

## 2W High Efficiency Mono Class-D Audio Power Amplifier with Non-Clip, Power Limit

### DESCRIPTION

The EUA2069 is a high efficiency, low noise, class-D audio power amplifier. A low noise, filterless PWM architecture eliminates the output filter, reducing external component count, system cost, and simplifying design.

The power amplifier, having power limit interlock non-clip function, controls gain automatically and prevents output signals from being clipped at the supply voltage. Moreover, EUA2069 permits an accurate output in the entire supply voltage range of battery (3.3V to 4.3V) with the new architecture of charge pump. EUA2069 has three output power modes: 0.8W, 1W and 1.2W, speakers with rated power of 0.7W or higher is recommended. And with the efficiency up to 82%, EUA2069 increases the working time of the smart phone greatly.

Furthermore, EUA2069 also integrates over current and over temperature protection functions, DC output protection function and EMI noise and the pop noise reduction functions.

The EUA2069 is available in space-saving 1.8mm×1.82 mm WCSP-16 packages.

### FEATURES

- Unique Modulation Scheme Reduces EMI Emissions
- Unique Non-Clip Function, Variable NCPA, NCPB, NCPC, NCPOFF mode Select
- Short Circuit Auto-Recovery
- Low Quiescent Current and Shutdown Current
- Optimized PWM Output Stage Eliminates LC Output Filter
- Fully Differential Design Reduces RF Rectification and Eliminates Bypass Capacitor
- Overcurrent Protection Function (OCP)
- Overtemperature Protection Function (OTP)
- DC Output Protection Function (DCOP)
- Power Limit Function
- 2W 8-Ω Load at VDD =4.2V, THD+N <10%
- 1.8mm×1.82mm WCSP-16 Package
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

### APPLICATIONS

- Smart Phones/Cellular Phones
- Portable Multimedia Players

### Typical Application Circuit

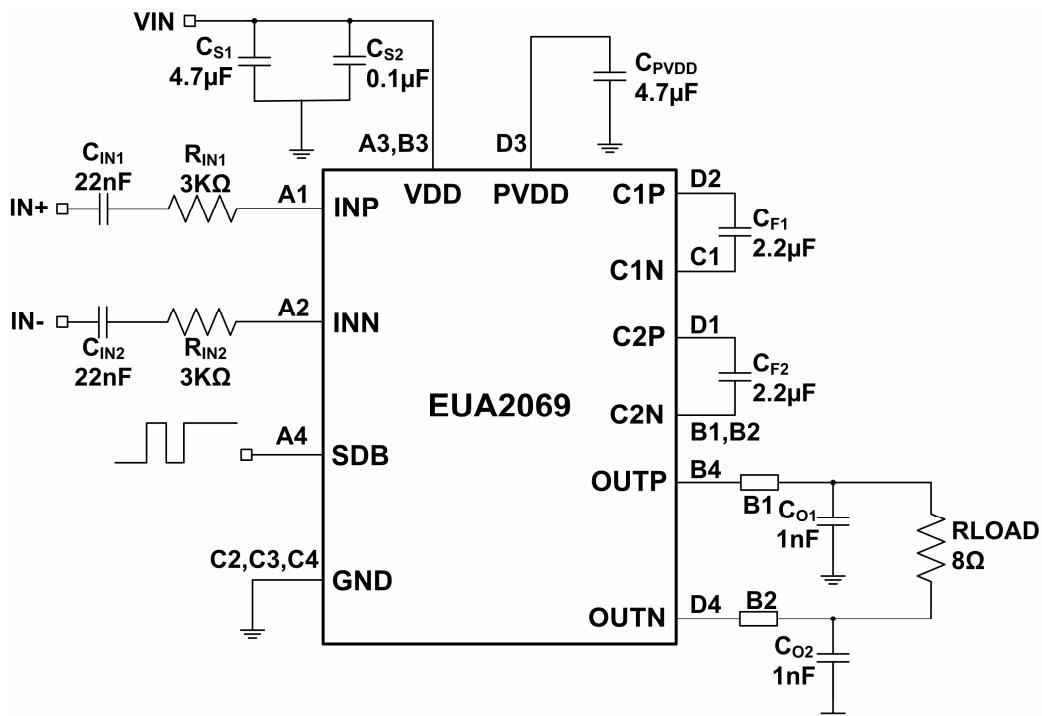


Figure1.