STM32H7P DK board

MB2232

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Sheet 13: M.2 Interface (Level Shifter)

Sheet 14: POWER

HW2

STICKER PRODUCT

N/A

HW10

PCB

MB2232



H3

H1

H4

H2

Legend

General comment such as function title, configuration, ...

Text to be added to silkscreen.

Warning text.

Notes to generate the board layout.

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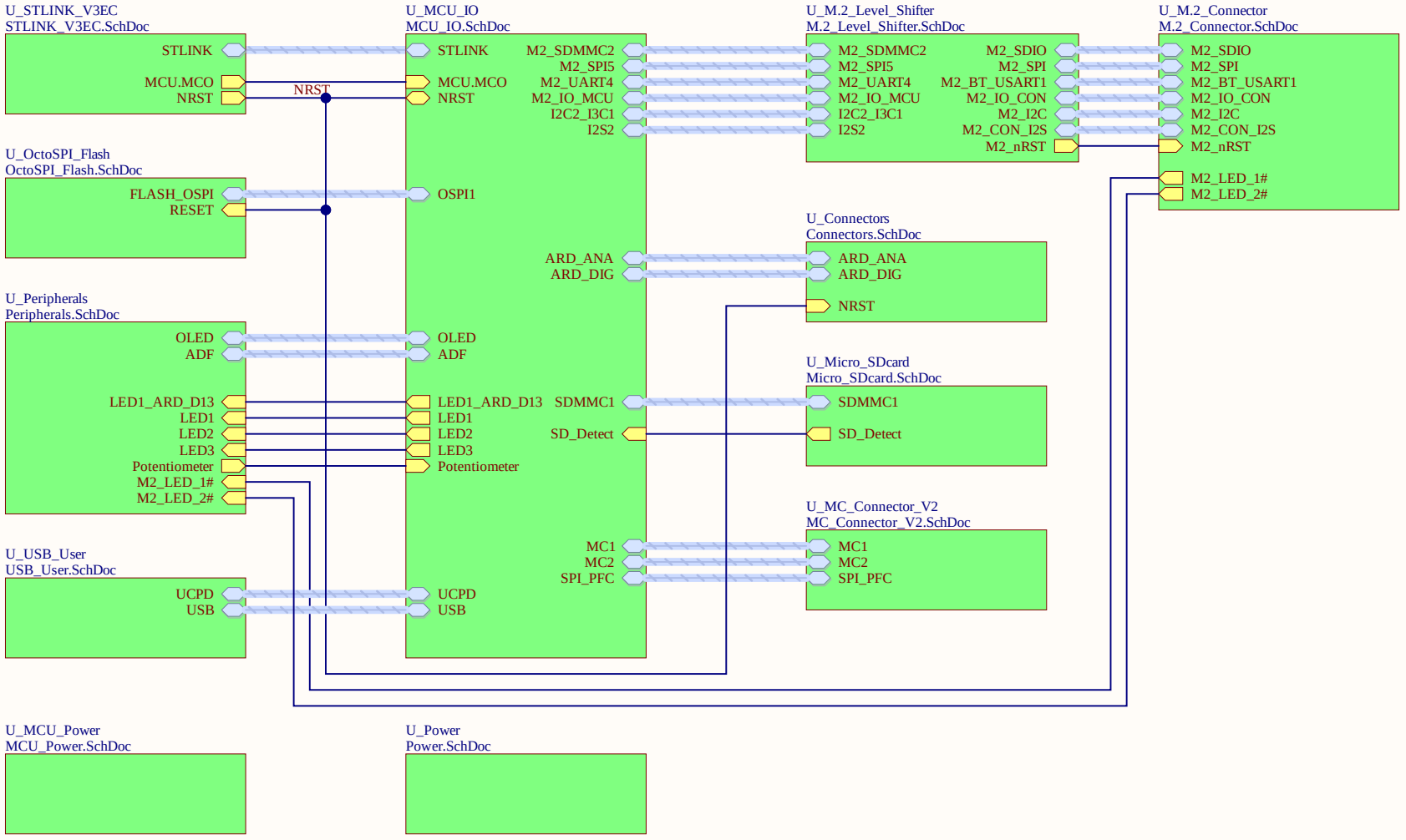
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U_TOP

TOP.SchDot



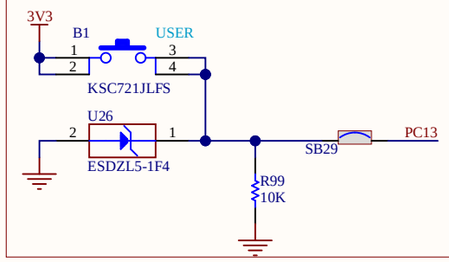
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Project: **STM32H7P DK board**			
Variant: H7P5II			
Revision: C-02		Reference: MB2232	
Size: A4	Date: 03-JUN-26	Sheet: 1 of 14	



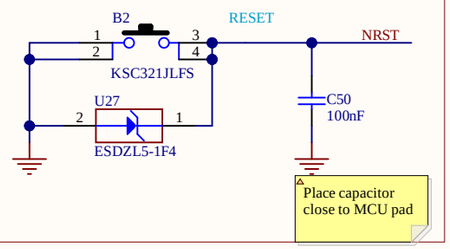
FID HW4 FID HW1
FID HW5 FID HW9

Title: **Top**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A4	Date: 03-JUN-26	Sheet: 2 of 14

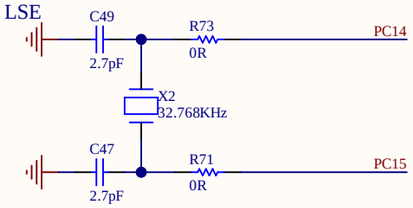
USER BUTTON



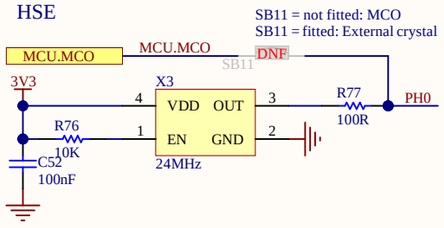
RESET BUTTON



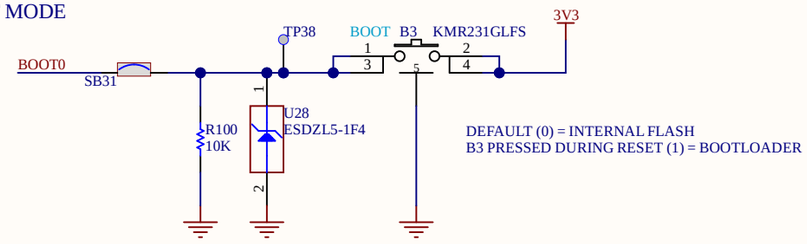
LSE



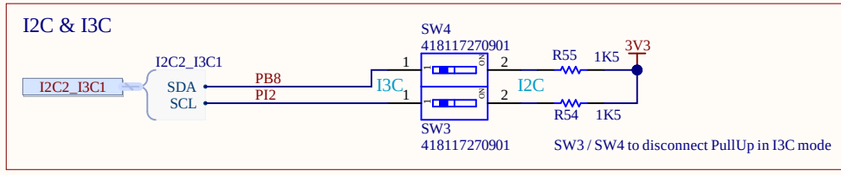
HSE



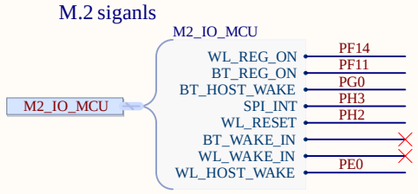
BOOT MODE

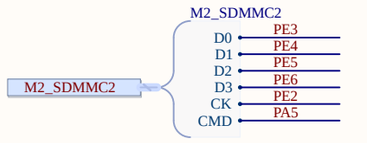


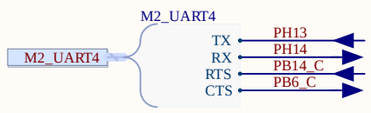
I2C & I3C



M.2 siganls

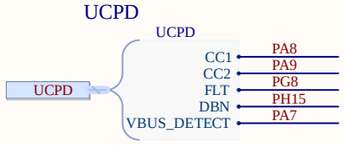


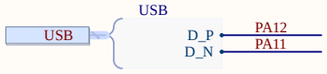






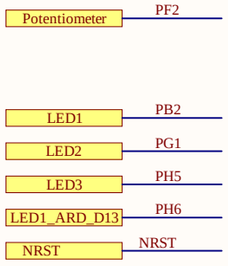
UCPD



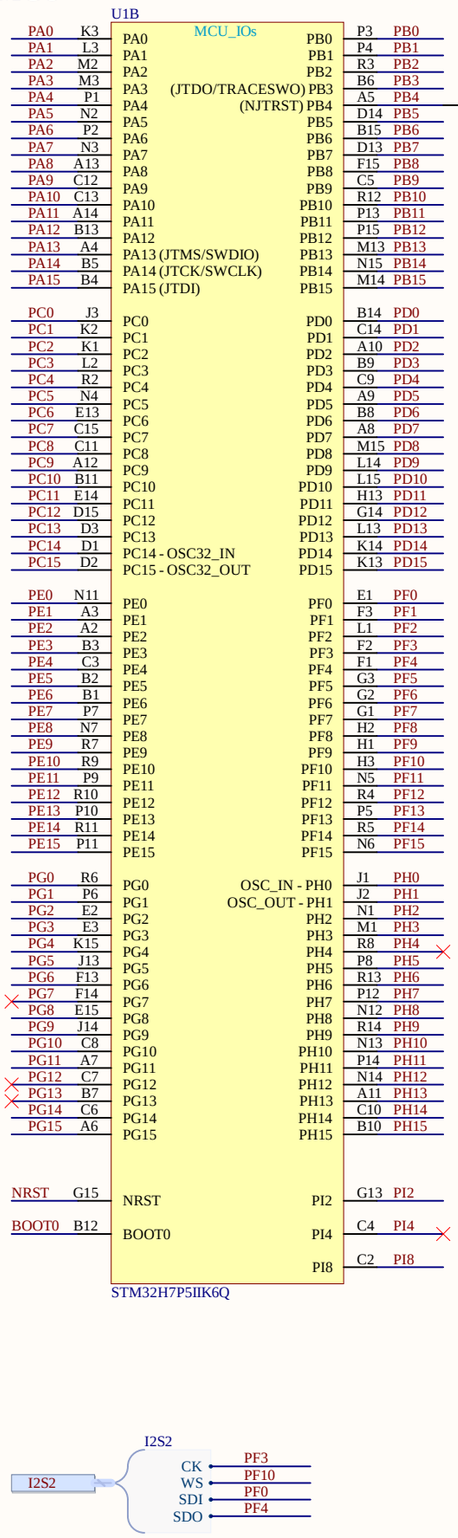


MEMs

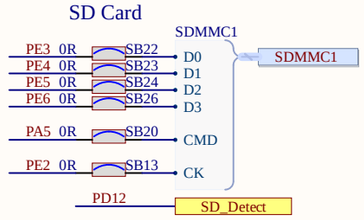




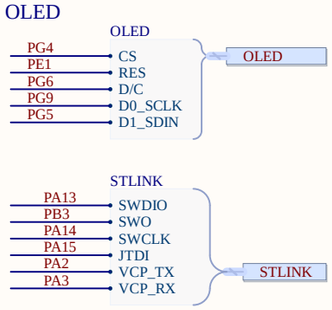
MCU



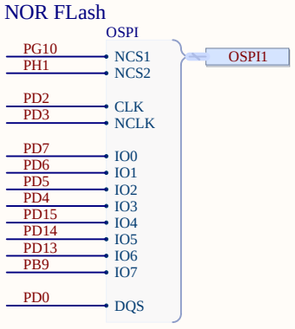
SD Card



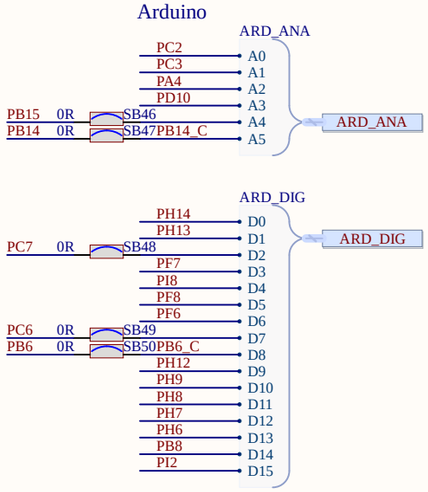
OLED



NOR FLash

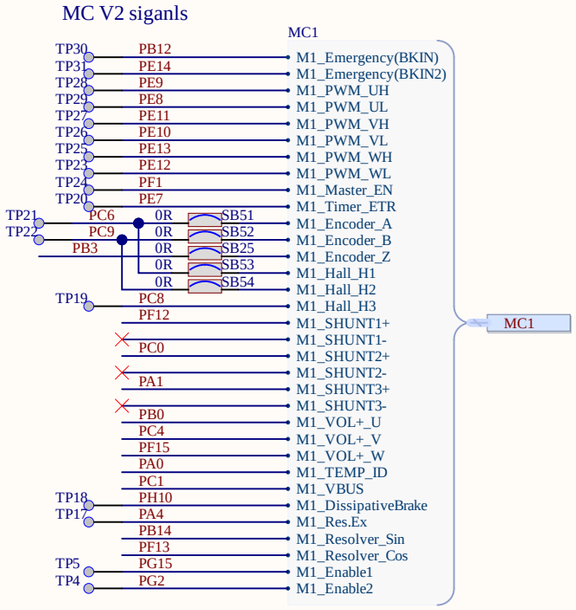


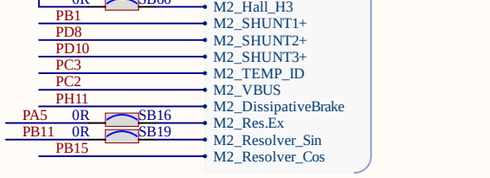
Arduino



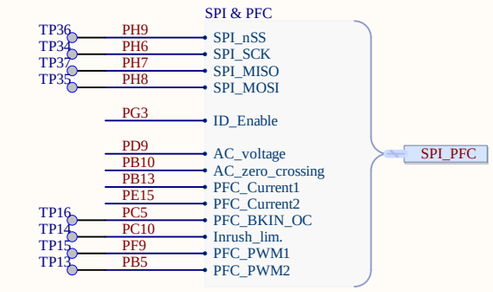
I2S2

MC V2 siganls



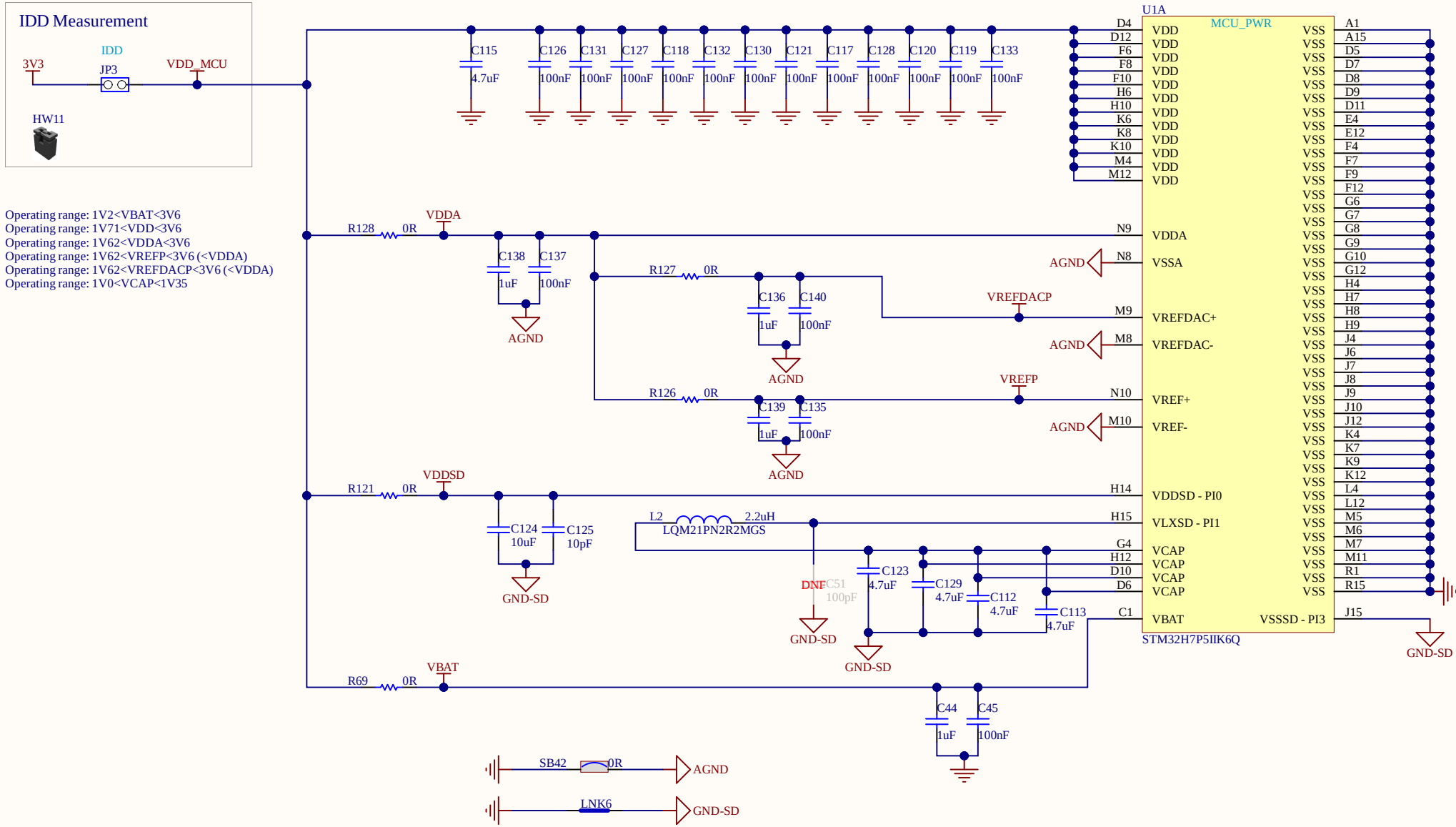


SPI & PFC



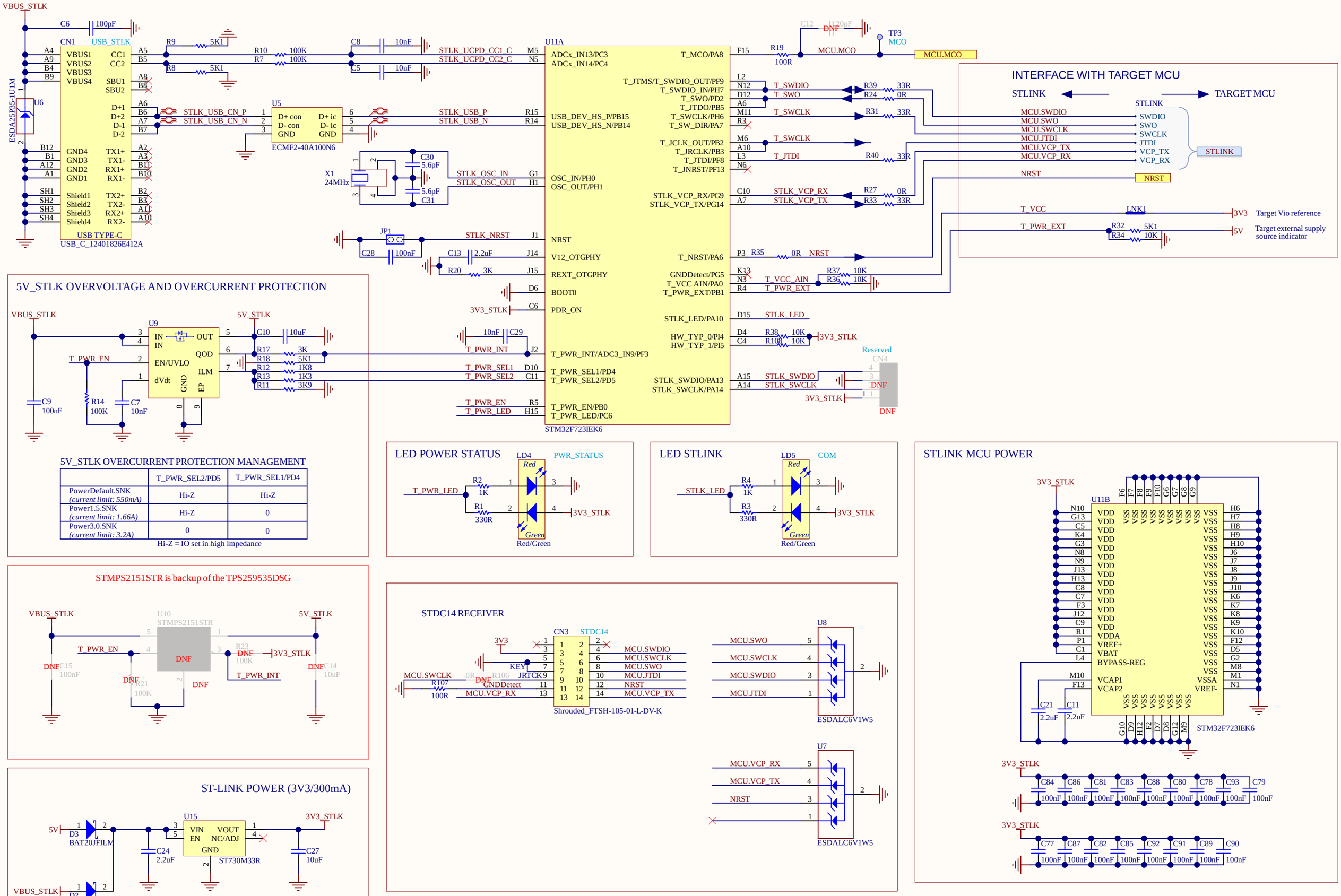
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Project: **STM32H7P DK board**			
Variant: H7P5II			
Revision: C-02		Reference: MB2232	
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MCU Power



Title: **MCU Power**			
Project: **STM32H7P DK board**			
Variant: H7P5II			
Revision: C-02		Reference: MB2232	
Size: A4	Date: 03-JUN-26	Sheet: 4 of 14	

STLINK-V3EC

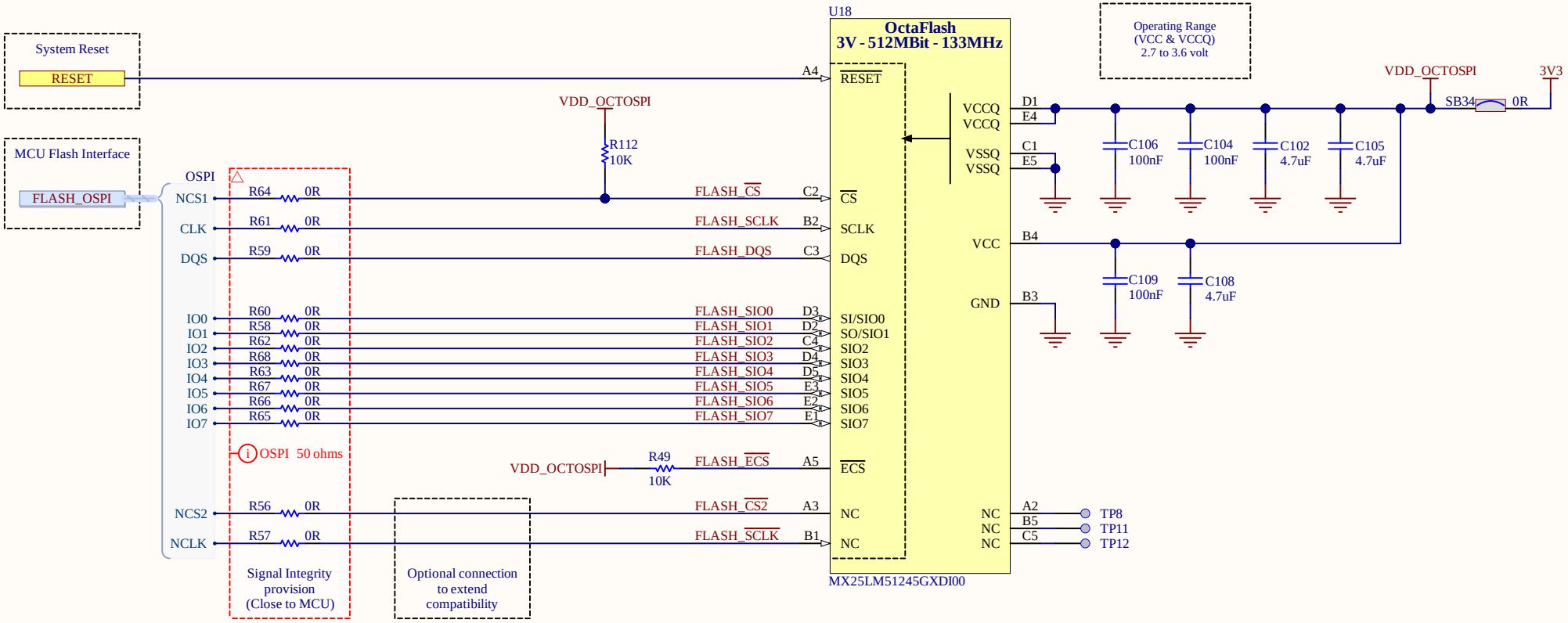


	T_PWR_SEL2/PD5	T_PWR_SEL1/PD4
PowerDefault.SNK *(current limit: 550mA)*	Hi-Z	Hi-Z
Power1.5.SNK *(current limit: 1.66A)*	Hi-Z	0
Power3.0.SNK *(current limit: 3.2A)*	0	0

Hi-Z = IO set in high impedance

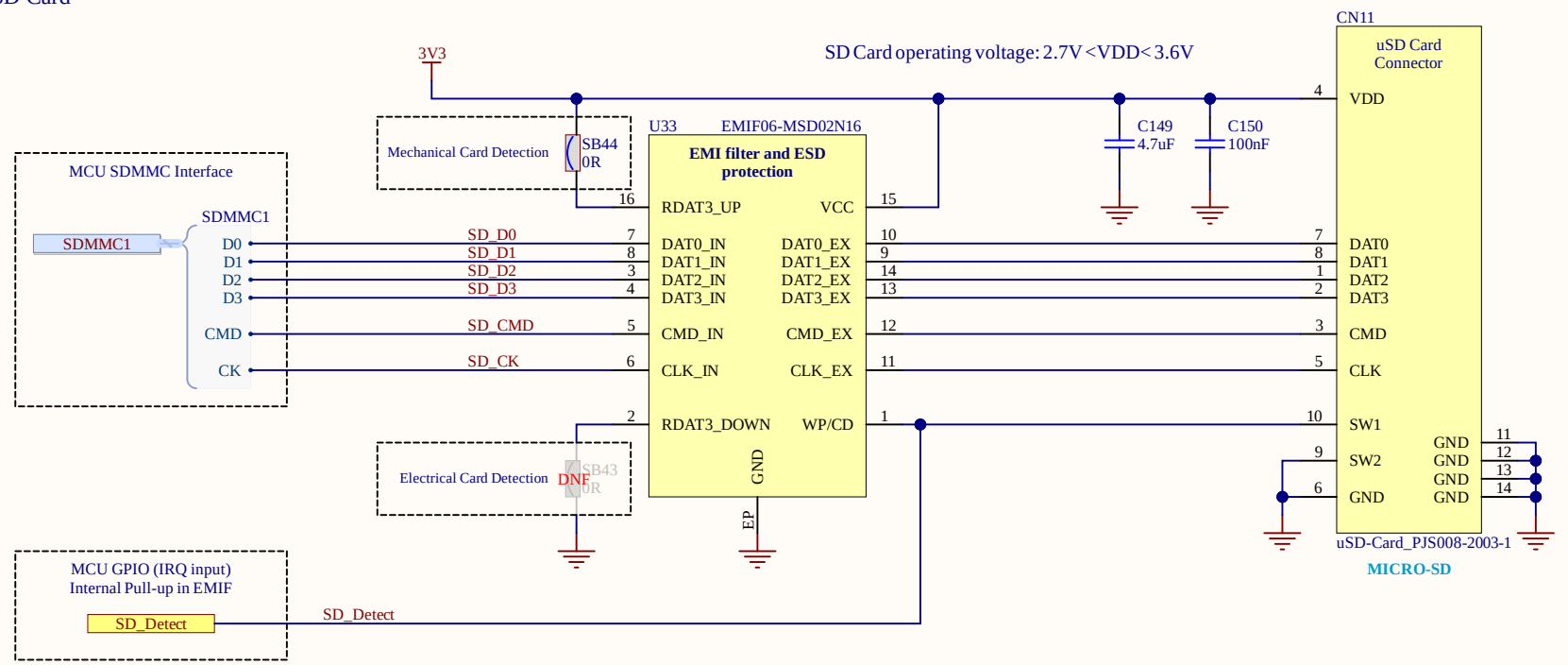
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Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A3	Date: 03-JUN-26	Sheet: 5 of 14

OctoSPI Flash Memory



Title: **OctoSPI Flash Memory**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A4	Date: 03-JUN-26	Sheet: 6 of 14

µSD Card

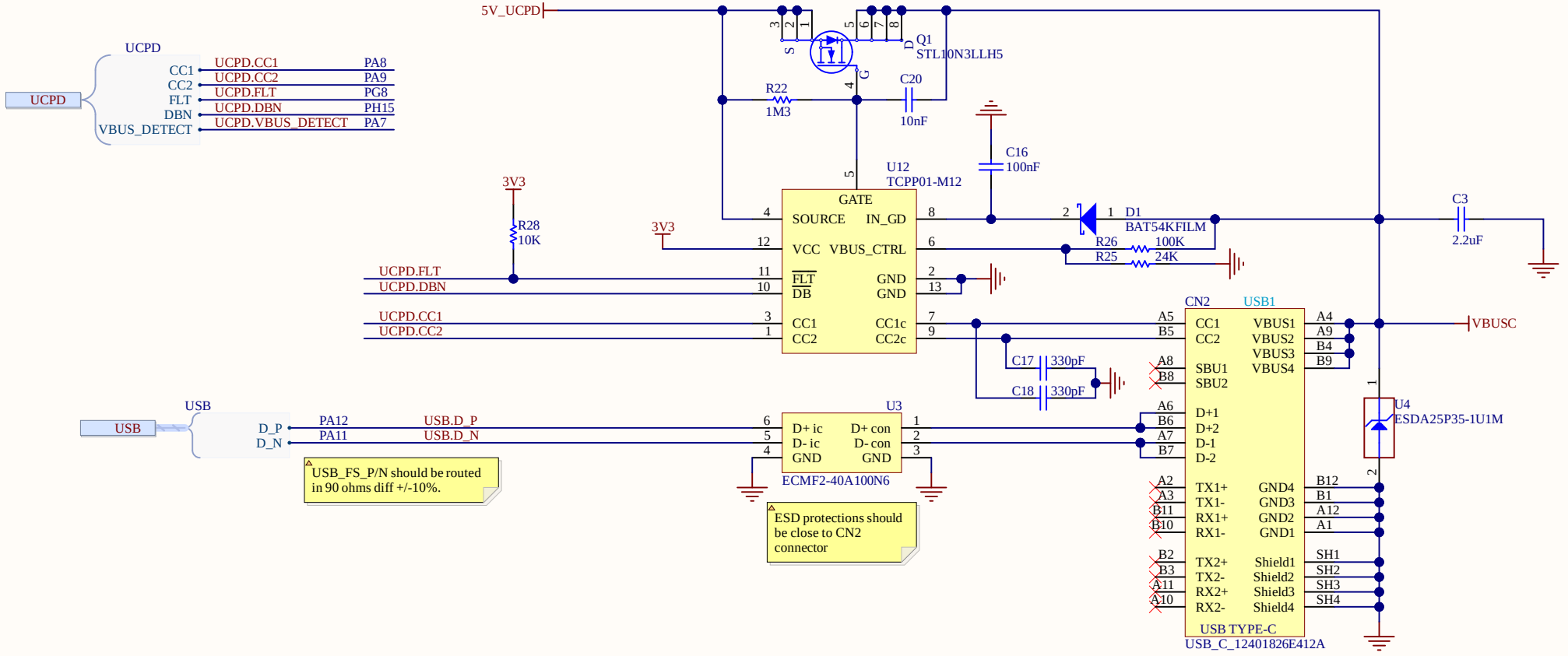


Title: **µSD Card**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A4	Date: 03-JUN-26	Sheet: 7 of 14

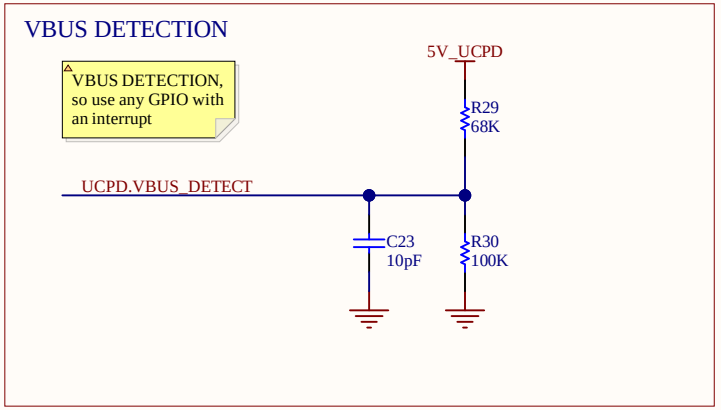
USB USER

SINK AND BUS POWER IMPLEMENTATION
VBUSC : 5V (15W max)

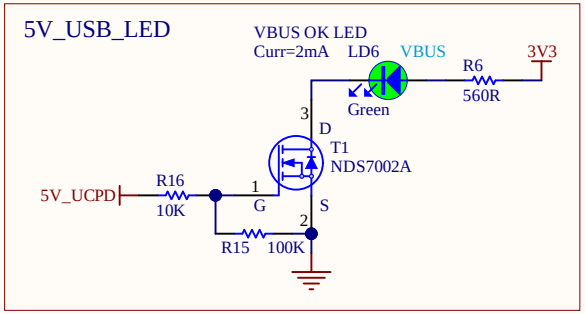
Operating range: 3V<VCC<3V6



VBUS DETECTION



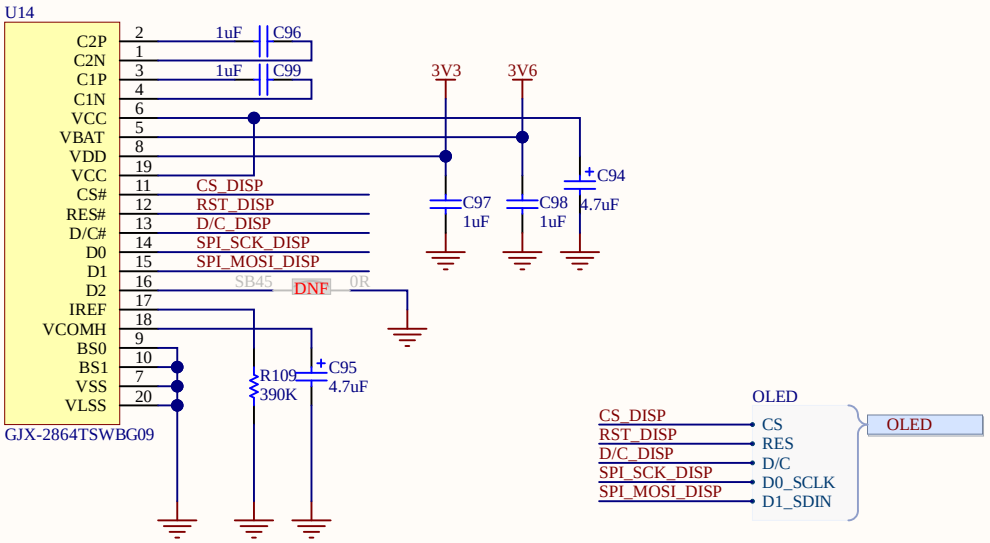
5V_USB_LED



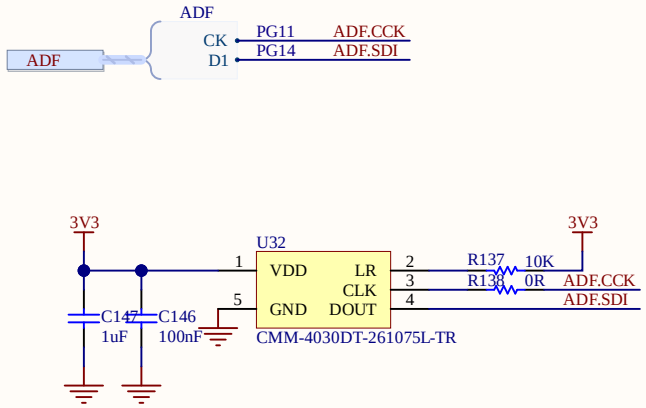
Title: **USB USER**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A4	Date: 03-JUN-26	Sheet: 8 of 14

PERIPHERALS

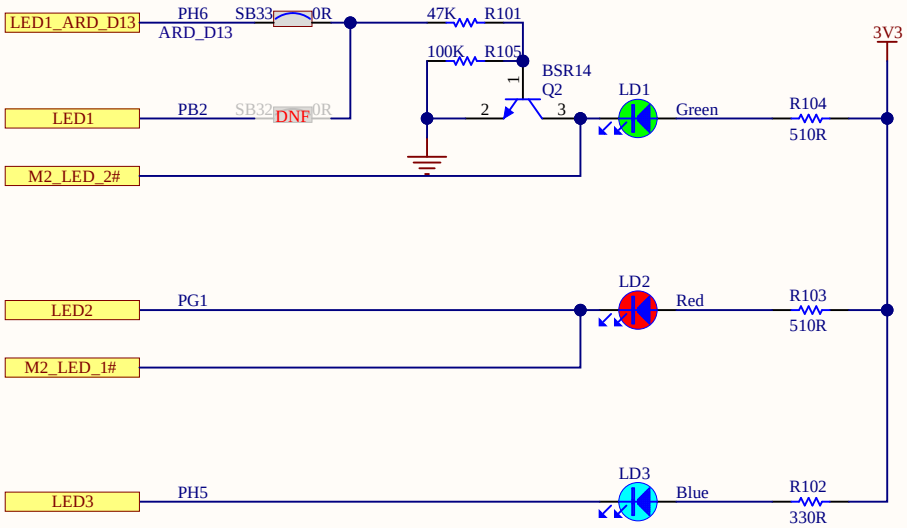
OLED DISPLAY



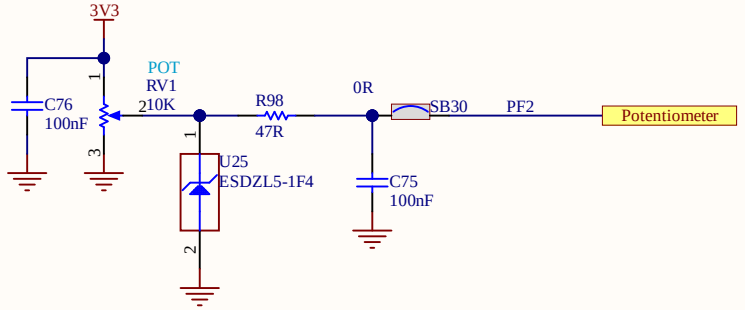
MEMs microphone



USER LED



Potentiometer

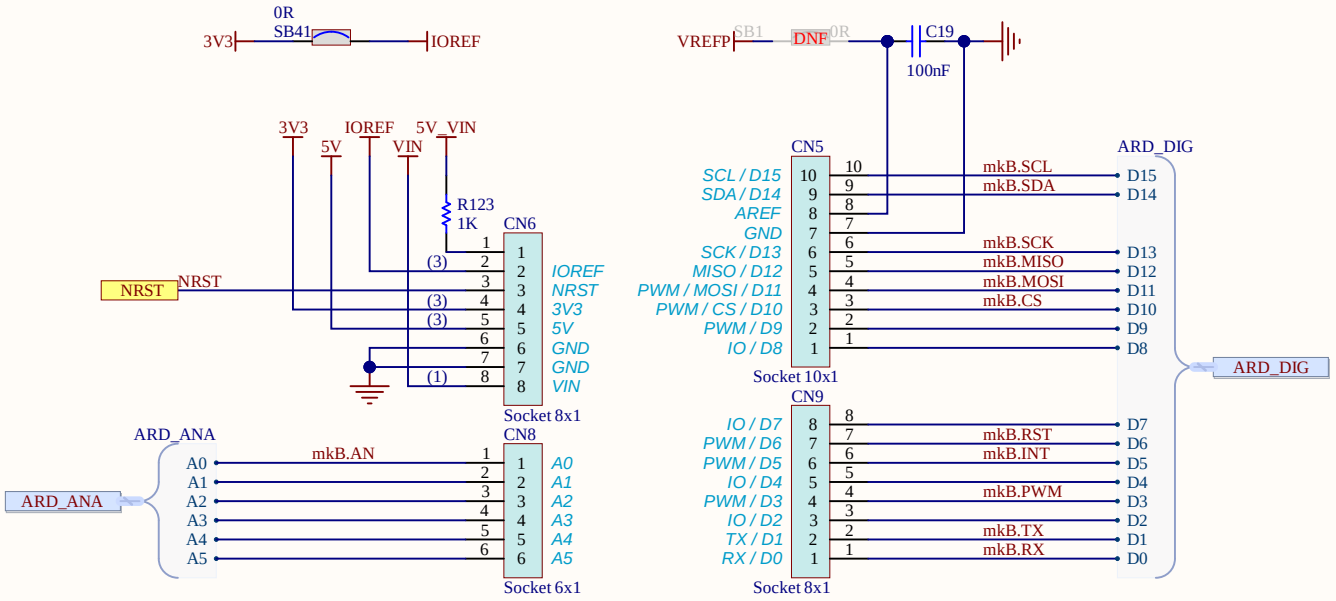


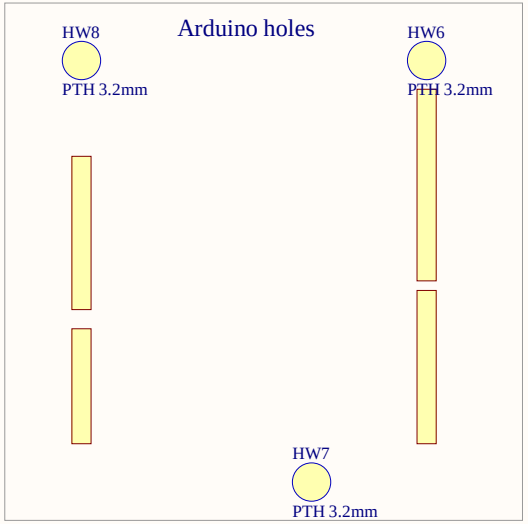
Title: **PERIPHERALS**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
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ARDUINO UNO-V3

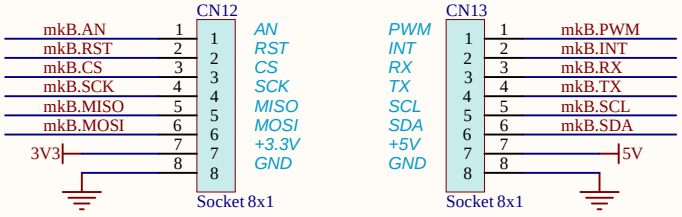
Operating range: 3V < VCC < 3.6V
Max current budget 500mA

(1): VIN (NUCLEO INPUT) WARNING voltage applied to 7V < VIN <12V
(2): AREF (NUCLEO INPUT)
(3): 5V, 3V3, IOREF(NUCLEO OUTPUT, SHIELD INPUT)





mikroBUS connector



Title: **Connectors**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
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MotorControl Connector V2

MC1

M1_Emergency(BKIN) M1_Emergency(BKIN)
M1_Emergency(BKIN2) M1_Emergency(BKIN2)
M1_PWM_UH M1_PWM_UH
M1_PWM_UL M1_PWM_UL
M1_PWM_VH M1_PWM_VH
M1_PWM_VL M1_PWM_VL
M1_PWM_WH M1_PWM_WH
M1_PWM_WL M1_PWM_WL
M1_Master_EN M1_Master_EN
M1_Timer_ETR M1_Timer_ETR
M1_Encoder_A M1_Encoder_A
M1_Encoder_B M1_Encoder_B
M1_Encoder_Z M1_Encoder_Z
M1_Hall_H1 M1_Hall_H1
M1_Hall_H2 M1_Hall_H2
M1_Hall_H3 M1_Hall_H3
M1_SHUNT1+ M1_SHUNT1+
M1_SHUNT1- M1_SHUNT2+
M1_SHUNT2+ M1_SHUNT2-
M1_SHUNT2- M1_SHUNT3+
M1_SHUNT3+ M1_SHUNT3-
M1_SHUNT3- M1_VOL+_U
M1_VOL+_U M1_VOL+_V
M1_VOL+_V M1_VOL+_W
M1_VOL+_W M1_TEMP_ID
M1_TEMP_ID M1_VBUS
M1_VBUS M1_DissipativeBrake
M1_DissipativeBrake M1_Res.Ex
M1_Res.Ex M1_Resolver_Sin
M1_Resolver_Sin M1_Resolver_Cos
M1_Resolver_Cos M1_Enable1
M1_Enable1 M1_Enable2
M1_Enable2

MC2

M2_Emergency(BKIN) M2_Emergency(BKIN)
M2_Emergency(BKIN2) M2_Emergency(BKIN2)
M2_PWM_UH M2_PWM_UH
M2_PWM_UL M2_PWM_UL
M2_PWM_VH M2_PWM_VH
M2_PWM_VL M2_PWM_VL
M2_PWM_WH M2_PWM_WH
M2_PWM_WL M2_PWM_WL
M2_Master_EN M2_Master_EN
M2_Timer_ETR M2_Timer_ETR
M2_Encoder_A M2_Encoder_A
M2_Encoder_B M2_Encoder_B
M2_Encoder_Z M2_Encoder_Z
M2_Hall_H1 M2_Hall_H1
M2_Hall_H2 M2_Hall_H2
M2_Hall_H3 M2_Hall_H3
M2_SHUNT1+ M2_SHUNT1+
M2_SHUNT2+ M2_SHUNT2+
M2_SHUNT3+ M2_SHUNT3+
M2_TEMP_ID M2_TEMP_ID
M2_VBUS M2_VBUS
M2_DissipativeBrake M2_DissipativeBrake
M2_Res.Ex M2_Res.Ex
M2_Resolver_Sin M2_Resolver_Sin
M2_Resolver_Cos M2_Resolver_Cos

SPI & PFC

SPI_nSS SPI_nSS
SPI_SCK SPI_SCK
SPI_MISO SPI_MISO
SPI_MOSI SPI_MOSI
ID_Enable ID_Enable
AC_voltage AC_voltage
AC_zero_crossing AC_zero_crossing
PFC_Current1 PFC_Current1
PFC_Current2 PFC_Current2
PFC_BKIN_OC PFC_BKIN_OC
Inrush_lim. Inrush_lim.
PFC_PWM1 PFC_PWM1
PFC_PWM2 PFC_PWM2

SPI_PFC

CN7A

(PH9)	SPI_nSS	A01	A01	B01	B01	SPI_MISO	(PH7)
(PH6)	SPI_SCK	A02	A02	B02	B02	SPI_MOSI	(PH8)
		A03	A03	B03	B03		
		A04	A04	B04	B04		
	5V_EXT	A05	A05	B05	B05	5V_EXT	
	3V3	A06	A06	B06	B06	VREFP	
(PG3)	ID_Enable	A07	A07	B07	B07		
		A08	A08	B08	B08		
		A09	A09	B09	B09		
		A10	A10	B10	B10		
		A11	A11	B11	B11		
TIM1_BKIN (PB12)	M1_Emergency(BKIN)	A12	A12	B12	B12	M1_Emergency(BKIN2)	TIM1_BKIN2 (PE14)
TIM1_CH1 (PE9)	M1_PWM_UH	A13	A13	B13	B13	M1_PWM_UL	TIM1_CH1N (PE8)
TIM1_CH2 (PE11)	M1_PWM_VH	A14	A14	B14	B14	M1_PWM_VL	TIM1_CH2N (PE10)
TIM1_CH3 (PE13)	M1_PWM_WH	A15	A15	B15	B15	M1_PWM_WL	TIM1_CH3N (PE12)
GPIO (PF1)	M1_Master_EN	A16	A16	B16	B16	M1_Encoder_A	TIM3_CH1 (PC6)
TIM1_ETR (PE7)	M1_Timer_ETR	A17	A17	B17	B17	M1_Encoder_B	TIM3_CH2 (PC9)
TIM3_CH1 (PC6)	M1_Hall_H1	A18	A18	B18	B18	M1_Encoder_Z	TIM3_ETR (PB3)
TIM3_CH2 (PC9)	M1_Hall_H2	A19	A19	B19	B19	M1_Hall_H3	TIM3_CH3 (PC8)
		A20	A20	B20	B20		
ADC2_INP16/ADC3_INP8(PF12)	M1_SHUNT1+_C	A21	A21	B21	B21	M1_SHUNT1-	
ADC1_INP6/ADC2_INP6(PC0)	M1_SHUNT2+_C	A22	A22	B22	B22	M1_SHUNT2-	
ADC1_INP2/ADC2_INP2 (PA1)	M1_SHUNT3+_C	A23	A23	B23	B23	M1_SHUNT3-	
		A24	A24	B24	B24		
ADC1_INP15/ADC3_INP12 (PB0)	M1_VOL+_U_C	A25	A25	B25	B25		
ADC2_INP5(PC4)	M1_VOL+_V_C	A26	A26	B26	B26		
ADC1_INP0 (PF15)	M1_VOL+_W_C	A27	A27	B27	B27		
ADC2_INP1 (PA0)	M1_TEMP_ID_C	A28	A28	B28	B28	M1_Res.Ex	DAC1_OUT1 (PA4)
ADC1_INP7 (PC1)	M1_VBUS_C	A29	A29	B29	B29	M1_Resolver_Sin_C	ADC1_INP13/ADC4_INP4 (PB14)
GPIO (PH10)	M1_DissipativeBrake	A30	A30	B30	B30	M1_Resolver_Cos_C	ADC3_INP9 (PF13)
		A31	A31	B31	B31		
		A32	A32	B32	B32		
ADC3_INP15 (PD9)	AC_voltage_C	A33	A33	B33	B33	AC_zero_crossing_C	ADC3_INP0 (PB10)
ADC3_INP5 (PB13)	PFC_Current1_C	A34	A34	B34	B34	PFC_Current2_C	ADC3_INP2 (PE15)
TIM15_BKIN (PC5)	PFC_BKIN_OC	A35	A35	B35	B35	Inrush_lim.	GPIO (PC10)
TIM_15_CH1 (PF9)	PFC_PWM1	A36	A36	B36	B36	PFC_PWM2	TIM16_CH1 (PB5)
TIM8_BKIN (PA6)	M2_Emergency(BKIN)	A37	A37	B37	B37	M2_Emergency(BKIN2)	TIM8_BKIN2 (PD1)
TIM8_CH1 (PB7)	M2_PWM_UH	A38	A38	B38	B38	M2_PWM_UL	TIM8_CH1N (PA10)
TIM8_CH2 (PB6)	M2_PWM_VH	A39	A39	B39	B39	M2_PWM_VL	TIM8_CH2N (PC11)
TIM8_CH3 (PC7)	M2_PWM_WH	A40	A40	B40	B40	M2_PWM_WL	TIM8_CH3N (PC12)
GPIO (PF5)	M2_Master_EN	A41	A41	B41	B41	M2_Encoder_A	TIM5_CH1 (PF6)

PCIE-Gold Finger-X16

CN7B

TIM8_ETR (PD11)	M2_Timer_ETR	A42	A42	B42	B42	M2_Encoder_B	TIM5_CH2 (PF7)
TIM5_CH1 (PF6)	M2_Hall_H1	A43	A43	B43	B43	M2_Encoder_Z	TIM5_CH3 (PF8)
TIM5_CH2 (PF7)	M2_Hall_H2	A44	A44	B44	B44	M2_Hall_H3	TIM5_CH3 (PF8)
		A45	A45	B45	B45		
ADC1_INP12/ADC3_INP1 (PB1)	M2_SHUNT1+_C	A46	A46	B46	B46		
ADC3_INP6/ADC4_INP12 (PD8)	M2_SHUNT2+_C	A47	A47	B47	B47		
ADC3_INP7/ADC4_INP7 (PD10)	M2_SHUNT3+_C	A48	A48	B48	B48		
		A49	A49	B49	B49		
ADC1_INP13/ADC4_INP4 (PB14)	M2_VOL+_U_C	A50	A50	B50	B50		
ADC3_INP9 (PF13)	M2_VOL+_V_C	A51	A51	B51	B51		
ADC4_INP5 (PB15)	M2_VOL+_W_C	A52	A52	B52	B52		
ADC2_INP9 (PC3)	M2_TEMP_ID_C	A53	A53	B53	B53	M2_Res.Ex	DAC2_OUT1 (PA5)
ADC2_INP8 (PC2)	M2_VBUS_C	A54	A54	B54	B54	M2_Resolver_Sin_C	ADC2_INP14 (PB11)
GPIO (PH11)	M2_DissipativeBrake	A55	A55	B55	B55	M2_Resolver_Cos_C	ADC4_INP5 (PB15)
		A56	A56	B56	B56		
		A57	A57	B57	B57		
		A58	A58	B58	B58		
		A59	A59	B59	B59		
		A60	A60	B60	B60		
		A61	A61	B61	B61		
		A62	A62	B62	B62		
		A63	A63	B63	B63		
		A64	A64	B64	B64		
		A65	A65	B65	B65		
		A66	A66	B66	B66		
		A67	A67	B67	B67		
		A68	A68	B68	B68		
		A69	A69	B69	B69		
		A70	A70	B70	B70		
		A71	A71	B71	B71		
		A72	A72	B72	B72		
		A73	A73	B73	B73		
		A74	A74	B74	B74		
		A75	A75	B75	B75		
		A76	A76	B76	B76		
		A77	A77	B77	B77	M1_Enable1	GPIO (PG15)
		A78	A78	B78	B78	M1_Enable2	GPIO (PG2)
		A79	A79	B79	B79		
		A80	A80	B80	B80		
		A81	A81	B81	B81		
		A82	A82	B82	B82		

PCIE-Gold Finger-X16

M1_VOL+_U_C — R81 220R — 0R — SB18 — M1_VOL+_U
C60 100pF DNF
M1_VOL+_V_C — R79 220R — 0R — SB14 — M1_VOL+_V
C55 100pF DNF
M1_VOL+_W_C — R75 220R — 0R — SB12 — M1_VOL+_W
C53 100pF DNF

M1_TEMP_ID_C — R124 220R — M1_TEMP_ID
C122 2.2nF
M1_VBUS_C — R122 220R — M1_VBUS
C116 2.2nF

To drive Motor2, open SB4/SB8/SB36, and close SB5/SB7/SB35

M1_Resolver_Sin_C — 0R SB8 DNF
M2_VOL+_U_C — 0R SB7 — R51 220R — M1_Resolver_Sin
C41 100pF DNF
M1_Resolver_Cos_C — 0R SB36 DNF
M2_VOL+_V_C — 0R SB35 — R113 220R — M1_Resolver_Cos
C103 100pF DNF
M2_Resolver_Cos_C — 0R SB4 DNF
M2_VOL+_W_C — 0R SB5 — R44 220R — M2_Resolver_Cos
C36 100pF DNF

M1_SHUNT1+_C — R135 220R — M1_SHUNT1+
C145 2.2nF
M1_SHUNT2+_C — R133 220R — M1_SHUNT2+
C144 2.2nF
M1_SHUNT3+_C — R131 220R — M1_SHUNT3+
C141 2.2nF

M2_SHUNT1+_C — R117 220R — 0R SB39 — M2_SHUNT1+
C110 2.2nF DNF — DNF — M1_VOL+_U
M2_SHUNT2+_C — R53 220R — 0R SB9 — M2_SHUNT2+
C42 2.2nF DNF — DNF — M1_VOL+_V
M2_SHUNT3+_C — R115 220R — 0R SB37 — M2_SHUNT3+
C107 2.2nF DNF — DNF — M1_VOL+_W

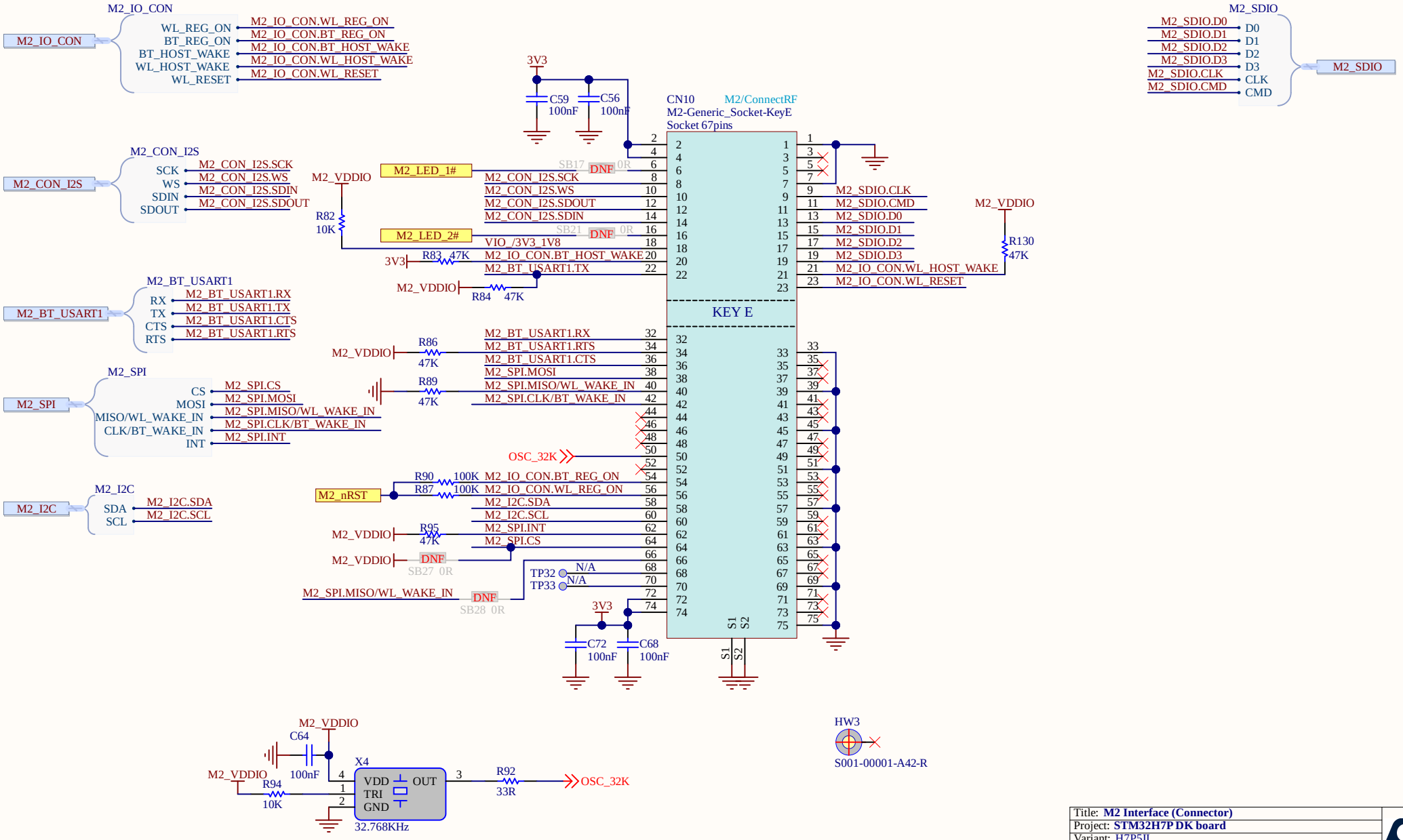
M2_TEMP_ID_C — R111 220R — M2_TEMP_ID
C101 2.2nF
M2_VBUS_C — R110 220R — M2_VBUS
C100 2.2nF
M2_Resolver_Sin_C — R48 220R — M2_Resolver_Sin
C37 2.2nF

AC_voltage_C — R120 220R — AC_voltage
C114 2.2nF
AC_zero_crossing_C — R72 220R — AC_zero_crossing
C48 2.2nF

PFC_Current1_C — R119 220R — PFC_Current1
C111 2.2nF
PFC_Current2_C — R70 220R — PFC_Current2
C46 2.2nF

Title: **MC_Connector_V2**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A3	Date: 03-JUN-26	Sheet: 11 of 14

M2 Interface (Connector)



Title: **M2 Interface (Connector)**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A4	Date: 03-JUN-26	Sheet: 12 of 14

M.2 Interface (Level Shifter)

VCCA : STM32 side

VCCB : M2 side

HOST_VDDIO

C142 100nF, C73 100nF, C65 100nF, C69 100nF, C61 100nF, C57 100nF, C66 100nF, C63 100nF

Level shifter HOST_VDDIO voltage decoupling capacitors

M2_VDDIO

C134 100nF, C148 100nF, C70 100nF, C143 100nF, C67 100nF, C74 100nF, C54 100nF, C58 100nF

Level shifter M2_VDDIO voltage decoupling capacitors

3V3 — SB15 — HOST_VDDIO

U23 SN74AVC4T774RSVR

HOST_VDDIO (14) — VCCA — VCCB (13) M2_VDDIO

M2_SPI5: CS, MOSI, MISO/WL_WAKE_IN, SCK/BT_WAKE_IN

A1 (1) ← M2_SPI5.CS — B1 (12) → M2_SPI.CS

A2 (2) ← M2_SPI5.MOSI — B2 (11) → M2_SPI.MOSI

A3 (3) ← M2_SPI5.MISO/WL_WAKE_IN — B3 (10) → M2_SPI.MISO/WL_WAKE_IN

A4 (4) ← M2_SPI5.SCK/BT_WAKE_IN — B4 (9) → M2_SPI.CLK/BT_WAKE_IN

HOST_VDDIO (15) — DIR1

HOST_VDDIO (16) — DIR2

5 — DIR3

6 — DIR4

DIR1, DIR2: *1:A>B*; DIR3, DIR4: *0:A<B*

HOST_VDDIO — R93 47K — M2_RST (7) — OE

GND (8)

HW13 — JP4

HOST_VDDIO — R85 47K, R88 47K

M2_IO_MCU: WL_REG_ON, BT_REG_ON, BT_HOST_WAKE, SPI_INT, WL_RESET, BT_WAKE_IN, WL_WAKE_IN, WL_HOST_WAKE

M2_IO_MCU.WL_REG_ON, M2_IO_MCU.BT_REG_ON, M2_IO_MCU.BT_HOST_WAKE, M2_IO_MCU.SPI_INT, M2_IO_MCU.WL_RESET, M2_IO_MCU.BT_WAKE_IN, M2_IO_MCU.WL_WAKE_IN, M2_IO_MCU.WL_HOST_WAKE

I/O voltage selector on M2.side
Default config M2_VDDIO 1.8V

09.03290.01 SW1: M2_VDDIO (1) — 3V3 (2) — IO M2 3V3; 1V8 (3) — IO M2 1V8

M2_SPI: CS, MOSI, MISO/WL_WAKE_IN, CLK/BT_WAKE_IN, INT

M2_SPI.MISO/WL_WAKE_IN, M2_SPI.CLK/BT_WAKE_IN, *(OD)*M2_SPI.INT

M2_SPI

C43 100nF — 3V3

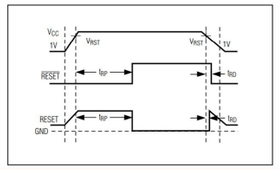
U19 IC_MAX825 MAX825REUK

M2 ON / M2 HiZ — SW2 — 09.03290.01

MR, VCC, GND, RESET, RESET

M2_RST, M2_nRST

Power supervisor to keep M2 signals
in high impedance until voltage stable



U31 TXS0104EPWR

HOST_VDDIO — VCCB, VCCA — M2_VDDIO

I2C2_I3C1: SDA, SCL — I2C2_I3C1.SDA, I2C2_I3C1.SCL

M2_I2C: SDA, SCL — M2_I2C.SDA, M2_I2C.SCL

B1, B2, B3, B4, NC, OE — A1, A2, A3, A4, NC, GND

M2_nRST

VCCB should be always > VCCA

U21 SN74AVC4T774RSVR

HOST_VDDIO (14) — VCCA — VCCB (13) 3V3 — C62 100nF

M2_IO_MCU.WL_REG_ON (1) → M2_IO_CON.WL_REG_ON (12)

M2_IO_MCU.BT_REG_ON (2) → M2_IO_CON.BT_REG_ON (11)

M2_IO_MCU.BT_HOST_WAKE (3) → M2_IO_CON.BT_HOST_WAKE (10) *(OD)*

4, 9

HOST_VDDIO (15) — DIR1

HOST_VDDIO (16) — DIR2

5 — DIR3

6 — DIR4

DIR1, DIR2: *1:A>B*; DIR3, DIR4: *0:A<B*

M2_RST (7) — OE

GND (8)

R91 47K

M2_IO_CON: WL_REG_ON, BT_REG_ON, BT_HOST_WAKE, WL_HOST_WAKE, WL_RESET

M2_IO_CON.WL_REG_ON, M2_IO_CON.BT_REG_ON, M2_IO_CON.BT_HOST_WAKE, M2_IO_CON.WL_HOST_WAKE, M2_IO_CON.WL_RESET

M2_IO_CON

U20 SN74AVC4T774RSVR

HOST_VDDIO (14) — VCCA — VCCB (13) M2_VDDIO

M2_UART4: TX, RX, RTS, CTS

A1 (1) ← M2_UART4.TX — B1 (12) → M2_BT_USART1.RX

A2 (2) ← M2_UART4.RX — B2 (11) → M2_BT_USART1.TX

A3 (3) ← M2_UART4.RTS — B3 (10) → M2_BT_USART1.CTS

A4 (4) ← M2_UART4.CTS — B4 (9) → M2_BT_USART1.RTS

M2_BT_USART1.RX, M2_BT_USART1.TX, M2_BT_USART1.CTS, M2_BT_USART1.RTS

M2_BT_USART1: RX, TX, CTS, RTS

HOST_VDDIO (15) — DIR1

HOST_VDDIO (16) — DIR2

5 — DIR3

6 — DIR4

DIR1, DIR2: *1:A>B*; DIR3, DIR4: *0:A<B*

M2_RST (7) — OE

GND (8)

U24 SN74AVC4T774RSVR

HOST_VDDIO (14) — VCCA — VCCB (13) M2_VDDIO

M2_IO_MCU.WL_HOST_WAKE (1) → M2_IO_CON.WL_HOST_WAKE (12) *(OD)*

M2_IO_MCU.SPI_INT (2) → M2_SPI.INT (11) *(OD)*

M2_IO_MCU.WL_RESET (3) → M2_IO_CON.WL_RESET (10)

4, 9

HOST_VDDIO (15) — DIR1

16 — DIR2

5 — DIR3

6 — DIR4

DIR1, DIR2: *1:A>B*; DIR3, DIR4: *0:A<B*

M2_RST (7) — OE

GND (8)

R97 47K

HOST_VDDIO — R136 47K, R134 47K, R133 47K, R129 47K, R125 47K

M2_SDMMC2: D0, D1, D2, D3, CK, CMD

M2_SDMMC2.D0, M2_SDMMC2.D1, M2_SDMMC2.D2, M2_SDMMC2.D3, M2_SDMMC2.CK, M2_SDMMC2.CMD

U30_TXB0304RSVR — HOST_VDDIO (16) — VCCA — VCCB (13) M2_VDDIO

A1 (1) ↔ M2_SDMMC2.D0 — B1 (12) ↔ M2_SDIO.D0

A2 (2) ↔ M2_SDMMC2.D1 — B2 (11) ↔ M2_SDIO.D1

A3 (3) ↔ M2_SDMMC2.D2 — B3 (10) ↔ M2_SDIO.D2

A4 (4) ↔ M2_SDMMC2.D3 — B4 (9) ↔ M2_SDIO.D3

NC (5), OE (8) — GND, GND — NC (14), NC (15)

M2_nRST

TXB0304RSVR (6, 7)

U29_TXB0304RSVR — HOST_VDDIO (16) — VCCA — VCCB (13) M2_VDDIO

A1 (1) ↔ M2_SDMMC2.CK — B1 (12) ↔ M2_SDIO.CLK

A2 (2) ↔ M2_SDMMC2.CMD — B2 (11) ↔ M2_SDIO.CMD

A3 (3), A4 (4), NC (5), OE (8) — GND, GND — B3 (10), B4 (9), NC (14), NC (15)

M2_nRST

TXB0304RSVR (6, 7)

M2_SDIO: D0, D1, D2, D3, CLK, CMD

M2_SDIO

I2S2: CK, WS, SDO, SDI

I2S2.CK, I2S2.WS, I2S2.SDO, I2S2.SDI

U22_TXB0304RSVR — HOST_VDDIO (16) — VCCA — VCCB (13) M2_VDDIO

A1 (1) ↔ I2S2.CK — B1 (12) ↔ M2_CON_I2S.SCK

A2 (2) ↔ I2S2.WS — B2 (11) ↔ M2_CON_I2S.WS

A3 (3) ↔ I2S2.SDO — B3 (10) ↔ M2_CON_I2S.SDIN

A4 (4) ↔ I2S2.SDI — B4 (9) ↔ M2_CON_I2S.SDOUT

NC (5), OE (8) — GND, GND — NC (14), NC (15)

M2_nRST

TXB0304RSVR (6, 7)

M2_CON_I2S: SCK, WS, SDIN, SDOUT

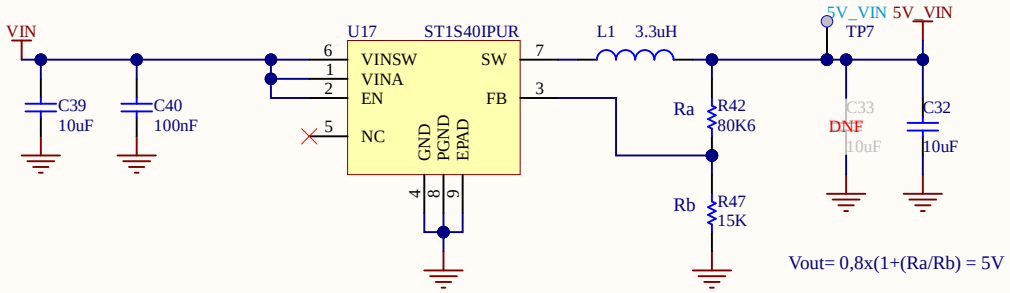
M2_CON_I2S

Title: **M.2 Interface (Level Shifter)**		
Project: **STM32H7P DK board**		
Variant: H7P5II		
Revision: C-02		Reference: MB2232
Size: A3	Date: 03-JUN-26	Sheet: 13 of 14

POWER SOURCES

VIN / 5V PWR / 3A

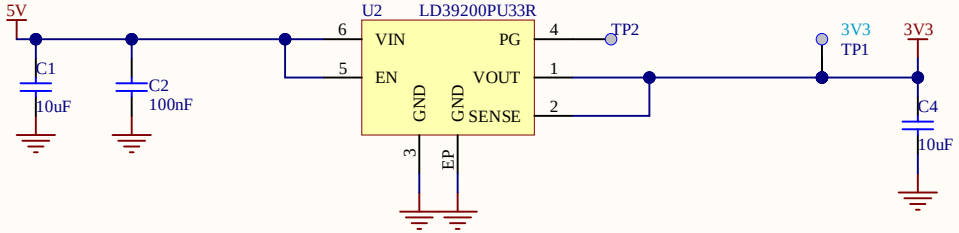
Operating range: 7V < VIN < 12V



Vout= 0,8x(1+(Ra/Rb) = 5V

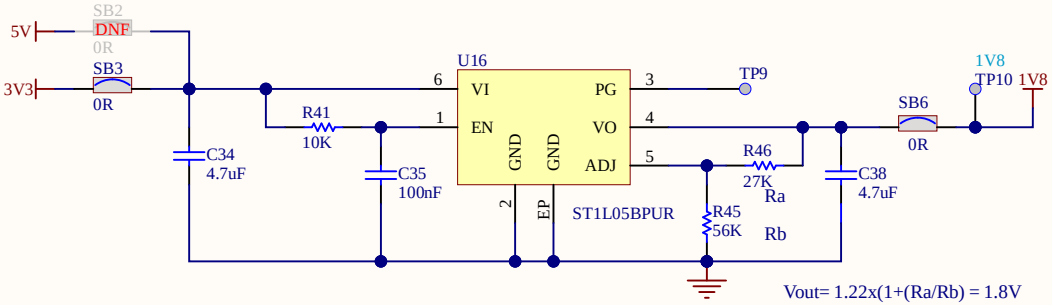
3V3 PWR / 2A

Operating range: 4.5V < PVIN < 5.5V



1V8 PWR/ 1.3A

Operating range: 3V < VI < 5.5V

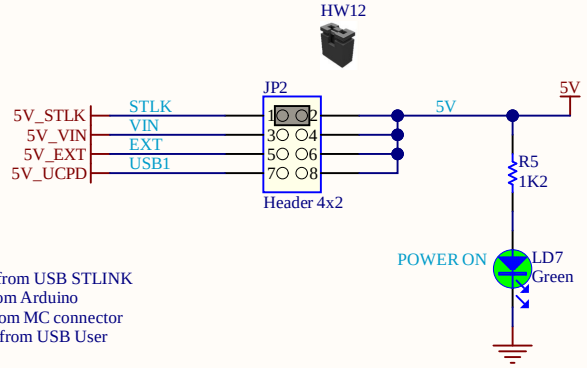


Vout= 1.22x(1+(Ra/Rb) = 1.8V

5V PWR SELECTION

ONLY ONE POSITION SHOULD BE SELECTED

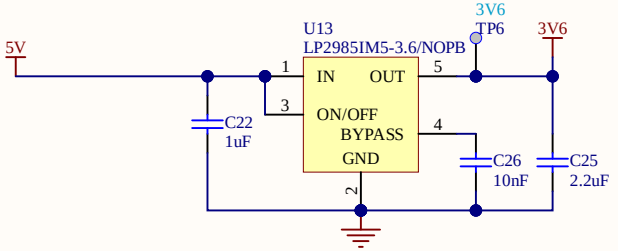
5V / 2A MAX



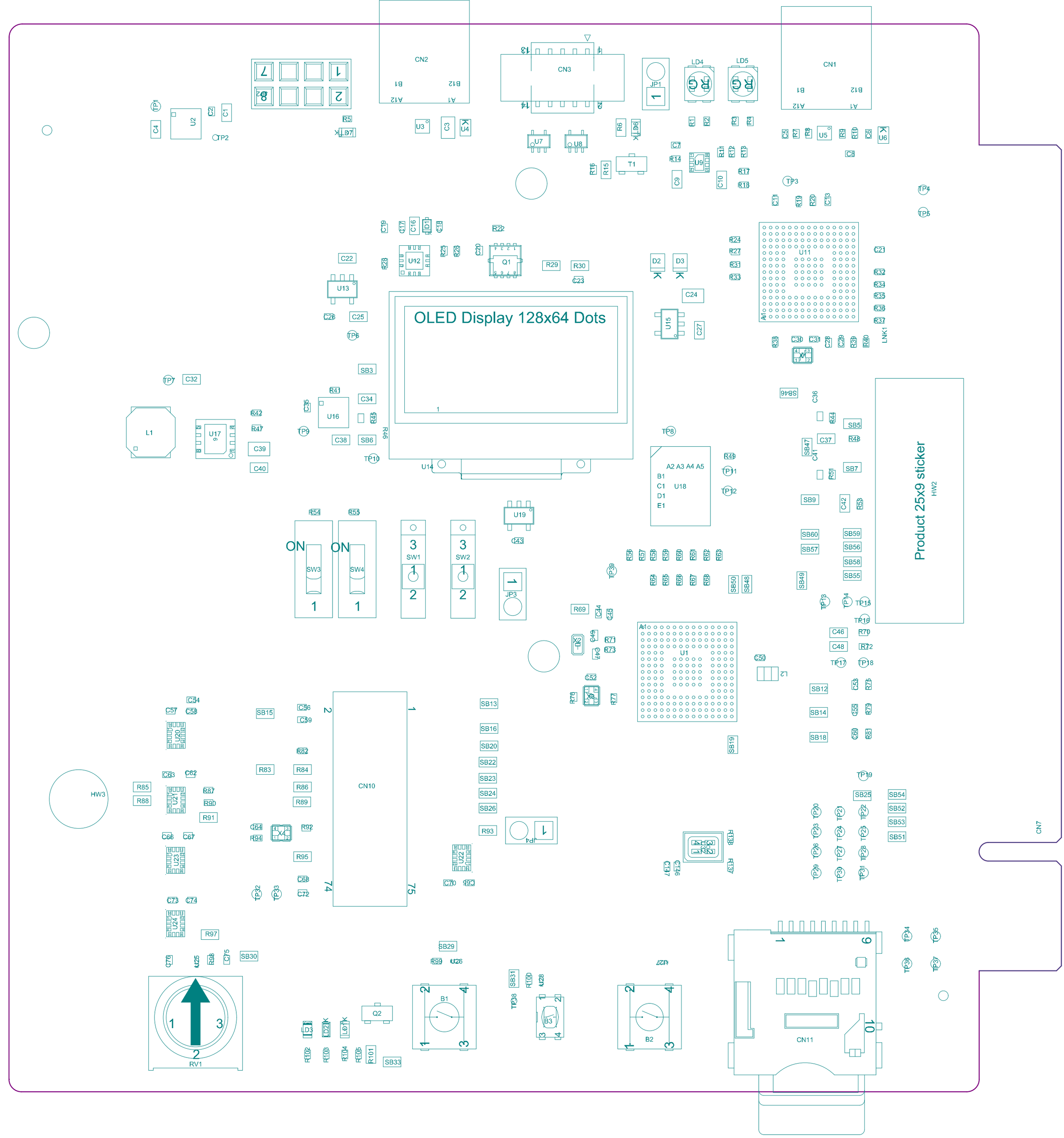
5V_STLK from USB STLINK
5V_VIN from Arduino
5V_EXT from MC connector
5V_UCPD from USB User

3V6 PWR/ 150mA

Operating range: 2.5V < VI < 16V



Title: **POWER SOURCES**			
Project: **STM32H7P DK board**			
Variant: H7P5II			
Revision: C-02		Reference: MB2232	
Size: A4	Date: 03-JUN-26	Sheet: 14 of 14	



Project: STM32H7P DK board	
Layer: M14-Top Assembly	Gerber: .GM14
Variant: H7P5II	Ref: MB2232
Date: 03-JUN-26	Rev: C

H1

H2

R107

HW6

CN5

CN9

C77 C78 C79

C80

C81 C82 C83 C84 C85 C86 C87 C88 C89 C90 C91 C92 R108 C93

C94 C95 R109 C97 C98 C99 C96

CN12

HW7

R110 C100

R111 C101

SB34 C102 R112 C104 C106 C105 C108 C109

SB35 C103 R113

R115 C107 SB37

R117 C110 SB39

CN13

R119 C111

R120 C114

R122 C116

R124 C122

R121 C115 C112 C113 C118 C119 C117 C120 C121 C123 C124 C125 C129 C126 C127 C128 C131 C132 C133 C130 LNK6 C135 C136 C137 C138 C139 C140 SB42 R126 R127 R128

HW8

R123

CN6

CN8

SB41

C69 C134

R125 U29

R131 C141

R133 C144

R135 C145

R129 C142 C143 R130

R132 U30

R134

R136

C61

U31

C148

U33

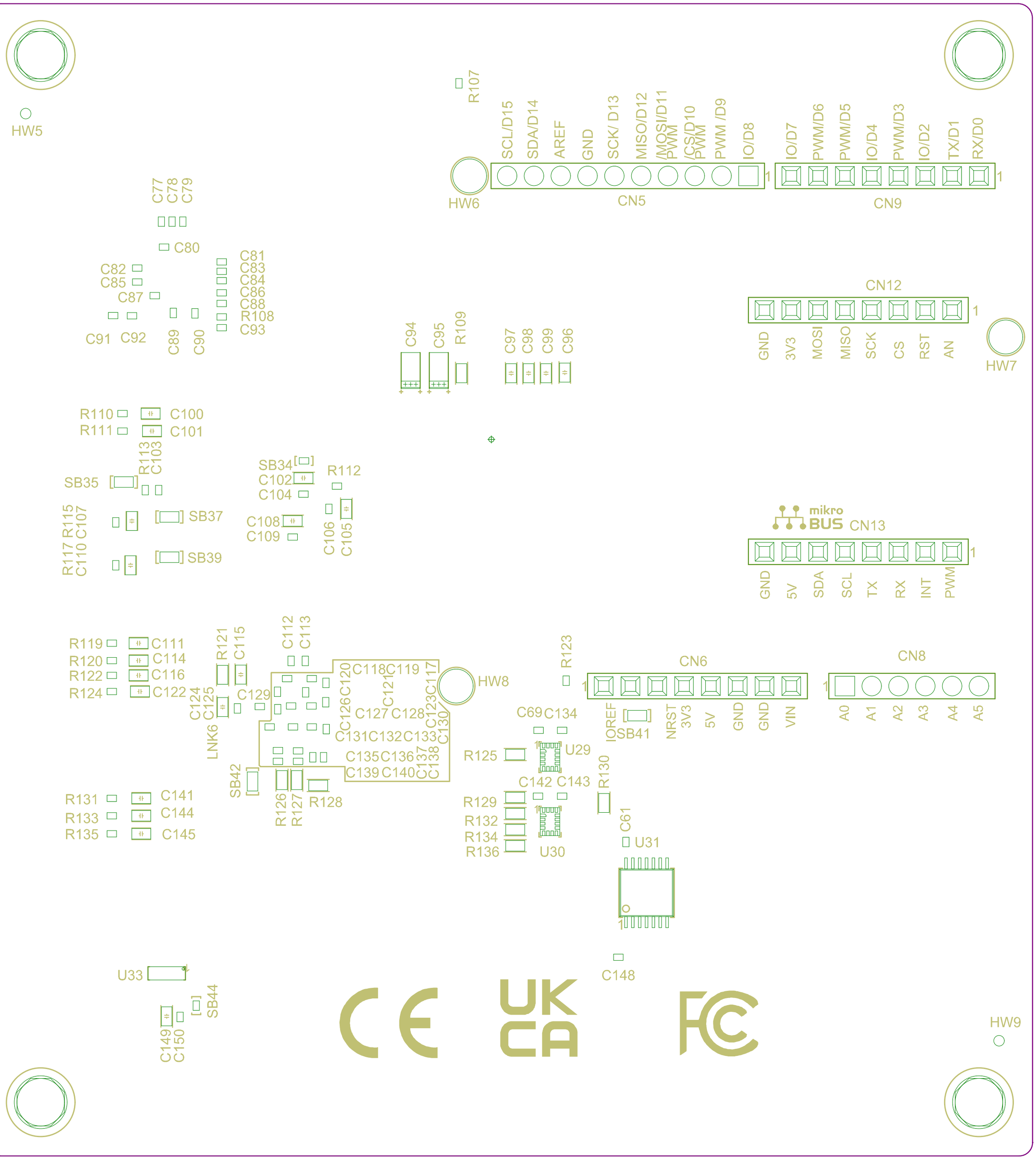
C149 C150 SB44

H3

H4

Project: STM32H7P DK board	
Layer: M15-Bottom Assembly	Gerber:.GM15
Variant: H7P5II	Ref: MB2232
Date: 03-JUN-26	Rev: C

Reserved
USB1 EXT VIN STLK
JP2
1
2
5V
R5
LD7
POWER ON
TP1
3V3
C4
U2
C2
C1
TP2
HW1
B1
B12
A12
A1
CN2
USB1
U3
C3
U4
STDC14
CN3
13
1
14
2
U7
U8
R6
LD6
VBUS
JP1
PWR_STATUS
LD4
LD5
COM
USB STLK
CN1
R1
C7
R14
R2
R3
R4
R11
R12
R13
C5
R7
R8
U5
C8
R17
R18
MCO
TP3
TP4
TP5
R16
R15
T1
C9
U9
C10
C11
R19
R20
C13
C19
C17
C16
D1
C18
R22
C22
U13
C25
C26
TP6
3V6
R28
U12
R25
R26
C20
Q1
R29
R30
C23
OLED Display 128x64 Dots
D2
D3
R24
R27
R31
R33
C24
U11
U15
C27
C21
R32
R34
R35
R36
R37
C30 C31
LNK1
R38
X1
C28
C29
R39
R40
HW2
SB46
TP8
R49
TP11
TP12
SB47
C36
R44
SB5
C37
R48
A2
C41
R51
SB7
SB9
C42
R53
U18
Product 25x9 sticker
SB60
SB59
SB57
SB56
SB58
SB55
TP13
TP14
TP15
TP16
R70
R72
C46
C48
TP17
TP18
L2
SB12
SB14
SB18
C60
C55
C53
R81
R79
R75
5V_VIN
TP7
C32
SB3
R41
C34
C35
R42
R47
C39
C40
TP9
U16
C38
SB6
TP10
R46
R45
1V8
U17
L1
U14
R54
R55
SW3
SW4
I2C
I3C
IO M2
3V3
1V8
SW1
M2 ON
M2 HiZ
SW2
U19
C43
JP3
IDD
X2
C49
C52
R76
X3
R77
SB13
SB16
SB20
SB22
SB23
SB24
SB26
R93
JP4
U22
C70 C65
U1
SB19
RoHS
Compliant
TP19
SB25
SB54
SB52
SB53
SB51
TP20 TP21
TP23 TP24
TP26 TP27
TP22
TP25
TP28
TP31
TP29 TP30
U32
C147
C146
R138
R137
CN10
M2/ConnectRF
SB29
R99
U26
MB2232C
U27
CN11 MICRO-SD
TP34 TP35
TP36 TP37
HW4
C56
C59
SB15
C54
C58
C57
U20
R82
C63
C62
R83
R85
R84
R87
R86
R90
R89
R91
R88
U21
C64
X4
R92
C66
C67
R94
R95
U23
C68
C73
C74
C72
TP32
TP33
U24
R97
C76
U25
R98
C75
SB30
R102
R103
R104
R105
R101
LD3
LD2
LD1
Q2
SB33
B1 USER
TP38
SB31
R100
U28
B3
BOOT
B2 RESET
R64
R65
R66
R67
R71
R73
C50
HW3
RV1 POT
Top Overlay
Top Assembly
.GTO
.GTA



M15-Bottom Assembly .GM15

Bottom Overlay