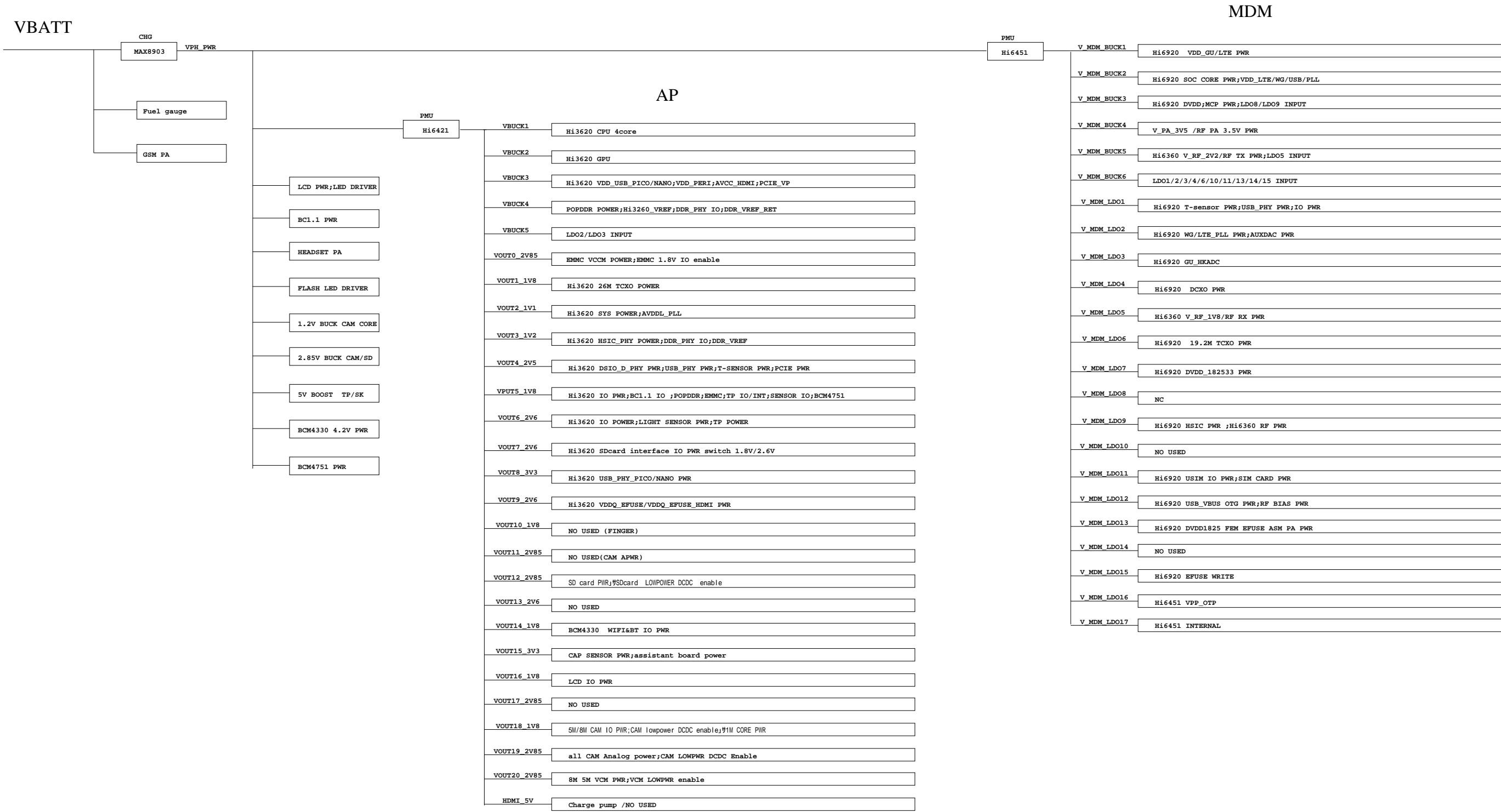


	1	2	3	4	5	6
A	BB SCHEMETIC					
	1. Contents		23. MainBoard to SubBoard Connector		40. WCDMA TX	
	2. POWER TREE		24. Test Points/JTAG/Shields		41. FEM	
	3. Hi3620V100		25. Hi6920 RF IO		42. WCDMA	
	4. Hi3620V100					
	5. Hi3620V100		26. Balong Memory Interface		43. DIVERSITY ANTENNA	
	6. Hi3620V100		27. Balong Interface and GPIO		44~46. RESERVED	
B	7. Hi3620V100		28.Hi6920 Power			
	8. GPU Power		29.PMU Hi6451			
	9. Hi6421V200		30~31. NC			
	10. Hi6421V200		32.Camera Power			
	11. 8/16GB eMMC AND LPDDR		33. NC			
	12. RESERVED		34. BCM4330 BB			
	13. Battery/Vabrator		35. WIFI RF			
	14. MIC & MR Sensor		36.GPS RF			
C	15. 3.5 Headphone port/Vibrator		37 CAPACITOR SENSOR			
	16. LCD interface		38. ANT & TCXO			
	17. TP		39. HI6360(Balong RF)			
	18. Main Camera and Slave Camera					
	19. USB/Charge management					
	20. Sensor/Status indicator					
	21. SIM/TF card					
D	22. Ambient Light					
				The type and specification of the components refer to the BOM		
					NA	2011-11-30
					ECA NO	DATE
			DESIGNED	SUNQIAODAN KF39018	SH4101UM	
			REVIEWED	YANXUXING 00166792		
					VER	PART_NUMBER
					A	03021SHJ
						SHEET 1 OF 43
						HUAWEI TECH CO.,LTD.
	1	2	3	4	5	6

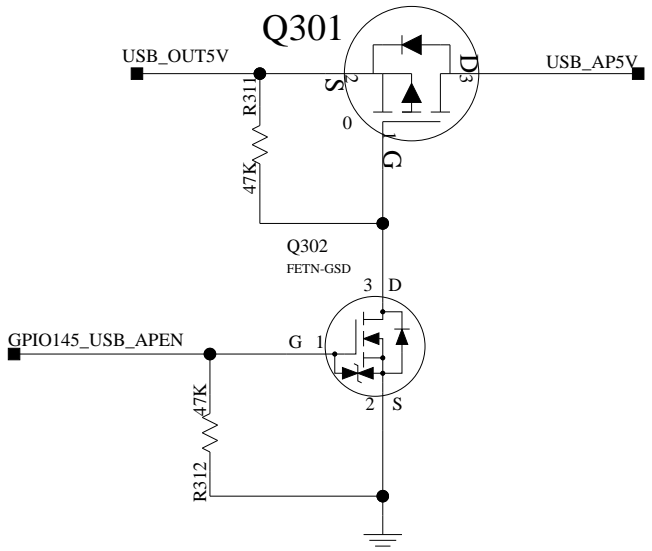
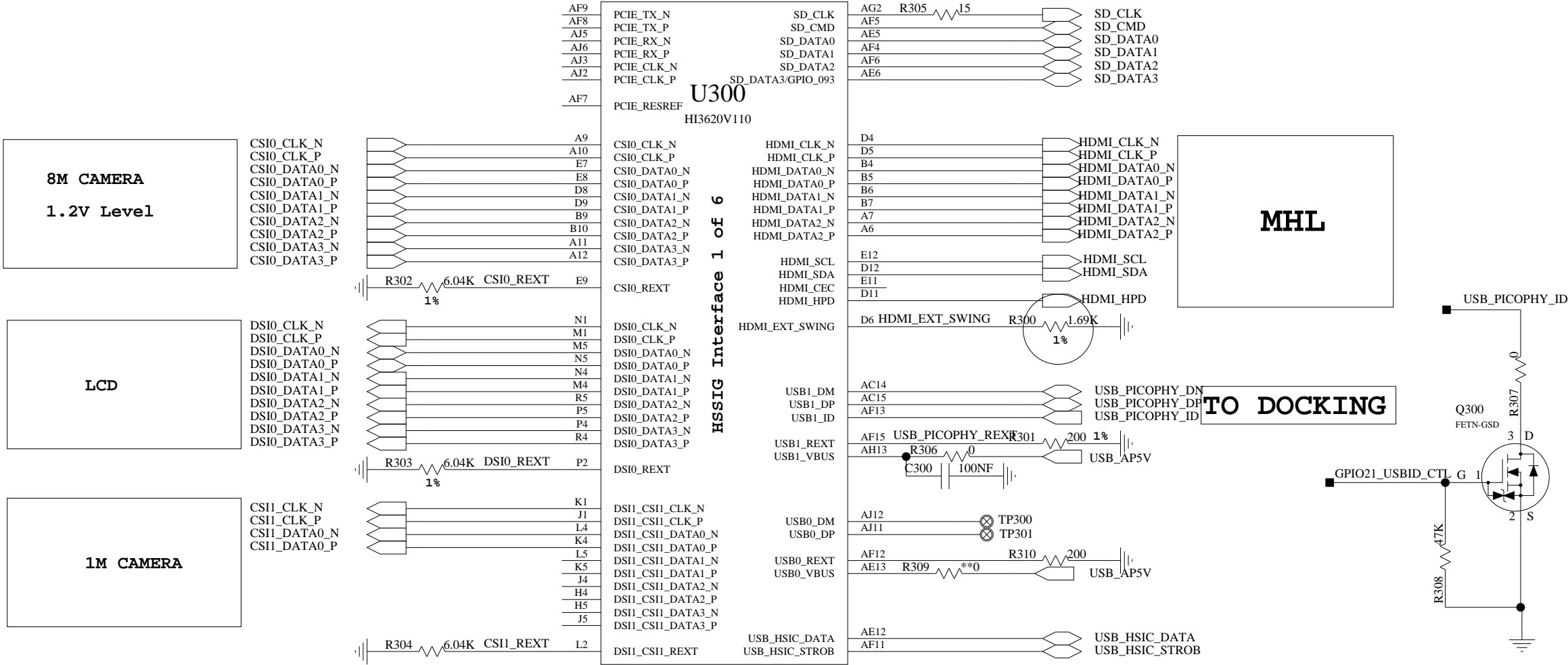
2.Power Tree



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	SUNQIAODAN KF39018	SH4101UM		B519710_SCHZH	
REVIEWED	YANXUXING 00166792				
		VER	PART_NUMBER	SHEET 2 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

3. Hi3620



Hi3620v100 high speed siganl

The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 3 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

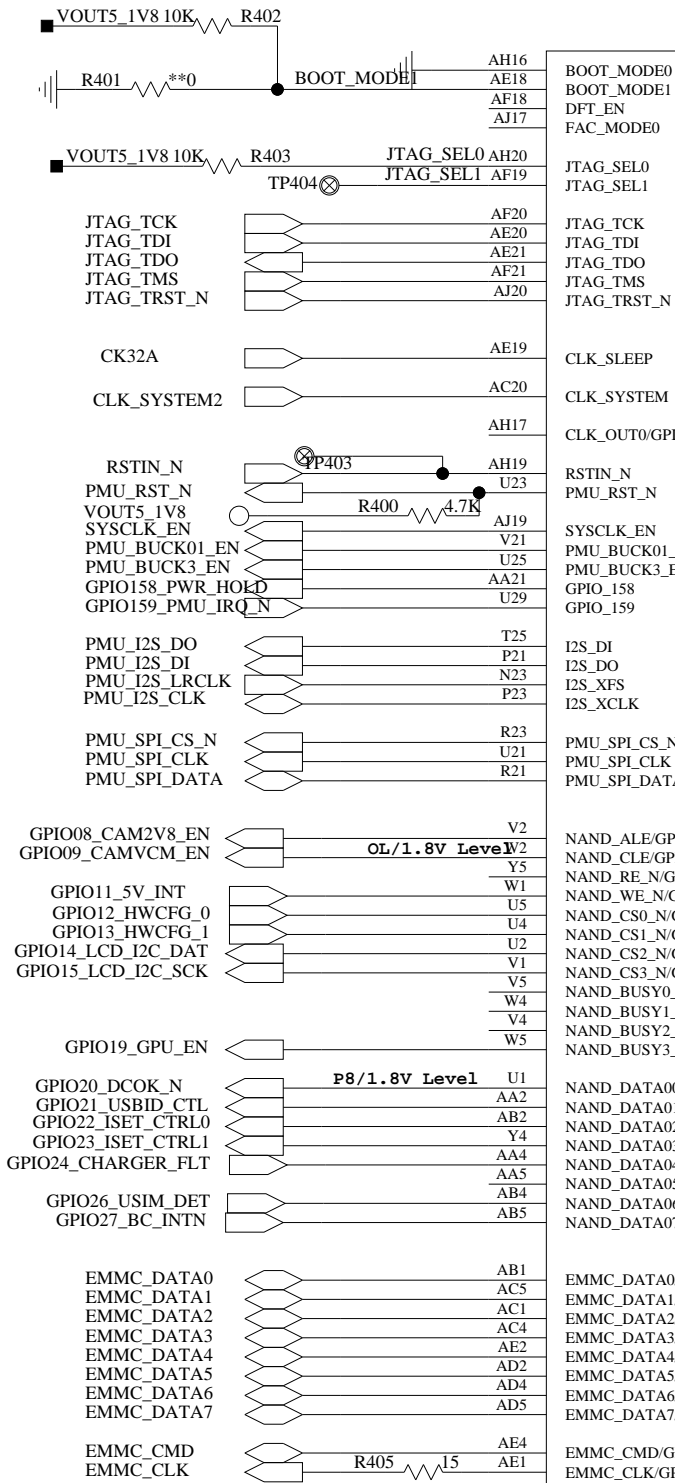
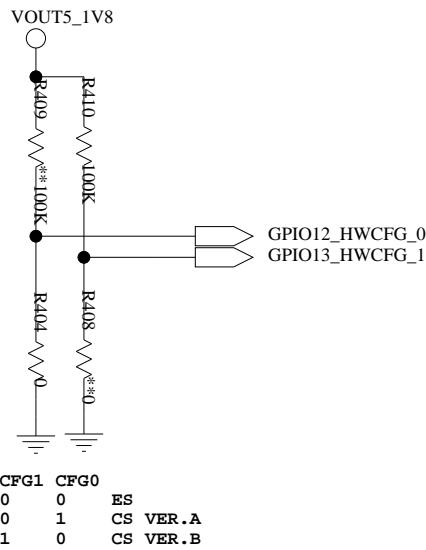
4. Hi3620

JTAG Selection setting

SEL0 (ISU)	SEL1 (ISD)	FUNCTION
0	0	SOC TAP
1	0	ARM COTEX A9
0	1	DAISY CHAIN
1	1	ARM TAP

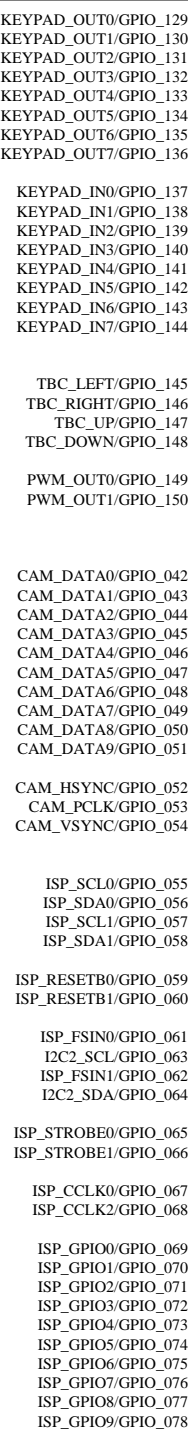
Boot Mode Configuration

BOOT0 (ICU)	BOOT1 (ICU)	FUNCTION
0	0	Bootrom start-load
1	0	Bootrom start-nand start
0	1	Bootrom start-eMMC start
1	1	EX-nand start



U300  
Hi3620V110

DSIG1 Interface 2 of 6



Use for NFC

P2/2.6V Level

Can't use

Can't use

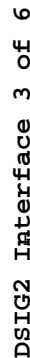
can't use

Hi3620v100 digital siganl 1

The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 4 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

## D

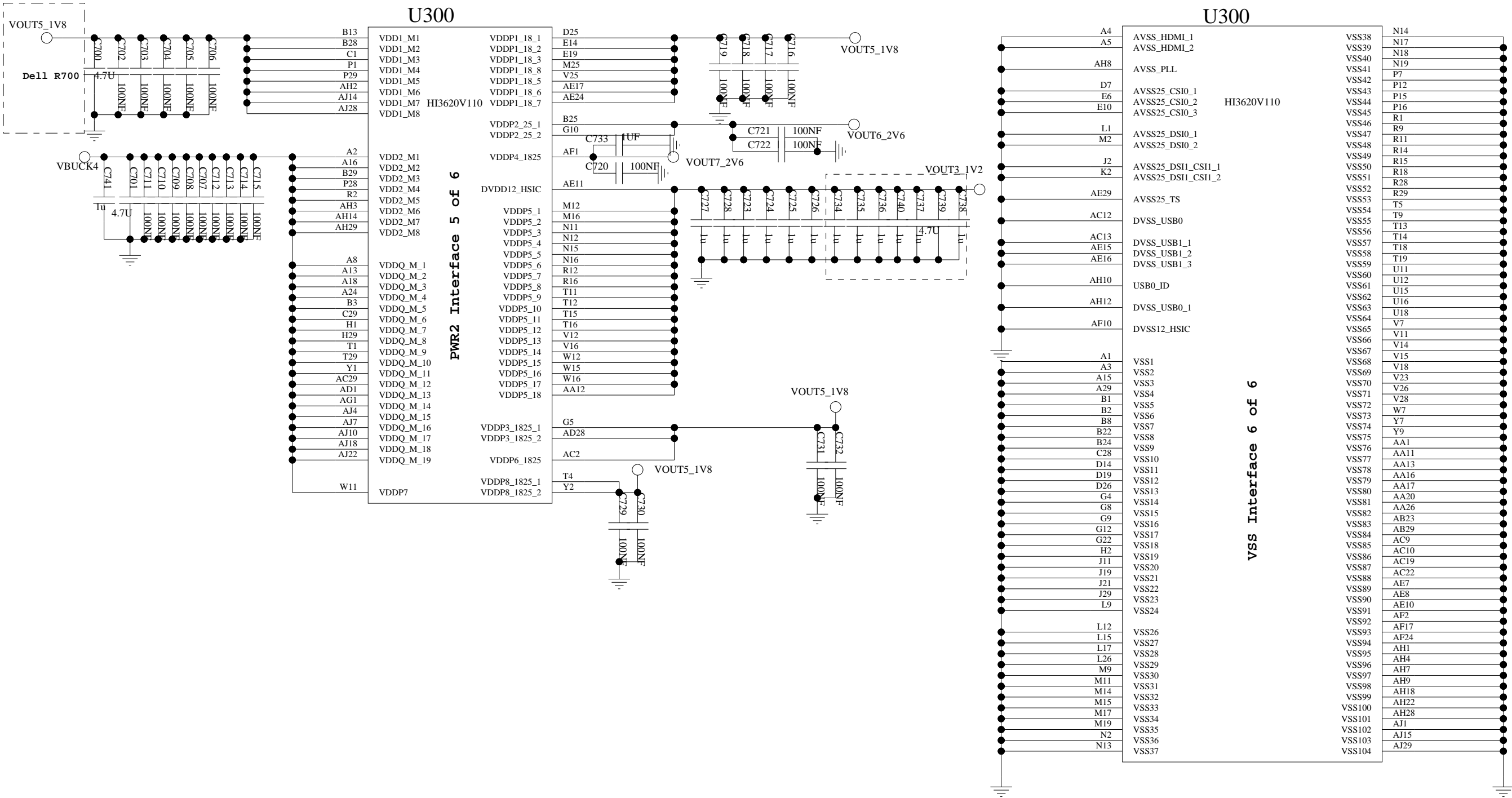


The type and specification of the components refer to the BOM

D



7. Hi3620

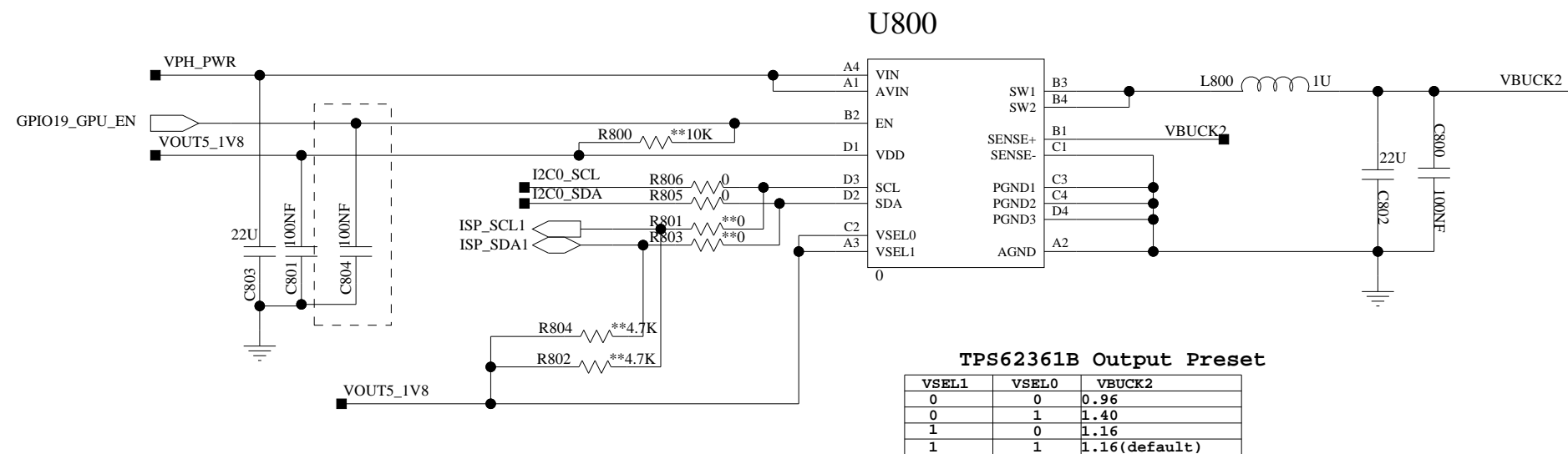


Hi3620v100 power&Decouple2

The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 7 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

## 8. GPU Power



## NAND Memory Int

The type and specification of the components refer to the BOM

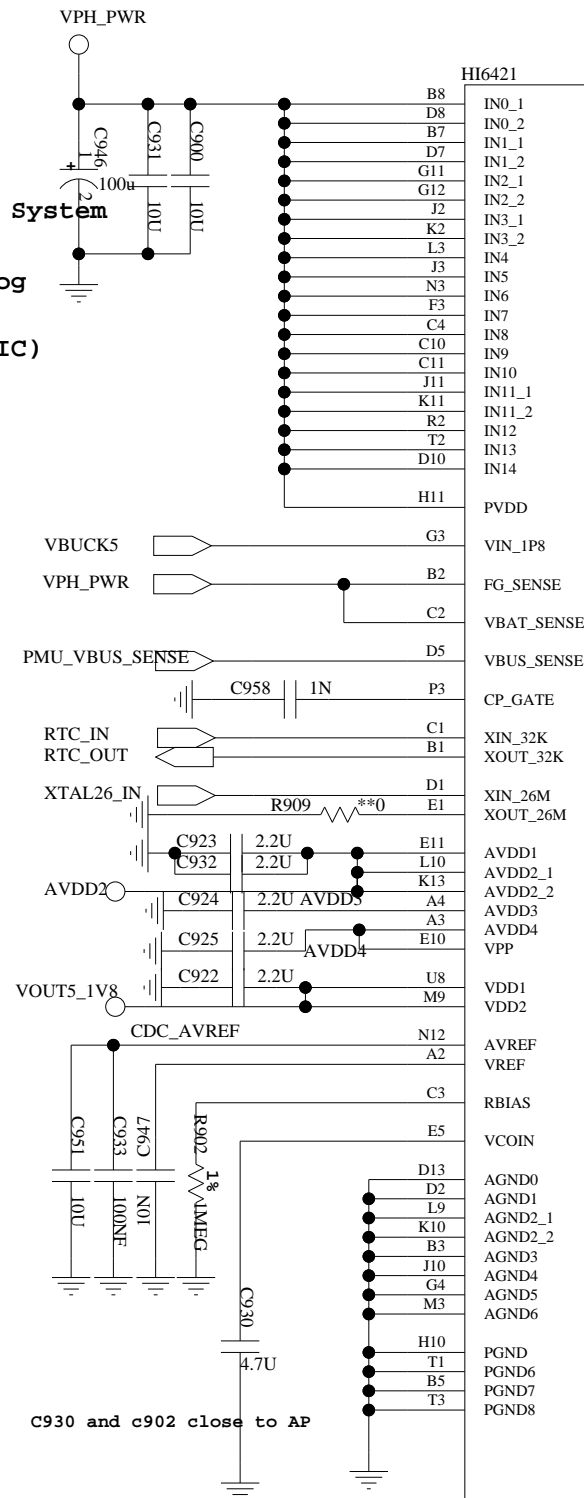
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET	8 OF 43
		A	03021SHJ	HUAWEI TECH CO.,LTD.	



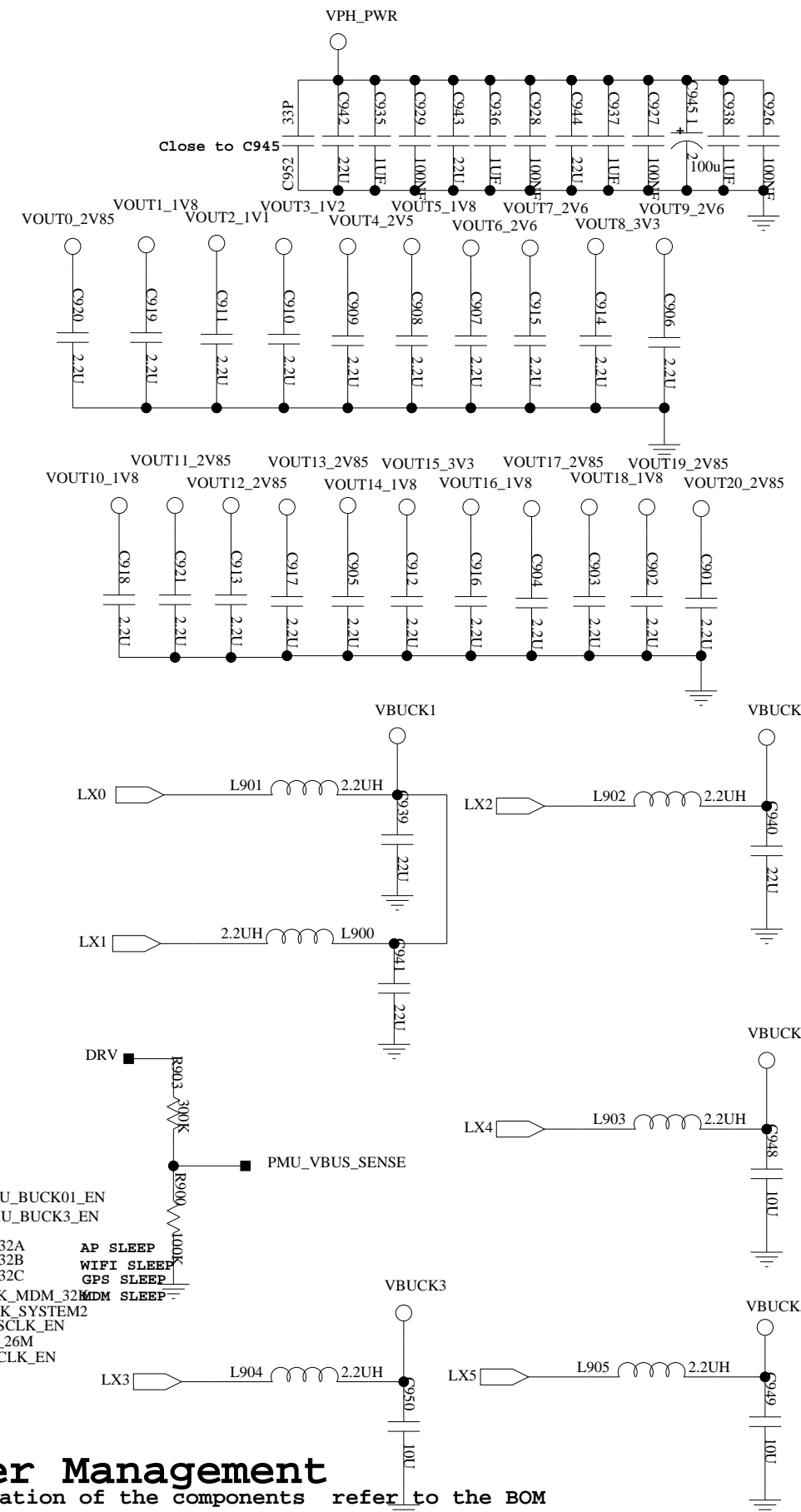
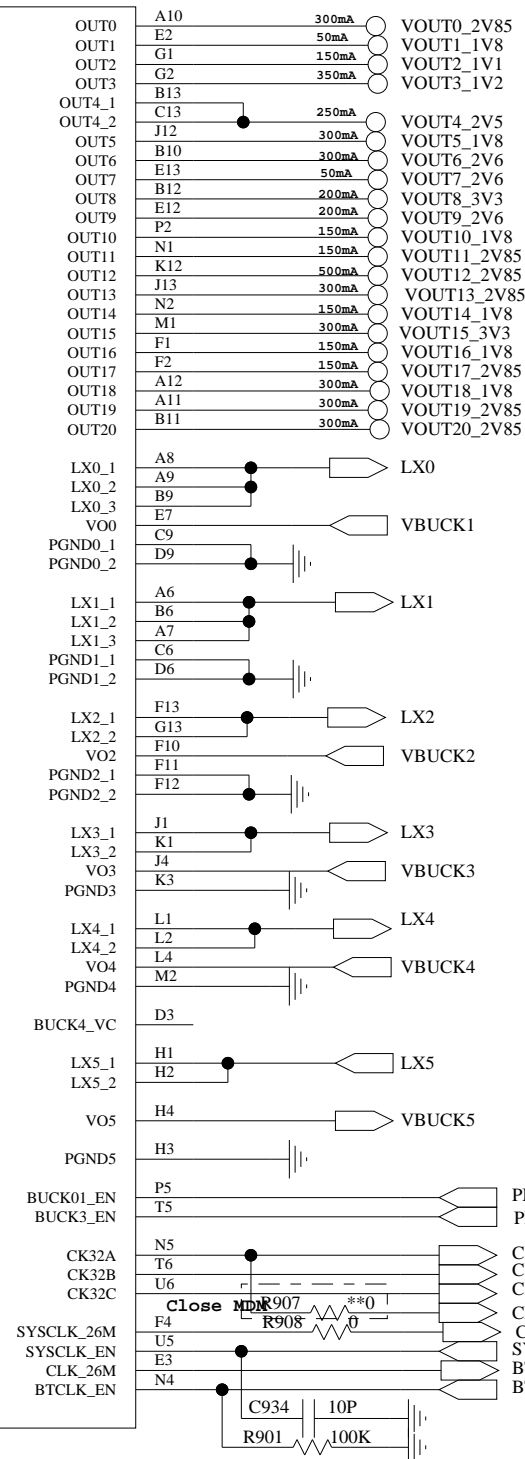
## 9.Hi6421 Power Management

## Power Management Table

Name	Voltage	Current	Function
VOUT0	2.85V	300mA	MLC NAND/eMMC
VOUT1	1.8V	50mA	26M Oscillator
VOUT2	1.1V	150mA	
VOUT3	1.2V	350mA	SYS.+BT DIG.+PLL DIG.+SDR PHY + HSIC PHY
VOUT4	2.5V	250mA	MIPI+USB2.0+PCIE+PLL Antenna
VOUT5	1.8V	300mA	Hi3620 1.8V I/O(BT&GPS)
VOUT6	2.6V	300mA	Hi3620 2.6V I/O
VOUT7	2.6V	50mA	Hi3620 SD I/O
VOUT8	3.3V	200mA	USB PHY
VOUT9	2.6V	200mA	Efuse Power
VOUT10	1.8V	150mA	BT RF&PA
VOUT11	2.85V	150mA	GPS RF&PA
VOUT12	2.85V	500mA	SD Card
VOUT13	2.85V	300mA	CMMB
VOUT14	1.8V	150mA	WIFI I/O
VOUT15	3.3V	300mA	WIFI Core&PA
VOUT16	1.8V	150mA	LCD I/O
VOUT17	2.85V	150mA	LCD Analog
VOUT18	1.8V	300mA	Camera I/O
VOUT19	2.85V	300mA	LCD Camera Analog
VOUT20	2.85V	300mA	LCD Camera VCM
VBUCK1	1.1V	4000mA	A9 Core
VBUCK2	1.1V	1400mA	GPU
VBUCK3	1.1V	1100mA	Peripheral
VBUCK4	1.2/1.8V	8000mA	LPDDR2/AP IO
	1.8V	500mA	Low Voltage LDO



PWR Interface 2 of 2

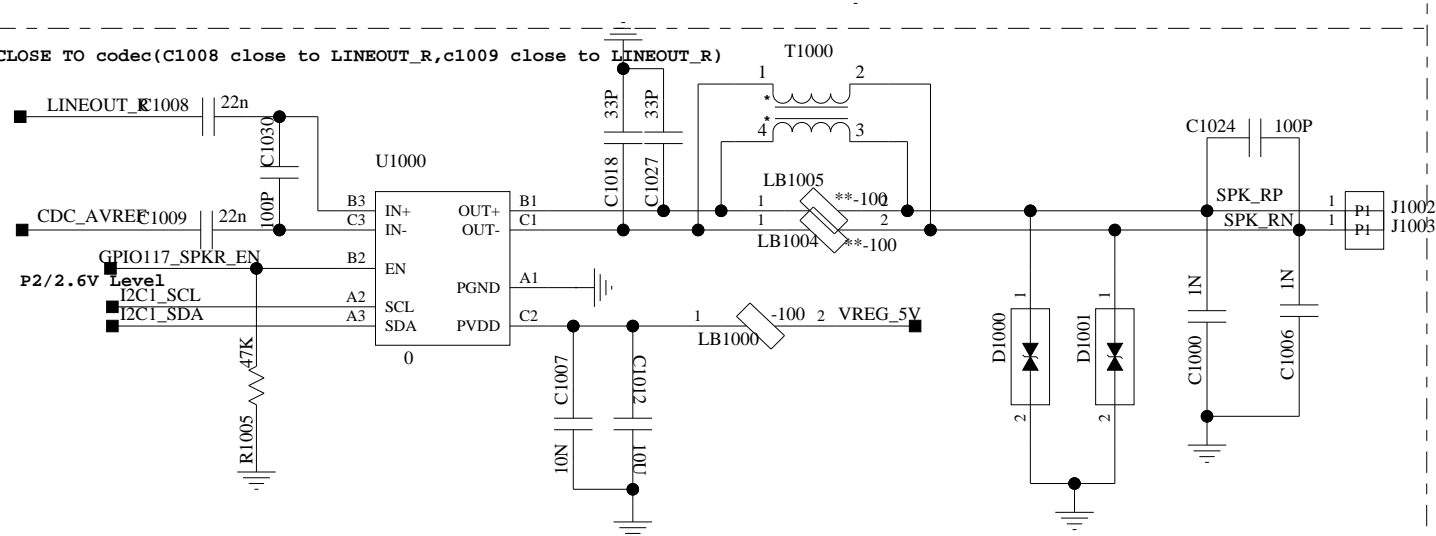
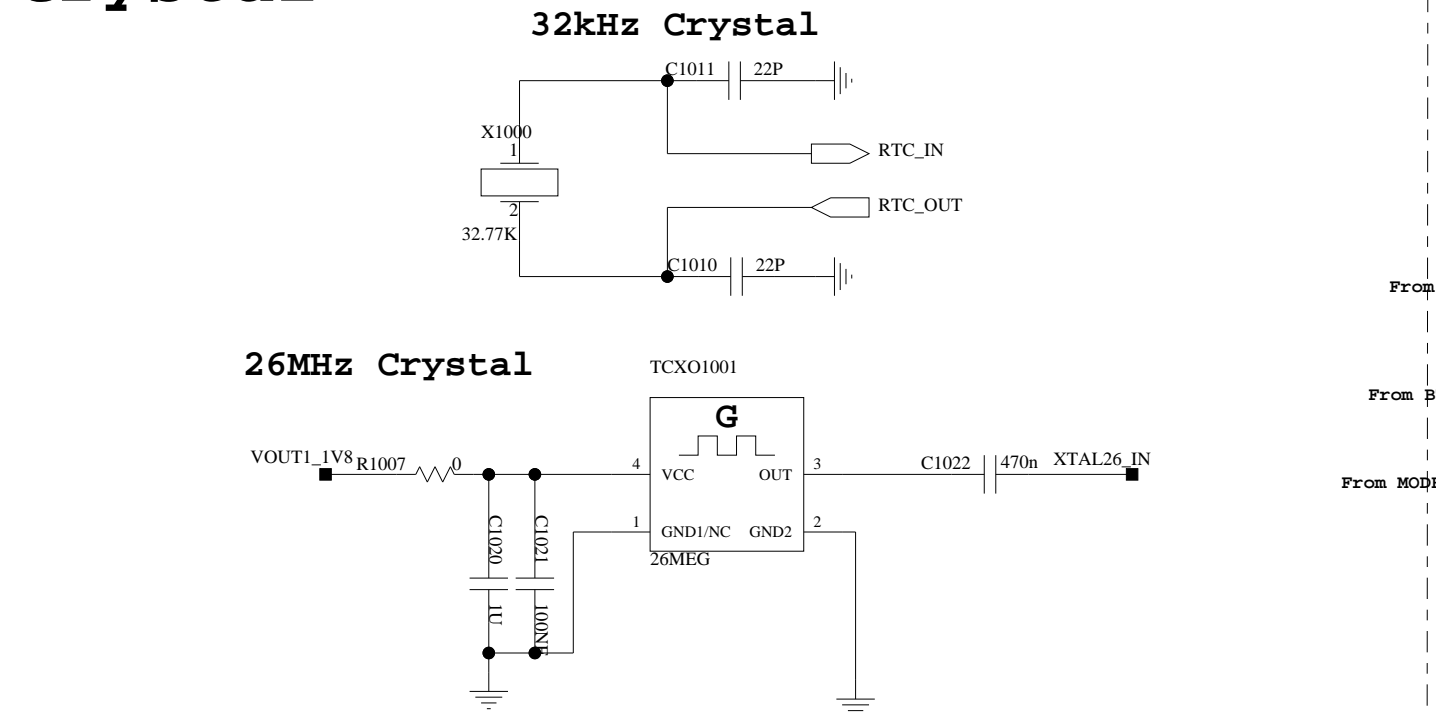


# Hi6421 Power Management

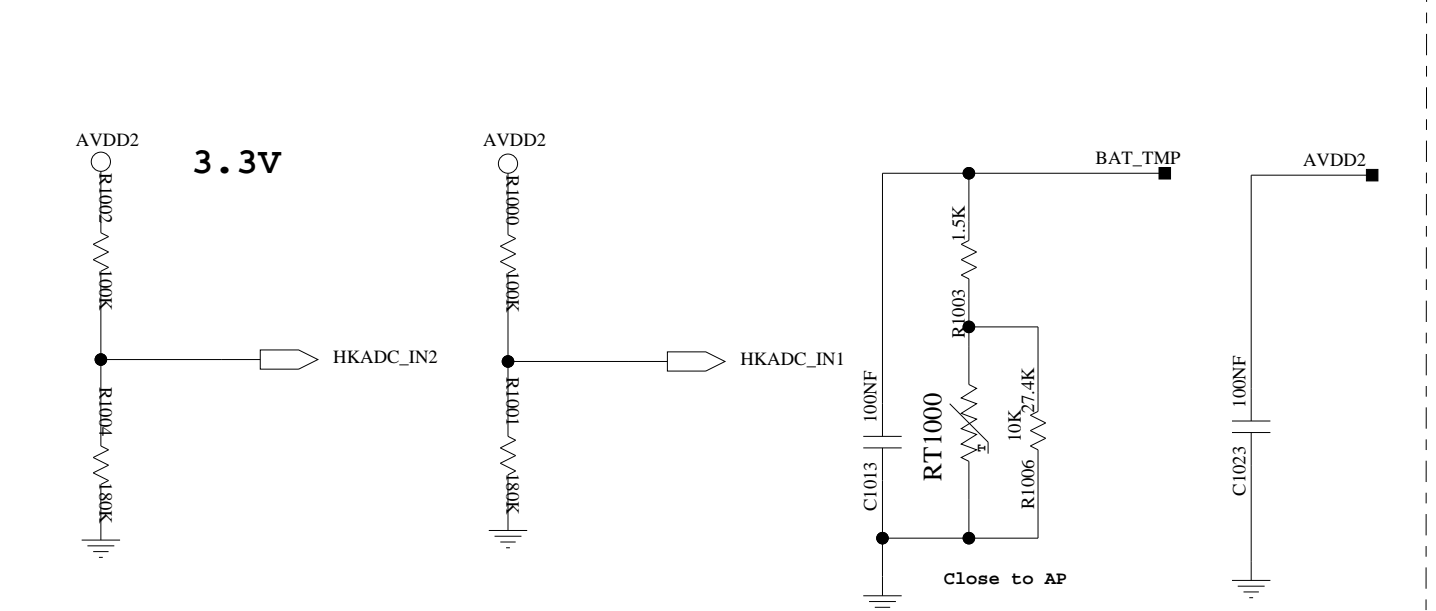
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 9 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD	

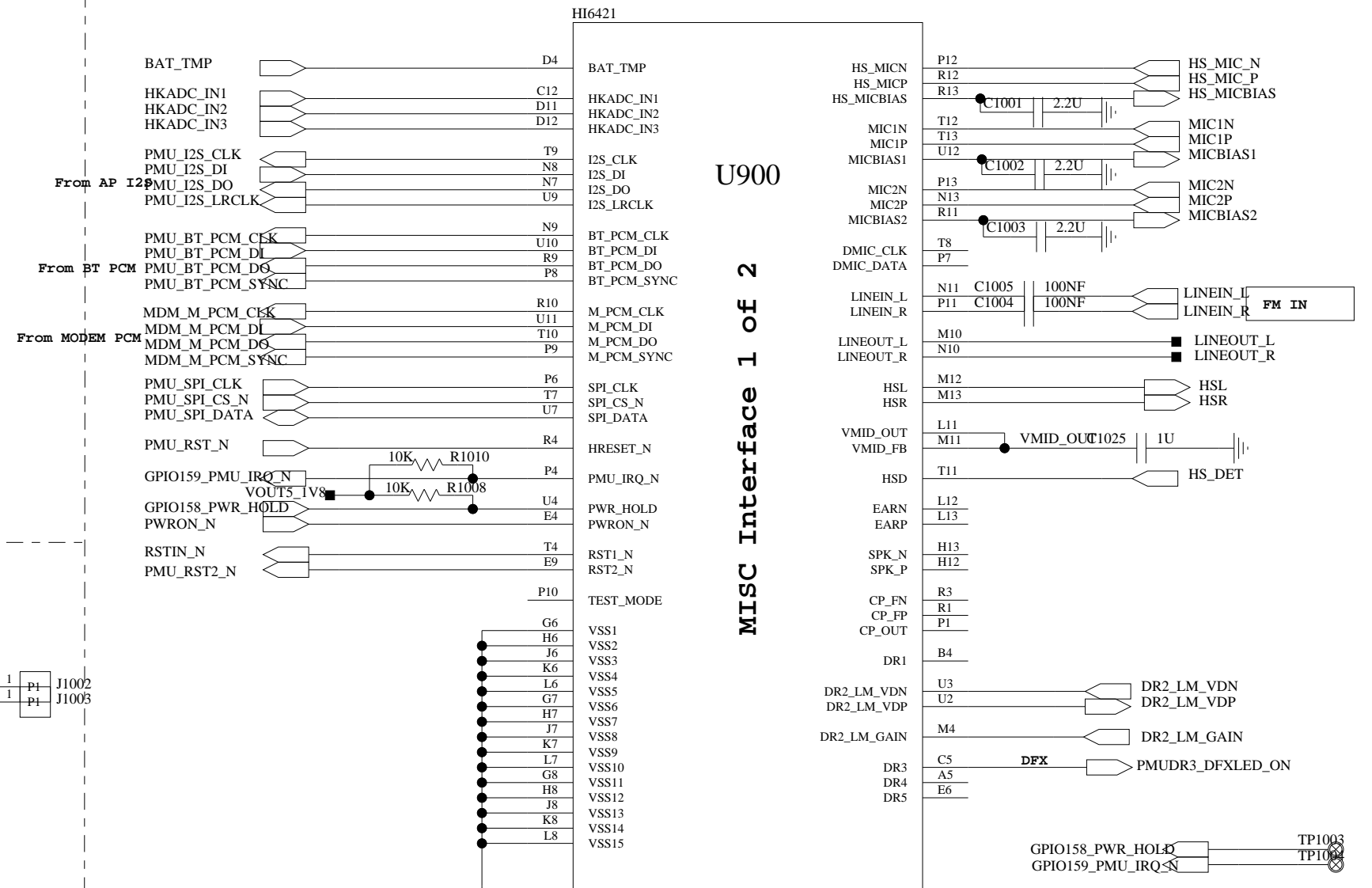
# Crystal



# HW Version Detect



# Hi6421 Audio CODEC



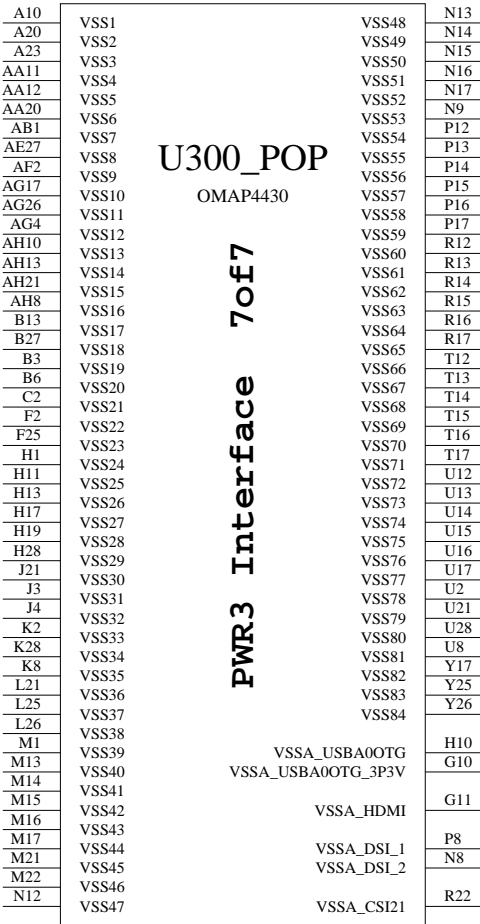
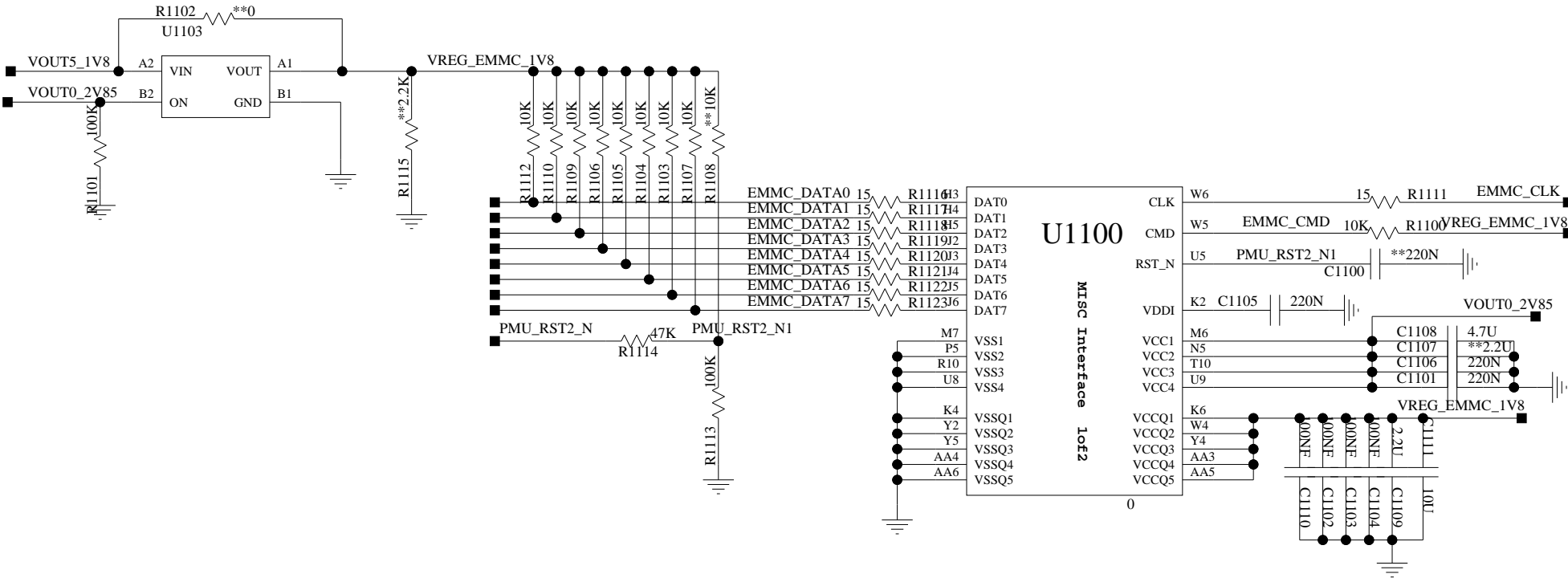
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 10 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

11. 8GB eMMC AND LPDDR2

12\*16,Need to Cover shield

Note:when in low power mode,eMMC need to poweroff,VOUT0 = off,VOUT5 = on



A4	NC1	NC72	U1
A6	NC2	NC73	U2
A9	NC3	NC74	U3
A11	NC4	NC75	U12
B2	NC5	NC76	U13
B13	NC6	NC77	U14
D1	NC7	NC78	V1
D14	NC8	NC79	V2
H1	NC9	NC80	V3
H2	NC10	NC81	V12
H8	NC11	NC82	V13
H9	NC12	NC83	V14
H10	NC13	NC84	W1
H11	NC14	NC85	W2
H12	NC15	NC86	W3
H13	NC16	NC87	W7
H14	NC17	NC88	W8
J1	NC18	NC89	W9
J7	NC19	NC90	W10
J8	NC20	NC91	W11
J9	NC21	NC92	W12
J10	NC22	NC93	W13
J11	NC23	NC94	W14
J12	NC24	NC95	Y1
J13	NC25	NC96	Y3
J14	NC26	NC97	Y6
K1	NC27	NC98	Y7
K3	NC28	NC99	Y8
K7	NC29	NC100	Y9
K8	NC30	NC101	Y10
K9	NC31	NC102	Y11
K10	NC32	NC103	Y12
K11	NC33	NC104	Y13
K12	NC34	NC105	Y14
K13	NC35	NC106	AA1
K14	NC36	NC107	AA2
L1	NC37	NC108	AA8
L2	NC38	NC109	AA9
L3	NC39	NC110	AA11
L12	NC40	NC111	AA12
L13	NC41	NC112	AA13
L14	NC42	NC113	AA14
M1	NC43	NC114	AE1
M2	NC44	NC115	AE14
M3	NC45	NC116	AG2
M12	NC46	NC117	AG13
M13	NC47	NC118	AH4
M14	NC48	NC119	AH6
N1	NC49	NC120	AH9
N2	NC50	NC121	AH11
N3	NC51	NC122	L4
N12	NC52		
N13	NC53		
N14	NC54		
P1	NC55	RFU1	H6
P2	NC56	RFU2	H7
P12	NC57	RFU3	K5
P13	NC58	RFU4	M5
P14	NC59	RFU5	M8
R1	NC60	RFU6	M9
R2	NC61	RFU7	M10
R3	NC62	RFU8	P3
R12	NC63	RFU9	P10
R13	NC64	RFU10	R5
R14	NC65	RFU11	T5
T1	NC66	RFU12	U6
T2	NC67	RFU13	U7
T3	NC68	RFU14	U10
T12	NC69	RFU15	AA7
T13	NC70	RFU16	AA10
T14	NC71	RFU17	N10

NC Interface 2of2

The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 11	OF 43
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

1	2	3	4	5	6
12.NC					

**A**

## B



**A**

B



D

D

1

---

2

3

---

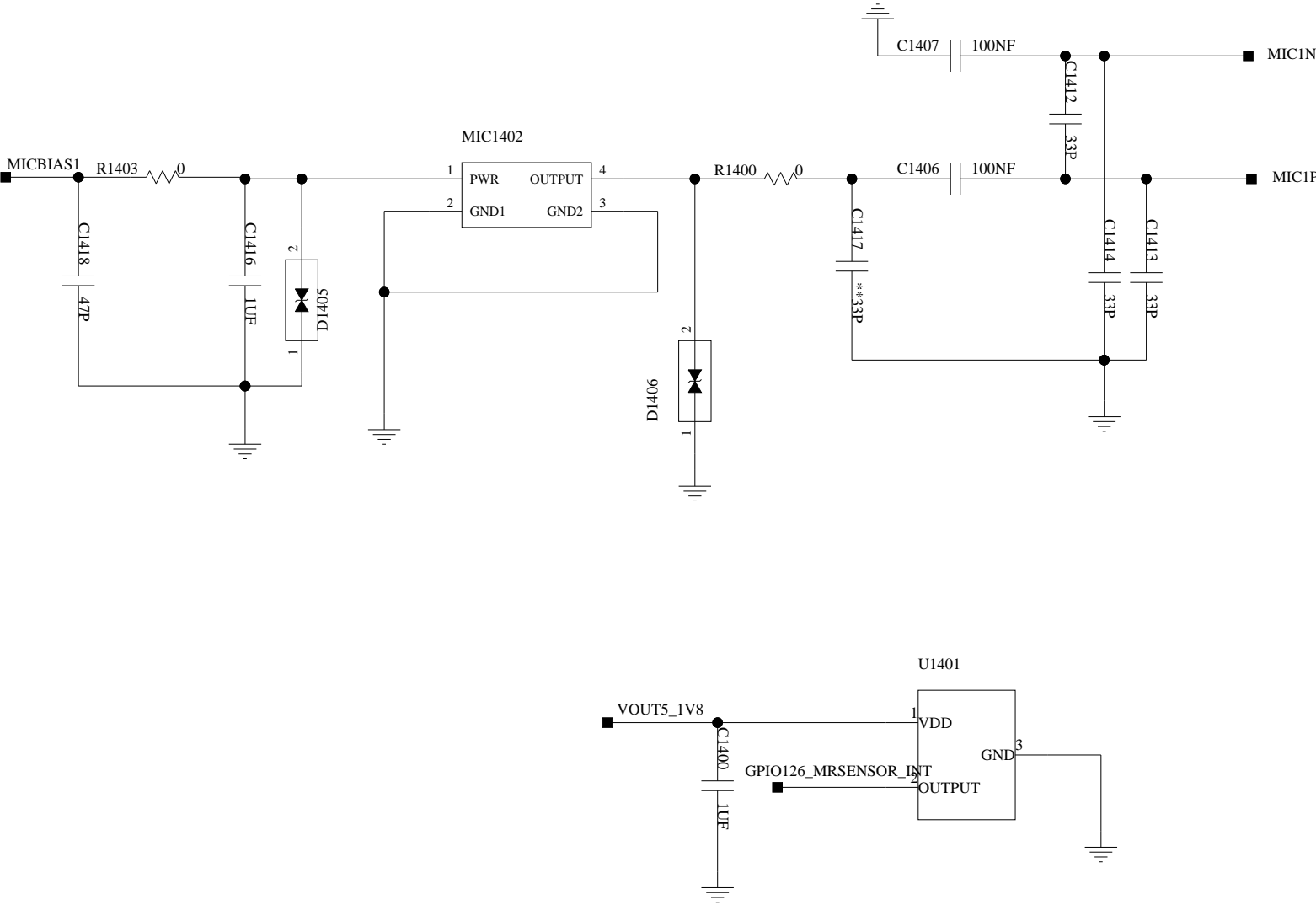
4

5

6

14. MIC & MR Sensor

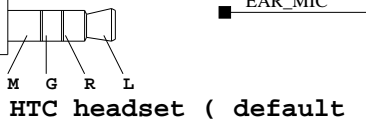
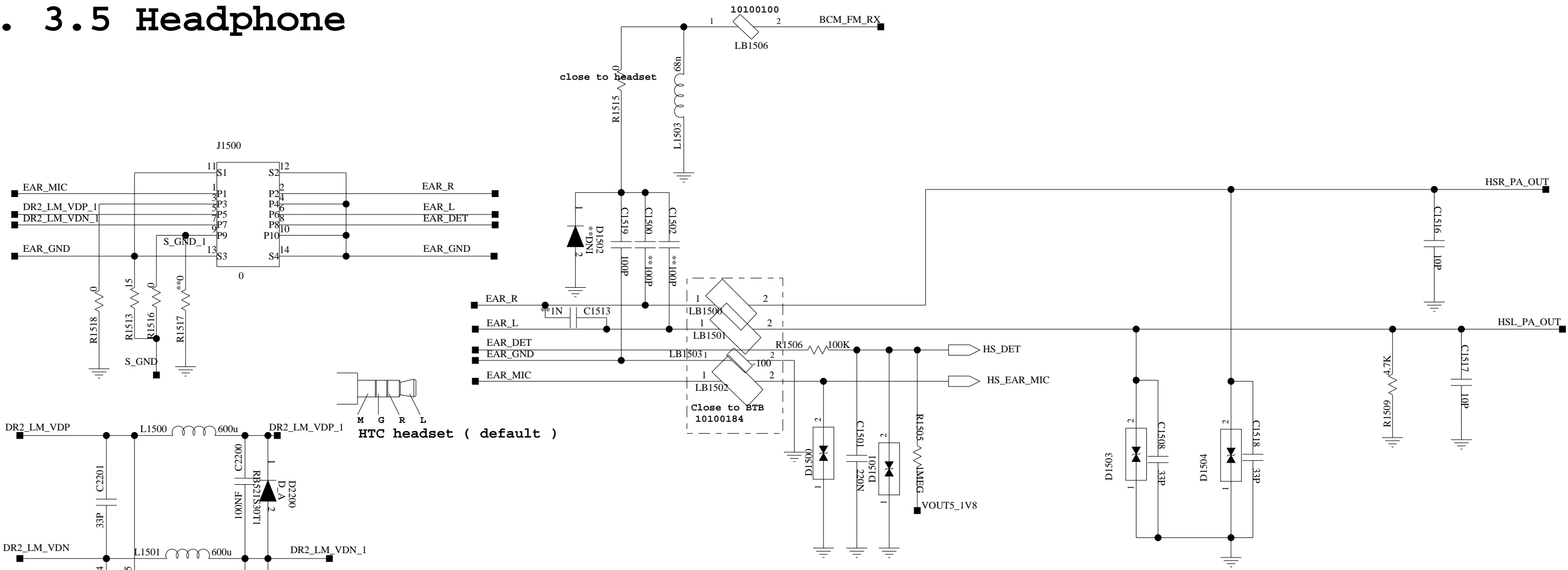
Primarily PAD Mic



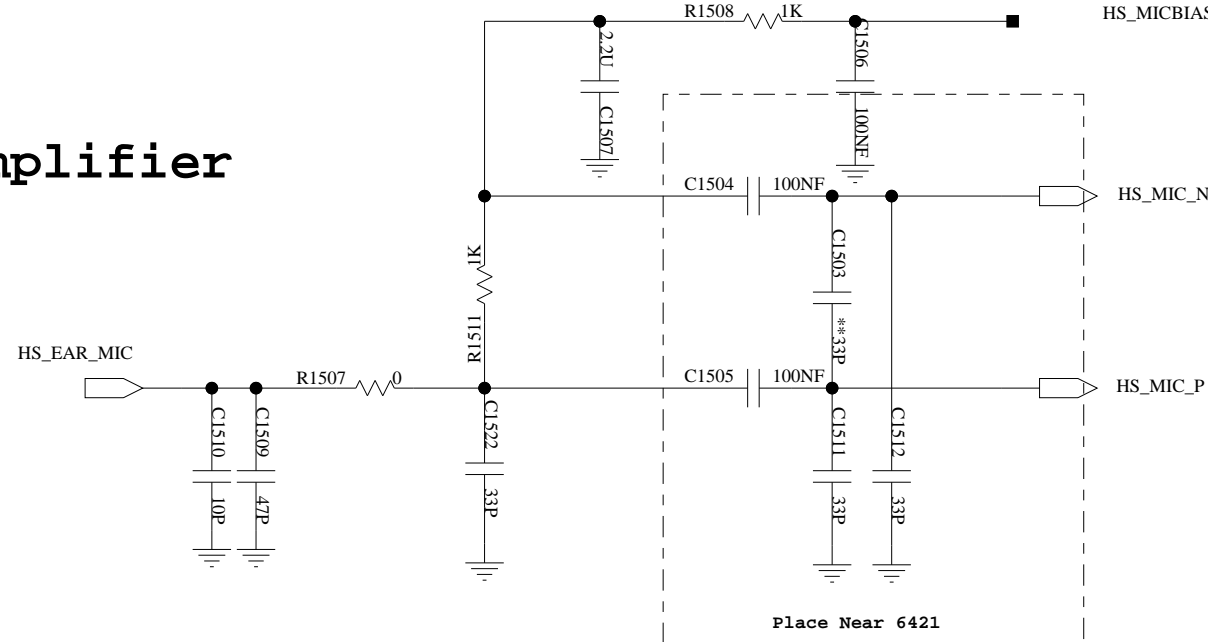
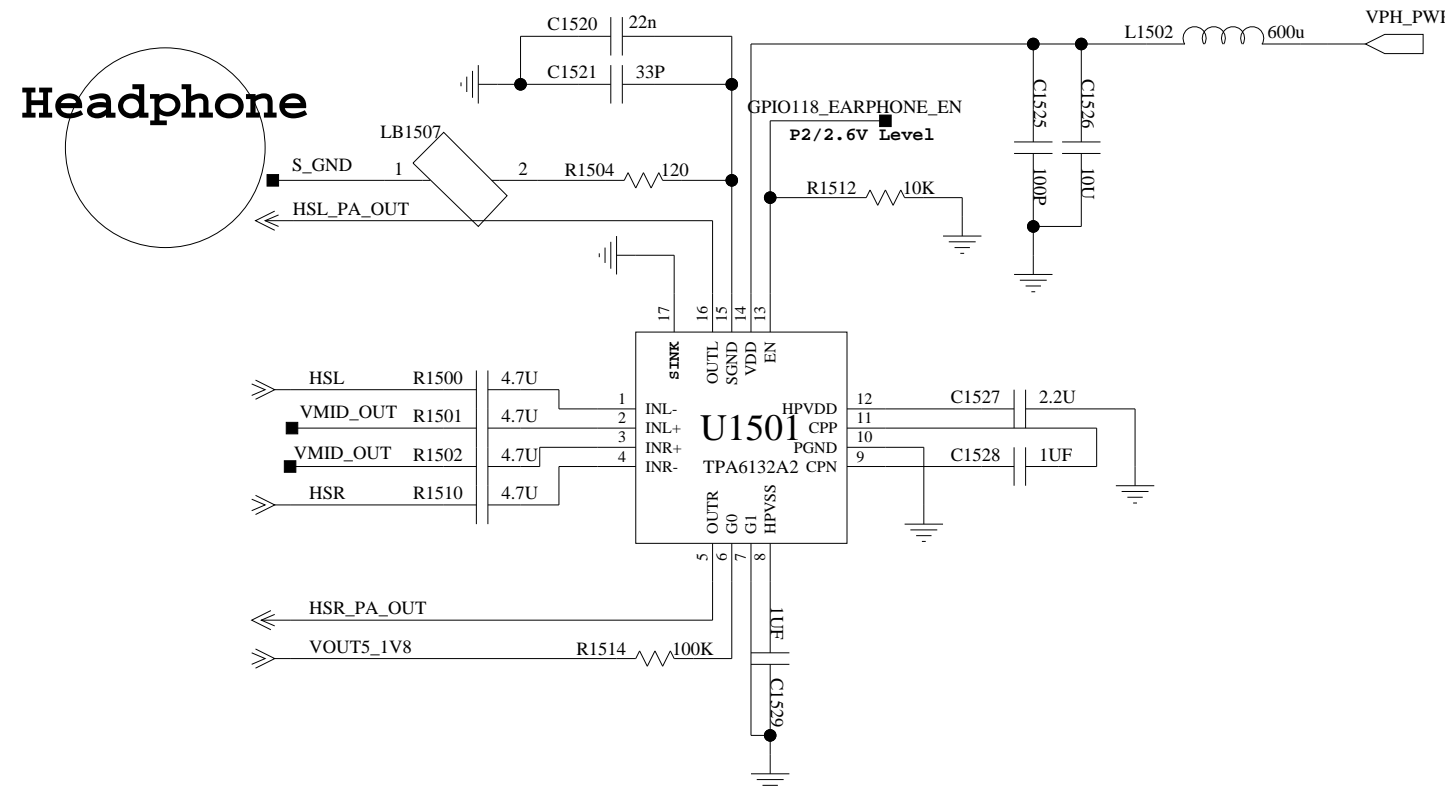
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 14 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

15. 3.5 Headphone



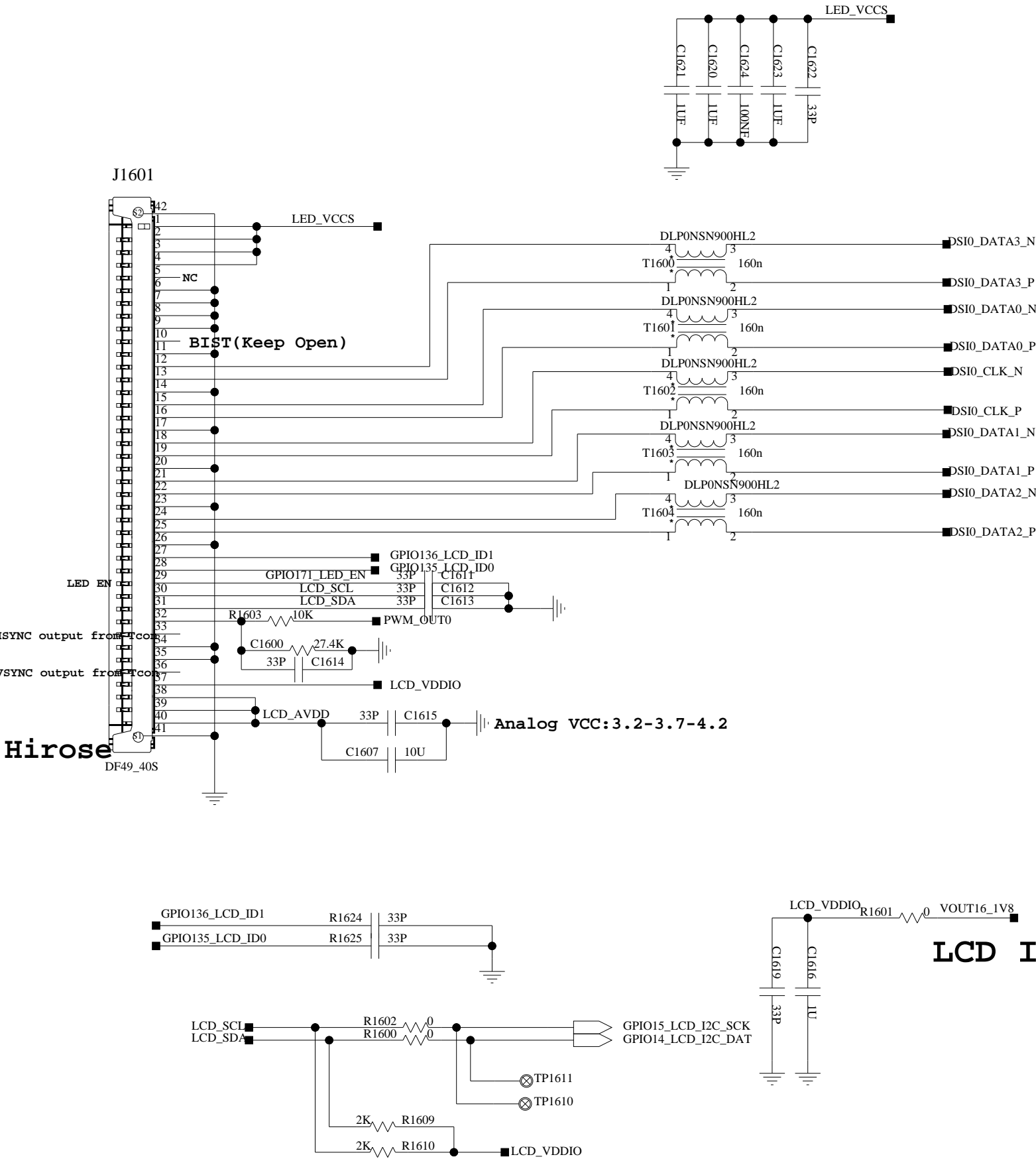
Stereo Headphone Amplifier



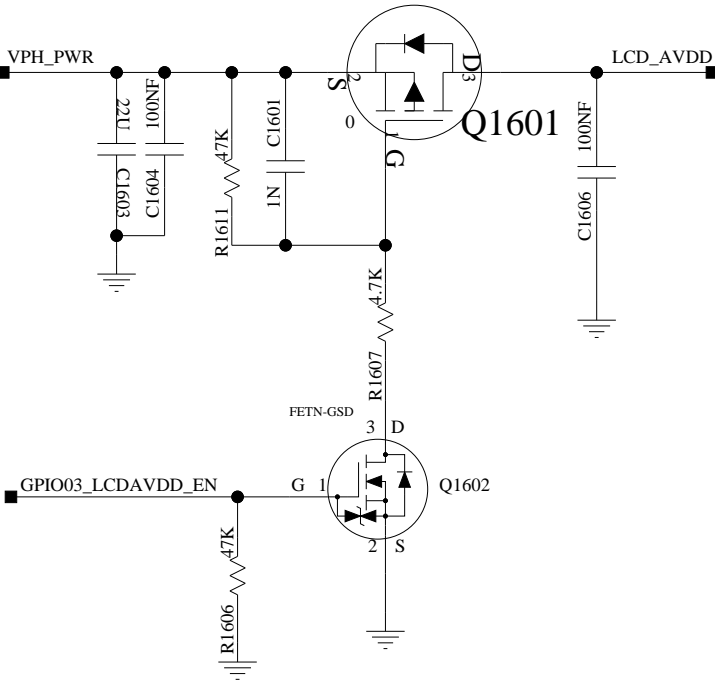
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 15 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

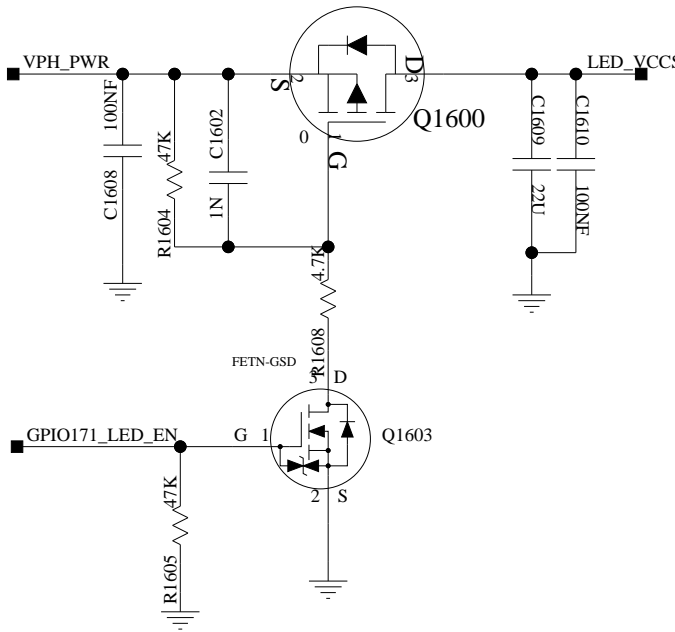
16. LCD interface



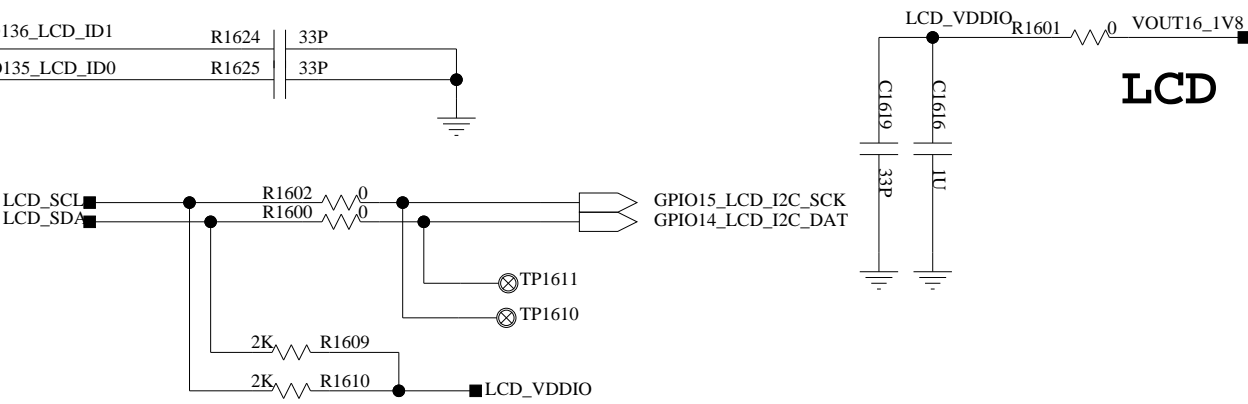
Analog VCC:3.2-3.7-4.2



LED PWR:3.2-3.7-4.2



LCD IO:1.8V

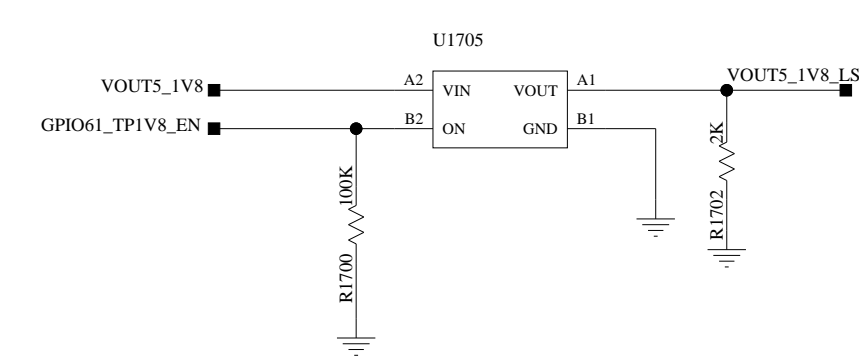
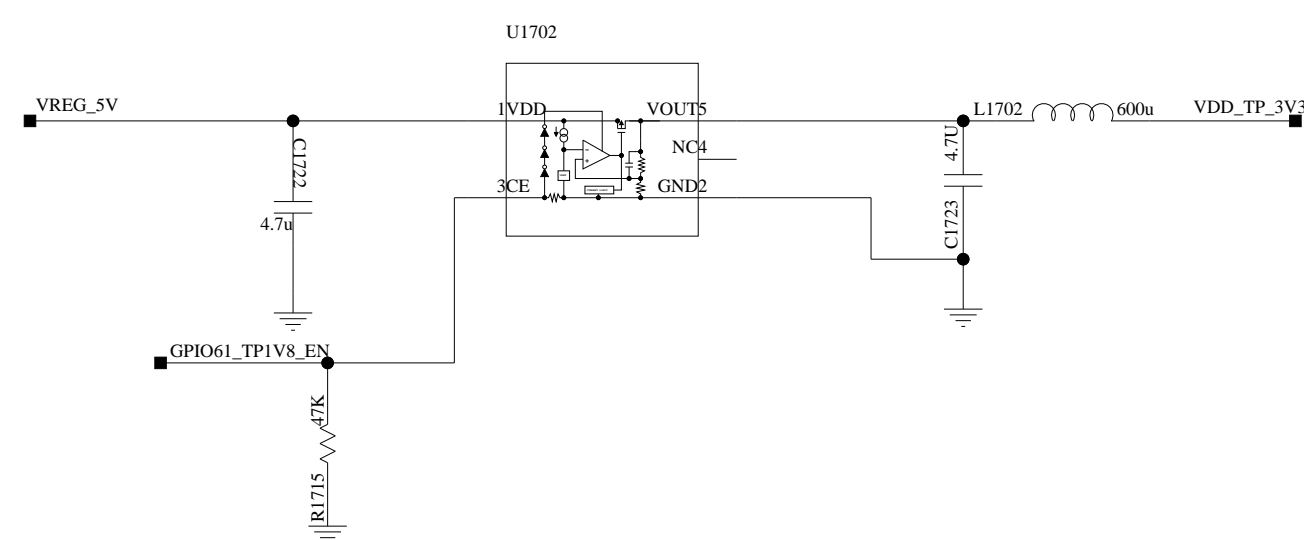
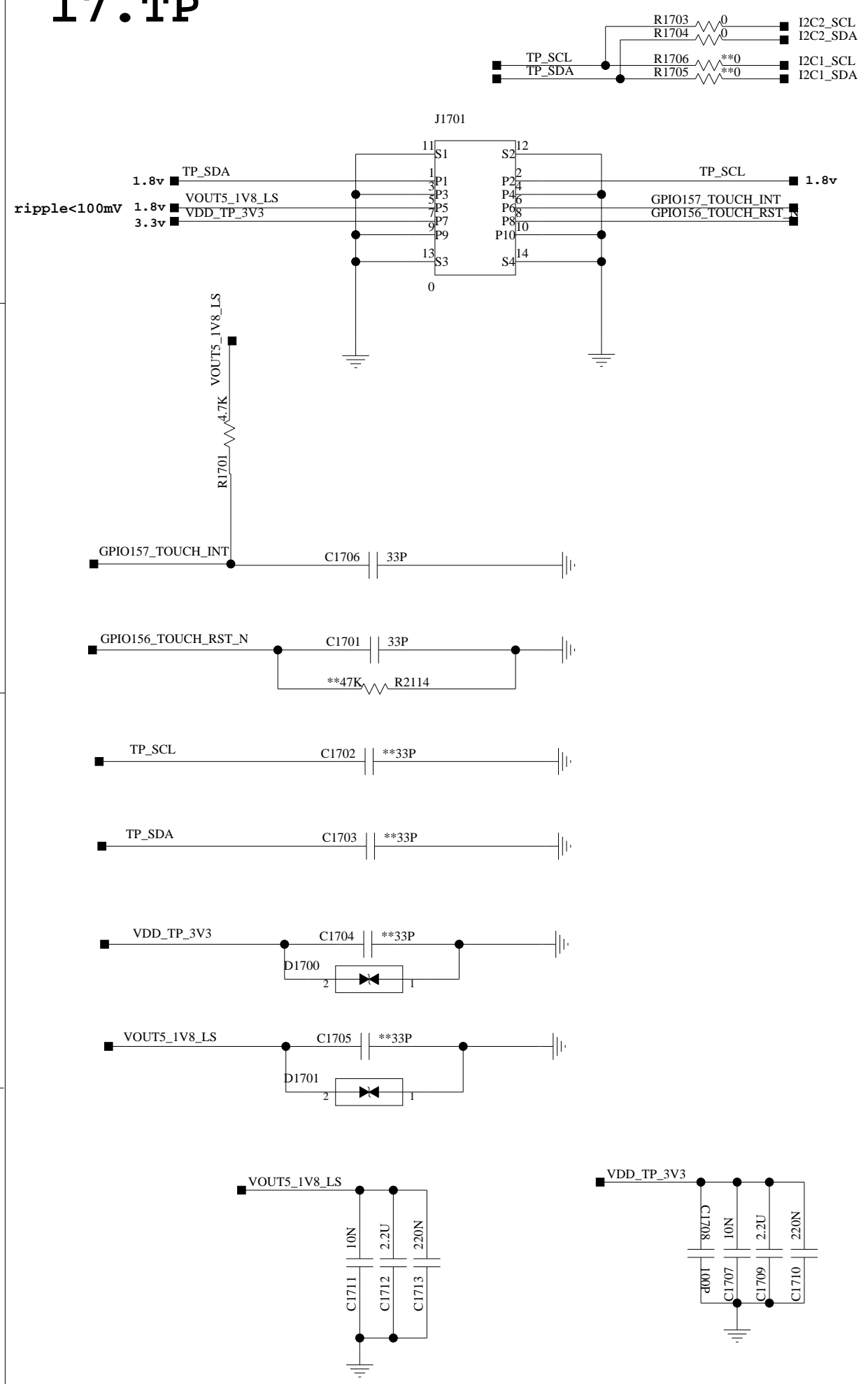


The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	ZHONGDUOQUN 00181792			B519710_SCHZH	
REVIEWED	XUQIAN 00135004			SH4101UM	
		VER	PART_NUMBER	SHEET 16 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	



17.TP

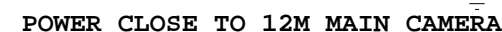


The type and specification of the components refer to the BOM					
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	ZHONGDUOQUN 00181792			B519710_SCHZH	
	SH4101UM				
REVIEWED	XUQIAN 00135004			SHEET 17 OF 43	
		VER	PART_NUMBER		
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

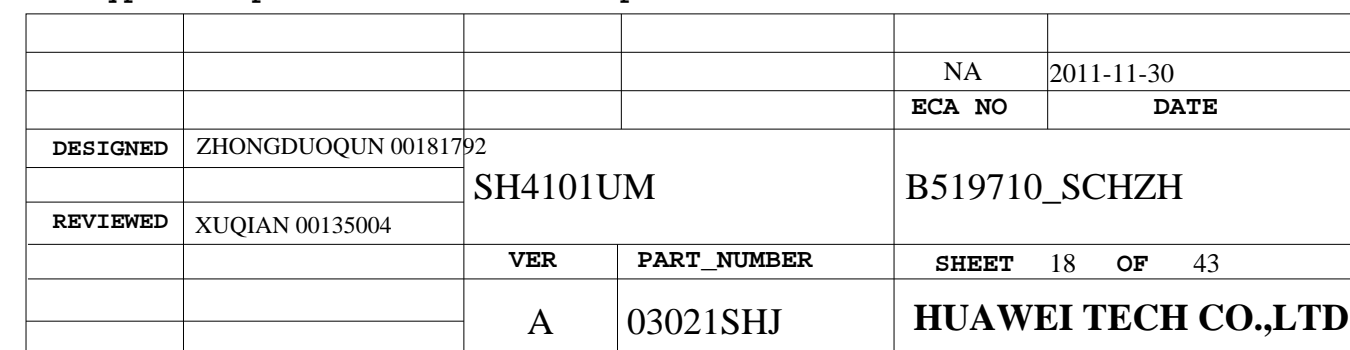
**A**



## C



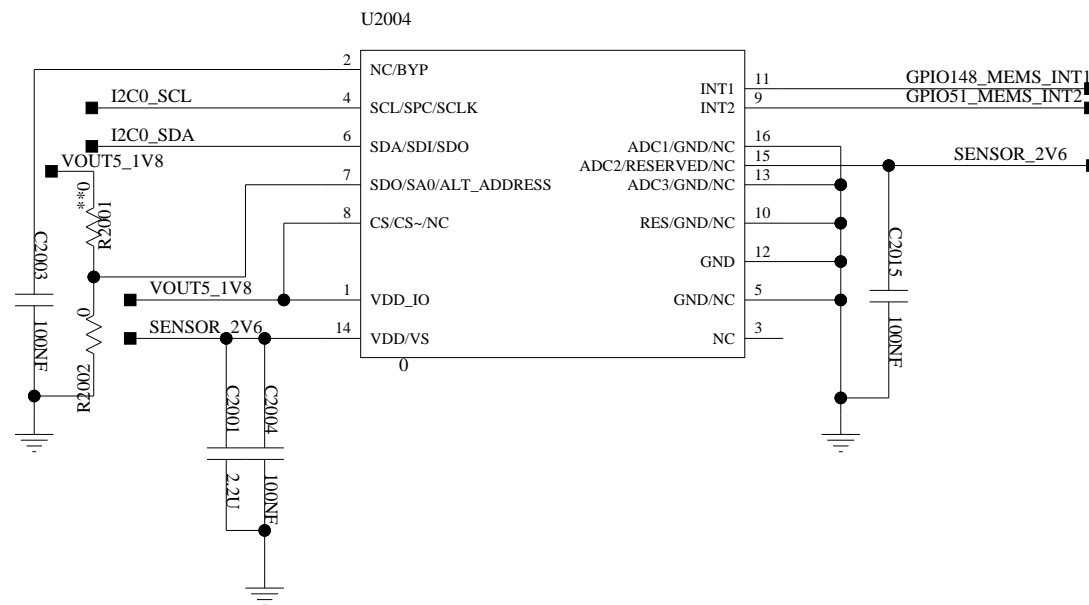
## D



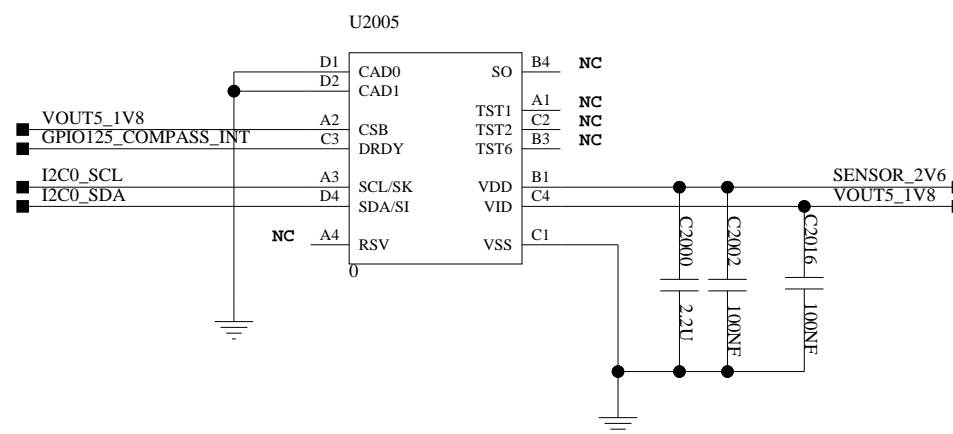


## 20. Sensor/Status indicator

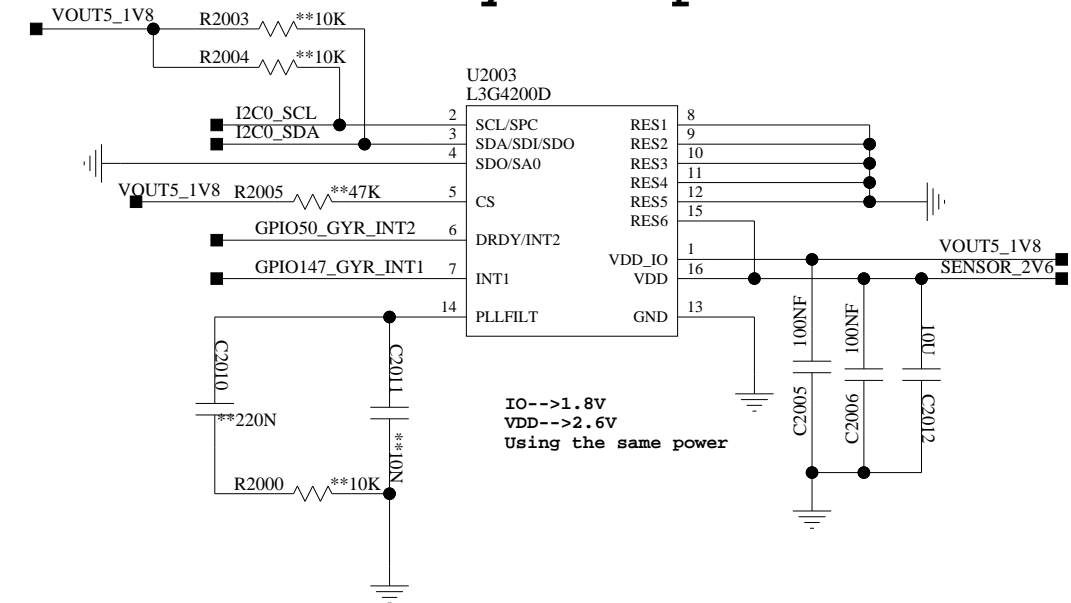
## Accelerometer



## Compass



## Gyroscope



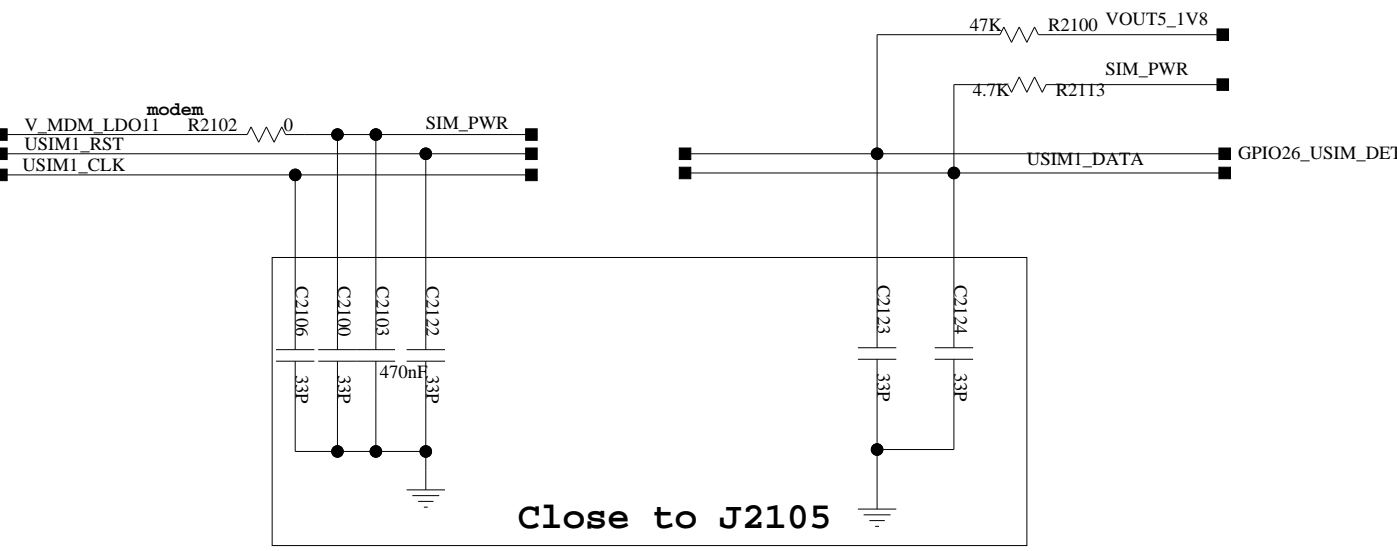
```
IO-->1.8V
VDD-->2.6V
Using the same power
```

The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET	20 OF 43
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

21. SIM/TF card

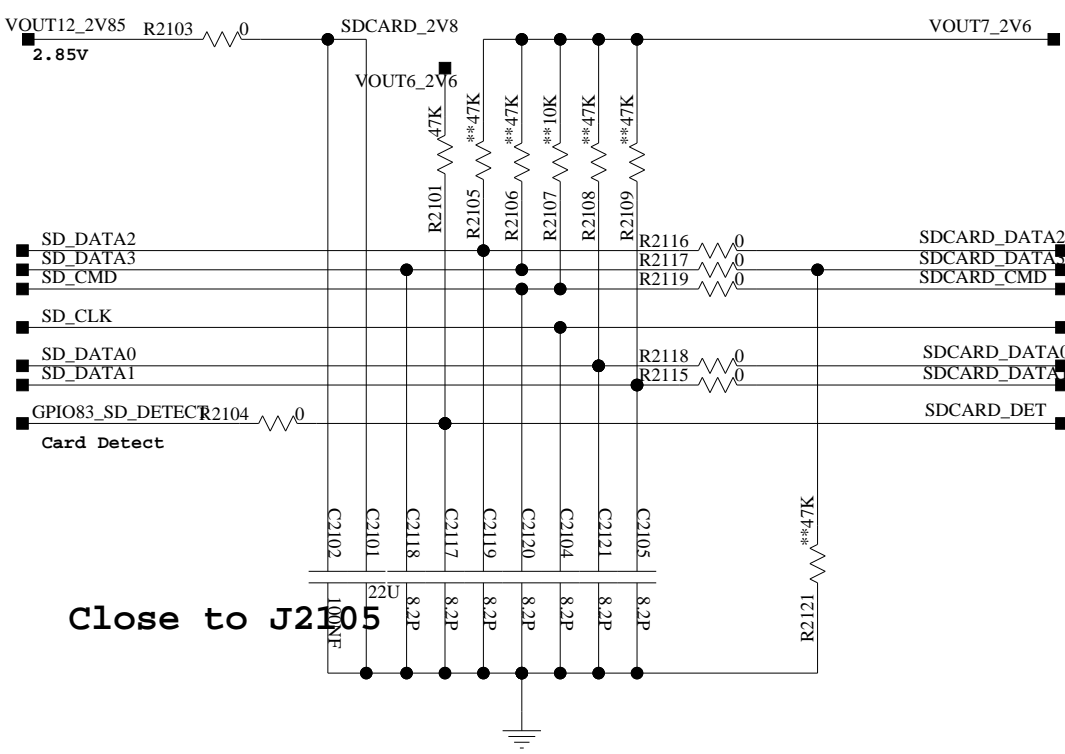
SIM Card



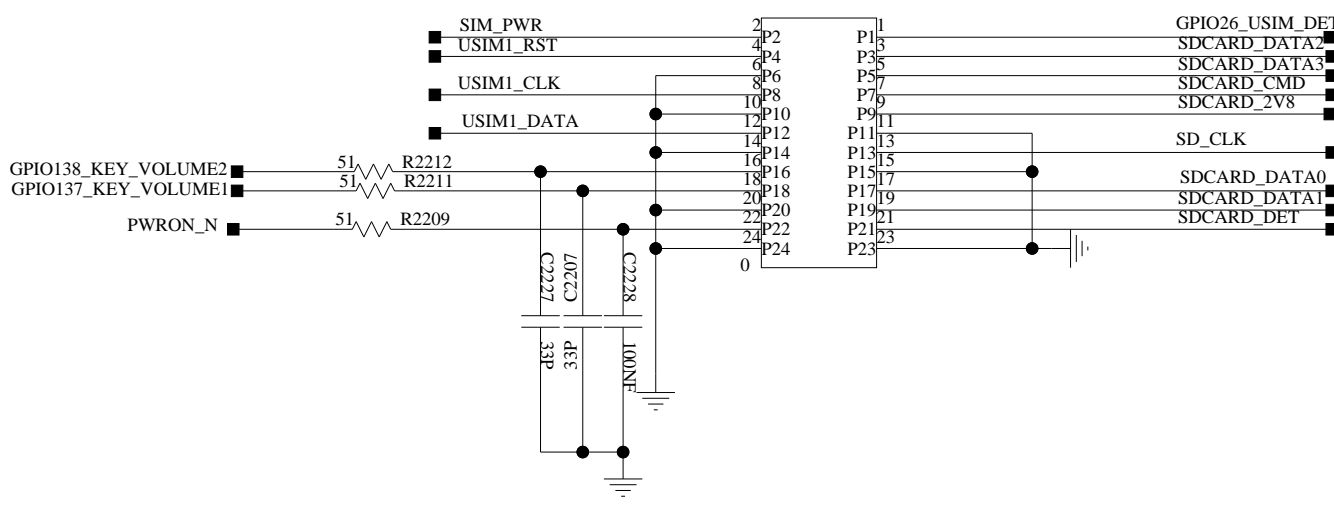
SIM Card ESD Protect

Close to J2105

Micro SD Card



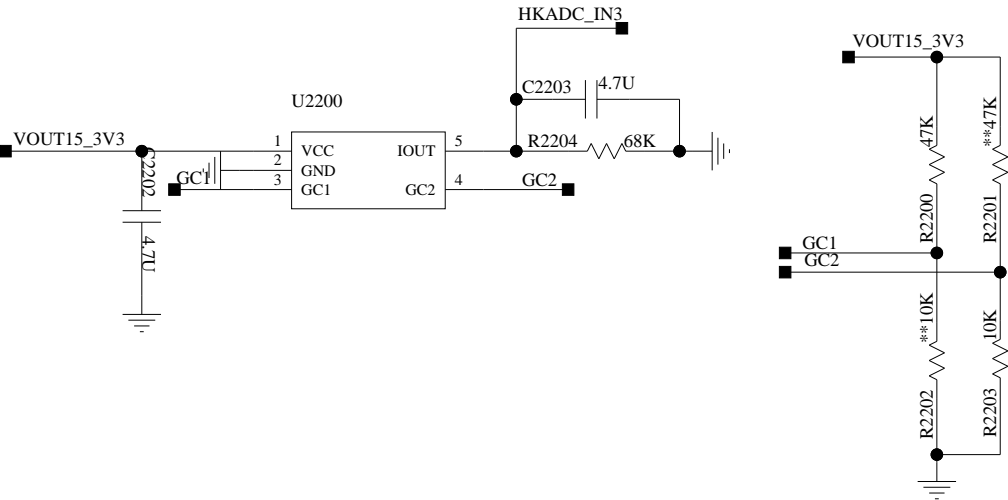
J2105



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 21 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

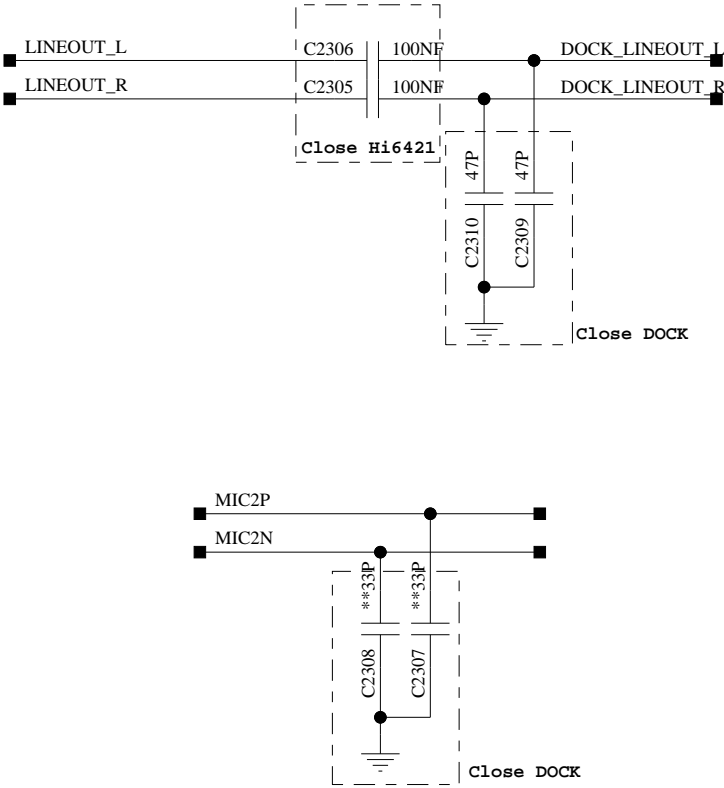
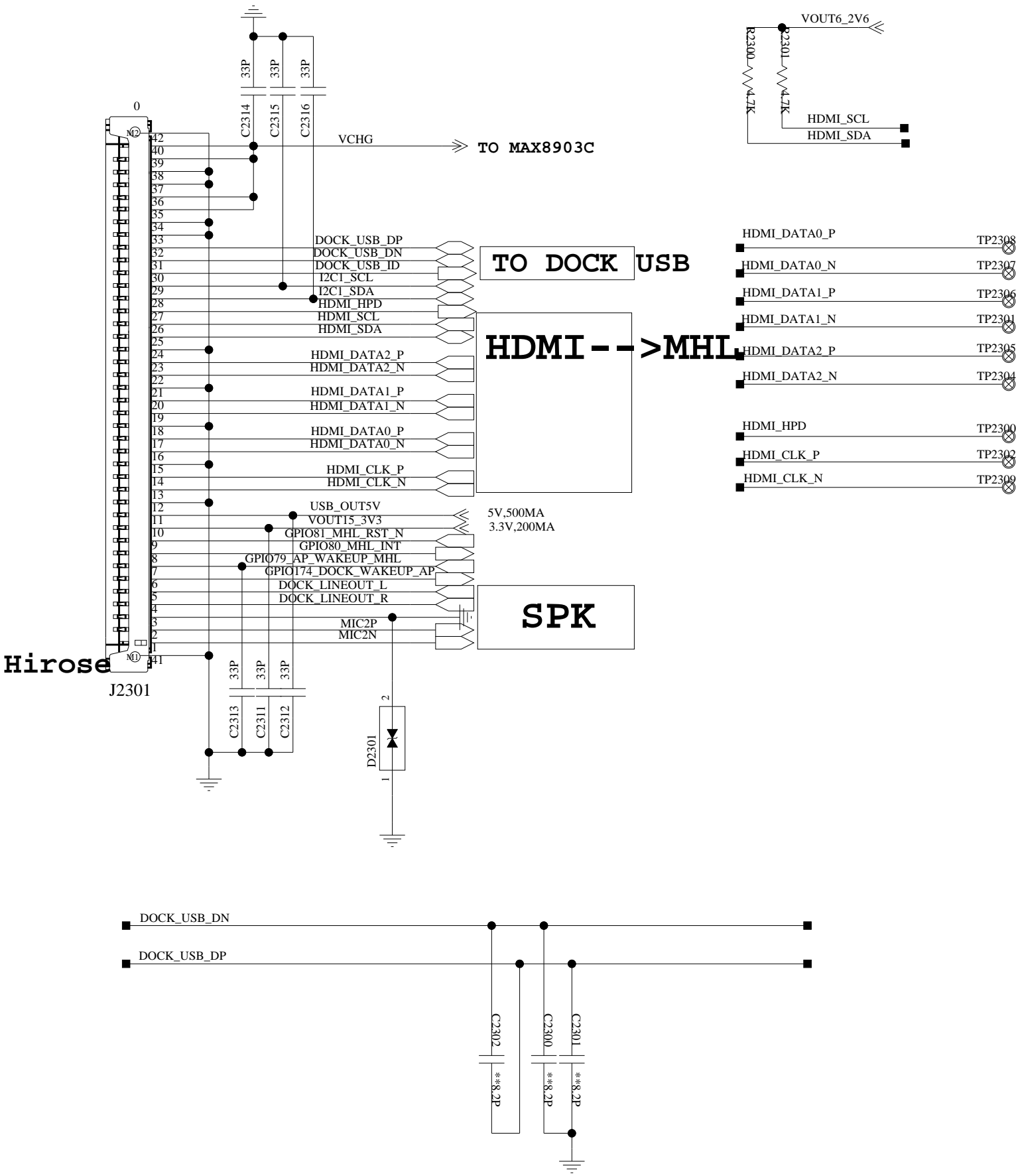
22. Ambient Light



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 22 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

23. MainBoard to SubBoard Connector

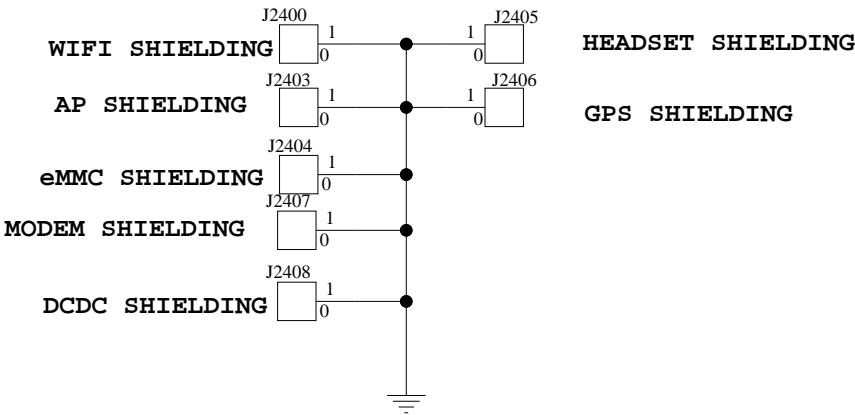


The type and specification of the components refer to the BOM

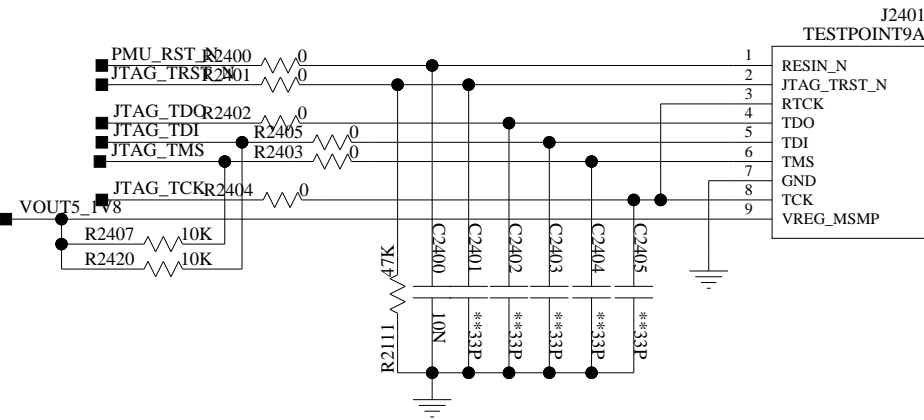
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 23 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

24. Test Points/JTAG/Shields

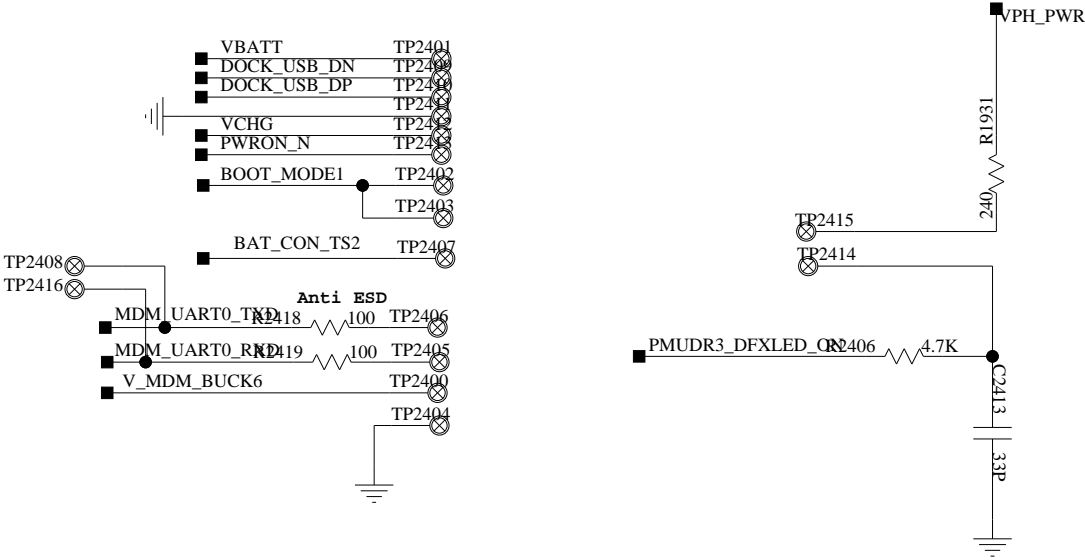
SHIELDING



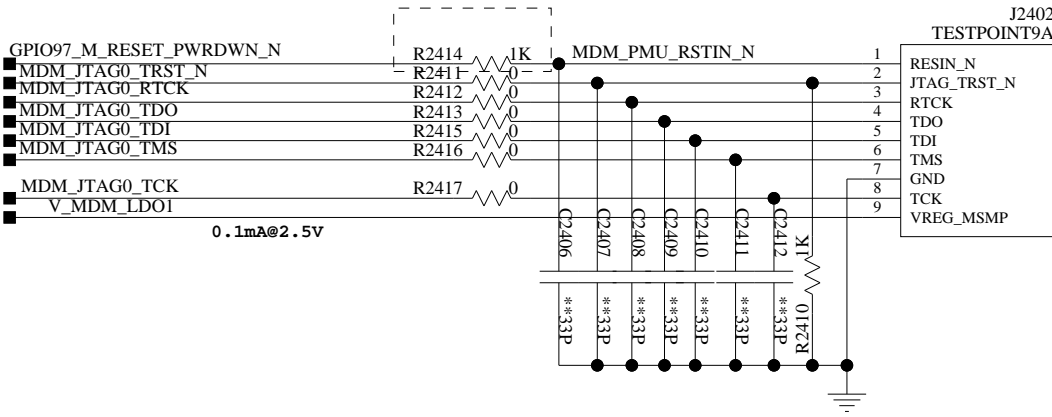
AP JTAG



TEST POINT for CT and BT



MODEM JTAG



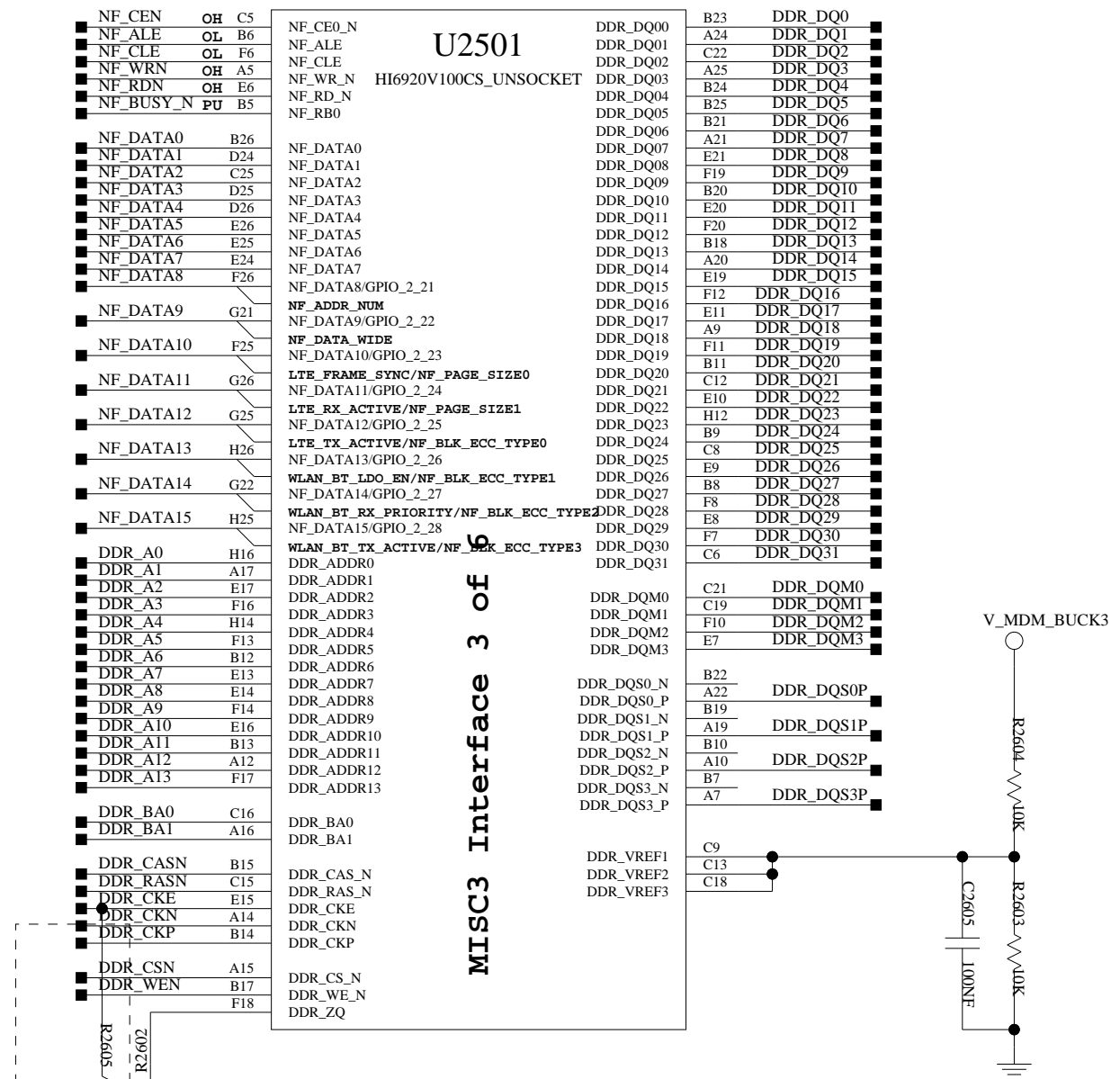
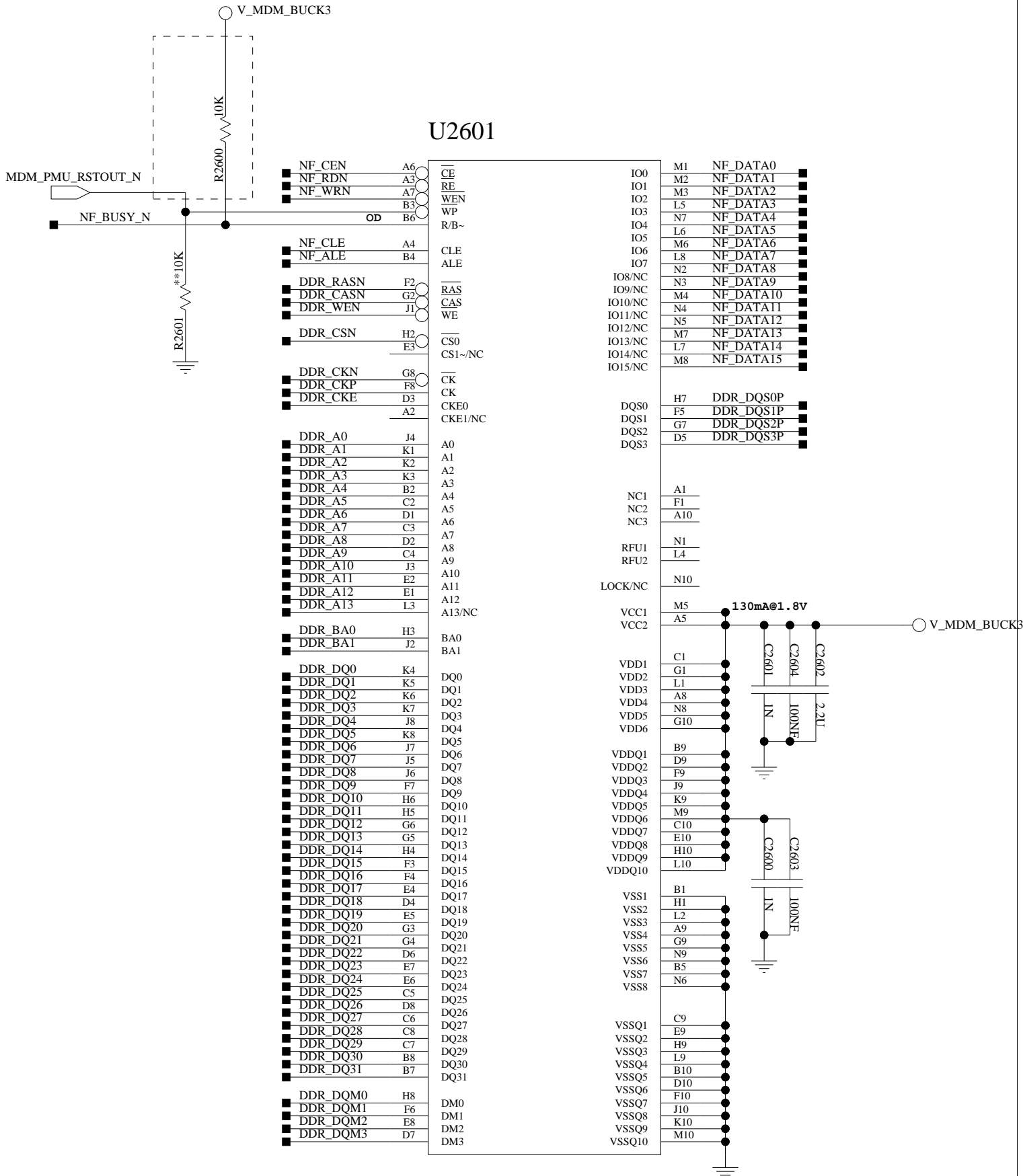
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGWENTAO 00181297	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 24 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	





## 26.MCP ( 8x9 package size )



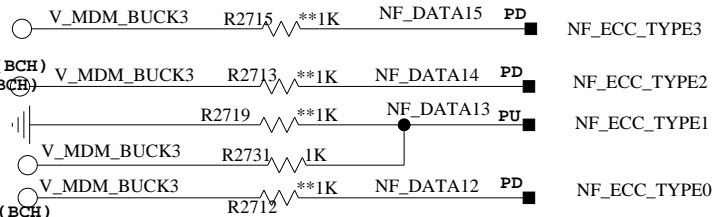
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGYONGXIANG 00171286	SH4101UM		B519710_SCHZH	
REVIEWED	YANGWENTAO 00181297				
		VER	PART_NUMBER	SHEET 26 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

# 27.Hi6920 Function IO

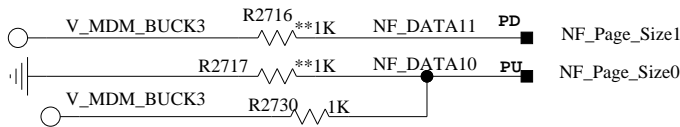
NF\_ECC\_TYPE[3:0]=

ECC_TYPE[3:0]	Page/Block	ECC Type			
0000	64	No ECC			
0001	64	1bit ECC			
0010	64	4bit ECC(RS)			
0011	64	24-bit/512Bytes ECC(BCH)			
0100	64	24-bit/1KBytes ECC(BCH)			
0101	256	No ECC			
0110	256	1bit ECC			
0111	256	4bit ECC(RS)			
1000	128	No ECC			
1001	128	1bit ECC			
1010	128	4bit ECC(RS)			
1011	128	24-bit/512Bytes ECC(BCH)			
1100	128	24-bit/1KBytes ECC(BCH)			
1101	256	24-bit/512Bytes ECC(BCH)			
1110	256	24-bit/1KBytes ECC(BCH)			



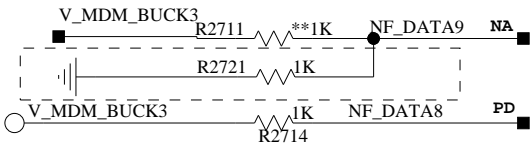
NF\_Page\_Size[1:0]=

00: 512KB  
01: 2KB  
10: 4KB  
11: 8KB



NF\_BUS\_WIDE=

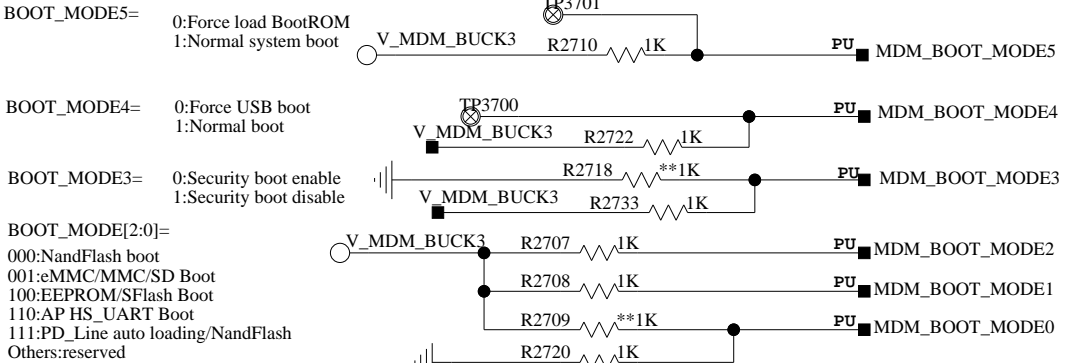
0:8bit  
1:16bit



NF\_ADDR\_NUM=

0:4 cycle  
1:5 cycle

Boot\_Mode

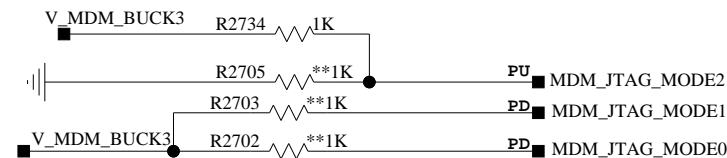


JTAG\_DFT\_MODE=

0:JTAG0 scan SOC module by JTAG\_MODE setting  
1:JTAG0 scan BSD

JTAG\_MODE2[2:0]=

000:A9 + Tensilica + ZSP + HiFi  
001:A9  
010:A9  
011:A9  
100:A9  
101:Tensilica + HiFi  
110:ZSP  
111:Tensilica



MDM_BOOT_MODE0	J26
MDM_BOOT_MODE1	H22
MDM_BOOT_MODE2	J25
MDM_BOOT_MODE3	B4
MDM_BOOT_MODE4	A4
MDM_BOOT_MODE5	T26

MDM\_CLK\_32K\_A

TO AP

USB\_HSIC\_DATA  
USB\_HSIC\_STROB

MDM_JTAG_MODE0	R26
MDM_JTAG_MODE1	R21
MDM_JTAG_MODE2	R25
MDM_JTAG_DFT_MODE	R22

MDM_JTAG0_RTCK	W24
MDM_JTAG0_TCK	V25
MDM_JTAG0_TDI	W26
MDM_JTAG0_TDO	AA26
MDM_JTAG0_TMS	Y26
MDM_JTAG0_TRST_N	W25

JTAG0_RTCK	
JTAG0_TCK	
JTAG0_TDI	
JTAG0_TDO	
JTAG0_TMS	
JTAG0_TRST_N	

BOOT\_MODE0/GPIO\_1\_06  
BOOT\_MODE1/GPIO\_1\_07  
BOOT\_MODE2/GPIO\_1\_08  
BOOT\_MODE3/GPIO\_1\_09  
BOOT\_MODE4/GPIO\_1\_10  
FORCE\_LOAD/GPIO\_1\_11

CLKIN\_SLEEP

HSIC\_DATA  
HSIC\_STROBE

JTAG\_MODE0/GPIO\_2\_18  
JTAG\_MODE1/GPIO\_2\_19  
JTAG\_MODE2/GPIO\_2\_20  
JTAG\_DFT\_MODE

JTAG0\_RTCK  
JTAG0\_TCK  
JTAG0\_TDI  
JTAG0\_TDO  
JTAG0\_TMS  
JTAG0\_TRST\_N

U2501

Hi6920V100CS\_UNSOCKET

MISC2 Interface 2 of 6

GPIO\_0\_07/MMC0\_CLK  
LTE\_FRAME\_SYNC  
GPIO\_0\_08/MMC0\_CMD  
LTE\_RX\_ACTIVE  
GPIO\_0\_09/MMC0\_DATA0  
LTE\_TX\_ACTIVE  
GPIO\_0\_10/MMC0\_DATA1  
WLAN\_BT\_LDO\_EN  
GPIO\_0\_11/MMC0\_DATA2  
WLAN\_BT\_RX\_PRIORITY  
GPIO\_0\_31/MMC0\_DATA3  
WLAN\_BT\_TX\_ACTIVE

GPIO\_2\_00/MIL\_RX\_CLK  
MMC2\_CLK/PTM\_DO0  
GPIO\_2\_01/MIL\_TX\_CLK/RMIL\_CLK  
MMC0\_CLK/SDIO\_CLK/PTM\_DO1  
GPIO\_2\_04/MIL\_RXDV/RMIL\_RXDV  
MMC0\_CMD/SDIO\_CMD/PTM\_DO2  
GPIO\_2\_08/MIL\_RXD0/RMIL\_RXD0  
MMC0\_DATA0/SDIO\_DATA0/PTM\_DO3  
GPIO\_2\_09/MIL\_RXD1/RMIL\_RXD1  
MMC0\_DATA1/SDIO\_DATA1/PTM\_DO4  
GPIO\_2\_10/MIL\_RXD2  
MMC2\_CMD/PTM\_DO5  
GPIO\_2\_17/MIL\_RXD3  
MMC2\_DATA2/PTM\_DO11  
GPIO\_2\_02  
MMC2\_DATA3  
GPIO\_2\_11/MIL\_TXEN/RMIL\_TXEN  
PTM\_DO6  
GPIO\_2\_13/MIL\_TXD0/RMIL\_TXD0  
MMC0\_DATA2/SDIO\_DATA2/PTM\_DO7  
GPIO\_2\_14/MIL\_TXD1/RMIL\_TXD1  
MMC0\_DATA3/SDIO\_DATA3/PTM\_DO8  
GPIO\_2\_15/MIL\_TXD2  
MMC2\_DATA0/PTM\_DO9  
GPIO\_2\_16/MIL\_TXD3  
MMC2\_DATA1/PTM\_DO10  
GPIO\_0\_12/MIL\_MDIO/RMIL\_MDIO  
PTM\_DO12  
GPIO\_0\_13/MIL\_MDC/RMIL\_MDC  
PTM\_DO13

PMU\_RSTIN\_N  
PMU\_RSTOUT\_N  
PMU\_HOLD/GPIO\_2\_31  
PMU\_IRQ\_N  
USB\_DRVVBUS  
GPIO\_0\_27

SSP0\_CS0\_N/GPIO\_1\_12  
SSP0\_CS1\_N/GPIO\_1\_13  
SSP0\_CLK/GPIO\_1\_14  
SSP0\_SDIO/GPIO\_1\_15  
SSP0\_SDO/GPIO\_1\_16

GPIO\_0\_22/SSP1\_CS0\_N  
SSIO/HS\_UART\_TXD  
GPIO\_0\_23/SSP1\_CS1\_N  
SSI1/HS\_UART\_RXD  
GPIO\_0\_24/SSP1\_CLK  
HS\_UART\_RTS\_N  
GPIO\_0\_25/SSP1\_SDIO  
HS\_UART\_CTS\_N  
GPIO\_0\_26/SSP1\_SDO

UART0\_TXD/GPIO\_0\_14  
UART0\_RXD/GPIO\_0\_15  
UART1\_TXD/GPIO\_0\_16  
I2C\_SCL/PTM\_DO14  
UART1\_RXD/GPIO\_0\_17  
I2C\_SDA/PTM\_DO15  
GPIO\_0\_18/UART2\_TXD  
PCM\_CLK/LCD\_CS\_N/PTM\_CLK  
GPIO\_0\_19/UART2\_RXD  
PCM\_SYNC/LCD\_RST\_N/PTM\_CTL  
GPIO\_0\_20/UART3\_TXD/PCM\_DI  
GPIO\_0\_21/UART3\_RXD/PCM\_DO

UICC\_DP/GPIO\_0\_04  
UICC\_DM/GPIO\_0\_05  
LED\_PWM/GPIO\_0\_06

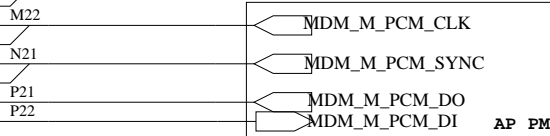
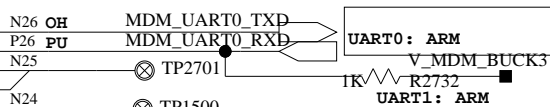
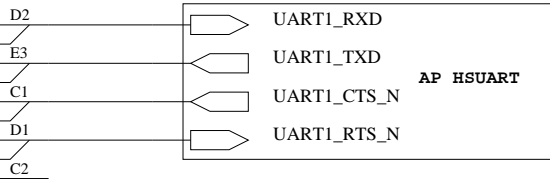
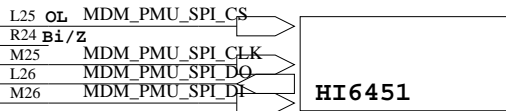
USIM0\_CLK/GPIO\_0\_28  
USIM0\_RST/GPIO\_0\_29  
USIM0\_DATA/GPIO\_0\_30

USIM1\_CLK/GPIO\_0\_00  
USIM1\_RST/GPIO\_0\_01  
USIM1\_DATA/GPIO\_0\_02  
GPIO\_0\_03

USB20\_VBUS  
USB20\_ID  
USB20\_DP  
USB20\_DM  
USB20\_TXRTUNE  
USBPHY\_CLK

JTAG1\_TCK/MMC1\_CLK  
GPIO\_1\_21  
JTAG1\_RTCK/MMC1\_CMD  
SPI1\_CS0\_N/GPIO\_1\_22  
JTAG1\_TRST\_N/MMC1\_DATA0  
SPI1\_CS1\_N/GPIO\_1\_23  
JTAG1\_TMS/MMC1\_DATA1  
SPI1\_CLK/GPIO\_1\_24  
JTAG1\_TDI/MMC1\_DATA2  
SPI1\_SDIO/GPIO\_1\_25  
JTAG1\_TDO/MMC1\_DATA3  
SPI1\_SDO/GPIO\_1\_26

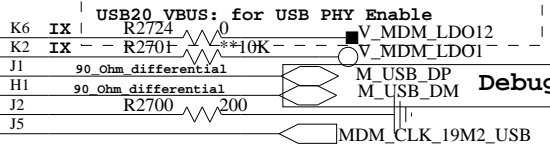
K26 IX  
J24 OD  
K25 OL  
K22 PU  
P25



AB26  
AC26  
B2

AC25  
AE26  
AD25

Y22  
AA24  
AB25  
B1



T25  
T22

U26  
U22

V26  
U24

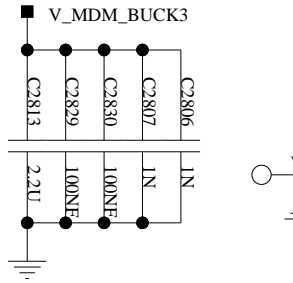
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGYONGXIANG 00171286				
				SH4101UM	B519710_SCHZH
REVIEWED	YANGWENTAO 00181297				
		VER	PART_NUMBER	SHEET 27 OF 43	
		A	03021SHJ		HUAWEI TECH CO.,LTD.

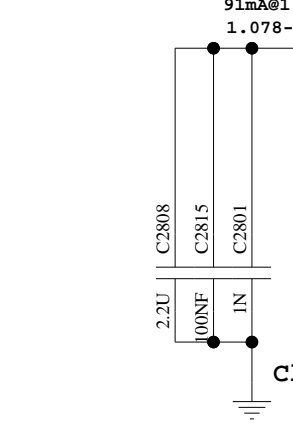
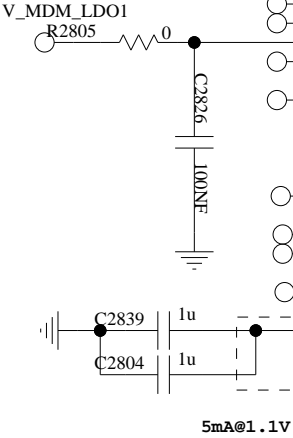
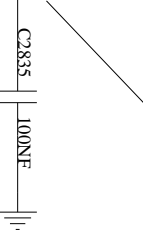
28.Hi6920 Power

V\_BUCK3

NAND IO:40mA@1.8V  
DDR IO:40mA@1.8V  
MCP device:130mA@1.8V  
UART/SPI/BOOT\_MODE/MMC1/  
NAND&RF CTRL IO:55mA@1.8V  
Max:265mA



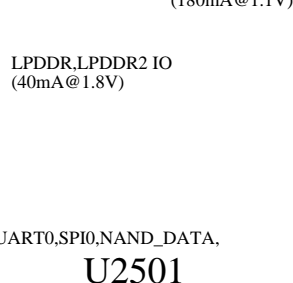
V\_MDM\_LDO9



Close Pin

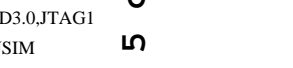
V\_MDM\_BUCK3

80mA@1.8V



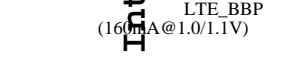
V\_MDM\_BUCK3

55mA@1.8V



V\_MDM\_LDO1

5mA@2.5V



V\_MDM\_LDO2

2mA@2.85V



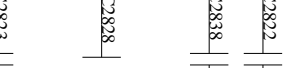
V\_MDM\_LDO1

5mA@2.5V



V\_MDM\_LDO2

2mA@2.85V



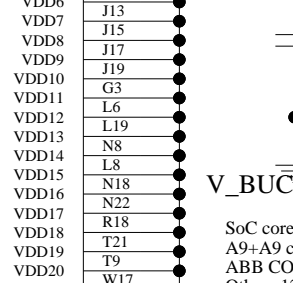
V\_MDM\_BUCK2

2mA@2.8V



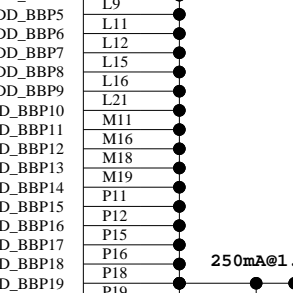
V\_MDM\_BUCK2

380mA@1.1V



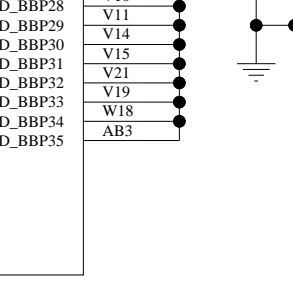
V\_BUCK2

SoC core:180mA@1.1V  
A9+A9 core:200mA@1.1V  
ABB CORE:93mA@1.1V  
Others:12mA@1.1V  
BBP core:250mA@1.1V - Backup  
Max: 735mA



V\_MDM\_BUCK1

250mA@1.0/1.1V



V\_MDM\_BUCK2

2mA@2.8V



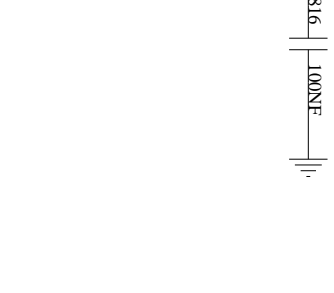
V\_MDM\_BUCK2

2mA@2.8V



V\_MDM\_BUCK2

1mA@2.5V



V\_MDM\_BUCK2

1mA@2.5V



V\_MDM\_BUCK2

1mA@2.5V



V\_MDM\_BUCK2

1mA@2.5V



V\_MDM\_BUCK2

1mA@2.5V



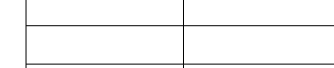
V\_MDM\_BUCK2

1mA@2.5V



V\_MDM\_BUCK2

1mA@2.5V



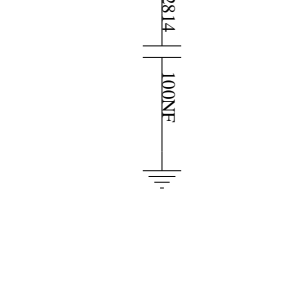
V\_MDM\_BUCK2

1mA@2.5V



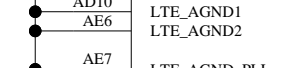
V\_MDM\_BUCK2

1.078-1.25V



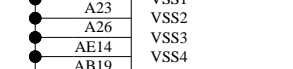
V\_MDM\_BUCK2

1.078-1.25V



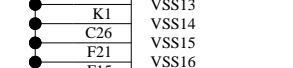
V\_MDM\_BUCK2

1.078-1.25V



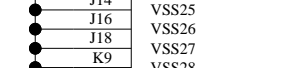
V\_MDM\_BUCK2

1.078-1.25V



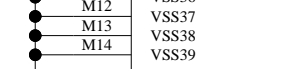
V\_MDM\_BUCK2

1.078-1.25V



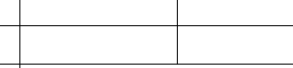
V\_MDM\_BUCK2

1.078-1.25V



V\_MDM\_BUCK2

1.078-1.25V



V\_MDM\_BUCK2

1.078-1.25V



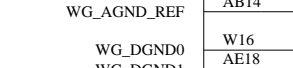
V\_MDM\_BUCK2

1.078-1.25V



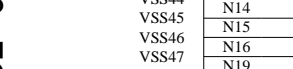
V\_MDM\_BUCK2

1.078-1.25V



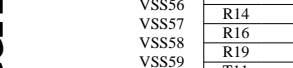
V\_MDM\_BUCK2

1.078-1.25V



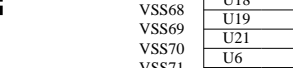
V\_MDM\_BUCK2

1.078-1.25V



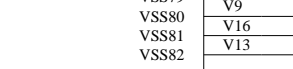
V\_MDM\_BUCK2

1.078-1.25V



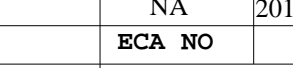
V\_MDM\_BUCK2

1.078-1.25V



V\_MDM\_BUCK2

1.078-1.25V



V\_MDM\_BUCK2

1.078-1.25V

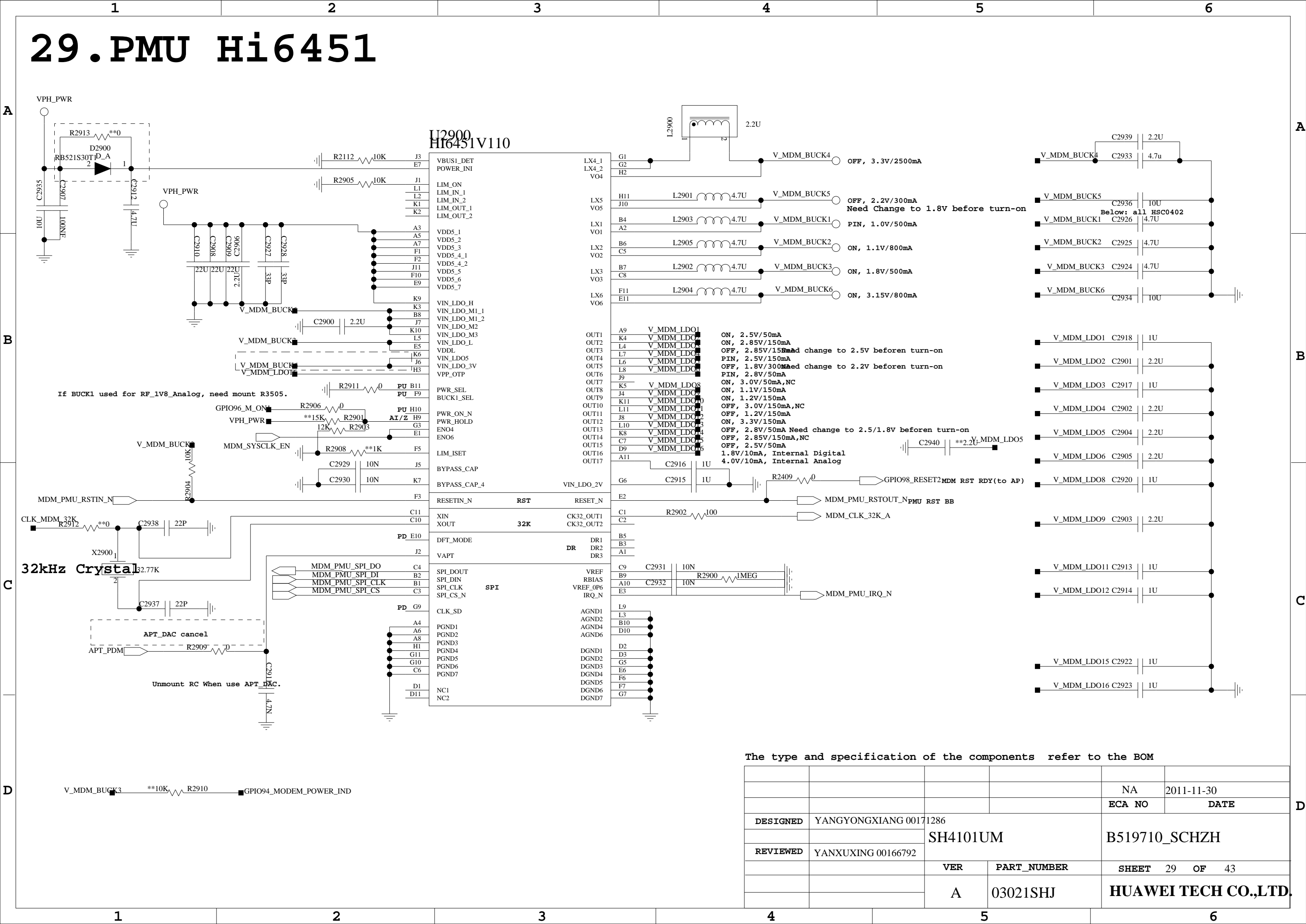


The type and specification of the components refer to the BOM					
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGYONGXIANG 00171286	SH4101UM		B519710_SCHZH	
REVIEWED	YANXUXING 00166792				
		VER	PART_NUMBER	SHEET 28 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

29. PMU Hi6451

The schematic diagram illustrates the PMU Hi6451 circuit, detailing the connections for various power management components. Key sections include:

- Power Input and Regulation:** VPH\_PWR input, V\_MDM\_BUCK4 (OFF, 3.3V/2500mA), V\_MDM\_BUCK5 (OFF, 2.2V/300mA), V\_MDM\_BUCK1 (PIN, 1.0V/500mA), V\_MDM\_BUCK2 (ON, 1.1V/800mA), V\_MDM\_BUCK3 (ON, 1.8V/500mA), and V\_MDM\_BUCK6 (ON, 3.15V/800mA).
- LDOs and Regulators:** V\_MDM\_LDO1 through V\_MDM\_LDO16, including their respective pin connections and component values (e.g., C2918, C2901, C2917, C2902, C2904, C2905, C2920, C2903, C2913, C2914, C2922, C2923).
- Crystal and Clock:** 32kHz Crystal (X2900), CLK\_MDM\_32K, and MDM\_CLK\_32K\_A.
- GPIOs and Control:** GPIO96\_M\_ON, GPIO94\_MODEM\_POWER\_IND, GPIO98\_RESET2, and MDM\_RST\_RDY(to AP).
- Other Components:** R2913, R2905, R2911, R2906, R2901, R2903, R2908, R2929, R2930, R2904, R2912, R2909, R2910, R2907, R2902, R2900, R2904, R2905, R2906, R2907, R2908, R2909, R2910, R2911, R2912, R2913, R2914, R2915, R2916, R2917, R2918, R2919, R2920, R2921, R2922, R2923, R2924, R2925, R2926, R2927, R2928, R2929, R2930, R2931, R2932, R2933, R2934, R2935, R2936, R2937, R2938, R2939, R2940, R2941, R2942, R2943, R2944, R2945, R2946, R2947, R2948, R2949, R2950, R2951, R2952, R2953, R2954, R2955, R2956, R2957, R2958, R2959, R2960, R2961, R2962, R2963, R2964, R2965, R2966, R2967, R2968, R2969, R2970, R2971, R2972, R2973, R2974, R2975, R2976, R2977, R2978, R2979, R2980, R2981, R2982, R2983, R2984, R2985, R2986, R2987, R2988, R2989, R2990, R2991, R2992, R2993, R2994, R2995, R2996, R2997, R2998, R2999, R3000, R3001, R3002, R3003, R3004, R3005, R3006, R3007, R3008, R3009, R3010, R3011, R3012, R3013, R3014, R3015, R3016, R3017, R3018, R3019, R3020, R3021, R3022, R3023, R3024, R3025, R3026, R3027, R3028, R3029, R3030, R3031, R3032, R3033, R3034, R3035, R3036, R3037, R3038, R3039, R3040, R3041, R3042, R3043, R3044, R3045, R3046, R3047, R3048, R3049, R3050, R3051, R3052, R3053, R3054, R3055, R3056, R3057, R3058, R3059, R3060, R3061, R3062, R3063, R3064, R3065, R3066, R3067, R3068, R3069, R3070, R3071, R3072, R3073, R3074, R3075, R3076, R3077, R3078, R3079, R3080, R3081, R3082, R3083, R3084, R3085, R3086, R3087, R3088, R3089, R3090, R3091, R3092, R3093, R3094, R3095, R3096, R3097, R3098, R3099, R3100, R3101, R3102, R3103, R3104, R3105, R3106, R3107, R3108, R3109, R3110, R3111, R3112, R3113, R3114, R3115, R3116, R3117, R3118, R3119, R3120, R3121, R3122, R3123, R3124, R3125, R3126, R3127, R3128, R3129, R3130, R3131, R3132, R3133, R3134, R3135, R3136, R3137, R3138, R3139, R3140, R3141, R3142, R3143, R3144, R3145, R3146, R3147, R3148, R3149, R3150, R3151, R3152, R3153, R3154, R3155, R3156, R3157, R3158, R3159, R3160, R3161, R3162, R3163, R3164, R3165, R3166, R3167, R3168, R3169, R3170, R3171, R3172, R3173, R3174, R3175, R3176, R3177, R3178, R3179, R3180, R3181, R3182, R3183, R3184, R3185, R3186, R3187, R3188, R3189, R3190, R3191, R3192, R3193, R3194, R3195, R3196, R3197, R3198, R3199, R3200, R3201, R3202, R3203, R3204, R3205, R3206, R3207, R3208, R3209, R3210, R3211, R3212, R3213, R3214, R3215, R3216, R3217, R3218, R3219, R3220, R3221, R3222, R3223, R3224, R3225, R3226, R3227, R3228, R3229, R3230, R3231, R3232, R3233, R3234, R3235, R3236, R3237, R3238, R3239, R3240, R3241, R3242, R3243, R3244, R3245, R3246, R3247, R3248, R3249, R3250, R3251, R3252, R3253, R3254, R3255, R3256, R3257, R3258, R3259, R3260, R3261, R3262, R3263, R3264, R3265, R3266, R3267, R3268, R3269, R3270, R3271, R3272, R3273, R3274, R3275, R3276, R3277, R3278, R3279, R3280, R3281, R3282, R3283, R3284, R3285, R3286, R3287, R3288, R3289, R3290, R3291, R3292, R3293, R3294, R3295, R3296, R3297, R3298, R3299, R3300, R3301, R3302, R3303, R3304, R3305, R3306, R3307, R3308, R3309, R3310, R3311, R3312, R3313, R3314, R3315, R3316, R3317, R3318, R3319, R3320, R3321, R3322, R3323, R3324, R3325, R3326, R3327, R3328, R3329, R3330, R3331, R3332, R3333, R3334, R3335, R3336, R3337, R3338, R3339, R3340, R3341, R3342, R3343, R3344, R3345, R3346, R3347, R3348, R3349, R3350, R3351, R3352, R3353, R3354, R3355, R3356, R3357, R3358, R3359, R3360, R3361, R3362, R3363, R3364, R3365, R3366, R3367, R3368, R3369, R3370, R3371, R3372, R3373, R3374, R3375, R3376, R3377, R3378, R3379, R3380, R3381, R3382, R3383, R3384, R3385, R3386, R3387, R3388, R3389, R3390, R3391, R3392, R3393, R3394, R3395, R3396, R3397, R3398, R3399, R3400, R3401, R3402, R3403, R3404, R3405, R3406, R3407, R3408, R3409, R3410, R3411, R3412, R3413, R3414, R3415, R3416, R3417, R3418, R3419, R3420, R3421, R3422, R3423, R3424, R3425, R3426, R3427, R3428, R3429, R3430, R3431, R3432, R3433, R3434, R3435, R3436, R3437, R3438, R3439, R3440, R3441, R3442, R3443, R3444, R3445, R3446, R3447, R3448, R3449, R3450, R3451, R3452, R3453, R3454, R3455, R3456, R3457, R3458, R3459, R3460, R3461, R3462, R3463, R3464, R3465, R3466, R3467, R3468, R3469, R3470, R3471, R3472, R3473, R3474, R3475, R3476, R3477, R3478, R3479, R3480, R3481, R3482, R3483, R3484, R3485, R3486, R3487, R3488, R3489, R3490, R3491, R3492, R3493



29. PMU Hi6451

VP\_H\_PWR

R2913 \*\*0

D2900 RB521S30T1D-A

C2935

C2907

C2912 4.7U

VP\_H\_PWR

C2910

C2908

C2909 9062C

C2927

C2928

22U

22U

22U

22U

33P

33P

V\_MDM\_BUCK

C2900 2.2U

V\_MDM\_BUCK

V\_MDM\_BUCK

V\_MDM\_LDO1

If BUCK1 used for RF\_1V8\_Analog, need mount R3505.

GPIO96\_M\_ON

R2906 \*\*15K

R2901 12K

R2903

VPH\_PWR

MDM\_SYCLK\_EN

R2908 \*\*1K

C2929 10N

C2930 10N

V\_MDM\_BUCK

R2904 10K

MDM\_PMU\_RSTIN\_N

CLK\_MDM 32K

R2912 \*\*0

C2938 22P

X2900

32.77K

C2937 22P

APT\_DAC cancel

APT\_PDM

R2909

Unmount RC When use APT\_DAC.

C2911 4.7N

V\_MDM\_BUCK3 \*\*10K

R2910

GPIO94\_MODEM\_POWER\_IND

U2900 Hi6451V110

VBUS1\_DET

POWER\_INI

LX4\_1

LX4\_2

VO4

LX5

VO5

LX1

VO1

LX2

VO2

LX3

VO3

LX6

VO6

OUT1

OUT2

OUT3

OUT4

OUT5

OUT6

OUT7

OUT8

OUT9

OUT10

OUT11

OUT12

OUT13

OUT14

OUT15

OUT16

OUT17

A9

K4

L4

L7

L6

L8

J9

K5

J4

K11

L11

J8

L10

K8

C7

D9

A11

G6

C2915

E2

C1

C2

B5

B3

A1

C9

B9

A10

E3

L9

L3

B10

D10

D2

D3

G5

E6

F6

D1

D11

AGND1

AGND2

AGND4

AGND6

DGND1

DGND2

DGND3

DGND4

DGND5

DGND6

DGND7

NC1

NC2

V\_MDM\_BUCK4 OFF, 3.3V/2500mA

V\_MDM\_BUCK5 OFF, 2.2V/300mA  
Need Change to 1.8V before turn-on

V\_MDM\_BUCK1 PIN, 1.0V/500mA

V\_MDM\_BUCK2 ON, 1.1V/800mA

V\_MDM\_BUCK3 ON, 1.8V/500mA

V\_MDM\_BUCK6 ON, 3.15V/800mA

V\_MDM\_LDO1 ON, 2.5V/50mA

V\_MDM\_LDO2 ON, 2.85V/150mA

V\_MDM\_LDO3 OFF, 2.85V/150mA  
Need change to 2.5V before turn-on

V\_MDM\_LDO4 PIN, 2.5V/150mA

V\_MDM\_LDO5 OFF, 1.8V/300mA  
Need change to 2.2V before turn-on

V\_MDM\_LDO6 PIN, 2.8V/50mA

V\_MDM\_LDO7 ON, 3.0V/50mA,NC

V\_MDM\_LDO8 ON, 1.1V/150mA

V\_MDM\_LDO9 ON, 1.2V/150mA

V\_MDM\_LDO10 OFF, 3.0V/150mA,NC

V\_MDM\_LDO11 OFF, 1.2V/150mA

V\_MDM\_LDO12 ON, 3.3V/150mA

V\_MDM\_LDO13 OFF, 2.8V/50mA  
Need change to 2.5/1.8V before turn-on

V\_MDM\_LDO14 OFF, 2.85V/150mA,NC

V\_MDM\_LDO15 OFF, 2.5V/50mA

V\_MDM\_LDO16 1.8V/10mA, Internal Digital  
4.0V/10mA, Internal Analog

MDM\_PMU\_RSTOUT\_N PMU RST BB

MDM\_CLK\_32K\_A

MDM\_PMU\_IRQ\_N

V\_MDM\_LDO1 1U

V\_MDM\_LDO2 2.2U

V\_MDM\_LDO3 1U

V\_MDM\_LDO4 2.2U

V\_MDM\_LDO5 2.2U

V\_MDM\_LDO6 2.2U

V\_MDM\_LDO8 1U

V\_MDM\_LDO9 2.2U

V\_MDM\_LDO11 1U

V\_MDM\_LDO12 1U

V\_MDM\_LDO15 1U

V\_MDM\_LDO16 1U

32kHz Crystal

The type and specification of the components refer to the BOM

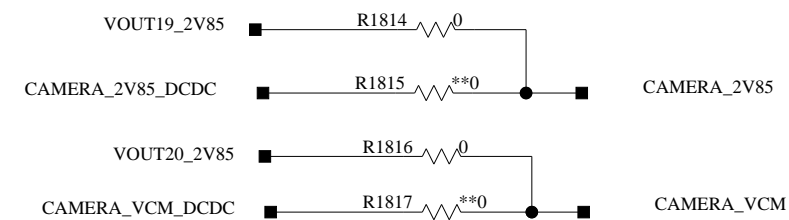
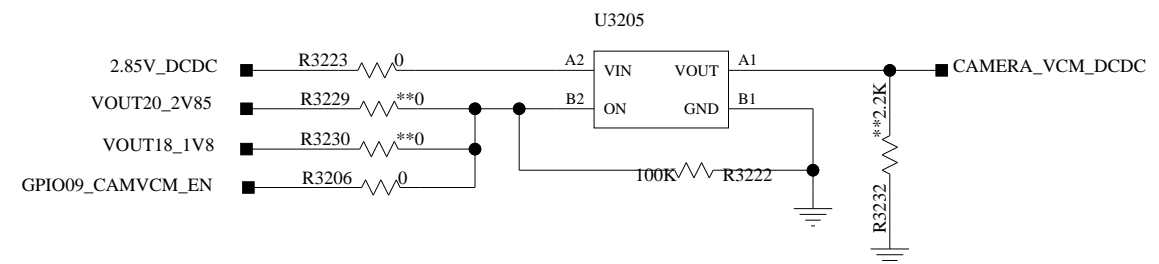
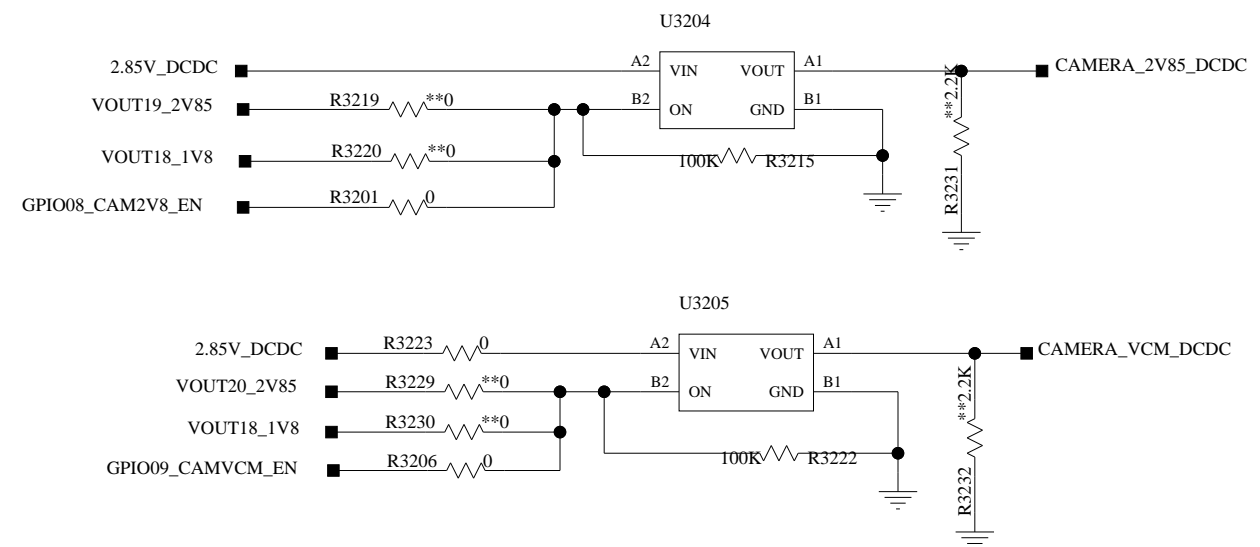
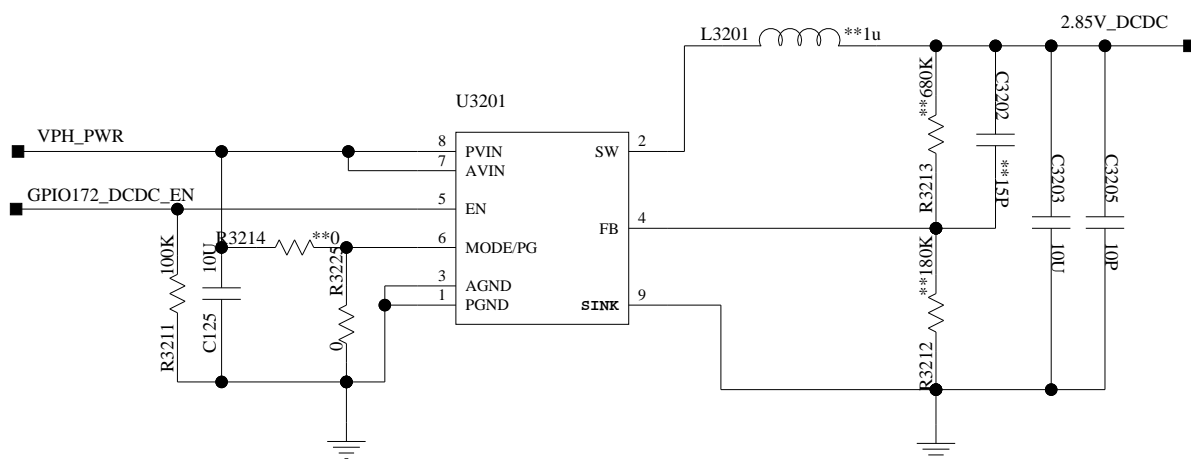
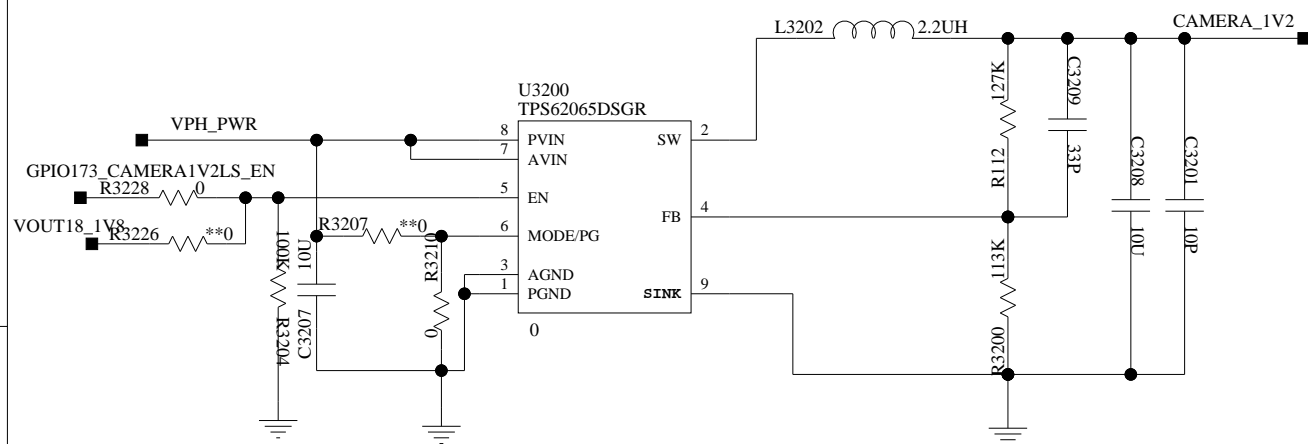
DESIGNED	YANGYONGXIANG 00171286	SH4101UM	B519710_SCHZH
REVIEWED	YANXUXING 00166792	VER A	PART_NUMBER 03021SHJ
		SHEET 29 OF 43	
		HUAWEI TECH CO.,LTD.	

[illegible]



1	2	3	4	5	6
31.NC					
The type and specification of the components refer to the BOM					
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANGYONGXIANG 00171286	SH4101UM		B519710_SCHZH	
REVIEWED	YANGWENTAO 00181297				
		VER	PART_NUMBER	SHEET 31 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	
1	2	3	4	5	6

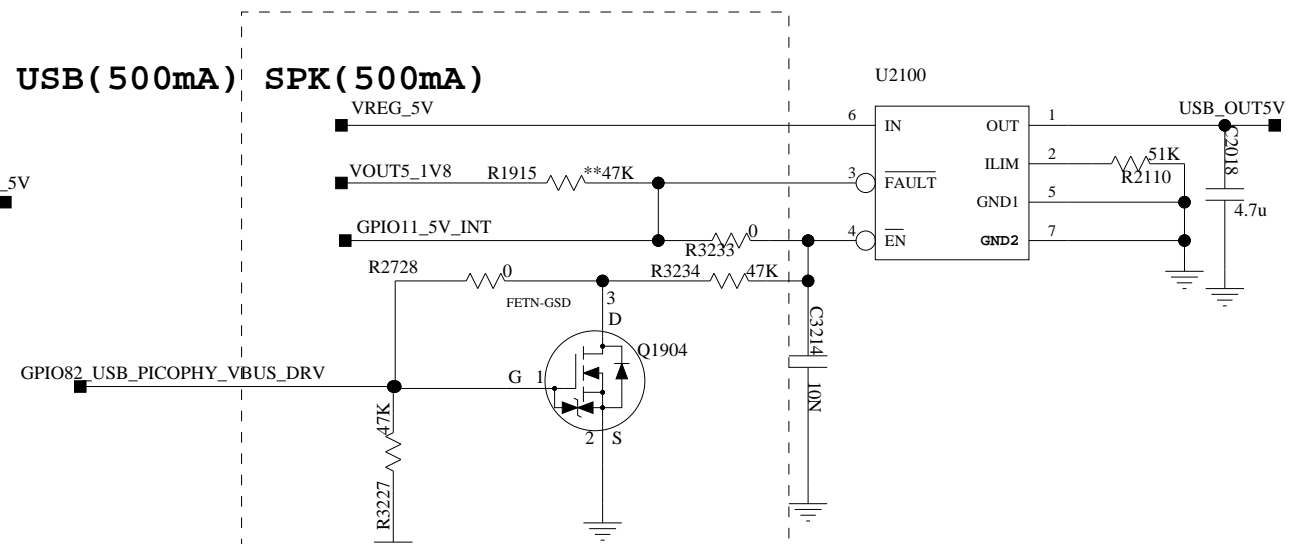
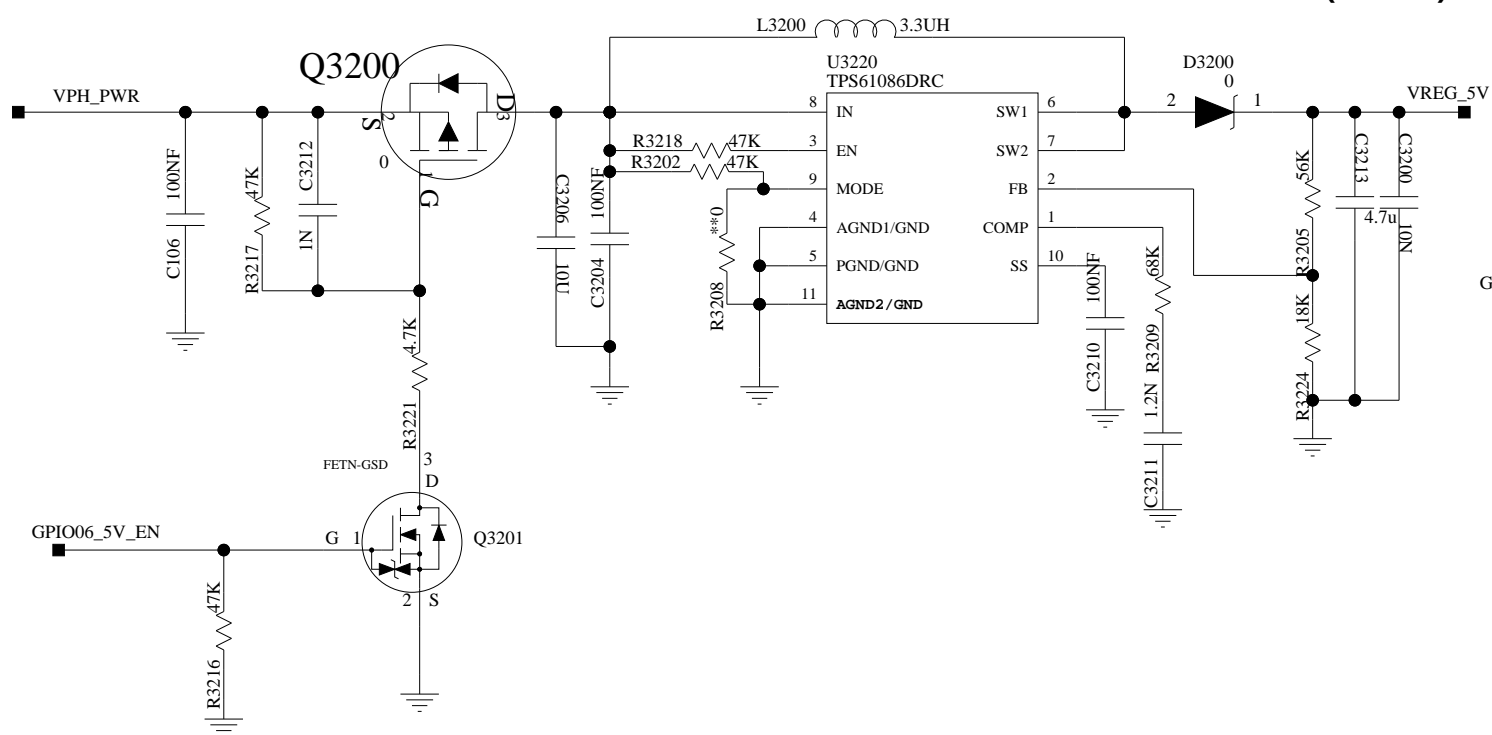
### 32.2.85V DCDC



## Camera power

## 5V BOOST

USED FOR: TP (30mA) USB (500mA) SPK (500mA)



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	YANXUXING 00166792	SH4101UM		B519710_SCHZH	
REVIEWED	ZHANGDEWEN 69779				
		VER	PART_NUMBER	SHEET 32 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	



1	2	3	4	5	6
33. NC					
A					A
B					B
C					C
D					D
The type and specification of the components refer to the BOM					
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	ZHONGDUOQUN 00181792			SH4101UM	
				B519710_SCHZH	
REVIEWED	ZHANGDEWEN 69779				
			VER	PART_NUMBER	SHEET 33 OF 43
			A	03021SHJ	HUAWEI TECH CO.,LTD.
1	2	3	4	5	6

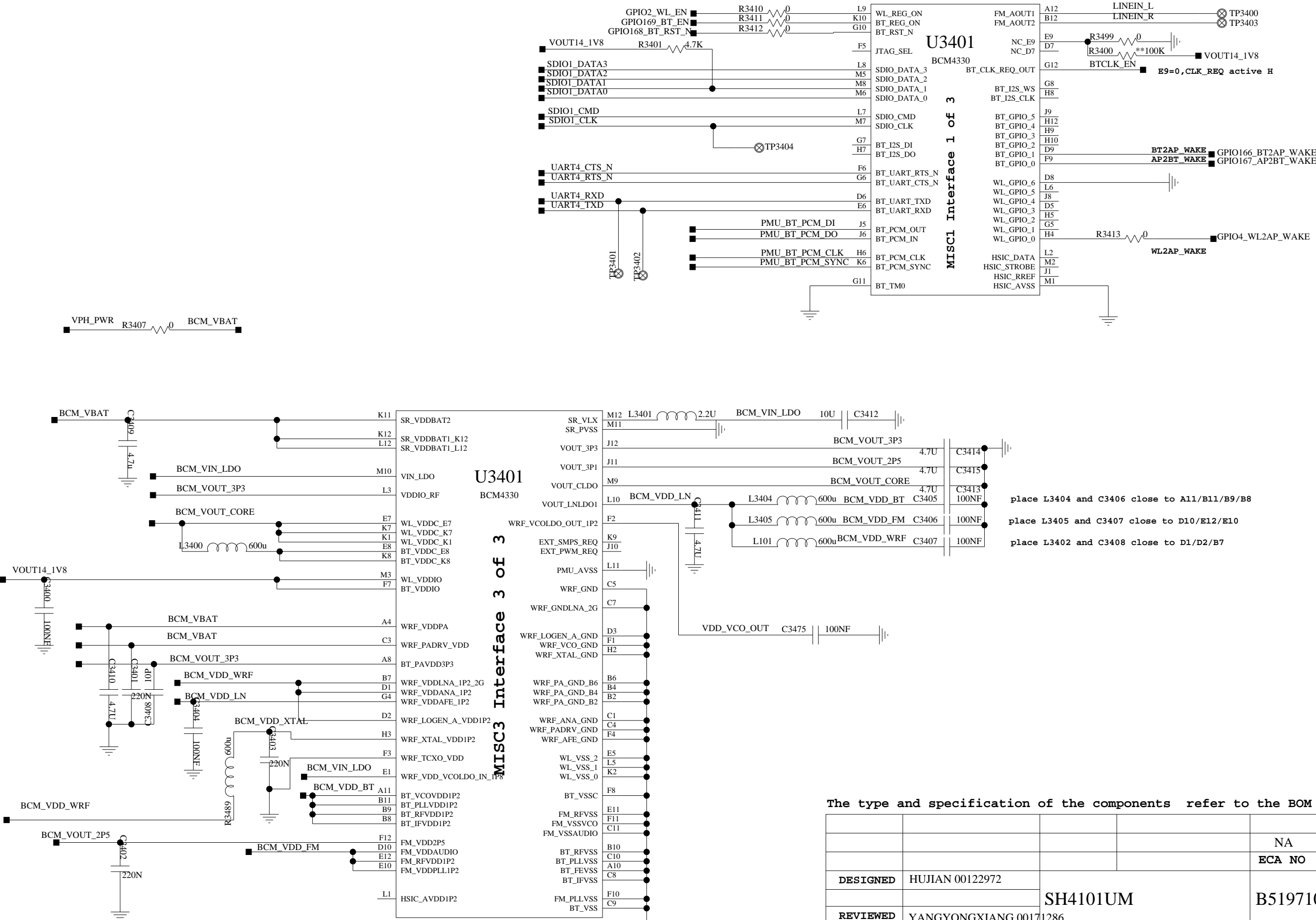
34. BCM4330 BB

A

B

C

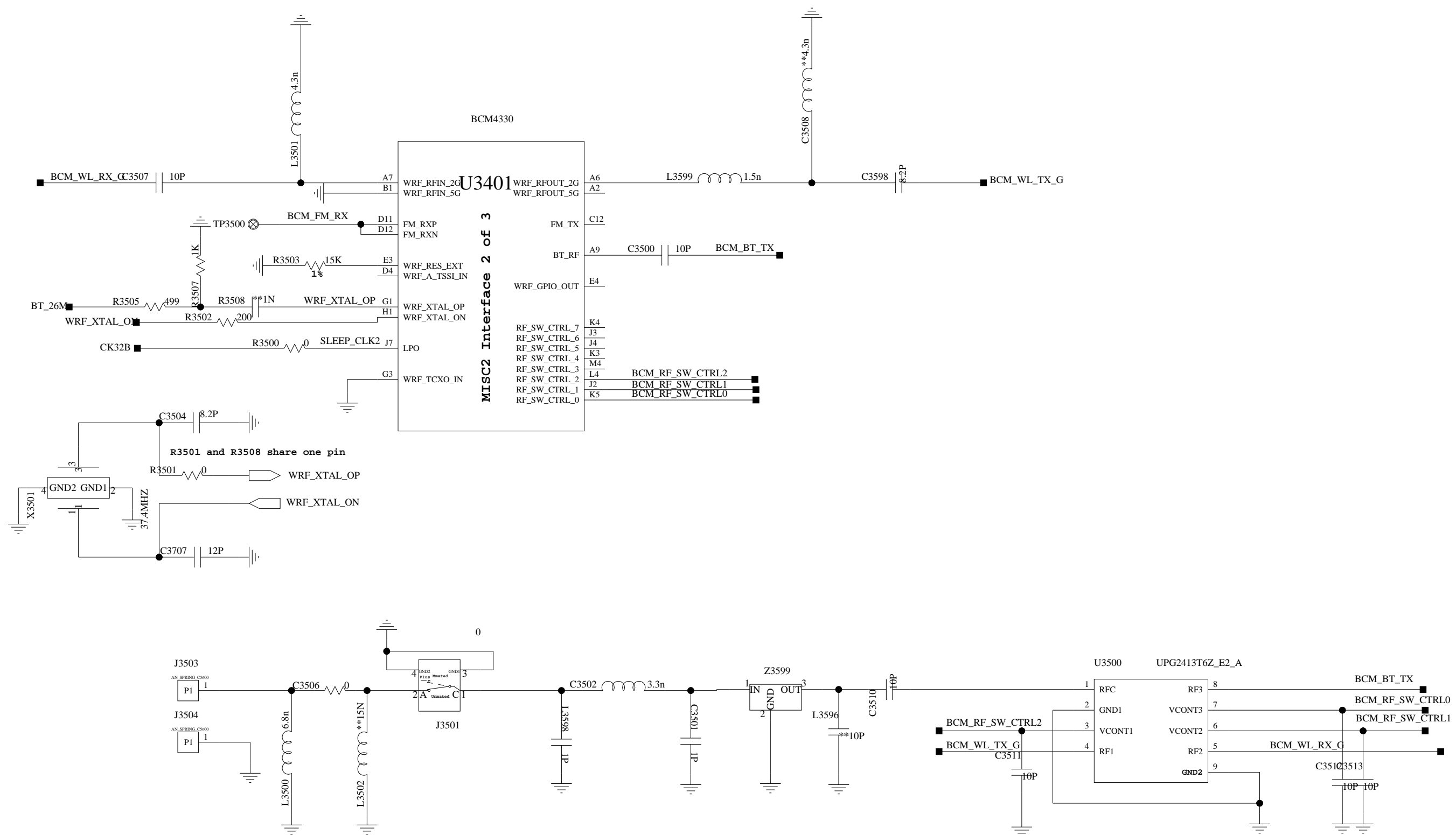
D



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 34 OF 43	
		A	03021SHJ	HUAWAI TECH CO.,LTD.	

## 35. WIFI RF



The type and specification of the components refer to the BOM

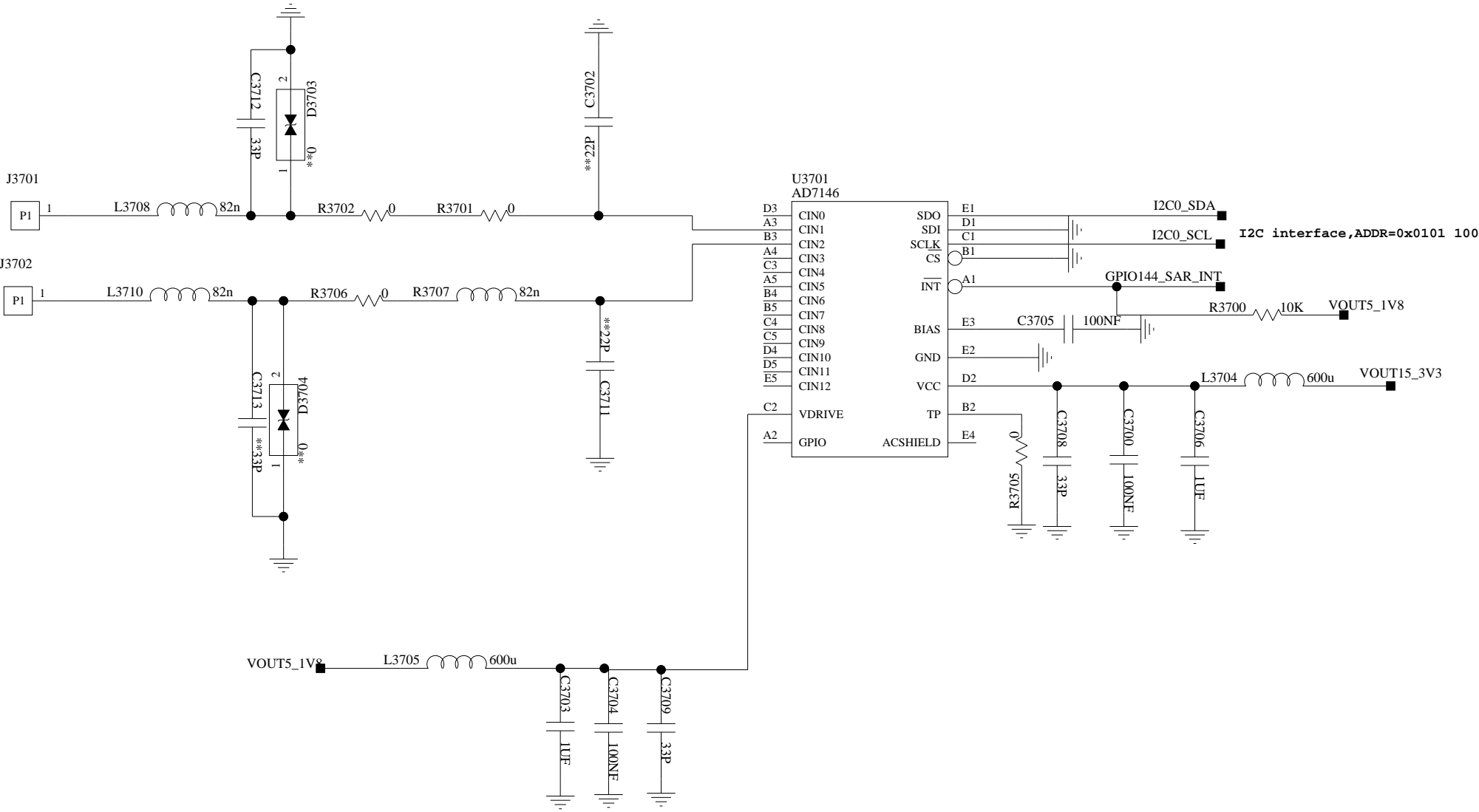
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 35 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

## D



				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET	36 OF 43
		A	03021SHJ	HUAWEI TECH CO.,LTD	

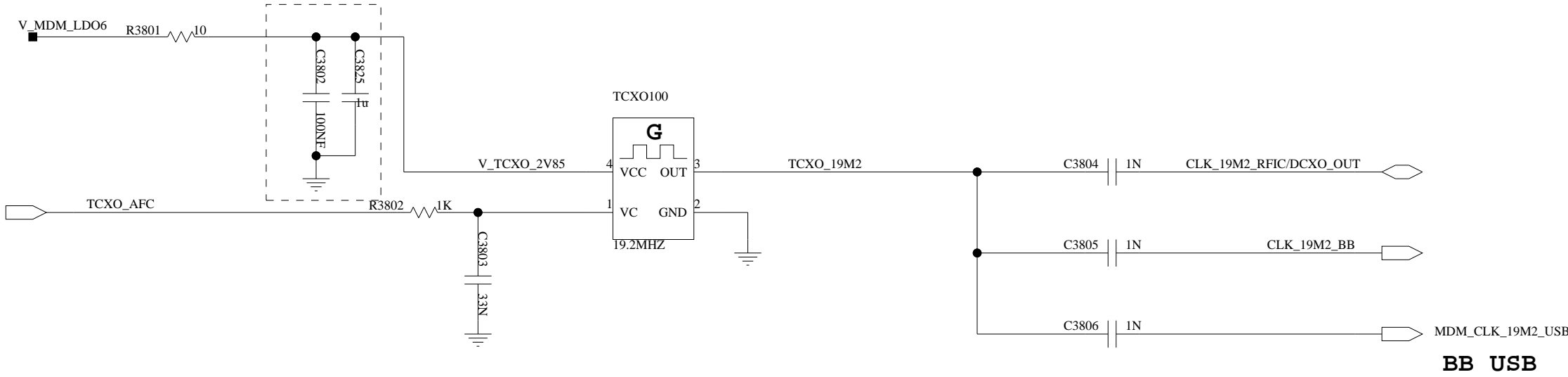
37 CAPACITOR SENSOR



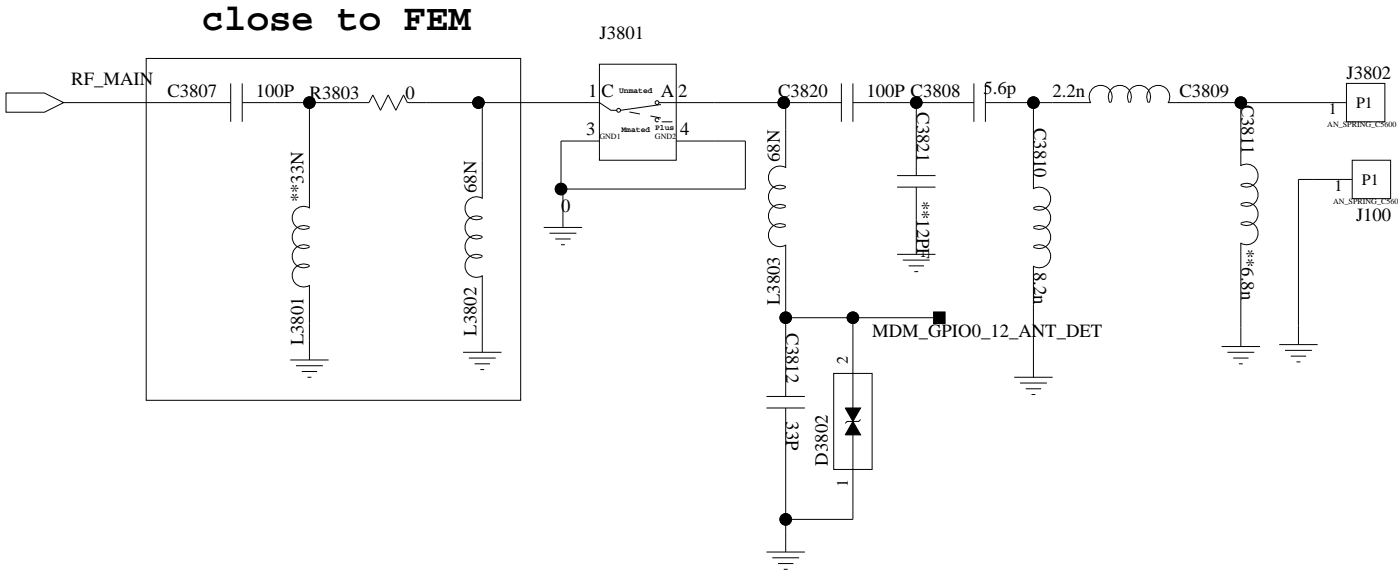
The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 37 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

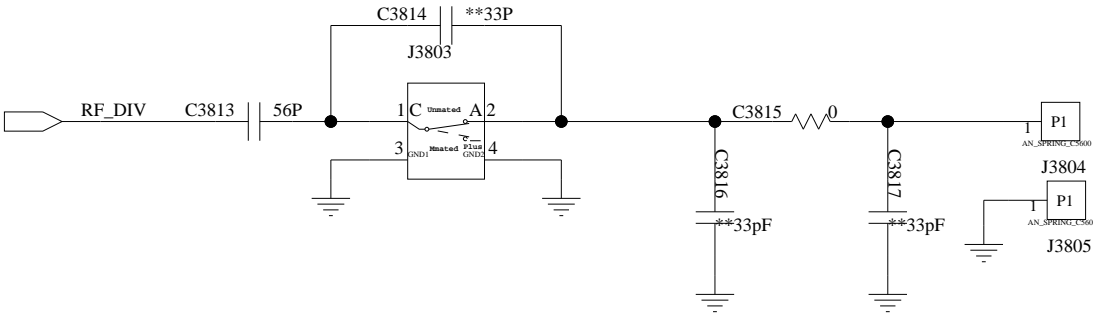
38 TCXO+ANT



MAIN ANT

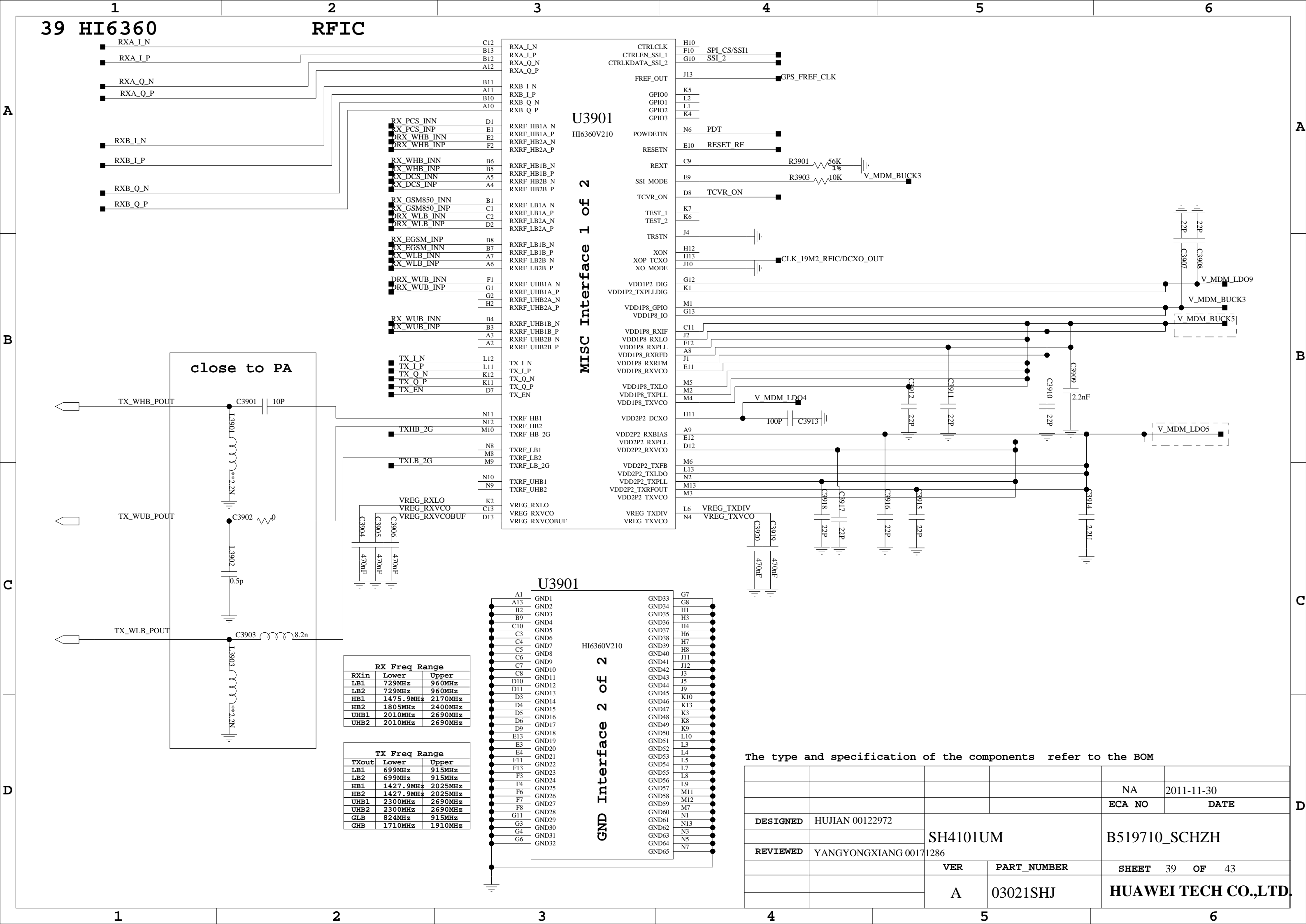


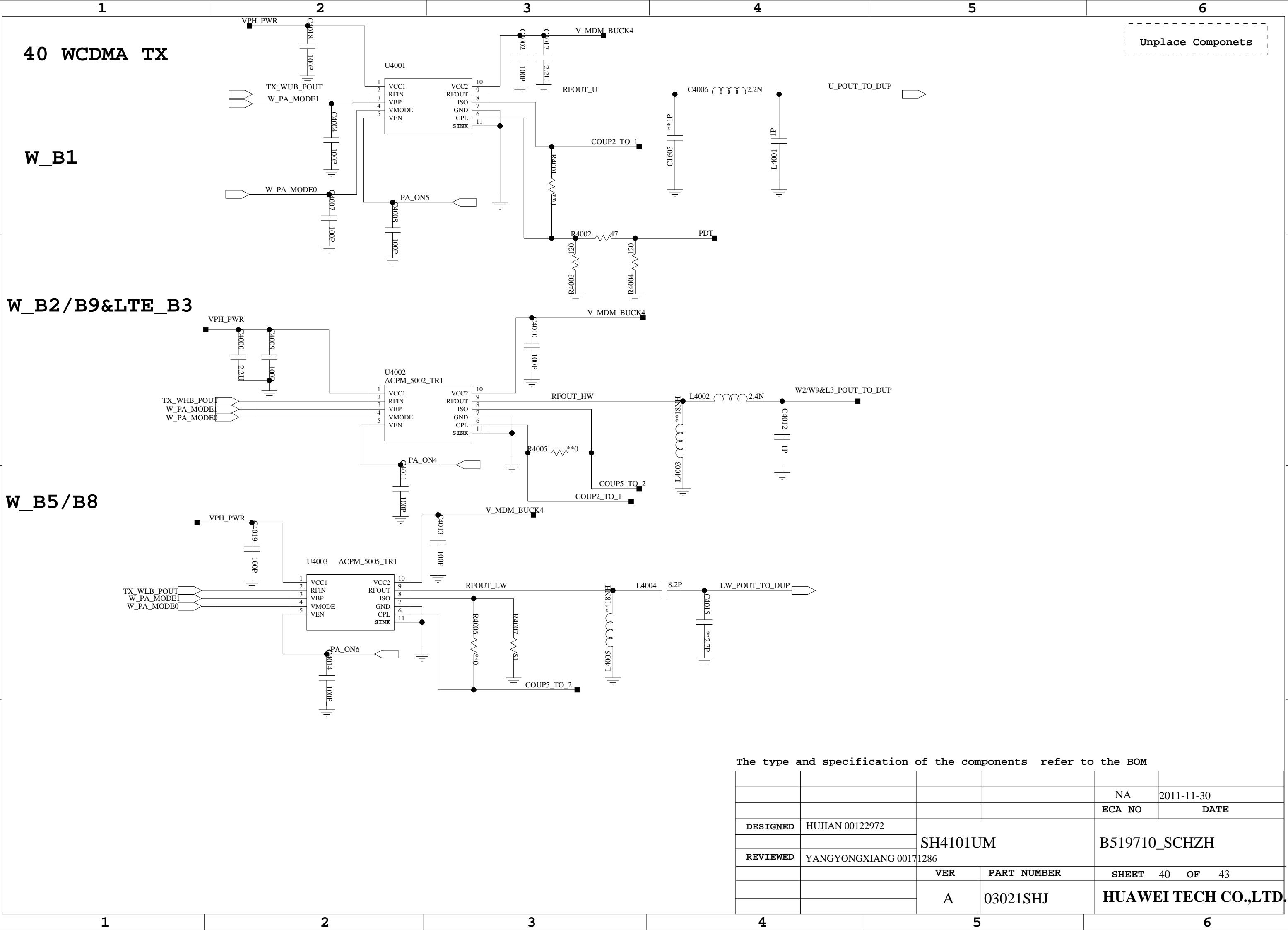
DIV ANT



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 38 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	



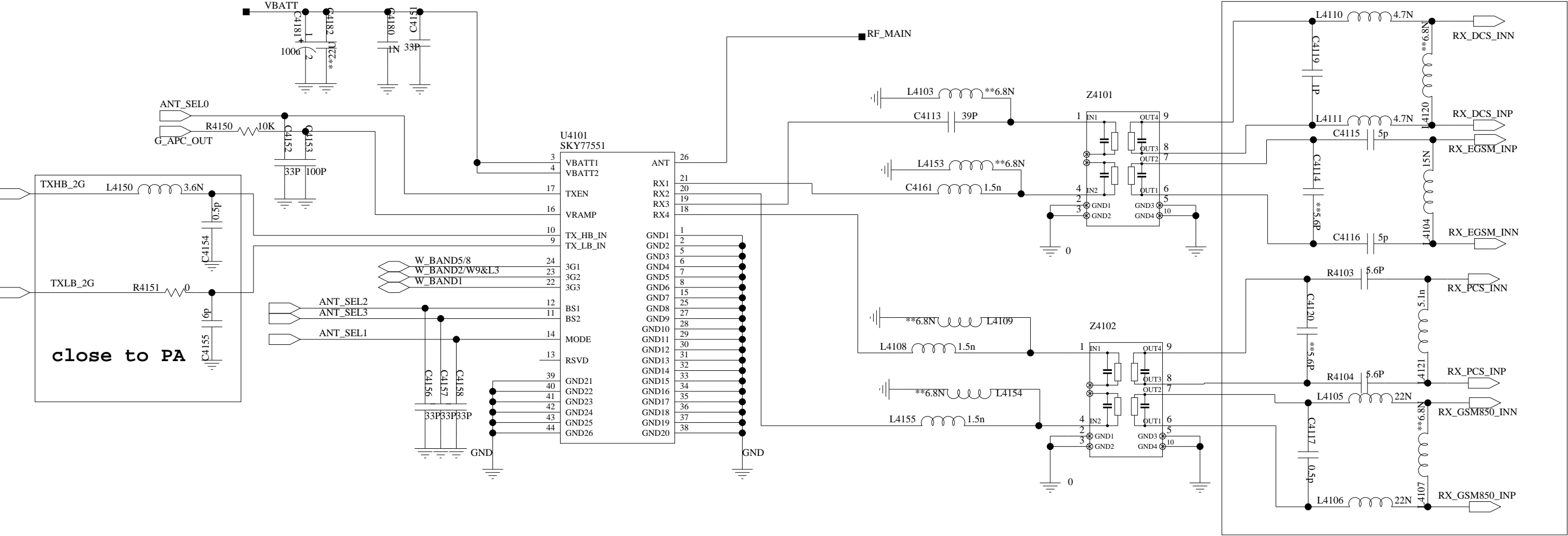


The type and specification of the components refer to the BOM

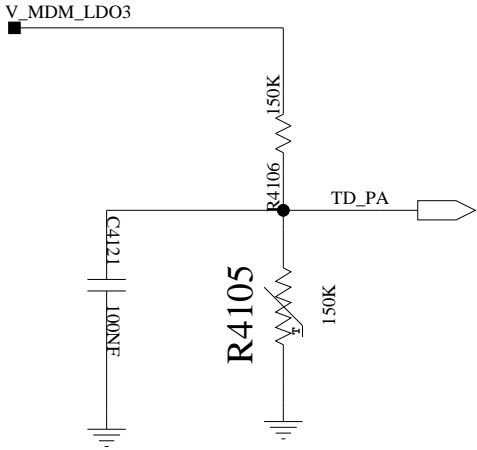
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUIJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 40 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	



41.GSM PA+Switch



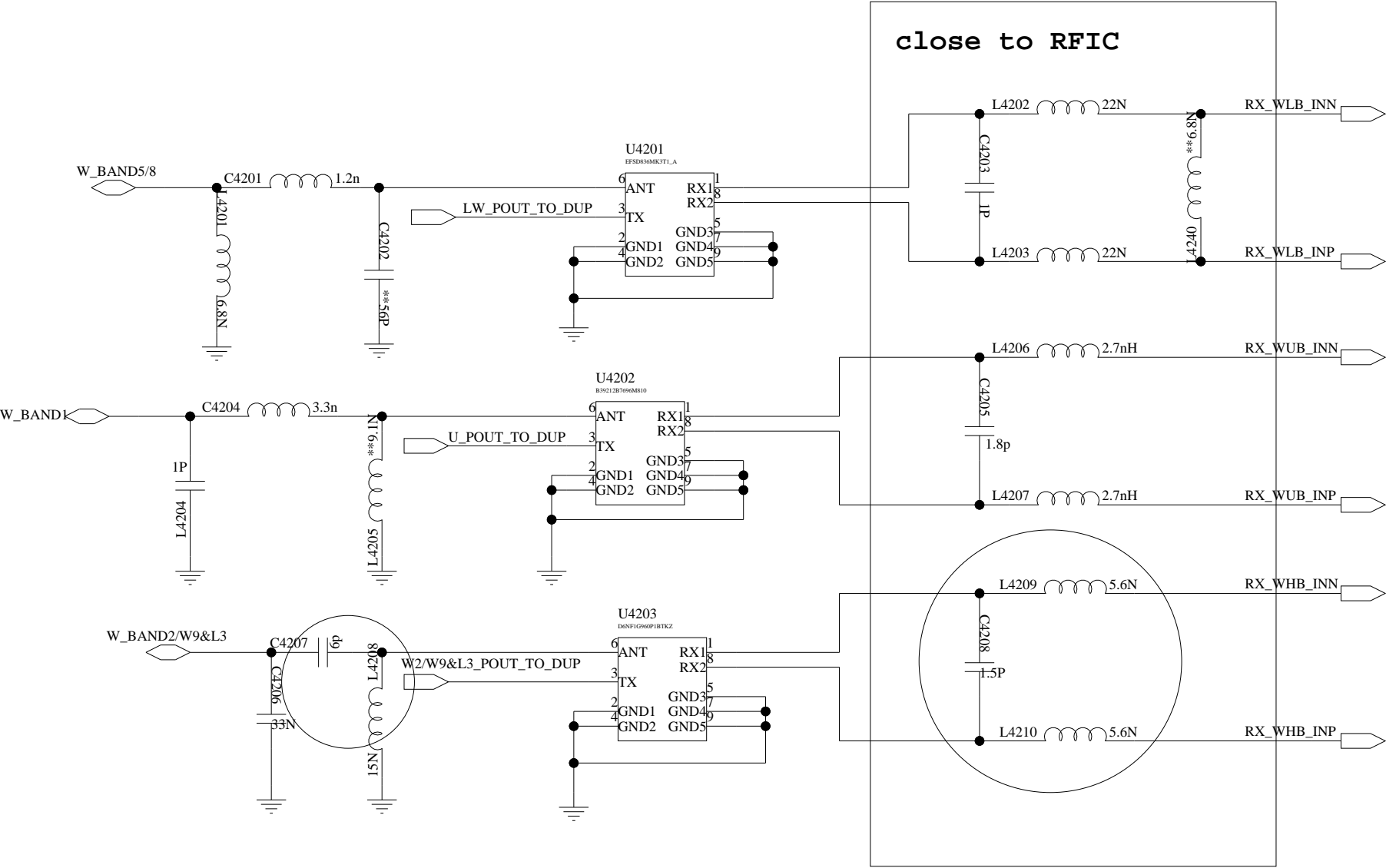
MODE	ANT_SEL0	ANT_SEL1	ANT_SEL2	ANT_SEL3
Standby	0	0	0	0
LB_GMSK_Tx	1	0	0	X
HB_GMSK_Tx	1	0	1	X
LB_EDGE_Tx	1	1	0	X
HB_EDGE_Tx	1	1	1	X
RX1	0	1	0	0
RX2	0	1	1	0
RX3	0	1	0	1
RX4	0	1	1	1
3G1	0	0	1	1
3G2	0	0	0	1
3G3	0	0	1	0



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 41 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

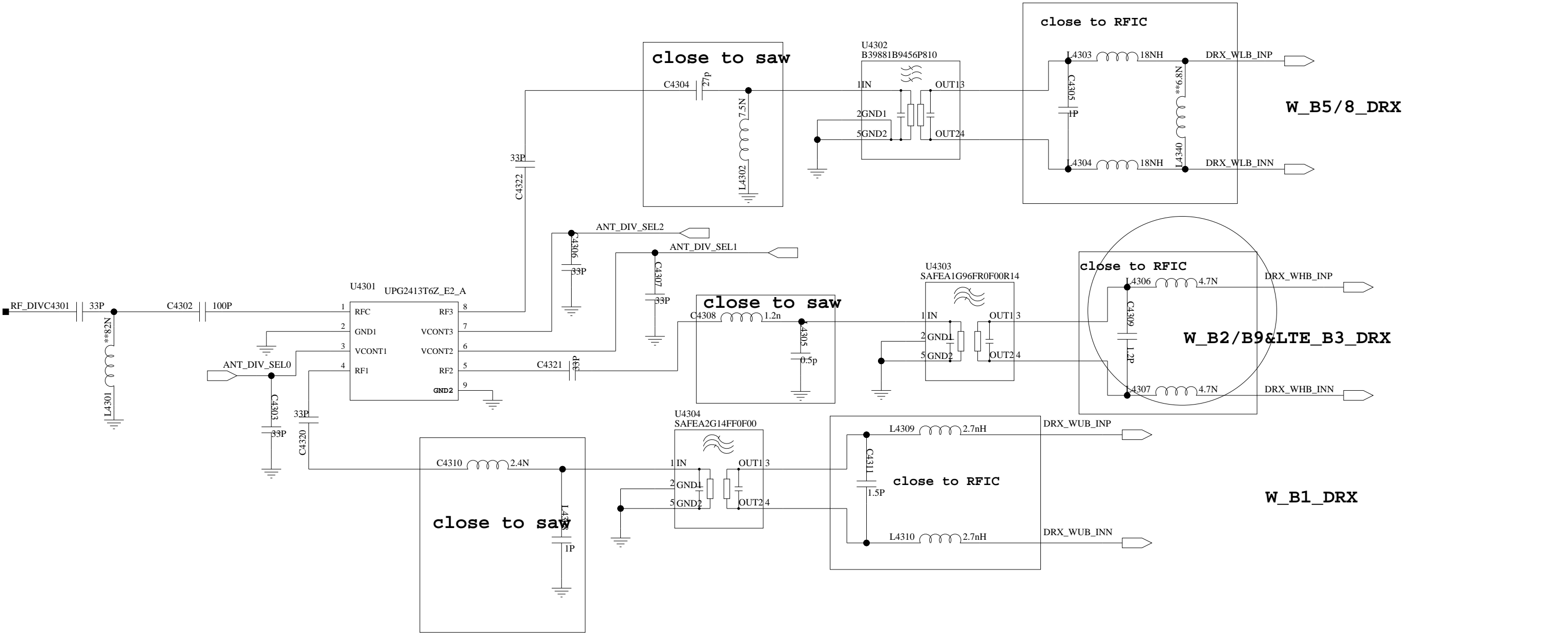
42.WCDMA+LTE Duplexer



The type and specification of the components refer to the BOM

				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 42 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	

43.DIVERSITY



	ANT1_DI_SELO	ANT1_DI_SEL1	ANT1_DI_SEL2
RF1	1	0	0
RF2	0	1	0
RF3	0	0	1

The type and specification of the components refer to the BOM					
				NA	2011-11-30
				ECA NO	DATE
DESIGNED	HUJIAN 00122972	SH4101UM		B519710_SCHZH	
REVIEWED	YANGYONGXIANG 00171286				
		VER	PART_NUMBER	SHEET 43 OF 43	
		A	03021SHJ	HUAWEI TECH CO.,LTD.	