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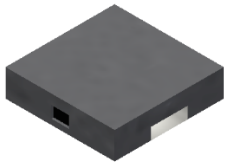
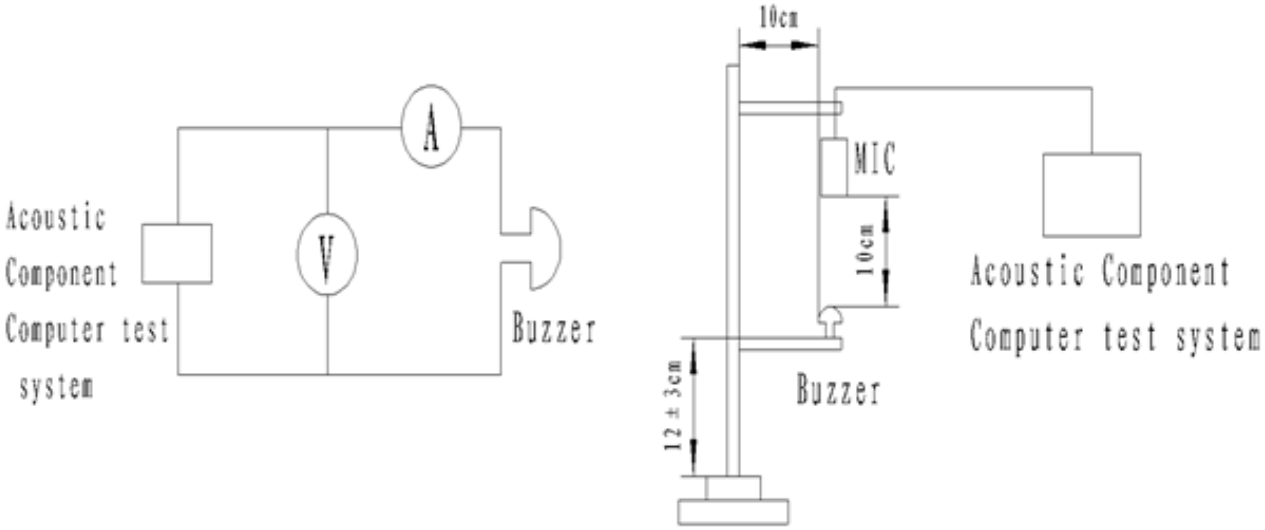


Data Sheet	SMTB-1240-S-R

Specifications

Parameters	Values	Units
Rated Voltage	3	Vp-p
Operating Voltage Range	1 ~ 25	Vp-p
Current Draw at Rated Voltage	≤ 3	mA
Capacitance (@ 120Hz)	16,000 ± 30%	pF
Minimum SPL @ 10cm	75	dBA
Resonant Frequency	4,000 ± 500	Hz
Housing Material	LCP	-
Weight	0.3	Grams
Acceptable Soldering Methods	Reflow Solder	See following pages
Environmental Compliances	RoHS/REACH	Ex. 7c-1
Moisture Sensitivity Level	4	-
Storage Temperature	-40 ~ 85	°C
Operating Temperature	-40 ~ 85	°C

Measurement Method (3Vpp square wave, 10cm)



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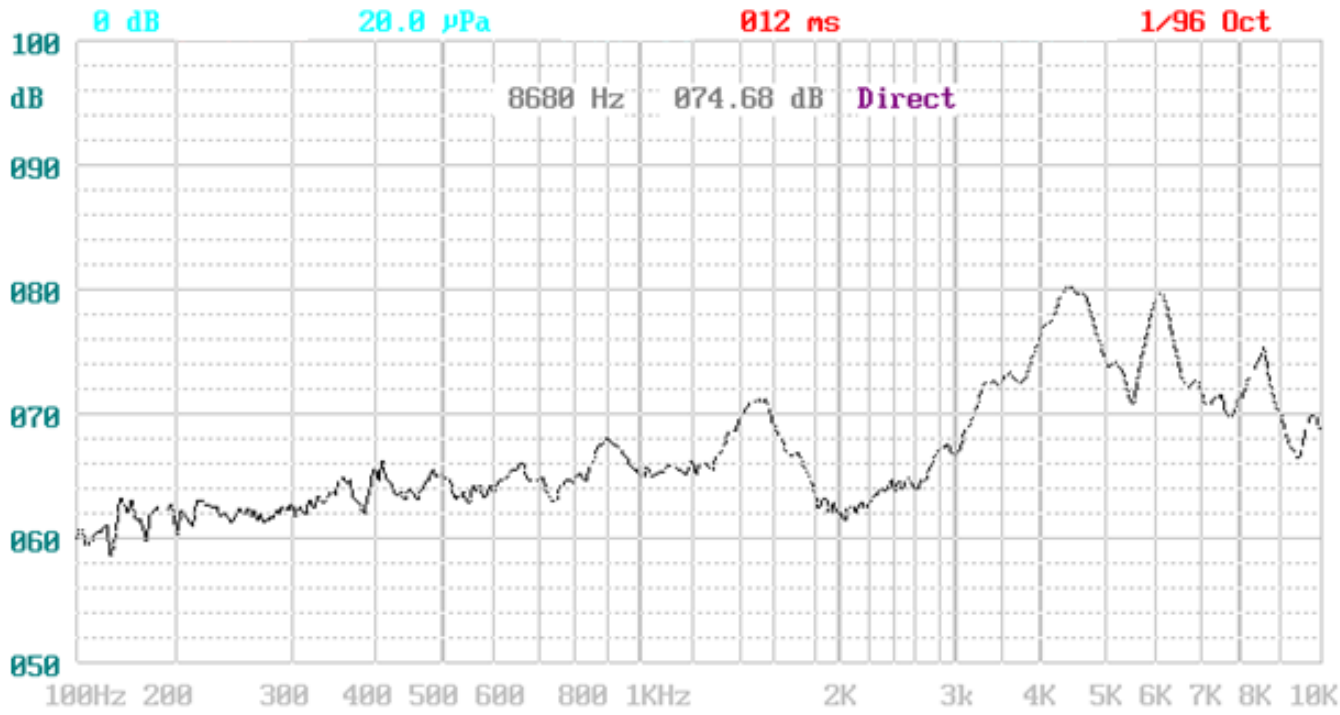
Typical Frequency Response (3Vpp, 10cm)



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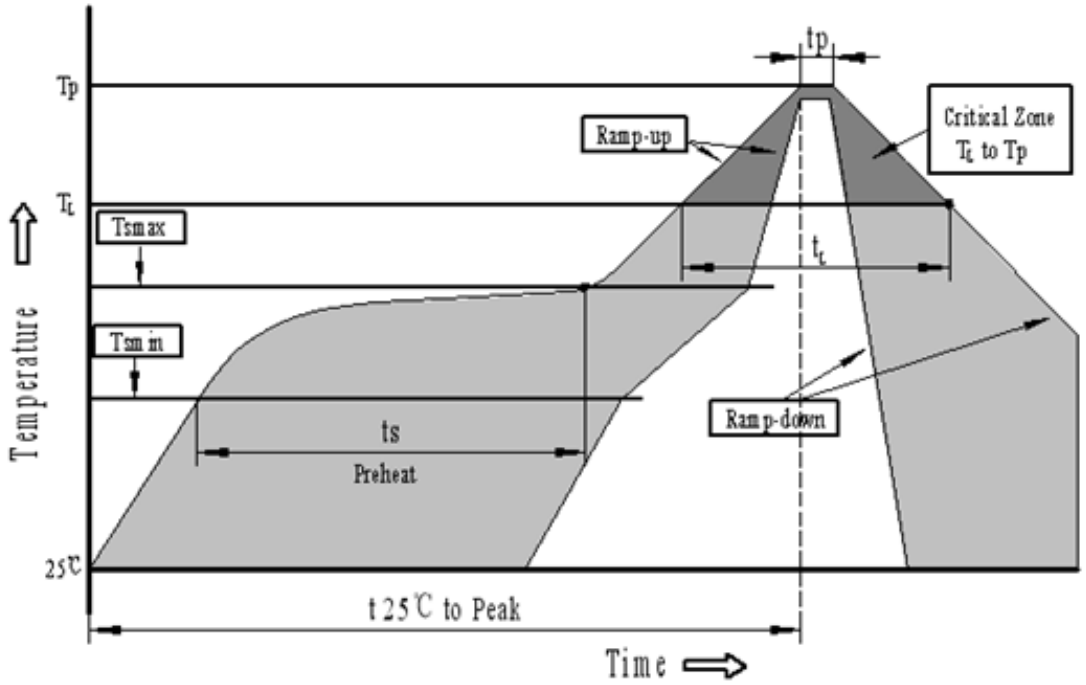
Recommended Soldering Procedure



Profile Feature	Pb-Free Assembly
Average ramp-up rate(T_L to Tp)	3℃/second max.
Preheat	
-Temperature Min.(T_{Smin})	150℃
-Temperature Min.(T_{Smax})	200℃
-Temperature Min.(ts)	60～180 seconds
T_{Smax} 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.	

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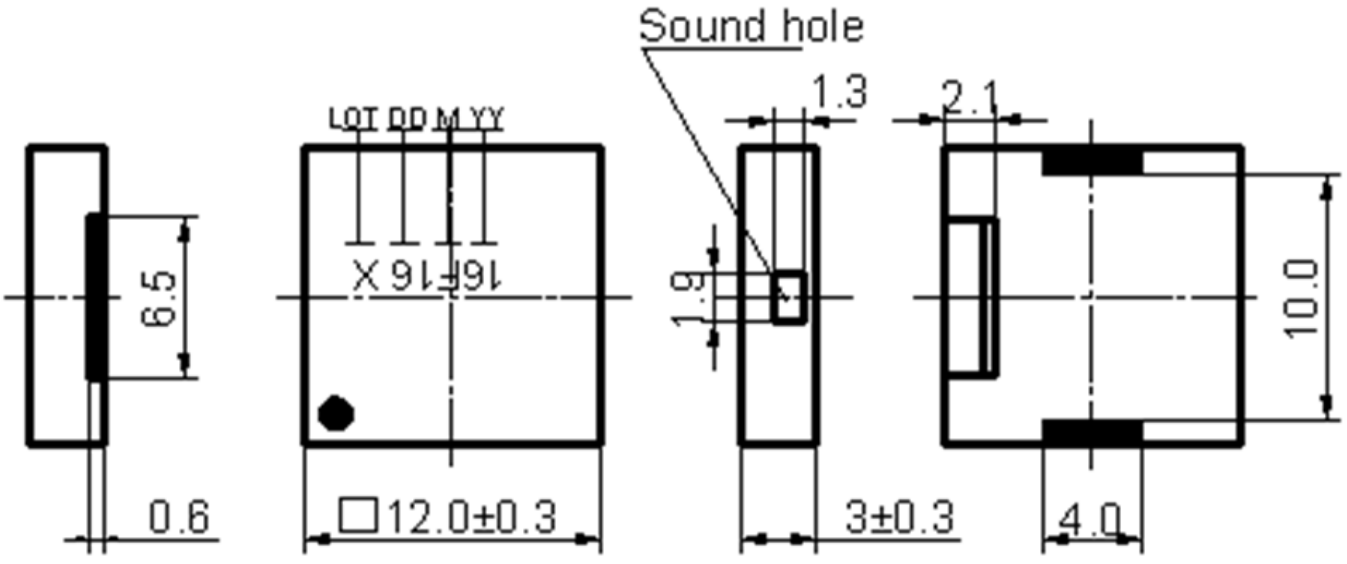
Reliability Testing

Type of Test	Test Specifications
High Temperature Test	120 hours at 85°C
Low Temperature Test	120 hours at -40°C
Humidity Test	120 hours at 40°C with relative humidity at 90 ~ 95%
Temperature Cycle Testing	Run for 5 cycles with each cycle consisting of: -40±2°C, 30 minutes 20±5°C 15 minutes 85±2°C, 30 minutes 20±5°C 15 minutes
Vibration Test	Frequency: 10 Hz, Amplitude: 1.52mm, Duration: 2 hours, Directions: X, Y, Z
Drop Test	Drop from 70cm onto the surface of a 10mm thick wooden board on both the top and sides of the part.

After each test, the change in SPL shall be within ±3dB.

Dimensions



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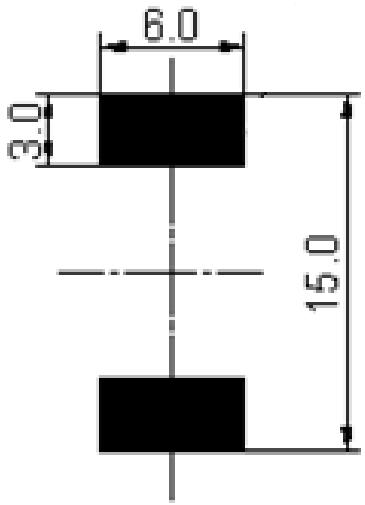
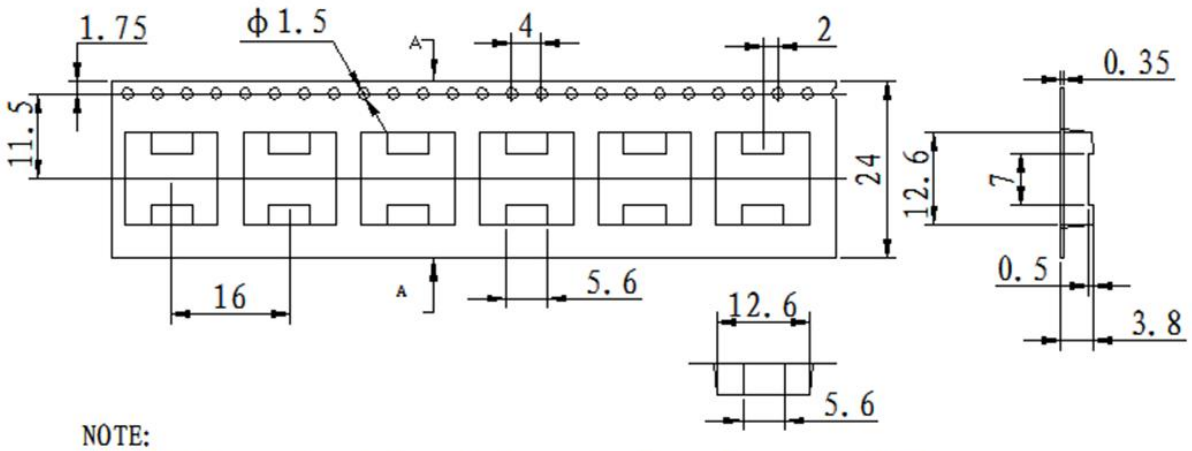
Suggested Land Pattern*



*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 +/-0.2mm.
2. All dimensions meet EIA-481-D requirements.
3. Thickness: 0.35+/-0.05mm.
4. Component loaded per 13"reel: 1000pcs.

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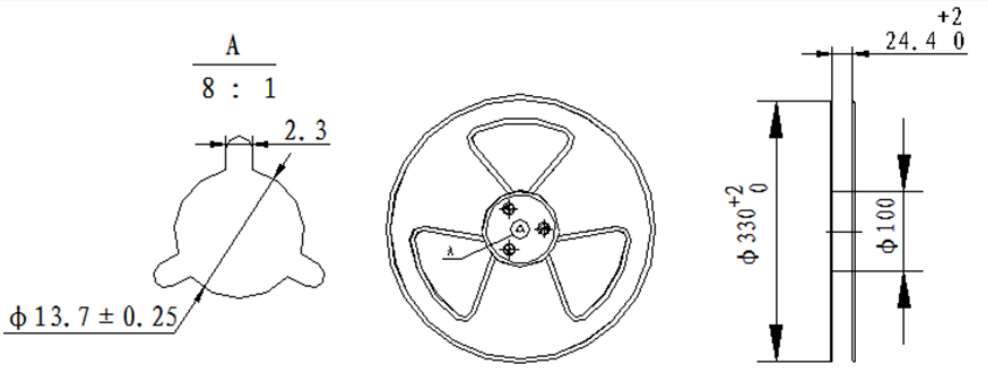

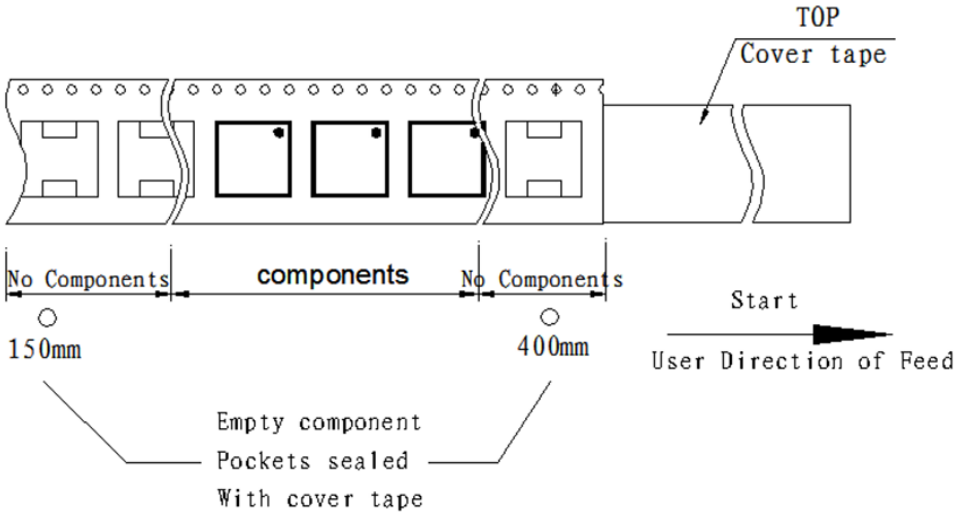

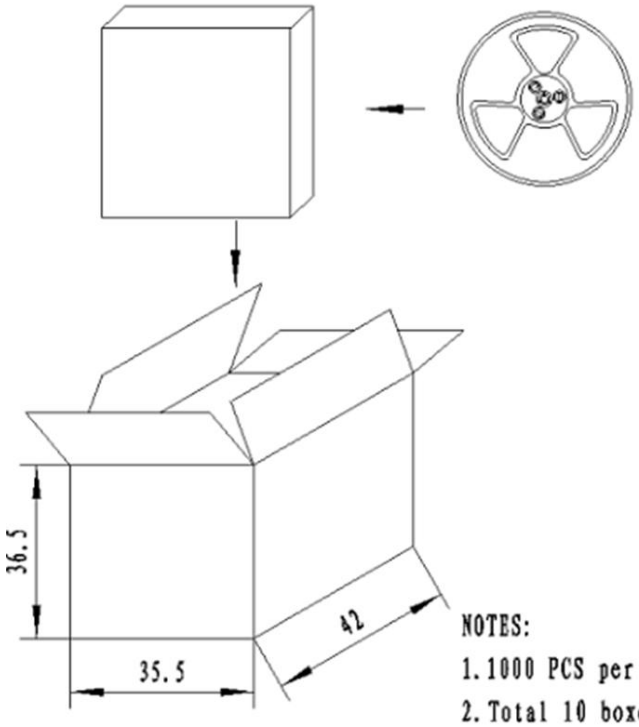

NOTES:
1. 1000 PCS per box
2. Total 10 boxes per carton
3. Total 10000 PCS carton
4. volume: 42 × 35.5 × 36.5cm

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Specifications Revisions

Revision	Description	Date	Approved
A	Released from Engineering	08/11/2017	MV
B	Update Spec Format, Add details for Reliability, Packaging, etc. Add MSL 4	05/06/2025	ML
C	Revised MSL	12/23/2025	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.