

## Data Sheet

AS03604MR-N50-R

Introducing the N50 Mini Speaker Series from PUI Audio. High-grade neodymium magnetic motors are employed in each N50 Series speaker to create the highest output possible, in the smallest form factor.

A black poly dome-capped paper diaphragm combines with a rubber surround for moisture resistance on the 36mm diameter **AS03604MR-N50-R**. High power handling (conservatively rated at 3 watts, 5 watts peak) is achieved through the use of a cupped spider.

### Features:

- Black poly cone and rubber surround
- High 85 dB output at 1W/50cm
- N50 neodymium motor
- Only 17.5mm thick
- 2.5mm of excursion

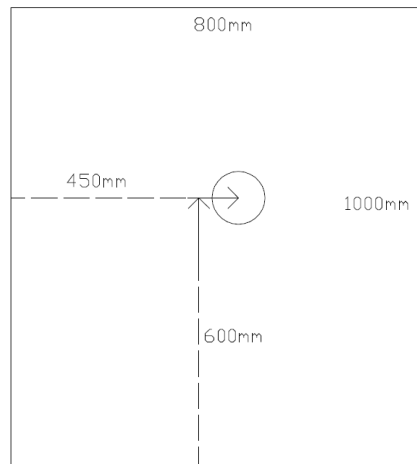
### Specifications

| Parameters  | Values       | Units |
|---|--------------|-------|
| Rated Input Power   | 3            | Watts |
| Max Input Power   | 5            | Watts |
| Impedance   | 4 ± 15%      | Ohms  |
| Sensitivity (SPL @ 1W/50cm)<br>(800, 1000, 1200, and 1500 Hz) | 85 ± 3       | dBa   |
| Distortion (Max @ 1W, 1 kHz)                                  | <5%          |       |
| Resonant Frequency  | 200 ± 20%    | Hz    |
| Frequency Range   | 150 ~ 20,000 | Hz    |
| Housing Material  | ABS          |       |
| Magnet Material   | NdFeB        |       |
| Weight  | 20.2         | Grams |

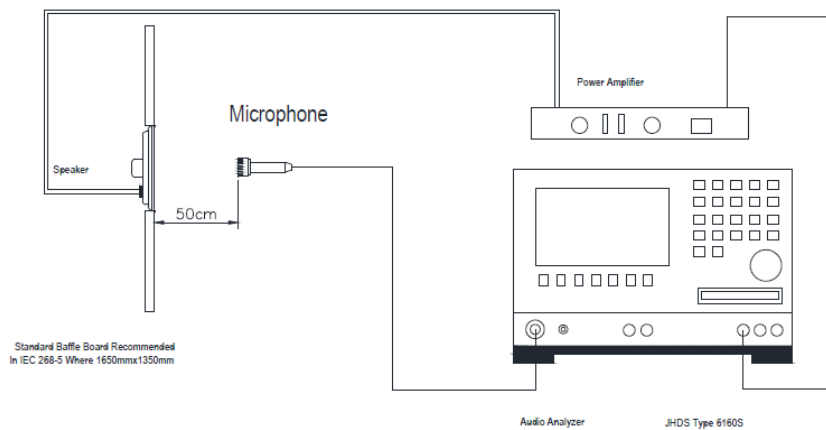
## Specifications (continued)

|                       |  |    |
|-----------------------|--|----|
| Buzz, Rattle, etc.    | Should not be audible with 4.47Vpk sine wave from 200 Hz to 20 kHz                         |    |
| Polarity              | When positive voltage is applied to the positive terminal, the diaphragm will move outward |    |
| Operating Temperature | -20 ~ +50  | °C |
| Storage Temperature   | -30 ~ +60  | °C |

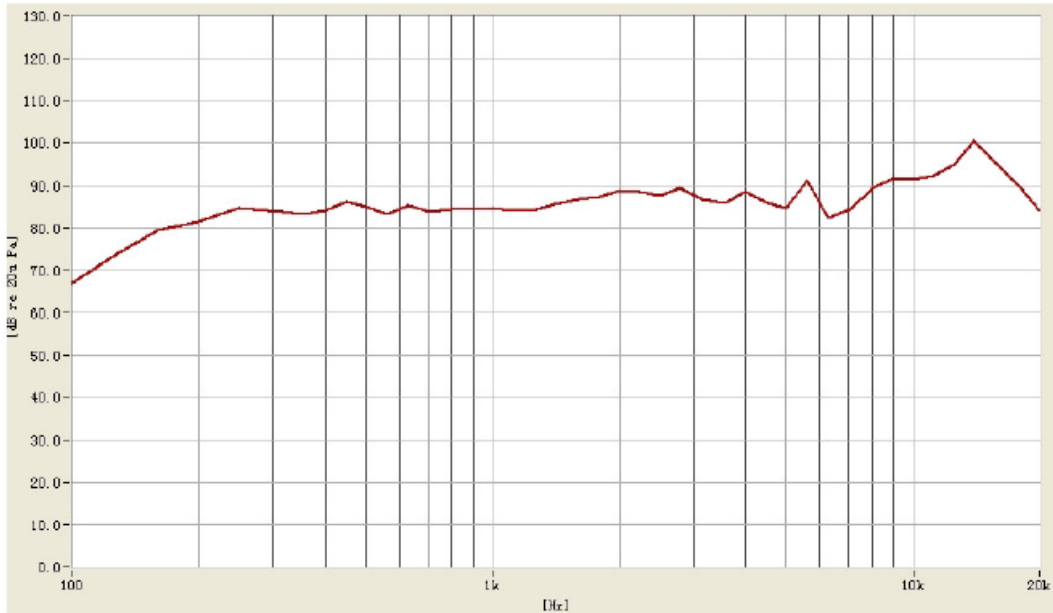
## Measurement Method



Test Baffle (speaker mounted in circle)



## Frequency Response (measured at 50cm with 1W input power)

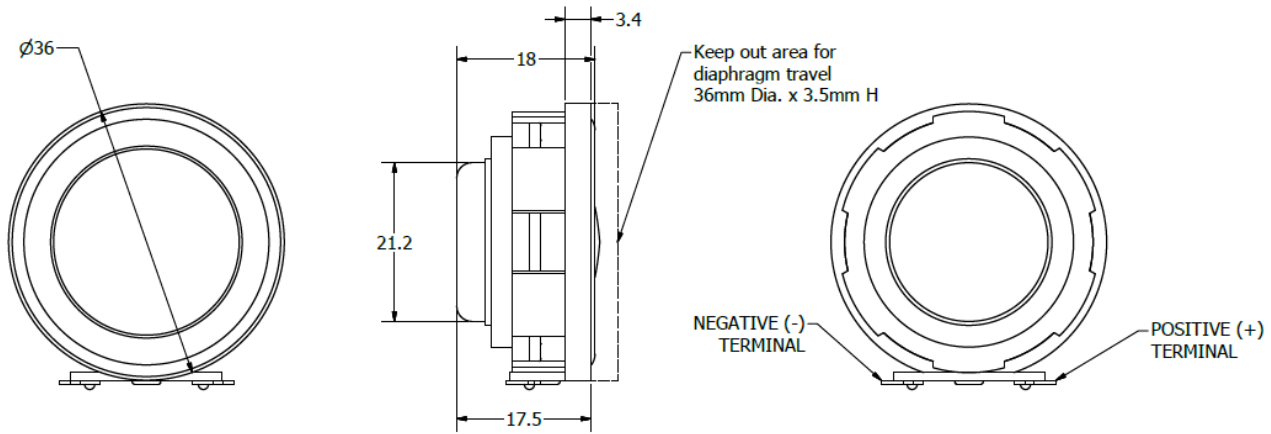


## Reliability Testing

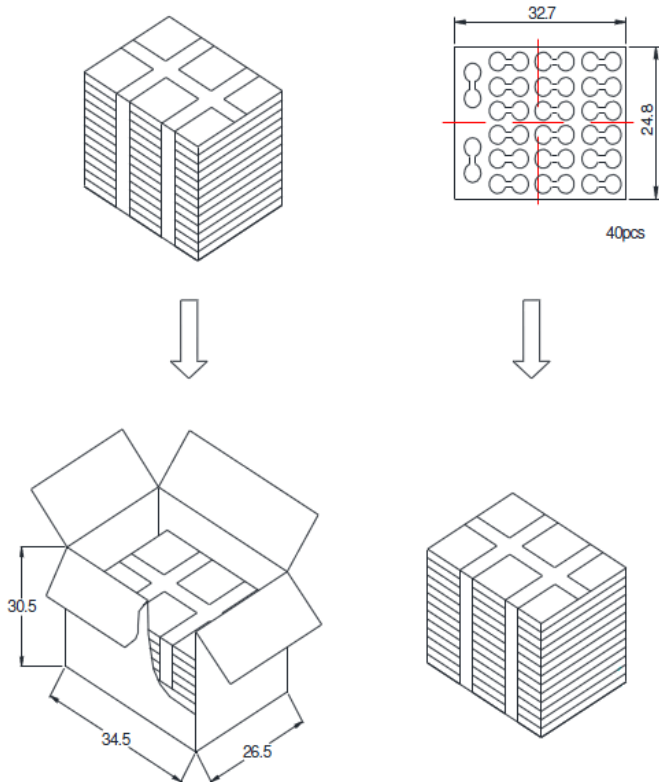
| Type of Test              | Test Specifications   |
|---------------------------|---|
| High Temperature Test     | 96 hours at +85°C ± 3°C followed by six hours in normal room temperature                                    |
| Low Temperature Test      | 96 hours at -40°C ± 3°C followed by six hours in normal room temperature                                    |
| Humidity Test             | 96 hours at +30°C ± 3°C with relative humidity at 92% to 95% followed by 3 hours in normal room temperature |
| Temperature Cycle Testing | The part shall be subjected to 5 cycles using the following procedure:<br>                                  |
| Vibration Test            | 10 to 55 to 10 Hz cycles, 15 minutes per cycle. 2 hours in each axis X, Y, and Z.                           |
| Drop Test                 | Drop the speakers onto a 40mm thick board 10 times from a height of 75cm.                                   |
| Load Test                 | Pink noise is applied at the speakers rated power for 96 hours at room temperature                          |

**After each test, the speaker's SPL shall be ±3 dB of the original SPL**

## Dimensions



## Packaging



40 pcs per tray  
240 trays for unit, 2 units per carton  
Total:480pcs per box  
Size:34.5\*26.5\*30.5cm

**Specifications Revisions**

| <b>Revision</b> | <b>Description</b>                                | <b>Date</b> |
|-----------------|---|-------------|
|                 | Released from Engineering                         | 5/11/2017   |
| A               | Updated Weight and added Packaging Specifications | 7/13/2017   |

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.
3. This part is RoHS 2011/65/EU Compliant.

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