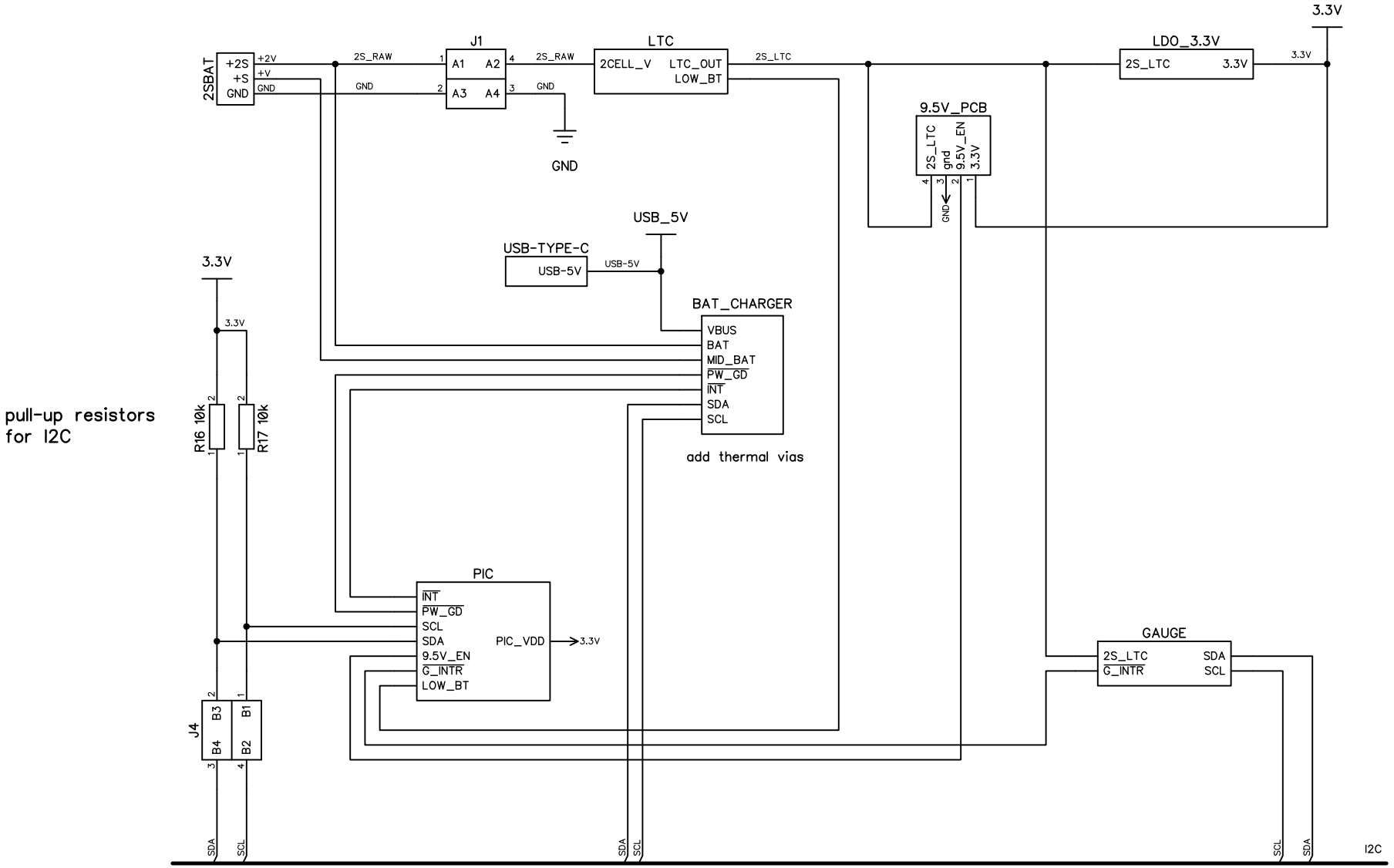
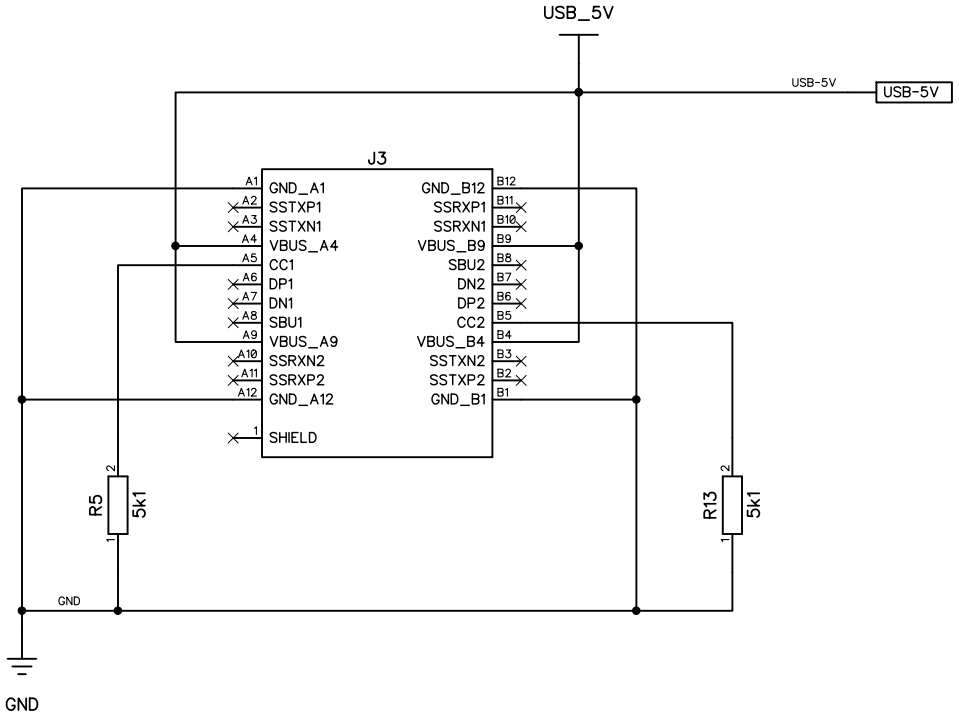
Battery: 2 x Samsung 40T 21700 4000mAh 35A Battery



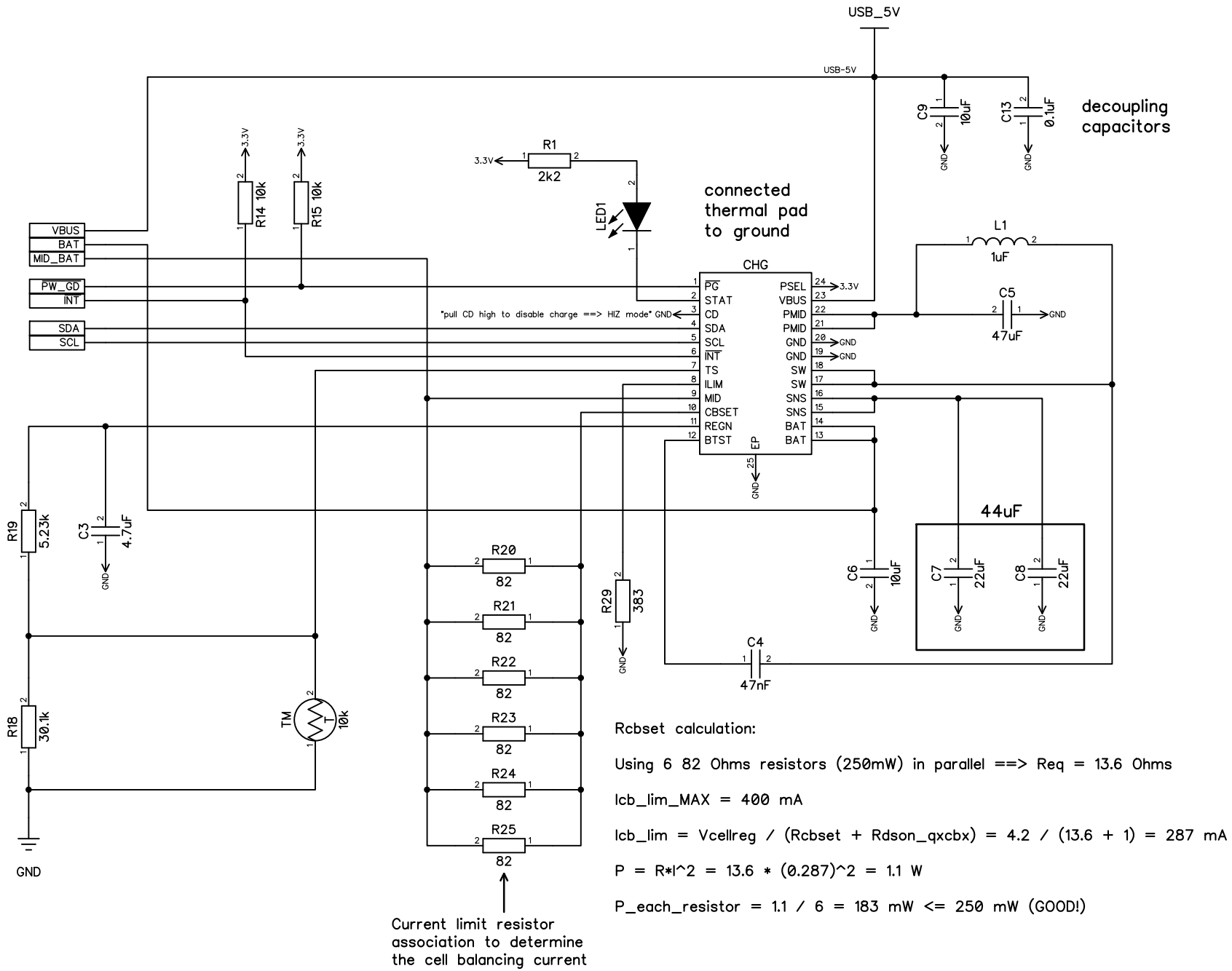
Rev_1	Li-Ion Battery Monitor	2021	Ricardo	Barbosa

Shield should be left disconnected at device end because it is already grounded at the host. This is to avoid ground loop problems.



*Consuming device: 5k1 connected to CC lines to allow Upward Facing Port (UFP) = 5V at up to 3 A

Rev_1	Li-Ion Battery Monitor: USB-C connector	2021	Ricardo	Barbosa



Rcbset calculation:

Using 6 82 Ohms resistors (250mW) in parallel ==> Req = 13.6 Ohms

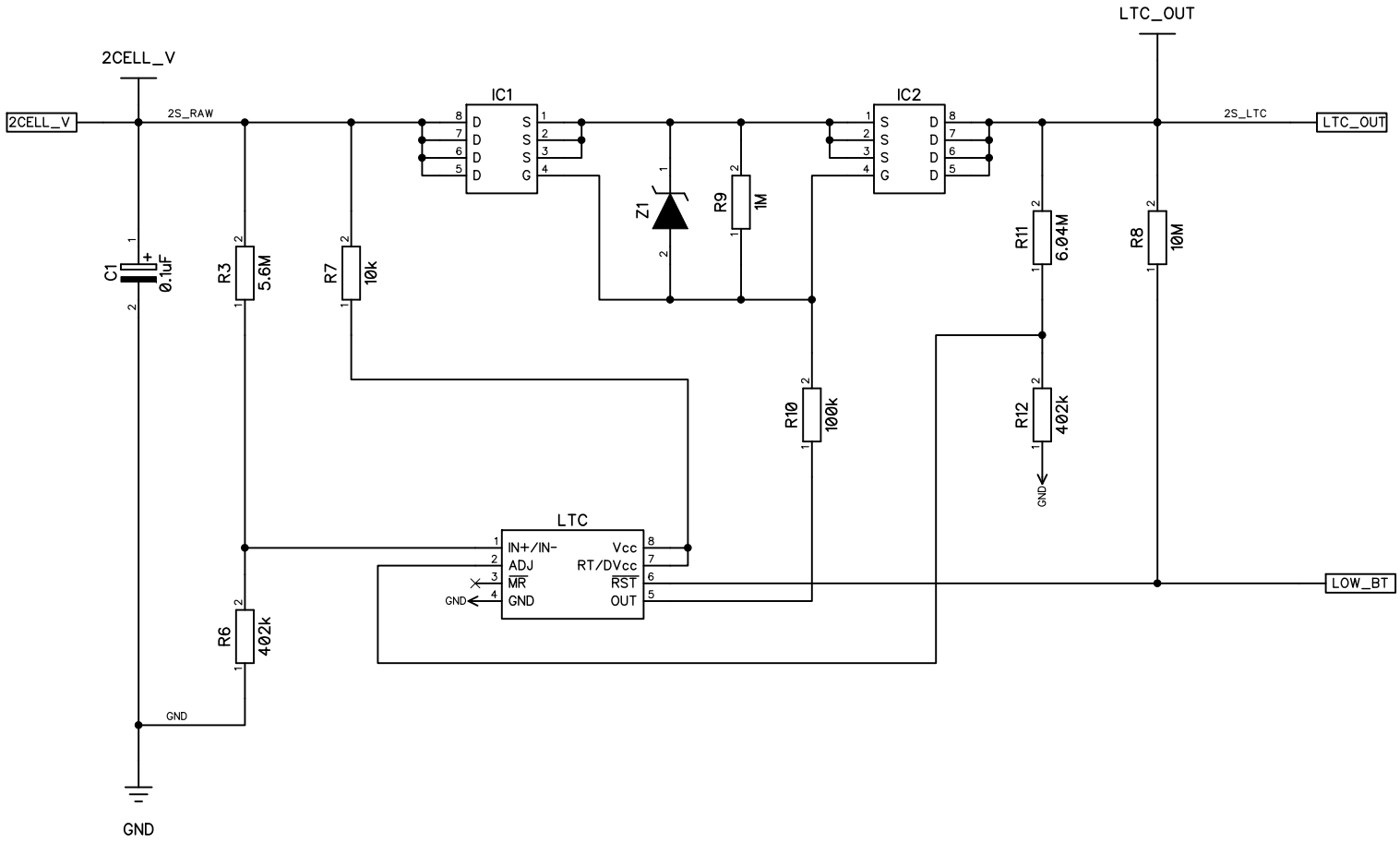
Icb_lim_MAX = 400 mA

Icb_lim = Vcellreg / (Rcbset + Rdson_qxcbx) = 4.2 / (13.6 + 1) = 287 mA

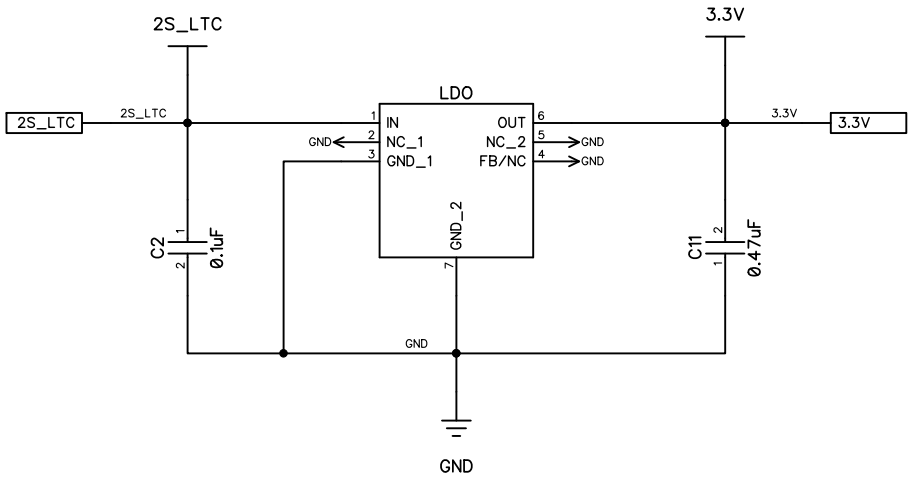
P = R*I^2 = 13.6 * (0.287)^2 = 1.1 W

P_each_resistor = 1.1 / 6 = 183 mW <= 250 mW (GOOD!)

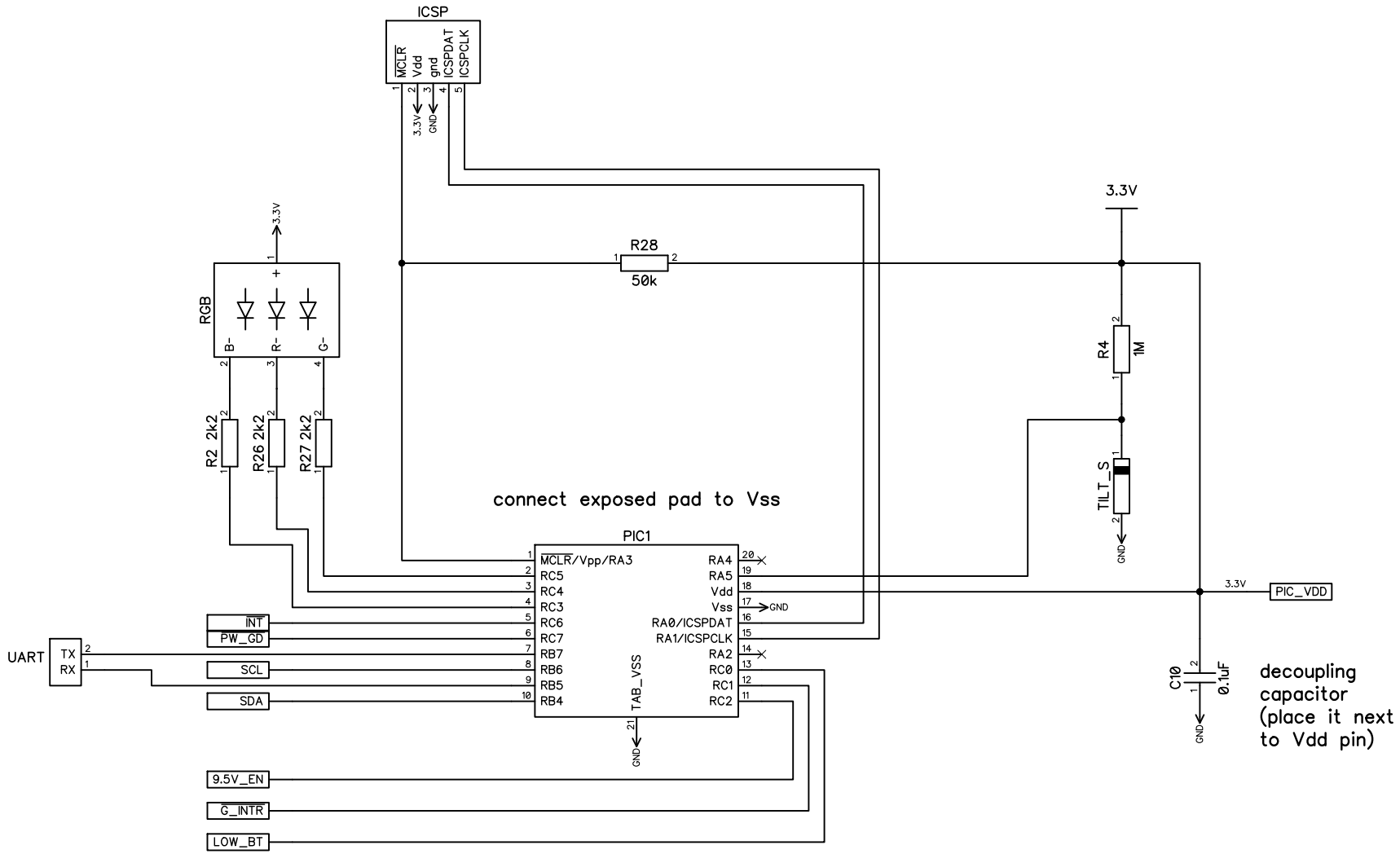
Rev_1	Li-Ion Battery Monitor: Battery charger	2021	Ricardo	Barbosa



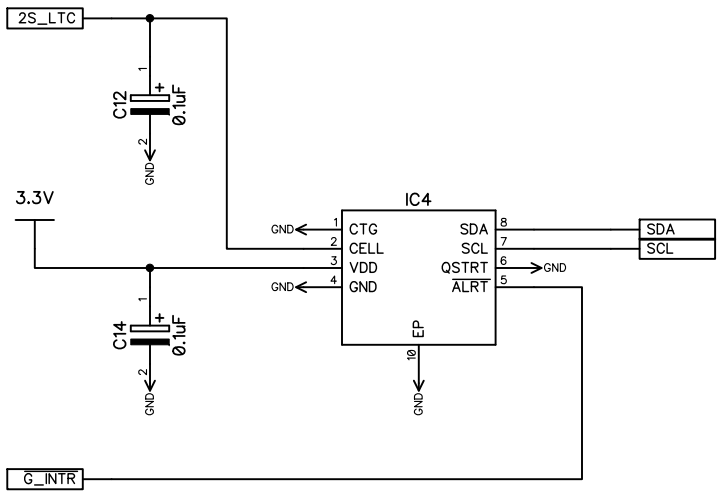
Rev_1	Li-Ion Battery Monitor: Battery protection	2021	Ricardo	Barbosa



Rev_1	Li-Ion Battery Monitor: LDO 3.3V	2021	Ricardo	Barbosa



Rev_1	Li-Ion Battery Monitor: PIC microcontroller	2021	Ricardo	Barbosa



Rev_1	Li-Ion Battery Monitor: IC batttery gauge	2021	Ricardo	Barbosa