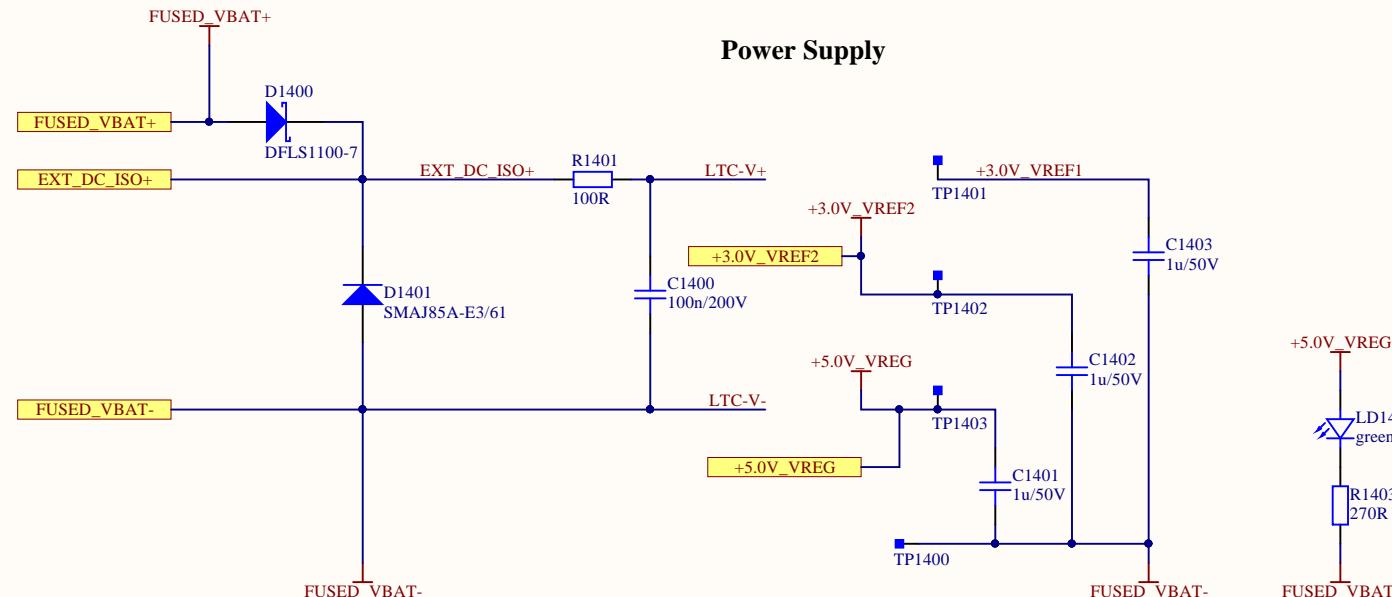
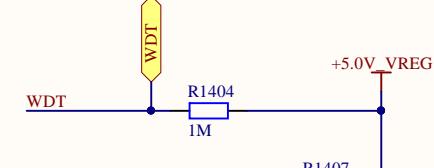


Power Supply

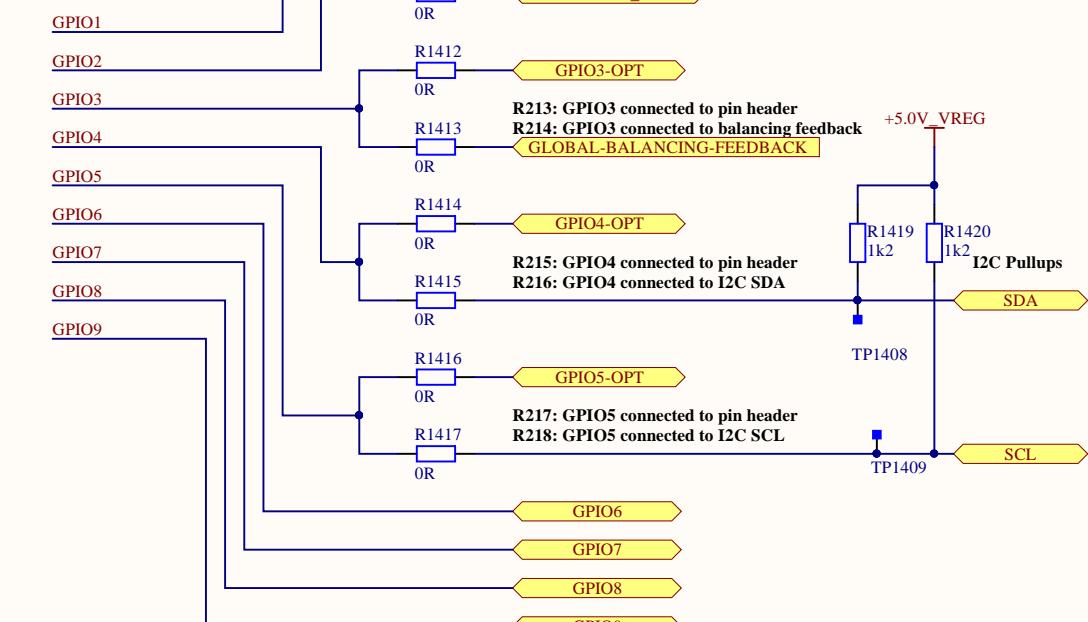


Setting Pins



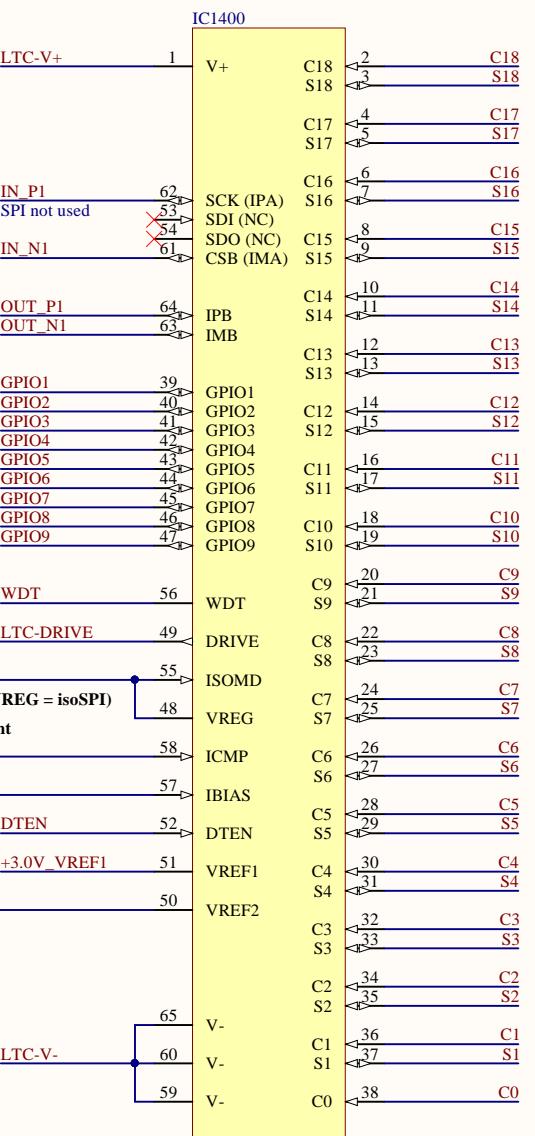
Watchdog timer pull-up
Discharge timer configuration:
Pull-up: on
Pull-down: off

GPIO Pins



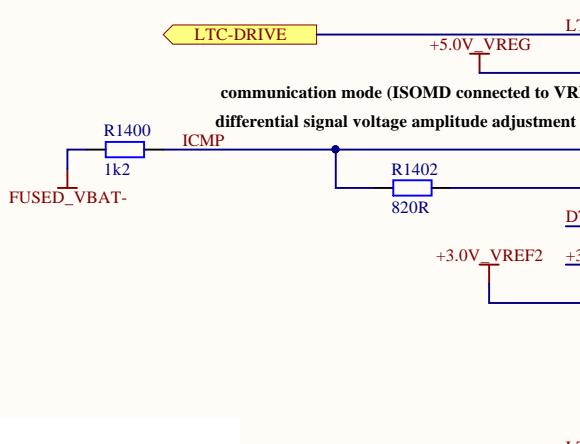
Cell voltage sense inputs

C[0..18] C[0..18]



Cell balancing control

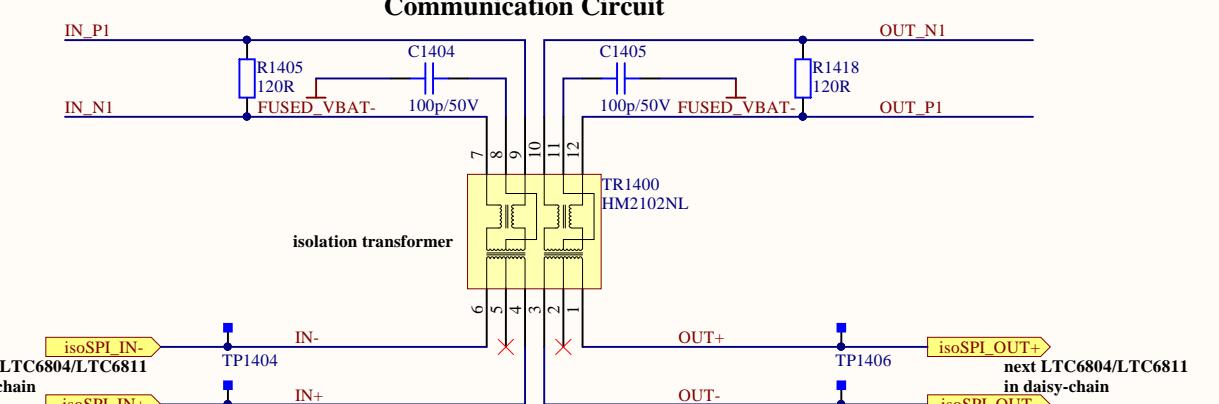
S[1..18] S[1..18]

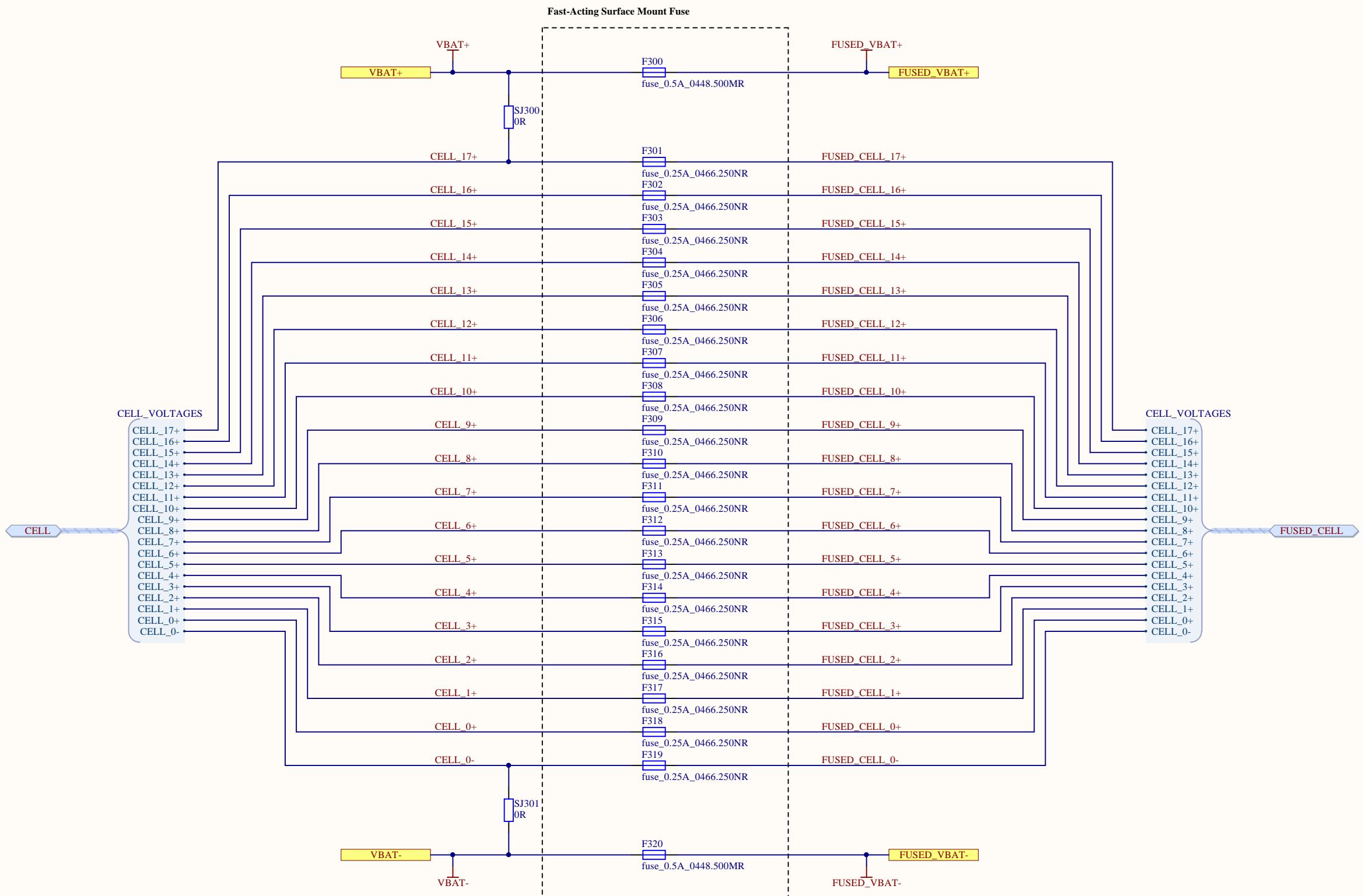


Layout:

- The transformer should be placed as close to the isoSPI cable connector as possible. The distance should be kept less than 2cm.
- The LTC6813 should be placed at least 1cm to 2cm away from the transformer.
- On the top component layer, no ground plane should be placed under the transformer, the isoSPI connector, or in between the transformer and the connector.
- The isoSPI signal traces should be isolated from surrounding circuits and traces by ground metal or space. No traces should cross the isoSPI signal lines, unless separated by a ground plane on an inner layer.

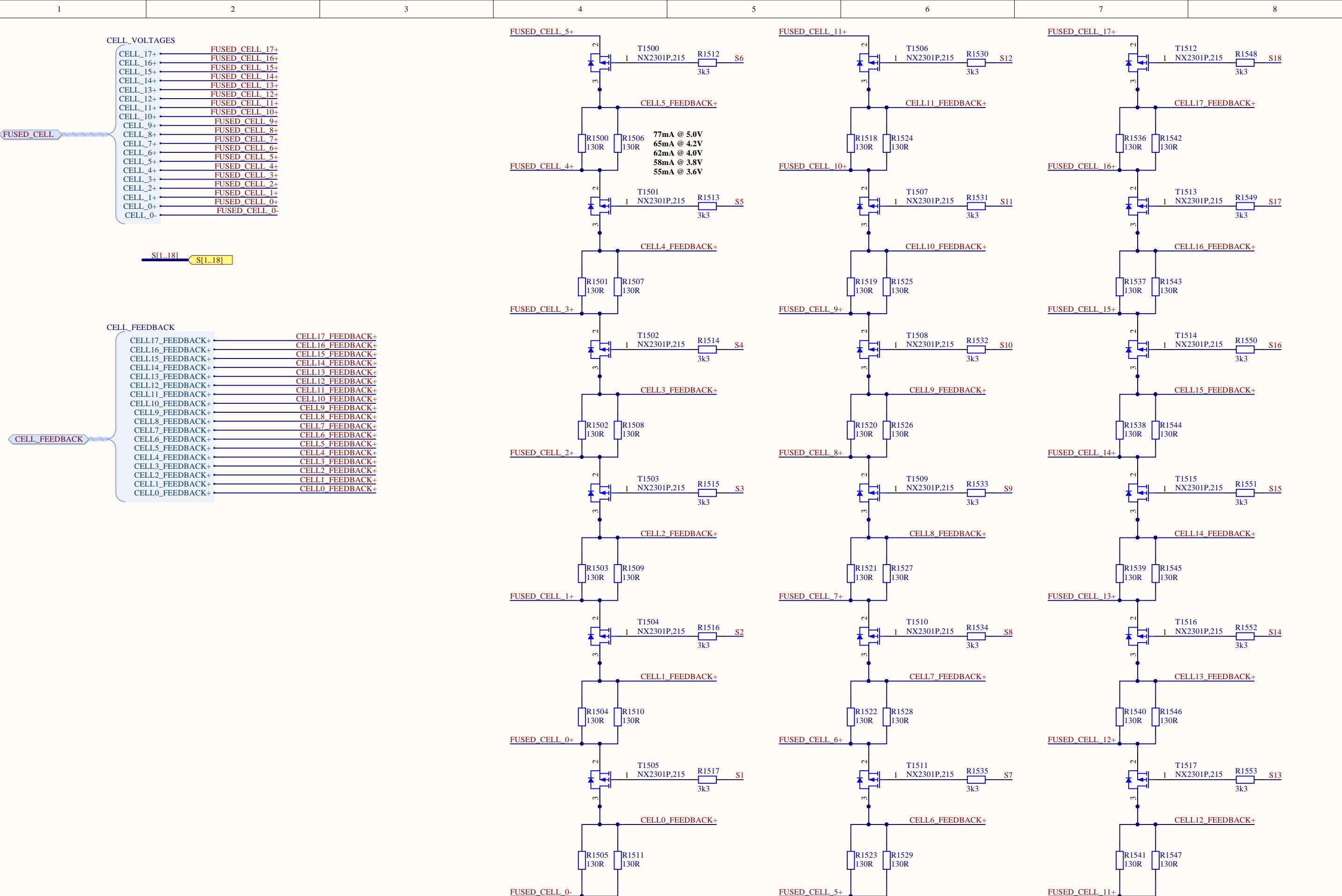
Communication Circuit

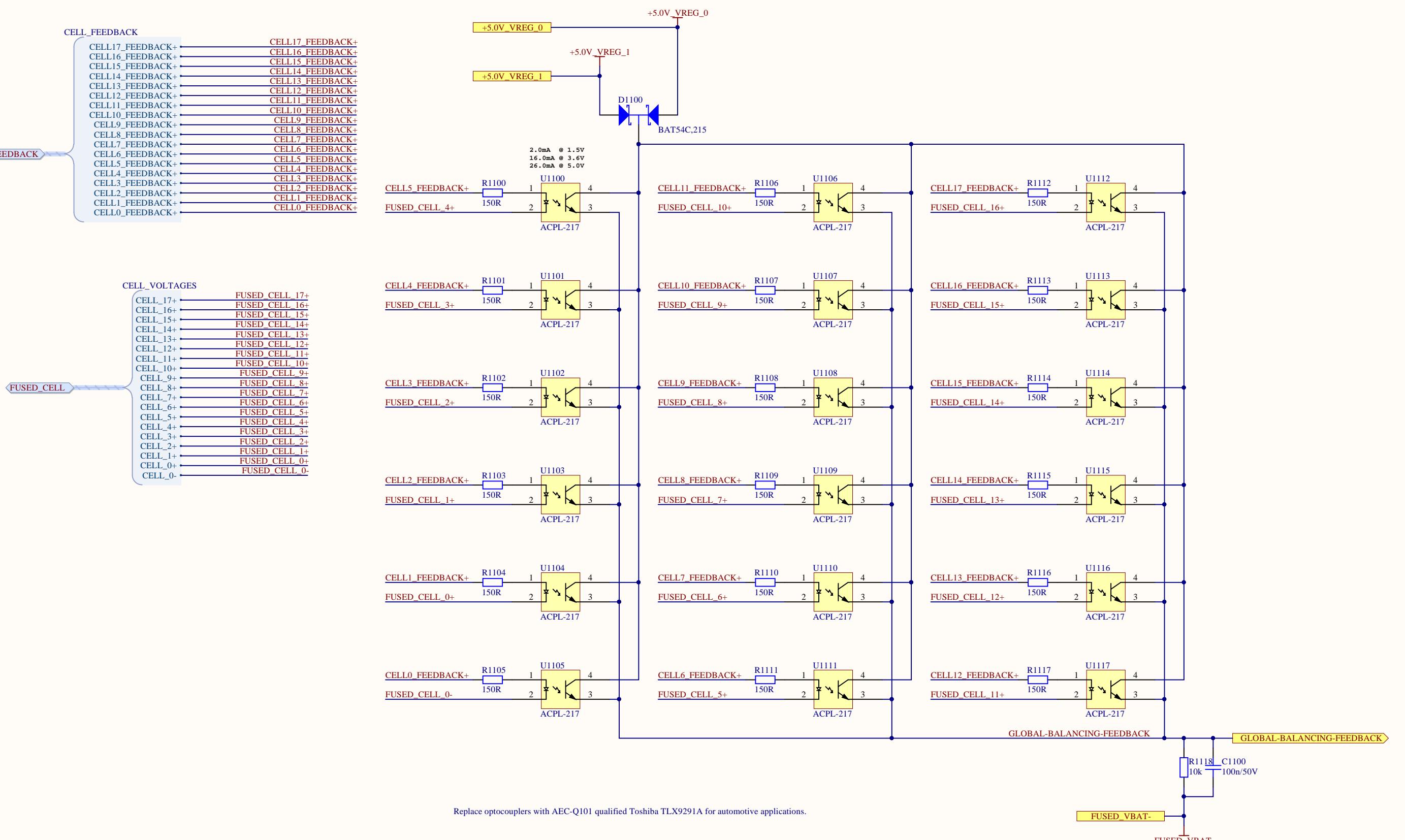




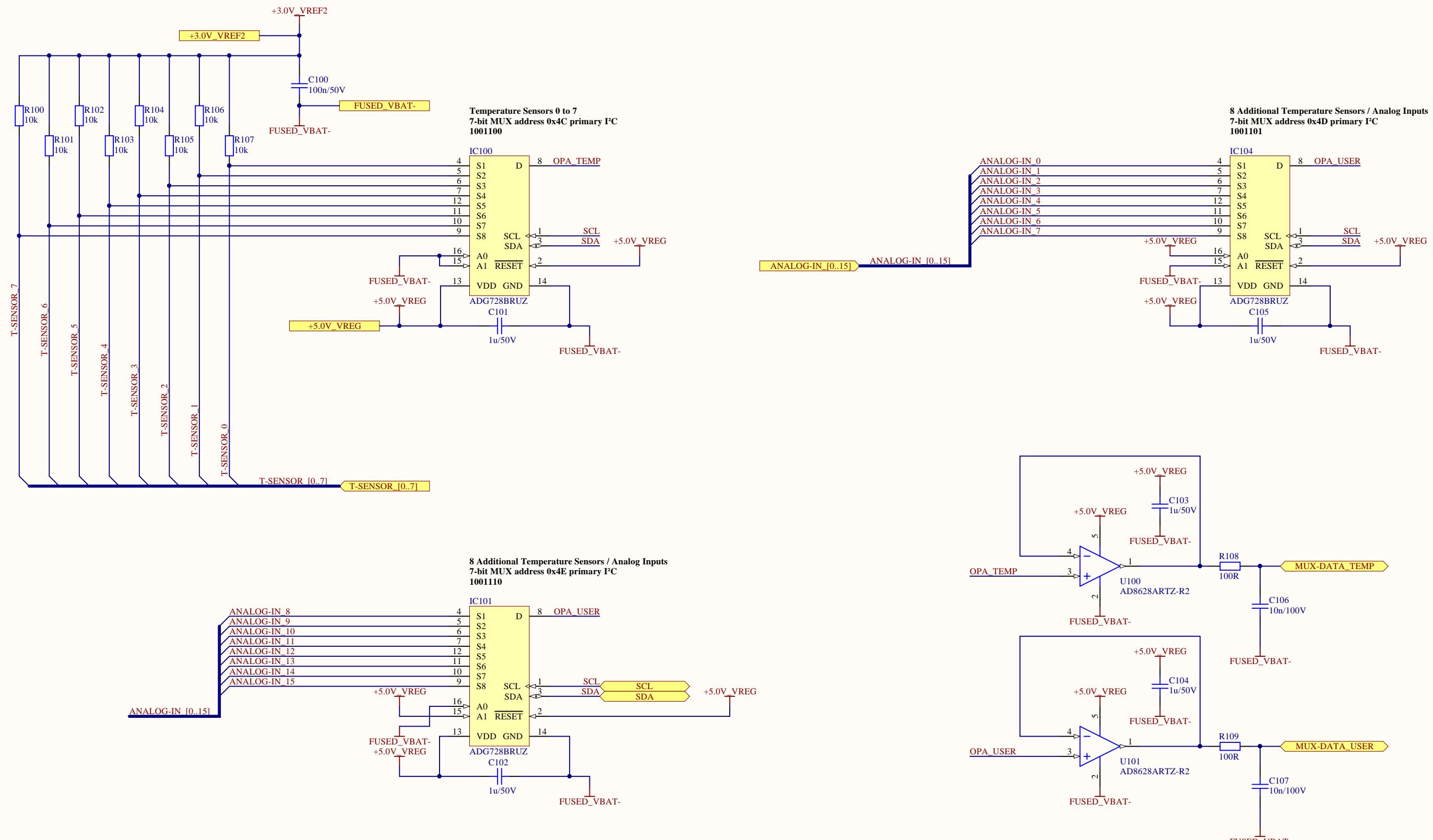
For Cell Balancing/ Measuring Inputs: Max. 0.250A Balancing Current
 Reaction Time:
 200% Load (0.500A) = ca. 20ms
 300% Load (0.750A) = <10ms

For Power Supply Inputs: Max. 0.500A Current
 Reaction Time:
 200% Load (1.000A) = ca. 200ms
 300% Load (1.500A) = ca. 70ms





Design Note:
replace ADG728BRUZ with ADG728WBRUZ-REEL7 for
automotive compliance



A

A

B

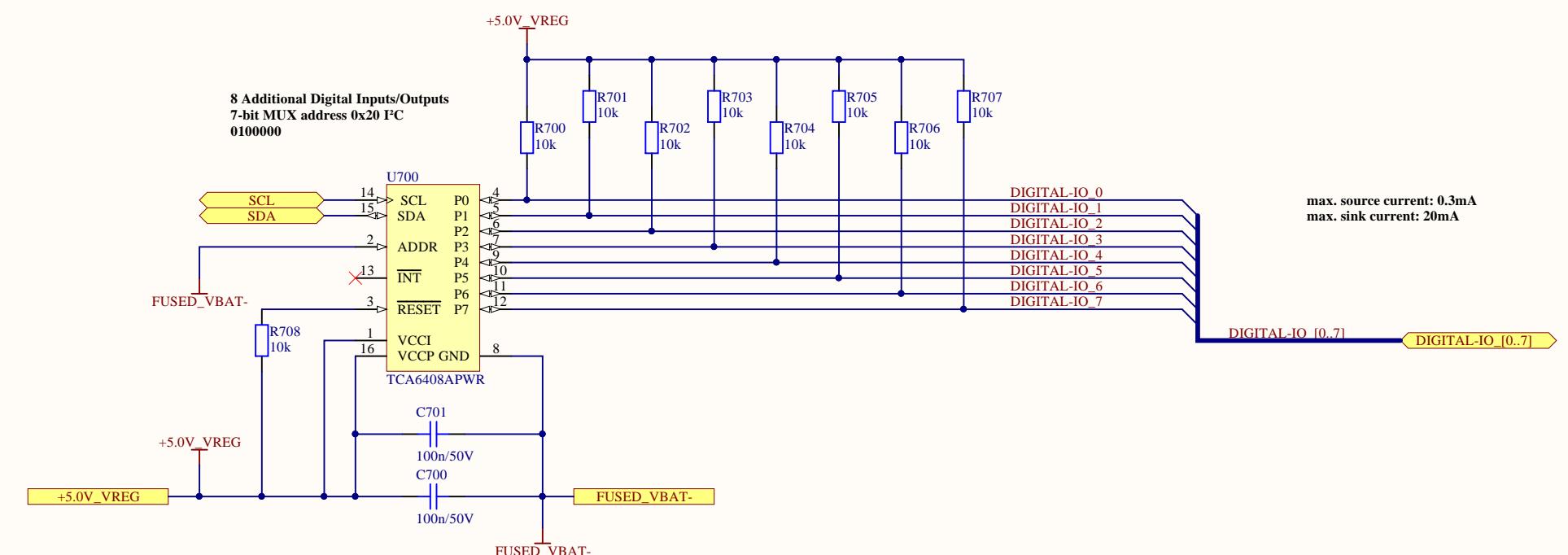
B

C

C

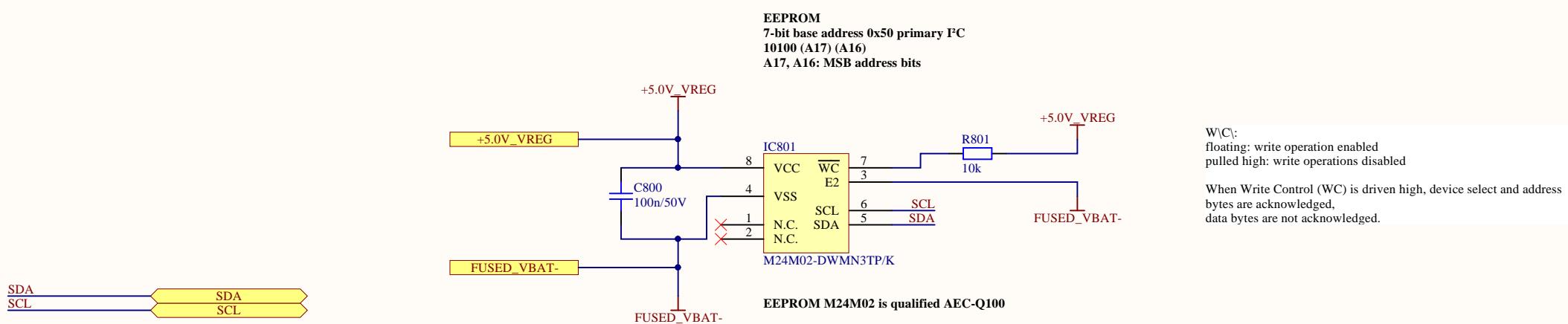
D

D



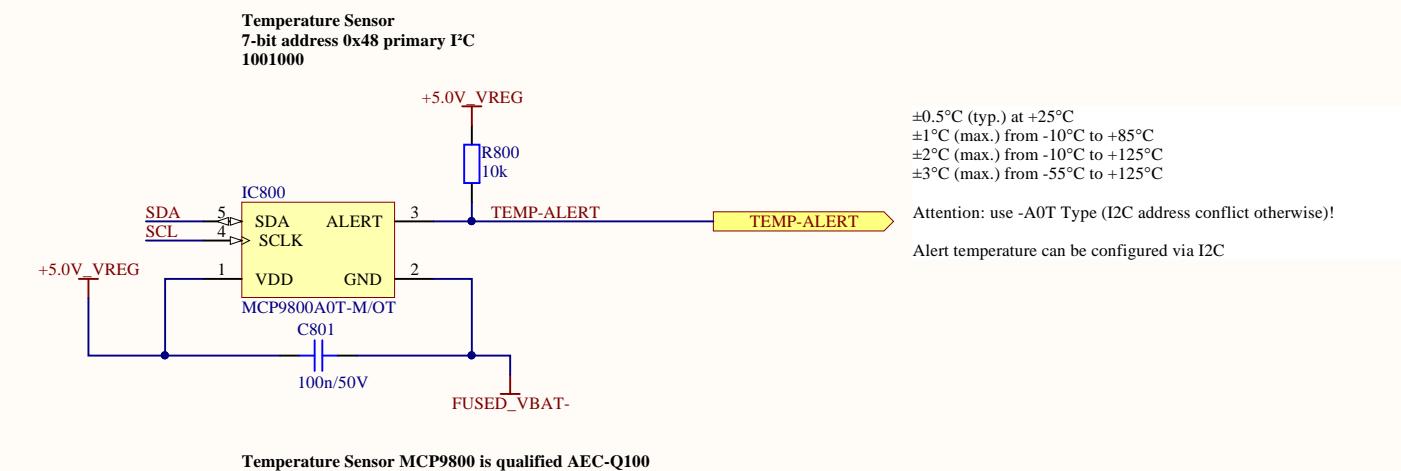
A

A



B

B

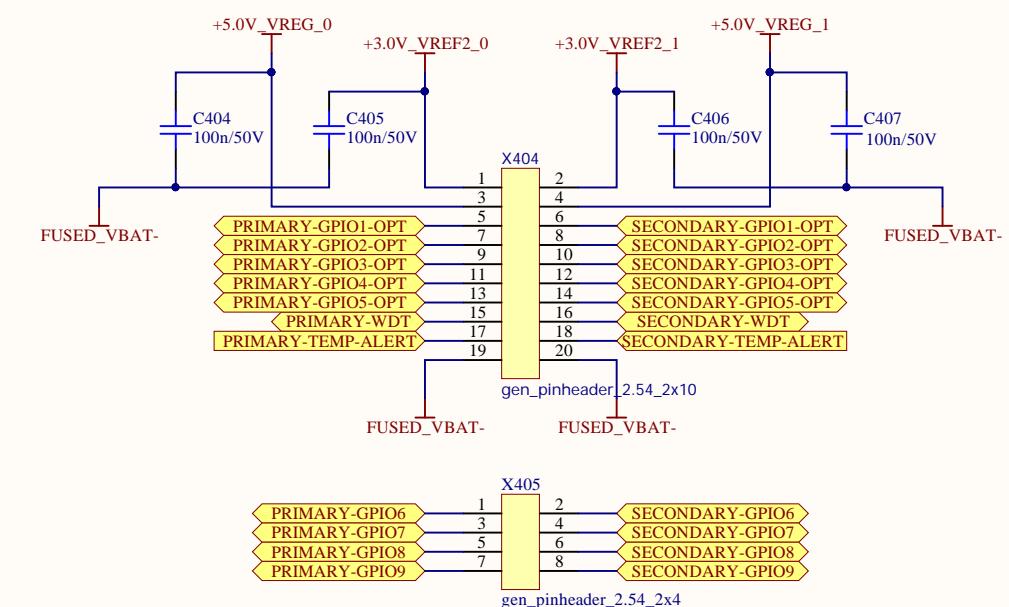
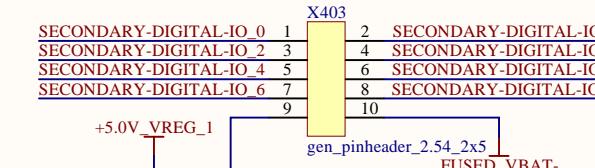
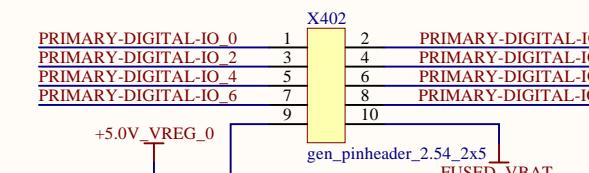
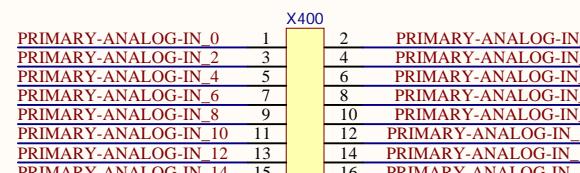


C

C

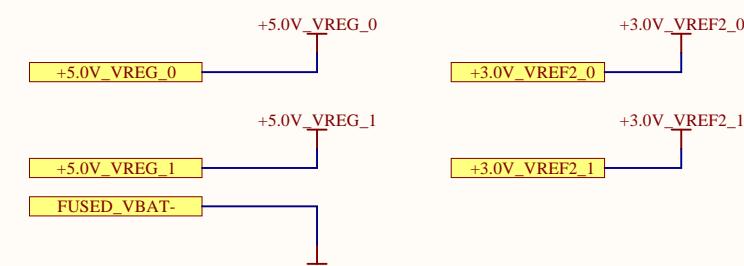
D

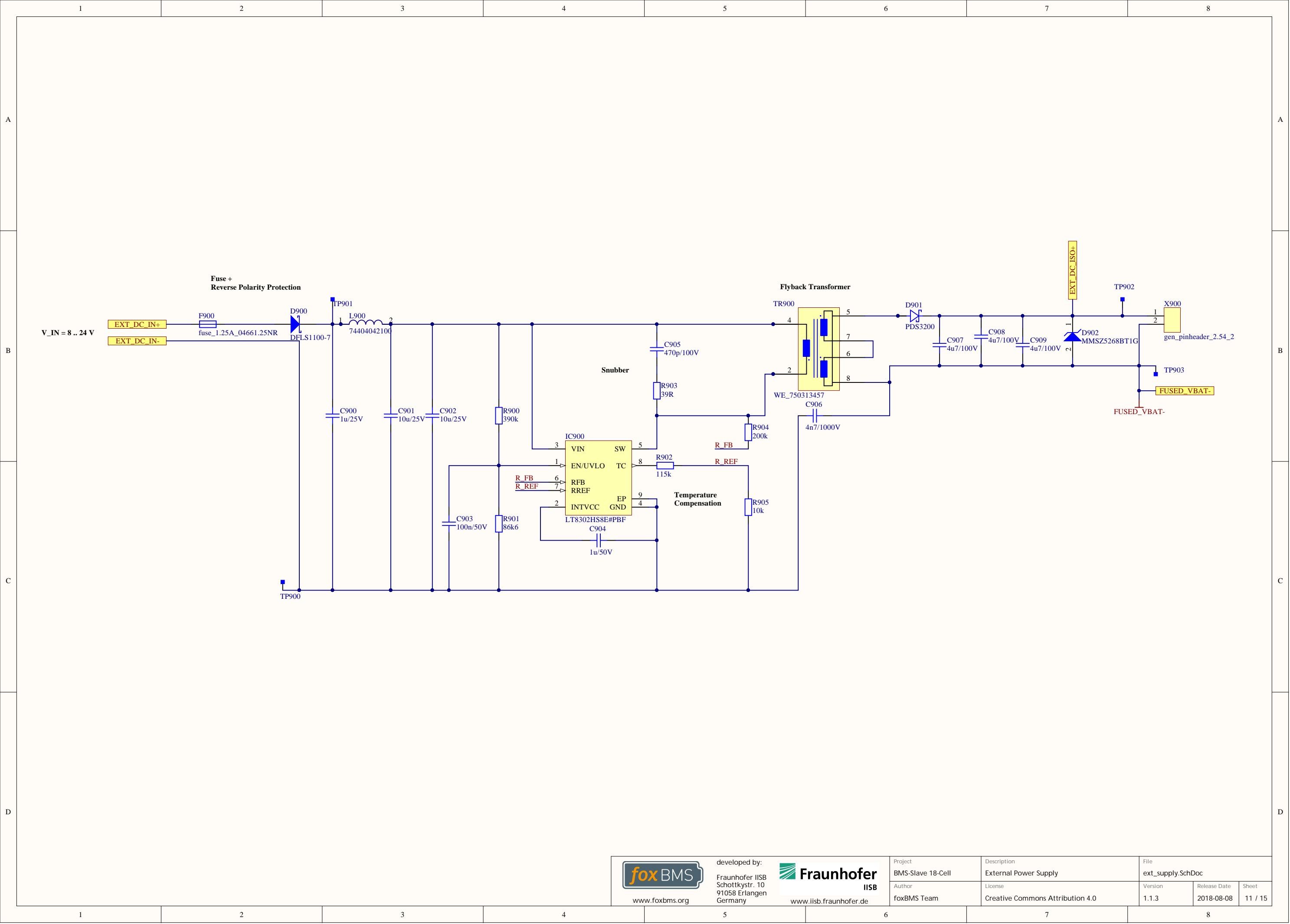
D

Pin-Header for additional analog and digital inputs/outputs

Legend for connections:

- SECONDARY-DIGITAL-IO [0..7] <--> PRIMARY-DIGITAL-IO [0..7]
- PRIMARY-DIGITAL-IO [0..7] <--> PRIMARY-DIGITAL-IO [0..7]
- SECONDARY-ANALOG-IN [0..15] <--> SECONDARY-ANALOG-IN [0..15]
- PRIMARY-ANALOG-IN [0..15] <--> PRIMARY-ANALOG-IN [0..15]





A

A

B

B

C

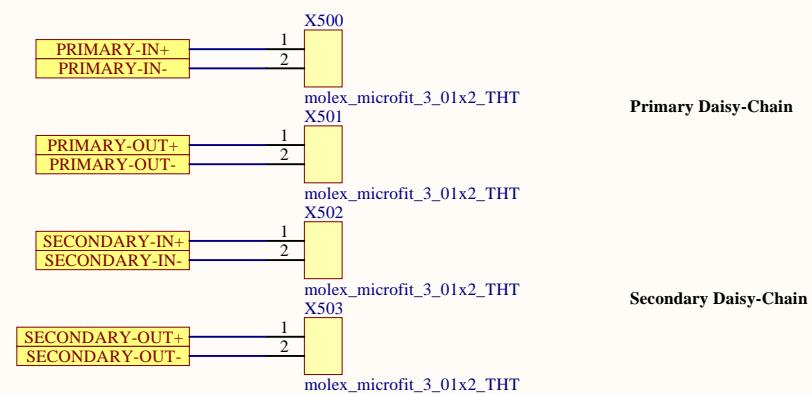
C

D

D

Daisy Chain Connectors

4x 2p connector equal for 12/15/18/20 cell version



A

A

B

B

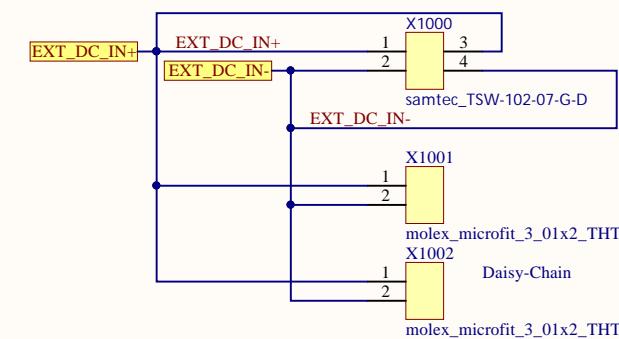
C

C

D

D

External Power Supply

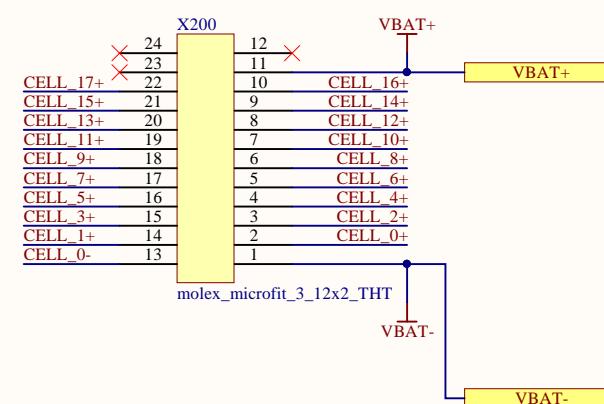


A

A

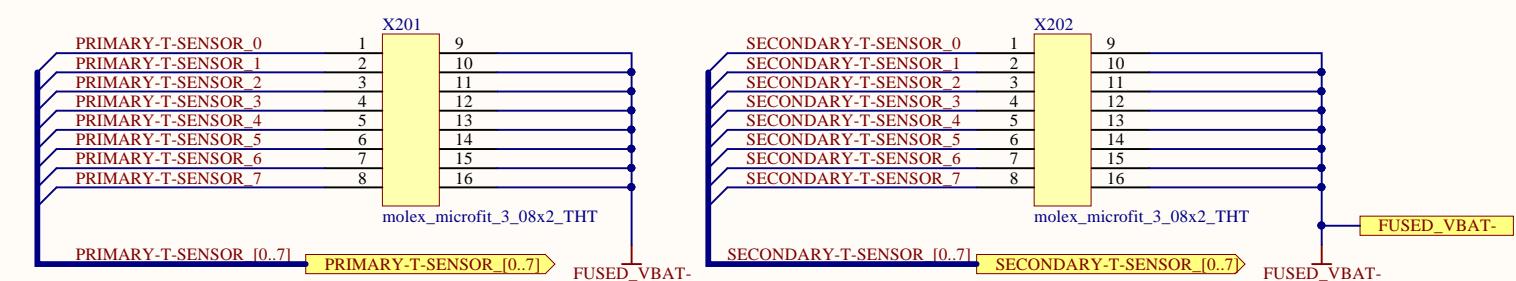
Batterie Cell Voltage Sense Connector

24p connector equal for 12/15/18/20 cell version



Temperature Sensor Connector

2x 16p connector equal for 12/15/18/20 cell version

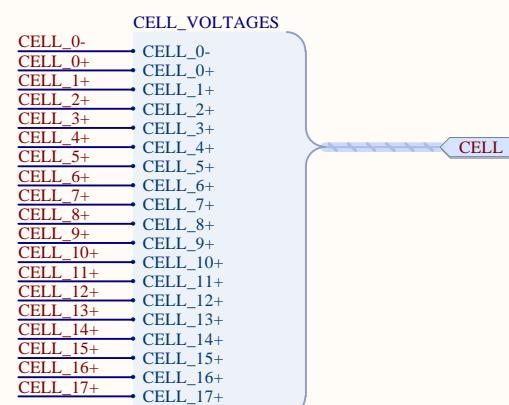


B

B

C

C



D

D

