

## Re: MOSFET Failure Problem

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- *From:* Nermal <[nermal1@xxxxxxxxxxxxxx](mailto:nermal1@xxxxxxxxxxxxxx)>
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One possible problem: you are switching the MOSFETs too slow, the is, they are staying too long in the linear region where the power dissipation is too high.

Patrick Johnson wrote:

I am attempting to drive 8 logic-level MOSFETs (IRLR2905) with an 8-bit bus switch (FST3244). I have a 300 Ohm resistor in series with the gate of each MOSFET. Fast switching time isn't a necessity. I also have a 30V Zener diode connected across the drain-source to handle reverse transients. The MOSFETs are being used as low-side switches for 12V automotive fuel injectors (solenoids). I have 4 of these particular circuits built and am having trouble with all of the MOSFETs failing short-circuit. The first circuit worked for a little while, the second has yet to fail, and the third and fourth failed immediately after power-up.

The MOSFETs have a maximum Vds rating of 55V (I am only using 12V) and a Id > 20A (I am only using 1.2A). The bus switch has a logic-level output (5V). I can't see how I am stressing these parts. Any ideas of what may be happening?