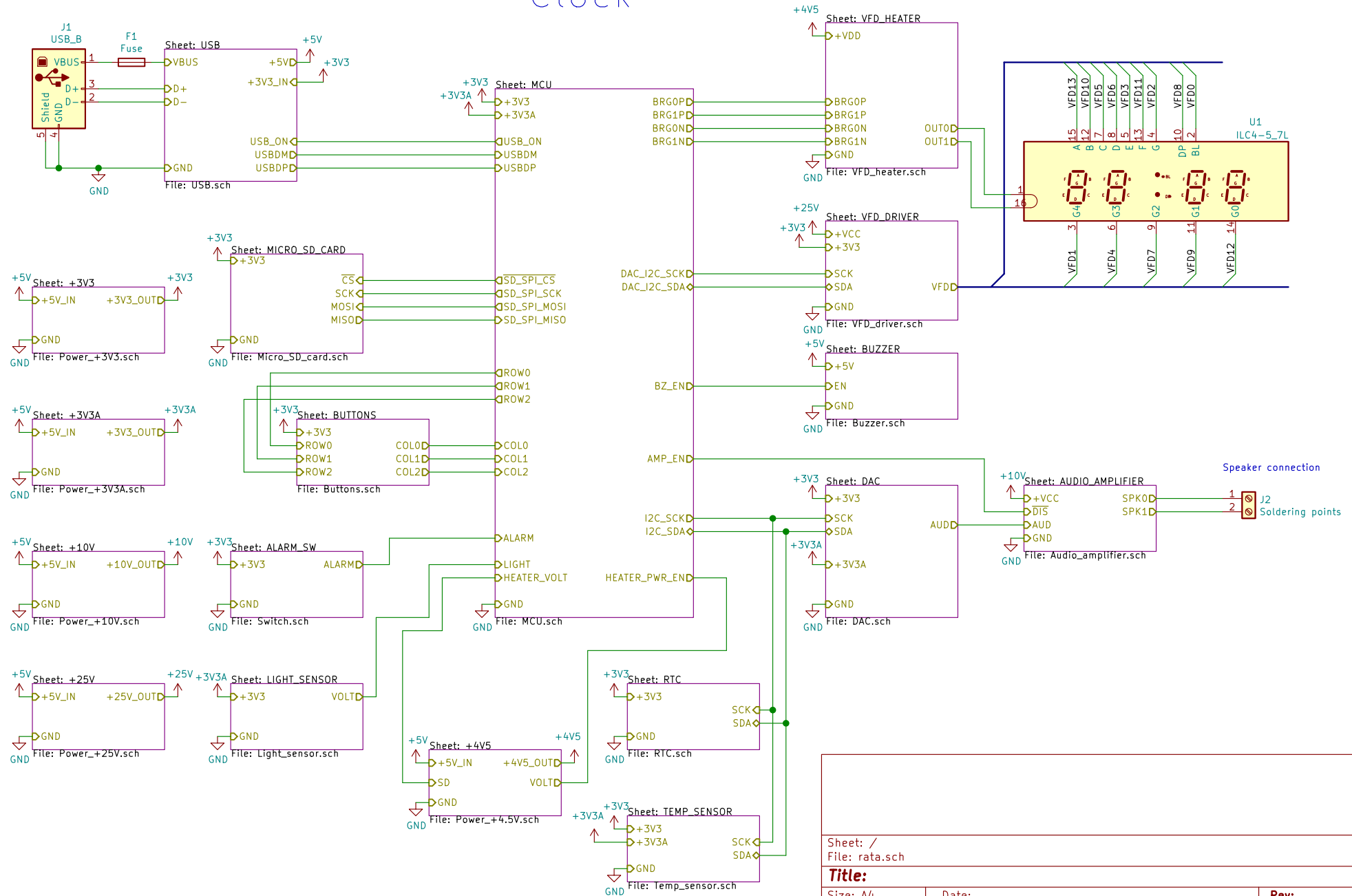


Clock



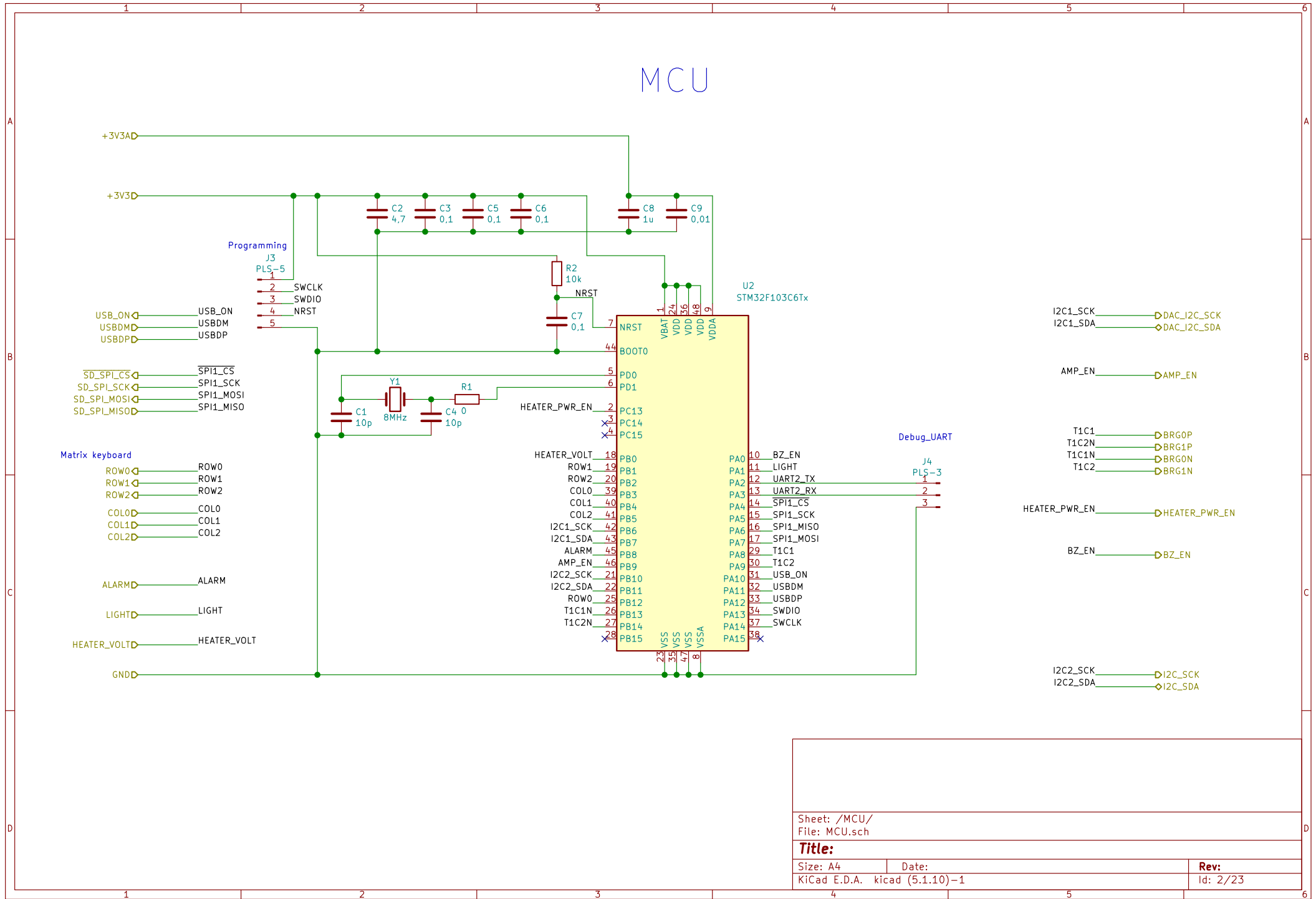
Sheet: /  
File: rata.sch

**Title:**

Size: A4	Date:
KiCad E.D.A. kicad (5.1.10)–1	

Rev:  
Id: 1/23

# MCU



Sheet: /MCU/  
File: MCU.sch

Title:

Size: A4

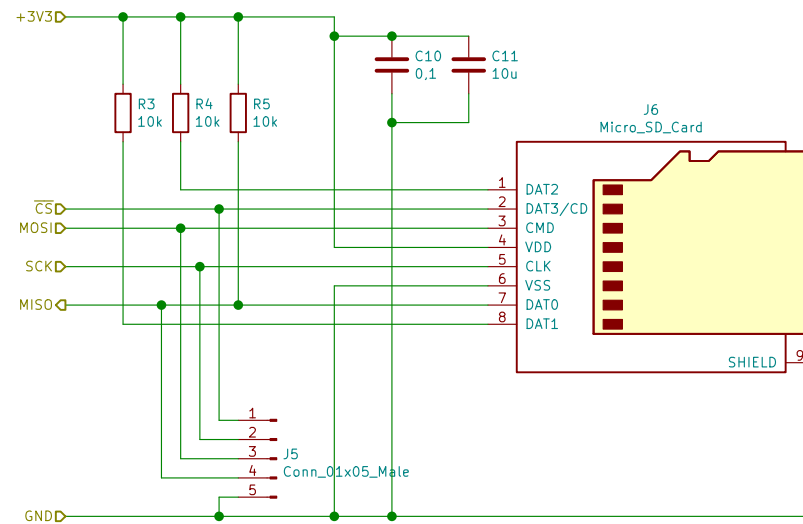
Date:

KiCad E.D.A. kicad (5.1.10)-1

Rev:

Id: 2/23

# Micro-SD card connector



Sheet: /MICRO\_SD\_CARD/  
File: Micro\_SD\_card.sch

**Title:**

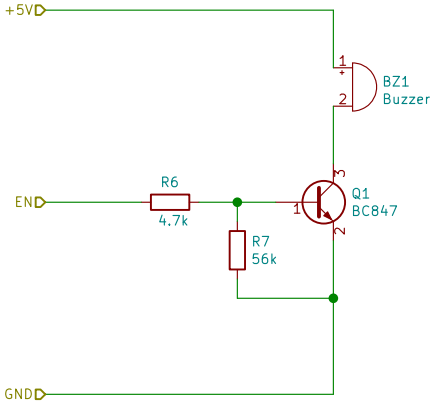
Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:

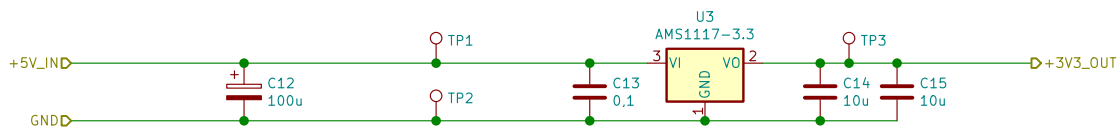
Id: 3/23

# Buzzer



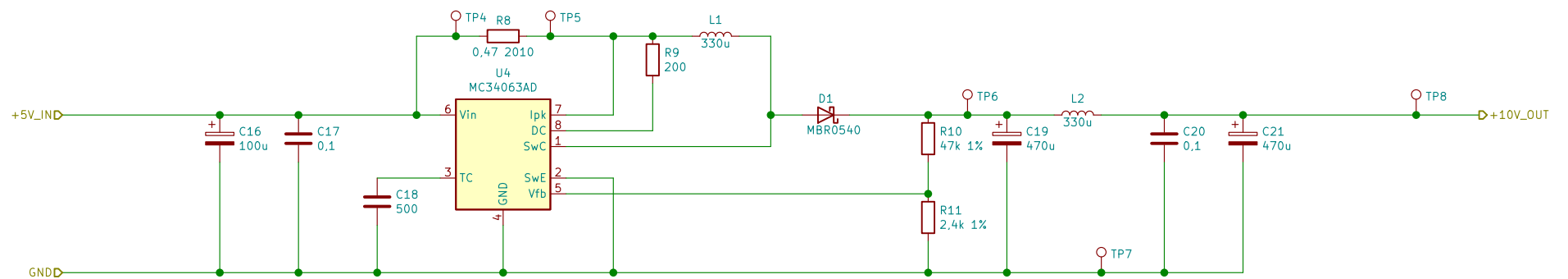
Sheet: /BUZZER/ File: Buzzer.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 4/23

Power source +3V3



Sheet: /+3V3/ File: Power_+3V3.sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.10)-1		Id: 5/23

## Boost converter +10V



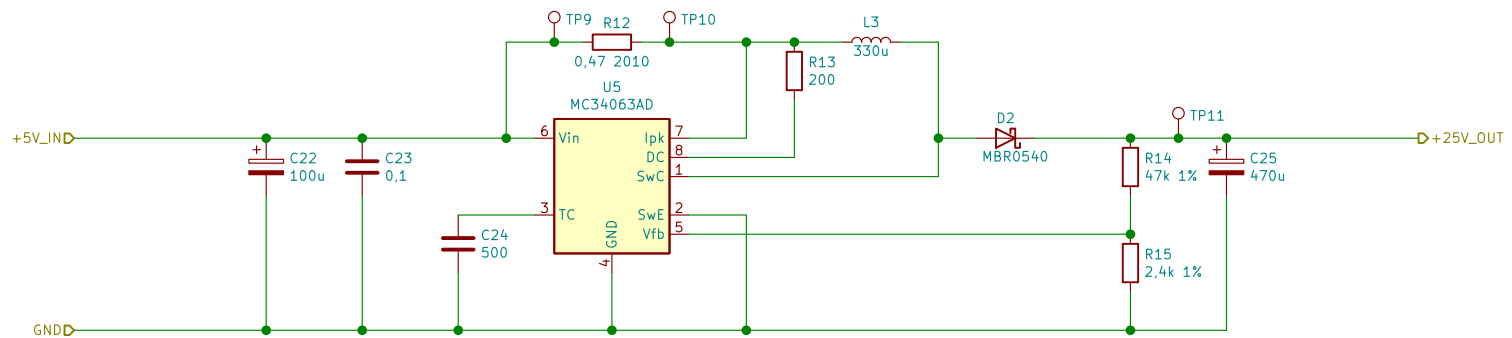
Sheet: /+10V/  
File: Power\_+10V.sch

**Title:**

Size: A4	Date:
KiCad E.D.A. kicad (5.1.10)-1	

Rev:  
Id: 6/23

# Boost converter +25V



Sheet: /+25V/  
File: Power\_+25V.sch

## Title:

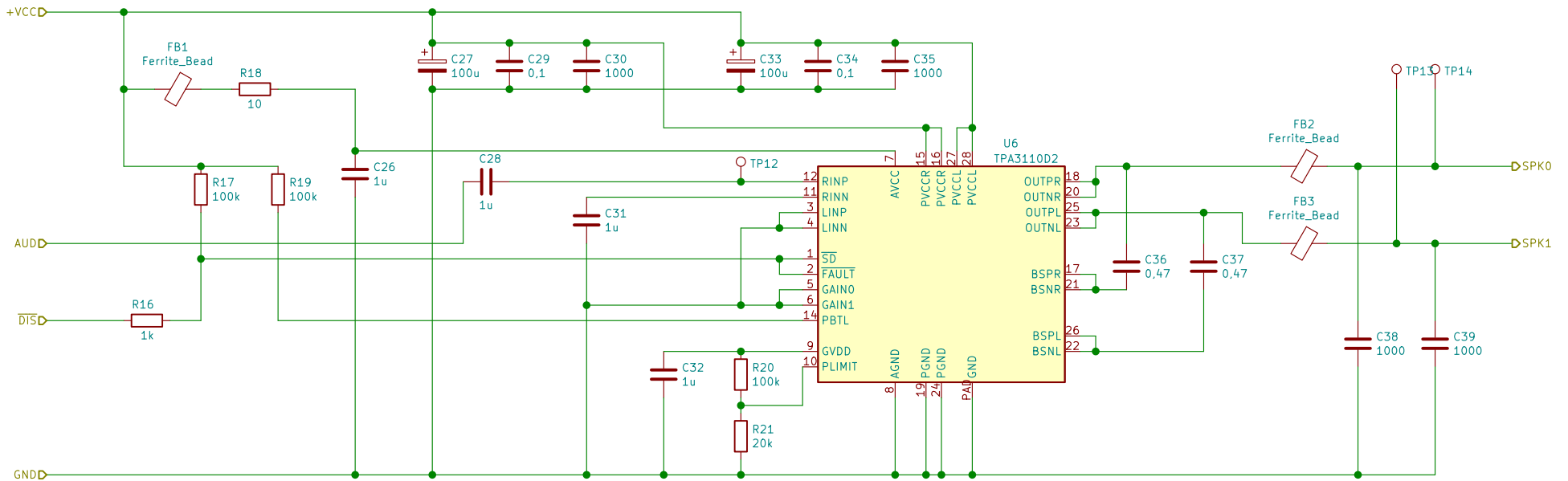
Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:

Id: 7/23

# D class audio amplifier



Sheet: /AUDIO\_AMPLIFIER/  
File: Audio\_amplifier.sch

## Title:

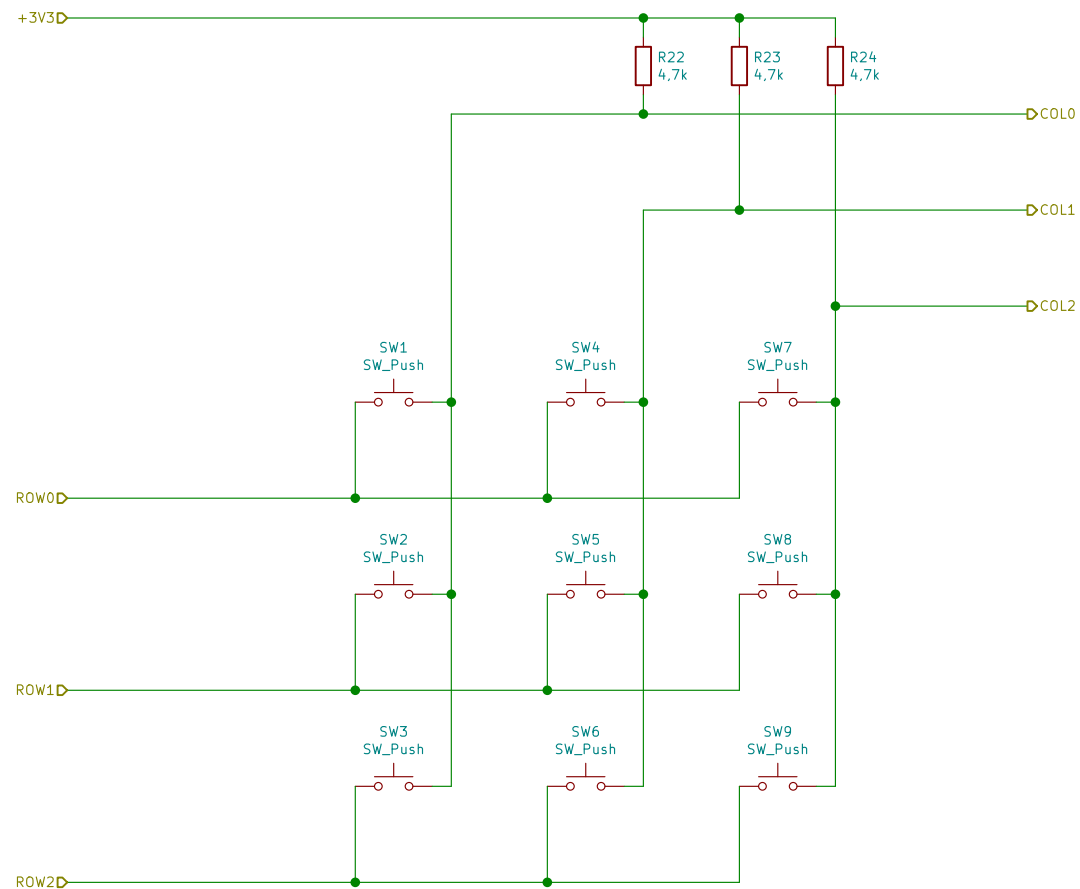
Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:  
Id: 8/23



# Button matrix



Sheet: /BUTTONS/  
File: Buttons.sch

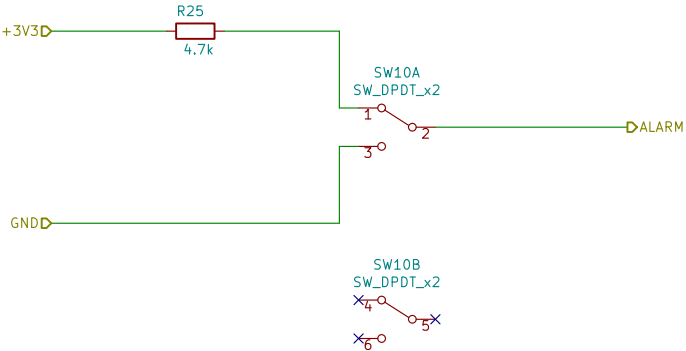
**Title:**

Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

**Rev:**  
Id: 9/23

# Alarm switch



Sheet: /ALARM\_SW/  
File: Switch.sch

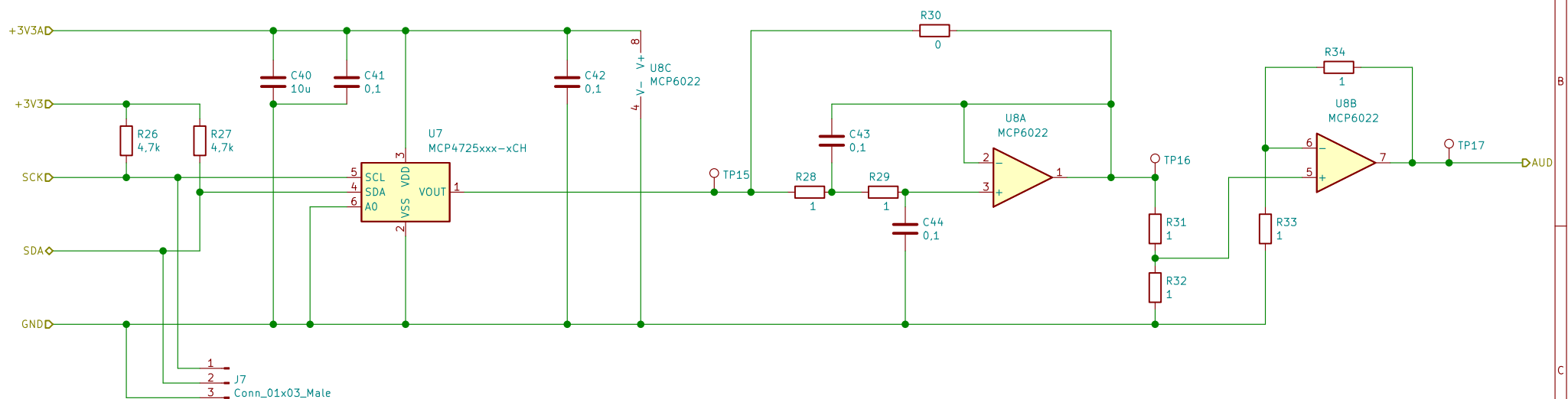
**Title:**

Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:  
Id: 10/23

# DAC with filter and preamplifier



Sheet: /DAC/  
File: DAC.sch

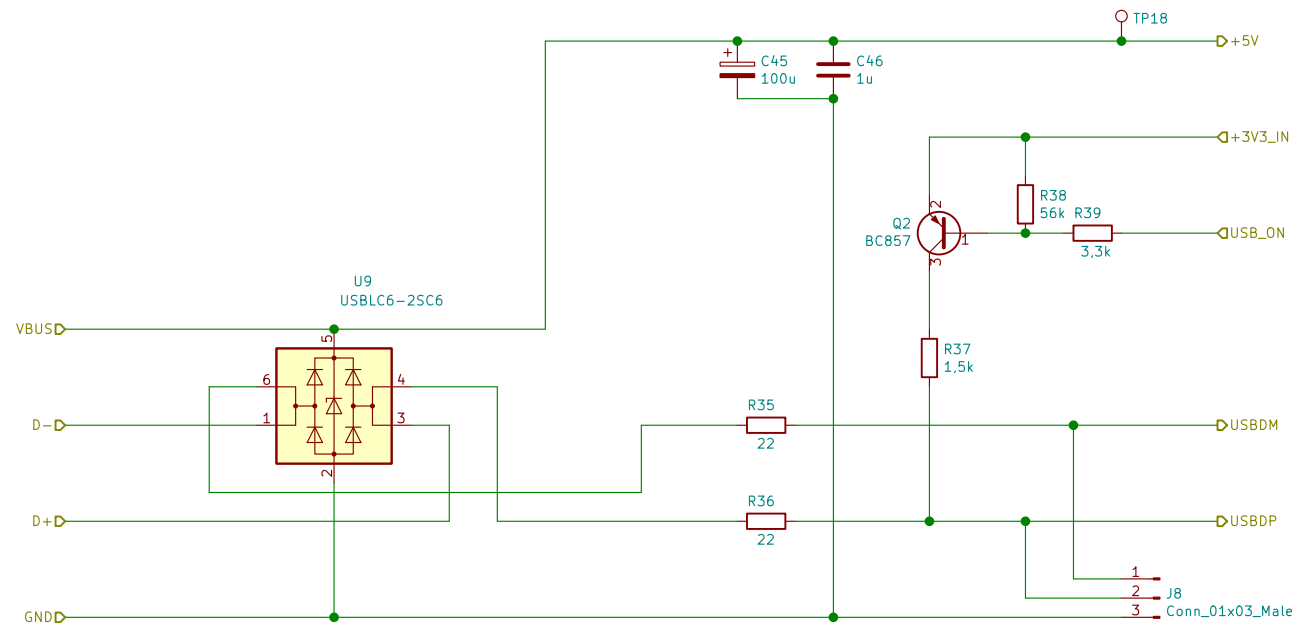
**Title:**

Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

**Rev:**  
Id: 11/23

# USB in/out circuit



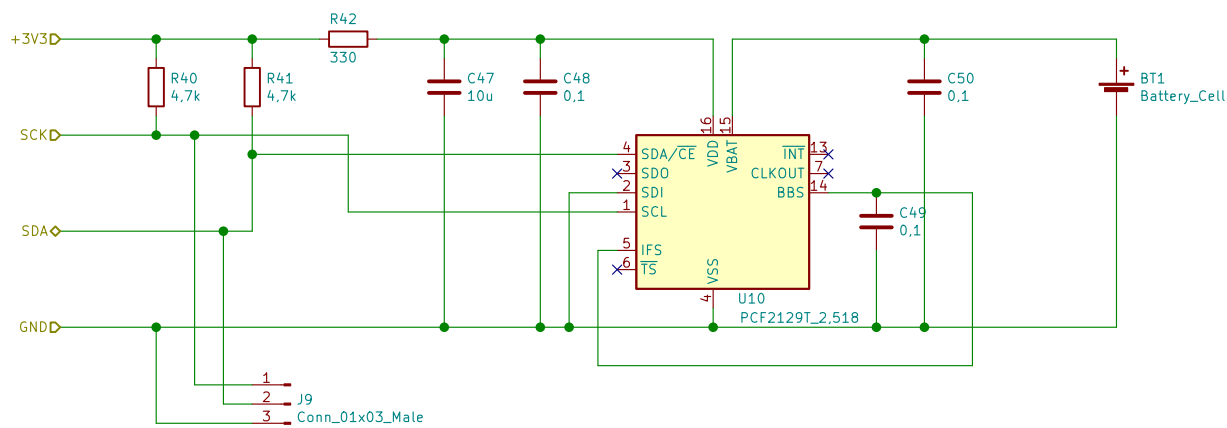
Sheet: /USB/  
File: USB.sch

**Title:**

Size: A4 Date:  
KiCad E.D.A. kicad (5.1.10)-1

**Rev:**  
Id: 12/23

Battery powered RTC



Sheet: /RTC/  
File: RTC.sch

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad (5.1.10)-1

**Rev:**

Id: 13/23

The image shows a PCB layout for an LDO +4V5 regulator circuit. The circuit is centered on a yellow rectangular component labeled U11, LP2951-5.0\_SOIC. The input is +5V\_IND, which passes through a resistor R43 (0 ohms) and a test point TP19. After TP20, there is a capacitor C51 (0.1 uF) to ground. The input pin (8) of U11 is connected to this node. The shutdown pin (3) is connected to SDD. The ground pin (4) is connected to GNDD. The output pin (1) is connected to a network of components: a capacitor C52 (0.01 uF) to ground, a resistor R44 (2.7k 1%) to ground, a capacitor C53 (4.7 uF) to ground, and a resistor R45 (1k 1%) to ground. The output pin (2) is connected to a test point TP21 and the +4V5\_OUT signal. The error pin (5) is connected to a resistor R46 (2.7k 1%) to ground. The feedback pin (7) is connected to a resistor R47 (1k 1%) to ground. The feedback pin (6) is connected to the VOLT signal. The feedback pin (7) is also connected to a resistor R46 (2.7k 1%) to ground. The feedback pin (6) is also connected to a resistor R47 (1k 1%) to ground. The feedback pin (7) is also connected to a resistor R46 (2.7k 1%) to ground. The feedback pin (6) is also connected to a resistor R47 (1k 1%) to ground.

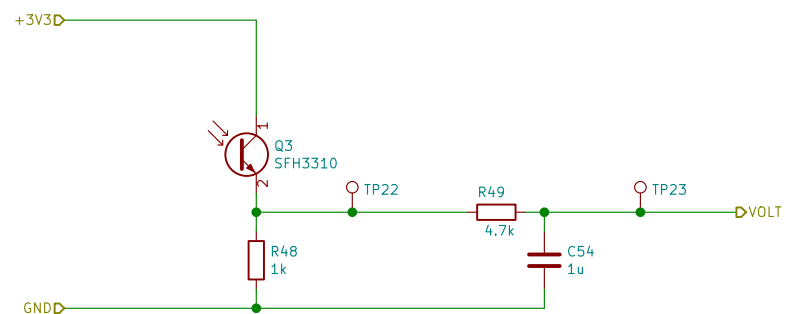
U11  
LP2951-5.0\_SOIC

8 IN  
3 SHUTDOWN  
4 GND  
1 OUT  
2 SENSE  
5 ERROR  
6 FEEDBACK  
7 VTAP

+5V\_IND TP19 R43 0 TP20 C51 0.1 SDD GNDD C52 0.01 R44 2.7k 1% C53 4.7u R45 1k 1% R46 2.7k 1% R47 1k 1% TP21 +4V5\_OUT VOLT

Rev:  
Id: 14/23

# Light level sensor



Sheet: /LIGHT\_SENSOR/  
File: Light\_sensor.sch

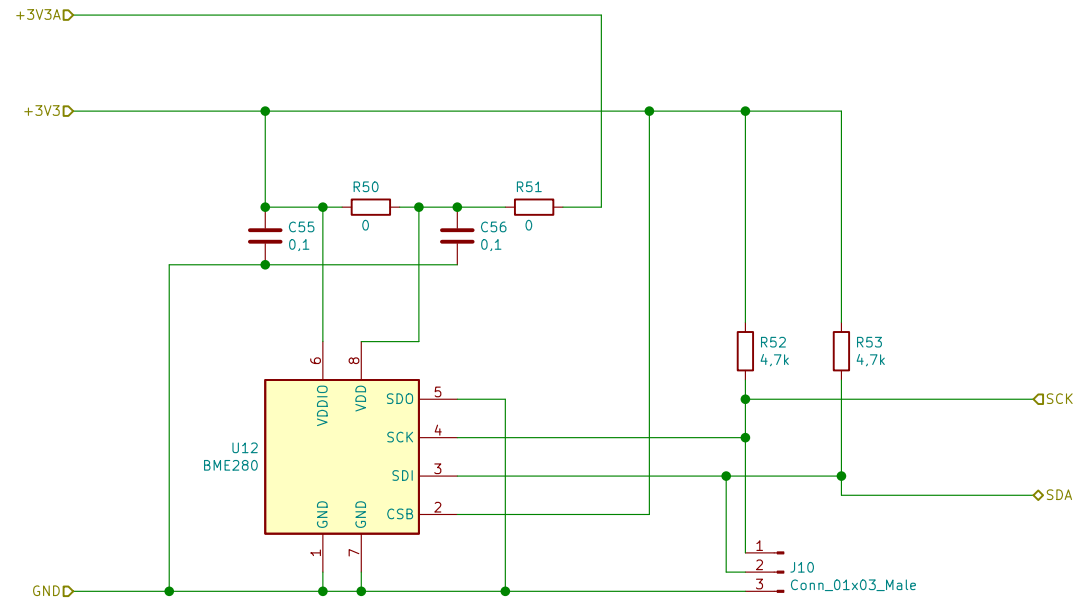
**Title:**

Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:  
Id: 15/23

# BME280 humidity and temperature sensor



Sheet: /TEMP\_SENSOR/  
File: Temp\_sensor.sch

**Title:**

Size: A4  
KiCad E.D.A. kicad (5.1.10)–1

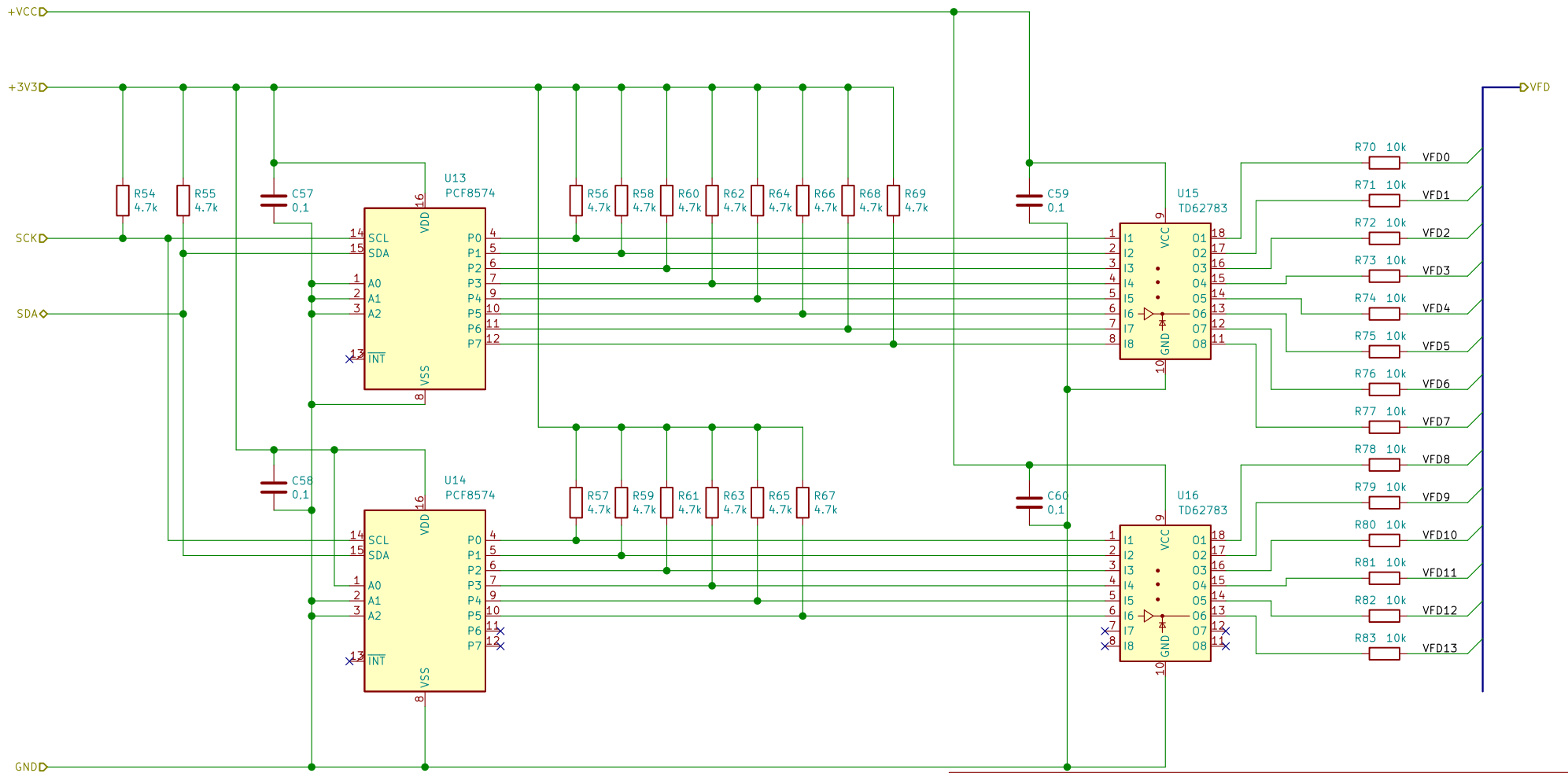
Date:

Rev:

Id: 16/23



# VFD (vacuum fluorescent display) control circuit



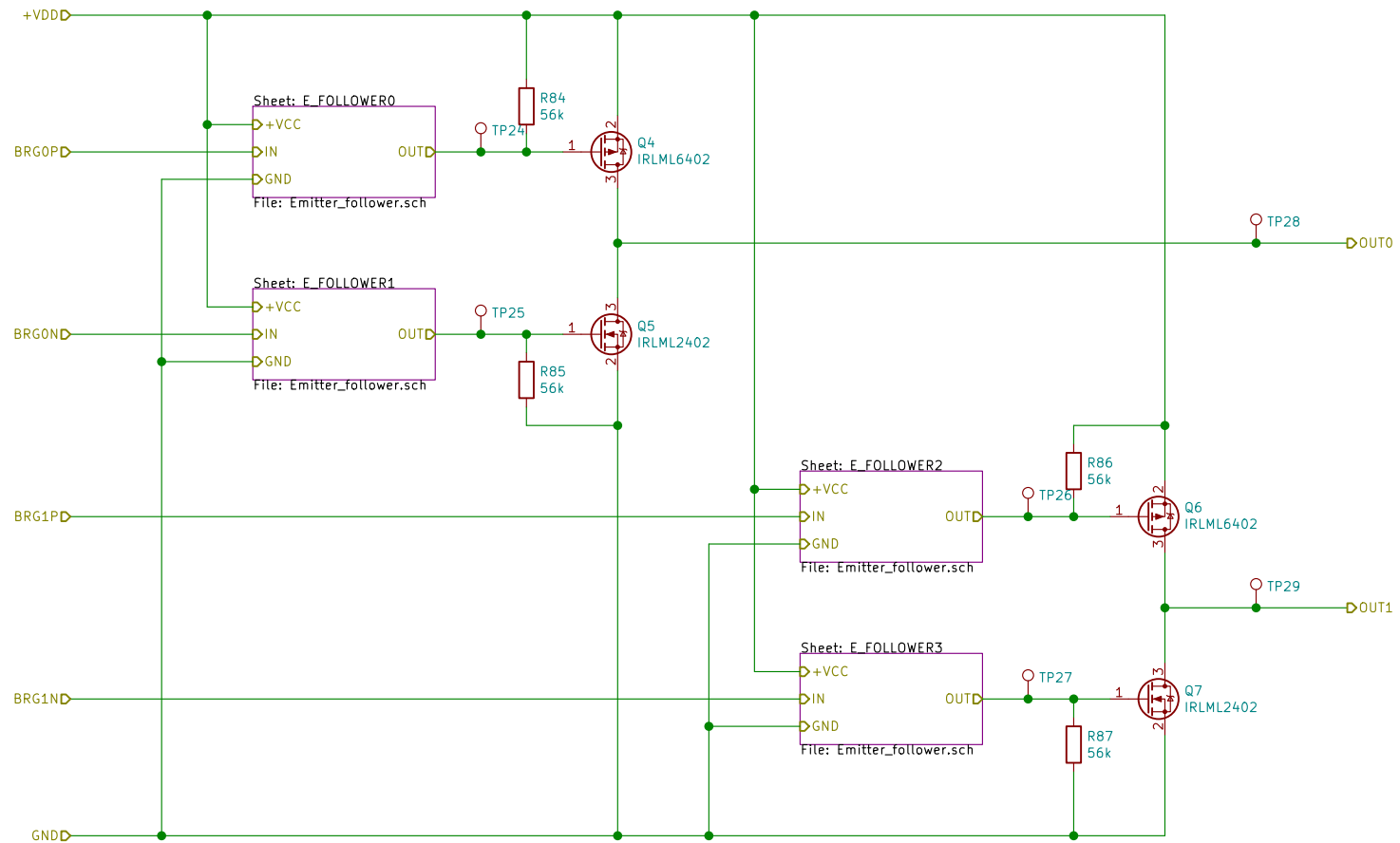
Sheet: /VFD\_DRIVER/  
File: VFD\_driver.sch

## Title:

Size: A4 Date:  
KiCad E.D.A. kicad (5.1.10)-1

Rev:  
Id: 17/23

# Heater power H-bridge



Sheet: /VFD\_HEATER/  
File: VFD\_heater.sch

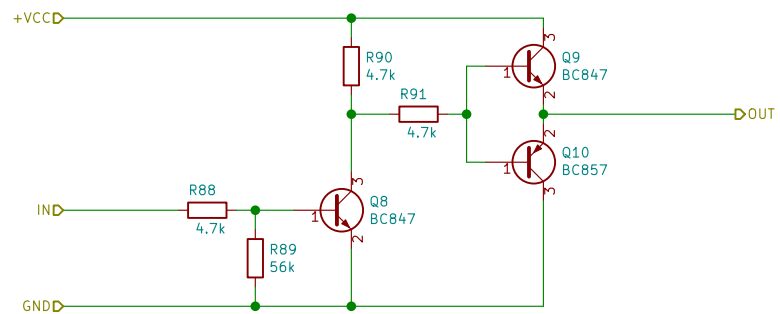
## Title:

Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:  
Id: 18/23

## Double emitter follower



Sheet: /VFD\_HEATER/E\_FOLLOWER0/  
File: Emitter\_follower.sch

**Title:**

Size: A4

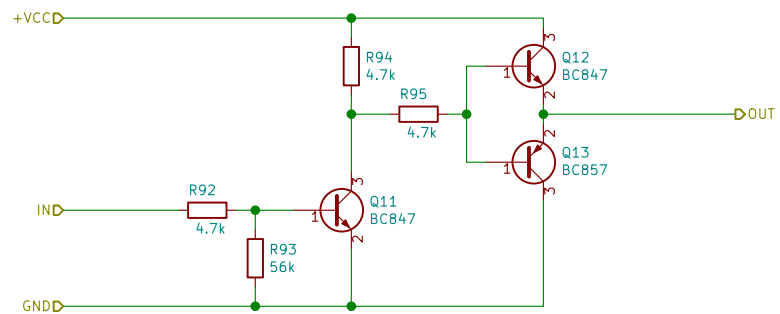
Date:

KiCad E.D.A. kicad (5.1.10)-1

**Rev:**

Id: 19/23

## Double emitter follower



Sheet: /VFD\_HEATER/E\_FOLLOWER1/  
File: Emitter\_follower.sch

**Title:**

Size: A4

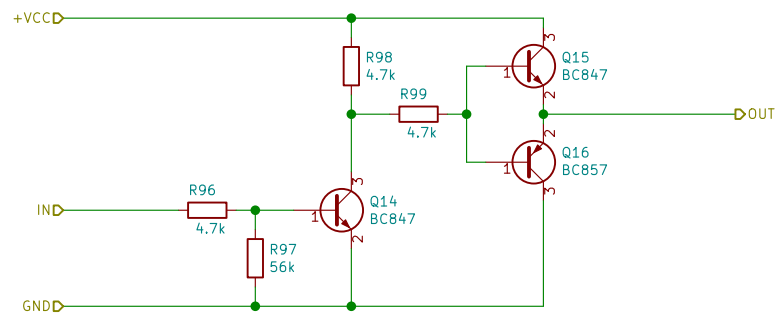
Date:

KiCad E.D.A. kicad (5.1.10)-1

**Rev:**

Id: 20/23

## Double emitter follower



Sheet: /VFD\_HEATER/E\_FOLLOWER2/  
File: Emitter\_follower.sch

**Title:**

Size: A4

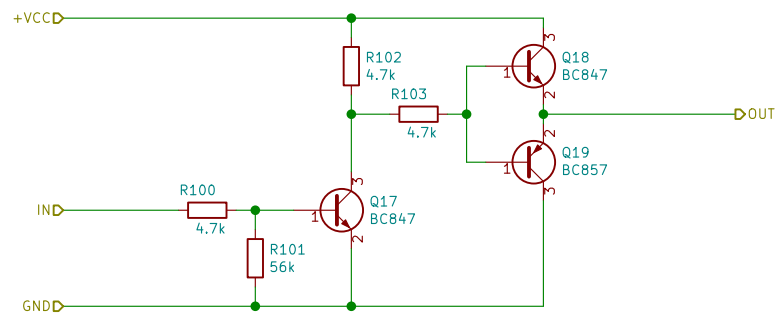
Date:

KiCad E.D.A. kicad (5.1.10)-1

**Rev:**

Id: 21/23

## Double emitter follower



Sheet: /VFD\_HEATER/E\_FOLLOWER3/  
File: Emitter\_follower.sch

**Title:**

Size: A4

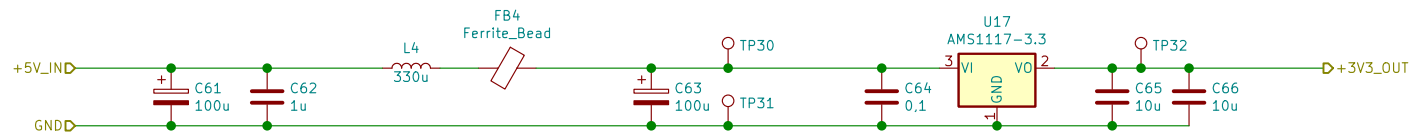
Date:

KiCad E.D.A. kicad (5.1.10)-1

**Rev:**

Id: 22/23

# Power source +3V3 analog



Sheet: /+3V3A/  
File: Power\_+3V3A.sch

**Title:**

Size: A4  
KiCad E.D.A. kicad (5.1.10)-1

Date:

Rev:  
Id: 23/23