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- 03.Block Diagram
- 04.04.Power Tree
- 05.Power
- 06.USB Port
- 07.Audio Codec-ES8323
- 08.Camera-CIF
- 09.LCM-eDP Panel
- 10.HDMI
- 11.LCM-LVDS Panel
- 12.AP6XXX-WIFI/BT
- 13.TP COF
- 14.TF Card&GE
- 15.JM23029(USB-SATA)
- 16.MXM-CONNECTOR

I2C address(7bit):

1.I2C0 POWER:

ACT8846 0x5a
 CW2013 0x62
 HYM8563 0x51
 RT5C619 0x32
 SYR827 0x40
 SYR828 0x41

2.I2C1 Sensor:

CM3218 0x10,0x0c
 LSM330TR G:0x6a A:0x1e
 MMA8452Q 0X1d
 MPU6050C 0x68
 LIS3DH 0X19
 LSM303D 0X1d

3.I2C2 Audio Codec:

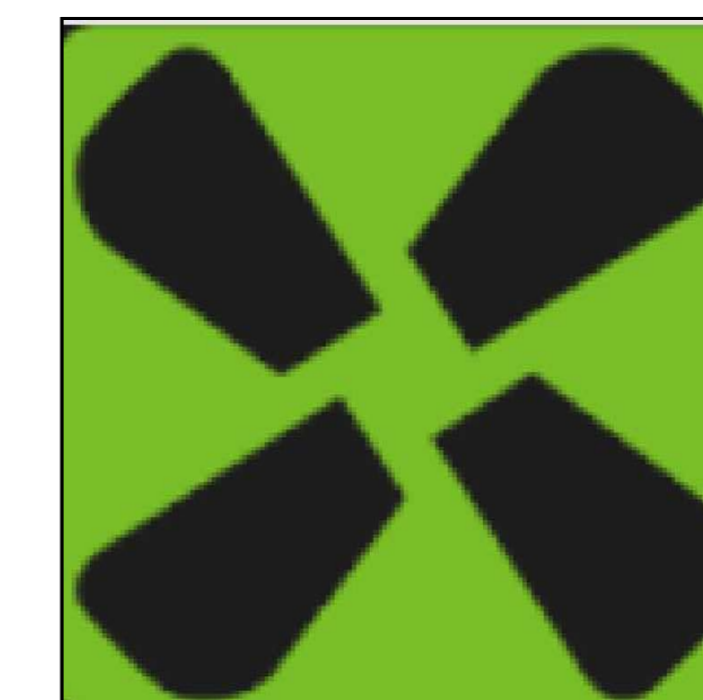
ALC3224 0x19
 ALC5623 0x1a
 ALC5631 0x1a
 ES8323 0x10

4.I2C3 Camera:

OV2659 0x30
 OV8825 0x36

5.I2C4 Touch:

CT363 0x1b
 FT5506
 GSL3680 0x40



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4

3

2

1

Version	Date	Author	Change Note	Approved
V1.0	20140930	Prince	First edictor	Prince
V1.1	20150303	Prince		

D

D

C

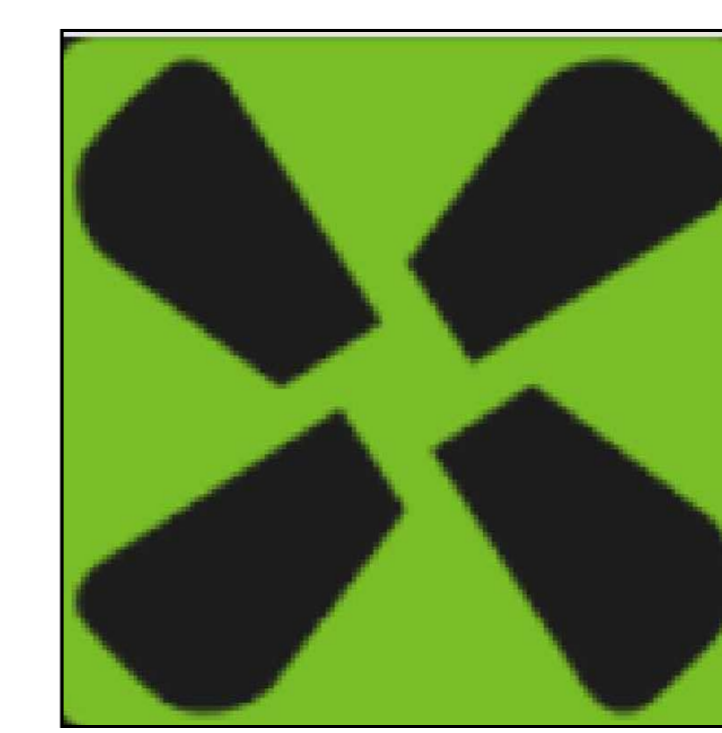
C

B

B

A

A



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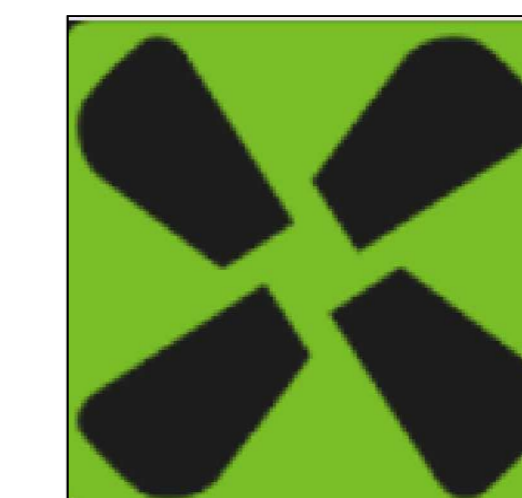
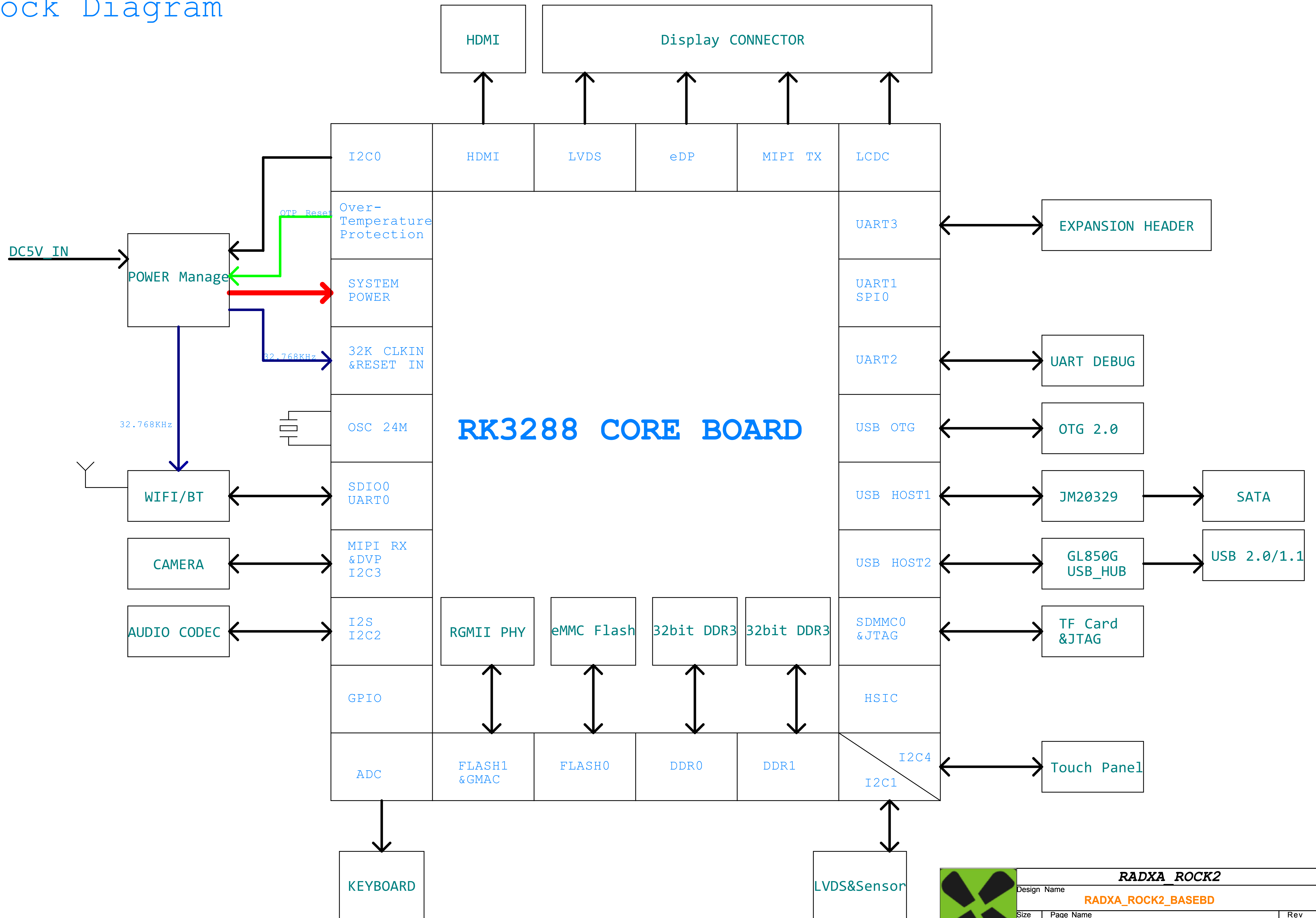
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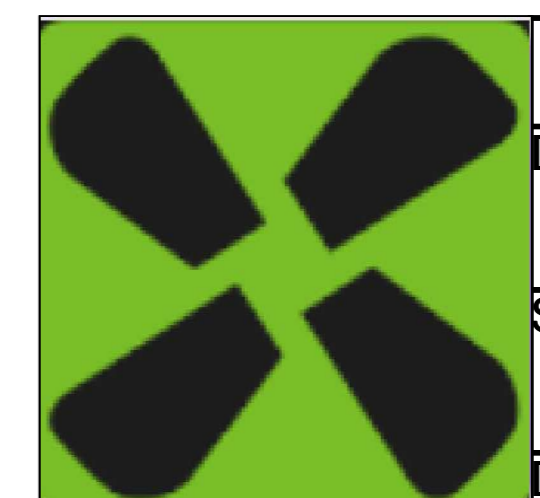
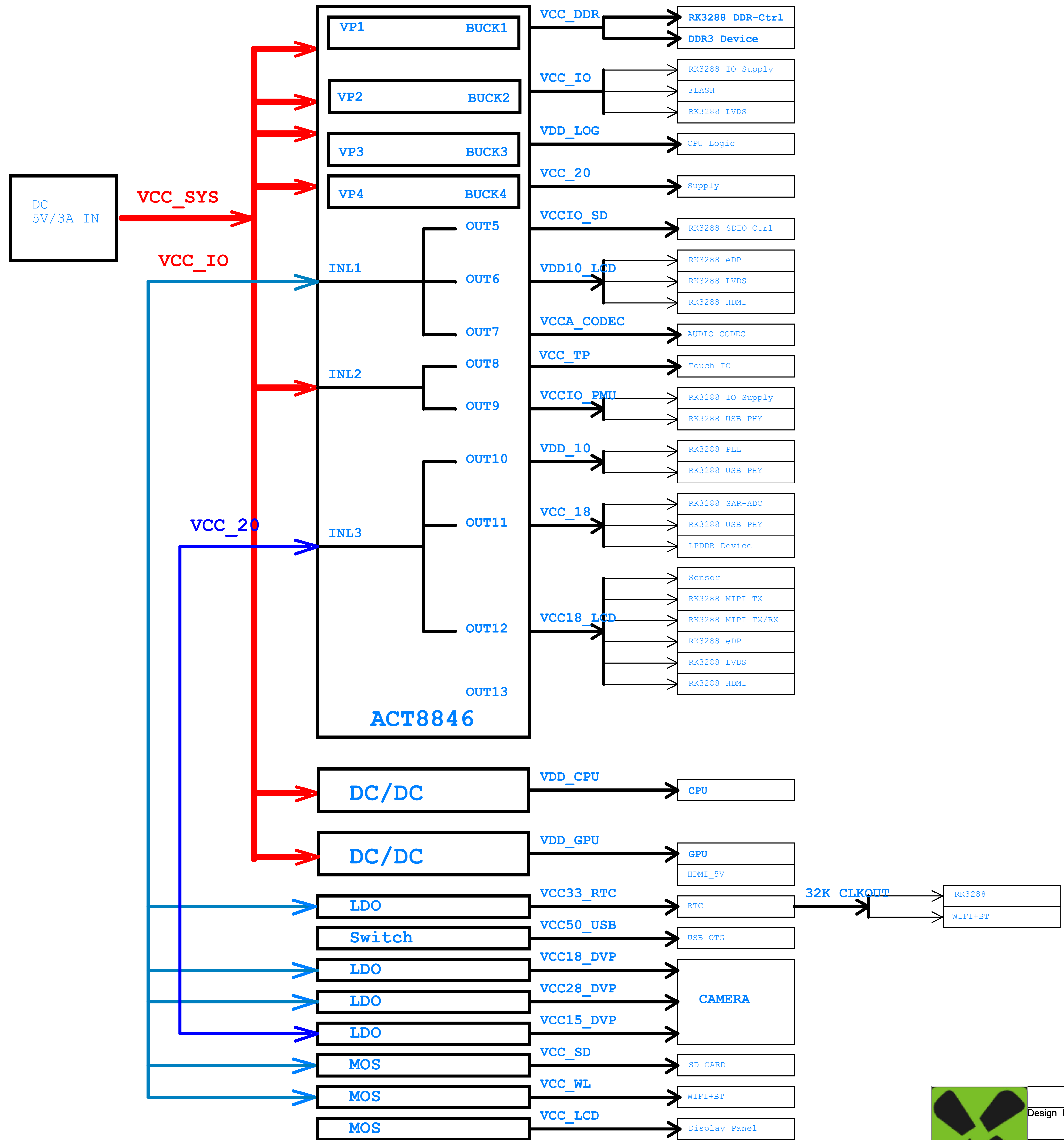
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2

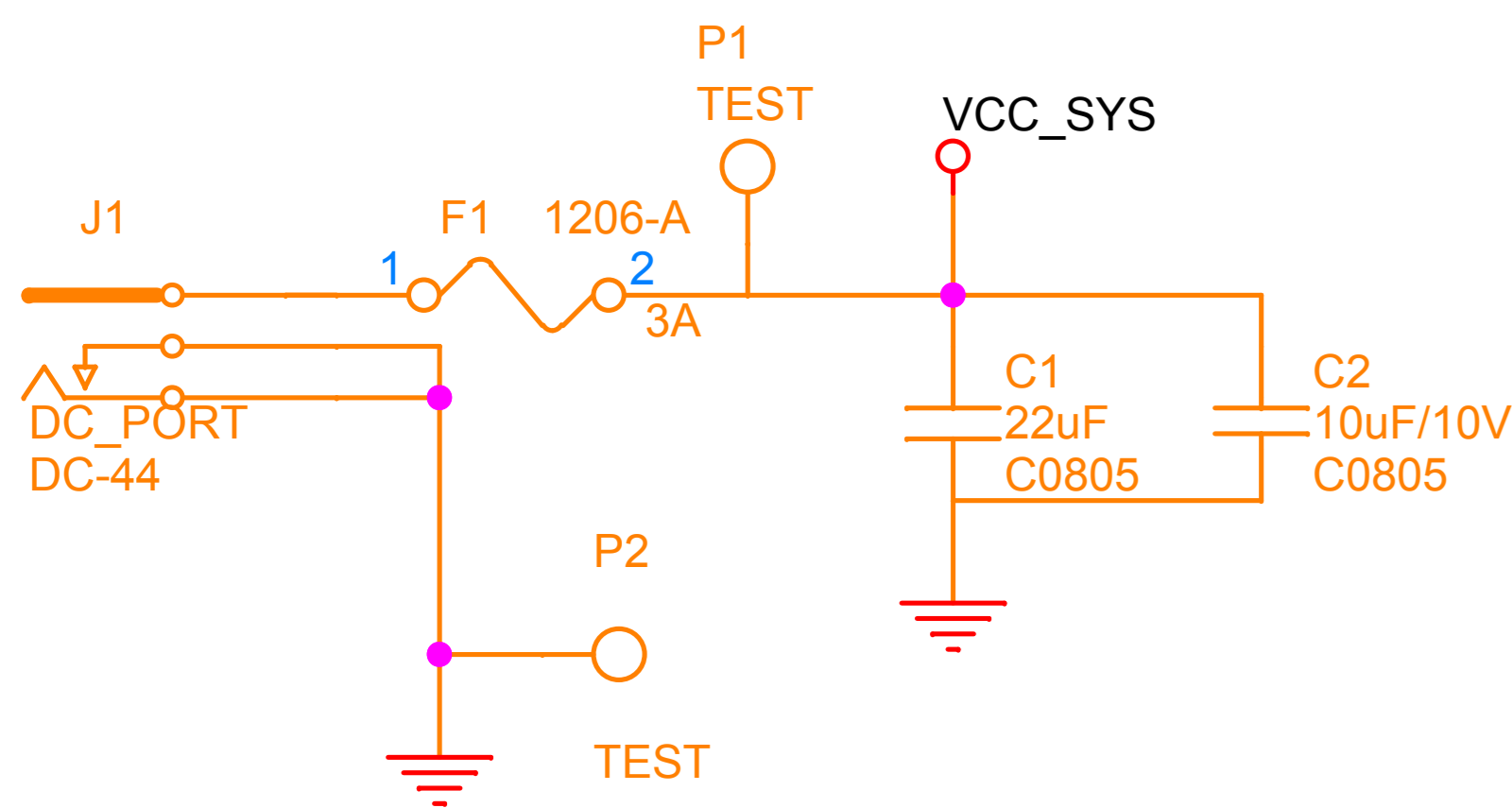
1

Block Diagram





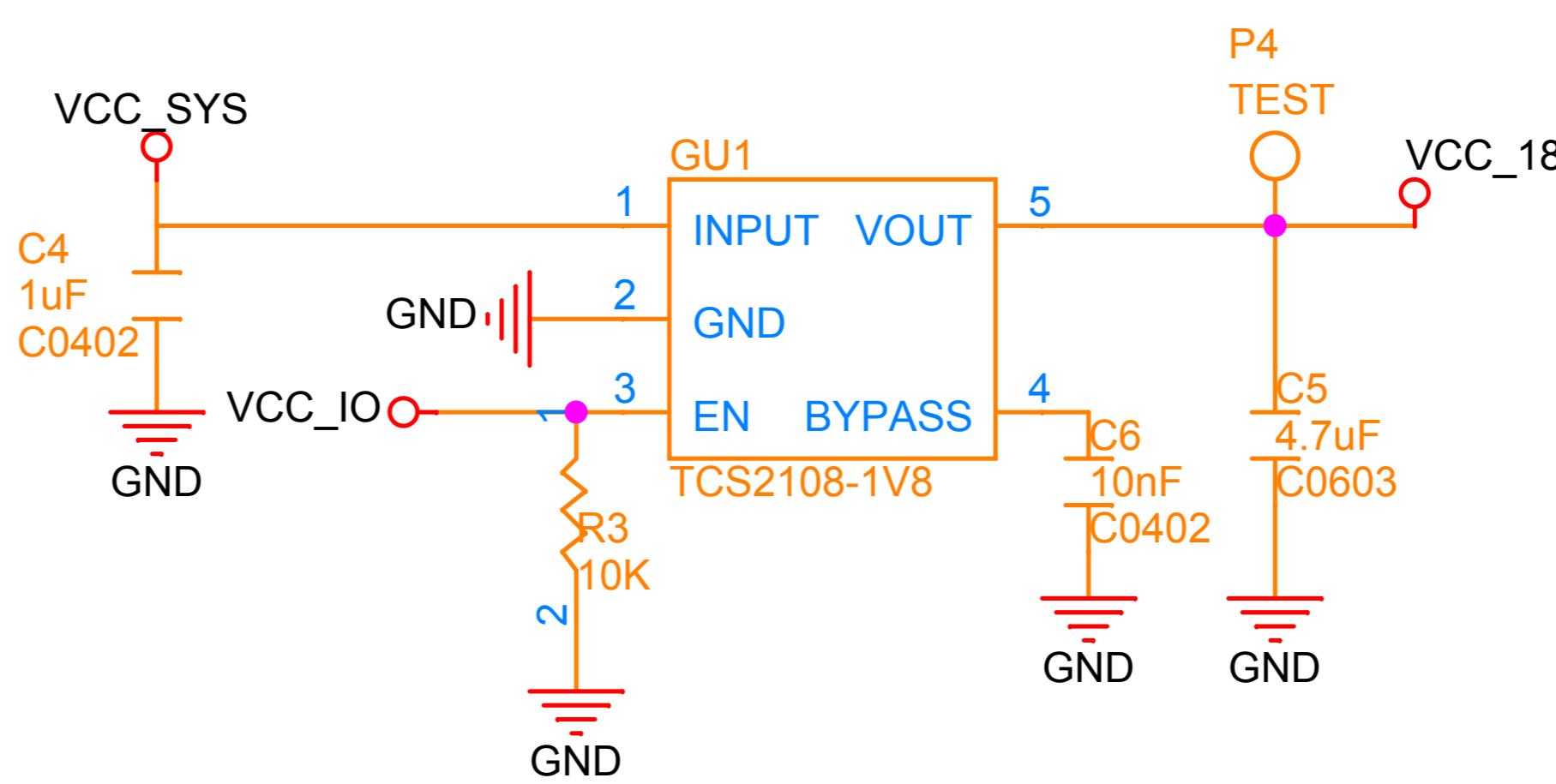
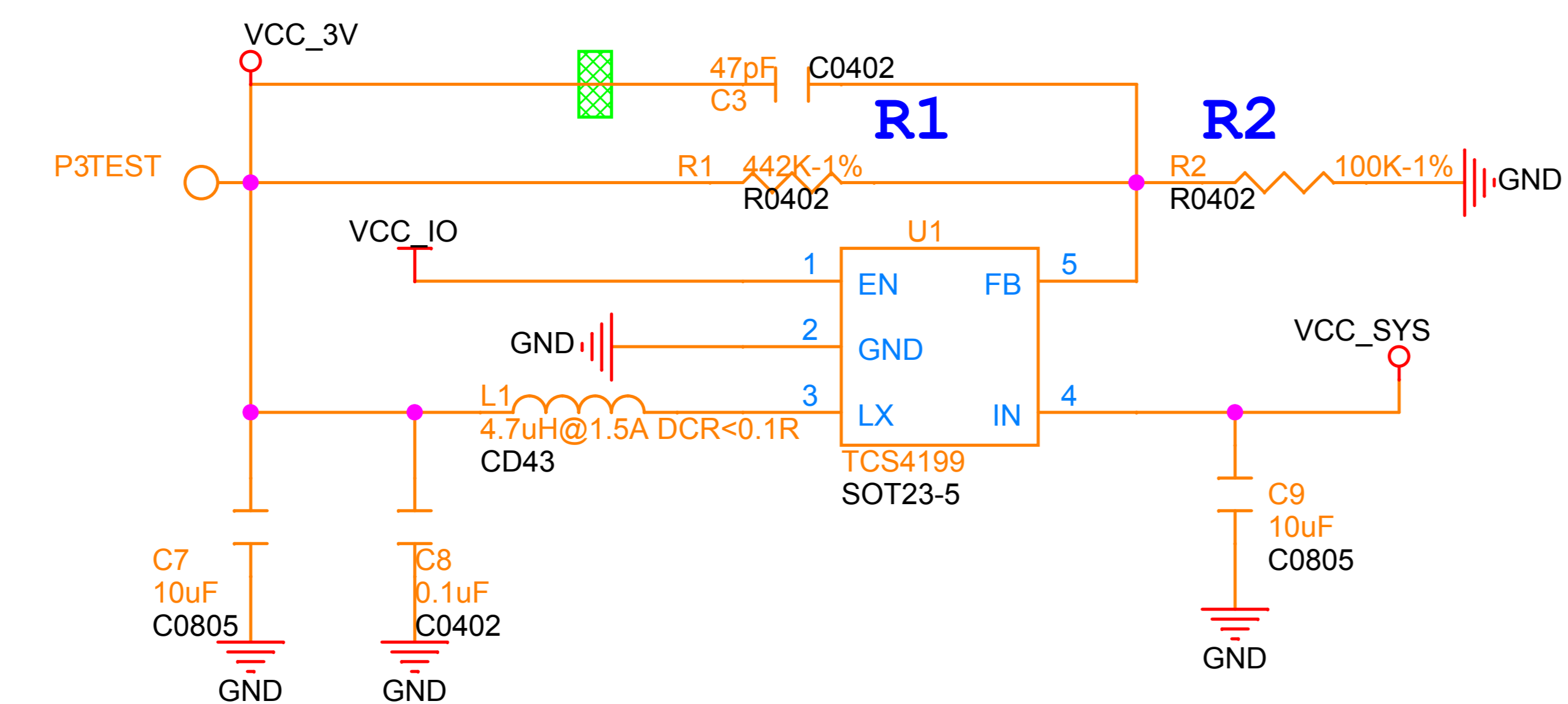
DC IN



Note:
Please use a 12V DC.

LDO

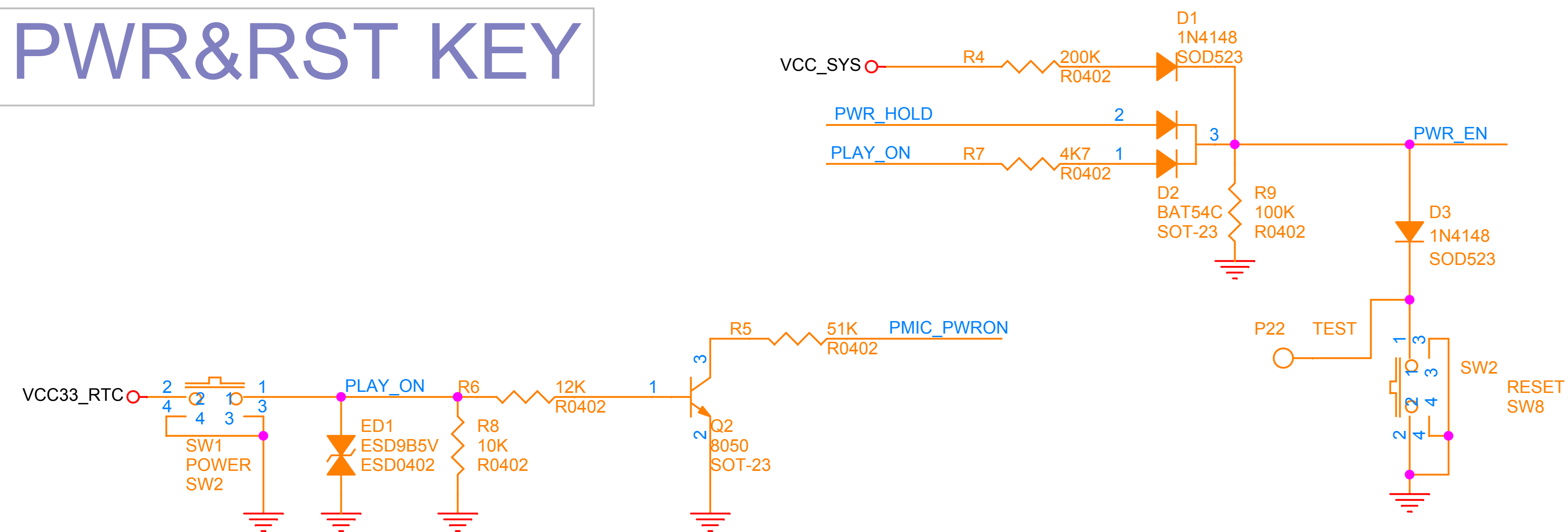
VCC-3V $V_{out} = 0.6 * (1 + R1/R2)$



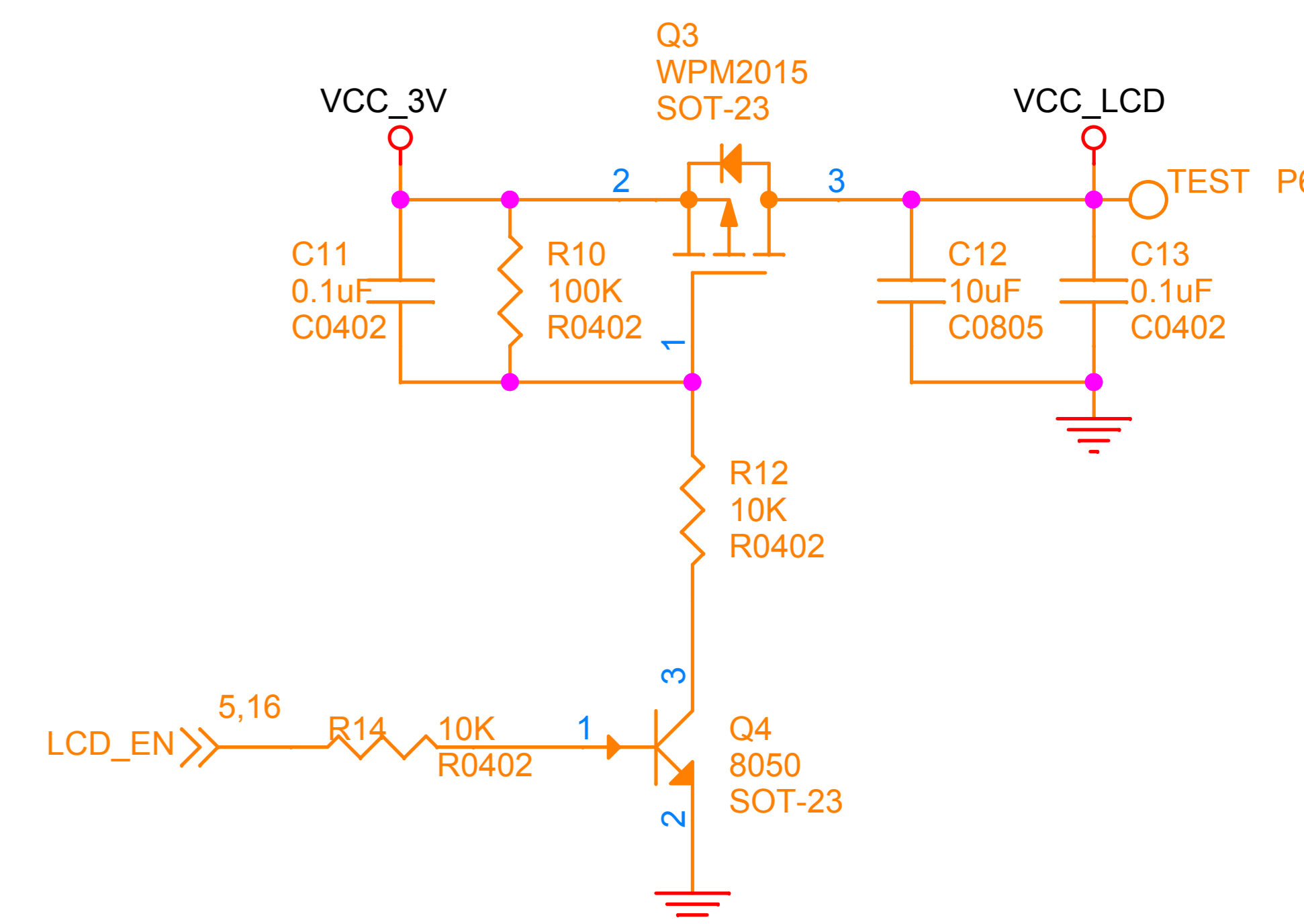
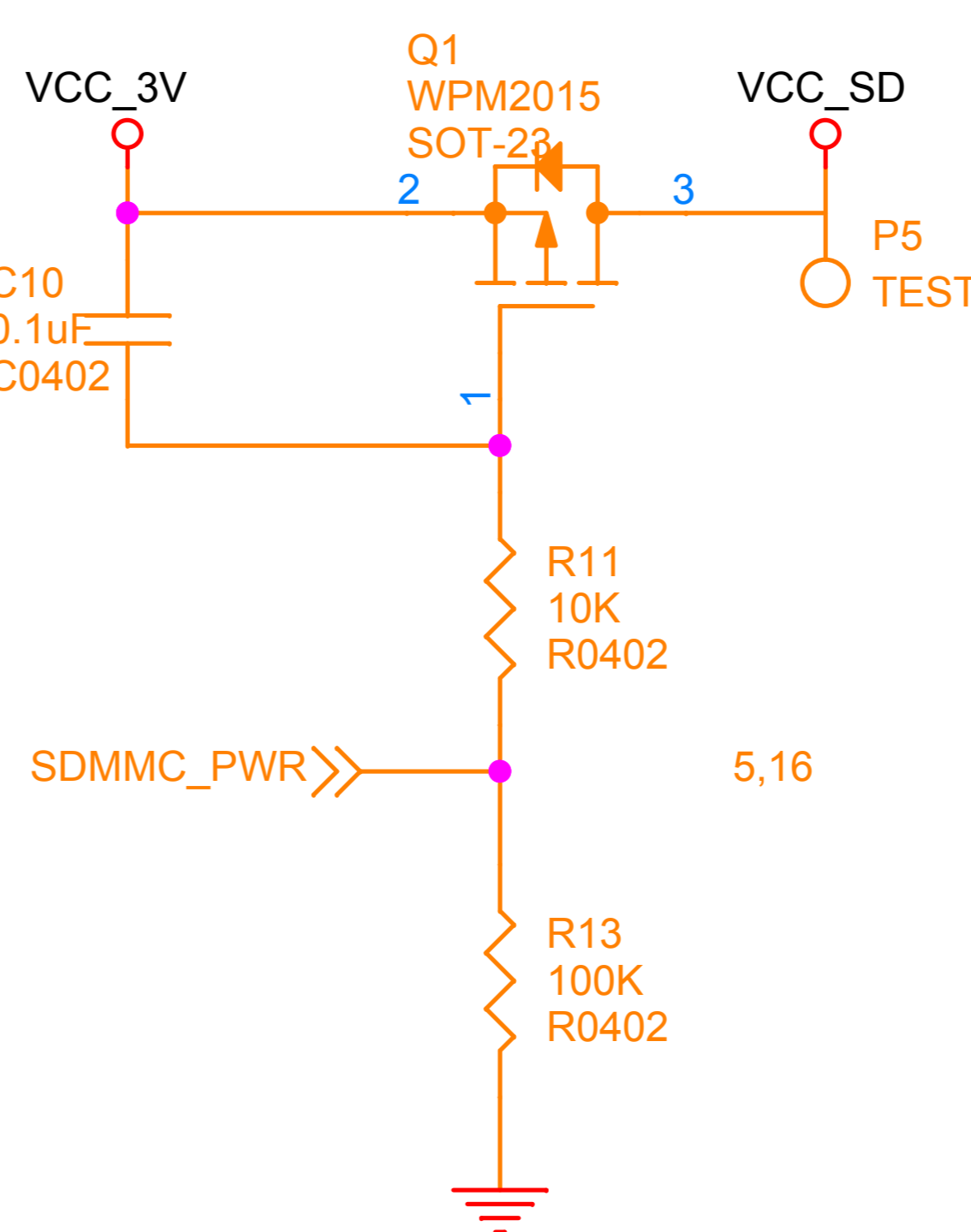
PWR

RTC_CLKOUT1	RTC_CLKOUT1	16
RTC_CLKOUT2	RTC_CLKOUT2	12
PMIC_INT	PMIC_INT	16
PWR_EN	PWR_EN	16
I2C0_SDA_PMIC	I2C0_SDA_PMIC	16
I2C0_SCL_PMIC	I2C0_SCL_PMIC	16
PMIC_PWRON	PMIC_PWRON	16
SDMMC_PWR	SDMMC_PWR	5,16
LCD_EN	LCD_EN	5,16
BL_EN	BL_EN	9,16
PWR_HOLD	PWR_HOLD	16

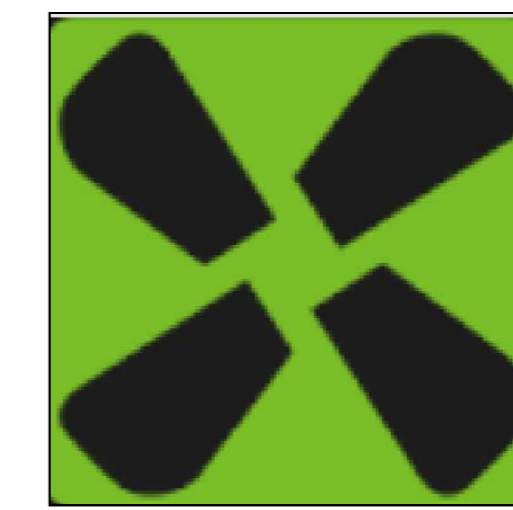
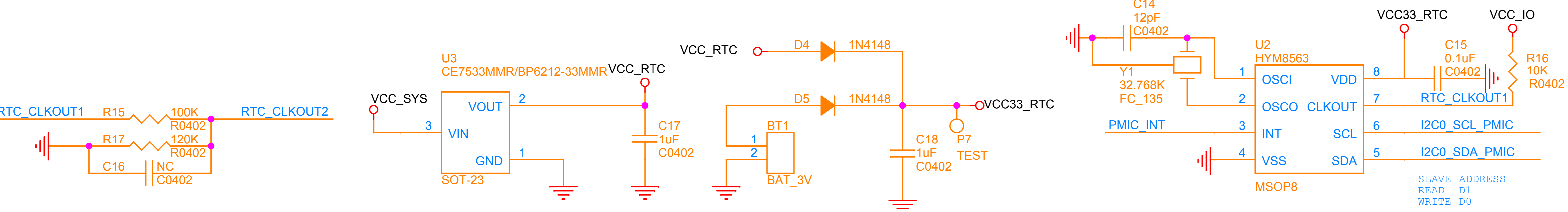
PWR&RST KEY



PWR CTL

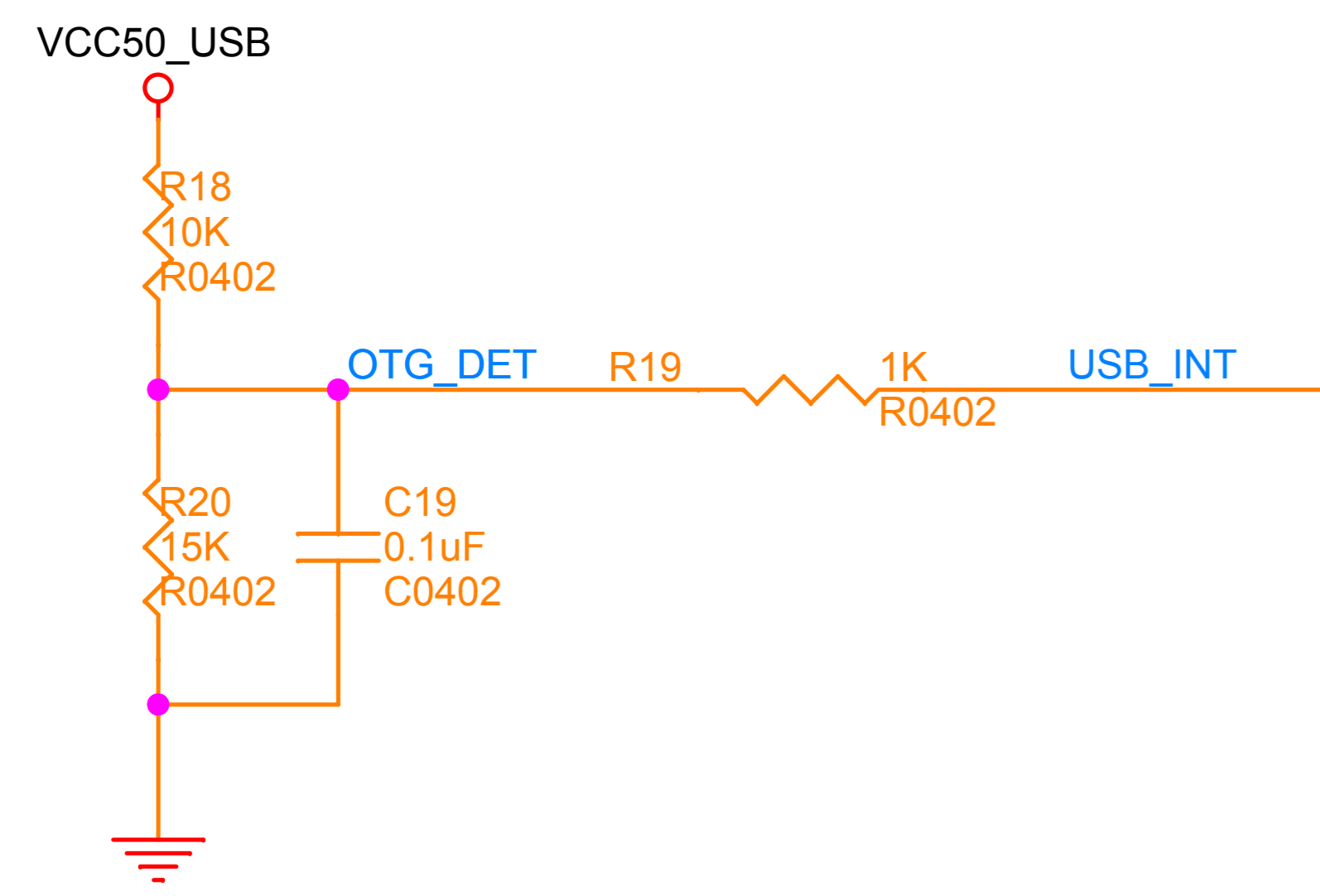


RTC

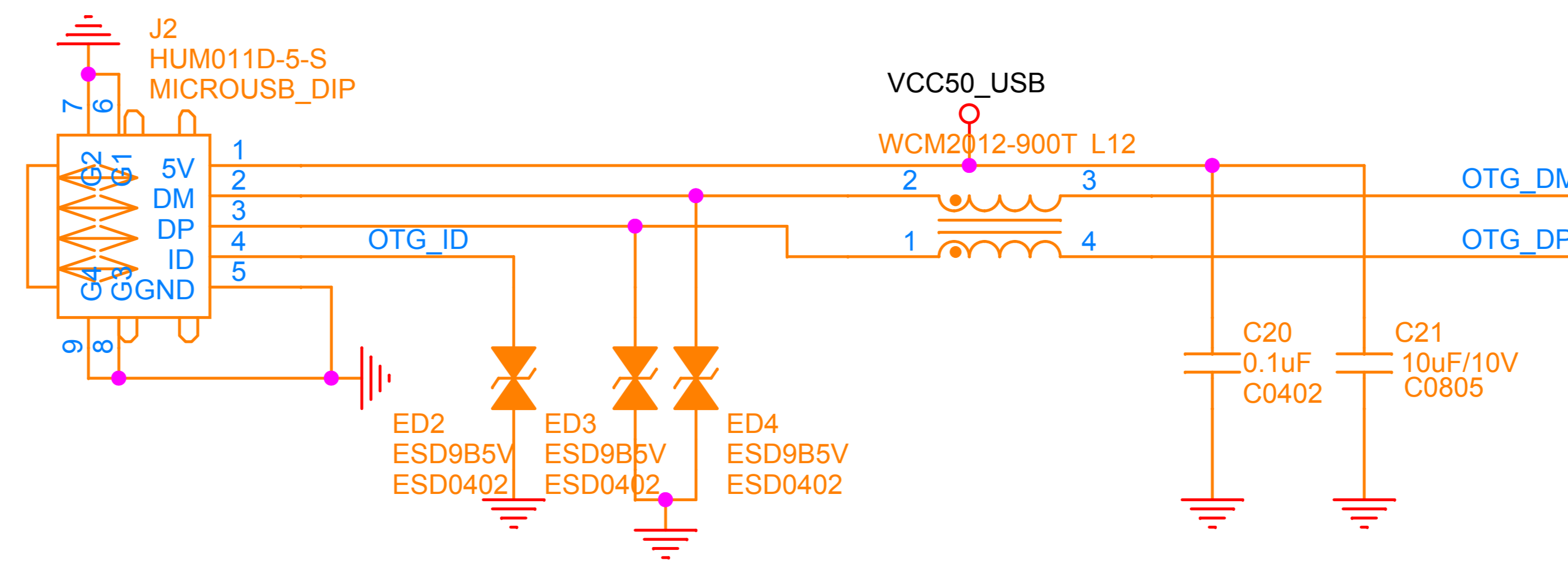


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USB Detection



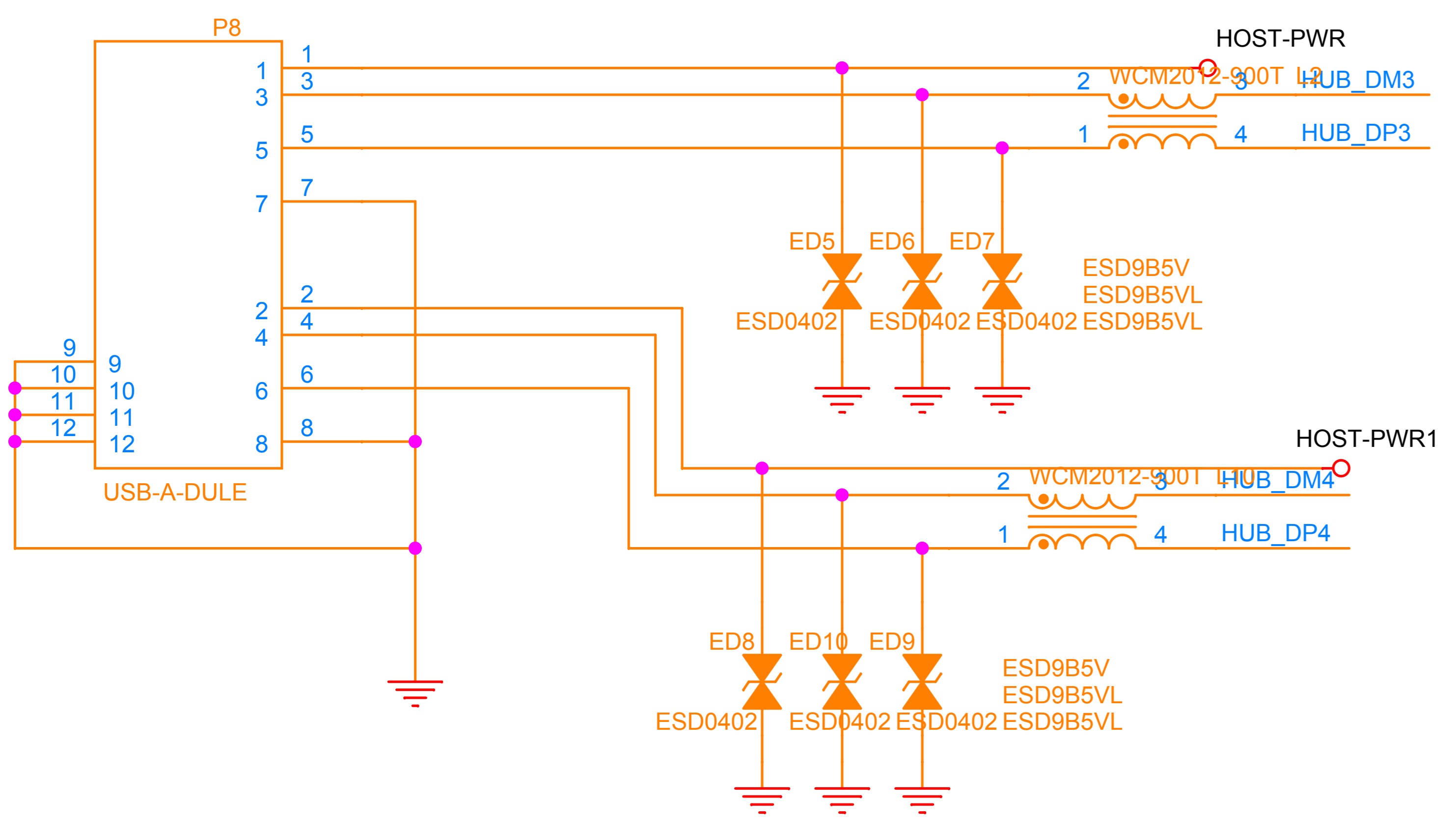
USB OTG



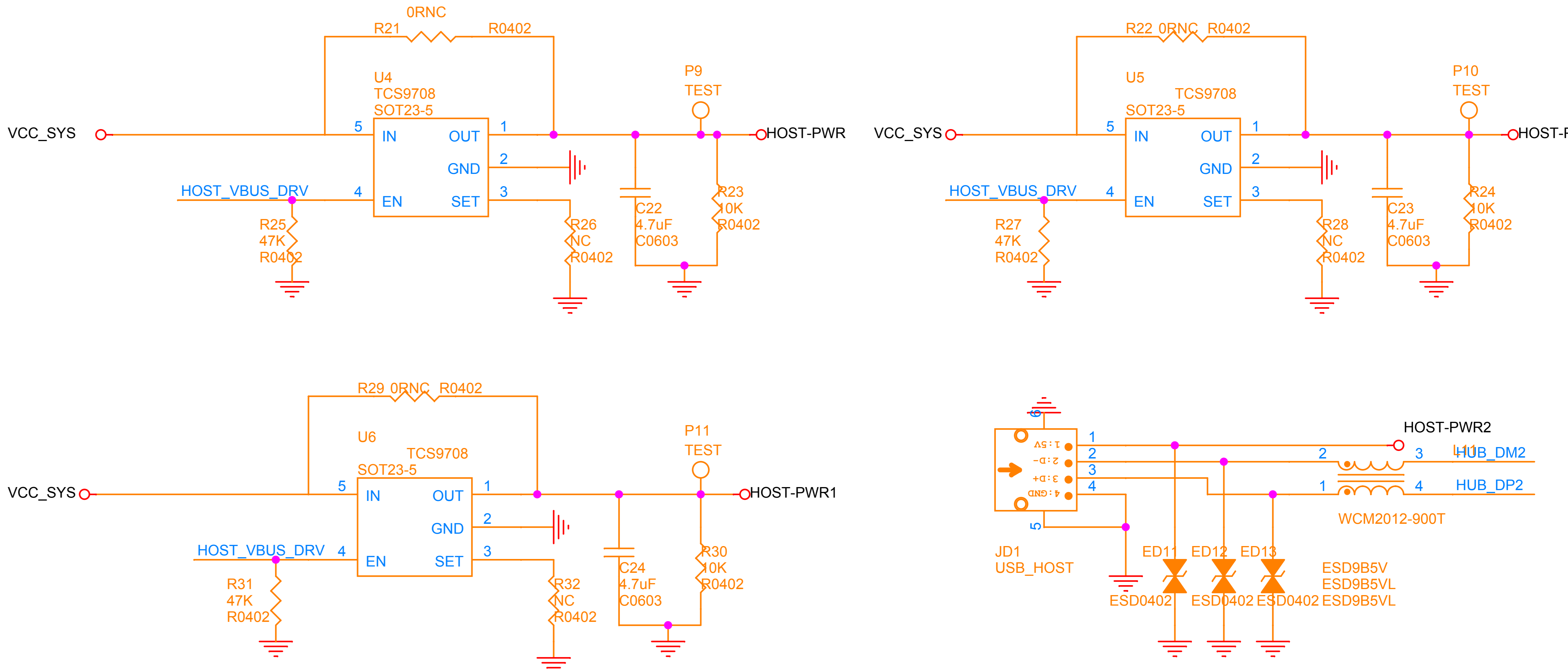
USB

OTG_DM	OTG_DM	16
OTG_DP	OTG_DP	16
OTG_ID	OTG_ID	16
OTG_DET	OTG_DET	16
USB_INT	USB_INT	16
HOST1_DP	HOST1_DP	16
HOST1_DM	HOST1_DM	16
HOST_VBUS_DRV	HOST_VBUS_DRV	16
HUB_DP1	HUB_DP1	16
HUB_DM1	HUB_DM1	16

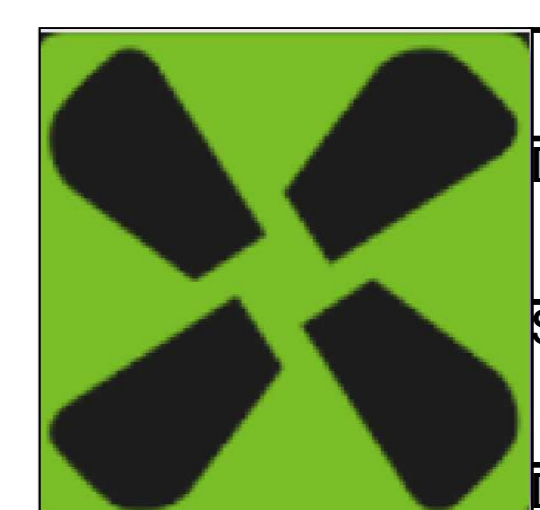
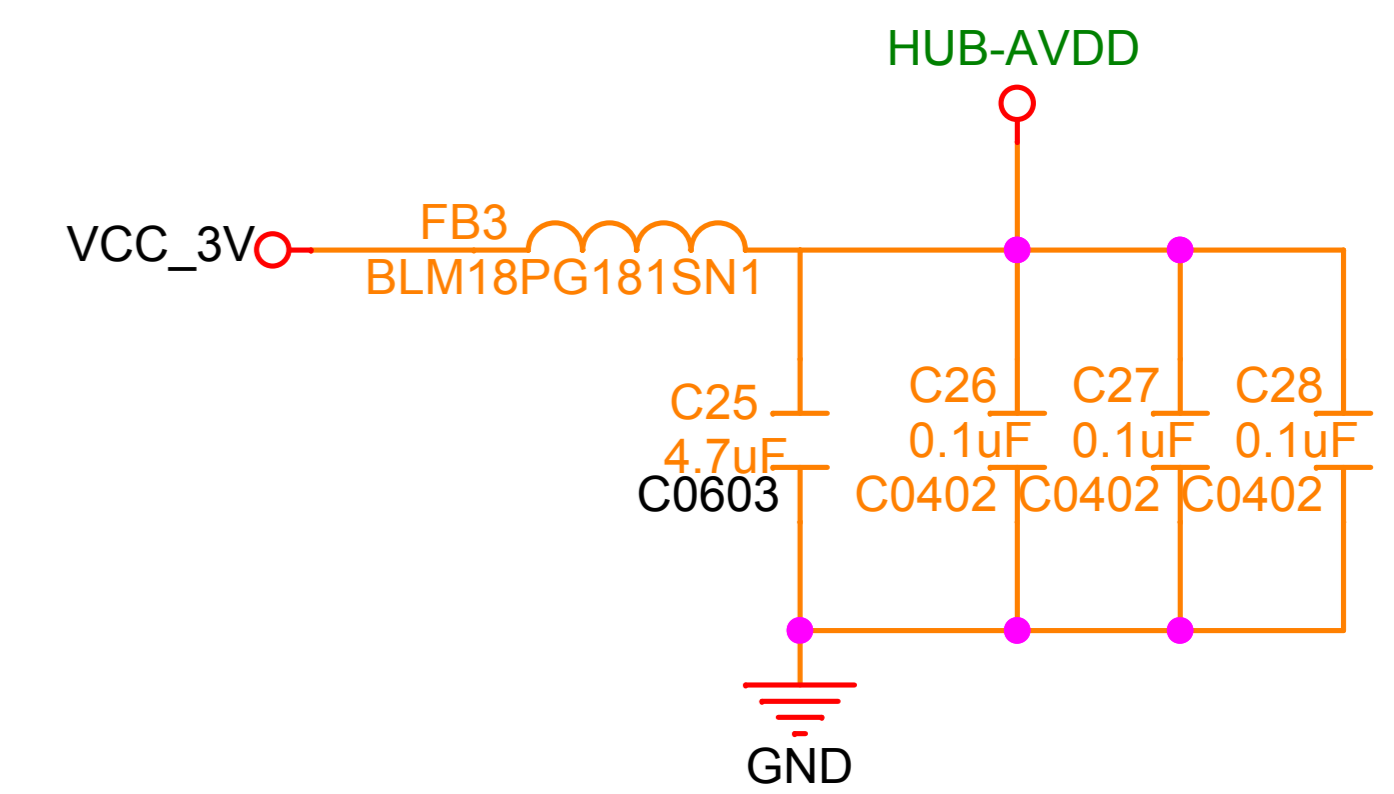
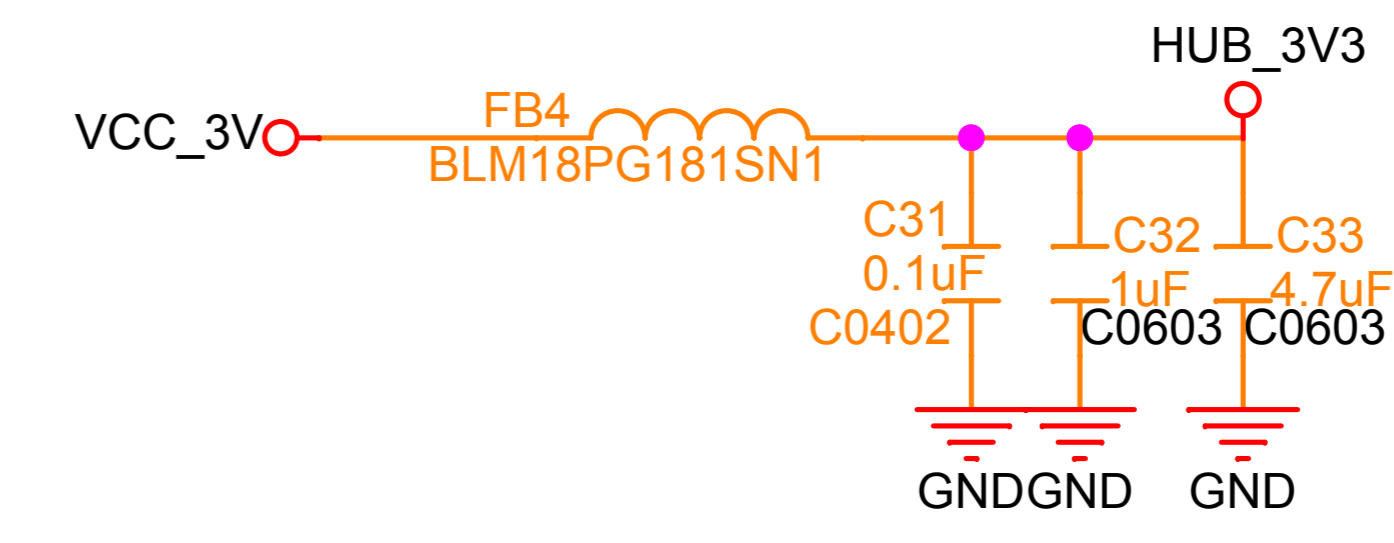
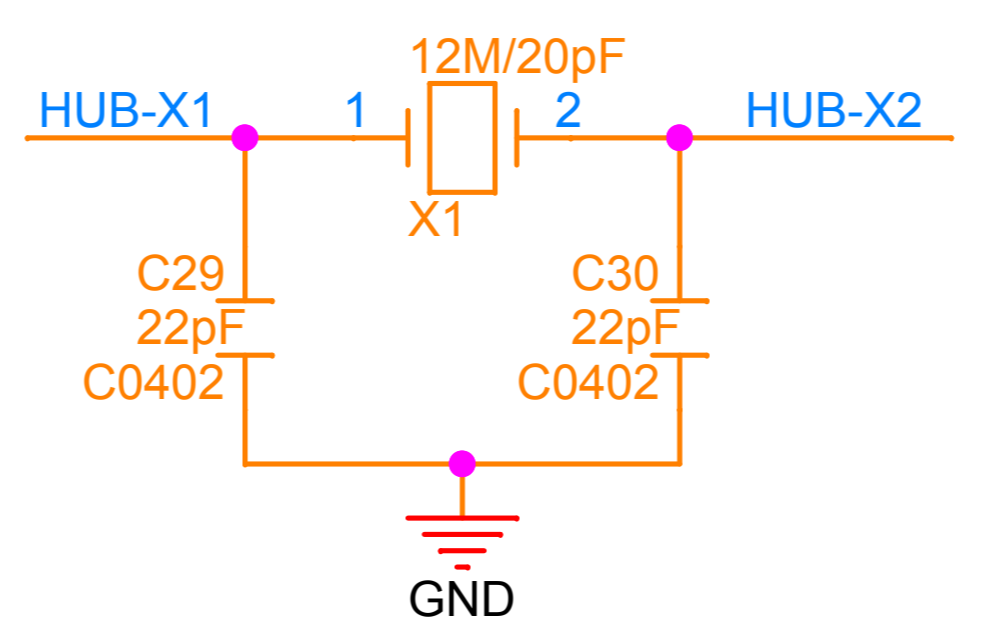
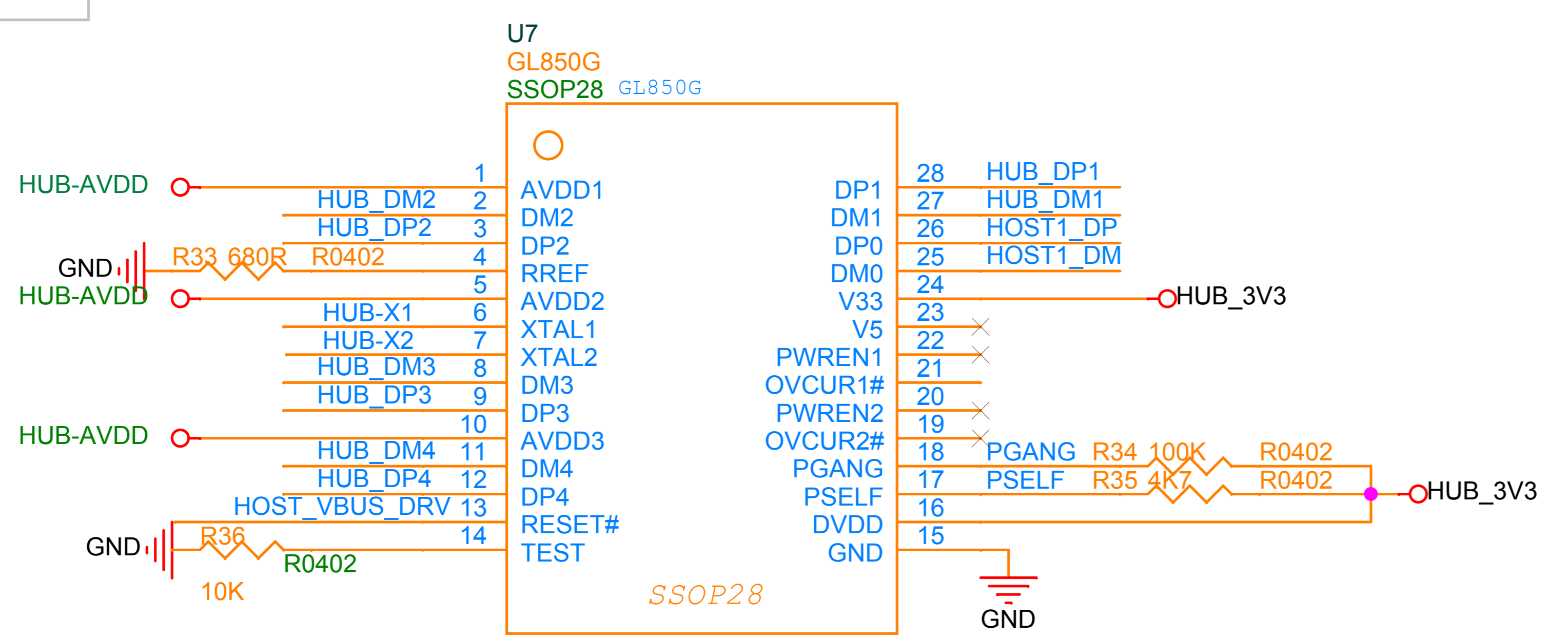
USB HOST



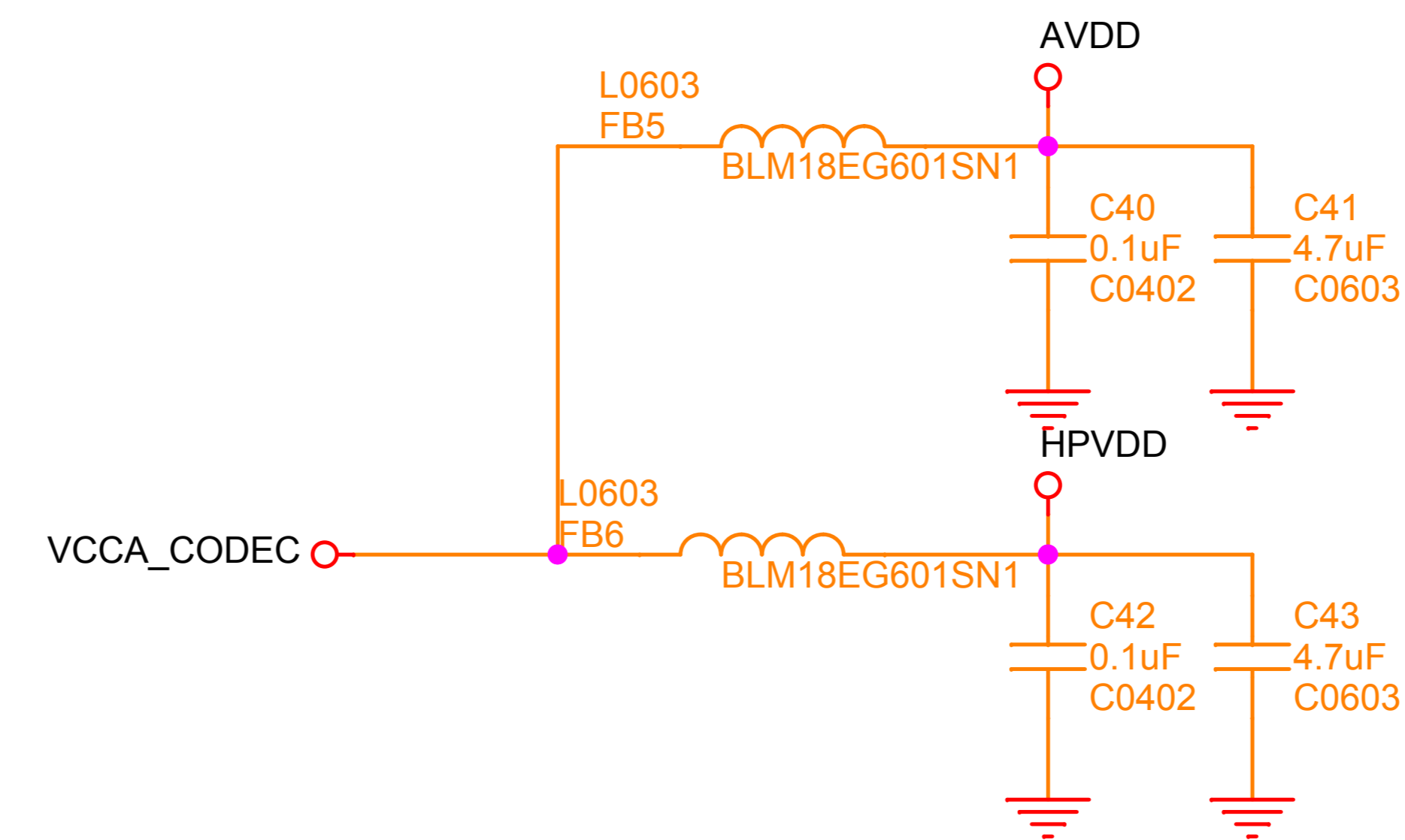
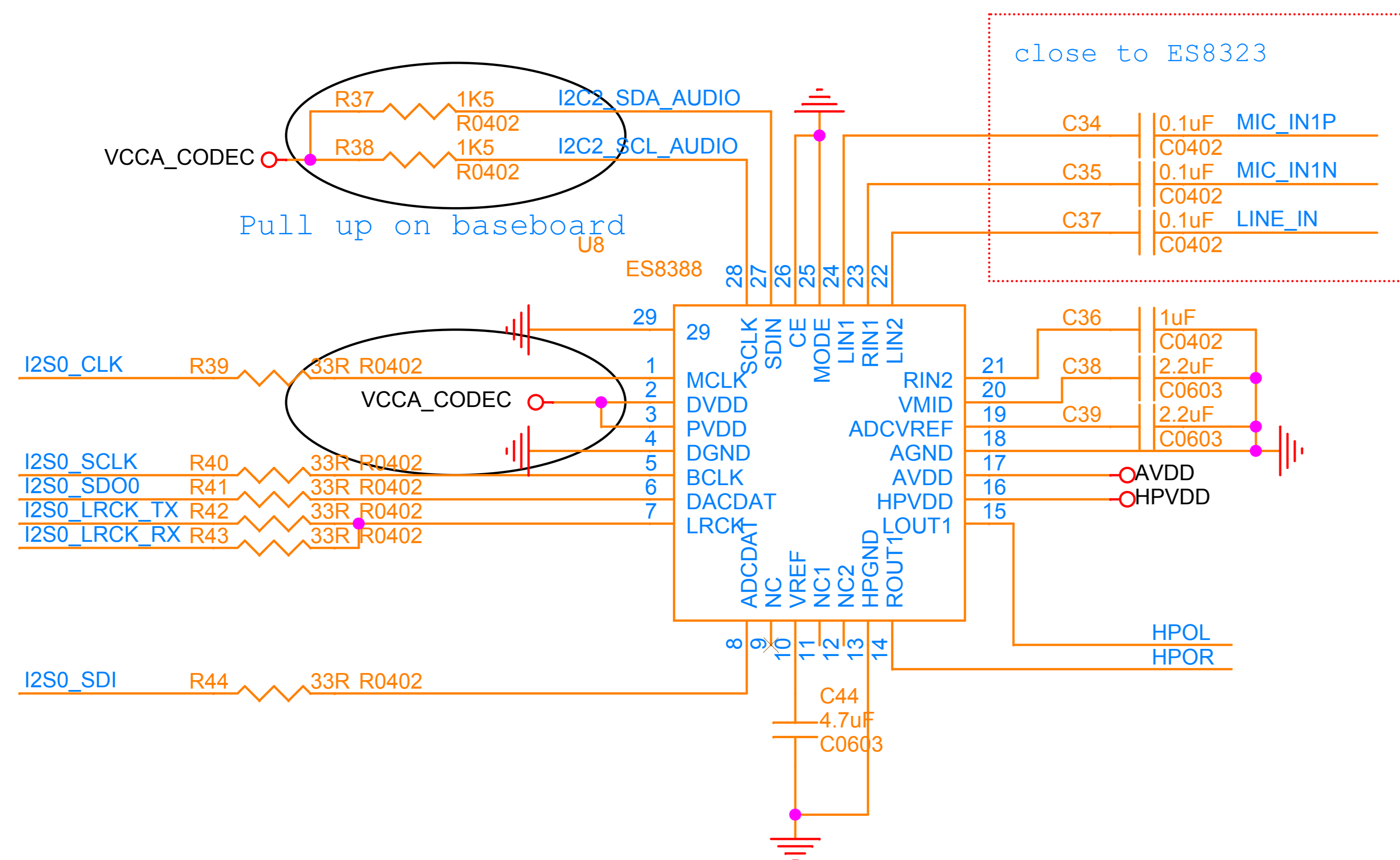
HOST PWR



USB HUB



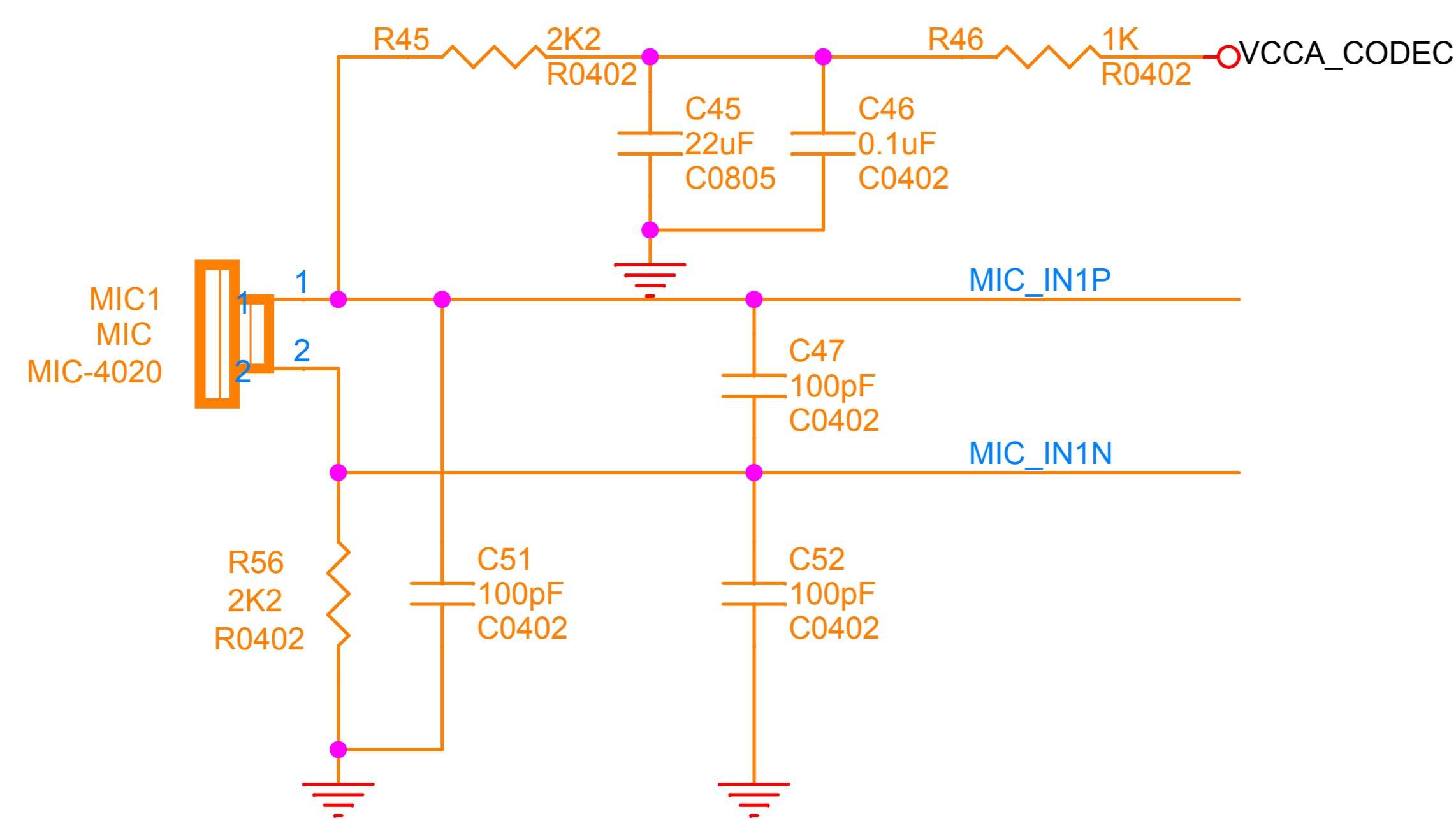
CODEC



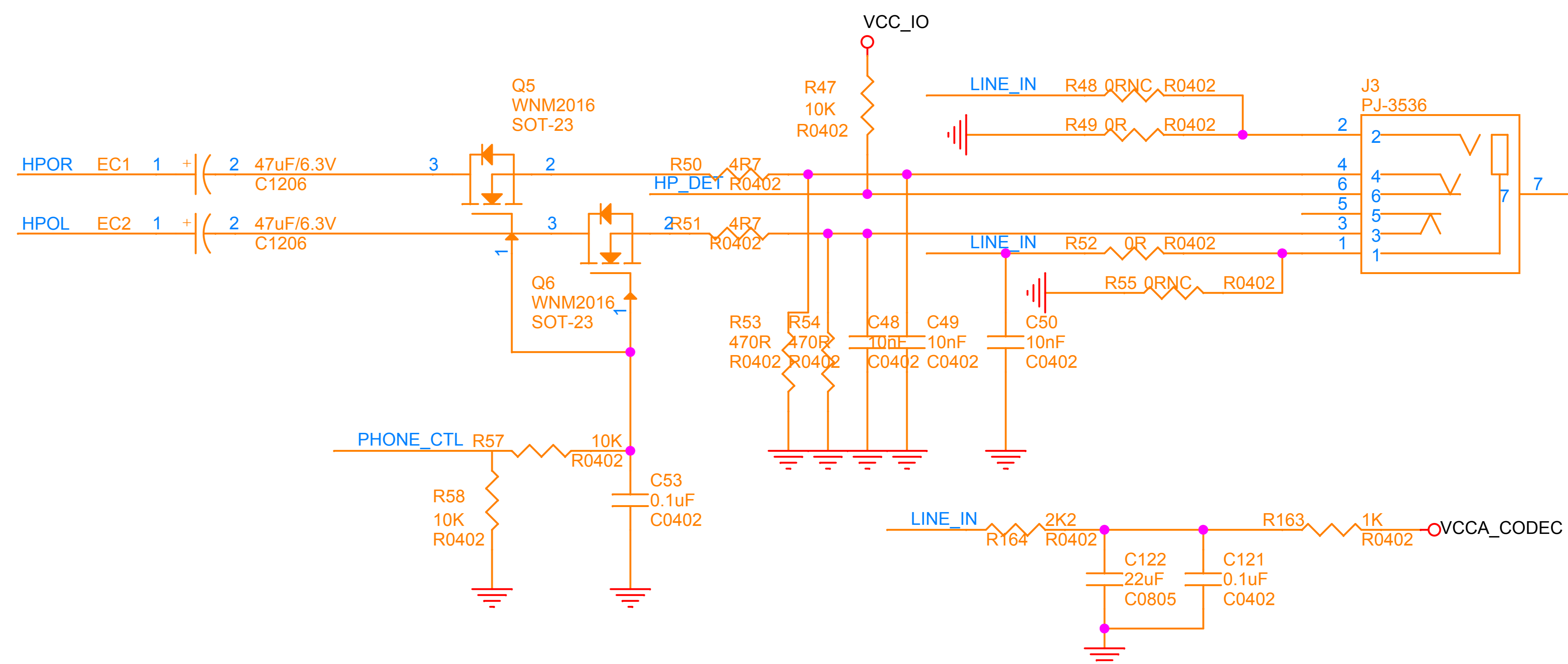
CODEC

I2C2_SDA_AUDIO	I2C2_SDA_AUDIO	16
I2C2_SCL_AUDIO	I2C2_SCL_AUDIO	16
I2S0_CLK	I2S0_CLK	16
I2S0_SCLK	I2S0_SCLK	16
I2S0_SDO0	I2S0_SDO0	16
I2S0_LRCK_TX	I2S0_LRCK_TX	16
I2S0_LRCK_RX	I2S0_LRCK_RX	16
I2S0_SDI	I2S0_SDI	16
HP_DET	HP_DET	16
PHONE_CTL	PHONE_CTL	16

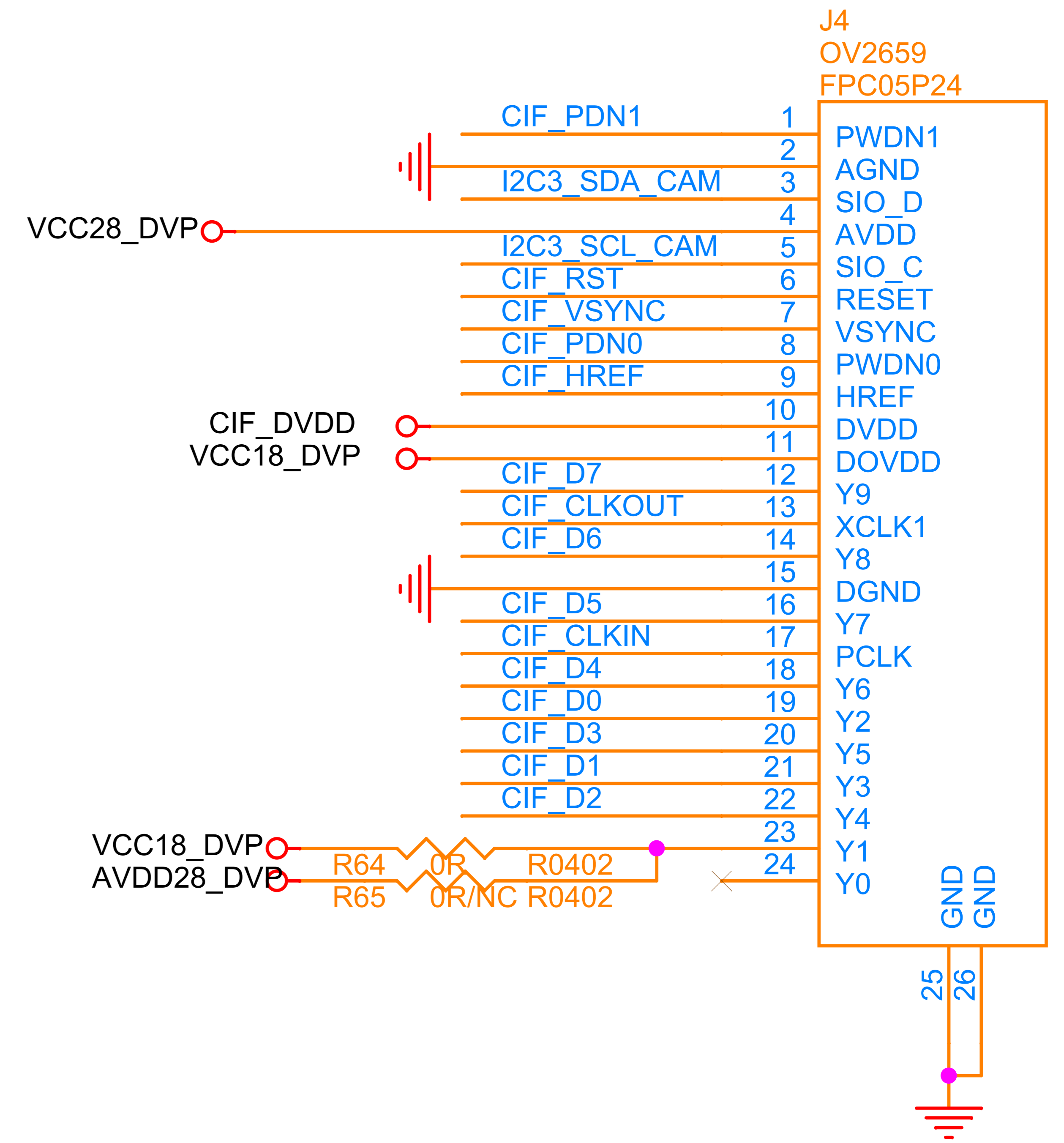
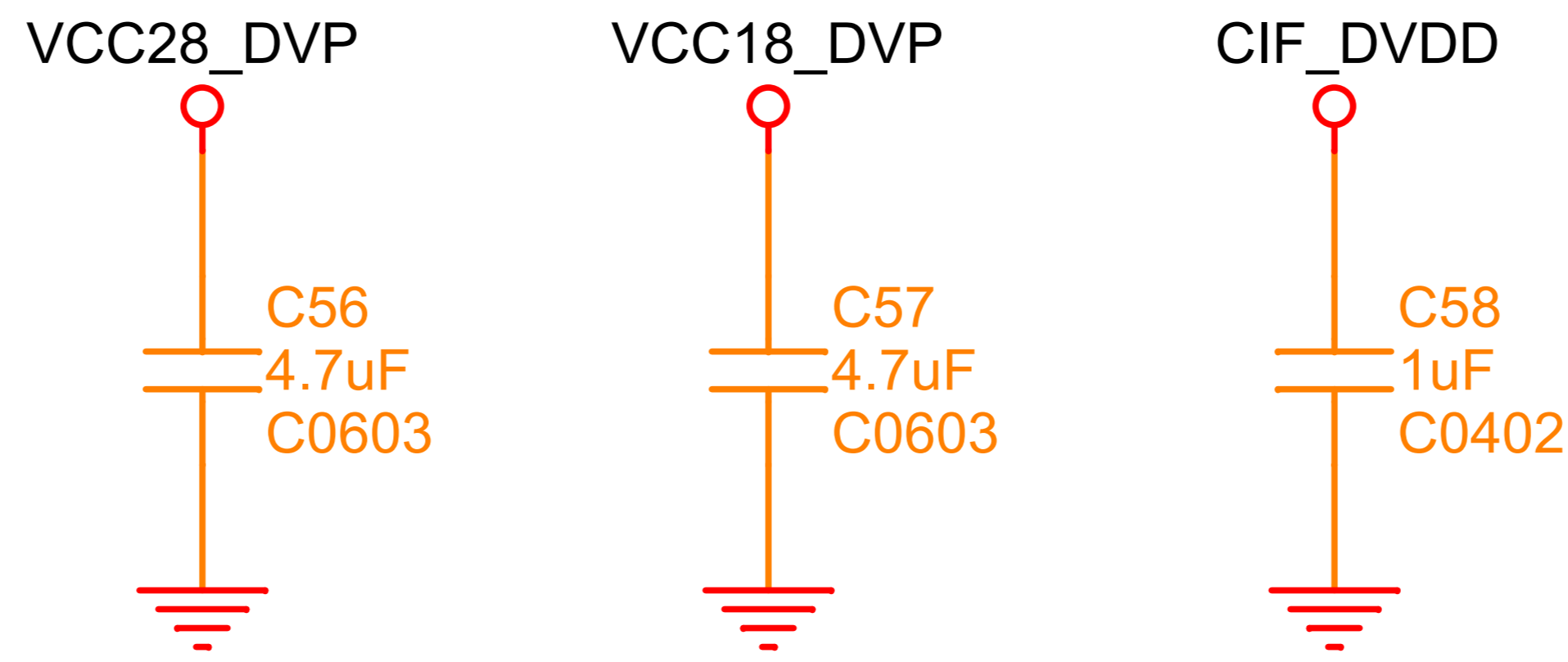
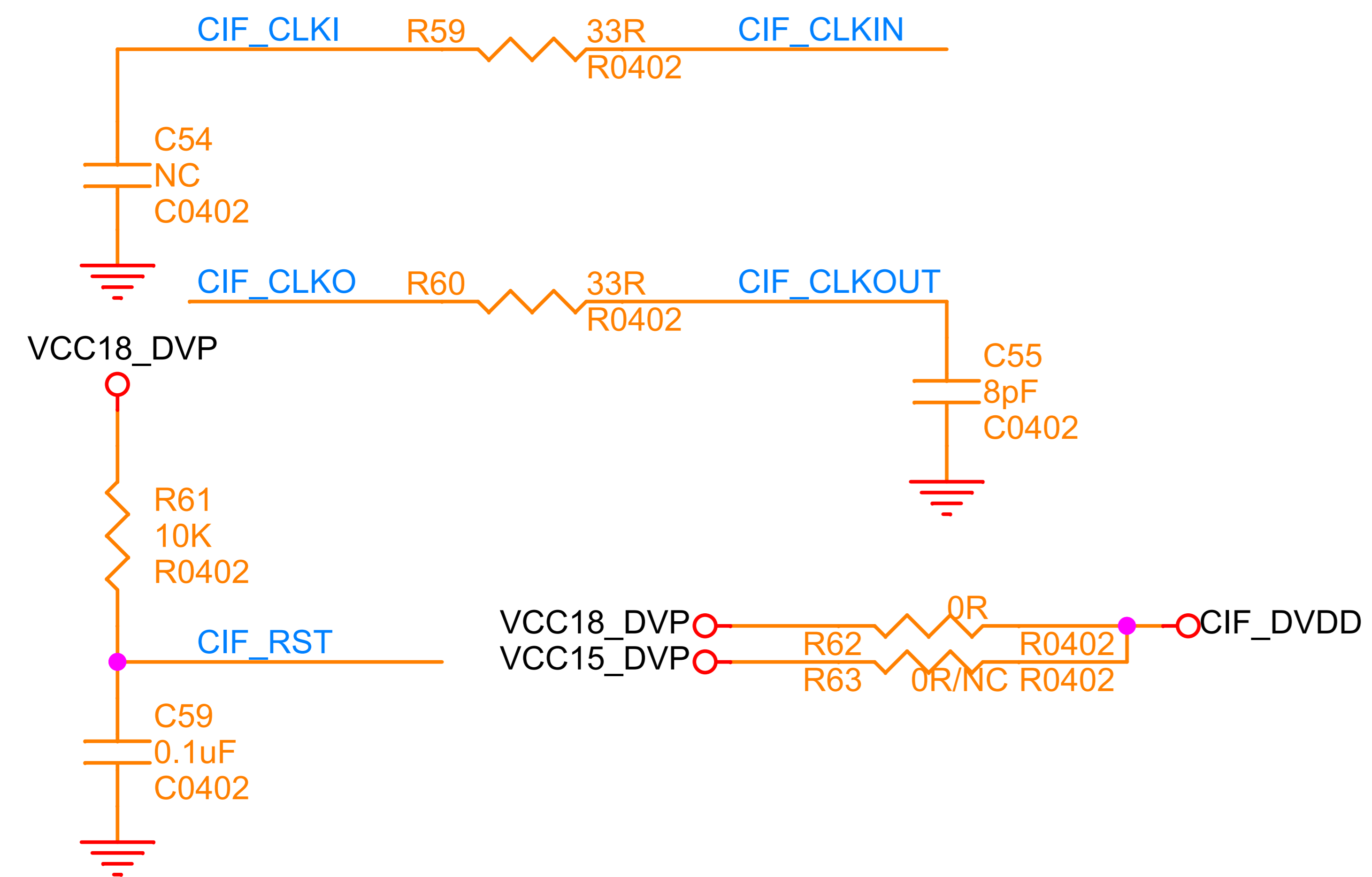
MIC



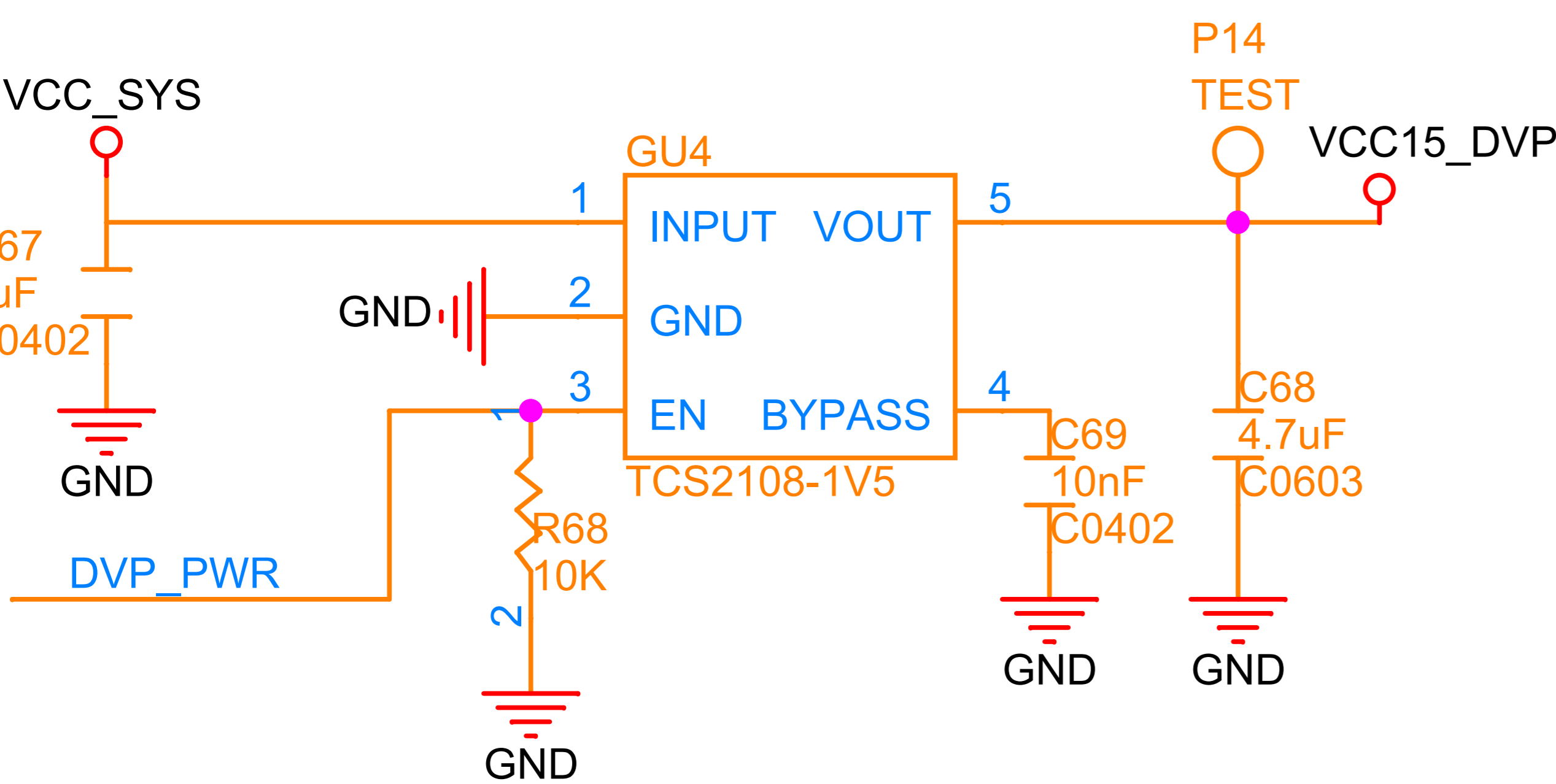
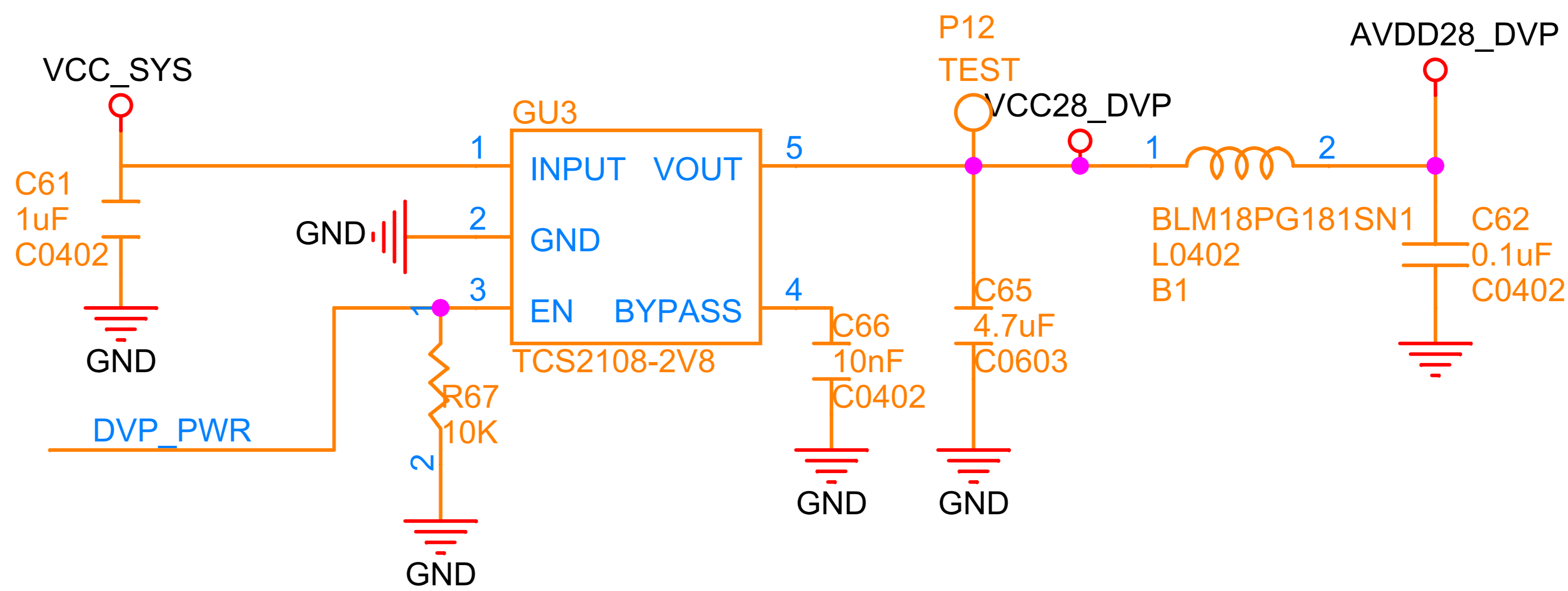
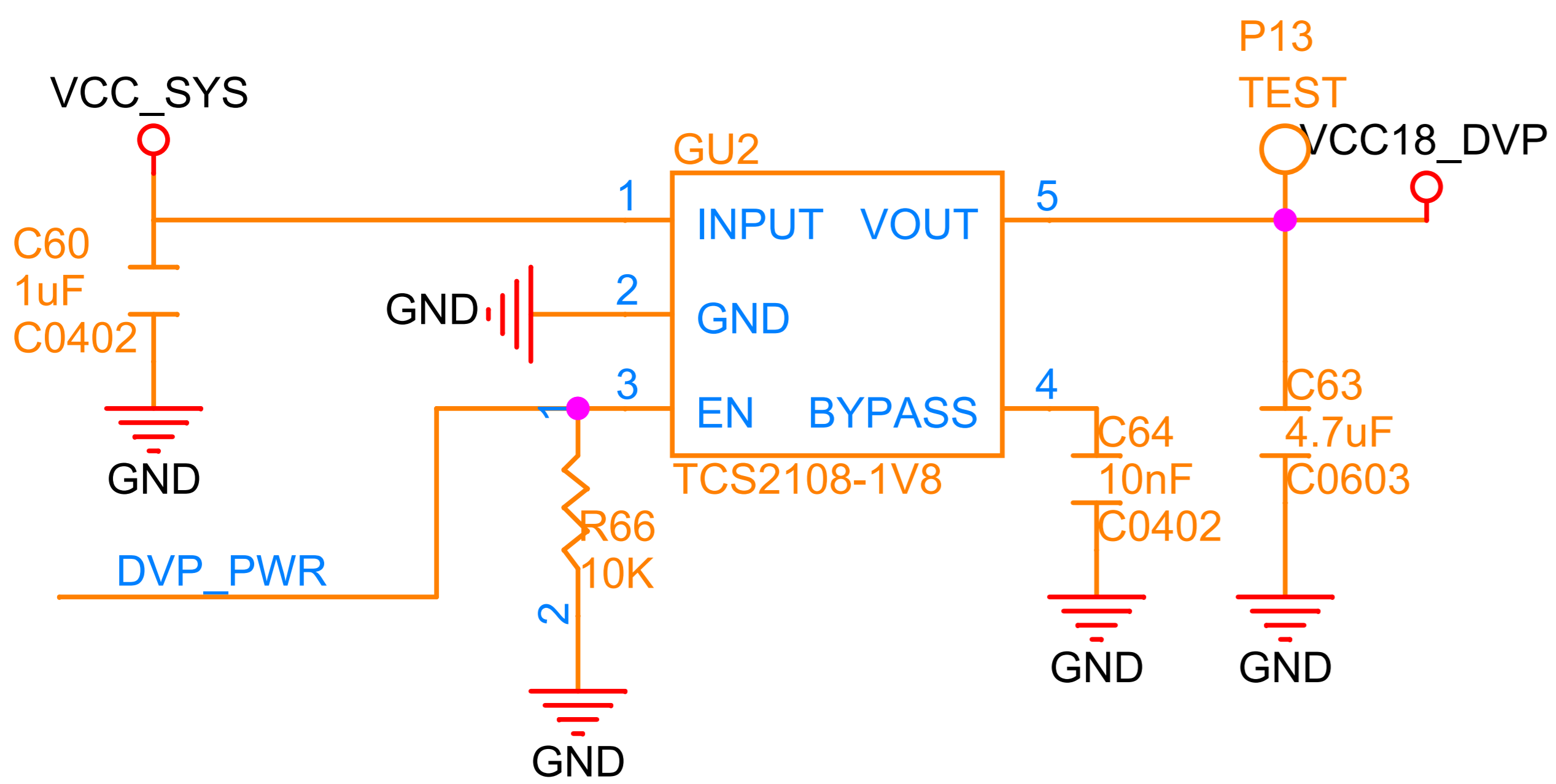
EARPHONE



CIF Camera

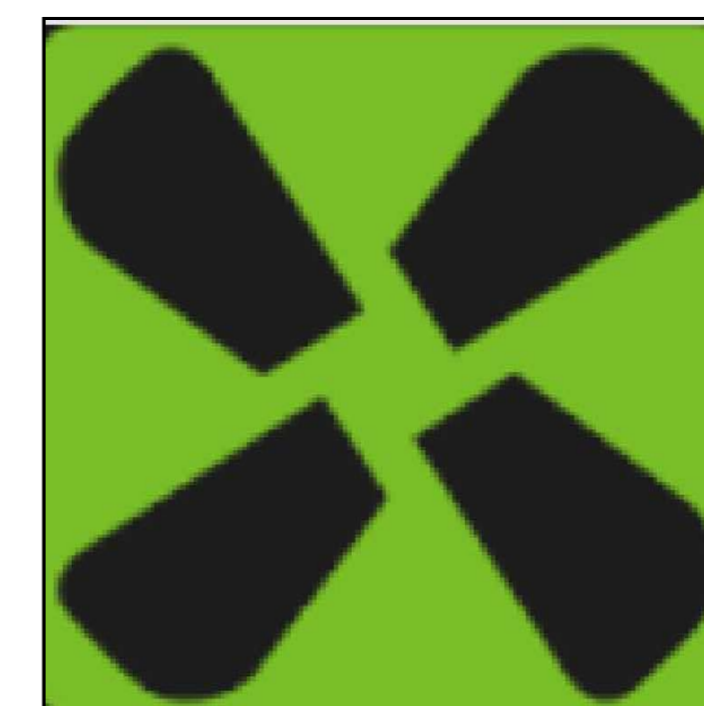


CIF PWR



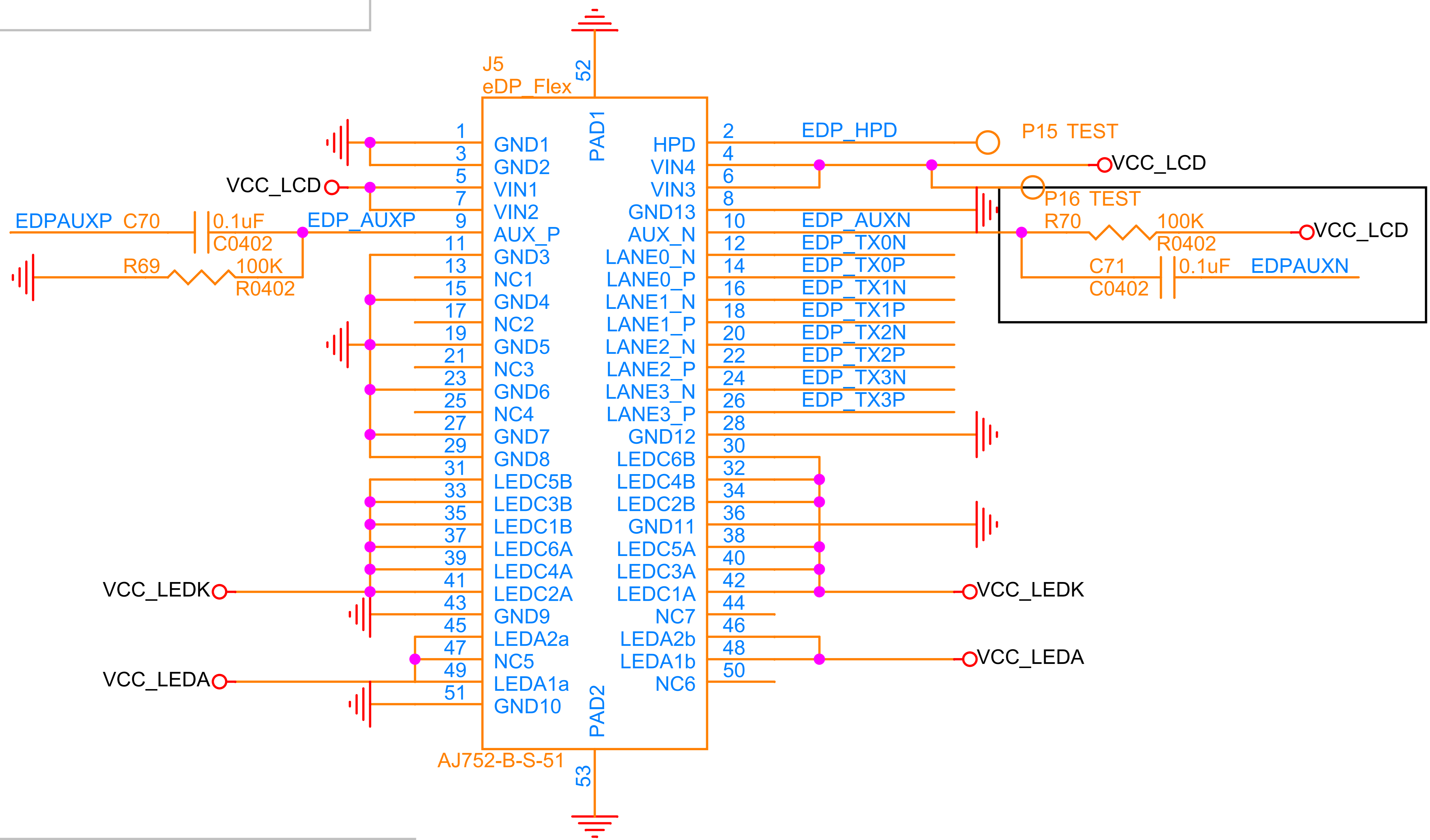
CIF Camera

CIF_D0	CIF_D0	16
CIF_D1	CIF_D1	16
CIF_D2	CIF_D2	16
CIF_D3	CIF_D3	16
CIF_D4	CIF_D4	16
CIF_D5	CIF_D5	16
CIF_D6	CIF_D6	16
CIF_D7	CIF_D7	16
CIF_HREF	CIF_HREF	16
CIF_VSYNC	CIF_VSYNC	16
CIF_CLKI	CIF_CLKI	16
CIF_CLKO	CIF_CLKO	16
I2C3_SCL_CAM	I2C3_SCL_CAM	16
I2C3_SDA_CAM	I2C3_SDA_CAM	16
CIF_PDN0	CIF_PDN0	16
CIF_PDN1	CIF_PDN1	16
DVP_PWR	DVP_PWR	16



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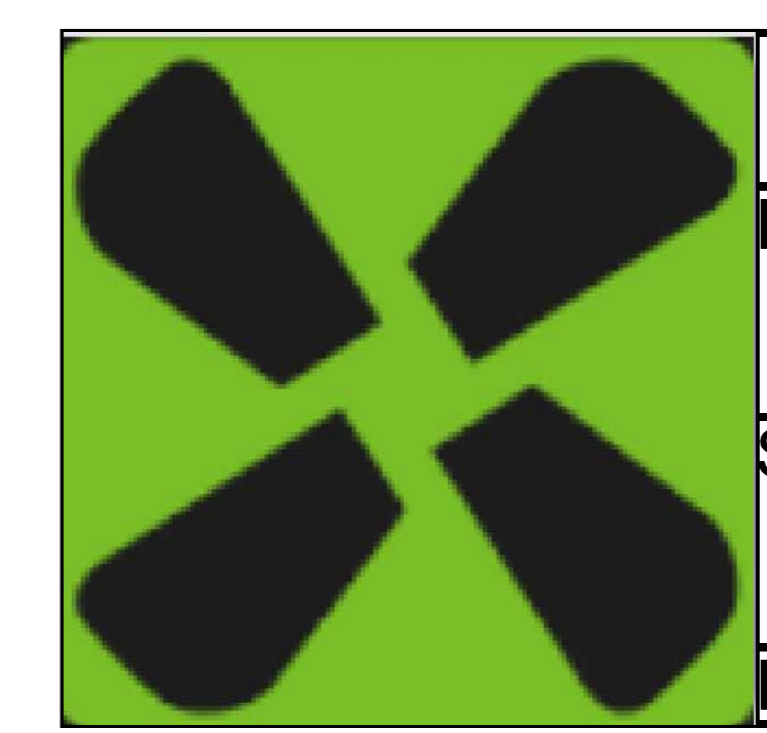
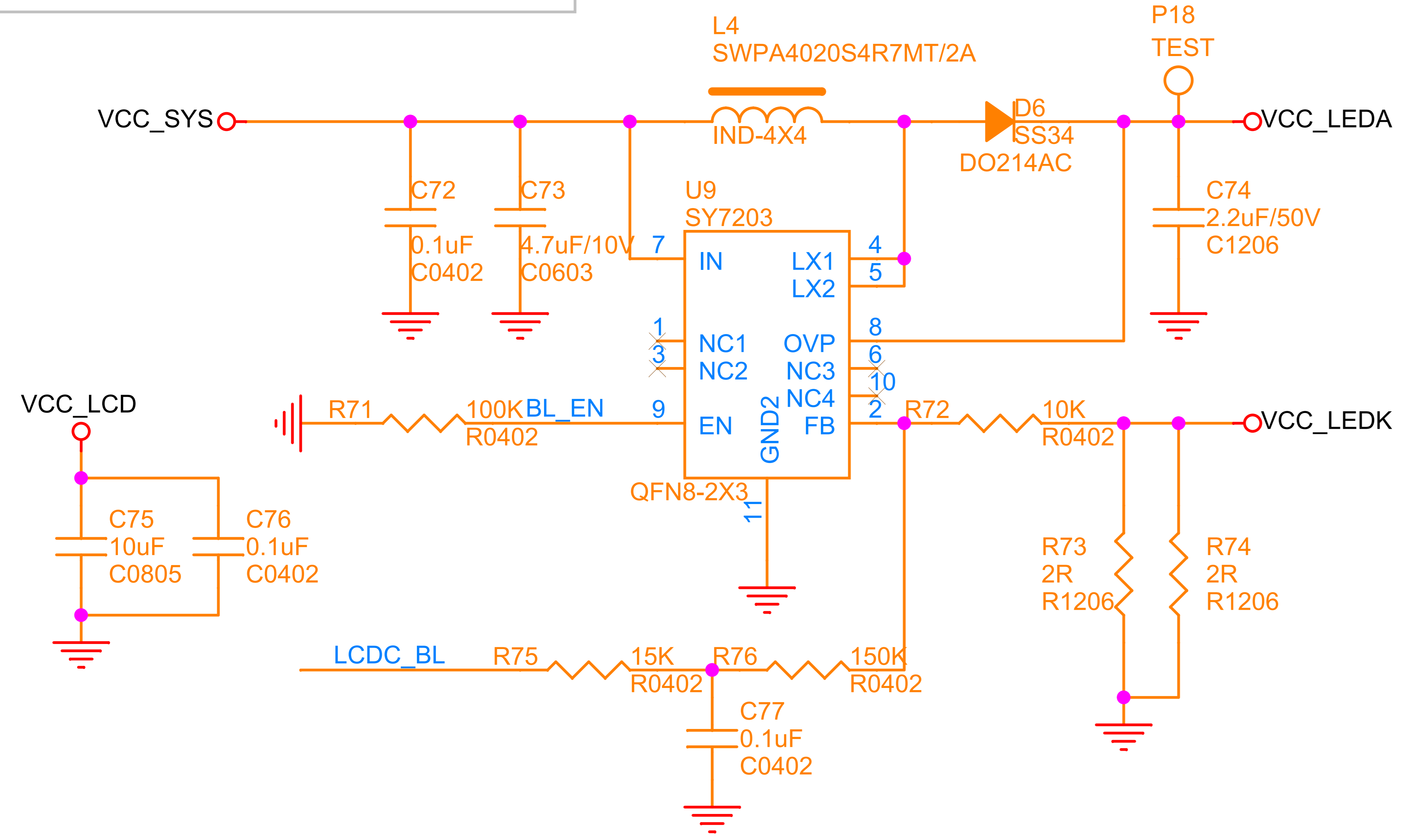
eDP Panel



EDP

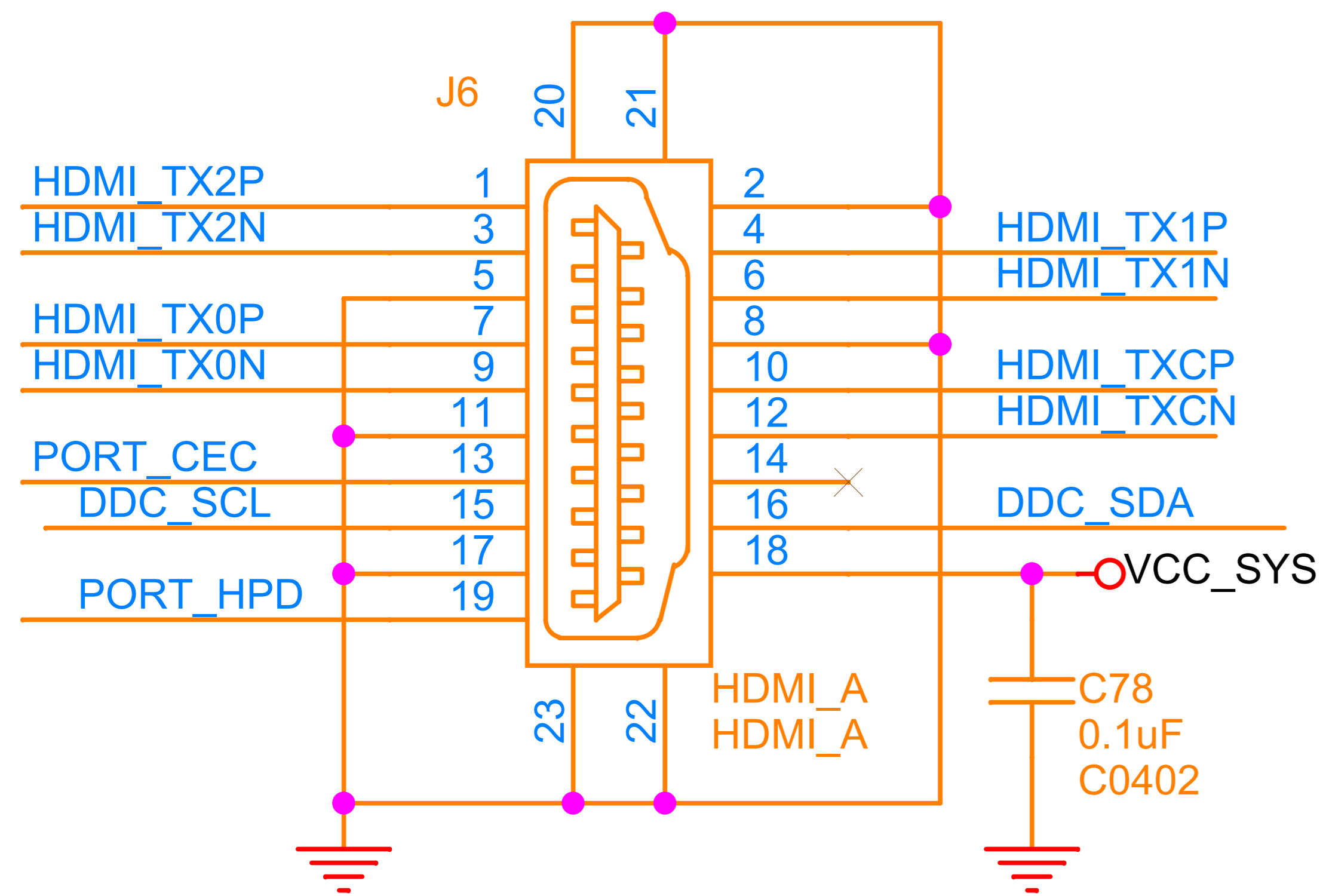
EDP_TX0N	EDP_TX0N	16
EDP_TX0P	EDP_TX0P	16
EDP_TX1N	EDP_TX1N	16
EDP_TX1P	EDP_TX1P	16
EDP_TX2N	EDP_TX2N	16
EDP_TX2P	EDP_TX2P	16
EDP_TX3N	EDP_TX3N	16
EDP_TX3P	EDP_TX3P	16
EDPAUXP	EDPAUXP	16
EDPAUXN	EDPAUXN	16
BL_EN	BL_EN	16
LCDC_BL	LCDC_BL	16

BACKLIGHT

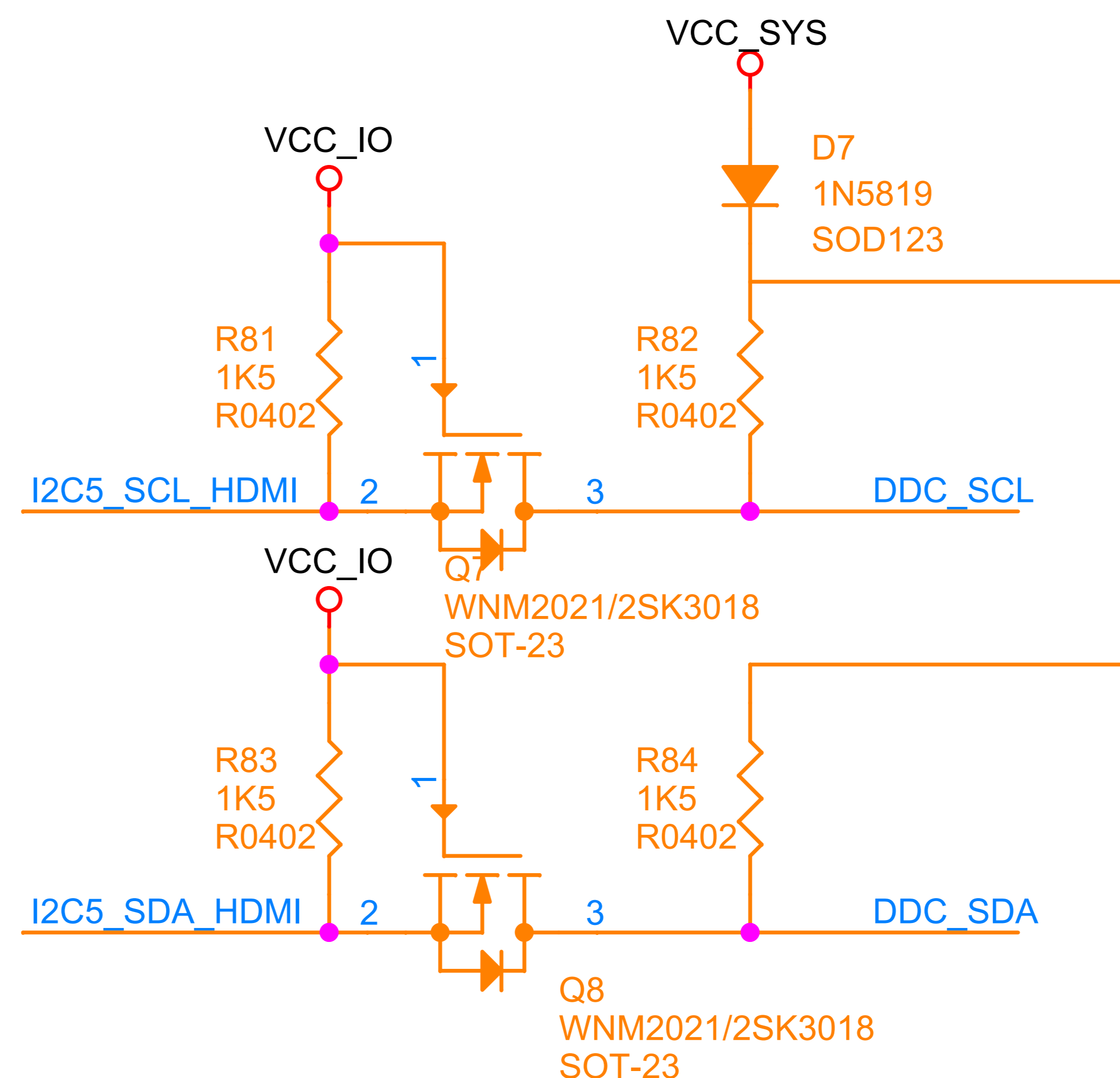
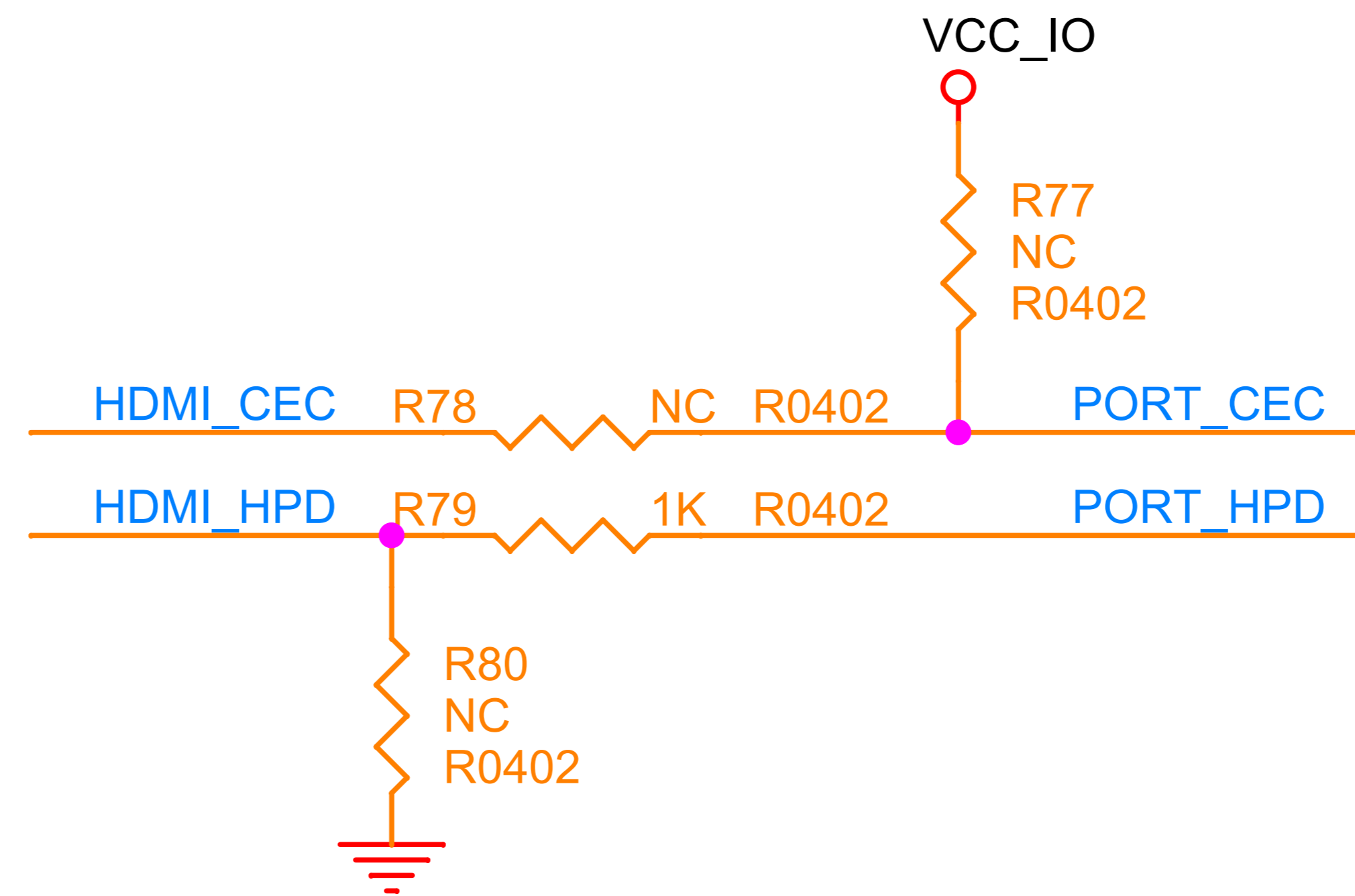


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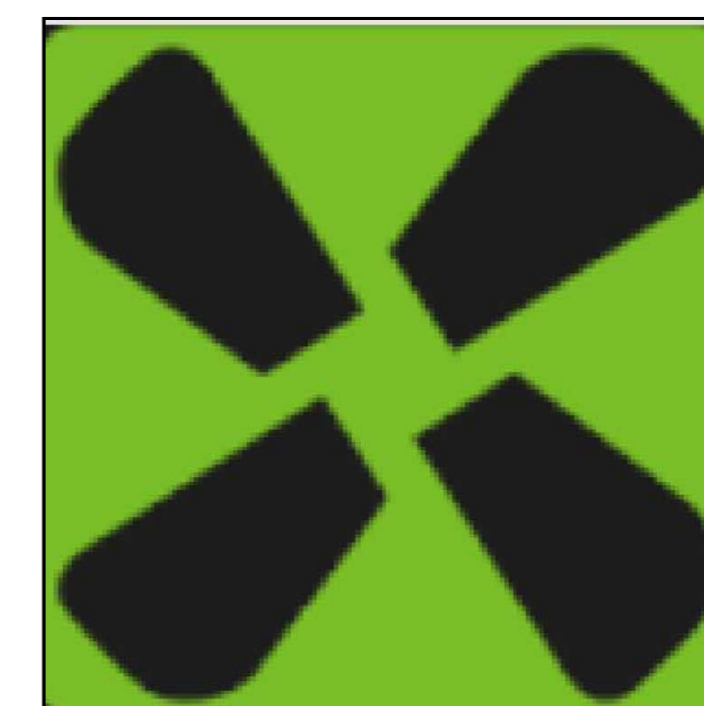
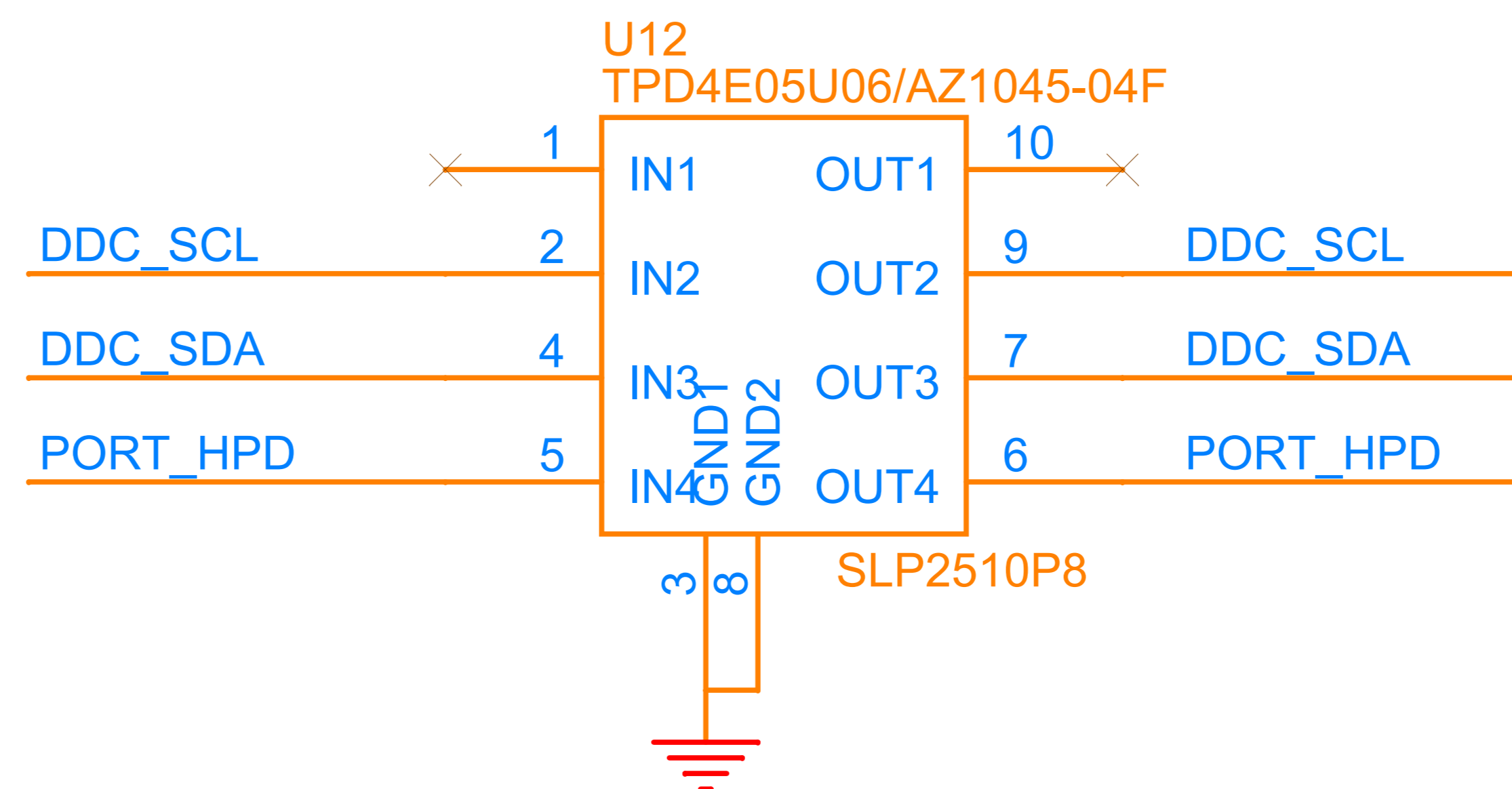
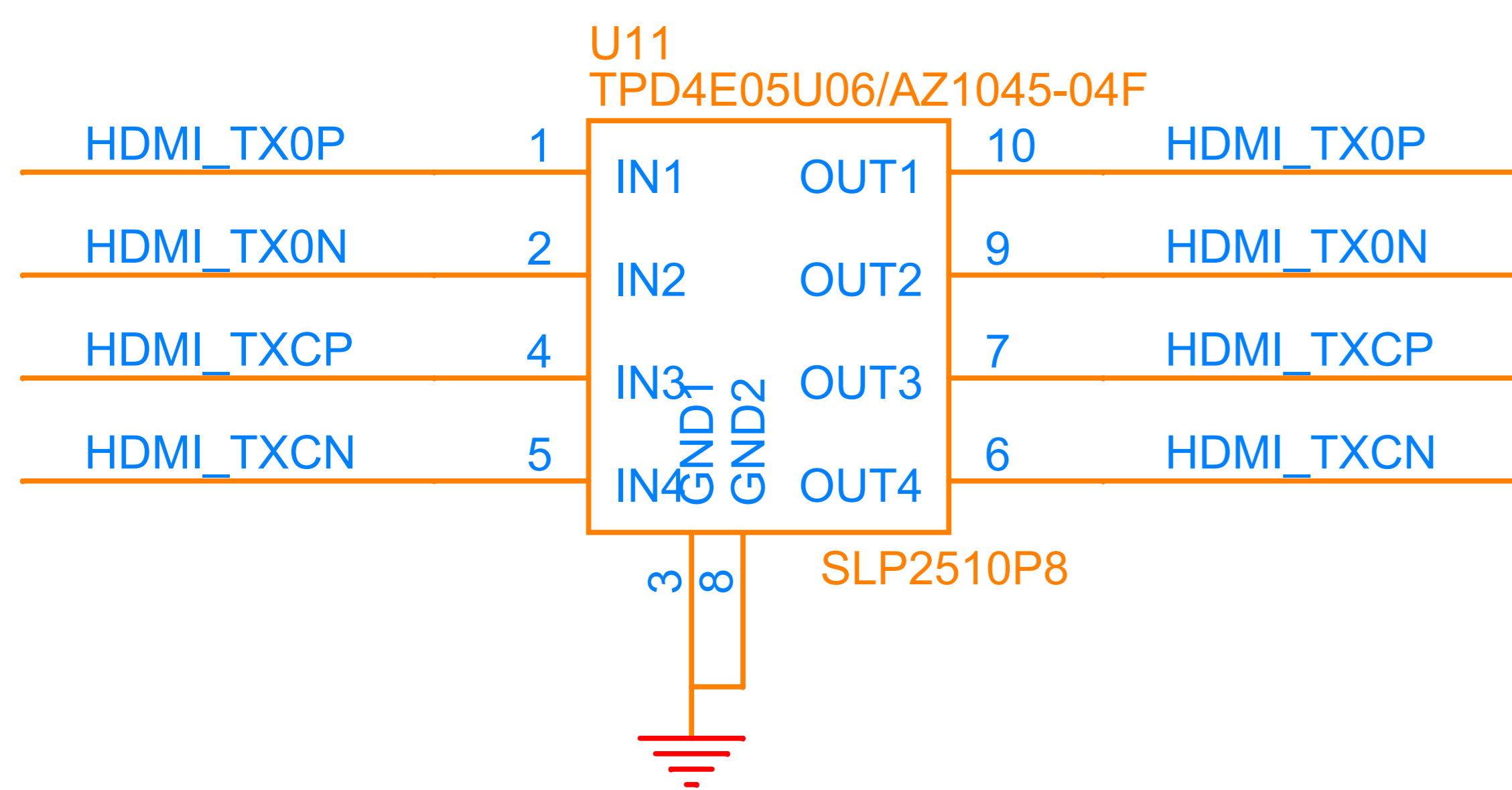
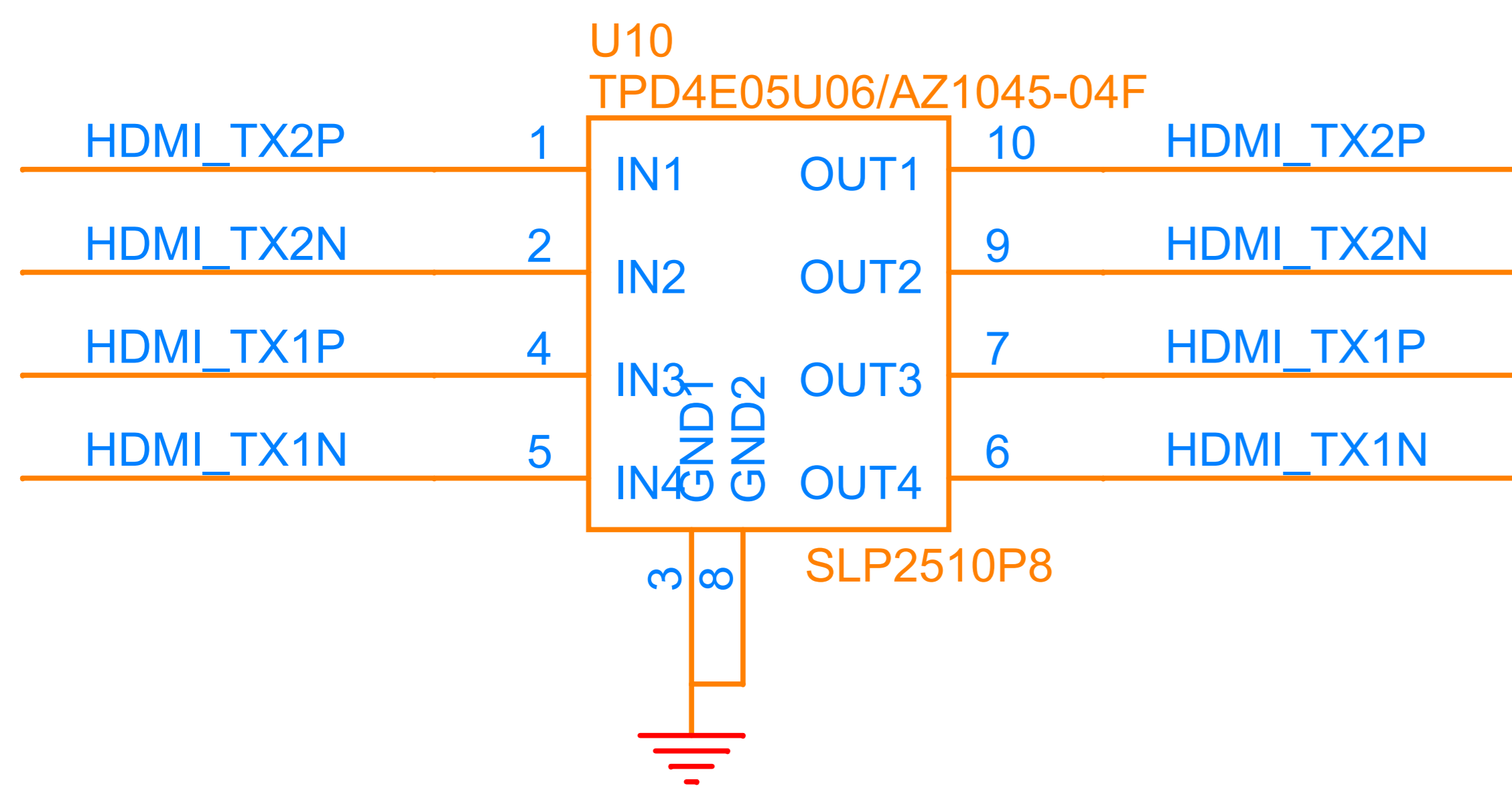
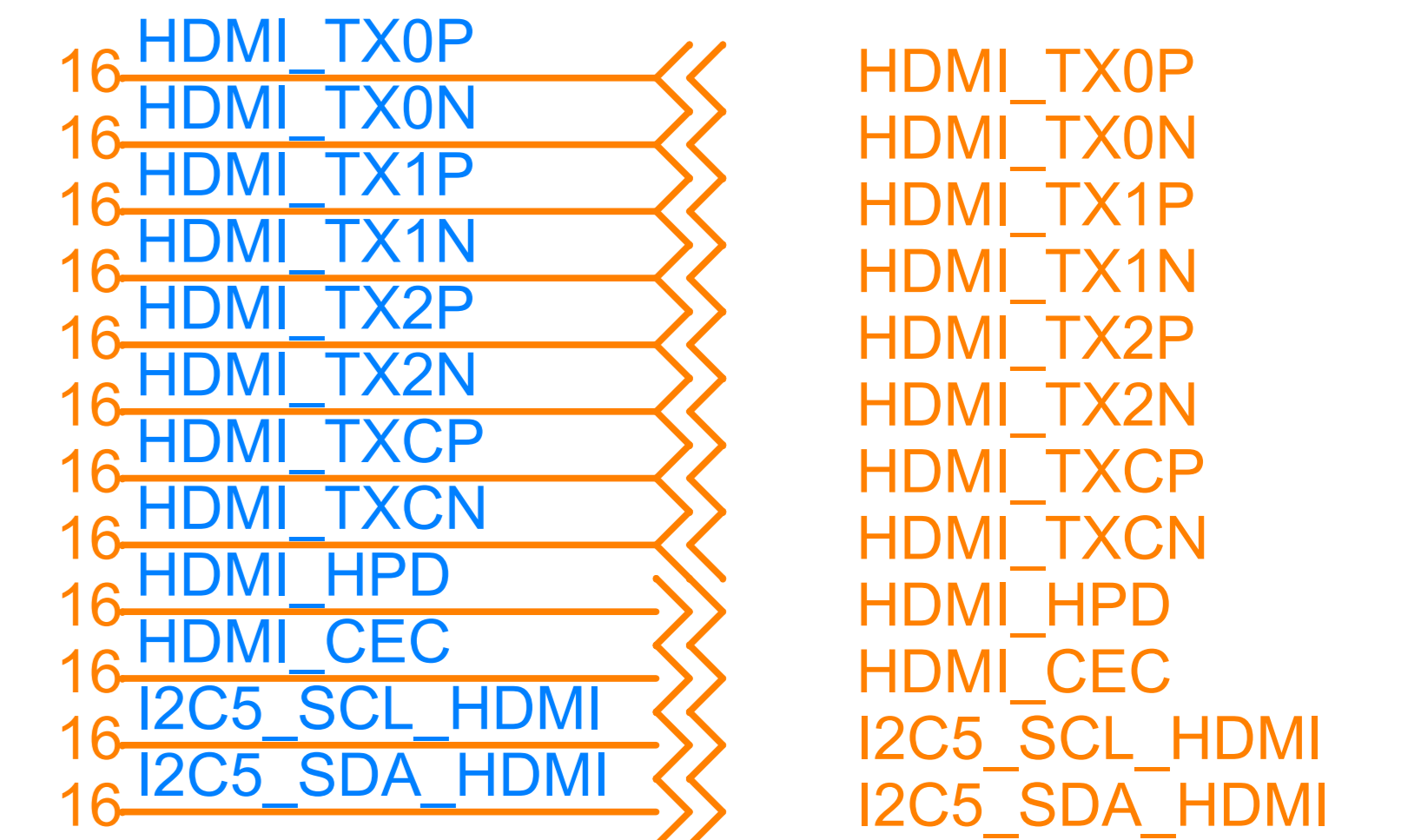
HDMI



HDMI OUT



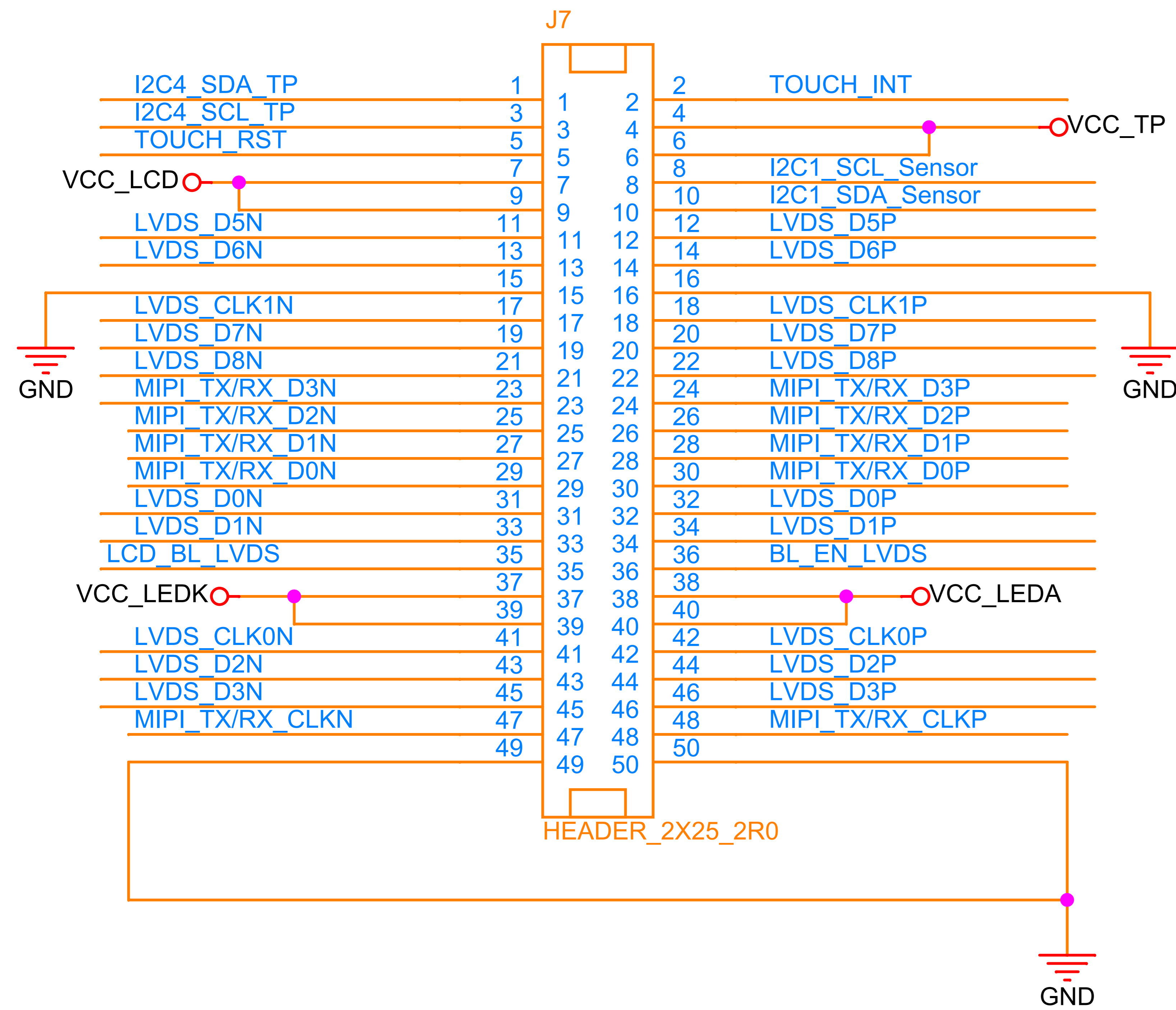
HDMI



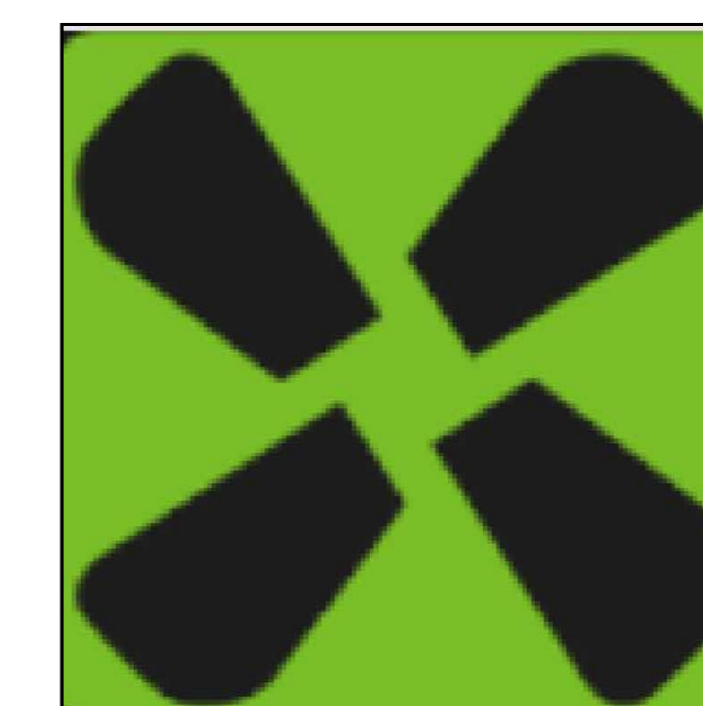
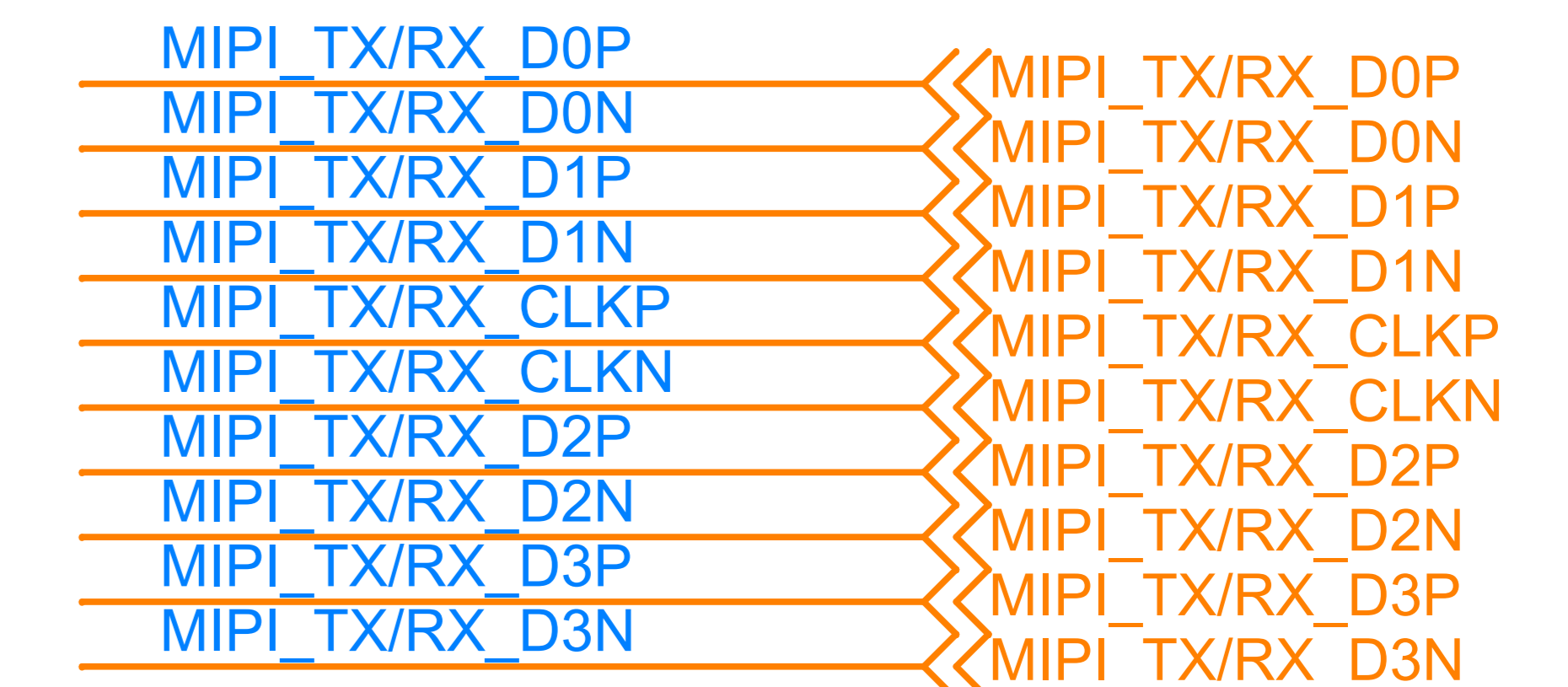
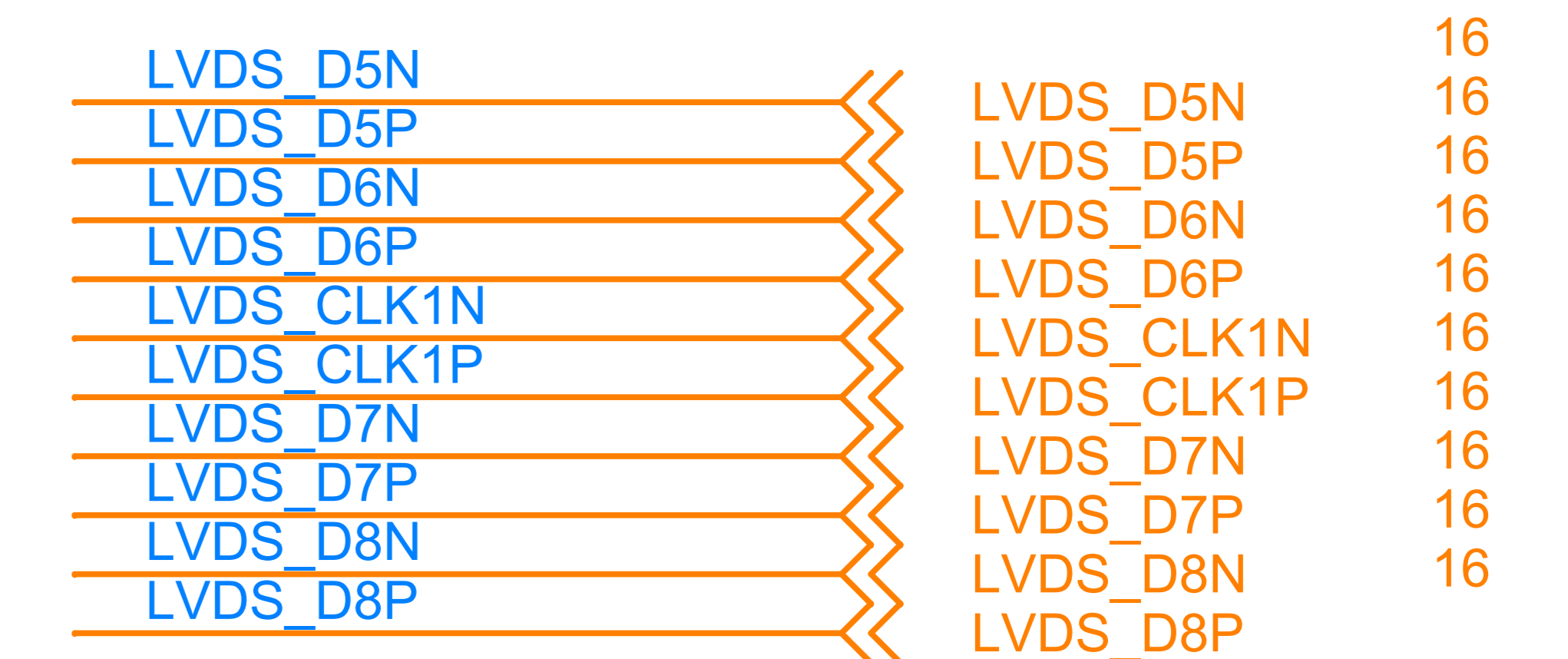
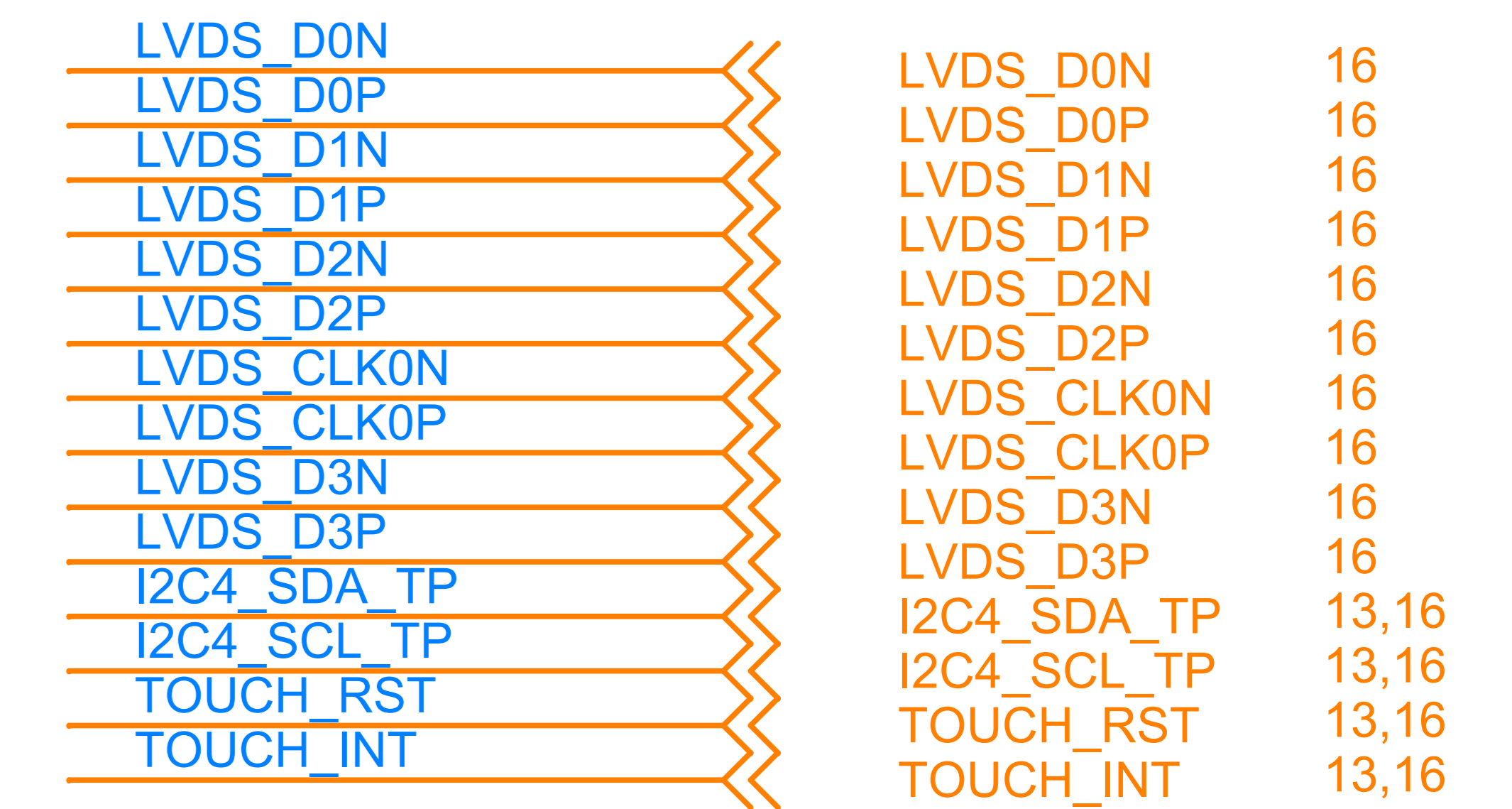
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LVDS Panel



LVDS&MIPI

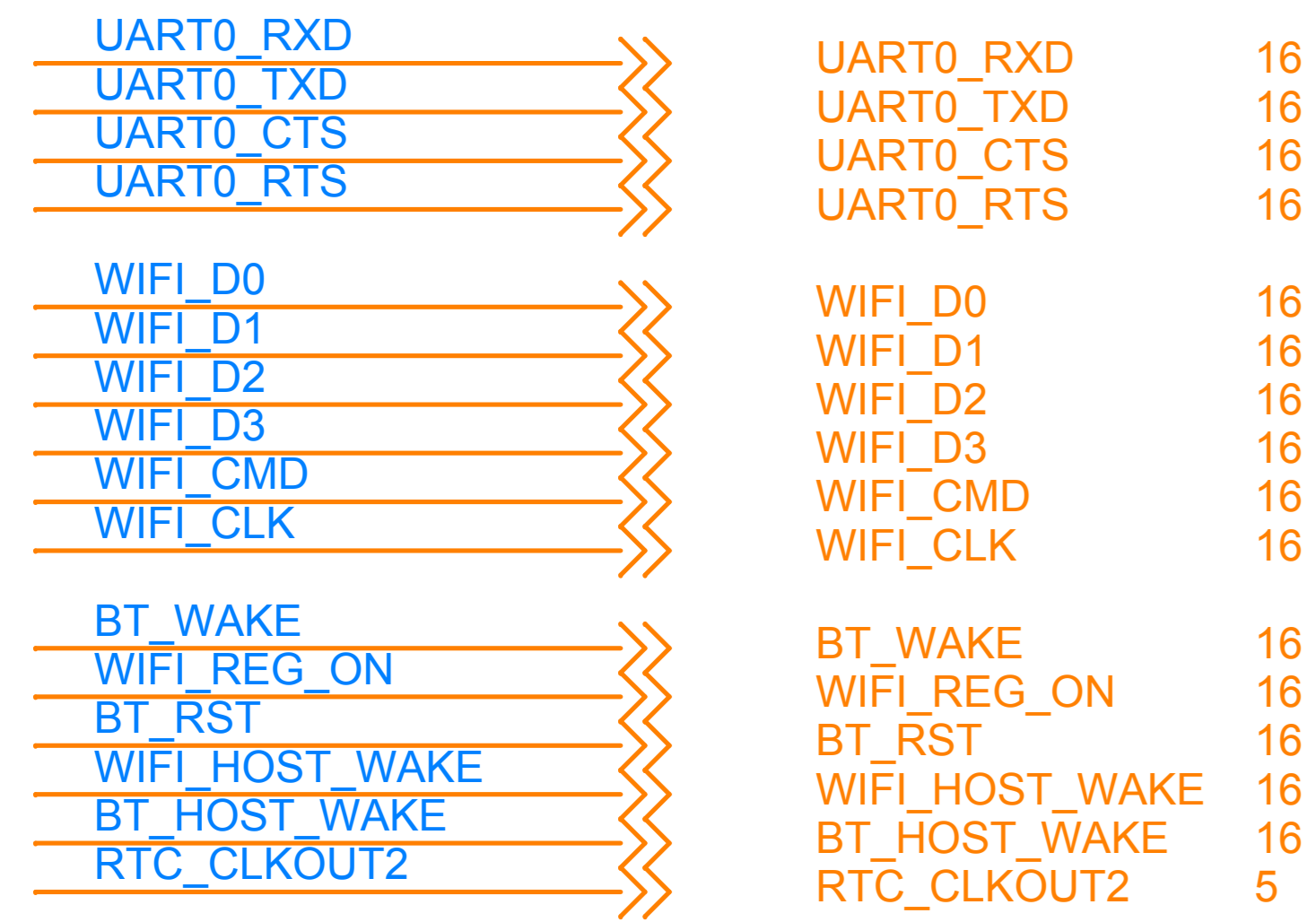


RADXA ROCK2

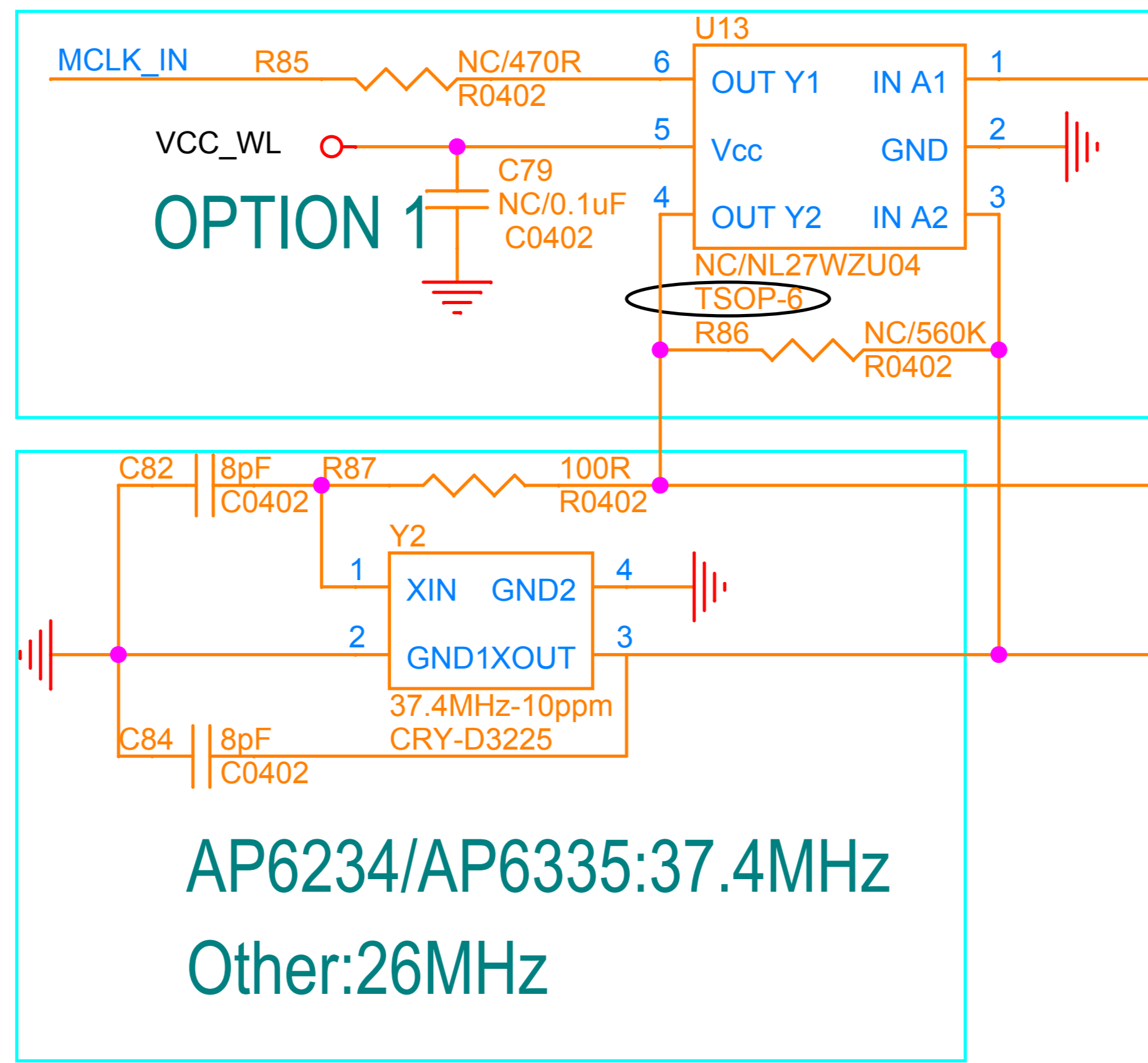
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AP6335

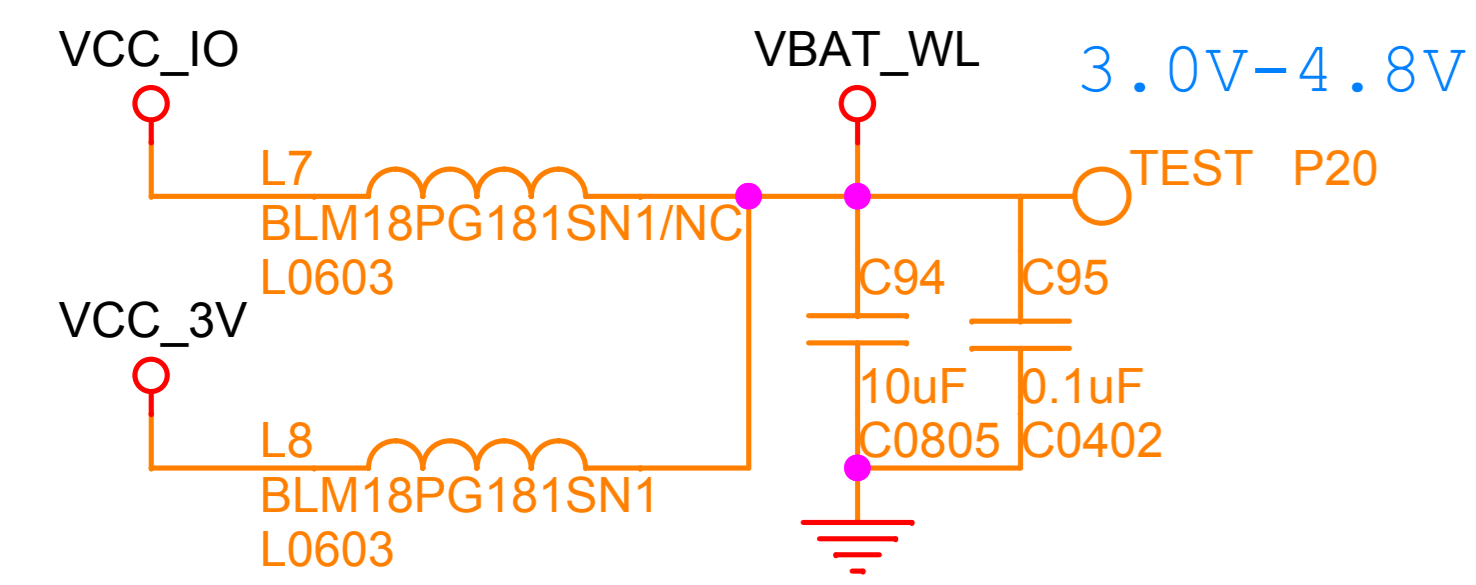
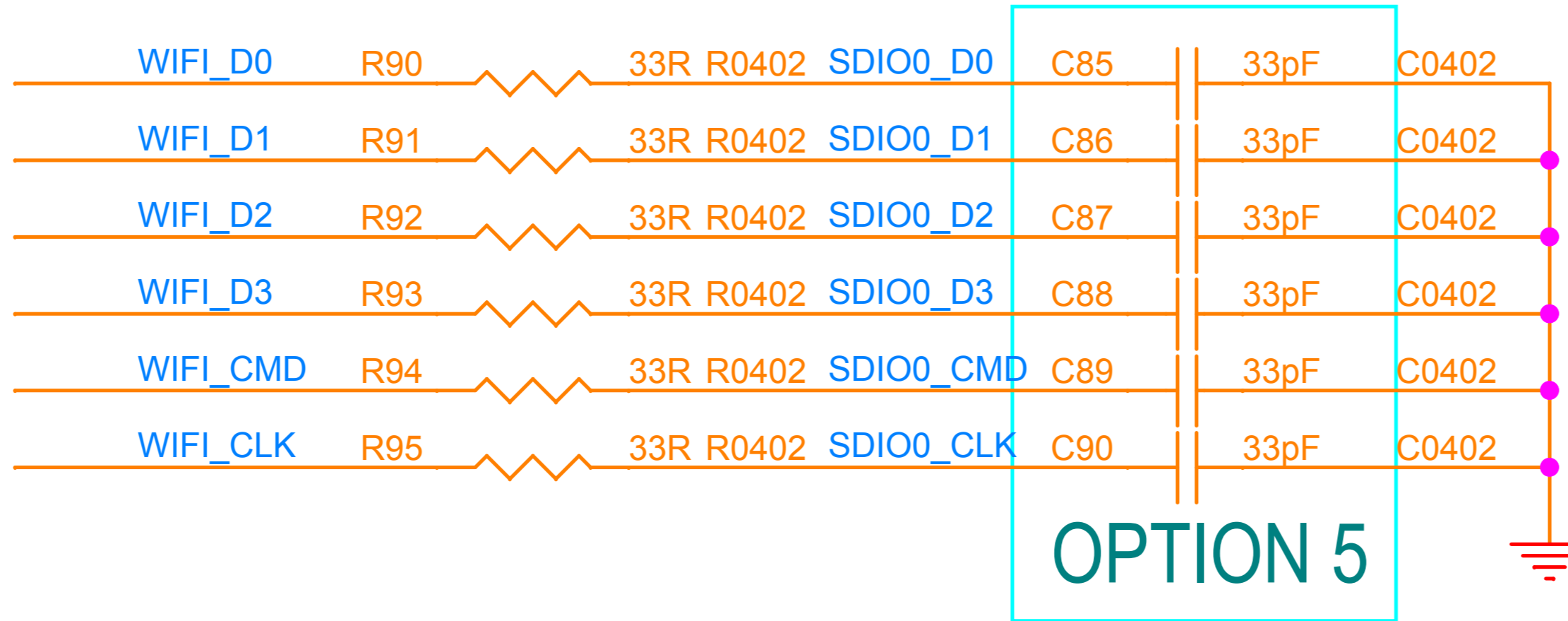
WIFI&BT



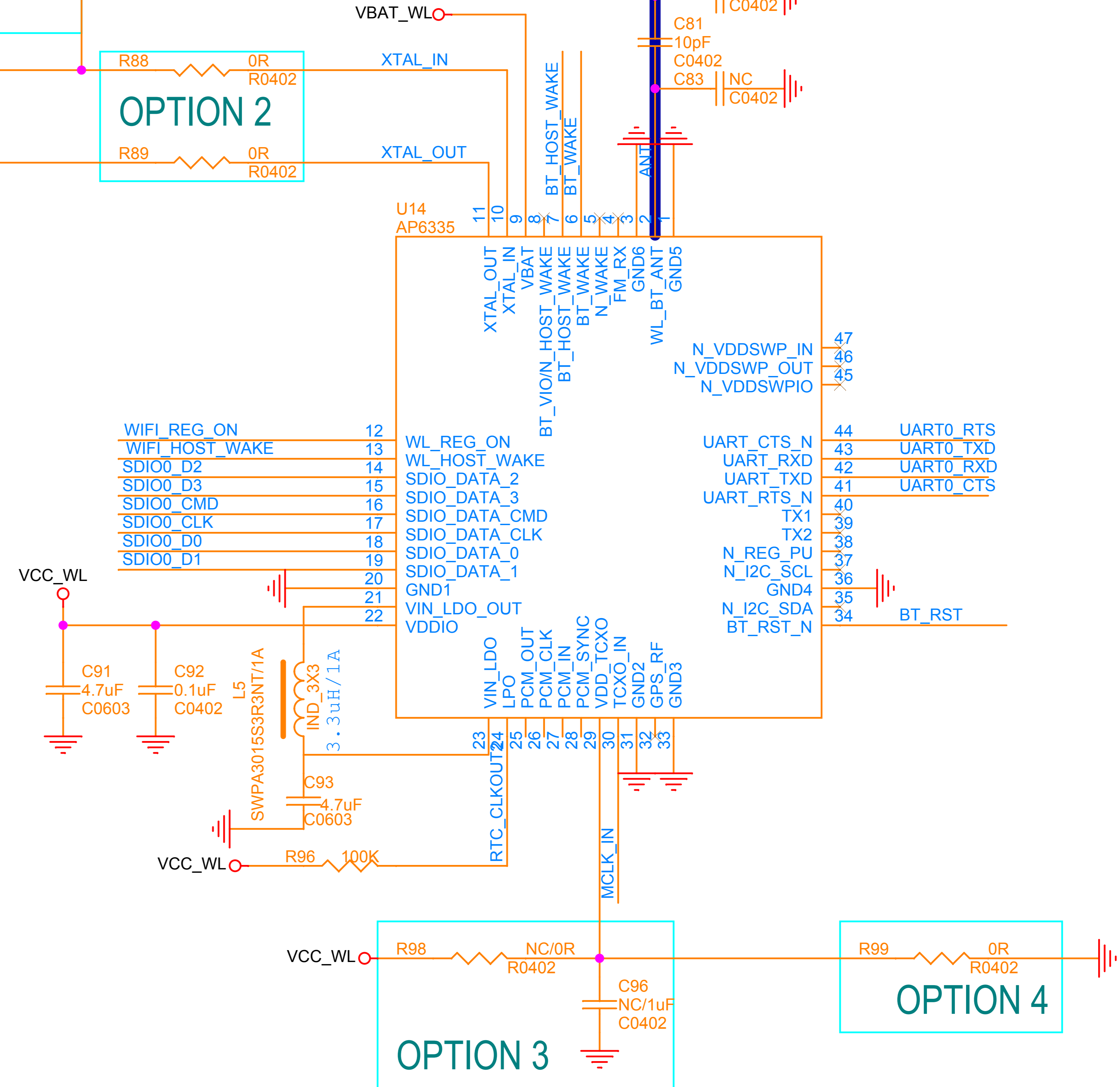
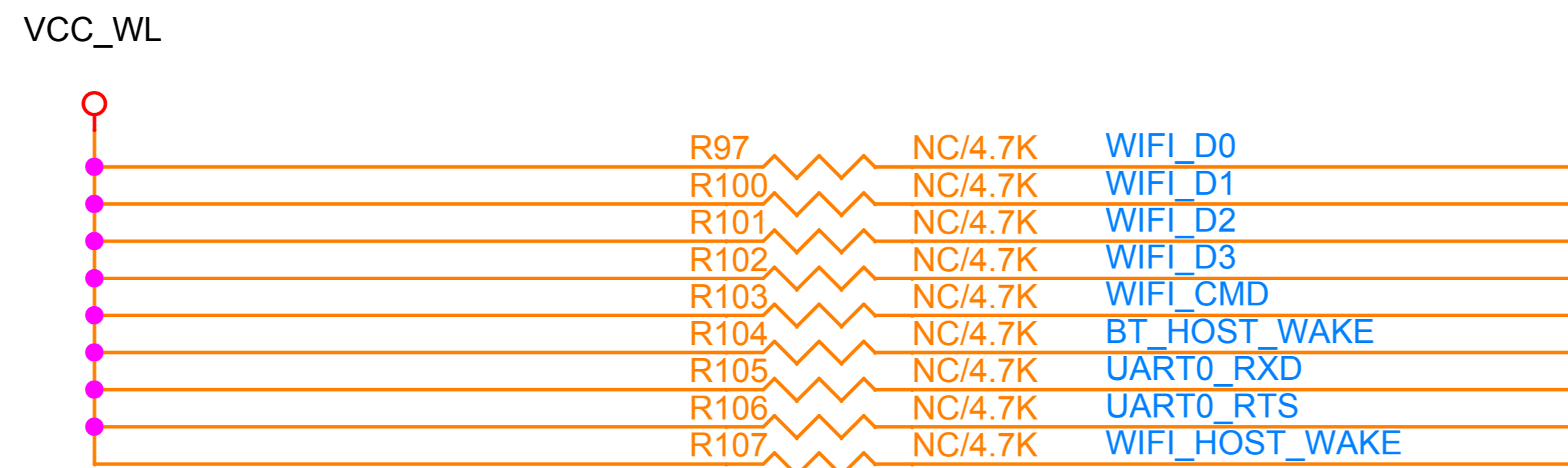
Note:
Adjusted the load capacitance
according to the crystal specification.



AP6234/AP6335:37.4MHz
Other:26MHz



3.0V-4.8V
Minimum current supply:480ma

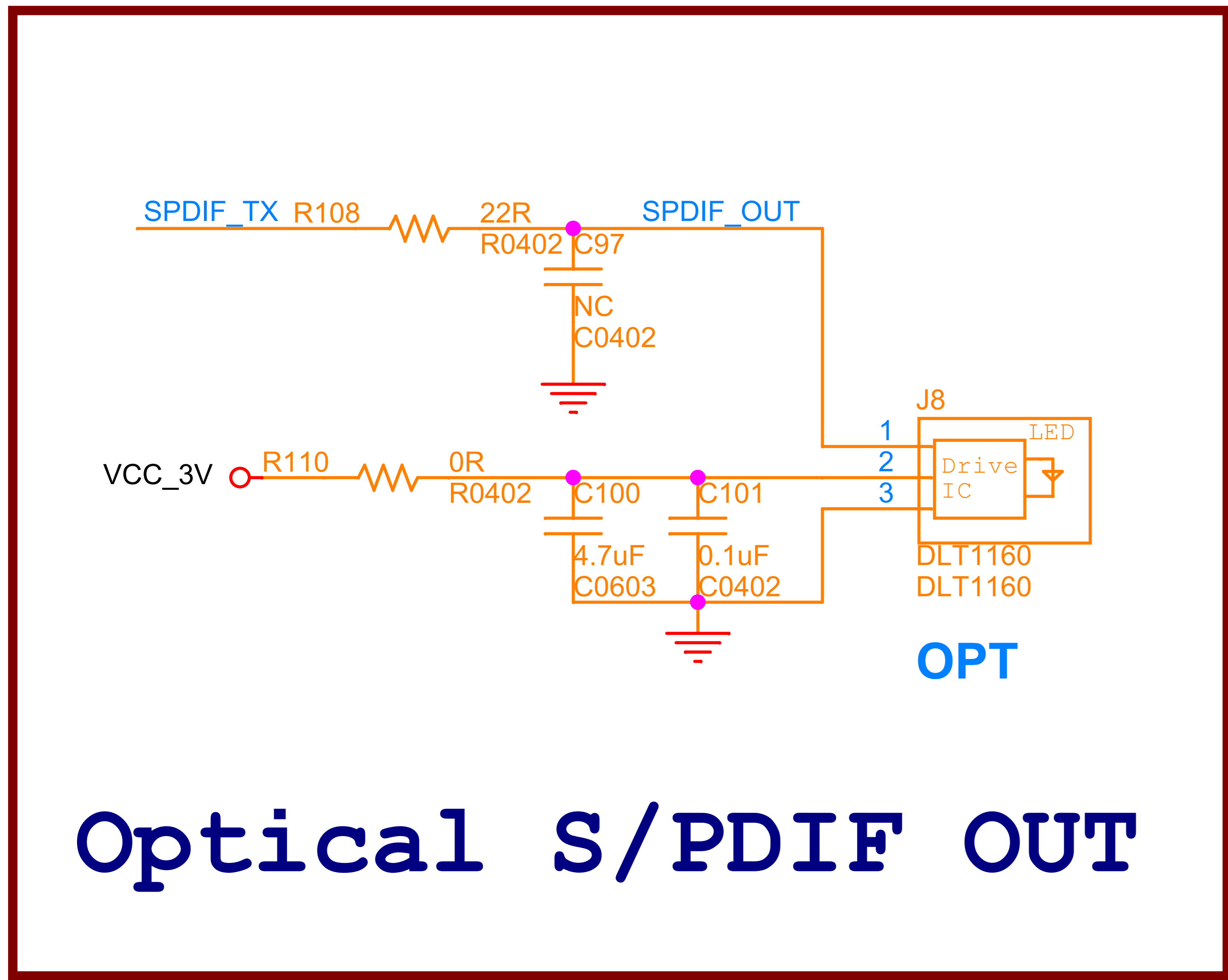


OPTION	WIFI				BT4.0	Crystals	VDDIO
	a	b/g/n	ac	5Ghz			
AP6181		Yes				26MHz	1.71-3.6V
AP6210		Yes			Yes	26MHz	1.71-3.6V
AP6234	Yes	Yes		Yes	Yes	37.4MHz	1.6-3.4V
AP6330	Yes	Yes		Yes	Yes	26MHz	1.2-2.9V
AP6335 (Default)	Yes	Yes	Yes	Yes	Yes	37.4MHz	1.71-3.63V

OPTION	1	2	3	4	5
AP6181	No	Yes	No	No	No
AP6210	Yes	No	Yes	No	No
AP6234	No	Yes	No	No	No
AP6330	No	Yes	No	No	No
AP6335 (Default)	No	Yes	No	Yes	Yes

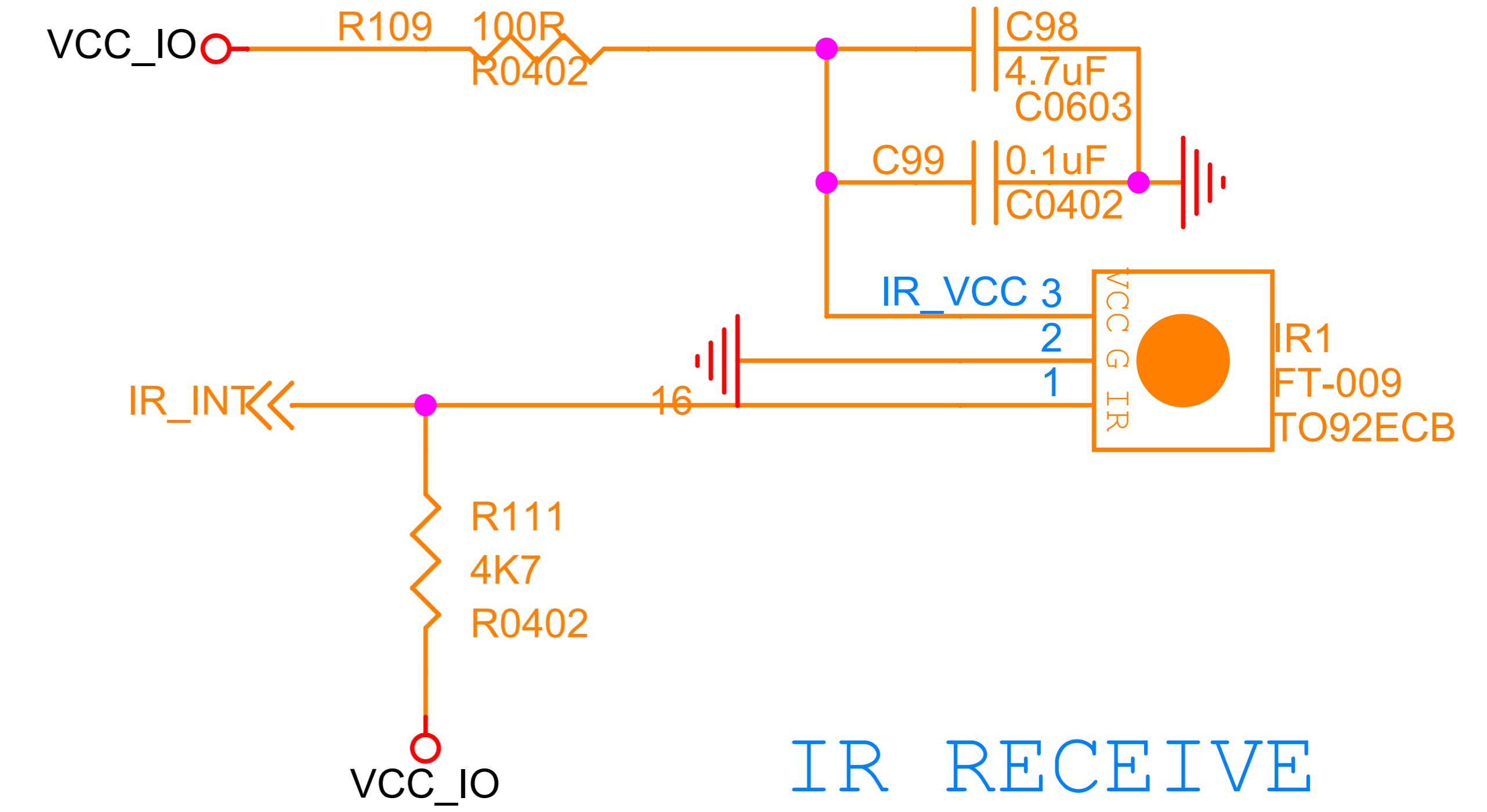
Note:
Yes:Components need to patch
No:Components not patch



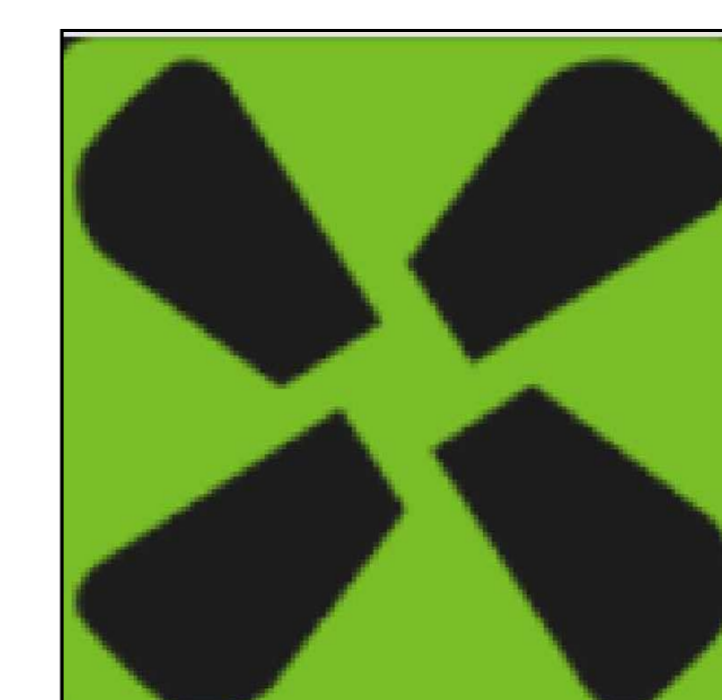
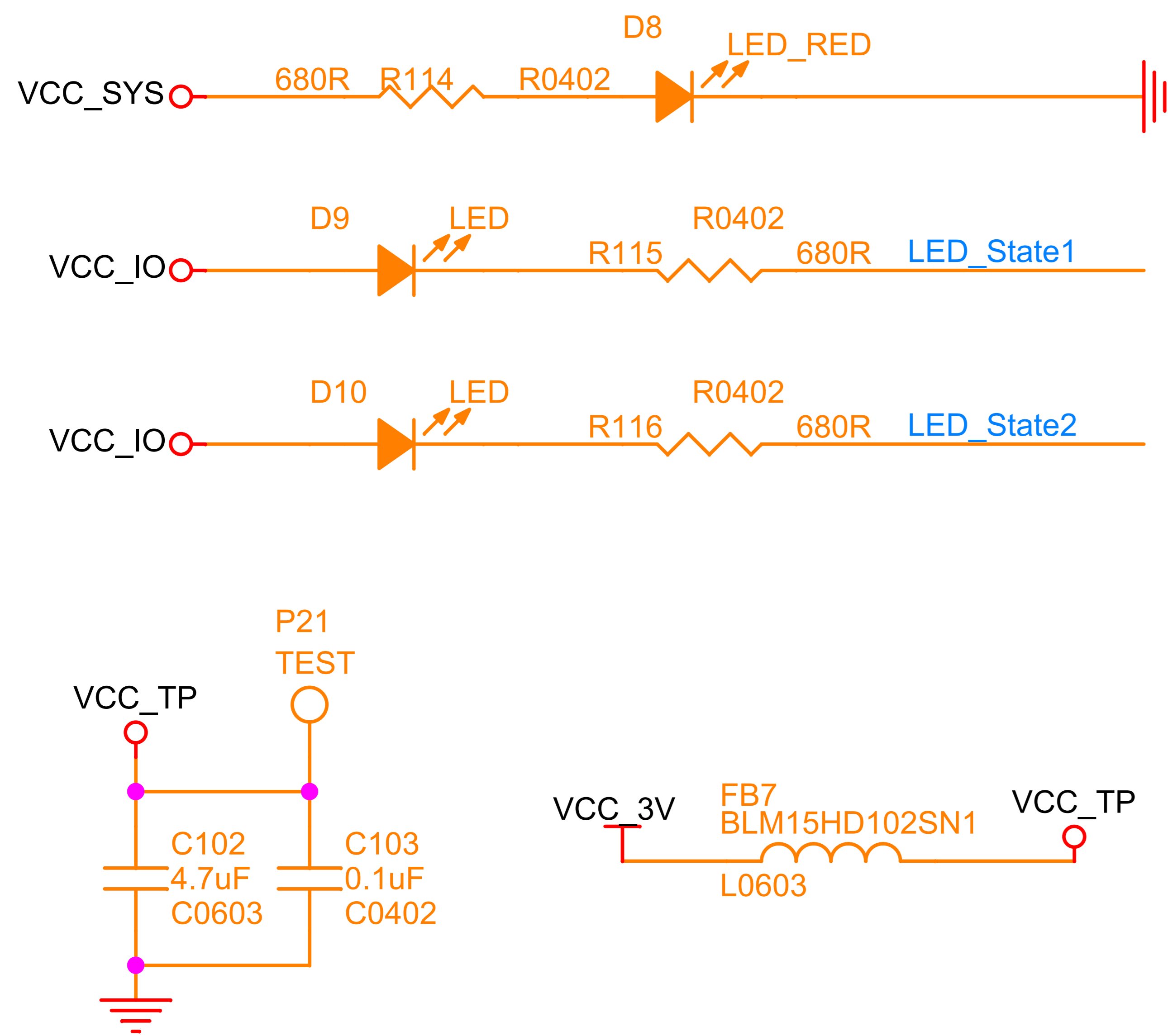
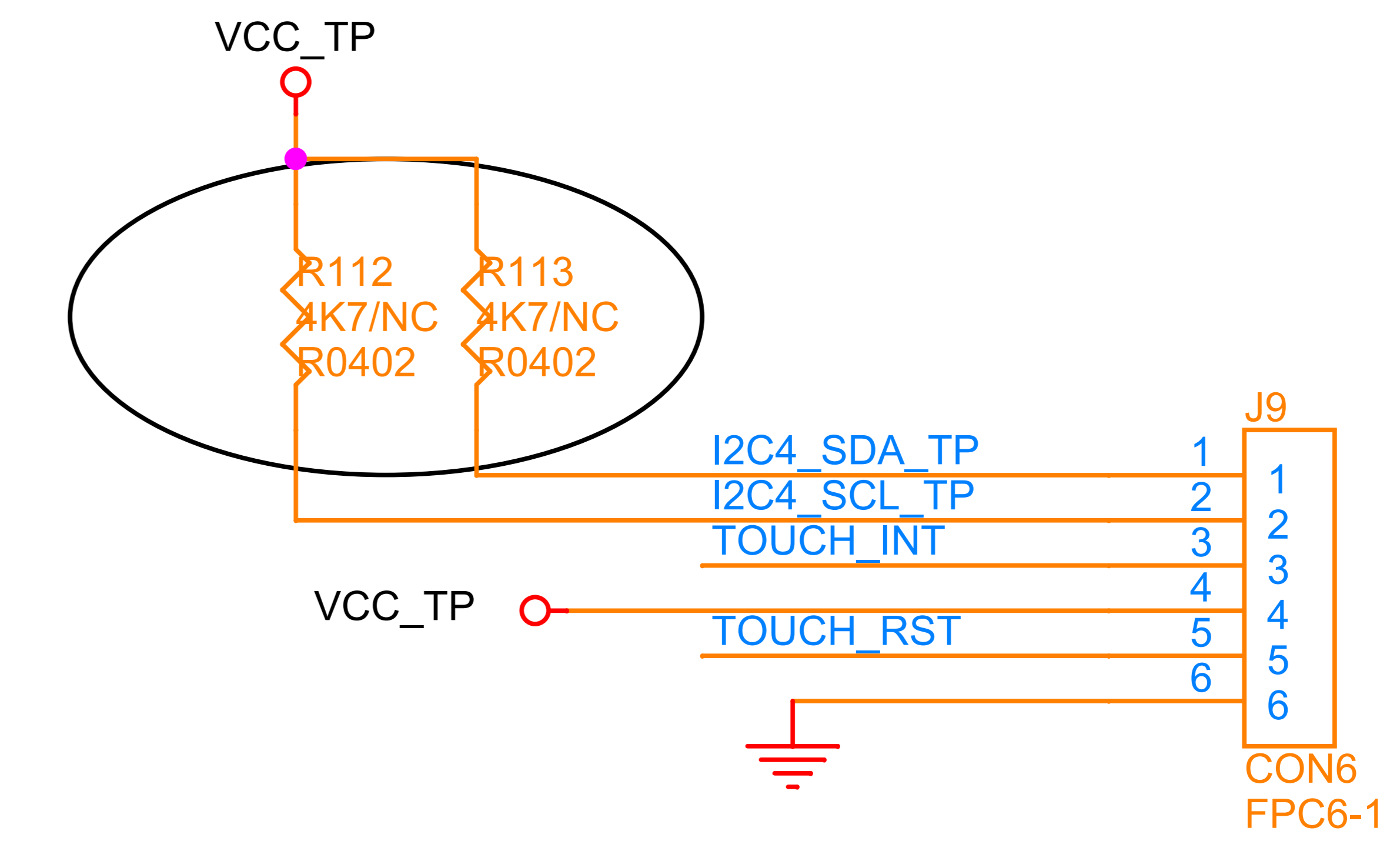


TP

TOUCH_RST	TOUCH_RST	11,16
TOUCH_INT	TOUCH_INT	11,16
I2C4_SDA_TP	I2C4_SDA_TP	11,16
I2C4_SCL_TP	I2C4_SCL_TP	11,16
LED_State1	LED_State1	16
LED_State2	LED_State2	16
SPDIF_TX	SPDIF_TX	16

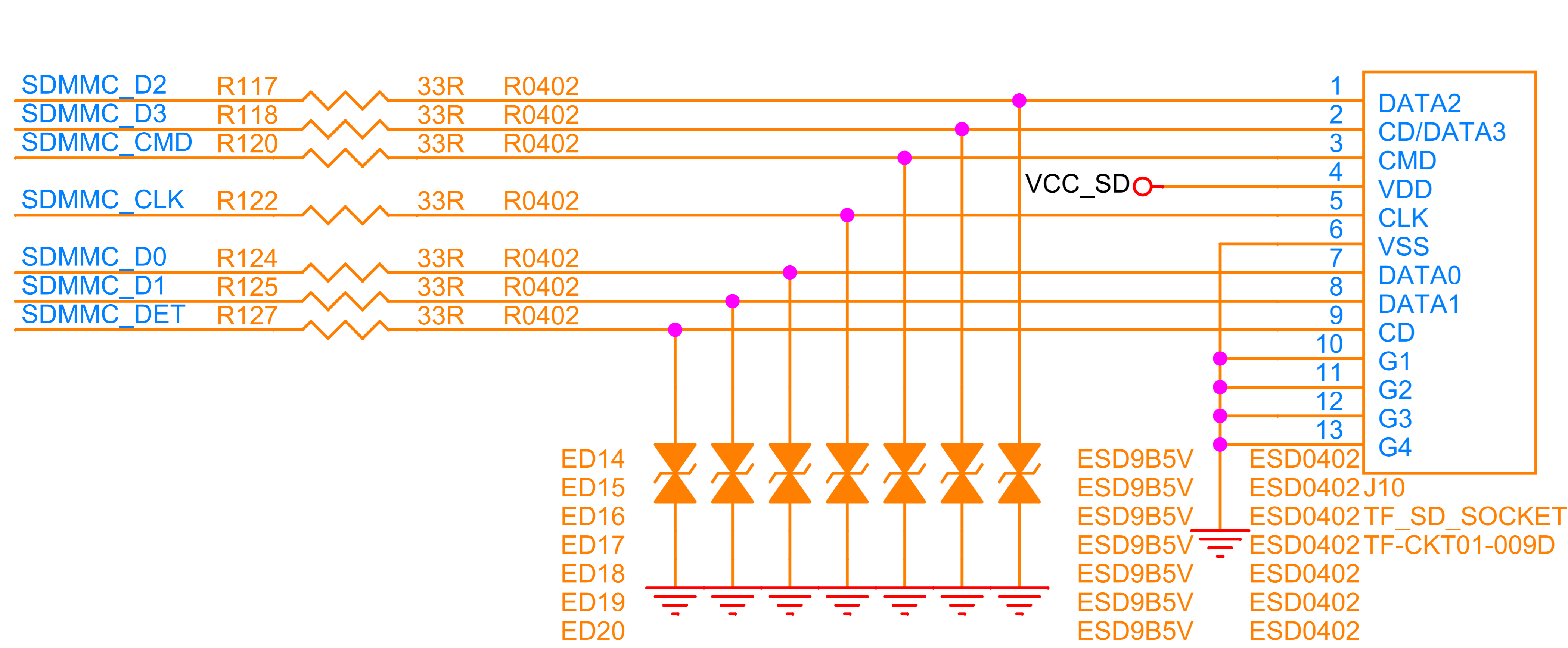


Pull up on the coreboard

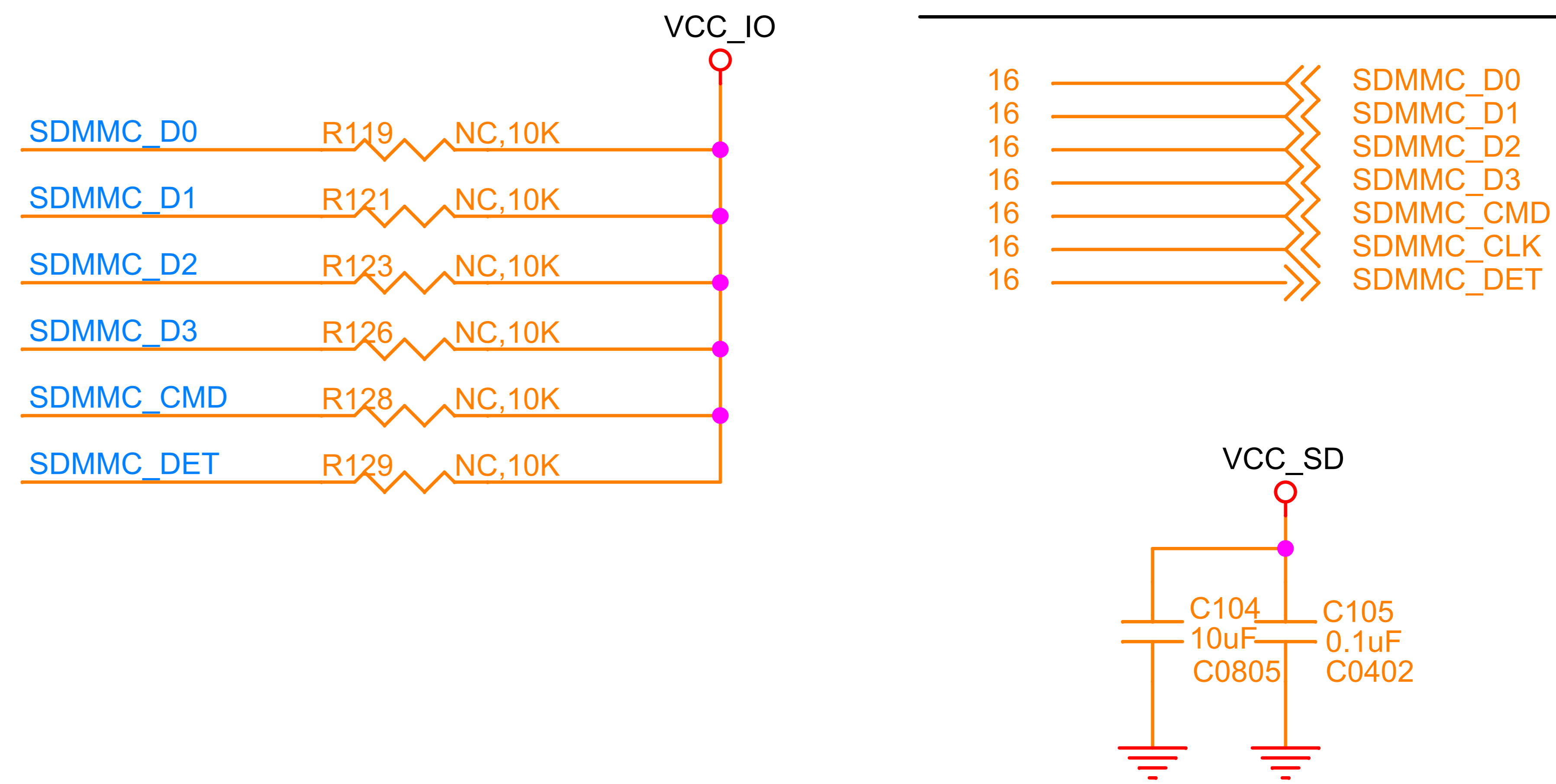


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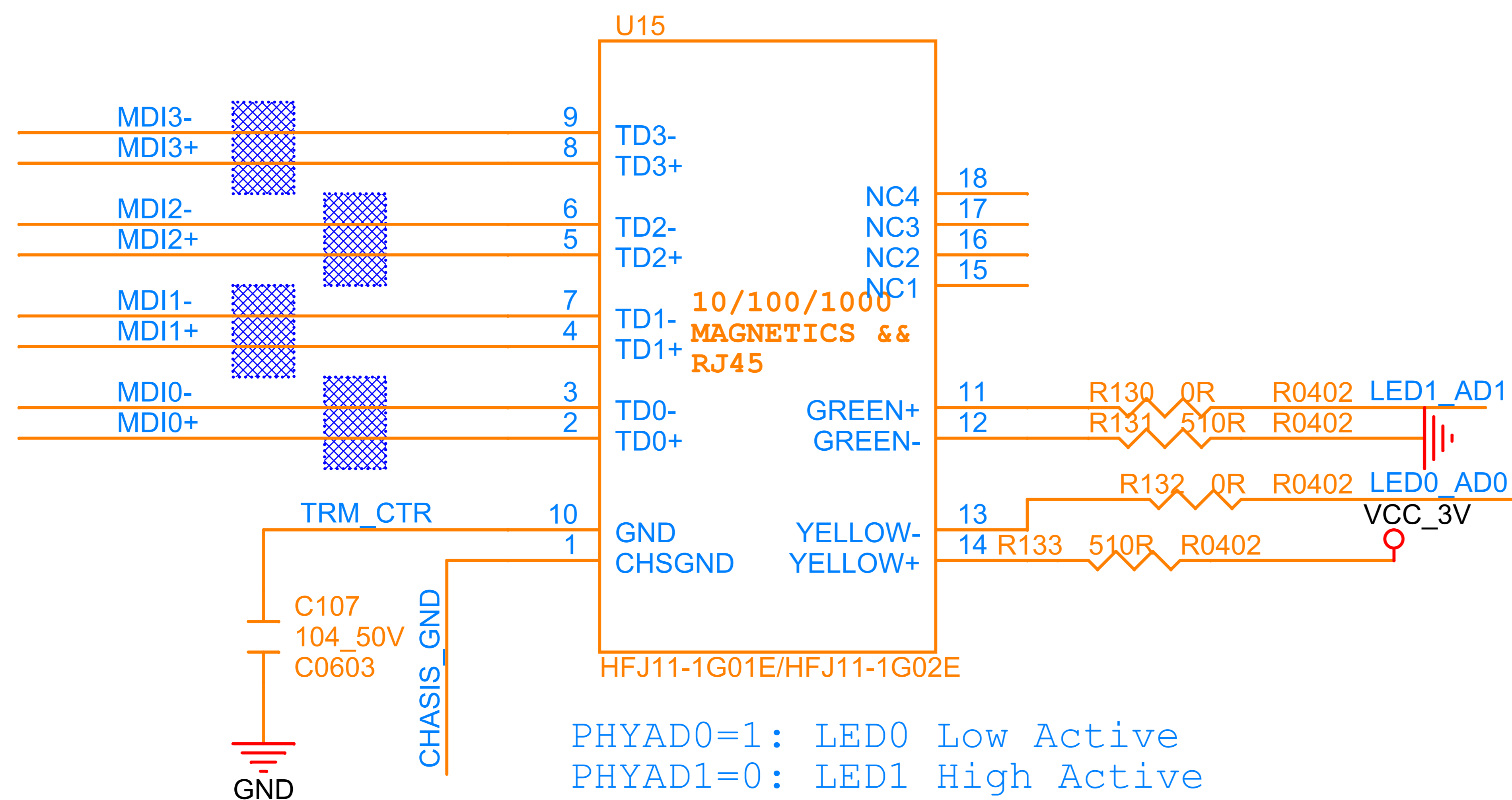
TF CARD



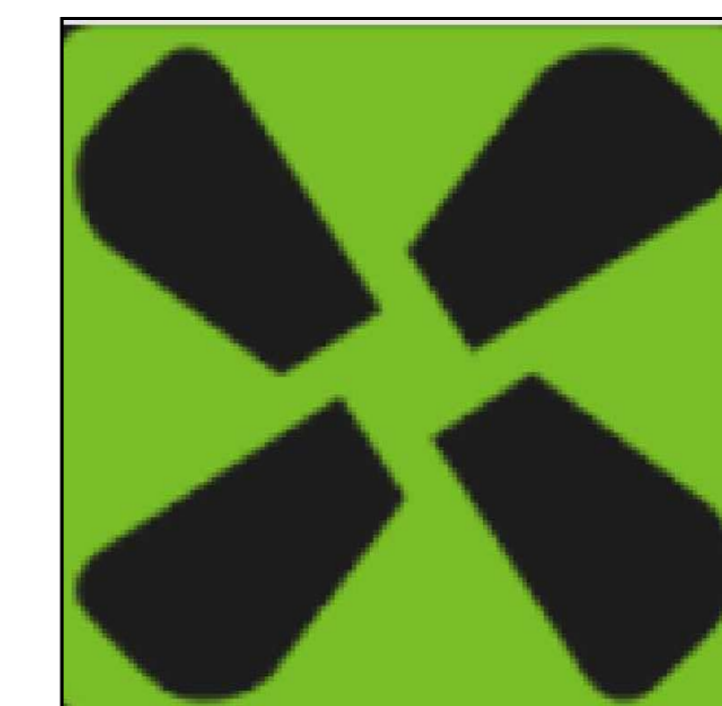
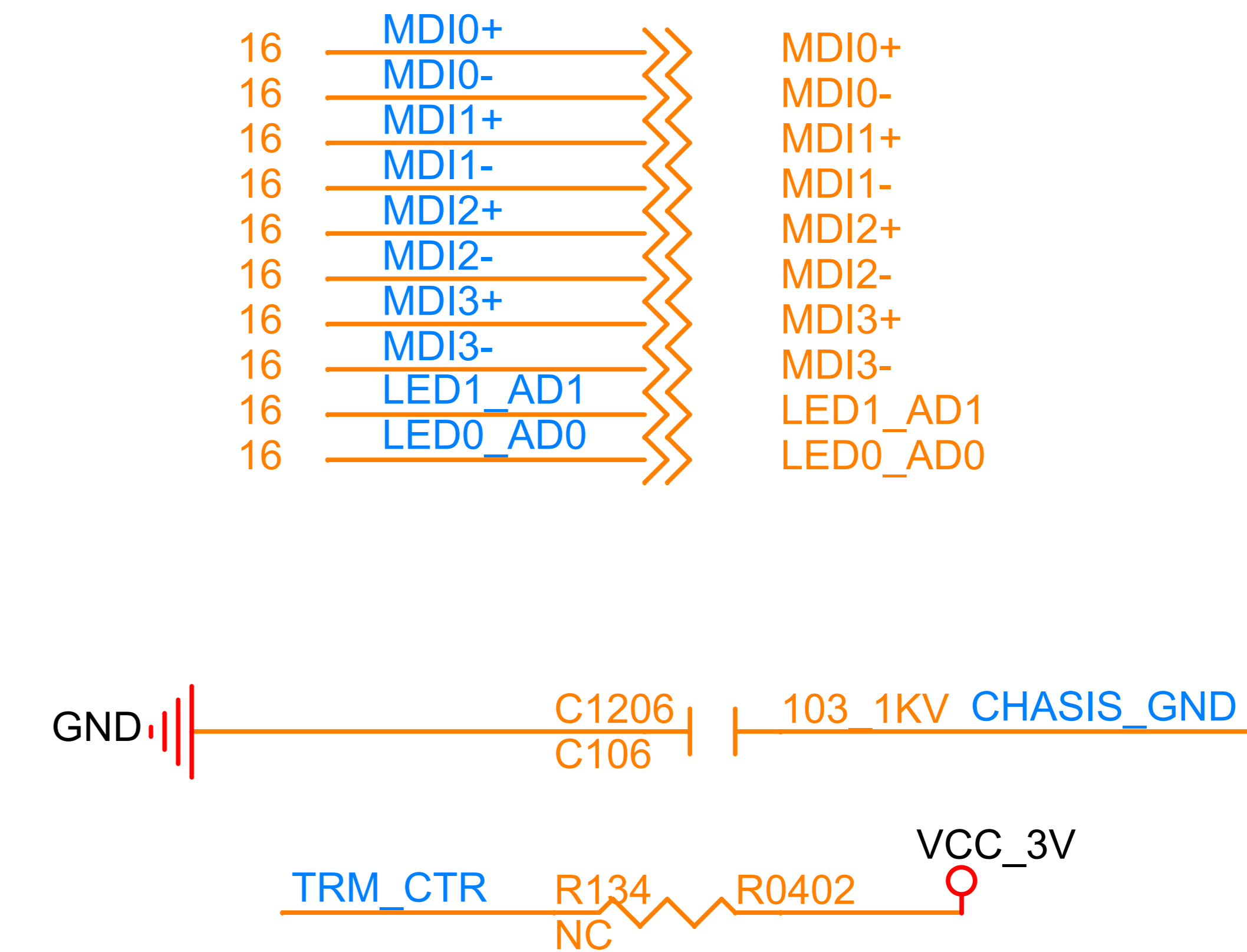
TF CARD



GBIT_ETH

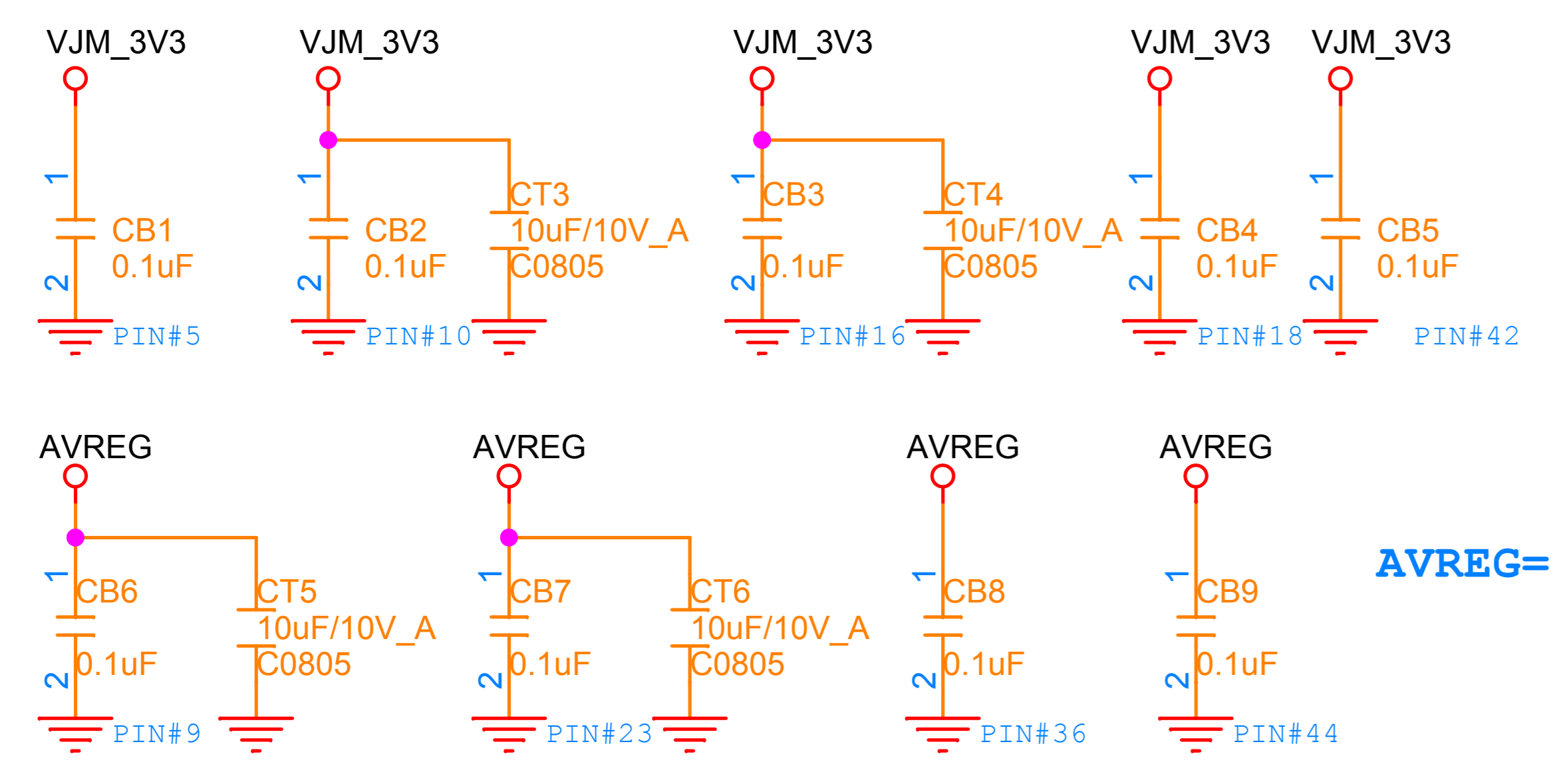


ETH

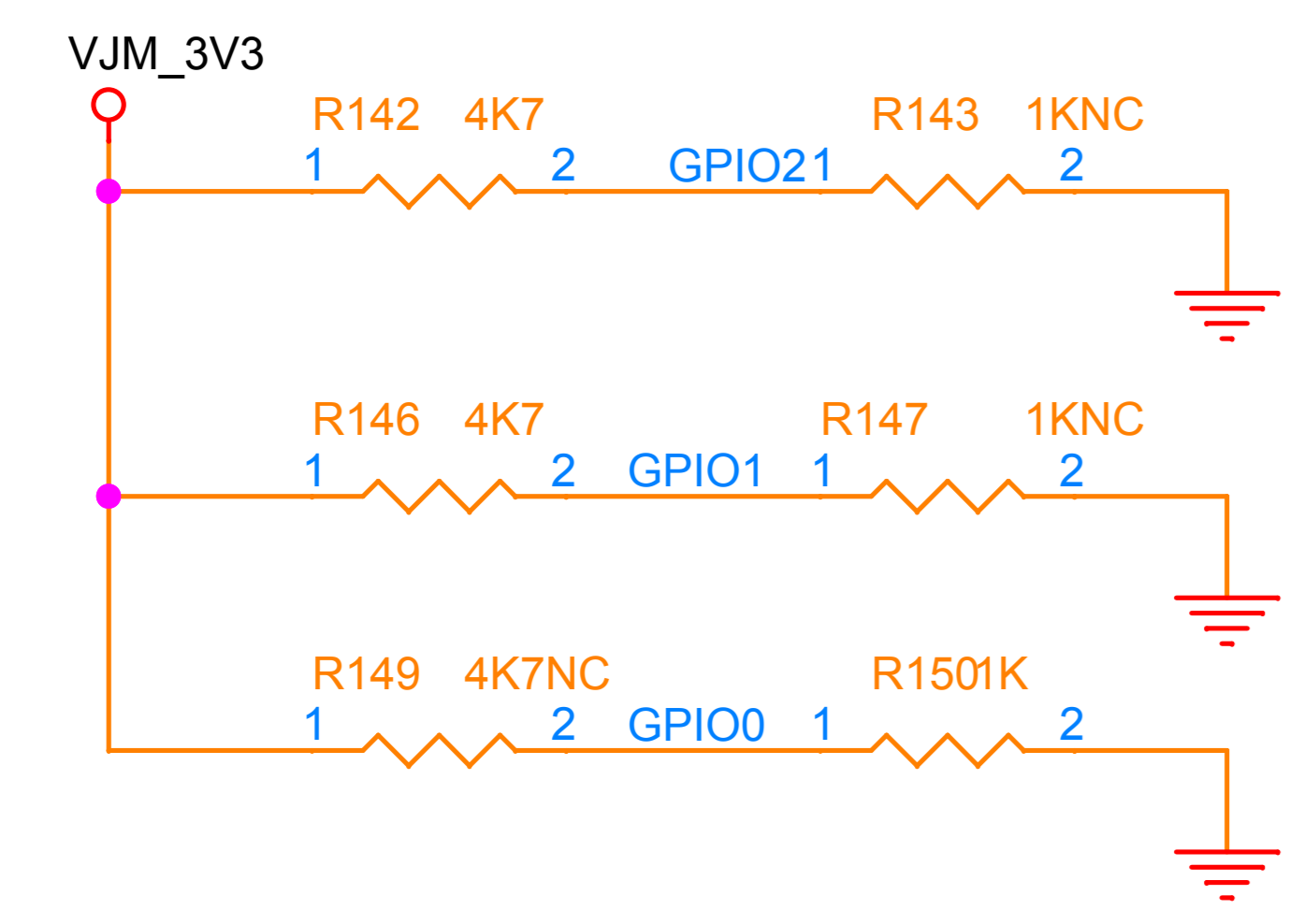


RADXA ROCK2		
Design Name		
RADXA_ROCK2_BASEBD		
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JM20329



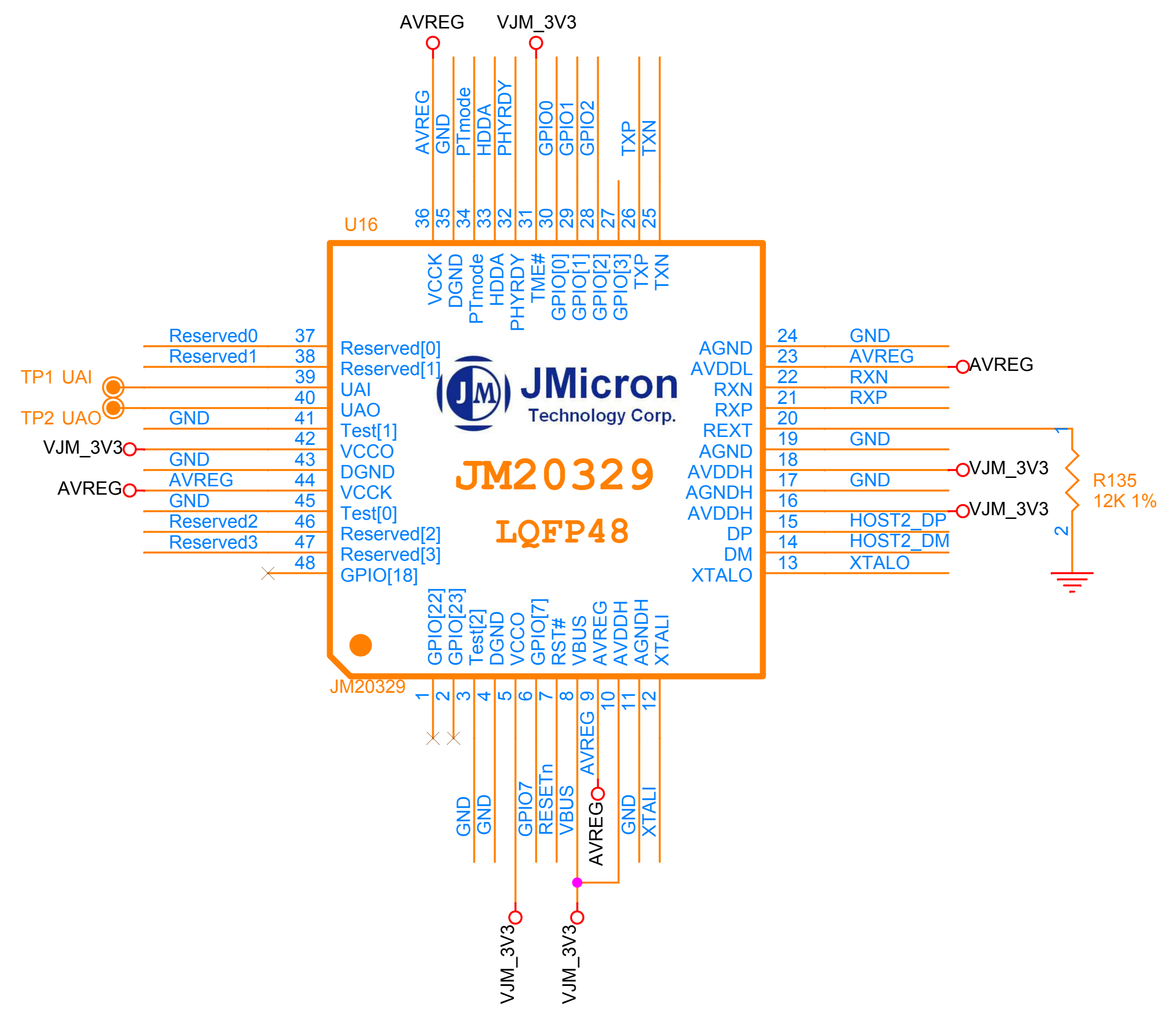
Option function :
Switch circuit



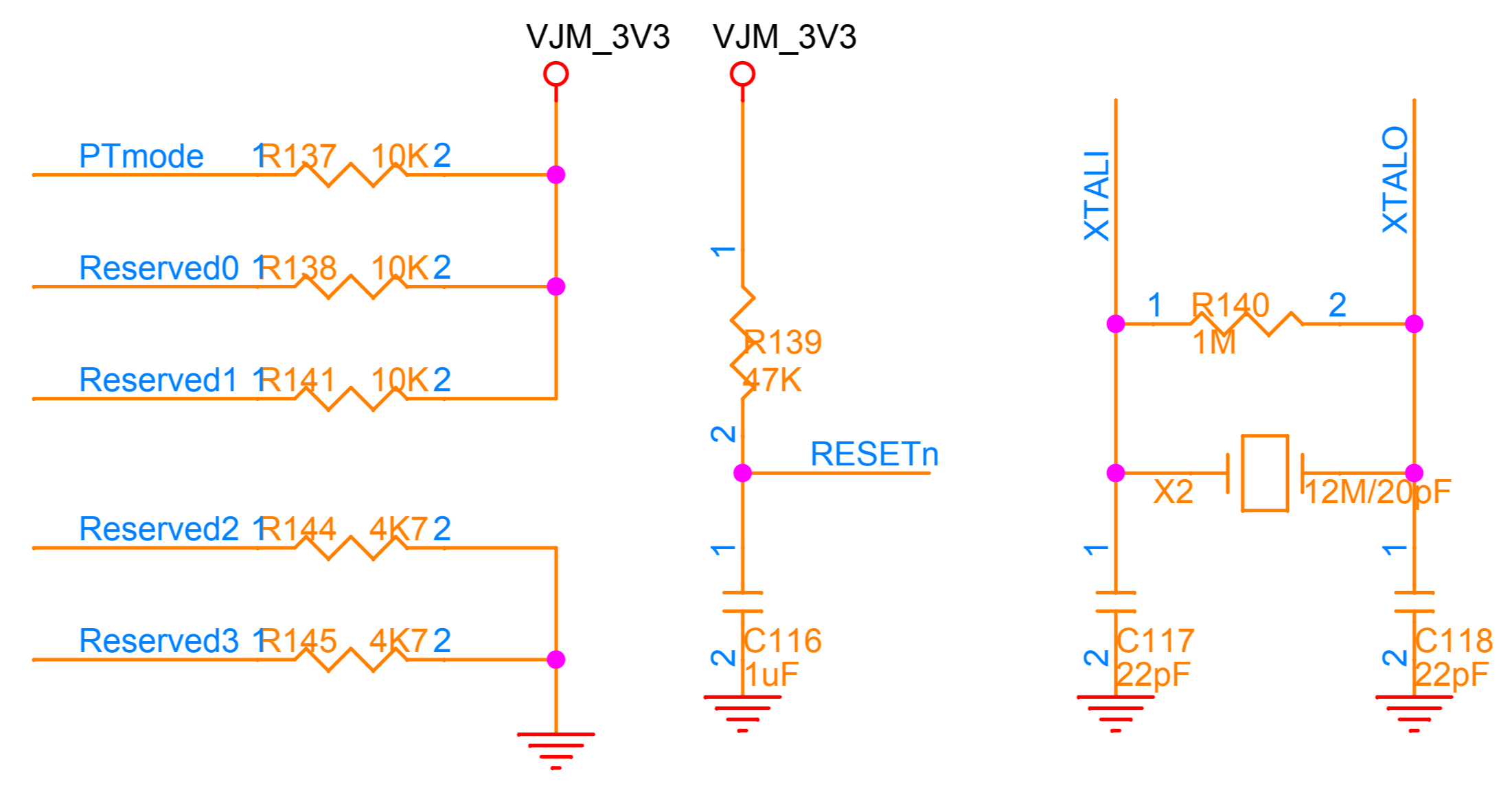
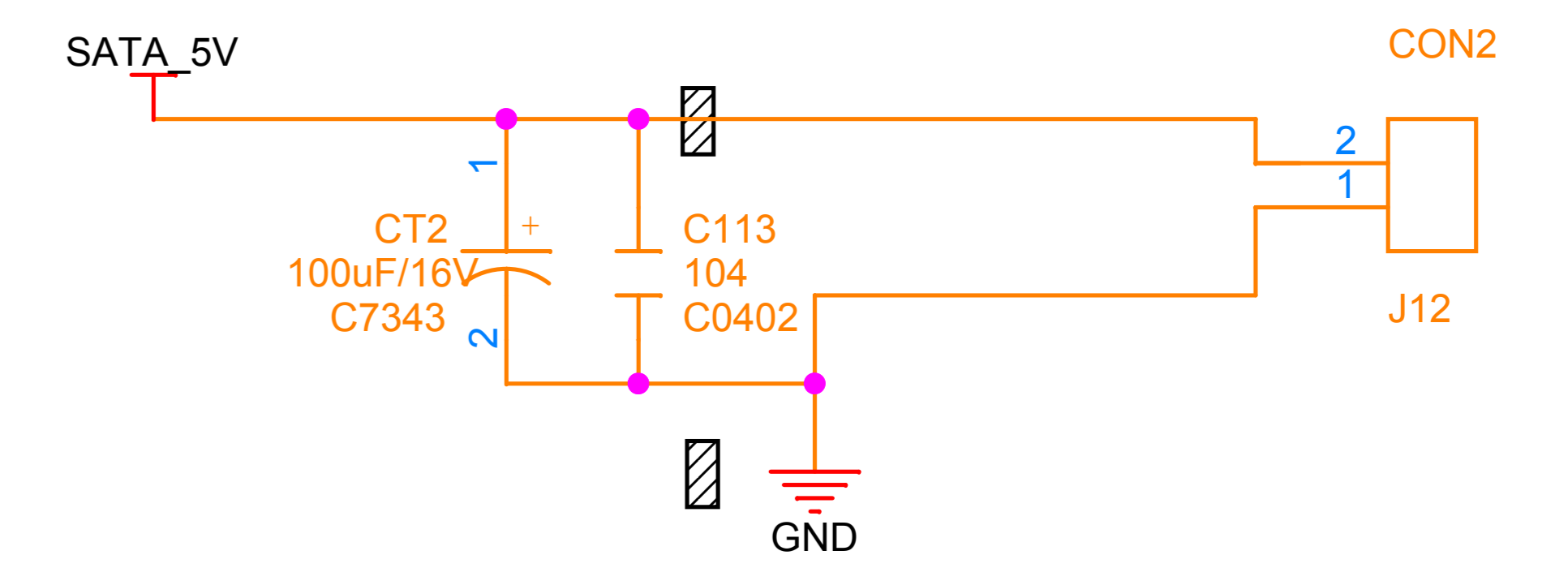
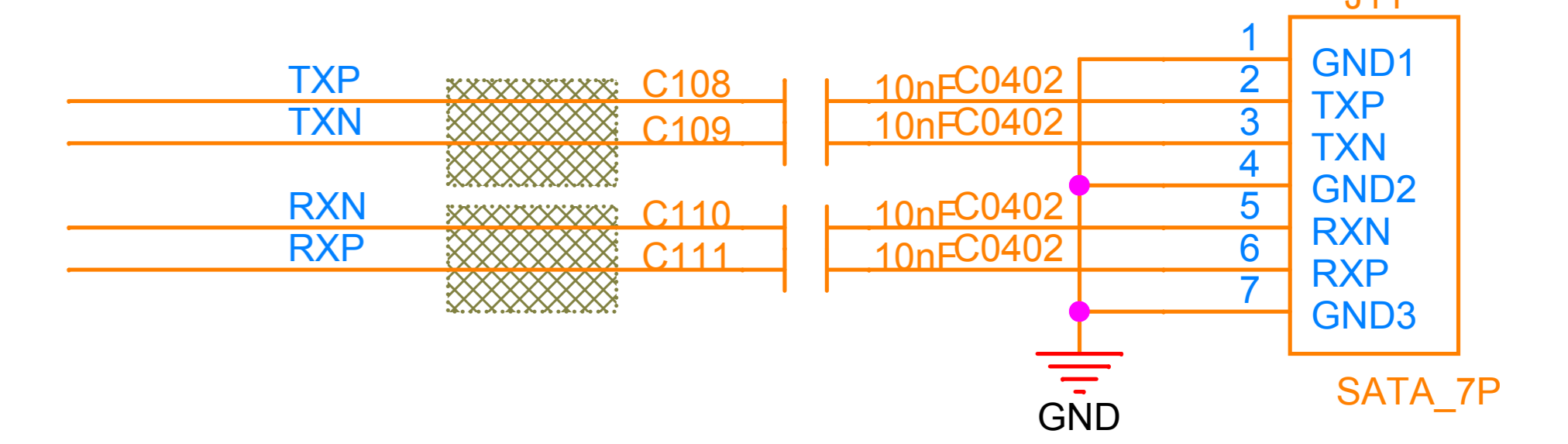
One touch backup use GPIO0 (SW3) If there aren't switch circuit don't care R_SET2,R8 and R_SET4

GPIO	R_SET1 (4K7)	R_SET2 (1K)	Power On Detection Sequence.
	1-2 (PD)	2-3 (PU)	0: Enable USB before detecting attached device.
	2-3 (PU)	1-2 (PD)	1: Enable USB after detecting attached device.
Default GPIO2 Pull High			
GPIO0	R_SET3 (4K7)	R_SET4 (1K)	GPIO0 ATA power down mode
	1-2 (PD)	2-3 (PU)	0: Enable
	2-3 (PU)	1-2 (PD)	1: Disable

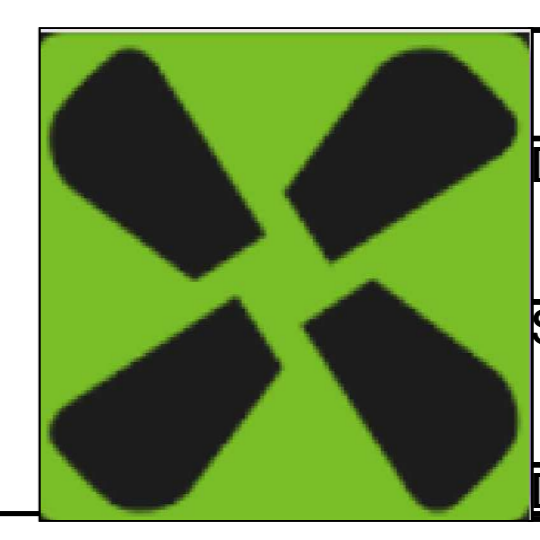
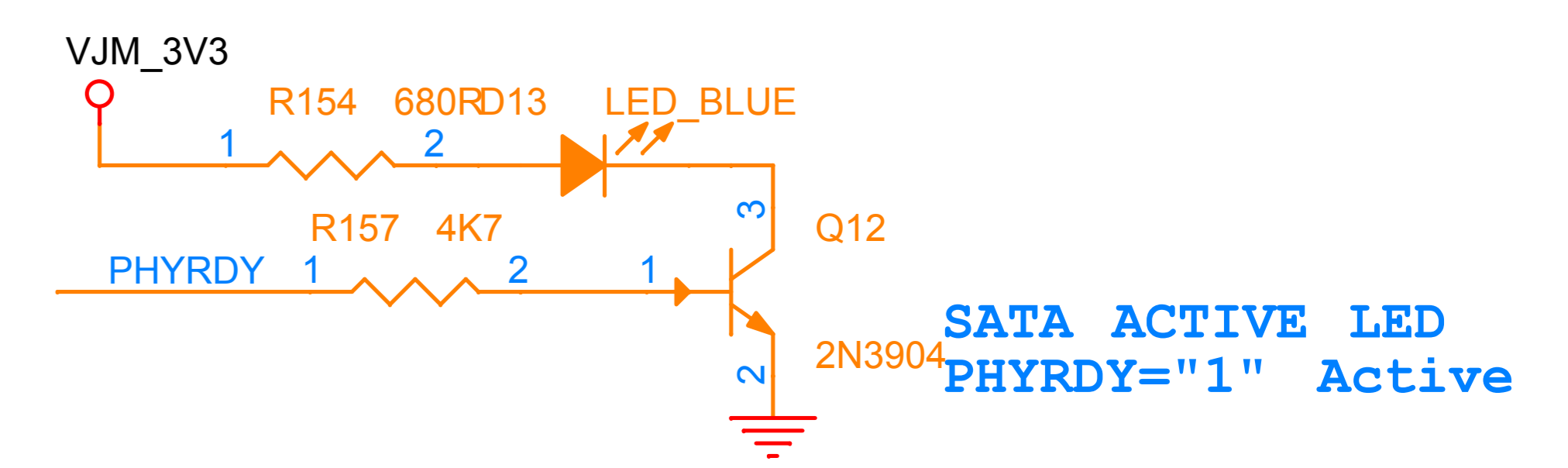
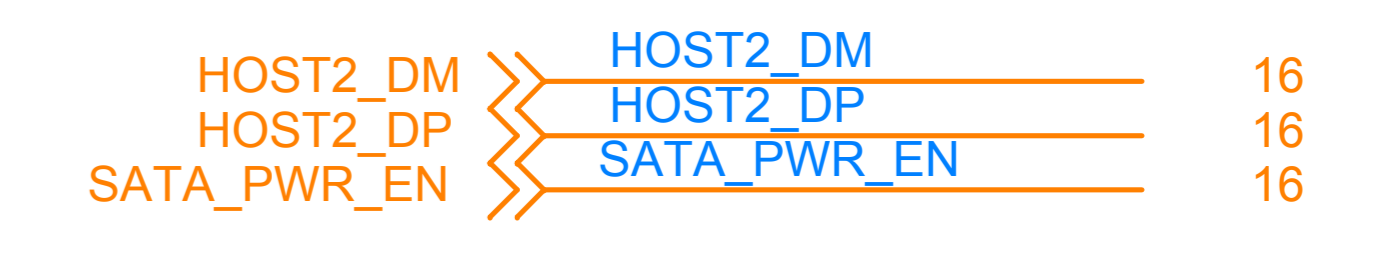
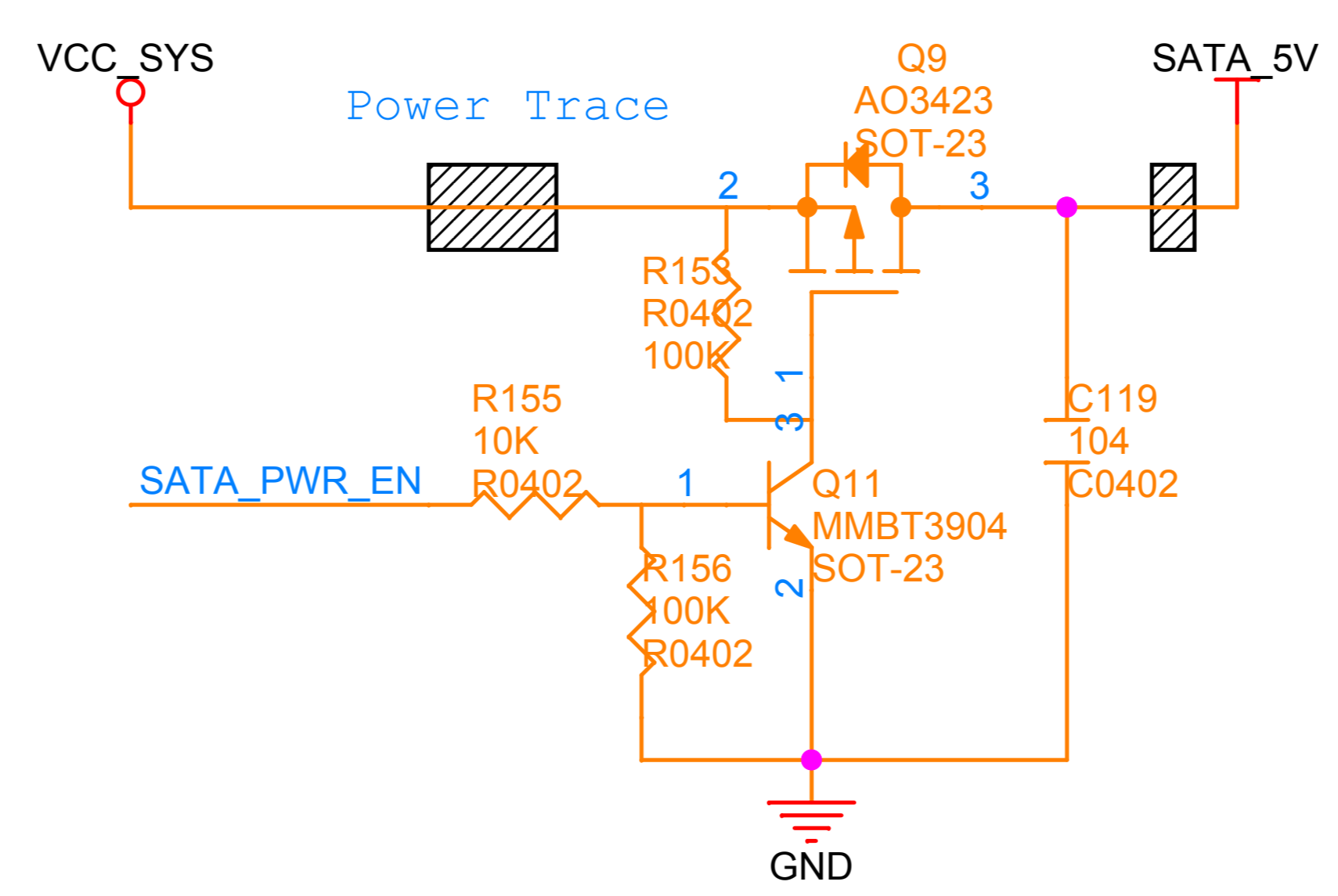
In ATA Power Down Mode, GPIO0 should be pull-down.



Differential pairs
Z0= 100ohm +/-5 ohm



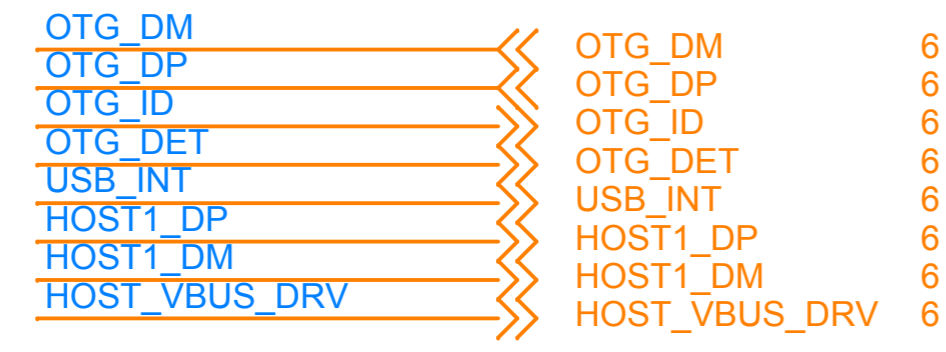
Option function :



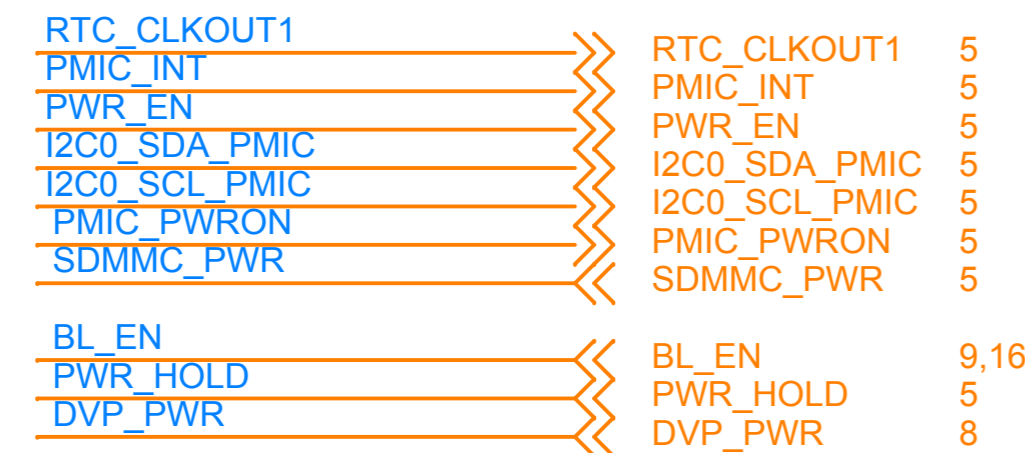
RADXA ROCK2		
Design Name		
RADXA_ROCK2_BASEBD		
Size	Page Name	Rev
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MXM-CONNECTOR

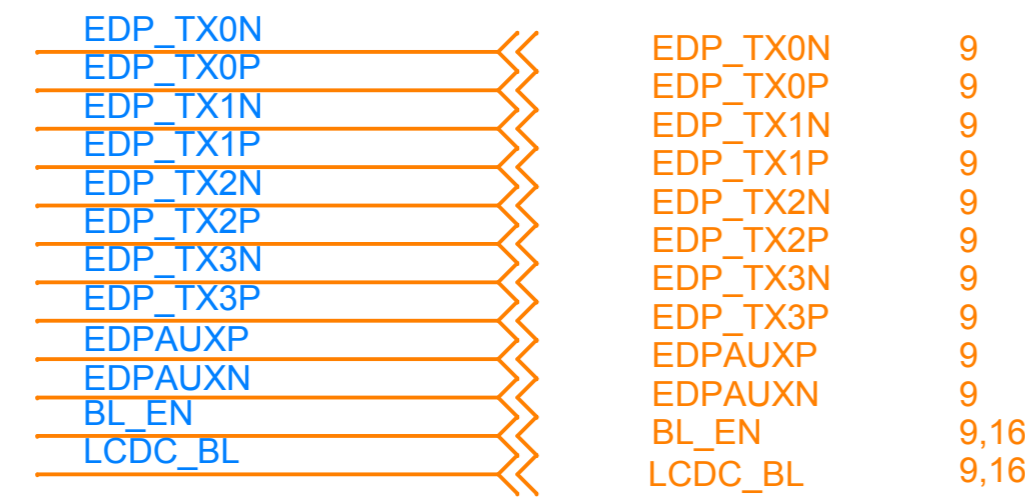
USB



PWR



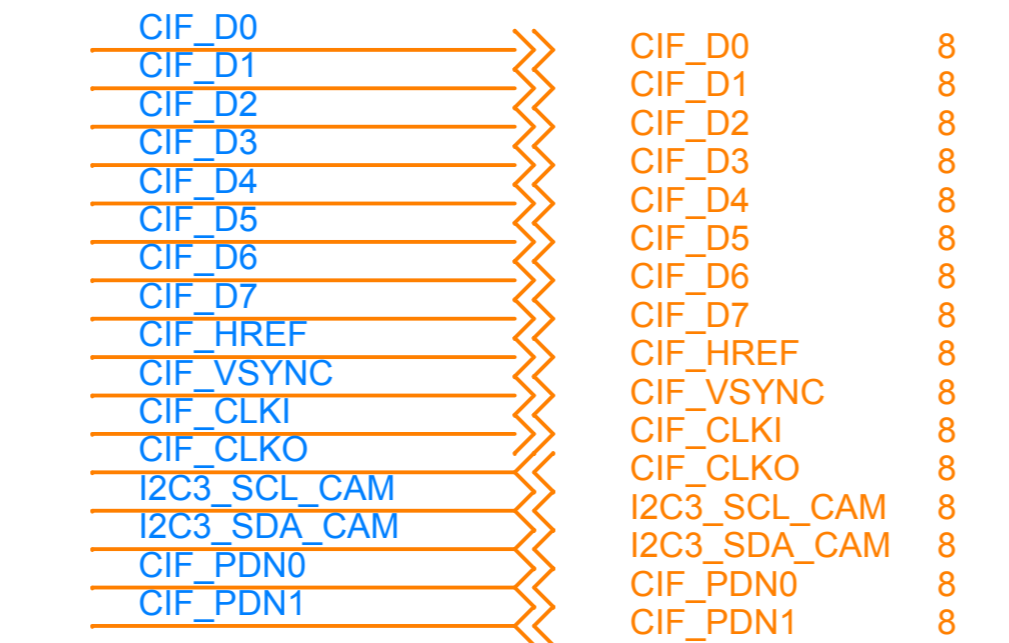
EDP



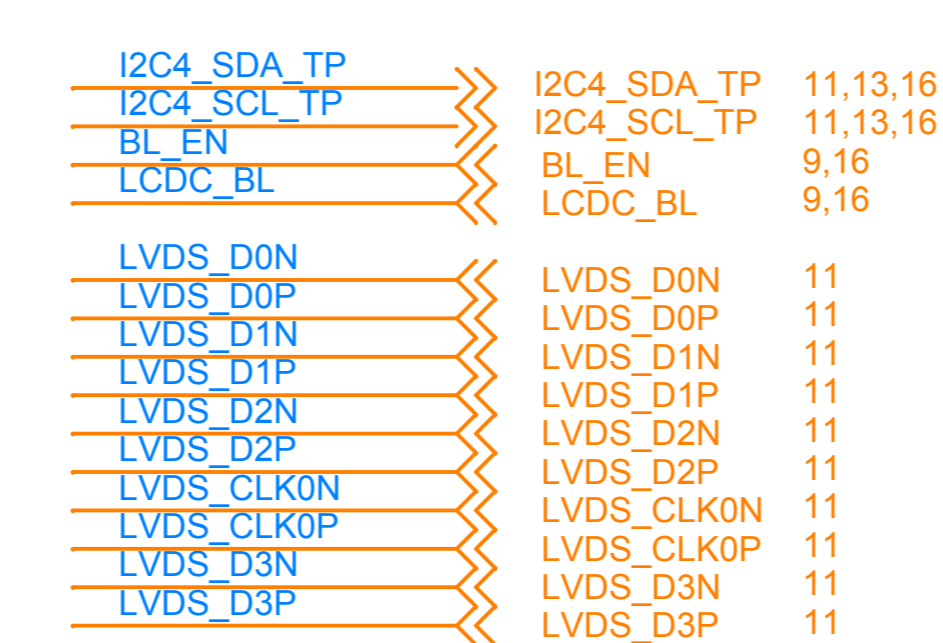
MIPI



CSI_CAMERY



LVDS



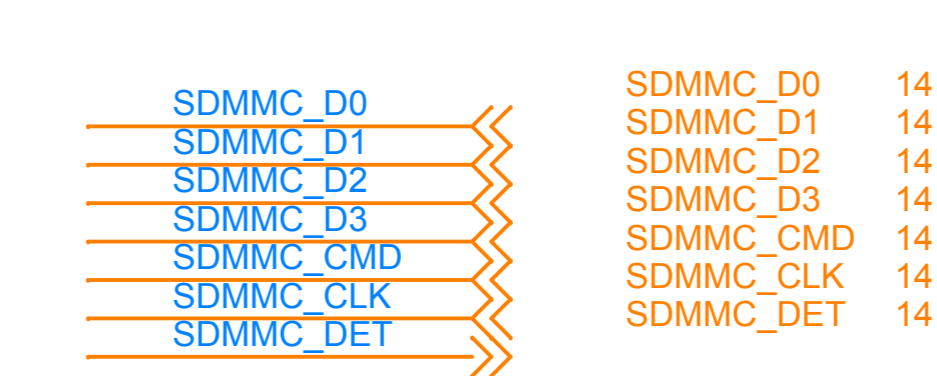
3G_UNA



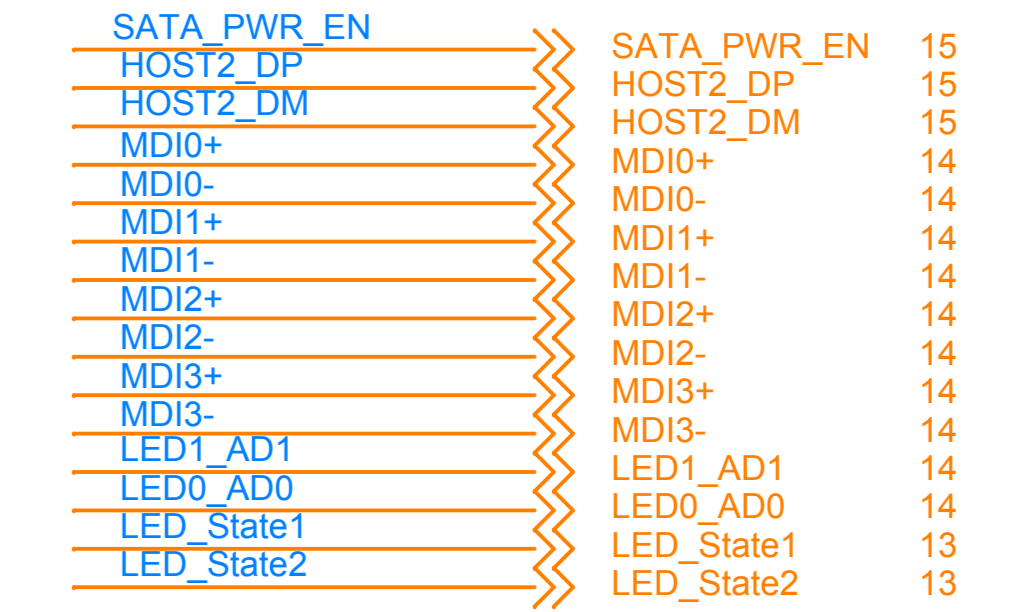
TP



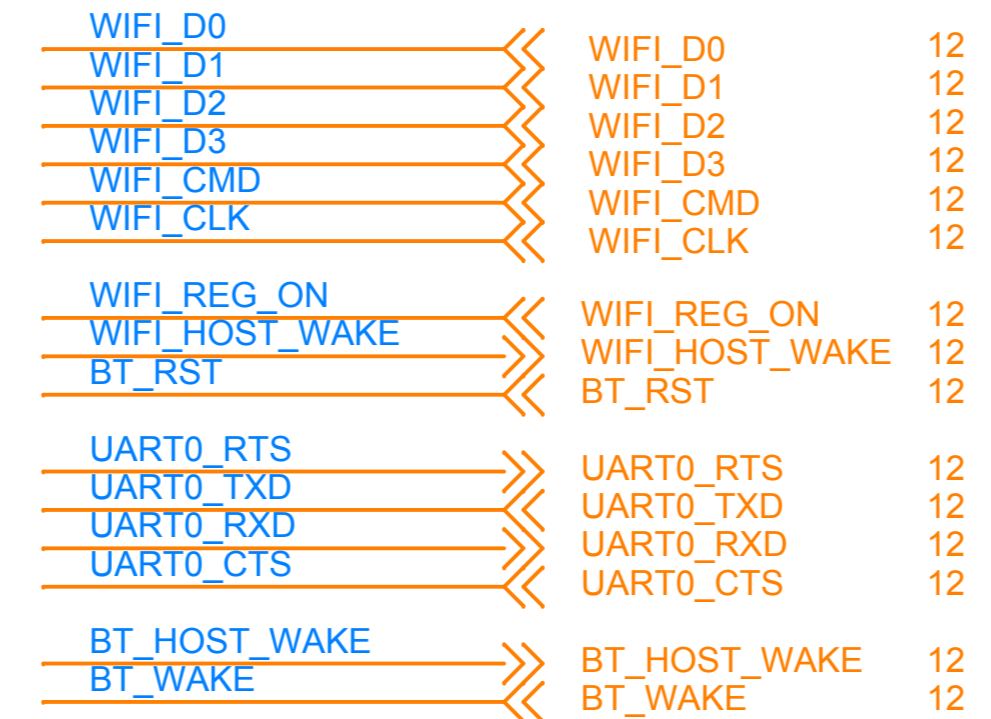
TF_CARD



USB-SATA



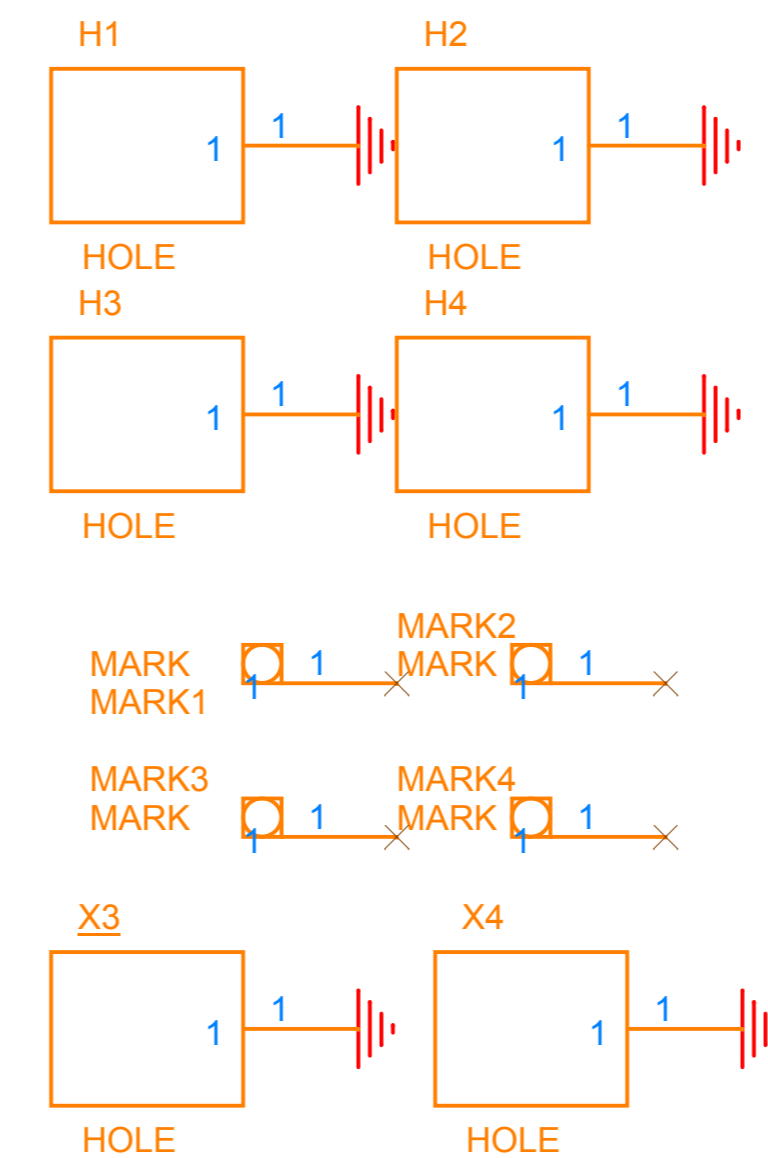
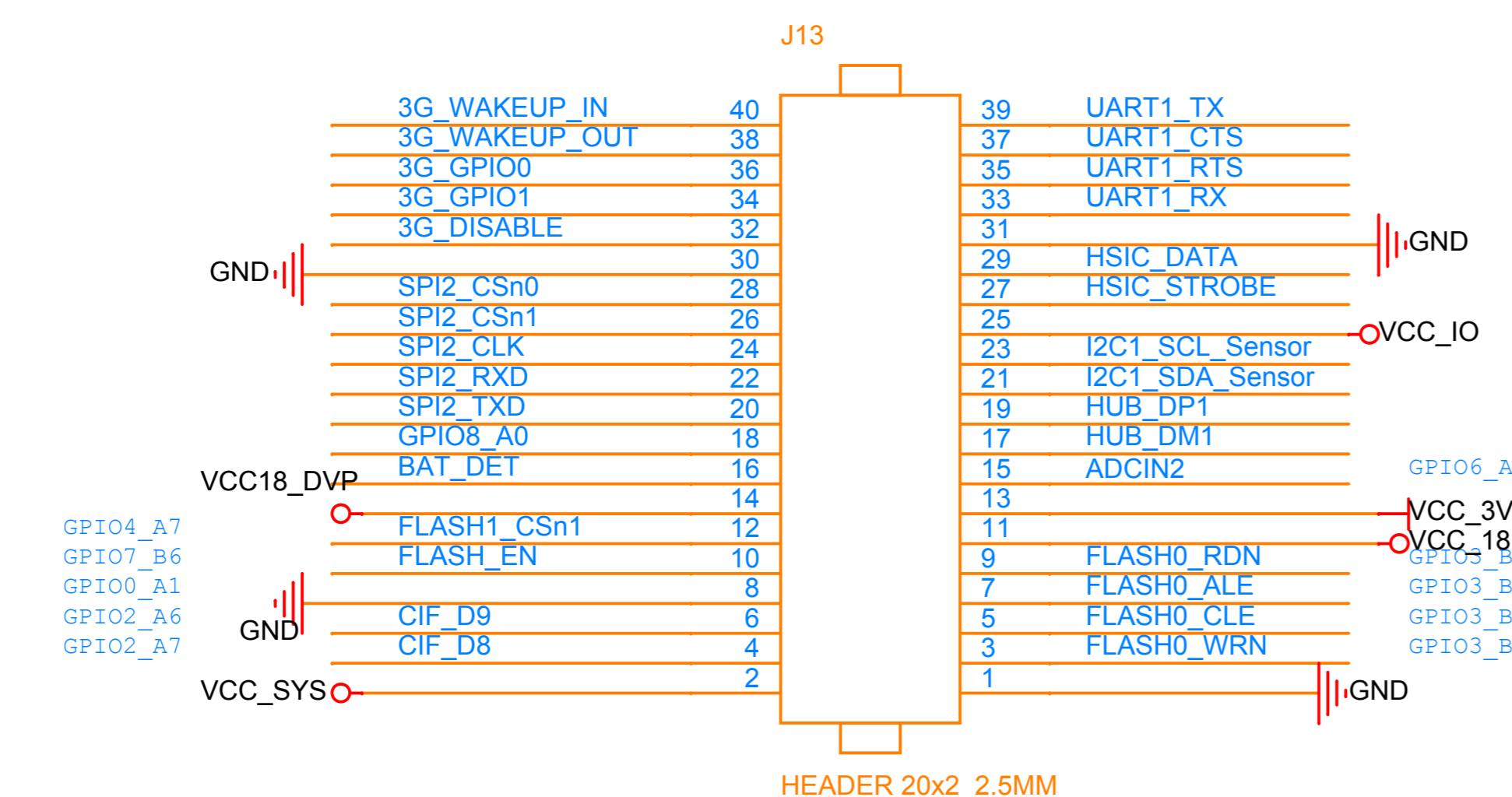
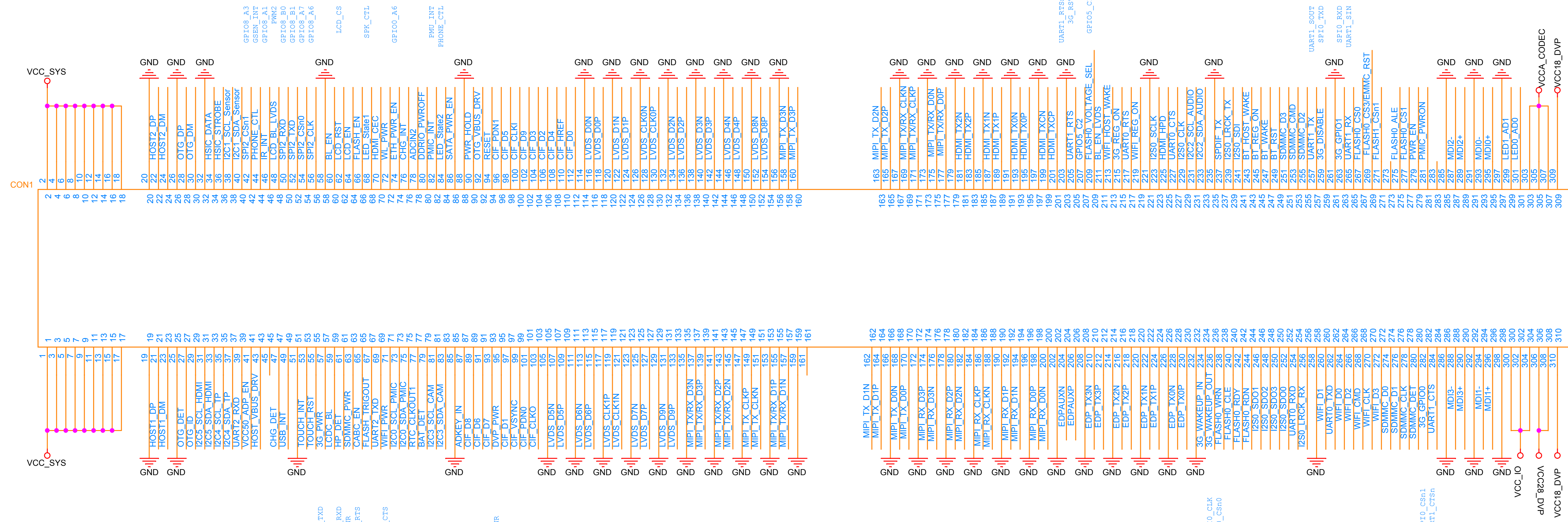
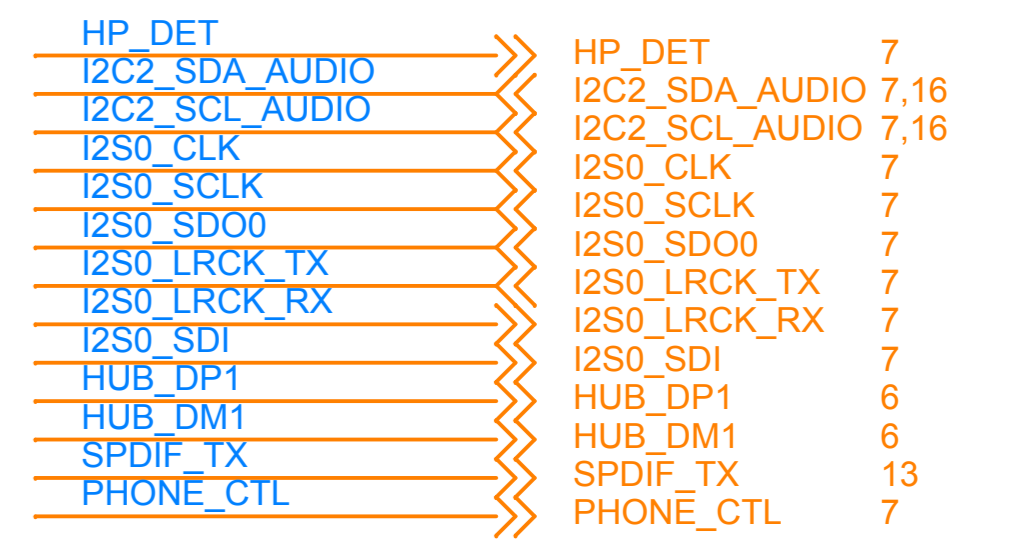
WIFI



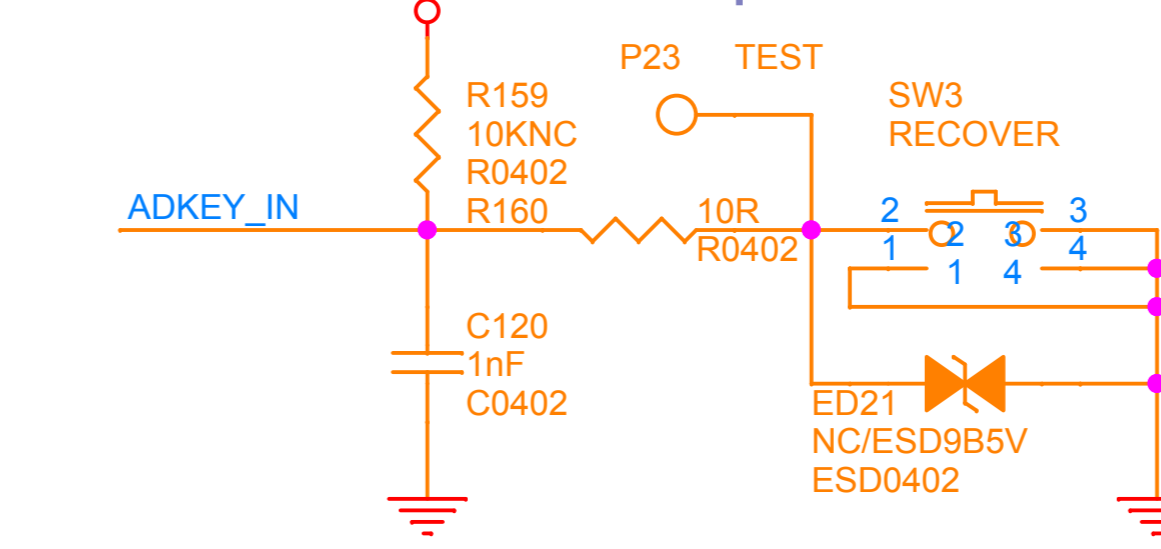
HDMI



AUDIO



Pull up on the coreboard



RECOVERY KEY

