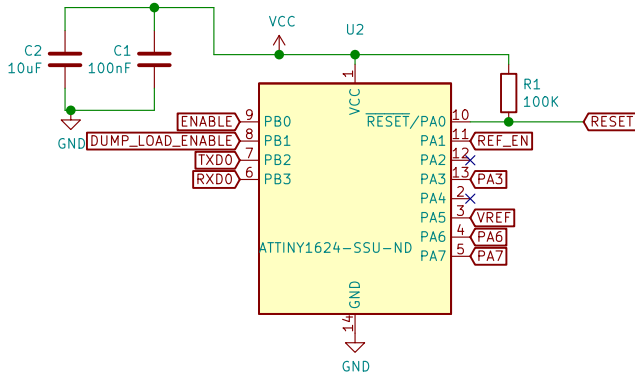


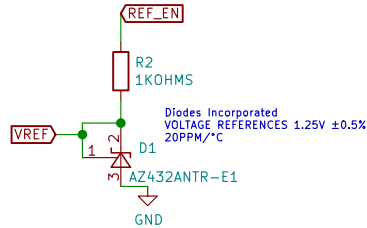
DIYBMS v4 CELL MONITORING MODULE

VERSION 4.50 – NOTE CHANGE TO ATTINY1624 MICRO CONTROLLER

FOR LITHIUM VOLTAGE RANGES (18650 etc.) 2.0V – 4.2V



Change pin for Reference EN – its 2nd TX serial port so useful for DEBUG?



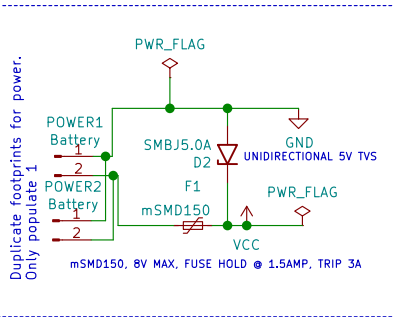
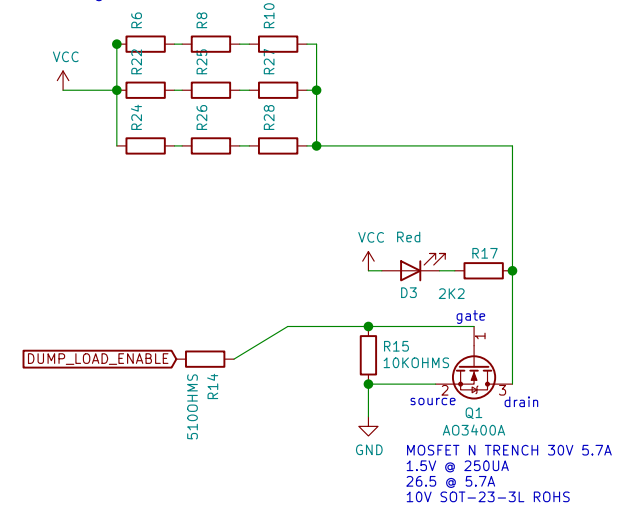
Diodes Incorporated
VOLTAGE REFERENCES 1.25V ±0.5%
20PPM/°C

CHIP RESISTOR – SURFACE MOUNT 30HMS ±5% 3/4W 2010
3 in series with 3 in parallel gives 30hm equivalent resistance

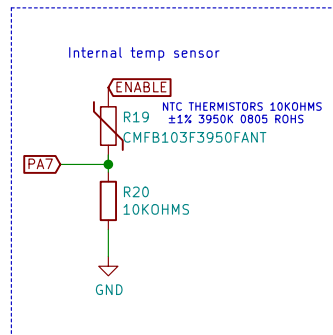
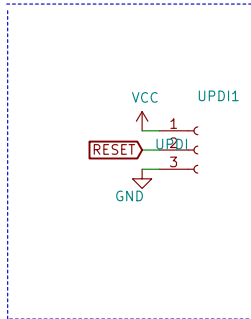
9 resistors provide $9 \times 0.75W = 6.75W$ of power dissipation.

Balance current (at 30hm):

1.4A @ 4.2V
1.22A @ 3.65V

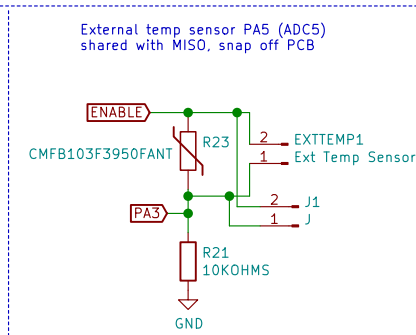


Duplicate footprints for power.
Only populate 1

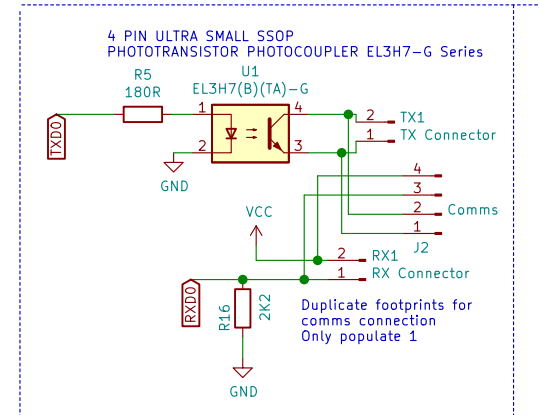


Internal temp sensor

NTC THERMISTORS 10KOHMS
±1% 3950K 0805 ROHS
CMFB103F3950FANT

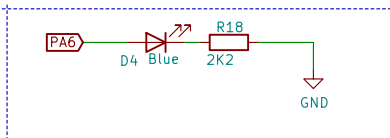


External temp sensor PA5 (ADC5)
shared with MISO, snap off PCB



4 PIN ULTRA SMALL SSOP
PHOTOTRANSISTOR PHOTOCOUPLER EL3H7-G Series

TXDDO
TX Connector
Comms
RX1 J2
RX Connector
RXDDO
Duplicate footprints for
comms connection
Only populate 1



Stuart Pittaway

Sheet: /
File: ModuleV450.sch

Title: DIYBMS cell monitoring module

Size: A4 Date: 2021-01-31

KiCad E.D.A. eeschema 5.1.9+dfsg1-1+deb11u1

Rev: 4.5

Id: 1/1