ROHS

VersionNo:04011

# APPROVAL SHEET
# FOR
# PIEZO BUZZER

# 納 入 仕 様 書

CUSTOMER: LET

SUNWAY P/N: PCW23098P15.0-12V-3300-F

CUSTOMER P/N:

| CUSTOMER | APPROVER | CHECKER |
|---|---|---|
| | | |

# CONTENTS

# *SPECIFICATIONS FOR PIEZO BUZZER*

## 1.Scope

This specification is applied to PIEZO BUZZER.

The products described below are used for sounder in various alarm systems.

## 2.Basic Condition

2.1 Operating Voltage: 3.0—20.0VDC.

2.2 Operating Temperature Range: -20—+70℃

2.3 Storage Temperature Range:-40—+80℃

## 3.Electrical Characteristics

3.1 Specification

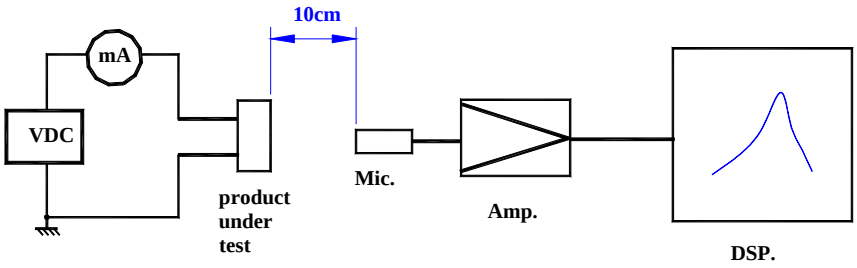
3.1.1 Output SPL: ≥85.0dB at 30cm , 12.0VDC

3.1.2 Consumption Current: ≤10.0mA : at 12.0 VDC

3.1.3 Oscillation Frequency: 3300±500Hz.

3.2 Measuring Method

3.2.1 Measuring Circuit for SPL, Consumption Current, Resonant Frequency




Input Signal: 12.0VDC

S.G: Signal Generator mA: Milliammeter Amp: Amplifier

Mic: Measuring Condenser Microphone DSP: Display Screen

3.2.2 Capacitance Measuring: LCR Meter

3.2.3 Measuring Condition

Temperature: 15—35℃ R.H. 45—75%

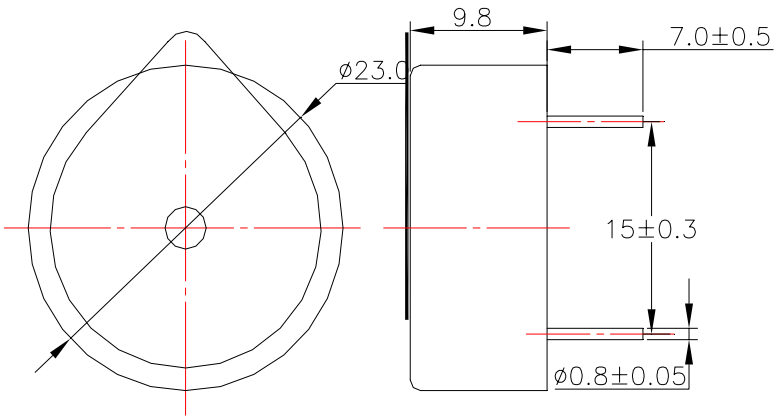
3.2.4 Judgement Condition

Temperature : 25±2℃ R.H. 45—75%

## 4. Mechanical and Environment Characteristics.

| | ITEM | TEST CONDITION AND REQUIREMENT |
|---|---|---|
| 4.1 | High Temperature Test (Storage) | After being placed in a chamber with 85±2ºC for 4 hours and then being placed in natural condition for 2 hours. Allowable variation of SPL after test: ±10dB. |
| 4.2 | Low Temperature Test (Storage) | After being Placed in a chamber with -40±2ºC for 4 hours and then being placed in natural condition for 2 hours. Allowable variation of SPL after test: ±10dB. |
| 4.3 | Humidity Test | After being Placed in a chamber with 90-95% R.H. at 40±2ºC for 24 hours and then being placed in natural condition for 4 hours. Allowable variation of SPL after test: ±10dB. |
| 4.4 | Temperature Cycle Test | After being placed in a chamber at -40 ±2ºC for 30 minutes, products shall be placed at room temperature(+20ºC). After 15 minutes at this temperature, products shall be placed in a chamber at +85±2ºC. After 30 minutes at this temperature, products shall be return to room temperature (+20ºC) for 15 minutes. After 5 above cycles, products shall be measured after being placed in natural condition for 4 hours. Allowable variation of SPL after test: ±10dB. |
| 4.5 | Drop Test | Drop on a hard wood board of 5cm thick, any directions ,6 times, at the height of 80cm . Allowable variation of SPL after test: ±10dB. |
| 4.6 | Vibration Test | After being applied vibration of amplitude of 1.5mmwith 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours . Allowable variation of SPL after test: ±10dB. |
| 4.7 | Solderability Test | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +260±5ºC for 60±1 seconds . 90% min. lead terminals shall be wet with solder (Except the edge of terminals). |
| 4.8 | Solderability Test | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +230±5ºC for 3±0.5 seconds . 90% min. lead terminals shall be wet with solder (Except the edge of terminals). |
| 4.9 | Terminal Strength Pulling Test | The force of 9.8N is applied to each terminal in axial direction for 10 seconds. No visible damage and cutting off. |

## 5.Dimensions

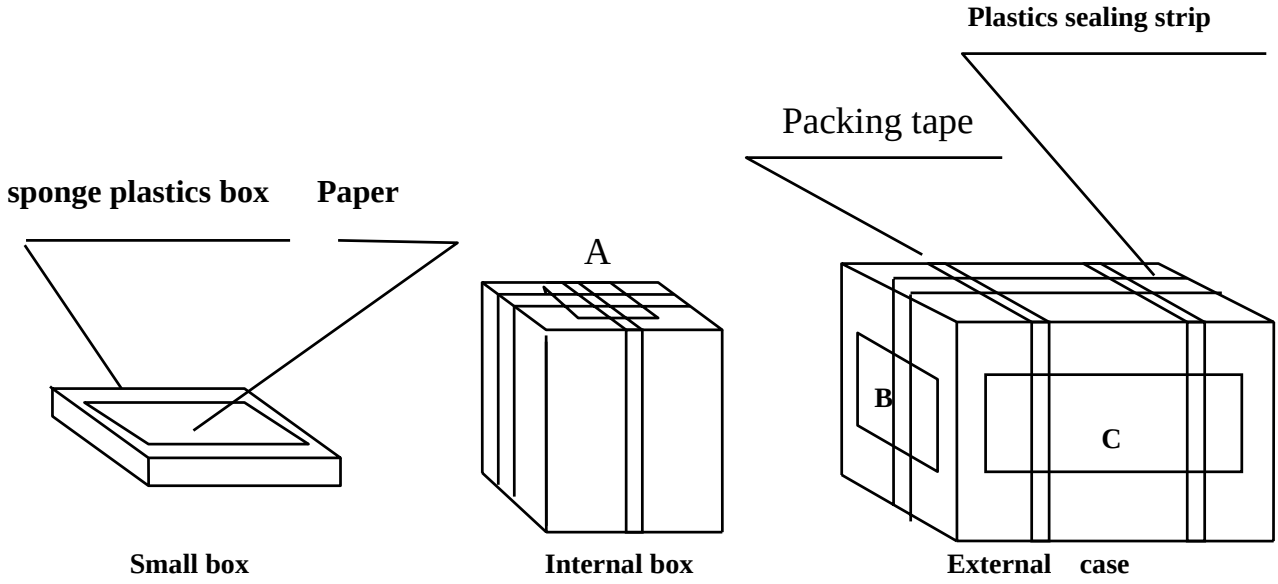



## 6.Materials List

| No. | Part Name | Type of Material | Supplier |
|---|---|---|---|
| 1 | Case | MPPO | GE PLASTICS |
| 2 | Diaphragm | 20.0mm | |
| 3 | Pin | Cu | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

## 7.Package

| package / Item | Small box | Internal box | External case |
|---|---|---|---|
| Size | 22.5X15.0X3.0 | 24.0X16.0X29.0 | 47.5X39.0X30.0 |
| Material | sponge plastics | PVC bag | paper board |
| Quantity | 40 pcs/box | 400 pcs/bag | 2000 pcs/case |
| G. Weight | 200g | 1.93Kg | 10.7Kg |

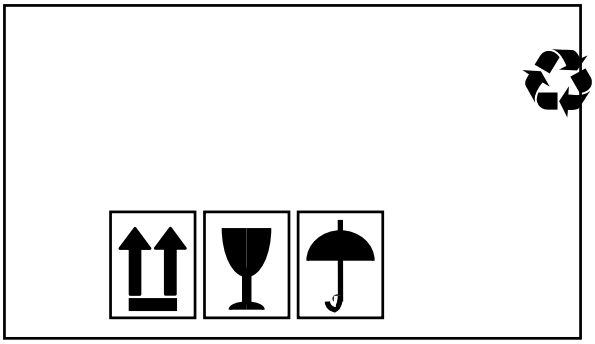



## About the A.B.C See below

### A:

| |
|---|
| TYPE: PCW23098P15.0-12V-3300-F |
| LOT NO.: |
| QUANTITY: 400 Pcs |
| DATE: |

### B:



### C:

FR__TYPE: PCW23098P15.0-12V-3300-F

Q'TY: 2000 PCS
N. W: 9.0 KG
G. W: 10.7 KG
SIZE: 47.5X39.0X30.0CM
NO. _____ OF_____

| | | | | | |
|---|---|---|---|---|---|
| | | | | Date | 2009-10-10 |
| | | | | Des. | L.Liu |
| | | | | Chk. | J.Yang |
| | | | | Apr. | J.G.Rui |
| Issue | Note | Date | Name | **PCW23098P15.0-12V-3300-F** | **050303.01** **Page: 4/ 6** |

## 8. Remarks

8.1 Please pay attention to connect the positive end of your signal to the " + " terminal of our product.

8.2 Be sure to provide an appropriate fail-safe function on your product to prevent a second damage that may be caused by an abnormality or failure related to our product.

8.3 The product may be damaged if mechanical stress over this specification is applied.

8.4 Please pay attention to protect operating circuit from surge voltage provided by something of force such as falling, shock and temperature changing.

8.5 In case of using solder iron for soldering, the temperature at the top of soldering irons should be kept less than +350℃. Moreover the soldering time should be also kept within 3 seconds.

8.6 This specification mentions the quality of the product as a single unit. Please insure the product is thoroughly evaluated in your application circuit.

8.7 Please return a copy of this specification after your signature of confirmation. In case of no return within three months from submission date, this specification should be treated as confirmed.

## 9. Annex

9.1 Measuring Data Sheet.

## 9.1 Test Data at Natural Temperature

| | | | |
|---|---|---|---|
| CUSTOMER | LET | CUST. PT./No | |
| OUR. PT./No | PCW23098P15.0-12V-3300-F | Quantity | Pcs |
| ENVIRONMENT | TEMP:25℃<br>HUM. 65% | Measuring Condition | 30cm 12.0VDC |

Electrical Characteristics

| No. | SPL (dB) | Resonant Frequency (Hz) | Current (mA) | | | |
|---|---|---|---|---|---|---|
| 01 | | | | | | |
| 02 | | | | | | |
| 03 | | | | | | |
| 04 | | | | | | |
| 05 | | | | | | |
| 06 | | | | | | |
| 07 | | | | | | |
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| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| MIN | | | | | | |
| MAX | | | | | | |
| X | | | | | | |
| R | | | | | | |