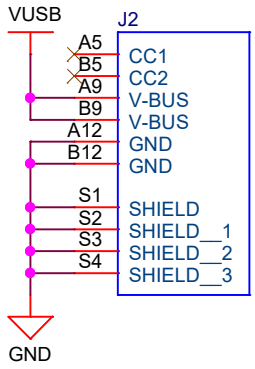
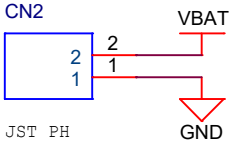
USB-C CONNECTOR



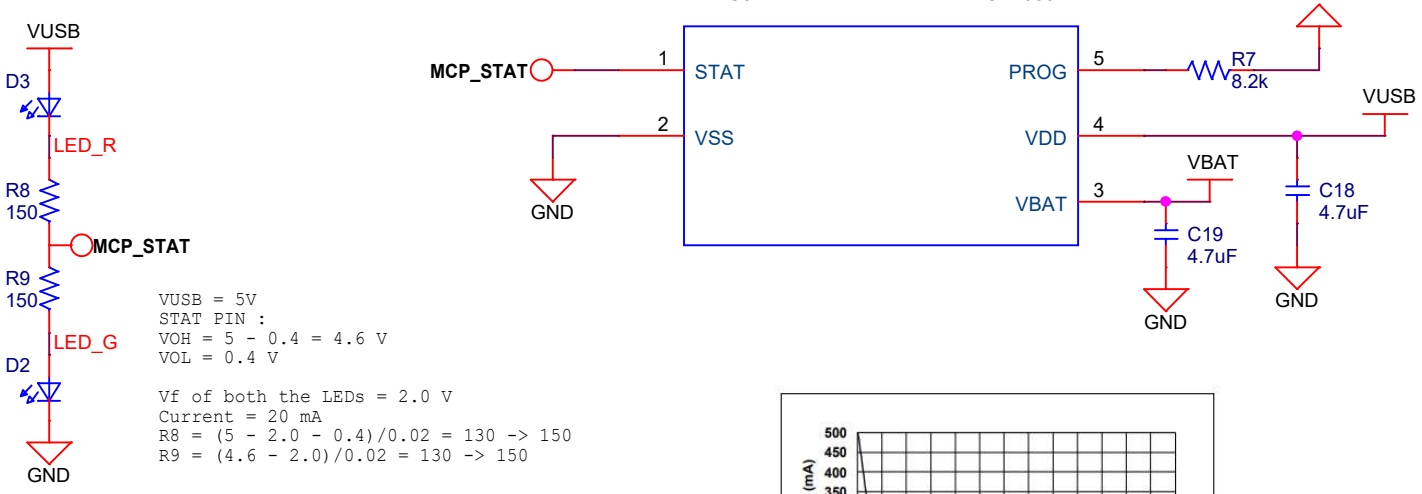
BATTERY CONNECTOR

LiPO Battery Connector



BATTERY CHARGER

Battery Charger module



VUSB = 5V
STAT PIN :
VOH = 5 - 0.4 = 4.6 V
VOL = 0.4 V

Vf of both the LEDs = 2.0 V
Current = 20 mA
R8 = (5 - 2.0 - 0.4)/0.02 = 130 -> 150
R9 = (4.6 - 2.0)/0.02 = 130 -> 150

MPC73831
Battery charger circuit, able to provide a maximum charging current of 500mA.
With a LiPO LP402025 Battery, the maximum charging current is 155mA, so resistor R7 on the PROG pin provides a constant charging current of about 130 mA, that does not exceed the threshold.

STAT pin allows to drive 2 indicator LEDs to show the charging state (complete -> GREEN, charging -> RED)

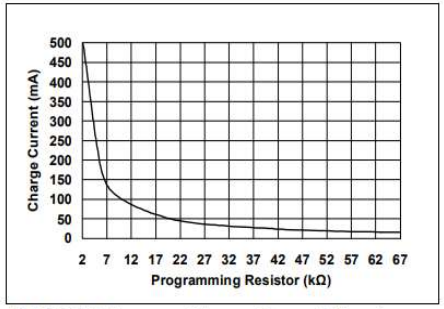
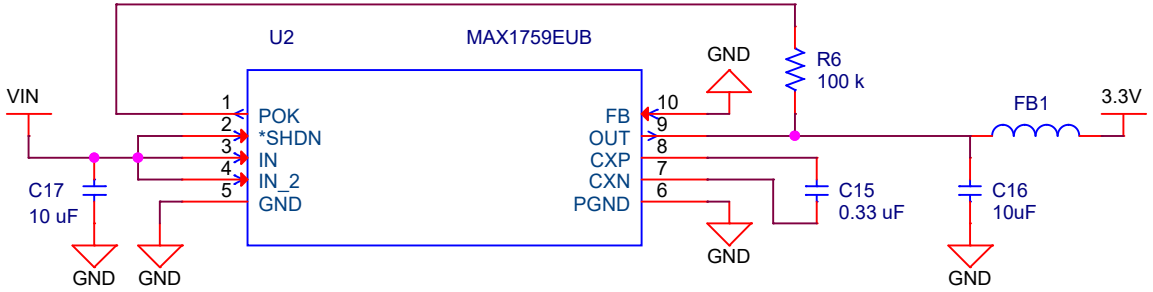


FIGURE 2-4: *Charge Current (I_{OUT}) vs. Programming Resistor (R_{PROG}).*

VOLTAGE REGULATOR

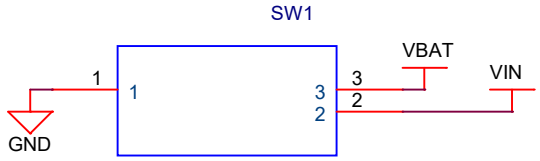
3.3V Voltage Regulator

MAX1759
Programmable Buck/Boost IC
Able to provide a minimum of 100mA current
Input voltage : 1.6 - 5.5 V
Fixed output voltage : 3.3V, thanks to FB pin at GND



POWER SWITCH

Power Slide Switch



Needed for the possibility ot disconnect the circuit from the power supply, and charging the battery.

CAPOZZOLI - MARCHEI		
Title: Power		
Size: A	Document Number: ECG Sensor	Rev: 1.4
Date: Tuesday, January 16, 2024	Sheet 3 of 4	