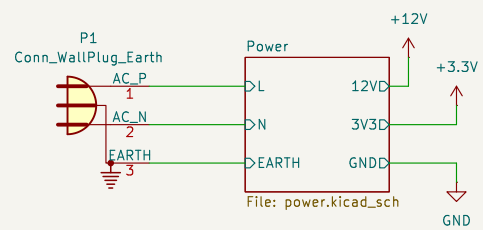
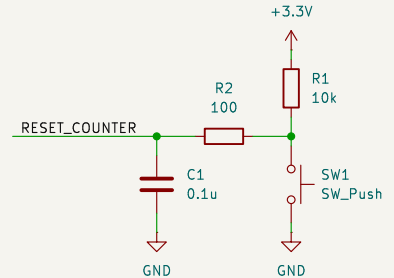
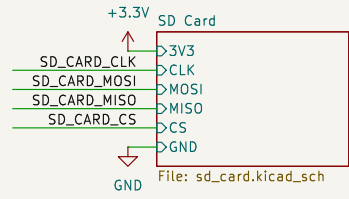
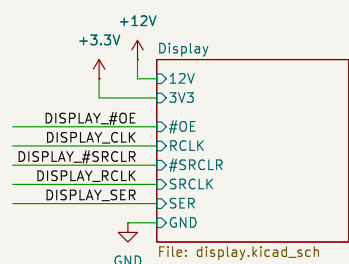
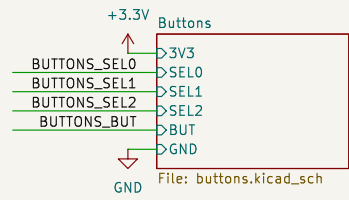
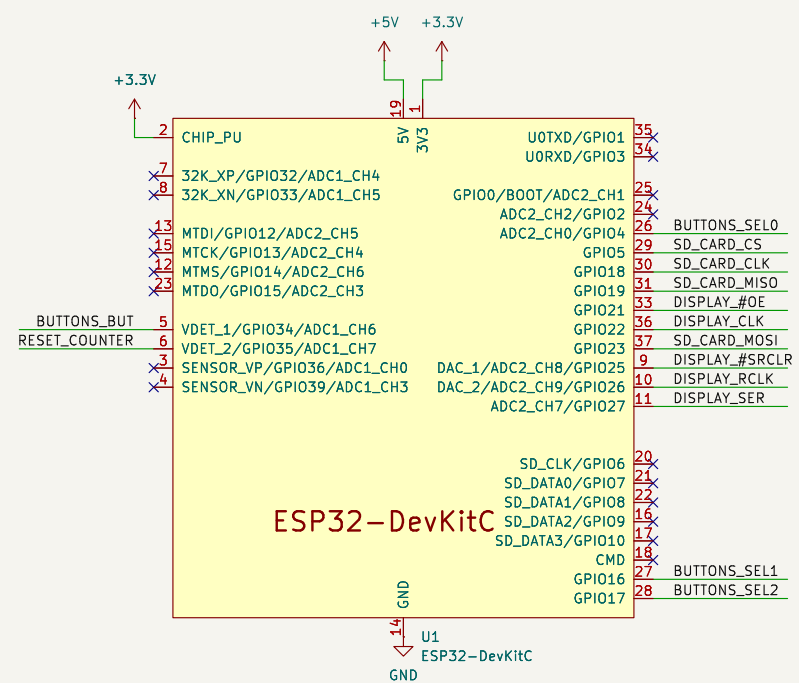
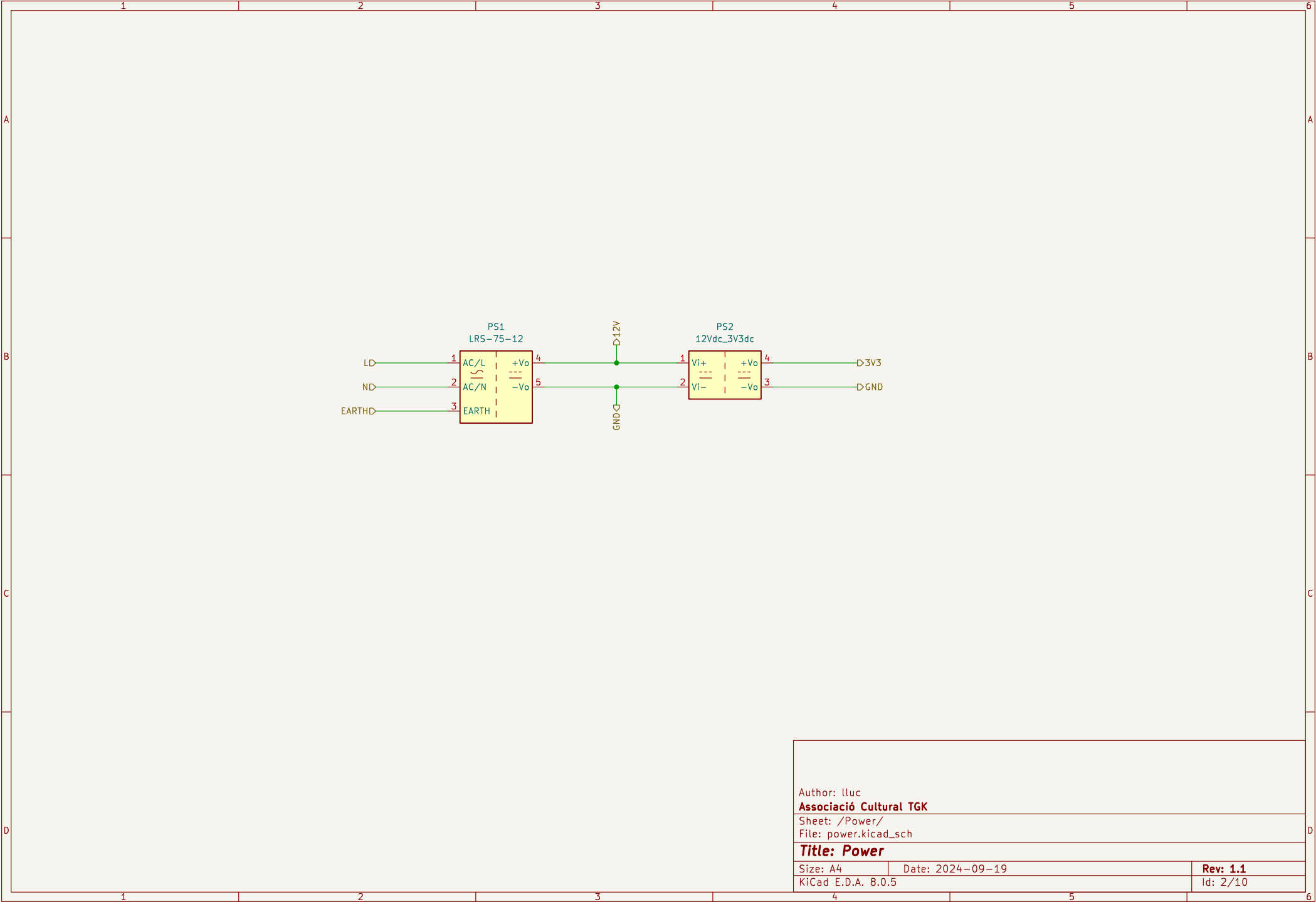


The devkit being used is a different one. and has less pins than the one showed here!!!
(I should create a symbol for the new one, but right now works)

SPI0: GPIO6–11 are usually connected to the SPI flash integrated on the module and therefore should not be used for other purposes.

JTAG: GPIO12–15 are usually used for inline debug.



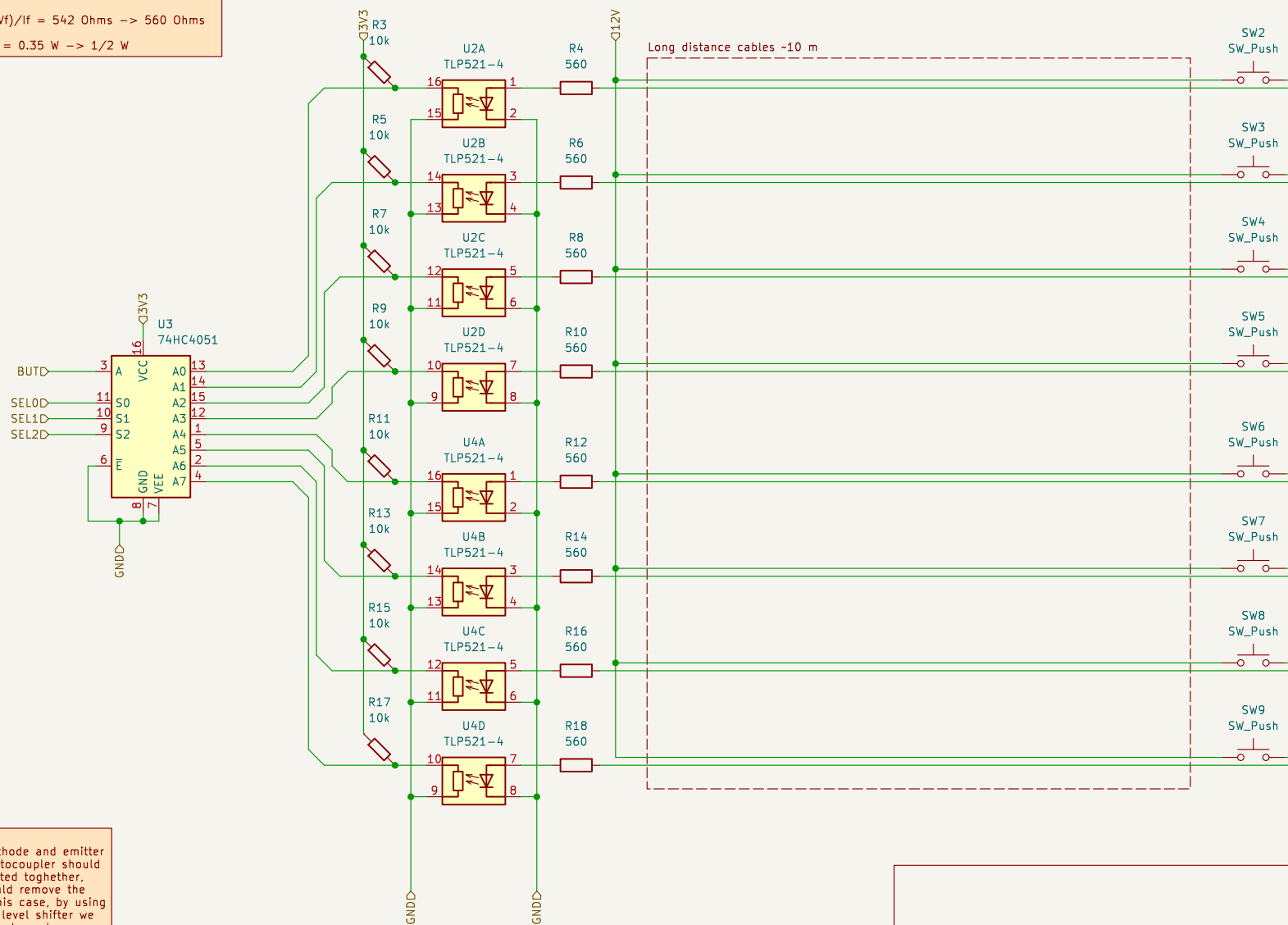


Ra (Anode resistor on optocoupler) Calculation:

$V_f = 1.15 \text{ V}$
 $I_f = 20 \text{ mA}$

$R_a = (V_{cc} - V_f) / I_f = 542 \text{ Ohms} \rightarrow 560 \text{ Ohms}$

$P = R_a \cdot I_f^2 = 0.35 \text{ W} \rightarrow 1/2 \text{ W}$



NOTE:
Ideally the cathode and emitter pins of the optocoupler should not be connected together, since that would remove the isolation. In this case, by using it as a down-level shifter we do not need that much isolation only the down conversion.
For some isolation we could connect the two grounds far from the IC and not the pins at each button.

Author: lluc
Associació Cultural TGK

Sheet: /Buttons/
File: buttons.kicad_sch

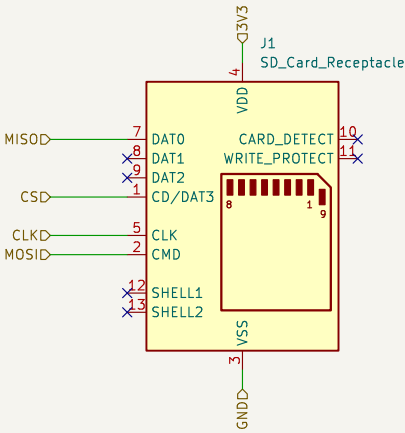
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Size: A4
KiCad E.D.A. 8.0.5

Date: 2024-09-26

Rev: 1.3

Id: 3/10



Author: lluc

Associació Cultural TGK

Sheet: /SD Card/

File: sd_card.kicad_sch

Title: SD Card

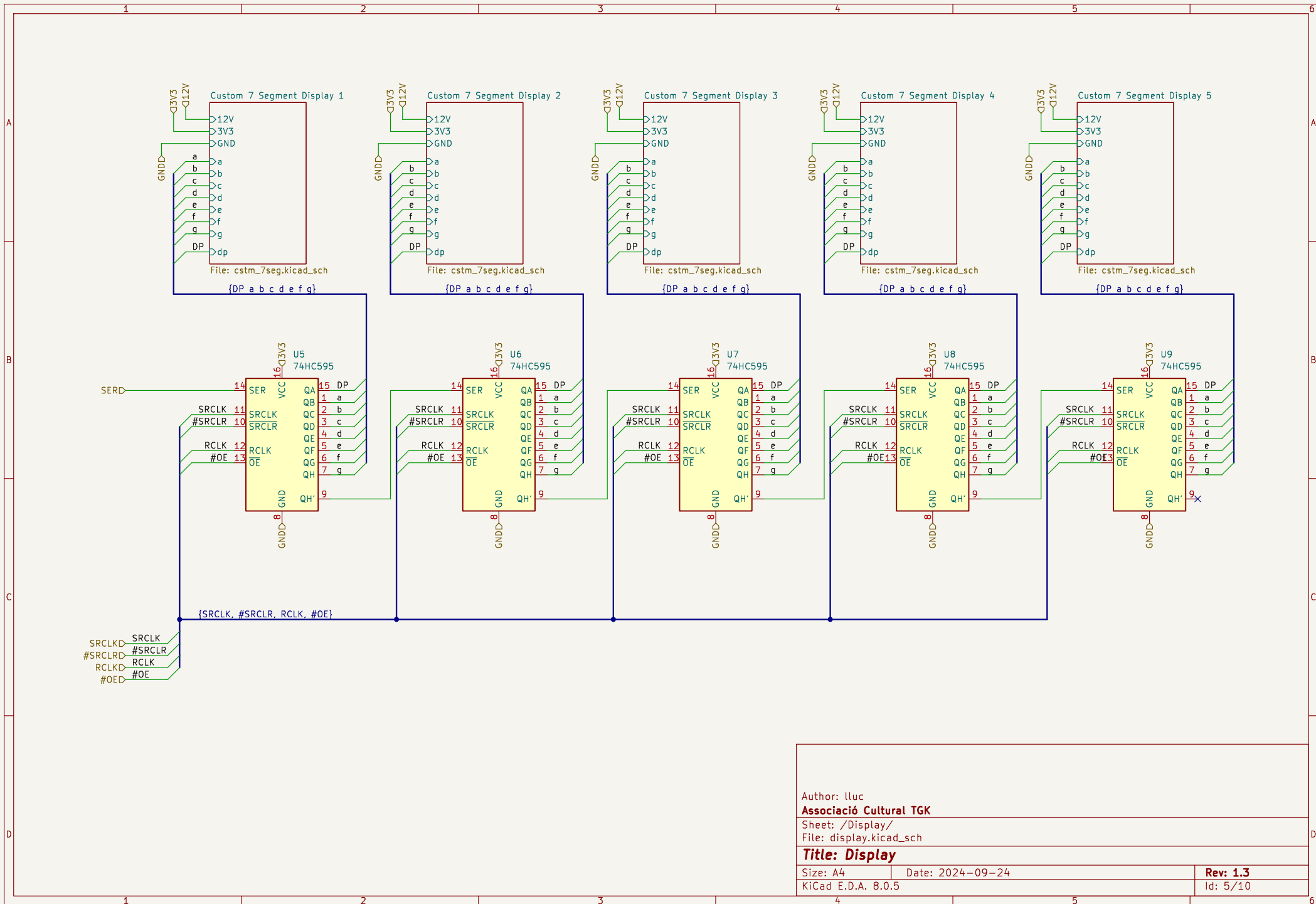
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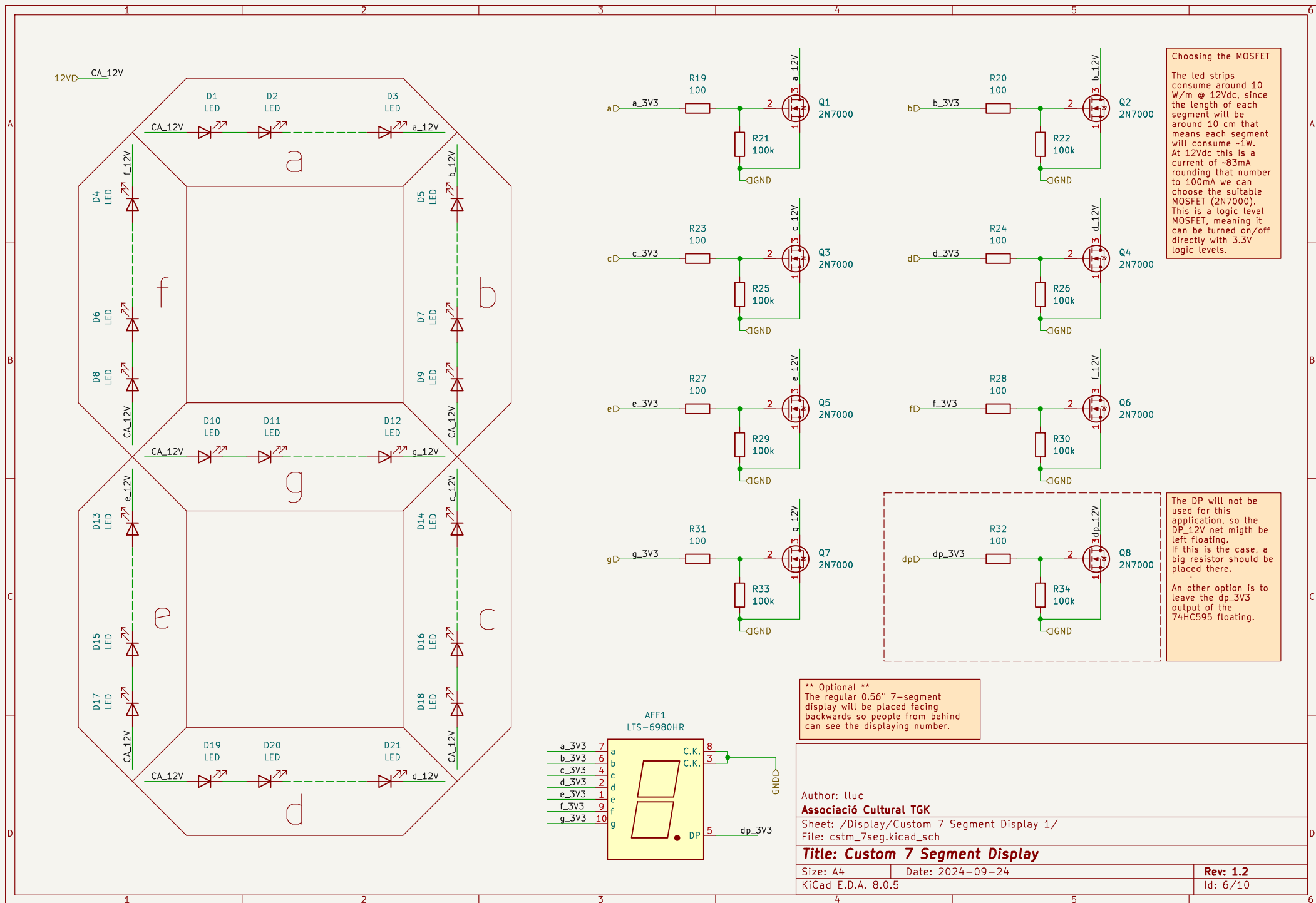
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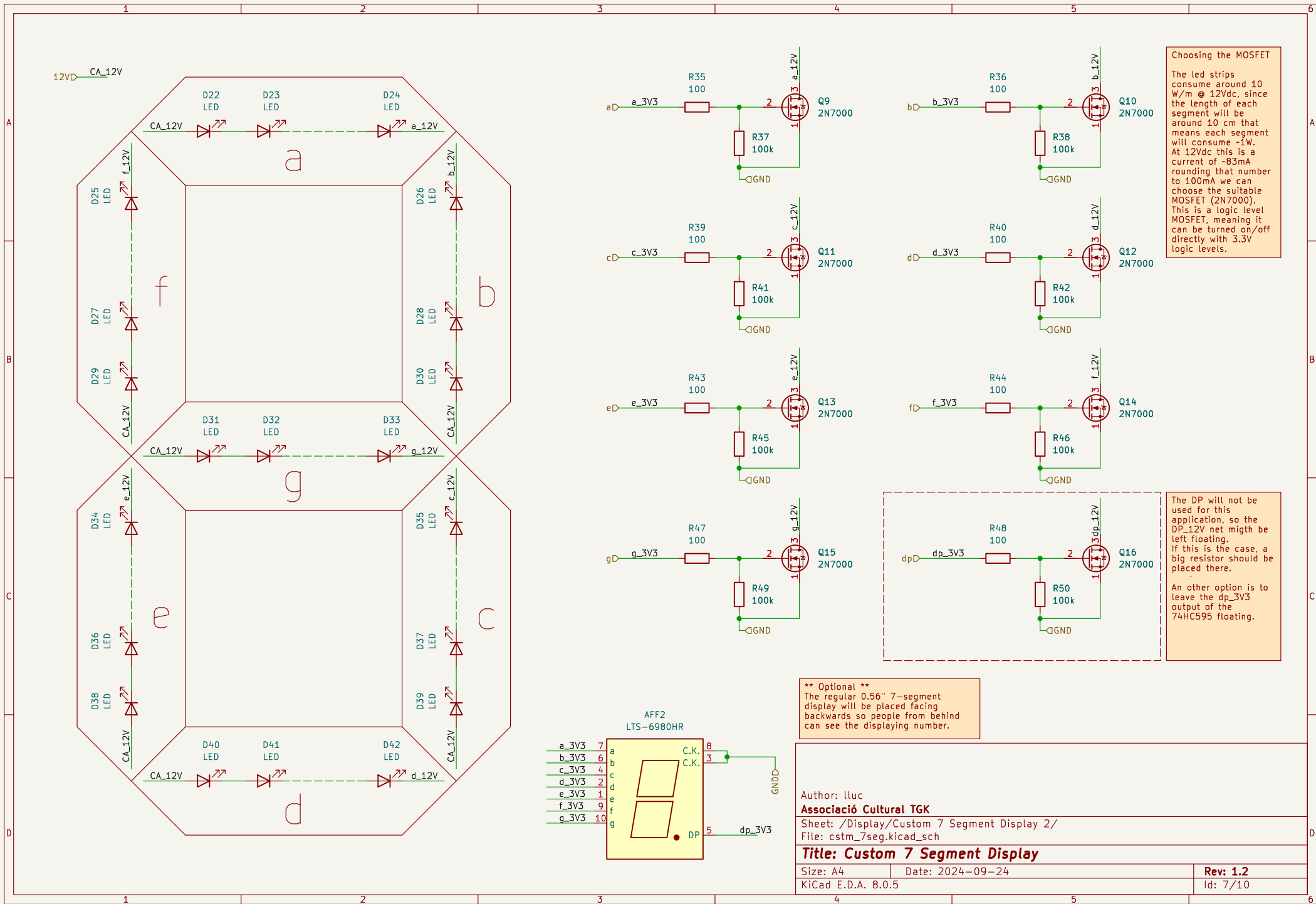
Rev: 1.1

KiCad E.D.A. 8.0.5

Id: 4/10







Author: lluc

Associació Cultural TGK

Sheet: /Display/Custom 7 Segment Display 2/

File: cstm_7seg.kicad_sch

Title: Custom 7 Segment Display

Size: A4

Date: 2024-09-24

Rev: 1.2

KiCad E.D.A. 8.0.5

Id: 7/10

