

Changing List

Ver.	Who	Date	Description
Ver.B	Chen Yang	2014-10-15	Initial
Ver.C	Chen Yang	2014-12-01	C102 100nF ----> 4.7uF Update the circuit of DC-iris.
Ver.D	Yin Wei	2014-12-20	Update the design of U6 in order to improve the DC-DC efficiency. Optimize the design of CAP.

The type and specification of the components refer to the BOM

				NA	
				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 2 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

1

2

3

4

5

6

Block Diagram

A

A

B

B

C

C

D

D

The type and specification of the components refer to the BOM

				NA	
				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 3 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

1

2

3

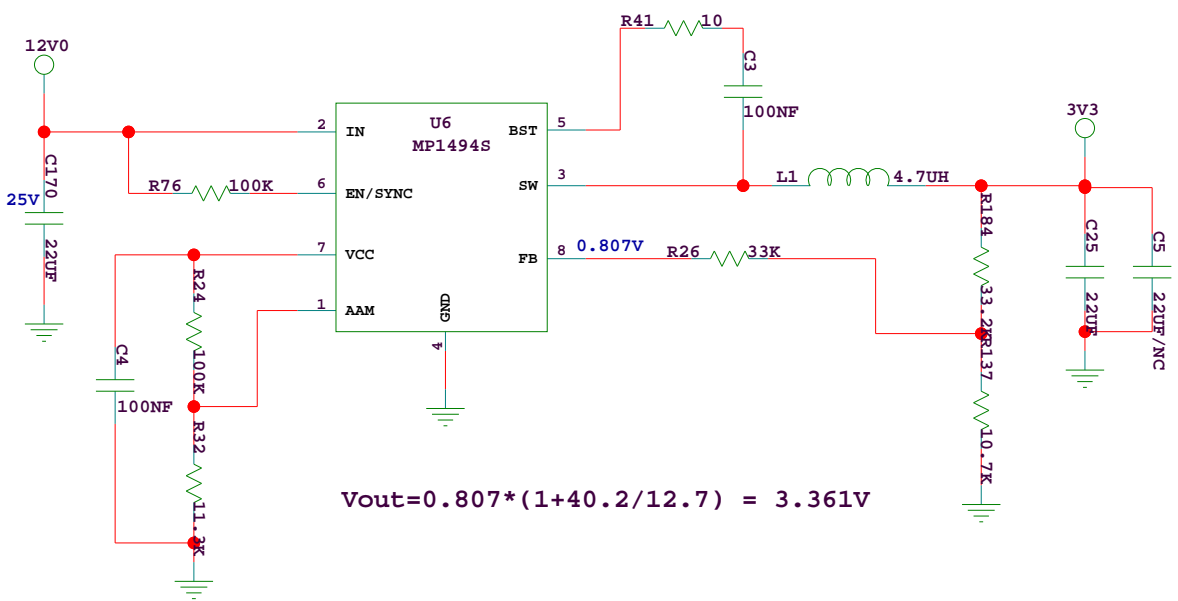
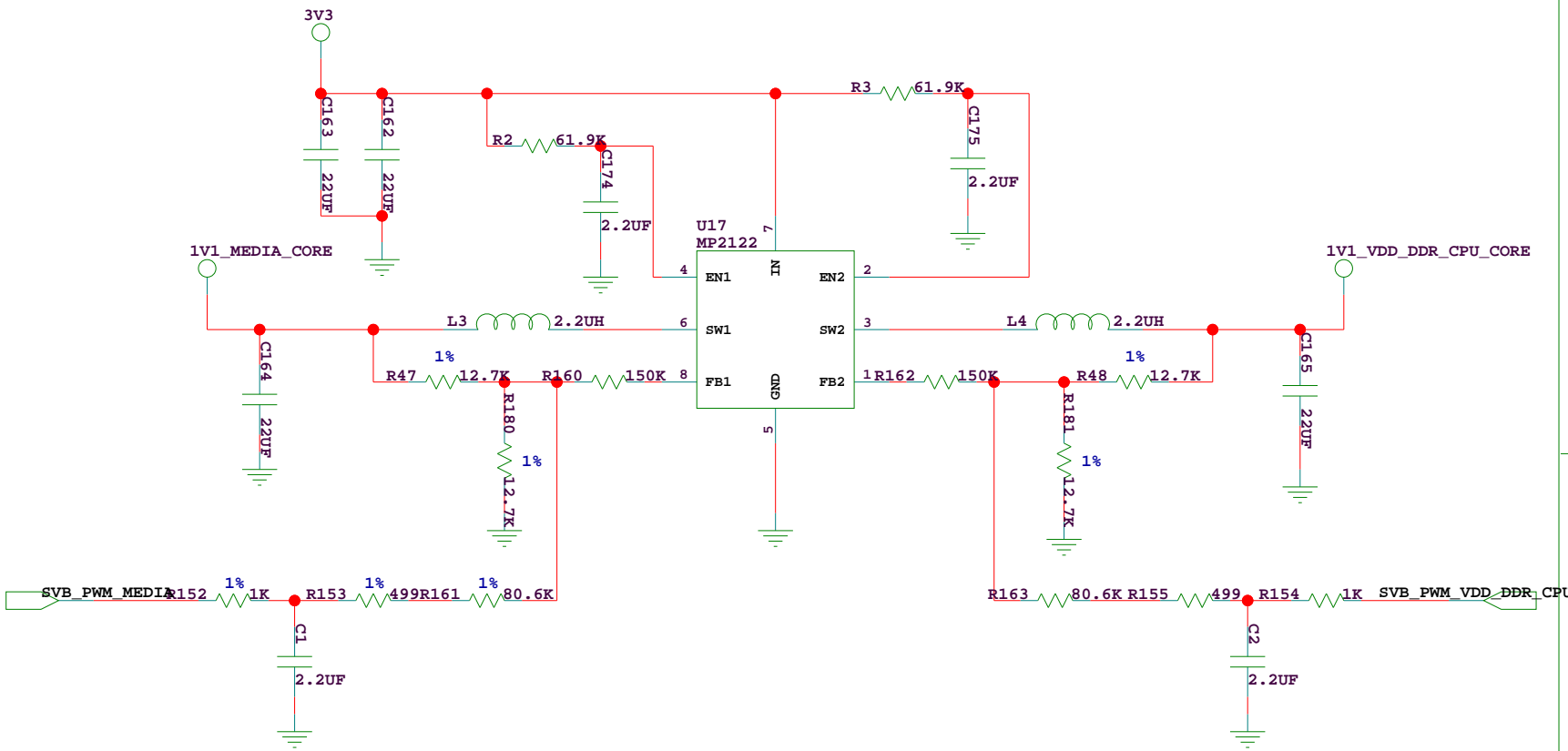
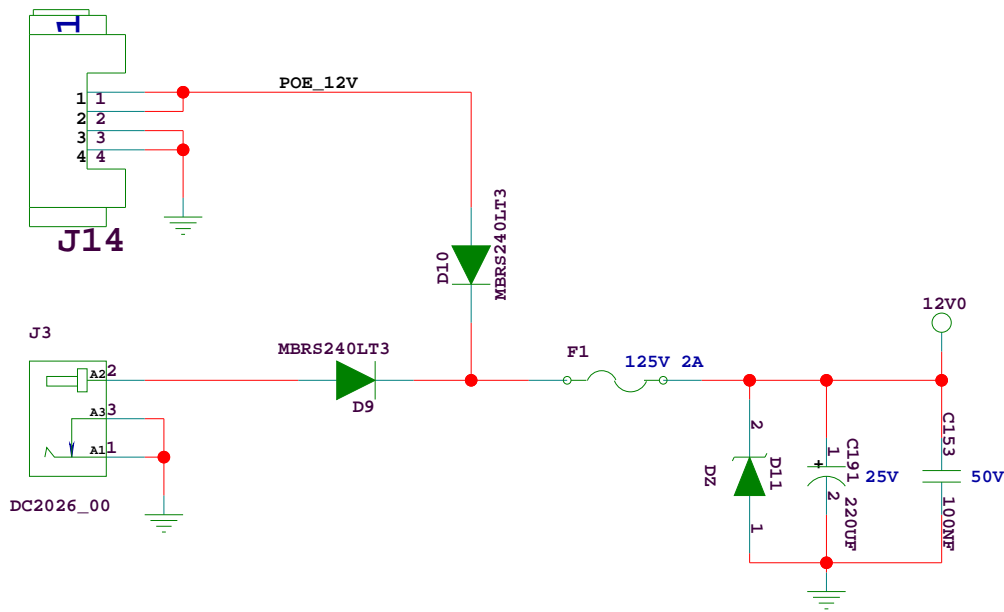
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5

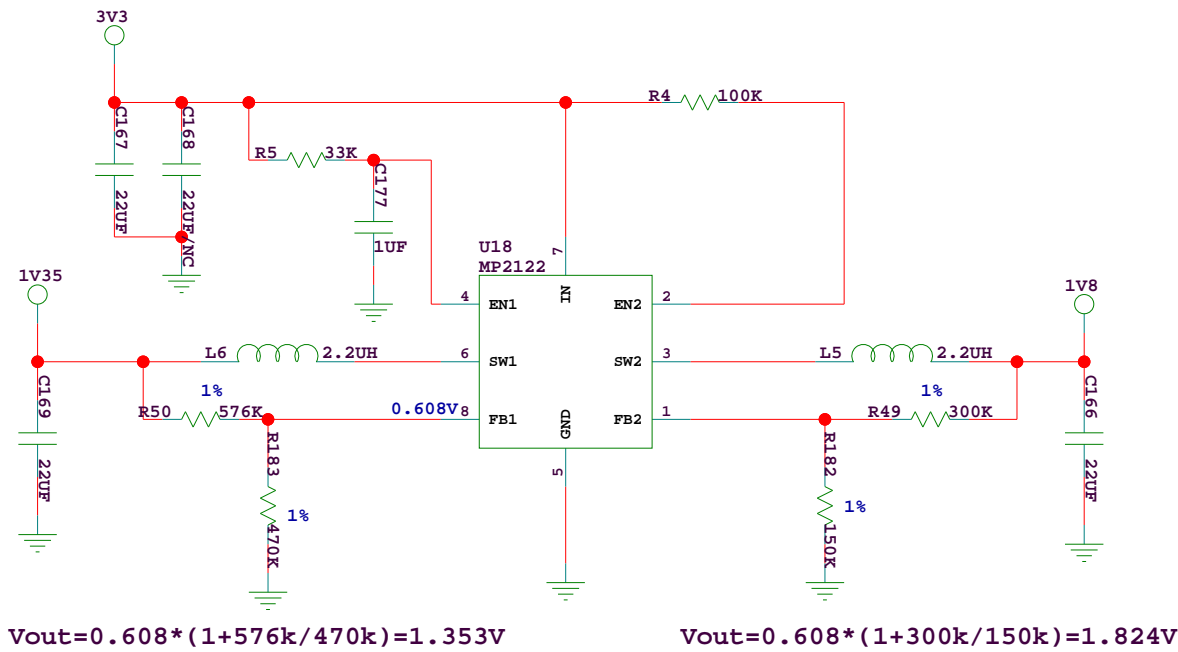
6

	1	2	3	4	5	6
A	Power tree					
B						
C						
D				The type and specification of the components refer to the BOM		
					NA	
					ECA NO	DATE
	DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
	REVIEWED	LISI XXXXX				
			VER	PART_NUMBER	SHEET 4 OF 19	
			B	03030001	HUAWEI TECH CO.,LTD.	
	1	2	3	4	5	6

POWER



$V_{out}=0.807*(1+40.2/12.7) = 3.361V$



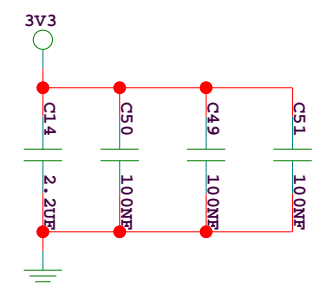
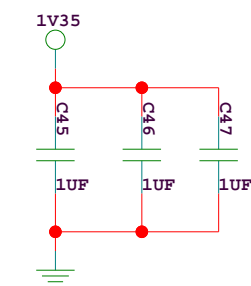
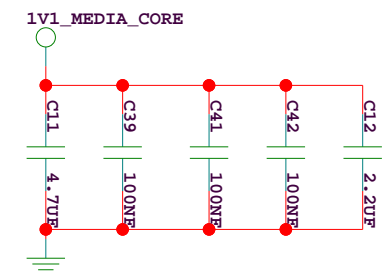
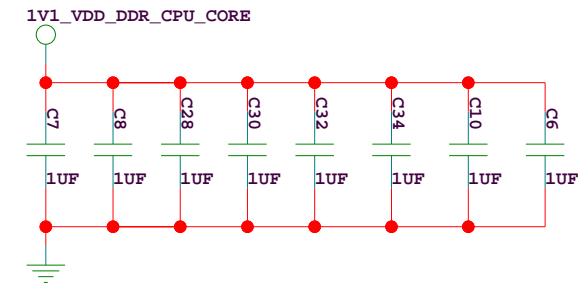
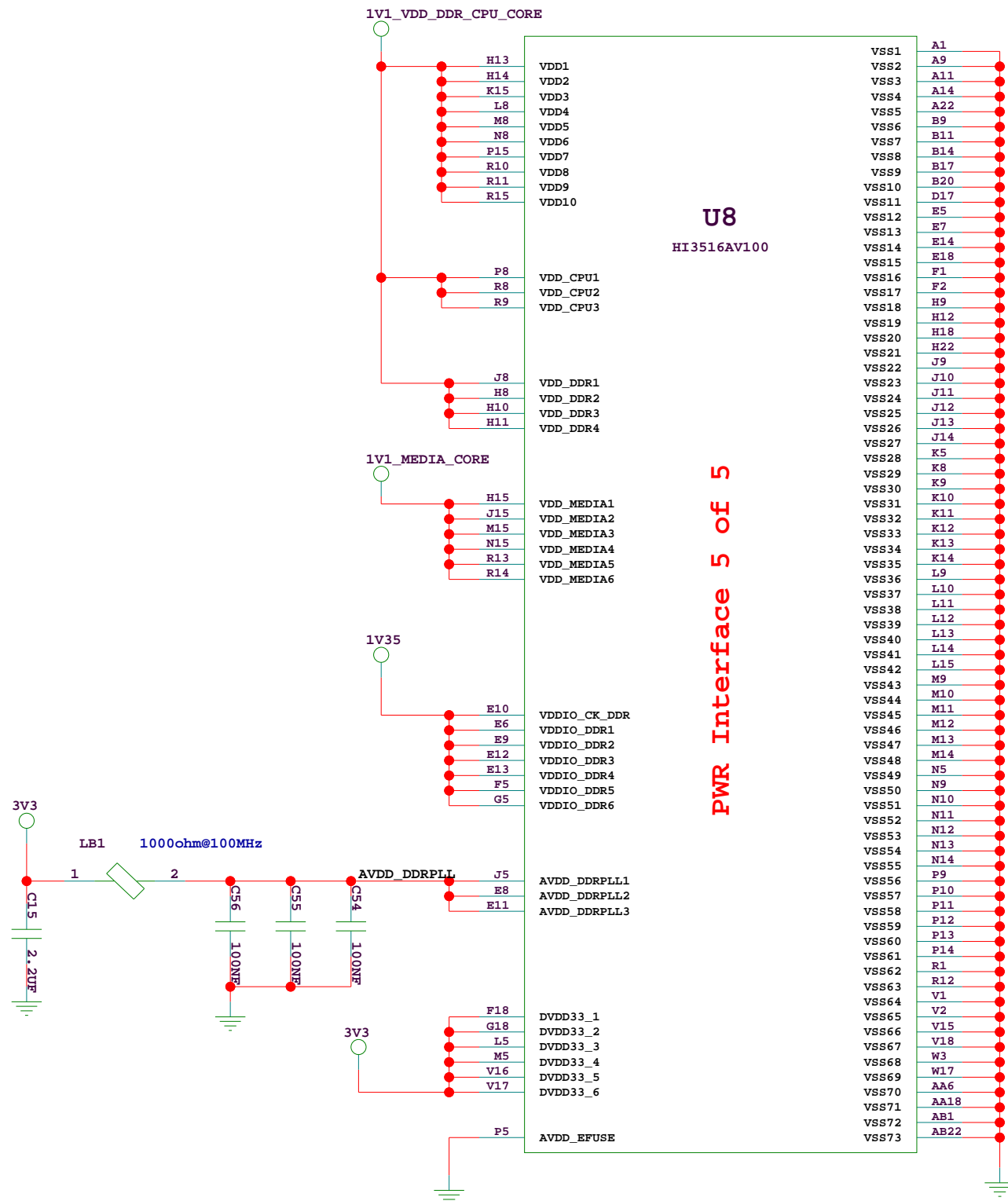
$V_{out}=0.608*(1+576k/470k)=1.353V$

$V_{out}=0.608*(1+300k/150k)=1.824V$

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REVIEWED	LISI XXXXX				
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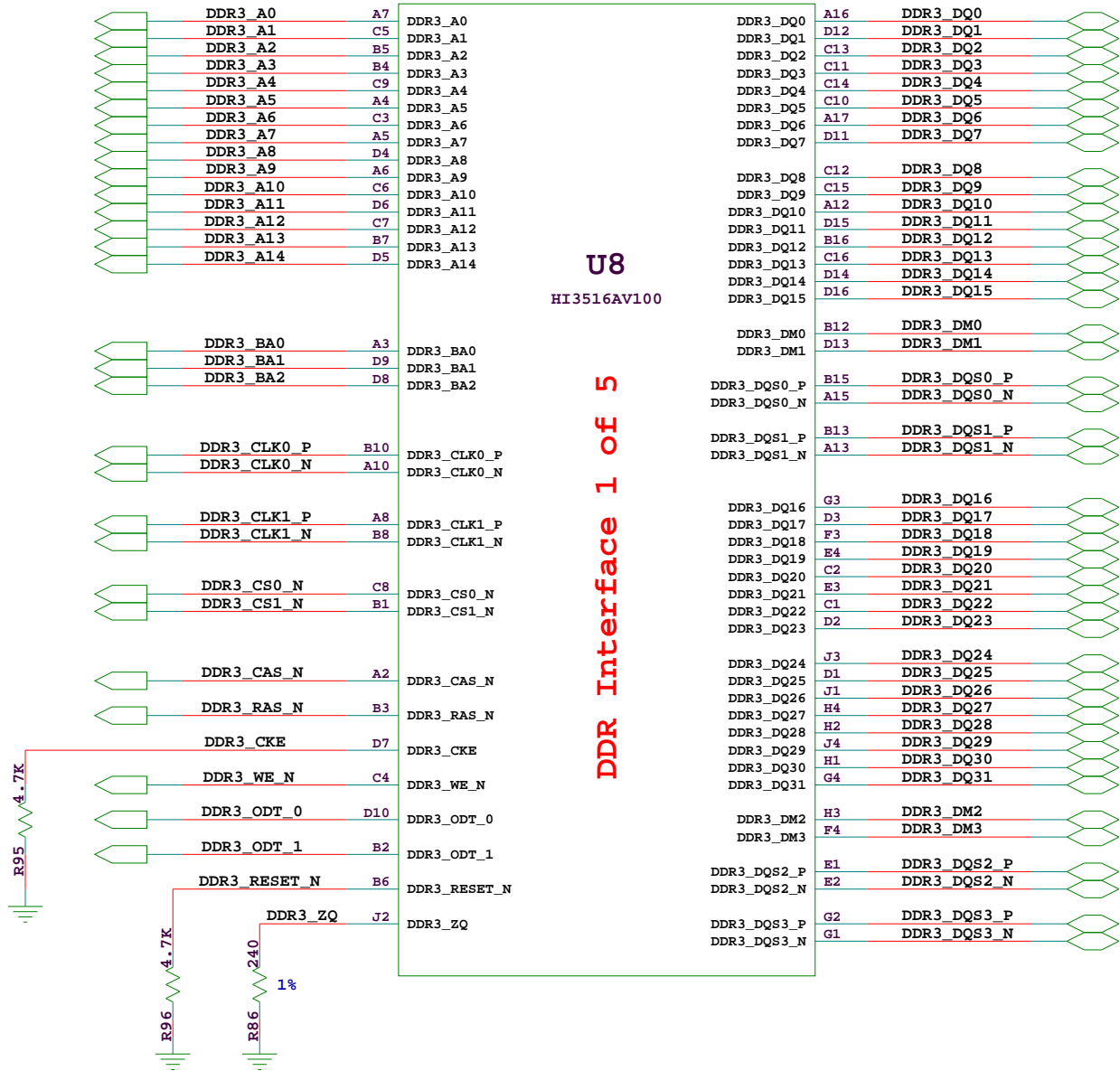
Power of Hi3516A



The type and specification of the components refer to the BOM

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DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 6 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

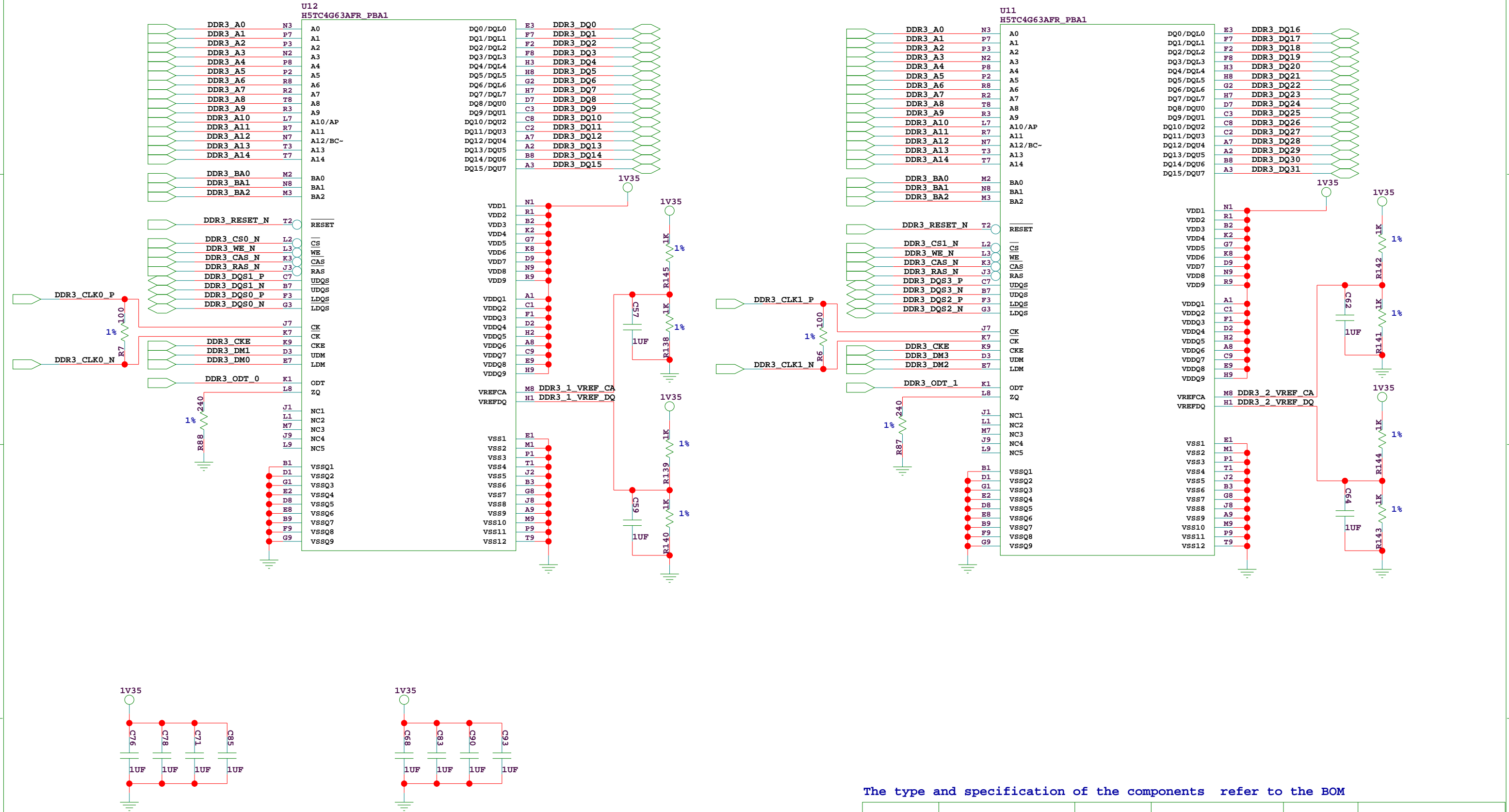
DDR of Hi3516A



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				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 7 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

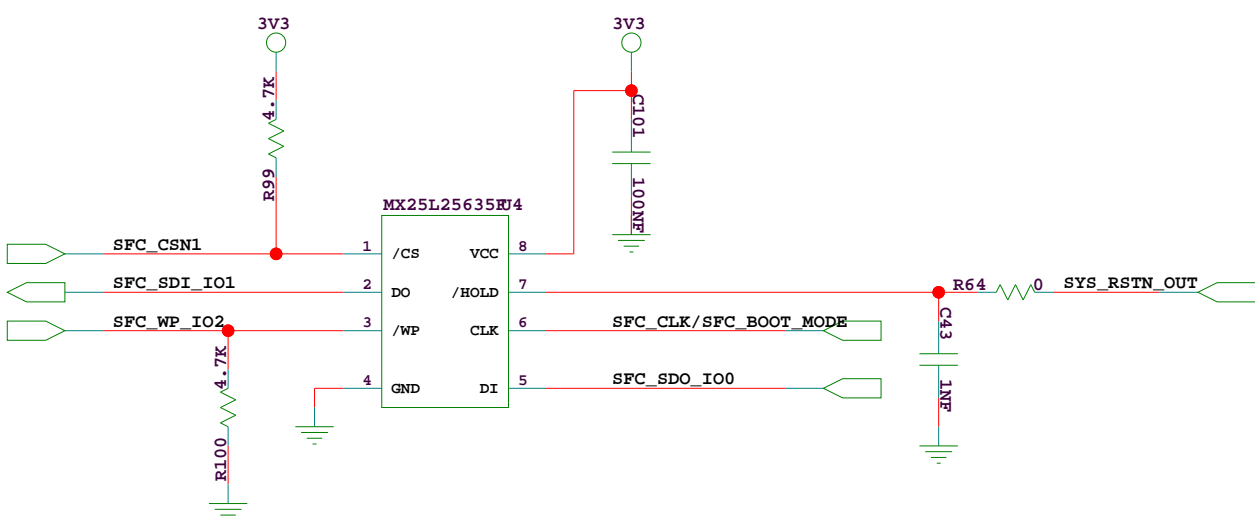
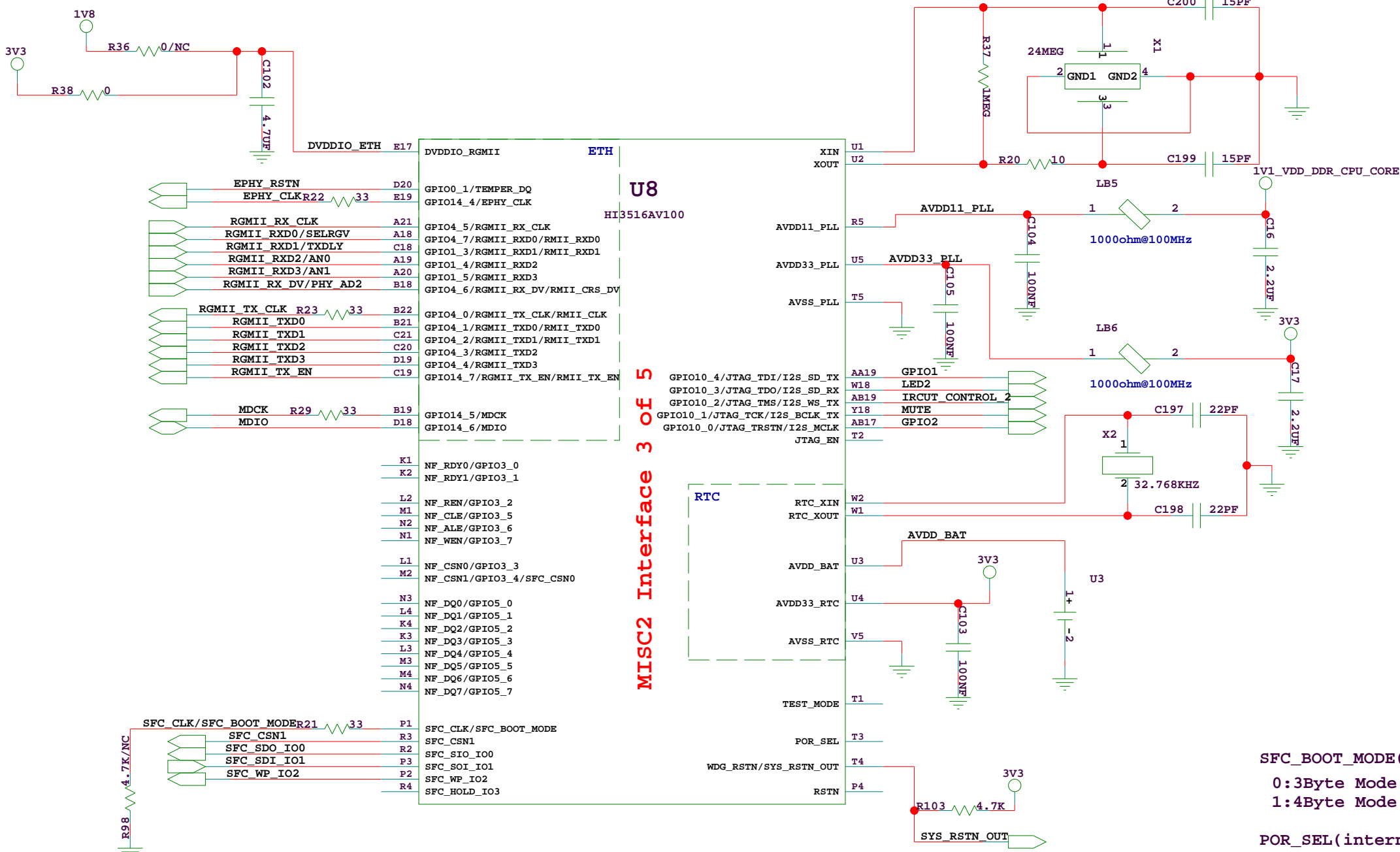
DDR



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				ECA NO	DATE
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Sys of Hi3516A



SFC_BOOT_MODE(internal pull down)
0:3Byte Mode(default)
1:4Byte Mode

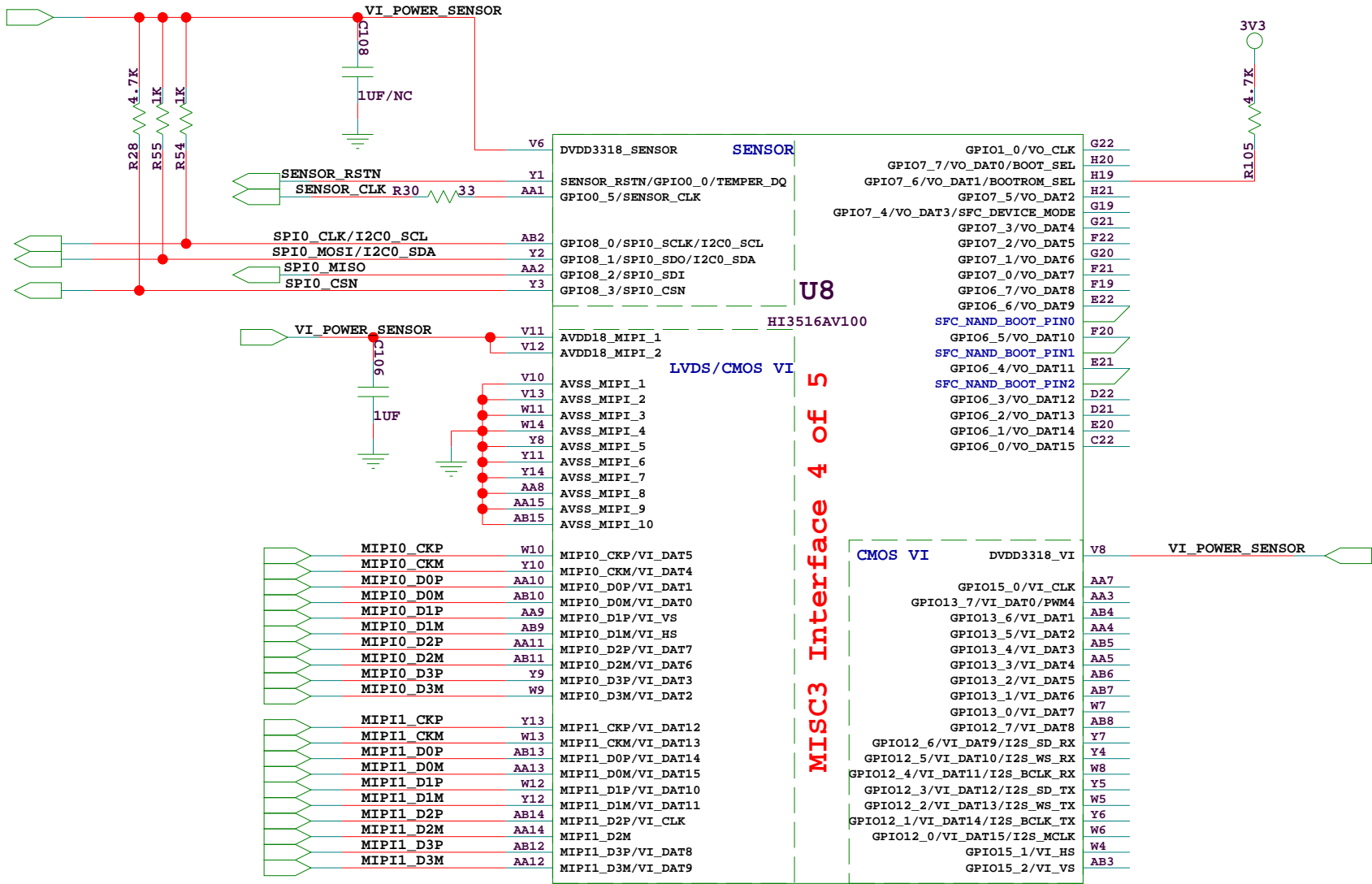
POR_SEL(internal pull down)
0: Enable POR(default)
1: Disable POR

TEST_MODE(internal pull down)
0: Normal(default)
1: Test

JTAG_EN(internal pull down)
0: Disable JTAG(default)
1: Enable JTAG

The type and specification of the components refer to the BOM					
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REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 9 OF 19	
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VIVO of Hi3516A



BOOT_SEL(internal pull down)

0: SPI FLASH

1: NAND FLASH

BOOTROM_SEL(internal pull down)

0: Disable BOOTROM

1: Enable BOOTROM

SFC_DEVICE_MODE(internal pull down)

0: Spi Nor flash

1: Spi Nand flash

SFC_NAND_BOOT_PIN[1:0](default value is 01)

00: 0bit ecc

01: 8bit ecc

10: 16bit ecc

11: 24bit ecc

SF_NAND_BOOT_PIN2(internal pull down)

0: page size is 2kB

1: page size is 4kB

The type and specification of the components refer to the BOM

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				ECA NO	DATE
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		VER	PART_NUMBER	SHEET 10 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

Peripheral of Hi3516A

The diagram illustrates the peripheral interface of the Hi3516A chip, showing connections for various modules and components. The central component is the Hi3516A chip, which is connected to several modules:

- SDXC:** Connected to the SDIO0_VOUT, SDIO0_CCLK_OUT, SDIO0_CDATA0, SDIO0_CDATA1, SDIO0_CDATA2, SDIO0_CDATA3, SDIO0_CARD_POWER_EN, SDIO0_CARD_DETECT, SDIO0_CWPR, SDIO0_CCMD, SDIO1_VOUT, SDIO1_CCLK_OUT, SDIO1_CDATA0, SDIO1_CDATA1, SDIO1_CDATA2, SDIO1_CDATA3, SDIO1_CARD_POWER_EN, SDIO1_CARD_DETECT, SDIO1_CWPR, and SDIO1_CCMD.
- AUDIO:** Connected to the AVDD33_AC, AVSS_AC1, AVSS_AC2, AVSS_AC3, AVSS_AC4, AC_MICBIAS, AC_LINEL, AC_LINER, AC_OUTL, AC_OUTR, and AC_VREF.
- CVBS:** Connected to the AVDD33_VDAC, AVSS_VDAC, VDAC_CVBS, and VDAC_IREF.
- USB:** Connected to the AVDD33_USB, AVSS_USB1, AVSS_USB2, AVSS_USB3, USB_DP, USB_DM, and USB_REXT.
- I2C:** Connected to the I2C2_SDA and I2C2_SCL.

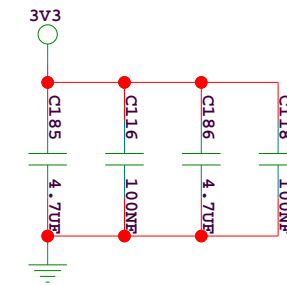
The diagram also shows various external components, including resistors (R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100), capacitors (C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100), and other components (U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31, U32, U33, U34, U35, U36, U37, U38, U39, U40, U41, U42, U43, U44, U45, U46, U47, U48, U49, U50, U51, U52, U53, U54, U55, U56, U57, U58, U59, U60, U61, U62, U63, U64, U65, U66, U67, U68, U69, U70, U71, U72, U73, U74, U75, U76, U77, U78, U79, U80, U81, U82, U83, U84, U85, U86, U87, U88, U89, U90, U91, U92, U93, U94, U95, U96, U97, U98, U99, U100).

The type and specification of the components refer to the BOM

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			SHEET 11 OF 19
			HUAWEI TECH CO.,LTD.

[illegible][illegible]

D



DVDDIO_ETH

R107	4.7K	RGMII_RXD0/SELRGV
R109	4.7K	RGMII_RXD2/AN0
R110	4.7K	RGMII_RXD3/AN1

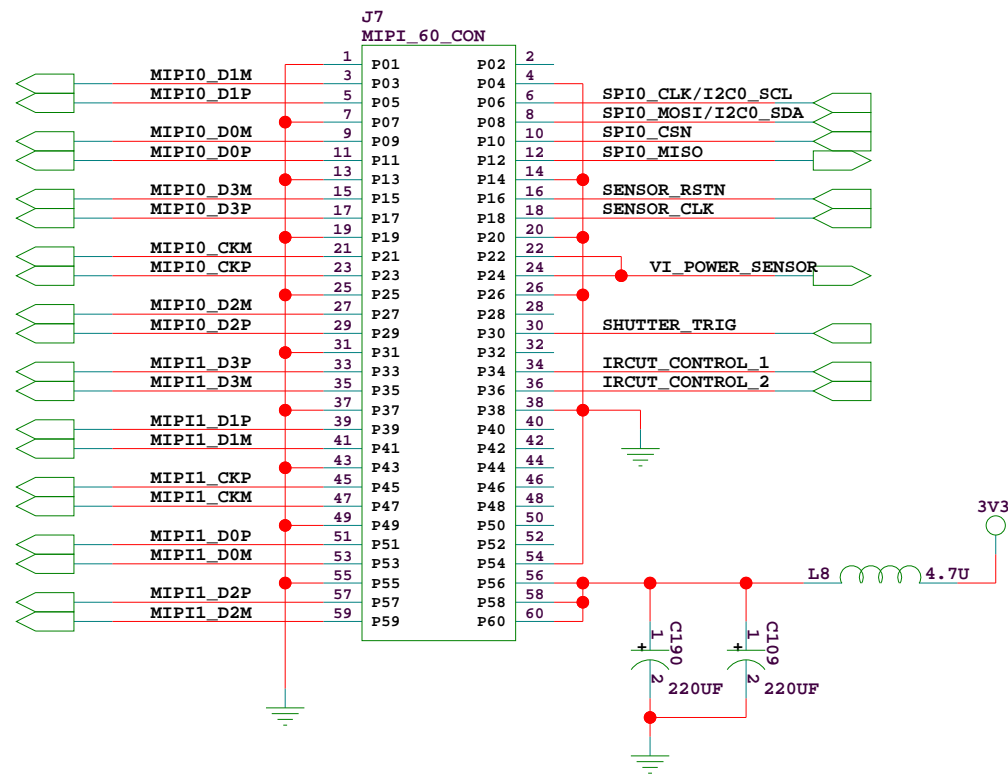
AN[1:0]=11: Auto Negotiation



				NA	
				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 12 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

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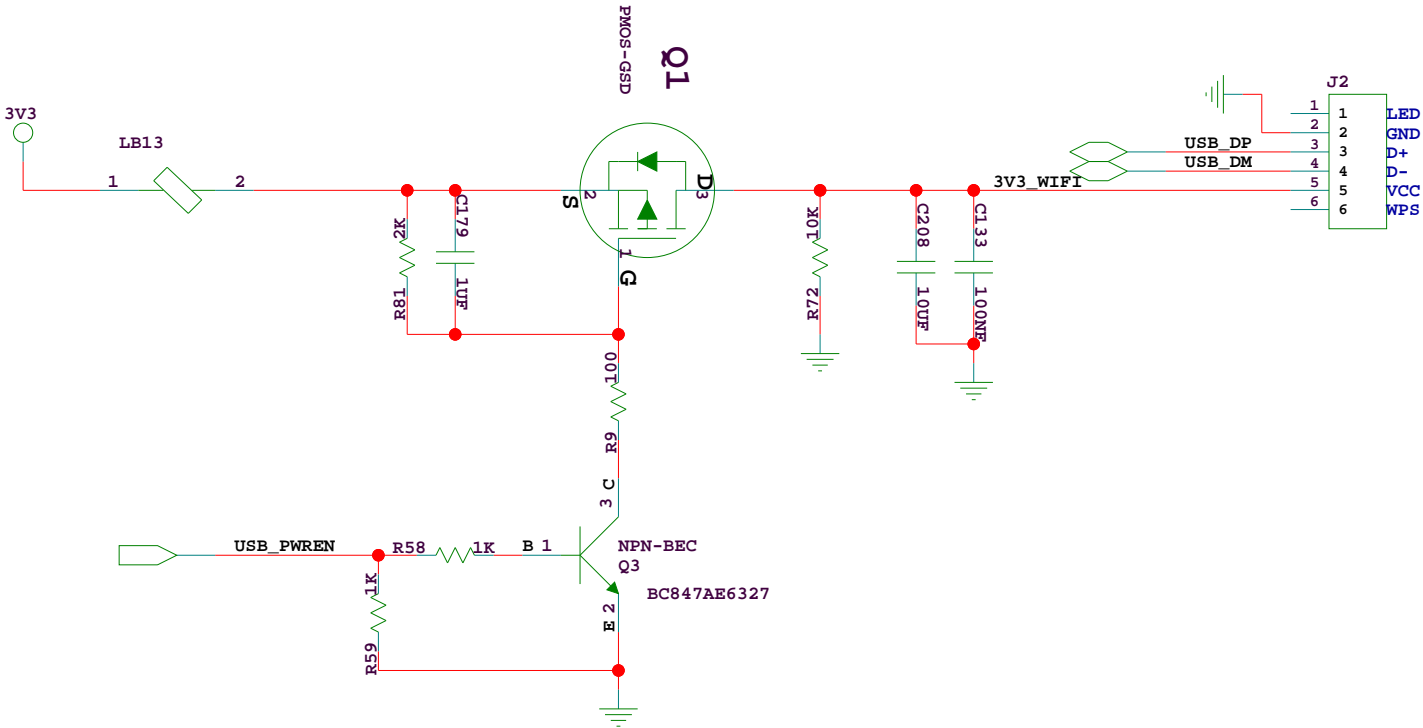
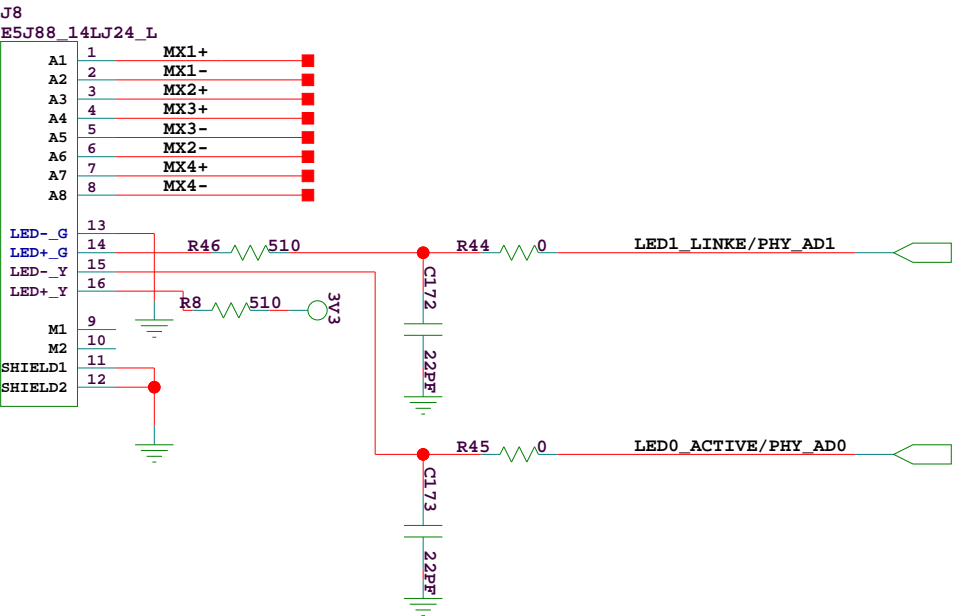
Sensor Connector



The type and specification of the components refer to the BOM

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				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 13 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

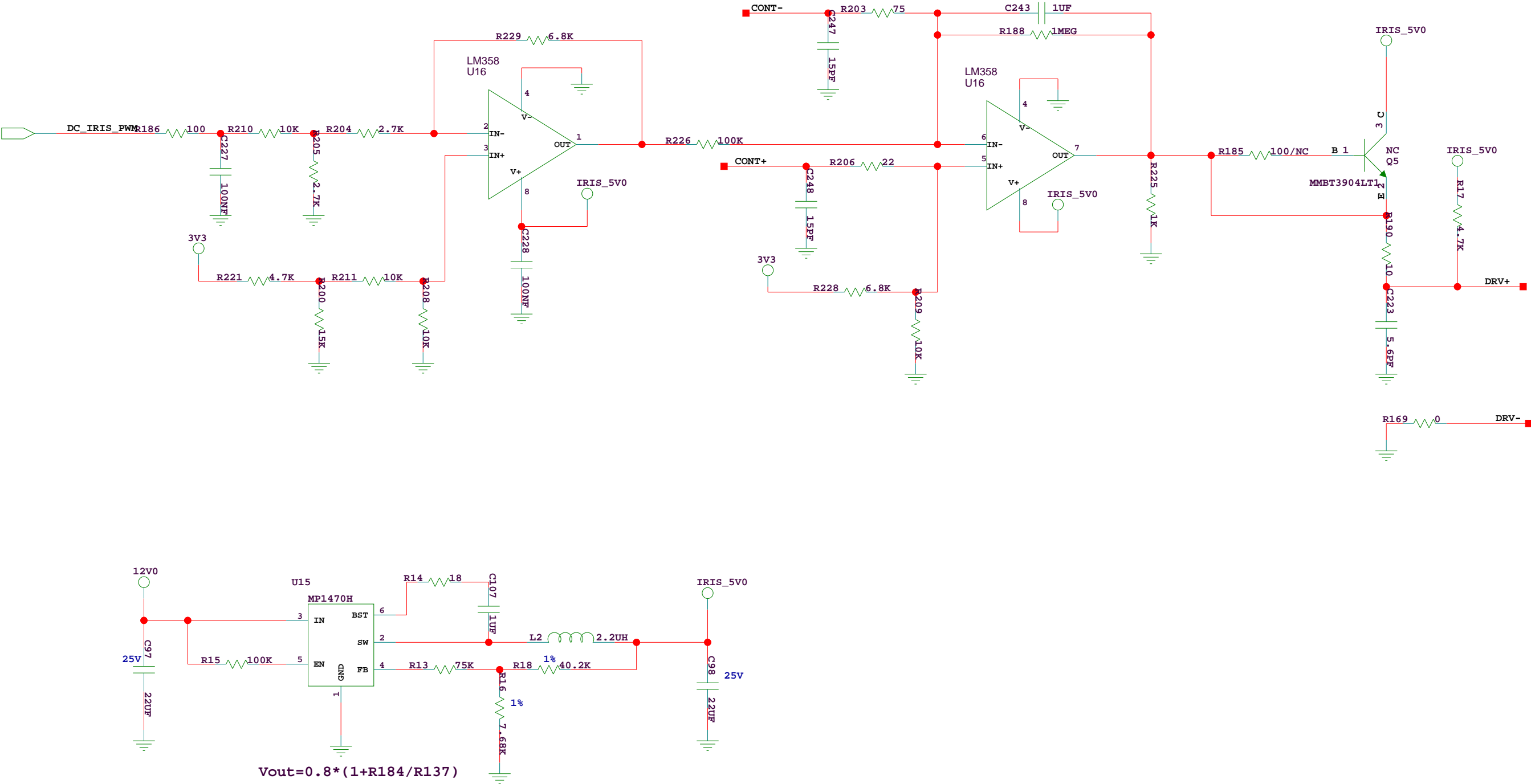
RJ45 and WIFI



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				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 14 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

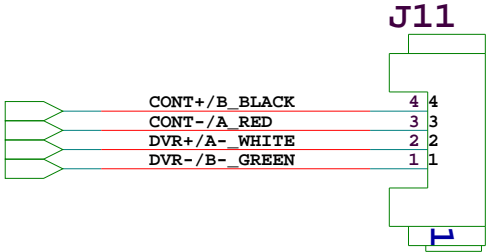
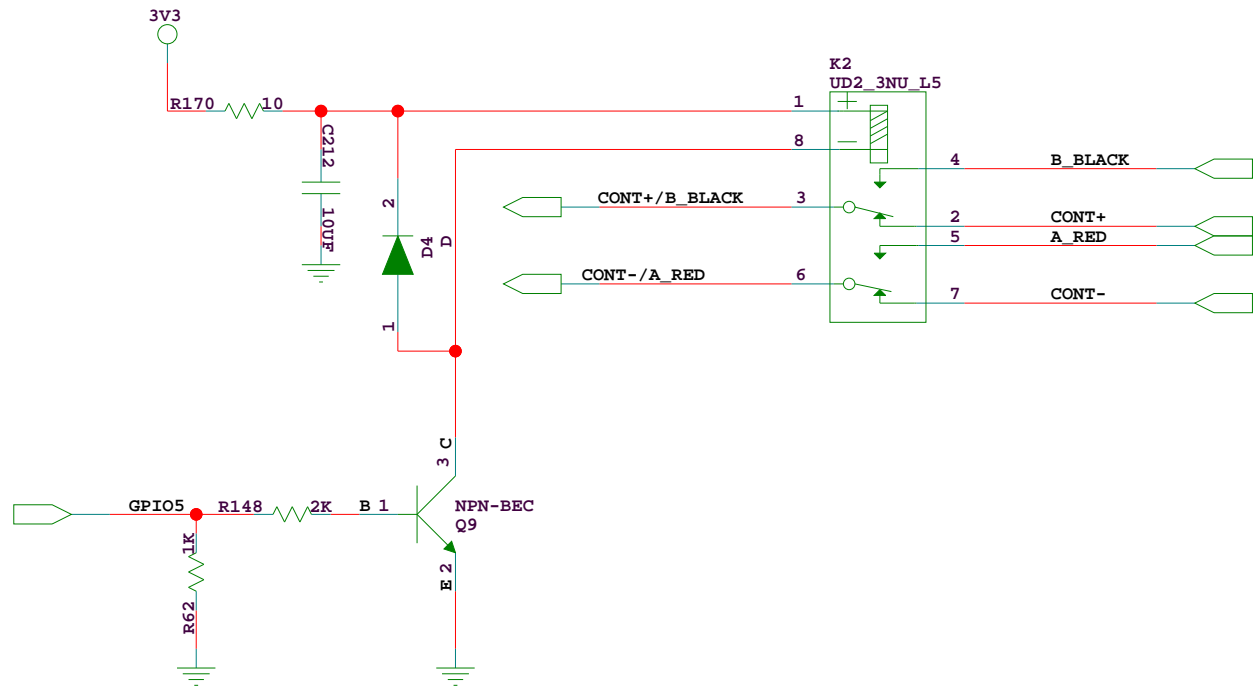
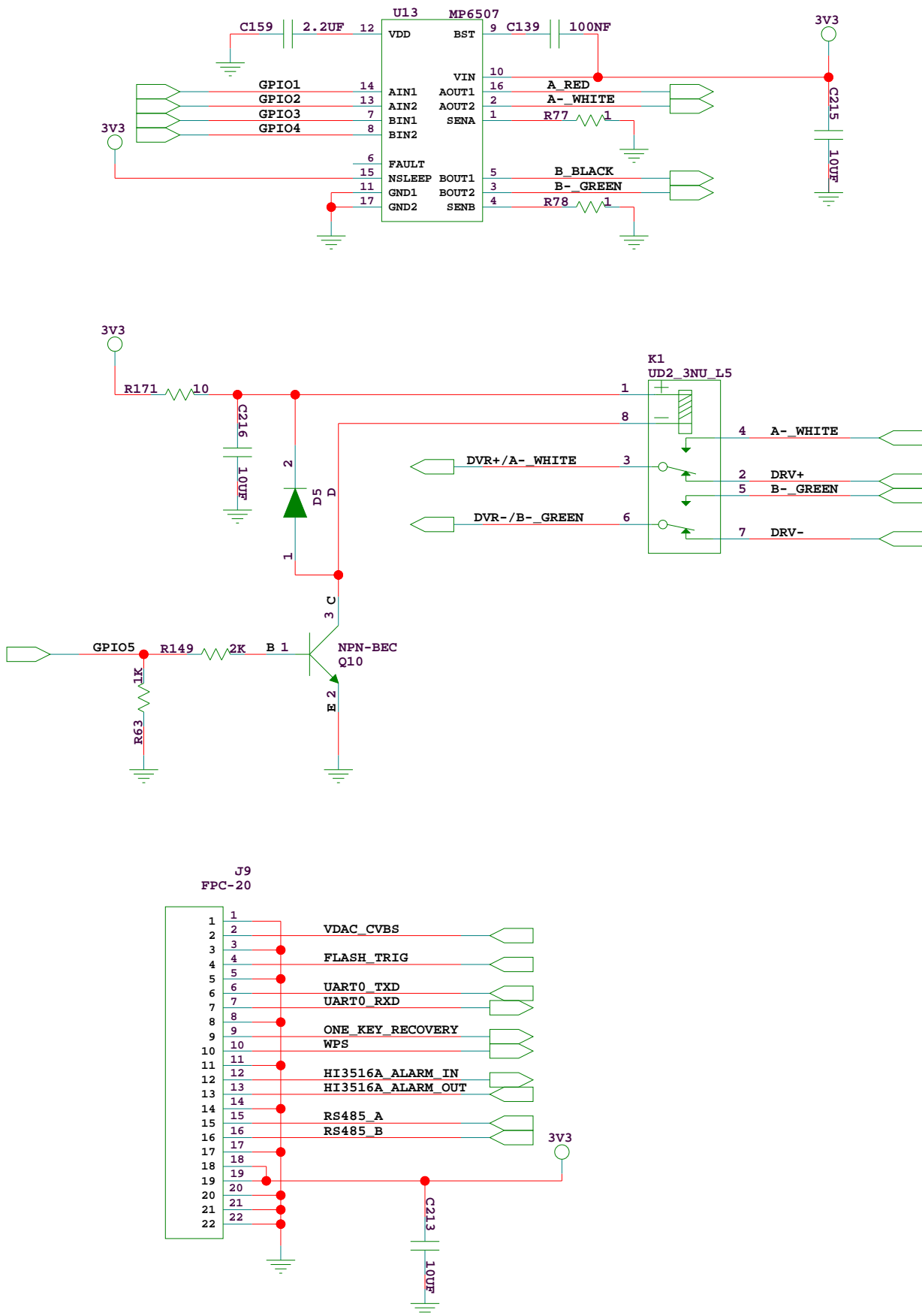
DC_IRIS



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DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 16 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

P-IRIS and Switch Circuit

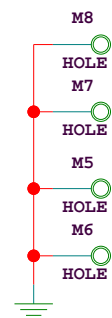
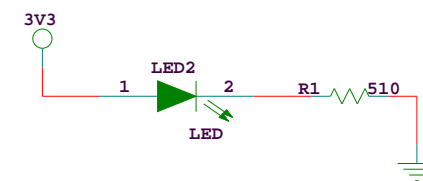
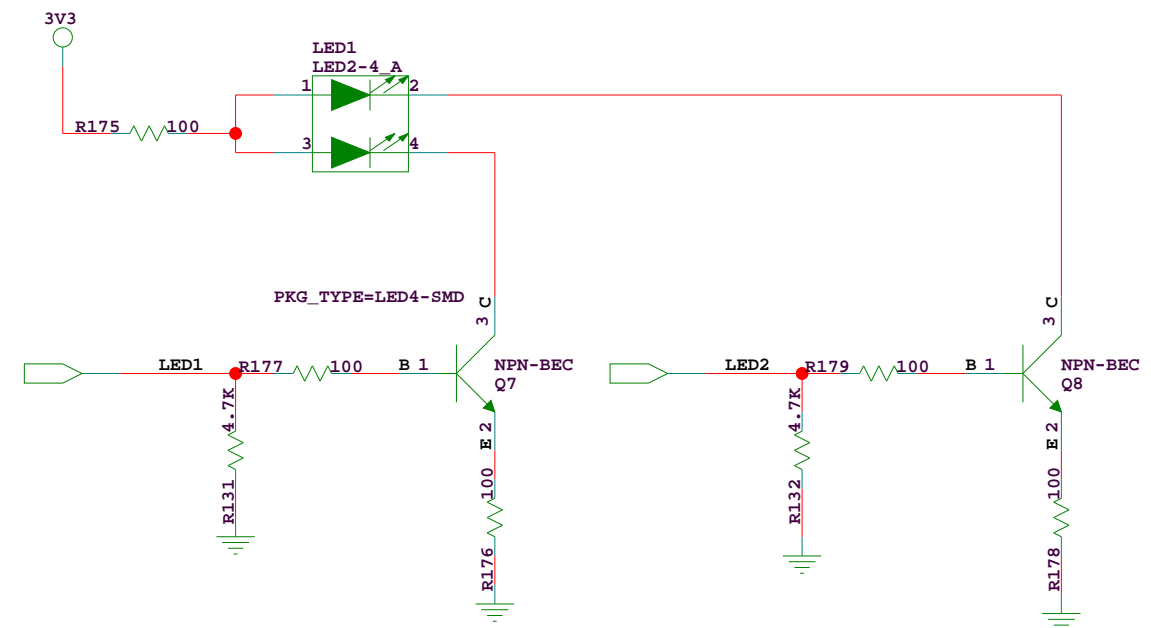
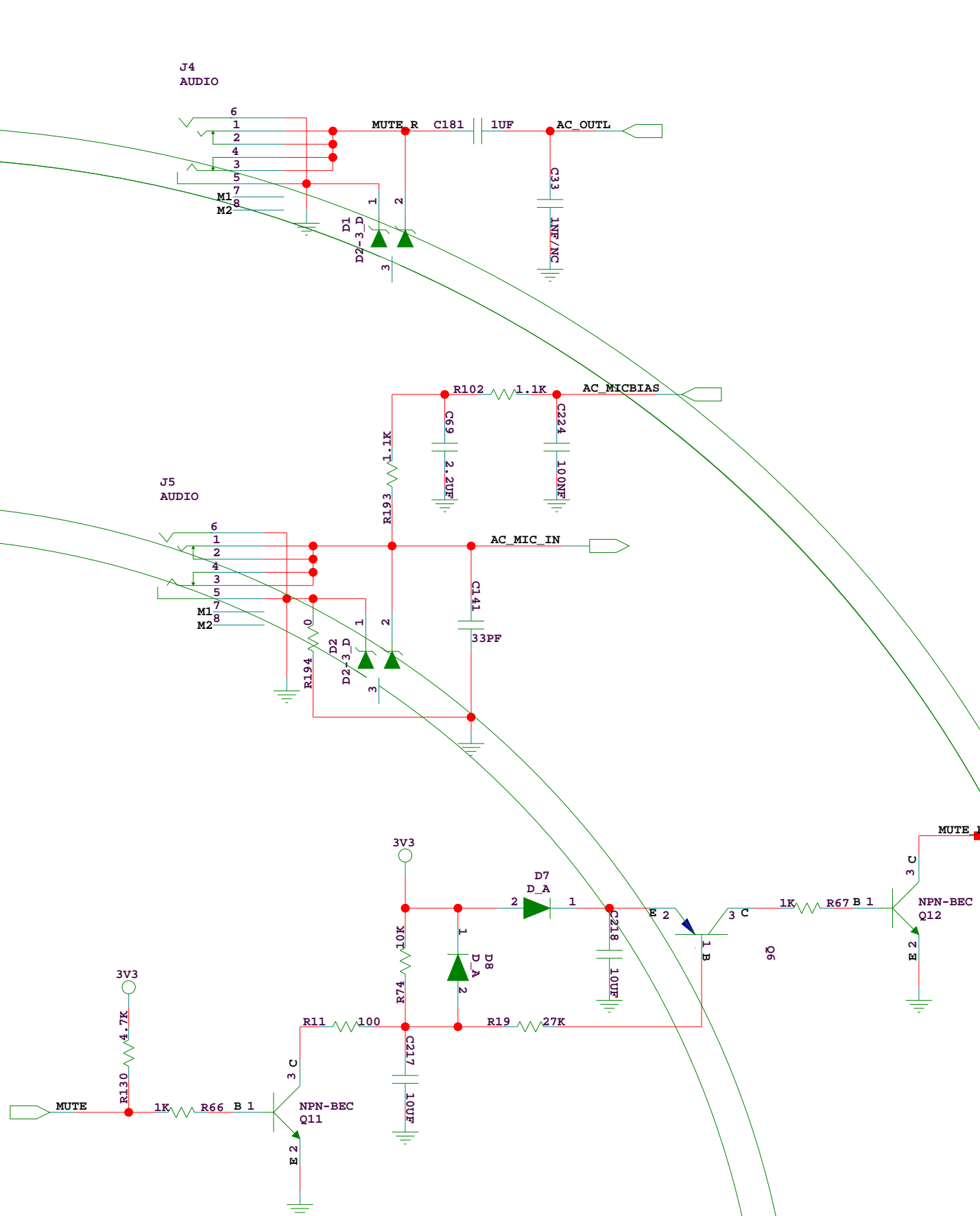


SDW12501_4A_HW

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				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET 17 OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.	

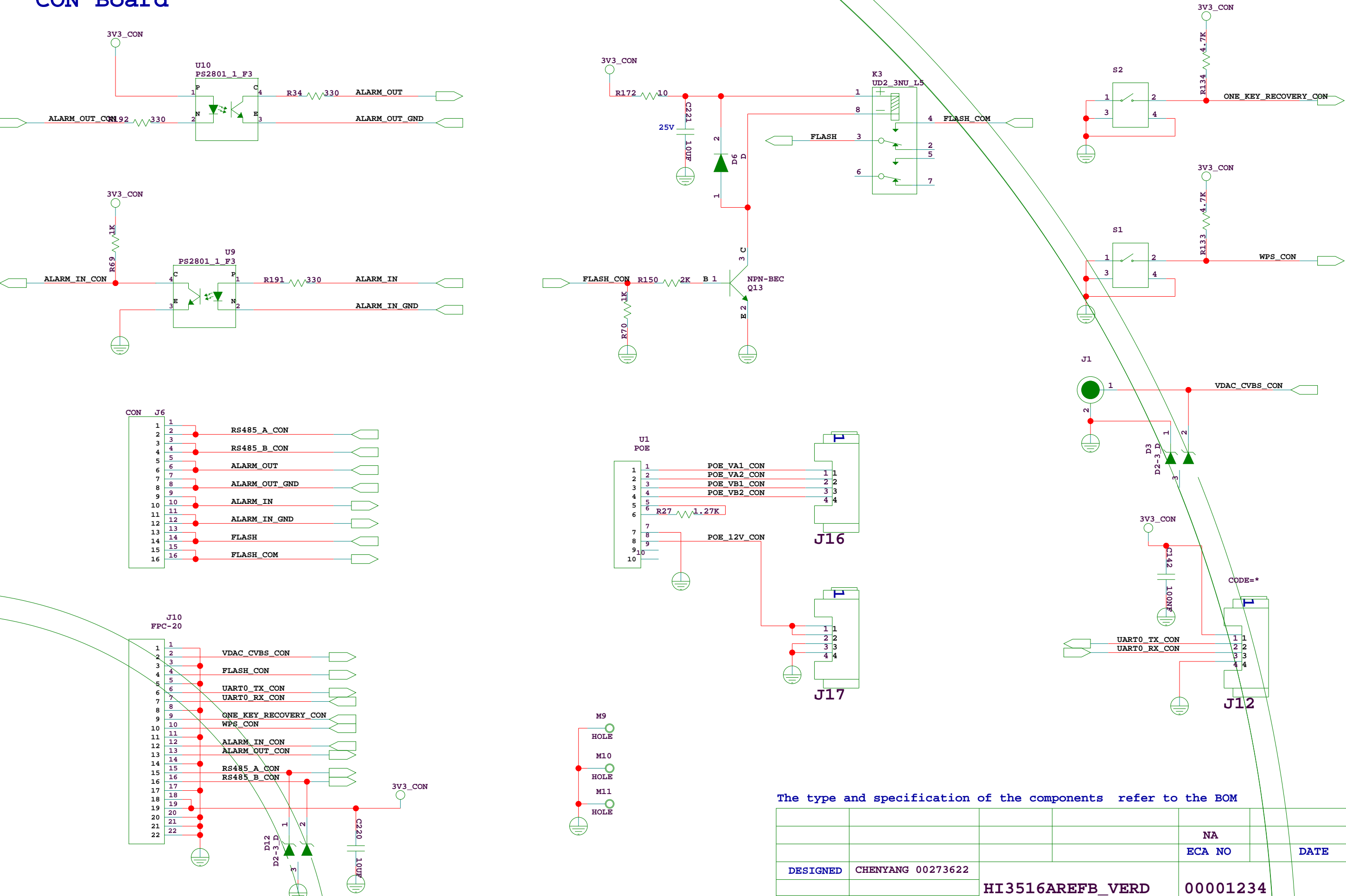
Audio and LED



The type and specification of the components refer to the BOM

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				ECA NO	DATE
DESIGNED	CHENYANG 00273622	HI3516AREFB_VERD		00001234	
REVIEWED	LISI XXXXX				
		VER	PART_NUMBER	SHEET	18 OF 19
		B	03030001	HUAWEI TECH CO.,LTD.	

CON Board



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REVIEWED	LISI XXXXX					
		VER	PART_NUMBER	SHEET 19	OF 19	
		B	03030001	HUAWEI TECH CO.,LTD.		