

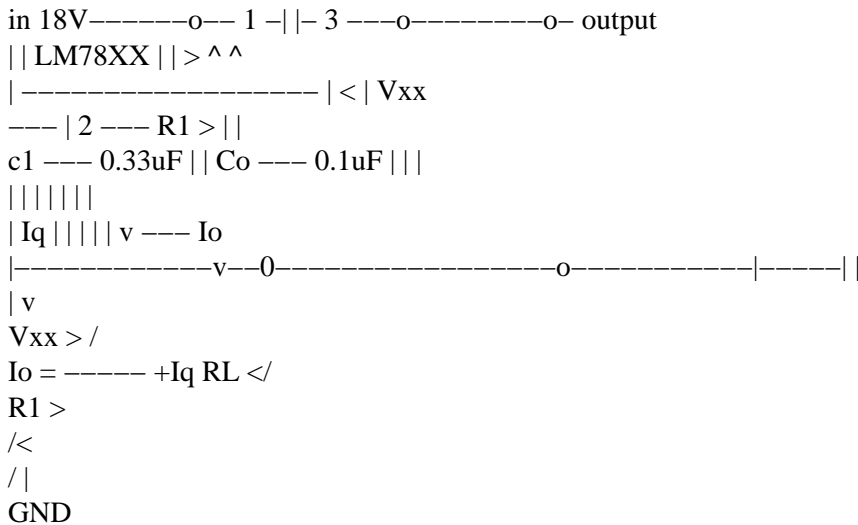
Re: Regulating Voltage with LM78XX

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- From: "James Thompson" <Jamesthompson2002@xxxxxxxxxxxx>
- Date: Thu, 19 Oct 2006 13:13:38 -0400

"Don" <dwbauer@xxxxxxxxxxxx> wrote in message
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I have a project that requires 12V. I have some LM7815's and looked at the Fairchild pdf sheet and I need some help understanding the formula to specify 12 Volt out. (maybe that can't be done)?



The only thing I know is R1 = 220 (I have these).
What is Iq/Iq and Io/Io? You can see I am no good in math. I was a programmer and If I know the formula and meanings of I? I could write a program and let the computer do it. Most programmers are dumber than Dog S!@# in math and anything not(simple minded) me, anyway. KISS is my motto.

While I'm here, this circuit is supposed to switch a 12V relay after being on for 2 hrs, for 120V on/off and I was wondering how to use the 120V instead of buying a transformer like 120/18V or whatever? to drive the relay.

Any Help is appreciated;
Thanks, Don Bauer

If you must use that regulator, the only way to get 12 volt from the 15 volt regulator is by further dropping the output with some series diodes.

Re: Regulating Voltage with LM78XX

So $15 - 12$ leaves 3 volts, and each diode drops .6 to .7 volt so four series diodes will drop 2.8 volts leaving you an output of 12.2 volt.

If your circuit has a stable current draw you can simply insert a resistor in place of the diodes to drop the extra 3 volt. So say if the circuit you're feeding draws .5 amp to drop 3 volts you will divide 3 by the .5 to get you a 1.5 ohm resistor which consumes $3 * .5 = 1.5$ watt so you would use at least a 2 watt resistor there.