

# XENSIV™ – IM68A130A

## Automotive MEMS microphone

The Infineon IM68A130A is part of the 2<sup>nd</sup> generation automotive qualified high performance MEMS microphones. The device has an analog interface in a PG-TLGA-4-2 package.

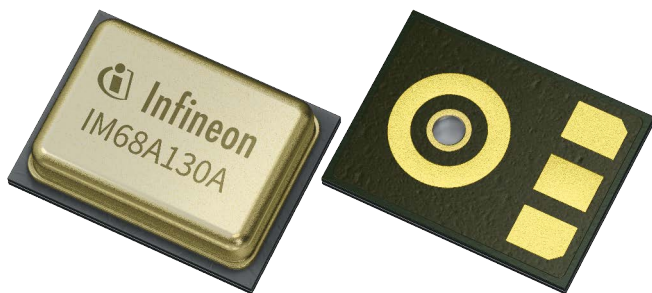
Infineon technical leadership in MEMS technology ensures best in class performance for this analog microphone. IM68A130A is designed to serve as a universal microphone for all automotive interior and exterior applications, due to its high Acoustic-Overload-Point (AOP) and low distortions (THD). This device is optimized for applications requiring a Low Frequency Roll Off (LFRO), making it best suited for Active Noise Cancellation (ANC). Its high Signal to Noise Ratio (SNR) improves speech quality and improves the speech intelligibility, making it also a perfect fit for speech applications.

Infineon's MEMS technology is based on a miniaturized microphone design and results in high linearity of the output signal within a high dynamic range. With its low equivalent noise floor, the microphone is no longer the limiting factor in the audio signal chain and enables higher performance of voice recognition algorithms.

The analog microphone ASIC contains an extremely low-noise preamplifier. The tight manufacturing tolerance, combined with the fact that each device is calibrated with an advanced Infineon calibration algorithm, results in small sensitivity and phase matching tolerances. This makes it well suited for multi-microphone applications like beam forming arrays.

### Potential applications

- Active Noise Cancellation (ANC) and Road Noise Cancellation (RNC) in vehicles
- Hands free calling
- Emergency call systems (e-call)
- Voice control/command



### Key features

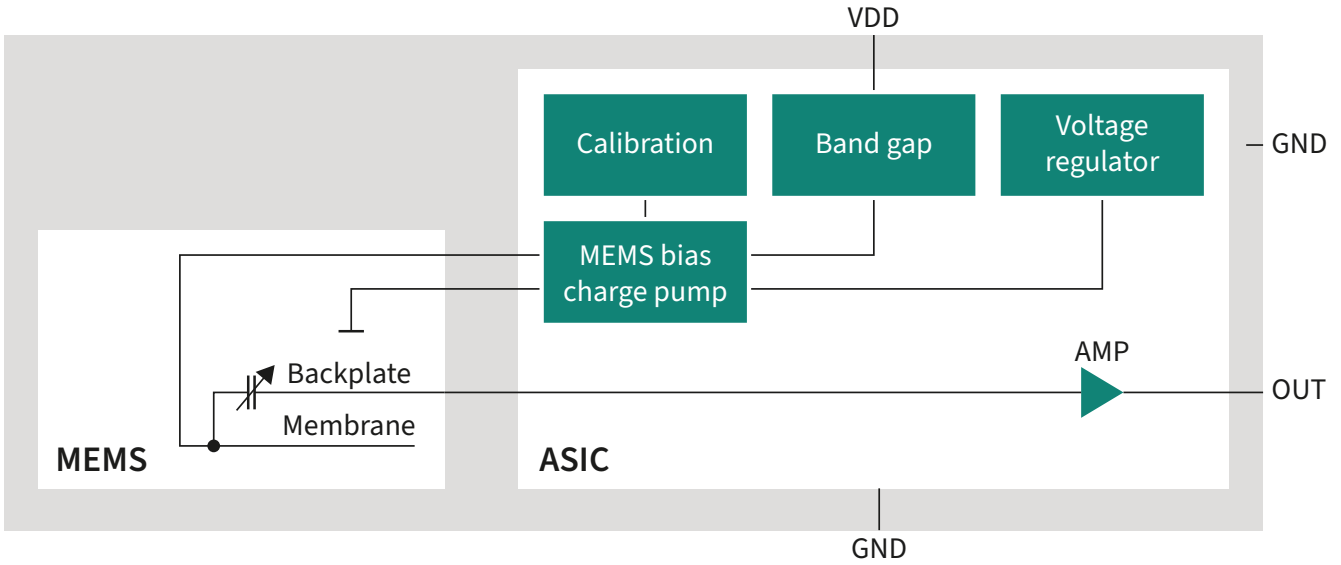
- Qualification according to AEC-Q103-003
- High Acoustic Overload Point (AOP) of 130 dB SPL
- 10 Hz low frequency roll off
- High Signal to Noise Ratio (SNR) of 68 dB(A)
- Enlarged operating temperature range up to +105°C
- Tight sensitivity (-38±1 dB) tolerance
- Analog single ended output

### Key benefits

- Flat frequency response with very low frequency roll off and small group delay for best ANC performance
- Extended availability to match long automotive design cycles
- Improved speech quality and higher speech intelligibility
- Low distortions and narrow sensitivity matching for best beam forming performance
- Reduced effort, risk, and costs of qualifications due to full AEC-Q103 qualification
- Flexible use in different application environments due to increased operating temperature range
- Single-ended analog interface for simple connection to audio DSP

PRODUCT BRIEF

Blockdiagram



Product table

Parametrics	IM68A130A
Signal to noise ratio (SNR)	>68 dB(A)
Acoustic overload point (AOP)	130 dB SPL
Total harmonic distortion (THD) @1%	116 dB SPL
Sensitivity @1 kHz, 94 dB SPL (dBV)	-38±1 dB
Low frequency roll off (LFRO)	10 Hz
Interface	Analog single ended
Current consumption	110 µA
Supply voltage	2.4 to 3.6 V
Port location	Bottom port
Package dimensions	3.35 x 2.50 x 0.98 mm
SP-Nr.	SP005738297



[www.infineon.com](http://www.infineon.com)

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