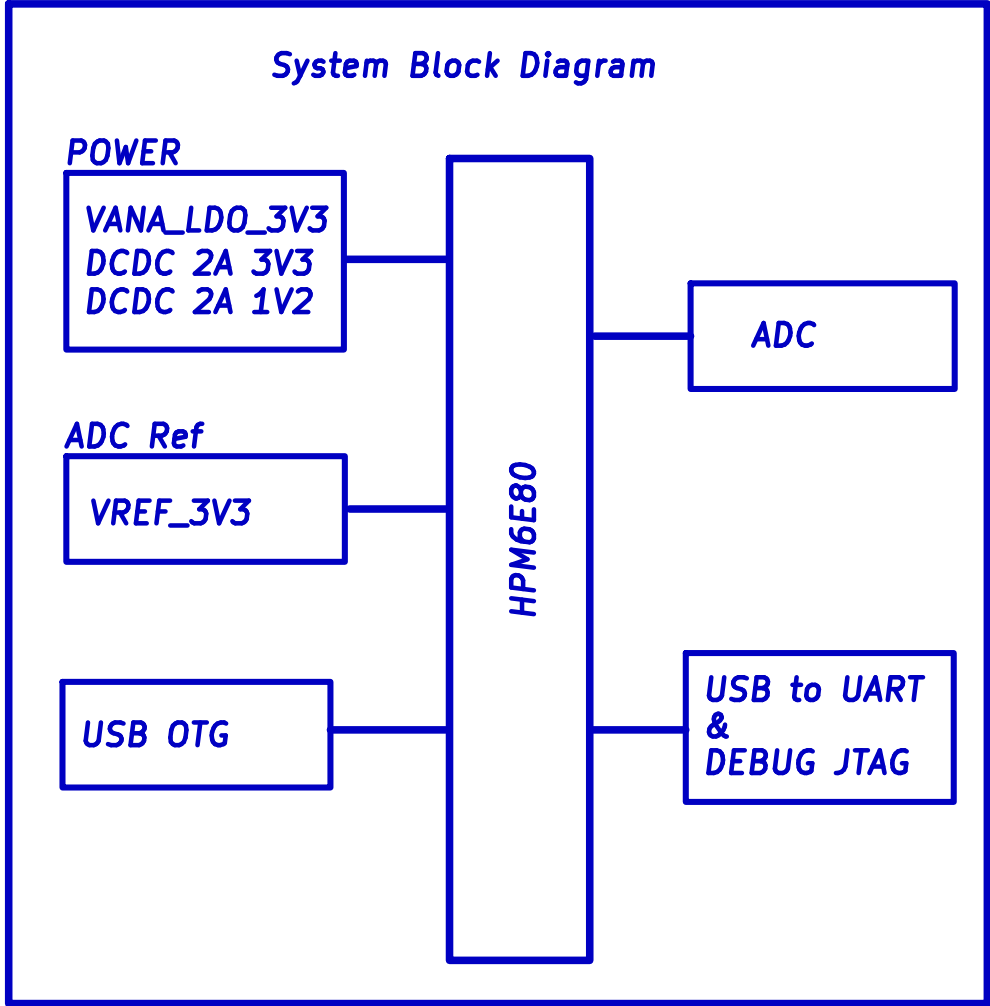


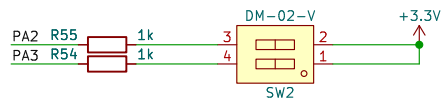


修订历史	
内容	时间
HPM6E00_ADC_EVK_RevC	20240917

System Block Diagram


先楫半导体

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Title: HPM6E00ADCEVKRevC		
Size: A4	Date: 2024-09-17	Rev: RevC
KiCad E.D.A. kicad 7.0.9		Id: 1/16



MCU_PA&JTAG



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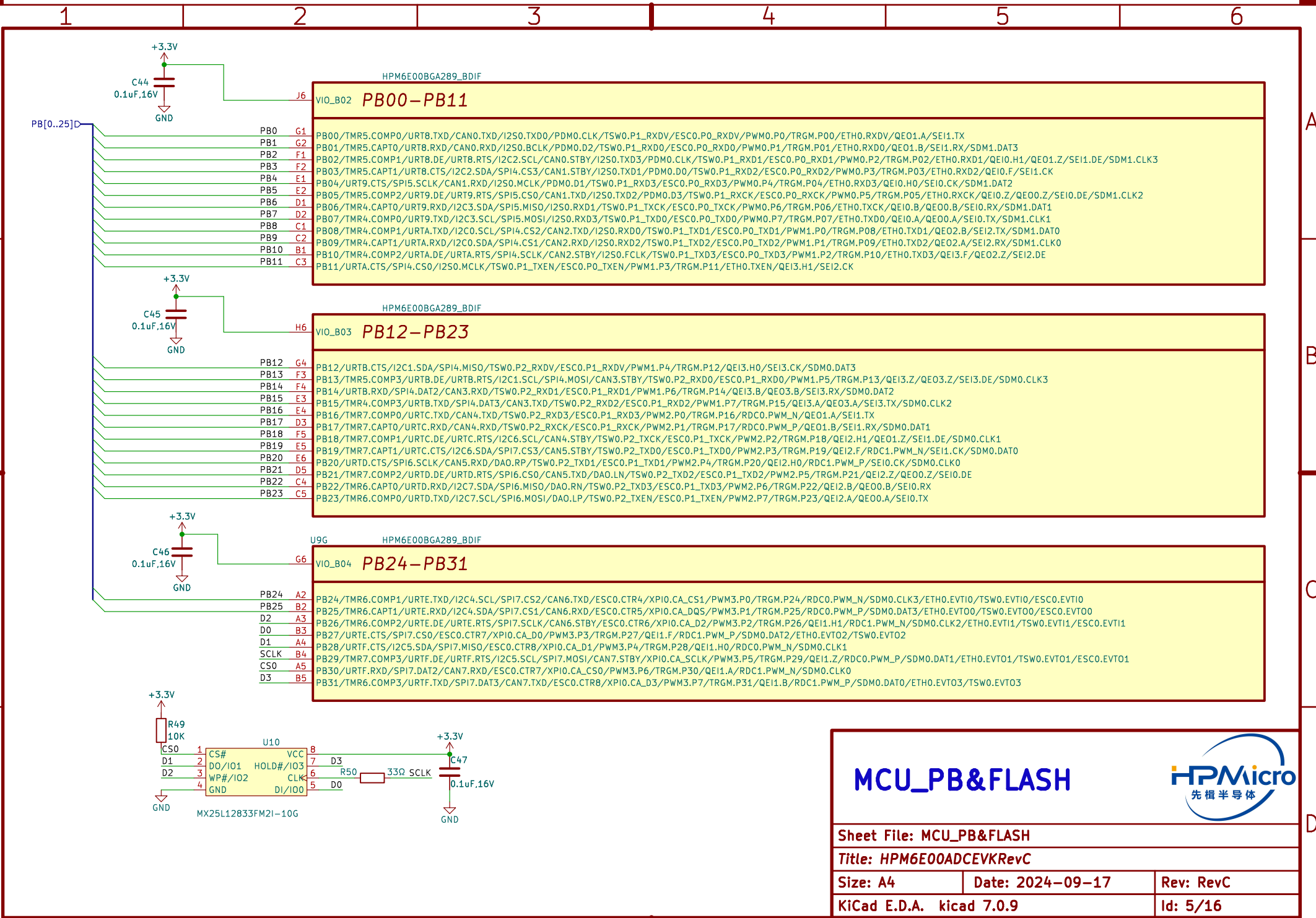
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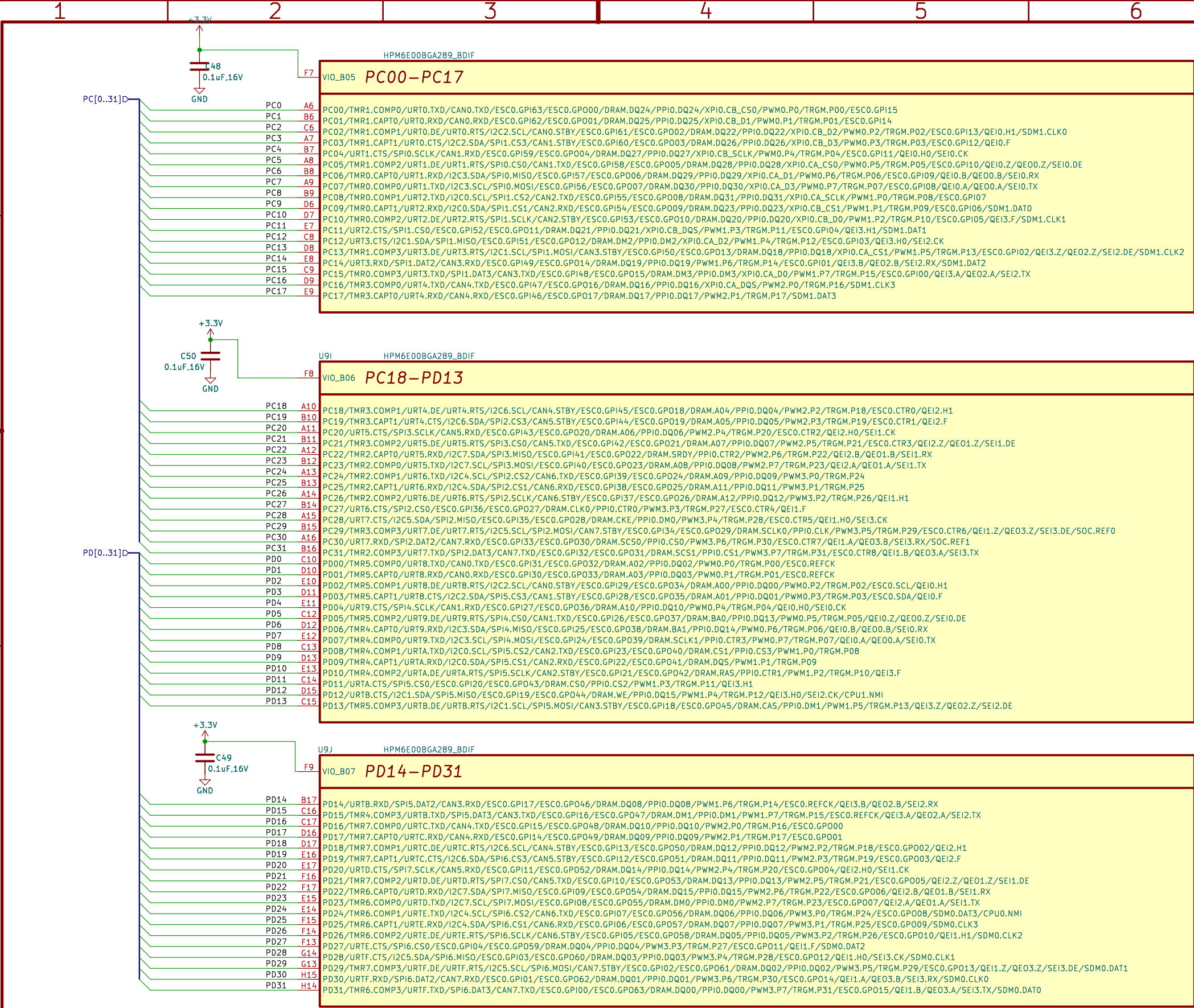
Rev: RevC

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Id: 4/16

A4





MCU_PC&PD



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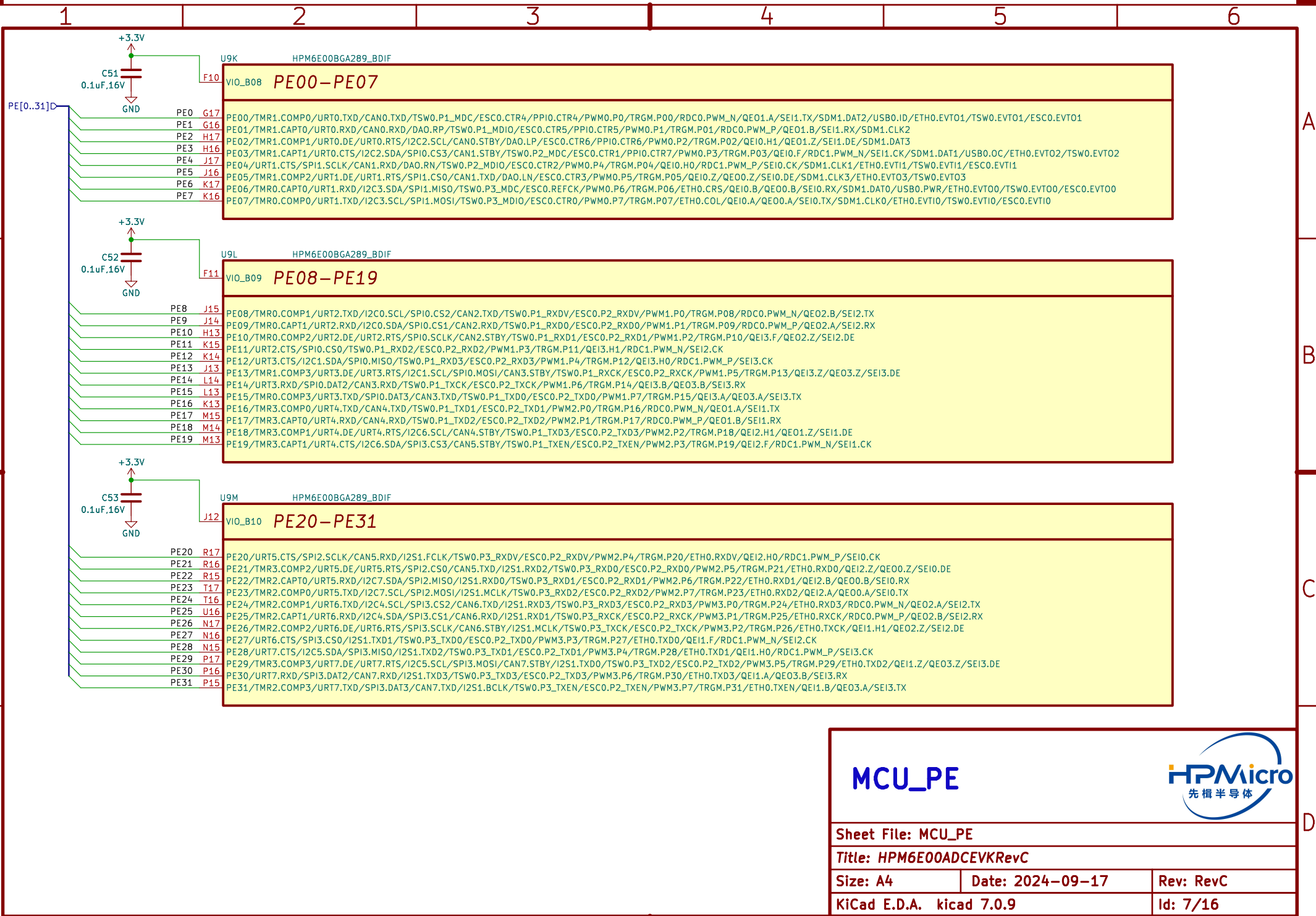
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Rev: RevC

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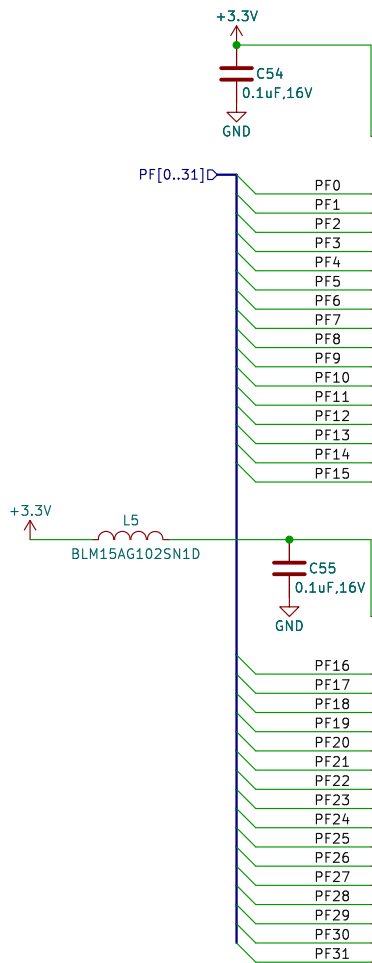
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MCU_PE



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Title: HPM6E00ADCEVKRevC		
Size: A4	Date: 2024-09-17	Rev: RevC
KiCad E.D.A. kicad 7.0.9		Id: 7/16



HPM6E00BGA289_BDIF

VIO_B11 PF00-PF15

PF0	T13	PF00/TMR5.COMP0/URT8.TXD/CAN0.TXD/DA0.LN/TSW0.P3_MDC/ESCO.MDC/PWM0.P0/TRGM.P00/ETH0.MDC/QE01.A/SEI1.TX
PF1	N12	PF01/TMR5.CAPT0/URT8.RXD/CAN0.RXD/DA0.LP/TSW0.P3_MDIO/ESCO.MDIO/PWM0.P1/TRGM.P01/ETH0.MDIO/QE01.B/SEI1.RX
PF2	U12	PF02/TMR5.COMP1/URT8.DE/URT8.RTS/I2C2.SCL/CAN0.STBY/TSW0.P3_TXCK/ESCO.P1_TXCK/PWM0.P2/TRGM.P02/ETH0.TXCK/QE10.H1/QE01.Z/SEI1.DE
PF3	N13	PF03/TMR5.CAPT1/URT8.CTS/I2C2.SDA/SPI4.CS3/CAN1.STBY/DA0.RN/TSW0.P3_TXD0/ESCO.P1_TXD0/PWM0.P3/TRGM.P03/ETH0.TXD0/QE10.F/SEI1.CK
PF4	N14	PF04/URT9.CTS/SPI5.SCLK/CAN1.RXD/DA0.RP/TSW0.P3_TXD1/ESCO.P1_TXD1/PWM0.P4/TRGM.P04/ETH0.TXD1/QE10.H0/SEI0.CK
PF5	R14	PF05/TMR5.COMP2/URT9.DE/URT9.RTS/SPI5.CS0/CAN1.TXD/TSW0.P3_TXD2/ESCO.P1_TXD2/PWM0.P5/TRGM.P05/ETH0.TXD2/QE10.Z/QE00.Z/SEI0.DE
PF6	U11	PF06/TMR4.CAPT0/URT9.RXD/I2C3.SDA/SPI5.MISO/TSW0.P3_TXD3/ESCO.P1_TXD3/PWM0.P6/TRGM.P06/ETH0.TXD3/QE10.B/QE00.B/SEI0.RX
PF7	R13	PF07/TMR4.COMP0/URT9.TXD/I2C3.SCL/SPI5.MOSI/TSW0.P3_TXEN/ESCO.P1_TXEN/PWM0.P7/TRGM.P07/ETH0.TXEN/QE10.A/QE00.A/SEI0.TX
PF8	R12	PF08/TMR4.COMP1/URTA.TXD/I2C0.SCL/SPI4.CS2/CAN2.TXD/TSW0.P3_RXDV/ESCO.P1_RXDV/PWM1.P0/TRGM.P08/ETH0.RXDV/QE02.B/SEI2.TX
PF9	P13	PF09/TMR4.CAPT1/URTA.RXD/I2C0.SDA/SPI4.CS1/CAN2.RXD/TSW0.P3_RXD0/ESCO.P1_RXD0/PWM1.P1/TRGM.P09/ETH0.RXD0/QE02.A/SEI2.RX
PF10	U13	PF10/TMR4.COMP2/URTA.DE/URTA.RTS/SPI4.SCLK/CAN2.STBY/TSW0.P3_RXD1/ESCO.P1_RXD1/PWM1.P2/TRGM.P10/ETH0.RXD1/QE13.F/QE02.Z/SEI2.DE
PF11	P12	PF11/URTA.CTS/SPI4.CS0/TSW0.P3_RXD2/ESCO.P1_RXD2/PWM1.P3/TRGM.P11/ETH0.RXD2/QE13.H1/SEI2.CK
PF12	T14	PF12/URTB.CTS/I2C1.SDA/SPI4.MISO/TSW0.P3_RXD3/ESCO.P1_RXD3/PWM1.P4/TRGM.P12/ETH0.RXD3/QE13.H0/SEI3.CK
PF13	U14	PF13/TMR5.COMP3/URTB.DE/URTB.RTS/I2C1.SCL/SPI4.MOSI/CAN3.STBY/TSW0.P3_RXCK/ESCO.P1_RXCK/PWM1.P5/TRGM.P13/ETH0.RXCK/QE13.Z/QE03.Z/SEI3.DE
PF14	U15	PF14/URTB.RXD/SPI4.DAT2/CAN3.RXD/TSW0.P3_RXER/ESCO.P1_RXER/PWM1.P6/TRGM.P14/ETH0.RXER/QE13.B/QE03.B/SEI3.RX
PF15	T15	PF15/TMR4.COMP3/URTB.TXD/SPI4.DAT3/CAN3.TXD/TSW0.P1_RXER/ESCO.P2_RXER/PWM1.P7/TRGM.P15/ETH0.TXER/QE13.A/QE03.A/SEI3.TX

HPM6E00BGA289_BDIF

VIO_B12 PF16-PF31

PF16	U9	PF16/TMR7.COMP0/URTC.TXD/CAN4.TXD/PWM2.P0/TRGM.P16/SDM0.DAT0
PF17	U10	PF17/TMR7.CAPT0/URTC.RXD/CAN4.RXD/PWM2.P1/TRGM.P17/SDM0.CLK0
PF18	T10	PF18/TMR7.COMP1/URTC.DE/URTC.RTS/I2C6.SCL/CAN4.STBY/PWM2.P2/TRGM.P18/SDM0.DAT1/USB0.PWR/ETH0.EVT00/TSW0.EVT00/ESCO.EVT00
PF19	T8	PF19/TMR7.CAPT1/URTC.CTS/I2C6.SDA/SPI7.CS3/CAN5.STBY/PWM2.P3/TRGM.P19/SDM0.CLK1/USB0.PWR/ETH0.EVT02/TSW0.EVT02
PF20	T11	PF20/URTD.CTS/SPI6.SCLK/CAN5.RXD/PWM2.P4/TRGM.P20/SDM0.DAT3/USB0.OC/ETH0.EVT01/TSW0.EVT01/ESCO.EVT01
PF21	N11	PF21/TMR7.COMP2/URTD.DE/URTD.RTS/SPI6.CS0/CAN5.TXD/PWM2.P5/TRGM.P21/SDM0.DAT2/USB0.ID/ETH0.EVT10/TSW0.EVT10/ESCO.EVT10
PF22	T9	PF22/TMR6.CAPT0/URTD.RXD/I2C7.SDA/SPI6.MISO/PWM2.P6/TRGM.P22/SDM0.CLK2/USB0.ID/ETH0.EVT11/TSW0.EVT11/ESCO.EVT11
PF23	R8	PF23/TMR6.COMP0/URTD.TXD/I2C7.SCL/SPI6.MOSI/PWM2.P7/TRGM.P23/SDM0.CLK3/USB0.OC
PF24	P9	PF24/TMR6.COMP1/URTE.TXD/I2C4.SCL/SPI7.CS2/CAN6.TXD/PWM3.P0/TRGM.P24/SDM1.DAT0
PF25	P10	PF25/TMR6.CAPT1/URTE.RXD/I2C4.SDA/SPI7.CS1/CAN6.RXD/PWM3.P1/TRGM.P25/SDM1.CLK0
PF26	T12	PF26/TMR6.COMP2/URTE.DE/URTE.RTS/SPI7.SCLK/CAN6.STBY/PWM3.P2/TRGM.P26/SDM1.DAT1/CPU0.NMI/ETH0.EVT03/TSW0.EVT03
PF27	P11	PF27/URTE.CTS/SPI7.CS0/PWM3.P3/TRGM.P27/SDM1.CLK1
PF28	R10	PF28/URTF.CTS/I2C5.SDA/SPI7.MISO/PWM3.P4/TRGM.P28/SDM1.DAT2/CPU1.NMI
PF29	N10	PF29/TMR7.COMP3/URTF.DE/URTF.RTS/I2C5.SCL/SPI7.MOSI/CAN7.STBY/PWM3.P5/TRGM.P29/SDM1.CLK2
PF30	N9	PF30/URTF.RXD/SPI7.DAT2/CAN7.RXD/PWM3.P6/TRGM.P30/SDM1.CLK3
PF31	R9	PF31/TMR6.COMP3/URTF.TXD/SPI7.DAT3/CAN7.TXD/PWM3.P7/TRGM.P31/SDM1.DAT3

MCU_PF



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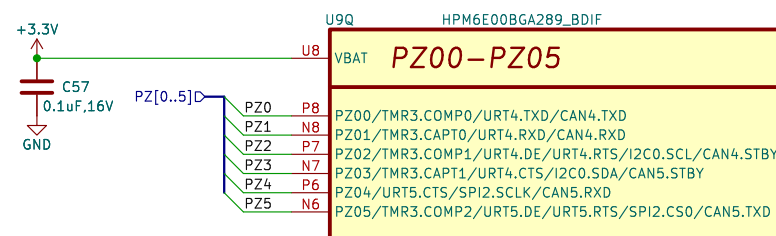
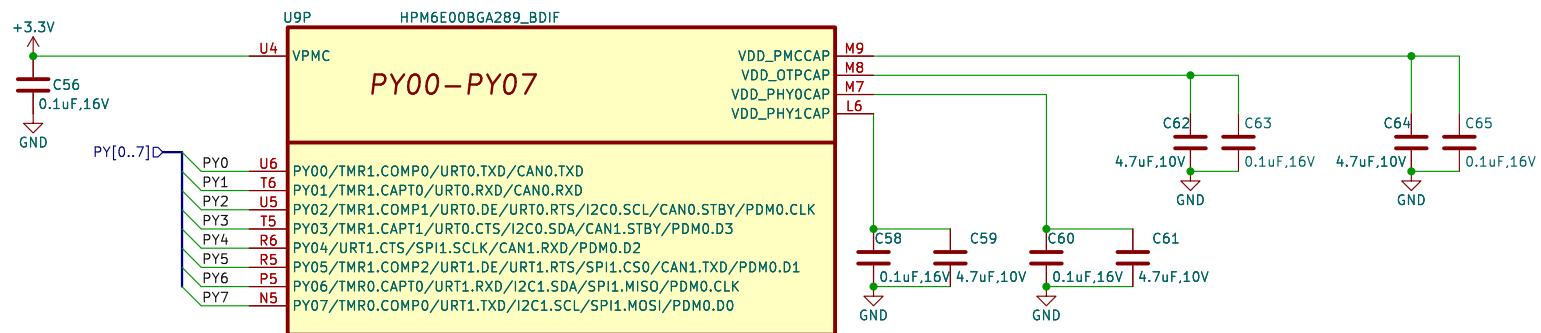
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Date: 2024-09-17

Rev: RevC

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Id: 8/16



MCU_PY&PZ



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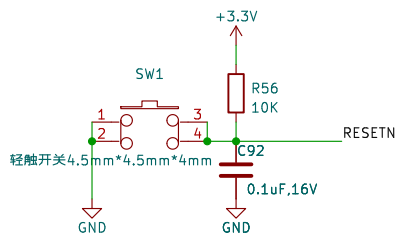
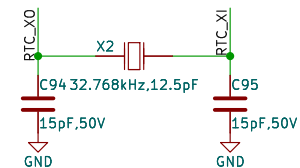
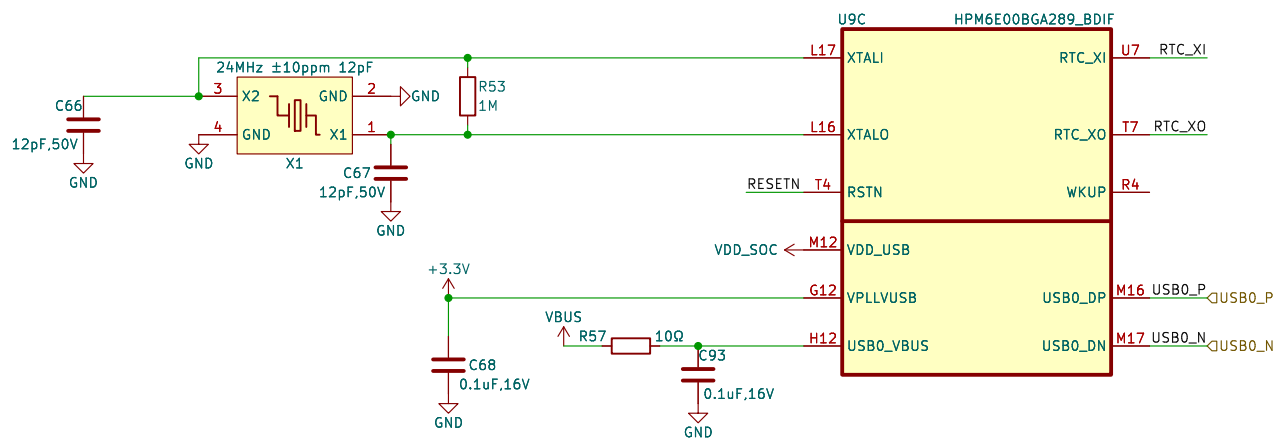
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Rev: RevC

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Id: 9/16

1 2 3 4 5 6



MCU_USB&OSC



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Date: 2024-09-17

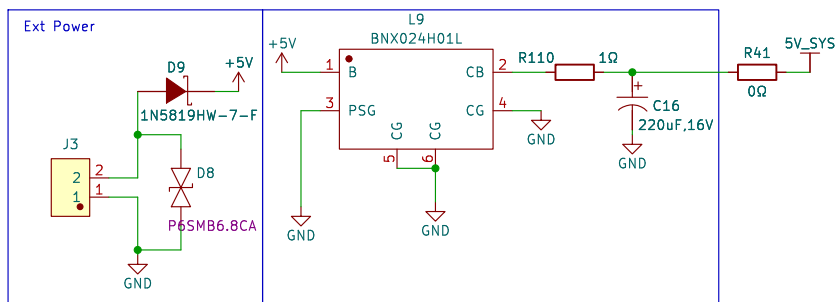
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Id: 10/16

A4

INPUT Filter



DCDC 5V-3.3V

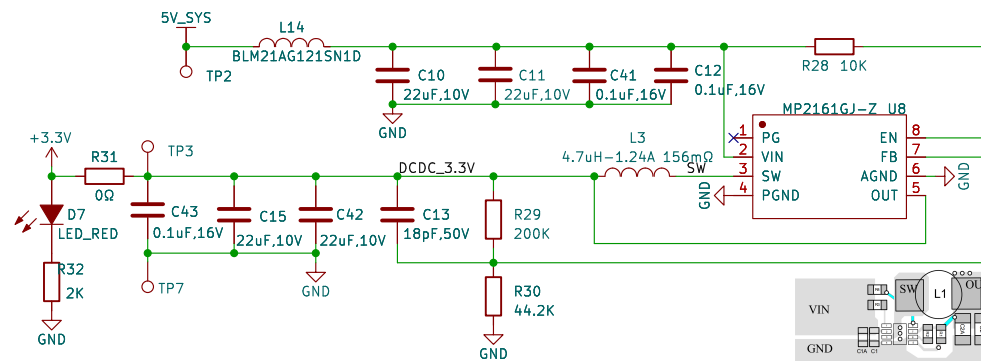
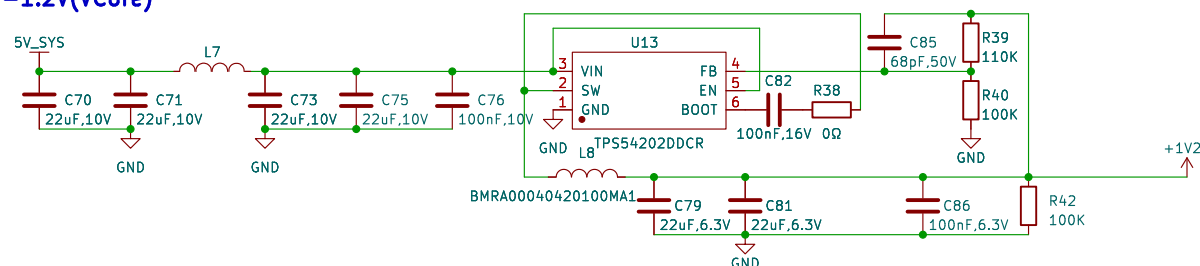
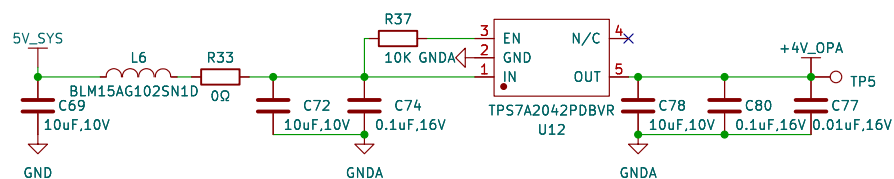


Figure 3: Recommended PCB Layout

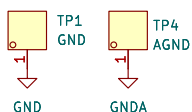
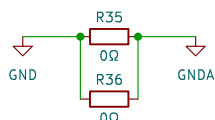
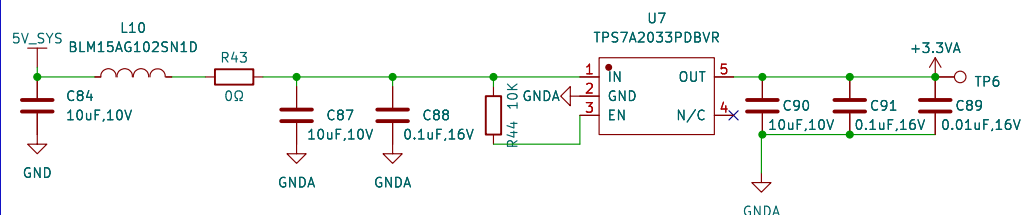
DCDC 5V-1.2V(VCore)



OPA VDD



LDO 5V-3.3V(ADC)



Power



Sheet File: Power

Title: HPM6E00ADCEVKRevC

Size: A4

Date: 2024-09-17

Rev: RevC

KiCad E.D.A. kicad 7.0.9

Id: 11/16

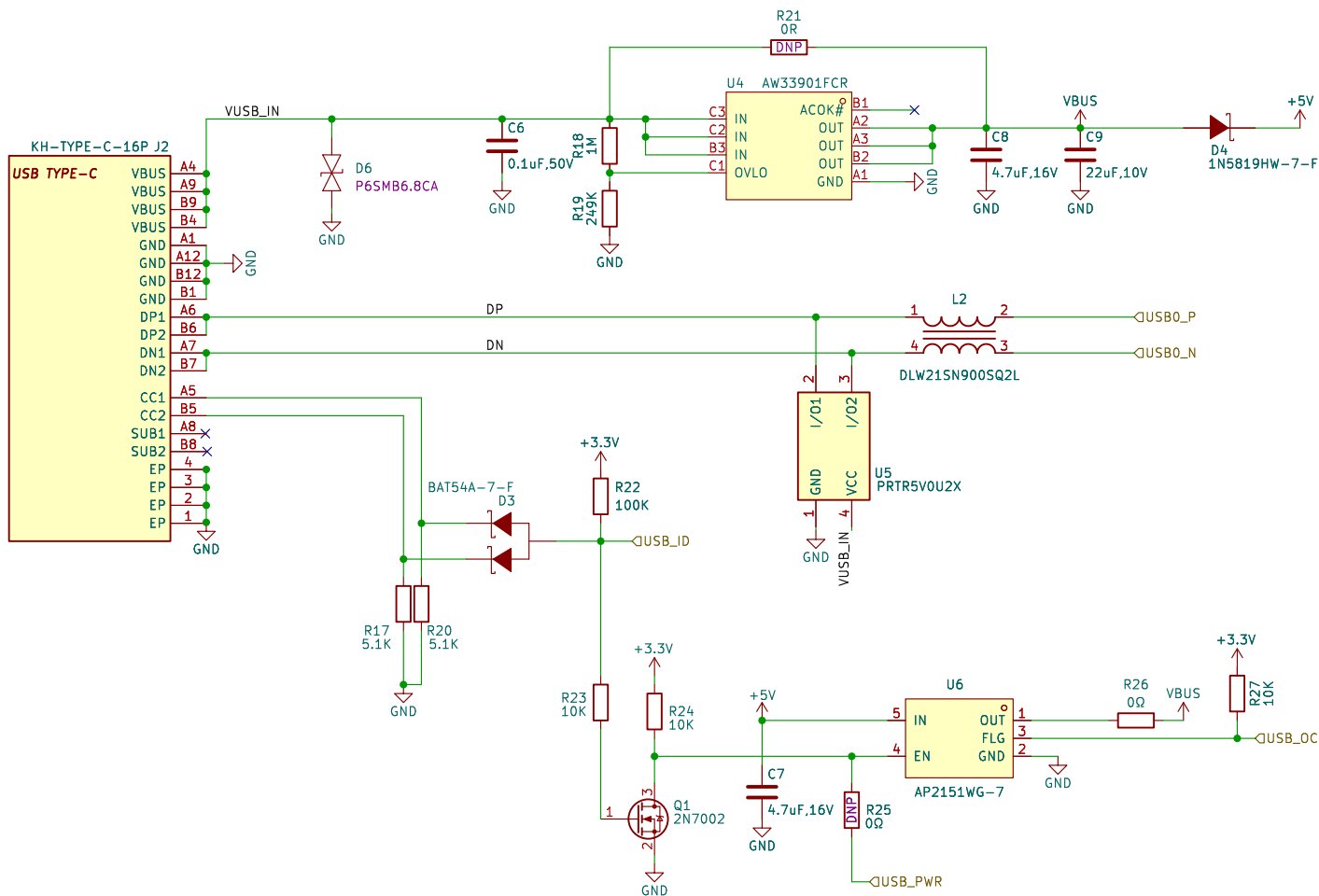
[illegible]

The diagram illustrates a USB-to-UART bridge circuit. A yellow CH340E IC (U3) is the central component. Its pins are connected as follows:

- VCC (Pin 10):** Connected to a +3.3V supply.
- GND (Pin 3):** Connected to ground.
- TXD (Pin 8):** Connected to a +3.3V supply through a 33Ω resistor (R13).
- RXD (Pin 9):** Connected to a +3.3V supply through a 33Ω resistor (R14).
- CTS (Pin 5):** Connected to ground through a 2KΩ resistor (R12).
- RTS (Pin 4):** Connected to ground through a 2KΩ resistor (R12).
- UD+ (Pin 1):** Connected to a +3.3V supply through a 4.7μF capacitor (C4) and a 0.1μF capacitor (C5) in parallel, with the other ends of the capacitors connected to ground.
- UD- (Pin 2):** Connected to ground.
- TNOW (Pin 6):** Connected to a green LED (D2) through a 1KΩ resistor (R11). The other end of the resistor is connected to ground.

The circuit is powered by a +3.3V supply. The USB2UART_P and USB2UART_N signals are connected to the UD+ and UD- pins, respectively. The TXD and RXD pins are connected to the TXD0 and RXD0 pins of a microcontroller (CURT0). The CTS and RTS pins are connected to the CTS0 and RTS0 pins of the microcontroller. The LED (D2) is labeled "LED GREEN".

Id: 12/16



USB



Sheet File: USB

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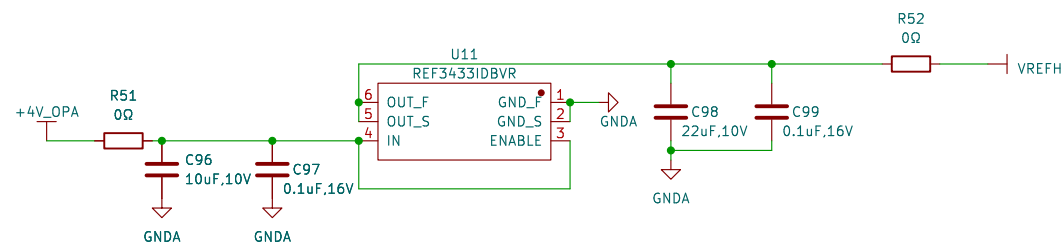
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Date: 2024-09-17

Rev: RevC

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Id: 13/16



VREF



Sheet File: VREF

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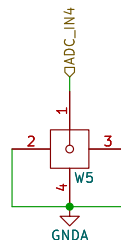
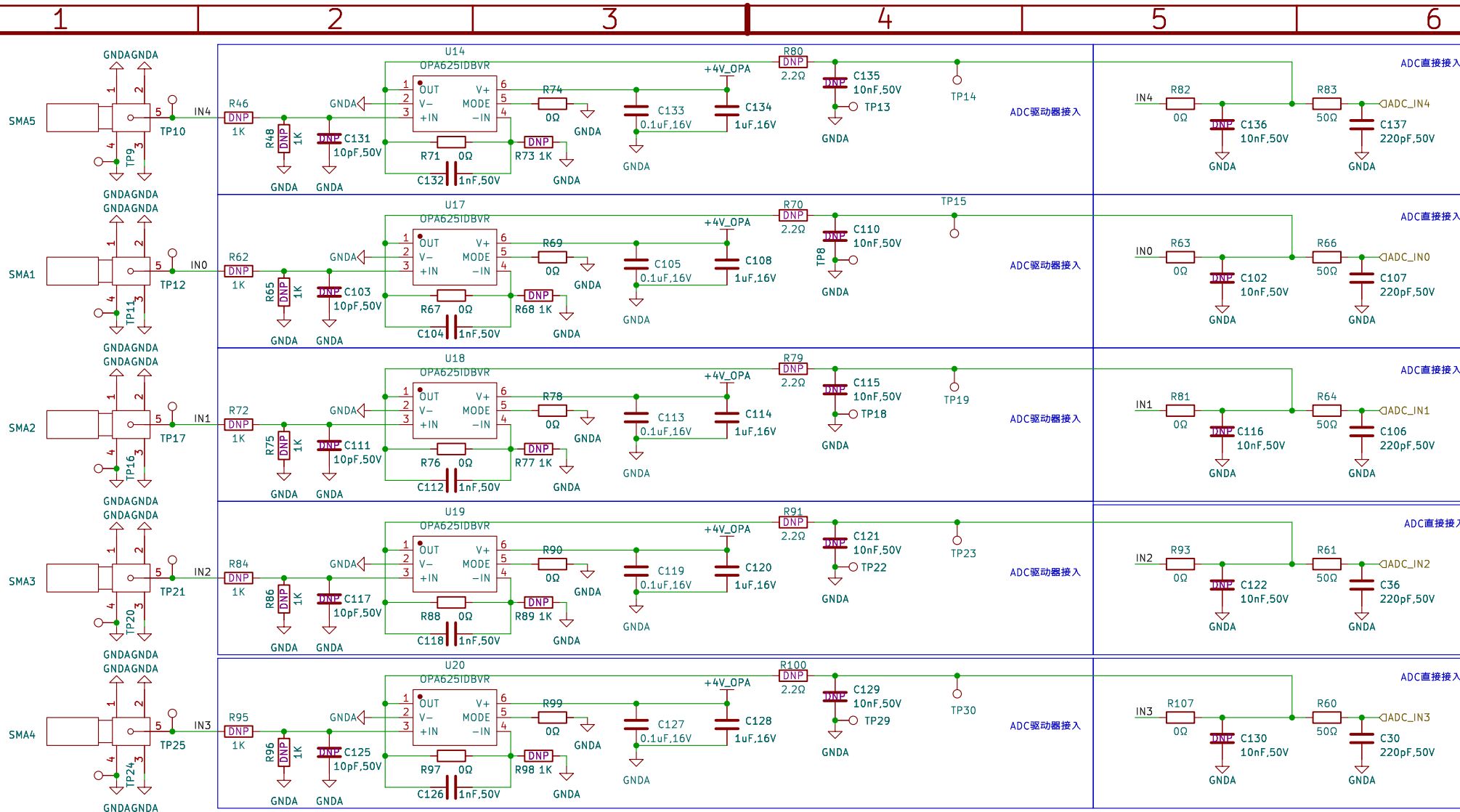
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Date: 2024-09-17

Rev: RevC

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Id: 14/16



ADC



Sheet File: ADC_Signal_IN

Title: HPM6E00ADCEVKRevC

Size: A4

Date: 2024-09-17

Rev: RevC

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Id: 15/16

A4

1

2

3

4

5

6

A

B

C

D



Assembly



Sheet File: Assembly		
Title: HPM6E00ADCEVKRevC		
Size: A4	Date: 2024-09-17	Rev: RevC
KiCad E.D.A. kicad 7.0.9		Id: 16/16

A4