

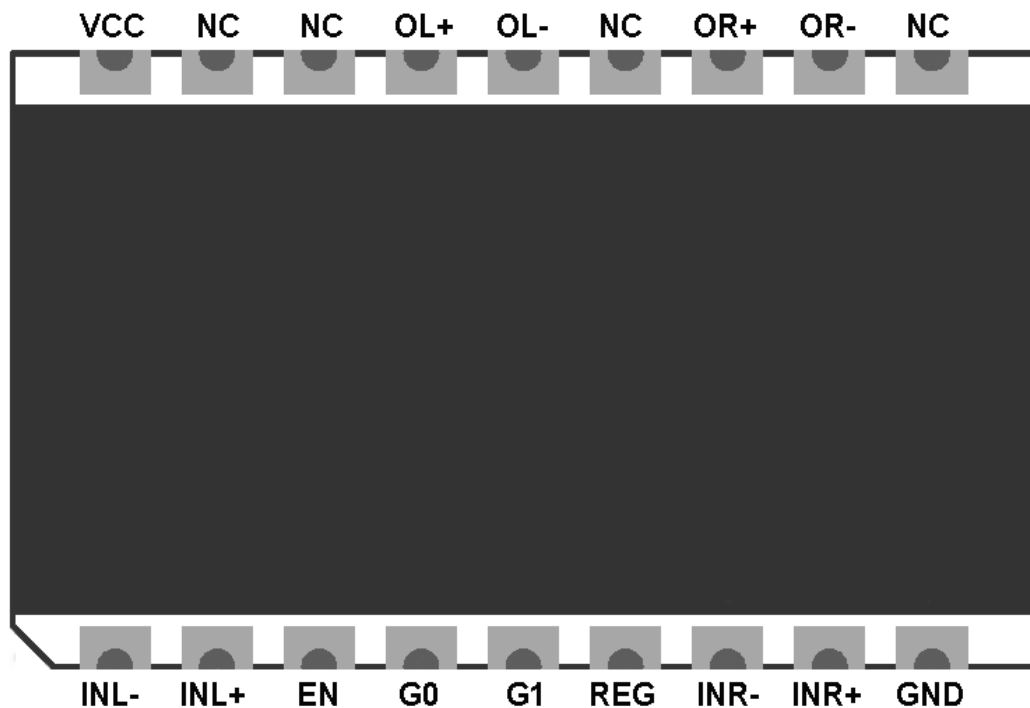
## General description

VMA2016 is a small size, low profile and high efficiency (up to 88%) stereo audio amplifier module. Output power is up to 10W per channel on 80hm load (THD = 10%). If the load is 160hm the maximum power can be up to 10W x 2. There's no noticeable heat even at the maximum output power.

## 1. Applications

- Portable audio
- Car audio
- Entertainment
- Desktop audio
- PC Audio
- Other high efficiency sound systems

## 2. Pinout



### Pin Description

| Pin No. | Name | Function Description                     |
|---------|------|--|
| 1       | INL- | Negative input of left channel           |
| 2       | INL+ | Positive input of left channel           |
| 3       | EN   | Enable, tide to VCC to enable the module |
| 4       | G0   | Gain set bit 0                           |



# VMA2016 10Wx2 Audio Amplifier

|             |      |  |
|-------------|------|--|
| 5           | G1   | Gain set bit 1                         |
| 6           | REG  | Regulated voltage output for G0 and G1 |
| 7           | INR- | Negative input of right channel        |
| 8           | INR+ | Positive input of right channel        |
| 9           | GND  | Power ground                           |
| 11          | OR-  | Negative output of right channel       |
| 12          | OR+  | Positive output of right channel       |
| 14          | OL-  | Negative output of left channel        |
| 15          | OL+  | Positive output of left channel        |
| 18          | VCC  | 10V-22V power input                    |
| 10,13,16,17 | NC   | No Connection                          |

## 3. Electrical Characteristics

| Parameters                 | Value  |
|----------------------------|--|
| Supply Voltage             | 10V-22V  |
| Channels                   | 2  |
| Max power<br>(THD+N = 10%) | 5W x 2 for 4Ω load<br>10W x 2 for 8Ω load<br>15W x 2 for 16Ω load    |
| Efficiency                 | 88% max  |
| Gain set                   | G1:G0=00 30dB<br>G1:G0=01 13.2dB<br>G1:G0=10 19.5dB<br>G1:G0=11 16dB |
| THD+N                      | 0.07%(4Wx2, 8Ω load)   |
| SNR                        | >90dB  |
| Vreg                       | 6V   |
| Input Impedance Rin        | >10kΩ  |
| Quiescent Current          | 24ma   |
| Shutdown current           | 1uA  |

## 4. Reference Design

