

野火 EBF RK3568 核心板

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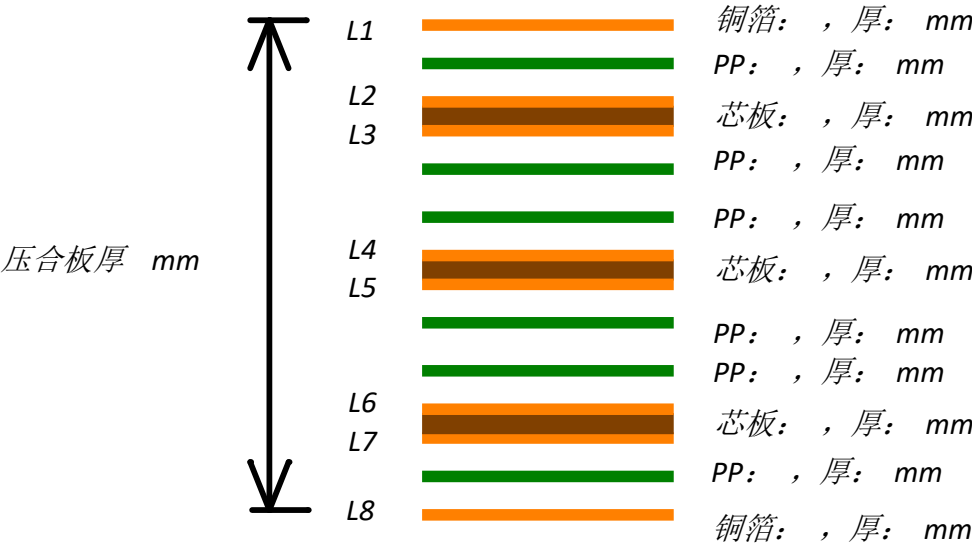
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东莞野火电子有限公司 https://yehuosm.tmall.com		
Title 野火_EBF RK3568 核心板		
Size A4	Document Number 目录	Rev V1.0
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历史版本

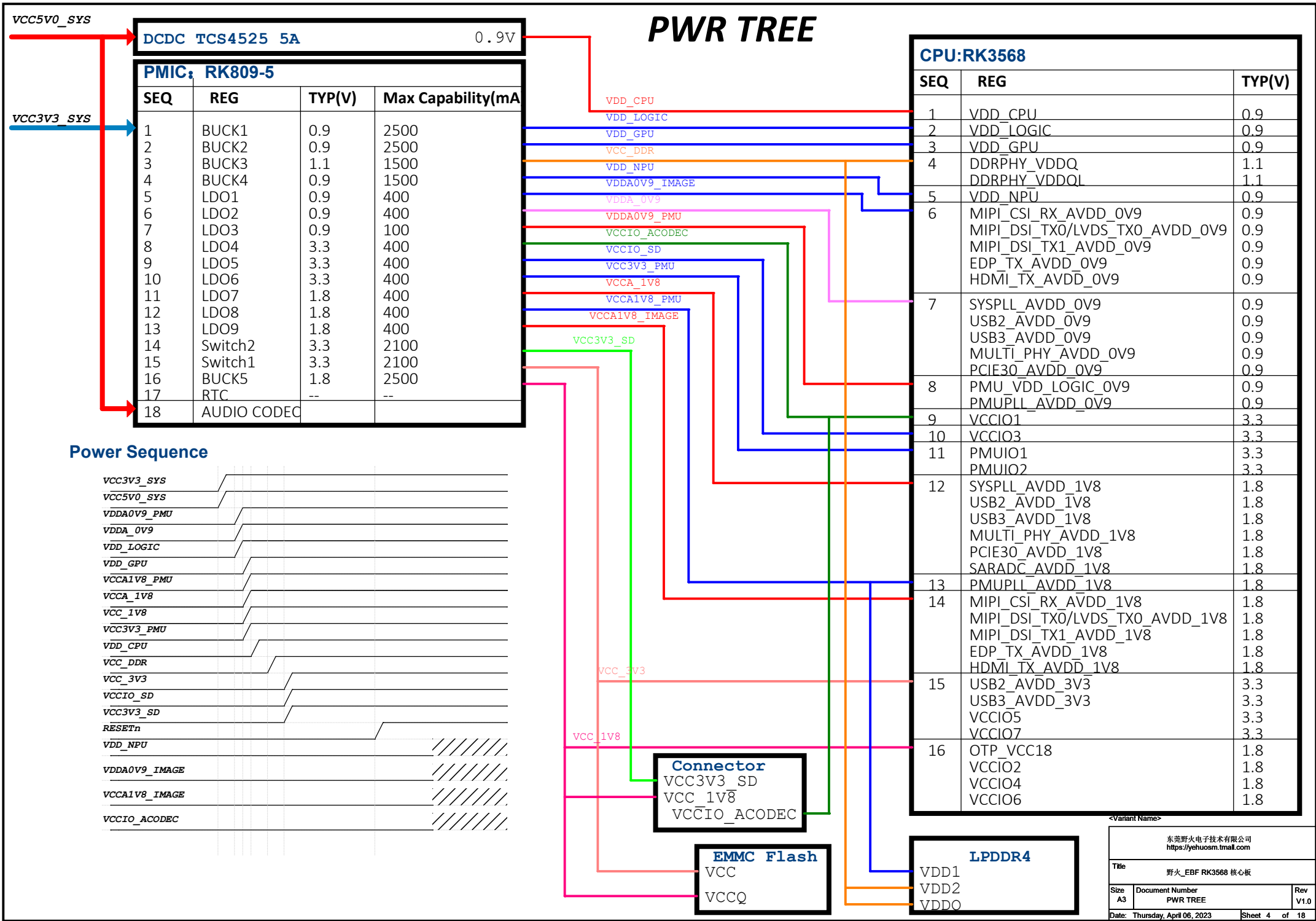
版本号	日期	设计	描述
V1.0	2021-10-15	llm	初始版本, 开发阶段
V1.1	2021-11-26	llm	预留LPDDR4 1.8V LDO单独供电
V1.2	2021-12-07	llm	Connector引脚网络对调如下: 1.203与205引脚网络对调 2.33与35引脚网络对调 3.107与109引脚网络对调 4.141与143引脚网络对调 5.217与219引脚网络对调
V1.3	2022-07-07	llm	1.把定位孔改为M3的定位孔，数量改为2个 2.增加LPDDR4x兼容电路 3.金手指去掉VCC_3V3引出

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Title 野火_EBF RK3568 核心板		
Size A4	Document Number 历史版本	Rev V1.0
Date: Thursday, April 06, 2023		Sheet 2 of 18

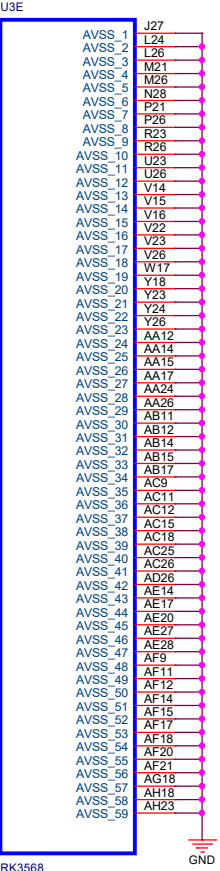
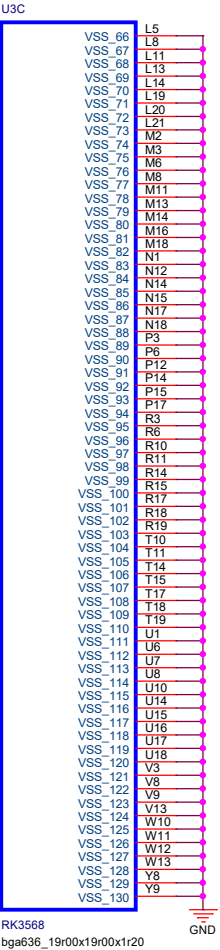
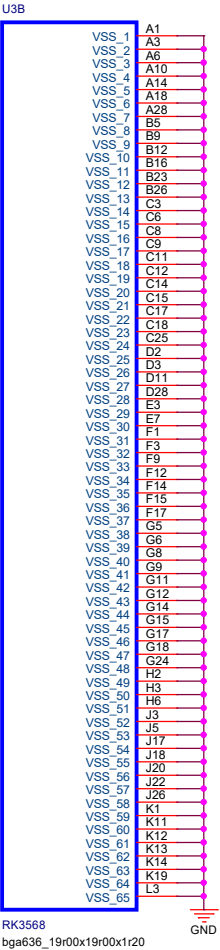
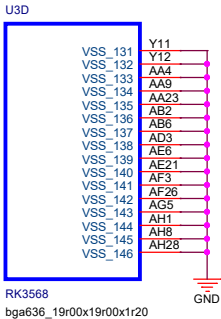
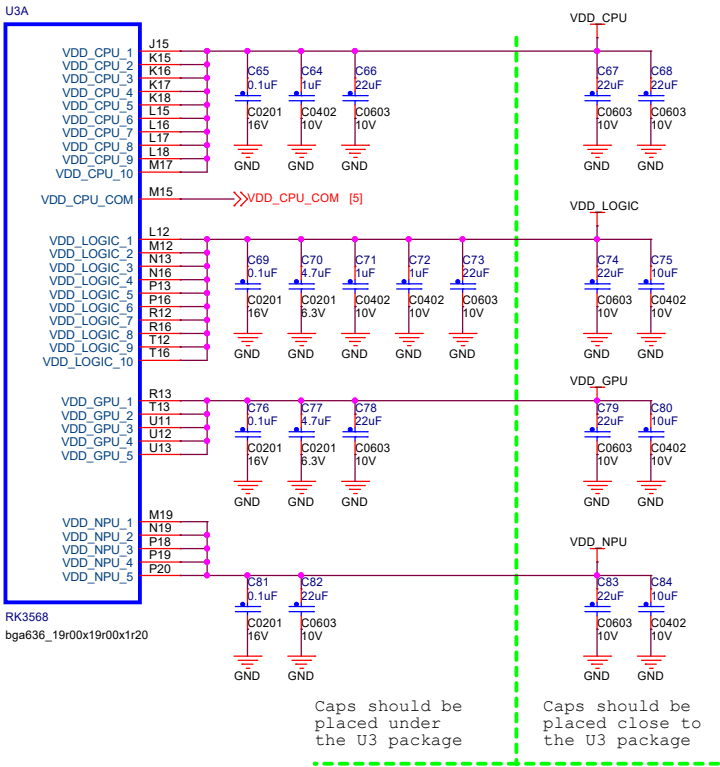
ebf_rk3568 core board



<Variant Name>		
东莞野火电子有限公司 https://yehuosm.tmall.com		
Title 野火_EBF RK3568 核心板		
Size A4	Document Number PCB叠层	Rev V1.0
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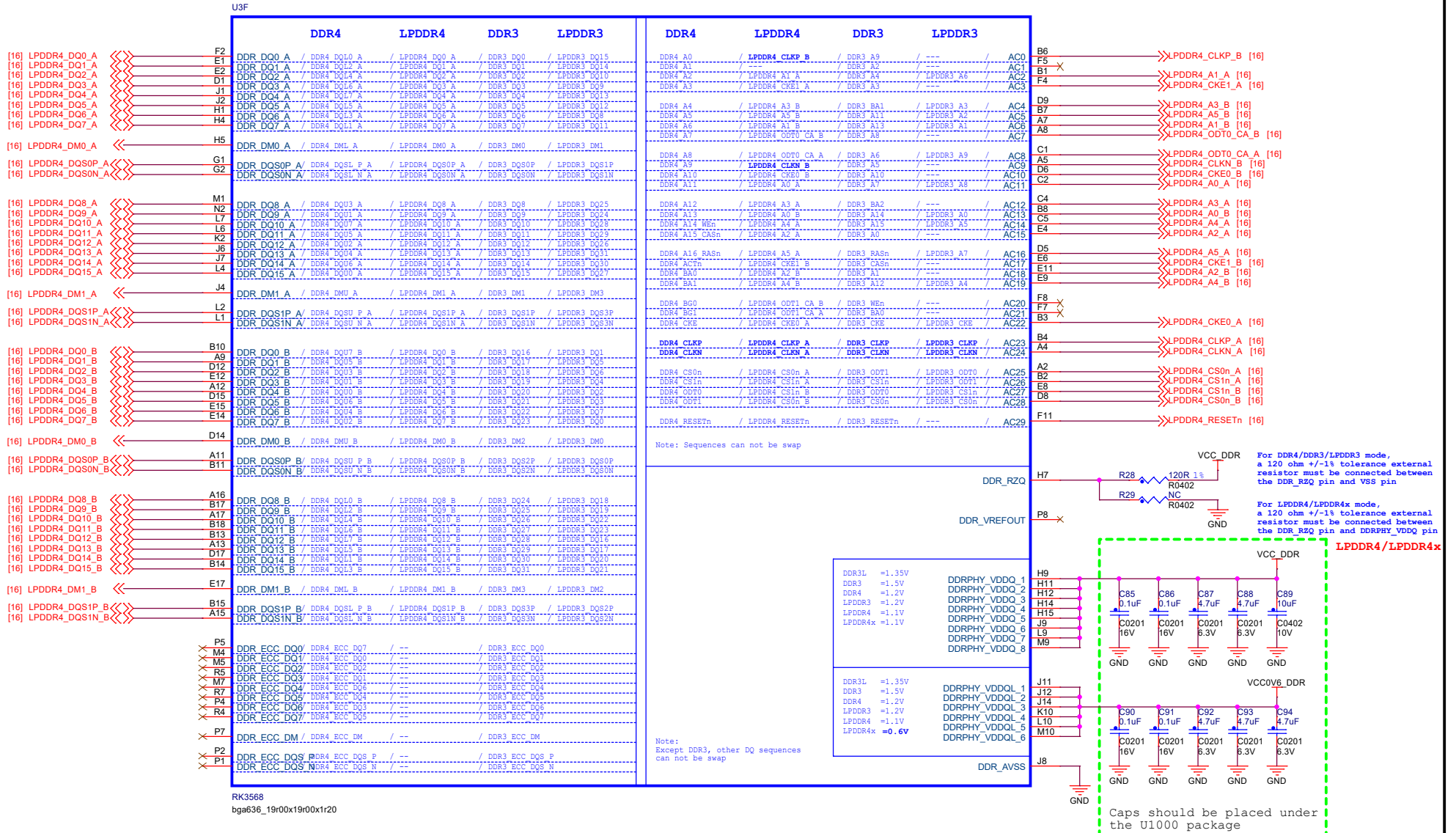


RK3568 PWR



<Variant Name>		
东莞野火电子技术有限公司 https://yehuosm.tmall.com		
Title 野火_EBF RK3568 核心板		
Size A3	Document Number CPU PWR	Rev V1.0
Date: Thursday, April 06, 2023 Sheet 6 of 18		

RK3568 DDR PHY



RK3568
bga636_19r00x19r00x1r20

<Variant Name>

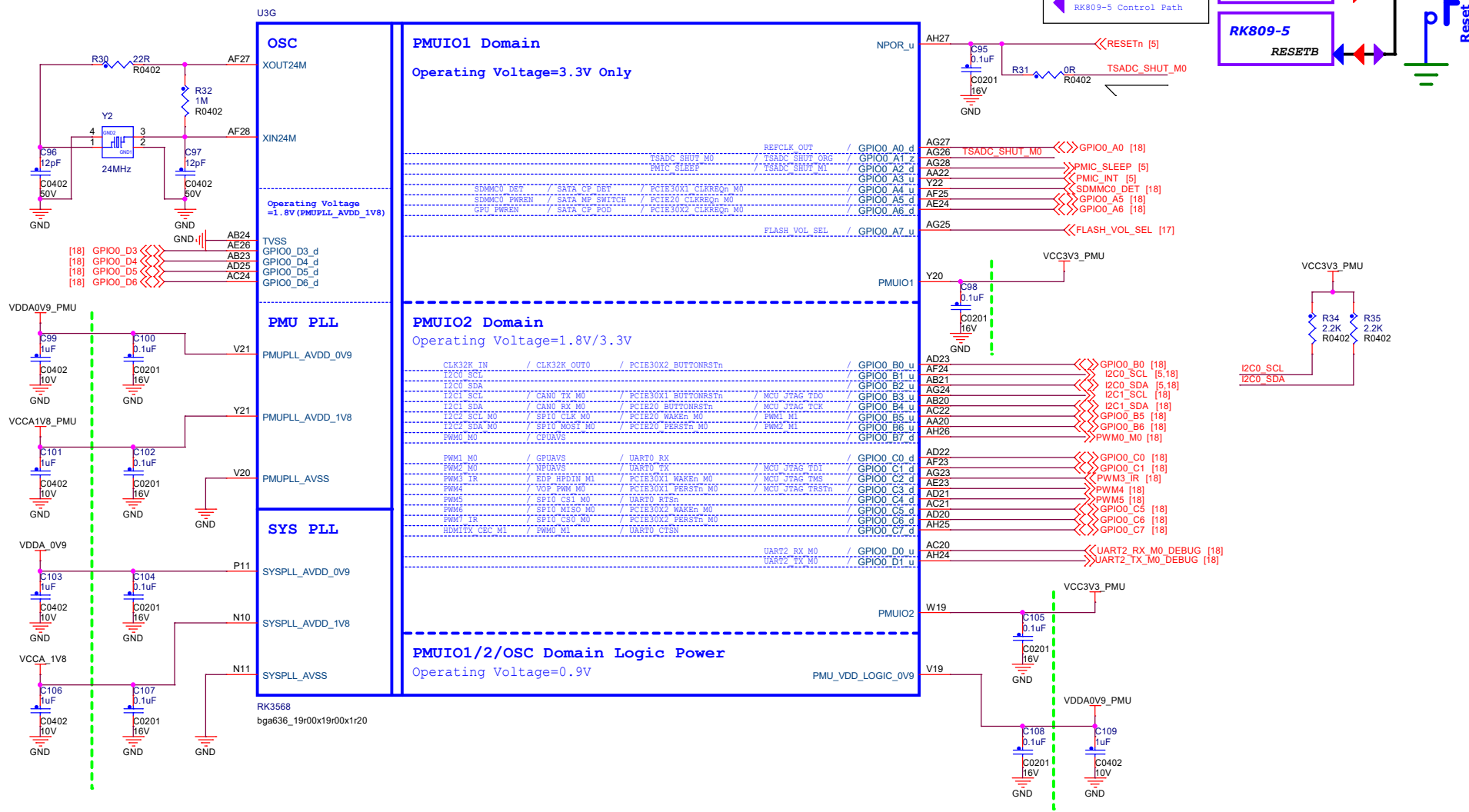
东莞野火电子技术有限公司
https://yehuosm.tmall.com

Title
野火_EBF RK3568 核心板

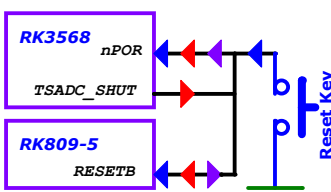
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RK3568 OSC/PLL/PMUIO

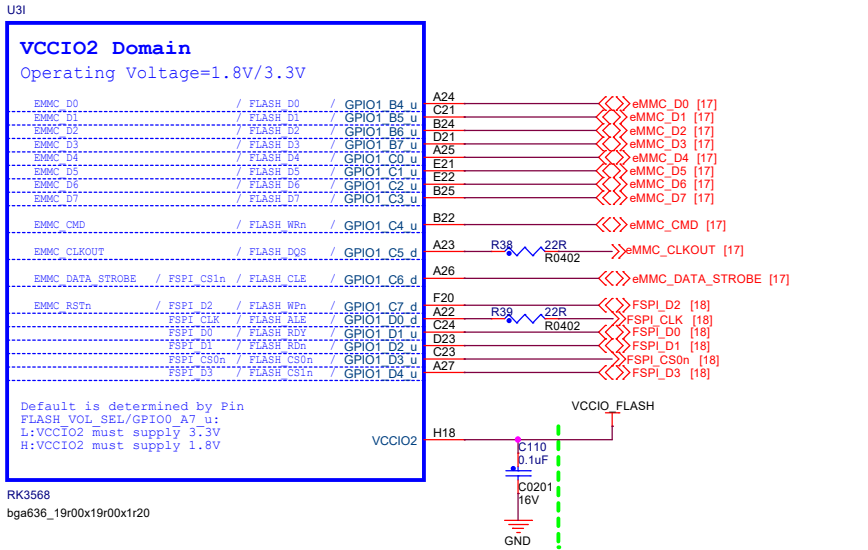


Note:
Caps of between dashed green lines and U3 should be placed under the U3 package.
Other caps should be placed close to the U3 package

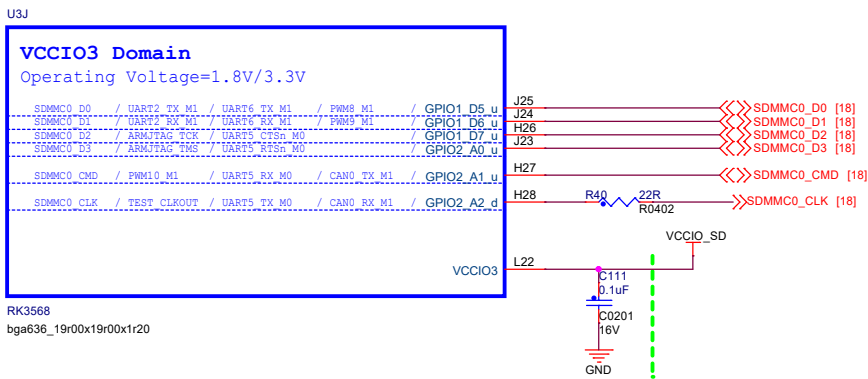


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Title 野火_EBF RK3568 核心板		
Size A3	Document Number OSC/PLL/PMUIO	Rev V1.0
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RK3568 VCCIO2 Domain



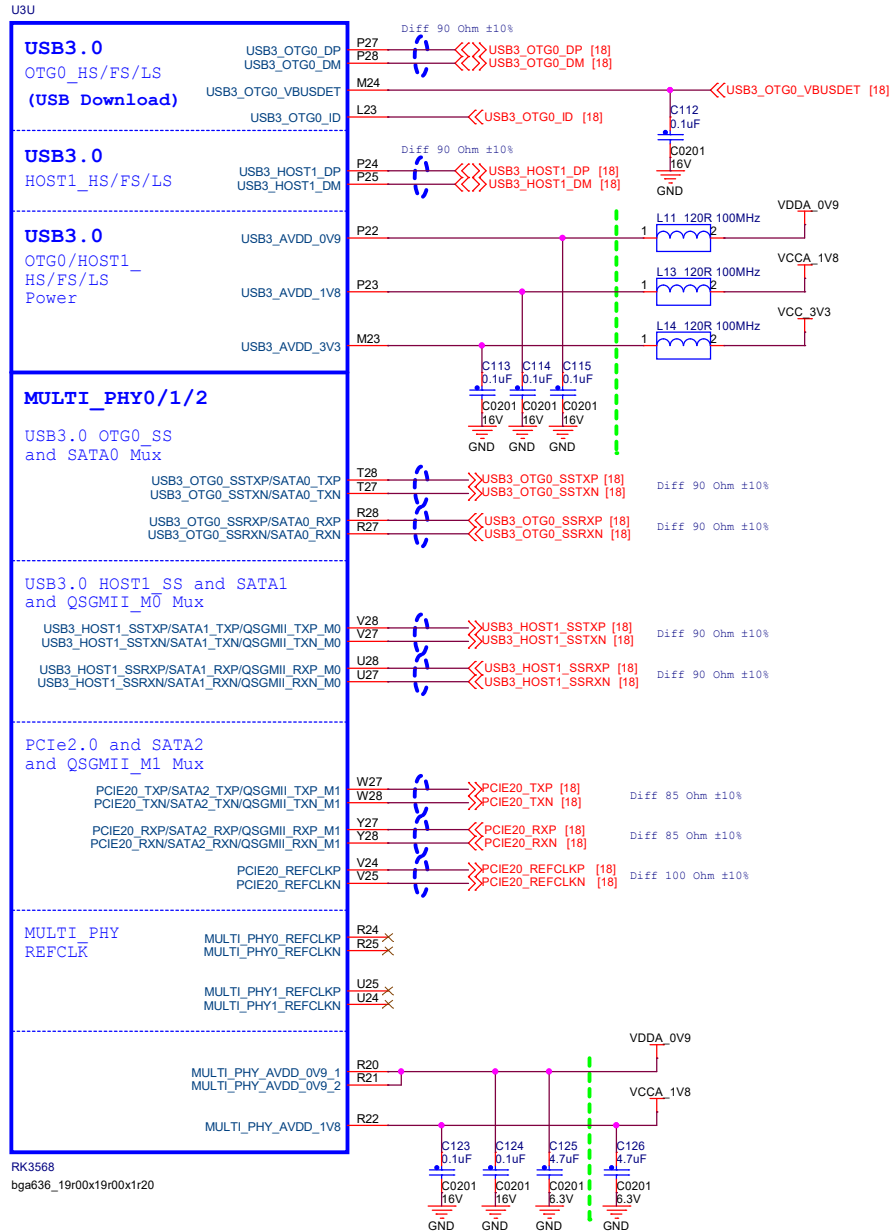
RK3568 VCCIO3 Domain



Note:
Caps of between dashed green lines and U3 should be placed under the U3 package.
Other caps should be placed close to the U3 package

<Variant Name>		
东莞野火电子技术有限公司 https://yehuosm.tmall.com		
Title 野火_EBF RK3568 核心板		
Size A3	Document Number SARADC/GPIO	Rev V1.0
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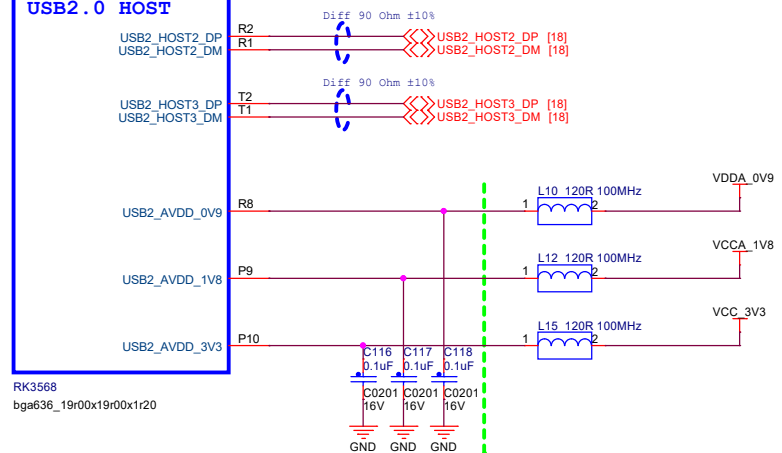
RK3568 USB3.0/SATA/QSGMII/PCIE2.0 x1



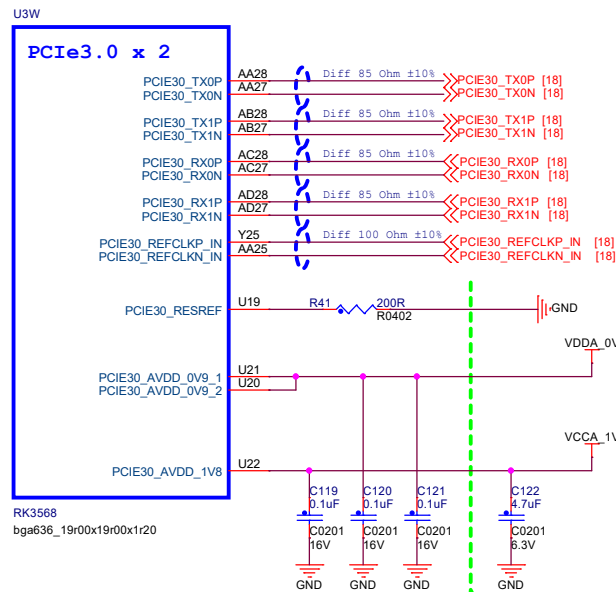
Note:

Caps of between dashed green lines and U3 should be placed under the U3 package.
Other caps should be placed close to the U3 package

RK3568 USB2.0 HOST



RK3568 PCIE3.0 x2



<Variant Name>

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野火_EBF RK3568 核心板

Size A3 Document Number USB/PCIE/STAT PHY Rev V1.0

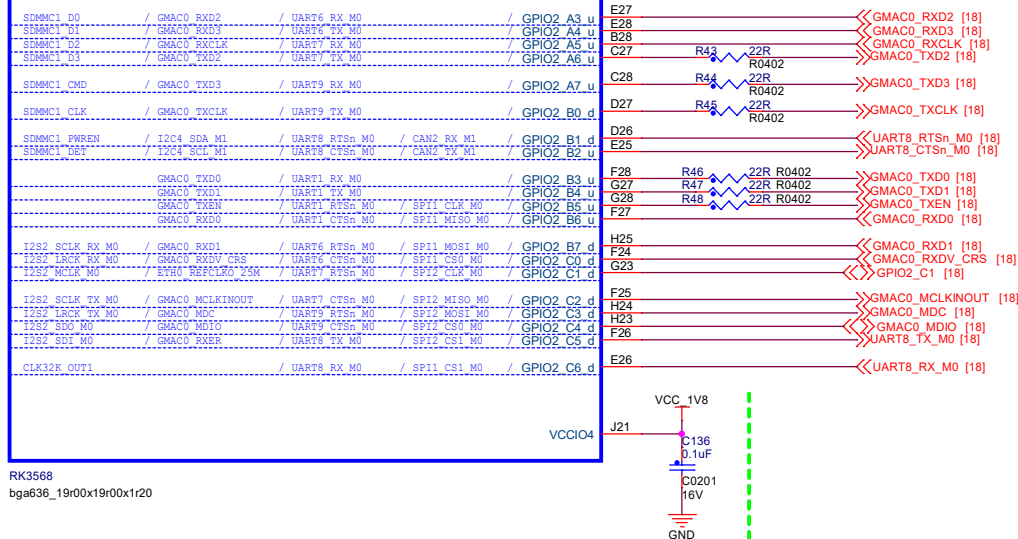
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RK3568 VCCI04 Domain

U3K

VCCIO4 Domain

Operating Voltage=1.8V/3.3V



RK3568

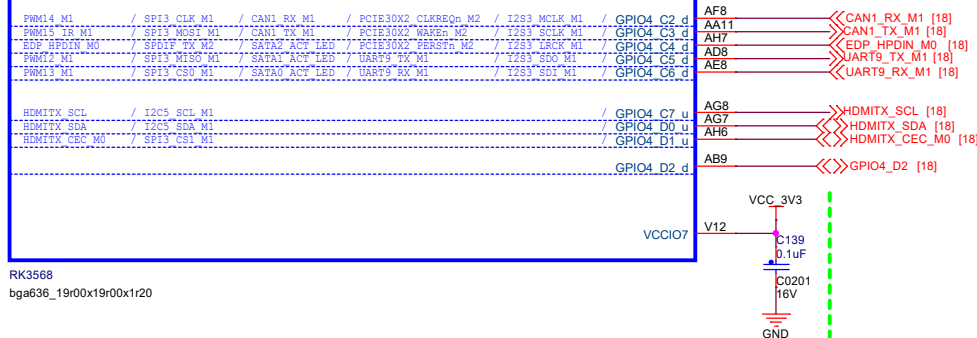
bga636_19r00x19r00x1r20

RK3568 VCCI07 Domain

U3N

VCCI07 Domain

Operating Voltage=1.8V/3.3V



RK3568

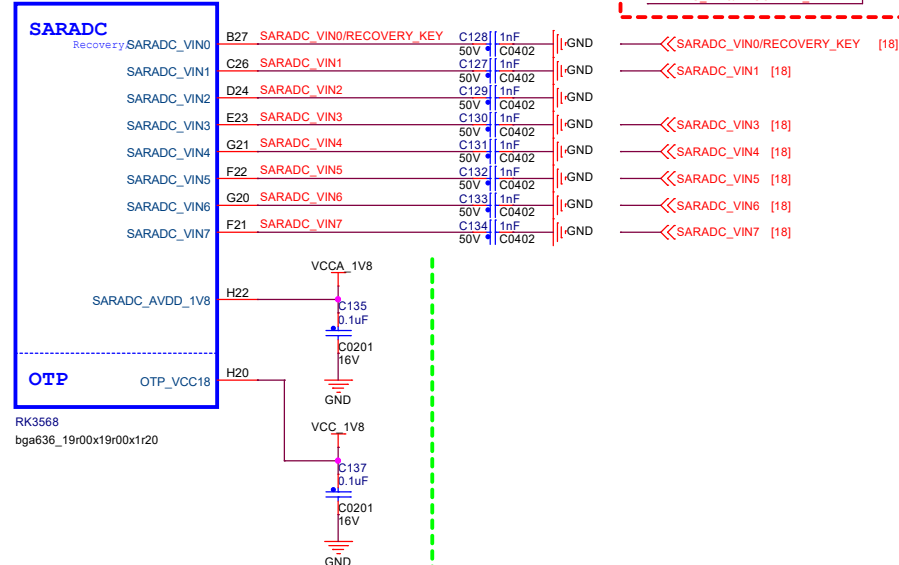
bqa636 19r00x19r00x1r20

Note:

Caps of between dashed green lines and U3
should be placed under the U3 package.
Other caps should be placed close to the U3 package

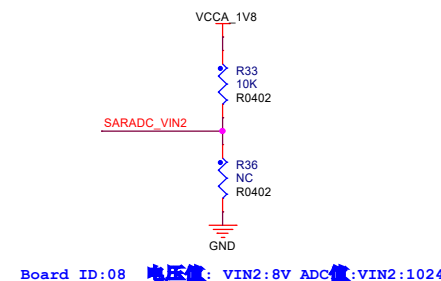
RK3568 SARADC/OTP

U3O



RK3568

bqa636 19r00x19r00x1r20



Board ID:08 电压: VIN2:8V ADC:VIN2:1024

<Variant Name>

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Title	野火 EBF RK3568 核心板
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Size	Document Number	Rev
A3	SARADC/GPIO	V1.0

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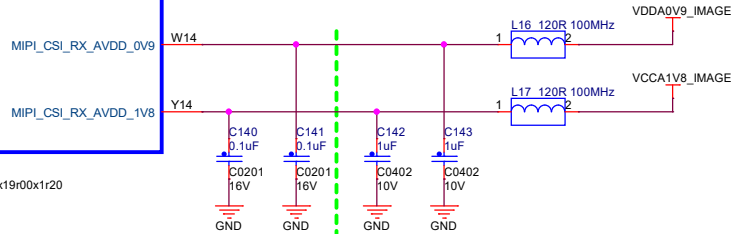
RK3568 MIPI_CSI_RX

U3P

MIPI CSI RX

MIPI_CSI_RX_D0P	AG12	Diff 100 Ohm ±10%	MIPI_CSI_RX_D0P [18]
MIPI_CSI_RX_D0N	AH12		MIPI_CSI_RX_D0N [18]
MIPI_CSI_RX_D1P	AG11	Diff 100 Ohm ±10%	MIPI_CSI_RX_D1P [18]
MIPI_CSI_RX_D1N	AH11		MIPI_CSI_RX_D1N [18]
MIPI_CSI_RX_D2P	AE11	Diff 100 Ohm ±10%	MIPI_CSI_RX_D2P [18]
MIPI_CSI_RX_D2N	AD11		MIPI_CSI_RX_D2N [18]
MIPI_CSI_RX_D3P	AD9	Diff 100 Ohm ±10%	MIPI_CSI_RX_D3P [18]
MIPI_CSI_RX_D3N	AE9		MIPI_CSI_RX_D3N [18]
MIPI_CSI_RX_CLK0P	AG10	Diff 100 Ohm ±10%	MIPI_CSI_RX_CLK0P [18]
MIPI_CSI_RX_CLK0N	AH10		MIPI_CSI_RX_CLK0N [18]
MIPI_CSI_RX_CLK1P	AG9	Diff 100 Ohm ±10%	MIPI_CSI_RX_CLK1P [18]
MIPI_CSI_RX_CLK1N	AH9		MIPI_CSI_RX_CLK1N [18]

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



RK3568
bga636_19r00x19r00x1r20

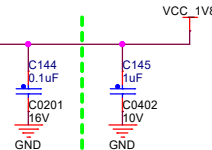
RK3568 VCCIO6 Domain

U3M

VCCIO6 Domain

Operating Voltage=1.8V/3.3V

CIF_D0	/ EBC SDD00	/ SDMMC2_D0_M0	/ I2S1_MCLK_M1	/ VOP_BT656_D0_M1	/ GPIO3_C6_d	AC5		>SDMMC2_D0_M0 [18]
CIF_D1	/ EBC SDD01	/ SDMMC2_D1_M0	/ I2S1_SCLK_TX_M1	/ VOP_BT656_D1_M1	/ GPIO3_C7_d	AA6		>SDMMC2_D1_M0 [18]
CIF_D2	/ EBC SDD02	/ SDMMC2_D2_M0	/ I2S1_LCLK_RX_M1	/ VOP_BT656_D2_M1	/ GPIO3_D0_d	AB5		>SDMMC2_D2_M0 [18]
CIF_D3	/ EBC SDD03	/ SDMMC2_D3_M0	/ I2S1_SDO_M1	/ VOP_BT656_D3_M1	/ GPIO3_D1_d	AB1		>SDMMC2_D3_M0 [18]
CIF_D4	/ EBC SDD04	/ SDMMC2_CMD_M0	/ I2S1_SDI0_M1	/ VOP_BT656_D4_M1	/ GPIO3_D2_d	Y7		>SDMMC2_CMD_M0 [18]
CIF_D5	/ EBC SDD05	/ SDMMC2_CLK_M0	/ I2S1_SDI1_M1	/ VOP_BT656_D5_M1	/ GPIO3_D3_d	AA1	R52 22R R0402	>SDMMC2_CLK_M0 [18]
CIF_D6	/ EBC SDD06	/ SDMMC2_DET_M0	/ I2S1_SDI2_M1	/ VOP_BT656_D6_M1	/ GPIO3_D4_d	AA5		>GPIO3_D4 [18]
CIF_D7	/ EBC SDD07	/ SDMMC2_FAREN_M0	/ I2S1_SDI3_M1	/ VOP_BT656_D7_M1	/ GPIO3_D5_d	AA5		>GPIO3_D5 [18]
CIF_D8	/ EBC SDD08	/ GMAC1_TXD2_M1	/ UART1_TX_M1	/ PWM_CLK0_M1	/ GPIO3_D6_d	Y6	R53 22R R0402	>GMAC1_TXD2_M1 [18]
CIF_D9	/ EBC SDD09	/ GMAC1_RXD3_M1	/ UART1_RX_M1	/ PWM_SDI0_M1	/ GPIO3_D7_d	Y5	R54 22R R0402	>GMAC1_TXD3_M1 [18]
CIF_D10	/ EBC SDD010	/ GMAC1_RXCLK_M1	/ UART1_TX_M1	/ PWM_CLK1_M1	/ GPIO4_A0_d	AA3	R55 22R R0402	>GMAC1_TXCLK_M1 [18]
CIF_D11	/ EBC SDD011	/ GMAC1_RXD2_M1	/ UART1_TX_M2	/ PWM_SDI1_M1	/ GPIO4_A1_d	Y4		>GMAC1_RXD2_M1 [18]
CIF_D12	/ EBC SDD012	/ GMAC1_RXD1_M1	/ UART1_TX_M2	/ PWM_SDI2_M1	/ GPIO4_A2_d	Y3		>GMAC1_RXD3_M1 [18]
CIF_D13	/ EBC SDD013	/ GMAC1_RXD0_M1	/ UART1_RX_M2	/ PWM_SDI3_M1	/ GPIO4_A3_d	Y2	R56 22R R0402	>GMAC1_RXCLK_M1 [18]
CIF_D14	/ EBC SDD014	/ GMAC1_TXD0_M1	/ UART1_RX_M2	/ I2S2_LCLK_RX_M1	/ GPIO4_A4_d	Y1	R57 22R R0402	>GMAC1_TXD0_M1 [18]
CIF_D15	/ EBC SDD015	/ GMAC1_TXD1_M1	/ UART1_RX_M2	/ I2S2_LCLK_RX_M1	/ GPIO4_A5_d	Y1		>GMAC1_TXD1_M1 [18]
ISP_FLASHTRIGOUT	/ EBC SDCE0	/ GMAC1_TXEN_M1	/ SPI3_CS0_M0	/ I2S1_SCLK_RX_M1	/ GPIO4_A6_d	W2	R58 22R R0402	>GMAC1_TXEN_M1 [18]
CAM_CLKOUT0	/ EBC SDCE1	/ GMAC1_RXD0_M1	/ SPI3_CS1_M0	/ I2S1_LCLK_RX_M1	/ GPIO4_A7_d	W1		>GMAC1_RXD0_M1 [18]
CAM_CLKOUT1	/ EBC SDCE2	/ GMAC1_RXD1_M1	/ SPI3_MISO_M0	/ I2S1_SDI0_M1	/ GPIO4_B0_d	V7		>GMAC1_RXD1_M1 [18]
ISP_PRLIGHT_TRIG	/ EBC SDCE3	/ GMAC1_RXDV_CRS_M1	/ I2S1_SDO2_M1	/ I2S1_SDO2_M1	/ GPIO4_B1_d	V2		>GMAC1_RXDV_CRS_M1 [18]
I2C4_SDA_M0	/ EBC VCOM	/ GMAC1_RXER_M1	/ SPI3_MOSI_M0	/ I2S2_SDI_M1	/ GPIO4_B2_d	V4		>>I2C4_SDA_M0 [18]
I2C4_SCL_M0	/ EBC GD08	/ ETH1_REFCLK0_25M_M1	/ SPI3_CLK_M0	/ I2S2_SDO_M1	/ GPIO4_B3_d	V1		>>I2C4_SCL_M0 [18]
I2C2_SDA_M1	/ EBC GDSP	/ CAN2_RX_M0	/ I2S1_FLASH_TRIGIN	/ VOP_BT656_CLK_M1	/ GPIO4_B4_d	V6		>>CAN2_RX_M0 [18]
I2C2_SCL_M1	/ EBC SD58A	/ CAN2_TX_M0	/ I2S1_SDO3_M1	/ I2S1_SDO3_M1	/ GPIO4_B5_d	V5		>>CAN2_TX_M0 [18]
CIF_HREF	/ EBC SDLE	/ GMAC1_MDC_M1	/ UART1_RTS_M1	/ I2S2_MCLK_M1	/ GPIO4_B6_d	U5		>>GMAC1_MDC_M1 [18]
CIF_VSYNC	/ EBC SD0E	/ GMAC1_MDIO_M1	/ I2S2_SCLK_TX_M1	/ I2S2_SCLK_TX_M1	/ GPIO4_B7_d	U4		>>GMAC1_MDIO_M1 [18]
CIF_CLKOUT	/ EBC GDCLK	/ PWM1_IR_M1	/ I2S2_SCLK_RX_M1	/ I2S2_SCLK_RX_M1	/ GPIO4_C0_d	U3		>>GPIO4_C0 [18]
CIF_CLKIN	/ EBC SDCLK	/ GMAC1_MCLKINOUT_M1	/ UART1_CTS_M1	/ I2S2_SCLK_RX_M1	/ GPIO4_C1_d	U2		>>GMAC1_MCLKINOUT_M1 [18]



RK3568
bga636_19r00x19r00x1r20

Note:

Caps of between dashed green lines and U3 should be placed under the U3 package.
Other caps should be placed close to the U3 package

<Variant Name>

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Title 野火_EBF RK3568 核心板

Size A3	Document Number V1 Interface	Rev V1.0
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RK3568 MIPI_DSI_TX0/LVDS_TX0

U3R

MIPI DSI TX0/LVDS TX0

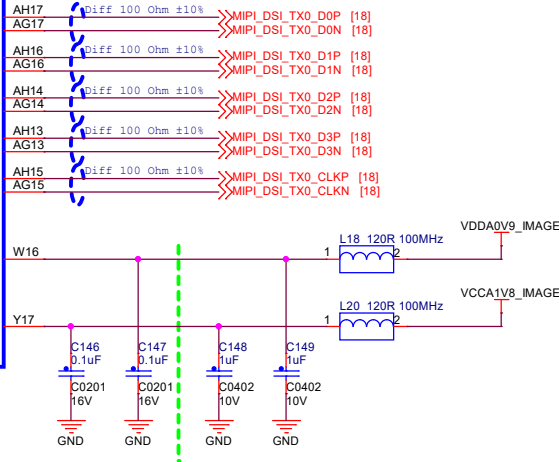
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MIPI_DSI_TX0_D1N/LVDS_TX0_D1N

MIPI_DSI_TX0_D2P/LVDS_TX0_D2P
MIPI_DSI_TX0_D2N/LVDS_TX0_D2N

MIPI_DSI_TX0_D3P/LVDS_TX0_D3P
MIPI_DSI_TX0_D3N/LVDS_TX0_D3N

MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP
MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN



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bga636_19r00x19r00x1r20

RK3568 MIPI_DSI_TX1

U3S

MIPI DSI TX1

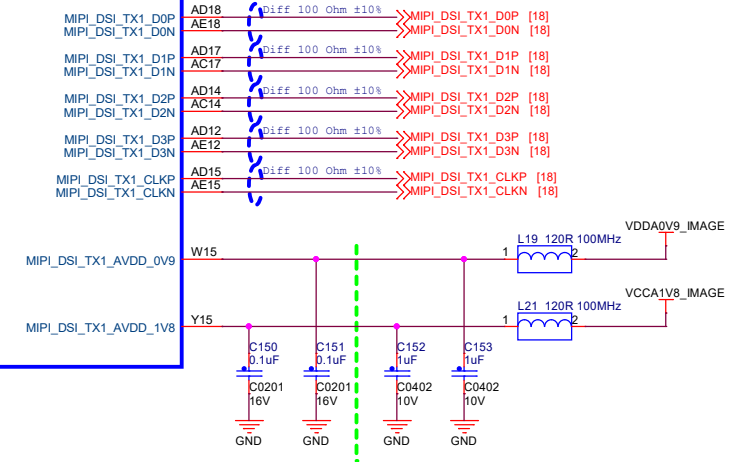
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MIPI_DSI_TX1_D2P
MIPI_DSI_TX1_D2N

MIPI_DSI_TX1_D3P
MIPI_DSI_TX1_D3N

MIPI_DSI_TX1_CLKP
MIPI_DSI_TX1_CLKN



RK3568
bga636_19r00x19r00x1r20

RK3568 eDP TX

U3T

eDP_TX

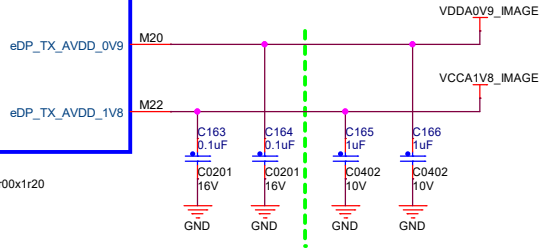
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eDP_TX_D0N

eDP_TX_D1P
eDP_TX_D1N

eDP_TX_D2P
eDP_TX_D2N

eDP_TX_D3P
eDP_TX_D3N

eDP_TX_AUXP
eDP_TX_AUXN



RK3568
bga636_19r00x19r00x1r20

RK3568 HDMI2.0 TX

U3Q

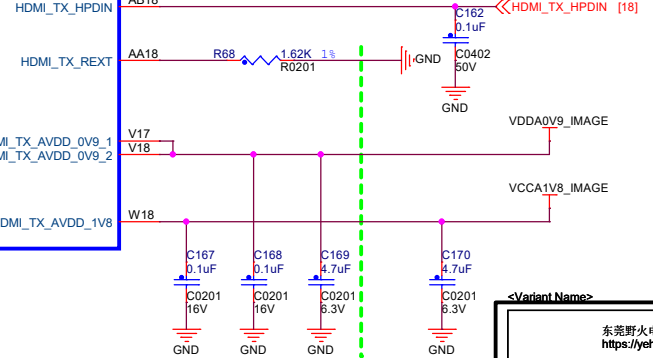
HDMI2.0 TX

HDMI_TX_D2P
HDMI_TX_D2N

HDMI_TX_D1P
HDMI_TX_D1N

HDMI_TX_D0P
HDMI_TX_D0N

HDMI_TX_CLKP
HDMI_TX_CLKN



RK3568
bga636_19r00x19r00x1r20

<Variant Name>

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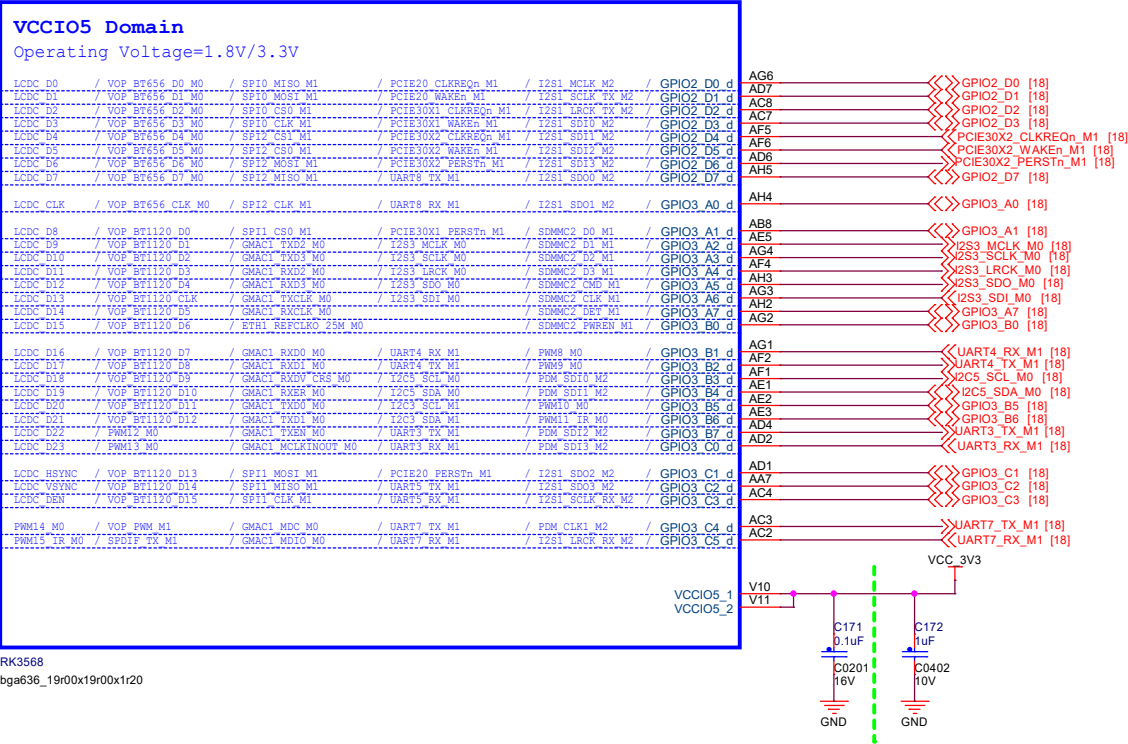
Title 野火_EBF RK3568 核心板

Size A3 Document Number VO Interface_1 Rev V1.0

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RK3568 VCCIO5 Domain

U3L



Note:

Caps of between dashed green lines and U3 should be placed under the U3 package.
Other caps should be placed close to the U3 package

<Variant Name>

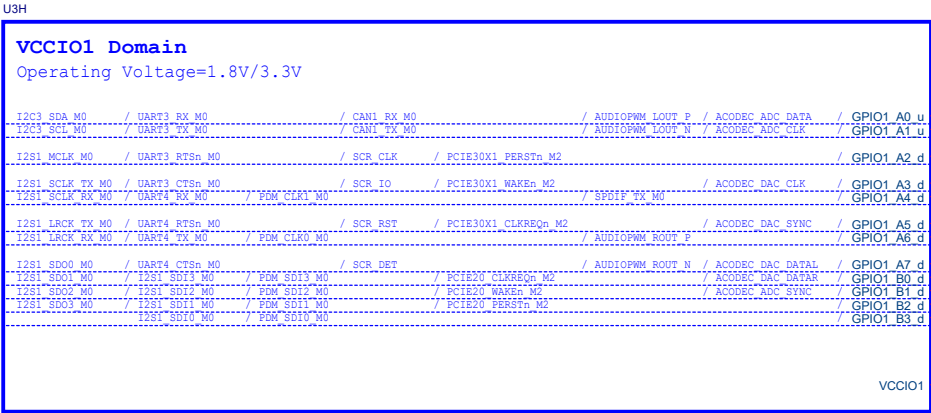
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Title
野火_EBF RK3568 核心板

Size A3	Document Number VO Interface_2	Rev V1.0
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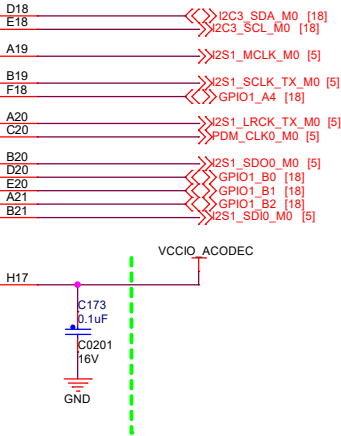
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RK3568 VCCIO1 Domain



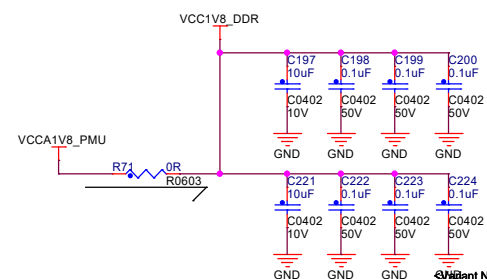
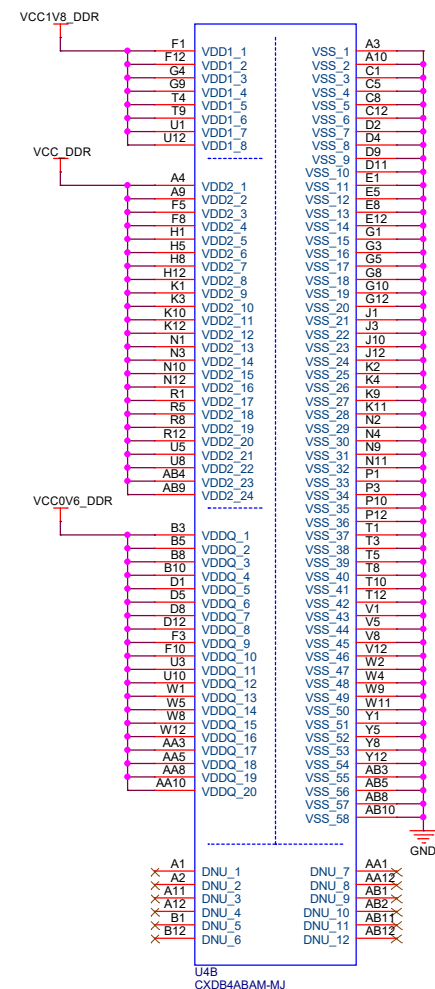
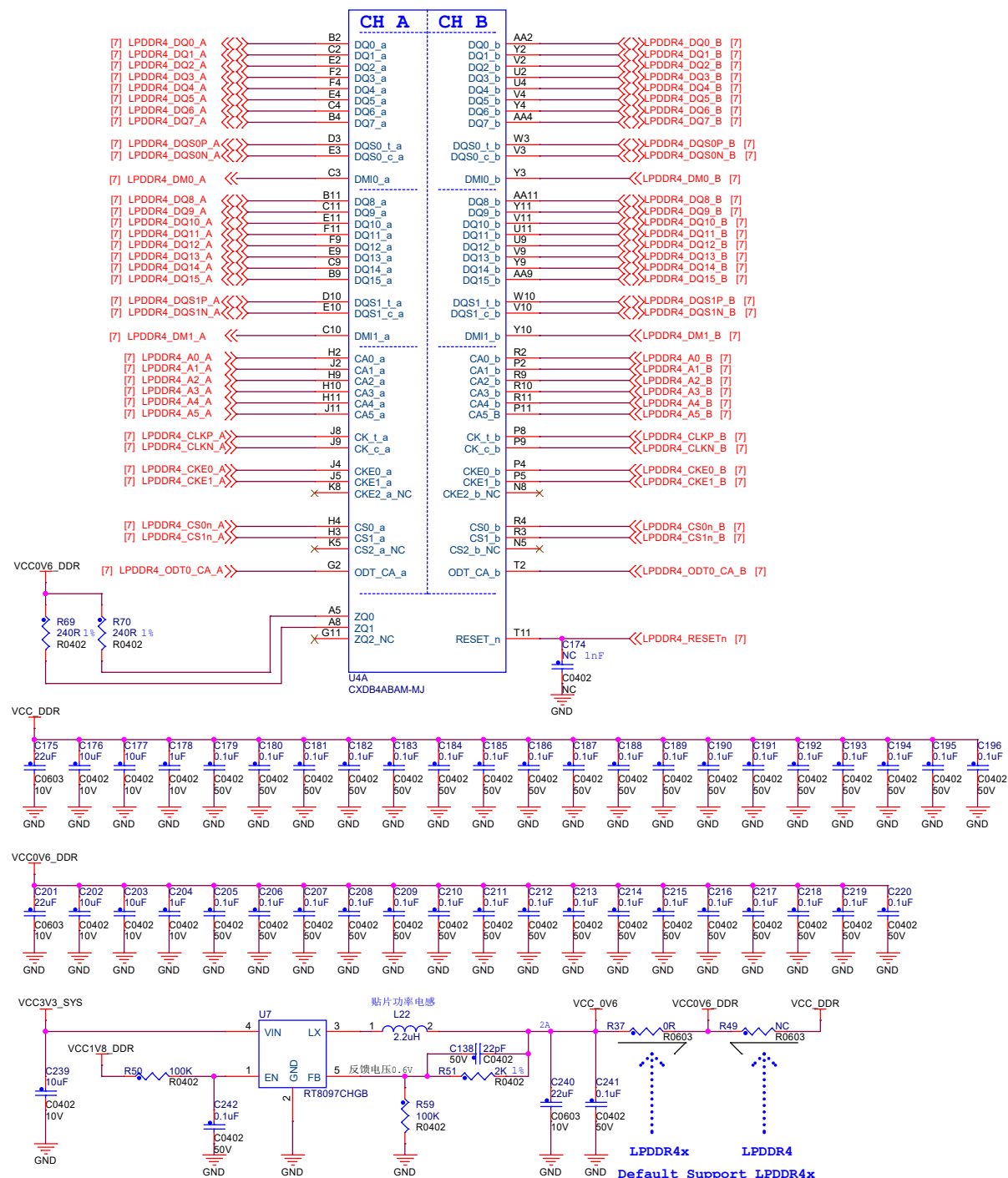
RK3568
bga636_19r00x19r00x1r20

Note:
Caps of between dashed green lines and U3
should be placed under the U3 package.
Other caps should be placed close to the U3 package



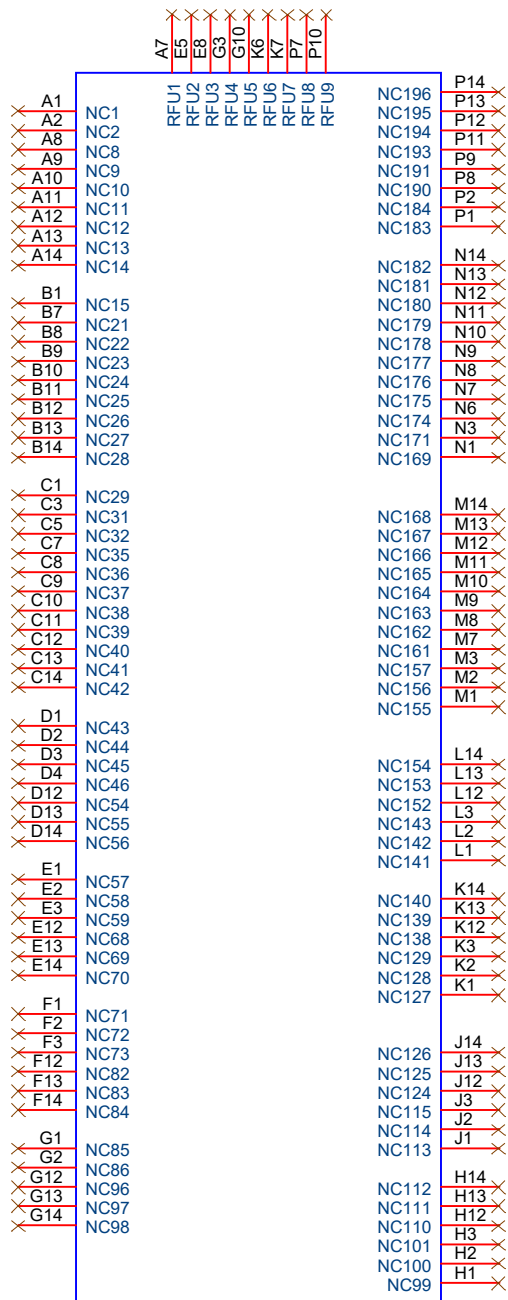
<Variant Name>		
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LPDDR4

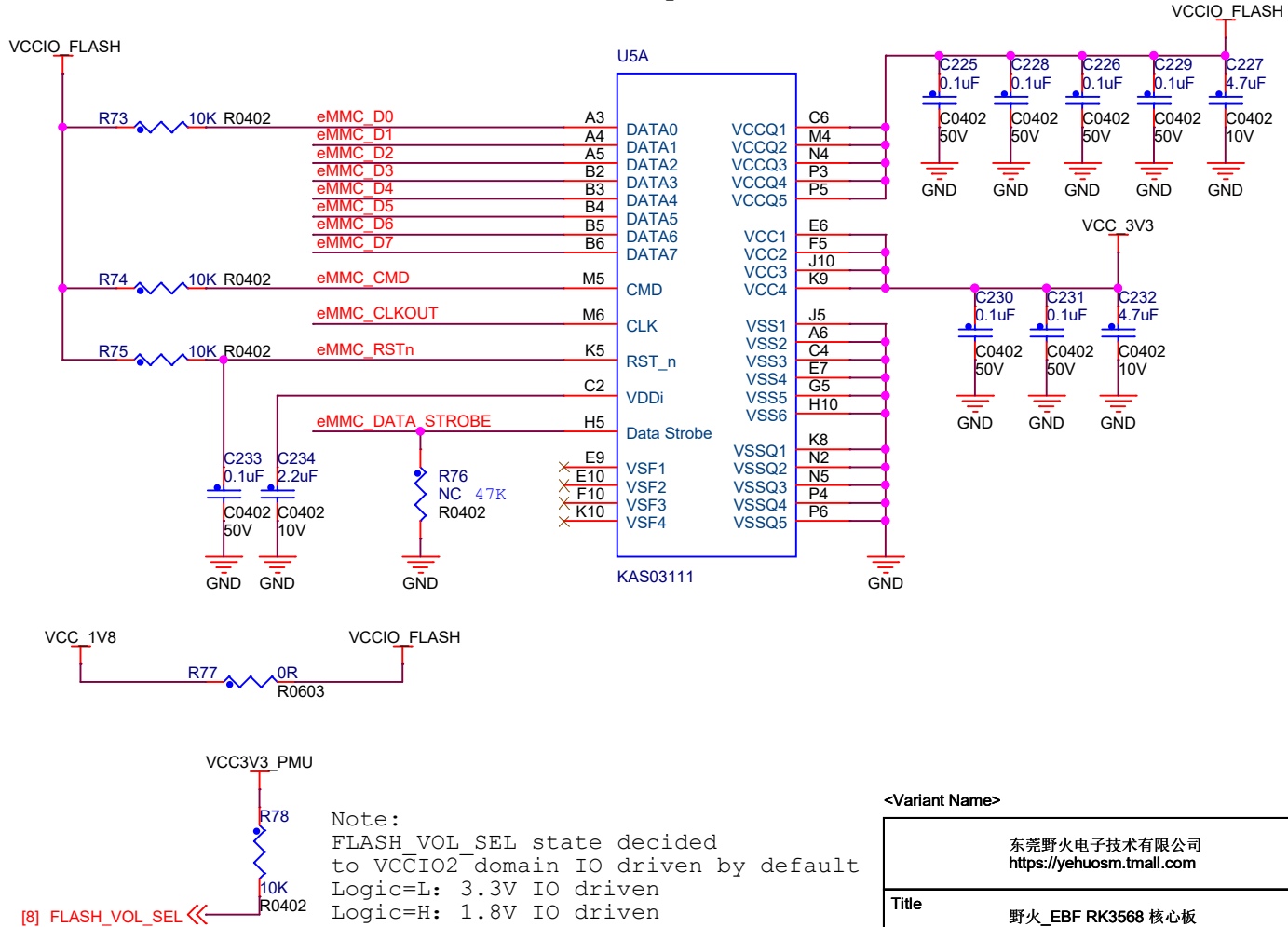
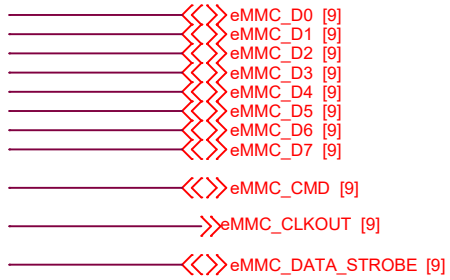


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eMMC Flash

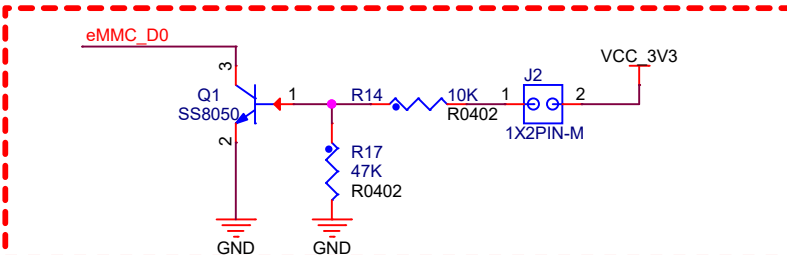


U5B
KAS03111



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

[8] FLASH_VOL_SEL <<



Note:
For eMMC or Nand Flash:
If eMMC_D0/FLASH_D0=0V at after power on and reset,
then system will enter into Maskrom mode.

<Variant Name>		
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