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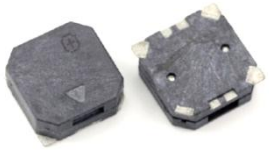
PUIaudio



Data Sheet	SMT-0827-S-HT-R

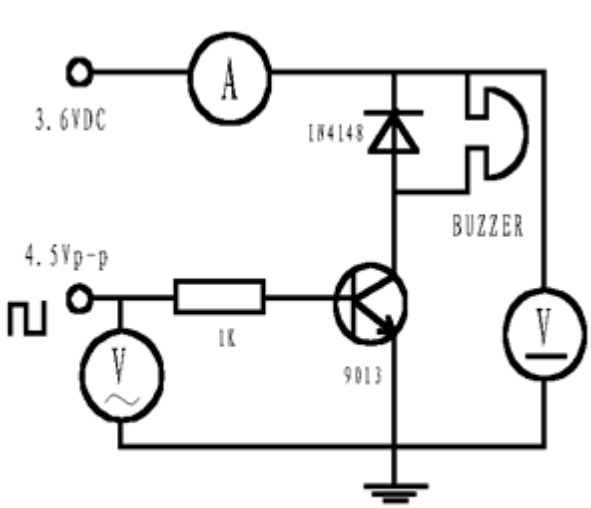
PUI Audio's **High-Temp** line of products is designed with ultra-wide operating temperatures. The **SMT-0827-S-HT-R** is designed for high output at 2700 Hz in a small package.

- Only weighs 0.5 grams
- Wide operating temperature of -40°C ~ +105°C
- 85 dB minimum SPL @ 10cm with 3.6V0-p input

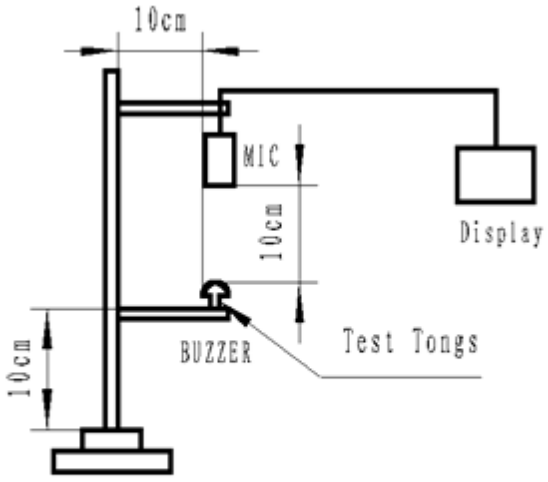
Transducer Specifications

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	≥85	dBA
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 (3.6V0-p, 2700Hz, 50% duty cycle square wave with a SPL meter at 10cm)



Test Circuit



Test Equips

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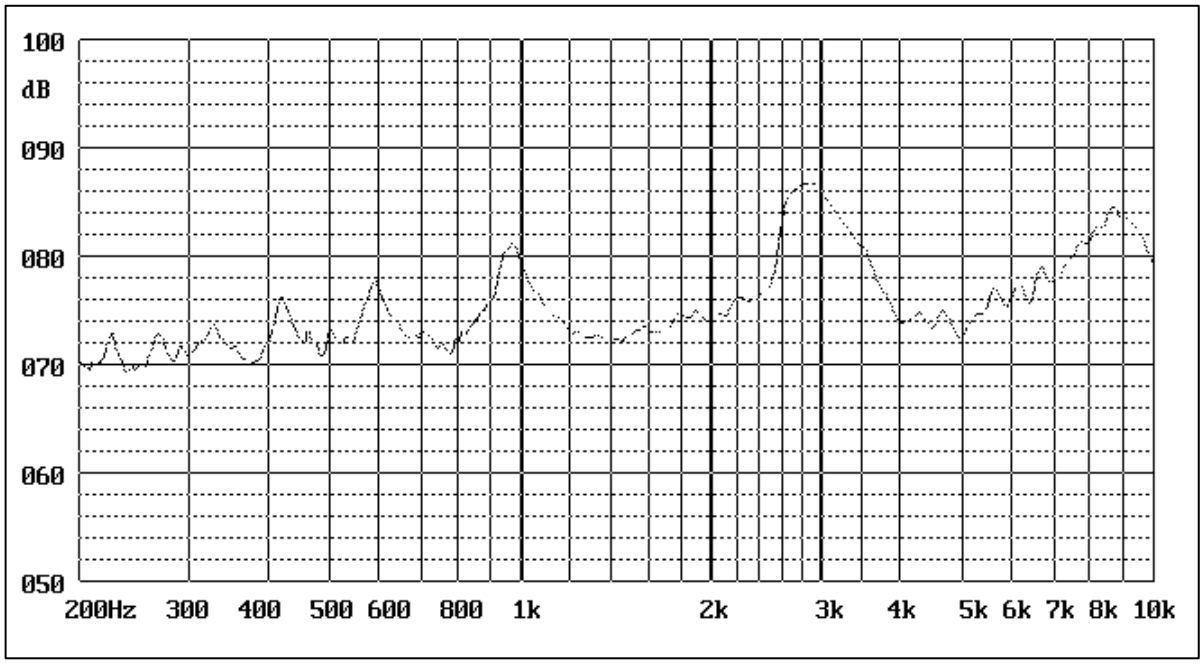
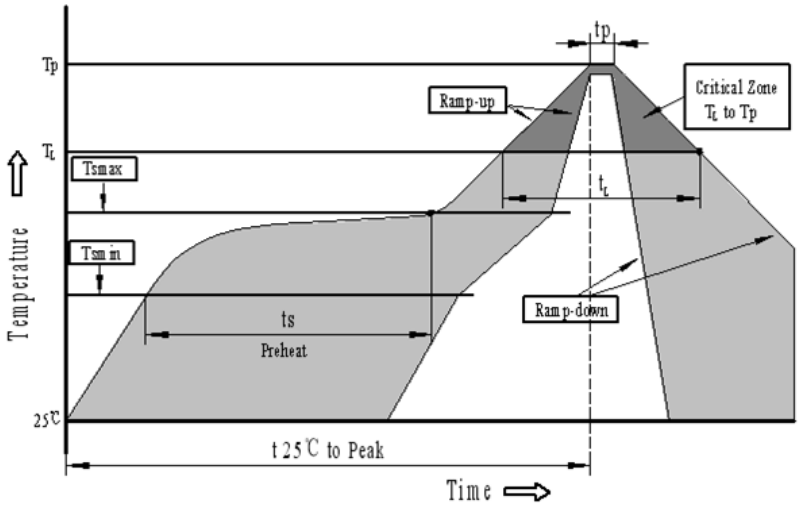
Typical Frequency Response (3.6V0-p sine-sweep with microphone spaced at 10cm)



Recommended Soldering Procedure



Profile Feature	Pb-Free Assembly
Average ramp-up rate(T_L to 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)	250℃+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.

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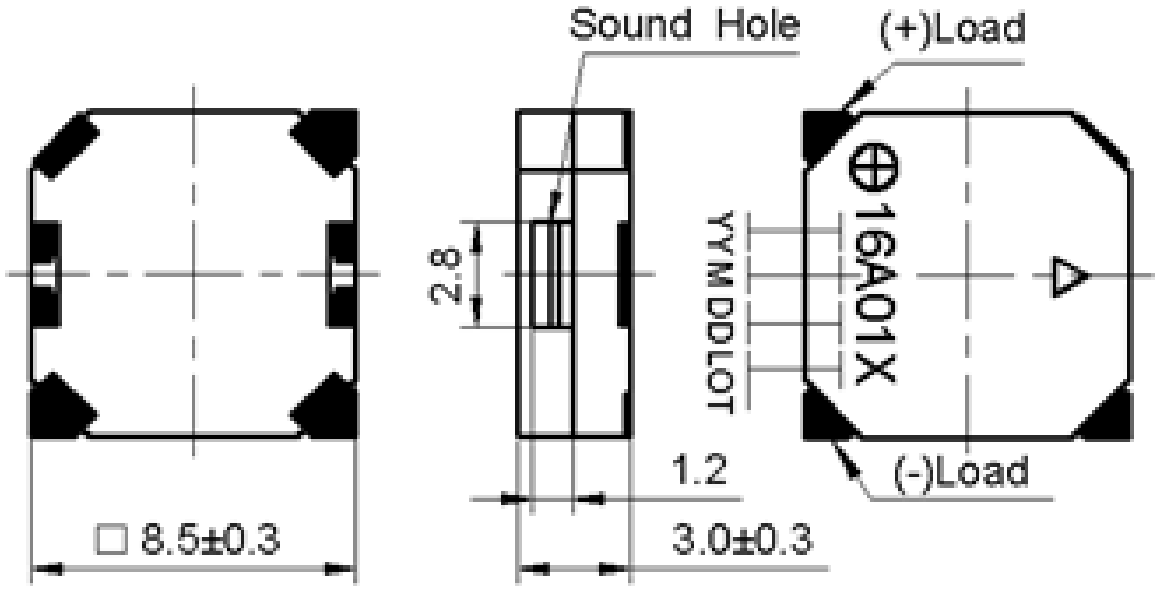
Reliability Testing

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	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)**



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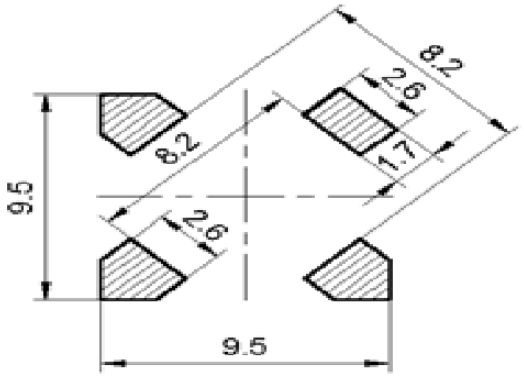
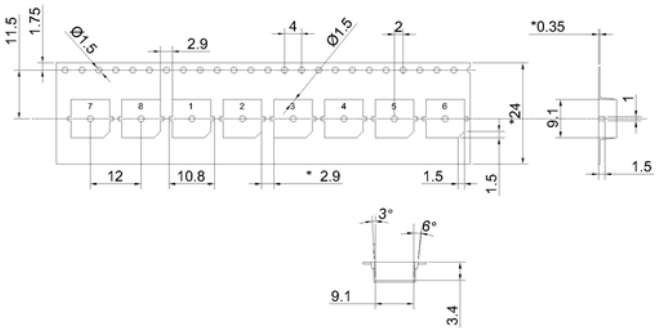
Suggested Land Pattern*

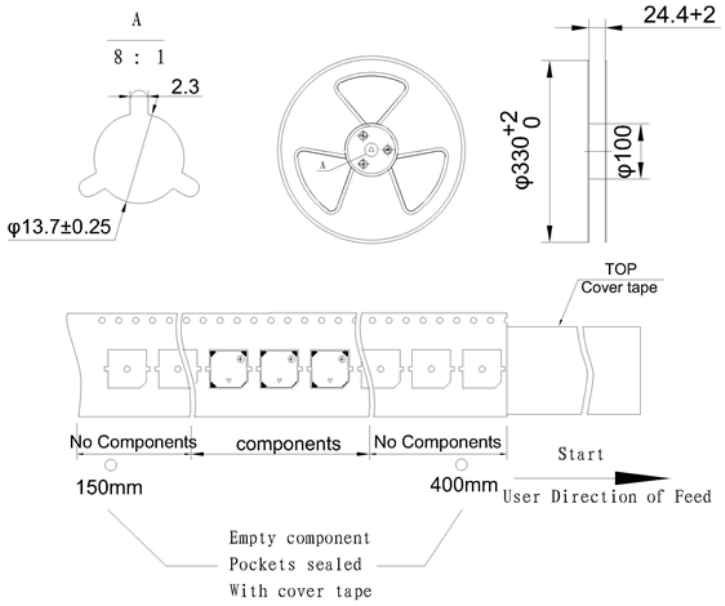


*This land pattern is advisory only and its use or adaptation is entirely voluntary. PUI Audio disclaims all liability of any kind associated with the use, application, or adaptation of this land pattern.

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 13.3"reel：1000pcs.



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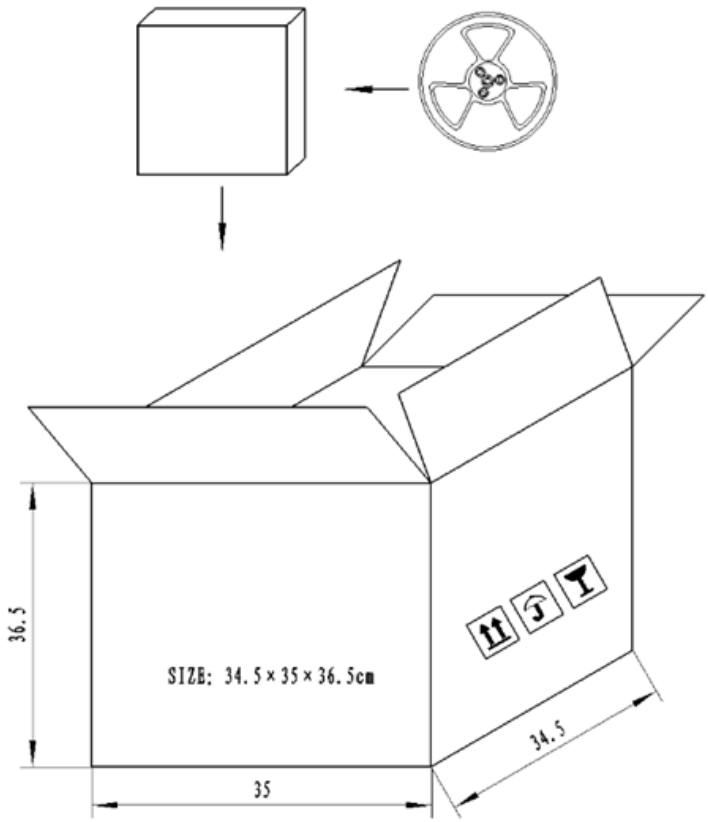
Packaging Cont'd



NOTES:

1.1000 PCS per box

2.Total 10 boxes per carton

3.Total 10000 PCS carton

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Specifications Revisions

Revision	Description	Date	Approved
A	Released from Engineering	3/31/2020	
B	Revised Packaging	1/28/2026	JD

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.