

Sheet: INFOS
File: infos.sch

Sheet: INTERNAL SUPPLIES

File: alims.sch

- H1 MountingHole
- H2 MountingHole
- H3 MountingHole
- H4 MountingHole

J1
CX570-14-C

6095
#J3

TP1
TP_POP
PWR_FLAG
#J4
6095
J2
CX570-14-C
GND

Sheet: INT EXT CONFIG

PWM_Freewheel
PWM_Power
INT_PWM_Freewheel
INT_PWM_Power
Dir
Mode
CC_CV_Mode
Voltage_Sens_L
Current_Sens_L
Voltage_Sens_R
Current_Sens_R
Ext_Setpoint
Ext_Rearm
Ext_Voltage_Tresh
Ext_Current_Tresh
File: Int_Ext_Config.sch

Sheet: LEFT PROTECTION

IO_PWR VProt
File: PROTECT.sch

Sheet: U/I SENSOR LEFT

VProt VD_Mos
Current_Sens
Voltage_Sens
File: voltage_current_sens.sch

Sheet: DC/DC CONVERTER

VD_LS VD_RS
VG_LS VS_L
VG_LP VS_R
VG_RS VG_RP
File: DC_DC_Converter.sch

Sheet: U/I SENSOR RIGHT

VD_Mos VProt
Current_Sens
Voltage_Sens
File: voltage_current_sens.sch

Sheet: RIGHT PROTECTION

VProt IO_PWR
File: PROTECT.sch

J7
CX570-14-C

6095
#J5

J8
CX570-14-C
GND

Sheet: DRIVER COMMAND

Dir
Mode
PWM
PWM
Enable
File: Drivers_Command.sch

Sheet: MOS DRIVER L

Driver_LS
Driver_LP
Driver_S
Driver_P
File: Mos_Drivers.sch

Sheet: MOS DRIVER R

Driver_RS
Driver_RP
Driver_S
Driver_P
File: Mos_Drivers.sch

Sheet: RAMP GENERATOR

Ramp
Feedback
File: gen_ramp.sch

Sheet: PWM GEN

PWM_Power
PWM_Freewheel
Feedback
File: PWM_Gen.sch

Sheet: PID

Ext_SetPoint
Feedback
Measure_Selected
File: PID.sch

← VOIR PROBLEME DC

Over_UI_Protection

Sheet: MEASURE SELECTOR

Voltage_Sens_R
Current_Sens_R
Voltage_Sens_L
Current_Sens_L
Dir
CC_CV_Mode
File: Measure_Selector.sch

Sheet: PROGRAMMABLE BREAKER

Rearm
Voltage_Thres
Current_Thres
Voltage_Sens
Current_Sens
Over_UI_Protection
File: programmable_breaker.sch

Dessin : Guillaume Arthaud

ALEEA

Sheet: /

File: sesame-fonctionnel.sch

Title: SESAME

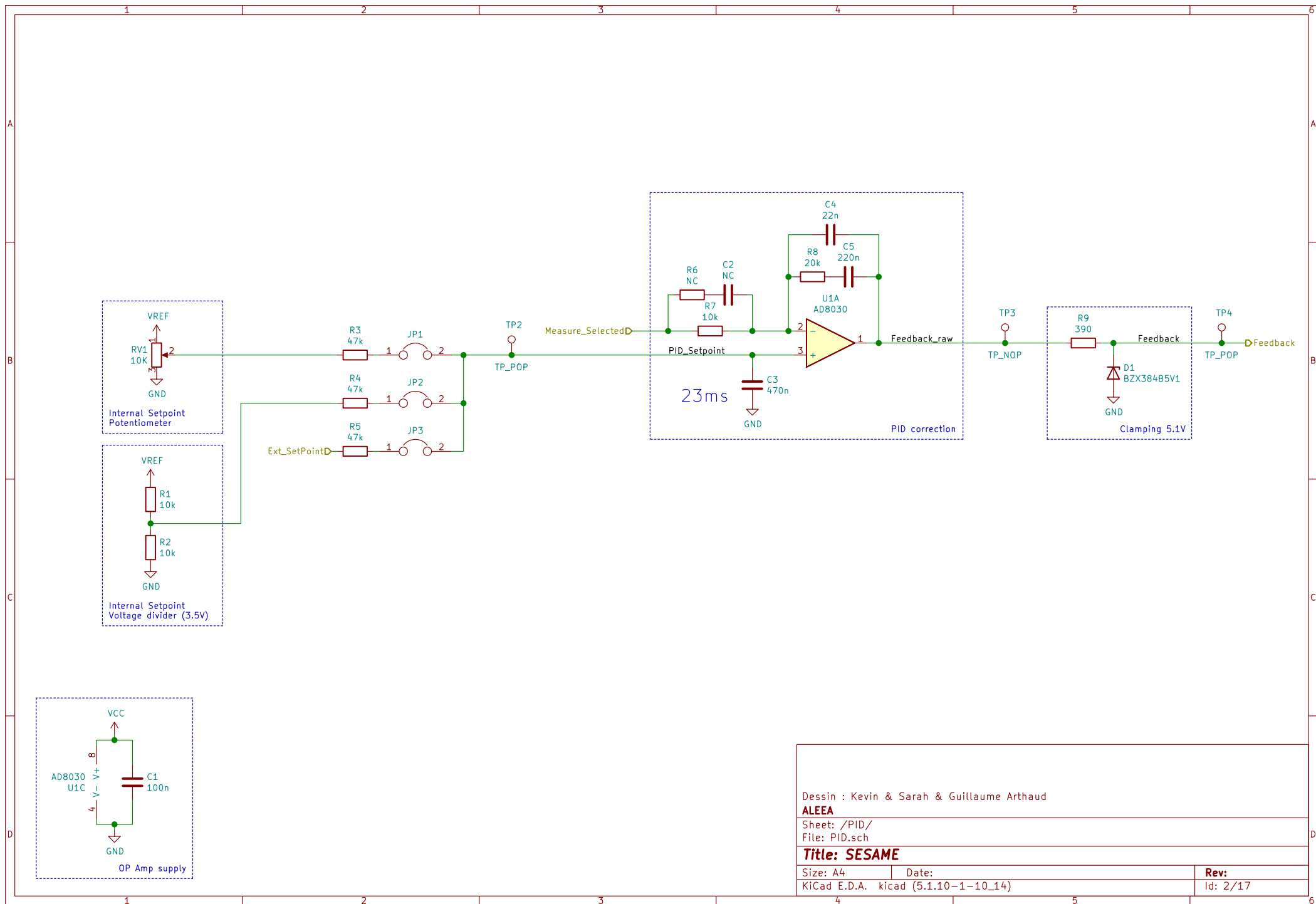
Size: A4

Date: 2021-08-31

KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev: 0.9

Id: 1/17



Dessin : Kevin & Sarah & Guillaume Arthaud

ALEEA

Sheet: /PID/

File: PID.sch

Title: SESAME

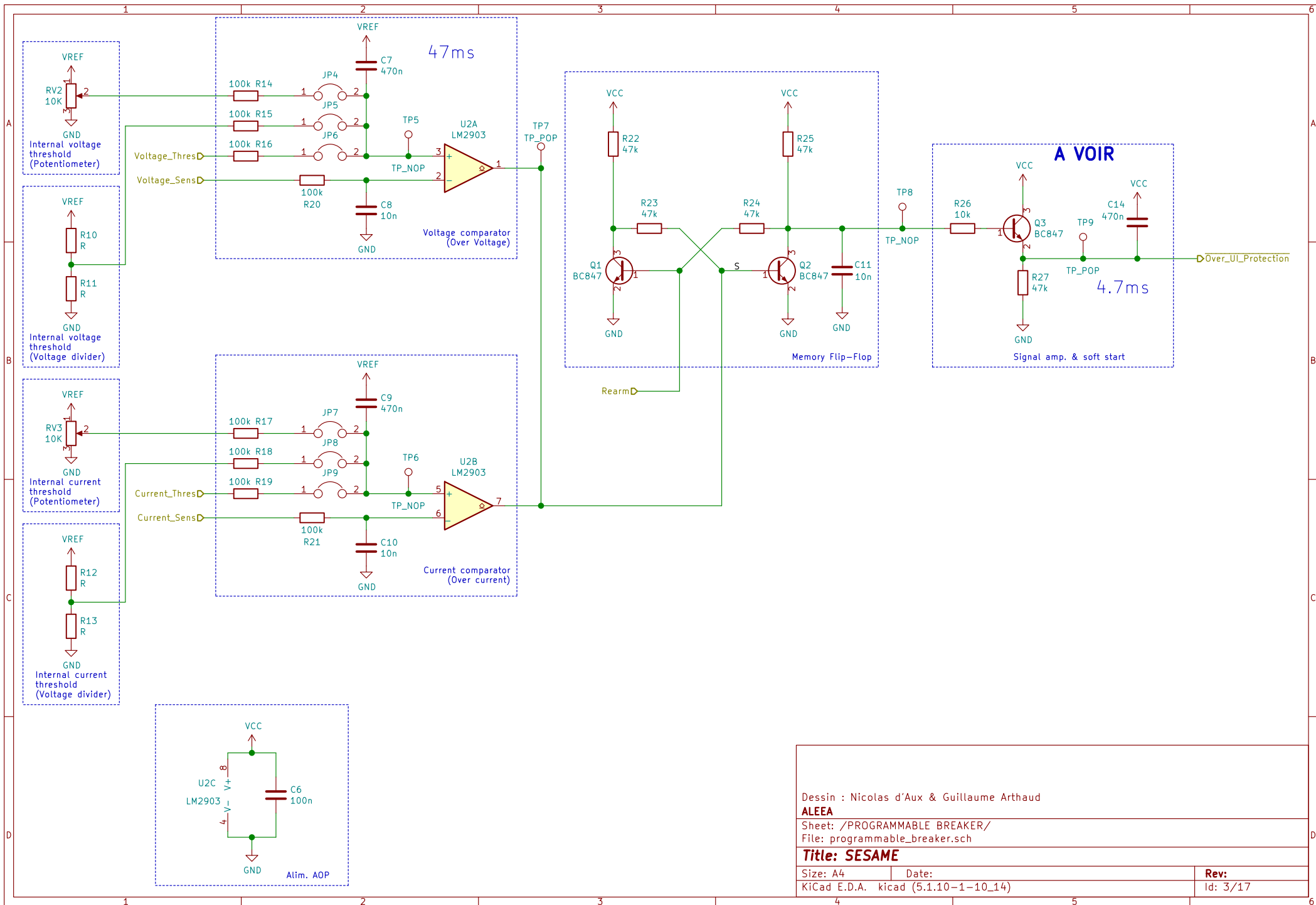
Size: A4

Date:

KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:

Id: 2/17



Dessin : Nicolas d'Aux & Guillaume Arthaud

ALEEA

Sheet: /PROGRAMMABLE BREAKER/

File: programmable_breaker.sch

Title: SESAME

Size: A4

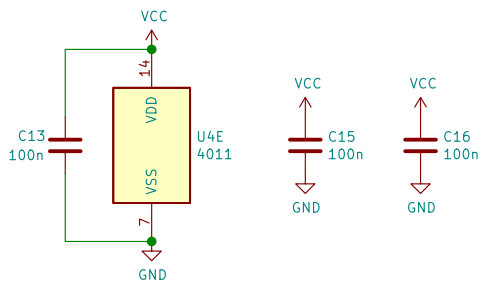
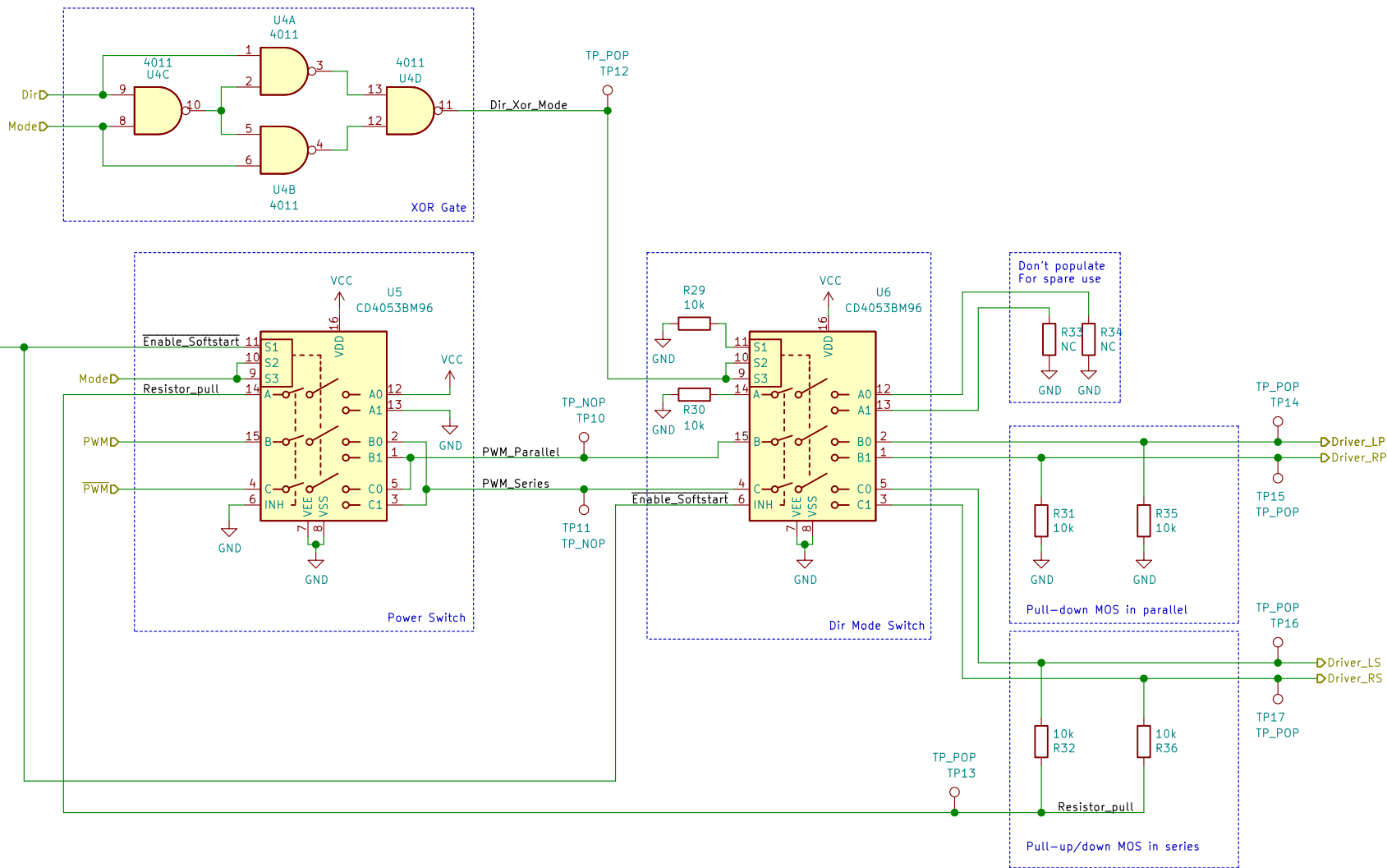
Date:

KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:

Id: 3/17

Id: 4/17



	DIR	MODE	GS	GP	DS	DP
Buck (I Droit)	0	0	PWM	~PWM	1	0
Boost (I Droit)	0	1	1	0	~PWM	PWM
Buck (I Gauche)	1	0	1	0	PWM	~PWM
Boost (I Gauche)	1	1	~PWM	PWM	1	0

Dessin : Clément & Josué & Guillaume Arthaud

ALEEA

Sheet: /DRIVER COMMAND/

File: Drivers_Command.sch

Title: **SESAME**

Size: A4 Date: 2021-08-04

KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev: **A**

Id: 5/17

Ordre soft starts:
Enable Driver < PID < Entree de disjoncteur
4.7ms < 23ms < 47ms

Johnson / Cinch Connectivity Solutions 108-0740-102
or Keystone 6095
+ CXS70-14-C

L = Left
R = Right
S = Serial
P = Parallel
G = Gate
D = Drain

RAF:
> Driver de MOS
> Recalculer la bobine et la sourcer

SHIELD BLOCKS

Measure UI L + R
Driver MOS
Ramp Generator + PID + PWM GEN

Sheet: /INFOS/
File: infos.sch

Title:

Size: A4

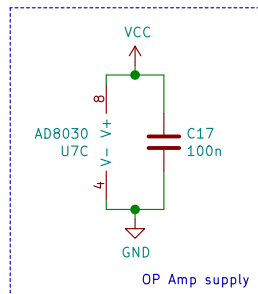
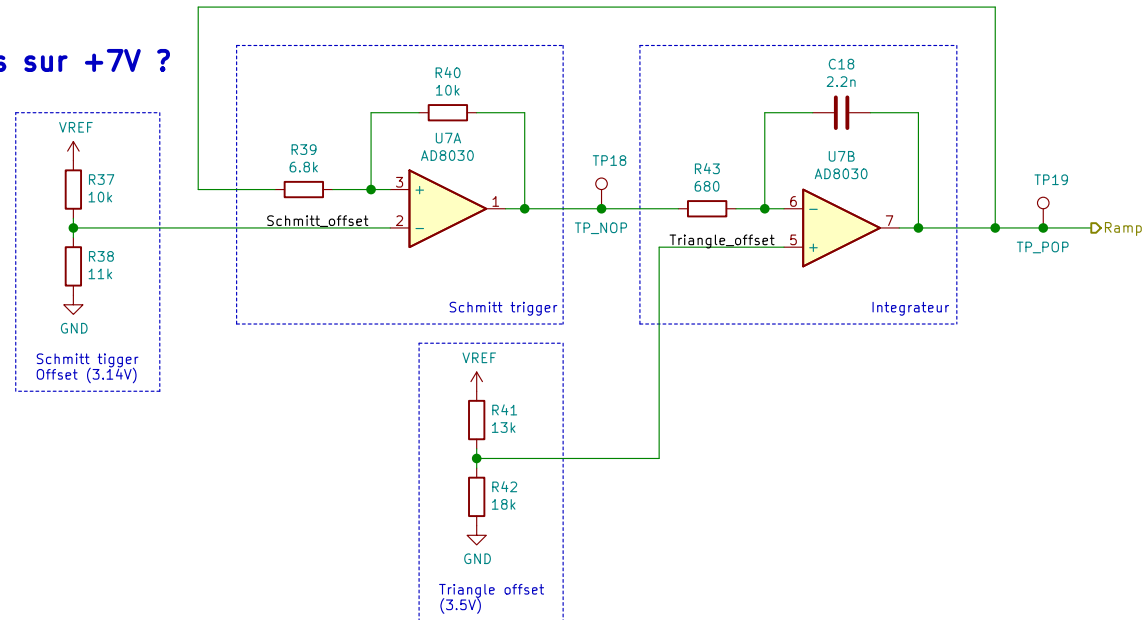
Date:

KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:

Id: 6/17

ponts diviseurs sur +7V ?



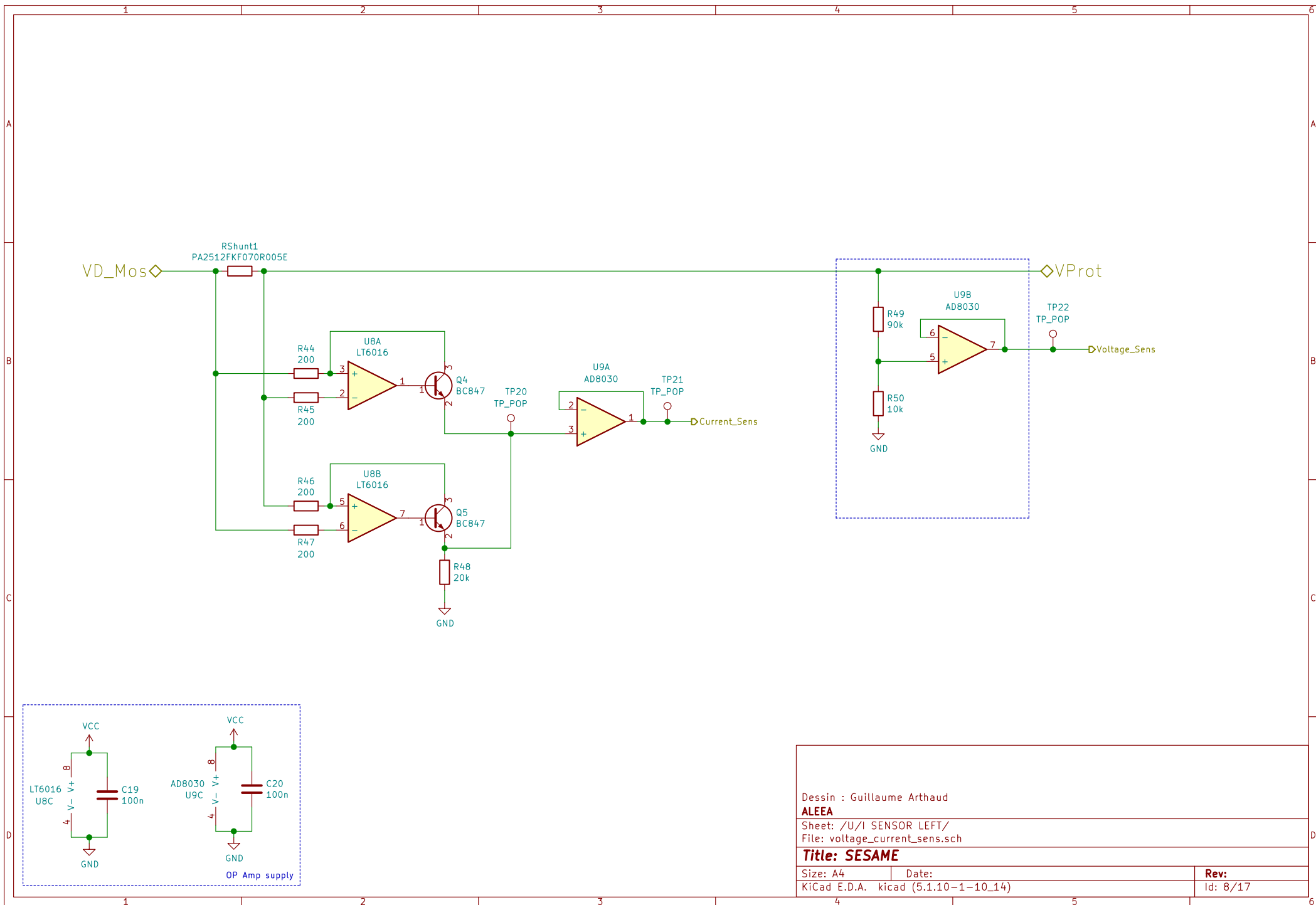
Dessin : Kevin & Sarah & Guillaume Arthaud
ALEEA

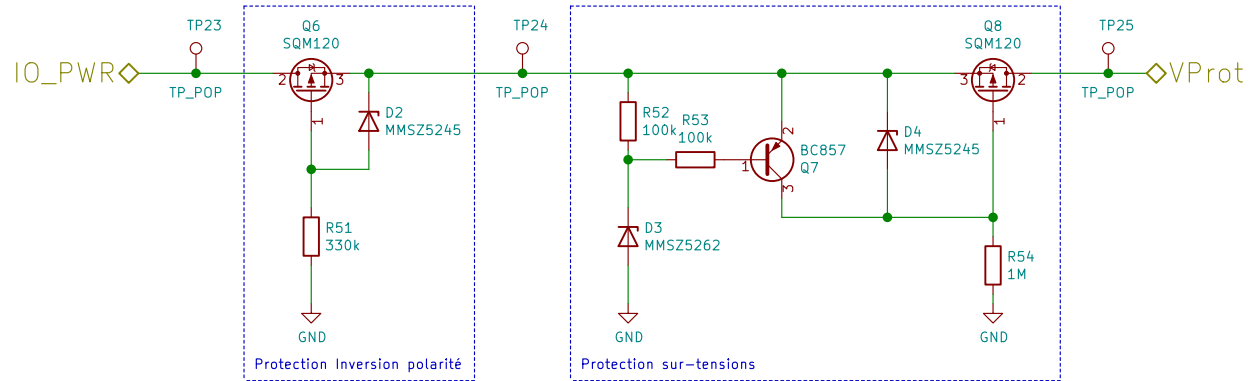
Sheet: /RAMP GENERATOR/
File: gen_ramp.sch

Title: SESAME

Size: A4 Date:
KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:
Id: 7/17





Dessin : Guillaume Arthaud

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Sheet: /LEFT PROTECTION/
File: PROTECT.sch

Title:

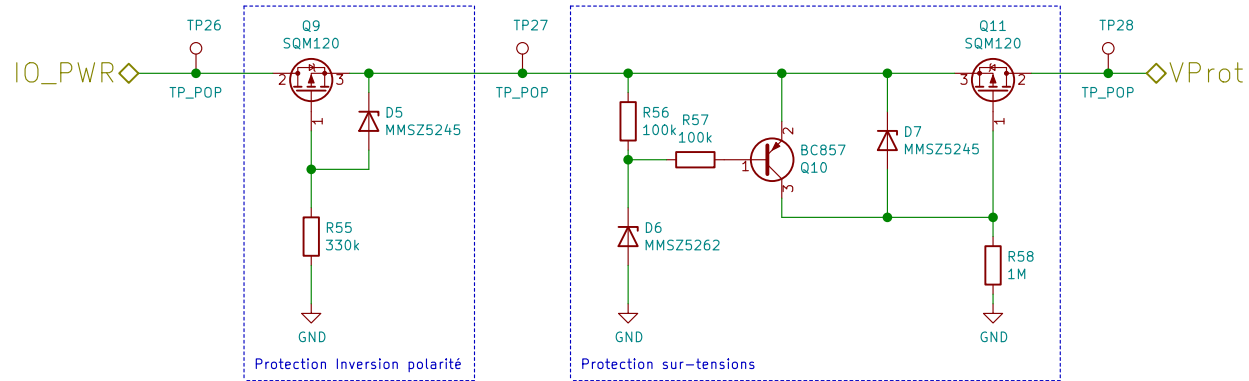
Size: A4

Date:

KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:

Id: 9/17



Dessin : Guillaume Arthaud

ALEEA

Sheet: /RIGHT PROTECTION/

File: PROTECT.sch

Title:

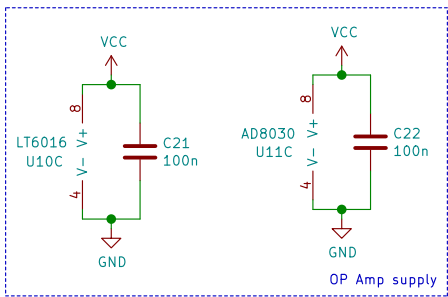
Size: A4

Date:

KiCad E.D.A. kicad (5.1.10-1-10_14)

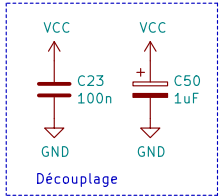
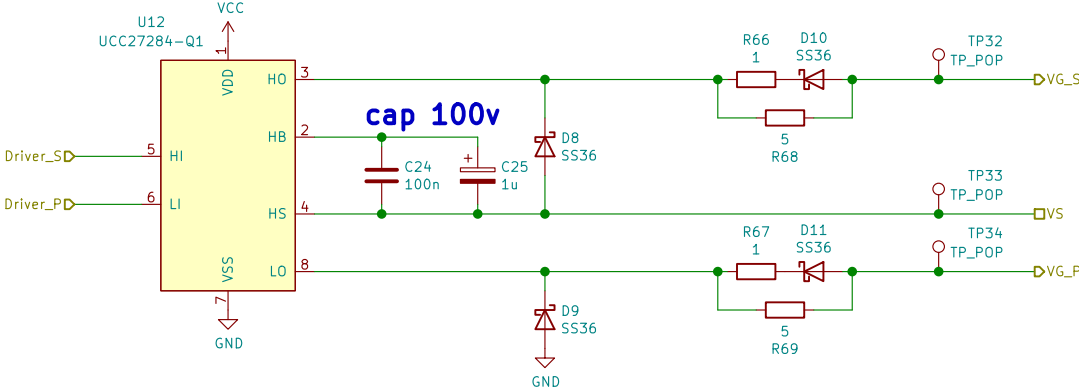
Rev:

Id: 10/17



Rev:
Id: 11/17

ajouter power pad
Verifier que le driver peut tenir l'etat DC



ALEEA

Sheet: /MOS DRIVER L/
File: Mos_Drivers.sch

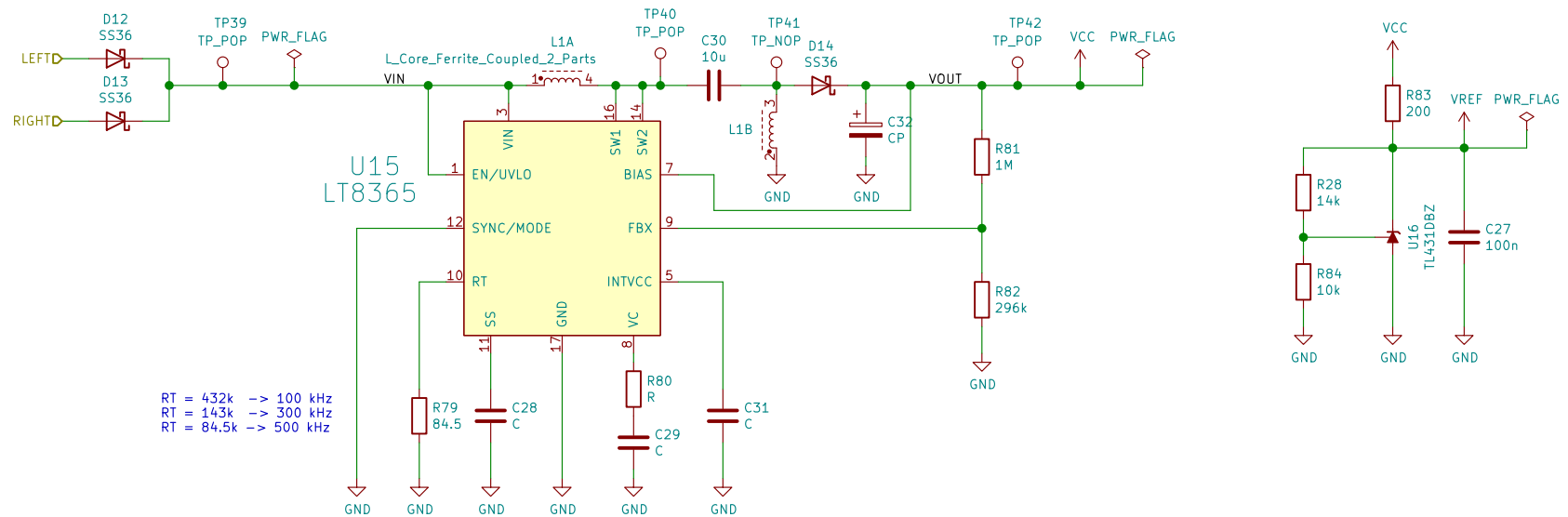
Title: **SESAME**

Size: A4 Date:
KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:
Id: 12/17

Id: 13/17

VCC = 7V
VREF = 6V



ALEEA

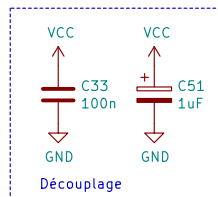
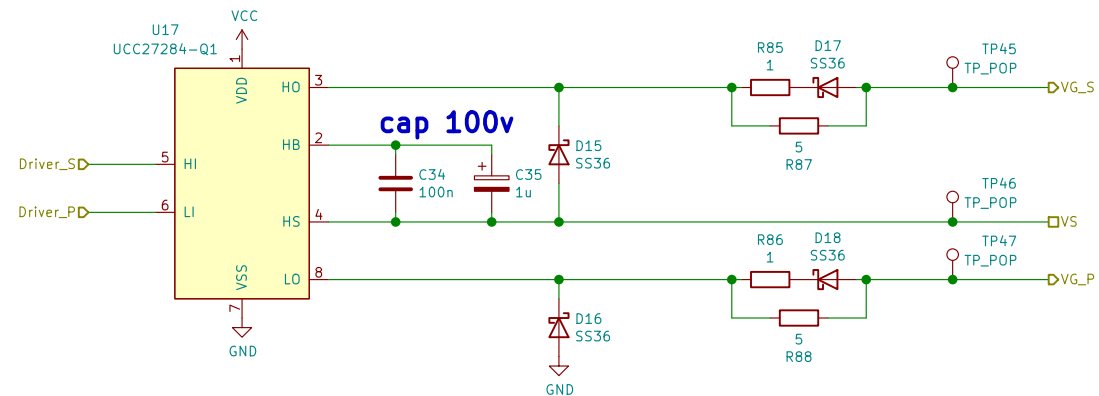
Sheet: /INTERNAL SUPPLIES/
File: alims.sch

Title: SESAME

Size: A4	Date:
KiCad E.D.A. kicad (5.1.10-1-10_14)	

Rev:
Id: 14/17

ajouter power pad
Verifier que le driver peut tenir l'etat DC



ALEEA

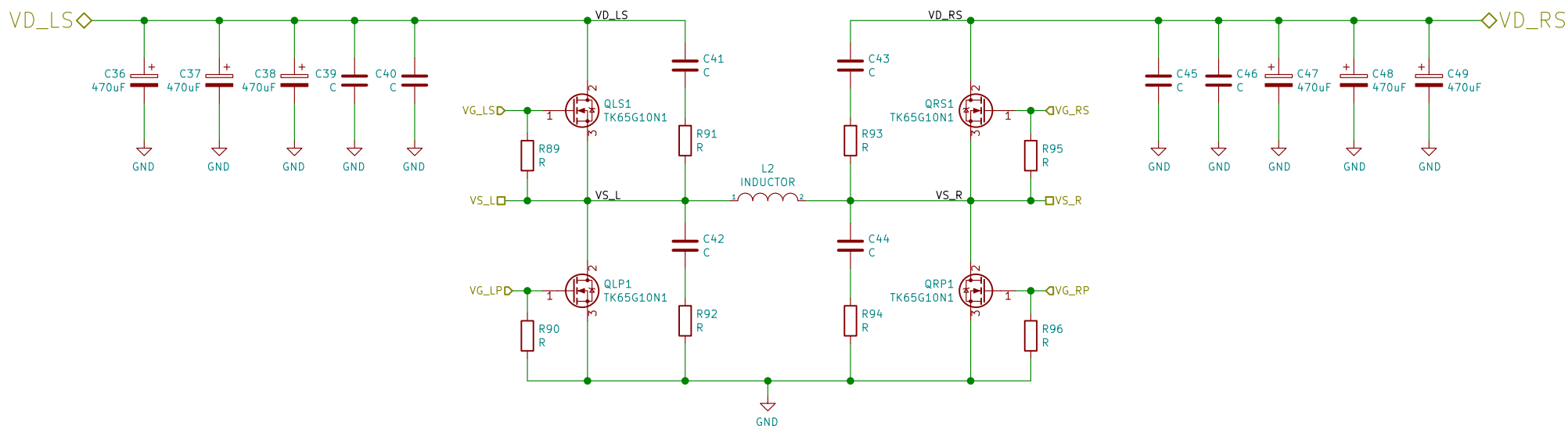
Sheet: /MOS DRIVER R/
File: Mos_Drivers.sch

Title: SESAME

Size: A4	Date:
KiCad E.D.A. kicad (5.1.10-1-10_14)	

Rev:
Id: 15/17

Inductor between 90uH -> 125uH
<https://fr.rs-online.com/web/p/inductances-traversantes/1816037>
<https://fr.rs-online.com/web/p/inductances-traversantes/1542466>
<https://fr.rs-online.com/web/p/inductances-traversantes/1048448>



Dessin : Guillaume Arthaud

ALEEA

Sheet: /DC/DC CONVERTER/

File: DC_DC_Converter.sch

Title: SESAME

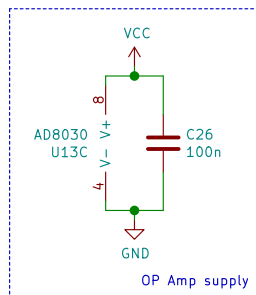
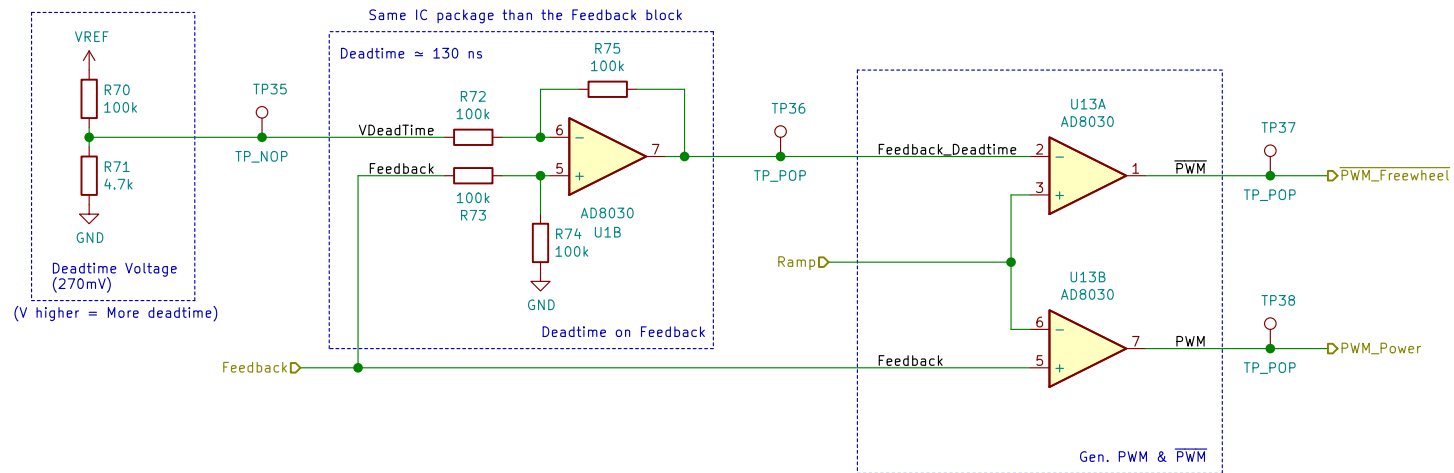
Size: A4

Date:

KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:

Id: 16/17



Dessin : Kevin & Sarah & Guillaume Arthaud
ALEEA

Sheet: /PWM GEN/
File: PWM_Gen.sch

Title: SESAME

Size: A4 Date:
KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev:
Id: 17/17