

L200 0.1A to 2A / 2.85V to 36V Adjustable Power Supply

modattu Mascot 682 virtalähde TDA 0200SP (=L200)

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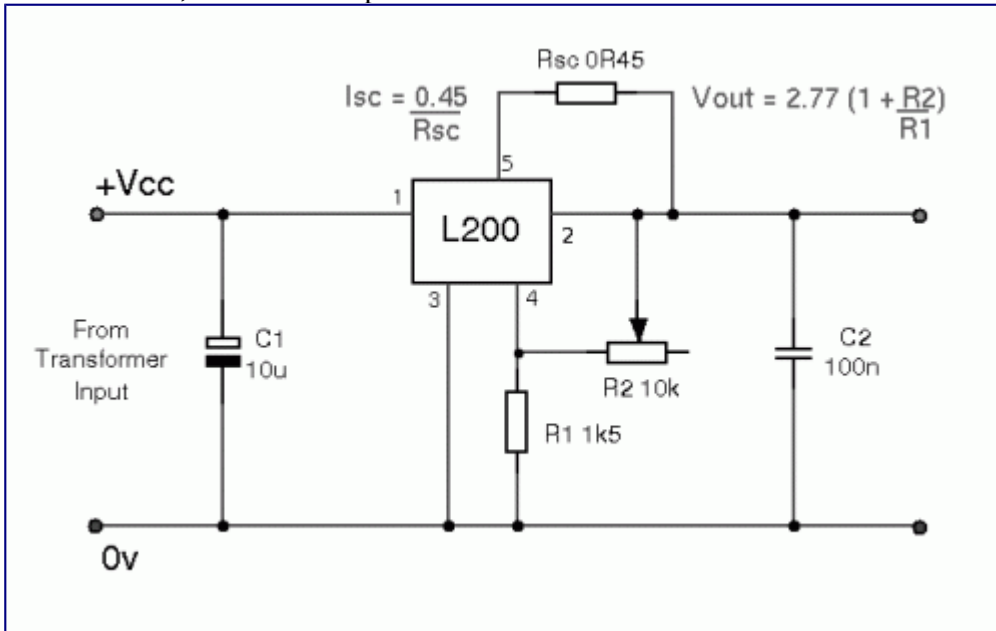


Figure 1 $R1 = 820 \Omega$, $Rsc = 0,2 \Omega$ ja $R2 = 10 \text{ k}\Omega$ $C1 = 470 \mu\text{F}$, $C2 = 1 \mu\text{F}$

Muuntajalta ulos 35 V= ja säätöalue 2,8 V – 33 V, 0,5 A

L200 is a both voltage and current regulator integrated circuit that provides an adjustable current output of up to 2A and adjustable voltage output of from 2.85V up to 36V. It provides input overvoltage protection that can resist for 10ms at 60V input. Additionally L200 includes short circuit protection feature and it can shutdown itself when overheating occurs.

You can limit the current by setting the Rsc resistor. The L200 wants to see 0.45V between its output pin (pin 5) and the limiting pin (pin 2), and it will do whatever it can to keep that voltage differential between these terminals. So if a Rsc is connected in series with the limiting terminal, a current source is set up which follows the equation, $Isc = 0.45/Rsc$. Since the Rsc value is 0.45 ohm in this design, the current is limited to 1A.

$R2$ is used to adjust the output voltage. The equation $Vout=2.77(1 + R2/R1)$ is used to calculate the output voltage. You can connect a small digital voltmeter between the output and the ground to see the voltage adjustment in real time. The input voltage must be at least 3V higher than the desired output voltage.

Read More:www.zen22142.zen.co.uk/Circuits/Power/l200.html