℃	-30 ~ +80	
Dimension	mm	Ø43.0xH14.0	See attached drawing.
Weight	gram	12.0	
Material		PPO(Black)	
Terminal		Pin type (Plating Sn)	
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. (Except the edge of terminal)
Soldering Heat Resistance	Lead terminals are immersed in the soldering bath at +250±5℃ for 3±1seconds. The force of 9.8N(1.0Kg) is applied to the part for 10 seconds.	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.	The value of oscillation frequency current consumption should 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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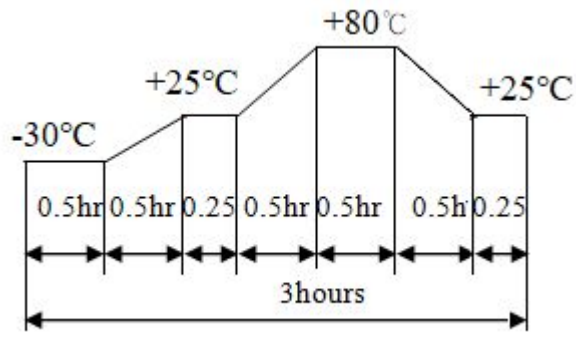
Environment Test		
Item	**Test Condition**	**Evaluation Standard**
High Temp. Test	The part is placed in a chamber at +80℃ for 96 hours.	After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25℃ ±2˚C, the SPL should be in ±10dBA compared with initial one.
Low Temp. Test	The part is placed in a chamber at -30℃ for 96 hours.	
Humidity Test	The part is placed in a chamber at +80℃, and 90±5% relative humidity for 96 hours.	
Temp/Humidity Cycle	The part shall be subjected to 5 cycles, Each cycle shall consist of: 	

Reliability Test		
Item	**Test Condition**	**Evaluation Standard**
Operating Life Test	**1. Continuous Life Test** 48 hours of continuous operation at +55℃ with the 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℃ 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℃ ±2˚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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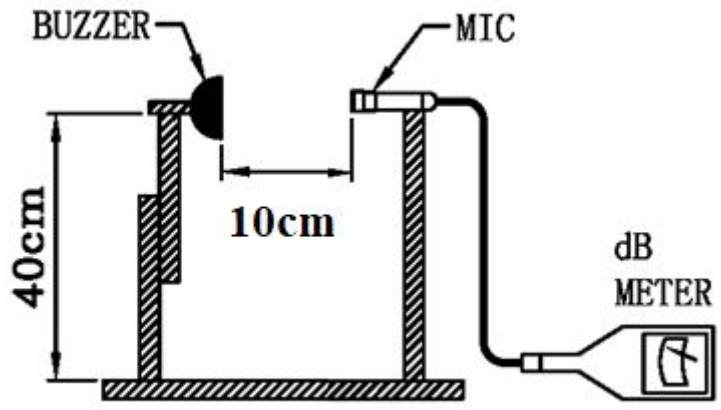
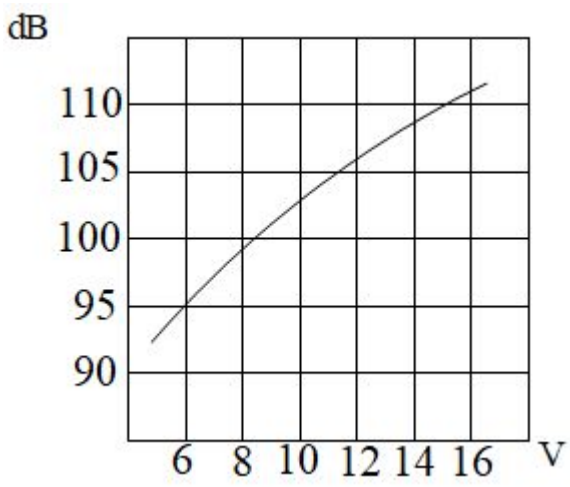
Inspection Fixture

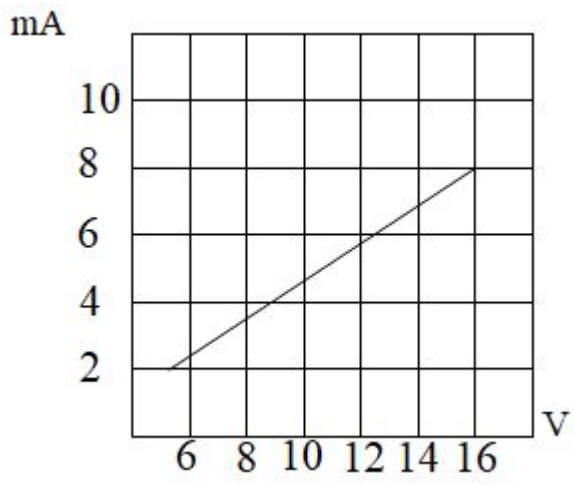
S.P.L Measuring Circuit

Input Signal: 12 VDC **MIC:** S.P.L meter TES1351B or equivalent

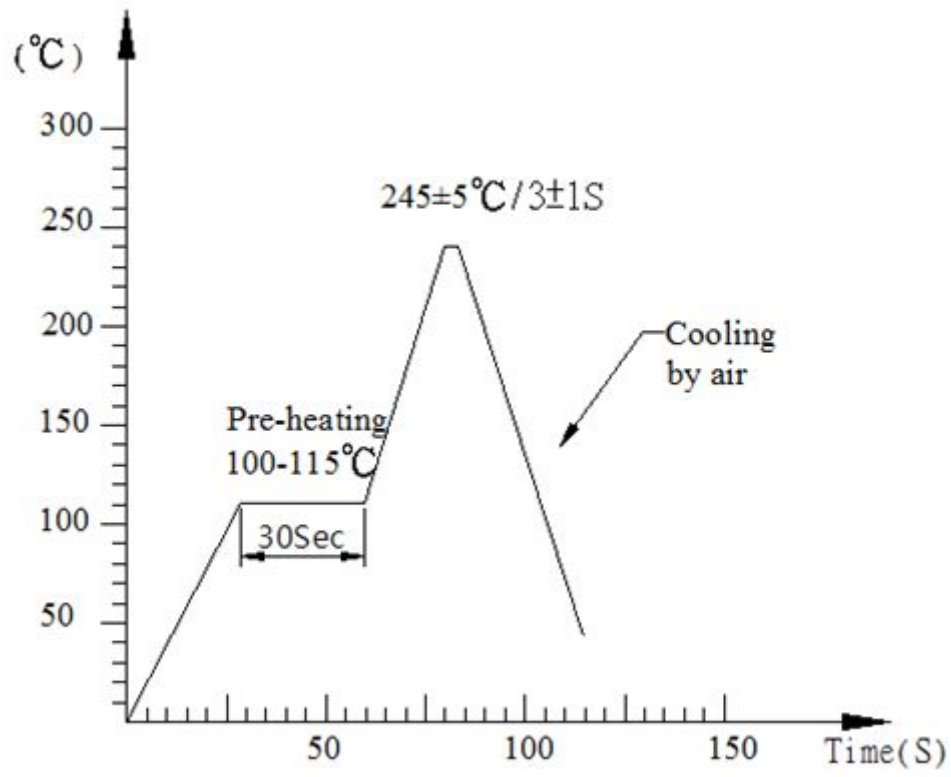


Frequency Response





Recommended Wave Soldering Temperature Curve



soberton inc.

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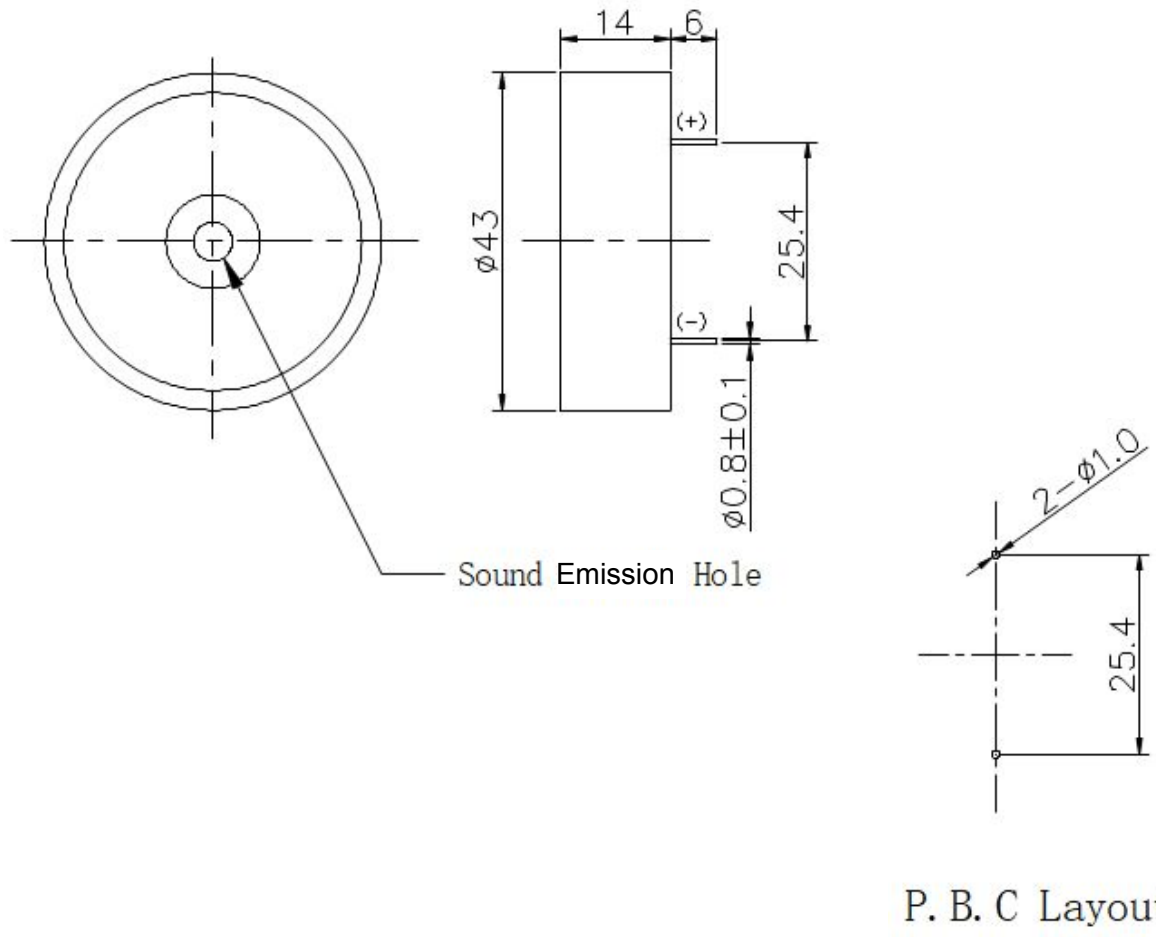
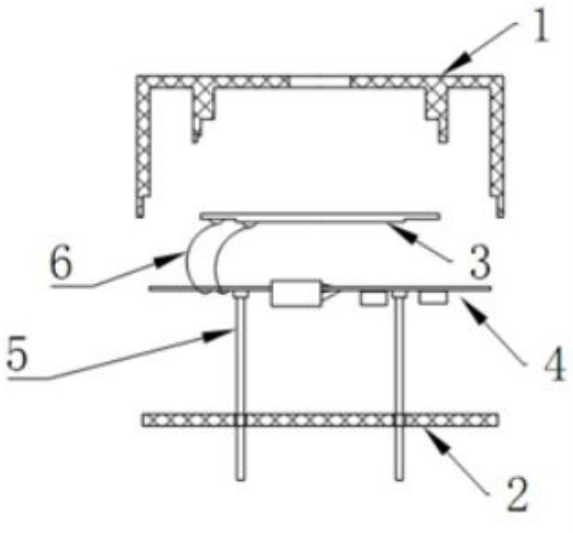
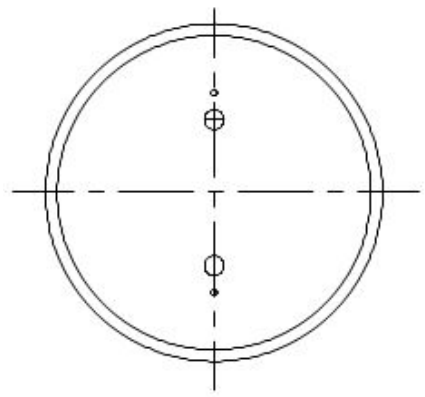
Dimensions

Tolerance: ±0.5 (unit: mm)



P. B. C Layout





No.	Part Name	Material	Quantity
1	Case	PPO	1
2	Cover	PPO	1
3	Piezo	Brass + Ceramic	1
4	PCB	Epoxy	1
5	PIN	Copper	2
6	Wire	Copper	2

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Packing

Details

Pearl Foam: 16 per tray

Inner Box: 9 Trays x 16 = 144pcs

Per Carton: 4 Inner Box

Per Carton: 576 pcs