

Audio Power Amplifier

Features and Key Specification

- Very high voltage operation $\pm 12V$ (max), $\pm 11V$ (recom.)
- Scalable output power $10W_{RMS}$ @ $4\ \Omega$ $\pm 10V$ V_{DD}
- Minimum external components with integrated high current output MOSFETs $5A$ pulse (max)
- External compensation β feedback circuit poss.
- Output capacitor less push pull topology
- Current Driven Class A $I_Q = 9mA$ (typ.)

Applications

- Pro Audio
- Headphone amplifier

Available Package

- SIP-10
- RoHS compliance

General Description

The CS6A4983 is an integrated audio power amplifier with new Class A operation for high fidelity audio amplification with a minimum number of external components. The CS6A4983 can operate with up to $\pm 12V$ power supply for high output power. However, to provide adequate voltage headroom to protect the device from breakdown, it is recommended to operate CS6A4983 at $\pm 11V$ or lower to obtain HiFi quality audio with good performance stability. When the amplifier is working with a $\pm 10V$ V_{DD} , it can deliver $10W_{RMS}$ on a $4\ \Omega$ speaker in an output capacitor-less amplifier topology that is free from cross-over distortion. The amplifier only requires a few external components to form the feedback circuit to operate, which also provide the advantage of allowing user to implement β feedback circuits for tonal and offset adjustment. The double current feedback sensing circuit will dynamically bias the CS6A4983 to drive large resistive and capacitive load with minimal power dissipation and without loss in fidelity. Such high performance amplifier not only minimizes the thermal noise problem, it also requires a small size heat sink and power supply to work with, and thus reducing the whole product size and cost.

Application Circuit

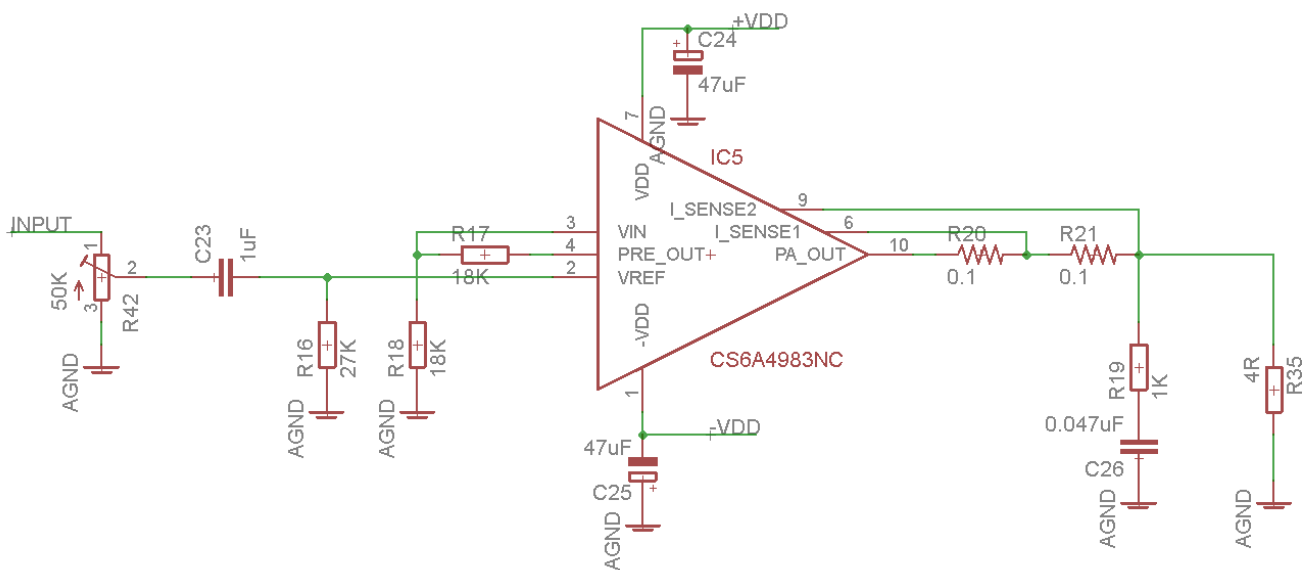


Figure 1. Typical Audio Amplifier Application Circuit

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