

Revision History

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

Page 2 BLOCK DIAGRAM

Page 3 Power Supply With Low Emission Hot Rod Package + Power Sequencer

Page 4 Power Module in QFN Package + Simple Switcher + DDR Termination

Page 5 Compact Power Module + Micro SiP Module

Page 6 Redundant Supply + To TPS5410 EVM + 1.8V+ Synchronous Stepdown VConverter

Page 7 Input Protection- eFuse + 6A_Point of Load Power Supply

Page 8 Power Module in QFN Package + Quad Reset Supervisor

Page 9 Switching Voltage Regulator

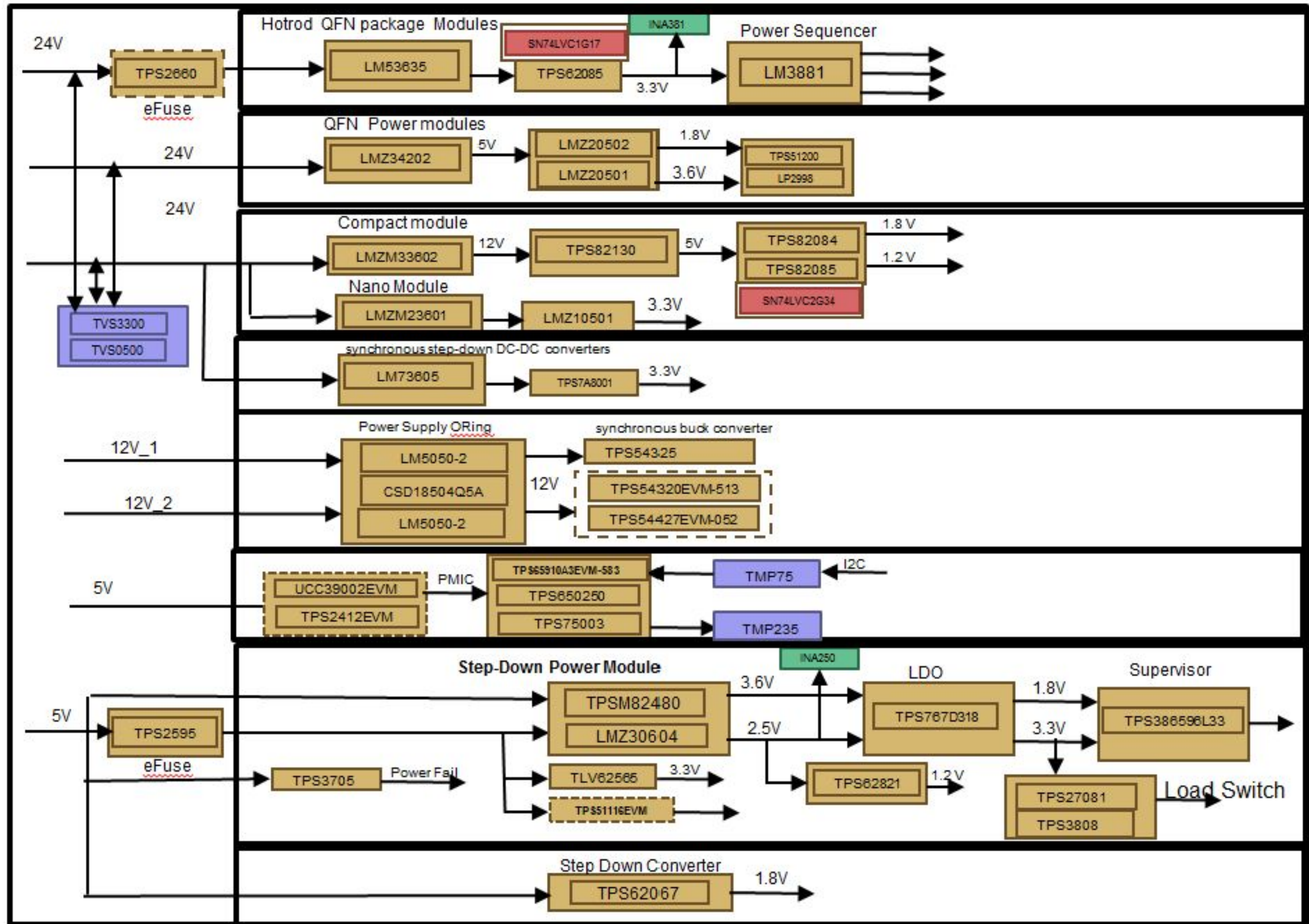
Page 9 PMIC Integrated 3-Supply

Page 10 PMIC FOR AM335X

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: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1_Processor_Power	
Number: TIDA-010011-E1_Processor_Power	Sheet Title: Coversheet	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 1 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1_Processor_Power_CoverSheet.dwg	http://www.ti.com
Engineer: Sreenivasa	Contact: http://www.ti.com/support	© Texas Instruments 2018

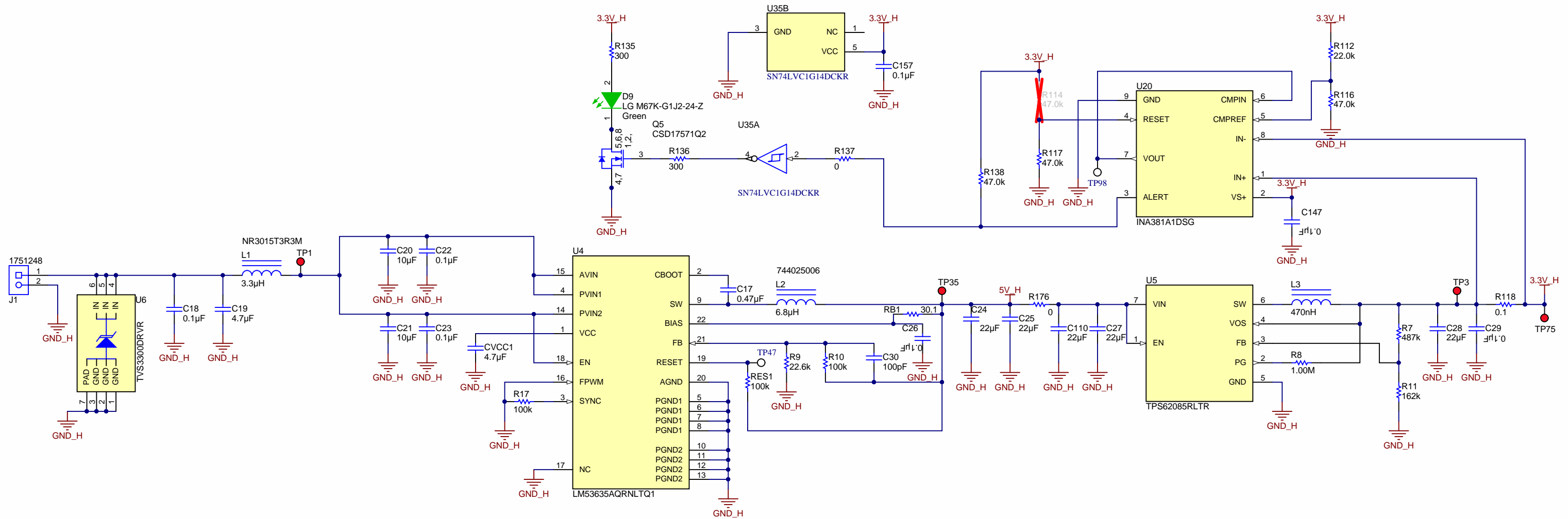




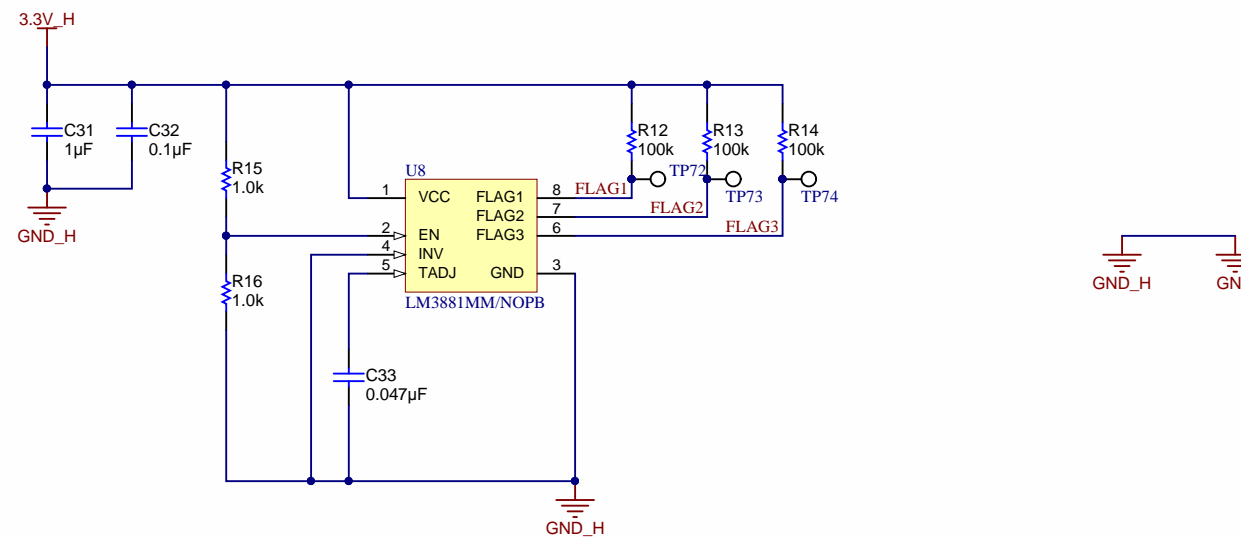
Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular 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: N/A	Designed for: Public Release	Mod. Date: 10/24/2018
TID #: 010011	Project Title: TIDA-010011-E1_Processor_Power	
Number: TIDA-010011-E1_Rev. 0.0	Sheet Title: Block Diagram	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 2 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1_Processor_Power_Block Diagram.pptx	http://www.ti.com
Engineer: Sreenivasa	Contact: http://www.ti.com/support	© Texas Instruments 2018





Power Supply With Low Emission Hot Rod Package

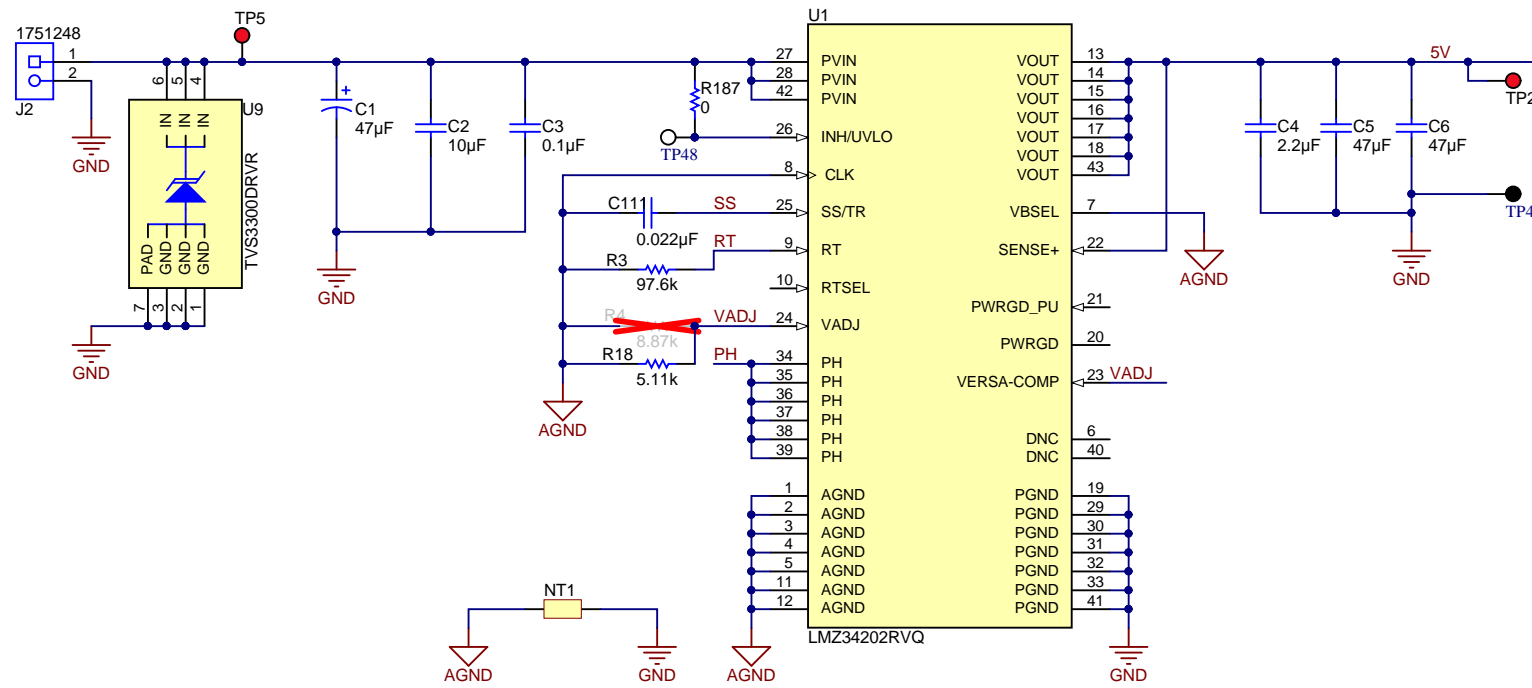


Power Sequencer

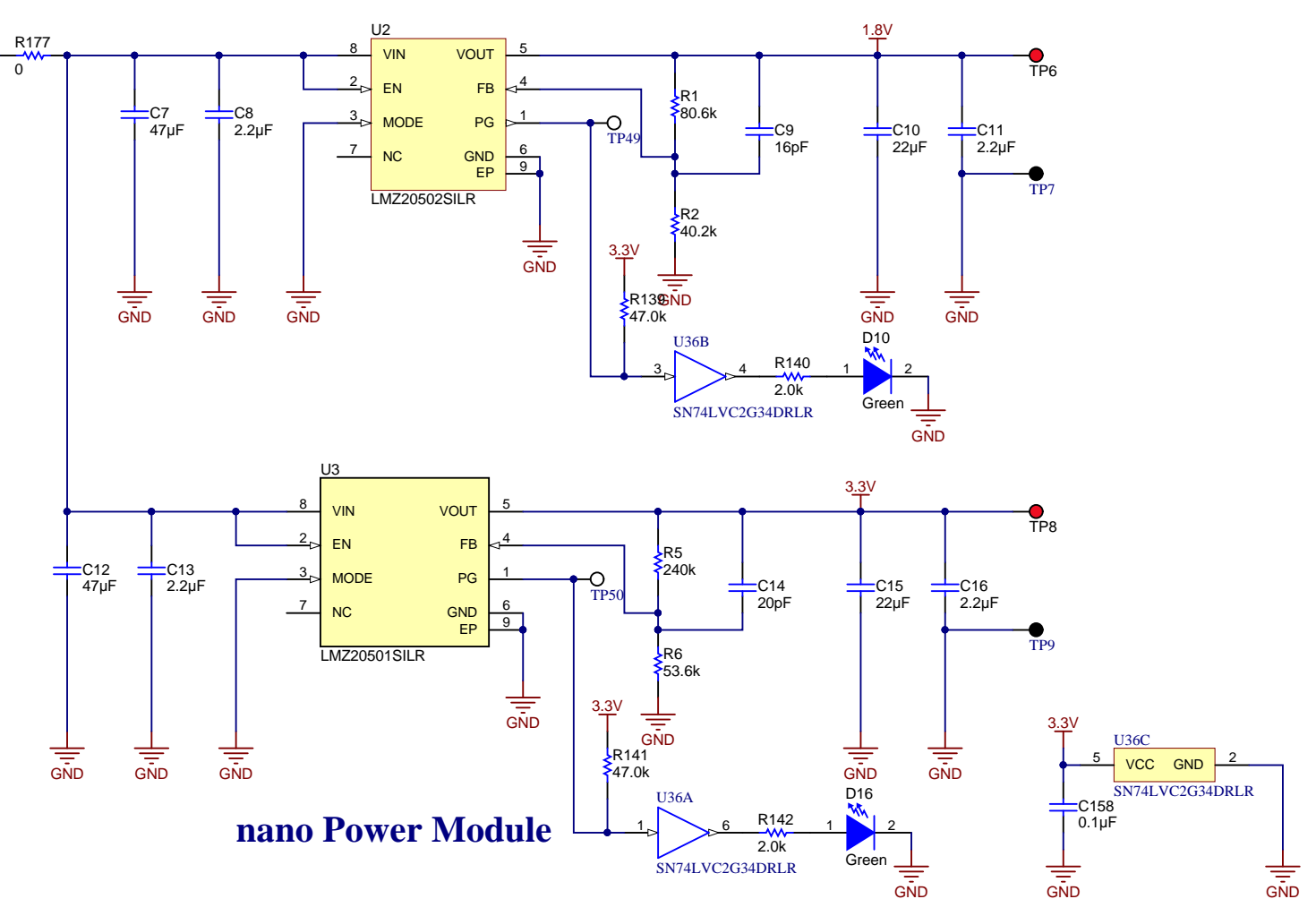
Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular 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: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1 Processor Power	
Number: TIDA-010011-E1 Rev. 0	Sheet Title: +24V_HOT RED PACKAGE	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 3 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1 Processor Power_Pg3.SchDoc	Size: B
Engineer: Sreenivasa	Contact: http://www.ti.com/support	

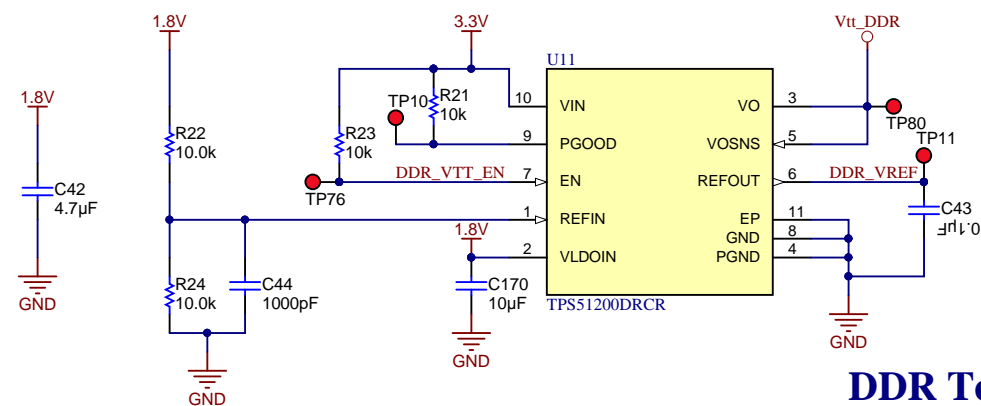
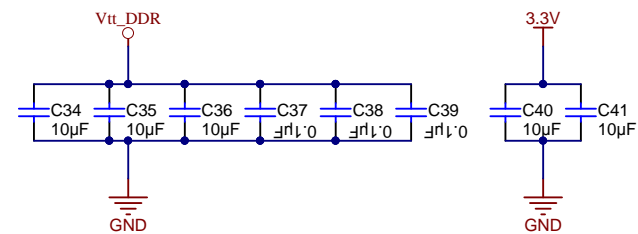




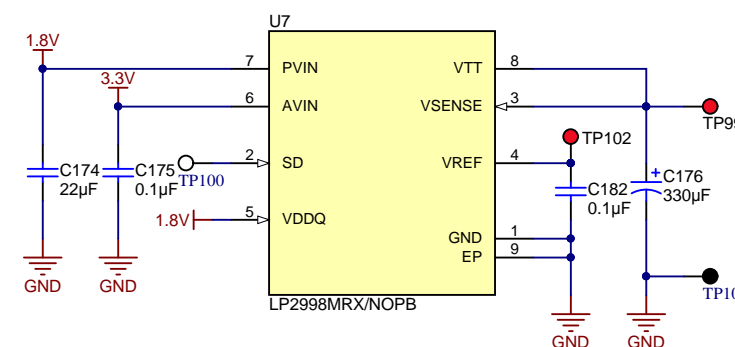
Power Module in QFN Package



nano Power Module

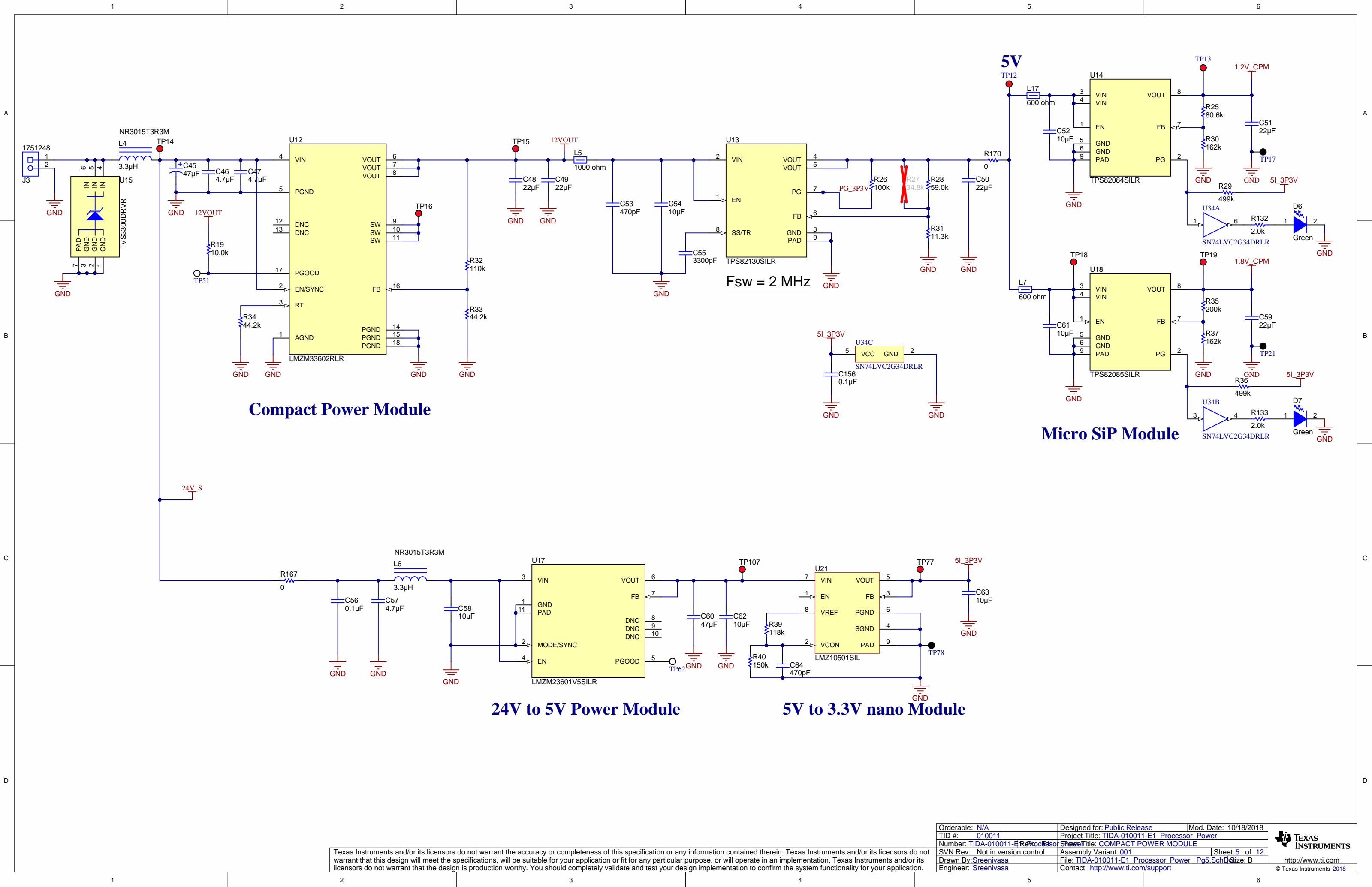


DDR Termination



Orderable: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1 Processor Power	
Number: TIDA-010011-E1 Rev. 0	Project Title: POWER MODULE QFN_NANO	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 4 of 12
Drawn By:	File: TIDA-010011-E1 Processor Power_Pg4.SchDoc	Size: B
Engineer: Sreenivasa	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.



Compact Power Module

Micro SiP Module

24V to 5V Power Module

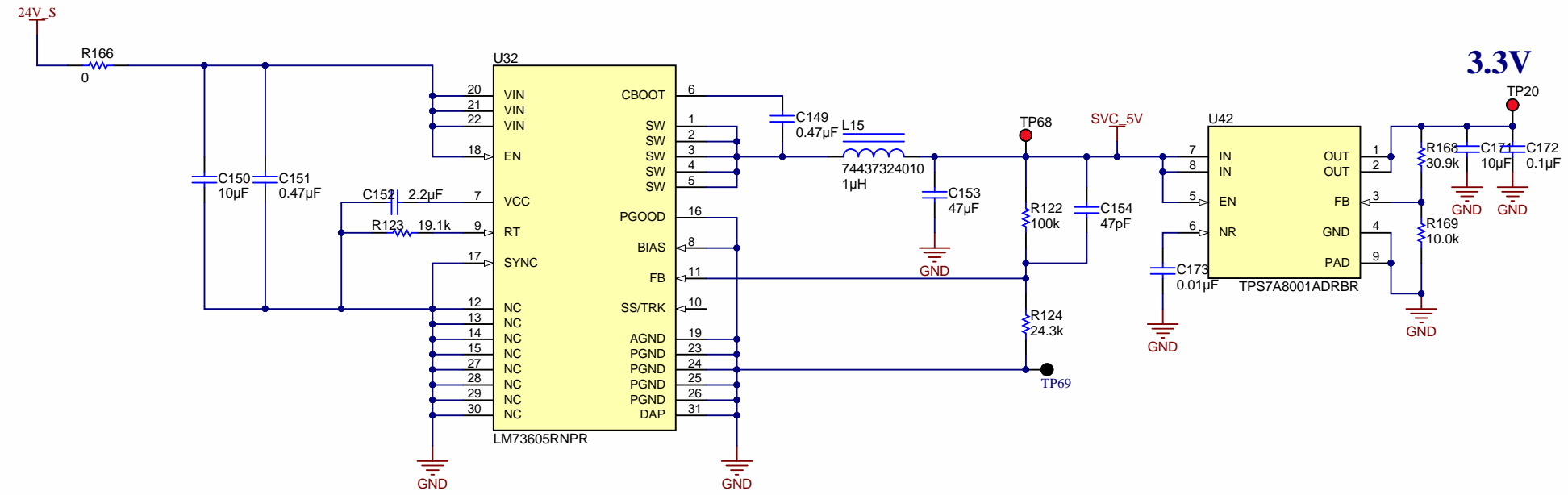
5V to 3.3V nano Module

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.

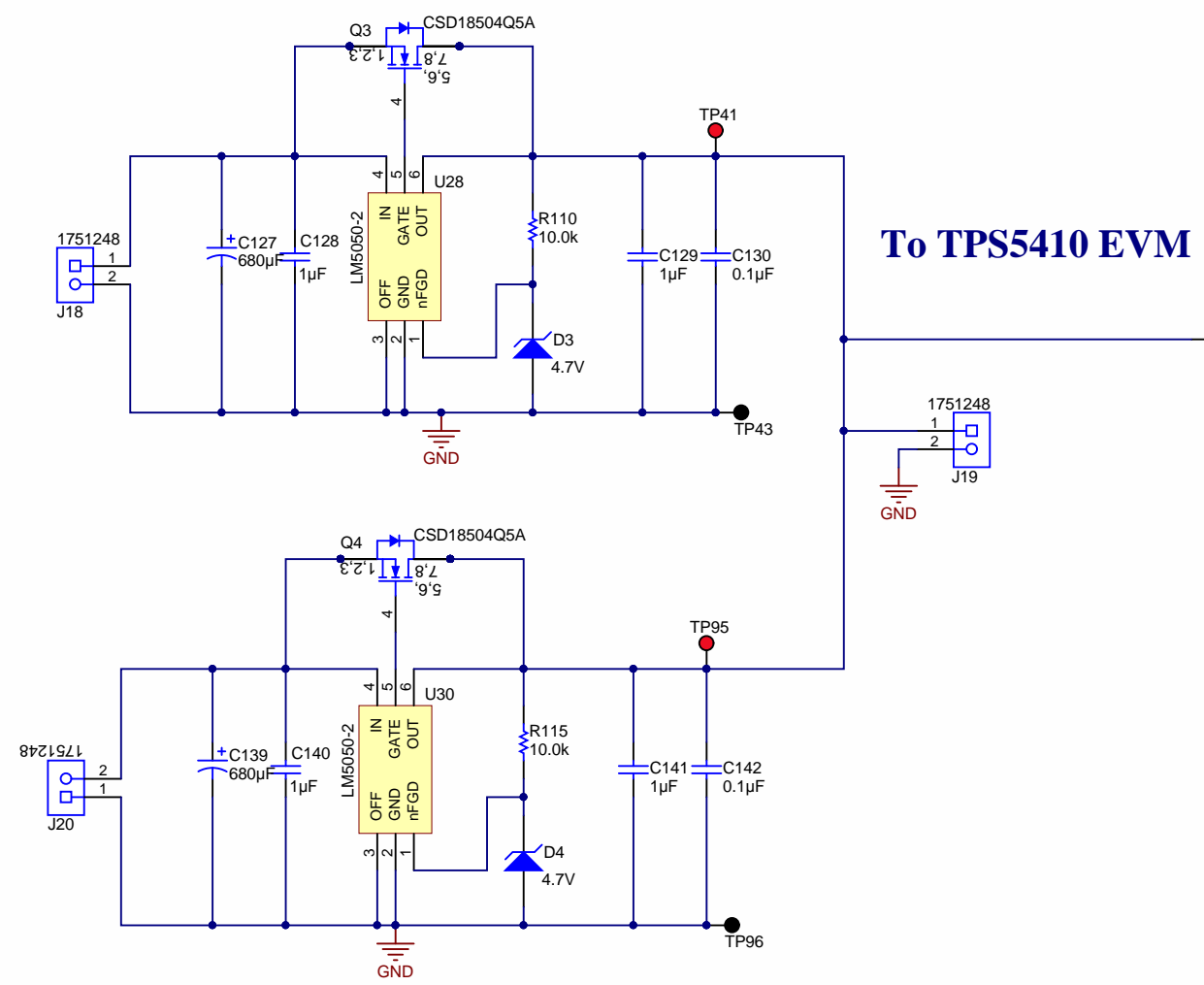
Orderable: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1_Processor Power	
Number: TIDA-010011-E1_Processor Power	Sheet Title: COMPACT POWER MODULE	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 5 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1_Processor Power_Pg5.SchDoc	Size: B
Engineer: Sreenivasa	Contact: http://www.ti.com/support	



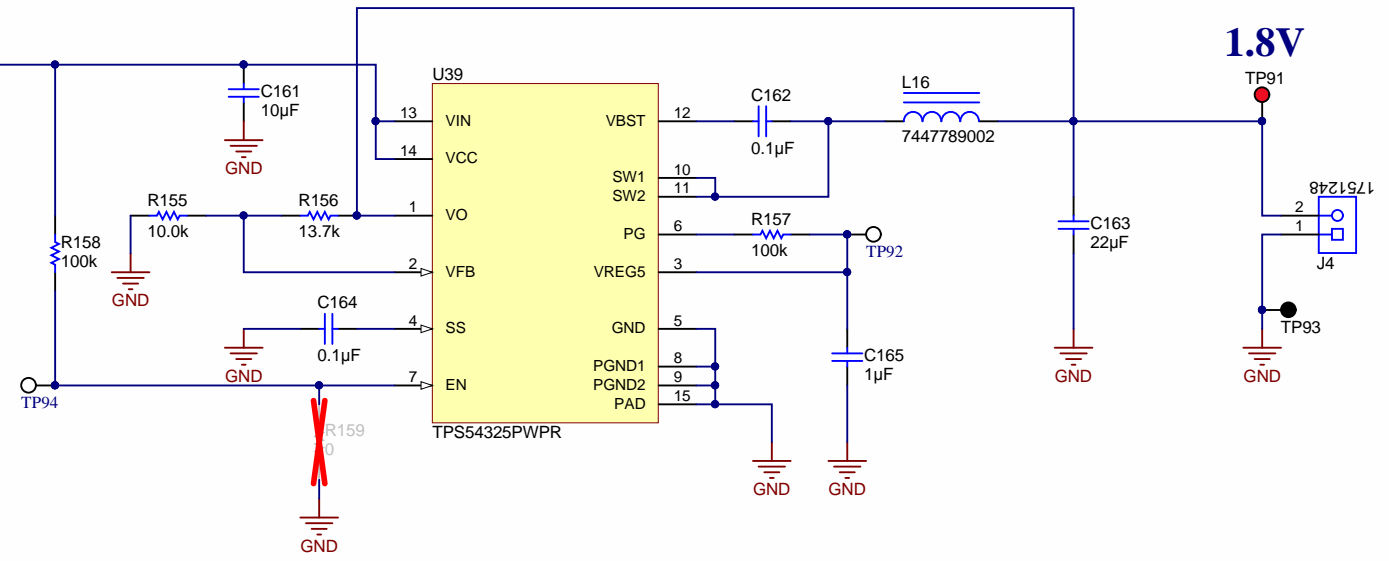
© Texas Instruments 2018



Synchronous Stepdown V Converter



Redundant Supply



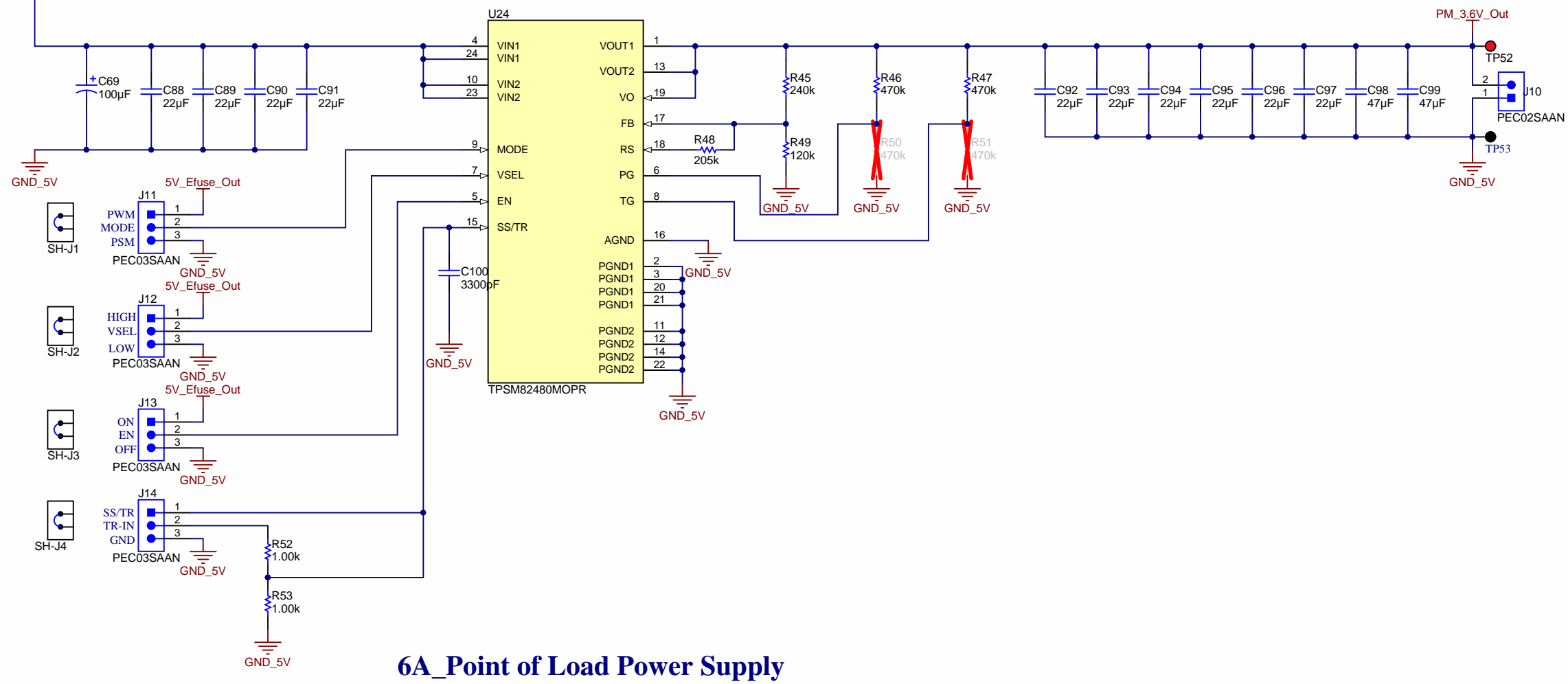
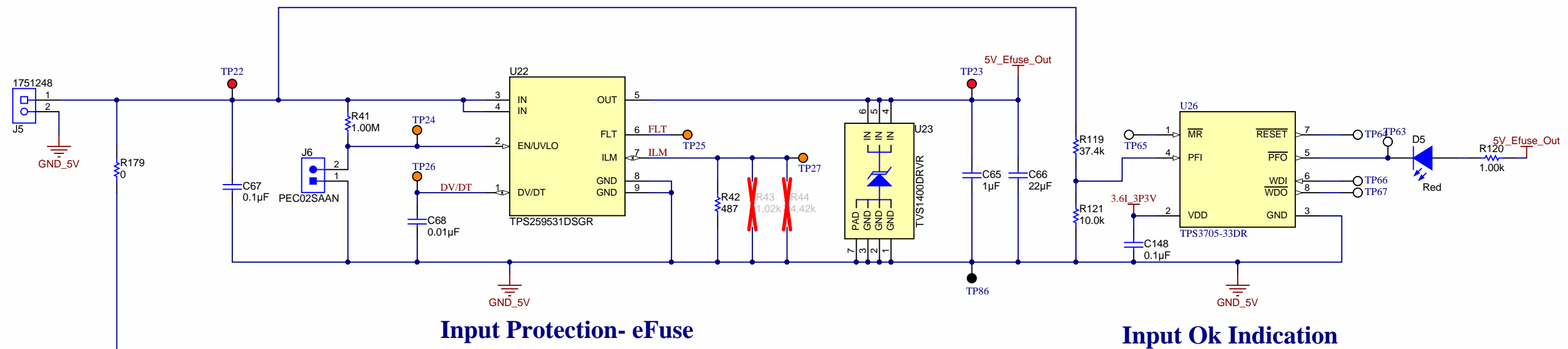
To TPS5410 EVM

1.8V

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: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1_Processor_Power	
Number: TIDA-010011-E1_Rev. 0	Sheet Title: SUPPLY ORING	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 6 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1_Processor_Power_Pg6.SchDoc	Size: B
Engineer: Sreenivasa	Contact: http://www.ti.com/support	

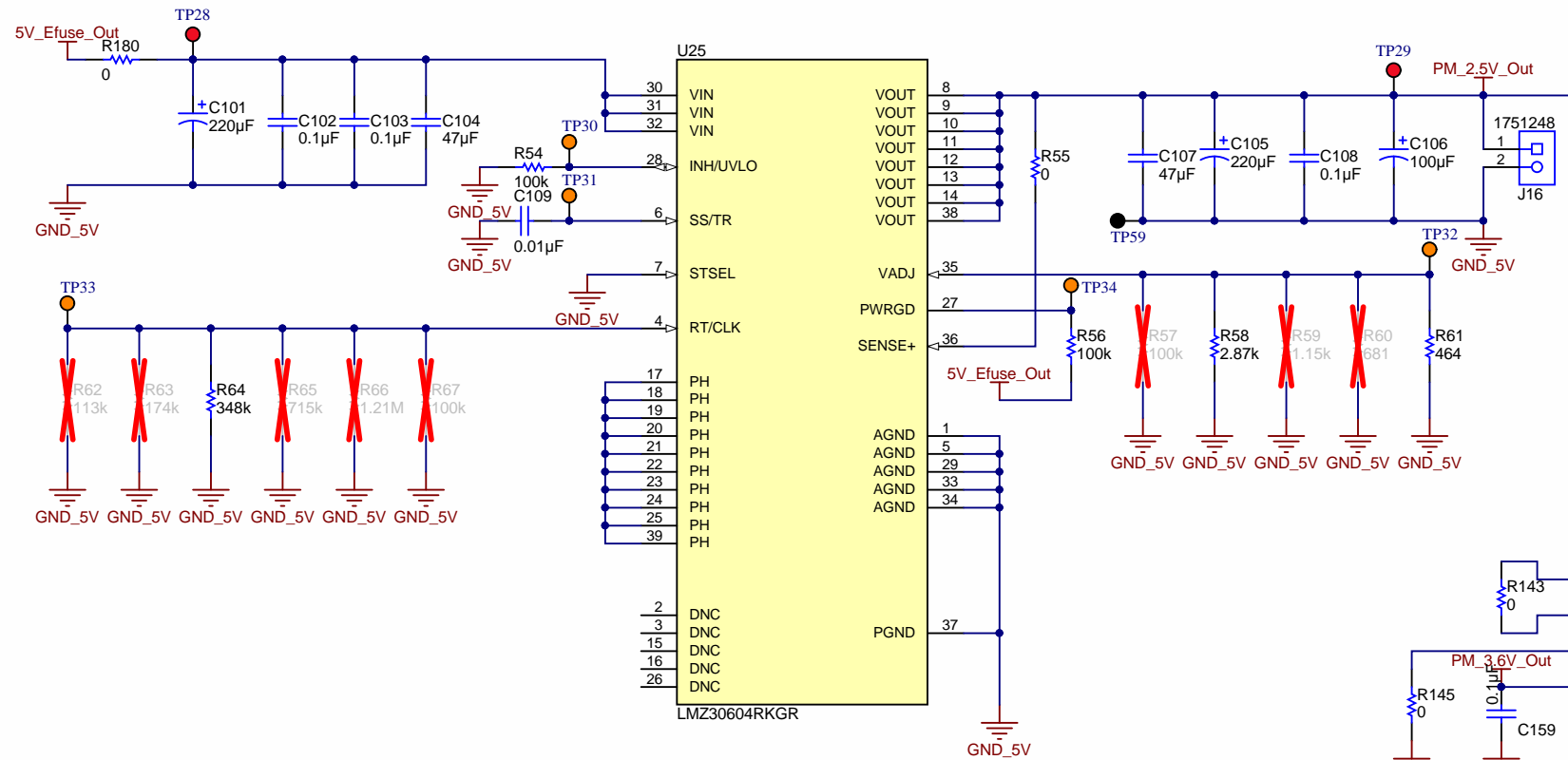




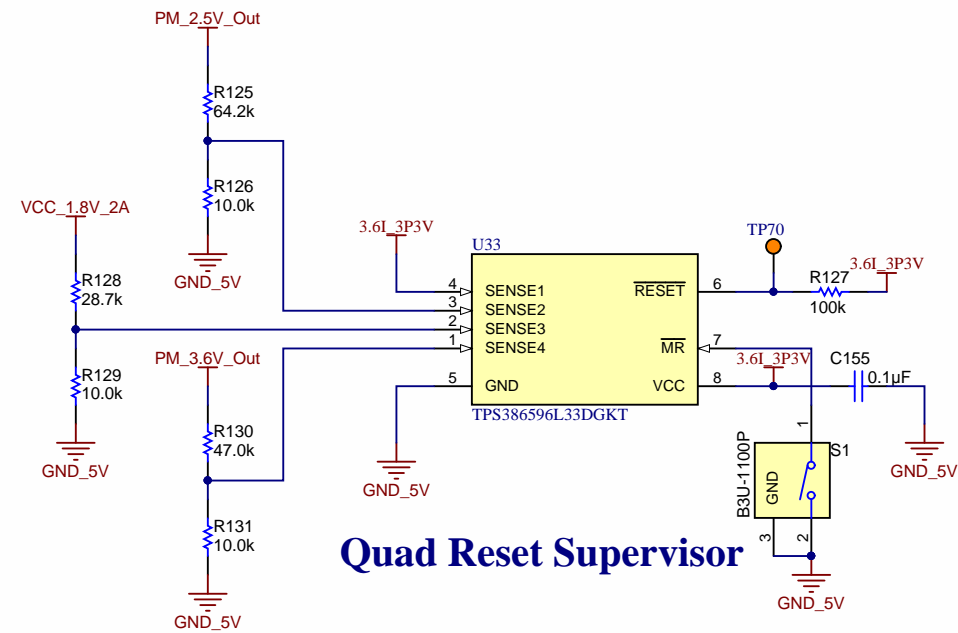
Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular 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.

Orderable: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1 Processor Power	
Number: TIDA-010011-E1 Rev. 1.0	Sheet Title: POINT OF LOAD	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 7 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1 Processor Power_Pg7.SchDoc	Size: B
Engineer: Sreenivasa	Contact: http://www.ti.com/support	

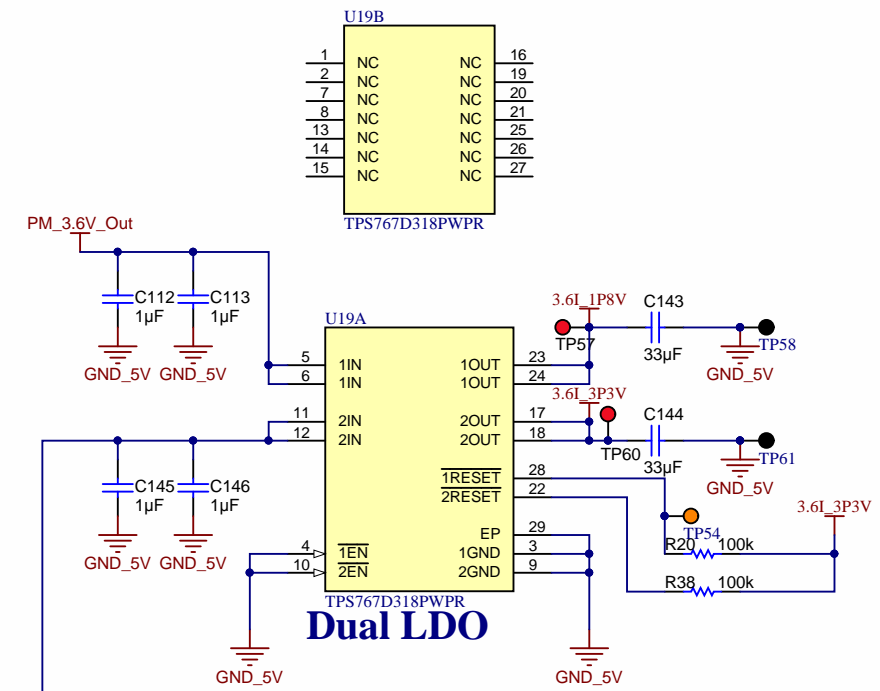




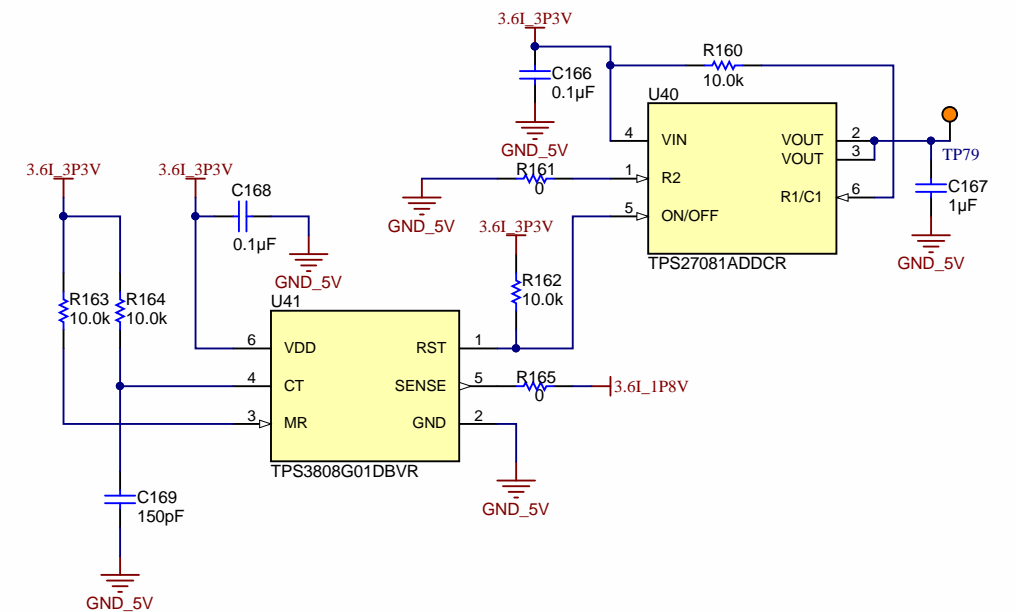
Power Module in QFN Package



Quad Reset Supervisor

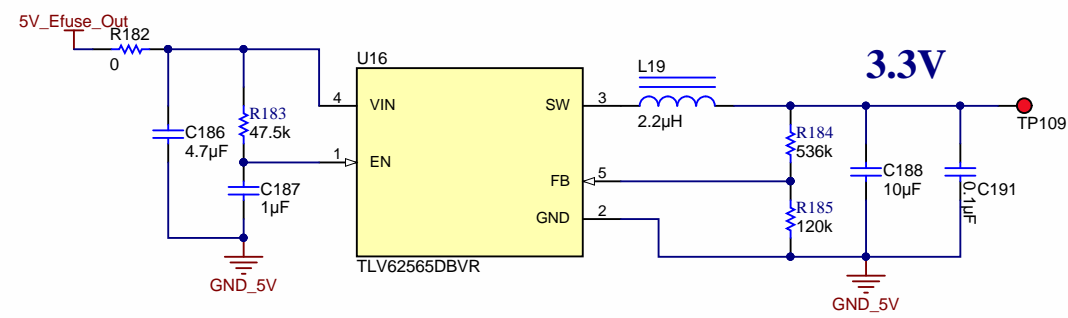


Dual LDO



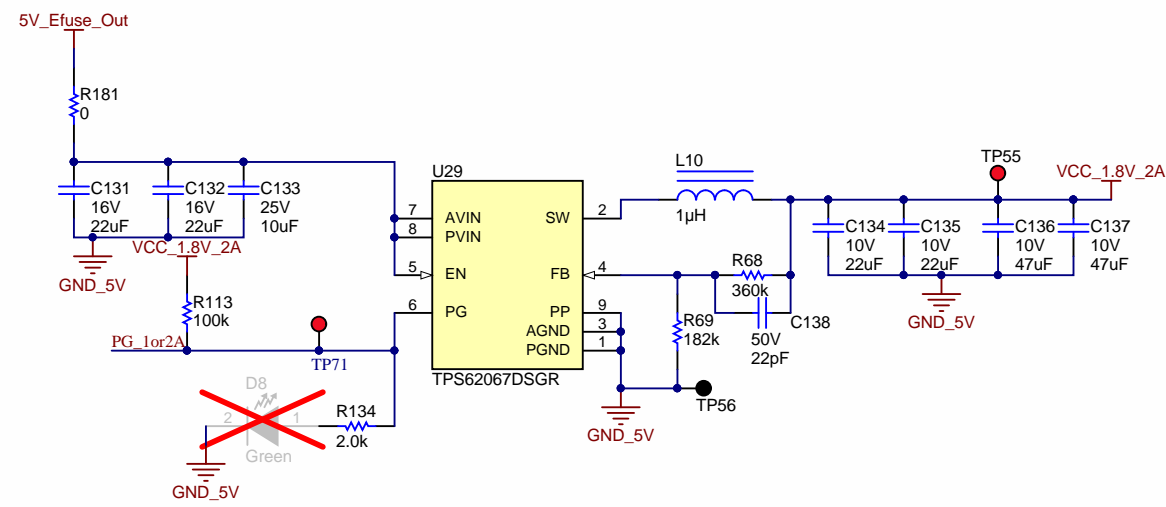
A

A



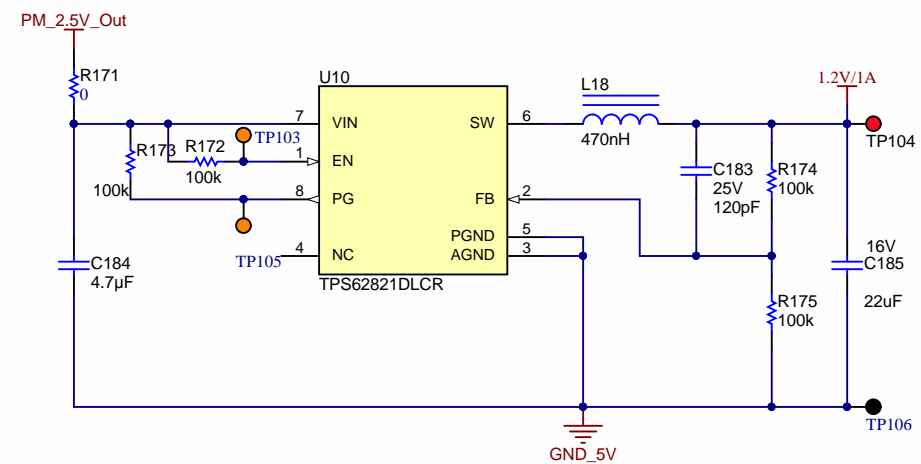
B

B



C

C

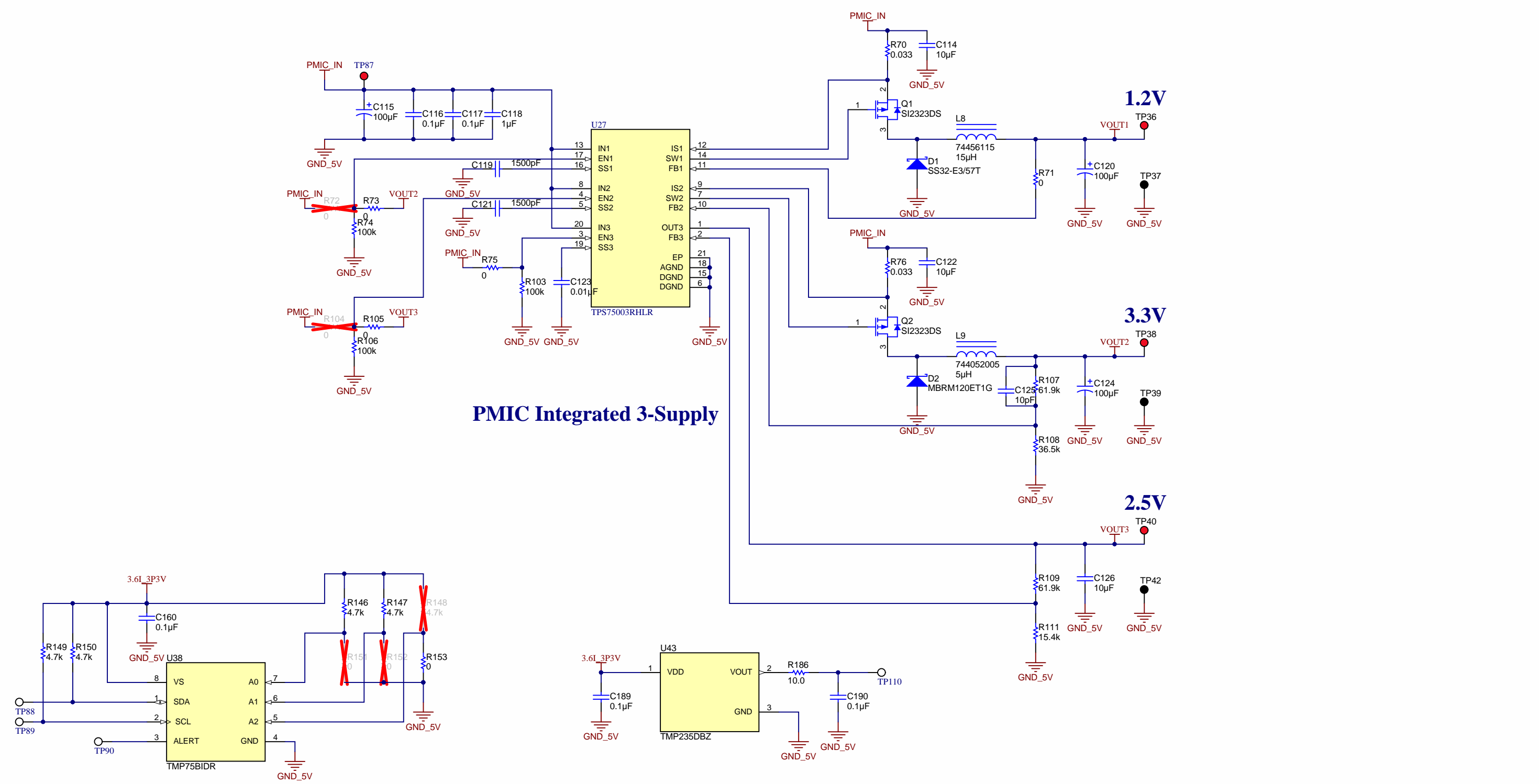


Switching Voltage Regulator

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: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1 Processor Power	
Number: TIDA-010011-E1 Rev. 0	Sheet Title: SWITCHING REGULATOR	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 9 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1 Processor Power_Pg9.SchDoc	Size: B
Engineer: Sreenivasa	Contact: http://www.ti.com/support	



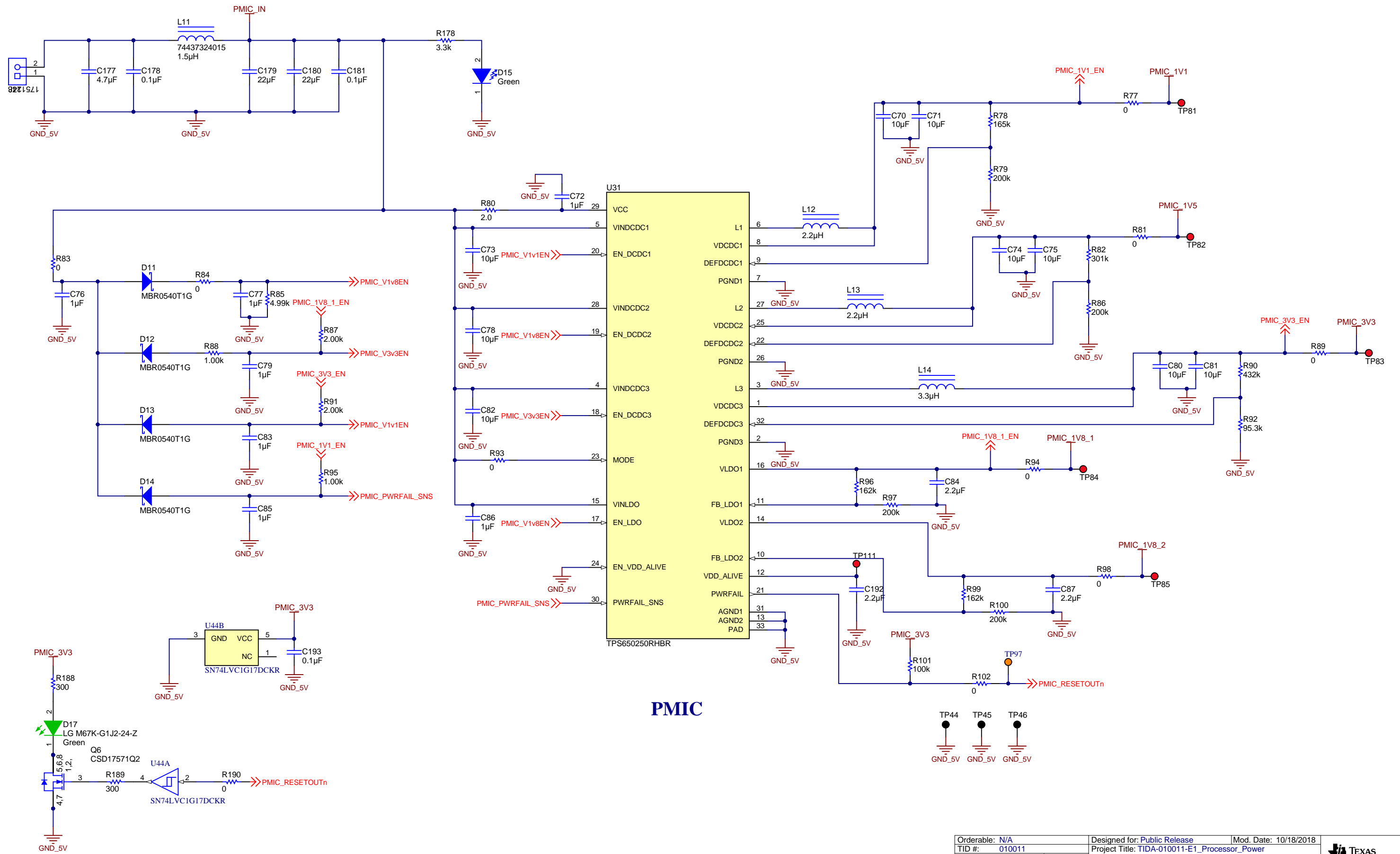


PMIC Integrated 3-Supply

Orderable: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1_Processor_Power	
Number: TIDA-010011-E1_Rev. 0.0	Sheet Title: PMIC 3 OUTPUT	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 10 of 12
Drawn By: Sreenivasa	File: TIDA-010011-E1_Processor_Power_Pg10.Sch	Size: B
Engineer: Sreenivasa	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.





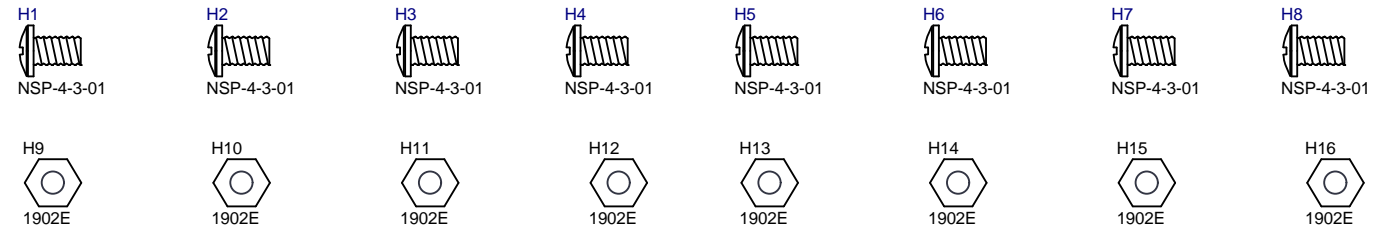
PMIC

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: N/A	Designed for: Public Release	Mod. Date: 10/18/2018
TID #: 010011	Project Title: TIDA-010011-E1_Processor_Power	
Number: TIDA-010011-E1_Processor_Power	Part Number: PMIC_AM35X	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 11 of 12
Drawn By:	File: TIDA-010011-E1_Processor_Power_Pg11.Sch	Size: B
Engineer: Sreenivasa	Contact: http://www.ti.com/support	

A

A



PCB Number: TIDA-010011-E1_Processor_Power
PCB Rev: E1

PCB LOGO
Pb-Free Symbol
PCB LOGO
FCC disclaimer
PCB LOGO
Logo4

B

B

Variant/Label Table	
Variant	Label Text
001	Version E1

LBL1
PCB Label
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.

D

D



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, 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 will 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 (www.ti.com/legal/termsofsale.html) 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.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2018, Texas Instruments Incorporated