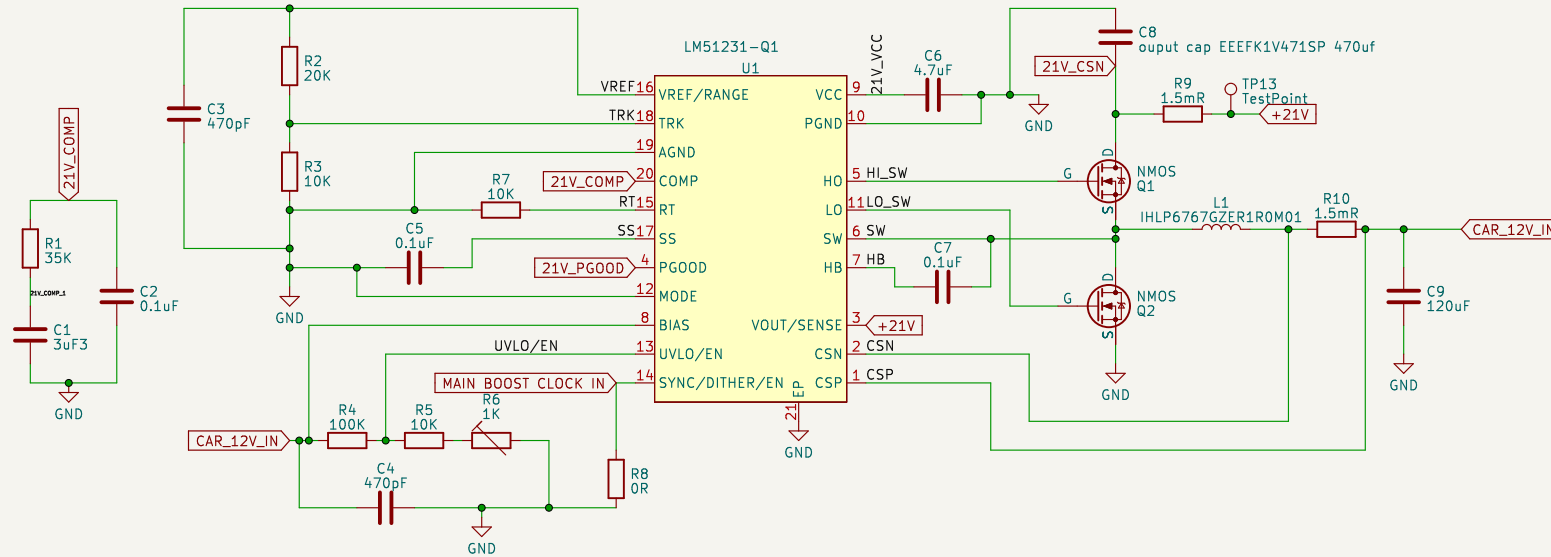
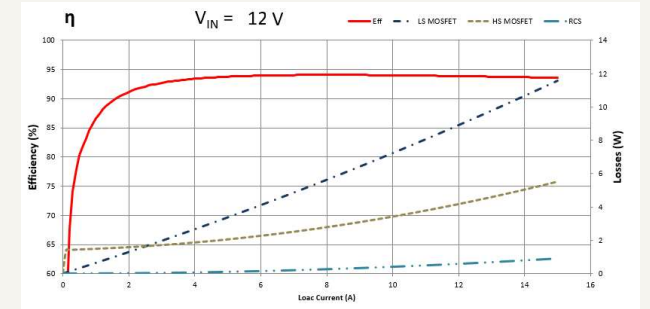


2mhz switching freq



TOTAL SYSTEM POWER IS ~275w

HUB USB SPEC 3.1

THIS IS A 2X 100W USB PD SOURCE

MICK MAKE

Sheet: /12-21V INPUT BOOST CONVERTER/

File: untitled.kicad_sch

Title: 200W USB PD 3.1 HUB

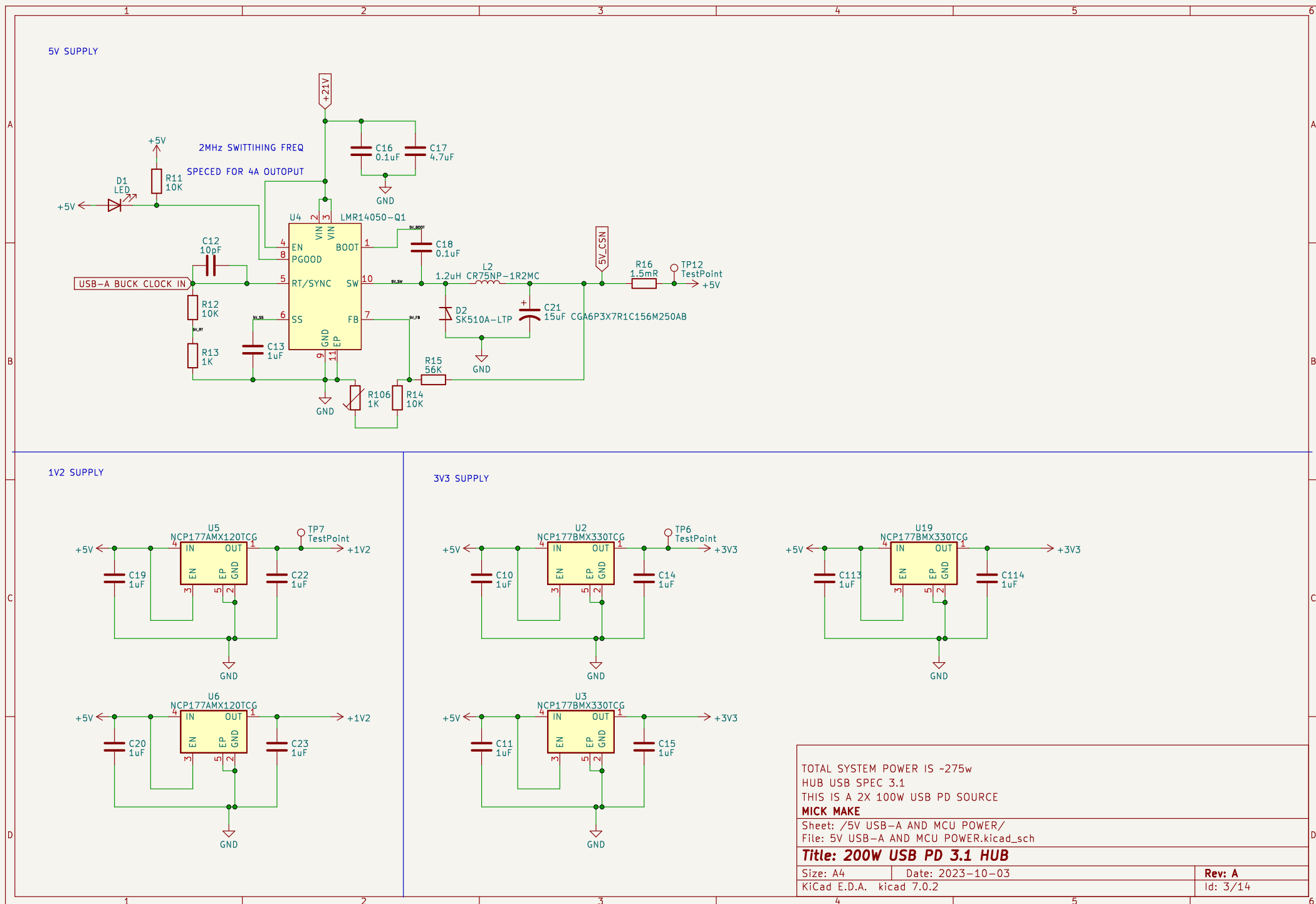
Size: A4

Date: 2023-10-03

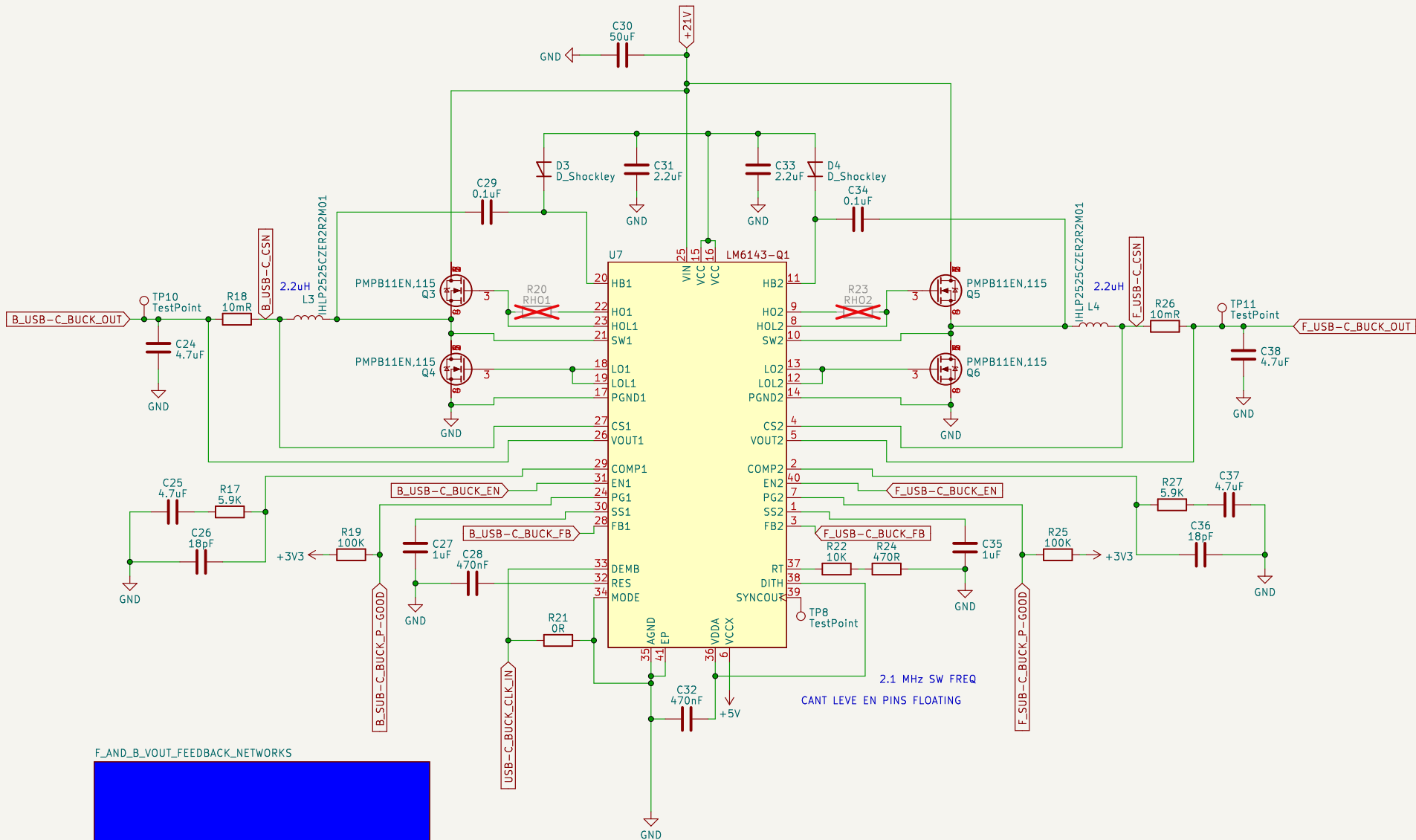
Rev: A

KiCad E.D.A. kicad 7.0.2

Id: 2/14



TOTAL SYSTEM POWER IS ~275w
HUB USB SPEC 3.1
THIS IS A 2X 100W USB PD SOURCE
MICK MAKE
Sheet: /5V USB-A AND MCU POWER/
File: 5V USB-A AND MCU POWER.kicad_sch
Title: 200W USB PD 3.1 HUB
Size: A4 Date: 2023-10-03
KiCad E.D.A. kicad 7.0.2
Rev: A
Id: 3/14



F_AND_B_VOUT_FEEDBACK_NETWORKS

File: F_AND_B_VOUT_FEEDBACK_NETWORKS.kicad_sch

TOTAL SYSTEM POWER IS ~275w

HUB USB SPEC 3.1

THIS IS A 2X 100W USB PD SOURCE

MICK MAKE

Sheet: /USB-C_POWER/

File: FRONT USB-C_POWER.kicad_sch

Title: 200W USB PD 3.1 HUB

Size: A4

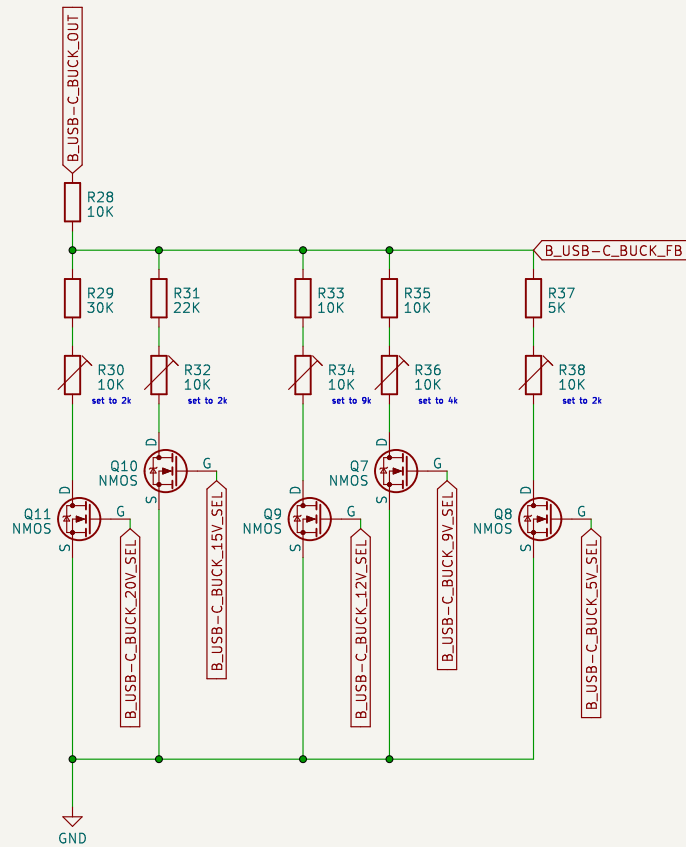
Date: 2023-10-03

KiCad E.D.A. kicad 7.0.2

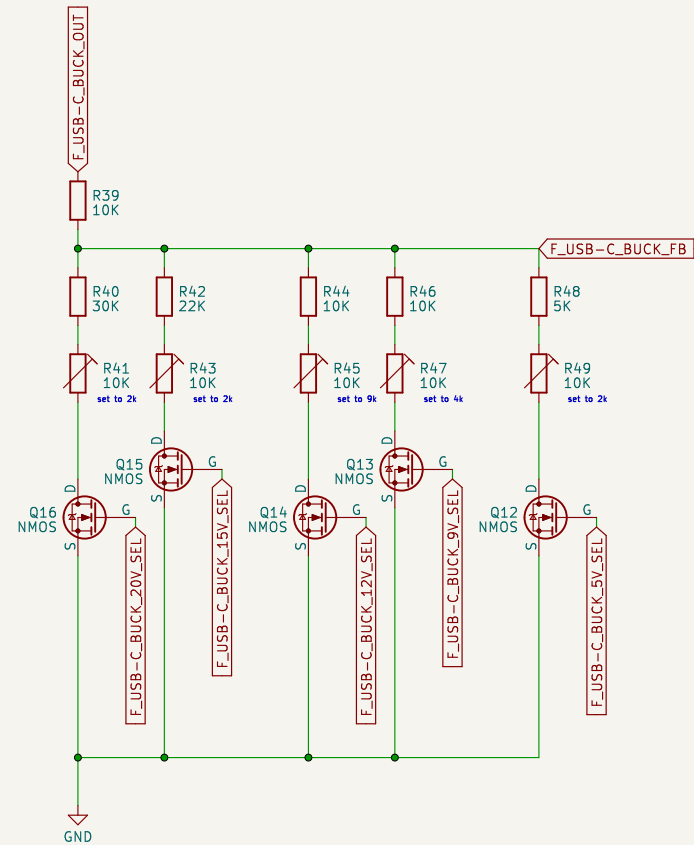
Rev: A

Id: 4/14

FRONT USB-C BUCK SELECTABLE FEEDBACK NETWORK



BACK USB-C BUCK SELECTABLE FEEDBACK NETWORK



TOTAL SYSTEM POWER IS ~275w

HUB USB SPEC 3.1

THIS IS A 2X 100W USB PD SOURCE

MICK MAKE

Sheet: /USB-C_POWER/F_AND_B_VOUT_FEEDBACK_NETWORKS/

File: F_AND_B_VOUT_FEEDBACK_NETWORKS.kicad_sch

Title: 200W USB PD 3.1 HUB

Size: A4 Date: 2023-10-03

KiCad E.D.A. kicad 7.0.2

Rev: A

Id: 5/14

The schematic shows two identical PI4IOE5V6416LEX IO expanders, U8 and U9, connected to the system. Both are powered by +3V3 and GND. U8 is connected to IOX_1 and U9 to IOX_0. Both have their I2C_SCL and I2C_SDA pins connected to +3V3, and their INT pins connected to IOX1_INT and IOX0_INT respectively. The RESET pins are connected to RST, and the ADDR pins are connected to GND. The pin lists for each device show various peripheral connections.

U8 (PI4IOE5V6416LEX) Connections:

- Power: +3V3 (pins 2, 24), GND (pin 12)
- Reset: RST (pin 3)
- I2C: I2C_SCL (pin 22), I2C_SDA (pin 23)
- Interrupt: IOX1_INT (pin 1)
- Address: +3V3 (pin 21)
- Pin List:
 - P1_7: ADC_ALERT
 - P1_6: 21V_PG00D
 - P1_5: B_USB-C_BUCK_20V_SEL
 - P1_4: B_USB-C_BUCK_15V_SEL
 - P1_3: B_USB-C_BUCK_12V_SEL
 - P1_2: B_USB-C_BUCK_9V_SEL
 - P1_1: B_USB-C_BUCK_5V_SEL
 - P1_0: B_USB-C_BUCK_EN
 - P0_7: F_USB-C_BUCK_EN
 - P0_6: F_SUB-C_BUCK_P_GOOD
 - P0_5: B_SUB-C_BUCK_P_GOOD
 - P0_4: F_USB-C_BUCK_20V_SEL
 - P0_3: F_USB-C_BUCK_15V_SEL
 - P0_2: F_USB-C_BUCK_12V_SEL
 - P0_1: F_USB-C_BUCK_9V_SEL
 - P0_0: F_USB-C_BUCK_5V_SEL

U9 (PI4IOE5V6416LEX) Connections:

- Power: +3V3 (pins 2, 24), GND (pin 12)
- Reset: RST (pin 3)
- I2C: I2C_SCL (pin 22), I2C_SDA (pin 23)
- Interrupt: IOX0_INT (pin 1)
- Address: GND (pin 21)
- Pin List:
 - P1_7: SRC_BTN
 - P1_6: UNIT_BTN
 - P1_5: MODE_BTN
 - P1_4: DISP_IRQ
 - P1_3: UFP_DBGACC
 - P1_2: DFP_DBGACC
 - P1_1: UFP_C_ATTACH_0
 - P1_0: HUB_VBUS_DET
 - P0_7: DFP_C_ATTACH_1
 - P0_6: IOX_0_P_0_0
 - P0_5: IOX_0_P_0_1
 - P0_4: CAN_SILENT
 - P0_3: IOX1_INT
 - P0_2: IOX1_INT
 - P0_1: IOX1_INT
 - P0_0: IOX1_INT

[illegible]

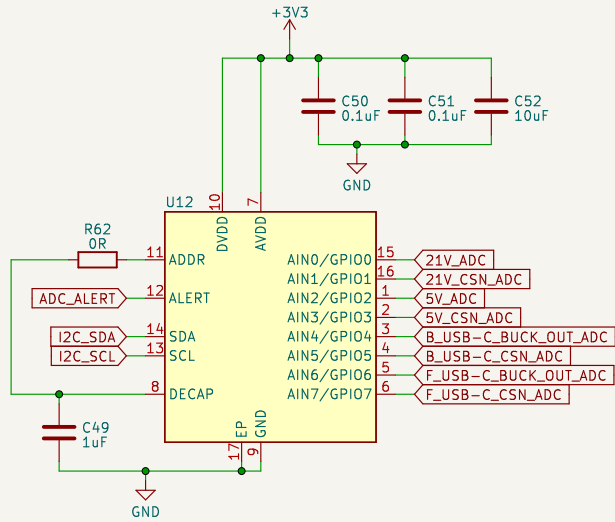
TOTAL SYSTEM POWER IS ~275w		
HUB USB SPEC 3.1		
THIS IS A 2X 100W USB PD SOURCE		
MICK MAKE		
Sheet: /ESP-12F/		
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Title: 200W USB PD 3.1 HUB		
Size: A4	Date: 2023-10-03	Rev: A
KiCad E.D.A. kicad 7.0.2	Id: 6/14	

Size: A4	Date: 2023-10-03	Rev: A
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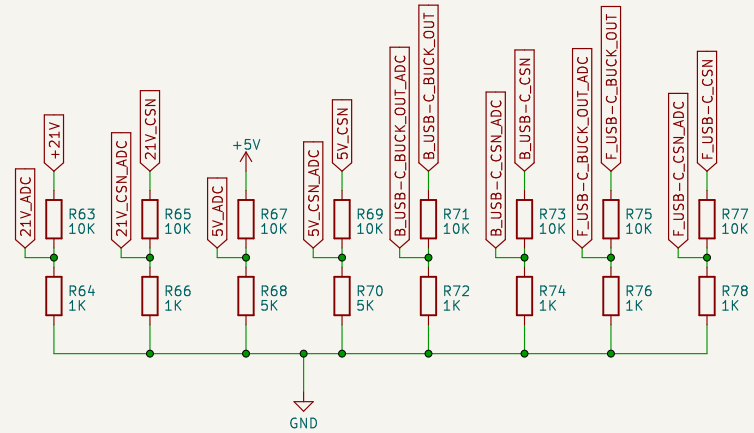
KiCad E.D.A. kicad 7.0.2	Id: 6/14
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4	5	6
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I2C ADC



DEVIDER NETWORKS FOR ADC INPUT



TOTAL SYSTEM POWER IS ~275w
HUB USB SPEC 3.1
THIS IS A 2X 100W USB PD SOURCE

MICK MAKE

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File: ADC.kicad_sch

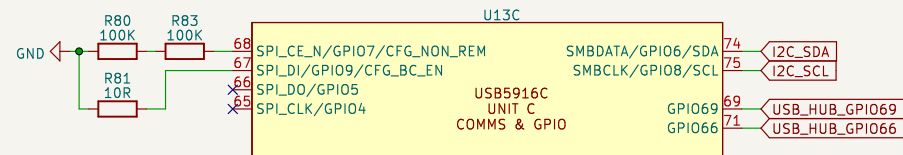
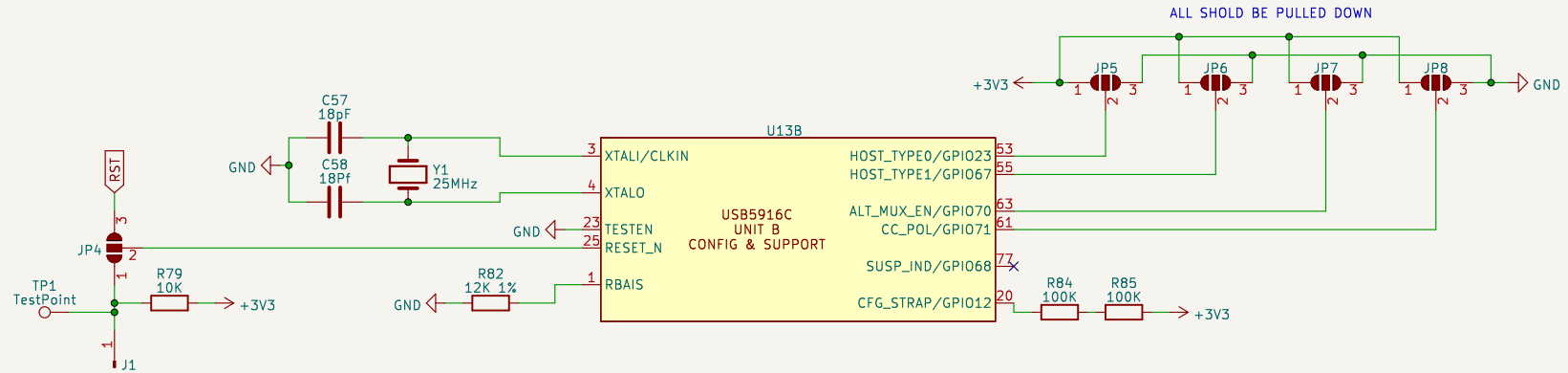
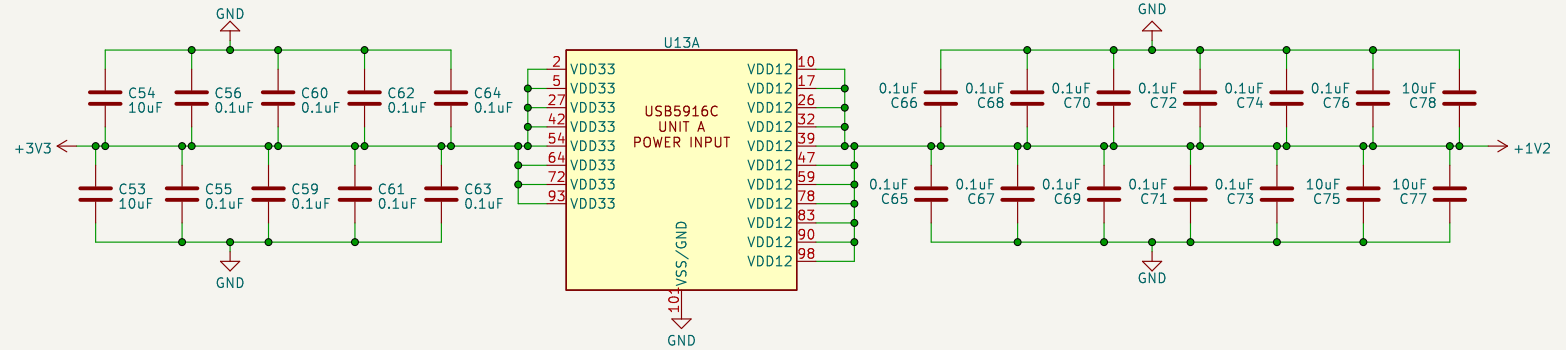
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Size: A4 Date: 2023-10-03

KiCad E.D.A. kicad 7.0.2

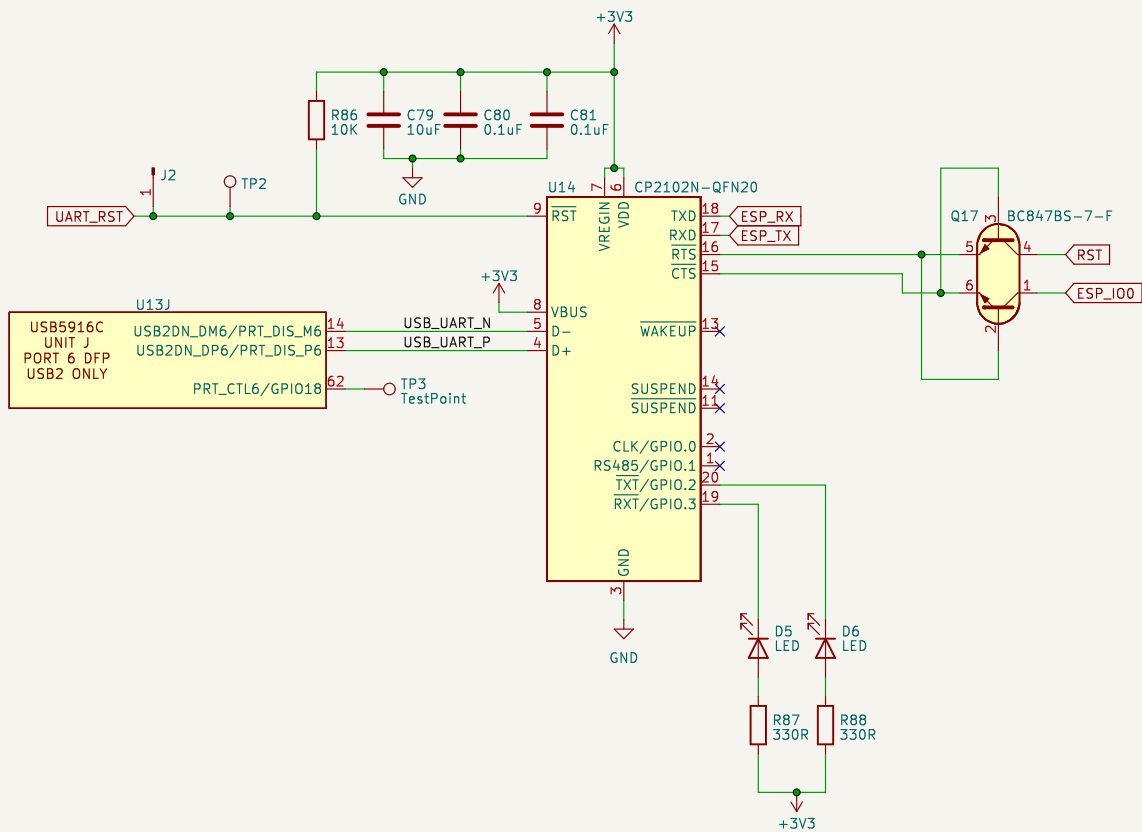
Rev: A

Id: 7/14

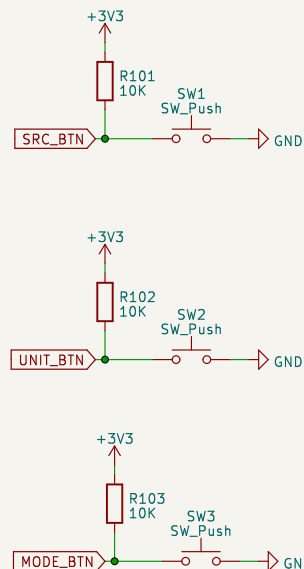
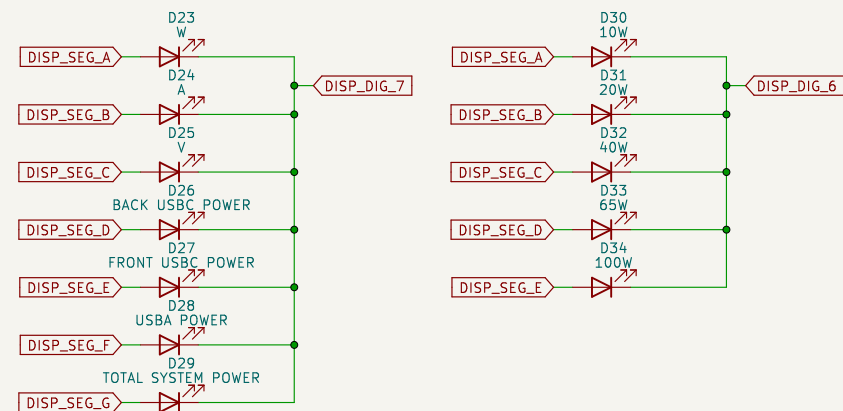
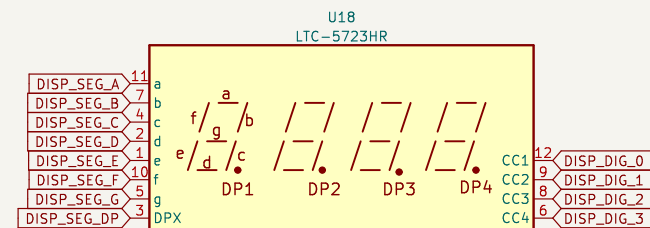
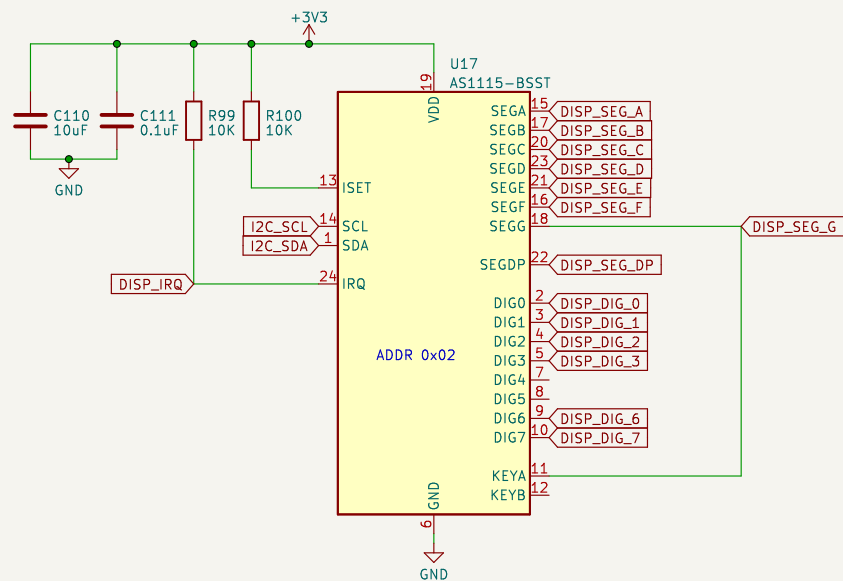


KiCad E.D.A. kicad 7.0.2	Id: 8/14
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4	5	
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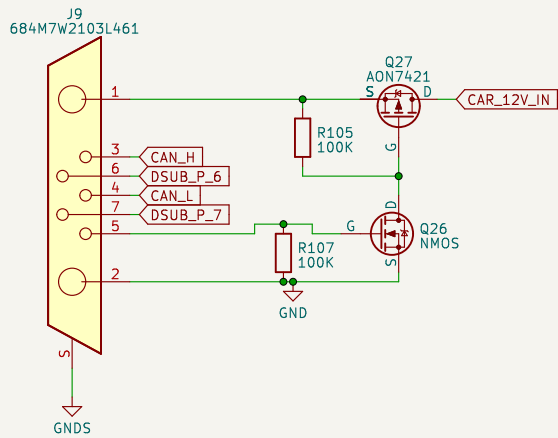
TOTAL SYSTEM POWER IS ~275w
HUB USB SPEC 3.1
THIS IS A 2X 100W USB PD SOURCE
MICK MAKE
Sheet: /USB_UART/
File: USB_UART.kicad_sch
Title: 200W USB PD 3.1 HUB
Size: A4 Date: 2023-10-03
KiCad E.D.A. kicad 7.0.2
Rev: A
Id: 9/14



Size: A4	Date: 2023-10-03
KiCad E.D.A. kicad 7.0.2	

Rev: A
Id: 13/14

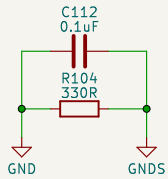
CAR CONNECTOR



MOUNTING HOLES

- H7 MountingHole
- H9 MountingHole
- H4 MountingHole
- H2 MountingHole
- H3 MountingHole
- H1 MountingHole
- H8 MountingHole
- H5 MountingHole
- H6 MountingHole

SHIELD LINK



TOTAL SYSTEM POWER IS ~275w
HUB USB SPEC 3.1
THIS IS A 2X 100W USB PD SOURCE
MICK MAKE

Sheet: /CAR_12V_IN/
File: CAR_12V_IN.kicad_sch

Title: 200W USB PD 3.1 HUB

Size: A4 Date: 2023-10-03

KiCad E.D.A. kicad 7.0.2

Rev: A

Id: 14/14