

## 2x16W Stereo / 1x20W Mono Class-D Audio Amplifier With Built-in Step-up Converter

### Features

- Input voltage 2.9V~12V
- Adjustable boost converter output up to 14V
- Loudspeaker power @12V boost from 7.4V  
Stereo: 8W/CH into 8Ω @THD+N=1%  
Stereo: 10W/CH into 8Ω @ THD+N=10%  
Stereo: 16W/CH into 4Ω @ <10% THD+N  
Mono (PBTL): 20W/CH into 4Ω @THD+N=10%
- Loudspeaker power @8V boost from 3.7V  
Stereo: 3.7W/CH into 8Ω @THD+N=1%  
Stereo: 4.6W/CH into 8Ω @THD+N=10%  
Stereo: 7.1W/CH into 4Ω @THD+N=1%  
Stereo: 8.8W/CH into 4Ω @THD+N=10%  
Mono (PBTL): 8.8W/CH into 4Ω @THD+N=10%
- Differential inputs signal
- Fixed gain setting
- Internal oscillator
- Short-Circuit protection with auto recovery option
- Under-Voltage detection
- Over-Voltage protection
- Pop noise and click noise reduction
- Output DC detection for speaker protection
- Filter-Free operation
- Over temperature protection with auto recovery
- Superior EMC performance

### Applications

- Blue-tooth Box
- Portable Media
- Audio Docking System
- Tablet Personal PC
- Consumer Audio Equipment

### Description

The AD52067 is a high efficiency stereo class-D audio amplifier with built-in boost DC-DC converter. The loudspeaker driver can deliver stereo 16W/CH output power into 4Ω loudspeaker under 10% THD+N at two-cell Li-ion battery (7.4V).

AD52067 provides parallel BTL (Mono) application also, and it can deliver 20W into 4Ω loudspeaker at 7.4V supply voltage.

Output DC detection prevents speaker damage from long-time current stress. AD52067 provides superior EMC performance for filter-free application. The output short circuit and over temperature protection include auto-recovery feature.

### Simplified Application Circuit

