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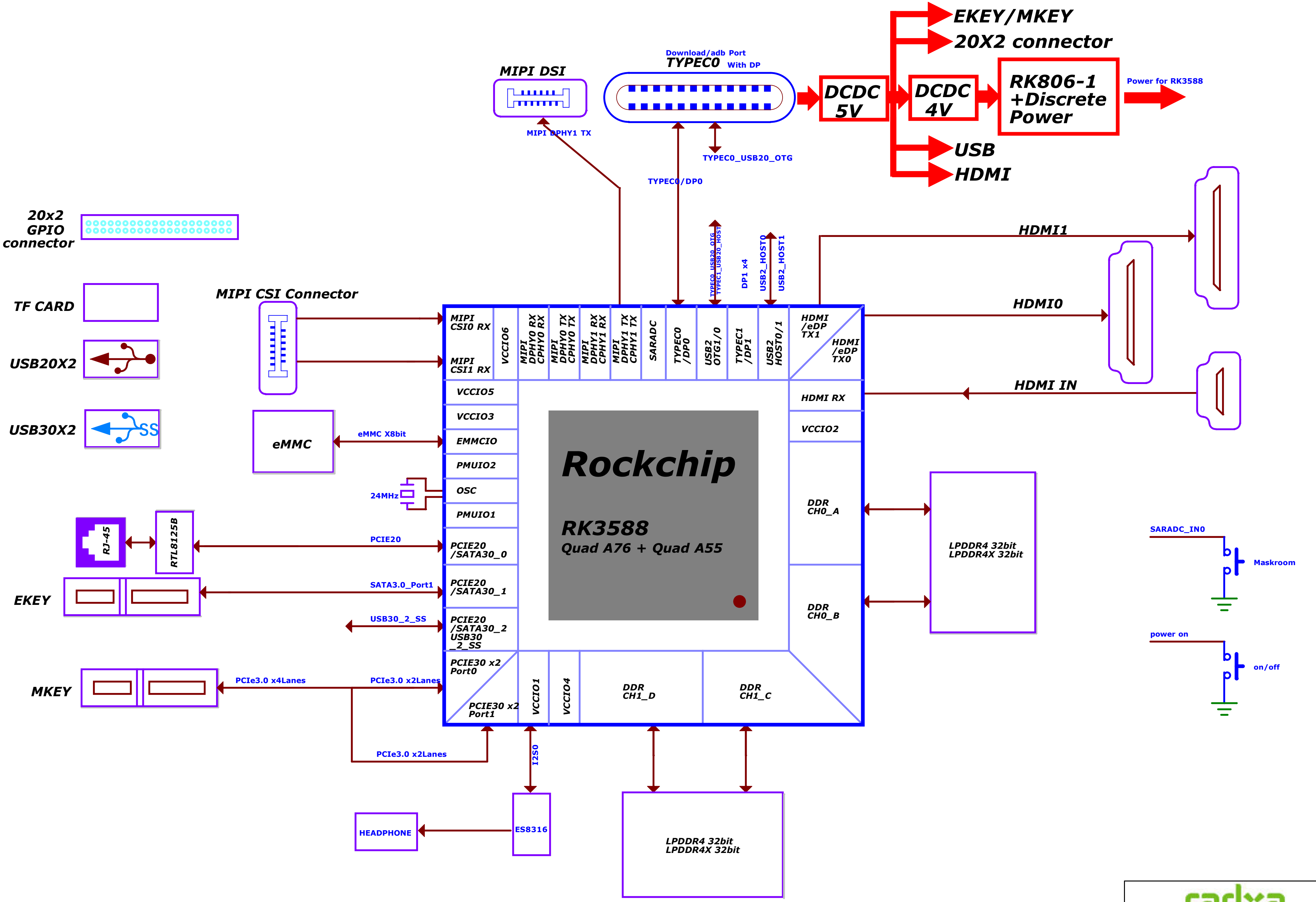

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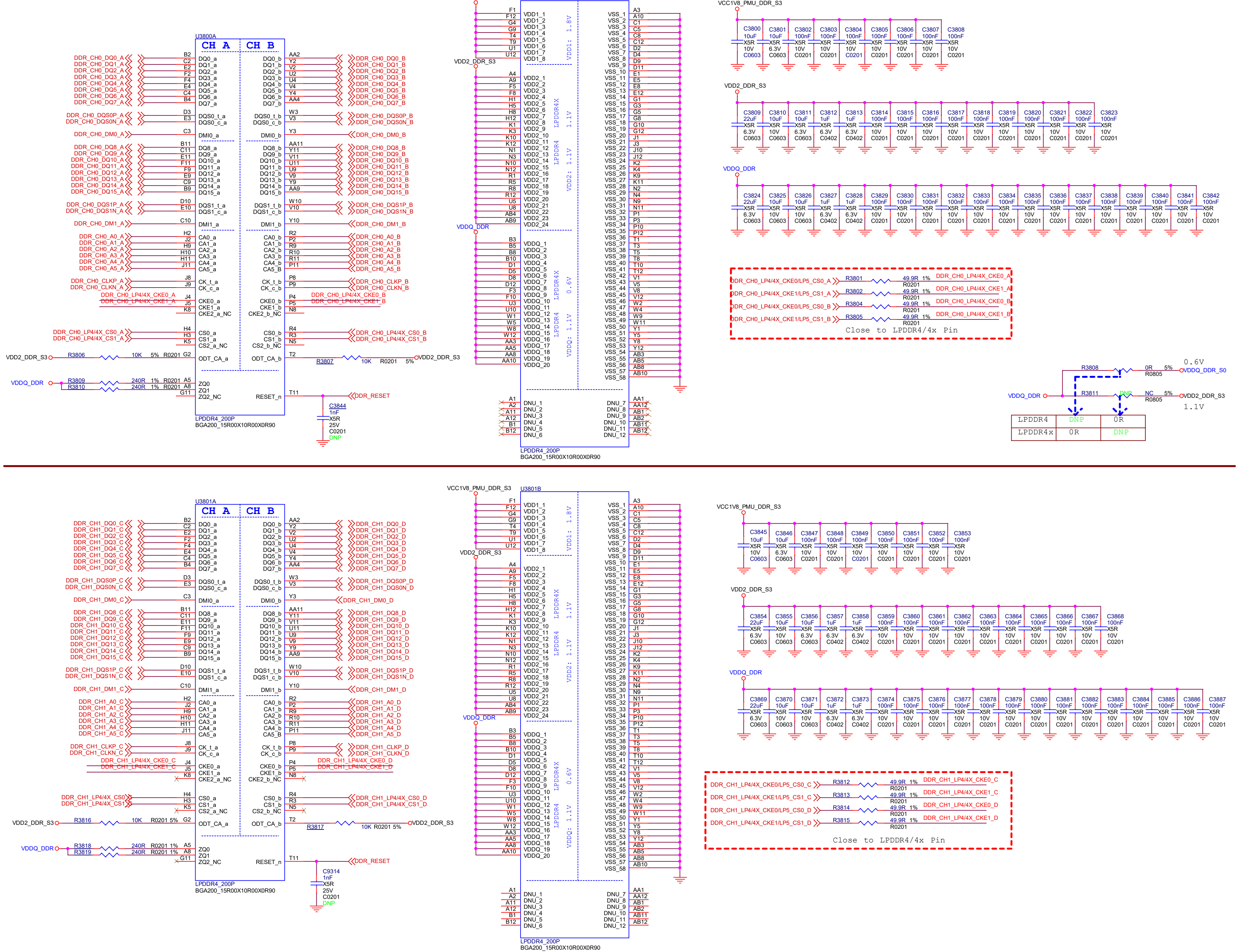
LPDDR4X



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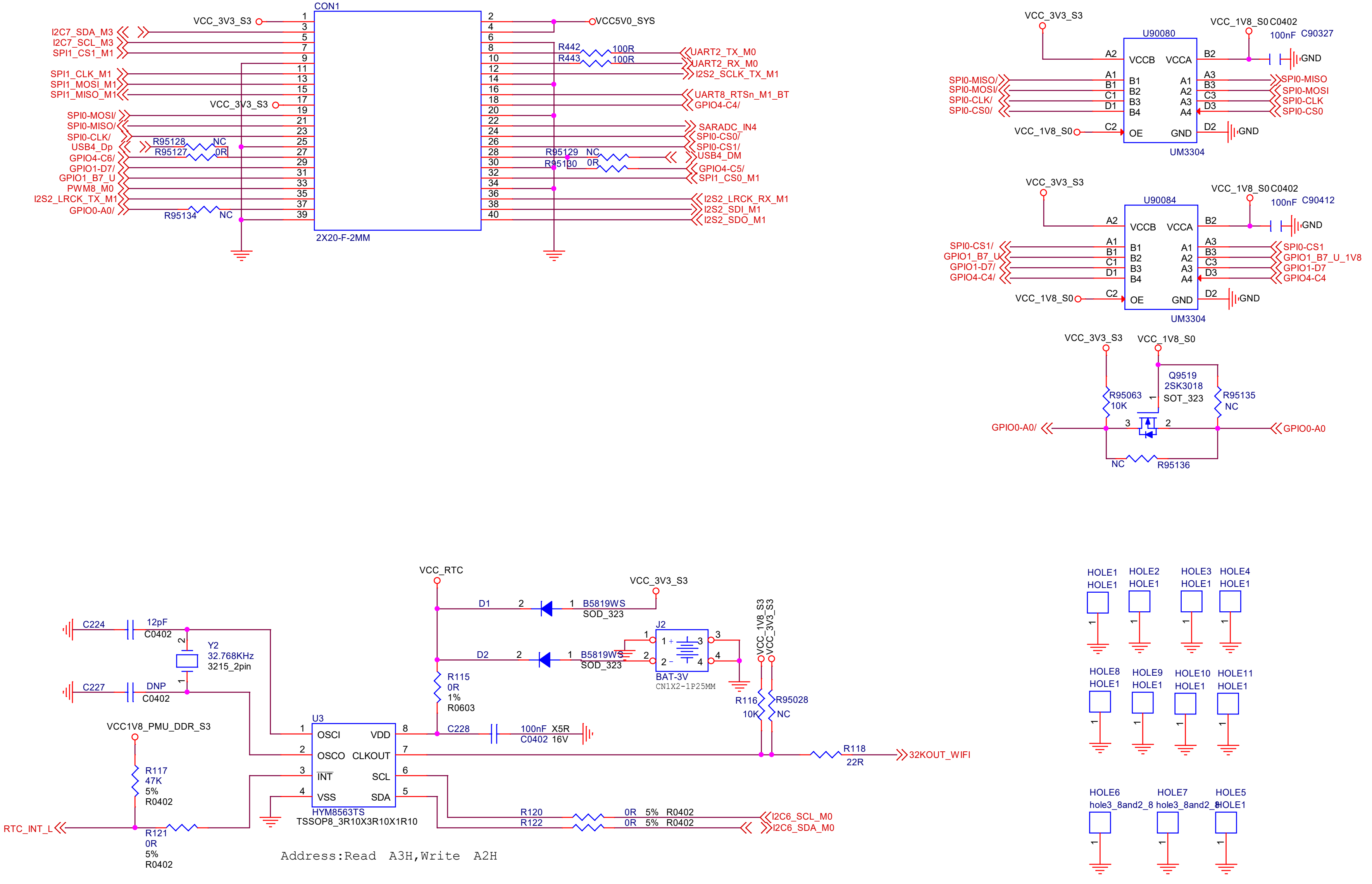
CONNECT



Address:Read A3H,Write A2H

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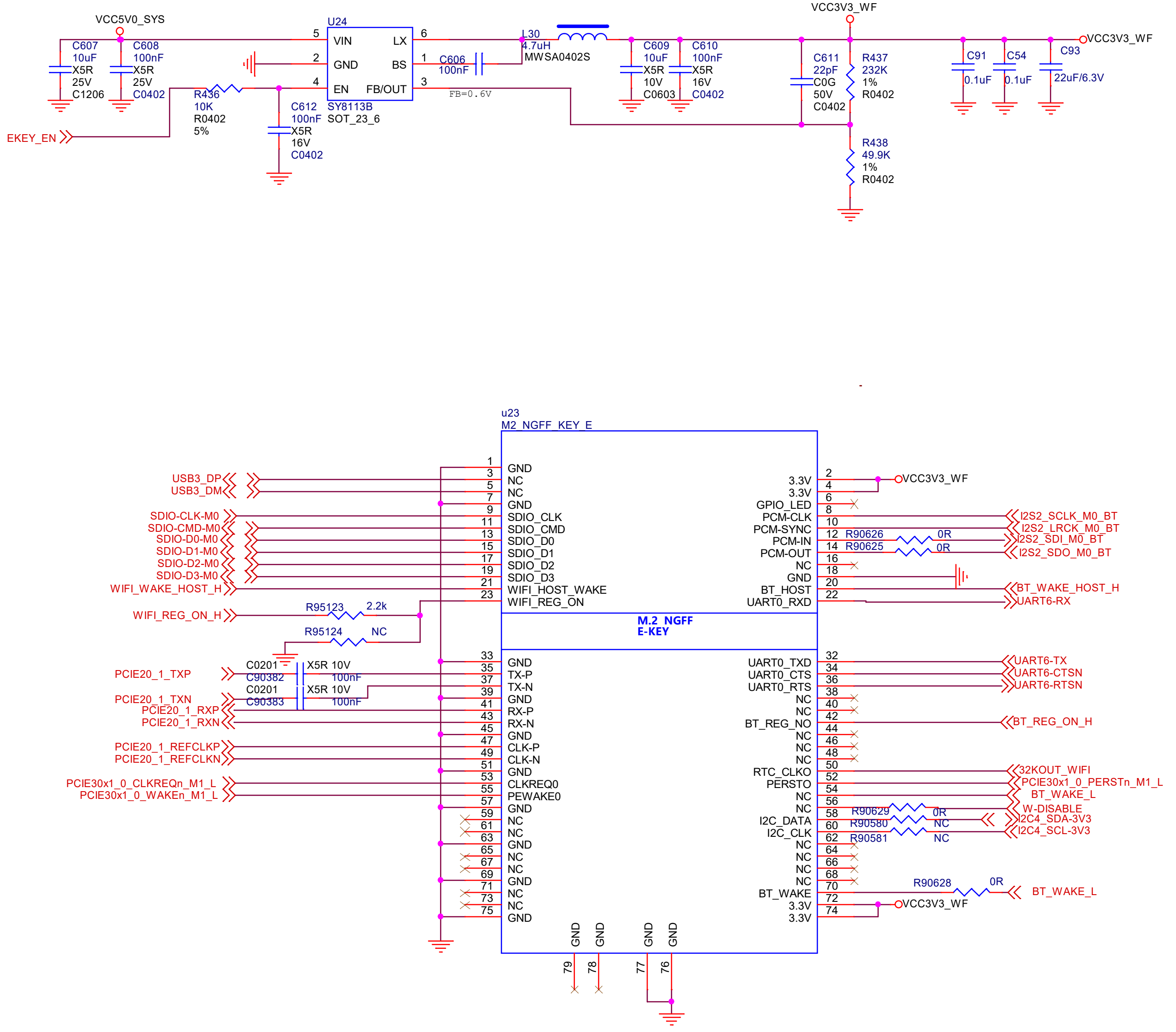
PCIE-PCIE2.0_Slot-Ekey



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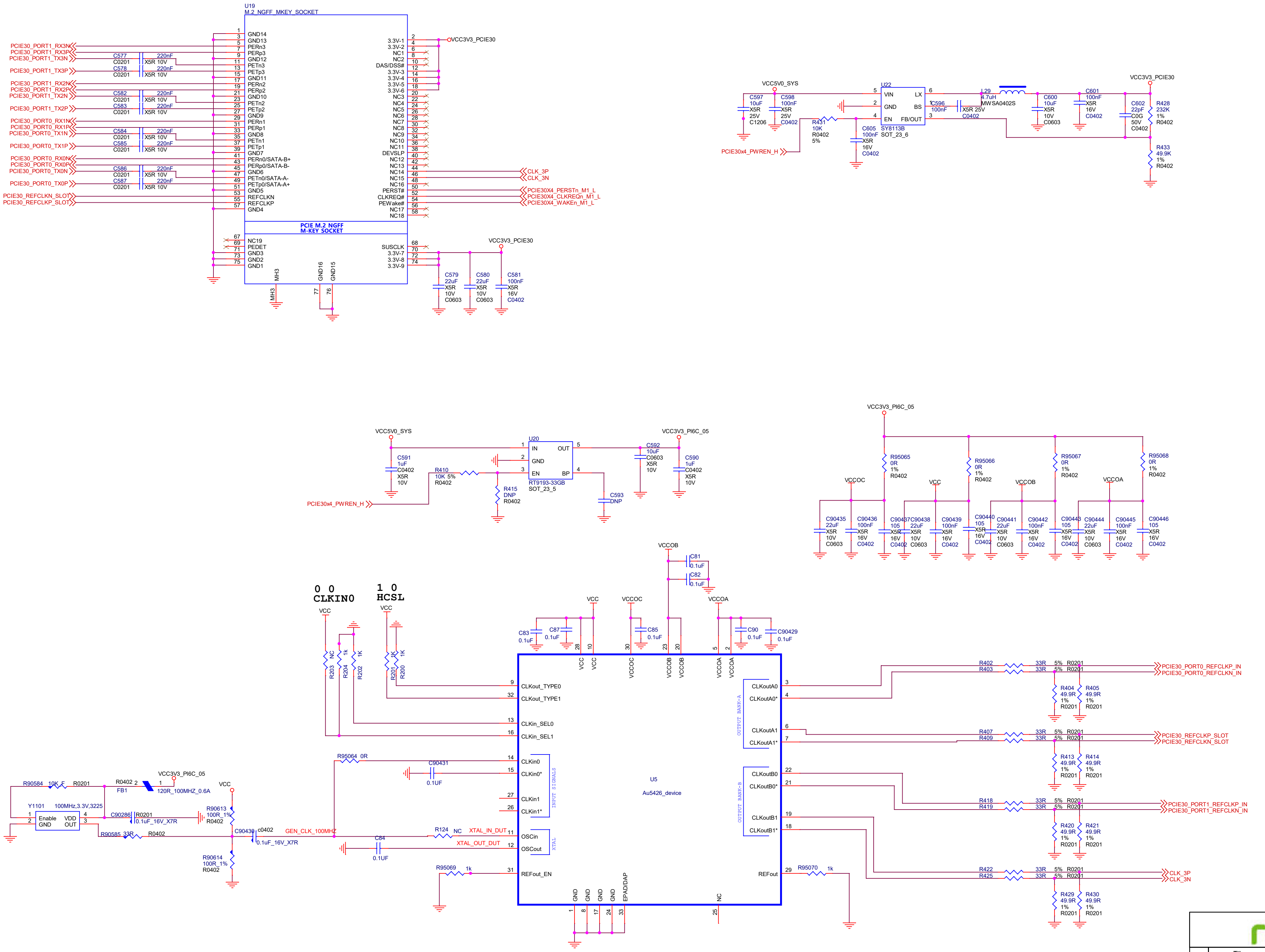
PCIe3.0 x 4 Slot



Size	Title: ROCK 5B	REV
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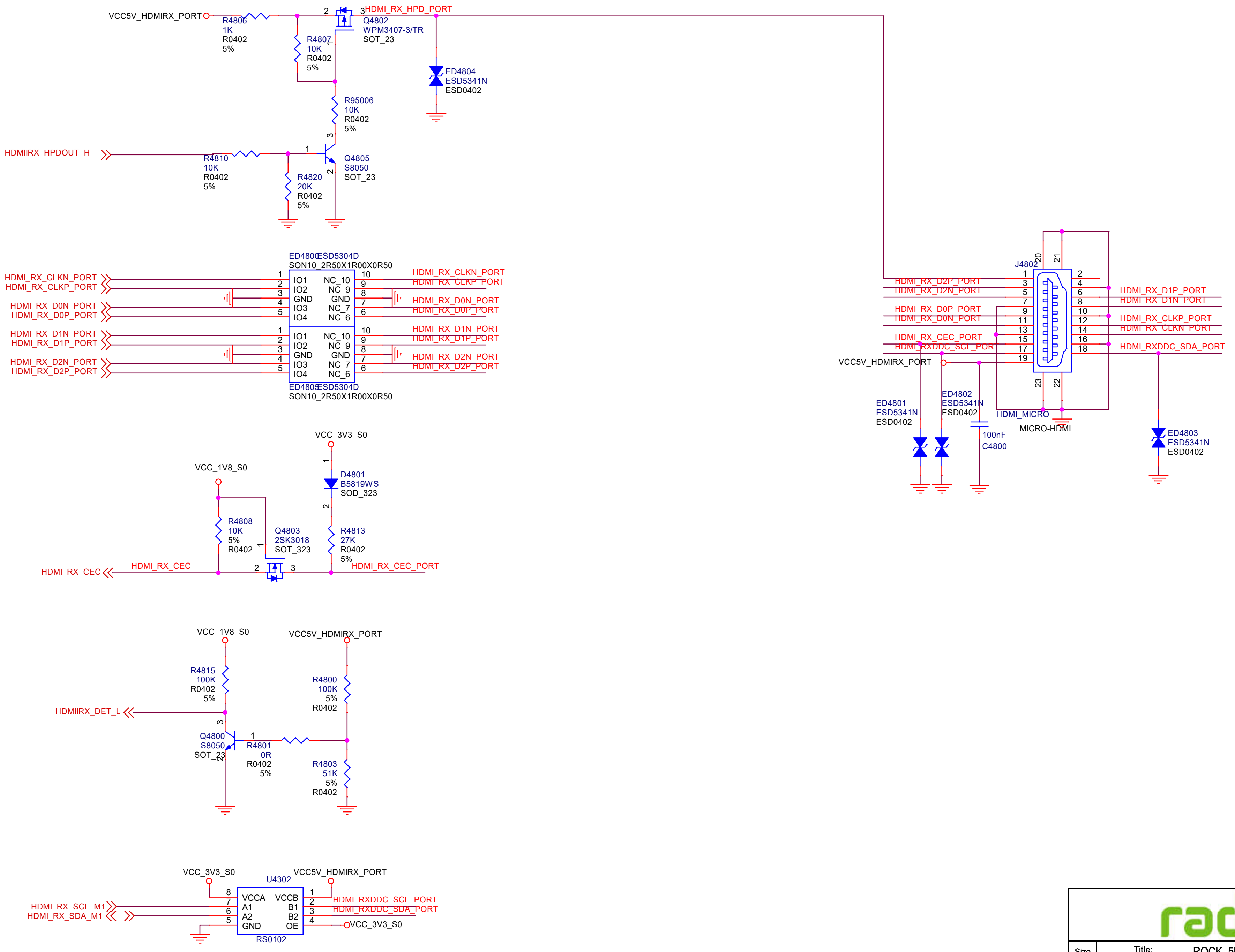
HDMI2.0 RX



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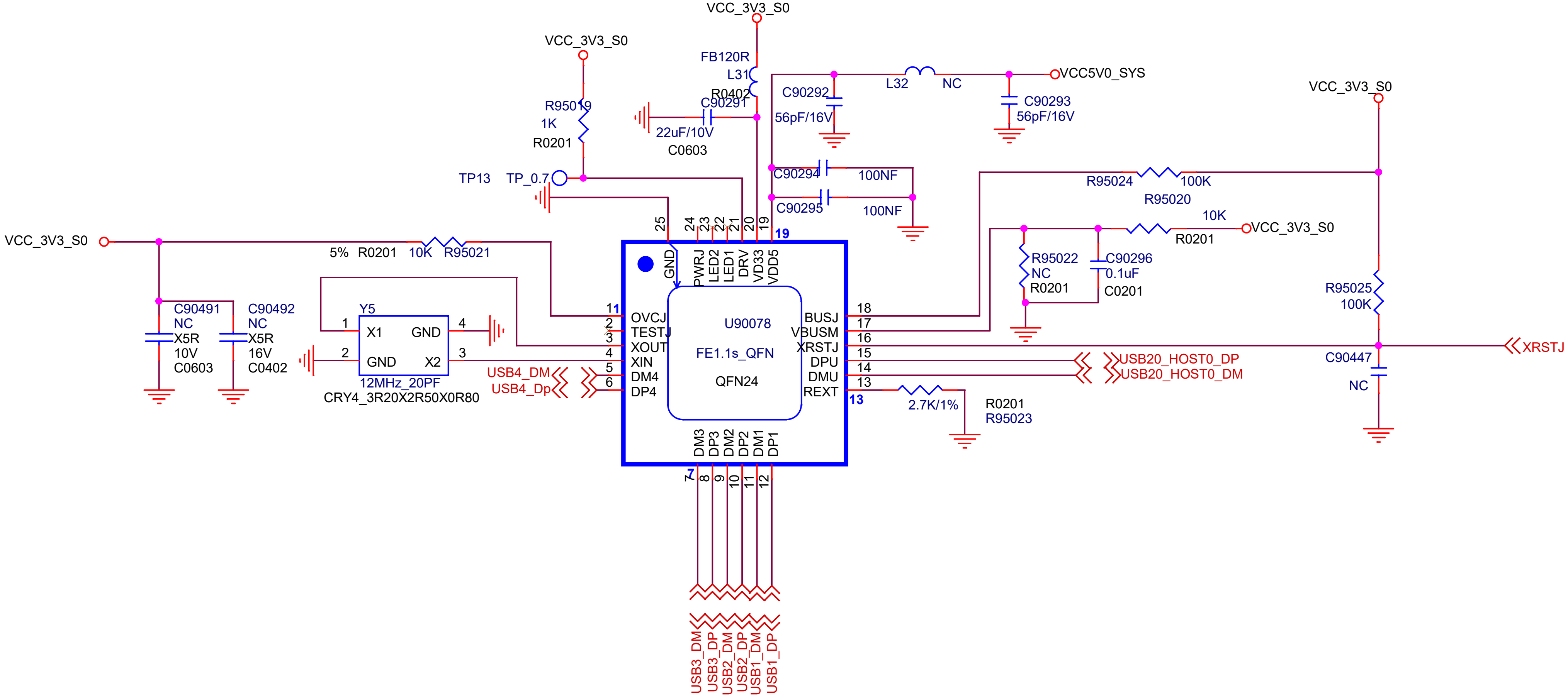
USB2HUB



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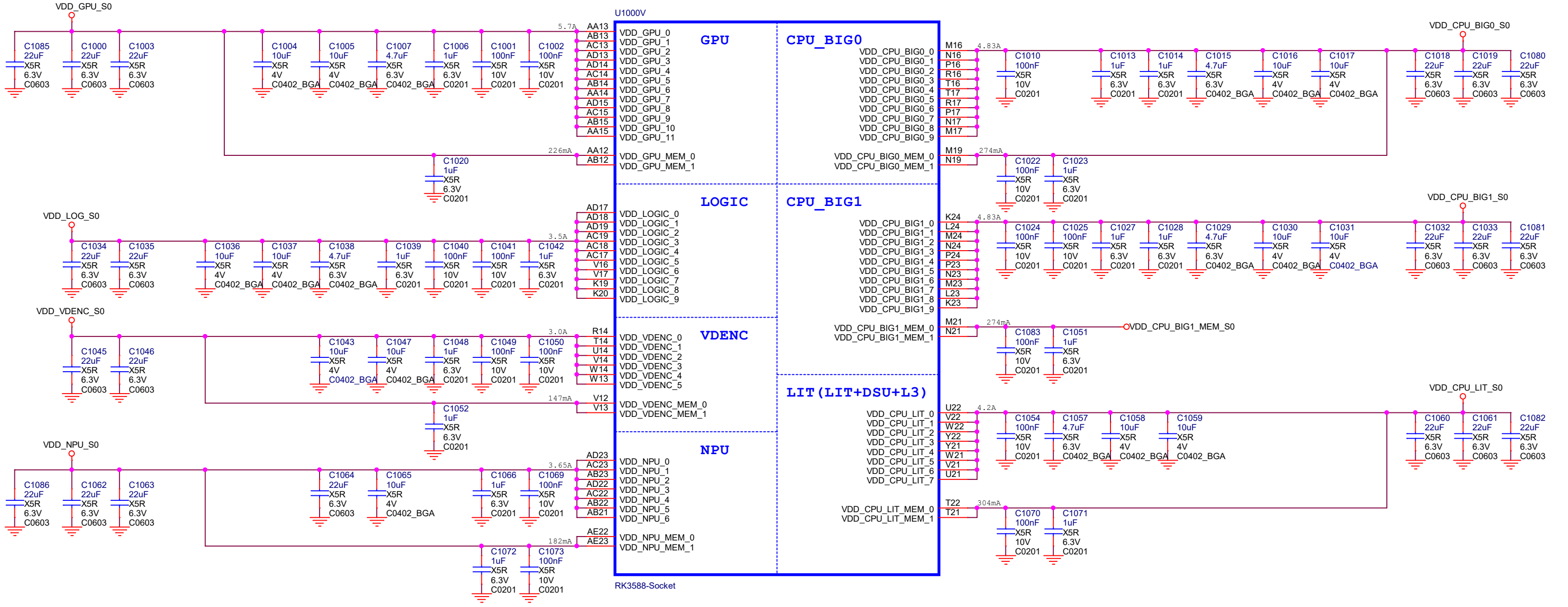
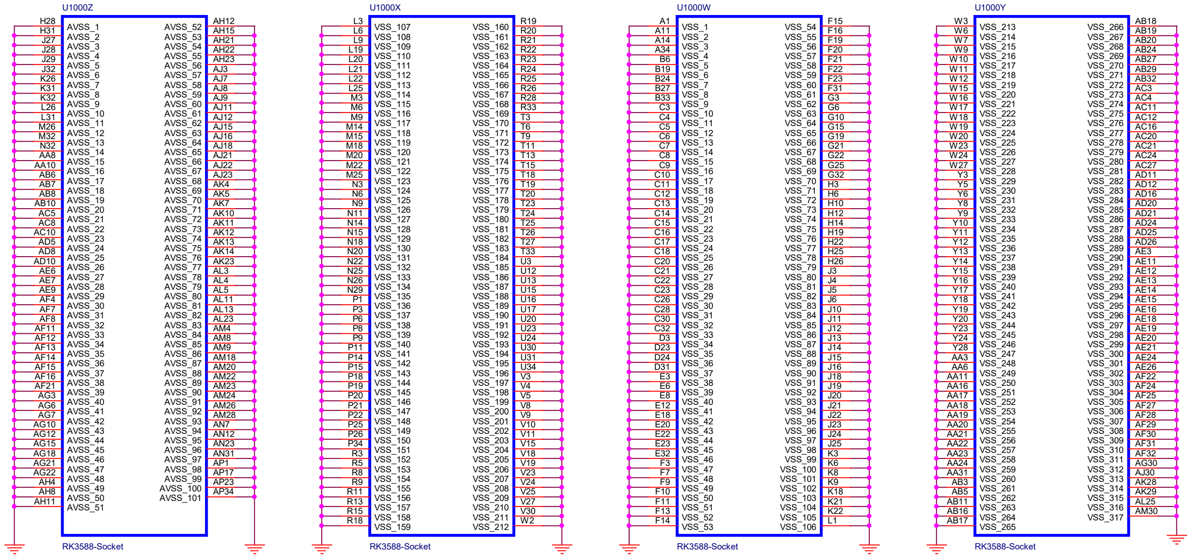


U1000V
RK3588-Socket
GPU
CPU_BIG0
LOGIC
CPU_BIG1
VDENC
NPU
LIT(LIT+DSU+L3)
VDD_GPU_S0
VDD_LOG_S0
VDD_VDENC_S0
VDD_NPU_S0
VDD_CPU_BIG0_S0
VDD_CPU_BIG1_S0
VDD_CPU_BIG1_MEM_S0
VDD_CPU_LIT_S0
5.7A
226mA
3.5A
3.0A
147mA
3.65A
182mA
4.83A
274mA
4.83A
274mA
4.2A
304mA
VDD_GPU_0 … VDD_GPU_11
VDD_GPU_MEM_0
VDD_GPU_MEM_1
VDD_LOGIC_0 … VDD_LOGIC_9
VDD_VDENC_0 … VDD_VDENC_5
VDD_VDENC_MEM_0
VDD_VDENC_MEM_1
VDD_NPU_0 … VDD_NPU_6
VDD_NPU_MEM_0
VDD_NPU_MEM_1
VDD_CPU_BIG0_0 … VDD_CPU_BIG0_9
VDD_CPU_BIG0_MEM_0
VDD_CPU_BIG0_MEM_1
VDD_CPU_BIG1_0 … VDD_CPU_BIG1_9
VDD_CPU_BIG1_MEM_0
VDD_CPU_BIG1_MEM_1
VDD_CPU_LIT_0 … VDD_CPU_LIT_7
VDD_CPU_LIT_MEM_0
VDD_CPU_LIT_MEM_1
C1085 22uF X5R 6.3V C0603
C1000 22uF X5R 6.3V C0603
C1003 22uF X5R 6.3V C0603
C1004 10uF X5R 4V C0402_BGA
C1005 10uF X5R 4V C0402_BGA
C1007 4.7uF X5R 6.3V C0402_BGA
C1006 1uF X5R 6.3V C0201
C1001 100nF X5R 10V C0201
C1002 100nF X5R 10V C0201
C1020 1uF X5R 6.3V C0201
C1034 22uF X5R 6.3V C0603
C1035 22uF X5R 6.3V C0603
C1036 10uF X5R 4V C0402_BGA
C1037 10uF X5R 4V C0402_BGA
C1038 4.7uF X5R 6.3V C0402_BGA
C1039 1uF X5R 6.3V C0201
C1040 100nF X5R 10V C0201
C1041 100nF X5R 10V C0201
C1042 1uF X5R 6.3V C0201
C1045 22uF X5R 6.3V C0603
C1046 22uF X5R 6.3V C0603
C1043 10uF X5R 4V C0402_BGA
C1047 10uF X5R 4V C0402_BGA
C1048 1uF X5R 6.3V C0201
C1049 100nF X5R 10V C0201
C1050 100nF X5R 10V C0201
C1052 1uF X5R 6.3V C0201
C1086 22uF X5R 6.3V C0603
C1062 22uF X5R 6.3V C0603
C1063 22uF X5R 6.3V C0603
C1064 22uF X5R 6.3V C0603
C1065 10uF X5R 4V C0402_BGA
C1066 1uF X5R 6.3V C0201
C1069 100nF X5R 10V C0201
C1072 1uF X5R 6.3V C0201
C1073 100nF X5R 10V C0201
C1010 100nF X5R 10V C0201
C1013 1uF X5R 6.3V C0201
C1014 1uF X5R 6.3V C0201
C1015 4.7uF X5R 6.3V C0402_BGA
C1016 10uF X5R 4V C0402_BGA
C1017 10uF X5R 4V C0402_BGA
C1018 22uF X5R 6.3V C0603
C1019 22uF X5R 6.3V C0603
C1080 22uF X5R 6.3V C0603
C1022 100nF X5R 10V C0201
C1023 1uF X5R 6.3V C0201
C1024 100nF X5R 10V C0201
C1025 100nF X5R 10V C0201
C1027 1uF X5R 6.3V C0201
C1028 1uF X5R 6.3V C0201
C1029 4.7uF X5R 6.3V C0402_BGA
C1030 10uF X5R 4V C0402_BGA
C1031 10uF X5R 4V C0402_BGA
C1032 22uF X5R 6.3V C0603
C1033 22uF X5R 6.3V C0603
C1081 22uF X5R 6.3V C0603
C1083 100nF X5R 10V C0201
C1051 1uF X5R 6.3V C0201
C1054 100nF X5R 10V C0201
C1057 4.7uF X5R 6.3V C0402_BGA
C1058 10uF X5R 4V C0402_BGA
C1059 10uF X5R 4V C0402_BGA
C1060 22uF X5R 6.3V C0603
C1061 22uF X5R 6.3V C0603
C1082 22uF X5R 6.3V C0603
C1070 100nF X5R 10V C0201
C1071 1uF X5R 6.3V C0201



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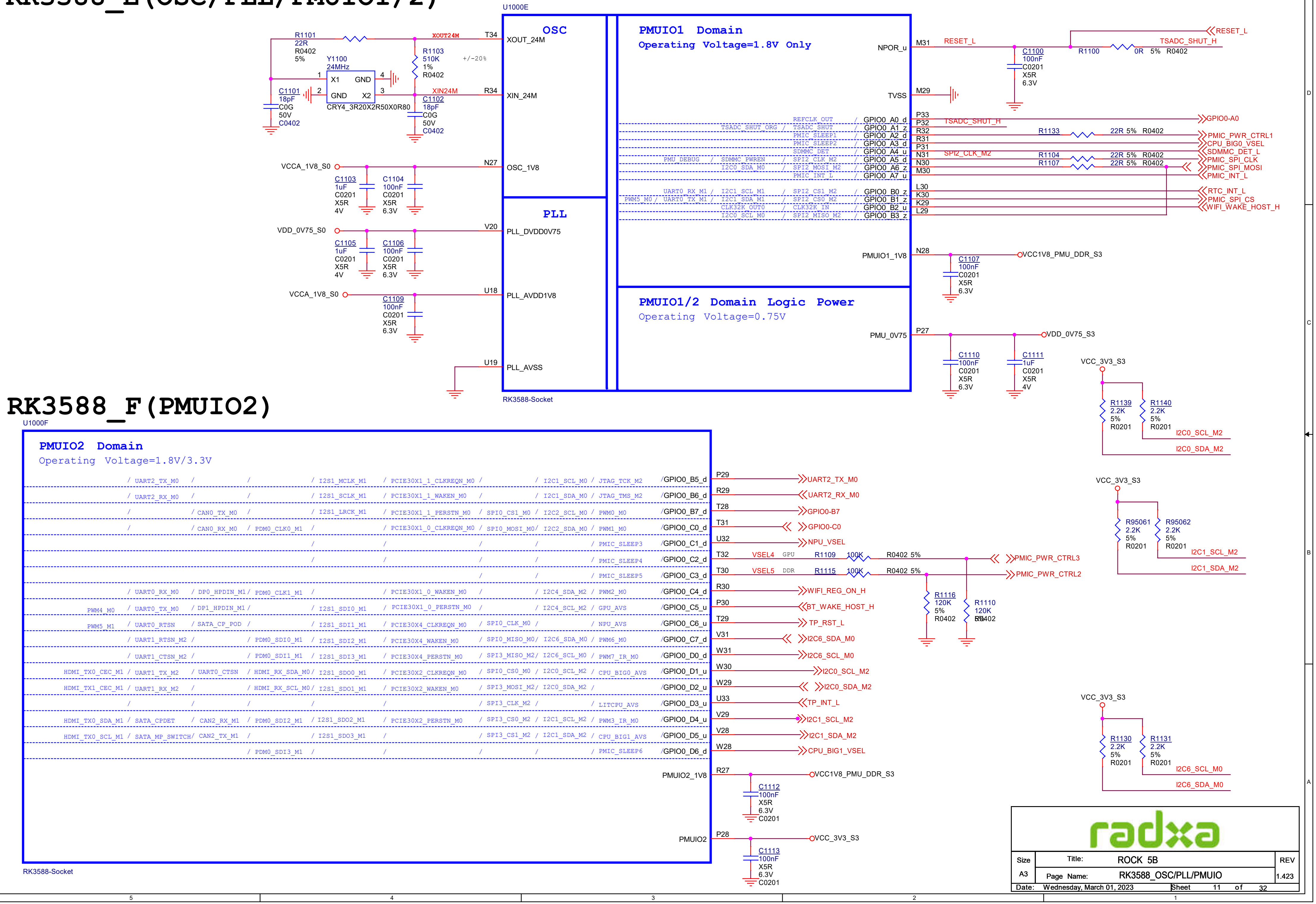
RK3588_E(OSC/PLL/PMUIO1/2)

RK3588_F(PMUIO2)


U1000E
OSC
XOUT_24M
XIN_24M
OSC_1V8
PLL
PLL_DVDD0V75
PLL_AVDD1V8
PLL_AVSS
RK3588-Socket
R1101 22R R0402 5%
XOUT24M
T34
R1103 510K 1% R0402
+/-20%
Y1100 24MHz
1 X1 GND 4
2 GND X2 3
CRY4_3R20X2R50X0R80
C1101 18pF C0G 50V C0402
XIN24M
R34
C1102 18pF C0G 50V C0402
VCCA_1V8_S0
N27
C1103 1uF C0201 X5R 4V
C1104 100nF C0201 X5R 6.3V
VDD_0V75_S0
V20
C1105 1uF C0201 X5R 4V
C1106 100nF C0201 X5R 6.3V
VCCA_1V8_S0
U18
C1109 100nF C0201 X5R 6.3V
U19
PMUIO1 Domain
Operating Voltage=1.8V Only
NPOR_u
M31
RESET_L
C1100 100nF C0201 X5R 6.3V
R1100 0R 5% R0402
TSADC_SHUT_H
RESET_L
TVSS
M29
REFCLK_OUT / GPIO0_A0_d
TSADC_SHUT_ORG / TSADC_SHUT / GPIO0_A1_z
PMIC_SLEEP1 / GPIO0_A2_d
PMIC_SLEEP2 / GPIO0_A3_d
SDMMC_DET / GPIO0_A4_u
PMU_DEBUG / SDMMC_PWREN / SPI2_CLK_M2 / GPIO0_A5_d
I2C0_SDA_M0 / SPI2_MOSI_M2 / GPIO0_A6_z
PMIC_INT_L / GPIO0_A7_u
UART0_RX_M1 / I2C1_SCL_M1 / SPI2_CS1_M2 / GPIO0_B0_z
PWM5_M0 / UART0_TX_M1 / I2C1_SDA_M1 / SPI2_CS0_M2 / GPIO0_B1_z
CLK32K_OUT0 / CLK32K_IN / GPIO0_B2_u
I2C0_SCL_M0 / SPI2_MISO_M2 / GPIO0_B3_z
P33
P32
R32
R31
P31
N31
N30
M30
L30
K30
K29
L29
TSADC_SHUT_H
SPI2_CLK_M2
R1133 22R 5% R0402
R1104 22R 5% R0402
R1107 22R 5% R0402
GPIO0-A0
PMIC_PWR_CTRL1
CPU_BIG0_VSEL
SDMMC_DET_L
PMIC_SPI_CLK
PMIC_SPI_MOSI
PMIC_INT_L
RTC_INT_L
PMIC_SPI_CS
WIFI_WAKE_HOST_H
PMUIO1_1V8
N28
VCC1V8_PMU_DDR_S3
C1107 100nF C0201 X5R 6.3V
PMUIO1/2 Domain Logic Power
Operating Voltage=0.75V
PMU_0V75
P27
VDD_0V75_S3
C1110 100nF C0201 X5R 6.3V
C1111 1uF C0201 X5R 4V
VCC_3V3_S3
R1139 2.2K 5% R0201
R1140 2.2K 5% R0201
I2C0_SCL_M2
I2C0_SDA_M2
U1000F
PMUIO2 Domain
Operating Voltage=1.8V/3.3V
/ UART2_TX_M0 / / / I2S1_MCLK_M1 / PCIE30X1_1_CLKREQN_M0 / / I2C1_SCL_M0 / JTAG_TCK_M2 /GPIO0_B5_d
/ UART2_RX_M0 / / / I2S1_SCLK_M1 / PCIE30X1_1_WAKEN_M0 / / I2C1_SDA_M0 / JTAG_TMS_M2 /GPIO0_B6_d
/ / CAN0_TX_M0 / / I2S1_LRCK_M1 / PCIE30X1_1_PERSTN_M0 / SPI0_CS1_M0 / I2C2_SCL_M0 / PWM0_M0 /GPIO0_B7_d
/ / CAN0_RX_M0 / PDM0_CLK0_M1 / / PCIE30X1_0_CLKREQN_M0 / SPI0_MOSI_M0/ I2C2_SDA_M0 / PWM1_M0 /GPIO0_C0_d
/ / / / / PMIC_SLEEP3 /GPIO0_C1_d
/ / / / / PMIC_SLEEP4 /GPIO0_C2_d
/ / / PMIC_SLEEP5 /GPIO0_C3_d
/ UART0_RX_M0 / DP0_HPDIN_M1 / PDM0_CLK1_M1 / / PCIE30X1_0_WAKEN_M0 / / I2C4_SDA_M2 / PWM2_M0 /GPIO0_C4_d
PWM4_M0 / UART0_TX_M0 / DP1_HPDIN_M1 / / I2S1_SDI0_M1 / PCIE30X1_0_PERSTN_M0 / / I2C4_SCL_M2 / GPU_AVS /GPIO0_C5_u
PWM5_M1 / UART0_RTSN / SATA_CP_POD / / I2S1_SDI1_M1 / PCIE30X4_CLKREQN_M0 / SPI0_CLK_M0 / / NPU_AVS /GPIO0_C6_u
/ UART1_RTSN_M2 / / PDM0_SDI0_M1 / I2S1_SDI2_M1 / PCIE30X4_WAKEN_M0 / SPI0_MISO_M0/ I2C6_SDA_M0 / PWM6_M0 /GPIO0_C7_d
/ UART1_CTSN_M2 / / PDM0_SDI1_M1 / I2S1_SDI3_M1 / PCIE30X4_PERSTN_M0 / SPI3_MISO_M2/ I2C6_SCL_M0 / PWM7_IR_M0 /GPIO0_D0_d
HDMI_TX0_CEC_M1 / UART1_TX_M2 / UART0_CTSN / HDMI_RX_SDA_M0/ I2S1_SDO0_M1 / PCIE30X2_CLKREQN_M0 / SPI0_CS0_M0 / I2C0_SCL_M2 / CPU_BIG0_AVS /GPIO0_D1_u
HDMI_TX1_CEC_M1 / UART1_RX_M2 / / HDMI_RX_SCL_M0/ I2S1_SDO1_M1 / PCIE30X2_WAKEN_M0 / SPI3_MOSI_M2/ I2C0_SDA_M2 / /GPIO0_D2_u
/ / / / / SPI3_CLK_M2 / / LITCPU_AVS /GPIO0_D3_u
HDMI_TX0_SDA_M1 / SATA_CPDET / CAN2_RX_M1 / PDM0_SDI2_M1 / I2S1_SDO2_M1 / PCIE30X2_PERSTN_M0 / SPI3_CS0_M2 / I2C1_SCL_M2 / PWM3_IR_M0 /GPIO0_D4_u
HDMI_TX0_SCL_M1 / SATA_MP_SWITCH/ CAN2_TX_M1 / / I2S1_SDO3_M1 / / SPI3_CS1_M2 / I2C1_SDA_M2 / CPU_BIG1_AVS /GPIO0_D5_u
/ PDM0_SDI3_M1 / / / / PMIC_SLEEP6 /GPIO0_D6_d
P29 UART2_TX_M0
R29 UART2_RX_M0
T28 GPIO0-B7
T31 GPIO0-C0
U32 NPU_VSEL
T32 VSEL4 GPU R1109 100K R0402 5%
PMIC_PWR_CTRL3
T30 VSEL5 DDR R1115 100K R0402 5%
PMIC_PWR_CTRL2
R1116 120K 5% R0402
R1110 120K 5% R0402
R30 WIFI_REG_ON_H
P30 BT_WAKE_HOST_H
T29 TP_RST_L
V31 I2C6_SDA_M0
W31 I2C6_SCL_M0
W30 I2C0_SCL_M2
W29 I2C0_SDA_M2
U33 TP_INT_L
V29 I2C1_SCL_M2
V28 I2C1_SDA_M2
W28 CPU_BIG1_VSEL
PMUIO2_1V8
R27
VCC1V8_PMU_DDR_S3
C1112 100nF X5R 6.3V C0201
PMUIO2
P28
VCC_3V3_S3
C1113 100nF X5R 6.3V C0201
RK3588-Socket
VCC_3V3_S3
R95061 2.2K 5% R0201
R95062 2.2K 5% R0201
I2C1_SCL_M2
I2C1_SDA_M2
VCC_3V3_S3
R1130 2.2K 5% R0201
R1131 2.2K 5% R0201
I2C6_SCL_M0
I2C6_SDA_M0
5
4
3
2
1
D
C
B
A

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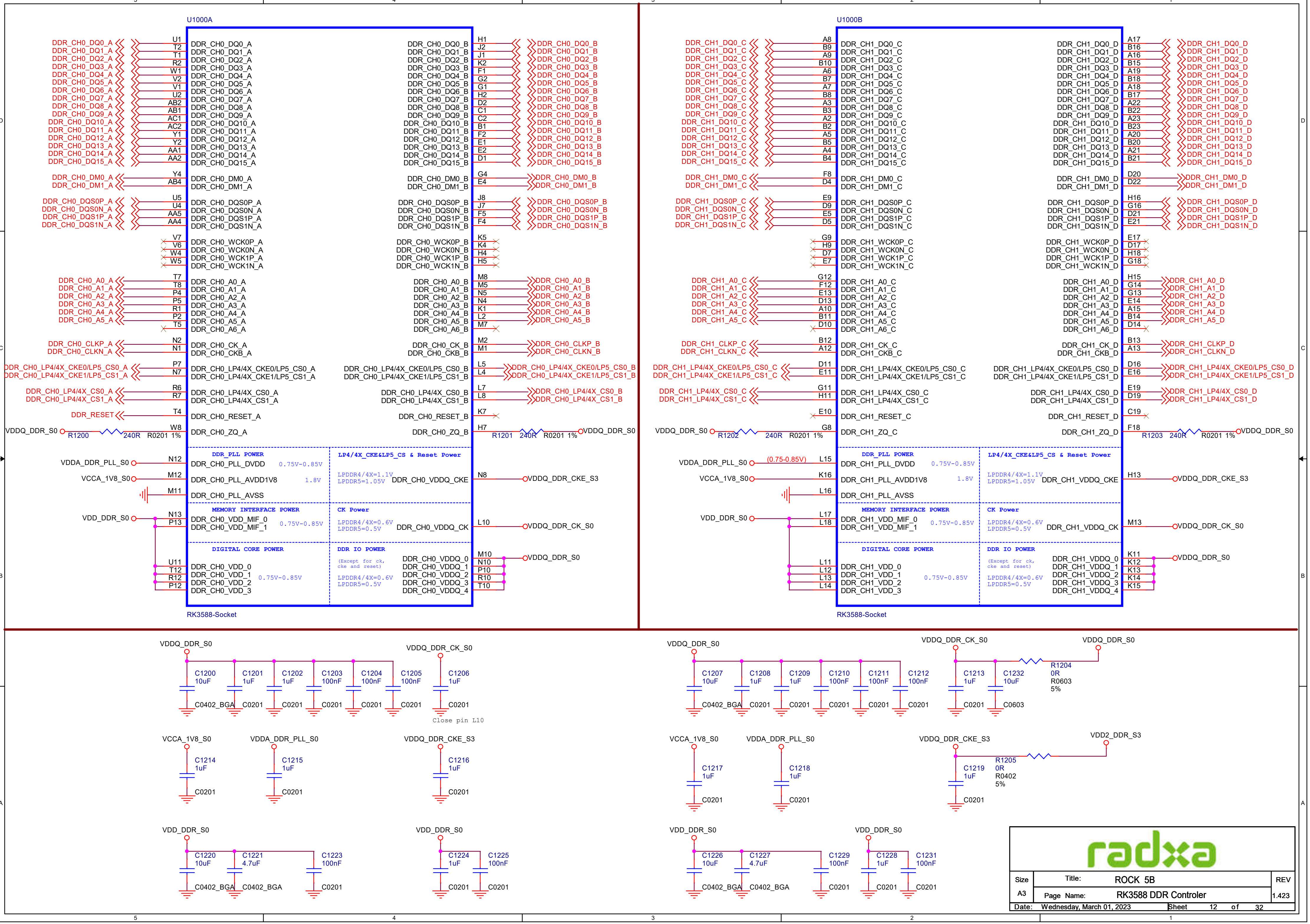
U1000A
U1 DDR_CH0_DQ0_A
T2 DDR_CH0_DQ1_A
T1 DDR_CH0_DQ2_A
R2 DDR_CH0_DQ3_A
W1 DDR_CH0_DQ4_A
V2 DDR_CH0_DQ5_A
V1 DDR_CH0_DQ6_A
U2 DDR_CH0_DQ7_A
AB2 DDR_CH0_DQ8_A
AB1 DDR_CH0_DQ9_A
AC1 DDR_CH0_DQ10_A
AC2 DDR_CH0_DQ11_A
Y1 DDR_CH0_DQ12_A
Y2 DDR_CH0_DQ13_A
AA1 DDR_CH0_DQ14_A
AA2 DDR_CH0_DQ15_A
Y4 DDR_CH0_DM0_A
AB4 DDR_CH0_DM1_A
U5 DDR_CH0_DQS0P_A
U4 DDR_CH0_DQS0N_A
AA5 DDR_CH0_DQS1P_A
AA4 DDR_CH0_DQS1N_A
V7 DDR_CH0_WCK0P_A
V6 DDR_CH0_WCK0N_A
W4 DDR_CH0_WCK1P_A
W5 DDR_CH0_WCK1N_A
T7 DDR_CH0_A0_A
T8 DDR_CH0_A1_A
P4 DDR_CH0_A2_A
P5 DDR_CH0_A3_A
R1 DDR_CH0_A4_A
P2 DDR_CH0_A5_A
T5 DDR_CH0_A6_A
N2 DDR_CH0_CLKP_A DDR_CH0_CK_A
N1 DDR_CH0_CLKN_A DDR_CH0_CKB_A
P7 DDR_CH0_LP4/4X_CKE0/LP5_CS0_A
N7 DDR_CH0_LP4/4X_CKE1/LP5_CS1_A
R6 DDR_CH0_LP4/4X_CS0_A
R7 DDR_CH0_LP4/4X_CS1_A
T4 DDR_RESET DDR_CH0_RESET_A
W8 DDR_CH0_ZQ_A
VDDQ_DDR_S0 R1200 240R R0201 1%
H1 DDR_CH0_DQ0_B
J2 DDR_CH0_DQ1_B
J1 DDR_CH0_DQ2_B
K2 DDR_CH0_DQ3_B
F1 DDR_CH0_DQ4_B
G2 DDR_CH0_DQ5_B
G1 DDR_CH0_DQ6_B
H2 DDR_CH0_DQ7_B
D2 DDR_CH0_DQ8_B
C1 DDR_CH0_DQ9_B
C2 DDR_CH0_DQ10_B
B1 DDR_CH0_DQ11_B
F2 DDR_CH0_DQ12_B
E1 DDR_CH0_DQ13_B
E2 DDR_CH0_DQ14_B
D1 DDR_CH0_DQ15_B
G4 DDR_CH0_DM0_B
E4 DDR_CH0_DM1_B
J8 DDR_CH0_DQS0P_B
J7 DDR_CH0_DQS0N_B
F5 DDR_CH0_DQS1P_B
F4 DDR_CH0_DQS1N_B
K5 DDR_CH0_WCK0P_B
K4 DDR_CH0_WCK0N_B
H4 DDR_CH0_WCK1P_B
H5 DDR_CH0_WCK1N_B
M8 DDR_CH0_A0_B
M5 DDR_CH0_A1_B
N5 DDR_CH0_A2_B
N4 DDR_CH0_A3_B
K1 DDR_CH0_A4_B
L2 DDR_CH0_A5_B
M7 DDR_CH0_A6_B
M2 DDR_CH0_CK_B DDR_CH0_CLKP_B
M1 DDR_CH0_CKB_B DDR_CH0_CLKN_B
L5 DDR_CH0_LP4/4X_CKE0/LP5_CS0_B
L4 DDR_CH0_LP4/4X_CKE1/LP5_CS1_B
L7 DDR_CH0_LP4/4X_CS0_B
L8 DDR_CH0_LP4/4X_CS1_B
K7 DDR_CH0_RESET_B
H7 DDR_CH0_ZQ_B
R1201 240R R0201 1% VDDQ_DDR_S0
DDR_PLL POWER
N12 VDDA_DDR_PLL_S0 DDR_CH0_PLL_DVDD 0.75V~0.85V
M12 VCCA_1V8_S0 DDR_CH0_PLL_AVDD1V8 1.8V
M11 DDR_CH0_PLL_AVSS
LP4/4X_CKE&LP5_CS & Reset Power
LPDDR4/4X=1.1V
LPDDR5=1.05V
N8 DDR_CH0_VDDQ_CKE VDDQ_DDR_CKE_S3
MEMORY INTERFACE POWER
N13 VDD_DDR_S0 DDR_CH0_VDD_MIF_0
P13 DDR_CH0_VDD_MIF_1 0.75V~0.85V
CK Power
LPDDR4/4X=0.6V
LPDDR5=0.5V
L10 DDR_CH0_VDDQ_CK VDDQ_DDR_CK_S0
DIGITAL CORE POWER
U11 DDR_CH0_VDD_0
T12 DDR_CH0_VDD_1
R12 DDR_CH0_VDD_2
P12 DDR_CH0_VDD_3
0.75V~0.85V
DDR IO POWER
(Except for ck, cke and reset)
LPDDR4/4X=0.6V
LPDDR5=0.5V
M10 DDR_CH0_VDDQ_0 VDDQ_DDR_S0
N10 DDR_CH0_VDDQ_1
P10 DDR_CH0_VDDQ_2
R10 DDR_CH0_VDDQ_3
T10 DDR_CH0_VDDQ_4
RK3588-Socket
U1000B
A8 DDR_CH1_DQ0_C
B9 DDR_CH1_DQ1_C
A9 DDR_CH1_DQ2_C
B10 DDR_CH1_DQ3_C
A6 DDR_CH1_DQ4_C
B7 DDR_CH1_DQ5_C
A7 DDR_CH1_DQ6_C
B8 DDR_CH1_DQ7_C
A3 DDR_CH1_DQ8_C
B3 DDR_CH1_DQ9_C
A2 DDR_CH1_DQ10_C
B2 DDR_CH1_DQ11_C
A5 DDR_CH1_DQ12_C
B5 DDR_CH1_DQ13_C
A4 DDR_CH1_DQ14_C
B4 DDR_CH1_DQ15_C
F8 DDR_CH1_DM0_C
D4 DDR_CH1_DM1_C
E9 DDR_CH1_DQS0P_C
D9 DDR_CH1_DQS0N_C
E5 DDR_CH1_DQS1P_C
D5 DDR_CH1_DQS1N_C
G9 DDR_CH1_WCK0P_C
H9 DDR_CH1_WCK0N_C
D7 DDR_CH1_WCK1P_C
E7 DDR_CH1_WCK1N_C
G12 DDR_CH1_A0_C
F12 DDR_CH1_A1_C
E13 DDR_CH1_A2_C
D13 DDR_CH1_A3_C
A10 DDR_CH1_A4_C
B11 DDR_CH1_A5_C
D10 DDR_CH1_A6_C
B12 DDR_CH1_CLKP_C DDR_CH1_CK_C
A12 DDR_CH1_CLKN_C DDR_CH1_CKB_C
D11 DDR_CH1_LP4/4X_CKE0/LP5_CS0_C
E11 DDR_CH1_LP4/4X_CKE1/LP5_CS1_C
G11 DDR_CH1_LP4/4X_CS0_C
H11 DDR_CH1_LP4/4X_CS1_C
E10 DDR_CH1_RESET_C
G8 DDR_CH1_ZQ_C
VDDQ_DDR_S0 R1202 240R R0201 1%
A17 DDR_CH1_DQ0_D
B16 DDR_CH1_DQ1_D
A16 DDR_CH1_DQ2_D
B15 DDR_CH1_DQ3_D
A19 DDR_CH1_DQ4_D
B18 DDR_CH1_DQ5_D
A18 DDR_CH1_DQ6_D
B17 DDR_CH1_DQ7_D
A22 DDR_CH1_DQ8_D
B22 DDR_CH1_DQ9_D
A23 DDR_CH1_DQ10_D
B23 DDR_CH1_DQ11_D
A20 DDR_CH1_DQ12_D
B20 DDR_CH1_DQ13_D
A21 DDR_CH1_DQ14_D
B21 DDR_CH1_DQ15_D
D20 DDR_CH1_DM0_D
D22 DDR_CH1_DM1_D
H16 DDR_CH1_DQS0P_D
G16 DDR_CH1_DQS0N_D
D21 DDR_CH1_DQS1P_D
E21 DDR_CH1_DQS1N_D
E17 DDR_CH1_WCK0P_D
D17 DDR_CH1_WCK0N_D
H18 DDR_CH1_WCK1P_D
G18 DDR_CH1_WCK1N_D
H15 DDR_CH1_A0_D
G14 DDR_CH1_A1_D
G13 DDR_CH1_A2_D
E14 DDR_CH1_A3_D
A15 DDR_CH1_A4_D
B14 DDR_CH1_A5_D
D14 DDR_CH1_A6_D
B13 DDR_CH1_CK_D DDR_CH1_CLKP_D
A13 DDR_CH1_CKB_D DDR_CH1_CLKN_D
D16 DDR_CH1_LP4/4X_CKE0/LP5_CS0_D
E16 DDR_CH1_LP4/4X_CKE1/LP5_CS1_D
E19 DDR_CH1_LP4/4X_CS0_D
D19 DDR_CH1_LP4/4X_CS1_D
C19 DDR_CH1_RESET_D
F18 DDR_CH1_ZQ_D
R1203 240R R0201 1% VDDQ_DDR_S0
DDR_PLL POWER
L15 VDDA_DDR_PLL_S0 (0.75-0.85V) DDR_CH1_PLL_DVDD 0.75V~0.85V
K16 VCCA_1V8_S0 DDR_CH1_PLL_AVDD1V8 1.8V
L16 DDR_CH1_PLL_AVSS
LP4/4X_CKE&LP5_CS & Reset Power
LPDDR4/4X=1.1V
LPDDR5=1.05V
H13 DDR_CH1_VDDQ_CKE VDDQ_DDR_CKE_S3
MEMORY INTERFACE POWER
L17 VDD_DDR_S0 DDR_CH1_VDD_MIF_0
L18 DDR_CH1_VDD_MIF_1 0.75V~0.85V
CK Power
LPDDR4/4X=0.6V
LPDDR5=0.5V
M13 DDR_CH1_VDDQ_CK VDDQ_DDR_CK_S0
DIGITAL CORE POWER
L11 DDR_CH1_VDD_0
L12 DDR_CH1_VDD_1
L13 DDR_CH1_VDD_2
L14 DDR_CH1_VDD_3
0.75V~0.85V
DDR IO POWER
(Except for ck, cke and reset)
LPDDR4/4X=0.6V
LPDDR5=0.5V
K11 DDR_CH1_VDDQ_0 VDDQ_DDR_S0
K12 DDR_CH1_VDDQ_1
K13 DDR_CH1_VDDQ_2
K14 DDR_CH1_VDDQ_3
K15 DDR_CH1_VDDQ_4
RK3588-Socket
VDDQ_DDR_S0
C1200 10uF C0402_BGA
C1201 1uF C0201
C1202 1uF C0201
C1203 100nF C0201
C1204 100nF C0201
C1205 100nF C0201
VDDQ_DDR_CK_S0
C1206 1uF C0201
Close pin L10
VDDQ_DDR_S0
C1207 10uF C0402_BGA
C1208 1uF C0201
C1209 1uF C0201
C1210 100nF C0201
C1211 100nF C0201
C1212 100nF C0201
VDDQ_DDR_CK_S0
C1213 1uF C0201
C1232 10uF C0603
VDDQ_DDR_S0
R1204 0R R0603 5%
VCCA_1V8_S0
C1214 1uF C0201
VDDA_DDR_PLL_S0
C1215 1uF C0201
VDDQ_DDR_CKE_S3
C1216 1uF C0201
VCCA_1V8_S0
C1217 1uF C0201
VDDA_DDR_PLL_S0
C1218 1uF C0201
VDDQ_DDR_CKE_S3
C1219 1uF C0201
VDD2_DDR_S3
R1205 0R R0402 5%
VDD_DDR_S0
C1220 10uF C0402_BGA
C1221 4.7uF C0402_BGA
C1223 100nF C0201
VDD_DDR_S0
C1224 1uF C0201
C1225 100nF C0201
VDD_DDR_S0
C1226 10uF C0402_BGA
C1227 4.7uF C0402_BGA
C1229 100nF C0201
VDD_DDR_S0
C1228 1uF C0201
C1231 100nF C0201
5 4 3 2 1
D C B A
radxa
Size A3
Title: ROCK 5B
REV 1.423
Page Name: RK3588 DDR Controler
Date: Wednesday, March 01, 2023
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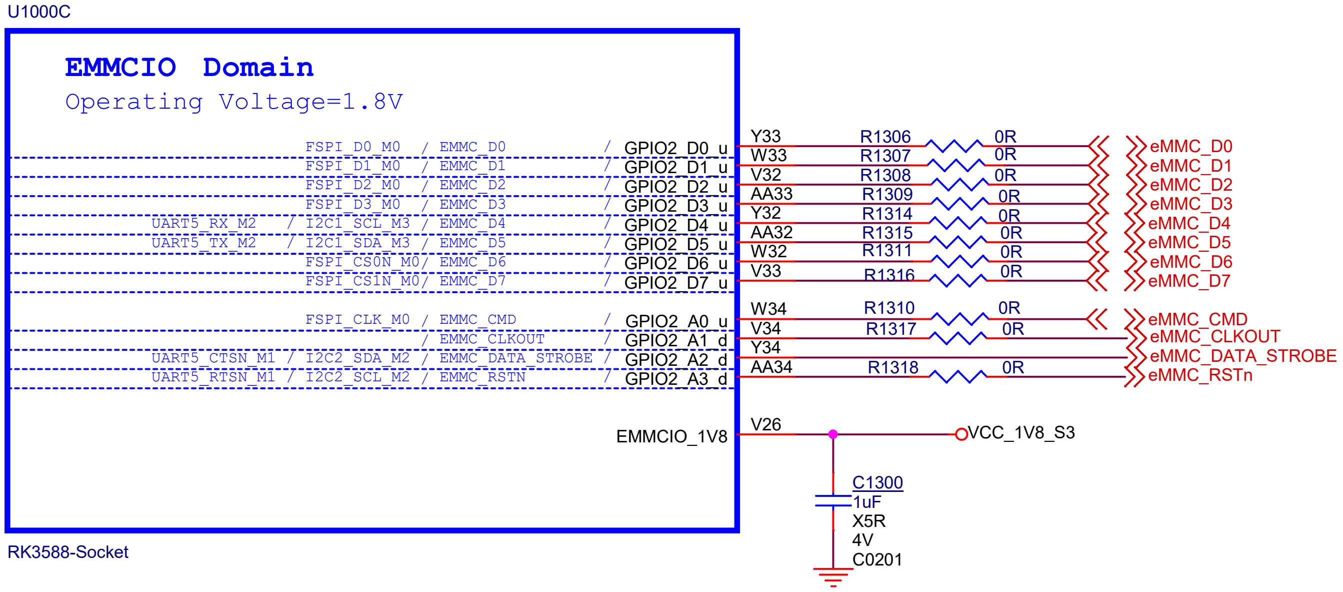
RK3588_C(EMMCIO Domain)


U1000C
EMMCIO Domain
Operating Voltage=1.8V
FSPI_D0_M0 / EMMC_D0 / GPIO2_D0_u
FSPI_D1_M0 / EMMC_D1 / GPIO2_D1_u
FSPI_D2_M0 / EMMC_D2 / GPIO2_D2_u
FSPI_D3_M0 / EMMC_D3 / GPIO2_D3_u
UART5_RX_M2 / I2C1_SCL_M3 / EMMC_D4 / GPIO2_D4_u
UART5_TX_M2 / I2C1_SDA_M3 / EMMC_D5 / GPIO2_D5_u
FSPI_CS0N_M0/ EMMC_D6 / GPIO2_D6_u
FSPI_CS1N_M0/ EMMC_D7 / GPIO2_D7_u
FSPI_CLK_M0 / EMMC_CMD / GPIO2_A0_u
/ EMMC_CLKOUT / GPIO2_A1_d
UART5_CTSN_M1 / I2C2_SDA_M2 / EMMC_DATA_STROBE / GPIO2_A2_d
UART5_RTSN_M1 / I2C2_SCL_M2 / EMMC_RSTN / GPIO2_A3_d
Y33 R1306 0R eMMC_D0
W33 R1307 0R eMMC_D1
V32 R1308 0R eMMC_D2
AA33 R1309 0R eMMC_D3
Y32 R1314 0R eMMC_D4
AA32 R1315 0R eMMC_D5
W32 R1311 0R eMMC_D6
V33 R1316 0R eMMC_D7
W34 R1310 0R eMMC_CMD
V34 R1317 0R eMMC_CLKOUT
Y34 eMMC_DATA_STROBE
AA34 R1318 0R eMMC_RSTn
EMMCIO_1V8
V26
VCC_1V8_S3
C1300
1uF
X5R
4V
C0201
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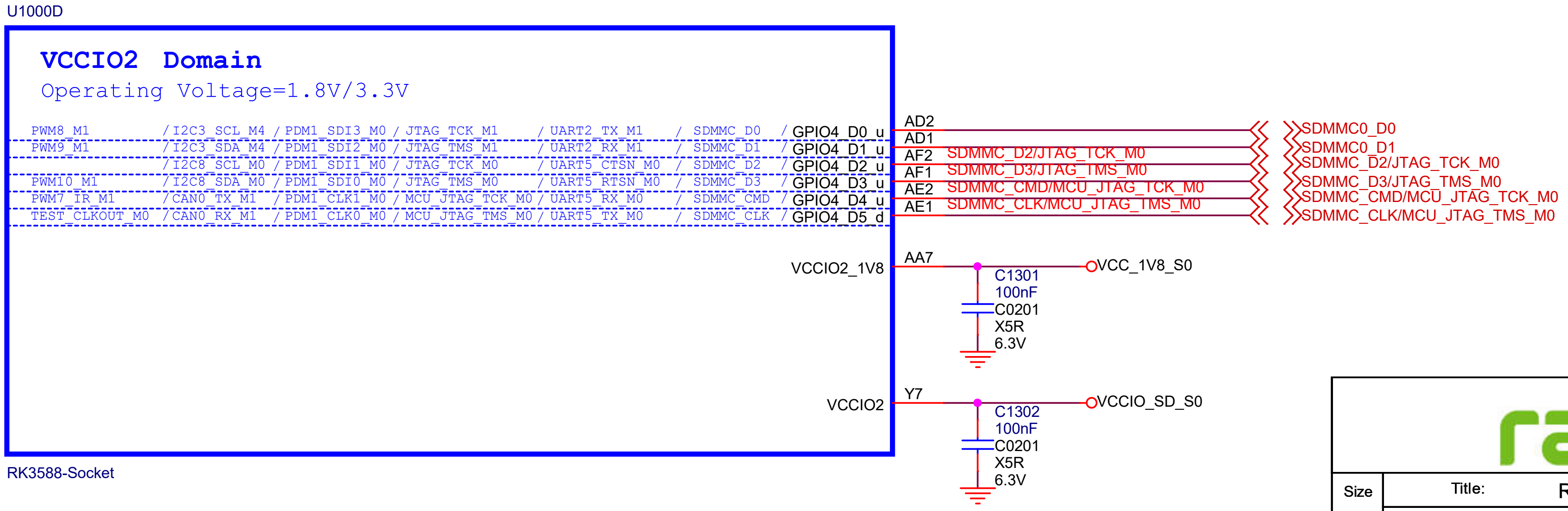
RK3588_D(VCCIO2 Domain)


U1000D
VCCIO2 Domain
Operating Voltage=1.8V/3.3V
PWM8_M1 / I2C3_SCL_M4 / PDM1_SDI3_M0 / JTAG_TCK_M1 / UART2_TX_M1 / SDMMC_D0 / GPIO4_D0_u
PWM9_M1 / I2C3_SDA_M4 / PDM1_SDI2_M0 / JTAG_TMS_M1 / UART2_RX_M1 / SDMMC_D1 / GPIO4_D1_u
/ I2C8_SCL_M0 / PDM1_SDI1_M0 / JTAG_TCK_M0 / UART5_CTSN_M0 / SDMMC_D2 / GPIO4_D2_u
PWM10_M1 / I2C8_SDA_M0 / PDM1_SDI0_M0 / JTAG_TMS_M0 / UART5_RTSN_M0 / SDMMC_D3 / GPIO4_D3_u
PWM7_IR_M1 / CAN0_TX_M1 / PDM1_CLK1_M0 / MCU_JTAG_TCK_M0 / UART5_RX_M0 / SDMMC_CMD / GPIO4_D4_u
TEST_CLKOUT_M0 / CAN0_RX_M1 / PDM1_CLK0_M0 / MCU_JTAG_TMS_M0 / UART5_TX_M0 / SDMMC_CLK / GPIO4_D5_d
AD2 SDMMC0_D0
AD1 SDMMC0_D1
AF2 SDMMC_D2/JTAG_TCK_M0
AF1 SDMMC_D3/JTAG_TMS_M0
AE2 SDMMC_CMD/MCU_JTAG_TCK_M0
AE1 SDMMC_CLK/MCU_JTAG_TMS_M0
SDMMC_D2/JTAG_TCK_M0
SDMMC_D3/JTAG_TMS_M0
SDMMC_CMD/MCU_JTAG_TCK_M0
SDMMC_CLK/MCU_JTAG_TMS_M0
VCCIO2_1V8
AA7
VCC_1V8_S0
C1301
100nF
C0201
X5R
6.3V
VCCIO2
Y7
VCCIO_SD_S0
C1302
100nF
C0201
X5R
6.3V
RK3588-Socket

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Size	Title:	ROCK 5B	REV
A4	Page Name:	RK3588_Flash/SD Controller	1.423

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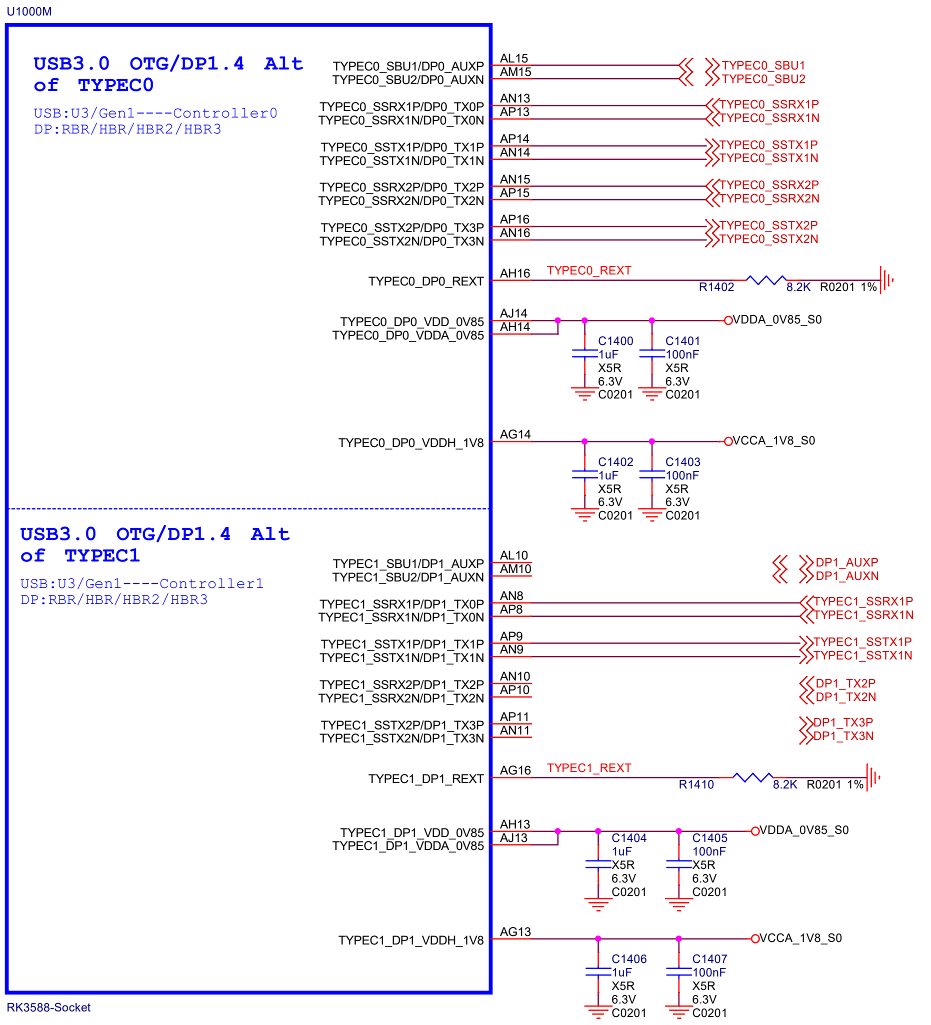
RK3588_M(TYPEC/DP)


U1000M
USB3.0 OTG/DP1.4 Alt of TYPEC0
USB:U3/Gen1----Controller0
DP:RBR/HBR/HBR2/HBR3
TYPEC0_SBU1/DP0_AUXP AL15 TYPEC0_SBU1
TYPEC0_SBU2/DP0_AUXN AM15 TYPEC0_SBU2
TYPEC0_SSRX1P/DP0_TX0P AN13 TYPEC0_SSRX1P
TYPEC0_SSRX1N/DP0_TX0N AP13 TYPEC0_SSRX1N
TYPEC0_SSTX1P/DP0_TX1P AP14 TYPEC0_SSTX1P
TYPEC0_SSTX1N/DP0_TX1N AN14 TYPEC0_SSTX1N
TYPEC0_SSRX2P/DP0_TX2P AN15 TYPEC0_SSRX2P
TYPEC0_SSRX2N/DP0_TX2N AP15 TYPEC0_SSRX2N
TYPEC0_SSTX2P/DP0_TX3P AP16 TYPEC0_SSTX2P
TYPEC0_SSTX2N/DP0_TX3N AN16 TYPEC0_SSTX2N
TYPEC0_DP0_REXT AH16 TYPEC0_REXT R1402 8.2K R0201 1%
TYPEC0_DP0_VDD_0V85 AJ14
TYPEC0_DP0_VDDA_0V85 AH14
VDDA_0V85_S0
C1400 1uF X5R 6.3V C0201
C1401 100nF X5R 6.3V C0201
TYPEC0_DP0_VDDH_1V8 AG14
VCCA_1V8_S0
C1402 1uF X5R 6.3V C0201
C1403 100nF X5R 6.3V C0201
USB3.0 OTG/DP1.4 Alt of TYPEC1
USB:U3/Gen1----Controller1
DP:RBR/HBR/HBR2/HBR3
TYPEC1_SBU1/DP1_AUXP AL10 DP1_AUXP
TYPEC1_SBU2/DP1_AUXN AM10 DP1_AUXN
TYPEC1_SSRX1P/DP1_TX0P AN8 TYPEC1_SSRX1P
TYPEC1_SSRX1N/DP1_TX0N AP8 TYPEC1_SSRX1N
TYPEC1_SSTX1P/DP1_TX1P AP9 TYPEC1_SSTX1P
TYPEC1_SSTX1N/DP1_TX1N AN9 TYPEC1_SSTX1N
TYPEC1_SSRX2P/DP1_TX2P AN10 DP1_TX2P
TYPEC1_SSRX2N/DP1_TX2N AP10 DP1_TX2N
TYPEC1_SSTX2P/DP1_TX3P AP11 DP1_TX3P
TYPEC1_SSTX2N/DP1_TX3N AN11 DP1_TX3N
TYPEC1_DP1_REXT AG16 TYPEC1_REXT R1410 8.2K R0201 1%
TYPEC1_DP1_VDD_0V85 AH13
TYPEC1_DP1_VDDA_0V85 AJ13
VDDA_0V85_S0
C1404 1uF X5R 6.3V C0201
C1405 100nF X5R 6.3V C0201
TYPEC1_DP1_VDDH_1V8 AG13
VCCA_1V8_S0
C1406 1uF X5R 6.3V C0201
C1407 100nF X5R 6.3V C0201
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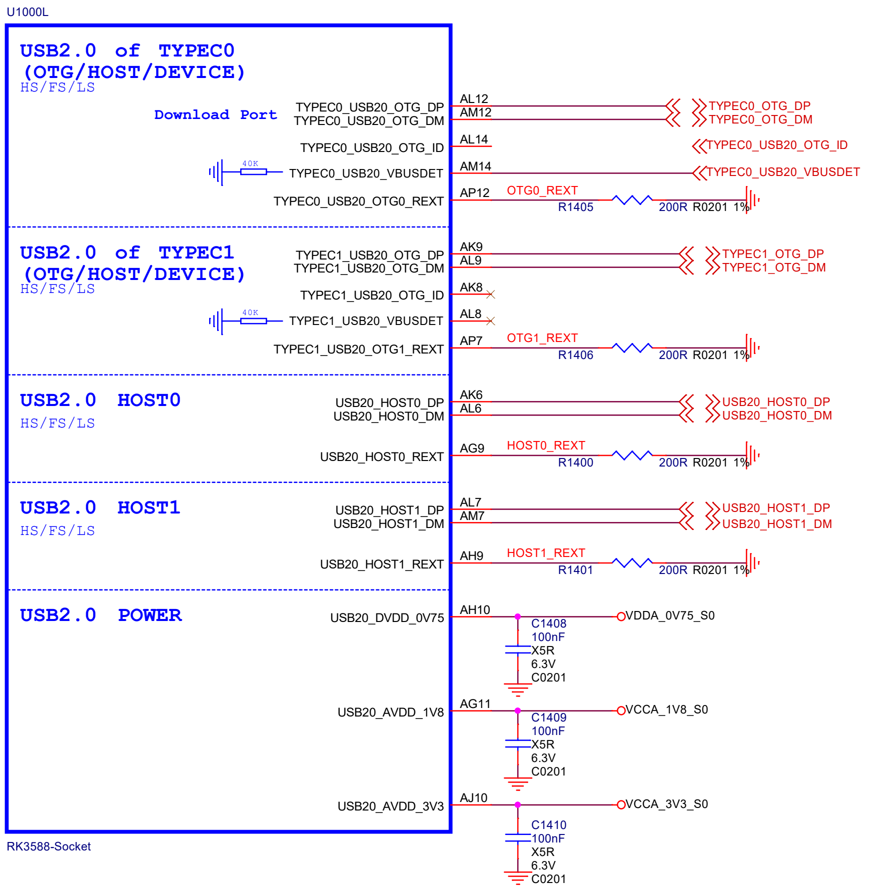
RK3588_L(USB2.0 HOST/OTG)


U1000L
USB2.0 of TYPEC0 (OTG/HOST/DEVICE)
HS/FS/LS
Download Port
TYPEC0_USB20_OTG_DP AL12 TYPEC0_OTG_DP
TYPEC0_USB20_OTG_DM AM12 TYPEC0_OTG_DM
TYPEC0_USB20_OTG_ID AL14 TYPEC0_USB20_OTG_ID
40K
TYPEC0_USB20_VBUSDET AM14 TYPEC0_USB20_VBUSDET
TYPEC0_USB20_OTG0_REXT AP12 OTG0_REXT R1405 200R R0201 1%
USB2.0 of TYPEC1 (OTG/HOST/DEVICE)
HS/FS/LS
TYPEC1_USB20_OTG_DP AK9 TYPEC1_OTG_DP
TYPEC1_USB20_OTG_DM AL9 TYPEC1_OTG_DM
TYPEC1_USB20_OTG_ID AK8
40K
TYPEC1_USB20_VBUSDET AL8
TYPEC1_USB20_OTG1_REXT AP7 OTG1_REXT R1406 200R R0201 1%
USB2.0 HOST0
HS/FS/LS
USB20_HOST0_DP AK6 USB20_HOST0_DP
USB20_HOST0_DM AL6 USB20_HOST0_DM
USB20_HOST0_REXT AG9 HOST0_REXT R1400 200R R0201 1%
USB2.0 HOST1
HS/FS/LS
USB20_HOST1_DP AL7 USB20_HOST1_DP
USB20_HOST1_DM AM7 USB20_HOST1_DM
USB20_HOST1_REXT AH9 HOST1_REXT R1401 200R R0201 1%
USB2.0 POWER
USB20_DVDD_0V75 AH10 VDDA_0V75_S0
C1408 100nF X5R 6.3V C0201
USB20_AVDD_1V8 AG11 VCCA_1V8_S0
C1409 100nF X5R 6.3V C0201
USB20_AVDD_3V3 AJ10 VCCA_3V3_S0
C1410 100nF X5R 6.3V C0201
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Size	Title: ROCK 5B	REV
A3	Page Name: RK3588_USB30/USB20_Ctrl	1.423
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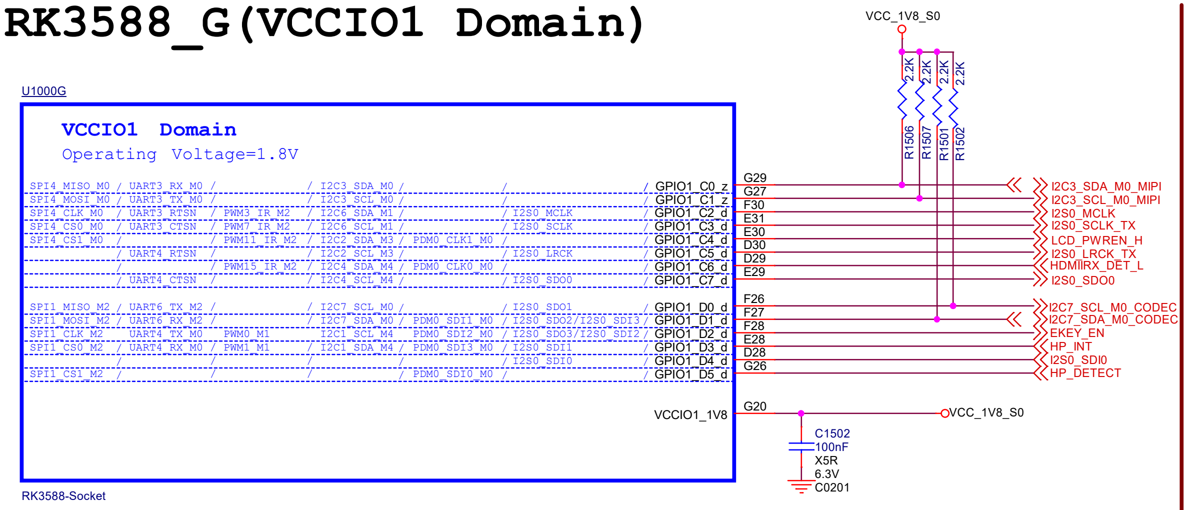
RK3588_G(VCCIO1 Domain)


VCC_1V8_S0
2.2K
2.2K
2.2K
2.2K
R1506
R1507
R1501
R1502
U1000G
VCCIO1 Domain
Operating Voltage=1.8V
SPI4_MISO_M0 / UART3_RX_M0 / I2C3_SDA_M0 / GPIO1_C0_z G29 I2C3_SDA_M0_MIPI
SPI4_MOSI_M0 / UART3_TX_M0 / I2C3_SCL_M0 / GPIO1_C1_z G27 I2C3_SCL_M0_MIPI
SPI4_CLK_M0 / UART3_RTSN / PWM3_IR_M2 / I2C6_SDA_M1 / I2S0_MCLK / GPIO1_C2_d F30 I2S0_MCLK
SPI4_CS0_M0 / UART3_CTSN / PWM7_IR_M2 / I2C6_SCL_M1 / I2S0_SCLK / GPIO1_C3_d E31 I2S0_SCLK_TX
SPI4_CS1_M0 / PWM11_IR_M2 / I2C2_SDA_M3 / PDM0_CLK1_M0 / GPIO1_C4_d E30 LCD_PWREN_H
UART4_RTSN / I2C2_SCL_M3 / I2S0_LRCK / GPIO1_C5_d D30 I2S0_LRCK_TX
PWM15_IR_M2 / I2C4_SDA_M4 / PDM0_CLK0_M0 / GPIO1_C6_d D29 HDMIRX_DET_L
UART4_CTSN / I2C4_SCL_M4 / I2S0_SDO0 / GPIO1_C7_d E29 I2S0_SDO0
SPI1_MISO_M2 / UART6_TX_M2 / I2C7_SCL_M0 / I2S0_SDO1 / GPIO1_D0_d F26 I2C7_SCL_M0_CODEC
SPI1_MOSI_M2 / UART6_RX_M2 / I2C7_SDA_M0 / PDM0_SDI1_M0 / I2S0_SDO2/I2S0_SDI3 / GPIO1_D1_d F27 I2C7_SDA_M0_CODEC
SPI1_CLK_M2 / UART4_TX_M0 / PWM0_M1 / I2C1_SCL_M4 / PDM0_SDI2_M0 / I2S0_SDO3/I2S0_SDI2 / GPIO1_D2_d F28 EKEY_EN
SPI1_CS0_M2 / UART4_RX_M0 / PWM1_M1 / I2C1_SDA_M4 / PDM0_SDI3_M0 / I2S0_SDI1 / GPIO1_D3_d E28 HP_INT
I2S0_SDI0 / GPIO1_D4_d D28 I2S0_SDI0
SPI1_CS1_M2 / PDM0_SDI0_M0 / GPIO1_D5_d G26 HP_DETECT
VCCIO1_1V8 G20 VCC_1V8_S0
C1502 100nF X5R 6.3V C0201
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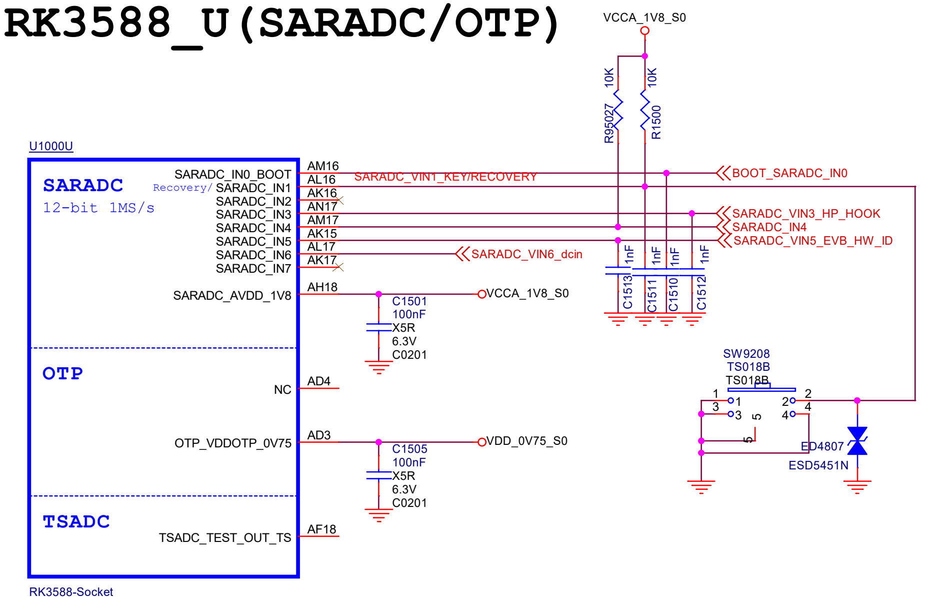
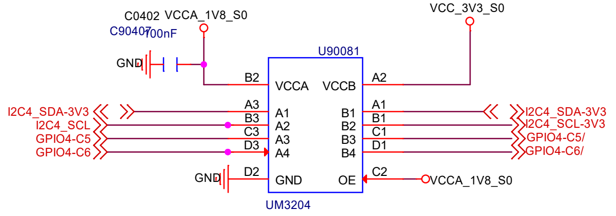
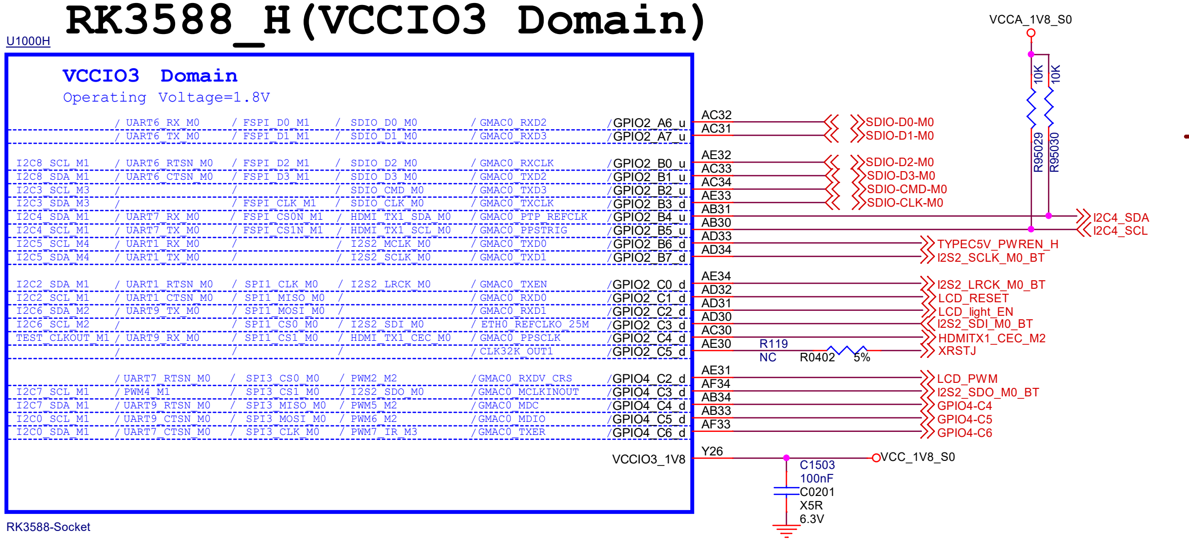
RK3588_U(SARADC/OTP)


VCCA_1V8_S0
10K
10K
R95027
R1500
U1000U
SARADC
12-bit 1MS/s
Recovery/
SARADC_IN0_BOOT AM16 BOOT_SARADC_IN0
SARADC_IN1 AL16 SARADC_VIN1_KEY/RECOVERY
SARADC_IN2 AK16
SARADC_IN3 AN17 SARADC_VIN3_HP_HOOK
SARADC_IN4 AM17 SARADC_IN4
SARADC_IN5 AK15 SARADC_VIN5_EVB_HW_ID
SARADC_IN6 AL17 SARADC_VIN6_dcin
SARADC_IN7 AK17
1nF 1nF 1nF 1nF
C1513 C1511 C1510 C1512
SARADC_AVDD_1V8 AH18 VCCA_1V8_S0
C1501 100nF X5R 6.3V C0201
OTP
NC AD4
OTP_VDDOTP_0V75 AD3 VDD_0V75_S0
C1505 100nF X5R 6.3V C0201
TSADC
TSADC_TEST_OUT_TS AF18
SW9208
TS018B
TS018B
1 2 3 4 5
ED4807
ESD5451N
RK3588-Socket


C0402 VCCA_1V8_S0
C90407 100nF
VCC_3V3_S0
GND
U90081
B2 VCCA VCCB A2
I2C4_SDA-3V3 A3 A1 B1 A1 I2C4_SDA-3V3
I2C4_SCL B3 A2 B2 B1 I2C4_SCL-3V3
GPIO4-C5 C3 A3 B3 C1 GPIO4-C5/
GPIO4-C6 D3 A4 B4 D1 GPIO4-C6/
GND D2 GND OE C2 VCCA_1V8_S0
UM3204

RK3588_H(VCCIO3 Domain)


U1000H
VCCIO3 Domain
Operating Voltage=1.8V
VCCA_1V8_S0
10K 10K
R95029 R95030
UART6_RX_M0 / FSPI_D0_M1 / SDIO_D0_M0 / GMAC0_RXD2 / GPIO2_A6_u AC32 SDIO-D0-M0
UART6_TX_M0 / FSPI_D1_M1 / SDIO_D1_M0 / GMAC0_RXD3 / GPIO2_A7_u AC31 SDIO-D1-M0
I2C8_SCL_M1 / UART6_RTSN_M0 / FSPI_D2_M1 / SDIO_D2_M0 / GMAC0_RXCLK / GPIO2_B0_u AE32 SDIO-D2-M0
I2C8_SDA_M1 / UART6_CTSN_M0 / FSPI_D3_M1 / SDIO_D3_M0 / GMAC0_TXD2 / GPIO2_B1_u AC33 SDIO-D3-M0
I2C3_SCL_M3 / SDIO_CMD_M0 / GMAC0_TXD3 / GPIO2_B2_u AC34 SDIO-CMD-M0
I2C3_SDA_M3 / FSPI_CLK_M1 / SDIO_CLK_M0 / GMAC0_TXCLK / GPIO2_B3_d AE33 SDIO-CLK-M0
I2C4_SDA_M1 / UART7_RX_M0 / FSPI_CS0N_M1 / HDMI_TX1_SDA_M0 / GMAC0_PTP_REFCLK / GPIO2_B4_u AB31 I2C4_SDA
I2C4_SCL_M1 / UART7_TX_M0 / FSPI_CS1N_M1 / HDMI_TX1_SCL_M0 / GMAC0_PPSTRIG / GPIO2_B5_u AB30 I2C4_SCL
I2C5_SCL_M4 / UART1_RX_M0 / I2S2_MCLK_M0 / GMAC0_TXD0 / GPIO2_B6_d AD33 TYPEC5V_PWREN_H
I2C5_SDA_M4 / UART1_TX_M0 / I2S2_SCLK_M0 / GMAC0_TXD1 / GPIO2_B7_d AD34 I2S2_SCLK_M0_BT
I2C2_SDA_M1 / UART1_RTSN_M0 / SPI1_CLK_M0 / I2S2_LRCK_M0 / GMAC0_TXEN / GPIO2_C0_d AE34 I2S2_LRCK_M0_BT
I2C2_SCL_M1 / UART1_CTSN_M0 / SPI1_MISO_M0 / GMAC0_RXD0 / GPIO2_C1_d AD32 LCD_RESET
I2C6_SDA_M2 / UART9_TX_M0 / SPI1_MOSI_M0 / GMAC0_RXD1 / GPIO2_C2_d AD31 LCD_light_EN
I2C6_SCL_M2 / SPI1_CS0_M0 / I2S2_SDI_M0 / ETH0_REFCLKO_25M / GPIO2_C3_d AD30 I2S2_SDI_M0_BT
TEST_CLKOUT_M1 / UART9_RX_M0 / SPI1_CS1_M0 / HDMI_TX1_CEC_M0 / GMAC0_PPSCLK / GPIO2_C4_d AC30 HDMITX1_CEC_M2
CLK32K_OUT1 / GPIO2_C5_d AE30 R119 NC R0402 5% XRSTJ
UART7_RTSN_M0 / SPI3_CS0_M0 / PWM2_M2 / GMAC0_RXDV_CRS / GPIO4_C2_d AE31 LCD_PWM
I2C7_SCL_M1 / PWM4_M1 / SPI3_CS1_M0 / I2S2_SDO_M0 / GMAC0_MCLKINOUT / GPIO4_C3_d AF34 I2S2_SDO_M0_BT
I2C7_SDA_M1 / UART9_RTSN_M0 / SPI3_MISO_M0 / PWM5_M2 / GMAC0_MDC / GPIO4_C4_d AB34 GPIO4-C4
I2C0_SCL_M1 / UART9_CTSN_M0 / SPI3_MOSI_M0 / PWM6_M2 / GMAC0_MDIO / GPIO4_C5_d AB33 GPIO4-C5
I2C0_SDA_M1 / UART7_CTSN_M0 / SPI3_CLK_M0 / PWM7_IR_M3 / GMAC0_TXER / GPIO4_C6_d AF33 GPIO4-C6
VCCIO3_1V8 Y26 VCC_1V8_S0
C1503 100nF C0201 X5R 6.3V
RK3588-Socket

BOOT MODE CONFIG

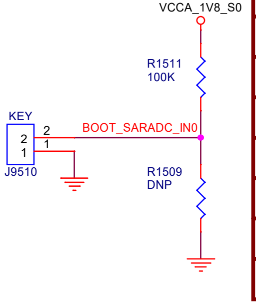


TABLE 1

Item	Rup	Rdown	ADC	VOL	BOOT MODE
LEVEL1	DNP	100K	0	0V	USB (Maskrom mode)
LEVEL2	100K	20K	682	0.3V	SD Card-USB
LEVEL3	100K	51K	1365	0.6V	EMMC-USB
LEVEL4	100K	100K	2047	0.9V	FSPI M0-USB
LEVEL5	100K	200K	2730	1.2V	FSPI M1-USB
LEVEL6	100K	499K	3412	1.5V	FSPI M2-USB
LEVEL7	100K	DNP	4095	1.8V	FSPI_M2-FSPI_M1-FSPI_M0 -EMMC-SD Card-USB

BOARD ID CONFIG

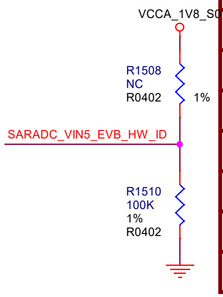


TABLE 2

Item	Rup	Rdown	ADC	VOL	VERSION
LEVEL1	DNP	100K	0	0V	A
LEVEL2	100K	20K	682	0.3V	B
LEVEL3	100K	51K	1365	0.6V	C
LEVEL4	100K	100K	2047	0.9V	D
LEVEL5	100K	200K	2730	1.2V	E
LEVEL6	100K	499K	3412	1.5V	F
LEVEL7	100K	DNP	4095	1.8V	H

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Size	Title: ROCK 5B	REV
A3	Page Name: RK3588_SARADC/1.8V Only GPIO	1.423

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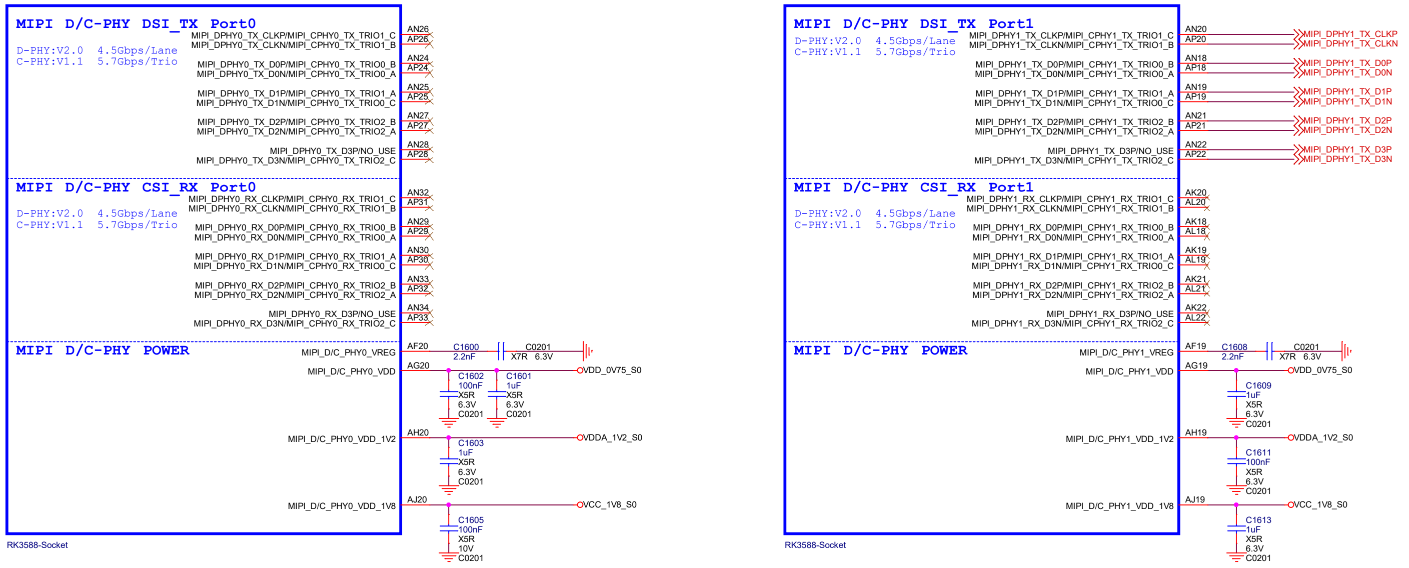
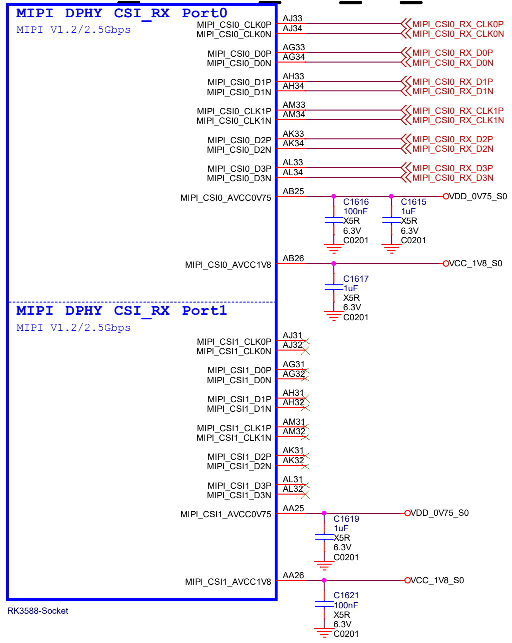
RK3588_Q/R(MIPI_D/C_PHY0/1)


U1000Q
MIPI D/C-PHY DSI_TX Port0
D-PHY:V2.0 4.5Gbps/Lane
C-PHY:V1.1 5.7Gbps/Trio
MIPI_DPHY0_TX_CLKP/MIPI_CPHY0_TX_TRIO1_C AN26
MIPI_DPHY0_TX_CLKN/MIPI_CPHY0_TX_TRIO1_B AP26
MIPI_DPHY0_TX_D0P/MIPI_CPHY0_TX_TRIO0_B AN24
MIPI_DPHY0_TX_D0N/MIPI_CPHY0_TX_TRIO0_A AP24
MIPI_DPHY0_TX_D1P/MIPI_CPHY0_TX_TRIO1_A AN25
MIPI_DPHY0_TX_D1N/MIPI_CPHY0_TX_TRIO0_C AP25
MIPI_DPHY0_TX_D2P/MIPI_CPHY0_TX_TRIO2_B AN27
MIPI_DPHY0_TX_D2N/MIPI_CPHY0_TX_TRIO2_A AP27
MIPI_DPHY0_TX_D3P/NO_USE AN28
MIPI_DPHY0_TX_D3N/MIPI_CPHY0_TX_TRIO2_C AP28
MIPI D/C-PHY CSI_RX Port0
D-PHY:V2.0 4.5Gbps/Lane
C-PHY:V1.1 5.7Gbps/Trio
MIPI_DPHY0_RX_CLKP/MIPI_CPHY0_RX_TRIO1_C AN32
MIPI_DPHY0_RX_CLKN/MIPI_CPHY0_RX_TRIO1_B AP31
MIPI_DPHY0_RX_D0P/MIPI_CPHY0_RX_TRIO0_B AN29
MIPI_DPHY0_RX_D0N/MIPI_CPHY0_RX_TRIO0_A AP29
MIPI_DPHY0_RX_D1P/MIPI_CPHY0_RX_TRIO1_A AN30
MIPI_DPHY0_RX_D1N/MIPI_CPHY0_RX_TRIO0_C AP30
MIPI_DPHY0_RX_D2P/MIPI_CPHY0_RX_TRIO2_B AN33
MIPI_DPHY0_RX_D2N/MIPI_CPHY0_RX_TRIO2_A AP32
MIPI_DPHY0_RX_D3P/NO_USE AN34
MIPI_DPHY0_RX_D3N/MIPI_CPHY0_RX_TRIO2_C AP33
MIPI D/C-PHY POWER
MIPI_D/C_PHY0_VREG AF20
C1600 2.2nF C0201 X7R 6.3V
MIPI_D/C_PHY0_VDD AG20
VDD_0V75_S0
C1602 100nF X5R 6.3V C0201
C1601 1uF X5R 6.3V C0201
MIPI_D/C_PHY0_VDD_1V2 AH20
VDDA_1V2_S0
C1603 1uF X5R 6.3V C0201
MIPI_D/C_PHY0_VDD_1V8 AJ20
VCC_1V8_S0
C1605 100nF X5R 10V C0201
RK3588-Socket
U1000R
MIPI D/C-PHY DSI_TX Port1
D-PHY:V2.0 4.5Gbps/Lane
C-PHY:V1.1 5.7Gbps/Trio
MIPI_DPHY1_TX_CLKP/MIPI_CPHY1_TX_TRIO1_C AN20 MIPI_DPHY1_TX_CLKP
MIPI_DPHY1_TX_CLKN/MIPI_CPHY1_TX_TRIO1_B AP20 MIPI_DPHY1_TX_CLKN
MIPI_DPHY1_TX_D0P/MIPI_CPHY1_TX_TRIO0_B AN18 MIPI_DPHY1_TX_D0P
MIPI_DPHY1_TX_D0N/MIPI_CPHY1_TX_TRIO0_A AP18 MIPI_DPHY1_TX_D0N
MIPI_DPHY1_TX_D1P/MIPI_CPHY1_TX_TRIO1_A AN19 MIPI_DPHY1_TX_D1P
MIPI_DPHY1_TX_D1N/MIPI_CPHY1_TX_TRIO0_C AP19 MIPI_DPHY1_TX_D1N
MIPI_DPHY1_TX_D2P/MIPI_CPHY1_TX_TRIO2_B AN21 MIPI_DPHY1_TX_D2P
MIPI_DPHY1_TX_D2N/MIPI_CPHY1_TX_TRIO2_A AP21 MIPI_DPHY1_TX_D2N
MIPI_DPHY1_TX_D3P/NO_USE AN22 MIPI_DPHY1_TX_D3P
MIPI_DPHY1_TX_D3N/MIPI_CPHY1_TX_TRIO2_C AP22 MIPI_DPHY1_TX_D3N
MIPI D/C-PHY CSI_RX Port1
D-PHY:V2.0 4.5Gbps/Lane
C-PHY:V1.1 5.7Gbps/Trio
MIPI_DPHY1_RX_CLKP/MIPI_CPHY1_RX_TRIO1_C AK20
MIPI_DPHY1_RX_CLKN/MIPI_CPHY1_RX_TRIO1_B AL20
MIPI_DPHY1_RX_D0P/MIPI_CPHY1_RX_TRIO0_B AK18
MIPI_DPHY1_RX_D0N/MIPI_CPHY1_RX_TRIO0_A AL18
MIPI_DPHY1_RX_D1P/MIPI_CPHY1_RX_TRIO1_A AK19
MIPI_DPHY1_RX_D1N/MIPI_CPHY1_RX_TRIO0_C AL19
MIPI_DPHY1_RX_D2P/MIPI_CPHY1_RX_TRIO2_B AK21
MIPI_DPHY1_RX_D2N/MIPI_CPHY1_RX_TRIO2_A AL21
MIPI_DPHY1_RX_D3P/NO_USE AK22
MIPI_DPHY1_RX_D3N/MIPI_CPHY1_RX_TRIO2_C AL22
MIPI D/C-PHY POWER
MIPI_D/C_PHY1_VREG AF19
C1608 2.2nF C0201 X7R 6.3V
MIPI_D/C_PHY1_VDD AG19
VDD_0V75_S0
C1609 1uF X5R 6.3V C0201
MIPI_D/C_PHY1_VDD_1V2 AH19
VDDA_1V2_S0
C1611 100nF X5R 6.3V C0201
MIPI_D/C_PHY1_VDD_1V8 AJ19
VCC_1V8_S0
C1613 1uF X5R 6.3V C0201
RK3588-Socket

RK3588_P(MIPI_CSI_RX_PHY)



Size	Title: ROCK 5B	REV
A2	Page Name: RK3588_MIPI Interface	1.423

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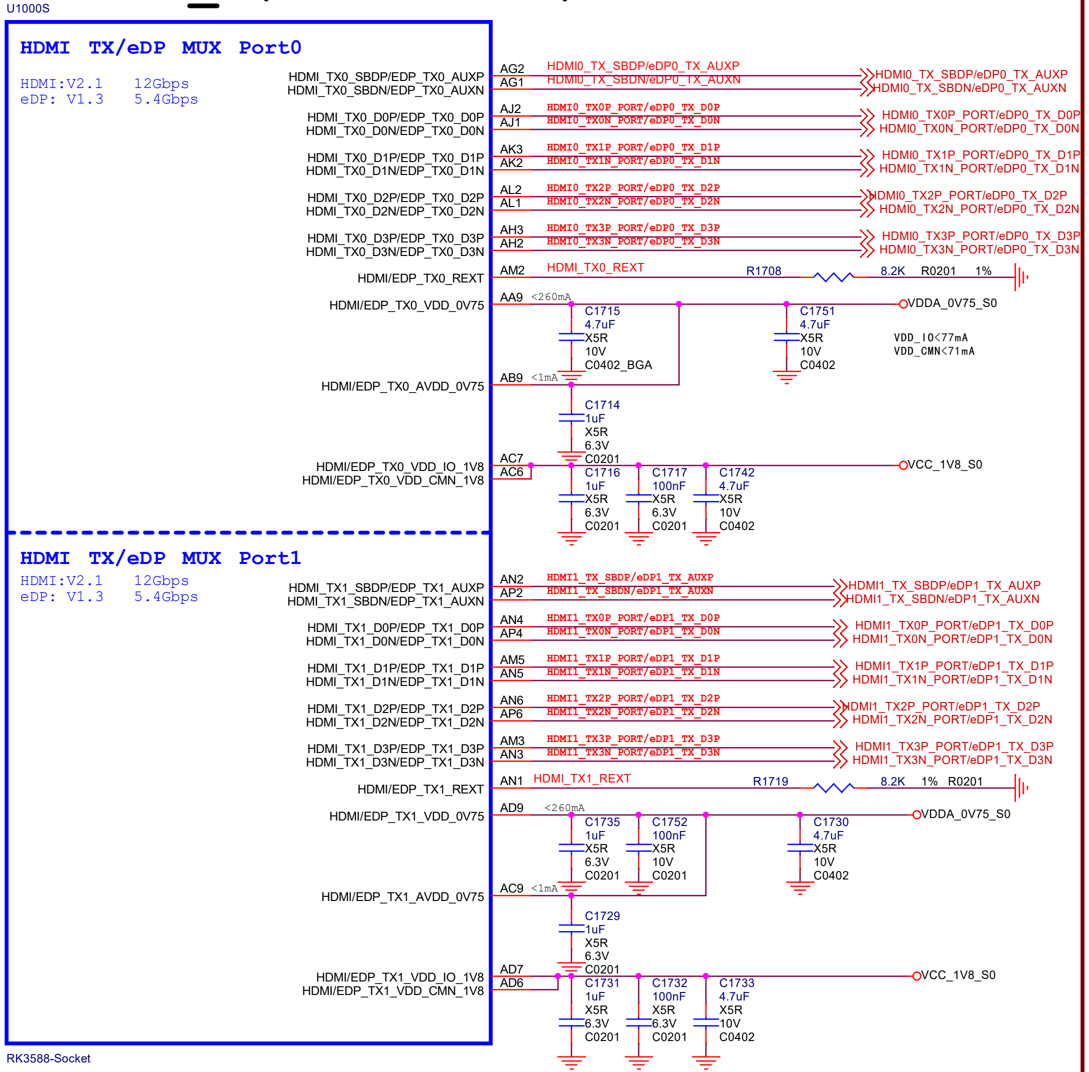
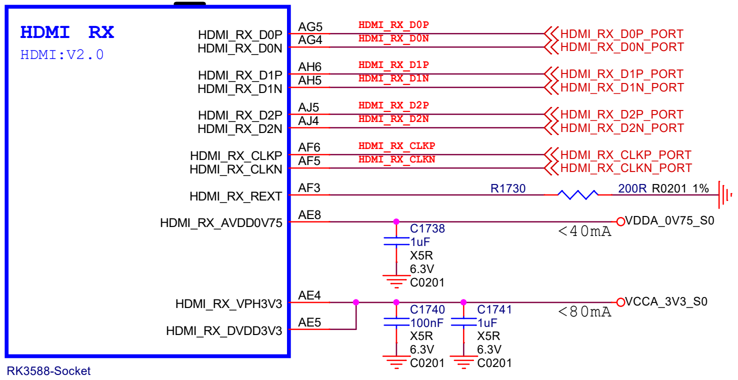
RK3588_S(HDMI2.1 TX)


U1000S
HDMI TX/eDP MUX Port0
HDMI:V2.1 12Gbps
eDP: V1.3 5.4Gbps
HDMI_TX0_SBDP/EDP_TX0_AUXP AG2 HDMI0_TX_SBDP/eDP0_TX_AUXP
HDMI_TX0_SBDN/EDP_TX0_AUXN AG1 HDMI0_TX_SBDN/eDP0_TX_AUXN
HDMI_TX0_D0P/EDP_TX0_D0P AJ2 HDMI0_TX0P_PORT/eDP0_TX_D0P
HDMI_TX0_D0N/EDP_TX0_D0N AJ1 HDMI0_TX0N_PORT/eDP0_TX_D0N
HDMI_TX0_D1P/EDP_TX0_D1P AK3 HDMI0_TX1P_PORT/eDP0_TX_D1P
HDMI_TX0_D1N/EDP_TX0_D1N AK2 HDMI0_TX1N_PORT/eDP0_TX_D1N
HDMI_TX0_D2P/EDP_TX0_D2P AL2 HDMI0_TX2P_PORT/eDP0_TX_D2P
HDMI_TX0_D2N/EDP_TX0_D2N AL1 HDMI0_TX2N_PORT/eDP0_TX_D2N
HDMI_TX0_D3P/EDP_TX0_D3P AH3 HDMI0_TX3P_PORT/eDP0_TX_D3P
HDMI_TX0_D3N/EDP_TX0_D3N AH2 HDMI0_TX3N_PORT/eDP0_TX_D3N
HDMI/EDP_TX0_REXT AM2 HDMI_TX0_REXT R1708 8.2K R0201 1%
HDMI/EDP_TX0_VDD_0V75 AA9 <260mA
C1715 4.7uF X5R 10V C0402_BGA
C1751 4.7uF X5R 10V C0402
VDDA_0V75_S0
VDD_IO<77mA
VDD_CMN<71mA
HDMI/EDP_TX0_AVDD_0V75 AB9 <1mA
C1714 1uF X5R 6.3V C0201
HDMI/EDP_TX0_VDD_IO_1V8 AC7
HDMI/EDP_TX0_VDD_CMN_1V8 AC6
C1716 1uF X5R 6.3V C0201
C1717 100nF X5R 6.3V C0201
C1742 4.7uF X5R 10V C0402
VCC_1V8_S0
HDMI TX/eDP MUX Port1
HDMI:V2.1 12Gbps
eDP: V1.3 5.4Gbps
HDMI_TX1_SBDP/EDP_TX1_AUXP AN2 HDMI1_TX_SBDP/eDP1_TX_AUXP
HDMI_TX1_SBDN/EDP_TX1_AUXN AP2 HDMI1_TX_SBDN/eDP1_TX_AUXN
HDMI_TX1_D0P/EDP_TX1_D0P AN4 HDMI1_TX0P_PORT/eDP1_TX_D0P
HDMI_TX1_D0N/EDP_TX1_D0N AP4 HDMI1_TX0N_PORT/eDP1_TX_D0N
HDMI_TX1_D1P/EDP_TX1_D1P AM5 HDMI1_TX1P_PORT/eDP1_TX_D1P
HDMI_TX1_D1N/EDP_TX1_D1N AN5 HDMI1_TX1N_PORT/eDP1_TX_D1N
HDMI_TX1_D2P/EDP_TX1_D2P AN6 HDMI1_TX2P_PORT/eDP1_TX_D2P
HDMI_TX1_D2N/EDP_TX1_D2N AP6 HDMI1_TX2N_PORT/eDP1_TX_D2N
HDMI_TX1_D3P/EDP_TX1_D3P AM3 HDMI1_TX3P_PORT/eDP1_TX_D3P
HDMI_TX1_D3N/EDP_TX1_D3N AN3 HDMI1_TX3N_PORT/eDP1_TX_D3N
HDMI/EDP_TX1_REXT AN1 HDMI_TX1_REXT R1719 8.2K 1% R0201
HDMI/EDP_TX1_VDD_0V75 AD9 <260mA
C1735 1uF X5R 6.3V C0201
C1752 100nF X5R 10V C0201
C1730 4.7uF X5R 10V C0402
VDDA_0V75_S0
HDMI/EDP_TX1_AVDD_0V75 AC9 <1mA
C1729 1uF X5R 6.3V C0201
HDMI/EDP_TX1_VDD_IO_1V8 AD7
HDMI/EDP_TX1_VDD_CMN_1V8 AD6
C1731 1uF X5R 6.3V C0201
C1732 100nF X5R 6.3V C0201
C1733 4.7uF X5R 10V C0402
VCC_1V8_S0
RK3588-Socket

RK3588_T(HDMI20 RX)


U1000T
HDMI RX
HDMI:V2.0
HDMI_RX_D0P AG5 HDMI_RX_D0P HDMI_RX_D0P_PORT
HDMI_RX_D0N AG4 HDMI_RX_D0N HDMI_RX_D0N_PORT
HDMI_RX_D1P AH6 HDMI_RX_D1P HDMI_RX_D1P_PORT
HDMI_RX_D1N AH5 HDMI_RX_D1N HDMI_RX_D1N_PORT
HDMI_RX_D2P AJ5 HDMI_RX_D2P HDMI_RX_D2P_PORT
HDMI_RX_D2N AJ4 HDMI_RX_D2N HDMI_RX_D2N_PORT
HDMI_RX_CLKP AF6 HDMI_RX_CLKP HDMI_RX_CLKP_PORT
HDMI_RX_CLKN AF5 HDMI_RX_CLKN HDMI_RX_CLKN_PORT
HDMI_RX_REXT AF3 R1730 200R R0201 1%
HDMI_RX_AVDD0V75 AE8
C1738 1uF X5R 6.3V C0201
<40mA
VDDA_0V75_S0
HDMI_RX_VPH3V3 AE4
HDMI_RX_DVDD3V3 AE5
C1740 100nF X5R 6.3V C0201
C1741 1uF X5R 6.3V C0201
<80mA
VCCA_3V3_S0
RK3588-Socket

Size	Title: ROCK 5B	REV
A3	Page Name: RK3588_HDMI/eDP Interface	1.423
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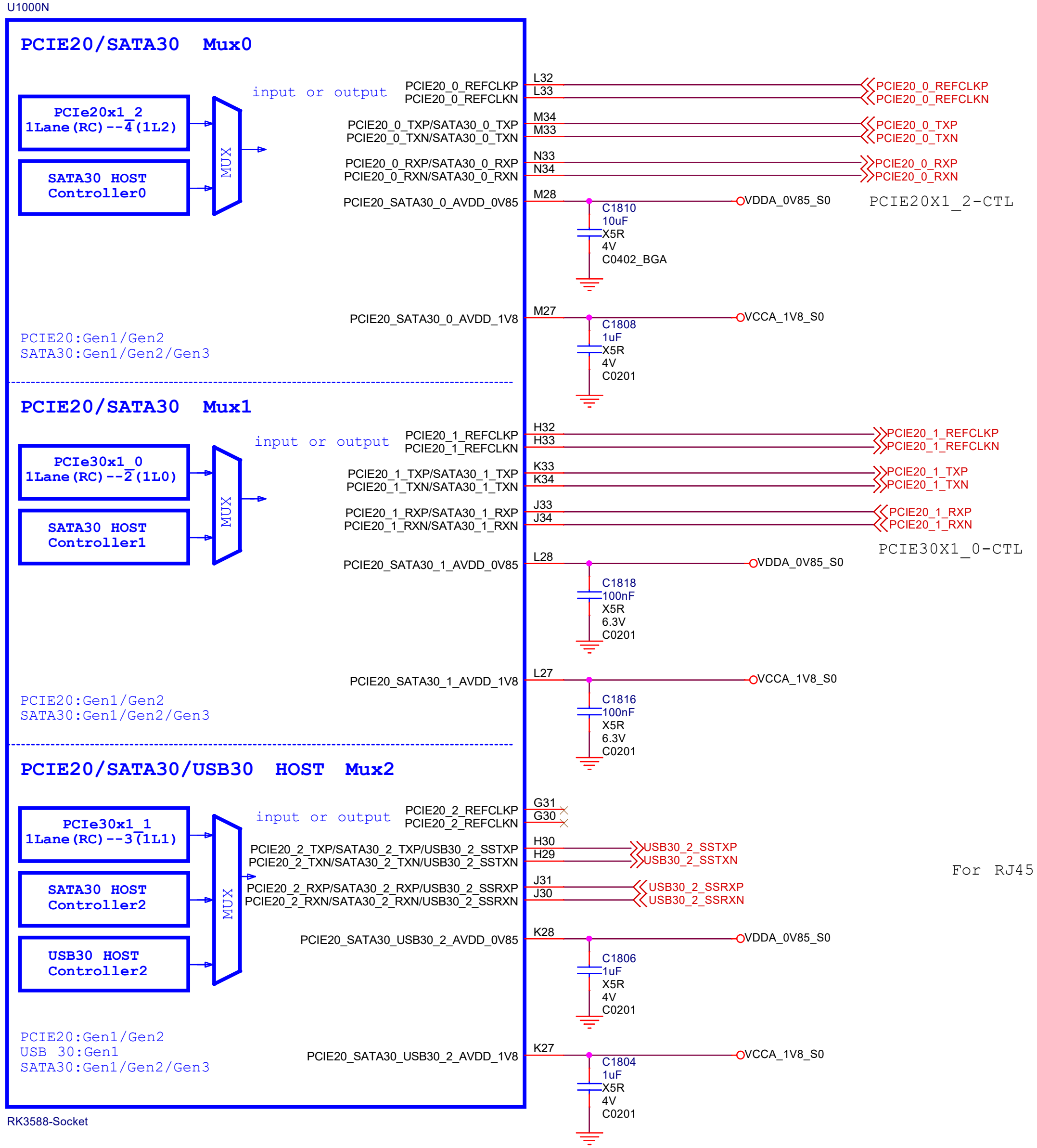
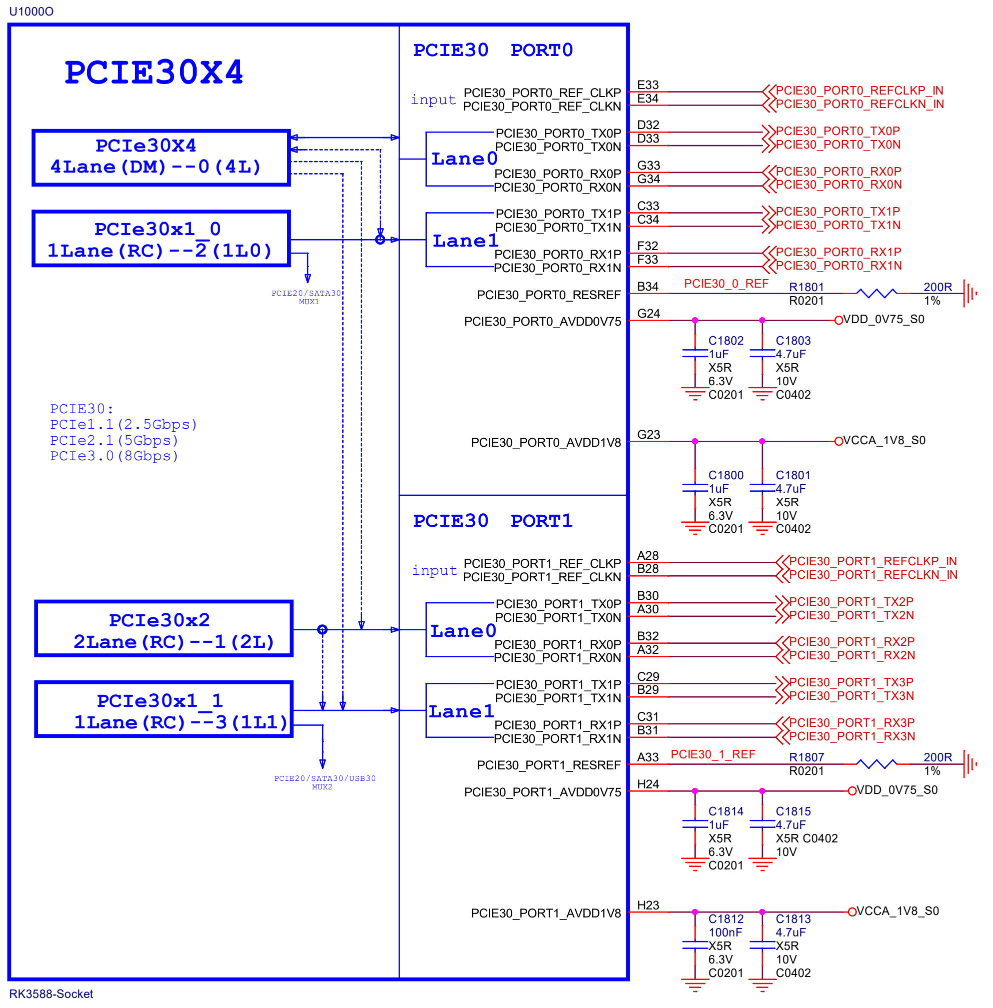
RK3588_N(PCIE20)



RK3588_O(PCIE30)



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Size	Title:	ROCK 5B	REV
A3	Page Name:	RK3588_PCIE30/PCIE20/SATA30	1.423
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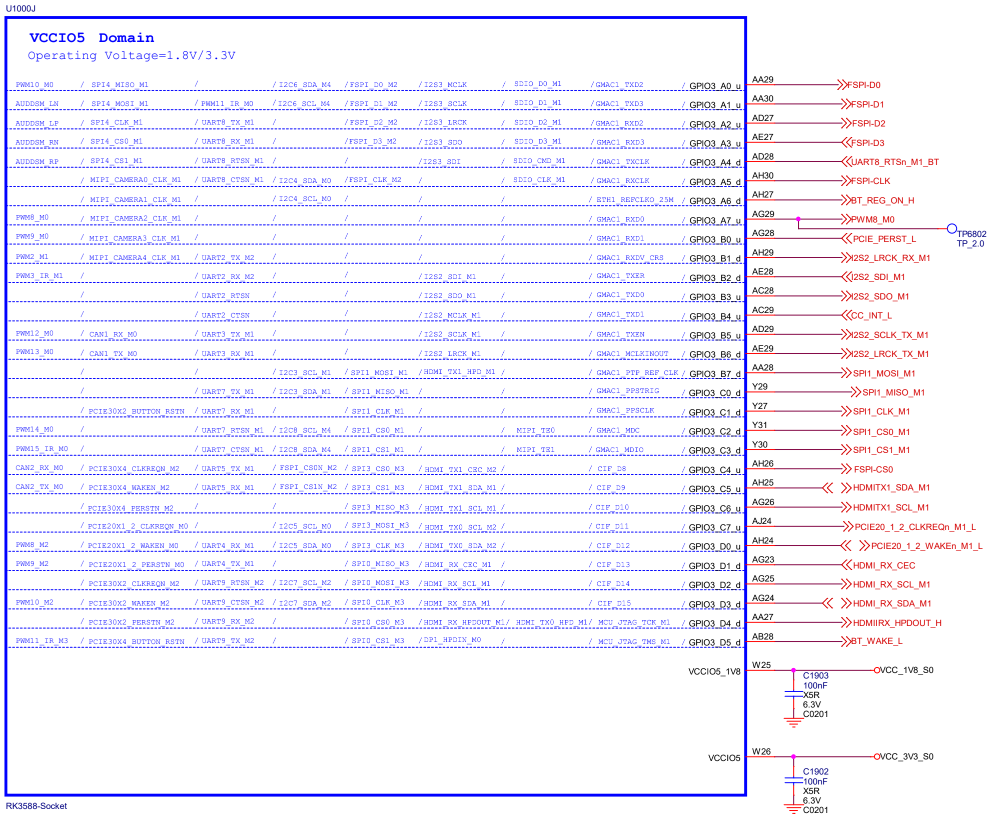
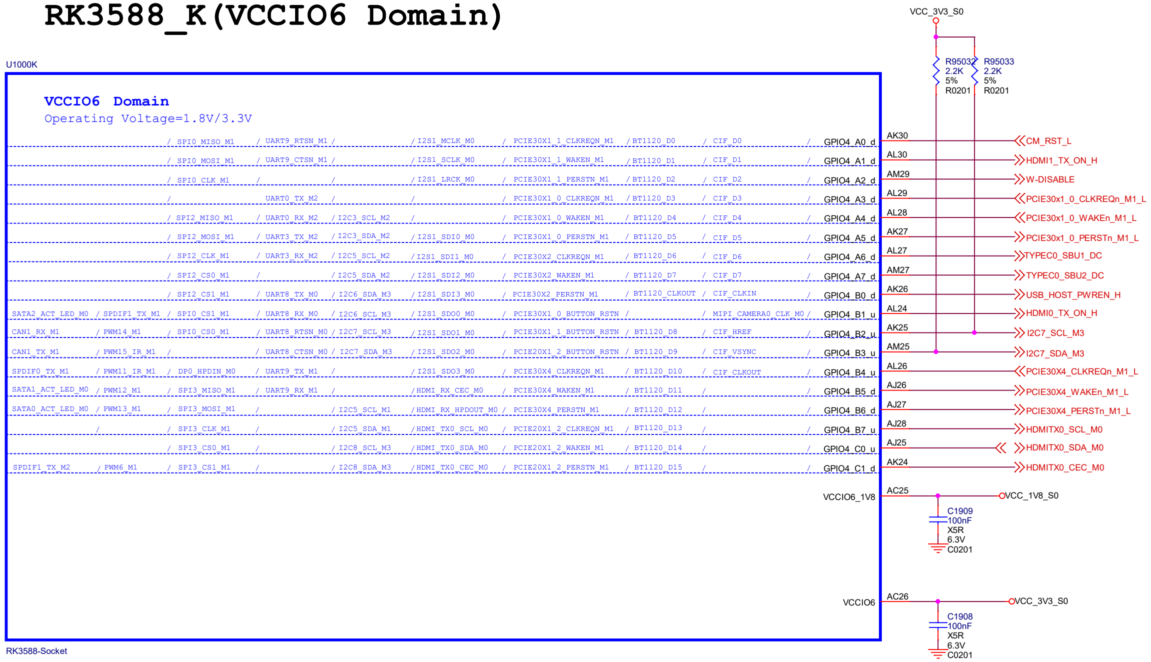
RK3588_J(VCCIO5 Domain)


U1000J
VCCIO5 Domain
Operating Voltage=1.8V/3.3V
GPIO3_A0_u AA29 FSPI-D0
GPIO3_A1_u AA30 FSPI-D1
GPIO3_A2_u AD27 FSPI-D2
GPIO3_A3_u AE27 FSPI-D3
GPIO3_A4_d AD28 UART8_RTSn_M1_BT
GPIO3_A5_d AH30 FSPI-CLK
GPIO3_A6_d AH27 BT_REG_ON_H
GPIO3_A7_u AG29 PWM8_M0
GPIO3_B0_u AG28 PCIE_PERST_L
TP6802
TP_2.0
GPIO3_B1_d AH29 I2S2_LRCK_RX_M1
GPIO3_B2_d AE28 I2S2_SDI_M1
GPIO3_B3_u AC28 I2S2_SDO_M1
GPIO3_B4_u AC29 CC_INT_L
GPIO3_B5_u AD29 I2S2_SCLK_TX_M1
GPIO3_B6_d AE29 I2S2_LRCK_TX_M1
GPIO3_B7_d AA28 SPI1_MOSI_M1
GPIO3_C0_d Y29 SPI1_MISO_M1
GPIO3_C1_d Y27 SPI1_CLK_M1
GPIO3_C2_d Y31 SPI1_CS0_M1
GPIO3_C3_d Y30 SPI1_CS1_M1
GPIO3_C4_u AH26 FSPI-CS0
GPIO3_C5_u AH25 HDMITX1_SDA_M1
GPIO3_C6_u AG26 HDMITX1_SCL_M1
GPIO3_C7_u AJ24 PCIE20_1_2_CLKREQn_M1_L
GPIO3_D0_u AH24 PCIE20_1_2_WAKEn_M1_L
GPIO3_D1_d AG23 HDMI_RX_CEC
GPIO3_D2_d AG25 HDMI_RX_SCL_M1
GPIO3_D3_d AG24 HDMI_RX_SDA_M1
GPIO3_D4_d AA27 HDMIIRX_HPDOUT_H
GPIO3_D5_d AB28 BT_WAKE_L
VCCIO5_1V8 W25 VCC_1V8_S0
C1903 100nF X5R 6.3V C0201
VCCIO5 W26 VCC_3V3_S0
C1902 100nF X5R 6.3V C0201
RK3588-Socket

RK3588_K(VCCIO6 Domain)


U1000K
VCCIO6 Domain
Operating Voltage=1.8V/3.3V
VCC_3V3_S0
R95032 2.2K 5% R0201
R95033 2.2K 5% R0201
GPIO4_A0_d AK30 CM_RST_L
GPIO4_A1_d AL30 HDMI1_TX_ON_H
GPIO4_A2_d AM29 W-DISABLE
GPIO4_A3_d AL29 PCIE30x1_0_CLKREQn_M1_L
GPIO4_A4_d AL28 PCIE30x1_0_WAKEn_M1_L
GPIO4_A5_d AK27 PCIE30x1_0_PERSTn_M1_L
GPIO4_A6_d AL27 TYPEC0_SBU1_DC
GPIO4_A7_d AM27 TYPEC0_SBU2_DC
GPIO4_B0_d AK26 USB_HOST_PWREN_H
GPIO4_B1_u AL24 HDMI0_TX_ON_H
GPIO4_B2_u AK25 I2C7_SCL_M3
GPIO4_B3_u AM25 I2C7_SDA_M3
GPIO4_B4_u AL26 PCIE30X4_CLKREQn_M1_L
GPIO4_B5_d AJ26 PCIE30X4_WAKEn_M1_L
GPIO4_B6_d AJ27 PCIE30X4_PERSTn_M1_L
GPIO4_B7_u AJ28 HDMITX0_SCL_M0
GPIO4_C0_u AJ25 HDMITX0_SDA_M0
GPIO4_C1_d AK24 HDMITX0_CEC_M0
VCCIO6_1V8 AC25 VCC_1V8_S0
C1909 100nF X5R 6.3V C0201
VCCIO6 AC26 VCC_3V3_S0
C1908 100nF X5R 6.3V C0201
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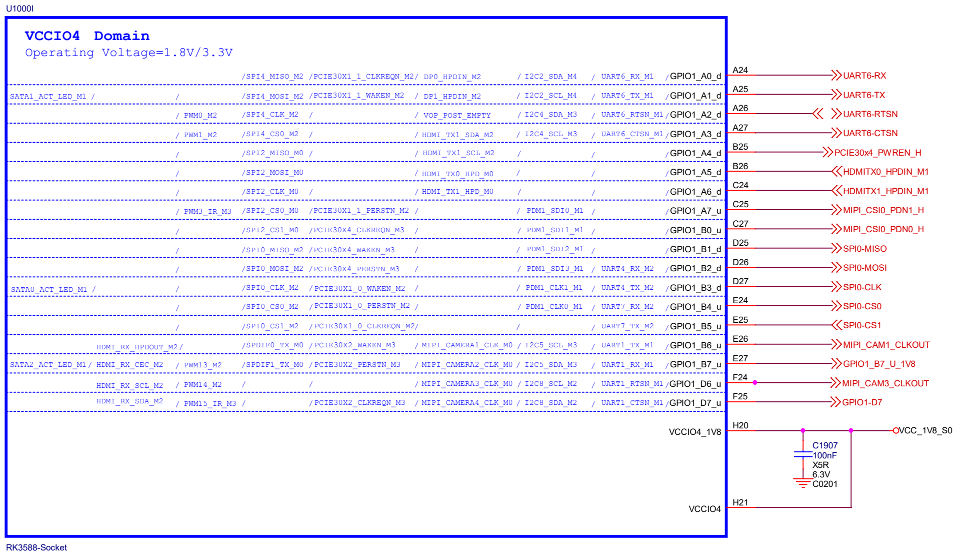
RK3588_I(VCCIO4 Domain)


U1000I
VCCIO4 Domain
Operating Voltage=1.8V/3.3V
GPIO1_A0_d A24 UART6-RX
GPIO1_A1_d A25 UART6-TX
GPIO1_A2_d A26 UART6-RTSN
GPIO1_A3_d A27 UART6-CTSN
GPIO1_A4_d B25 PCIE30x4_PWREN_H
GPIO1_A5_d B26 HDMITX0_HPDIN_M1
GPIO1_A6_d C24 HDMITX1_HPDIN_M1
GPIO1_A7_u C25 MIPI_CSI0_PDN1_H
GPIO1_B0_u C27 MIPI_CSI0_PDN0_H
GPIO1_B1_d D25 SPI0-MISO
GPIO1_B2_d D26 SPI0-MOSI
GPIO1_B3_d D27 SPI0-CLK
GPIO1_B4_u E24 SPI0-CS0
GPIO1_B5_u E25 SPI0-CS1
GPIO1_B6_u E26 MIPI_CAM1_CLKOUT
GPIO1_B7_u E27 GPIO1_B7_U_1V8
GPIO1_D6_u F24 MIPI_CAM3_CLKOUT
GPIO1_D7_u F25 GPIO1-D7
VCCIO4_1V8 H20 VCC_1V8_S0
C1907 100nF X5R 6.3V C0201
VCCIO4 H21
RK3588-Socket

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Size: A2
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REV: 1.423
Page Name: RK3588_1.8V/ 3.3V GPIO
Date: Wednesday, March 01, 2023
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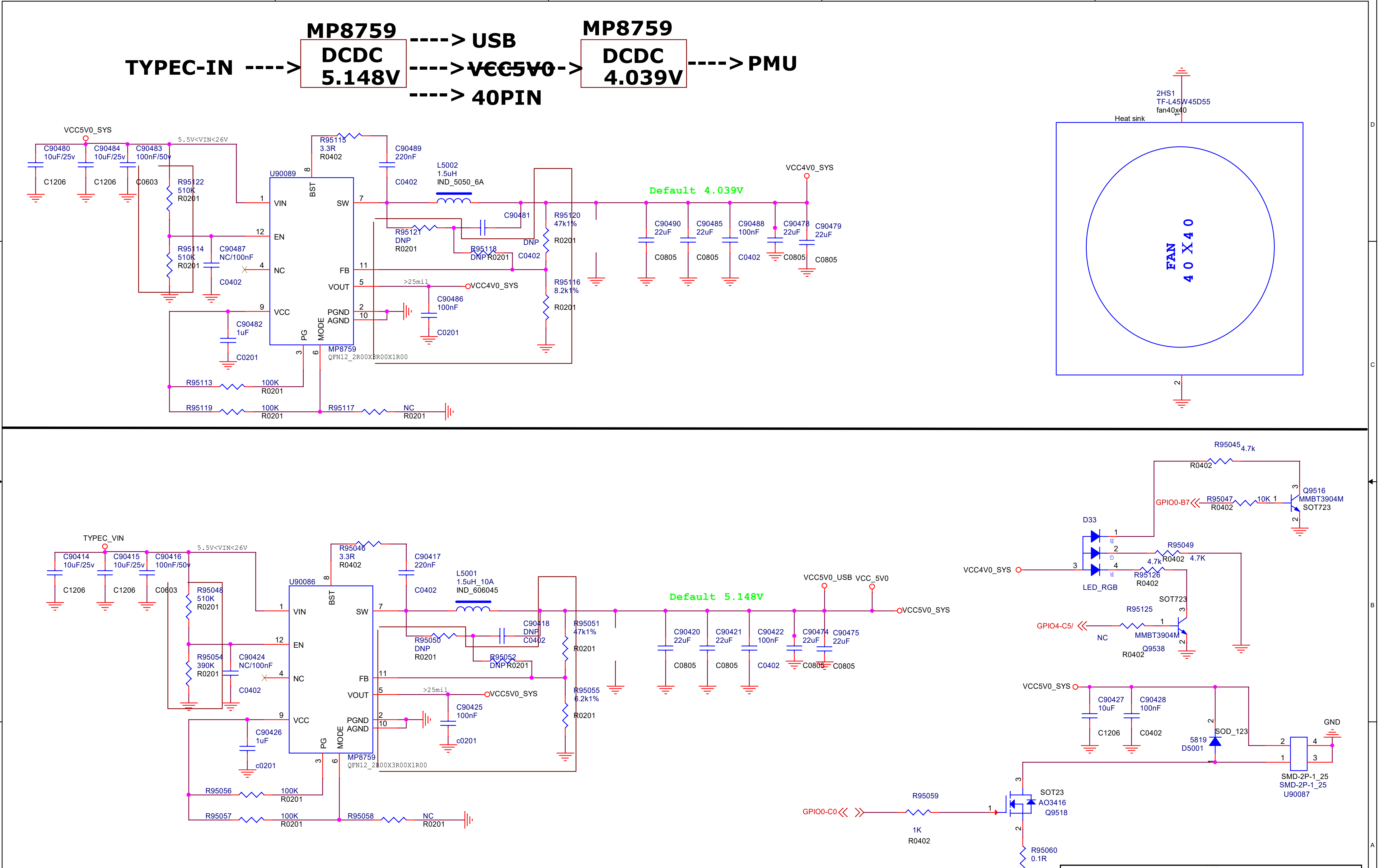

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Size	Title: ROCK 5B	REV
A3	Page Name: RK3588_PCIE30/PCIE20/SATA30	1.423
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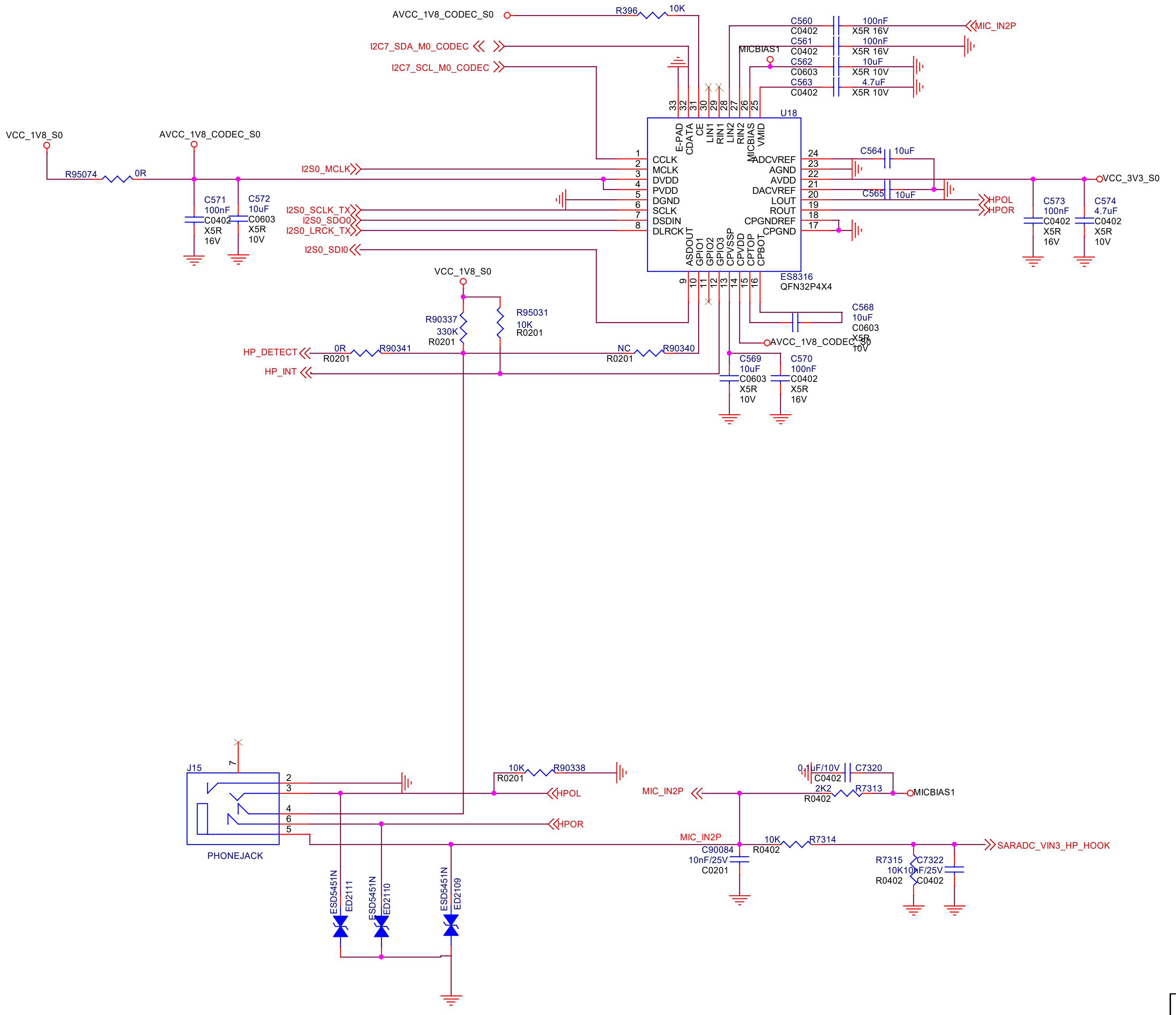
CODEC ES8316



Size	Title: ROCK 5B	REV
A3	Page Name: CODEC ES8316	1.423
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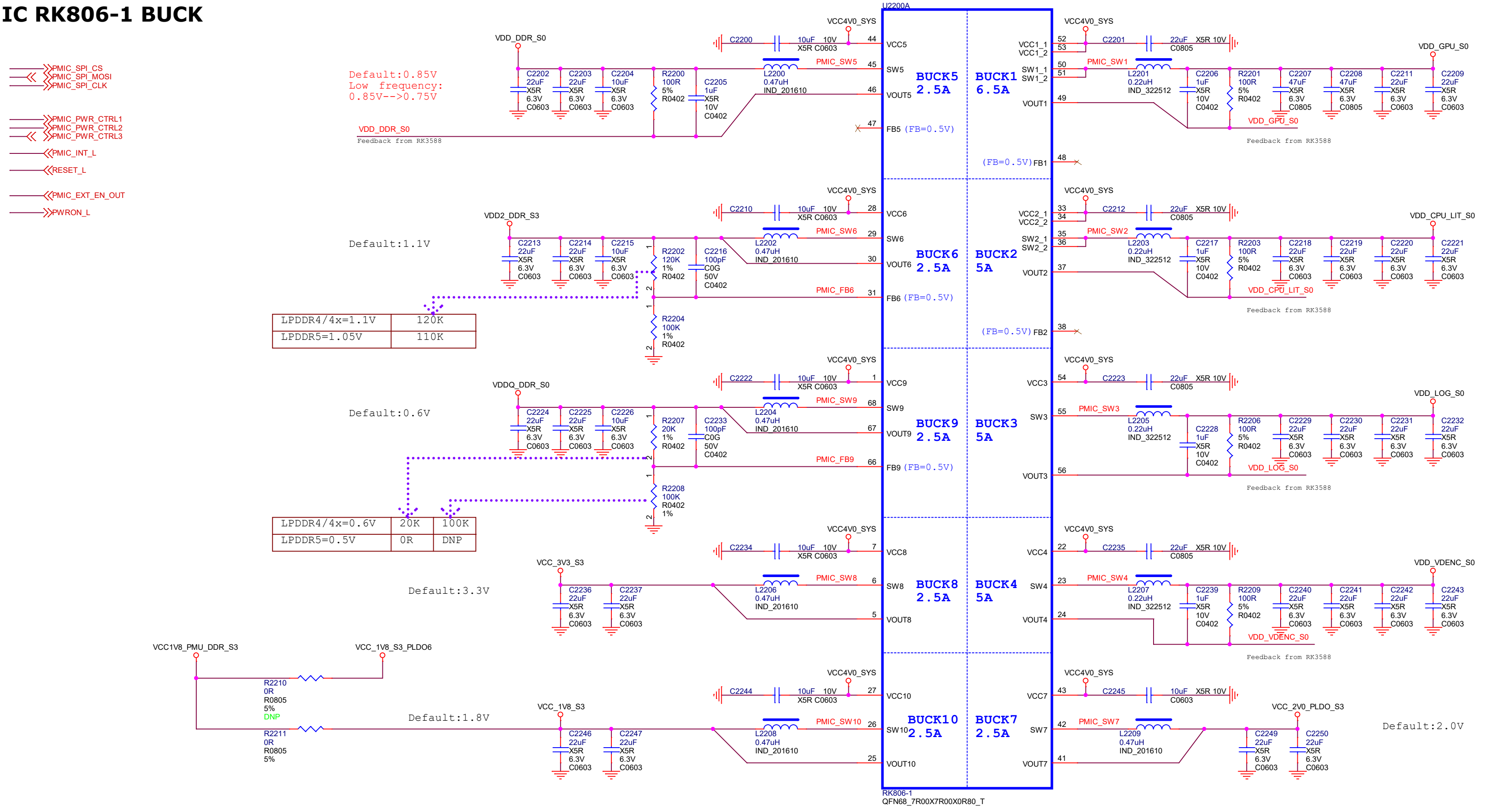
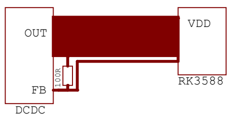
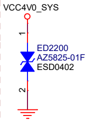
PMIC RK806-1 BUCK





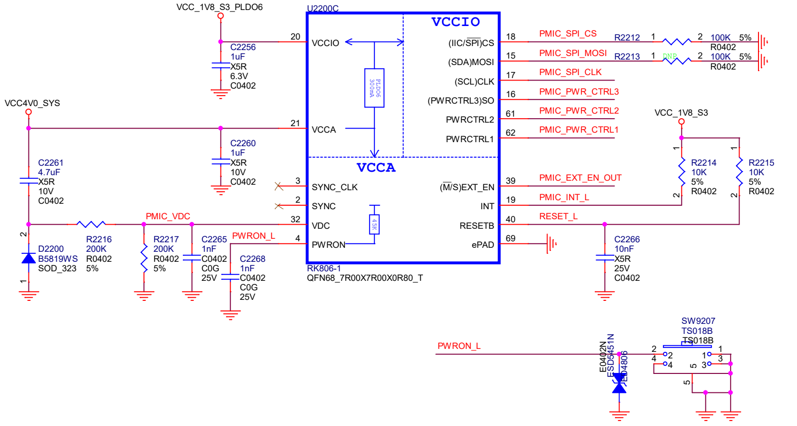


IF TVS UNMOUNTED, ESD OR SURGE SHOULD BE DAMAGE THE PMIC!!!

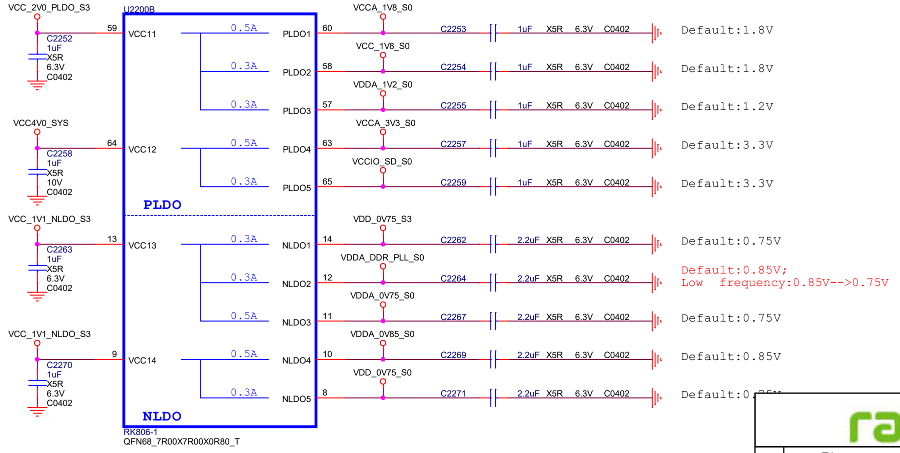
This device must be mounted.Replacing TVS mode is not recommended, if must, please choose the same specifications
Operating Supply Vltage :5.5V(5.25~6V)
PeakPulse Current:>10A(tp=8/20us)
Surge Clamping Voltage:<6.5V

DO NOT DELETE IT!

PMIC RK806-1 Managerment

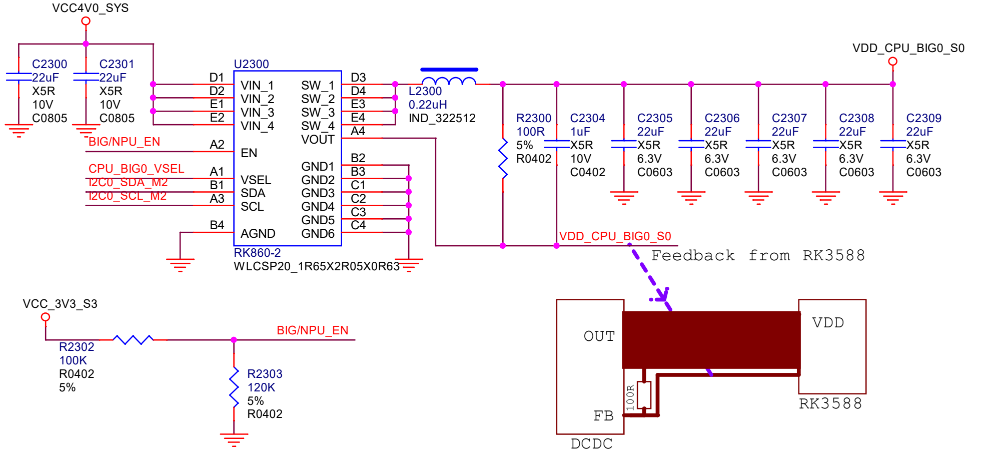


PMIC RK806-1 LDO

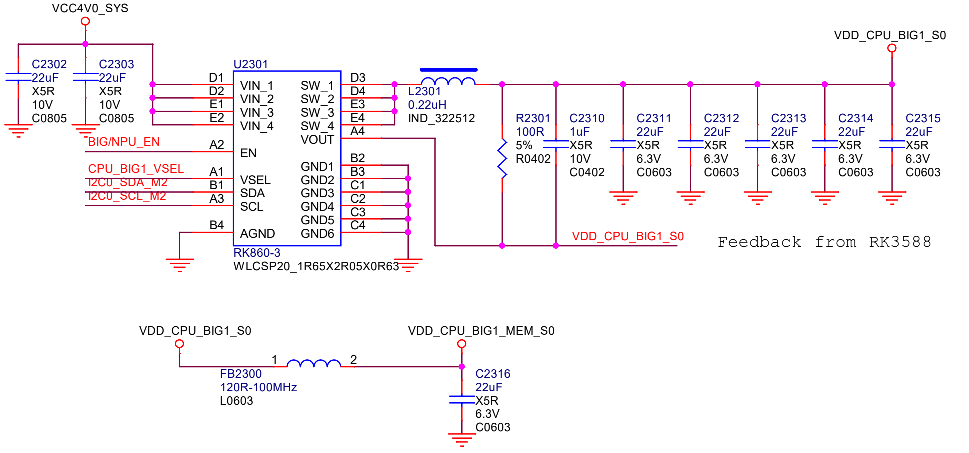


Size	Title: ROCK 5B	REV
A2	Page Name: PMIC RK806-1 BUCK	1.423
Date: Wednesday, March 01, 2023	Sheet 22 of 32	

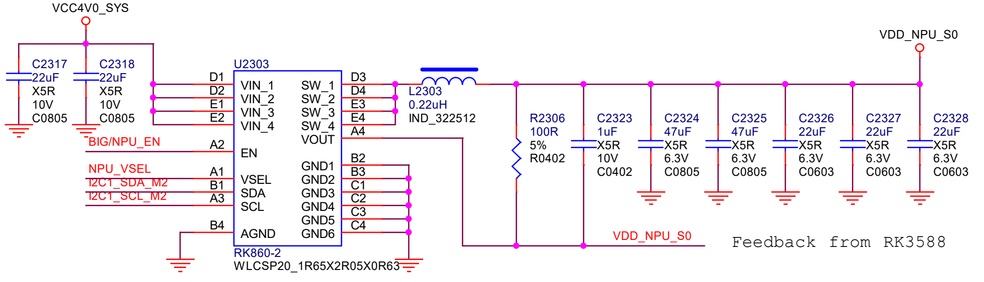
VDD_CPU_BIG0



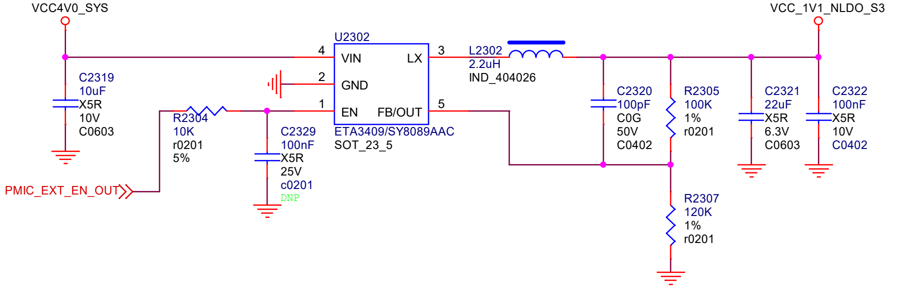
VDD_CPU_BIG1

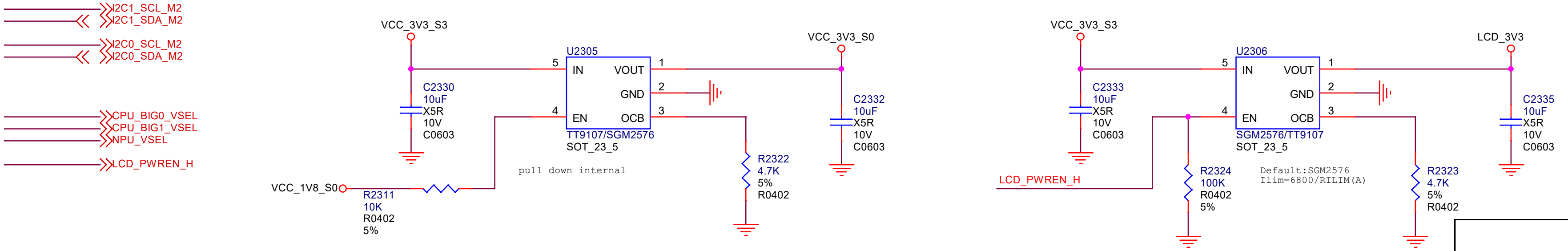


VDD_NPU



VCC_1V1_NLDO_S3





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A3	Page Name: Power_Ext Discrete	1.423
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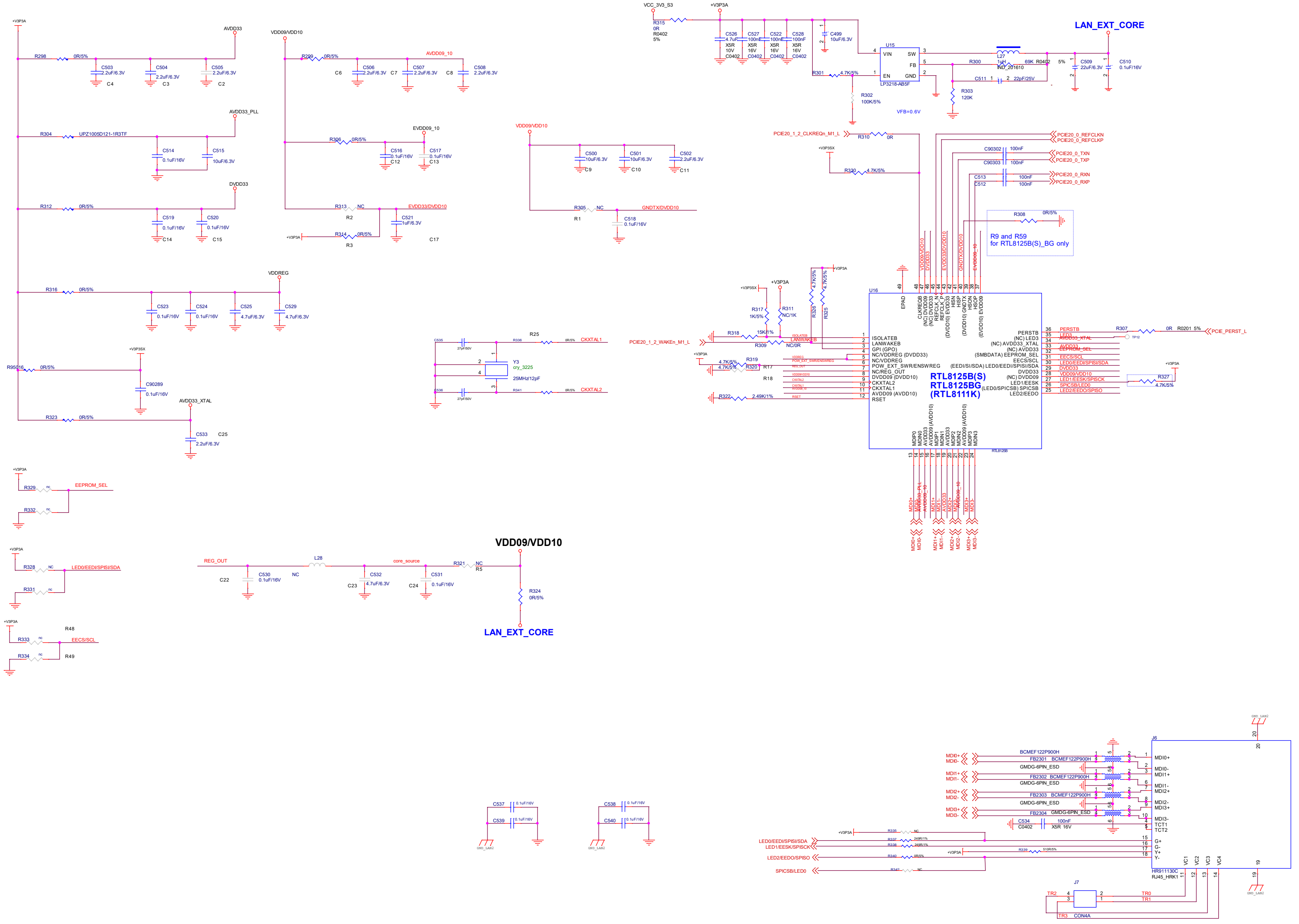

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Title: ROCK 5B

Page Name: PCIE TO RJ45_RTL8125B

REV 1.423

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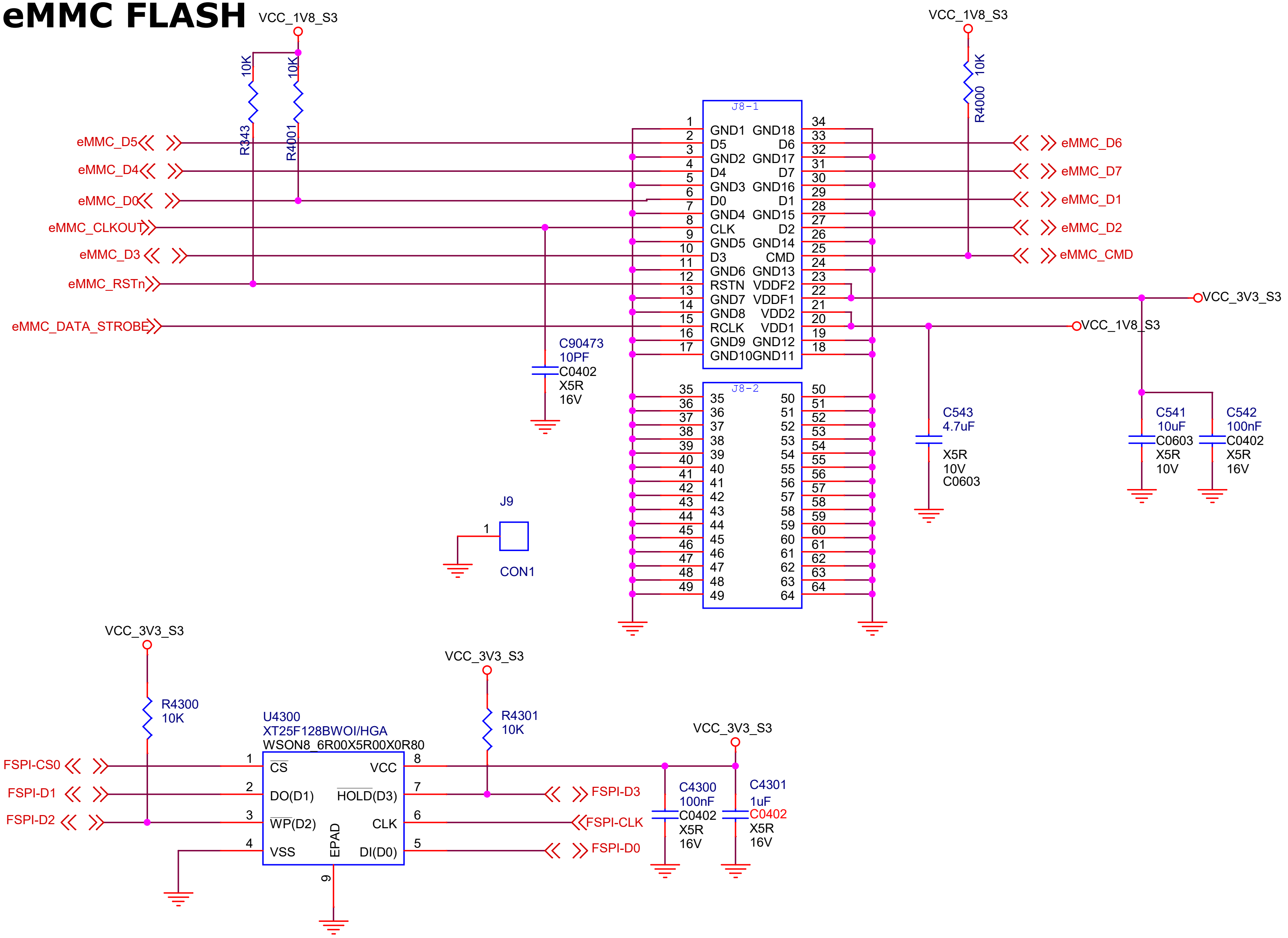
eMMC FLASH



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Size	Title: ROCK 5B	REV
A4	Page Name: eMMC FLASH	1.423
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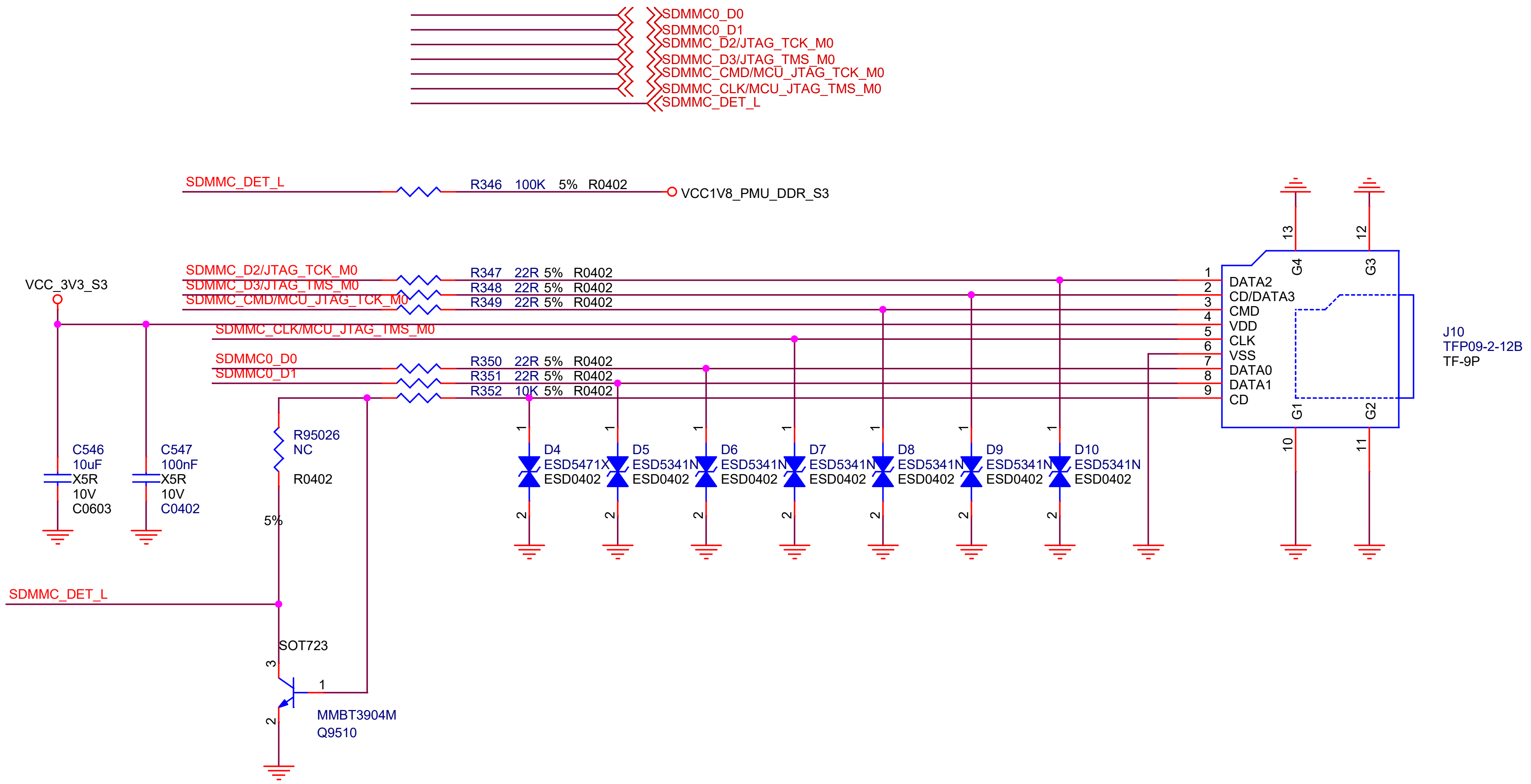
TF CARD



Size	Title: ROCK 5B	REV
A4	Page Name: TF CARD	1.423
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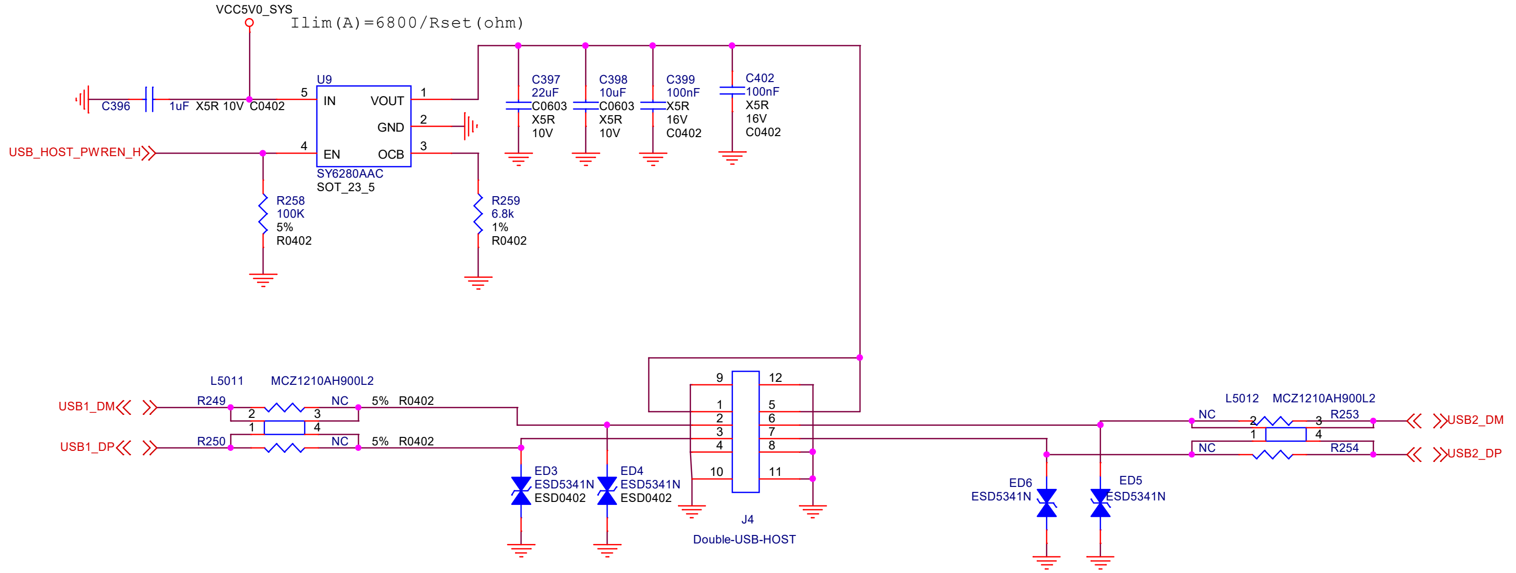
USB2.0



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A3	Page Name: USB2.0	1.423

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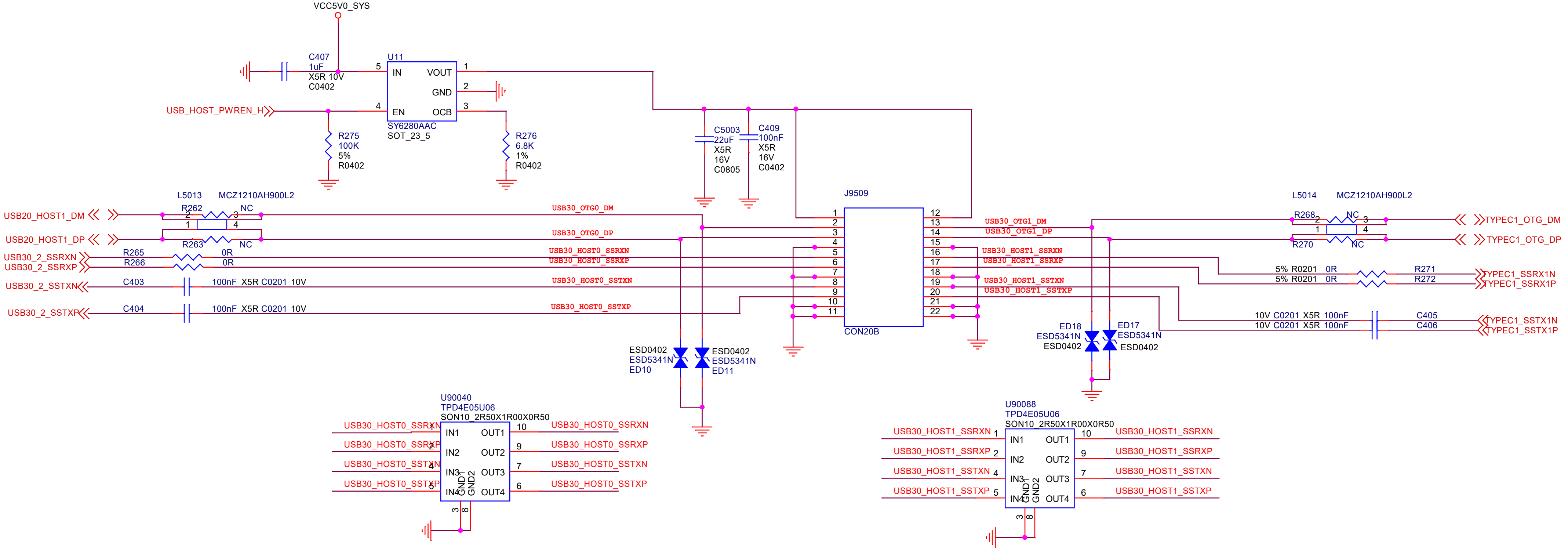
USB3.0 HOST PORT



Size	Title: ROCK 5B	REV
A3	Page Name: USB3.0 HOST PORT	1.423
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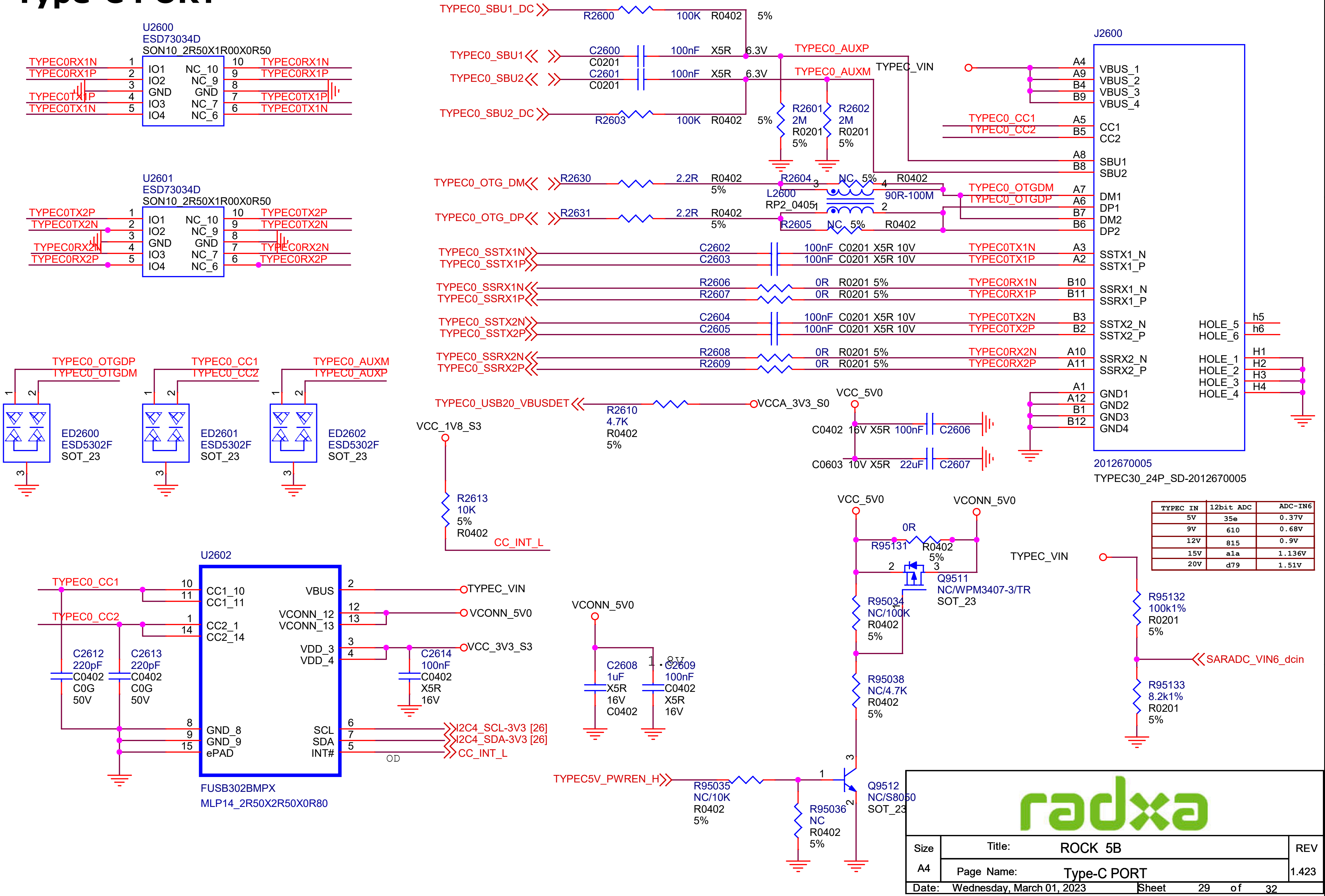
Type-C PORT



TYPEC IN	12bit ADC	ADC-IN6
5V	35e	0.37V
9V	610	0.68V
12V	815	0.9V
15V	a1a	1.136V
20V	d79	1.51V

Size: A4
Title: ROCK 5B
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Page Name: Type-C PORT
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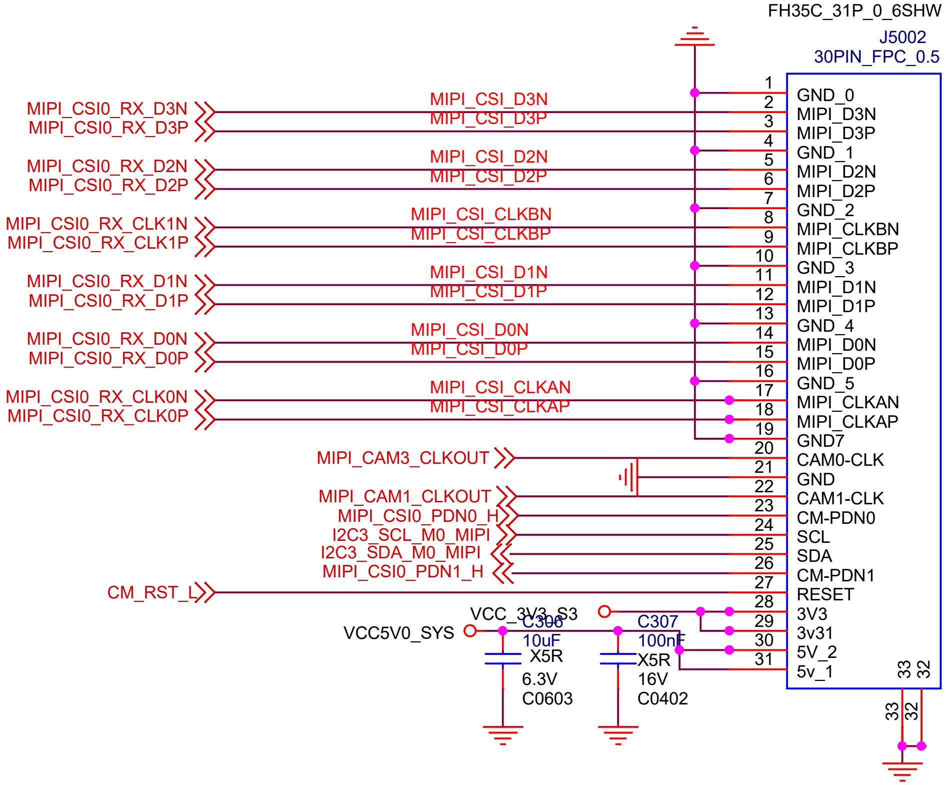
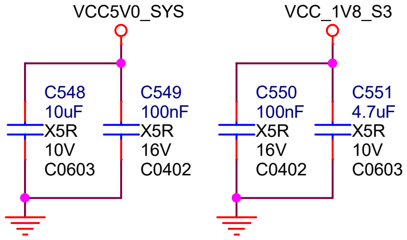
CAM





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A4	Page Name:	CAM	1.423
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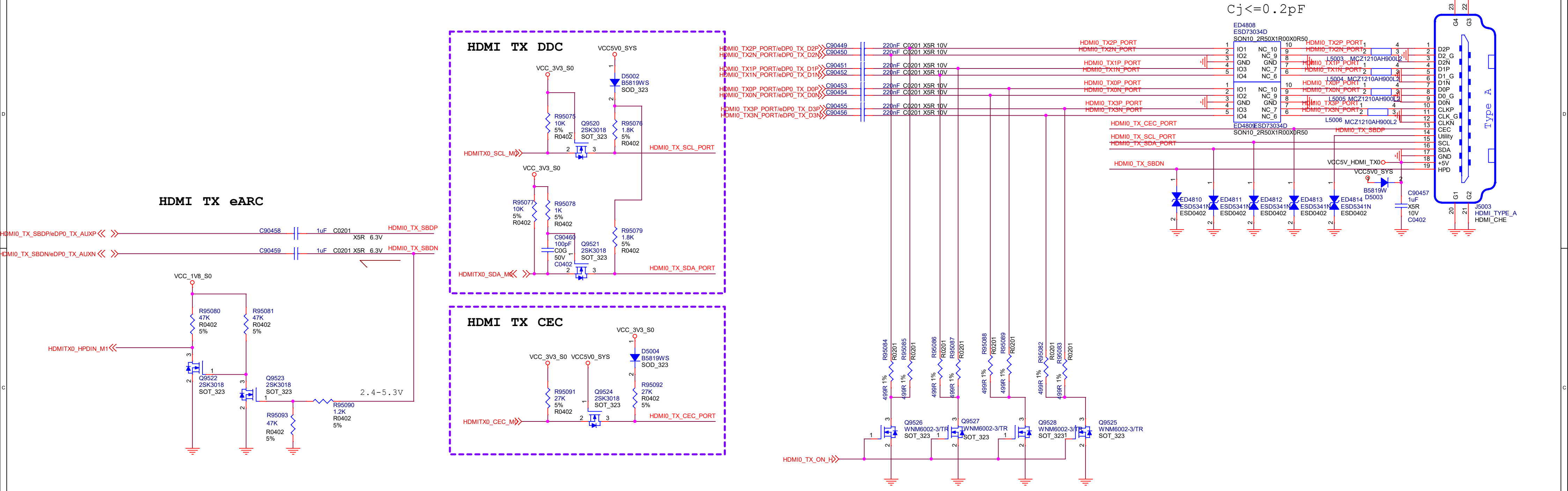
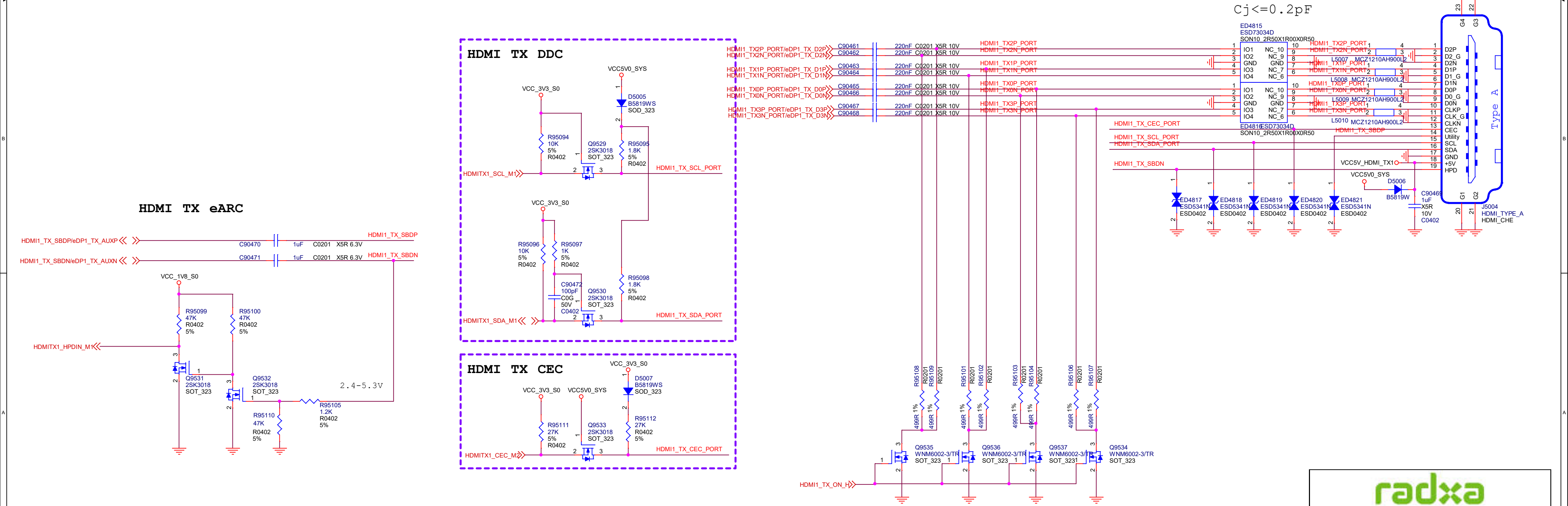
HDMI 1



HDMI 2



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Size	Title: ROCK 5B	REV
A2	Page Name: HDMI	1.423

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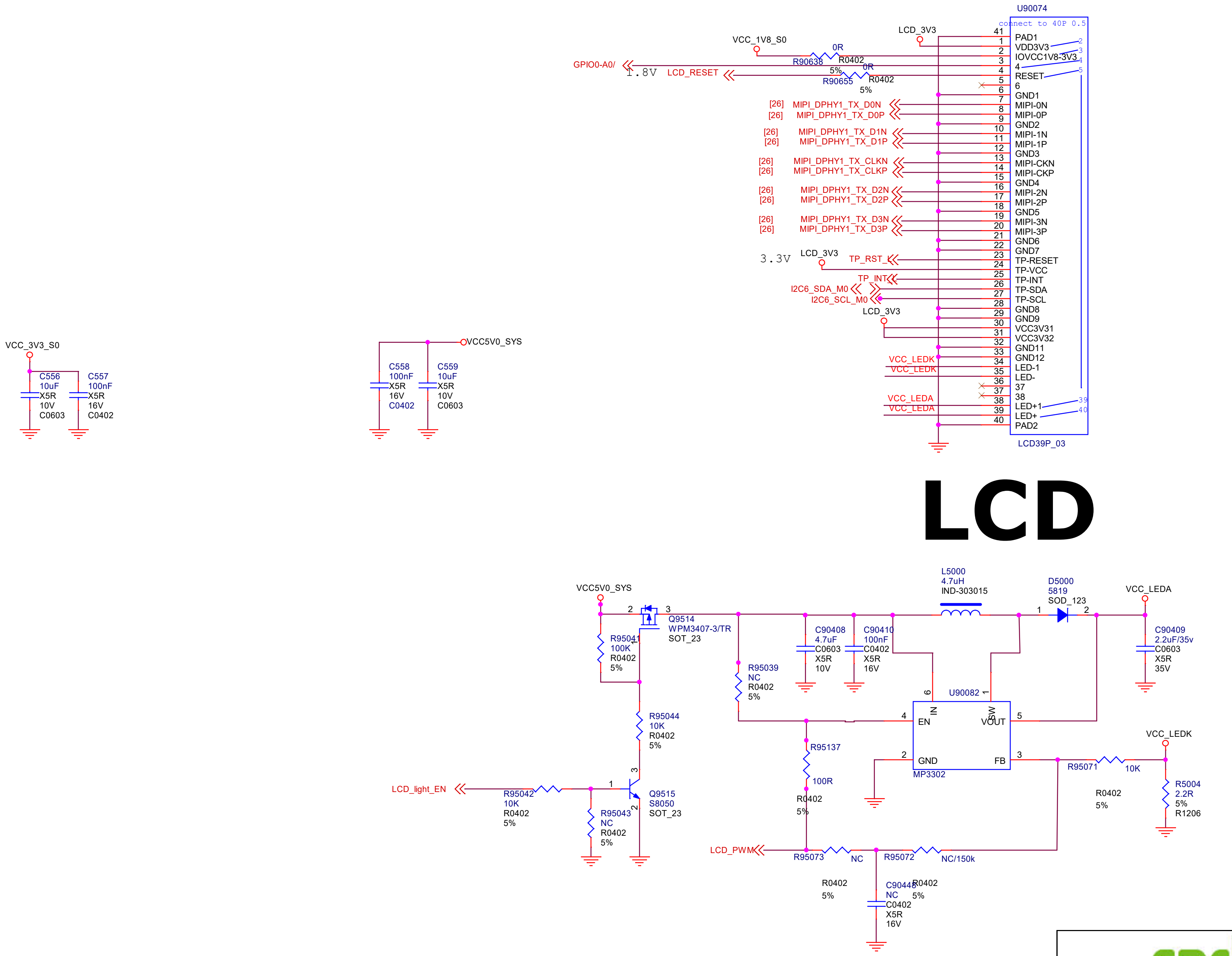
MIPI DPHY1 TX



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Size	Title: ROCK 5B	REV
A3	Page Name: MIPI DPHY1 TX	1.423
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