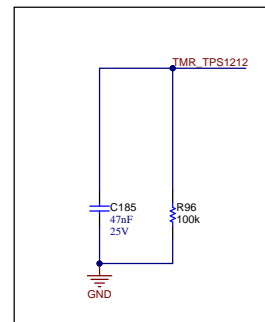
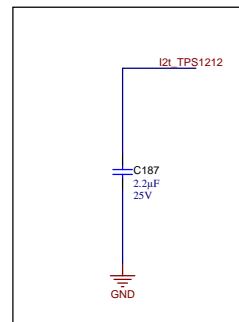


Circuit Breaker Timer Setting



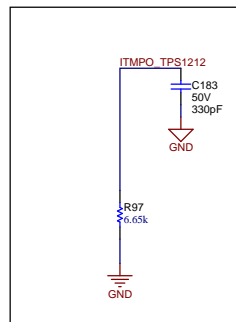
1.2s Latch-off

I2t Timer Setting



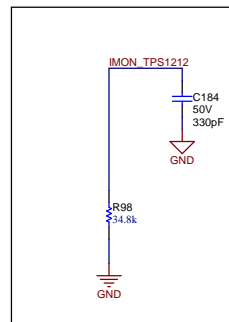
825ms

ITMPO Output



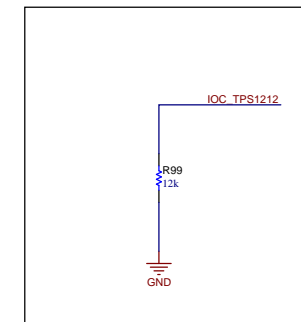
3.3V at 150C

Current Monitor Scaling



3.24V at 35A

Over Current Protection Setting



74

A

B

C

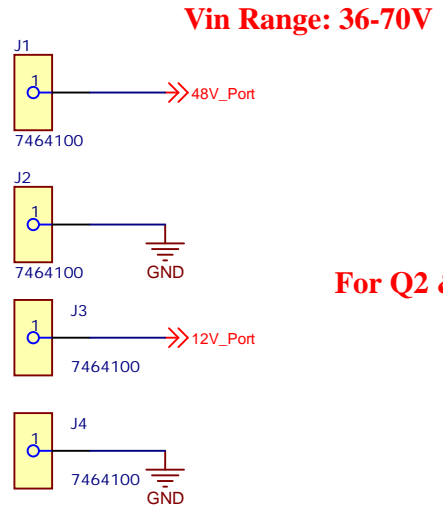
D

A

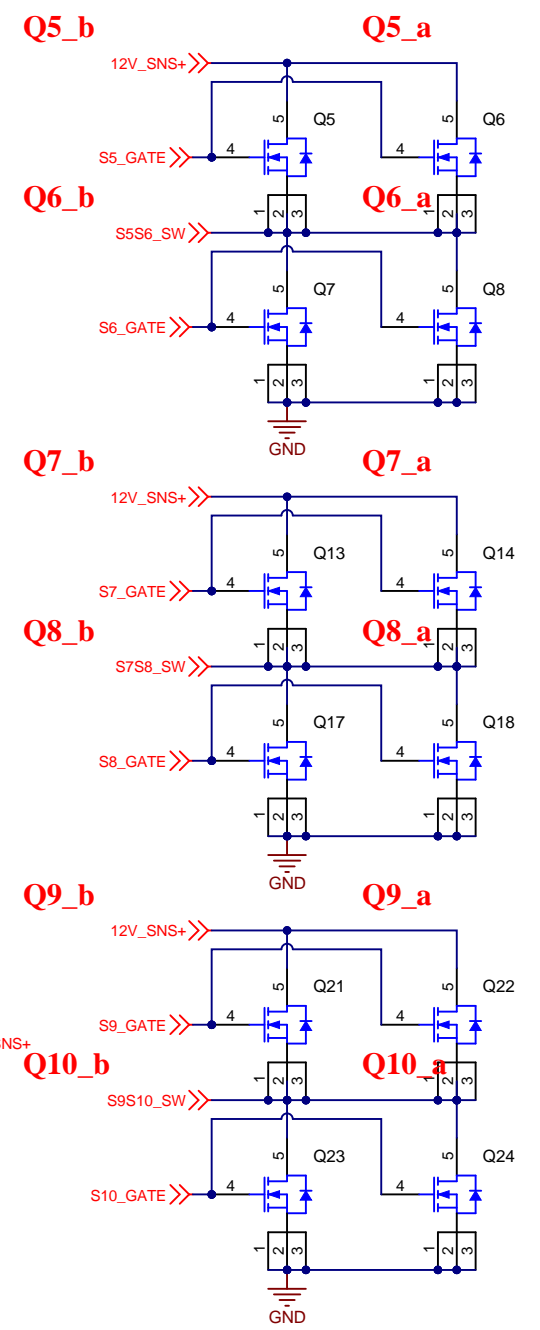
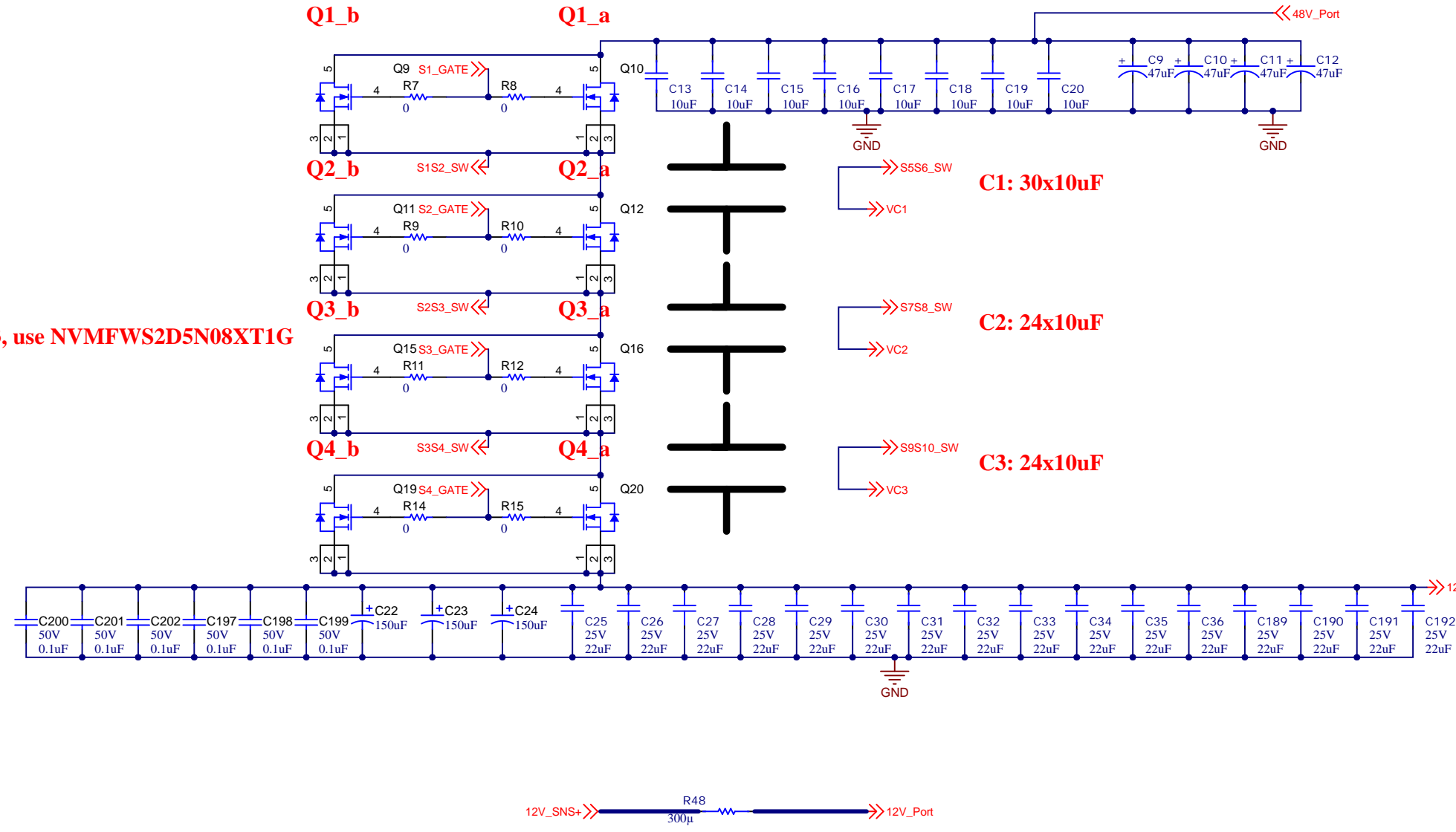
B

C

D



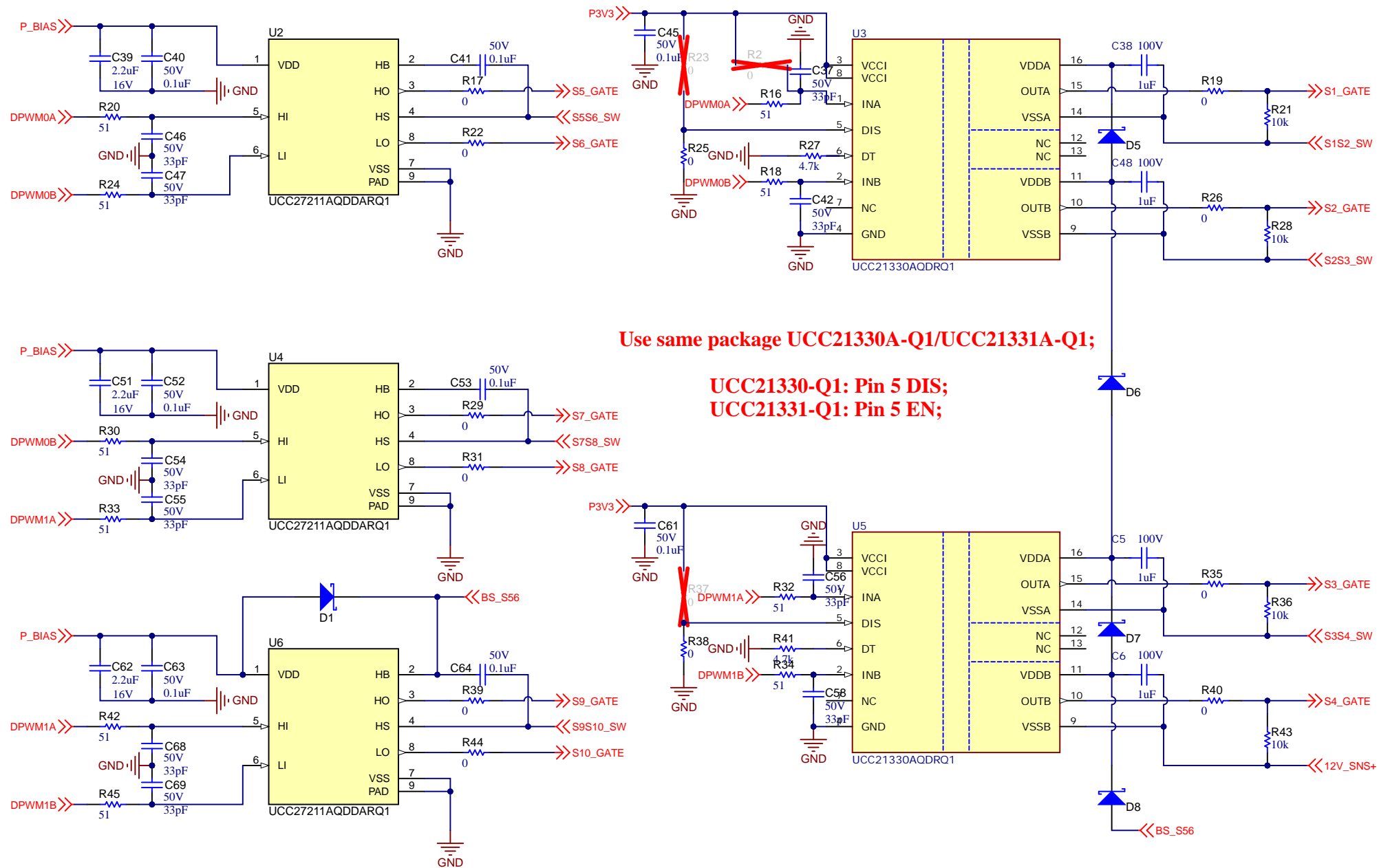
For Q2 & Q3, use NVMFWS2D5N08XT1G



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: 8/14/2025
TID #: N/A	Project Title: 4:1 SCC 1kW	
Number: PMP41150	Rev: E1	Sheet: 2 of 6
SVN Rev: Not in version control	Assembly Variant: 001	Size: B
Drawn By:	File: PMP41150_Power Stage.SchDoc	
Engineer: Mingrui Zhu	Contact: http://www.ti.com/support	

TEXAS INSTRUMENTS
<http://www.ti.com>
 © Texas Instruments 2024



Use same package UCC21330A-Q1/UCC21331A-Q1;
UCC21330-Q1: Pin 5 DIS;
UCC21331-Q1: Pin 5 EN;

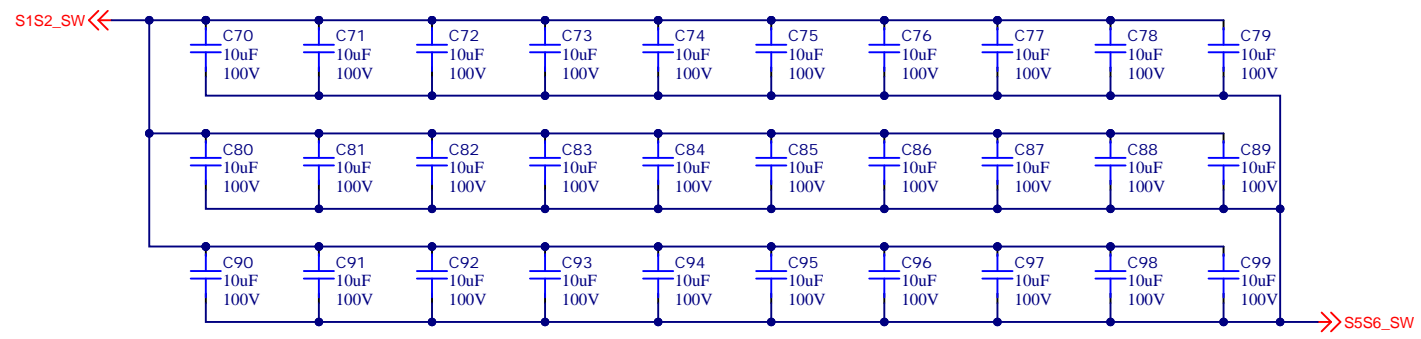
Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 8/14/2025
TID #: N/A	Project Title: 4:1 SCC 1kW	
Number: PMP41150	Rev: E1	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 3 of 6
Drawn By:	File: PMP41150_Driver_SchDoc	Size: B
Engineer: Mingrui Zhu	Contact: 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.

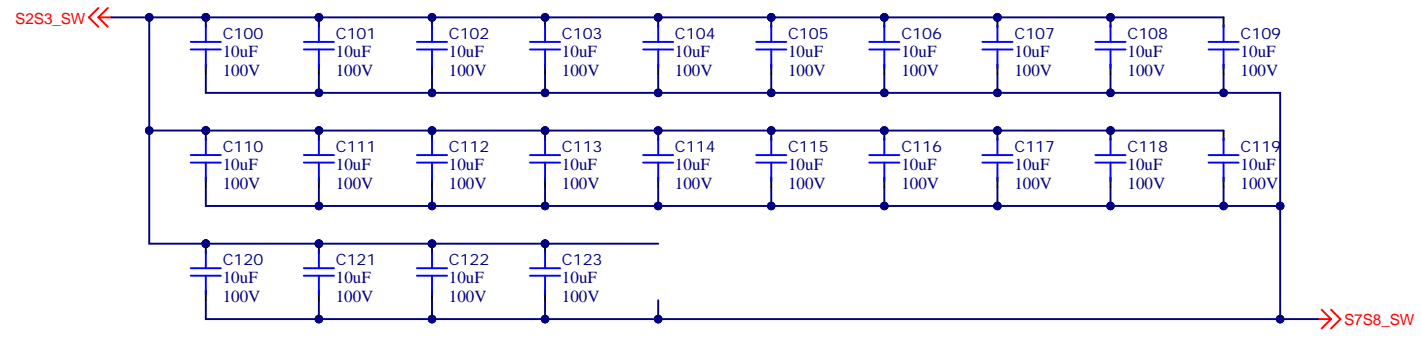


© Texas Instruments 2024

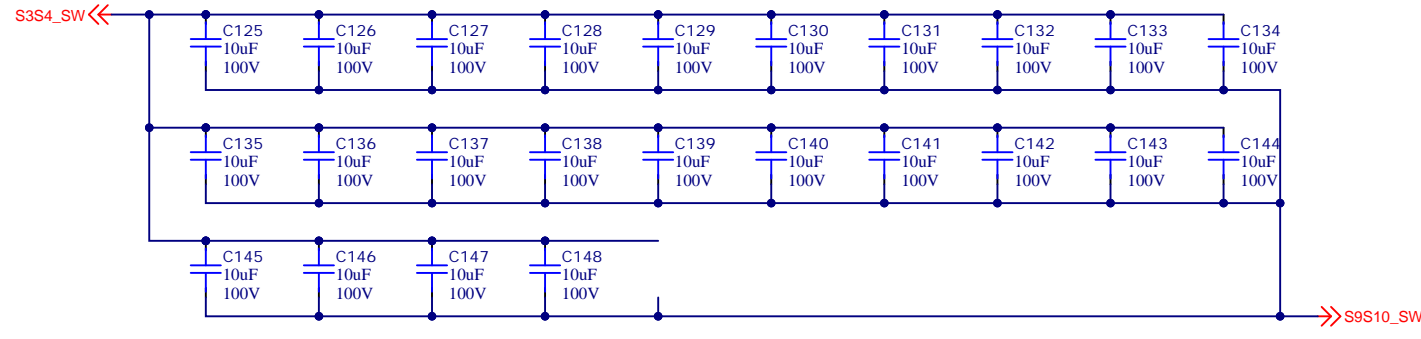
C1: 30x10uF




C2: 24x10uF

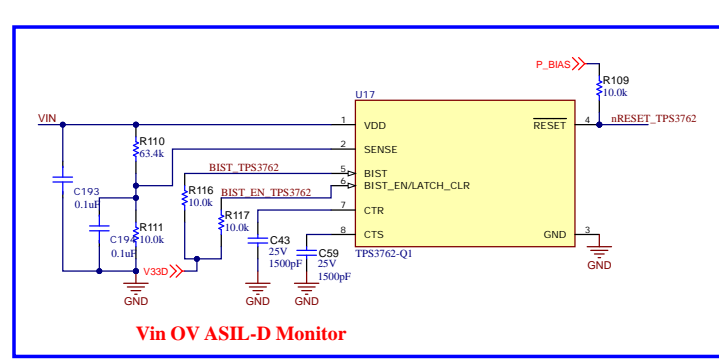
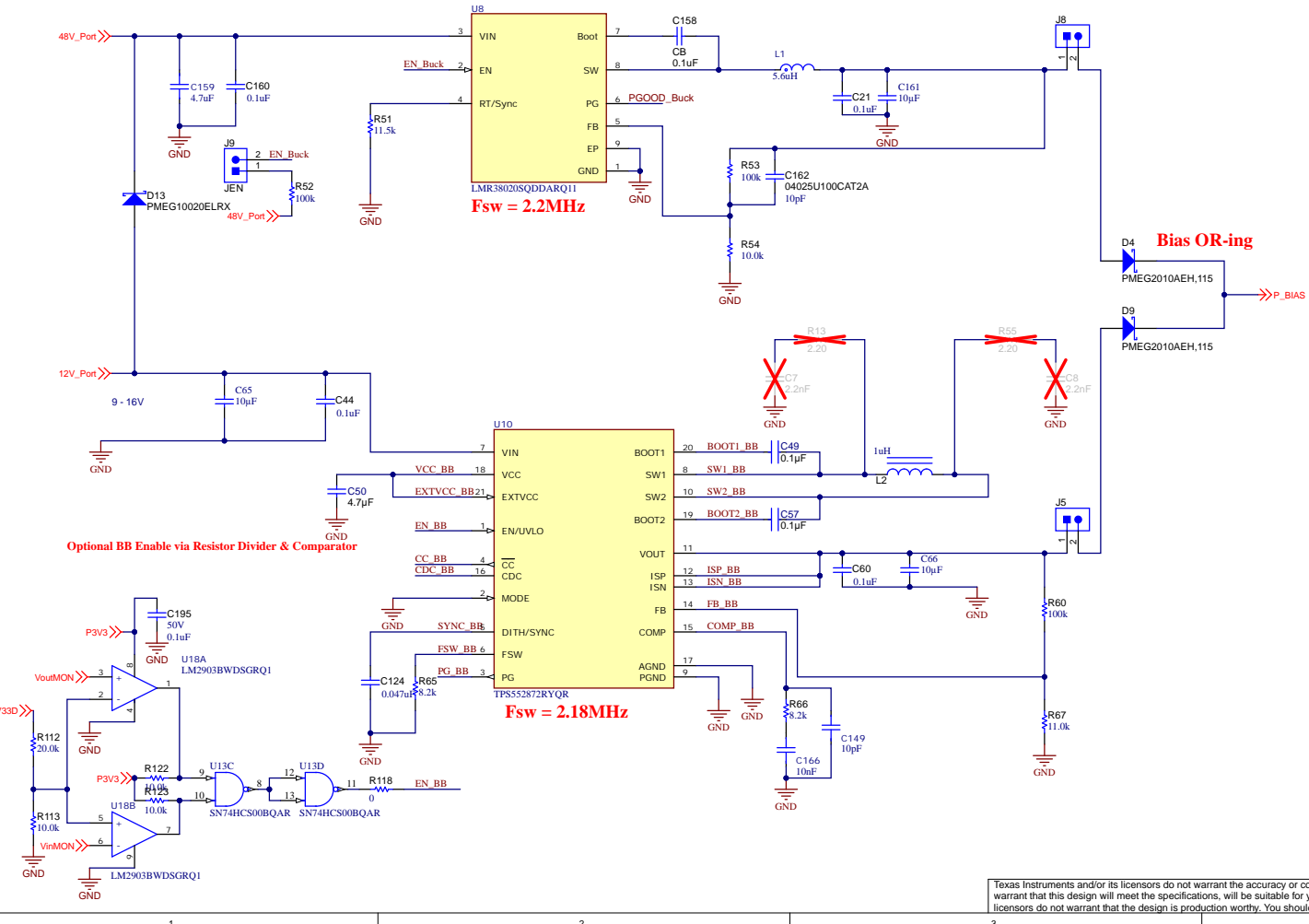
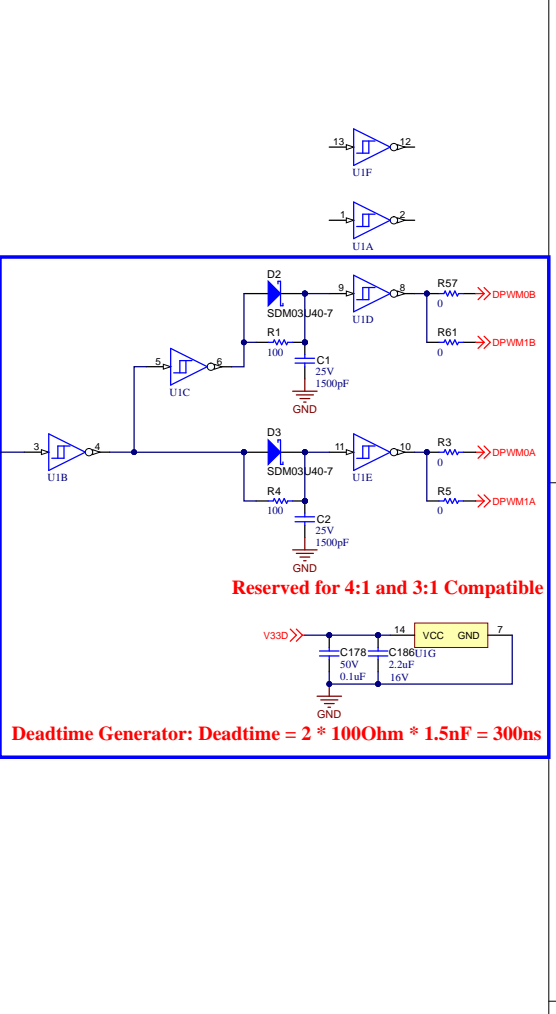
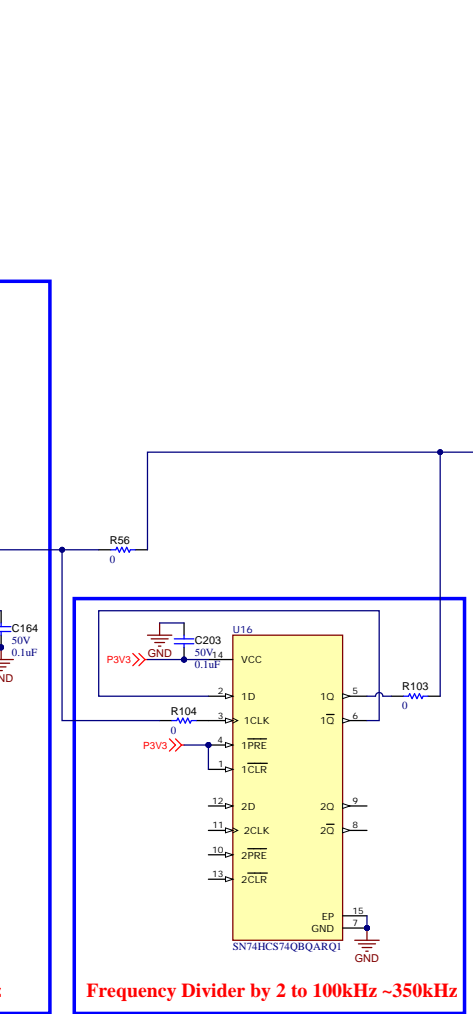
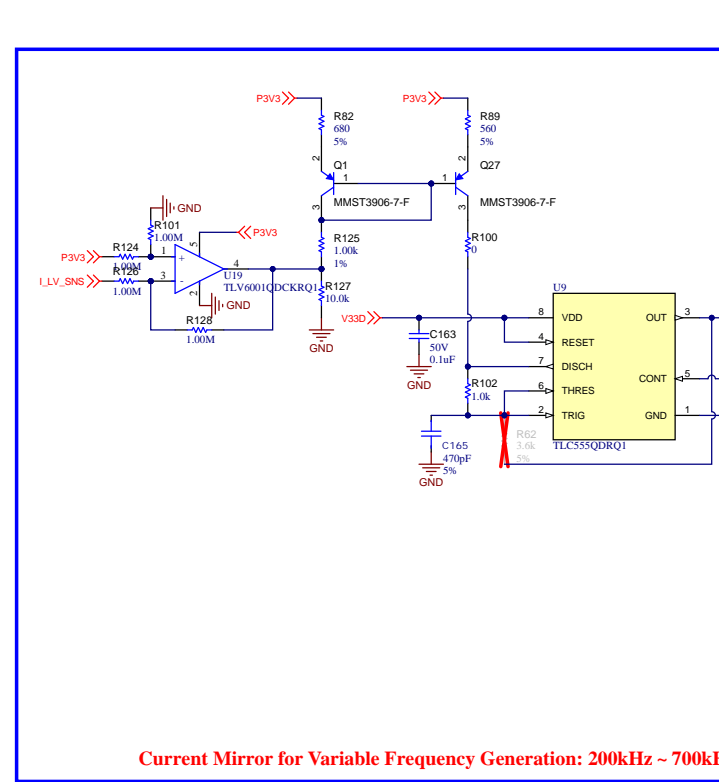
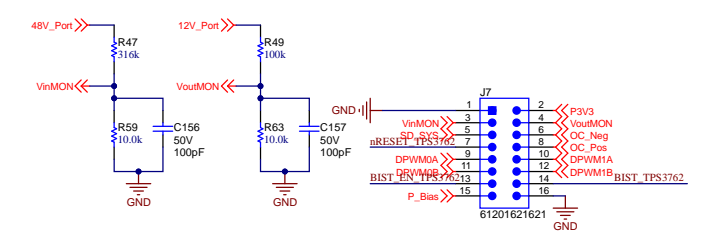
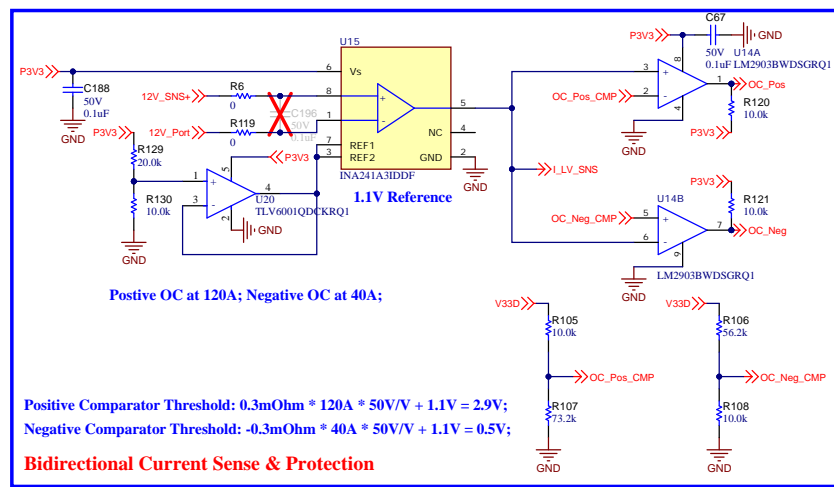
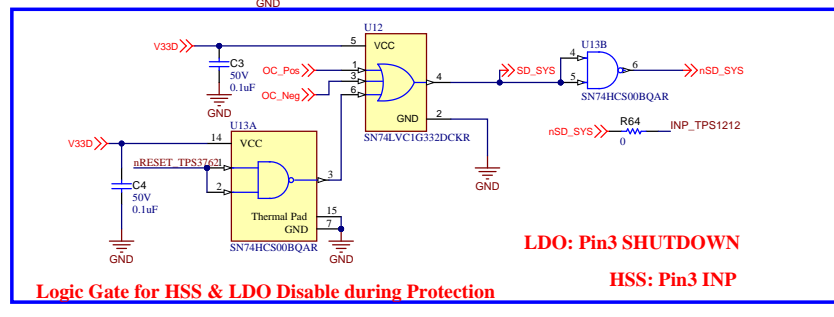
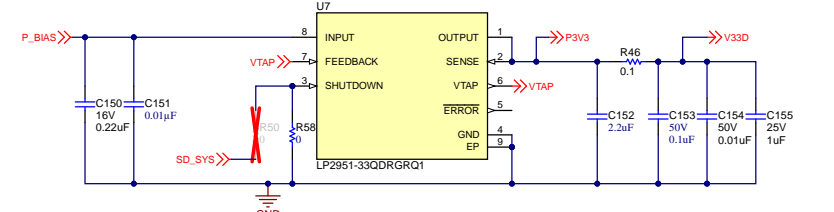


C3: 24x10uF



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: 3/3/2025	 http://www.ti.com © Texas Instruments 2024
TID #: N/A	Project Title: 4:1 SCC 1kW		
Number: PMP41150	Rev: E1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 4 of 6	
Drawn By:	File: PMP41150_Capbank.SchDoc	Size: B	
Engineer: Mingrui Zhu	Contact: http://www.ti.com/support		





PCB Number: PMP41150
PCB Rev: E1



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: 4/24/2025	<p>TEXAS INSTRUMENTS http://www.ti.com © Texas Instruments 2024</p>
TID #: N/A	Project Title: 4:1 SCC 1kW		
Number: PMP41150	Rev: E1	Sheet: 6 of 6	
SVN Rev: Not in version control	Assembly Variant: 001	File: PMP41150_Hardware.SchDoc	
Drawn By: Mingrui Zhu	Engineer: Mingrui Zhu	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 © 2025, Texas Instruments Incorporated

Last updated 10/2025