

## Data Sheet

ROM-2235L-HD-R

PUI Audio's all-new **HD Series** microphones use premium-grade FETs and diaphragms for high sensitivity and superior signal-to-noise ratio. Each microphone features GSM buzz-blocking capacitors. Upgrade the ECM microphone that you use today with a PUI Audio **HD Series** microphone.

The 5.8mm diameter **ROM-2235L-HD-R** is designed for extreme fidelity in a compact housing with true 20 Hz to 20 kHz performance.

### Features:

- 5.8mm diameter
- 2.7mm height
- -35 dB sensitivity
- 68 dB signal-to-noise ratio
- True 20 Hz to 20 kHz performance

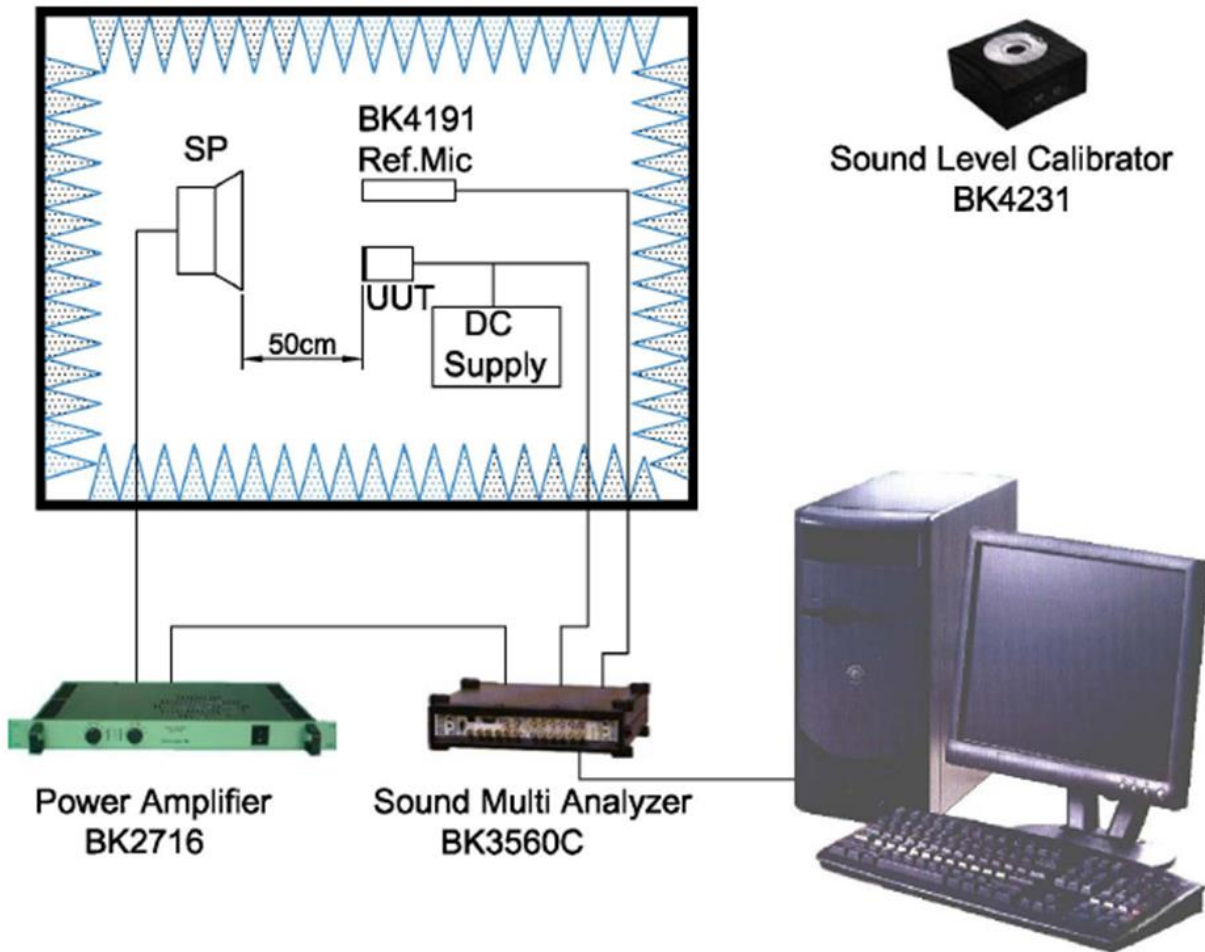
### Specifications

| Parameters   | Values           | Units |
|--|------------------|-------|
| Sensitivity (1 kHz @ 50cm)<br>0 dB=1V/Pa                 | -35 ±3           | dB    |
| Rated Voltage  | 3                | VDC   |
| Output Impedance (@ 1 kHz)                               | 2.2              | kΩ    |
| Current consumption<br>(3VS with 2.2 kΩ RL)              | 500              | μA    |
| Signal-to-Noise Ratio<br>(1kHz, 94 dB input, A-weighted) | 68               | dB    |
| Decreasing Voltage (3VS to 2VS)                          | -3               | dB    |
| Frequency Range  | 20 ~ 20,000      | Hz    |
| Operating Voltage Range                                  | 1 ~ 10           | VDC   |
| Maximum SPL Input (THD<3%)                               | 110              | dB    |
| Directivity  | Omni-directional | -     |

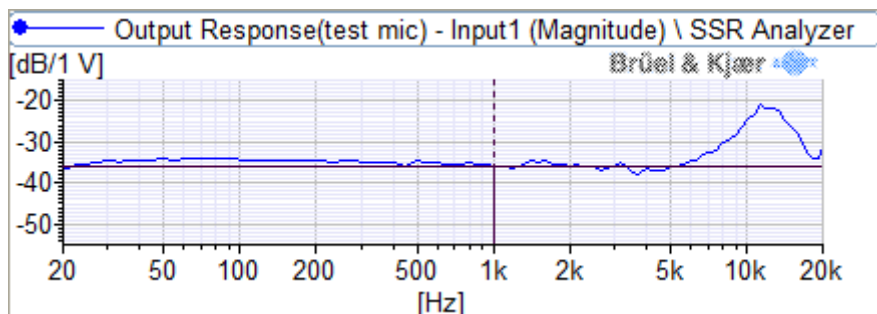
## Specifications (continued)

|                       |           |       |
|-----------------------|-----------|-------|
| Operating Temperature | -20 ~ +70 | °C    |
| Storage Temperature   | -40 ~ +85 | °C    |
| Weight                | <0.5      | Grams |

## Measurement Method (in Anechoic Chamber)



## Typical Frequency Response (measured at 50cm with 3V input and 94 dB source)

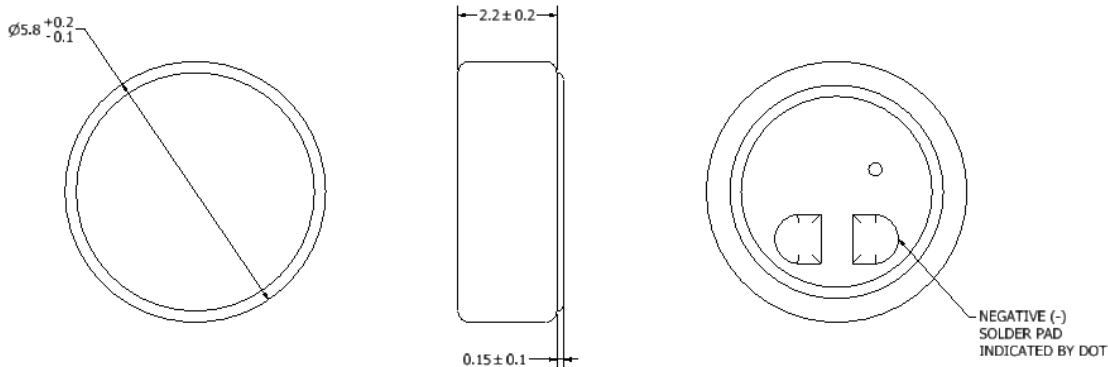


## Reliability Testing

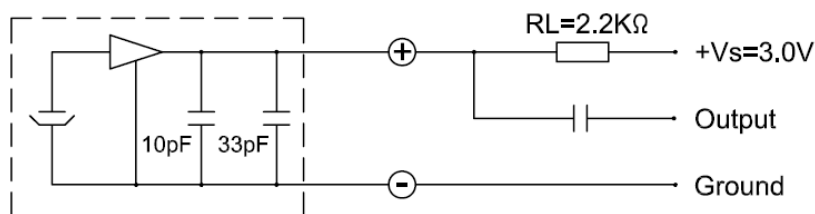
| Type of Test                     | Test Specifications  |
|----------------------------------|--|
| High Temperature Test            | 200 hours at +70°C ± 3°C followed by two hours in normal room temperature  |
| Low Temperature Test             | 200 hours at -25°C ± 3°C followed by two hours in 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 axis  |
| 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 speaker's SPL shall be ±3 dB of the original SPL

## Dimensions



## Recommended Drive Circuit



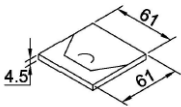
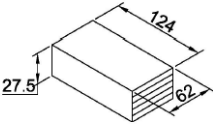
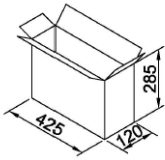
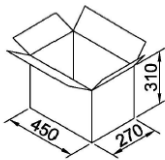
## Microphone Handling Precautions

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°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)



## Packaging

|                | Drawing   | Qty (pcs.)          | Size(mm)<br>L×W×H | Material |
|----------------|---|---------------------|-------------------|----------|
| Packing        |  | 100                 | 61×61×4.5         | Paper    |
| Inner Package  |  | 1000<br>(10×100)    | 124×62×27.5       | Paper    |
| Middle Package |  | 50000<br>(50×1000)  | 425×120×285       | Paper    |
| Outer Package  |  | 100000<br>(2×50000) | 450×270×310       | Paper    |

### Specifications Revisions

| <b>Revision</b> | <b>Description</b>          | <b>Date</b> |
|-----------------|-----------------------------|-------------|
| -               | Released from Engineering   | 6/6/2017    |
| A               | Revised Microphone Polarity | 2/20/2018   |

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.