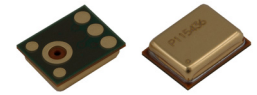


# Knowles analog microphone for far-field IoT and ANC Ear applications

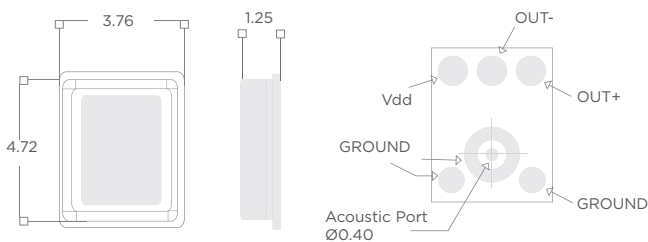


## PRODUCT OVERVIEW

- ▶ 70 dB Signal-to-Noise Ratio (SNR) enables far-field voice pick up for IoT applications.
- ▶ 130 dB Acoustic Overload Point (AOP) provides a large dynamic range for barge-in applications.
- ▶ Low phase distortion lends to superior ANC algorithm performance.
- ▶ Differential mode configuration improves noise immunity to power supply variations, allowing extension of microphone PCB traces.
- ▶ +/-1 dB matching enhances multi-mic array performance.

| KEY PARAMETERS                     | SPECIFICATIONS   |
|------------------------------------|--|
| Signal-to-noise ratio (SNR)        | 70 dB (A)  |
| Acoustic Overload Point (10% AOP)  | 130 dB SPL   |
| Low Frequency Roll Off (LFRO)      | < 13 Hz  |
| Bandwidth ( $\pm 3$ dB)            | 13 kHz   |
| Current consumption                | 285uA @ 2.7V   |
| Sensitivity and Tolerance (dBV/Pa) | -40 +/- 1 dB (Single Ended)<br>-35 +/- 1 dB (Differential) |
| Supply voltage (V)                 | 2.3 to 3.6V  |
| Interface                          | Analog (SE/Diff)   |
| Port location                      | Bottom Port  |
| Package dimensions                 | 4.72 x 3.76 x 1.25 mm                                      |

## DIMENSIONS (MM)

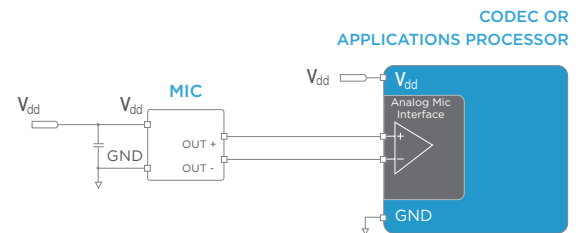


## TYPICAL APPLICATIONS

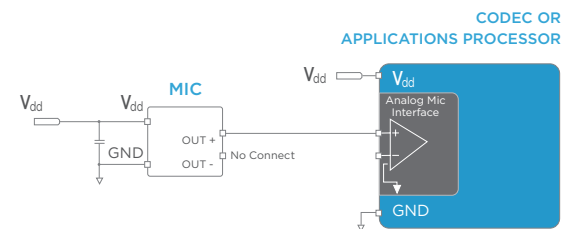
- ▶ Mic arrays for voice enabled smart home hubs
- ▶ Active Noise Cancelling (ANC) Headsets
- ▶ Voice enabled home/ industrial devices (thermostats, bulbs, fans, remote controls, TV)
- ▶ Speakerphones, Teleconference systems

## APPLICATION NOTES

TYPICAL DIFFERENTIAL MODE APPLICATION CIRCUIT



TYPICAL SINGLE ENDED MODE APPLICATION CIRCUIT



RECOMMENDATIONS FROM THE MANUFACTURER OF THE SPECIFIC CODEC BEING USED ARE EXPECTED TO BE FOLLOWED.

## CONTACT

For inquiries, please contact your nearest Knowles representative or Knowles at: [memsmicinfo@knowles.com](mailto:memsmicinfo@knowles.com)

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