

## Re: Zener diode regulator?

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- *From:* Jim Drew <msdei@xxxxxxxxxxxx>
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John\_H wrote:

"Jim Drew" <msdei@xxxxxxxxxxxx> wrote in message  
[news:43e0e7bd\\$0\\$8270\\$6d36acad@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:43e0e7bd$0$8270$6d36acad@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)

I am revisiting a problem that was posted a few months ago. I have tried numerous solutions, but nothing on the complex side of things will work for this application.

The problem is that I need to be able to convert an input voltage varying from 20 volts to 80 volts (at up to 100 amps) to 12 volts (at 500ma to 1 amp).

<snip>

Are you able to dissipate 68 watts in this "simple" circuit? If you're supplying 1A through a series element (as opposed to a switcher) you *\*will\** dissipate at least 68 watts.

This circuit is to power a 5 volt regulator for a CPU, and to provide gate drive power for MOSFETS. The circuit probably needs no more than 100ma, but I wanted to have a reserve for future use of LEDs and such.

I don't think I will need to handle 68 watts of power. Like I said, a 12 zener with the proper resistor for 80 volts works great to provide whatever current level needed. However, as the voltage drops, the current drops, making this solution unusable with a variable power input. I have seen some sort of voltage follower type of circuit that connects to a zener diode to provide a constant current. An op-amp could do something similar I suppose, but I have no idea how this would be wired.

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