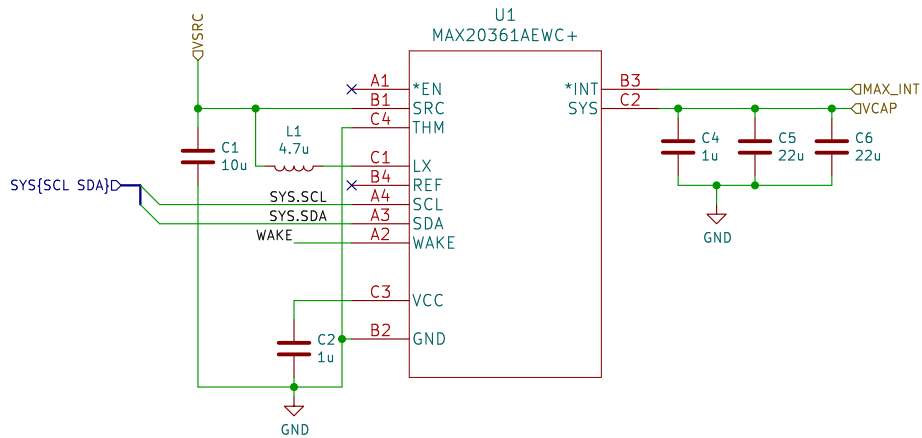
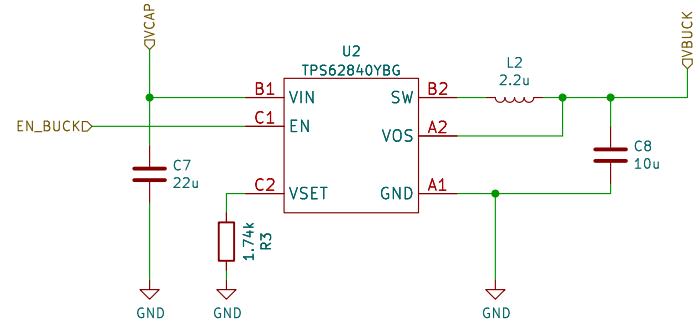


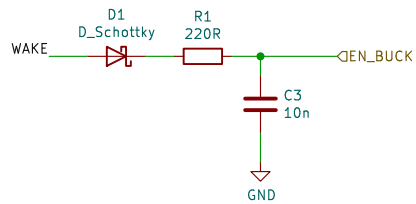
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|-------------------------------|-------|---------|
| Sheet: / | | |
| File: riotee-module.kicad_sch | | |
| Title: | | |
| Size: A4 | Date: | Rev: |
| KiCad E.D.A. 8.0.6 | | Id: 1/7 |



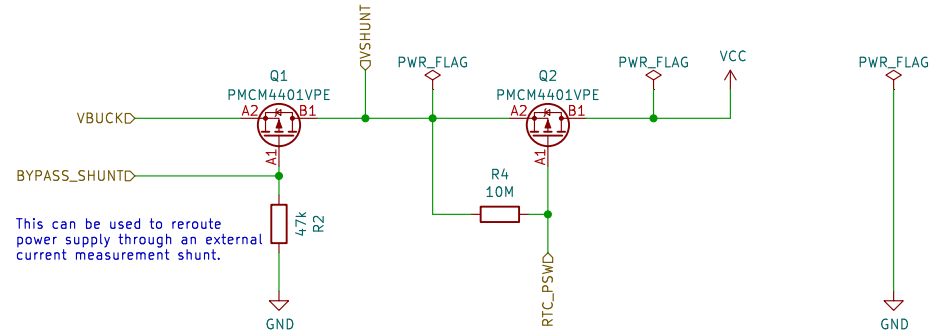
DC-DC boost with MPPT to step up voltage from harvester at VSRC. Configured via I2C. Charges capacitor on VCAP.



DC-DC buck regulates capacitor voltage to 2.0V. Gets activated by WAKE signal from MAX20361.



After switching on, capacitor voltage drops and 'wake' signal from MAX20361 goes low again. This circuit keeps the buck on for long enough to disable the 'wake' functionality.



This can be used to reroute power supply through an external current measurement shunt.

Sheet: /Power Supply/
File: power_supply.kicad_sch

Title:

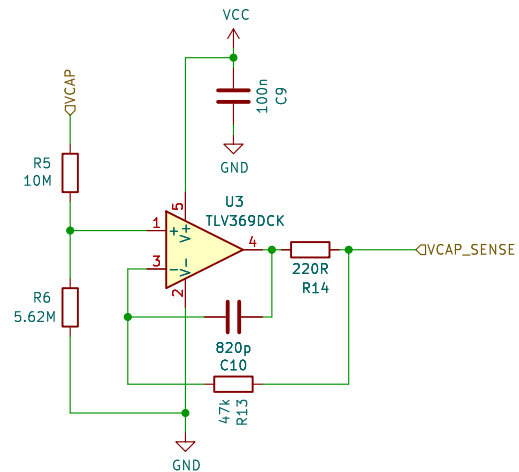
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Date:

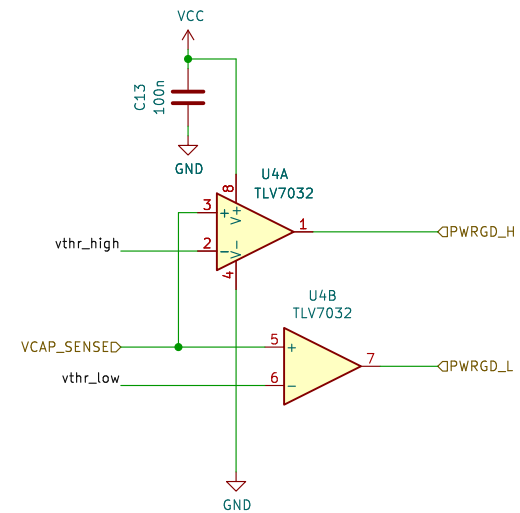
KiCad E.D.A. 8.0.6

Rev:

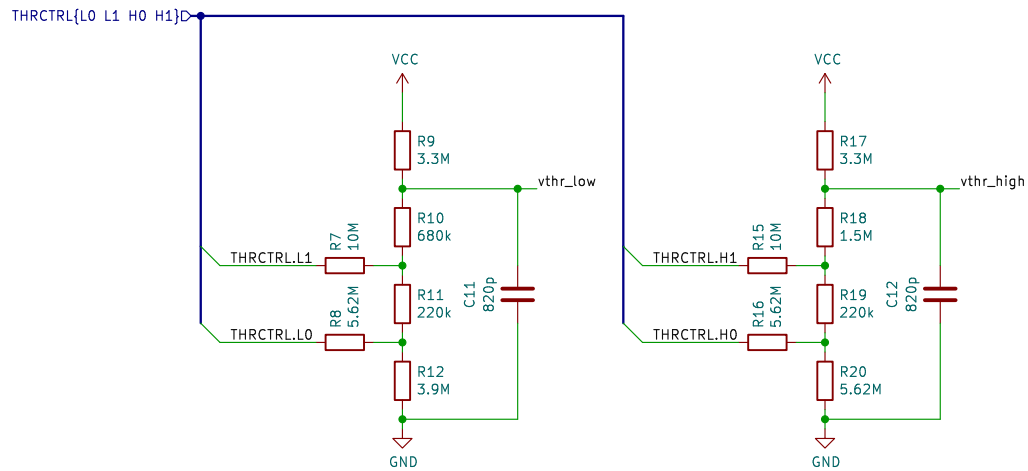
Id: 2/7



Voltage divider and op-amp buffer for capacitor voltage.
Range: 0V..4.8V->0V..1.727V.



Power OK comparator with hysteresis. Signals to nRF if capacitor is within vthr_on and vthr_off.



Resistor networks use tri-state gpios to provide 9 comparator threshold levels.

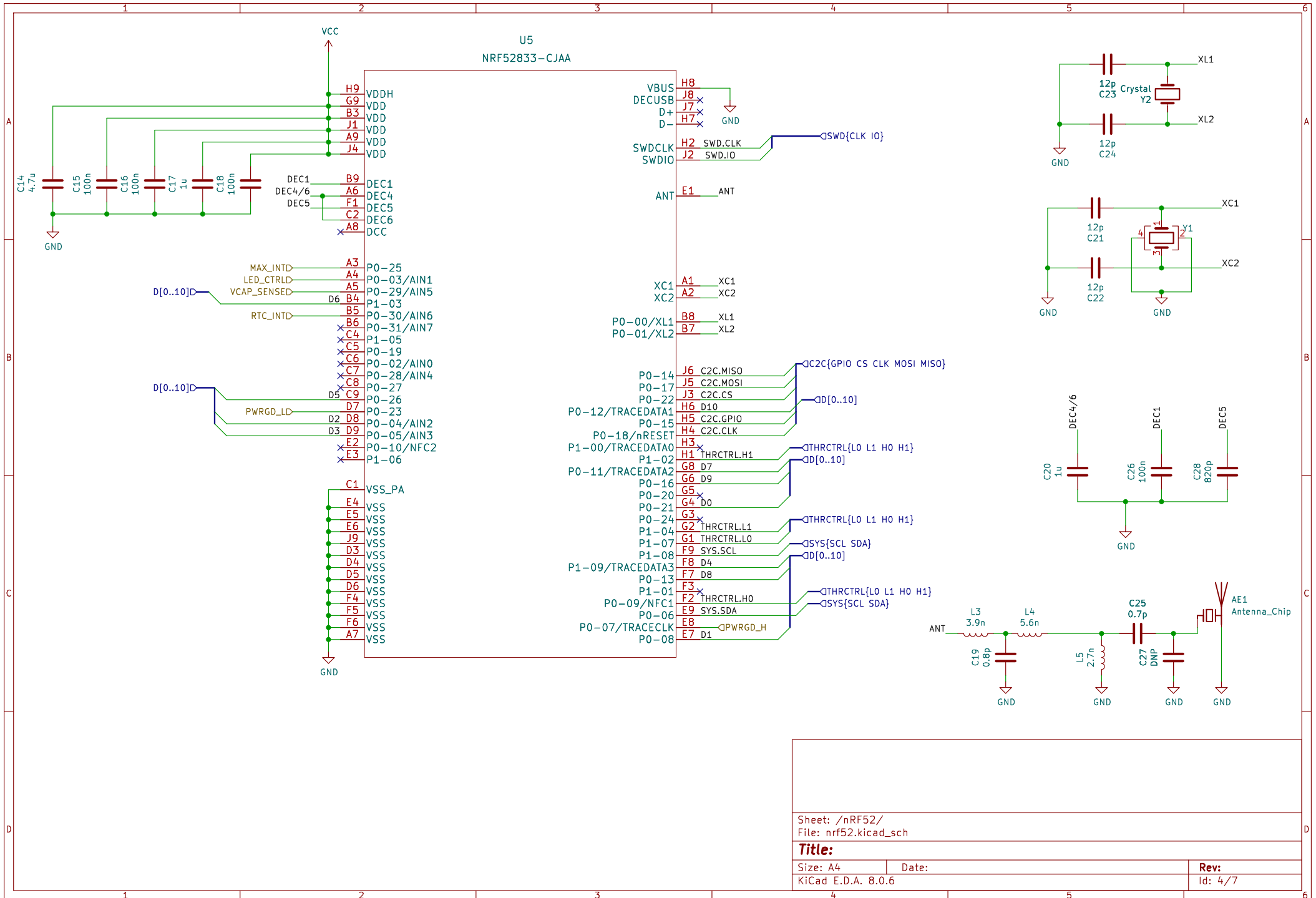
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File: energy_management.kicad_sch

Title:

Size: A4
KiCad E.D.A. 8.0.6

Date:

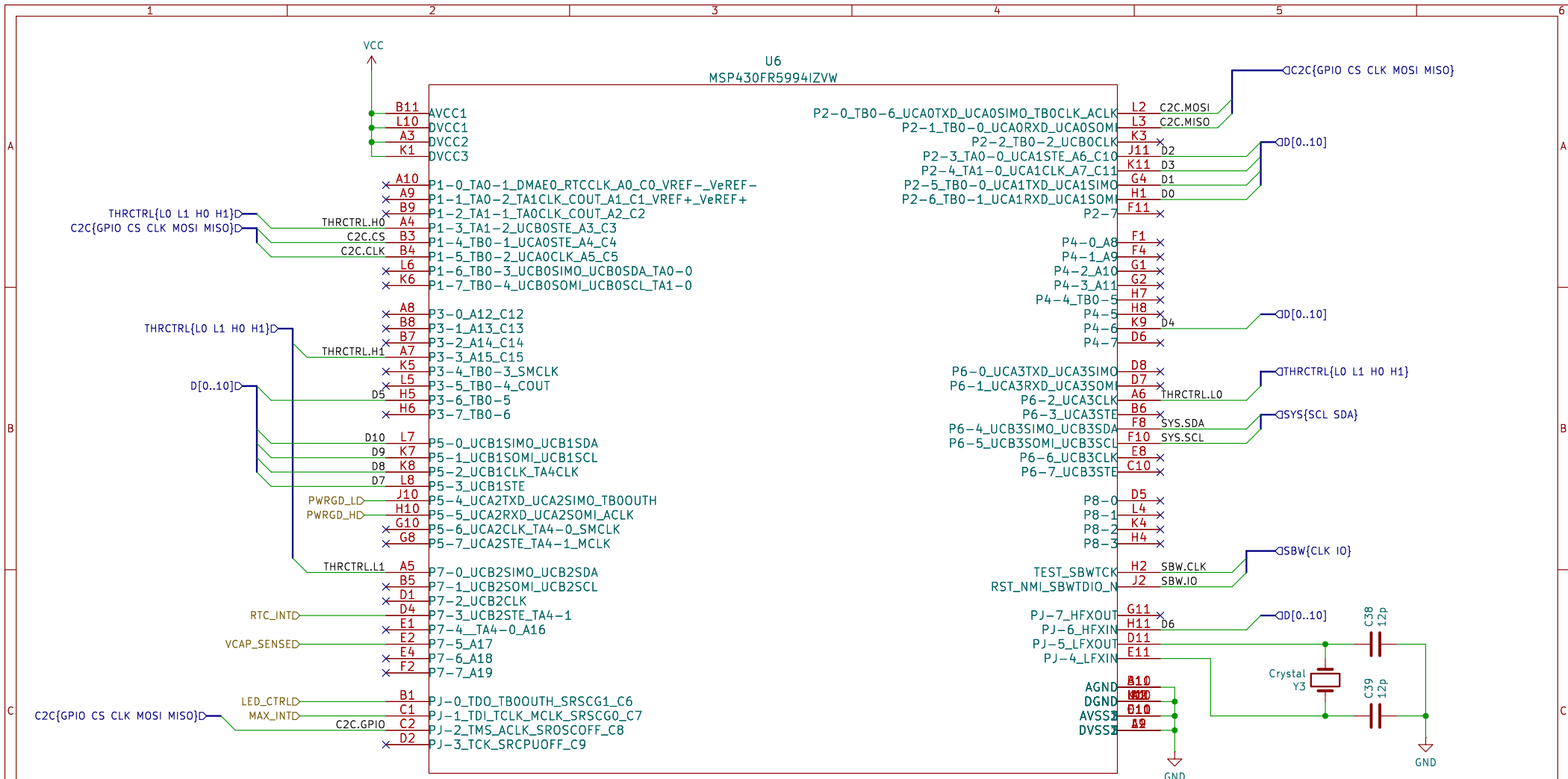
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Id: 3/7



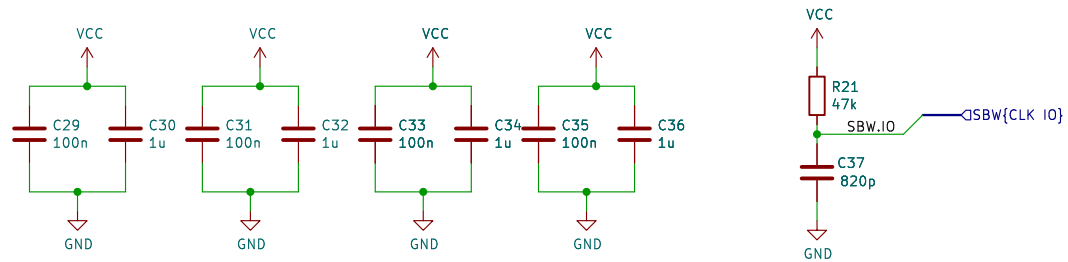
Sheet: /nRF52/
File: nrf52.kicad_sch

Title:

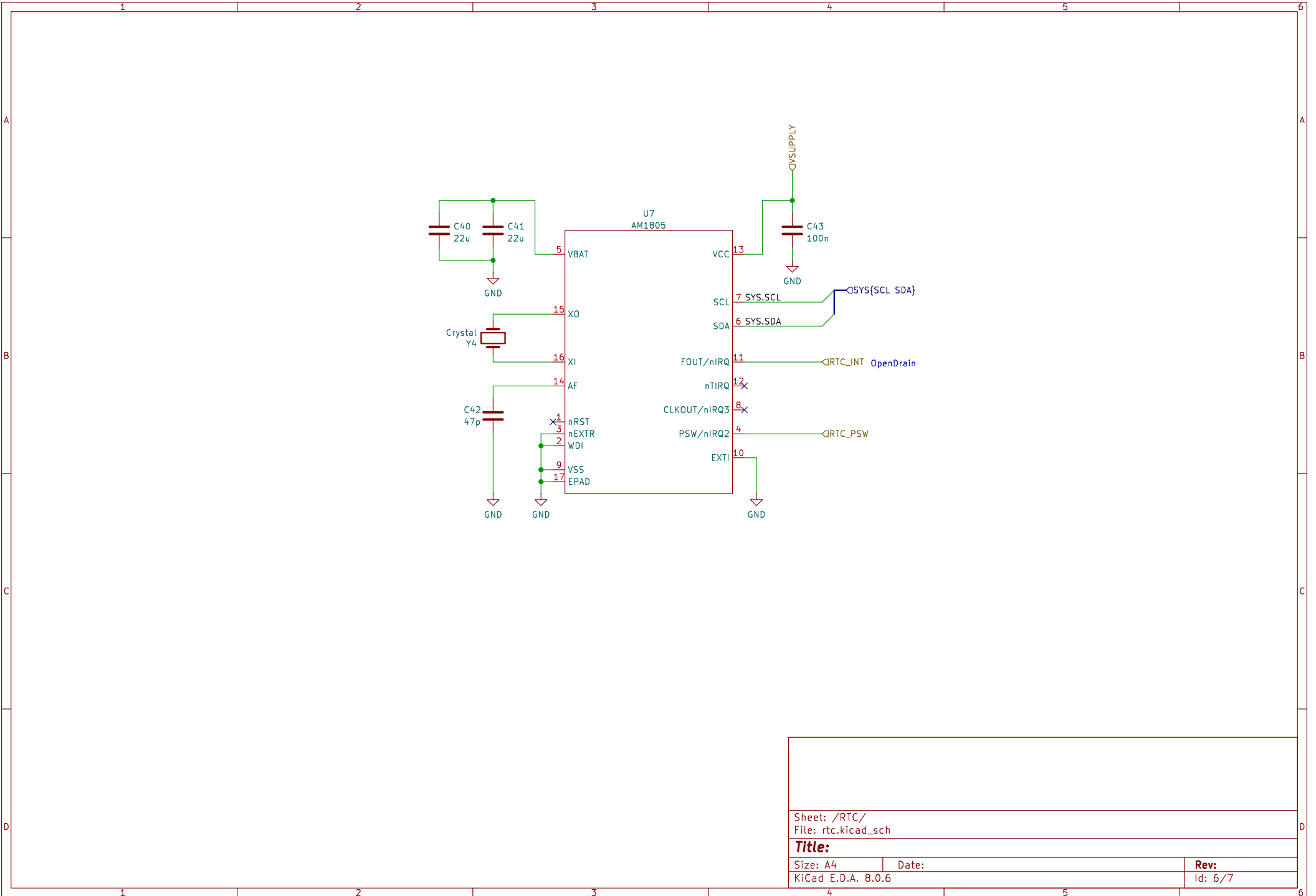
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| Size: A4 | Date: | Rev: |
| KiCad E.D.A. 8.0.6 | | Id: 4/7 |



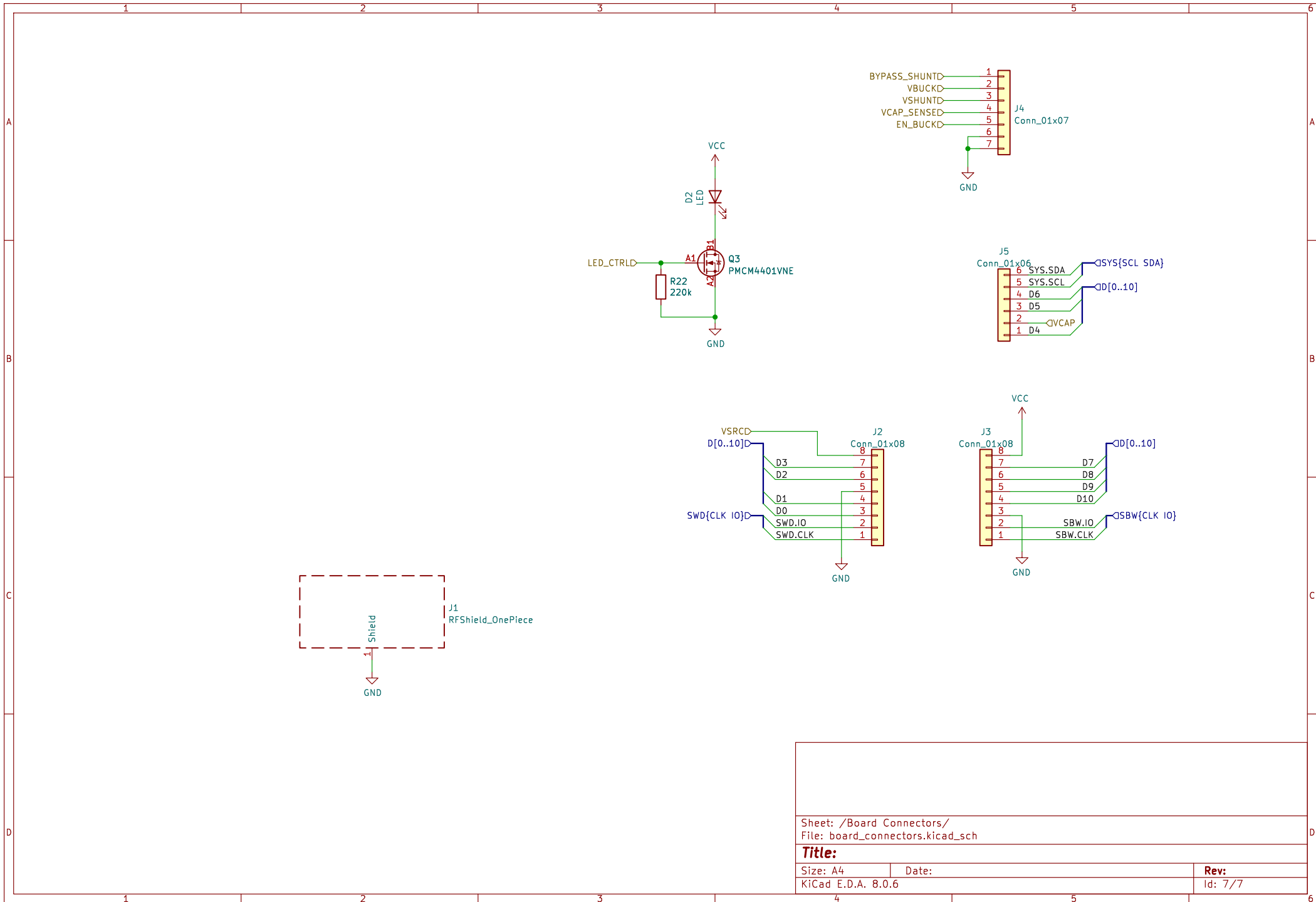
MSP430 with 256kB of FRAM. Mainly used for NVM storage. Will be kept power down with around 250nA current consumption and woken up by nRF52 to store/fetch program/data state before and after power failure.



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|--------------------------|--------------------|-------|---------|
| Sheet: /MSP430FR/ | | Date: | |
| File: msp430fr.kicad_sch | | Rev: | |
| Size: A4 | KiCad E.D.A. 8.0.6 | | Id: 5/7 |



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| Sheet: /RTC/ | | |
| File: rtc.kicad_sch | | |
| Title: | | |
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| KiCad E.D.A. 8.0.6 | | Id: 6/7 |



Sheet: /Board Connectors/
 File: board_connectors.kicad_sch

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| Title: | | Rev: | |
| Size: A4 | Date: | | |
| KiCad E.D.A. 8.0.6 | | Id: 7/7 | |