

2.7W Boosted Class-D Audio Power Amplifier

DESCRIPTION

The EUA2510 integrates a current-mode boost converter with a high efficiency mono, Class D audio power amplifier to provide 2.7W/10% THD or 2W/1% THD continuous power into a 4Ω speaker when operating on a 3.3V power supply with boost voltage (PV1) of 5V. The Class D amplifier is a low noise, filterless PWM architecture that eliminates the output filter, reducing external component count, board area consumption, system cost, and simplifying design.

The EUA2510's boost converter, operating at a fixed frequency of 600KHz, generates a high voltage rail which is used to supply the Class-D amplifier. The EUA2510 features a low-power consumption shutdown mode. Shutdown may be enabled by driving the Shutdown pin to a logic low (GND).

The gain of the Class D is externally configurable which allows independent gain control from multiple sources by summing the signals. Output short circuit and Thermal shutdown protection prevent the device from damage during fault conditions. Superior click and pop suppression eliminates audible transients during power-up and shutdown.

FEATURES

- 2.7W/10% THD into a 4Ω Load with a 3.3V Supply
- Fully Differential Inputs
- Externally Configurable Gain on Class D
- 2.7V - 5V operation (V_{DD})
- Independent Boost and Amplifier Shutdown Pins
- 0.5μA Shutdown Current
- Integrated Pop and Click Suppression Circuitry
- 3mm × 4mm TDFN-14 Package
- RoHS compliant and 100% lead(Pb)-free

APPLICATIONS

- Mobile Phones
- GPS
- Portable media
- Handheld games

Typical Application Circuit

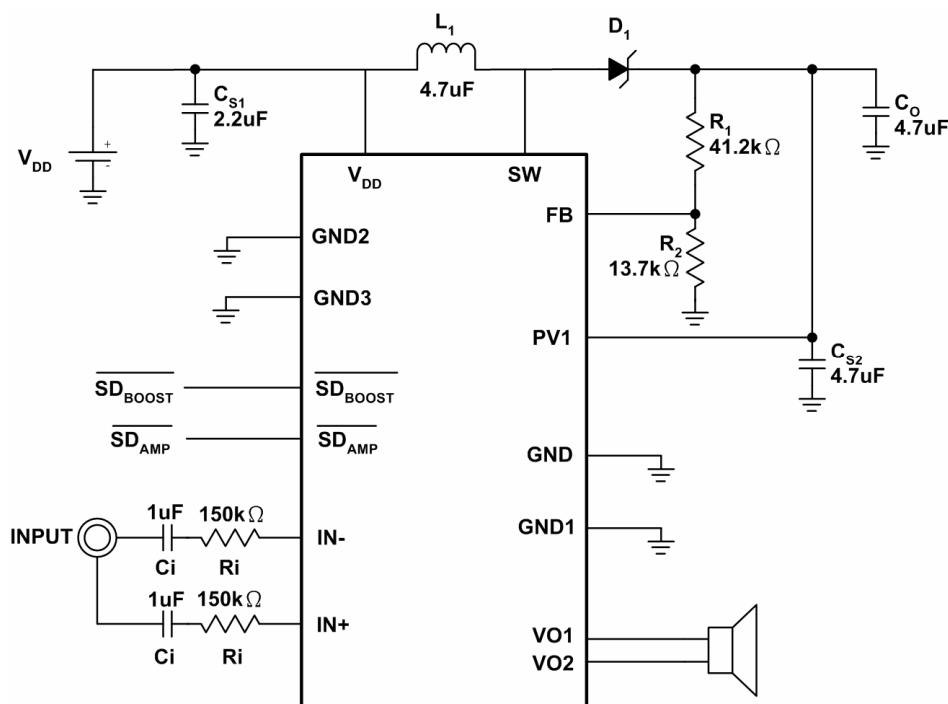


Figure1.