TOP_CTRL

TOP_CTR
DATA_RESET
DATA1
DATA_CLK
DATA_RESET_2V5
DATA_IN_2V5
DATA_CLK_2V5
DATA_OUT_2V5
DATA2
SW3_A
SW3_B
SW3_A_3V
SW3_B_3V
ATTEN0_2V5
ATTEN1_2V5
ATTEN2_2V5
ATTEN0
ATTEN1
ATTEN2
SW4_CTRL
SW4_CTRL_2V5
SW5_A
SW5_B
SW5_A_3V
SW5_B_3V
SW1_A_3V
SW1_B_3V
SW1_A
SW1_B
SW7_CTRL
SWR_EN
SW7_2V5
SWR_EN_2V5
SW2_V1_2V5
SW2_V2_2V5
SW2_V3_2V5
SW2_V1
SW2_V2
SW2_V3
SWR_SW_A_2V5
SWR_SW_A
TOP_CTRL.sch

1–4000MHz RX_OUT

SMA_H
J1
U1
F1956NBGI8
GND
RF2
NC
A0
A1
LE
CLK
V_MODE
VDD
DATA
D6
D5
D4
D3
D2
D1
D0
ATTEN2
ATTEN1
ATTEN0
47nF
C3
R3
0R
C1
47nF

RX_L (1–500MHz)

RX_L
RF_L_OUT
DATA_RESET
DATA3
DATA_CLK
LNA_EN
DATA_RESET_2V5
DATA_IN_2V5
DATA_CLK_2V5
LNA_EN
RF_L_IN
DATA_OUT_2V5
DATA4
RX_L.sch
47nF
C117
C294
100nF
U8
HMC544AE
SW5_B
SW5_A
100nF
C313
47nF
C6
30MHz_RX

RX_H (500–4000MHz)

RX_H
RF_0_OUT
RF_1_OUT
RF_2_OUT
RF_3_OUT
RF_4_OUT
DATA_RESET
DATA2
DATA_CLK
LNA_EN
RF_IN
DATA_OUT_2V5
DATA3
RX_H.sch
R5
0R
C318
100pF
U4
SKY13416-485LF
SW2_V1
SW2_V2
SW2_V3
47nF
C5
100pF
C233
SW6_V3
SW6_V2
R9
0R
U9
SKY13414-485LF
R10
0R
SMA_H
J3

100–4000MHz RX_IN/TX_OUT

RX, TX (GSM, LTE)

Cell
RX
TX
BAND38_TX_ENn
DATA_RESET
DATA4
DATA_CLK
DATA_RESET_2V5
DATA_IN_2V5
DATA_CLK_2V5
TXRX
DATA_OUT_2V5
DATA5
CPL
CPL
Cell.sch
R6
0R
100pF
C256
U5
SKY13414-485LF
47nF
C4
R128
0R
SW5_V2
SW5_V3
100nF
C300
U10
SKYA21003
VBATT
ENABLE
CTRL
7 SW7_CTRL

TX (1–4000MHz)

TX_H2
RF_H_IN
RF_IN_435
RF_L_IN
DATA_RESET
DATA5
DATA_CLK
PA_ENn
DATA_RESET_2V5
DATA_IN_2V5
DATA_CLK_2V5
PA_ENn
RF_OUT
RF_OUT_30_70
FAN_EN_2V5
FAN_EN
TX_H.sch
R7
0R
R8
0R
30MHz_TX

TX_IN 1–4000MHz

SMA_H
J2
47nF
C2
U2
HMC544AE
SW3_B
SW3_A
100nF
C265

100–4000MHz TX_OUT

R11
0R
SMA_H
J4

MCU

MCU
DATA_RESET
DATA1
DATA_CLK
DATA_RESET_2V5
DATA_2V5
DATA_CLK_2V5
LNA_EN
PA_ENn
RX_SW_0D
RX_SW_1D
RELAY_30MHz
FAN_SENSE
USB_DP
USB_DM
SDA
SCL
ADC7_1
ADC7_2
ADC6_1
ADC6_2
GPIO5
GPIO4
BAND38_TX_ENn
SW6_V2
SW6_V3
30MHz_RELAY_CTR
FAN_SENSE
USB_DP
USB_DM
SDA
SCL
GPIO_ADC1
PFWDF_DB
GPIO_ADC2
GAMMA_DB
GPIO5
GPIO4
BAND38_TX_ENn
MCU.sch

GPIO_Subsystem

SCL
SDA
ADC1
ADC2
GPIO5
GPIO4
GPIO_ADC1
GPIO_ADC2
GPIO5
GPIO4
GPIO_Subsystem.sch

SWR_Meter_Subsystem

SWR_EN
CPL
+5V
EN
CPL
PFWD_DB
GAMMA_DB
SW
PFWDF_DB
GAMMA_DB
SWR_SW_A
SWR_Meter_Subsystem.sch

POWER

PowerSupply
PowerSupply.sch

FAN

FAN
FAN_EN_2V5
FAN_SENSE
FAN_EN
FAN_SENSE
FAN.sch

30MHz_RELAY_CTR

U7
DRDC3105F-7
U11
1462042-8
30MHz_RX
30MHz_TX

1–30MHz RX_IN/TX_OUT

1uF
R12
SMA_H
J5

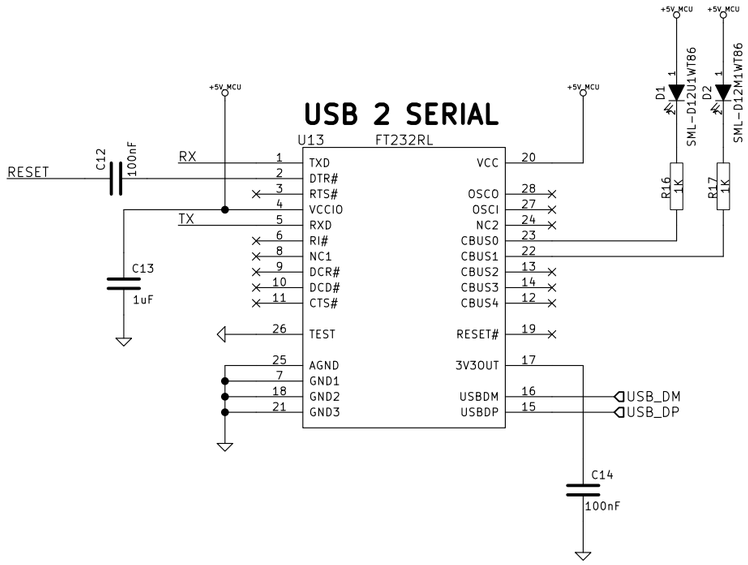
USB

USB
USB_DM
USB_DP
DM
DP
USB.sch

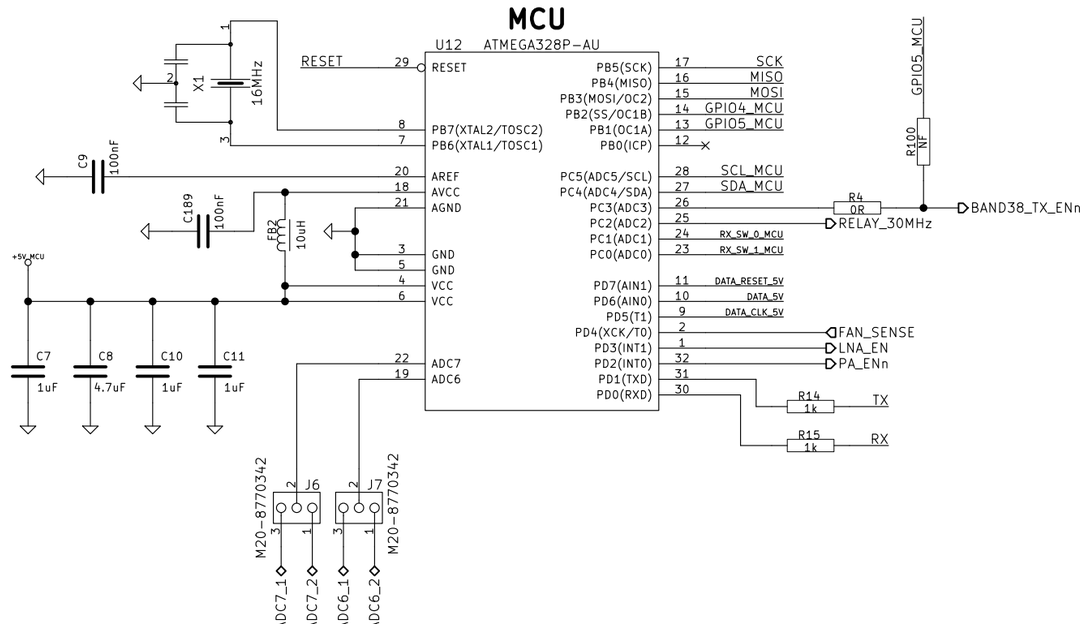
Lime Microsystems
Sheet: /
File: Lime_RFE.sch
Title: LMS8001_AppPCB
Size: A2 | Date: 7 feb 2018 | Rev: 1v0
KiCad E.D.A. kicad 4.0.7 | Id: 1/56

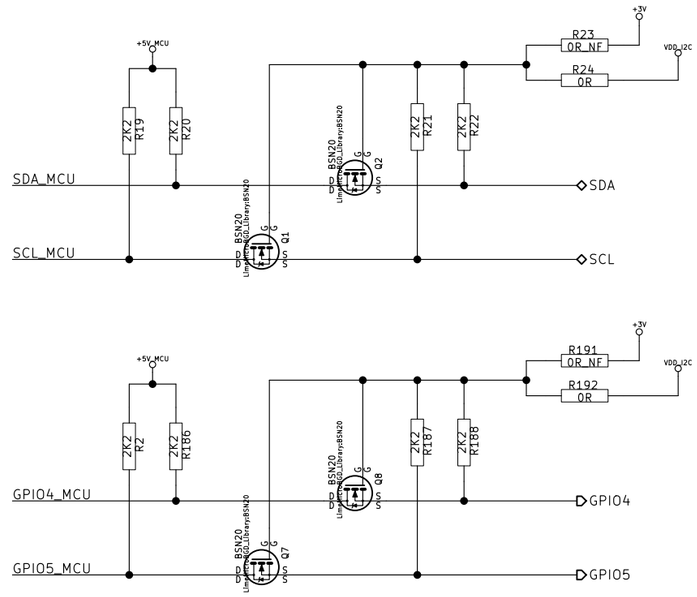
RESET

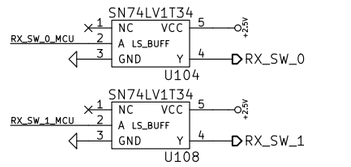
USB 2 SERIAL

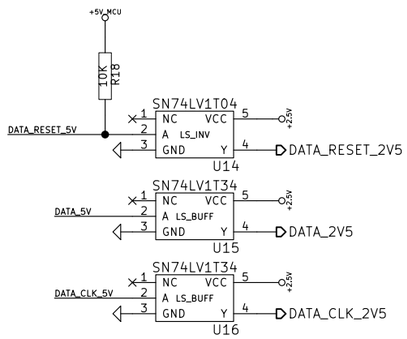


MCU

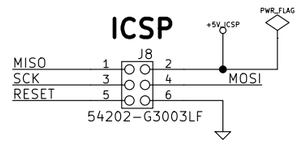








ICSP



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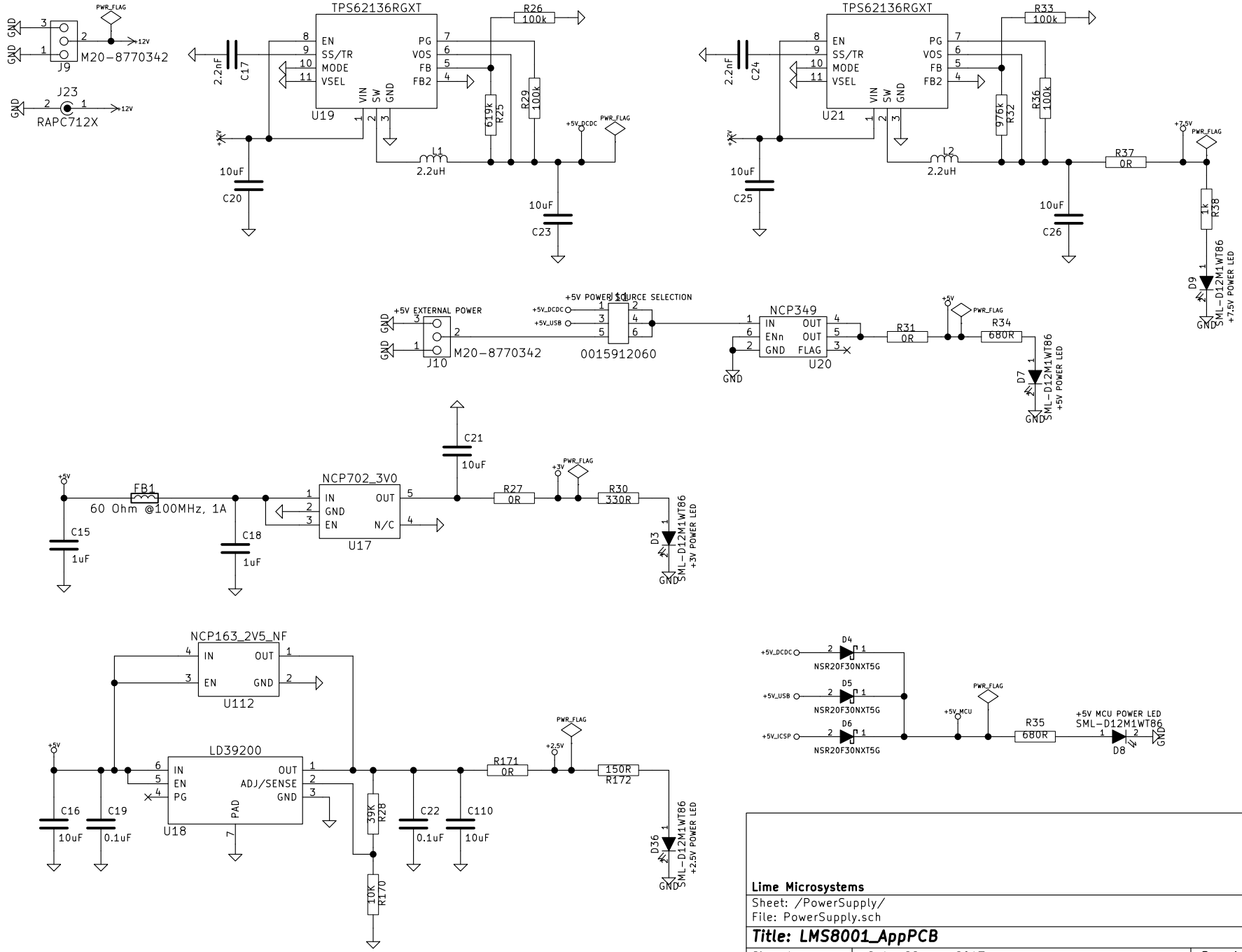
Size: A3	Date: 7 feb 2018	**Rev:**
KiCad E.D.A. kicad 4.0.7		Id: 2/56



Lime Microsystems		
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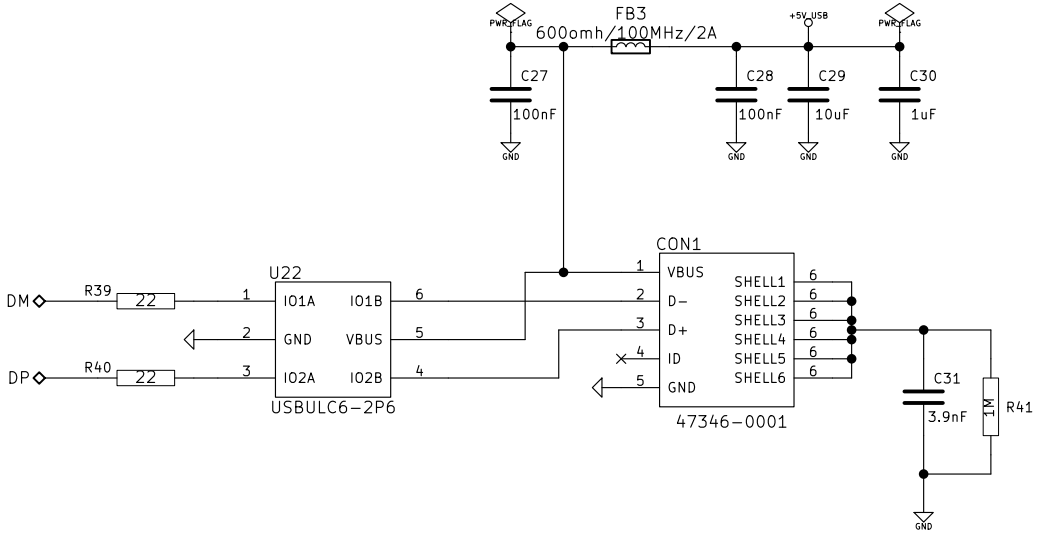
Size: A	Date: 22 may 2017	**Rev: 1v0**
KiCad E.D.A. kicad 4.0.7		Id: 3/56



Lime Microsystems

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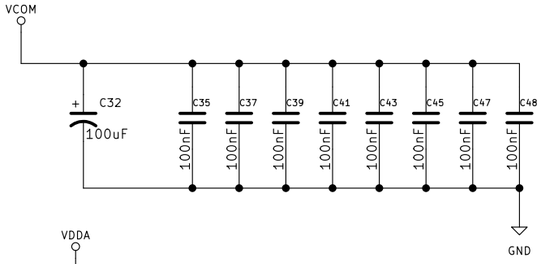
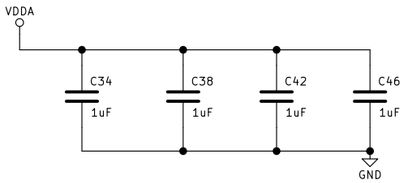
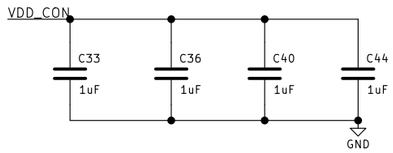
File: USB.sch

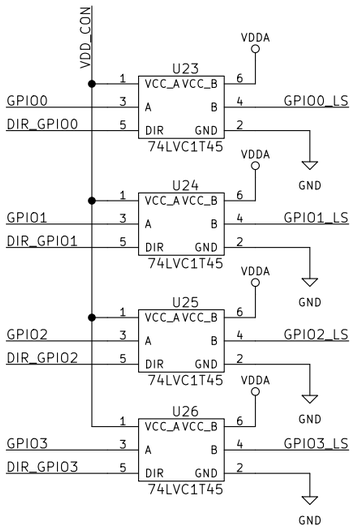
Title: LMS8001_AppPCB

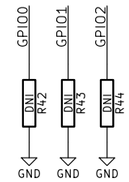
Size: A4	Date: 22 may 2017	**Rev: 1v0**
KiCad E.D.A. kicad 4.0.7		Id: 4/56

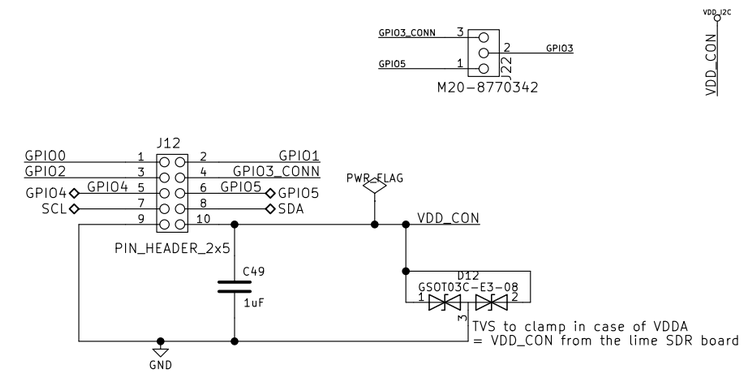


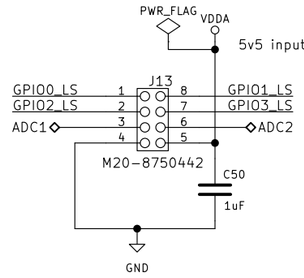


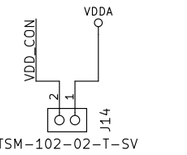


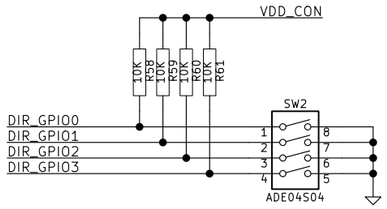


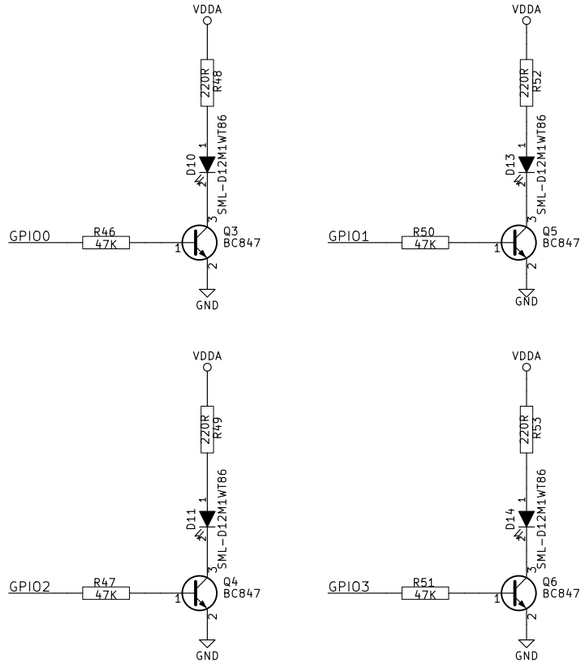


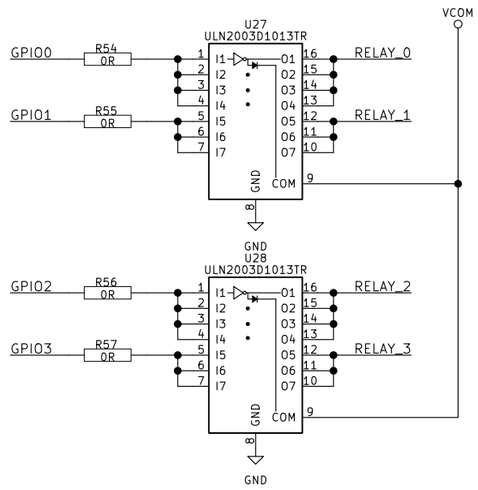


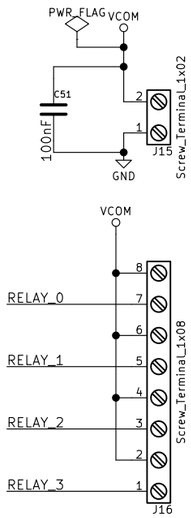












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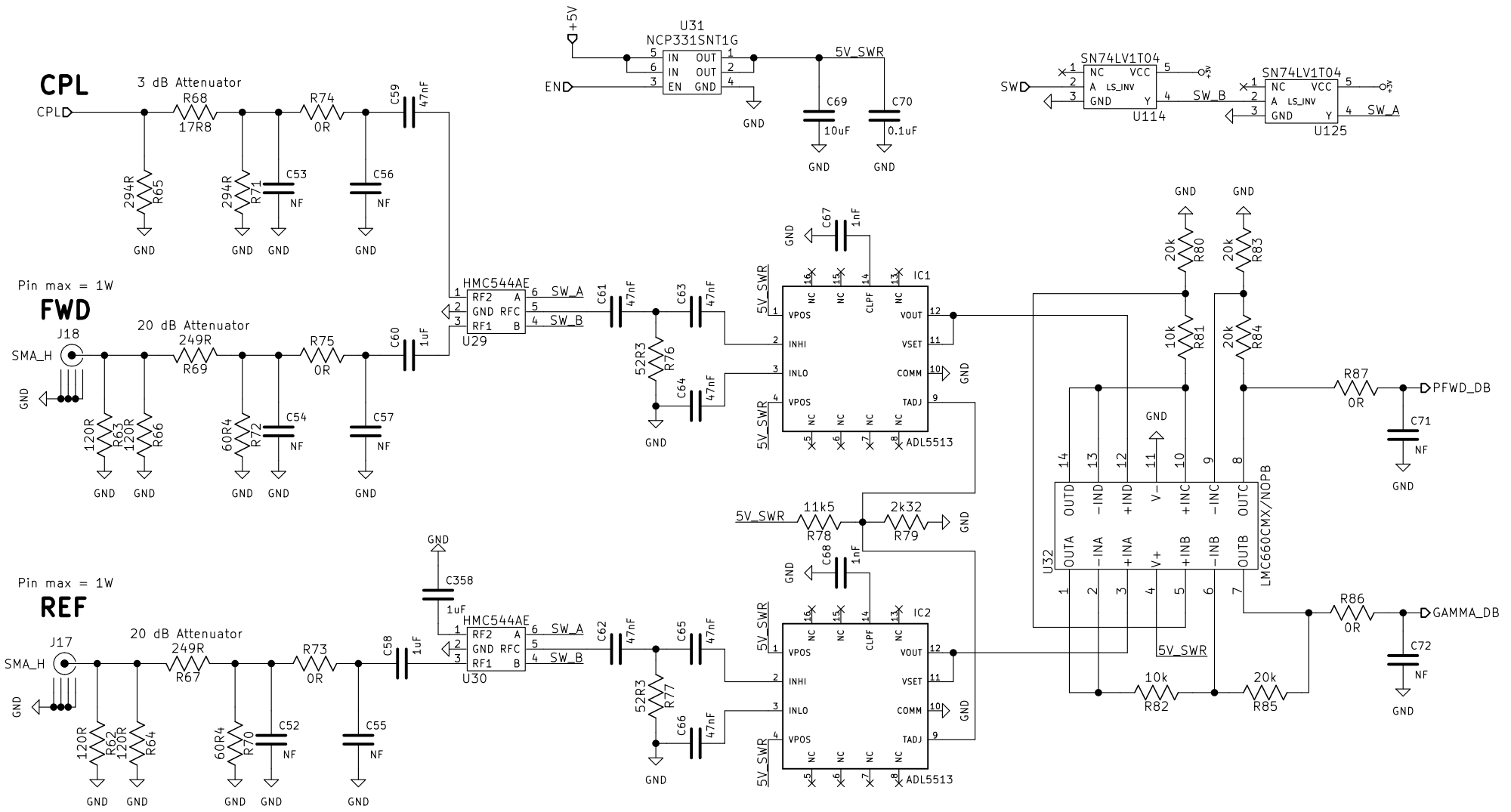
Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7		Id: 5/56


CPL
3 dB Attenuator
CPL
R68
17R8
R74
0R
C59
47nF
294R
R65
294R
R71
C53
NF
C56
NF
GND
GND
GND
GND
Pin max = 1W
FWD
20 dB Attenuator
J18
SMA_H
GND
249R
R69
R75
0R
C60
1uF
120R
R63
120R
R66
60R4
R72
C54
NF
C57
NF
GND
GND
GND
GND
GND
Pin max = 1W
REF
20 dB Attenuator
J17
SMA_H
GND
249R
R67
R73
0R
C58
1uF
120R
R62
120R
R64
60R4
R70
C52
NF
C55
NF
GND
GND
GND
GND
GND
+5V
U31
NCP331SNT1G
IN
IN
EN
OUT
OUT
GND
5V_SWR
C69
10uF
C70
0.1uF
GND
GND
SW
SN74LV1T04
U114
SW_B
SN74LV1T04
U125
SW_A
HMC544AE
U29
RF2
GND RFC
RF1
SW_A
SW_B
C61
47nF
C63
47nF
52R3
R76
C64
47nF
GND
HMC544AE
U30
C358
1uF
C62
47nF
C65
47nF
52R3
R77
C66
47nF
GND
C67
1nF
C68
1nF
IC1
IC2
5V_SWR
VPOS
INHI
INLO
VPOS
VOUT
VSET
COMM
TADJ
NC
CLPF
ADL5513
GND
5V_SWR
11k5
R78
2k32
R79
GND
20k
R80
20k
R83
10k
R81
20k
R84
R87
0R
PFWD_DB
C71
NF
GND
GND
GND
U32
LMC660CMX/NOPB
OUTA
−INA
+INA
V+
+INB
−INB
OUTB
OUTD
−IND
+IND
V−
+INC
−INC
OUTC
5V_SWR
R86
0R
GAMMA_DB
C72
NF
GND
10k
R82
20k
R85
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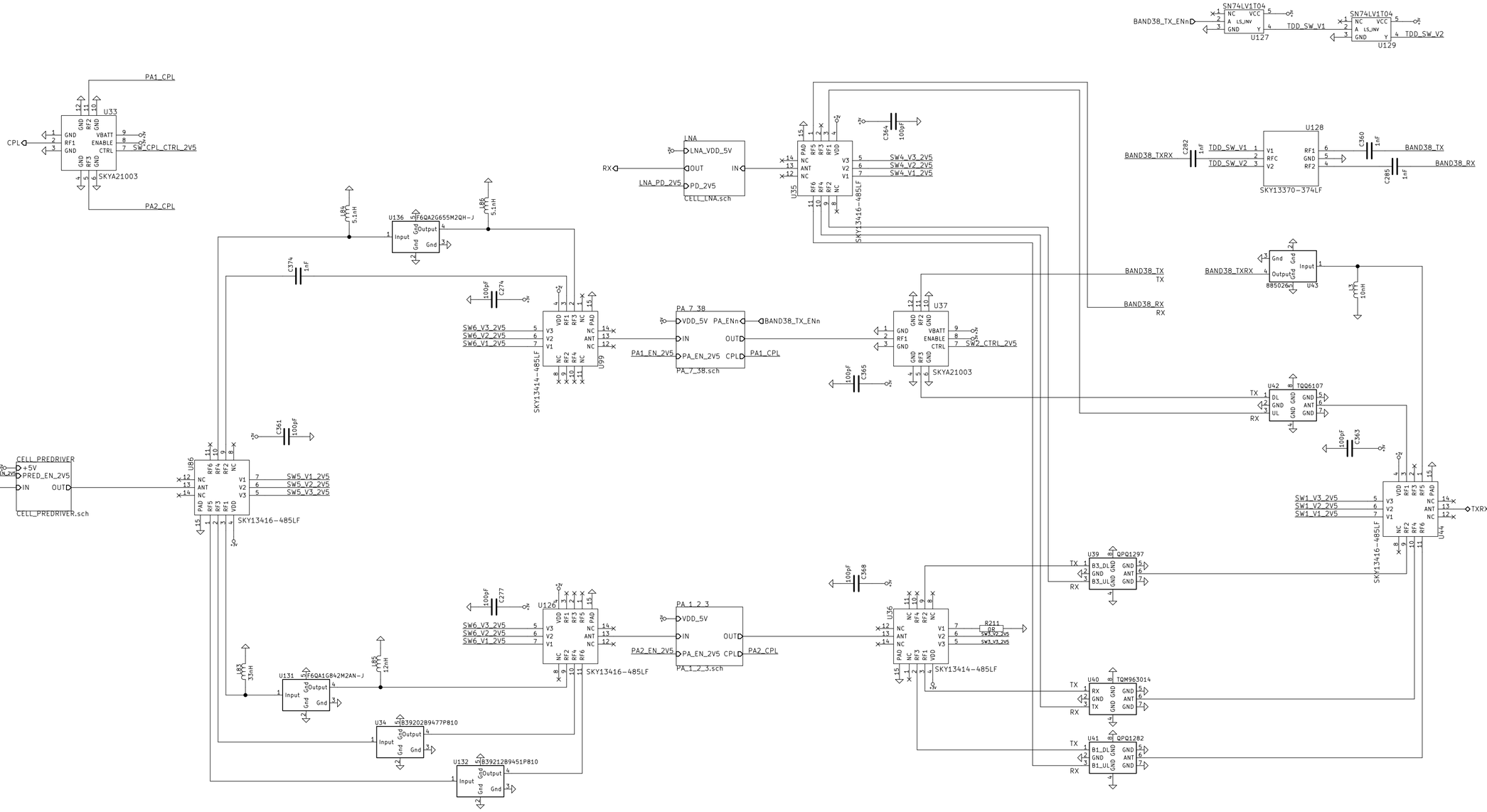
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 4.0.7
Id: 6/56



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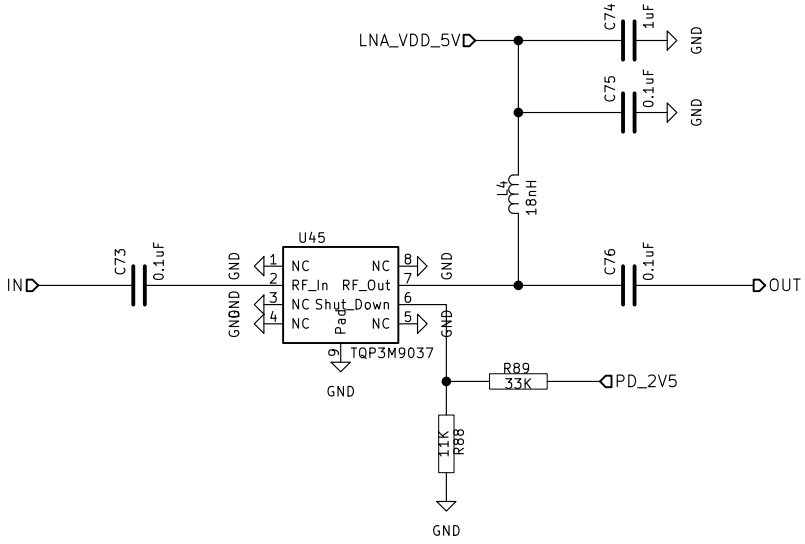
Size: A2	Date:	**Rev:**
KiCad E.D.A. kicad 4.0.7		Id: 7/56



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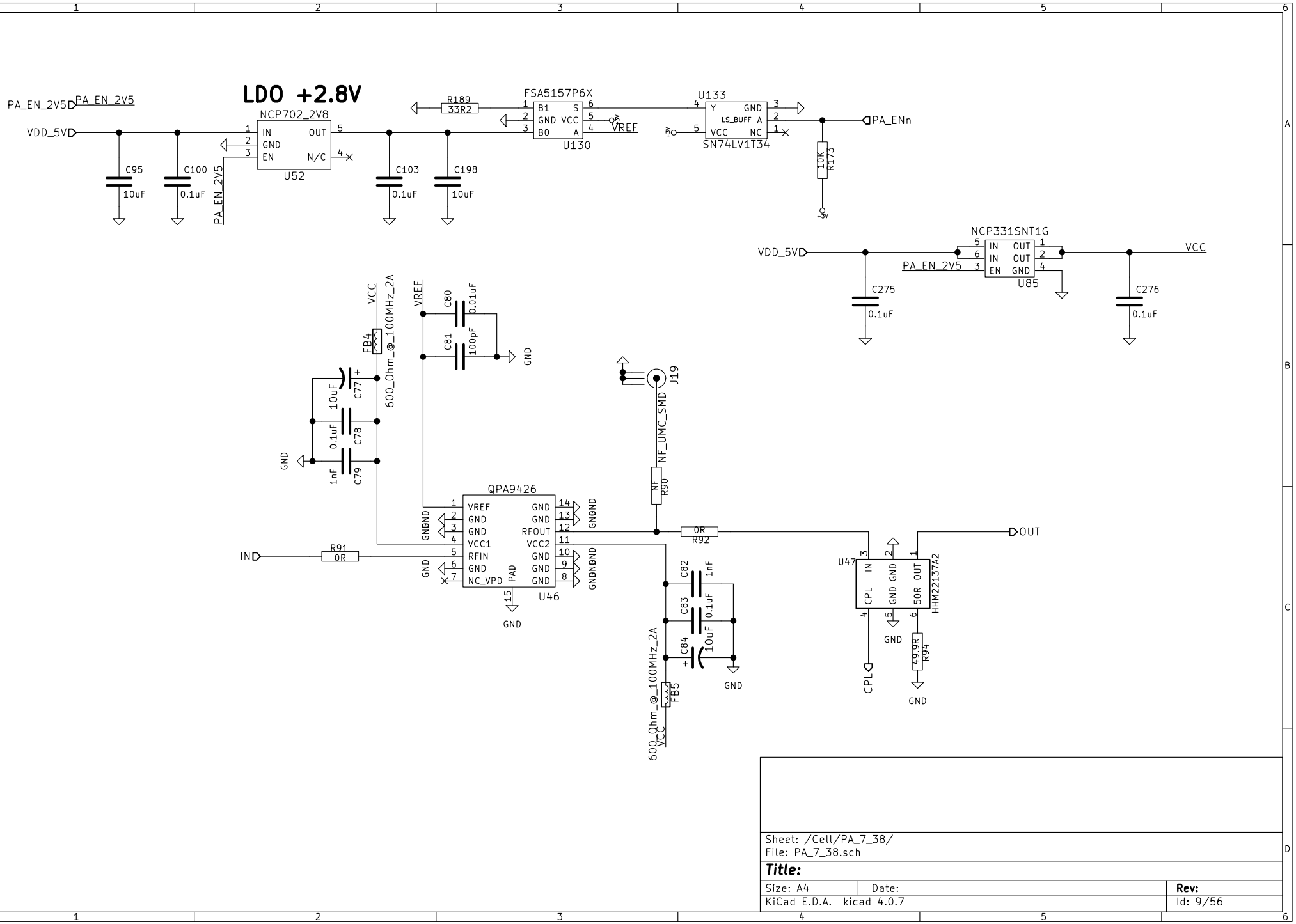
KiCad E.D.A. kicad 4.0.7		Id: 8/56



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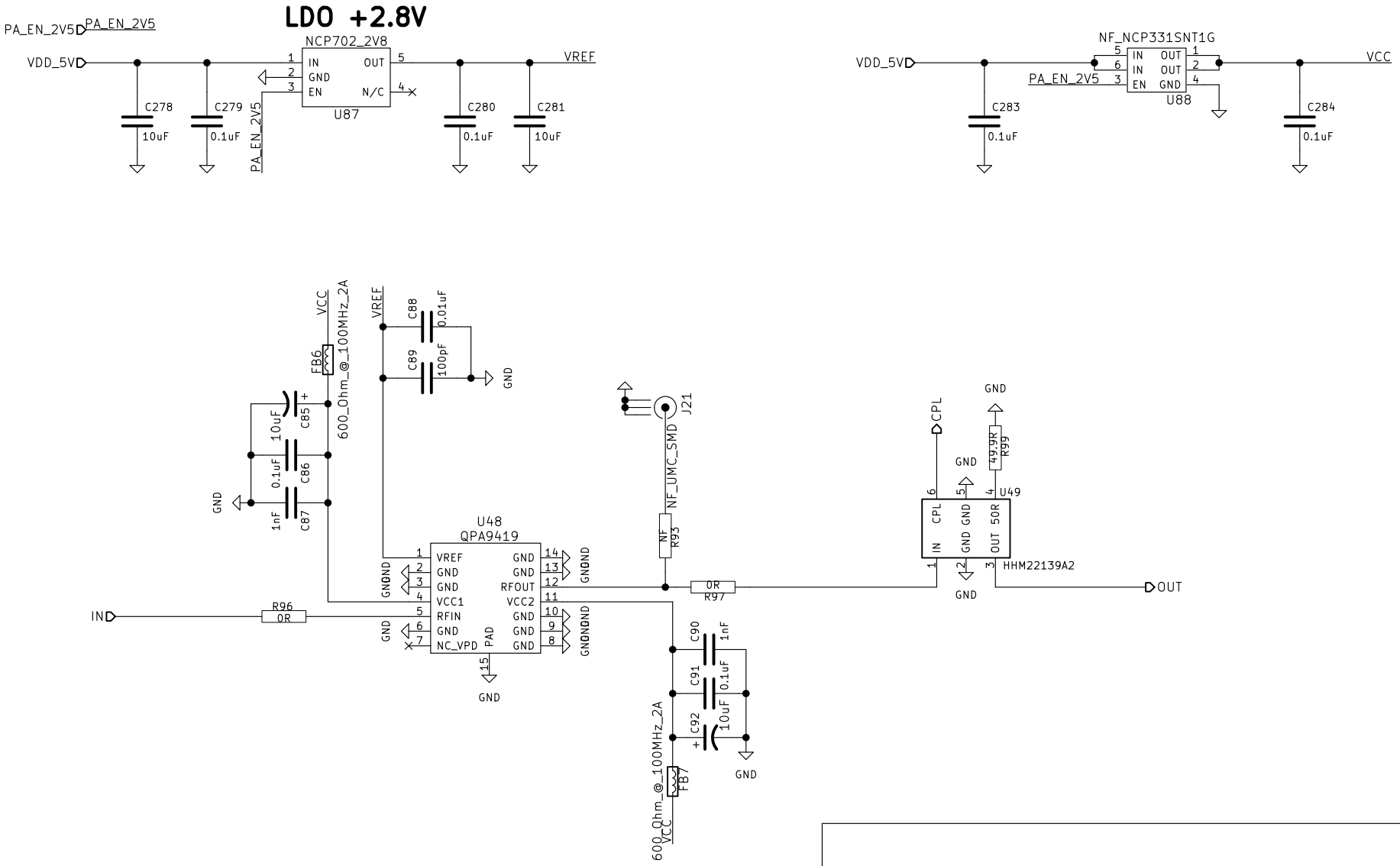
KiCad E.D.A. kicad 4.0.7		Id: 9/56



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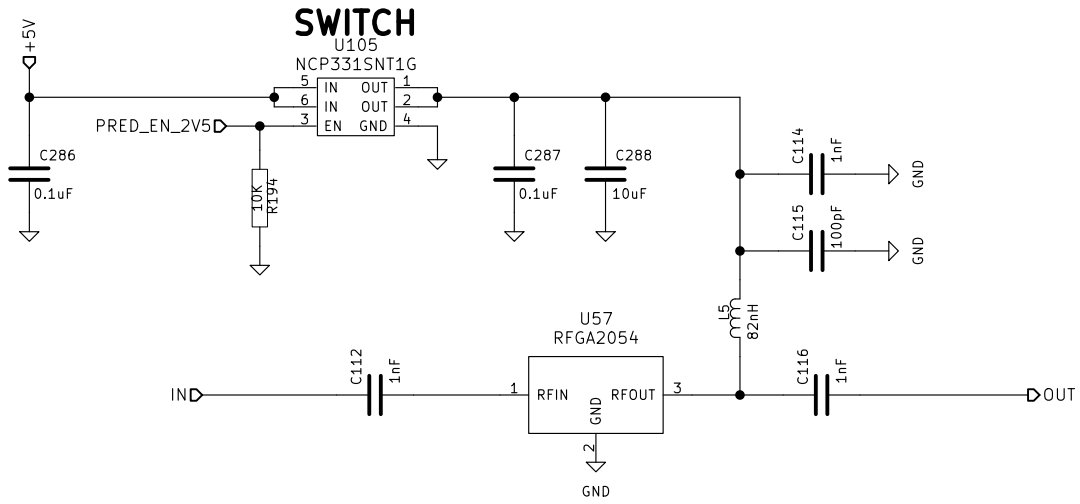

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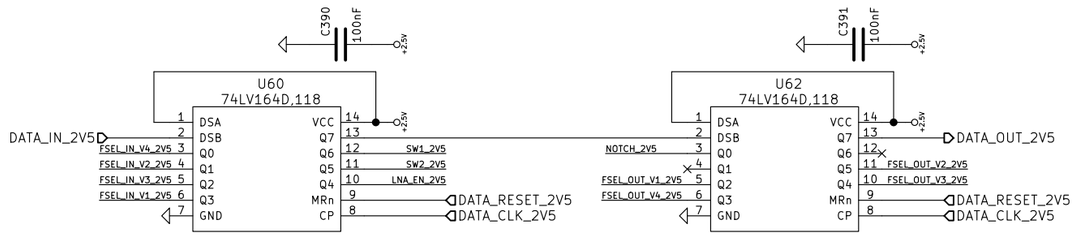

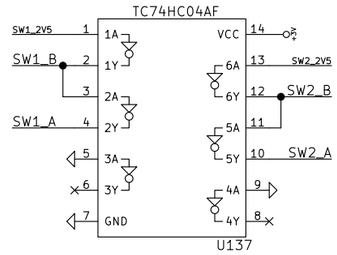

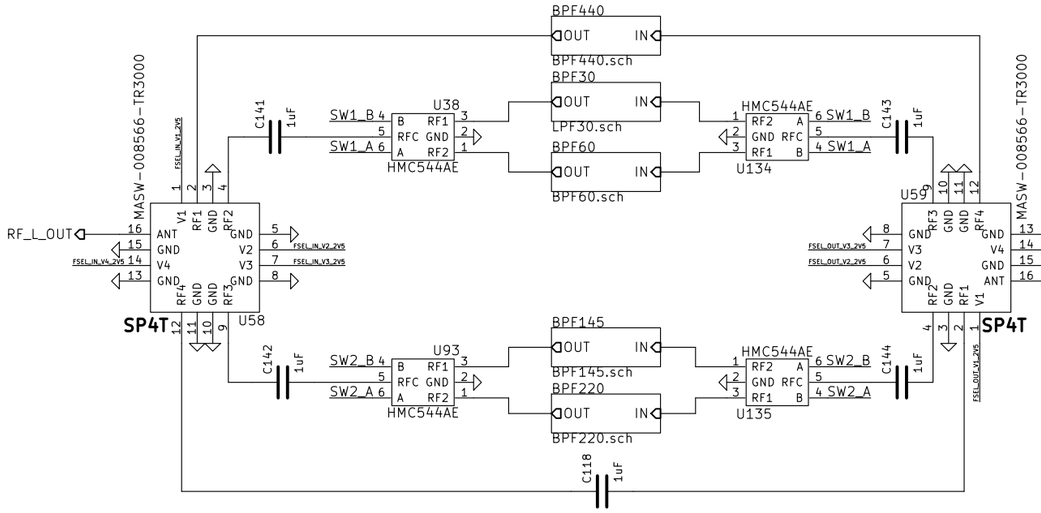

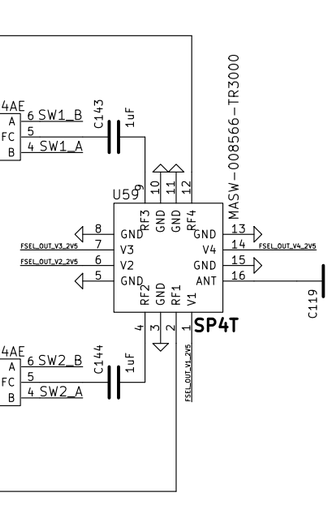

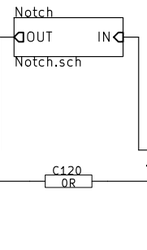

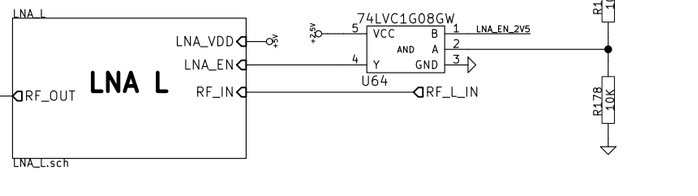

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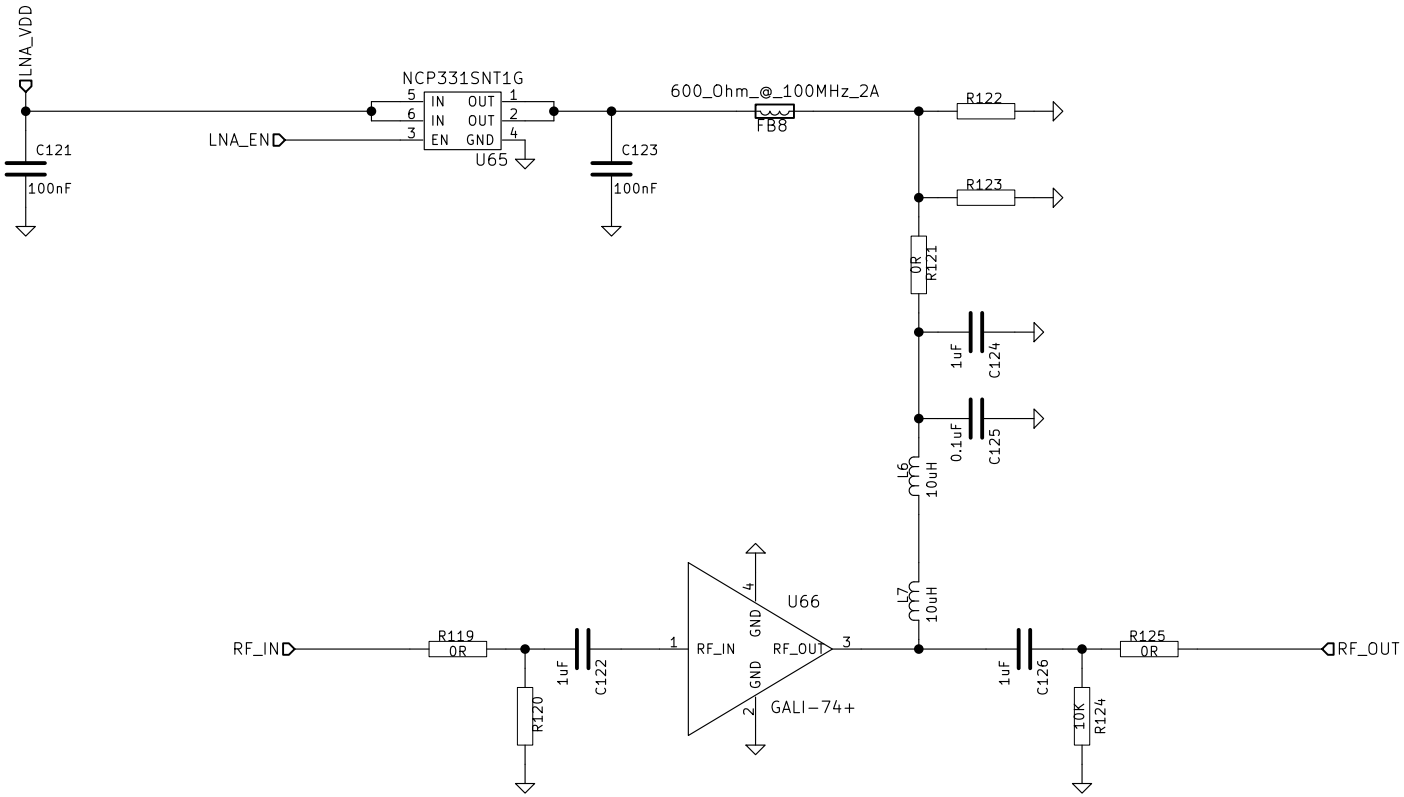
Size: A3	Date: 7 feb 2018	**Rev:**
KiCad E.D.A. kicad 4.0.7		Id: 12/56



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Title: LMS8001_AppPCB		
Size: A4	Date: 23 jan 2019	**Rev: 1v0**
KiCad E.D.A. kicad 4.0.7		Id: 13/56

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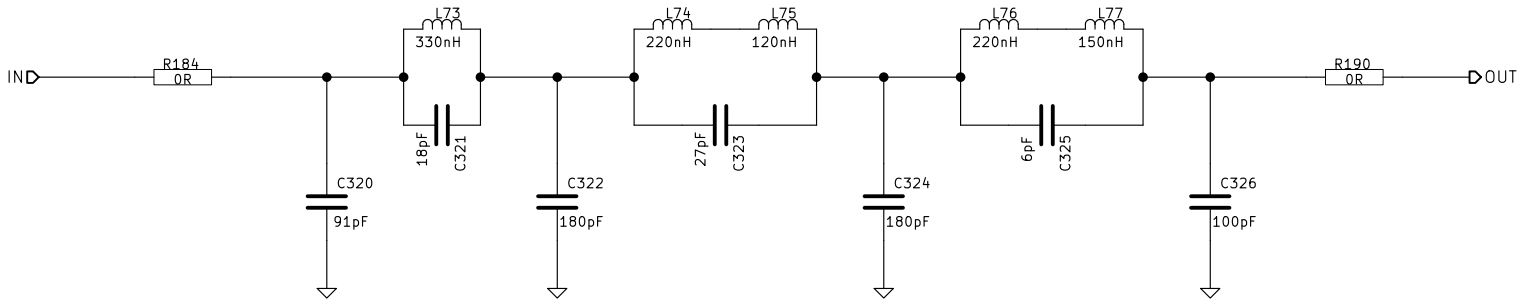
KiCad E.D.A. kicad 4.0.7		Id: 14/56



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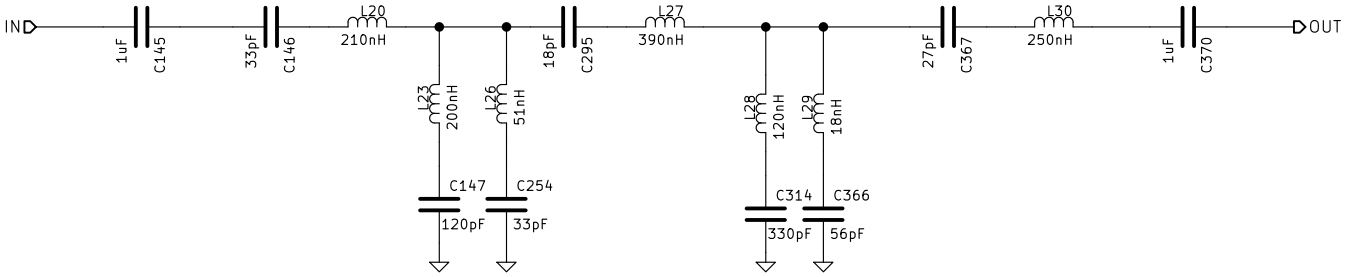
KiCad E.D.A. kicad 4.0.7		Id: 15/56



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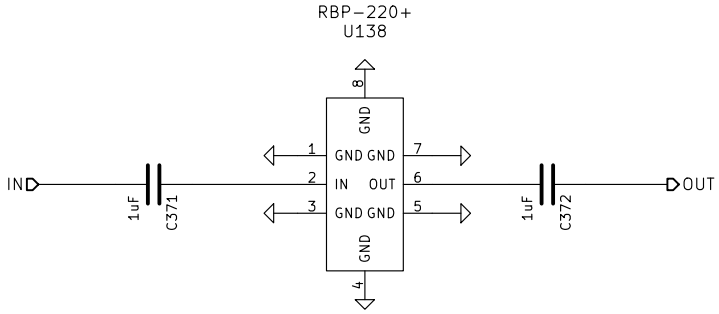

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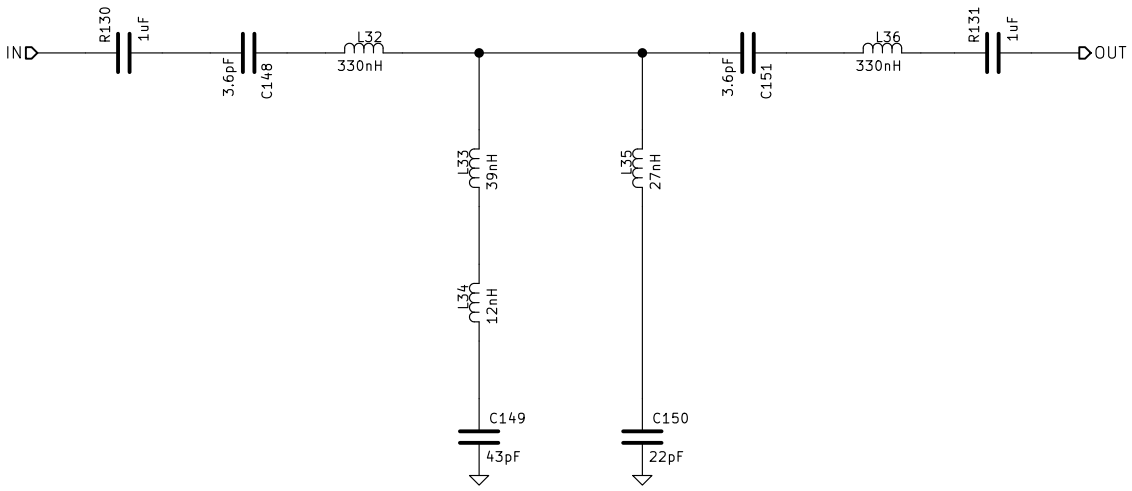

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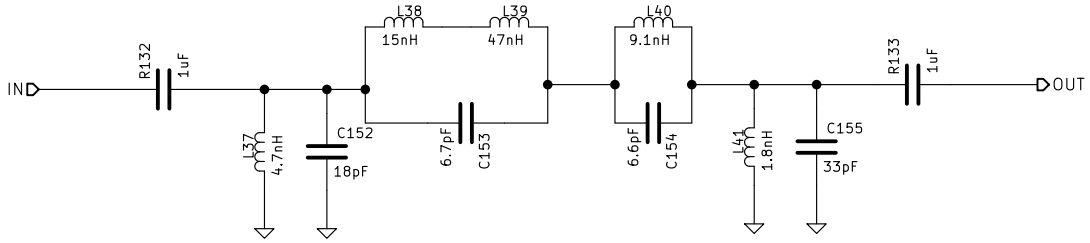
KiCad E.D.A. kicad 4.0.7		Id: 18/56



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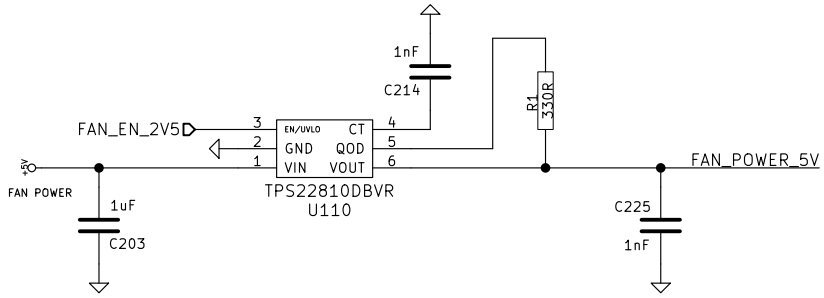
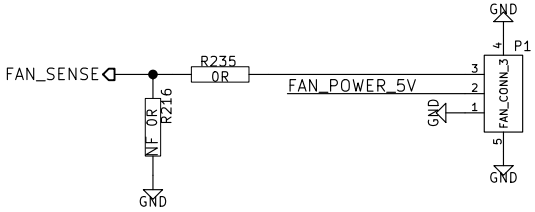
KiCad E.D.A. kicad 4.0.7		Id: 19/56





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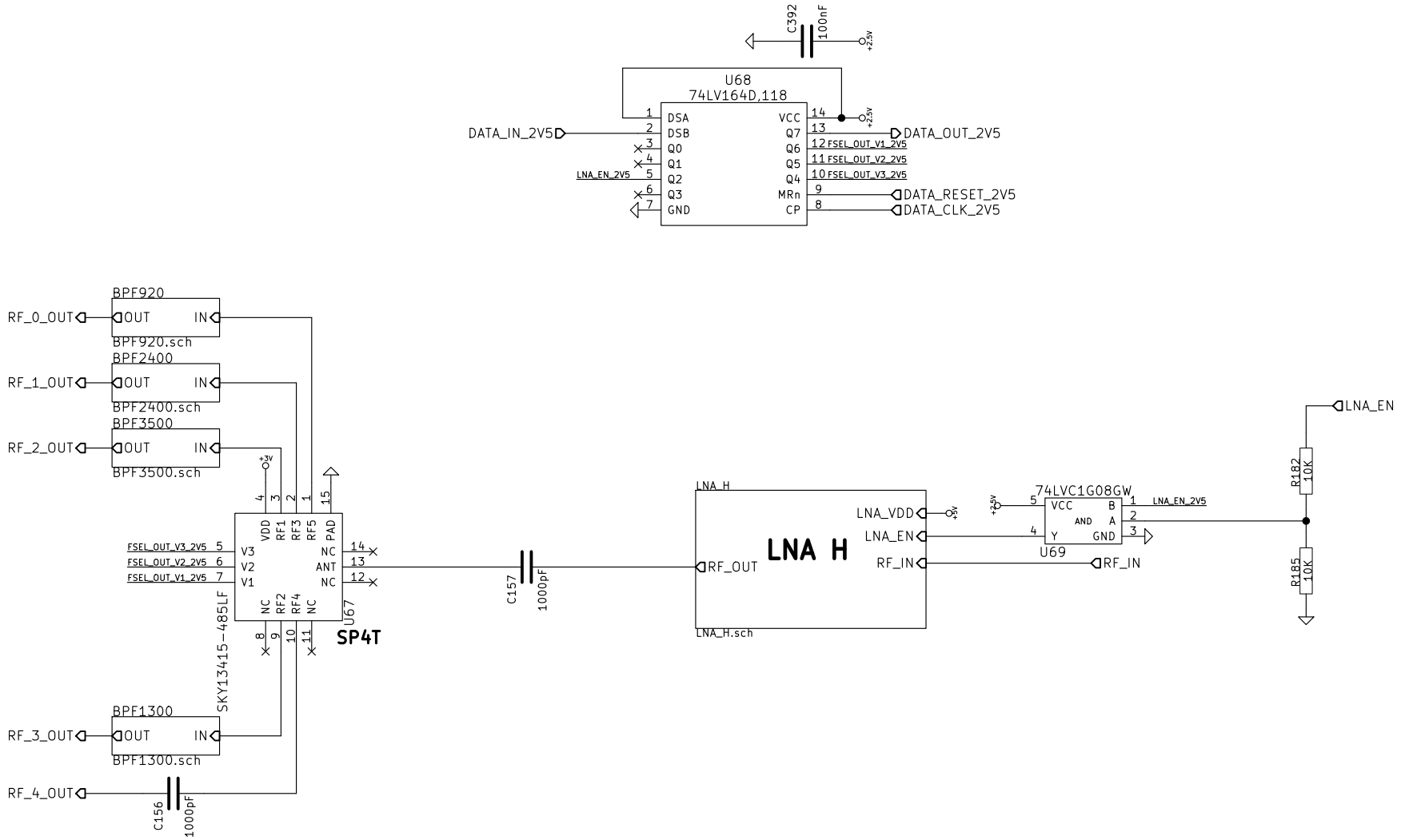
KiCad E.D.A. kicad 4.0.7		Id: 20/56



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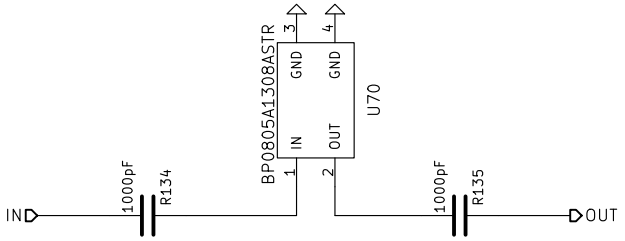
KiCad E.D.A. kicad 4.0.7		Id: 21/56



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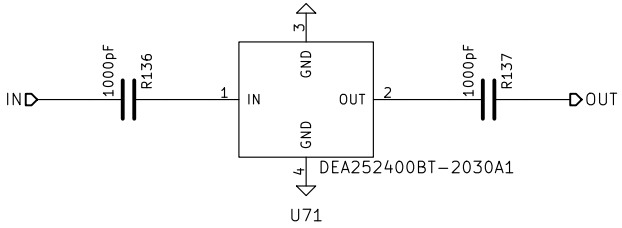

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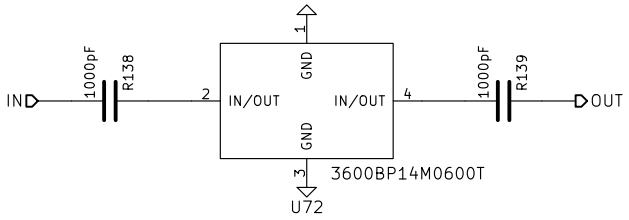
KiCad E.D.A. kicad 4.0.7		Id: 23/56



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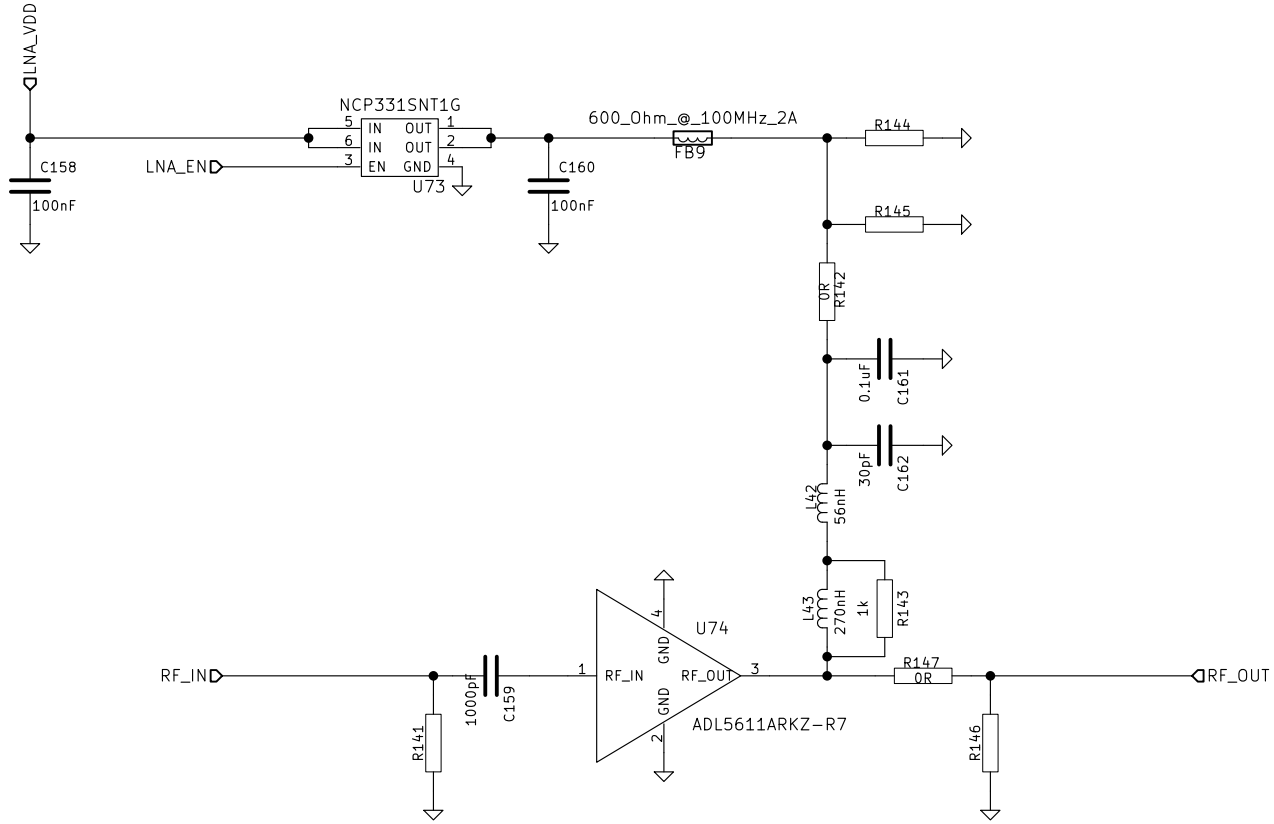

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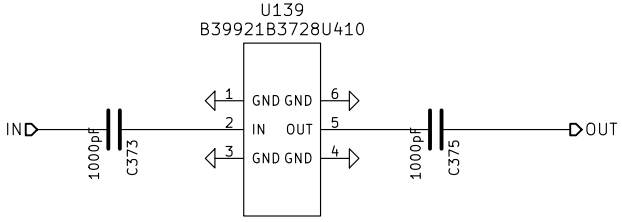
Size: A4	Date: 23 jan 2019	**Rev: 1v0**
KiCad E.D.A. kicad 4.0.7		Id: 25/56



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KiCad E.D.A. kicad 4.0.7		Id: 26/56

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74LV164D,118
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U89
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U92
74LV164D,118
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DATA_RESET_2V5
DATA_CLK_2V5
FAN_EN_2V5
PDRIV_435MHz
PDRIV435.sch
PA_435MHz
PA435.sch
LPF435
LPF435.sch
435MHz
PA_2.4GHz
PA2400.sch
LPF2400
LPF2400.sch
2400MHz
PA_4.0GHz
PA4000.sch
1–4GHz
PA_3.5GHz
PA3500.sch
LPF3500
LPF3500.sch
PREDRIVER_H
PREDRIVER_H.sch
1000–4000MHz
SKY13415-485LF
SKY13418-485LF
U94
RF_OUT
3500MHz
PDRIV_1.28GHz
PDRIV1280.sch
PA_1.28GHz
PA1280.sch
LPF1280
LPF1280.sch
1280MHz
PDRIV_920MHz
PDRIV920.sch
PA_920MHz
PA_920.sch
LPF920
LPF920.sch
SN74LVCH8T245PWR
U77
U78
PA_ENn
PDRIV_30, 70MHz
PDRIV30.sch
PA_30,70MHz
PA30.sch
HF_BANK
HF_BANK.sch
RF_OUT_30_70
30,70MHz
PDRIV_145MHz
PDRIV145.sch
PA_145MHz
PA145.sch
LPF145
LPF145.sch
145MHz
SP4T
MASW-008566-TR3000
U91
1–1000MHz
RF_I_IN
SN74LV1T04
U141
U142
HMC544AE
U143
PDRIV_220MHz
PDRIV220.sch
PA_220MHz
PA_220.sch
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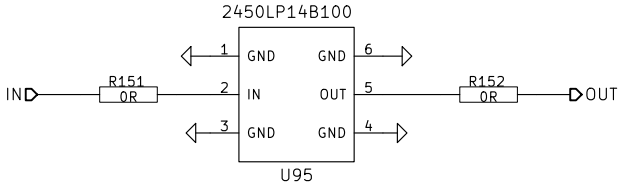
Size: A2
Date: 7 feb 2018
Rev:
KiCad E.D.A. kicad 4.0.7
Id: 27/56



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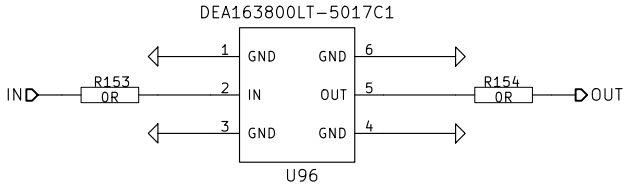
KiCad E.D.A. kicad 4.0.7		Id: 28/56



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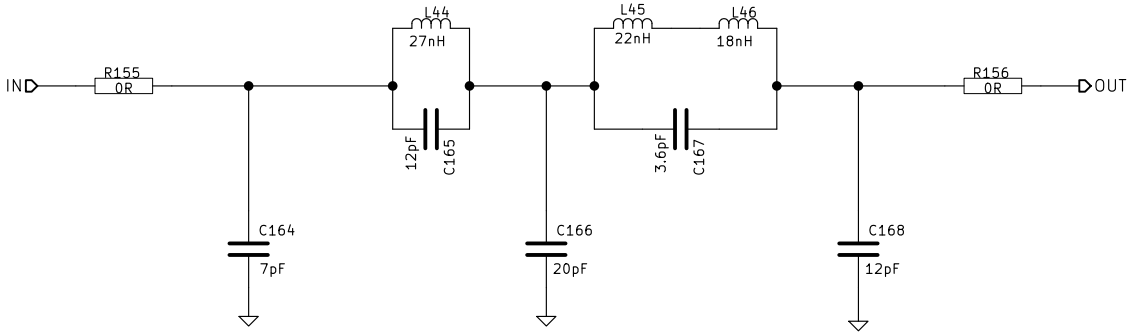
KiCad E.D.A. kicad 4.0.7		Id: 29/56



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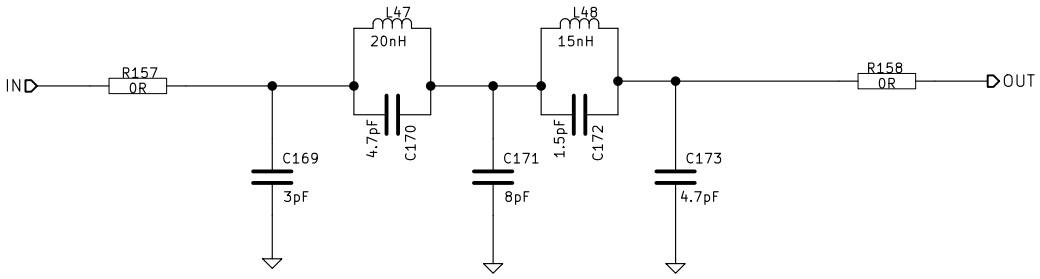

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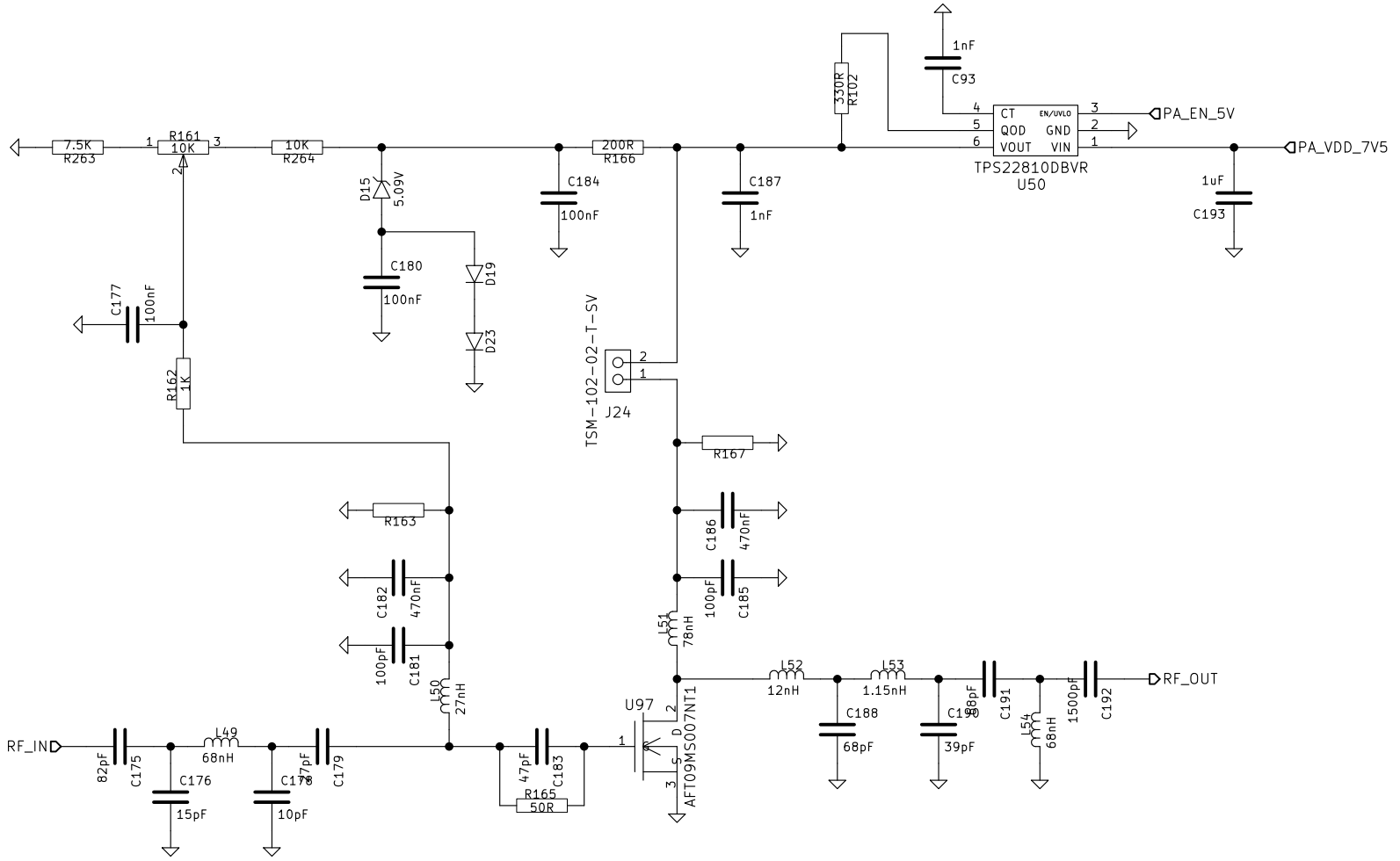

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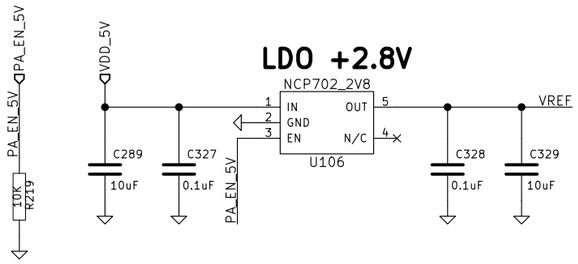

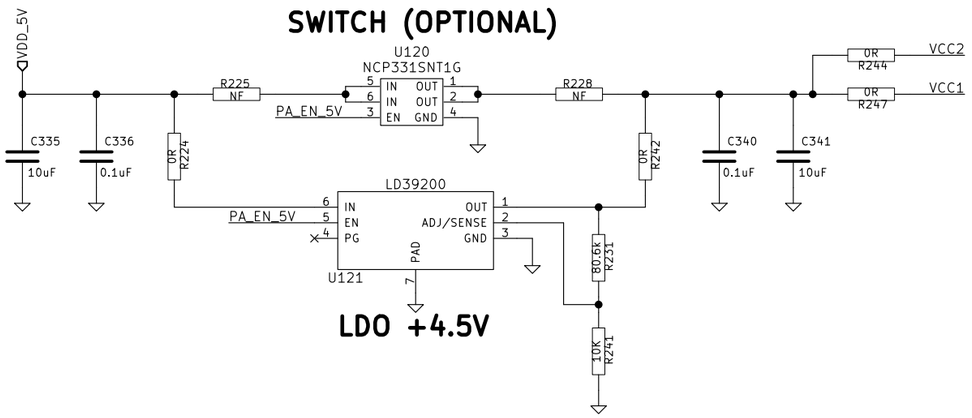

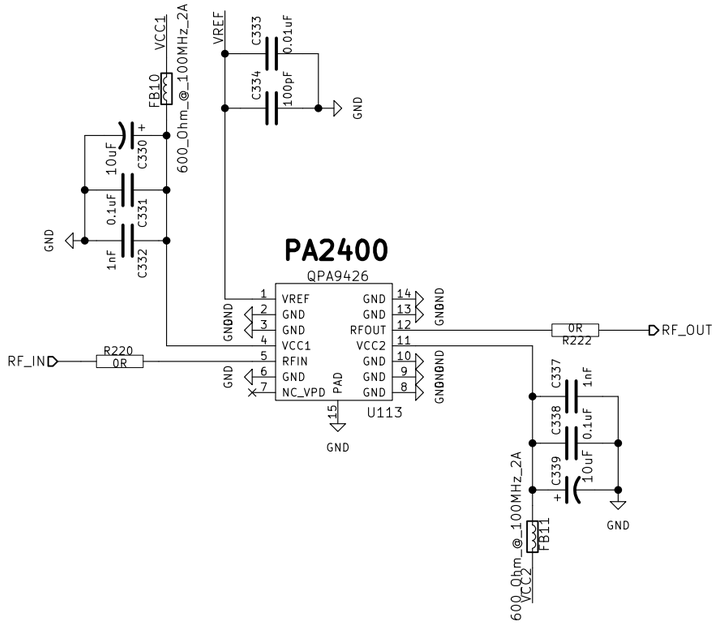

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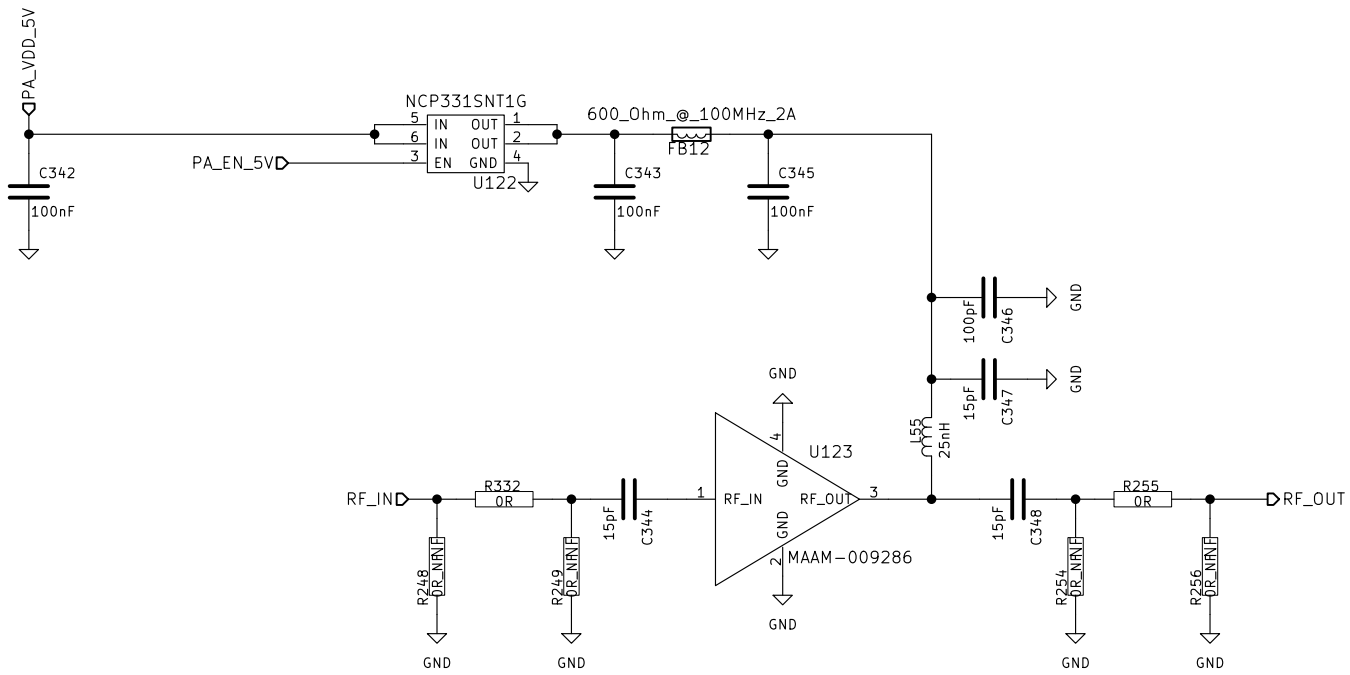
Size: A3	Date: 23 jan 2019	**Rev: 1v0**
KiCad E.D.A. kicad 4.0.7		Id: 33/56



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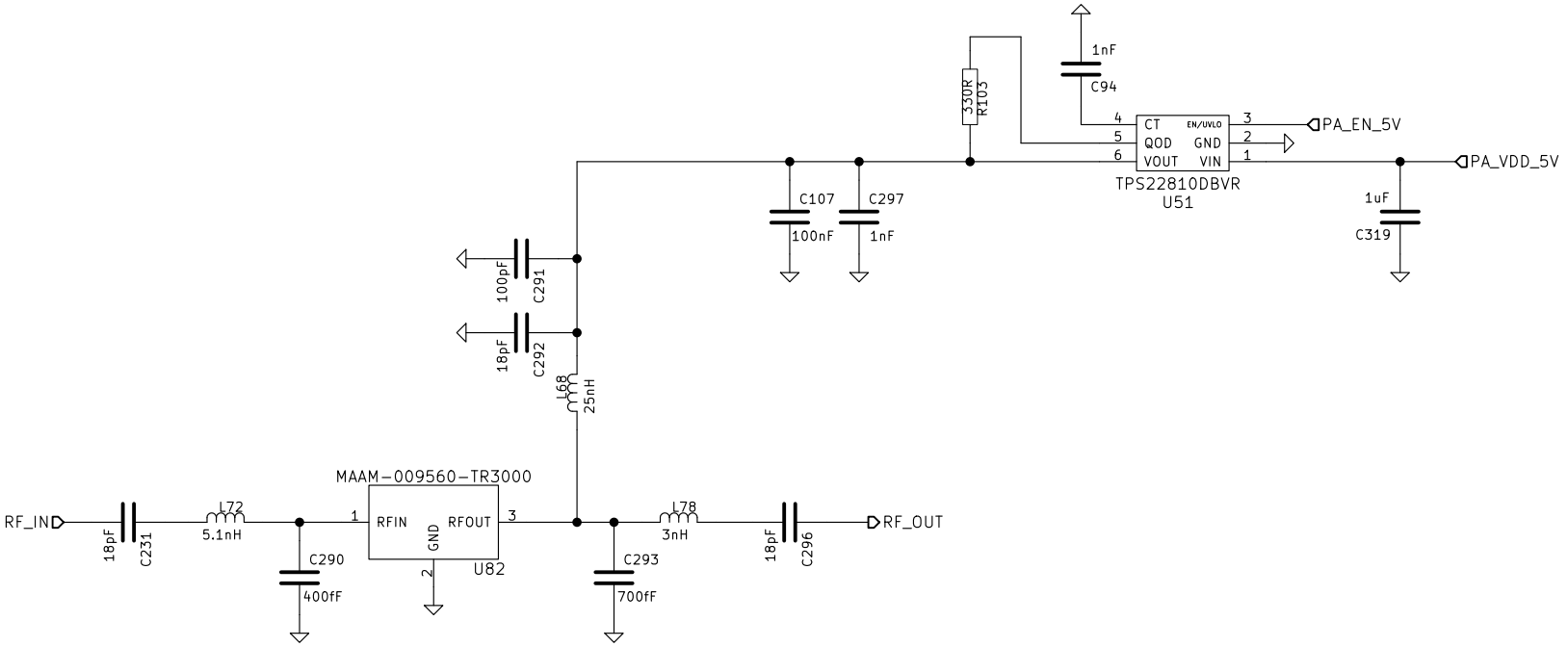

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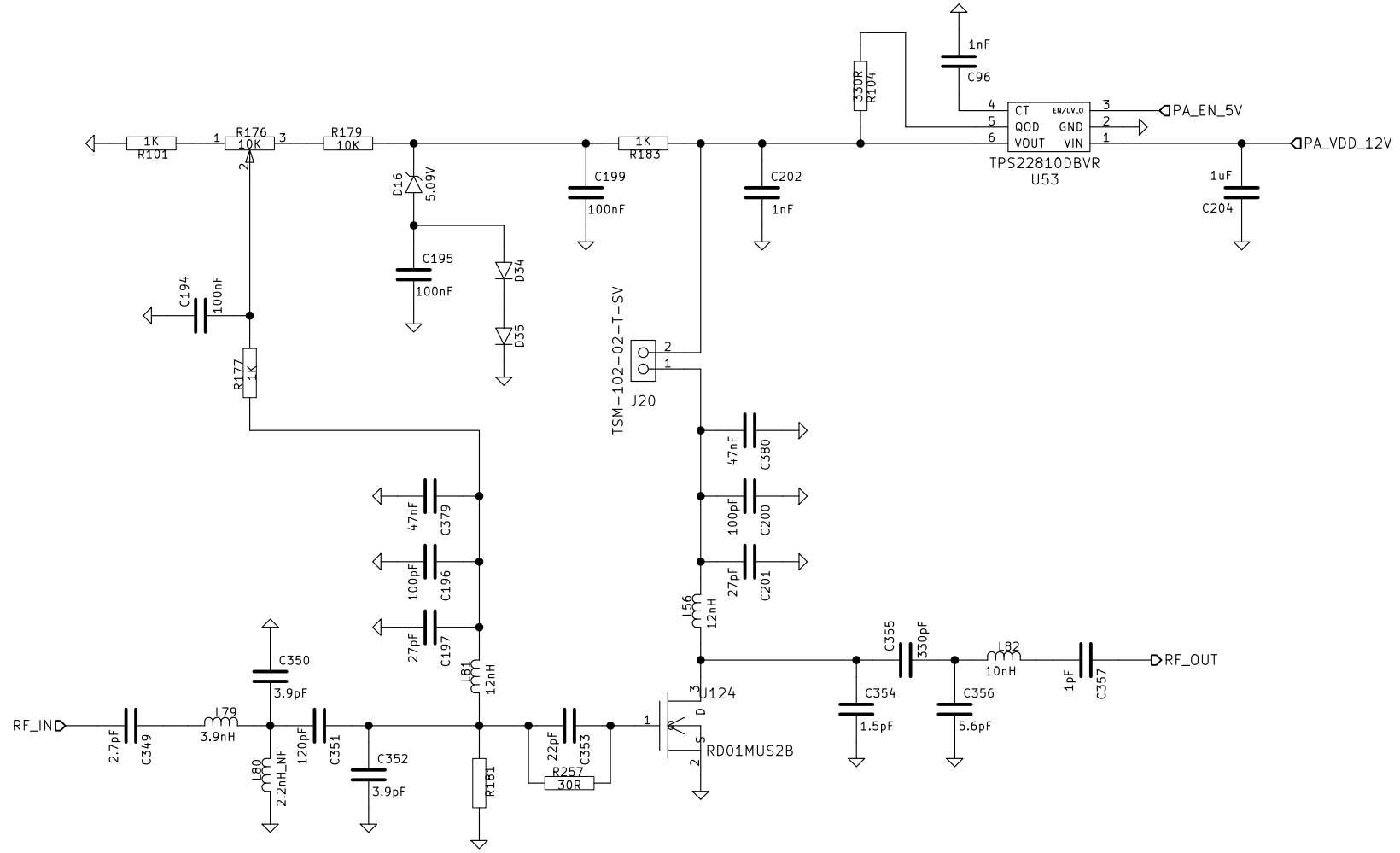

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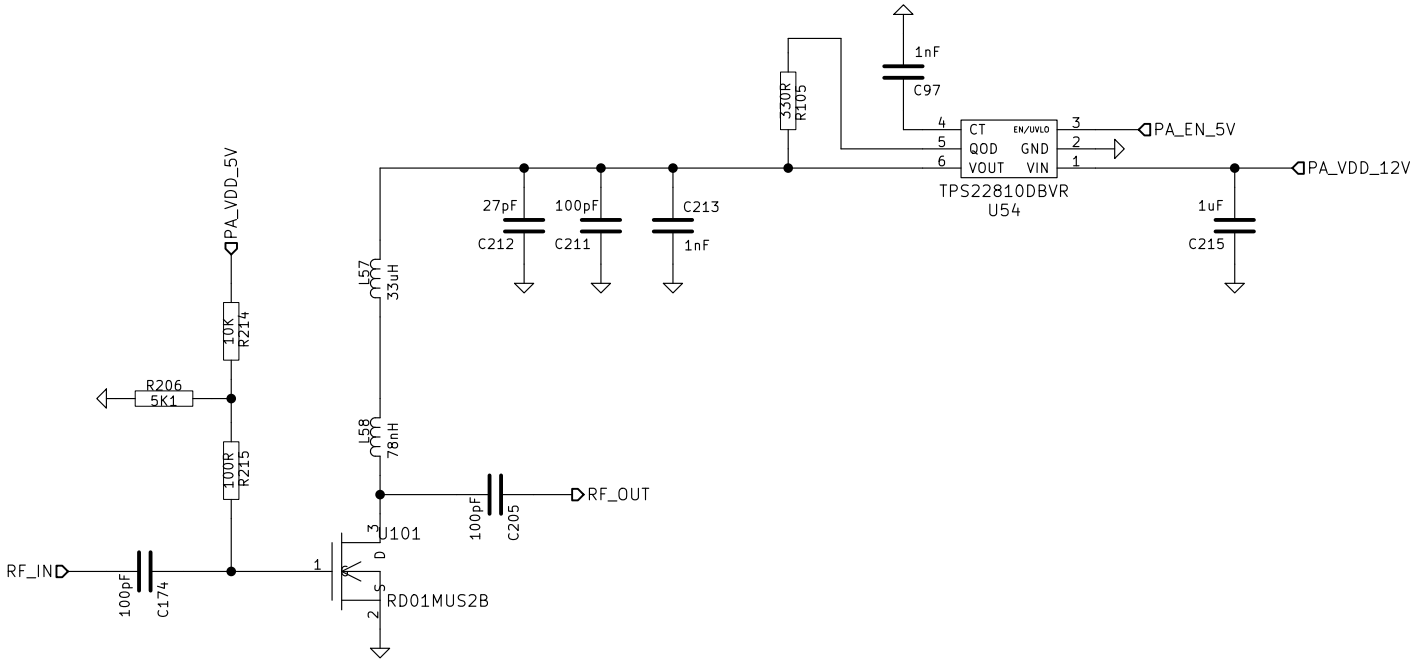

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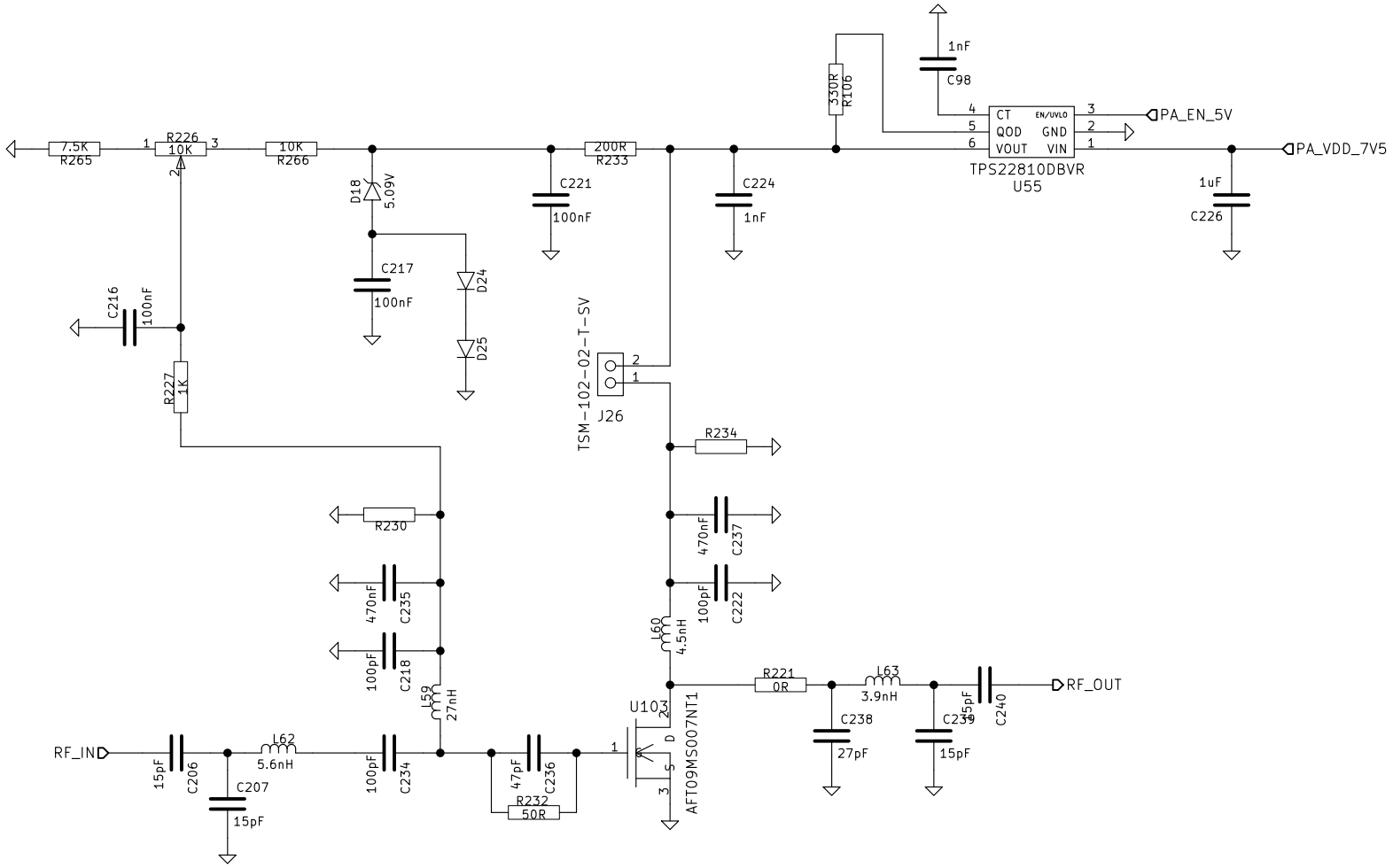
KiCad E.D.A. kicad 4.0.7		Id: 37/56



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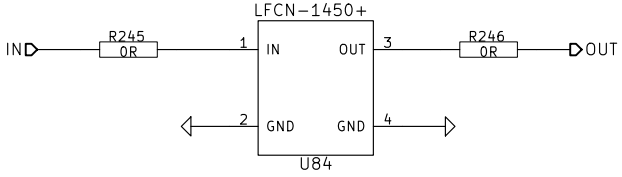

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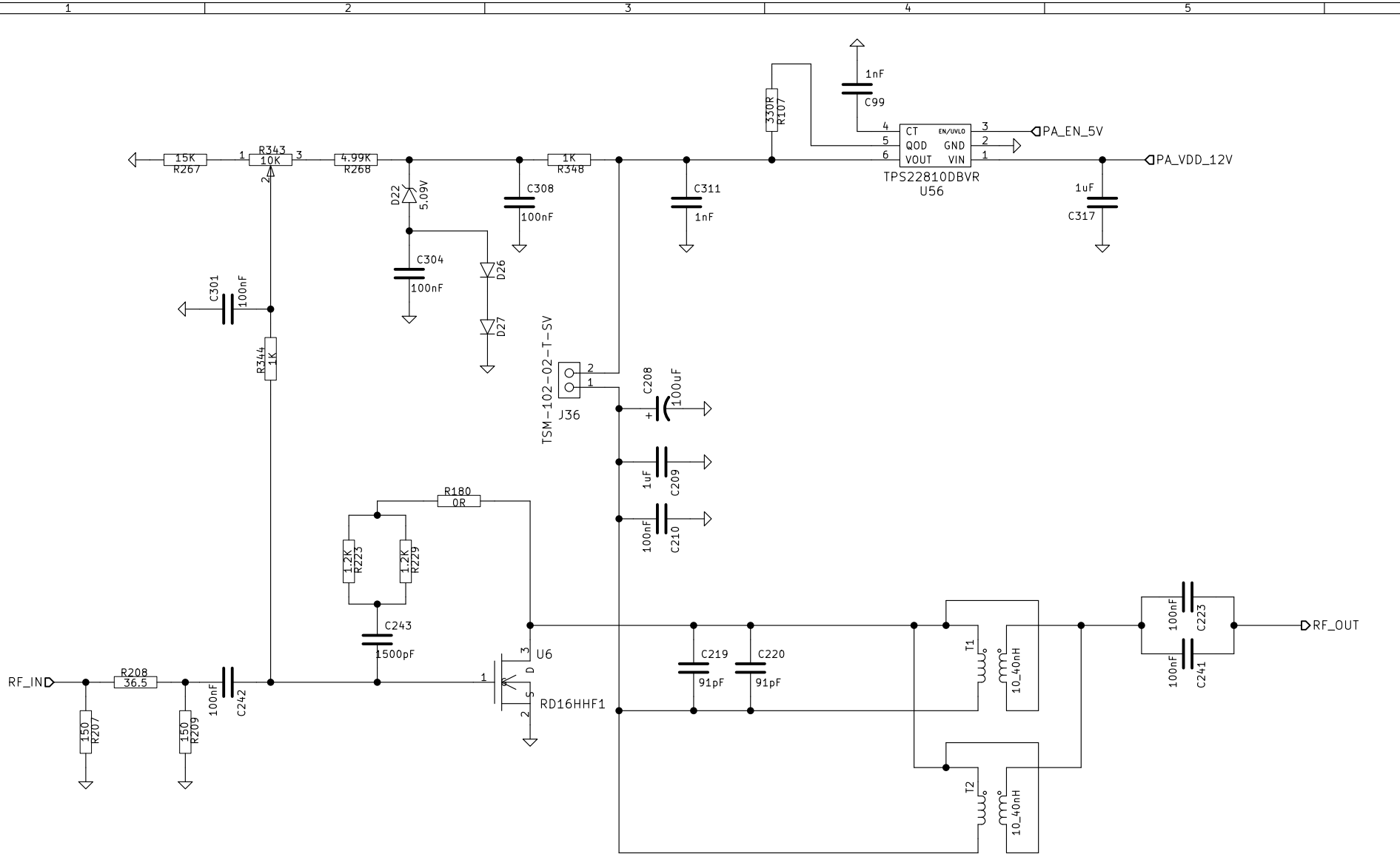
KiCad E.D.A. kicad 4.0.7		Id: 39/56



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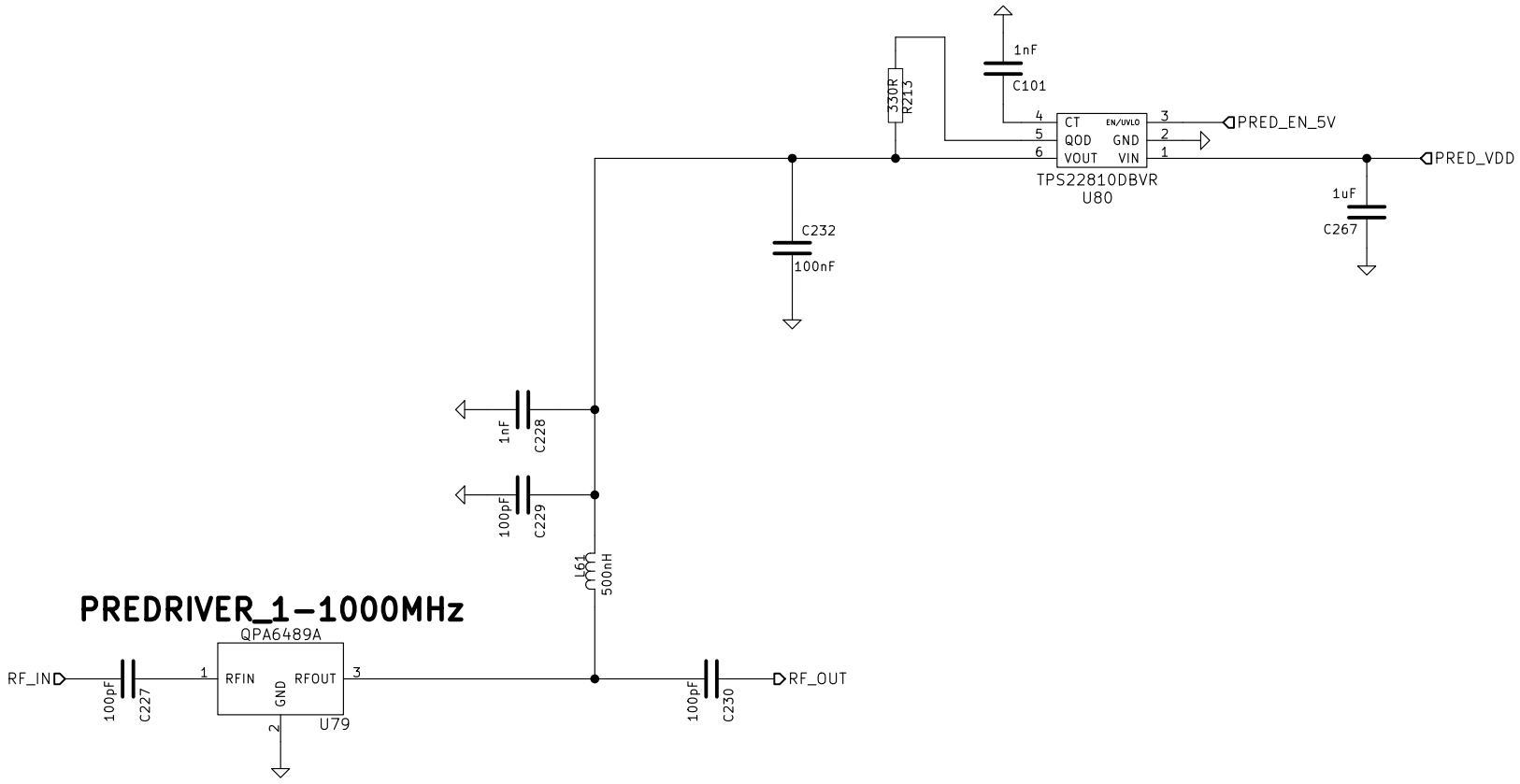

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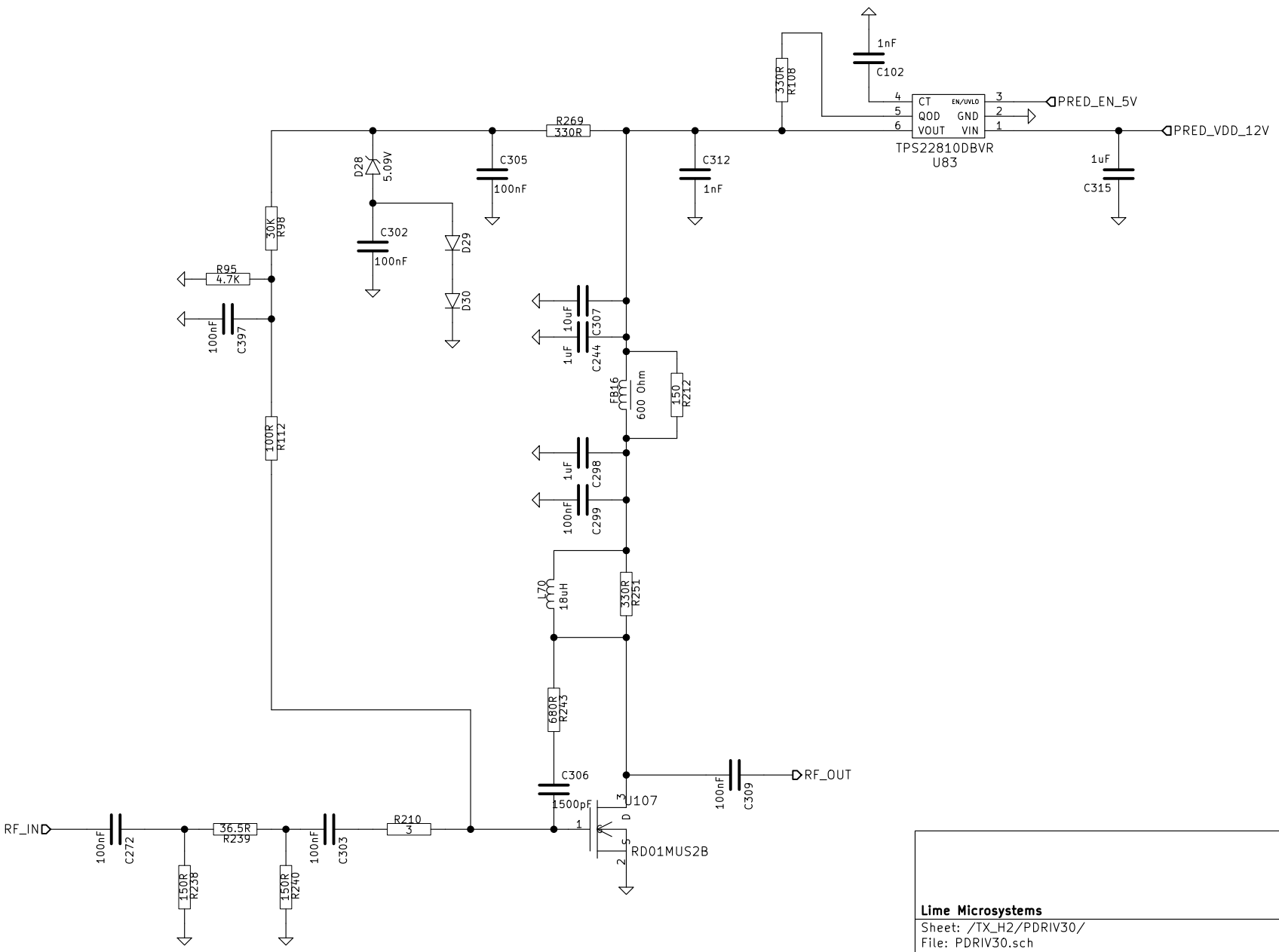
KiCad E.D.A. kicad 4.0.7		Id: 41/56



Lime Microsystems		
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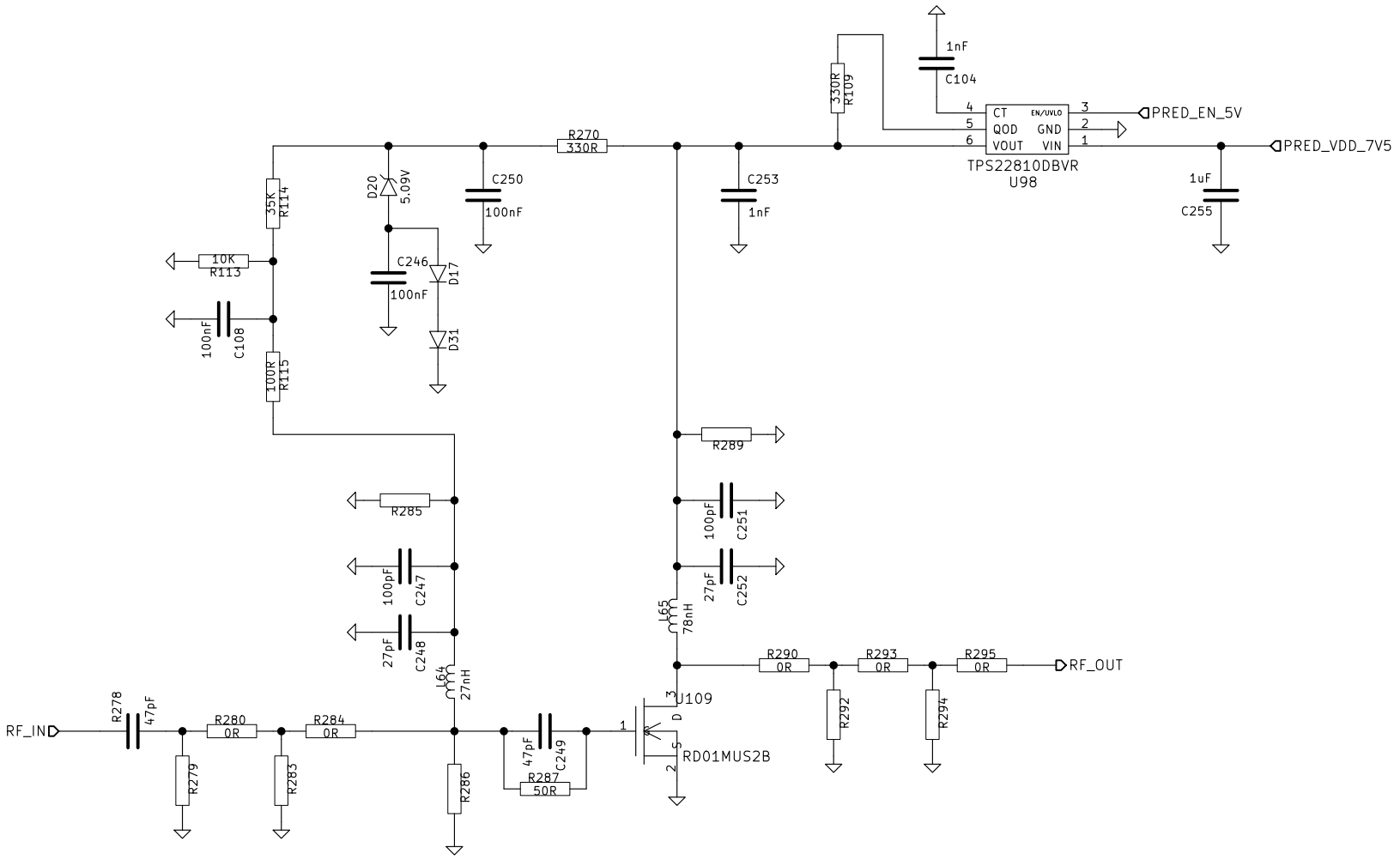
KiCad E.D.A. kicad 4.0.7		Id: 42/56



Lime Microsystems		
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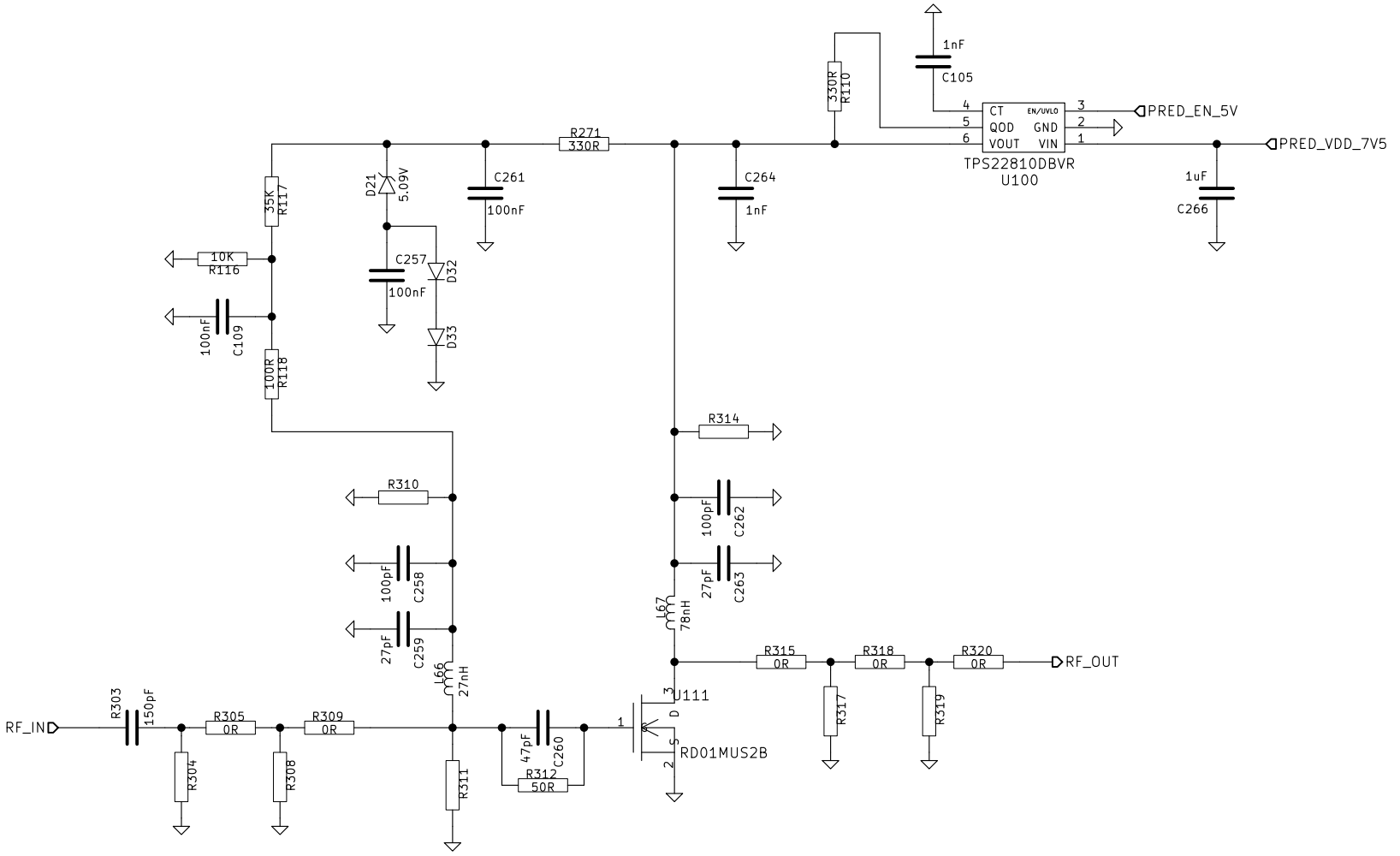
Size: A4	Date: 23 jan 2019	**Rev: 1v0**
KiCad E.D.A. kicad 4.0.7		Id: 43/56



Lime Microsystems		
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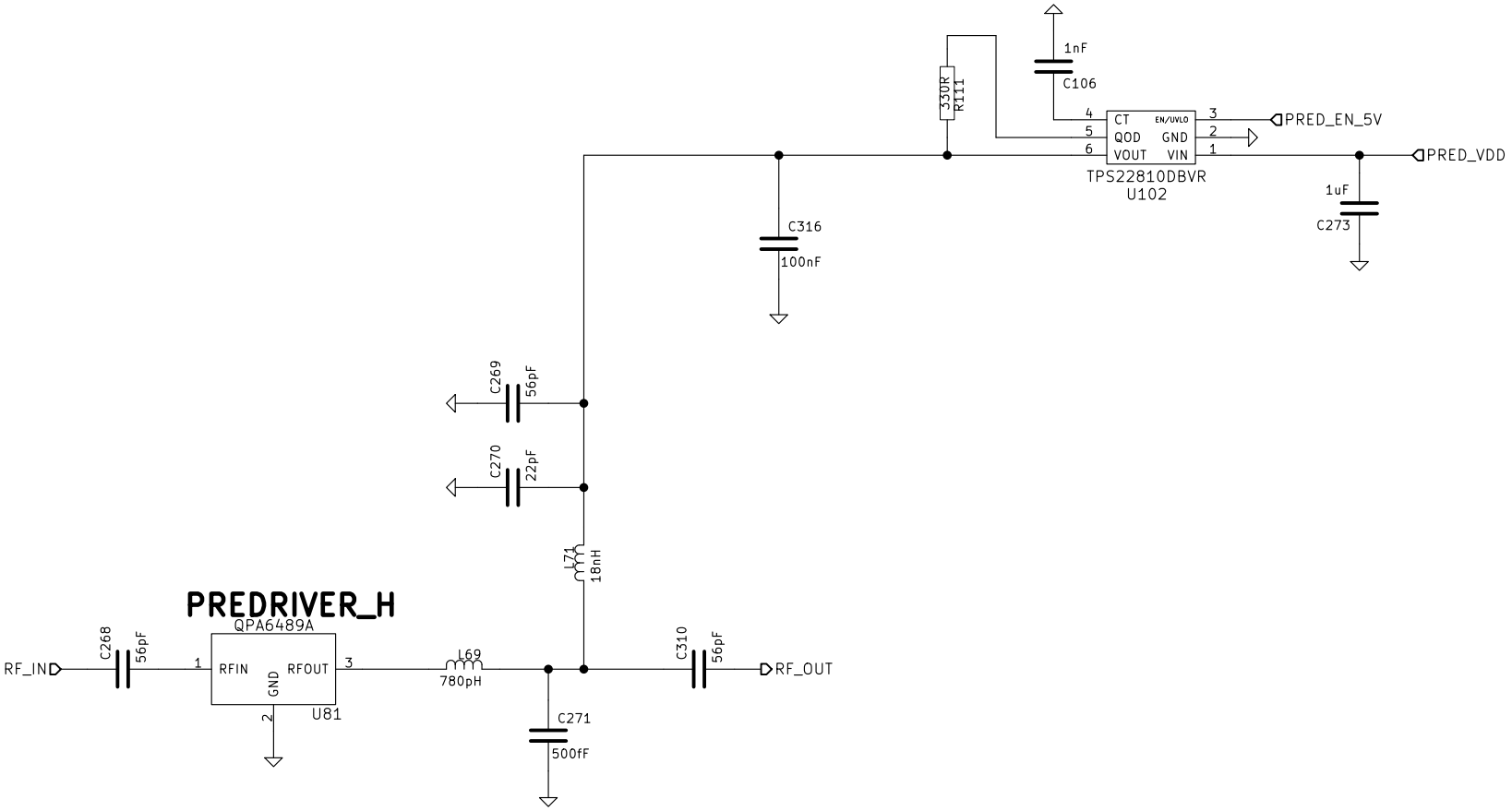
Size: A4	Date: 23 jan 2019	**Rev: 1v0**
KiCad E.D.A. kicad 4.0.7		Id: 44/56



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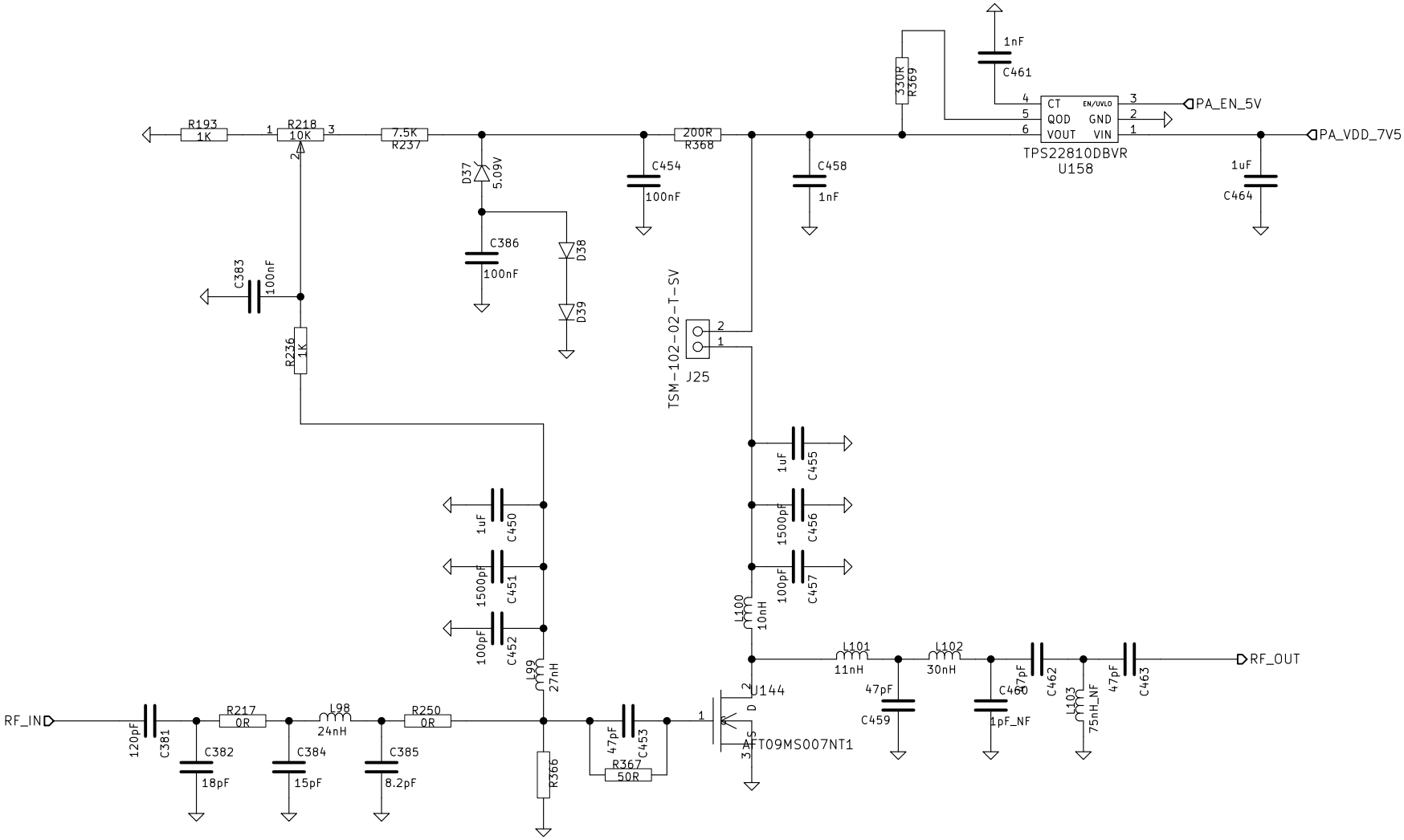
Size: A4	Date: 7 feb 2018	**Rev:**
KiCad E.D.A. kicad 4.0.7		Id: 45/56



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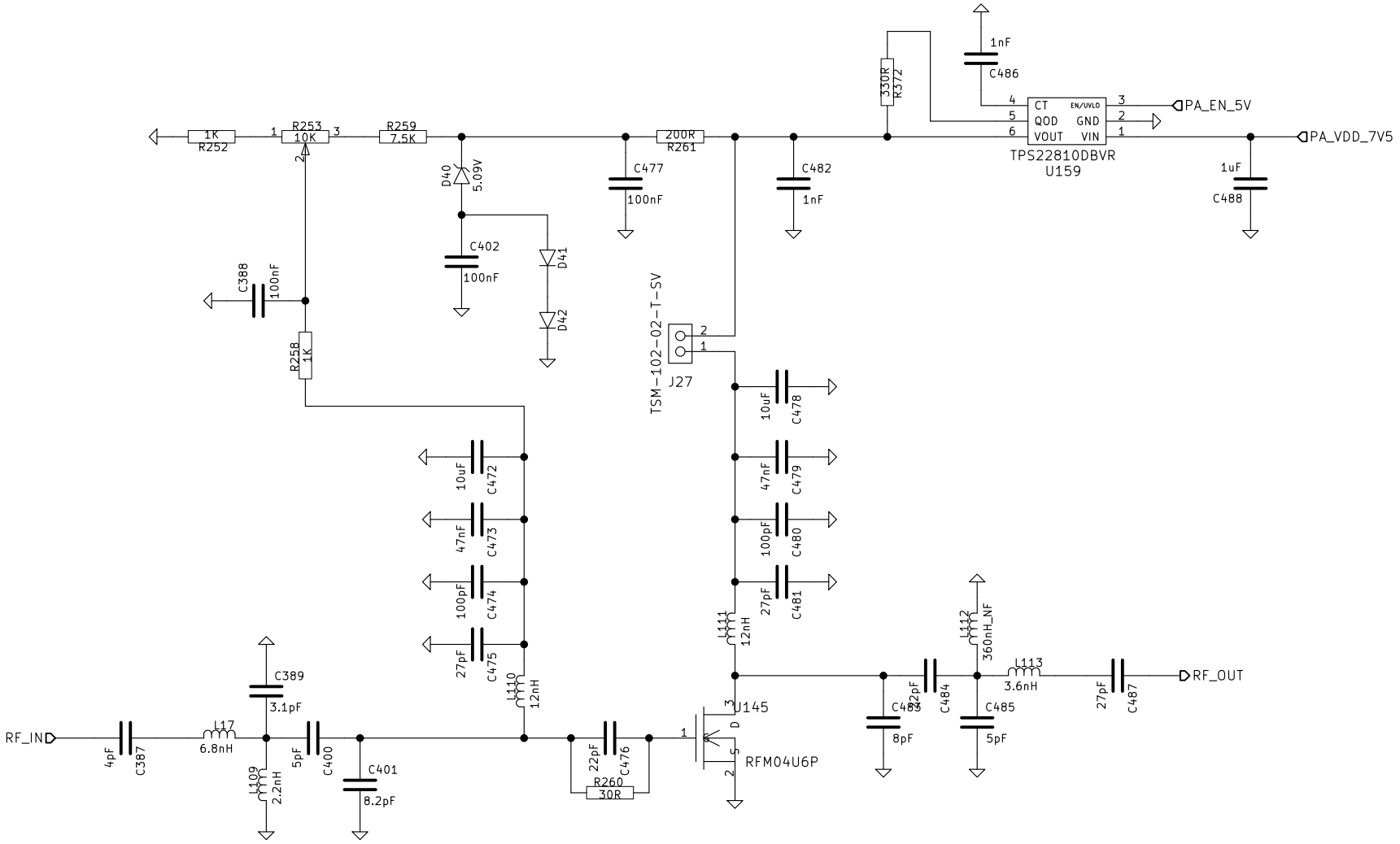
KiCad E.D.A. kicad 4.0.7		Id: 46/56



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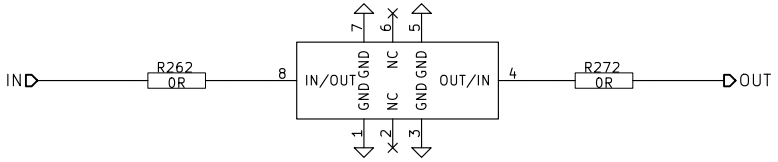
KiCad E.D.A. kicad 4.0.7		Id: 47/56



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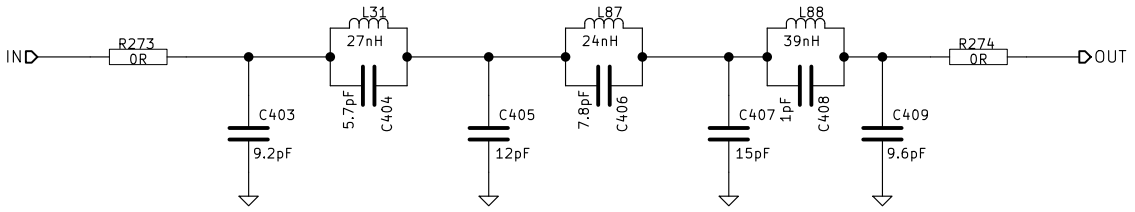

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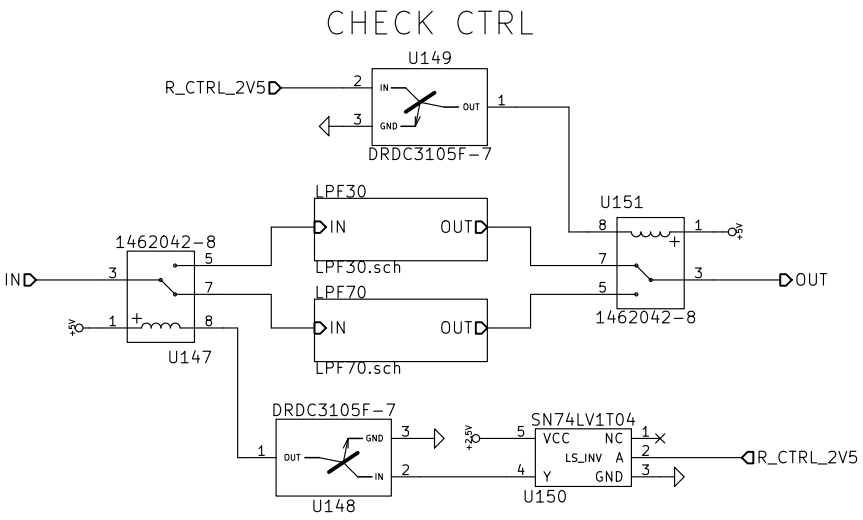

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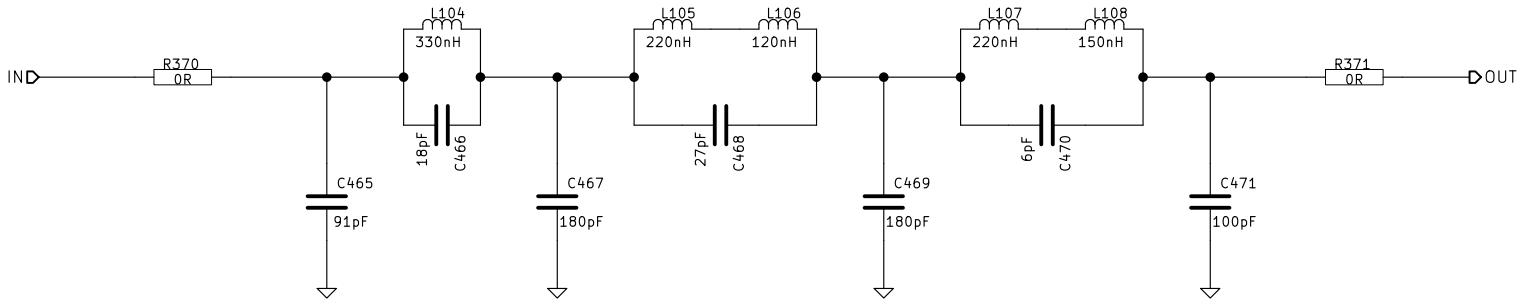

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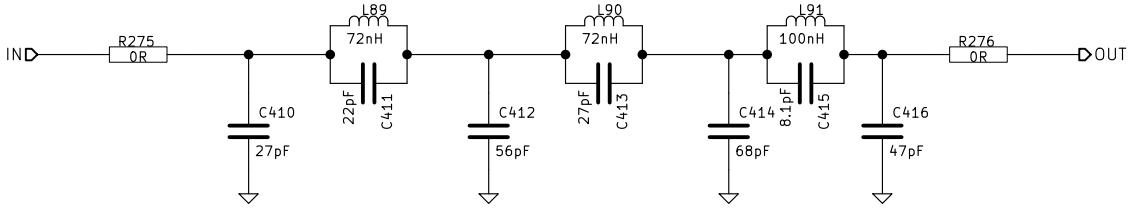

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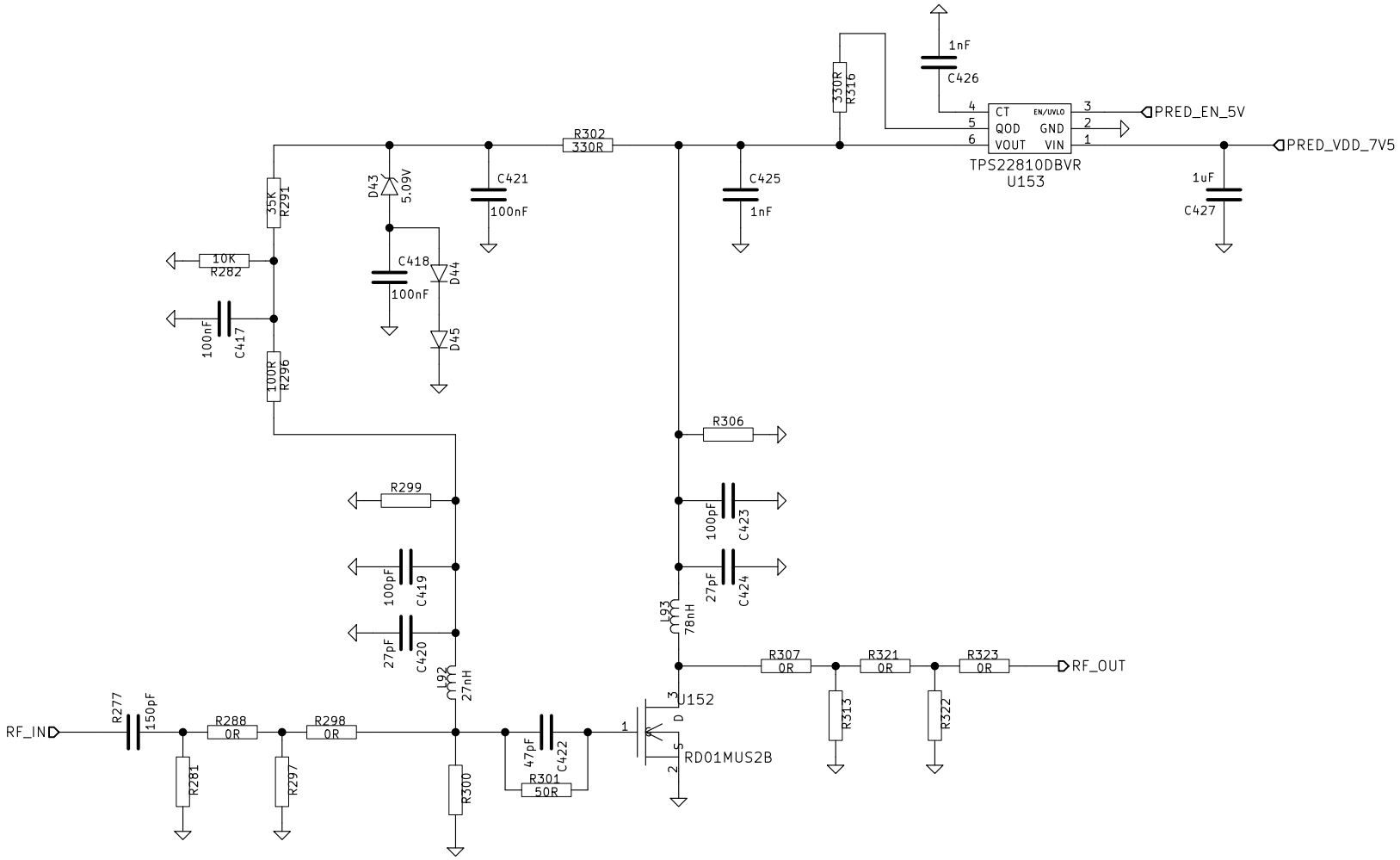

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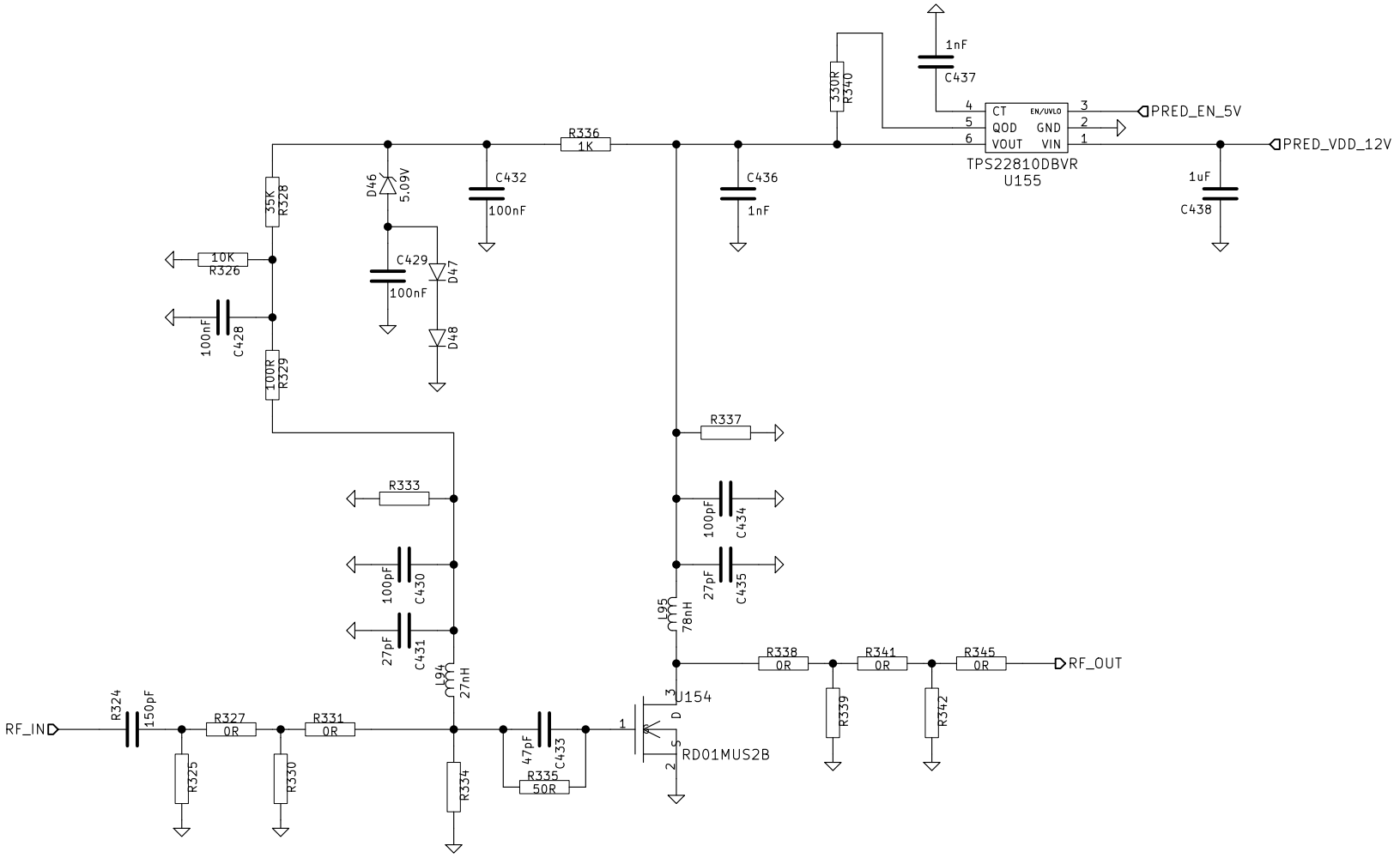
	Rev: 1v0



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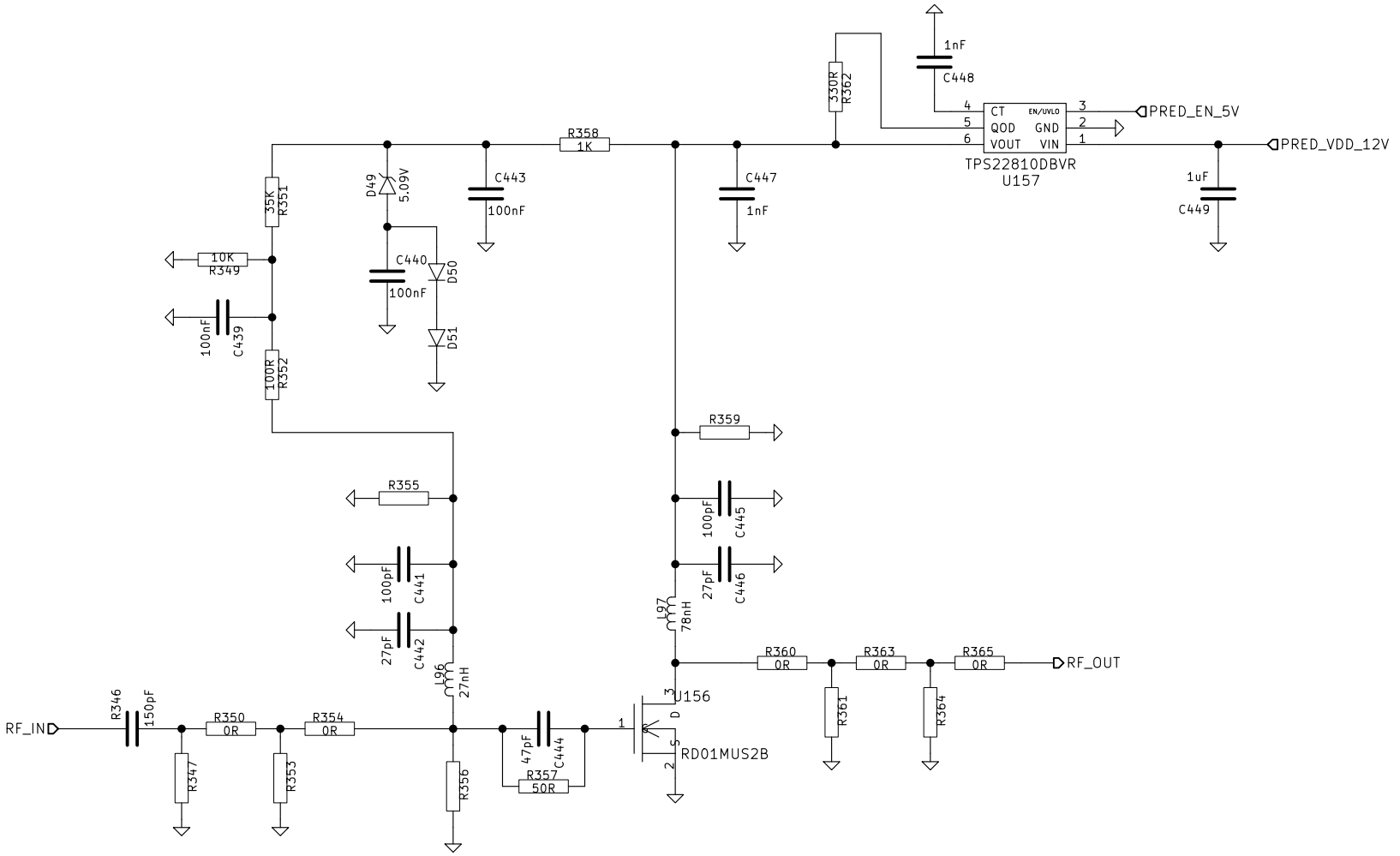

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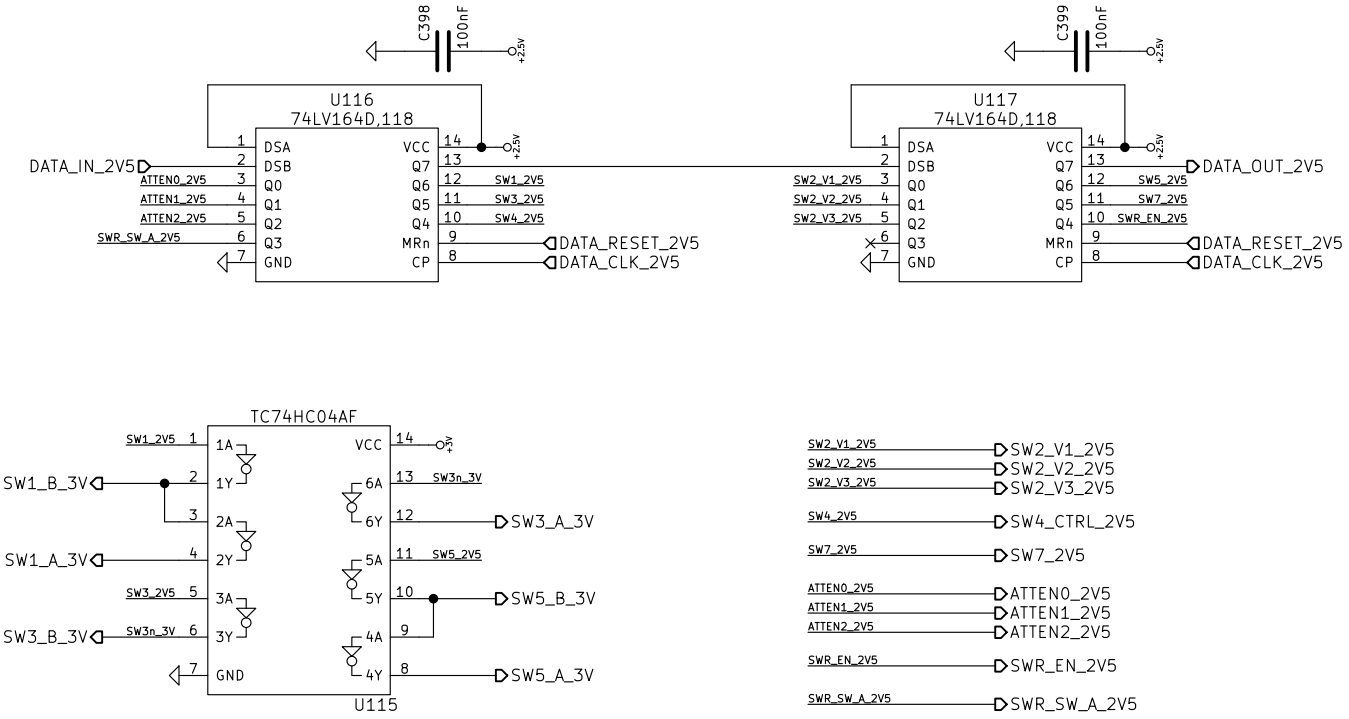

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