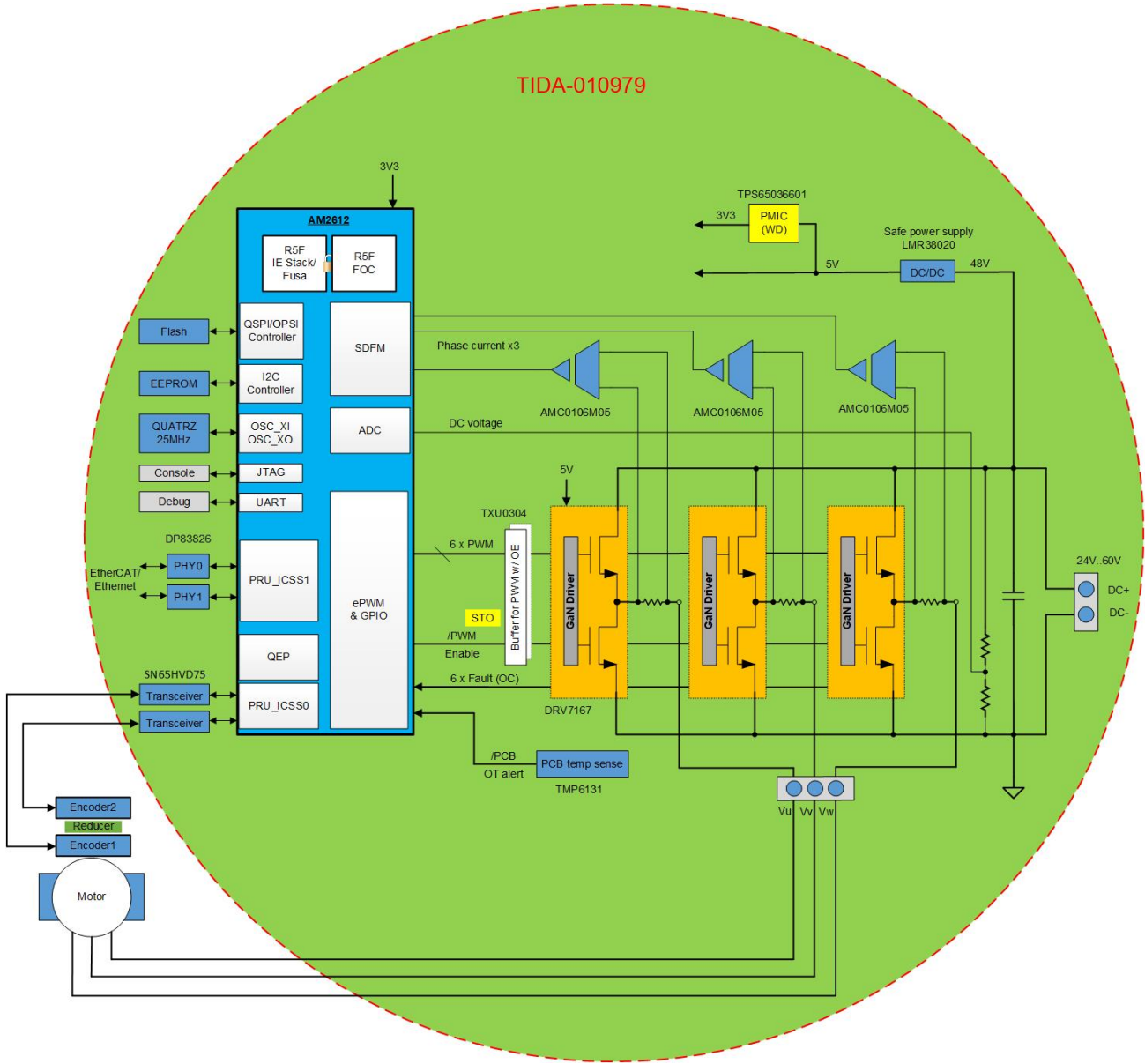


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



48VDC (12-60VDC)

DC+ 1 MTG_Pads

VDC

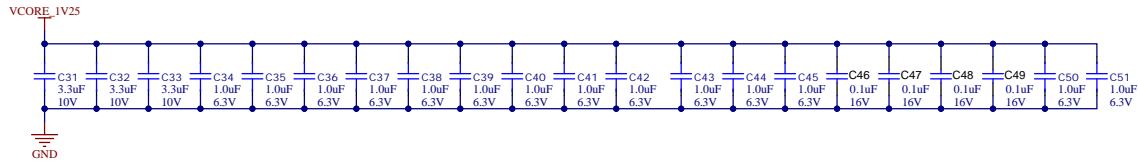
GND 1 MTG_Pads

PGND

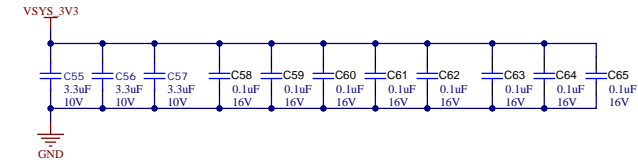
The schematic diagram illustrates a boost converter circuit. The input is a DC source connected to a resistor R1. The circuit includes a bootstrap network with capacitor C1 and a switching network with inductor L1 and capacitor C2. The LMR38020FSDDAR IC is the central component, with its pins connected to various components. The output is taken from a filter network consisting of capacitor C5 and capacitor C6, followed by a resistor R3 and a diode D1. The output is labeled VSYS_5V0.

Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 3/18/2026
TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 2 of 11
Drawn By: Chen Gao	File: TIDA-010979 E1 02 Power.SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	

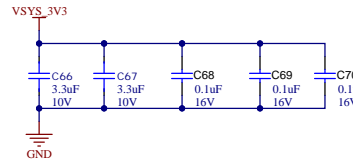
VDD 1V25 Core Digital



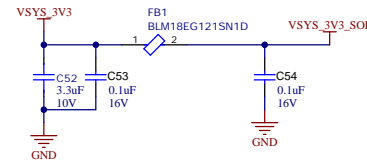
VDDSHV 3V3 Digital



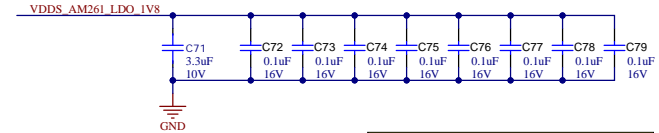
VDDSHV 3V3_D/E Flash



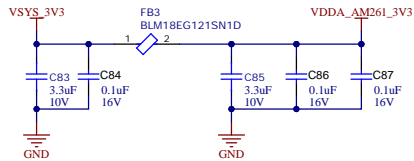
VSYS_3V3_SOP



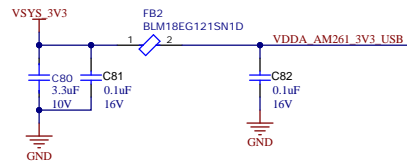
VDDDS 1V8 Digital



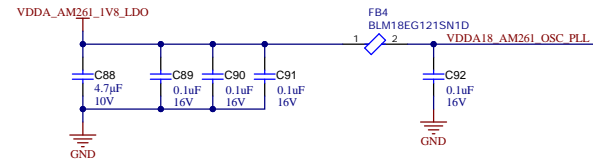
VDDA 3V3 Analog



VDDA 3V3 USB

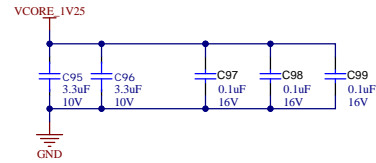


VDDA 1V8 Analog

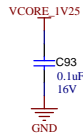


Notes VDDA1V8:
- May not need ferrite filtering, but will keep this for experimenting

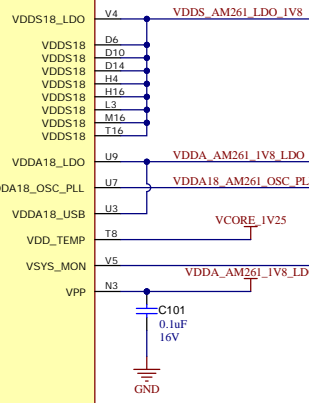
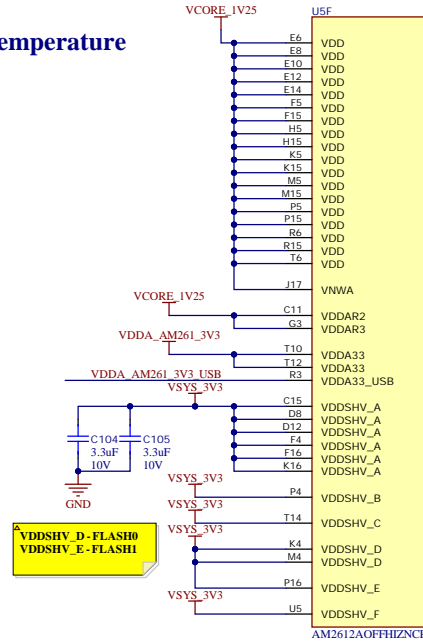
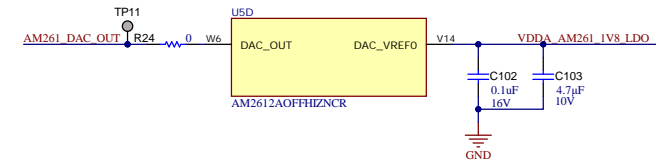
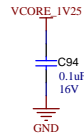
VDDAR[3:2] 1V25 SRAM Array



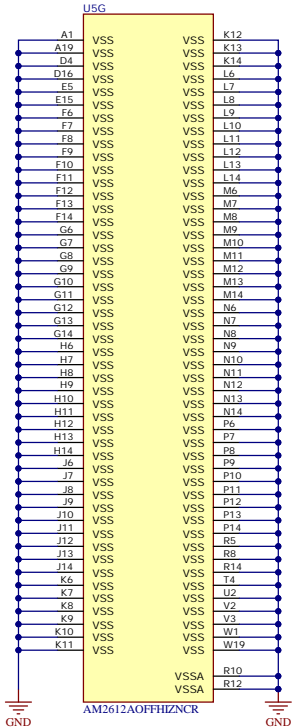
VNWA 1V2



VDD 1V2 Temperature



Notes: VSYS_MON
- Vmax 1.8V
- scaling 2.805V (3.3V -15%) to 0.895V for 0.9V Vmin comparator



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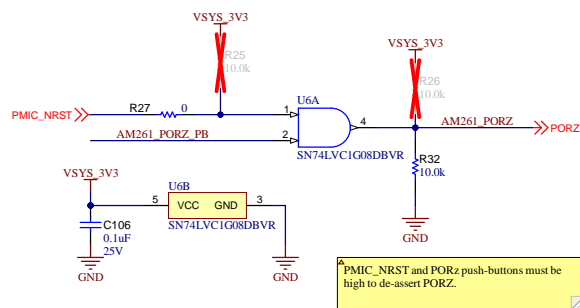
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TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979 Rev: E1	Sheet Title:	Sheet 3 of 11
SVN Rev: Not in version control	Assembly Variant: 001	File: TIDA-010979 E1_03_SoC_Power_SchDoc
Drawn By: Chen Gao	Engineer: Chen Gao	Contact: http://www.ti.com/support



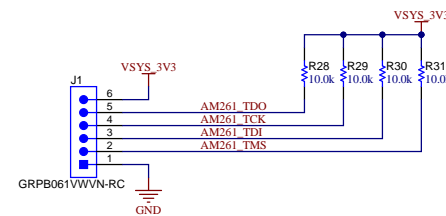
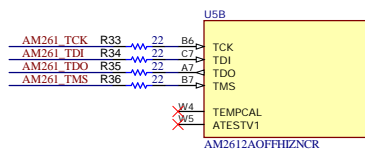
© Texas Instruments 2025

AM261x Clock, Reset, JTAG, EEPROM

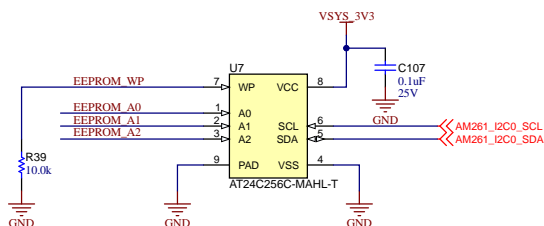
POR Generation



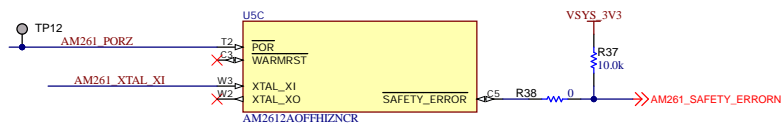
JTAG



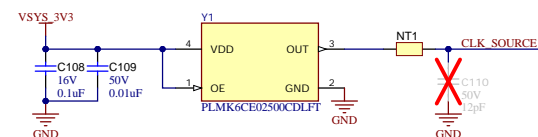
Board ID EEPROM



CLOCK INPUT

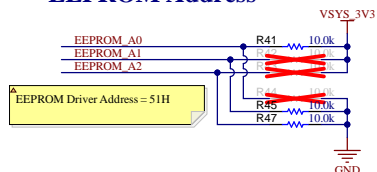


25 MHz Oscillator

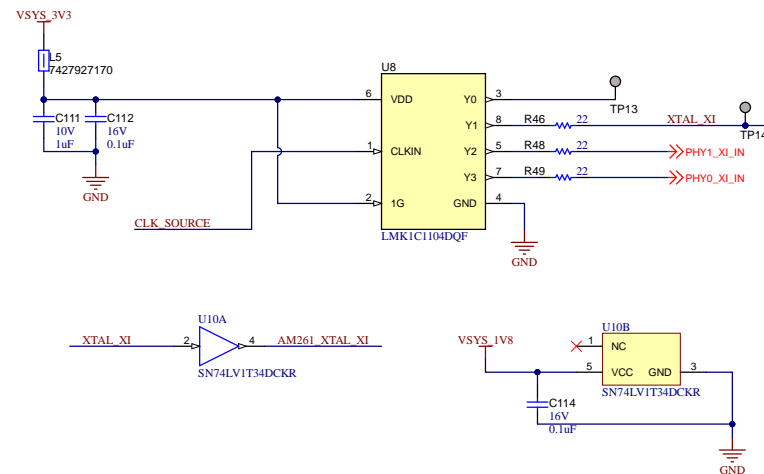
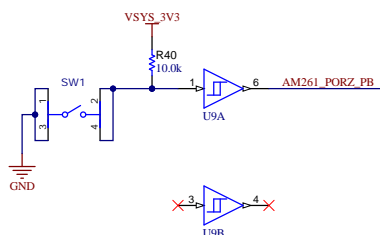


p2p: CAT24M01HU5I-GT3

EEPROM Address



PORZ & RST Push-Button

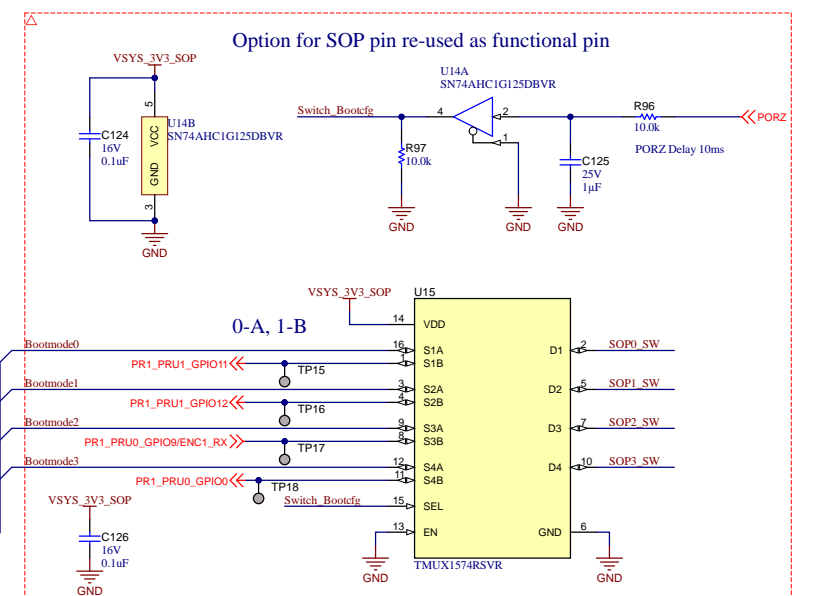
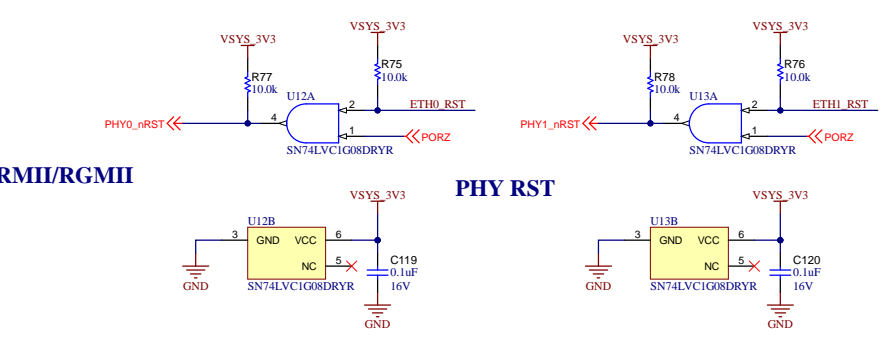
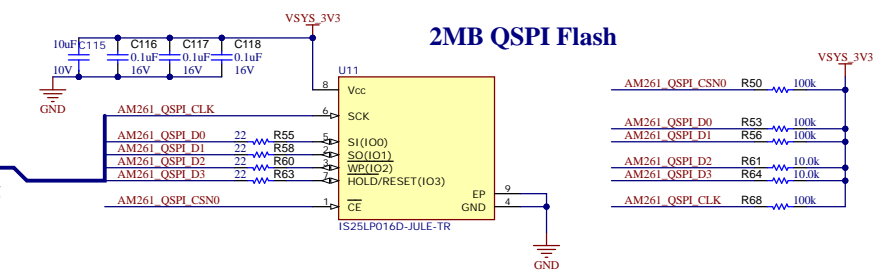
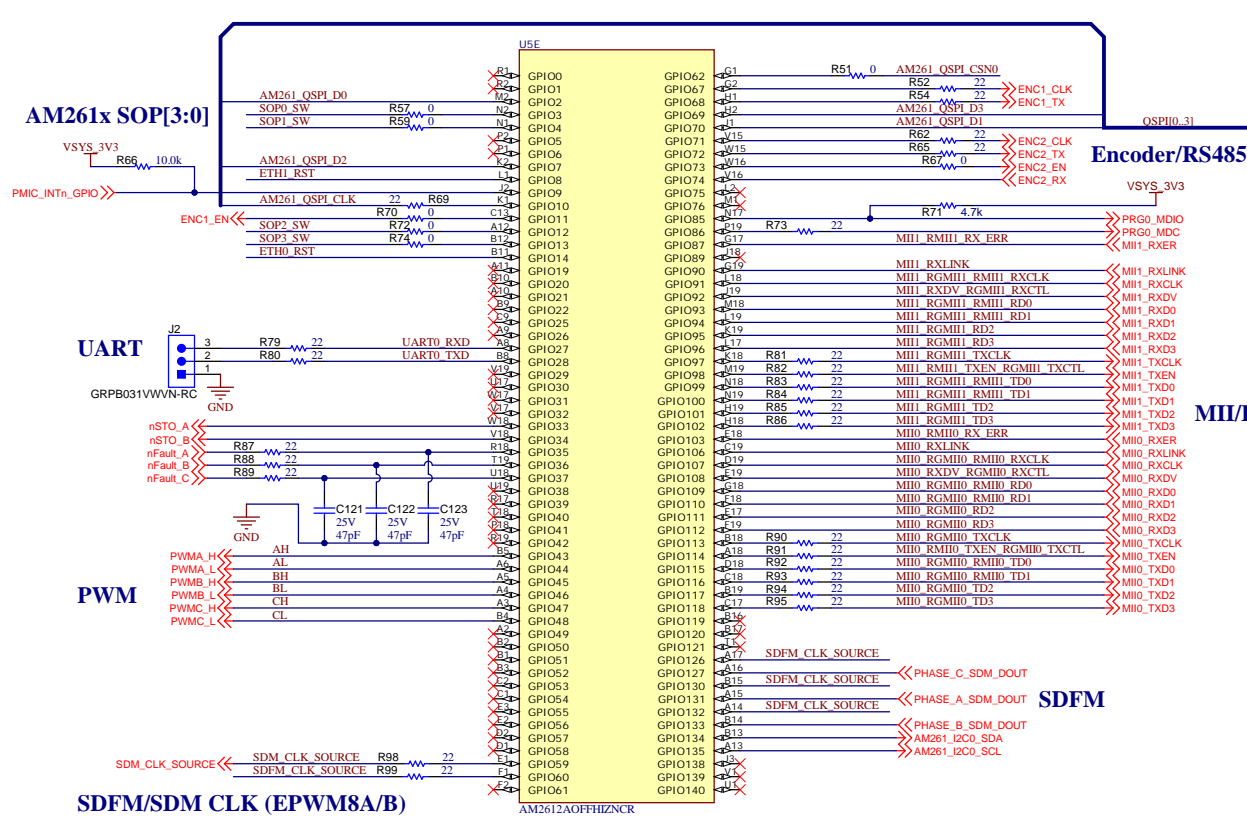


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Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 6/26/2025
TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979	Rev: E1	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet 4 of 11
Drawn By: Chen Gao	File: TIDA-010979_E1_04_CLK_RST_Boot_JTAG_Schematic B	Sheet 4 of 11
Engineer: Chen Gao	Contact: http://www.ti.com/support	© Texas Instruments 2025



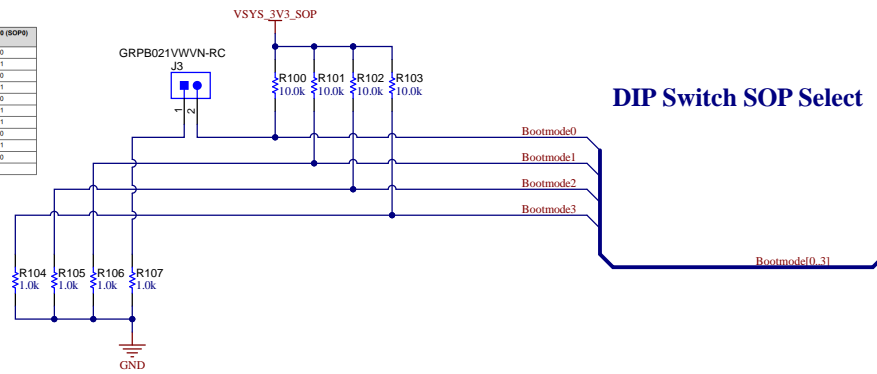
AM261x Debug console, Boot, IOs




Boot Mode	SP1_D0_pad (SOP)	SP1_CLK_pad (SOP)	QSP1_D1 (SOP1)	QSP1_D0 (SOP1)
QSP1 (45) - Quad Read Mode	0	0	0	0
UART	0	0	0	1
QSP1 (15) - Single Read Mode	0	0	0	1
QSP1 (85) - Octal Read Mode	0	0	0	1
QSP1 Serial NAND (15) - Single Read Mode	0	1	1	1
QSP1 Serial NAND (45) - Quad Read Mode	0	1	1	1
QSP1 Serial NAND (85) - Octal Read Mode	0	1	0	1
eSPI RD (SOP)	1	1	0	0
QSP1 Serial NAND (85) - Octal Read Mode	1	1	0	1
USB DPU	1	1	0	1

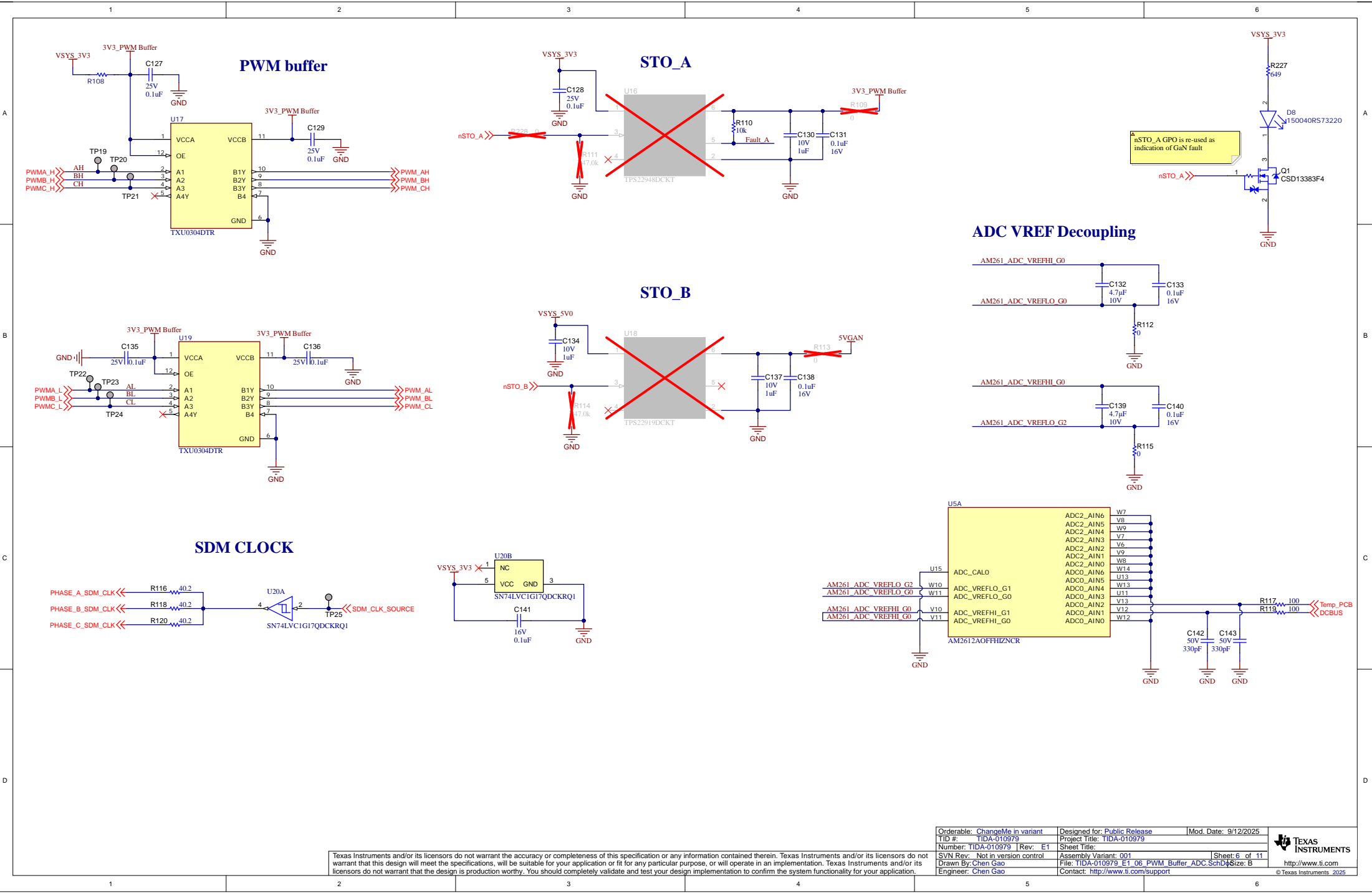
Unimplemented Mode

All other combinations not defined above

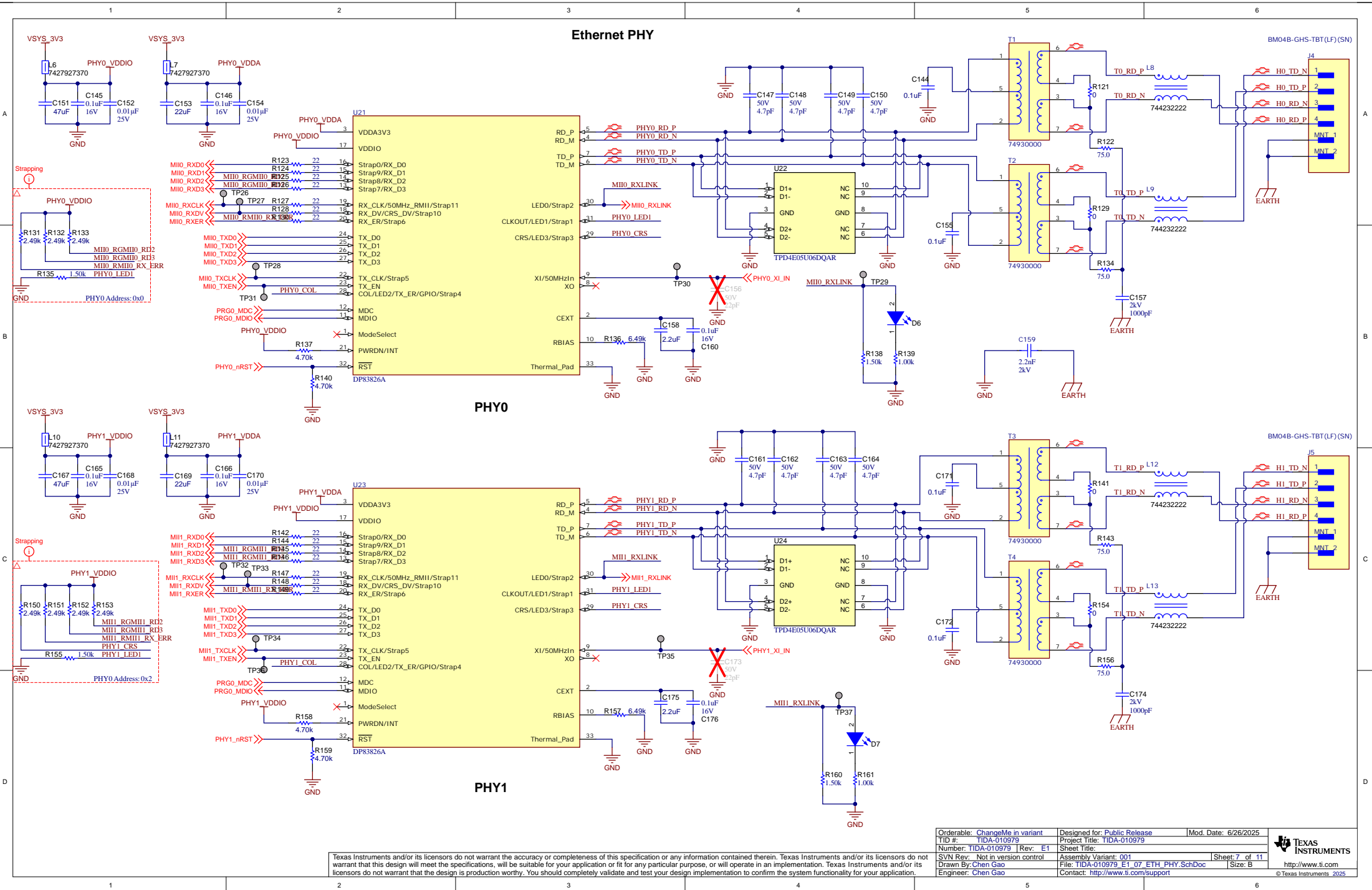


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Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 6/26/2025	 TEXAS INSTRUMENTS http://www.ti.com © Texas Instruments 2025
TIDA # TIDA-010979	Project Title: TIDA-010979		
SVN Rev: TIDA-010979 Rev: E1	Sheet Title:		
Number Var: Not in version control	Assembly Variant: 001	Sheet 5 of 11	
Drawn by: Chen Gao	File: TIDA-010979 E1_05_Debug_Console_IOS_Sch Size: B		
Engineer: Chen Gao	Contact: http://www.ti.com/support		

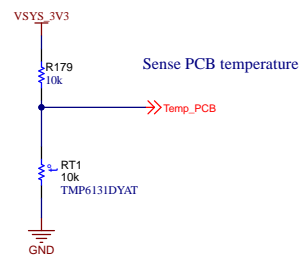
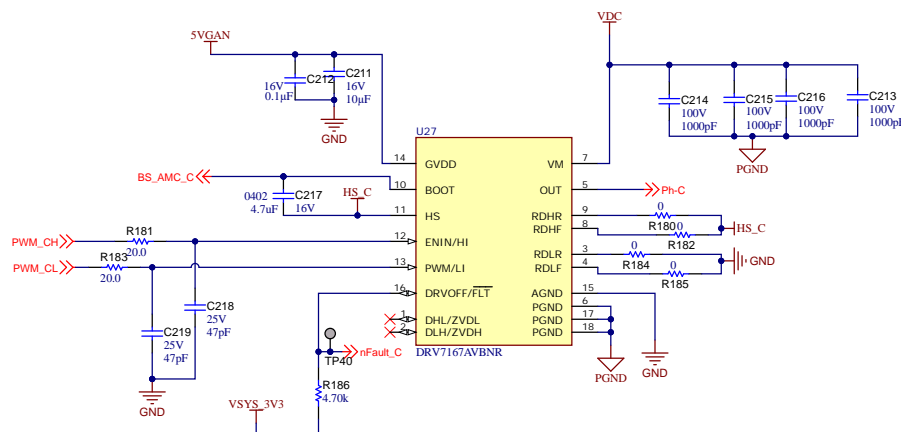
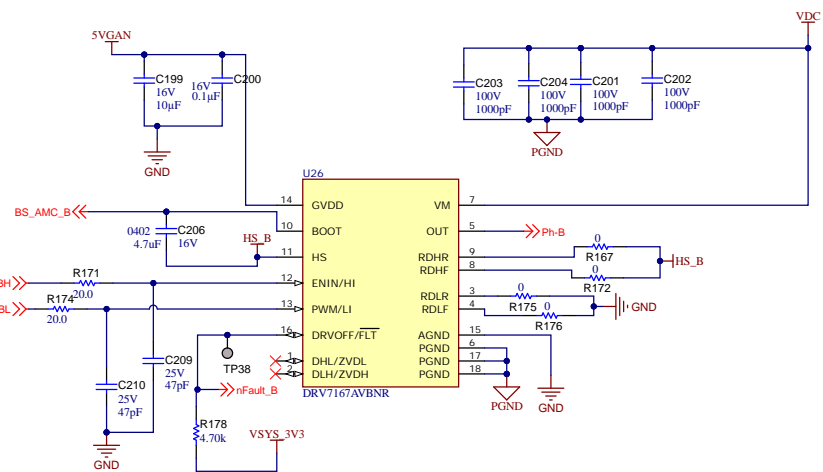
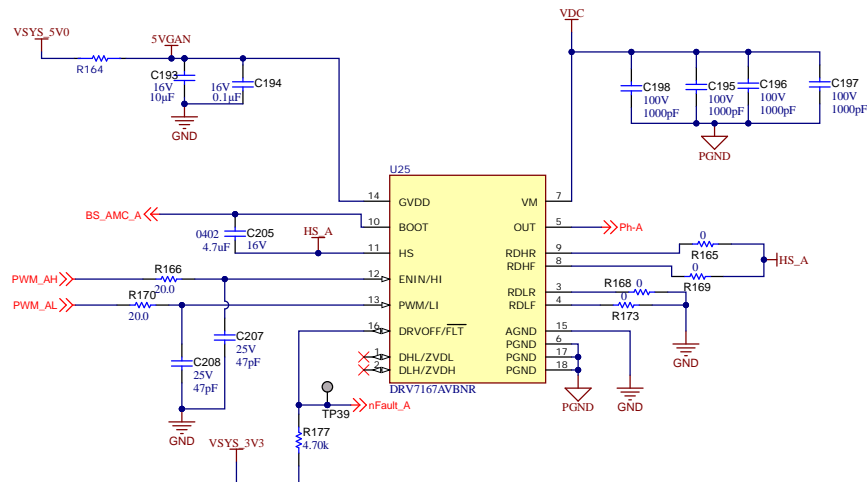
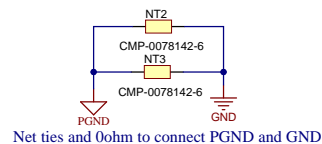
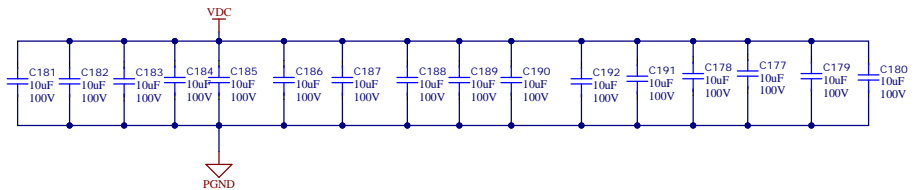


Ethernet PHY



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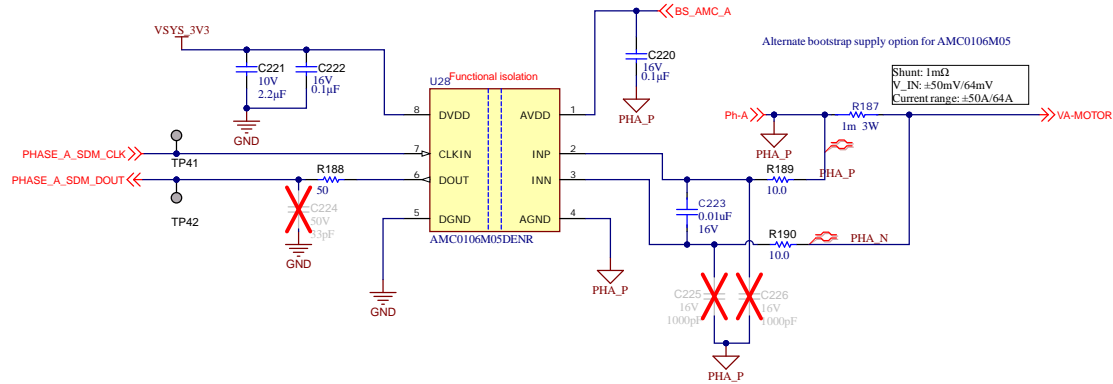
Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 6/26/2025
TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 7 of 11
Drawn By: Chen Gao	File: TIDA-010979 E1 07 ETH PHY_SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	



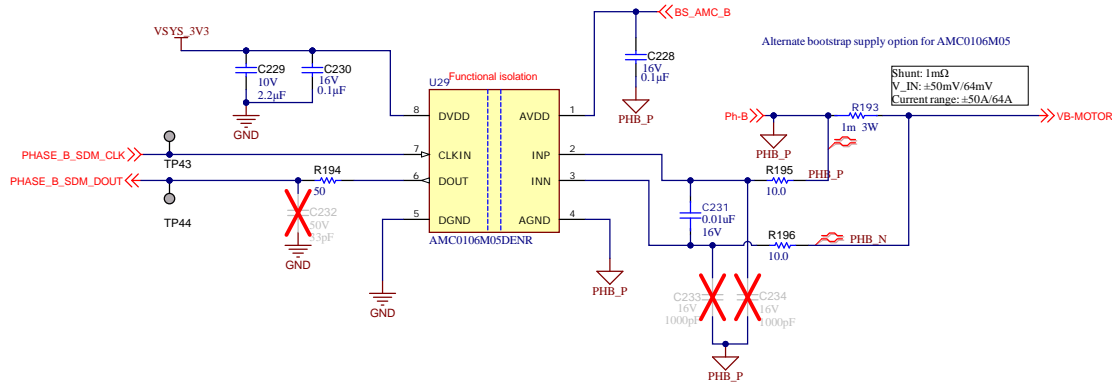
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Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 9/15/2025
TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet 8 of 11
Drawn By: Chen Gao	File: TIDA-010979 E1_08 GaN_SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	

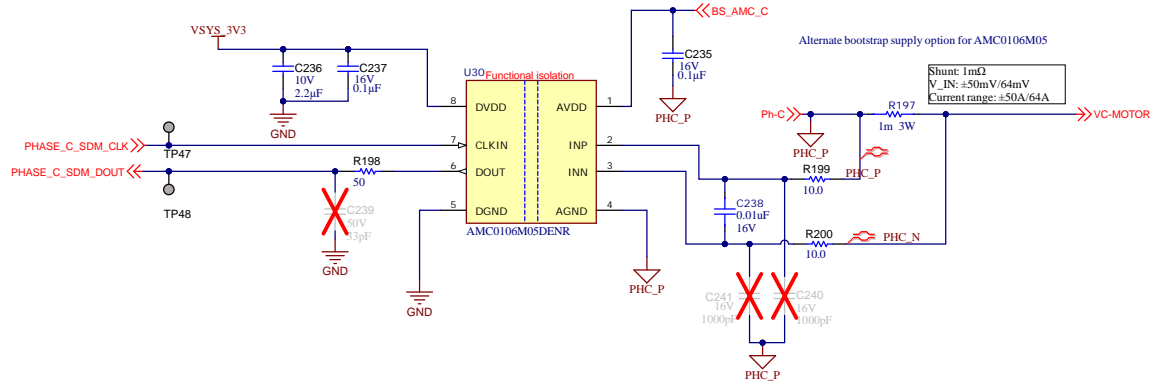
Phase A current sensing



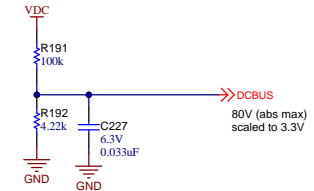
Phase B current sensing



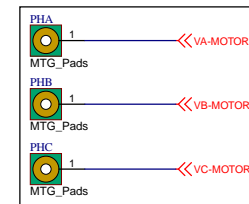
Phase C current sensing



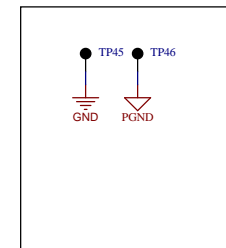
DC bus voltage sensing



Motor Connector



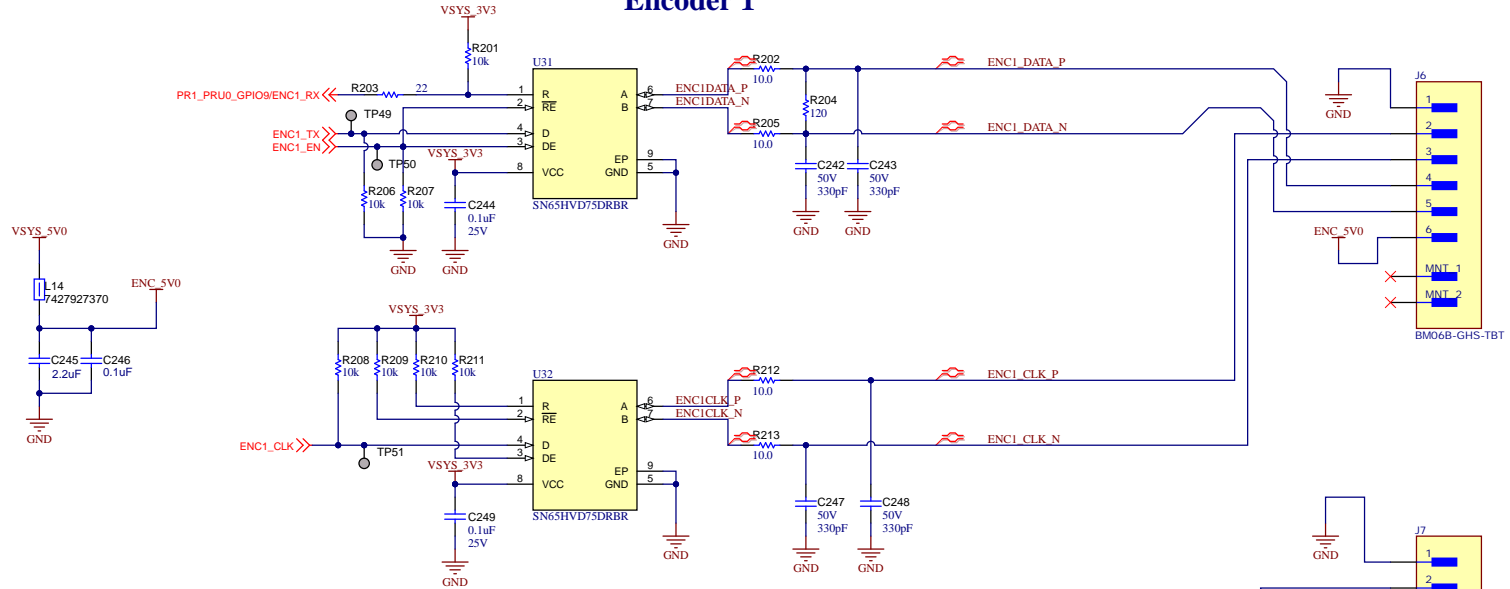
Test Points



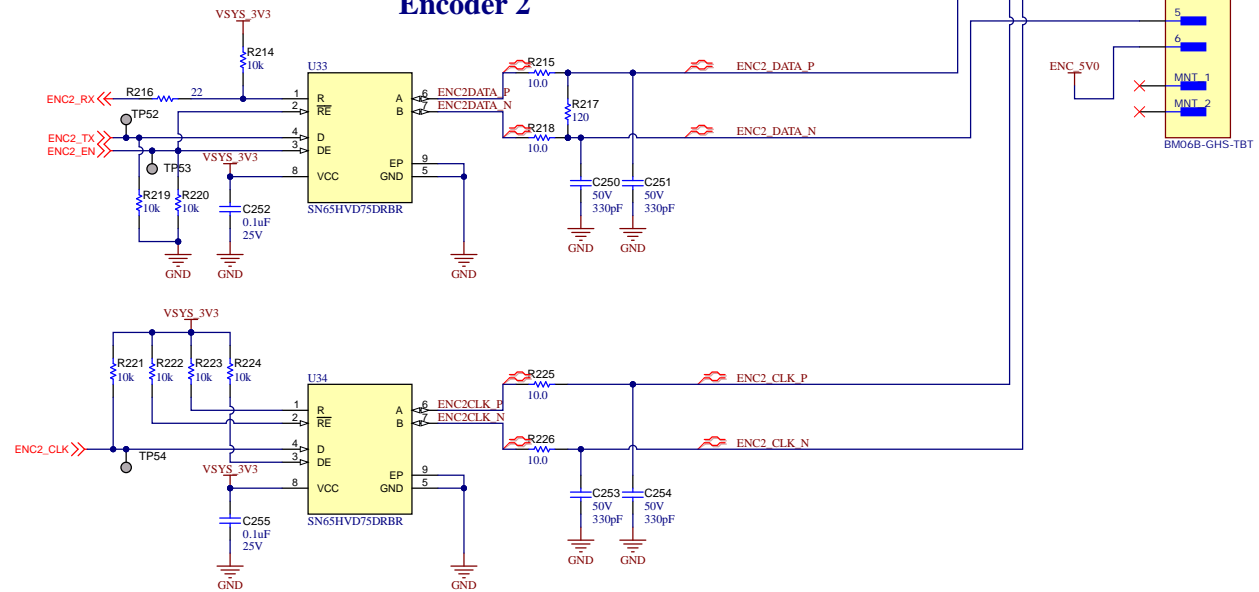
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Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 6/26/2025
TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 9 of 11
Drawn By: Chen Gao	File: TIDA-010979 E1_09_Current Sense.SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	

Encoder 1



Encoder 2



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Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 6/26/2025
TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979	Rev: E1	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet 10 of 11
Drawn By: Chen Gao	File: TIDA-010979 E1 10 Encoder interface GH12500000	Drawn Date: 6/26/2025
Engineer: Chen Gao	Contact: http://www.ti.com/support	



PCB Number: TIDA-010979
PCB Rev: E1



PCB
LOGO
FCC disclaimer

PCB
LOGO
WEEE logo



CAUTION HOT SURFACE

Variant/Label Table	
Variant	Label Text
001	TIDA-010979E1

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: ChangeMe in variant	Designed for: Public Release	Mod. Date: 9/12/2025
TID #: TIDA-010979	Project Title: TIDA-010979	
Number: TIDA-010979 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 11 of 11
Drawn By: Chen Gao	File: TIDA-010979_E1_Hardware_SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	