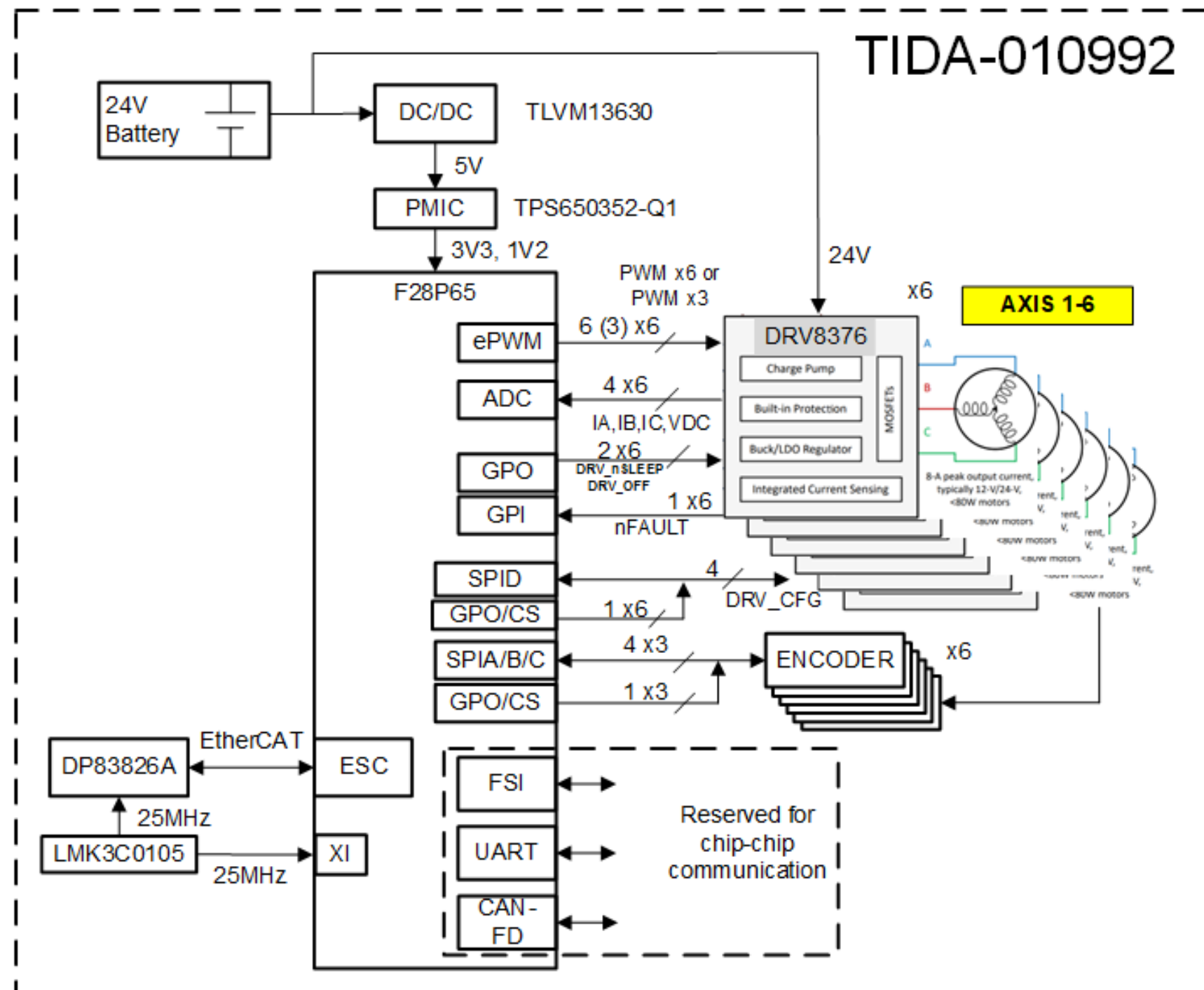


Revision History

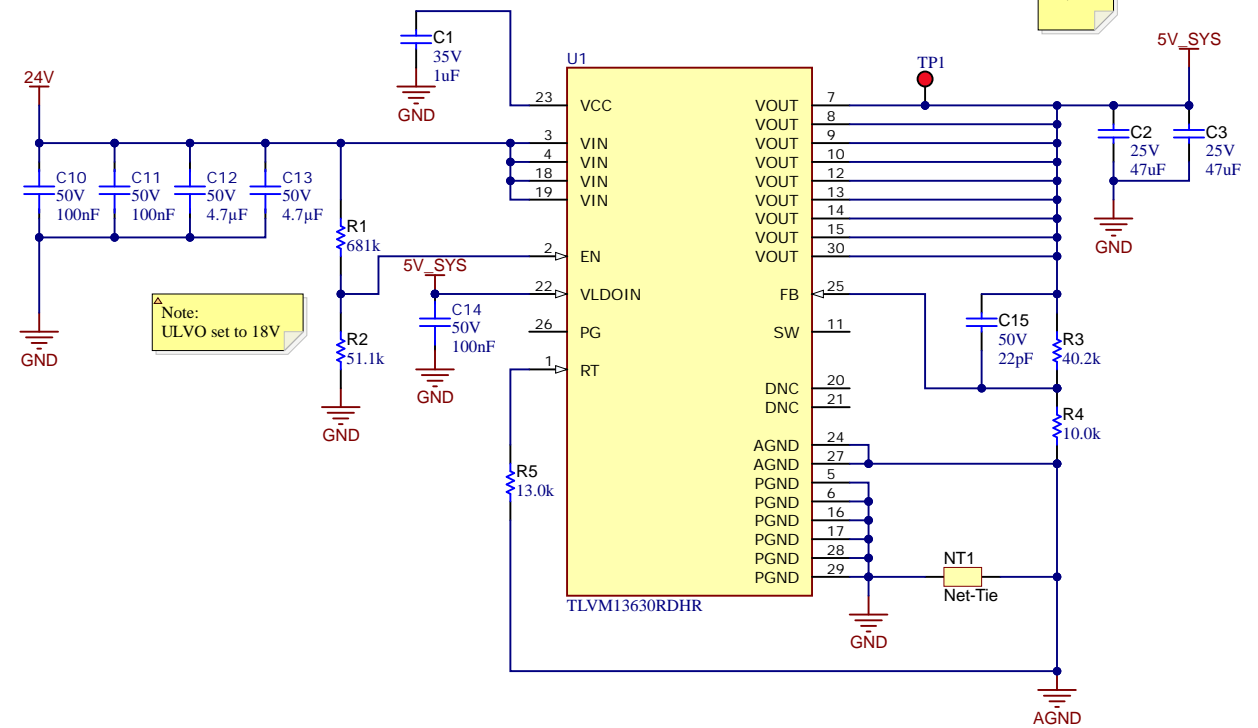
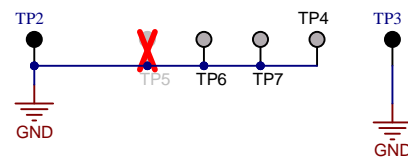
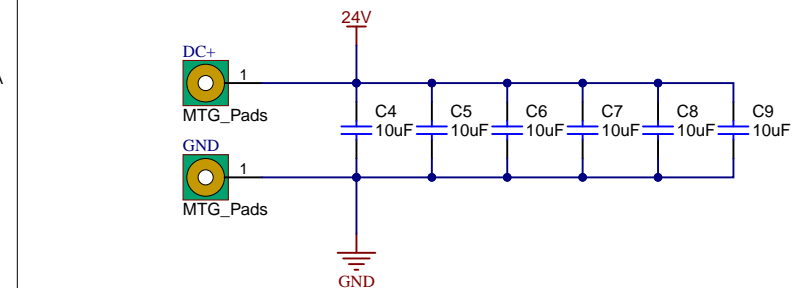
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



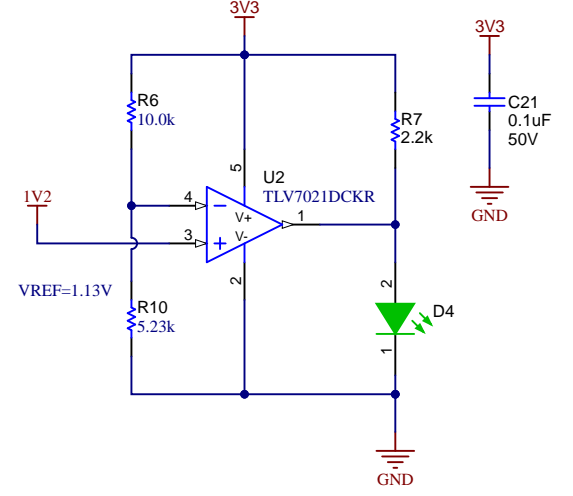
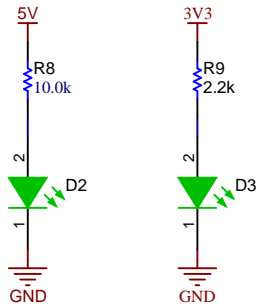
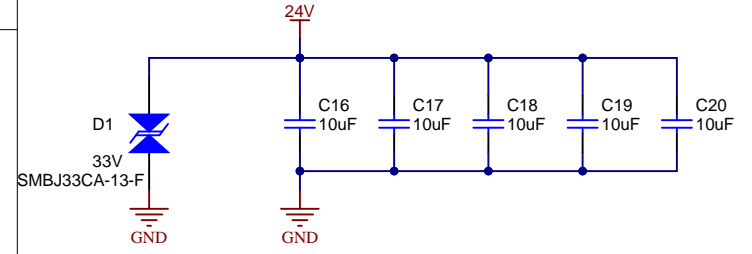
Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 11/6/2025
TID #: TIDA-010992	Project Title: TIDA-010992	
Number: TIDA-010992 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 1 of 13
Drawn By: Chen Gao	File: TIDA-010992_01_CoverSheet.SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	

Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

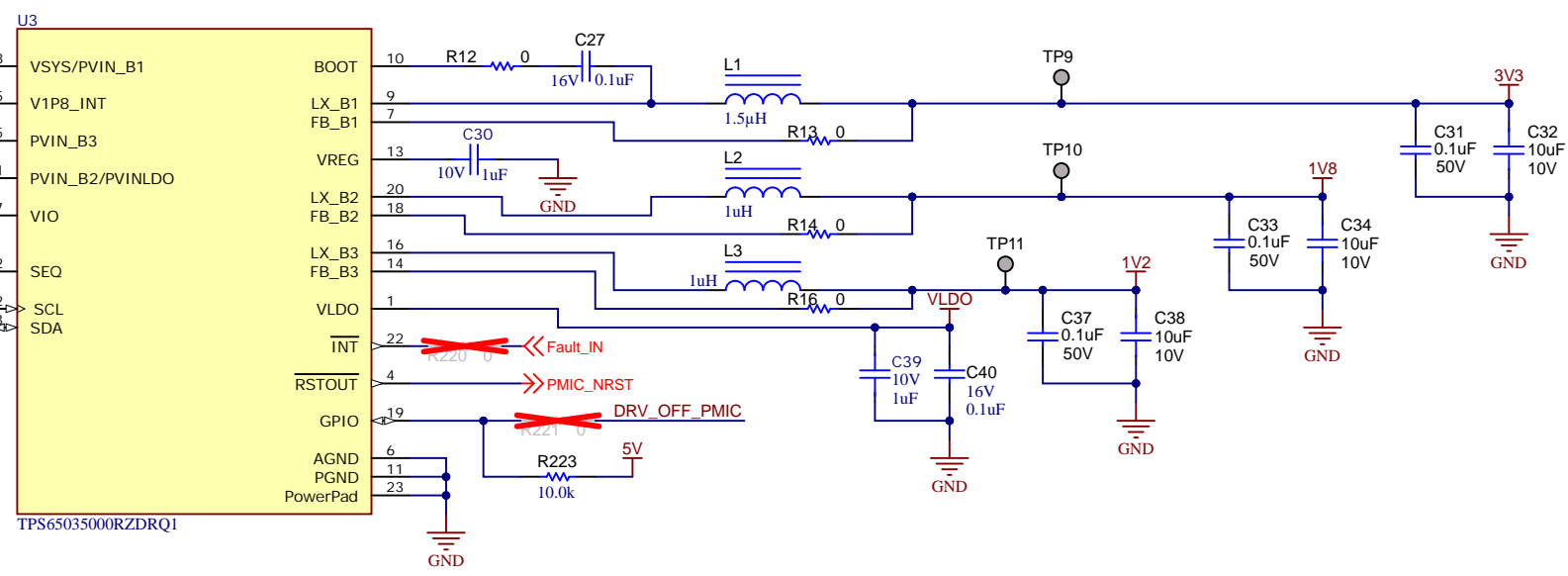
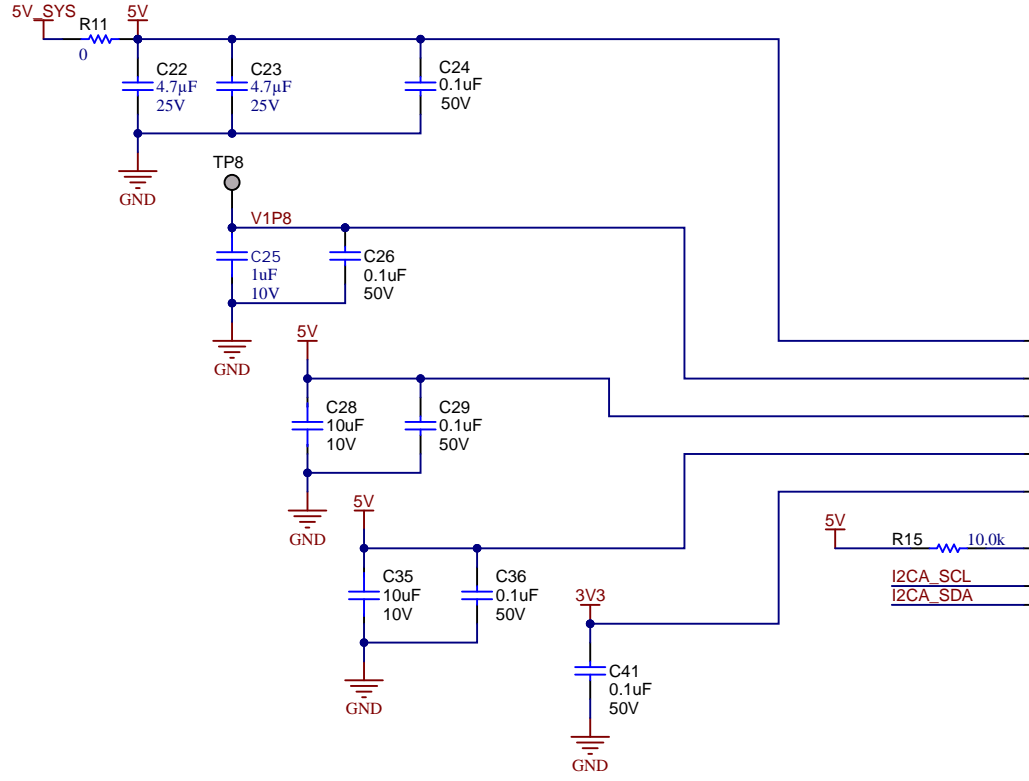
POWER



Indicators



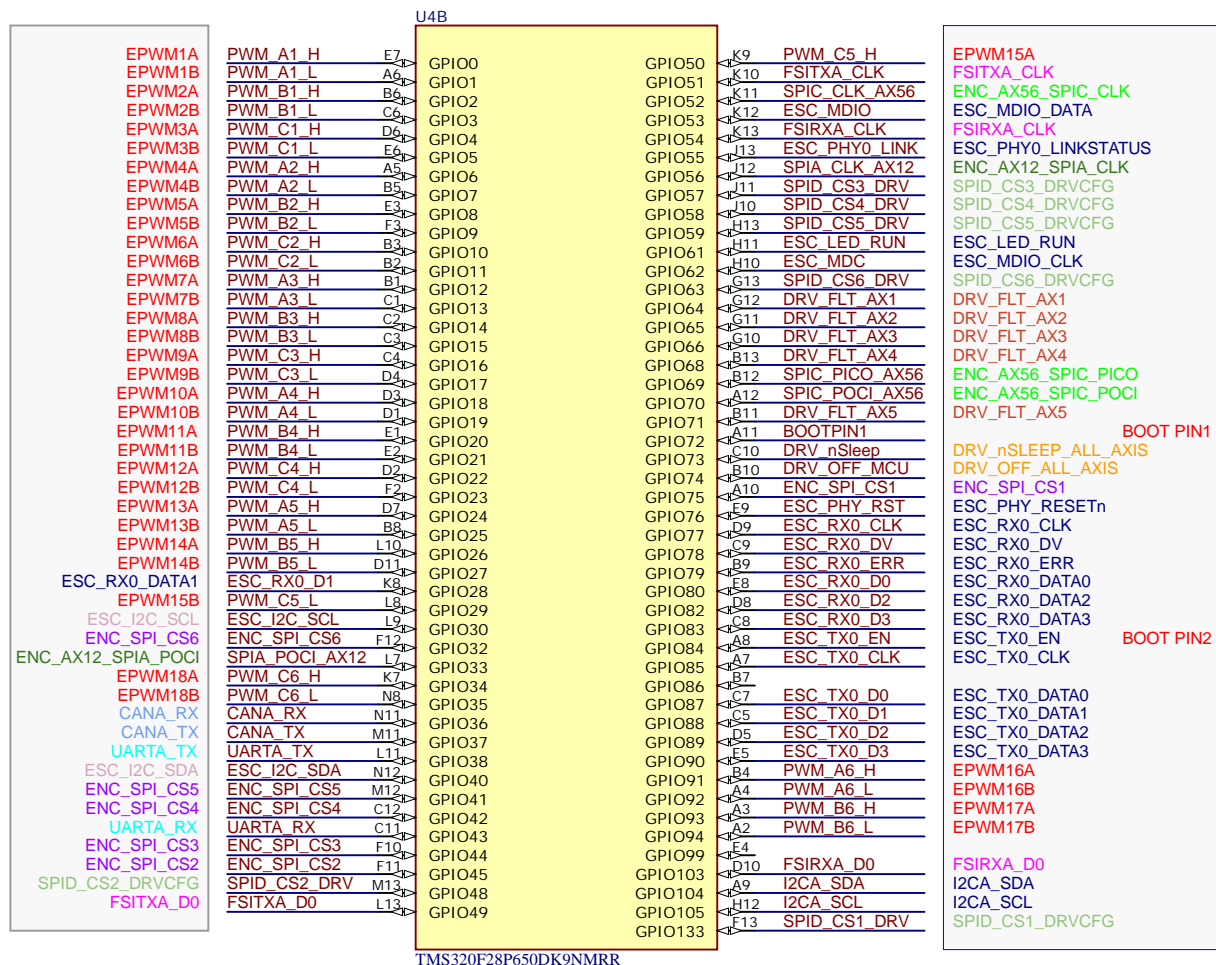
SAFE PMIC



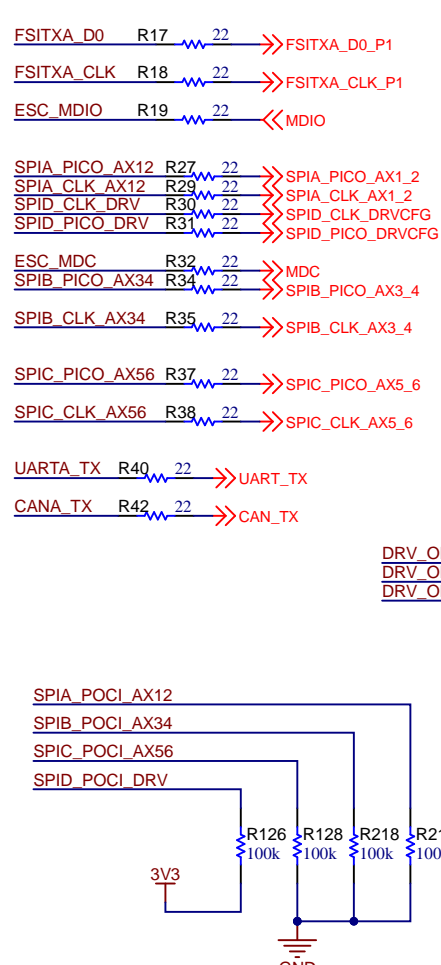
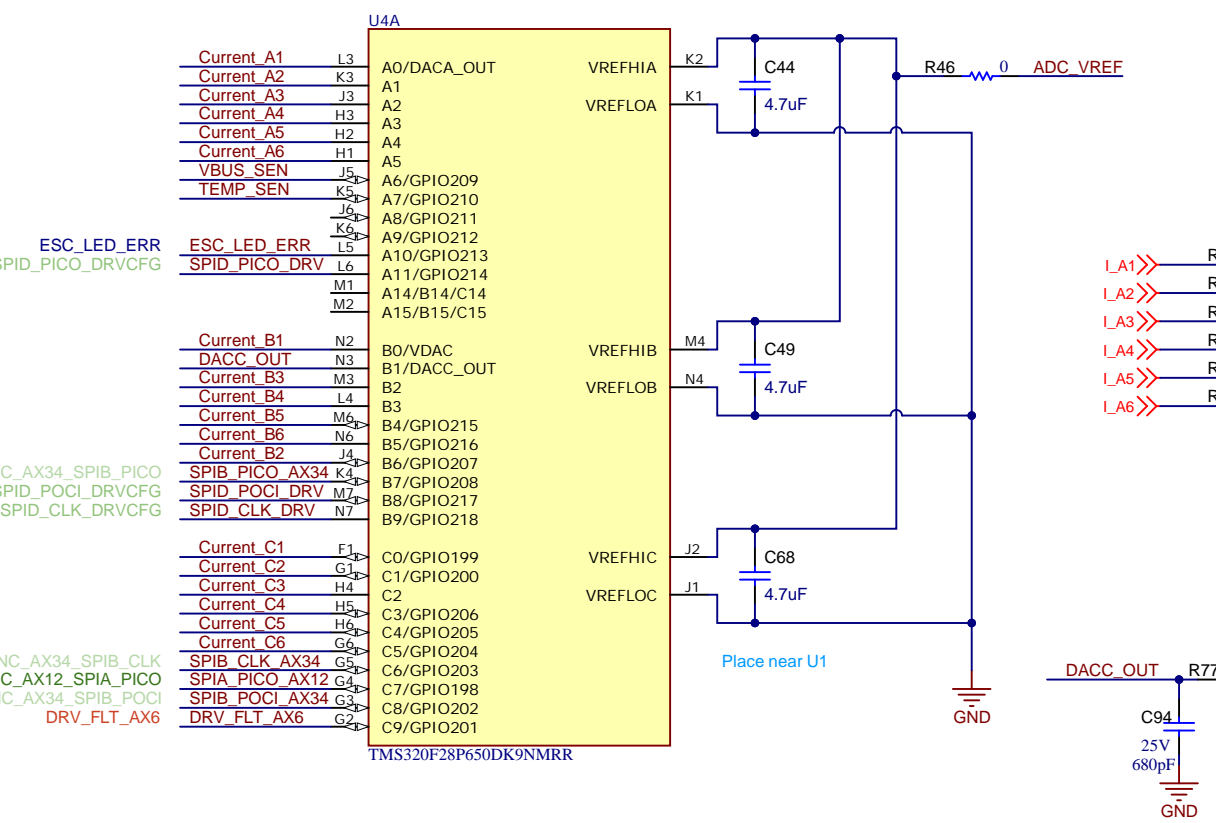
Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 11/25/2025
TID #: TIDA-010992	Project Title: TIDA-010992	
Number: TIDA-010992	Rev: E1	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 2 of 13
Drawn By: Chen Gao	File: TIDA-010992_02_Power_SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	

Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

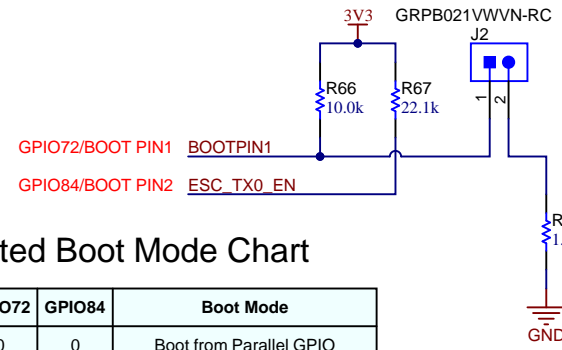




F28P65x Pin_IO



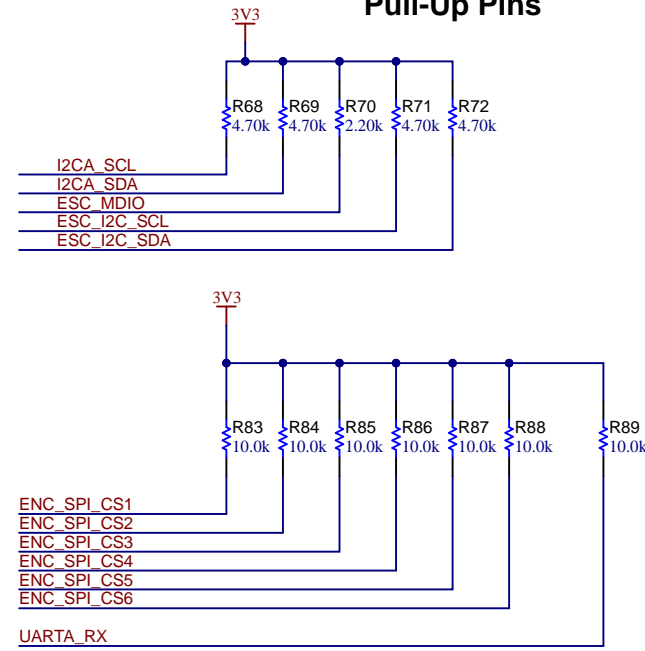
Boot Mode Select



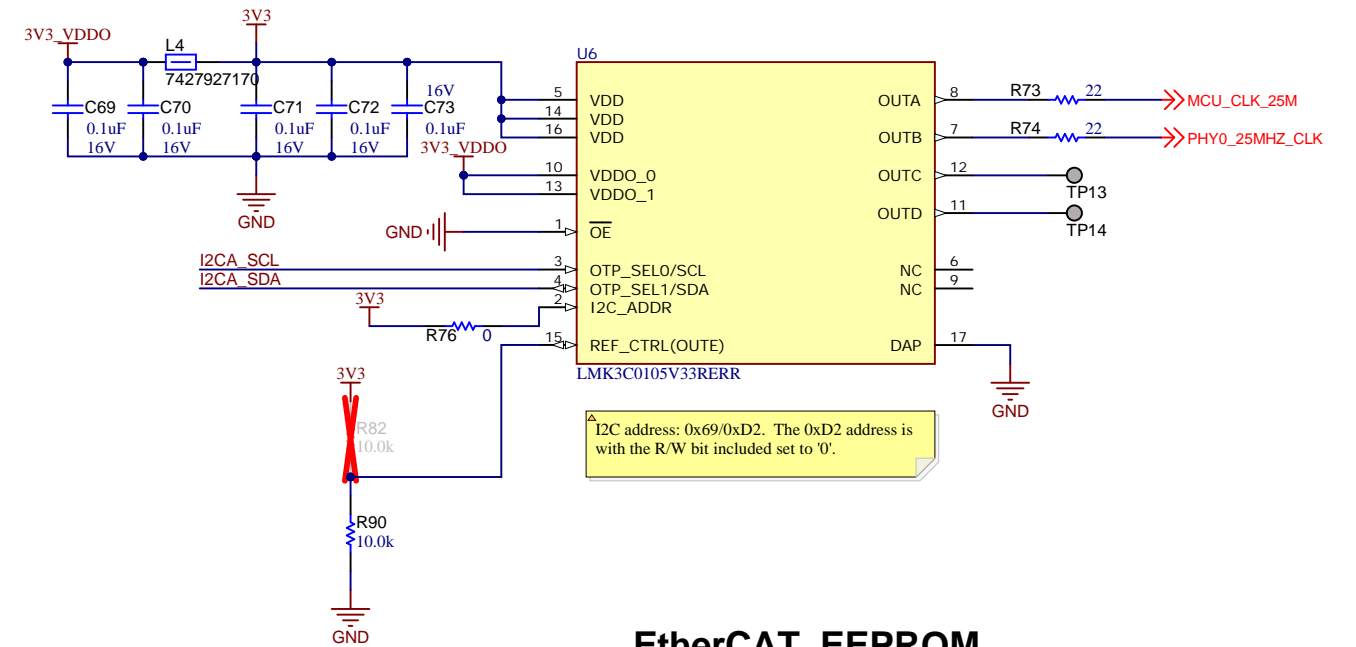
Selected Boot Mode Chart

Mode #	GPIO72	GPIO84	Boot Mode
00	0	0	Boot from Parallel GPIO
01	0	1	Boot from SCI / Wait Mode
02	1	0	Boot from CAN
03	1	1	Boot from Flash

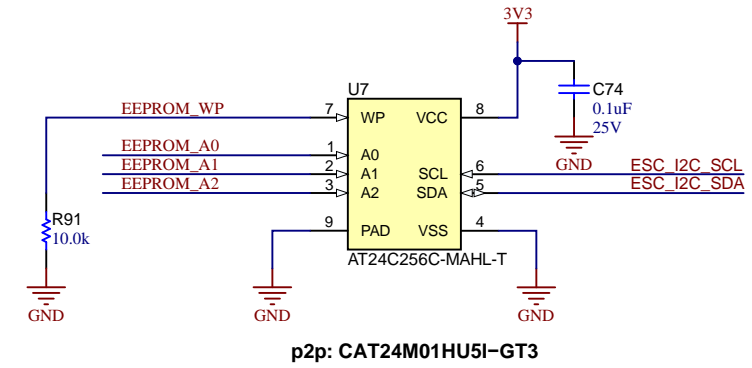
Pull-Up Pins



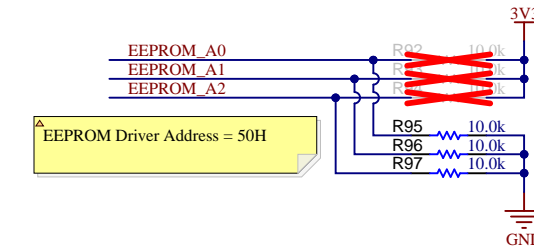
25 MHz BAW Oscillator with Clock Buffer



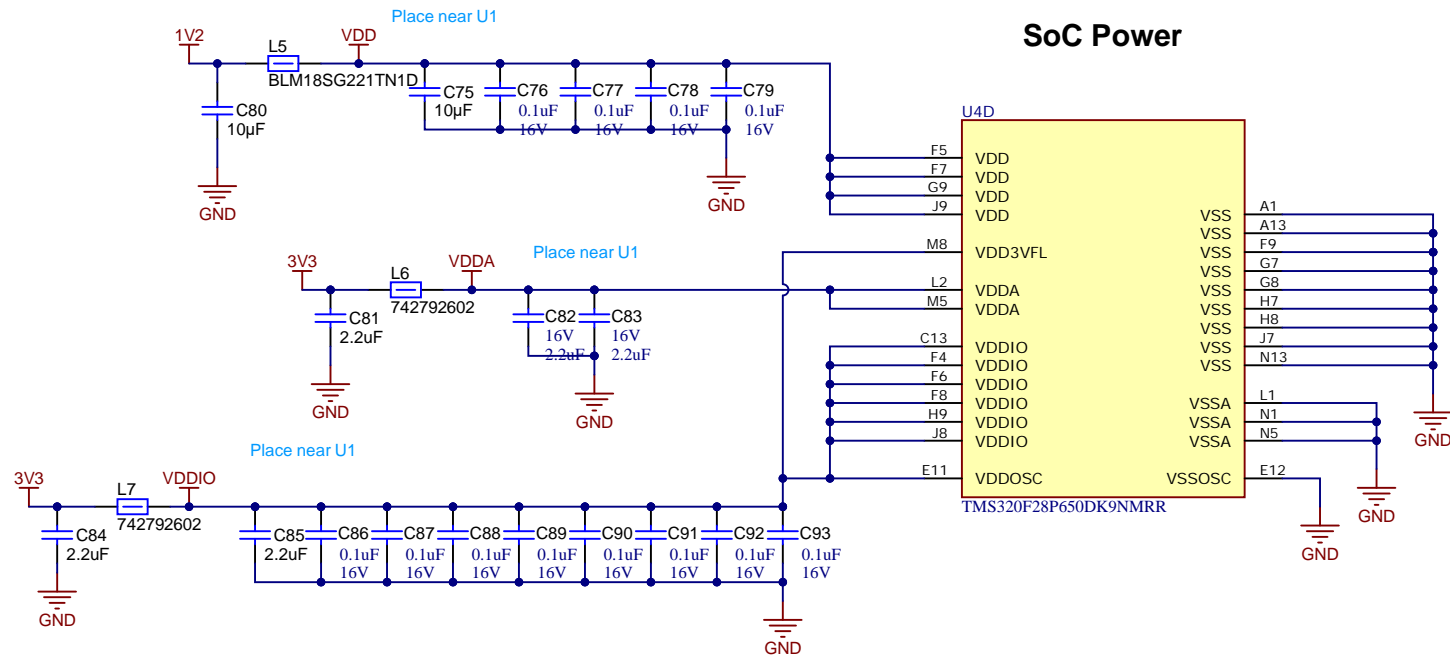
EtherCAT_EEPROM



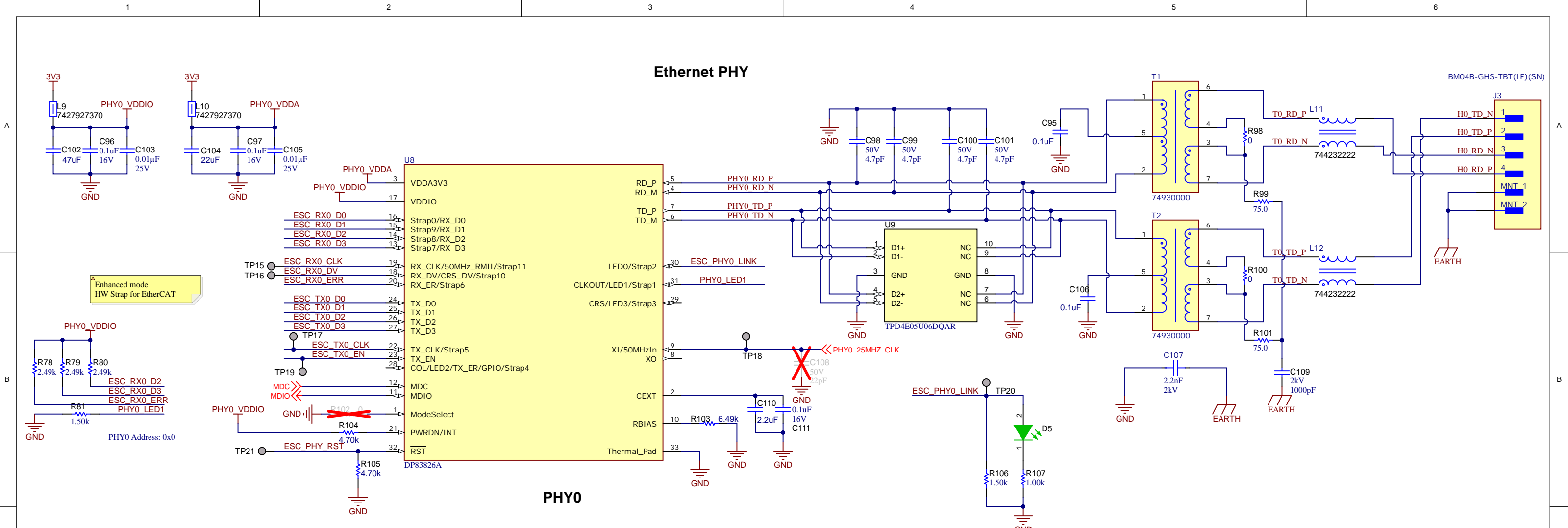
EEPROM Address



SoC Power

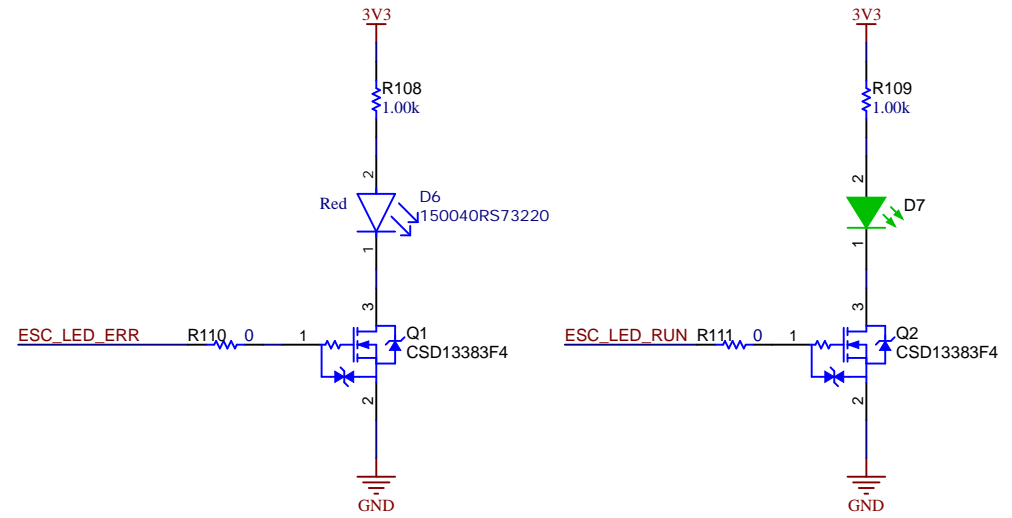


Ethernet PHY



Enhanced mode
HW Strap for EtherCAT

Run and Error LEDs

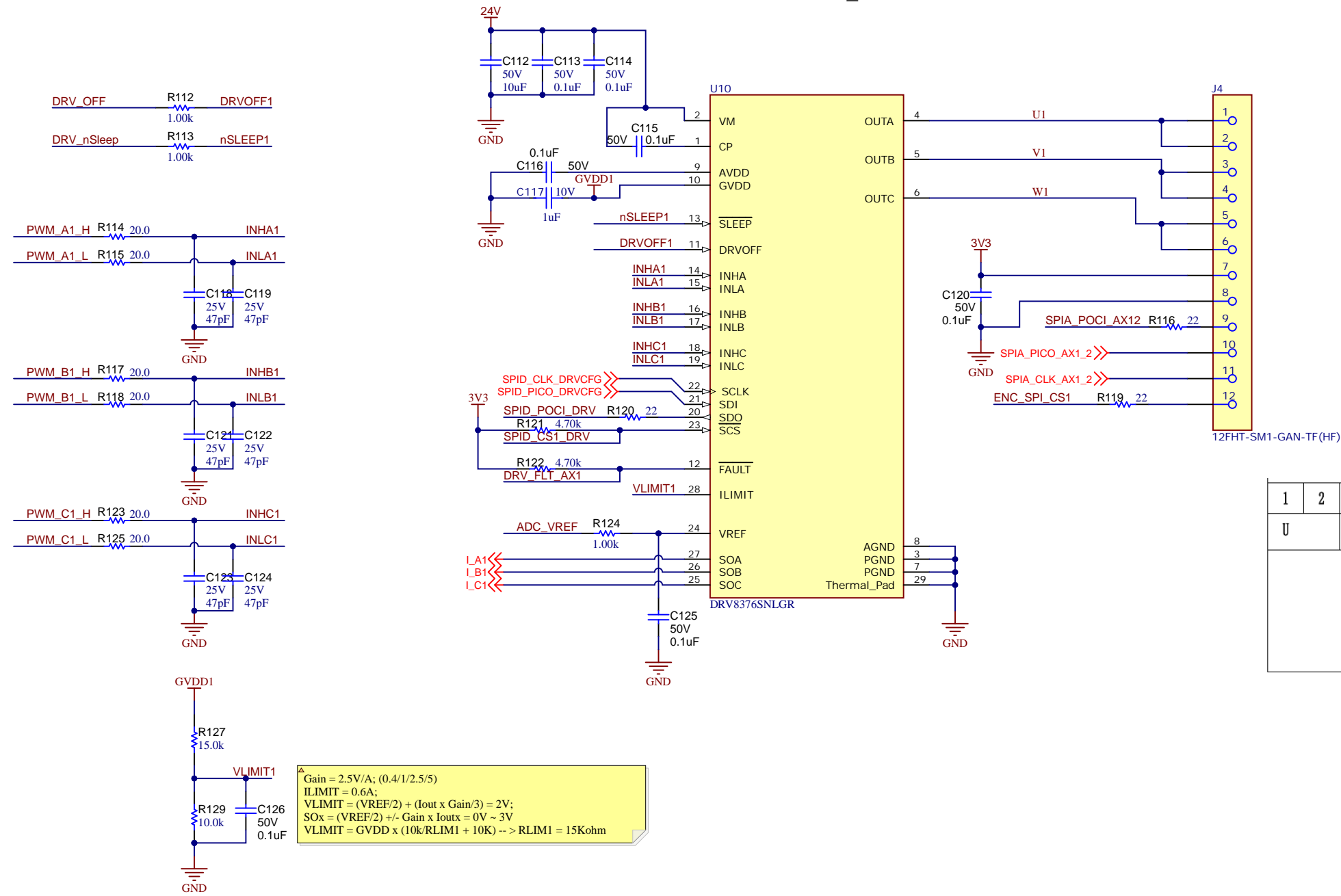


Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 9/14/2025
TID #: TIDA-010992	Project Title: TIDA-010992	
Number: TIDA-010992 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 5 of 13
Drawn By: Chen Gao	File: TIDA-010992_05_ETH_Conn.SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	

Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



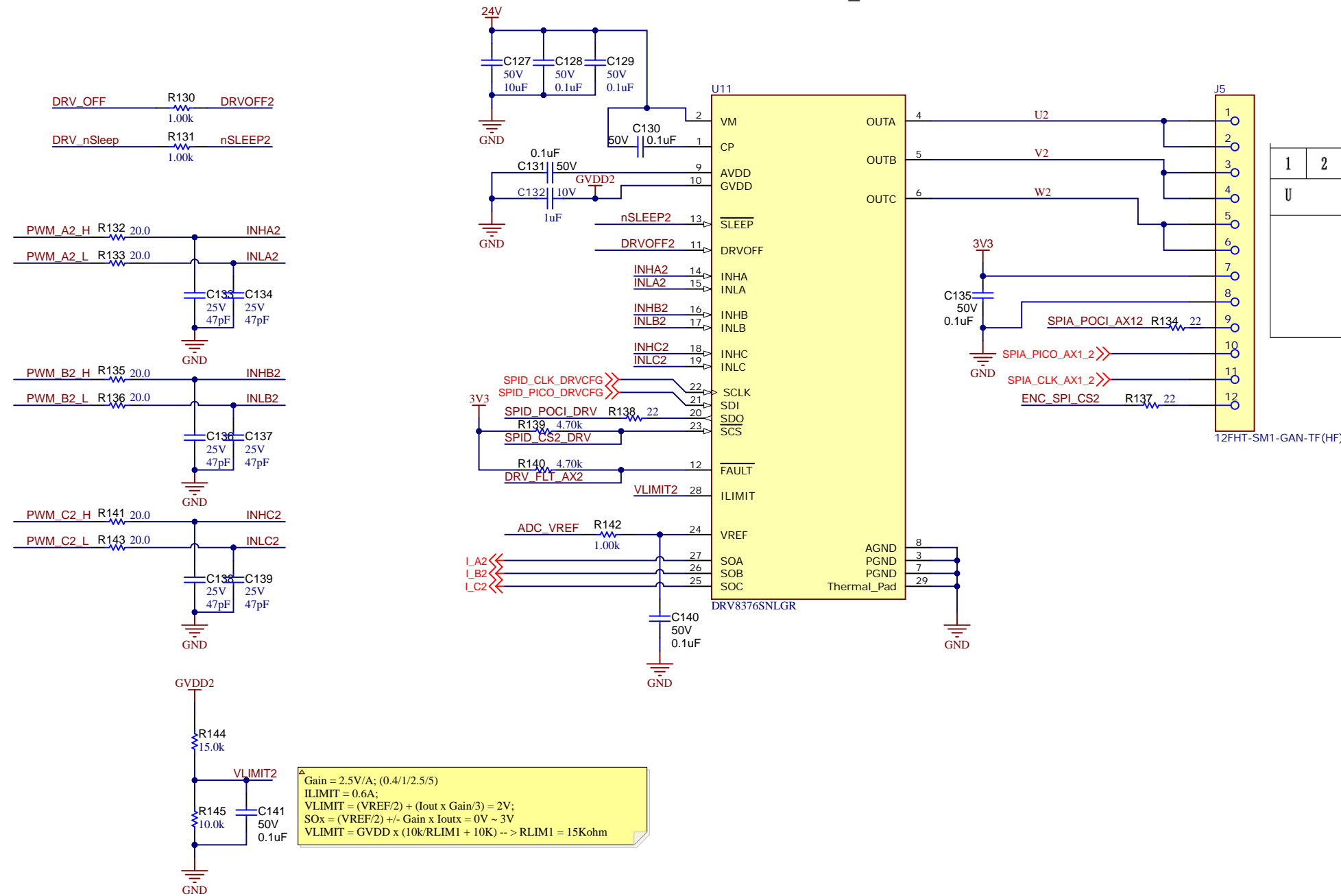
AXIS1_DRV



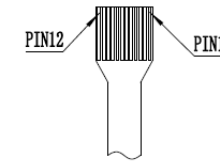
^a Gain = 2.5V/A; (0.4/1/2.5/5)
 ILIMIT = 0.6A;
 VLIMIT = (VREF/2) + (Iout x Gain/3) = 2V;
 SOx = (VREF/2) +/- Gain x Ioutx = 0V ~ 3V
 VLIMIT = GVDD x (10k/RLIM1 + 10K) --> RLIM1 = 15Kohm

1	2	3	4	3	4	7	8	9	10	11	12
U	V	W	3.3V	GND	SPI MISO	SPI MOSI	SPI SCK	SPI NSS			

AXIS2_DRV

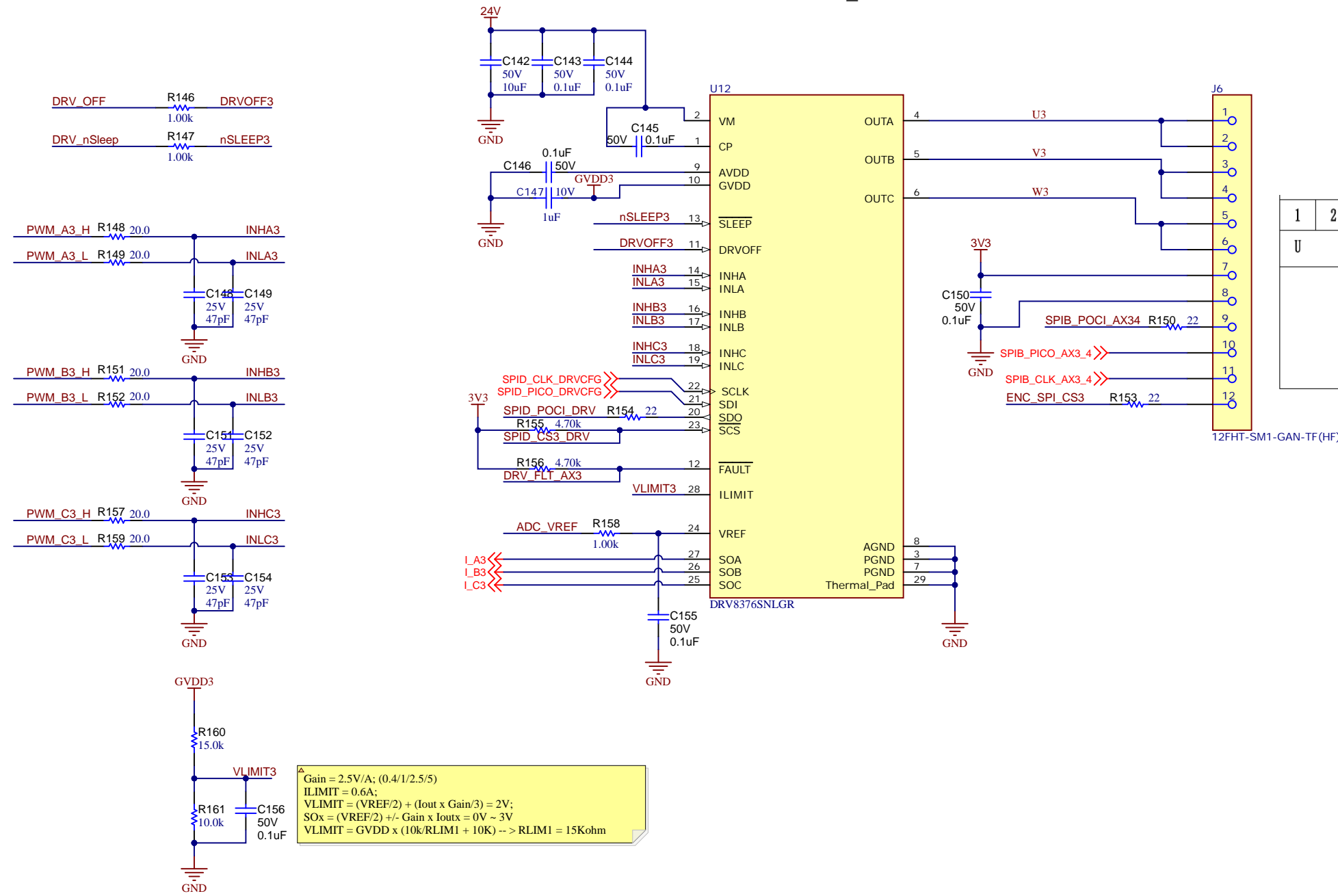


1	2	3	4	3	4	7	8	9	10	11	12
U	V	W	3.3V	GND	SPI MISO	SPI MOSI	SPI SCK	SPI NSS			

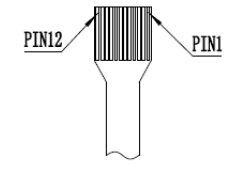


Gain = 2.5V/A; (0.4/1/2.5/5)
 ILIMIT = 0.6A;
 VLIMIT = (VREF/2) + (Iout x Gain/3) = 2V;
 SOx = (VREF/2) +/- Gain x Ioutx = 0V ~ 3V
 VLIMIT = GVDD x (10k/RLIM1 + 10K) --> RLIM1 = 15Kohm

AXIS3_DRV

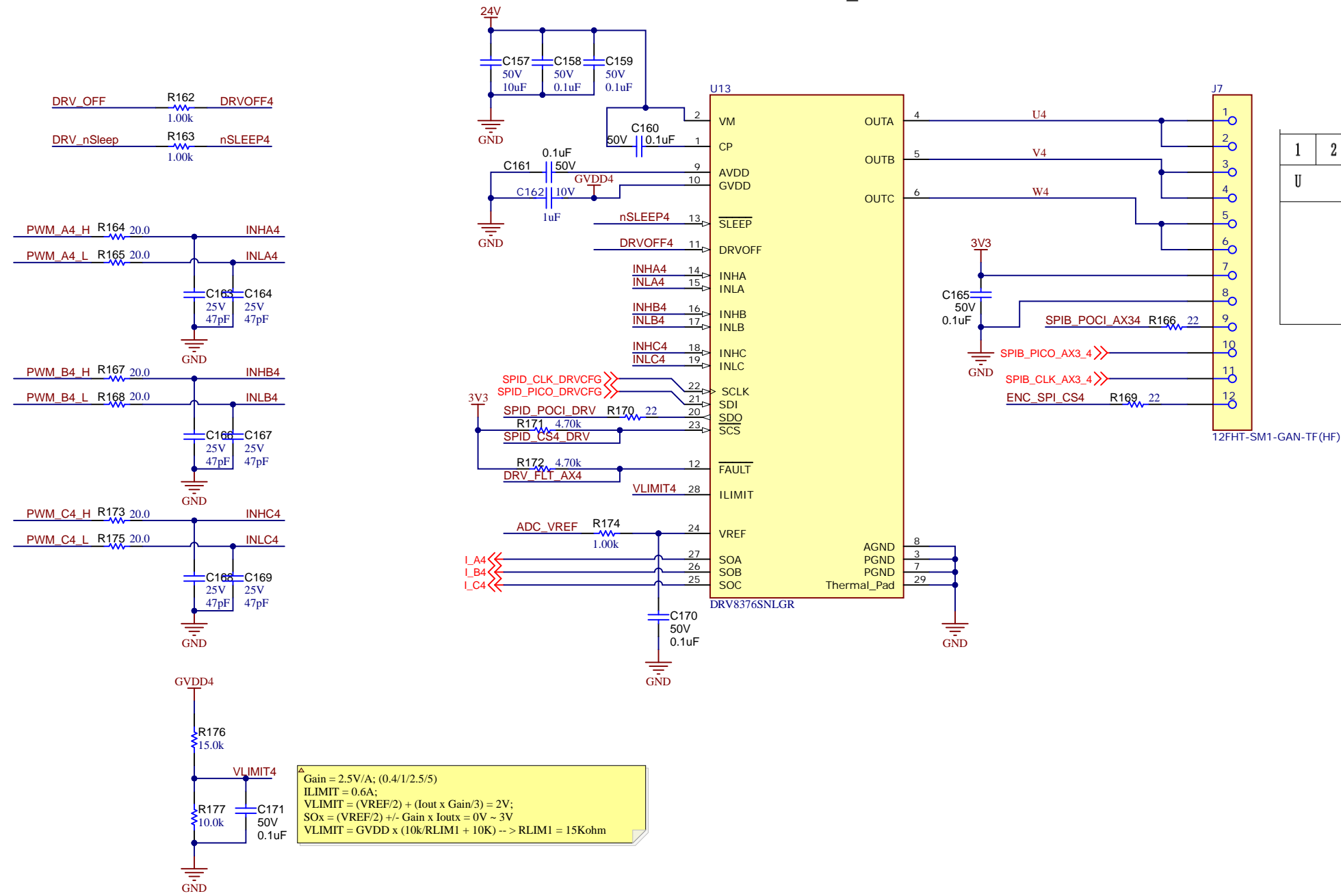


1	2	3	4	3	4	7	8	9	10	11	12
U		V		W		3.3V	GND	SPI MISO	SPI MOSI	SPI SCK	SPI NSS

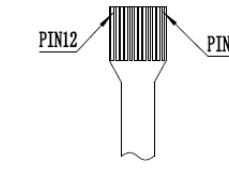


^a Gain = 2.5V/A; (0.4/1/2.5/5)
 ILIMIT = 0.6A;
 VLIMIT = (VREF/2) + (Iout x Gain/3) = 2V;
 SOx = (VREF/2) +/- Gain x Ioutx = 0V ~ 3V
 VLIMIT = GVDD x (10k/RLIM1 + 10K) --> RLIM1 = 15Kohm

AXIS4_DRV

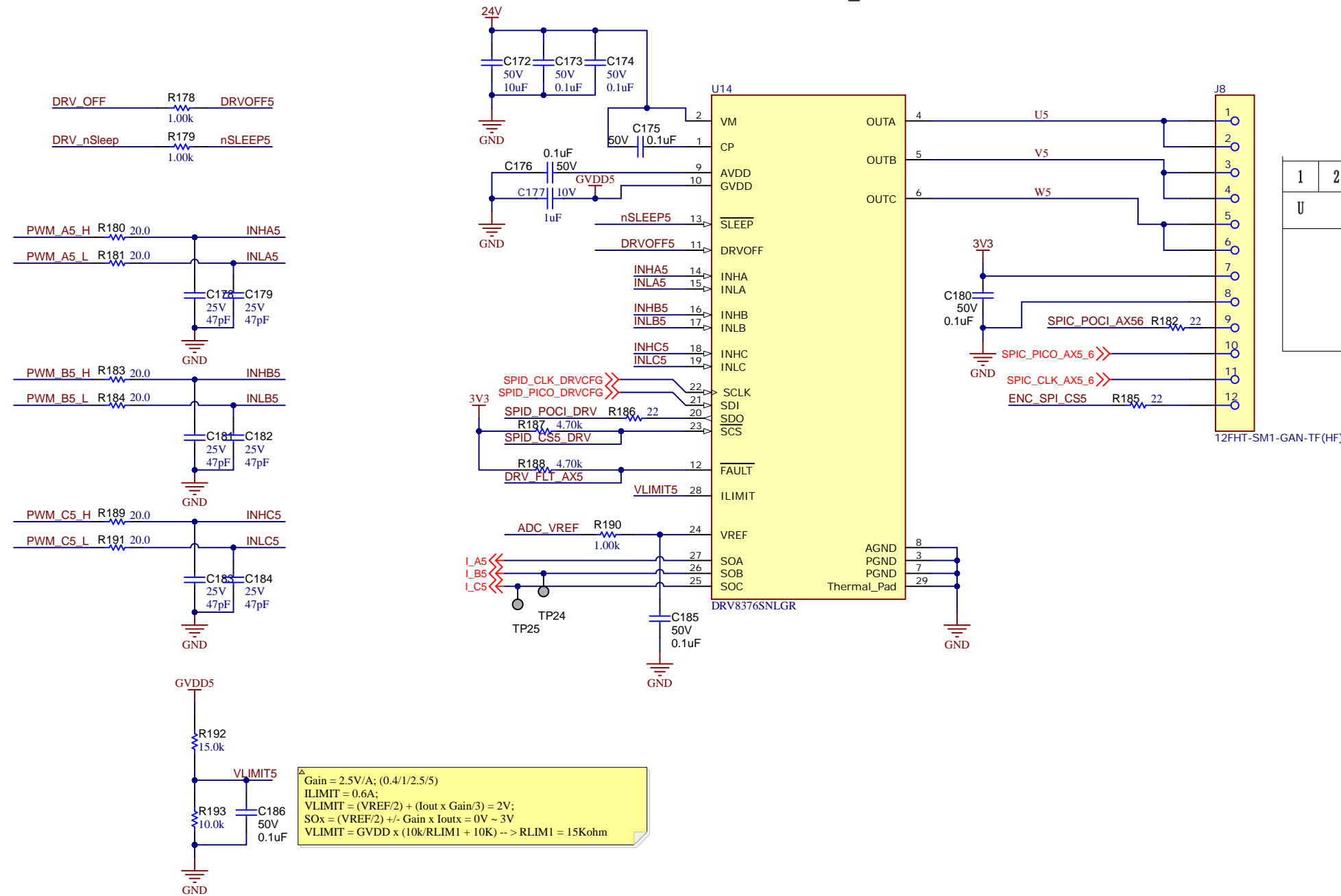


1	2	3	4	3	4	7	8	9	10	11	12
U	V	W	3.3V	GND	SPI MISO	SPI MOSI	SPI SCK	SPI NSS			

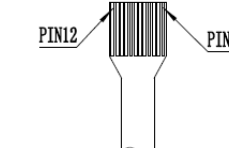


Gain = 2.5V/A; (0.4/1/2.5/5)
 ILIMIT = 0.6A;
 VLIMIT = (VREF/2) + (Iout x Gain/3) = 2V;
 SOx = (VREF/2) +/- Gain x Ioutx = 0V ~ 3V
 VLIMIT = GVDD x (10k/RLIM1 + 10K) --> RLIM1 = 15Kohm

AXIS5_DRV

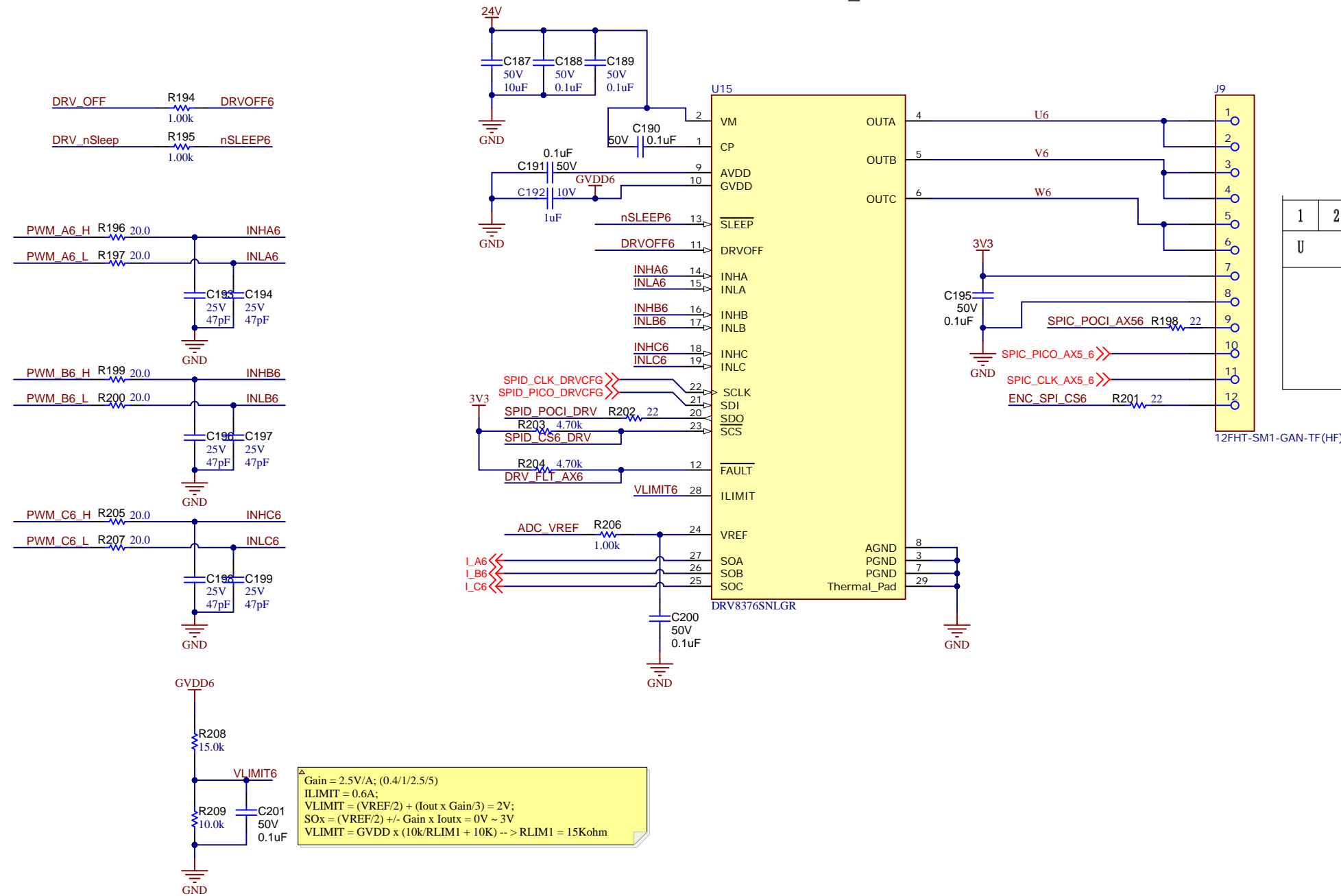


1	2	3	4	3	4	7	8	9	10	11	12
U	V	W	3.3V	GND	SPI MISO	SPI MOSI	SPI SCK	SPI NSS			



^a Gain = 2.5V/A; (0.4/1/2.5/5)
 ILIMIT = 0.6A;
 VLIMIT = (VREF/2) + (Iout x Gain/3) = 2V;
 SOx = (VREF/2) +/- Gain x Ioutx = 0V ~ 3V
 VLIMIT = GVDD x (10k/RLIM1 + 10K) --> RLIM1 = 15Kohm

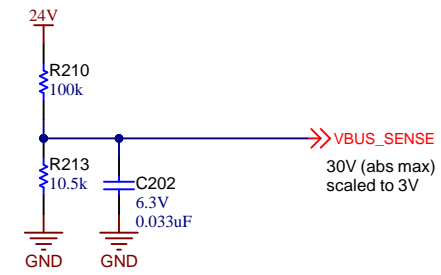
AXIS6_DRV



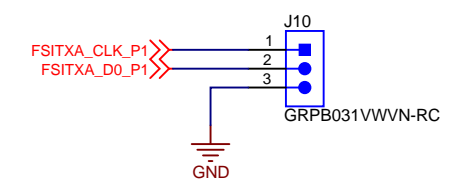
1	2	3	4	3	4	7	8	9	10	11	12
U		V		W		3.3V	GND	SPI MISO	SPI MOSI	SPI SCK	SPI NSS

Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

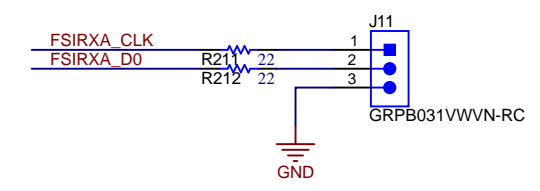
DC BUS Sensing



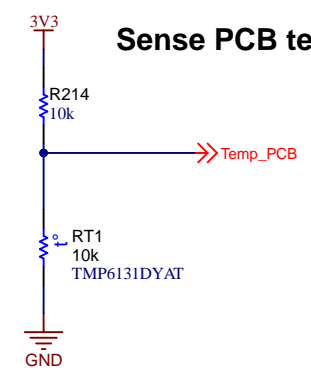
FSI_TXA_PORT1



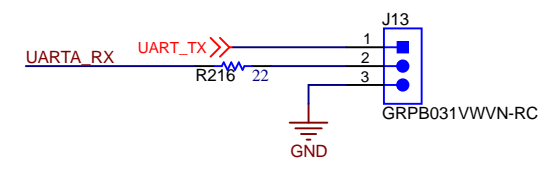
FSI_RXD_PORT2



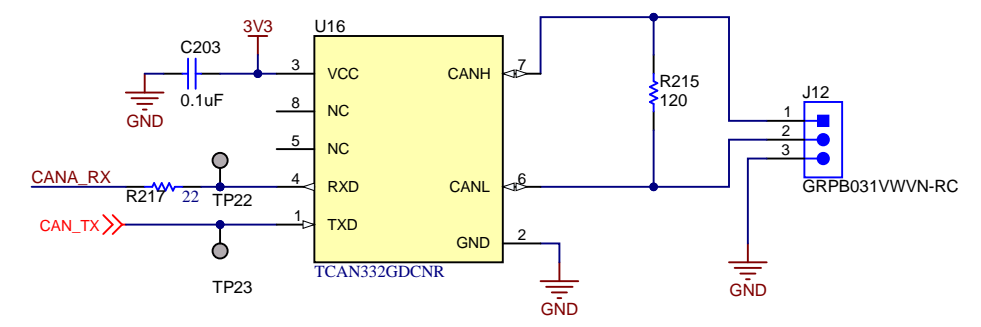
Sense PCB temperature



UART



CAN Transceiver & Connector



Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 9/14/2025
TID #: TIDA-010992	Project Title: TIDA-010992	
Number: TIDA-010992	Rev: E1	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 12 of 13
Drawn By: Chen Gao	File: TIDA-010992_12_Connectors.SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	





PCB Number: TIDA-010992
PCB Rev: E1

PCB LOGO
Texas Instruments



PCB LOGO
FCC disclaimer

PCB LOGO
WEEE logo

^A You should delete the nylon screws/standoffs and/or the bumpons as needed for your design (or substitute other parts from Hardware.IntLib). Bumpons are cheaper, but provide less clearance.

Deleting anything else from this page may result in your EVM submission being rejected (until you add them back).

Update the Label Text in the Label Table as needed for each Assembly Variant.

You should delete this note too.



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

LBL1
PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

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.

Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 9/18/2025
TID #: TIDA-010992	Project Title: TIDA-010992	
Number: TIDA-010992 Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 13 of 13
Drawn By: Chen Gao	File: TIDA-010992_Hardware.SchDoc	Size: B
Engineer: Chen Gao	Contact: http://www.ti.com/support	

Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you fully indemnify TI and its representatives against any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#), [TI's General Quality Guidelines](#), or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products. Unless TI explicitly designates a product as custom or customer-specified, TI products are standard, catalog, general purpose devices.

TI objects to and rejects any additional or different terms you may propose.

Copyright © 2026, Texas Instruments Incorporated

Last updated 10/2025