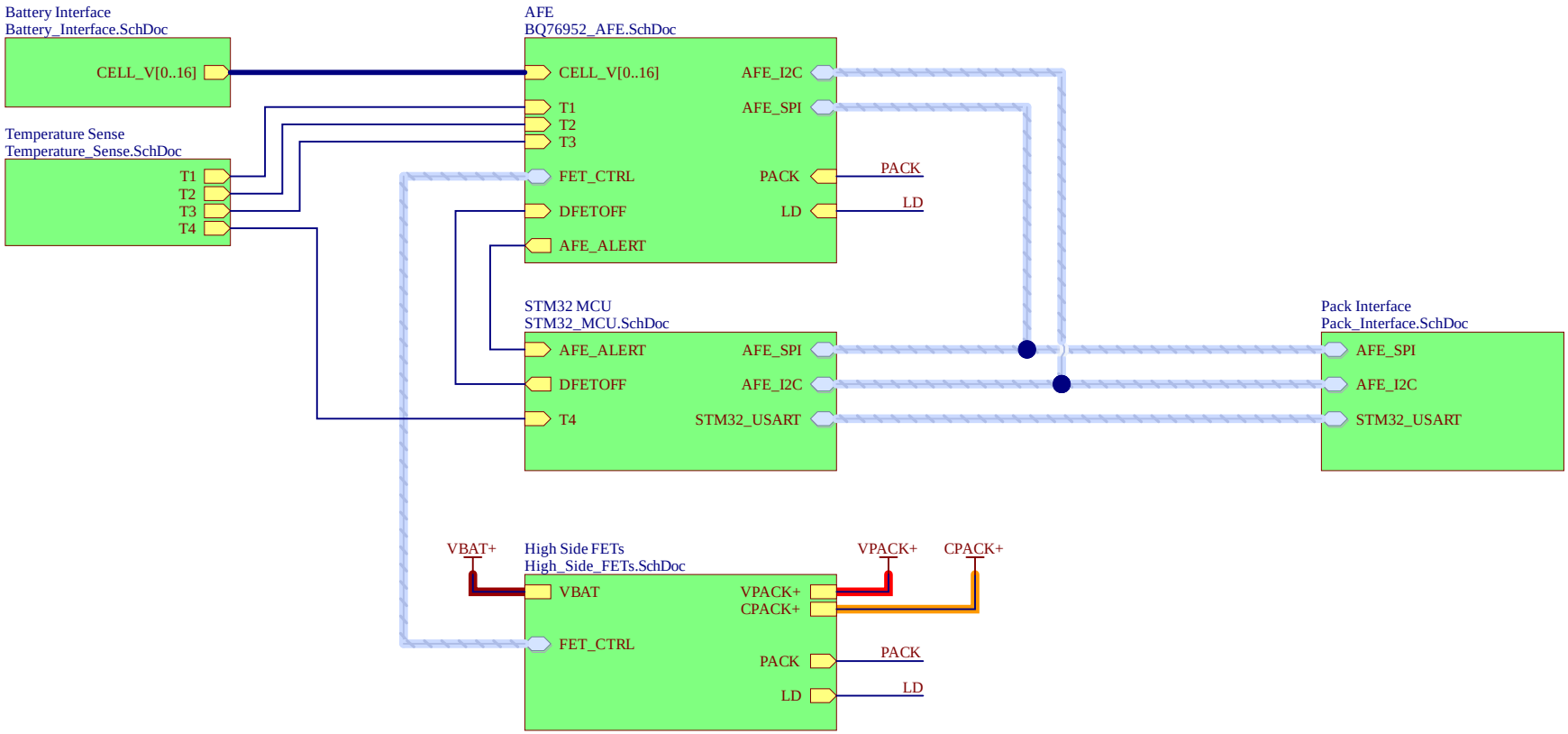

Mounting Holes

MH1 MH2

MH3 MH4

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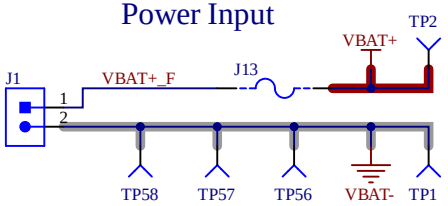
PROJECT LTO 16S BMS.PrjPcb, [No Variations]		
DOCUMENT Top.SchDoc		MODIFIED 2023-08-13
ENGINEER Farris Matar	REVIEWER *	SHEET 1 OF 8

BATTERY INTERFACE

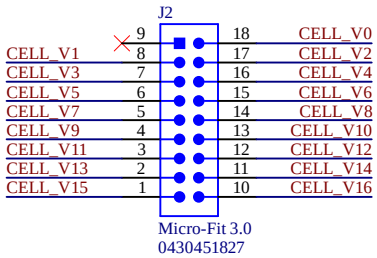
Use fuseholder with 0999050.ZXN fuse

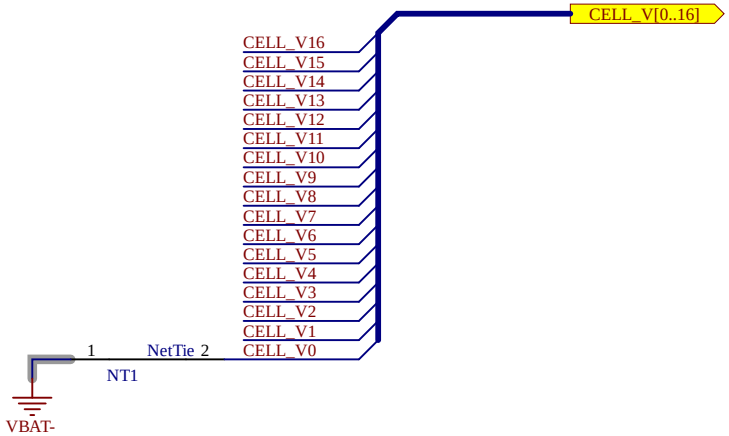
Power Input



Battery specs:
- 16s1p 20Ah LTO battery
- 1.5V - 2.7V cell voltage range, 2.3V nominal

Cell Sensing Inputs





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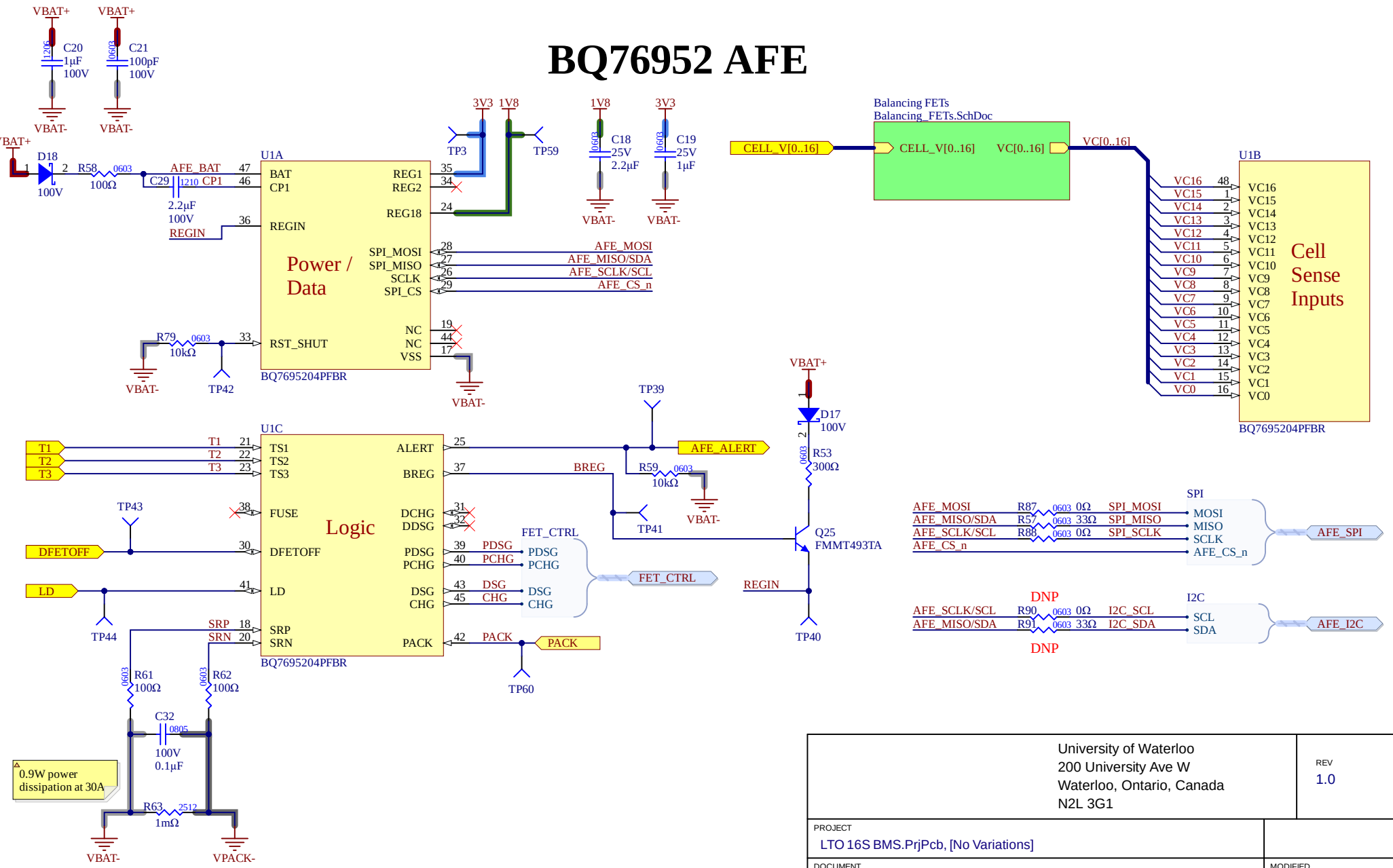
DOCUMENT: Battery_Interface.SchDoc		MODIFIED: 2024-12-17
ENGINEER: Farris Matar	REVIEWER: *	SHEET 2 OF 8

BQ76952 AFE



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PROJECT LTO 16S BMS.PrjPcb, [No Variations]		
DOCUMENT BQ76952_AFE.SchDoc		MODIFIED 2024-12-17
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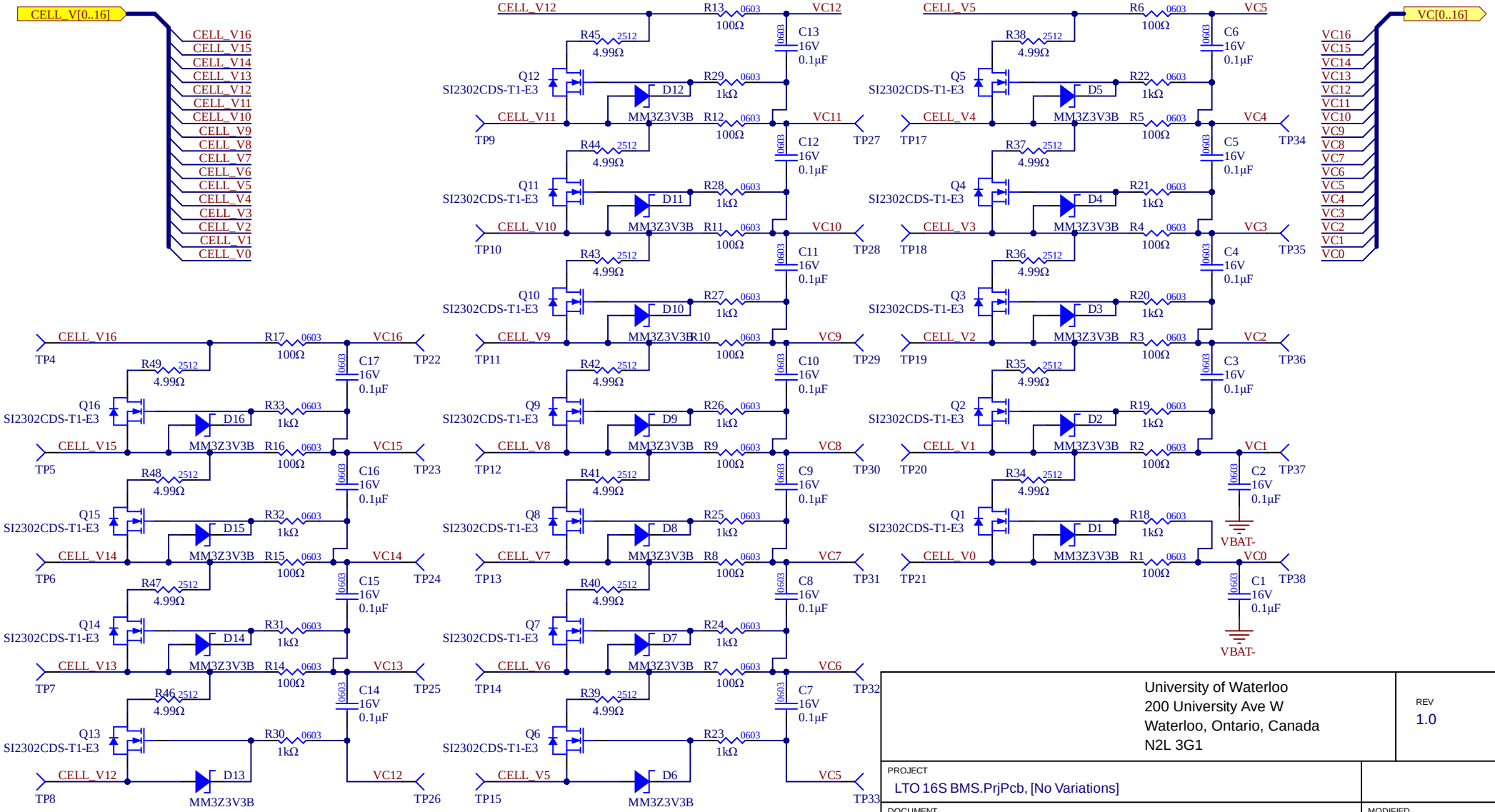
BALANCING FETS



University of Waterloo 200 University Ave W Waterloo, Ontario, Canada N2L 3G1	REV 1.0
PROJECT LTO 16S BMS.PrjPcb, [No Variations]	
DOCUMENT Balancing_FETs.SchDoc	MODIFIED 2024-12-17
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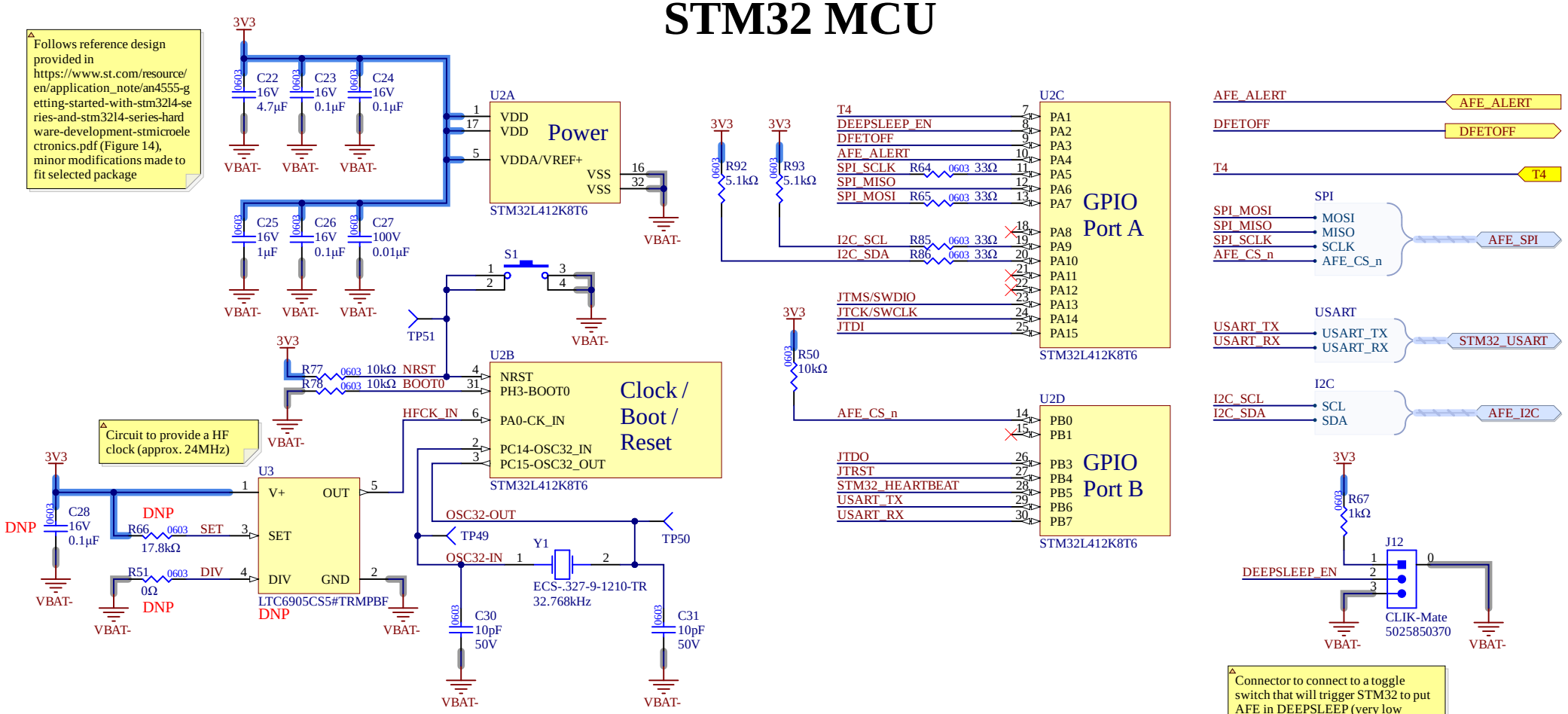
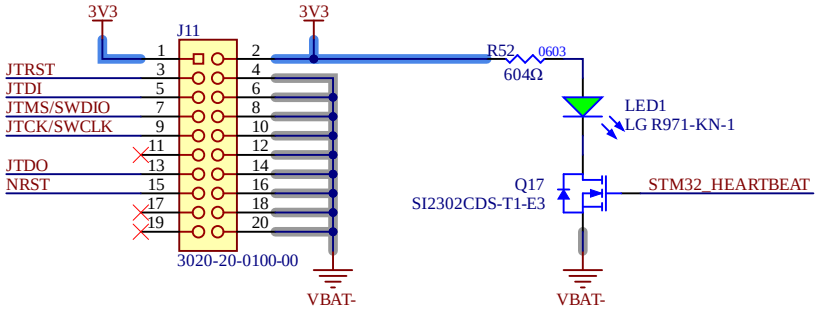
STM32 MCU

Follows reference design provided in https://www.st.com/resource/en/application_note/an4555-getting-started-with-stm32l4-series-and-stm32l4-series-hardware-development-stmicroelectronics.pdf (Figure 14), minor modifications made to fit selected package



Debug / Programming Connector



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PROJECT: LTO 16S BMS.PrjPcb, [No Variations]	
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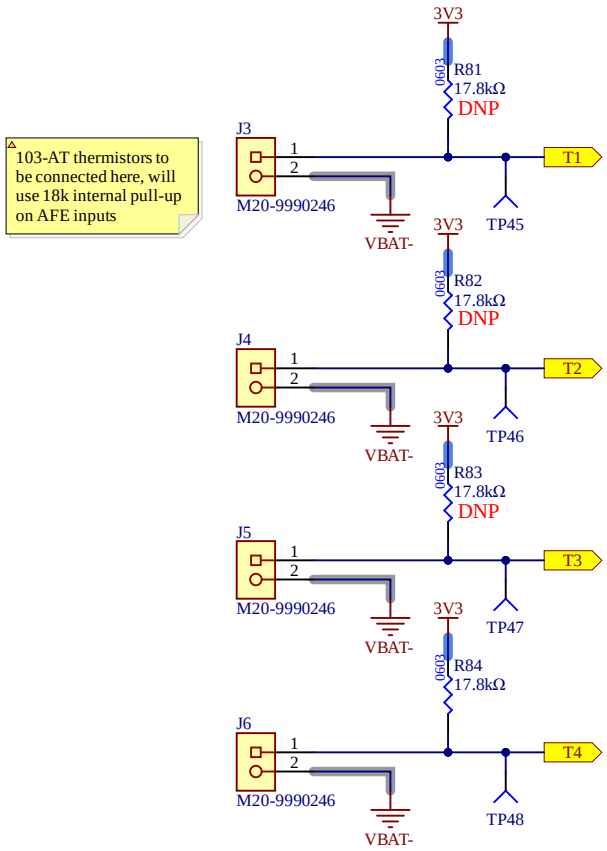
TEMPERATURE SENSING



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PROJECT LTO 16S BMS.PrjPcb, [No Variations]	
DOCUMENT Temperature_Sense.SchDoc	MODIFIED 2024-12-17
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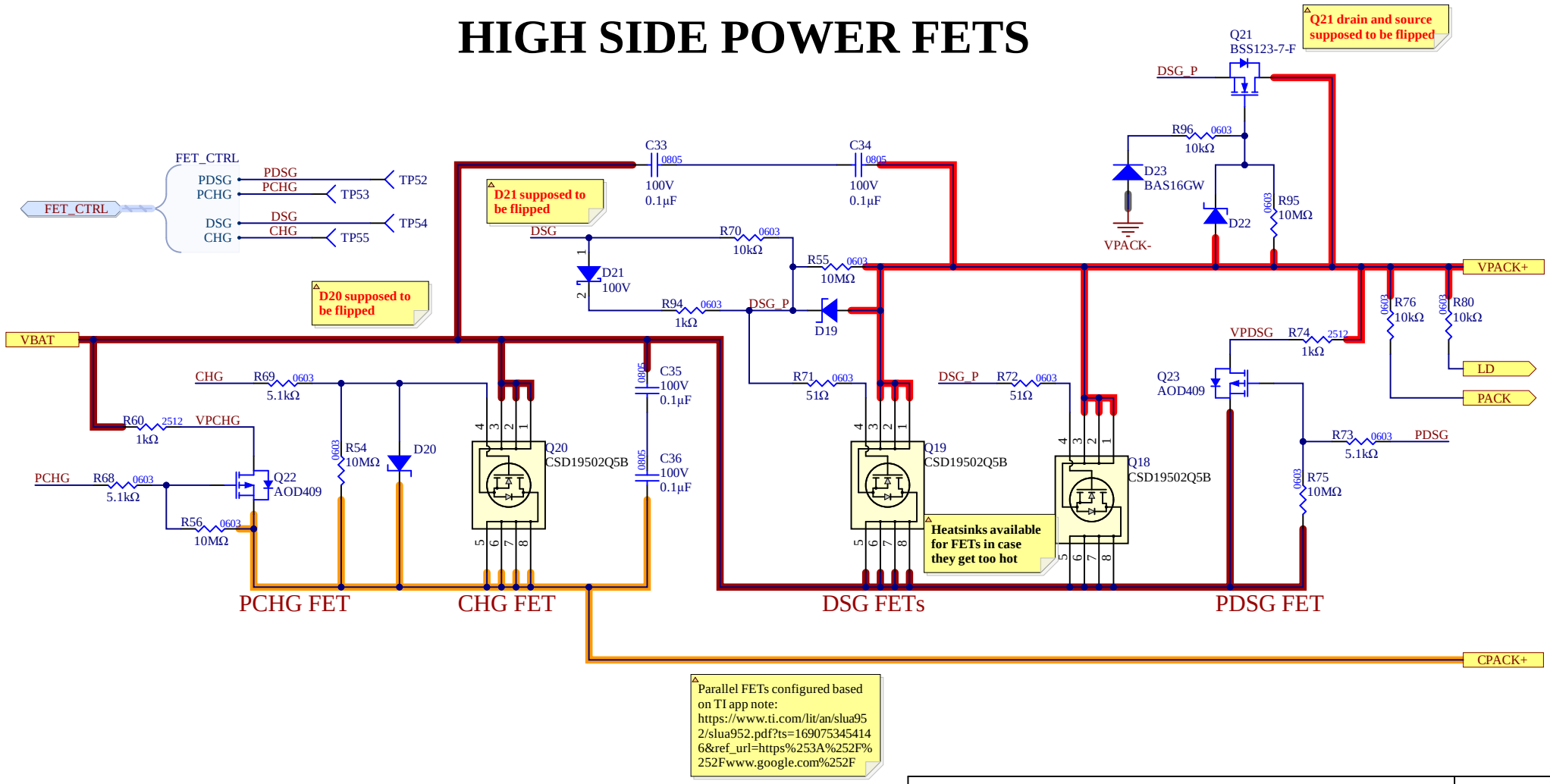
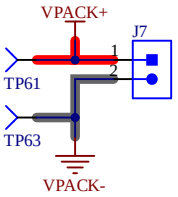
HIGH SIDE POWER FETS



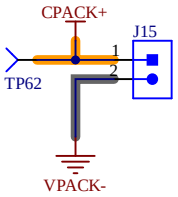
University of Waterloo 200 University Ave W Waterloo, Ontario, Canada N2L 3G1		REV 1.0
PROJECT: LTO 16S BMS.PrjPcb, [No Variations]		
DOCUMENT: High_Side_FETs.SchDoc		MODIFIED: 2024-07-13
ENGINEER: Farris Matar	REVIEWER: *	SHEET 7 OF 8

PACK INTERFACE

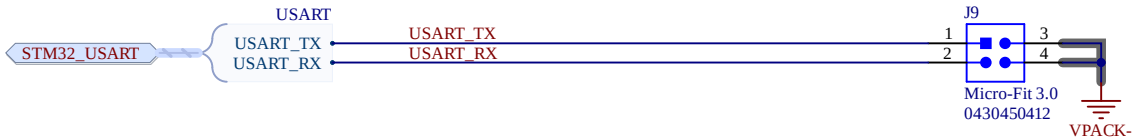
Power Output



Charger Input

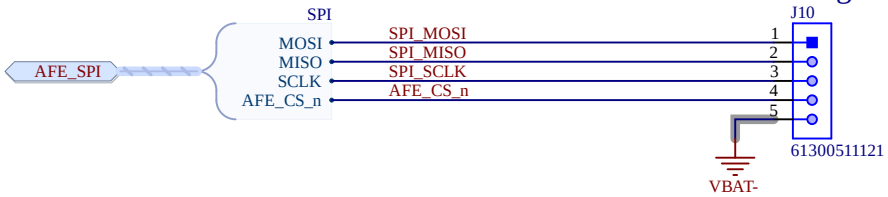


Data Output

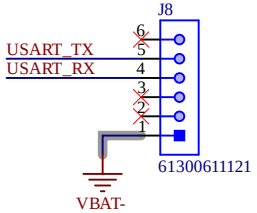


UART will be used to interface with the main control board, sending battery info & state and receiving any commands from the main control board/user

SPI Debug

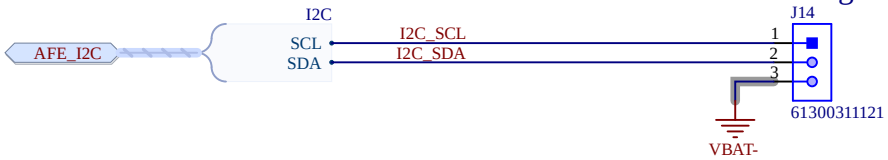


FTDI USB to UART Debug



Breakout headers for debugging/testing

I2C Debug



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DOCUMENT Pack_Interface.SchDoc		MODIFIED 2024-12-17
ENGINEER Farris Matar	REVIEWER *	SHEET 8 OF 8