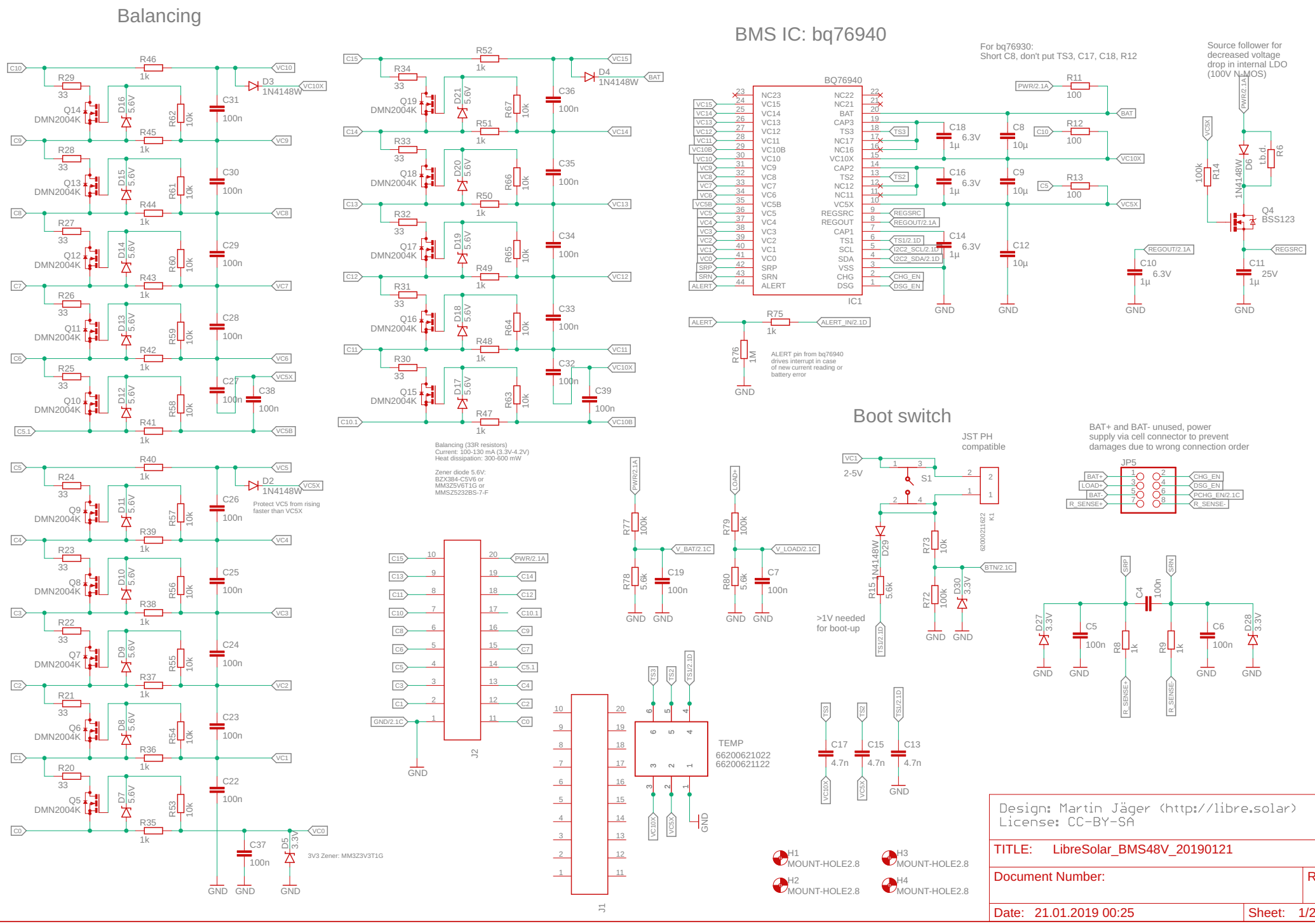
Balancing
BMS IC: bq76940
For bq76930:
Short C8, don't put TS3, C17, C18, R12
Source follower for decreased voltage drop in internal LDO (100V N-MOS)
BQ76940
IC1
Balancing (33R resistors)
Current: 100-130 mA (3.3V-4.2V)
Heat dissipation: 300-600 mW
Zener diode 5.6V:
BZX384-C5V6 or
MM3Z5V6T1G or
MMSZ5232BS-7-F
Protect VC5 from rising faster than VC5X
3V3 Zener: MM3Z3V3T1G
ALERT pin from bq76940 drives interrupt in case of new current reading or battery error
Boot switch
JST PH compatible
>1V needed for boot-up
BAT+ and BAT- unused, power supply via cell connector to prevent damages due to wrong connection order
TEMP
66200621022
66200621122
Design: Martin Jäger (http://libre.solar)
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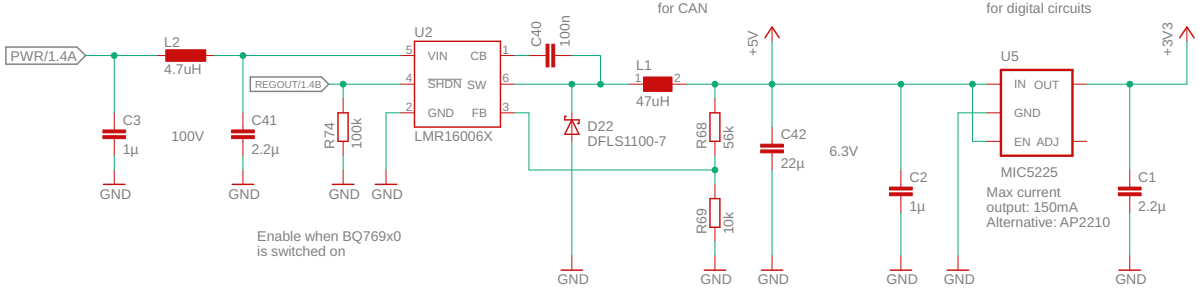
Power supply

Layout for Vin<60V, Iout<300mA, Vout=5V

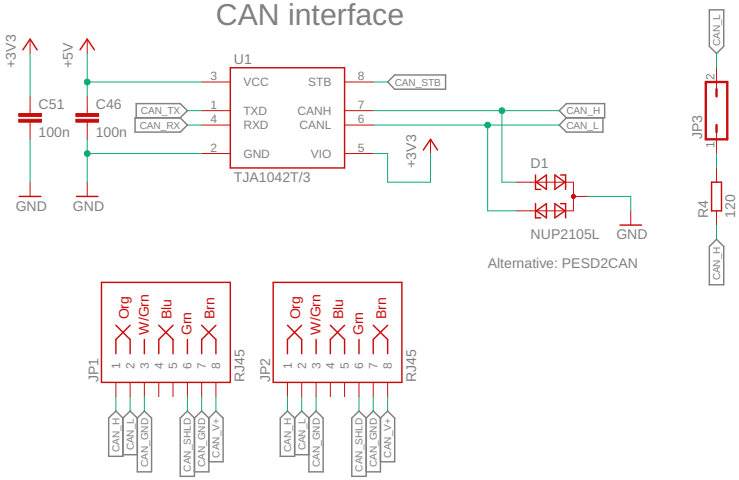
C_in: TDK C3225X7R2A225K230AB
C_out: Murata GRM21BR60J226ME39L
Inductor: Bourns SRR6038-470Y

5 V
for CAN

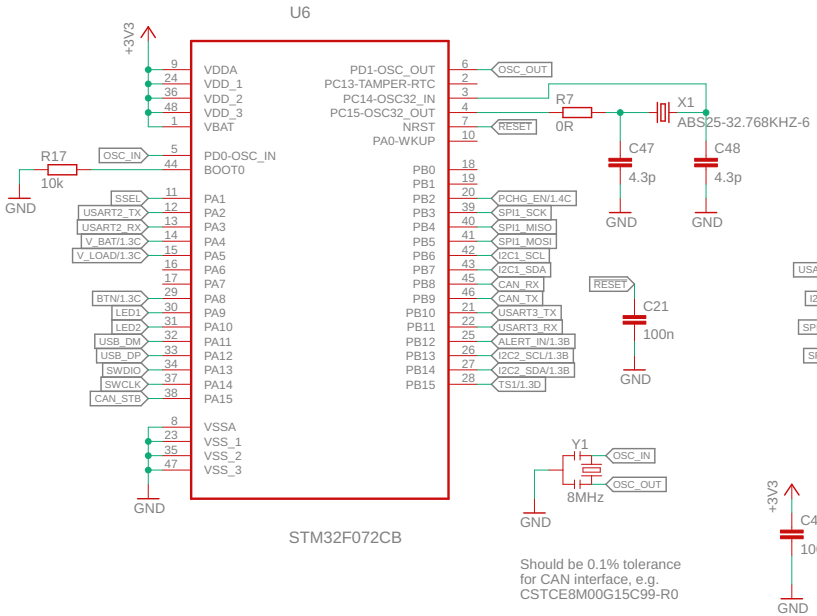
3.3 V
for digital circuits



CAN interface

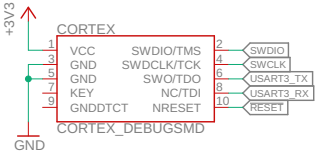


MCU STM32F072

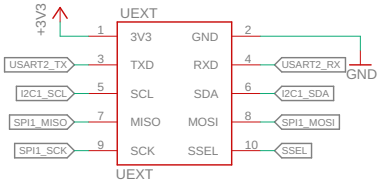


Should be 0.1% tolerance for CAN interface, e.g. CSTCE8M00G15C99-R0

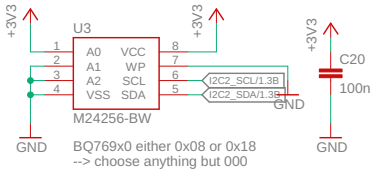
Cortex SWD



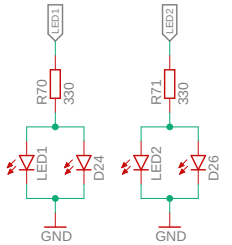
Extension connector



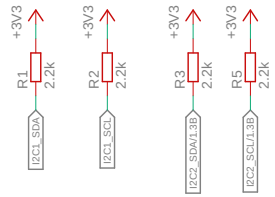
EEPROM

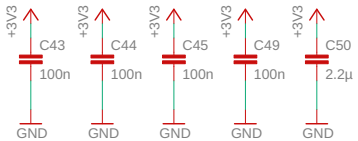


Status LEDs



I2C pull-ups





Libre Solar

open hardware

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