

Product Overview

FAN3852: Microphone Pre-Amplifier with Digital Output

For complete documentation, see the data sheet.

The FAN3852 integrates a pre-amplifier, LDO, and ADC that converts Electret Condenser Microphone (ECM) outputs to digital Pulse Density Modulation (PDM) data streams. The pre-amplifier accepts analog signals from the ECM and drives an over-sampled sigma delta Analog-to-Digital Converter (ADC) and outputs PDM data. The PDM digital audio has the advantage of noise rejection and easy interface to mobile handset processors.

The FAN3852 features an integrated LDO and is powered from the system supply rails up to 3.63V, with low power consumption of only 0.85mW and less than 20µW in Power-Down Mode.

Features

- Optimized for Mobile Handset and Notebook PC Microphone Applications
- Accepts Input from Electret Condenser Microphones (ECM)
- Pulse Density Modulation (PDM) Output
- Standard 5-Wire Digital Interface
- Low Input Capacitance, High PSR, 20 kHz Pre-Amplifier
- Low-Power 1.5µA Sleep Mode
- Typical 420µA Supply Current
- SNR of 62dB(A) for 16dB Gain
- Total Harmonic Distortion 0.02%
- Input Clock Frequency Range of 1-4MHz

For more features, see the data sheet

Applications

- Computing
- Consumer

End Products

- Electret Condenser Microphones with Digital Output
- Mobile Handset
- Headset Accessories
- Personal Computer (PC)

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Function	Control Type	f _s Max (kHz)	Power Dissipation Max (mW)	Supply Voltage Min (V)	Supply Voltage Max (V)	Operating Temp Min (°C)	Operating Temp Max (°C)	Package Type
FAN3852UC16X	0.1762	Pb-free Halide free non AEC-Q and PPAP	Active	Digital Audio Interface Receiver	None	WLCSP-6

For more information please contact your local sales support at www.onsemi.com.

Created on: 10/23/2021