

The diagram shows a circuit for reverse polarity protection. A P-MOSFET (Q1, IRLML6401) is used as a switch. The gate of the MOSFET is connected to a network of two resistors, R8 (82k) and R9 (33k), which are connected to the USB\_VBUS\_SENSE line. The source of the MOSFET is connected to the positive terminal of a battery (CR2032, Energizer). The drain of the MOSFET is connected to the +3V0 and +5V power rails. The gate of the MOSFET is also connected to the +BATTERY line. The negative terminal of the battery is connected to GND. The USB\_VBUS\_SENSE line is shown as a green arrow pointing towards the resistors.

Q1 works as a reverse polarity protection, closes on 5V presence from USB (Ugate > Usource)

CR2032 will have ~200mA till 2V5 discharge

Energizer CR2032

U5  
AP2112K-3.3

+5V

+3V3

CB  
10u

GND

GND

LDO, Udrop = 250

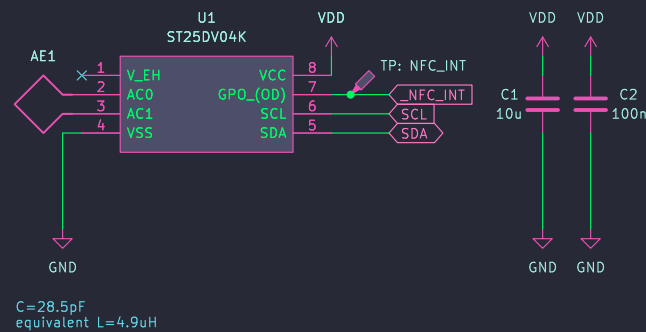
The diagram shows a circuit segment with three input pins at the top: +3V3, +3V0, and VDD. The +3V3 and +3V0 pins are connected to a common green line. This line passes through a component labeled FB1 330 and then reaches a node connected to the VDD pin. A capacitor labeled C7 10u is connected between this VDD node and a GND symbol at the bottom. The entire diagram is rendered in pink lines on a dark blue background.

[illegible]

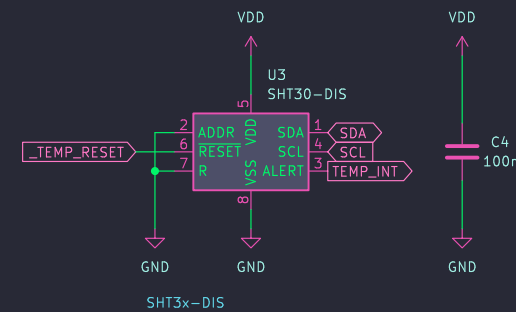
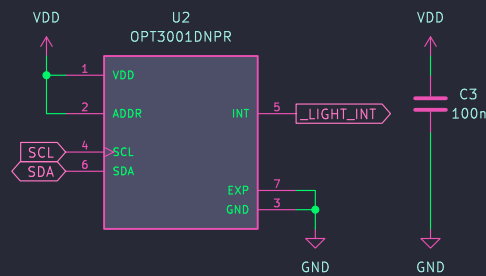
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12C: system 0x57 (0xAE/0xAF), user 0x54 (0xA6/0xA7)
ST25DV ultra-low power: AN5733
Antenna design: AN2972
Antenna design double-layer : AN5605
FTM Data exchange: AN4910

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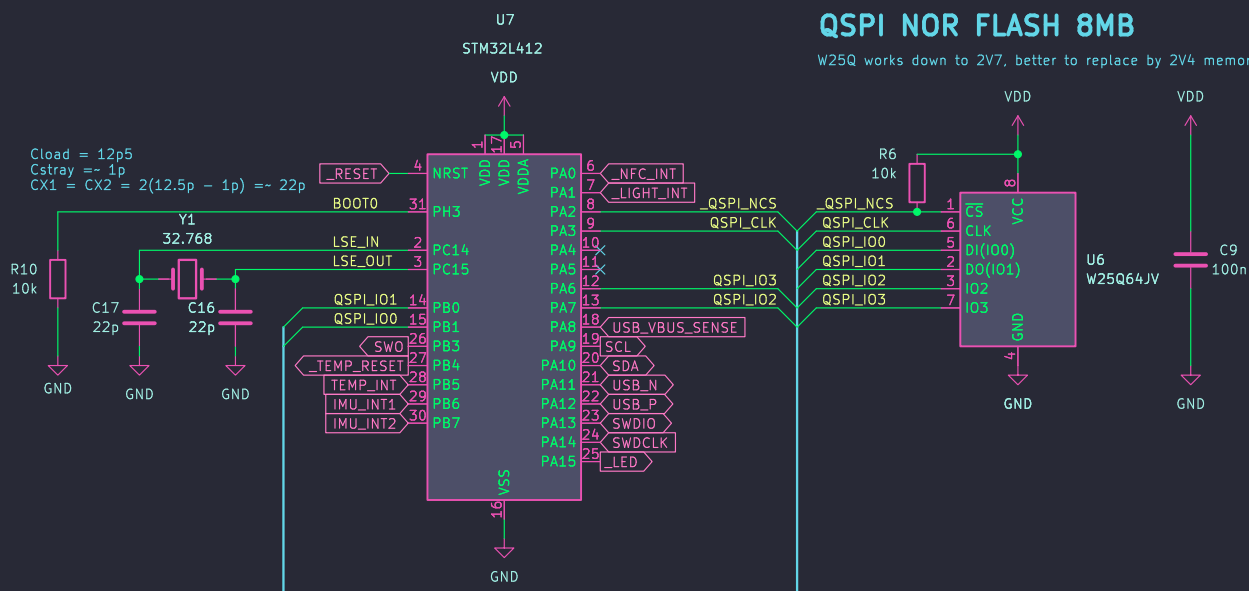
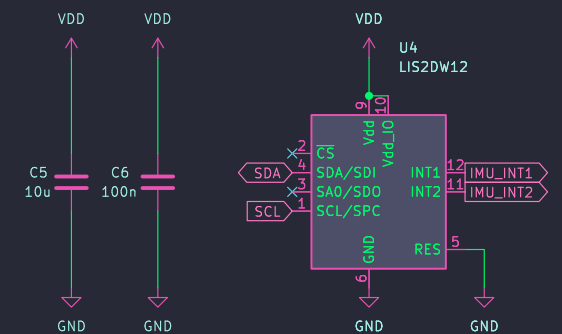


I2C 0x45 (0x8A/0x8B), ADDR=VDD



I2C 0x19 (0x32/0x33), ADDR(SA0)=VDD (internal pull-up)

- Orientation: Can detect logger tilt
- Shock and vibration monitoring: Shipping and warranty usage logging
- Freefall: Logger fall detection



VDD

R3  
1k

+LED

D2  
LED

LED

$I = 1\text{mA}$