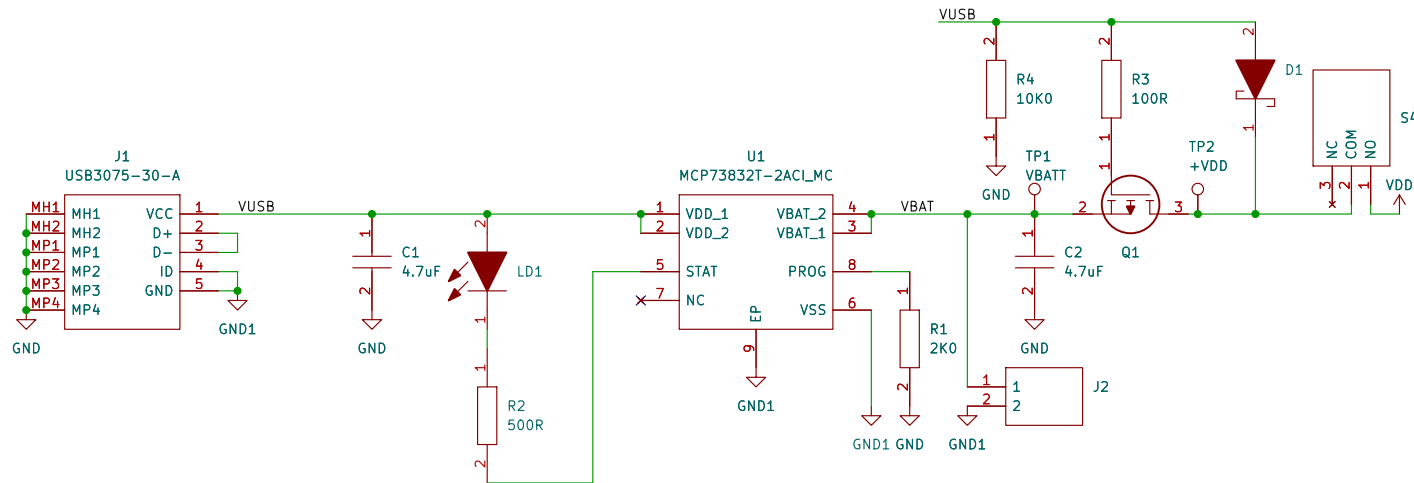


## Charging circuit



Gnd1 must be connected to battery gnd.

Current regulation set (prog):

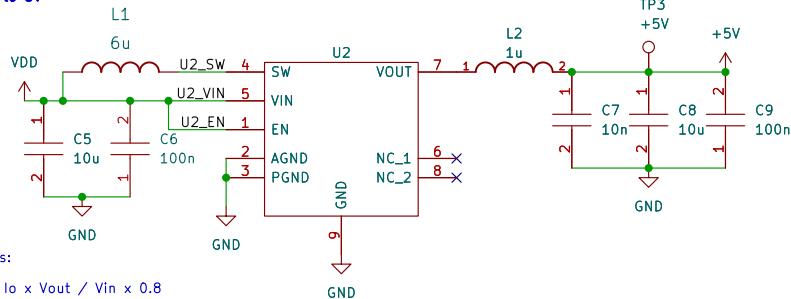
Ireg = 1000V / Rprog  
where,  
Rprog = kOhms  
Ireg = milliampere

2K0 (Rprog) = 500mA charge

J2 is battery connector

S4 is power switch

## Boost converter VDD to 5V



Calcs:

$$I_L = I_o \times V_{out} / V_{in} \times 0.8$$

$$= 0.3 \times 5 / 2.7 \times 0.8$$

$$= 0.7A$$

$$L = V_{in} \times (V_{out} - V_{in}) / I_L(20\%) \times f \times V_{in}$$

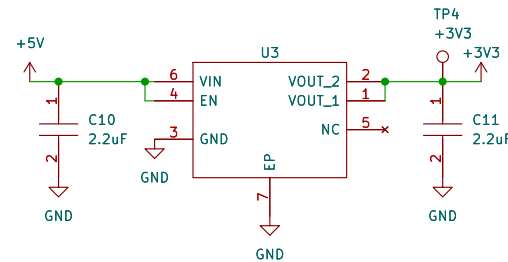
$$f = 1.5Mhz$$

$$I_L(20\%) = 0.13$$

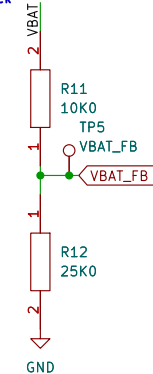
$$L = 6uH$$

Use a common ground node for power ground and a different one for control ground to minimize the effects of ground noise. Connect these ground nodes at any place close to the ground pin of the IC.

## LDO 5V to 3V3



## VBAT feedback



Sheet: /Power /  
File: Power.kicad\_sch

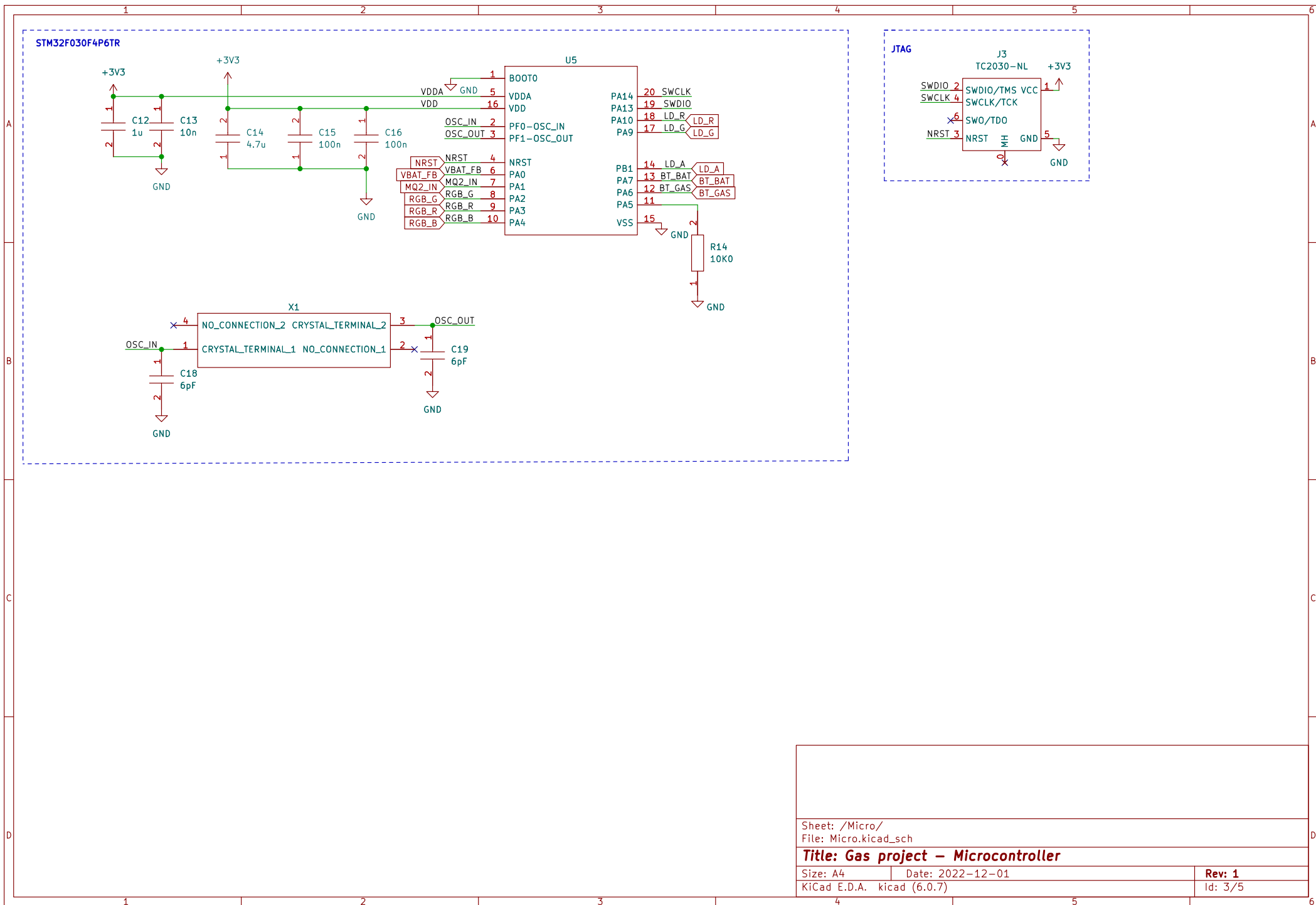
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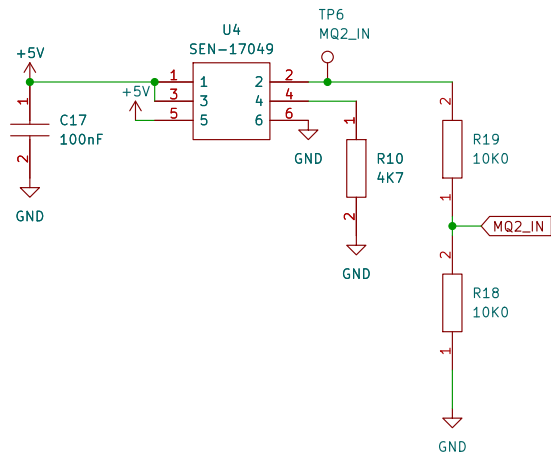
Size: A4 Date: 2022-12-01

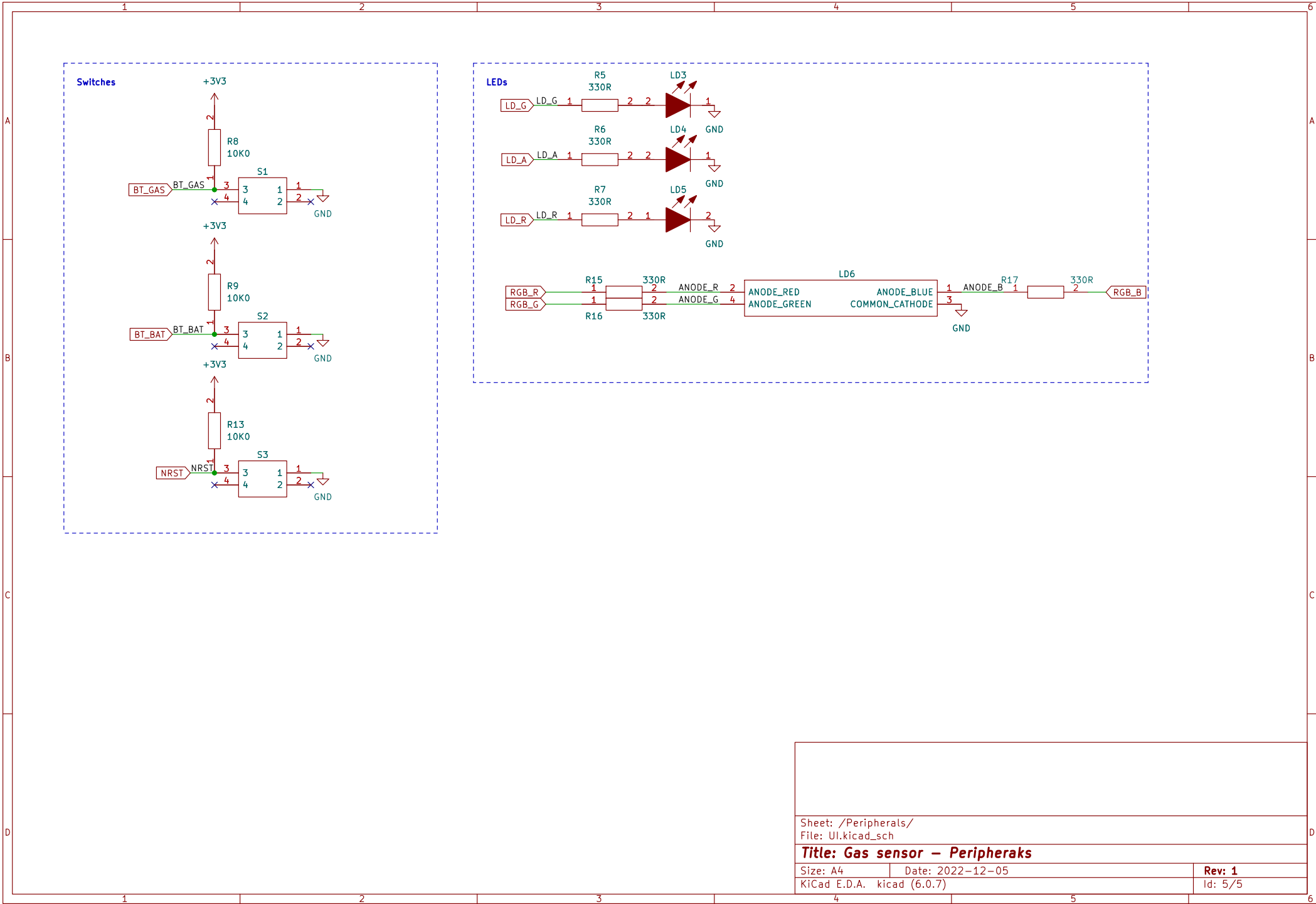
KiCad E.D.A. kicad (6.0.7)

**Rev: 1.1**

Id: 2/5







Sheet: /Peripherals/  
File: UI.kicad\_sch

**Title: Gas sensor – Peripheraks**

Size: A4 Date: 2022-12-05  
KiCad E.D.A. kicad (6.0.7)

Rev: 1  
Id: 5/5