

**12V STEREO CLASS-D AUDIO POWER AMPLIFIER**

**Features**

- Operate from 8-12V supply voltage
- Class D power
  - 9.5W/ch into 8Ω from 12V supply @ 10% THD+N for stereo
  - 11.8W/ch into 6Ω from 12V supply @ 10% THD+N for stereo
- Support single-ended or differential analog input
- Antipop design
- Over-temperature protection
- Over-current protection
- Clock output for synchronization with multiple Class D devices
- Two volume control modes
  - 31 step DC volume control
  - 4 selectable, fixed gain setting
- 48-pin E-LQFP package

**Applications**

- TV audio
- Boom-Box
- Powered speaker

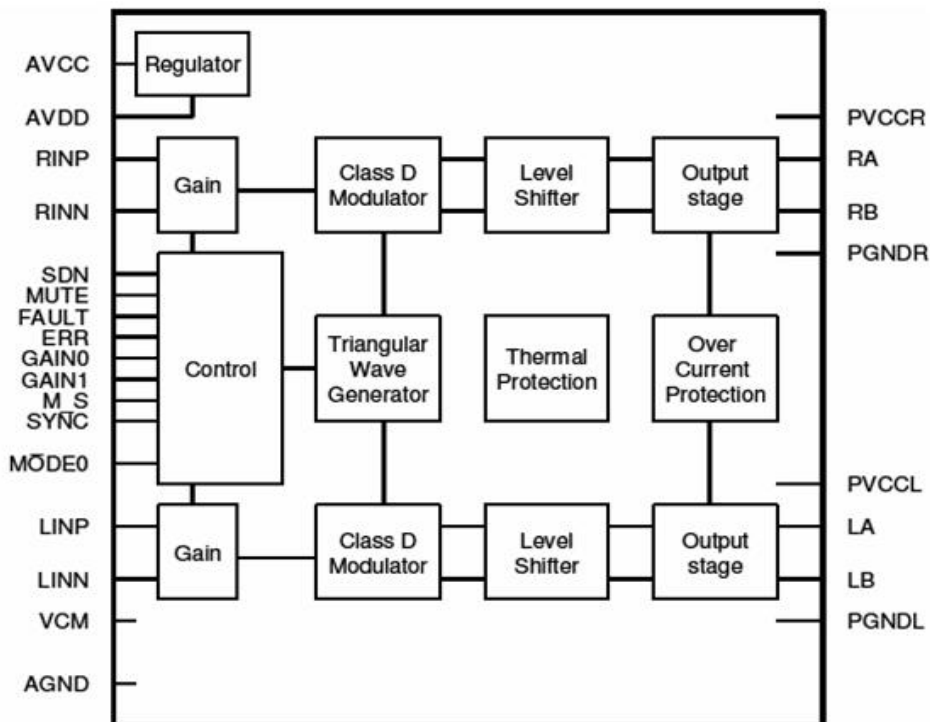
**Description**

The AD52660A is a high efficiency stereo class-D audio amplifier. Operating with 8 ~ 12V supply, it can deliver 9.5W/CH output power into 8 Ω loudspeaker within 10% THD+N and without external heat sink.

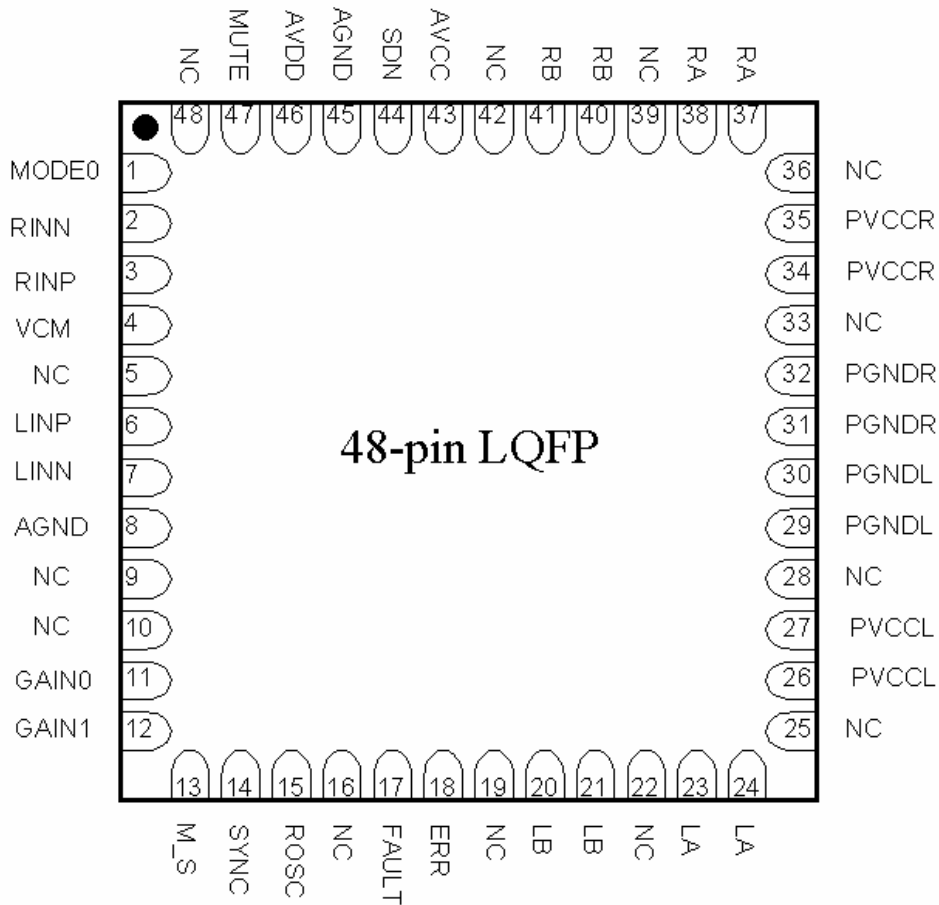
The AD52660A has two volume control modes by setting MODE0 pin. While MODE0 pin is set logic high, AD52660A is in DC volume control mode with 31-step volume gain, adjusted by the DC voltage applied on GAIN0 pin. Otherwise, AD52660A is the 4-step volume gain mode, selected by setting GAIN0 and GAIN1 pins. The two volume adjustment modes are designed to fit the different volume control requirements in various applications.

The AD52660A packaged as E-LQFP 48L is a stereo audio amplifier with high efficiency and low thermal resistance which leads to no external heat sink requirement under 9.5W/ch output power.

**Functional Block Diagram**



**Pin Assignments**



**Pin Description**

PIN	NAME	TYP	DESCRIPTION
1	MODE0	I	Mode0 control terminal
2	RINN	I	Negative audio input for right channel. Biased at ½ AVDD
3	RINP	I	Positive audio input for right channel. Biased at ½ AVDD
4	VCM	O	Reference for internal amplifiers. Normally equal to ½ AVDD.
5	NC		
6	LINP	I	Positive audio input for left channel. Biased at ½ AVDD
7	LINN	I	Negative audio input for left channel. Biased at ½ AVDD
8	AGND	P	Analog ground
9	NC		
10	NC		
11	GAIN0	I	Gain select bit 0.