



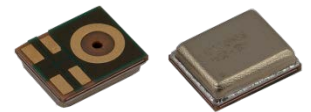
THE DATASHEET OF SPH1878LR5H-1





SPW0878LR5H-1
ELLEN

Knowles versatile, high-performance, multi-mode analog microphone

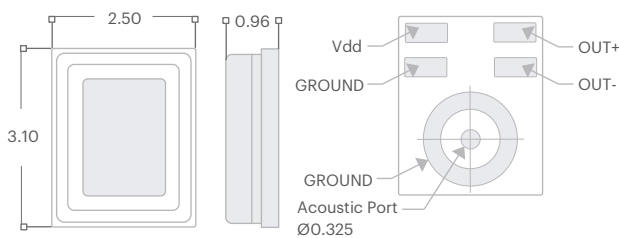


PRODUCT OVERVIEW

- ▶ Low (15Hz) LFRO and Tight Phase Tolerance enhance and improve ANC and beam forming algorithm performance
- ▶ 1% THD at 131 dB SPL and a large dynamic range enables improved barge-in performance and resilience to wind noise turbulence
- ▶ 65dB Signal-to-Noise Ratio (SNR) in a small footprint, ideal for a wide range of use cases and devices
- ▶ Multiple operating modes facilitates both high-performance and low-power/Always On applications

KEY PARAMETERS	LPM	SPM
Signal-to-noise ratio (SNR) (Diff/SE)	63 / 64.5 dB (A)	65 / 65 dB (A)
Acoustic Overload Point (1%/10% THD)	128 / 132 dB SPL	131 / 134 dB SPL
Low Frequency Roll Off (LFRO)	15 Hz	
Resonant Frequency	45 kHz	
Current consumption	70 uA	220 uA
Sensitivity and Tolerance	-38 ± 1 dB FS (Diff) / -44 ± 1 dB FS (SE)	
Supply voltage	1.6 to 1.9V	2.3 to 3.6V
Interface	Analog Differential or Single-Ended	
Port location	Bottom Port	
Package dimensions	3.10 x 2.65 x 0.96 mm	

DIMENSIONS (MM)



DISCLAIMER

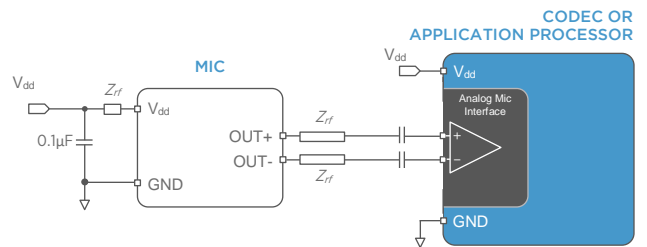
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TYPICAL APPLICATIONS

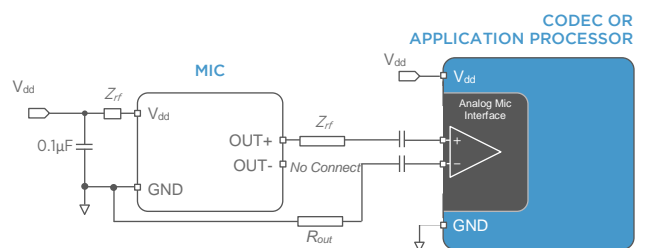
- ▶ Headsets
- ▶ Action Cameras
- ▶ Noise Cancellation
- ▶ Speech Enhancement
- ▶ Beam Forming

APPLICATION NOTES

TYPICAL DIFFERENTIAL APPLICATION CIRCUIT



TYPICAL SINGLE-ENDED APPLICATION CIRCUIT



Note: The above block diagram is for illustrative purposes only. Specific connectivity recommendations from the CODEC manufacturer should be followed.

CONTACT

For inquiries, please contact your nearest Knowles representative, or Knowles at: memsmicinfo@knowles.com

INFORMATION

For further information on technology, delivery terms and conditions and prices, please contact a Knowles representative.

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