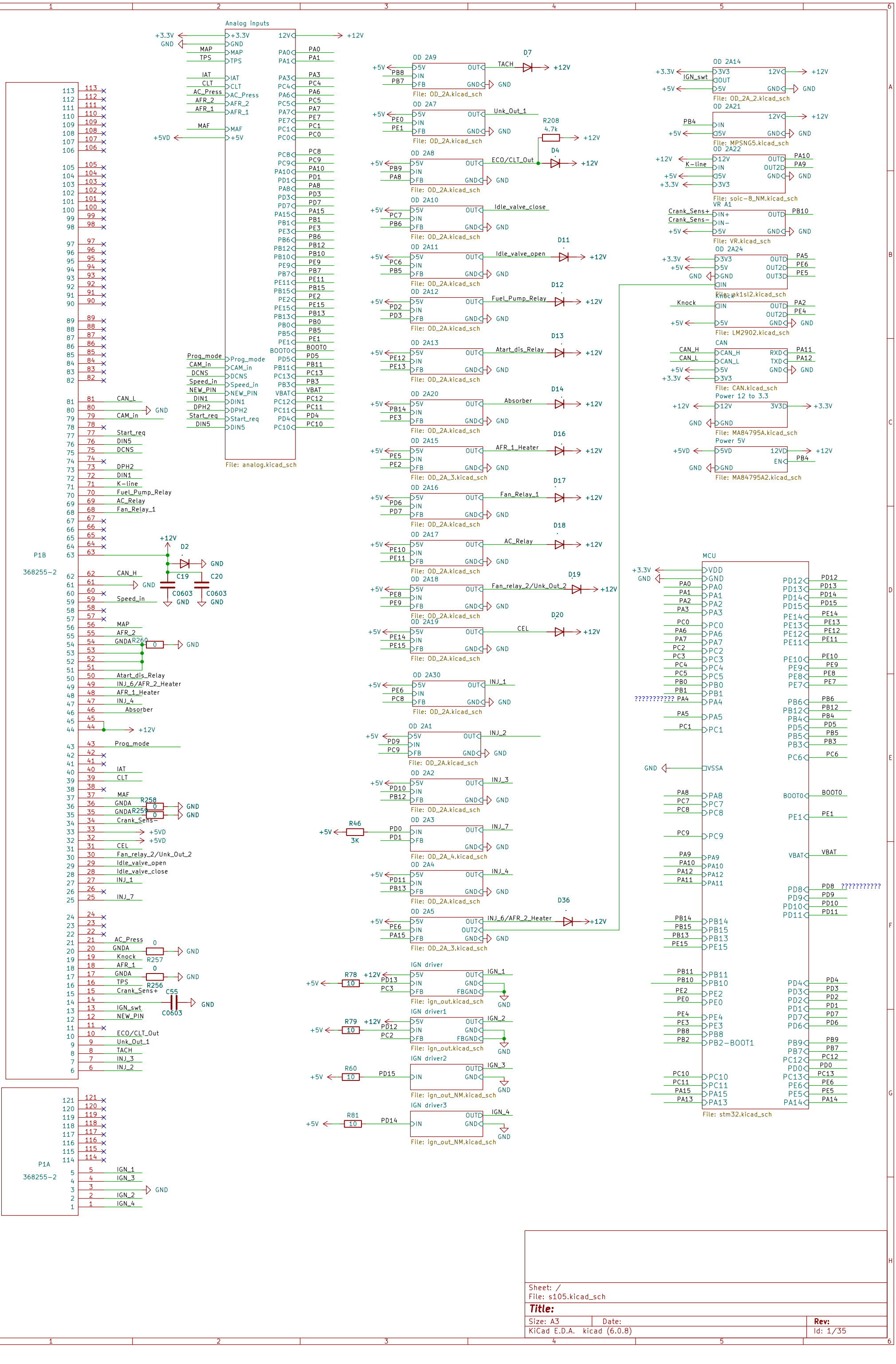
Analog inputs
+3.3V
GND
MAP
TPS
IAT
CLT
AC_Press
AFR_2
AFR_1
MAF
+5VD
+3.3V
GND
MAP
TPS
IAT
CLT
AC_Press
AFR_2
AFR_1
MAF
+5V
12V
+12V
PA0
PA1
PA3
PC4
PA6
PC5
PA7
PE7
PC1
PC0
PC8
PC9
PA10
PD1
PA8
PD3
PD7
PA15
PB1
PE3
PB6
PB12
PB10
PE9
PB7
PE11
PB15
PE2
PE15
PB13
PB0
PB5
PE1
BOOT0
PD5
PB11
PC13
PB3
VBAT
PC12
PC11
PD4
PC10
Prog_mode
CAM_in
DCNS
Speed_in
NEW_PIN
DIN1
DPH2
Start_req
DIN5
File: analog.kicad_sch
OD 2A9
OD 2A7
OD 2A8
OD 2A10
OD 2A11
OD 2A12
OD 2A13
OD 2A20
OD 2A15
OD 2A16
OD 2A17
OD 2A18
OD 2A19
OD 2A30
OD 2A1
OD 2A2
OD 2A3
OD 2A4
OD 2A5
5V
IN
FB
OUT
GND
OUT2
File: OD_2A.kicad_sch
File: OD_2A_3.kicad_sch
File: OD_2A_4.kicad_sch
D7
TACH
D4
ECO/CLT_Out
D11
Idle_valve_open
D12
Fuel_Pump_Relay
D13
Atart_dis_Relay
D14
Absorber
D16
AFR_1_Heater
D17
Fan_Relay_1
D18
AC_Relay
D19
Fan_relay_2/Unk_Out_2
D20
CEL
D36
INJ_6/AFR_2_Heater
Unk_Out_1
Idle_valve_close
INJ_1
INJ_2
INJ_3
INJ_4
R208
4.7k
R46
3K
OD 2A14
OD 2A21
OD 2A22
OD 2A24
IGN_swt
PB4
K-line
Crank_Sens+
Crank_Sens-
Knock
CAN_H
CAN_L
Power 12 to 3.3
Power 5V
3V3
3V3OUT
12VD
5VD
EN
File: OD_2A_2.kicad_sch
File: MPSNG5.kicad_sch
File: soic-8_NM.kicad_sch
VR A1
File: VR.kicad_sch
File: pak1sl2.kicad_sch
File: LM2902.kicad_sch
CAN
File: CAN.kicad_sch
File: MA84795A.kicad_sch
File: MA84795A2.kicad_sch
MCU
VDD
VSSA
BOOT0
VBAT
PB2-BOOT1
??????????
File: stm32.kicad_sch
P1B
368255-2
P1A
368255-2
CAN_L
CAN_H
CAM_in
Start_req
DIN5
DCNS
DPH2
DIN1
K-line
Fuel_Pump_Relay
AC_Relay
Fan_Relay_1
Speed_in
MAP
AFR_2
GNDA
Atart_dis_Relay
INJ_6/AFR_2_Heater
AFR_1_Heater
INJ_4
Absorber
Prog_mode
IAT
CLT
MAF
Crank_Sens-
CEL
Fan_relay_2/Unk_Out_2
Idle_valve_open
Idle_valve_close
INJ_7
AC_Press
Knock
AFR_1
TPS
IGN_swt
NEW_PIN
ECO/CLT_Out
Unk_Out_1
TACH
INJ_3
INJ_2
IGN_1
IGN_3
IGN_2
IGN_4
R257
R256
R258
R259
R260
C19
C20
C55
C0603
IGN driver
IGN driver1
IGN driver2
IGN driver3
R78
R79
R60
R81
10
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File: ign_out_NM.kicad_sch
Sheet: /
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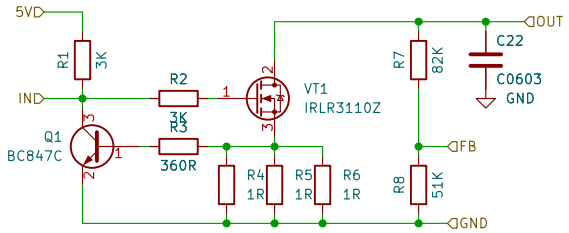
Title:
Size: A3
Date:
Rev:
KiCad E.D.A. kicad (6.0.8)
Id: 1/35



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Size: A4	Date:	**Rev:**
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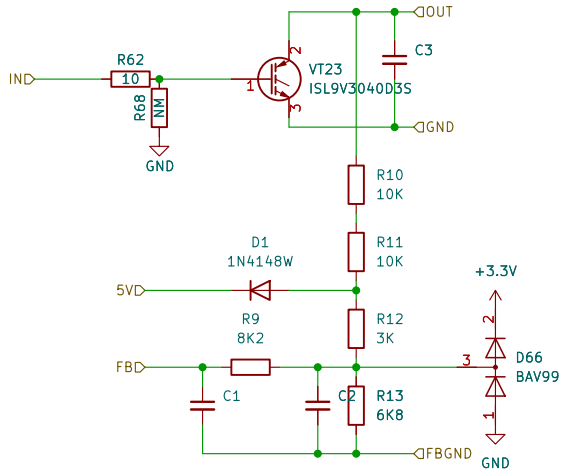

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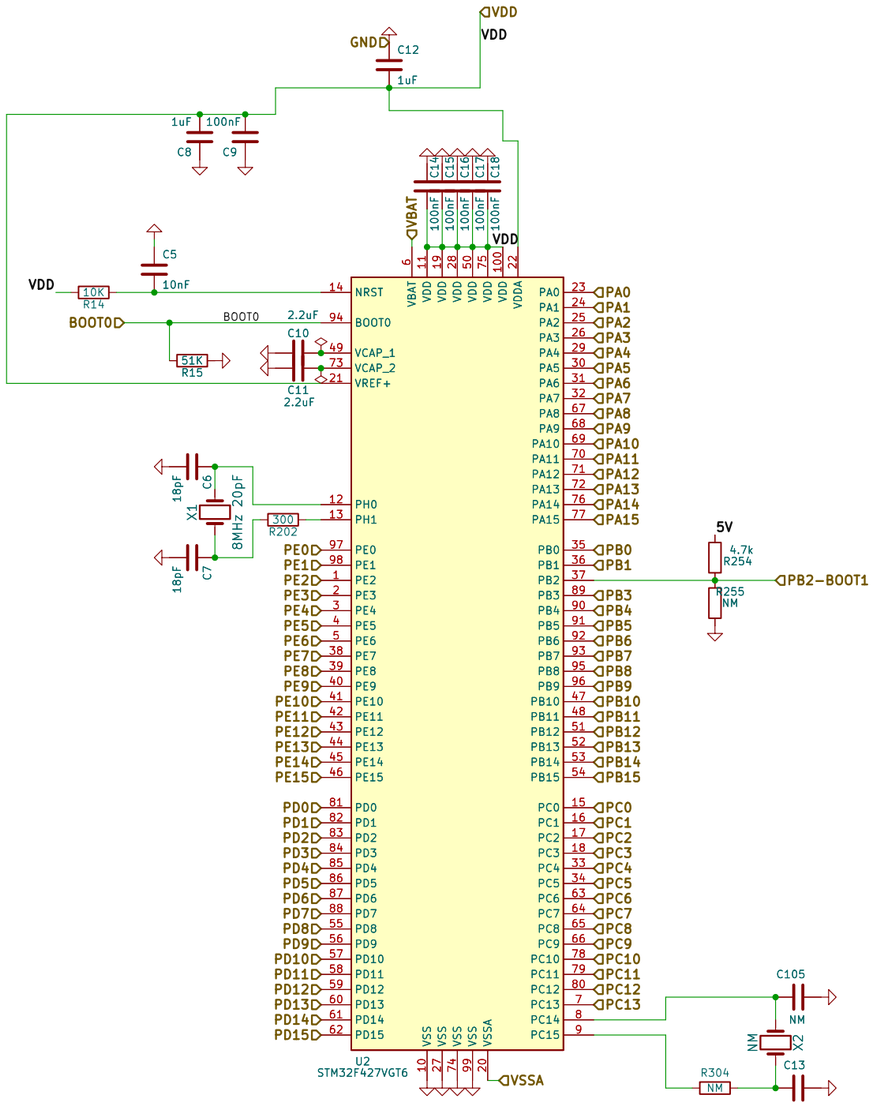
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.8)		Id: 3/35

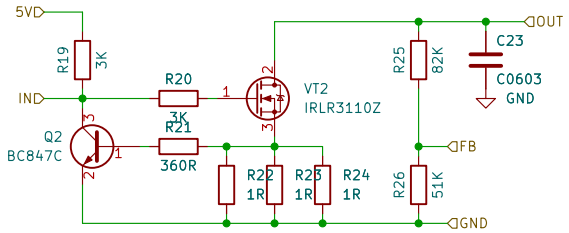


http://www.crystek.com/documents/appnotes/Pierce-GateIntroduction.pdf
PCB per predictions with SaturnPCB has less then 3.5pF traces,
STM32 pins assumed 5pF
ESR = 80ohms max???
Rf = 2meg could be between 1meg and 10meg.
Cload should be 8pF per XTAL datasheet
Cload = ([Cin+C1][C2+Cout])/(Cin+C1+C2_Cout)+PCBstray
Cload = ([5+4.7][4.7+5])/(5+4.7+4.7+5)+3.5= 8.35pF
C1=C2=C166=C167 = 4.7pF
Rs = 1/(2piFC2) = 1/(2*pi*8MHz*4.7pF) = 4.2ohms.

AI6OD
Donald Becker
rusEFI.com
Sheet: /MCU/
File: stm32.kicad_sch

Title: microRusEFI-2L

Size: B	Date: 2022-04-10	**Rev: R0.6.0**
KiCad E.D.A. kicad (6.0.8)		Id: 4/35



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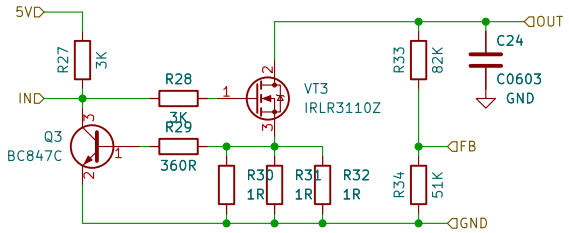
KiCad E.D.A. kicad (6.0.8)		Id: 5/35



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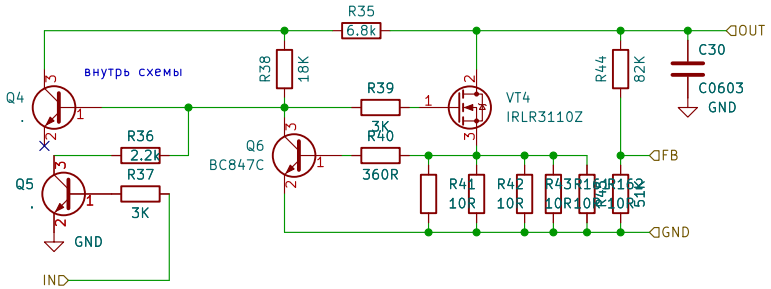
KiCad E.D.A. kicad (6.0.8)		Id: 6/35



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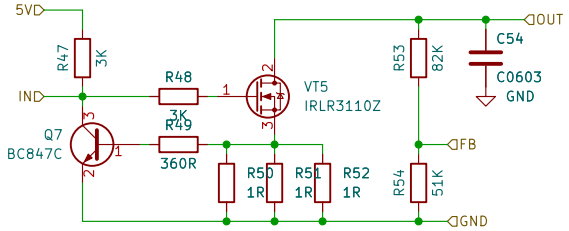
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.8)		Id: 7/35



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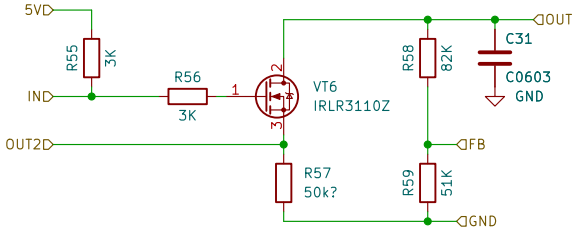
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.8)		Id: 8/35



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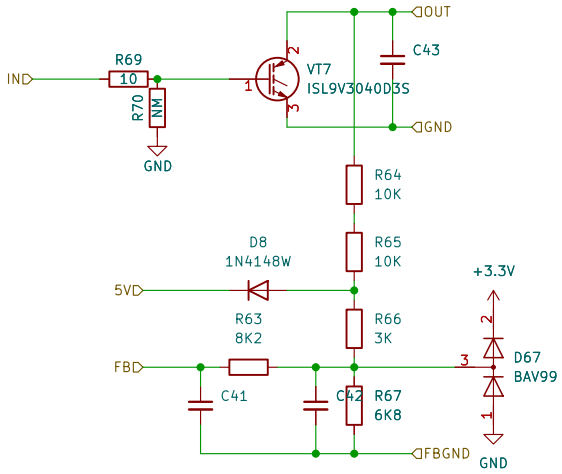
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.8)		Id: 9/35



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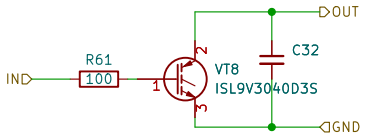
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.8)		Id: 10/35



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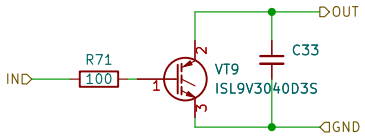
Title:

Size: A4 | Date: | **Rev:**
KiCad E.D.A. kicad (6.0.8) | Id: 11/35



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Title:

Size: A4 | Date: | **Rev:**
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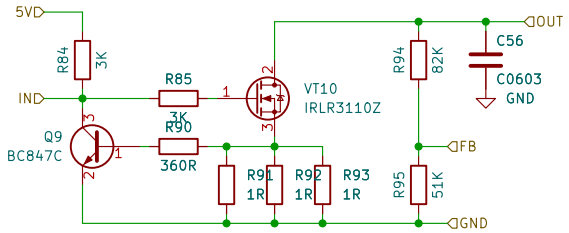

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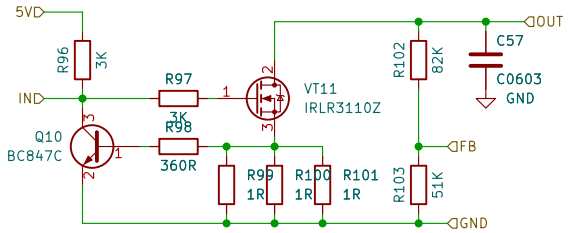
KiCad E.D.A. kicad (6.0.8)		Id: 13/35



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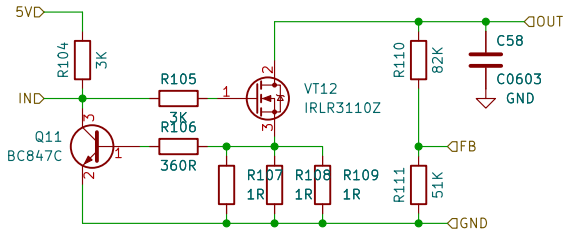

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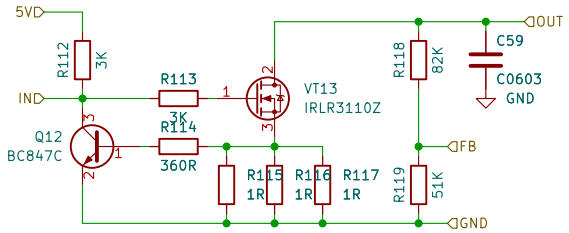

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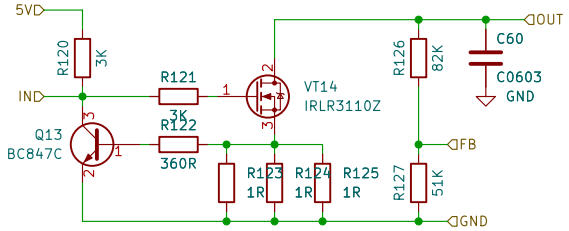

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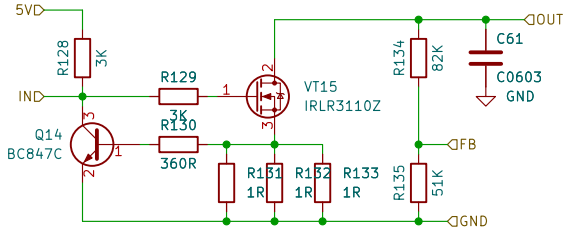

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Title:

Size: A4	Date:	**Rev:**
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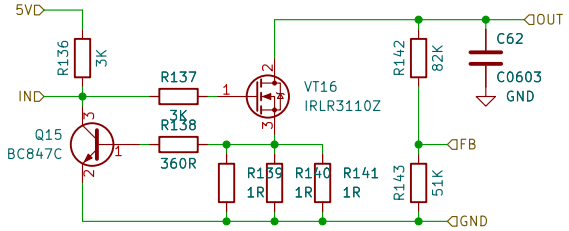

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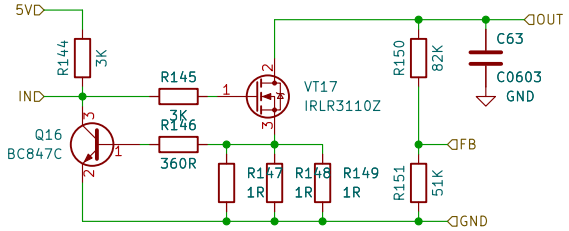

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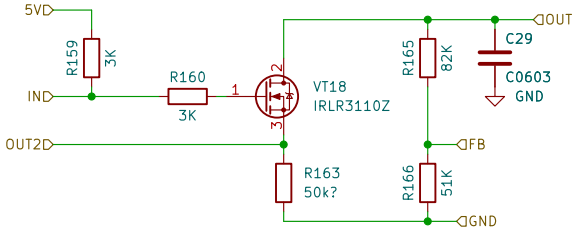

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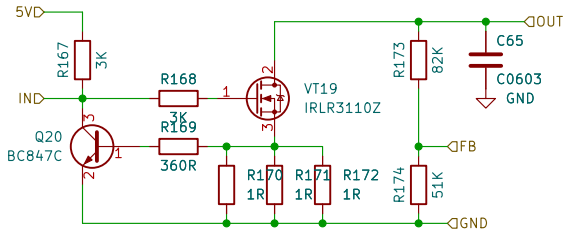
Title:

Size: A4 | Date: | **Rev:**

KiCad E.D.A. kicad (6.0.8) | Id: 21/35



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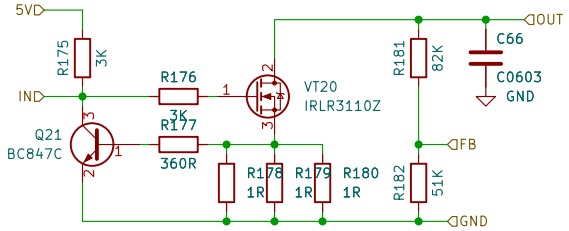

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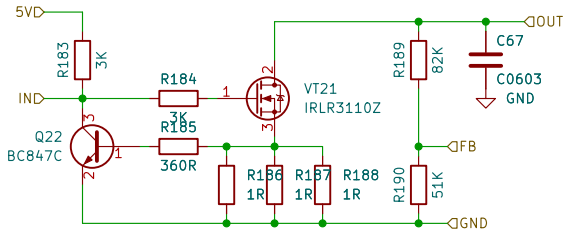

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Size: A4	Date:	**Rev:**
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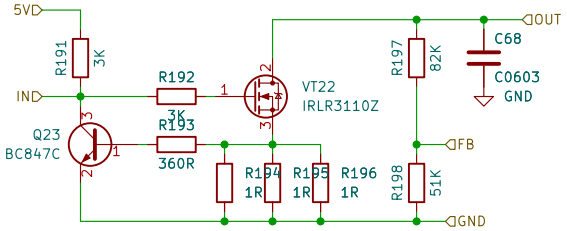

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Title:

Size: A4	Date:	**Rev:**
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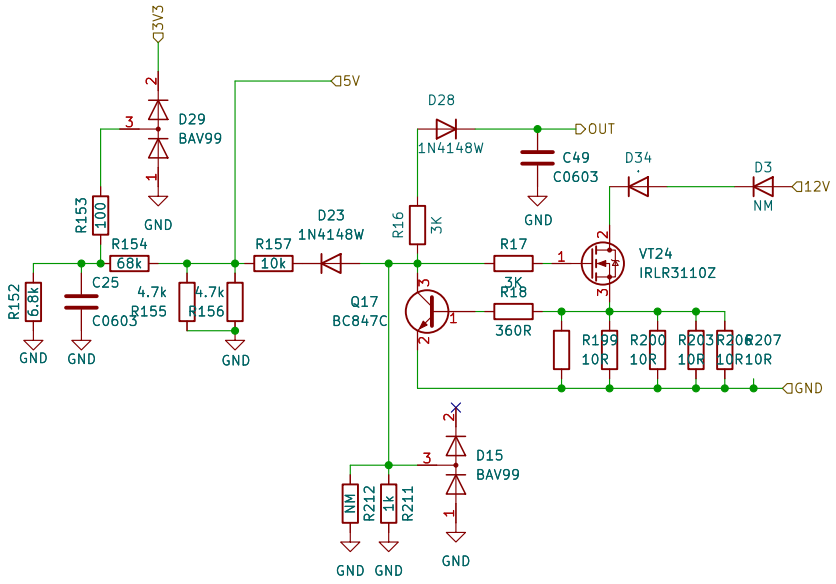

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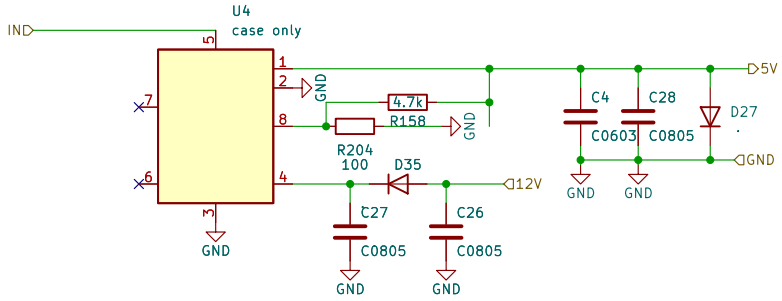
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.8)		Id: 26/35



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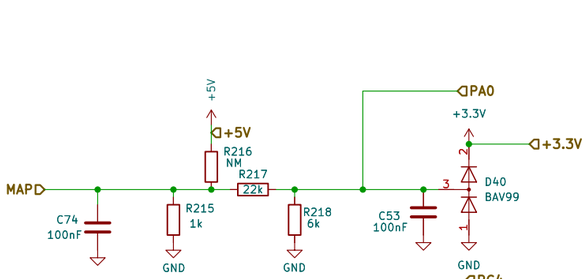
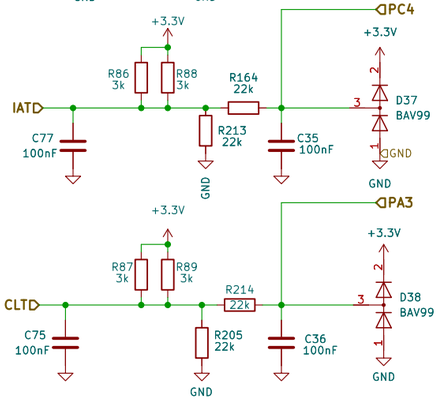
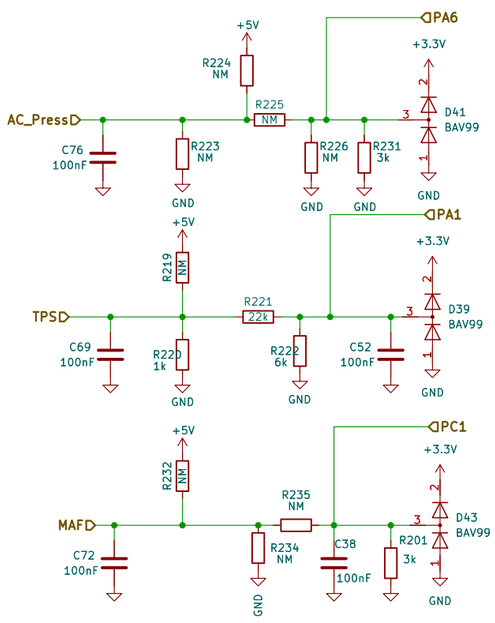
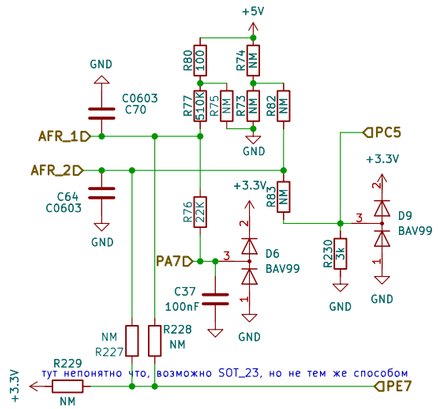
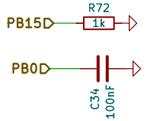
KiCad E.D.A. kicad (6.0.8)		Id: 27/35

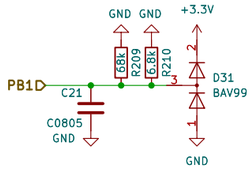


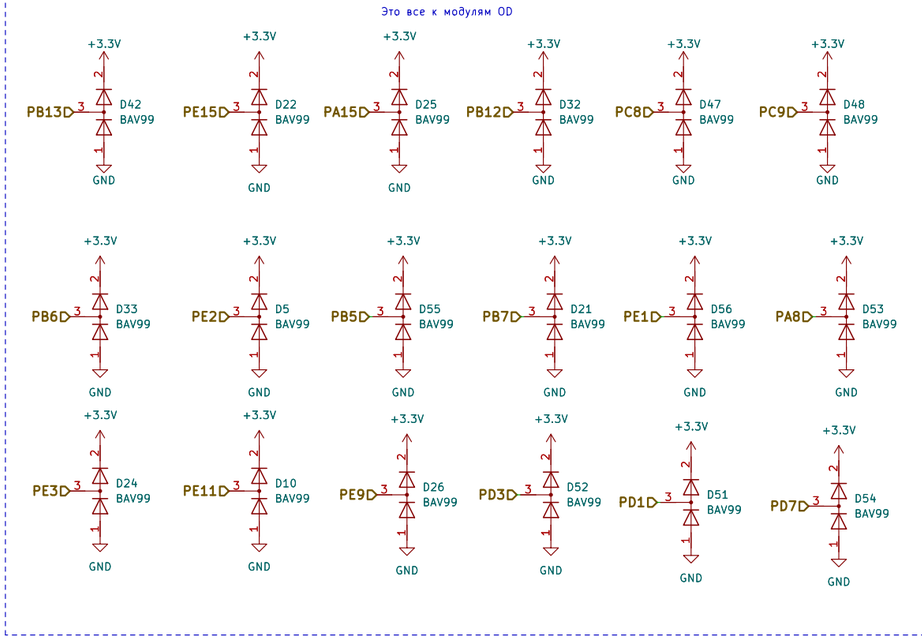


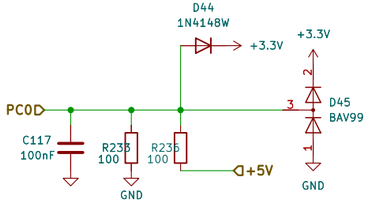


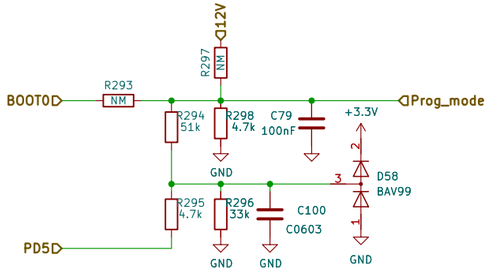


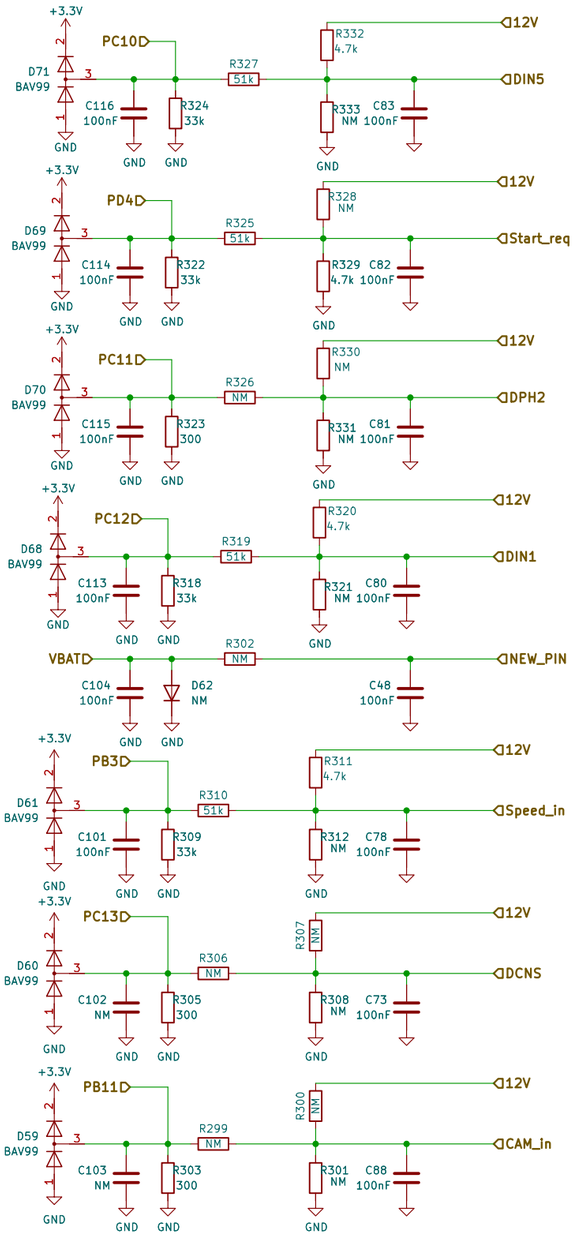












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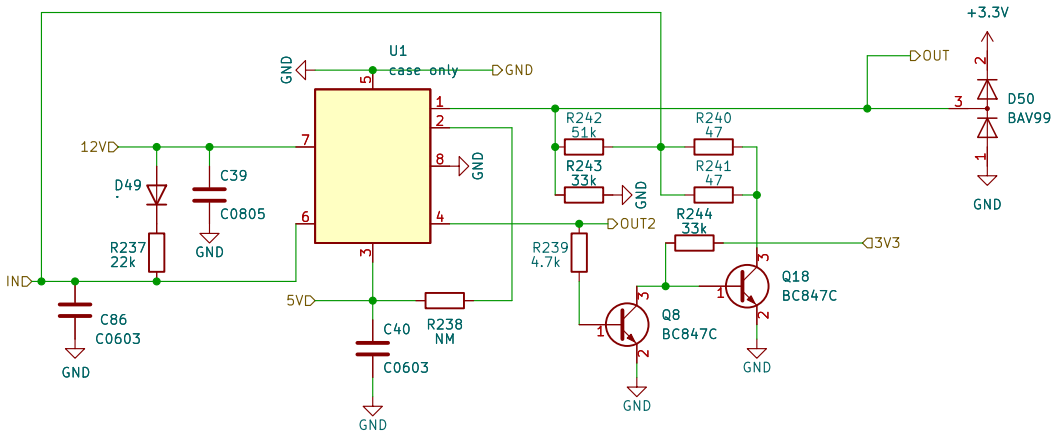

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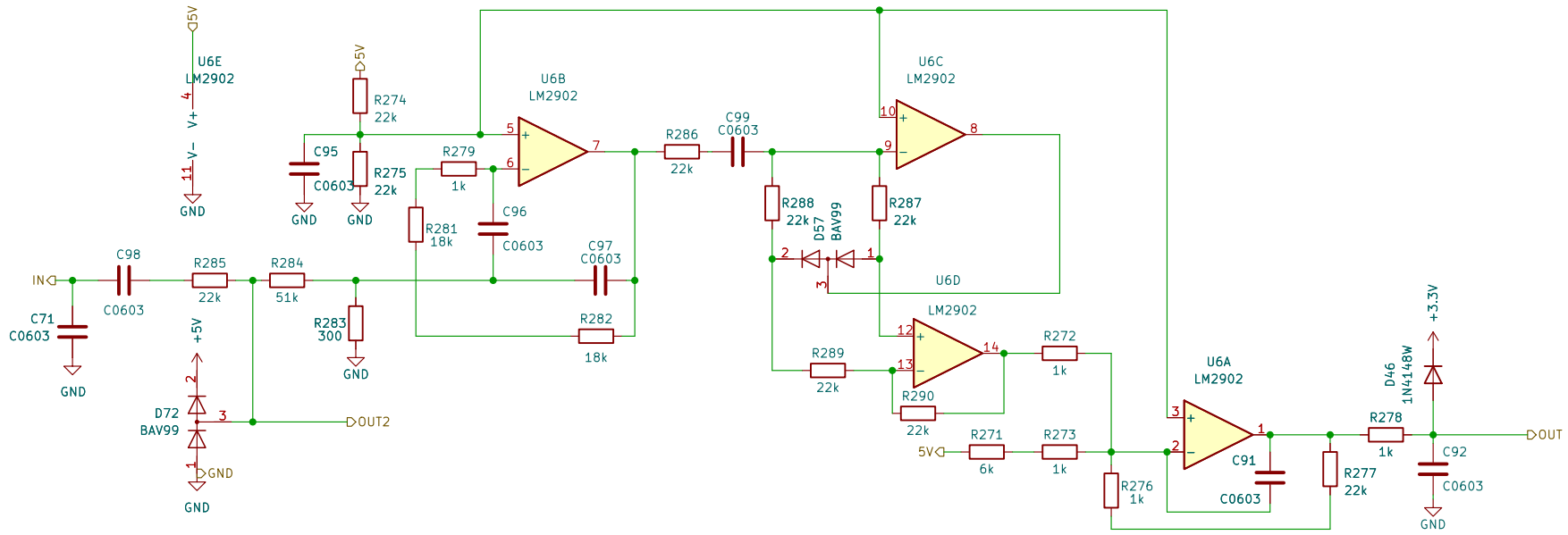

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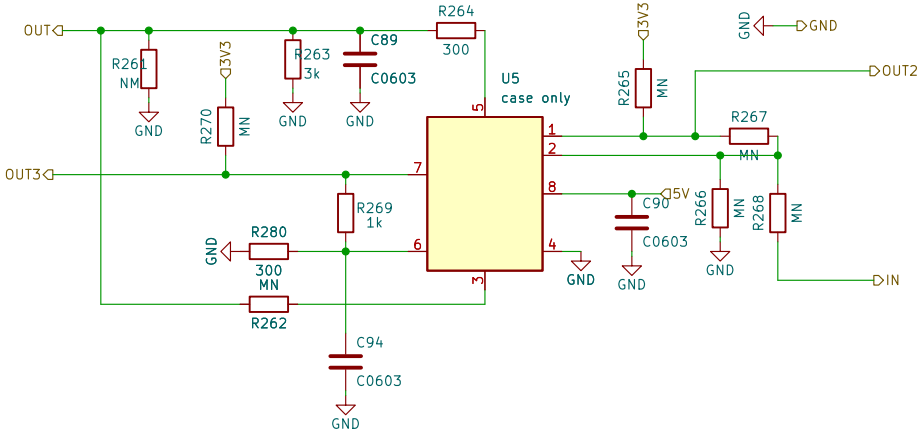

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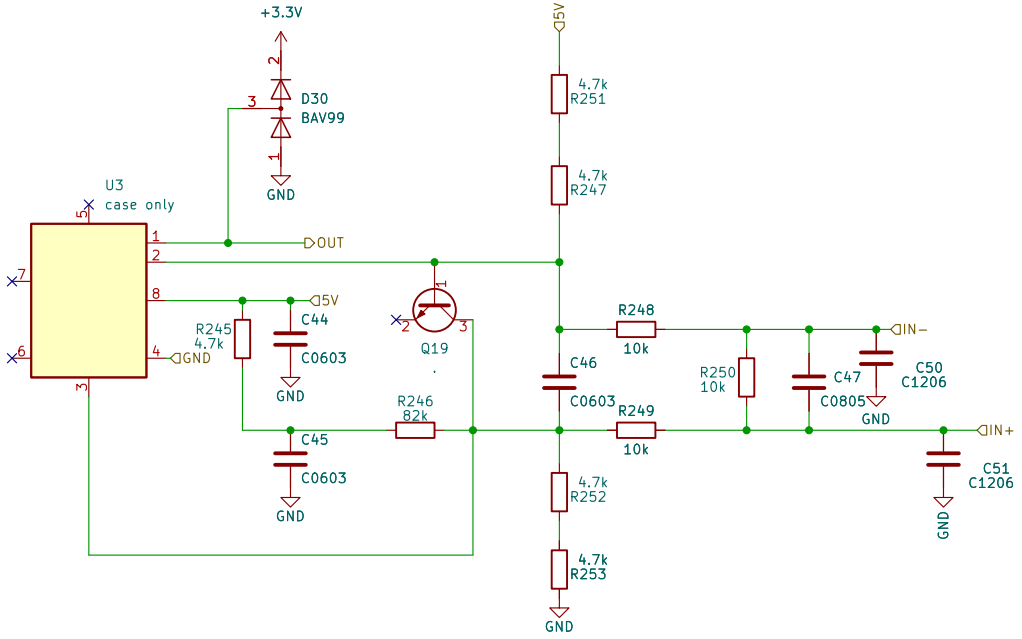

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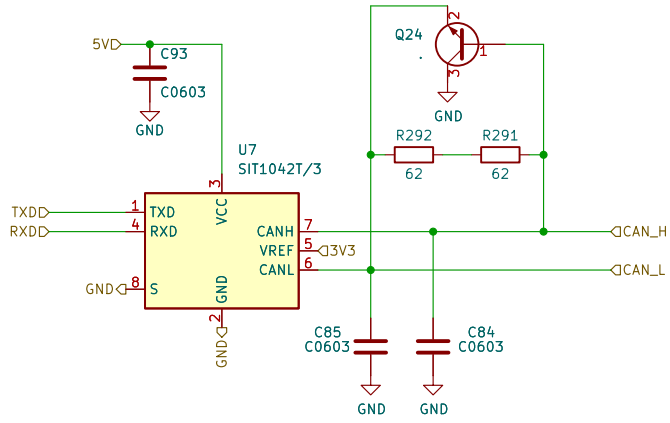

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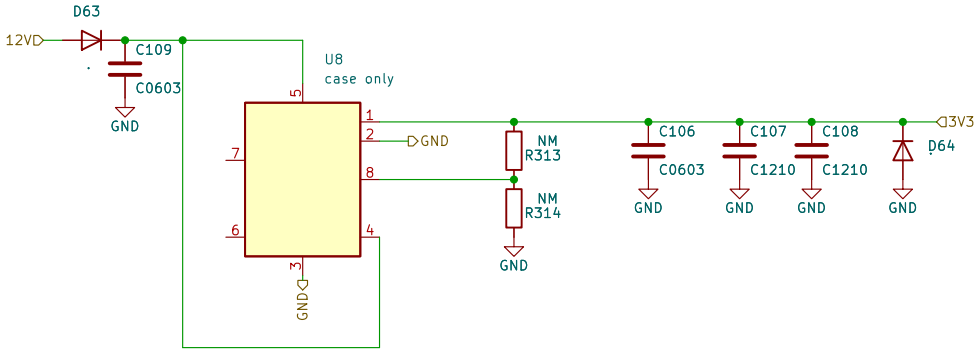

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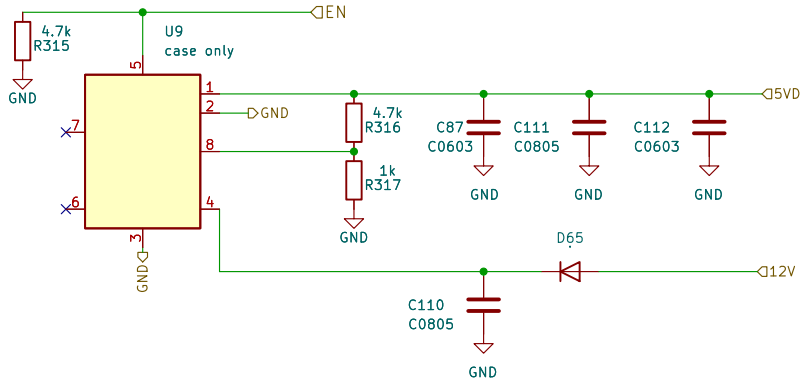

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