

All things power related

Sheet: /POWER SHEET/  
File: POWER\_SHEET.kicad\_sch

**Title: Power Sheet**

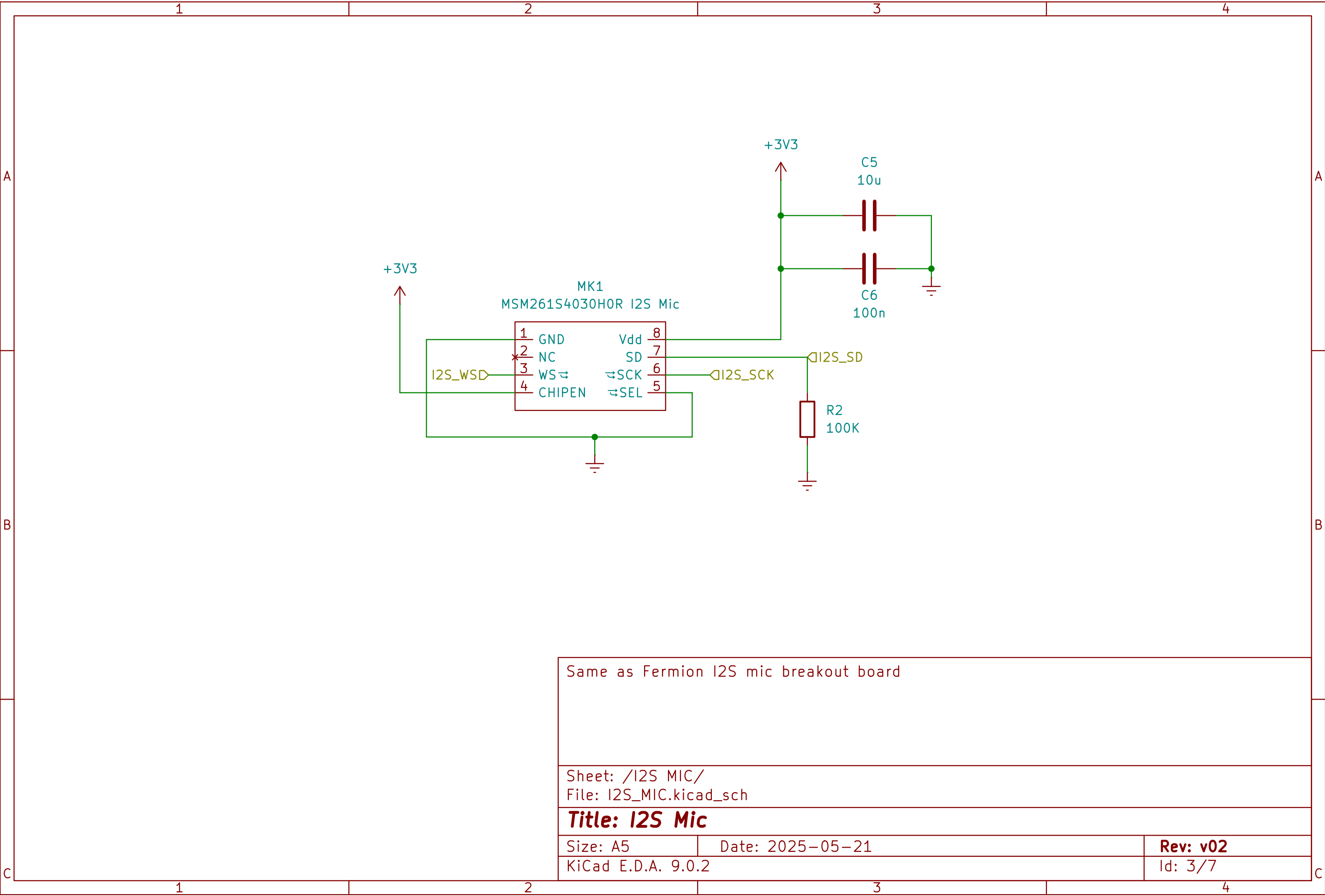
Size: A5


Date: 2025-05-21

Rev: v07

KiCad E.D.A. 9.0.2

Id: 2/7





Reset circuit

The diagram shows a reset circuit for the NRST pin. It consists of a switch labeled SW1 (SW\_Push) in series with a capacitor labeled C7 (100n). This combination is connected to the NRST pin. A diode labeled D3 (PESD5V0X1UAB) is connected in parallel with the capacitor, with its cathode to the NRST pin and its anode to ground. The ground symbol is labeled NRST.

Pin configuration diagram for the STM32F103C8T6 microcontroller. The diagram shows the microcontroller with pins 1 through 31 on the left and pins 1 through 25 on the right. Various pins are connected to external components or signals.

**Left Side Connections:**

- Pin 2: I2S\_WS
- Pin 3: I2S\_SCK
- Pin 26: SPI\_CLK/SWD\_SW0
- Pin 27: SPI\_MOSI
- Pin 28: SPI\_MISO
- Pin 29: SPI\_CS
- Pin 30: SPI\_SS
- Pin 31: SPI\_SS

**Right Side Connections:**

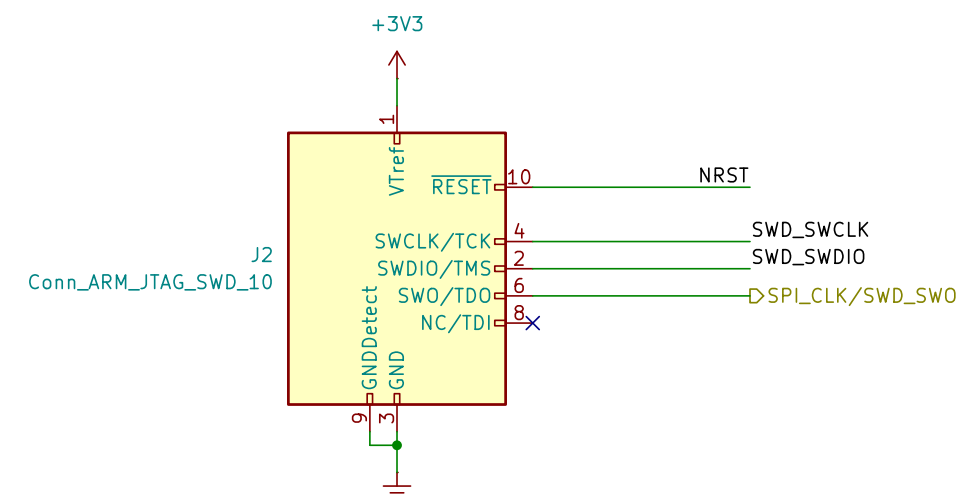
- Pin 7: GPIO\_LE
- Pin 8: GPIO\_LE
- Pin 9: GPIO\_LE
- Pin 10: GPIO\_LE
- Pin 11: GPIO\_LE
- Pin 12: GPIO\_LE
- Pin 18: GPIO\_CS
- Pin 19: GPIO\_CS
- Pin 20: GPIO\_CS
- Pin 21: GPIO\_CS
- Pin 22: GPIO\_CS
- Pin 23: GPIO\_CS
- Pin 24: GPIO\_CS
- Pin 25: GPIO\_CS

**Bottom Connections:**

- Pin 16: VSS
- Pin 14: VSS
- Pin 13: VSS

A 10K resistor (R3) is connected between pins 26, 27, 28, 29, 30, and 31 and ground.

(64 as DATALEN != 0b00, instead SD out is 24-bits therefore CHLEN = 1, otherwise replace 64 w/ 32)

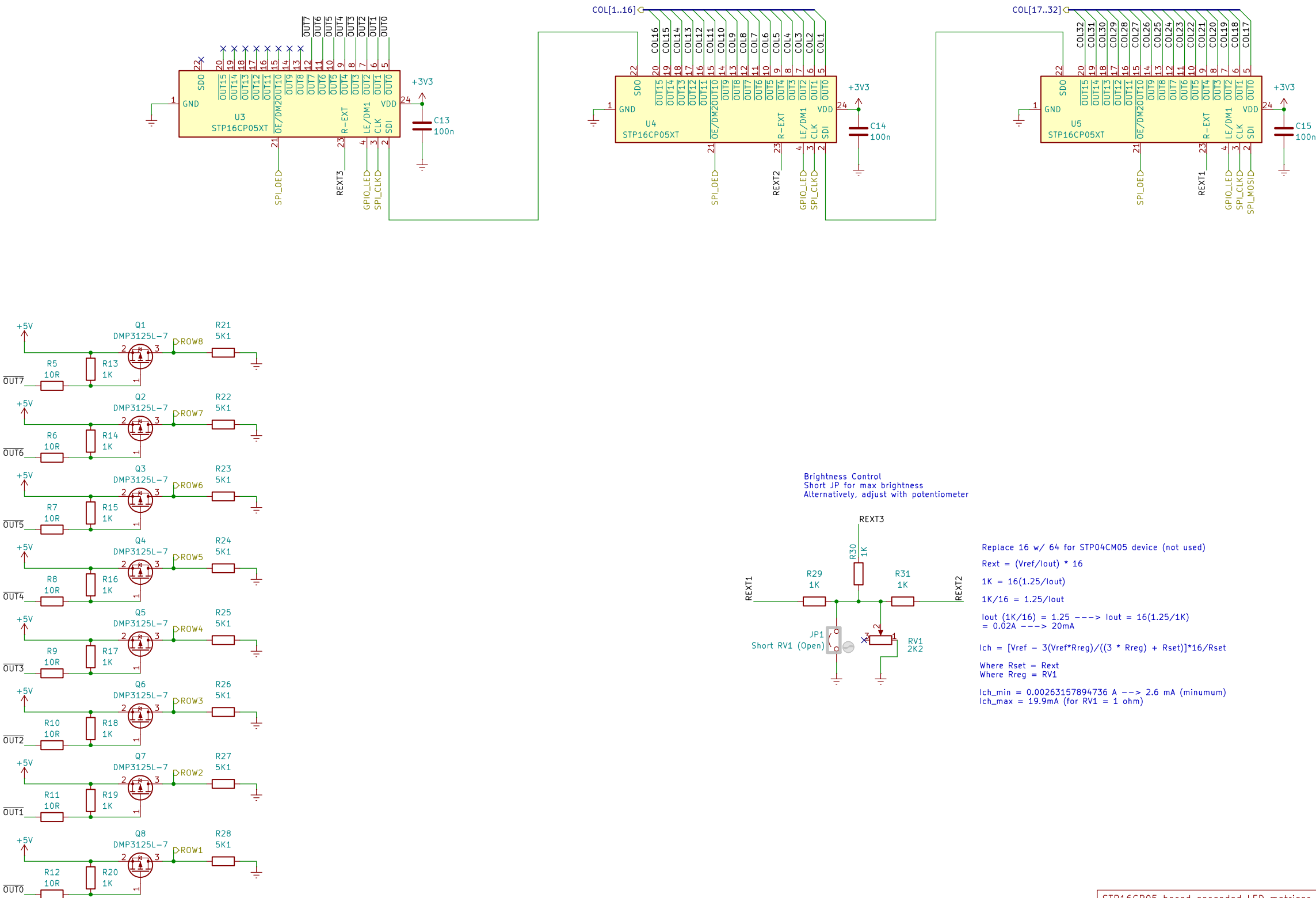


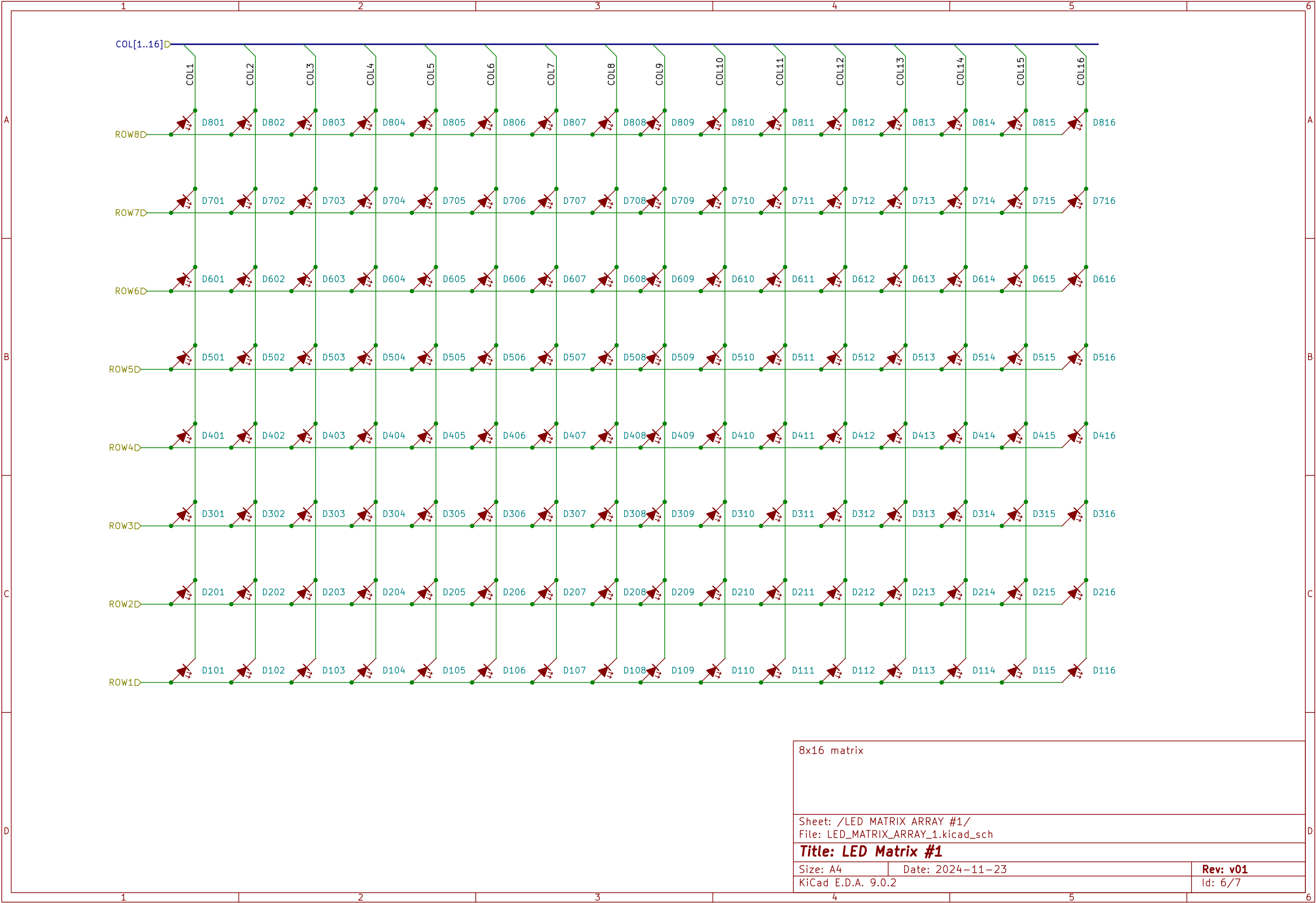
Two circuit diagrams illustrating decoupling capacitor placement:

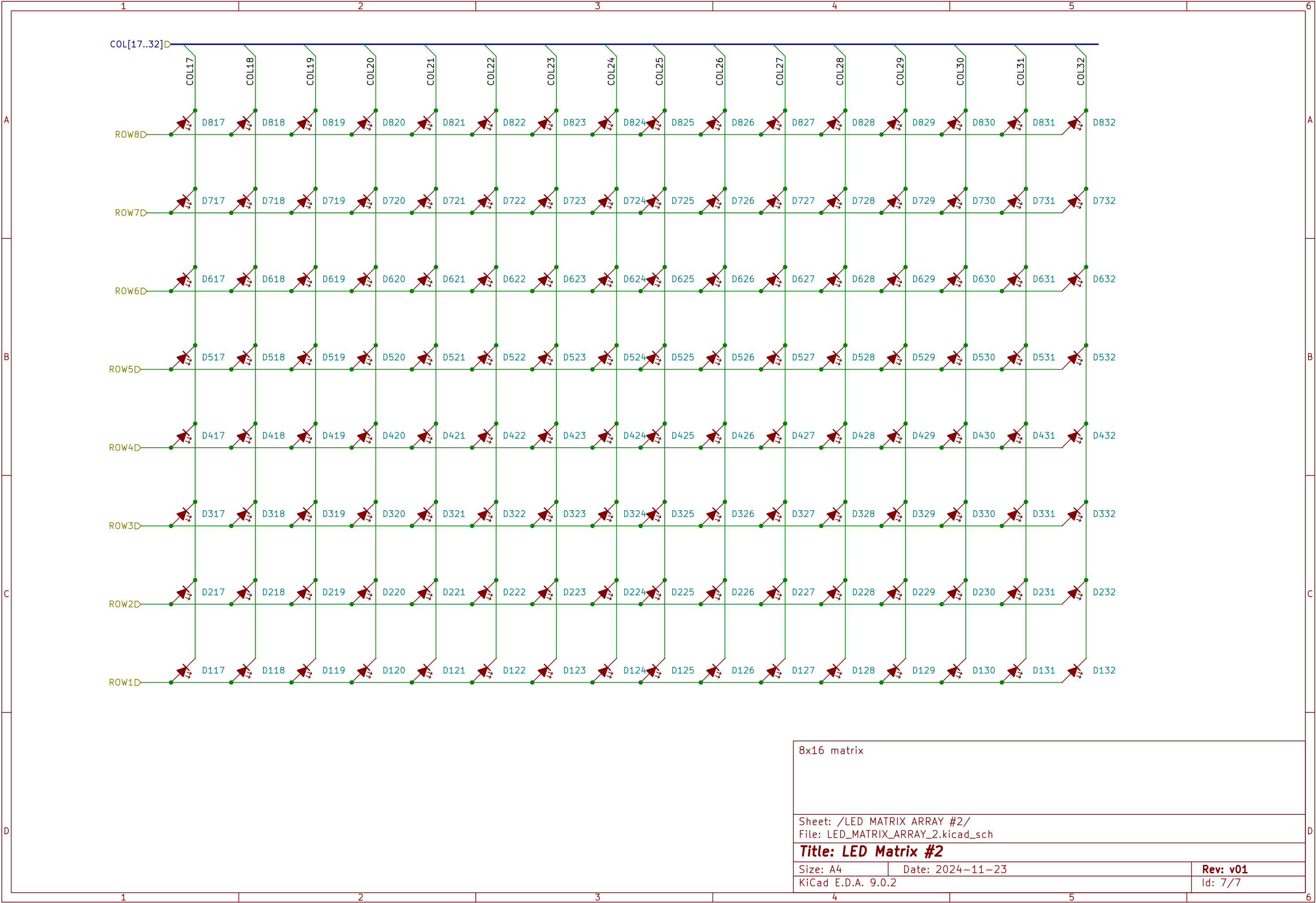
- Left Diagram:** A pi-network decoupling circuit. It features a central node connected to a  $+3V3$  supply. This node is connected to ground through two capacitors in series:  $C8$  (100n) and  $C9$  (1u). The text "VDDA" is placed near the ground connection, and "Place close to VDD/VDDA" is written above the circuit.
- Right Diagram:** A pi-network decoupling circuit. It features a central node connected to a  $+3V3$  supply. This node is connected to ground through three capacitors in series:  $C10$  (4u7),  $C11$  (100n), and  $C12$  (100n). The text "VDD" is placed near the ground connection, and "Place close to VDD/VDDA" is written above the circuit.

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Cascade Direction  
Last (in chain) <--- First (in chain)







8x16 matrix		
Sheet: /LED MATRIX ARRAY #2/ File: LED_MATRIX_ARRAY_2.kicad_sch		
Title: LED Matrix #2		
Size: A4	Date: 2024-11-23	Rev: v01
KiCad E.D.A. 9.0.2		Id: 7/7