

20-W Stereo Digital Audio Power Amplifier with EQ, 3-Band AGL and 3D

DESCRIPTION

The EUA2850 is a 20-W, digital audio power amplifier with 4 half-bridged power drivers. The EUA2850 is a slave device that all clocks are provided by the external sources. One serial data input allows processing of up to two discrete audio channels and seamless integration to most digital audio processors. A bidirectional I²C interface allows reading or writing to change the internal register status.

Advanced EMI Suppression Technology enables the use of inexpensive ferrite bead filters at the outputs while meeting EMC requirements for system cost reduction.

The EUA2850 also features short-circuit and thermal protection preventing the device from being damaged during a fault condition. The EUA2850 is available in thermally efficient 48-pin TQFN package.

FEATURES

- **Audio Input/Output**
 - Wide Power Supply Voltage: 5 V to 22 V
 - Digital and analog Supply: 1.8V and 3.3V
 - 20W/ch into an 8-Ω Load from an 18-V Supply
 - 40W into a 4- Ω Mono Load from an 18-V Supply
 - Supports 8 kHz - 196kHz Sample Rates Serial Audio Input (LJ/RJ/T²S)
 - Bidirectional I²C interface
 - SDOOUT for Echo Cancellation

- **Audio Processing**
 - DC Blocking Filters
 - Channel Volume Control 24 dB to mute
 - 20 Biquads for Speaker EQ
 - Programmable 3-Band Automatic Gain Limiting (AGL)
 - 3D Effects
- **Benefits**
 - EQ: Speaker Equalization Improves Audio Performance
 - DRC: Enables Speaker Protection and Night-Mode Listening
 - Soft Mute
 - Auto detect: Automatically Detects Sample-rate Changes
 - Thermal and Short Circuit Protection
- Available in TQFN-48L (EP) Package
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

APPLICATIONS

- LCD TV
- Low Cost Audio Equipment
- Sound Bar

Typical Application Circuit

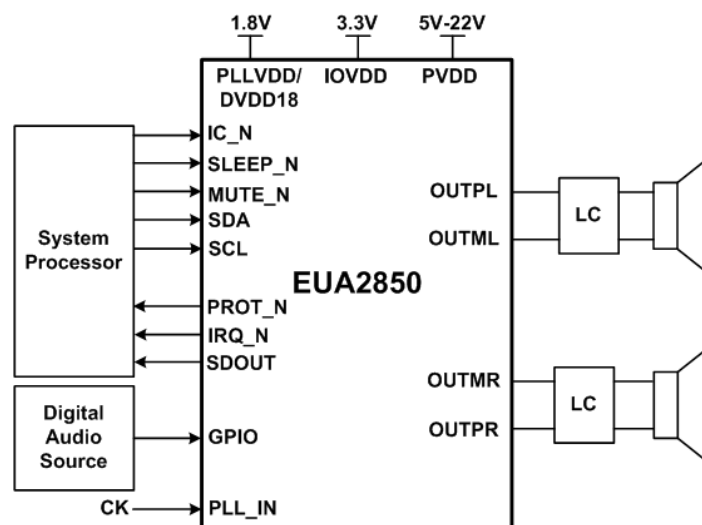


Figure1. Simplified Application Schematic