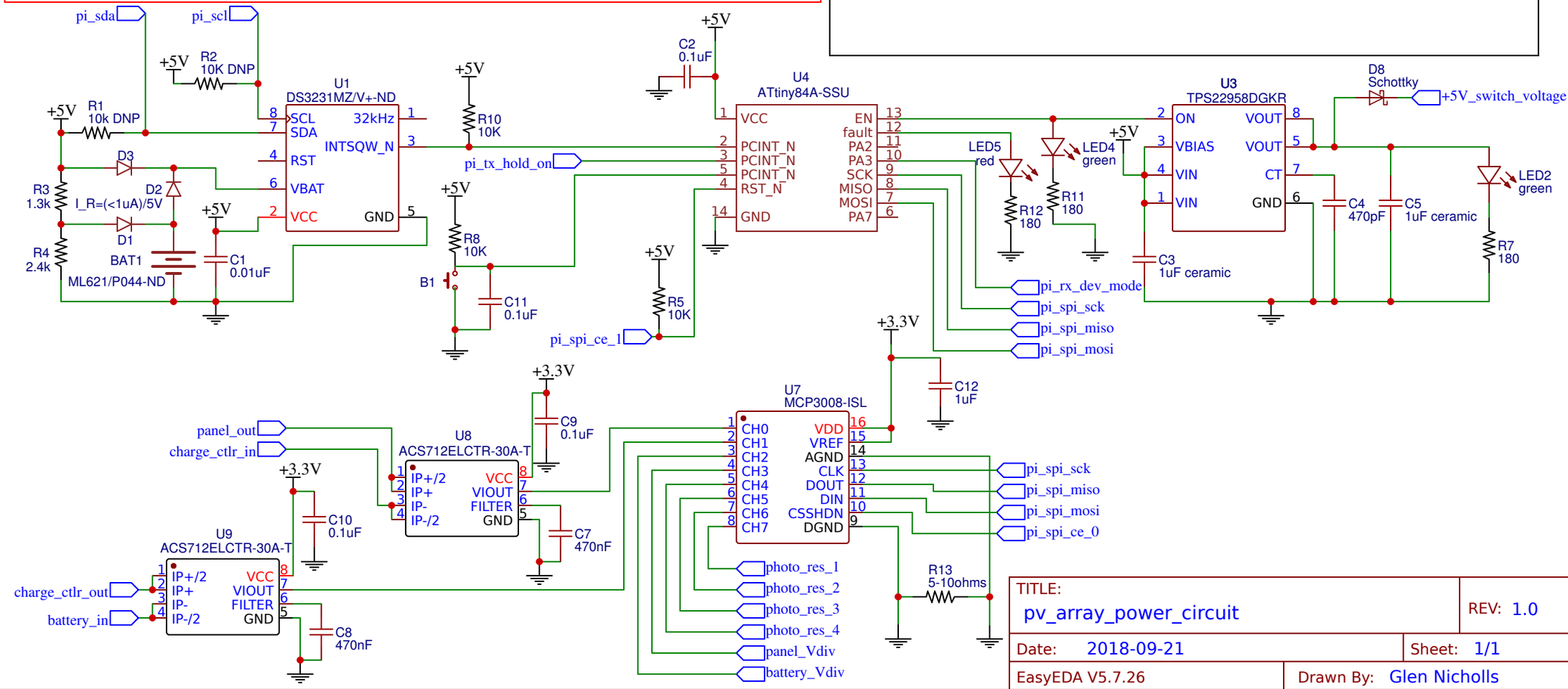
PCB NOTES:

* D for charge circuit are DB2J314 or similar SMD diode
* +5V comes from USB micro type B
* +5V_switch_voltage is the regulated 5V power for pi/peripherals
* D2 - select diode of small inverse current (I_R=1uA below/5V)
* DNP should be in schematic and PCB, but not placed
* 5mAh battery is ML621 or P044-ND from digikey
* Reference AAA4000COL19.pdf for R3/R4 changes for different battery
* To ensure <330mA of inrush current, 470pF Chosen based on SR=0.146*C_t+14.78 for CT
* SR requires >220us for to achieve <330mA inrush current
* CT capacitor should be X5R/X7R dialectric rating with >25V rating
* dV = I_load*R_on to give the voltage drop fron in/out
* Reference TPS22958DGKR datasheet for layout example
* NOTE: All the 5V traces from USB and to PI power need to support 3A at 5V

OPERATION:
DS3231 ALARM to turn on power:
* When an ALARM(active low) is triggered, it forces interrupt on ATTiny
ATTiny84
* Active low INT from DS3231 will assert EN/ON pin on load switch high
* Active low INT from push button asserts EN/ON pin on load switch. will also assert pi_rx_dev_mode so pi knows it should halt running tracking so it can be operated on by user
* Active high INT from pi: when pi wakes up, it needs to assert pi_tx_hold_on while it is on.
* If pi_tx_hold_on goes low, uC holds power on for programmable time to allow safe shutdown of pi. Then EN is tied to GND to turn load switch off
* SPI inputs used for programming a .hex via ICSP
Shutting down pi:
* Set ALARM time for next wake up.
* Deassert pi_tx_hold_on to signal power-down is commencing
Limitations:
* NO support yet for shutdown button. Might add this with SW for ATTiny84



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