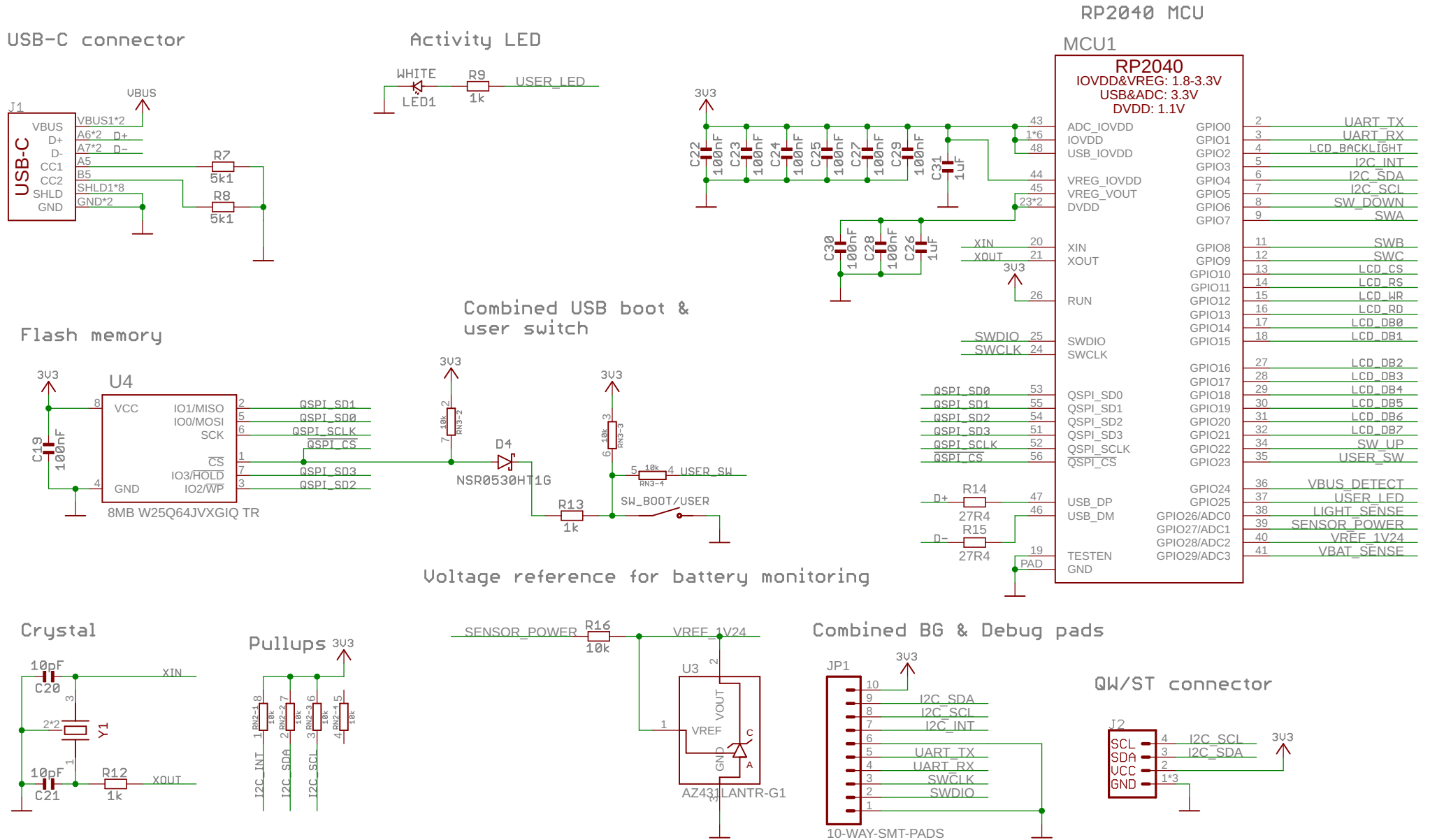


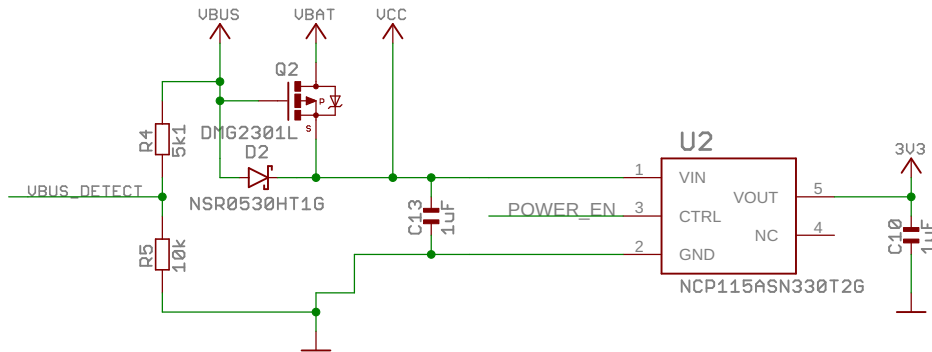
Tufty 2040 (PIM624): RP2040 & co



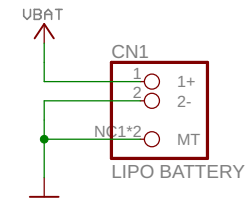
Tufty 2040 (PIM624): Power supply

Power Supply and switching

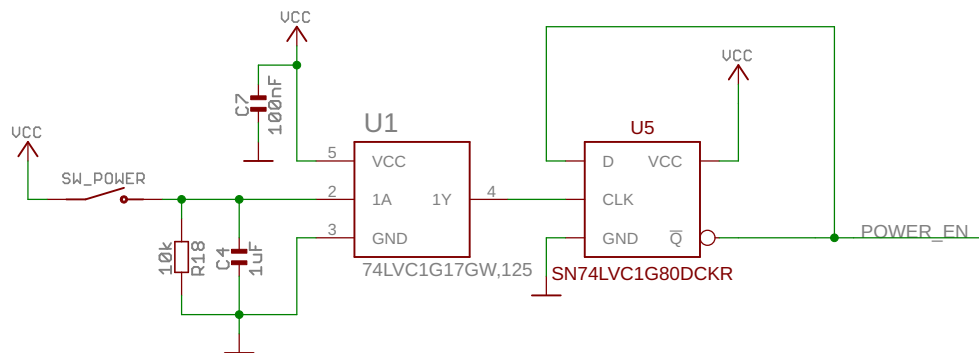
Use UBUS when available otherwise UBAT for supply.



Battery connector (JST PH)

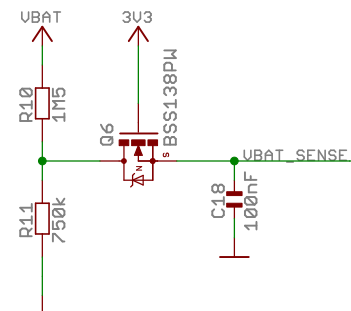


Power switch circuit



Battery voltage sense

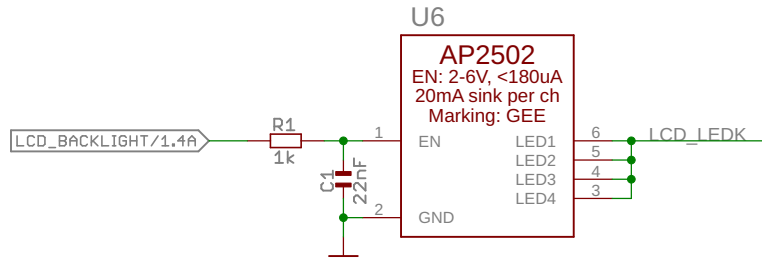
Max BAT_SENSE voltage with a 5U battery: $5.0/3 = 1.66V$
Q6 needs to conduct at least a little bit current at $3.3-1.66V = 1.64V$ gate voltage.



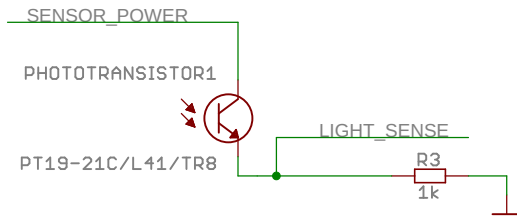
Tufty 2040 (PIM624): Display, Buttons and Light Sensor

LCD Backlight

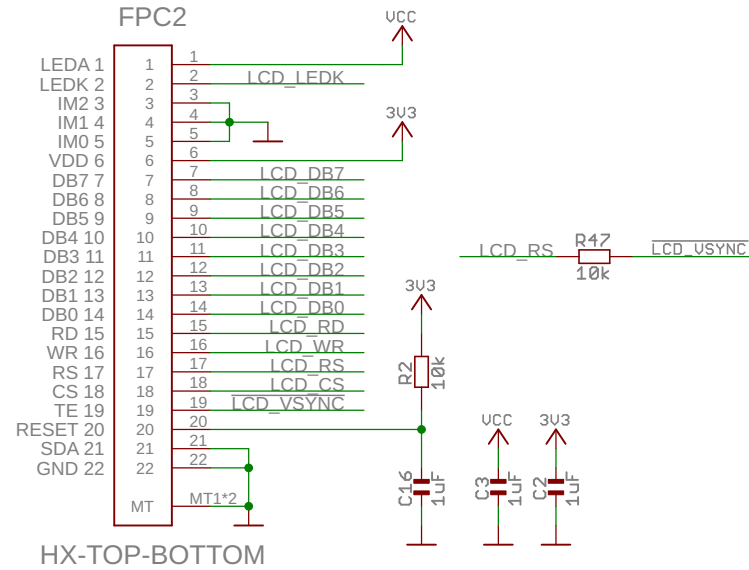
Display backlight is 4 white LEDs in parallel (FU 3.2 - 20mA). Each channel of the AP2502 constant current driver sinks 20mA so we tie them together to provide the necessary current.



Light sensor



LCD connector and circuitry



Five front-side buttons

