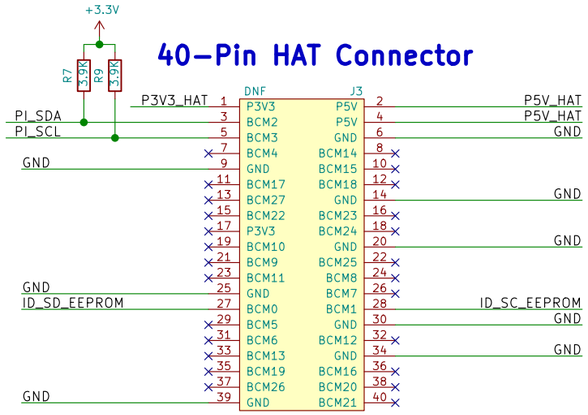
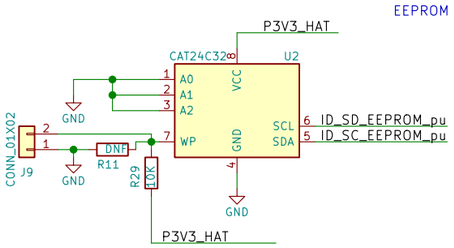
This is based on the official Raspberry Pi spec to be able to call an extension board a HAT.
https://github.com/raspberrypi/hats/blob/master/designguide.md

40-Pin HAT Connector



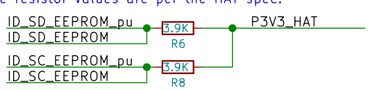
HAT EEPROM

The HAT spec requires this EEPROM with system information to be in place in order to be called a HAT. It should be set up as write protected (WP pin held high), so it may be desirable to either put a jumper as shown to enable writing, or to hook up a spare IO pin to do so.

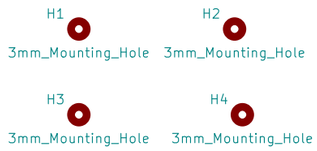


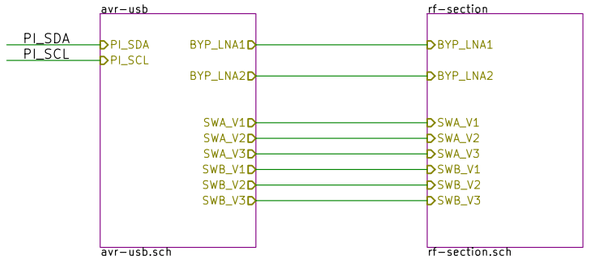
Pullup Resistors

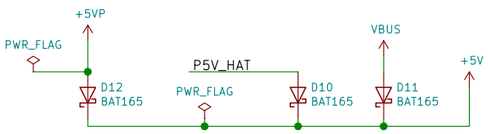
These are just pullup resistors for the I2C bus on the EEPROM.
The resistor values are per the HAT spec.

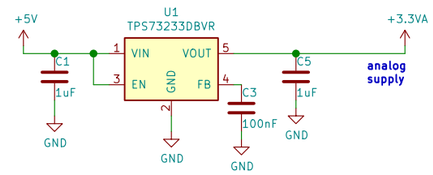


Mounting Holes









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Title: Multi-Band Low Noise Amplifier

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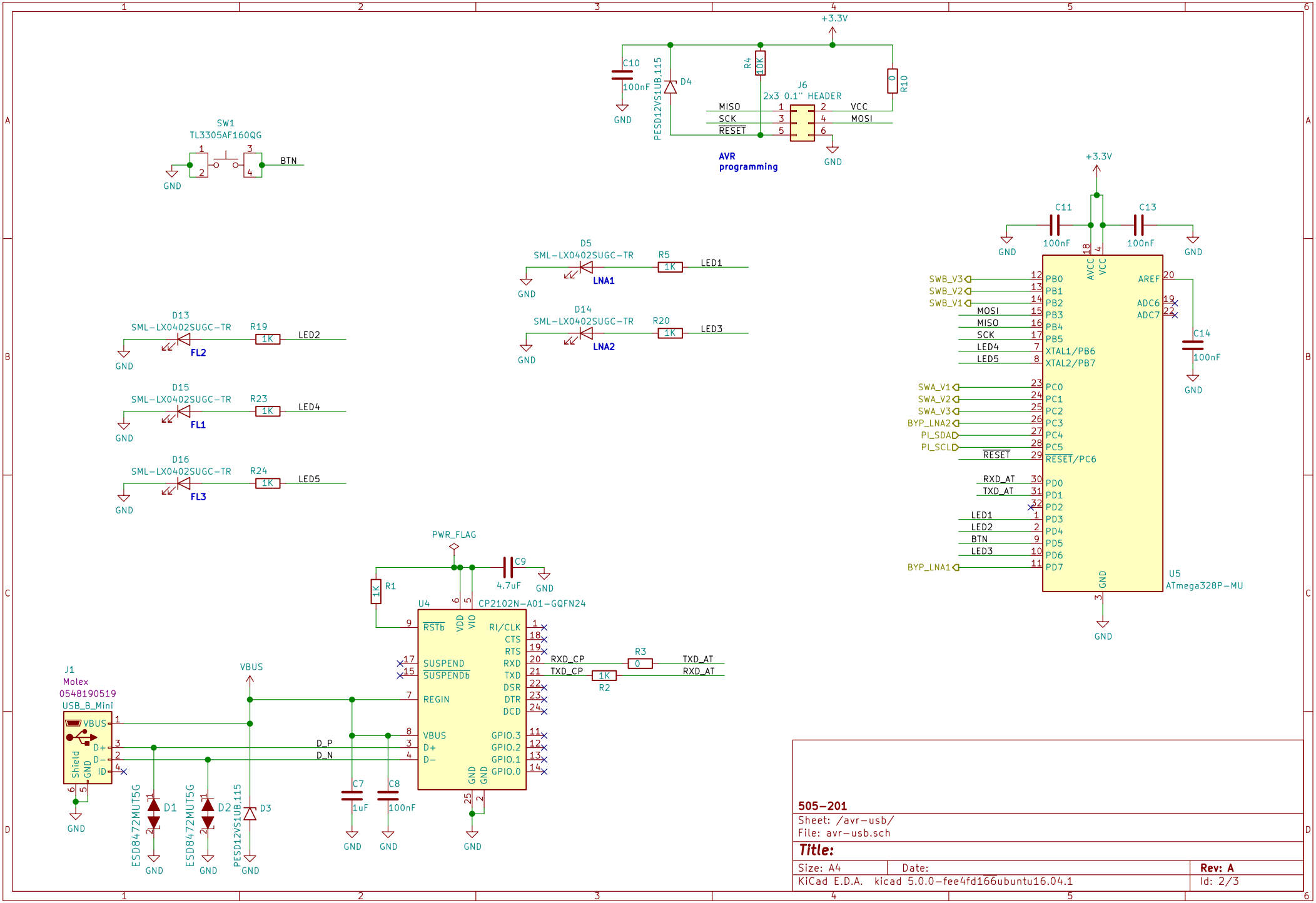
KiCad E.D.A. kicad 5.0.0-fee4fd166ubuntu16.04.1		Id: 1/3


+3.3V
C10
100nF
GND
D4
PESD12VS1UB.115
R4
10K
R10
0
J6
2x3 0.1" HEADER
MISO
SCK
RESET
VCC
MOSI
AVR
programming
SW1
TL3305AF160QG
BTN
D5
SML-LX0402SUGC-TR
R5
1K
LED1
LNA1
D14
R20
LED3
LNA2
D13
R19
LED2
FL2
D15
R23
LED4
FL1
D16
R24
LED5
FL3
C11
C13
C14
U5
ATmega328P-MU
SWB_V3
SWB_V2
SWB_V1
MOSI
MISO
SCK
LED4
LED5
SWA_V1
SWA_V2
SWA_V3
BYP_LNA2
PI_SDA
PI_SCL
RESET
RXD_AT
TXD_AT
LED1
LED2
BTN
LED3
BYP_LNA1
PWR_FLAG
C9
4.7uF
R1
U4
CP2102N-A01-GQFN24
RXD_CP
TXD_CP
R3
R2
J1
Molex
0548190519
USB_B_Mini
VBUS
D_P
D_N
D1
ESD8472MUT5G
D2
ESD8472MUT5G
D3
PESD12VS1UB.115
C7
1uF
C8
100nF
505-201
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Rev: A
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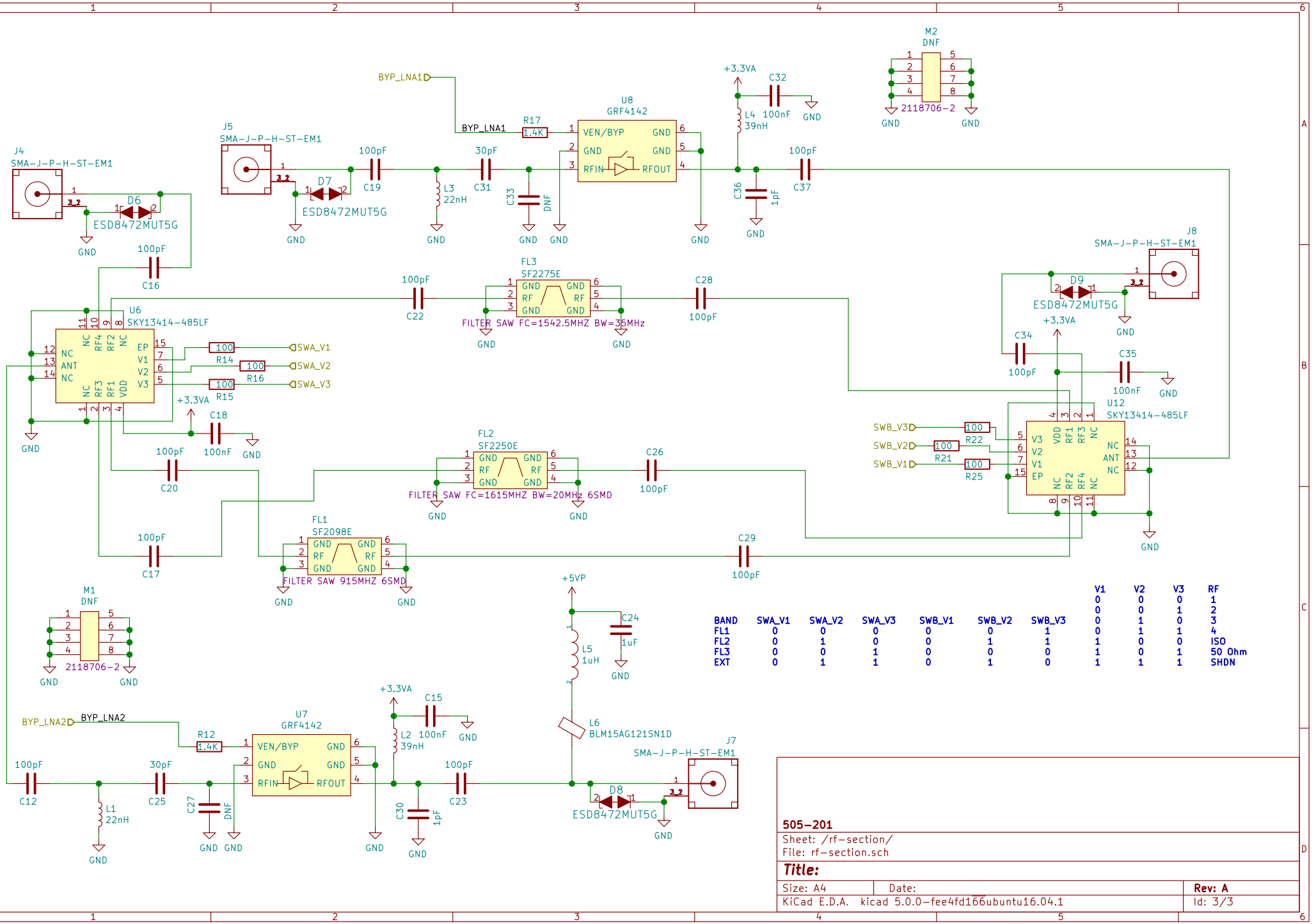
BYP_LNA1
BYP_LNA2
J4
SMA-J-P-H-ST-EM1
J5
SMA-J-P-H-ST-EM1
J7
SMA-J-P-H-ST-EM1
J8
SMA-J-P-H-ST-EM1
D6
ESD8472MUT5G
D7
ESD8472MUT5G
D8
ESD8472MUT5G
D9
ESD8472MUT5G
U6
SKY13414-485LF
U7
GRF4142
U8
GRF4142
U12
SKY13414-485LF
FL1
SF2098E
FILTER SAW 915MHZ 6SMD
FL2
SF2250E
FILTER SAW FC=1615MHZ BW=20MHz 6SMD
FL3
SF2275E
FILTER SAW FC=1542.5MHZ BW=35MHz
M1
DNF
2118706-2
M2
DNF
2118706-2
L1 22nH
L2 100nF 39nH
L3 22nH
L4 100nF 39nH
L5 1uH
L6 BLM15AG121SN1D
C12 100pF
C15
C16 100pF
C17 100pF
C18 100nF
C19 100pF
C20 100pF
C22 100pF
C23 100pF
C24 1uF
C25 30pF
C26 100pF
C27 DNF
C28 100pF
C29 100pF
C30 1pF
C31 30pF
C32
C33 DNF
C34 100pF
C35 100nF
C36 1pF
C37 100pF
R12 1.4K
R14 100
R15 100
R16 100
R17 1.4K
R21 100
R22 100
R25 100
SWA_V1
SWA_V2
SWA_V3
SWB_V1
SWB_V2
SWB_V3
+3.3VA
+5VP
GND
VEN/BYP
RFIN
RFOUT
BAND SWA_V1 SWA_V2 SWA_V3 SWB_V1 SWB_V2 SWB_V3 V1 V2 V3 RF
FL1 0 0 0 0 0 1 0 0 1
FL2 0 1 0 0 1 1 0 0 0 ISO
FL3 0 0 1 0 0 0 1 0 1 50 Ohm
EXT 0 1 1 0 1 0 1 1 1 SHDN
505-201
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Size: A4
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Rev: A
KiCad E.D.A. kicad 5.0.0-fee4fd166ubuntu16.04.1
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