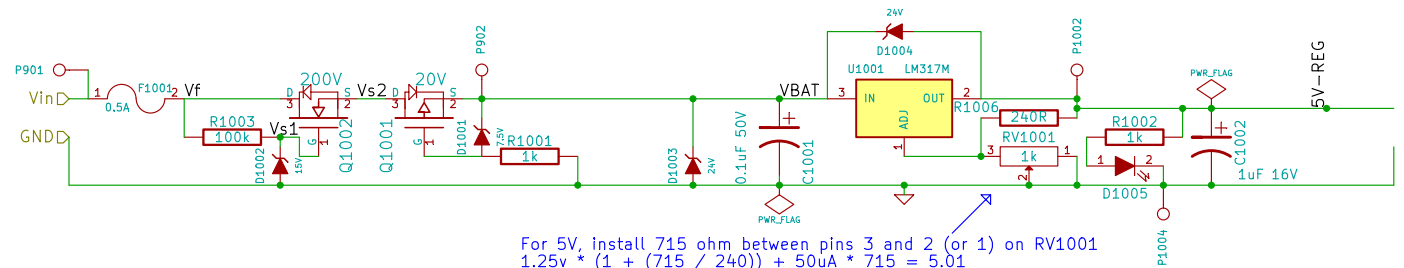


Brief overview

- Q1002, R1003, D1002 perform an active transient protection. It will suppress voltages up to 150V to 200V. This limits to 15V(diode) + 4.5V(MOSFET gate) 19.5V down stream.
- Q1001, R1001, D1001 perform a reverse polarity protection. If the input signal is the wrong polarity, the gate will not conduct which will prevent current from flowing. Above 19.5V is below 20Vmax of Q1001.
- D1003 is a second transient suppressor, it would catch faster transients allowing a brief amount of time for Q1002 to perform its duty.
- C1001 is a bulk cap, it simply stores energy locally such that the regulator can draw large currents in short periods of time.
- U1001 and the components to the right, are a buck style linear regulator, that will pull the 5V line up to 5V. It will now pull it down from 5V if there is an external voltage.



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