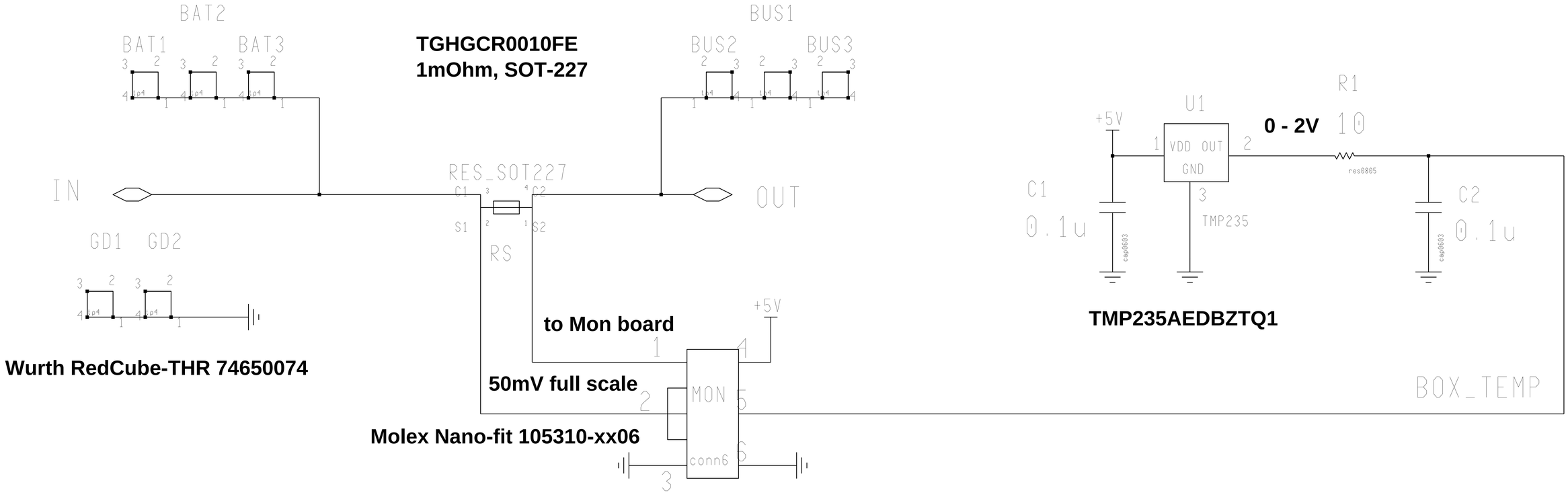
BAT2
BAT1
BAT3
BUS1
BUS2
BUS3
TGHGCR0010FE
1mOhm, SOT-227
IN
OUT
RES_SOT227
C1
C2
S1
S2
RS
GD1
GD2
Wurth RedCube-THR 74650074
to Mon board
50mV full scale
Molex Nano-fit 105310-xx06
+5V
MON
conn6
BOX_TEMP
U1
R1
0 - 2V
10
VDD OUT
GND
TMP235
res0805
cap0603
C1
0.1u
C2
0.1u
TMP235AEDBZTQ1
VEXT
C3 1u
R2
10K
R3
10K
R4
R5
R7
100K
2.8K
3.52K
U2
OUTA
INA
OUTB
INB
GND VDD
TPS3700
1u
C7
TPS3700DDCR
74LVC2G08DP-Q100H
U3
Vcc
GND
TC7W08FU
C4 0.1u
R6
500
R8
500
Green
Red
LED_EXT
NanoFit3
U4
C5 0.1u
R9
500
R11
500
TC7WZ04FU
VBUS
C6 1u
R10
10K
R12
10K
R13
R14
R15
100K
2.8K
3.52K
U5
TPS3700DDCR
C8
Green - Voltage between 23V and 29V
Red - Voltage >29V or <23V
SCH-2979
SPC-2980
ASM-2981
Engineer: M. Bogdan
Drawn by: M. Bogdan
DATE: 8/9/2021
The University of Chicago
5620 S. Ellis Ave. Chicago, IL 60637
HELIX - Battery Shunt Module
REV. A
DRW. 2979
Sheet 1 of 1