

PRODUCT SUMMARY

SKY76206-11: Mono Low-Power Multi-Level Class-D Audio Amplifier IC

Applications

- Wireless earbuds
- Wireless headphones
- Active Noise Cancellation (ANC) circuits
- Portable electronics

Features

- Low power consumption:
 - Quiescent power <900 μ W
 - Standby power (I^2C activity) <100 μ W
 - Reset power <6 μ W
- High incremental output efficiency:
 - 84% (62 mW O/P to 16 Ω)
- High quality audio performance:
 - DNR > 110 dB (A-wt)
 - THD+N: -79 dB
 - PSRR: -94 dB (<5 kHz)
- Low latency: < 5 μ s
- Supply voltage inputs:
 - VBAT (3.3V to 4.9V)
 - VDDIO (1.2V to 1.8V)
- Internally generated low-voltage supplies
- Operating Modes:
 - Reset
 - Standby
 - Audio playback
 - Two output gain modes, 0 dB (Normal) and +6 dB (High)
 - Fault
- PDM interface
 - 3.072 MHz PDM Clock, mono 1-bit PDM Data
 - 3.072 MHz PDM Clock, stereo 1-bit PDM Data
 - 3.072 MHz PDM Clock, 1.5-bit mono PDM Data
 - 6.144 MHz PDM Clock, 1.5-bit stereo PDM Data

Features

- Serial Audio Interface (SAI):
 - Support for 44.1 kHz, 48 kHz and 96 kHz 32-bit data
 - SAI supports I^2S and left justified data formats
 - EN/WS pin used for Word Select
- Clock System:
 - Audio path clock derived from PDM or SAI clock in
 - Autonomous system clock for I^2C configuration without a PDM or SAI clock present
- Digital control:
 - RESET
 - EN (if not in SAI mode)
 - System/amp configuration (via I^2C)
 - Fault code read/clear (via I^2C)
- Host notification:
 - IRQ (active low)
- Multi-level, output driver/amplifier:
 - Programmable edge-rate control
 - Programmable non-overlap timing
 - Thermal protection
- Other features:
 - Supply fault protection
 - On-chip temperature fault protection
 - Chip unique ID and information in the OTP (can be read by host)
 - ESD: HBM = 1500 V, CDM = 300 V



Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to *Skyworks Definition of Green™*, document number SQ04-0074.

Ordering Information

Part Number	Part Description	Evaluation Board Part Number
SKY76206-11	Mono Low-Power Multi-Level Class-D Audio Amplifier IC	SKY76206-11EVK1

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