**IC’s:**

* **Infiniteon PROFET BTS 6163D -- high-side power switch**
  + It was impossible to find an IC power switch that combined the fast turn-on time, high operating voltage, and high current requirements given in the specs
  + I found the BTS6163, which has the required operating voltage and turn-on-time, but about half the required nominal load current
  + So to compensate for that, I placed two of them in parallel, hooked up to the same ON signal, input, and output
* **Vishay Semiconductor MBRB1050 – rectifier**
  + I needed a reverse-biased diode in parallel with the inductive load to burn off the large induced negative voltage across it when it’s powered off
  + This one is rated for 10A of forward current, which is the same as what the load draws (I figured the current would likely be at least a little smaller than it is during normal operation)
  + It also can handle up to 60V of backward voltage without breaking down, which we need to prevent the 48V DC input from bypassing the load through this rectifier
  + Finally, its forward voltage is at worst .95V, which should be easily overcome by the voltage backwash at power off