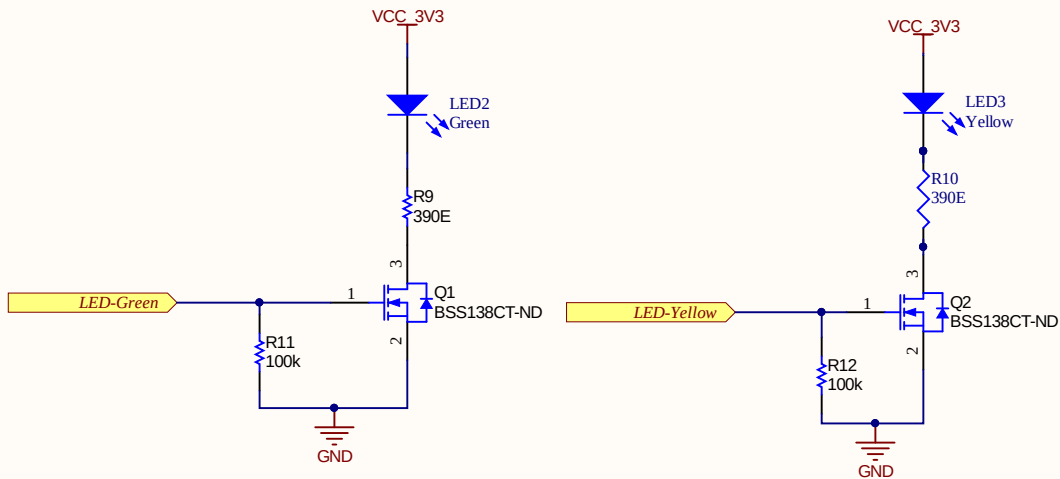
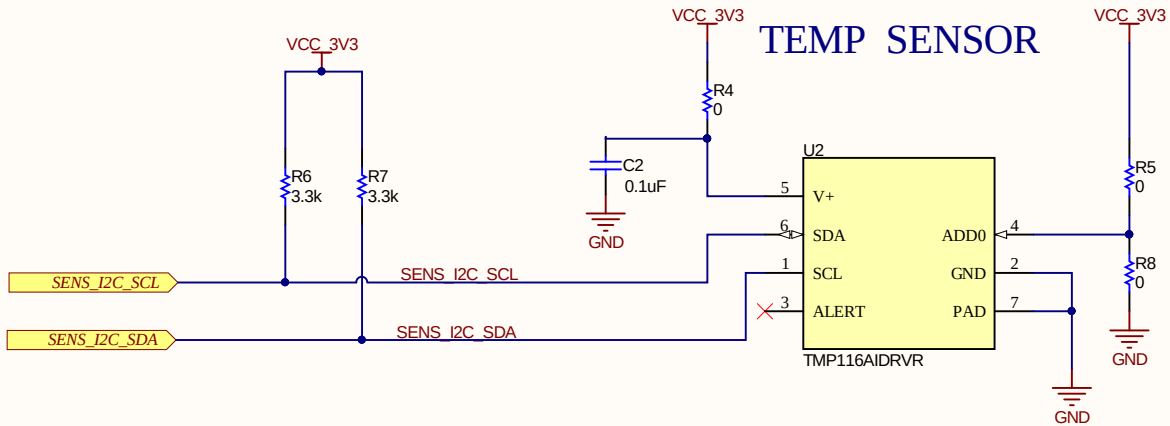




USB-INTERFACE

USB to serial converter

POWER MANAGEMENT

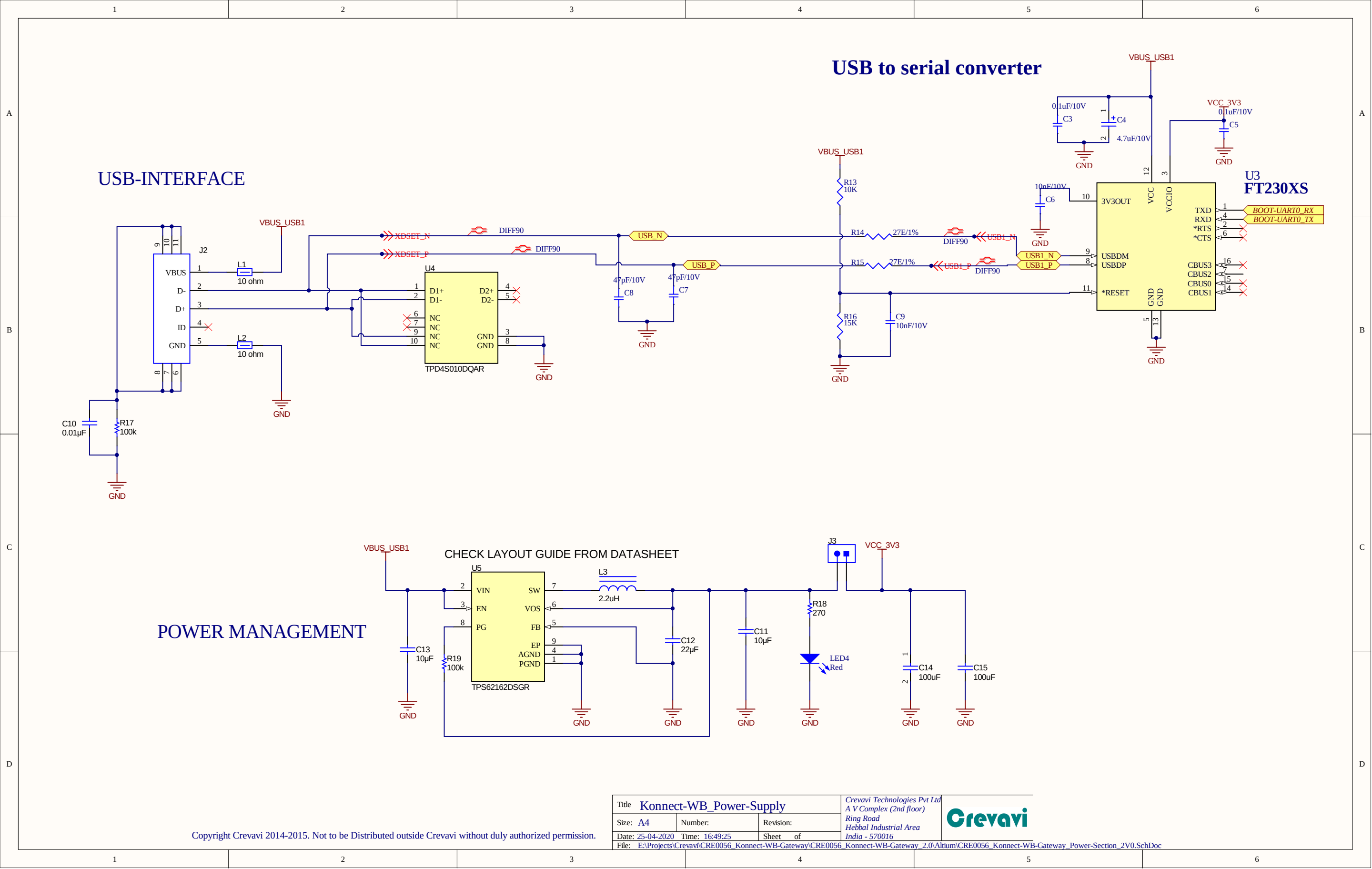
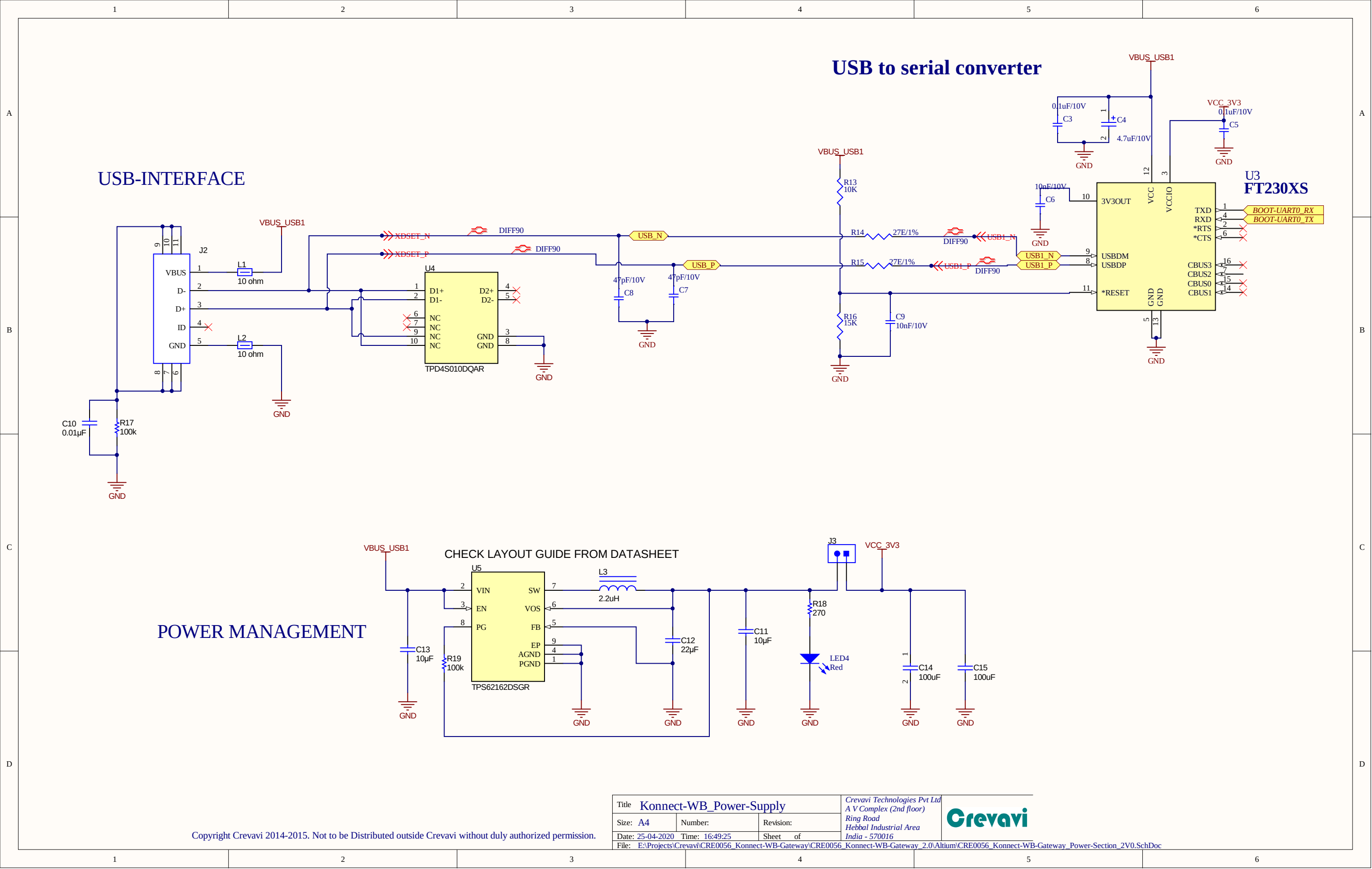
U3 FT230XS

TPD4S010DQAR

TPS62162DSGR

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This diagram illustrates the electrical schematic for a USB to serial converter, divided into three main functional blocks: USB-INTERFACE, USB to serial converter, and POWER MANAGEMENT.

USB-INTERFACE

The USB-INTERFACE block shows the connection of a USB connector (J2) to the USB to serial converter. The connector pins are labeled: 1 (VBUS), 2 (D-), 3 (D+), 4 (ID), 5 (GND), 6 (GND), 7 (GND), 8 (GND), 9 (VBUS), 10 (D-), 11 (D+). The ID pin (4) is connected to a 10 ohm resistor (L2) to GND. The D- and D+ pins (2 and 3) are connected to the D1+ and D1- pins of the TPD4S010DQAR (U4) through 10 ohm resistors (L1). The D1+ and D1- pins of U4 are connected to the D2+ and D2- pins, which are then connected to the USB_N and USB_P pins of the USB to serial converter through 47pF/10V capacitors (C8 and C7). The USB_N and USB_P pins are connected to the USB1_N and USB1_P pins of the USB to serial converter through 27E/1% resistors (R14 and R15). The USB1_N and USB1_P pins are connected to the USB1_N and USB1_P pins of the FT230XS (U3) through 10nF/10V capacitors (C6 and C9). The USB1_N and USB1_P pins are also connected to the TXD and RXD pins of the FT230XS (U3) through 10nF/10V capacitors (C6 and C9). The USB1_N and USB1_P pins are connected to the TXD and RXD pins of the FT230XS (U3) through 10nF/10V capacitors (C6 and C9).

USB to serial converter

The USB to serial converter block shows the connection of the USB to serial converter (U3) to the FT230XS (U3). The USB to serial converter (U3) is connected to the FT230XS (U3) through 10nF/10V capacitors (C6 and C9). The USB to serial converter (U3) is connected to the FT230XS (U3) through 10nF/10V capacitors (C6 and C9). The USB to serial converter (U3) is connected to the FT230XS (U3) through 10nF/10V capacitors (C6 and C9).

POWER MANAGEMENT

The POWER MANAGEMENT block shows the connection of the power management IC (U5) to the FT230XS (U3). The power management IC (U5) is connected to the FT230XS (U3) through 10nF/10V capacitors (C6 and C9). The power management IC (U5) is connected to the FT230XS (U3) through 10nF/10V capacitors (C6 and C9). The power management IC (U5) is connected to the FT230XS (U3) through 10nF/10V capacitors (C6 and C9).

Legend:

- VBUS_USB1: USB VBUS
- VCC_3V3: 3.3V supply
- GND: Ground
- DIFF90: Differential 90 degrees
- USB_N, USB_P: USB data lines
- USB1_N, USB1_P: USB data lines
- TXD, RXD: FT230XS TX and RX pins
- *RTS, *CTS: FT230XS RTS and CTS pins
- *RESET: FT230XS RESET pin
- CBUS3, CBUS2, CBUS0, CBUS1: FT230XS control pins
- BOOT-UART0_RX, BOOT-UART0_TX: FT230XS boot pins
- TPD4S010DQAR: USB to serial converter
- FT230XS: FT230XS
- TPS62162DSGR: Power management IC
- LED4: Red LED

Component Values:

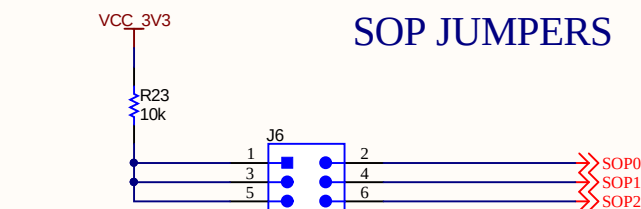
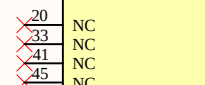
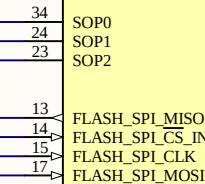
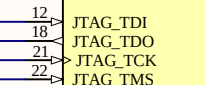
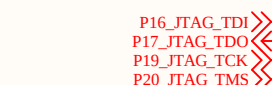
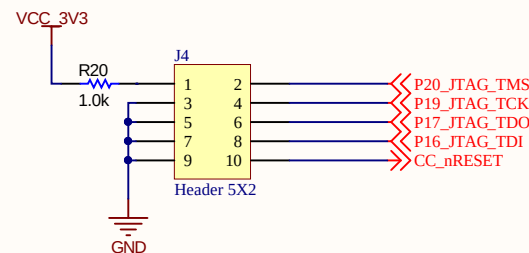
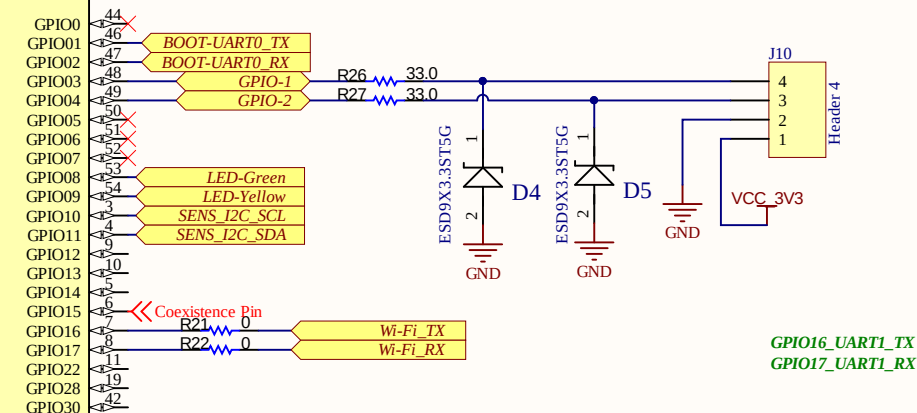
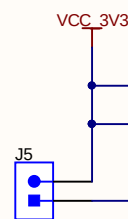
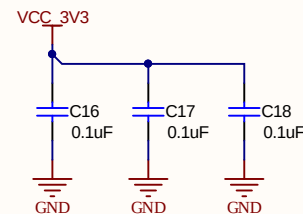
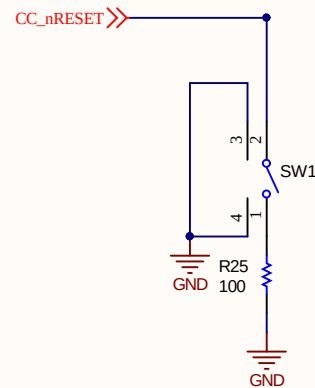
- L1: 10 ohm
- L2: 10 ohm
- L3: 2.2uH
- C3: 0.1uF/10V
- C4: 4.7uF/10V
- C5: 0.1uF/10V
- C6: 10nF/10V
- C7: 47pF/10V
- C8: 47pF/10V
- C9: 10nF/10V
- C10: 0.01uF
- C11: 10uF
- C12: 22uF
- C13: 10uF
- C14: 100uF
- C15: 100uF
- R13: 10K
- R14: 27E/1%
- R15: 27E/1%
- R16: 15K
- R17: 100k
- R18: 270
- R19: 100k

Check Layout Guide from Datasheet

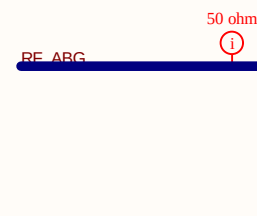
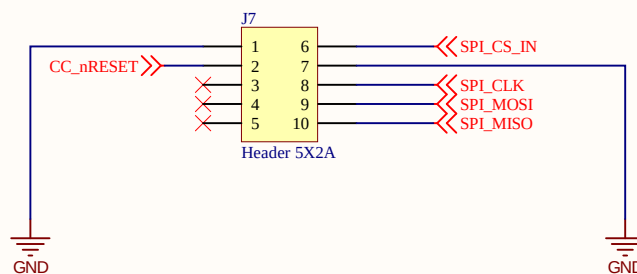
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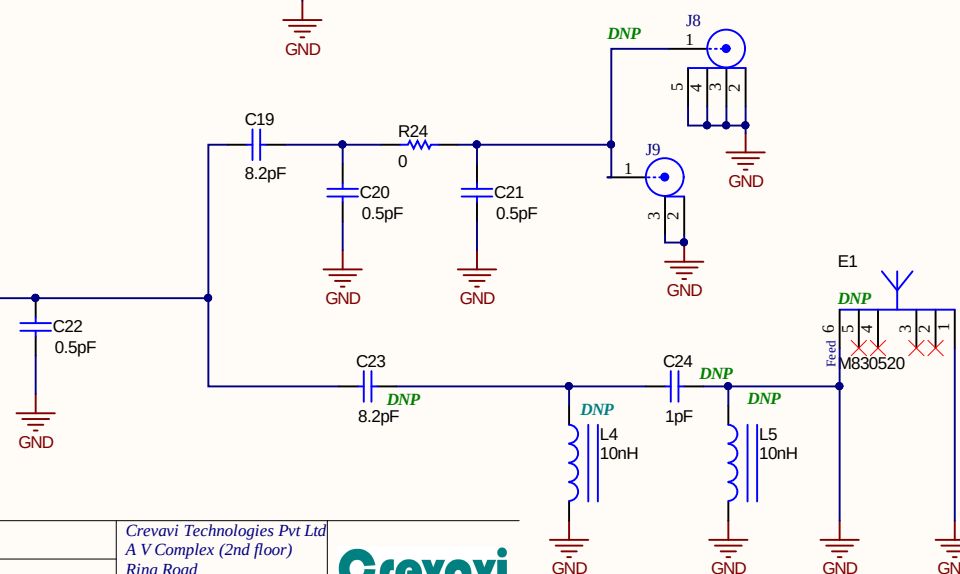
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GANG PROGRAMMING CONNECTOR



RF SECTION



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