

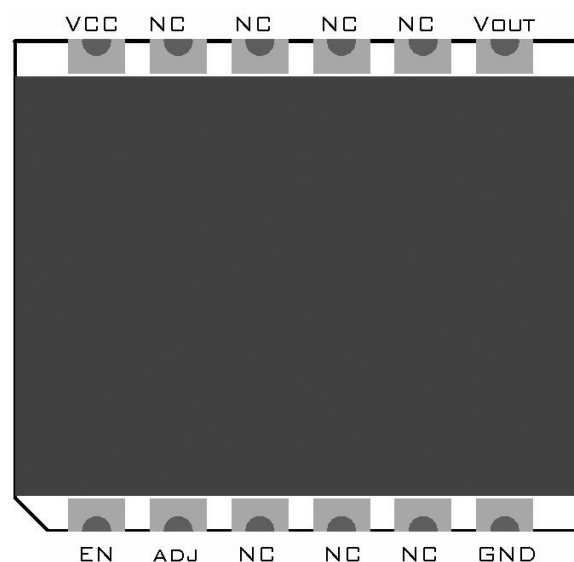
## General description

VMA2012 is a compact, low power, high efficiency 3Wx2 stereo class D audio amplifier.

## 1. Applications

- Instruments
- Handheld devices
- Communication equipments
- Battery powered devices
- Home entertainment
- Embedded, DSP, FPGA systems

## 2. Pinout



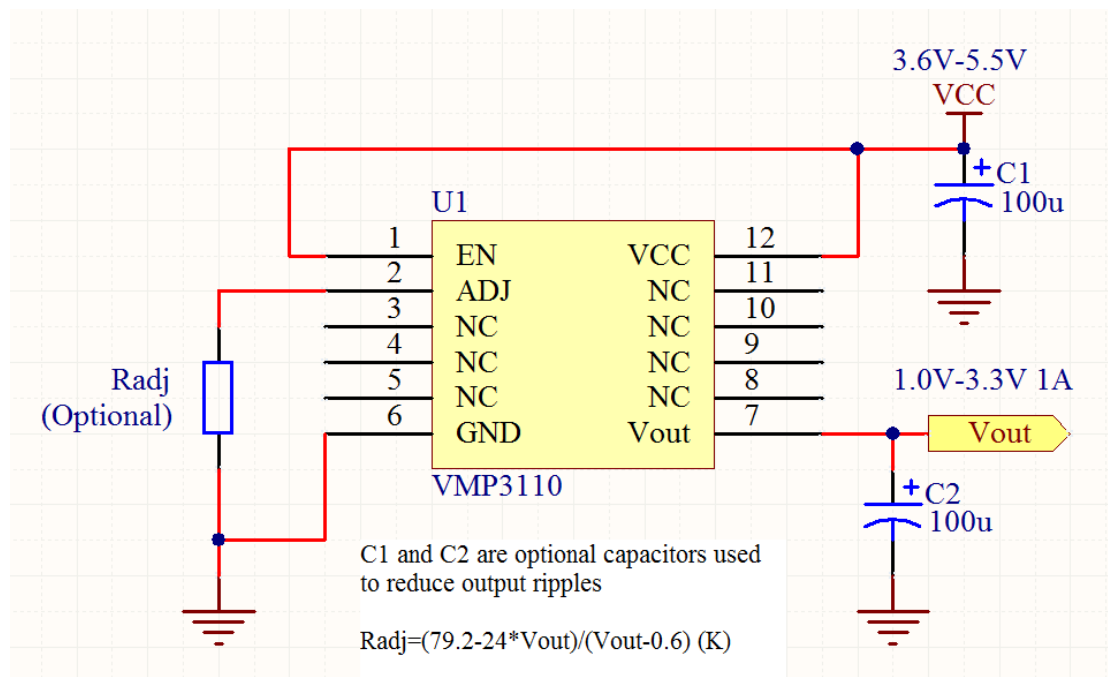
### Pin Description

| Pin No. | Name | Function Description  |
|---------|------|---|
| 1       | EN   | Connected to VCC will active the output. Connected to GND will put the module in idle mode  |
| 2       | ADJ  | Output voltage adjustment. Output voltage = 3.3v when Connected to GND. Connect a resistor between GND and ADJ can adjust the output voltage between 1.0V to 3.3V |
| 6       | GND  | Power Ground  |
| 7       | Vout | Voltage Output  |
| 12      | VCC  | Power input (3.6V-5.5V)   |

## 3. Electrical Characteristics

| Parameters     | Value                |
|----------------|----------------------|
| Supply Voltage | 3.6V to 5.5V         |
| Output Voltage | 1.0V-3.3V adjustable |
| Output Current | 1.0A                 |
| Efficiency     | 95% max              |
| Idle Current   | 10uA                 |
| Vp-p           | 50mV(full load)      |

## 4. Reference Design



## 5. Set the output voltage

The output voltage is programmed by connecting a resistor between ADJ (pin2) and GND. The value of Radj is calculated by the following formula:

$$R_{adj} = \frac{79.2 - 24 \times V_{out}}{V_{out} - 0.6} (K\Omega)$$

Radj can also be selected from the following table:

| Vout (V) | Radj (k) |
|----------|----------|
| 3.3      | -        |
| 3.0      | 3.0      |
| 2.5      | 10.1     |
| 2.0      | 22.3     |

