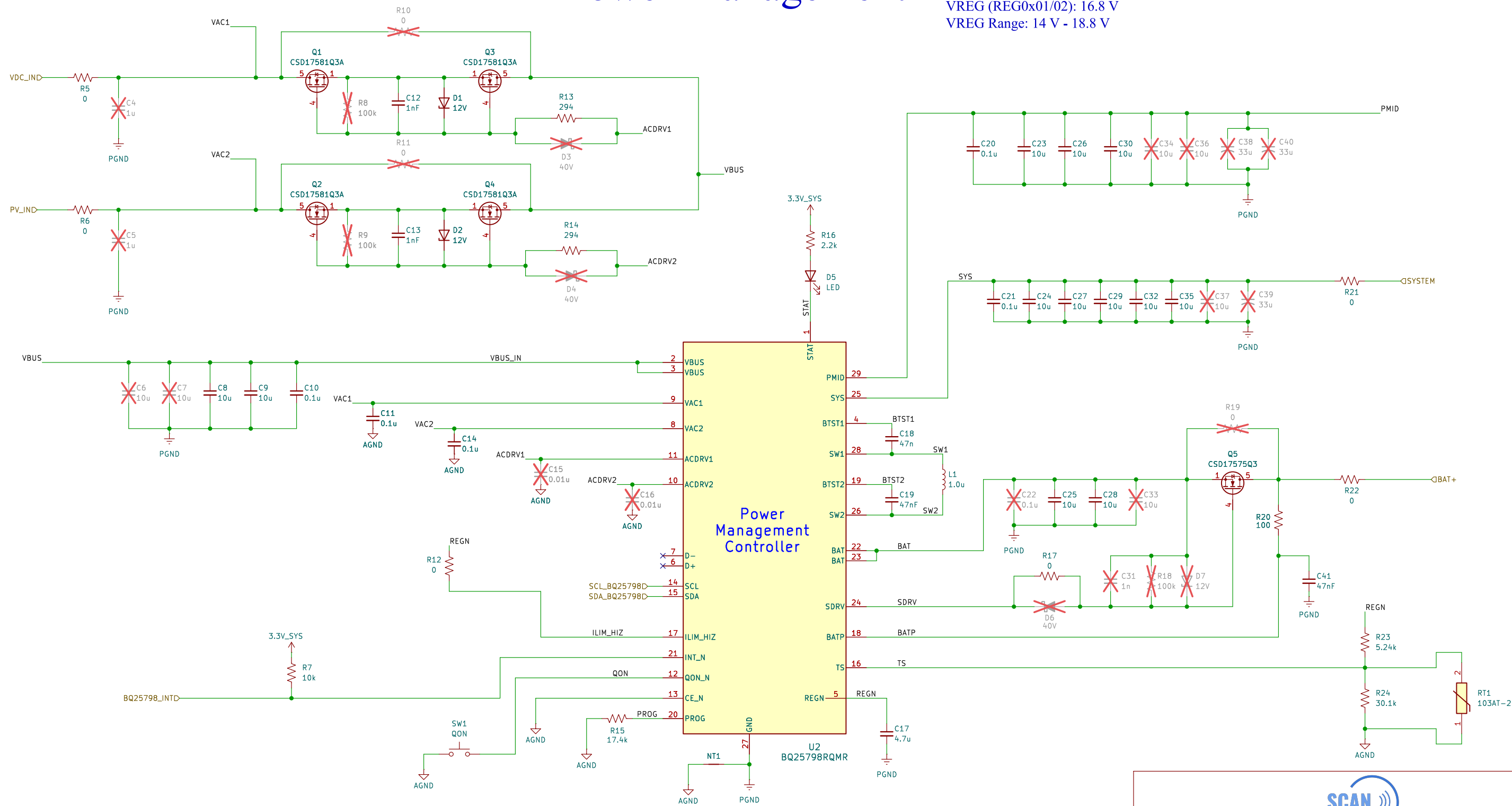


Power Management

At POR and WDT reset...

- Fsw = 1.5 MHz
- Battery Cell Count (REG0x0A[7:6]): 4s
- ICHG (REG0x03/04): 1 A
- VSYSMIN (REG0x00[5:0]): 12 V
- VREG (REG0x01/02): 16.8 V
- VREG Range: 14 V - 18.8 V



Senior Design Group 35

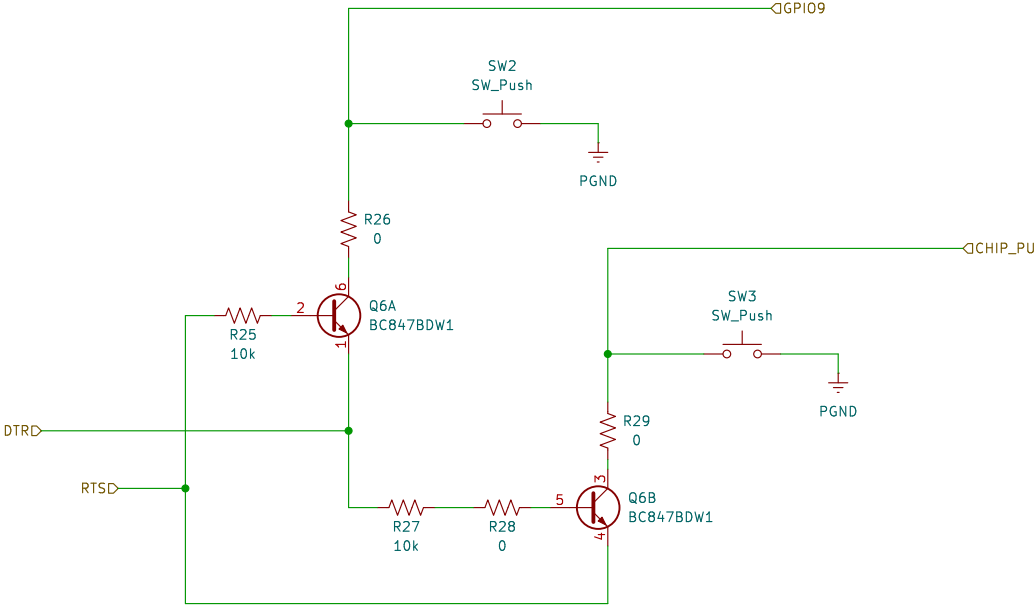
Sheet: /Power Management/
File: power_management.kicad_sch

Title: SCAN PCB

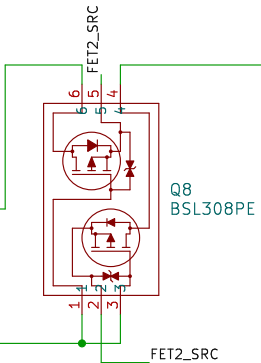
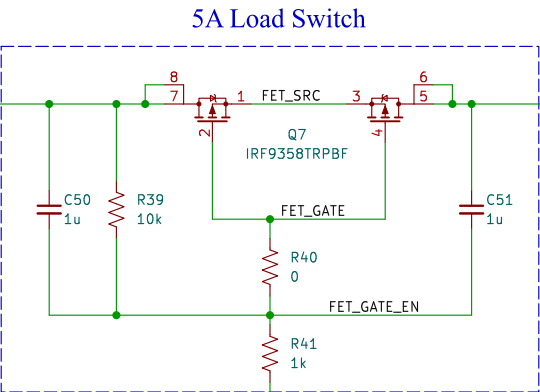
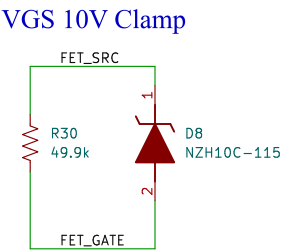
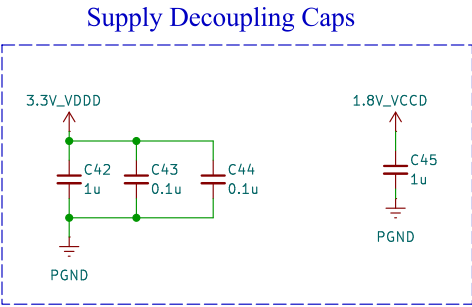
Size: B	Date: 2025-02-25
KiCad E.D.A. 8.0.6	

Rev: 1.2
Id: 2/10

Auto Download

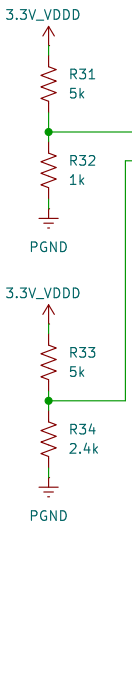


USB Power Delivery

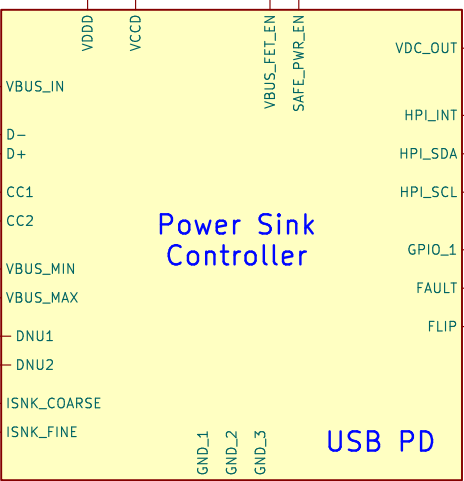


VBUS_MIN = 9V

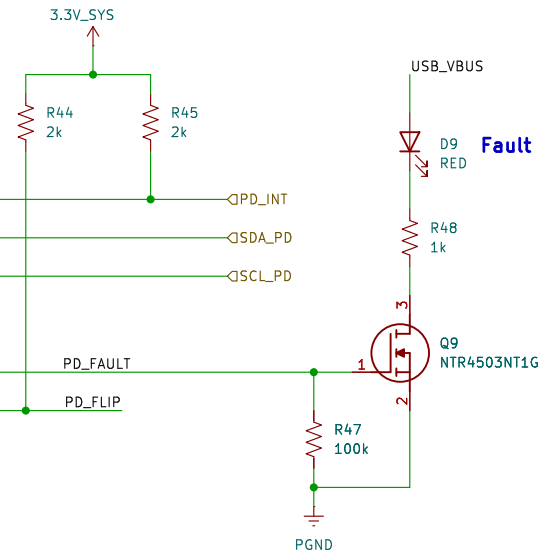
VBUS_MAX = 12V



ISNK = ISNK_CRS + ISNK_FIN
ISNK_CRS = 3A
ISNK_FIN = 0A



USB PD
U3
CYPD3177-24LQXQT



A

B

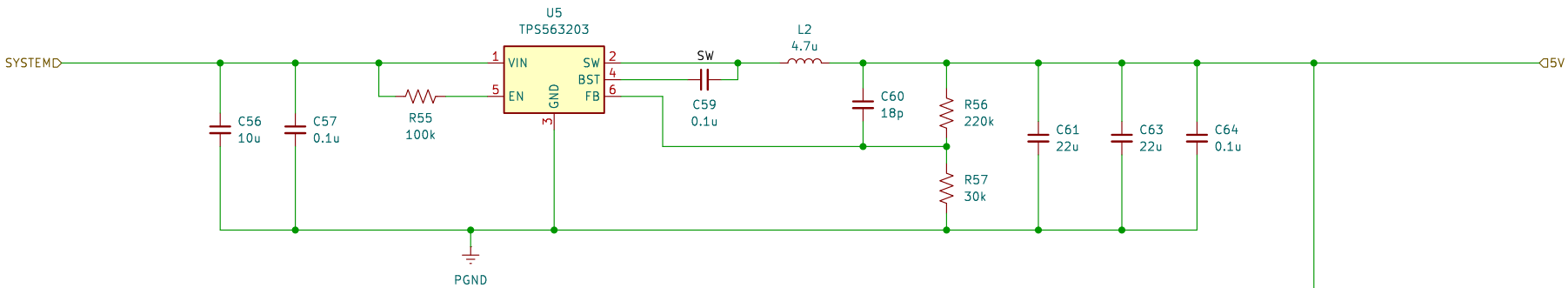


KiCad E.D.A. 8.0.6

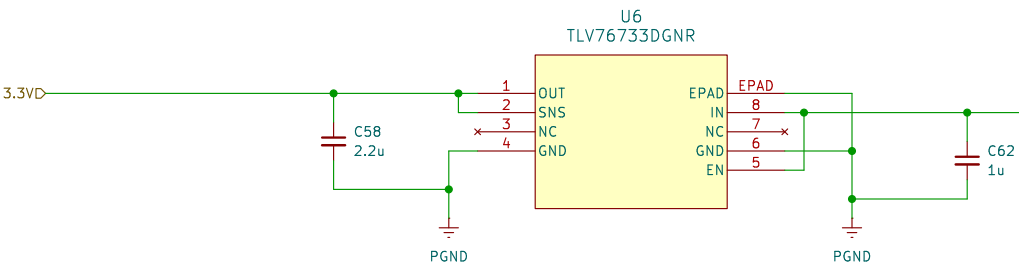
Id: 5/10

Logic Power

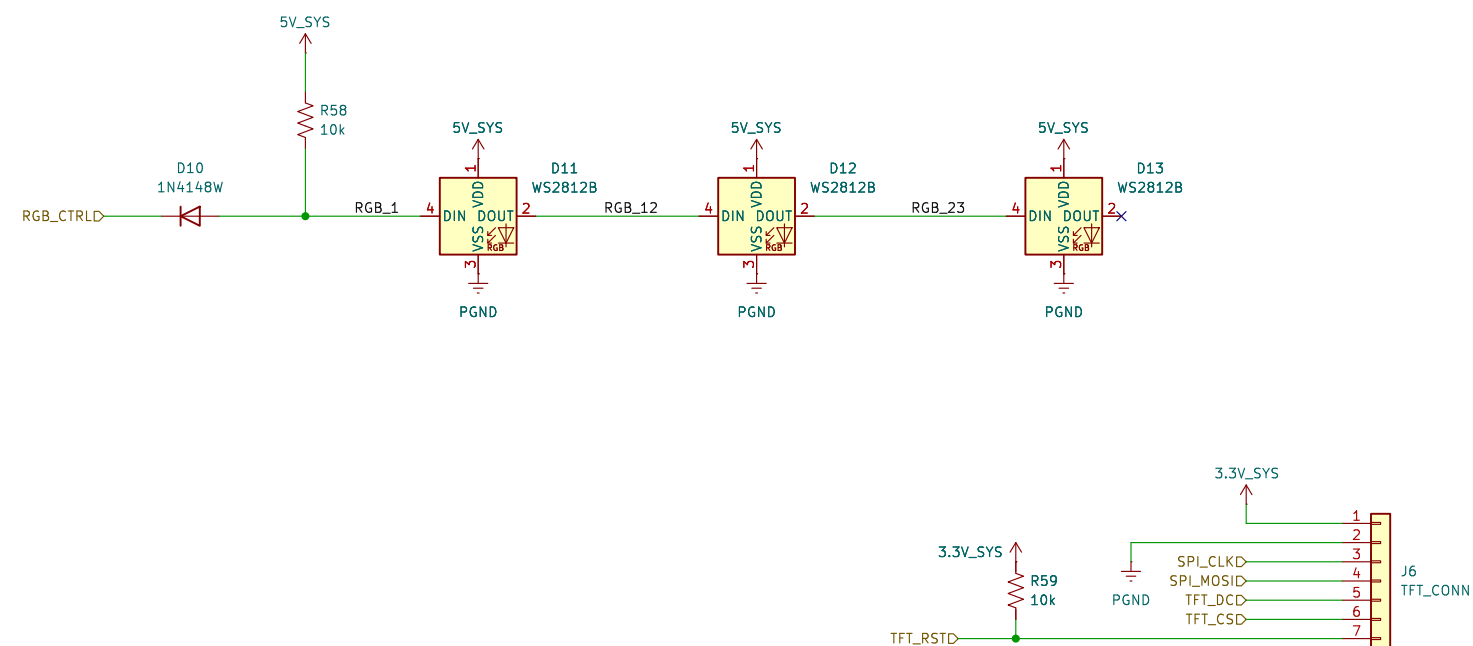
$V_{in} = 6.5\text{ V} - 17\text{ V}$
 $F_{sw} = 600\text{ kHz}$
 $V_{out} = 5\text{ V}$
 $I_{out(max)} = 2.5\text{ A}$



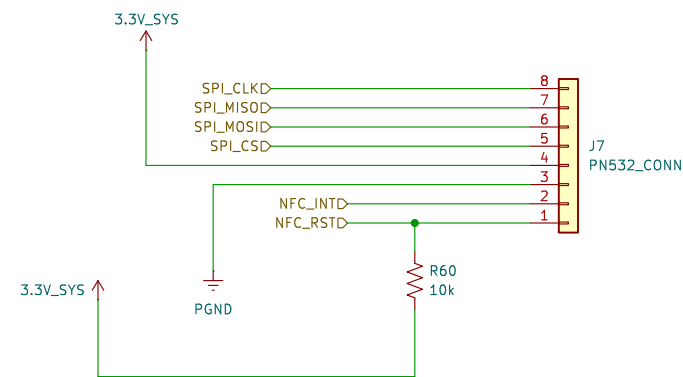
$V_{in} = 5\text{ V}$
Quiescent Current: 50 uA (typical)
 $V_{out} = 3.3\text{ V}$
 $I_{out(max)} = 1\text{ A}$



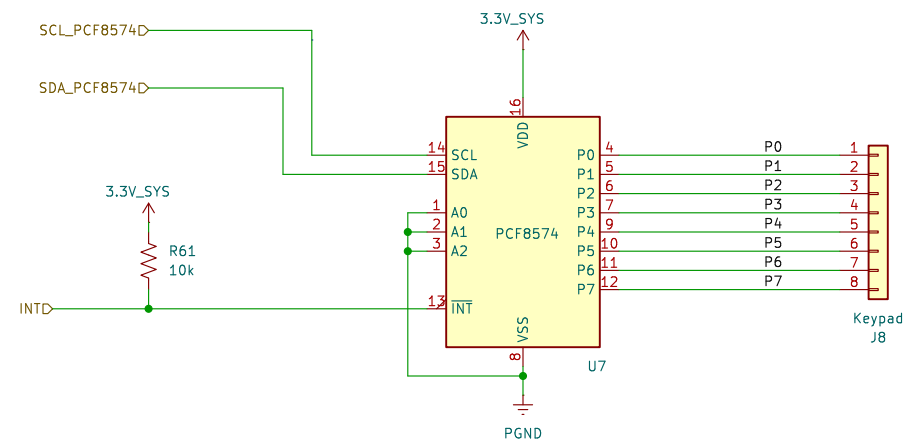
TFT Display Connector and RGB LEDs



NFC Connector



Keypad Bus Expander



USB Protection

