

野火 EBF RK3566 BTB 核心板

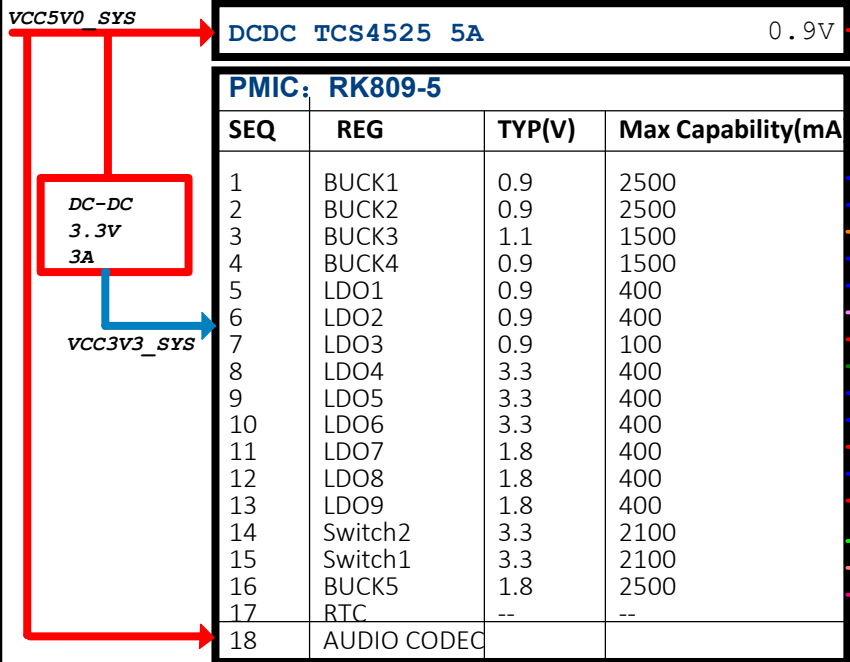
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历史版本

版本号	日期	设计	描述
v1.0	2023-03-07	ghs	初始版本, 开发阶段

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Title 野火_EBF RK3566 BTB 核心板		
Size A4	Document Number Historic Version	Rev V1.0
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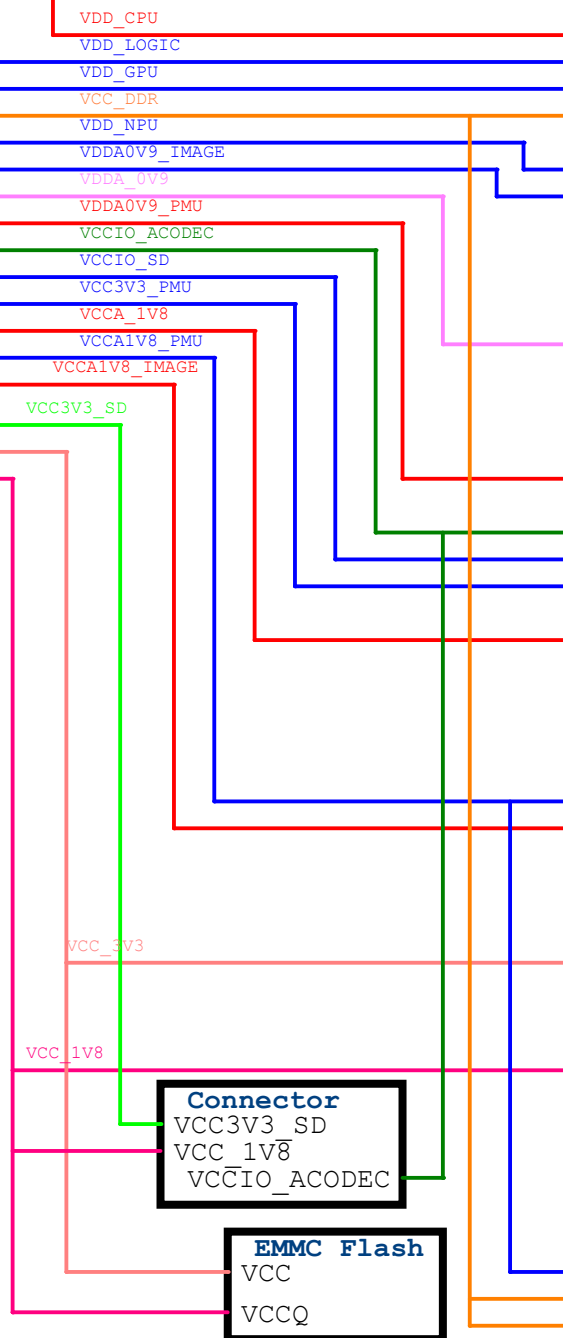
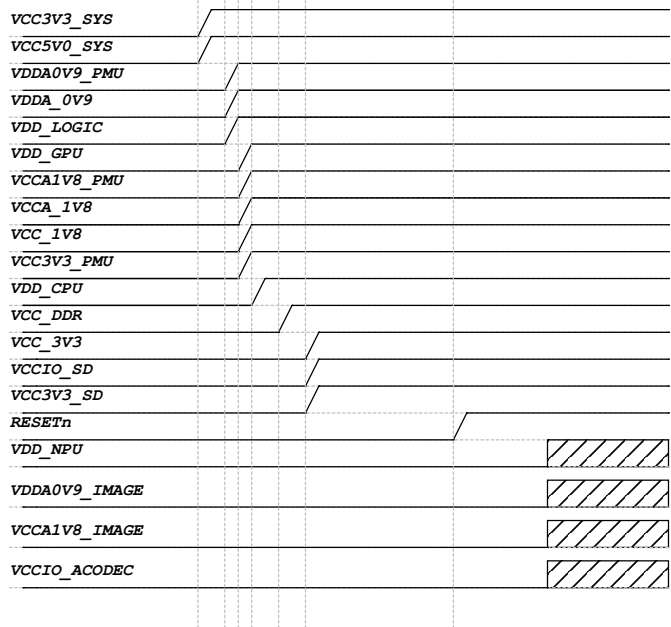


PWR TREE

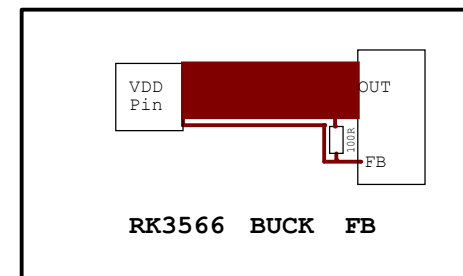
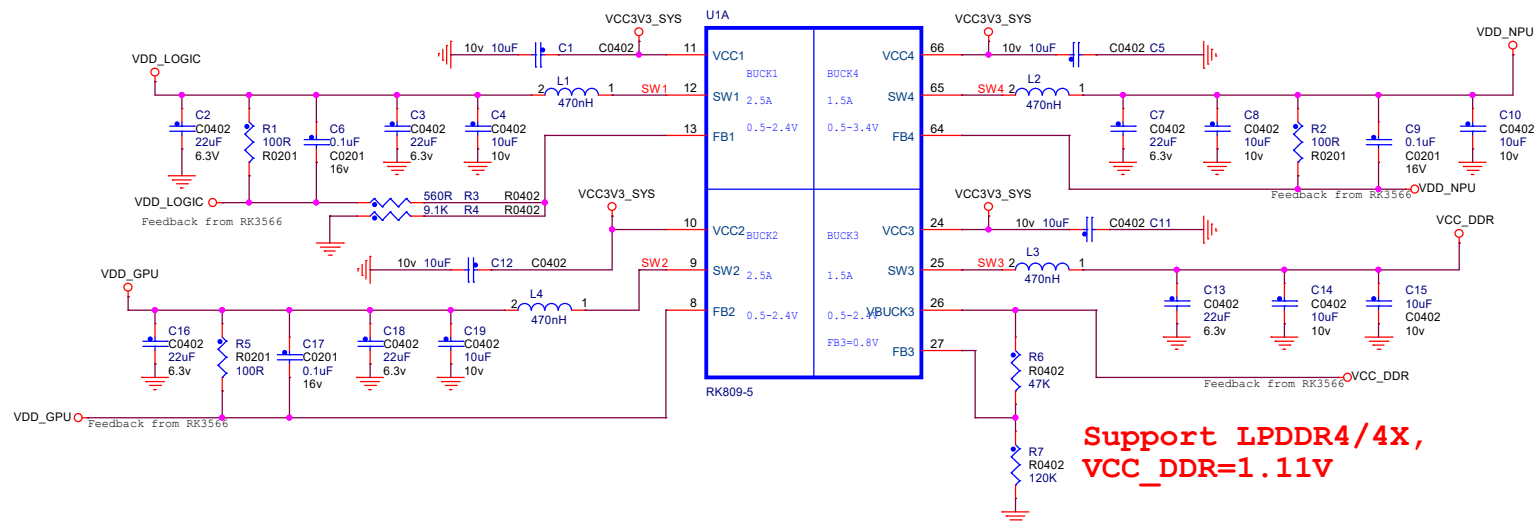
CPU:RK3566

SEQ	REG	TYP(V)
1	VDD_CPU	0.9
2	VDD_LOGIC	0.9
3	VDD_GPU	0.9
4	DDRPHY_VDDQ	1.1
5	DDRPHY_VDDQL	1.1
	VDD_NPU	0.9
6	MIPI_CSI_RX_AVDD_0V9	0.9
	MIPI_DSI_TX0/LVDS_TX0_AVDD_0V9	0.9
	MIPI_DSI_TX1_AVDD_0V9	0.9
	EDP_TX_AVDD_0V9	0.9
	HDMI_TX_AVDD_0V9	0.9
7	SYSPLL_AVDD_0V9	0.9
	USB2_AVDD_0V9	0.9
	USB3_AVDD_0V9	0.9
	MULTI_PHY_AVDD_0V9	0.9
		0.9
8	PMU_VDD_LOGIC_0V9	0.9
	PMUPLL_AVDD_0V9	0.9
9	VCCIO1	3.3
10	VCCIO3	3.3
11	PMUIO1	3.3
	PMUIO2	3.3
12	SYSPLL_AVDD_1V8	1.8
	USB2_AVDD_1V8	1.8
	USB3_AVDD_1V8	1.8
	MULTI_PHY_AVDD_1V8	1.8
	SARADC_AVDD_1V8	1.8
		1.8
13	PMUPLL_AVDD_1V8	1.8
14	MIPI_CSI_RX_AVDD_1V8	1.8
	MIPI_DSI_TX0/LVDS_TX0_AVDD_1V8	1.8
	MIPI_DSI_TX1_AVDD_1V8	1.8
	EDP_TX_AVDD_1V8	1.8
	HDMI_TX_AVDD_1V8	1.8
		1.8
15	USB2_AVDD_3V3	3.3
	USB3_AVDD_3V3	3.3
	VCCIO5	3.3
	VCCIO7	3.3
16	OTP_VCC18	1.8
	VCCIO2	1.8
	VCCIO4	1.8
	VCCIO6	1.8

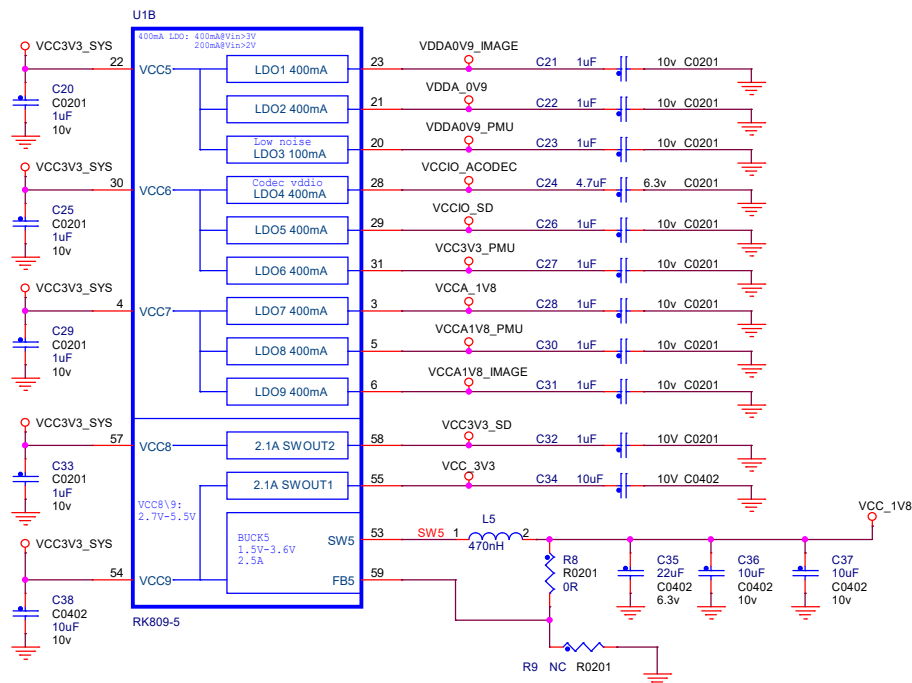
Power Sequence



PMIC RK809 DCDC

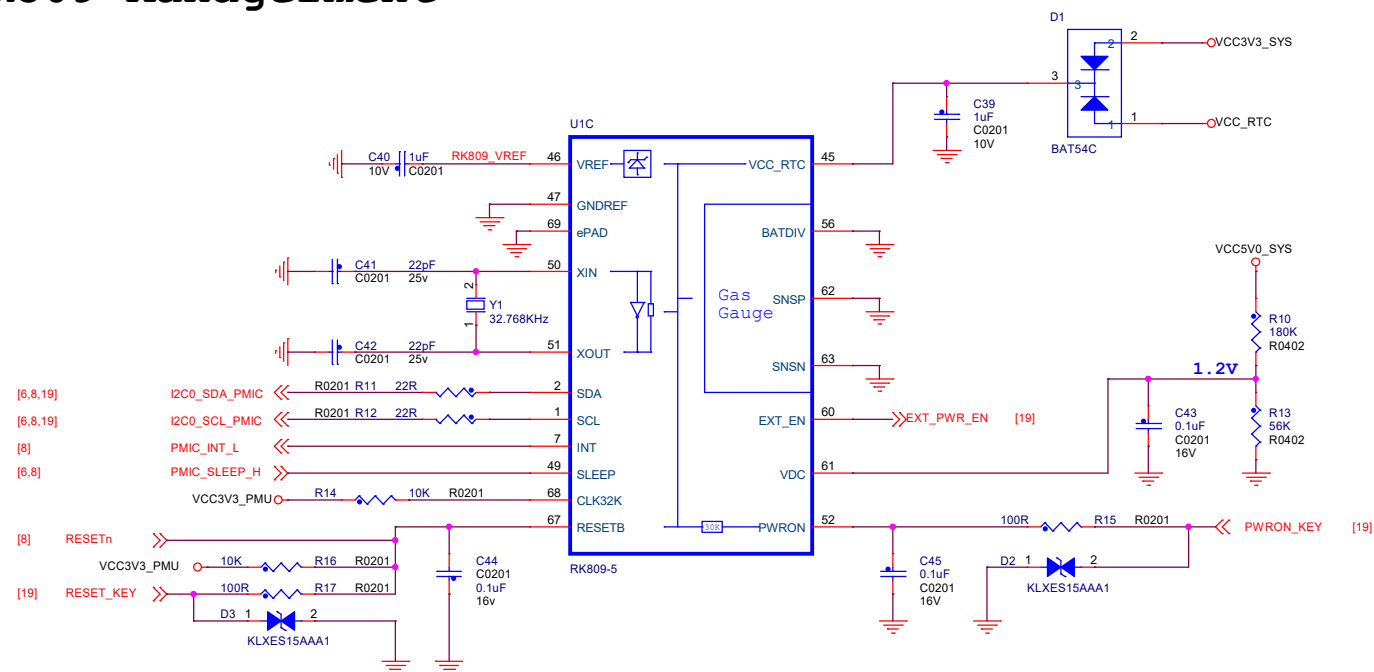


PMIC RK809 LDO

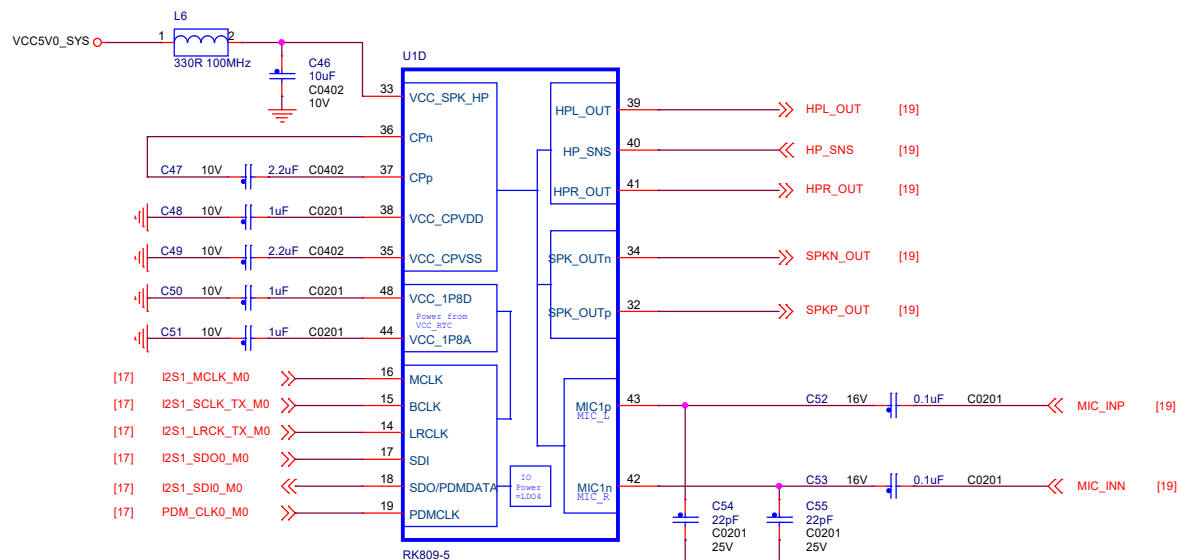


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Title 野火_EBF RK3566 BTB 核心板		
Size A3	Document Number PMIC_DCDC/LDO	Rev V1.0
Date: Wednesday, May 24, 2023	Sheet 4	of 19

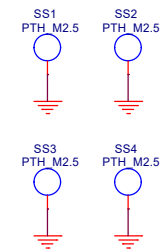
PMIC RK809 Managerment



PMIC RK809 CODEC



Fix Hole

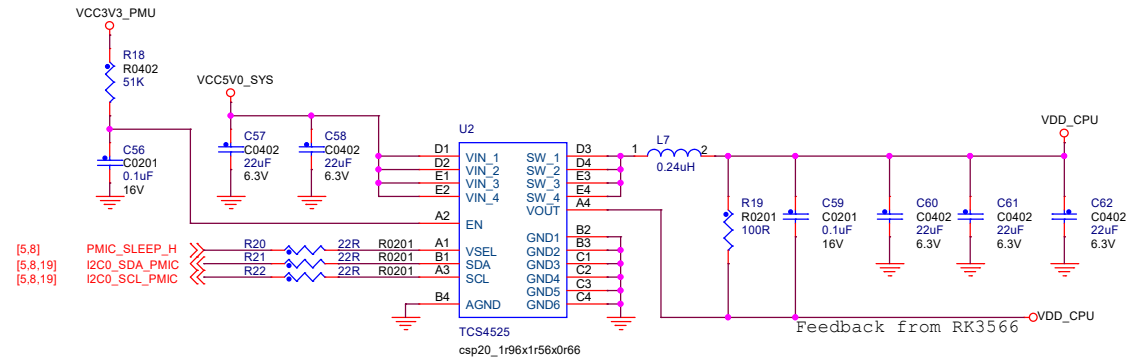


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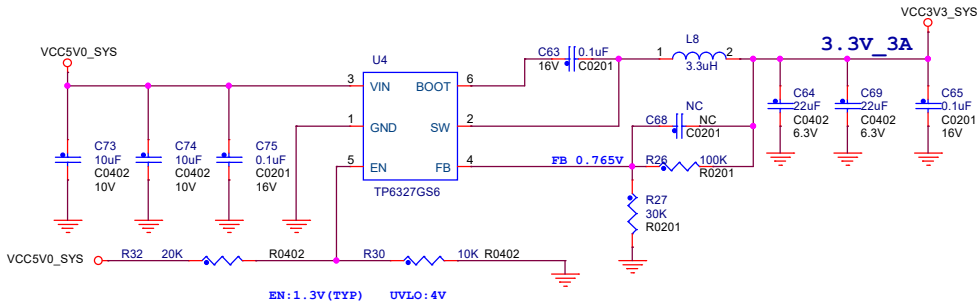
Title 野火_EBF RK3566 BTB 核心板		
Size A3	Document Number PMIC_Management/CODE	Rev V1.0
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RK3566 CPU Power

VDD_CPU_EXT

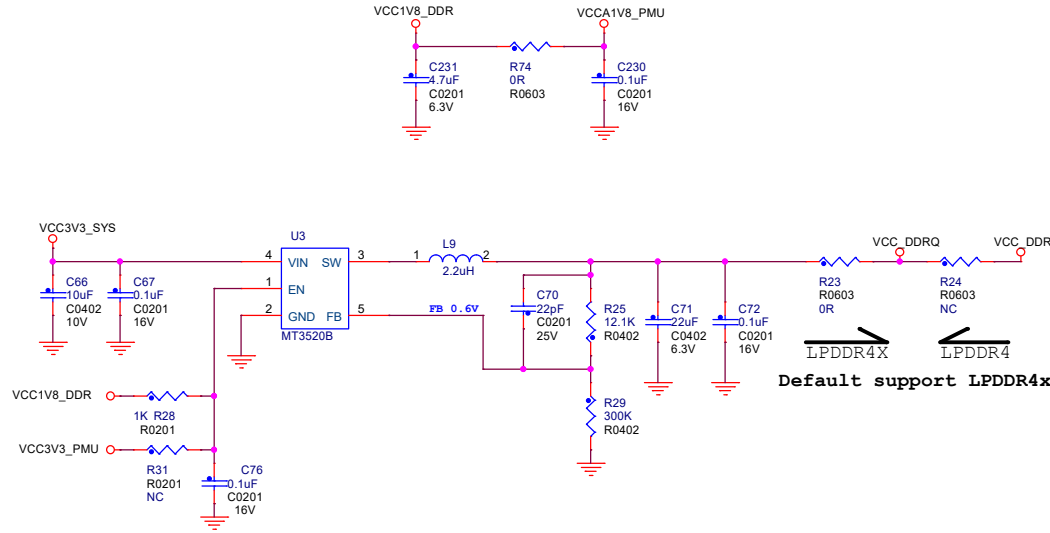


3V3_SYS



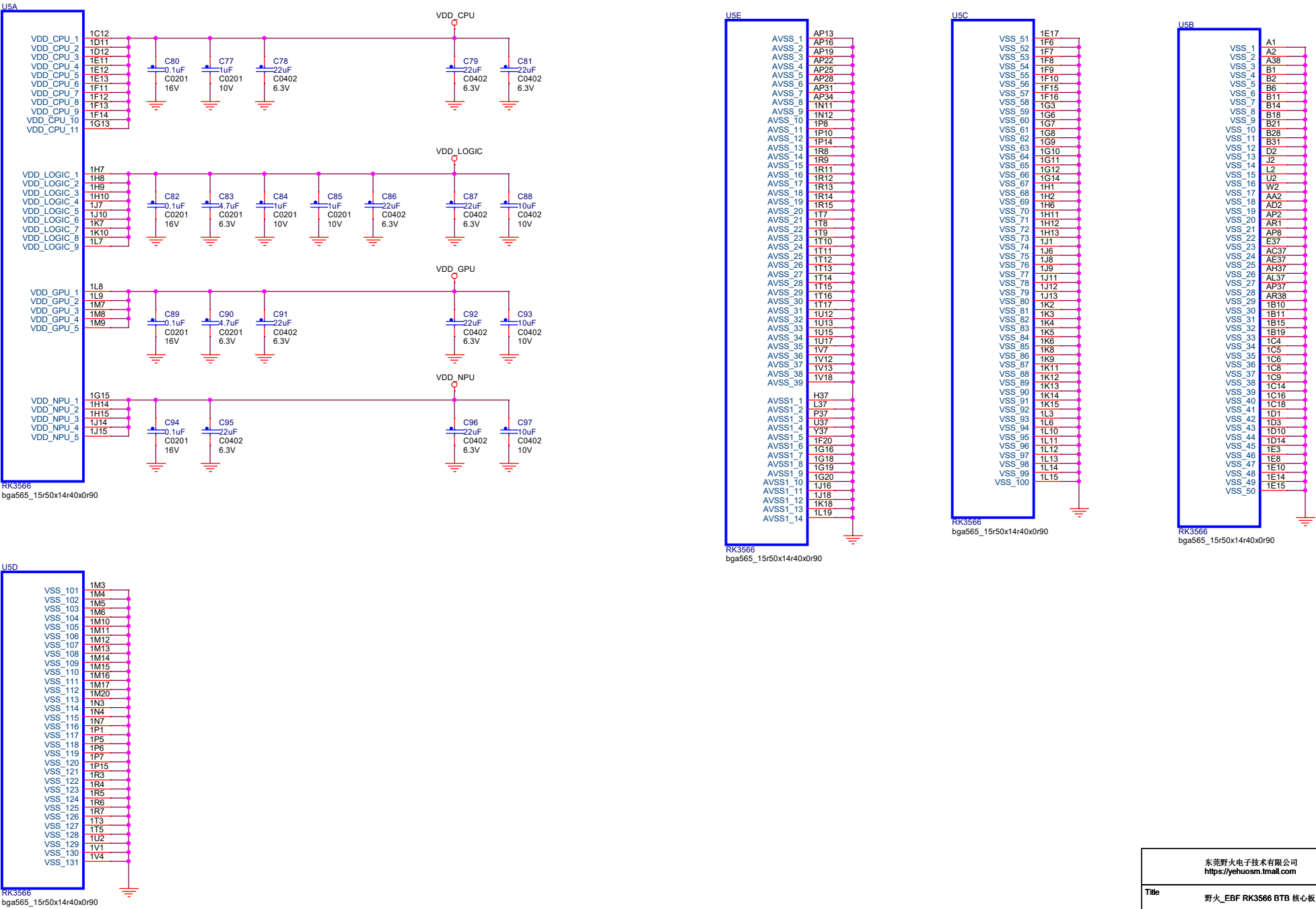
LPDDR4X Power

output: 0.6V

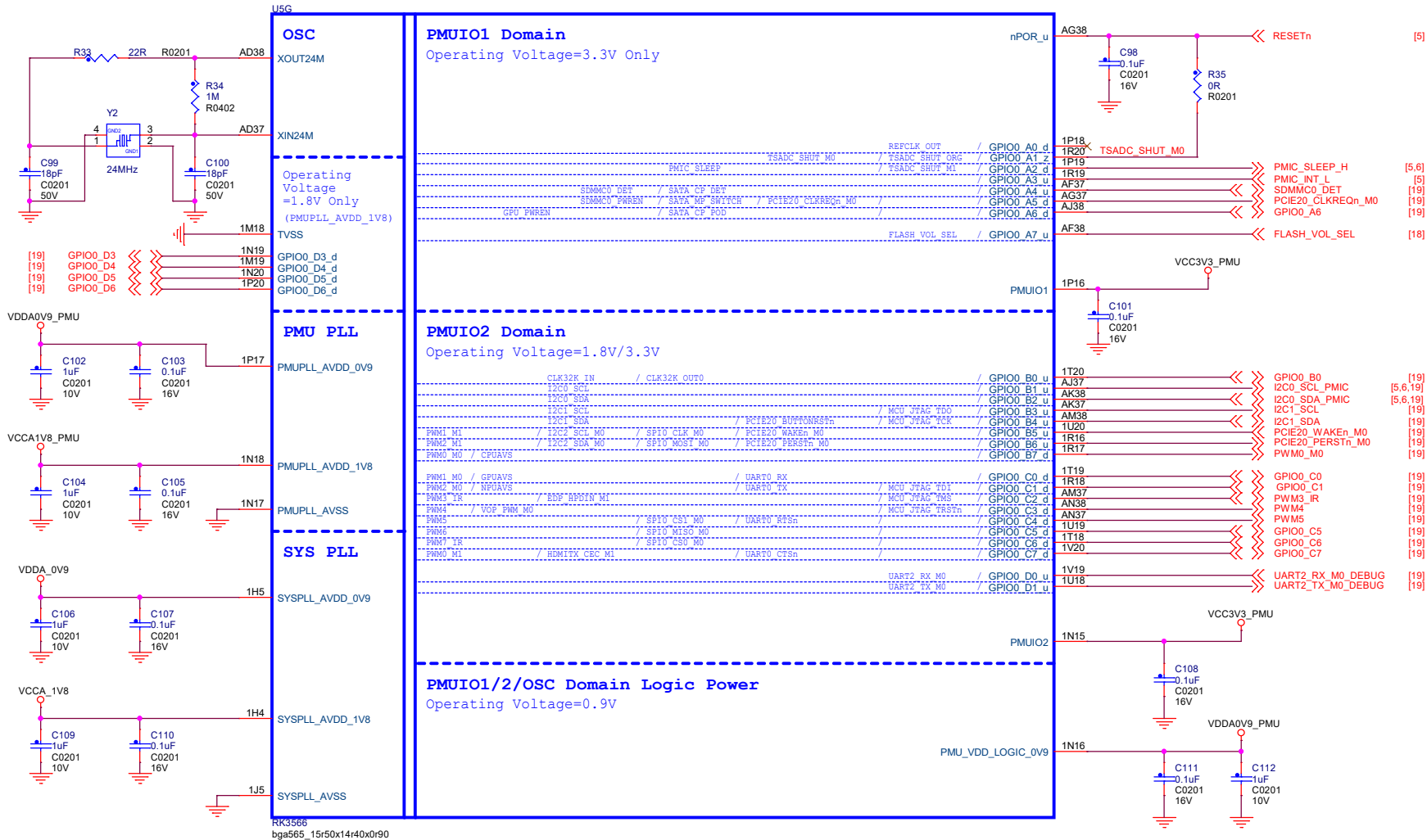


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RK3566 PWR



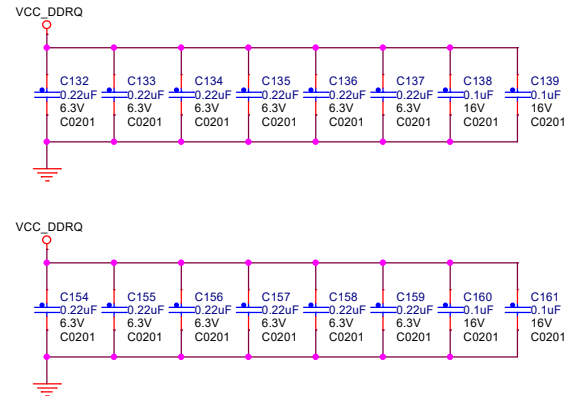
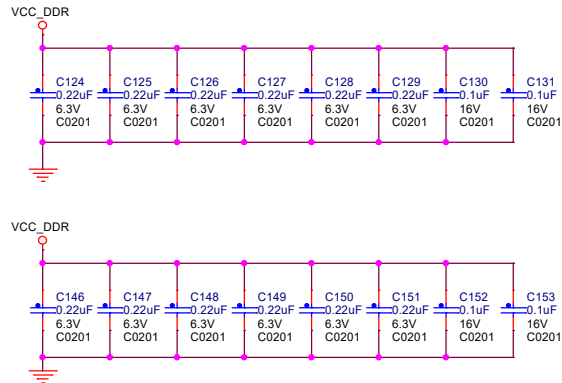
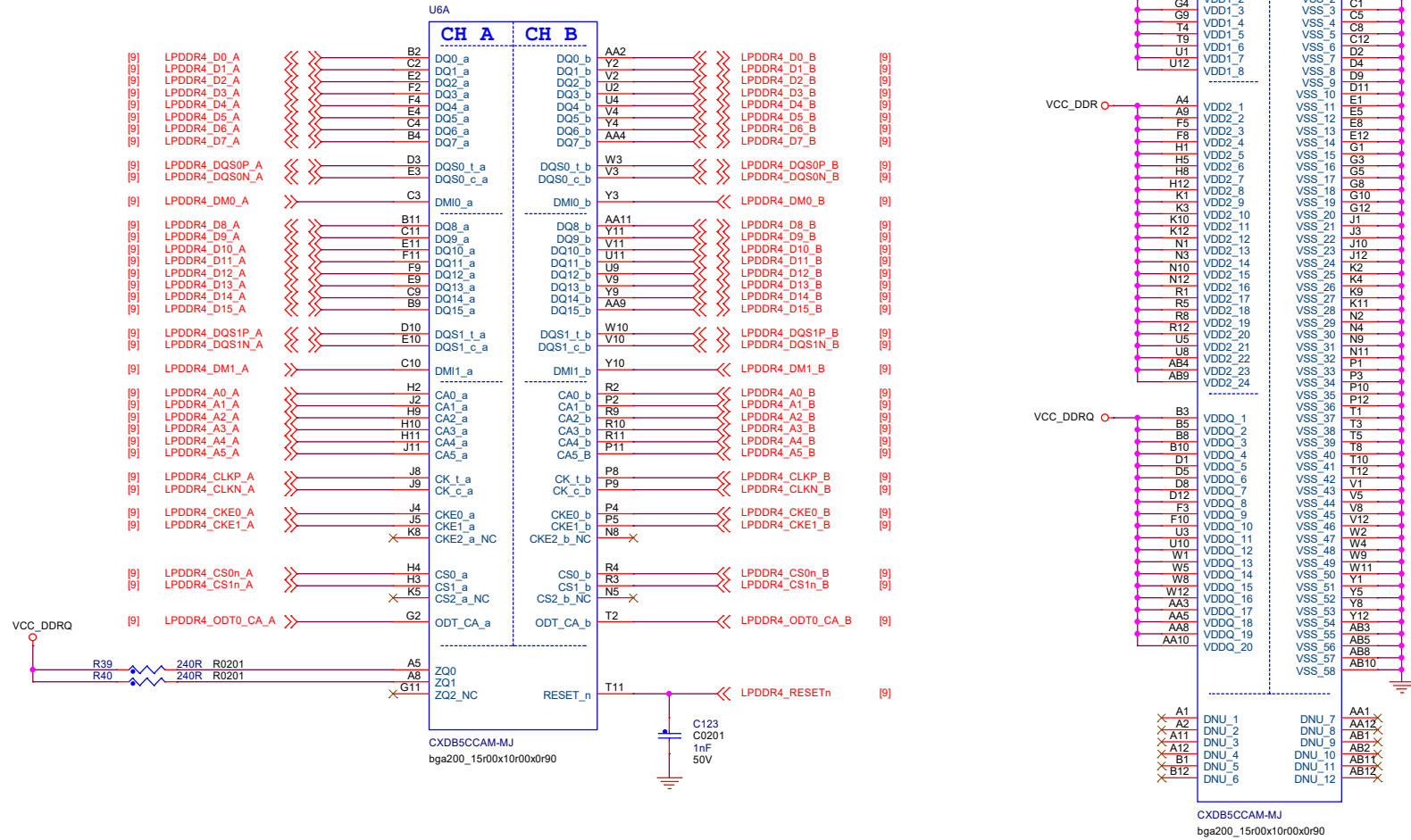
RK3566 OSC/PLL/PMUIO



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Date: Wednesday, May 24, 2023 Sheet 8 of 19		

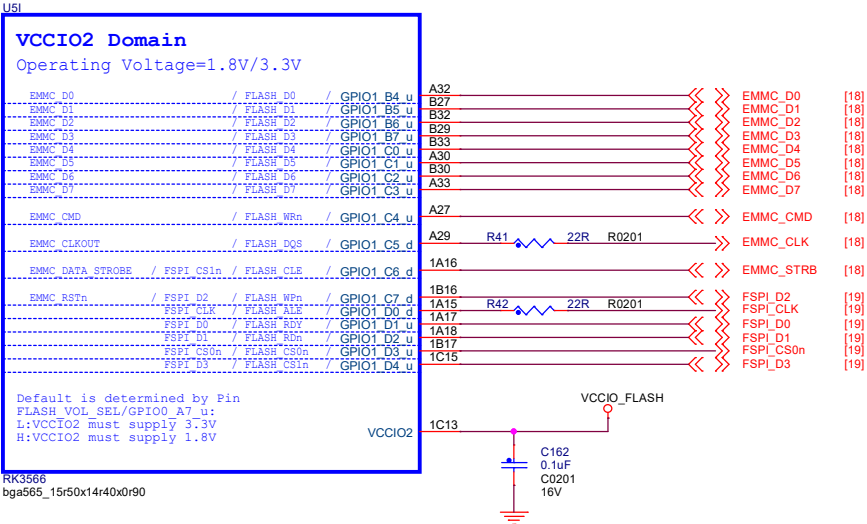


LPDDR4x

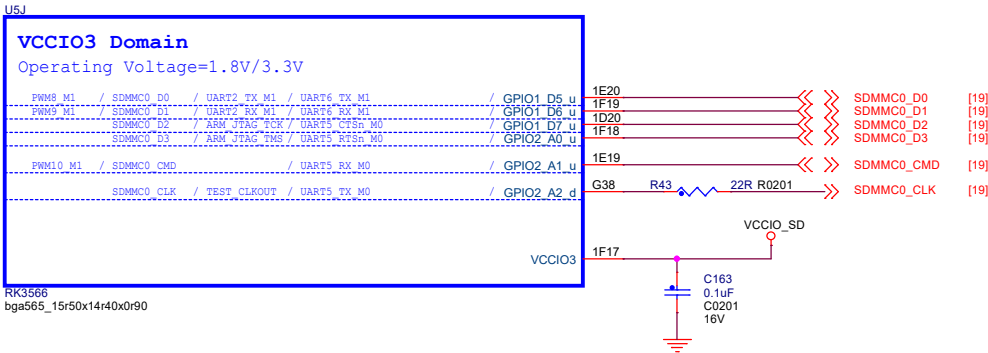


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Title 野火_EBF RK3566 BTB 核心板		
Size A3	Document Number LPDDR4x	Rev V1.0
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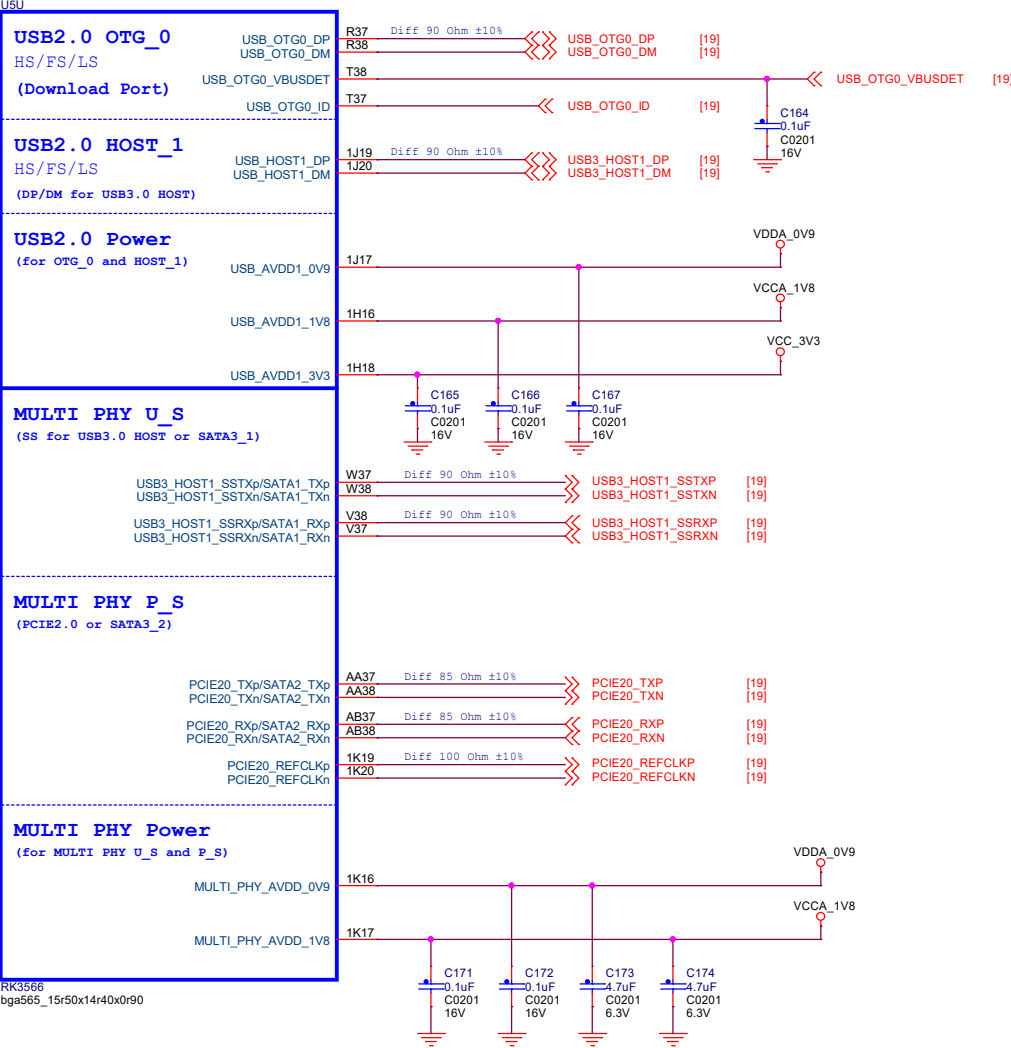
RK3566 VCCIO2 Domain



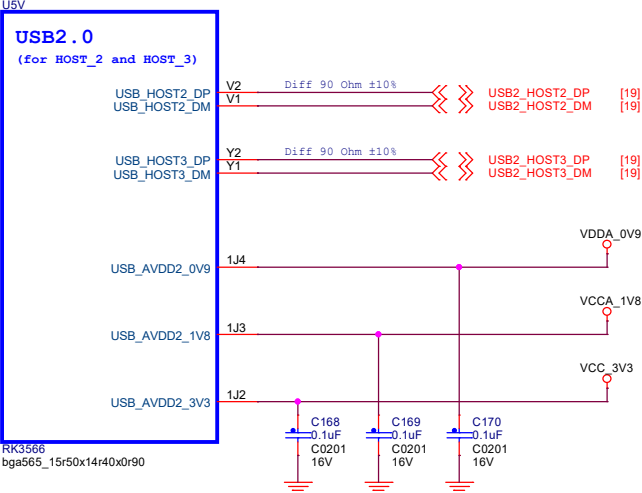
RK3566 VCCIO3 Domain



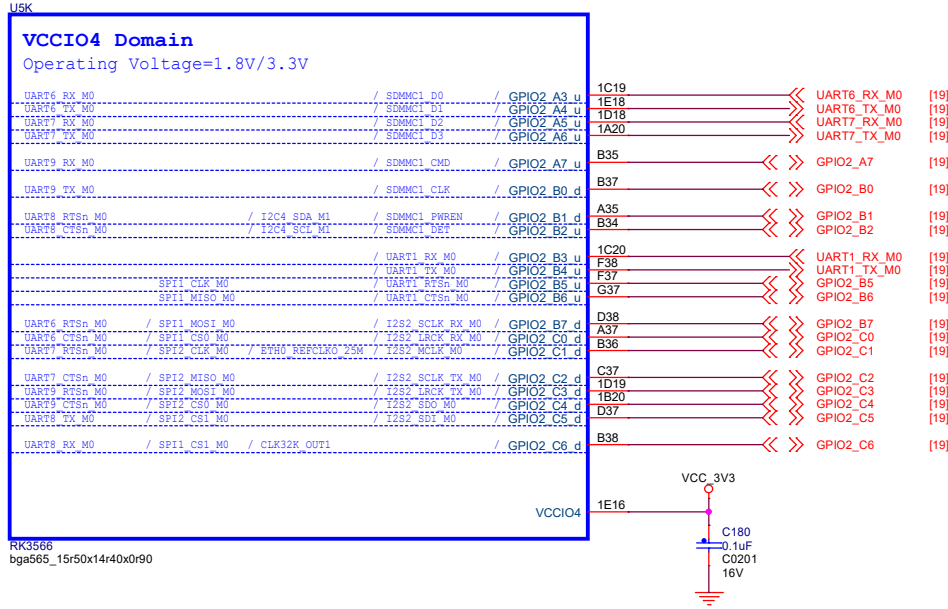
RK3566 USB3.0/SATA/QSGMII/PCIE2.0 x1



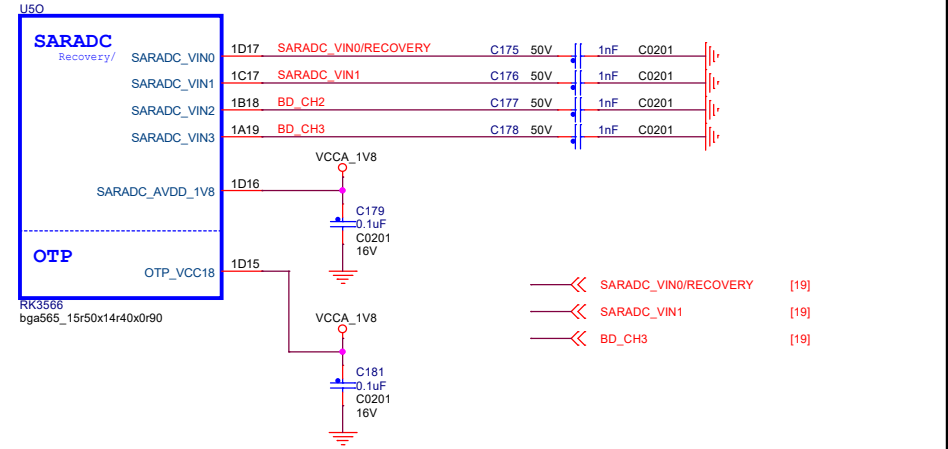
RK3566 USB2.0 HOST



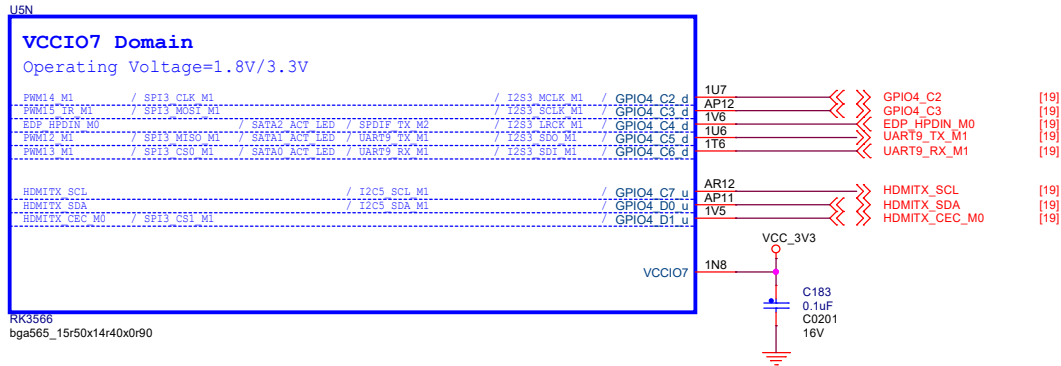
RK3566 VCCIO4 Domain



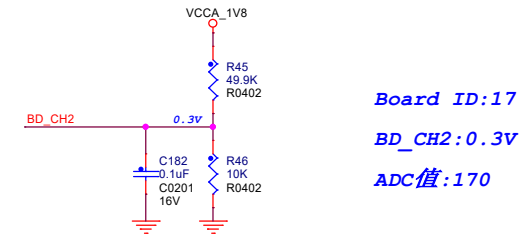
RK3566 SARADC/OTP



RK3566 VCCIO7 Domain



BD ID



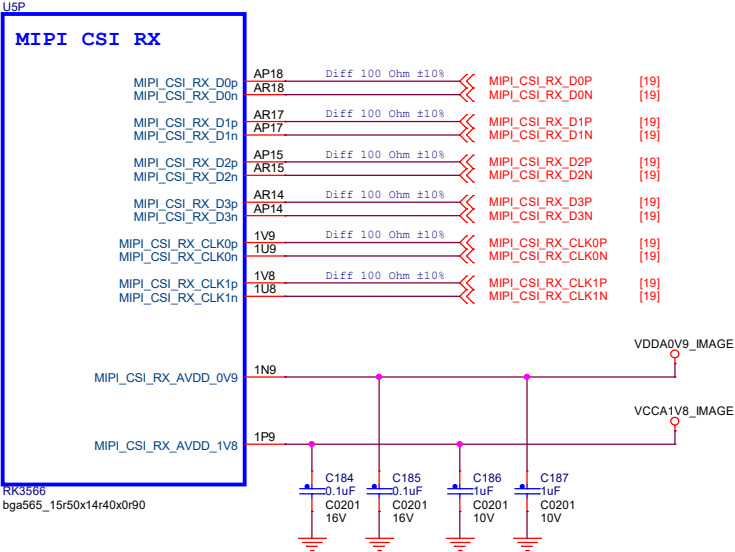
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Size A3	Document Number SARADC/GPIO	Rev V1.0
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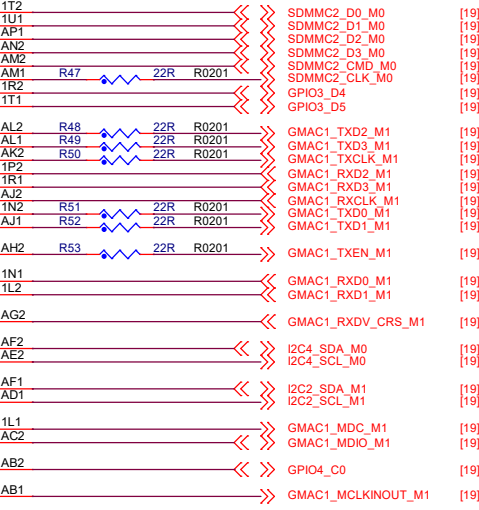
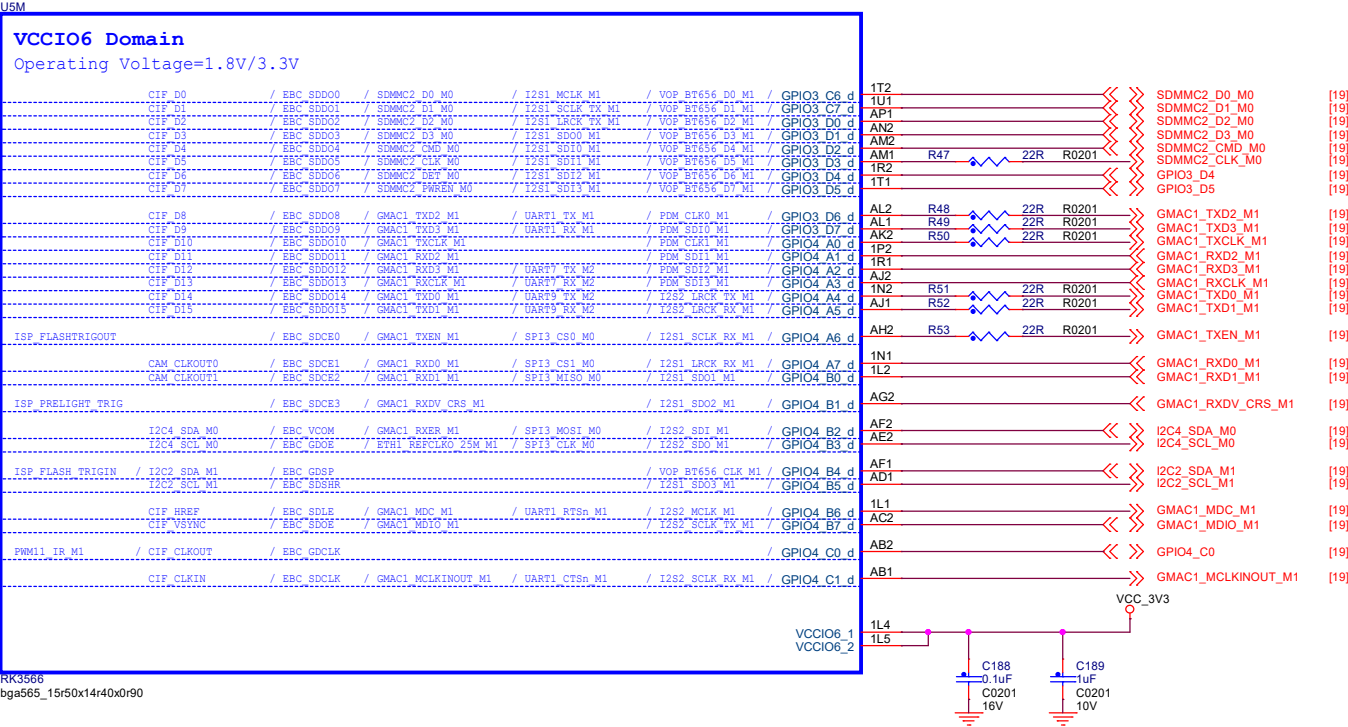
Date: Wednesday, March 06, 2024 Sheet 13 of 19

RK3566 MIPI_CSI_RX



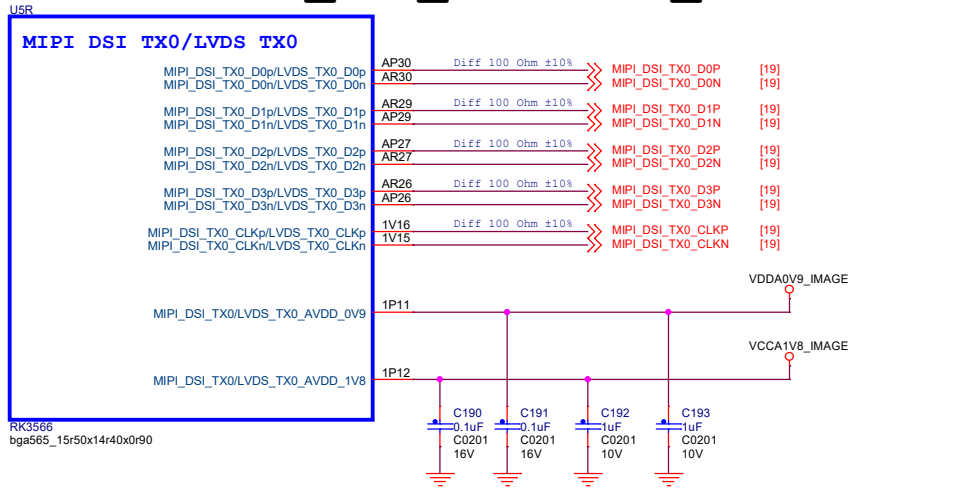
Option1	Sensor1 x4Lane	MIPI_CSI_RX_D0-3 MIPI_CSI_RX_CLK0
Option2	Sensor1 x2Lane	MIPI_CSI_RX_D0-1 MIPI_CSI_RX_CLK0
	+ Sensor2 x2Lane	MIPI_CSI_RX_D2-3 MIPI_CSI_RX_CLK1

RK3566 VCCIO6 Domain

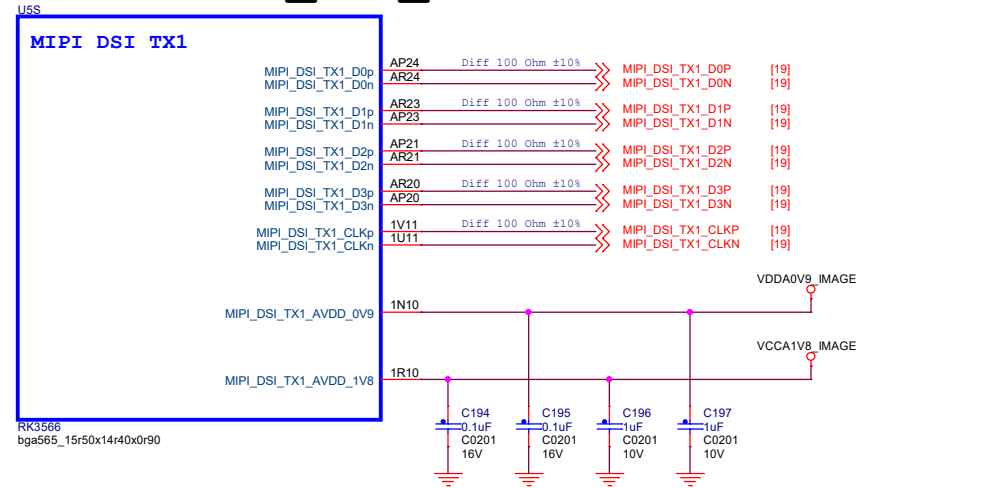


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Title 野火_EBF RK3566 BTB 核心板		
Size A3	Document Number VI Interface	Rev V1.0
Date: Wednesday, May 24, 2023 Sheet 14 of 19		

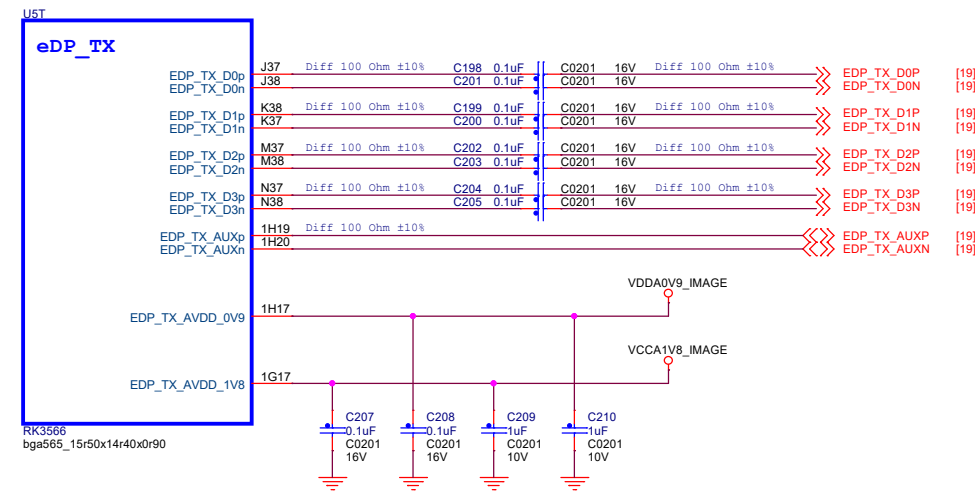
RK3566 MIPI_DSI_TX0/LVDS_TX0



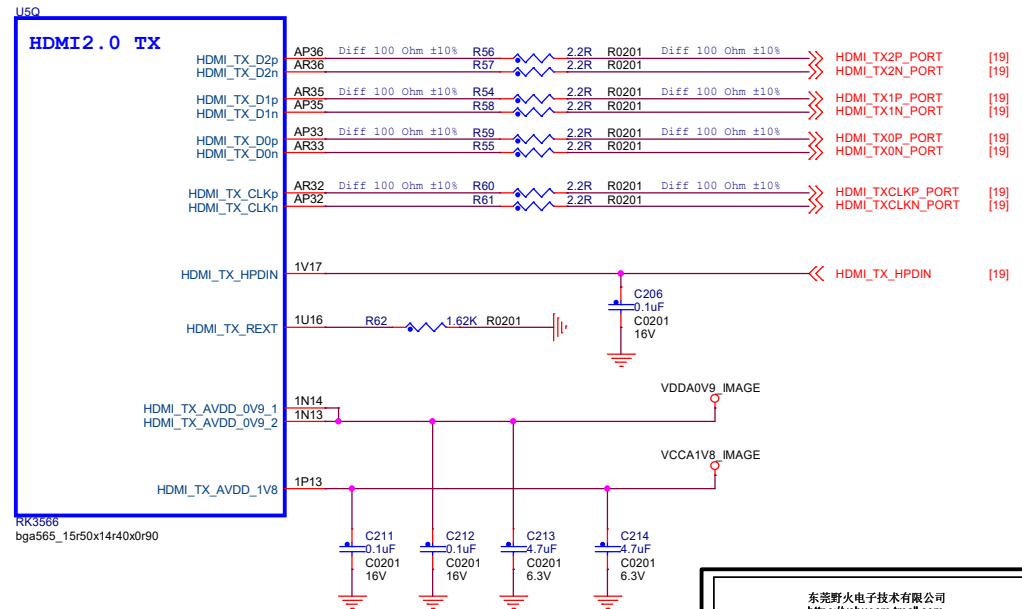
RK3566 MIPI_DSI_TX1



RK3566 eDP TX



RK3566 HDMI2.0 TX



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RK3566 VCCIO5 Domain

USL

VCCIO5 Domain
Operating Voltage=1.8V/3.3V

Pin	Signal	Function	GPIO	Direction	Notes
BT1120 D0	SPI1 CS0 M1	/ SDMMC2 D0 M1	GPIOD_A1_d	d	[19]
BT1120 D1	/ GMAC1 TXD2 M0	/ 12S3 MCLK M0	SDMMC2_D1_M1	M1	GPIOD_A2_d [19]
BT1120 D2	/ GMAC1 RXD3 M0	/ 12S3 SCLK M0	SDMMC2_CS_M1	M1	GPIOD_A3_d [19]
BT1120 D3	/ GMAC1 RXD0 M0	/ 12S3 LRPC M0	SDMMC2_DS_M1	M1	GPIOD_A4_d [19]
BT1120 D4	/ GMAC1 RXD5 M0	/ 12S3 SD0 M0	SDMMC2_CMD_M1	M1	GPIOD_A5_d [19]
BT1120 CLK	/ GMAC1 RXCLK M0	/ 12S3 SDI M0	SDMMC2_CLK_M1	M1	GPIOD_A6_d [19]
BT1120 DS	/ GMAC1 RXCLK M0	/ SDMMC2 DET M1	GPIOD_A7_d	d	[19]
BT1120 D6	/ ETH1 REFCLK0 25M M0	/ SDMMC2 PWREN M1	GPIOD_B0_d	d	[19]
PWM0 M0	/ VOP BT1120 D7	/ GMAC1 RXD0 M0	DARX4_RX_M1	M1	GPIOD_B1_d [19]
PWM0 M0	/ VOP BT1120 D8	/ GMAC1 RXD1 M0	DARX4_RX_M1	M1	GPIOD_B2_d [19]
BT1120 D9	/ 12C5 SCL M0	/ GMAC1 RXDV CRS M0	PDM_SDIO_M2	M2	GPIOD_B3_d [19]
BT1120 D10	/ 12C5 SDA M0	/ GMAC1 RXER M0	PDM_SDI1_M2	M2	GPIOD_B4_d [19]
PWM10 M0	/ VOP BT1120 D11	/ 12C3 SCL M1	GMAC1_TXD0_M0	M0	GPIOD_B5_d [19]
PWM11 TX M0	/ VOP BT1120 D12	/ 12C3 SDA M1	GMAC1_TXD1_M0	M0	GPIOD_B6_d [19]
PWM12 M0	/ GMAC1 TXEN M0	/ UART3 TX M1	PDM_SDIO_M2	M2	GPIOD_B7_d [19]
PWM13 M0	/ VOP BT1120 D13	/ SPI1 MOSI M1	FCIDEV_FCSSEL_M1	M1	GPIOD_C0_d [19]
BT1120 D14	/ SPI1 MISO M1	/ UART5 TX M1	12S1_SD03_M2	M2	GPIOD_C1_d [19]
BT1120 D15	/ SPI1 CLK M1	/ UART5 RX M1	12S1_SCLK_RX_M2	M2	GPIOD_C2_d [19]
PWM14 M0	/ VOP PWM M1	/ GMAC1 MDC M0	UART7_TX_M1	M1	GPIOD_C4_d [19]
PWM15 TX M0	/ SPOTB TX M1	/ GMAC1 MDIO M0	DARX4_RX_M1	M1	12S1_LRPC_RX_M2 GPIOD_C5_d [19]

VCCIO5_1
VCCIO5_2

1N5
1N6

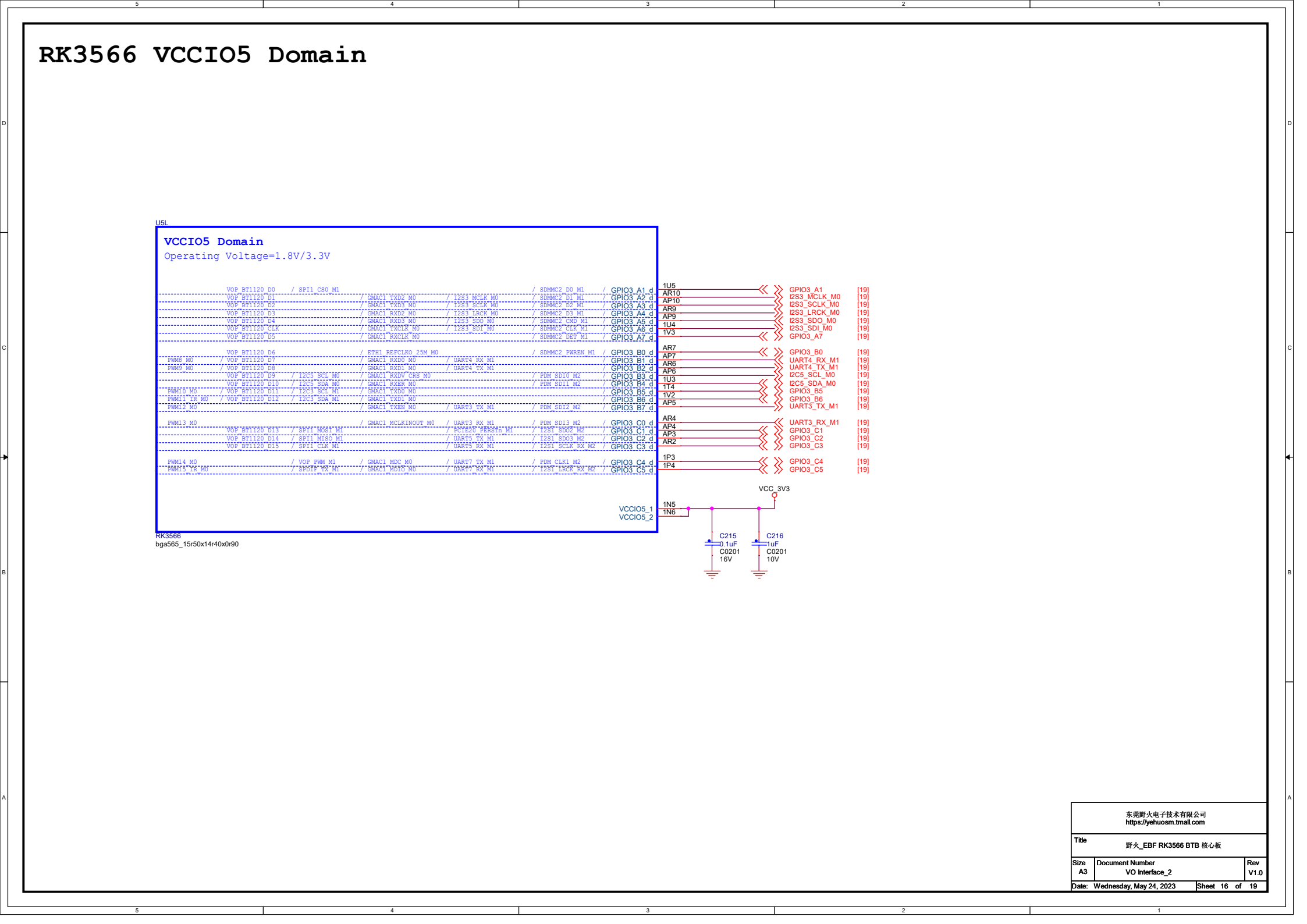
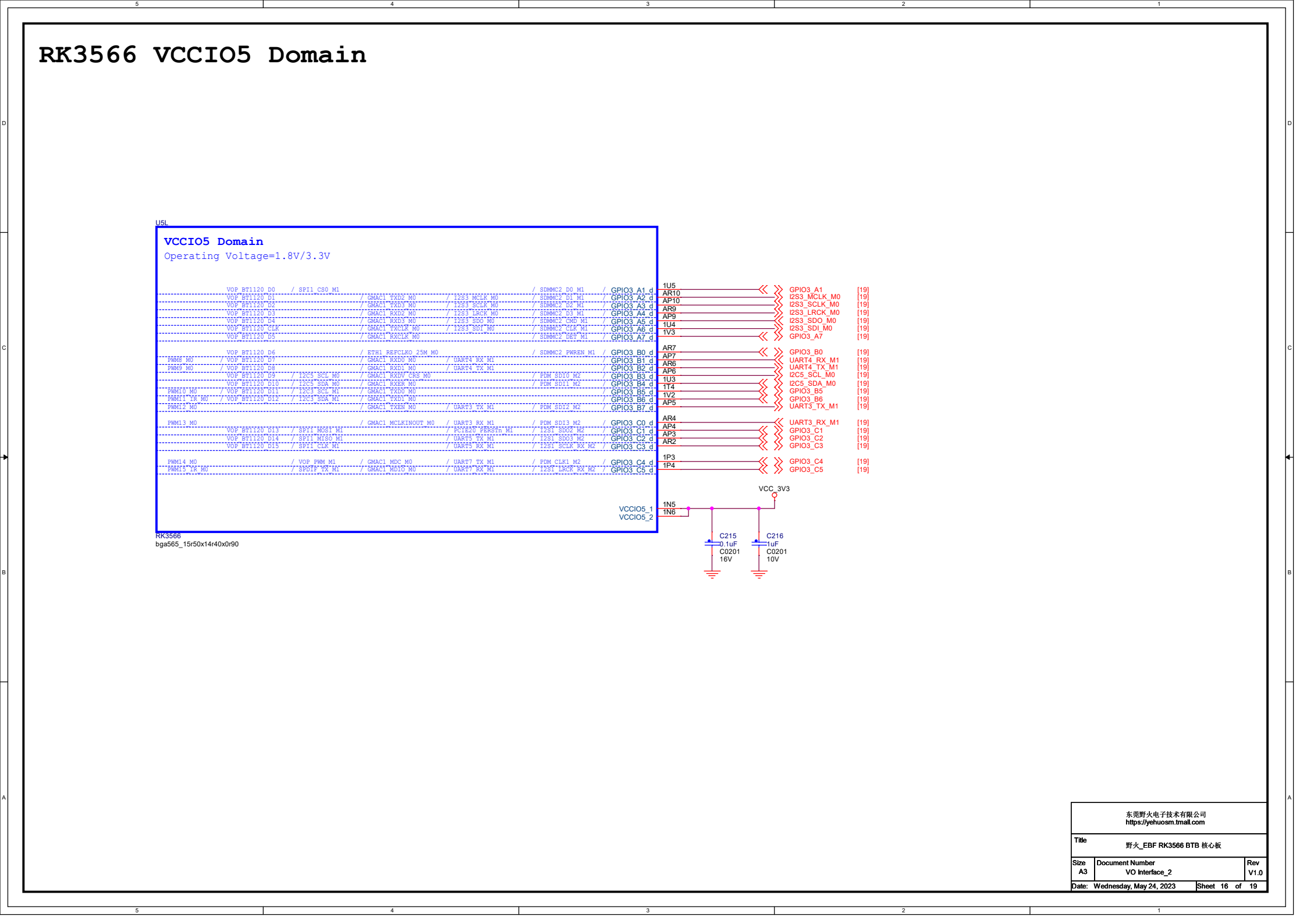
VCC_3V3

C215
0.1uF
C0201
16V

C216
1uF
C0201
10V

RK3566
bga565_15r50x14r40x0r90

Title		
野火_EBF RK3566 BTB 核心板		
Size	Document Number	Rev
A3	VO Interface_2	V1.0
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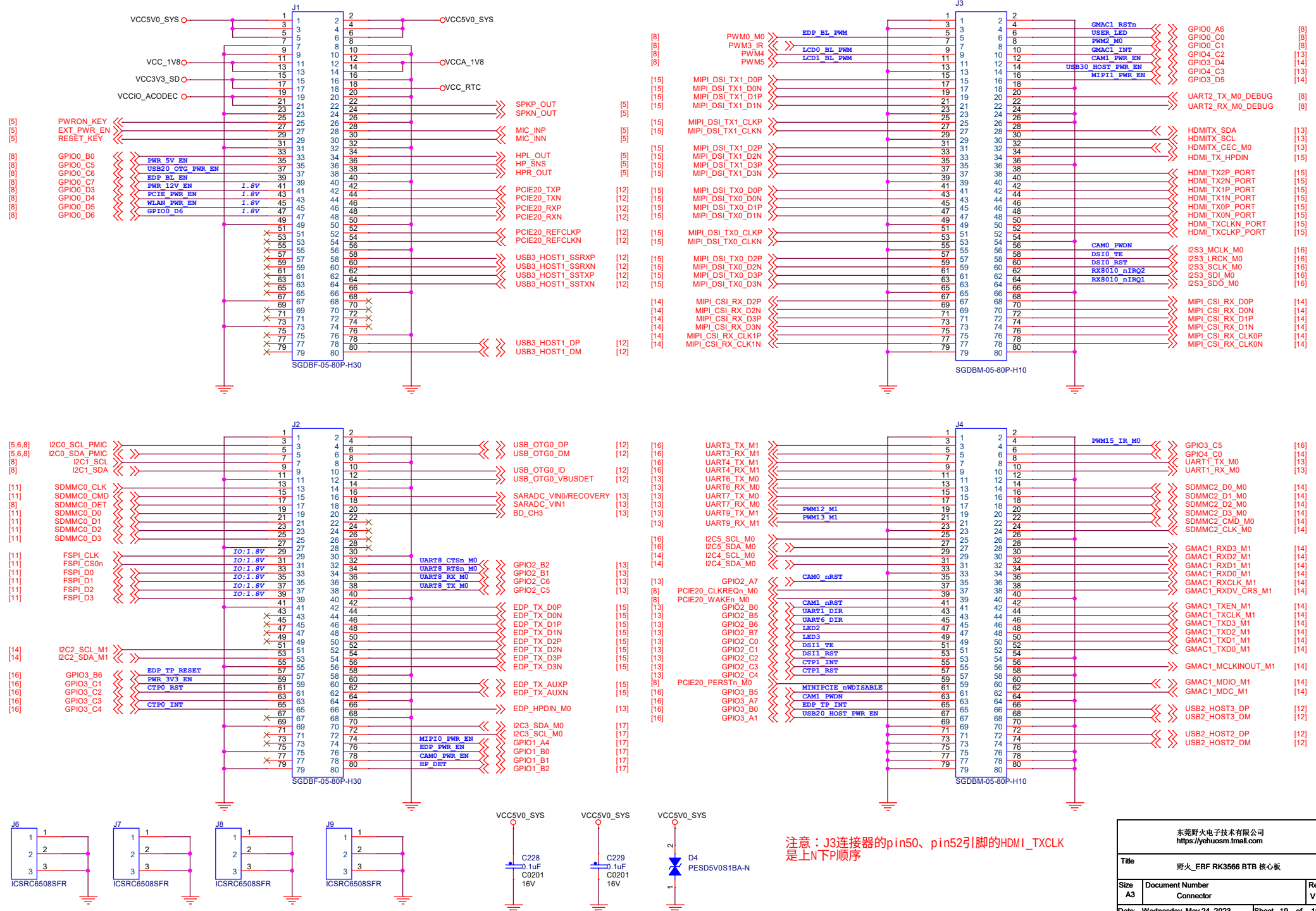
RK3566 VCCIO1 Domain

URH

VCCIO1 Domain
Operating Voltage=1.8V/3.3V

/ I2C3_SDA_M0	/ UART3_RX_M0	/ AUDIOPWM_LOUT_P	/ GPIO1_A0_u
/ I2C3_SCL_M0	/ UART3_TX_M0	/ AUDIOPWM_LCLK_P	/ GPIO1_A1_u
SCR_CLK	/ I2S1_MCLK_M0	/ UART3_RTSn_M0	/ GPIO1_A2_d
SCR_IO	/ I2S1_SCLK_TX_M0	/ UART3_CTSn_M0	/ GPIO1_A3_d
	/ I2S1_SCLK_RX_M0	/ UART4_RX_M0	/ GPIO1_A4_d
		/ PDM_CLK0_M0	/ SPOIF_TX_M0
SCR_RST	/ I2S1_LRCK_TX_M0	/ UART4_RTSn_M0	/ GPIO1_A5_d
	/ I2S1_LRCK_RX_M0	/ UART4_TX_M0	/ GPIO1_A6_d
		/ PDM_CLK0_M0	/ AUDIOPWM_ROUT_P
SCR_DET	/ I2S1_SDO0_M0	/ UART4_CTSn_M0	/ GPIO1_A7_d
	/ I2S1_SDIO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF1_M0
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		/ PDM_SDIF10_M0	/ PDM_SDIF10_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF11_M0
		/ PDM_SDIF11_M0	/ PDM_SDIF11_M0
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		/ PDM_SDIF12_M0	/ PDM_SDIF12_M0
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	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF18_M0
		/ PDM_SDIF18_M0	/ PDM_SDIF18_M0
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		/ PDM_SDIF20_M0	/ PDM_SDIF20_M0
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	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF23_M0
		/ PDM_SDIF23_M0	/ PDM_SDIF23_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF24_M0
		/ PDM_SDIF24_M0	/ PDM_SDIF24_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF25_M0
		/ PDM_SDIF25_M0	/ PDM_SDIF25_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF26_M0
		/ PDM_SDIF26_M0	/ PDM_SDIF26_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF27_M0
		/ PDM_SDIF27_M0	/ PDM_SDIF27_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF28_M0
		/ PDM_SDIF28_M0	/ PDM_SDIF28_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF29_M0
		/ PDM_SDIF29_M0	/ PDM_SDIF29_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF30_M0
		/ PDM_SDIF30_M0	/ PDM_SDIF30_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF31_M0
		/ PDM_SDIF31_M0	/ PDM_SDIF31_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF32_M0
		/ PDM_SDIF32_M0	/ PDM_SDIF32_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF33_M0
		/ PDM_SDIF33_M0	/ PDM_SDIF33_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF34_M0
		/ PDM_SDIF34_M0	/ PDM_SDIF34_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF35_M0
		/ PDM_SDIF35_M0	/ PDM_SDIF35_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF36_M0
		/ PDM_SDIF36_M0	/ PDM_SDIF36_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF37_M0
		/ PDM_SDIF37_M0	/ PDM_SDIF37_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF38_M0
		/ PDM_SDIF38_M0	/ PDM_SDIF38_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF39_M0
		/ PDM_SDIF39_M0	/ PDM_SDIF39_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF40_M0
		/ PDM_SDIF40_M0	/ PDM_SDIF40_M0
	/ I2S1_SDO0_M0	/ I2S1_B0n_M0	/ PDM_SDIF41_M0
		/ PDM_SDIF41_M0	/ PDM_SDIF41_M0
	/ I2S1_SDO0_M0	/ I2S	

BTB Connector



注意：J3连接器的pin50、pin52引脚的HDMI_TXCLK是上N下P顺序

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