Balancing

BMS IC: bq76940

Chg/Dsg FETs

FET driver
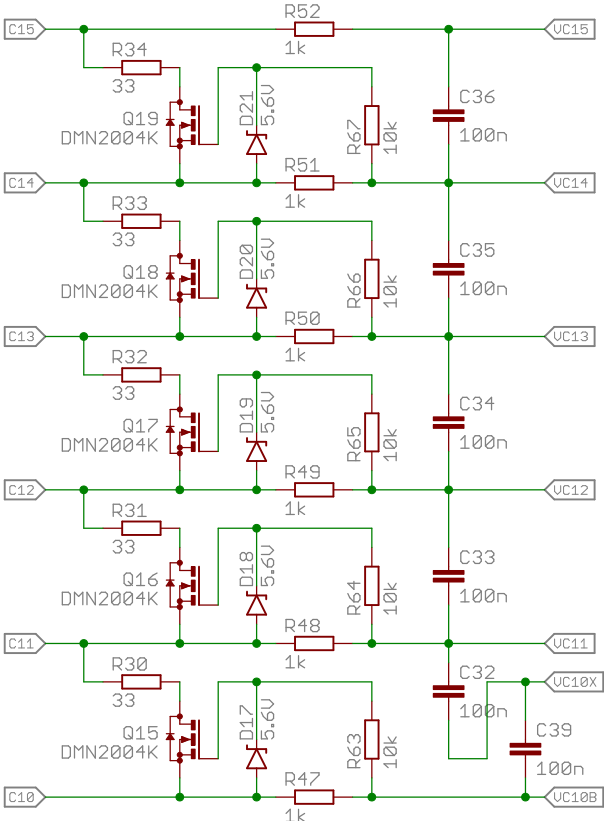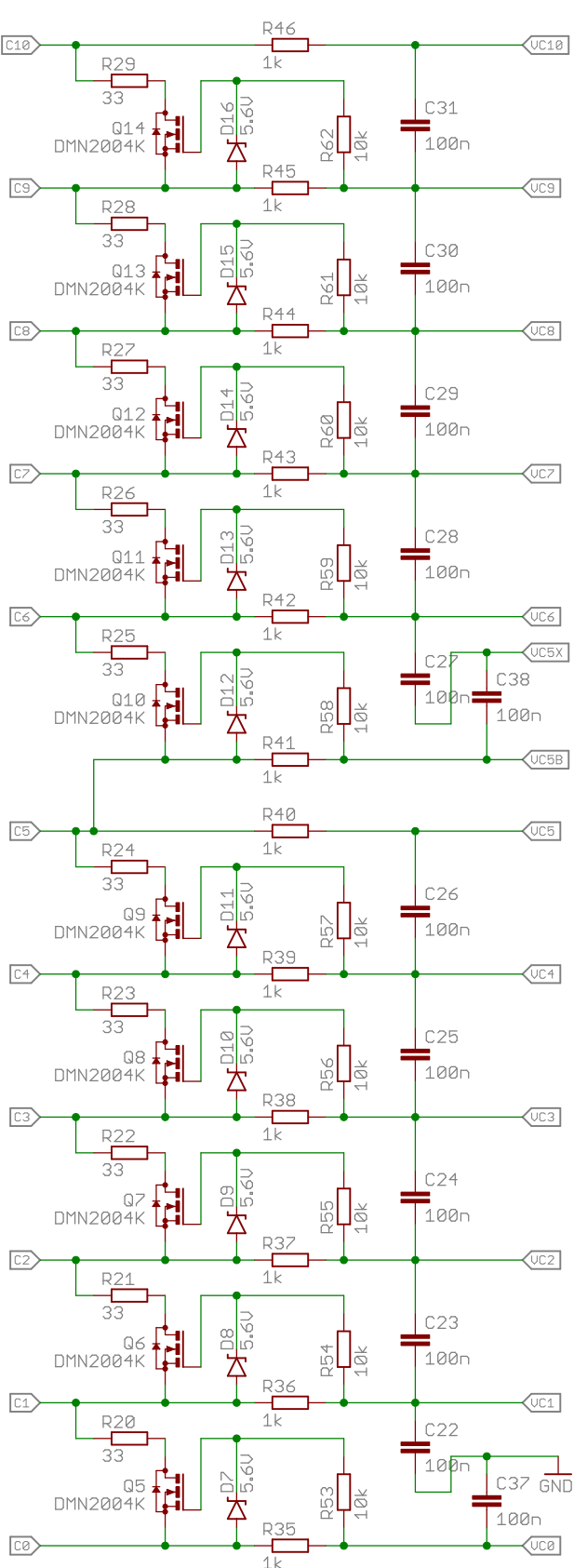
Balancing (33R resistors)
Current: 100-130 mA (3.3V-4.2V)
Heat dissipation: 300-600 mW

Total gate capacitance of both
FETs approx 40nF (see slva729a)

Purpose not clear...
See reference design

Suitchable voltage divider:
PACKDIV current max. 500 uA
Pack voltage max. 60V + transients
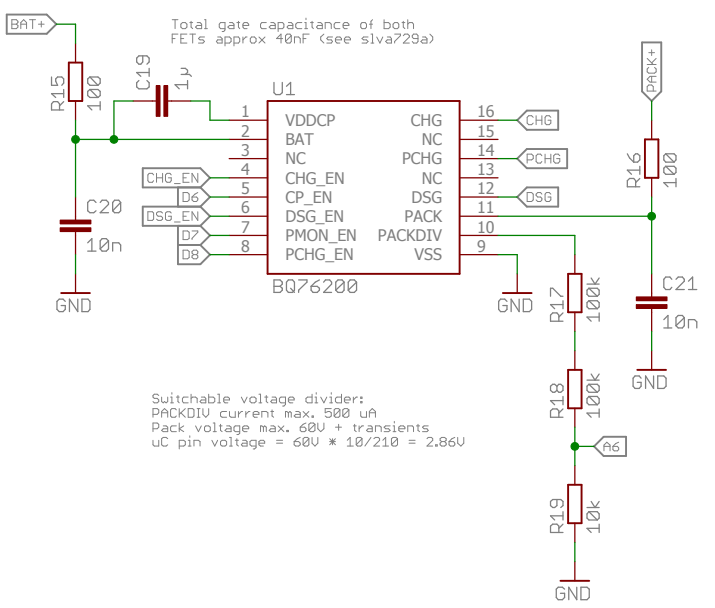uC pin voltage = 60V * 10/210 = 2.86V
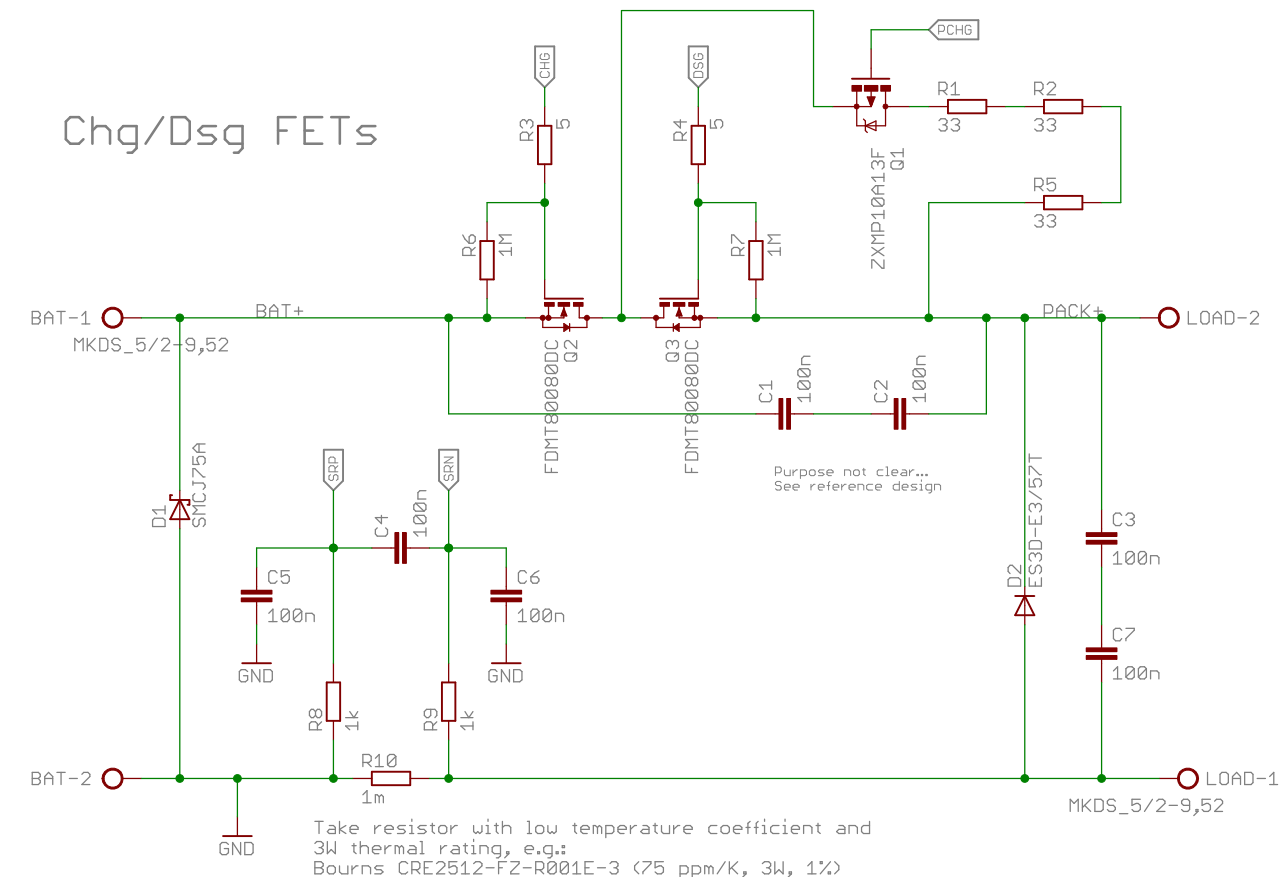
Take resistor with lou temperature coefficient and
3W thermal rating, e.g.:
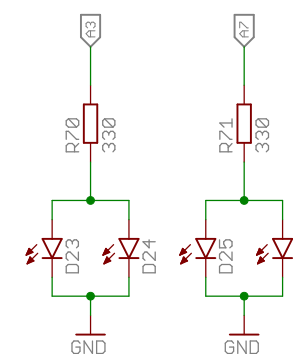Bourns CRE2512-FZ-R001E-3 (75 ppm/K, 3W, 1%)
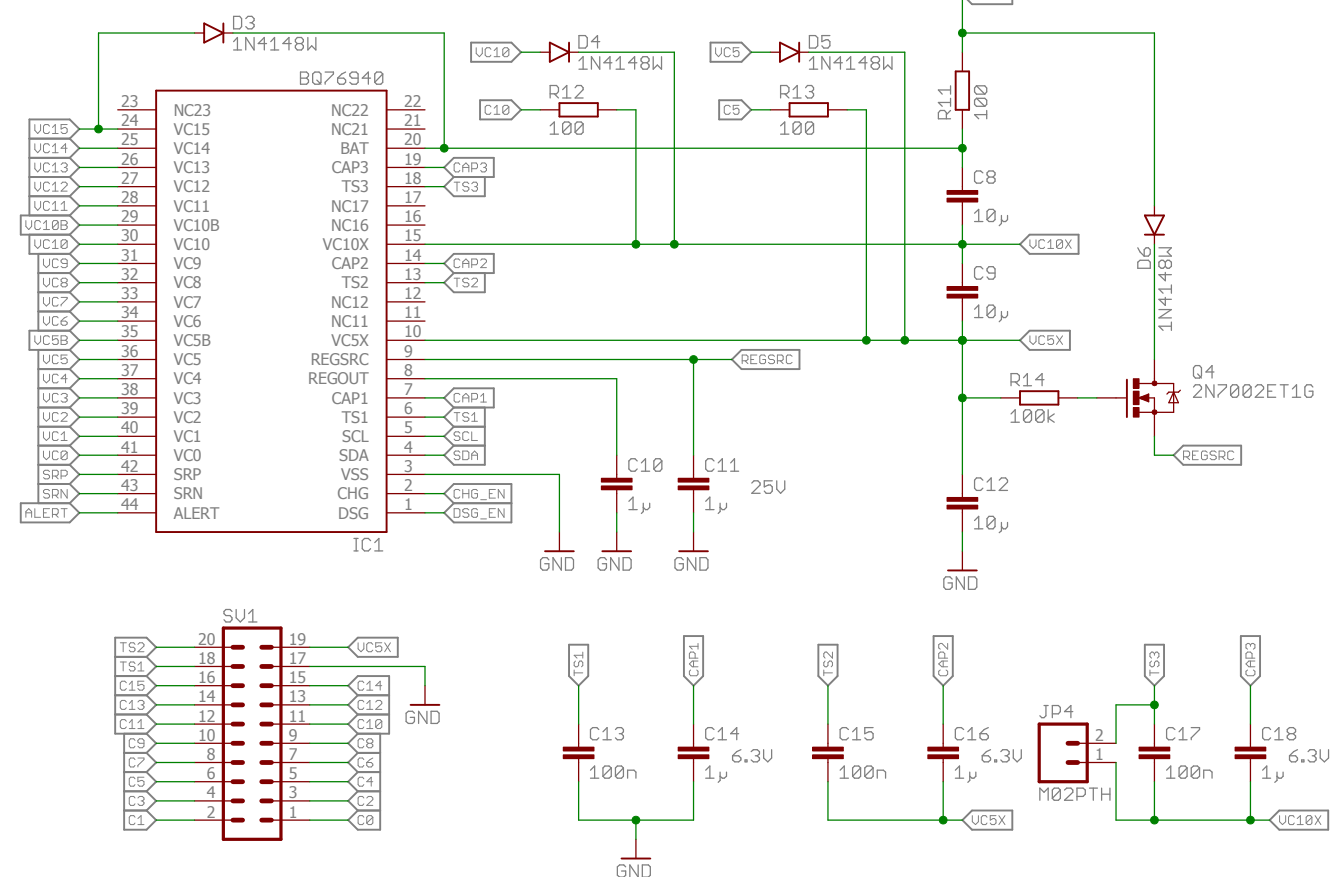
Design: Martin Jäger (m.jaeger@posteo.de)
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TITLE: LibreSolar_BMS48V

Document Number:

REV:

Date: nicht gespeichert!

Sheet: 1/2

ATmega 328P (Arduino-compatible)

ALERT pin from bq76940 drives interrupt in case of new current reading or battery error

MCU power supply

Layout for Vin<60V, Iout<200mA, Vout=3.3V

C_in: TDK C3225X7R2A225K230AB
C_out: Murata GRM21BR60J226ME39L
Inductor: Bourns SRR4028-101Y or
          WE-TPC-4828 744043101 or
          CoilCraft LPS5030 or

Connectors

Status LEDs

H1 MOUNT-HOLE2.8	H3 MOUNT-HOLE2.8
H2 MOUNT-HOLE2.8	H4 MOUNT-HOLE2.8

open hardware