

Data Sheet

SMT-0827-S-HT-R

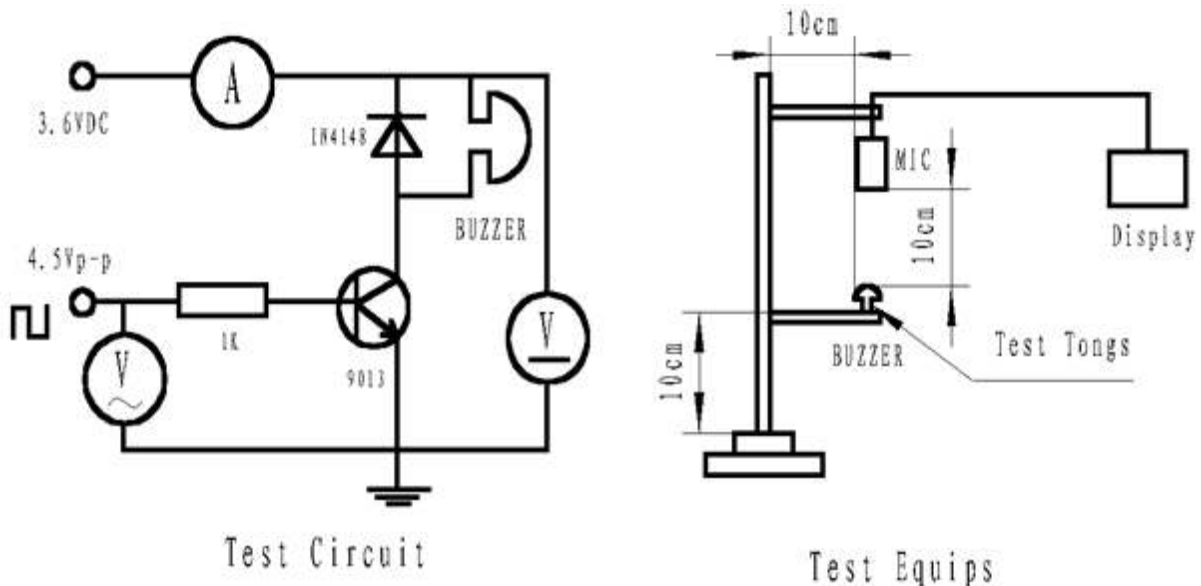
PUI Audio's **High-Temp** line of products is designed with ultra-wide operating temperatures. The **SMT-0827-S-HT-R** is designed for high output at 2700 Hz in a small package.

- Only weighs 0.5 grams
- Wide operating temperature of -40°C ~ +105°C
- 85 dB minimum SPL @ 10cm with 3.6V_{0-p} input

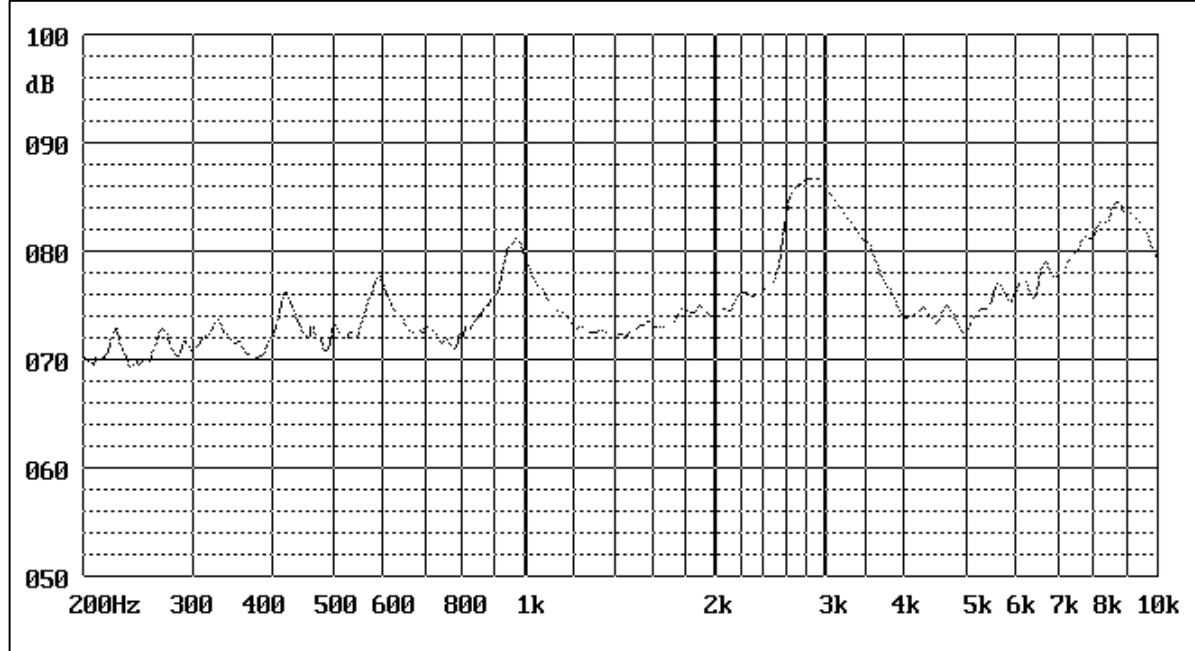
Transducer Specifications

| Parameters | Values | Units |
|-------------------------------|----------------------------|--------------------------------------|
| Rated Voltage | 3.6 | V _{0-p} |
| Operating Voltage Range | 2 ~ 5 | V _{0-p} |
| Current Draw at Rated Voltage | ≤100 | mA |
| Coil Resistance | 16±3 | Ohms |
| Minimum SPL @ 10cm | ≥85 | dB |
| Resonant Frequency | 2700 ±500 | Hz |
| Housing Material | LCP | - |
| Weight | 0.5 | 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 |

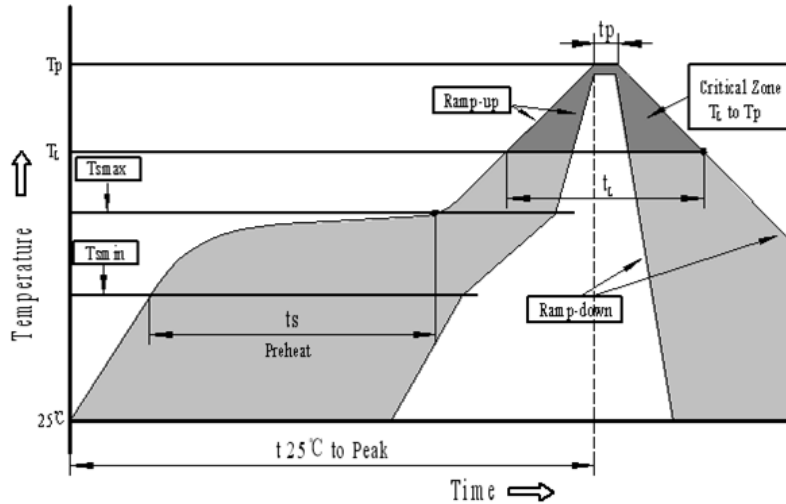
Measurement Method (3.6V_{0-p}, 2700Hz, 50% duty cycle square wave with a SPL meter at 10cm)



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



Recommended Soldering Procedure



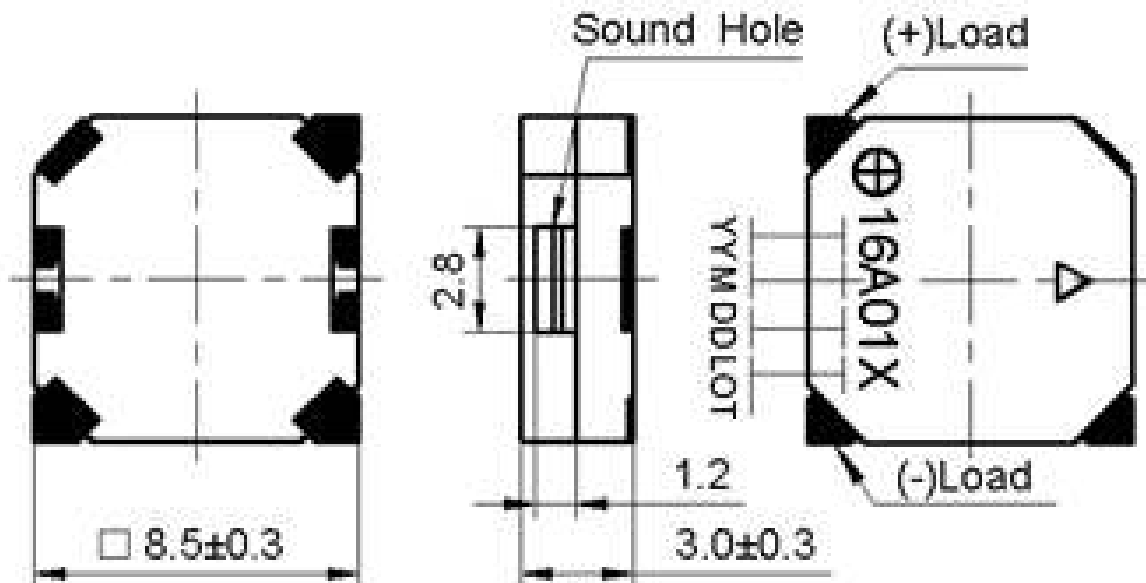
| Profile Feature | Pb-Free Assembly |
|--|------------------|
| Average ramp-up rate(T_L to T_p) | 3°C/second max. |
| Preheat | |
| -Temperature Min. (T_{smin}) | 150°C |
| -Temperature Min. (T_{smax}) | 200°C |
| -Temperature Min. (t_s) | 60~180 seconds |
| T_{smax} to T_L | |
| -Ramp-up Rate | 3°C/second 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

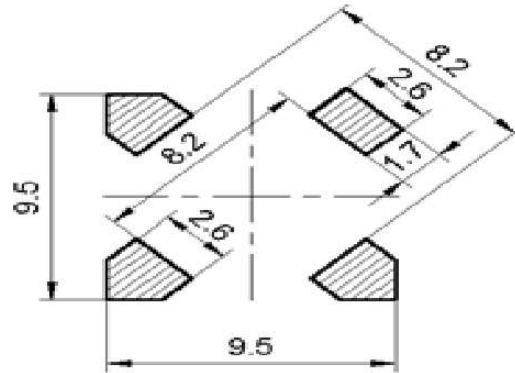
| Type of Test | Test Specifications |
|---------------------------|--|
| High Temperature Test | The part shall be capable of withstanding a storage temperature of +120°C for 120 hours |
| Low Temperature Test | The part shall be capable of withstanding a storage temperature of -40°C for 120 hours |
| Humidity Test | 40±2°C, 90~95% RH, 120 hours |
| Temperature Cycle Testing | Total 5 cycles, 1 cycle consisting of: -40±2°C, 30 minutes 20±5°C, 15 minutes 120±2°C, 30 minutes 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). 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 | Part shall be measured after being applied a shock (980m/s ²) for each three mutually perpendicular directions to each of 3 times by a half sine wave. |
| Drop Test | Dropped from 7m height onto the surface of a 10mm thick wooden board. 2 directions-upper and side of the part are to be applied. |

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)

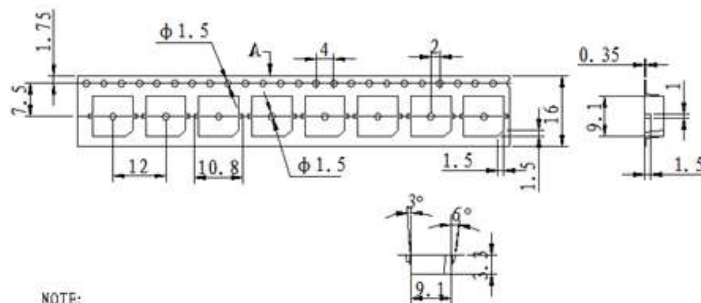


Suggested Land Pattern*



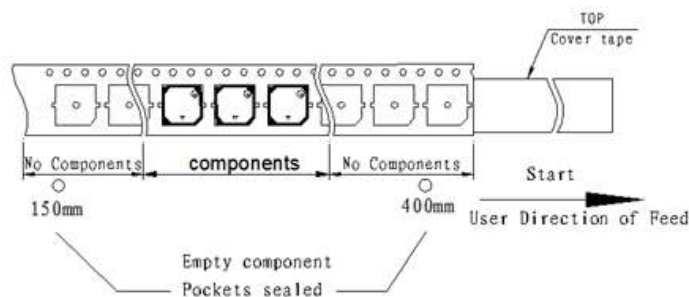
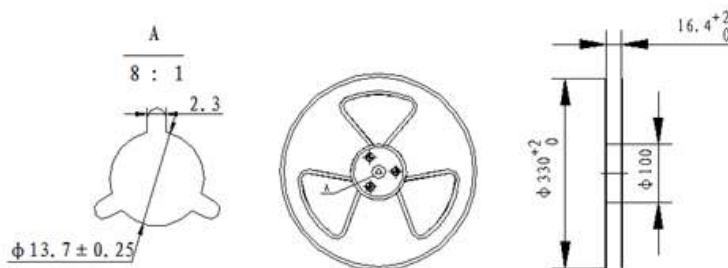
*This land pattern is advisory only and its use or adaptation is entirely voluntary. PUI Audio disclaims all liability of any kind associated with the use, application, or adaptation of this land pattern.

Packaging

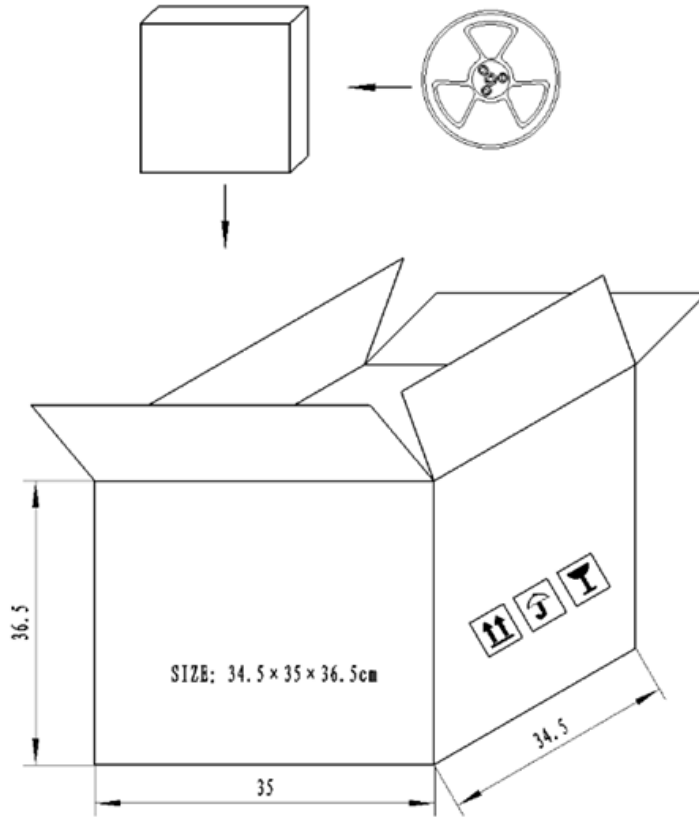


NOTE:

1. 10 sprocket hole pitch cumulative tolerance +/-0.20mm.
2. All dimensions meet EIA-481-D requirements.
3. Thickness: 0.35 +/- 0.05mm.
4. Component loaded per 13" reel: 1000pcs.



Packaging Cont'd



NOTES:

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

Specifications Revisions

| Revision | Description | Date |
|-----------------|---------------------------|-------------|
| - | Released from Engineering | 3/31/20 |

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.