

# OBC LLC 10 kW

**Resonant tank board (external)**

<b>OBC LLC switch board</b>		Assembly variant:	State:
<i>Top level diagram</i>		<i>standard_board</i>	<i>released</i>
Revision: 0.1	Repository revision: 1251		<b>ON Semiconductor</b> Solution Engineering Center Piešťany
Engineer: Stefan Kosterec	25.Sep 2018 20:18		
File: OBC_LLC_switch_board.SchDoc	1/10		



A

B

C

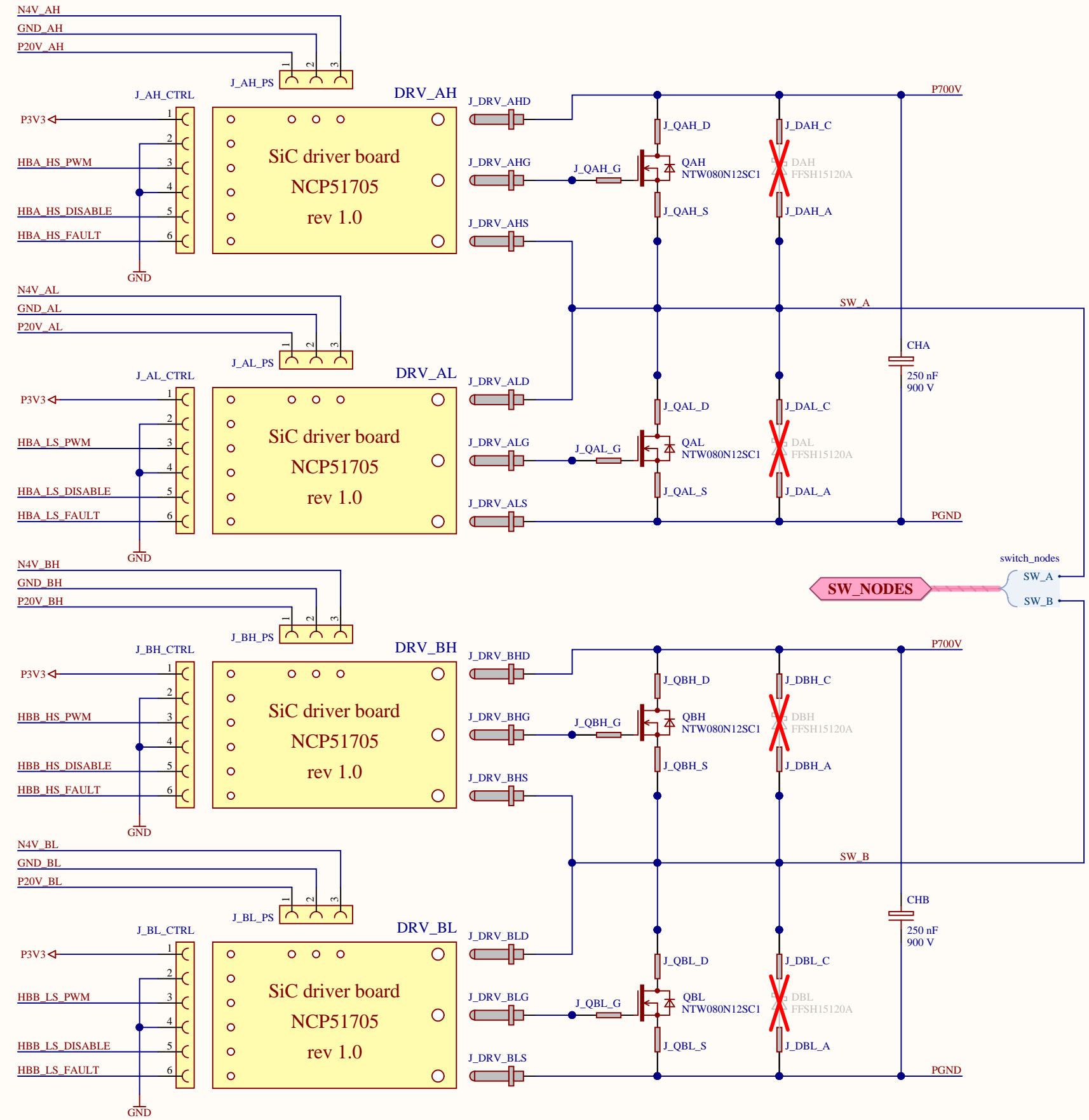
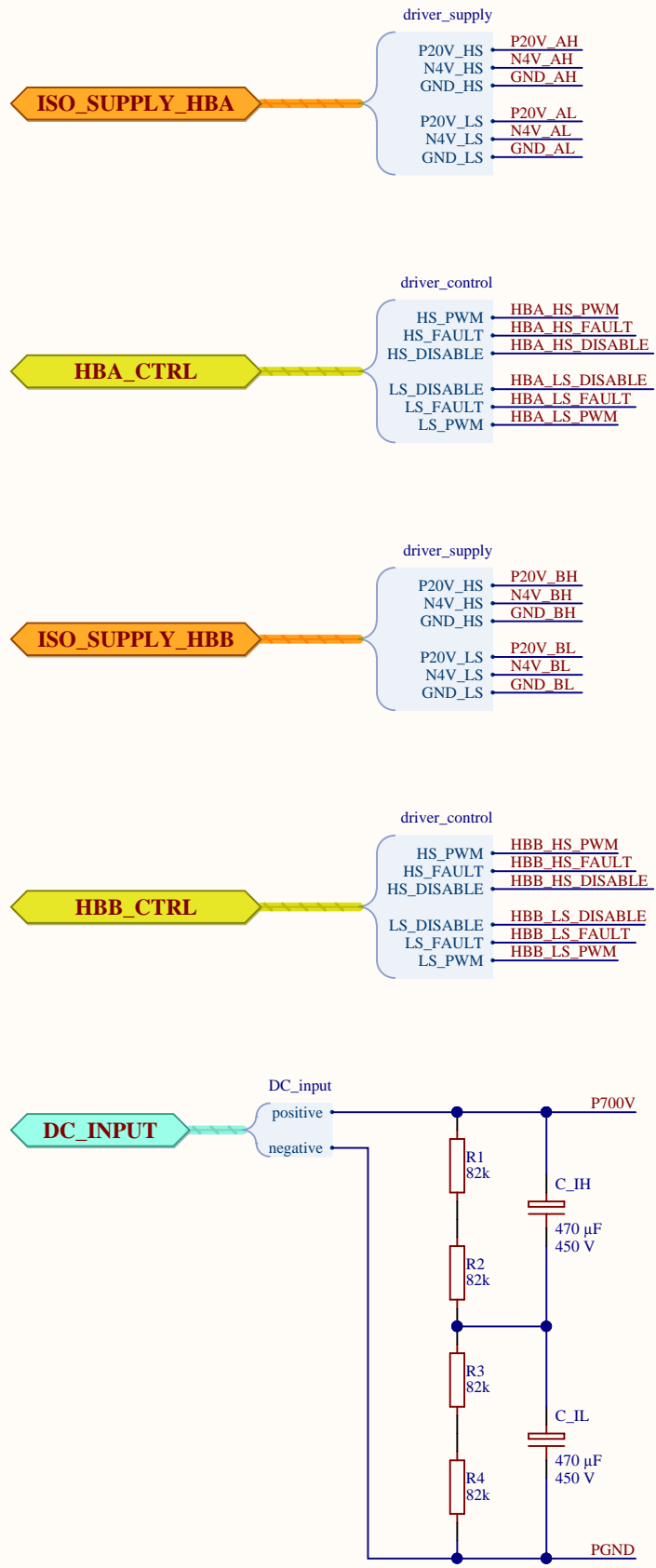
D

A

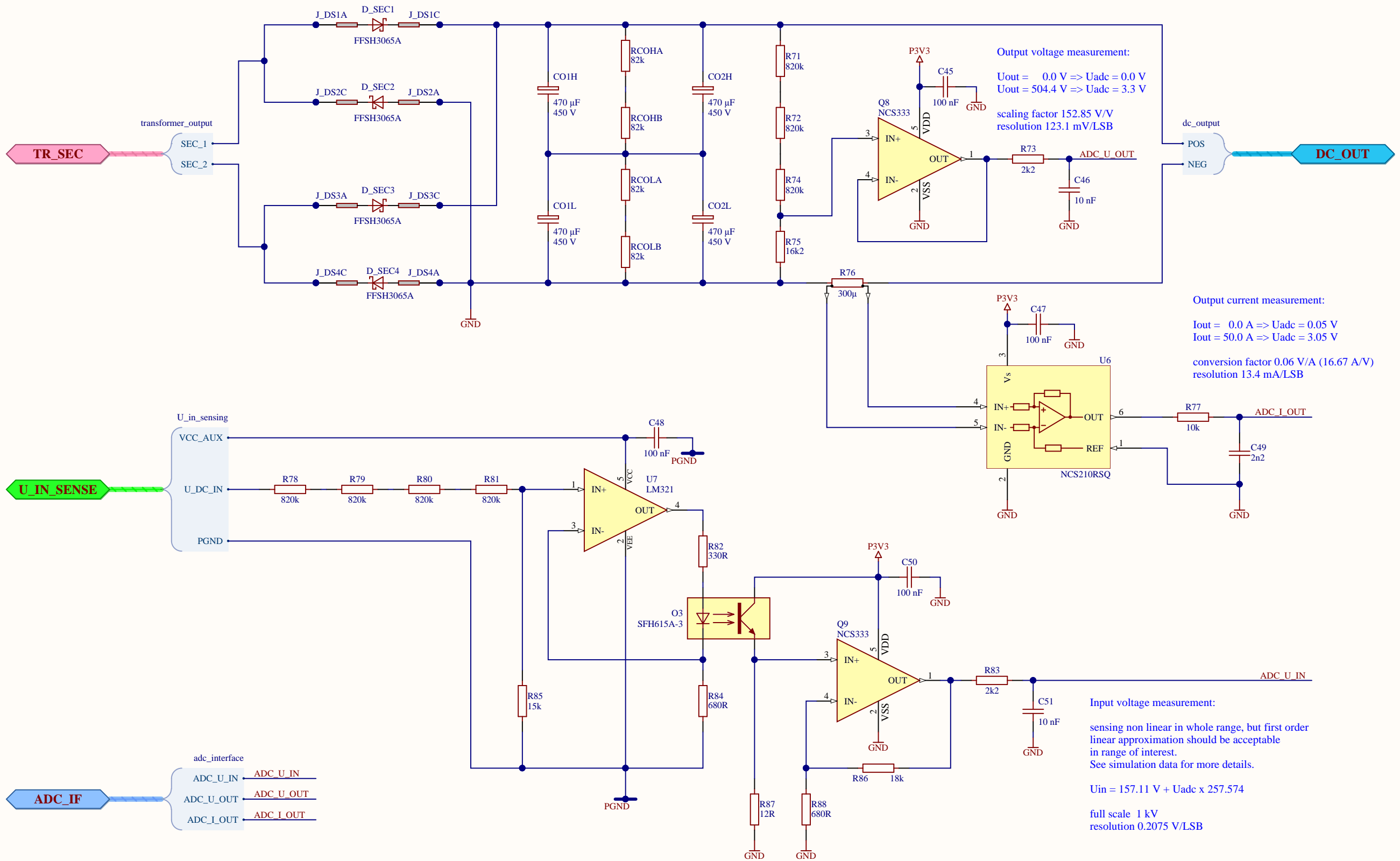
B

C

D

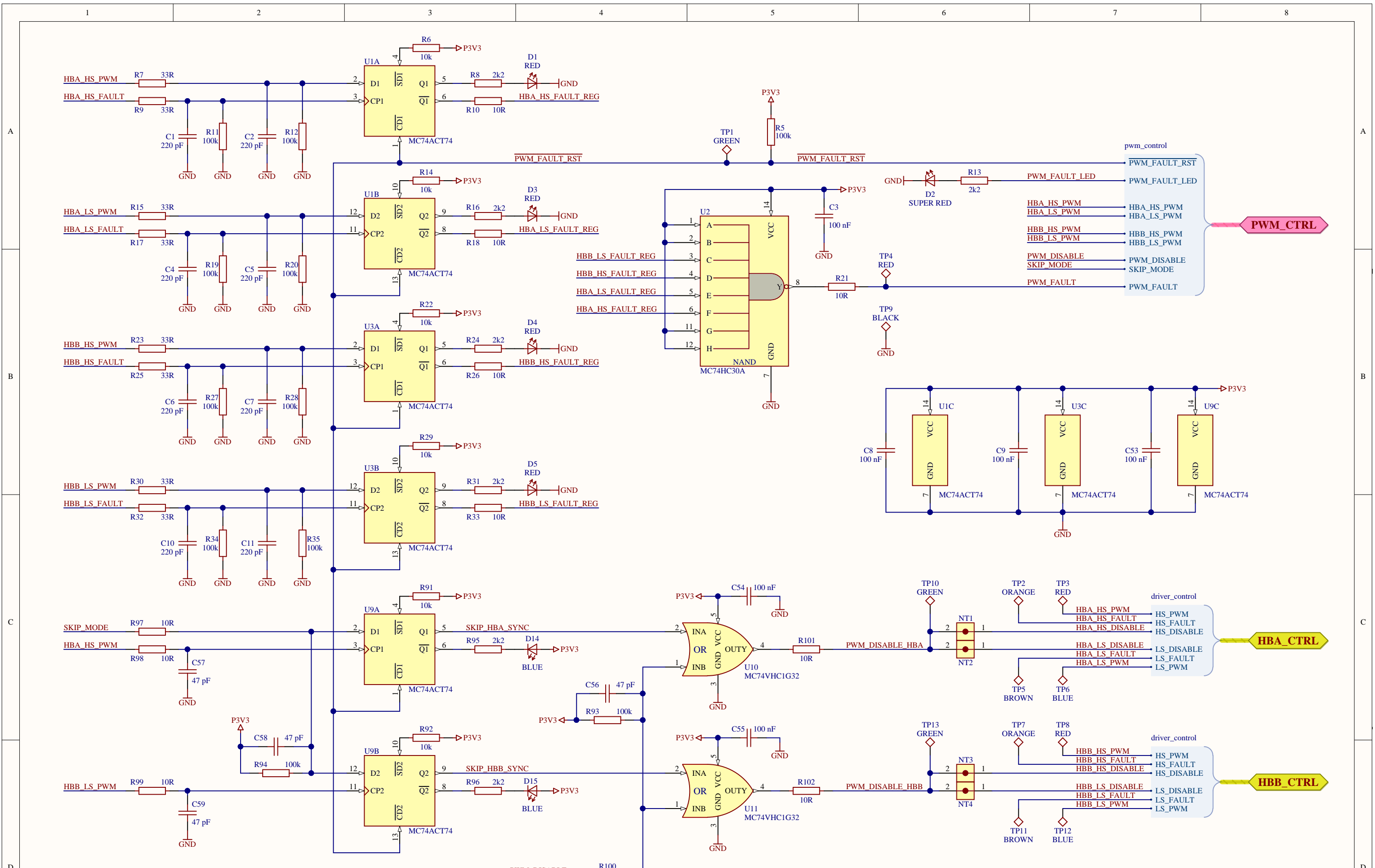


<b>OBC LLC switch board</b>		Assembly variant:	State:
Power stage		standard_board	released
Revision: 0.1	Repository revision: 1251		<b>ON Semiconductor</b> Solution Engineering Center Piešťany
Engineer: Stefan Kosterec	13.Sep 2018 15:56		
File: power_stage.SchDoc	2/10		



<b>OBC LLC switch board</b>		Assembly variant:	State:
Rectifier		standard_board	released
Revision: 0.1	Repository revision: 1251		<b>ON Semiconductor</b> Solution Engineering Center Piešťany
Engineer: Stefan Kosterec	25.Sep 2018 18:28		
File: rectifier.SchDoc	3/10		

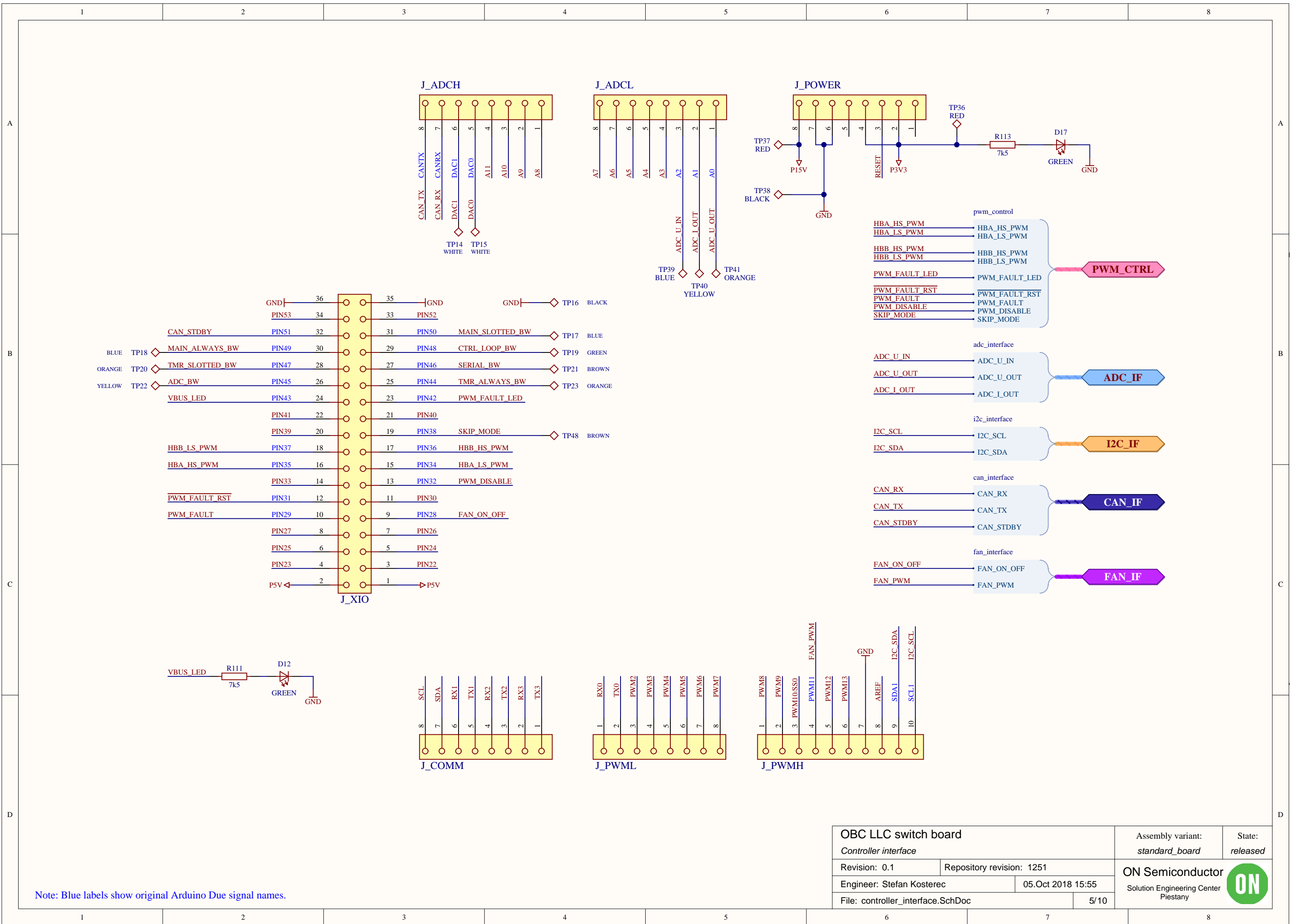




<b>OBC LLC switch board</b>		Assembly variant:	State:
<i>Drivers interconnection, fault protection logic</i>		<i>standard_board</i>	<i>released</i>
Revision: 0.1	Repository revision: 1251	<b>ON Semiconductor</b> Solution Engineering Center Piešťany	
Engineer: Stefan Kosterec	05.Oct 2018 12:44		
File: drivers_interconnection.SchDoc	4/10		



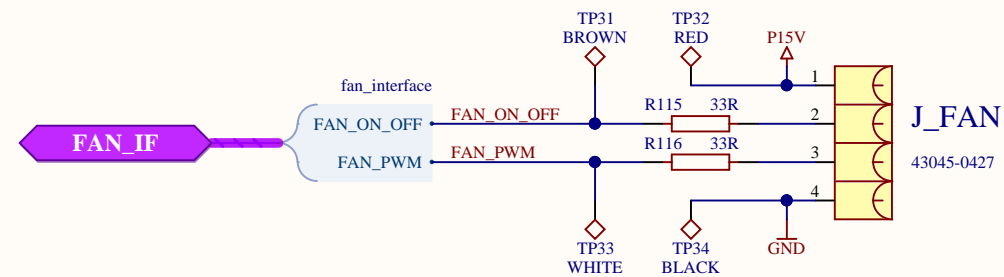
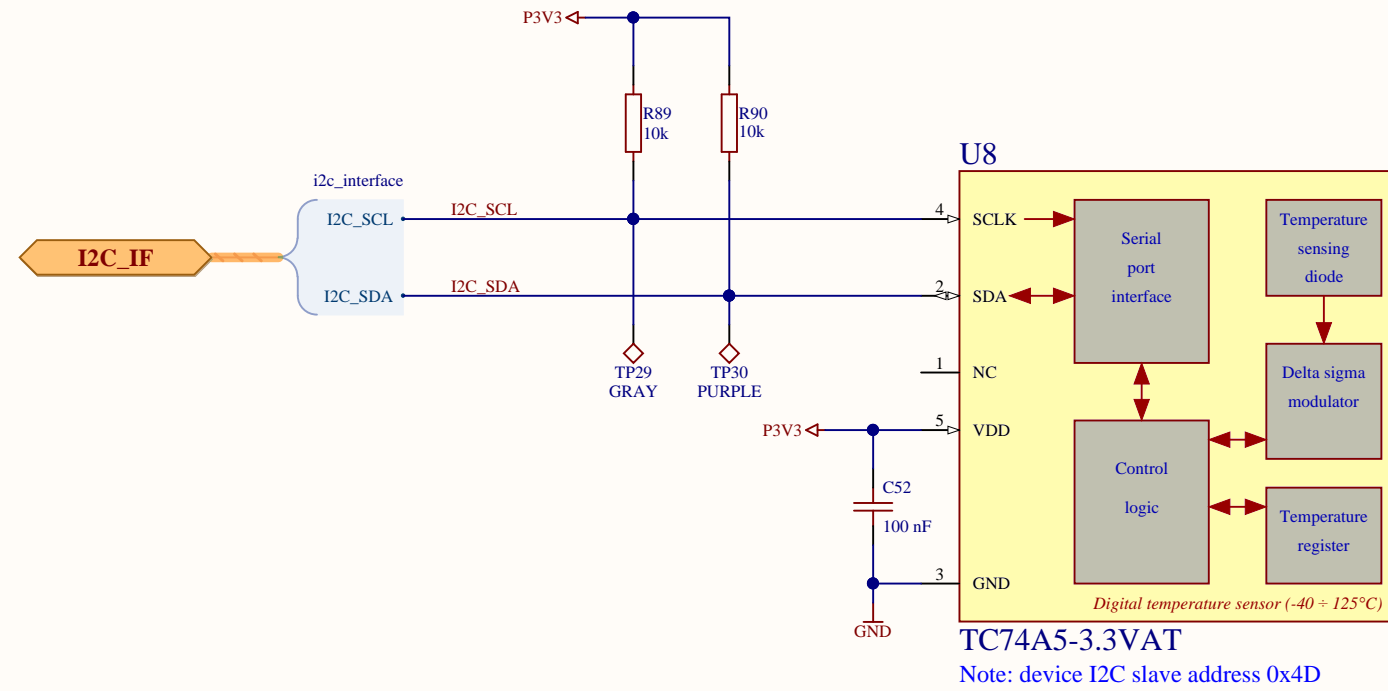
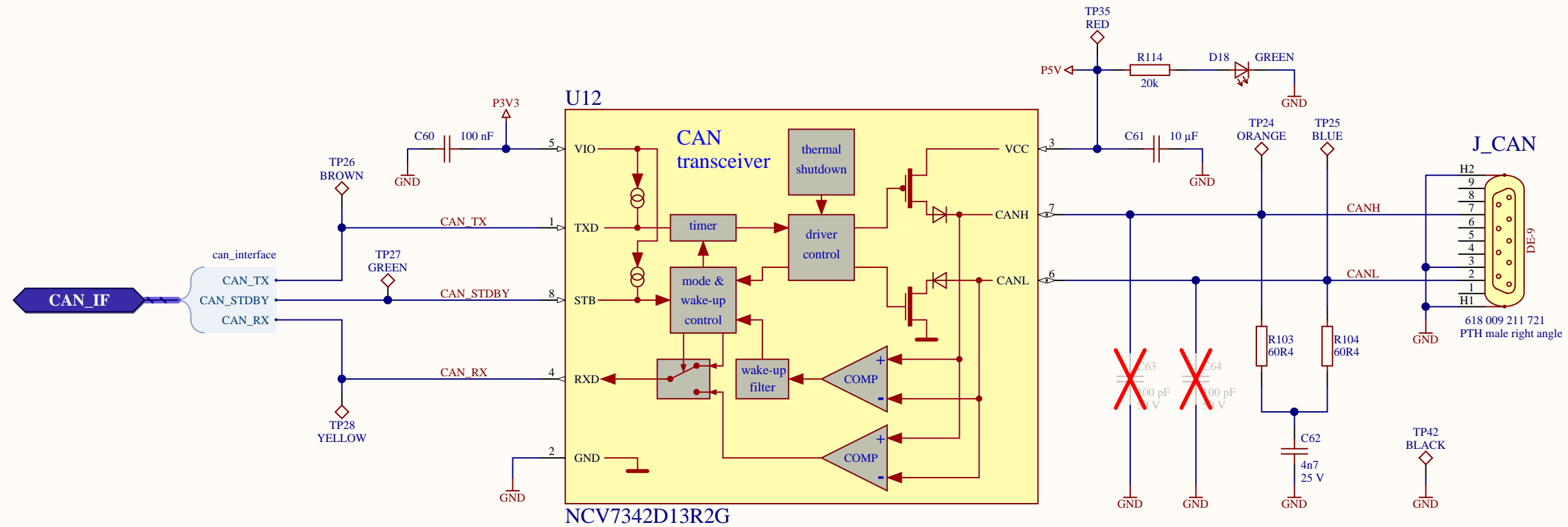




Note: Blue labels show original Arduino Due signal names.

<b>OBC LLC switch board</b>		Assembly variant: <i>standard_board</i>	State: <i>released</i>
Controller interface			
Revision: 0.1	Repository revision: 1251		
Engineer: Stefan Kosterec	05.Oct 2018 15:55		
File: controller_interface.SchDoc	5/10		
		<b>ON Semiconductor</b> Solution Engineering Center Piestany	

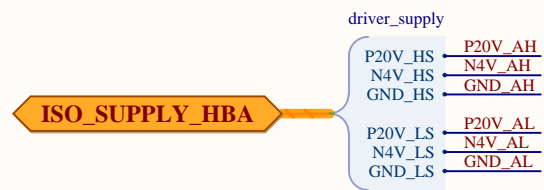
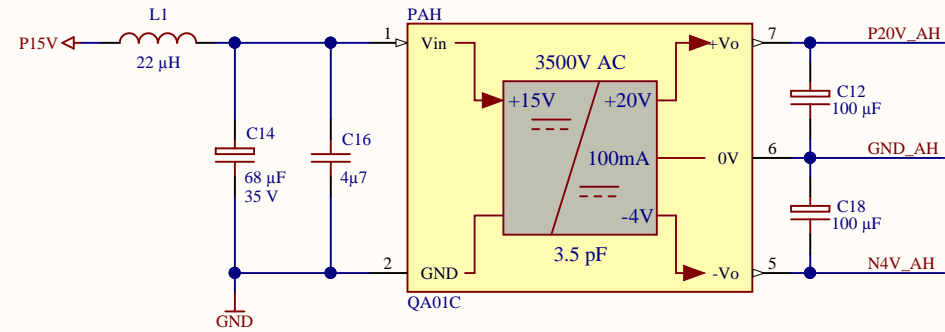




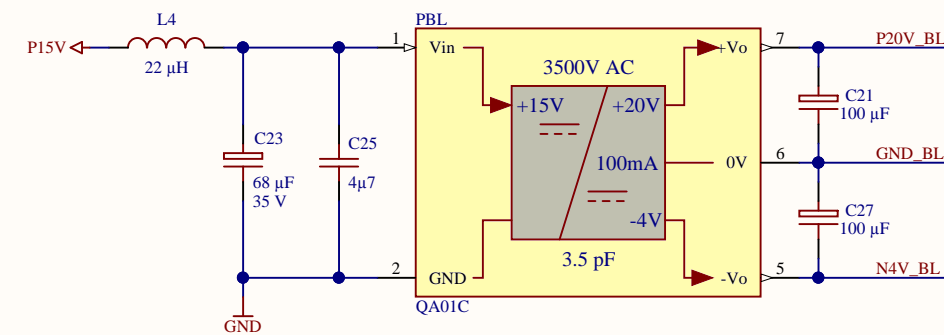
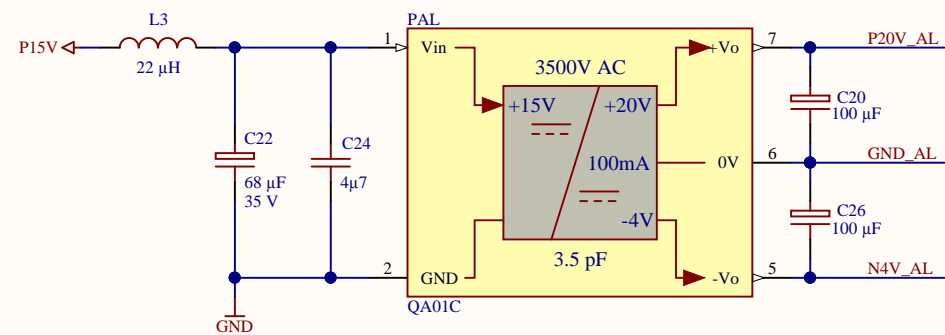
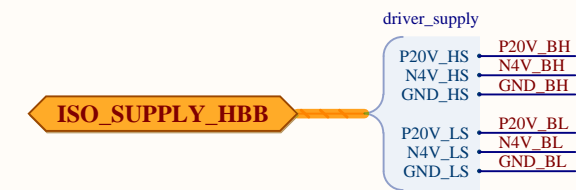
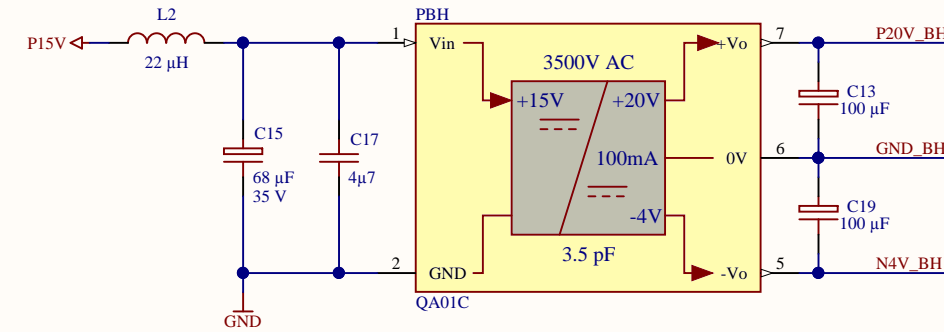
OBC LLC switch board		Assembly variant:	State:
Temperature sensing and CAN bus interface		standard_board	released
Revision: 0.1	Repository revision: 1251	<b>ON Semiconductor</b> Solution Engineering Center Piešťany	
Engineer: Stefan Kosterec	25.Sep 2018 20:33		
File: can_and_temperature.SchDoc	6/10		



supply for  
halfbridge A  
drivers

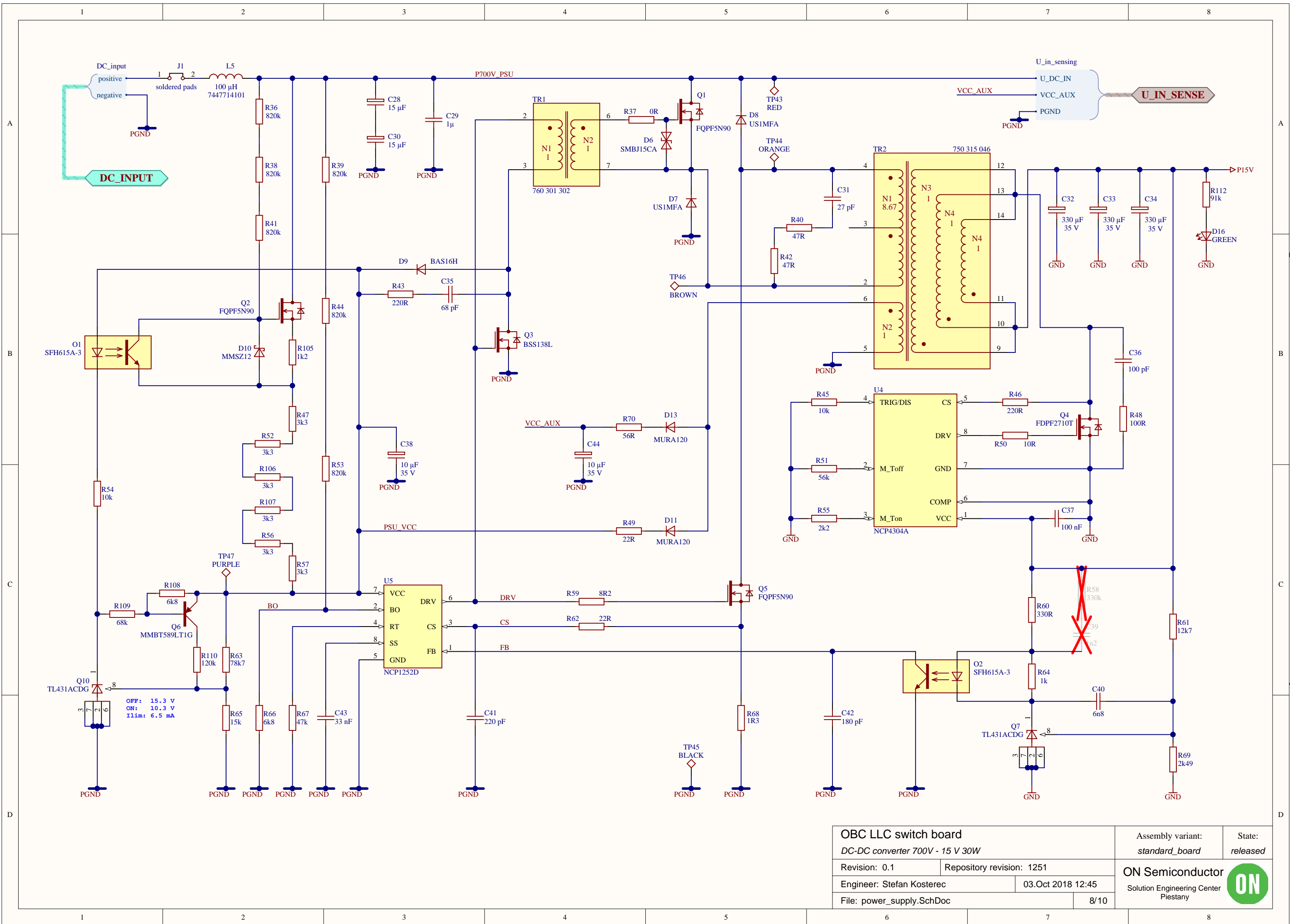


supply for  
halfbridge B  
drivers



OBC LLC switch board		Assembly variant:	State:
Insulated DC-DC converters for MOSFET drivers		standard_board	released
Revision: 0.1	Repository revision: 1251	ON Semiconductor	
Engineer: Stefan Kosterec	12.Sep 2018 11:26	Solution Engineering Center	
File: power_supply_drivers.SchDoc	7/10	Piešťany	





**OBC LLC switch board**

DC-DC converter 700V - 15 V 30W

Revision: 0.1

Repository revision: 1251

Engineer: Stefan Kosterec

03.Oct 2018 12:45

File: power\_supply.SchDoc

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Assembly variant:

standard\_board

State:

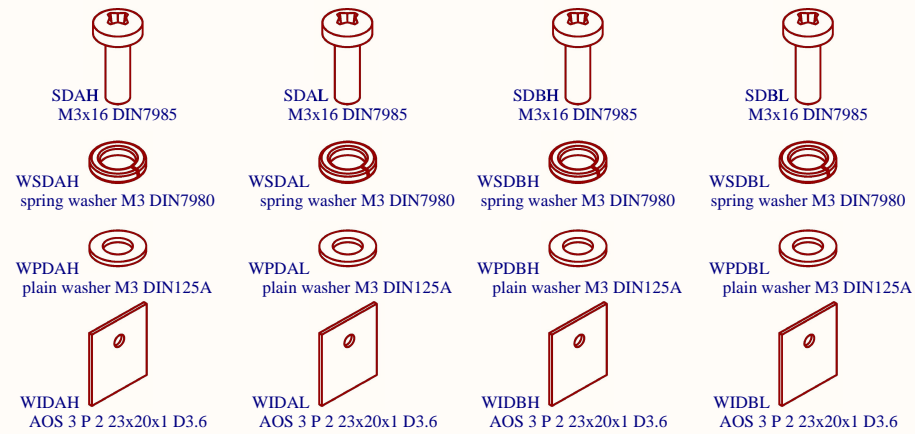
released

**ON Semiconductor**

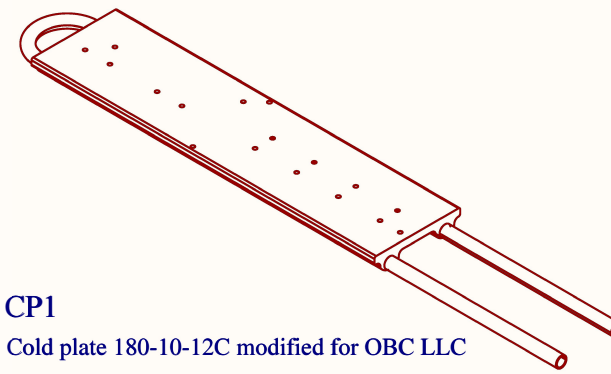
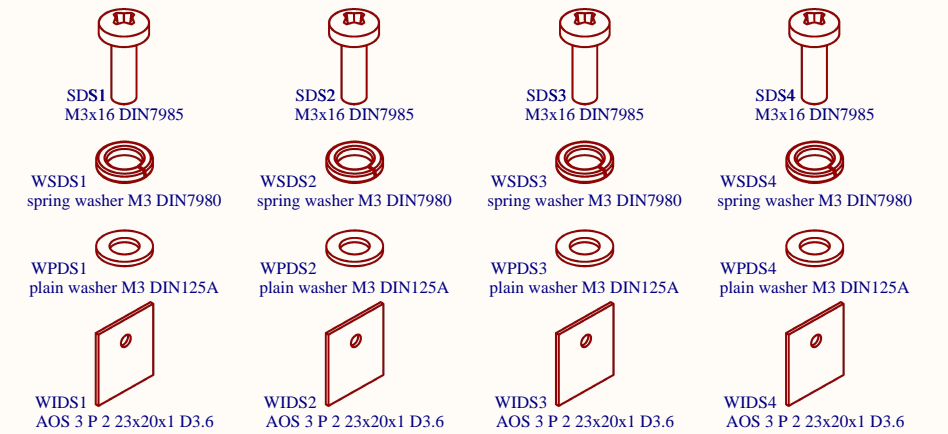
Solution Engineering Center  
Piestany



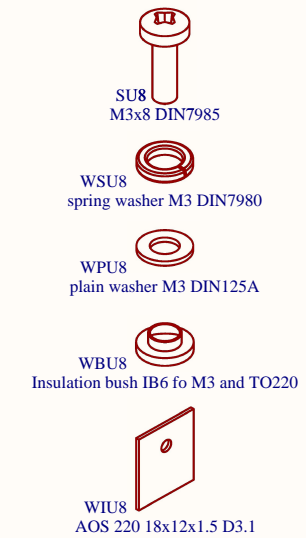
### Primary side SiC diodes fixing set



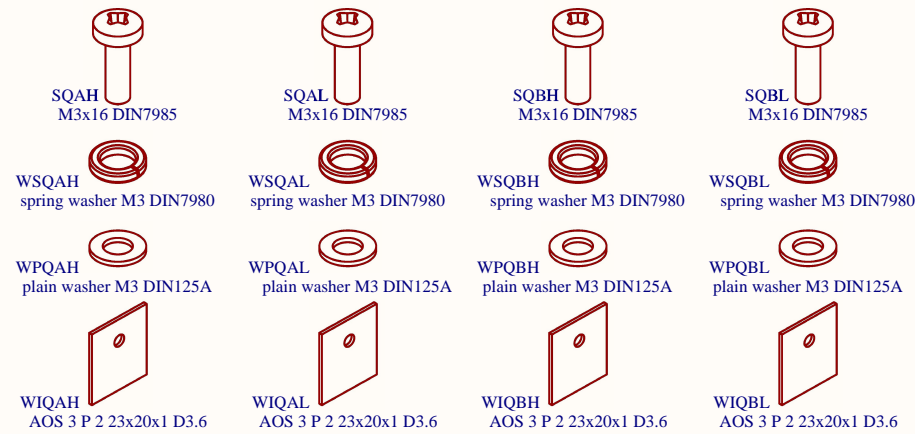
### Rectifier diodes fixing set



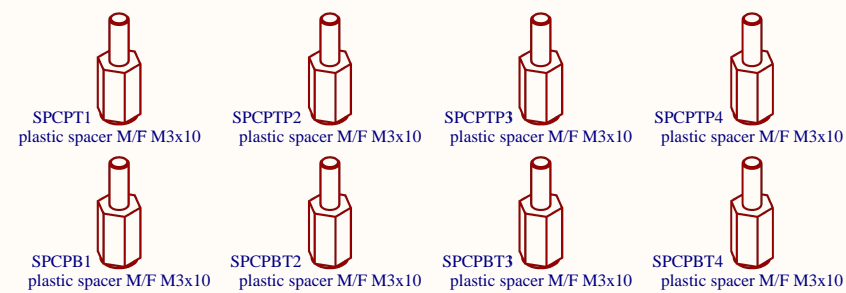
### Temperature sensor fixing set



### Primary side SiC MOSFETs fixing set



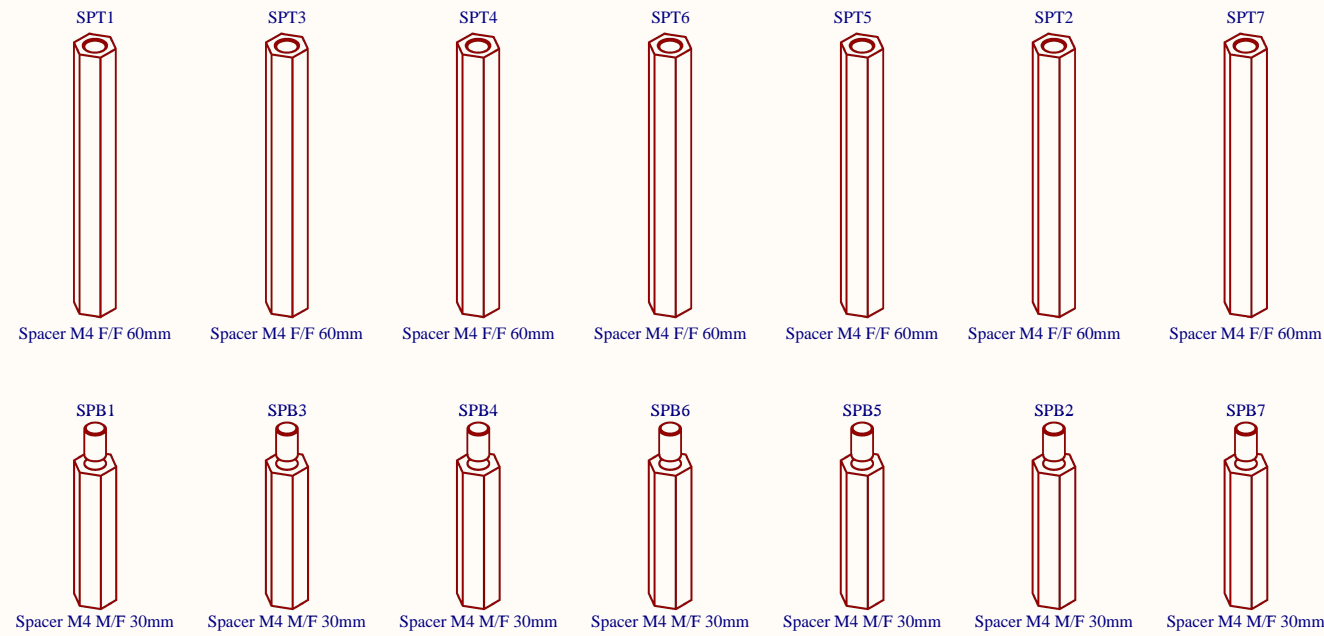
### Cold plate to PCB fixing set



S1\_top  
ON  
ON symbol

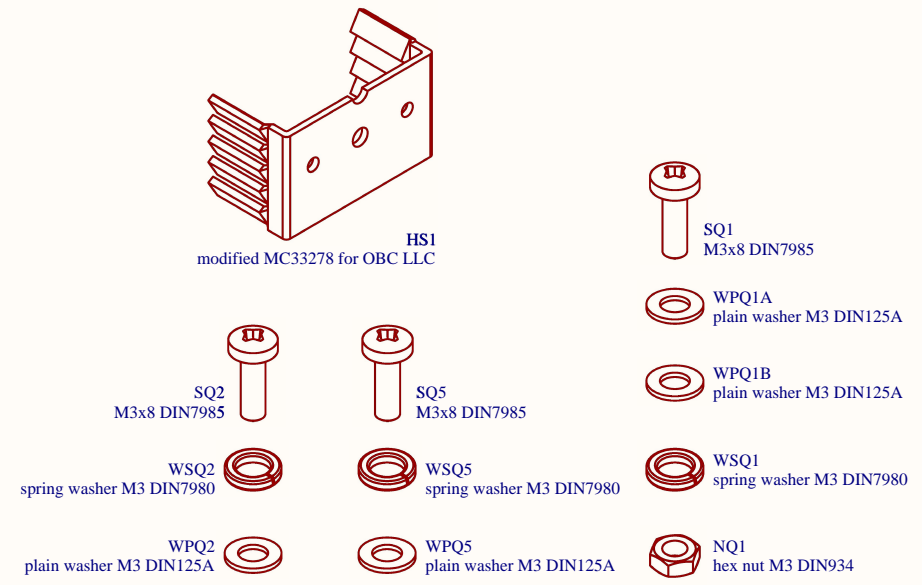
OBC LLC switch board		Assembly variant:	State:
Cold plate related mechanical parts		standard_board	released
Revision: 0.1	Repository revision: 1251	ON Semiconductor	
Engineer: Stefan Kosterec	12.Sep 2018 08:09	Solution Engineering Center	
File: cold_plate_mechanical_parts.SchDoc	9/10	Piešťany	

## Board support set

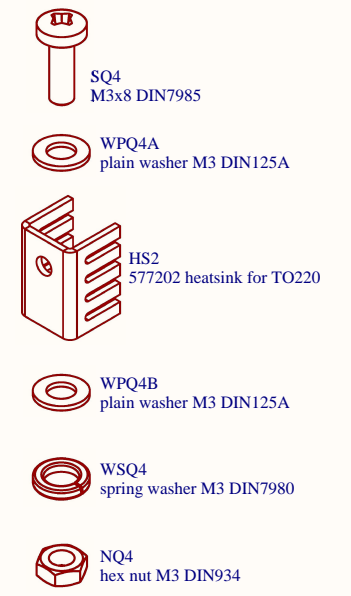


## DC-DC converter 700 V / 15 V

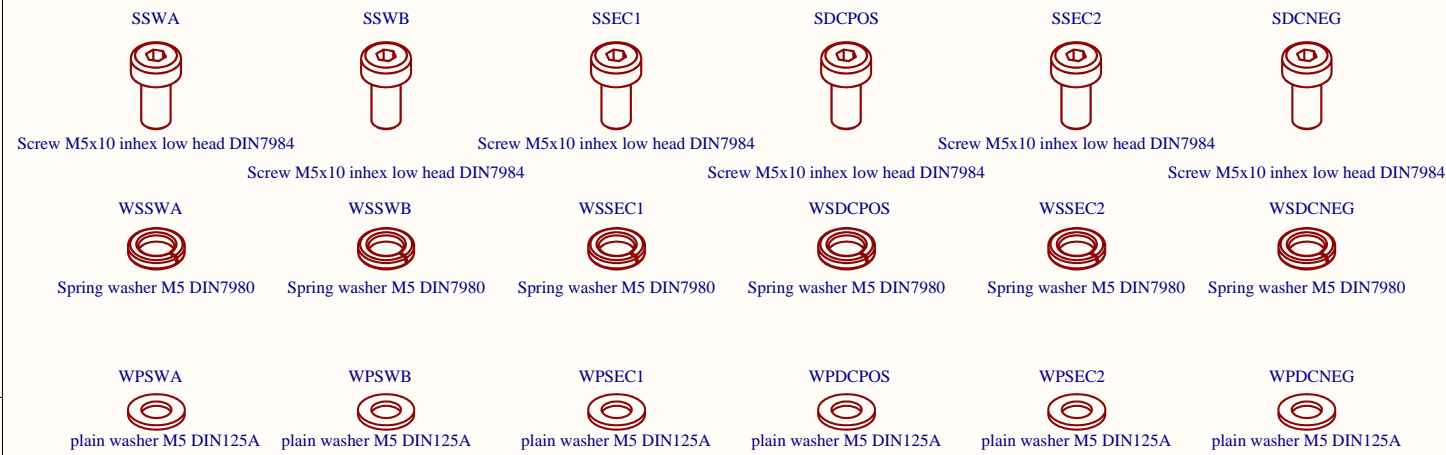
### primary side heatsink



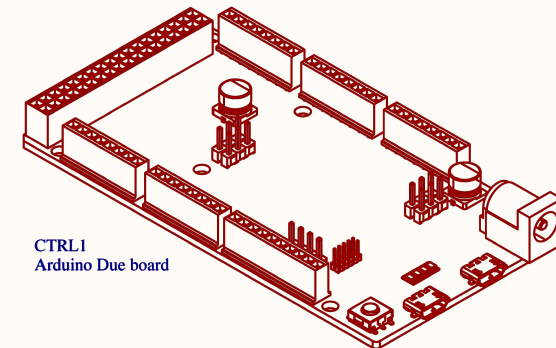
### rectifier heatsink



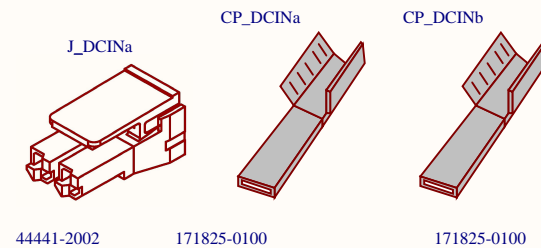
## High current terminals accessories



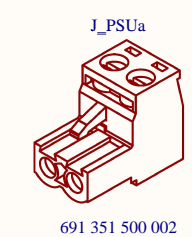
## Controller board



## DC input connector set



## DC15V I/O connector



OBC LLC switch board		Assembly variant:	State:
Mechanical and enclosed parts		standard_board	released
Revision: 0.1	Repository revision: 1251		ON Semiconductor Solution Engineering Center Piestany
Engineer: Stefan Kosterec	02.Oct 2018 15:21		
File: board_mechanical_parts.SchDoc	10/10		

