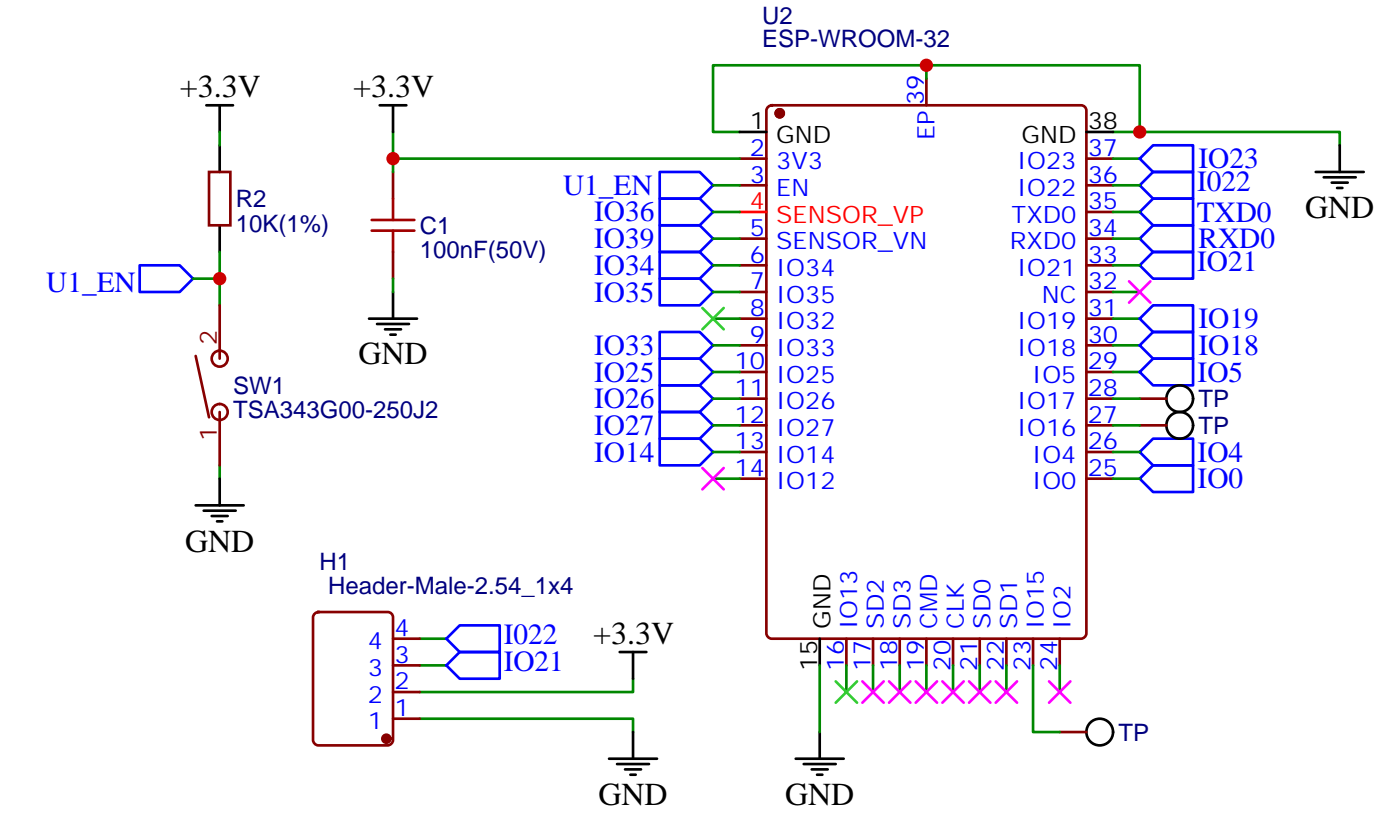
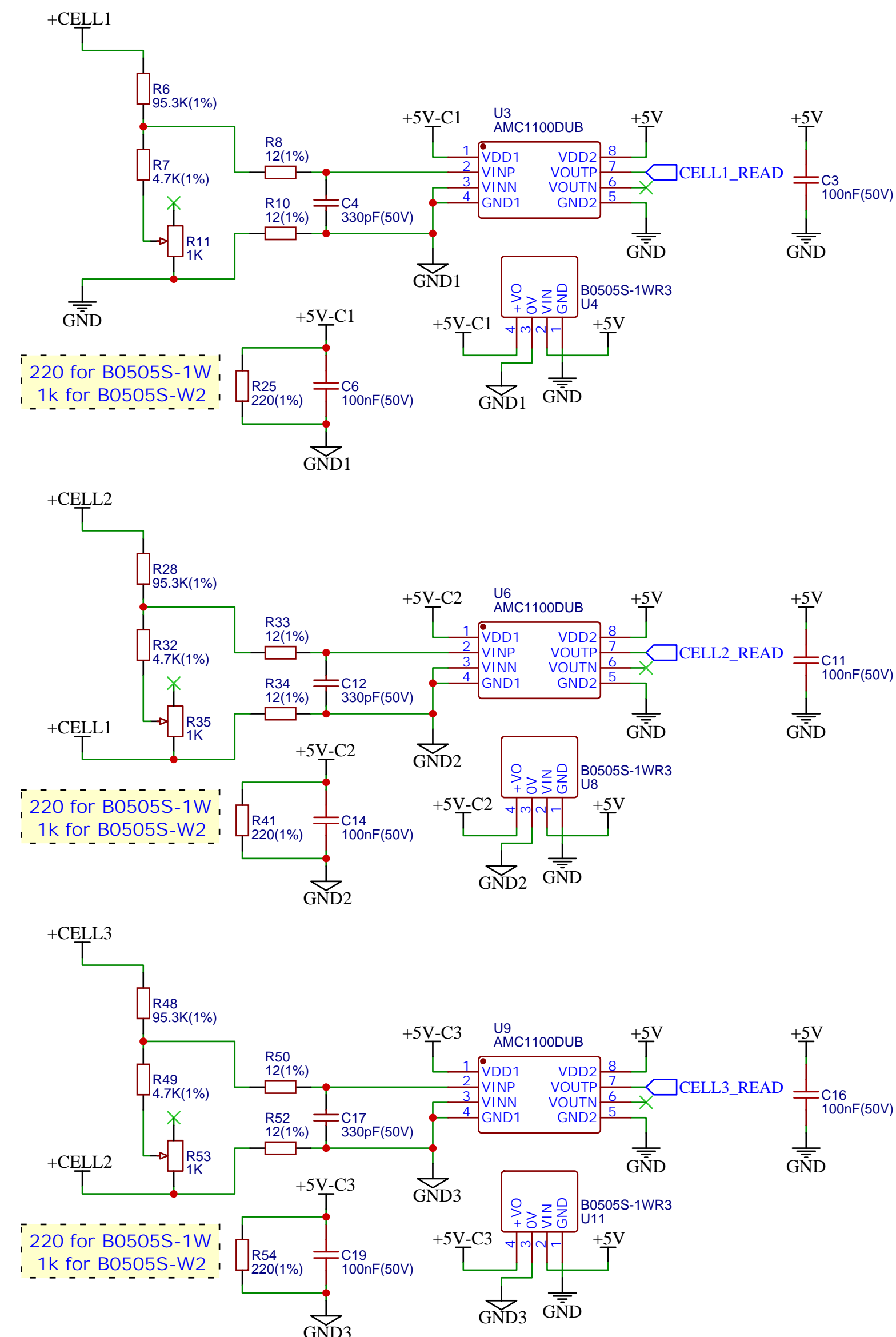


MICROCONTROLLER



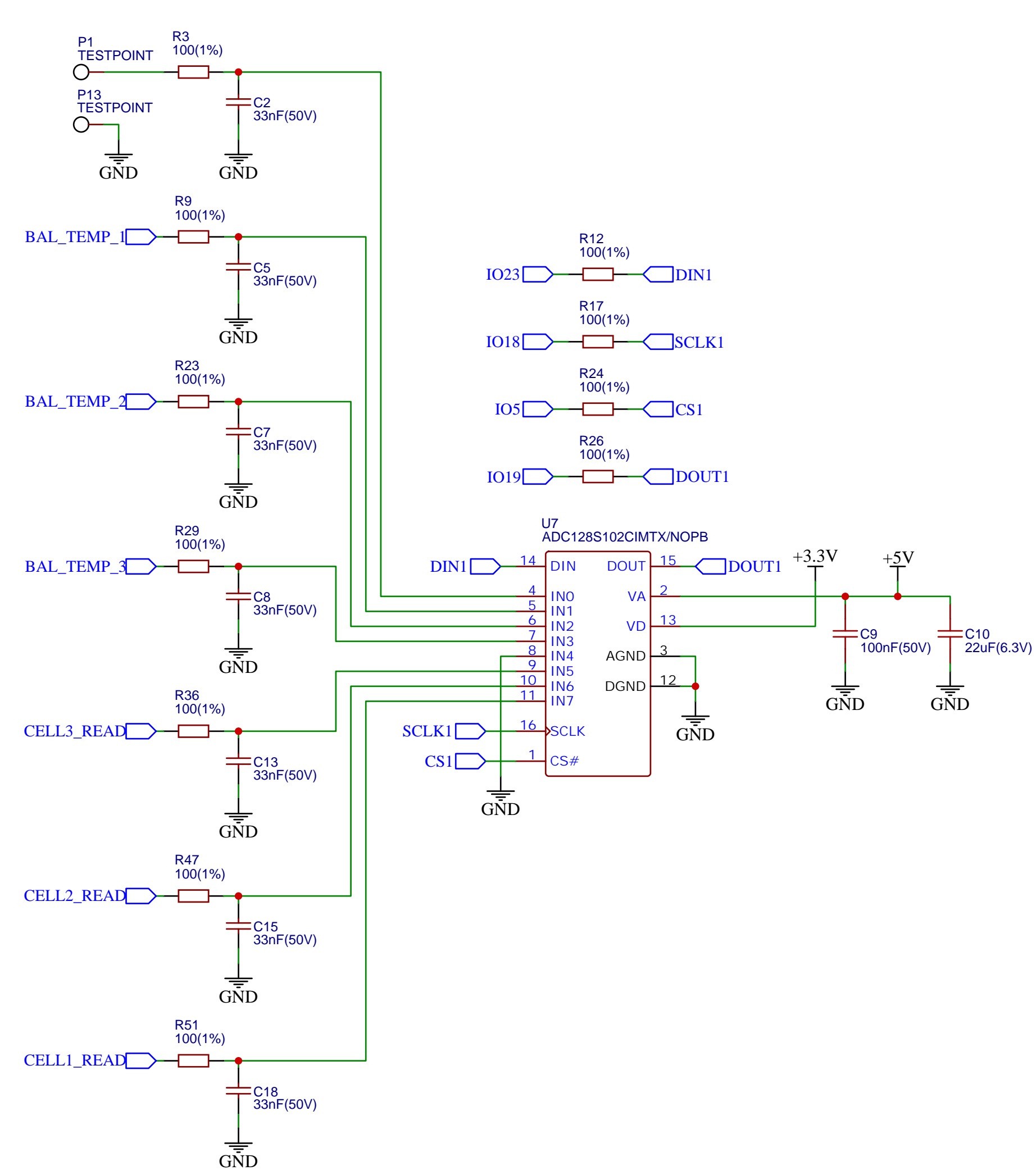
PIN ASSIGNMENT TABLE			
U1_EN	ESP ENABLE/RESET	IO0	ESP BOOT/PROGRAM
IO36	Push Button Y	IO4	Ext Digital Temp Sensors
IO39	Push Button X	IO5	SPI CS ADC1
IO34	Push Button B	IO18	SPI SCK
IO35	Push Button A	IO19	SPI MISO
IO33	LDO 5V EN	IO21	I2C SDA
IO25	Balancing Cell 3	RXD0	ESP UART RX
IO26	Balancing Cell 2	TXD0	ESP UART TX
IO27	Balancing Cell 1	IO22	I2C SCL
IO14	System LED	IO23	SPI MOSI

VOLTAGE MEASUREMENT

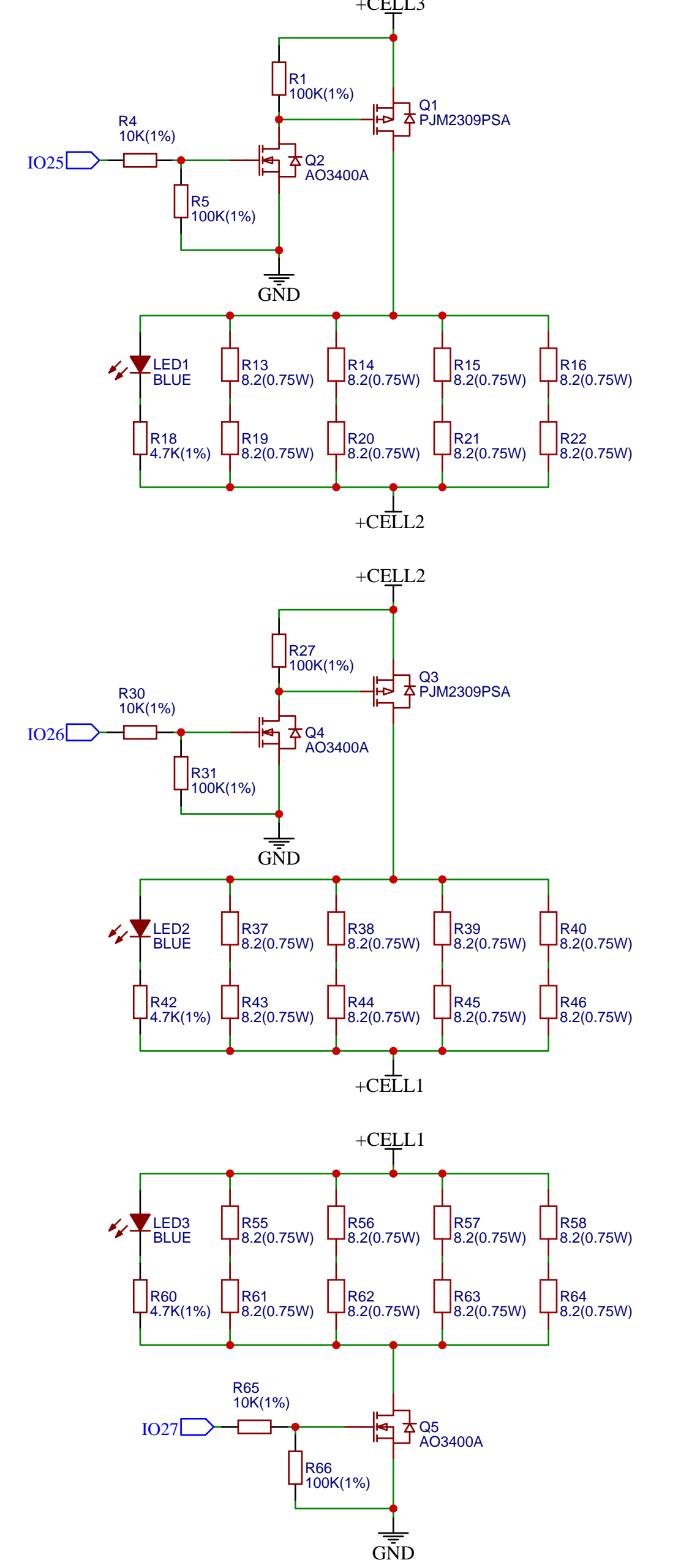


The input limit of the AMC1100 is $\pm 250\text{mV}$.
Cell voltage is reduced by a factor of 20 ($5\text{V} / 20 = 250\text{mV}$).
The output of the AMC1100 is $(\text{VINP} - \text{VINN}) * 8 + 2.55\text{V}$.

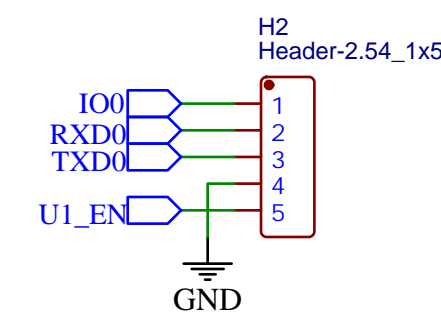
ANALOG TO DIGITAL CONVERTER



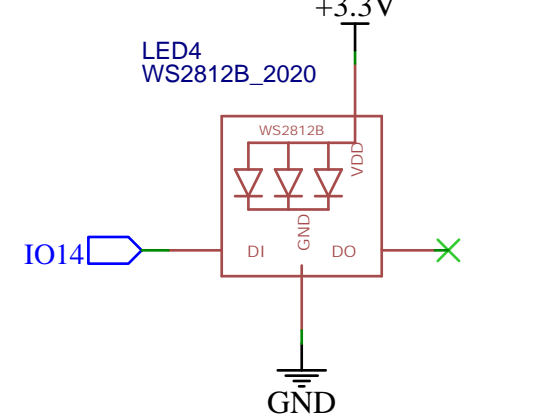
VOLTAGE BALANCING



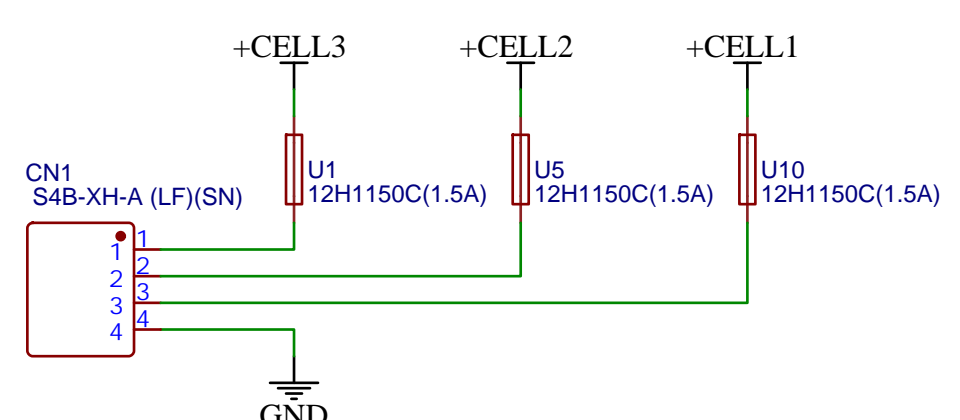
UART



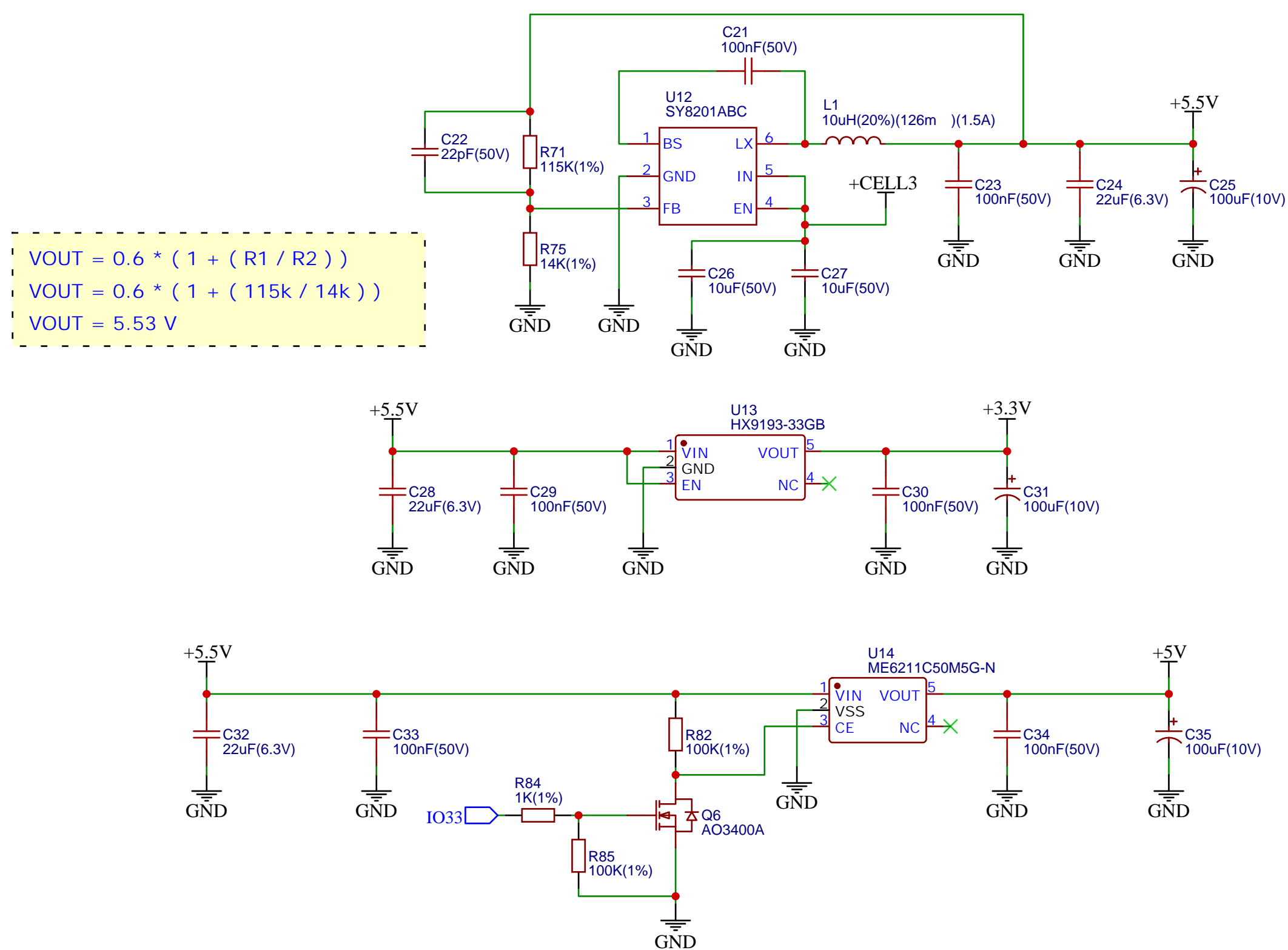
SYSTEM LED



CELLS CONNECTOR

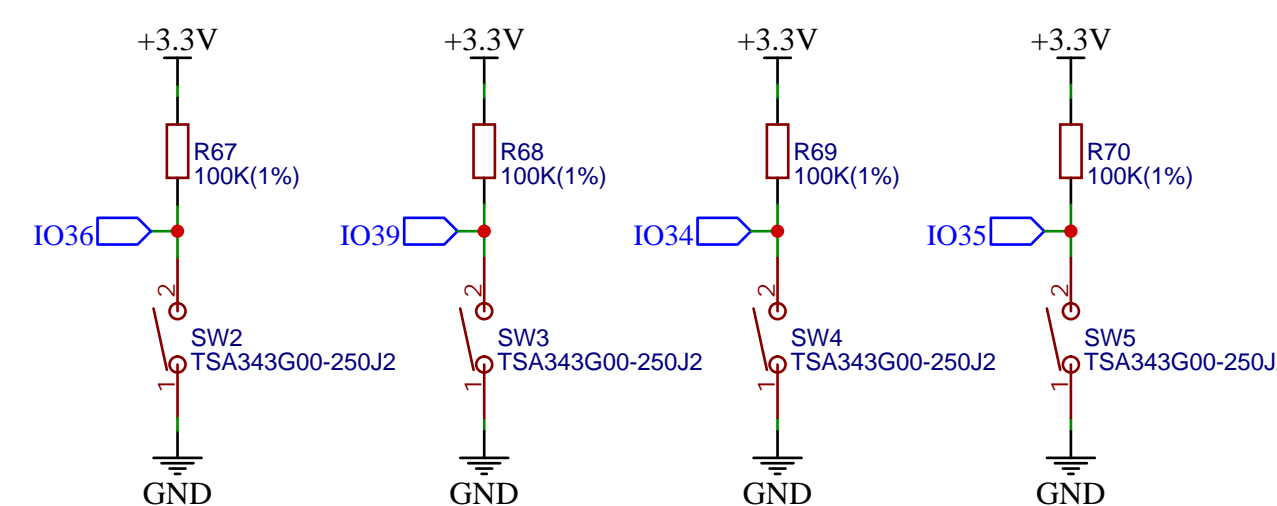


REGULATORS

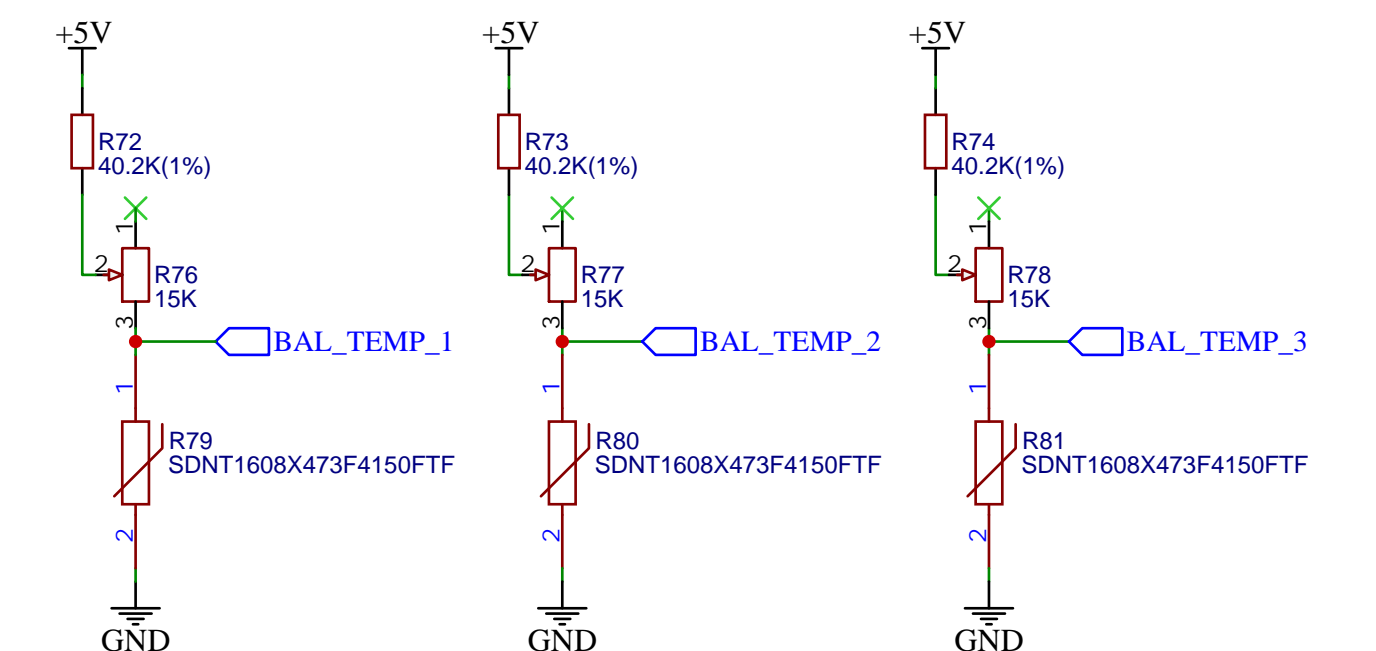


$$\text{VOUT} = 0.6 * (1 + (R1 / R2))$$
$$\text{VOUT} = 0.6 * (1 + (115\text{k} / 14\text{k}))$$
$$\text{VOUT} = 5.53\text{V}$$

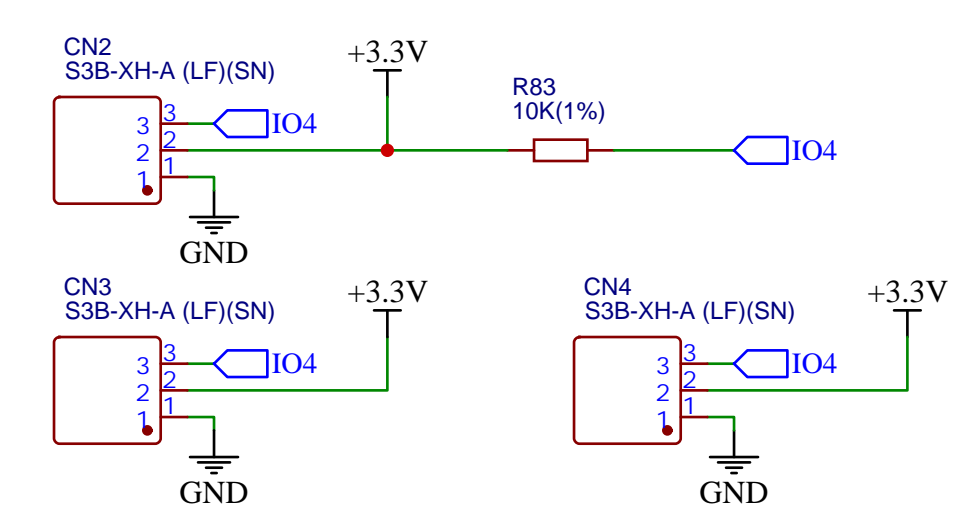
PUSH BUTTONS



BALANCING TEMPERATURE



CELLS TEMPERATURE



MOUNTING HOLES

