

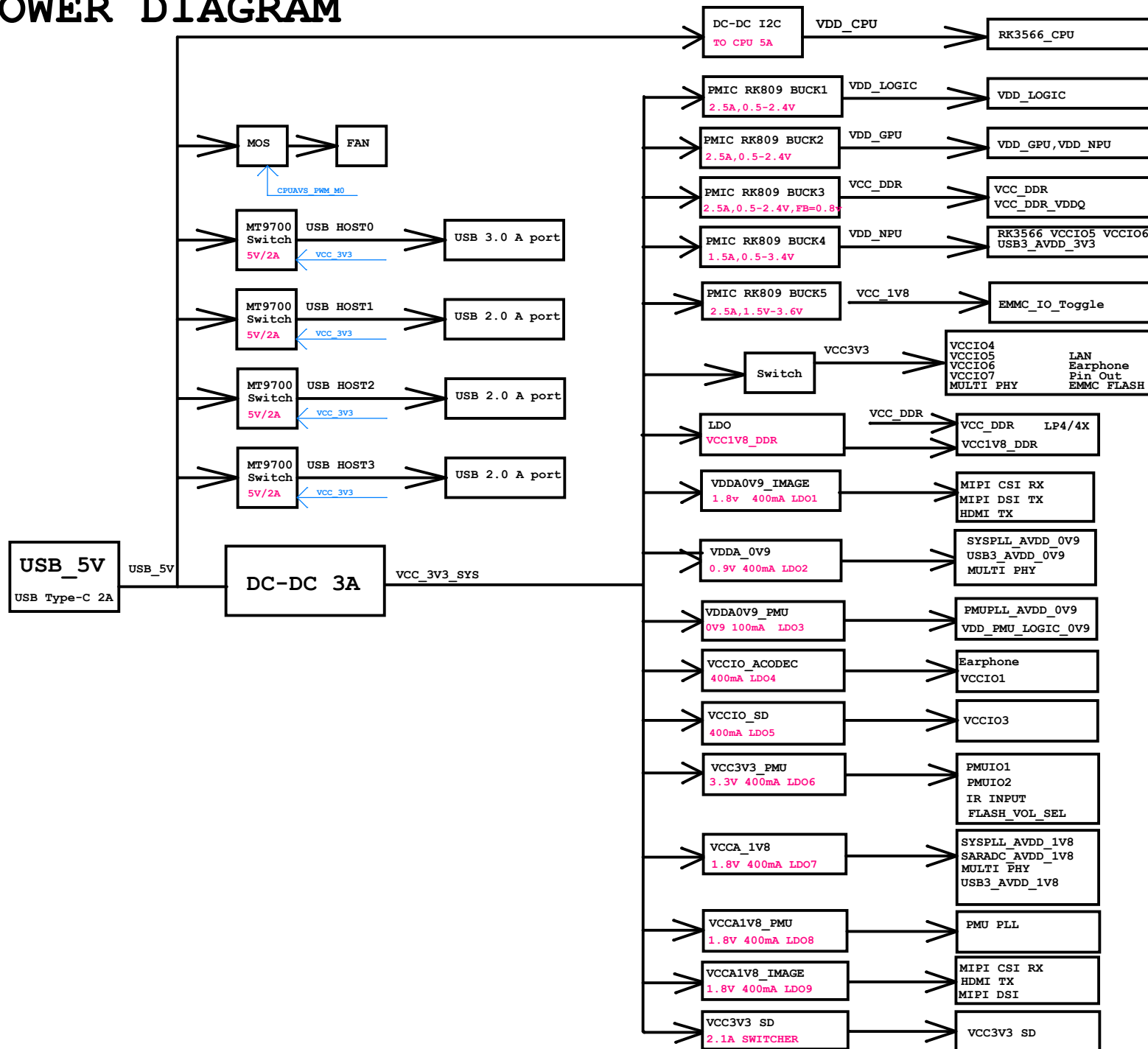
野火_RK3566 LUBANCAT_1_原理图_V0.1

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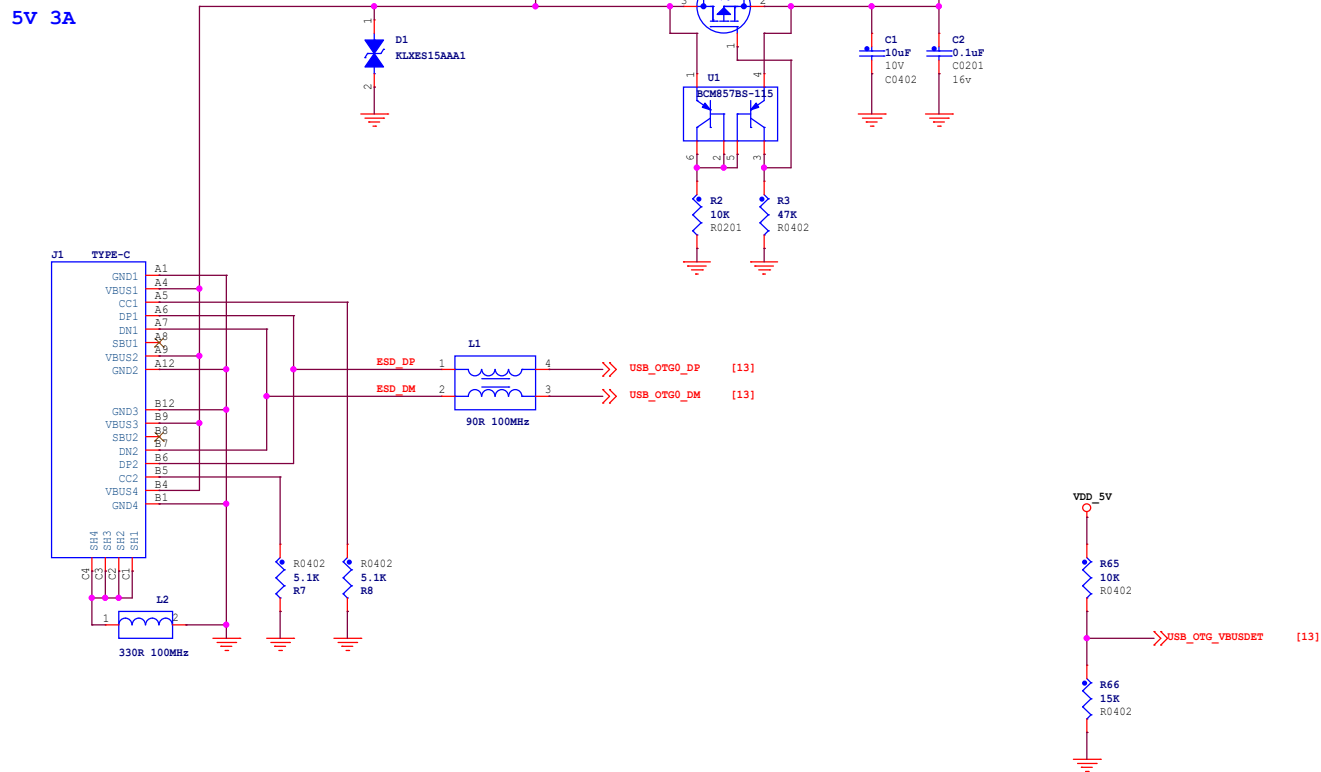
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版本号	日期	设计	描述
v0.1	2022-03-18	ghs	初始版本

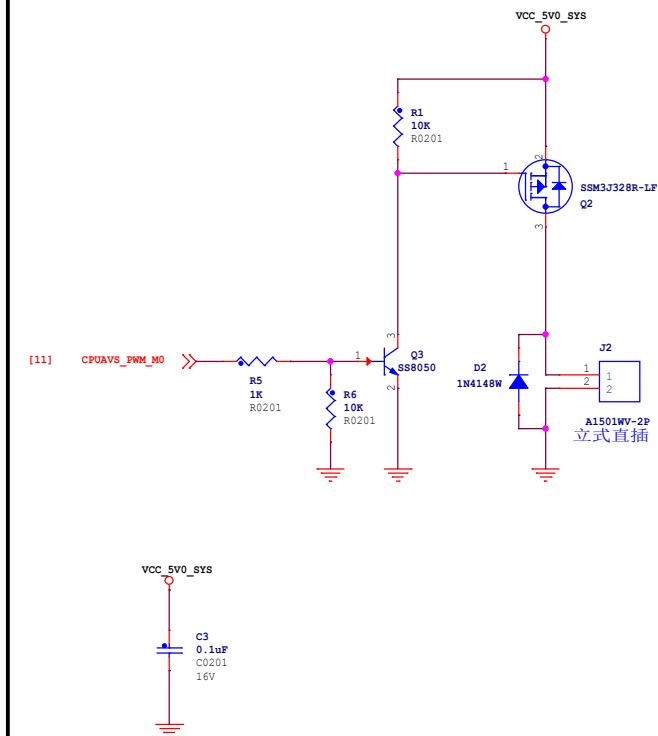
POWER DIAGRAM



POWER IN

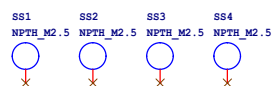


Active Cooling

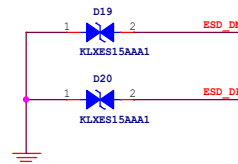


机械定位孔

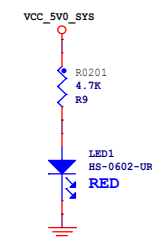
4*M3



USB ESD



PWR_LED



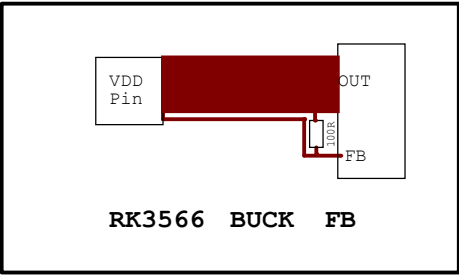
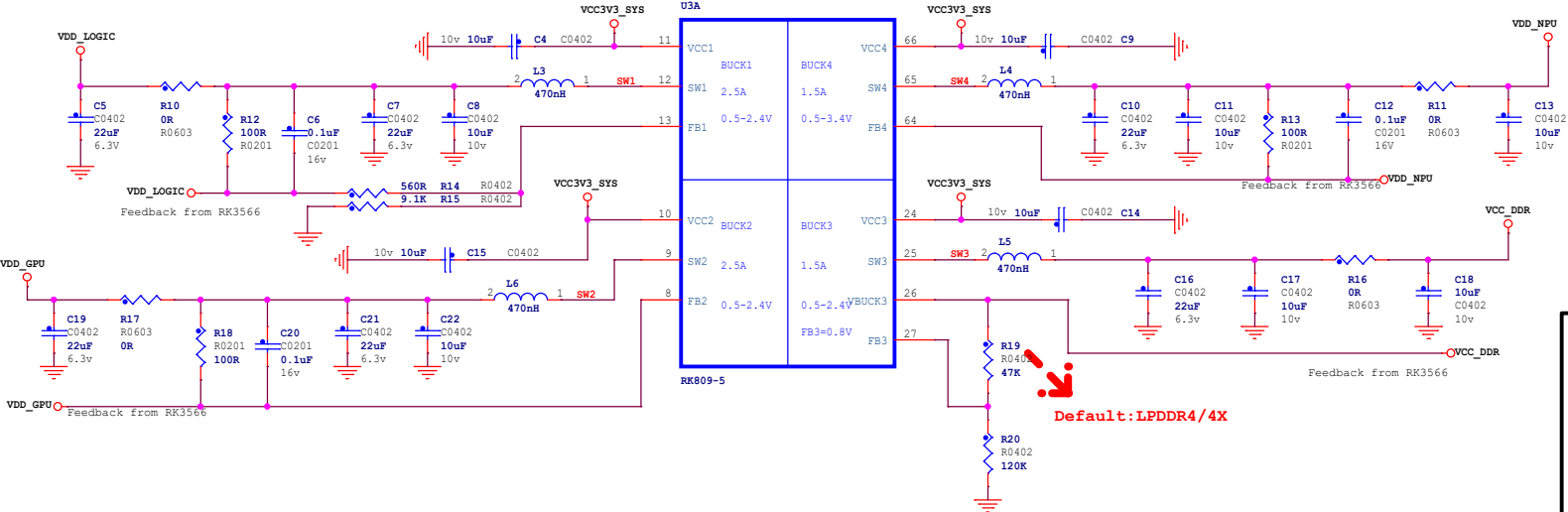
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<https://yehuosm.tmall.com>

Title 野火_RK3566_LUBANCAT_1_原理图_V0.1

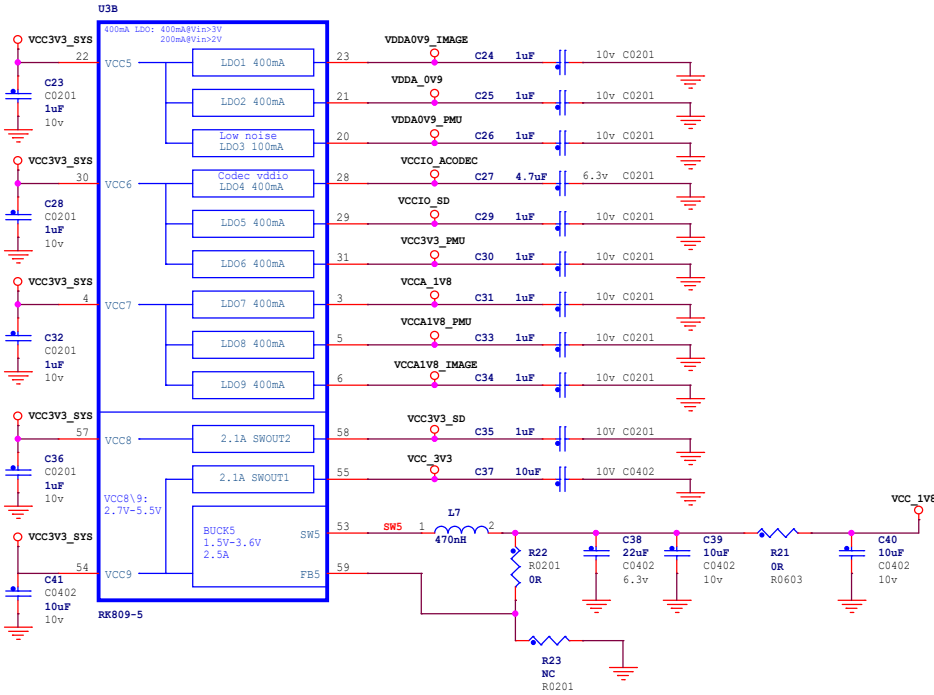
Size A3 Document Number TYPE_C_IN Rev V0.1

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PMIC RK809 DCDC

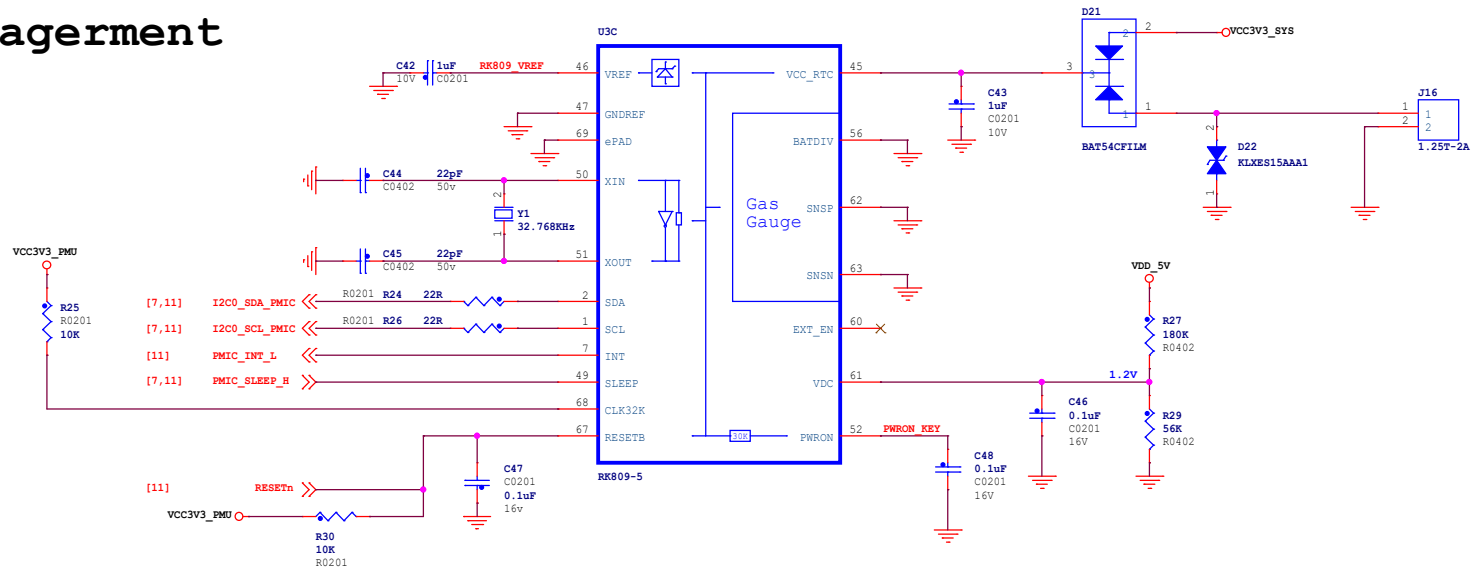


PMIC RK809 LDO

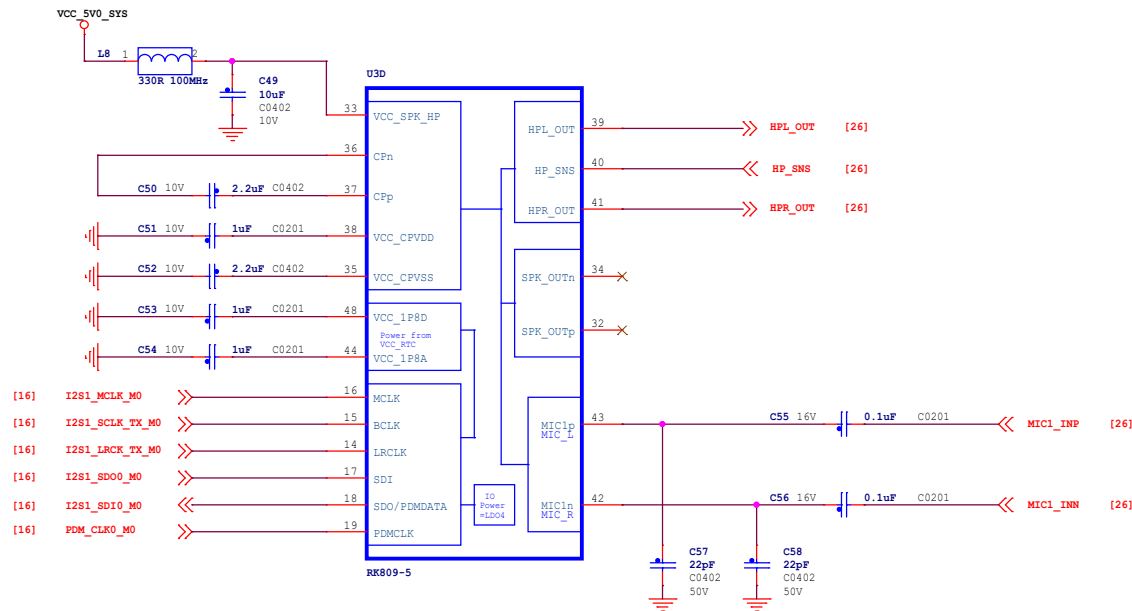


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A3	PMIC_DCDC/LDO	V0.1
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PMIC RK809 Managerment



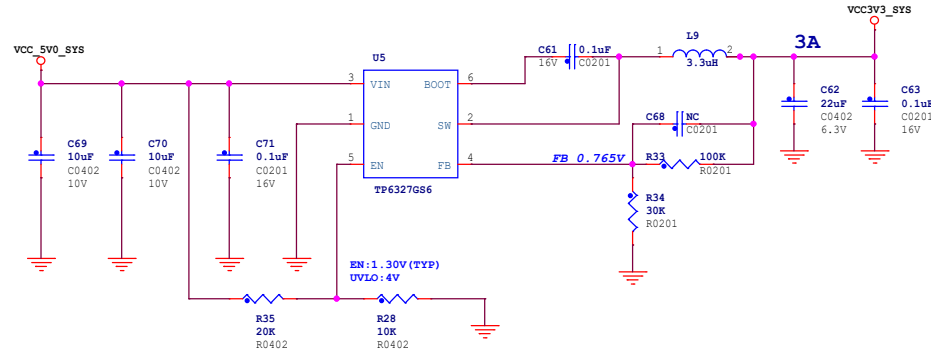
PMIC RK809 CODEC



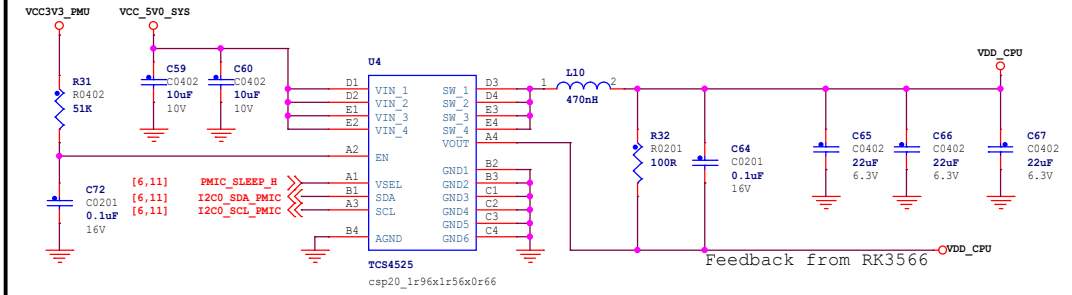
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Title 野火_RK3566_LUBANCAT_1_原理图_V0.1		
Size A3	Document Number PMIC_Managerment/CODE	Rev V0.1
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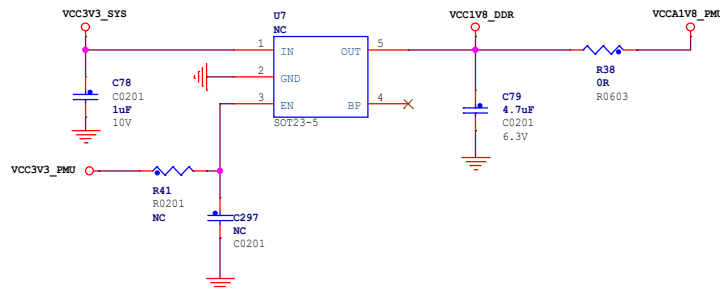
SYS_Power



RK3566 CPU Power VDD_CPU_EXT

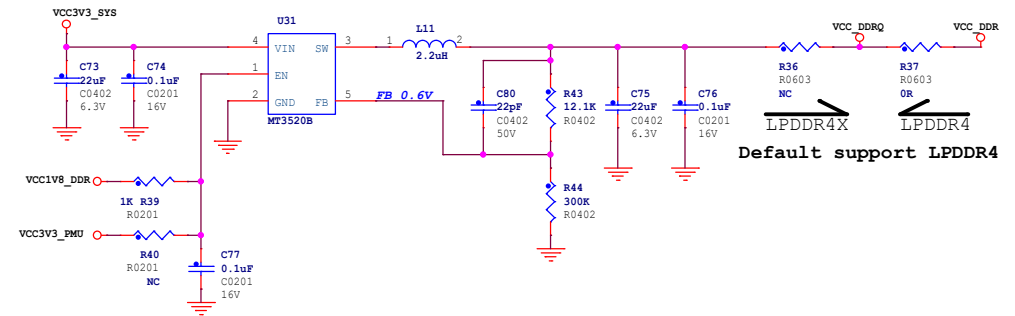


Auxiliary power supply LPDDR4_VCC1V8_DDR



LPDDR4X Power

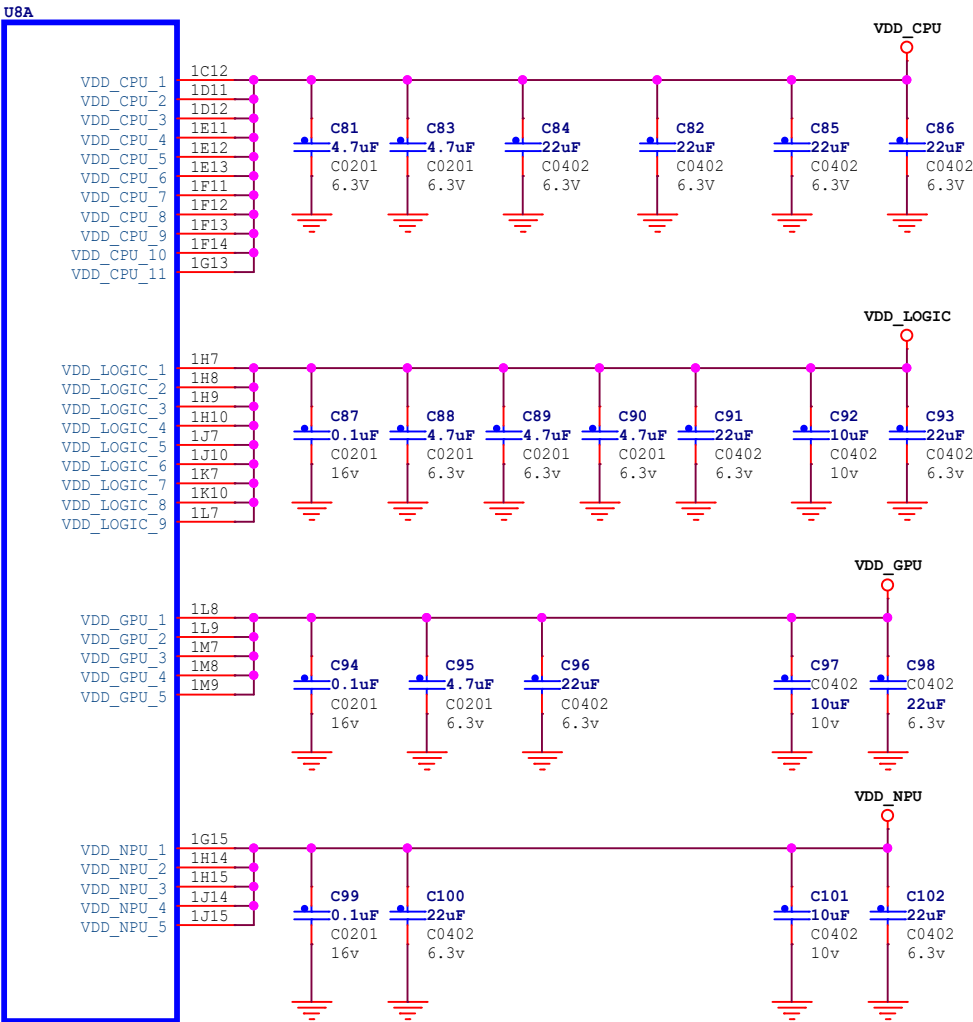
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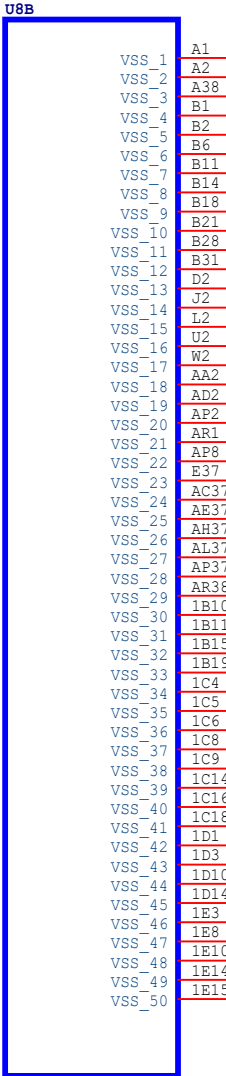
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RK3566_ABCDE

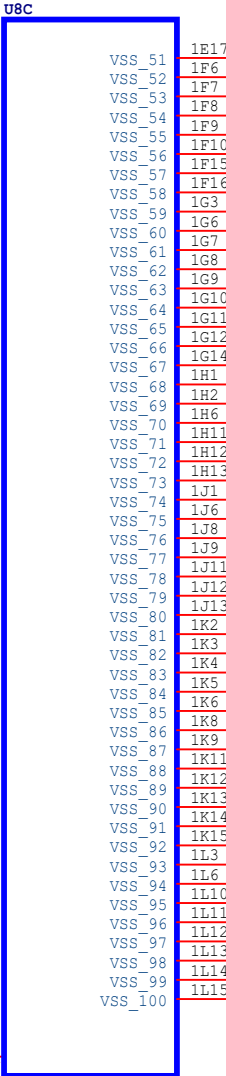
(Power&GND)



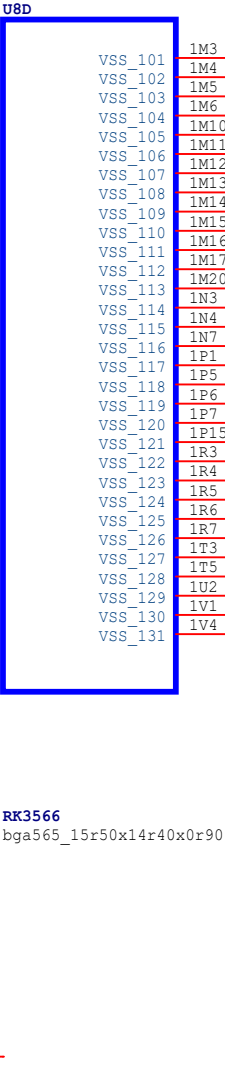
RK3566
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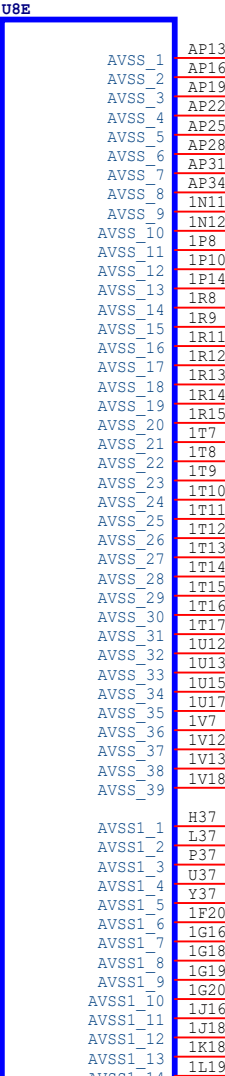
RK3566
bga565_15r50x14r40x0r90



RK3566
bga565_15r50x14r40x0r90



RK3566
bga565_15r50x14r40x0r90



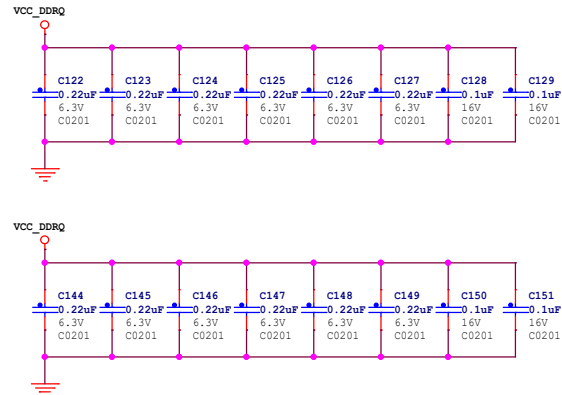
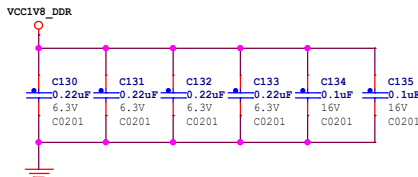
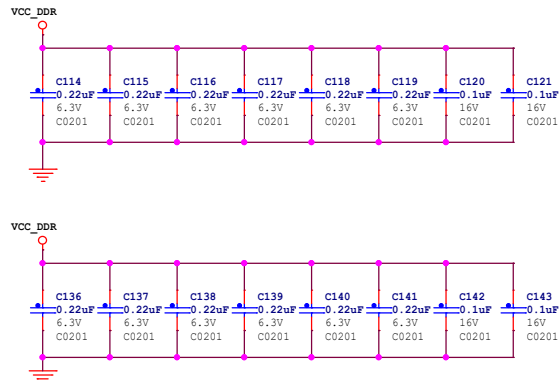
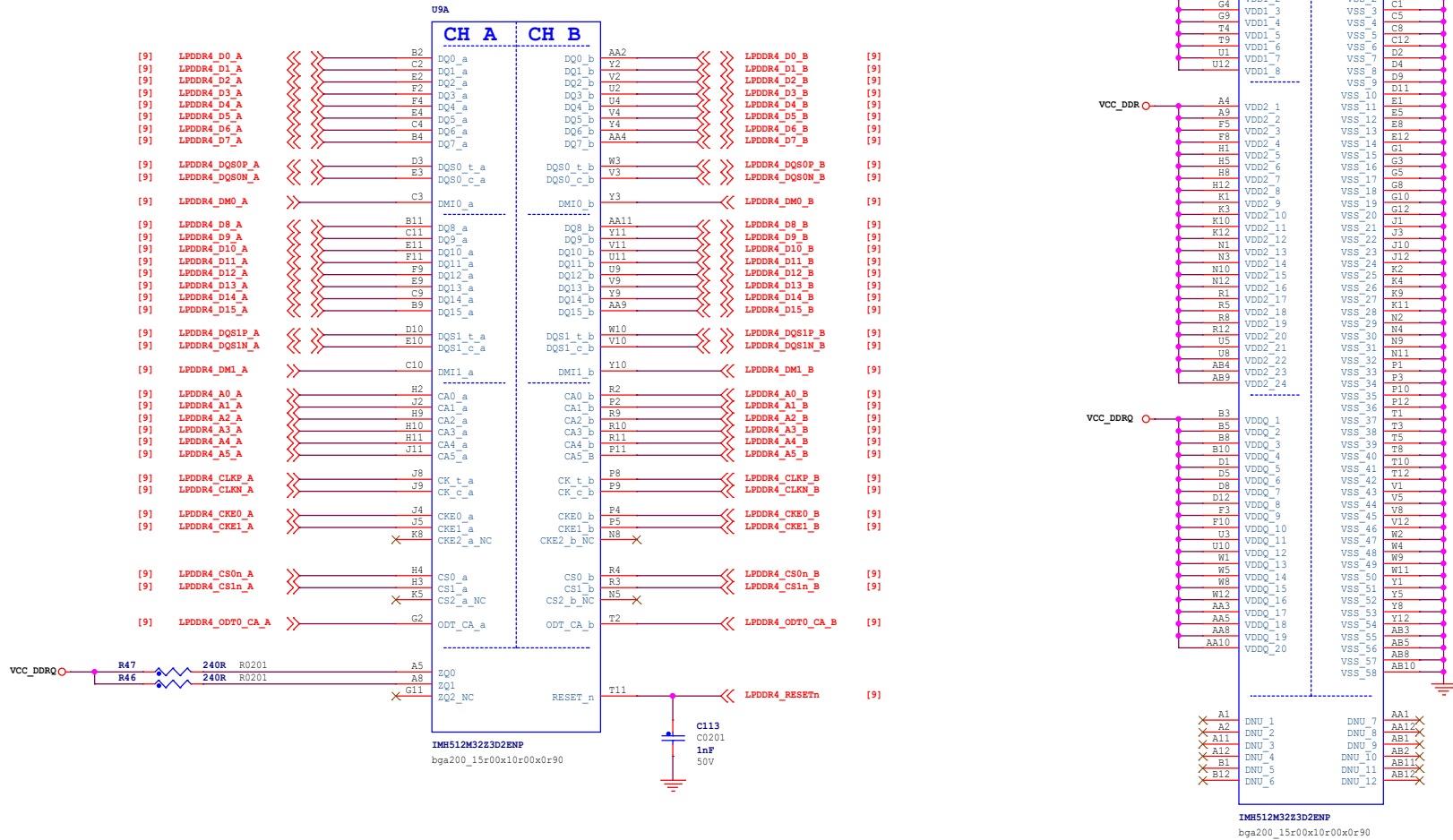
RK3566
bga565_15r50x14r40x0r90

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Title 野火_RK3566 LUBANCAT_1_原理图_v0.1		
Size A4	Document Number RK3566_Power/GND	Rev V0.1
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D

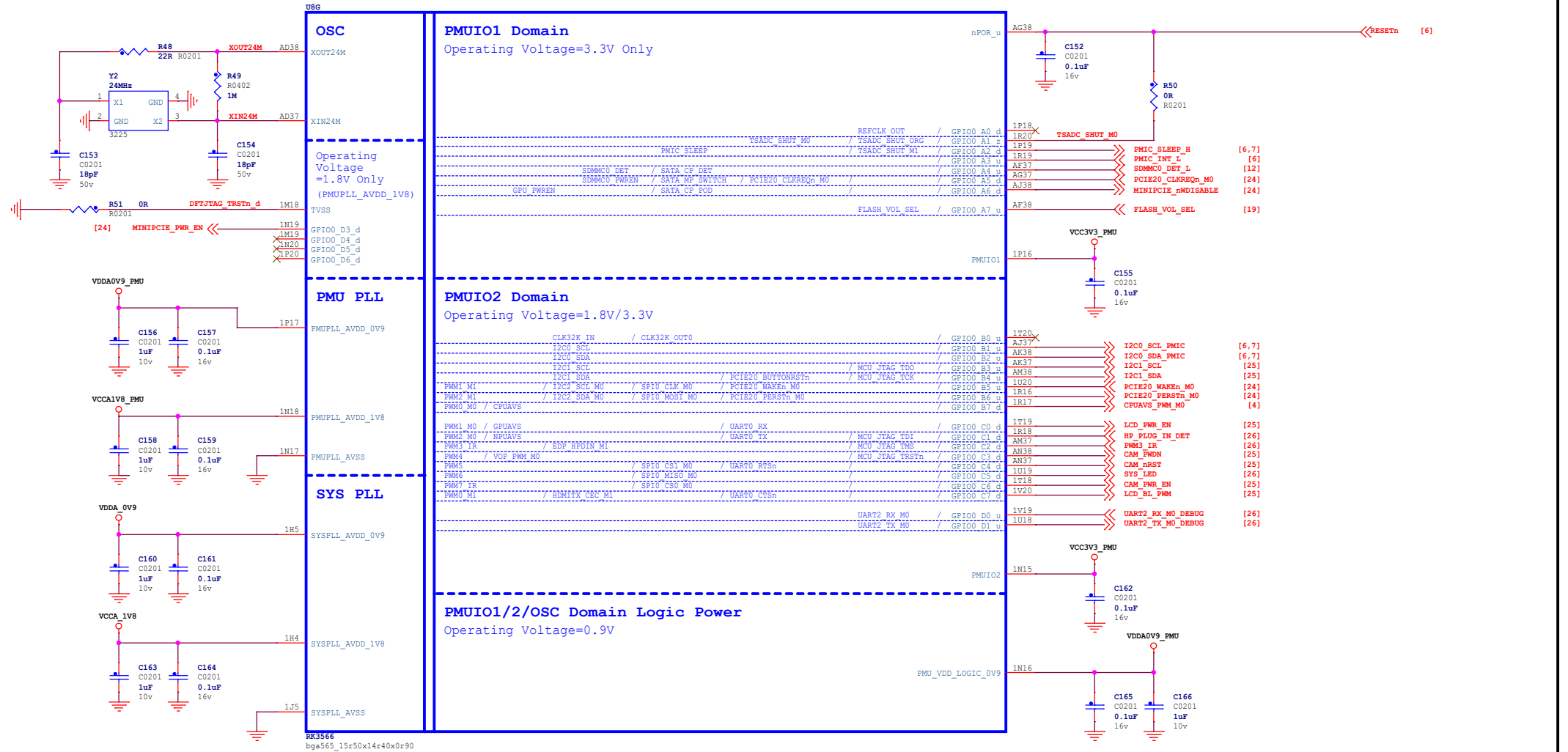


LPDDR4/4X



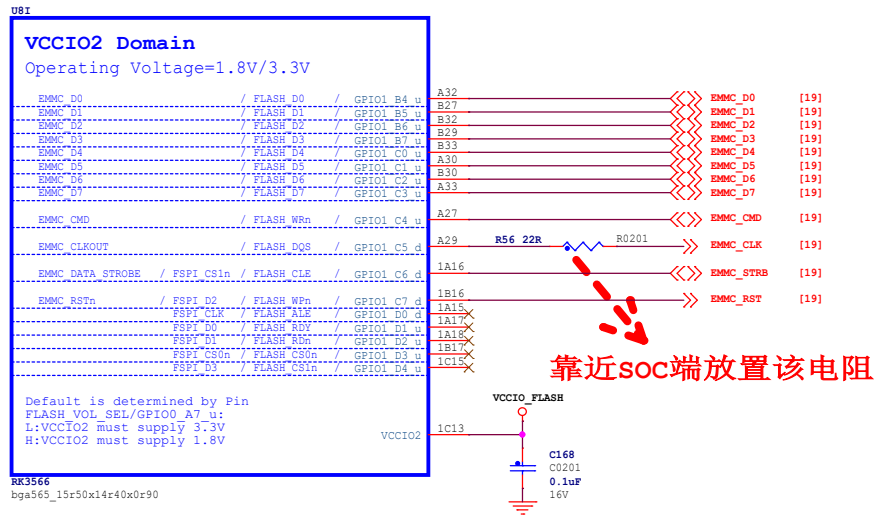
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Title	野火_RK3566_LUBANCAT_1_原理图_V0.1	
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A3	LPDDR4	V0.1
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RK3566_G (OSC/PLL/PMUIO1/2)

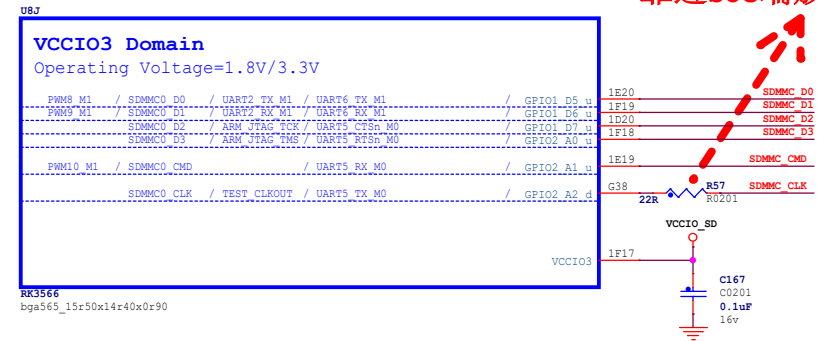


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Title 野火_RK3566_LUBANCAT_1_原理图_V0.1		
Size A3	Document Number RK3566_OSC/PLL/PMUIO	Rev V0.1
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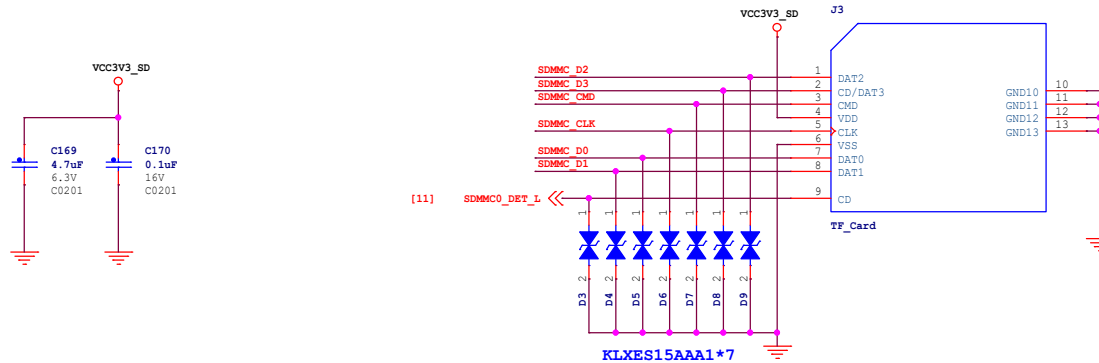
RK3566_I (VCCIO2 Domain) EMMC_IO



RK3566_J (VCCIO3 Domain) SDMMC_IO



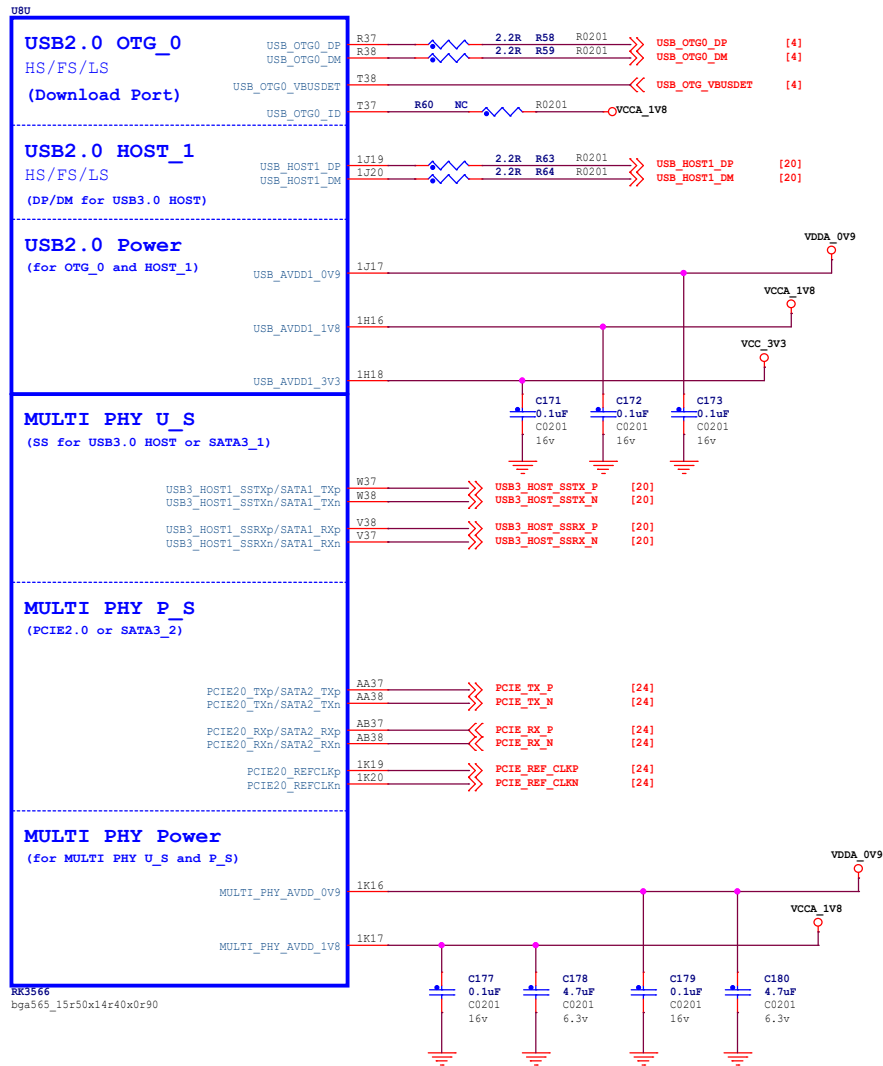
TF_CARD



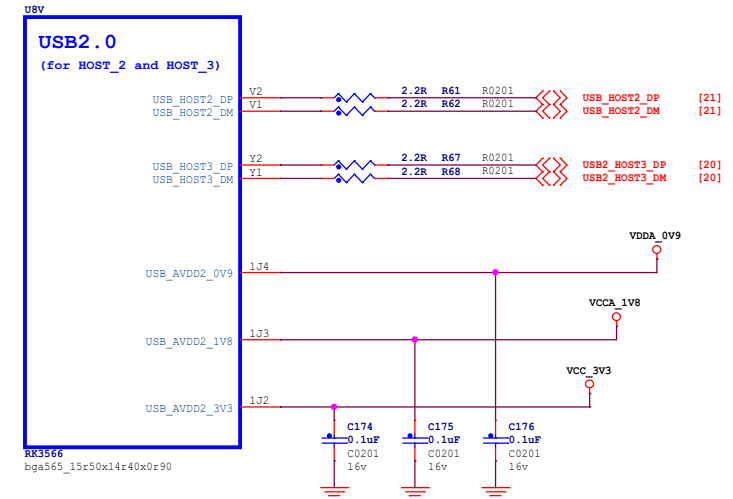
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Title 野火_RK3566_LUBANCAT_1_原理图_V0.1		
Size A3	Document Number RK3566_EMMC/SD Controller	Rev V0.1
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RK3566_U (USB3.0/SATA/PCIE2.0 x1)



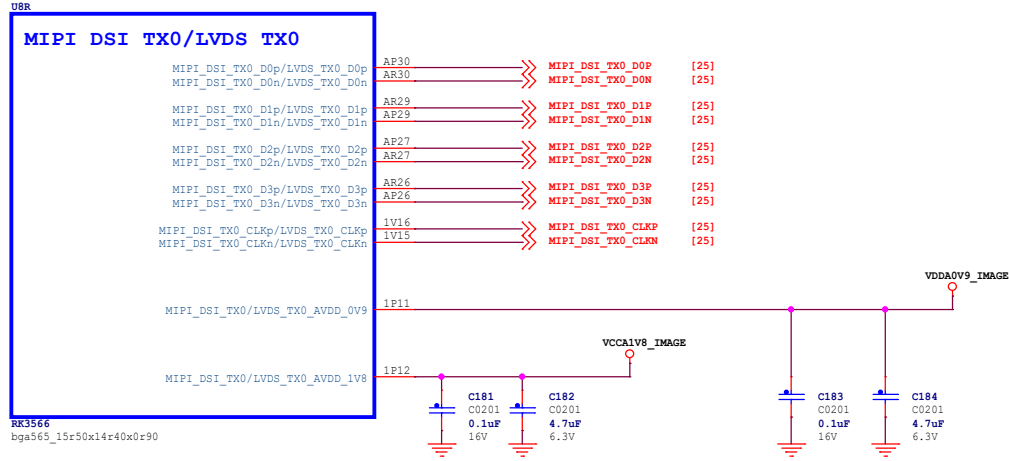
RK3566_V (USB2.0 HOST)



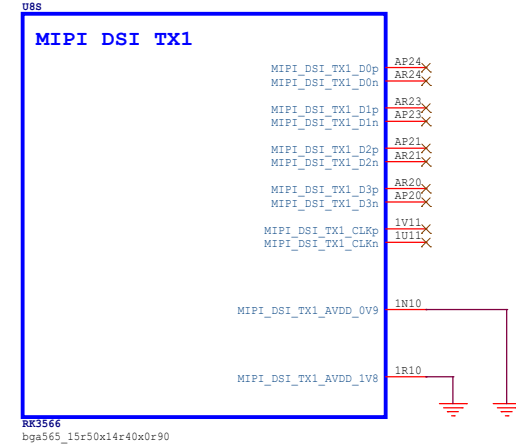
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Title 野火_RK3566_LUBANCAT_1_原理图_V0.1		
Size A3	Document Number RK3566_USB/PCIE/SATA_PHY	Rev V0.1
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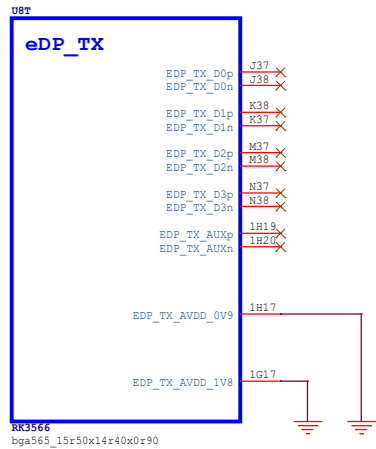
RK3566_R (MIPI_DSI_TX0/LVDS_TX0)



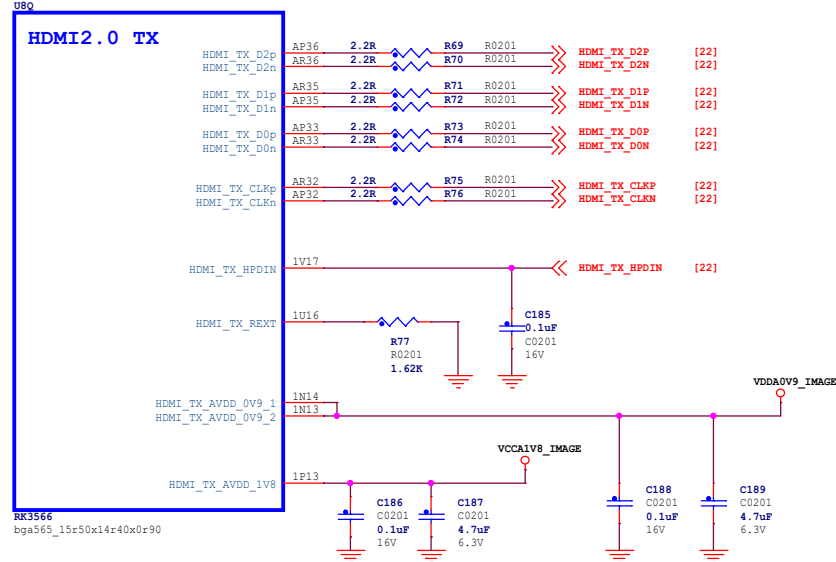
RK3566_S (MIPI_DSI_TX1)



RK3566_T (eDP/DP TX)



RK3566_Q (HDMI2.0 TX)

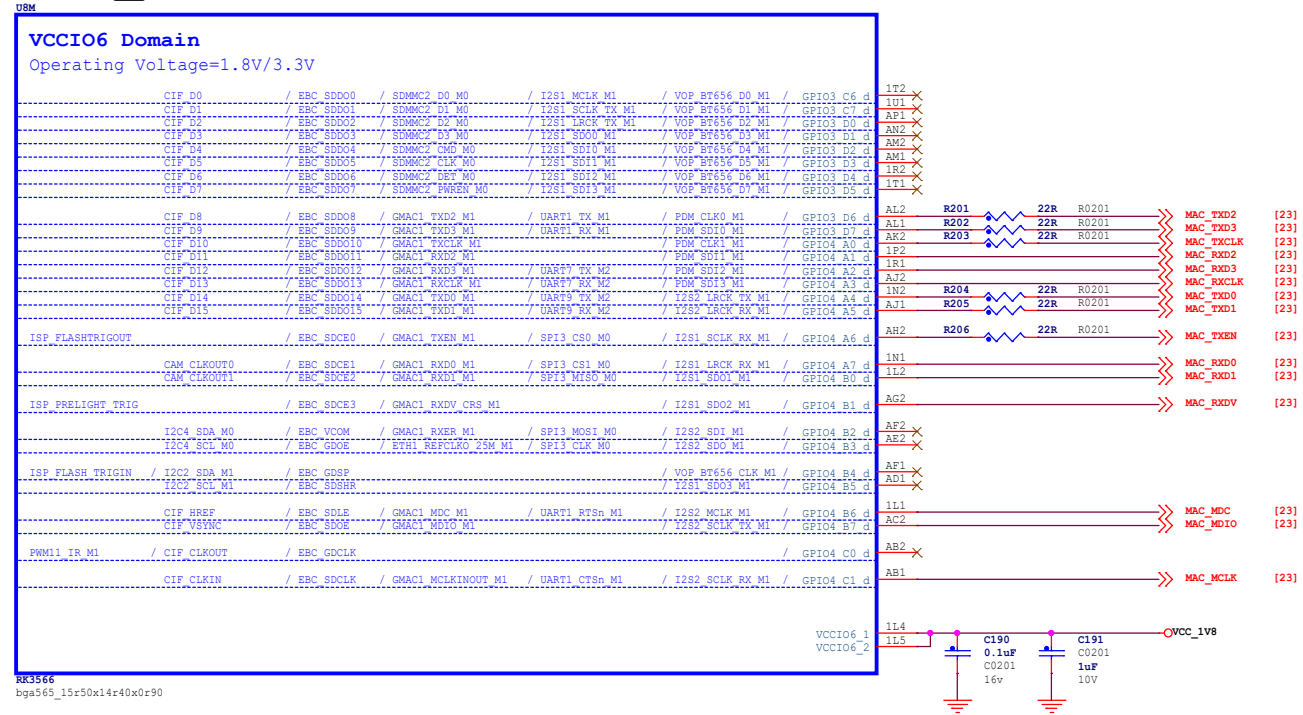


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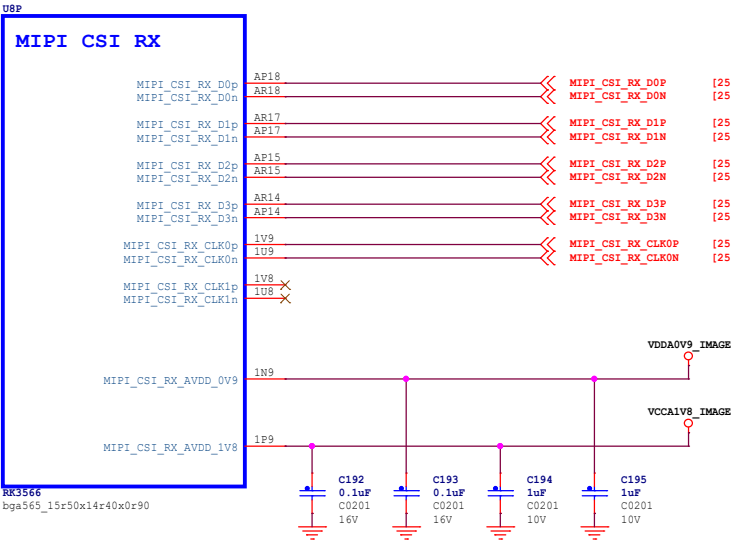
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野火_RK3566_LUBANCAT_1_原理图_V0.1		
Size	Document Number	Rev
A3	MIPI_DSI/EDP/HDMI_Controller	V0.1
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RK3566_M(VCCIO6 Domain)

GMAC_Controller



RK3566_P(MIPI_CSI_RX)



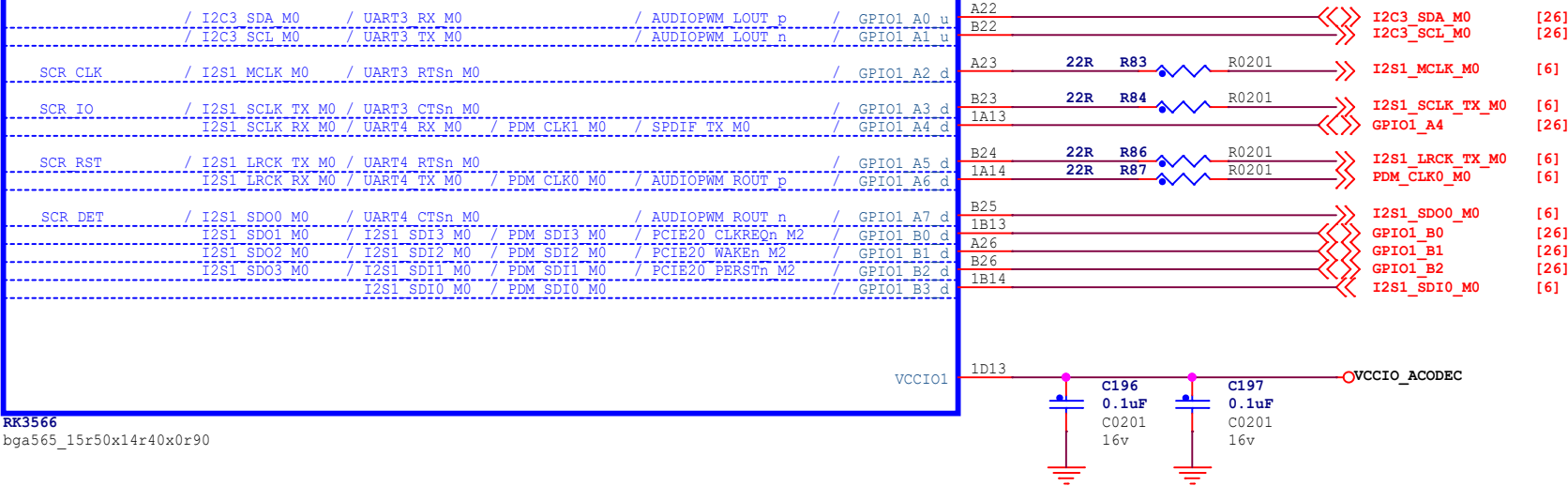
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Title	野火_RK3566_LUBANCAT_1_原理图_V0.1	
Size	Document Number	Rev
A3	MIPI_CSI/GMAC_Controller	V0.1
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RK3566_H (VCCIO1 Domain)

U8H

VCCIO1 Domain

Operating Voltage=1.8V/3.3V



RK3566
bga565_15r50x14r40x0r90



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Title 野火_RK3566 LUBANCAT_1_原理图_v0.1		
Size A4	Document Number RK3566_Audio Interface	Rev V0.1
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RK3566_K (VCCIO4 Domain)

USB

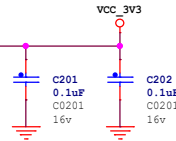
VCCIO4 Domain

Operating Voltage=1.8V/3.3V

UART6_RX_M0	/ SDMMC1_D0	/ GPIO2_A3_M	1C19	
UART6_TX_M0	/ SDMMC1_D1	/ GPIO2_A4_M	1E18	
UART7_RX_M0	/ SDMMC1_D2	/ GPIO2_A5_M	1D18	
UART7_TX_M0	/ SDMMC1_D3	/ GPIO2_A6_M	1A20	
UART9_RX_M0	/ SDMMC1_CMD	/ GPIO2_A7_M	B35	MAC_INT [23]
UART9_TX_M0	/ SDMMC1_CLK	/ GPIO2_B0_M	B37	MAC_RST [23]
UART8_RTSM_M0	/ I2C4_SDA_M1	/ SDMMC1_PWREN	A35	
UART8_CTS_M0	/ I2C4_SCL_M1	/ SDMMC1_DET	B34	
			1C20	
		/ UART1_RX_M0	F38	
		/ UART1_RTS_M0	F37	
SPI1_CLK_M0	/ UART1_CTS_M0	/ GPIO2_B3_M	G37	USB30_HOST_EN [20]
SPI1_MISO_M0	/ UART1_CS0_M0	/ GPIO2_B6_M	D38	USB20_HOST_EN [21]
UART6_RTSM_M0	/ SPI1_MOSI_M0	/ I2S2_SCLK_RX_M0	A37	
UART6_CTS_M0	/ SPI1_CS0_M0	/ I2S2_LCKM_RX_M0	B36	
UART7_RTSM_M0	/ SPI2_CLK_M0	/ I2S2_SCLK_TX_M0	C37	
UART7_CTS_M0	/ SPI2_MISO_M0	/ I2S2_SCLK_TX_M0	1D19	
UART9_RTSM_M0	/ SPI2_MOSI_M0	/ I2S2_LCKM_TX_M0	1B20	
UART9_CTS_M0	/ SPI2_CS0_M0	/ I2S2_SDO_M0	D37	
UART8_TX_M0	/ SPI2_CS1_M0	/ I2S2_SDI_M0	B38	
UART8_RX_M0	/ SPI1_CS1_M0	/ CLK32K_OUT1		

RK3566
bga565_15r50x14r40x0r90

VCCIO4



RK3566_O (SARADC/OTP)

USB

SARADC

Recovery/

OTP

RK3566
bga565_15r50x14r40x0r90

VCCA_1V8

R88
10K

R0201

Recovery

[26]

C198
1nF

C0201

50v

1D17

1C17

1B18

1A19

ADC_CH2

ADC_CH3

SARADC_VIN0

SARADC_VIN1

SARADC_VIN2

SARADC_VIN3

SARADC_AVDD_1V8

1D16

1D15

VCCA_1V8

C200

C0201

0.1uF

16v

BOARD ID

BOARD ID:01

CH2值: 170

CH3值: 170

VCCA_1V8

R89

49.9K

R0201

ADC_CH2 0.3V

R91

10K

R0201

VCCA_1V8

R90

49.9K

R0201

ADC_CH3 0.3V

R92

10K

R0201

RK3566_N (VCCIO7 Domain)

USB

VCCIO7 Domain

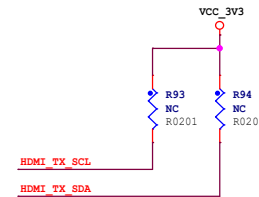
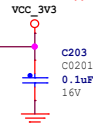
Operating Voltage=1.8V/3.3V

PM014 M1	/ SPI3_CLK M1	/ I2S3_MCLK M1	/ GPIO4_C2 d
PM014 I2M	/ SPI3_MOSI M1	/ I2S3_SCLK M1	/ GPIO4_C3 d
SDP_HPDIN M0	/ SPI3_MISO M1	/ I2S3_LCKM M1	/ GPIO4_C4 d
PM014 M0	/ SPI3_CS0 M1	/ I2S3_SDO M1	/ GPIO4_C5 d
PM014 M1	/ SPI3_CS1 M1	/ I2S3_SDI M1	/ GPIO4_C6 d

HDMI_TX_SCL	/ I2C5_SCL M1	/ GPIO4_C7 U	
HDMI_TX_SDA	/ I2C5_SDA M1	/ GPIO4_D0 U	
HDMI_TX_CEC M0	/ SPI3_CS1 M1	/ GPIO4_D1 U	

RK3566
bga565_15r50x14r40x0r90

VCCIO7



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Title 野火_RK3566_LUBANCAT_1_原理图_v0.1		
Size A3	Document Number RK3566_SARADC/GPIO	Rev V0.1
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RK3566_L(VCCIO5 Domain)

U8L

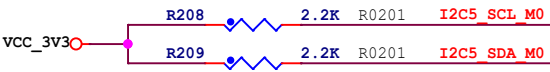
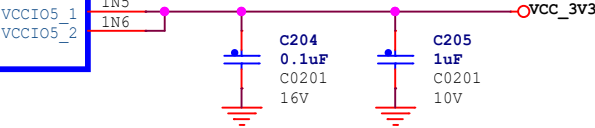
VCCIO5 Domain

Operating Voltage=1.8V/3.3V

VOP_BT1120_D0	/ SPI1_CS0_M1	/ GMAC1_TXD2_M0	/ I2S3_MCLK_M0	/ SDMMC2_D0_M1	/ GPIO3_A1_d
VOP_BT1120_D1		/ GMAC1_TXD3_M0	/ I2S3_SCLK_M0	/ SDMMC2_D1_M1	/ GPIO3_A2_d
VOP_BT1120_D2		/ GMAC1_RXD2_M0	/ I2S3_LRCK_M0	/ SDMMC2_D2_M1	/ GPIO3_A3_d
VOP_BT1120_D3		/ GMAC1_RXD3_M0	/ I2S3_SDO_M0	/ SDMMC2_D3_M1	/ GPIO3_A4_d
VOP_BT1120_D4		/ GMAC1_TXCLK_M0	/ I2S3_SDI_M0	/ SDMMC2_CMD_M1	/ GPIO3_A5_d
VOP_BT1120_D5		/ GMAC1_RXCLK_M0		/ SDMMC2_CLK_M1	/ GPIO3_A6_d
				/ SDMMC2_DET_M1	/ GPIO3_A7_d
VOP_BT1120_D6		ETH1_REFCLKO_25M_M0		SDMMC2_PWREN_M1	/ GPIO3_B0_d
PWM8_M0	/ VOP_BT1120_D7	GMAC1_RXD0_M0	/ UART4_RX_M1		/ GPIO3_B1_d
PWM9_M0	/ VOP_BT1120_D8	GMAC1_RXD1_M0	/ UART4_TX_M1		/ GPIO3_B2_d
VOP_BT1120_D9	/ I2C5_SCL_M0	GMAC1_RXDV_CRS_M0		PDM_SDI0_M2	/ GPIO3_B3_d
VOP_BT1120_D10	/ I2C5_SDA_M0	GMAC1_RXER_M0		PDM_SDI1_M2	/ GPIO3_B4_d
PWM10_M0	/ VOP_BT1120_D11	I2C3_SCL_M1	GMAC1_TXD0_M0		/ GPIO3_B5_d
PWM11_IR_M0	/ VOP_BT1120_D12	I2C3_SDA_M1	GMAC1_TXD1_M0		/ GPIO3_B6_d
PWM12_M0		GMAC1_TXEN_M0	/ UART3_TX_M1	PDM_SDI2_M2	/ GPIO3_B7_d
PWM13_M0		GMAC1_MCLKINOUT_M0	/ UART3_RX_M1	PDM_SDI3_M2	/ GPIO3_C0_d
VOP_BT1120_D13	/ SPI1_MOSI_M1		PCIE20_PERSTn_M1	I2S1_SDO2_M2	/ GPIO3_C1_d
VOP_BT1120_D14	/ SPI1_MISO_M1		UART5_TX_M1	I2S1_SDO3_M2	/ GPIO3_C2_d
VOP_BT1120_D15	/ SPI1_CLK_M1		UART5_RX_M1	I2S1_SCLK_RX_M2	/ GPIO3_C3_d
PWM14_M0	/ VOP_PWM_M1	GMAC1_MDC_M0	/ UART7_TX_M1	PDM_CLK1_M2	/ GPIO3_C4_d
PWM15_IR_M0	/ SPDIF_TX_M1	GMAC1_MDIO_M0	/ UART7_RX_M1	I2S1_LRCK_RX_M2	/ GPIO3_C5_d

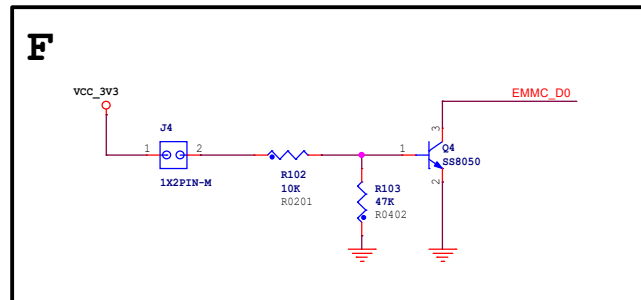
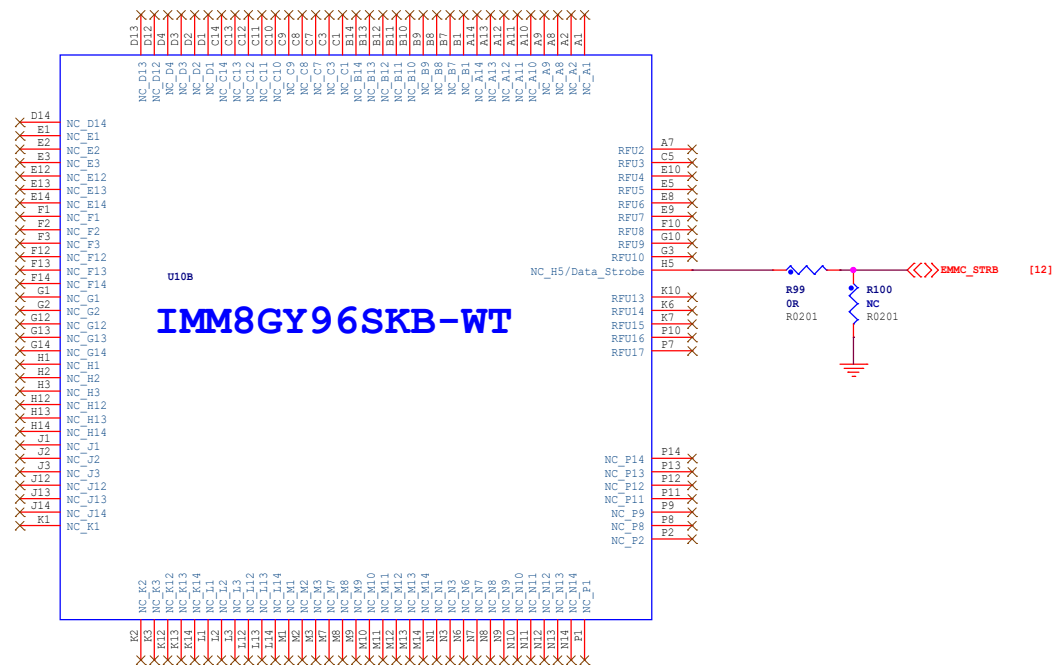
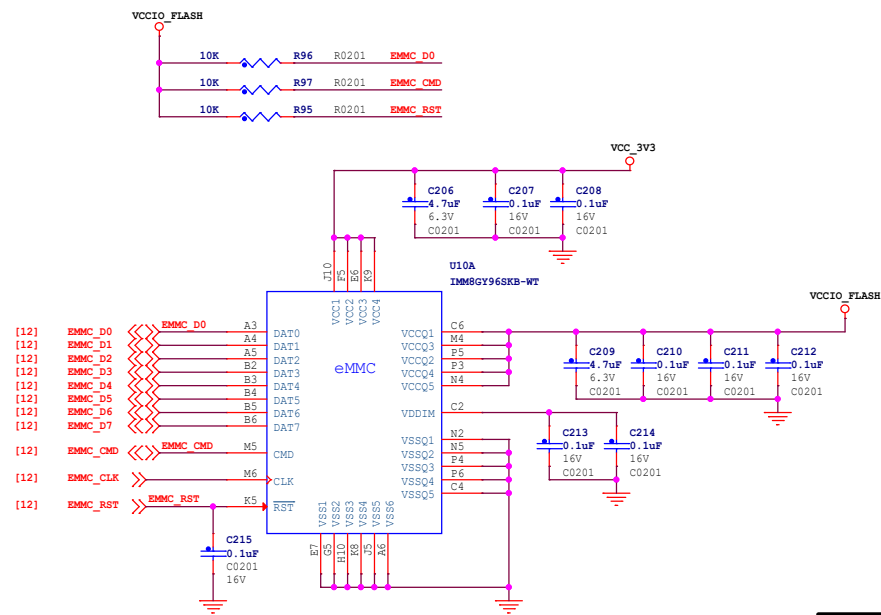
RK3566
bga565_15r50x14r40x0r90

1U5	CTP_INT	[25]
AR10	CTP_RST	[25]
AP10	LCD_TE	[25]
AR9	LCD_RST	[25]
AP9	GPIO3_A5	[26]
1U4	GPIO3_A6	[26]
1V3	GPIO3_A7	[26]
AR7	GPIO3_B0	[26]
AP7	PWM8_M0	[26]
AR6	PWM9_M0	[26]
AP6	I2C5_SCL_M0	[26]
1U3	I2C5_SDA_M0	[26]
1T4	PWM10_M0	[26]
1V2	GPIO3_B6	[26]
AP5	UART3_TX_M1	[26]
AR4	UART3_RX_M1	[26]
AP4	GPIO3_C1	[26]
AP3	GPIO3_C2	[26]
AR2	GPIO3_C3	[26]
1P3	PWM14_M0	[26]
1P4	GPIO3_C5	[26]

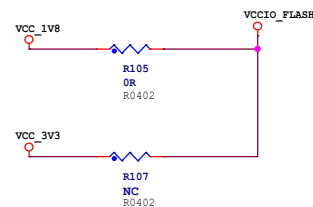


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Title 野火_RK3566 LUBANCAT_1 原理图_V0.1		
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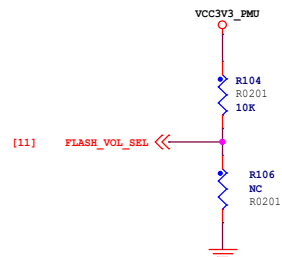
EMMC FLASH



EMMC_IO_Toggle



FLASH VOL SEL



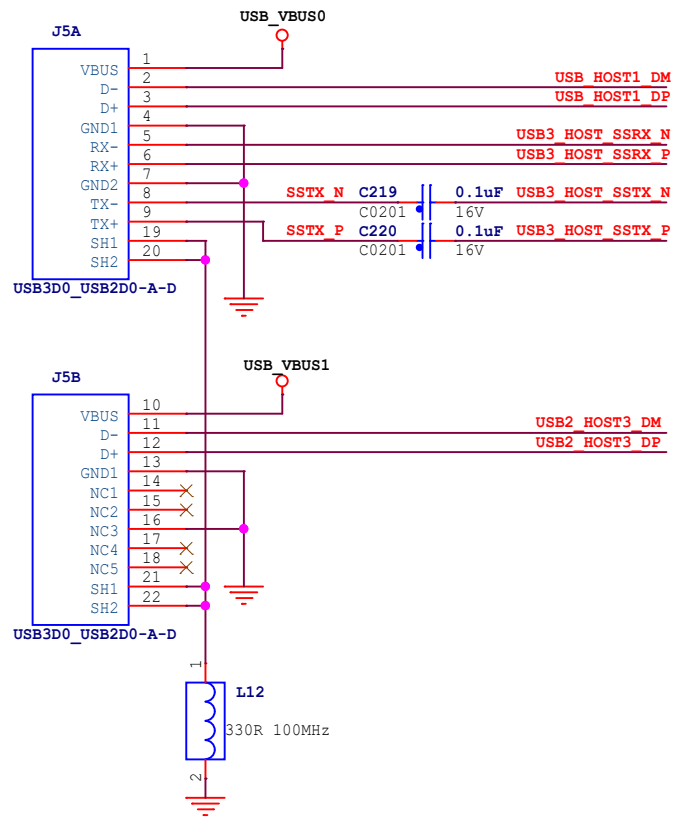
Note:

```
FLASH_VOL_SEL state decided
to VCCIO2 domain IO driven by default
Logic=L: 3.3V IO driven
Logic=H: 1.8V IO driven
```

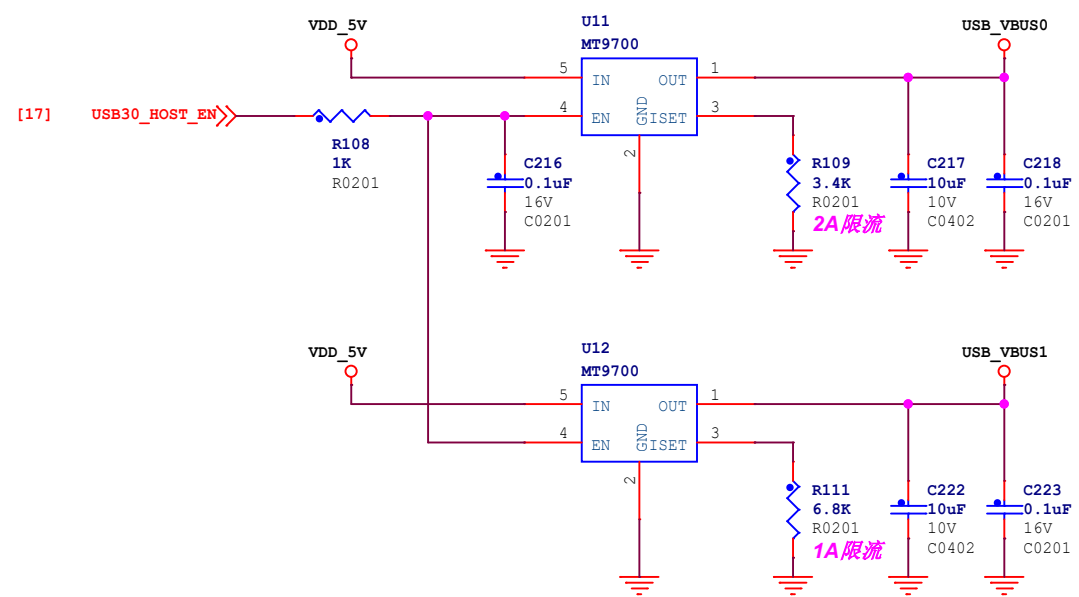
东莞野火电子技术有限公司 https://yehuosm.tmall.com			
Title 野火_RK3566_LUBANCAT_1_原理图_V0.1			
Size A3	Document Number ENMC_FLASH		Rev V0.1
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USB 3.0 HOST x1

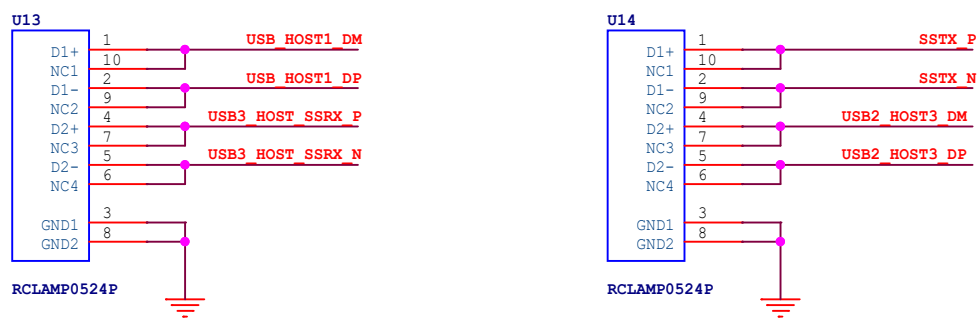
USB 2.0 HOST x1



USB POWER



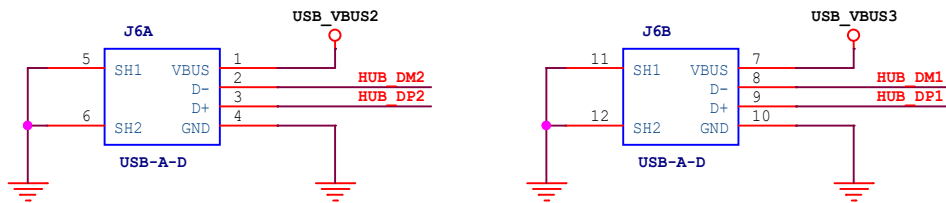
ESD



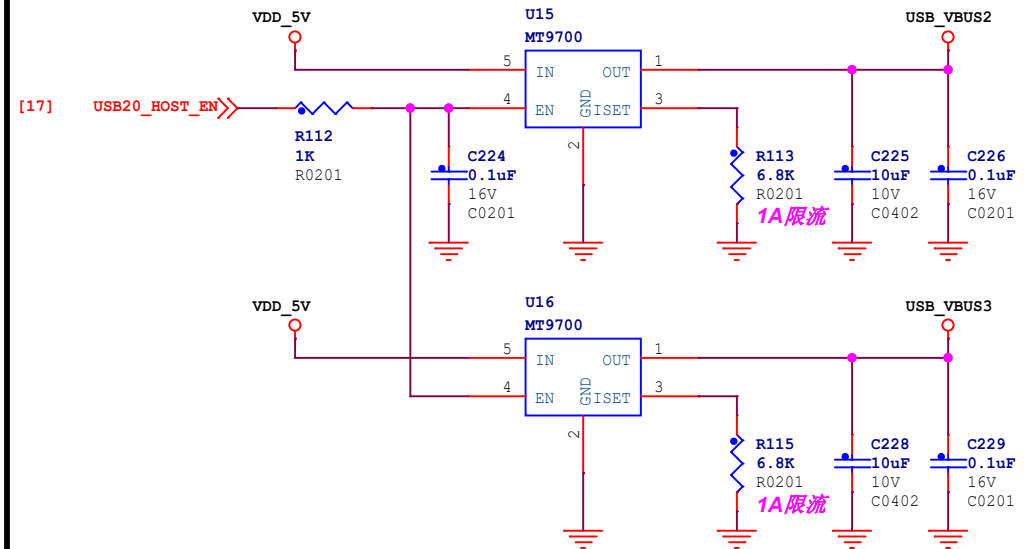
USB_HOST1_DM	>>>	USB_HOST1_DM	[13]
USB_HOST1_DP	>>>	USB_HOST1_DP	[13]
USB2_HOST3_DM	<<<<	USB2_HOST3_DM	[13]
USB2_HOST3_DP	<<<<	USB2_HOST3_DP	[13]
USB3_HOST_SSRX_N	>>>	USB3_HOST_SSRX_N	[13]
USB3_HOST_SSRX_P	>>>	USB3_HOST_SSRX_P	[13]
USB3_HOST_SSTX_N	>>>	USB3_HOST_SSTX_N	[13]
USB3_HOST_SSTX_P	>>>	USB3_HOST_SSTX_P	[13]

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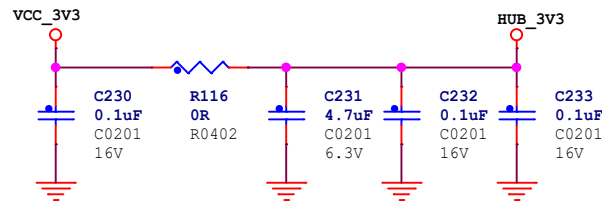
USB 2.0 HOST x2



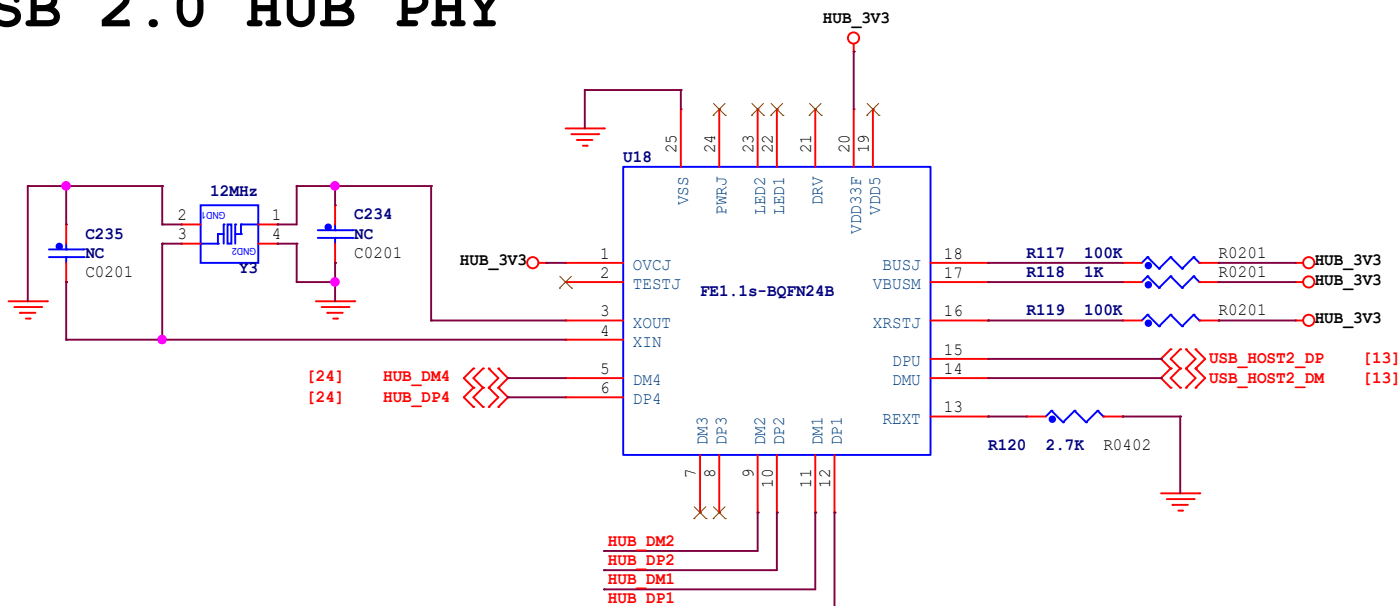
USB POWER



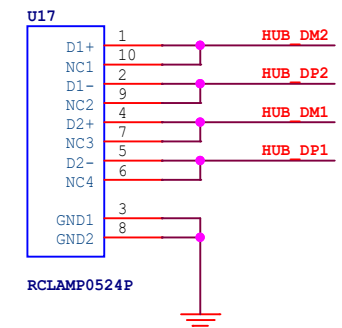
Filter capacitor



USB 2.0 HUB PHY



ESD



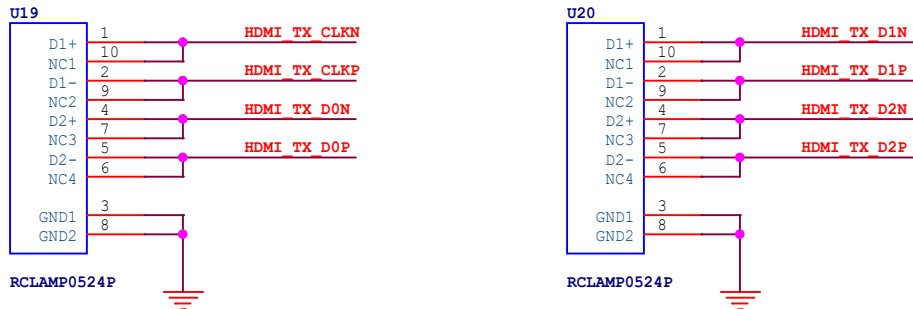
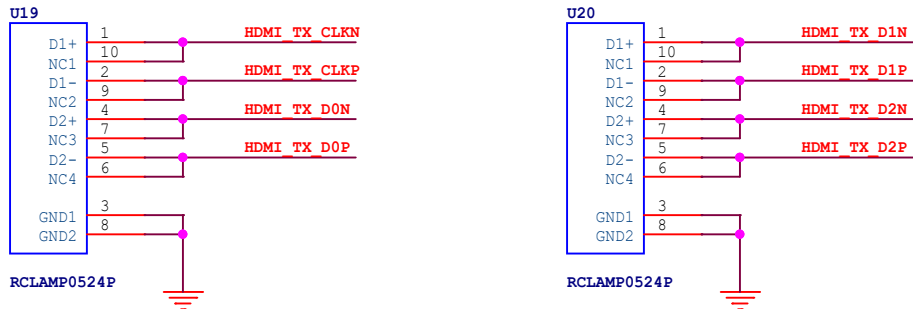
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Title
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ESD

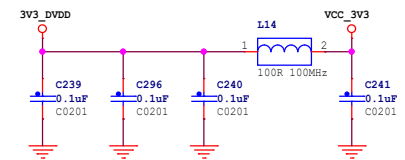
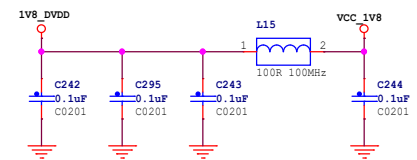
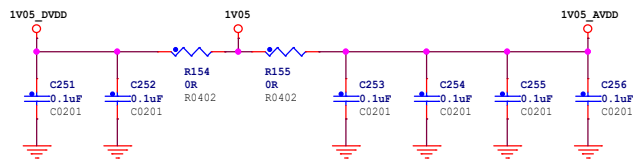
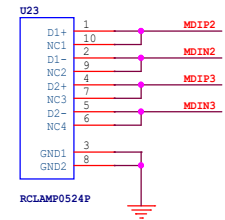
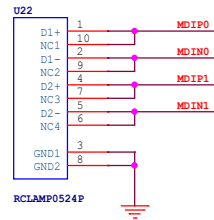
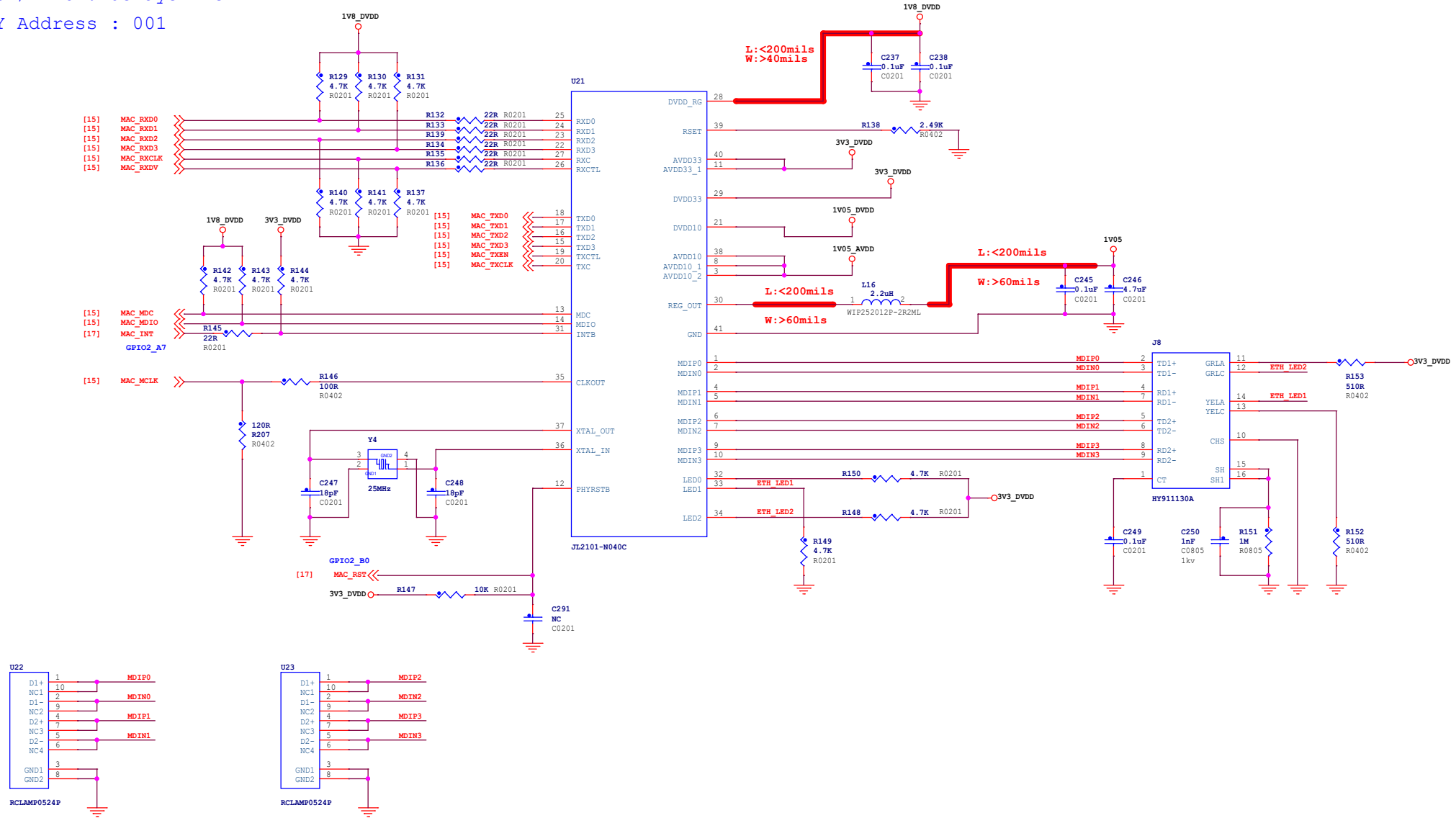


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JL2101-N040C

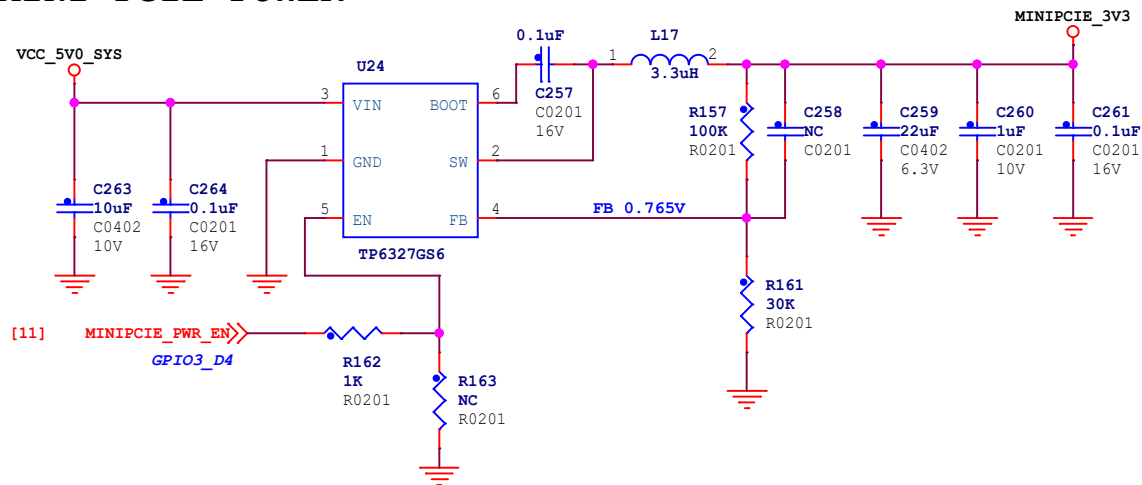
TXC / RXC : delays 2ns

PHY Address : 001

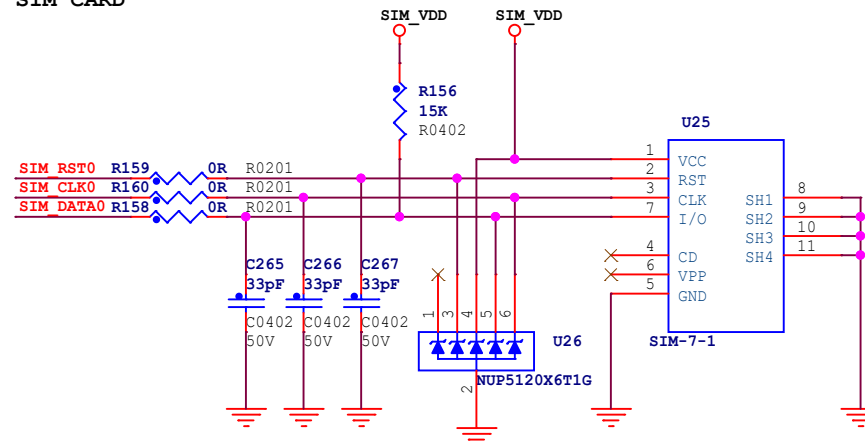


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Title 野火_RK3566_L0BANCAT_1_原理图_V0.1		
Size A3	Document Number WAN RTL8211F/JL2101-N040C	Rev V0.1
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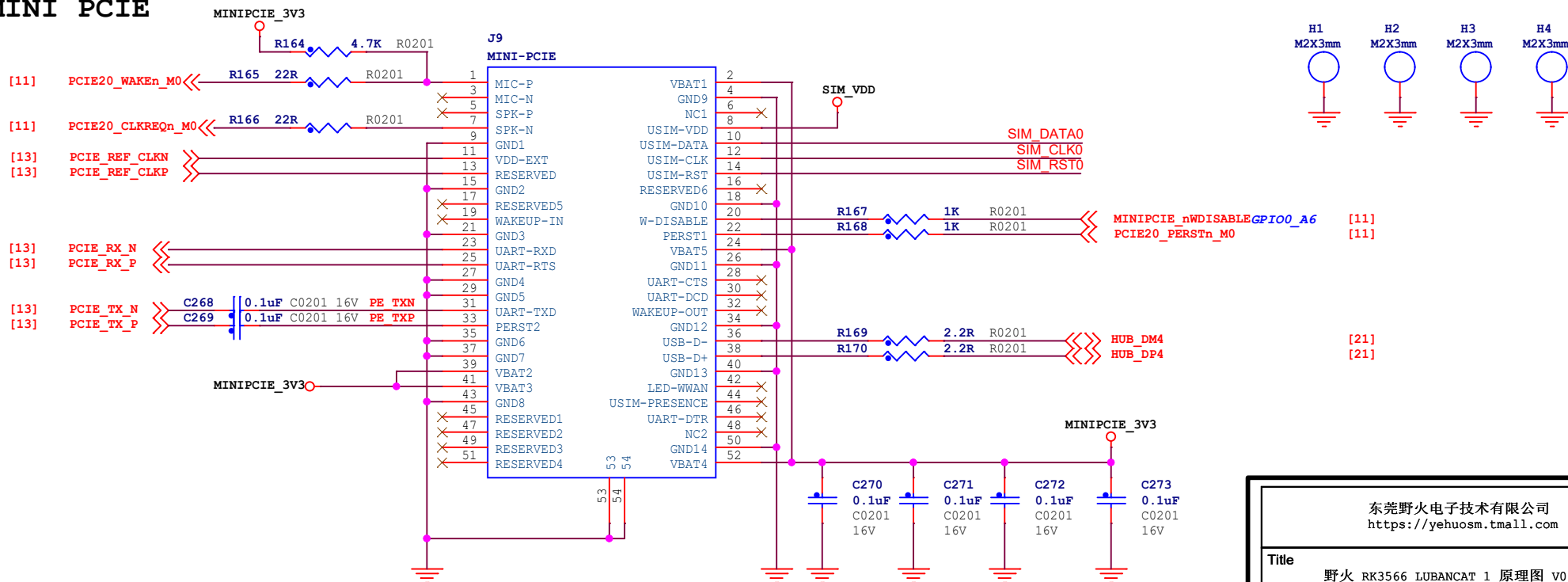
MINI PCIE POWER



SIM CARD

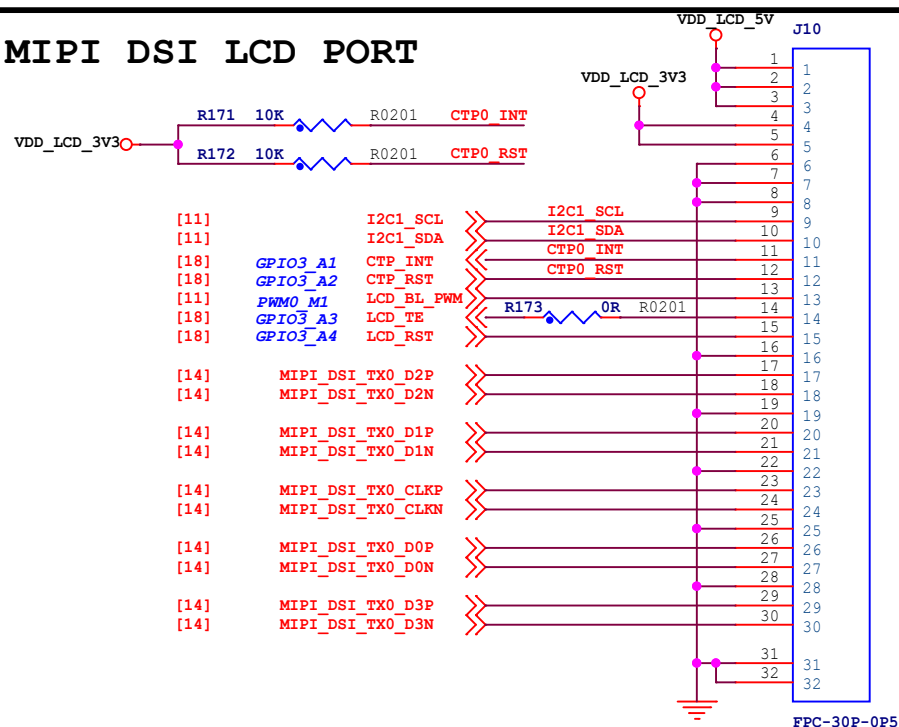


MINI PCIE

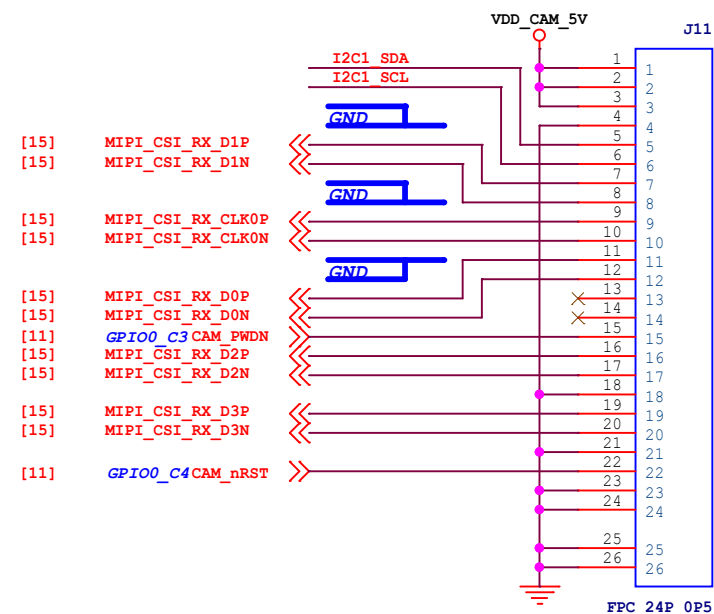


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Title		
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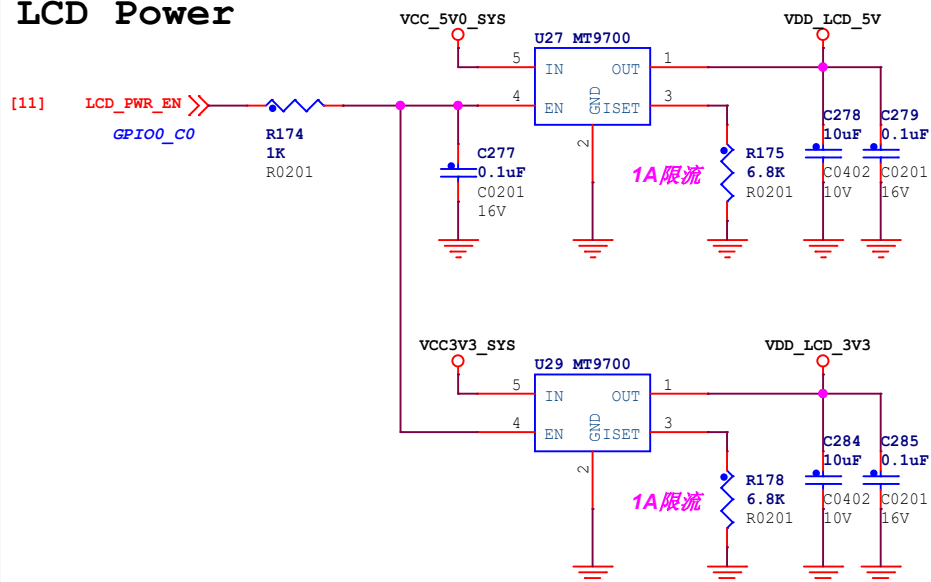
MIPI DSI LCD PORT



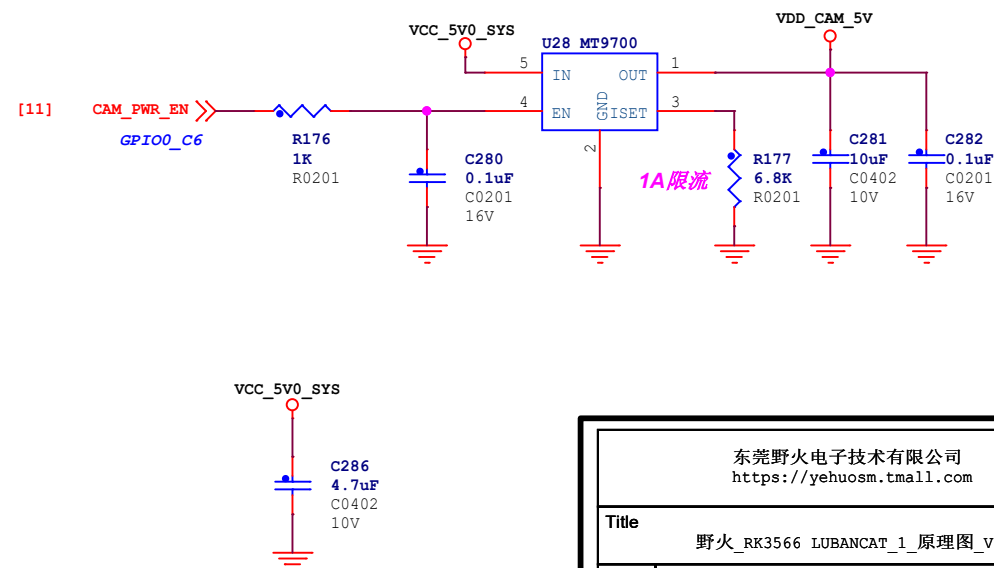
MIPI CSI PORT



LCD Power



MIPI CSI Power



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野火 RK3566 LUBANCAT 1 原理图 V0.1

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Document Number

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