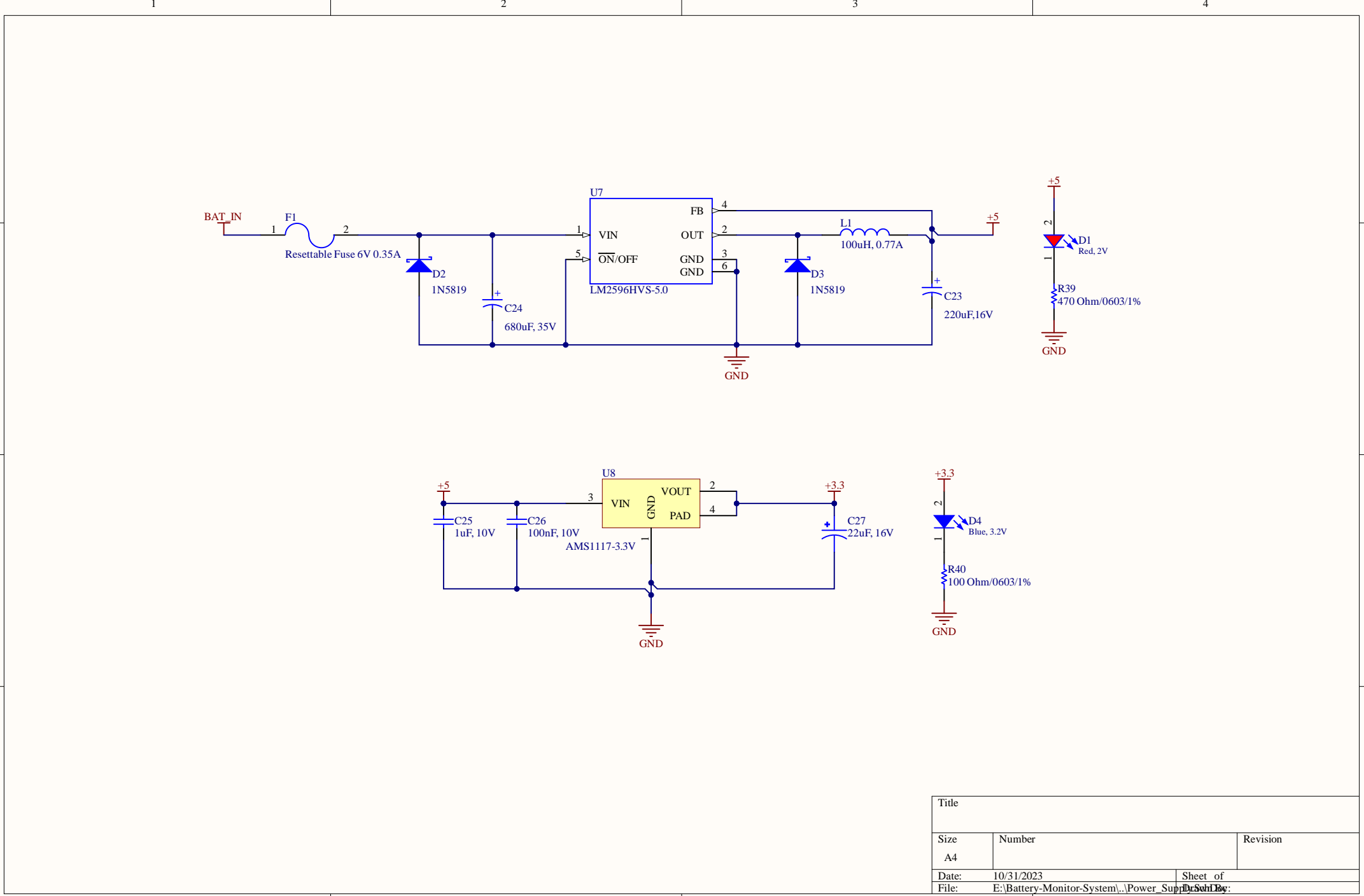
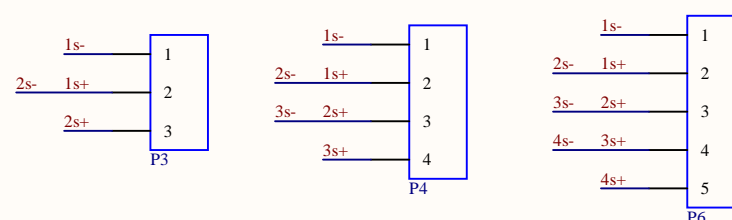
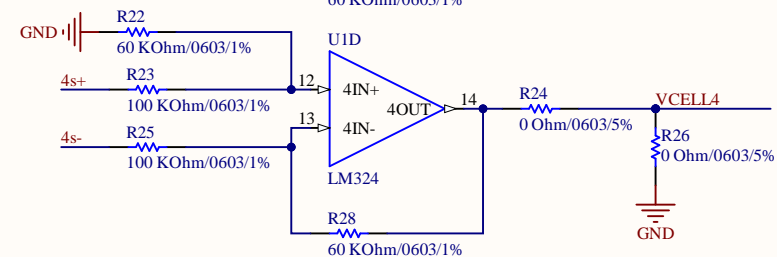
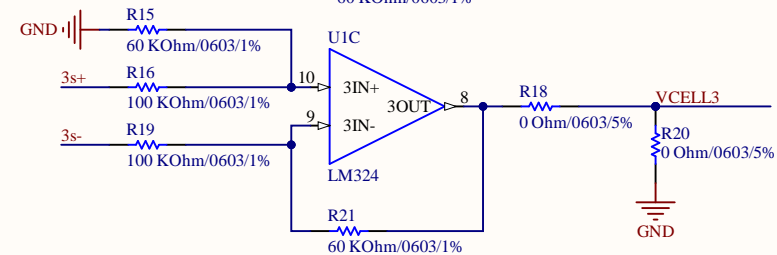
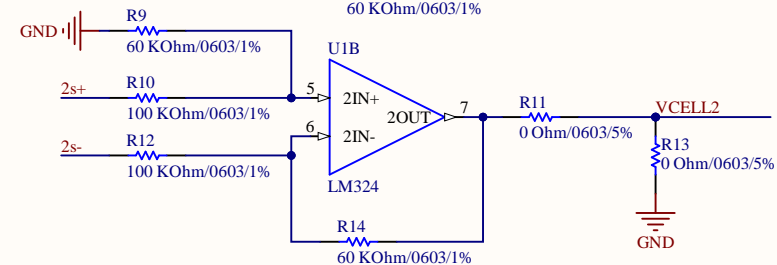
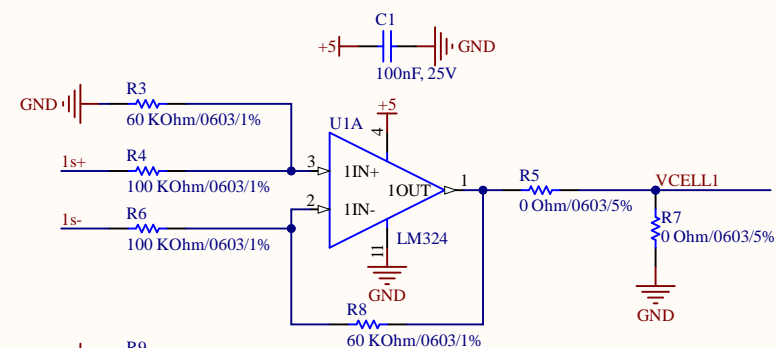


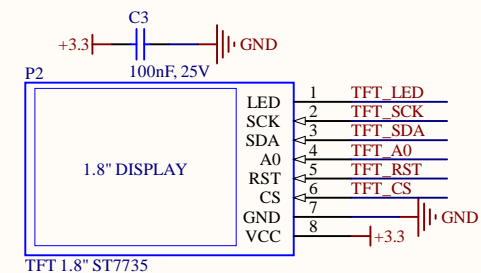
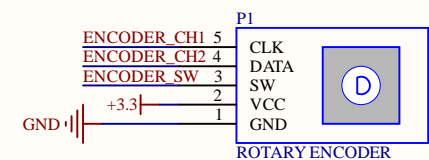
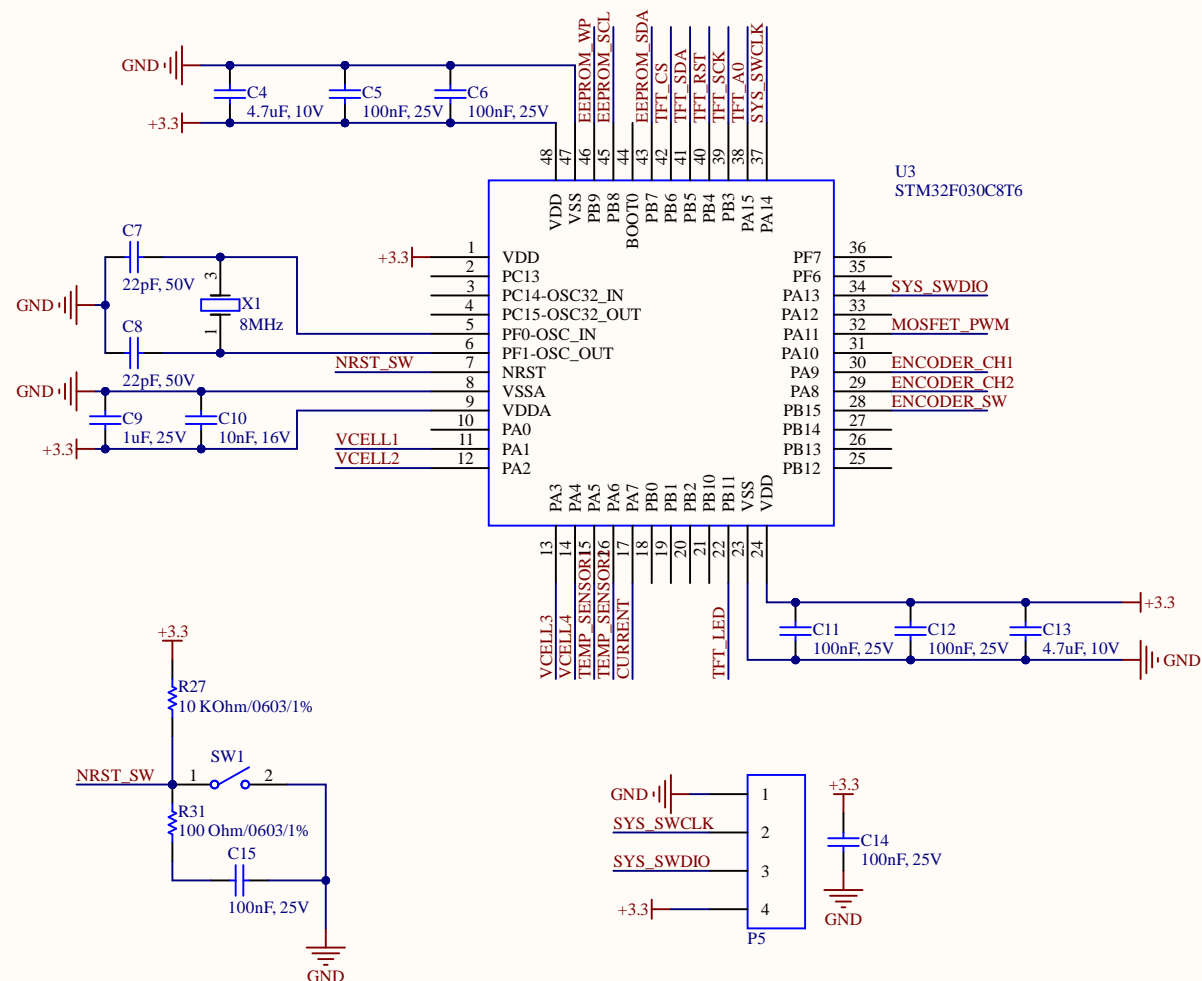
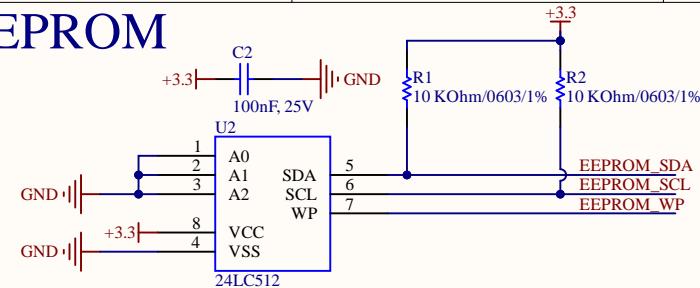
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| Title | | |
| Size | Number | Revision |
| A4 | | |
| Date: | 10/31/2023 | Sheet of |
| File: | E:\Battery-Monitor-System\Power_Diagram_SchDoc | Power_Diagram_SchDoc |



| Title | | |
|-------|--|------------|
| Size | Number | Revision |
| A4 | | |
| Date: | 10/31/2023 | Sheet of |
| File: | E:\Battery-Monitor-System\Power_Supply | Dr.Sun By: |

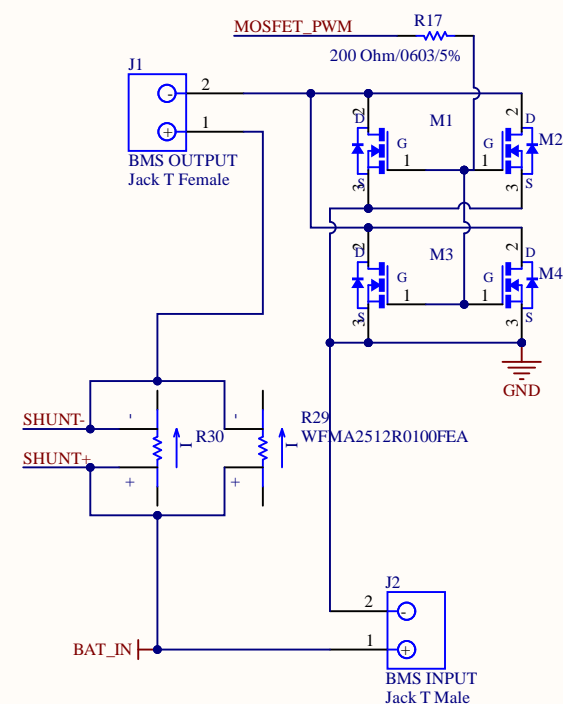


BATTERY VOLTAGE MEASURE

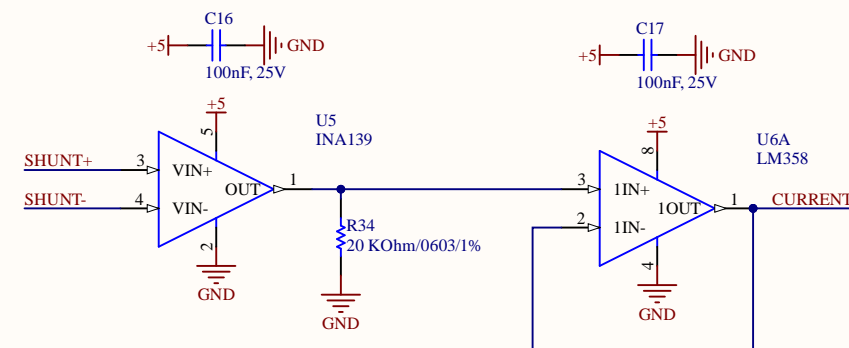
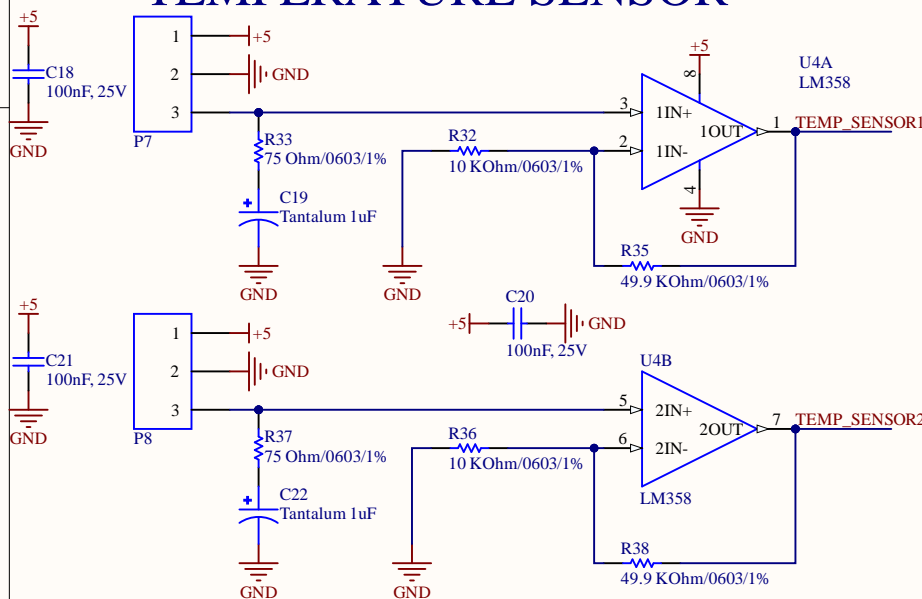


USER INTERACTION

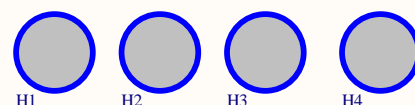
SWITCHING CIRCUIT



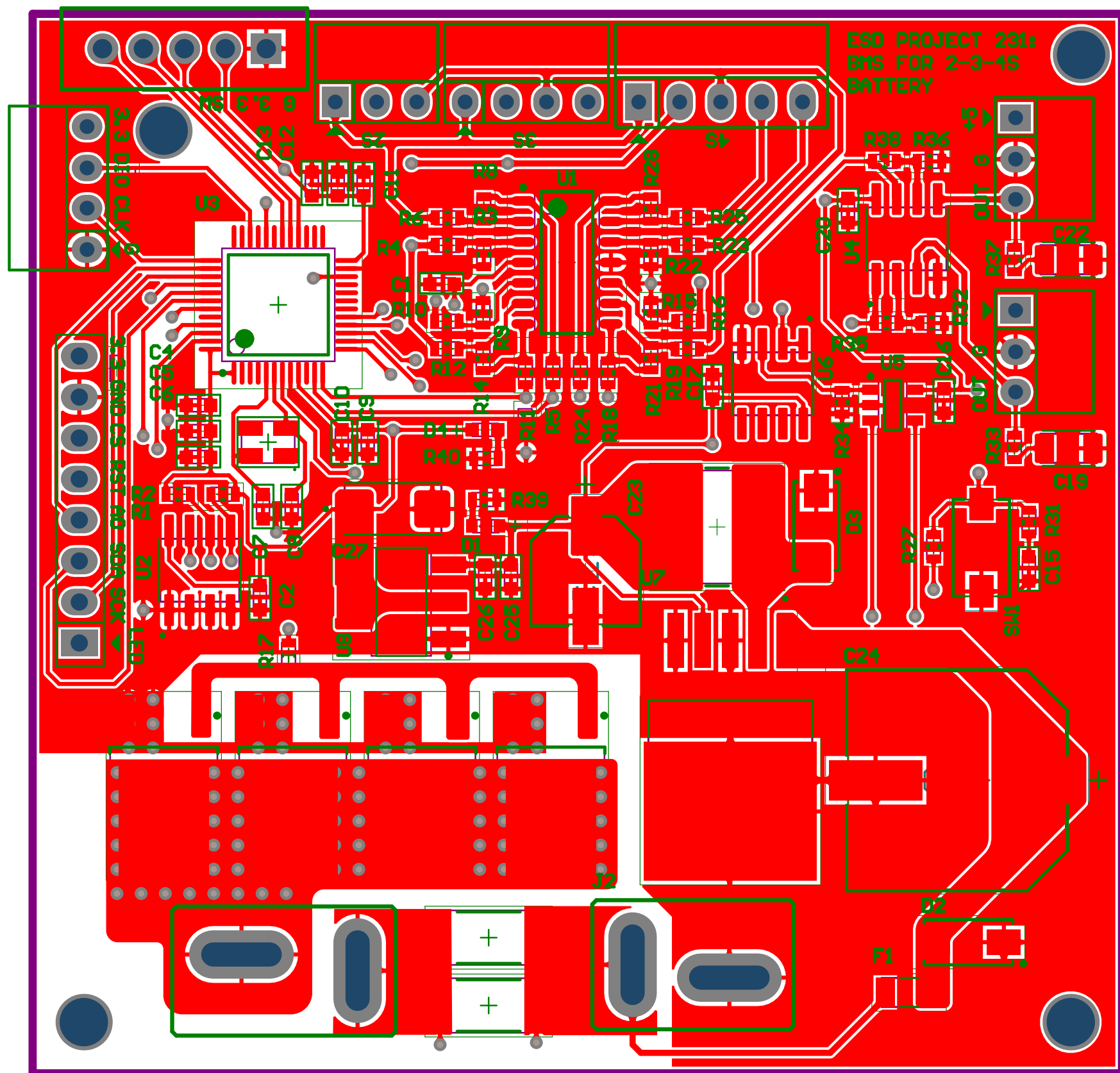
TEMPERATURE SENSOR

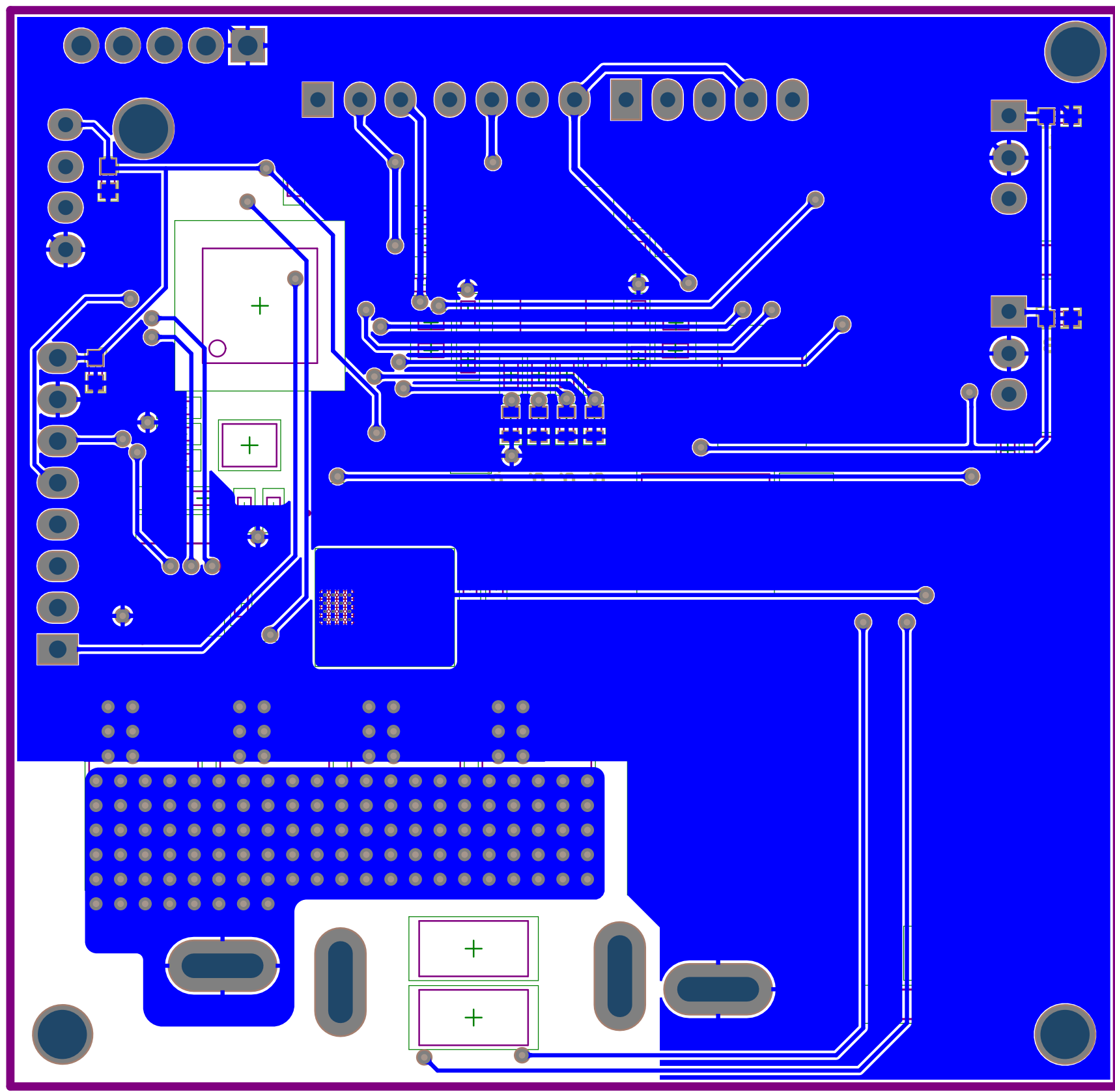


CURRENT SENSE



| | | |
|--|--------------------------------|----------|
| Title | | |
| Size A3 | Number | Revision |
| Date: 10/31/2023 | Sheet of Drawings | |
| File: E:\Battery-Monitor-System\... | Voltage_Battery_Monitor_SchDoc | |





| Designator | Comment | Description | Quantity |
|--|-------------------------------|---|----------|
| C25 | 1uF, 10V | WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X5R, 1uF, 10V | 1 |
| C9 | 1uF, 25V | WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X5R, 1uF, 25V | 1 |
| C4, C13 | 4.7uF, 10V | WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X5R, 4.7uF, 10V | 2 |
| C10 | 10nF, 16V | WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 10nF, 16V | 1 |
| C7, C8 | 22pF, 50V | WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, NPO, 22pF, 50V | 2 |
| U2 | 24LCxx | EEPROM | 1 |
| C26 | 100nF, 10V | WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 100nF, 10V | 1 |
| C1, C2, C3, C5, C6, C11, C12, C14, C15, C16, C17, C18, C20, C21 | 100nF, 25V | WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 100nF, 25V | 14 |
| L1 | 100uH, 0.77A | WE-PD2A SMT Power Inductor, size 7850, 100uH, 0.77A | 1 |
| C23 | 220uF | WCAP-ASLI Aluminum Electrolytic Capacitor, V-Chip, D6.3 x H7.7mm, 220uF, 16V | 1 |
| C24 | 680uF | WCAP-ASLI Aluminum Electrolytic Capacitor, V-Chip, D12.5 x H14mm, 680uF, 35V | 1 |
| SW1 | 434123050816 | WS-TASV J-Bend SMT Tact Switch, 12VDC, 50mA, 160g, height 5mm | 1 |
| UB | AMS1117-3.3V | | 1 |
| M1, M2, M3, M4 | AOD472 | MOSFET 25V 55A N- Channel | 4 |
| D4 | Blue, 3.2V | WL-SMCW SMT Mono color Chip LED Waterclear, size 0603, Blue, 3.2V, 140deg | 1 |
| J2 | BMS INPUT | Jack T 120A | 1 |
| J1 | BMS OUTPUT | Jack T 120A | 1 |
| R29, R30 | Current Sense Resistor | Shunt Resistor | 2 |
| D2, D3 | D Schottky | Schottky Diode | 2 |
| P3, P7, P8 | Header 3H | Header, 3-Pin, Right Angle | 3 |
| P4, P5 | Header 4H | Header, 4-Pin, Right Angle | 2 |
| P6 | Header 5H | Header, 5-Pin, Right Angle | 1 |
| H1, H2, H3, H4 | Hole | Hole 3mm | 4 |
| U5 | INA139 | High-Side Measurement Current Shunt Monitor | 1 |
| U1 | LM324 | OPAMP General Purpose Amplifier 4 Circuit 1.2MHz | 1 |
| U4, U6 | LM358 | General Purpose Amplifier 2 Circuit 1.1MHz | 2 |
| U7 | LM2596 | Simple Switcher Power Converter 150- kHz 4V to 60V, 3A Step-Down Voltage Regulator | 1 |
| D1 | Red, 2V | WL-SMCW SMT Mono color Chip LED Waterclear, size 0603 dome, Red, 2V, 60deg | 1 |
| F1 | RESETTABLE FUSE 1206 | Polymeric PTC Resettable Fuse 6V 350mA 1h Surface Mount 1206_3216 Metric, Concave | 1 |
| R5, R7, R11, R13, R18, R20, R24, R26 | Resistor 0 Ohm 0603 5% | Code 0R, 1/10W | 8 |
| R1, R2, R27, R32, R36 | Resistor 10 KOhm 0603 1% | Code 103, 1/10W | 5 |
| R34 | Resistor 20 KOhm 0603 1% | Code 203, 1/10W | 1 |
| R35, R38 | Resistor 49 9 KOhm 0603 1% | Code (4992, 68C), 1/10W | 2 |
| R3, R8, R9, R14, R15, R21, R22, R28 | Resistor 60 KOhm 0603 1% | Code 603, 1/10W | 8 |
| R33, R37 | Resistor 75 Ohm 0603 1% | Code 750, 1/10W | 2 |
| R4, R6, R10, R12, R16, R19, R23, R25 | Resistor 100 KOhm 0603 1% | Code 104, 1/10W | 8 |
| R31, R40 | Resistor 100 Ohm 0603 1% | Code 1000, 1/10W | 2 |
| R17 | Resistor 200 Ohm 0603 5% | Code 201, 1/10W | 1 |
| R39 | Resistor 470 Ohm 0603 1% | Code 471, 1/10W | 1 |
| P1 | Rotary Encoder | KY-040 | 1 |
| U3 | STM32F030C8T6 | | 1 |
| C19, C22 | Tantalum Capacitor | Code 105 10%, 1206 (3216 Metric) | 2 |
| C27 | Tantalum Capacitor | Code 226 10%, 2312 (6032 Metric) | 1 |
| P2 | 1FT 1.8" ST7735 | LCD 1.8inch 160x128 TFT ST7735 | 1 |
| X1 | XTAL | | 1 |