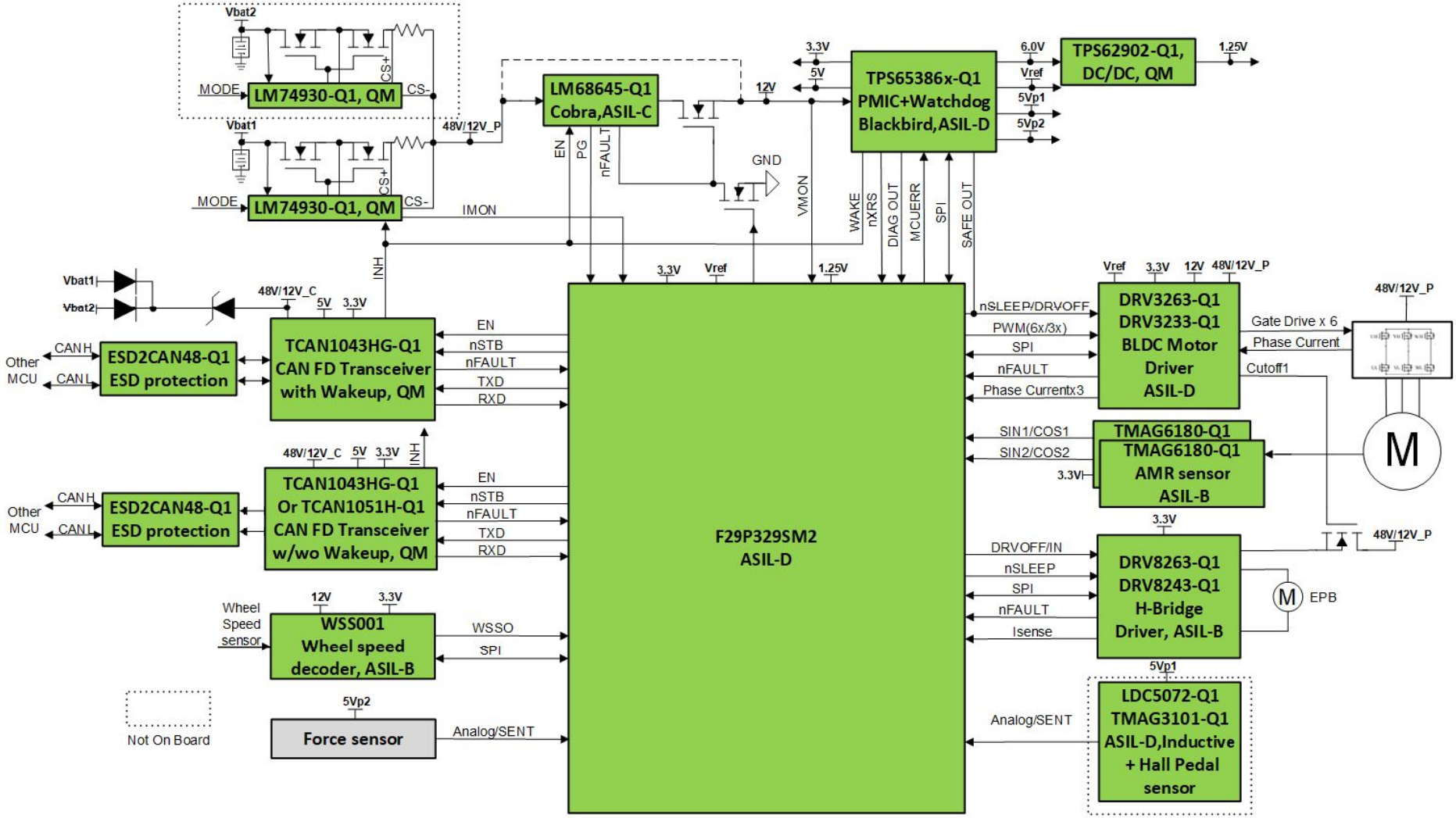
TIDA-020106

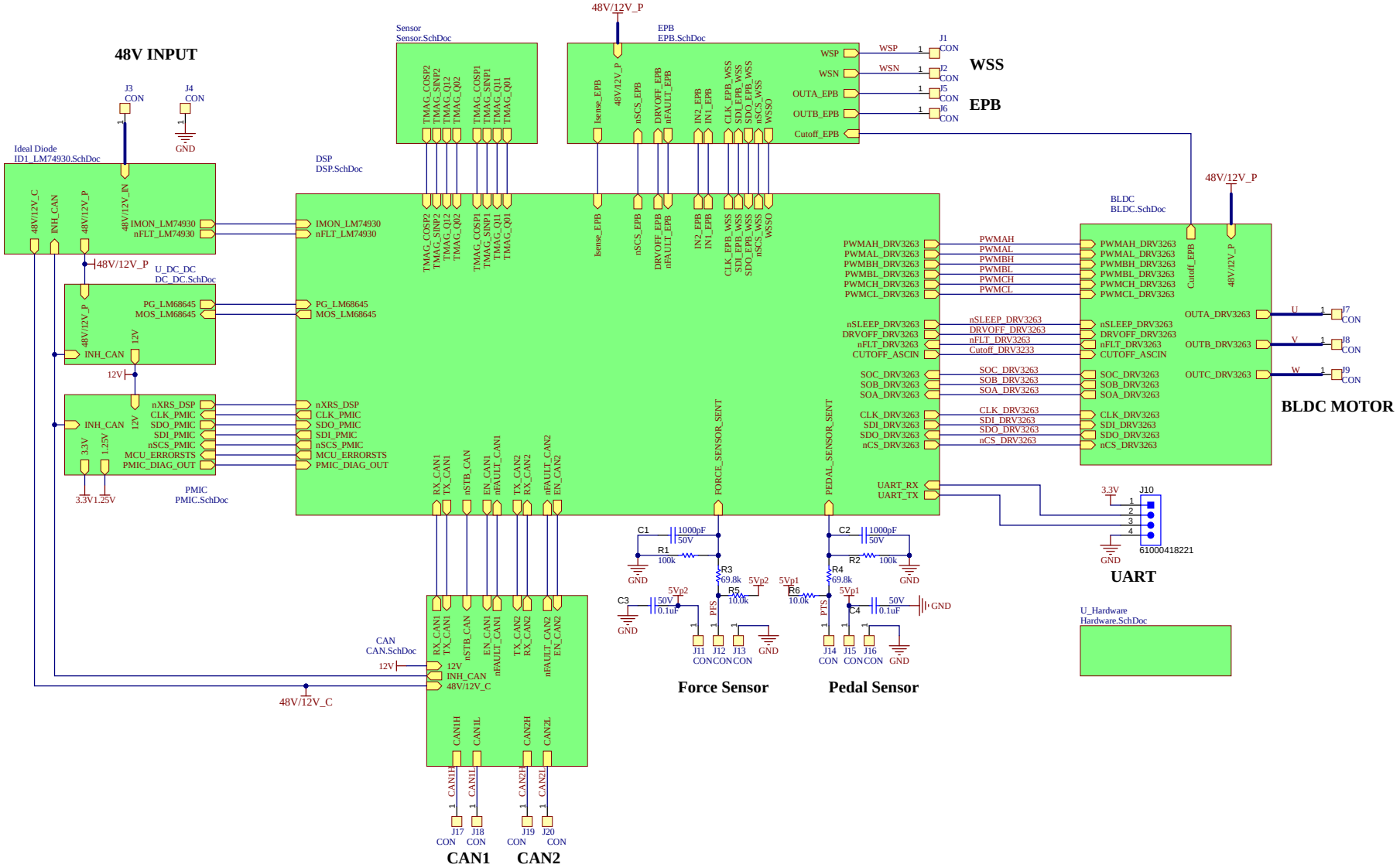
Electromechanical braking (EMB, 48V/12V, VerA)

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



Orderable: No	Designed for: Public Release	Mod. Date: 4/15/2026
TID #: TIDA-020106	Project Title: TIDA-020106	
Number: TIDA-020106 Rev: VerB	Sheet Title: Cover	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 1 of 15
Drawn By:	File: Cover - VerA.SchDoc	Size: B
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

MAIN



Orderable: No	Designed for: Public Release	Mod. Date: 5/17/2026
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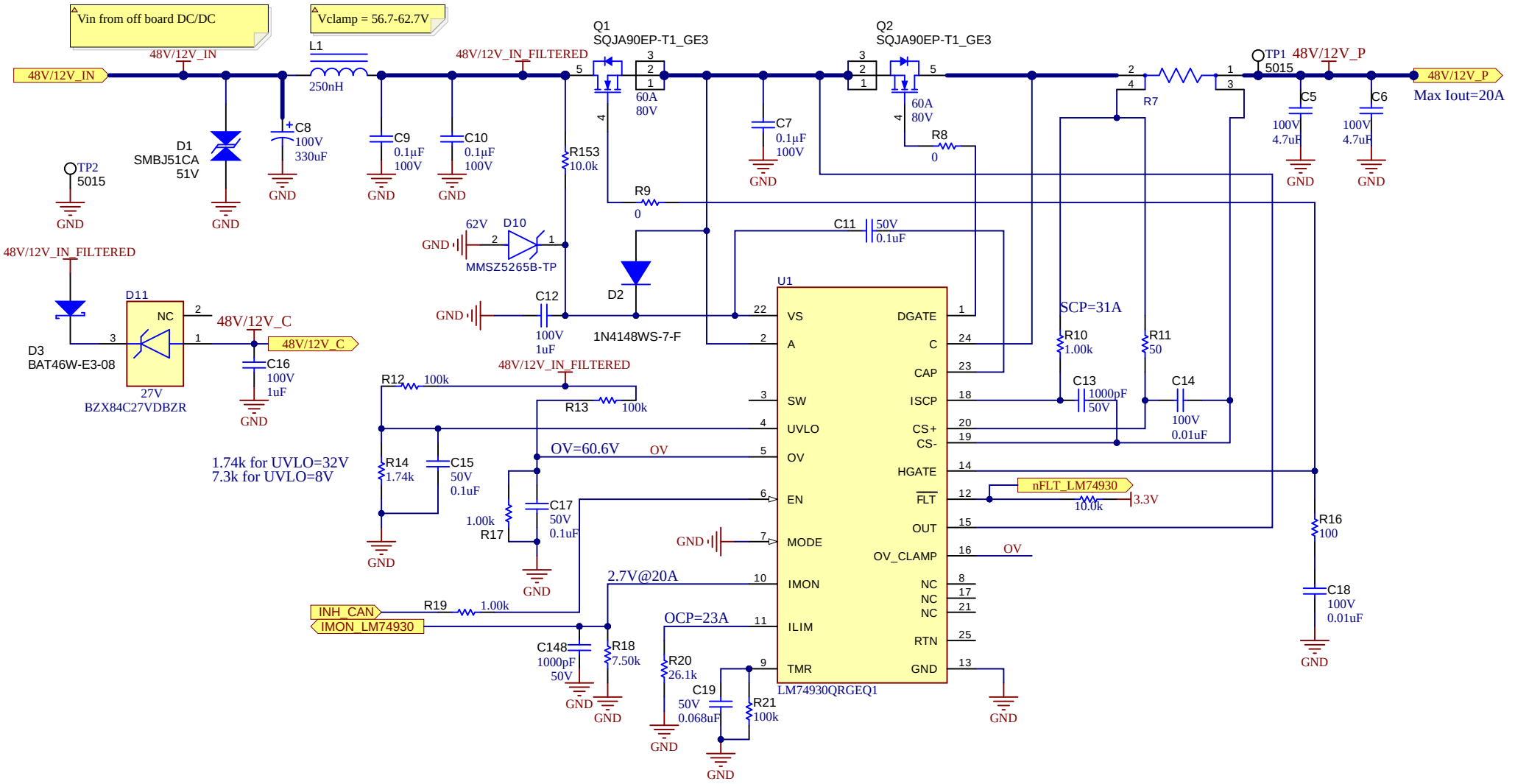
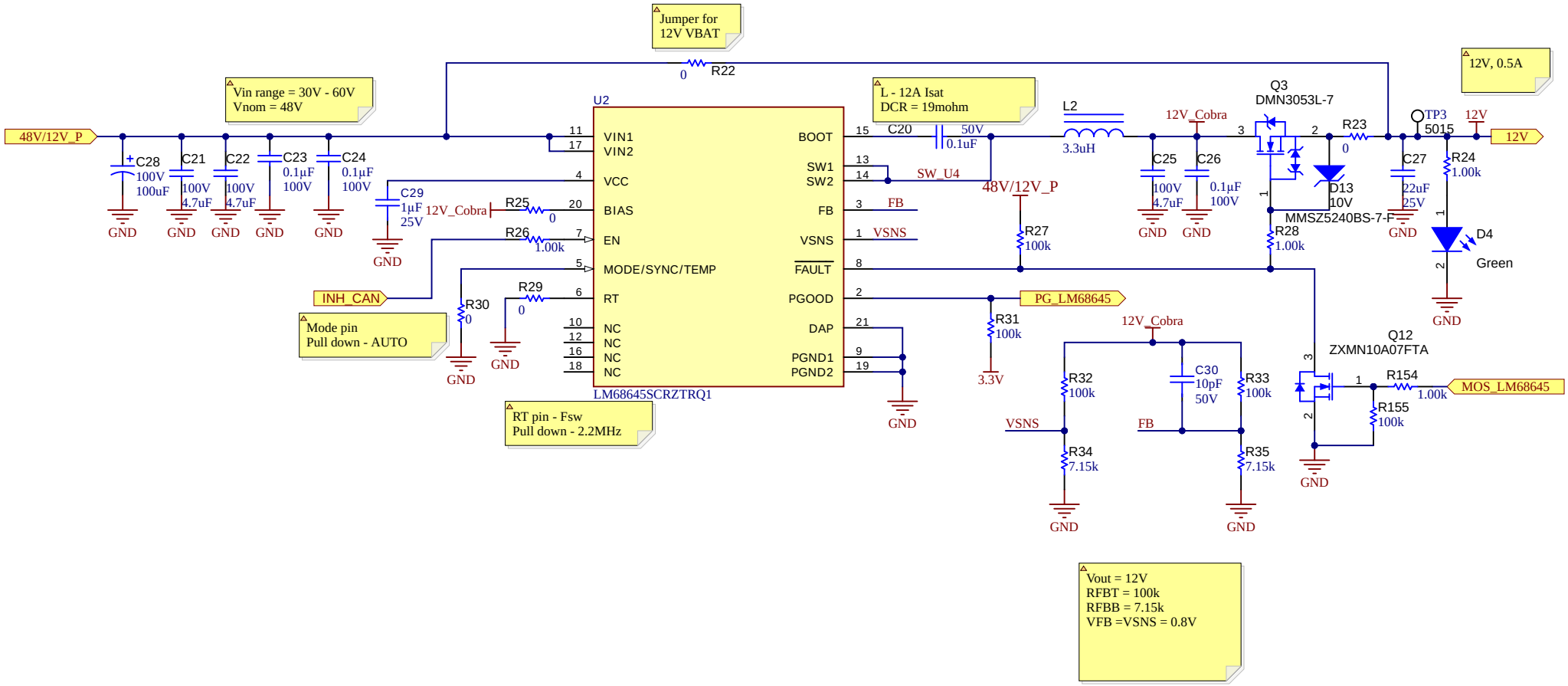
Number: TIDA-020106 Rev: VerB	Sheet Title: Main	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 2 of 15
Drawn By: Hely Zhang	File: Main.SchDoc	Size: B
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

Ideal Diode



Orderable: No		Designed for: Public Release	Mod. Date: 5/17/2026
TID #: TIDA-020106		Project Title: TIDA-020106	
Number: TIDA-020106	Rev: VerB	Sheet Title: LM25143-Q1 Two Phases	
SVN Rev: Not in version control		Assembly Variant: [No Variations]	Sheet: 3 of 15
Drawn By: Hely Zhang		File: ID1_LM74930.SchDoc	Size: A4
Engineer: Hely Zhang		Contact: http://www.ti.com/support	

DC/DC



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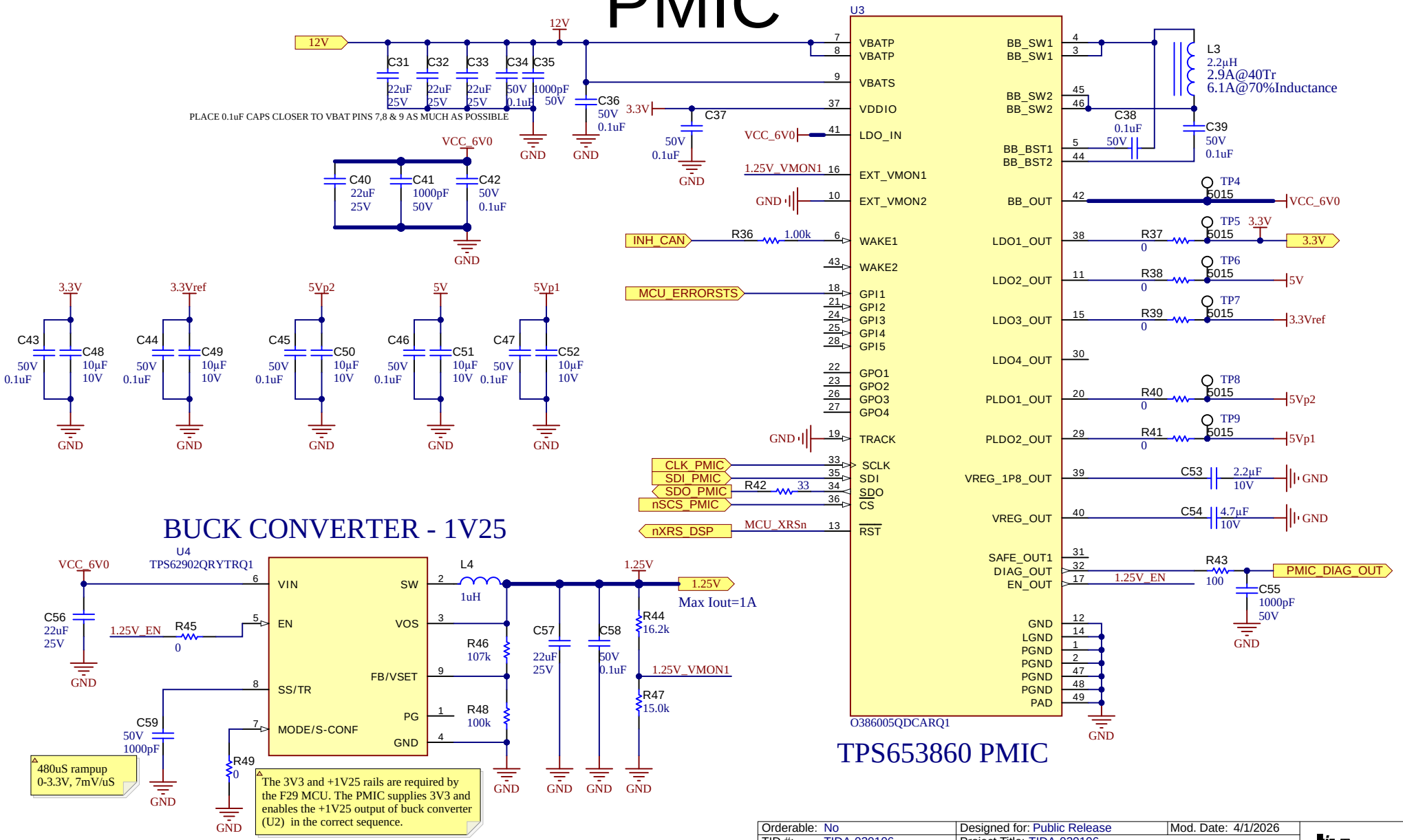
Number: TIDA-020106	Rev: VerB	Sheet Title: DC/DC	
SVN Rev: Not in version control		Assembly Variant: [No Variations]	Sheet: 4 of 15
Drawn By: Hely Zhang		File: DC_DC.SchDoc	Size: A4
Engineer: Hely Zhang		Contact: http://www.ti.com/support	

PMIC



BUCK CONVERTER - 1V25

TPS653860 PMIC

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Orderable: No	Designed for: Public Release	Mod. Date: 4/1/2026
TID #: TIDA-020106	Project Title: TIDA-020106	
Number: TIDA-020106 Rev: VerB	Sheet Title: PMIC	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 5 of 15
Drawn By: Hely Zhang	File: PMIC.SchDoc	Size: A4
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

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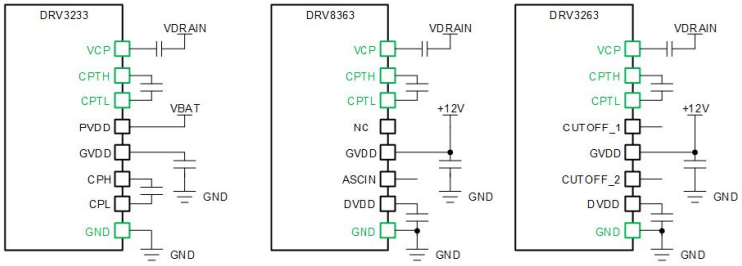
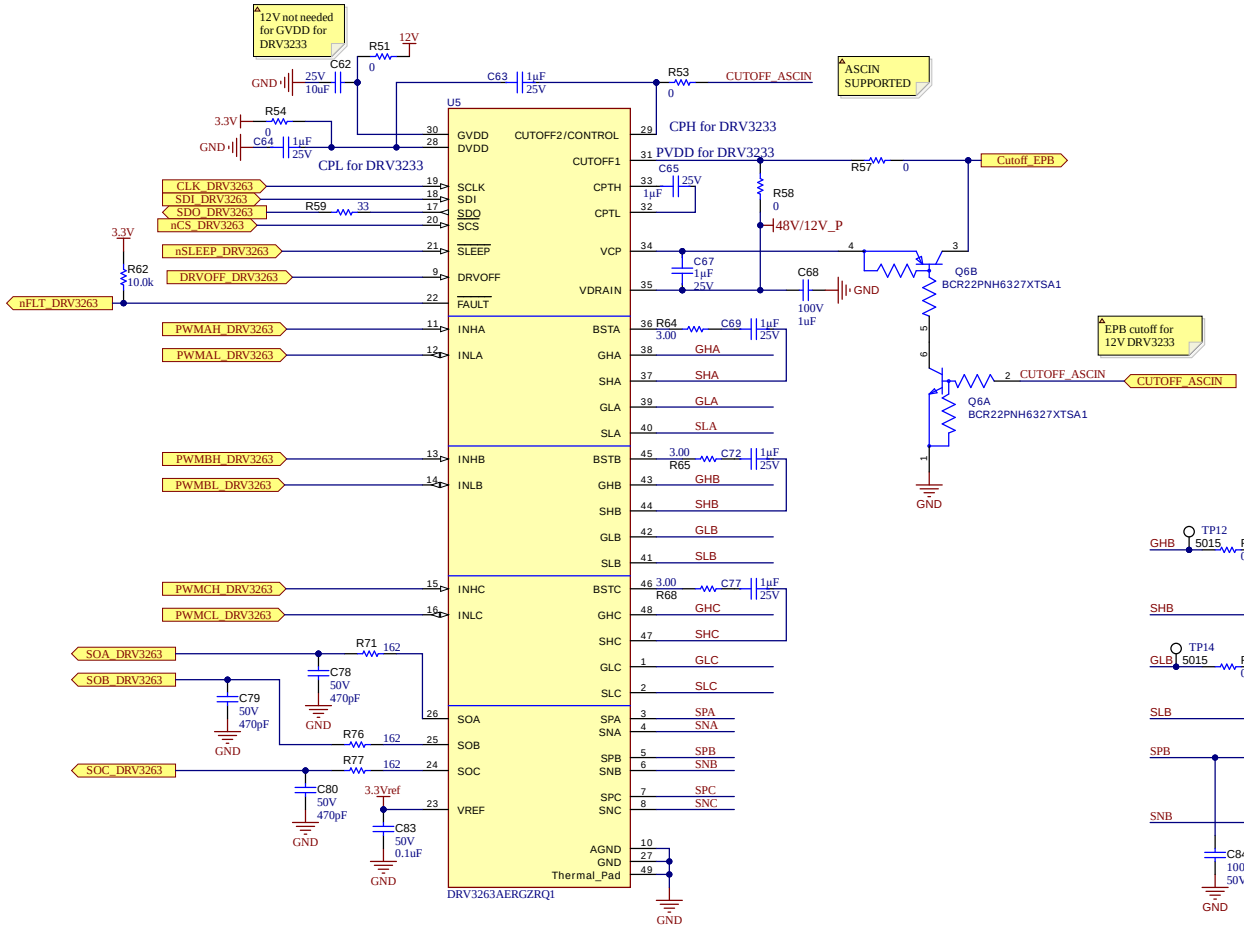
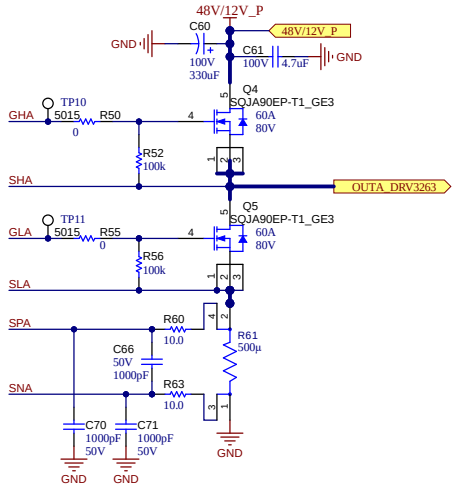
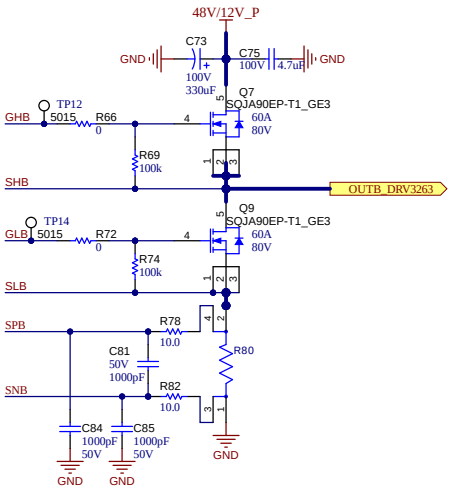
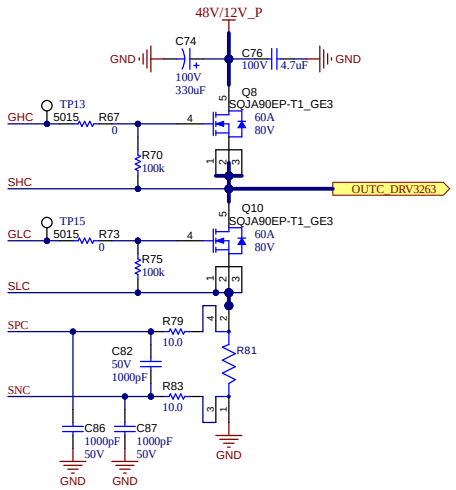
BLDC Motor Drive











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Number: TIDA-020106 Rev: VerB	Sheet Title: BLDC	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 6 of 15
Drawn By: Hely Zhang	File: BLDC.SchDoc	Size: B
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

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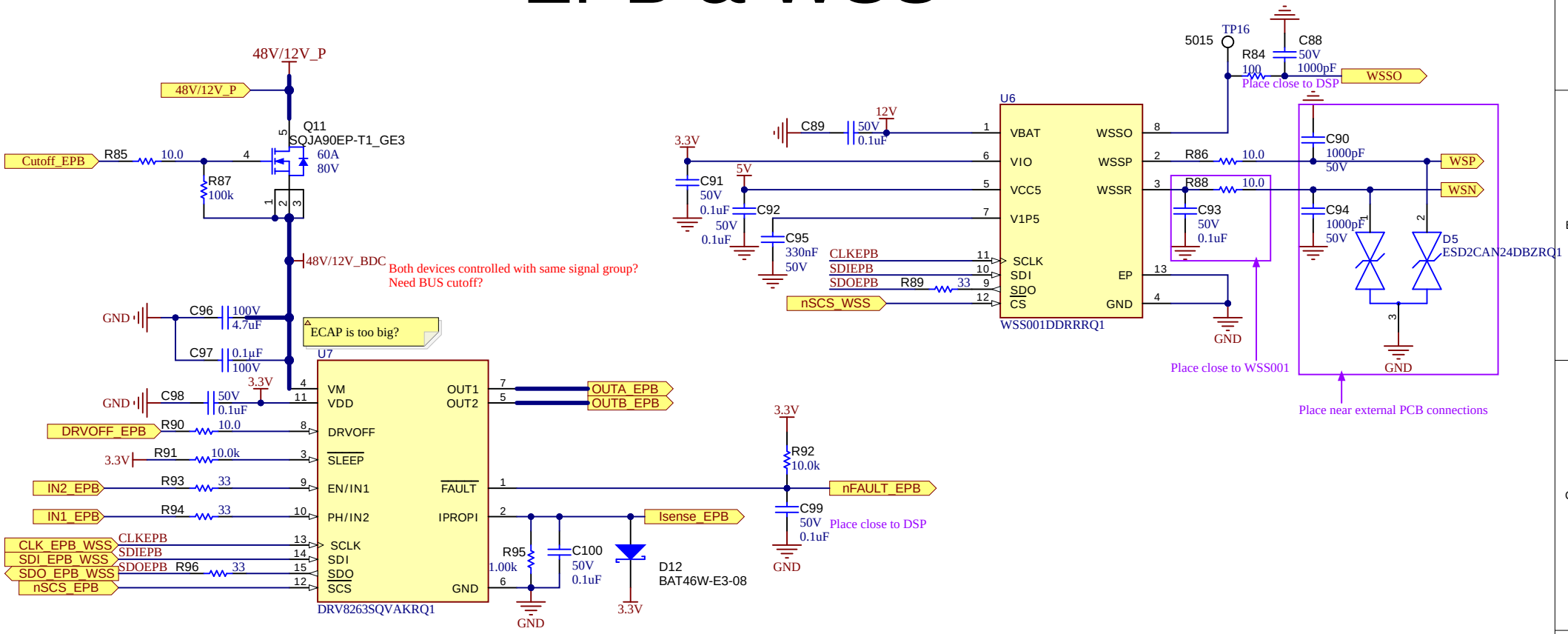
EPB & WSS



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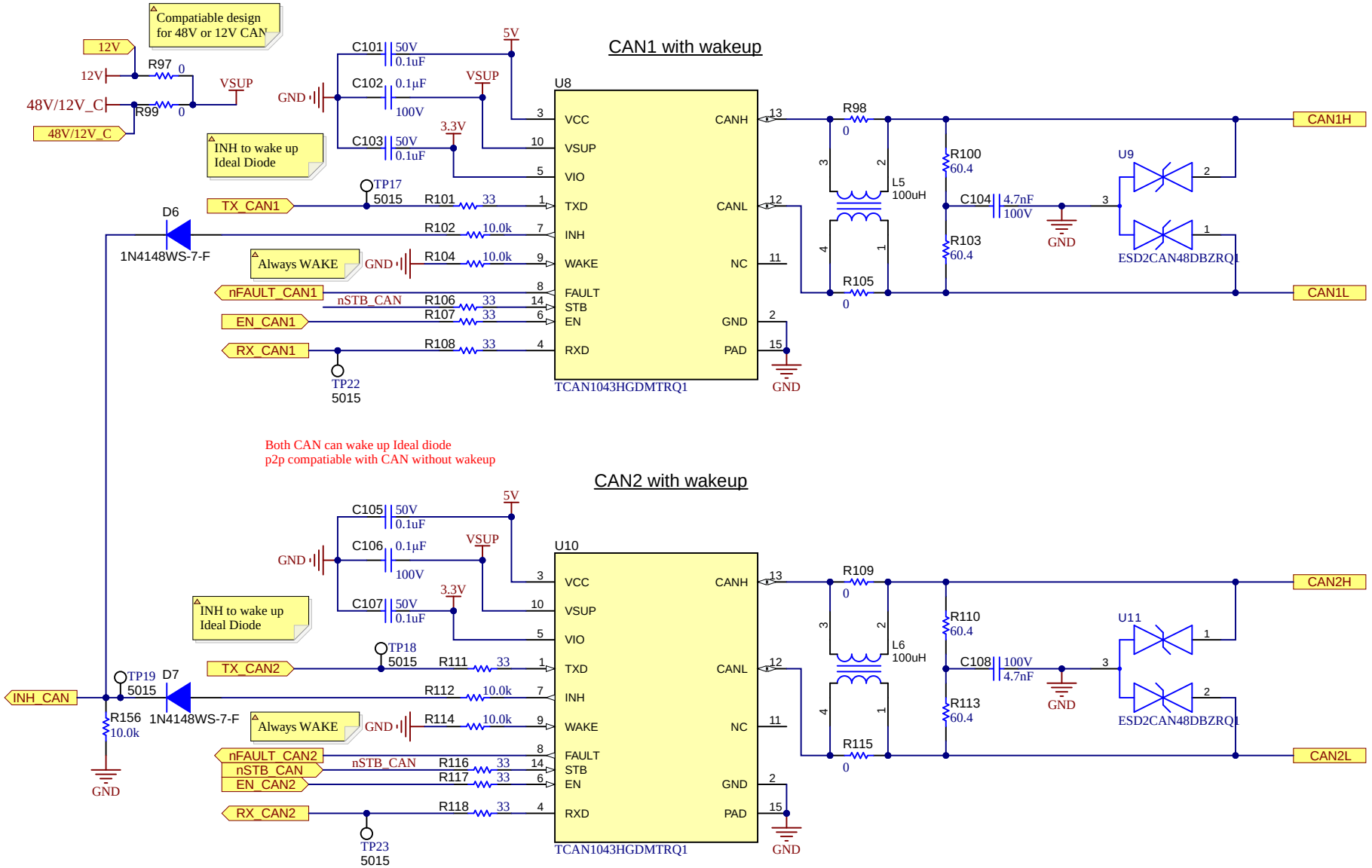
Number: TIDA-020106 Rev: VerB	Sheet Title: EPB & WSS		
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 7 of 15	
Drawn By: Hely Zhang	File: EPB.SchDoc	Size: A4	
Engineer: Hely Zhang	Contact: http://www.ti.com/support		

CAN



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Number: TIDA-020106 Rev: VerB	Sheet Title: CAN	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 8 of 15
Drawn By: Hely Zhang	File: CAN.SchDoc	Size: A4
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

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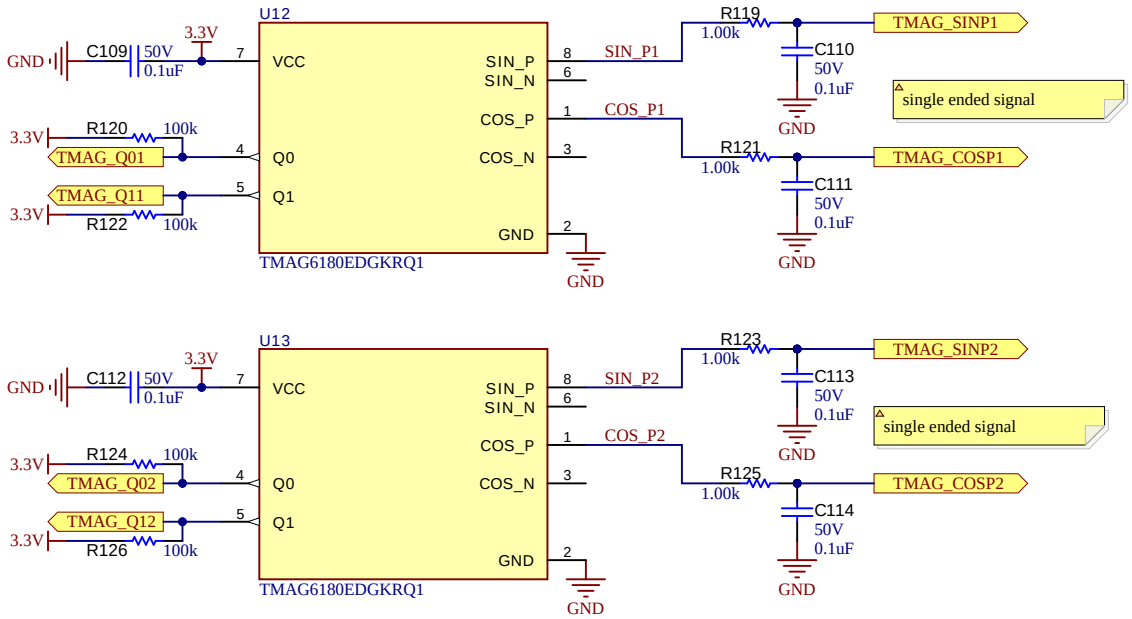
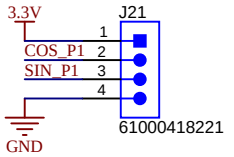
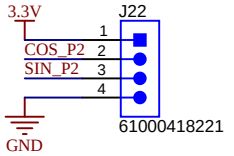
Rotor Postiion Sensor

Onboard AMR sensor



Offboard Inductive Sensor





Orderable: No		Designed for: Public Release	Mod. Date: 3/27/2026
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Number: TIDA-020106	Rev: VerB	Sheet Title: Sensor	
SVN Rev: Not in version control		Assembly Variant: [No Variations]	Sheet: 9 of 15
Drawn By: Hely Zhang		File: Sensor.SchDoc	Size: A4
Engineer: Hely Zhang		Contact: http://www.ti.com/support	

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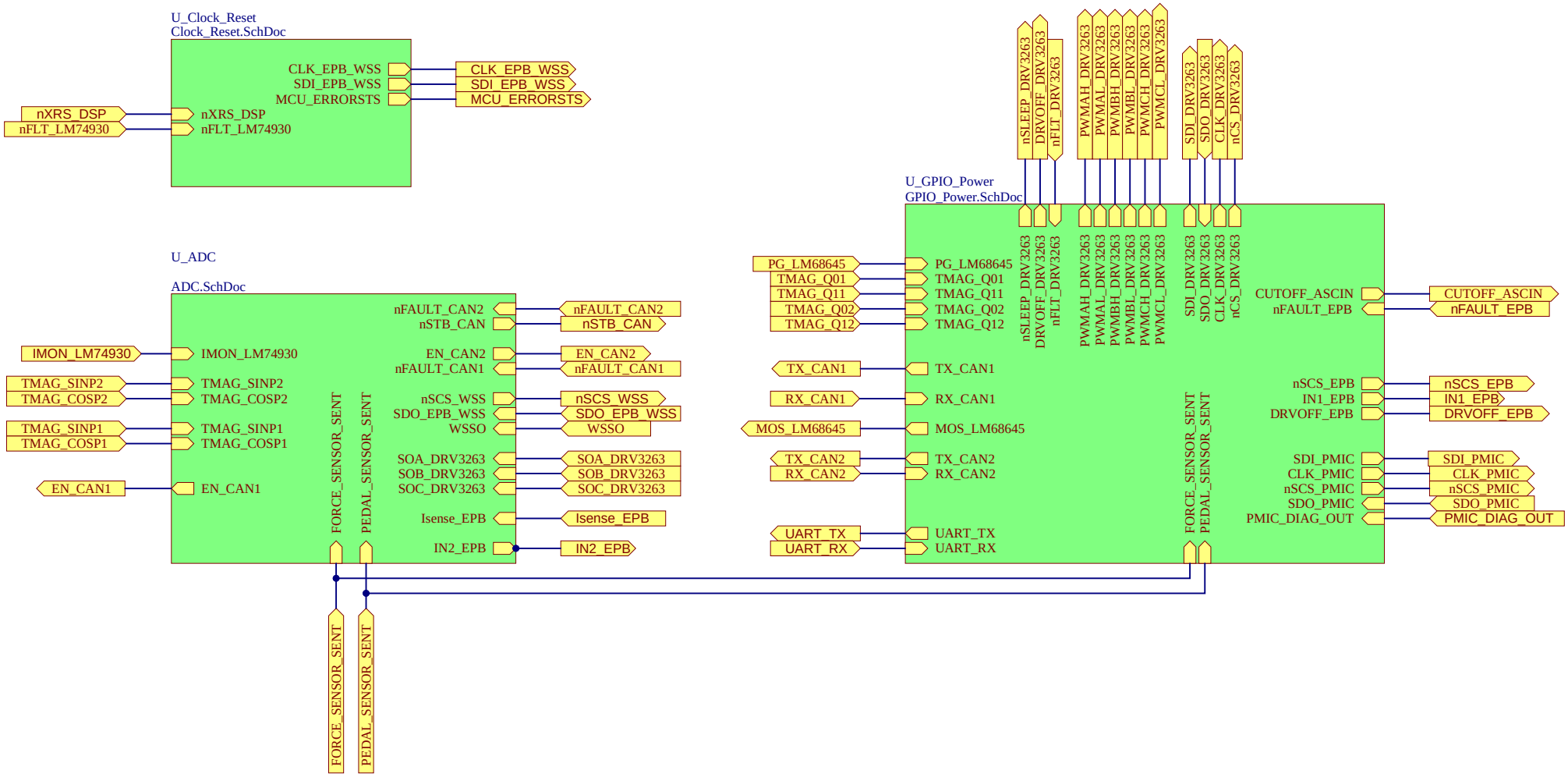
DSP



Orderable: No		Designed for: Public Release	Mod. Date: 5/17/2026
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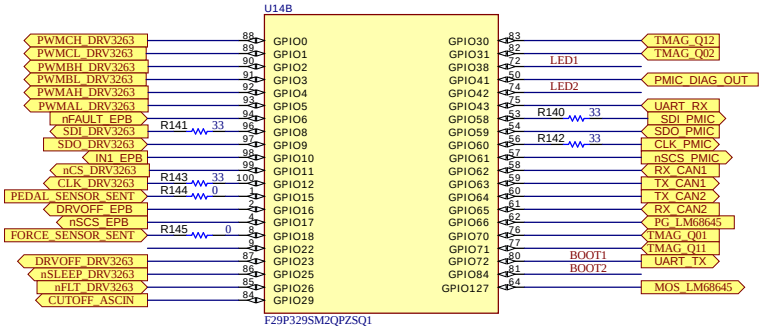
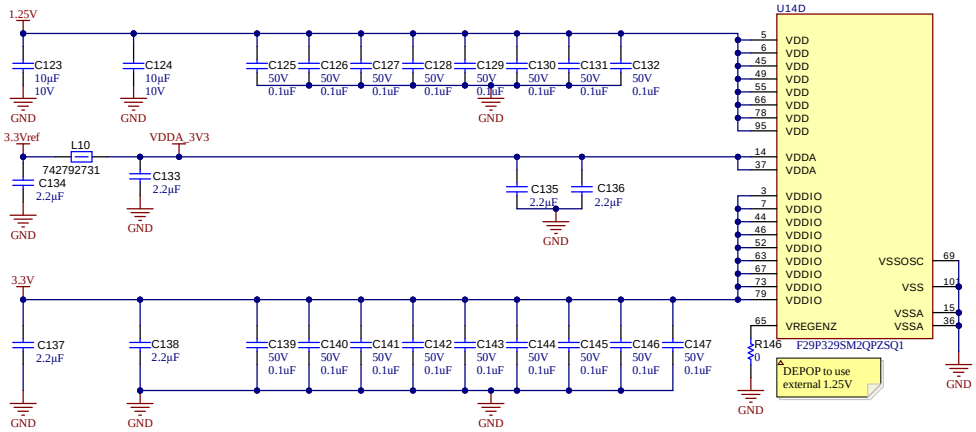
Number: TIDA-020106	Rev: VerB	Sheet Title: DSP	
SVN Rev: Not in version control		Assembly Variant: [No Variations]	Sheet: 10 of 15
Drawn By: Hely Zhang		File: DSP.SchDoc	Size: A4
Engineer: Hely Zhang		Contact: http://www.ti.com/support	

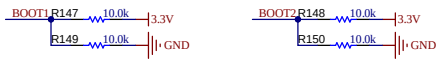
GPIO and Power



Place near DSP

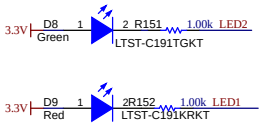


Boot Mode Selection Switch



Boot Mode Selection Chart			
Modes	GPIO72	GPIO84	Boot Modes
00	0	0	Boot from Parallel GPIO
01	0	1	Boot from UART / Wait Mode
02	1	0	Boot from CAN
03	1	1	Boot from Flash*

*Default



User LEDs

Orderable: No	Designed for: Public Release	Mod. Date: 3/31/2026
TID #: TIDA-020106	Project Title: TIDA-020106	
Number: TIDA-020106 Rev: VerB	Sheet Title: GPIO and Power	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 11 of 15
Drawn By: Gustavo Martinez	File: GPIO_Power.SchDoc	Size: B
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

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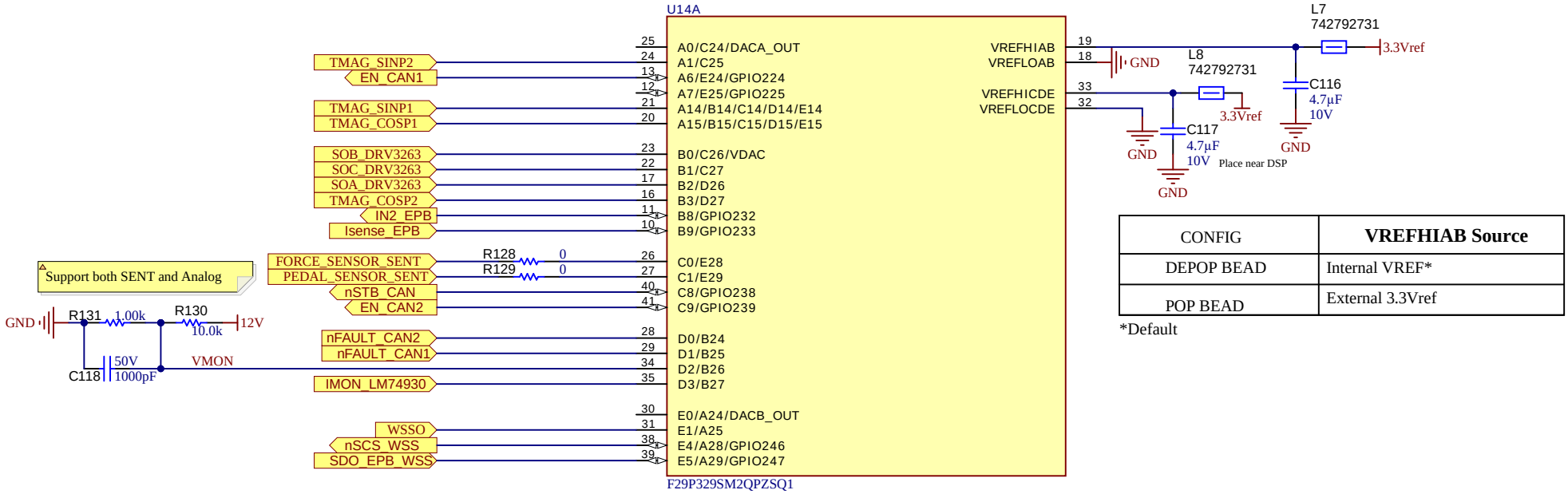
ADC



CONFIG	**VREFHIAB Source**
DEPOP BEAD	Internal VREF*
POP BEAD	External 3.3Vref

*Default

Orderable: No		Designed for: Public Release	Mod. Date: 5/17/2026
TID #: TIDA-020106		Project Title: TIDA-020106	
Number: TIDA-020106	Rev: VerB	Sheet Title: ADC	
SVN Rev: Not in version control		Assembly Variant: [No Variations]	Sheet: 12 of 15
Drawn By: Hely Zhang		File: ADC.SchDoc	Size: A4
Engineer: Hely Zhang		Contact: http://www.ti.com/support	

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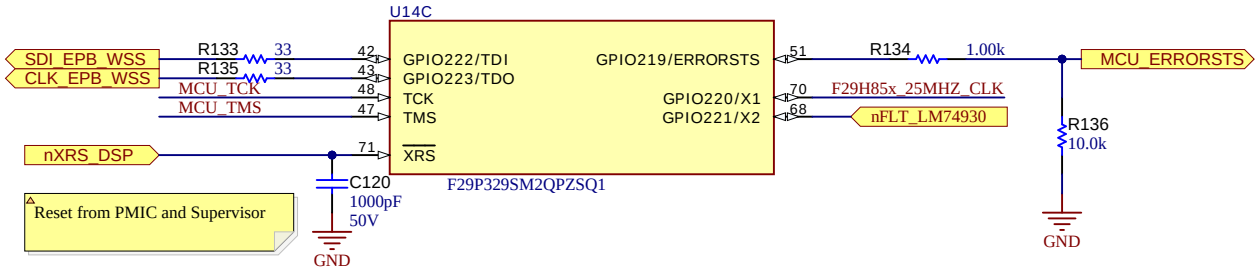
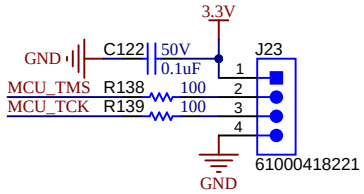
CLOCK AND RESET

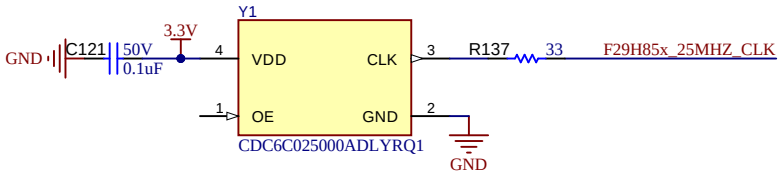
Reset and JTAG



Emulator Connector



Clock



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Number: TIDA-020106 Rev: VerB	Sheet Title: Clock&Reset	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 13 of 15
Drawn By: Hely Zhang	File: Clock_Reset.SchDoc	Size: A4
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

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MP1 29344

MP2 29344

MP3 29344

MP4 29344

FID1

FID2

FID3

PCB Number: TIDA-020106
PCB Rev: VerA

PCB LOGO
Texas Instruments

CE Mark

PCB LOGO
FCC disclaimer

PCB LOGO
WEEE logo

CAUTION HOT SURFACE

DANGER HIGH VOLTAGE

LBL1

PCB Label

THT-14-423-10
Size: 0.65" x 0.20 "

Variant/Label Table	
Variant	Label Text
001	ChangeMe!
002	ChangeMe!

Orderable: No	Designed for: Public Release	Mod. Date: 4/3/2026
TID #: TIDA-020106	Project Title: TIDA-020106	
Number: TIDA-020106 Rev: VerB	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 14 of 15
Drawn By:	File: Hardware.SchDoc	Size: B
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

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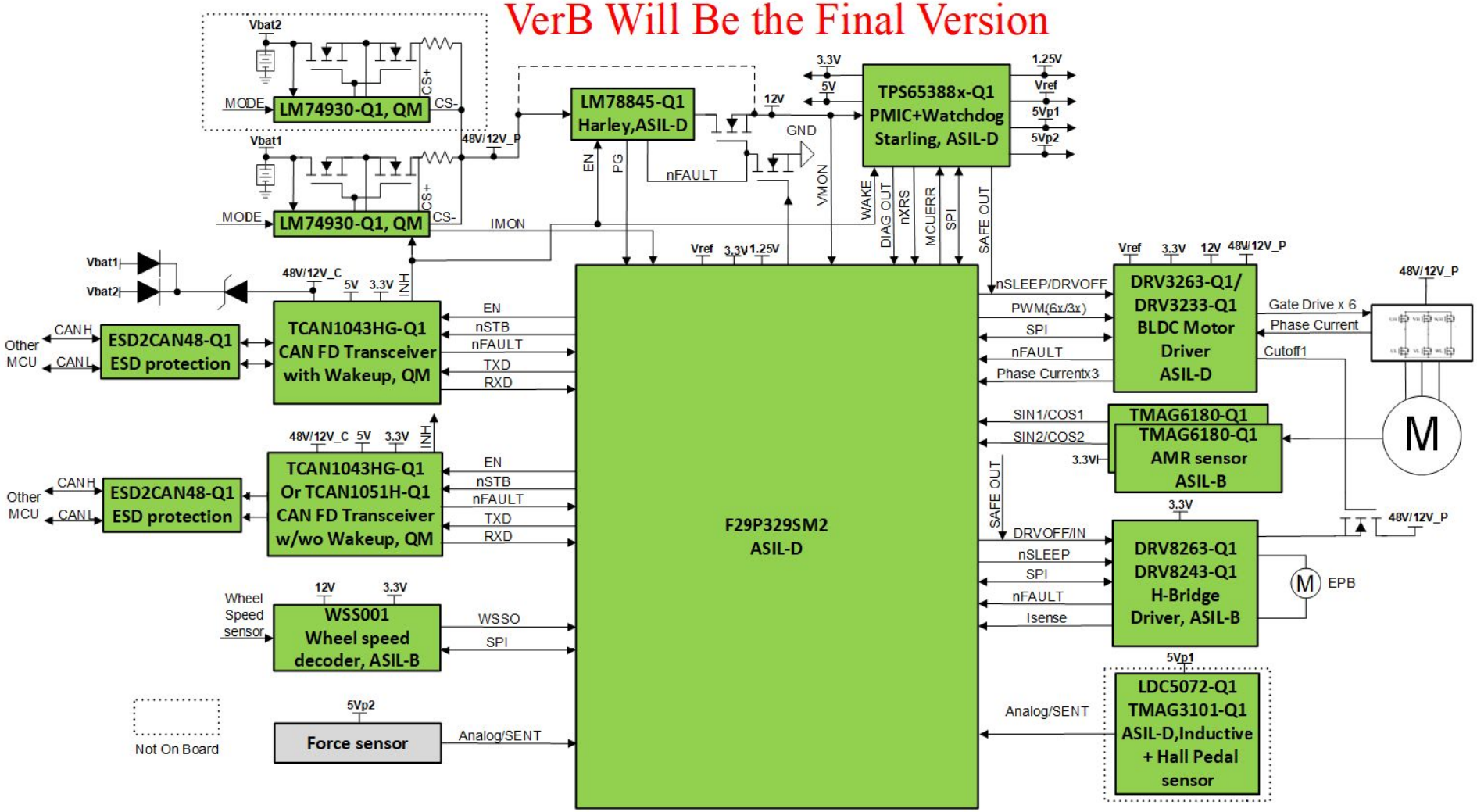
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A

TIDA-020106

Electromechanical braking (EMB, 48V/12V,VerB)

VerB Will Be the Final Version



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Number: TIDA-020106 Rev: VerB	Sheet Title: Cover	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 15 of 15
Drawn By:	File: Cover - VerB.SchDoc	Size: B
Engineer: Hely Zhang	Contact: http://www.ti.com/support	

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Last updated 10/2025