

Data Sheet

SMT-0830-T-HT-R

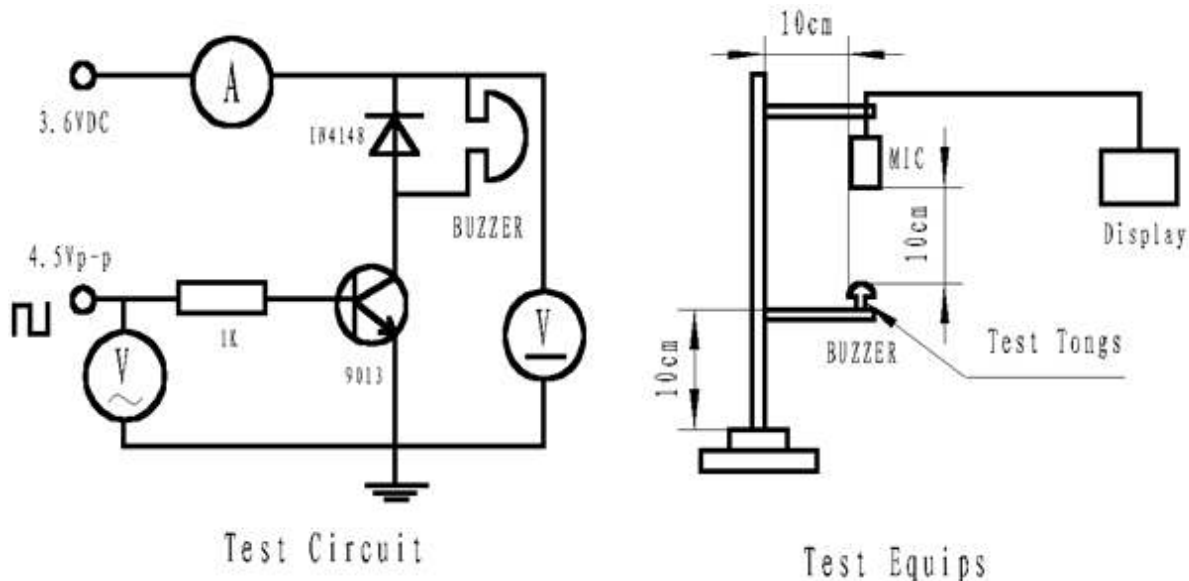
PUI Audio's **High-Temp** line of products is designed with ultra-wide operating temperatures. The **SMT-0830-T-HT-R** is designed for high output at 3000 Hz in a small package.

- 90dB output with 3.6 V0-p and 3000 Hz input
- Has a wide operating temperature range of -40°C ~ +105°C
- Only weighs 0.4 grams

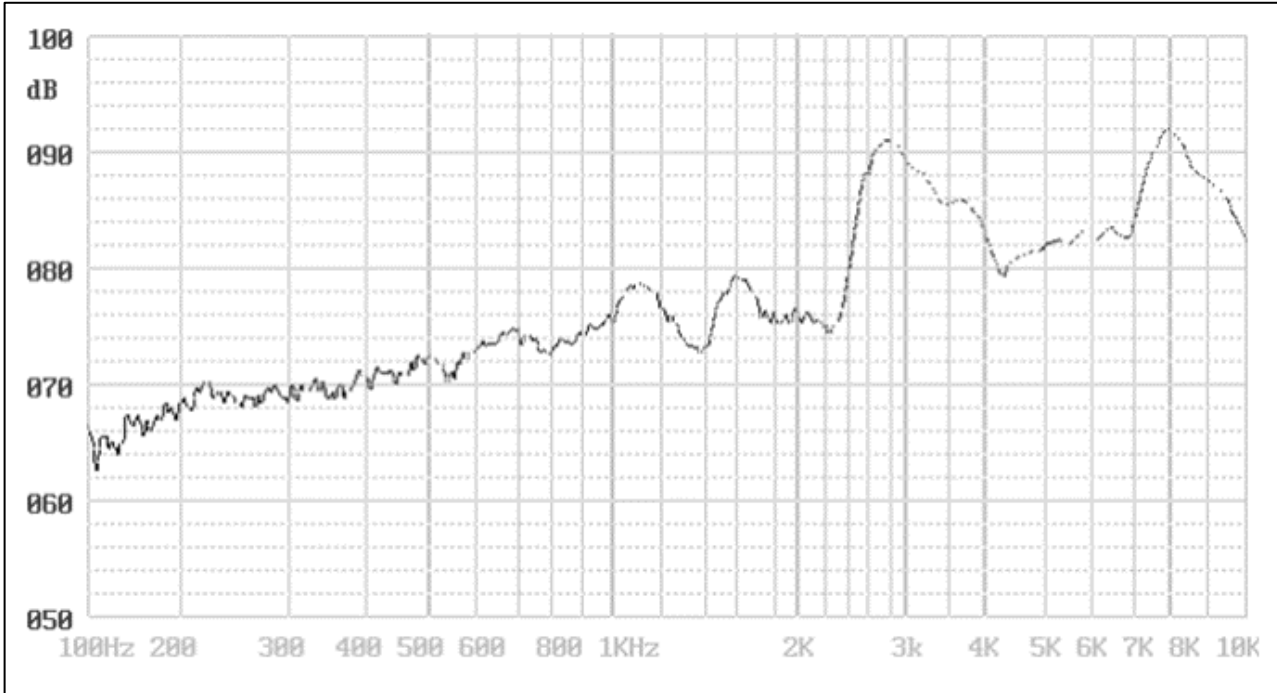
**Specifications**

| Parameters                    | Values                     | Units                                |
|-------------------------------|----------------------------|--------------------------------------|
| Rated Voltage                 | 3.6                        | V0-p                                 |
| Operating Voltage Range       | 2 ~ 5                      | V0-p                                 |
| Current Draw at Rated Voltage | ≤100                       | mA                                   |
| Coil Resistance               | 16±3                       | Ohms                                 |
| Minimum SPL @ 10cm            | ≥90                        | dBa                                  |
| Resonant Frequency            | 3000±500                   | Hz                                   |
| Housing Material              | LCP                        | -                                    |
| Weight                        | 0.4                        | Grams                                |
| Acceptable Soldering Methods  | Hand Solder, Reflow Solder | See page 2 for soldering information |
| Environmental Compliances     | RoHS                       | -                                    |
| Storage Temperature           | -40 ~ +120                 | °C                                   |
| Operating Temperature         | -40 ~ +105                 | °C                                   |

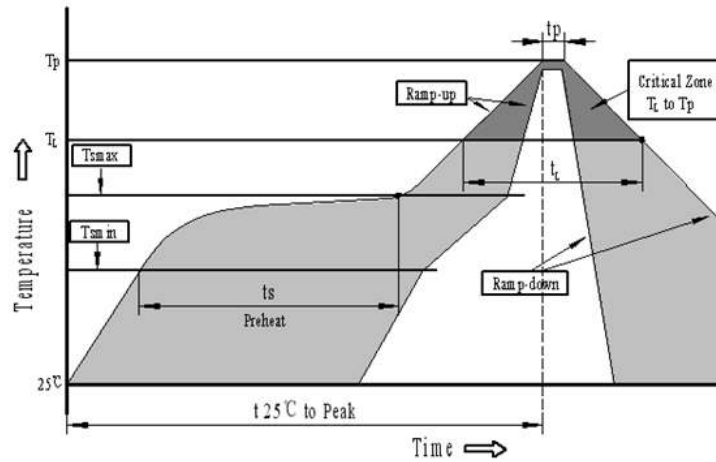
**Measurement Method** (3.6V0-p, 3000Hz, 50% duty cycle square wave with a SPL meter at 10cm)



## Typical Frequency Response (3.6 V0-p sine-sweep with microphone spaced at 10cm)



## Recommended Soldering Procedure



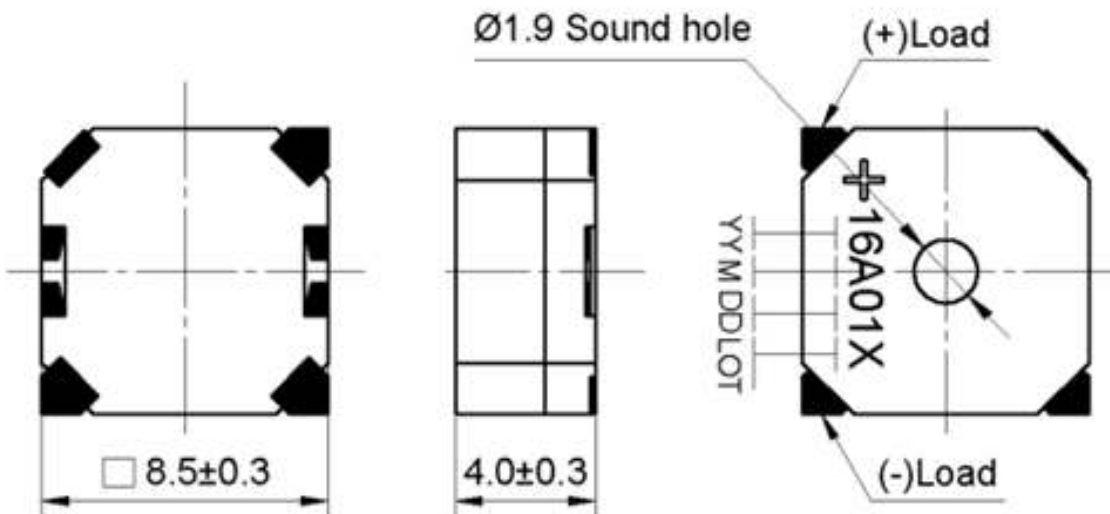
| Profile Feature                                      | Pb-Free Assembly |
|--|------------------|
| Average ramp-up rate( $T_L$ to $T_p$ )               | 3°C/second max.  |
| Preheat  |                  |
| -Temperature Min. ( $T_{smin}$ )                     | 150°C            |
| -Temperature Min. ( $T_{smax}$ )                     | 200°C            |
| -Temperature Min. ( $t_s$ )                          | 60~180 seconds   |
| $T_{smax}$ to $T_L$                                  |                  |
| -Ramp-up Rate  | 3°C/second max.  |
| Time maintained above:                               |                  |
| - Temperature( $T_L$ )                               | 217°C            |
| -Time( $T_L$ )                                       | 60~150 seconds   |
| Peak temperature( $T_p$ )                            | 250°C+0/-5°C     |
| Time within 5°C of actual Peak temperature ( $t_p$ ) | 6 seconds max.   |
| Ramp-down Rate                                       | 6°C/second max.  |
| Time 25°C to Peak Temperature                        | 8 minutes max.   |

## Reliability Testing

| Type of Test              | Test Specifications  |
|---------------------------|--|
| High Temperature Test     | The part shall be capable of withstanding a storage temperature of +120°C for 120 hours  |
| Low Temperature Test      | The part shall be capable of withstanding a storage temperature of -40°C for 120 hours   |
| Humidity Test             | 40±2°C, 90~95% RH, 120 hours   |
| Temperature Cycle Testing | Total 5 cycles, 1 cycle consisting of:<br>-40±2°C, 30 minutes<br>20±5°C, 15 minutes<br>120±2°C, 30 minutes<br>20±5°C, 15 minutes   |
| Vibration Test            | The part shall be subjected to a vibration cycle of 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm (9.3g).<br>The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours. |
| Shock Test                | Sounder shall be measured after being applied a shock (980m/s <sup>2</sup> ) for each three mutually perpendicular directions to each of 3 times by a half sine wave.  |
| Drop Test                 | Dropped from 7m onto the surface of a 10mm thick wooden board. Applied to the top and side of the part.  |

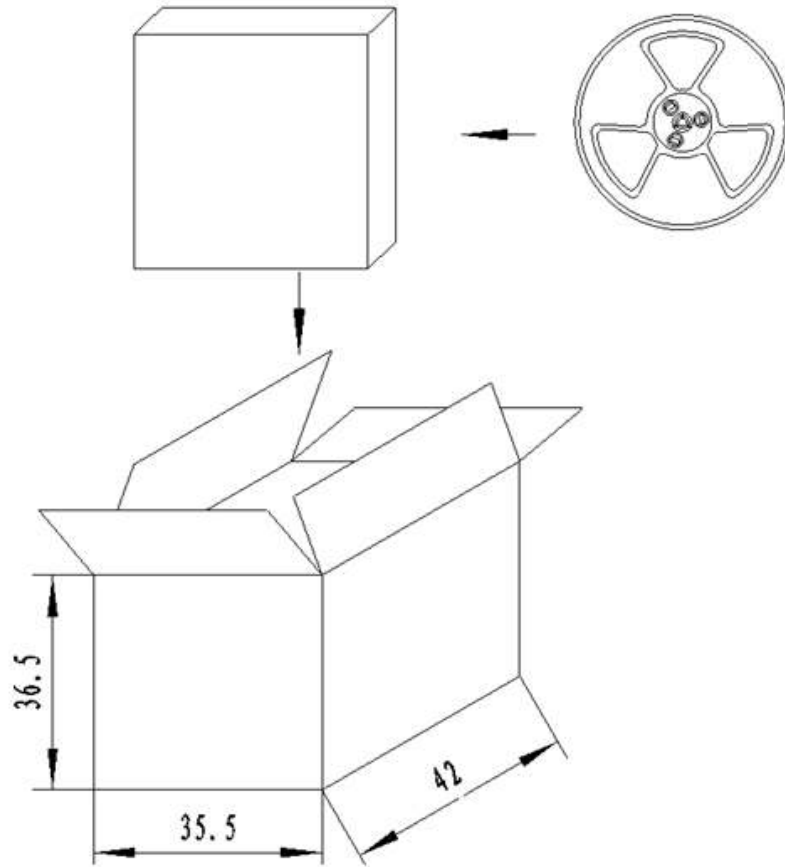
**2 hours after the test the part shall meet specifications without any degradation in appearance and performance except SPL shall be within ±10dB of the initial value.**

## Dimensions (Tolerance: ±0.5mm Units: mm)





## Packaging Cont'd



### NOTES:

- 1.1000 PCS per box
- 2.Total 10 boxes per carton
- 3.Total 10000 PCS carton

**Specifications Revisions**

| <b>Revision</b> | <b>Description</b>        | <b>Date</b> |
|-----------------|---------------------------|-------------|
| -               | Released from Engineering | 4/1/20      |

Note:

- 1. Unless otherwise specified:
  - A. All dimensions are in millimeters.
  - B. Default tolerances are  $\pm 0.5\text{mm}$  and angles are  $\pm 3^\circ$ .
- 2. Specifications subject to change or withdrawal without notice.