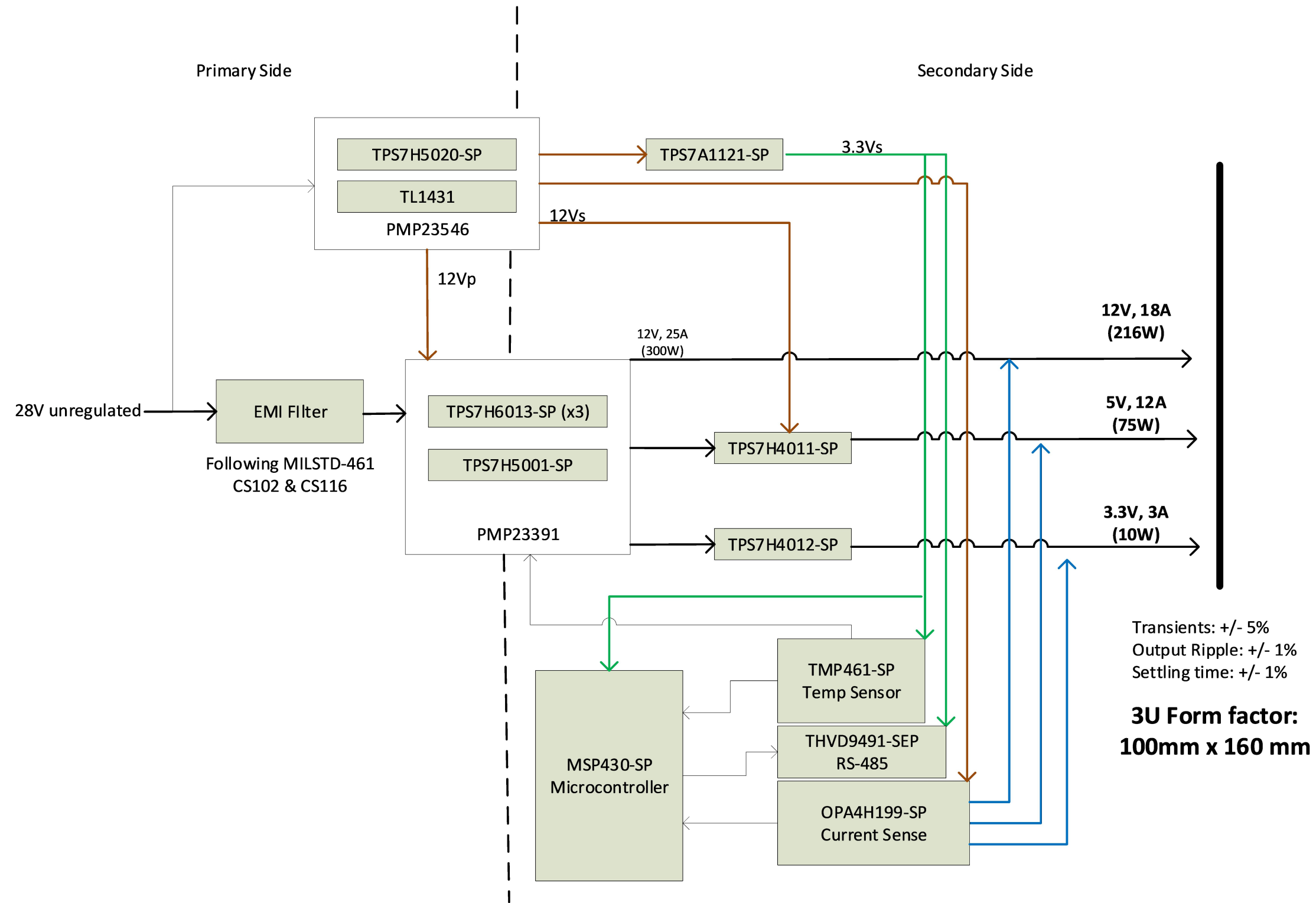


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



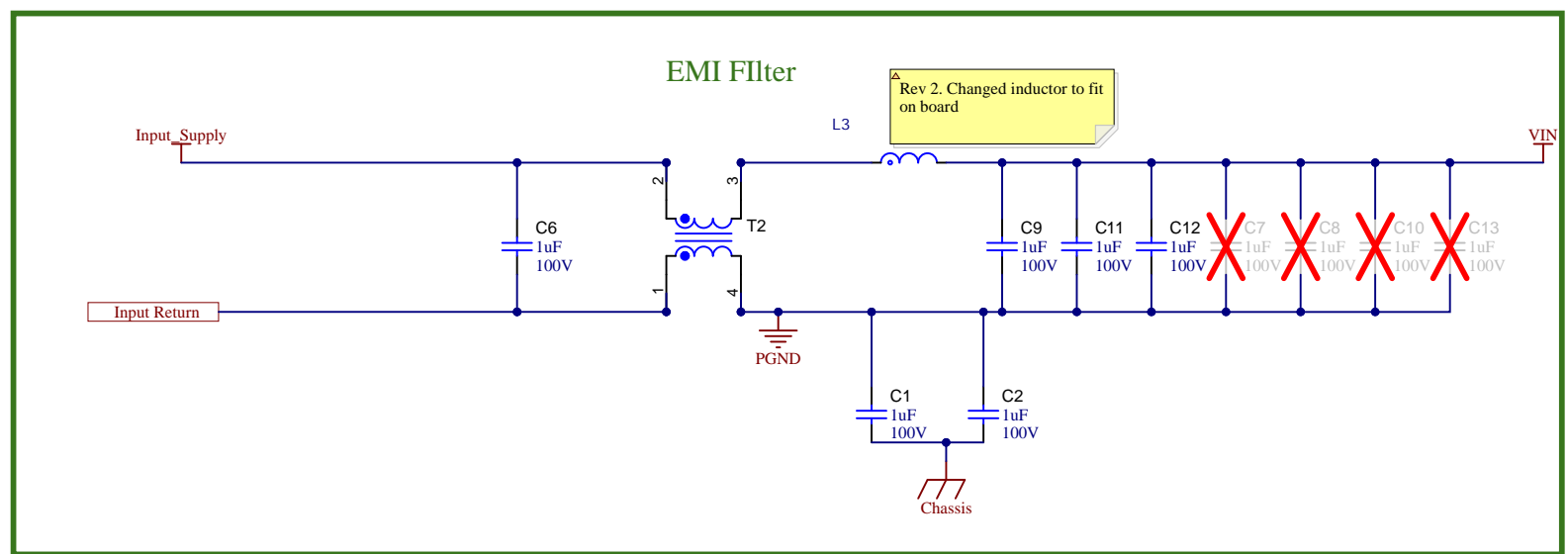
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TID #: N/A	Project Title: Space 3U VPX PSU		
Number: TIDA-011004	Rev: V1	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 1 of 8	
Drawn By:	File: Block Diagram.SchDoc	Size: B	
Engineer: Bhavika Kagathi	Contact: http://www.ti.com/support		

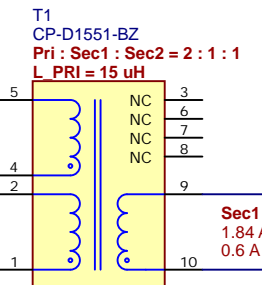
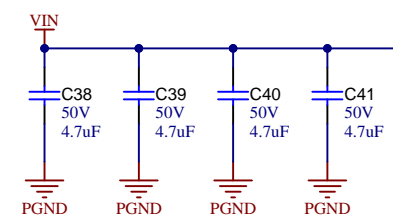
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A

3 input block terminal outside +/- and ground in the middle

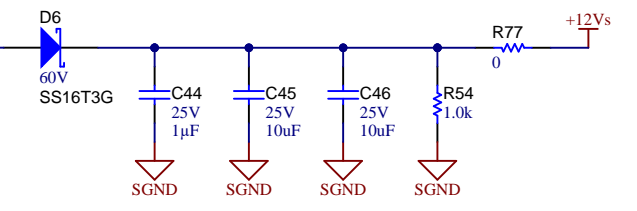
Rev 2. Changed inductor to fit on board



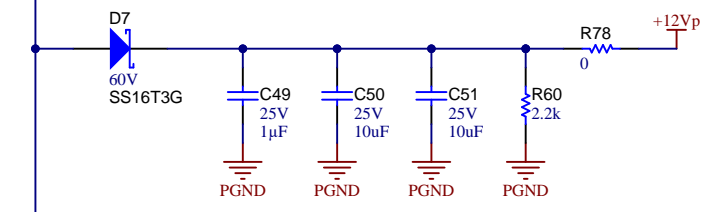
22 - 36 V input



+12 V secondary bias



+12 V primary bias



Adding R77 and R78 to easily disconnect the bias supply for testing purposes

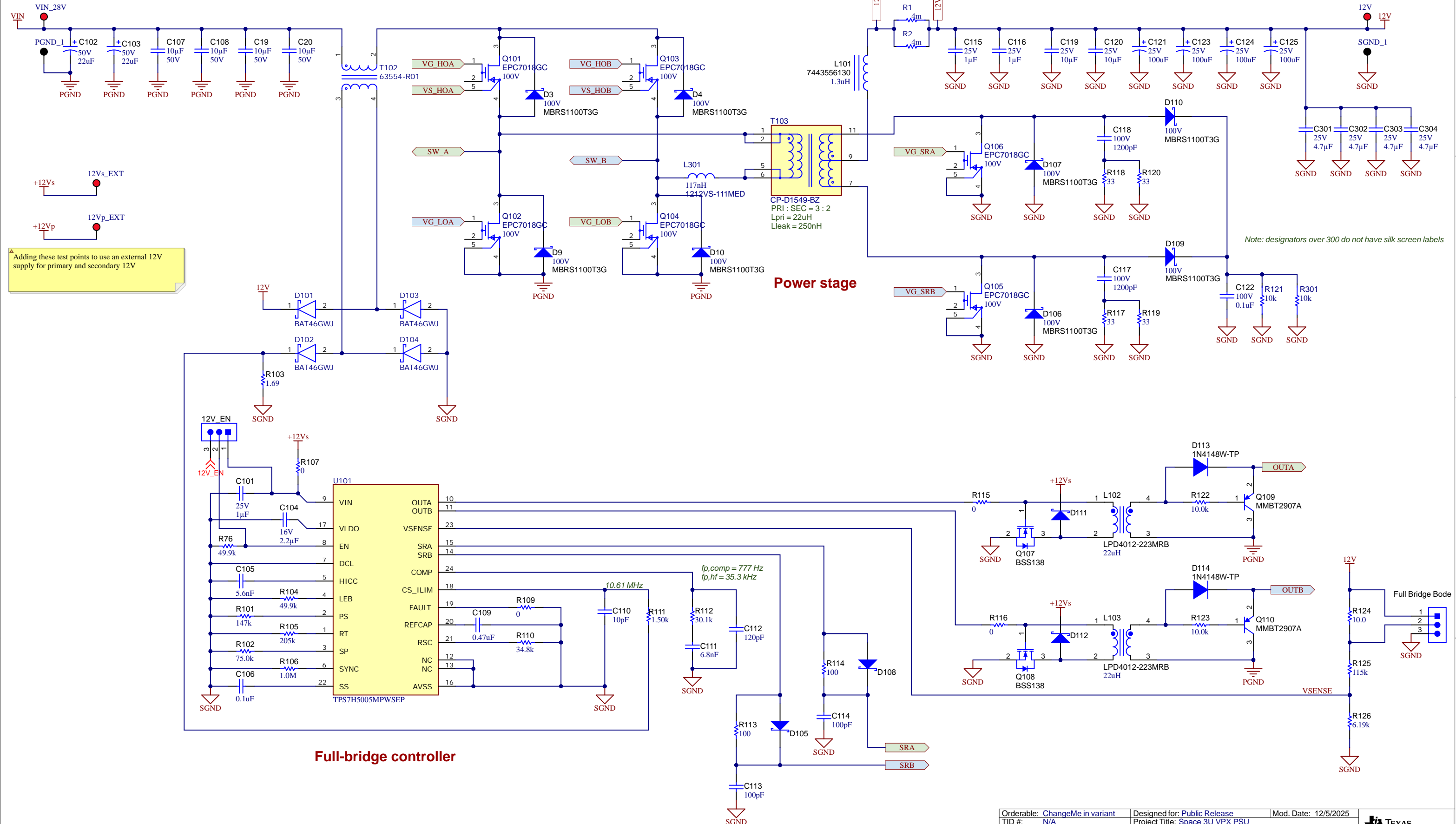
NCs are tied to ground per data sheet to prevent charge buildup

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22-36 Vin, 28 Vnom

12V / 25 A max

2.06 Arms ripple



Adding these test points to use an external 12V supply for primary and secondary 12V

Note: designators over 300 do not have silk screen labels

Full-bridge controller

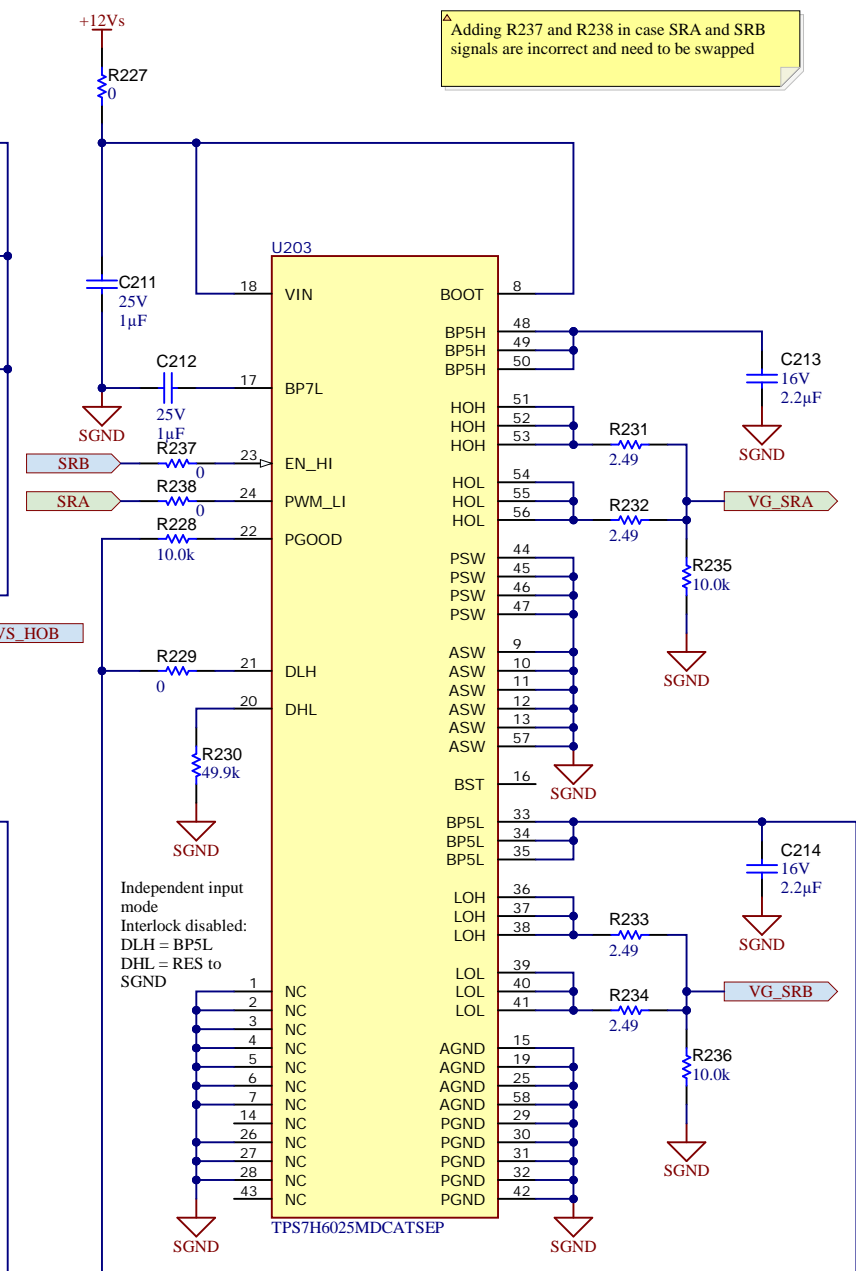
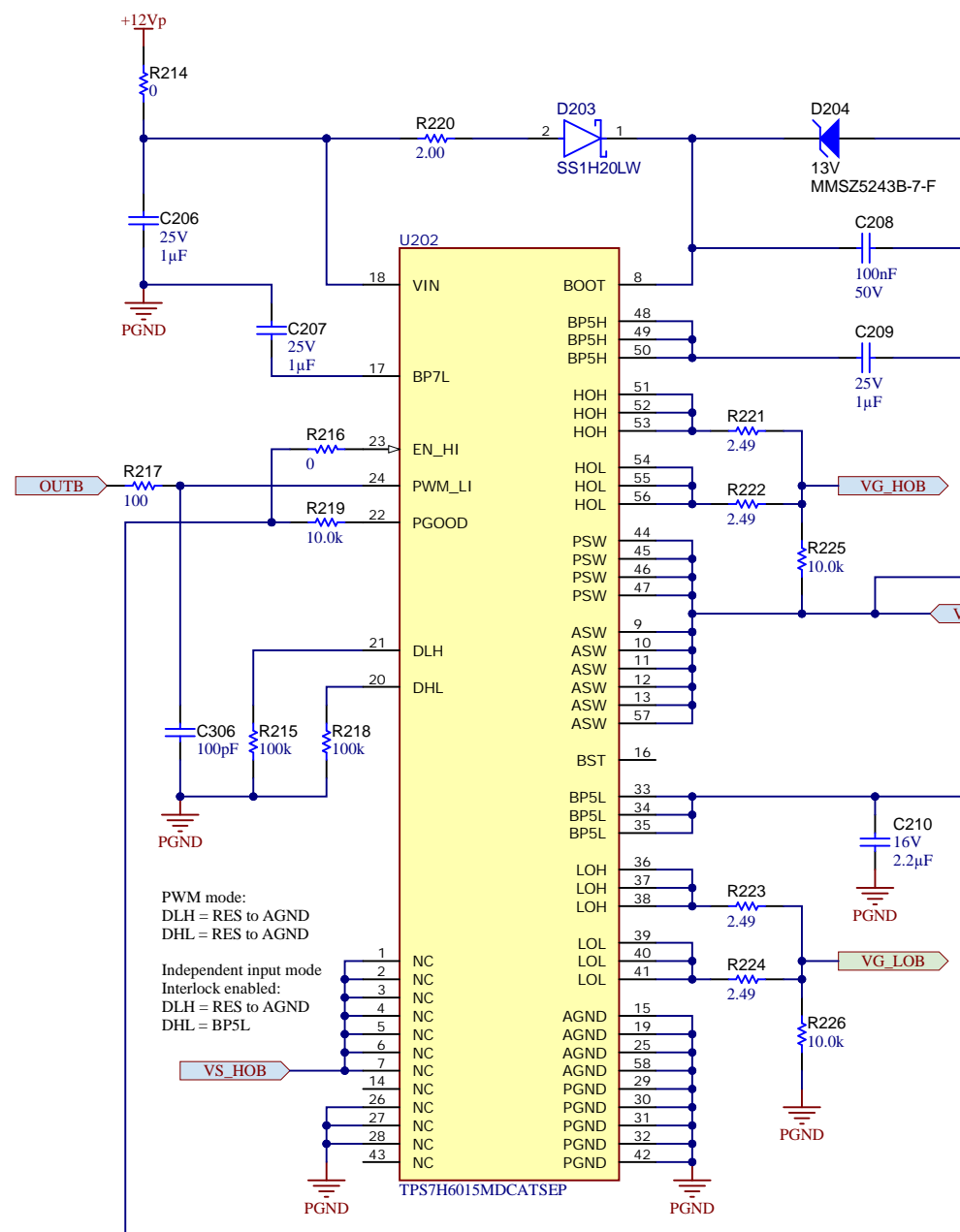
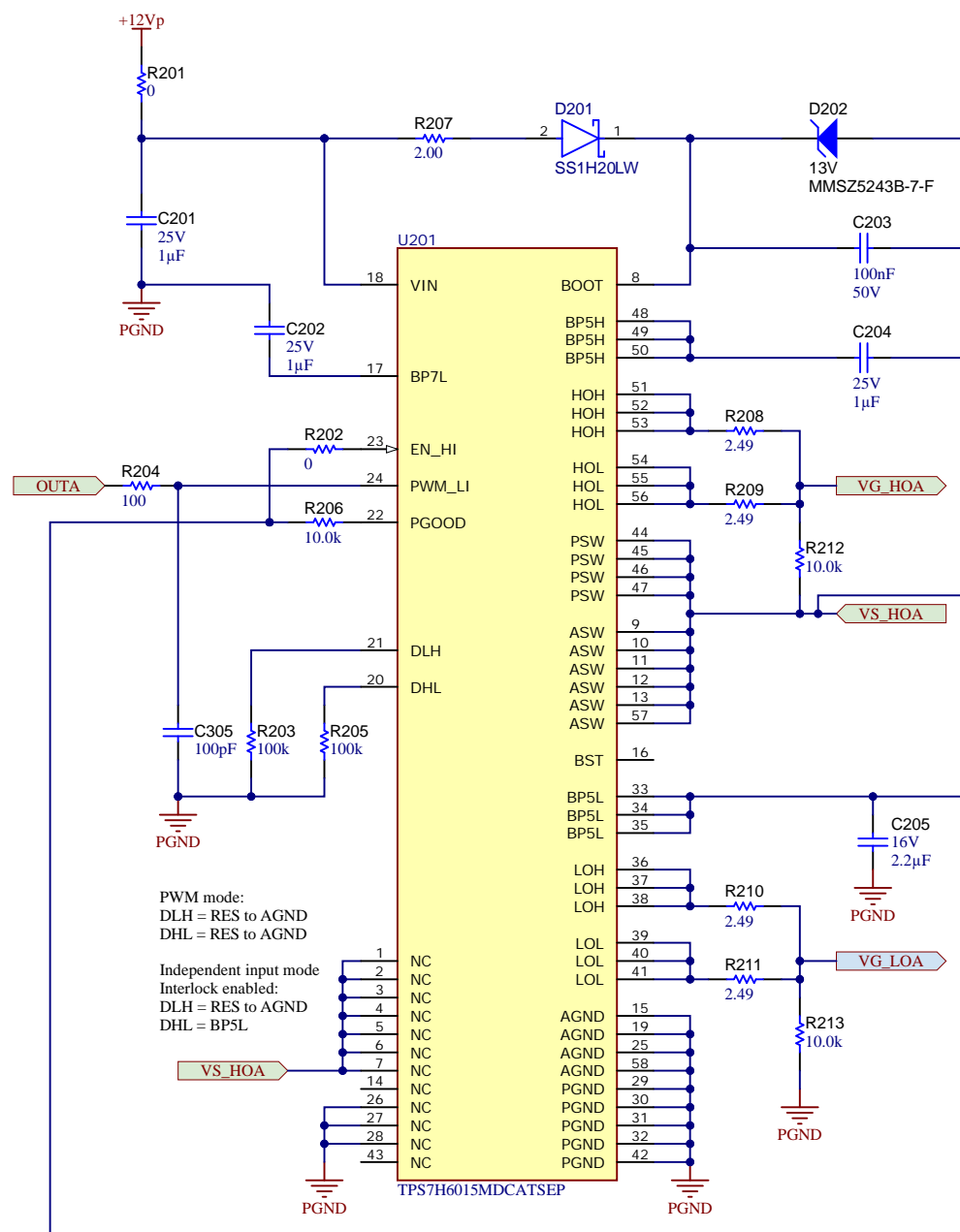
Power stage

Full Bridge Bode

Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 12/5/2025
TID #: N/A	Project Title: Space 3U VPX PSU	
Number: TIDA-011004	Rev: V1	Sheet Title:
SVN Rev: N/A	Assembly Variant: 001	Sheet: 3 of 8
Drawn By:	File: 28V to 12V.SchDoc	Size: B
Engineer: Bhavika Kagathi	Contact: http://www.ti.com/support	

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Adding R237 and R238 in case SRA and SRB signals are incorrect and need to be swapped

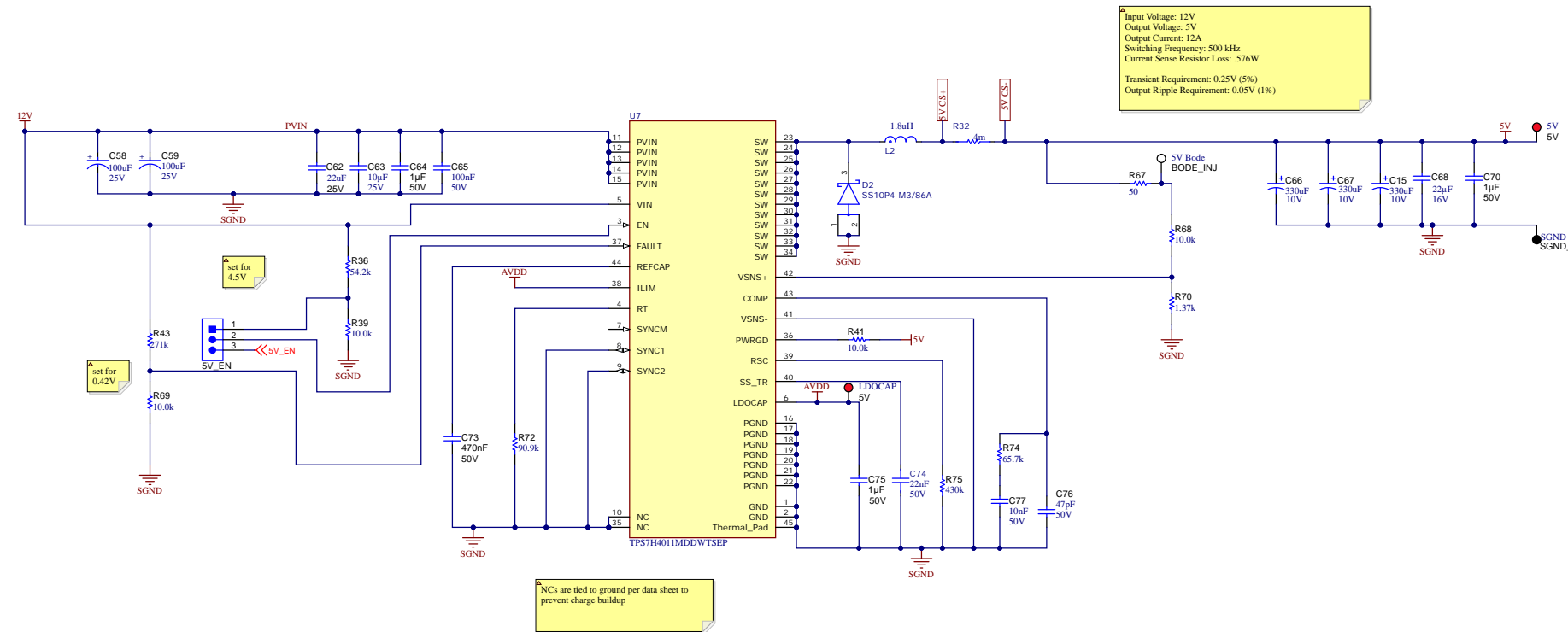
Primary FET drivers

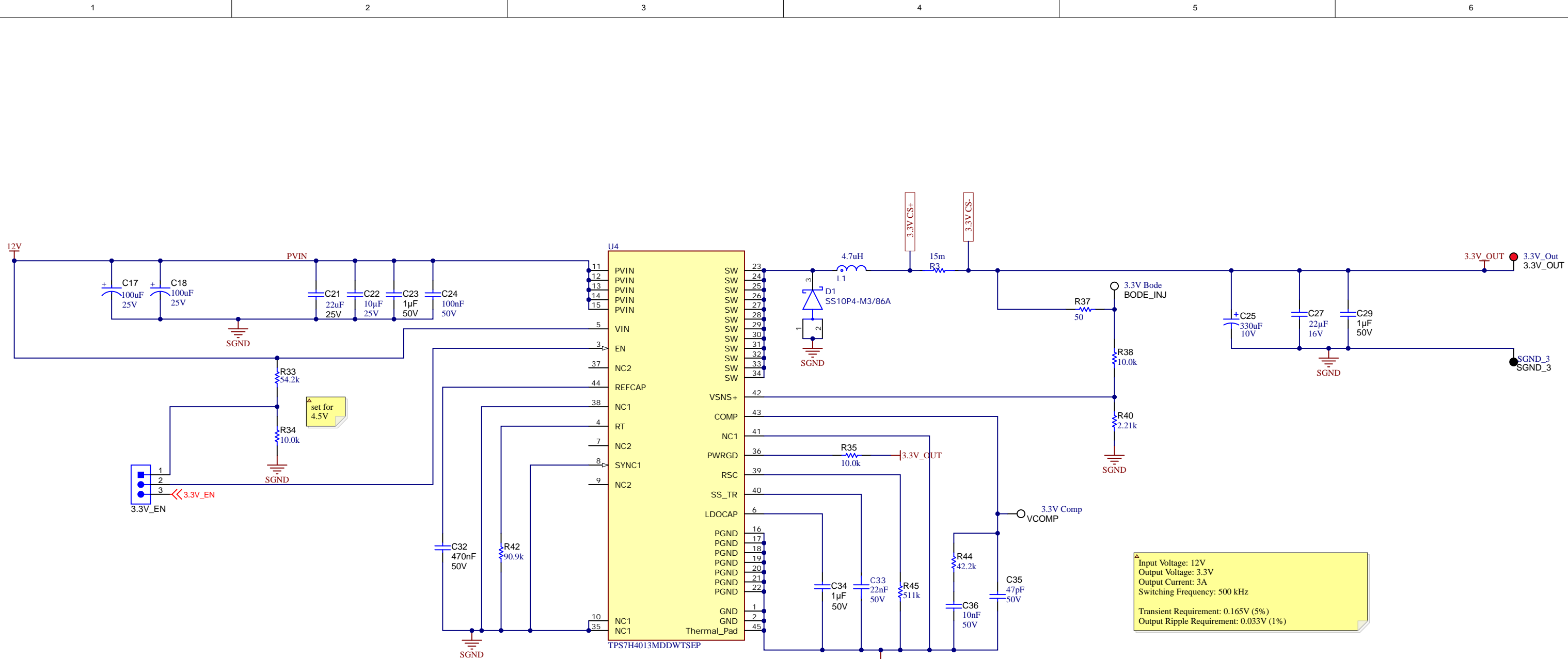
Secondary rectifier drivers

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TID #: N/A	Project Title: Space 3U VPX PSU	
Number: TIDA-011004	Rev: V1	Sheet: 4 of 8
SVN Rev: Not in version control	Assembly Variant: 001	Size: B
Drawn By:	File: 28V to 12V drivers_SchDoc	
Engineer: Bhavika Kagathi	Contact: http://www.ti.com/support	







NCs are tied to ground per data sheet to prevent charge buildup

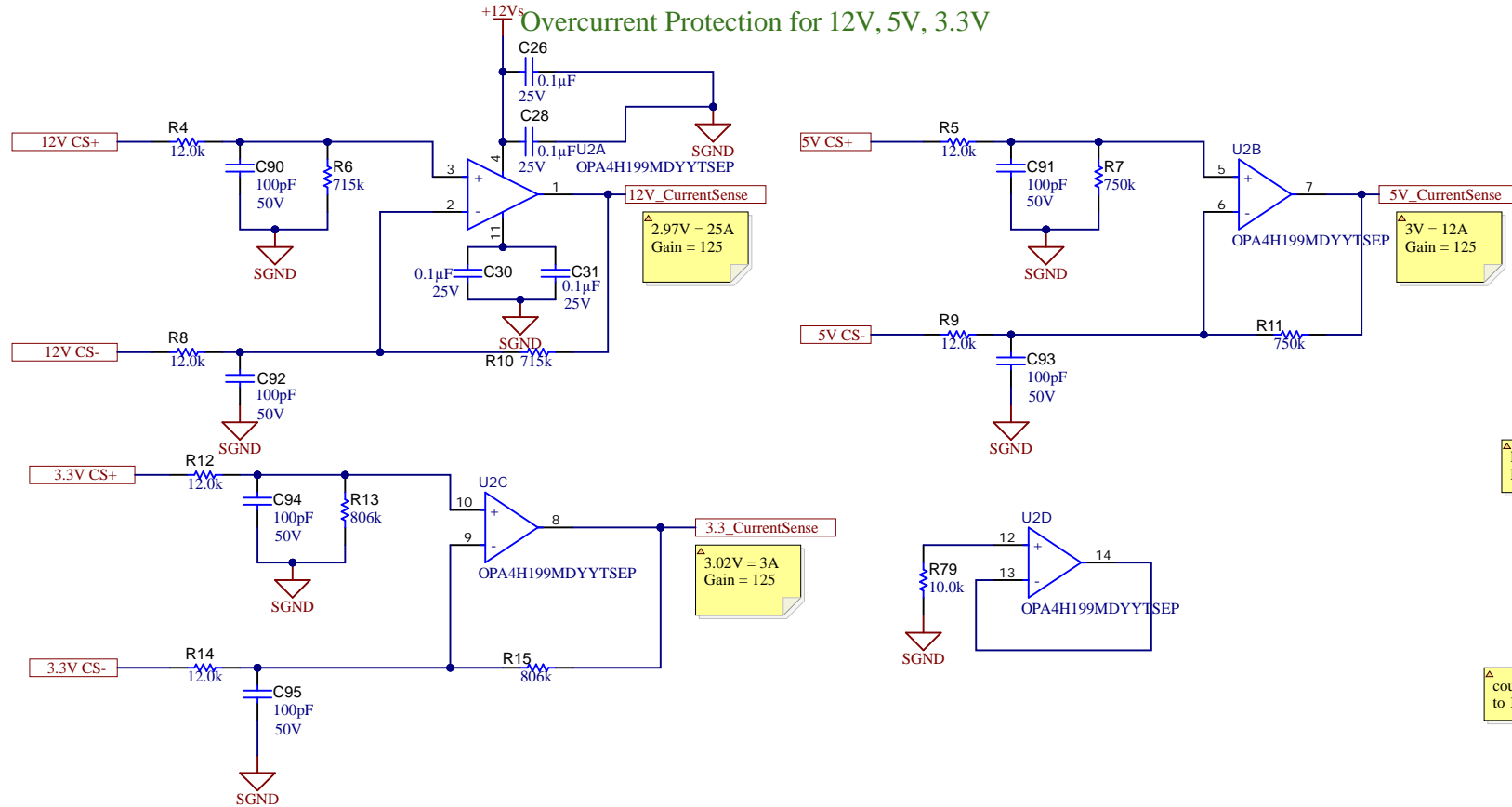
Input Voltage: 12V
 Output Voltage: 3.3V
 Output Current: 3A
 Switching Frequency: 500 kHz
 Transient Requirement: 0.165V (5%)
 Output Ripple Requirement: 0.033V (1%)

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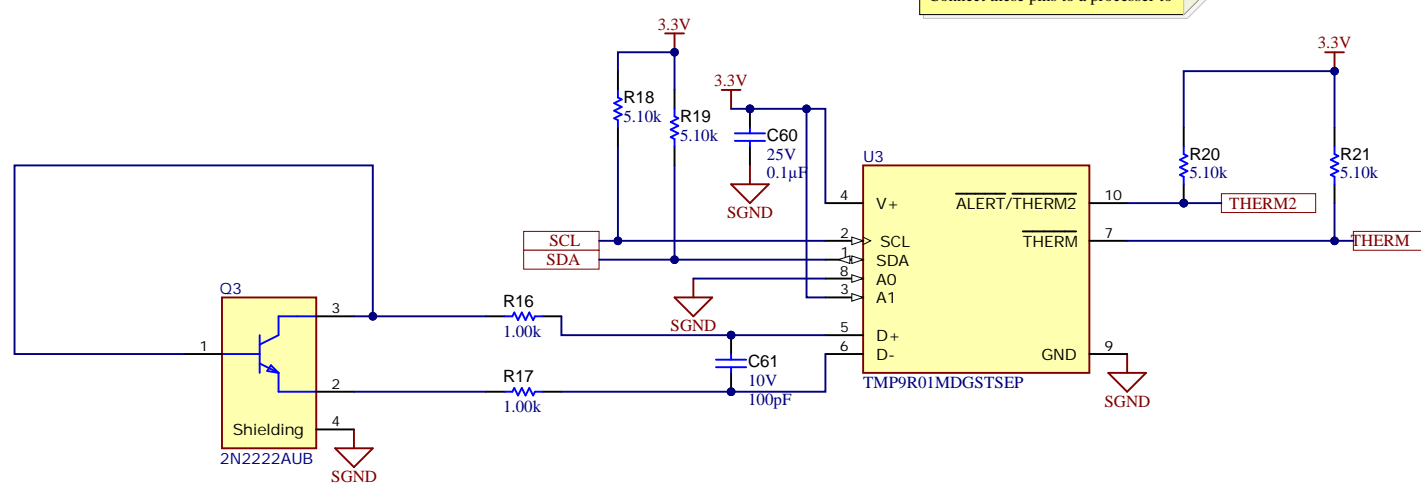
Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 11/18/2025
TID #: N/A	Project Title: Space 3U VPX PSU	
Number: TIDA-011004	Rev: V1	Sheet: 6 of 8
SVN Rev: Not in version control	Assembly Variant: 001	Size: B
Drawn By:	File: 12 to 3.3V.SchDoc	
Engineer: Bhavika Kagathi	Contact: http://www.ti.com/support	

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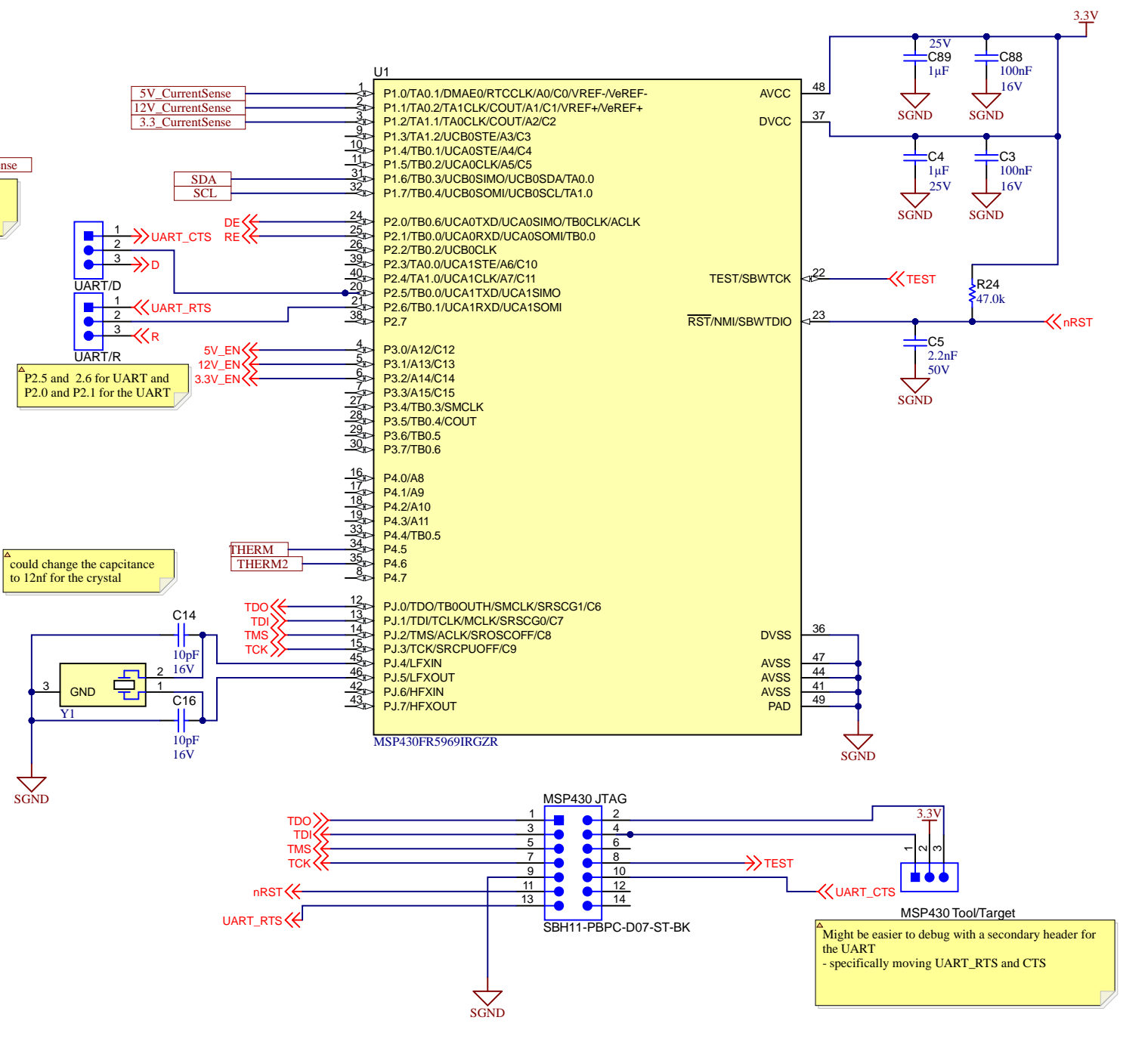
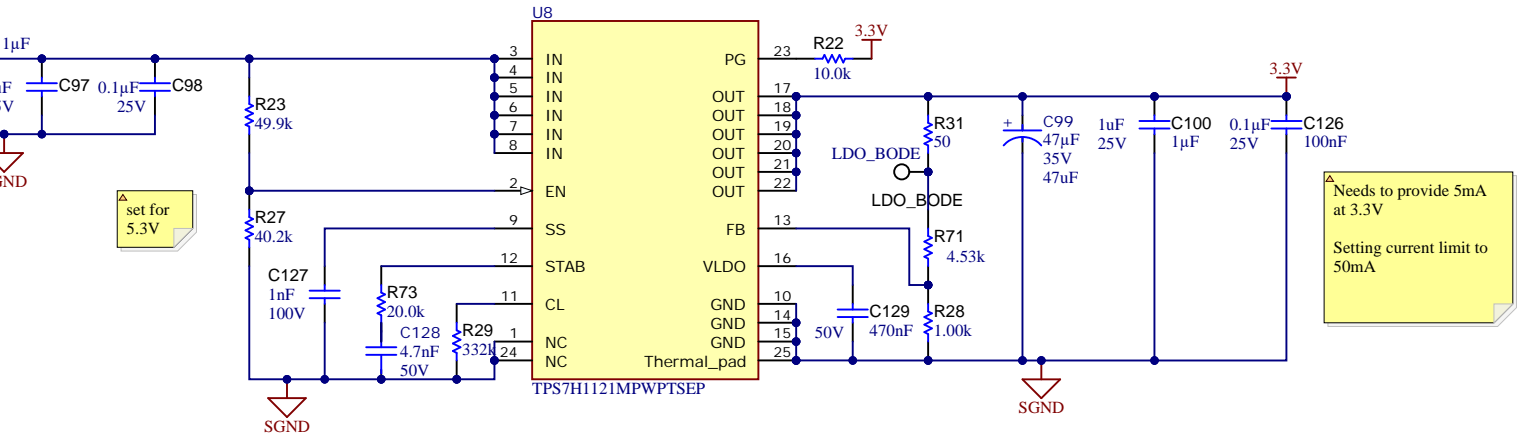
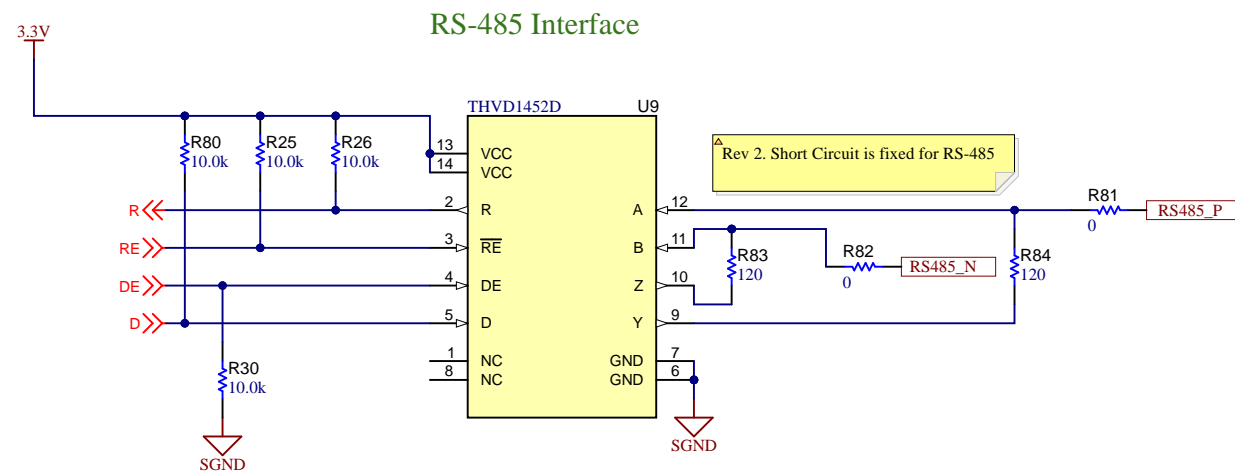
Overcurrent Protection for 12V, 5V, 3.3V



Temperature Sensing



RS-485 Interface



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TID #: N/A	Project Title: Space 3U VPX PSU	
Number: TIDA-011004	Rev: V1	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 7 of 8
Drawn By:	File: Telemetry_SchDoc	Size: B
Engineer: Bhavika Kagathi	Contact: http://www.ti.com/support	

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