


Project Title				Mini-F5277-OB		
Sheet Title				System Block Diagram		
Size	A3	Rev	A	Drawn	Li Hongpeng	
Sheet	1	/	6	Checked	Lu Weiwei	
Date	2023-04-30			Approved	Chen Do	
				7	8	

A

B

C

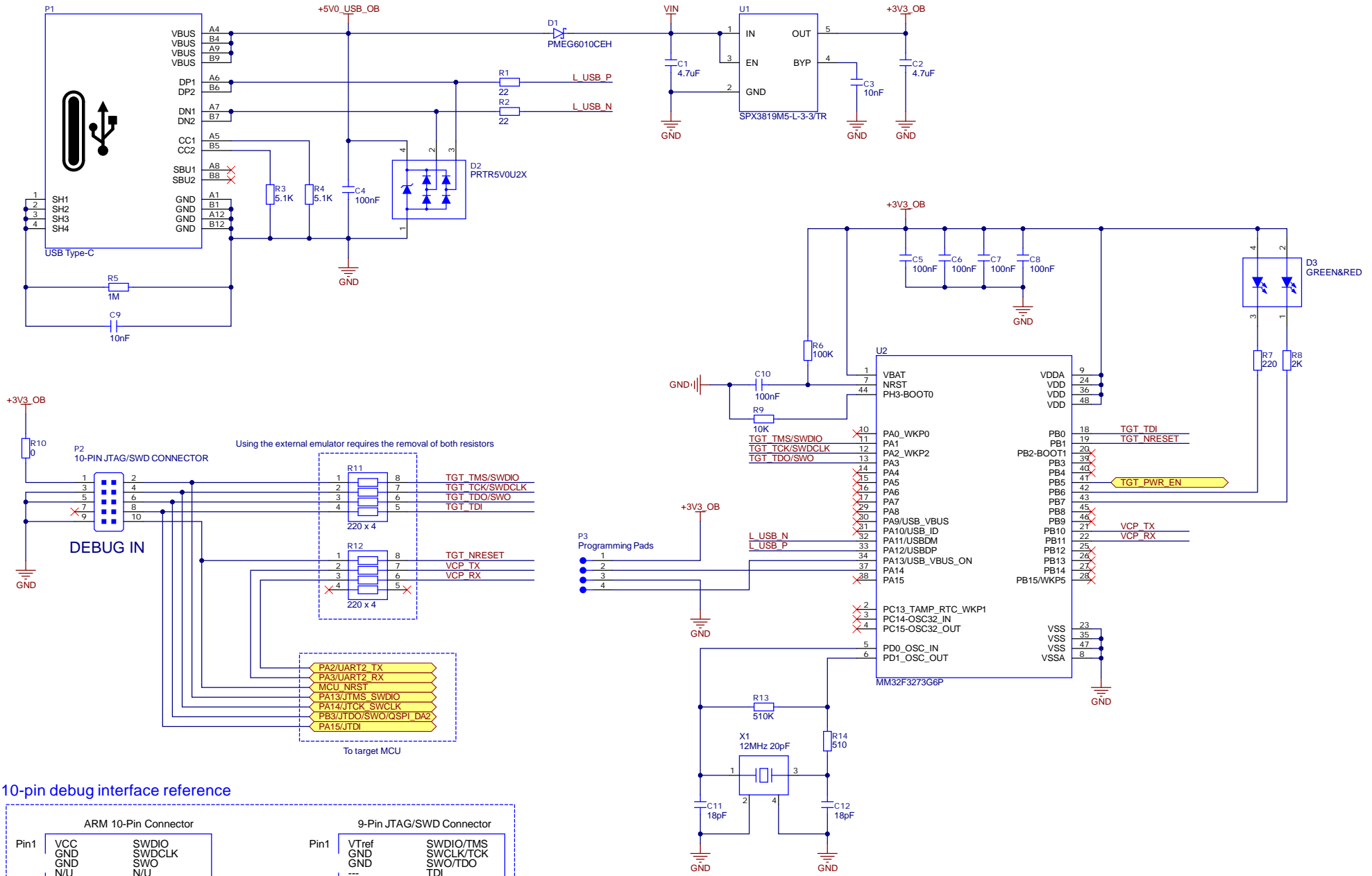
D

A

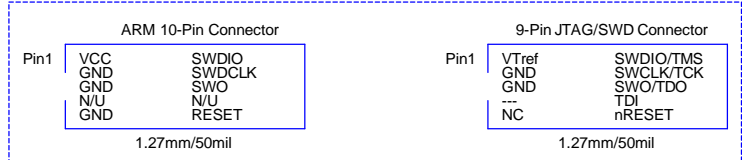
B

C

D

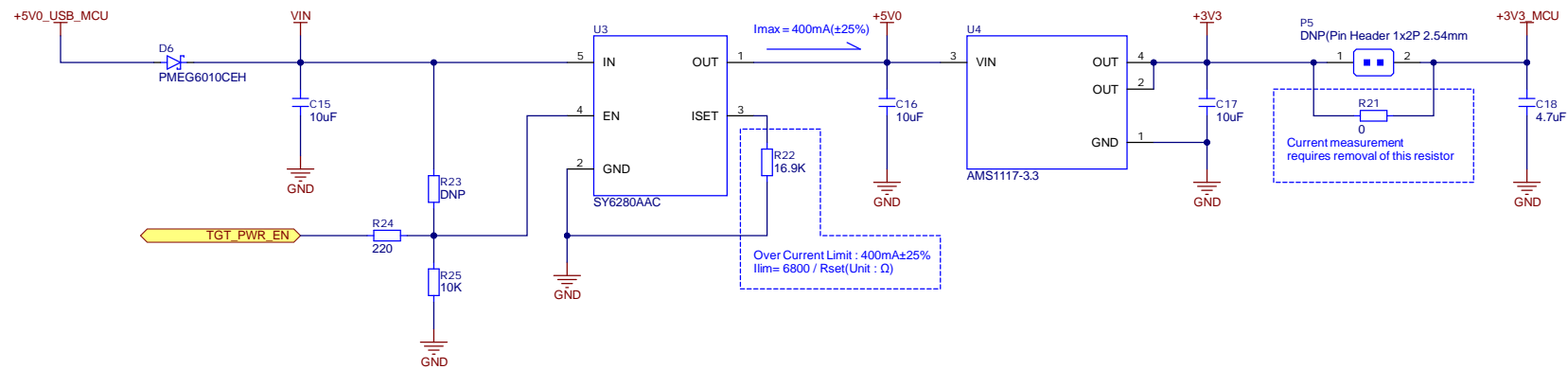
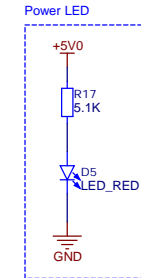
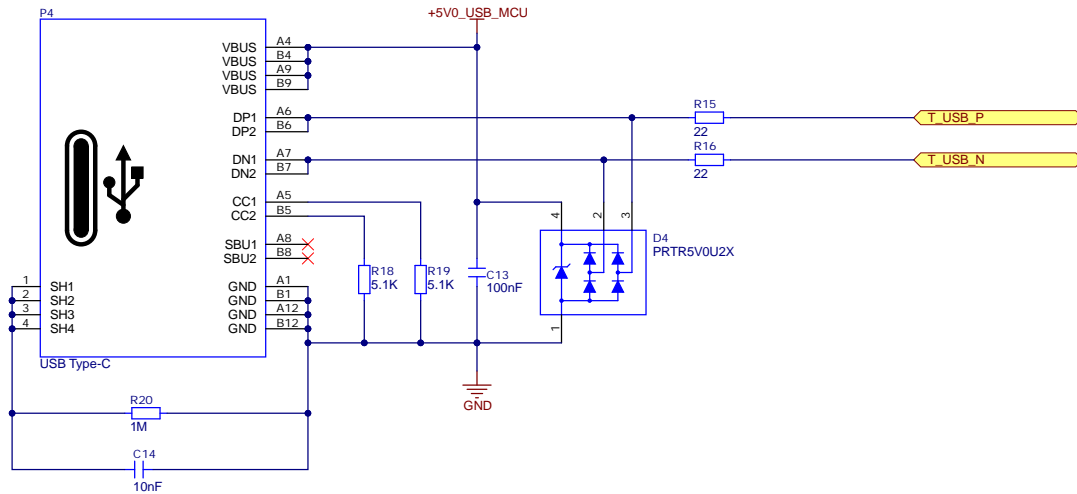


10-pin debug interface reference



DNP : DO NOT POPULATE

Project Title		Mini-F5277-OB		
Sheet Title		MM32Link-OB V1.0		
Size	A3	Rev	A	
Sheet	2 / 6	Drawn	Lu Hongpeng	
Data	2023-04-30	Checked	Lu Weiwei	
		Approved	Chen Do	



DNP : DO NOT POPULATE

Project Title		Mini-F5277-OB	
Sheet Title		Target Power	
Size	A3	Rev	A
Sheet	3	Drawn	Lu Hongpeng
Date		Checked	Lu Weiwei
2023-04-30		Approved	Chen Do



A

B

C

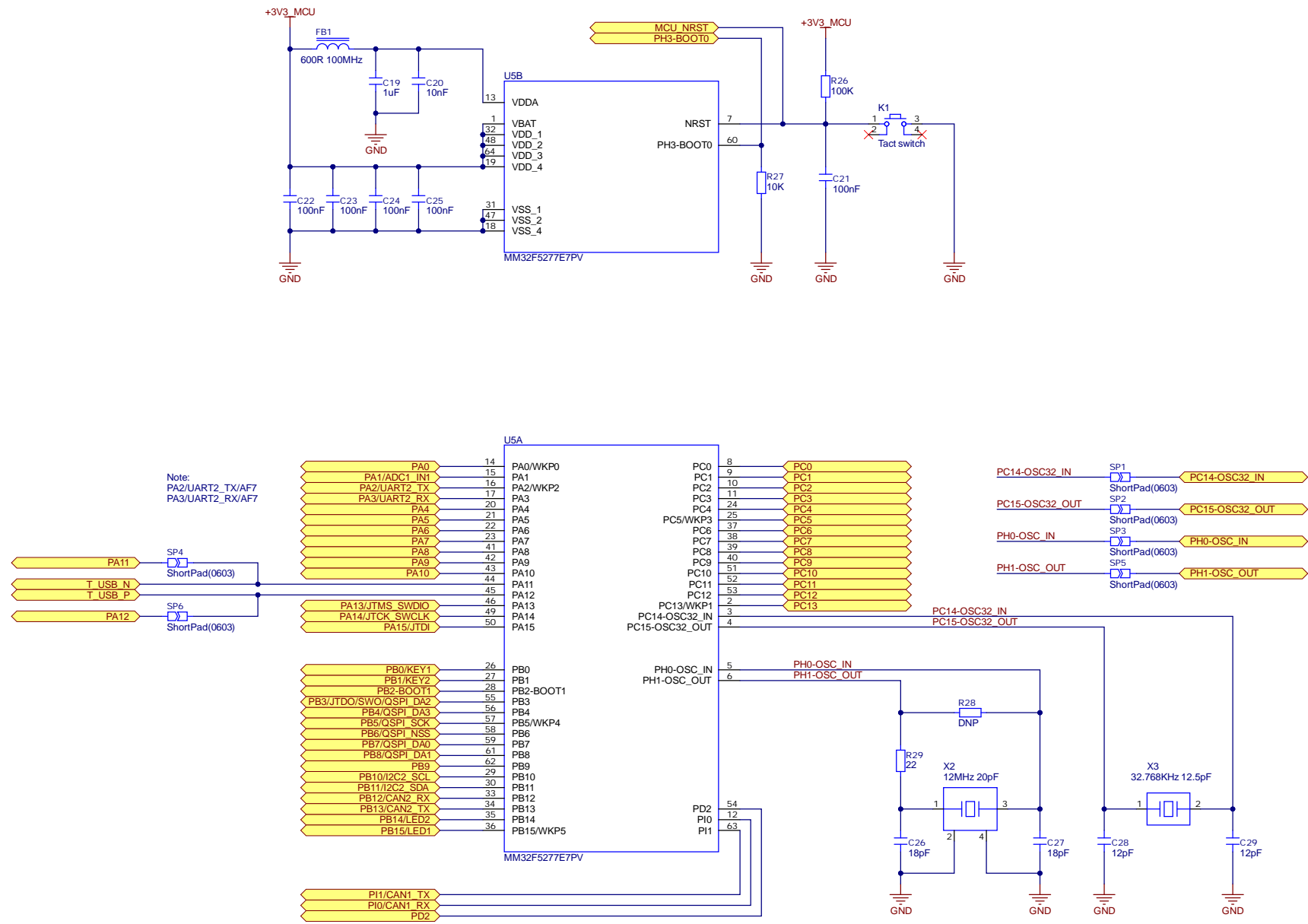
D

A

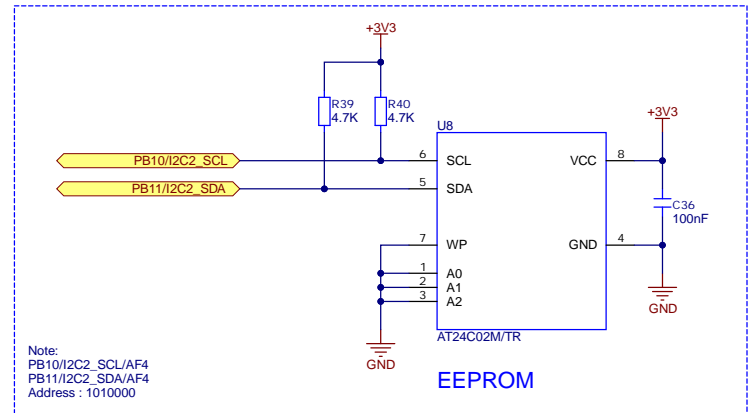
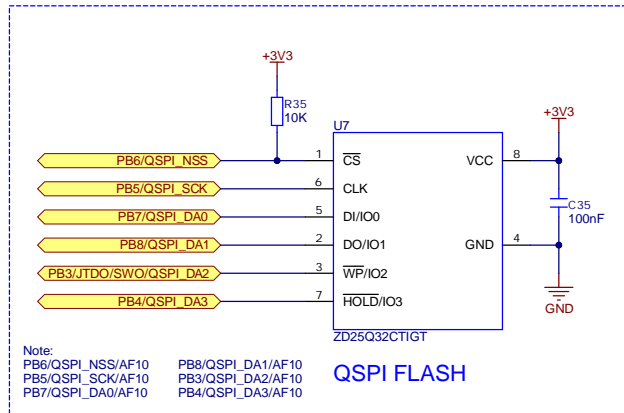
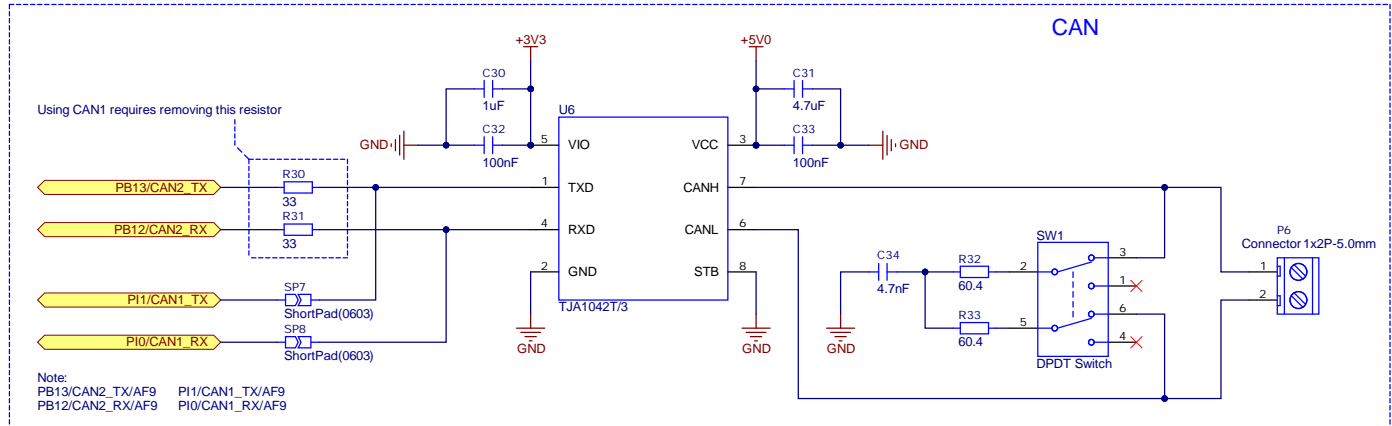
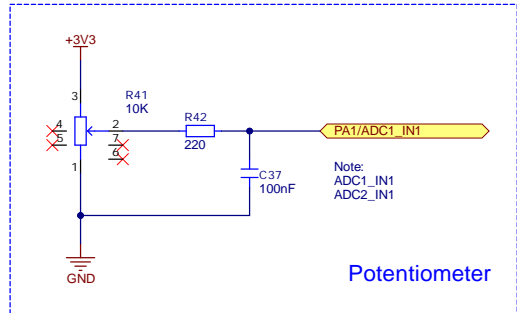
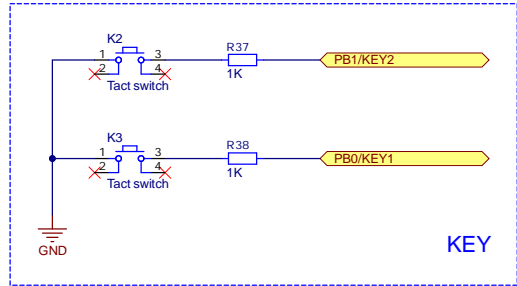
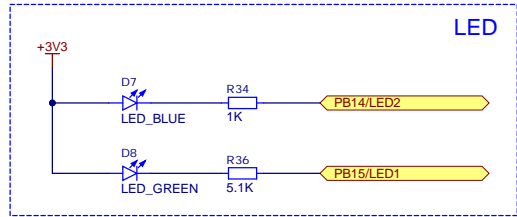
B

C

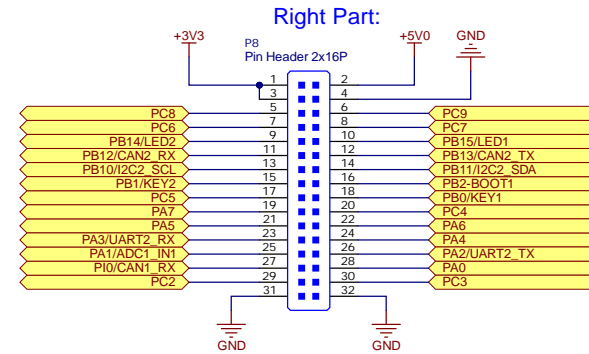
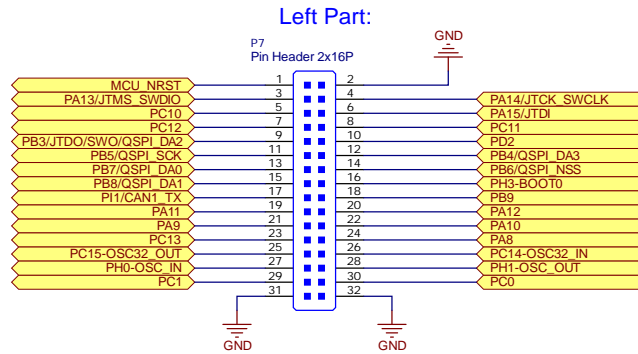
D



DNP : DO NOT POPULATE



DNP : DO NOT POPULATE



Pin assignment:

PA0---TIM2_CH1---TIM2_ETR---TIM5_CH1---TIM8_ETR---UART2_CTS---UART4_TX---ENET_MII_CRS---ADC12_IN0---COMP12_INP0---COMP1_INM2---COMP3_INP3---WKP0
PA1---TIM2_CH2---TIM5_CH2---UART2_RTS---UART4_RX---QSPI_DA3---ENET_MII_RX_CLK---ENET_RMII_REF_CLK---ADC12_IN1---COMP12_INP1---COMP3_INP7
PA2---TIM2_CH3---TIM5_CH3---UART2_TX---COMP2_OUT---QSPI_DA2---ENET_MDIO---FMC_DA4---LPUART_TX---ADC12_IN2---COMP12_INP2---COMP2_INM2---WKP2
PA3---TIM2_CH4---TIM5_CH4---I2S1_MCK---UART2_RX---QSPI_DA1---ENET_MII_COL---FMC_DA5---LPUART_RX---ADC12_IN3---COMP12_INP3
PA4---TIM5_ETR---SPI1_NSS---I2S1_WS---SPI3_NSS---I2S3_WS---UART5_TX---QSPI_DA0---FMC_DA6---ADC12_IN4---COMP12_INM0---DAC1_OUT
PA5---TIM2_CH1---TIM2_ETR---TIM3_ETR---TIM8_CH1N---SPI1_SCK---I2S1_CLK---UART5_RX---QSPI_SCK---FMC_DA7---ADC12_IN5---COMP12_INM1---COMP3_INM7---DAC2_OUT
PA6---TIM1_BKIN1---TIM3_CH1---TIM8_BKIN1---SPI1_MISO---I2S1_MCK(extSD)---COMP1_OUT---QSPI_NSS---ADC12_IN6
PA7---TIM1_CH1N---TIM3_CH2---TIM8_CH1N---SPI1_MOSI---I2S1_SD---COMP2_OUT---CRS_SYNC---ENET_RMII_RX_DV---ENET_RMII_CRS_DV---MDSW_IN1---ADC12_IN7
PA8---TIM1_CH1---TIM3_ETR---I2C1_SCL
PA9---TIM1_CH2---I2C1_SCL---UART1_TX---USB_FS_VBUS
PA10---TIM1_CH3---I2C1_SDA---UART1_RX---USB_FS_ID
PA11---TIM1_CH4---I2C1_SMBA---UART1_CTS---COMP1_OUT---CAN1_RX---USB_FS_DM
PA12---TIM1_ETR---UART1_RTS---COMP2_OUT---CAN1_TX---USB_FS_DP
PA13---I2C1_SMBA---USB_FS_VBUSON---ENET_MII_TX_CLK---MDSW_OUT2
PA14---I2C1_SDA---I2S3_MCK---UART4_CTS---MDSW_IN3
PA15---TIM2_CH1---TIM2_ETR---I2C1_SCL---SPI1_NSS---I2S1_WS---SPI3_NSS---I2S3_WS---UART4_RTS---ENET_MII_RX_CLK---ENET_RMII_REF_CLK

PB0---TIM1_CH2N---TIM3_CH3---TIM8_CH2N---UART6_TX---ENET_MII_RXD2IADC12_IN8---COMP3_INP1
PB1---TIM1_CH3N---TIM3_CH4---TIM8_CH3N---UART6_RX---ENET_MII_RXD3IADC12_IN9---COMP3_INM1
PB2---TIM1_CH4N---TIM8_CH4N---QSPI_SCK---ENET_MII_RX_CLK---ENET_RMII_REF_CLK---BOOT1
PB3---TIM2_CH2---TIM4_ETR---SPI1_SCK---I2S1_CLK---SPI3_SCK---I2S3_CLK---UART5_CTS---QSPI_DA2
PB4---TIM3_CH1---SPI1_MISO---I2S1_MCK(extSD)---SPI3_MISO---I2S3_MCK(extSD)---UART5_RTS---QSPI_DA3
PB5---TIM3_CH2---TIM8_CH3N---I2C1_SMBA---SPI1_MOSI---I2S1_SD---SPI3_MOSI---I2S3_SD---CAN2_RX---QSPI_SCK---ENET_PPS_OUT---LPTIM_CH1---WKP4
PB6---TIM4_CH1---TIM8_CH4N---I2C1_SCL---SPI1_NSS---I2S1_WS---SPI3_NSS---I2S3_WS---UART1_TX---UART7_TX---CAN2_TX---QSPI_NSS---LPTIM_ETR
PB7---TIM4_CH2---COMP3_OUT---I2C1_SDA---I2S1_MCK---I2S3_MCK---UART1_RX---UART7_RX---QSPI_DA0---FMC_NADV---MDSW_OUT3
PB8---TIM4_CH3---TIM8_CH1N---I2C1_SCL---UART1_CTS---COMP1_OUT---CAN1_RX---QSPI_DA1---ENET_MII_TXD3
PB9---TIM4_CH4---TIM8_CH2N---I2C1_SDA---SPI2_NSS---I2S2_WS---UART1_RTS---COMP2_OUT---CAN1_TX
PB10---TIM2_CH3---I2C2_SCL---SPI2_SCK---I2S2_CLK---UART3_TX---QSPI_NSS---ENET_MII_RX_ER---LPTIM_CH1---LPUART_RX
PB11---TIM2_CH4---I2C2_SDA---I2S2_MCK---UART3_RX---ENET_MII_TX_EN---ENET_RMII_TX_EN---LPTIM_ETR---LPUART_TX---MDSW_OUT1
PB12---TIM1_BKIN2---TIM5_ETR---COMP3_OUT---I2C2_SMBA---SPI2_NSS---I2S2_WS---CAN2_RX---ENET_MII_TXD0---ENET_RMII_TXD0---FMC_DA13
PB13---TIM1_CH1N---TIM8_CH1N---SPI2_SCK---I2S2_CLK---UART3_CTS---CAN2_TX---ENET_MII_TXD1---ENET_RMII_TXD1
PB14---TIM1_CH2N---TIM8_CH2N---SPI2_MISO---I2S2_MCK(extSD)---UART3_RTS---ENET_MII_TX_CLK---FMC_DA0---MDSW_IN2
PB15---TIM1_CH3N---TIM8_CH3N---SPI2_MOSI---I2S2_SD---WKP5

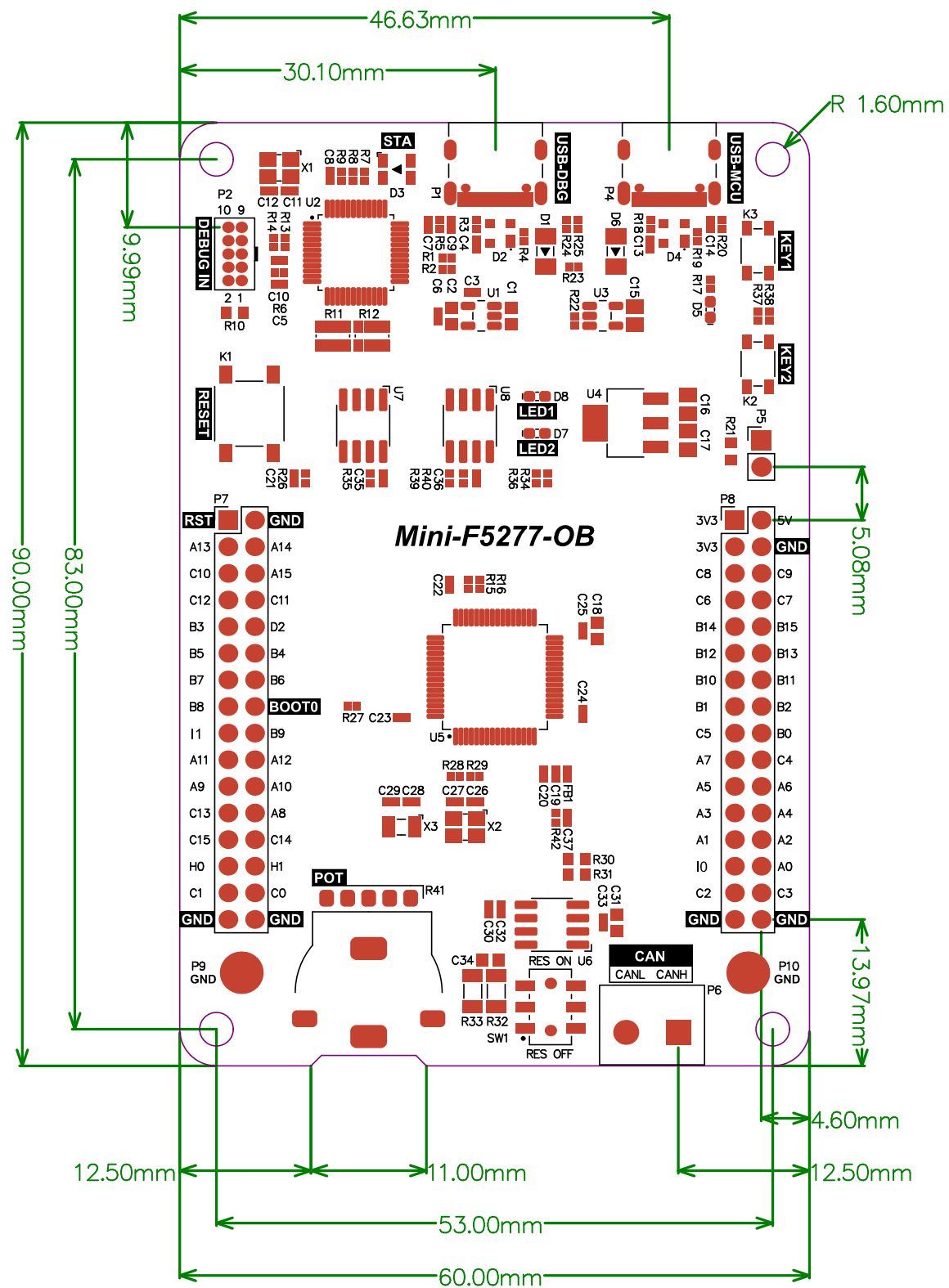
PC0---TIM1_BKIN3---I2C1_SCL---UART4_TX---LPUART_RX---ADC12_IN10---COMP3_INM0
PC1---TIM8_BKIN2---I2C1_SDA---UART4_RX---ENET_MDC---LPUART_TX---ADC12_IN11---COMP3_INP0
PC2---COMP3_OUT---I2C2_SCL---SPI2_MISO---I2S2_MCK(extSD)---UART4_CTS---ENET_MII_TXD2---FMC_NWE---ADC1_IN12
PC3---I2C2_SDA---SPI2_MOSI---I2S2_SD---UART4_RTS---ENET_MII_TX_CLK---FMC_A0---ADC1_IN13
PC4---UART1_TX---ENET_MII_RXD0---ENET_RMII_RXD0---FMC_NE4---ADC2_IN14
PC5---UART1_RX---ENET_MII_RXD1---ENET_RMII_RXD1---FMC_NOE---ADC2_IN15---WKP3
PC6---TIM3_CH1---TIM8_CH1---I2C1_SCL---SPI2_MISO---I2S2_MCK(extSD)---UART6_TX---FMC_DA1
PC7---TIM3_CH2---TIM8_CH2---I2C1_SDA---SPI3_MISO---I2S3_MCK(extSD)---SPI3_MISO---I2S3_MCK(extSD)---UART6_RX
PC8---TIM3_CH3---TIM8_CH3---I2C2_SCL
PC9---TIM3_CH4---TIM8_CH4---I2C2_SDA
PC10---SPI3_SCK---I2S3_CLK---UART3_TX---UART4_TX---QSPI_SCK
PC11---SPI3_MISO---I2S3_MCK(extSD)---UART3_RX---UART4_RX---QSPI_NSS---FMC_DA2
PC12---SPI3_MOSI---I2S3_SD---UART5_TX---FMC_DA3
PC13---TIM8_CH1---MDSW_IN0
PC14---TIM8_CH2---OSC32_IN
PC15---TIM8_CH3---OSC32_OUT



PD2---TIM3_ETR---I2S3_MCK---UART5_RX---FMC_NWE
PH0---OSC_IN
PH1---OSC_OUT
PH3---BOOT0
PI0---TIM1_CH4N---TIM8_CH4---CAN1_RX---LPUART_RX---MDSW_OUT0
PI1---TIM2_ETR---TIM5_ETR---TIM8_ETR---I2C1_SMBA---CAN1_TX---LPUART_TX

Project Title		Mini-F5277-OB	
Sheet Title		Target MCU IO Expansion	
Size	A3	Rev	A
Drawn	Li Hongpeng		
Sheet	6 / 6	Checked	Lu Weiwel
Date	2023-04-30	Approved	Chen Do







MM32F5277E7PV
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DEBUG IN				1
SWDIO/TMS	VCC			
SWCLK/TCK	GND			
TDO/SWO	GND			
TDI	NC			
nRESET	NC			

Measuring Current

+ ← +3V3
- ← +3V3_MCU

5V 3V3
GND 3V3
C9 C8
C7 C6
B15 B14
B13 B12
B11 B10
B2 B1
B0 C5
C4 A7
A6 A5
A4 A3
A2 A1
A0 I0
C3 C2
GND **GND**

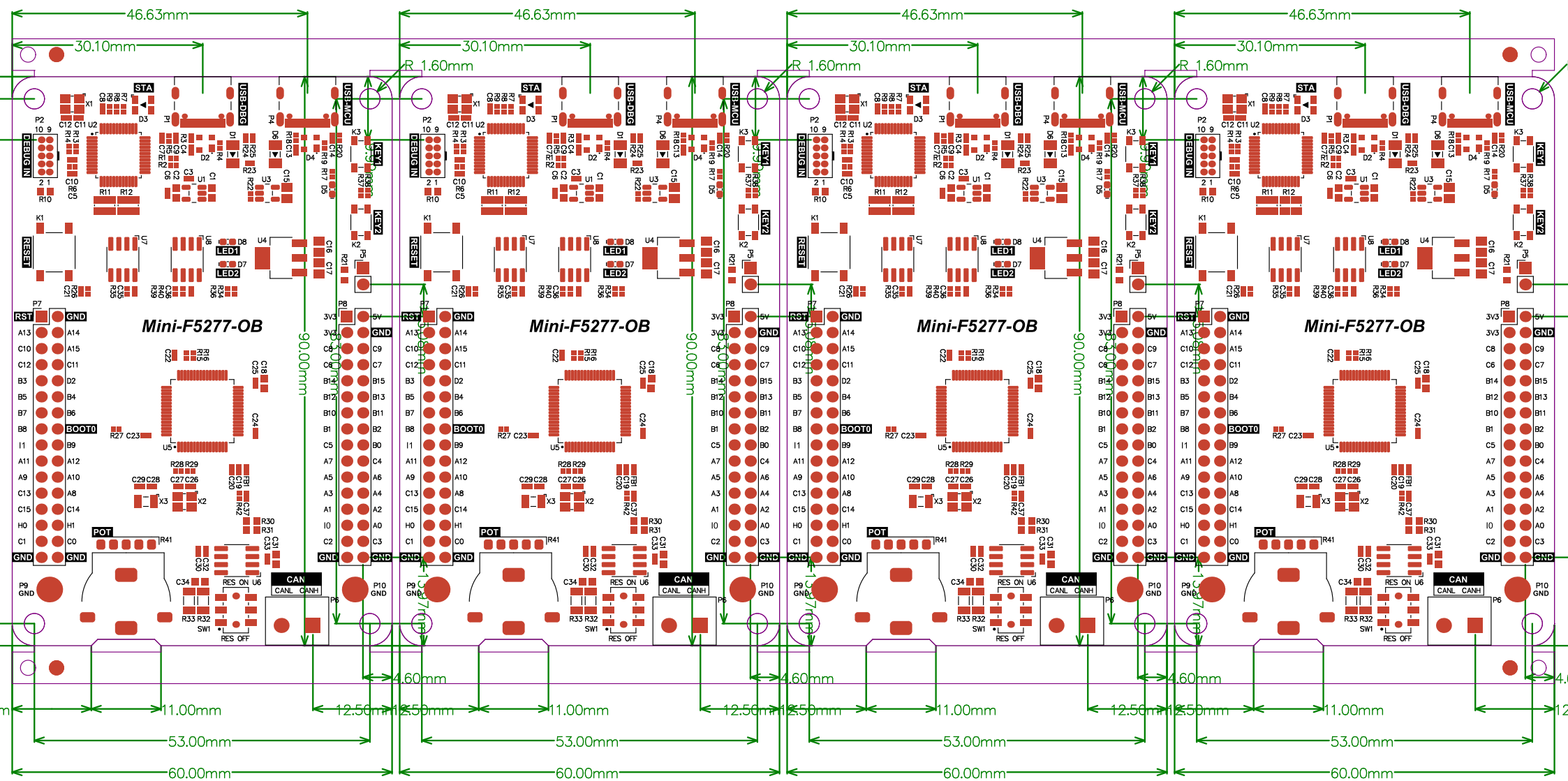
A11 A12
SP4 SP6

I1 SP7
I0 SP8
H1 SP5
H0 SP3
C14 SP1
C15 SP2

GND **RST**
A14 A13
A15 C10
C11 C12
D2 B3
B4 B5
B6 B7
BOOT0 B8
B9 I1
A12 A11
A10 A9
A8 C13
C14 C15
H1 H0
C0 C1
GND **GND**



CANH
CANL

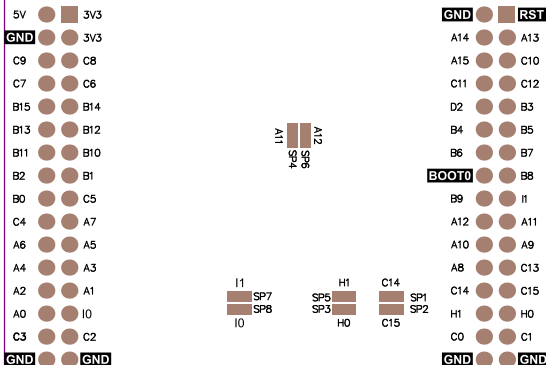
RevA



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DEBUG IN 1
SWDIO/TMS VCC
SWCLK/TCK GND
TDO/SWO GND
TDI NC
nRESET NC



Measuring Current
+  $\leftarrow +3V3$
-  $\leftarrow +3V3_MCU$

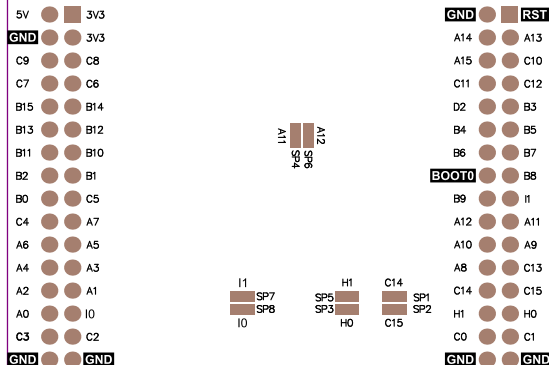


RevA

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DEBUG IN 1
SWDIO/TMS VCC
SWCLK/TCK GND
TDO/SWO GND
TDI NC
nRESET NC



Measuring Current
+  $\leftarrow +3V3$
-  $\leftarrow +3V3_MCU$

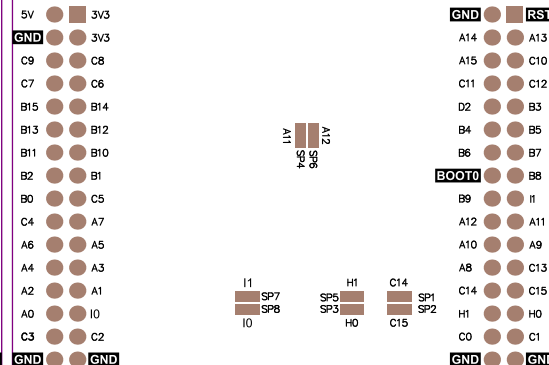


RevA

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DEBUG IN 1
SWDIO/TMS VCC
SWCLK/TCK GND
TDO/SWO GND
TDI NC
nRESET NC



Measuring Current
+  $\leftarrow +3V3$
-  $\leftarrow +3V3_MCU$

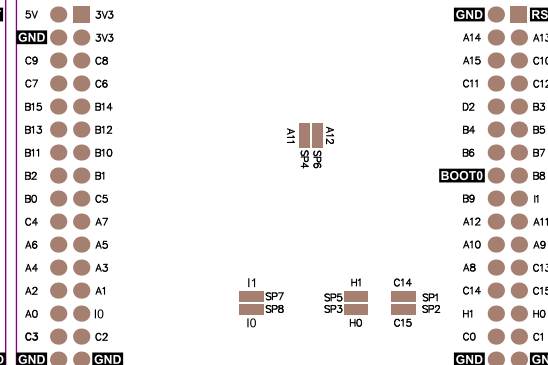


RevA

 **MM32F5277E7PV**
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DEBUG IN 1
SWDIO/TMS VCC
SWCLK/TCK GND
TDO/SWO GND
TDI NC
nRESET NC

Measuring Current
+  $\leftarrow +3V3$
-  $\leftarrow +3V3_MCU$



RevA