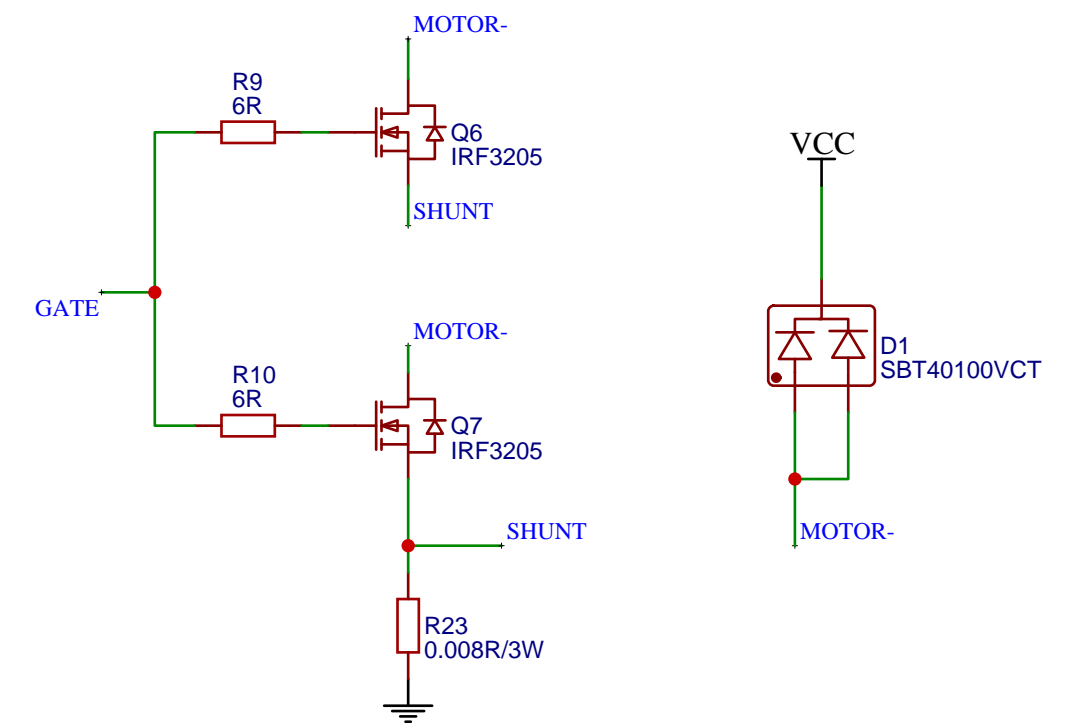
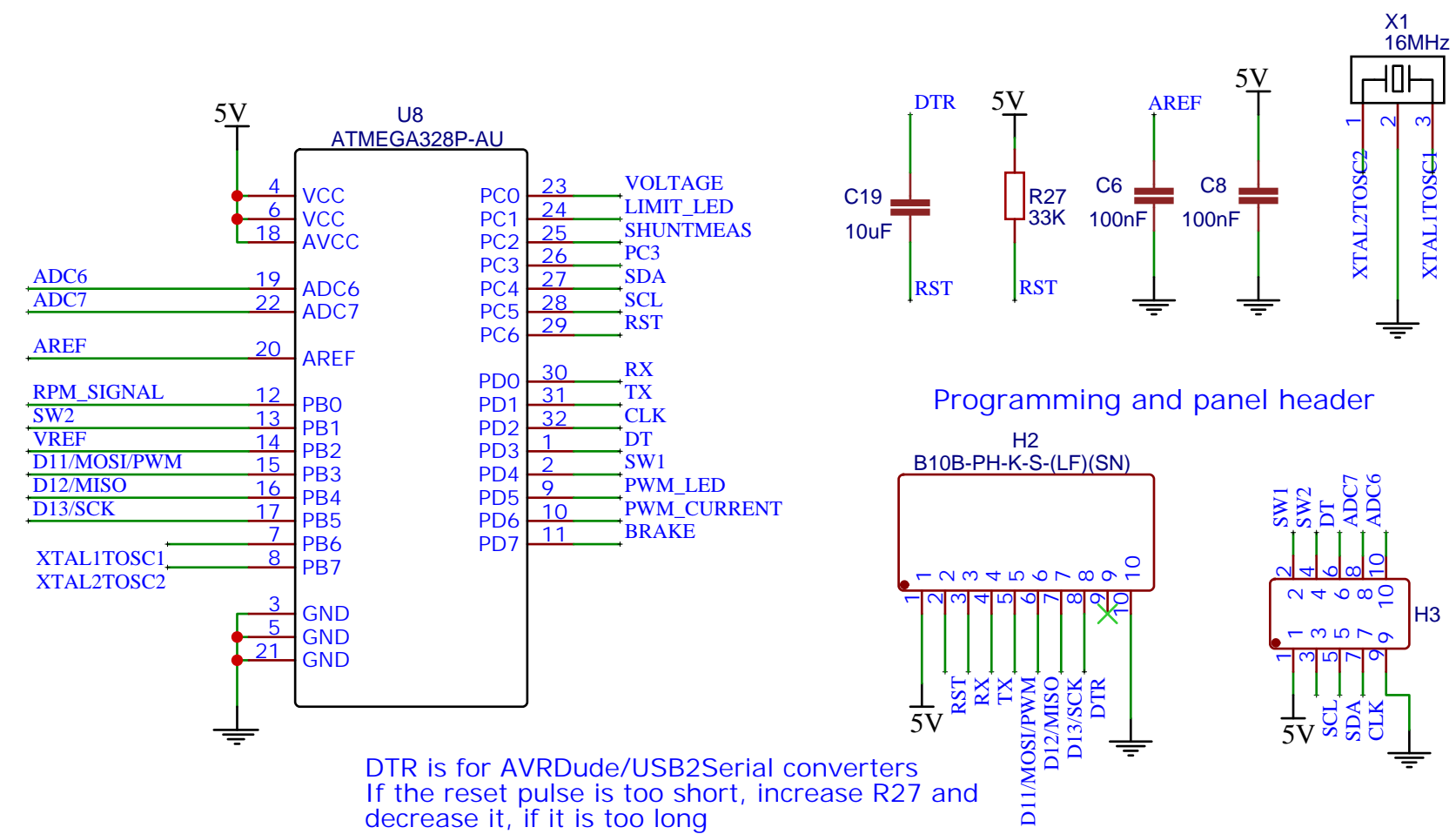
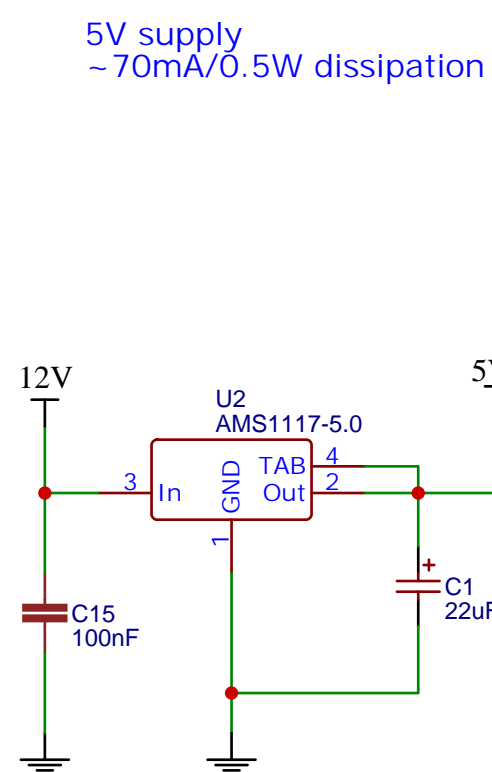
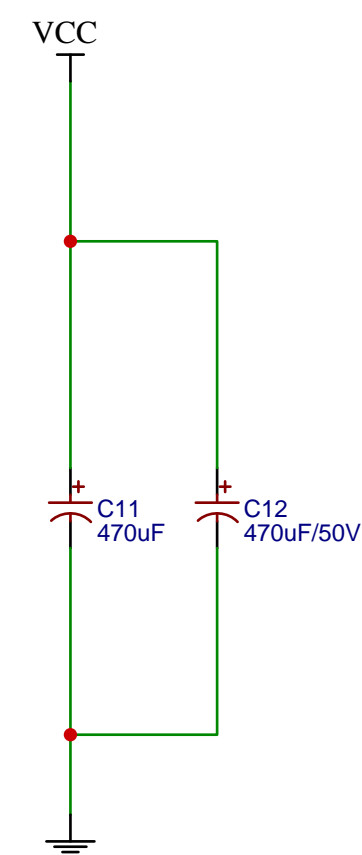
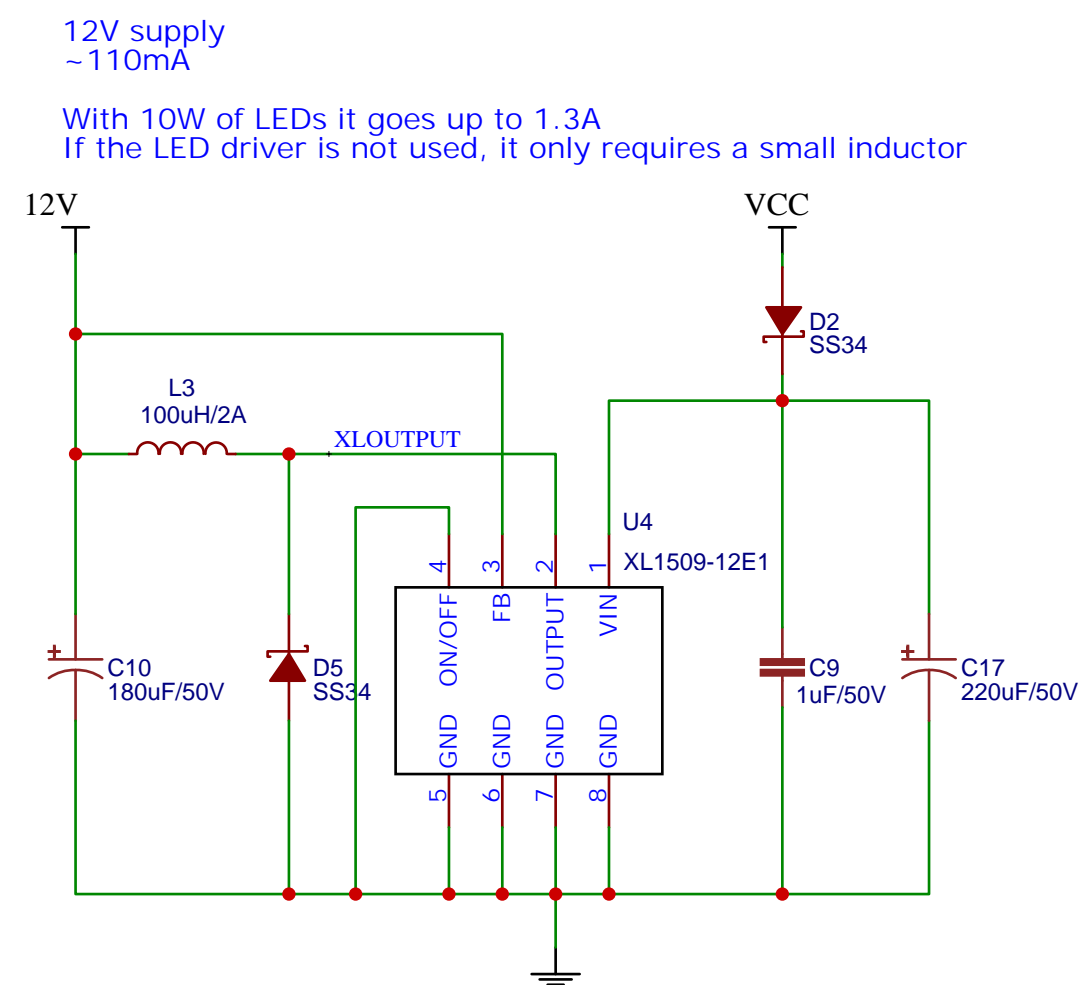
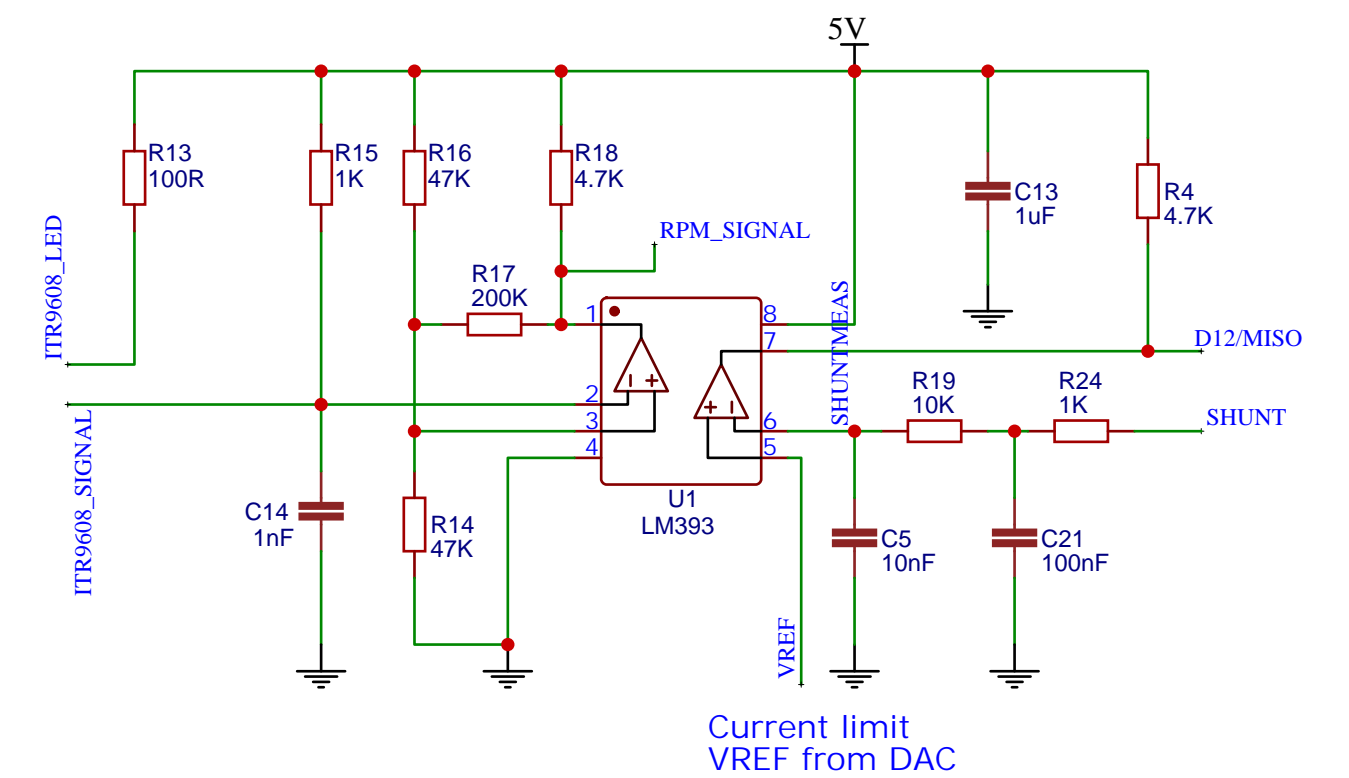
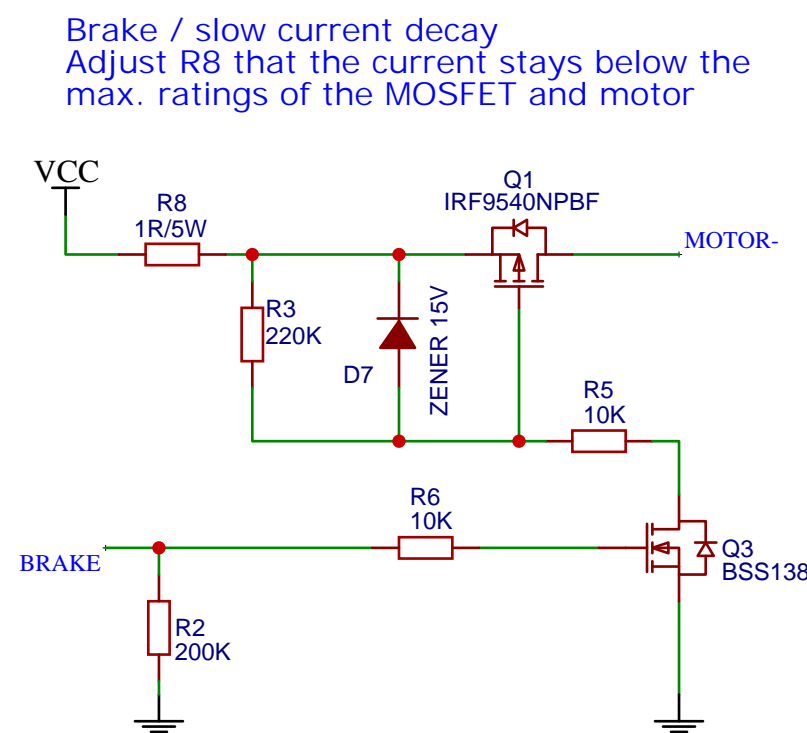
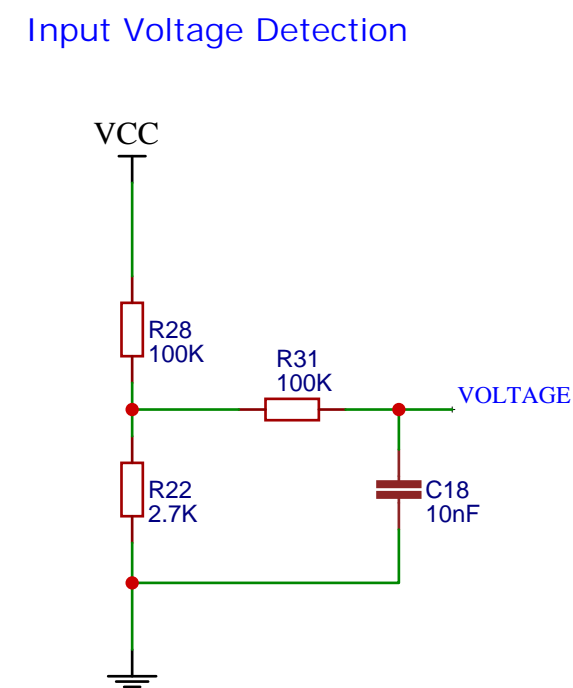
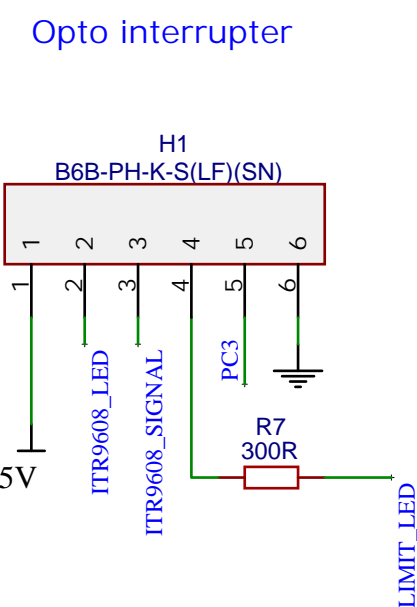
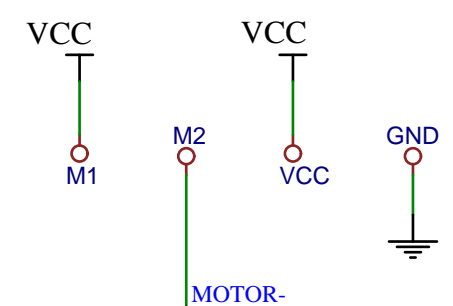


- 13.5(12)-40V, 20A
- Current limit sensing
- 10W LED driver
- Support for RPM measurement
- PID controller for constant RPM

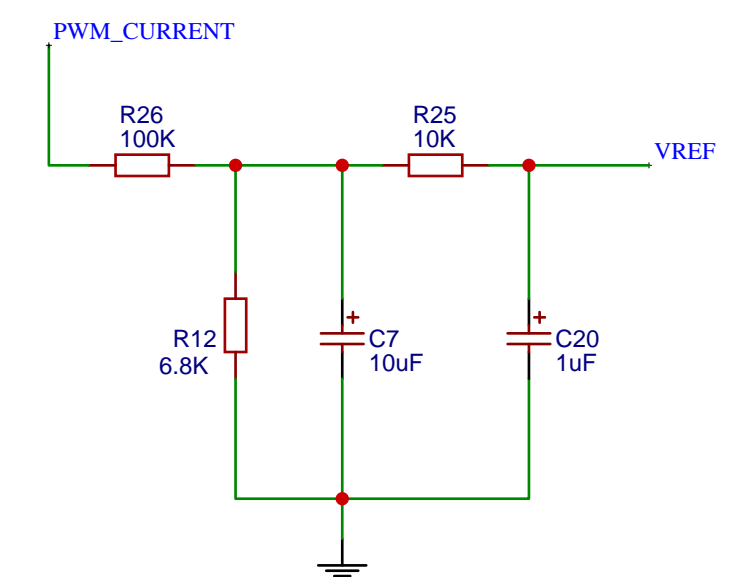



The original current limiter has been replaced and the LM393 sends a signal to the MCU.
The rise time is <0.5ms
The current limit is supposed to signal over current to the MCU, not limit the actual current.



I got the best results with 4.7uF, LEDs 21.6V@250mA and 120, 180 or 240Hz. With higher frequencies the dimming curve becomes non linear and the increase from duty cycle 96-100% is pretty steep (current 70-100%). There is no visible flicker and most cameras can filter multiples of 60Hz.

DAC for current limit detection
0-318mV, ~30 μ V ripple
200-300ms to reach the max. voltage @ 980Hz



TITLE: DC Motor Controller 12-40V, 20A		REV: 1.5
	Company: KFCLabs	Sheet: 1/1
	Date: 2019-10-08	Drawn By: sascha23095123423