



PUI audio

Data Sheet

AOW-5024P-HD-F-R

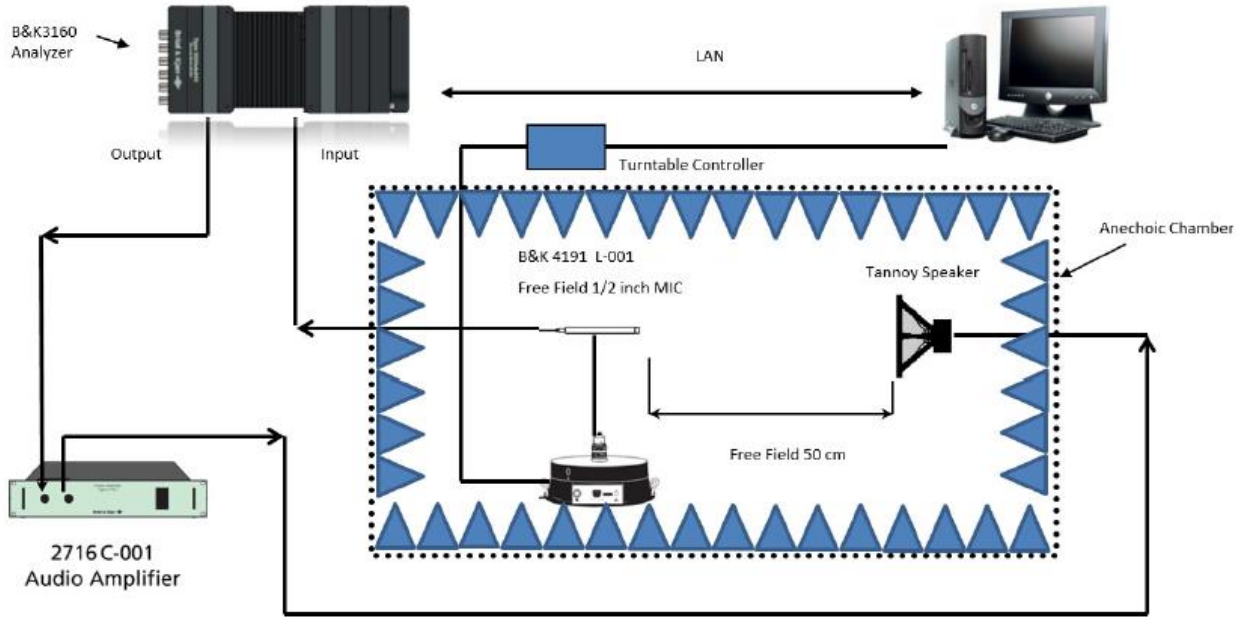
Features:

- -24 ± 3 dB sensitivity
- IP 57 Rating
- 110 dB Acoustic Overload Point

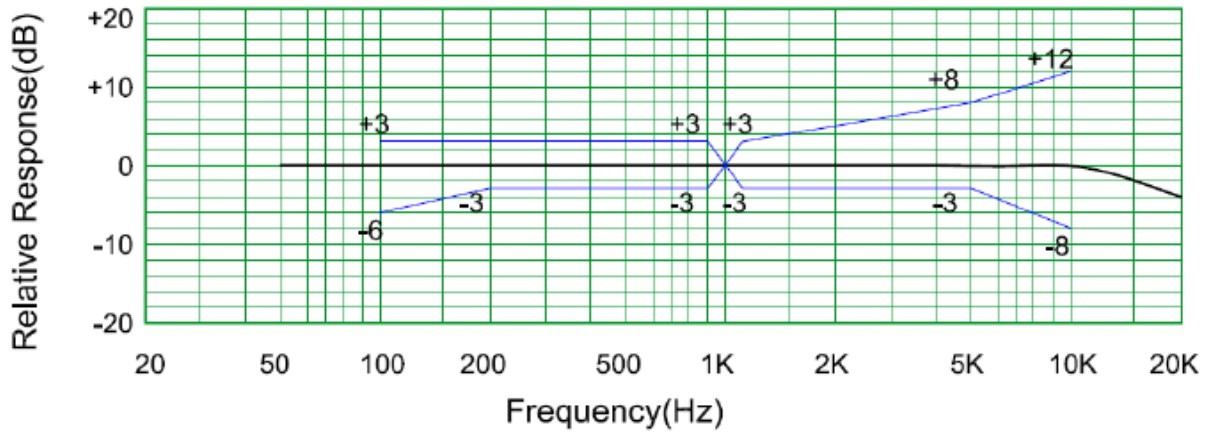
Specifications

Parameters	Values	Units
Sensitivity (1 kHz @ 50cm) 0 dB=1V/Pa	-24 ± 3	dB
Rated Voltage	3	VDC
Operating Voltage Range	1 ~ 10	VDC
Output Impedance (@ 1 kHz)	2.2	k Ω
Current consumption ($V_S=3.0V, R_L=2.2K\Omega$)	500	μ A
Signal-to-Noise Ratio (1kHz, 94 dB input, A-weighted)	80	dB
Decreasing Voltage ($V_S=3.0V$ to 2.0V)	-3	dB
Maximum SPL Input (THD<3%) Acoustic Overload Point	110	dB
Directivity	Omni-directional	-
Environmental Compliances	<i>RoHS/REACH</i>	-
Ingress Protection Rating	IP57	-
Operating Temperature	-20 ~ 70	$^{\circ}$ C
Storage Temperature	-40 ~ 85	$^{\circ}$ C
Weight	<0.5	Grams

Measurement Method



Typical Frequency Response



Microphone Handling Precautions

High temperature and/or static electricity may damage microphones. To ensure careful handling, we suggest following these precautions:

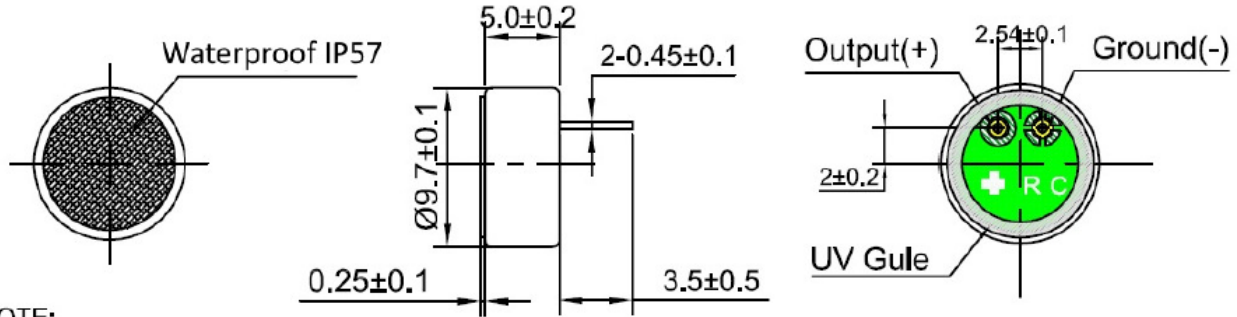
- Ensure the power rating of the soldering iron is below 90 watts
- The temperature of the soldering iron must be limited to 360°C ±10°C (680°F ±50°F)
- Soldering duration for each terminal shall be at or under 2 seconds
- If practical, use a metal fixture to hold the microphone in-place and to act as a heatsink. A fixture should have appropriate diameter holes drilled through the entire fixture to prevent pressure from being placed on the diaphragm (as below)



Reliability Testing

Type of Test	Test Specifications
High Temperature Test	200 hours at 70°C (Testing to be done after 2 hours of conditioning at 22 ± 5 °C, R.H 30%~ R.H 70%)
Low Temperature Test	200 hours at -25°C (Testing to be done after 2 hours of conditioning at 22 ± 5 °C, R.H 30%~ R.H 70%)
Humidity Test	200 hours at 40°C with relative humidity at 90 ~ 95% (Testing to be done after 2 hours of conditioning at 22 ± 5 °C, R.H 30%~ R.H 70%)
Temperature Cycle Testing	Exposure at -25°C for 30 minutes, at 20°C for 10 minutes, at +70°C for 30 minutes, at 20°C for 10 minutes, 5 cycles. (Testing to be done after 2 hours of conditioning at 22 ± 5 °C, R.H 30%~ R.H 70%)
Vibration Test	10Hz to 55Hz for 1-minute full amplitude 1.52 mm, for 2 hours at three axes in state of standard packing.
Drop Test	dropped to concrete floor each one time from 1 meter height at three directions in state of outer packing.

Dimensions



NOTE:
 Bore diameter of PCB in customer side should be $>0.9\text{mm}$.

Packaging

	Drawing	Qty (pcs.)	Size(mm) L×W×H	Material
Packing		100	98×98×8	Form
		100	100×100×14	Paper
Middle Packing		5000 (50×100)	375×120×265	Paper
Outer Packing		10000 (2×5000)	396×275×295	Paper

Specifications Revisions

Revision	Description	Date
-	Released from Engineering	6/21/2021
A	Updated Formatting	7/13/2022

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.