

## Advanced Stereo Headphone Amplifier

### DESCRIPTION

EUA6211 is a dual audio power amplifier designed for portable communication device applications such as mobile phones. EUA6211 operates from a single 2.5V to 5.5V supply, consumes only 3.8mA of supply current, capable of delivering 30mW of continuous average power into a 16Ω load from a 3V power supply with a THD+N of 1%.

Base on the power supply delivered to the device, an internal power management block generates a negative voltage. Thus, the internal amplifiers provide outputs referenced to Ground. In this configuration, the two external heavy coupling capacitors can be removed. It offers significant space and cost savings compared to a typical stereo application.

EUA6211 has an internal gain of  $-1.5V/V$  with low 0.03% THD+N performance. An 80dB at 1kHz power-supply rejection ratio (PSRR) allows these devices to operate from noisy digital supplies without an additional linear regulator. Comprehensive click-and-pop circuitry suppresses audible clicks and pops on startup and shutdown.

Other features include short-circuit and thermal-overload protection, and are specified over the extended  $-40^{\circ}C$  to  $+85^{\circ}C$  temperature range. The device is available in tiny 12- bump WCSP (1.5mm×2mm) and TDFN-12 packages.

### FEATURES

- No Bulky DC-Blocking Capacitors Required
- 2.5V to 5.5V Operation
- Fixed  $-1.5V/V$  Gain
- Low 0.03% THD+N
- High PSRR (80dB at 1kHz)
- Integrated Click-and-Pop Suppression
- Low Quiescent Current (3.8mA)
- Low-Power Shutdown Mode,  $< 0.1\mu A$
- Available in Space-Saving 12-Bump WCSP (1.5mm × 2mm) and TDFN-12 Packages
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

### APPLICATIONS

- Cellular Phones
- MP3 Players
- Notebook PCs
- Handheld Gaming Consoles

### Typical Application Circuit

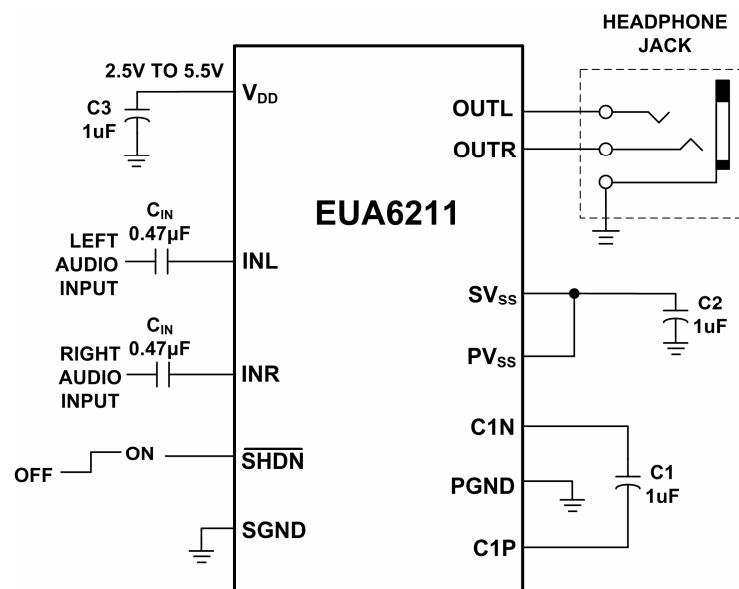


Figure1.