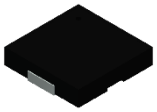
PUIaudio



Data Sheet	SMTB-0940-T-3V-R

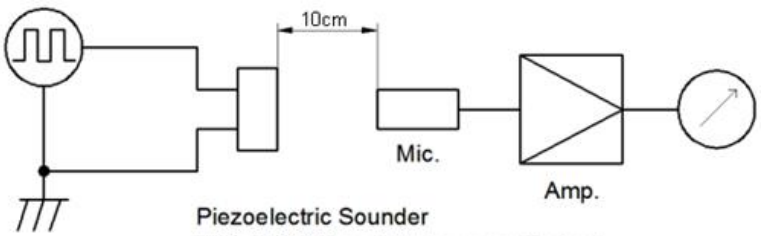
PUI Audio's **High-Temp** line of products is designed with ultra-wide operating temperatures. The **SMTB-0940-T-3V-R** is built for output at 4 kHz in a small package.

- Wide operating temperature range of -40°C ~ +105°C
- Ultra-thin 1.8mm height
- Consumes less than 3 mA of current at rated voltage

Transducer Specifications

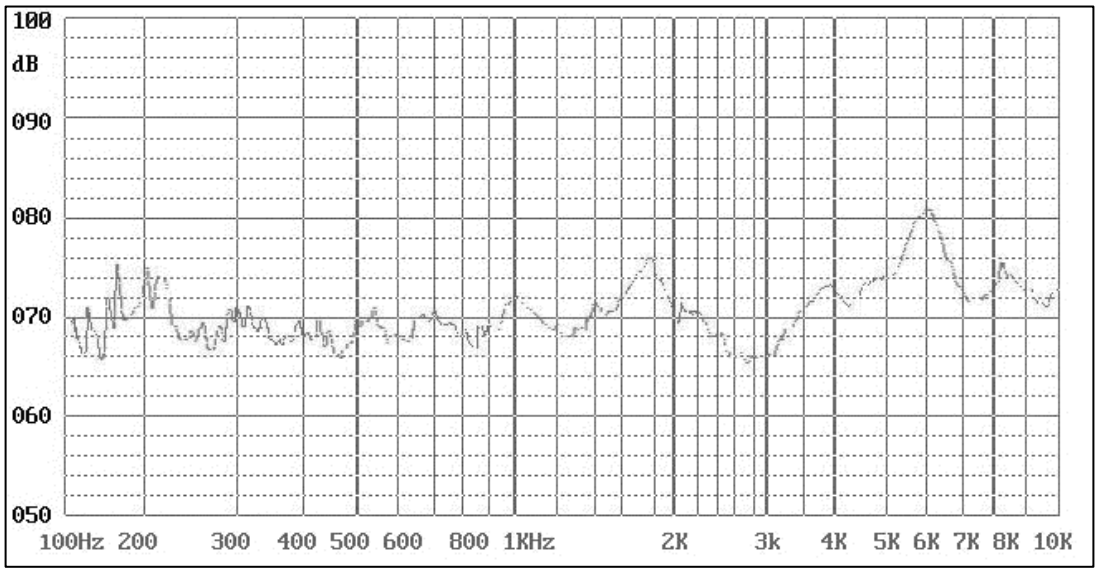
Parameters	Values	Units
Rated Voltage	3	Vp-p
Operating Voltage Range	1 ~ 25	Vp-p
Current Draw at Rated Voltage	≤3	mA
Capacitance (100Hz)	12000 ± 30%	pF
Minimum SPL @ 10cm	≥65	dBA
Resonant Frequency	4000 ± 500	Hz
Housing Material	LCP	-
Weight	0.25	Grams
Acceptable Soldering Methods	Hand Solder, Reflow Solder	See page 2 for soldering information
Moisture Sensitivity Level (MSL)	5a	-
Environmental Compliances	RoHS/REACH	Ex. 7c-1
Storage Temperature	-40 ~ +120	°C
Operating Temperature	-40 ~ +105	°C

Measurement Method **(3Vp-p, 4000Hz, square wave with 50% duty cycle and measured at 10cm)**

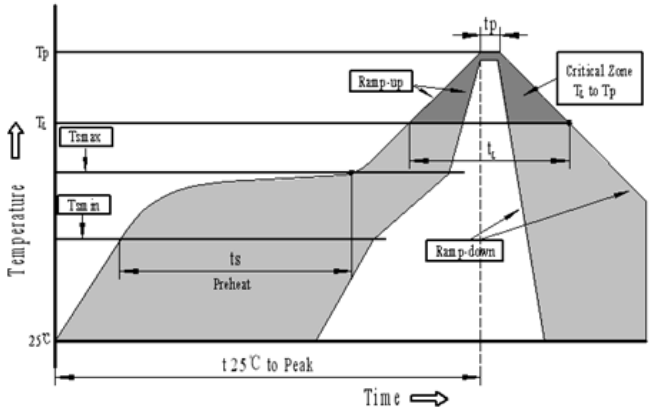


Piezoelectric Sounder
MIC: ND10 Sound Meter or equivalent
Signal Generator: DF1641D or equivalent

Typical Frequency Response (3Vp-p with the microphone 10cm away)



Recommended Reflow Soldering Procedure



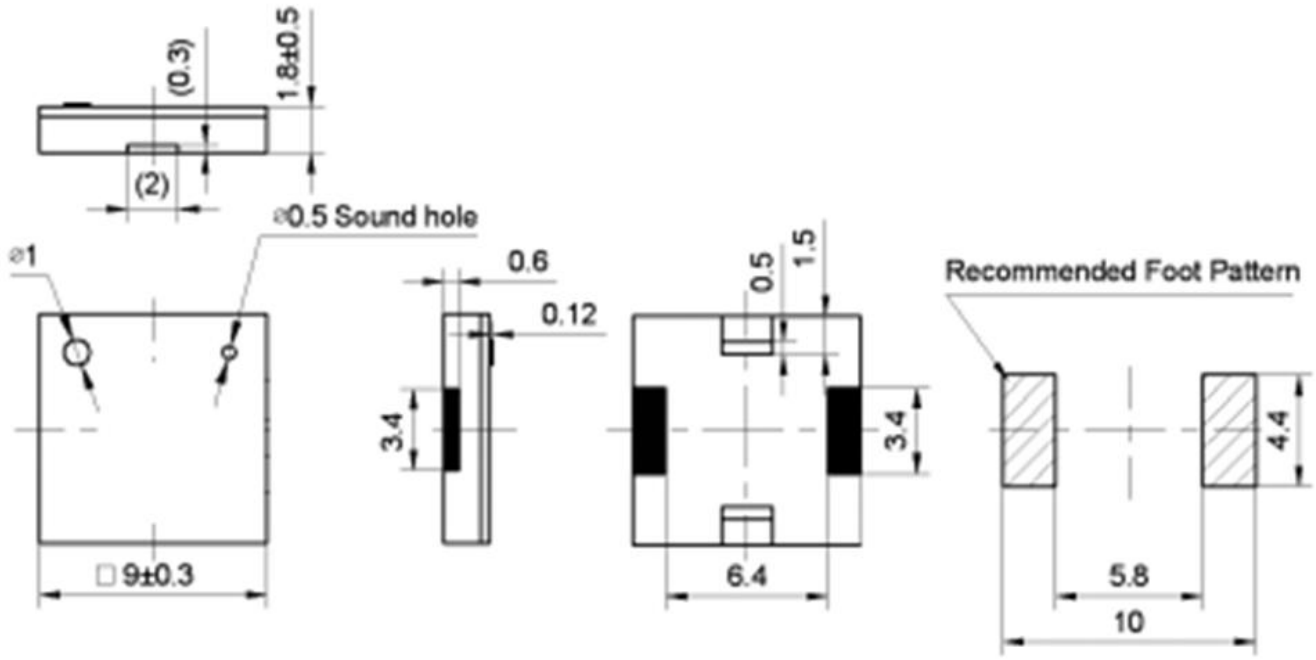
Profile Feature	Pb-Free Assembly
Average ramp-up rate(T_L to Tp)	3℃/second max.
Preheat	
-Temperature Min.(Ts_{min})	150℃
-Temperature Min.(Ts_{max})	200℃
-Temperature Min.(ts)	60～180 seconds
Ts_{max} to T_L	
-Ramp-up Rate	3℃/second max.
Time maintained above:	
- Temperature(T_L)	217℃
-Time(T_L)	60～150 seconds
Peak temperature(Tp)	245℃+0/-5
Time within 5℃of actual Peak temperature (tp)	6 seconds max.
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.
We suggest the customer do the reflow soldering once.	

Reliability Testing

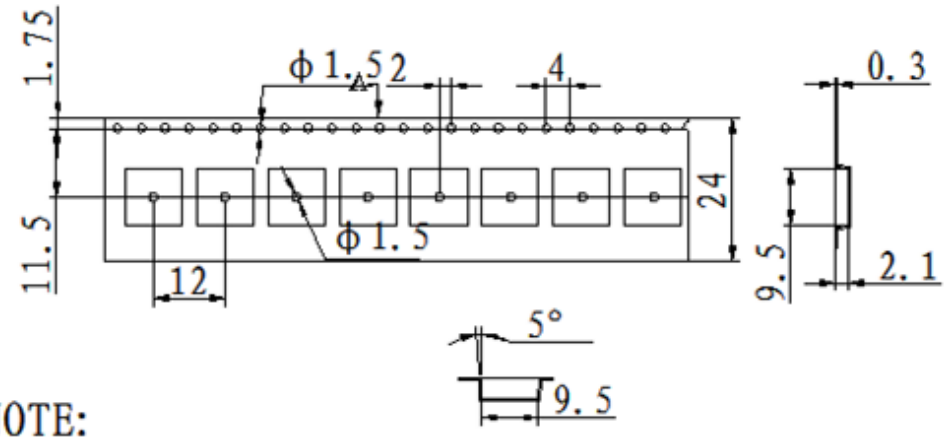
Type of Test	Test Specifications
High Temperature Test	The part shall be capable of withstanding a storage temperature of +120℃ for 120 hours
Low Temperature Test	The part shall be capable of withstanding a storage temperature of -40℃ for 120 hours
Humidity Test	40±2℃, 90～95% RH, 120 hours
Temperature Cycle Testing	Total 5 cycles, 1 cycle consisting of: -40±2℃, 30 minutes 20±5℃, 15 minutes 120±2℃, 30 minutes 20±5℃, 15 minutes
Vibration Test	To-and-fro sweep time (from 10 to 55 Hz and then 55 to 10) under single amplitude of 1.0mm for 1 minute. 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	Drop part from 70cm onto the surface of a 10mm thick wooden board. Applied to the top and side of the part.

After being placed for 2 to 4hrs at room temperature, the product shall meet specifications, except the SPL should be within ±10dB compared with initial value.

Dimensions (Units: mm Tolerance: ±0.5mm unless noted)

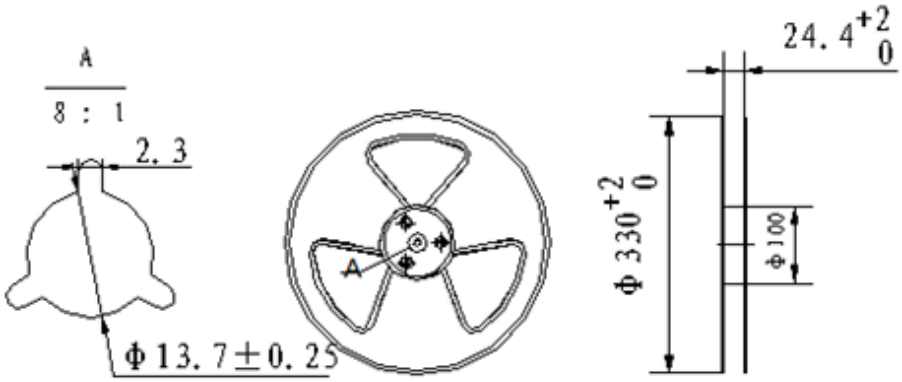


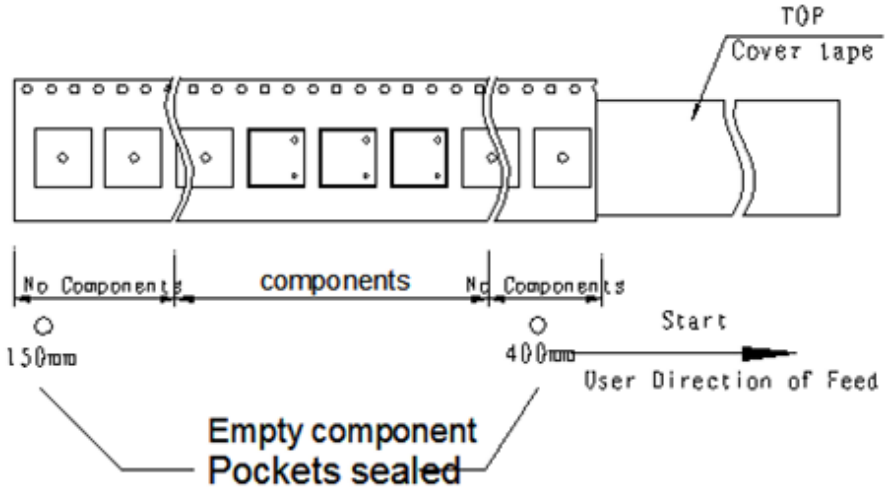
Packaging



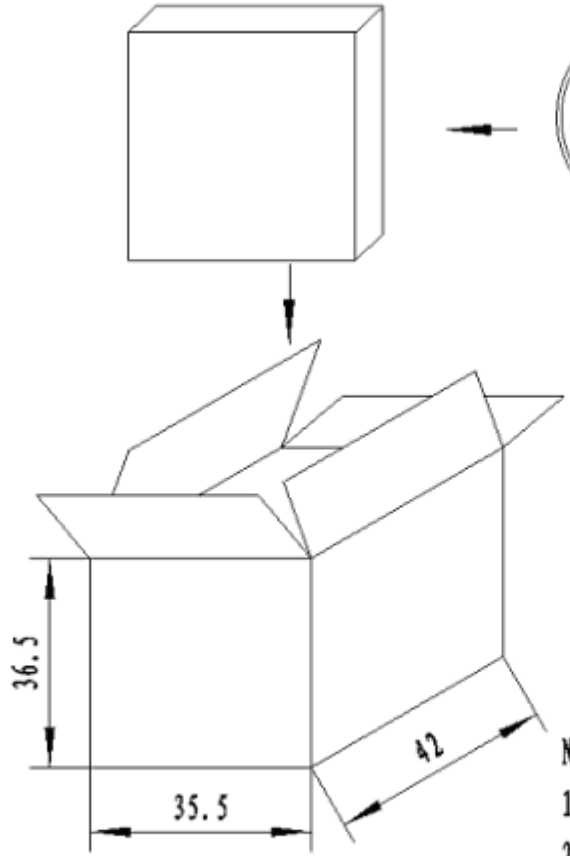
NOTE:

1. 10 sprocket hole pitch cumulative tolerance +/-0.20mm.
2. All dimensions meet EIA-481-D requirements.
3. Thickness: 0.3+/-0.1mm.
4. Component loaded per 13"reel: 2000pcs.





Packaging Cont'd



NOTES:
1. 2000 PCS per box
2. Total 10 boxes per carton
3. Total 20000 PCS carton
4. volume: 42 × 35.5 × 36.5cm

Specifications Revisions

Revision	Description	Date
A	Released from Engineering	1/24/2017

Note:

1. Unless otherwise specified:
   A. All dimensions are in millimeters.
   B. Default tolerances are ±0.5mm and angles are ±3°.
2. Specifications subject to change or withdrawal without notice.