Battery Charger

VIN

R1
1k

LED1
CHARGE

LED2
FULL

U1
CN3058E

1	TEMP	FB	8
2	ISET	CHRG	7
3	GND	DONE	6
4	VIN	BAT	5

B+

R2
1k2

C1
1u

C2
10u

GND GND GND GND   GND

Battery Protection

U2
HY2112

1	OD	VSS	6
2	CS	VDD	5
3	OC	NC	4

R3
100R

B+

C3
100n

R4
2k

Q1
FS8205

B-

GND

Load Sharing System

Q2
DMP1045U-7

B+

LS+

D1
SS34

VIN

R5
10k

GND

5V Boost Converter

+5V

D2
SS34

L1
22uH
3A

LS+

R6
15k

U3
MT3608

1	SW	NC	6
2	GND	IN	5
3	FB	EN	4

PWR
Slide Switch

C5
22u

R7
2k

C4
22u

2

3

1

GND GND   GND   GND   GND

Connectors

VIN

USB1
POWER IN

| 1 | +5V |
| 2 | GND |

GND

USB2
POWER OUT

+5V

5	SHLD	VCC	1
		D-	2
		D+	3
6	SHLD	GND	4

GND

BAT1
Connector

B+
B-

| 1 |
| 2 |

VIN

VIN
Connector

| 1 |
| 2 |

GND

+5V

VOUT
Connector

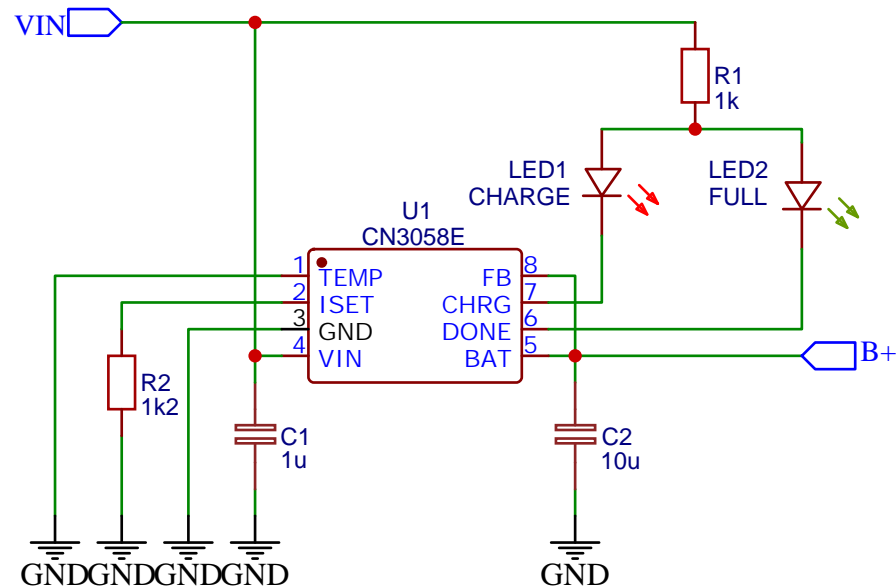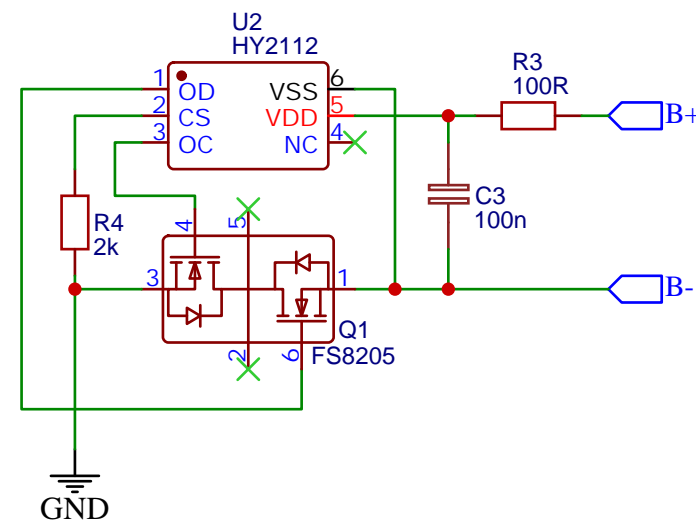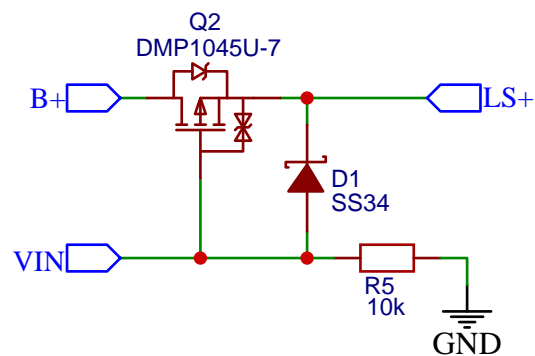| 1 |
| 2 |

GND

Set charging current by selecting proper R2
1k2 - 1000mA
1k5 - 780mA
2k - 580mA
4k - 300mA

$$I = \frac{1218V}{R2} \quad (\text{max } 1A)$$
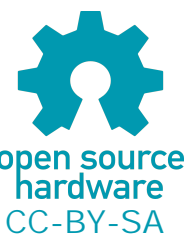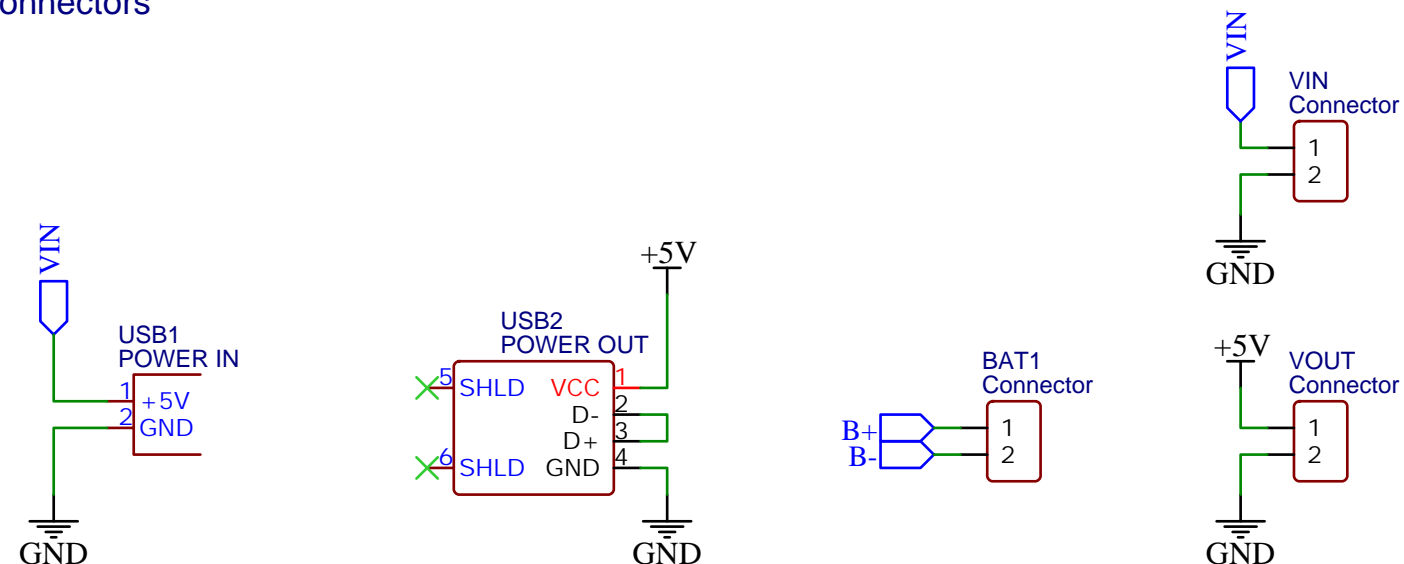
$$VOUT = 0.6 * \frac{R6 + R7}{R7}$$
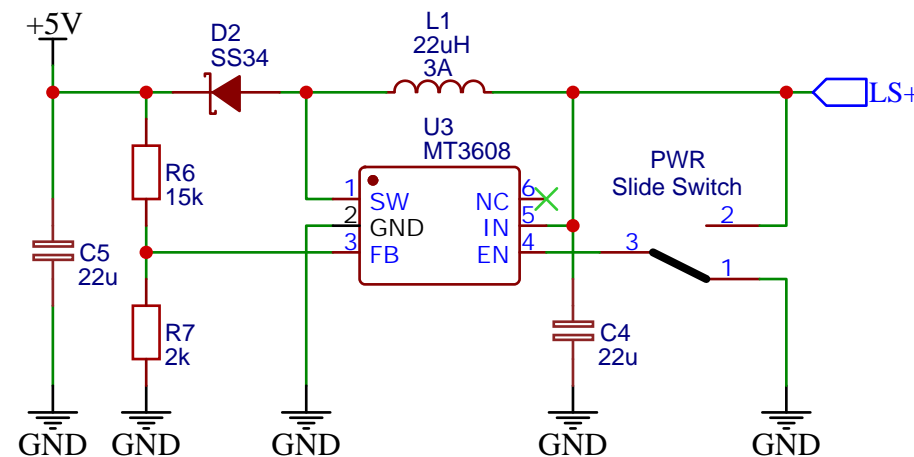
TITLE:
LiFePO4 Power Board LS 5V

REV: 1.0

Company: wagiminator

Sheet: 1/1

Date: 2020-07-03   Drawn By: Stefan Wagner

EasyEDA