soberton inc.

PB PIEZO AUDIO BUZZER

Acoustic Product Specification

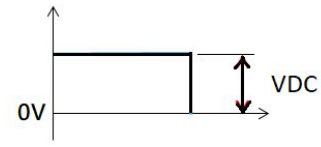
Product Number: PB-2410-2

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	6.0 ~ 15.0	
Mean Current	mA	30 Max.	At rated voltage
Sound Output	dB	95	At 10cm at rated voltage.
Rated Frequency	Hz	3500±500	
Operating Temp	℃	-20 ~ +70	
Storage Temp	℃	-30 ~ +80	
Dimension	mm	Ø23.3xH9.5	See attached drawing.
Weight	gram	3.0	
Material		PPO(Black)	
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 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±1 seconds.	No interference in operation.
Terminal Mechanical Strength	The force of 9.8N(1.0Kg) is applied to the part for 10 seconds.	No damage and cutting off.
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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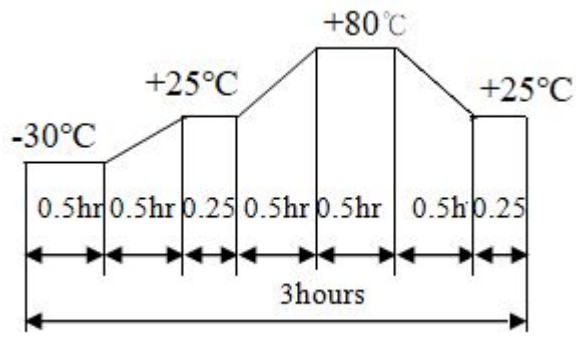
Environment Test		
Item	**Test Condition**	**Evaluation Standard**
High Temp. Test	The part is placed in a chamber at +80℃ for 96 hours.	After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25℃ ±2˚C, the SPL should be in ±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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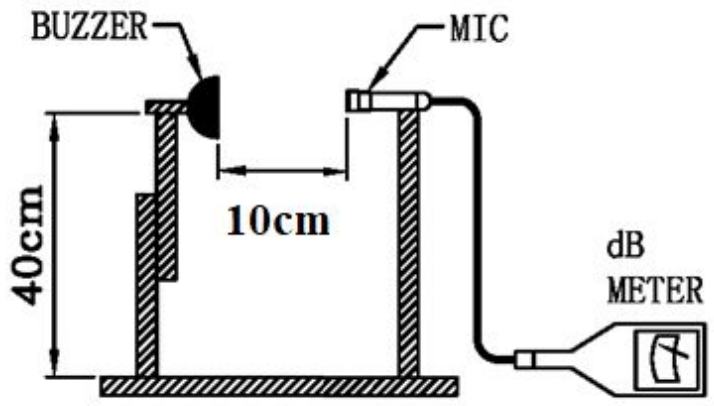
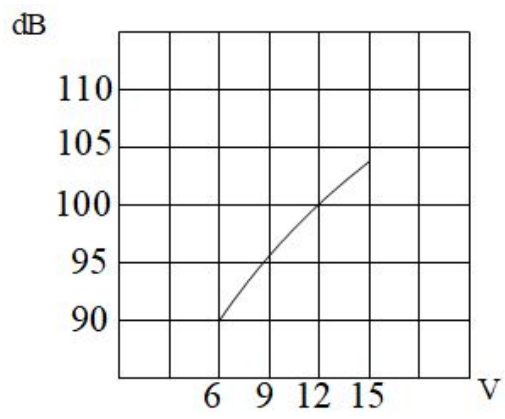
Inspection Fixture

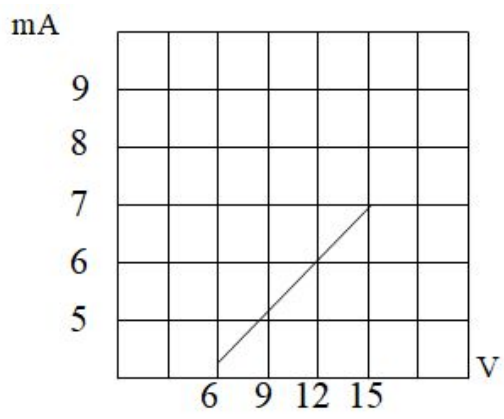
S.P.L Measuring Circuit

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

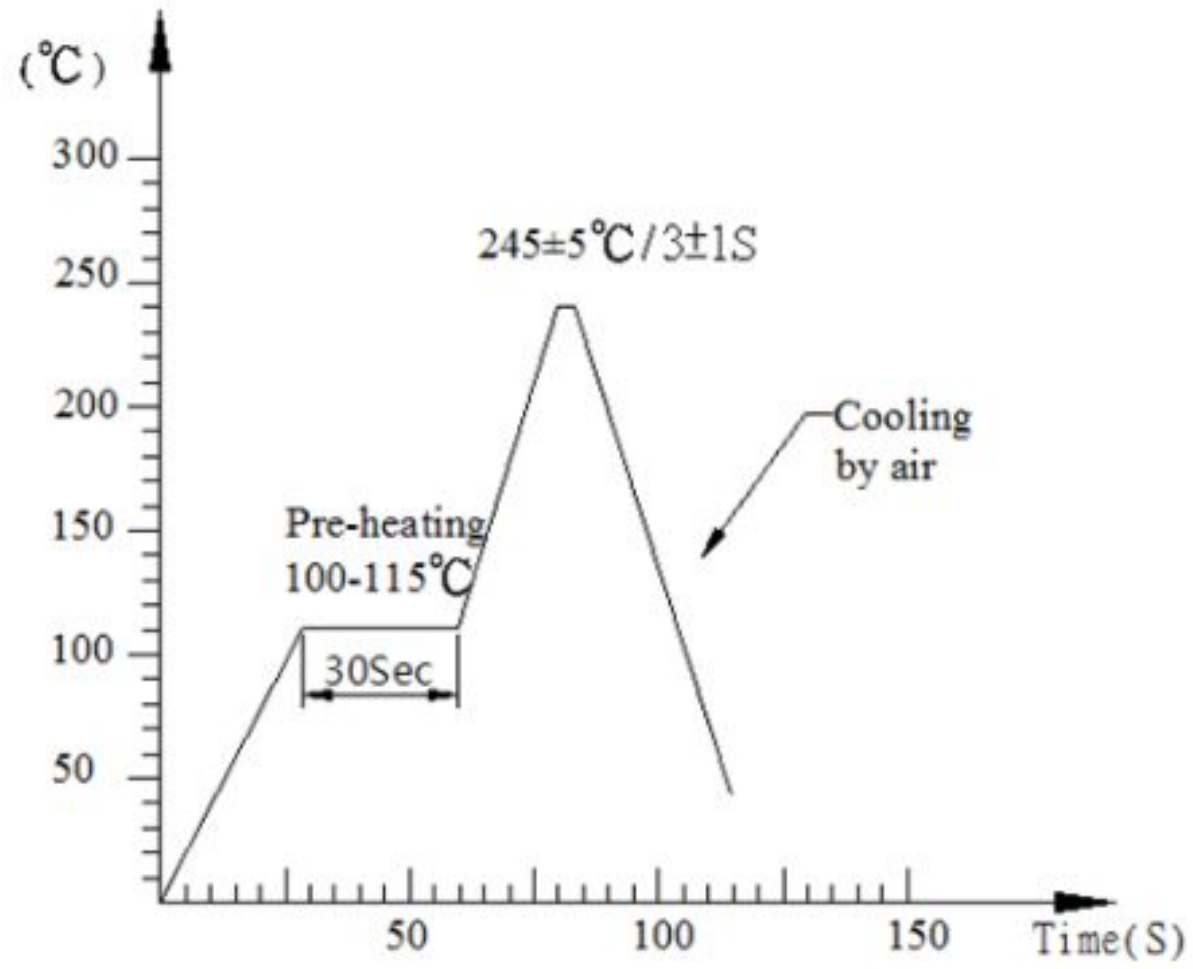


Frequency Response





Recommended Wave Soldering Temperature Curve



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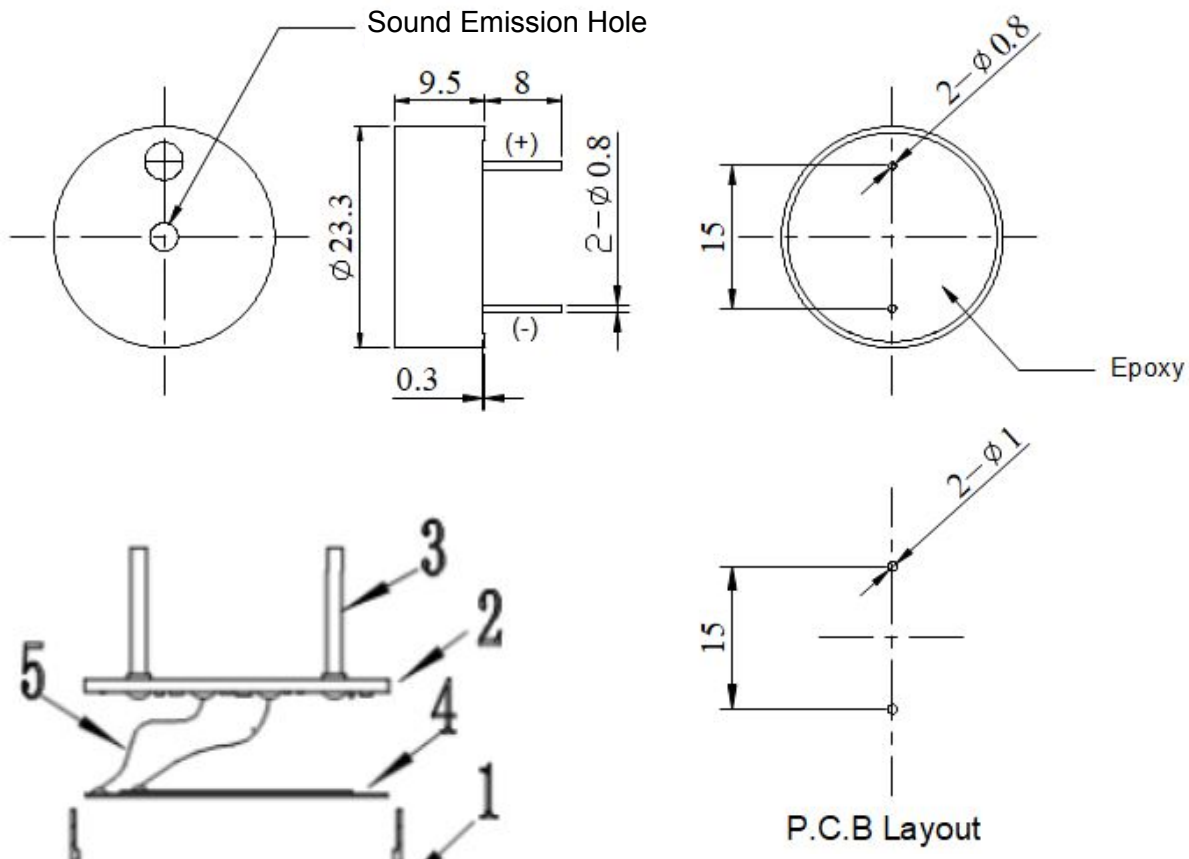
Dimensions

Tolerance: ±0.5 (unit: mm)



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

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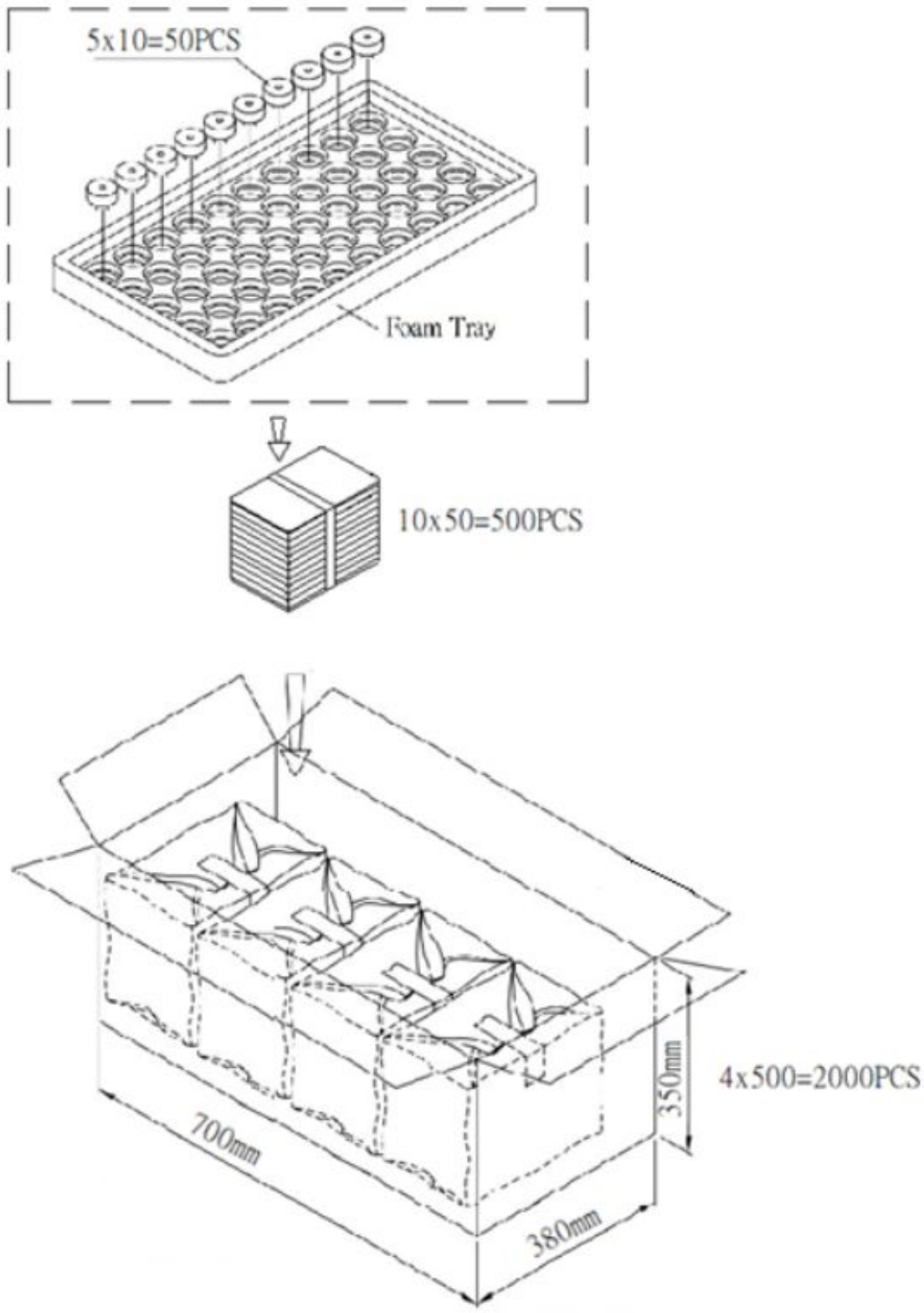
Packing



Details

Foam Tray	320 x 170 x 25mm	1 x 50pcs = 50pcs
Carton Box	700 x 380 x 350mm	4 x 500pcs = 2,000pcs