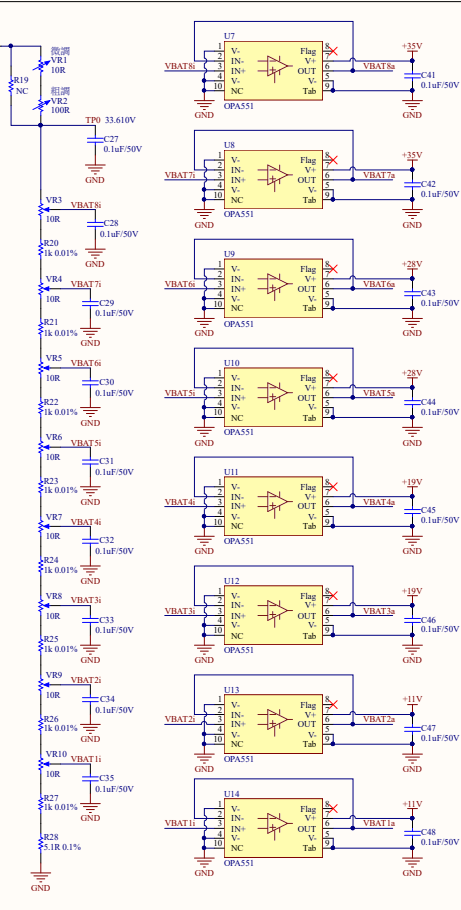
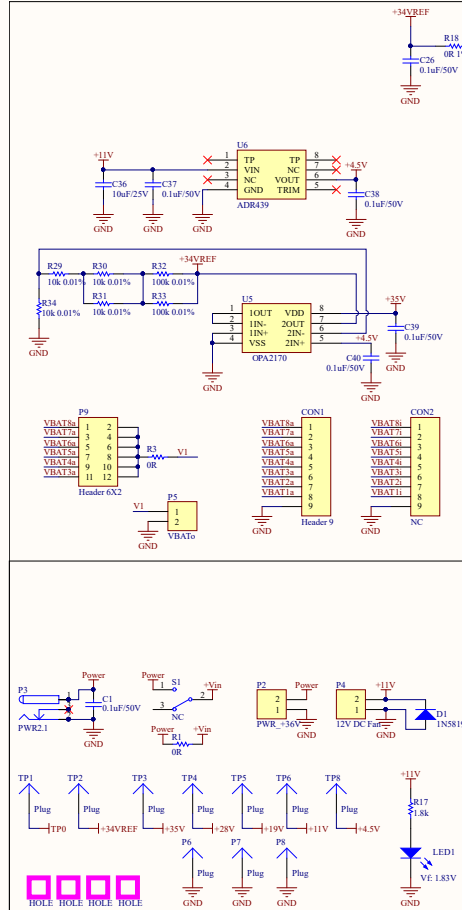
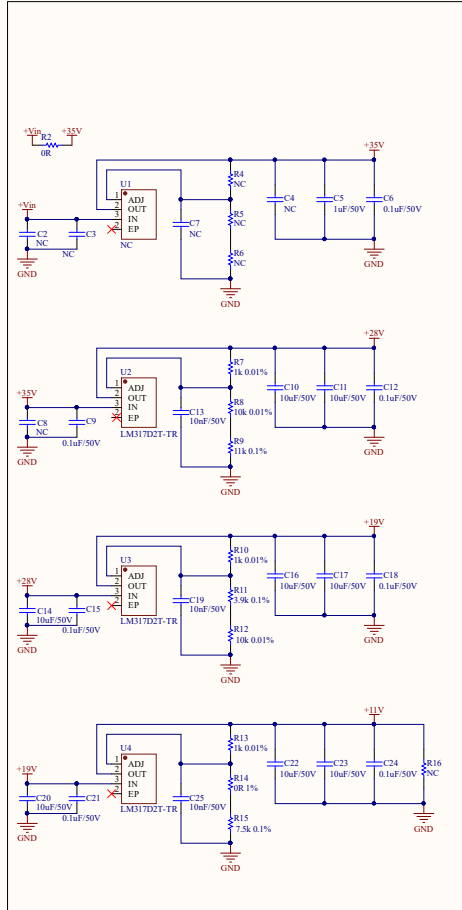
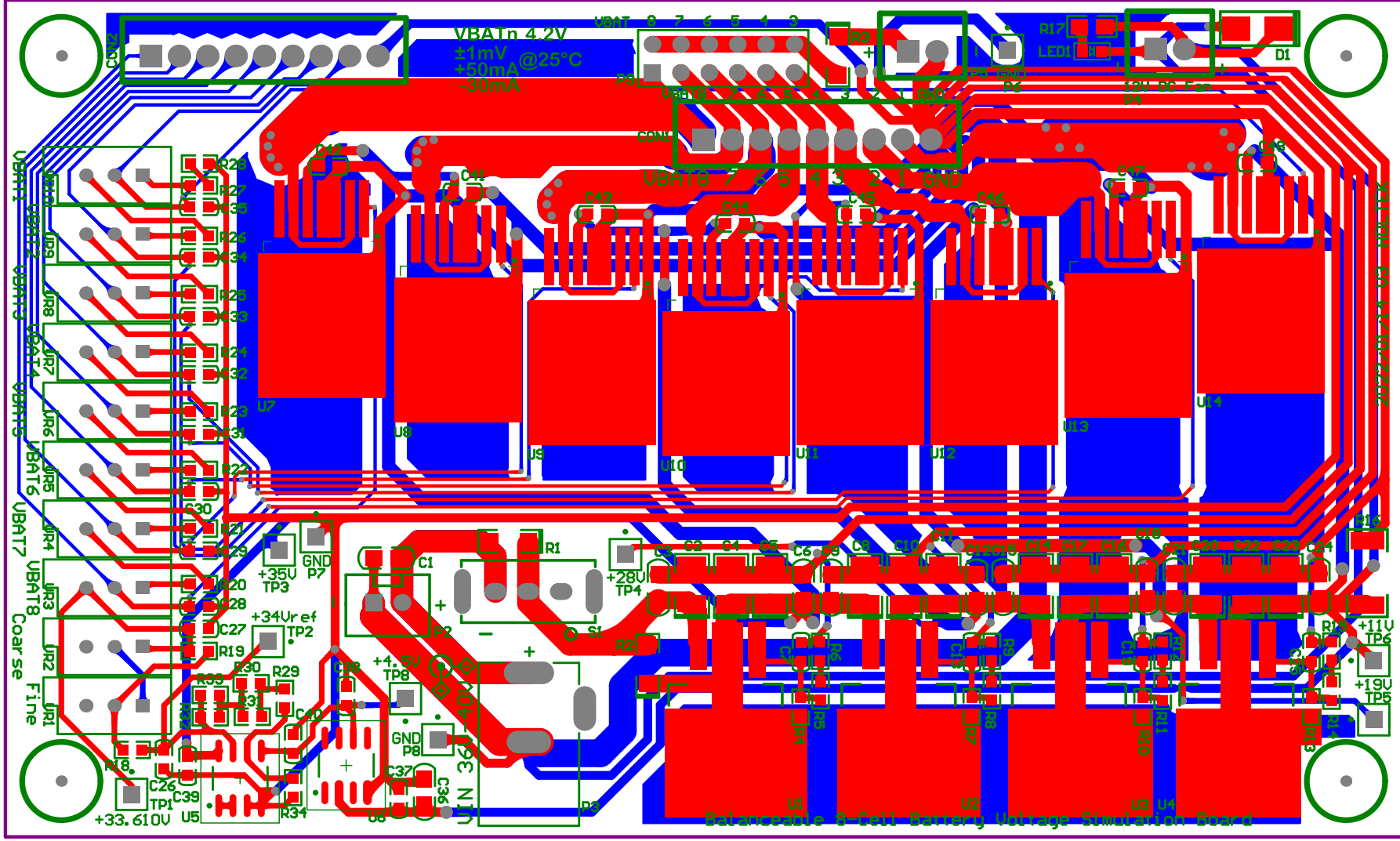




|                                         |                                                           |           |
|-----------------------------------------|-----------------------------------------------------------|-----------|
| Title                                   |                                                           |           |
| 8-Cell Bat Volt Sim Board Balancable V2 |                                                           |           |
| Size                                    | Number                                                    | Revision  |
| A2                                      |                                                           |           |
| Date:                                   | 2023/1/22                                                 | Sheet: 01 |
| File:                                   | C:\Users\8-Cell Bat Volt Sim Board Balancable V2.3 SchDoc |           |



| Comment     | Description                      | Designator                   | Footprint               | LibRef                      | Quantity |
|-------------|----------------------------------|------------------------------|-------------------------|-----------------------------|----------|
| 0.1uF/50V   | Capacitor                        | C1, C6, C9, C12, C15, C18    | 0805C                   | Cap                         | 8        |
| NC          | Capacitor                        | C2, C4, C8                   | 1210                    | Cap                         | 3        |
| NC          | Capacitor                        | C3                           | 0805C                   | Cap                         | 1        |
| 1uF/50V     | Capacitor                        | C5                           | 1210                    | Cap                         | 1        |
| NC          | Capacitor                        | C7                           | 0603C                   | Cap                         | 1        |
| 10uF/50V    | Capacitor                        | C10, C11, C14, C16, C17, C20 | 1210                    | Cap                         | 8        |
| 10nF/50V    | Capacitor                        | C13, C19, C25                | 0603C                   | Cap                         | 3        |
| 0.1uF/50V   | Capacitor                        | C26, C27, C28, C29, C30, C32 | 0603C                   | Cap                         | 22       |
| 10uF/25V    | Capacitor                        | C36                          | 0805C                   | Cap                         | 1        |
| Header 9    | Header, 9-Pin                    | CON1                         | XH2.54MM_9PIN           | Header 9                    | 1        |
| NC          | Header, 9-Pin                    | CON2                         | XH2.54MM_9PIN           | Header 9                    | 1        |
| 1N5819      | 1 Amp Fast Recovery Rectifier    | D1                           | SZLCSC-DO-214AC         | Diode                       | 1        |
| HOLE        |                                  | HOLE1, HOLE2, HOLE3, HOLE4   | VIA                     | HOLE                        | 4        |
| LED1        | Typical RED GaAs LED             | LED1                         | 0603-LED                | LED1                        | 1        |
| PWR_+36V    | Header, 2-Pin                    | P2                           | MOLEX1X2                | Header 2                    | 1        |
| PWR2.1      | Low Voltage Power Supply         | P3                           | KLD-0202 V2             | PWR2.5                      | 1        |
| 12V DC Fan  | Header, 2-Pin                    | P4                           | XH2.54MM_2PIN           | Header 2                    | 1        |
| VBATo       | Header, 2-Pin                    | P5                           | XH2.54MM_2PIN           | Header 2                    | 1        |
| Plug        | Plug                             | P6, P7, P8, TP1, TP2, TP3    | PIN1                    | Plug                        | 10       |
| Header 6X2  | Header, 6-Pin, Dual row          | P9                           | HDR2X6                  | Header 6X2                  | 1        |
| 0R          | Resistor                         | R1, R2, R3                   | 1206                    | Res1                        | 3        |
| NC          | Resistor                         | R4, R5, R6, R19              | 0603R                   | Res1                        | 4        |
| 1k 0.01%    | Resistor                         | R7, R10, R13, R20, R21, R22  | 0603R                   | Res1                        | 11       |
| 10k 0.01%   | Resistor                         | R8, R12, R29, R30, R31, R34  | 0603R                   | Res1                        | 6        |
| 11k 0.1%    | Resistor                         | R9                           | 0603R                   | Res1                        | 1        |
| 3.9k 0.1%   | Resistor                         | R11                          | 0603R                   | Res1                        | 1        |
| 0R 1%       | Resistor                         | R14, R18                     | 0603R                   | Res1                        | 2        |
| 7.5k 0.1%   | Resistor                         | R15                          | 0603R                   | Res1                        | 1        |
| NC          | Resistor                         | R16                          | 2512                    | Res1                        | 1        |
| 1.8k        | Resistor                         | R17                          | 0805R                   | Res1                        | 1        |
| 5.1R 0.1%   | Resistor                         | R28                          | 0603R                   | Res1                        | 1        |
| 100k 0.01%  | Resistor                         | R32, R33                     | 0603R                   | Res1                        | 2        |
| NC          | SPDT Subminiature Toggle Switch  | S1                           | SW_1.2mm*0.6mm          | SW-SPDT                     | 1        |
| NC          |                                  | U1                           | SZLCSC-TO-263-3         | TL783CKTTR                  | 1        |
| LM317D2T-TR |                                  | U2, U3, U4                   | SZLCSC-TO-263-3         | TL783CKTTR                  | 3        |
| OPA2170     | SOP 8PIN                         | U5                           | SOP 8PIN 150MIL 1.27PIN | IC 2x4 S                    | 1        |
| ADR439      |                                  | U6                           | SOP 8PIN 150MIL 1.27PIN | IC ADR43x                   | 1        |
| OPA551      | OPA551                           | U7, U8, U9, U10, U11, U12    | TO252-7                 | OPA551                      | 8        |
| 10R         | Variable Resistor, Potentiometer | VR1, VR3, VR4, VR5, VR6      | VR5                     | Res Adj1, RPot, RPot, RFPot | 9        |
| 100R        | Variable Resistor                | VR2                          | VR5                     | Res Adj1                    | 1        |
|             |                                  |                              |                         |                             |          |