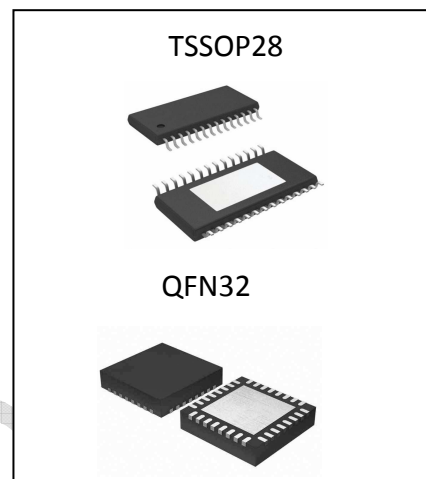

**10W+10W FILTER-LESS STEREO
CLASS-D AUDIO POWER AMPLIFIER**

Features

- 10W/ch into an 8- Ω Load at 10% THD+N from a 12V Supply
- 87% Efficient Class-D Operation eliminates need for Heat Sinks
- Wide Supply Voltage Range Allows Operation from 8 V to 15 V
- Filter-Free Operation
- Speaker Protection Includes Adjustable Power Limiter plus DC Protection
- Short Circuit Protection and Thermal Protection with Auto Recovery Option
- Excellent THD+N / Pop-Free Performance
- Four Selectable, Fixed Gain Settings
- Differential Inputs

**Description**

AM3823A is a Class-D audio power amplifier for driving stereo speakers in bridged-tied load (BTL) configuration. Advanced EMI Suppression Technology enables the use of inexpensive ferrite bead filters at the outputs while meeting EMC requirements. Speaker protection circuitry includes an adjustable power limiter and a DC detection circuit. The adjustable power limiter allows the user to set a "virtual" voltage rail lower than the chip supply to limit the amount of current through the speaker. The DC detect circuit measures the frequency and amplitude of the PWM signal and shuts off the output stage if the input capacitors are damaged or shorts exist on the inputs. The AM3823A can drive stereo speakers as low as 4 Ω . The high efficiency of the AM3823A, 87%, eliminates the need for an external heat sink when playing music. The outputs are also fully protected against shorts to GND, VCC, and output-to-output. The short-circuit protection and thermal protection includes an auto-recovery feature.