

Data Sheet	SMI-1324-TW-5V-HT-R
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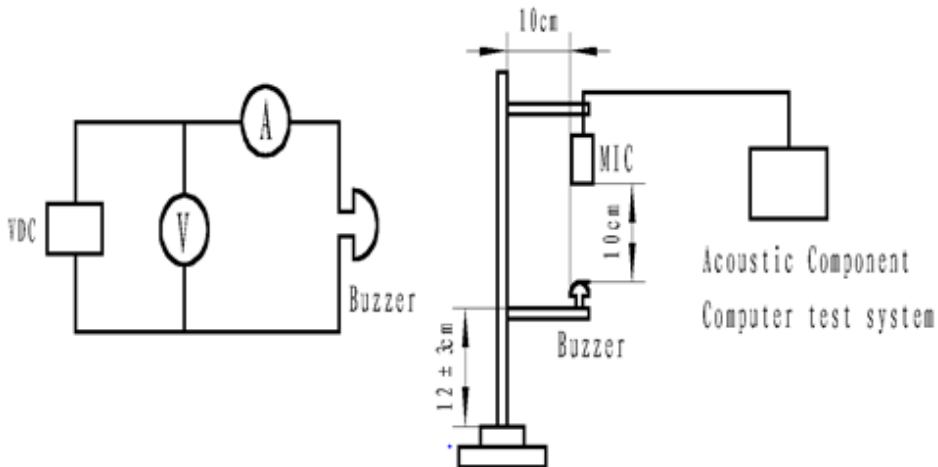
PUI Audio's **High-Temp** line of products is designed with ultra-wide operating temperatures. The **SMI-1324-TW-5V-HT-R** is built for high output at 2400 Hz in a small package.

- Low current draw of less than 30 mA at 5 VDC
- Minimum 85 dBA output with 5 VDC input
- Wide -40°C to +85°C operating temperature

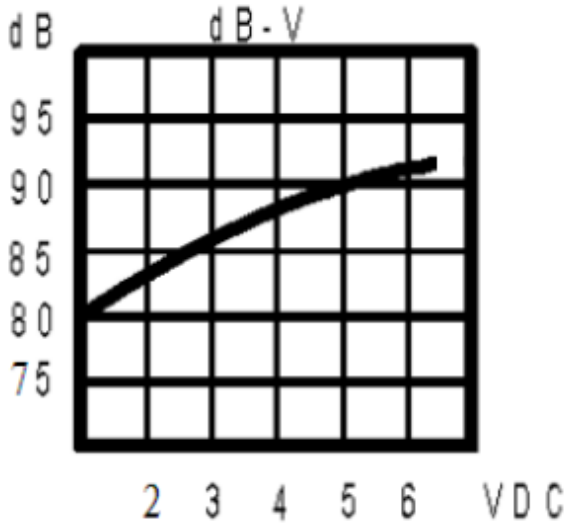
### Specifications

Parameters	Values	Units
Rated Voltage	5	VDC
Operating Voltage Range	3 ~ 6.5	VDC
Current Draw at Rated Voltage	≤30	mA
Minimum SPL @ 10cm	≥85	dBA
Resonant Frequency	2400 ± 300	Hz
Housing Material	PPS	-
Weight	2.2	Grams
Acceptable Soldering Methods	Hand Solder, Reflow Solder	See page 2 for soldering information
Environmental Compliances	RoHS	-
Storage Temperature	-40 ~ +90	°C
Operating Temperature	-40 ~ +85	°C

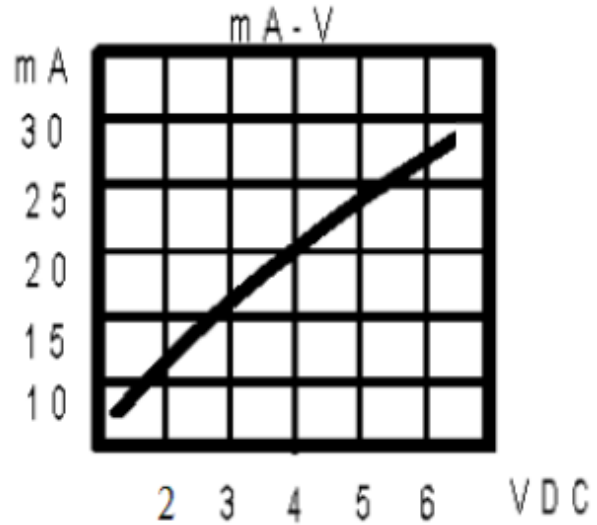
### Measurement Method (5 VDC, 2.4 kHz, SPL meter spaced at 10cm)



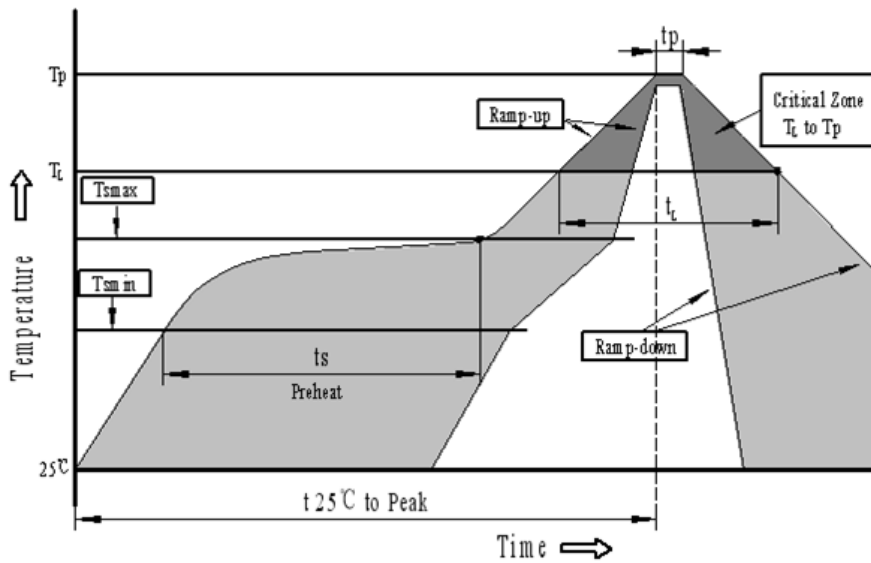
### Typical SPL vs Input Voltage



### Typical Current Draw vs Input Voltage



### Recommended Reflow Soldering Procedure



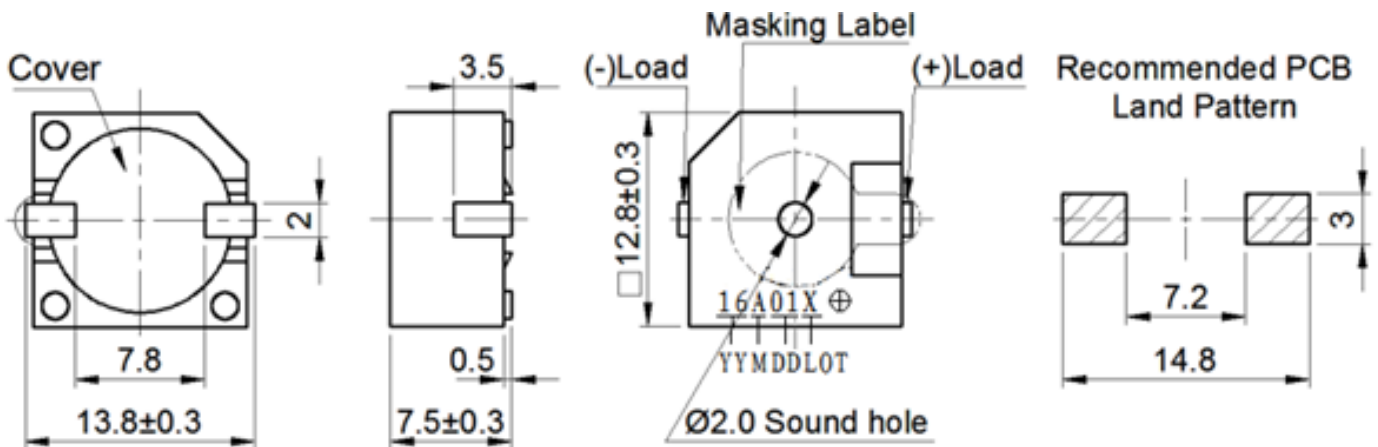
Profile Feature	Pb-Free Assembly
Average ramp-up rate(T <sub>L</sub> to T <sub>p</sub> )	3°C/second max.
Preheat	
-Temperature Min.(T <sub>smin</sub> )	150°C
-Temperature Min.(T <sub>smax</sub> )	200°C
-Temperature Min.(ts)	60~180 seconds
T <sub>smax</sub> to T <sub>L</sub>	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature(T <sub>L</sub> )	217°C
-Time(T <sub>L</sub> )	60~150 seconds
Peak temperature(T <sub>p</sub> )	245°C+0/-5°C
Time within 5°C of actual Peak temperature (tp)	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

## Reliability Testing

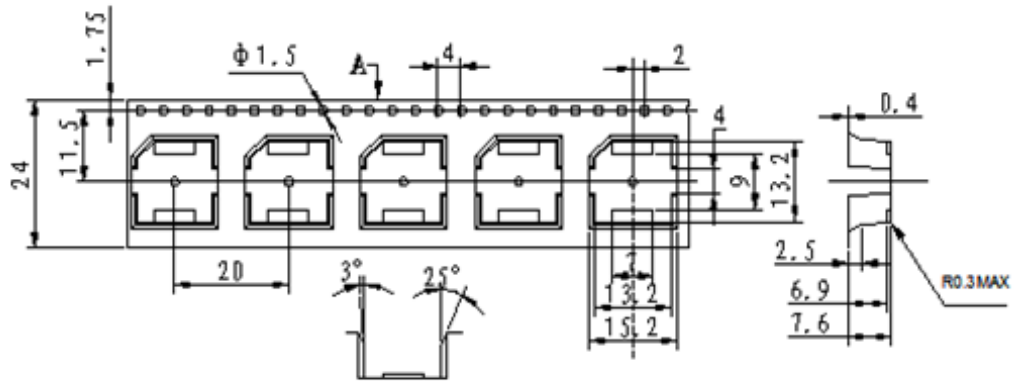
Type of Test	Test Specifications
High Temperature Test	The part shall be capable of withstanding a storage temperature of +90°C for 120 hours
Low Temperature Test	The part shall be capable of withstanding a storage temperature of -40°C for 120 hours
Humidity Test	40±2°C, 90~95% RH, 120 hours
Temperature Cycle Testing	Total 5 cycles, 1 cycle containing: -40±2°C, 30 minutes 20±5°C, 15 minutes 90±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 1.52 mm (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 <sup>2</sup> ) for each three mutually perpendicular directions to each of 3 times by half sine wave.
Drop Test	Drop part from 700mm height onto the surface of 10mm thick wooden board. 2 directions-upper and side of the part are to be applied.

**After the test the part shall meet specifications without any degradation in appearance and performance except SPL shall be initial value±10dB.**

## Dimensions (Tolerance: ±0.5mm Except when Specified)

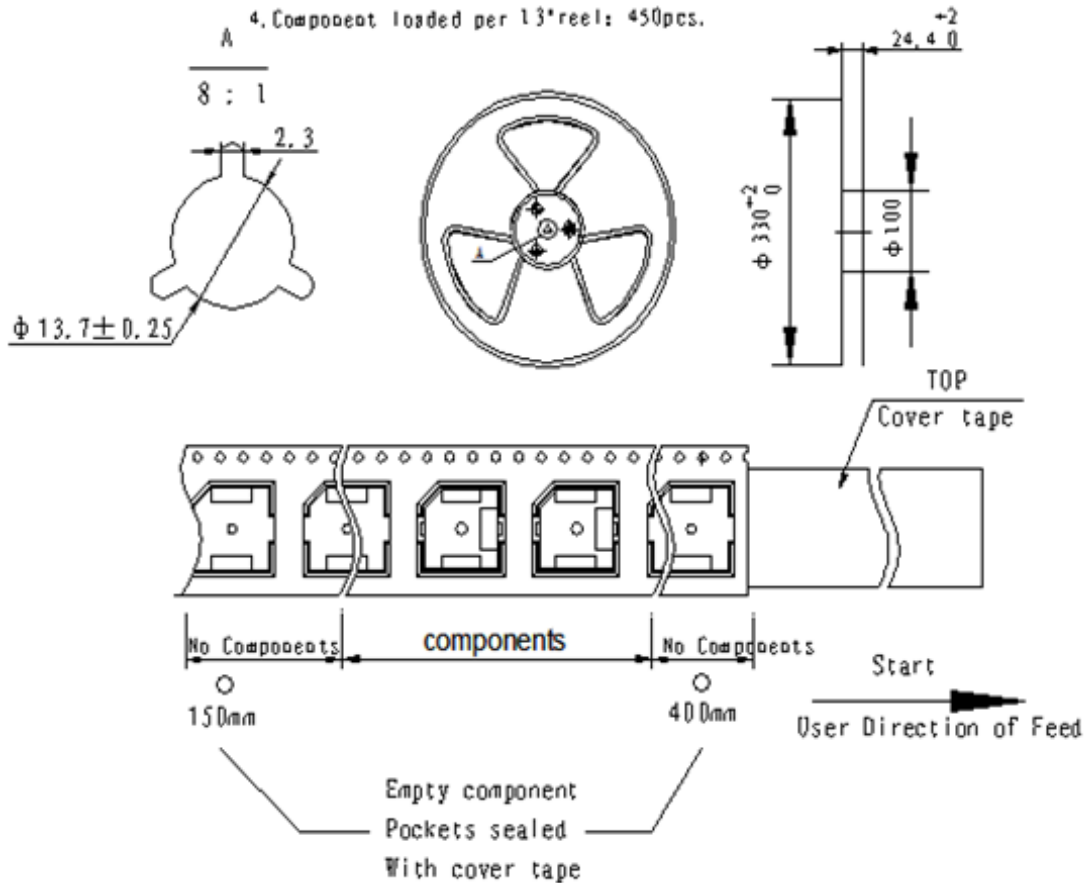


## Packaging

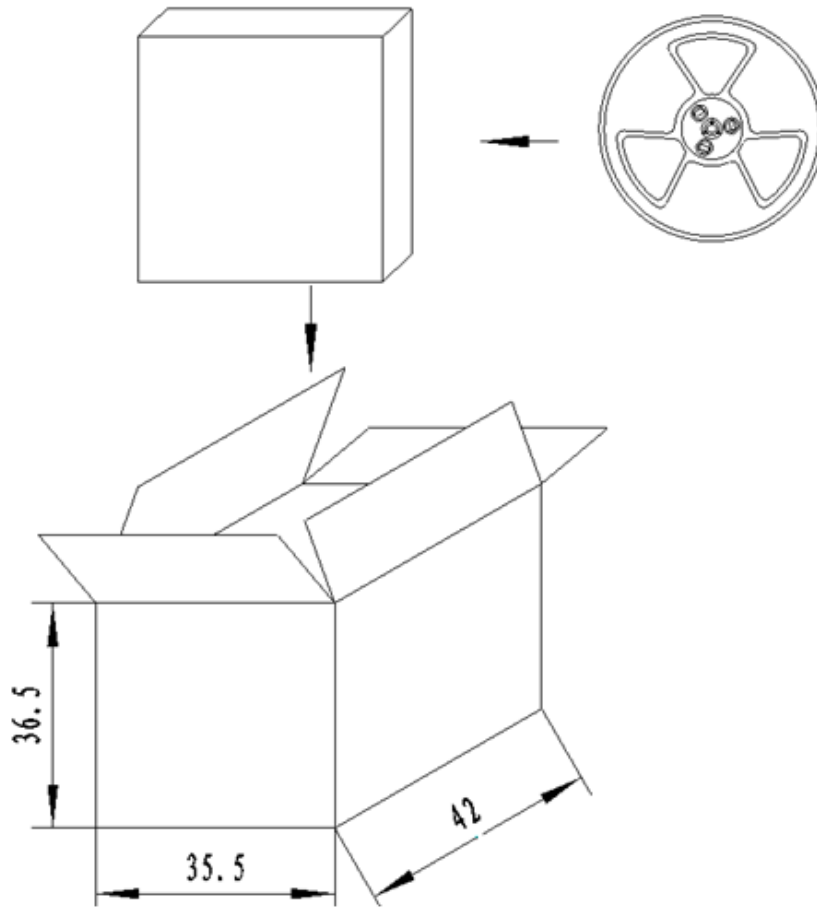


**NOTE:**

1. 10 sprocket hole pitch cumulative tolerance  $\pm 0.2\text{mm}$ .
2. All dimensions meet EIA-481-D requirements.
3. Thickness:  $0.4 \pm 0.05\text{mm}$ .
4. Component loaded per 13" reel: 450 pcs.



## Packaging Cont'd



### NOTES:

- 1.450 PCS per box
- 2.Total 10 boxes per carton
- 3.Total 4500 PCS carton

**Specifications Revisions**

<b>Revision</b>	<b>Description</b>	<b>Date</b>
-	Released from Engineering	3/23/20

**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.