USB_OTG AND POWER_INPUT

Sheet: USB)C_OTG_PWR_IN

USB_OTG0_VBUSDET — USB_OTG0_VBUSDET
USB_OTG0_D- — USB_OTG0_D-
USB_OTG0_D+ — USB_OTG0_D+

File: USB)C_OTG_PWR_IN.sch

RK809_PMIC

Sheet: RK809_IC_DCDC

File: PMIC_DCDC.sch

Sheet: RK890_IC_AUXILLARY

I2C0_SCL_PMIC — I2C0_SCL_PMIC
I2C0_SDA_PMIC — I2C0_SDA_PMIC
PMIC_INT_L — PMIC_INT_L
RECOVER — RECOVER
PMIC_EXT_EN — PMIC_EXT_EN
RESETn — RESETn
PMIC_SLEEP_H — PMIC_SLEEP_H
PMIC_32KOUT_WIFI — PMIC_32KOUT_WIFI

Files RK890_IC_AUXILLARY.sch

Sheet: RK809_CODEC

I2S1_MCLK_M0_RK809 — I2S1_MCLK_M0_RK809
I2S1_SCLK_TX_M0_RK809 — I2S1_SCLK_TX_M0_RK809
I2S1_LRCK_TX_M0_RK809 — I2S1_LRCK_TX_M0_RK809
I2S1_SDO0_M0_RK809 — I2S1_SDO0_M0_RK809
I2S1_SDI0_M0_PDM_SDI0_M0_RK809 — I2S1_SDI0_M0_PDM_SDI0_M0_RK809
PDM_CLK0_M0_RK809 — PDM_CLK0_M0_RK809
HPL_OUT — ITO HEADPHONE JACK
HP_SNS
HPR_OUT
SPK_MIN1_N
SPK_MIN1_P
MIC1_IN
MIC2_IN

Files RK809_CODEC.sch

SPEAKER OUT — J1 — SPEAKER

Sheet: OTHER_POWER

PMIC_EXT_EN — PMIC_EXT_EN

File: OTHER_POWER.sch

Sheet: BATTERY_CHARGER

File: BATTERY_CHARGER.sch

RK3566 AND SUPPORTING COMPONENTS SECTION

Sheet: RK3566_POWER

File: RK3566.sch

Sheet: RK3566_PART_B

NFC_SDA — I2C4_SDA_M0_TO_NFC_SDA
NFC_SCL — I2C4_SDA_M0_TO_NFC_SCL
NFC_REQ — GPIO4_B1_d_TO_NFC_REQ
USB_OTG0_VBUSDET — USB_OTG0_VBUSDET
USB_OTG0_D+ — USB_OTG0_D+
USB_OTG0_D- — USB_OTG0_D-
RECOVER — RECOVER
GPIO1_B4_DISPLAY_ONE — GPIO1_B4_DISPLAY_ONE
LCD_1_EN_GPIO1_B5_C7 — LCD_1_EN_GPIO1_B5_C7
TP_INT_GPIO1_B6_DISPLAY_ONE — TP_INT_GPIO1_B6_DISPLAY_ONE
BL_EN_GPIO1_B7_DISPLAY_ONE — BL_EN_GPIO1_B7_DISPLAY_ONE
LCD_RST_L_GPIO1_C0_DISPLAY_ONE — LCD_RST_L_GPIO1_C0_DISPLAY_ONE
TP_RST_L_GPIO1_C2_DISPLAY_ONE — TP_RST_L_GPIO1_C2_DISPLAY_ONE
HDMITX_CEC_M0 — HDMITX_CEC_M0
HDMITX_SDA — HDMITX_SDA
HDMITX_SCL — HDMITX_SCL
USB2.0 HOST_1 to 4G_MODULE — 4G_MODULE_USB_D+ — 4G_MODULE_USB_D+
4G_MODULE_USB_D- — 4G_MODULE_USB_D-
SATA1_TX+ — SATA1_TX+
SATA1_TX- — SATA1_TX-
SATA1_RX+ — SATA1_RX+
SATA1_RX- — SATA1_RX-
SDMMC1_D0 — SDMMC1_D0
SDMMC1_D1 — SDMMC1_D1
SDMMC1_D2 — SDMMC1_D2
SDMMC1_D3 — SDMMC1_D3
SDMMC1_CMD — SDMMC1_CMD
SDMMC1_CLK — SDMMC1_CLK
WIFI_REG_ON_H_GPIO2_B1 — WIFI_REG_ON_H_GPIO2_B1
WIFI_WAKE_HOST_H_GPIO2_B2 — WIFI_WAKE_HOST_H_GPIO2_B2
UART1_RX_M0 — UART1_RX_M0
UART1_TX_M0 — UART1_TX_M0
UART1_RTSn_M0 — UART1_RTSn_M0
UART1_CTSn_M0 — UART1_CTSn_M0
BT_REG_ON_H_GPIO2_B7 — BT_REG_ON_H_GPIO2_B7
BT_WAKE_HOST_H_GPIO2_C0 — BT_WAKE_HOST_H_GPIO2_C0
HOST_WAKE_BT_H_GPIO2_C1 — HOST_WAKE_BT_H_GPIO2_C1
I2S2_SCLK_TX_M0 — I2S2_SCLK_TX_M0
I2S2_LRCK_TX_M0 — I2S2_LRCK_TX_M0
I2S2_SDO_M0 — I2S2_SDO_M0
I2S2_SDI_M0 — I2S2_SDI_M0
CLK32K_OUT1_WIFI — CLK32K_OUT1_WIFI
UART8_RX_M1 — RX_IR ITO 5G RADA MODULE
UART8_TX_M1

Files RK3566_PART_B.sch

Sheet: RK3566_PART_C

I2C3_SDA_M0_GPIO1_A0 — I2C3_SDA_M0_GPIO1_A0
I2C3_SCL_M0_GPIO1_A1 — I2C3_SCL_M0_GPIO1_A1
I2S1_MCLK_M0_RK809 — I2S1_MCLK_M0_RK809
I2S1_SCLK_TX_M0_RK809 — I2S1_SCLK_TX_M0_RK809
PDM_CLK0_M0_RK809 — PDM_CLK0_M0_RK809
I2S1_LRCK_TX_M0_RK809 — I2S1_LRCK_TX_M0_RK809
I2S1_SDO0_M0_RK809 — I2S1_SDO0_M0_RK809
I2S1_SDI0_M0_PDM_SDI0_M0_RK809 — I2S1_SDI0_M0_PDM_SDI0_M0_RK809
TO CODEC
GPIO0_A0_DISPLAY_ZERO — GPIO0_A0_DISPLAY_ZERO
I2C2_SDA_M0_TP — I2C2_SDA_M0_TP
I2C2_SCL_M0_TP — I2C2_SCL_M0_TP
LCD_EN_GPIO0_C7 — LCD_EN_GPIO0_C7
TP_INT_GPIO0_A5 — TP_INT_GPIO0_A5
BL_EN_GPIO0_C0 — BL_EN_GPIO0_C0
LCD_BL_PWM4 — LCD_BL_PWM4
LCD_RST_L_GPIO0_C2 — LCD_RST_L_GPIO0_C2
TP_RST_L_GPIO0_C5 — TP_RST_L_GPIO0_C5
TO DISPLAY_ONE(MIPI_TX0)
HDMITX_CEC_M0 — HDMITX_CEC_M0
HDMITX_SDA — HDMITX_SDA
HDMITX_SCL — HDMITX_SCL
TO HDMI
UART4_RX — UART4_RX
UART4_TX — UART4_TX
TO GPS MODULE
GPIO1_B4_DISPLAY_ONE — GPIO1_B4_DISPLAY_ONE
LCD_1_EN_GPIO1_B5_C7 — LCD_1_EN_GPIO1_B5_C7
TP_INT_GPIO1_B6_DISPLAY_ONE — TP_INT_GPIO1_B6_DISPLAY_ONE
BL_EN_GPIO1_B7_DISPLAY_ONE — BL_EN_GPIO1_B7_DISPLAY_ONE
LCD_RST_L_GPIO1_C0_DISPLAY_ONE — LCD_RST_L_GPIO1_C0_DISPLAY_ONE
TP_RST_L_GPIO1_C2_DISPLAY_ONE — TP_RST_L_GPIO1_C2_DISPLAY_ONE
TP_RST_L_GPIO1_C5_DISPLAY_ONE — TP_RST_L_GPIO1_C5_DISPLAY_ONE
DISPLAY_ONE GPIO
I2C3_SCL_M1 — 4G_MODULE_SCL
I2C3_SDA_M1 — 4G_MODULE_SDA
GPIO3_A2_d_TO_4G_MODEM_ON — 4G_MODEM_ON
GPIO3_A3_d_TO_4G_MODEM_RESETn — 4G_MODEM_RESETn

Files RK3566_PART_C.sch

Sheet: RK3566_LPDDR3

RESETn — RESETn
PMIC_SLEEP_H — PMIC_SLEEP_H
PMIC_INT_L — PMIC_INT_L
SDMMC0_DET_L — SDMMC0_DET_L
USB_HOST5V_EN — USB_HOST5V_EN
I2C0_SCL_PMIC — PMIC_32KOUT_SOC
I2C0_SCL_PMIC — I2C0_SCL_PMIC
I2C0_SDA_PMIC — I2C0_SDA_PMIC
I2C1_SCL
I2C1_SDA
I2C2_SCL_M0_TP — I2C2_SCL_M0_TP
I2C2_SDA_M0_TP — I2C2_SDA_M0_TP
GMAC1_RSTn_GPIO0_B7
LCD_MIPI_GPIO
GPIO0_A0_DISPLAY_ZERO — GPIO0_A0
LCD_EN_GPIO0_C7 — LCD_EN_GPIO0_C7
TP_INT_GPIO0_A5 — TP_INT_GPIO0_A5
BL_EN_GPIO0_C0 — BL_EN_GPIO0_C0
LCD_BL_PWM4 — LCD_BL_PWM4
LCD_RST_L_GPIO0_C2 — LCD_RST_L_GPIO0_C2
TP_RST_L_GPIO0_C5 — TP_RST_L_GPIO0_C5
PWM_IR — BT_CTC_INT_L_GPIO0_C1
PWM_IR

Files RK3566_PART_D.sch

NFC_MODULE SECTION

NOTE: accompanying NFC ANTENNA
538-146236-2151
link: https://eu.mouser.com/ProductDetail/Molex/146236-2151?qs=v2%2F%2F%2Bq9zWqYlOZOJu1H6Kw%3D%3D

ANTRDR_p — R55 0R — C178 220pF — C180 180pF — RF1
GND
ANTRDR_n — R54 0R — C179 220pF — C181 180pF — RF2
C182 66pF
ANTENNA CONNECTOR — J3 205957-0271 — MP1 MP2 — GND

VCC3V3_EXT — I2C_PULLUP — R20 4.7K — R56 4.7K
NFC_SDA
NFC_SCL

NFC_IC_VS1797SM

VCC3V3_EXT — R57 1K — NFC_WAKE
VCC3V3_EXT — VDDIO
VCC3V3_EXT — C183 100nF — C184 4.7uF — GND

U11 NFC_VS1797SM

NFC_WAKE — NFC_WAKE
NFC_REQ — I2C_REQ
NFC_SDA — I2C_SDA
NFC_SCL — I2C_SCL
ANTRDR_P — ANTRDR_p
ANTRDR_N — ANTRDR_n
5V/NC
VDDSWP_INO
VDDSWP_O
SWPIO_O
VDDIO — VDDIO
REG_PU
VBAT
GND GND GND GND GND GND GND GND GND
C177 100nF — GND

5G_RADAR_MODULE

https://www.hiktech.com/en/Product/Details/85

J7 Conn_01x05_Male
PWM_IR
TX_IR
RX_IR
+5V — C185 100nF — GND

4G_MODULE

Sheet: 4G_MODULE

4G_MODEM_ON — 4G_MODEM_ON
4G_MODEM_RESETn — 4G_MODEM_RESETn
4G_MODULE_SCL — 4G_MODULE_SCL
4G_MODULE_SDA — 4G_MODULE_SDA
USB2.0 HOST_1 to 4G_MODULE
4G_MODULE_USB_D+ — 4G_MODULE_USB_D+
4G_MODULE_USB_D- — 4G_MODULE_USB_D-

Files 4G_MODULE.sch

MOUNTING HOLES

H1 MountingHole
H3 MountingHole
H2 MountingHole
H4 MountingHole

NOTE: CONSIDER POWER FLOW --NOW ITS POWERED DIRECTLY FROM SOURCE

SATA/HDD CONN

LINKS OF REF:
https://www.tonymacx86.com/media/sata-power-pinout.63971/
https://pinoutguide.com/Power/sata-power_pinout.shtml

GND — S1 GND_S1
SATA1_TX+ — S2 A+
SATA1_TX- — S3 A-
GND — S4 GND_S4
SATA1_RX- — S5 B-
SATA1_RX+ — S6 B+
GND — S7 GND_S7
VCC_3V3 — P1 V33_P1
P2 V33_P2
P3 V33_P3
GND — P4 GND_P4
GND — P5 GND_P5
P6 GND_P6
+5V — P7 V5_P7
P8 V5_P8
P9 V5_P9
GND — P10 GND_P10
P11 RESERVED
GND — P12 GND_P12
+12V — P13 V12_P13
P14 V12_P14
P15 V12_P15

J2 5622-6309-ML

WIFI/BT MODULE

Sheet: AP6256_WIFI_BT

PMIC_32KOUT_WIFI — PMIC_32KOUT_WIFI
SDMMC1_D2 — SDIO_DATA_2
SDMMC1_D3 — SDIO_DATA_3
SDMMC1_D1 — SDIO_DATA_1
SDMMC1_D0 — SDIO_DATA_0
SDMMC1_CMD — SDIO_DATA_CMD
SDMMC1_CLK — SDIO_DATA_CLK
UART1_RX_M0 — UART1_RX_M0
UART1_TX_M0 — UART1_TX_M0
UART1_RTSn_M0 — UART1_RTS_M0
UART1_CTSn_M0 — UART1_CTS_M0
I2S2_SCLK_TX_M0 — I2S2_SCLK_TX_M0
I2S2_SDO_M0 — I2S2_SDO_M0
I2S2_LRCK_TX_M0 — I2S2_LRCK_TX_M0
BT_WAKE_HOST_H_GPIO2_C0 — BT_WAKE_HOST_H_GPIO2_C0
HOST_WAKE_BT_H_GPIO2_C1 — HOST_WAKE_BT_H_GPIO2_C1
BT_REG_ON_H_GPIO2_B7 — BT_REG_ON_H_GPIO2_B7
CLK32K_OUT1_WIFI — CLK32K_OUT1_WIFI
WIFI_WAKE_HOST_H_GPIO2_B2 — WIFI_WAKE_HOST_H_GPIO2_B2
WIFI_REG_ON_H_GPIO2_B1 — WIFI_REG_ON_H_GPIO2_B1

Files AP6256_WIFI_BT.sch

GPS_MODULE

+3V3 — C283 100nF — GND
+3V3 — U7 QUECTEL_L70-RL
RESET
TXD1 — UART4_RX
RXD1 — UART4_TX
1PPS — IPPS
STANDBY — STANDBY
V_BCKP
NC
NC
VCC
RF_IN — J15 U.FL-R-SMT-1(10)
ANTON
VCC_RF — R28 0R — 50ohm
RESERVED
RESERVED
RESERVED
GND GND GND GND GND GND
+3V3 — C149 10uF — C150 100nF — GND

+3V3 — D1 LED — R29 1K — Q1 DTC143ZEBTL — IPPS
+3V3 — D2 LED — R30 1K — Q2 DTC143ZEBTL — STANDBY
GND

Sheet: /		
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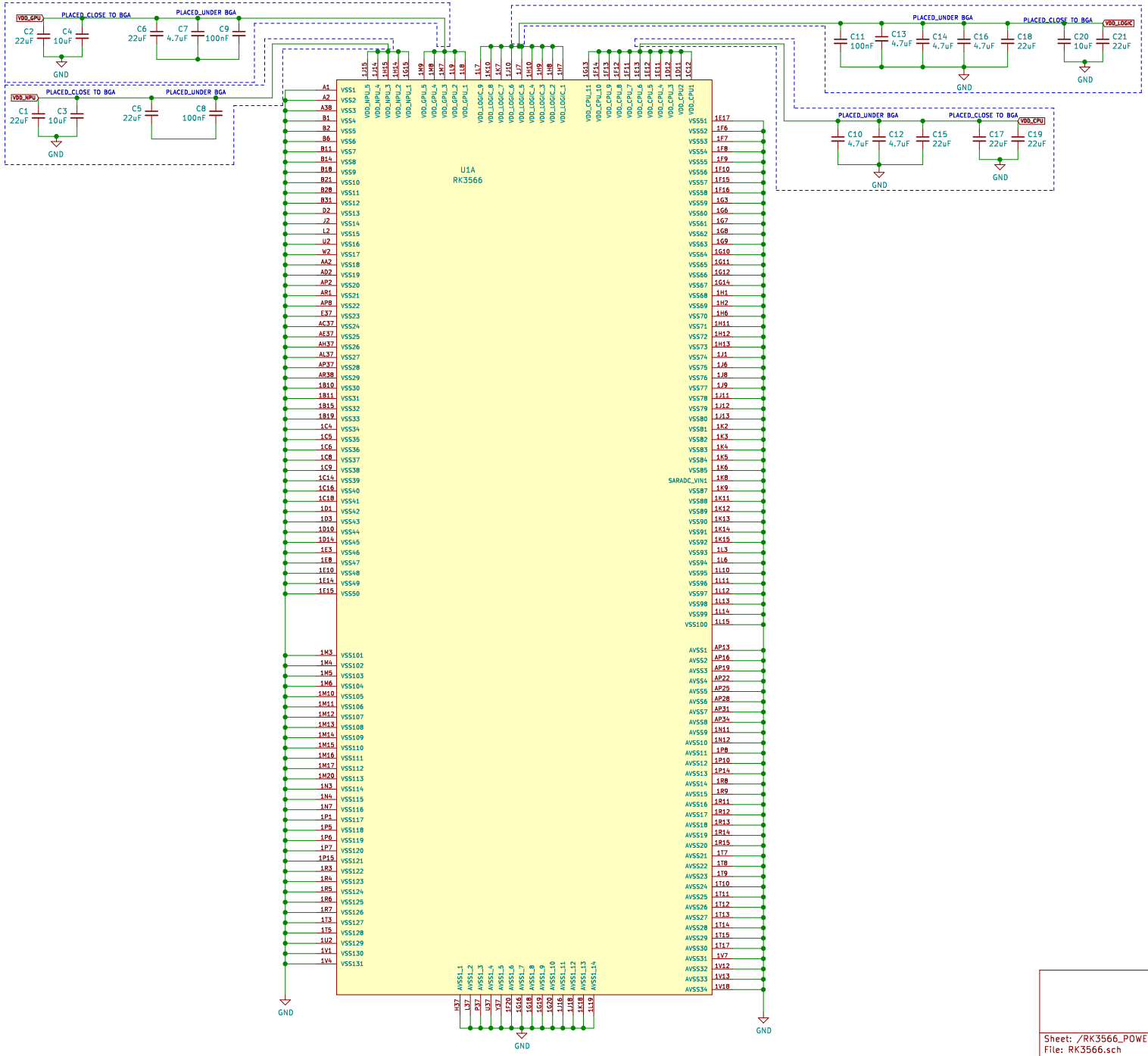
Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 1/15



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File: RK3566.sch

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Size: A3	Date:	Rev:
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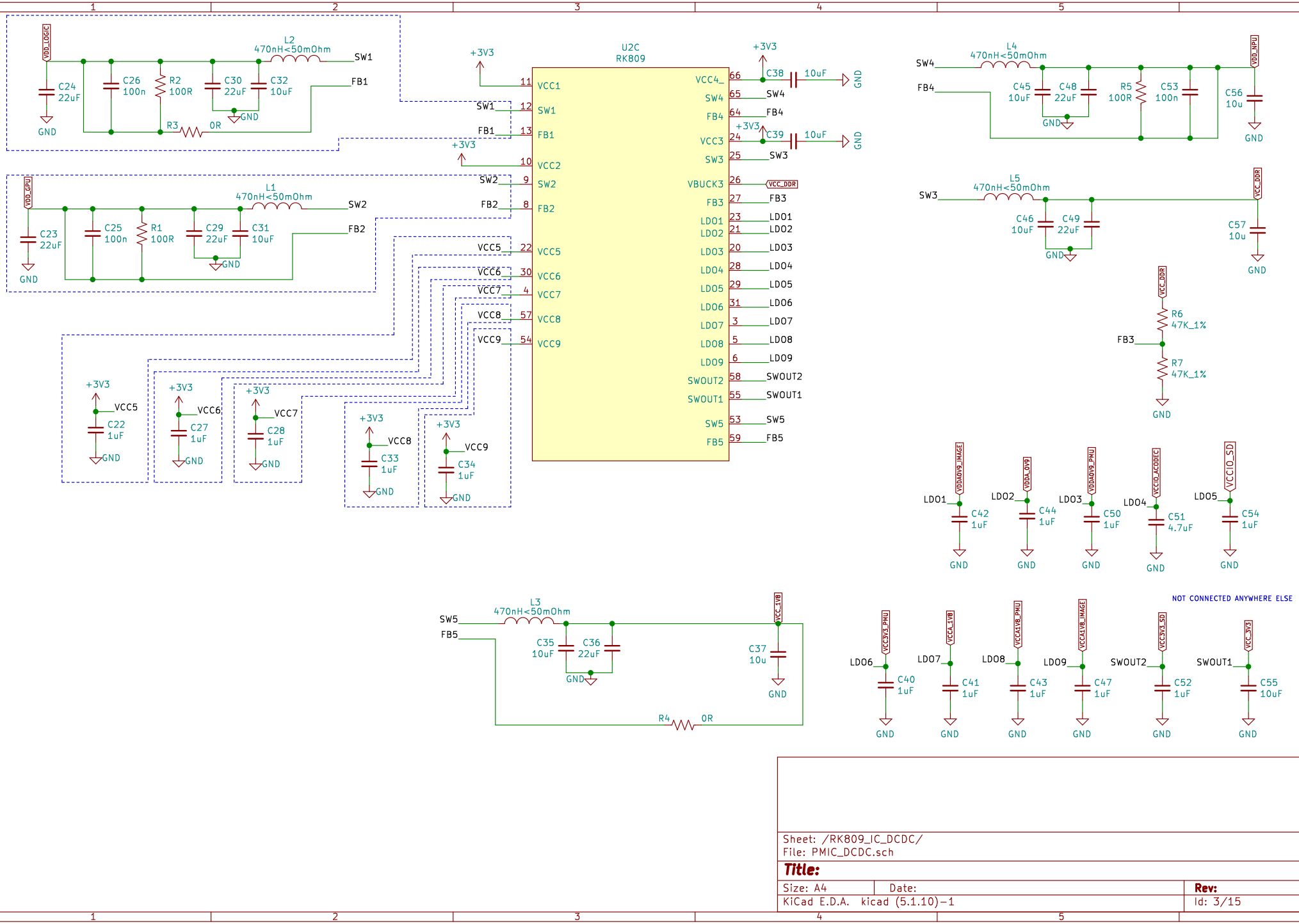
U2C
RK809
VDD_LOGIC
L2
470nH<50mOhm
SW1
FB1
C24
22uF
C26
100n
R2
100R
C30
22uF
C32
10uF
R3
0R
GND
VDD_GPU
L1
470nH<50mOhm
SW2
FB2
C23
22uF
C25
100n
R1
100R
C29
22uF
C31
10uF
+3V3
VCC1
VCC2
VCC5
VCC6
VCC7
VCC8
VCC9
C22
1uF
C27
1uF
C28
1uF
C33
1uF
C34
1uF
SW1
SW2
FB1
FB2
SW3
SW4
SW5
FB3
FB4
FB5
VCC4_
VBUCK3
VCC_DDR
LDO1
LDO2
LDO3
LDO4
LDO5
LDO6
LDO7
LDO8
LDO9
SWOUT2
SWOUT1
C38
10uF
C39
10uF
L4
470nH<50mOhm
VDD_NPU
C45
10uF
C48
22uF
R5
100R
C53
100n
C56
10u
L5
470nH<50mOhm
C46
10uF
C49
22uF
C57
10u
R6
47K_1%
R7
47K_1%
VDDA0V9_IMAGE
VDDA_0V9
VDDA0V9_PMU
VCCIO_ACODEC
VCCIO_SD
C42
1uF
C44
1uF
C50
1uF
C51
4.7uF
C54
1uF
L3
470nH<50mOhm
VCC_1V8
C35
10uF
C36
22uF
C37
10u
R4
0R
VCC3V3_PMU
VCCA_1V8
VCCA1V8_PMU
VCCA1V8_IMAGE
VCC3V3_SD
VCC_3V3
C40
1uF
C41
1uF
C43
1uF
C47
1uF
C52
1uF
C55
10uF
NOT CONNECTED ANYWHERE ELSE
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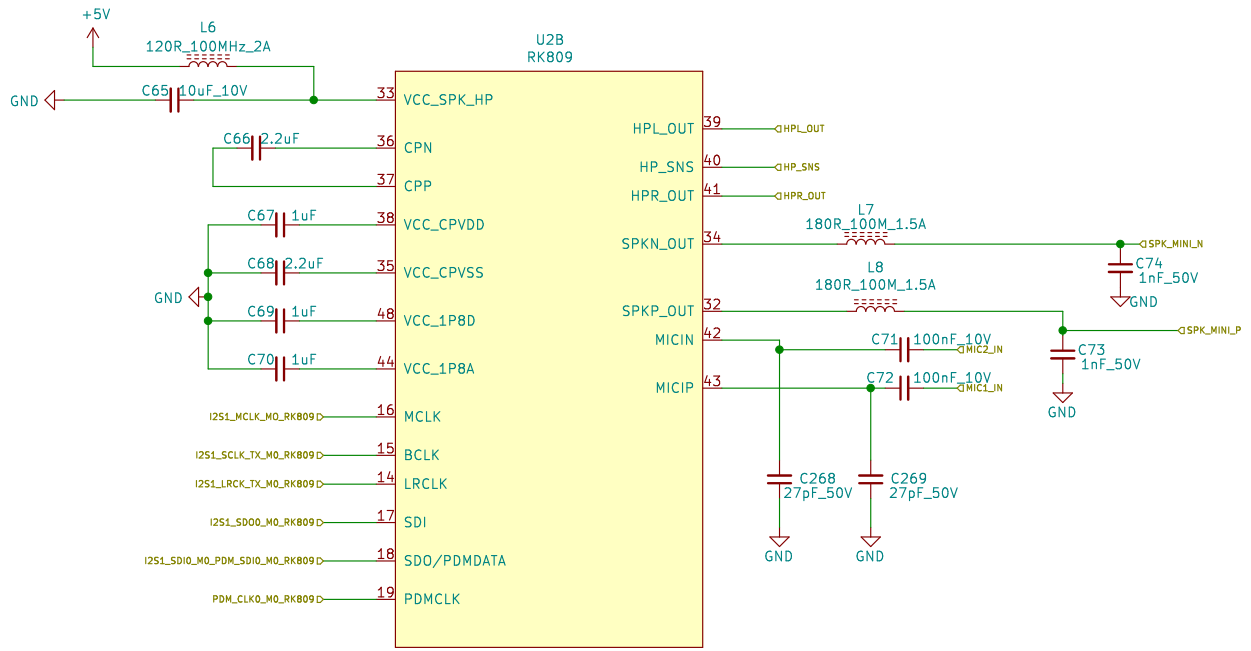
Rev:
KiCad E.D.A. kicad (5.1.10)-1
Id: 3/15



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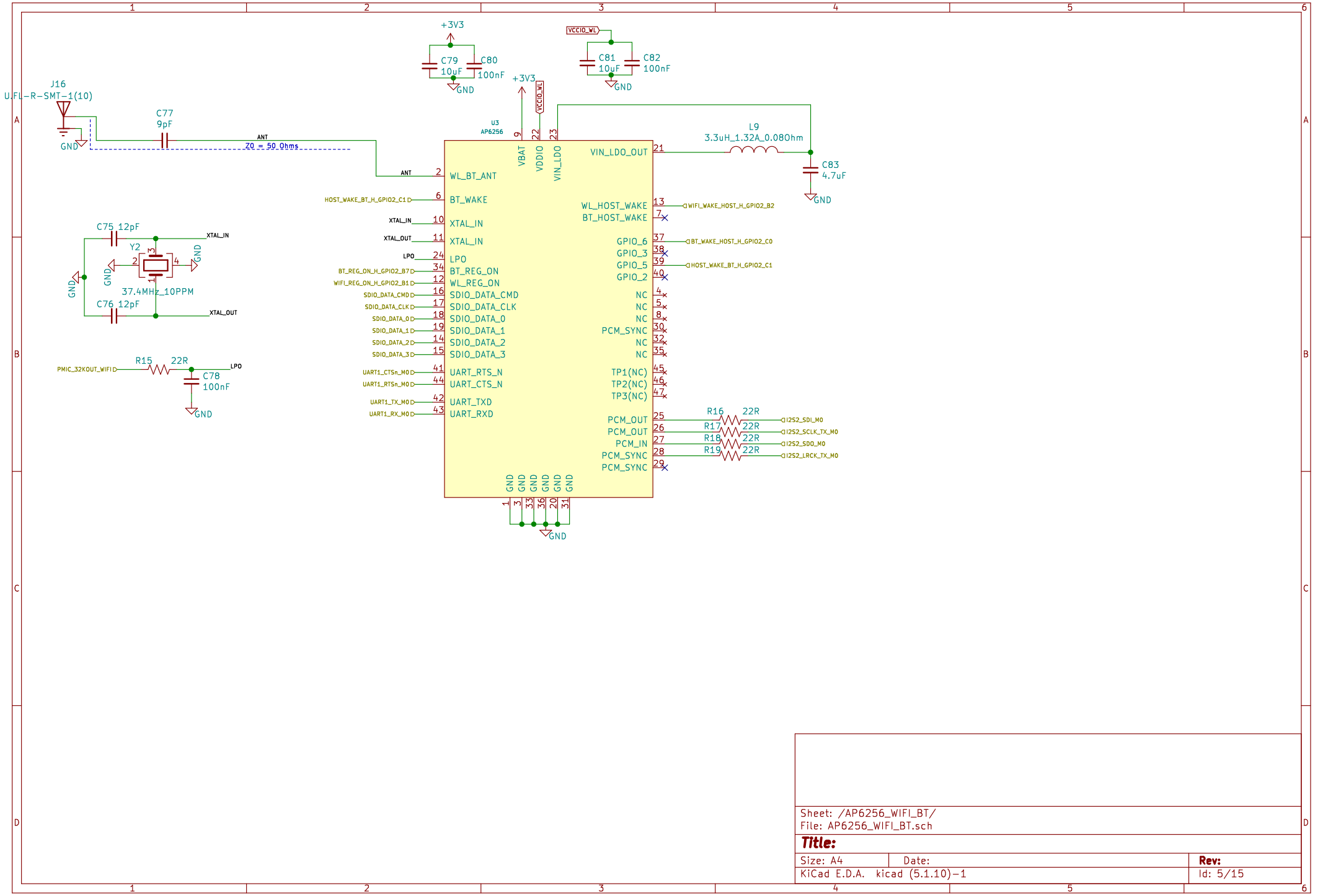

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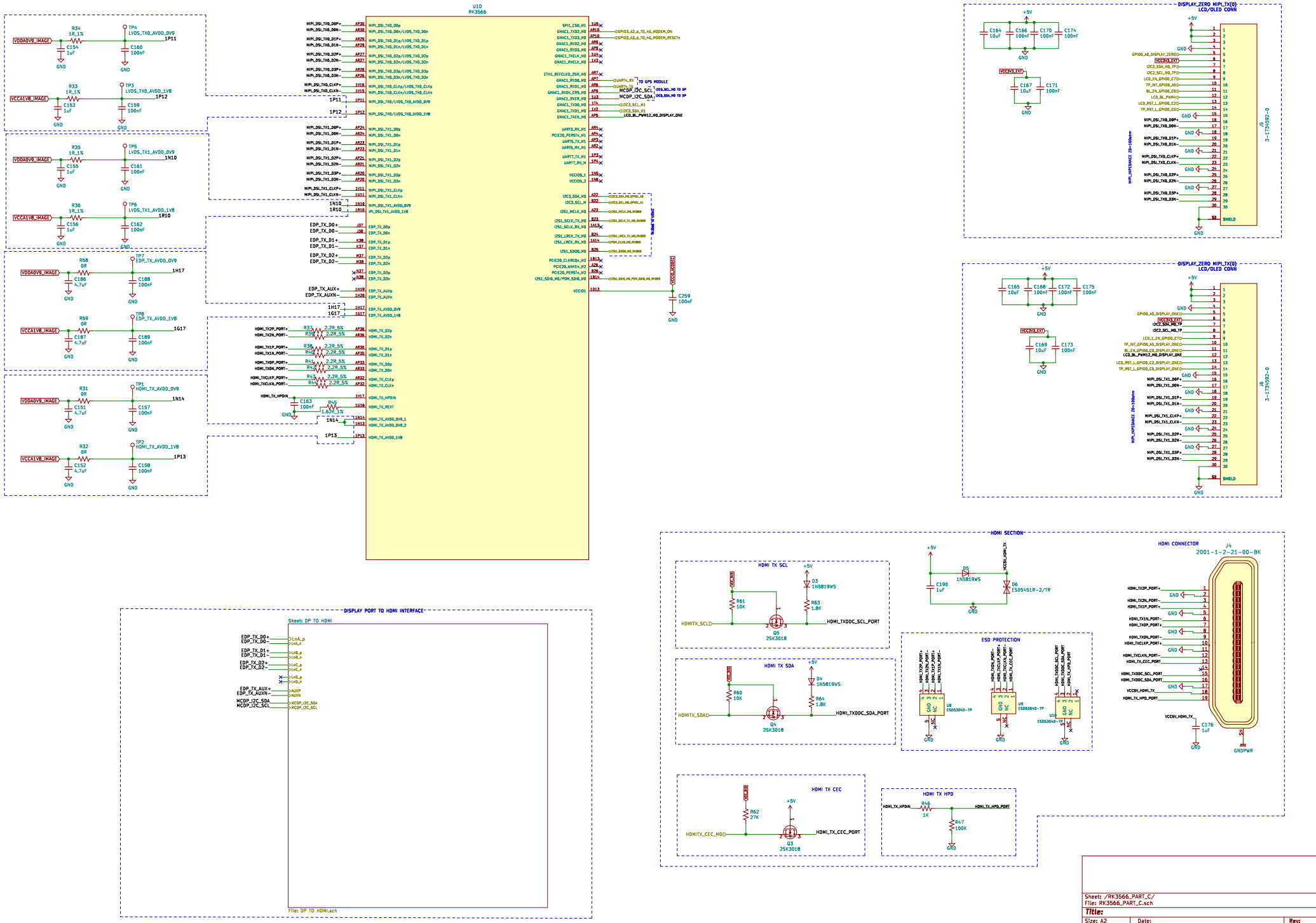
U1D
RK3566
LVDS_TX0_AVDD_0V9
LVDS_TX0_AVDD_1V8
LVDS_TX1_AVDD_0V9
LVDS_TX1_AVDD_1V8
EDP_TX_AVDD_0V9
EDP_TX_AVDD_1V8
HDMI_TX_AVDD_0V9
HDMI_TX_AVDD_1V8
VDDA0V9_IMAGE
VCCA1V8_IMAGE
DISPLAY_ZERO MIPI_TX(0) LCD/OLED CONN
DISPLAY_ZERO MIPI_TX(0) LCD/OLED CONN
DISPLAY PORT TO HDMI INTERFACE
Sheet: DP TO HDMI
File: DP TO HDMI.sch
HDMI SECTION
HDMI TX SCL
HDMI TX SDA
HDMI TX CEC
HDMI TX HPD
ESD PROTECTION
HDMI CONNECTOR
2001-1-2-21-00-BK
MCDP_I2C_SCL
MCDP_I2C_SDA
TO GPS MODULE
LCD_BL_PWM12_M0_DISPLAY_ONE
Sheet: /RK3566_PART_C/
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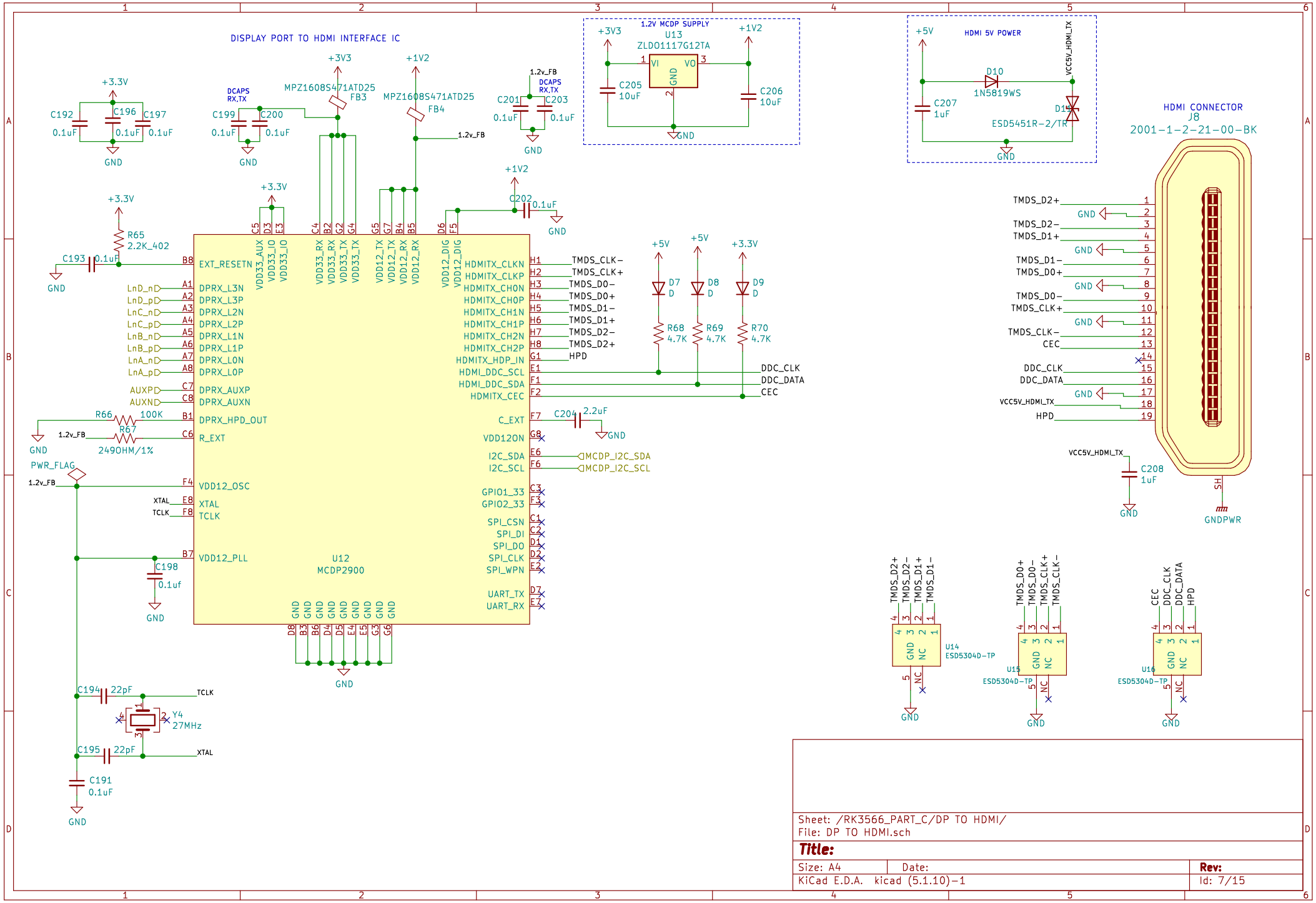
Title:
Size: A2
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
Id: 6/15


DISPLAY PORT TO HDMI INTERFACE IC
1.2V MCDP SUPPLY
U13
ZLDO1117G12TA
HDMI 5V POWER
D10
1N5819WS
D11
ESD5451R-2/TR
HDMI CONNECTOR
J8
2001-1-2-21-00-BK
U12
MCDP2900
PWR_FLAG
Y4
27MHz
U14
ESD5304D-TP
U15
ESD5304D-TP
U16
ESD5304D-TP
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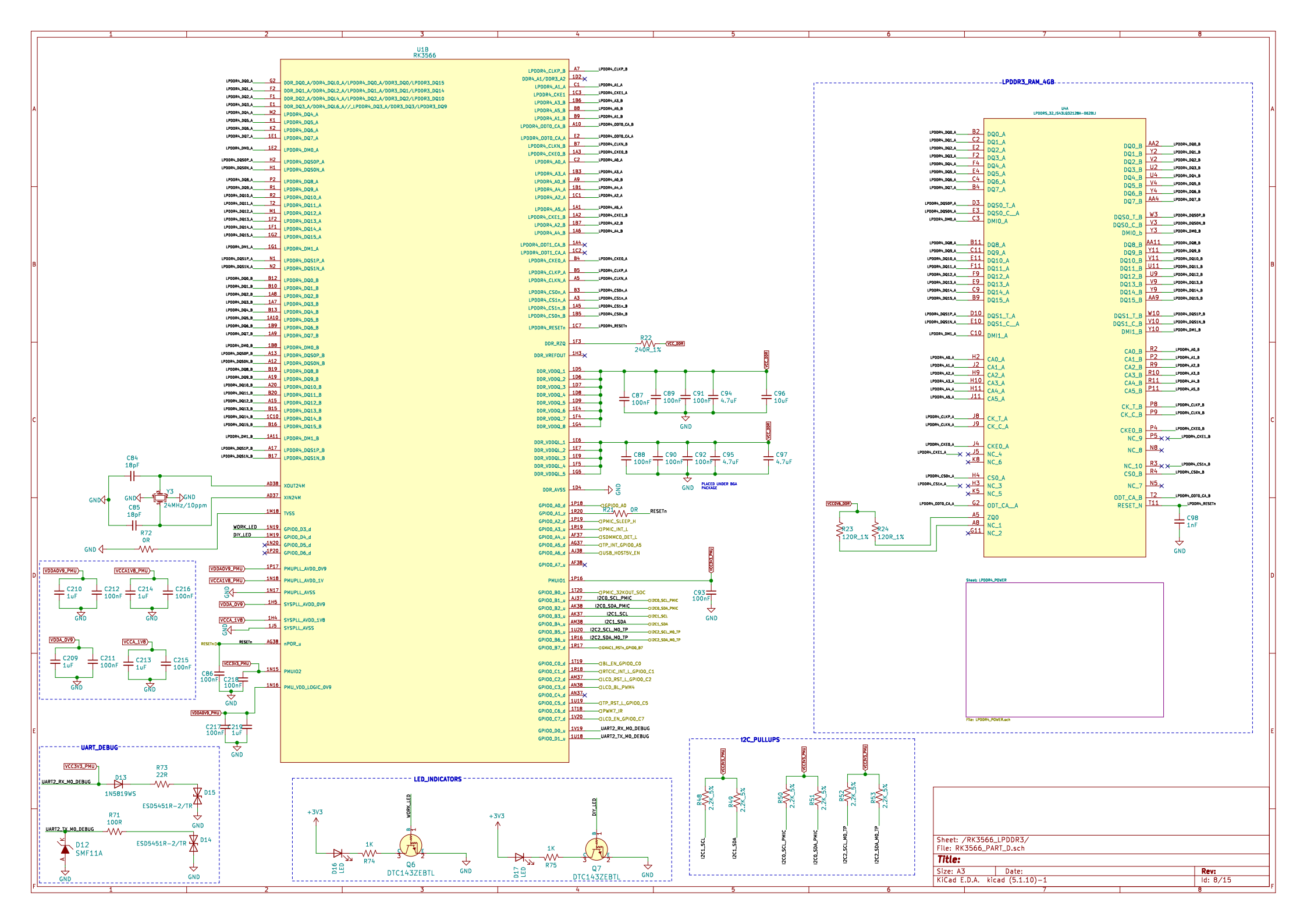
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
Id: 7/15


U1B
RK3566
LPDDR4_DQ0_A
LPDDR4_DQ1_A
LPDDR4_DQ2_A
LPDDR4_DQ3_A
LPDDR4_DQ4_A
LPDDR4_DQ5_A
LPDDR4_DQ6_A
LPDDR4_DQ7_A
LPDDR4_DM0_A
LPDDR4_DQS0P_A
LPDDR4_DQS0N_A
LPDDR4_DQ8_A
LPDDR4_DQ9_A
LPDDR4_DQ10_A
LPDDR4_DQ11_A
LPDDR4_DQ12_A
LPDDR4_DQ13_A
LPDDR4_DQ14_A
LPDDR4_DQ15_A
LPDDR4_DM1_A
LPDDR4_DQS1P_A
LPDDR4_DQS1N_A
LPDDR4_DQ0_B
LPDDR4_DQ1_B
LPDDR4_DQ2_B
LPDDR4_DQ3_B
LPDDR4_DQ4_B
LPDDR4_DQ5_B
LPDDR4_DQ6_B
LPDDR4_DQ7_B
LPDDR4_DM0_B
LPDDR4_DQS0P_B
LPDDR4_DQS0N_B
LPDDR4_DQ8_B
LPDDR4_DQ9_B
LPDDR4_DQ10_B
LPDDR4_DQ11_B
LPDDR4_DQ12_B
LPDDR4_DQ13_B
LPDDR4_DQ14_B
LPDDR4_DQ15_B
LPDDR4_DM1_B
LPDDR4_DQS1P_B
LPDDR4_DQS1N_B
DDR_DQ0_A/DDR4_DQL0_A/LPDDR4_DQ0_A/DDR3_DQ0/LPDDR3_DQ15
DDR_DQ1_A/DDR4_DQL2_A/LPDDR4_DQ1_A/DDR3_DQ1/LPDDR3_DQ14
DDR_DQ2_A/DDR4_DQL4_A/LPDDR4_DQ2_A/DDR3_DQ2/LPDDR3_DQ10
DDR_DQ3_A/DDR4_DQL6_A//_LPDDR4_DQ3_A/DDR3_DQ3/LPDDR3_DQ9
LPDDR4_CLKP_B
DDR4_A1/DDR3_A2
LPDDR4_A1_A
LPDDR4_CKE1_A
LPDDR4_A3_B
LPDDR4_A5_B
LPDDR4_A1_B
LPDDR4_ODT0_CA_B
LPDDR4_ODT0_CA_A
LPDDR4_CLKN_B
LPDDR4_CKE0_B
LPDDR4_A0_A
LPDDR4_A3_A
LPDDR4_A0_B
LPDDR4_A4_A
LPDDR4_A2_A
LPDDR4_A5_A
LPDDR4_CKE1_B
LPDDR4_A2_B
LPDDR4_A4_B
LPDDR4_ODT1_CA_B
LPDDR4_ODT1_CA_A
LPDDR4_CKE0_A
LPDDR4_CLKP_A
LPDDR4_CLKN_A
LPDDR4_CS0n_A
LPDDR4_CS1n_A
LPDDR4_CS1n_B
LPDDR4_CS0n_B
LPDDR4_RESETn
DDR_RZQ
DDR_VREFOUT
DDR_VDDQ_1
DDR_VDDQ_2
DDR_VDDQ_3
DDR_VDDQ_4
DDR_VDDQ_5
DDR_VDDQ_6
DDR_VDDQ_7
DDR_VDDQ_8
DDR_VDDQL_1
DDR_VDDQL_2
DDR_VDDQL_3
DDR_VDDQL_4
DDR_VDDQL_5
DDR_AVSS
GPIO0_A0_d
GPIO0_A1_z
GPIO0_A2_d
GPIO0_A3_u
GPIO0_A4_u
GPIO0_A5_d
GPIO0_A6_d
GPIO0_A7_u
PMUIO1
GPIO0_B0_u
GPIO0_B1_u
GPIO0_B2_u
GPIO0_B3_u
GPIO0_B4_u
GPIO0_B5_u
GPIO0_B6_u
GPIO0_B7_d
GPIO0_C0_d
GPIO0_C1_d
GPIO0_C2_d
GPIO0_C3_d
GPIO0_C4_d
GPIO0_C5_d
GPIO0_C6_d
GPIO0_C7_d
GPIO0_D0_u
GPIO0_D1_u
R22
240R_1%
VCC_DDR
C87 100nF
C89 100nF
C91 100nF
C94 4.7uF
C96 10uF
C88 100nF
C90 100nF
C92 100nF
C95 4.7uF
C97 4.7uF
PLACED UNDER BGA PACKAGE
R23 0R
RESETn
C93 100nF
I2C0_SCL_PMIC
I2C0_SDA_PMIC
I2C1_SCL
I2C1_SDA
I2C2_SCL_M0_TP
I2C2_SDA_M0_TP
C84 18pF
C85 18pF
Y3
24MHz/10ppm
R72 0R
XOUT24M
XIN24M
TVSS
WORK_LED
DIY_LED
GPIO0_D3_d
GPIO0_D4_d
GPIO0_D5_d
GPIO0_D6_d
PMUPLL_AVDD_0V9
PMUPLL_AVDD_1V
PMUPLL_AVSS
SYSPLL_AVDD_0V9
SYSPLL_AVDD_1V8
SYSPLL_AVSS
nPOR_u
PMUIO2
PMU_VDD_LOGIC_0V9
C86 100nF
C218 100nF
C217 100nF
C219 1uF
VDDA0V9_PMU
VCCA1V8_PMU
VDDA_0V9
VCCA_1V8
VCC3V3_PMU
C210 1uF
C212 100nF
C214 1uF
C216 100nF
C209 1uF
C211 100nF
C213 1uF
C215 100nF
LPDDR3_RAM_4GB
U4A
LPDDR3_32_IS43LQ32128A-062BLI
DQ0_A
DQ1_A
DQ2_A
DQ3_A
DQ4_A
DQ5_A
DQ6_A
DQ7_A
DQS0_T_A
DQS0_C_A
DMI0_A
DQ8_A
DQ9_A
DQ10_A
DQ11_A
DQ12_A
DQ13_A
DQ14_A
DQ15_A
DQS1_T_A
DQS1_C_A
DMI1_A
CA0_A
CA1_A
CA2_A
CA3_A
CA4_A
CA5_A
CK_T_A
CK_C_A
CKE0_A
NC_4
NC_6
CS0_A
NC_3
NC_5
ODT_CA_A
ZQ0
NC_1
NC_2
DQ0_B
DQ1_B
DQ2_B
DQ3_B
DQ4_B
DQ5_B
DQ6_B
DQ7_B
DQS0_T_B
DQS0_C_B
DMI0_b
DQ8_B
DQ9_B
DQ10_B
DQ11_B
DQ12_B
DQ13_B
DQ14_B
DQ15_B
DQS1_T_B
DQS1_C_B
DMI1_B
CA0_B
CA1_B
CA2_B
CA3_B
CA4_B
CA5_B
CK_T_B
CK_C_B
CKE0_B
NC_9
NC_8
NC_10
CS0_B
NC_7
ODT_CA_B
RESET_N
R23 120R_1%
R24 120R_1%
C98 1nF
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UART_DEBUG
UART2_RX_M0_DEBUG
UART2_TX_M0_DEBUG
D13 1N5819WS
D15 ESD5451R-2/TR
D14 ESD5451R-2/TR
D12 SMF11A
R73 22R
R71 100R
LED_INDICATORS
WORK_LED
DIY_LED
R74 1K
R75 1K
D16 LED
D17 LED
Q6 DTC143ZEBTL
Q7 DTC143ZEBTL
I2C_PULLUPS
R48 2.2K_5%
R49 2.2K_5%
R50 2.2K_5%
R51 2.2K_5%
R52 2.2K_5%
R53 2.2K_5%
I2C1_SCL
I2C1_SDA
I2C0_SCL_PMIC
I2C0_SDA_PMIC
I2C2_SCL_M0_TP
I2C2_SDA_M0_TP
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File: RK3566_PART_D.sch
Title:
Size: A3
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
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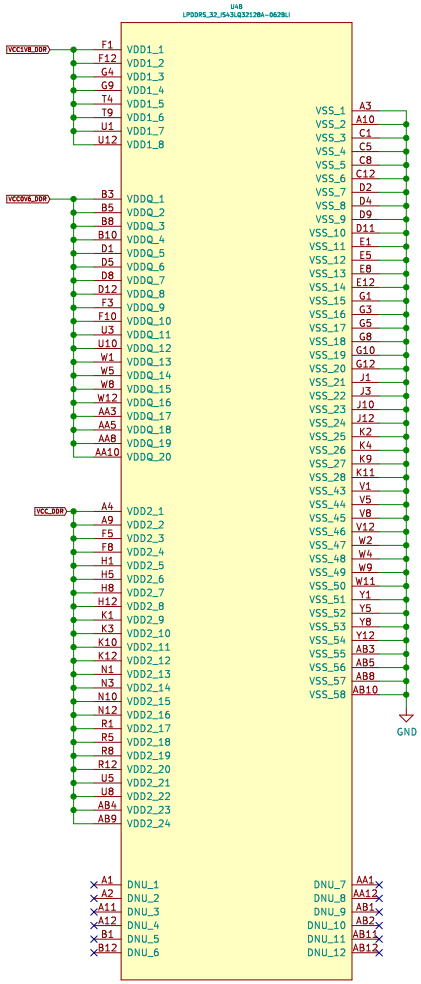
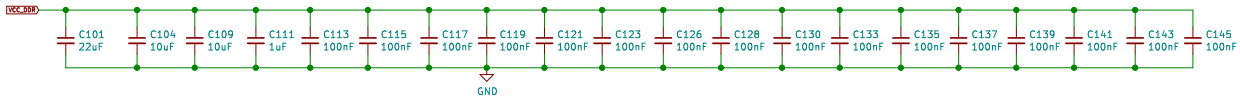
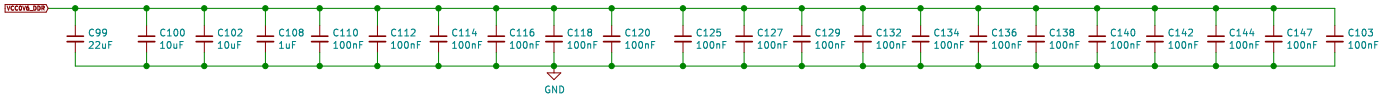
LPDDR3_RAM POWER

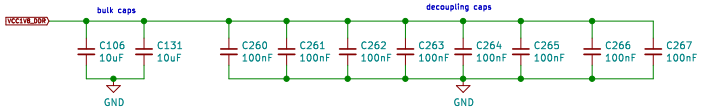


VCC_DDR DECOUPLING CAPACITORS

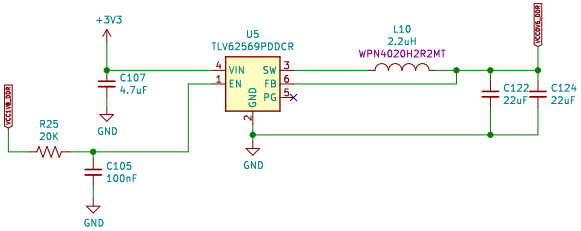


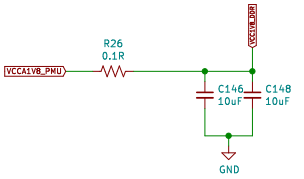
VCC_DDR DECOUPLING CAPACITORS





3.3V TO 0.6V@2A





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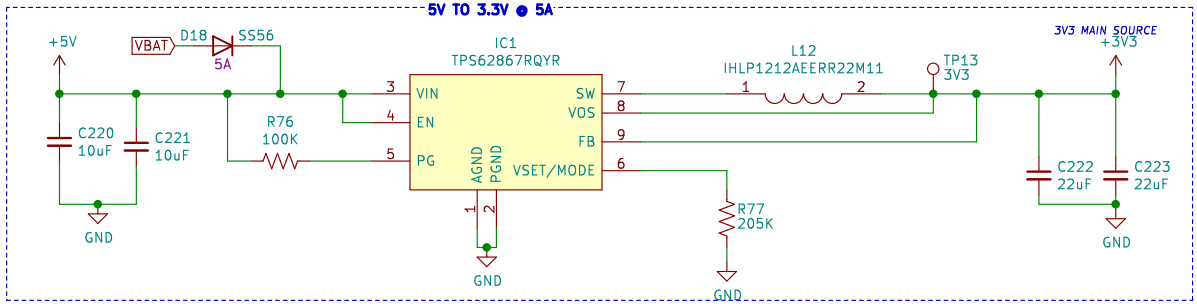
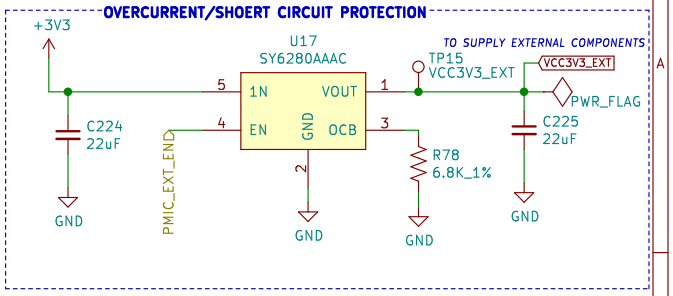
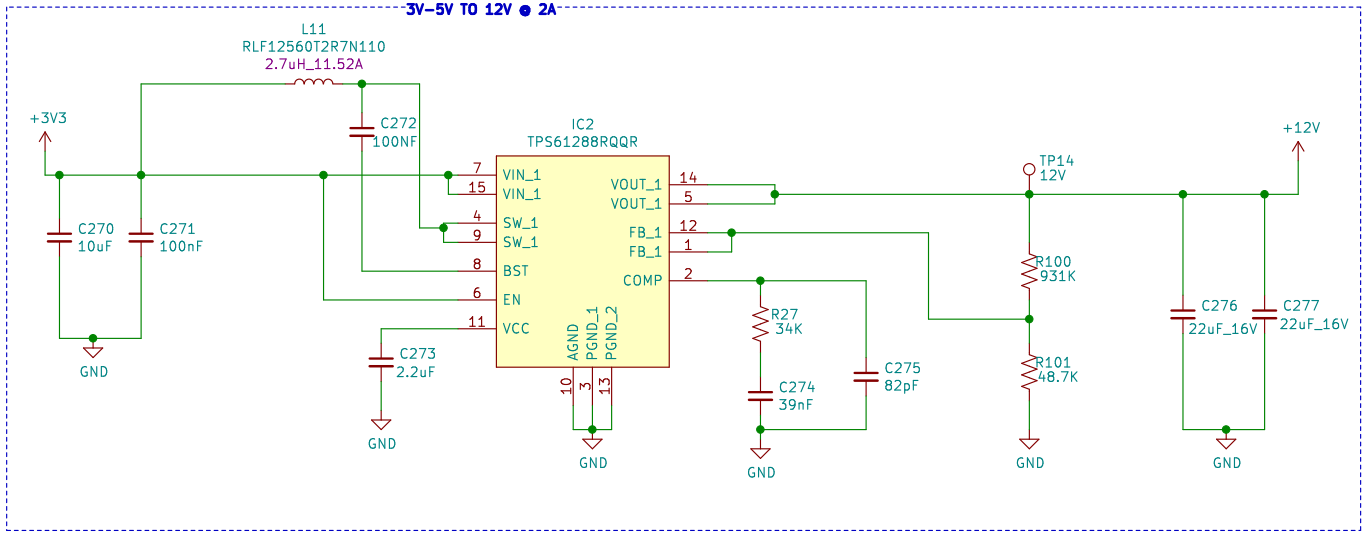
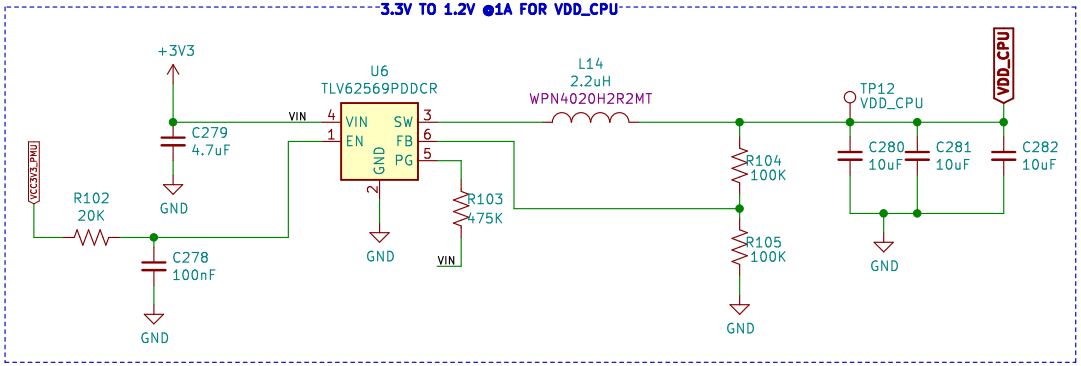
Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 9/15









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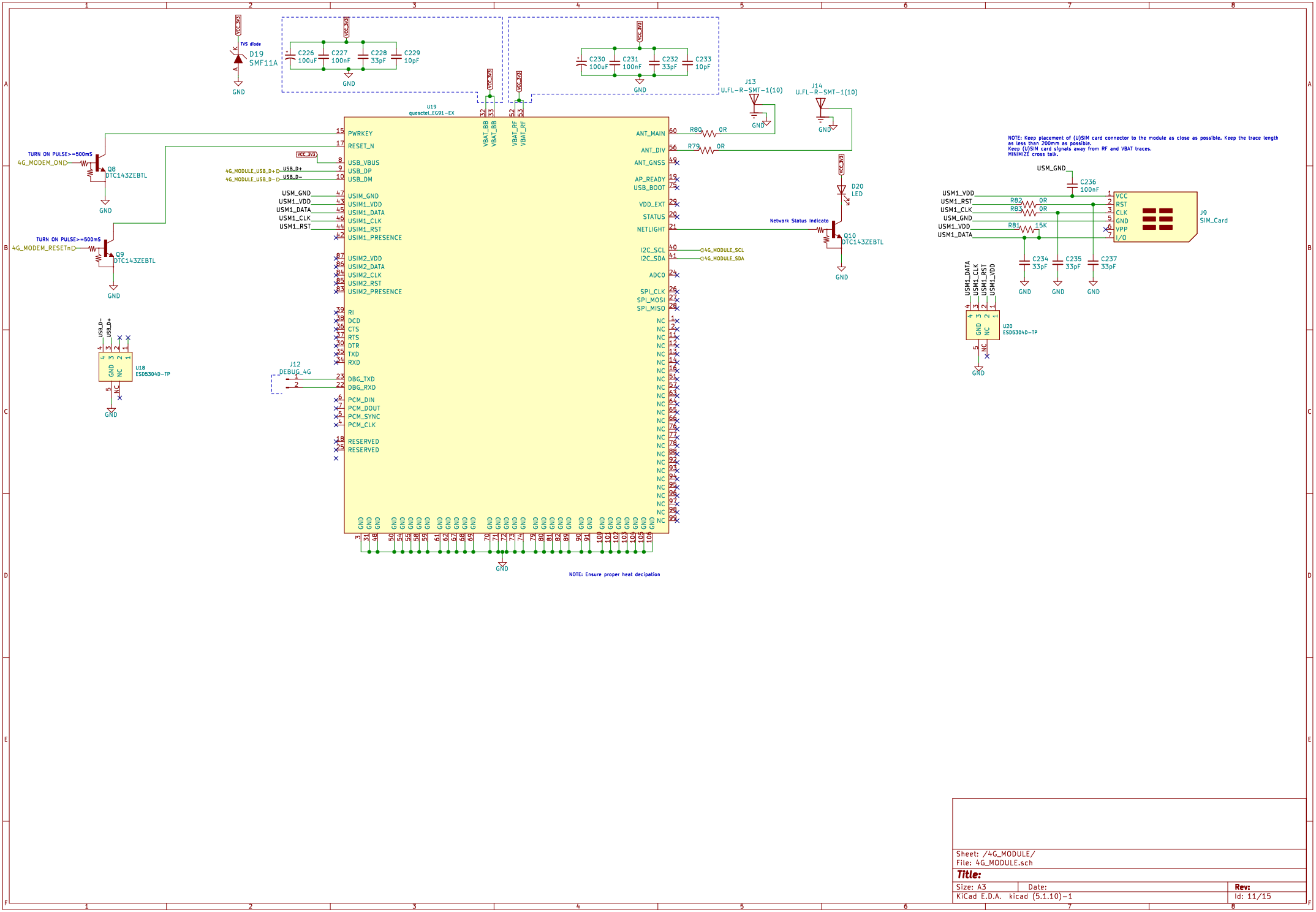
KiCad E.D.A. kicad (5.1.10)-1		Id: 10/15


VCC_3V3
TVS diode
D19
SMF11A
GND
C226
100uF
C227
100nF
C228
33pF
C229
10pF
C230
100uF
C231
100nF
C232
33pF
C233
10pF
U19
quectel_EG91-EX
PWRKEY
RESET_N
USB_VBUS
USB_DP
USB_DM
USIM_GND
USIM1_VDD
USIM1_DATA
USIM1_CLK
USIM1_RST
USIM1_PRESENCE
USIM2_VDD
USIM2_DATA
USIM2_CLK
USIM2_RST
USIM2_PRESENCE
RI
DCD
CTS
RTS
DTR
TXD
RXD
DBG_TXD
DBG_RXD
PCM_DIN
PCM_DOUT
PCM_SYNC
PCM_CLK
RESERVED
VBAT_BB
VBAT_RF
ANT_MAIN
ANT_DIV
ANT_GNSS
AP_READY
USB_BOOT
VDD_EXT
STATUS
NETLIGHT
I2C_SCL
I2C_SDA
ADC0
SPI_CLK
SPI_MOSI
SPI_MISO
NC
TURN ON PULSE>=500mS
4G_MODEM_ON
Q8
DTC143ZEBTL
4G_MODEM_RESETn
Q9
DTC143ZEBTL
4G_MODULE_USB_D+
4G_MODULE_USB_D-
USB_D+
USB_D-
U18
ESD5304D-TP
J12
DEBUG_4G
R80
0R
R79
0R
J13
U.FL-R-SMT-1(10)
J14
U.FL-R-SMT-1(10)
D20
LED
Network Status indicate
Q10
DTC143ZEBTL
4G_MODULE_SCL
4G_MODULE_SDA
NOTE: Ensure proper heat decipation
NOTE: Keep placement of (U)SIM card connector to the module as close as possible. Keep the trace length as less than 200mm as possible.
Keep (U)SIM card signals away from RF and VBAT traces.
MINIMIZE cross talk.
USM_GND
C236
100nF
USM1_VDD
USM1_RST
USM1_CLK
USM_GND
USM1_VDD
USM1_DATA
R82
0R
R83
0R
R81
15K
C234
33pF
C235
33pF
C237
33pF
J9
SIM_Card
VCC
RST
CLK
GND
VPP
I/O
U20
ESD5304D-TP
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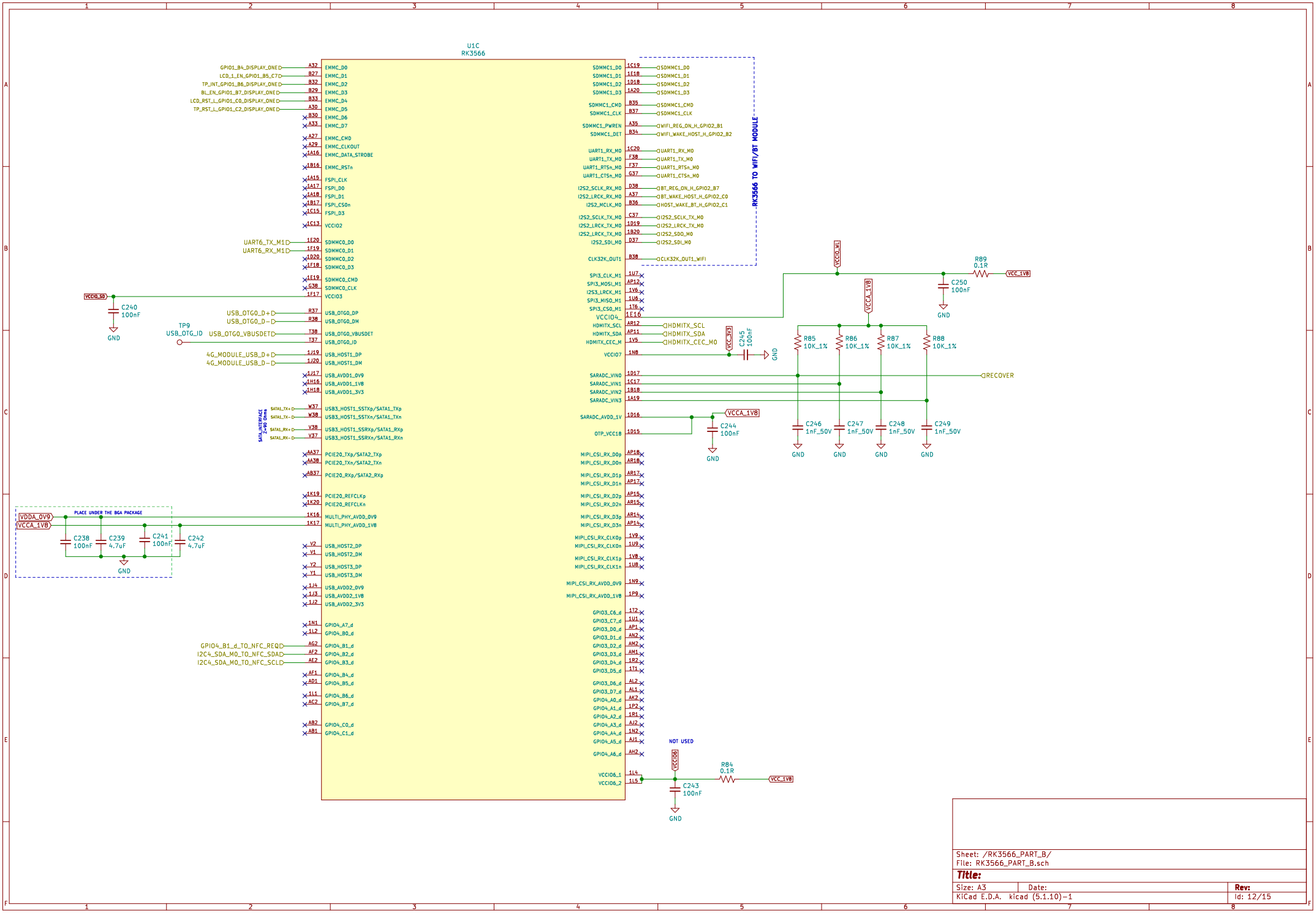
Size: A3
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
Id: 11/15


U1C
RK3566
RK3566 TO WIFI/BT MODULE
SATA_INTERFACE 2~90 Ohms
PLACE UNDER THE BGA PACKAGE
NOT USED
RECOVER
GND
VCC_1V8
VCCA_1V8
VCCIO_SD
VCCIO_M1
VCC_3V3
VCCIO6
VDDA_0V9
VCCA_1V8
TP9
USB_OTG_ID
C240 100nF
C238 100nF
C239 4.7uF
C241 100nF
C242 4.7uF
C243 100nF
C244 100nF
C245 100nF
C246 1nF_50V
C247 1nF_50V
C248 1nF_50V
C249 1nF_50V
C250 100nF
R84 0.1R
R85 10K_1%
R86 10K_1%
R87 10K_1%
R88 10K_1%
R89 0.1R
GPIO1_B4_DISPLAY_ONE
LCD_1_EN_GPIO1_B5_C7
TP_INT_GPIO1_B6_DISPLAY_ONE
BL_EN_GPIO1_B7_DISPLAY_ONE
LCD_RST_L_GPIO1_C0_DISPLAY_ONE
TP_RST_L_GPIO1_C2_DISPLAY_ONE
EMMC_D0
EMMC_D1
EMMC_D2
EMMC_D3
EMMC_D4
EMMC_D5
EMMC_D6
EMMC_D7
EMMC_CMD
EMMC_CLKOUT
EMMC_DATA_STROBE
EMMC_RSTn
FSPI_CLK
FSPI_D0
FSPI_D1
FSPI_CS0n
FSPI_D3
VCCIO2
UART6_TX_M1
UART6_RX_M1
SDMMC0_D0
SDMMC0_D1
SDMMC0_D2
SDMMC0_D3
SDMMC0_CMD
SDMMC0_CLK
VCCIO3
USB_OTG0_D+
USB_OTG0_D-
USB_OTG0_DP
USB_OTG0_DM
USB_OTG0_VBUSDET
USB_OTG0_ID
4G_MODULE_USB_D+
4G_MODULE_USB_D-
USB_HOST1_DP
USB_HOST1_DM
USB_AVDD1_0V9
USB_AVDD1_1V8
USB_AVDD1_3V3
SATA1_TX+
SATA1_TX-
SATA1_RX+
SATA1_RX-
USB3_HOST1_SSTXp/SATA1_TXp
USB3_HOST1_SSTXn/SATA1_TXn
USB3_HOST1_SSRXp/SATA1_RXp
USB3_HOST1_SSRXn/SATA1_RXn
PCIE20_TXp/SATA2_TXp
PCIE20_TXn/SATA2_TXn
PCIE20_RXp/SATA2_RXp
PCIE20_REFCLKp
PCIE20_REFCLKn
MULTI_PHY_AVDD_0V9
MULTI_PHY_AVDD_1V8
USB_HOST2_DP
USB_HOST2_DM
USB_HOST3_DP
USB_HOST3_DM
USB_AVDD2_0V9
USB_AVDD2_1V8
USB_AVDD2_3V3
GPIO4_A7_d
GPIO4_B0_d
GPIO4_B1_d_TO_NFC_REQ
I2C4_SDA_M0_TO_NFC_SDA
I2C4_SDA_M0_TO_NFC_SCL
GPIO4_B1_d
GPIO4_B2_d
GPIO4_B3_d
GPIO4_B4_d
GPIO4_B5_d
GPIO4_B6_d
GPIO4_B7_d
GPIO4_C0_d
GPIO4_C1_d
SDMMC1_D0
SDMMC1_D1
SDMMC1_D2
SDMMC1_D3
SDMMC1_CMD
SDMMC1_CLK
SDMMC1_PWREN
SDMMC1_DET
UART1_RX_M0
UART1_TX_M0
UART1_RTSn_M0
UART1_CTSn_M0
I2S2_SCLK_RX_M0
I2S2_LRCK_RX_M0
I2S2_MCLK_M0
I2S2_SCLK_TX_M0
I2S2_LRCK_TX_M0
I2S2_LRCK_TX_M0
I2S2_SDI_M0
CLK32K_OUT1
SPI3_CLK_M1
SPI3_MOSI_M1
I2S3_LRCK_M1
SPI3_MISO_M1
SPI3_CS0_M1
VCCIO4_
HDMITX_SCL
HDMITX_SDA
HDMITX_CEC_M
VCCIO7
SARADC_VIN0
SARADC_VIN1
SARADC_VIN2
SARADC_VIN3
SARADC_AVDD_1V
OTP_VCC18
MIPI_CSI_RX_D0p
MIPI_CSI_RX_D0n
MIPI_CSI_RX_D1p
MIPI_CSI_RX_D1n
MIPI_CSI_RX_D2p
MIPI_CSI_RX_D2n
MIPI_CSI_RX_D3p
MIPI_CSI_RX_D3n
MIPI_CSI_RX_CLK0p
MIPI_CSI_RX_CLK0n
MIPI_CSI_RX_CLK1p
MIPI_CSI_RX_CLK1n
MIPI_CSI_RX_AVDD_0V9
MIPI_CSI_RX_AVDD_1V8
GPIO3_C6_d
GPIO3_C7_d
GPIO3_D0_d
GPIO3_D1_d
GPIO3_D2_d
GPIO3_D3_d
GPIO3_D4_d
GPIO3_D5_d
GPIO3_D6_d
GPIO3_D7_d
GPIO4_A0_d
GPIO4_A1_d
GPIO4_A2_d
GPIO4_A3_d
GPIO4_A4_d
GPIO4_A5_d
GPIO4_A6_d
VCCIO6_1
VCCIO6_2
SDMMC1_D0
SDMMC1_D1
SDMMC1_D2
SDMMC1_D3
SDMMC1_CMD
SDMMC1_CLK
WIFI_REG_ON_H_GPIO2_B1
WIFI_WAKE_HOST_H_GPIO2_B2
UART1_RX_M0
UART1_TX_M0
UART1_RTSn_M0
UART1_CTSn_M0
BT_REG_ON_H_GPIO2_B7
BT_WAKE_HOST_H_GPIO2_C0
HOST_WAKE_BT_H_GPIO2_C1
I2S2_SCLK_TX_M0
I2S2_LRCK_TX_M0
I2S2_SDO_M0
I2S2_SDI_M0
CLK32K_OUT1_WIFI
HDMITX_SCL
HDMITX_SDA
HDMITX_CEC_M0
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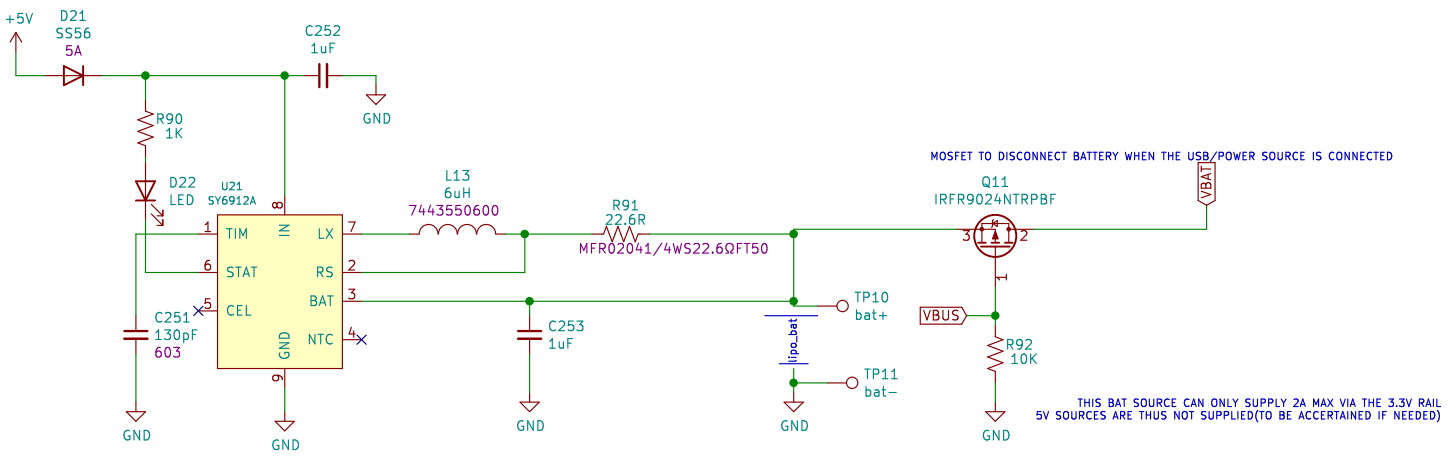
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
Id: 12/15



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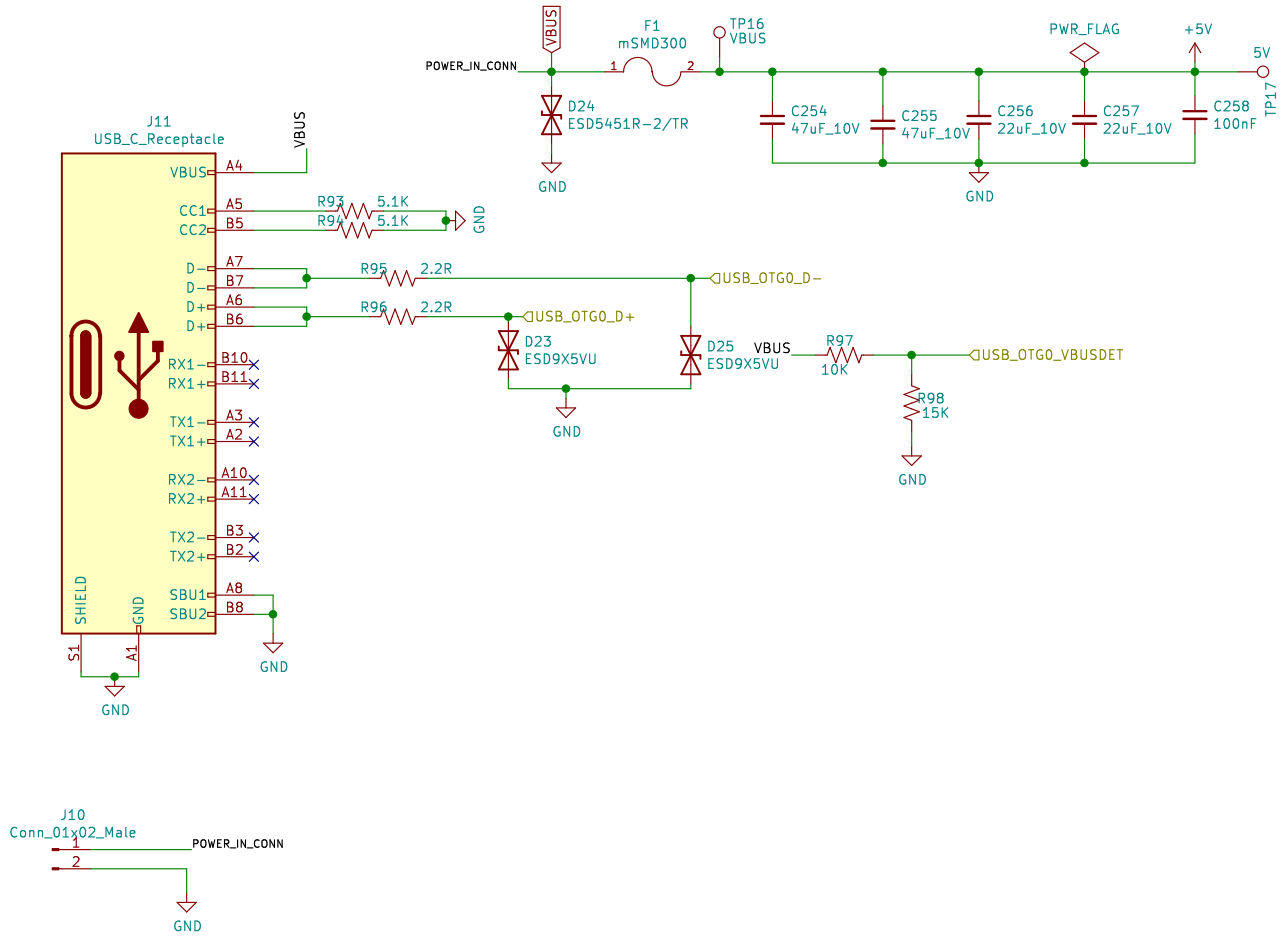

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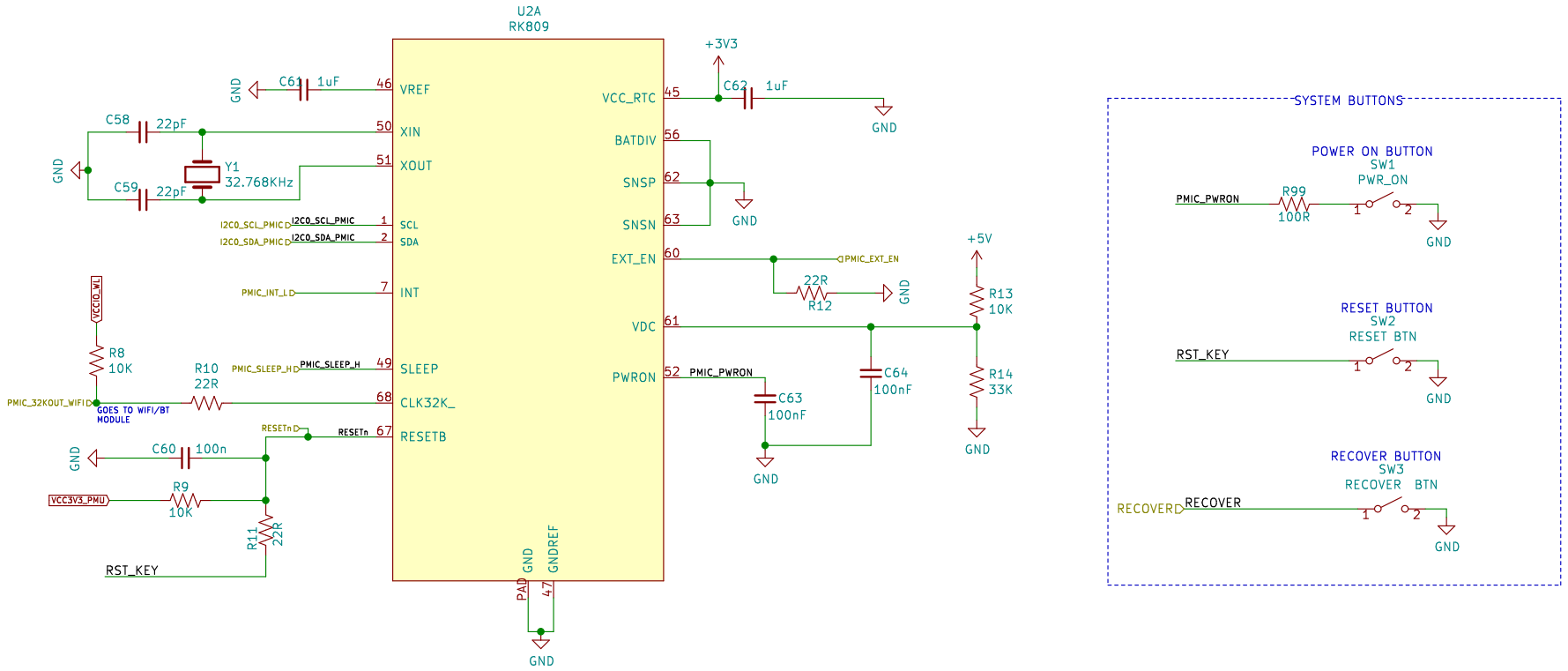

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