

## Features

- Electro mechanical buzzer
- Surface mount
- Small and low profile
- 2-5Vp-p
- Rated voltage 3Vp-p
- Sound output  $\geq 78\text{dB}$
- Requires additional circuitry to generate sound
- 5 x 5 x 2mm

## RS PRO Surface Mount Buzzer 2-5Vp-p, 78dB

RS Stock No.: 0102769



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

## Product Description

**A continuous tone, surface mount buzzer. This buzzer generates a sound output of more than 78dB and is reflow solderable. It is a small and low profile device, with a voltage range of 2-5Vp-p. It requires additional circuitry to generate sound.**

### **APPLICATIONS:**

- Access & security
- Medical
- Home appliances
- Toys & games
- Consumer electronics
- Timers
- Load monitors & pressure gauges
- Agricultural system monitoring
- Alarms within automotive applications such as seat belt, tyre pressure, temperature warnings
- Sensing & instrumentation
- Communications equipment
- Remote monitoring systems
- Safety products

## Electrical Specifications

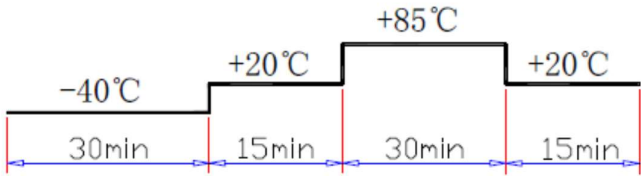
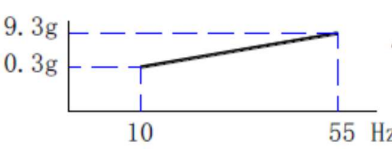
### 1. ELECTRICAL AND ACOUSTICAL SPECIFICATION

|      | Item                        | Unit               | Specifications |
|------|-----------------------------|--------------------|----------------|
| 1-1  | Rated Voltage (Square Wave) | Vp-p               | 3.0            |
| 1-2  | Operating Voltage           | Vp-p               | 2-5            |
| 1-3  | * Rated Current (Max)       | mA                 | 100            |
| 1-4  | * Min Sound Output at 10cm  | dB                 | 78(typ.80)     |
| 1-5  | * Resonant Frequency        | Hz                 | 4000           |
| 1-6  | Coil Resistance             | $\Omega$           | $12 \pm 2$     |
| 1-7  | Operating Temperature       | $^{\circ}\text{C}$ | -40~+85        |
| 1-8  | Storage Temperature         | $^{\circ}\text{C}$ | -40~+85        |
| 1-9  | Weight                      | g                  | 0.3            |
| 1-10 | Housing Material            |                    | LCP            |
| 1-11 | Lead Pin Material           |                    | Brass          |
|      |                             |                    |                |
|      |                             |                    |                |
|      |                             |                    |                |
|      |                             |                    |                |
|      |                             |                    |                |

\* Value Applying at Rated Voltage (resonant frequency, 1/2 duty, square wave)

Requires additional electronic circuitry to operate as a sounder.

## 2. ENVIRONMENTAL TEST

|  | Item                  | Specifications   |
|--|-----------------------|--|
| 2-1  | Storage in High temp. | Storage in $+85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 hours, then expose to the room temperature for 2 hours without applying power.  |
| 2-2  | Storage in Low temp.  | Storage in $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 hours, then expose to the room temperature for 2 hours without applying power.  |
| 2-3  | Storage in Humidity   | Storage in $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 90-95%RH test box for 96 hours, then expose to the room temperature for 2 hours without applying power.   |
| 2-4  | Thermal cycle test.   |  <p>Make this test for 5 cycles without applying power, then expose to the room temperature for 2 hours.</p>                         |
| 2-5  | Vibration test        |  <p>Amplitude: 1.5mm<br/>Time : 1min/axis</p> <p>Make this test for the directions of X, Y, Z for 2 hours each (total 6 hours).</p> |
| 2-6  | Drop test             | Free drop a unit from the height 100cm to the surface of 10mm thick board, three directions (X, Y, Z).   |
| 2-7  | Solderability test    | Soldering temp.: $260 \pm 5^{\circ}\text{C}$<br>Heat applying time: $3 \pm 0.5\text{sec}$ .  |
| <p><b>PASS CRITERION :</b></p> <p>After these tests, the change of S.P.L shall be within <math>\pm 5\text{ dB}</math>.</p> |                       |  |

## 3. MEASURING METHOD (BUZZER MODE)

### 3-1. Test Condition

#### 3-1-1. STANDARD

Temperature :  $25 \pm 3^\circ\text{C}$

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

#### 3-1-2. JUDGEMENT

Temperature :  $15 \sim 35^\circ\text{C}$

Relative humidity : 45% ~ 85%,

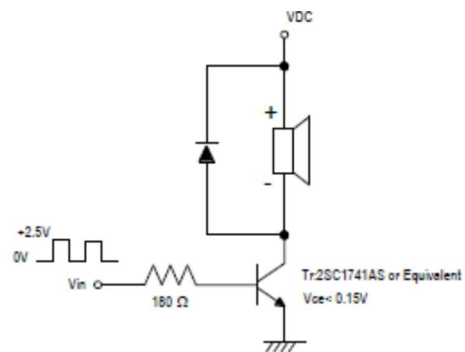
Atmospheric pressure : 860mbar to 1060mbar.

### 3-2. Standard Test Fixture

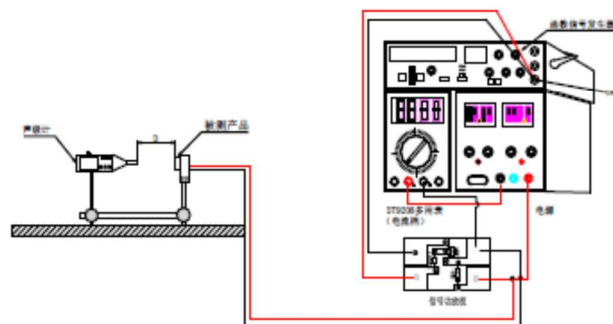
1. rated Voltage (Square wave): 3V

2. Resonant Frequency: 4000Hz

3. Standard Drive Circuit:

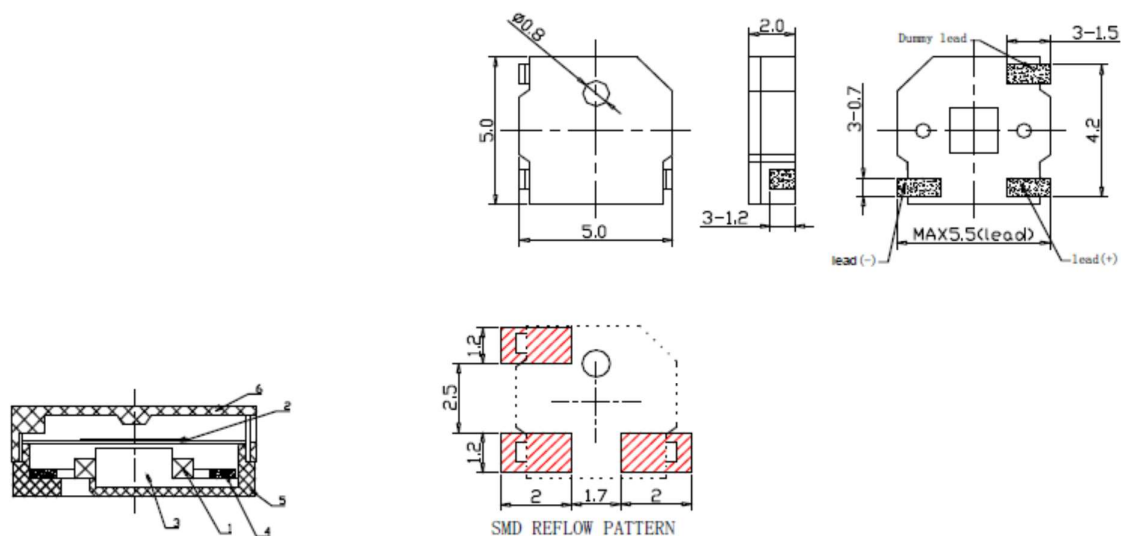


### 4. Standard test fixture:



## 4.DIMENSIONS

Unless otherwise specified, tolerance:  $\pm 0.5$ (unit:mm)



|                                      |                      |
|--------------------------------------|----------------------|
| Cadmium(Cd)/Cadmium Compounds        | $\leq 100\text{ppm}$ |
| Lead (Pb) / Lead Compounds           | $\leq 800\text{ppm}$ |
| Mercury (Hg) Mercury Compounds       | $\leq 800\text{ppm}$ |
| Hexavalent-Chromium (Cr6+) Compounds | $\leq 800\text{ppm}$ |
| PBB                                  | $\leq 800\text{ppm}$ |
| PBDE                                 | $\leq 800\text{ppm}$ |

- 1) All parts must be meet to ROHS.
- 2) Reflow solder allowed, wash not allowed.

|          |           |      |             |        |
|----------|-----------|------|-------------|--------|
| 6        | Cover     | 1    | LCP         |        |
| 5        | Case      | 1    | LCP         |        |
| 4        | Core      | 1    | Ferrite     |        |
| 3        | Iron      | 1    | Iron        |        |
| 2        | Diaphragm | 1    | Iron        |        |
| 1        | Coil Part | 1    | Copper Iron |        |
| Part No. | Part Name | Q'TY | Material    | Remark |

## 5.REFLOW SOLDERING CURVE

