

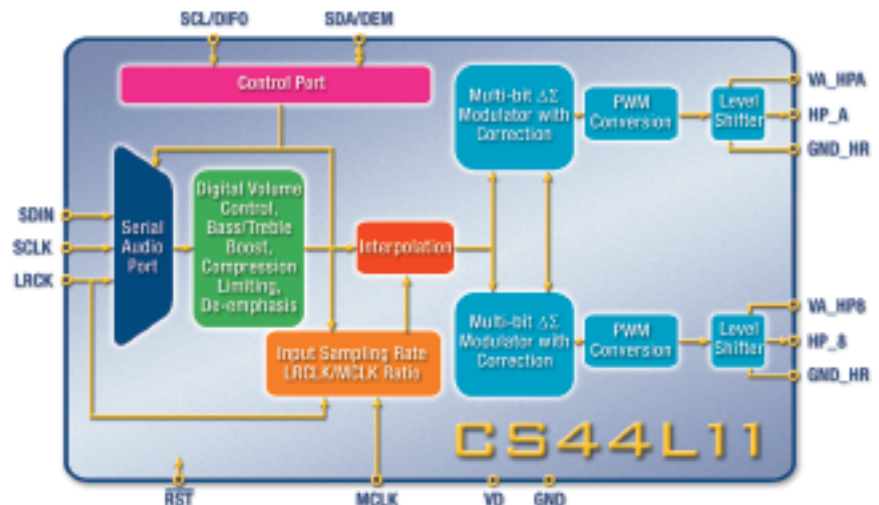
Low-Voltage Digital Headphone Amplifier

Low-Cost, High-Efficiency Design Ideal for Portable Audio Applications

CS44L11 Features

- Up to 100 dB dynamic range
- Sample rates up to 96 kHz
- 1.8 V to 2.4 V supply
- 23 mW/channel into 16 Ω at 2.4 V
- Digital tone control
 - Three selectable high-pass filter and low-pass filter corner frequencies
 - 12 dB boost for bass and treble - 1 dB step size
- Programmable digital volume control
 - 18 to -96 dB in 1 dB steps
- Peak signal soft limiting
- De-emphasis for 32 kHz, 44.1 kHz, and 48 kHz
- Selectable outputs for each channel including
 - Channel A: R, L, mono (L + R) / 2, mute
 - Channel B: R, L, mono (L + R) / 2, mute
- PWM Popguard® technology
- Package: 16-pin TSSOP

Actual Size



The CS44L11 is a complete, stereo, digital-to-audio, digital power headphone amplifier. The device's architecture uses a direct-to-digital approach that maintains digital signal integrity to the final output filter. This minimizes analog interference effects that can negatively impact system performance.

The CS44L11 contains on-chip digital bass and treble boost, peak signal limiting, and de-emphasis. The digital power amplifier can achieve greater than 90% efficiency. This efficiency leads to longer battery life for portable systems, smaller device size, and smaller power supplies.

This device is ideal for portable audio, headphone amplifiers, and mobile phones.