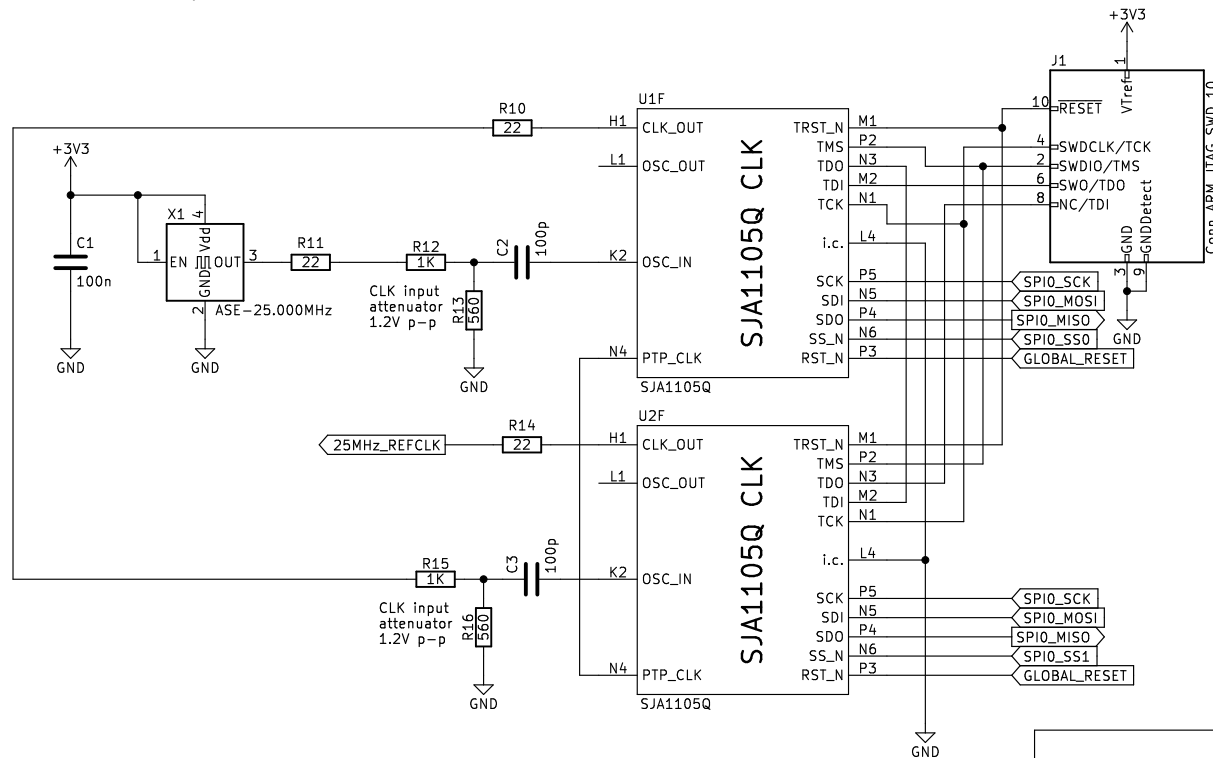
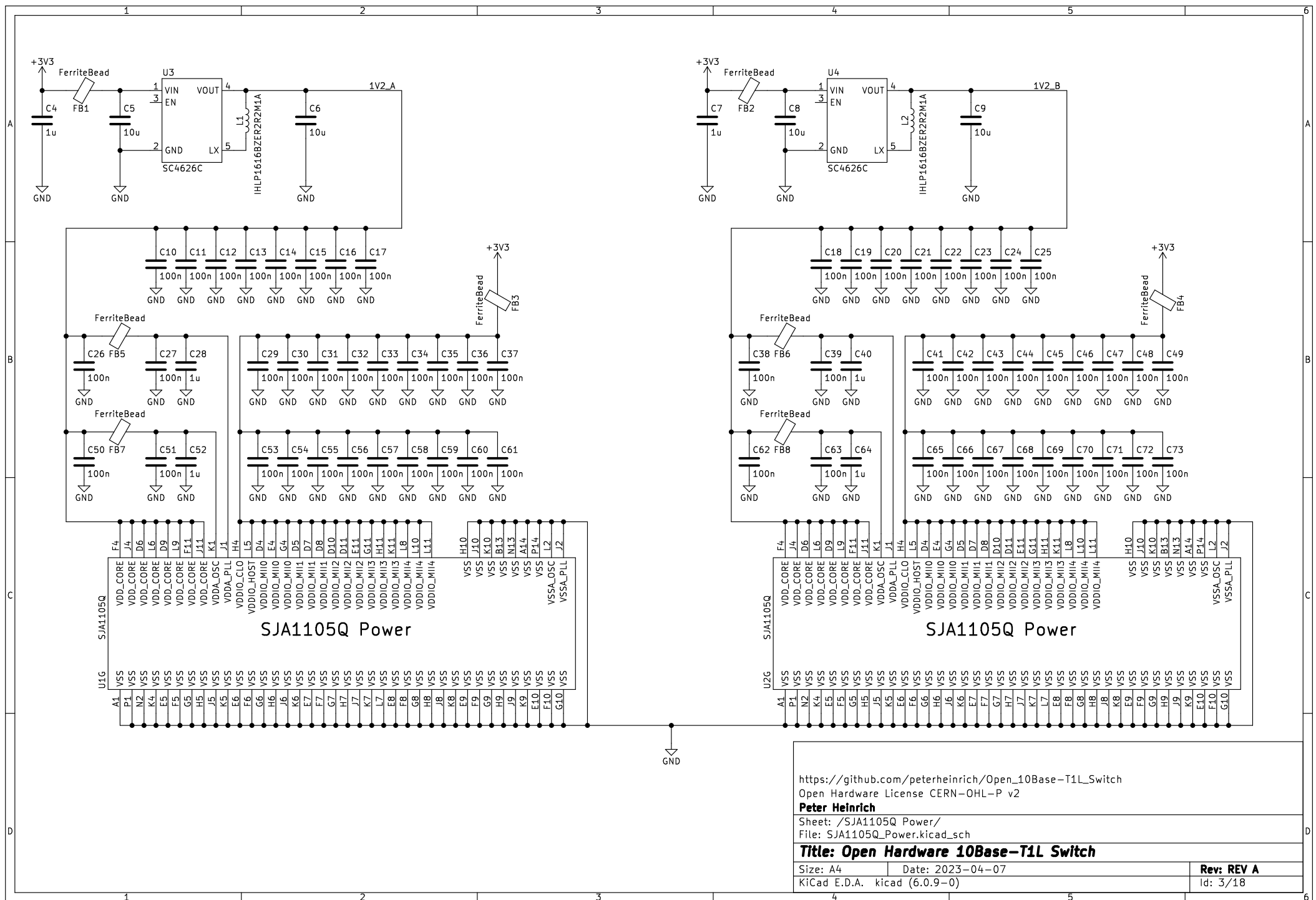


Switch Clock Generation / JTAG Debug



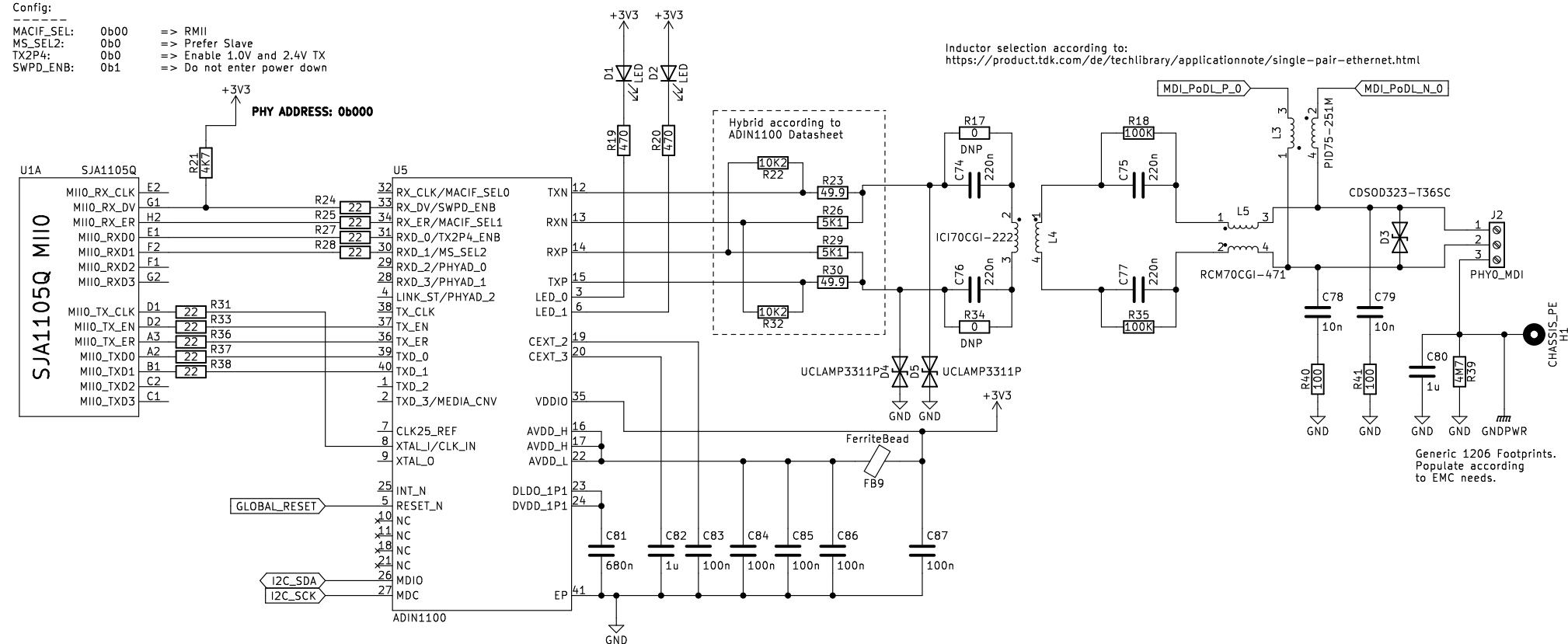
Id: 2/18



Config:
MACIF_SEL: 0b00 ==> RMII
MS_SEL2: 0b0 ==> Prefer Slave
TX2P4: 0b0 ==> Enable 1.0V and 2.4V TX
SWPD_ENB: 0b1 ==> Do not enter power down

PHY ADDRESS: 0b000

Inductor selection according to:
<https://product.tdk.com/de/techlibrary/applicationnote/single-pair-ethernet.html>



Generic 1206 Footprints.
Populate according to EMC needs.

Further documents considered during design
<https://www.we-online.com/catalog/media/o341320v410%20ANP085b%20EN.pdf>
<https://product.tdk.com/de/techlibrary/applicationnote/single-pair-ethernet.html>
https://www.ieee802.org/802_tutorials/2015-11/PoDL_tutorial1115.pdf

https://github.com/peterheinrich/Open_10Base-T1L_Switch
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Sheet: /10Base-T1L-PHY0/
File: 10Base-T1L-PHY0.kicad_sch

Title: Open Hardware 10Base-T1L Switch

Size: A4 Date: 2023-04-07

KiCad E.D.A. kicad (6.0.9-0)

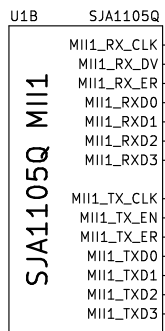
Rev: REV A

Id: 4/18

Config:
 MACIF_SEL: 0b00 ==> RMII
 MS_SEL2: 0b0 ==> Prefer Slave
 TX2P4: 0b0 ==> Enable 1.0V and 2.4V TX
 SWPD_ENB: 0b1 ==> Do not enter power down

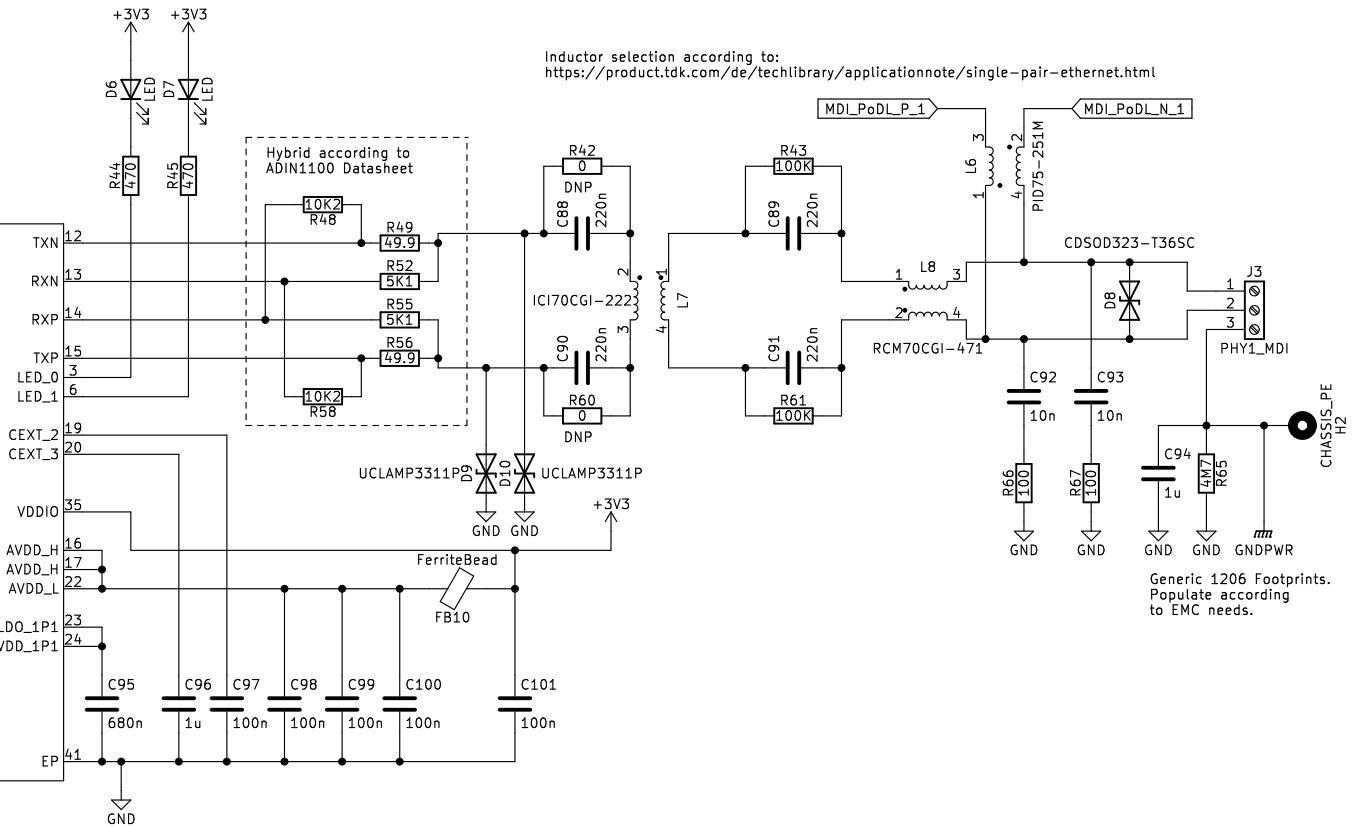
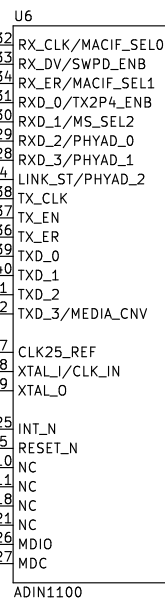
PHY ADDRESS: 0b001

Inductor selection according to:
<https://product.tdk.com/de/techlibrary/applicationnote/single-pair-ethernet.html>



GLOBAL_RESET

I2C_SDA
 I2C_SCK



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Sheet: /10Base-T1L-PHY1/
 File: 10Base-T1L-PHY1.kicad_sch

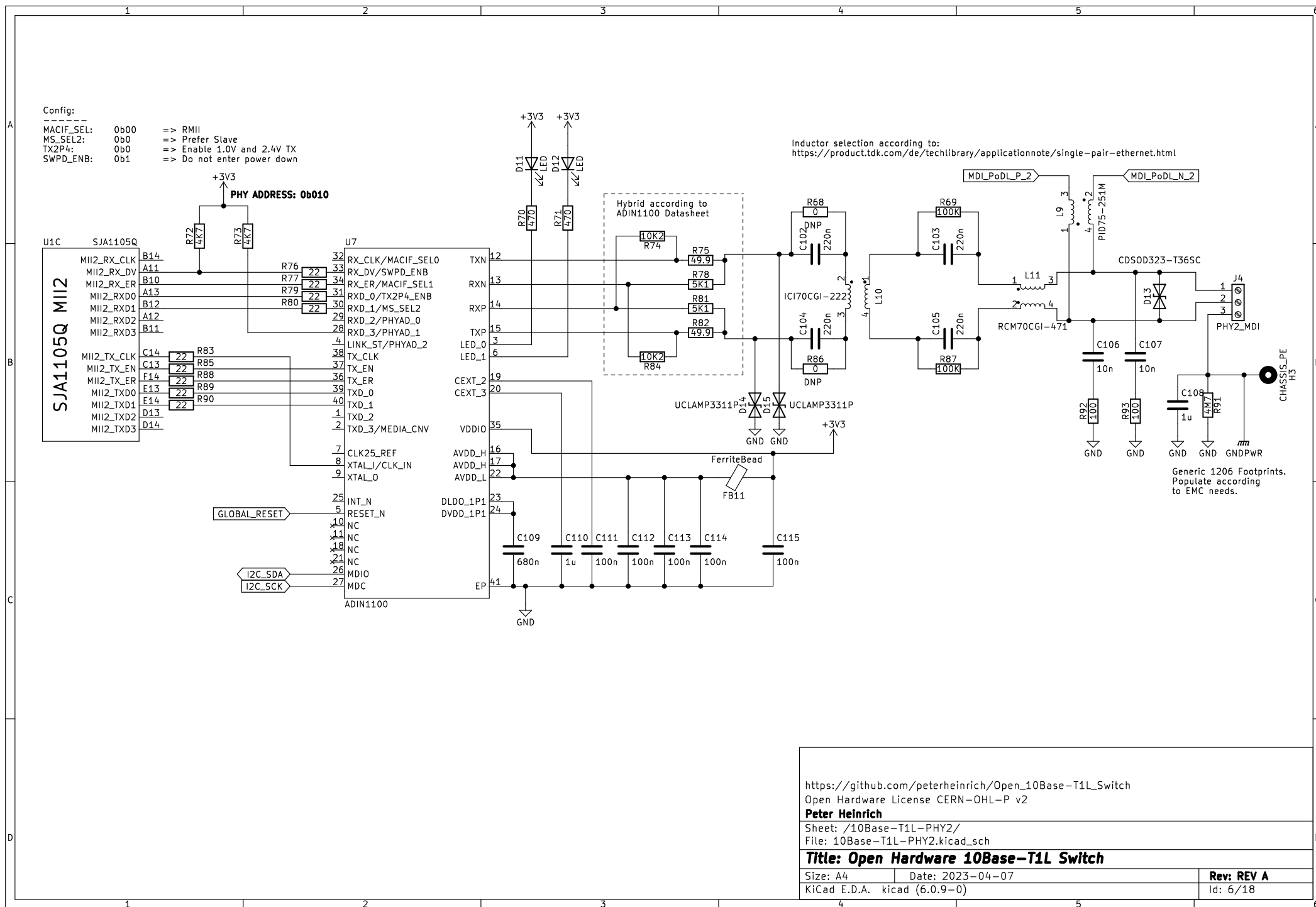
Title: Open Hardware 10Base-T1L Switch

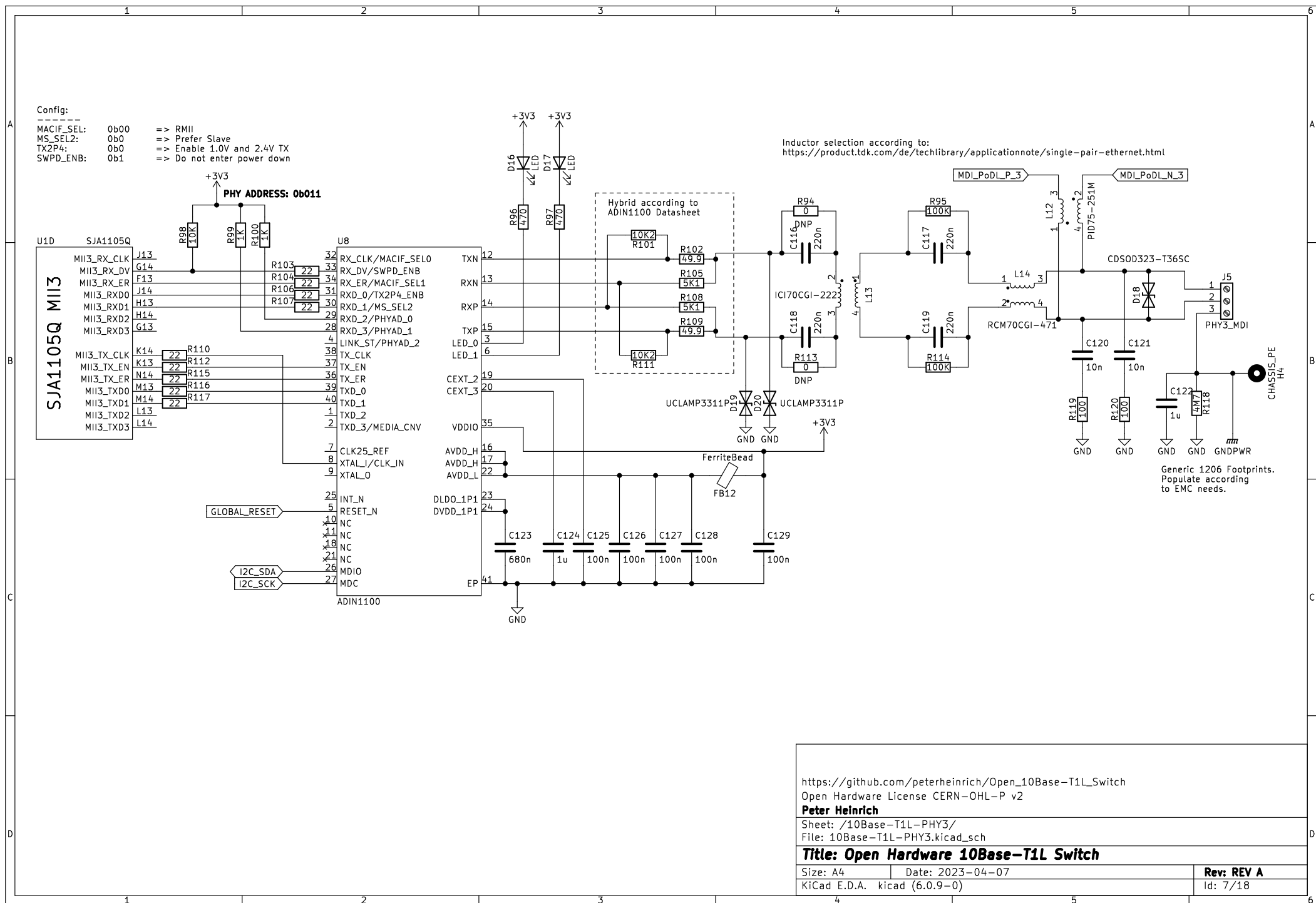
Size: A4 Date: 2023-04-07

KiCad E.D.A. kicad (6.0.9-0)

Rev: REV A

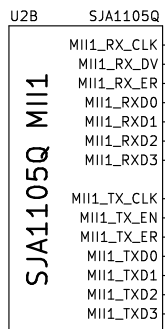
Id: 5/18





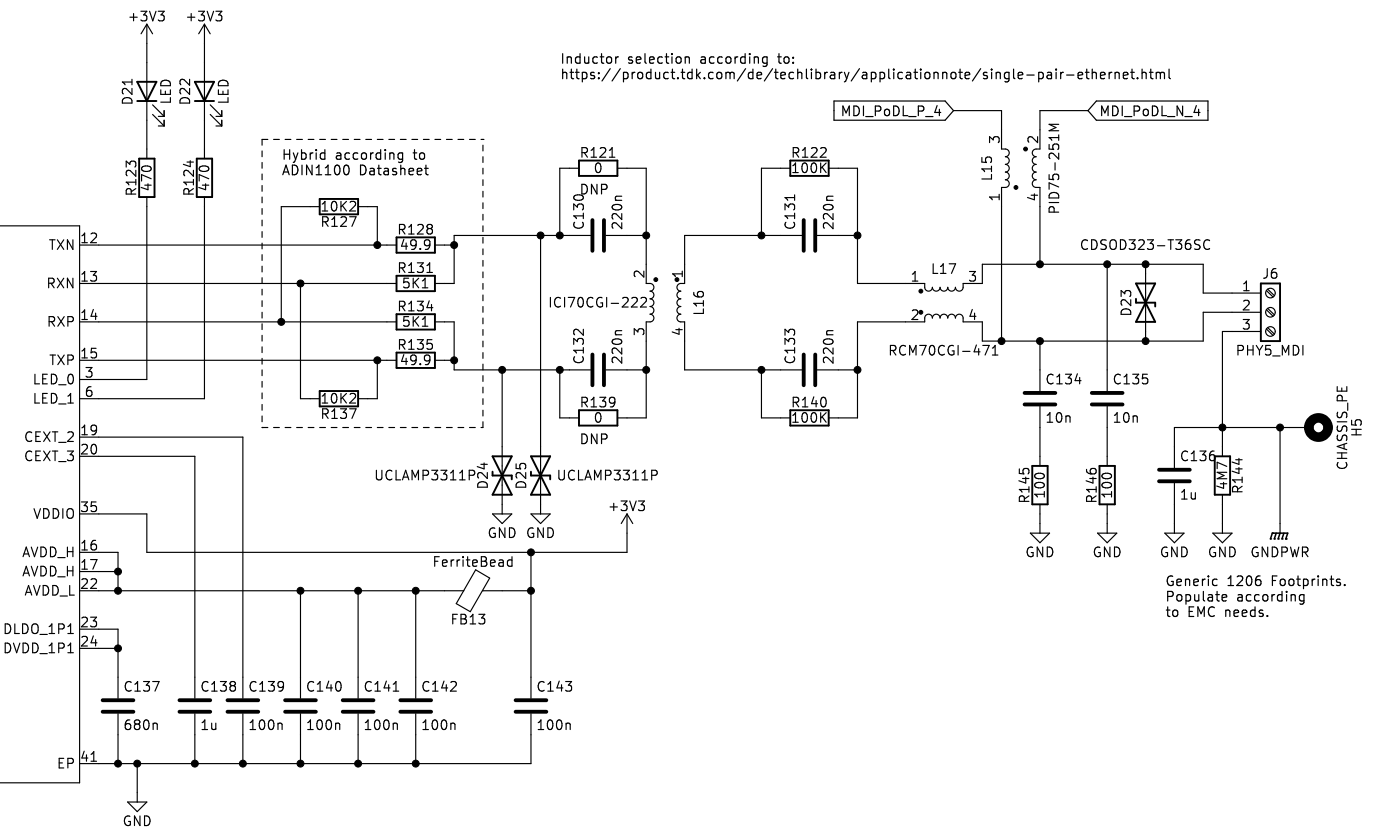
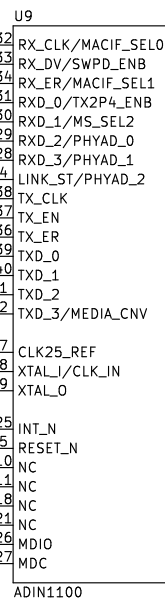
Config:
MACIF_SEL: 0b00 ==> RMII
MS_SEL2: 0b0 ==> Prefer Slave
TX2P4: 0b0 ==> Enable 1.0V and 2.4V TX
SWPD_ENB: 0b1 ==> Do not enter power down

PHY ADDRESS: 0b100



GLOBAL_RESET

I2C_SDA
I2C_SCK



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Sheet: /10Base-T1L-PHY4/
File: 10Base-T1L-PHY4.kicad_sch

Title: Open Hardware 10Base-T1L Switch

Size: A4 Date: 2023-04-07

KiCad E.D.A. kicad (6.0.9-0)

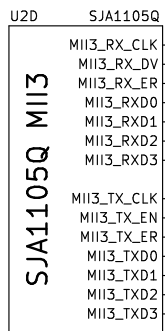
Rev: REV A

Id: 8/18

Config:
 MACIF_SEL: 0b00 ==> RMII
 MS_SEL2: 0b0 ==> Prefer Slave
 TX2P4: 0b0 ==> Enable 1.0V and 2.4V TX
 SWPD_ENB: 0b1 ==> Do not enter power down

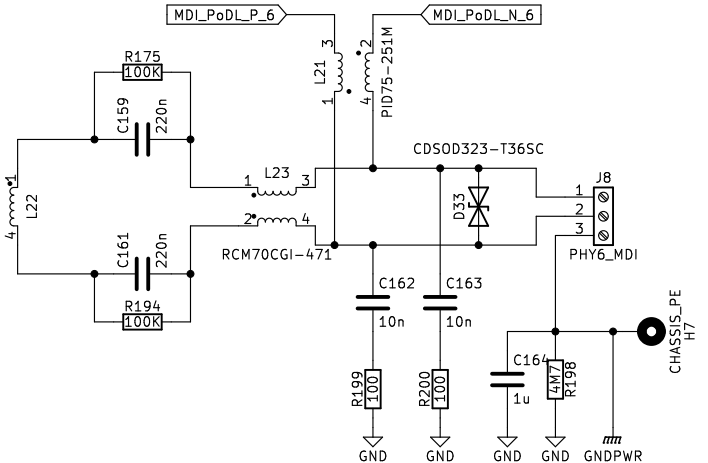
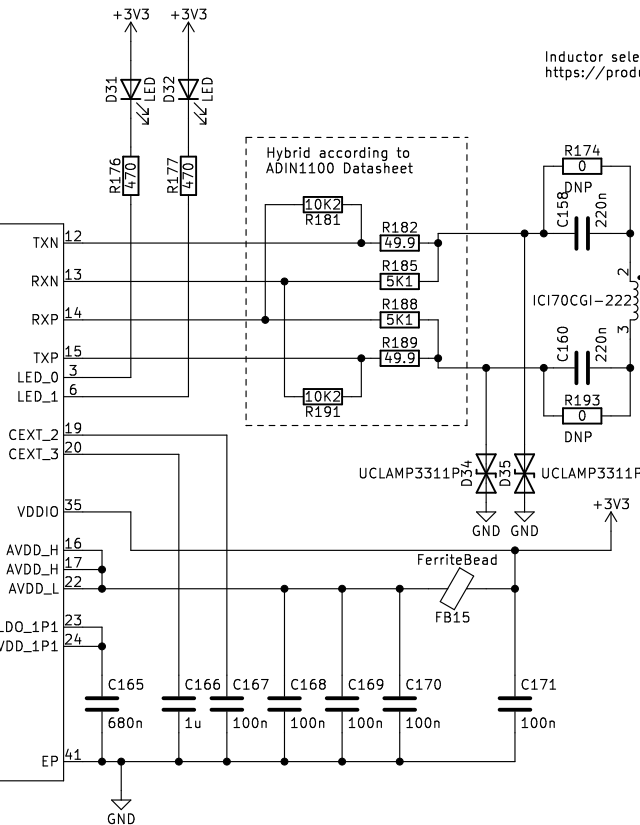
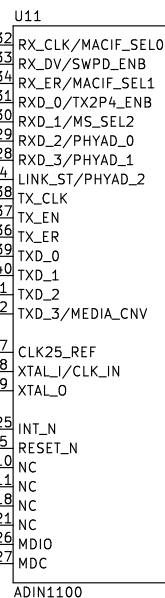
PHY ADDRESS: 0b110

Inductor selection according to:
<https://product.tdk.com/de/techlibrary/applicationnote/single-pair-ethernet.html>



GLOBAL_RESET

I2C_SDA
 I2C_SCK



Generic 1206 Footprints.
 Populate according to EMC needs.

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Sheet: /10Base-T1L-PHY6/
 File: 10Base-T1L-PHY6.kicad_sch

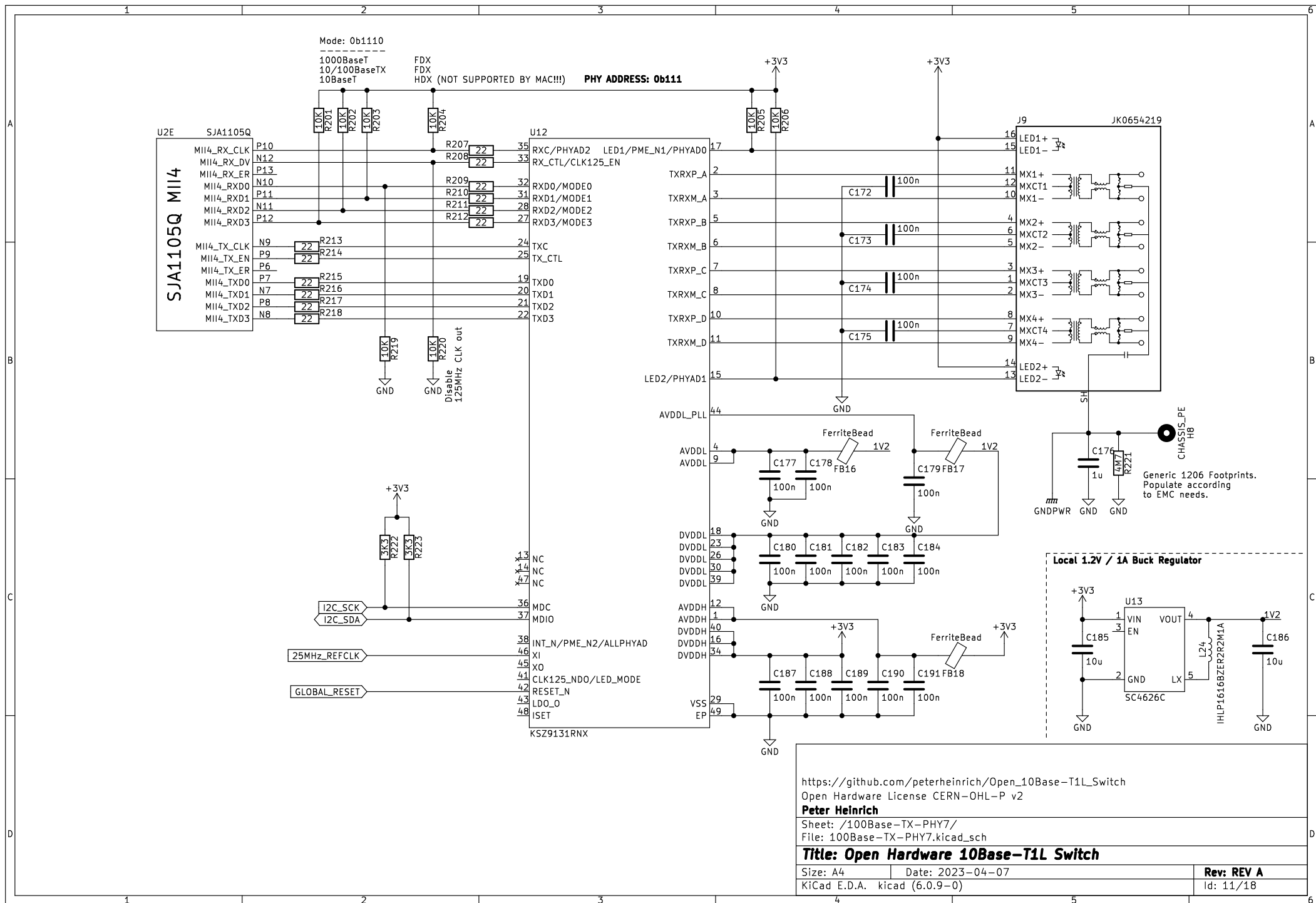
Title: Open Hardware 10Base-T1L Switch

Size: A4 Date: 2023-04-07

KiCad E.D.A. kicad (6.0.9-0)

Rev: REV A

Id: 10/18



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Sheet: /100Base-TX-PHY7/

File: 100Base-TX-PHY7.kicad_sch

Title: Open Hardware 10Base-T1L Switch

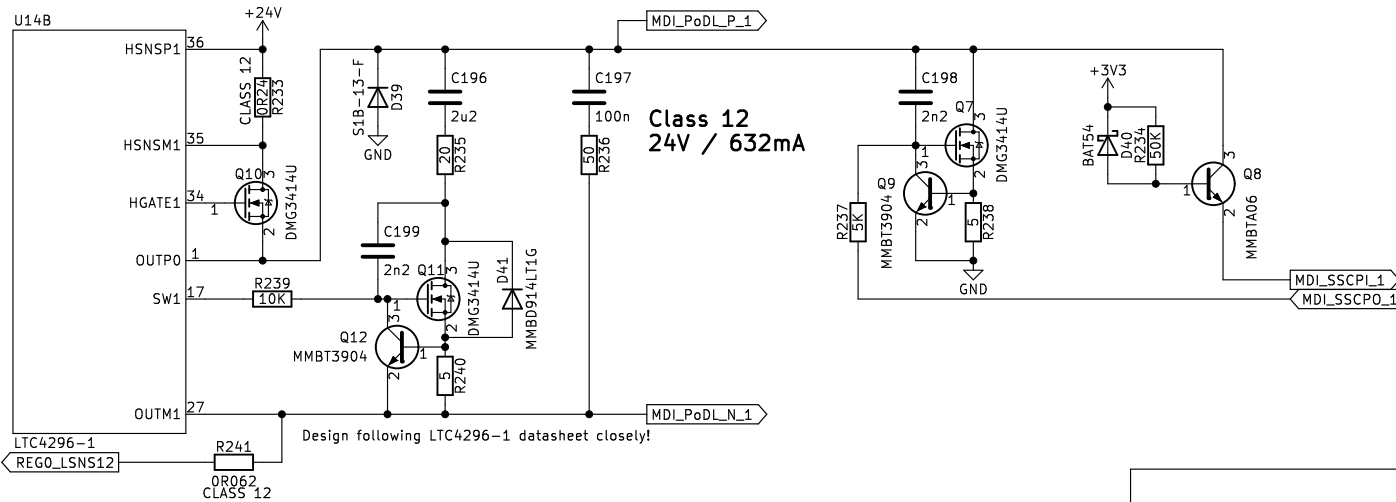
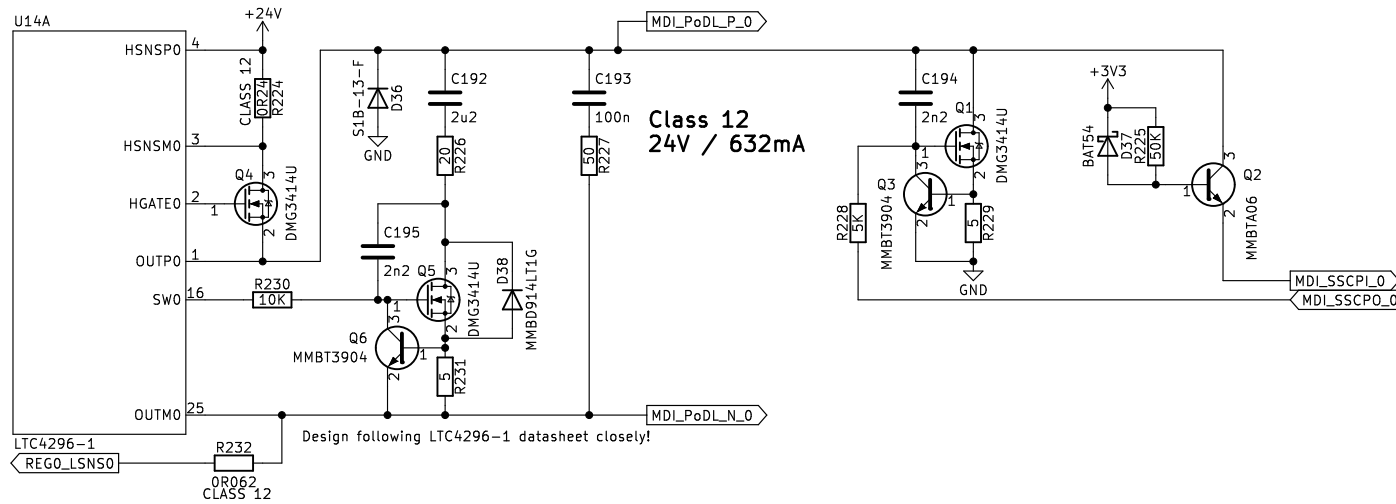
Size: A4

Date: 2023-04-07

Rev: REV A

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Id: 11/18



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Sheet: /PoDL PHY 0-1/
File: PoDL_PHY0-1.kicad_sch

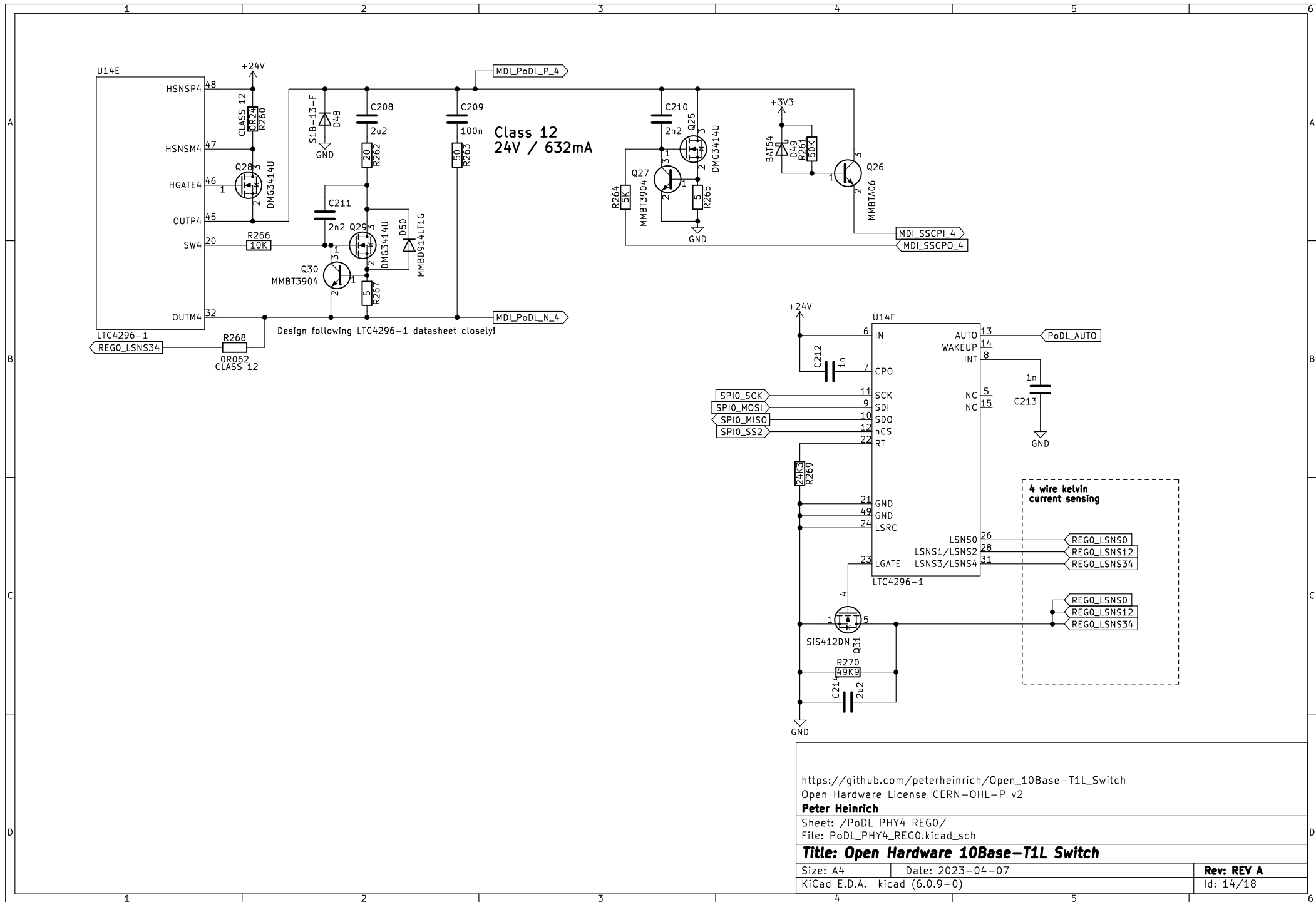
Title: Open Hardware 10Base-T1L Switch

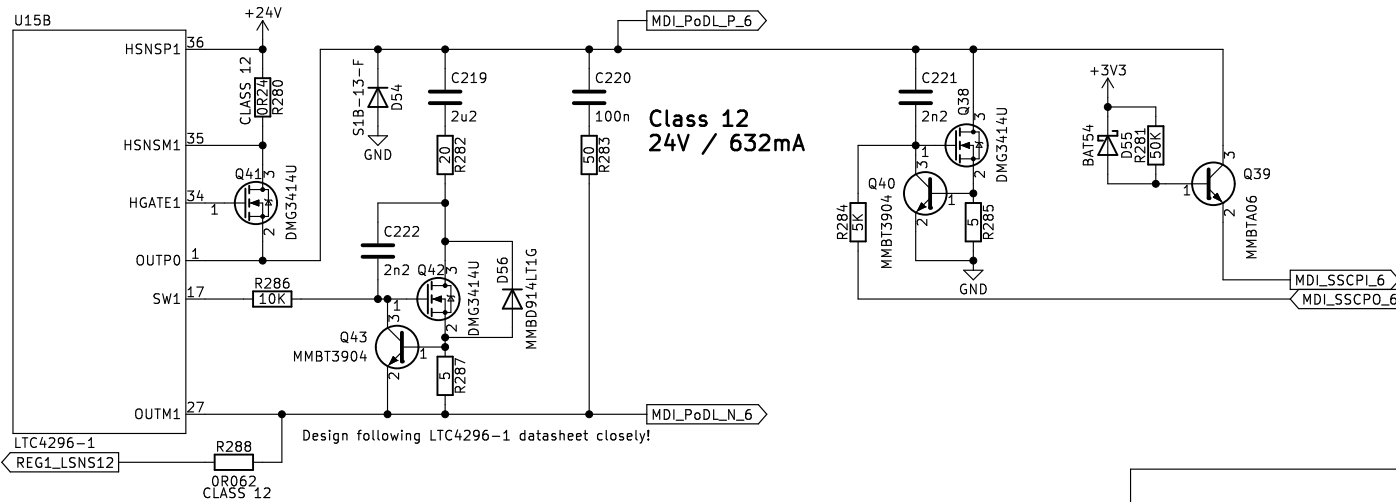
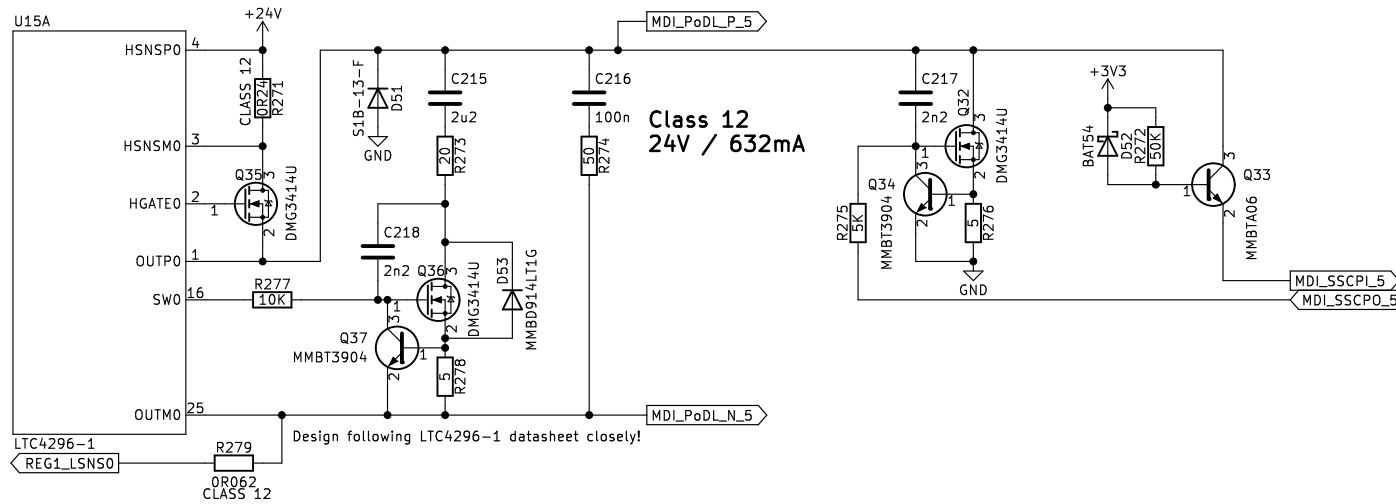
Size: A4 Date: 2023-04-07

KiCad E.D.A. kicad (6.0.9-0)

Rev: REV A

Id: 12/18





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Sheet: /PoDL PHY 5-6/

File: PoDL_PHY5-6.kicad_sch

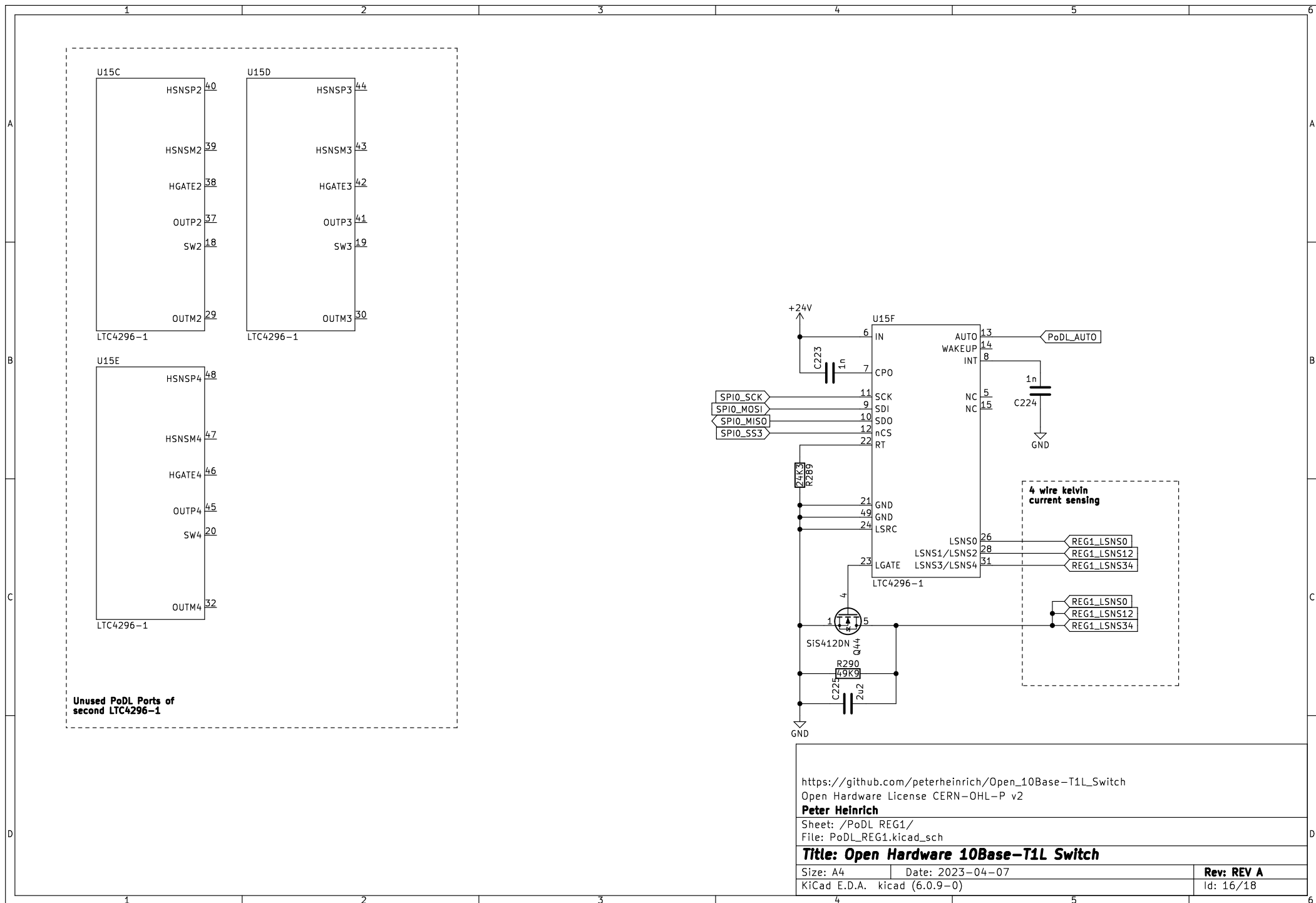
Title: Open Hardware 10Base-T1L Switch

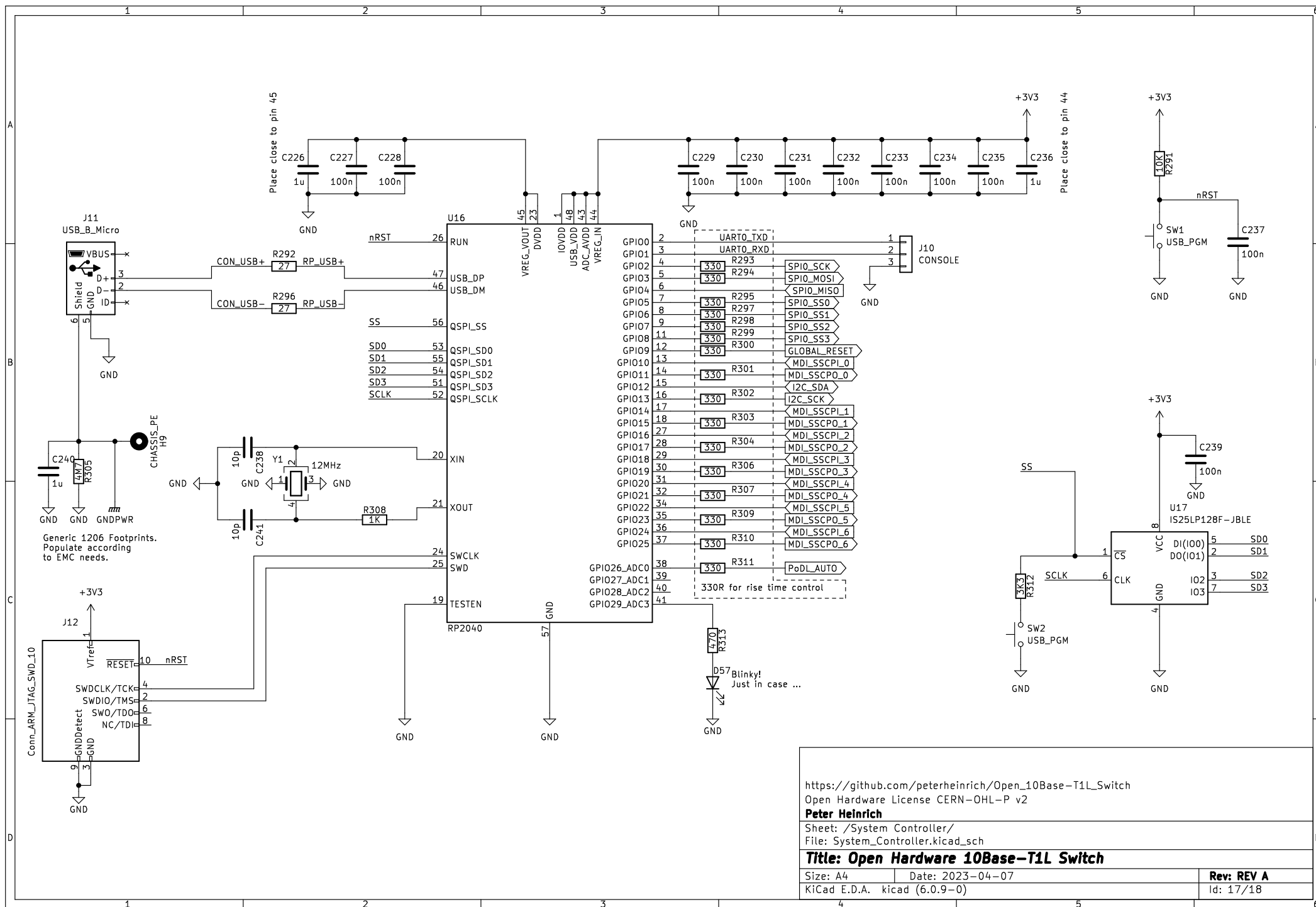
Size: A4 Date: 2023-04-07

KiCad E.D.A. kicad (6.0.9-0)

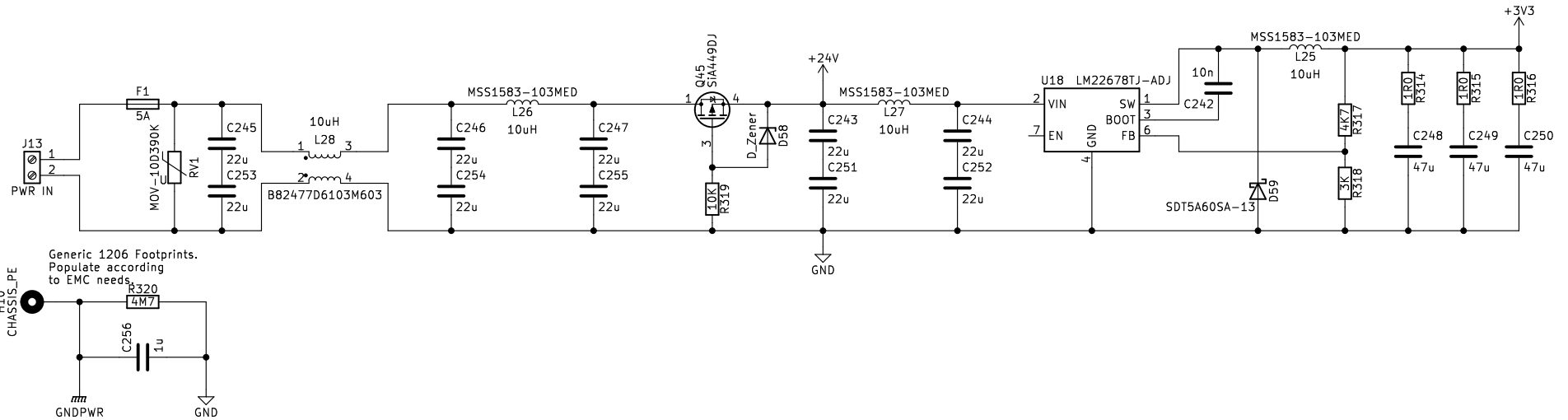
Rev: REV A

Id: 15/18





24V / 5A DC REGULATED



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Sheet: /Power Supply/
File: Power_Supply.kicad_sch

Title: Open Hardware 10Base-T1L Switch

Size: A4 Date: 2023-04-07

KiCad E.D.A. kicad (6.0.9-0)

Rev: REV A

Id: 18/18