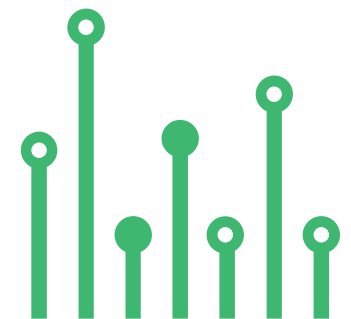


THE  
**electronics-lab**  
.com  
from ideas to  
**boards**

[electronics-lab - Projects](#) | [Embedded News](#) | [Online Community](#) | [e-Shop](#)

Open Source Hardware Electronics Projects

[electronics-lab.com /projects](https://electronics-lab.com/projects)





POWER SUPPLY



”

# Adjustable Current Source 0 to 1



SKU: EL143488

# ADJUSTABLE CURRENT SOURCE – 0 TO 1A



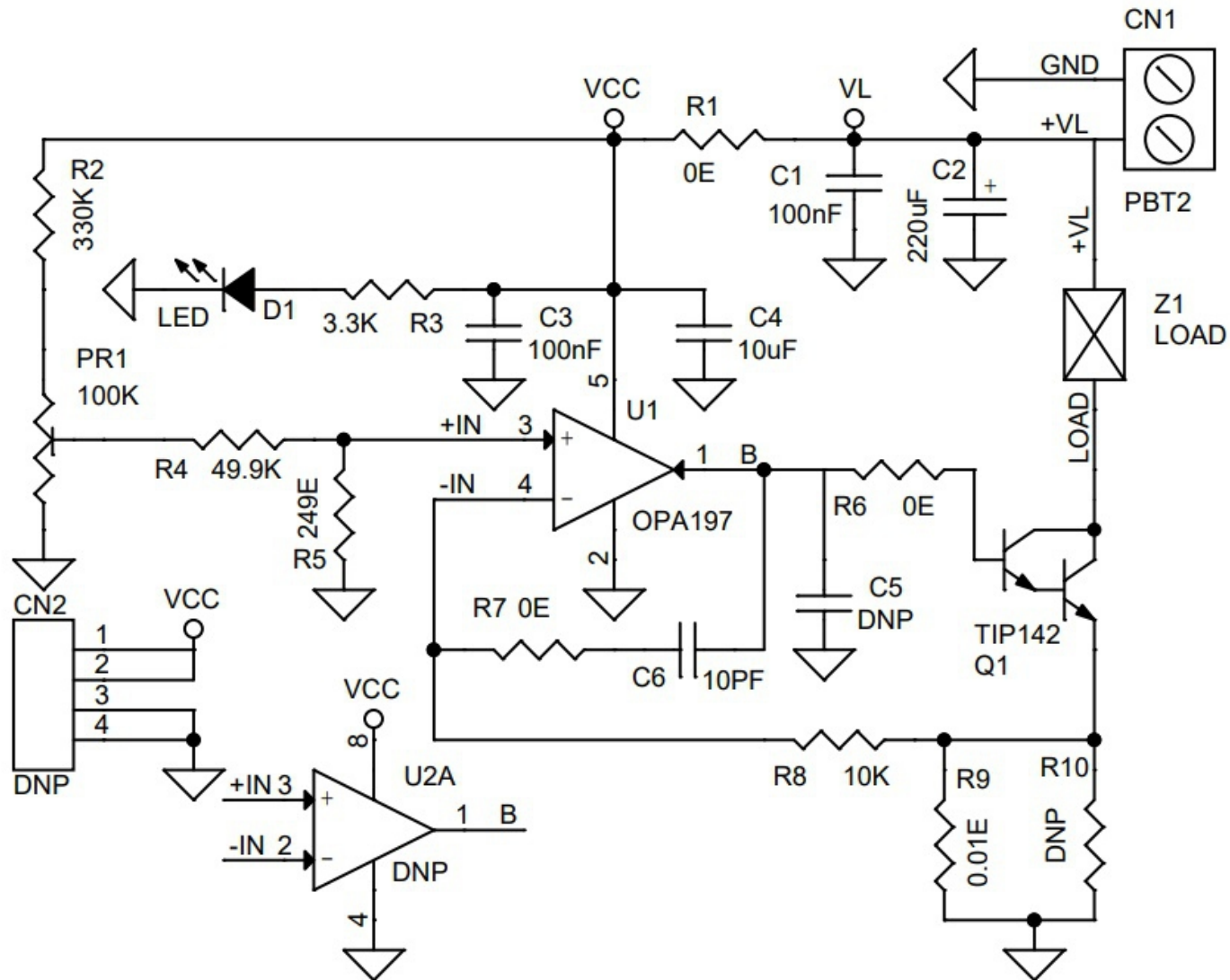
This voltage-to-current (V-I) converter delivers a well-regulated current to a load. The circuit accepts an adjustable input voltage from Trimmer potentiometer PR1 and converts it to an output current from 0A to 1A. The current is regulated by feeding the voltage across a low-side, current-sense resistor R9 back to the op amp. The output Darlington pair allows for higher current gain. Feedback components R8 and C6 provide frequency compensation to ensure the stability of the circuit during transients. They also help reduce noise. R8 provides a DC feedback path directly at the current setting resistor, R9, and C1 provides a high-frequency feedback path that bypasses the NPN pair. It is important to use appropriate heatsink for Q1 to take care of over heat.

## FEATURES

- Supply 24V
- Output Current 0 to 1A (Adjustable)
- PCB Dimensions 41.59 X 30.48MM
- 4 X 2.5MM Mounting Holes

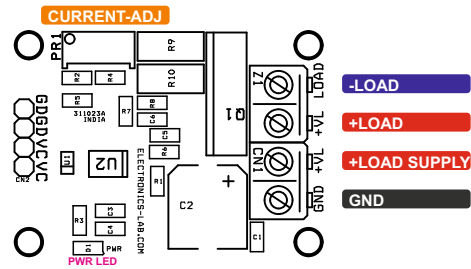


# Schematic



# Connections

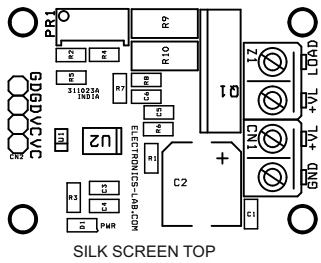
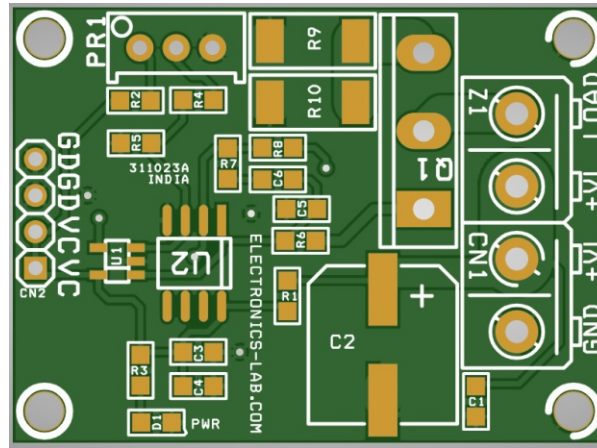
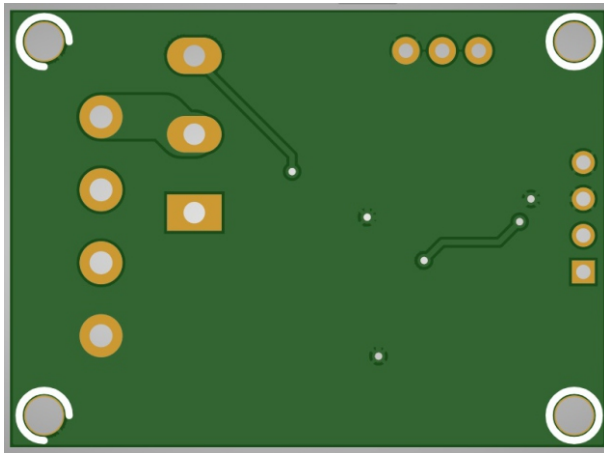
---



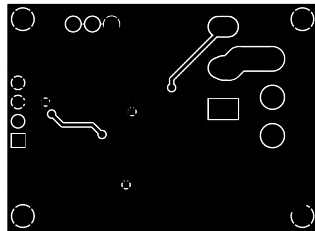
## Connections

- CN1: Pin 1 = GND, Pin + Load Supply 24V DC
- CN2: Pin 1 = + Load Supply, Pin 2 GND
- D1: Power LED
- Pr1: Current Adjust 0 to 1Amp

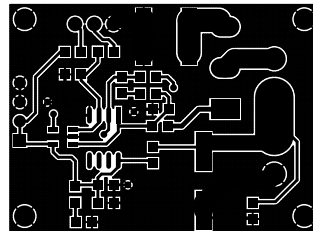
# PCB



SILK SCREEN TOP

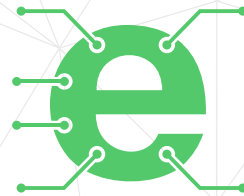


BOTTOM LAYER  
PCB DIMENSIONS 41.59 X 30.48MM



TOP LAYER





Keep  
In touch..

electronics-lab  
.com

info@electronics-lab.com  
www.electronics-lab.com

from ideas to **boards**

