Re: Voltage loss over diodes/transistors

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- *From*: John Popelish <jpopelish@xxxxxxxx>
- *Date*: Thu, 21 Jun 2007 12:14:03 −0400

ian field wrote:

> "Jan Nielsen" <nospam@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:4679d147$0$52155$edfadb0f@xxxxxxxxxxxxxxxxxxxxxxx
>
> > John Popelish skrev:
> >
> > > What voltage is available up stream of the regulator? Using that voltage (with an additional series resistor, if needed, to drop the extra voltage) will keep the regulator output cleaner and give you a certain activation.
> >
> > Theres 9−14V or so before the regulator, from a 12V 20Ah battery drawing 7.5A at peak, my circuit is only using about 60mA at peak, and <10mA at idle, which is most of its time.
> >
> > /Jan
>
> The suggestion seems to be that if you run the relay off a separate supply path, you reduce the risk of switching transients on the mcu rail − a dropper resistor from the unreg supply would be fine and if you included a small electrolytic this would charge to the full supply when the relay is off giving a brief burst of higher voltage making the relay snap to more positively, you could also reduce the overall relay current to the minimum safe holding value without compromising pull−in. With the voltage margins you stated, my suggestion of a separate 8V regulator would require a LDO type.

It would also eliminate about a half watt of heat into the 5 volt regulator (move it to the series resistor), possibly eliminating the need to heat sink it.

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