

2x25W Stereo / 2x15W+1x30W 2.1CH / 4x15W 4CH Class-D Audio Amplifier with Power Limit

Features

- Single supply voltage
4.5V ~ 20V for loudspeaker driver
Built-in LDO output 5V for others
- Loudspeaker power from 18V supply
BTL output: 15W/CH into 8Ω @<1% THD+N
PBTL Mode: 30W/CH into 4Ω @<1% THD+N
- Loudspeaker power from 12V supply
BTL output: 10W/CH into 8Ω @10% THD+N
PBTL output: 15W/CH into 4Ω @<1% THD+N
- 88% efficient Class-D operation eliminates need for heat sink
- Differential inputs
- +26dB fixed gain setting
- Internal oscillator
- Short-Circuit protection with auto recovery option
- Under-Voltage detection
- Over-Voltage protection
- Pop noise and click noise reduction
- Adjustable power limit function for speaker protection
- Output DC detection for speaker protection
- Filter-Free operation
- Over temperature protection with auto recovery
- Superior EMC performance

Applications

- Boom-Box
- Powered speaker
- Monitors
- Consumer Audio Equipment

Description

The AD53060 is a high efficiency stereo class-D audio amplifier with adjustable power limit function. The loudspeaker driver operates from 4.5V~20V supply voltage. It can deliver 15W/CHx4 output power into 8Ω loudspeaker within 1% THD+N at 18V supply voltage and without external heat sink requirement when playing music.

AD53060 provides parallel BTL configuration for stereo application also, and it can deliver 25W/CHx2 into 4Ω loudspeaker at 18V supply voltage. The adjustable power limit function allows user to set a voltage rail lower than half of 5V to limit the amount of current through the speaker.

Output DC detection prevents speaker damage from long-time current stress. AD53060 provides superior EMC performance for filter-free application. The output short circuit and over temperature protection include auto-recovery feature.

Simplified Application Circuit

