

Multi-Mode Microphone with I²S Digital Output

GENERAL DESCRIPTION

The ICS-43434 is digital I²S output bottom port microphone. The complete ICS-43434 solution consists of a MEMS sensor, signal conditioning, an analog-to-digital converter, decimation and antialiasing filters, power management, and an industry standard 24-bit I²S interface. The I²S interface allows the ICS-43434 to connect directly to digital processors, such as DSPs and microcontrollers, without the need for an audio codec in the system.

The ICS-43434 has multiple modes of operation: High Performance, Low Power (AlwaysOn), and Sleep. The ICS-43434 has high SNR and 120 dB SPL AOP in all operational modes.

The ICS-43434 has a high SNR of 64 dBA and a wideband frequency response. The sensitivity tolerance of the ICS-43434 is ± 1 dB, which enables high-performance microphone arrays without the need for system calibration.

The ICS-43434 is available in a small 3.50 mm \times 2.65 mm \times 0.98 mm surface-mount package. The ICS-43434 is function-compatible with the ICS-43432 while providing equivalent electro-acoustic performance at lower power consumption and in a smaller package.

APPLICATIONS

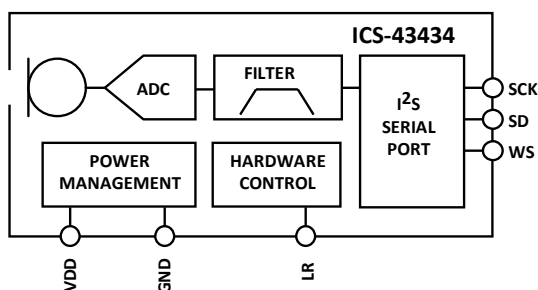
- Wearables
- Smart Televisions
- Remote Controls
- IoT Devices
- Teleconferencing Systems
- Gaming Consoles
- Security Systems

FEATURES

SPEC	HIGH PERFORMANCE MODE	LOW-POWER MODE
Sensitivity	-26 dB FS ± 1 dB	-26 dB FS ± 1 dB
SNR	64 dBA	64 dBA
Current	490 μ A	230 μ A
AOP	120 dB SPL	120 dB SPL
Sample Rate	23 – 51.6 kHz	6.25 – 18.75 kHz

- Digital I²S interface with high precision 24-bit data
- Wide frequency response from 60 Hz to 20 kHz
- High power supply rejection: -100 dB FS
- Small 3.50 mm \times 2.65 mm \times 0.98 mm surface-mount package
- Compatible with Sn/Pb and Pb-free solder processes
- RoHS/WEEE compliant

FUNCTIONAL BLOCK DIAGRAM



ORDERING INFORMATION

PART	TEMP RANGE	PACKAGING
ICS-43434	-40°C to +85°C	13" Tape & Reel
EV_IC3-43434-FX	—	