



**300W Boost Converter for CAR Audio
– TL494
User's Guide**

300W Boost Converter for CAR Audio - TL494

To keep the product in a best working condition and having a long service time, please operate it according to the relevant steps. The warranty lapses if the product is damaged because of incorrect use and your negligence.

Please read this manual carefully before you use the product and check if the product is a good one. DC12V is recommended to be used to power the product for one hour. Never use this product in an extreme condition.

Warning: Never immerse the product in the rain or any other humid environment to prevent the fire or electric shock.

Safety Precautions:

1. This product is designed for Car audio amplifier. Please fix it well.
2. Protect this product well and move away metal objects from this product.

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300W BOOST CONVERTER FOR CAR AUDIO - TL494

NOTES:

Product Version : Ver 1.0

Document Version : Ver 1.0

Chapter 1. Overview

1.1 Overview

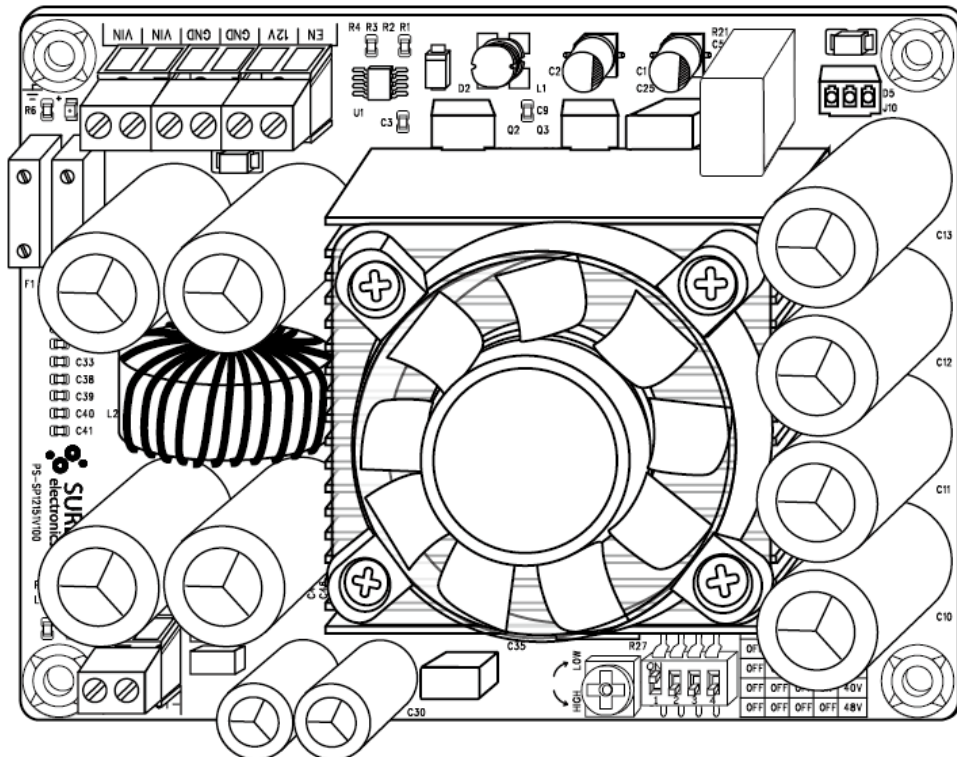
Welcome to use this self-made 300W Boost Converter for CAR Audio - TL494. This item is especially designed for CAR audio. It can be used with amplifiers from Sure Electronics. With DC12V input, it can output voltage of DC18V, DC24V, DC30V, DC36V, DC48 and power of up to 300W. You can set DIP switches to get the voltage required in your applications. Do turn off the power before adjust the voltage.

DIP Switch Settings and Voltage

VOUT	K1	K2	K3	K4
24V	ON	OFF	OFF	OFF
30V	OFF	ON	OFF	OFF
36V	OFF	OFF	ON	OFF
40V	OFF	OFF	OFF	ON
48V	OFF	OFF	OFF	OFF

Please adjust the adjustable resistance-R27 if you want to get more precise voltage.

FIGURE 1-1 OVERVIEW



Overview

1.2 Features

- A mature DC/DC Boost Converter
- LED status indicator
- Voltage adjustable via DIP switch
- A smart cooling fan
- Input lines with fuses protection

1.3 Applications

- Car audio power conversion

1.4 Benefits

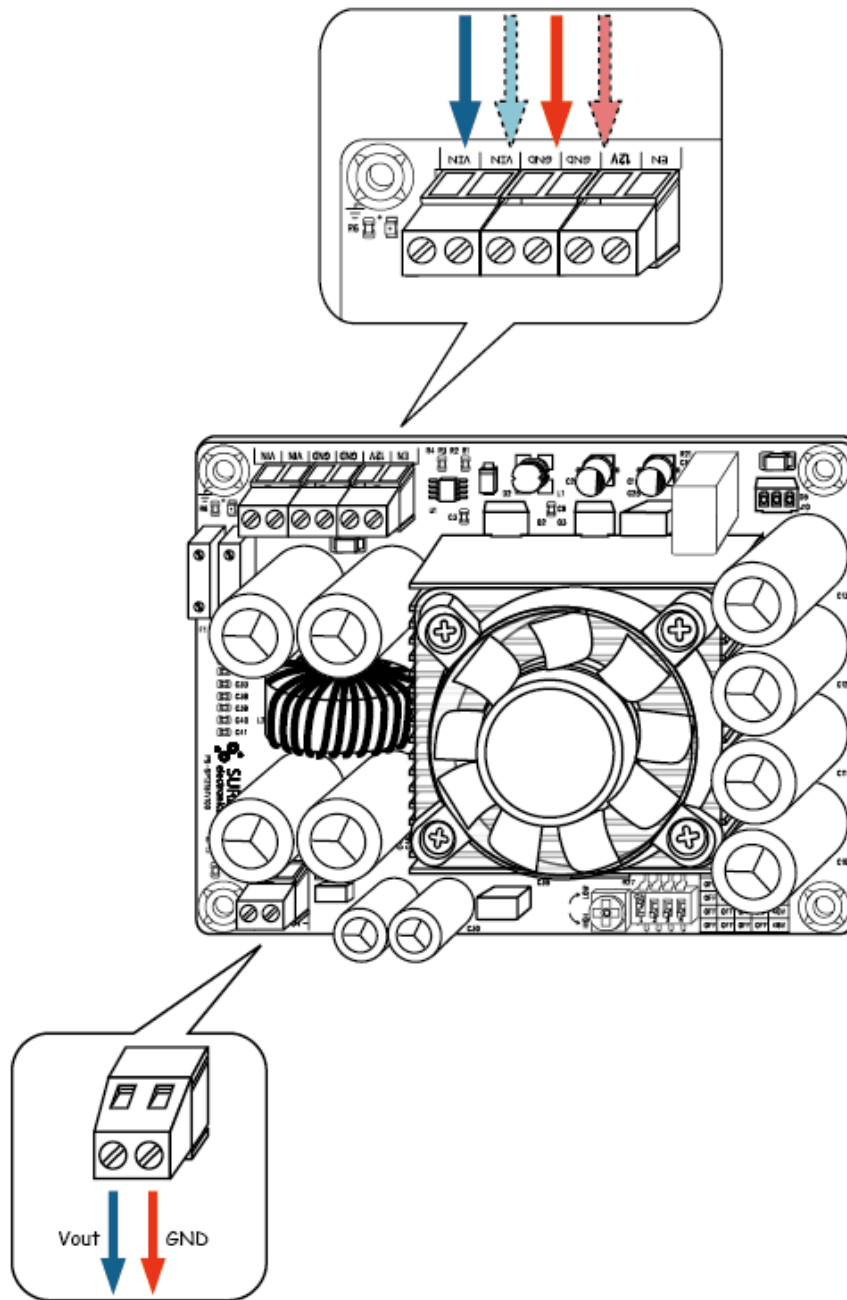
- Excellent heat dissipation eliminates the requirement of an extra heat sink.
- Rigorous component selection, layout and test to ensure performance stability
- Kinds of output voltage selectable
- EN pin for external connection
- Wide input voltage range
- Wide output voltage range
- Output voltage can be fine-tuned by rotating the adjustable resistance
- Low-voltage protection (10V)
- Over-voltage protection (28V)
- Fan starts to work when the output current is greater than 3A

300W Boost Converter for CAR Audio - TL494

1.5 Quick Start

Suggested connection is shown in figure 1-2.

FIGURE 1-2 CONNECTION SCHEMATIC



Note: Please observe the following steps to complete verification so as to ensure the products are intact during transit.

1. Open the product package and make sure the product is intact (No missing or damaged components and no deformation.)
2. Please observe the connection schematics when connecting the 300W Boost Converter for CAR Audio - TL494. Use nearby DC12V and a multimeter to have a trial. This 300W Boost Converter for CAR Audio - TL494 can be deemed as qualified if the indicator keeps on and output voltage is the same or similar with the value marked.

Chapter 2. Hardware Detail

2.1 Input Connection

A high-performance power supply is important for a 300W Boost Converter for CAR Audio - TL494 to output voltage and work stably. Pay attention to the polarity when connecting power supply.

2.2 Output Connection

Before power the amplifier, please test if the voltage is what you want and pay attention to the polarity.

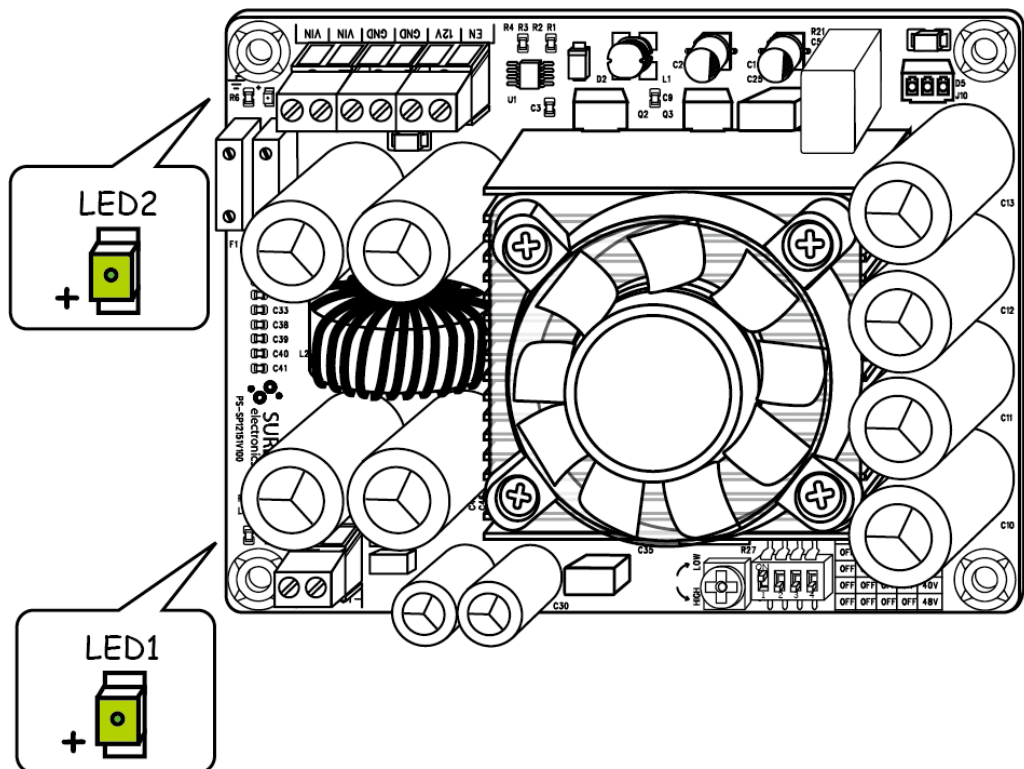
2.3 Enable Pin Connection

When EN pin is suspended or grounded, boost converter works.
When EN pin connects to DC12V, boost converter won't work.

2.4 LED Indicator

This 300W Boost Converter for CAR Audio - TL494 has one LED indicator which shows the current operation status. The indicator will be constantly illuminated in green when the converter works normally.

FIGURE 1-2 LED INDICATOR



Chapter 3. Electrical Characteristics

Following table lists all typical data of the 300W Boost Converter for CAR Audio - TL494.

TABLE 3-1 BASIC PARAMETERS

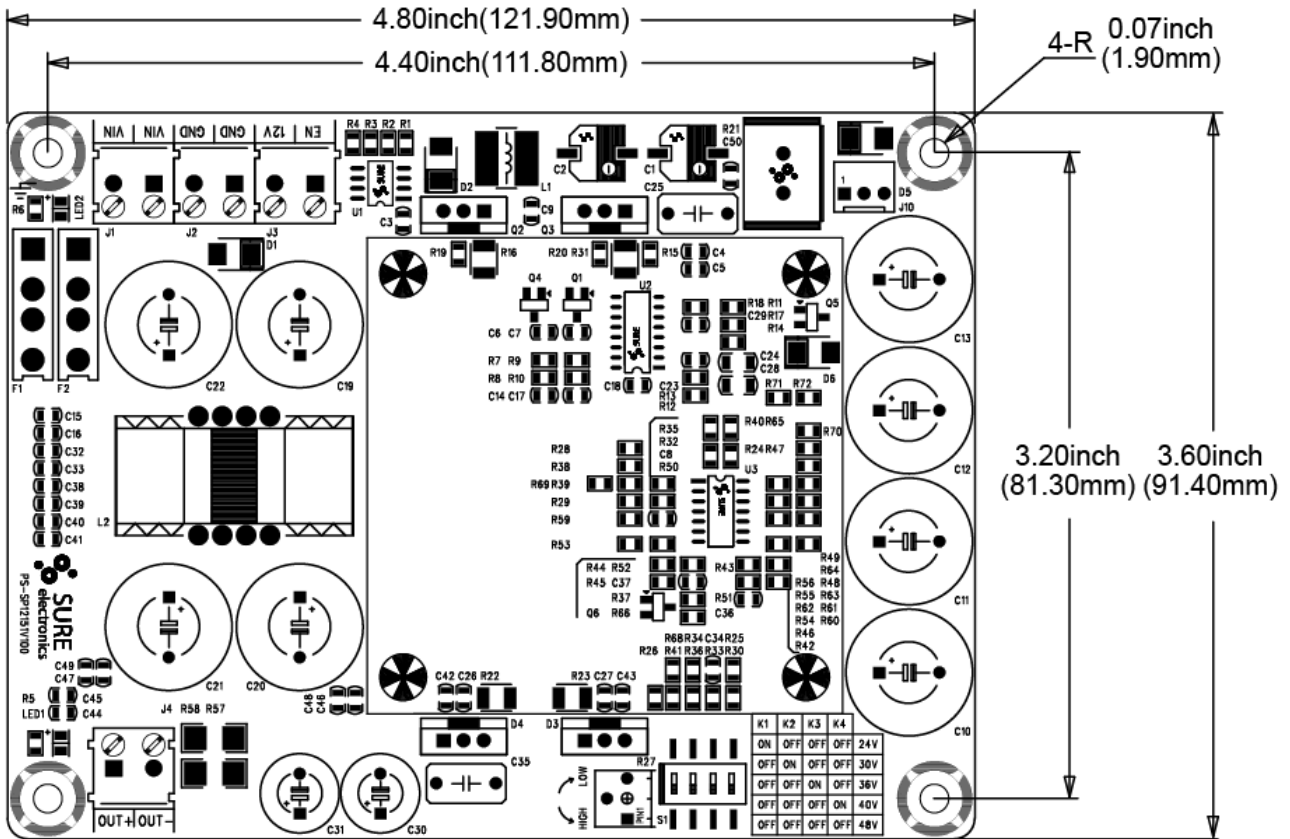
Parameter	Condition	Min.	Typ.	Max.
Supply Voltage	-	11V	12V	27V
EN enabled Voltage	-		12V	
Output Power	-	-	300W	
Oscillation Frequency	-	-	55KHZ	-
Quiescent Current	VIN=12V	-	20mA	-
Operating Temperature	-	0°C	20°C	80°C
Storage Temperature	-	-20°C	20°C	105°C
Thermal Shutdown	-	-	150°C	-

Note:

Stresses beyond the listed maximum power supply voltage may cause the permanent damage to components on board.

Chapter 4. Mechanical Drawing

FIGURE 4-1 MECHANICAL DRAWING



Chapter 5. Contact Us

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