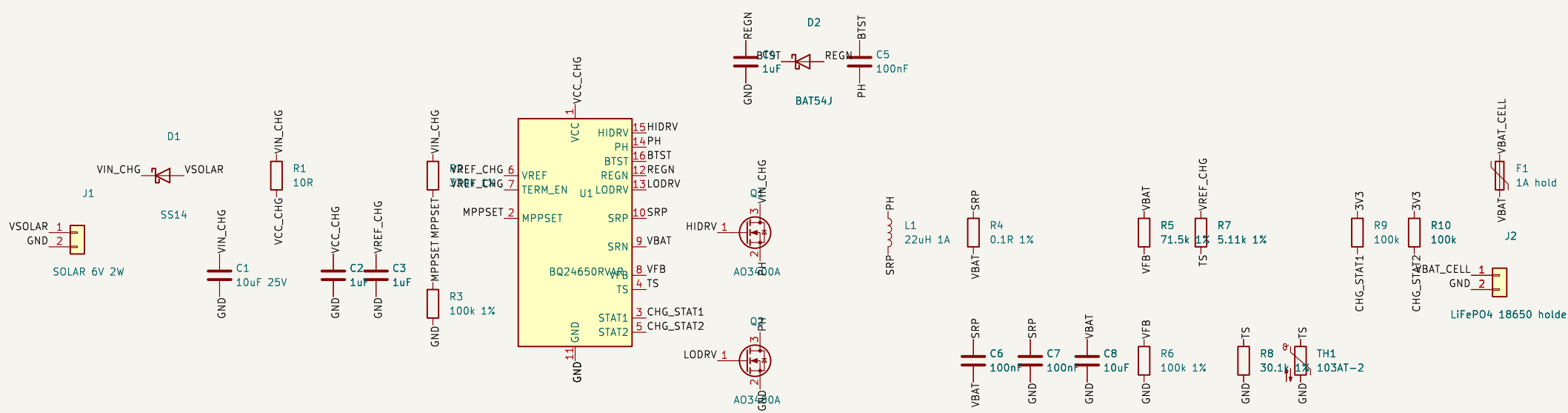
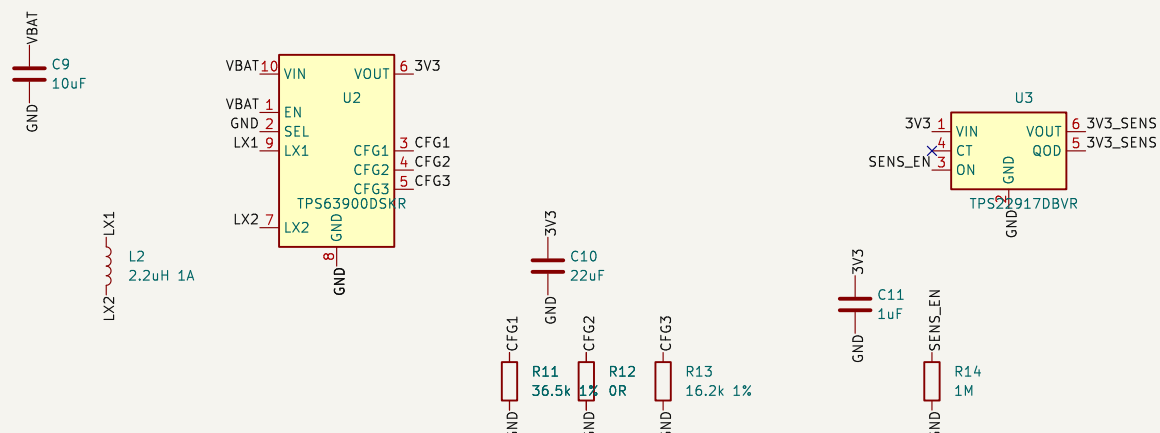


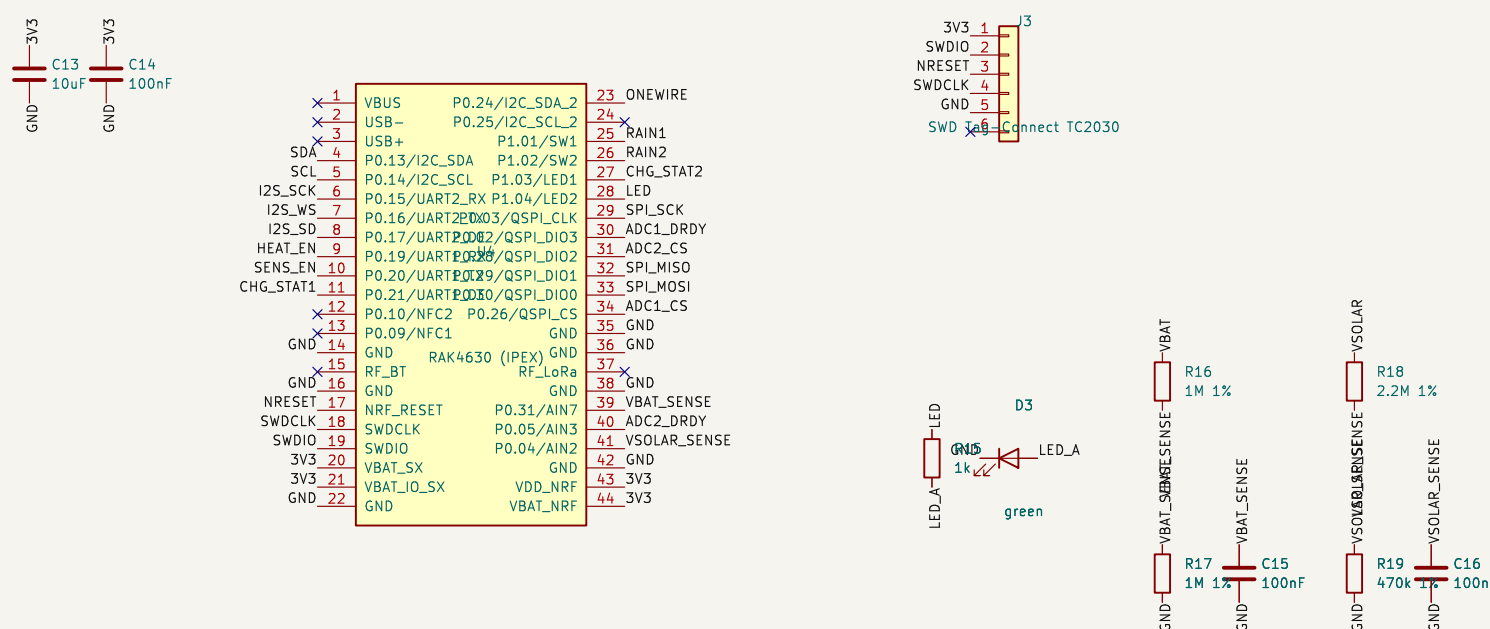
A. SOLAR MPPT CHARGER – BQ24650, LiFePO4 3.6 V, 0.4 A, charge only 0.45 C



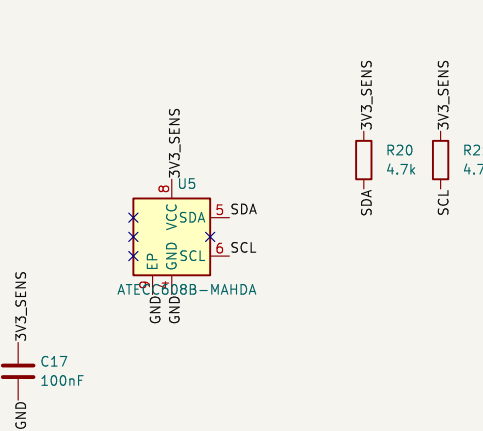
B. POWER – TPS63900 buck–boost 3.3 V (75 nA idle); TPS22917 sensor rail switch



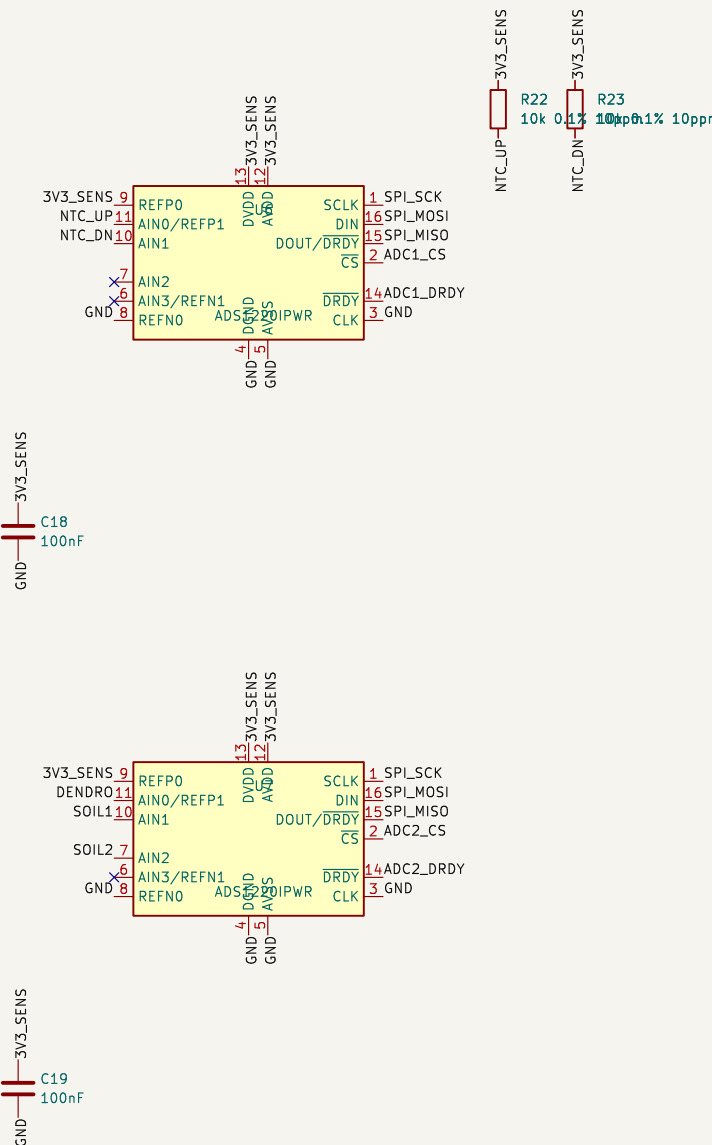
C. MCU + LoRa – RAK4630 (nRF52840 + SX1262), SWD, voltage sense



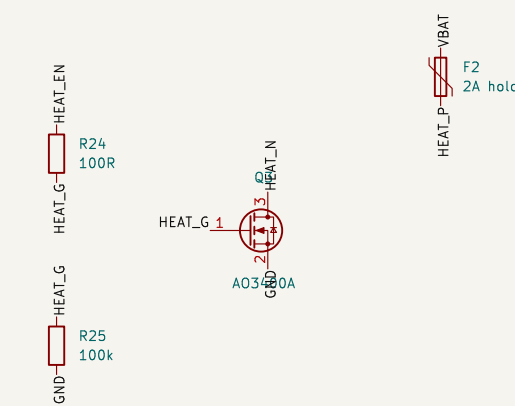
D. SIGNING – ATECC608B (device key generated on chip, never leaves it)



E. PRECISION ADCs – ADS1220 x2, ratiometric to the sensor rail



F. HEAT PULSE – about 4 W x 5 s = 20 J per pulse, straight from the cell



G. PROBE CONNECTORS – every sensor plugs in; all sensors on the switched rail

