

3.5W/CH Stereo Filter-less Class-AB/D Audio Amplifier

Features

- Supply voltage range: 2.5 V to 5.5 V
- Class-D and Class-AB speaker driver modes
- Static operation current:
 - Class-D mode: 8.0mA / 5V
 - Class-AB mode: 10mA / 5V
- Shutdown current: <1uA
- Loudspeaker peak power from 5V supply:
 - Class-D mode:
 - ◆ 3.5W x 2ch @ 4Ω, Po,10% THD+N
 - ◆ 2.9W x 2ch @ 4Ω, Po,1% THD+N
 - Class-AB mode:
 - ◆ 3.0W x 2ch @ 4Ω, Po,10% THD+N
 - ◆ 2.2W x 2ch @ 4Ω, Po,1% THD+N
- EMI reduction
- Power-limit control
- Non-Crack-Noise (NCN) Function
- Pop noise and click noise reduction
- High-efficiency: 93% (3.6V/8ohm/0.8W/Class-D mode)
- Protection function
 - Under-Voltage detection
 - Short-Circuit protection
 - Over temperature protection
 - DC output detection

Applications

- Portable Multimedia Devices
- Mobile Phones
- GPS
- Notebook computer

Description

The AD52040 is a high-efficiency, high-quality stereo audio amplifier which can operate in Class-D or Class-AB mode.

The non-crack-noise (NCN) function is enabled to prevent output signal from distortion when the input signal exceeds a threshold level. The power-limit control can provide further limit output power level of amplifier. All these functions are performed automatically.

AD52040 features two control modes, controlled by a one-wire pulse signal, to achieve different speaker driving mode. AD52040 is available in E-TSSOP-24L package.

Application Circuit

