



# PUI audio



Data Sheet

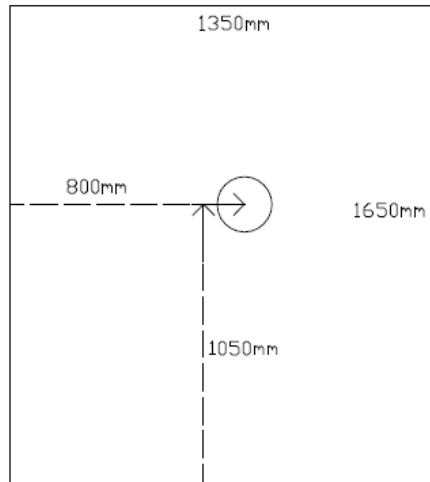
AS01508MS-SC14-WP

## Specifications

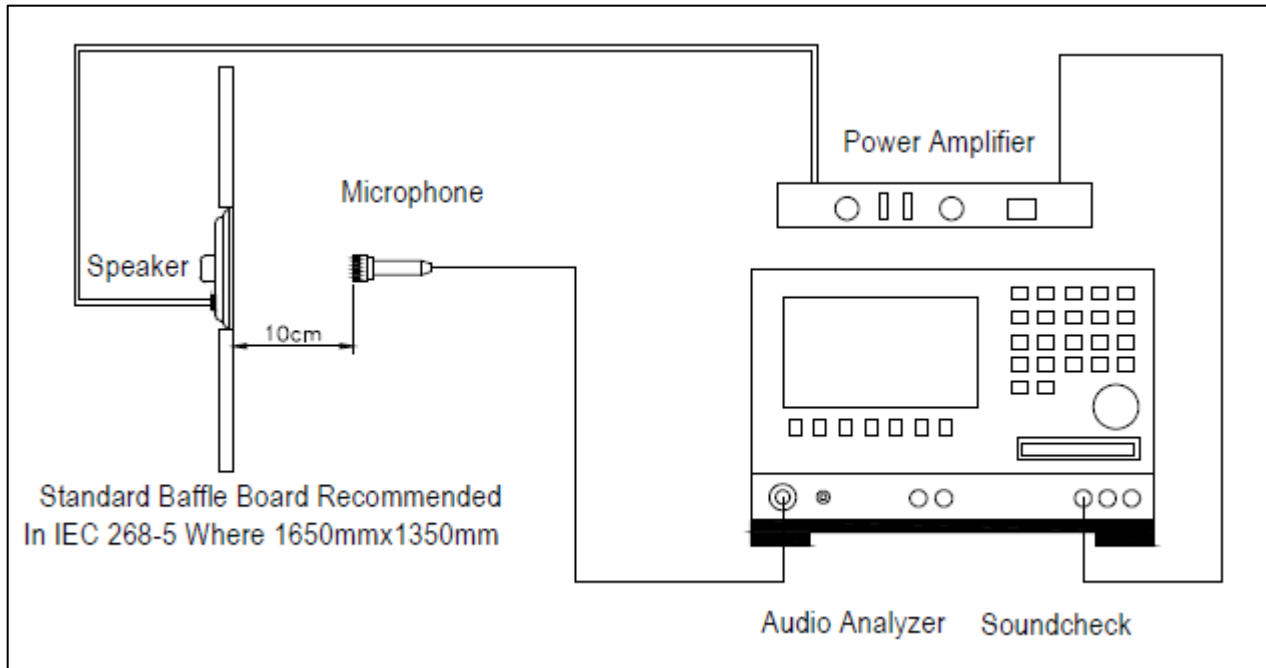
| Parameters  | Values   |            | Units          |
|---|--|------------|----------------|
| Rated Input Power<br><i>(1cc enclosure)</i>         | 0.5  |            | Watts          |
| Max Input Power<br><i>(1cc enclosure)</i>           | 0.7  |            | Watts          |
| Impedance<br><i>(1V input)</i>                      | 8 ± 15%  |            | Ohms           |
| DC Resistance                                       | 7 ± 0.7  |            | Ohms           |
| Output SPL (Average)<br><i>(2kHz @ 0.894V/0.1m)</i> | 81.0 ± 3   |            | dB             |
| Resonant Frequency                                  | 1cc enclosure  | 1050 ± 20% | Hz             |
|   | Free Air   | 850 ± 20%  |                |
| Frequency Range                                     | Fo ~ 20k   |            | Hz             |
| THD<br><i>(1kHz @ 0.5W) (1cc enclosure)</i>         | < 10%  |            | -              |
| Frame Material                                      | PPA  |            | -              |
| Magnet Material                                     | NdFeB  |            | -              |
| Diaphragm Material                                  | Peek   |            | -              |
| Weight  | 1.5  |            | Grams          |
| Buzz, Rattle, etc.<br><i>(3cc enclosure)</i>        | Should not be audible when driven with sine wave                       |            | Fo~20k @ 2.1 V |
| Environmental Compliances                           | ROHS/REACH   |            | -              |
| Polarity  | Cone moves forward when positive DC current is applied to (+) terminal |            | -              |
| Storage Temperature                                 | -40 ~ +85  |            | °C             |
| Operating Temperature                               | -30 ~ +70  |            | °C             |
| Ingress Protection                                  | IPX8<br><i>(1.5m / 60min)</i>  |            | -              |

All specifications measured at 5 ~ 35°C, 45~85% RH, under 86~106 kPa of pressure, unless otherwise noted.

## Measurement Method

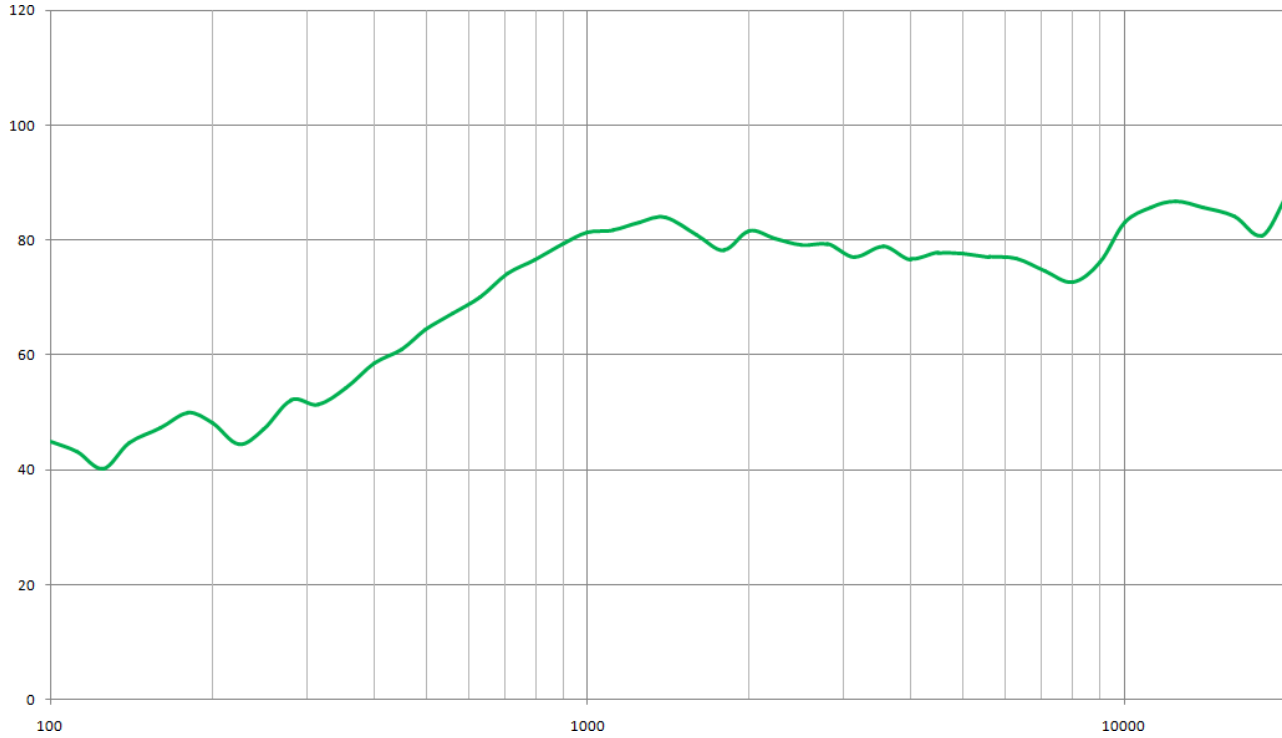


**Block Diagram for Measurement Method**

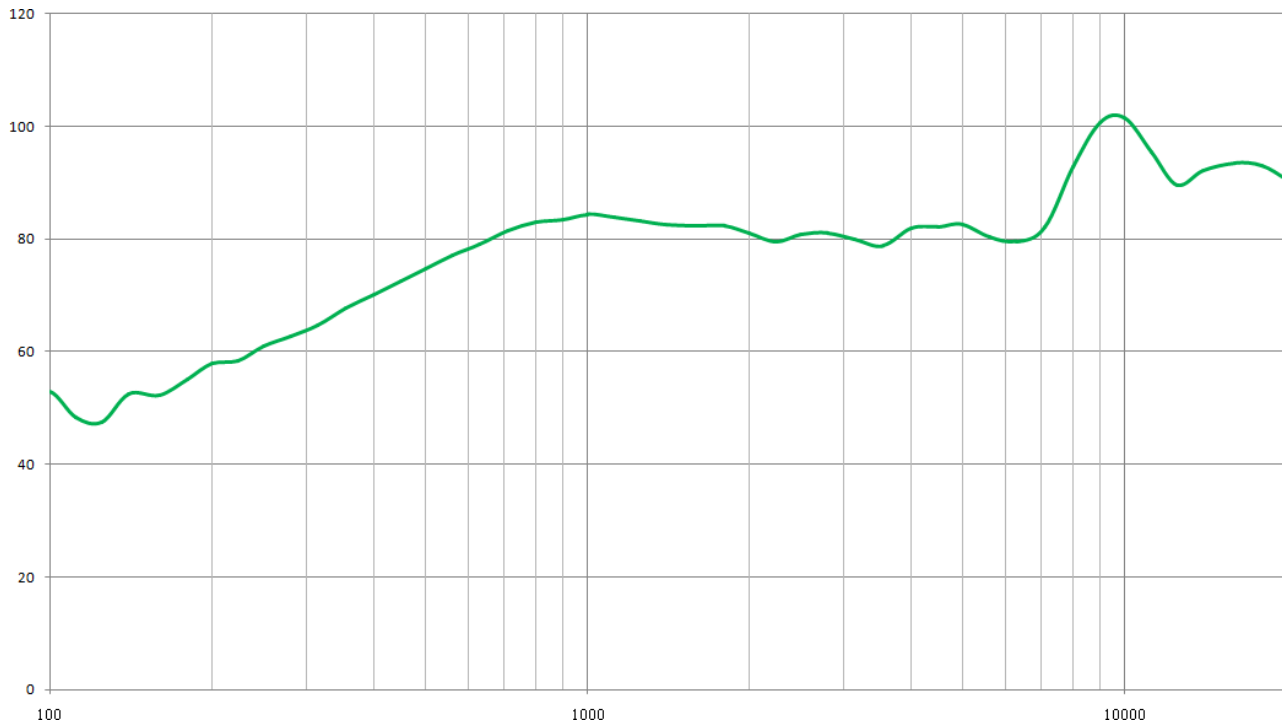


**Speaker Test Setup**

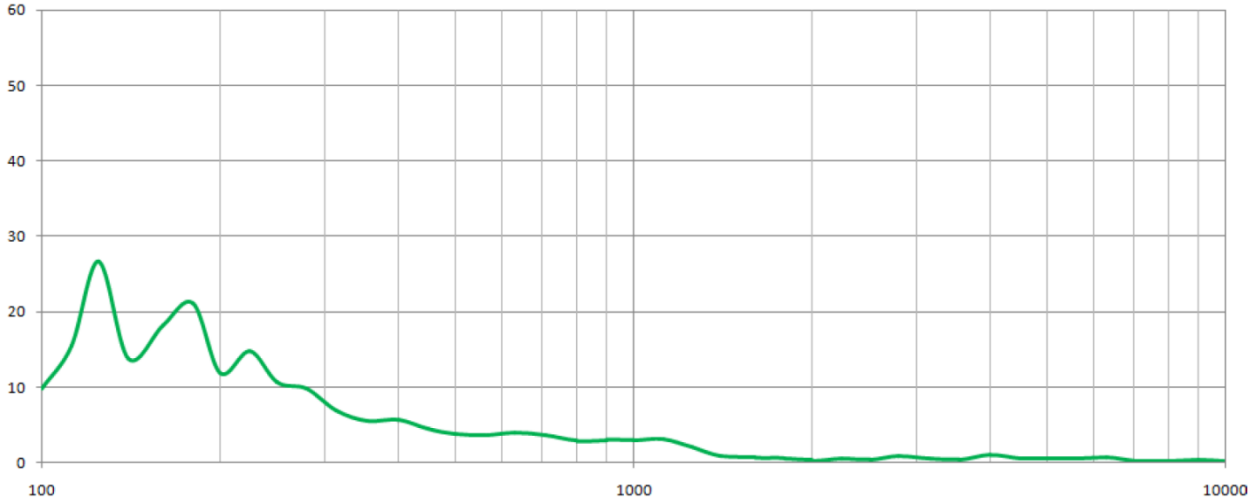
### Typical Frequency Response (0.1W / 0.1M / 1cc enclosure)



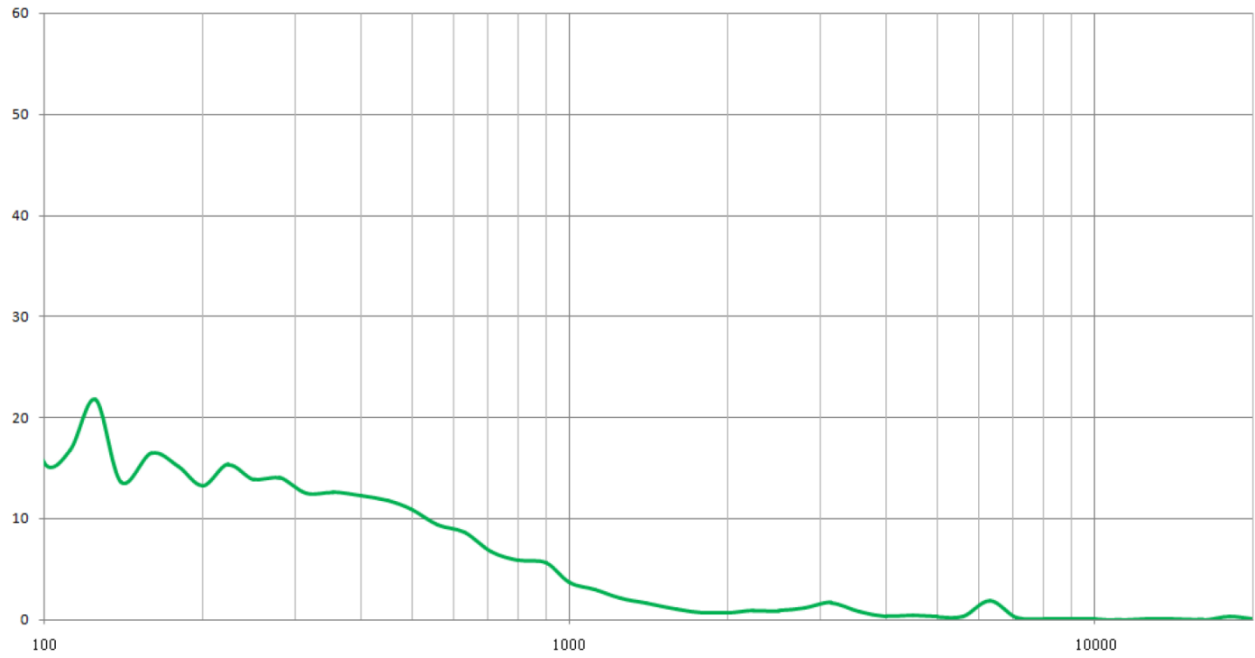
### Typical Frequency Response (0.1W / 0.1M / Free Air)



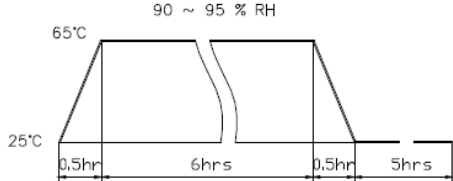
### Total Harmonic Distortion Curve (0.1W / 0.1M / 1cc enclosure)



### Total Harmonic Distortion Curve (0.1W / 0.1M / Free Air)

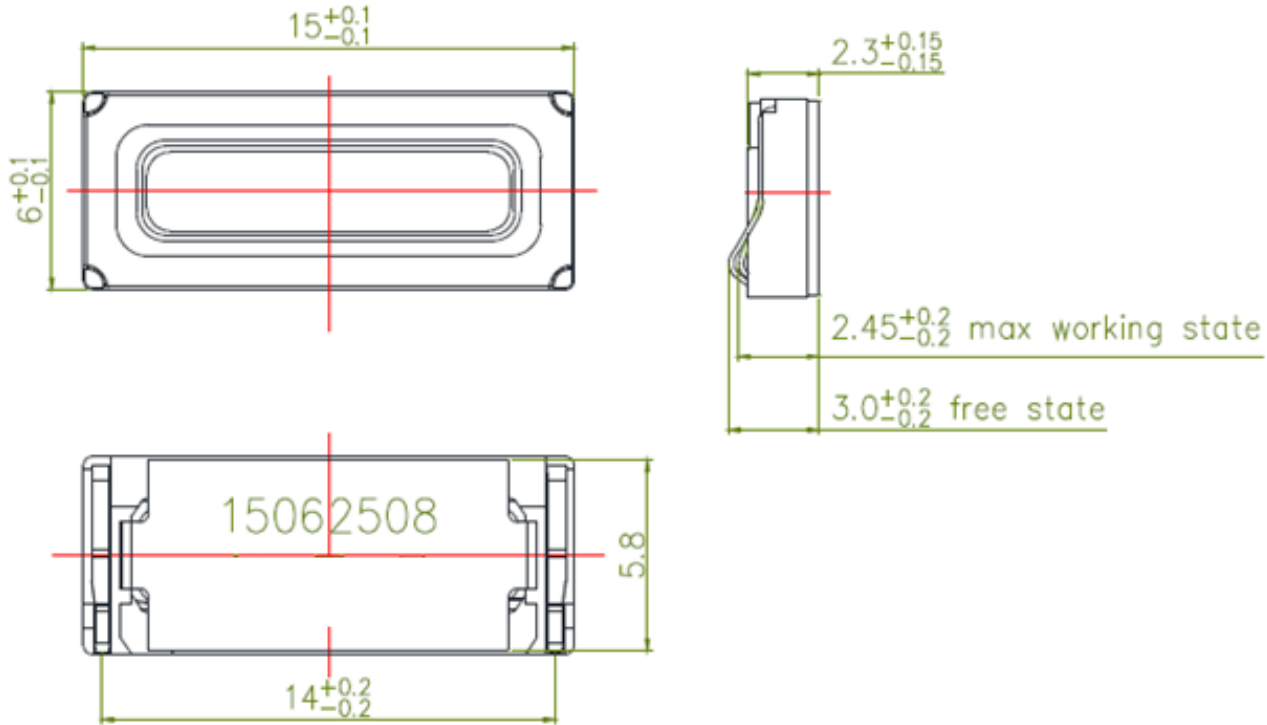


## Reliability Testing

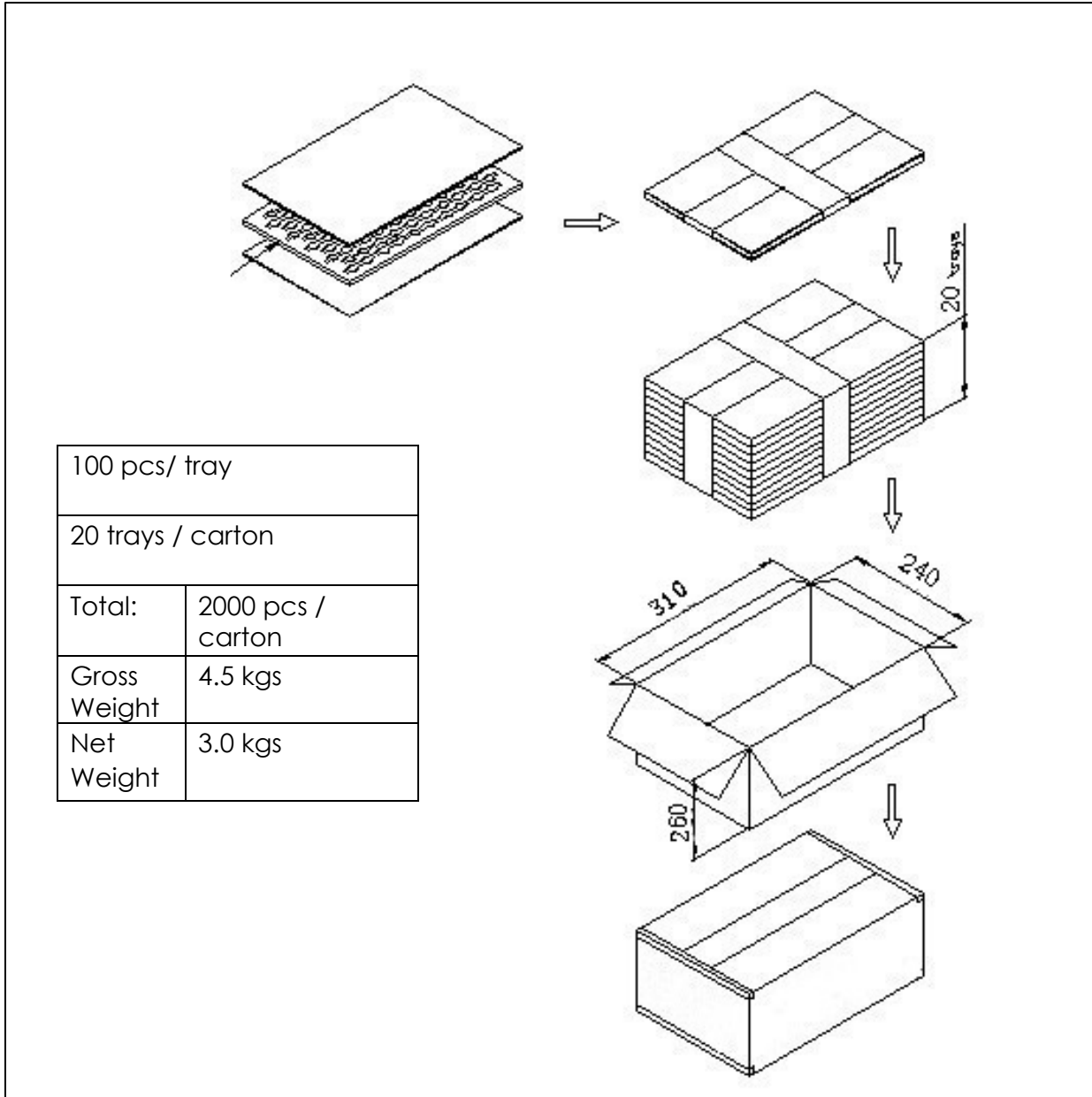
| Type of Test              | Test Specifications  |
|---------------------------|--|
| High Temperature Test     | 96 hours at +85°C  |
| Low Temperature Test      | 96 hours at -40°C  |
| Humidity Test             | 96 hours at +30±3°C, 92-95% RH   |
| Temperature Cycle Test    | <p>Part tested for 5 cycles, 6 hours per cycle according to the profile shown:</p>  <p>The diagram shows a temperature cycle profile. It starts at 25°C for 0.5hr, ramps up to 65°C, holds at 65°C for 6hrs, ramps down to 25°C, and holds at 25°C for 0.5hr. This sequence is repeated for 5 cycles. The humidity is maintained at 90 ~ 95 % RH during the 6-hour high-temperature hold.</p> |
| Vibration Test            | <p>Frequency: 10~55~10Hz Oct/min<br/>                     Amplitude: 1.5mm<br/>                     Duration: 2 hours per 3 perpendicular directions (XYZ)</p>   |
| Operation Life Test       | Pink noise applied at rated power for 96 hours   |
| Drop Test                 | Dropped in a typical enclosure onto 40mm thick board from 75cm, 10x  |
| Termination Strength Test | 3.0N applied to each terminal in horizontal direction for 30 seconds; 2.0N applied to each terminal in vertical direction for 30 seconds   |

**Parts should confirm to original performance within +/- 3dB following testing at rated power and a 6 hour rest period**

**Dimensions** (Tolerance:  $\pm 0.15\text{mm}$ , unless otherwise stated)



## Packaging



### Specifications Revisions

| Revision | Description               | Date      |
|----------|---------------------------|-----------|
| A        | Released from Engineering | 8/30/2023 |

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 withdrawal without notice.