

## 2.4W Charge Pump Class-G Audio Amplifier

### GENERAL DESCRIPTION

The ft2811 is a Class-G audio power amplifier with battery-tracking AGC technology. It integrates a charge pump and drives up to 2.4W into an 8  $\Omega$  speaker (10%THD). With 74% efficiency, the ft2811 helps extend battery life when playing audio.

The built-in charge pump generates a 6V supply voltage for the Class-G amplifier. This provides a louder audio output than a stand-alone amplifier directly connected to the battery. The AGC technology helps to adjust Class-G gain automatically.

The ft2811 has an integrated lowpass filter. It helps you get lower EMI noise and increase SNR.

The ft2811 is available in QFN3x3-20L and QFN4x4-28L Package

### FEATURES

- Wide Supply Voltage Range from 2.7V to 5.5V
- Class-G Audio Amplifier with Integrated ChargePump
- Constant Output Power at 2.4W into 8 $\Omega$  Load from 4.0V Supply
- Automatic Gain Control for Battery Tracking
- Integrated Lowpass Filter for Out-of-Band Noise Rejection
- Four Gain Settings: 12/16/24/28dB
- One-Wire Pulse adjust Gain Control
- Short-Circuit Protection with Hiccup Mode
- Low EMI noise
- High Power Efficiency up to 74%.
- Available in QFN3x3-20L and QFN4x4-28L Package

### APPLICATIONS

- Cell Phones
- Smart phones
- MP3/PMP
- GPS

### APPLICATION CIRCUIT

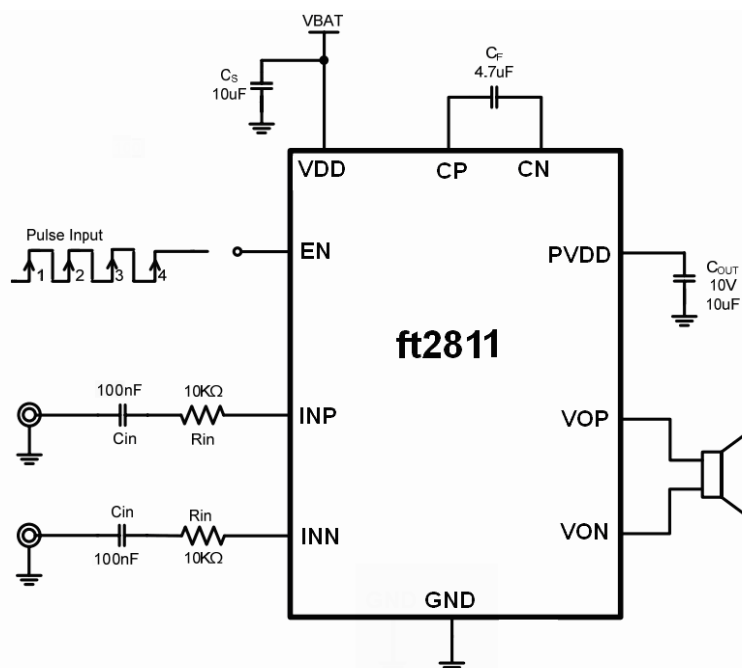
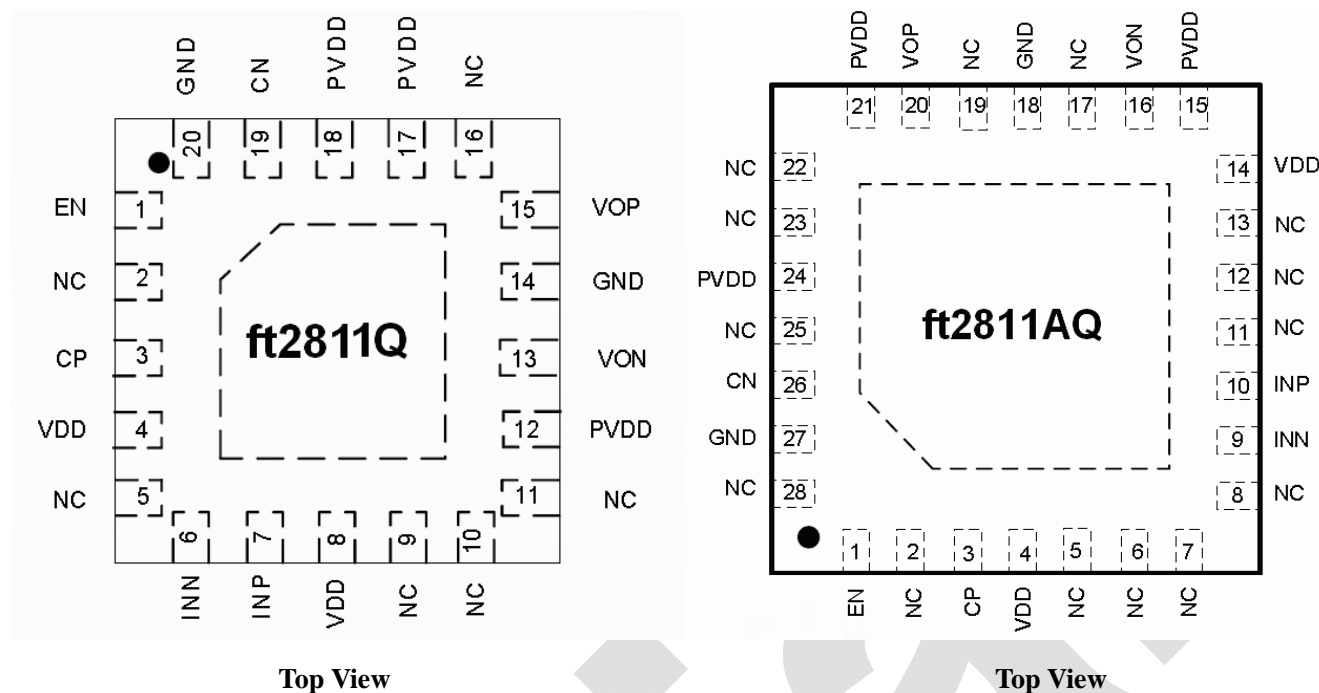


Figure 1: Typical Audio Amplifier Application Circuit

## PIN CONFIGURATION AND DESCRIPTION



| Symbol | QFN3x3-20L         | QFN4X4-28L                                      | I/O | Description                                     |
|--------|--------------------|---|-----|---|
| EN     | 1                  | 1   | I   | Chip enable                                     |
| NC     | 2,5,9,10,<br>11,16 | 2,5,6,7,8,<br>11,12,13<br>17,19,22,<br>23,25,28 | -   | NC  |
| CP     | 3                  | 3   | O   | Flying capacitor positive terminal.             |
| VDD    | 4,8                | 14  | P   | Power supply                                    |
| INN    | 6                  | 9   | I   | Negative audio input terminal (differential -). |
| INP    | 7                  | 10  | I   | Positive audio input terminal (differential +). |
| PVDD   | 12,17,18           | 15,21,24  | P   | Class-G Audio power amplifier voltage supply    |
| VON    | 13                 | 16  | O   | Negative audio output                           |
| VOP    | 15                 | 20  | O   | Positive audio output                           |
| CN     | 19                 | 26  | O   | Flying capacitor negative terminal.             |
| GND    | 14,20              | 18,27   | G   | Ground  |