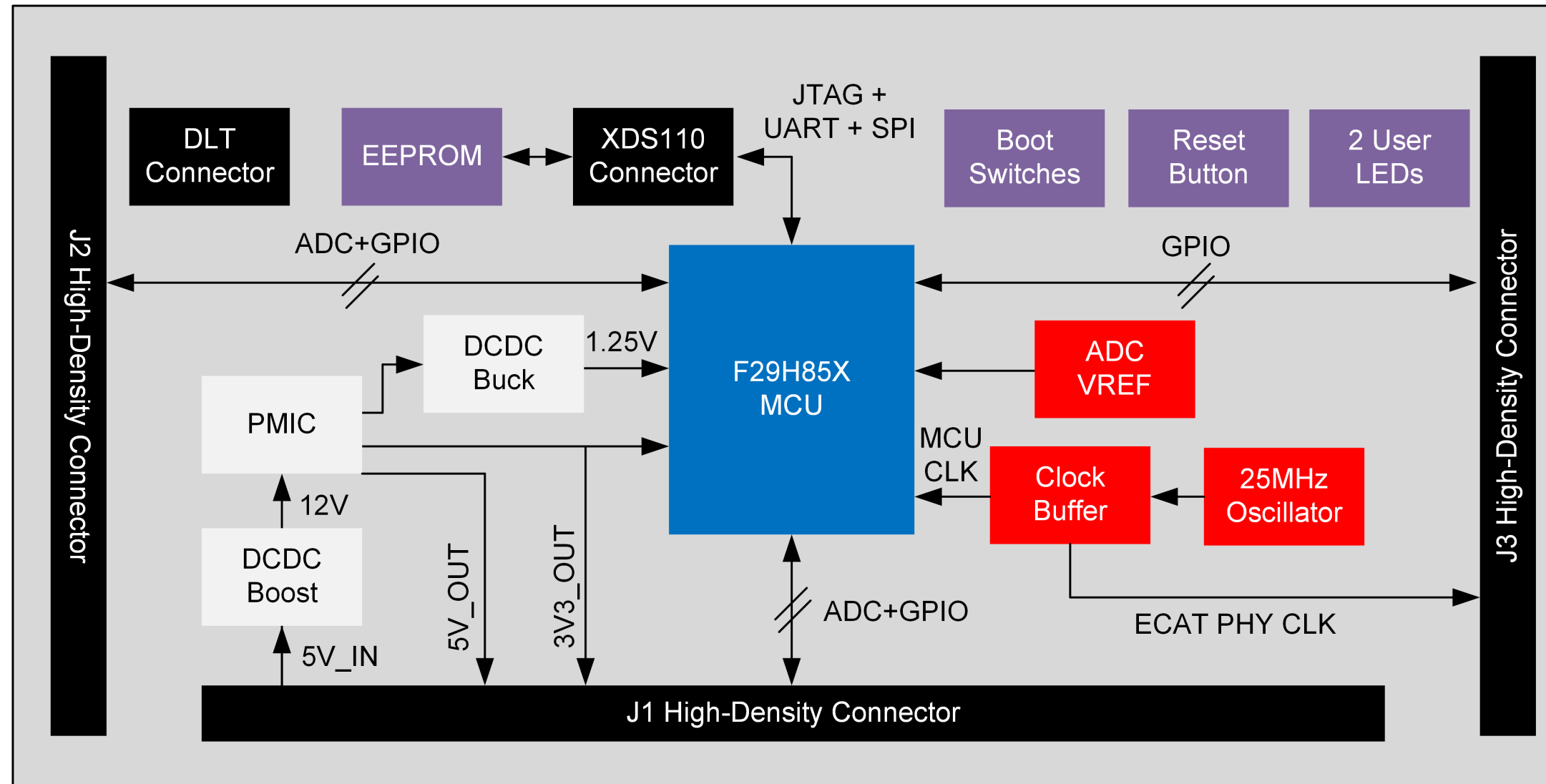
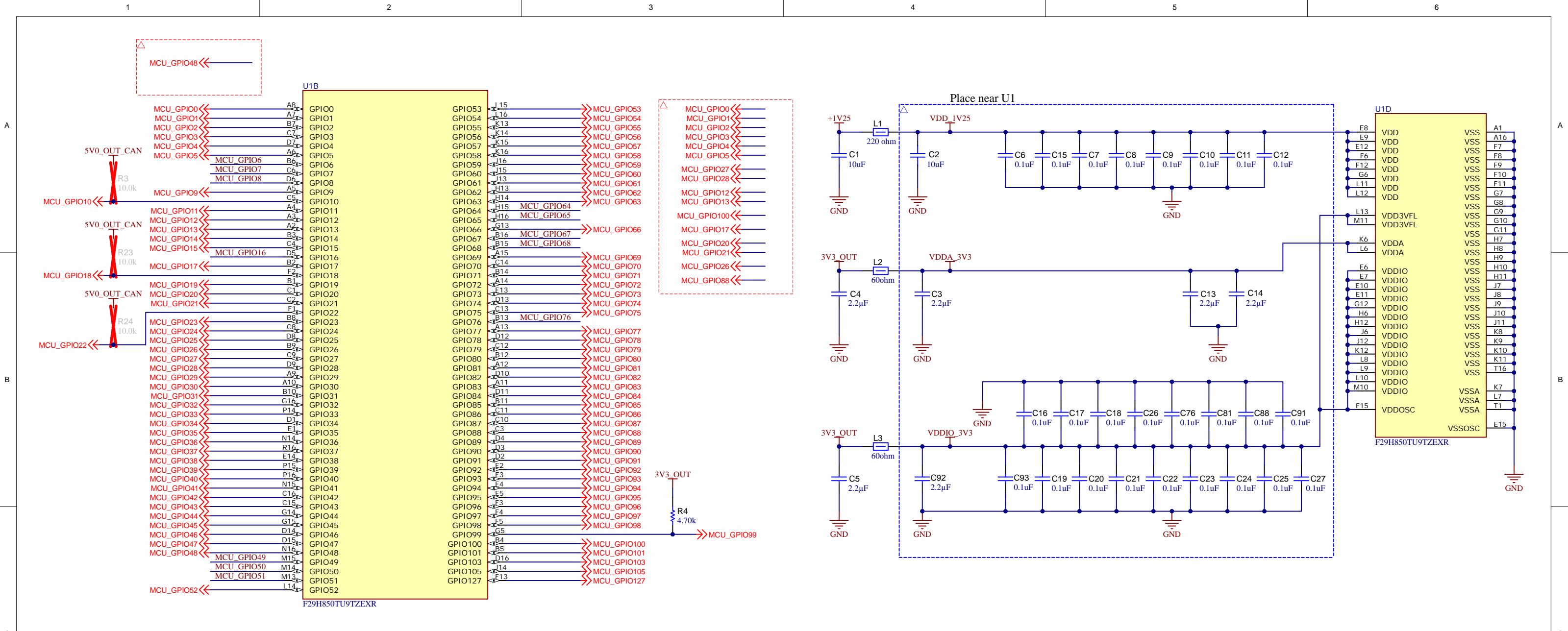


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
E1	N/A	N/A	GM	Original engineering release.
A	N/A	Oct. 17, 2024	GM	<ul style="list-style-type: none"> - Changed default boot mode to 11b - Changed C97 part number - Changed internal VREF connection on S3/S4 - Changed FSI connections on J5 - Removed tracking feature from U7 - Added soft start capacitor to U7 - Changed filtering scheme for ADC external reference



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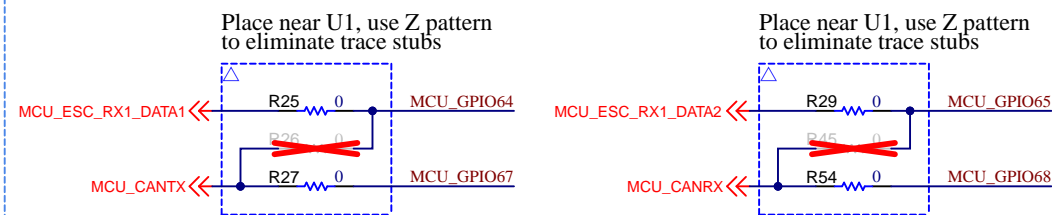
Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 10/23/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: Block Diagram
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 8
Drawn By: Gustavo Martinez	File: MCU144A_Coversheet.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: http://www.ti.com/support	



EtherCAT / MCAN-A Boot Selection

Mode	Resistor Configuration
EtherCAT support*	Populate R25/R27 and R29/R54 with 0-ohm resistor, remove R26/R45.
MCAN-A boot support	Populate R26/R45 with 0-ohm resistor, remove R25/R27 and R29/R54.

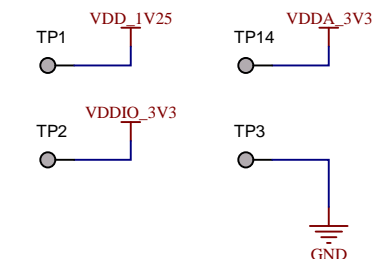
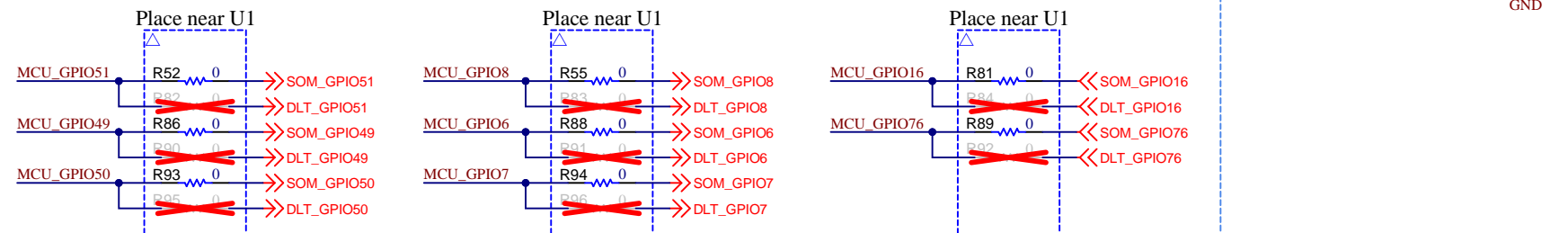
*Default



FSI Baseboard / DLT Selection

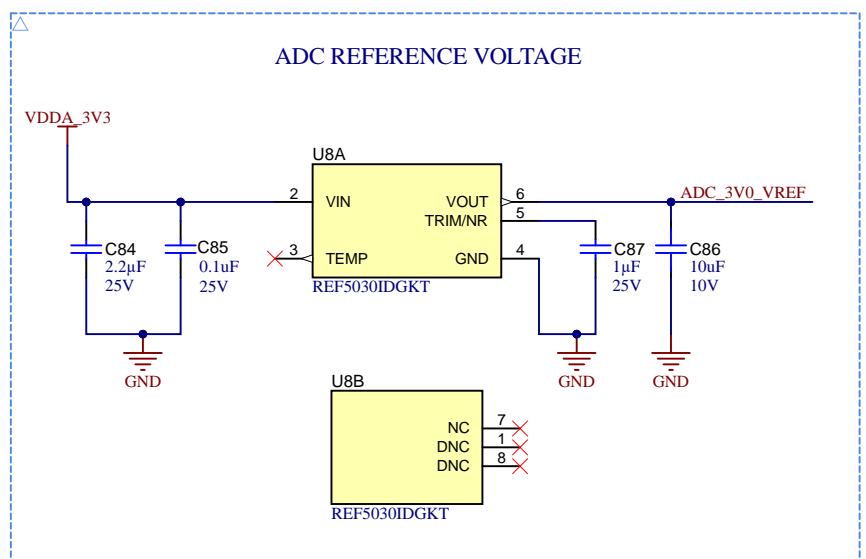
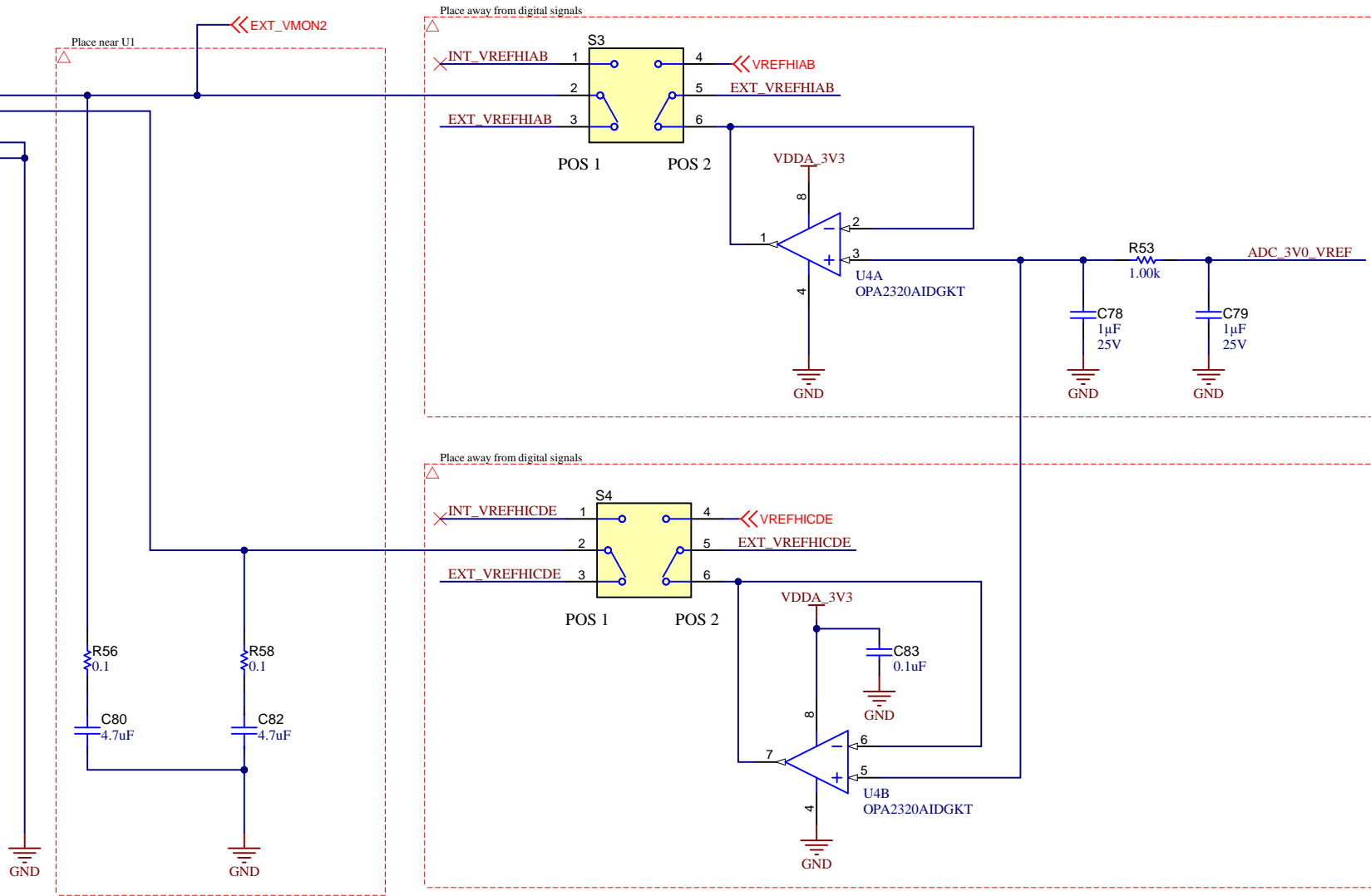
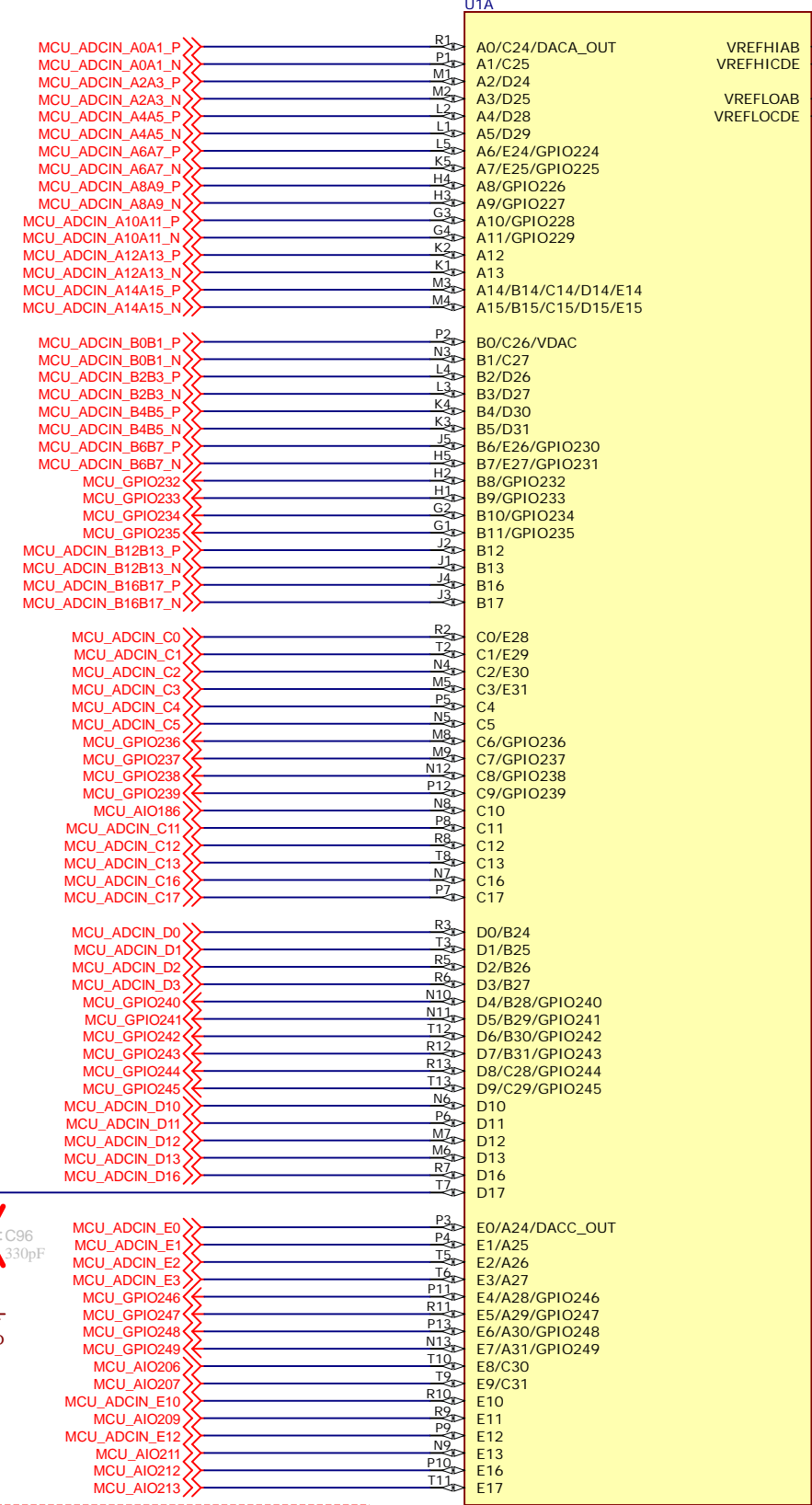
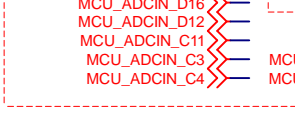
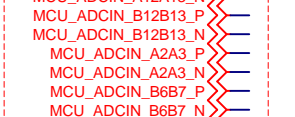
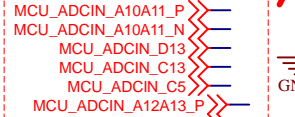
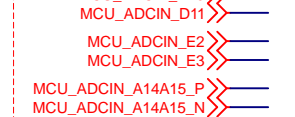
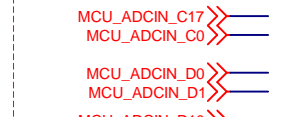
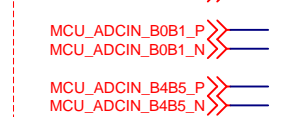
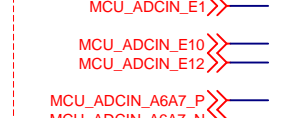
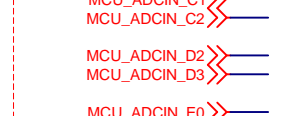
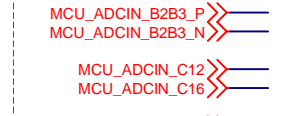
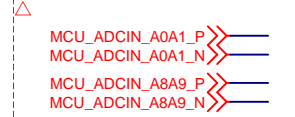
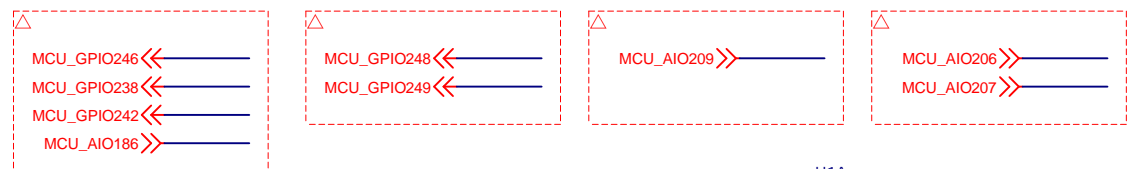
Mode	Resistor Configuration
Baseboard support*	Populate all 0-ohm resistors on SOM_GPIO nets. Remove all resistors on DLT_GPIO nets.
DLT support	Populate all 0-ohm resistors on DLT_GPIO nets. Remove all resistors on SOM_GPIO nets.

*Default



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Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 7/1/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: GPIO and Power
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 2 of 8
Drawn By: Gustavo Martinez	File: MCU144A_GPIO_Power.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: http://www.ti.com/support	



S3 (POS 1)	S3 (POS 2)	VREFHIAB Source
1-2	X	Internal VREF
2-3	4-5	External VREF (J1.VREFHIAB)
2-3	5-6	External VREF (3V0)*

*Default

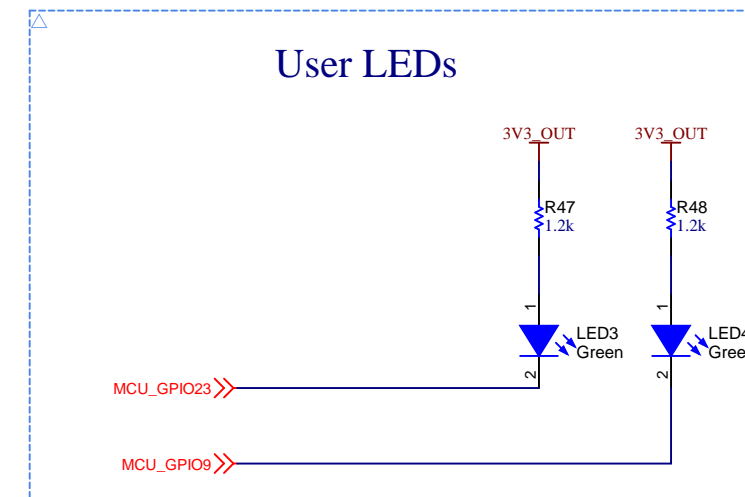
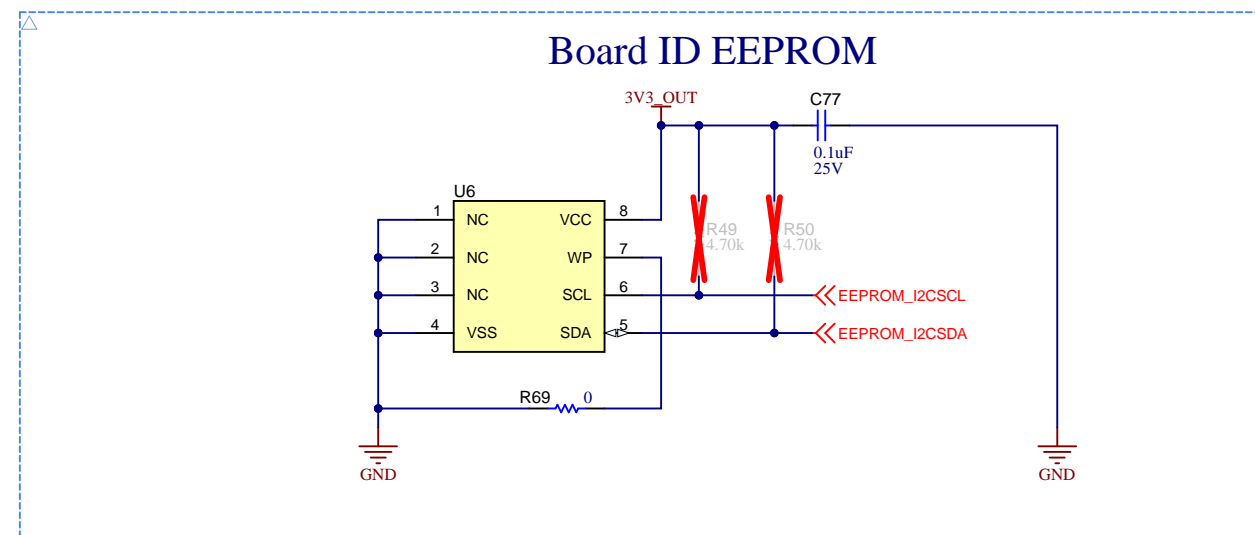
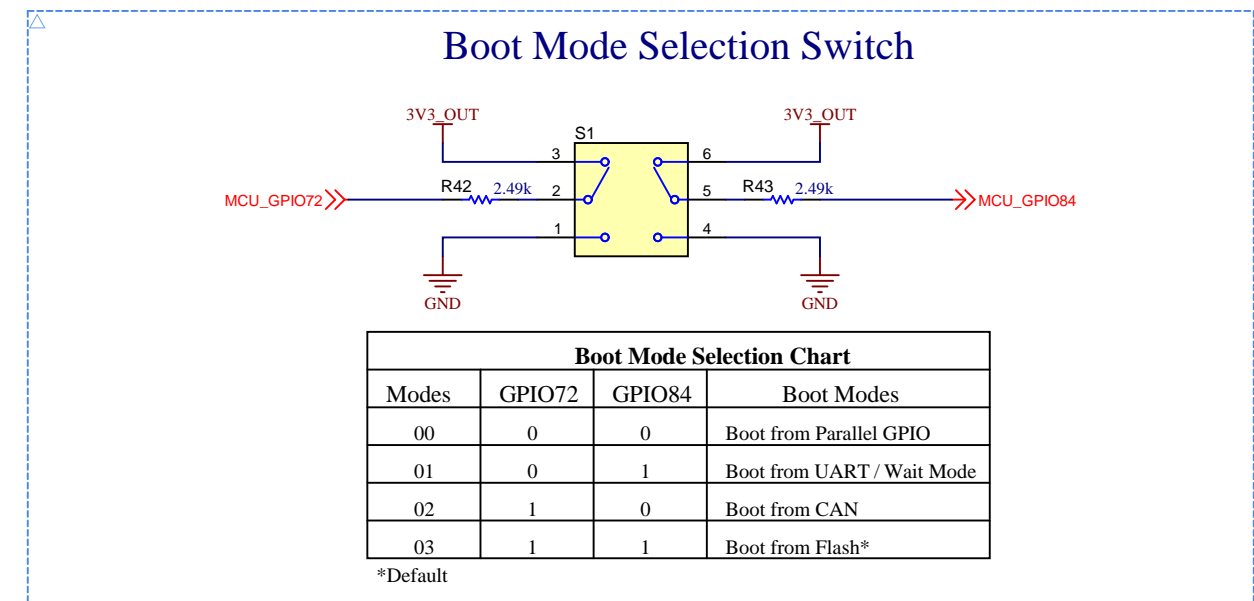
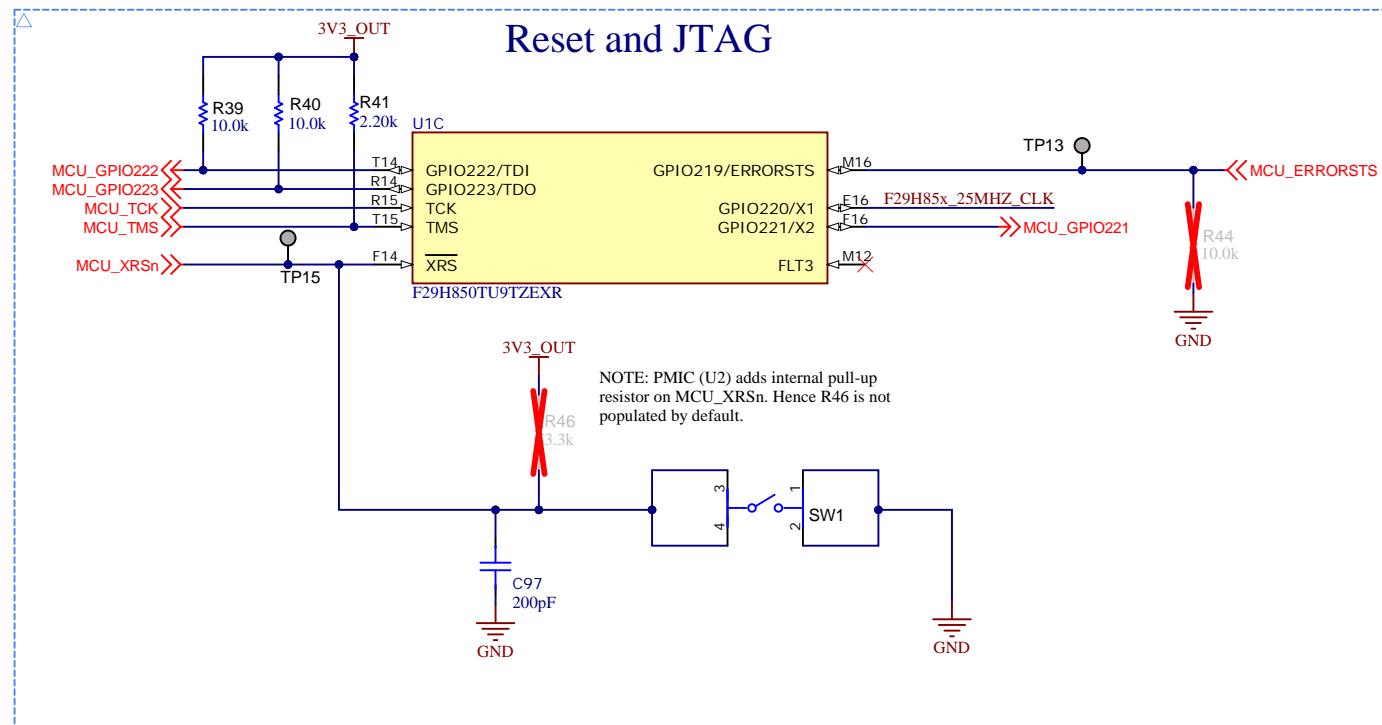
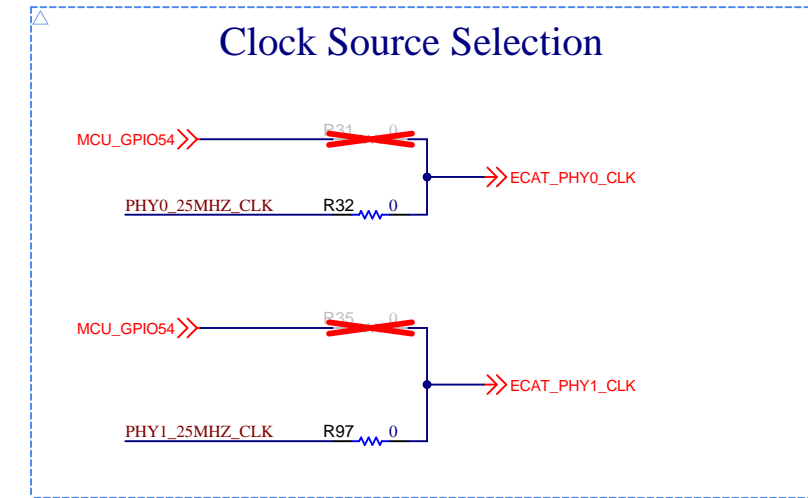
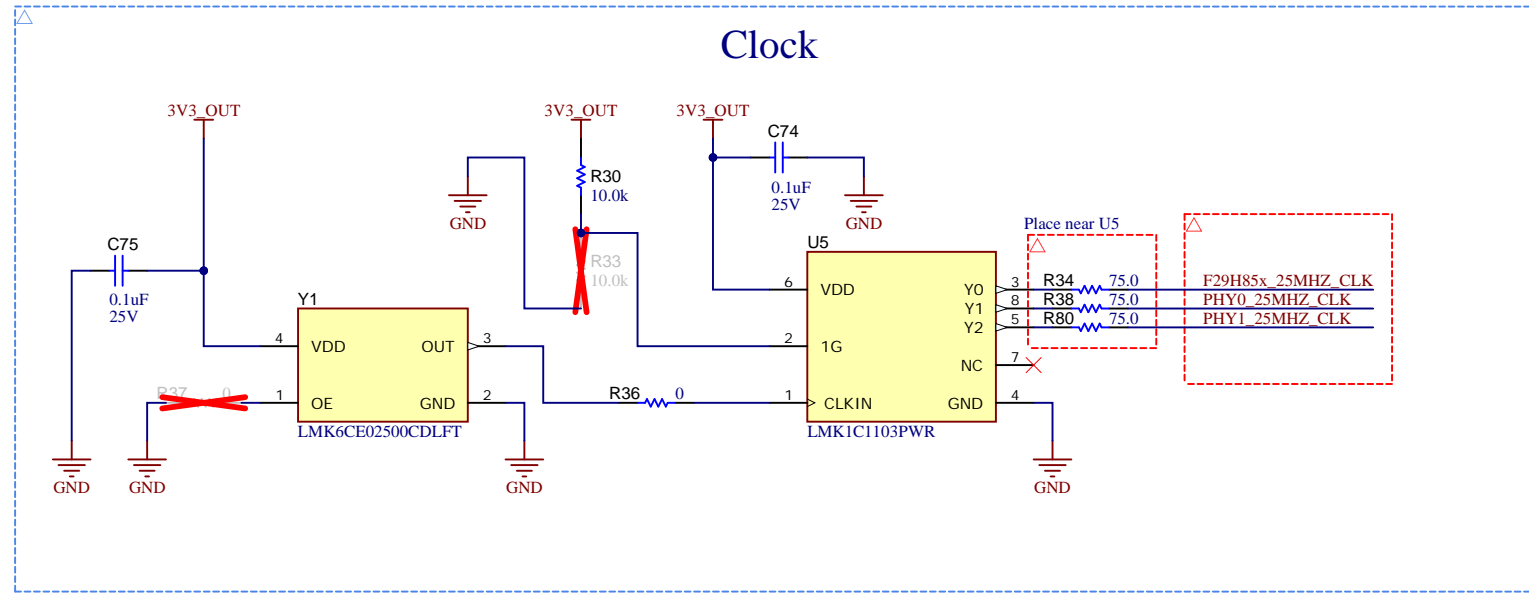
S4 (POS 1)	S4 (POS 2)	VREFHICDE Source
1-2	X	Internal VREF
2-3	4-5	External VREF (J1.VREFHICDE)
2-3	5-6	External VREF (3V0)*

*Default

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Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 11/2/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: ADC
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 3 of 8
Drawn By: Gustavo Martinez	File: MCU144A_ADC.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: http://www.ti.com/support	

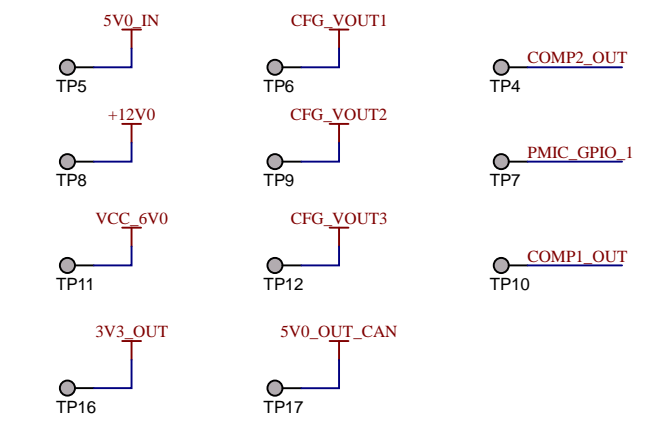
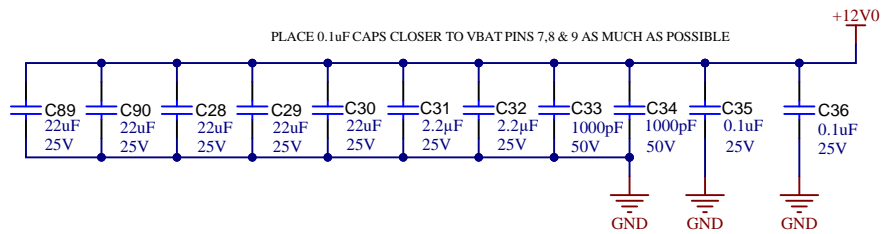
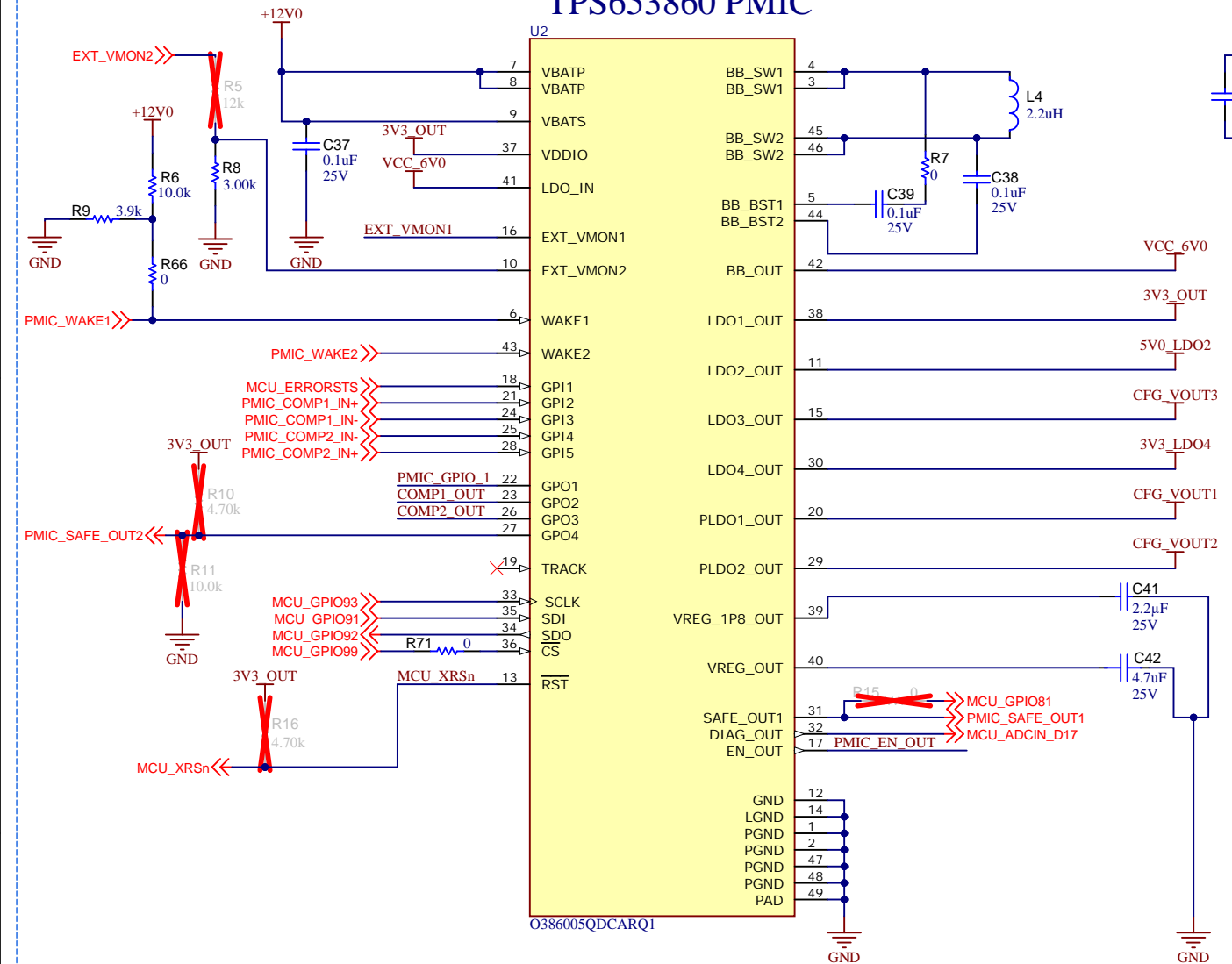




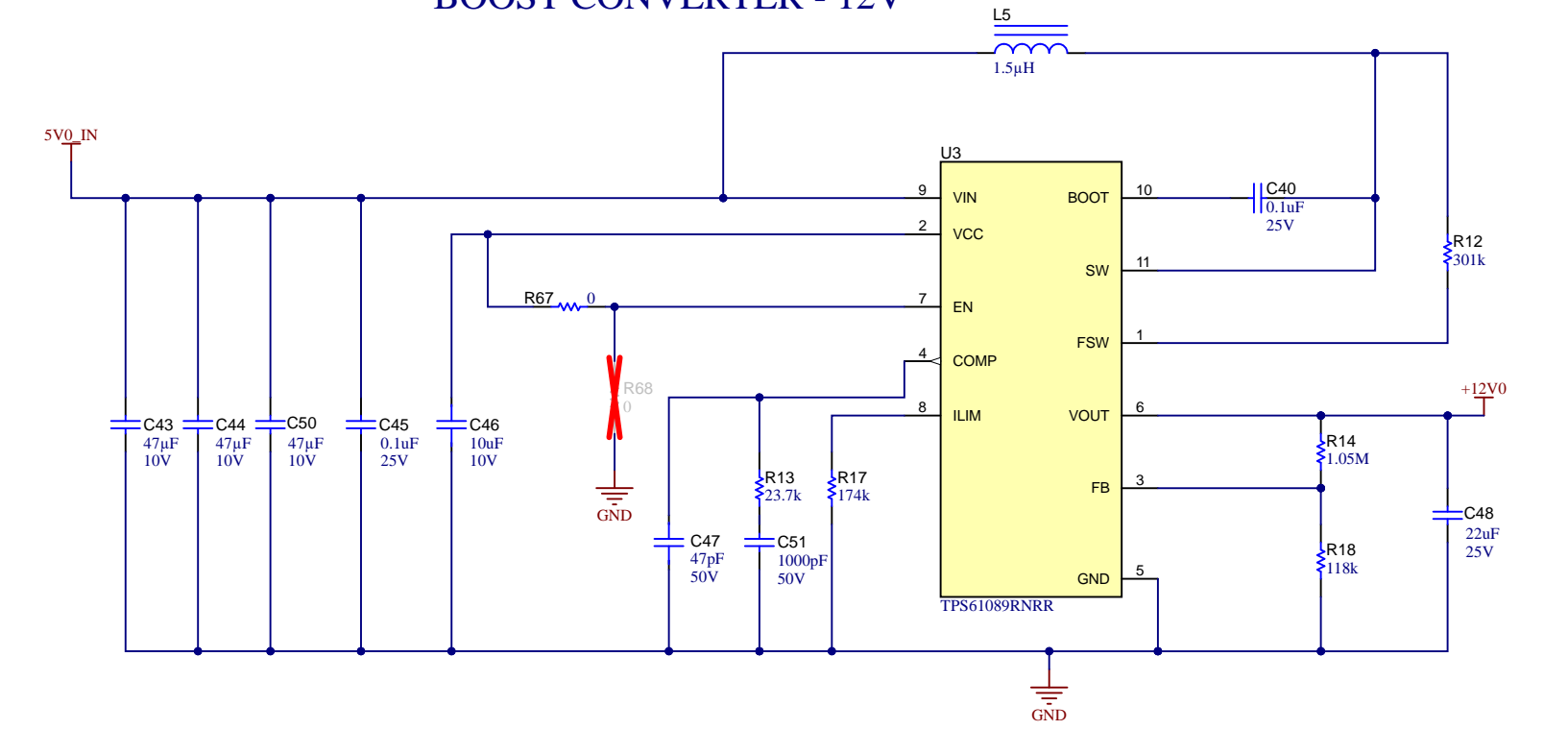
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Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 11/2/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: Clock, Reset, and Boot
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 4 of 8
Drawn By: Gustavo Martinez	File: MCU144A_Clock_Reset_Boot.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: http://www.ti.com/support	

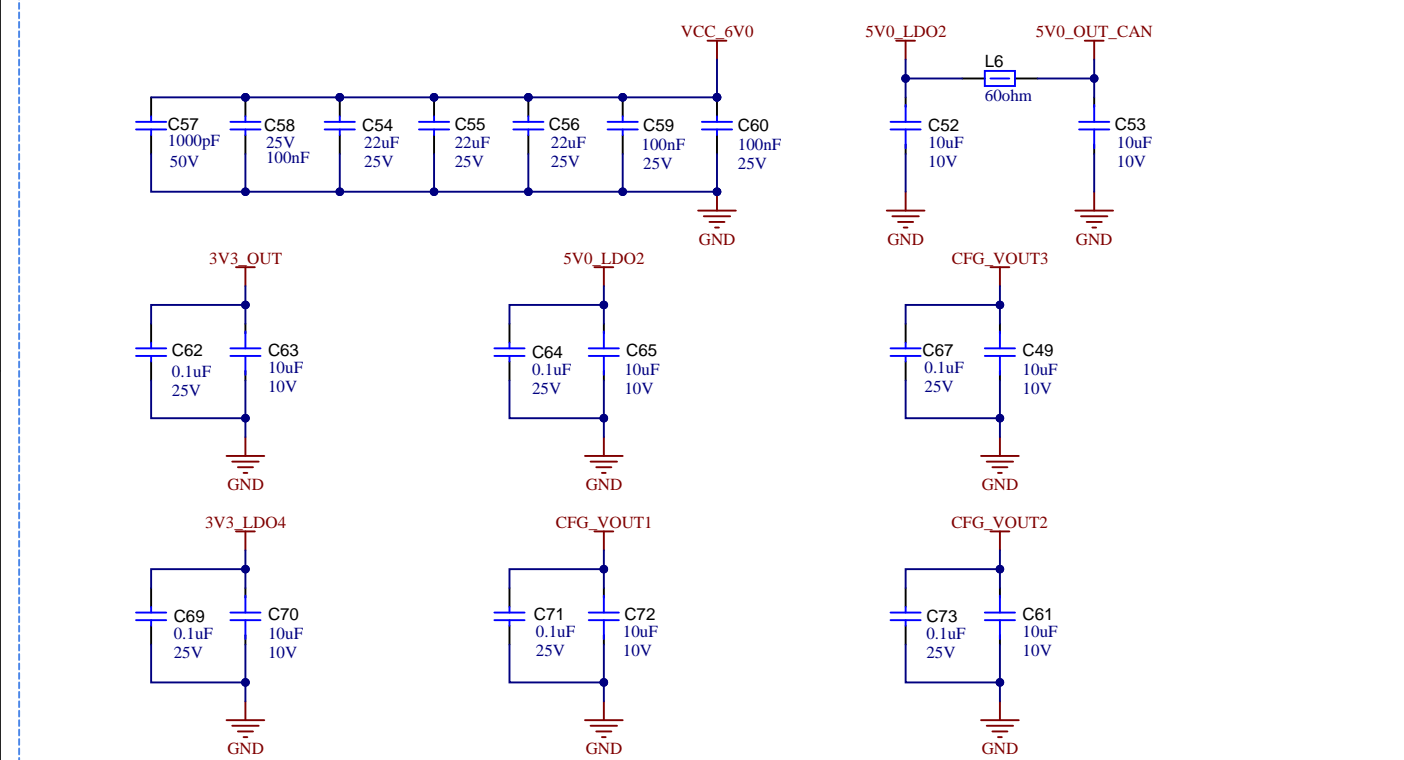
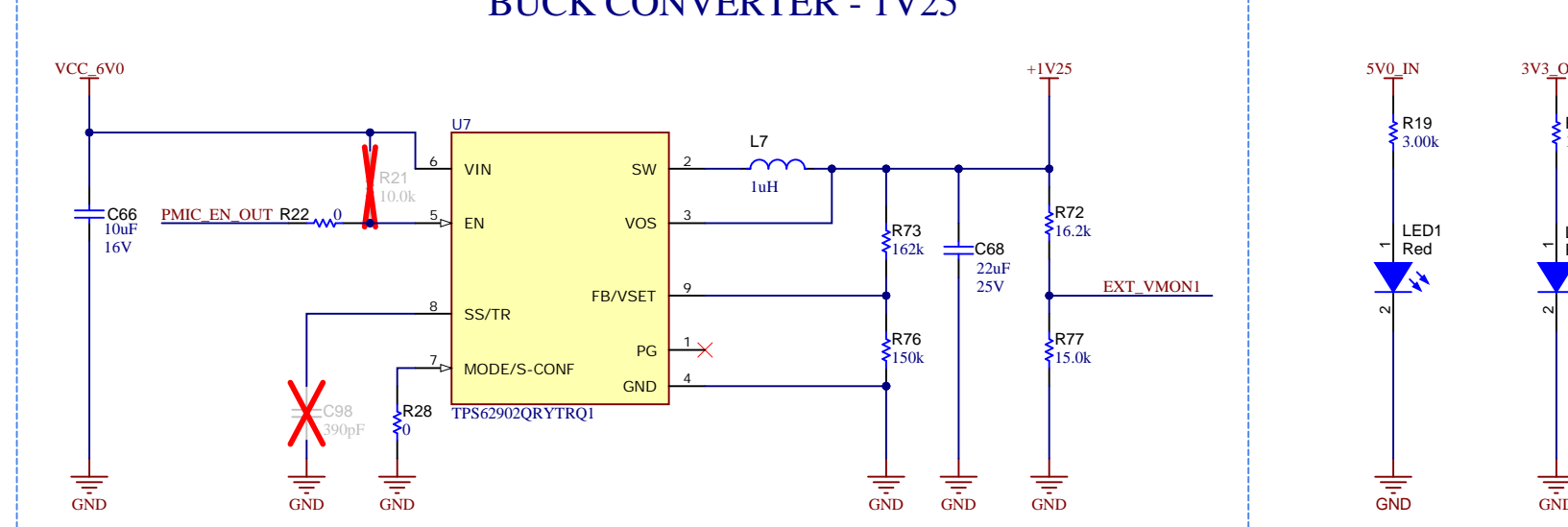
TPS653860 PMIC



BOOST CONVERTER - 12V



BUCK CONVERTER - 1V25



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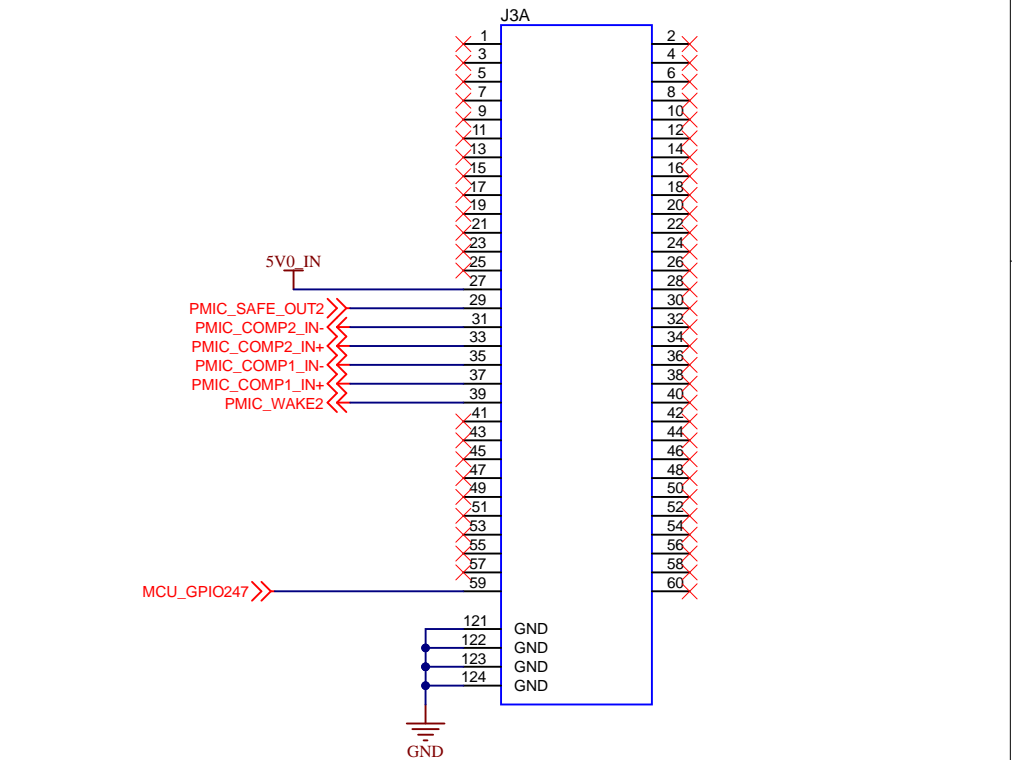
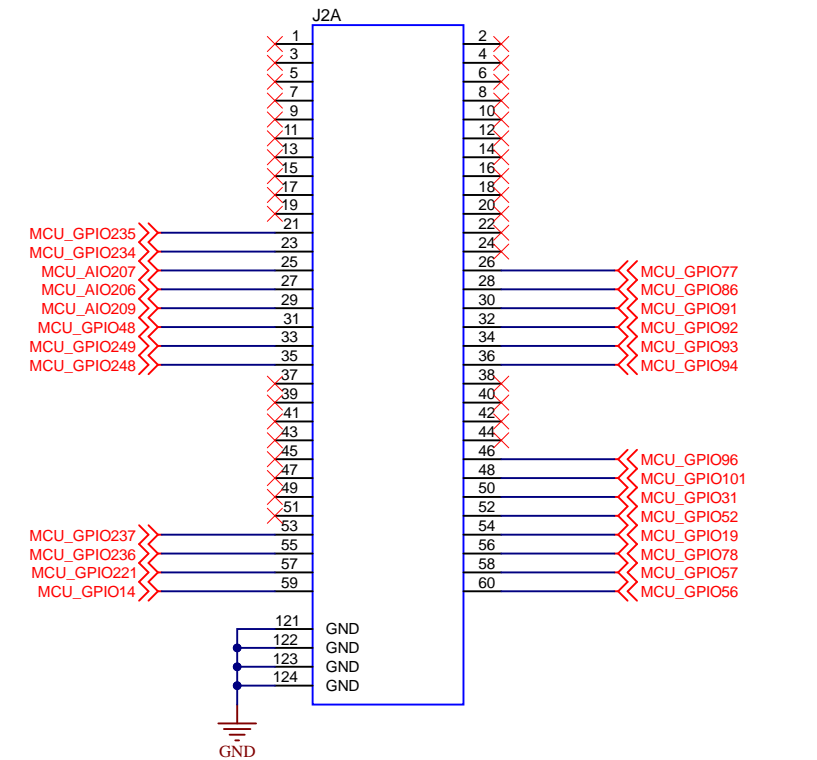
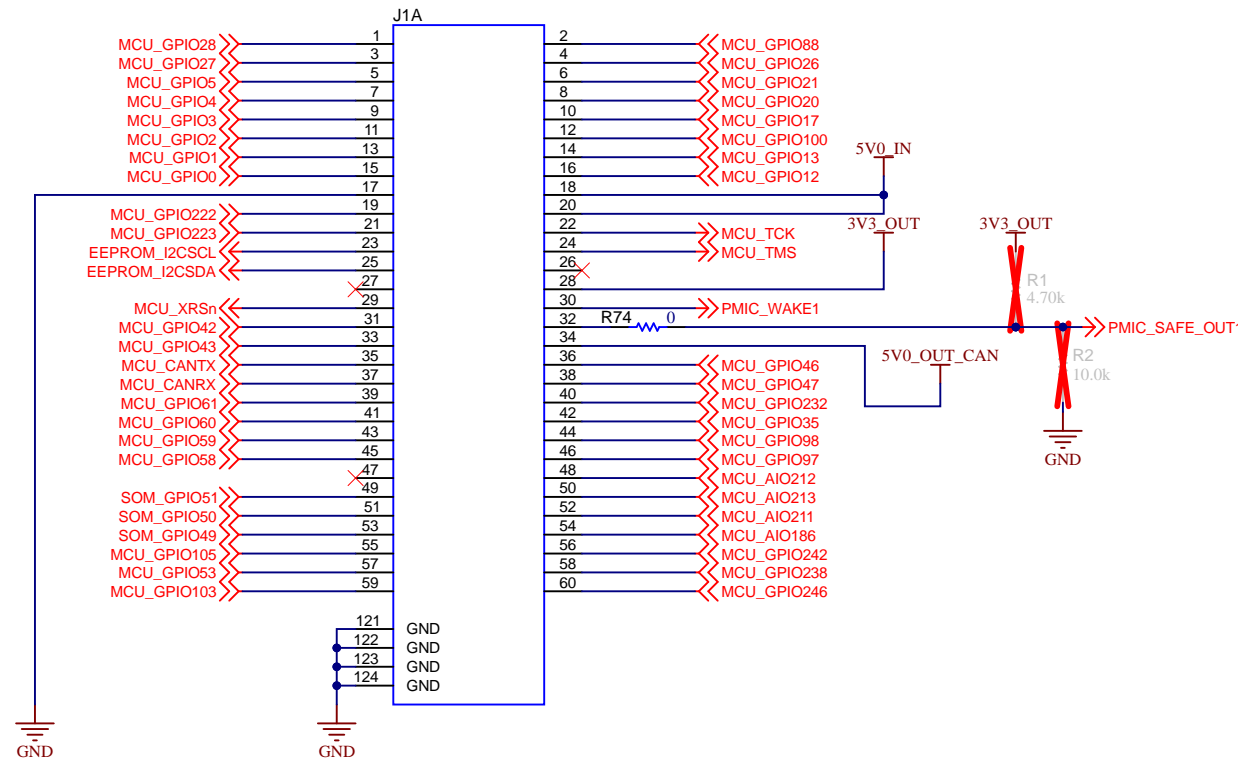
Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 11/2/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: controlSOM Power
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 5 of 8
Drawn By: Gustavo Martinez	File: MCU144A_SOM_Power.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: http://www.ti.com/support	



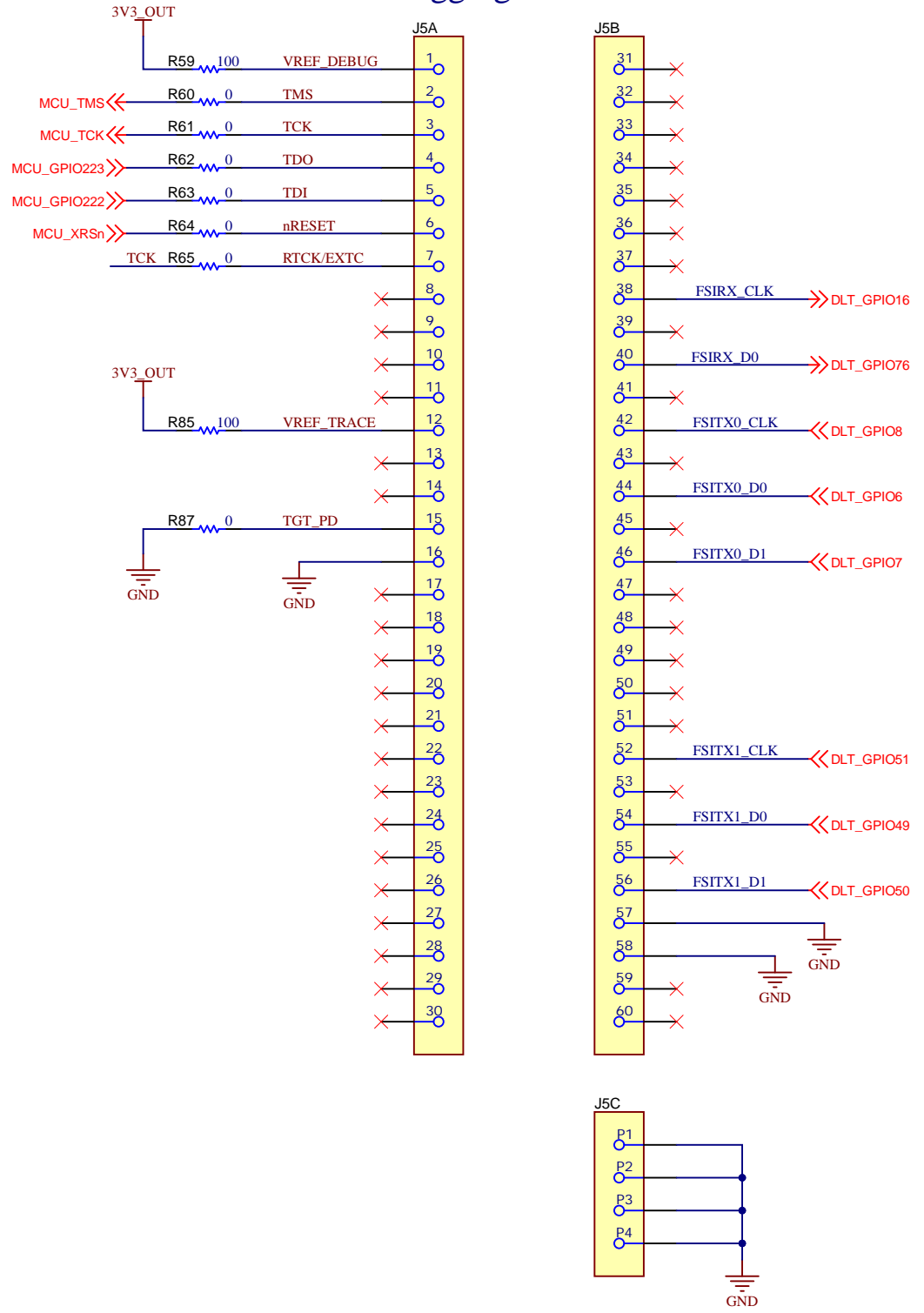
High Density Connector J1

High Density Connector J2

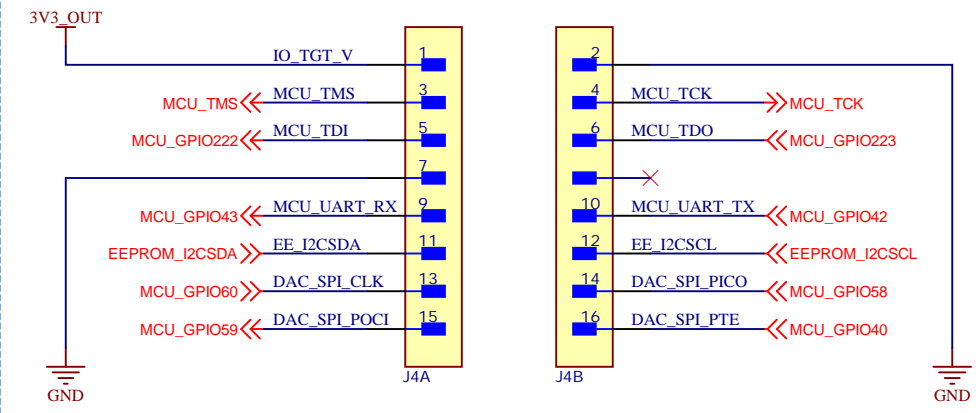
High Density Connector J3



Data Logging and Trace Connector



Emulator Connector

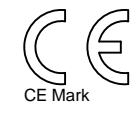


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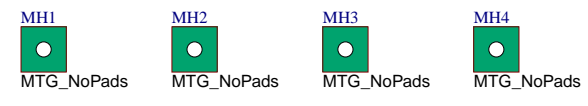
PCB Number: MCU144
PCB Rev: A

PCB LOGO
Texas Instruments



PCB LOGO
FCC disclaimer

PCB LOGO
WEEE logo



ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

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Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 7/1/2024	
TID #: N/A	Project Title: F29H85x controlSOM EVM		
Number: MCU144	Rev: A	Sheet Title: EVM Hardware	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 8 of 8	
Drawn By: Gustavo Martinez	File: MCU144A_EVM_Hardware.SchDoc	Size: B	
Engineer: Gustavo Martinez	Contact: http://www.ti.com/support		http://www.ti.com © Texas Instruments 2024

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