

15-W Stereo Class-D Audio Power Amplifier with Speaker Protection

DESCRIPTION

The EUA2310B is a high efficiency, 2 channel bridged-tied load (BTL), class-D audio power amplifier. Operating from a 16V power supply, EUA2310B is capable of delivering 15W/ channel of continuous output power to a 8Ω load with 10% THD+N. The EUA2310B features a differential input architecture offering improved noise immunity over a single-ended (SE) input amplifier. Amplifier gain is internally configured and can be selected to 20, 26, 32 or 36dB utilizing the G0 and G1 gain select pins. Advanced EMI suppression technology enables the use of inexpensive ferrite bead at the outputs while meeting EMC requirements.

The speaker protection circuitry is integrated into EUA2310B to limit the amount of current through the speaker. Meanwhile, the AGC detects output signal clip due to the over level input signal and suppresses it automatically. The EUA2310B also features short-circuit and thermal protection preventing the device from being damaged during a fault condition. The EUA2310B is available in thermally efficient 28-pin TSSOP package.

FEATURES

- Wide Supply Voltage: 5.5V to 26V
- Unique Modulation Scheme Reduces EMI Emission
- 15-W/ch into an 8-Ω Load From a 16-V Supply
- 10-W/ch into an 8-Ω Load From a 13-V Supply
- 30W into a 4-Ω Mono Load From a 16-V Supply
- 87% Efficient Class-D Operation Eliminates Need for Heat Sinks
- Four Selectable, Gain Settings
- Differential Inputs
- Speaker Protection Circuitry
- Auto Gain Control and Power Clamp
- Thermal and Short-Circuit Protection
- 28-pin TSSOP Package with Thermal Pad
- RoHS compliant and 100% lead(Pb)-free Halogen-Free

APPLICATIONS

- Televisions

Typical Application Circuit

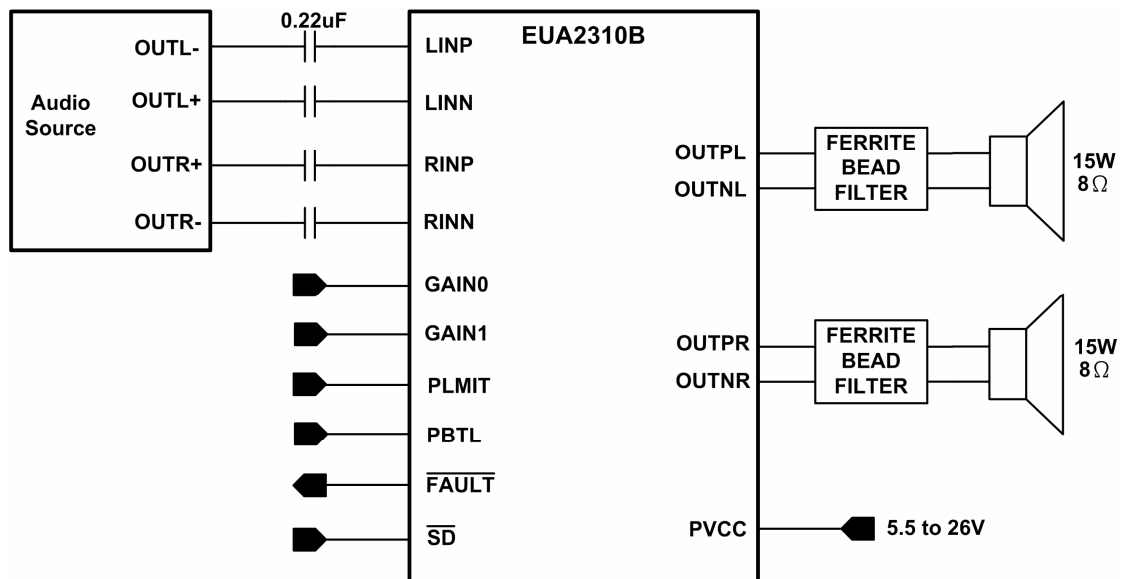


Figure1. Simplified Application Schematic