

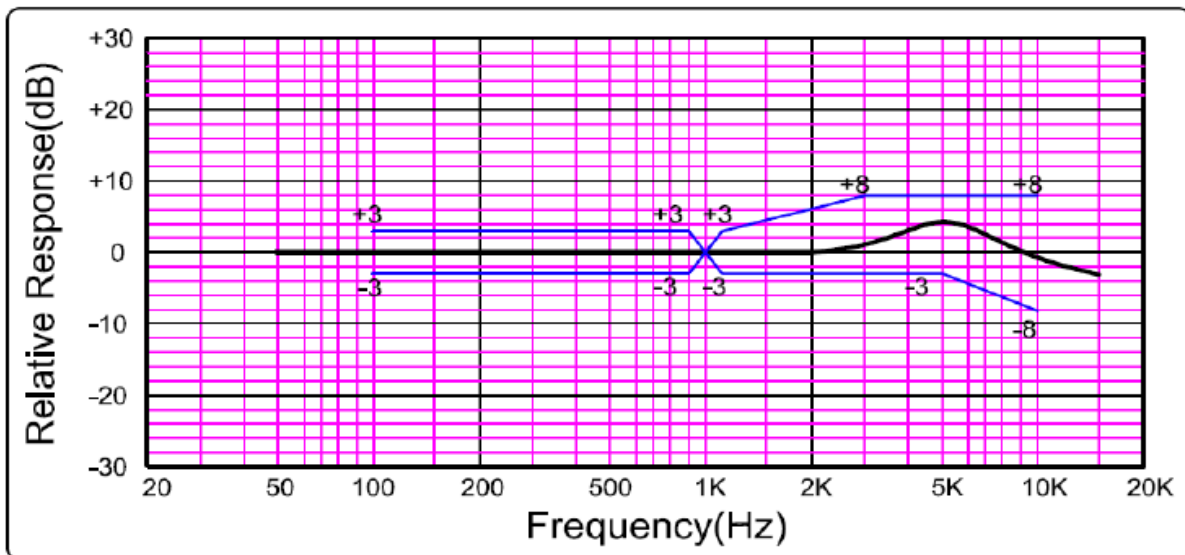


Data Sheet	AOW-6540L-R
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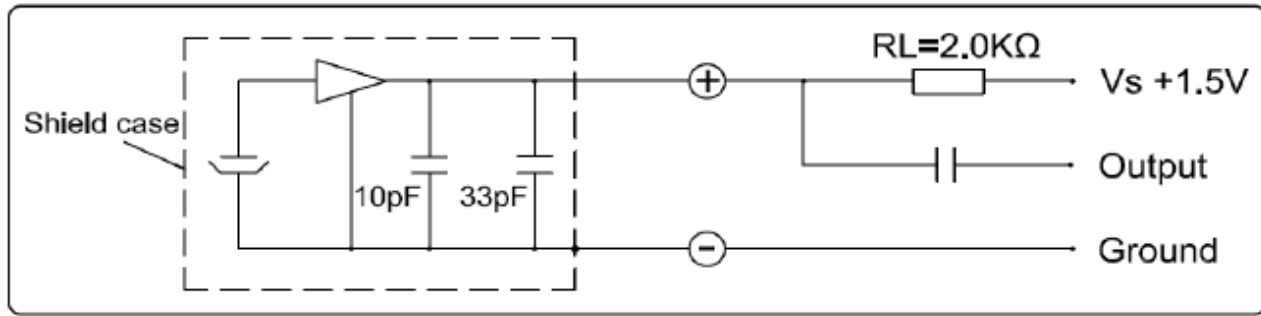
### Specifications

Parameters	Values	Units
Sensitivity (1 kHz @ 50cm) 0 dB=1V/Pa	-40 ±3	dB
Rated Voltage	1.5	VDC
Output Impedance (@ 1 kHz)	2000	kΩ
Current consumption <i>(List voltage and resistive load)</i>	0.3	mA
Signal-to-Noise Ratio (1kHz, 94 dB input, A-weighted)	>65	dB
Decreasing Voltage (Vs of 1.5 to 1.1)	3	dB
Frequency Range	50 ~ 16,000	Hz
Operating Voltage Range	1.5 ~ 10	VDC
Maximum SPL Input (THD<3%) Acoustic Overload Point	110	dB
Directivity	Omni-directional	-
Acceptable Soldering Methods	Hand Solder	See page 2 for soldering information
Environmental Compliances	ROHS 2015/863/EU	-
Operating Temperature	-20 ~ +60	°C
Storage Temperature	-40 ~ +70	°C
Weight	0.3	Grams

### Typical Frequency Response (1.5 VDC input with acoustic source spaced 50cm from microphone)



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

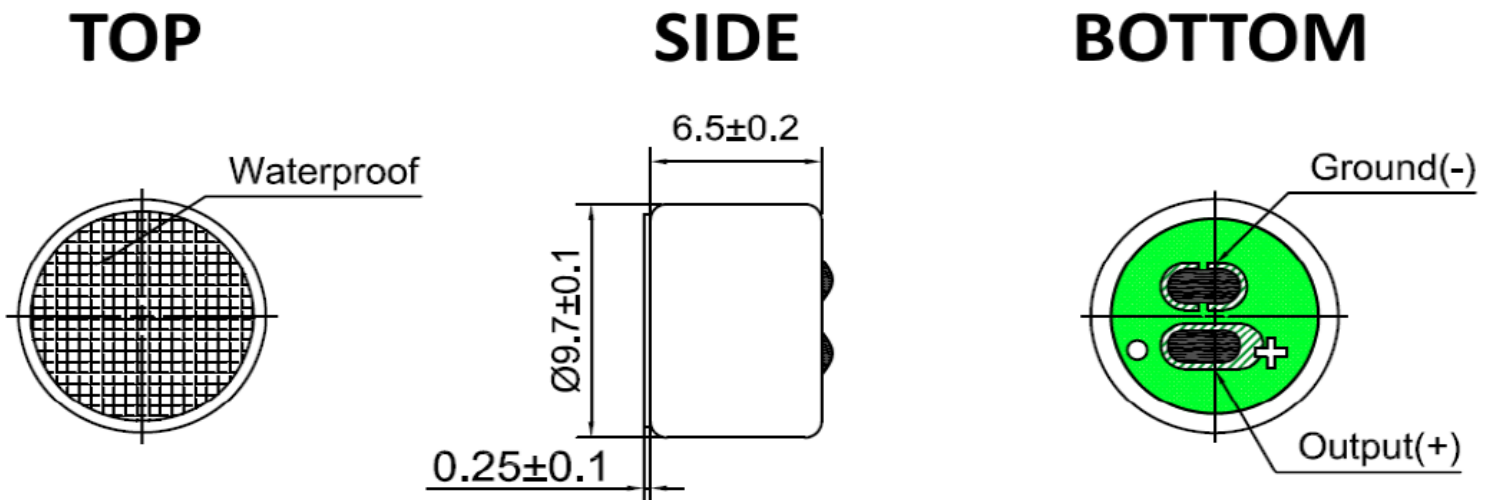


## Reliability Testing

Type of Test	Test Specifications
High Temperature Test	200 hours at +70°C ± 3°C followed by two hours in normal room temperature
Low Temperature Test	200 hours at -25°C ± 3°C followed by two hours in normal room temperature
Humidity Test	200 hours at +40°C ± 3°C with relative humidity at 90% to 95% followed by 2 hours in normal room temperature
Temperature Cycle Testing	30 minutes at -25°C, 10 minutes at 20°C, 30 minutes at +70°C, 10 minutes at 20°C for five cycles, followed by 2 hours in normal room temperature
Vibration Test	10 to 55 Hz for 1 minute with 1.52mm distance, followed by a two-hour 3 axis test in packaging
Drop Test	Drop microphones in packaging onto concrete floor from 1 meter height in each of 3 axes
ESD Test (according to IEC 6100)	<ol style="list-style-type: none"> <li>Contact discharge - Discharge 6000 VDC from capacitor into microphone output through 330Ω resistor ten times.</li> <li>Air discharge - Discharge 8000 VDC into sound hole of the microphone ten times.</li> </ol>

After each test, the sensitivity shall be ±3 dB of the original sensitivity.

## Dimensions



**Specifications Revisions**

<b>Revision</b>	<b>Description</b>	<b>Date</b>
-	Released from Engineering	4/14/2021

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 2015/863/EU compliant.