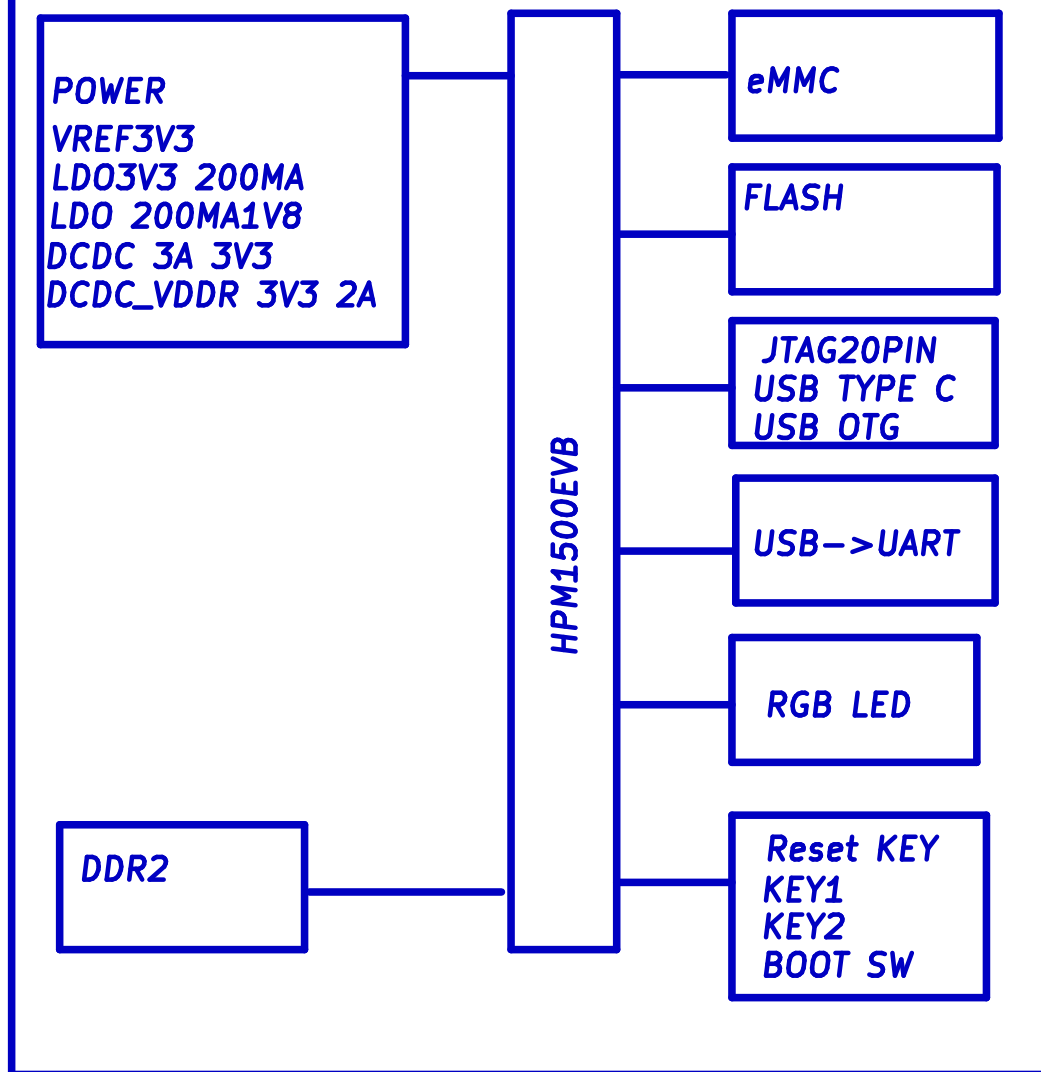


System block diagram



修订历史

内容	时间
HPM1500_DDR2_CORE_RevA JTAG 调试接口 (20pin) MCU+DDR Power by USB port eMMC as boot XPI as boot Boot code LED as indicator Button UART 300pin connector(100pin * 3)	20230312

System block diagram



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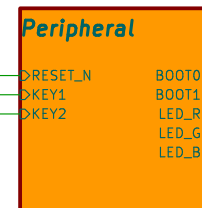
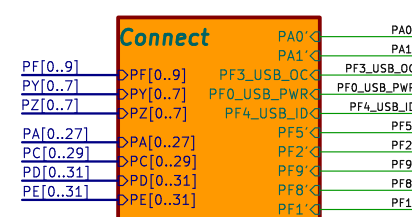
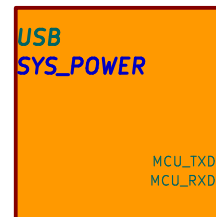
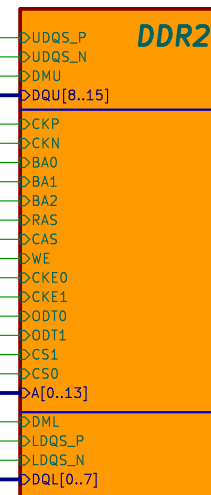
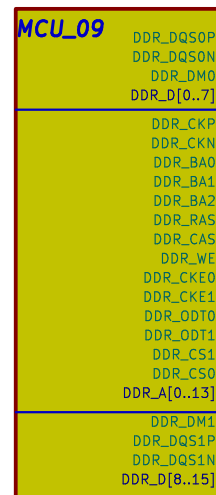
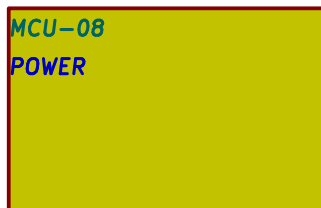
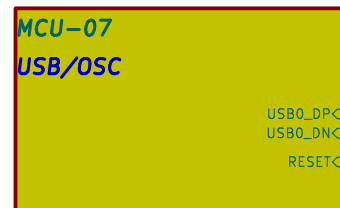
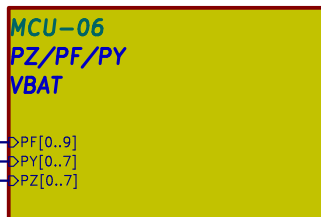
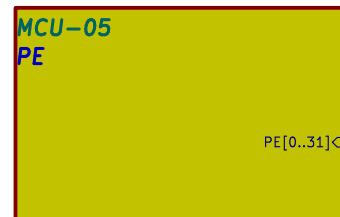
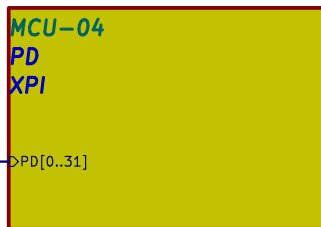
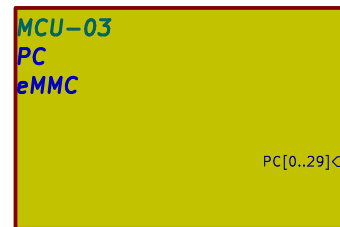
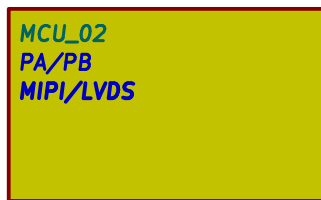
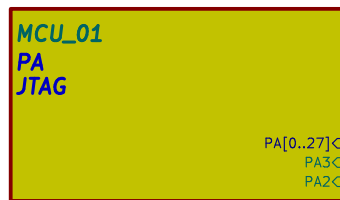
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KiCad E.D.A. kicad 7.0.2

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01-Main



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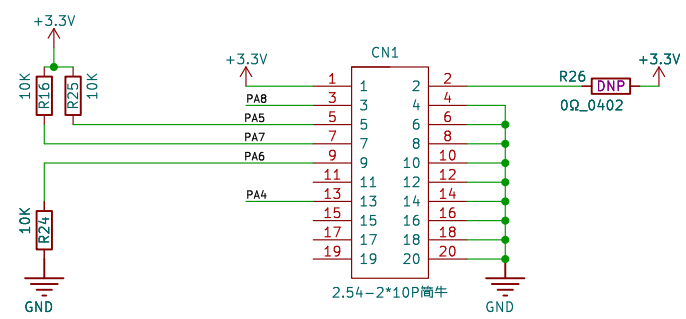
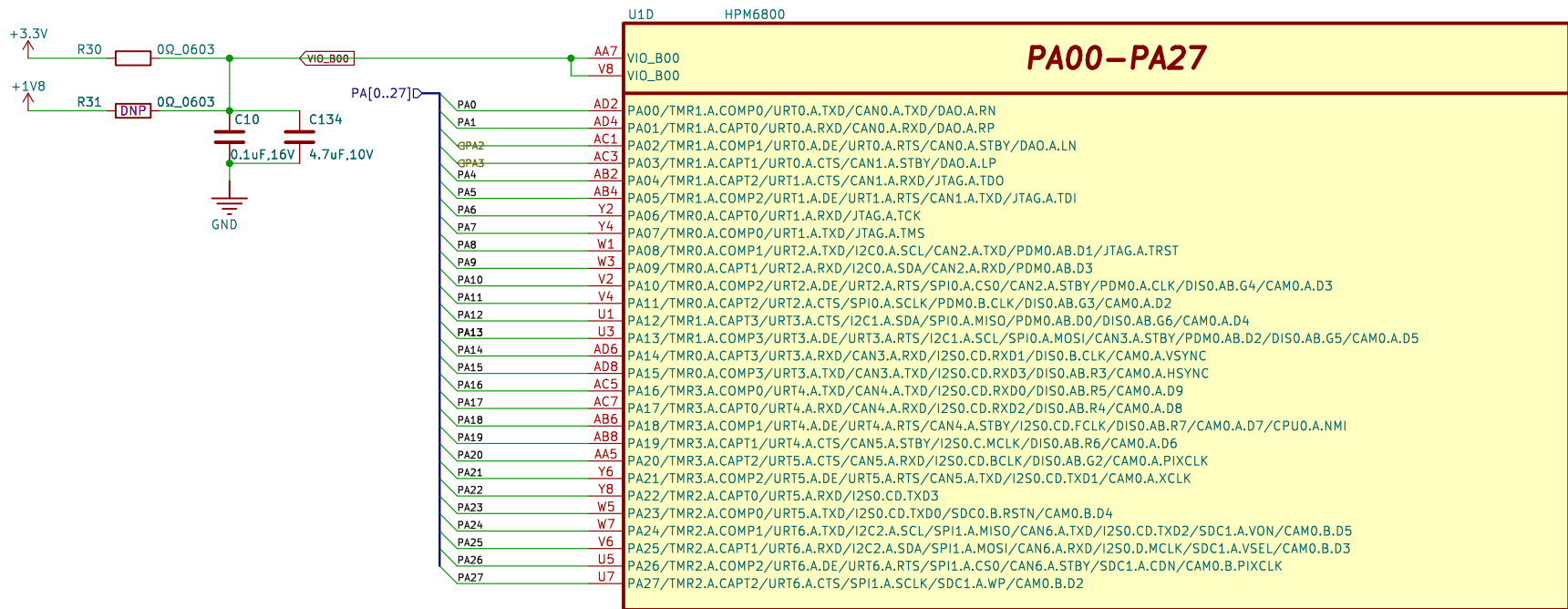
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KiCad E.D.A. kicad 7.0.2

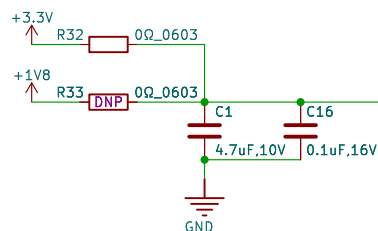
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02_MCU_01



MIPI/LVDS



引脚注意

U1E HPM6800		PA28-PB31	
	J7	VIO_B01	
	M8	VIO_B01	
	R5	VIO_B01	
	R7	VIO_B01	
PA28	M6	PA28/TMR3.A.CAPT3/URT7.A.CTS/I2C3.A.SDA/DISO.AB.R0/MIPI0.A.REXT	
PA29	L5	PA29/TMR3.A.COMP3/URT7.A.DE/URT7.A.RTS/I2C3.A.SCL/CAN7.A.STBY/CAM0.B.XCLK/MIPI1.A.REXT	
MIPI0.D0_N	N1	PA30/TMR2.A.CAPT3/URT7.A.RXD/CAN7.A.RXD/DISO.AB.R2/MIPI0.A.D0N/LVDS0.A.D0N	
MIPI0.D0_P	N3	PA31/TMR2.A.COMP3/URT7.A.TXD/CAN7.A.TXD/DISO.AB.R1/MIPI0.A.D0P/LVDS0.A.D0P	
MIPI0.CK_N	P2	PB00/TMR5.A.COMP0/URT0.B.TXD/CAN0.B.TXD/DISO.AB.G1/MIPI0.A.CKN/LVDS0.A.CKN	
MIPI0.CK_P	P4	PB01/TMR5.A.CAPT0/URT0.B.RXD/CAN0.B.RXD/DISO.AB.G0/MIPI0.A.CKP/LVDS0.A.CKP	
MIPI0.D1_N	T2	PB02/TMR5.A.COMP1/URT0.B.DE/URT0.B.RTS/CAN0.B.STBY/DISO.AB.B1/MIPI0.A.D1N/LVDS0.A.D1N	
MIPI0.D1_P	T4	PB03/TMR5.A.CAPT1/URT0.B.CTS/SPI3.A.CS3/CAN1.B.STBY/DISO.AB.B0/MIPI0.A.D1P/LVDS0.A.D1P	
MIPI2.D0_N	F2	PB04/TMR5.A.CAPT2/URT1.B.CTS/SPI2.A.CS0/CAN1.B.RXD/DISO.AB.B2/MIPI2.A.D0N/LVDS2.A.D0N	
MIPI2.D0_P	F4	PB05/TMR5.A.COMP2/URT1.B.DE/URT1.B.RTS/SPI2.A.SCLK/CAN1.B.TXD/DISO.AB.G7/MIPI2.A.D0P/LVDS2.A.D0P	
MIPI2.D1_N	G1	PB06/TMR4.A.CAPT0/URT1.B.RXD/SPI2.A.MISO/DISO.AB.B3/MIPI2.A.D1N/LVDS2.A.D1N	
MIPI2.D1_P	G3	PB07/TMR4.A.COMP0/URT1.B.TXD/SPI2.A.MOSI/DISO.AB.B4/MIPI2.A.D1P/LVDS2.A.D1P	
MIPI2.CK_N	H2	PB08/TMR4.A.COMP1/URT2.B.TXD/I2C0.B.SCL/SPI3.A.CS2/CAN2.B.TXD/DISO.AB.B6/MIPI2.A.CKN/LVDS2.A.CKN	
MIPI2.CK_P	H4	PB09/TMR4.A.CAPT1/URT2.B.RXD/I2C0.B.SDA/SPI3.A.CS1/CAN2.B.RXD/DISO.AB.B5/MIPI2.A.CKP/LVDS2.A.CKP	
MIPI2.D2_N	K2	PB10/TMR4.A.COMP2/URT2.B.DE/URT2.B.RTS/SPI3.A.CS0/CAN2.B.STBY/DISO.AB.EN/MIPI2.A.D2N/LVDS2.A.D2N	
MIPI2.D2_P	K4	PB11/TMR4.A.CAPT2/URT2.B.CTS/SPI3.A.SCLK/DISO.AB.B7/MIPI2.A.D2P/LVDS2.A.D2P	
MIPI2.D3_N	L1	PB12/TMR5.A.CAPT3/URT3.B.CTS/I2C1.B.SDA/SPI3.A.MISO/DISO.AB.HSYNC/MIPI2.A.D3N/LVDS2.A.D3N	
MIPI2.D3_P	L3	PB13/TMR5.A.COMP3/URT3.B.DE/URT3.B.RTS/I2C1.B.SCL/SPI3.A.MOSI/CAN3.B.STBY/DISO.A.CLK/MIPI2.A.D3P/LVDS2.A.D3P	
PB14	M2	PB14/TMR4.A.CAPT3/URT3.B.RXD/SPI3.A.DAT2/CAN3.B.RXD/DISO.AB.VSYNC/SYCTL.B.CLK_OBS1/MIPI2.A.REXT	
PB15	M4	PB15/TMR4.A.COMP3/URT3.B.TXD/SPI3.A.DAT3/CAN3.B.TXD/SDC0.B.DS/SYCTL.B.CLK_OBS3/MIPI3.A.REXT	
MIPI1.D0_N	N5	PB16/TMR7.A.COMP0/URT4.B.TXD/CAN4.B.TXD/CAM0.B.D6/MIPI1.A.D0N/LVDS1.A.D0N	
MIPI1.D0_P	N7	PB17/TMR7.A.CAPT0/URT4.B.RXD/CAN4.B.RXD/CAM0.B.D7/MIPI1.A.D0P/LVDS1.A.D0P	
MIPI1.CK_N	P6	PB18/TMR7.A.COMP1/URT4.B.DE/URT4.B.RTS/CAN4.B.STBY/I2S1.AB.TXD1/CAM0.B.D9/MIPI1.A.CKN/LVDS1.A.CKN	
MIPI1.CK_P	P8	PB19/TMR7.A.CAPT1/URT4.B.CTS/SPI0.B.CS3/CAN5.B.STBY/I2S1.B.MCLK/CAM0.B.D8/MIPI1.A.CKP/LVDS1.A.CKP	
MIPI1.D1_P	T8	PB20/TMR7.A.CAPT2/URT5.B.CTS/SPI1.B.CS0/CAN5.B.RXD/I2S1.AB.TXD2/CAM0.B.HSYNC/MIPI1.A.D1P/LVDS1.A.D1P	
MIPI1.D1_N	T6	PB21/TMR7.A.COMP2/URT5.B.DE/URT5.B.RTS/SPI1.B.SCLK/CAN5.B.TXD/I2S1.AB.TXD0/CAM0.B.VSYNC/MIPI1.A.D1N/LVDS1.A.D1N	
MIPI3.D0_N	F6	PB22/TMR6.A.CAPT0/URT5.B.RXD/SPI1.B.MISO/I2S1.AB.TXD3/SDC0.B.DAT6/MIPI3.A.D0N/LVDS3.A.D0N	
MIPI3.D1_P	G7	PB23/TMR6.A.COMP0/URT5.B.TXD/SPI1.B.MOSI/I2S1.AB.FCLK/SDC0.B.DAT5/MIPI3.A.D1P/LVDS3.A.D1P	
MIPI3.D0_P	F8	PB24/TMR6.A.COMP1/URT6.B.TXD/I2C2.B.SCL/SPI0.B.CS2/CAN6.B.TXD/I2S1.A.MCLK/SDC0.B.DAT7/MIPI3.A.D0P/LVDS3.A.D0P	
MIPI3.D1_N	G5	PB25/TMR6.A.CAPT1/URT6.B.RXD/I2C2.B.SDA/SPI0.B.CS1/CAN6.B.RXD/I2S1.AB.BCLK/SDC0.B.DAT4/MIPI3.A.D1N/LVDS3.A.D1N	
MIPI3.CK_N	H6	PB26/TMR6.A.COMP2/URT6.B.DE/URT6.B.RTS/SPI0.B.CS0/CAN6.B.STBY/I2S1.AB.RXD1/SDC0.BC.DAT3/MIPI3.A.CKN/LVDS3.A.CKN	
MIPI3.CK_P	H8	PB27/TMR6.A.CAPT2/URT6.B.CTS/SPI0.B.SCLK/I2S1.AB.RXD3/SDC0.BC.DAT0/MIPI3.A.CKP/LVDS3.A.CKP	
MIPI3.D2_N	J5	PB28/TMR7.A.CAPT3/URT7.B.CTS/I2C3.B.SDA/SPI0.B.MISO/I2S1.AB.RXD0/SDC0.BC.DAT1/CPU0.B.NMI/MIPI3.A.D2N/LVDS3.A.D2N	
MIPI3.D2_P	K6	PB29/TMR7.A.COMP3/URT7.B.DE/URT7.B.RTS/I2C3.B.SCL/SPI0.B.MOSI/CAN7.B.STBY/I2S1.AB.RXD2/SDC0.BC.DAT2/MIPI3.A.D2P/LVDS3.A.D2P	
MIPI3.D3_N	L7	PB30/TMR6.A.CAPT3/URT7.B.RXD/SPI0.B.DAT2/CAN7.B.RXD/SDC0.BC.CLK/MIPI3.A.D3N/LVDS3.A.D3N	
MIPI3.D3_P	K8	PB31/TMR6.A.COMP3/URT7.B.TXD/SPI0.B.DAT3/CAN7.B.TXD/SDC0.BC.CMD/MIPI3.A.D3P/LVDS3.A.D3P	

03_MCU_02



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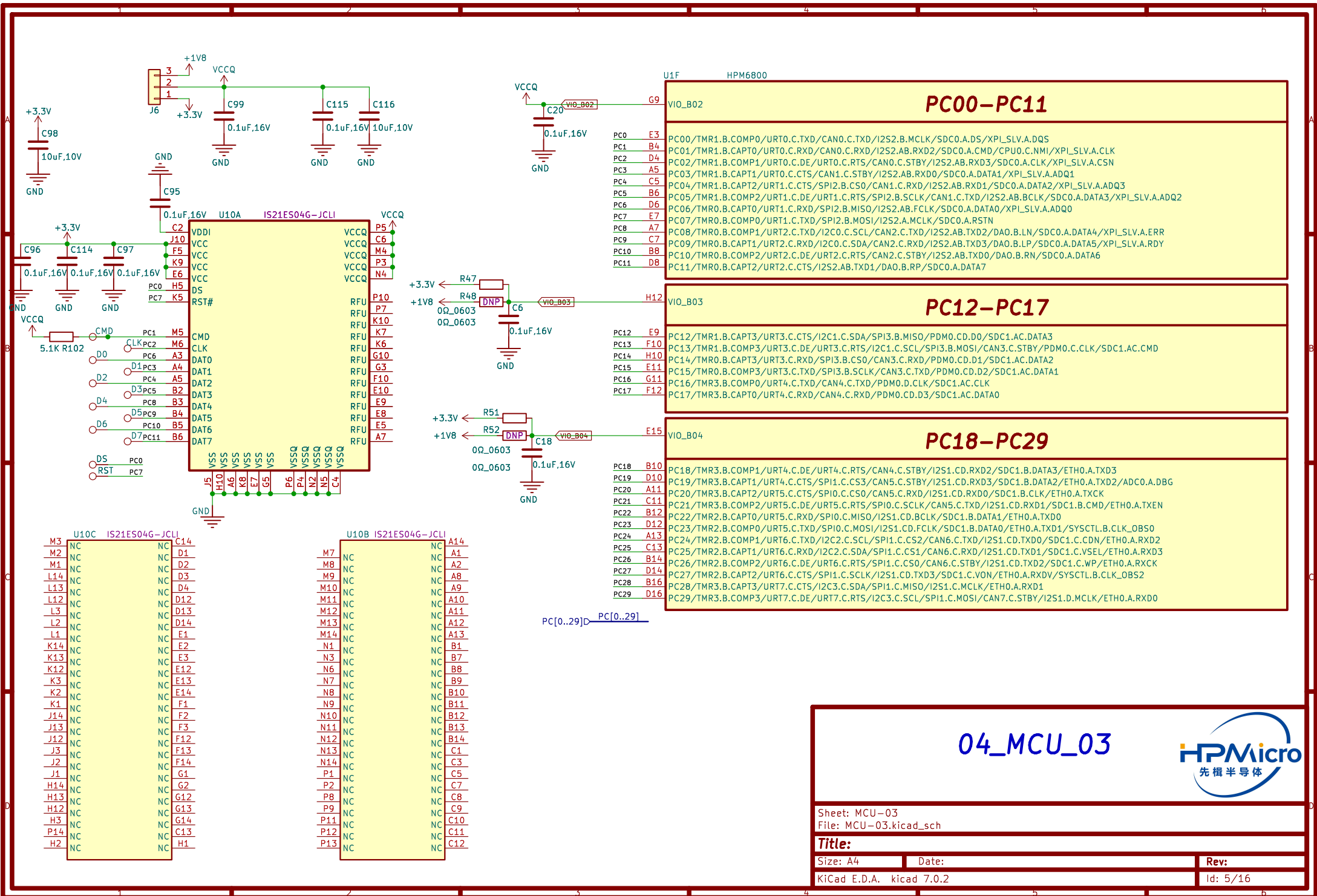
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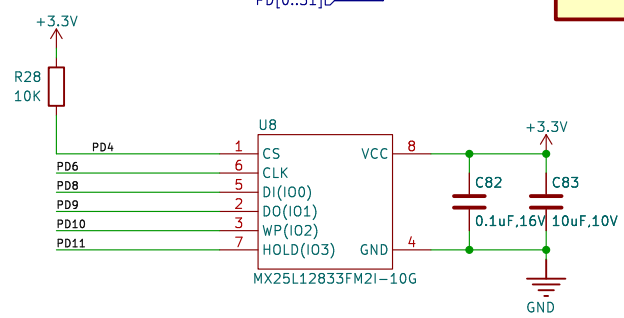
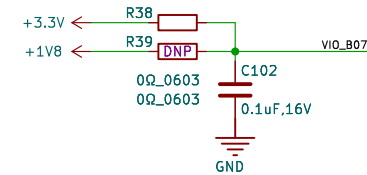
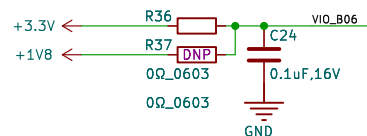
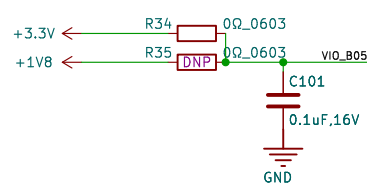
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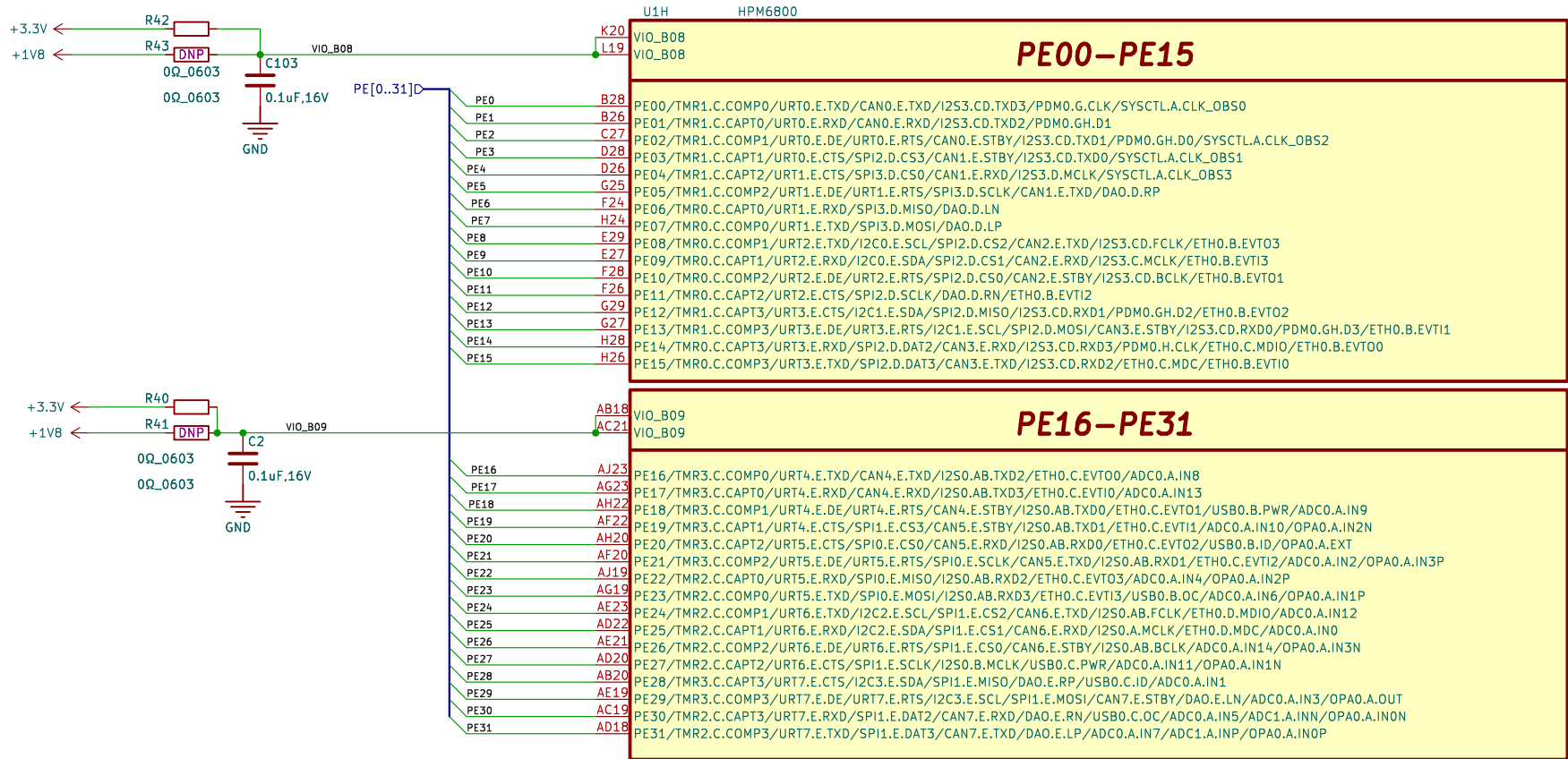


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PC30	PC30/TMR2.B.CAPT3/URT7.C.RXD/CAN7.C.RXD/DAO.C.LN/SDC1.B.CDN
PC31	PC31/TMR2.B.COMP3/URT7.C.TXD/CAN7.C.TXD/DAO.C.LP/SDC1.B.VSEL
PD00	PD00/TMR5.B.COMP0/URT0.D.TXD/CAN0.D.TXD/DAO.C.RN/SDC1.B.VON
PD01	PD01/TMR5.B.CAPT0/URT0.D.RXD/CAN0.D.RXD/DAO.C.RP/SDC1.B.WP
PD02	PD02/TMR5.B.COMP1/URT0.D.DE/URT0.D.RTS/CAN0.D.STBY/ETH0.A.MDC
PD03	PD03/TMR5.B.CAPT1/URT0.D.CTS/CAN1.D.STBY/ETH0.A.MDIO
VIO_B06	PD04-PD19
PD04	PD04/TMR5.B.CAPT2/URT1.D.CTS/SPI3.C.CS0/CAN1.D.RXD/PDM0.EF.D0/XPIO.A.CA_CS0
PD05	PD05/TMR5.B.COMP2/URT1.D.DE/URT1.D.RTS/SPI3.C.SCLK/CAN1.D.TXD/PDM0.EF.D1/XPIO.A.CA_CS1
PD06	PD06/TMR4.B.CAPT0/URT1.D.RXD/SPI3.C.MISO/I2S2.CD.RXD3/PDM0.F.CLK/XPIO.A.CA_SCLK/ETH0.B.TXD3
PD07	PD07/TMR4.B.COMP0/URT1.D.TXD/SPI3.C.MOSI/I2S2.CD.RXD2/PDM0.EF.D3/XPIO.A.CA_DQS/ETH0.B.TXD2
PD08	PD08/TMR4.B.COMP1/URT2.D.TXD/I2C0.D.SCL/SPI2.C.CS2/CAN2.D.TXD/PDM0.E.CLK/XPIO.A.CA_D0/ETH0.B.TXCK
PD09	PD09/TMR4.B.CAPT1/URT2.D.RXD/I2C0.D.SDA/SPI2.C.CS1/CAN2.D.RXD/PDM0.EF.D2/XPIO.A.CA_D1/ETH0.B.TXEN
PD10	PD10/TMR4.B.COMP2/URT2.D.DE/URT2.D.RTS/SPI2.C.CS0/CAN2.D.STBY/I2S2.CD.TXD2/XPIO.A.CA_D2/ETH0.B.TXD0
PD11	PD11/TMR4.B.CAPT2/URT2.D.CTS/SPI2.C.SCLK/I2S2.CD.TXD3/XPIO.A.CA_D3/ETH0.B.TXD1
PD12	PD12/TMR5.B.CAPT3/URT3.D.CTS/I2C1.D.SDA/SPI2.C.MISO/I2S2.CD.RXD1/XPIO.A.CB_CS0/ETH0.B.RXD1
PD13	PD13/TMR5.B.COMP3/URT3.D.DE/URT3.D.RTS/I2C1.D.SCL/SPI2.C.MOSI/CAN3.D.STBY/I2S2.D.MCLK/XPIO.A.CB_CS1/ETH0.B.RXD0
PD14	PD14/TMR4.B.CAPT3/URT3.D.RXD/SPI2.C.DAT2/CAN3.D.RXD/I2S2.CD.RXD0/XPIO.A.CB_SCLK/ETH0.B.RXCK
PD15	PD15/TMR4.B.COMP3/URT3.D.TXD/SPI2.C.DAT3/CAN3.D.TXD/I2S2.CD.BCLK/XPIO.A.CB_D0/ETH0.B.RXDV
PD16	PD16/TMR7.B.COMP0/URT4.D.TXD/CAN4.D.TXD/I2S2.CD.FCLK/XPIO.A.CB_D1/ETH0.B.RXD3
PD17	PD17/TMR7.B.CAPT0/URT4.D.RXD/CAN4.D.RXD/I2S2.CD.TXD0/XPIO.A.CB_DQS/ETH0.B.RXD2
PD18	PD18/TMR7.B.COMP1/URT4.D.DE/URT4.D.RTS/CAN4.D.STBY/I2S2.C.MCLK/XPIO.A.CB_D3
PD19	PD19/TMR7.B.CAPT1/URT4.D.CTS/SPI1.D.CS3/CAN5.D.STBY/I2S2.CD.TXD1/XPIO.A.CB_D2
VIO_B07	PD20-PD31
PD20	PD20/TMR7.B.CAPT2/URT5.D.CTS/SPI0.D.CS0/CAN5.D.RXD/I2S3.AB.RXD1/ETH0.A.EVTI3
PD21	PD21/TMR7.B.COMP2/URT5.D.DE/URT5.D.RTS/SPI0.D.SCLK/CAN5.D.TXD/I2S3.AB.RXD3/ETH0.A.EVT03
PD22	PD22/TMR6.B.CAPT0/URT5.D.RXD/SPI0.D.MISO/I2S3.AB.RXD0/ETH0.A.EVTI2
PD23	PD23/TMR6.B.COMP0/URT5.D.TXD/SPI0.D.MOSI/I2S3.AB.RXD2/ETH0.A.EVT01
PD24	PD24/TMR6.B.COMP1/URT6.D.TXD/I2C2.D.SCL/SPI1.D.CS2/CAN6.D.TXD/I2S3.AB.BCLK/ETH0.A.EVTI1
PD25	PD25/TMR6.B.CAPT1/URT6.D.RXD/I2C2.D.SDA/SPI1.D.CS1/CAN6.D.RXD/I2S3.AB.FCLK/ETH0.A.EVT02
PD26	PD26/TMR6.B.COMP2/URT6.D.DE/URT6.D.RTS/SPI1.D.CS0/CAN6.D.STBY/I2S3.AB.TXD1/ETH0.B.MDC
PD27	PD27/TMR6.B.CAPT2/URT6.D.CTS/SPI1.D.SCLK/I2S3.AB.TXD2/ETH0.B.MDIO
PD28	PD28/TMR7.B.CAPT3/URT7.D.CTS/I2C3.D.SDA/SPI1.D.MISO/I2S3.AB.TXD0
PD29	PD29/TMR7.B.COMP3/URT7.D.DE/URT7.D.RTS/I2C3.D.SCL/SPI1.D.MOSI/CAN7.D.STBY/I2S3.AB.TXD3/CPU0.D.NMI
PD30	PD30/TMR6.B.CAPT3/URT7.D.RXD/SPI1.D.DAT2/CAN7.D.RXD/I2S3.A.MCLK/ETH0.A.EVTI0/SOC.A.REF0
PD31	PD31/TMR6.B.COMP3/URT7.D.TXD/SPI1.D.DAT3/CAN7.D.TXD/I2S3.B.MCLK/ETH0.A.EVT00/SOC.A.REF1

05_MCU_04



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Size: A4	Date:
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Id: 6/16	



06_MCU_05



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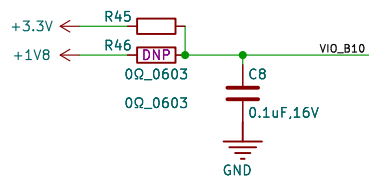
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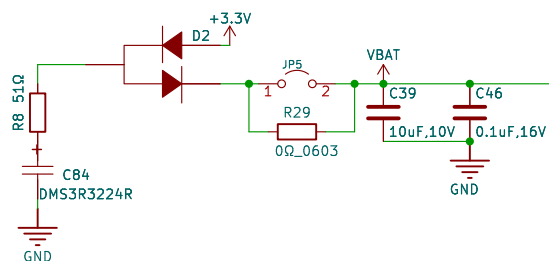
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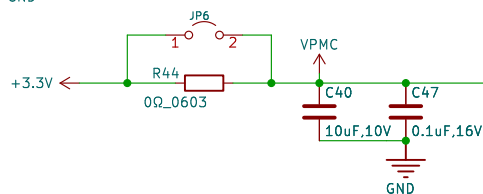
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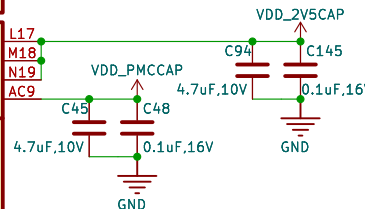
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PF00–PF09	
PF0 AH18	PF00/TMR5.C.COMP0/URT0.F.TXD/CAN0.F.TXD/PDM0.K.CLK/USB0.A.PWR
PF1 AF18	PF01/TMR5.C.CAPT0/URT0.F.RXD/CAN0.F.RXD/PDM0.JK.D2/CPU0.E.NMI
PF2 AJ17	PF02/TMR5.C.COMP1/URT0.F.DE/URT0.F.RTS/CAN0.F.STBY/PDM0.JK.D3/ETH0.D.EVT00
PF3 AG17	PF03/TMR5.C.CAPT1/URT0.F.CTS/SPI3.E.CS3/CAN1.F.STBY/PDM0.JK.D1/ETH0.D.EVT01/USB0.A.OC
PF4 AH16	PF04/TMR5.C.CAPT2/URT1.F.CTS/SPI2.E.CS0/CAN1.F.RXD/PDM0.J.CLK/ETH0.D.EVT02/USB0.A.ID
PF5 AF16	PF05/TMR5.C.COMP2/URT1.F.DE/URT1.F.RTS/SPI2.E.SCLK/CAN1.F.TXD/PDM0.JK.D0/ETH0.D.EVT03
PF6 AE17	PF06/TMR4.C.CAPT0/URT1.F.RXD/SPI2.E.MISO/ETH0.D.EVT10
PF7 AC17	PF07/TMR4.C.COMP0/URT1.F.TXD/SPI2.E.MOSI/ETH0.D.EVT11/
PF8 AD16	PF08/TMR4.C.COMP1/URT2.F.TXD/I2C0.F.SCL/SPI3.E.CS2/CAN2.F.TXD/ETH0.E.MDIO/ETH0.D.EVT12
PF9 AB16	PF09/TMR4.C.CAPT1/URT2.F.RXD/I2C0.F.SDA/SPI3.E.CS1/CAN2.F.RXD/ETH0.E.MDC/ETH0.D.EVT13



U1J HPM6800	
PZ00–PZ07	
PZ0 AD14	PZ00/TMR3.D.COMP0/URT4.G.TXD/CAN4.G.TXD
PZ1 AB14	PZ01/TMR3.D.CAPT0/URT4.G.RXD/CAN4.G.RXD
PZ2 AE13	PZ02/TMR3.D.COMP1/URT4.G.DE/URT4.G.RTS/CAN4.G.STBY/DAO.F.RP
PZ3 AC13	PZ03/TMR3.D.CAPT1/URT4.G.CTS/CAN5.G.STBY/DAO.F.RN
PZ4 AE11	PZ04/TMR3.D.CAPT2/URT5.G.CTS/SPI0.G.CS0/CAN5.G.RXD/DAO.F.LP
PZ5 AC14	PZ05/TMR3.D.COMP2/URT5.G.DE/URT5.G.RTS/SPI0.G.SCLK/CAN5.G.TXD/DAO.F.LN
PZ6 AD10	PZ06/TMR2.D.CAPT0/URT5.G.RXD/SPI0.G.MISO
PZ7 AB10	PZ07/TMR2.D.COMP0/URT5.G.TXD/SPI0.G.MOSI



PY00–PY07	
PY0 AJ13	PY00/TMR1.D.COMP0/URT0.G.TXD/CAN0.G.TXD
PY1 AG13	PY01/TMR1.D.CAPT0/URT0.G.RXD/CAN0.G.RXD
PY2 AH12	PY02/TMR1.D.COMP1/URT0.G.DE/URT0.G.RTS/CAN0.G.STBY/PDM0.M.CLK
PY3 AF12	PY03/TMR1.D.CAPT1/URT0.G.CTS/CAN1.G.STBY/PDM0.LM.D2
PY4 AJ11	PY04/TMR1.D.CAPT2/URT1.G.CTS/SPI2.F.CS0/CAN1.G.RXD/PDM0.LM.D3
PY5 AG11	PY05/TMR1.D.COMP2/URT1.G.DE/URT1.G.RTS/SPI2.F.SCLK/CAN1.G.TXD/PDM0.LM.D1
PY6 AH10	PY06/TMR0.D.CAPT0/URT1.G.RXD/SPI2.F.MISO/PDM0.L.CLK
PY7 AF10	PY07/TMR0.D.COMP0/URT1.G.TXD/SPI2.F.MOSI/PDM0.LM.D0



PY[0..7] PY[0..7]
PZ[0..7] PZ[0..7]
PF[0..9] PF[0..9]

07_MCU_06



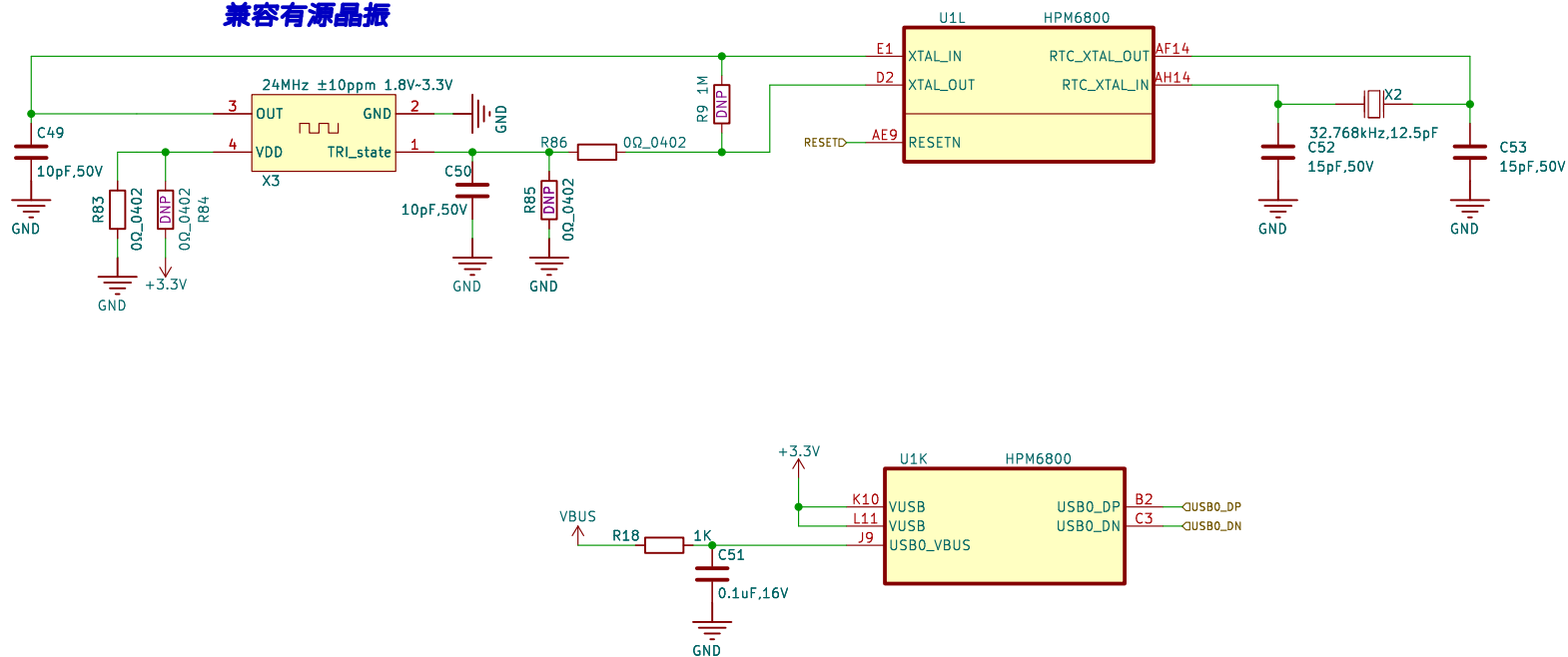
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Size: A4 Date:
KiCad E.D.A. kicad 7.0.2

Rev:
Id: 8/16

默认焊接无源晶振
兼容有源晶振



08_MCU_07



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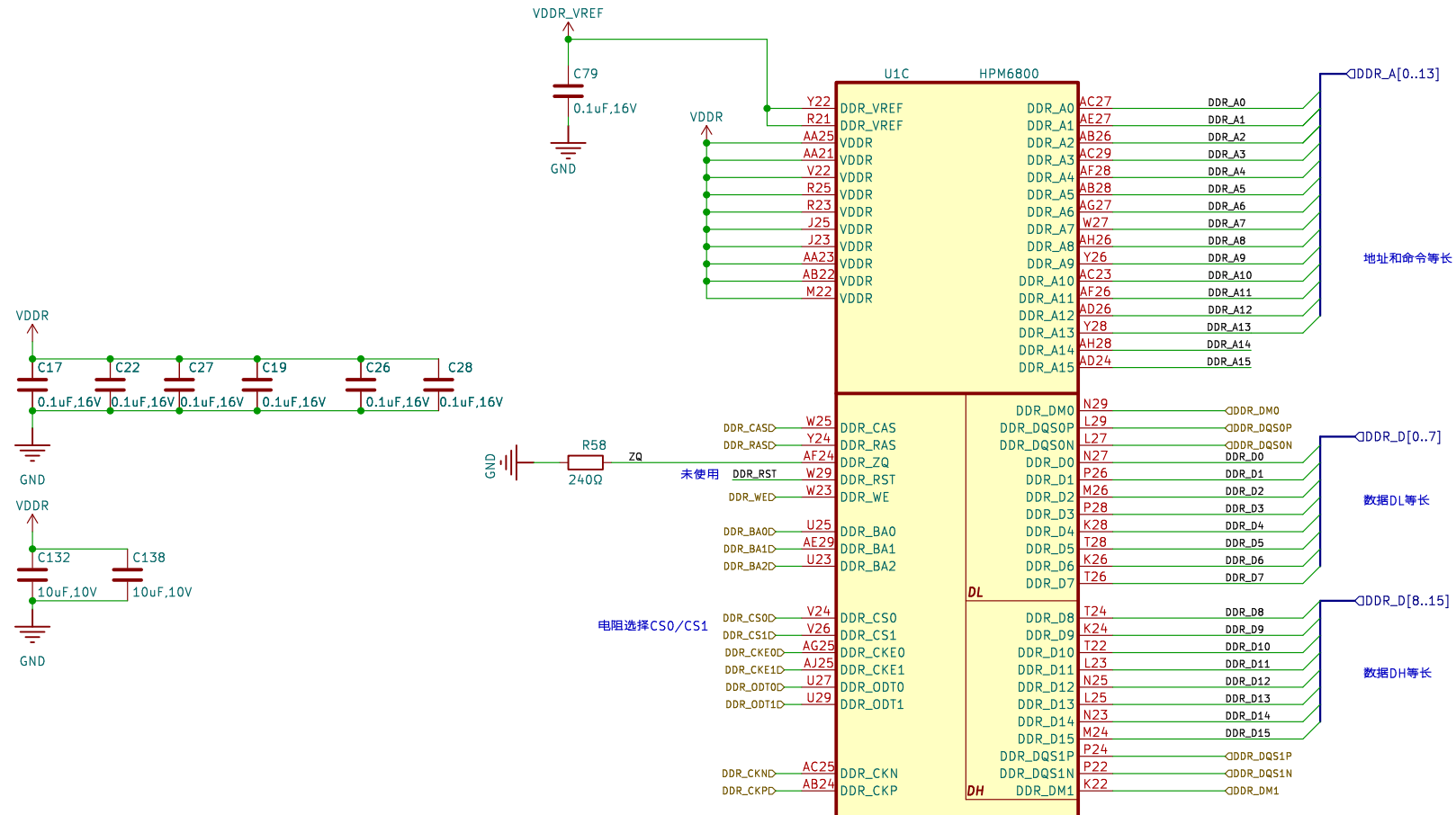
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Size: A4 Date:

Rev:

KiCad E.D.A. kicad 7.0.2

Id: 9/16

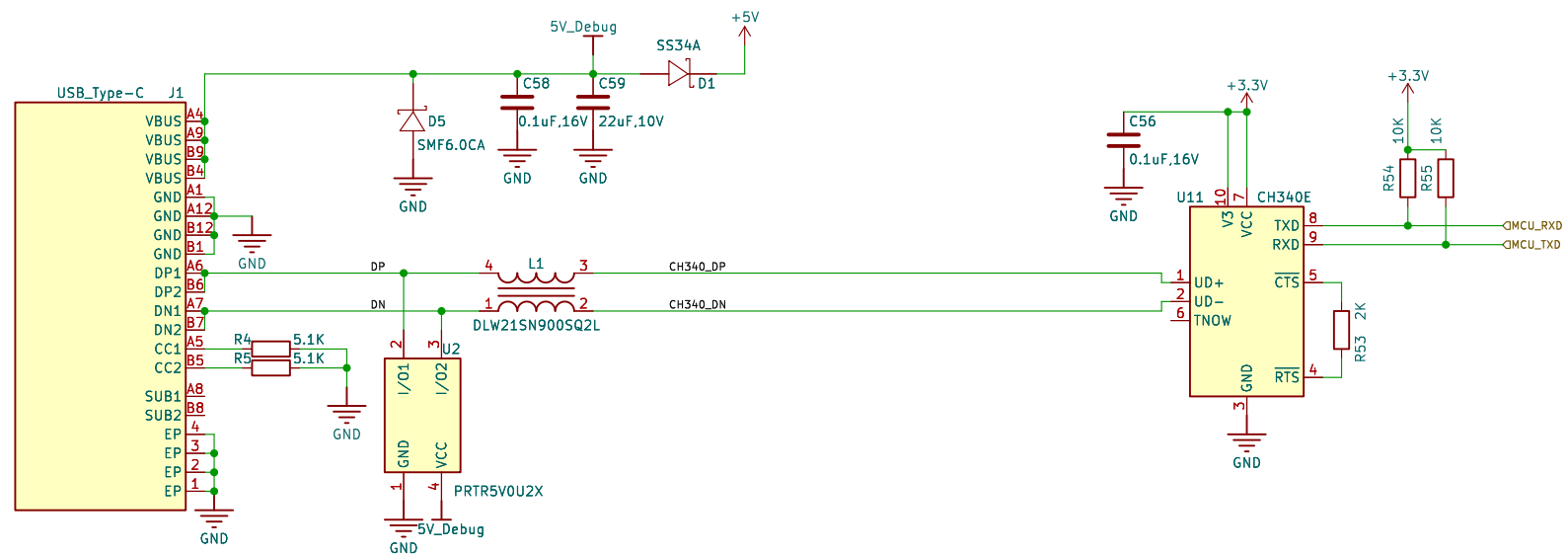


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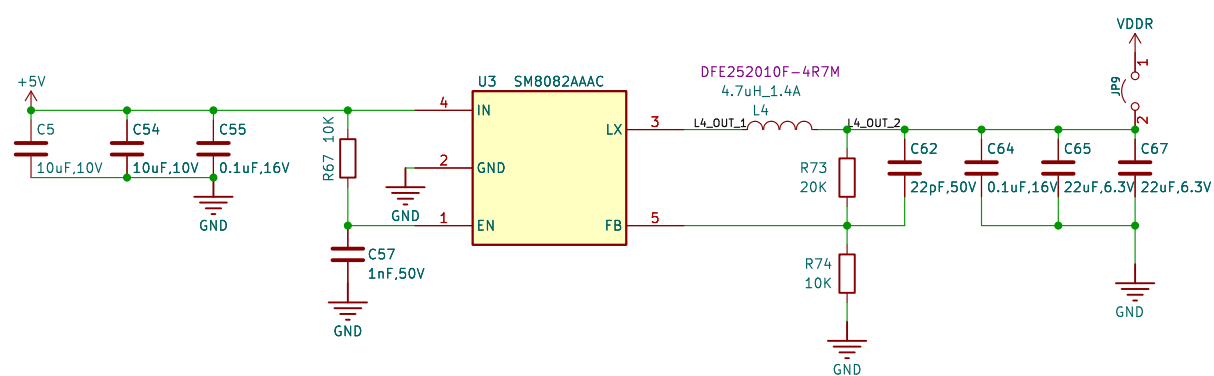
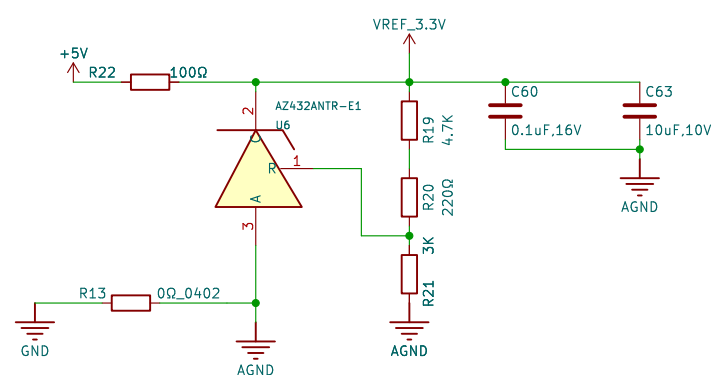


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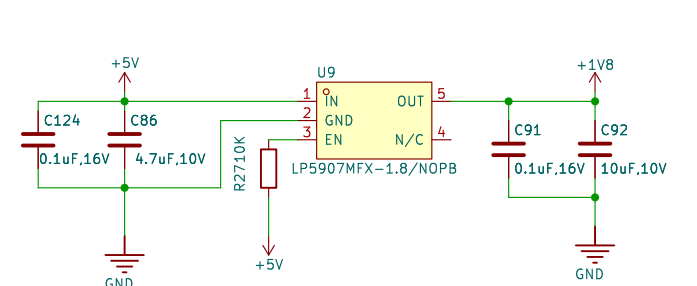
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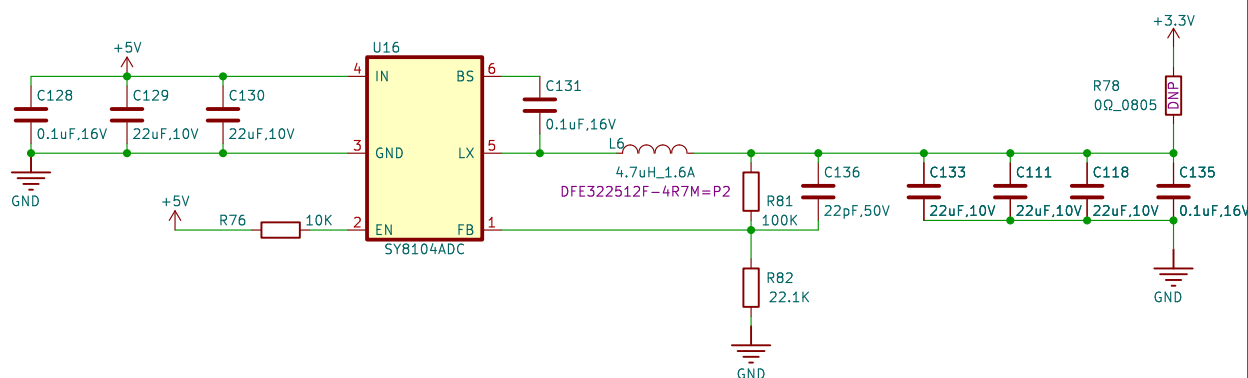
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**VREFH**

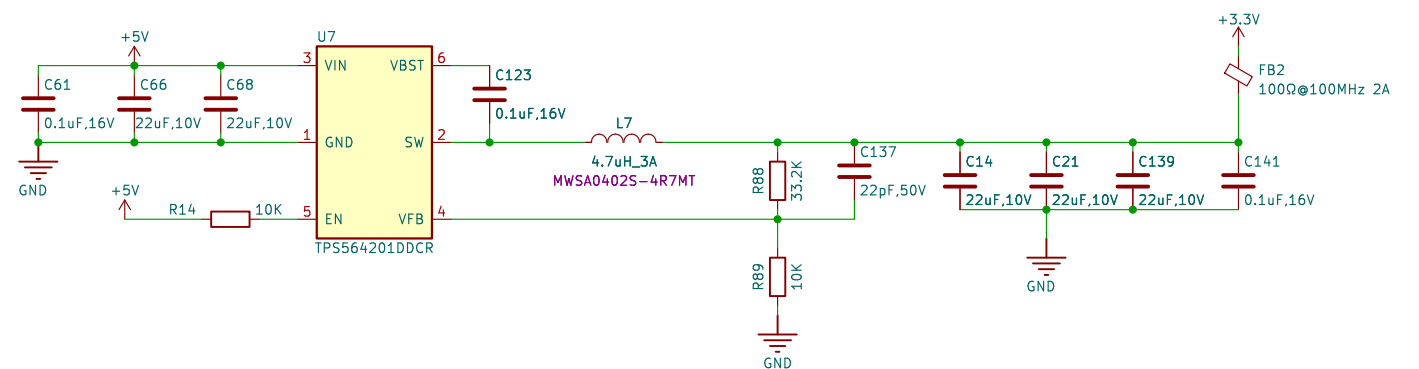
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备用



SYSTEM_3V3



12_USB



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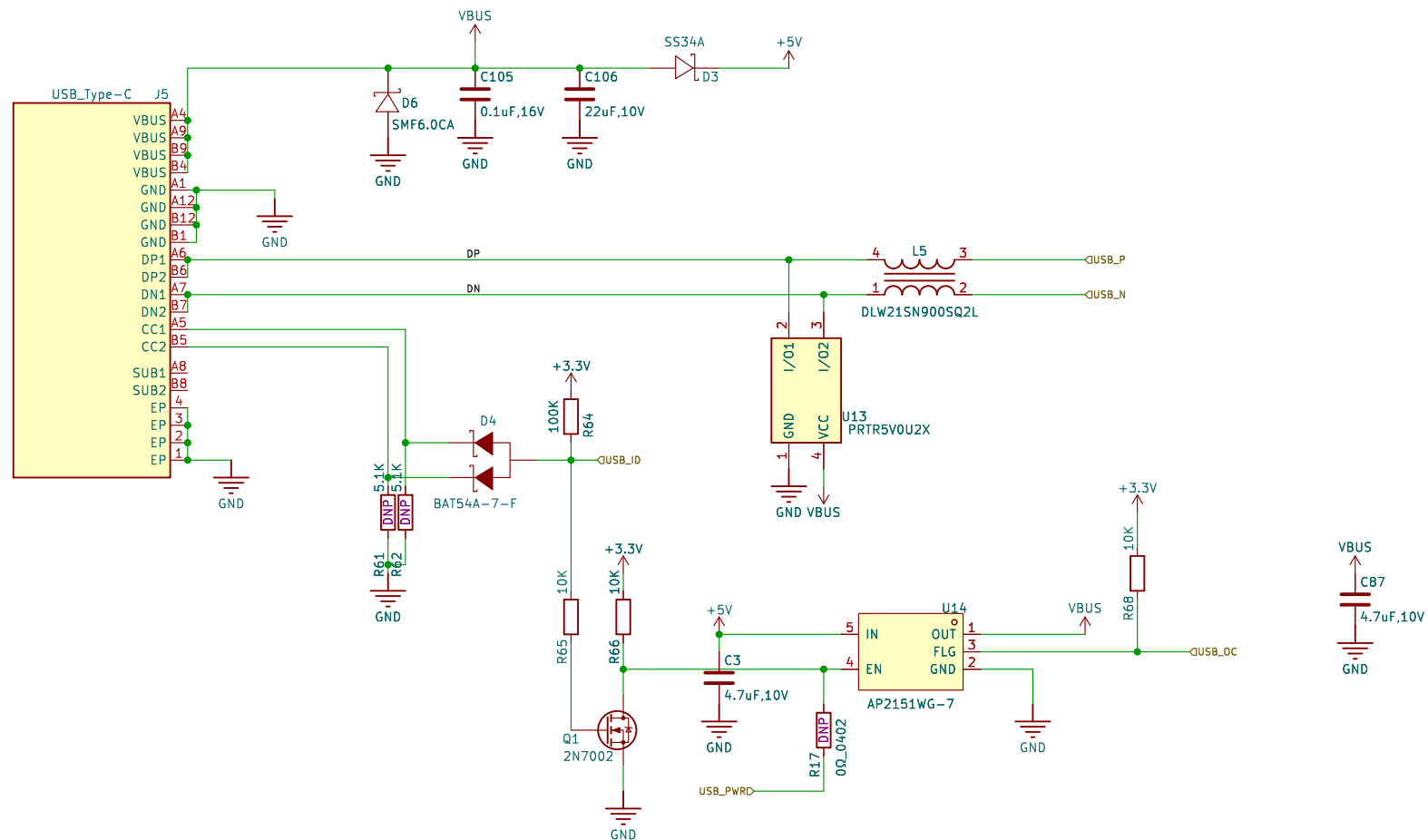
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Rev:

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13_USB_OTG

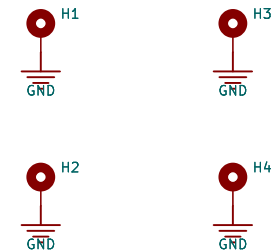
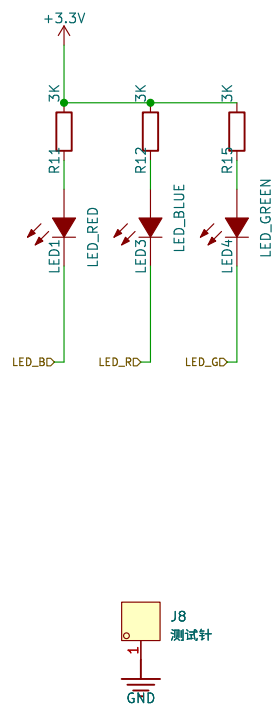
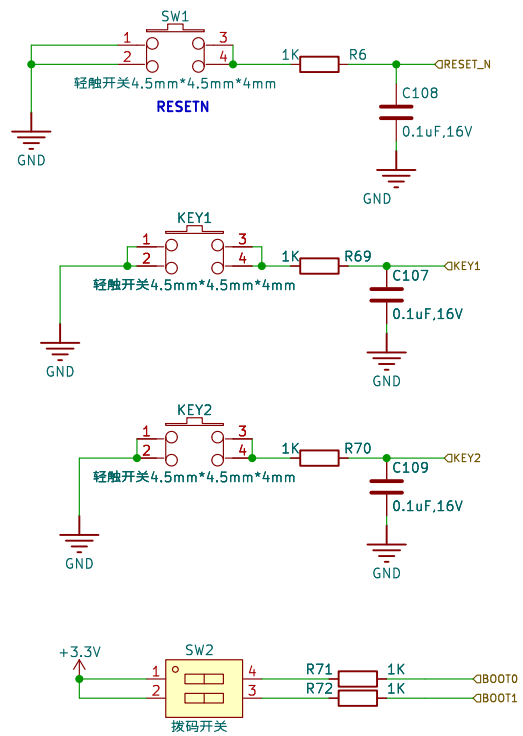


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Rev: 1.0
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14_Peripheral



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Title:

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Rev:

KiCad E.D.A. kicad 7.0.2

Id: 15/16

