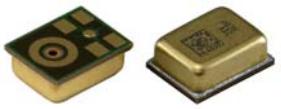
SPH1878 - High Performance Analog Automotive Microphone

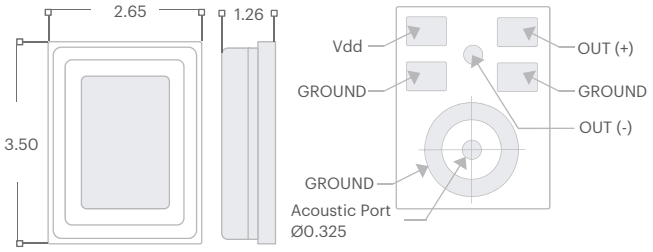


PRODUCT OVERVIEW

- AEC-Q100/103 Qualified for Automotive Robustness
- High Dynamic Range (67 dB SNR, 134dB AOP) for high-quality voice pick-up
- 7 Hz LFRO enables superior Active Noise Cancellation (ANC) for a quieter cabin
- Ultrasonic frequency response for proximity detection
- ±1 dB sensitivity matching, with an option to upgrade to ±0.5 dB matching, for enhanced beamforming performance
- Support for both Differential & Single Ended Modes

Key Parameters	Normal Mode	Low Power Mode
Signal-to-noise ratio (SNR)	67 dB (A)	64.5 dB (A)
Acoustic Overload Point (1% / 10% THD)	125 / 134 dB SPL	125 / 132 dB SPL
Low Frequency Roll Off (LFRO)	7 Hz	
Current Consumption	250 uA	100 uA
Sensitivity and Tolerance	-38 ± 1 (Single-Ended -44 ± 1) dB V/Pa	
Supply Voltage	2.3 to 3.6V	1.6 to 1.9V
Interface	Differential or Single-Ended Analog	
Port Location	Bottom Port	
Package Dimensions	3.50 x 2.65 x 1.26 mm	
Operational Temperature Range	-40° to +85°C	

DIMENSIONS (MM)

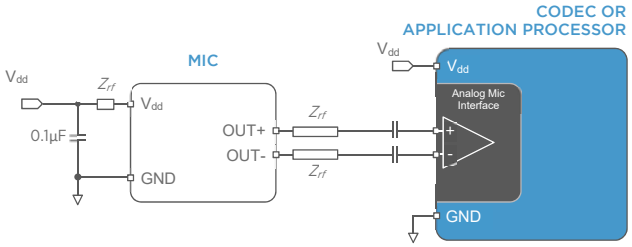


TYPICAL APPLICATIONS

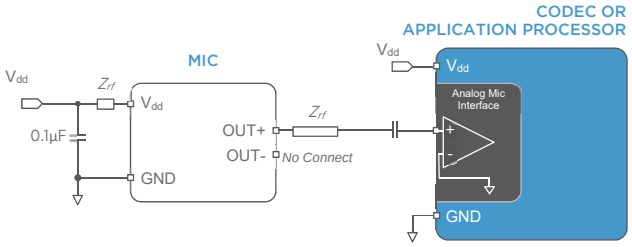
- Active Noise Cancellation
- Proximity Detection
- Voice Call / ECall

APPLICATION NOTES

TYPICAL DIFFERENTIAL MODE APPLICATION CIRCUIT



TYPICAL SINGLE-ENDED MODE APPLICATION CIRCUIT



Note: The above block diagram is for illustrative purposes only. For additional information, refer to the microphone datasheet.

CONTACT

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