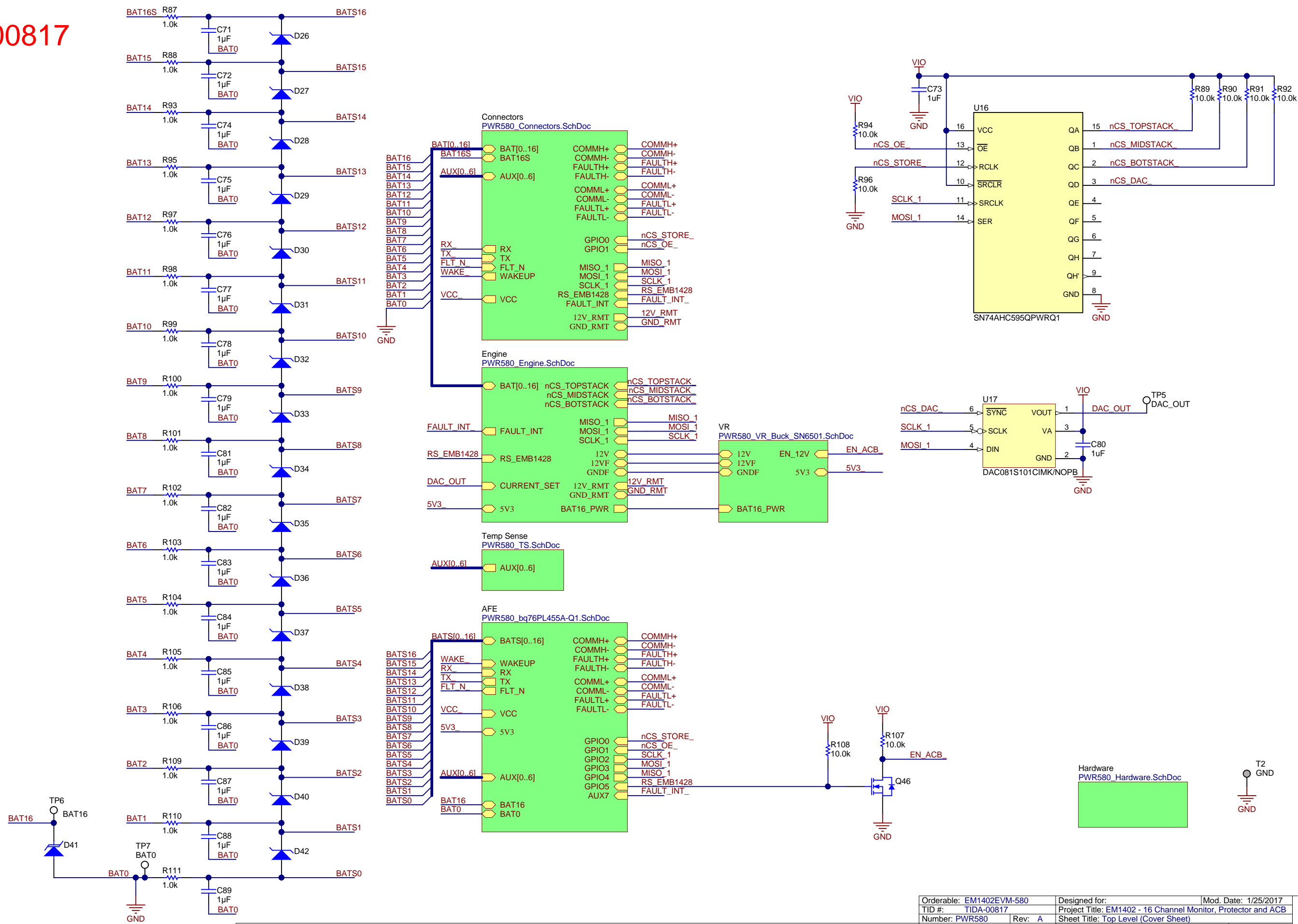


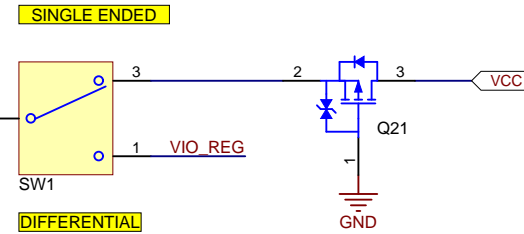
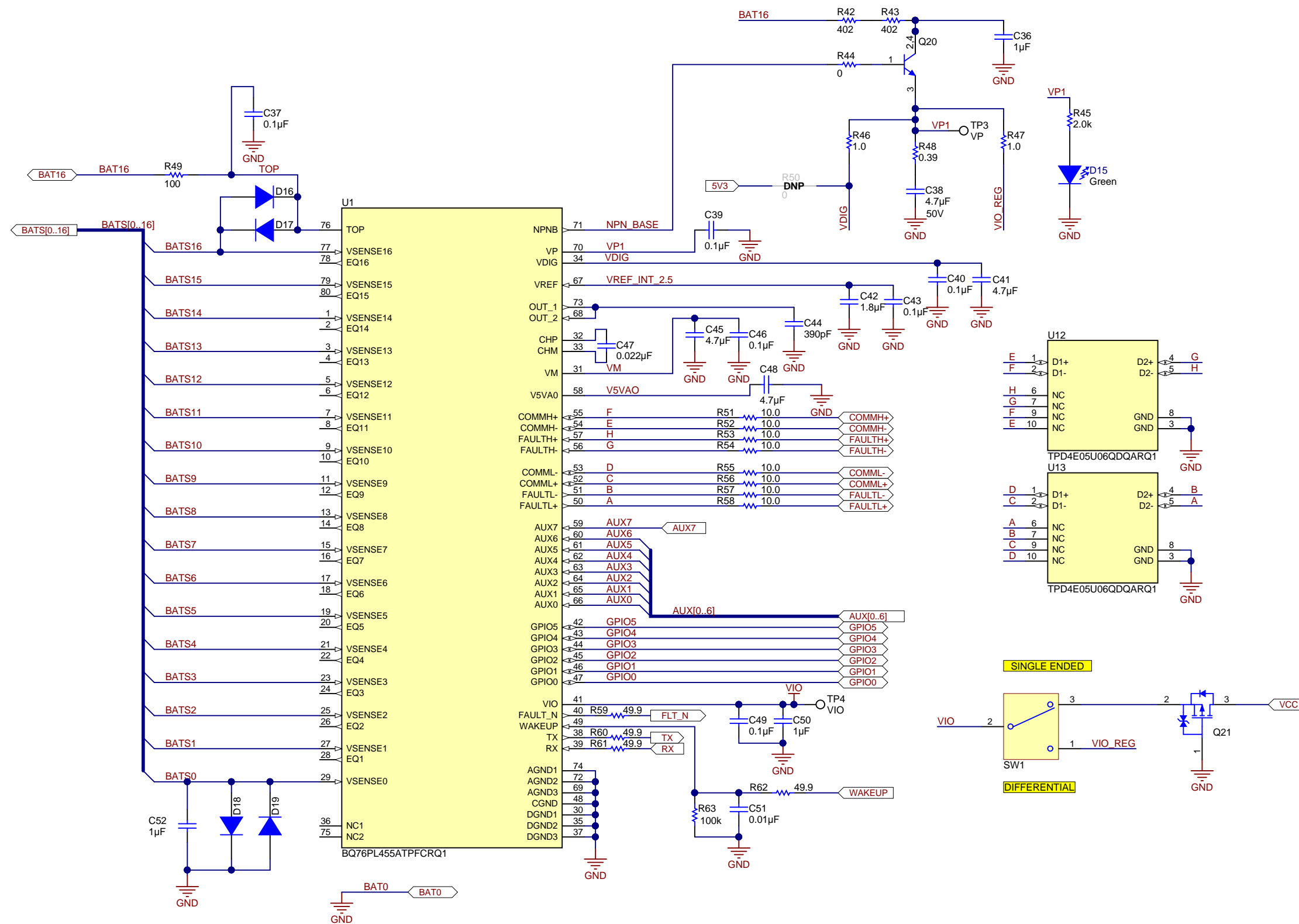
TIDA-00817



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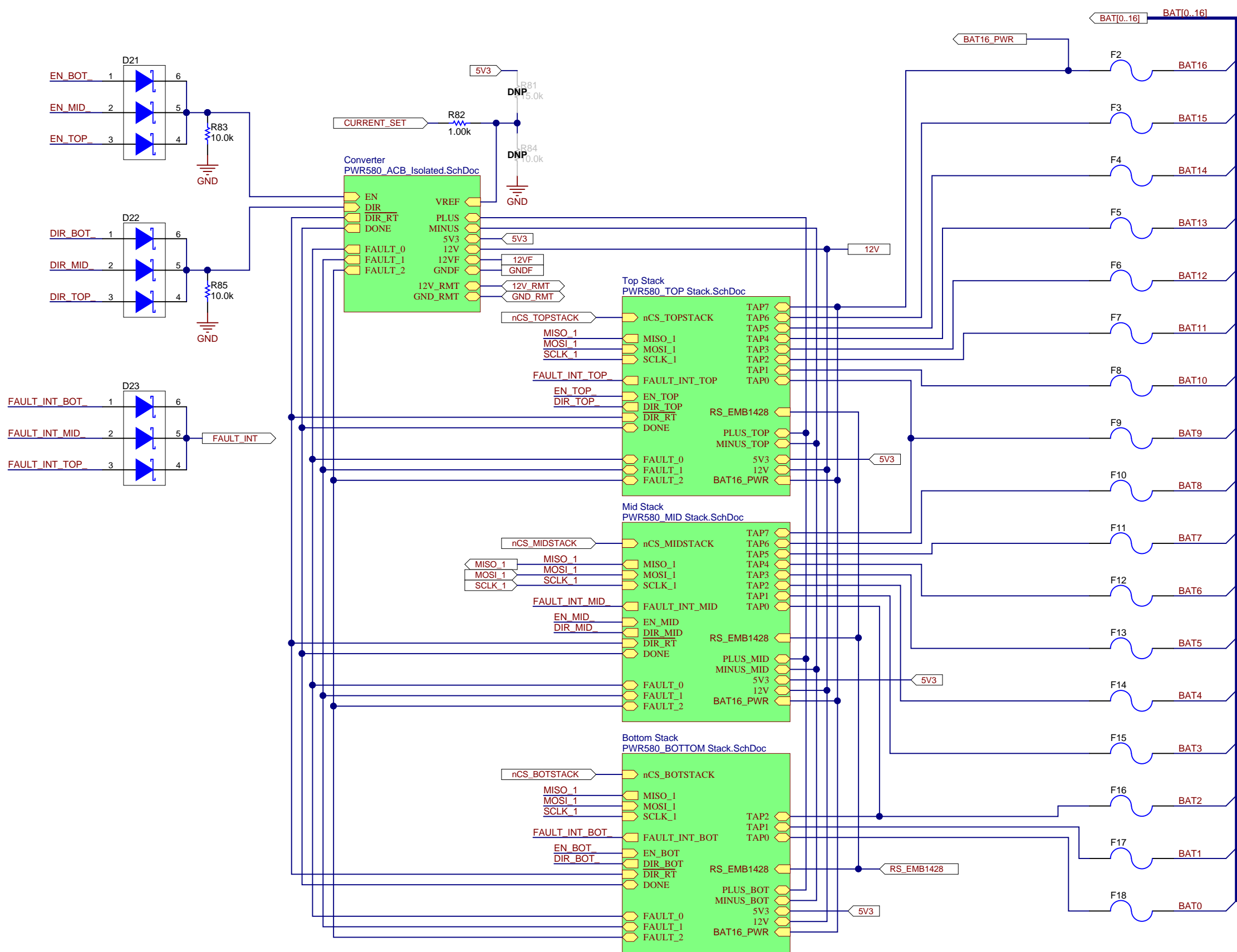
Orderable: EM1402EVM-580	Designed for: Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	Mod. Date: 1/25/2017
TID #: TIDA-00817	Rev: A	Sheet Title: Top Level (Cover Sheet)
Number: PWR580	SVN Rev: Version control disabled	Sheet: 1 of 11
Drawn By: Stephen Holland	File: PWR580_Top_Level.SchDoc	Size: B
Engineer: Stephen Holland	Contact: http://www.ti.com/support	© Texas Instruments 2016





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Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017	TEXAS INSTRUMENTS
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	Sheet Title: Cell Sensing (AFE)	
Number: PWR580	Rev: A	Assembly Variant: 001	Sheet: 2 of 11
SVN Rev: Version control disabled	File: PWR580_bq76PL455A-Q1.SchDoc	Contact: http://www.ti.com/support	Size: B
Drawn By: Stephen Holland	Engineer: Stephen Holland		http://www.ti.com



Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/23/2017
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	
Number: PWR580	Rev: A	Sheet Title: Engine (active cell balance top level)
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 3 of 11
Drawn By: Stephen Holland	File: PWR580_Engine.SchDoc	Size: B
Engineer: Stephen Holland	Contact: http://www.ti.com/support	

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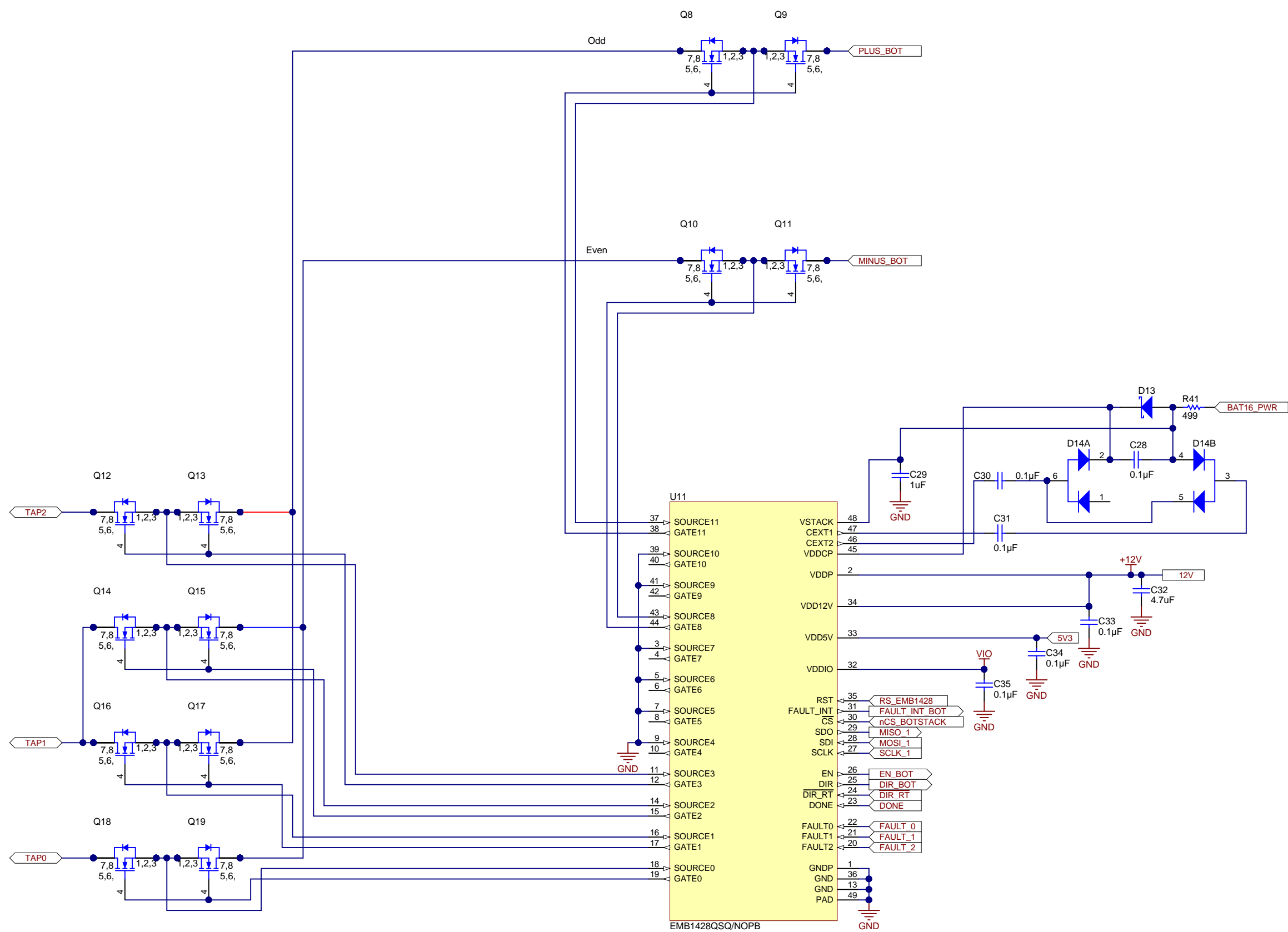
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A

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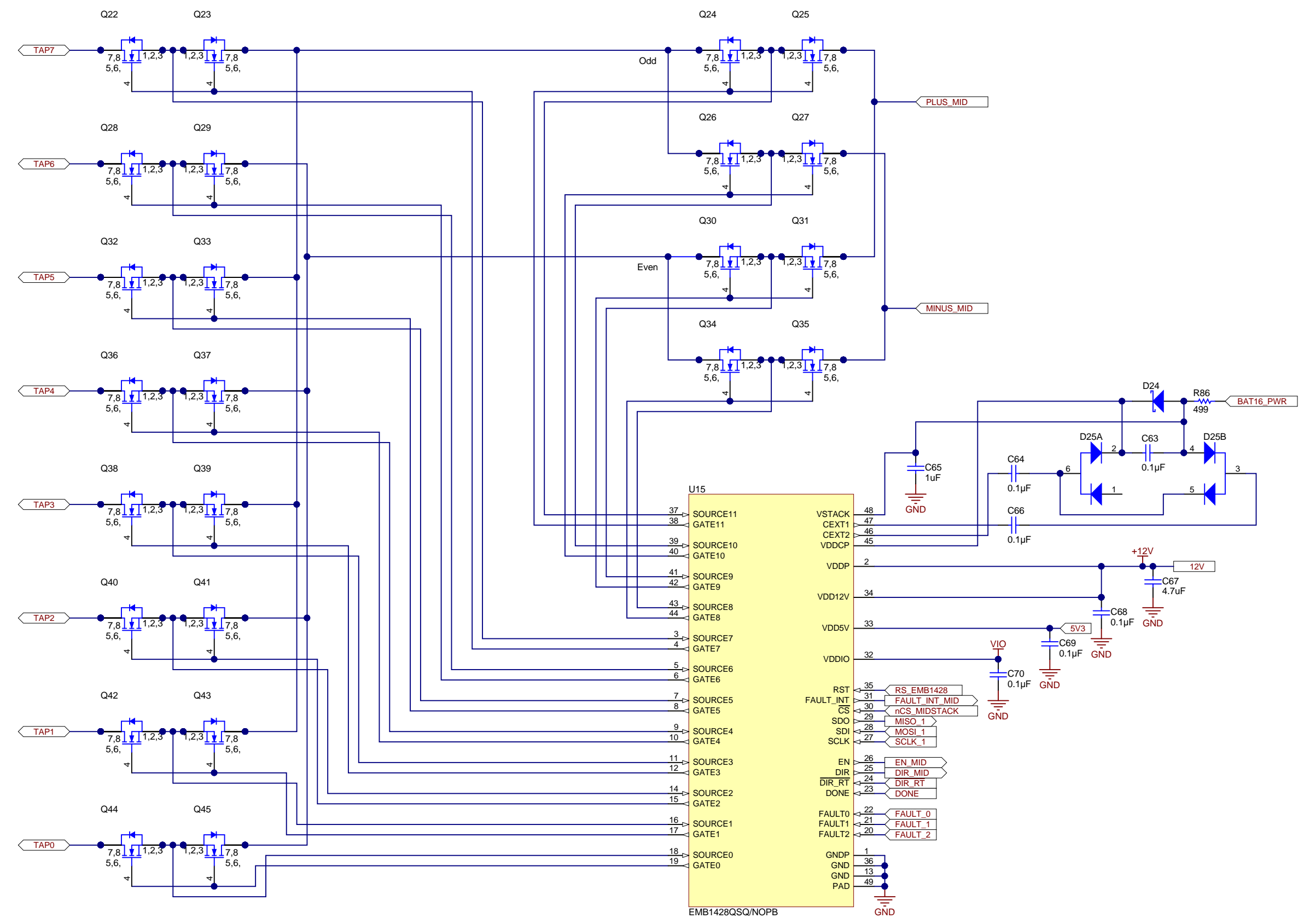
C

D



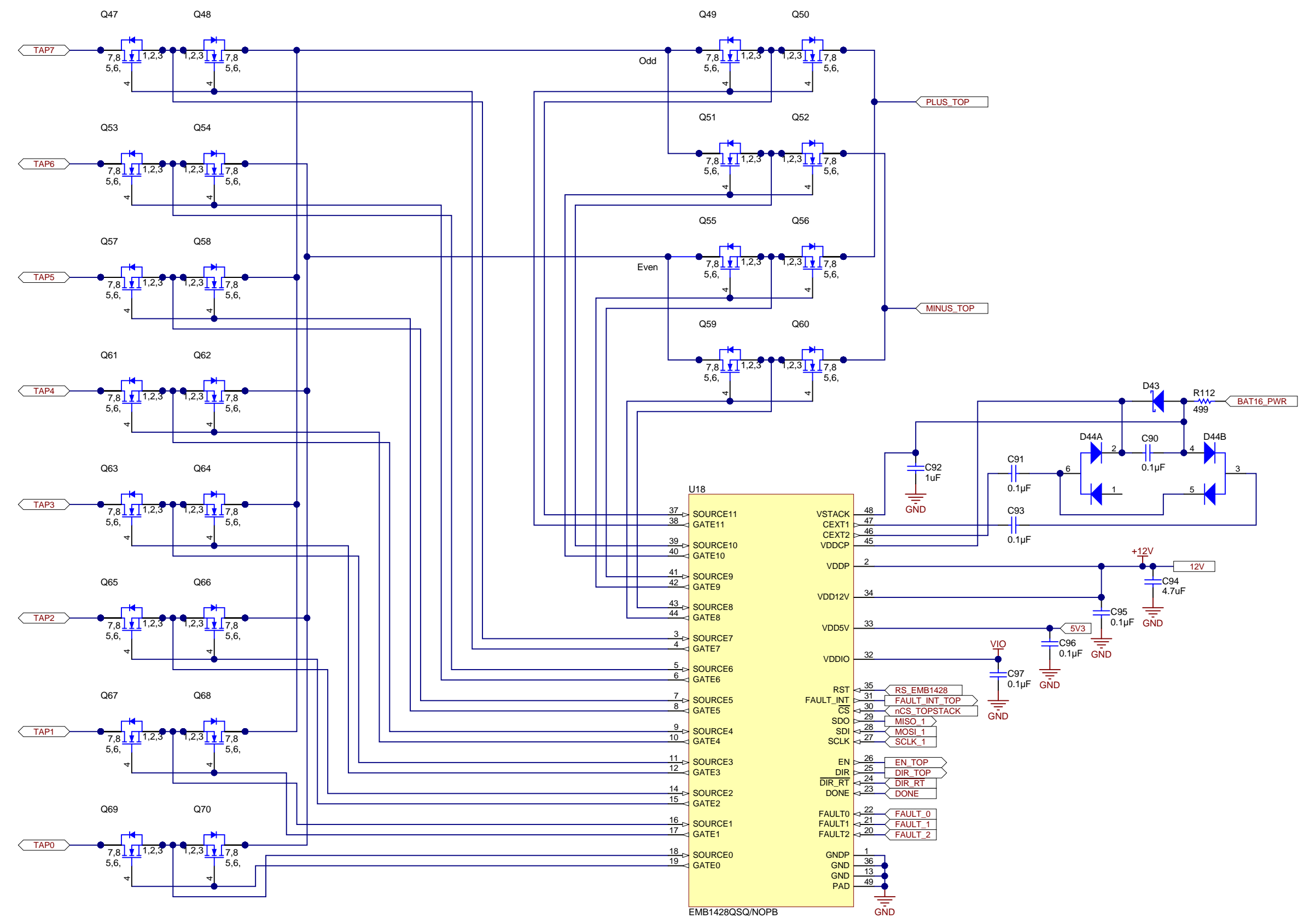
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Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017	
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	Sheet: 4 of 11	
Number: PWR580	Rev: A	Sheet Title: Bottom switch matrix	http://www.ti.com © Texas Instruments 2016
SVN Rev: Version control disabled	Assembly Variant: 001	Size: B	
Drawn By: Stephen Holland	File: PWR580_BOTTOM Stack.SchDoc	Contact: http://www.ti.com/support	
Engineer: Stephen Holland			



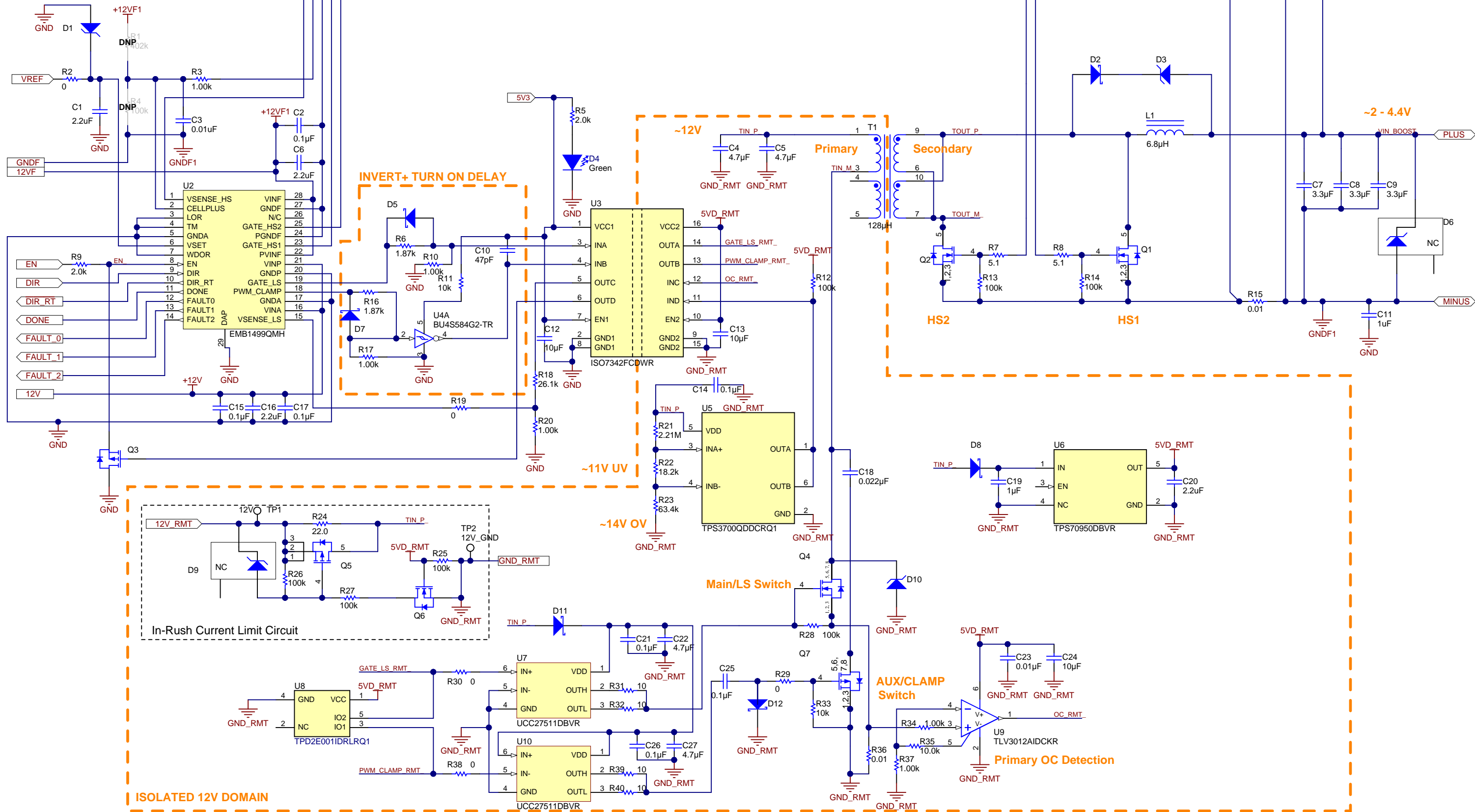
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Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017	
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB		
Number: PWR580	Rev: A	Sheet Title: Mid stack matrix	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 5 of 11	
Drawn By: Stephen Holland	File: PWR580_MID Stack.SchDoc	Size: B	http://www.ti.com
Engineer: Stephen Holland	Contact: http://www.ti.com/support		© Texas Instruments 2016



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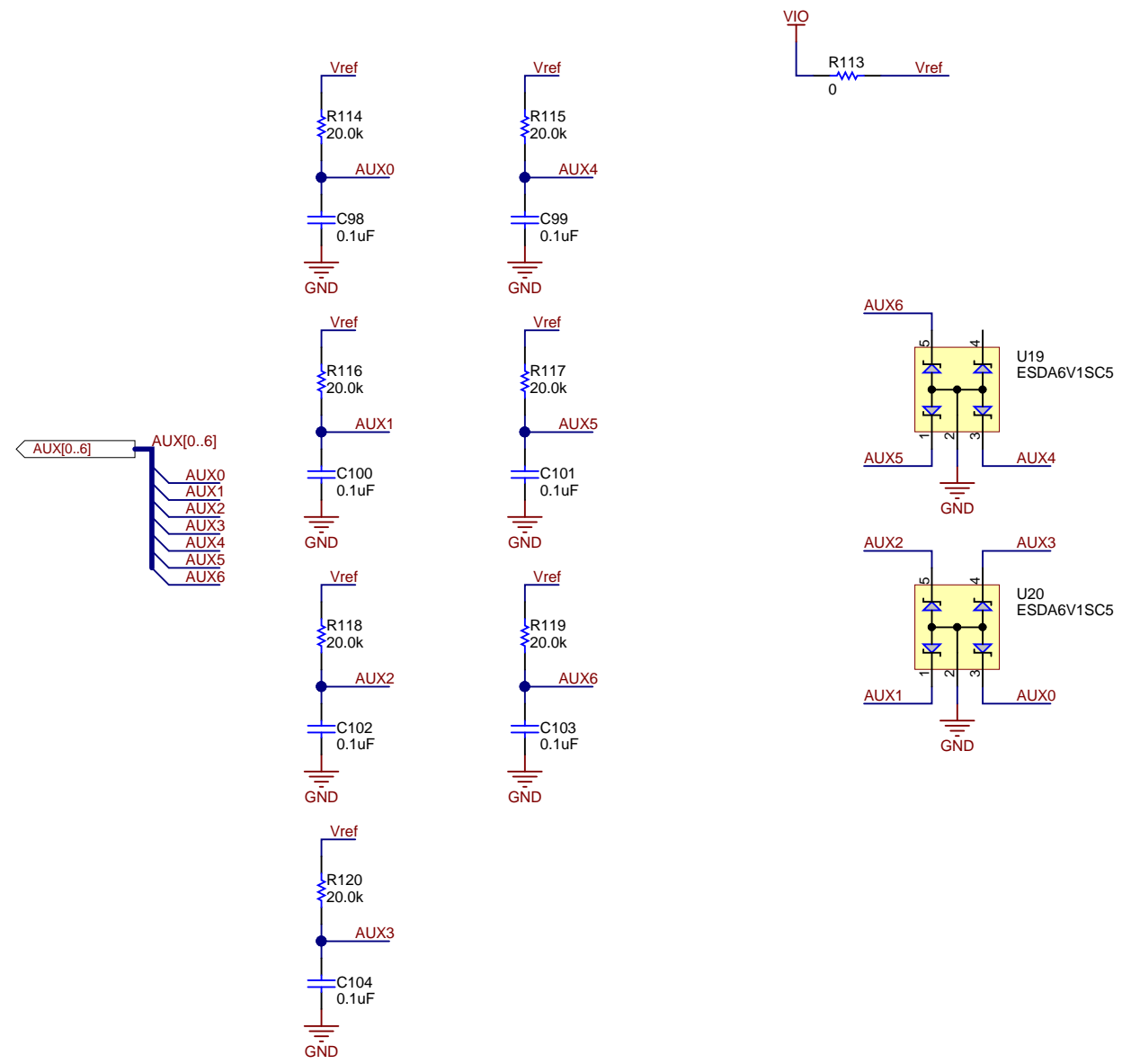
Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017	
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	Sheet Title: Top switch matrix	
Number: PWR580	Rev: A	Assembly Variant: 001	Sheet: 6 of 11
Drawn By: Stephen Holland	File: PWR580_TOP Stack.SchDoc	Size: B	http://www.ti.com
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Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	
Number: PWR580	Rev: A	Sheet Title: Converter (PWM controller)
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 7 of 11
Drawn By: Stephen Holland	File: PWR580_ACB_Isolated.SchDoc	Size: B
Engineer: Stephen Holland	Contact: http://www.ti.com/support	

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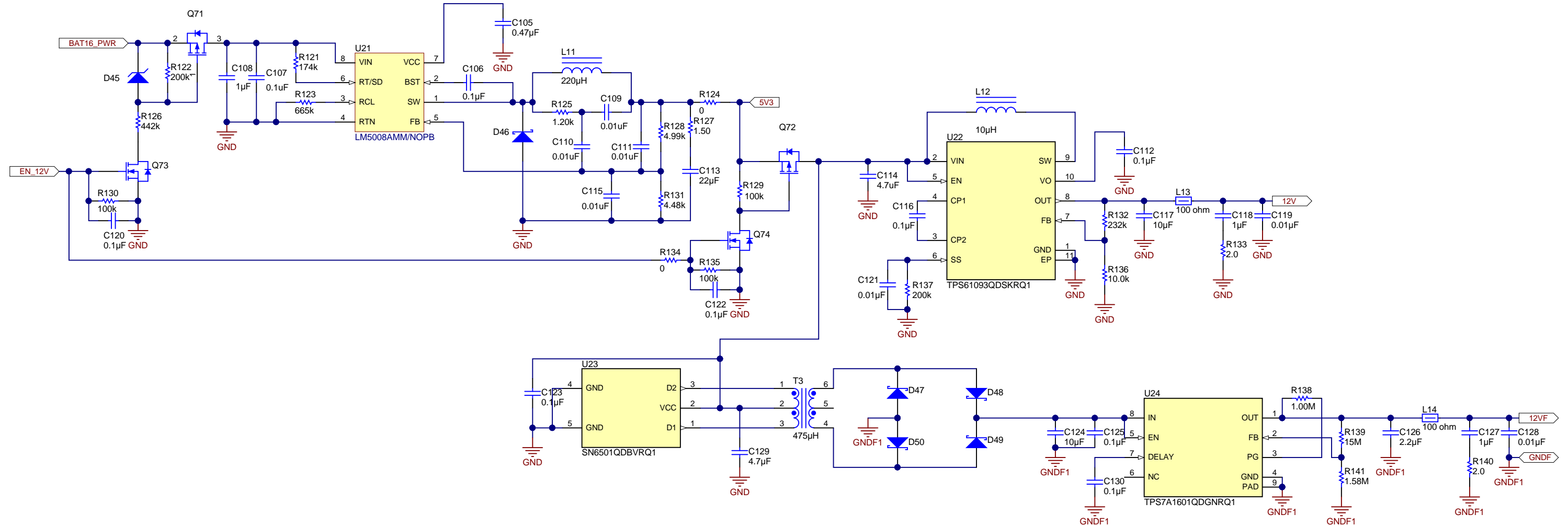




Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	
Number: PWR580	Rev: A	Sheet Title: Temp Sense
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 8 of 11
Drawn By: Stephen Holland	File: PWR580_TS.SchDoc	Size: B
Engineer: Stephen Holland	Contact: http://www.ti.com/support	

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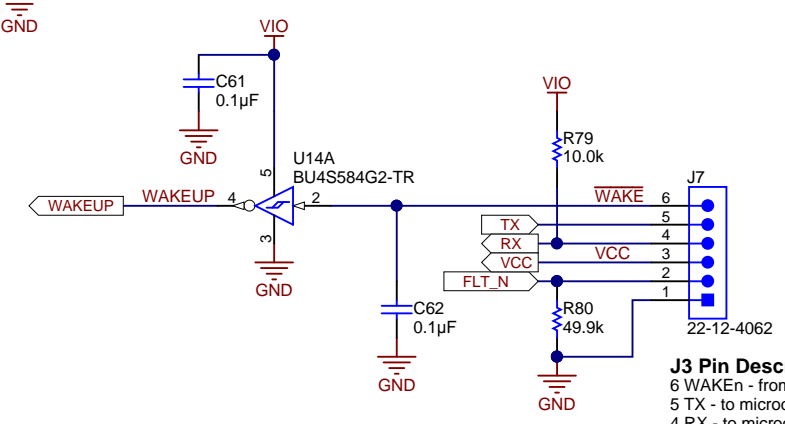
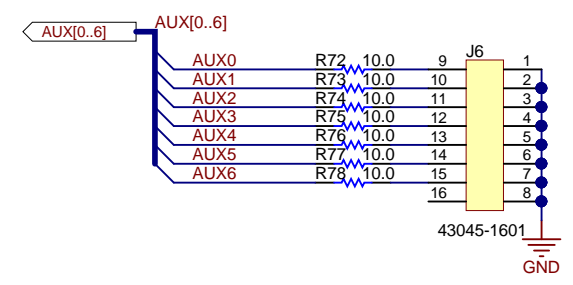
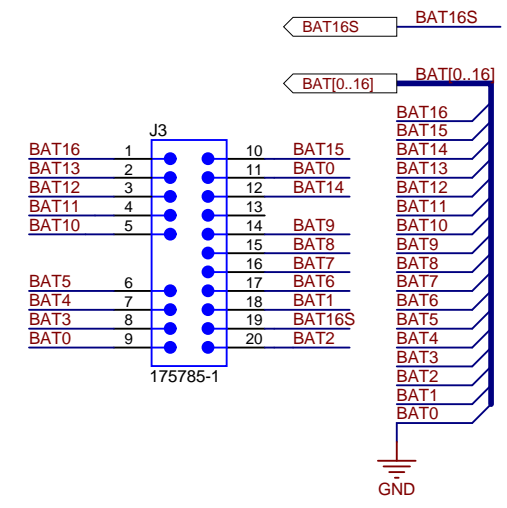
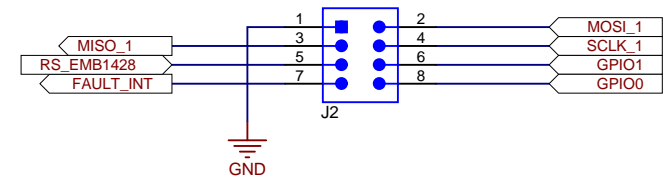
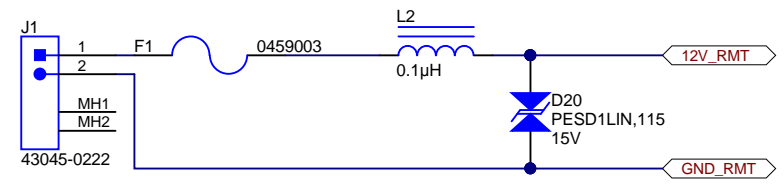


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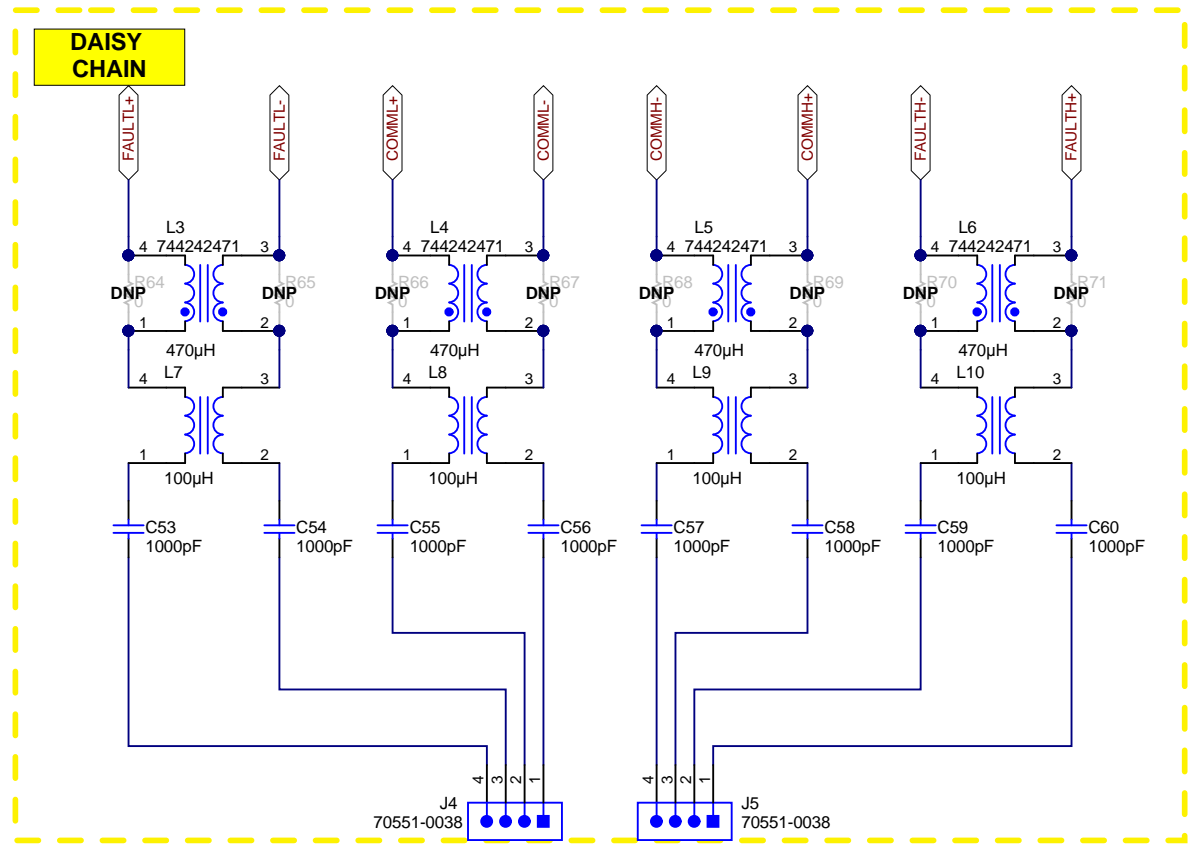
Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/26/2017
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	
Number: PWR580	Rev: A	Sheet Title: Power Supplies
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 9 of 11
Drawn By: Stephen Holland	File: PWR580_VR_Buck_SN6501.SchDoc	Size: B
Engineer: Stephen Holland	Contact: http://www.ti.com/support	



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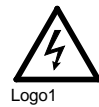
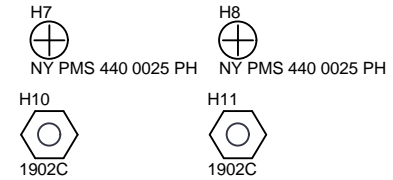
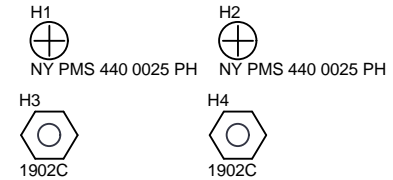
J3 Pin Description
 6 WAKEn - from microcontroller GPIO
 5 TX - to microcontroller UART RX
 4 RX - to microcontroller UART TX
 3 VCC - from microcontroller IOVCC
 2 FAULTn - to microcontroller GPIO
 1 GND - shared GND with microcontroller



Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	
Number: PWR580	Rev: A	Sheet Title: Connectors
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 10 of 11
Drawn By: Stephen Holland	File: PWR580_Connectors.SchDoc	Size: B
Engineer: Stephen Holland	Contact: http://www.ti.com/support	

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ZZ1
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ2
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

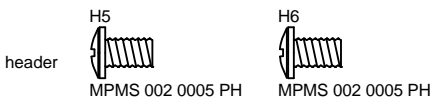
ZZ3
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

ZZ4
Assembly Note
USB Serial Cable
FTDI
TTL-232R-5V

ZZ5
Assembly Note
Screws H9 and H10 are for the J1 header

ZZ6
Assembly Note
Battery Cable Pigtail
Texas Instruments
PWR580A_Battery_Cable

ZZ8
Assembly Note
12V Cable Pigtail
Texas Instruments
PWR580A_12V_Cable



ZZ7
Assembly Note
H11 is an empty plug to be inserted in J4

ZZ9
Assembly Note
H12 is an empty plug to be inserted in J5

H9
MECH
50-57-9404

H12
MECH
50-57-9404

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Orderable: EM1402EVM-580	Designed for:	Mod. Date: 1/25/2017	
TID #: TIDA-00817	Project Title: EM1402 - 16 Channel Monitor, Protector and ACB	Sheet: 11 of 11	
Number: PWR580	Rev: A	File: PWR580_Hardware.SchDoc	Size: B
SVN Rev: Version control disabled	Assembly Variant: 001	Contact: http://www.ti.com/support	http://www.ti.com
Drawn By: Stephen Holland	Engineer: Stephen Holland	© Texas Instruments 2016	

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