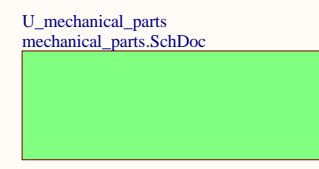
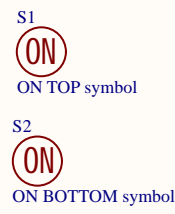
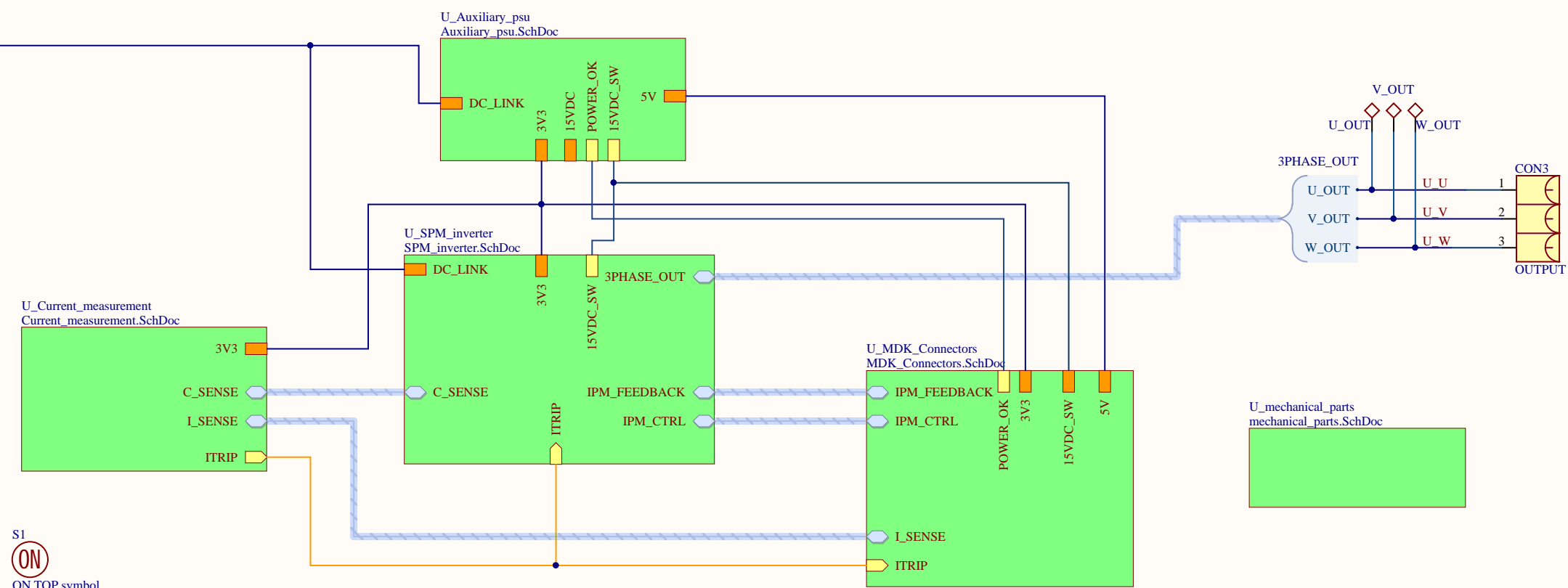
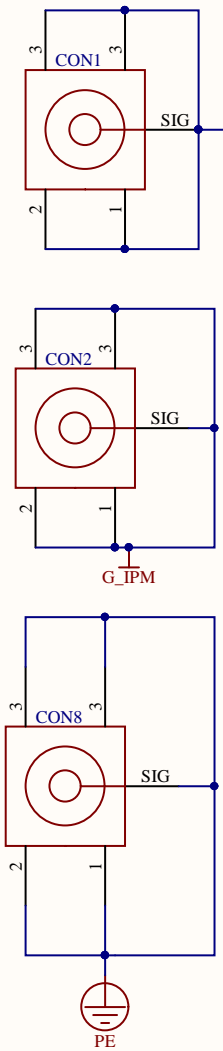
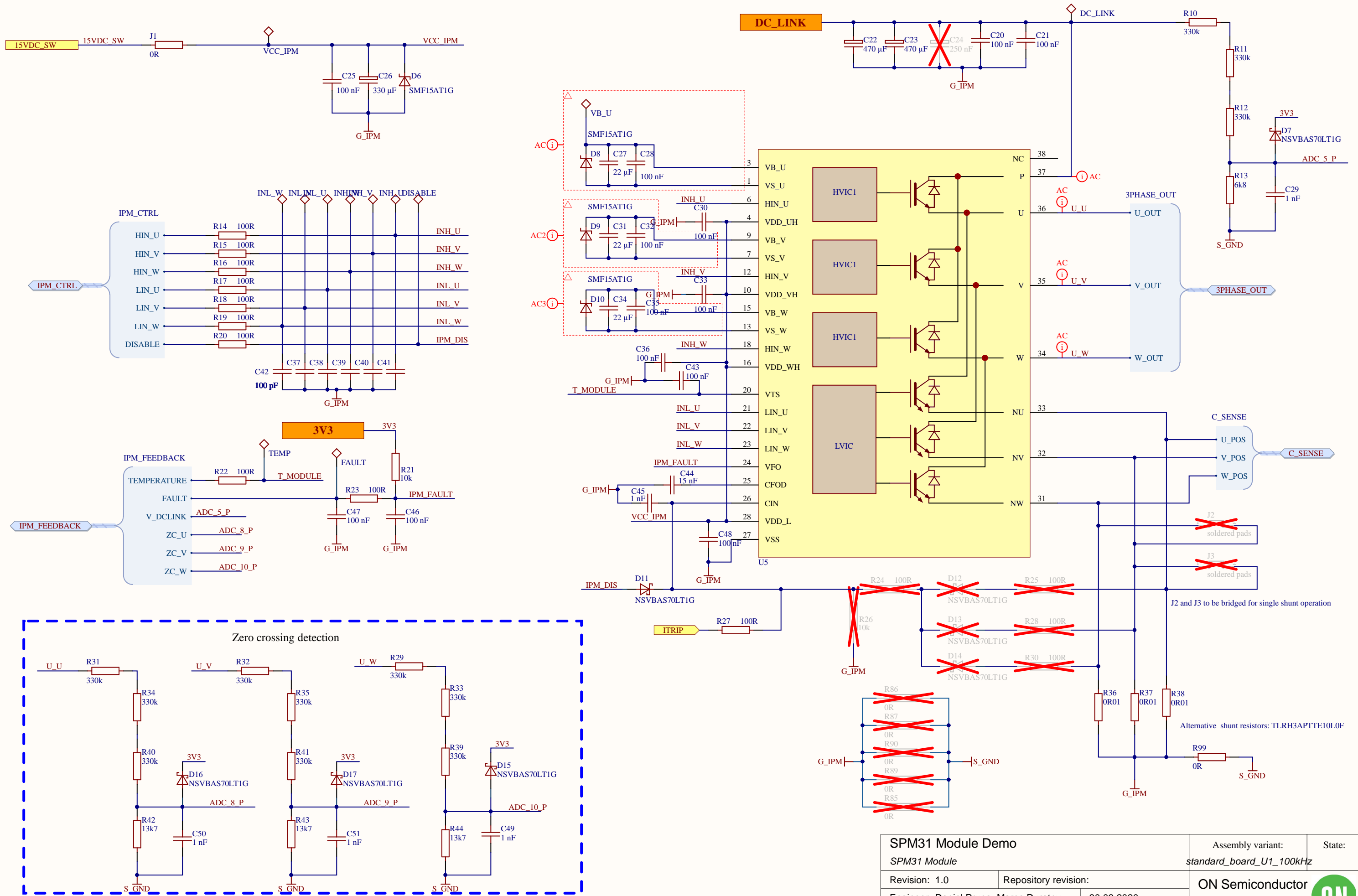


HVDC_INPUT



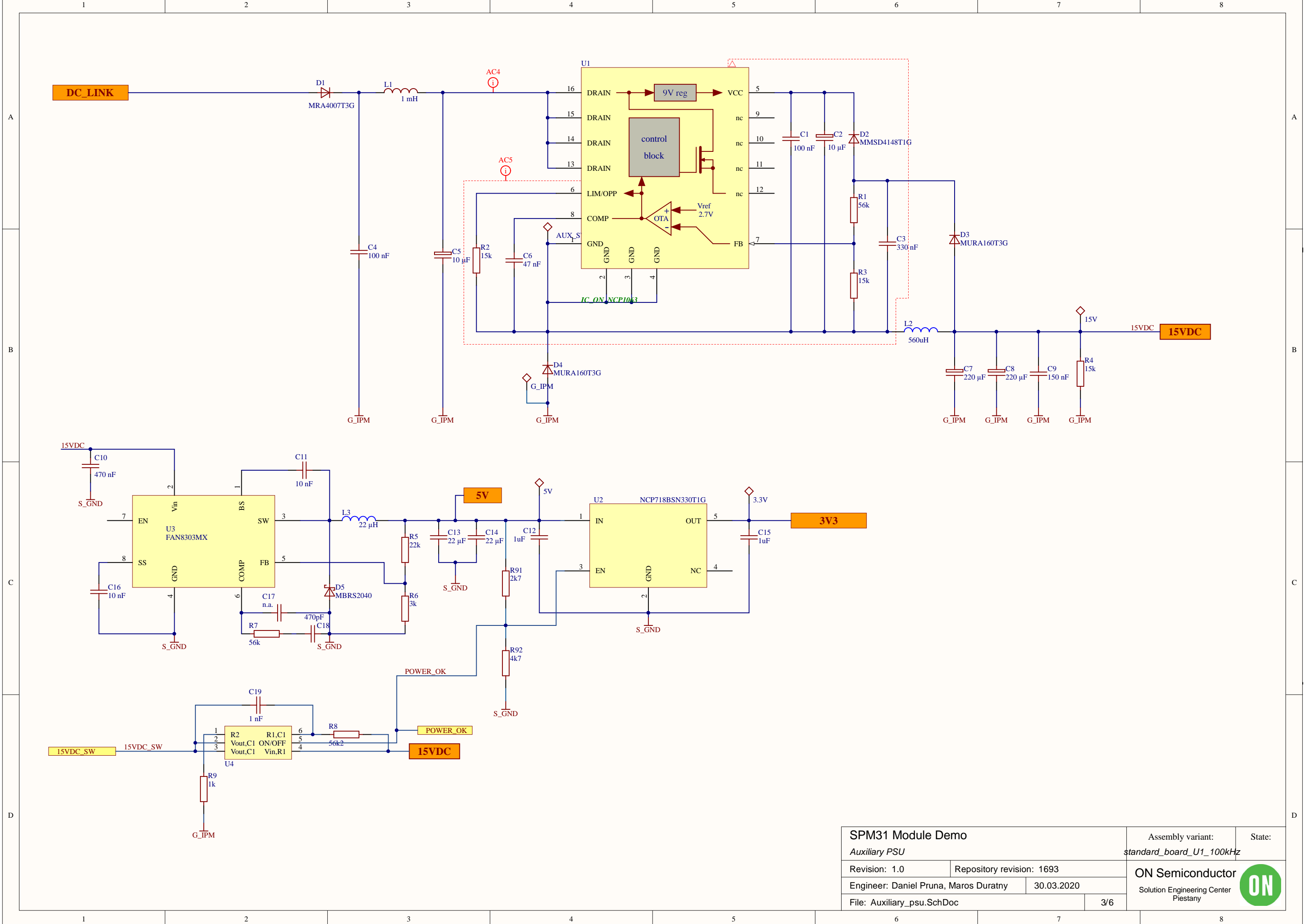
| | | | |
|---------------------------------------|------------------------|--|--------|
| SPM31 Module Demo | | Assembly variant: | State: |
| <i>Interconnection</i> | | <i>standard_board_U1_100kHz</i> | |
| Revision: 1.0 | Repository revision: 0 | | |
| Engineer: Daniel Pruna, Maros Duratny | | 30.03.2020 | |
| File: Board_overview.SchDoc | | 1/6 | |
| | | ON Semiconductor Solution Engineering Center Piestany | |





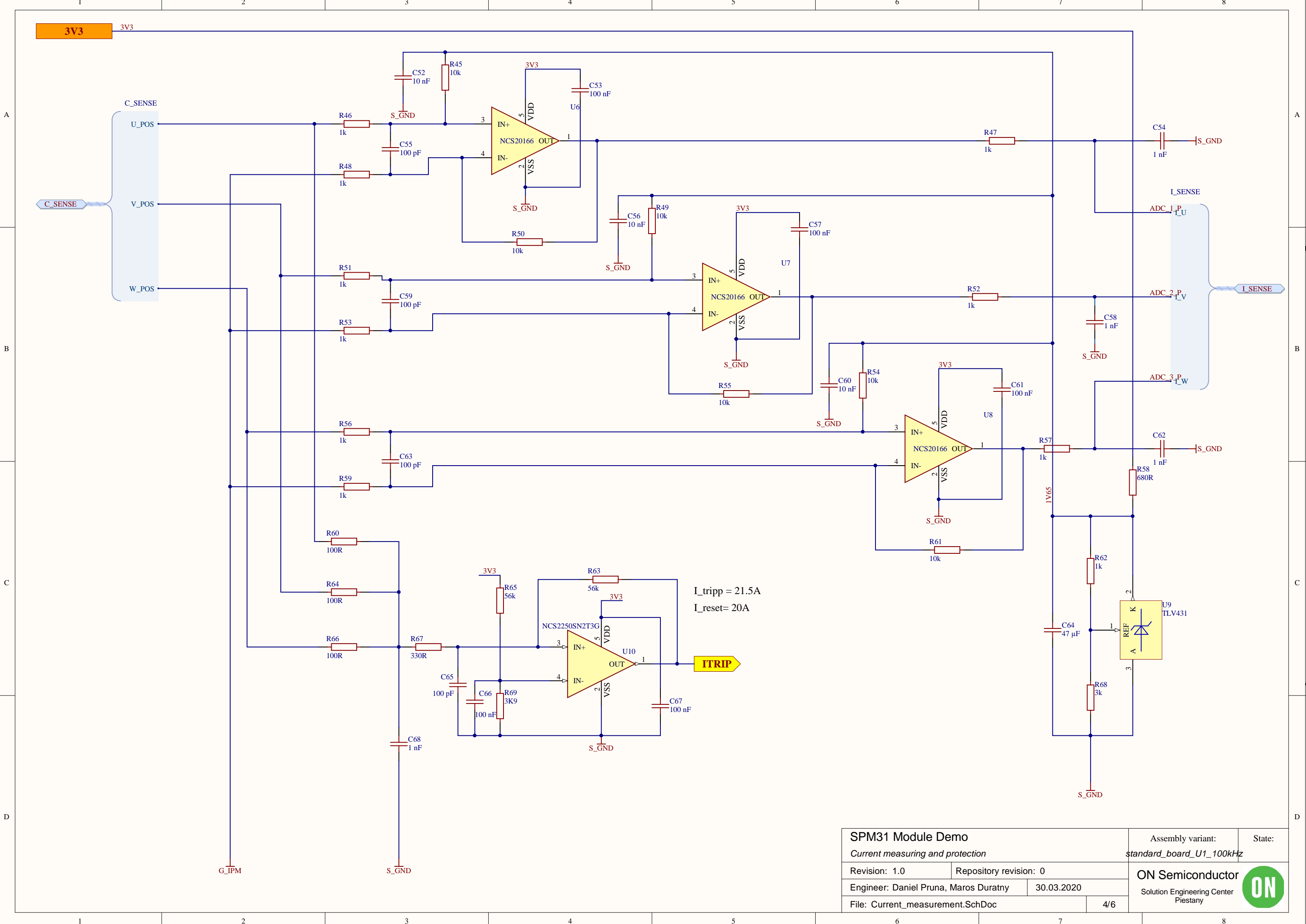
| | | | |
|---------------------------------------|----------------------|--|--------|
| SPM31 Module Demo | | Assembly variant: | State: |
| <i>SPM31 Module</i> | | <i>standard_board_U1_100kHz</i> | |
| Revision: 1.0 | Repository revision: | | |
| Engineer: Daniel Pruna, Maros Duratny | | 30.03.2020 | |
| File: SPM_inverter.SchDoc | | 2/6 | |
| | | ON Semiconductor Solution Engineering Center Piešťany | |

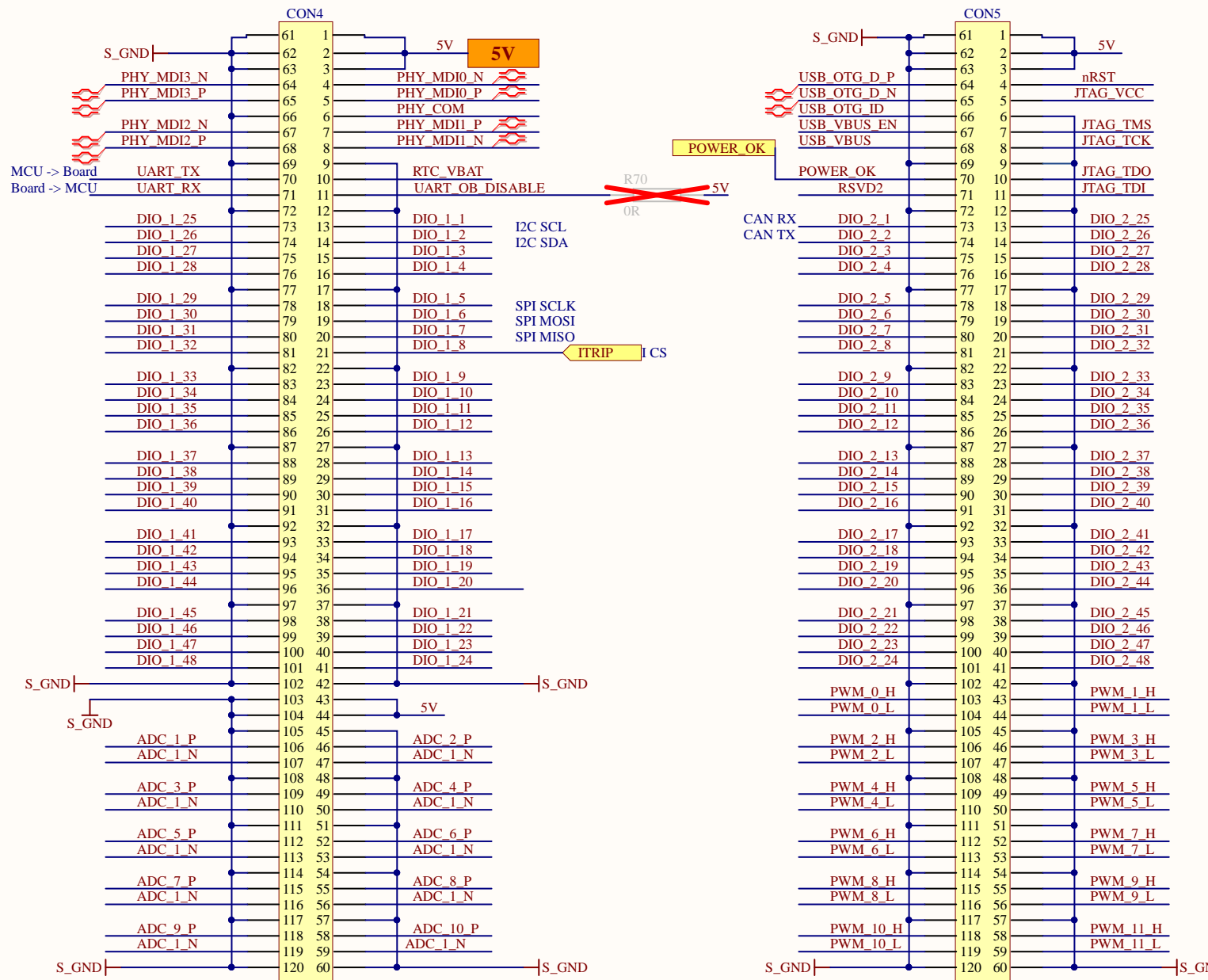




| | | | |
|---------------------------------------|---------------------------|---------------------------------|--|
| SPM31 Module Demo | | Assembly variant: | State: |
| <i>Auxiliary PSU</i> | | <i>standard_board_U1_100kHz</i> | |
| Revision: 1.0 | Repository revision: 1693 | | ON Semiconductor Solution Engineering Center Piestany |
| Engineer: Daniel Pruna, Maros Duratny | 30.03.2020 | | |
| File: Auxiliary_psu.SchDoc | 3/6 | | |

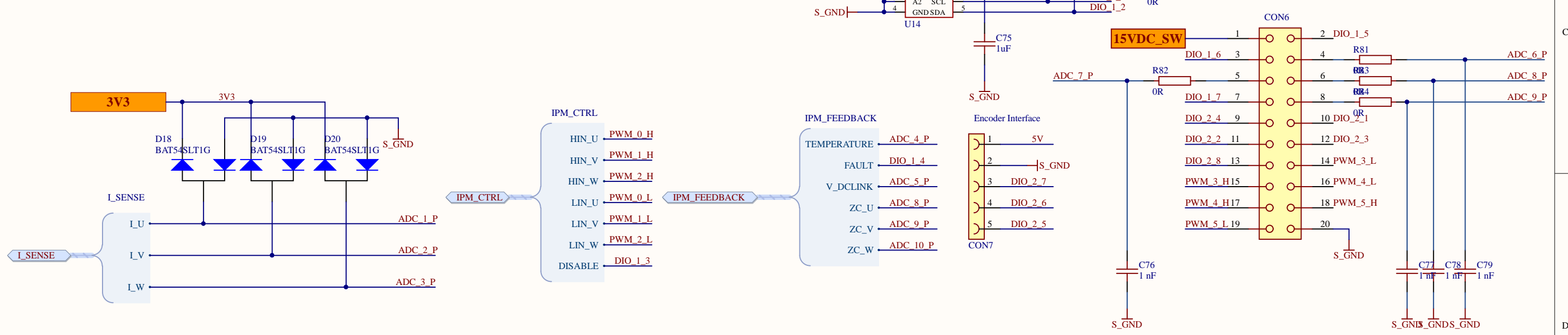
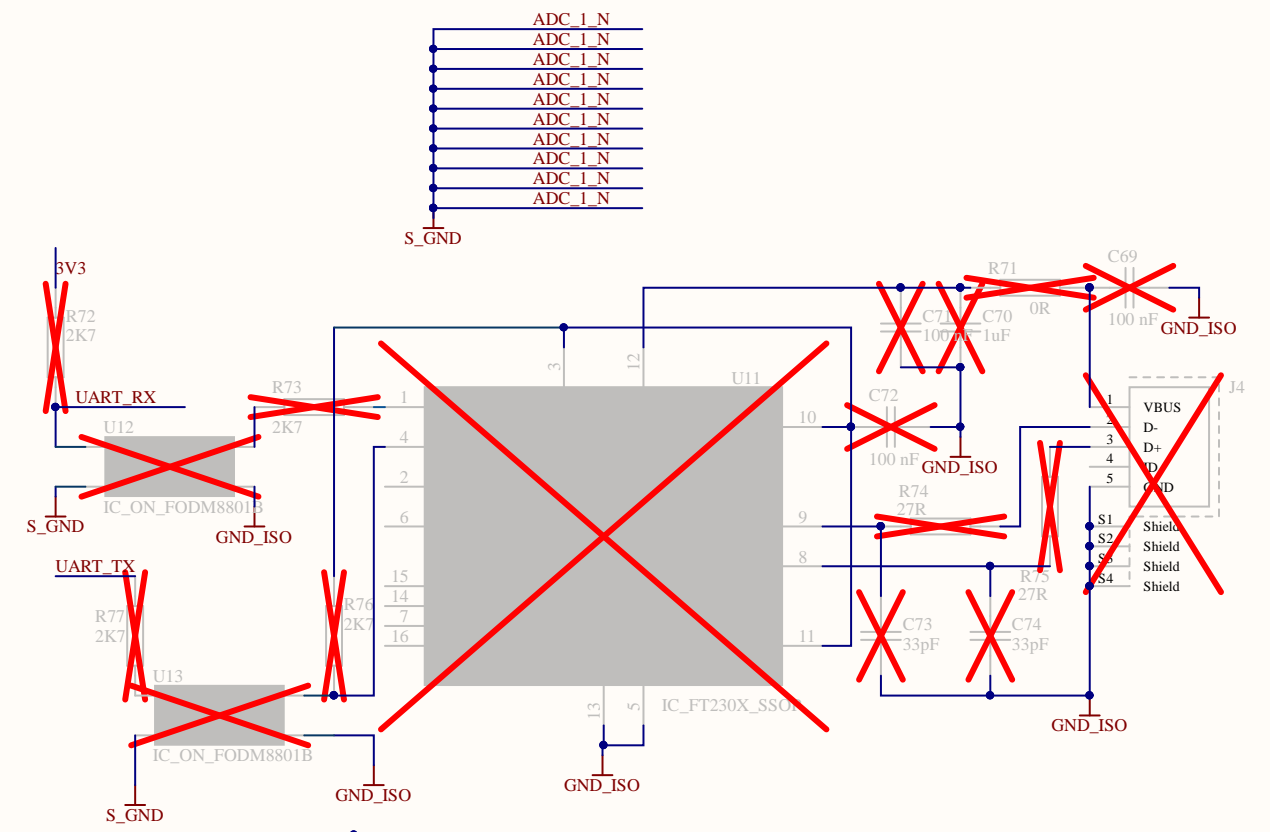






Grounding of negative ADC inputs:
(for single ended ADC usage)

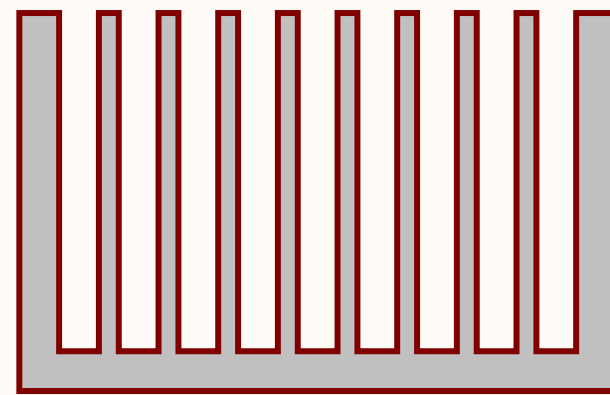
ADC_GND is a separate net only used for connecting the negative inputs of the ADCs. The ADC_GND is connected to one of two near-by Arduino Due GND pins via a 0-Ohm resistor (Arduino Due has no specific Analog Ground input; so one of the GND-pins next to the Analog Pins will be used)



| | | | |
|-----------------------------|------------------------|--|--------|
| SPM31 Module Demo | | Assembly variant: | State: |
| Connectors | | standard_board_U1_100kHz | |
| Revision: 1.0 | Repository revision: 0 | ON Semiconductor Solution Engineering Center Piestany | |
| Engineer: Daniel Pruna | 30.03.2020 | | |
| File: MDK_Connectors.SchDoc | 5/6 | | |



Board fixing set



HSC1
Heatsink SK64550SA



PE



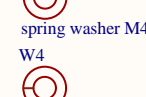
SHC7

M4x16 ISO7045



SHC8

M4x16 ISO7045



W3

spring washer M4 DIN7980



W4

spring washer M4 DIN7980



W1

Plain washer HV140 ISO7089 M4



W2

Plain washer HV140 ISO7089 M4



N1

washer under NFAM5065L4B



SB1

Spacer M3 F/F 50 HEX7



SB2

Spacer M3 F/F 50 HEX7



SB3

Spacer M3 F/F 50 HEX7



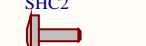
SB4

Spacer M3 F/F 50 HEX7



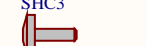
SHC1

M3x16 DIN7985



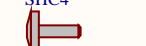
SHC2

M3x16 DIN7985



SHC3

M3x16 DIN7985



SHC4

M3x16 DIN7985

TP1



thermal paste

| | | | |
|---------------------------------------|----------------------|---|--------|
| SPM31 Module Demo | | Assembly variant: | State: |
| Mechanical and enclosed parts | | standard_board_U1_100kHz | |
| Revision: 1.0 | Repository revision: | | |
| Engineer: Daniel Pruna, Maros Duratny | 06.04.2020 | | |
| File: mechanical_parts.SchDoc | 6/6 | | |
| | | ON Semiconductor Solution Engineering Center Piestany | |
| | | | |