

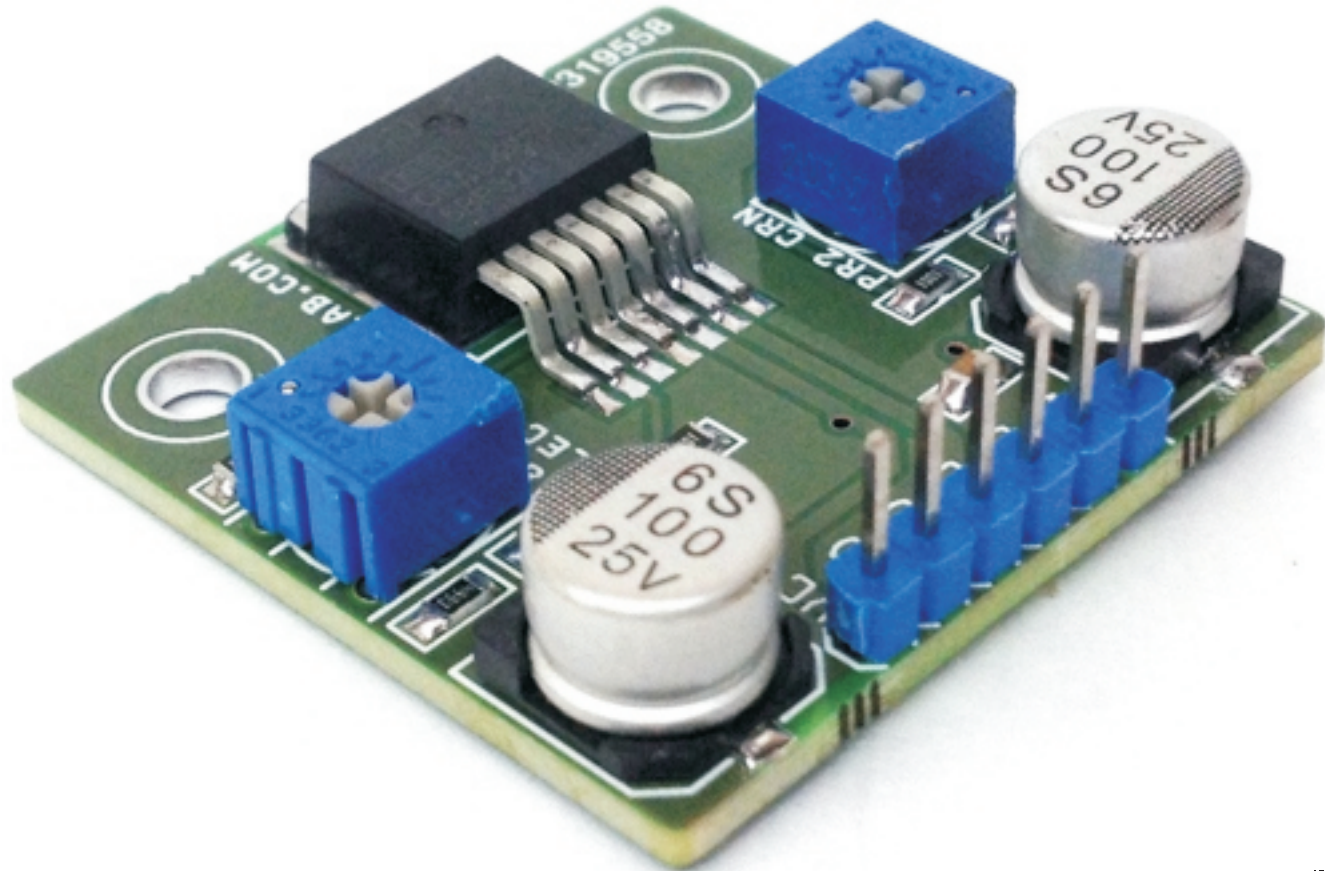
Resistor Controlled Programmable Power Supply Using OPA548

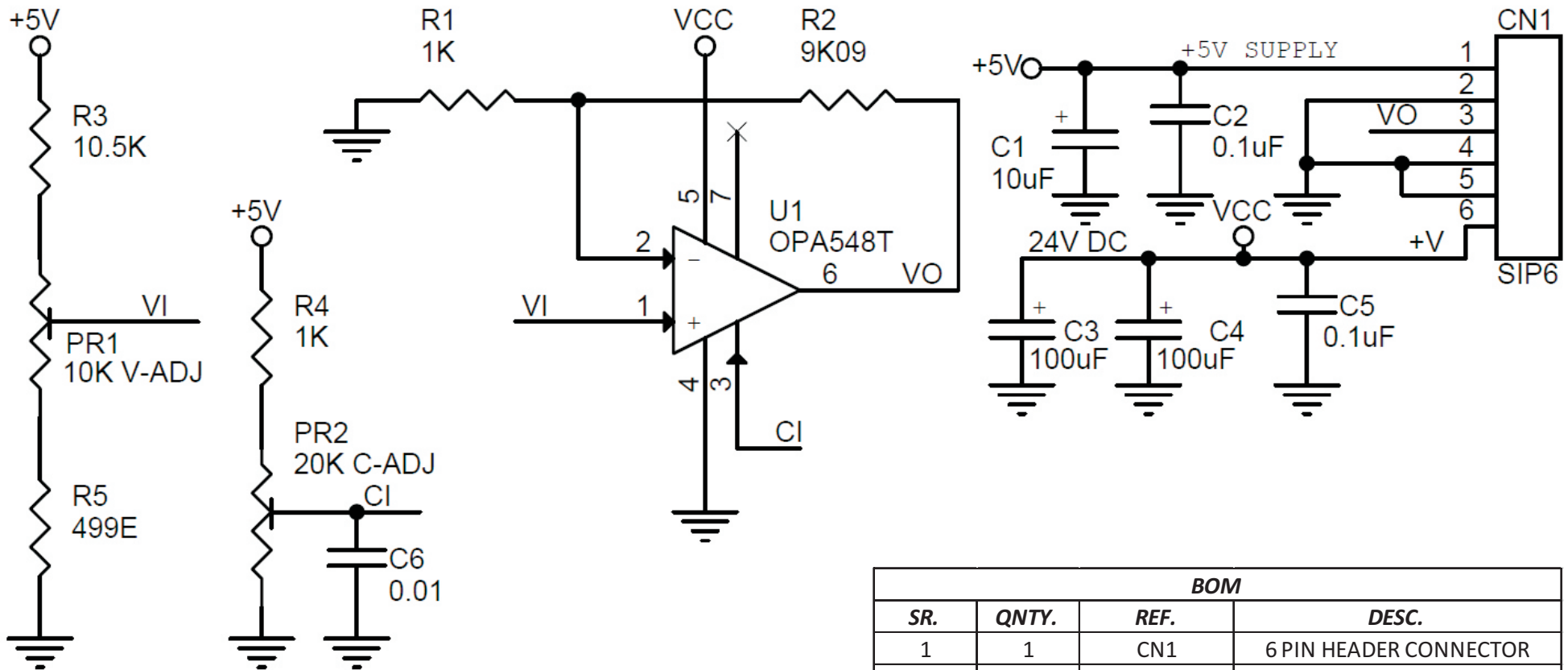
Project provides 1.2 to 20V DC output with current limit adjustable 0-5A. I have tested the circuit with 250mA without heat sink. Project is capable to drive 3A continues load and 5A peak, large size heat sink required for full load. The Tiny power supply based on low cost OPA548 high-voltage and high-current operational amplifier that's ideal for driving a wide variety of loads. The project provides excellent low-level signal accuracy and high-output voltage and current. The circuits operate with single supply 24V DC and logic supply 5V DC. The IC is internally protected against over-temperature conditions and current overloads. Trimmer potentiometer PR1 help to set the output voltages, PR2 helps to set the current limit 0 to 5Amps.

Note: Higher Out voltage 1.2V to 25V possible with input supplies 30V DC, replace capacitor C3, C4 for higher voltage.

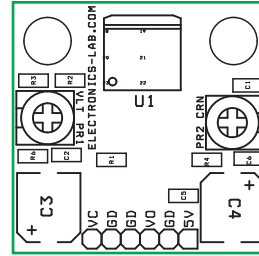
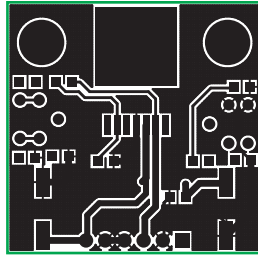
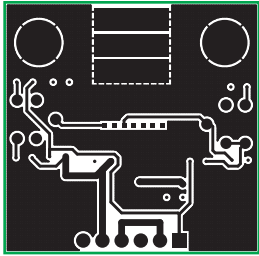
Features

- Supply Input 24V DC
- Logic Supply 5V
- Output 1.2V to 20V
- Current 3A (Heat sink required)





BOM			
SR.	QNTY.	REF.	DESC.
1	1	CN1	6 PIN HEADER CONNECTOR
2	1	C1	10uF/16V SMD 0805
3	2	C2,C5	0.1uF SMD 0805
4	2	C3,C4	100uF SMD
5	1	C6	0.01 SMD 0805
6	1	PR1	10K V-ADJ
7	1	PR2	20K C-ADJ
8	2	R1,R4	1K 1% SMD 0805
9	1	R2	9K09 1% SMD 0805
10	1	R3	10.5K 1% SMD 0805
11	1	R5	499E 1% SMD 0805
12	1	U1	OPA548T SMD



VOLTAGE SET

24V DC IN

GND

GND

OUTPUT

GND

5V DC IN

CURRENT SET

