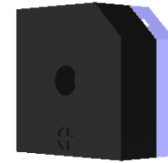




# PUIaudio



Data Sheet

SMT-1324-TW-1V-HT-R

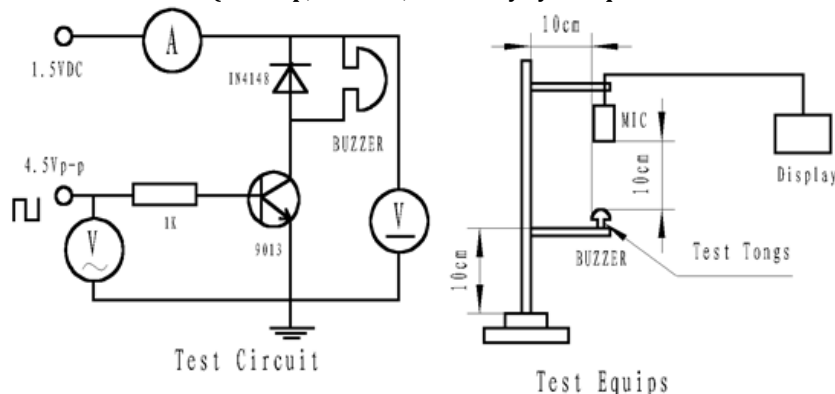
PUI Audio's **High Temperature** line of products is designed to withstand ultra-wide operating temperatures. The **SMT-1324-TW-1V-HT-R** is designed for high output at 2.4 kHz in a small package.

- Wide operating temperature range of  $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
- Low rated voltage at 1.5V0-p
- Light 2-gram weight
- Reflow Allowed, Washing NOT Allowed

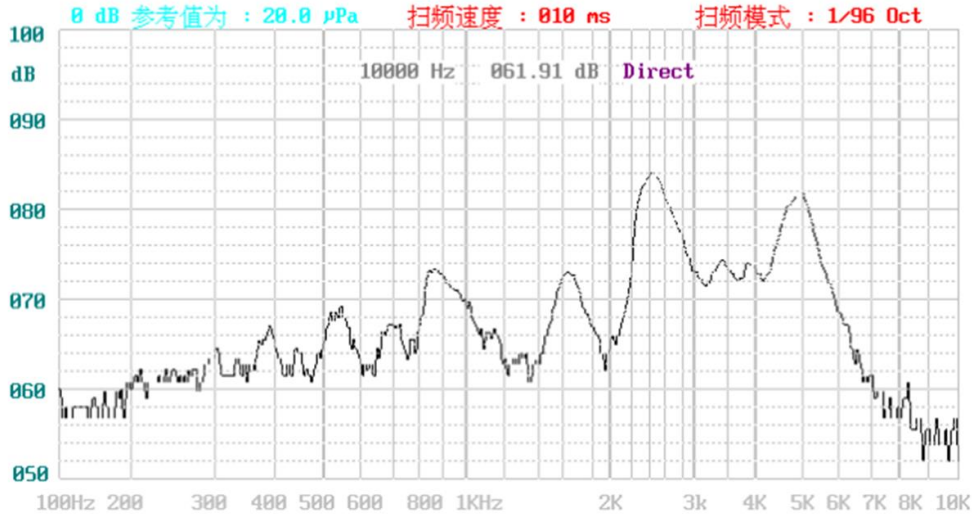
## Specifications

Parameters	Values	Units
Rated Voltage	1.5	V0-p
Operating Voltage Range	1 ~ 2	V0-p
Current Draw at Rated Voltage	$\leq 30$	mA
Coil Resistance	$15 \pm 3$	Ohms
Minimum SPL @ 10cm	$\geq 80$	dBA
Resonant Frequency	$2400 \pm 500$	Hz
Housing Material	LCP	-
Moisture Sensitivity Level (MSL)	1	-
Weight	2	Grams
Acceptable Soldering Methods	Hand Solder, Reflow Solder	See following pages
Environmental Compliances	RoHS/REACH	-
Storage Temperature	$-40 \sim +120$	$^{\circ}\text{C}$
Operating Temperature	$-40 \sim +105$	$^{\circ}\text{C}$

## Measurement Method (1.5V0-p, 2400Hz, 50% duty cycle square wave with a SPL meter at 10cm)



## Typical Frequency Response (1.5 V0-p sine-sweep with microphone spaced at 10cm)

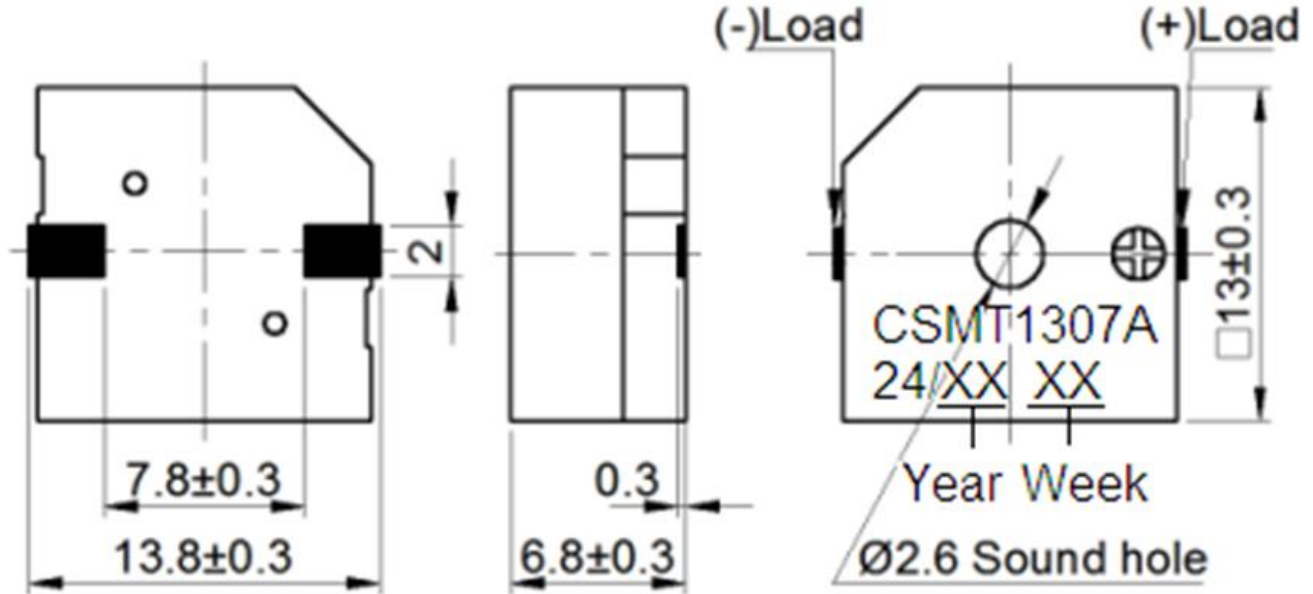


## Reliability Testing

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	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 a height of 700mm onto the surface of a 10mm thick wooden board. This shall be applied to the top and side of the part.

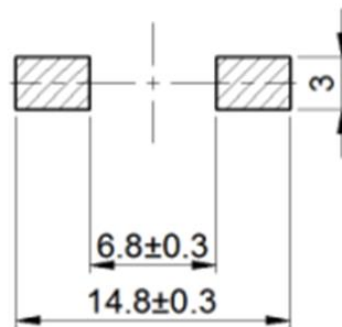
**2 hours after the test the part shall meet specifications without any degradation in appearance and performance except SPL shall be within ±10dB of the initial value.**

**Dimensions** (Tolerance:  $\pm 0.5\text{mm}$  unless specified)



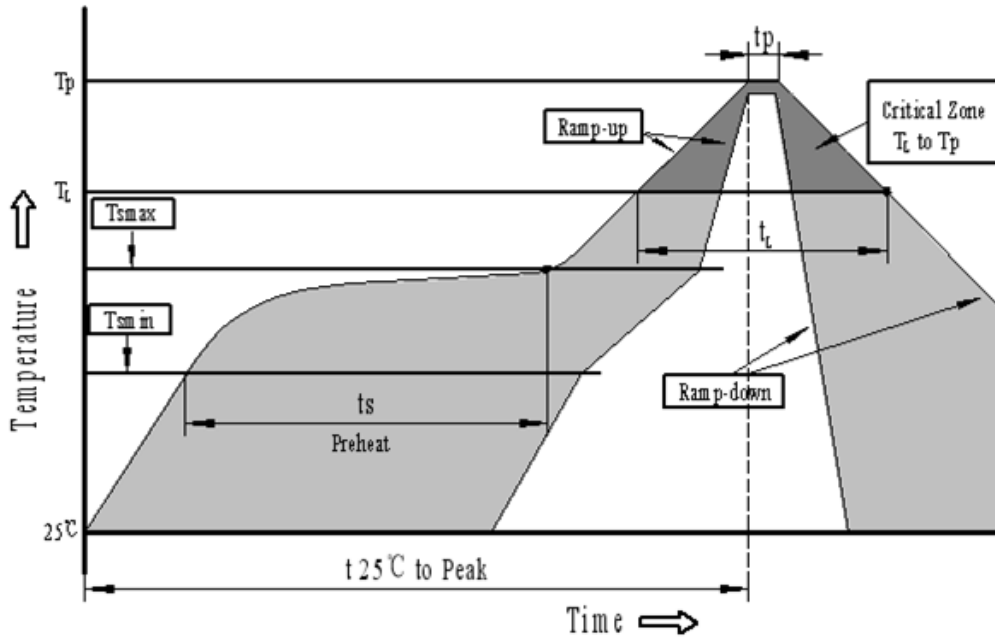
**Suggested Land Pattern\***

Recommended PCB Land Pattern



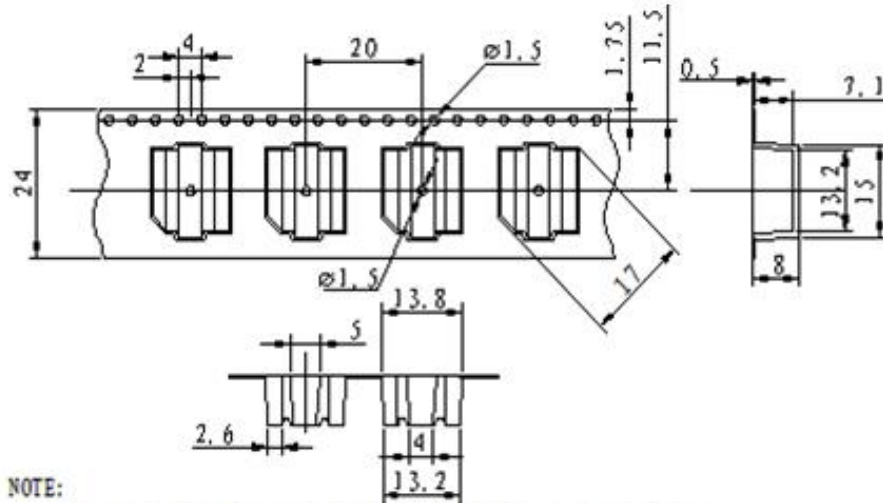
\*This land pattern is advisory only and its use or adaptation is entirely voluntary.  
PUI Audio disclaims all liability of any kind associated with the use, application, or adaptation of this land pattern.

## Recommended Soldering Procedure



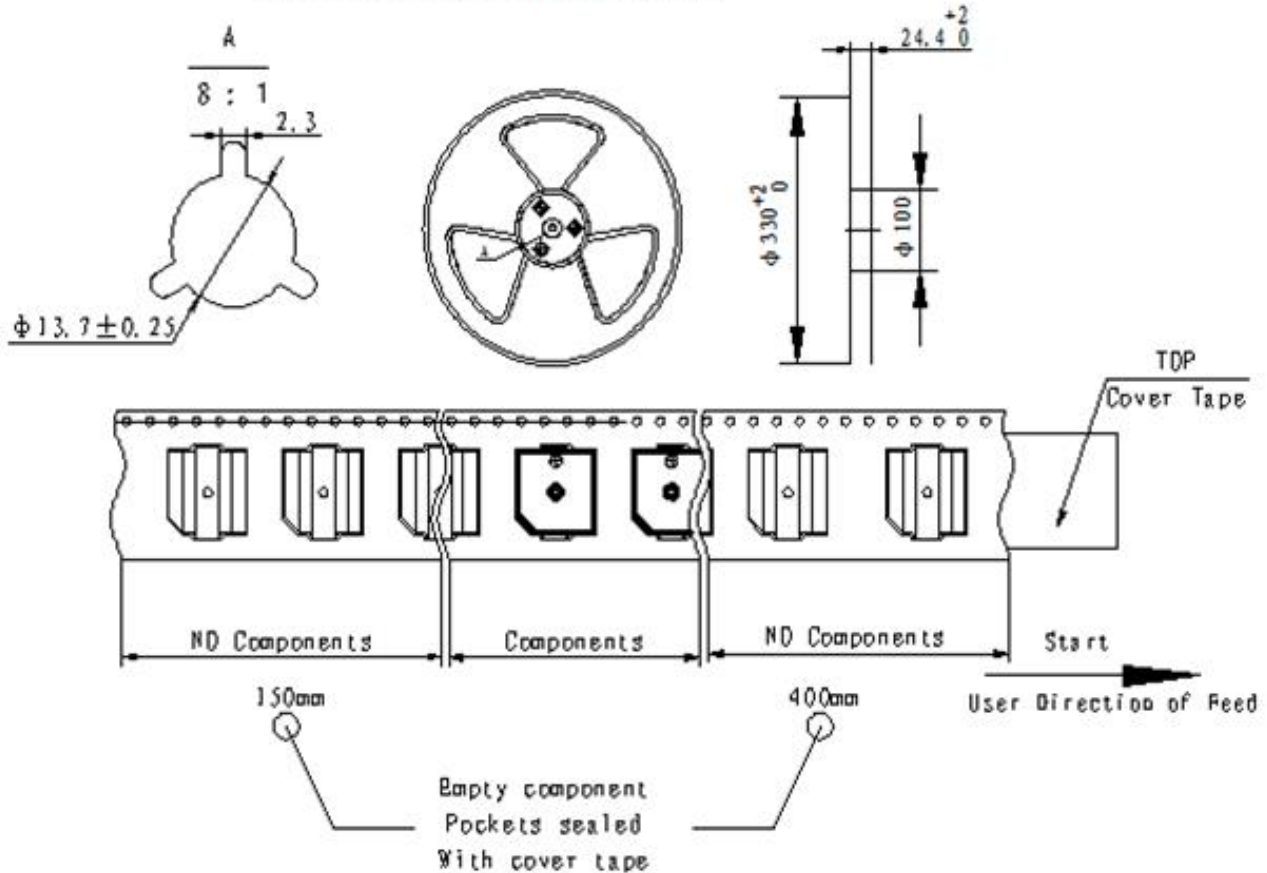
Profile Feature	Pb-Free Assembly
Average ramp-up rate( $T_L$ to $T_p$ )	3°C/second max.
Preheat	
-Temperature Min. ( $T_{smin}$ )	150°C
-Temperature Min. ( $T_{smax}$ )	200°C
-Temperature Min. ( $t_s$ )	60~180 seconds
$T_{smax}$ to $T_L$	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature( $T_L$ )	217°C
-Time( $T_L$ )	60~150 seconds
Peak temperature( $T_p$ )	245°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.

## Packaging

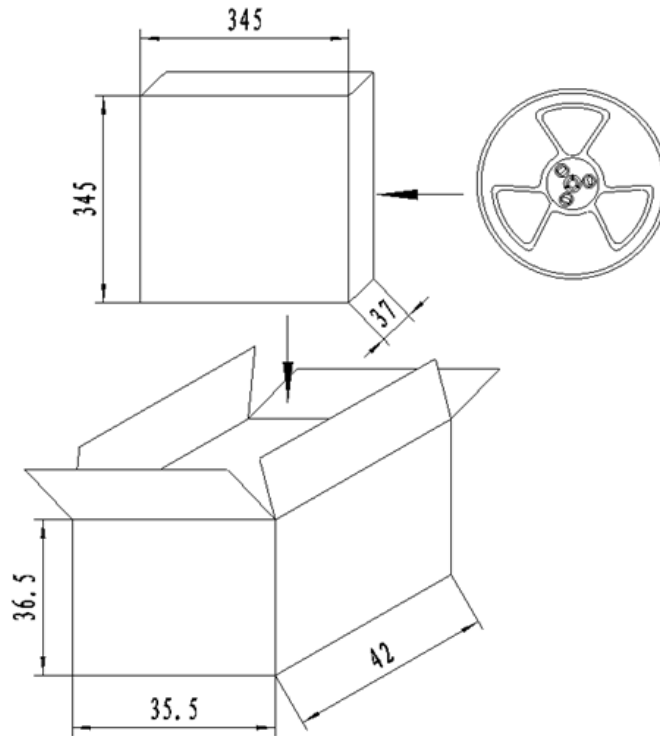


**NOTE:**

1. 10 sprocket hole pitch cumulative tolerance  $\pm 0.2$ mm.
2. All dimensions meet EIA-481-D requirements.
3. Thickness:  $0.5 \pm 0.05$ mm.
4. Component loaded per 13" reel: 400pcs.



## Packaging Cont'd



### NOTES:

- 1.400 PCS per box
- 2.Total 10 boxes per carton
- 3.Total 4000 PCS carton

### Specifications Revisions

Revision	Description	Date	Approved
-	Released from Engineering	03/30/2020	-
A	Add Details for MSL, Washing NOT Allowed	09/17/2024	ML

### 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.