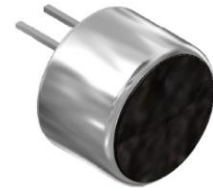




PUI audio



Data Sheet

AOM-6746P-R

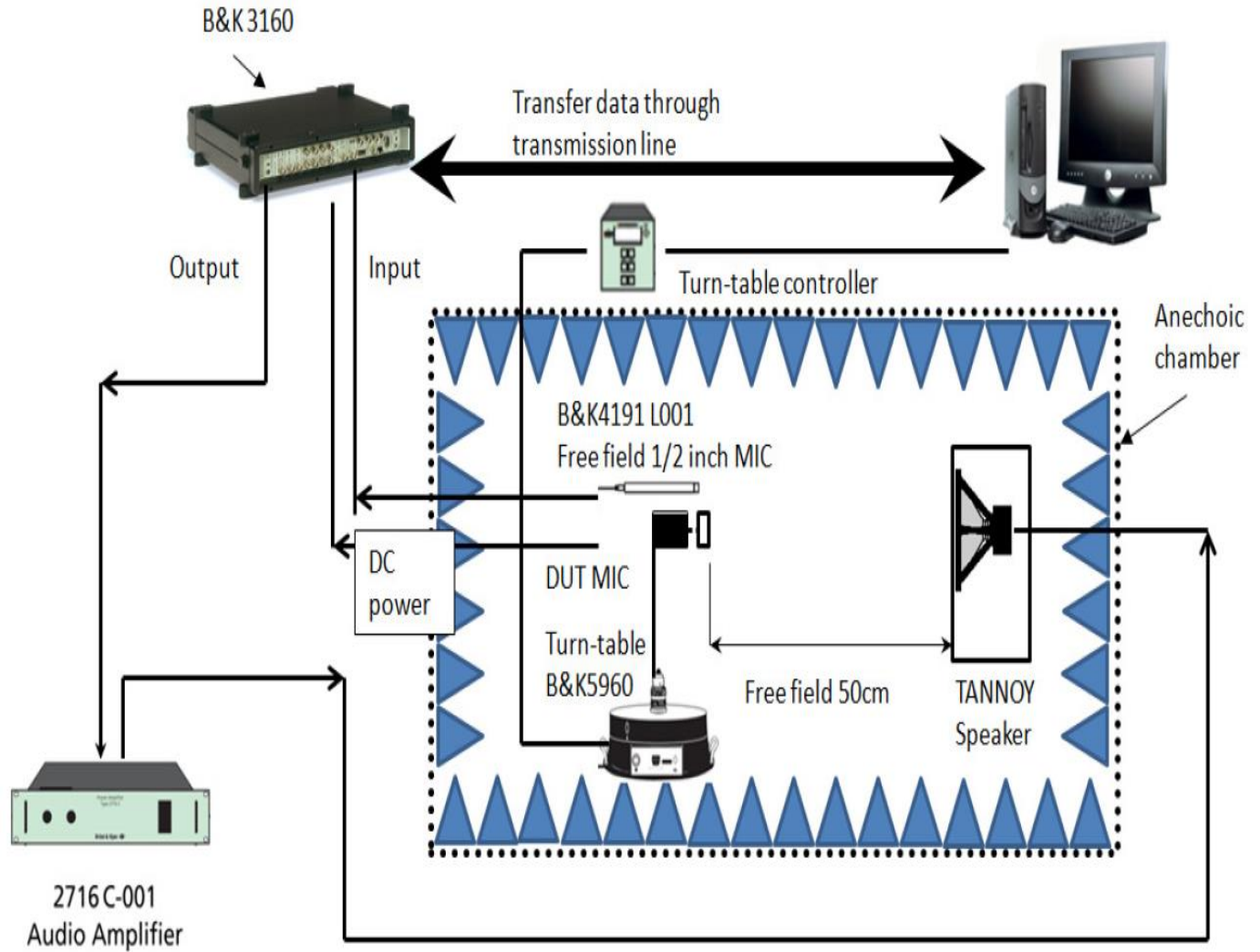
Features:

- Electret Condenser Microphone
- Omni-Directional 9.7mm diameter, -46dB, 1.5Vdc mic
- Pin Type

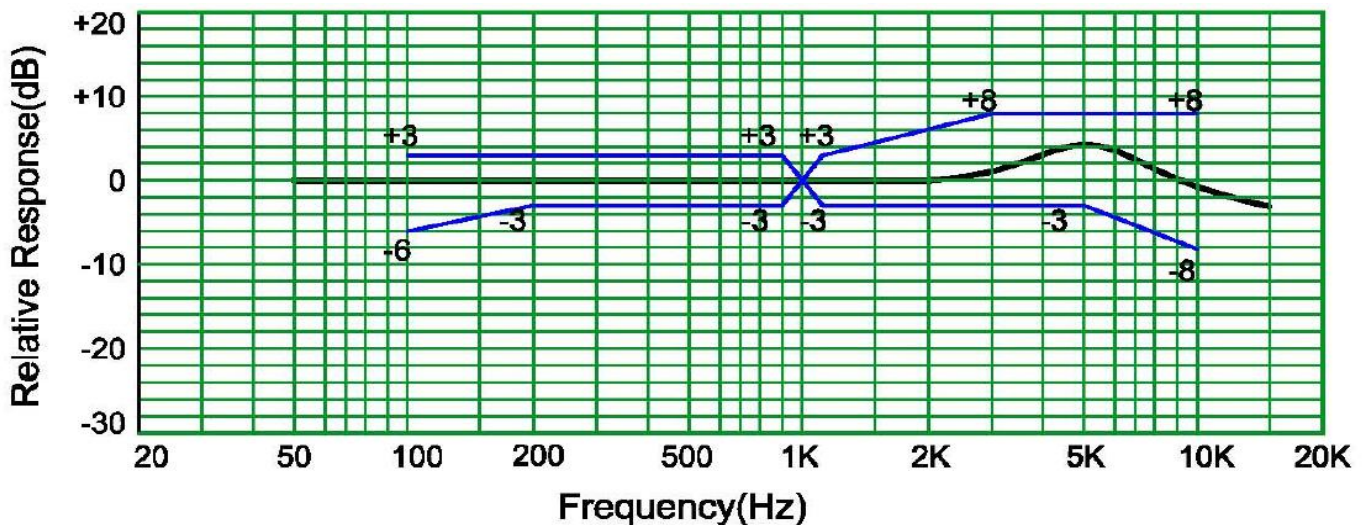
Specifications

| Parameters | Values | Units |
|--|-------------------|---|
| Sensitivity (0dB = 1V/pa @ 1kHz) | -46±3 | dB |
| Rated Voltage | 1.5 | VDC |
| Output Impedance (@ 1 kHz) | 2.2k | Ω |
| Current consumption | 500 @ 1.5V, 2.2kΩ | μA |
| Signal-to-Noise Ratio (1kHz, 94 dB input, A-weighted) | 60 | dB |
| Decreasing Voltage | -3 | dB |
| Frequency Range | 50-16,000 | Hz |
| Operating Voltage Range | 1-10 | VDC |
| Maximum SPL Input (THD<3%) Acoustic Overload Point | 110 | dB |
| Directivity | Omni | - |
| Acceptable Soldering Methods | Hand Solder | See page 3 for soldering information |
| Environmental Compliances | ROHS/REACH | - |
| Operating Temperature | -20 to 60 | °C |
| Storage Temperature | -40 to 70 | °C |
| Weight | <0.5 | Grams |

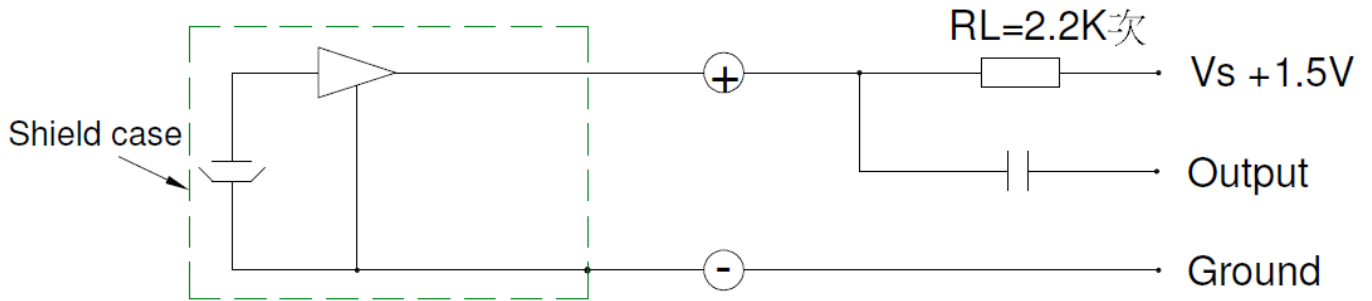
Measurement Method



Typical Frequency Response



Recommended Drive Circuit



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 $360^{\circ}\text{C} \pm 10^{\circ}\text{C}$ ($680^{\circ}\text{F} \pm 50^{\circ}\text{F}$)
- 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)

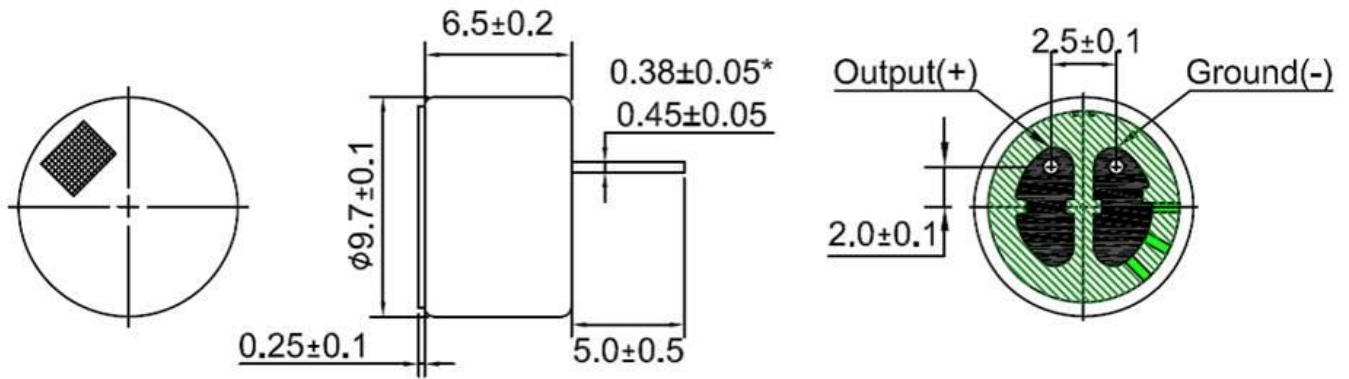


Reliability Testing

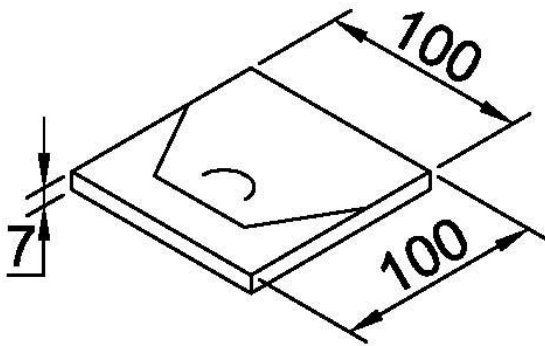
| Type of Test | Test Specifications |
|---------------------------|--|
| High Temperature Test | Exposure at +70°C for 200 hours (The measurement to be done after 2 hours of conditioning at +22 ± 5°C,R.H30%~ R.H 70%) |
| Low Temperature Test | Exposure at -25°C for 200 hours (The measurement to be done after 2 hours of conditioning at +22 ± 5°C,R.H30%~ R.H 70%) |
| Humidity Test | Exposure at +40°C and 90%~95% relative humidity for 200 hours. (The measurement to be done after 2 hours of conditioning at +22 ± 5°C,R.H30%~ 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. (The measurement to be done after 2 hours of conditioning at +22 ± 5°C,R.H30%~ R.H 70%) |
| Vibration Test | To be no interference in operation after vibrations,10Hz to 55Hz for 1 minute full amplitude 1.52 mm, for 2 hours at three axes in state of standard packing. |
| ESD Test | According to the third item of the standard of IEC 61000 1.Contact discharge Charge 6000V DC to the capacitor with 150pF, and discharge the output of the MIC ten times through the resistance of 330Ω, then check and test it. 2.Air discharge Charge 8000V DC to the capacitor with 150pF, and discharge the sound hole of the MIC ten times through the resistance of 330Ω, then check and test it. |
| Drop Test | To be no interference in operation after dropped to concrete floor each one time from 1 meter height at three directions in state of outer packing. (The measurement to be done after 2 hours of conditioning at +22 ± 5°C,R.H30%~ R.H 70%) |

After any following tests, the sensitivity of the microphone shall not change more than ±3dB from initial value, and shall keep its initial operation and appearance.

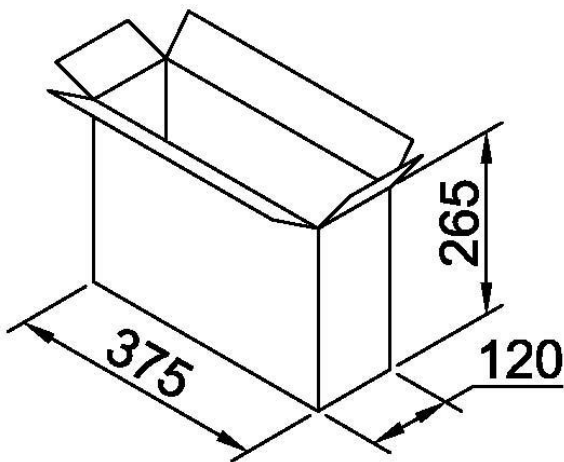
Dimensions



Packaging



QTY 100pcs



QTY 10,000pcs

Specifications Revisions

| Revision | Description | Date |
|-----------------|--|-------------|
| - | Released from Engineering | 01/30/2006 |
| A | Added terminal polarity | 01/30/2007 |
| B | Revised to inventor 3D drawing | 09/20/2010 |
| C | Update drawing to include pin diameter | 12/22/2023 |

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.