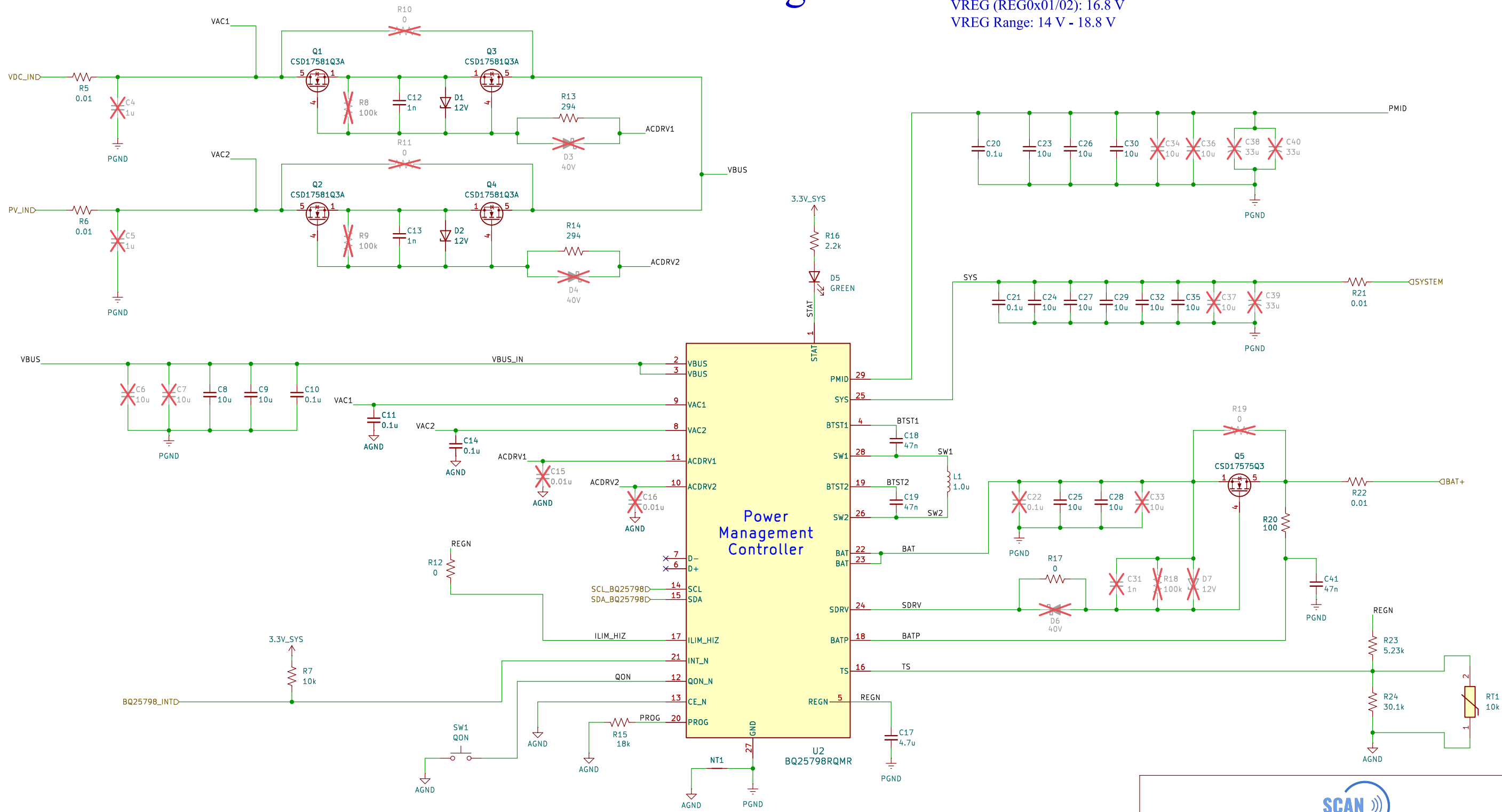
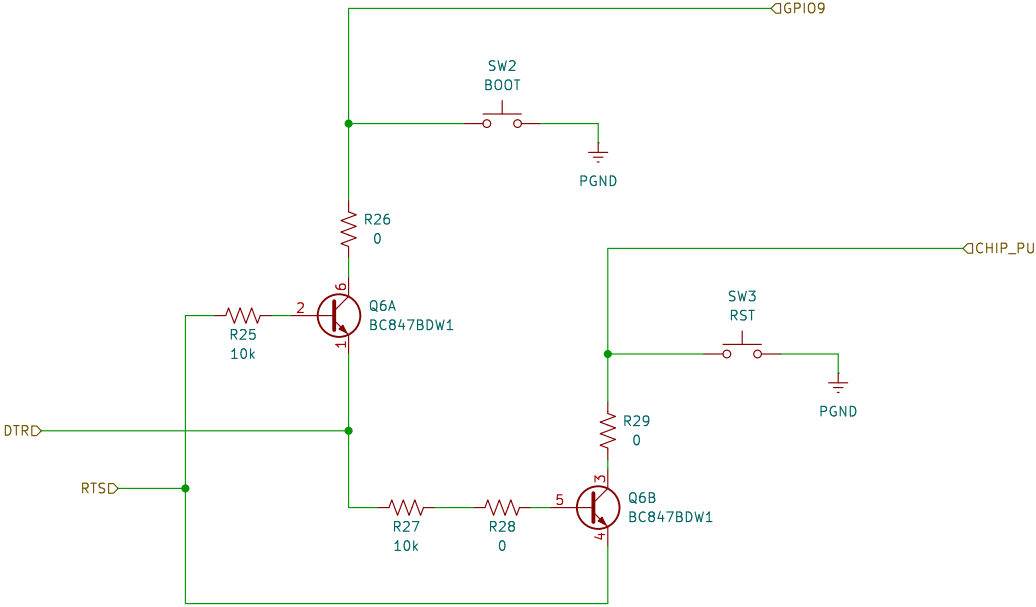


Power Management

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



Auto Download

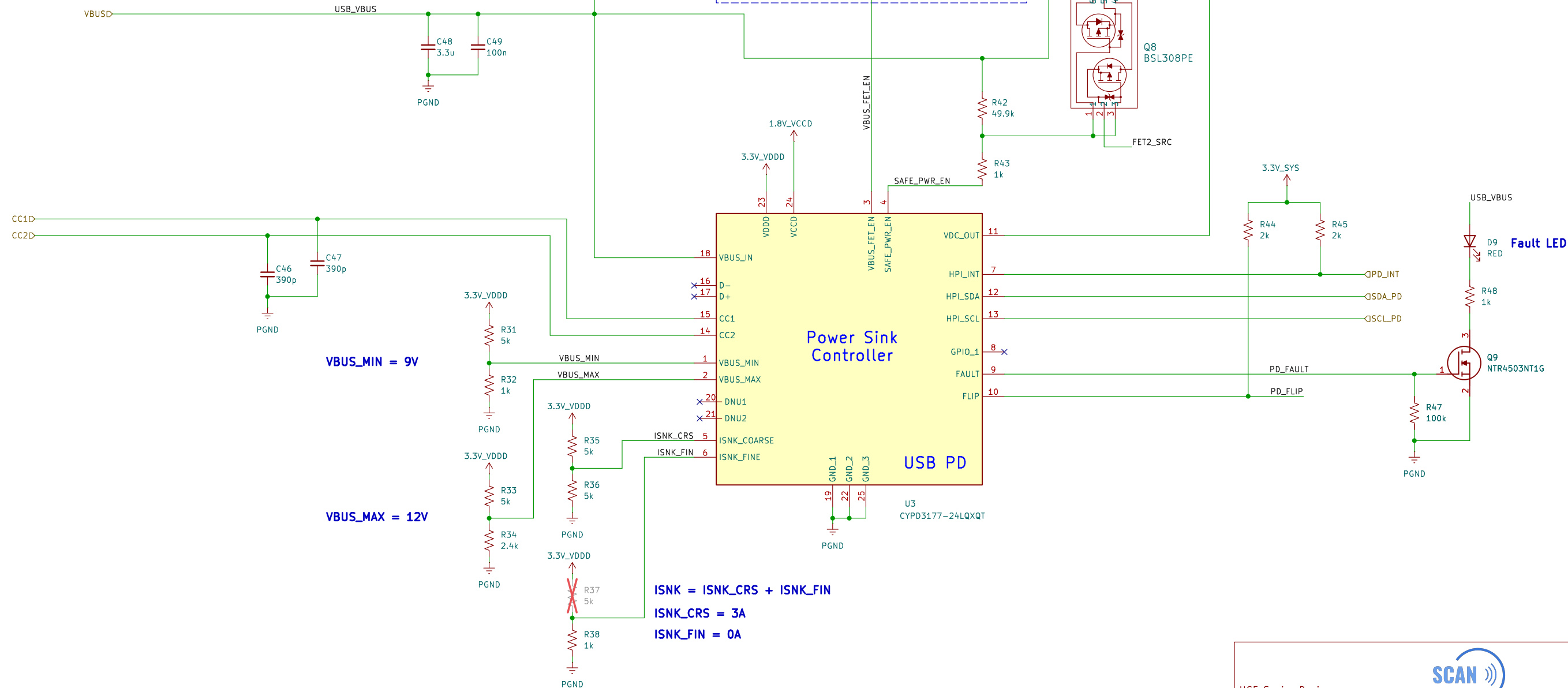
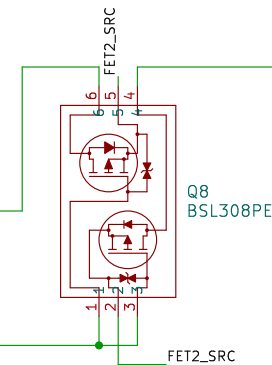
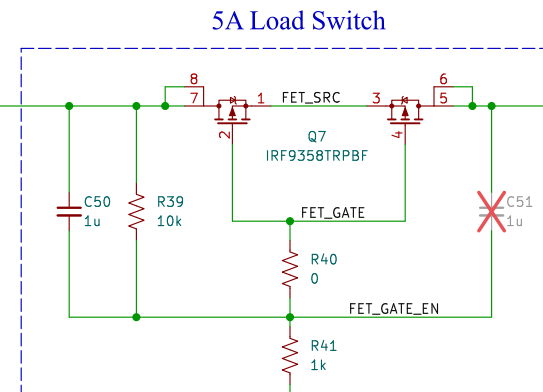
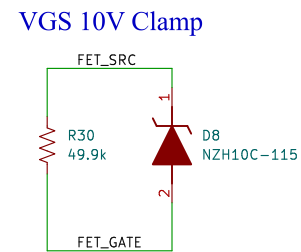
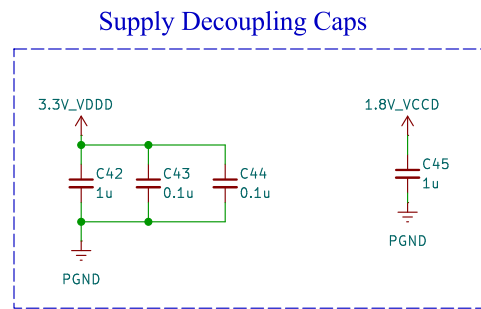


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Sheet: /Auto Download/
File: auto_download.kicad_sch

SCAN Schematic

Size: B	Date: 2025-03-06	Rev: 1.2
KiCad E.D.A. 8.0.6		Id: 3/10

USB Power Delivery



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Group 35

Sheet: /USB Power Delivery/
File: usb_power.kicad_sch

SCAN Schematic

Size: B	Date: 2025-03-06
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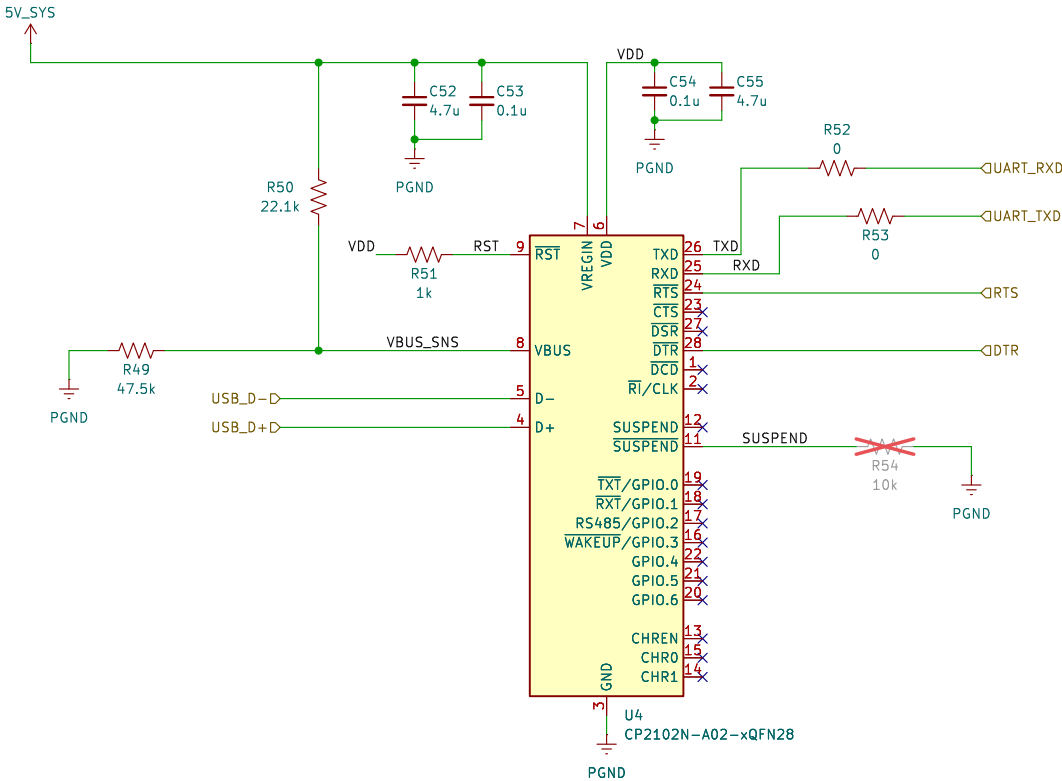
KiCad E.D.A. 8.0.6

Rev: 1.2

Id: 4/10

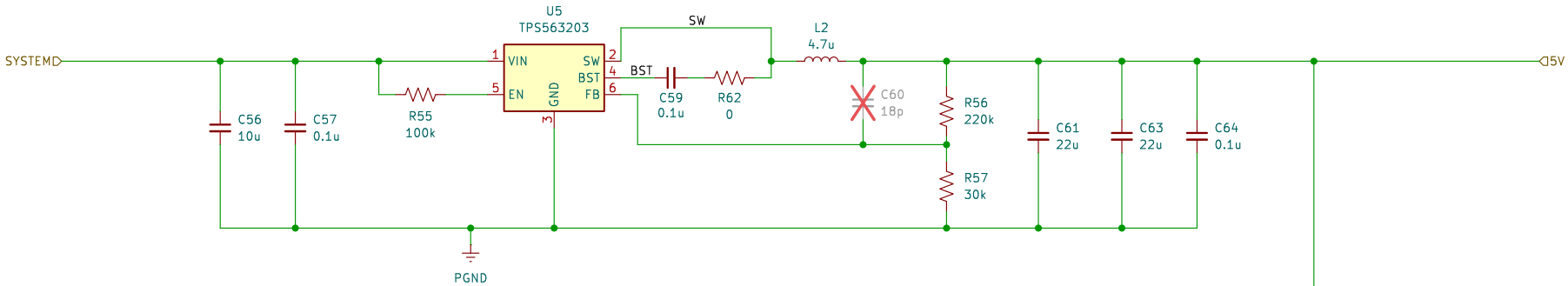
IPC-2141 TRACE IMPEDANCE CALCULATION FOR USB D+/D-
diff impedance = 90 ohms
trace thickness = 1 oz/ft^2
dielectric height = 0.1 mm
dielectric constant = 4.3
calculated trace width = 0.1539 mm

USB-to-UART Bridge

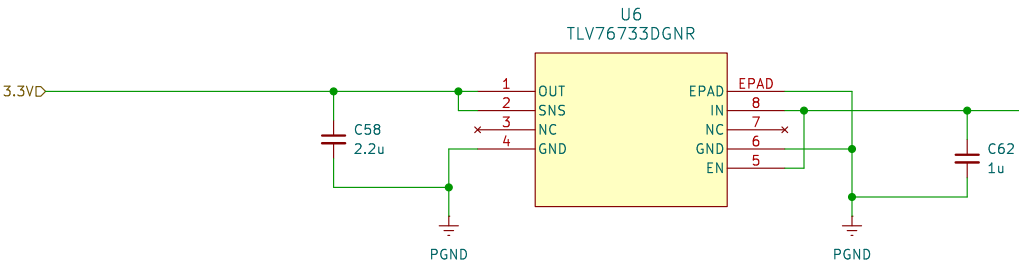


Logic Power

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



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

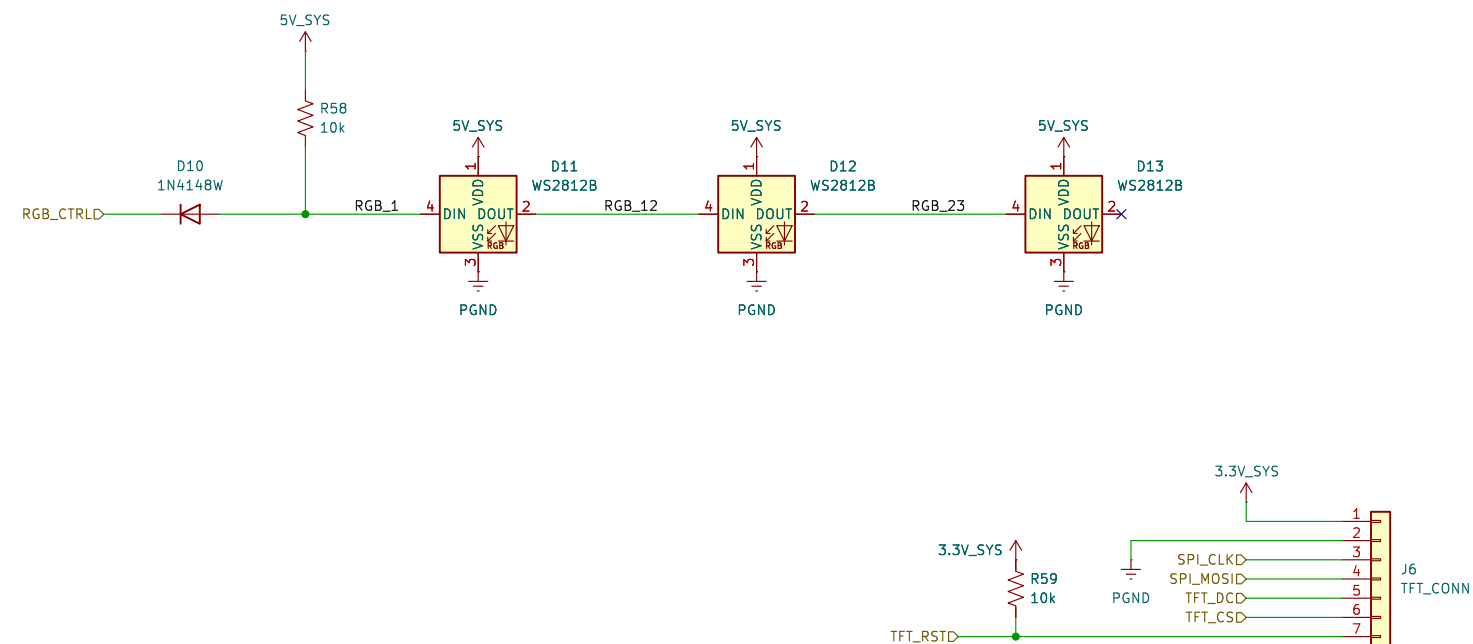


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Sheet: /Logic Power/
File: logic_power.kicad_sch

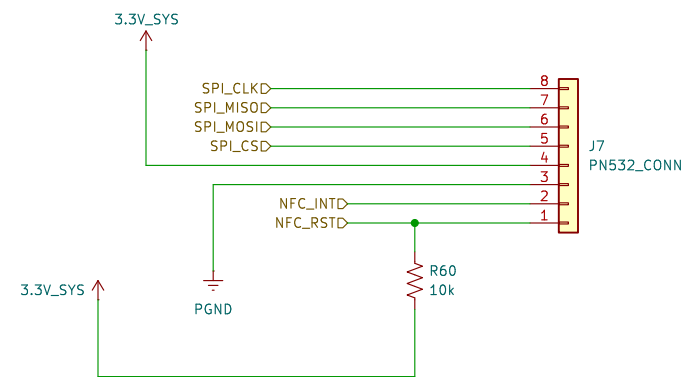
SCAN Schematic

Size: B	Date: 2025-03-06	Rev: 1.2
KiCad E.D.A. 8.0.6		Id: 6/10

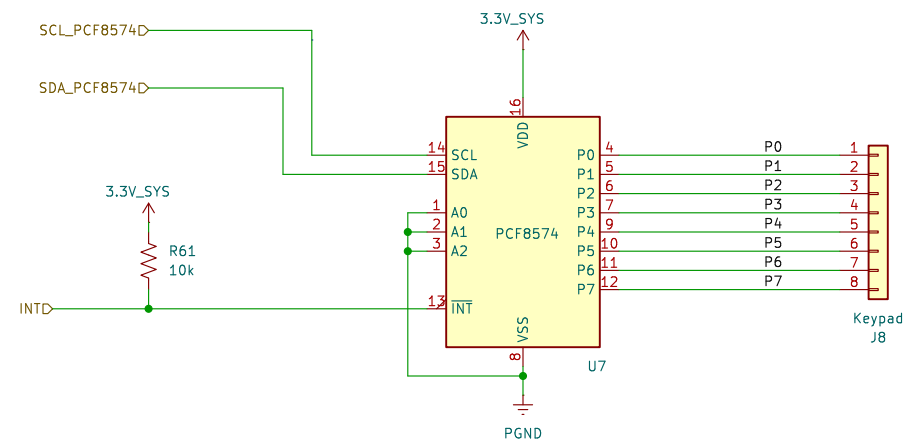
TFT Display Connector and RGB LEDs



NFC Connector



Keypad Bus Expander



USB Protection

