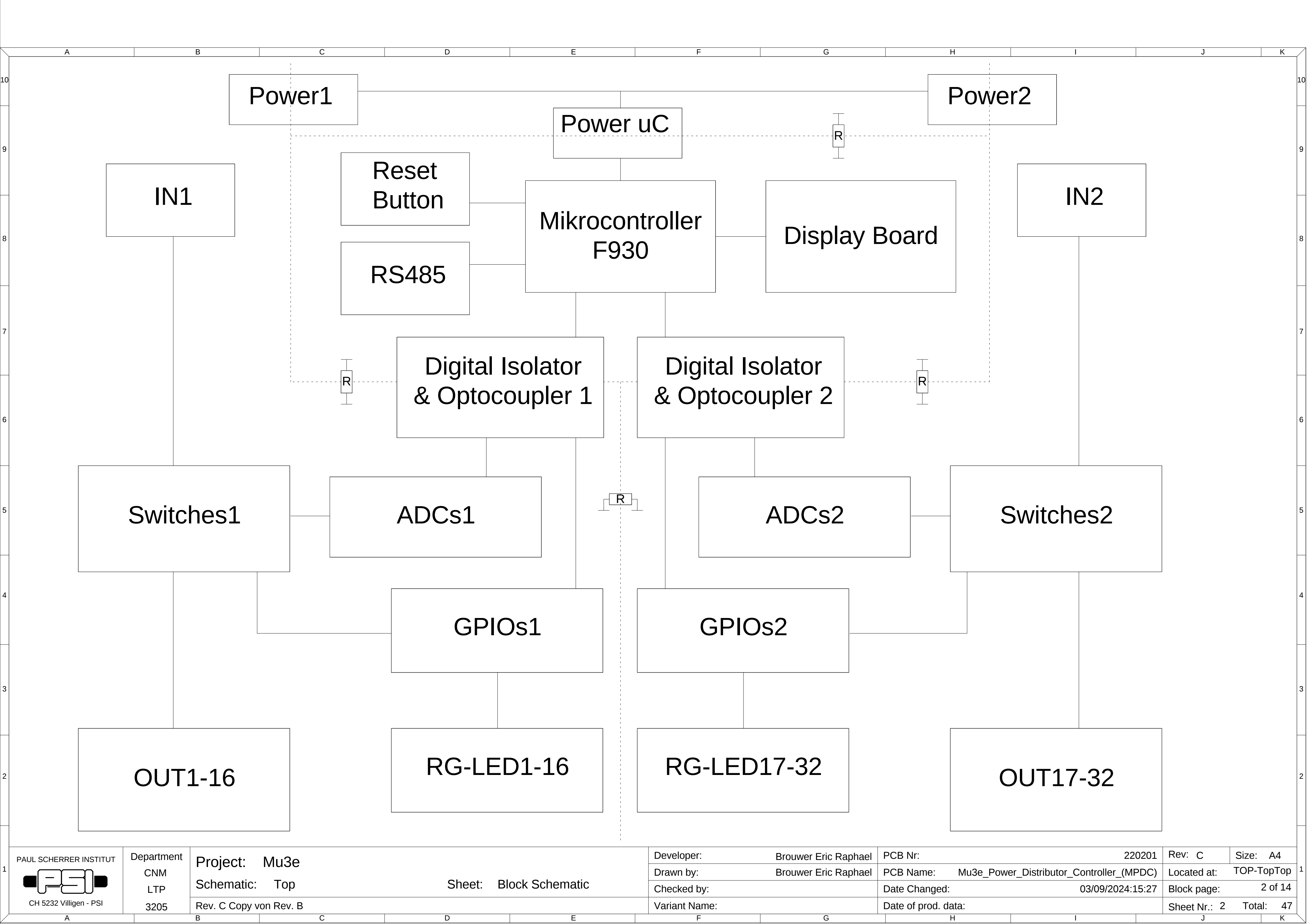


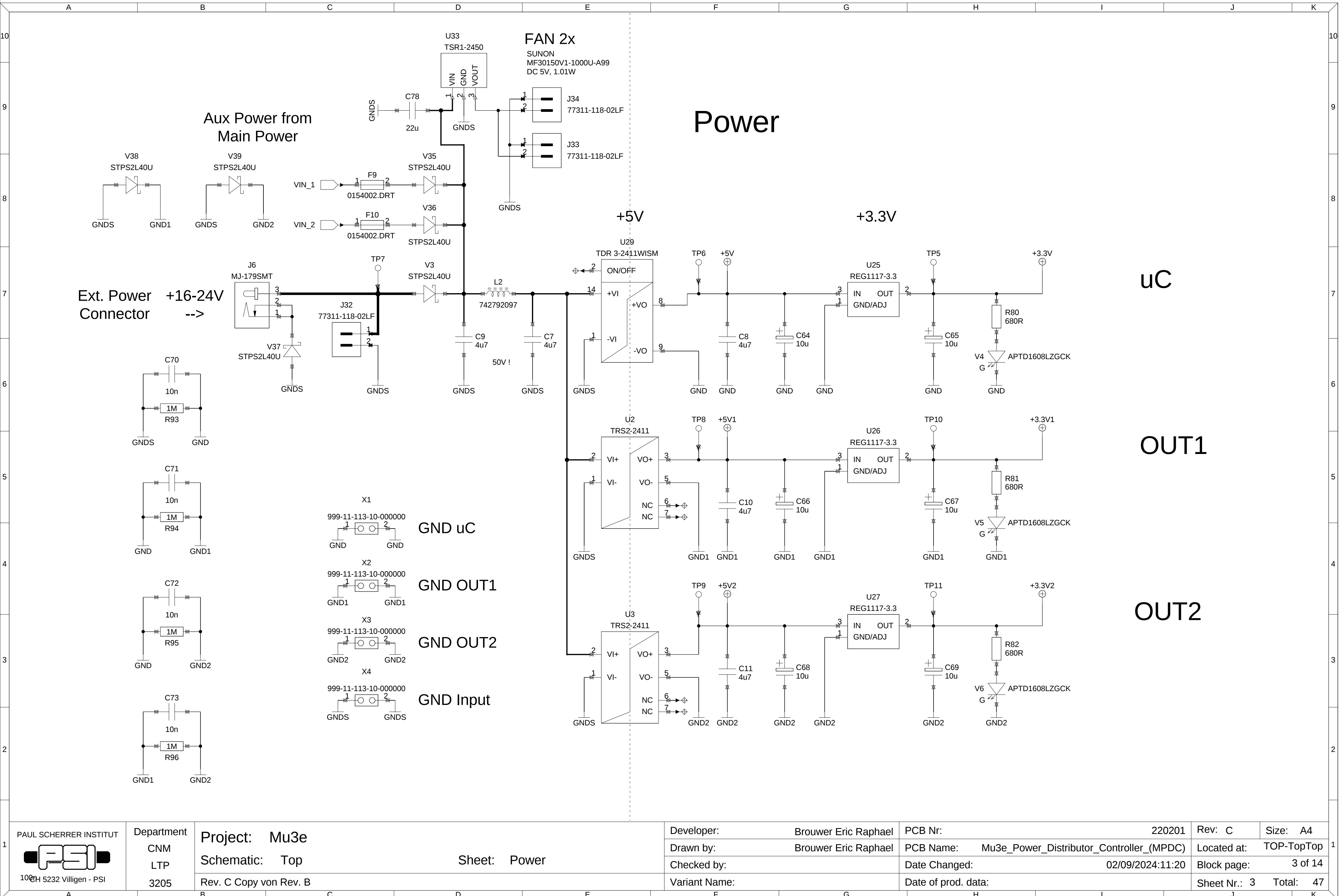
Mu3e Power Distributor and Controller

MPDC

09.05.2023

PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department CNM LTP 3205	Project: Mu3e				Developer: Brouwer Eric Raphael		PCB Nr: 220201		Rev: C	Size: A4
		Schematic: Top				Drawn by: Brouwer Eric Raphael		PCB Name: Mu3e_Power_Distributor_Controller_(MPDC)		Located at: TOP-TopTop	
		Rev. C Copy von Rev. B				Checked by:		Date Changed: 02/09/2024:11:20		Block page: 1 of 14	
						Variant Name:		Date of prod. data:		Sheet Nr.: 1	Total: 47





Reset Button

uC

C2 programming interface

Autoreset

Connector for Display Board

1

2

3

4

5

6

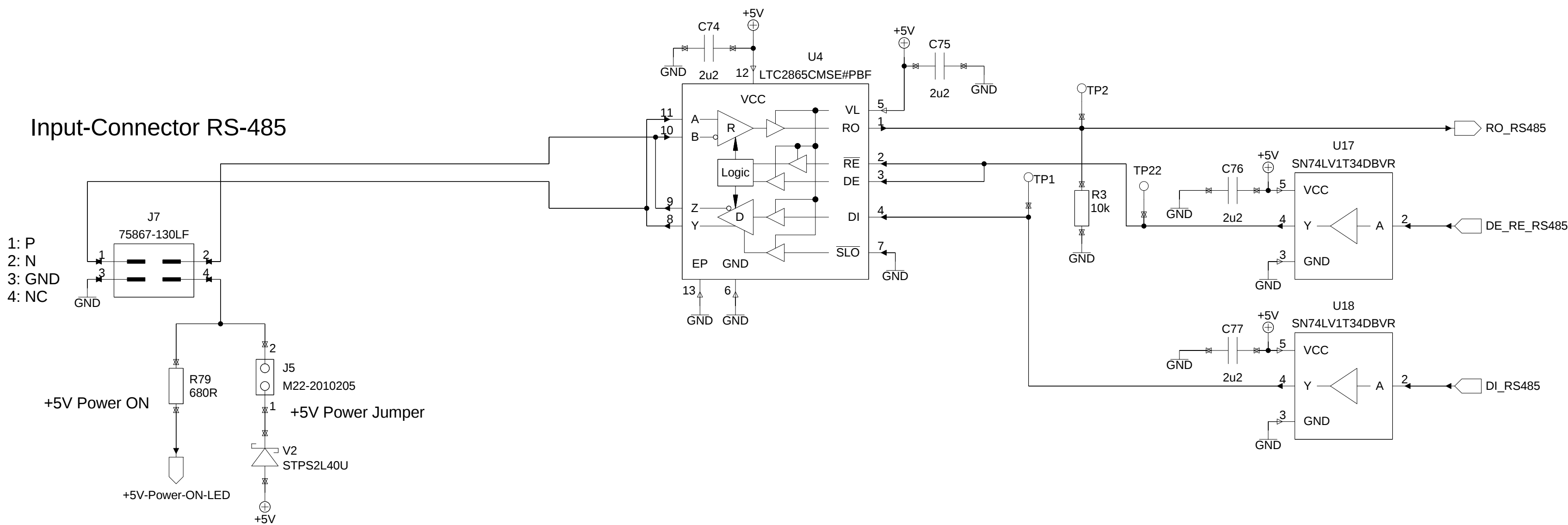
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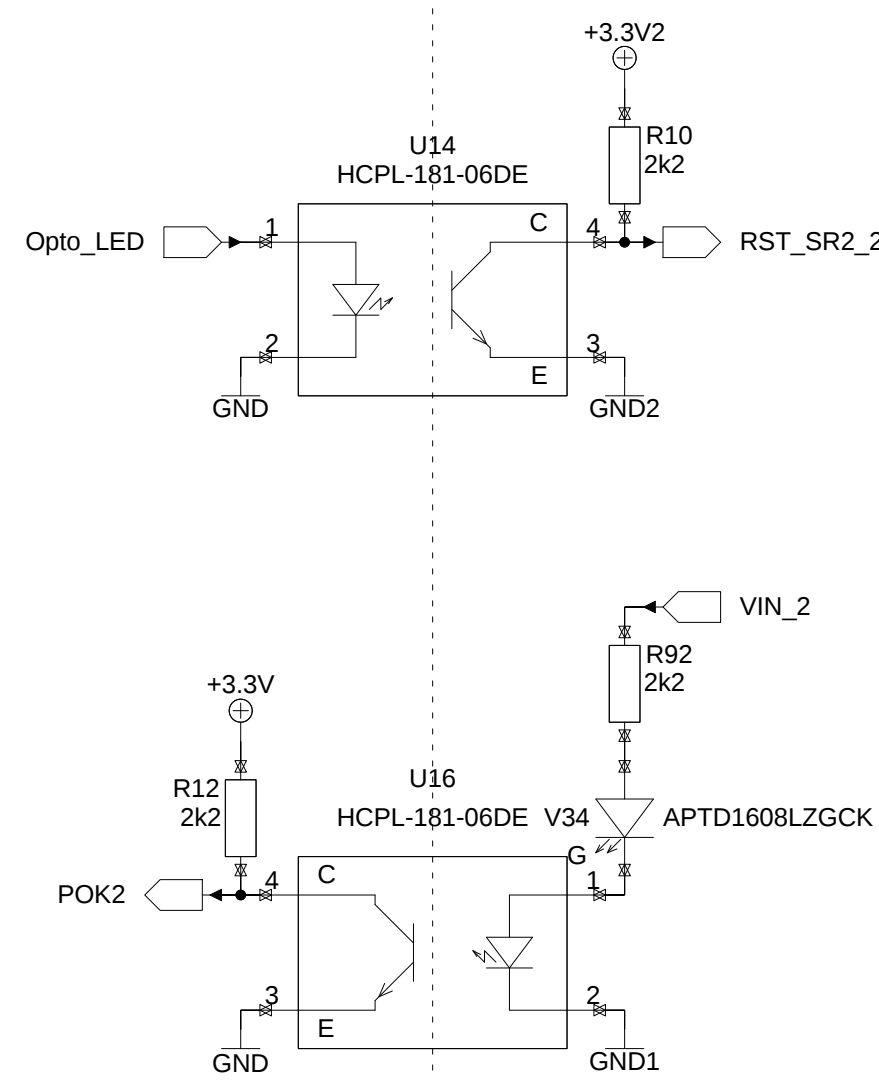
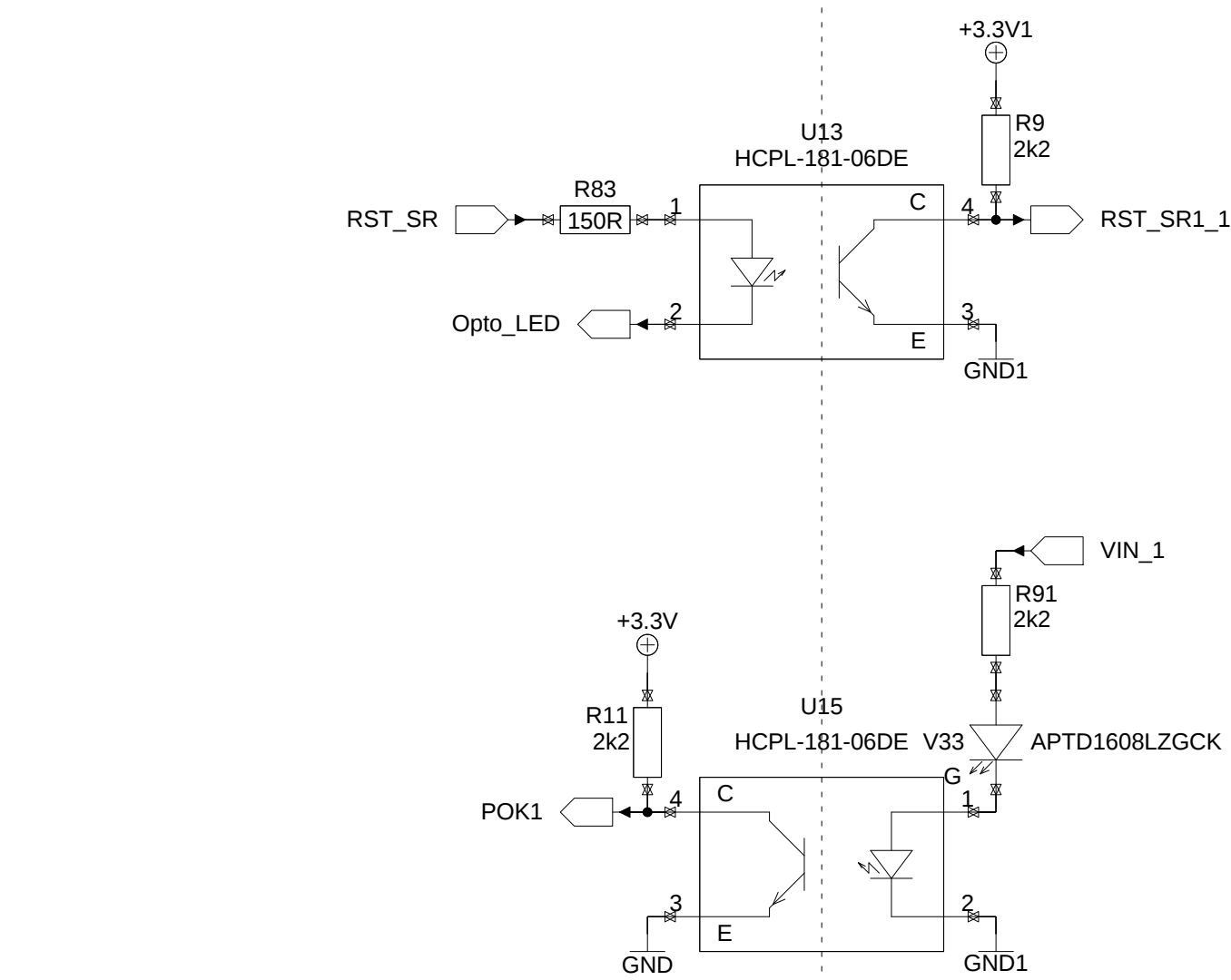
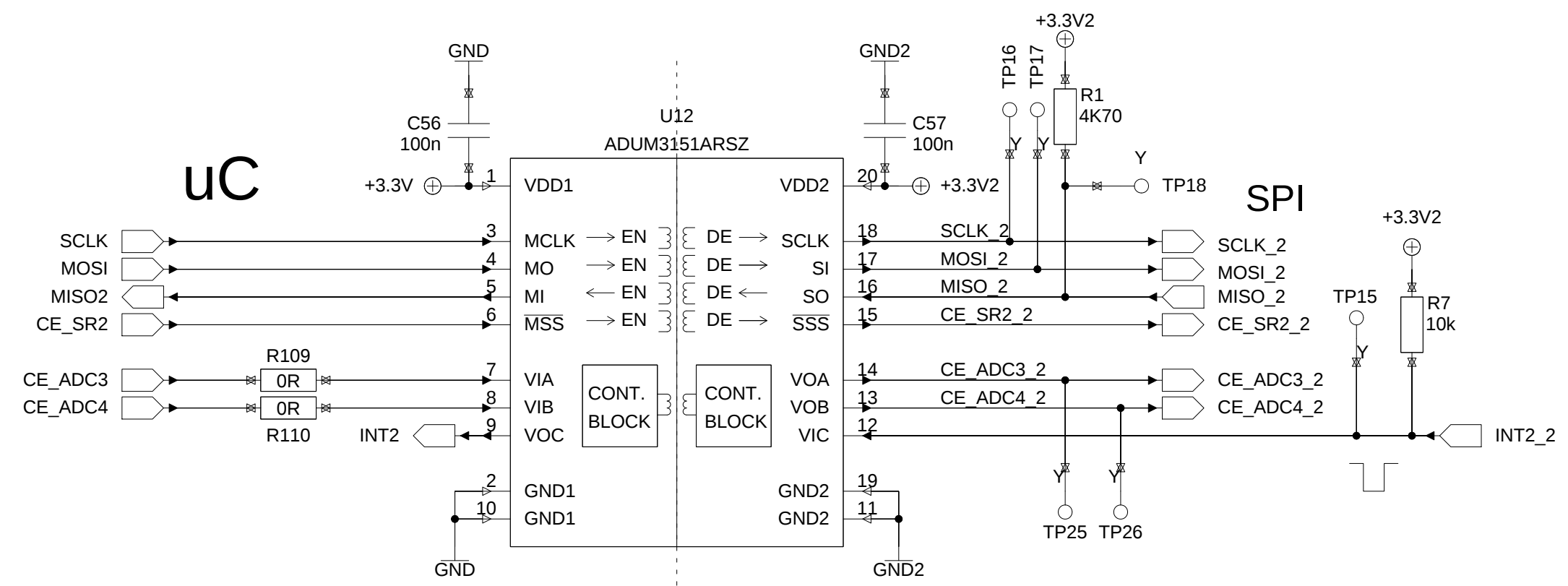
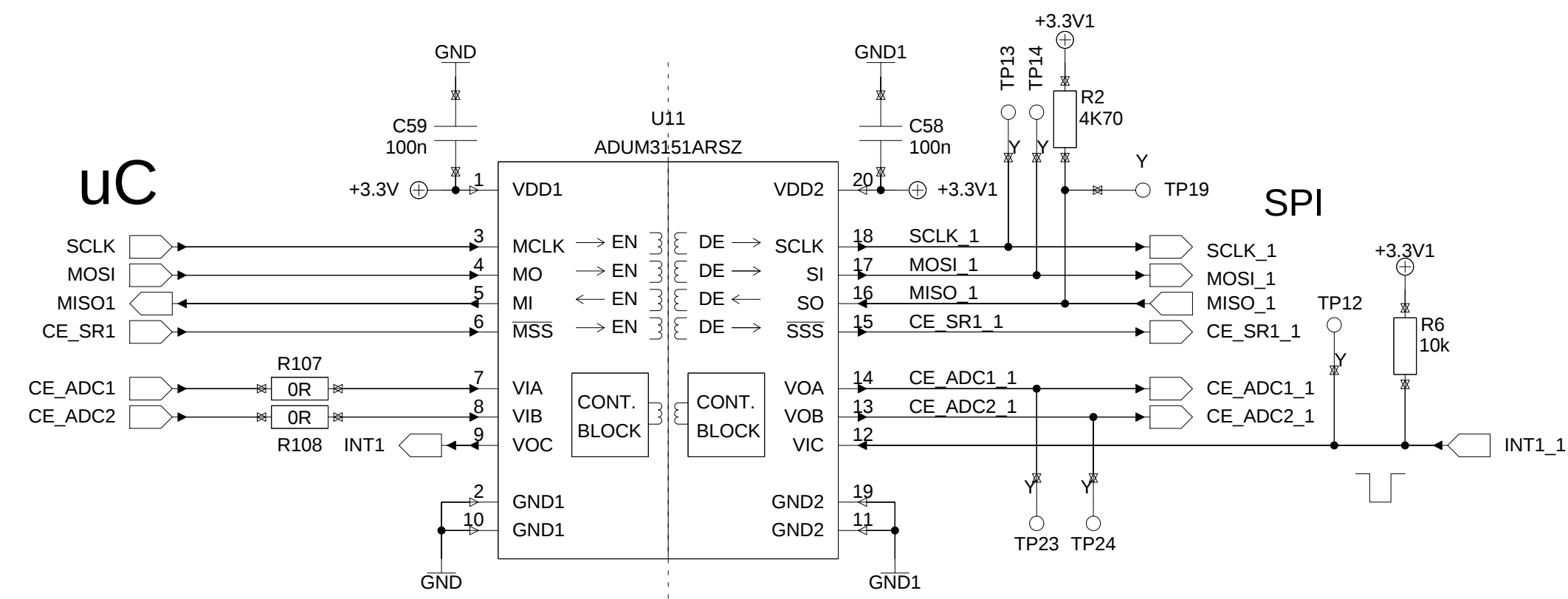
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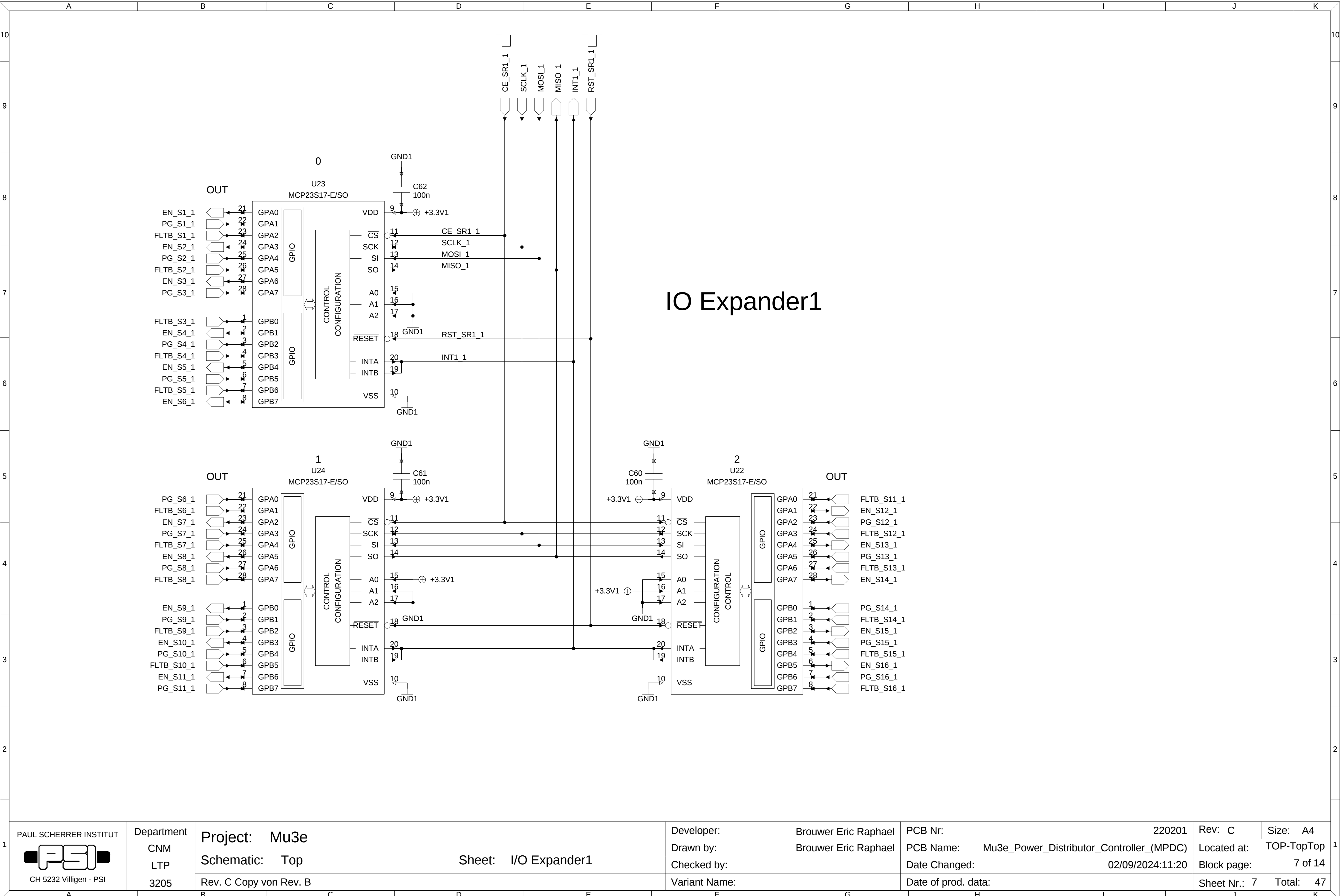
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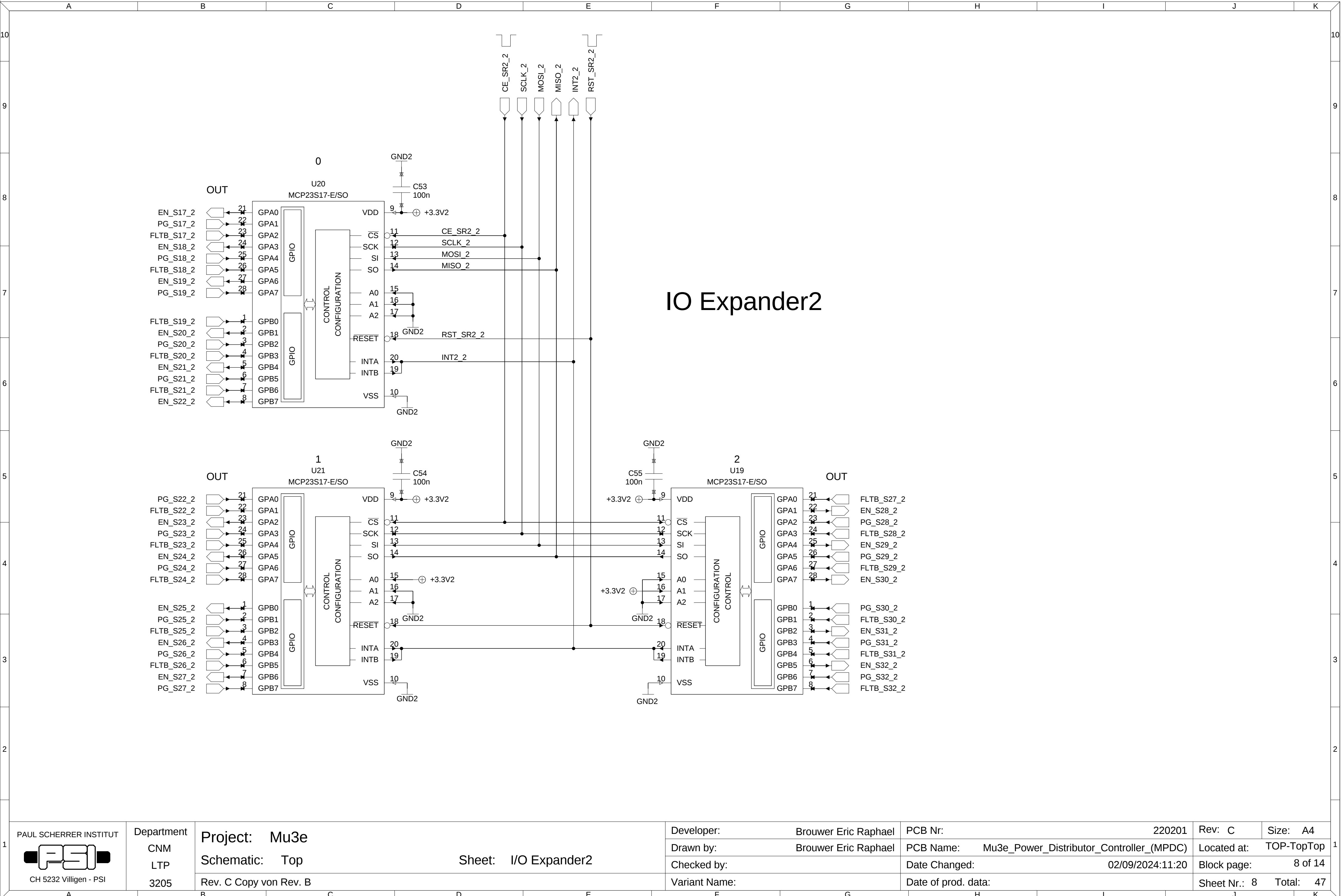
RS-485 Transceiver



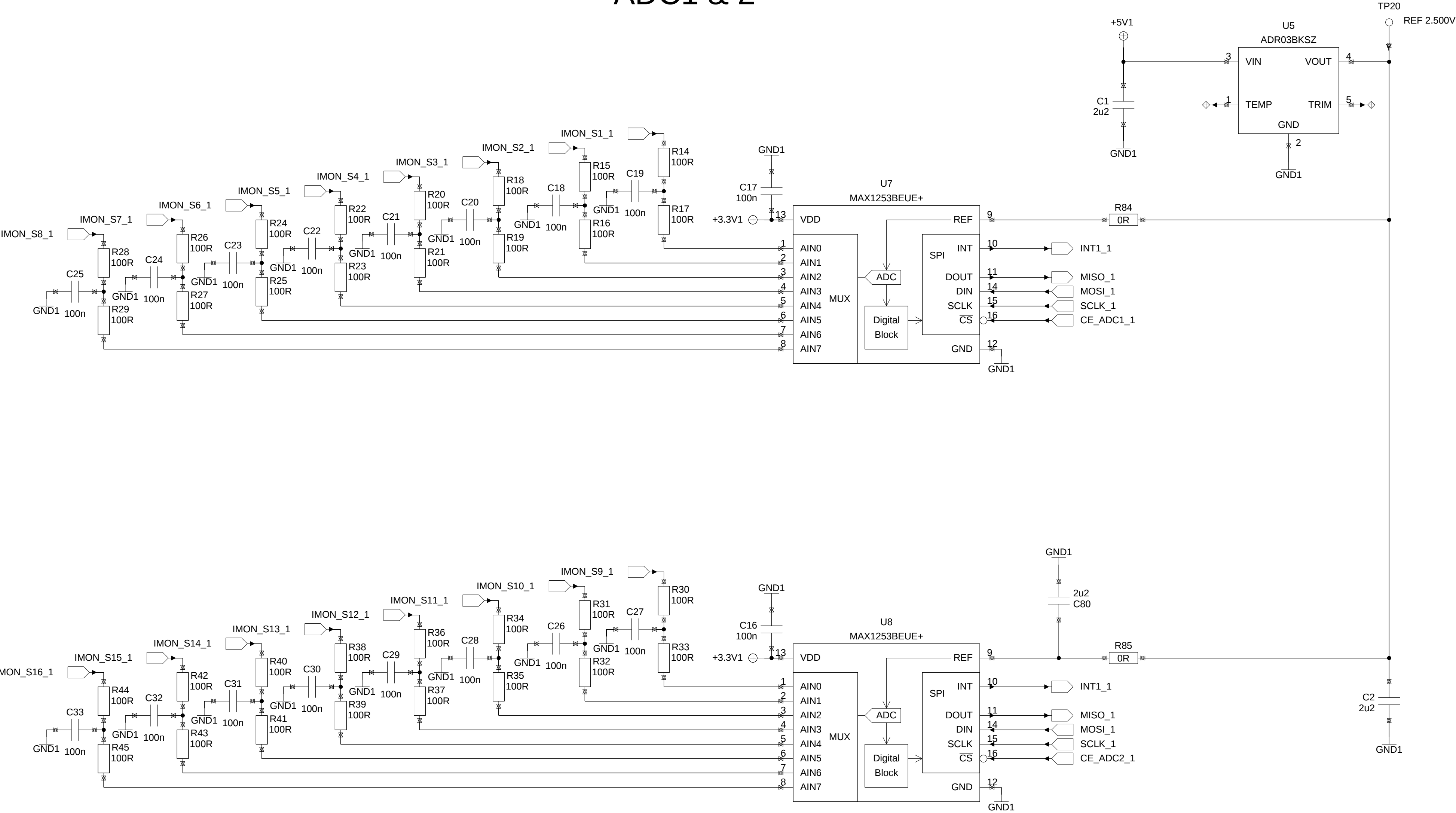
Digital Isolators



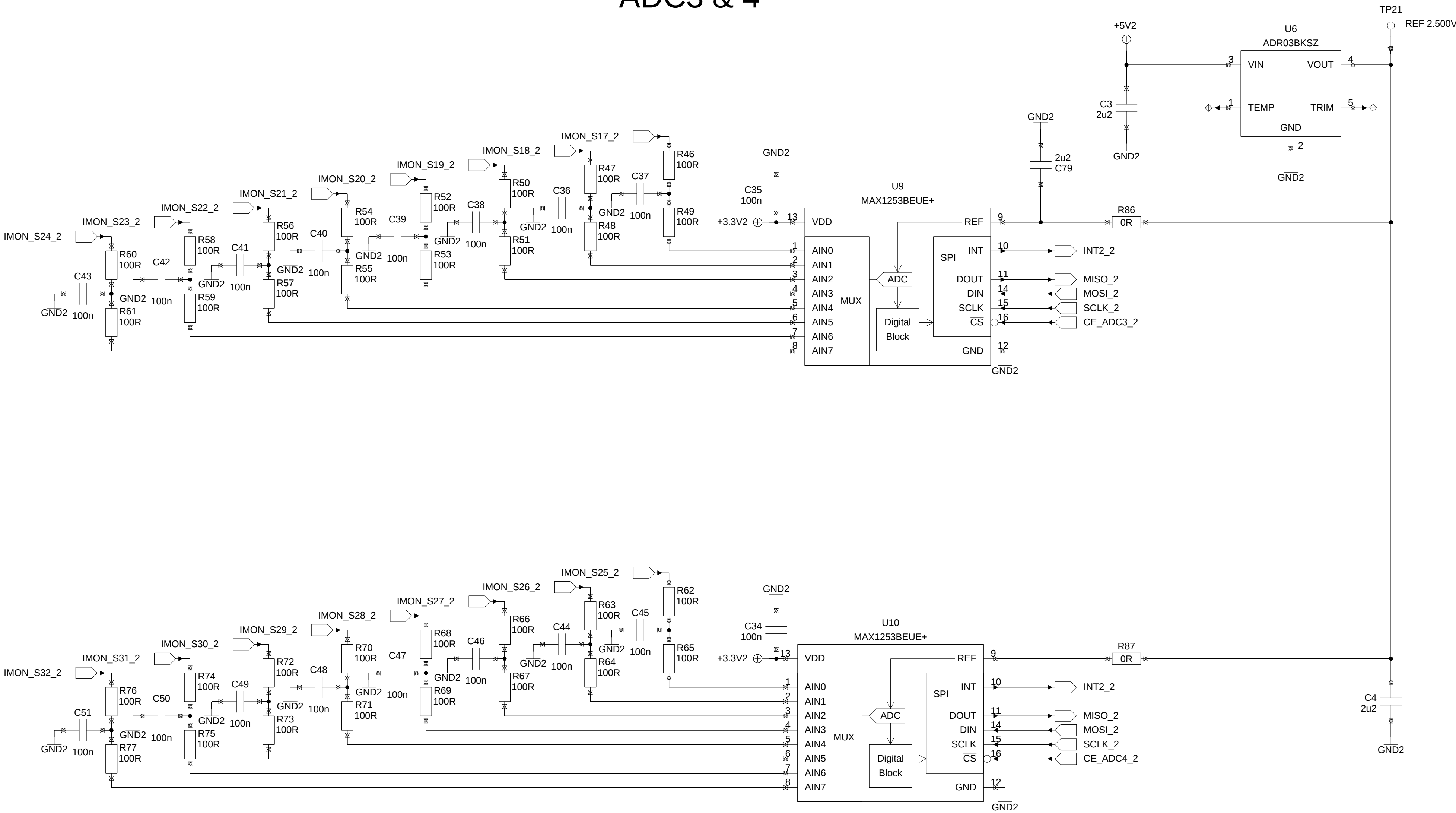




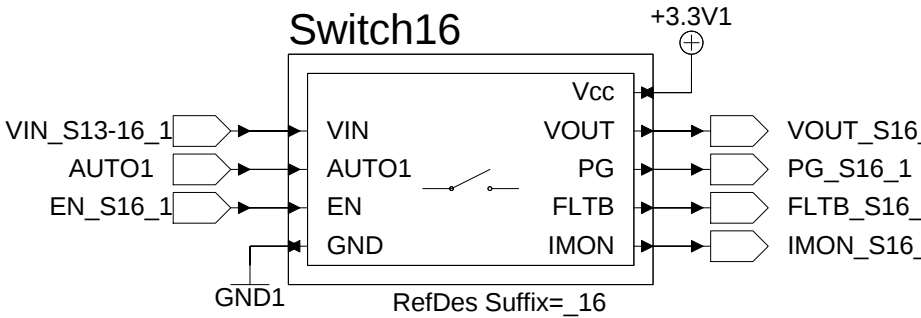
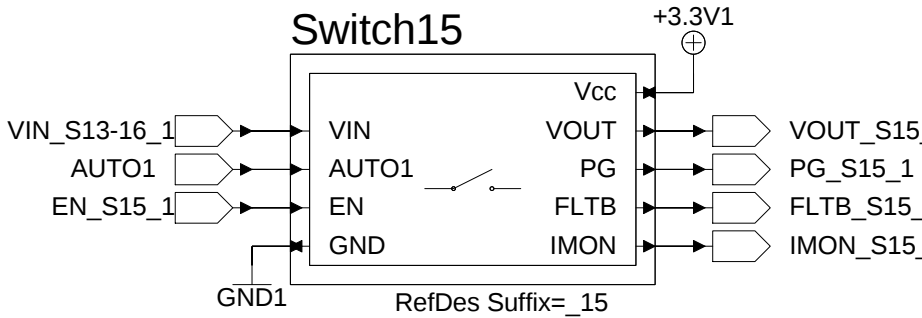
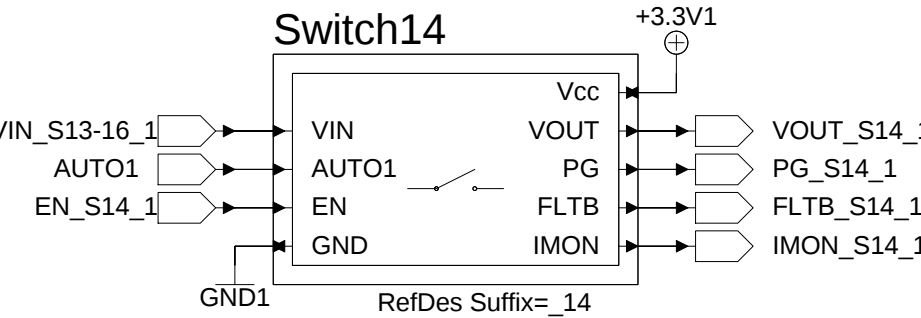
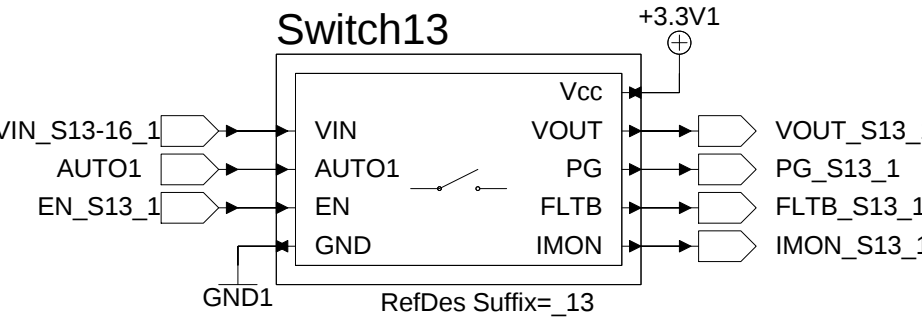
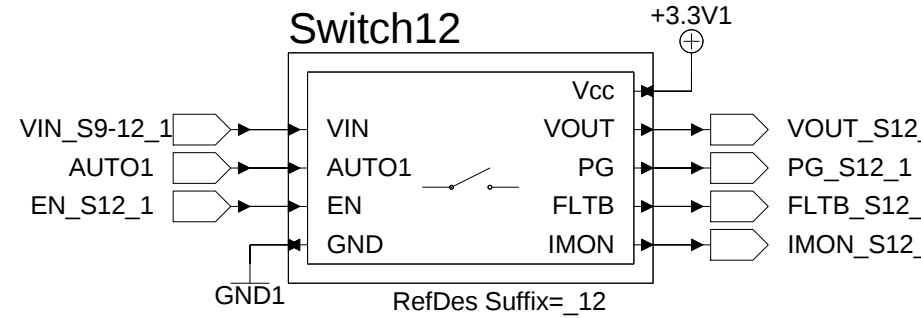
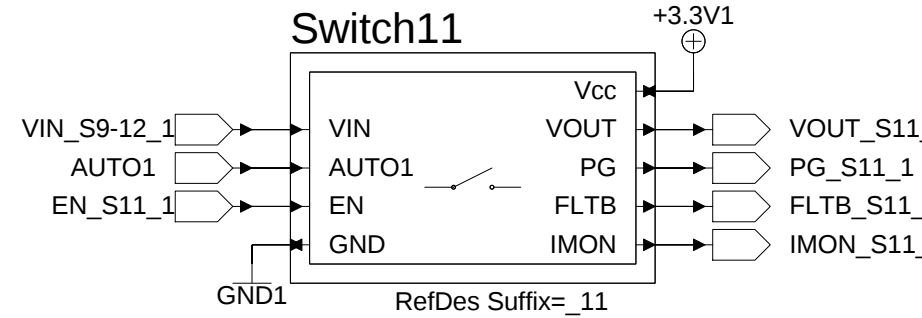
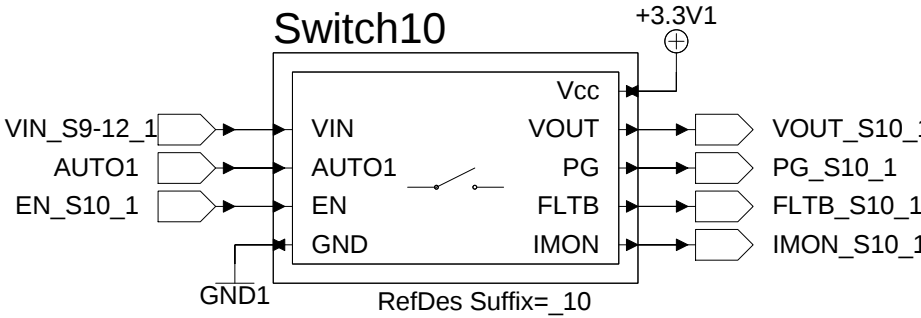
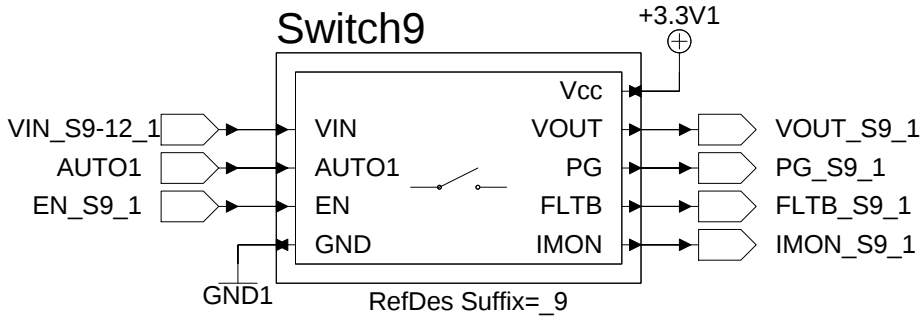
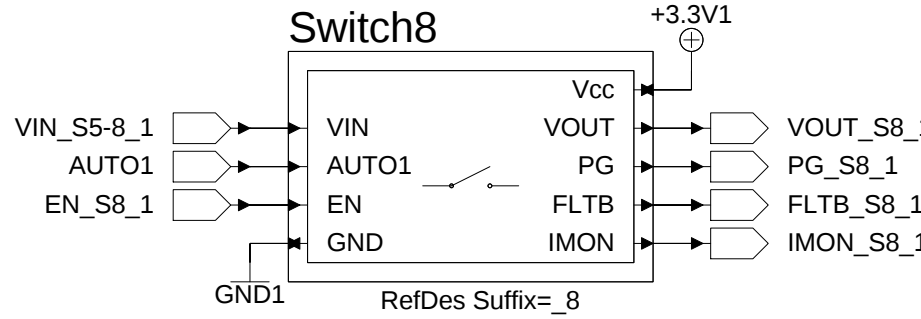
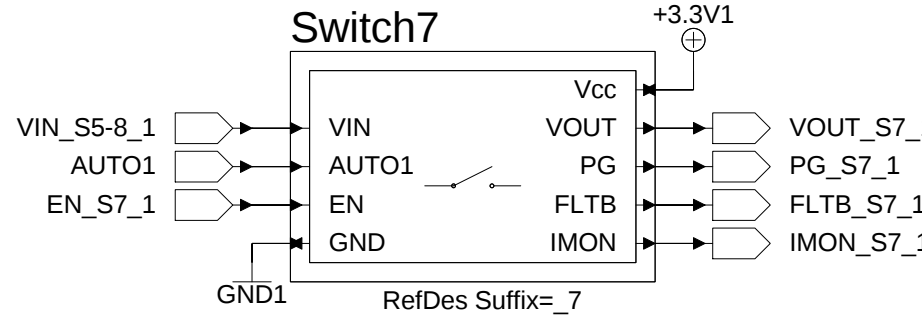
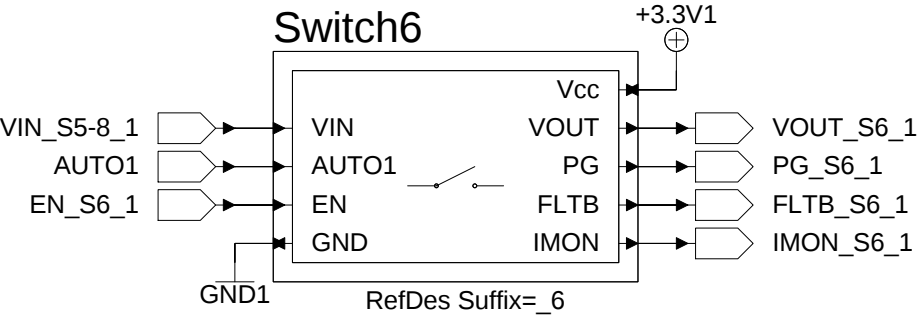
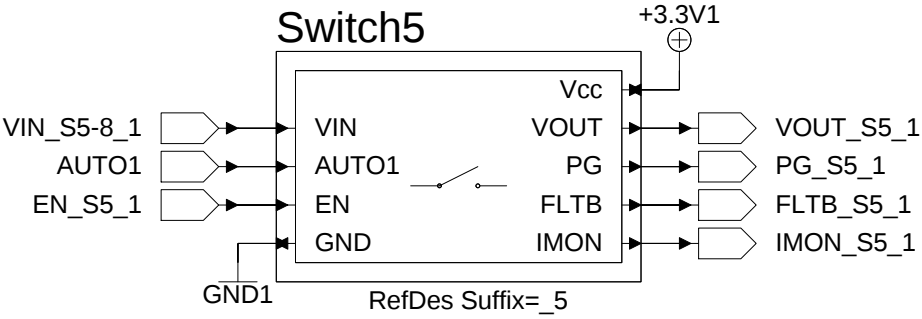
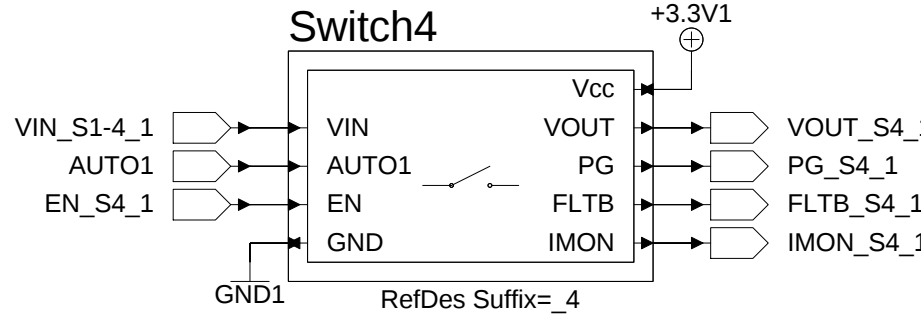
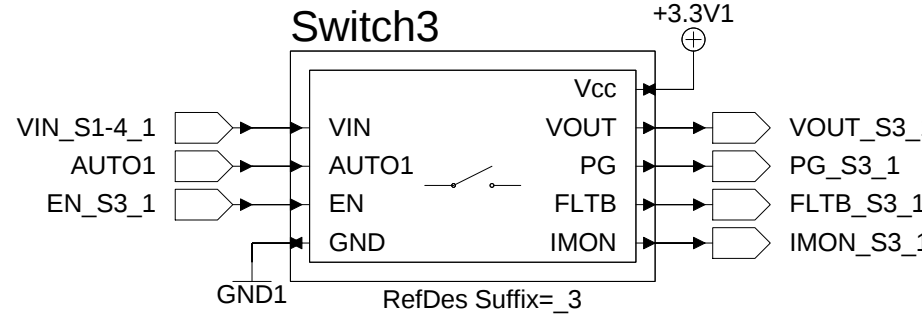
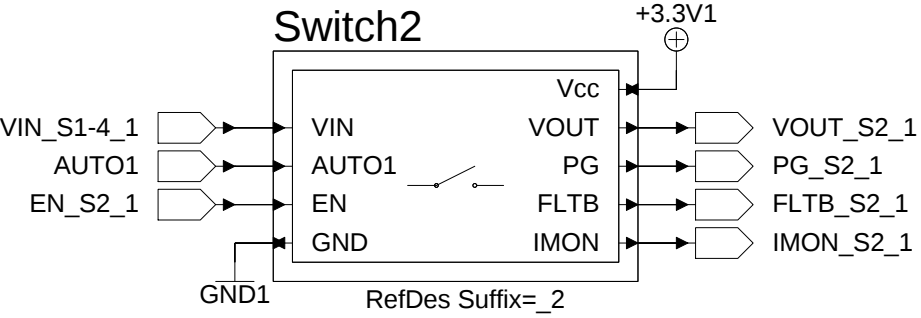
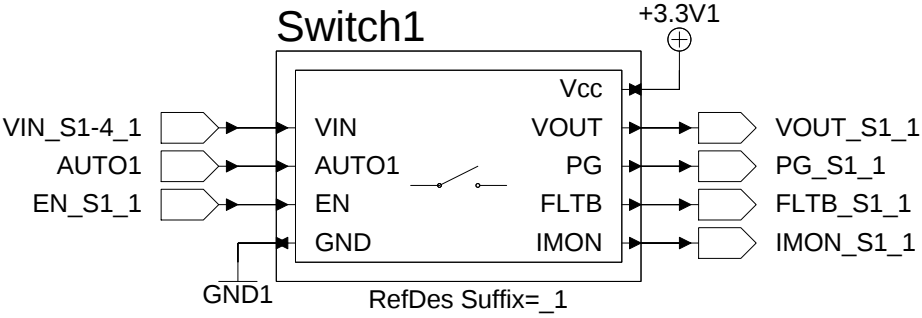
ADC1 & 2



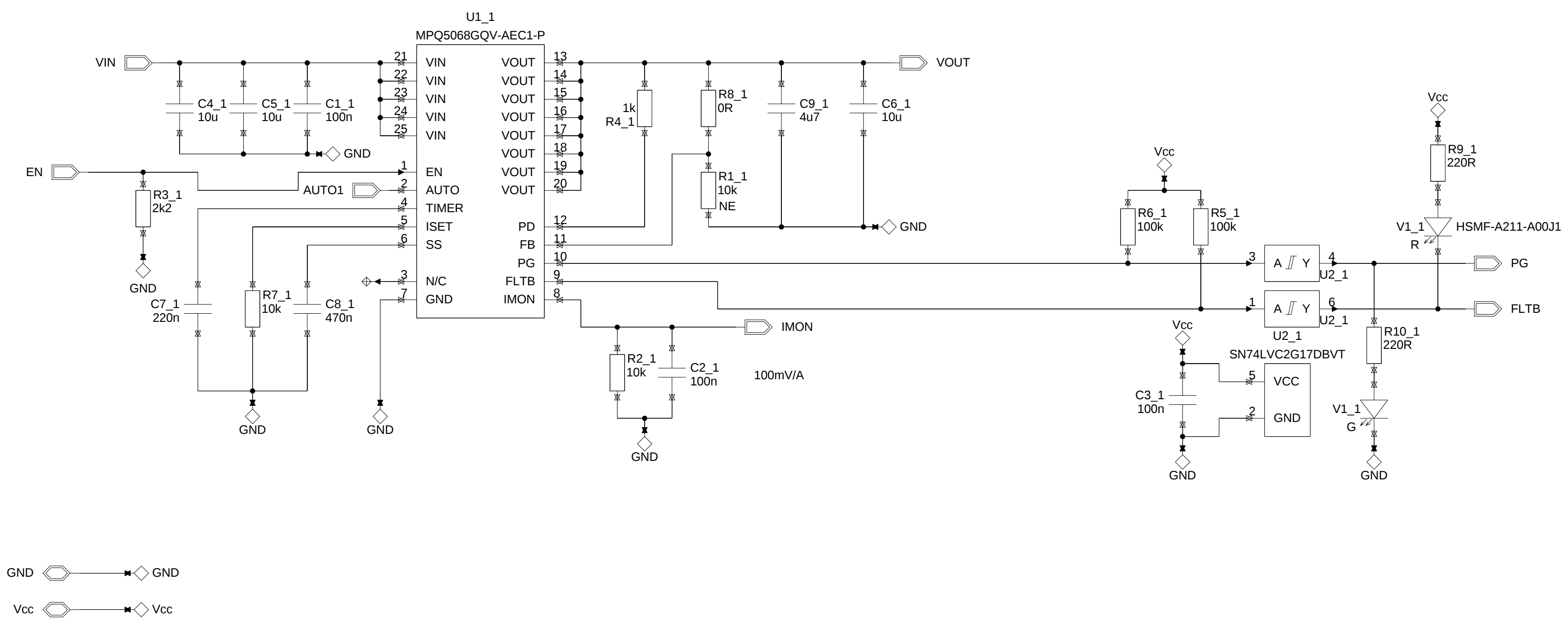
ADC3 & 4



Switches 1



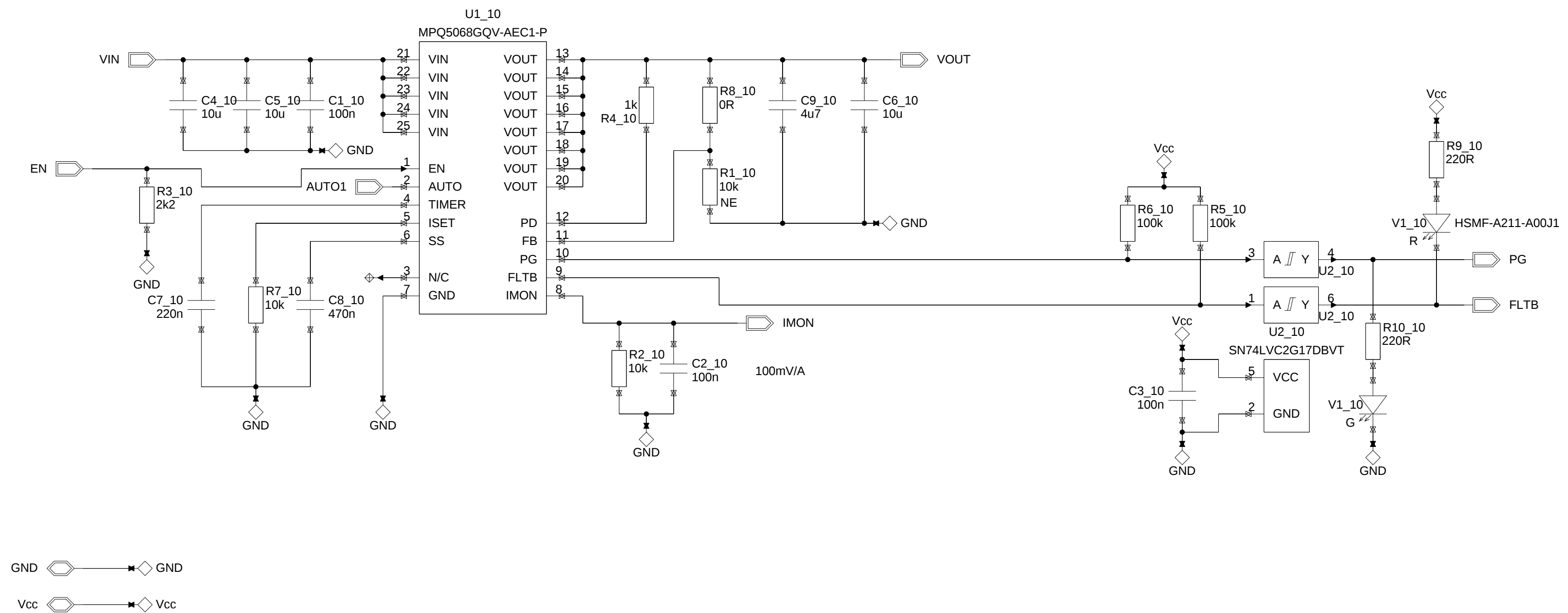
Switch_1



GND Vcc

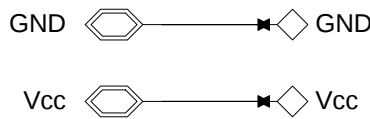
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Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
Checked by:		Rev. C Copy von Rev. B	Sheet: 1
PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev. C	Size: A3
	CH 5232 Villigen - PSI	Variant Name:	11-A8
	CH 5232 Villigen - PSI	Date Time:	30/09/2024:15:46
	CH 5232 Villigen - PSI	Sheet Nr.:	12
	CH 5232 Villigen - PSI	Total:	47

Switch_1



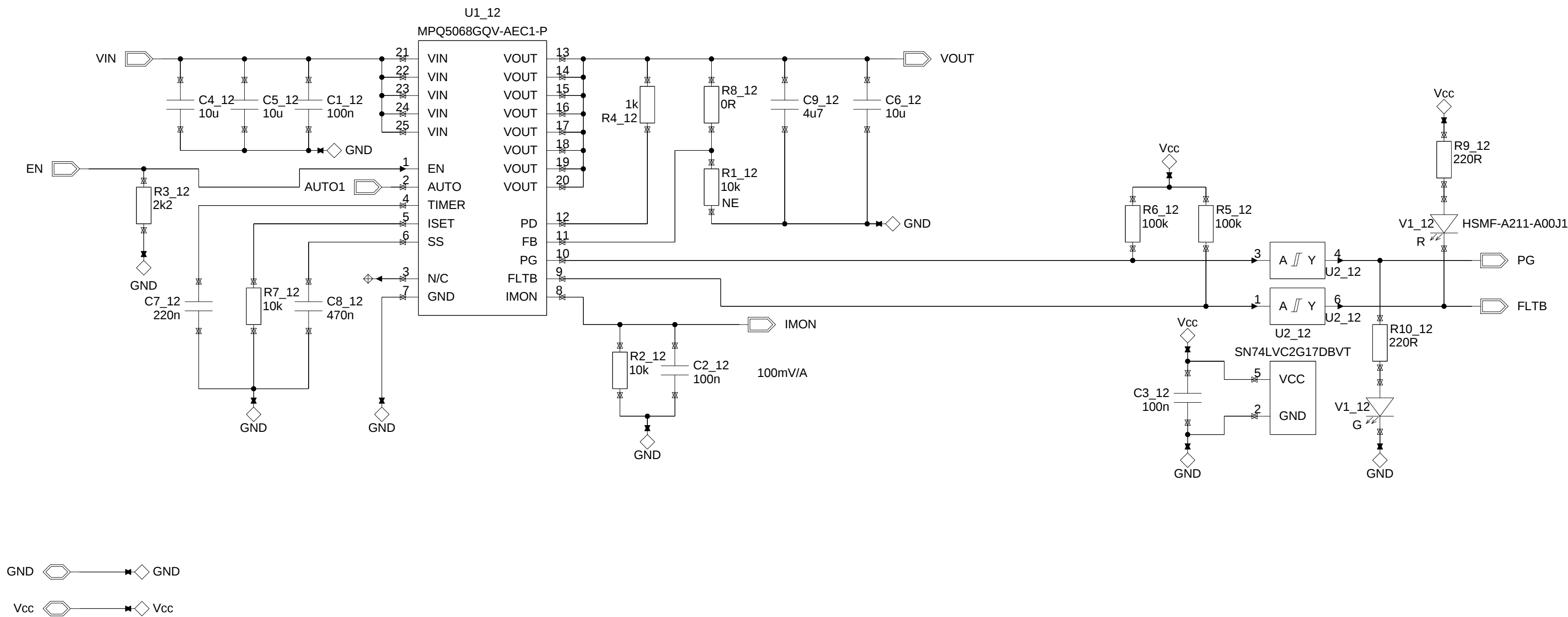
Developer: Brouwer Eric Raphael		Project: Mu3e		
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1
Checked by:		Rev. C Copy von Rev. B		
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: 11-D5		
	LTP	Variant Name:	Block page: 1 of 1	
	3205	Date Time: 30/09/2024:15:46	Sheet Nr.: 13	Total: 47

U1_11
MPQ5068GQV-AEC1-P



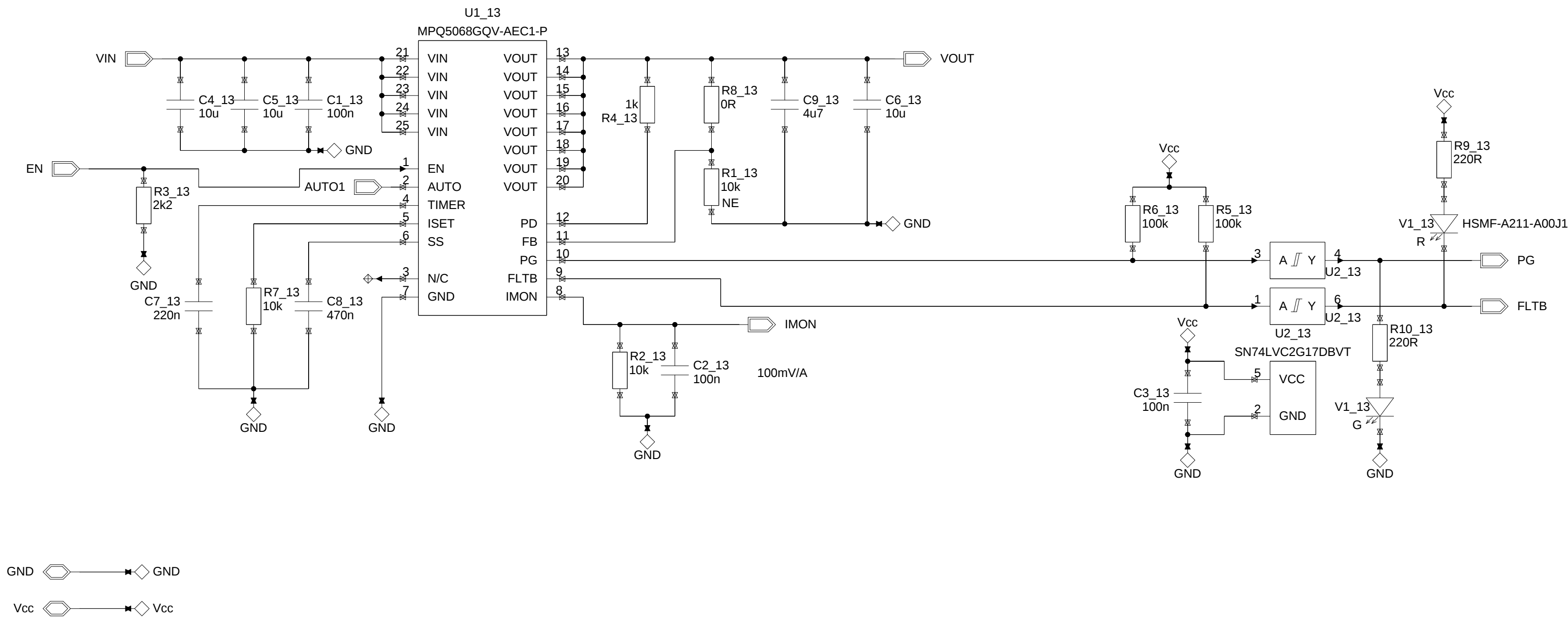
PSI
CH 5232 Villigen - PSI

Switch_1



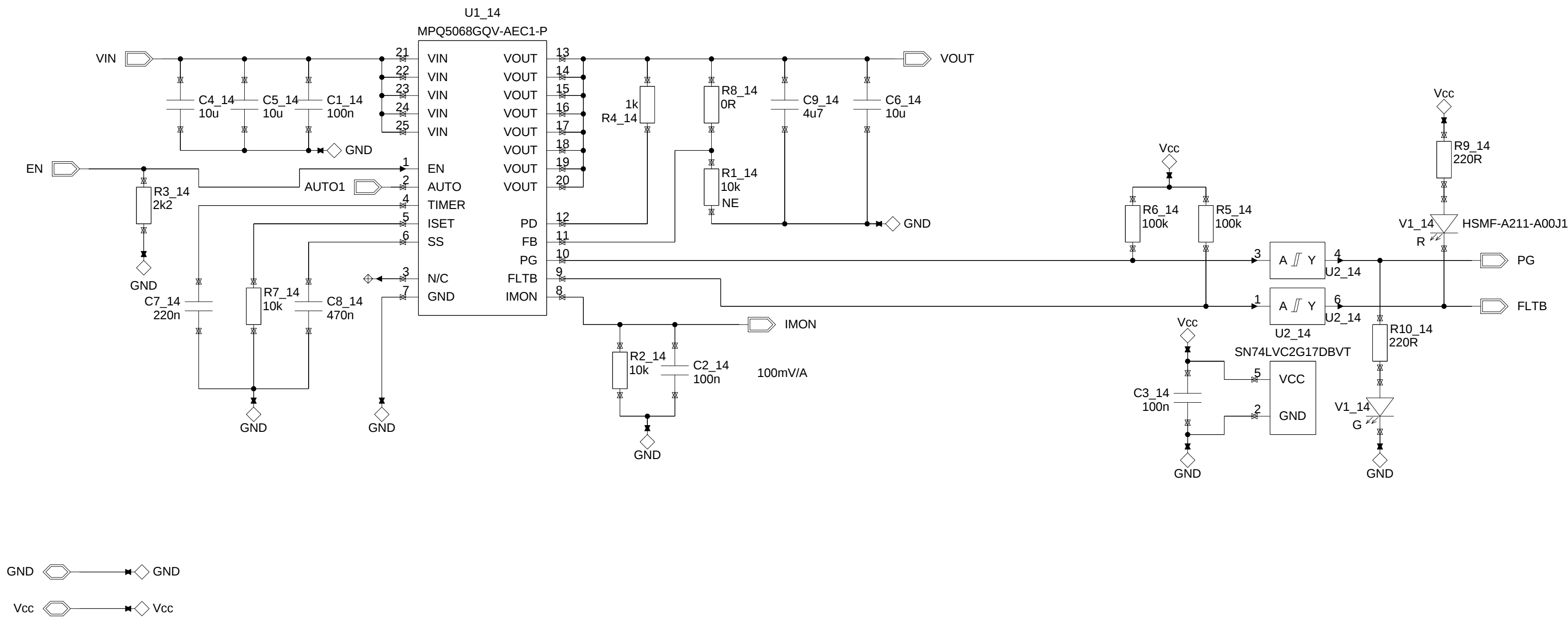
Developer: Brouwer Eric Raphael		Project: Mu3e			
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1	
Checked by:		Rev. C Copy von Rev. B			
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3	
	Unit: Power Distribution Controller (MPDC)	Located at:		11-I5	
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Switch_1



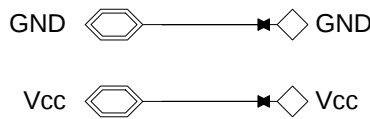
Developer: Brouwer Eric Raphael		Project: Mu3e			
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1	
Checked by:		Rev. C Copy von Rev. B			
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201		Rev: C	Size: A3
	CH 5232 Villigen - PSI	PCB Name: Power Distribution Controller (MPDC)		Located at: 11-A3	
	LTP	Variant Name:		Block page: 1 of 1	
	3205	Date Time: 30/09/2024:15:46		Sheet Nr.: 16	Total: 47

Switch_1



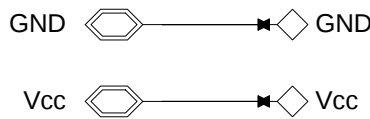
Developer:	Brouwer Eric Raphael	Project:	Mu3e
Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
Checked by:		Rev. C Copy von Rev. B	Sheet: 1
PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev. C	Size: A3
	CH 5232 Villigen - PSI	Variant Name:	11-D3
	CH 5232 Villigen - PSI	Date Time:	30/09/2024:15:46
	CH 5232 Villigen - PSI	Sheet Nr.:	17
	CH 5232 Villigen - PSI	Total:	47

U1_15
MPQ5068GQV-AEC1-P



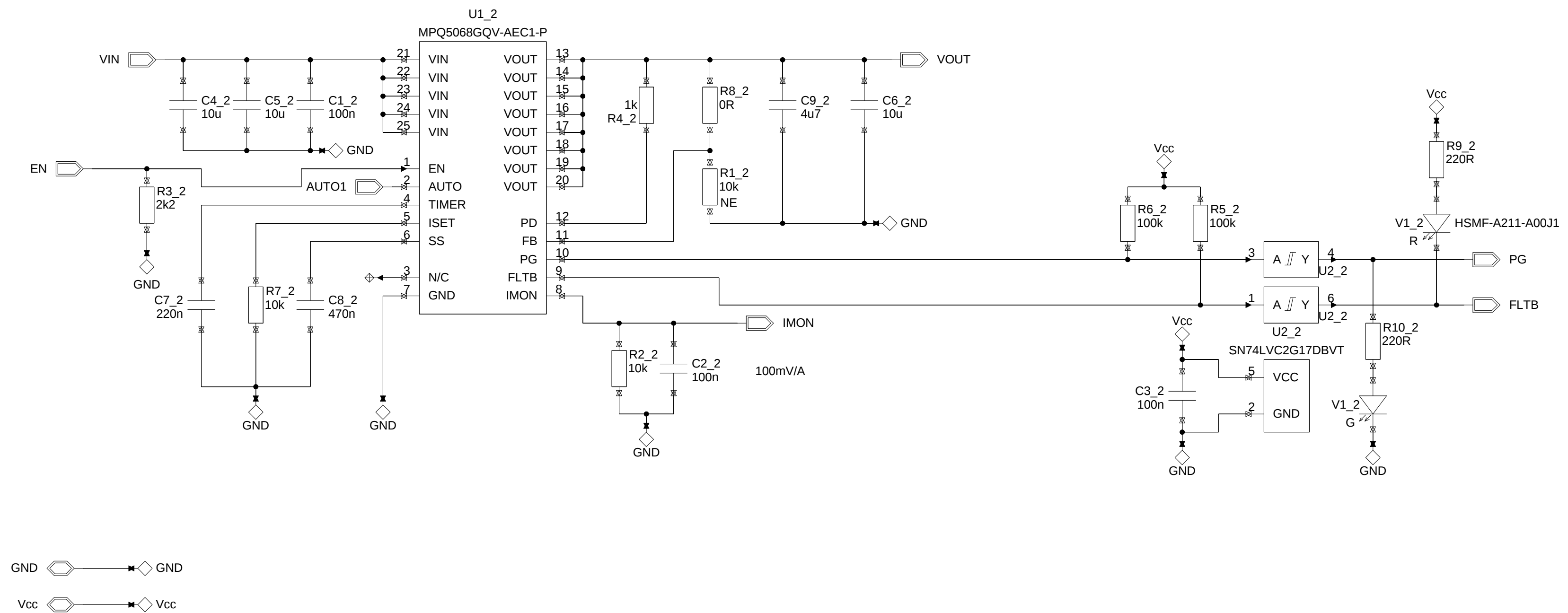
PSI
CH 5232 Villigen - PSI

U1_16
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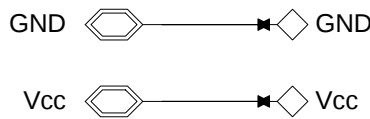
PSI
CH 5232 Villigen - PSI

Switch_1



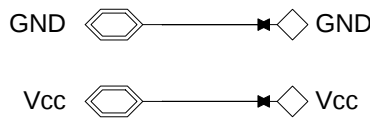
Developer: Brouwer Eric Raphael		Project: Mu3e		
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Checked by:		Rev. C Copy von Rev. B		
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
	Mu3e Power Distributor_Controller_(MPDC)	Located at: 11-D8		
	LTP	Variant Name:	Block page: 1 of 1	
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U1_3
MPQ5068GQV-AEC1-P



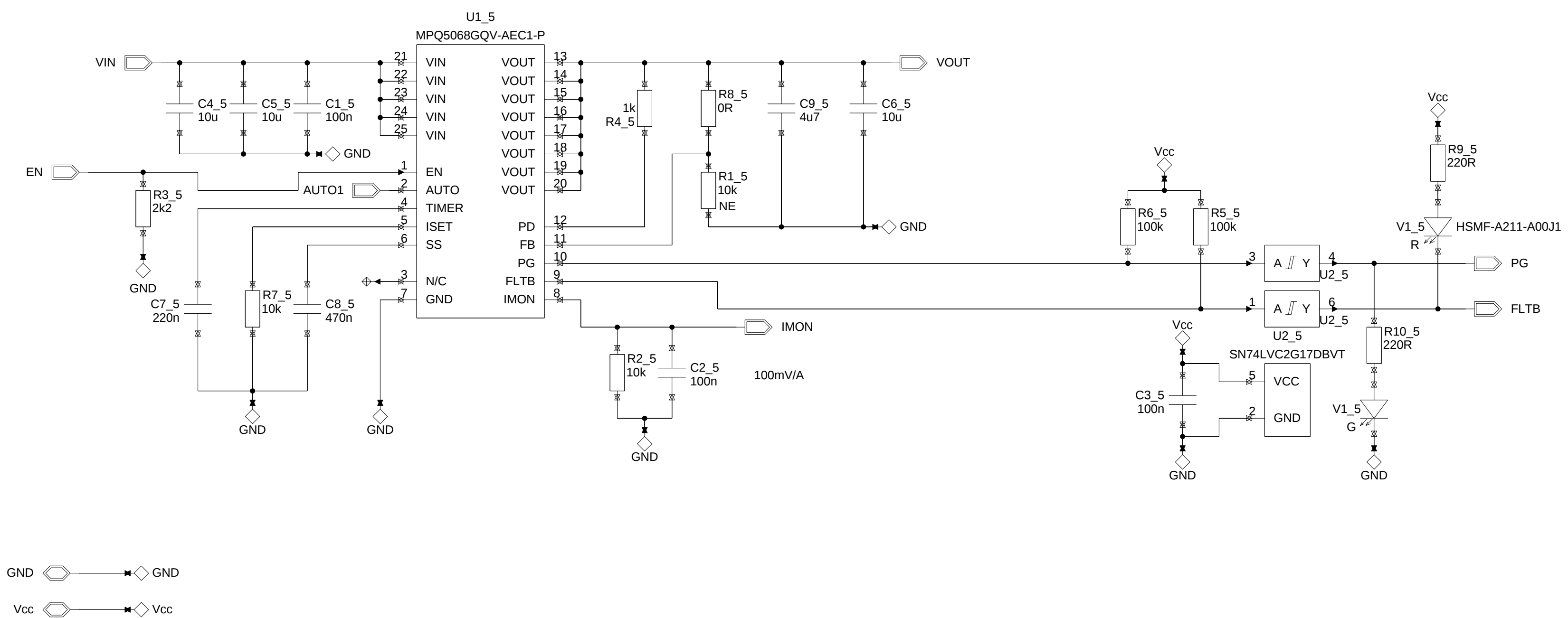
PSI
CH 5232 Villigen - PSI

U1_4
MPQ5068GQV-AEC1-P



PSI
CH 5232 Villigen - PSI

Switch_1

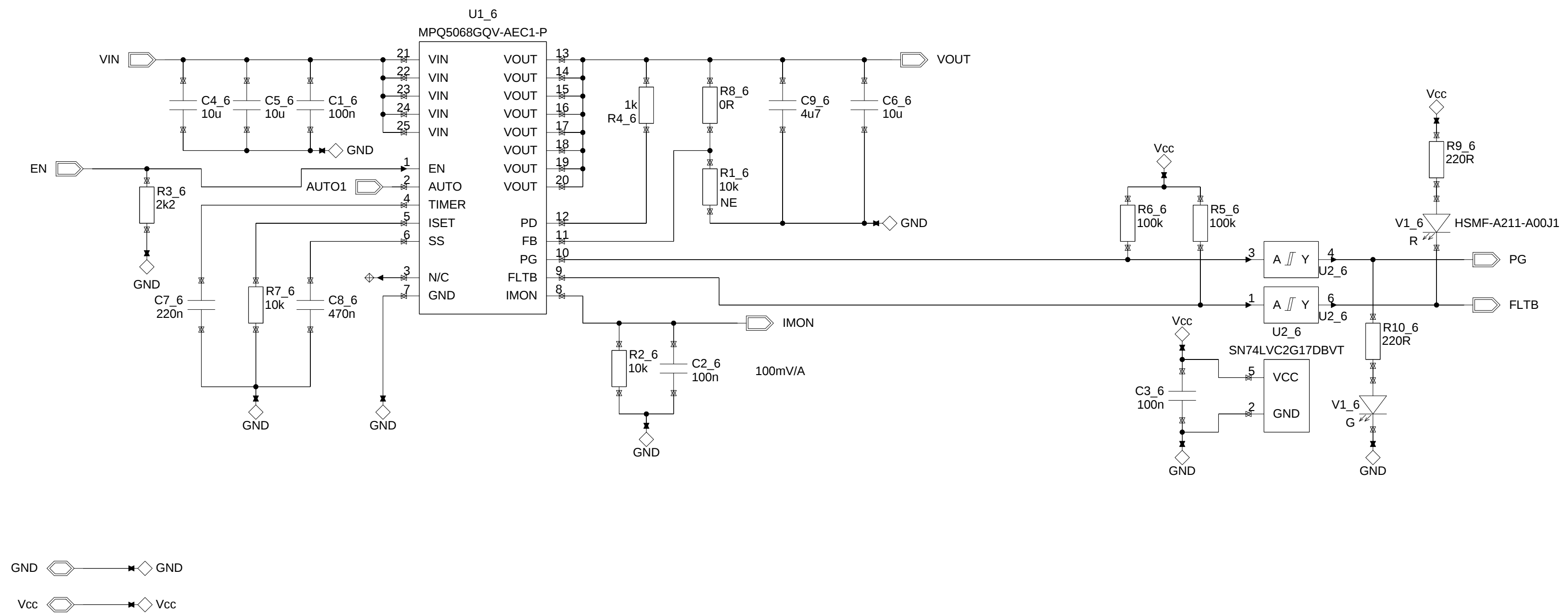


GND

Vcc

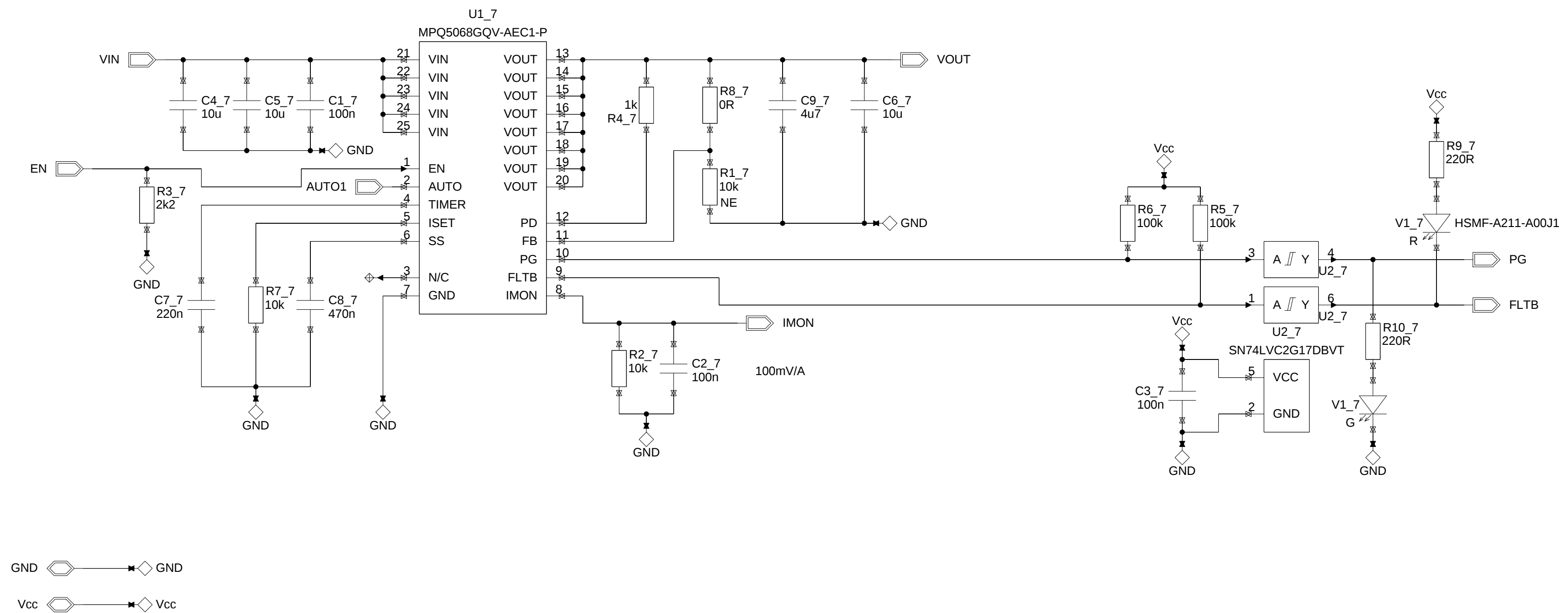
Developer:	Brouwer Eric Raphael	Project:	Mu3e
Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
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PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev. C	Size: A3
	CH 5232 Villigen - PSI	Variant Name:	11-A6
	CH 5232 Villigen - PSI	Date Time:	30/09/2024:15:46
	CH 5232 Villigen - PSI	Sheet Nr.:	23
	CH 5232 Villigen - PSI	Total:	47

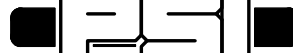
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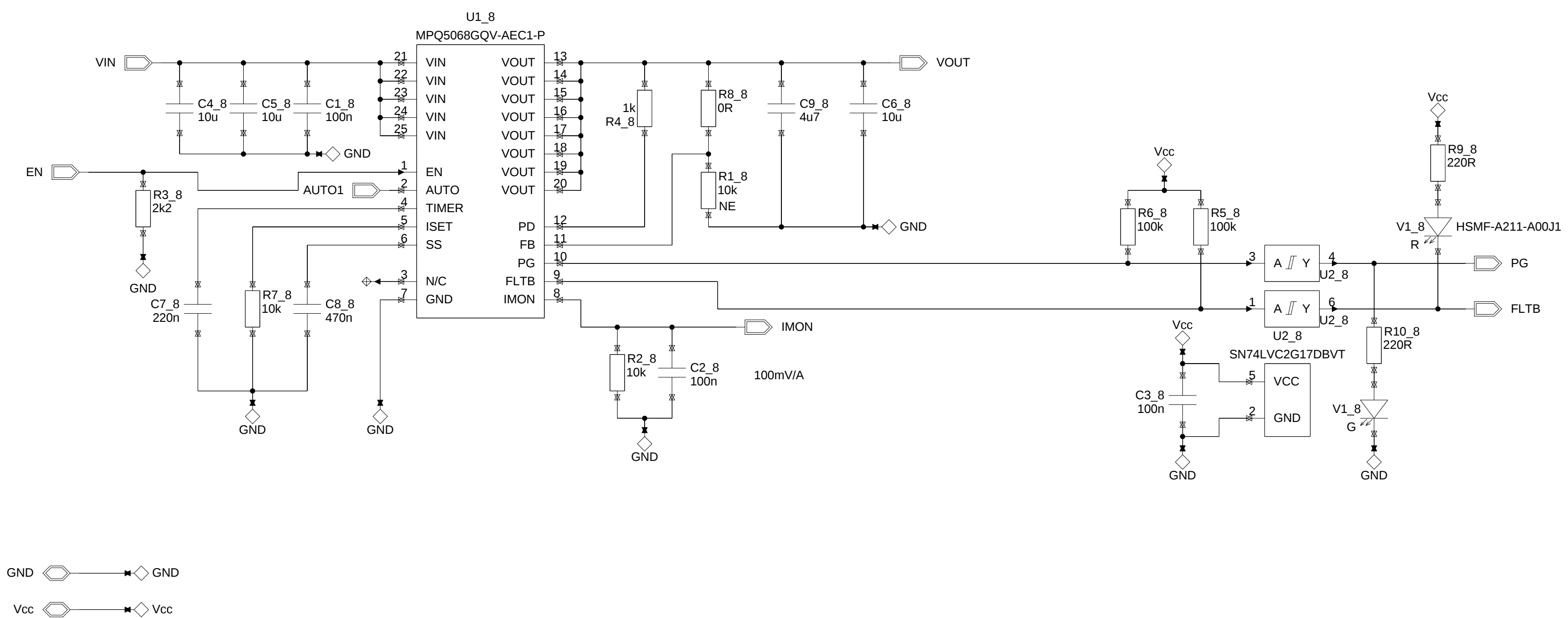
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: 11-D6		
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Switch_1



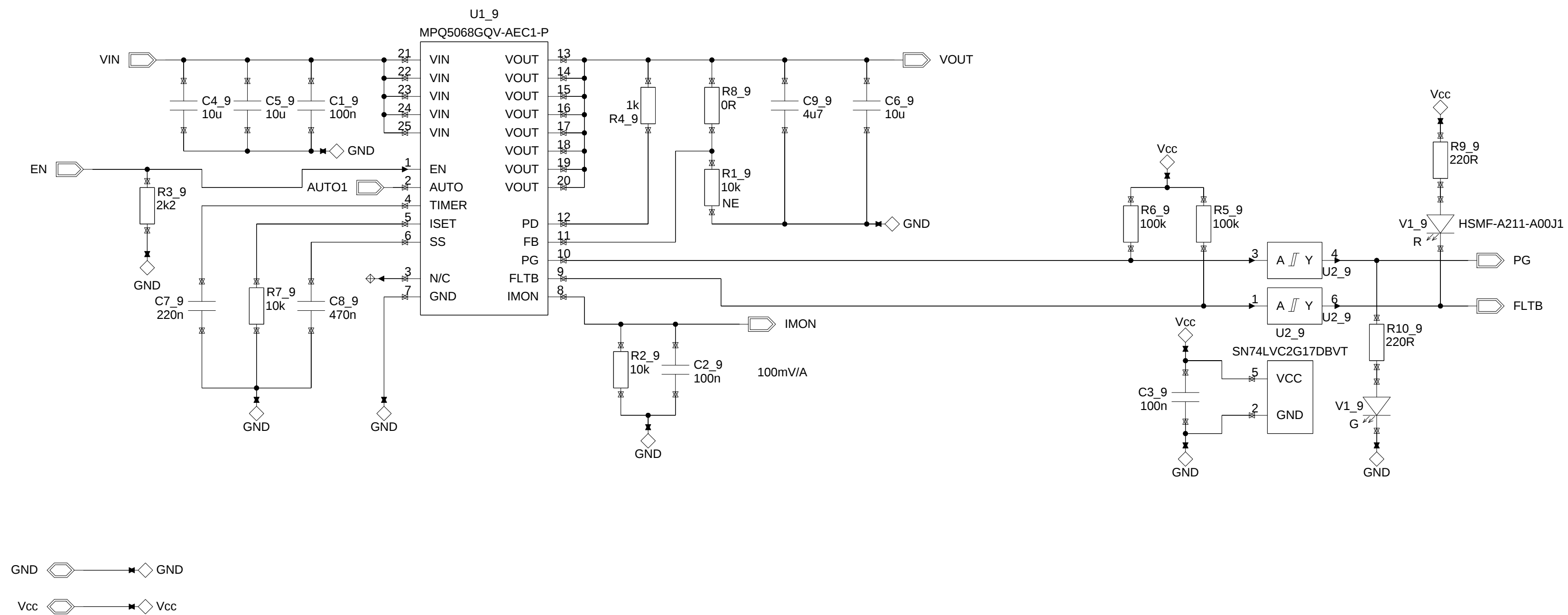
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
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Switch_1



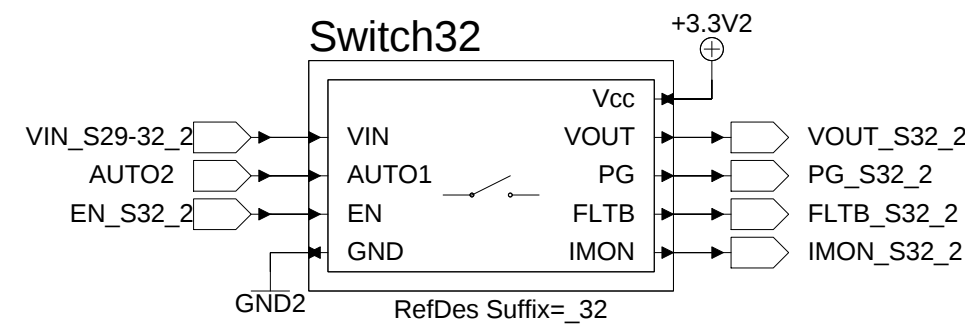
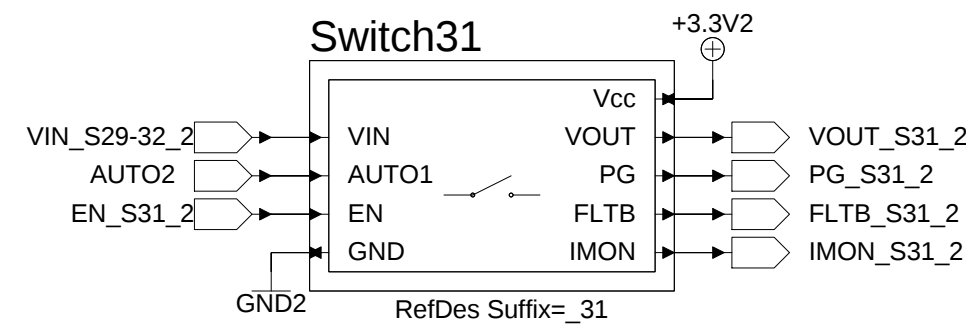
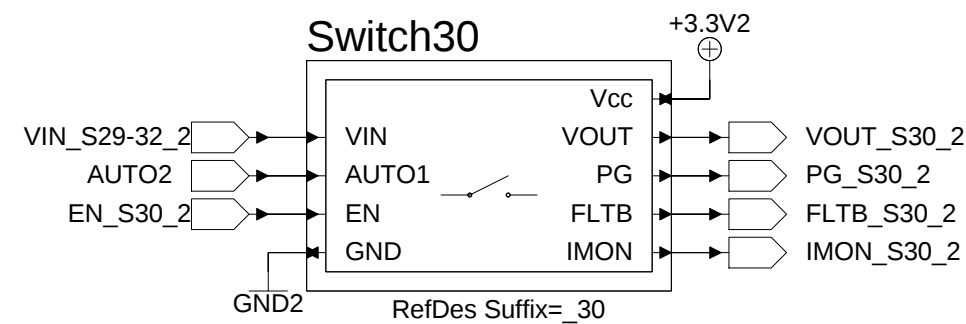
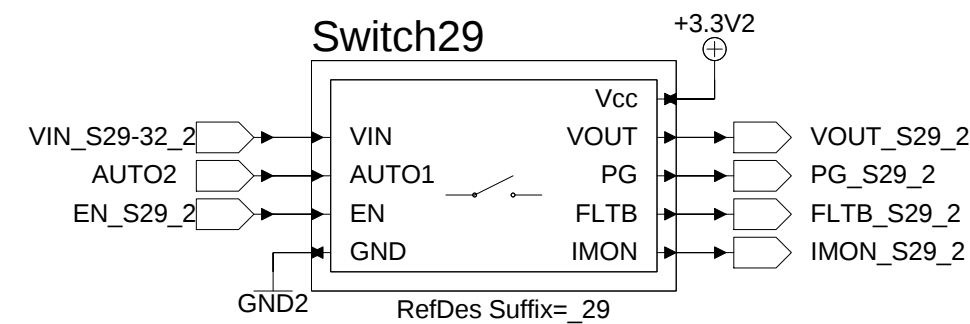
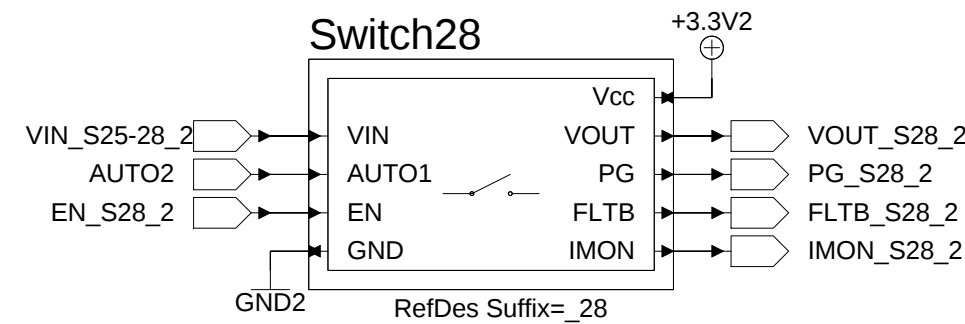
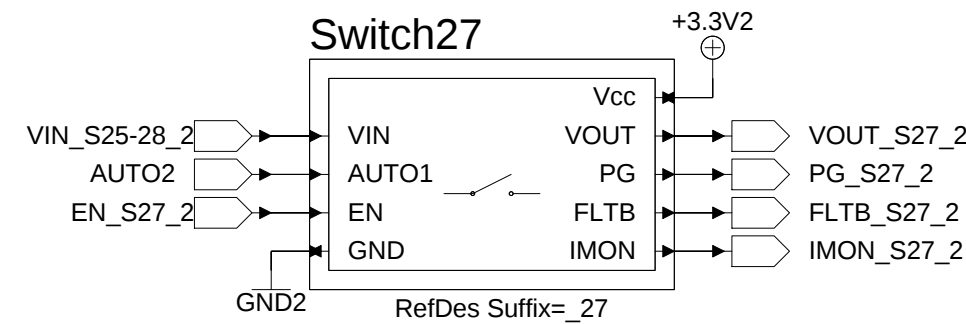
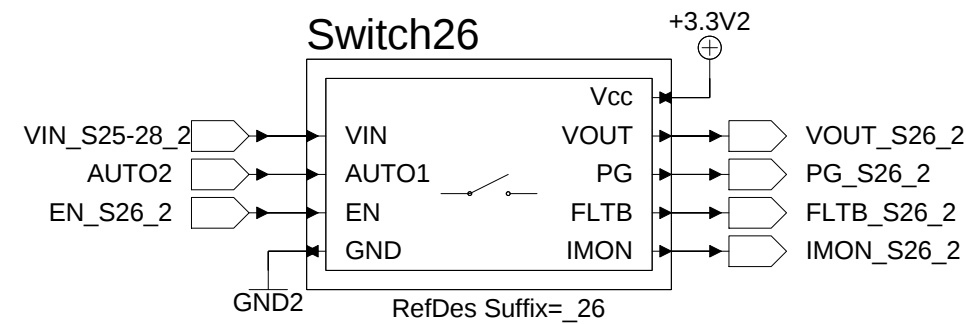
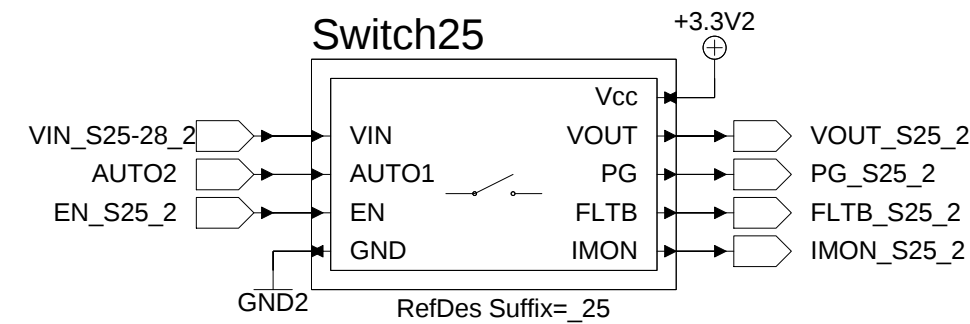
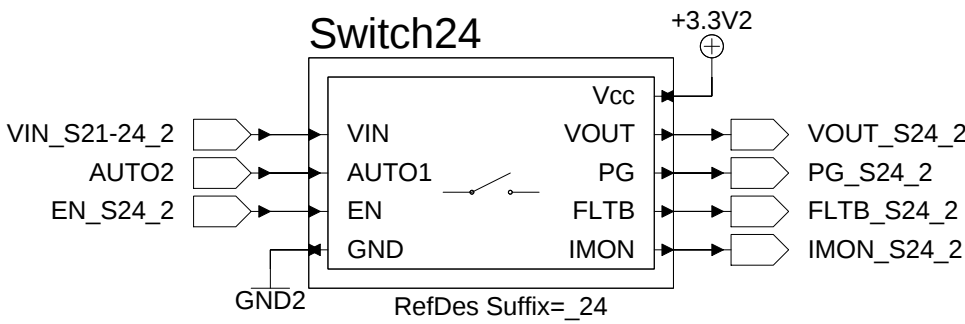
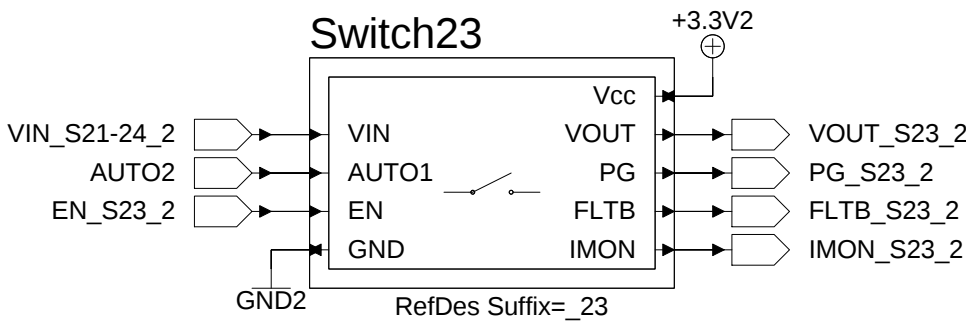
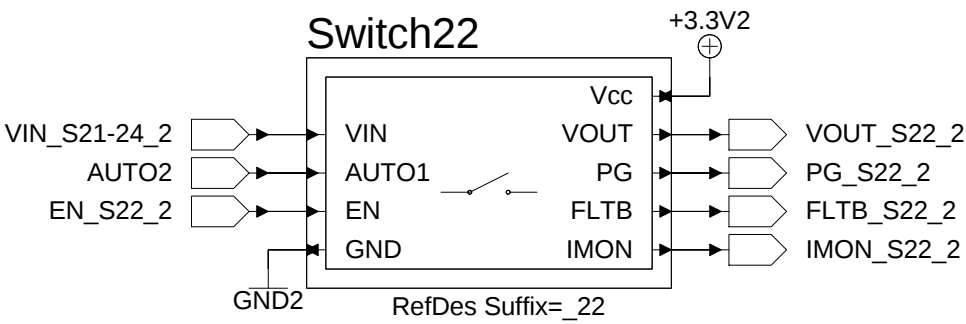
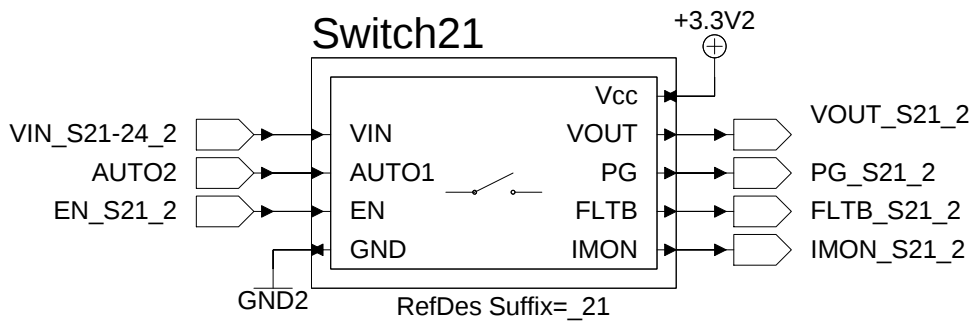
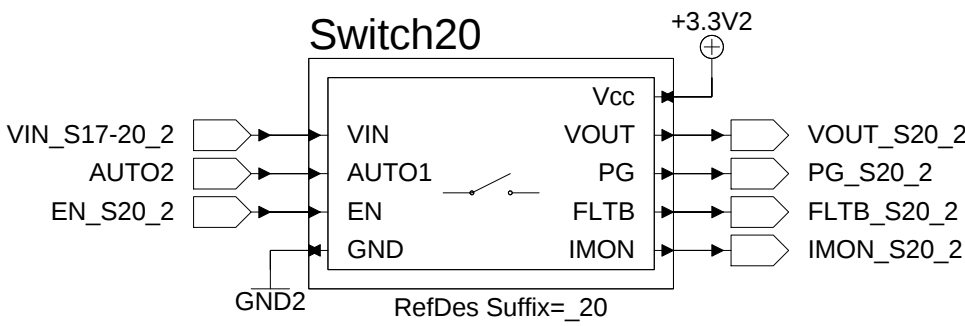
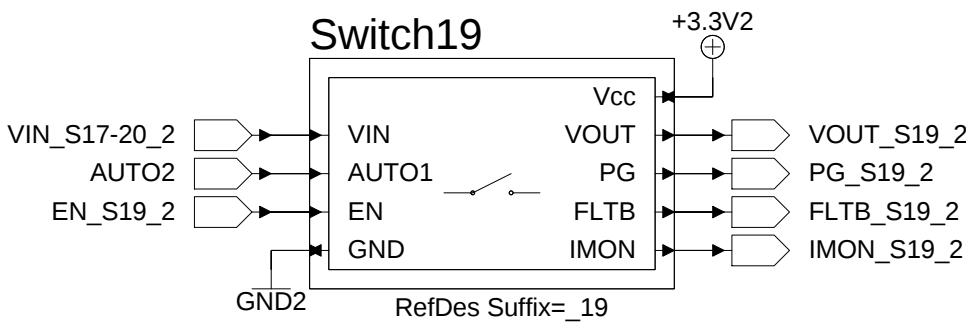
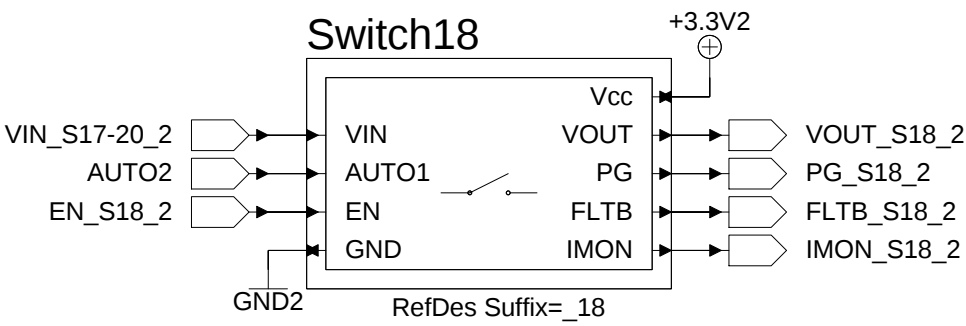
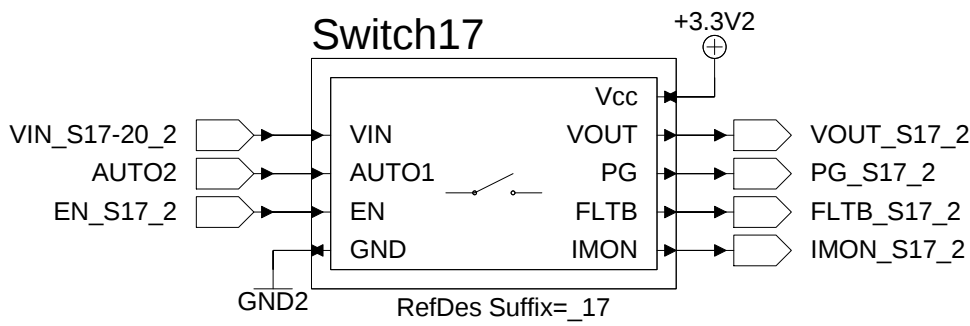
Developer: Brouwer Eric Raphael		Project: Mu3e			
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1	
Checked by:		Rev. C Copy von Rev. B			
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr:	220201	Rev: C	Size: A3
	Mu3e_Power_Distributor_Controller_(MPDC)	PCB_Distributor_Controller_(MPDC)		Located at: 11-l6	
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	3205	Date Time:	30/09/2024:15:46	Sheet Nr.: 26	Total: 47

Switch_1

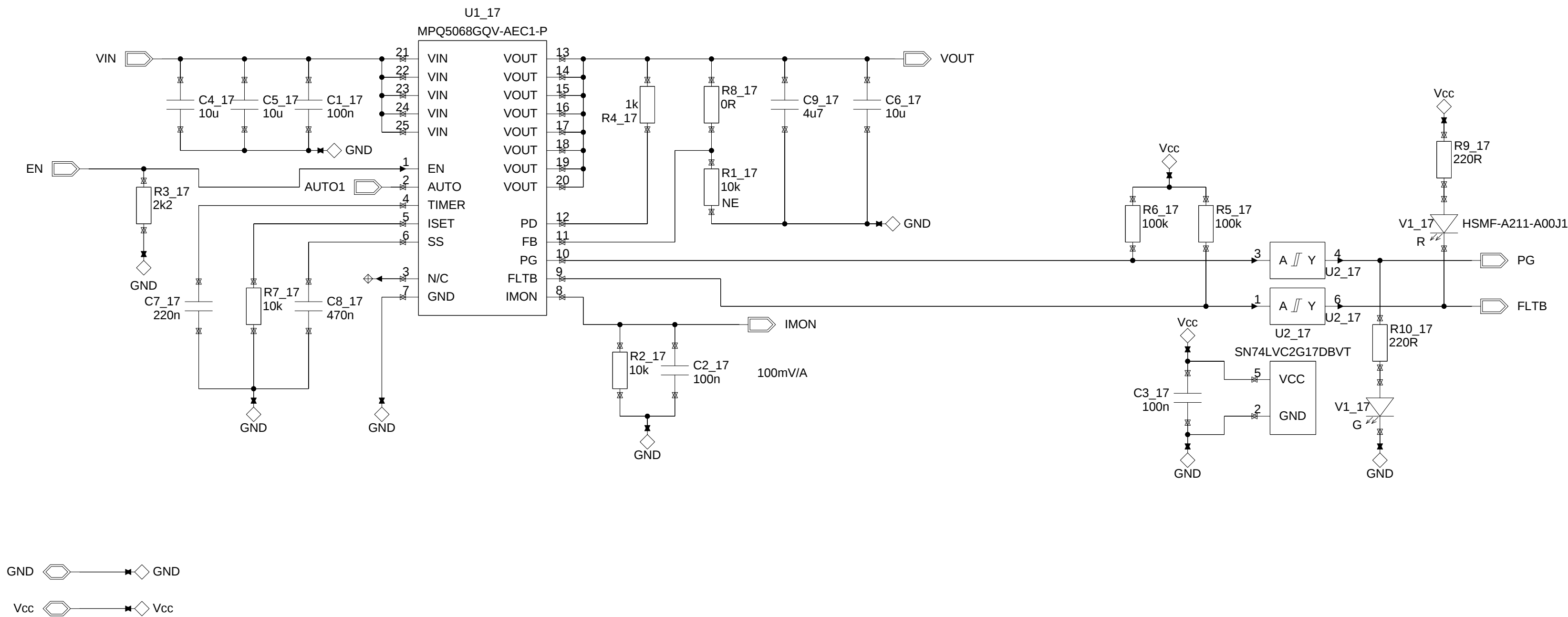


Developer: Brouwer Eric Raphael		Project: Mu3e		
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1
Checked by:		Rev. C Copy von Rev. B		
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: 11-A5		
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Switches 2

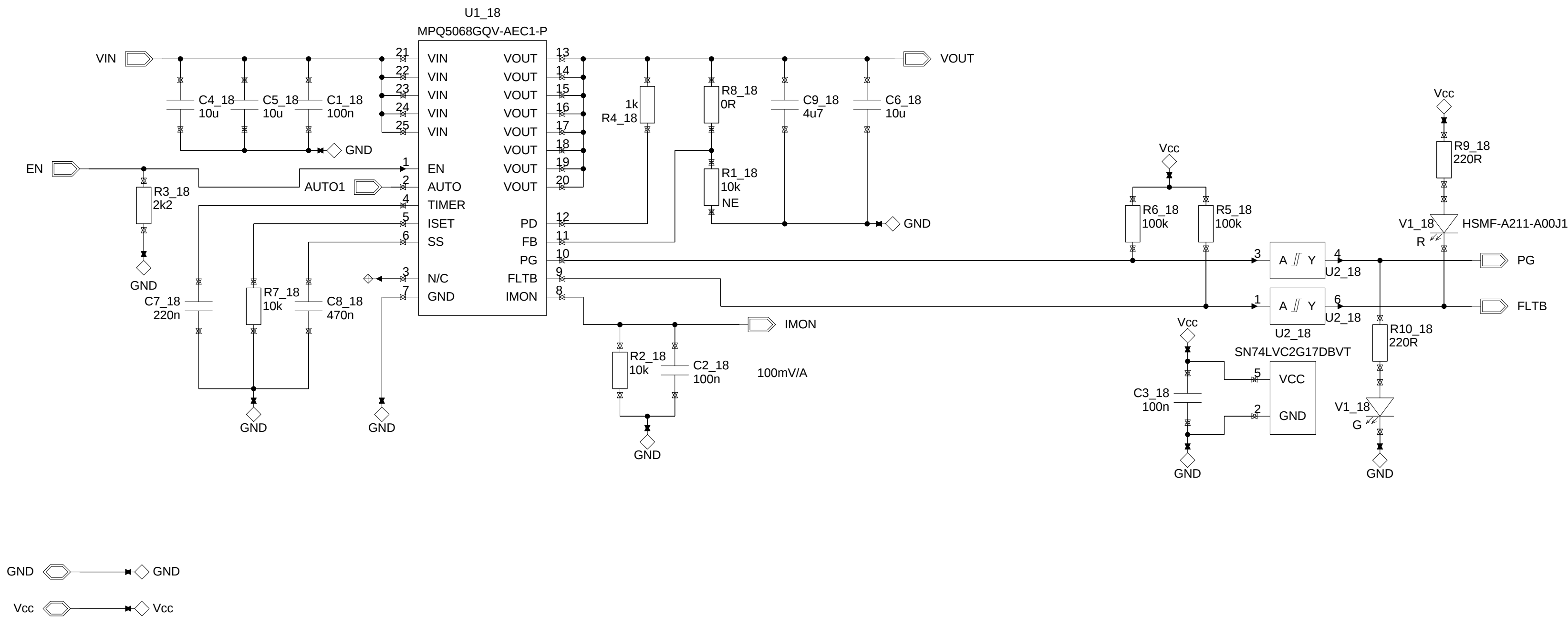


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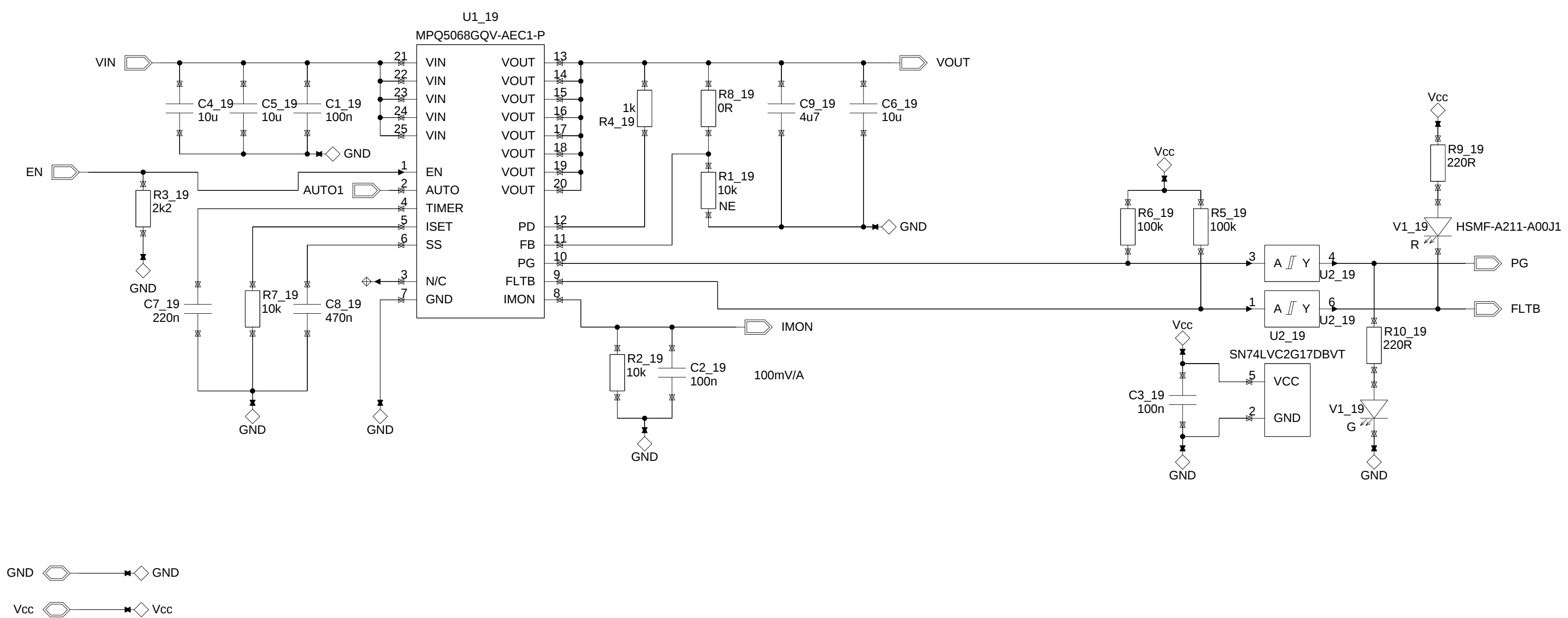
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Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
Checked by:		Rev. C Copy von Rev. B	Sheet: 1
PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
	CH 5232 Villigen - PSI	Rev. C	Size: A3
	CH 5232 Villigen - PSI	Variant Name:	Located at: _
	CH 5232 Villigen - PSI	Date Time:	30/09/2024:15:46
	CH 5232 Villigen - PSI	Sheet Nr.:	29
	CH 5232 Villigen - PSI	Total:	47

Switch_1



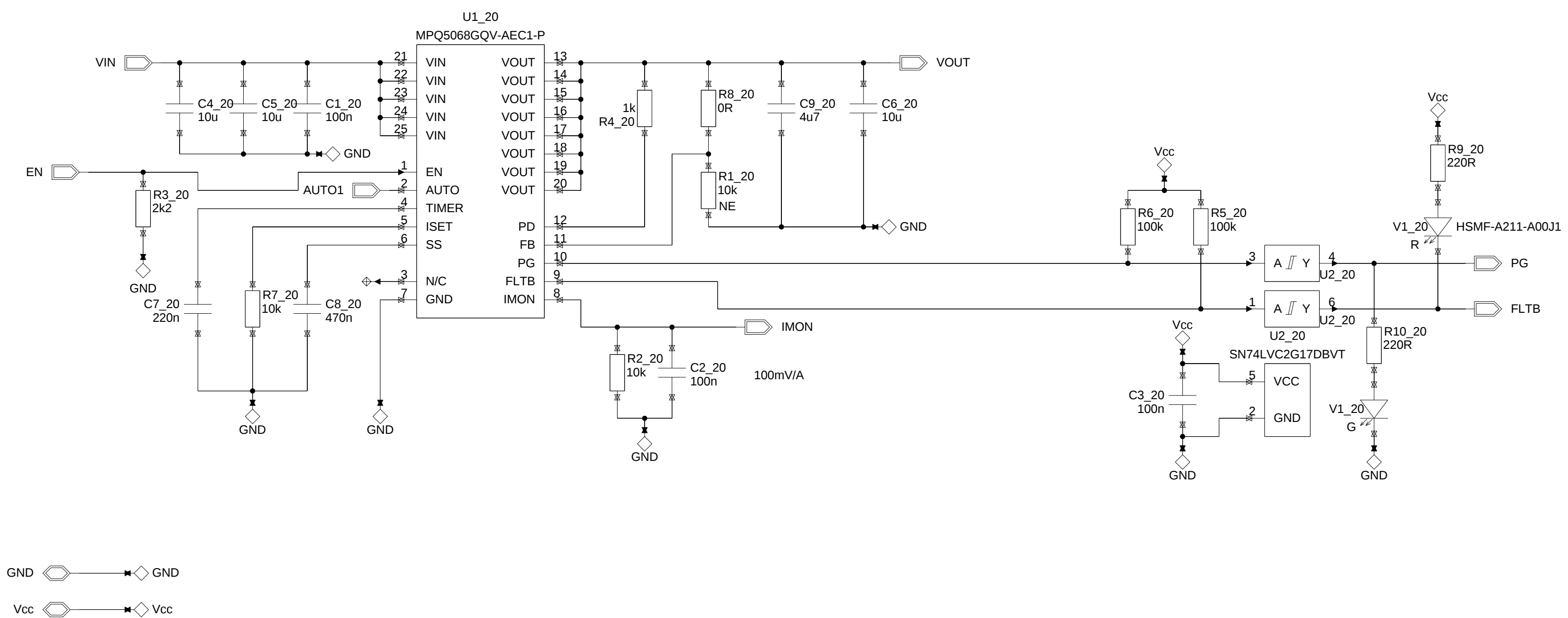
Developer: Brouwer Eric Raphael		Project: Mu3e			
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1	
Checked by:		Rev. C Copy von Rev. B			
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3	
	Owner: Mu3e_Power_Distributor_Controller_(MPDC)	Located at:		—	
	LTP	Variant Name:		Block page:	—
3205	Date Time: 30/09/2024:15:46	Sheet Nr.: 30	Total: 47		

Switch_1



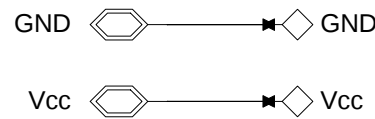
Developer:	Brouwer Eric Raphael	Project:	Mu3e
Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
Checked by:		Rev. C Copy von Rev. B	Sheet: 1
PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev:	C
	CH 5232 Villigen - PSI	Size:	A3
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Switch_1



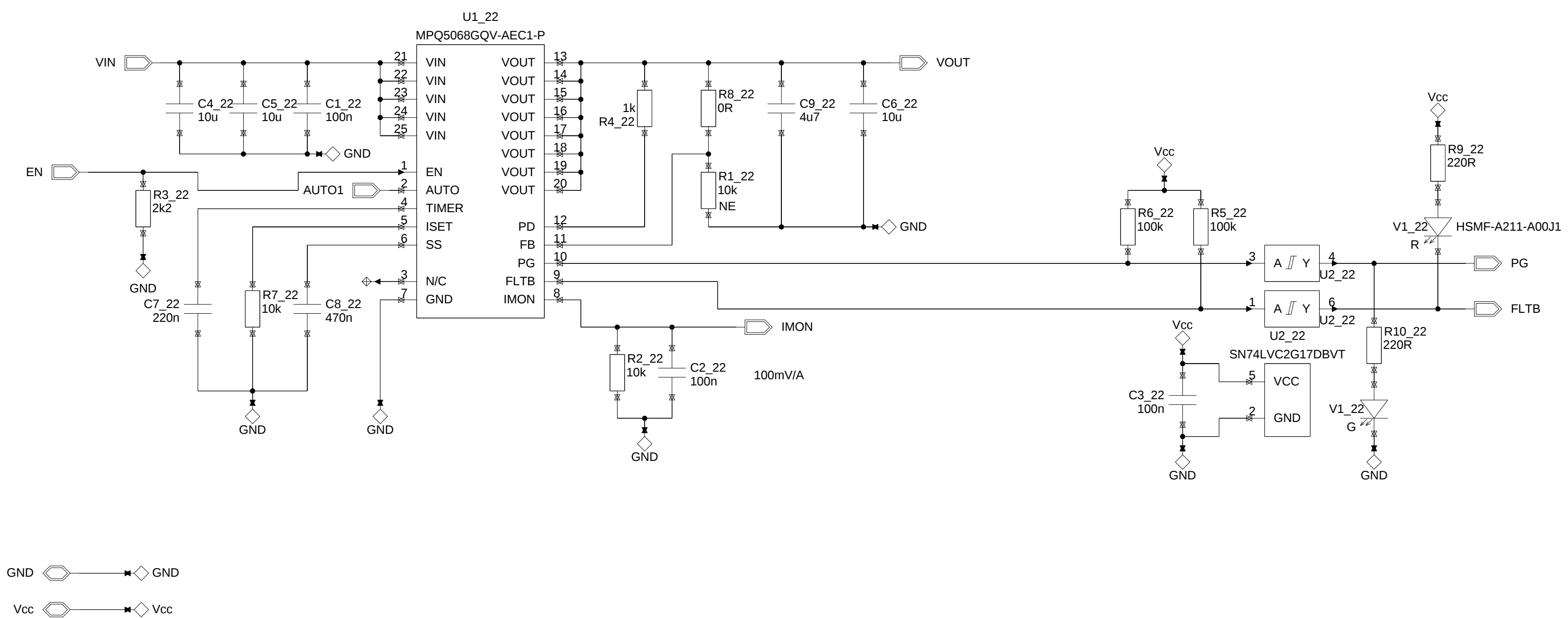
Developer:	Brouwer Eric Raphael	Project:	Mu3e
Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
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PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev:	C
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U1_21
MPQ5068GQV-AEC1-P



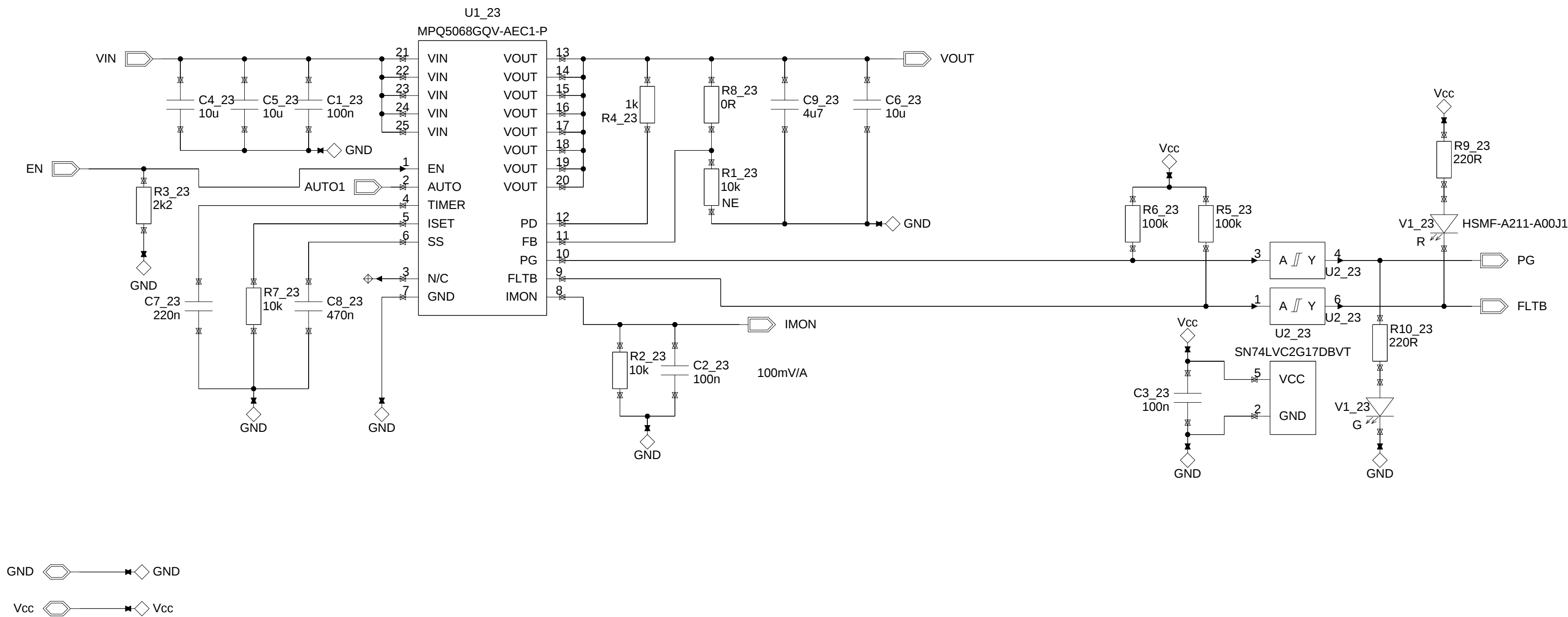
Developer: Brouwer Eric Raphael		Project: Mu3e		
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1
Checked by:		Rev. C Copy von Rev. B		
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
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Switch_1



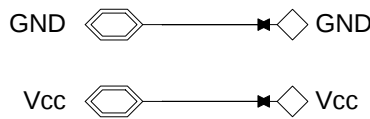
Developer:	Brouwer Eric Raphael	Project:	Mu3e
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PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev:	C
	CH 5232 Villigen - PSI	Size:	A3
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Switch_1



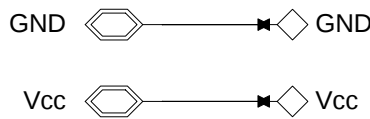
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PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev. C	Size: A3
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U1_24
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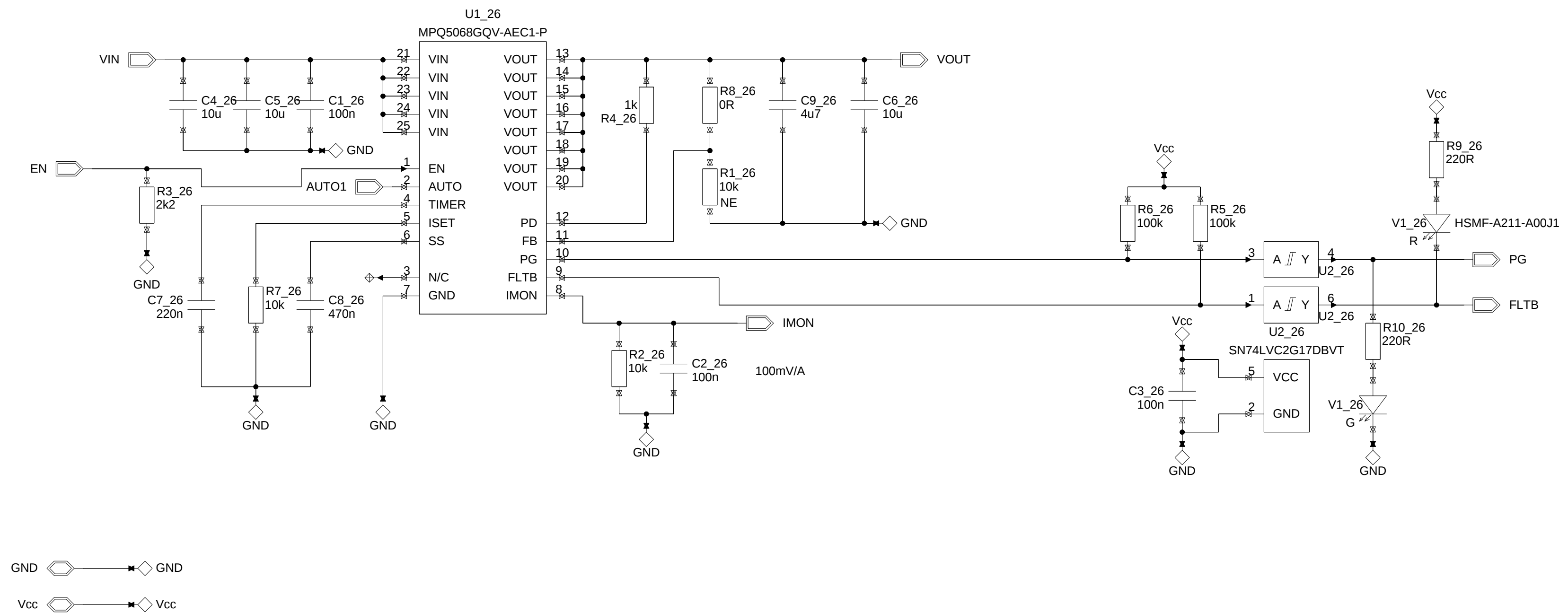
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PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI		Department	PCB Nr: 220201	Rev: C	Size: A3
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U1_25
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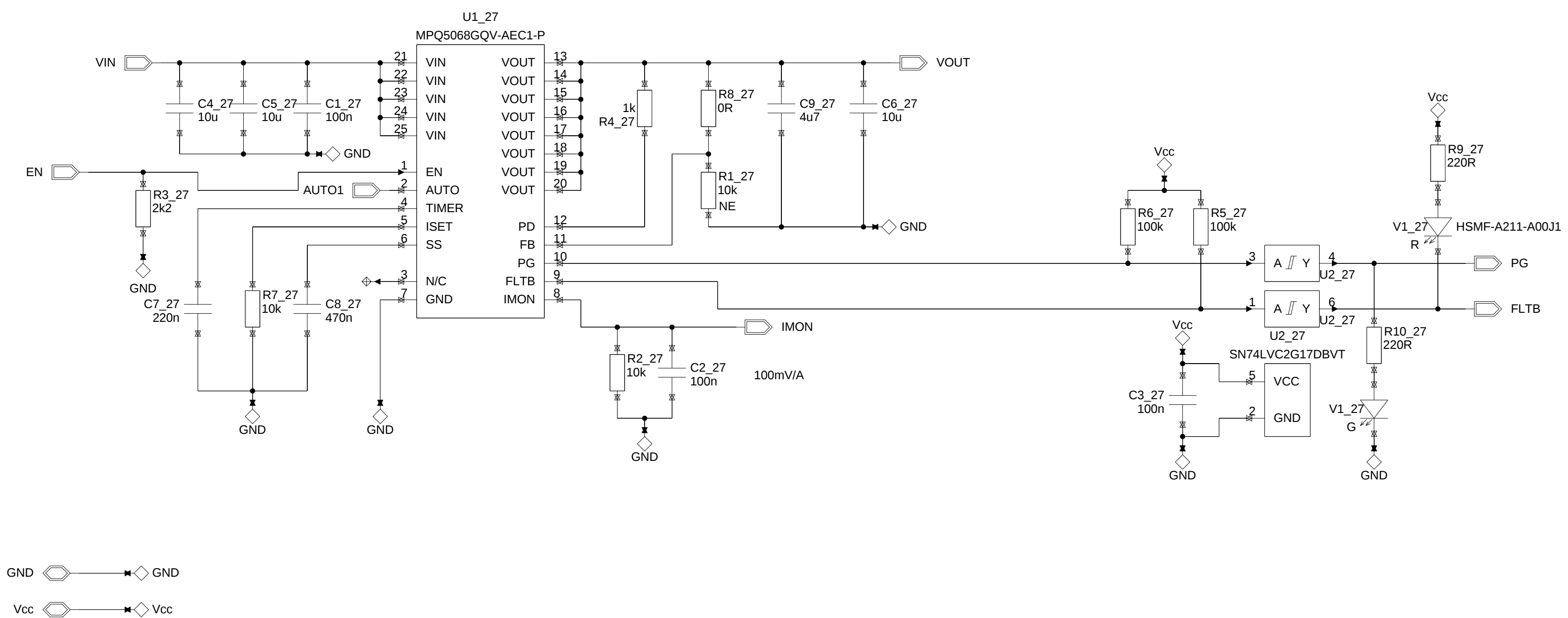
PSI
CH 5232 Villigen - PSI

Switch_1



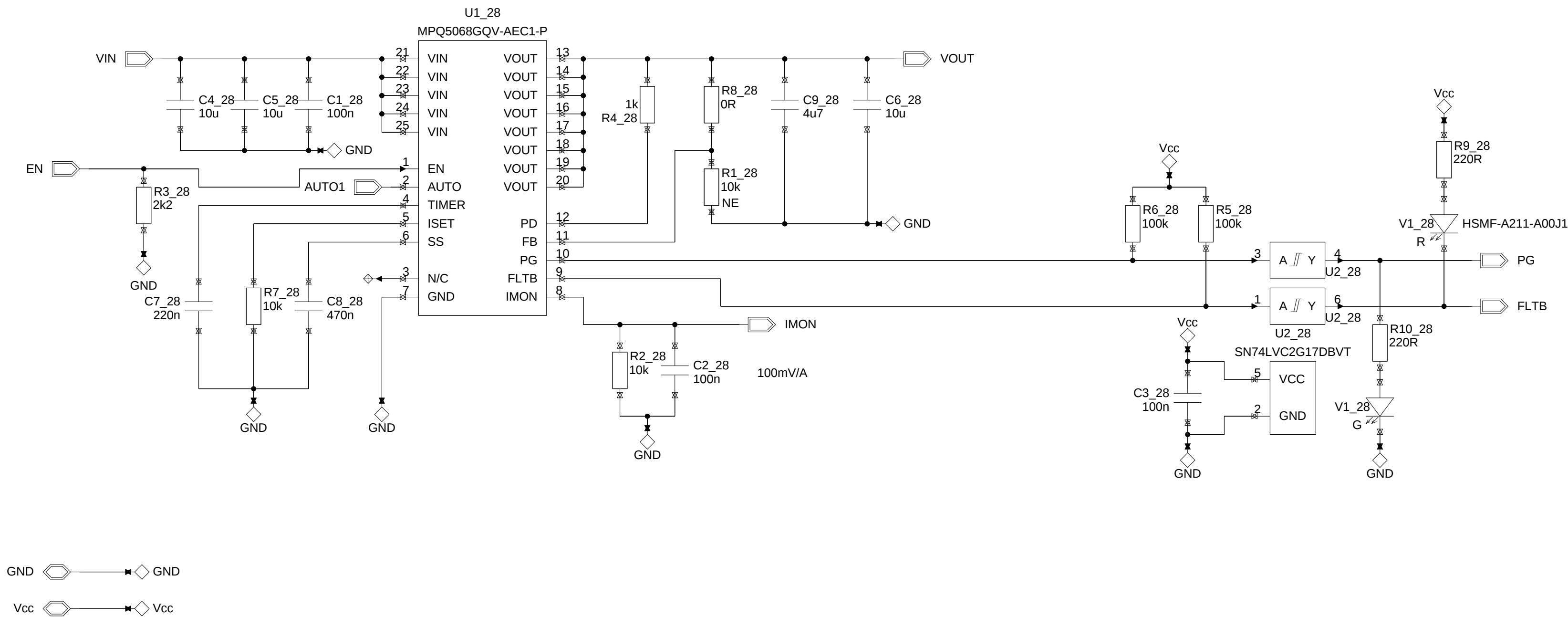
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Switch_1



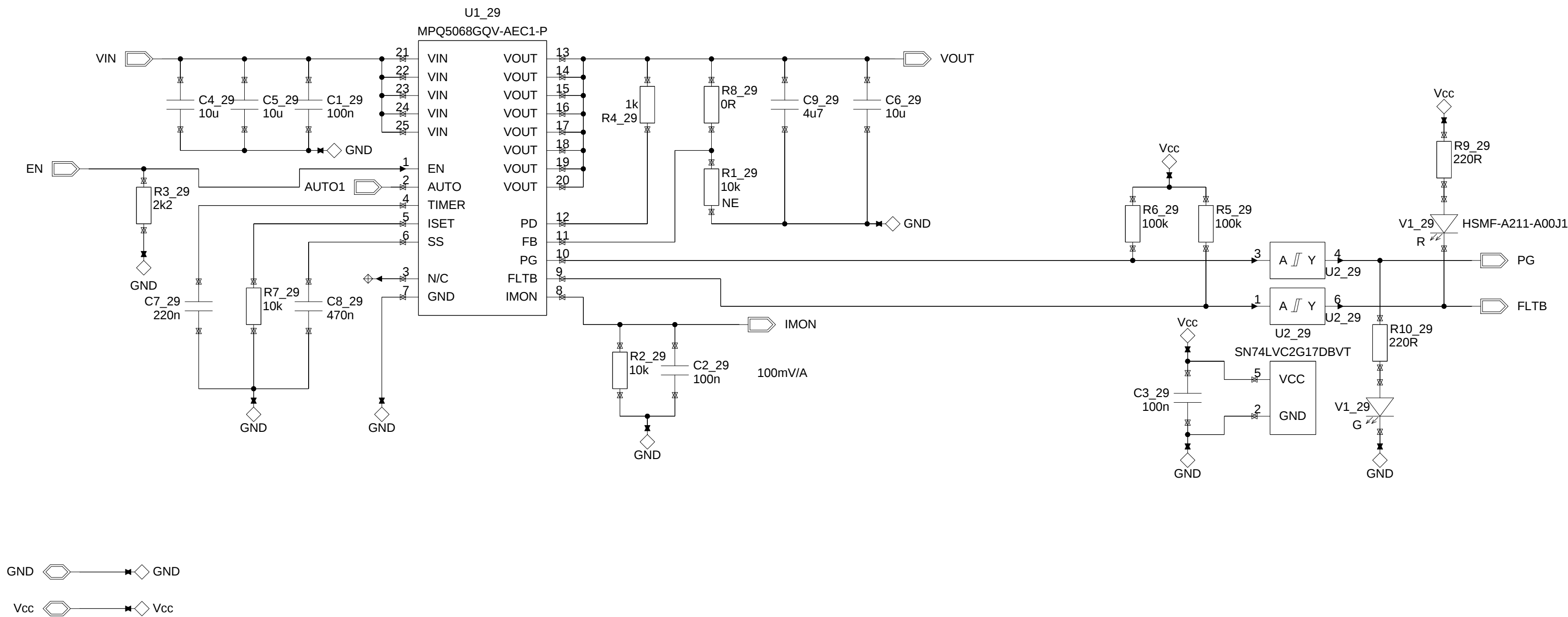
Developer:	Brouwer Eric Raphael	Project:	Mu3e
Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
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PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
	CH-5232 Villigen - PSI	Rev:	C
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		Total:	47

Switch_1



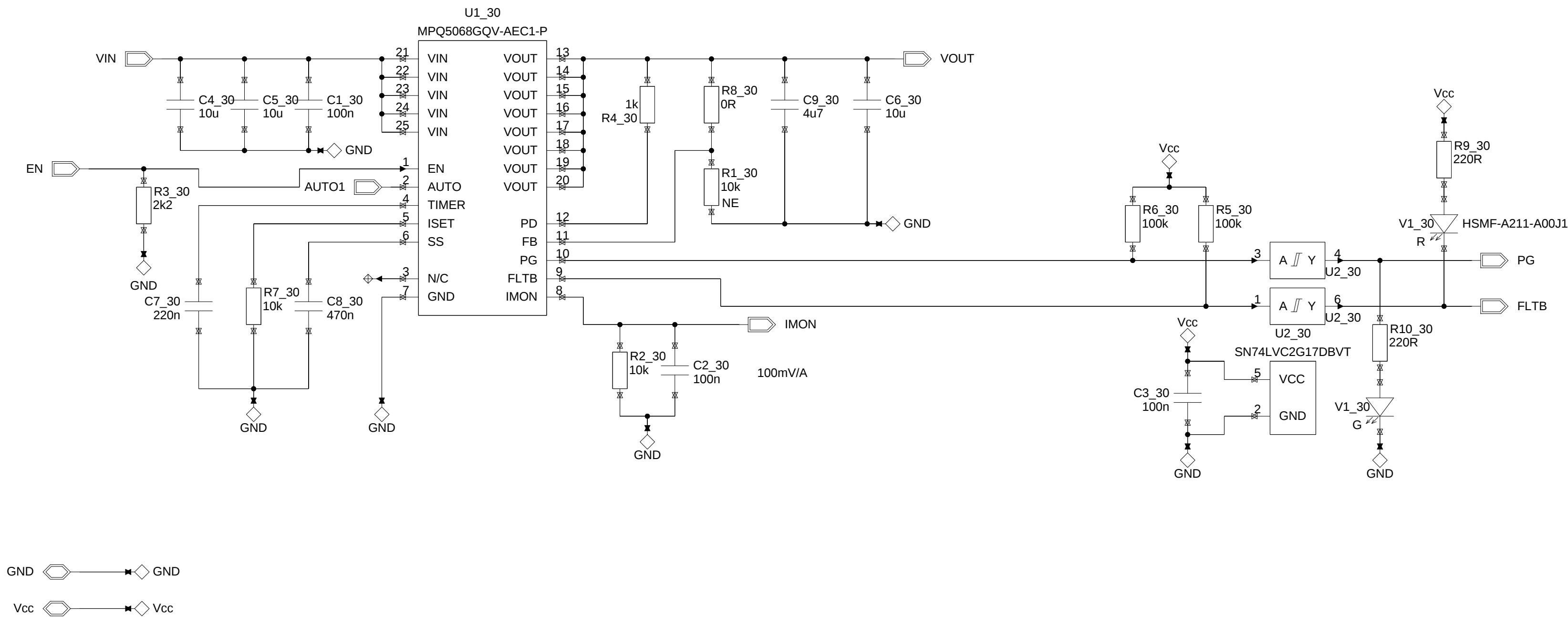
Developer:	Brouwer Eric Raphael	Project:	Mu3e
Drawn by:	Brouwer Eric Raphael	Schematic:	Switch1
Checked by:		Rev. C Copy von Rev. B	Sheet: 1
PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev. C	Size: A3
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	CH 5232 Villigen - PSI	Date Time:	30/09/2024:15:46
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Switch_1



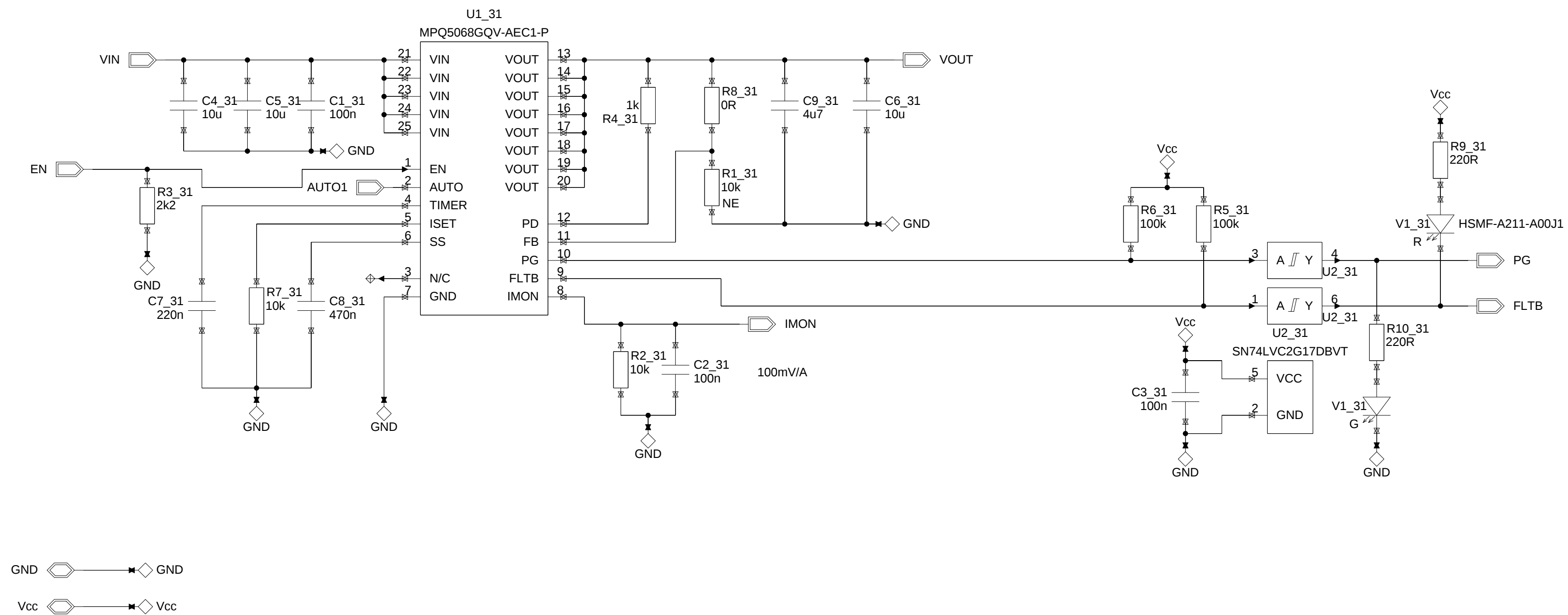
Developer:	Brouwer Eric Raphael	Project:	Mu3e
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PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev. C	Size: A3
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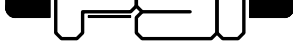
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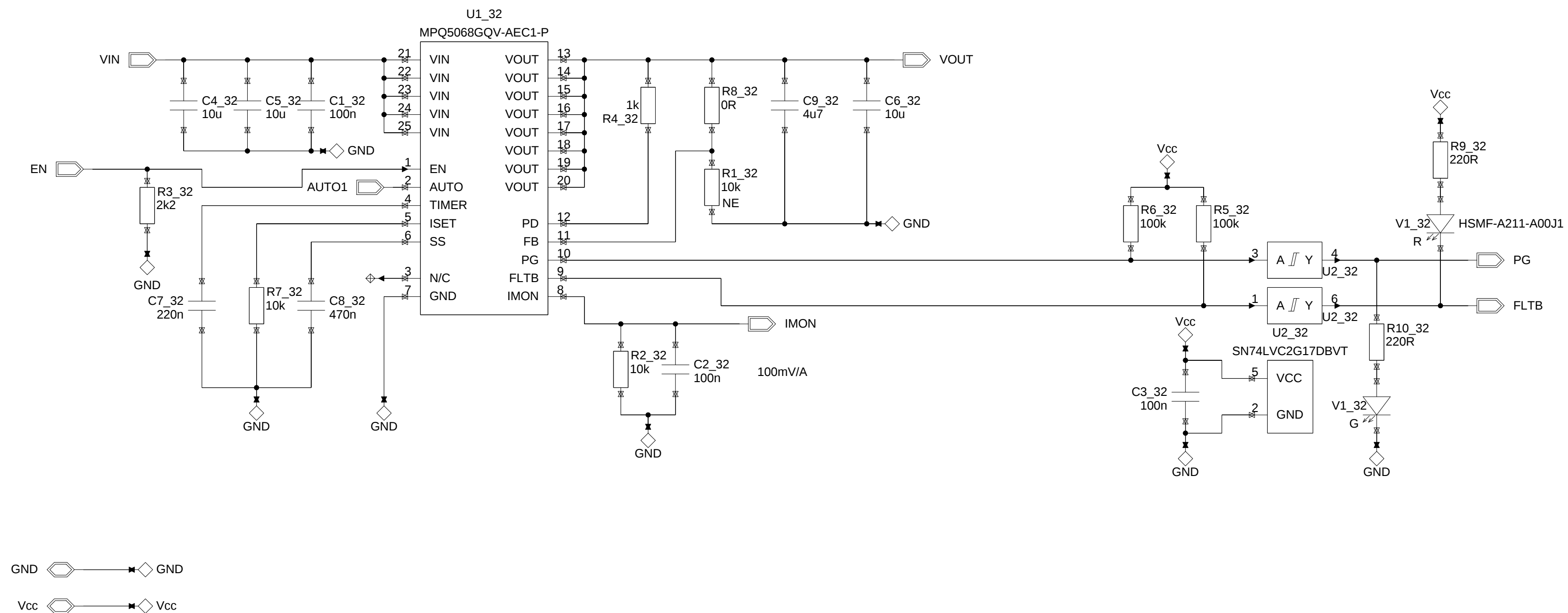
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PAUL SCHERRER INSTITUT	Department	PCB Nr:	220201
CH 5232 Villigen - PSI	CH 5232 Villigen - PSI	Rev:	C
	CH 5232 Villigen - PSI	Size:	A3
	CH 5232 Villigen - PSI	Located at:	
	CH 5232 Villigen - PSI	Variant Name:	
	CH 5232 Villigen - PSI	Block page:	
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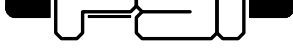
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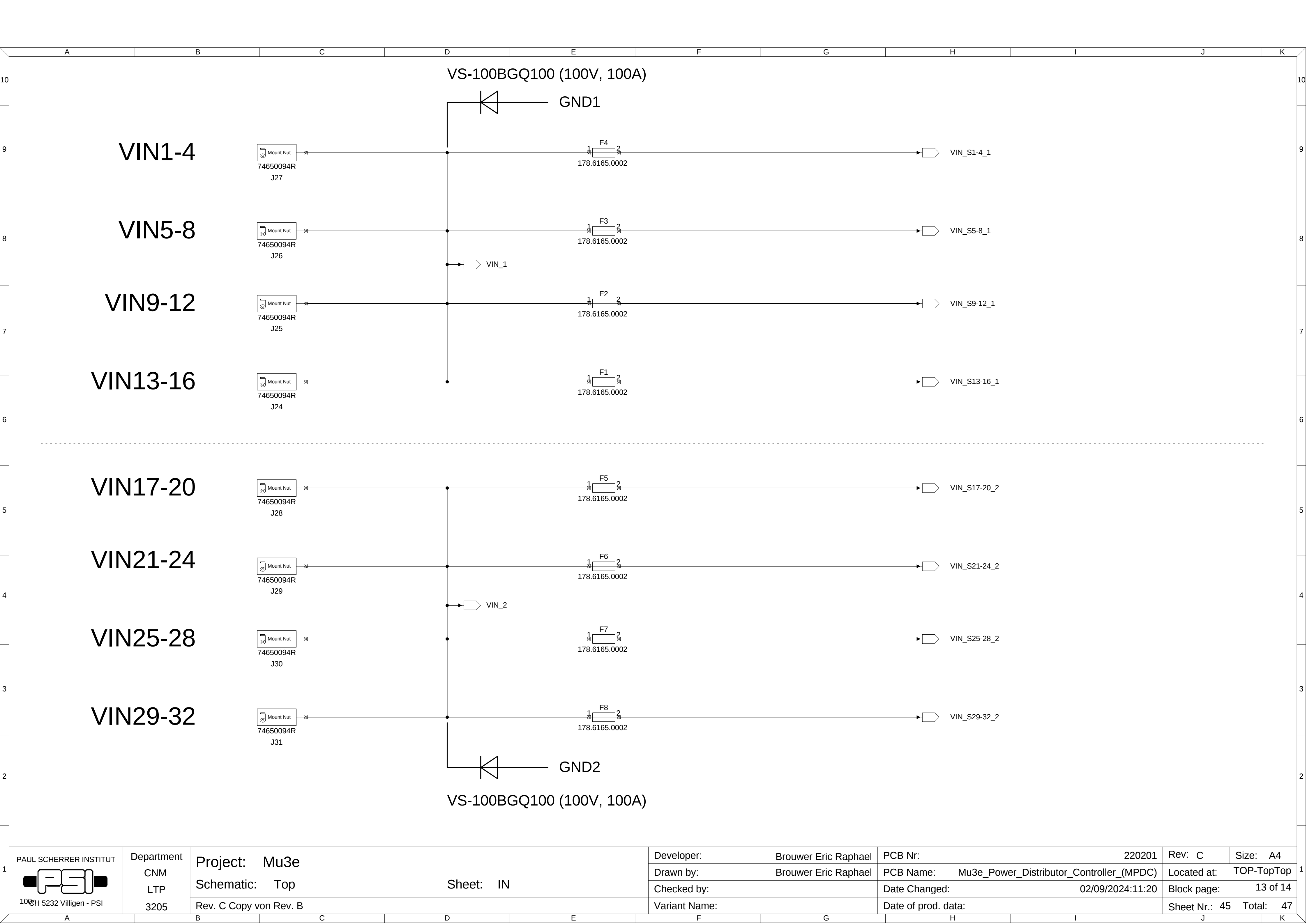


Developer: Brouwer Eric Raphael		Project: Mu3e		
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1
Checked by:		Rev. C Copy von Rev. B		
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
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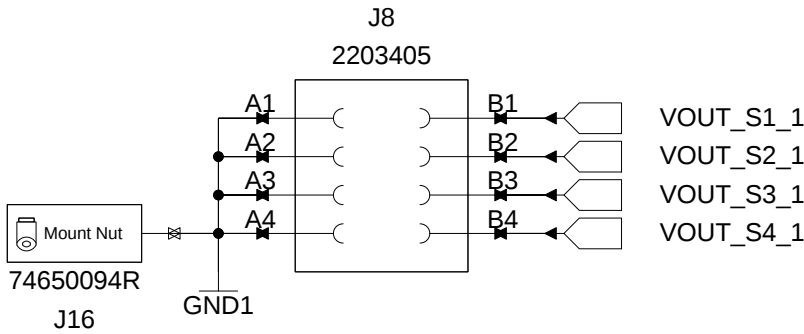
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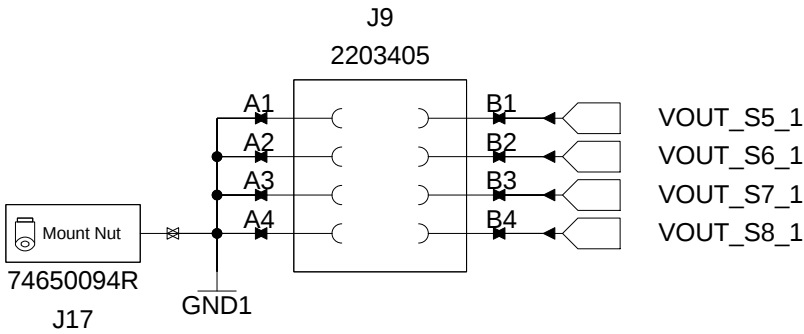
Developer: Brouwer Eric Raphael		Project: Mu3e		
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Checked by:		Rev. C Copy von Rev. B		
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
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	3205	Date Time: 30/09/2024:15:46	Sheet Nr.: 44	Total: 47



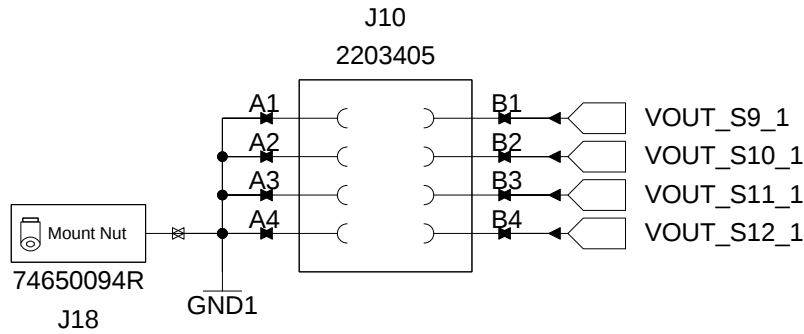
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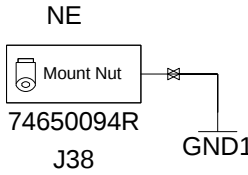
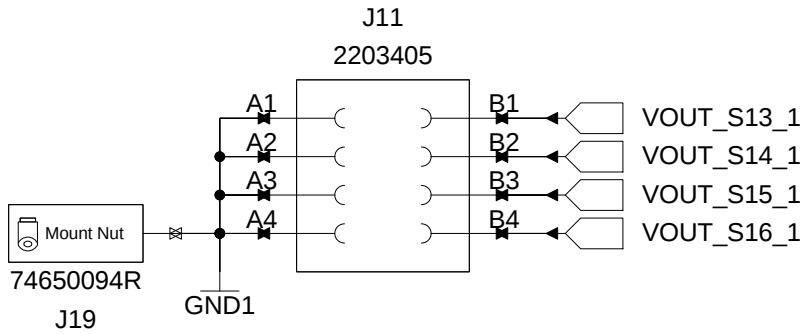
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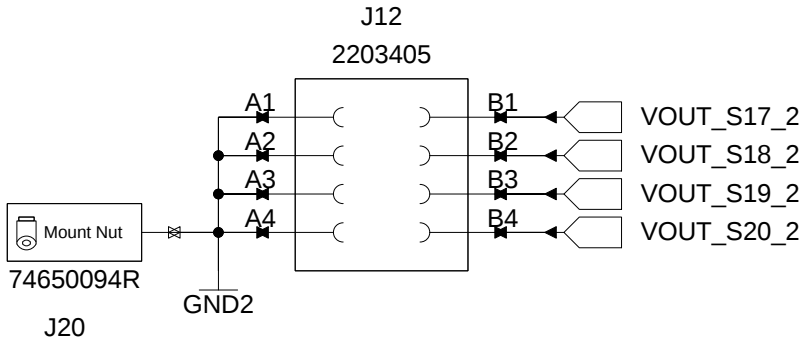
VOUT9-12



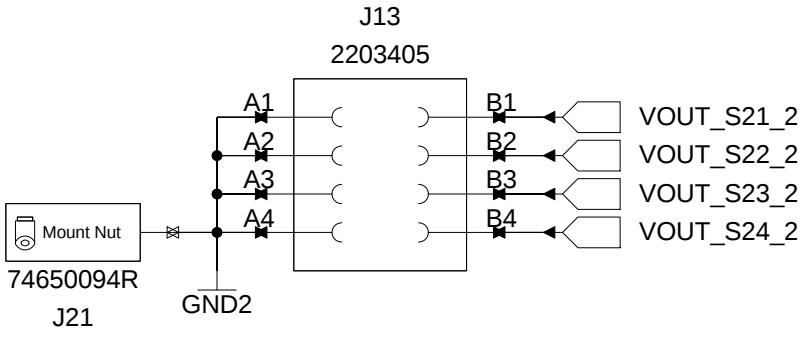
VOUT13-16



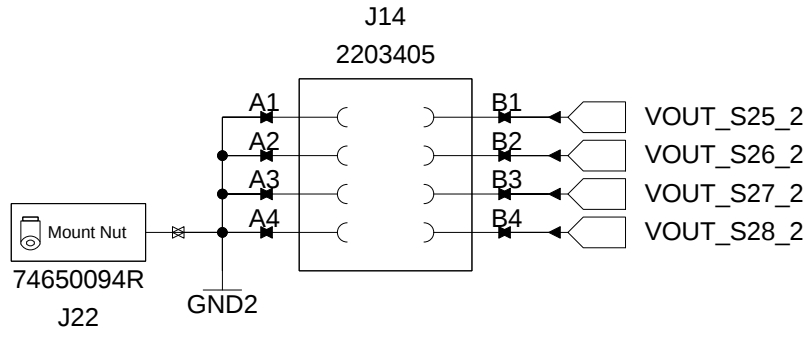
VOUT17-20



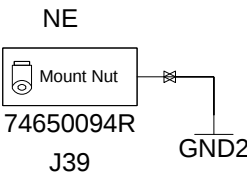
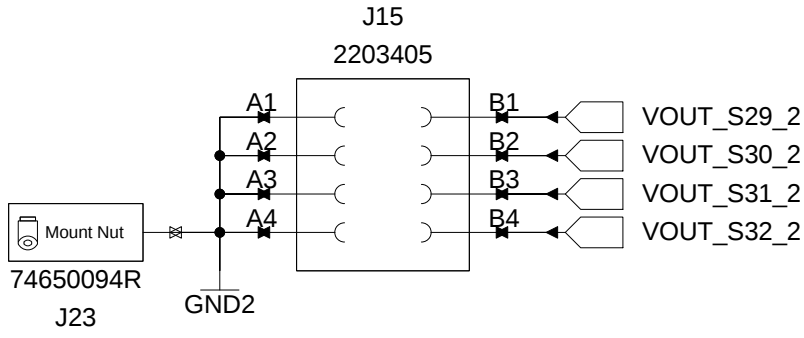
VOUT21-24



VOUT25-28

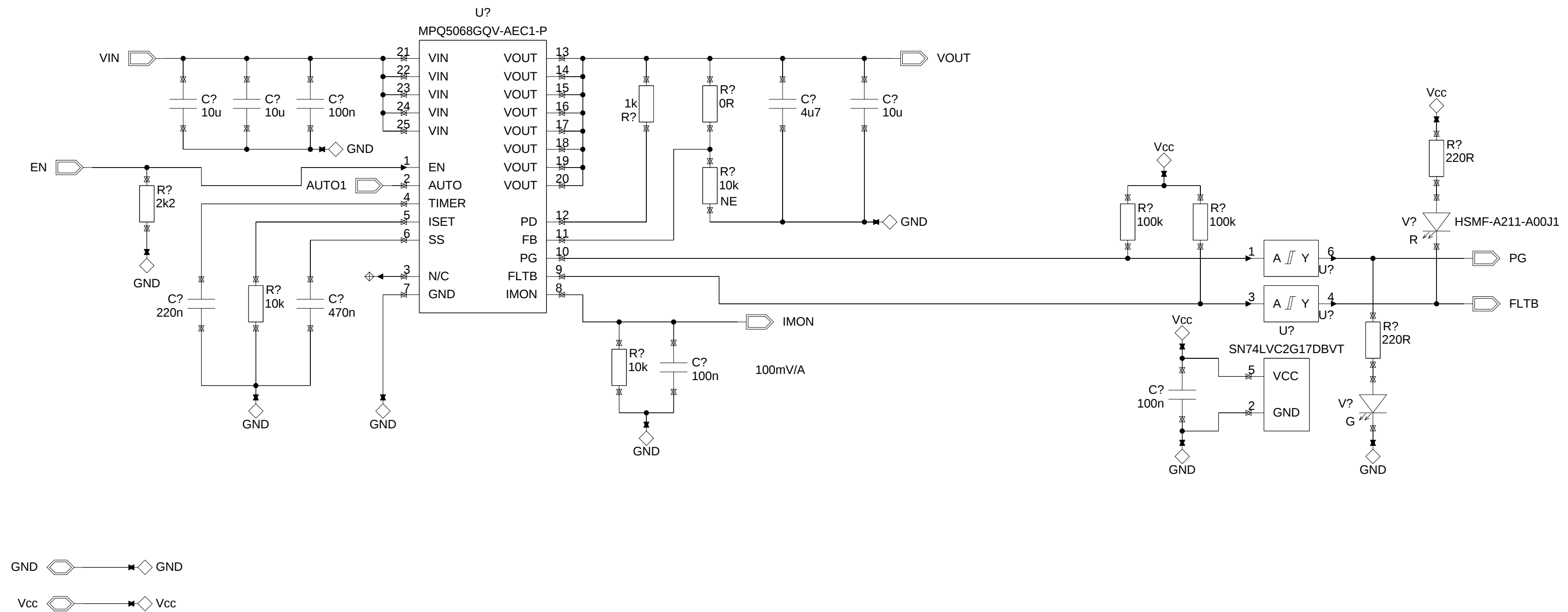


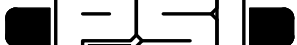
VOUT29-32



Lighpipes

Switch_1



Developer: Brouwer Eric Raphael		Project: Mu3e		
Drawn by: Brouwer Eric Raphael		Schematic: Switch1		Sheet: 1
Checked by:		Rev. C Copy von Rev. B		
PAUL SCHERRER INSTITUT  CH 5232 Villigen - PSI	Department	PCB Nr: 220201	Rev: C	Size: A3
	Mu3e_Power_Distributor_Controller_(MPDC)	Located at: _		
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