| Data Sheet | SMT-1640-S-4-R |
|---|---|

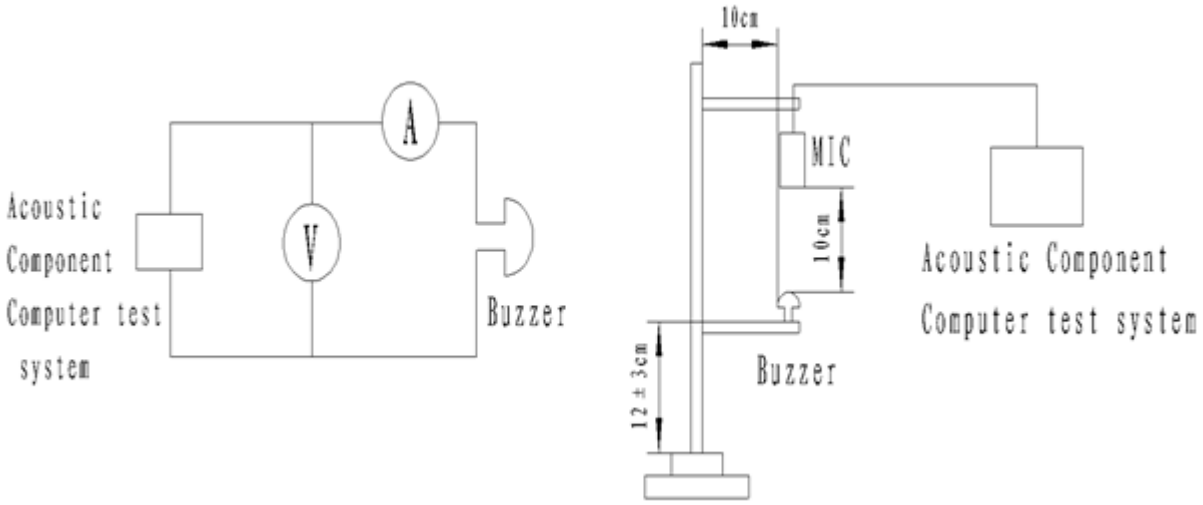
**Features:**

- 85 dB output with 5Vp-p 4000 Hz input
- Wide operating temperature of -40°C ~ +105°C
- Low 5 mA current draw

## Specifications

| Parameters | Values | Units |
|---|---|---|
| Rated Voltage | 5 | Vp-p |
| Operating Voltage Range | 1 ~ 25 | Vp-p |
| Current Draw at Rated Voltage | ≤5 | mA |
| Capacitance | 16000±30% | pF |
| Minimum SPL @ 10cm | ≥85 | dBA |
| Resonant Frequency | 4000±500 | Hz |
| Housing Material | LCP | - |
| Weight | 1 | Grams |
| Acceptable Soldering Methods | Hand Solder, Reflow Solder | See below for soldering information |
| Environmental Compliances | RoHS | - |
| Storage Temperature | -40 ~ +120 | °C |
| Operating Temperature | -40 ~ +105 | °C |

## Measurement Method (5Vp-p, 4000Hz, 50% duty cycle square wave with a SPL meter at 10cm)

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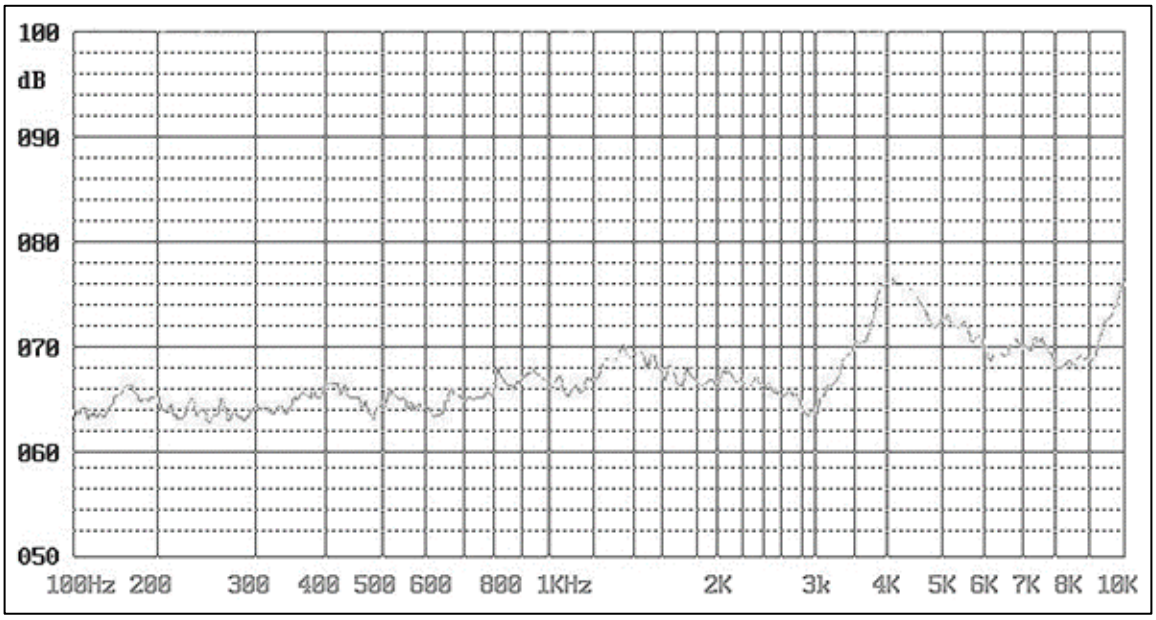
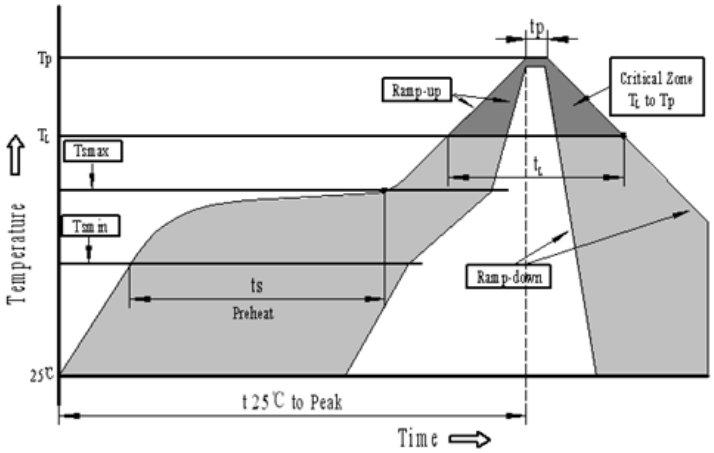
## Typical Frequency Response (3Vp-p sine-sweep with microphone spaced at 10cm)




## 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. |
| **We suggest the customer do the reflow soldering once.** | |

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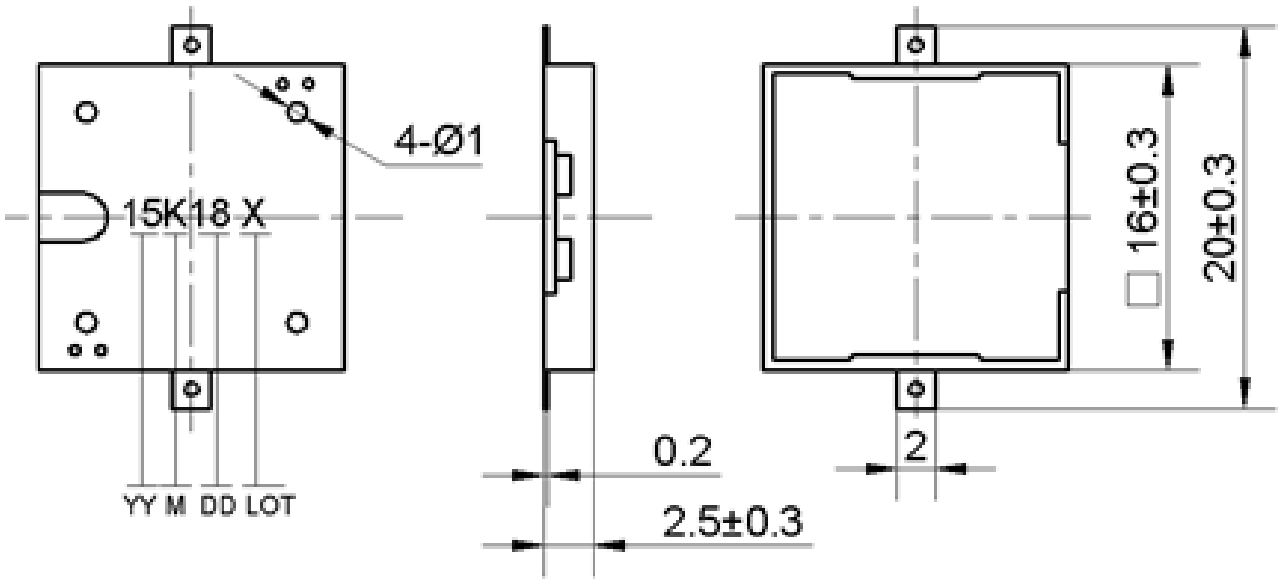
## Reliability Testing

| 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, 240 hours |
| Temperature Cycle Testing | Total 5 cycles,<br>1 cycle consisting of:<br>-40±2℃, 30 minutes<br>20±5℃, 15 minutes<br>120±2℃, 30 minutes<br>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).<br>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 | Sounder 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 onto the surface of a 10mm thick wooden board. Applied to the top and side of the part |

**All specifications must be satisfied after the test.**

## Dimensions (Units: mm Tolerance: ±0.5mm)

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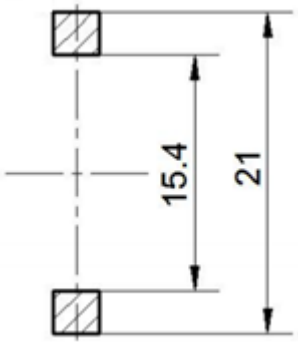
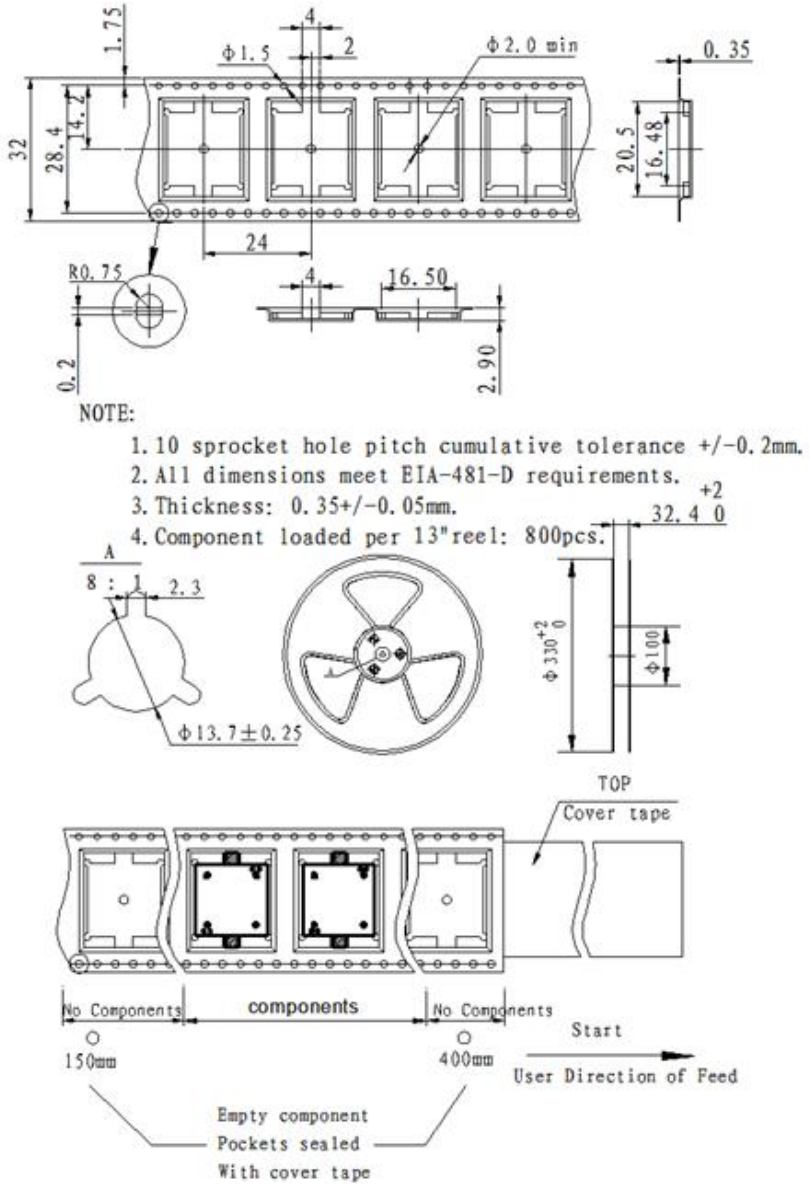
## Suggested Land Pattern*




*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

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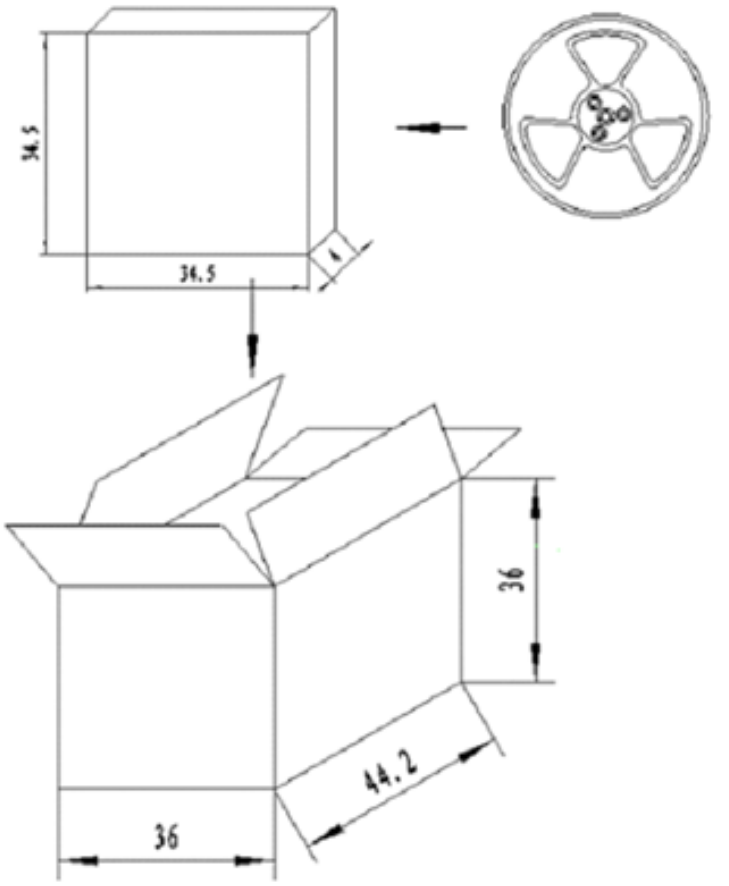
## Packaging Cont'd




NOTES:

1.800 PCS per tray

2.Total 10 trays per carton

3.Total 8000 PCS carton

4.Volume:44.2×36×36cm

**Specifications Revisions**

| Revision | Description | Date |
|---|---|---|
| - | Released from Engineering | 5/27/2020 |

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.

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