

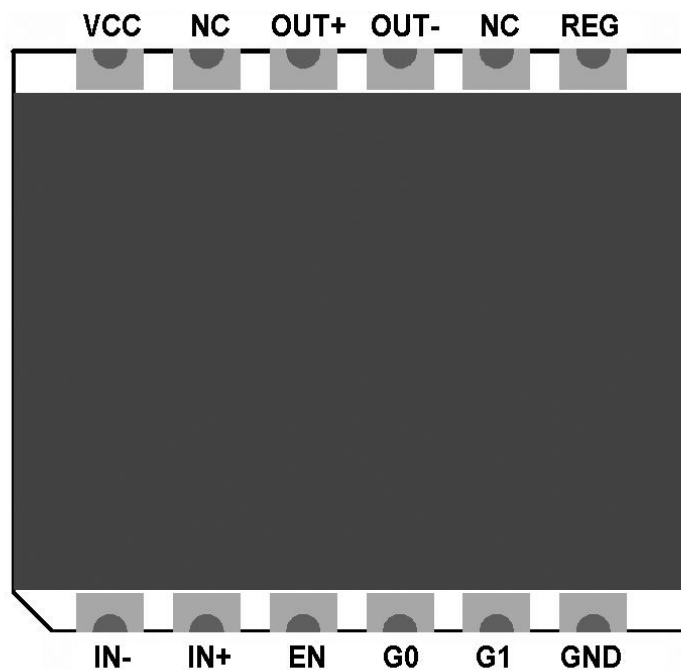
## General description

VMA2013/2015 are compact, low profile and high efficiency (up to 88%) stereo audio amplifier modules. Output power is up to 6W/15W per channel on 8Ohm load (THD = 10%). There's no significant heat generated 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, tie to VCC to enable the module
4	G0	Gain set bit 0

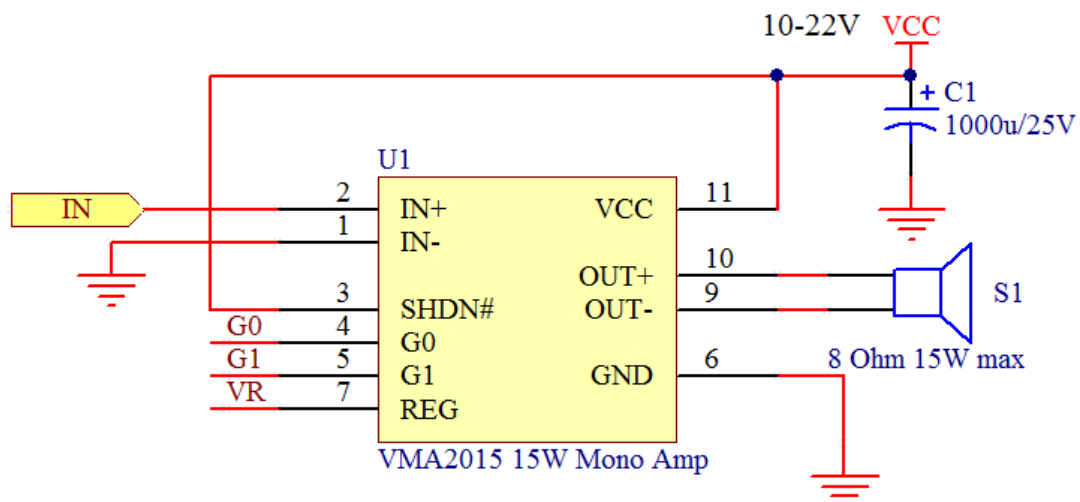
# VMA2013/2015 6W/15W Audio Amplifier

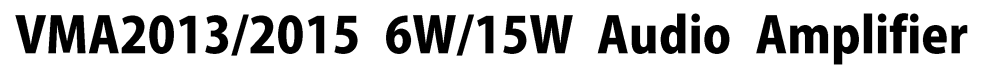
5	G1	Gain set bit 1
6	GND	Power supply ground
7	REG	Logic high supply for G0 and G1
9	OUT-	Negative output
10	OUT+	Positive output
12	VCC	Power supply
7,11	NC	No Connection

## 3. Electrical Characteristics

Parameters	Value
Supply Voltage	10V-22V
Channels	2
Max power (THD+N = 10%)	4W/10W for 4Ω load 6W/15W for 8Ω load 8W/20W for 16Ω load
Efficiency	88% max
Gain set	G1:G0=00 30dB G1:G0=01 13.2dB G1:G0=10 19.5dB 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





Technical drawing of a rectangular box with dimensions in inches and millimeters. The drawing includes a top view and a side view. The top view shows a rectangle with a dashed line indicating the internal dimensions. The side view shows the profile of the box with a rounded top. Dimensions are provided for both views.

Top View Dimensions:

- Overall Width: 17.78 / 700
- Overall Height: 15.24 / 600
- Internal Width: 12.50 / 508
- Internal Height: 12.208 / 520
- Top Flange Width: 2.54 / 100
- Bottom Flange Width: 0.762 / 30
- Right Flange Width: 1.524 / 60
- Top Flange Thickness: 0.50 / 19.685
- Bottom Flange Thickness: 0.50 / 19.685
- Right Flange Thickness: 0.50 / 19.685
- Top Flange Radius: R0.50 / 19.685
- Bottom Flange Radius: R0.50 / 19.685
- Right Flange Radius: R0.50 / 19.685
- Top Flange Chamfer: 12-R0.4572 / 18

Side View Dimensions:

- Overall Height: 3.80 / 149.61
- Top Flange Thickness: 0.80 / 31.496
- Top Flange Radius: R0.50 / 19.685