

Bus

File: Bus.kicad_sch

CPU, FPGA, FRAM

File: CPU,_FPGA,_FRAM.kicad_sch

Power

File: Power.kicad_sch

A/V

File: A%2FV.kicad_sch

USB

File: USB.kicad_sch

VRAM, DAC

File: VRAM,_DAC.kicad_sch

PETIO

File: PETIO.kicad_sch

SID

File: SID.kicad_sch

SID Power

File: SID_Power.kicad_sch

Mixer

File: Mixer.kicad_sch

Keylock

File: Keylock.kicad_sch

Smallbus

File: Smallbus.kicad_sch

UART

File: UART.kicad_sch

Userport

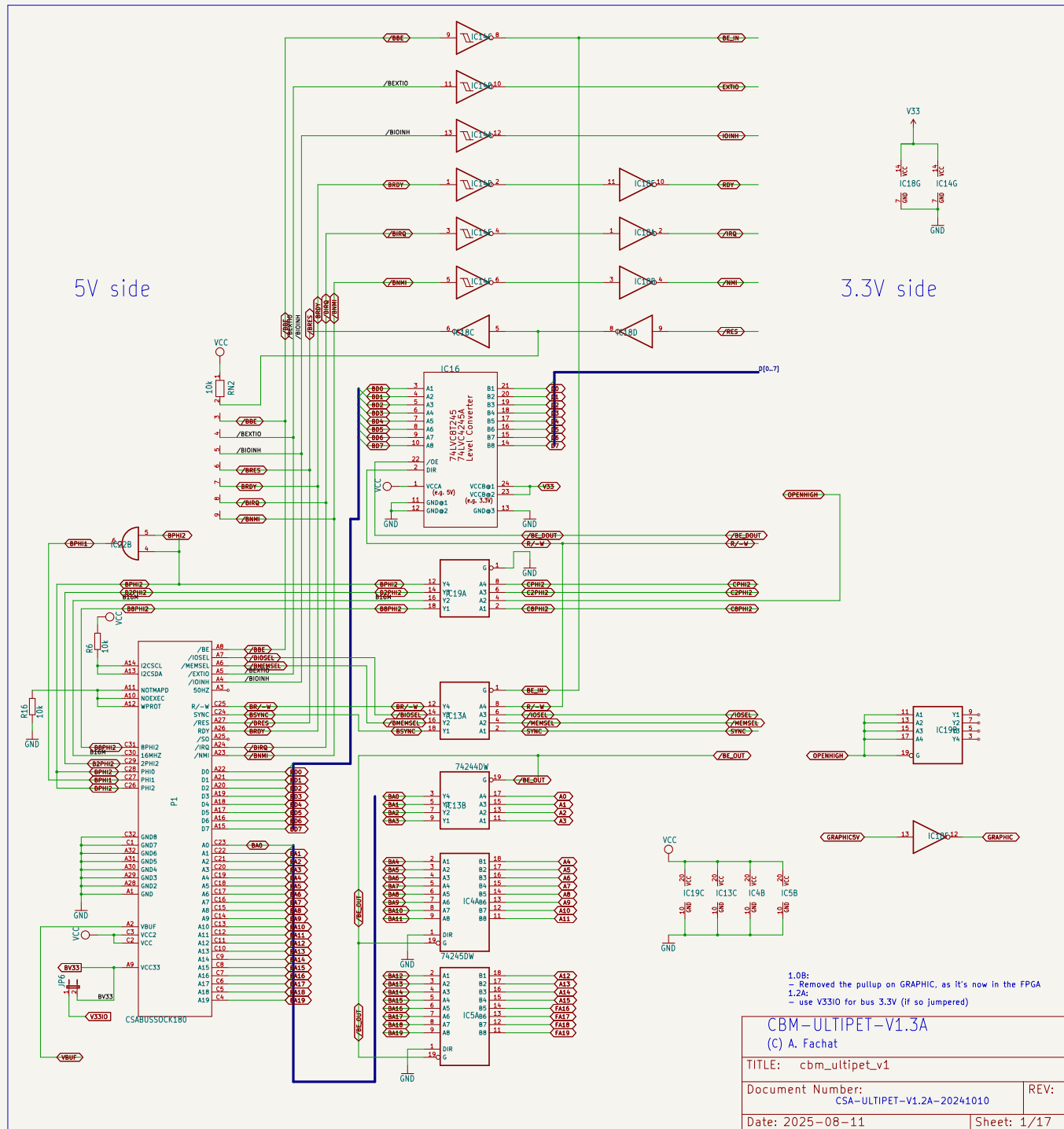
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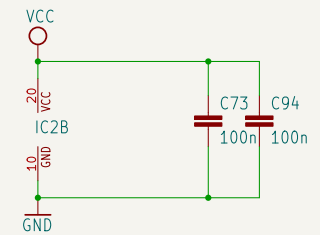
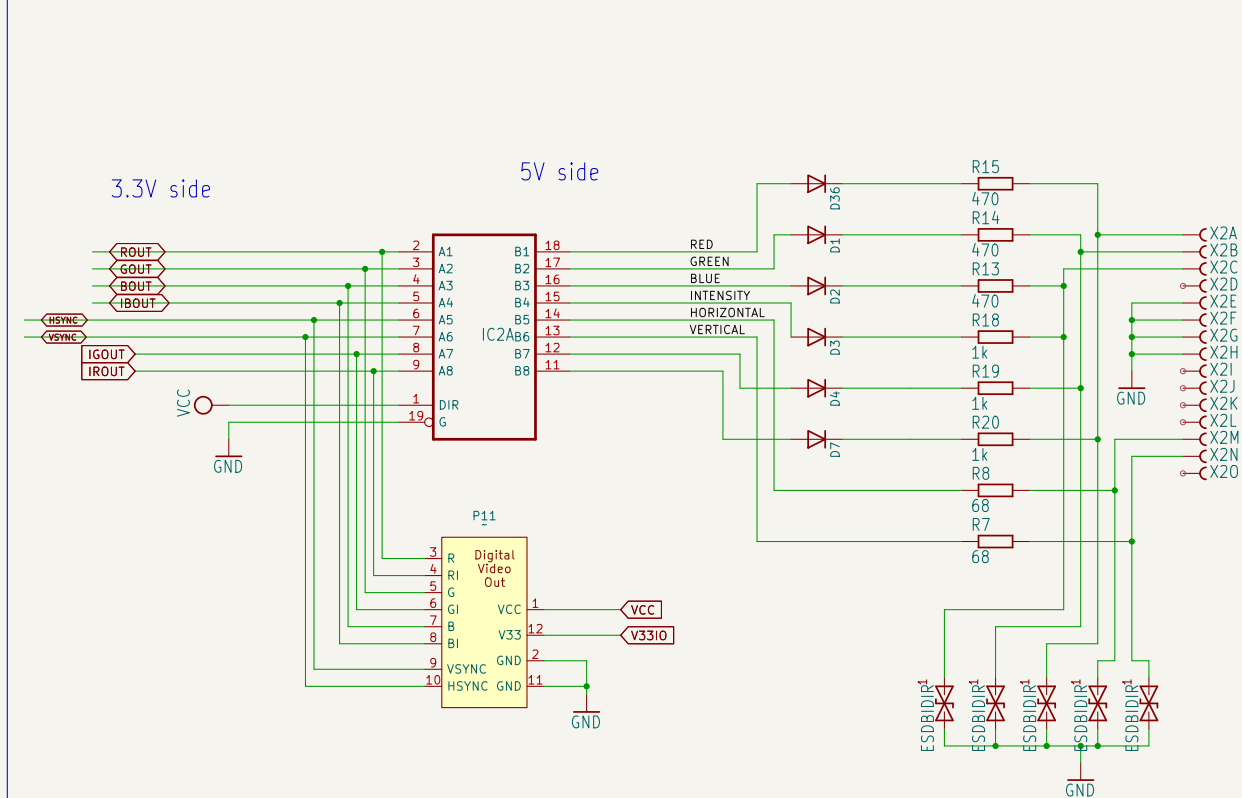
FastIEC

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I2C,UEXT

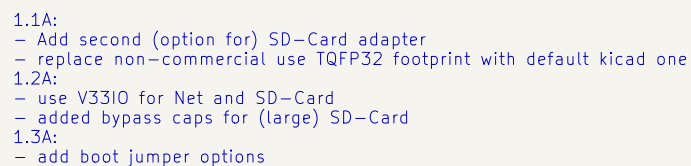
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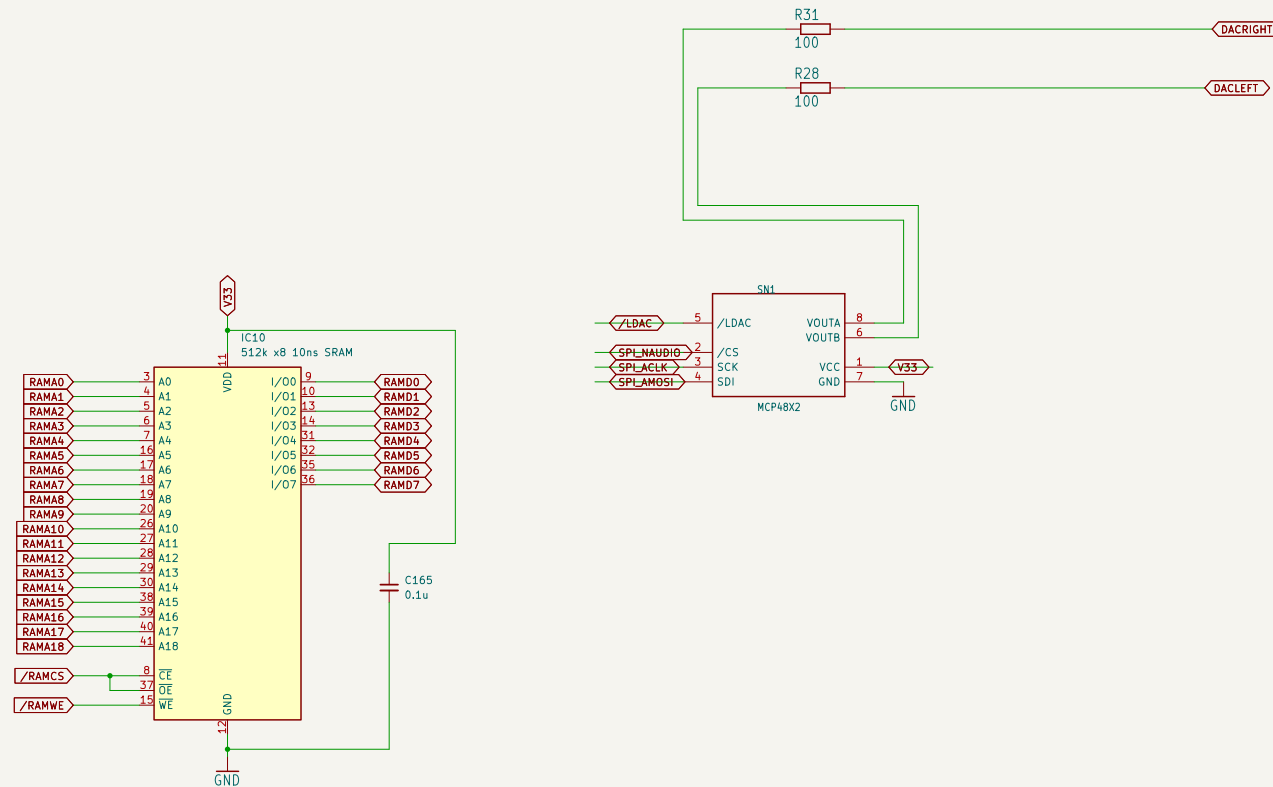


- 1.2A:
– add Digital Video Out connector
- 1.3A:
– VGA footprint with solderable supports

CBM-ULTIPET-V1.3A (C) A. Fachat	
TITLE: cbm_ultipet_v1	
Document Number: CSA-ULTIPET-V1.3A-20250806	REV:
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CBM-ULTIPET-V1.3A (C) A. Fachat	
TITLE: cbm_ultipet_v1	
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- 1.2A:
 – removed DAC output connector pins (already on SID page)
 1.3A:
 – replace 5V SRAM with 3.3V type

CBM-ULTIPET-V1.3A
 (C) A. Fachat

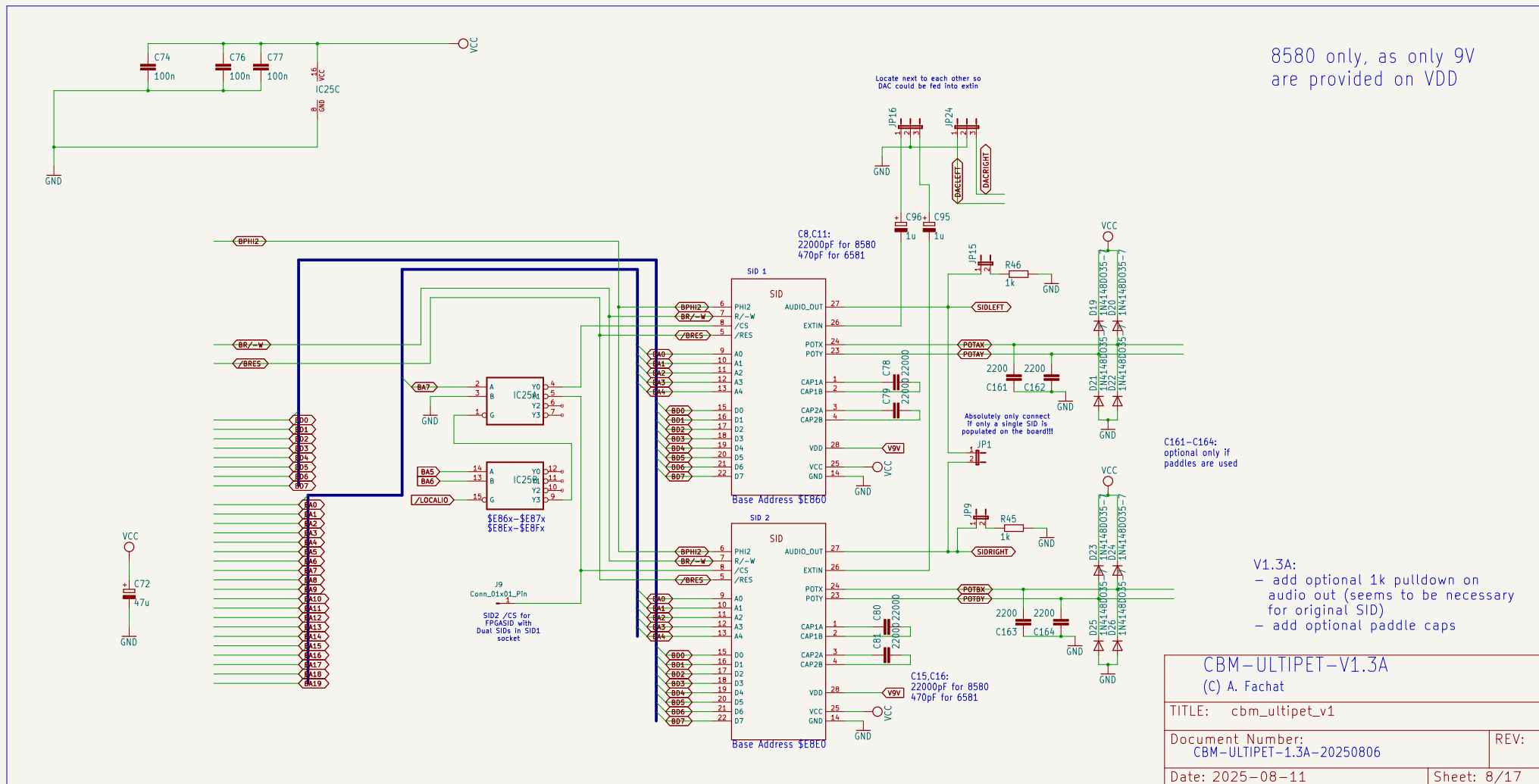
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 CBM-ULTIPET-V1.3A-20250806

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CBM-ULTIPET-V1.3A (C) A. Fachat

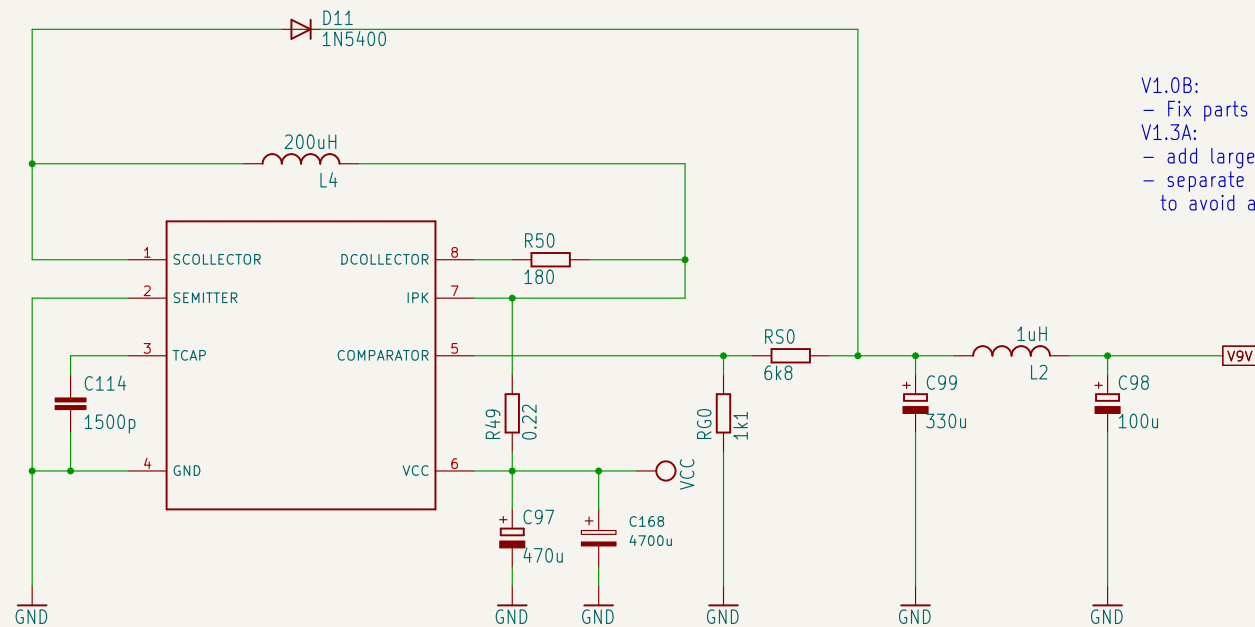
TITLE: cbm_ultipet_v1

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V1.0B:
 – Fix parts footprint for L4, D2 and some caps
 V1.3A:
 – add large bypass cap at VCC entry
 – separate 9V VCC/GND from rest in layout to avoid audio interference

$$V_{out} = 1.25 \times (1 + R_S/R_G)$$

$$R_S/R_G = (V_{out} / 1.25) - 1$$

$$V_{out} = 9V \rightarrow R_S/R_G = 6.2$$

$$\rightarrow R_G = 1.1k, R_S = 6.8k$$

$$V_{out} = 12V \rightarrow R_S/R_G = 8.6$$

$$\rightarrow R_G = 1.2k, R_S = 10k$$

9V is not only used by SID
 but also by Tape

CBM-ULTIPET-V1.3A

(C) A. Fachat

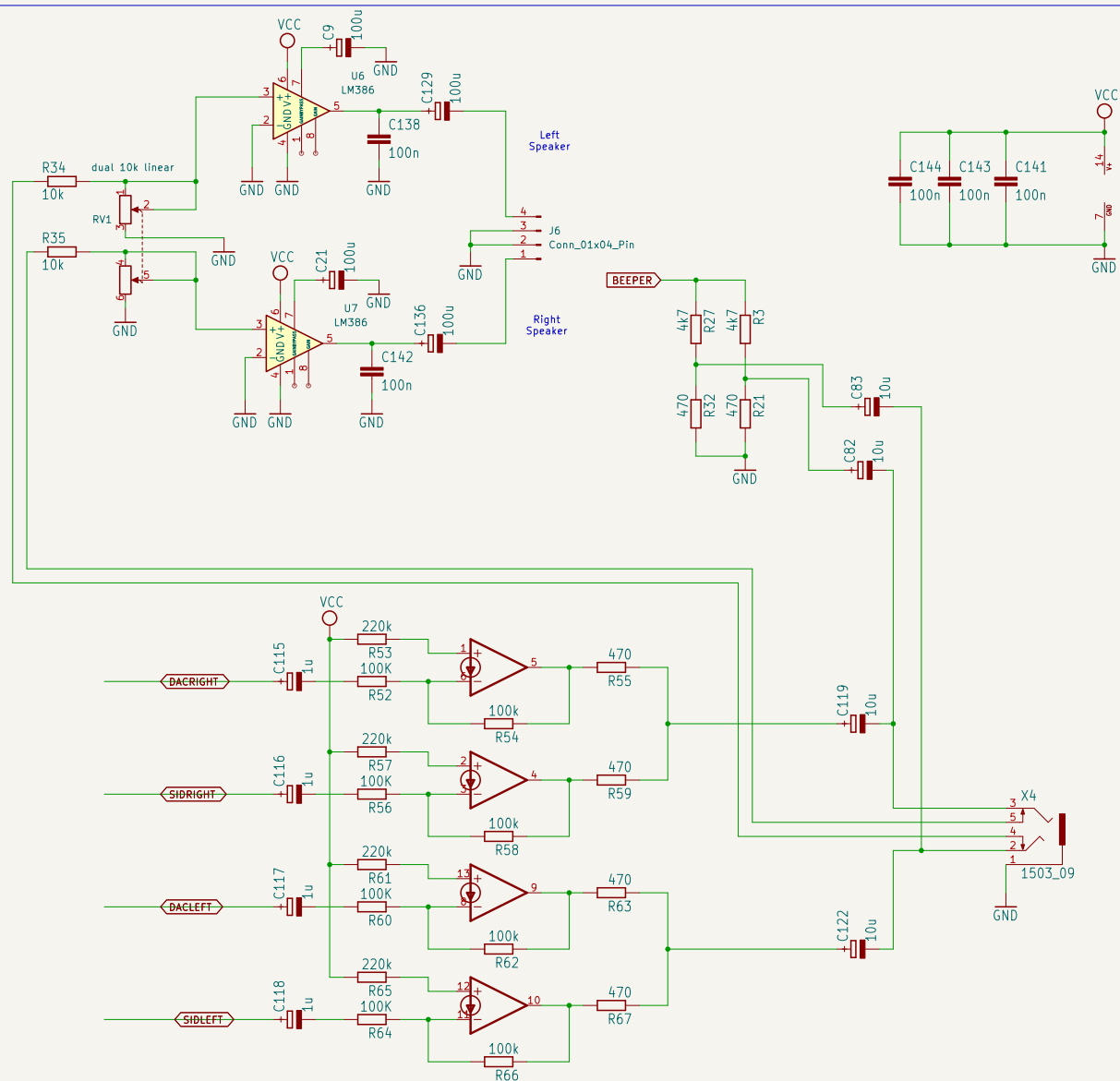
TITLE: cbm_ultipet_v1

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 CSA-DUALSID-1.3A-20250807

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1.0B: add voltage divider to reduce beeper
volume on mixer output

1.2A:

- duplicate beeper voltage divider to reduce L/R crosstalk
- adjust beeper voltage divider resistor values
- add bypass / gain caps on audio amp

1.3A:

- fix audio amp circuit for more linearity
- fix volume control on amp section

CBM-ULTIPET-V1.3A

(C) A. Fachat

TITLE: cbm_ultipet_v1

Document Number:
CBM-ULTIPET-1.3A-20250806

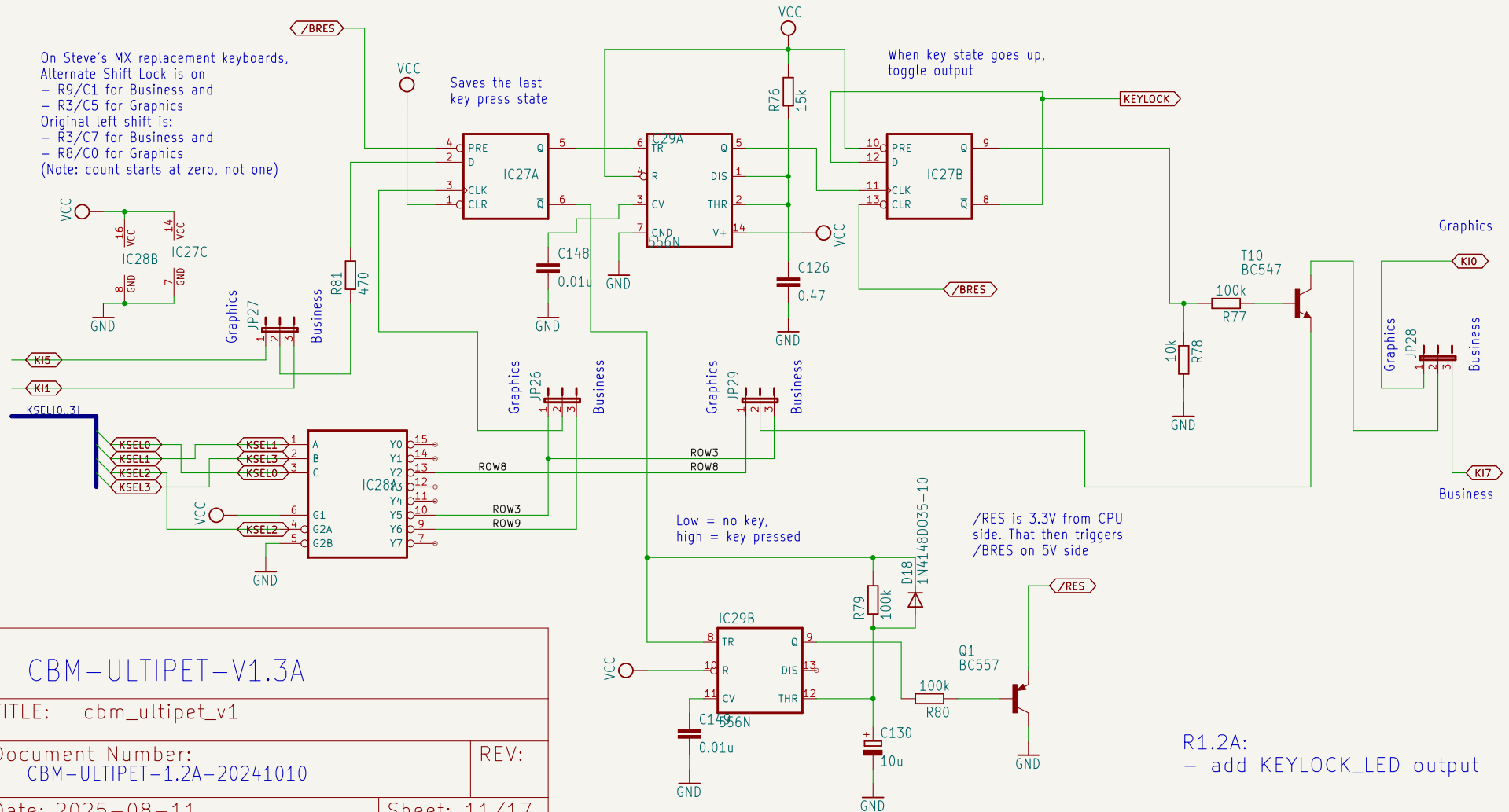
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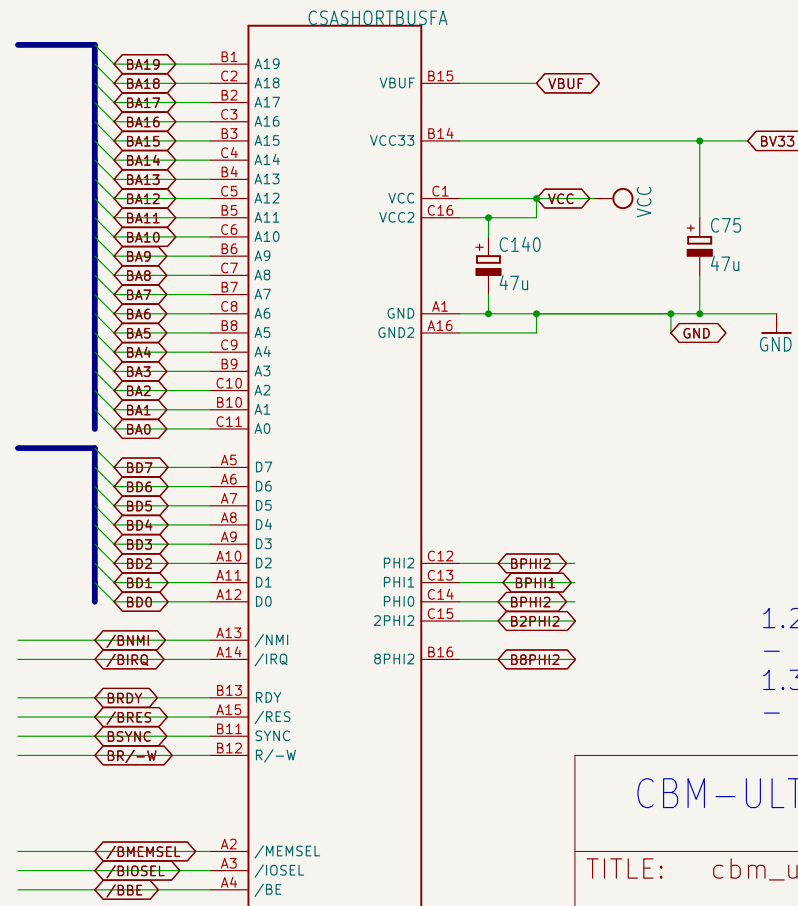
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Commodore PET SHIFT-LOCK simulator + RESET on long push

Inspired by SX64 keyboard and discussions
with Steve Gray and Mike Naberezny



R1.2A:
– add KEYLOCK_LED output



- 1.2A:
 – replace V33 with V33IO
 1.3A:
 – correct (mirrored) pinout

CBM-ULTIPET-V1.3A

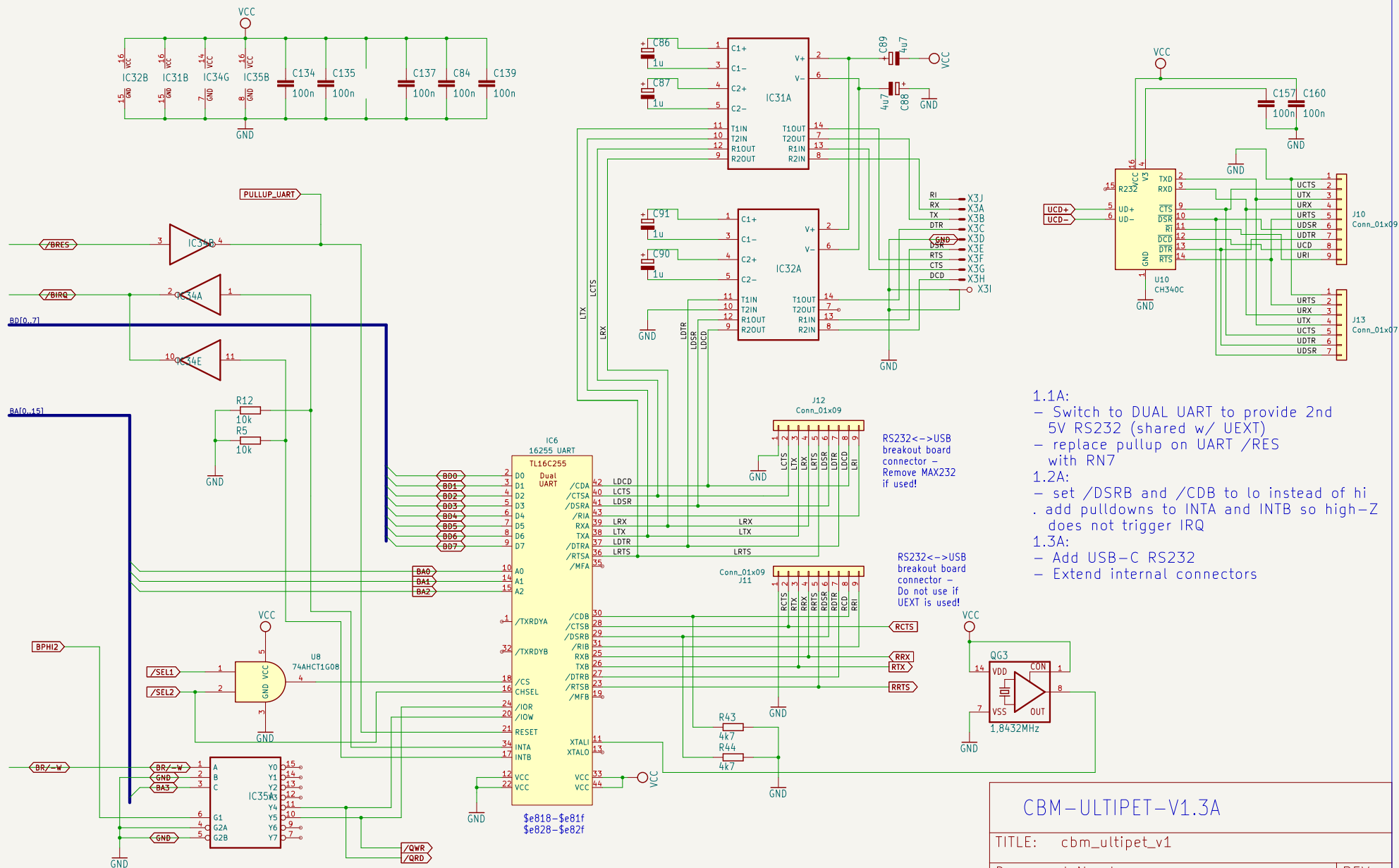
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CBM-ULTIPET-V1.3A

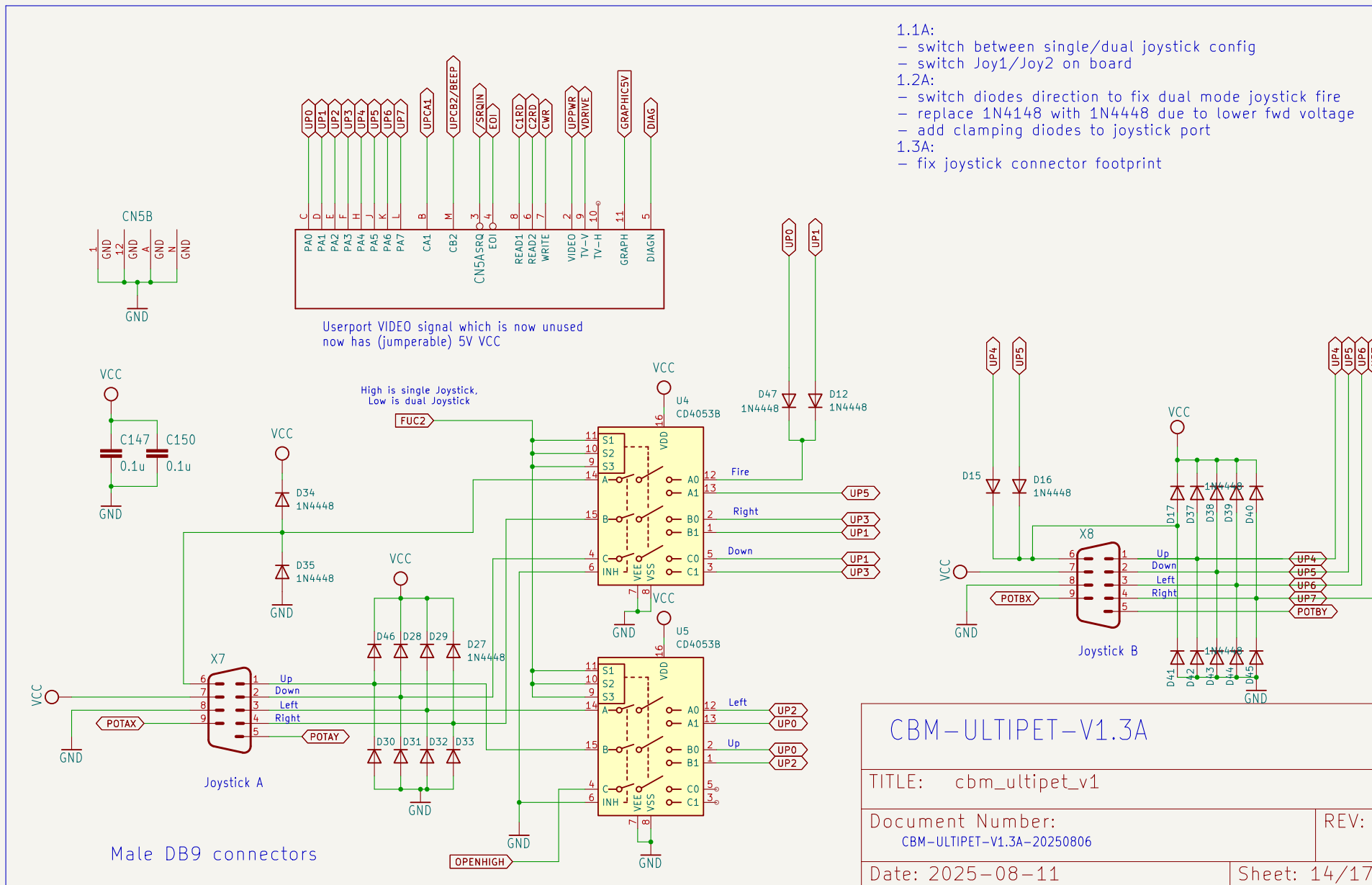
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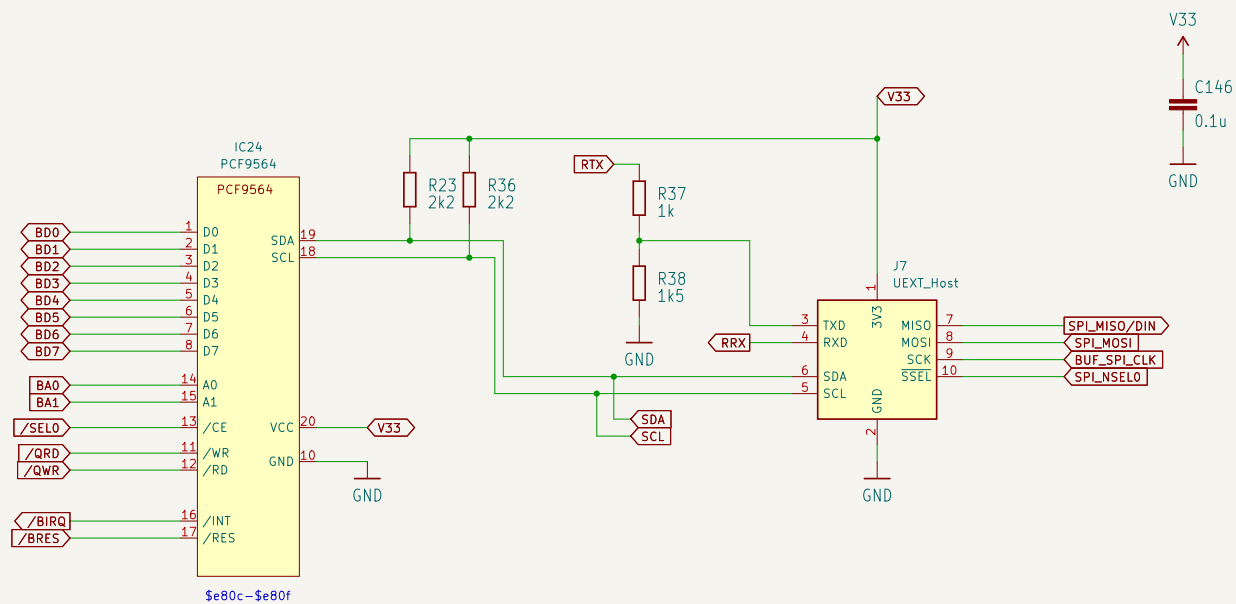
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- 1.1A:
 - Add VIA/HW SR SPI for SPI-10-5V connector
 - Replace discrete R with RN7 on PULLUP_FUC1
- 1.2A:
 - replace pin jumper for VIA fix with solder jumper
 - replace 1N4148 with 1N4448 for lower fwd voltage



1.1A:
- this page is new
1.3A:
- extra labels for SDA/SCL

CBM-ULTIPET-V1.3A

TITLE: cbm_ultipet_v1

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