

Re: Synchronous rectifier

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- *From:* "supermos@xxxxxxxx" <supermos@xxxxxxxx>
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Thank you for your reply!

I have said that the comparator is a zero-crossing detector. So it is used to compare V_{ds} with zero, but in fact there are some offset voltage in the input of the comparator. Thus the comparator point is actually \pm several mili volts. If the comparator point is positive several milivolts, there will be a large delay when turning off the MOSFET; a negative several milivolts will cause oscillation under light/zero load. Now you may understand it is very hard to have a hysteresis for such a comparator and in fact a hysteresis here is of no use.

This is for a VRM.

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