



soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1707



Release | Revision: B/2018

CONTENTS

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

Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response

Recommended Wave Soldering Temperature Curve

Page 4

Dimensions

Page 5

Packing

Specifications

| Item | Unit | Specification | Condition |
|-------------------------------------|------|--------------------------|---------------------------|
| Rated Voltage | Vp-p | 5.0 | |
| Operating Voltage | Vp-p | 30 Max. | |
| Mean Current | mA | 5 Max. | At rated voltage |
| Capacitance at 30Hz | pF | 15000±30% | |
| Sound Output | dB | 80 | At 10cm at rated voltage. |
| Rated Frequency | Hz | 4000 | |
| Operating Temp | °C | -20 ~ +70 | |
| Storage Temp | °C | -30 ~ +80 | |
| Dimension | mm | Ø17.0×H7.0 | See attached drawing. |
| Weight | gram | 2.0 | |
| Material | | PBT(Black) | |
| Terminal | | Pin type (Plating Sn) | 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. (Except the edge of terminal) |
| Soldering Heat Resistance | Lead terminals are immersed in the soldering bath at +250±5°C for 3±1 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. | |



soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1707



Release | Revision: B/2018

CONTENTS

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

Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response

Recommended Wave Soldering Temperature Curve

Page 4

Dimensions

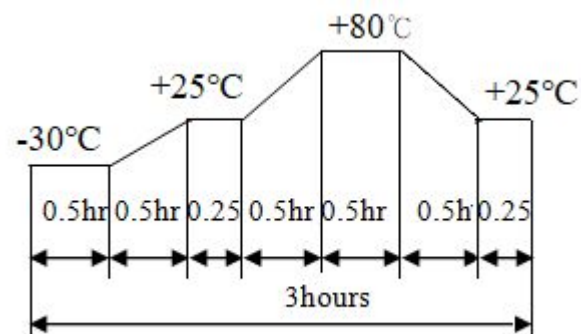
Page 5

Packing

Environment Test

| Item | Test Condition | Evaluation Standard |
|-----------------|---|---|
| High Temp. Test | The part is placed in a chamber at +80°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 ±2°C, the SPL should be in ±10dBA compared with initial one. |
| Low Temp. Test | The part is placed in a chamber at -30°C for 96 hours. | |
| Humidity Test | The part is placed in a chamber at +40°C, 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°C with 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°C ±2°C, the SPL should be in ±10dBA compared with initial one. |
| | 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. | |

Standard Test Condition:

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



soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1707



Release | Revision: B/2018

CONTENTS

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

Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response

Recommended Wave Soldering Temperature Curve

Page 4

Dimensions

Page 5

Packing

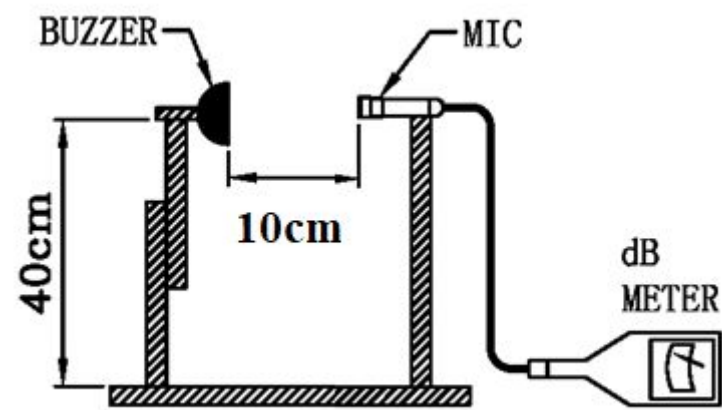
Inspection Fixture

S.P.L Measuring Circuit

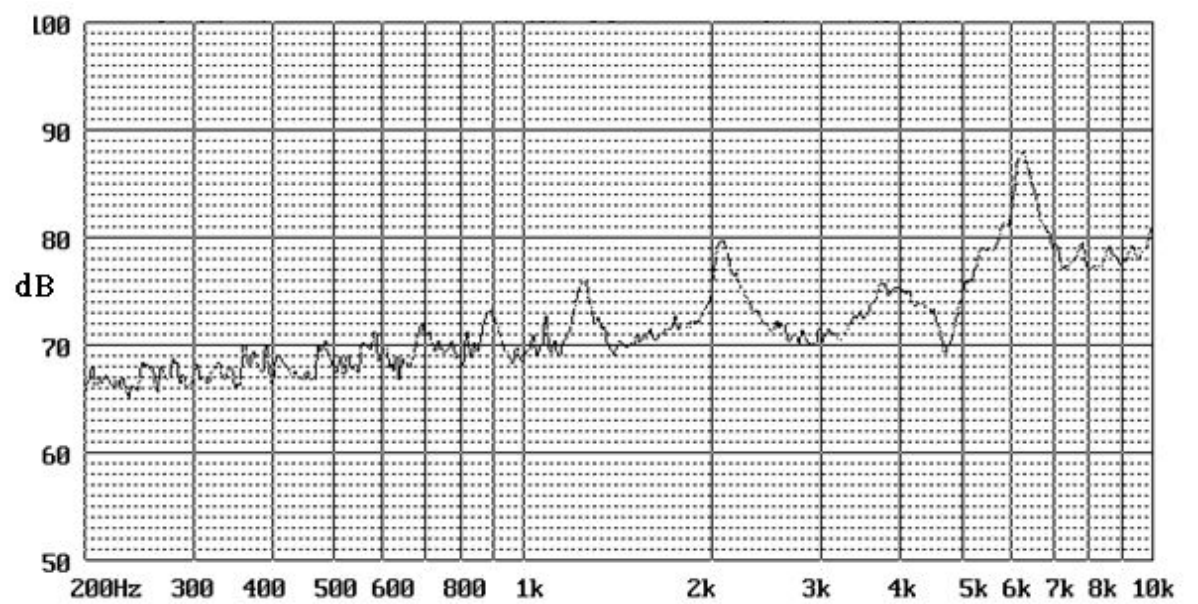
Input Signal: 5.0 Vp-p , square wave, 4000Hz

MIC: S.P.L meter TES1351B or equivalent

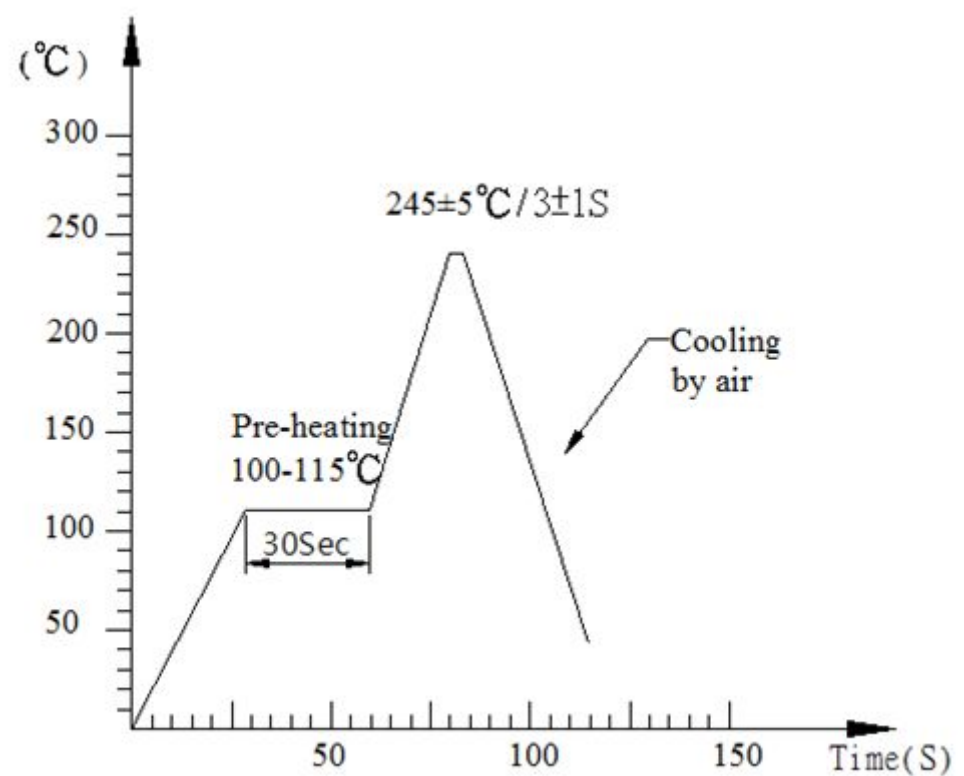
S.G: Hewlett Packard 33120A Function Generator or equivalent



Frequency Response



Recommended Wave Soldering Temperature Curve





soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1707



Release | Revision: B/2018

CONTENTS

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

Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response

Recommended Wave Soldering Temperature Curve

Page 4

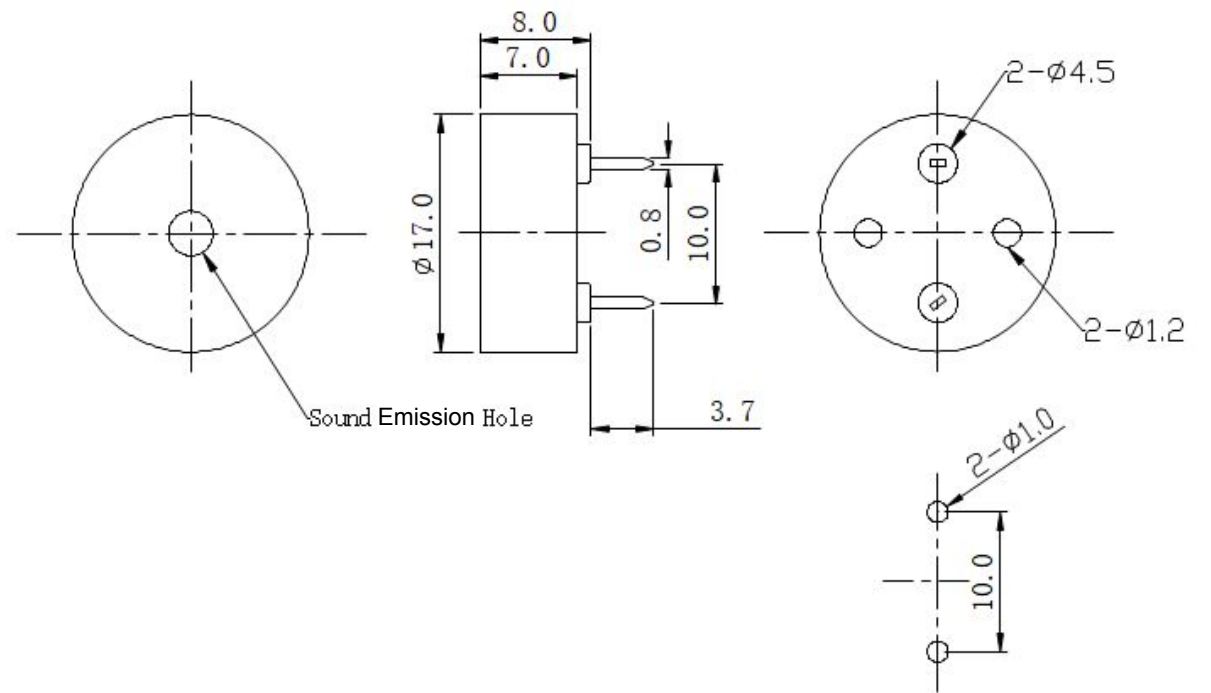
Dimensions

Page 5

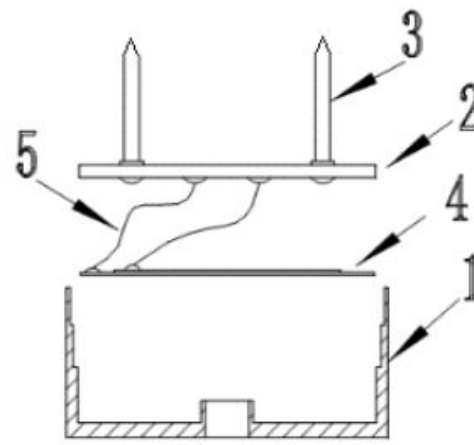
Packing

Dimensions

Tolerance: ± 0.5 (unit: mm)



P. C. B Layout



| No. | Part Name | Material | Quantity |
|-----|-----------|-----------------|----------|
| 1 | Case | PBT | 1 |
| 2 | PCB | Epoxy | 1 |
| 3 | Pin | Copper | 2 |
| 4 | Piezo | Brass + Ceramic | 1 |
| 5 | Wire | Copper | 2 |



soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1707



Release | Revision: B/2018

CONTENTS

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

Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response

Recommended Wave Soldering Temperature Curve

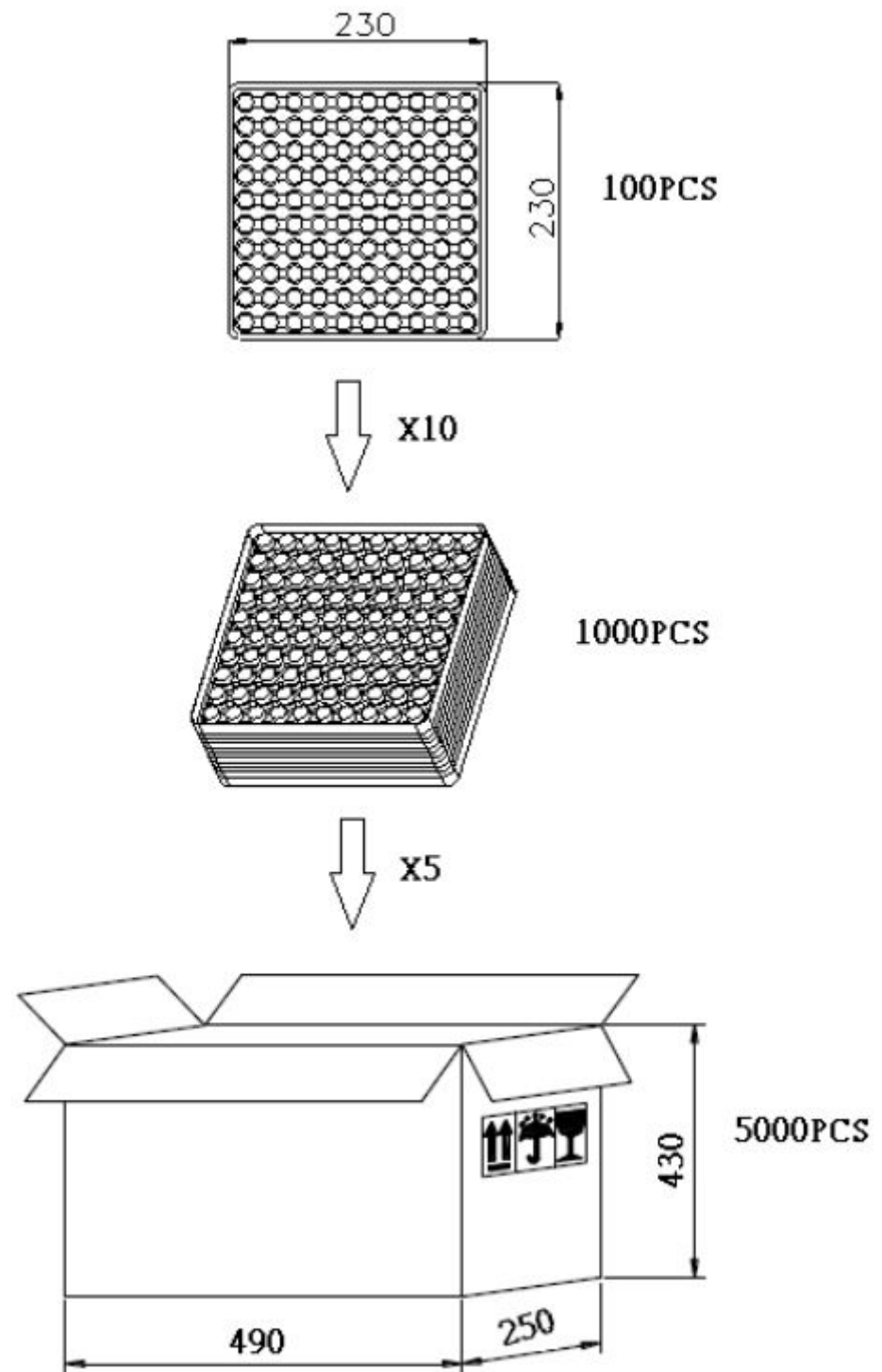
Page 4

Dimensions

Page 5

Packing

Packing



Details

Per tray: 100pcs
 Per bundle : 1,000
 5 bundles per carton: 5,000pcs
 Carton Size: 490 x 250 x 430mm