SECTION A-A (Scale 1:1)

160.00mm
150.00mm
6.98mm
37.78mm
31.42mm
90.00mm
100.00mm

Passive Balancing

R741 R740 R739 R724 R737 R736 R735 R734 R719 R718 R717 R730 R715 R728
R727 R726 R725 R738 R723 R722 R721 R720 R733 R732 R731 R716 R729 R714

MP_UL
MP_UR
fox BMS

J303
J303

BME680
MCP9808

LOW HIGH HIGH LOW
0 15
1 14
2 13
3 12
4 11
5 10
6 9
7 8

3.3V_LDO

R602
Vddc
Q600
Q600

DANGER
high voltage
may be present

R614
R613
R620
R615
R609
R608
R607
R606

R850 R853
R601
R637

foxBMS

U600

R640 R626
R639 R625
R636
R635 R624
R633 R623
R631
R630
R629

Vin_DCDC
R803
J311 J308
J312 J309
C806
J308
C804
J309
L800

enable_DCDC
3.3V_DCDC
TPL_L_N TPL_L_P TPL_H_N TPL_H_P ALARM_IN

U201_2
U201_1
R232_2 R230_2
R232_1 R230_1

R100

U200_2
U200_1

D606
D602
D604
D606
Vbat_con_ext
Vbat

J310

ALARM_OUT

T601 T600
J601

Input Filter

R200_1
Select Vmodule with 0R
Vmodule
GND

Temperature Measurement
Vaux
R603

J307 J304 J300

J307 J304 J300

Alarm
out
J306

TPL
low
J302

TPL
high
J301

Alarm
in
J305

J306 J302 J301 J305

MP_LL
MP_LR

View from Top side (Scale 1:1)

2.38mm
2.38mm
2.38mm
1.56mm
1.78mm
5.94mm

Fraunhofer IISB
BMS-Slave 14-Cell MC33775
v1.0.2

Project: BMS-Slave 14-Cell MC33775
Version: 1.0.2
Date: 2024-11-07
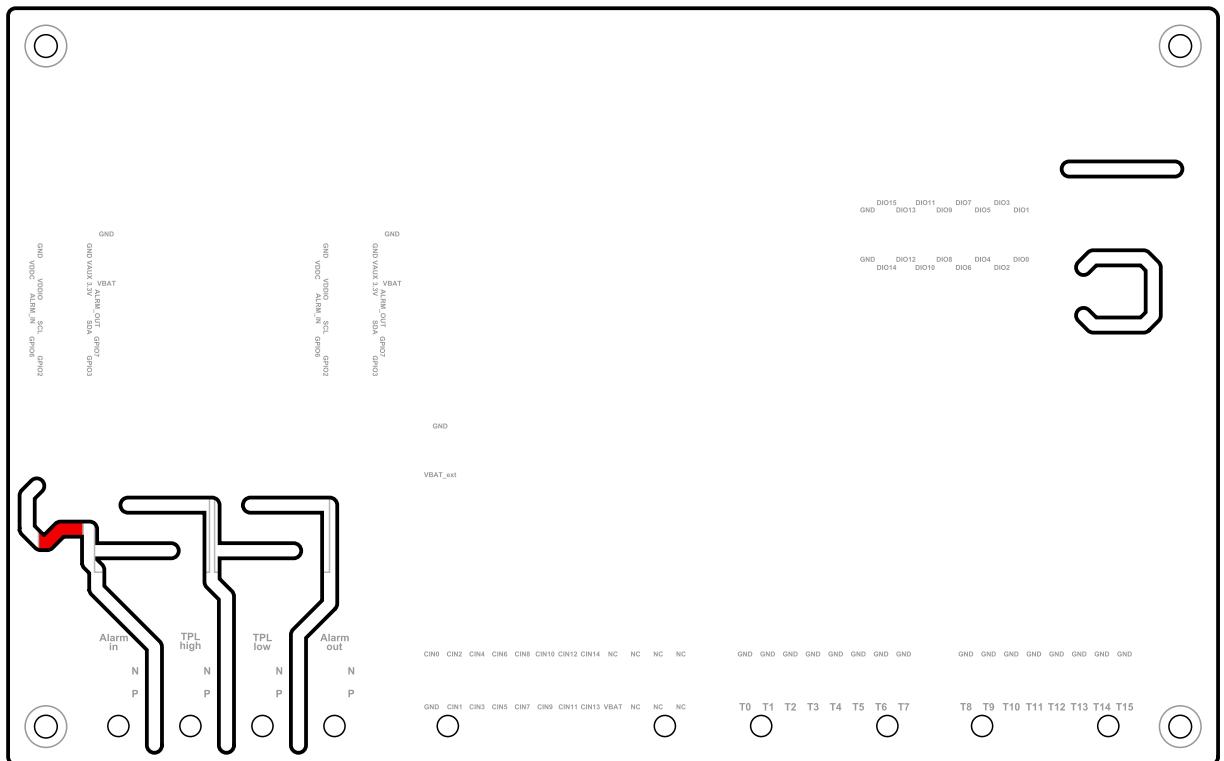Variant: foxBMS_14cell_BMS-Slave_NXP775A_minimal

A   B   C   D   E

1

2

DIO15   DIO11   DIO7   DIO3
GND   DIO13   DIO9   DIO5   DIO1

GND   DIO12   DIO6   DIO4   DIO0
DIO14   DIO10   DIO6   DIO2

GND   GND
VDDC   VDDC
VDIO0   VDIO0
ALRM_IN   ALRM_IN
SCL   SCL
GPIO2   GPIO2

GND VAUX 3.3V   GND VAUX 3.3V
VBAT   VBAT
ALRM_OUT   ALRM_OUT
SDA   SDA
GPIO7   GPIO7
GPIO3   GPIO3

GND

VBAT_ext

3

Alarm   TPL   TPL   Alarm
in   high   low   out

N   N   N   N
P   P   P   P

CIN0 CIN2 CIN4 CIN6 CIN8 CIN10 CIN12 CIN14   NC   NC   NC   NC   GND GND GND GND GND GND GND   GND GND GND GND GND GND GND GND

GND CIN1 CIN3 CIN5 CIN7 CIN9 CIN11 CIN13 VBAT   NC   NC   NC   T0   T1   T2   T3   T4   T5   T6   T7   T8   T9 T10 T11 T12 T13 T14 T15

View from Bottom side (Scale 1:1)

4

Project: BMS-Slave 14-Cell MC33775
Version: 1.0.2
Date: 2024-11-07
Variant: foxBMS_14cell_BMS-Slave_NXP775A_minimal