



# PUI audio



Data Sheet

SMT-0827-S-2-R

## Features:

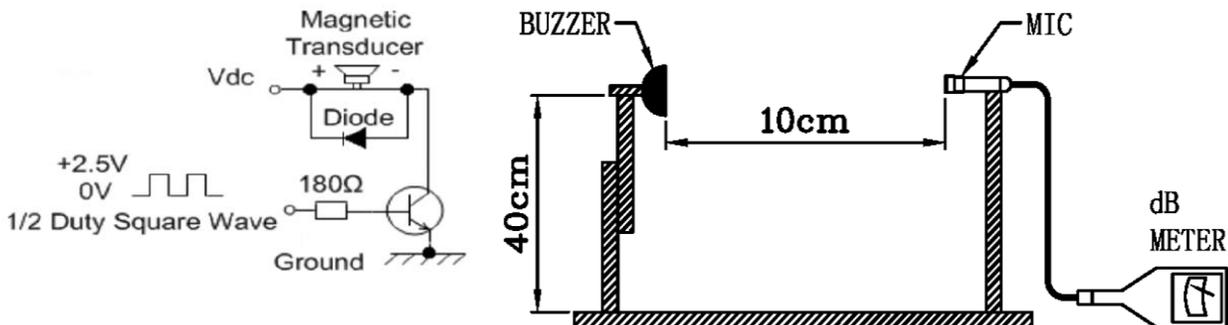
- 8.5x8.5mm SMT magnetic transducer
- 3.6V0-p, 2.7kHz

## Specifications

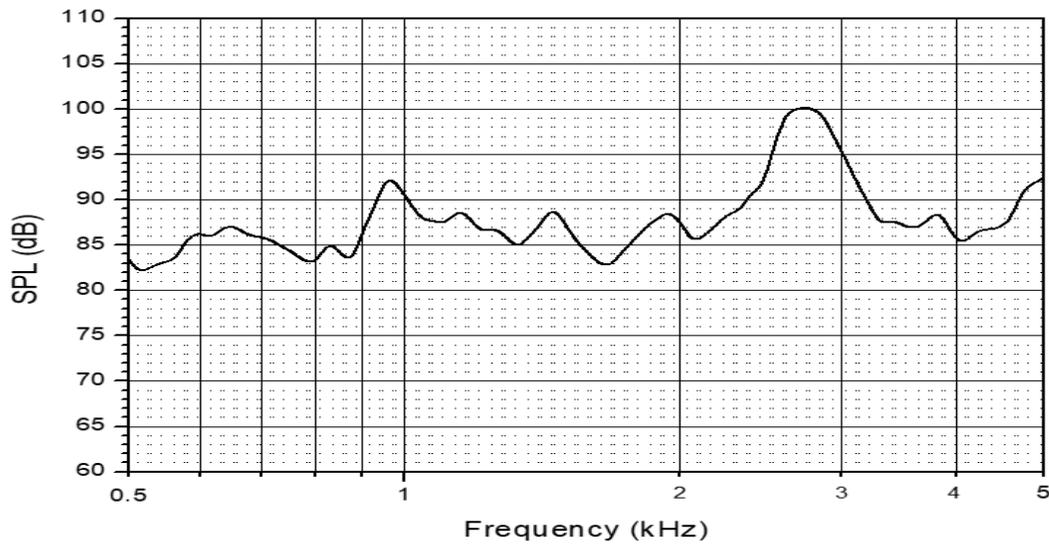
Parameters	Values	Units
Rated Voltage	3.6	V0-p
Operating Voltage Range	2.5 ~ 4.5	V0-p
Current Draw at Rated Voltage*	90	mA
Coil Resistance	15 ± 3	Ohms
Minimum SPL @ 10cm*	92	dB
Resonant Frequency	2,700 ± 500	Hz
Housing Material	LCP	-
Terminal Material	Tin-Plated Phosphor Bronze	-
Weight	0.42	Grams
Acceptable Soldering Methods	Hand Solder @ 350C for 5s, Reflow Solder	See following pages for solder information
Environmental Compliances	RoHS/REACH	-
Moisture Sensitivity Level (MSL)	2	-
Operating Temperature	-30 ~ +70	°C
Storage Temperature	-40 ~ +85	°C

\*At rated voltage with 50% duty cycle 2.7kHz positive biased square-wave

## Test Method (3.6Vpk, 2700Hz @ 10cm)

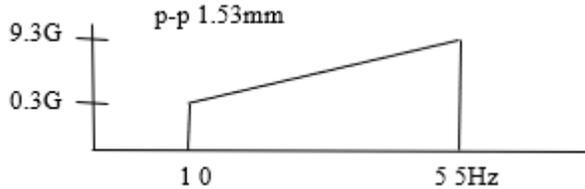


## Typical Frequency Response (at 10cm)



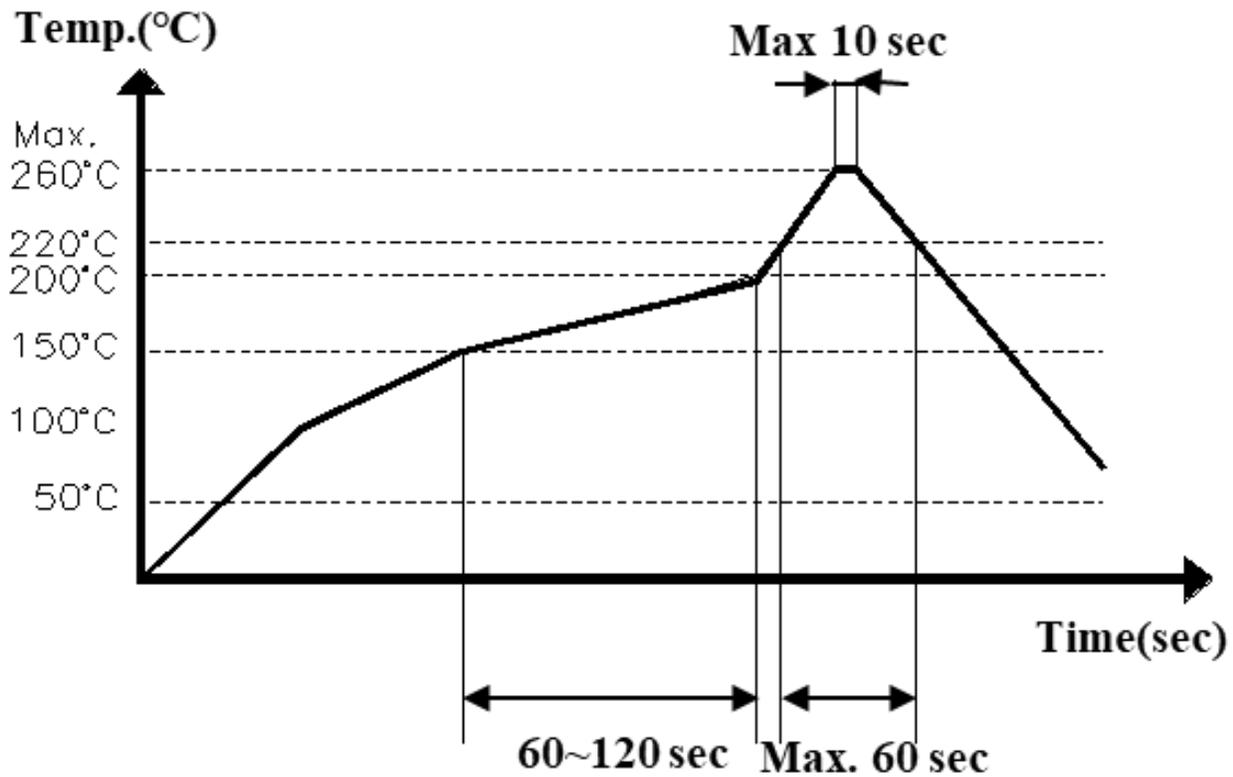
## Reliability Testing

Type of Test	Test Specifications
High Temperature Test	The part shall be capable of withstanding a temperature +85°C for 96 hours, then room temperature for 2 hours
Low Temperature Test	The part shall be capable of withstanding a temperature -40°C for 96 hours, then room temperature for 2 hours
Humidity Test	<p>10 cycles unpowered, then room temperature for 2 hours</p> <p style="text-align: center;">+60°C 95%RH</p> <p style="text-align: center;">1 cycle : 12 Hr</p>
Life Test	Operate sound transducer continuously for 1000 hours with applying 3.6V, square wave, 1/2 duty, 2700Hz, using the test circuit as per attached drawing.
Temperature Cycle Testing	<p>Total 5 cycles of the following without power.</p> <p style="text-align: center;">1 cycle : 90 min</p>

Vibration Test	 <p>Test for direction of X, Y, Z for 2 hours each (6hrs total).</p>
Drop Test	<p>Fix sound transducer on the PCB with polyester film(t=0.2mm, gross weight:100g) and the height of 120cm to the direction of six surface for 3 cycles.</p>

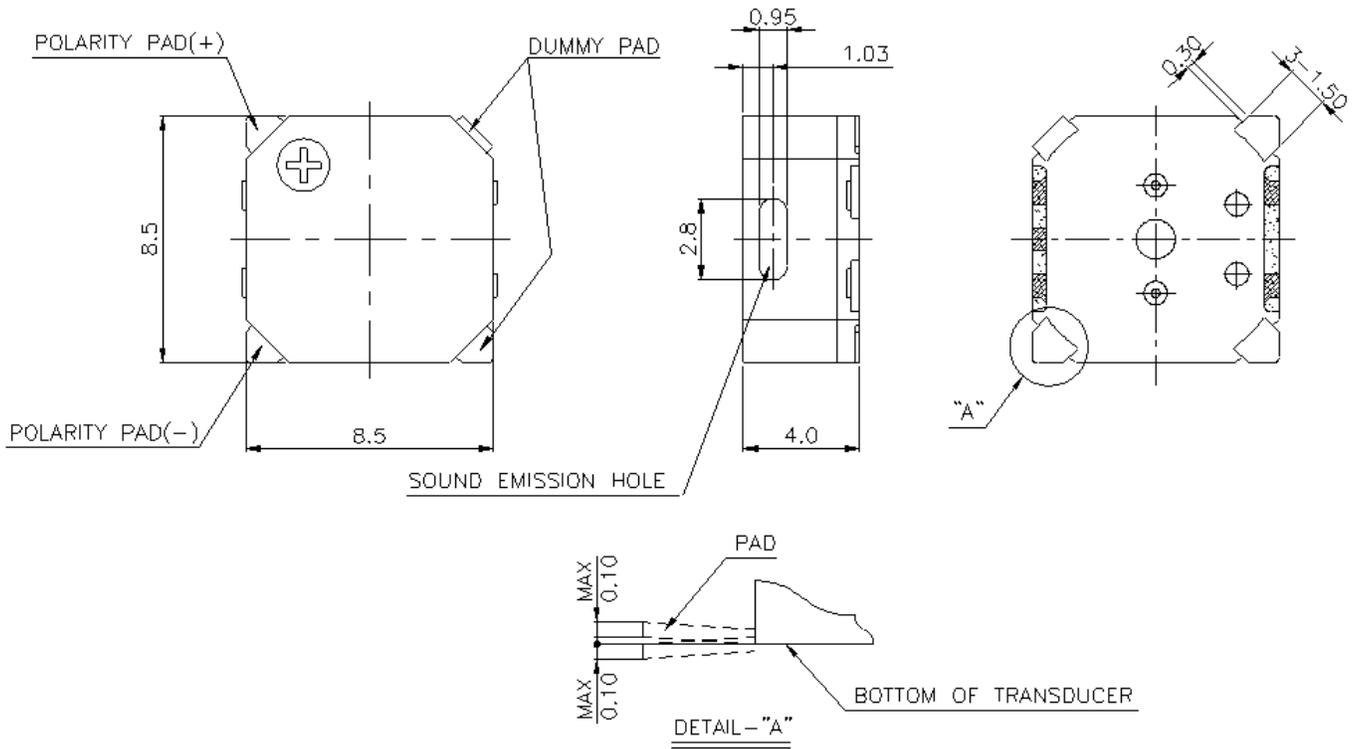
After each test, part shall meet specifications.

### Recommended Reflow Soldering Procedure (Lead-Free)

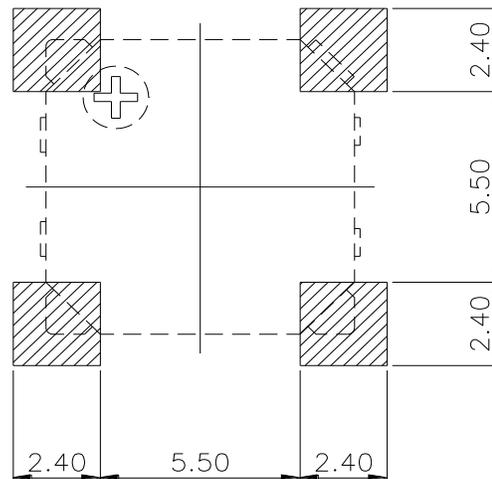


**\*Manual Soldering Iron Temperature 350C, Soldering Time within 5 seconds**

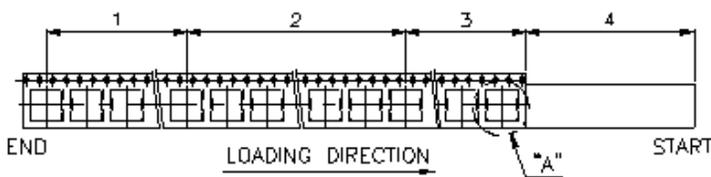
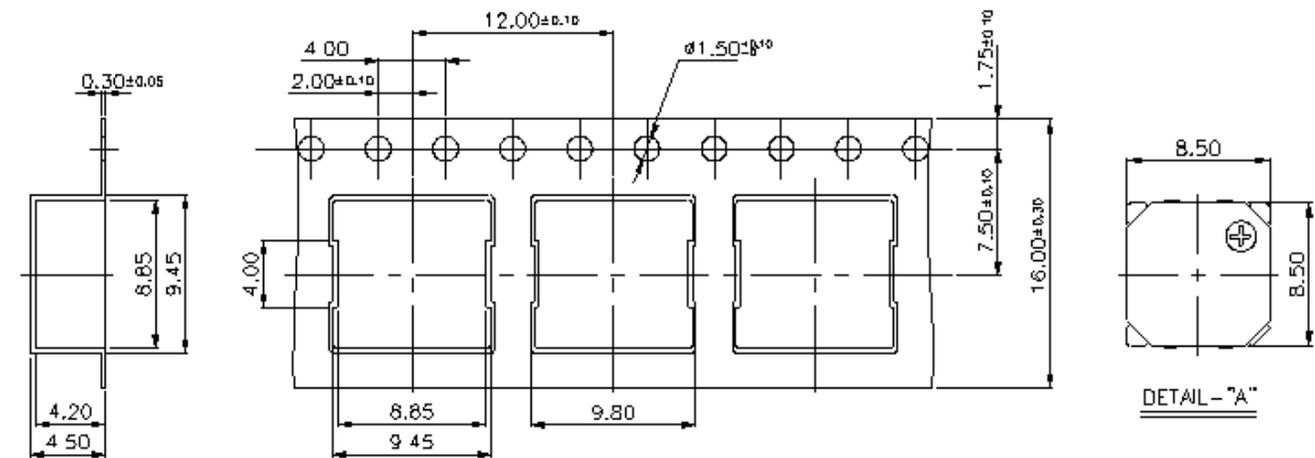
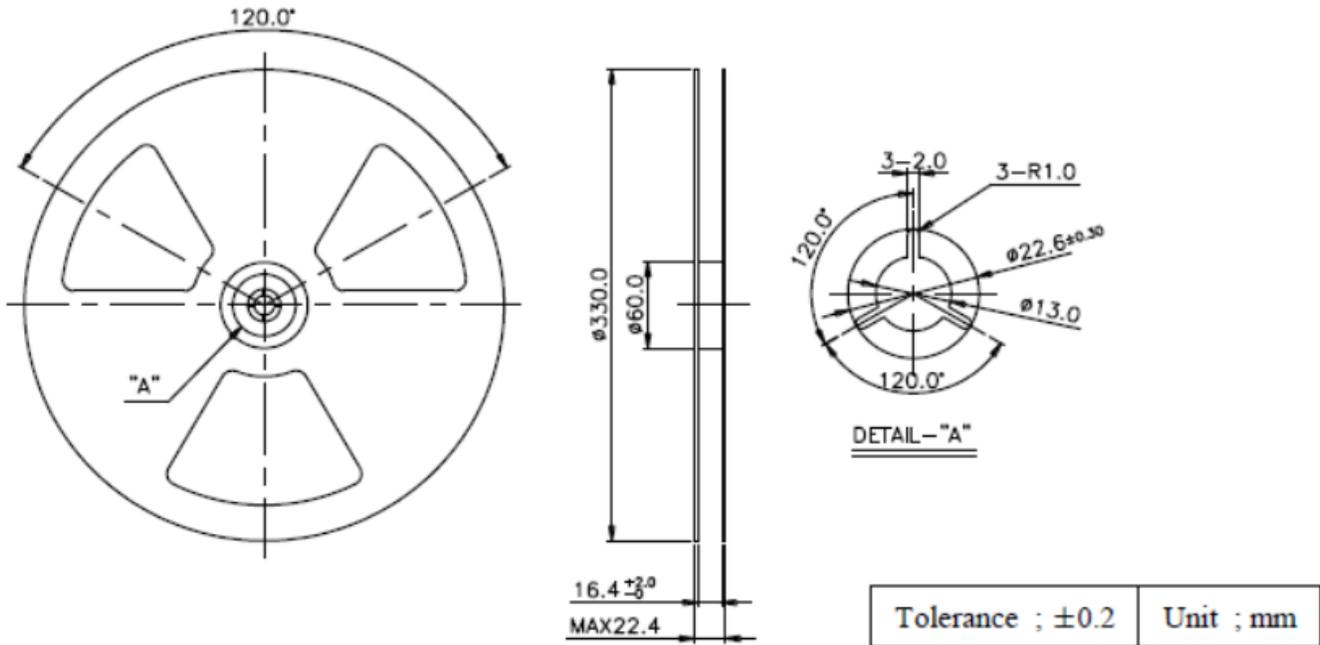
## Dimensions (Tolerances $\pm 0.2\text{mm}$ unless otherwise specified)



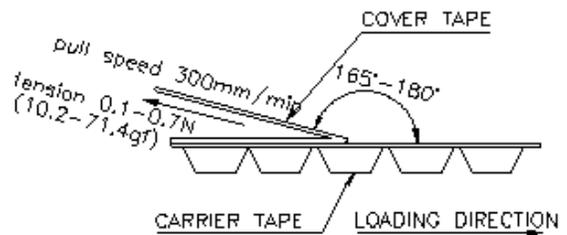
## Land Pattern



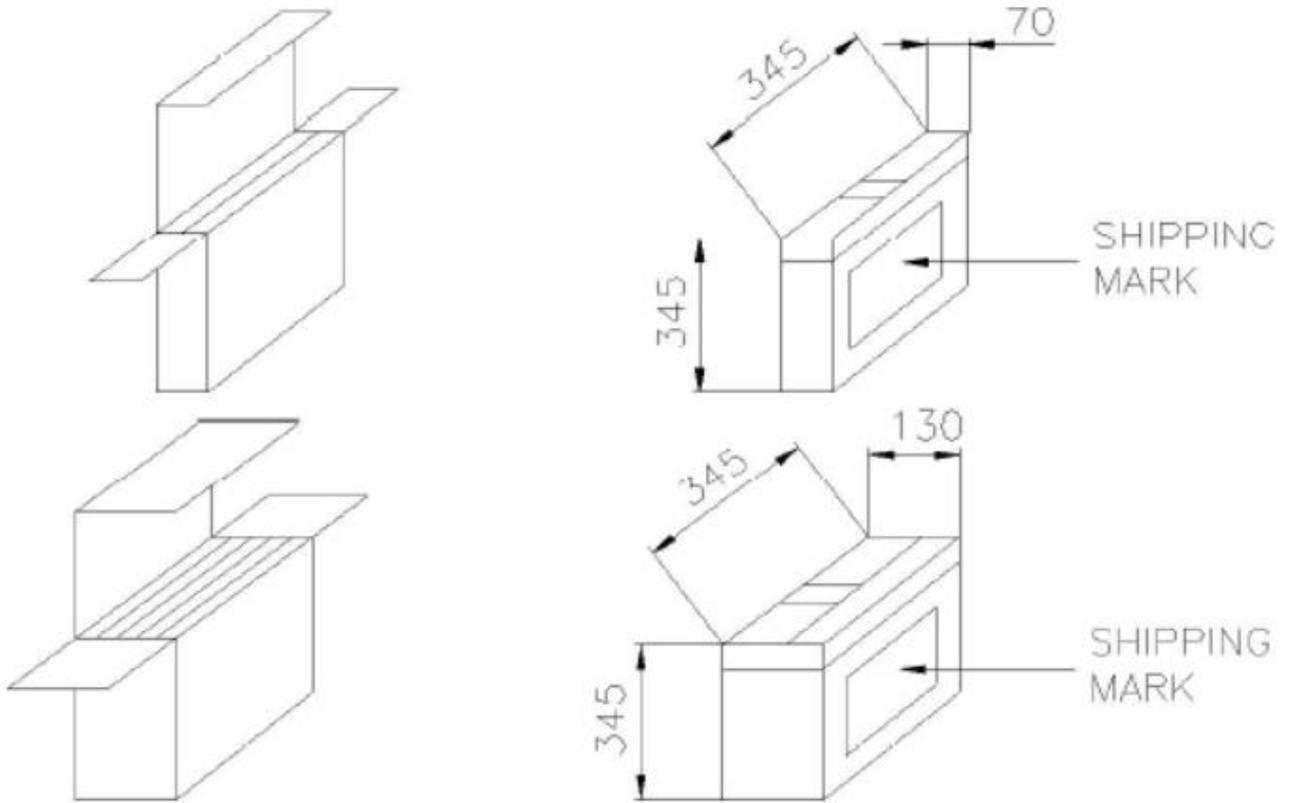
## Packaging



1. BARE EMBOSS AREA : 400mm OVER(35PCS OVER)
2. CHIP MOUNT AREA : 1.000PCS
3. BARE EMBOSS AREA : 400mmOVER(35PCS OVER)
4. LEADER AREA : 100mm OVER



Tolerance ; ±0.2	Unit ; mm
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**Specifications Revisions**

Revision	Description	Date	Approved
-	Released from Engineering	04/01/2005	-
A	Added ROHS Compliance Note	08/10/2005	-
B	Revised to 3D Template	04/27/2010	BR
C	Revised SPL Value	10/28/2011	MV
D	Updated Spec Layout, Add MSL 2	02/11/2025	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 withdraw without notice.
3. This part is ROHS Compliant.