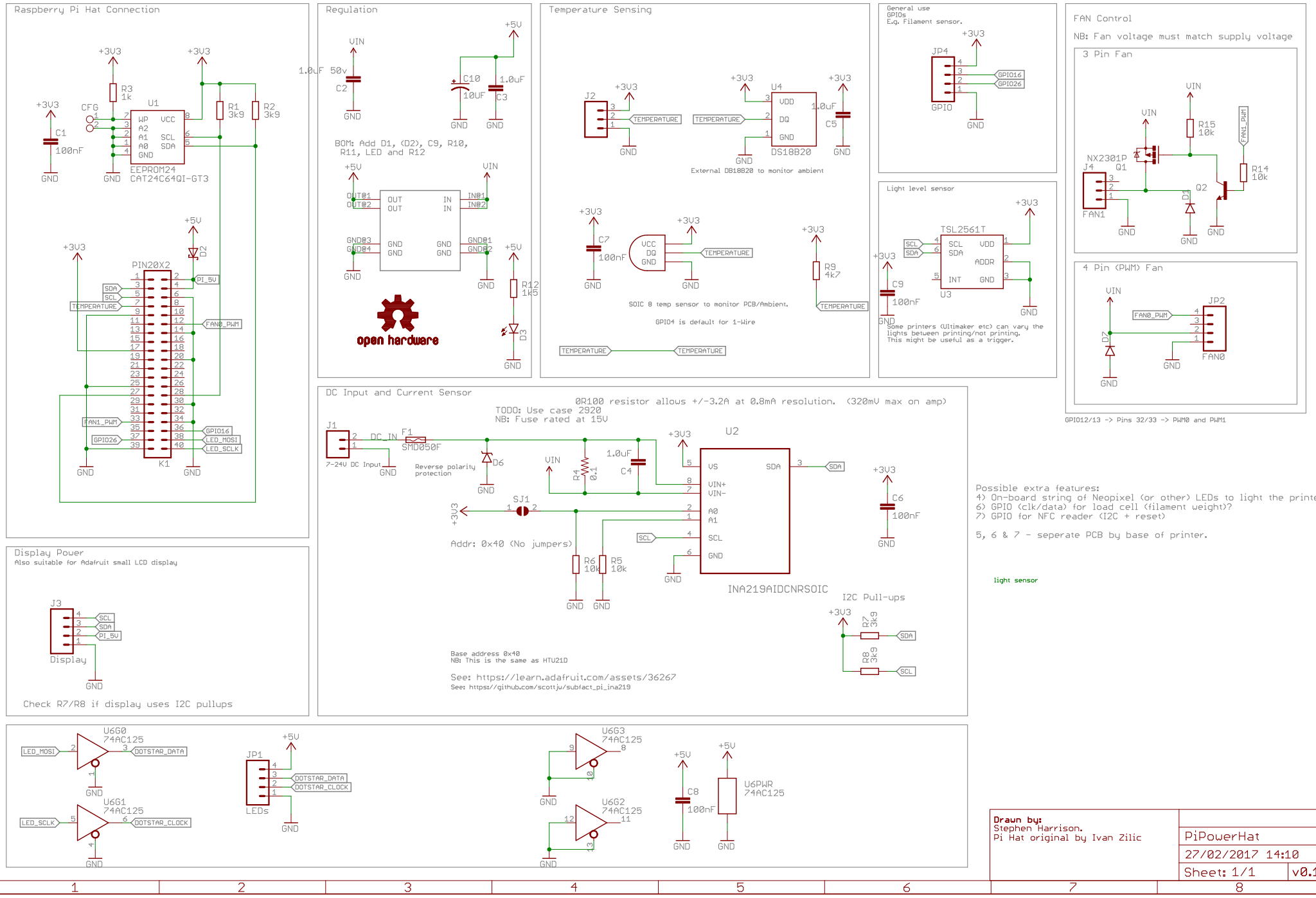
Raspberry Pi Hat Connection
Regulation
Temperature Sensing
General use GPIOs E.g. Filament sensor.
FAN Control
NB: Fan voltage must match supply voltage
3 Pin Fan
4 Pin (PWM) Fan
Light level sensor
DC Input and Current Sensor
Display Power
Also suitable for Adafruit small LCD display
Check R7/R8 if display uses I2C pullups
BOM: Add D1, (D2), C9, R10, R11, LED and R12
External DB18B20 to monitor ambient
SOIC 8 temp sensor to monitor PCB/Ambient.
GPIO4 is default for 1-Wire
Some printers (Ultimaker etc) can vary the lights between printing/not printing. This might be useful as a trigger.
GPIO12/13 -> Pins 32/33 -> PWM0 and PWM1
0R100 resistor allows +/-3.2A at 0.8mA resolution. (320mV max on amp)
TODO: Use case 2920
NB: Fuse rated at 15V
Addr: 0x40 (No jumpers)
I2C Pull-ups
Base address 0x40
NB: This is the same as HTU21D
See: https://learn.adafruit.com/assets/36267
See: https://github.com/scottju/subfact_pi_ina219
INA219AIDCNRSOIC
EEPROM24 CAT24C64GI-GT3
DS18B20
TSL2561T
NX2301P
Possible extra features:
4) On-board string of Neopixel (or other) LEDs to light the printer
6) GPIO (clk/data) for load cell (filament weight)?
7) GPIO for NFC reader (I2C + reset)
5, 6 & 7 - seperate PCB by base of printer.
light sensor
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Pi Hat original by Ivan Zilic
PiPowerHat
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Sheet: 1/1
v0.1