



Product Overview

NCP2704: Audio Management Subsystem - Power Amplifier, Class D

For complete documentation, see the [data sheet](#)

Product Description

The NCP2704 is a cost effective audio subsystem designed for portable applications such as cellular phones and portable media players. It has been designed to cover the power audio requirements in portable equipment, including a high fidelity Class D speaker amplifier and a Class G equivalent LongPlay true ground headphone amplifier. This patented headphone amplifier circuitry allows the removal of the bulky output capacitors and minimizes audio playback current consumption with minimum external components. In addition the user can set the output swing to have enough output dynamic even when a damping resistor is added. Through a flexible I²C interface, NCP2704 can support both single ended and differential types of analog input signals. In both cases, it offers a zero pop noise signature. The same interface allows a user defined architecture with an input control, highly accurate gain setting capability from -60 dB to +12 dB and output control. In addition, NCP2704 offers the possibility to reduce EMI perturbation by lowering the rise and fall times of the Class D outputs (software programmable). The loudspeaker amplifier also includes an AGC which performs two functions: limiter and non-clipping.

Features

- Flexible MUX capability and volume control
- -100 dB PSRR on headphone amplifier
-80 dB PSRR on loudspeaker amplifier
- Low EMI filterless Class D loudspeaker amplifier, programmable high efficiency or low EMI mode
- Programmable AGC: Non-clipping or power limit (loudspeaker output)
- LongPlay true ground headphone amplifier

Benefits

- Separated mixer control between loudspeaker and headset support, either differential or single-ended input
- High sound quality
- No output filter required
- Sound pressure level maximization and speaker protection
- Increased playback time

Applications

- Audio amplification

End Products

- Cellular phones
- Portable media player

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

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