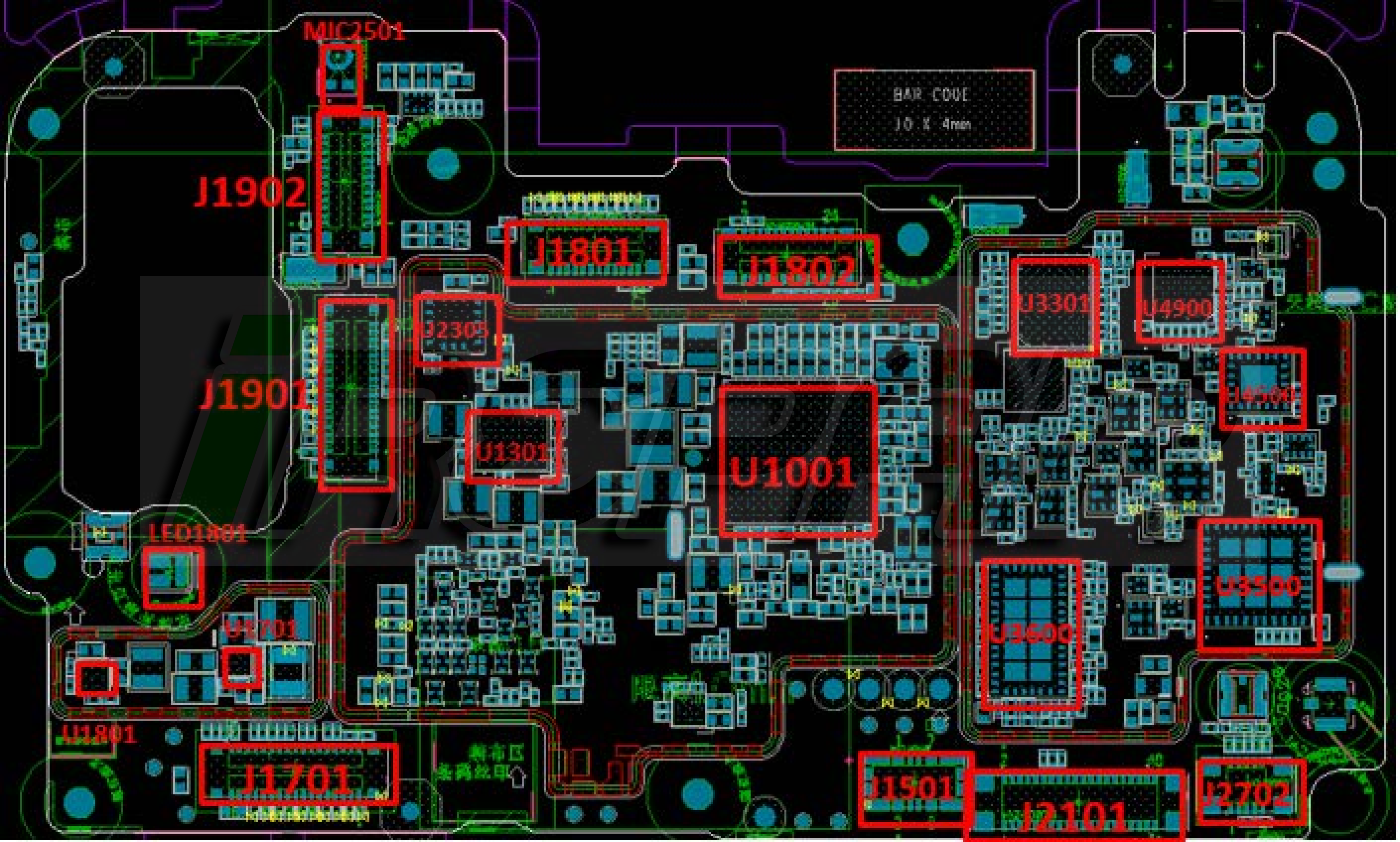
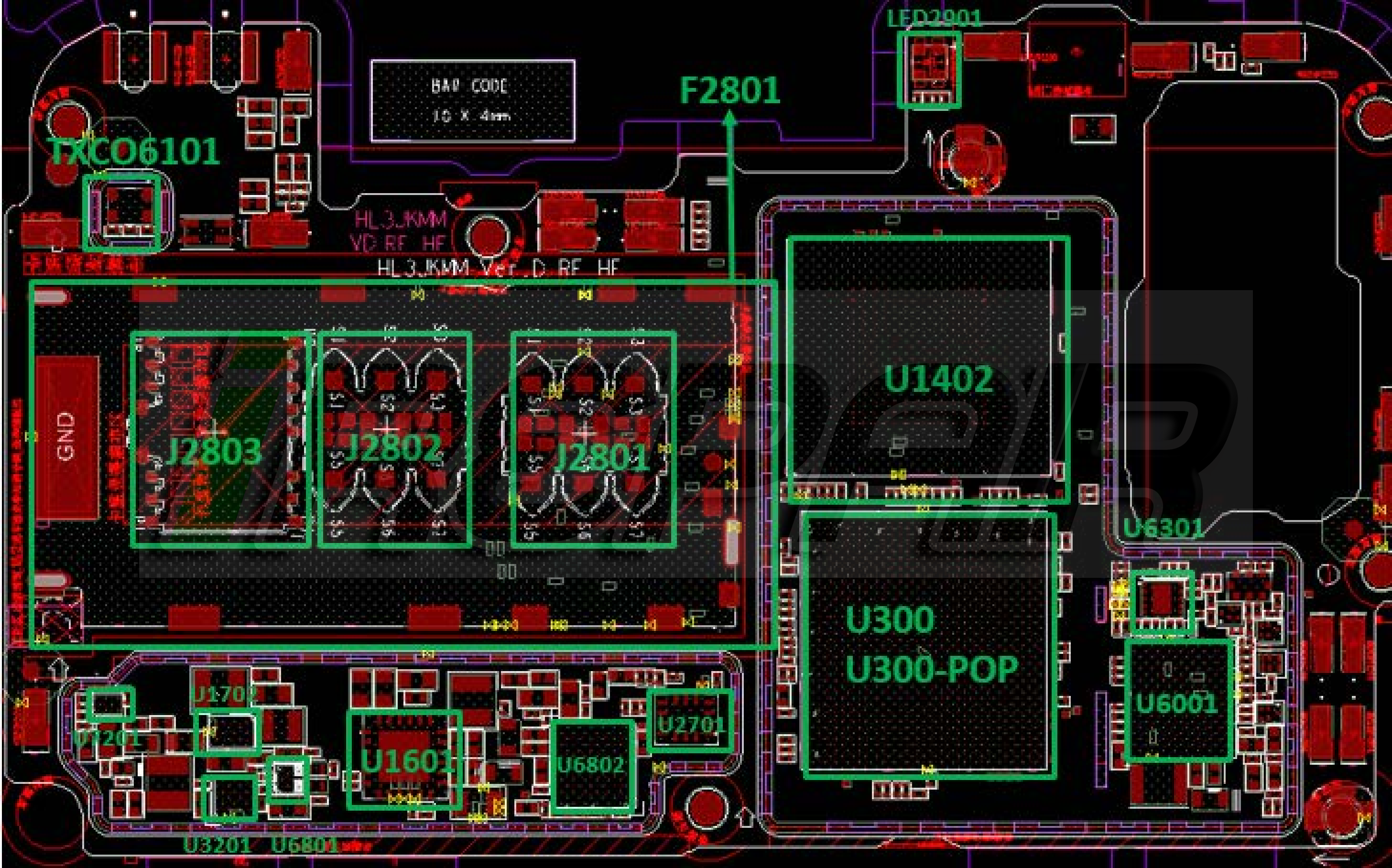
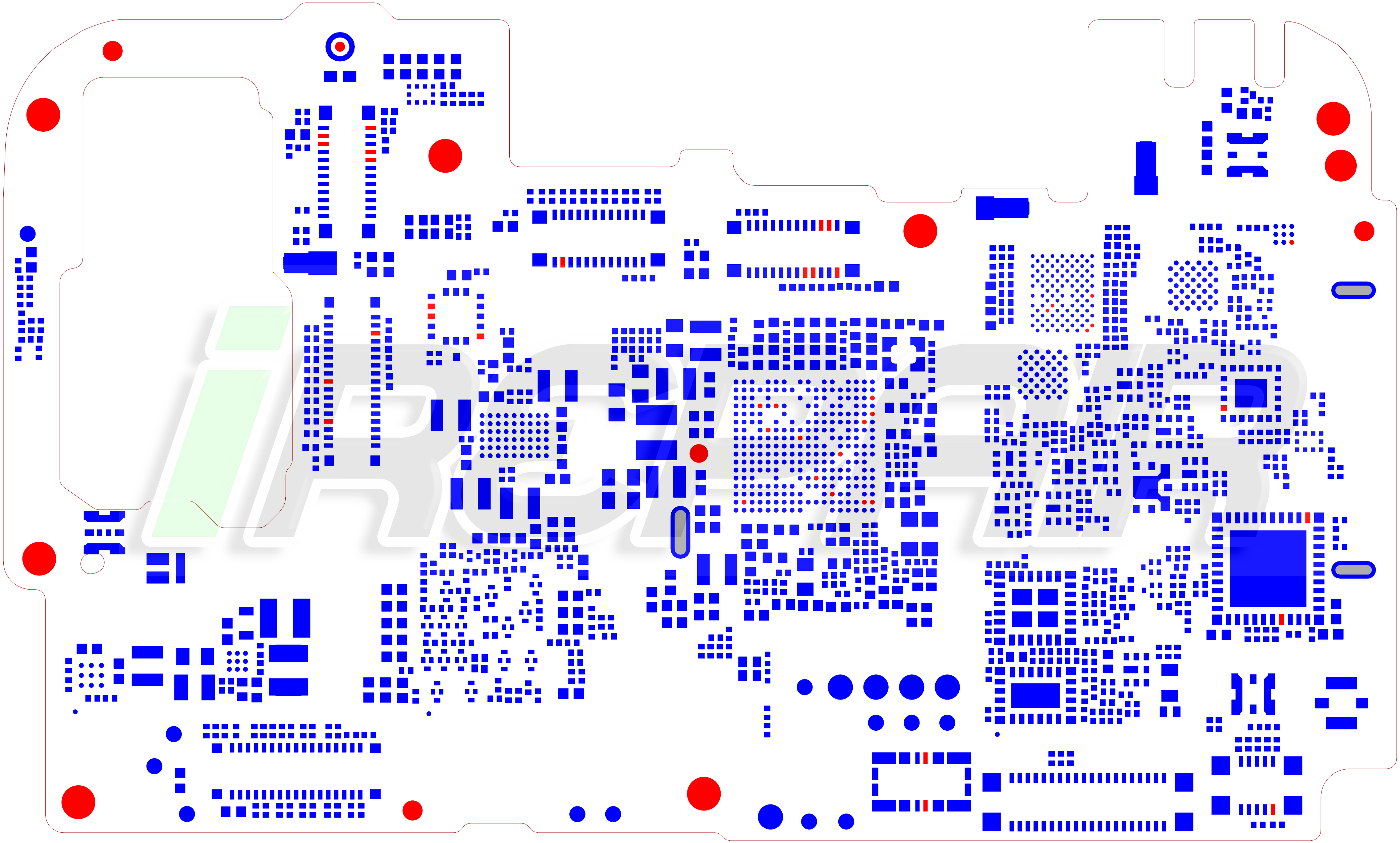
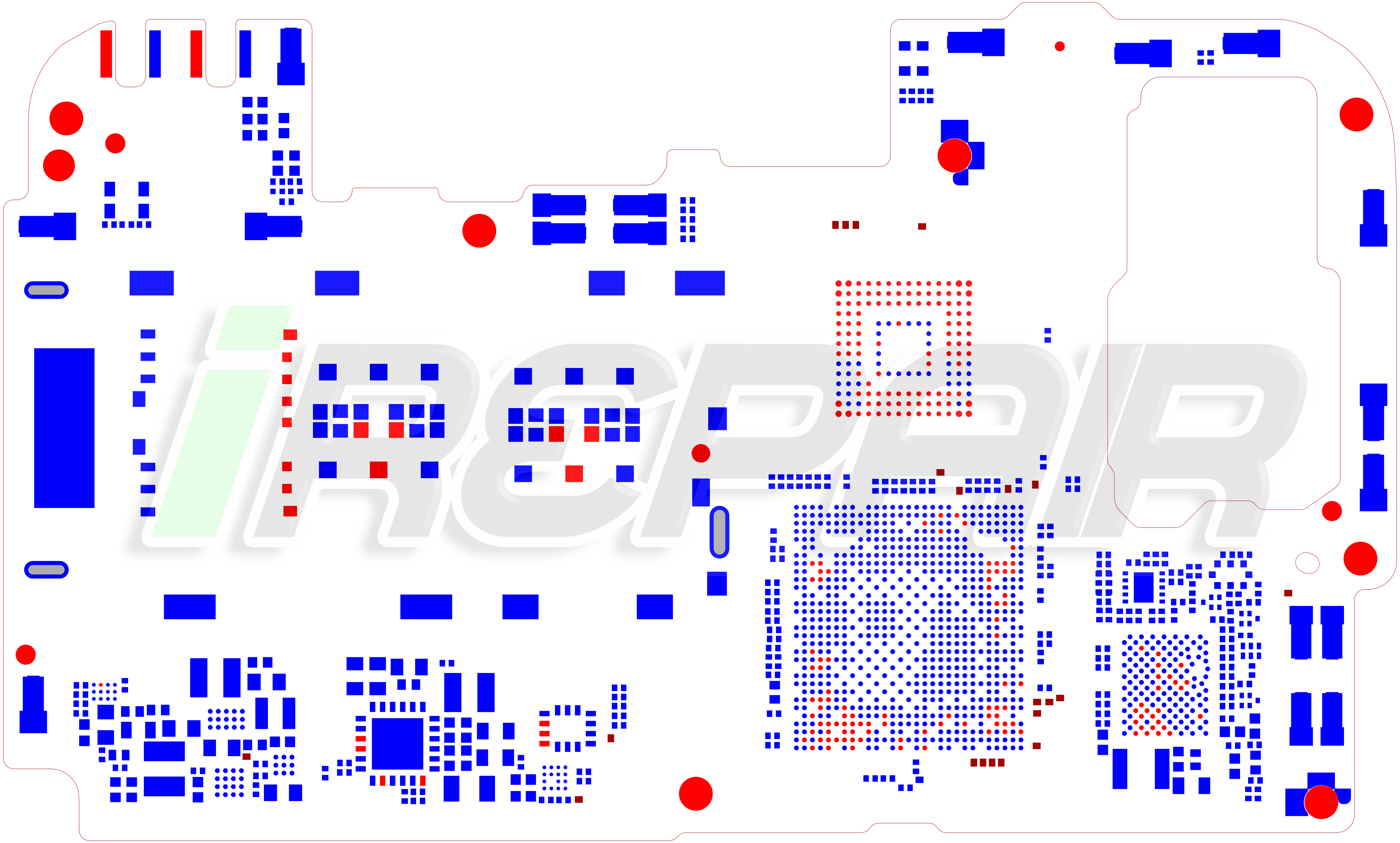
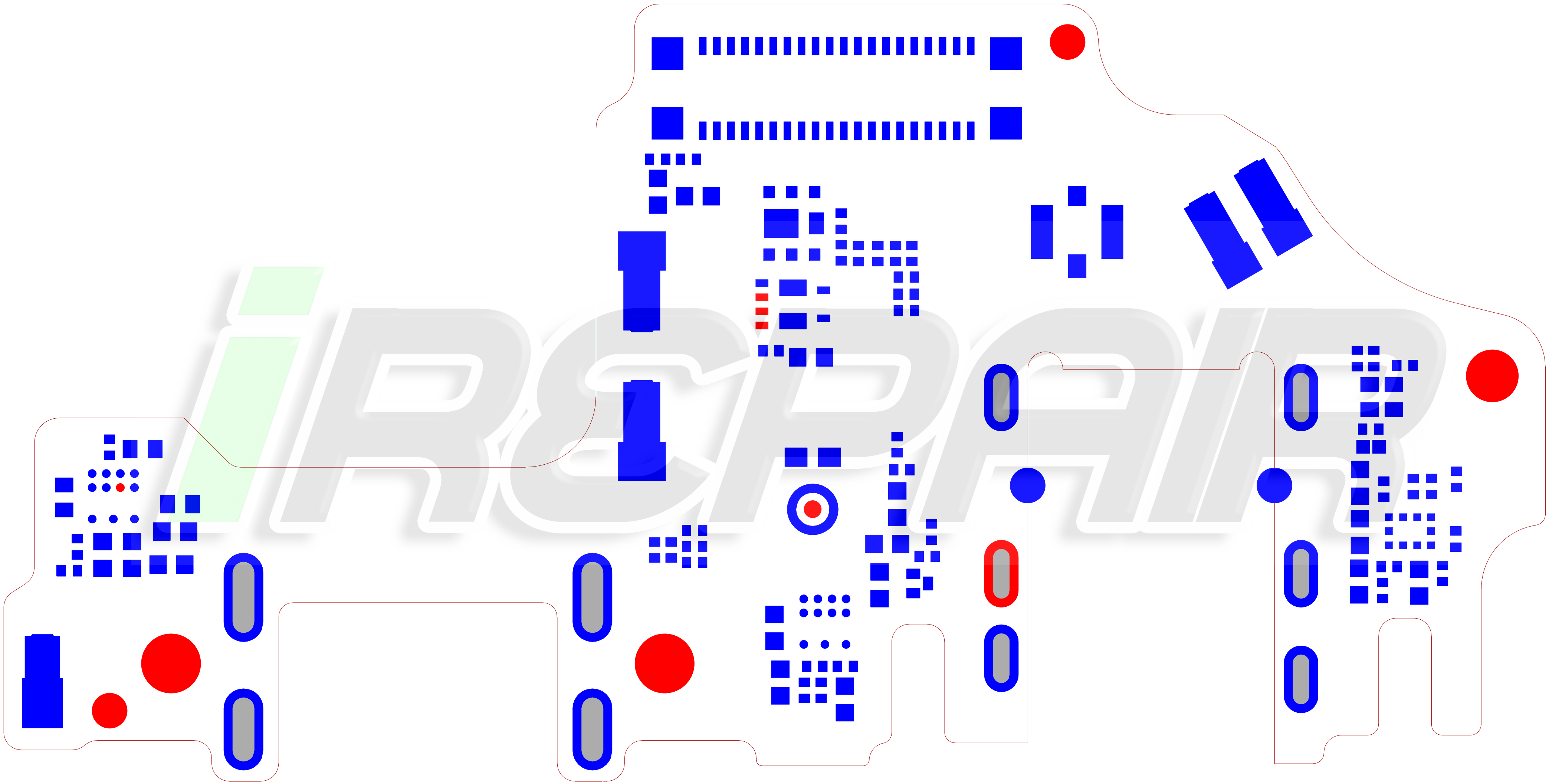
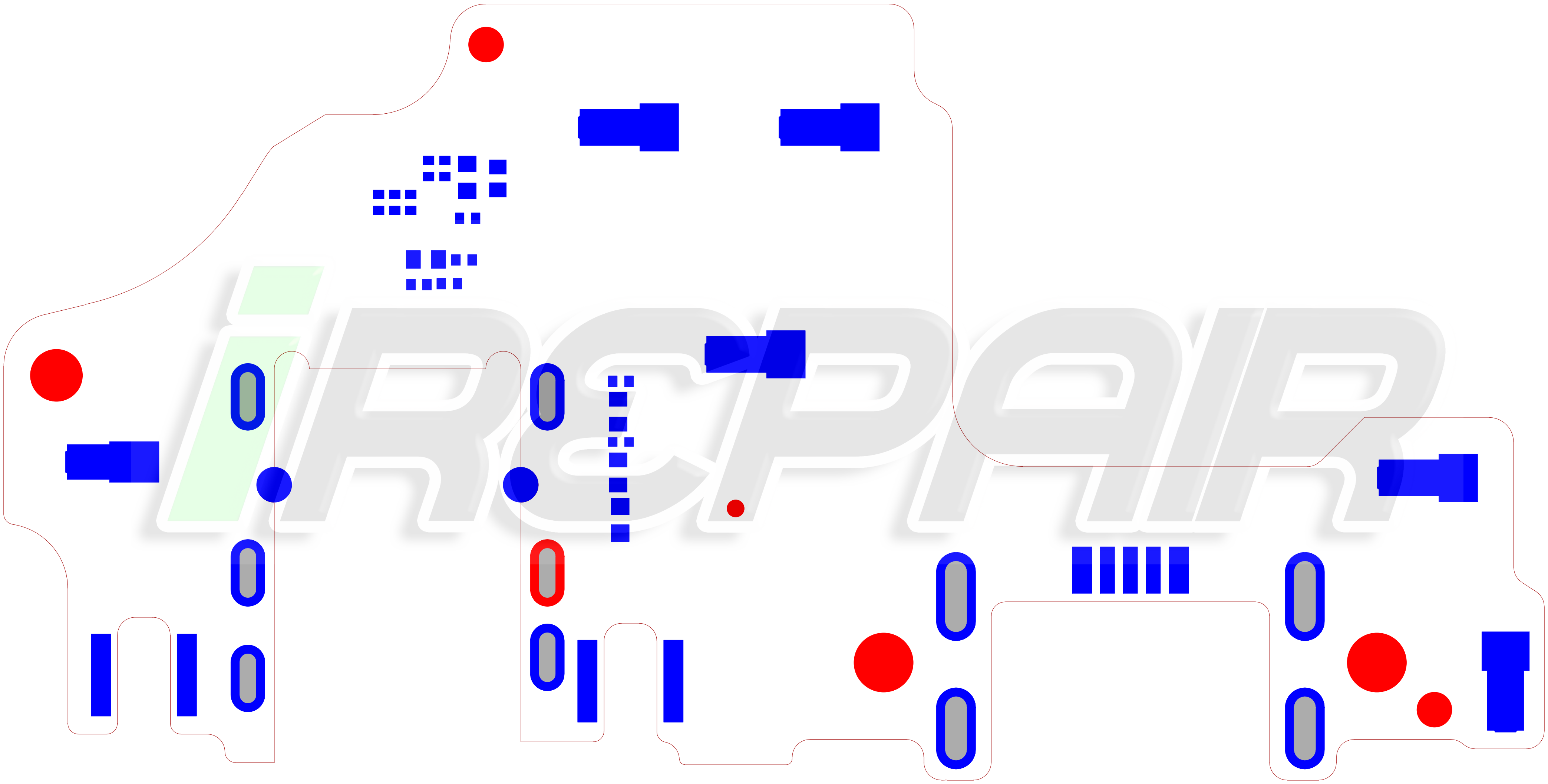

MIC2501
BAR CODE
10 X 4mm
J1902
J1801
J1802
U3301
U4900
U2305
U4500
J1901
U1301
U1001
LED1801
U3500
U3600
U1701
U1801
J1701
J1501
J2101
J2702

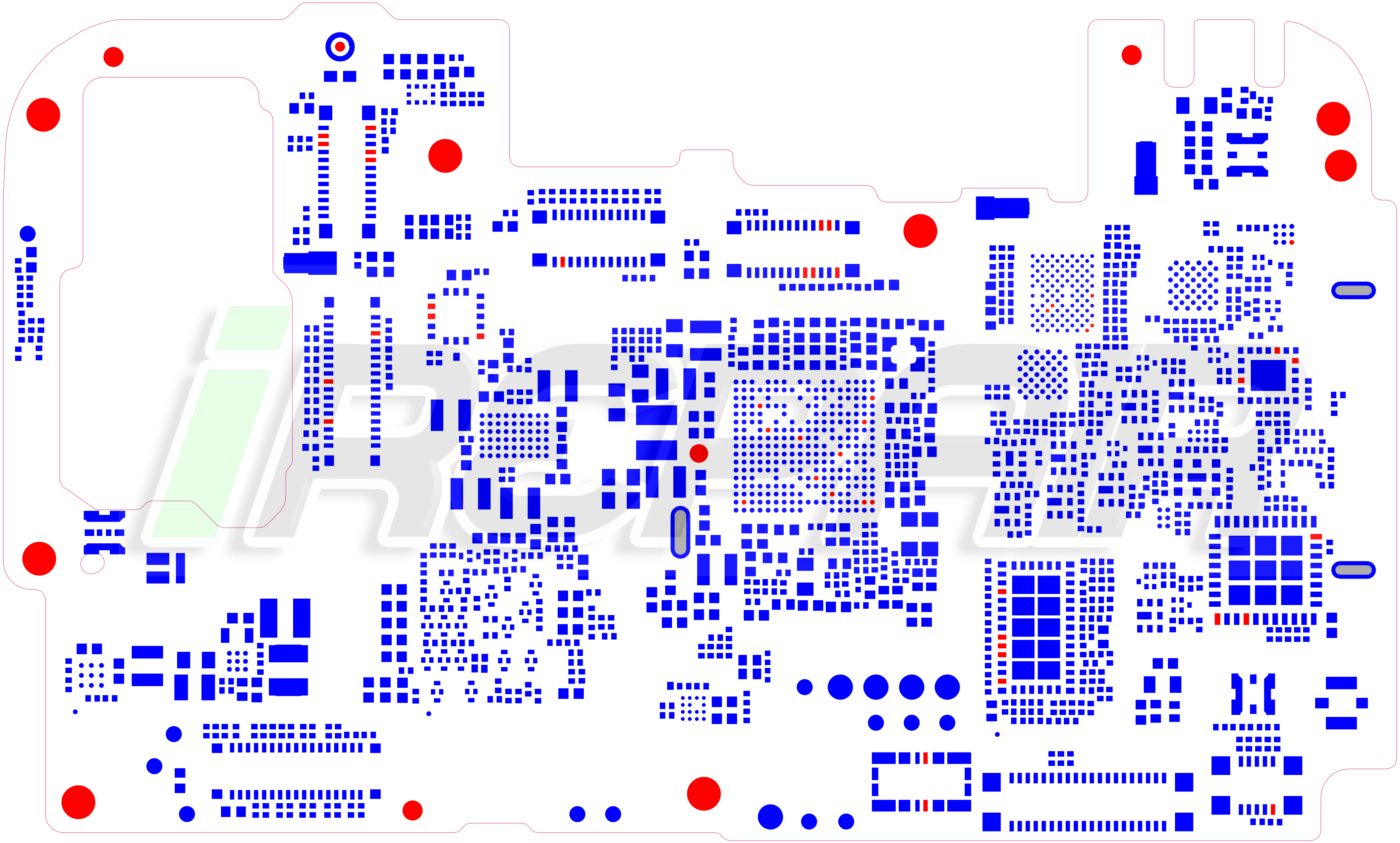

LED2901
F2801
BAR CODE
10 X 4mm
TXCO6101
HL3JKMM
VD RF HF
HL3JKMM Ver. D RF HF
GND
J2803
J2802
J2801
U1402
U6301
U300
U300-POP
U6001
U1702
U1201
U1601
U6802
U2701
U3201
U6801

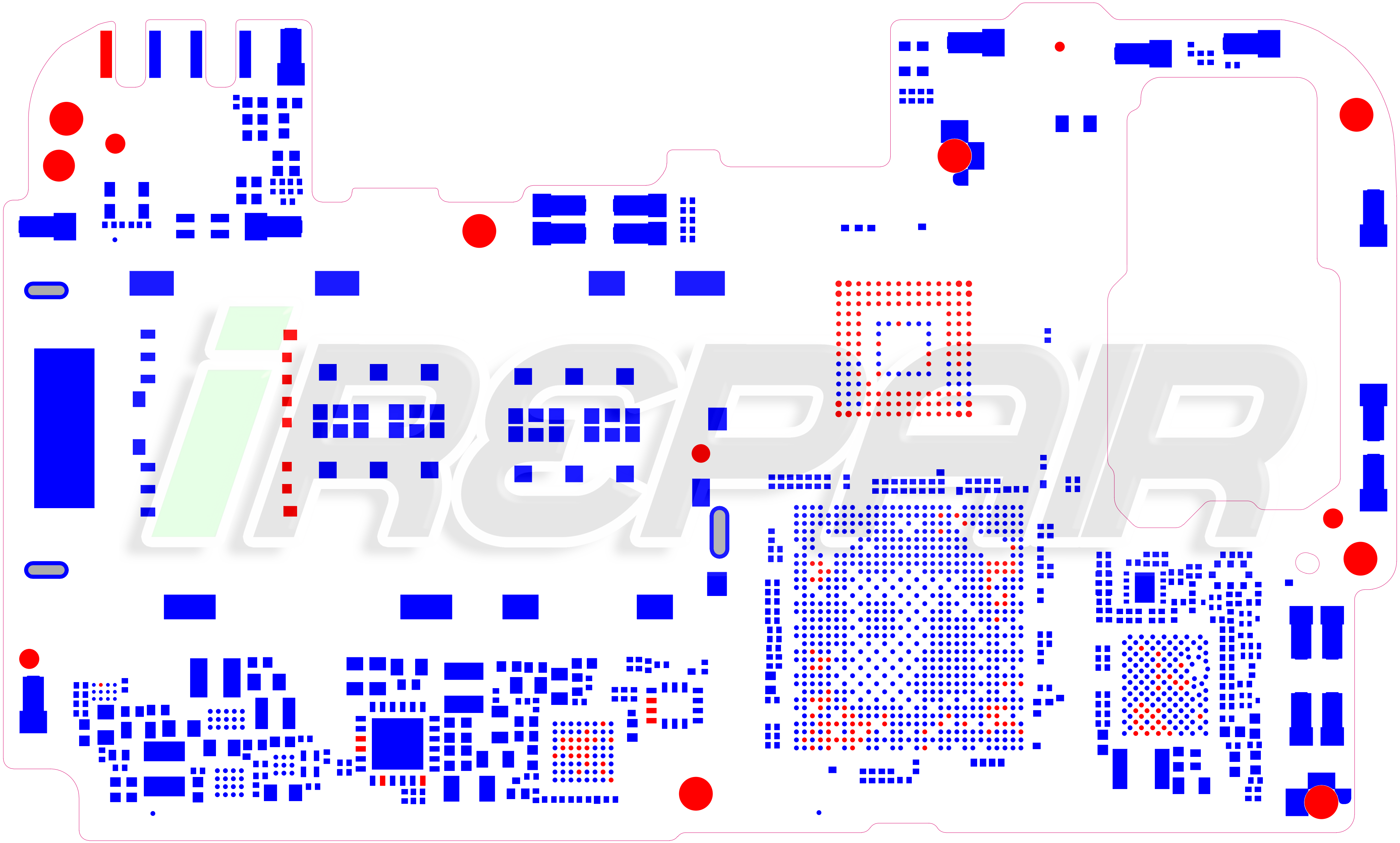




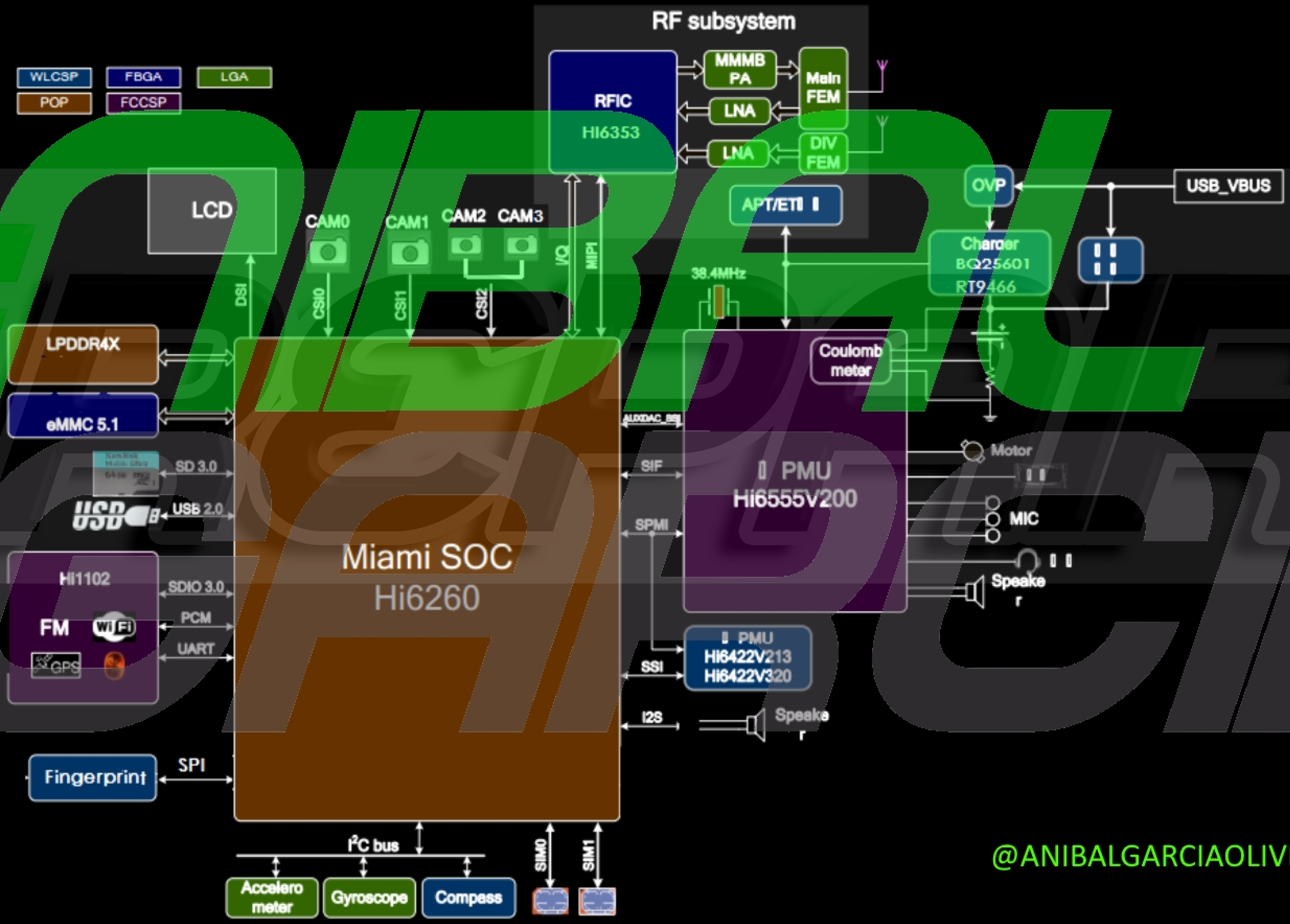








HUAWEI Y9 2019 (JACKMAN)



@ANIBALGARCIAOLIVERAOFICIAL

Jackman-L23 Schematic

1. Contents
2. Block Diagramm
3. SOC PWR1
4. SOC PWR2
5. SOC PWR3
6. SOC HS Interface
7. SOC GPIO Interface
8. SOC RF Interface
9. SOC GND
10. PMU LDO
11. PMU BUCK & HI6422-1
12. PMU MISC & BUCKBOOST
13. HI6422-2
14. UFS and LPDDR
15. Battery & Fuel guage
16. USB/Scharger V300/Switch
17. LCD Interface
18. Reserved
19. Flash LED
20. Camera Interface
21. ISP Reserved
22. Codec HI6403
23. Audio/SPK/VIB
24. Headphone
25. Audio
26. X-Sensor1
27. X-Sensor2
28. SIM/uSD Card
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30. Test Point/Shielding

MODEM Schematic

31. RF Interface
32. RF PMU
33. RF Transceiver
34. RF FRONT END HB
35. RF FRONT END B42
36. RF FRONT END MB
37. RF Front End LB
38. RF Front End Switch /Main ANT
39. RF Front End Diversity
40. RF Front End Diversity
41. Reserved for CDMA Modem
42. Reserved for CDMA Modem
43. Reserved for CDMA Modem
44. Reserved for CDMA Modem
45. Reserved for CDMA Modem
46. Reserved for CDMA Modem
47. Reserved for CDMA Modem
48. Reserved for CDMA Modem
49. RESERVED
50. RESERVED
51. RF Front End M1
52. Hi1102 POWER
53. Hi1102 Interface
54. Hi1102_RF_FrontEnd_2G
55. Hi1102_RF_FrontEnd_5GHz
56. RF_FRONT_END_Diversity_M1
57. NFC
58. RF Transceiver2
59. RFIC2 PA+PMU
60. ANT Tuner

The type and specification of the components refer to the BOM

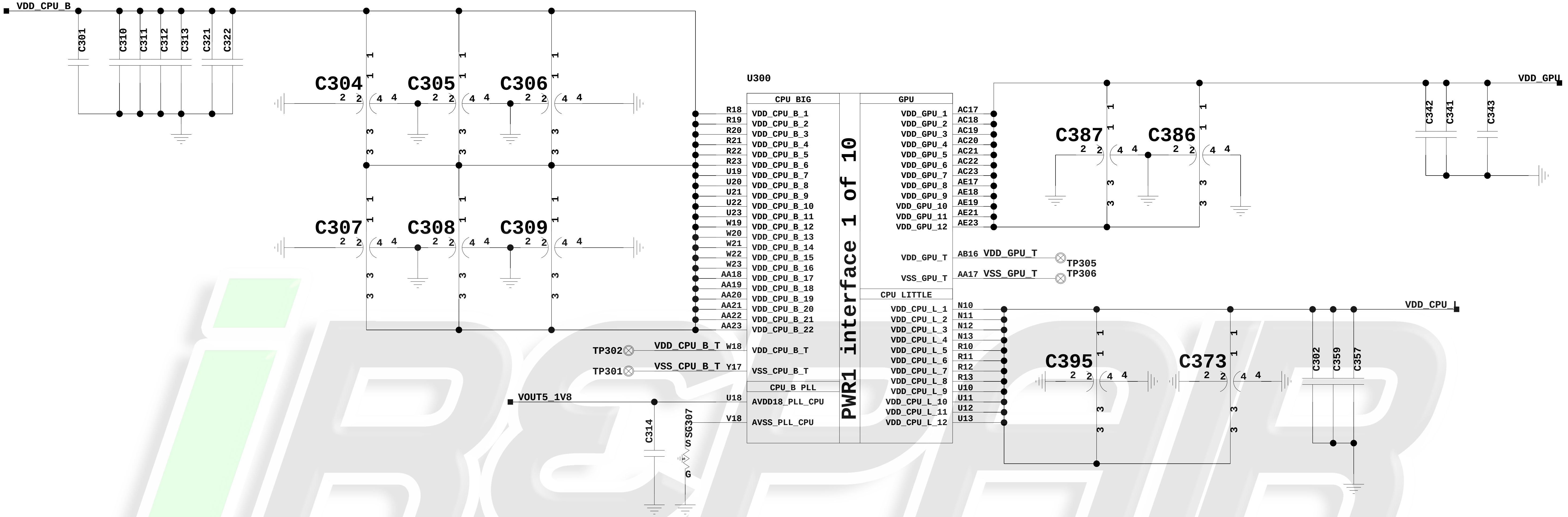
		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER	PART_NUMBER
		E	03025JLU
		SHEET 1 Contents OF 60	HUAWEI TECH CO.,LTD.

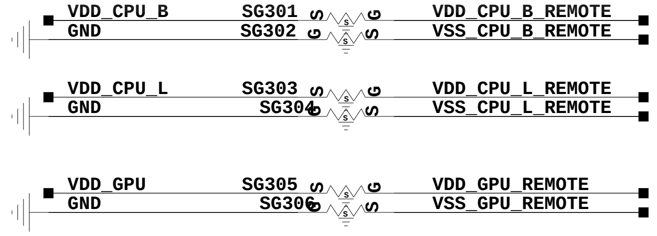
2.Block Diagramm

The type and specification of the components refer to the BOM

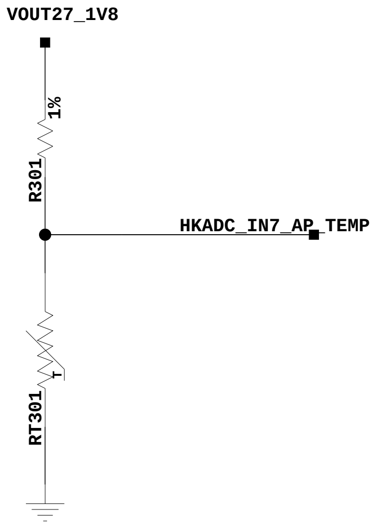
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 2 OF 60	Block Diagramm
		E	03025JLU	HUAWEI TECH CO.,LTD.	

3.SOC PWR1





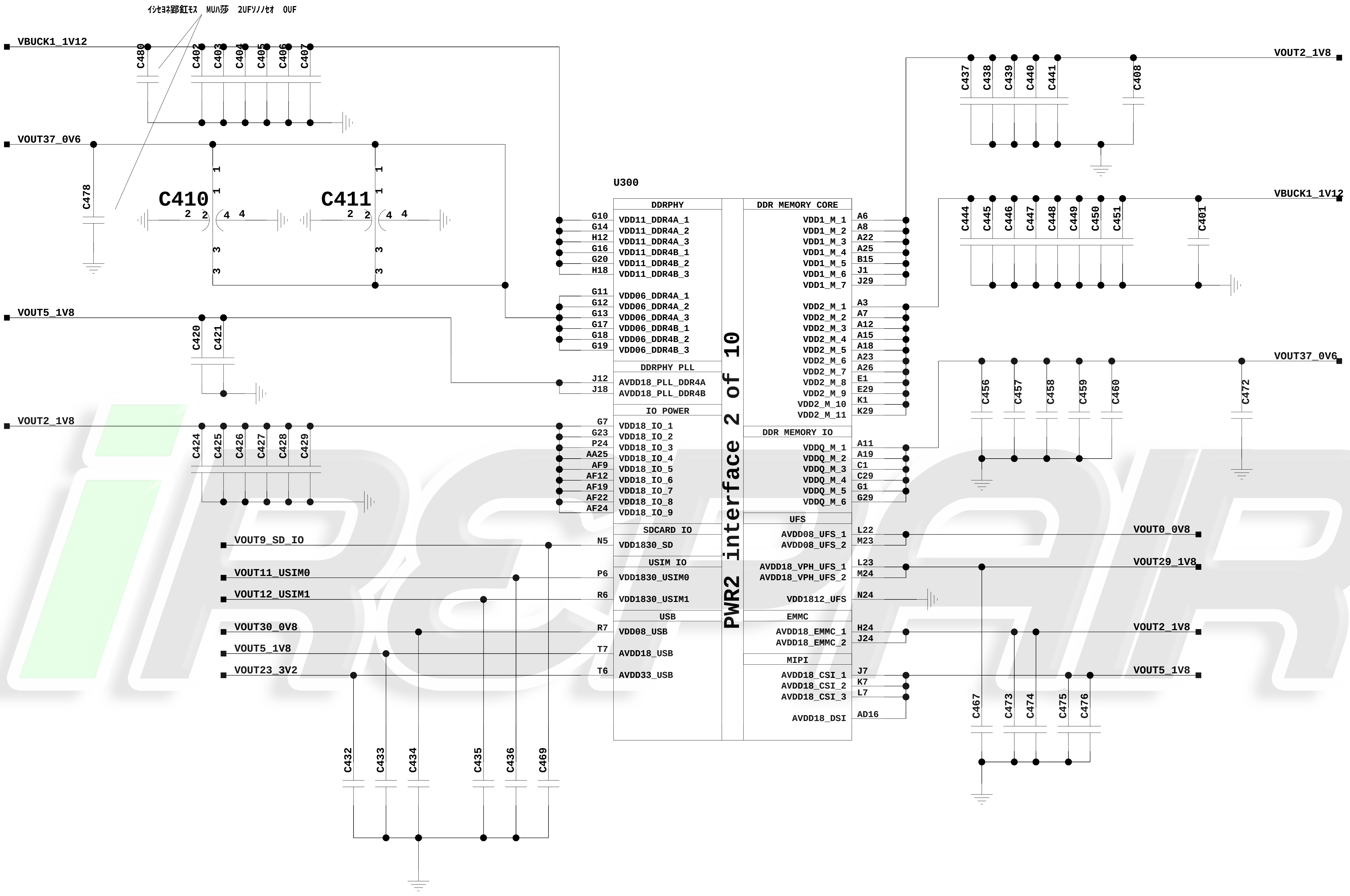
AP Temperature DET



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET SOC PWR1 OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

4.SOC PWR2



The type and specification of the components refer to the BOM

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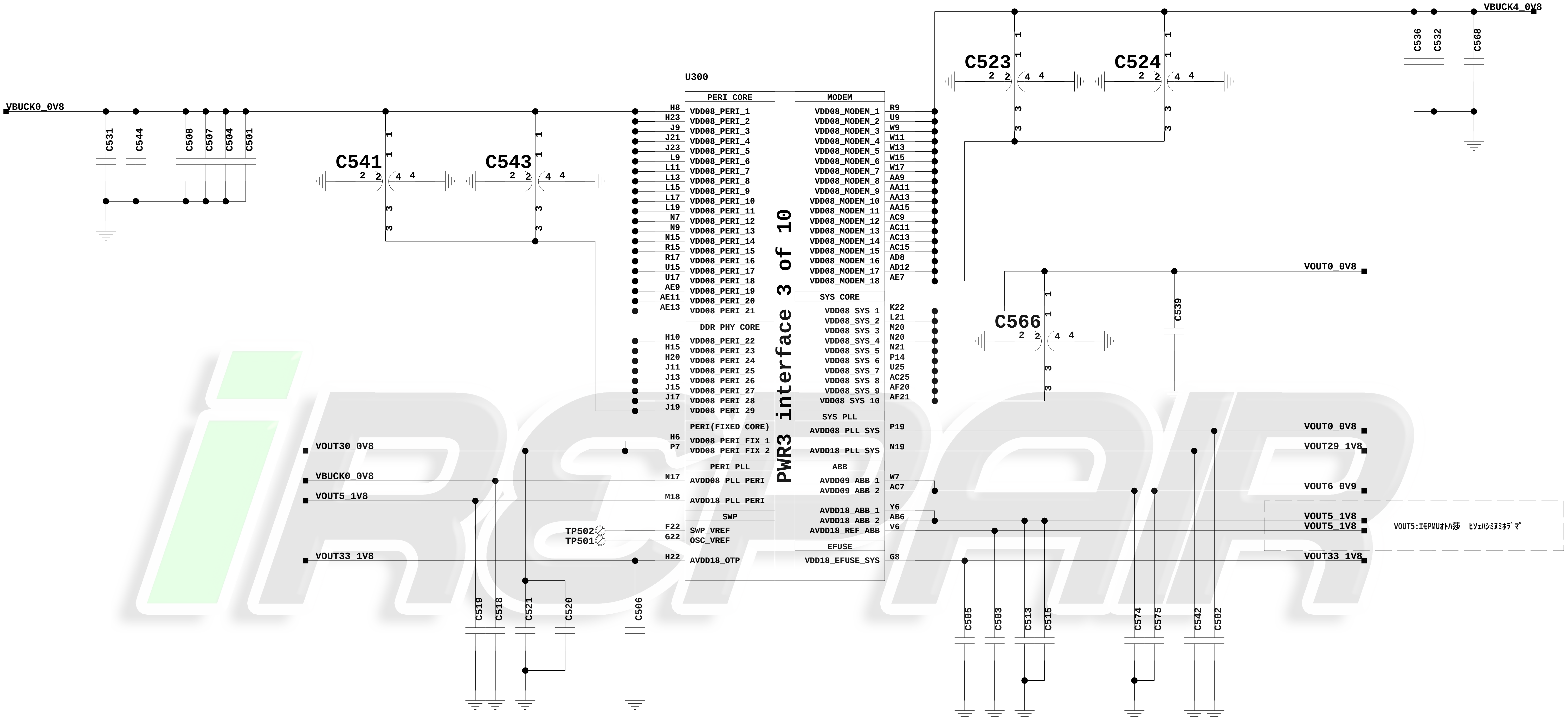
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 4.SOC PWR2 OF 60	
		E		HUAWEI TECH CO.,LTD.	

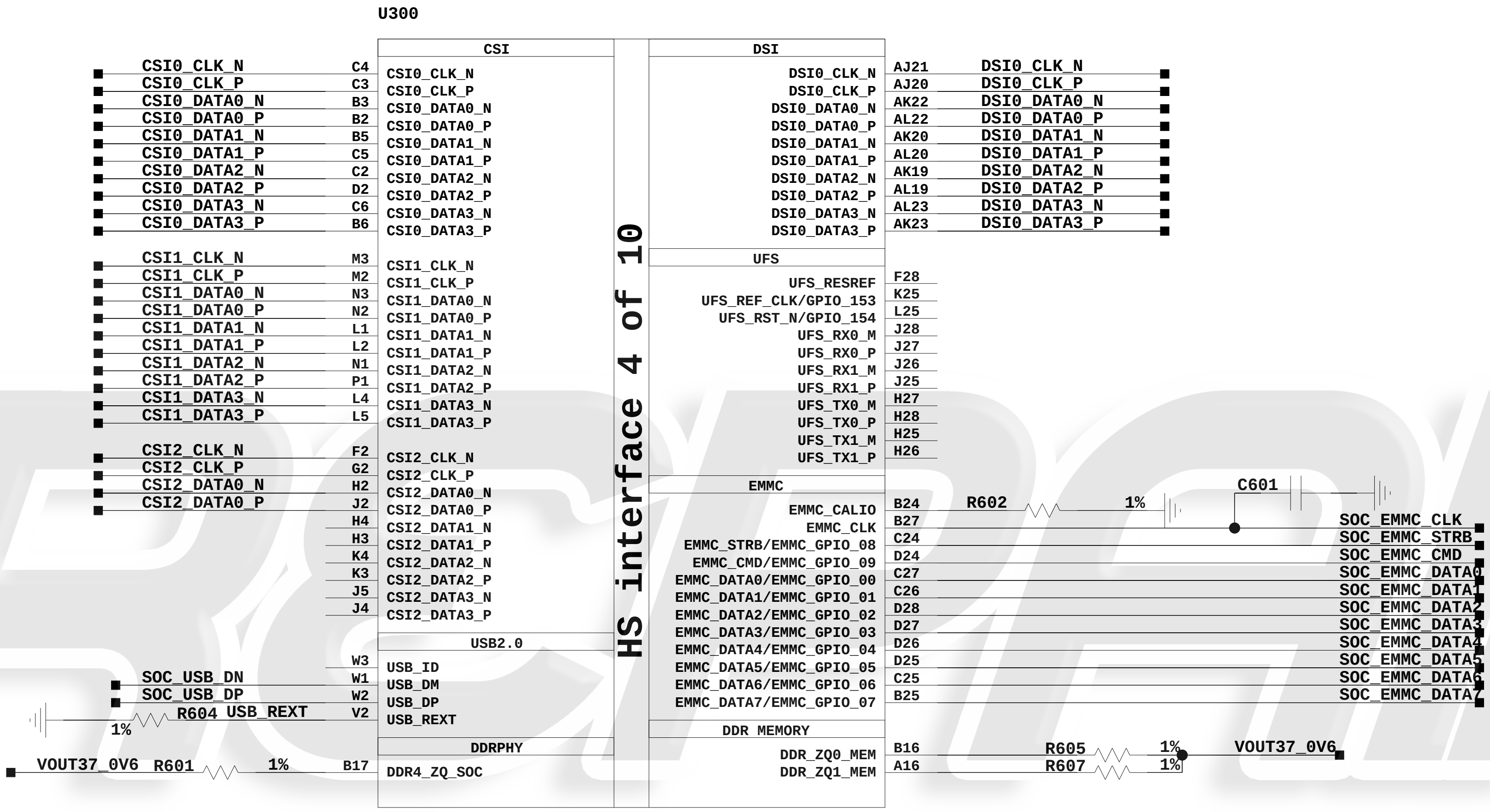
5.SOC PWR3



The type and specification of the components refer to the BOM

					2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 5.SOC PWR3 OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

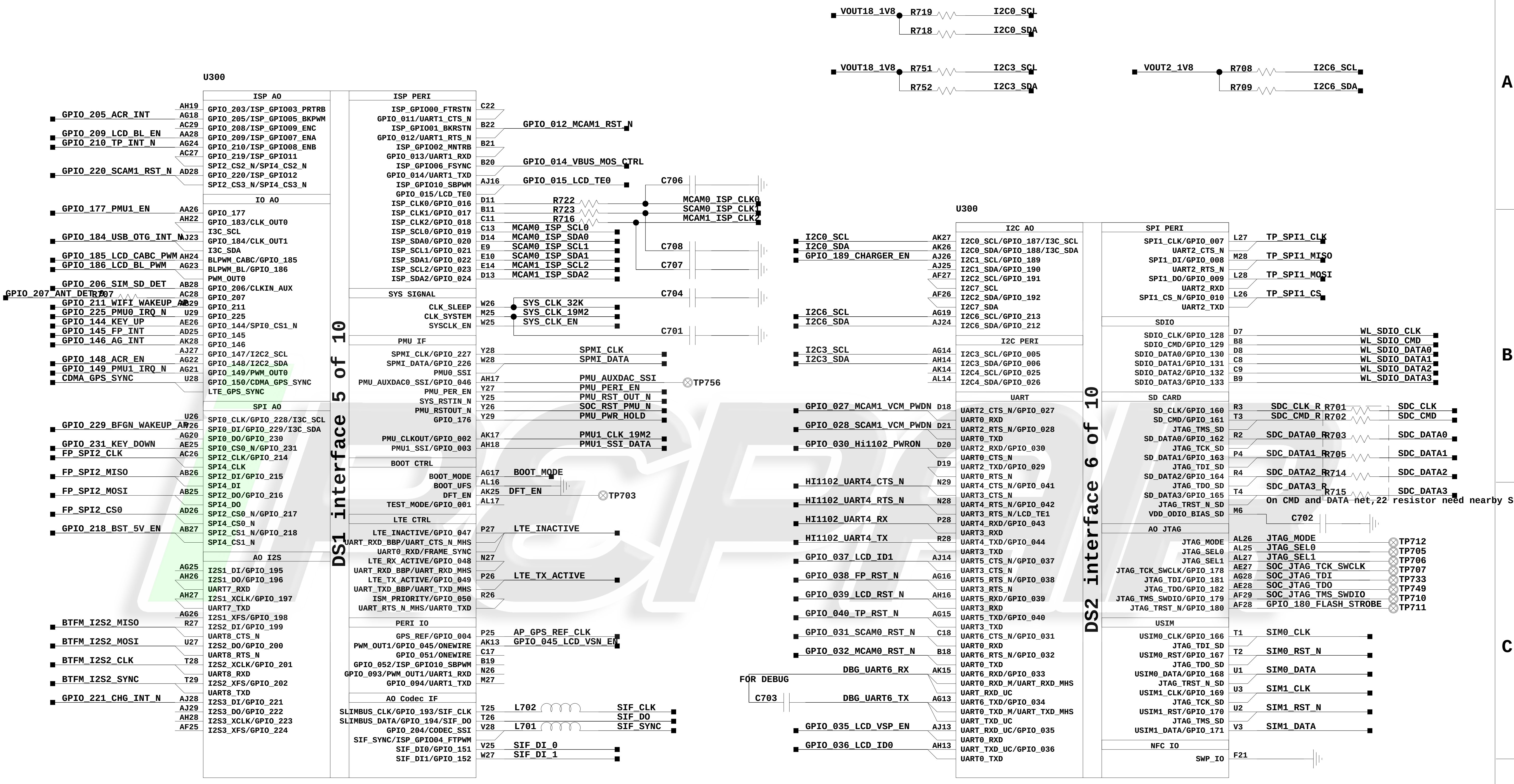
6.SOC HS INTERFACE



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	6_SOC HS Interface SHEET OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

7.SOC GPIO INTERFACE1



The type and specification of the components refer to the BOM

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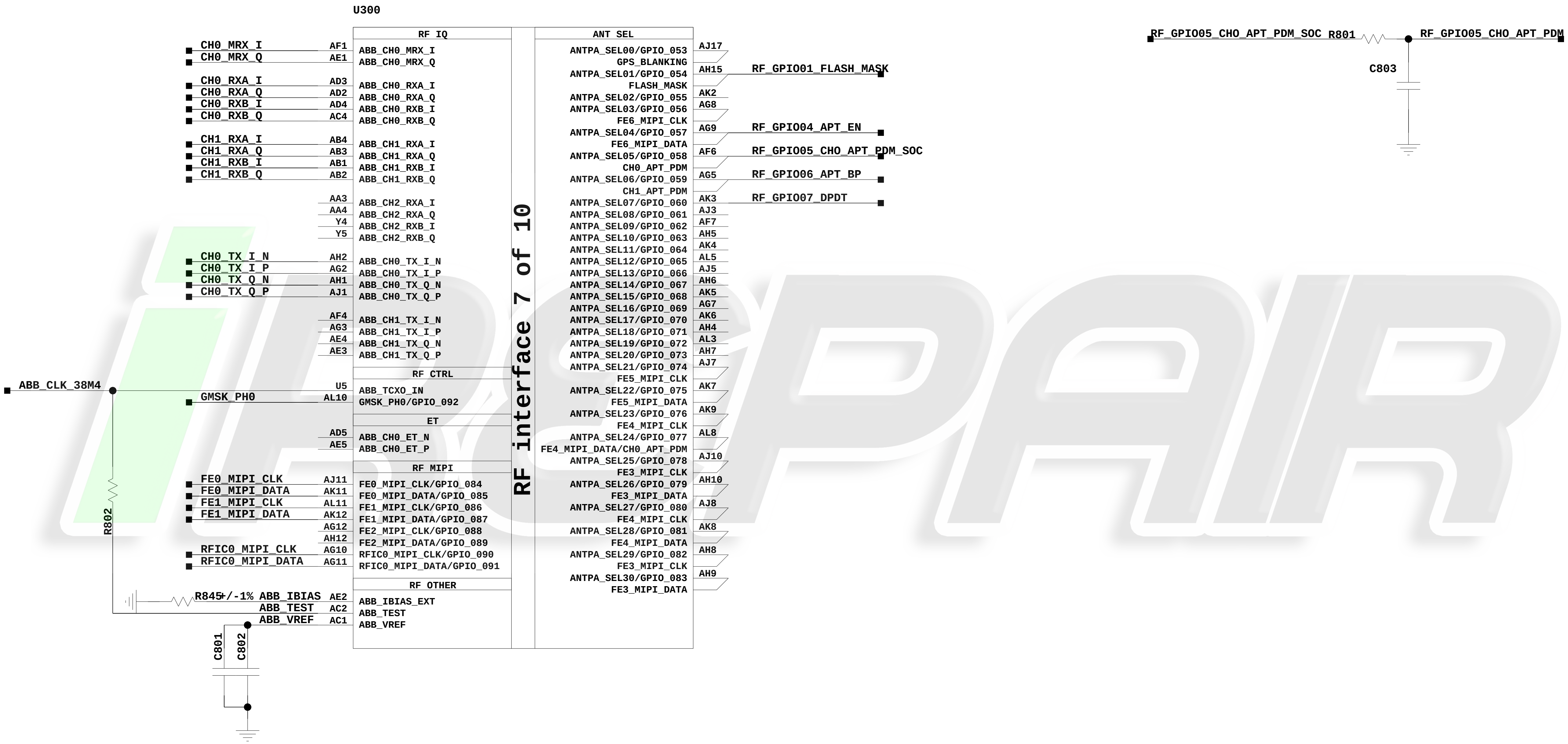
			ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580			
		VER	PART_NUMBER	7_SOC GPIO Interface SHEET OF
		E	03025JLU	HUAWEI TECH CO.,LTD.

8.SOC RF INTERFACE



The type and specification of the components refer to the BOM

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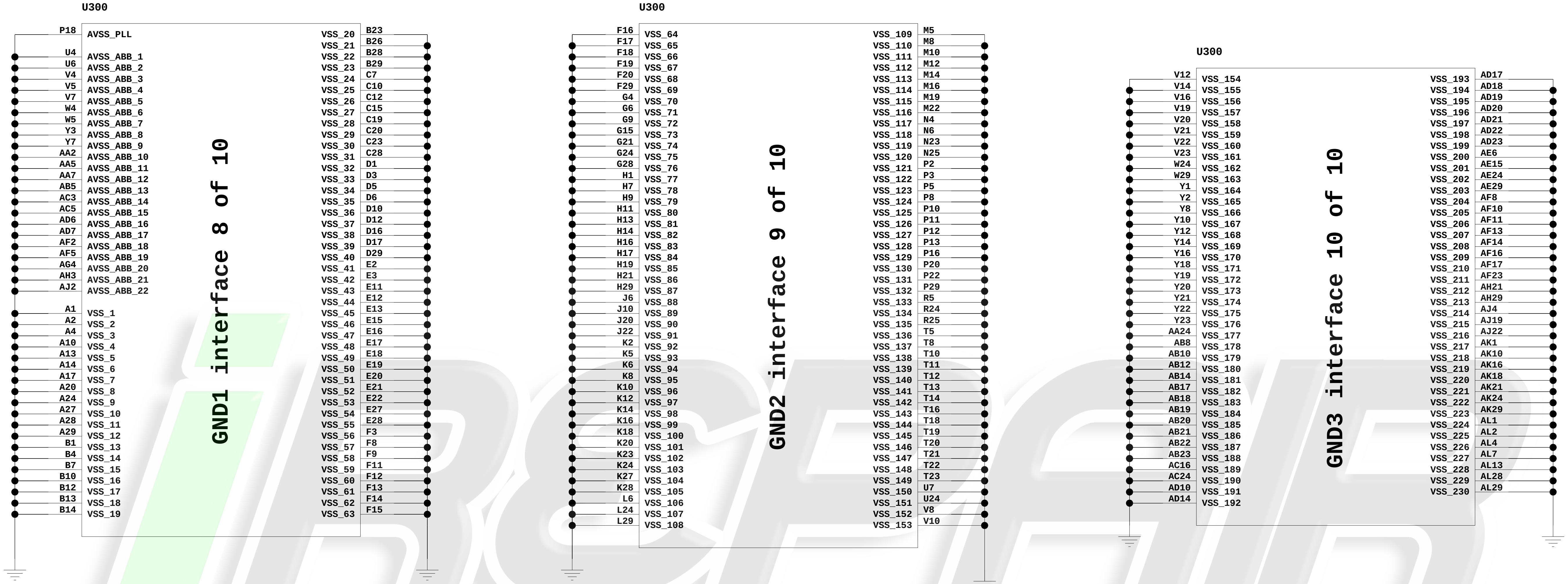
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	8_SOC RF Interface SHEET 8 OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

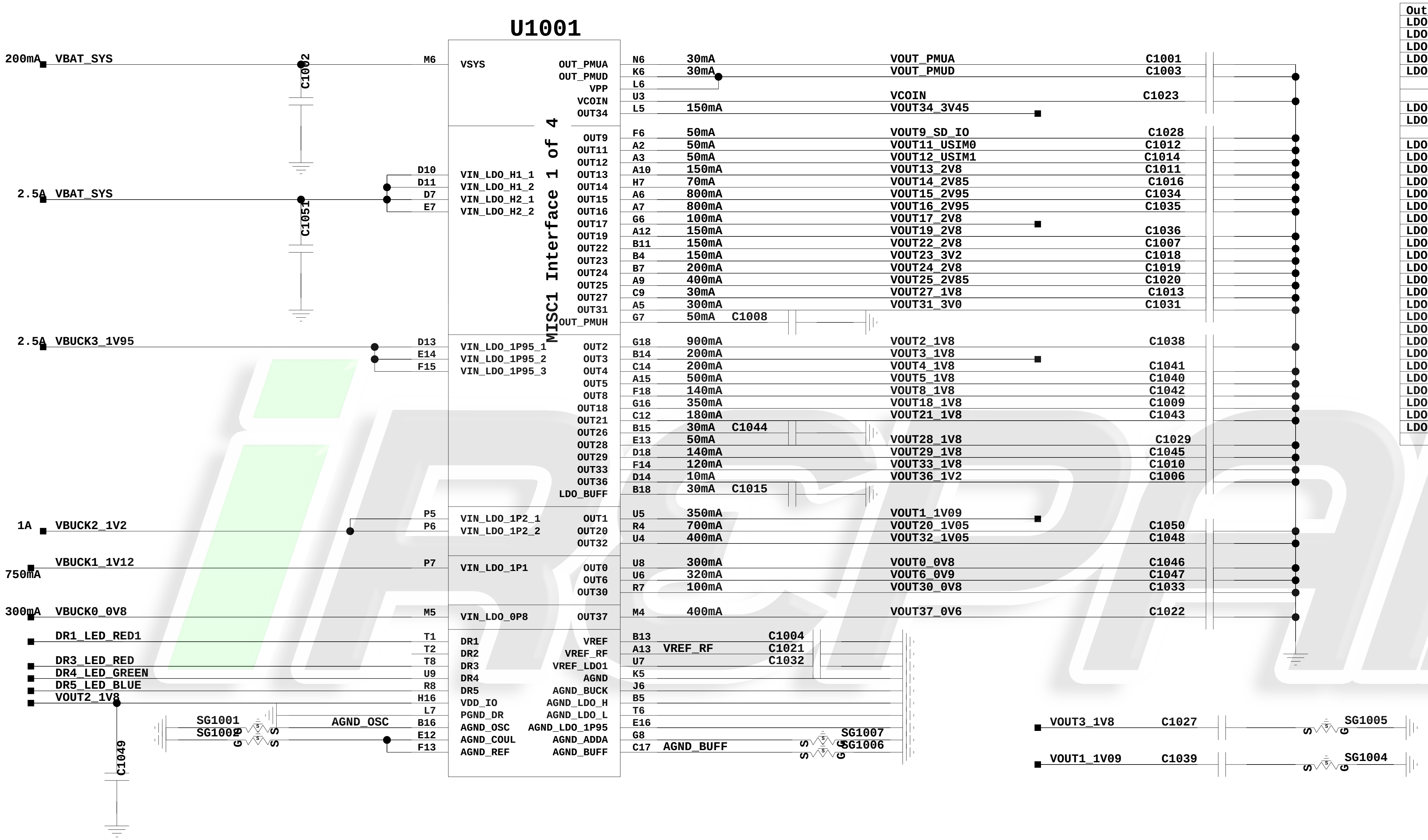
9.SOC GND



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 9_SOC GND	OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

10.PMU LDO

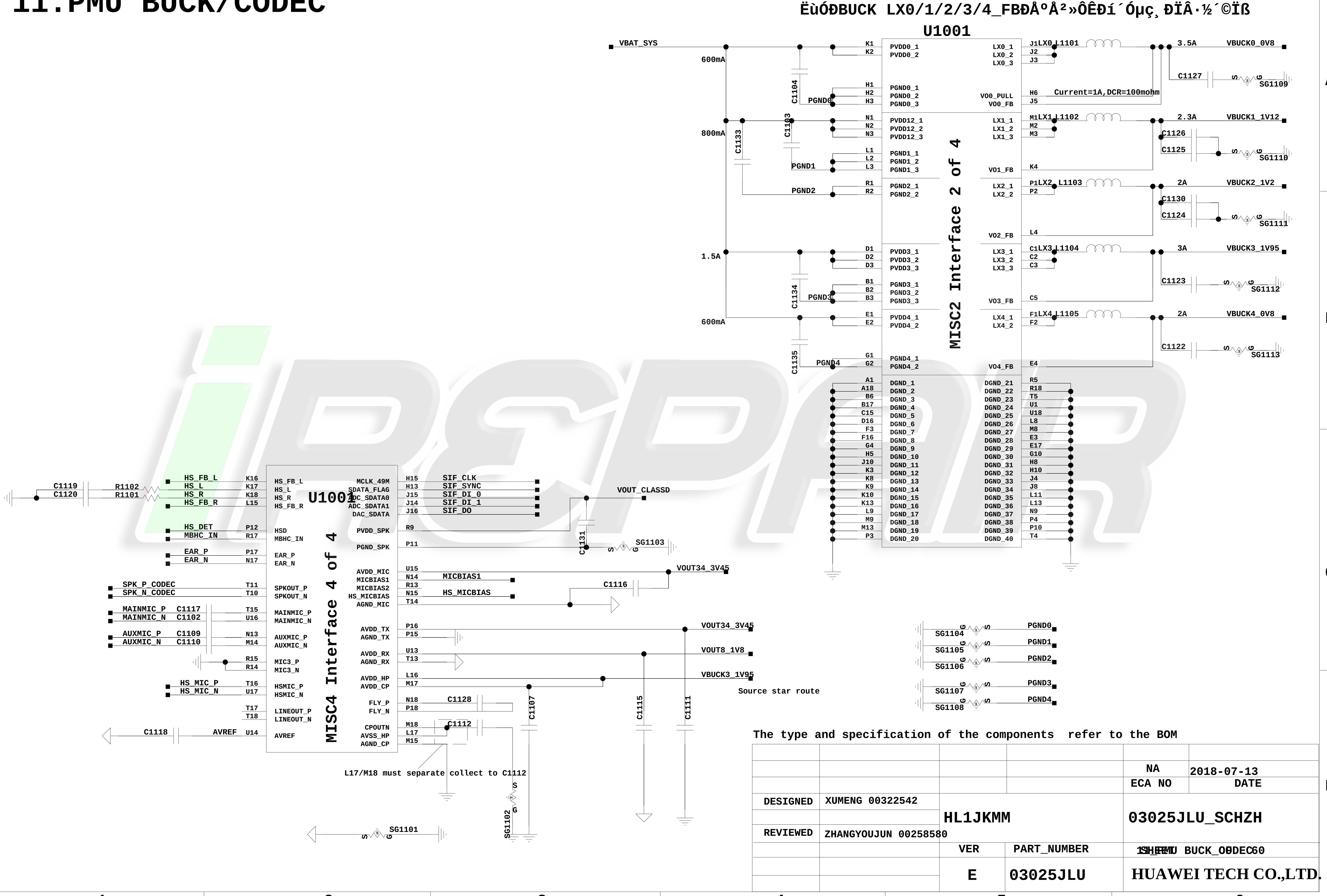


Output	default	current	TYP voltage	function
LDO1	OFF	350	1.09	RFIC0_AVDD
LDO2	ON	900	1.8	PMU dig/RFIC/SOC1V8IO/LPDDR4X VDD/UFS VCCQ2
LDO3	OFF	200	1.8	RFIC0 AVDD2
LDO4	OFF	200	1.8	LCD1V8 IO/TP1V8 IO
LDO5	ON	500	1.8	PHY ANA/ABB_AVDD1V8
LDO8	OFF	140	1.8	CLASSD1V8
LDO9	OFF	50	1.8/2.95	SD IO
LDO11	OFF	50	1.8	SIM0
LDO12	OFF	50	1.8	SIM1
LDO13	OFF	150	2.85	S camera analog
LDO14	OFF	70	2.85	RF FEM/AUXDAC
LDO15	ON	800	2.95	EMMC/UFS VDD
LDO16	OFF	800	2.95	SD card
LDO17	OFF	100	2.8	LCD TP VCI
LDO18	ON	350	1.8	fp/SENSOR IO FP AVDD/CON IO
LDO19	OFF	300	2.8	M camera anlog
LDO20	OFF	400	1.11	M Camera Core
LDO21	OFF	180	1.8	Camera io
LDO22	OFF	150	2.8	Back Camera Analog
LDO23	ON	150	3.2	HKADC
LDO24	ON	200	2.8	X Sensor AVDD
LDO25	OFF	400	2.85	Camera VCM
LDO26	ON	30	1.35	38.4_AVDD
LDO27	ON	50	1.8	HKADC
LDO28	OFF	50	1.8	RF MIPI I/O
LDO29	ON	140	1.8	UFS PHY/SYS CLK_BUF
LDO30				
LDO31	OFF	300	3.0	Vibrator
LDO32	OFF	400	1.11	S Camera Core
LDO33	OFF	120	1.8	EFUSE
LDO34	ON	150	3.45	CODEC RCV/MICBIAS

The type and specification of the components refer to the BOM

			NA	2018-07-13
			ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580			
		VER	PART_NUMBER	SHEET 10.PMU LDO OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.

11.PMU BUCK/CODEC



The type and specification of the components refer to the BOM

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			ECA NO	DATE
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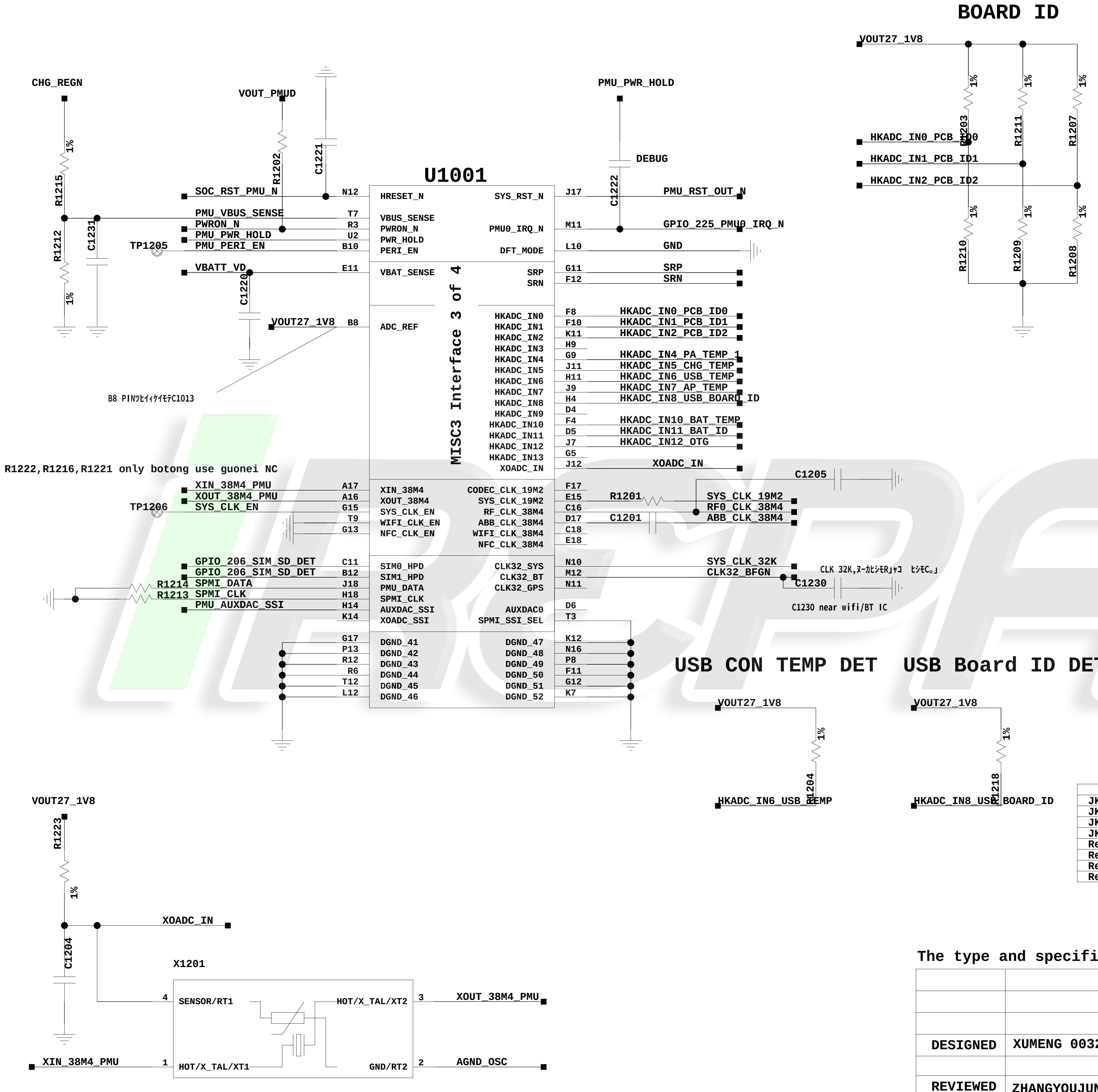
REVIEWED	ZHANGYOUJUN 00258580			
		VER	PART_NUMBER	11.PMU BUCK/CODEC SHEET 20 60
		E	03025JLU	HUAWEI TECH CO.,LTD.

12. PMU Digital



HKADC·ÖÅä±í

HKADC_IN0	APU Board ID0(RF USE)
HKADC_IN1	APU Board ID1
HKADC_IN2	APU Board ID2
HKADC_IN3	RESERVERD
HKADC_IN4	PA TEMP DET0
HKADC_IN5	Charge TEMP
HKADC_IN6	USB_TEMP_ADC
HKADC_IN7	AP TEMP
HKADC_IN8	USB_BOARD_ID
HKADC_IN9	RESERVERD
HKADC_IN10	BATT TEMP
HKADC_IN11	BATT ID
HKADC_IN12	USB_OTG_ADC
HKADC_IN13	RESERVERD

Main Board ID

	Mode		R1203	R1210	R1211	R1209	R1207	R1208
7690	JKM-AL00(6363)	V1-V2	NC	0	150K	NC	51K	100K
7698	JKM-AL00(6353)	V2	20K	150K	150K	NC	51K	100K
7680	JKM-AL00(6353)	V3-V3.1	NC	0	20K	150K	51K	100K
7691	JKM-TL00	V1-V3.1	150K	22K	150K	NC	51K	100K
7692	JKM-AL00a	V1-V3.1	100K	30K	150K	NC	51K	100K
7693	~~JKM-TL10~~	~~V1-MP~~	~~200K~~	~~100K~~	~~150K~~	~~NC~~	~~51K~~	~~100K~~
7694	JKM-LX1	V1-V3	150K	121K	150K	NC	51K	100K
7695	JKM-LX2	V1-V3	121K	150K	150K	NC	51K	100K
7696	JKM-LX3	V1-V3	51K	100K	150K	NC	51K	100K
7697	~~JKM-L4A~~	~~V1-MP~~	~~30K~~	~~100K~~	~~150K~~	~~NC~~	~~51K~~	~~100K~~
7699	JKM-LX1C	V1-V3	150K	NC	150K	NC	51K	100K

	Mode		R1203	R1210	R1211	R1209	R1207	R1208
7685	JKM-AL00(6353)	VN1-MP	121K	150K	20K	150K	51K	100K
7686	JKM-TL00	VN1-MP	51K	100K	20K	150K	51K	100K
7687	JKM-AL00a	V3-MP	30K	100K	20K	150K	51K	100K
7681	JKM-LX1	V3.1-MP	150K	22K	20K	150K	51K	100K
7682	JKM-LX2	V3.1-MP	100K	30K	20K	150K	51K	100K
7683	JKM-LX3	V3.1-MP	200K	100K	20K	150K	51K	100K
7684	JKM-LX1C	V3.1-MP	150K	121K	20K	150K	51K	100K

USB Board ID

R1218	Code	Value
JKM-AL00/TL00	07091406	200k
JKM-LX1/LX2/LX3	07092138	150k
JKM-LX1C	07091246	100k
JKM-AL00a	07091408	68k
Reserved	07091302	51k
Reserved	07091299	30k
Reserved	07091172	22K
Reserved	TBD	TBD

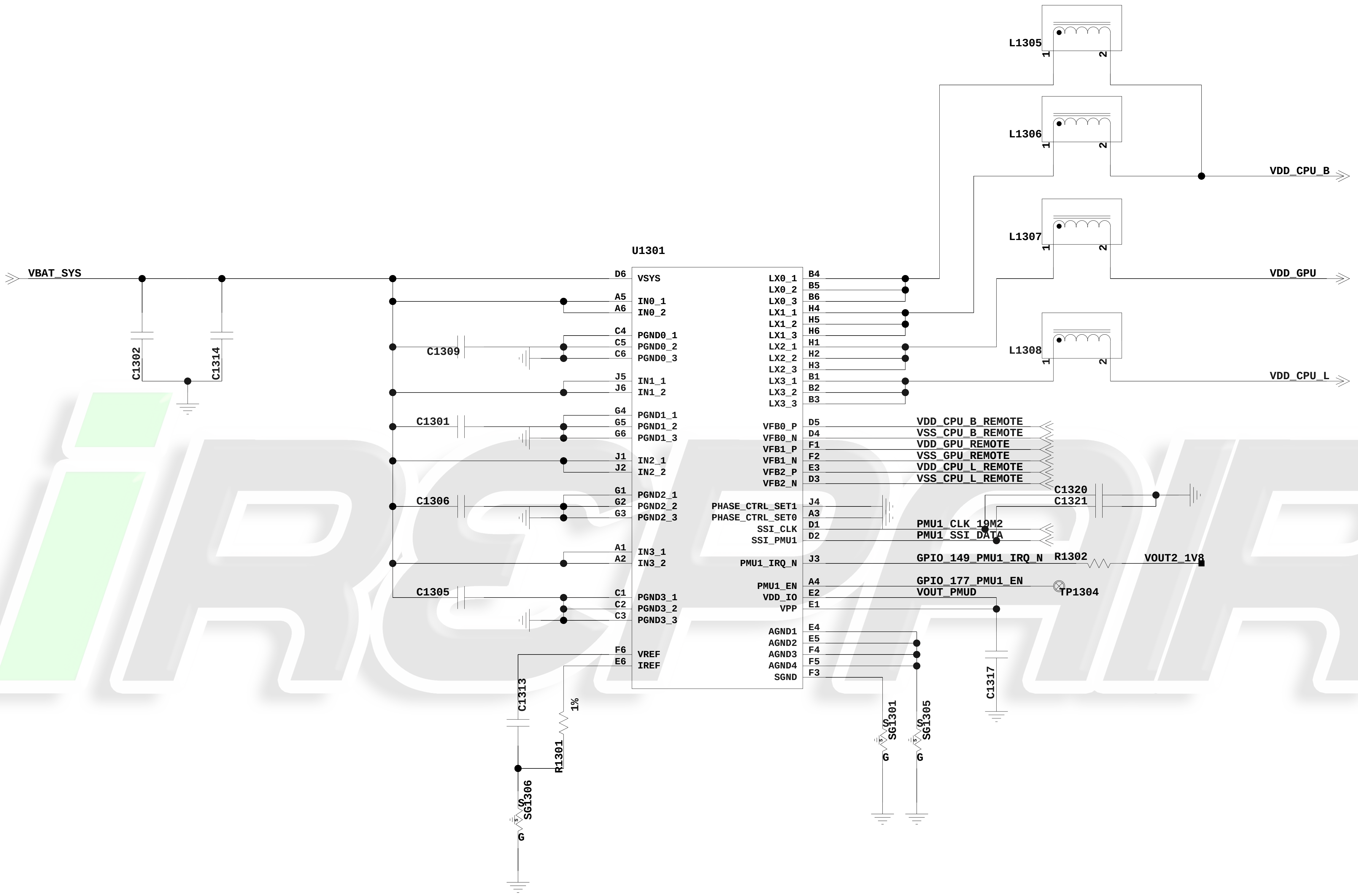
Board ID Resistor Set   Resistor Code

ID	UP RES	DOWN RES	Value	Code
0	NC	0K	0K	07090911
1	150K	22K	20K	07092448
2	100K	30K	22K	07091172
3	200K	100K	30K	07091299
4	150K	121K	51K	07091302
5	121K	150K	100K	07091246
6	51K	100K	121K	07091176
7	30K	100K	150K	07092138
8	20K	150K	200K	07091406
9	150K	NC		

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 12_PMU Digital 21 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

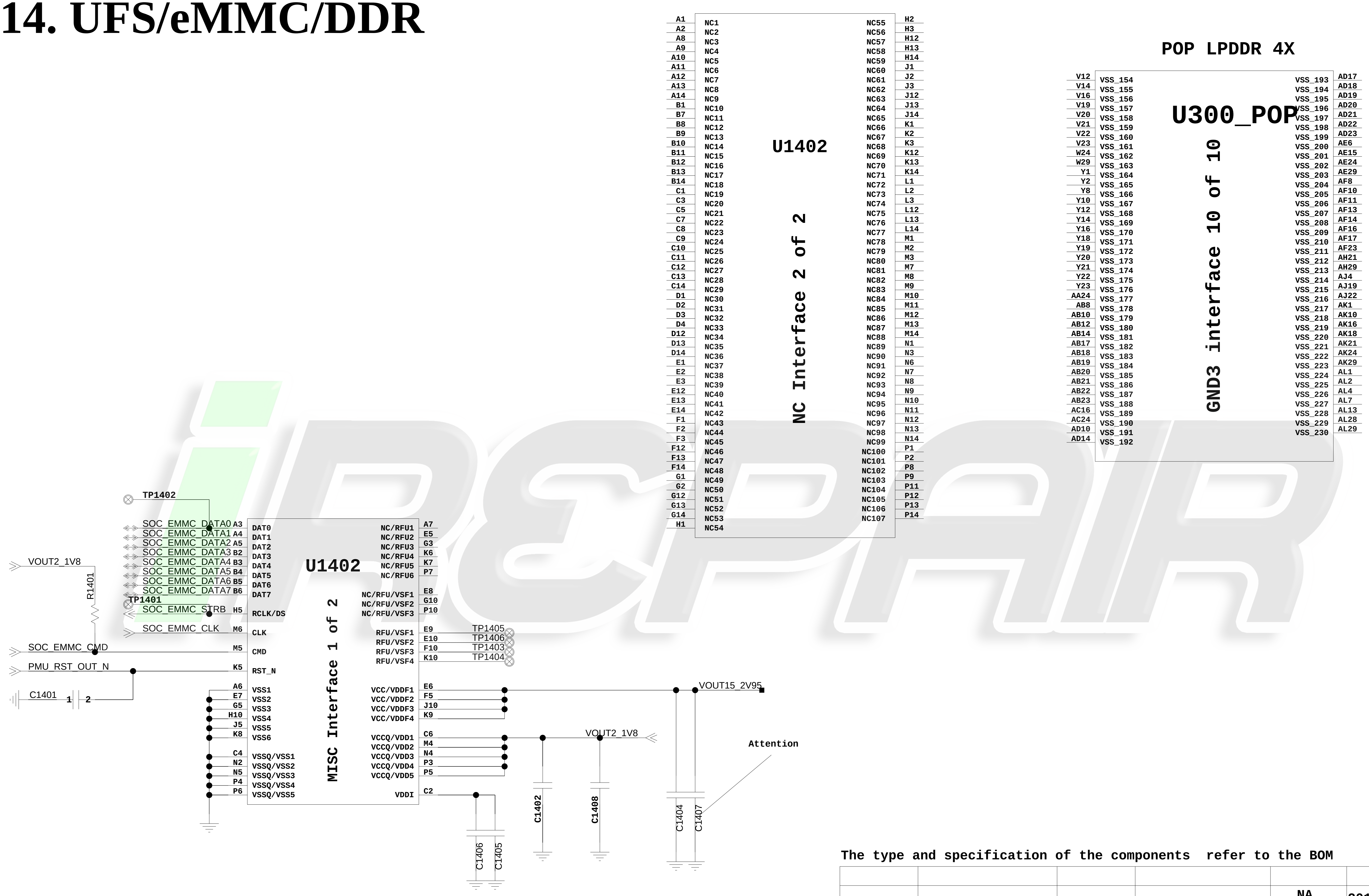
13.Hi6422



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 13_Hi6422 OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

14. UFS/eMMC/DDR



The type and specification of the components refer to the BOM

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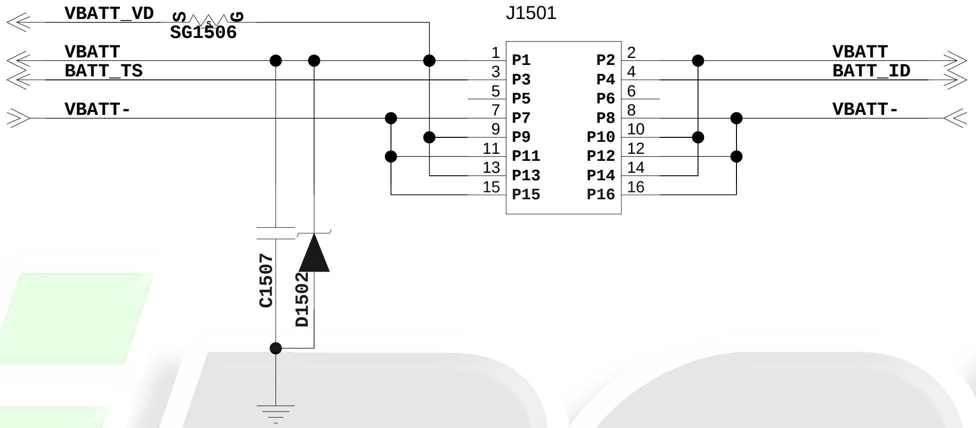
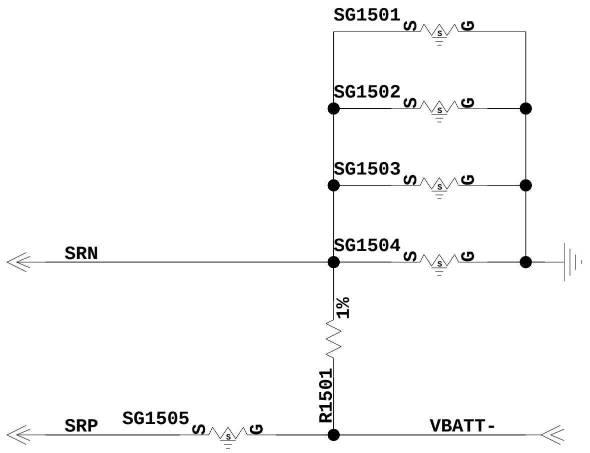
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET14_eMMC/DDR 14 OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

15. Battery & Fuel guage

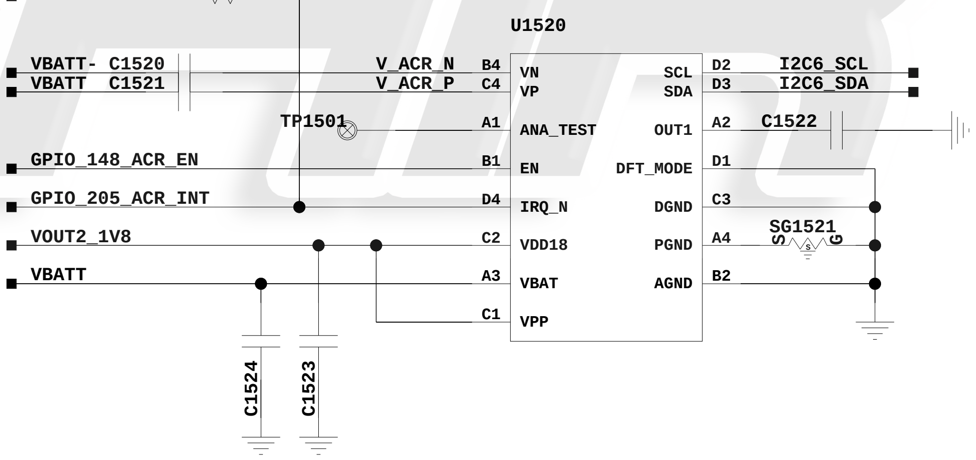
Battery Connector

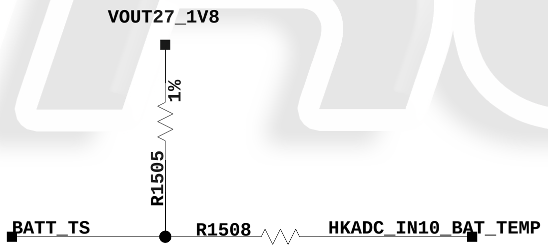


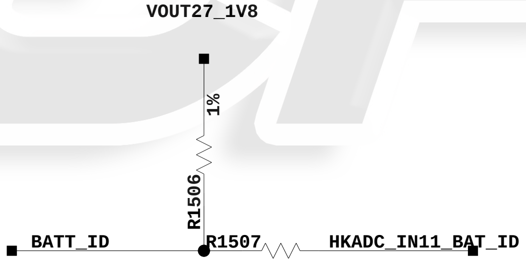


CAD note:1.Trace for 6A
2.Differential trace

Battery ACR







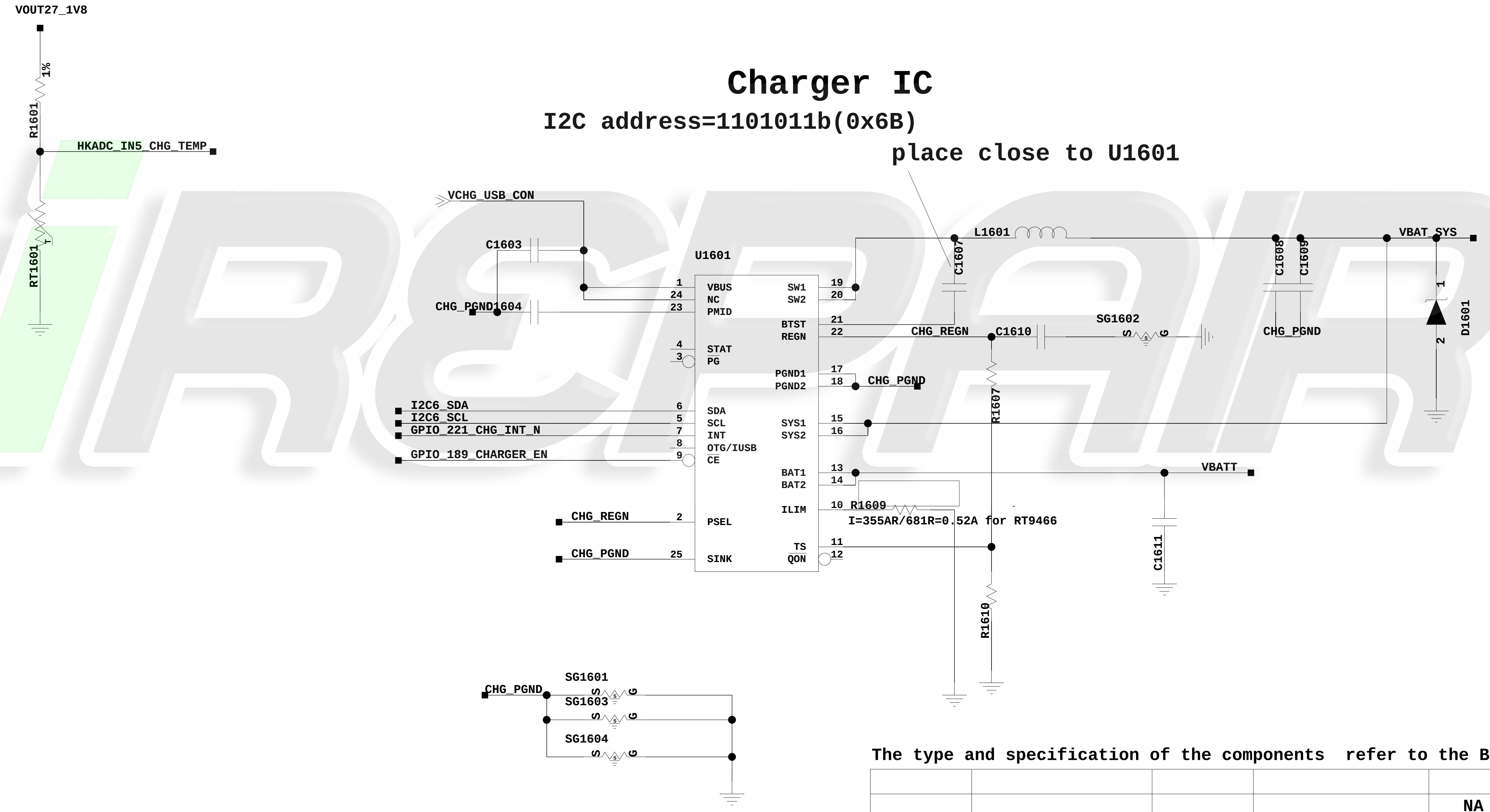
Battery Temperature

Battery ID

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 15_Battery OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

16. Charge Management



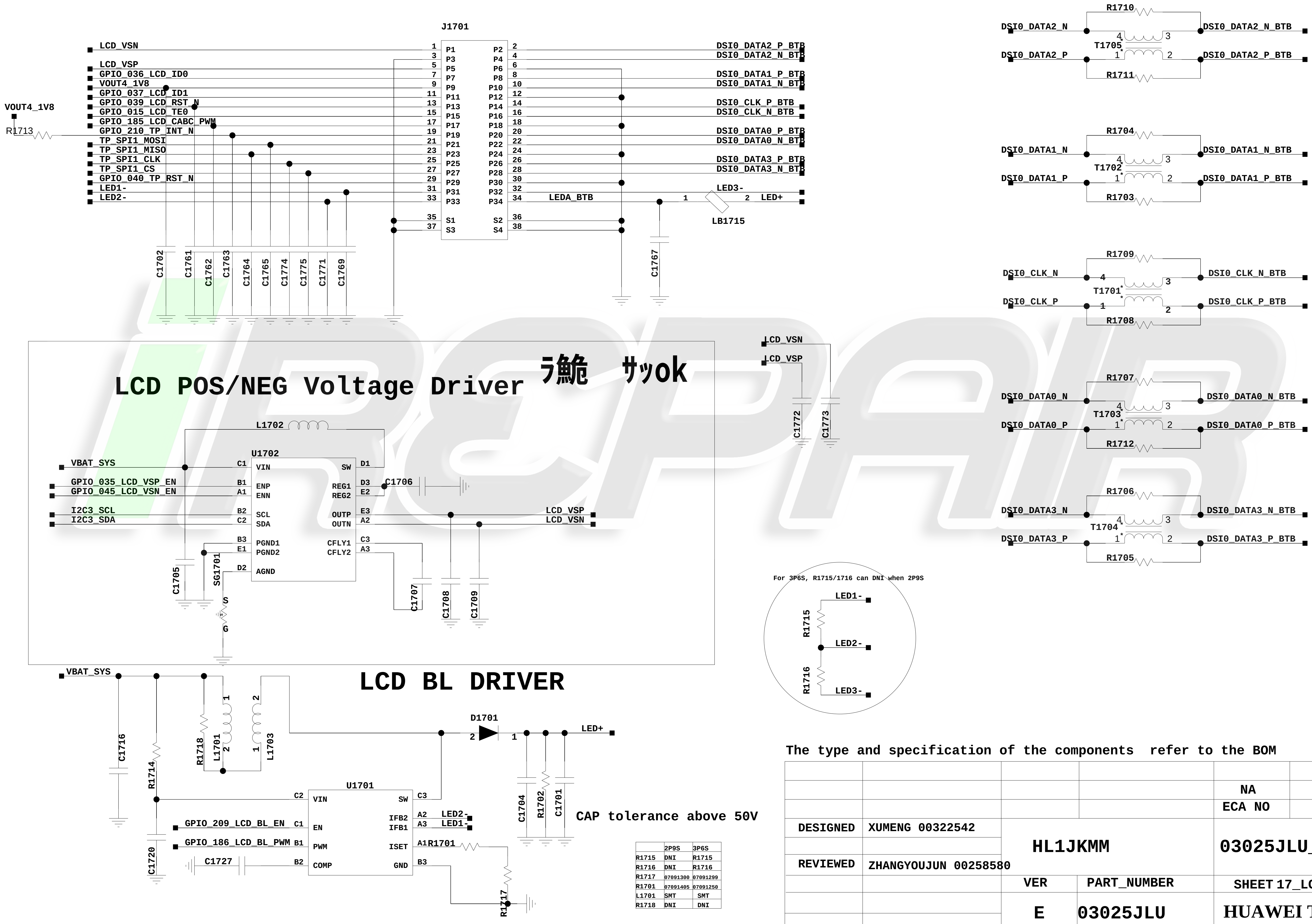
The type and specification of the components refer to the BOM

		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER	PART_NUMBER
		E	03025JLU

SHEET 16_charge OF 60

HUAWEI TECH CO.,LTD.

17. LCD and TP INTERFACE

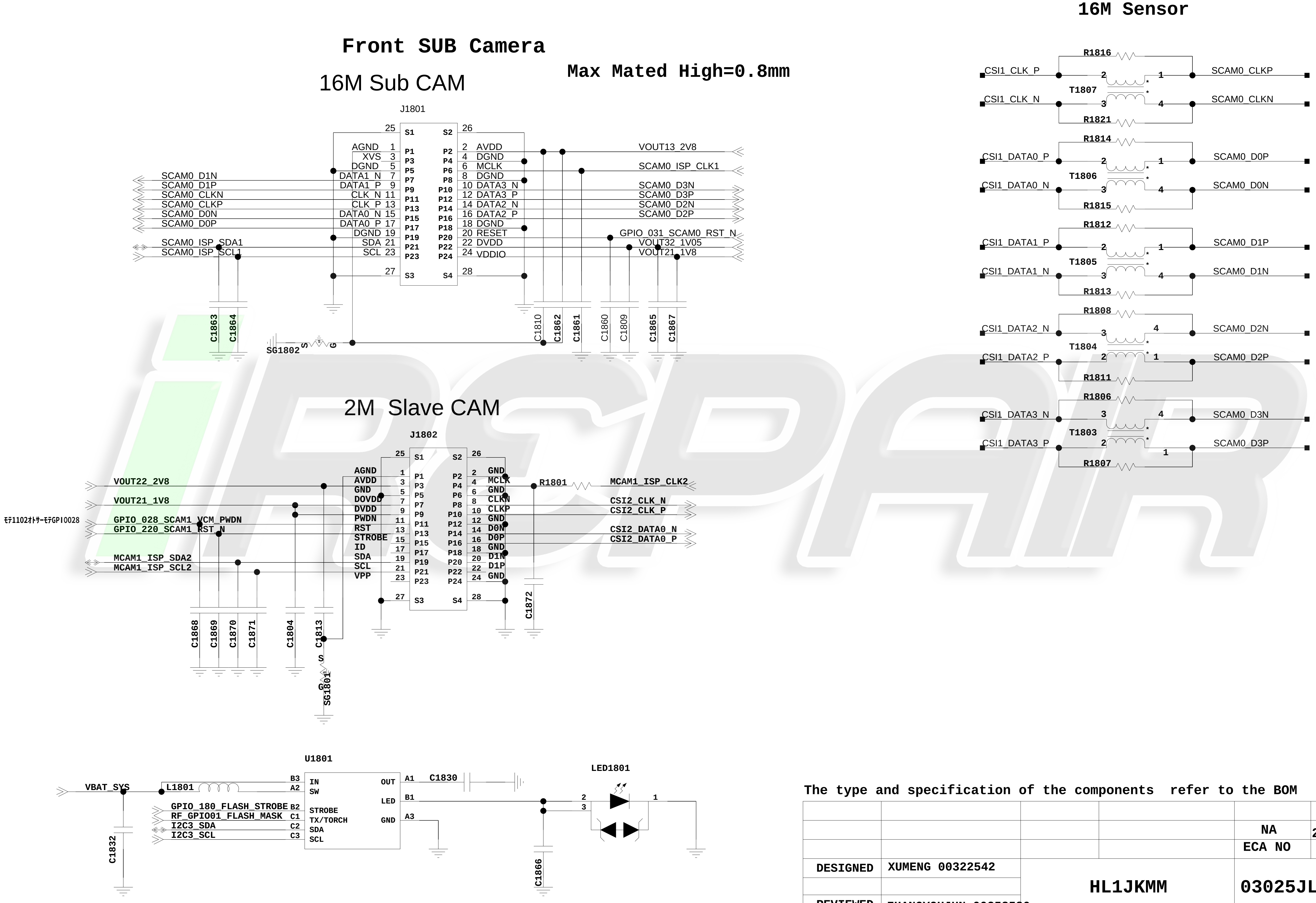


	2P9S	3P6S
R1715	DNI	R1715
R1716	DNI	R1716
R1717	07091300	07091299
R1701	07091405	07091250
L1701	SMT	SMT
R1718	DNI	DNI

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 17_LCDOF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

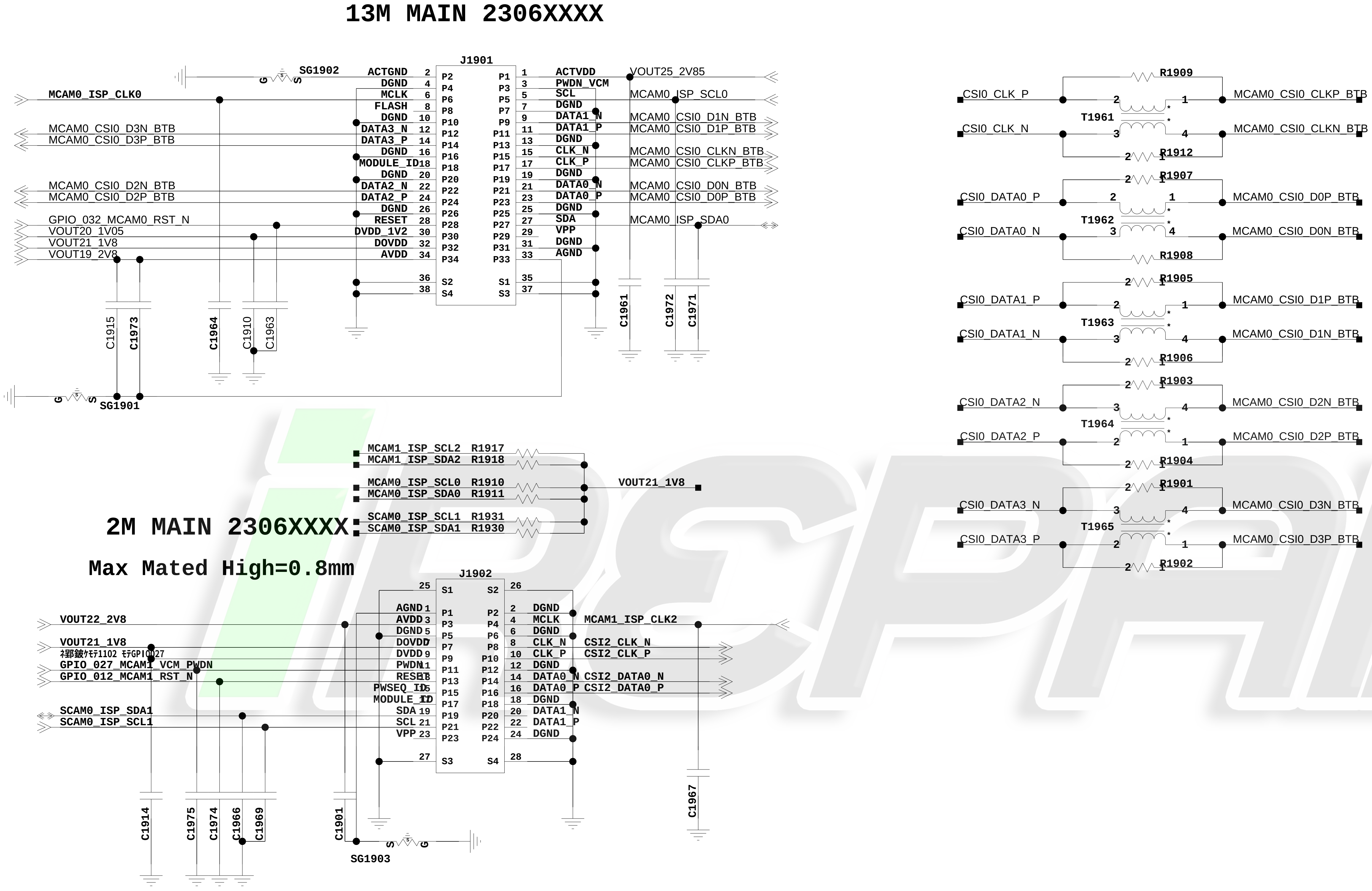
18. Flash/front Camera



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	18_Flash/Front Camera SHEET OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

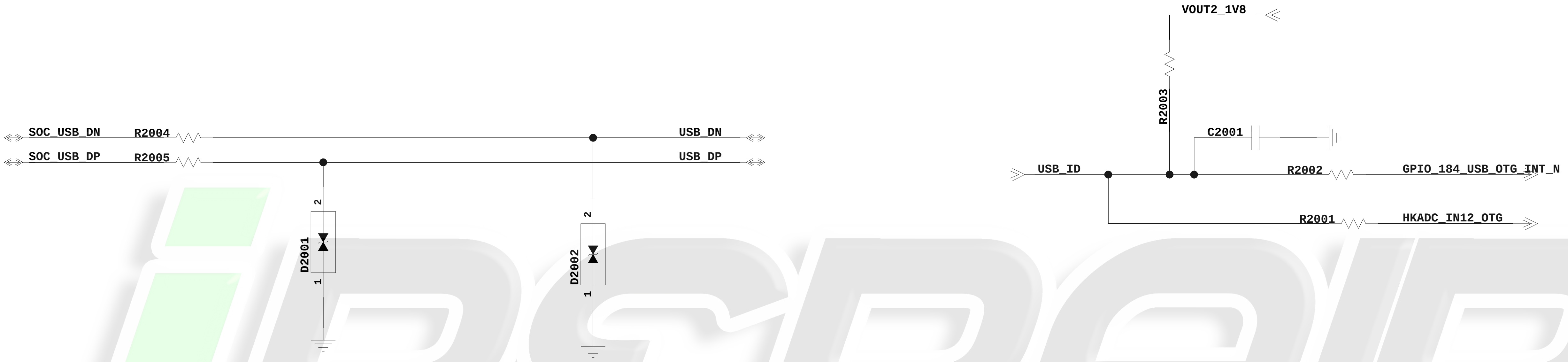
19. Main Camera



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 19 Main Camera OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

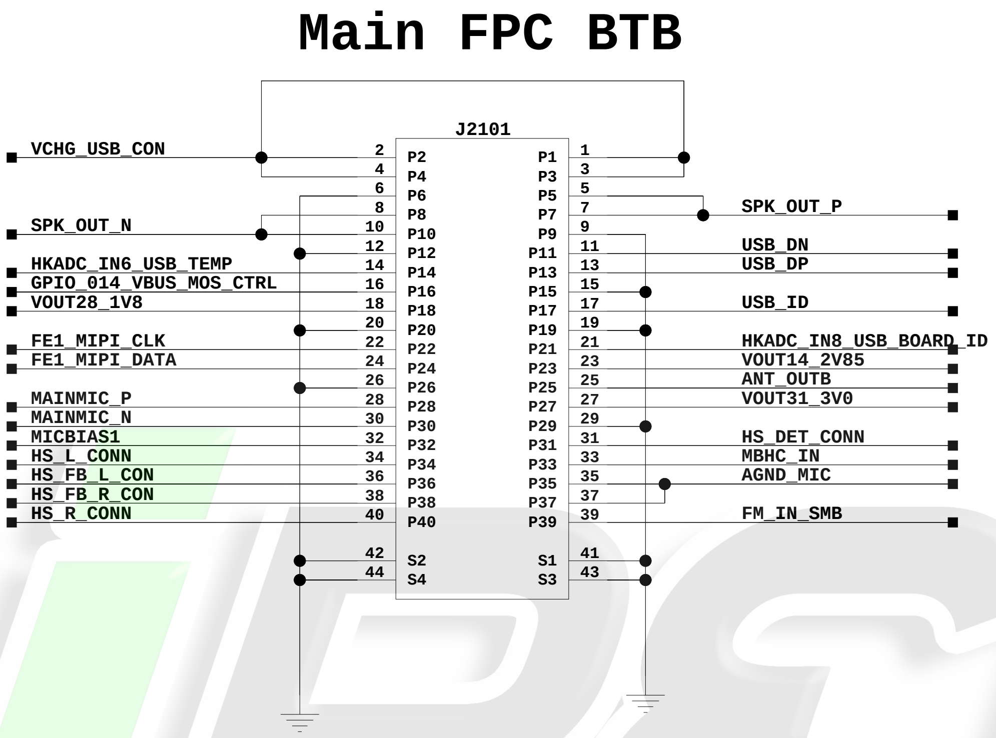
20. USB



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 20_USB OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

21. Main FPC



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 21_Main FPC OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

22. NC

The type and specification of the components refer to the BOM

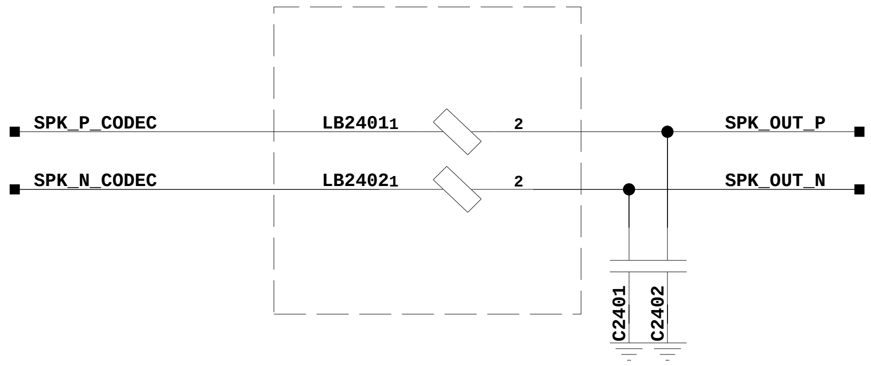
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	22_NOF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

23. NC

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 23_NC OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

24. SPK

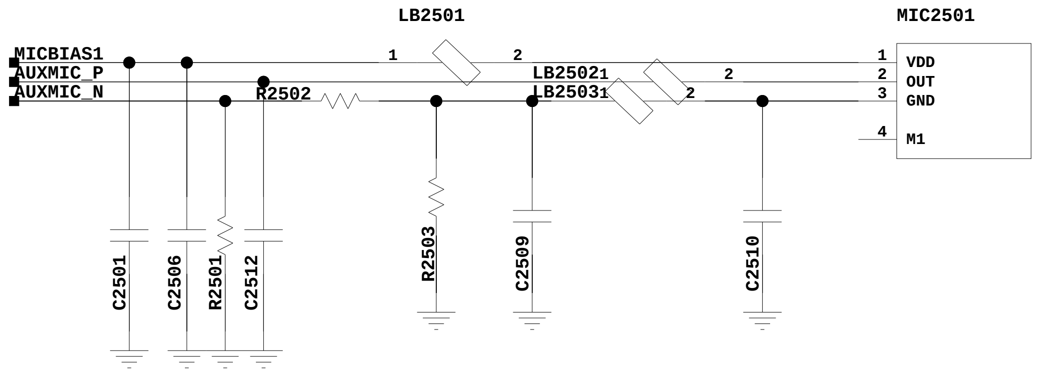


The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	24_SPK OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

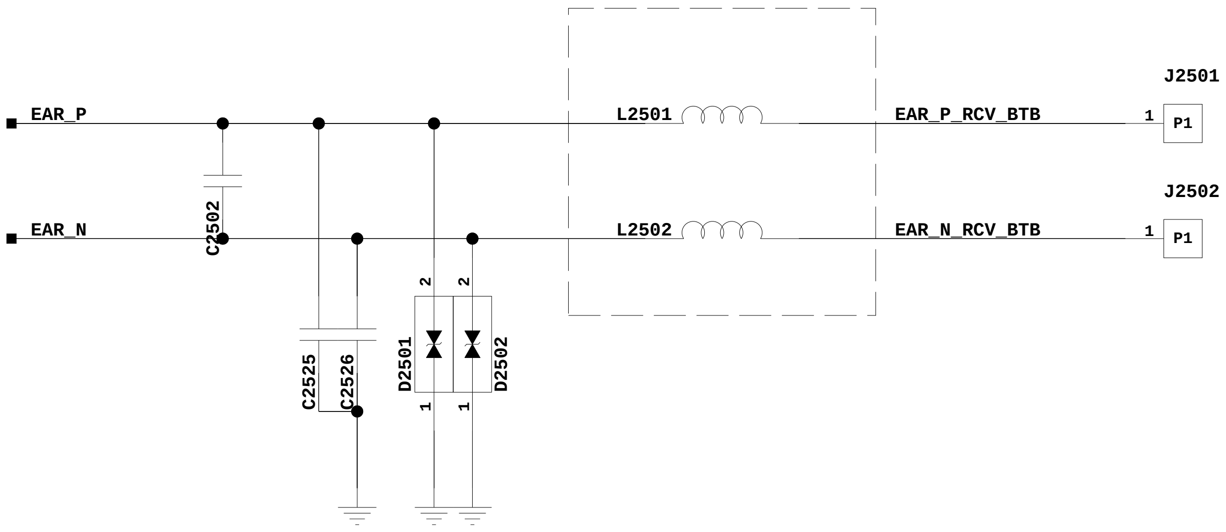
25. MIC/RCV

Second MIC



CAD note: 1,MIC need differential trace
2, MIC GND pad need use cycle via to GND net.

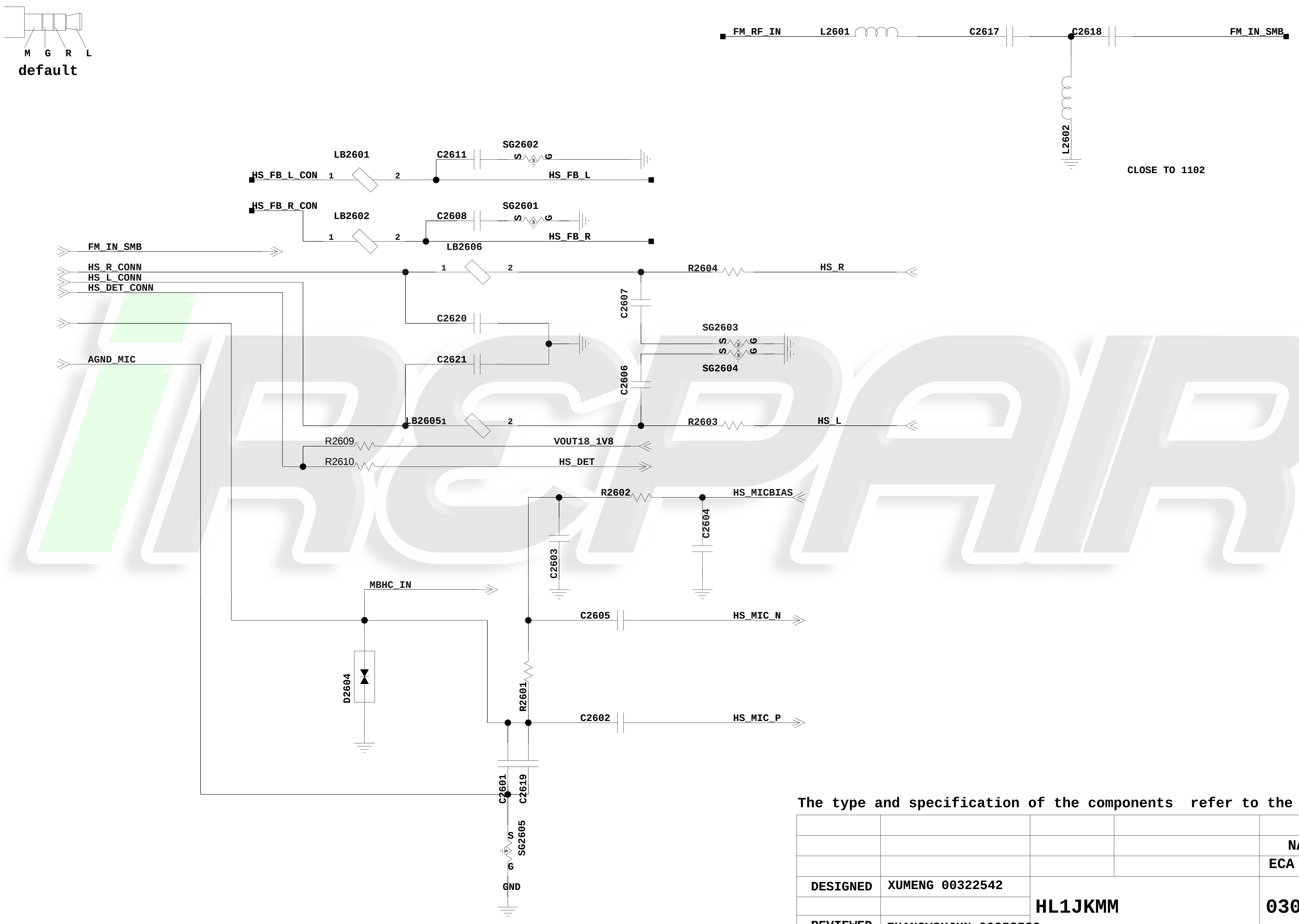
RCV



The type and specification of the components refer to the BOM

		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
VER	PART_NUMBER	SHEET 25_MIC/RCV OF 60	
E	03025JLU	HUAWEI TECH CO.,LTD.	

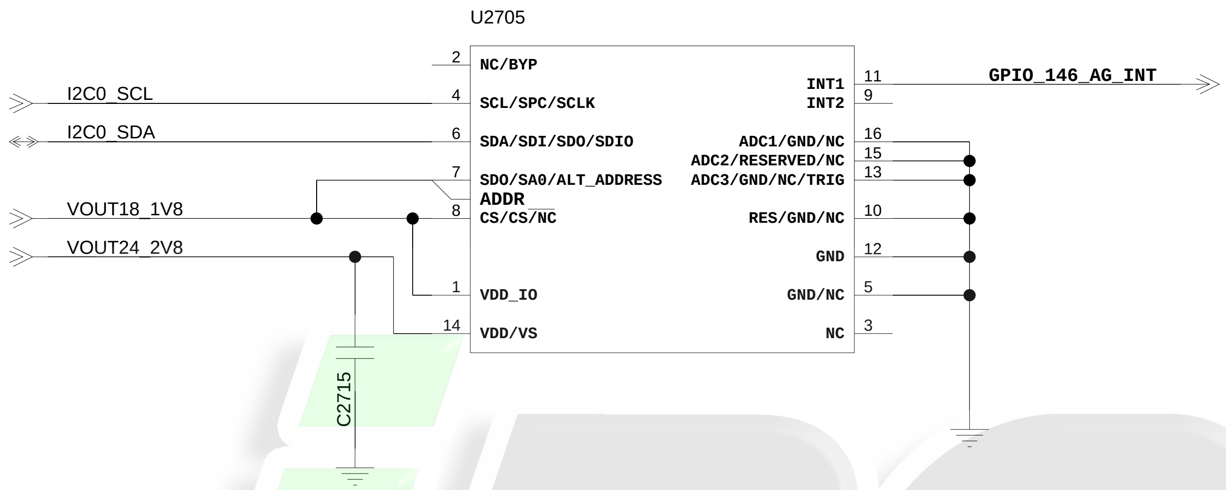
26. Headphone



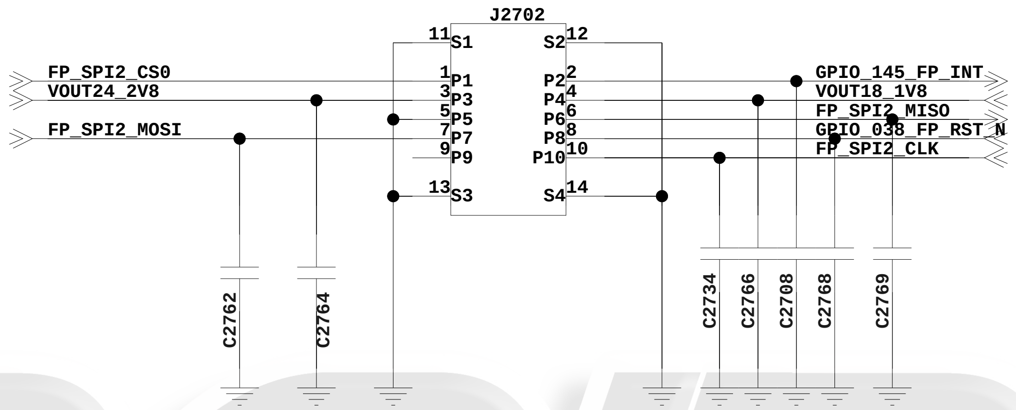
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	26_Headphone 35 OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

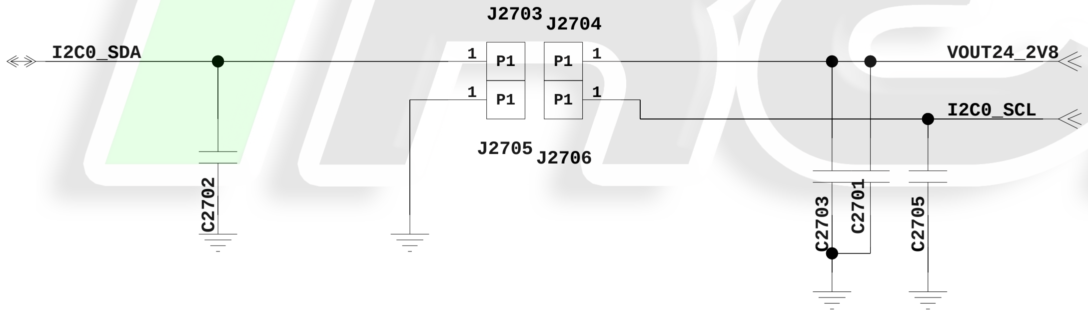
27. X-Sensor



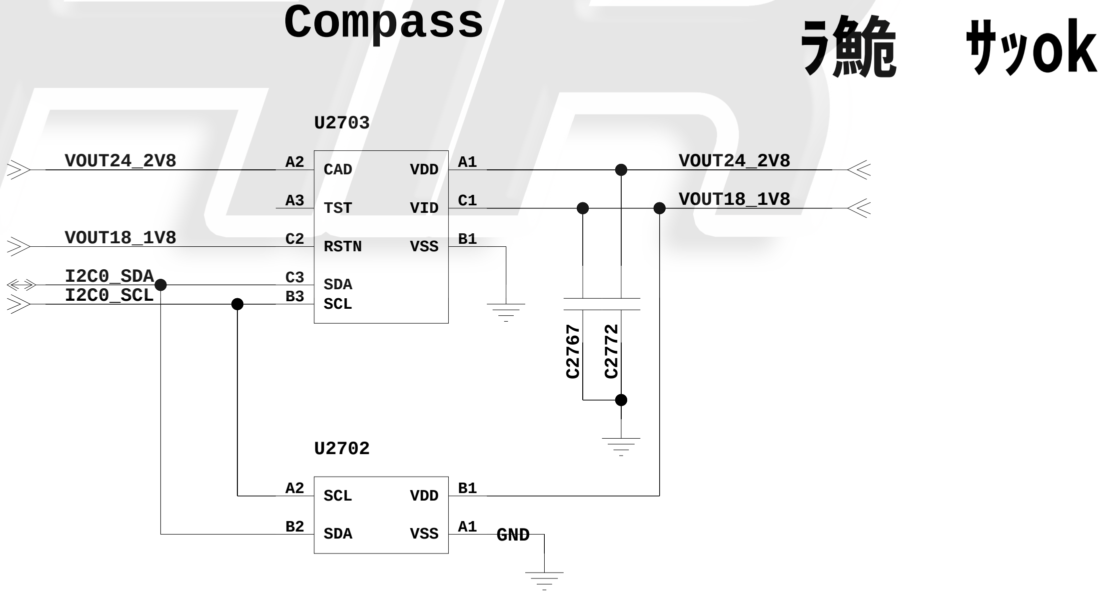
FingerPrint ZIF



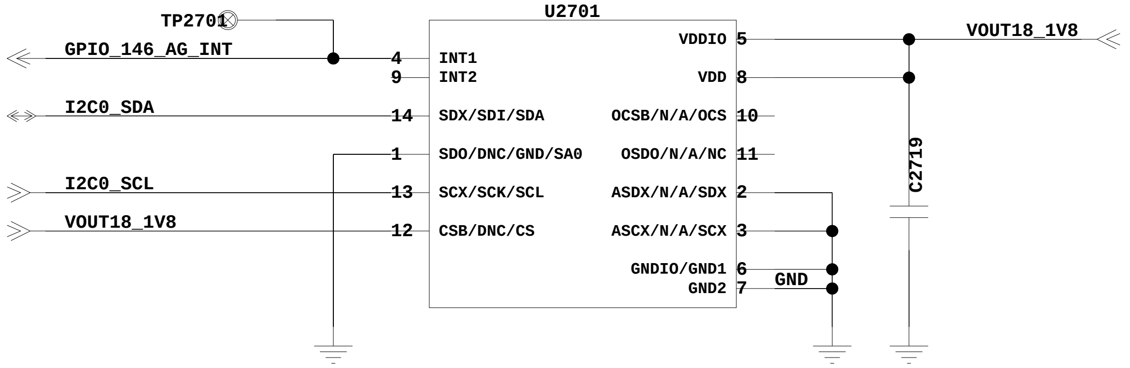
PROXIMITY&RGB AMBIENT Sensor



Compass



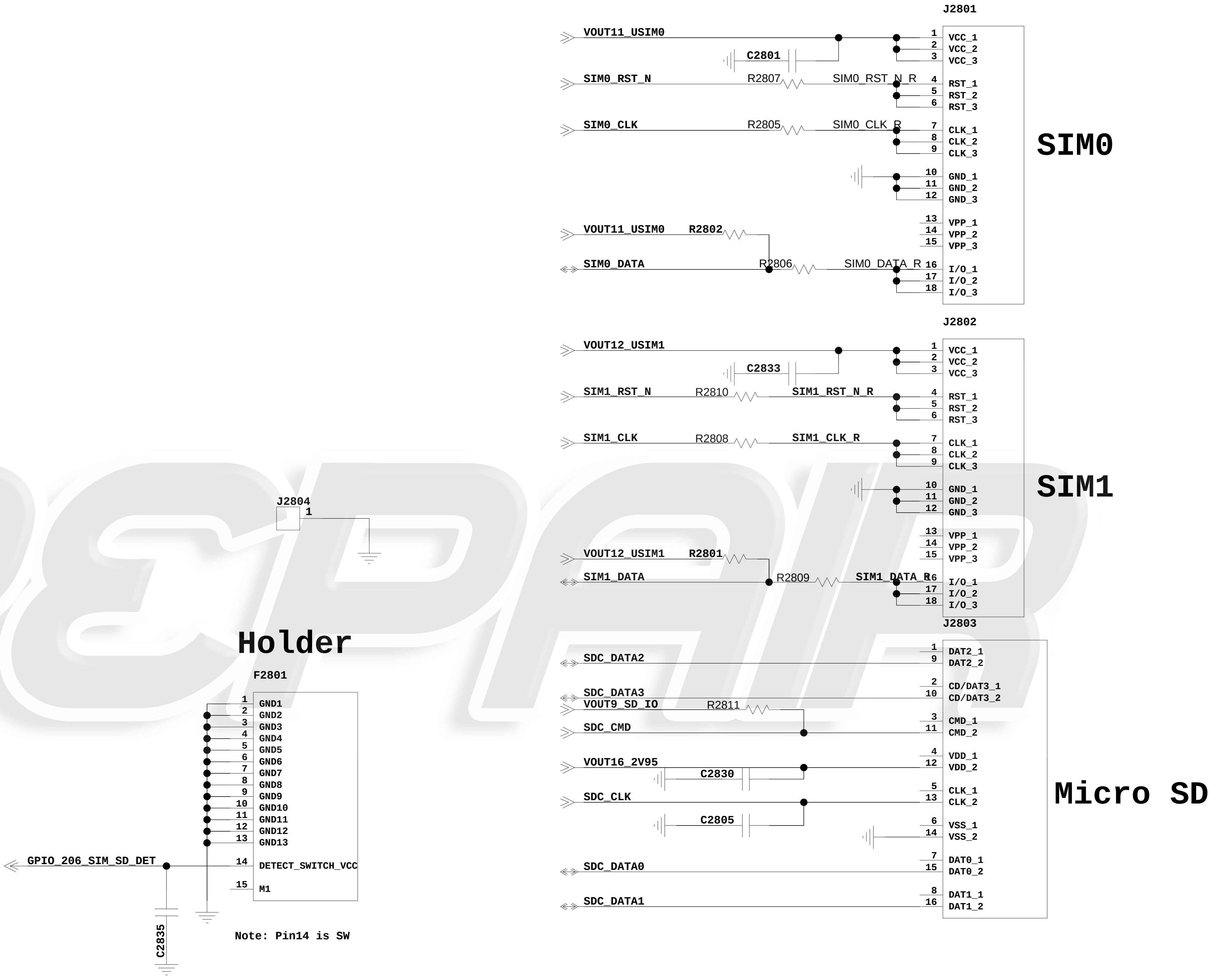
Accelerometer and Gyroscope 6-AXIS SENSOR



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 27 X-Sensor OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

28.SIM/uSD Card

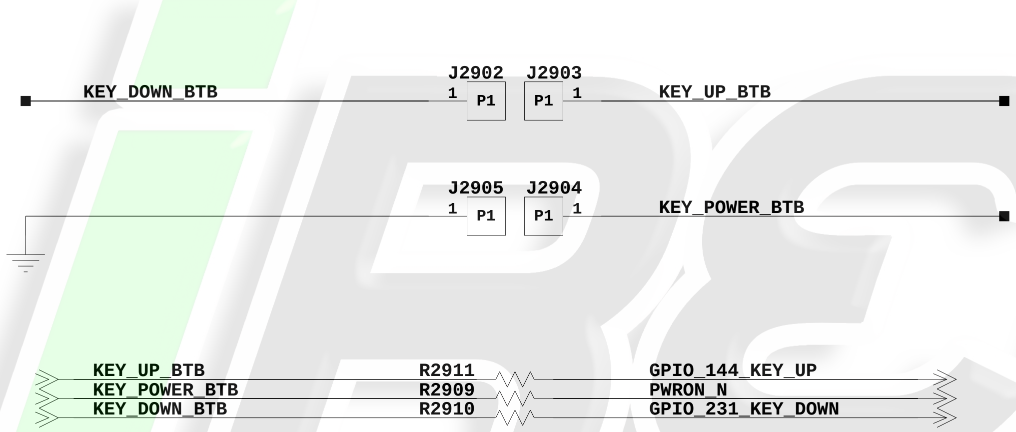


The type and specification of the components refer to the BOM

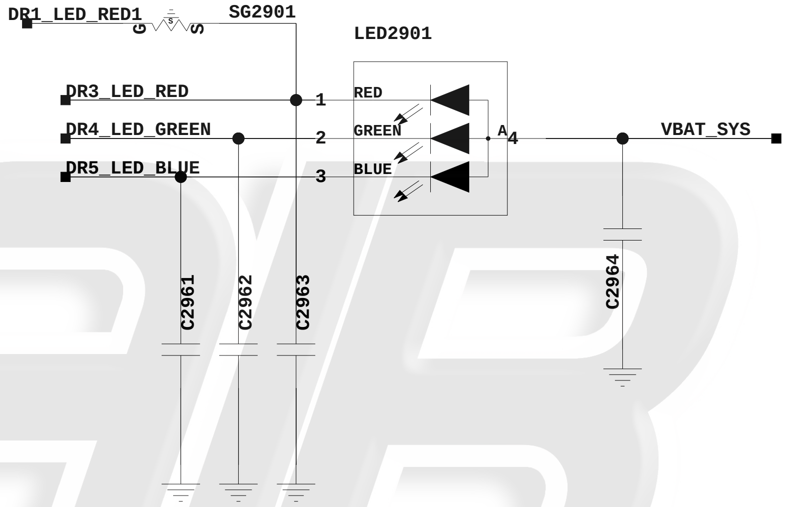
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	28_SIMSDcard OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

29. LED/Key

KEY BTB



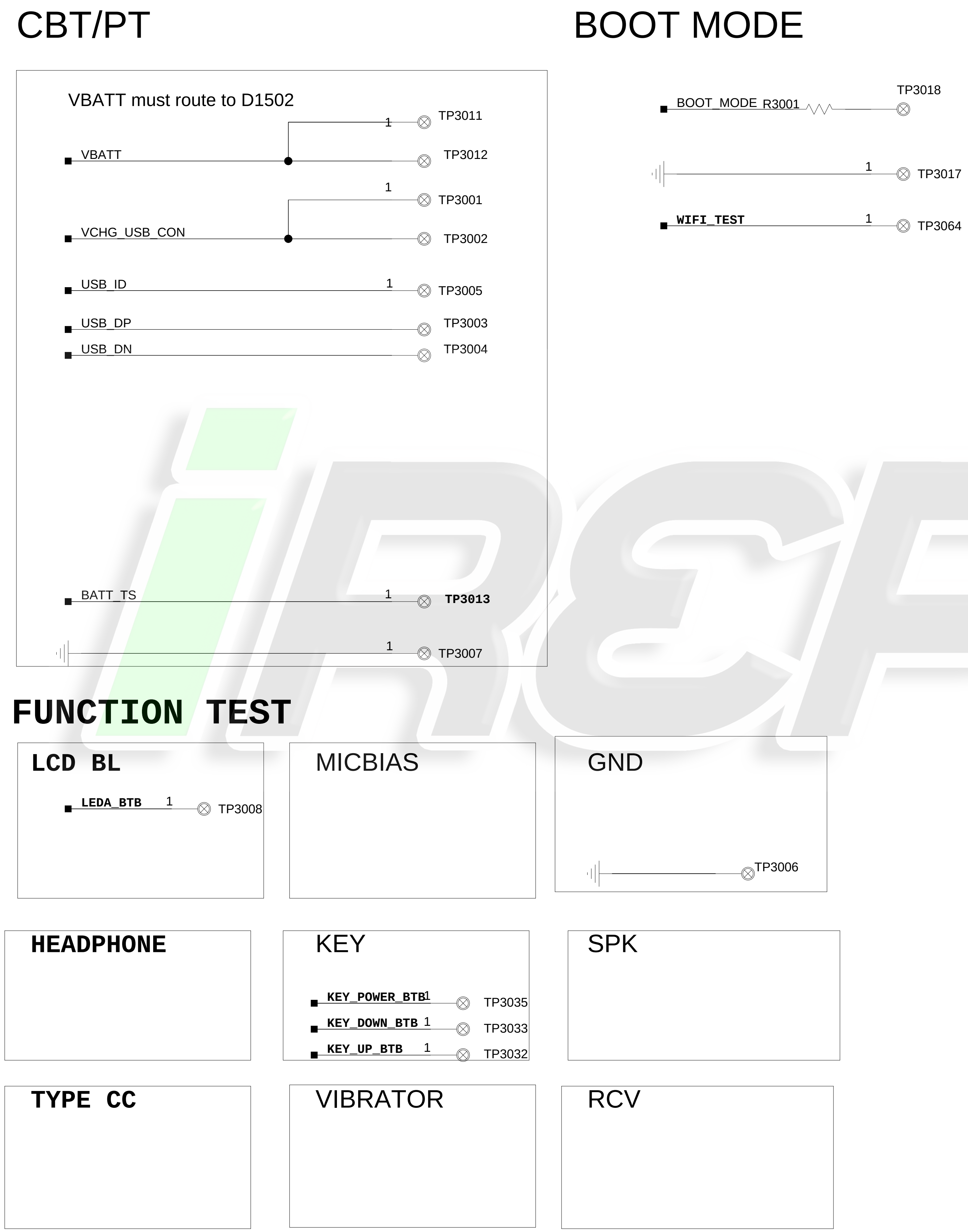
RGB LED

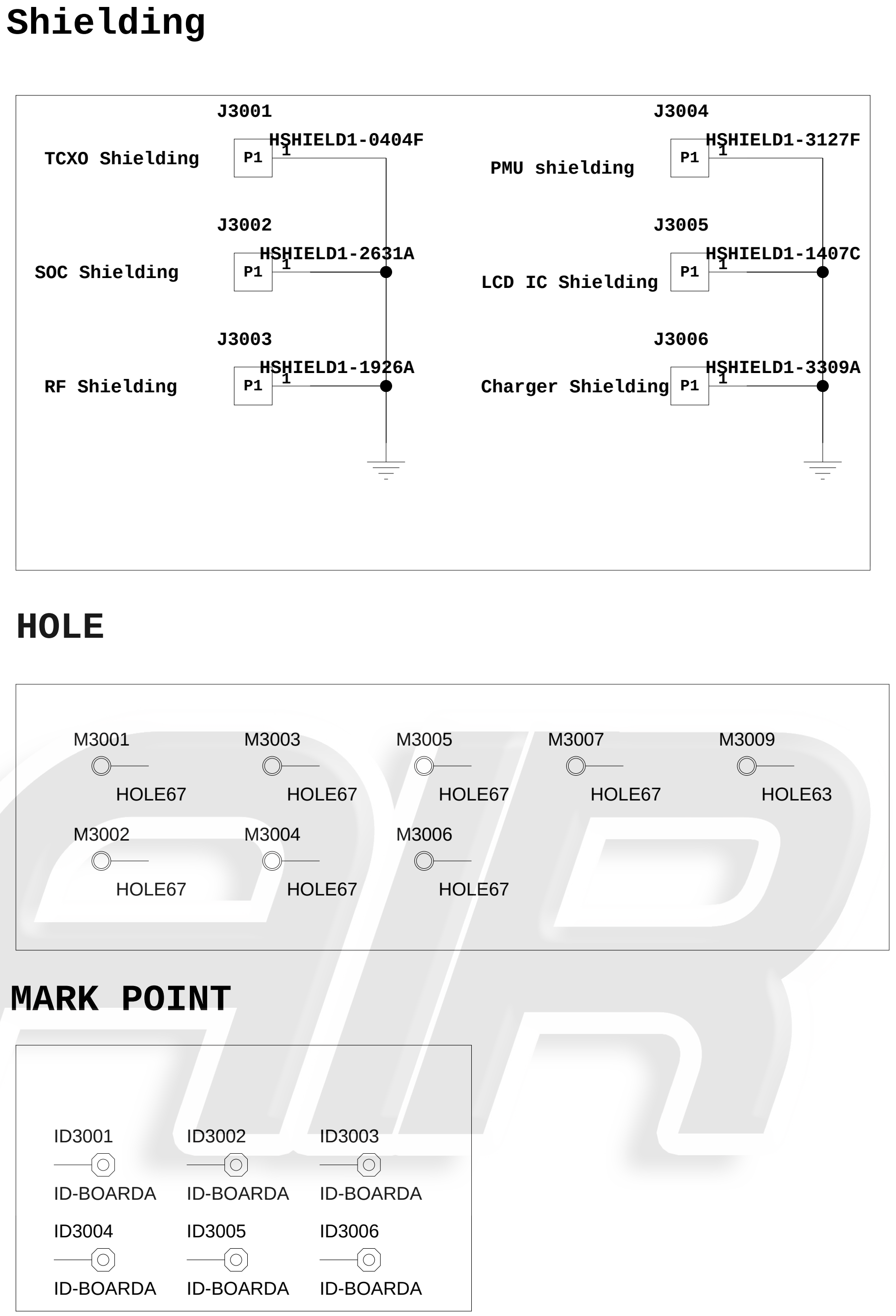


The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 29_LED/Key OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

30. Test Points/Shields

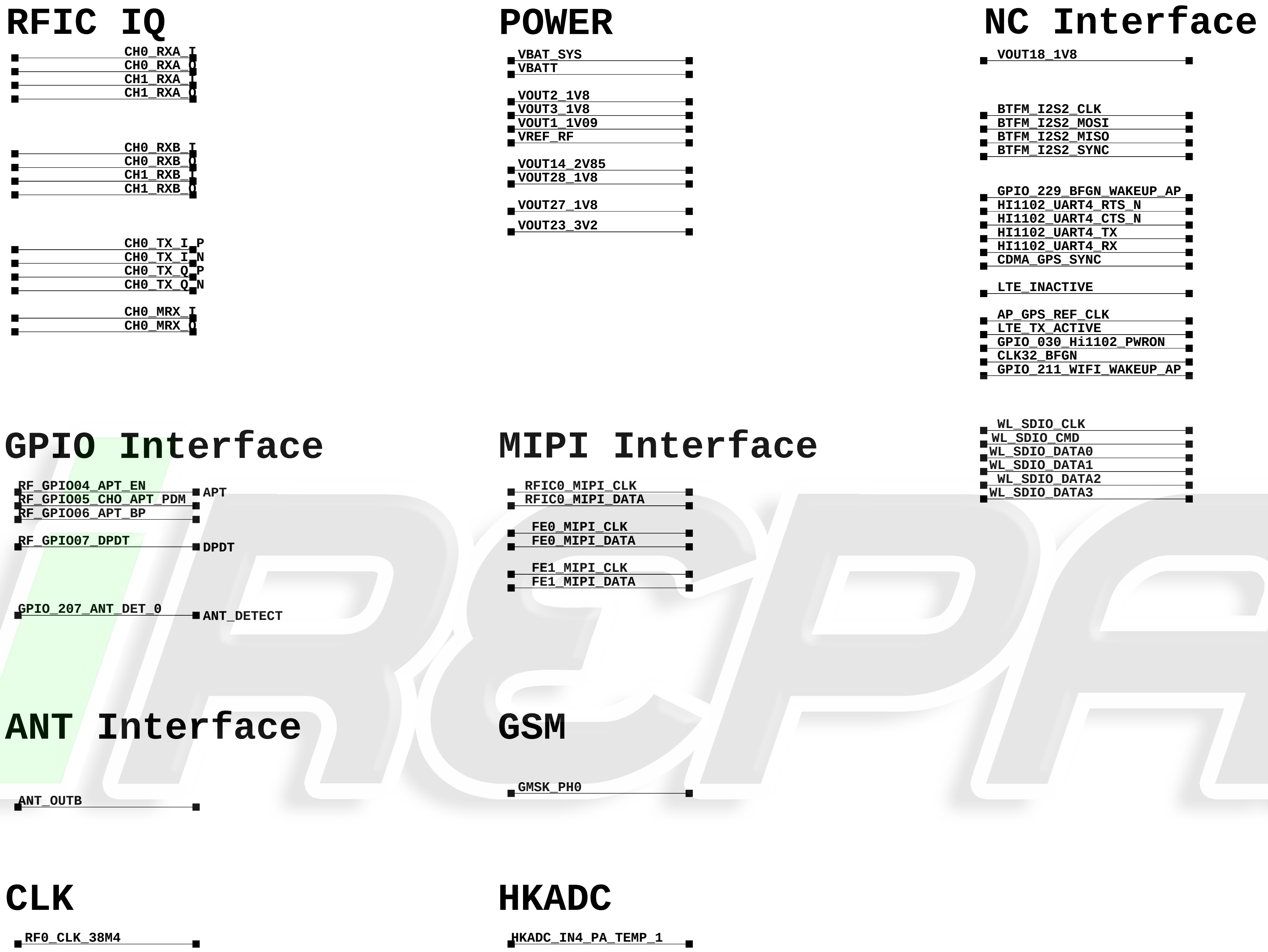




The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	30_Test Points/Shields SHEET OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

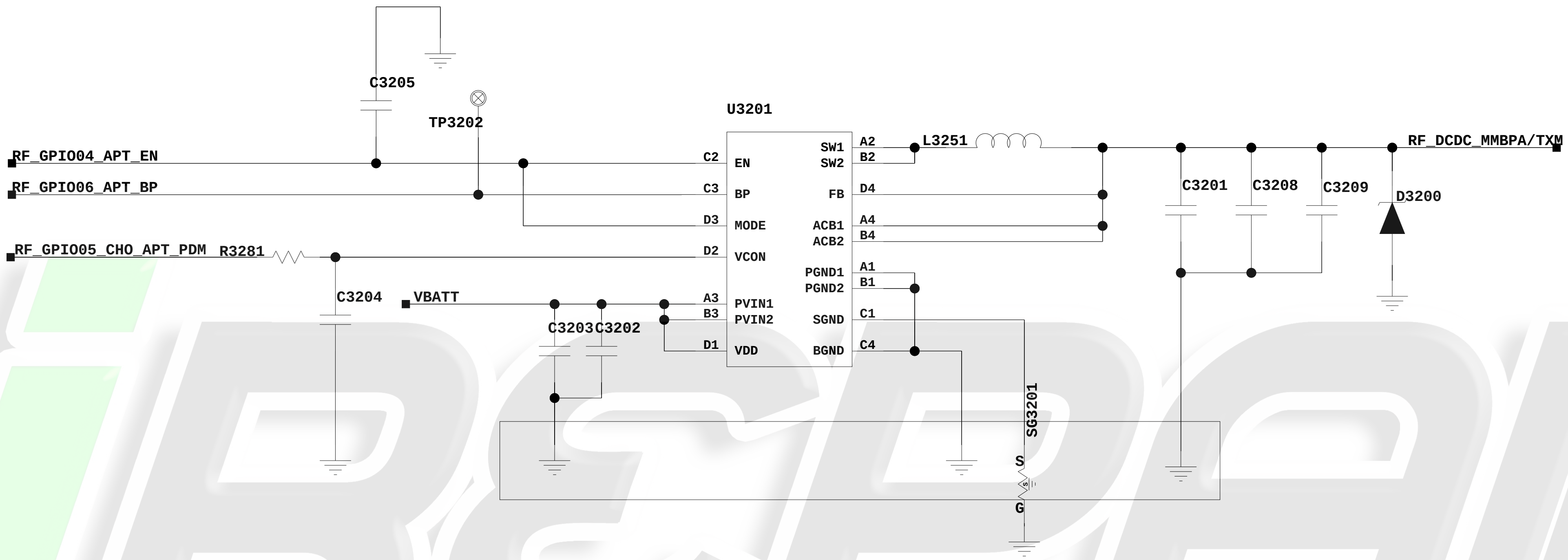
31.RF Interface



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 31 OF 60 Interface	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

32 APT_LM3243



1.DCDCｵ酊ｷﾎｪPAｷﾀｻ､ｹ鰓ｻｻｯｵ酊ｷｵﾄﾗ魑ﾉｲｿｷﾖ

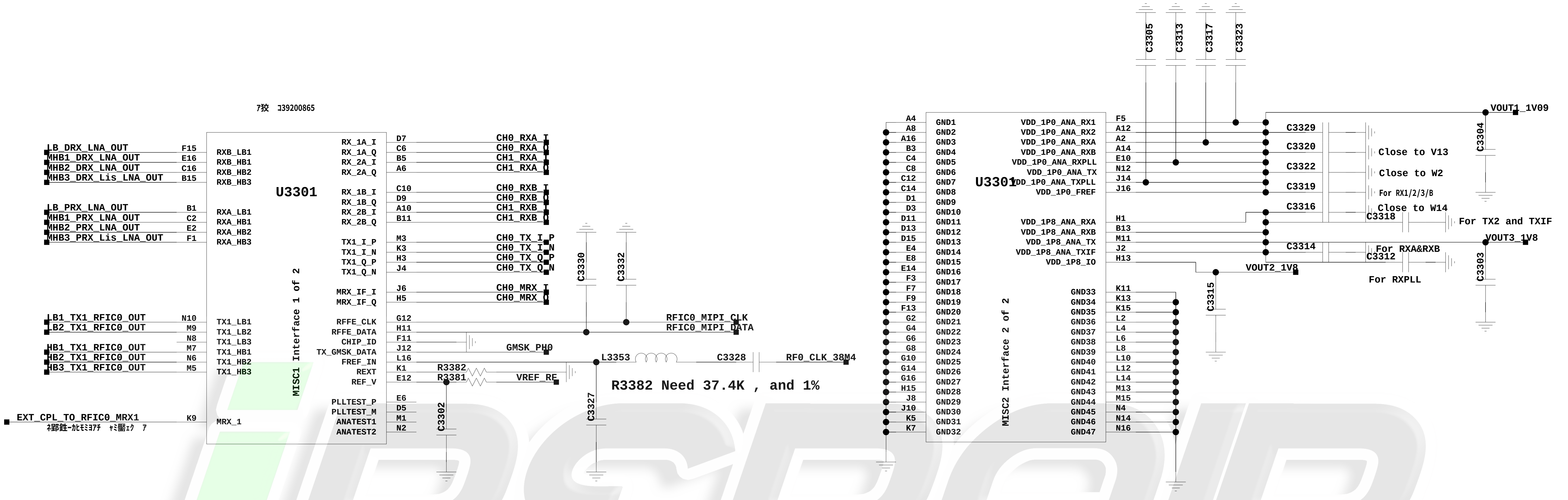
2.ｲｼﾏﾟﾊｱﾏﾈｾｭｹ　ﾎﾈﾑｹｹﾜD3200｣ｬﾔﾙﾐﾇﾐﾍﾗﾟﾏﾟｸ　Aｺﾍ TXMｹｩｵ

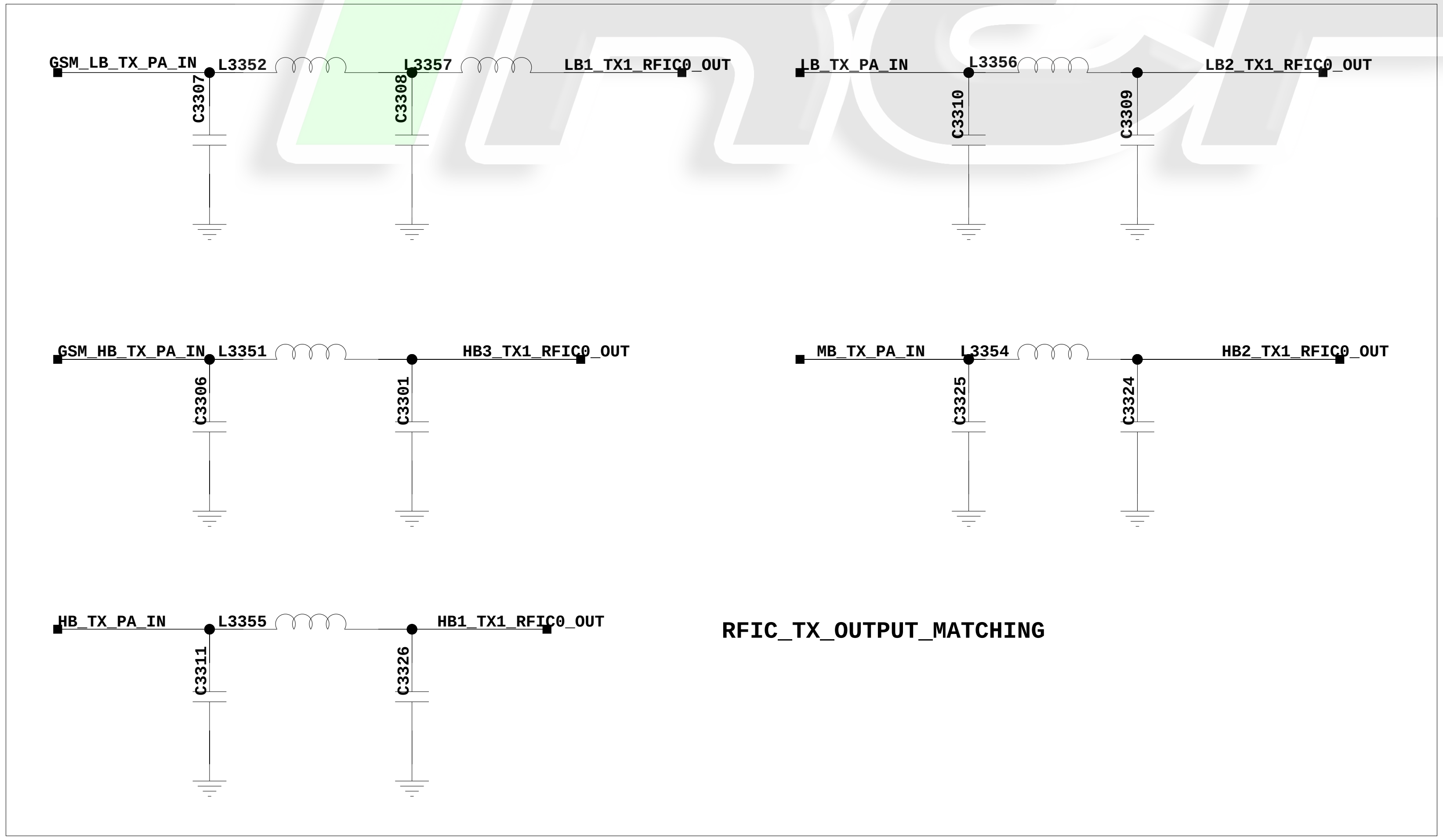
3.ｲｼﾏﾟﾊｱｿｼﾂﾇﾏﾟｿ忻ｬDCDCｸ　SMｹｩｵ醋ｱ｣ｬﾐ睢｣ﾖ､ﾍｨﾁ　　ｽ3A

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 32 APT OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

33.RFIC0_Hi6353





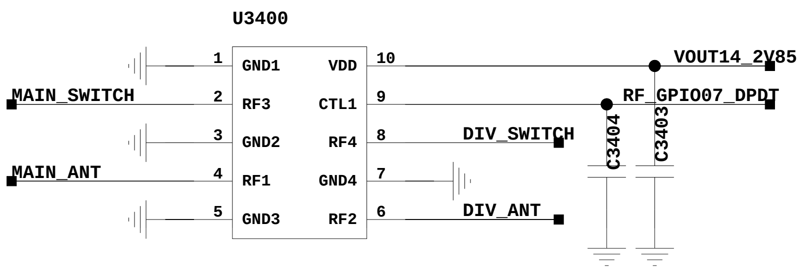
RFIC_TX_OUTPUT_MATCHING

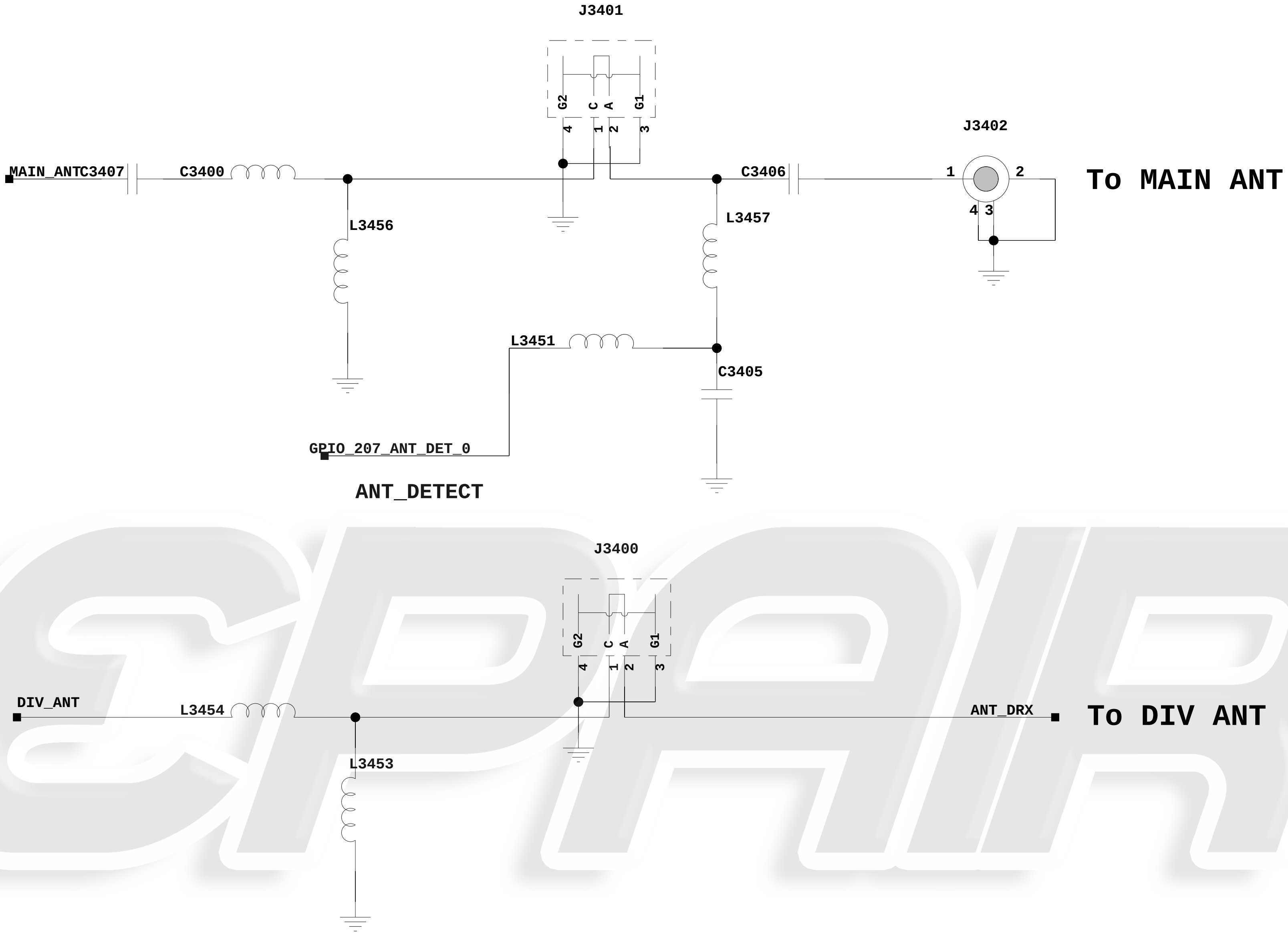
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 33 RFIC0_6053	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

34 DPDT_Connector

47140300 change to SKY13699-21





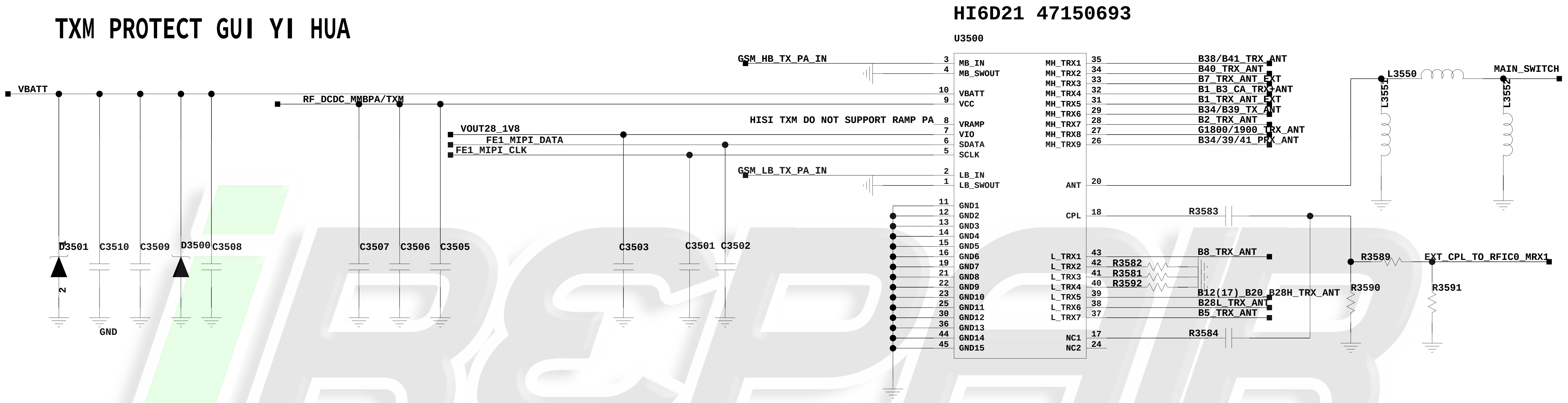
SKY13699-21 Truth Table	
CTRL1	State
0	RF1-RF3,RF2-RF4
1	RF1-RF4,RF2-RF3

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	34 DPDT_Connector
		E	03025JLU	HUAWEI TECH CO.,LTD.	

35. TXM

TXM PROTECT GUI YI HUA

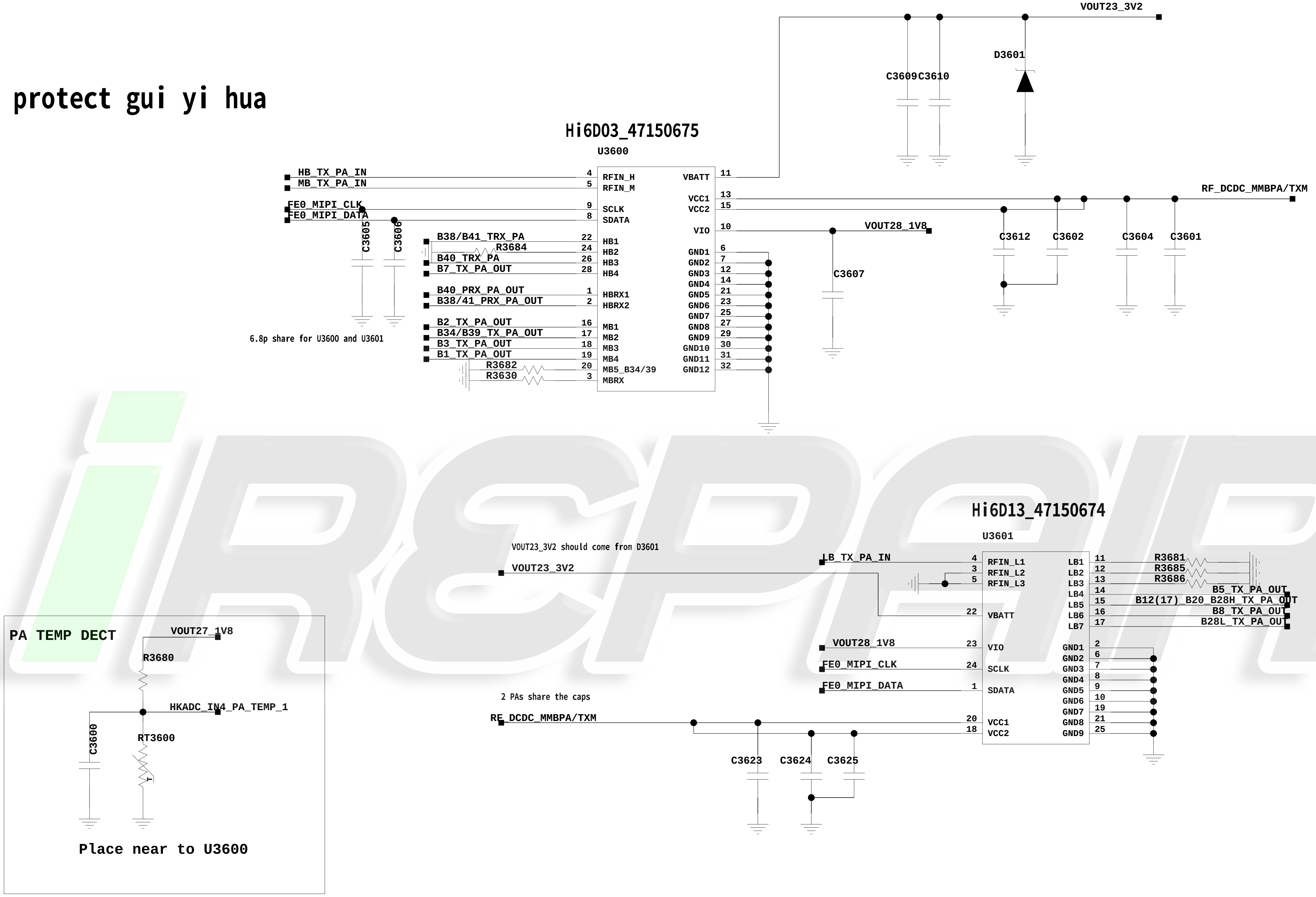


The type and specification of the components refer to the BOM

					2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	NA	03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 35 TXM OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

36 MMBPA

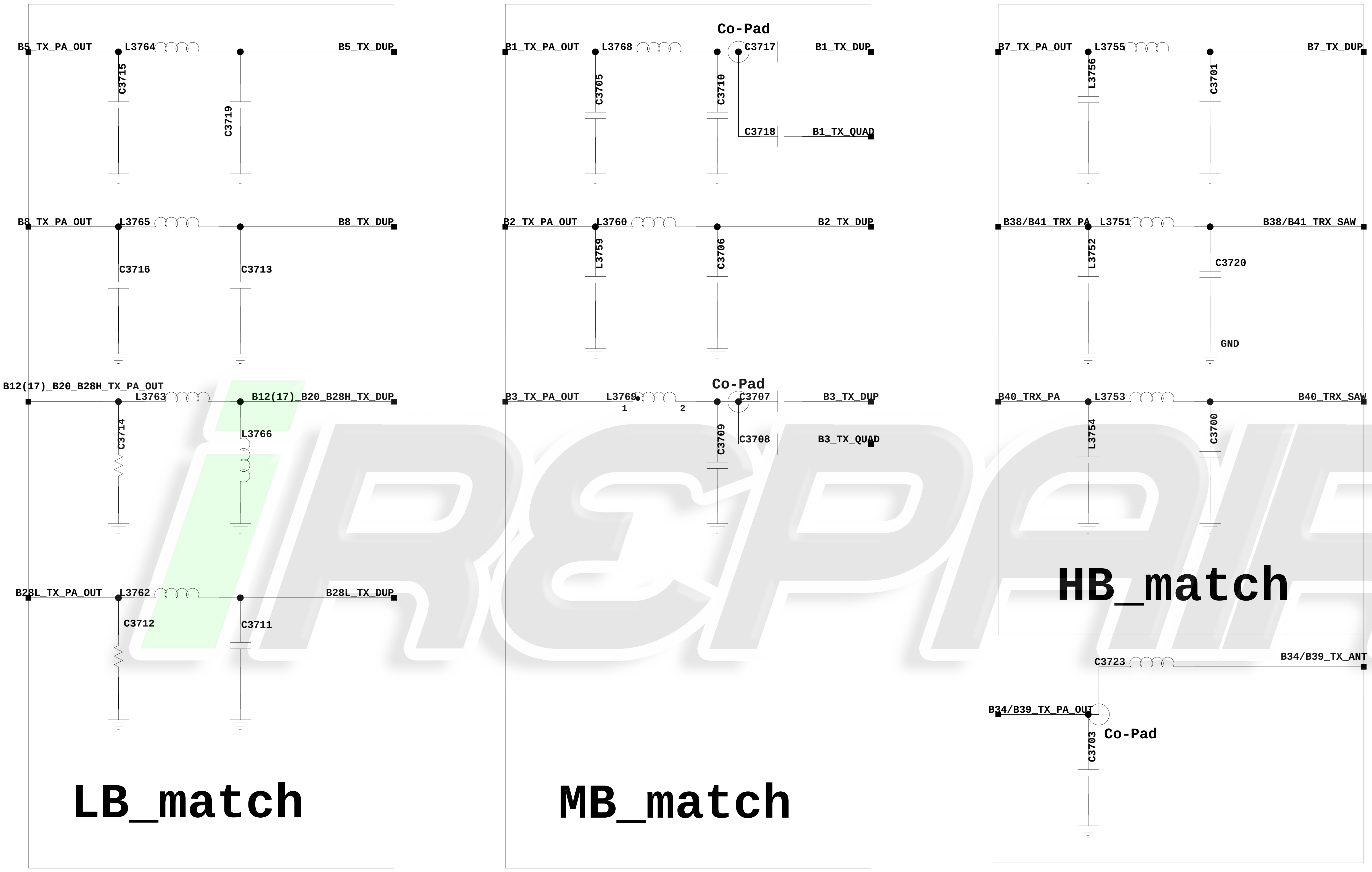
MMMBPA protect gui yi hua



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	36 MMBPA OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

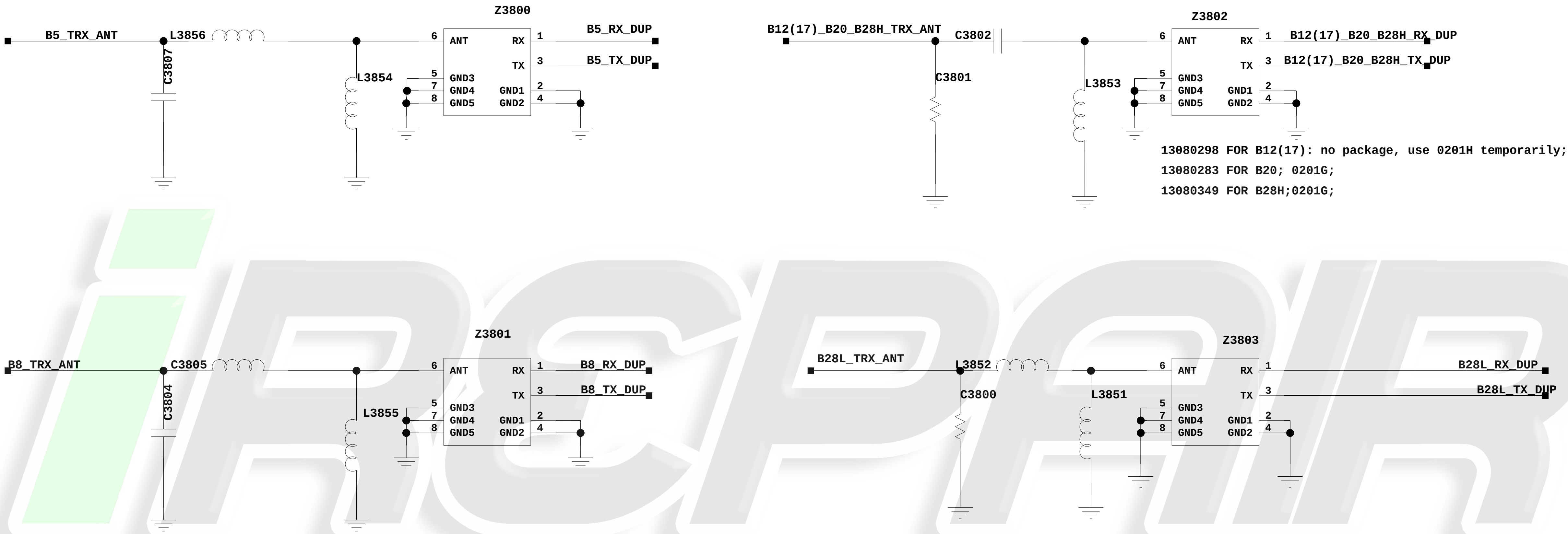
37.TX_Loadpull



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 37 OF 60 TX_Loadpull	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

38 TRX_LB_1



13080298 FOR B12(17): no package, use 0201H temporarily;check with DFX before product

13080283 FOR B20; 0201G;

13080349 FOR B28H;0201G;

13080348 FOR B28L- Package SFLT8-0201G

The type and specification of the components refer to the BOM

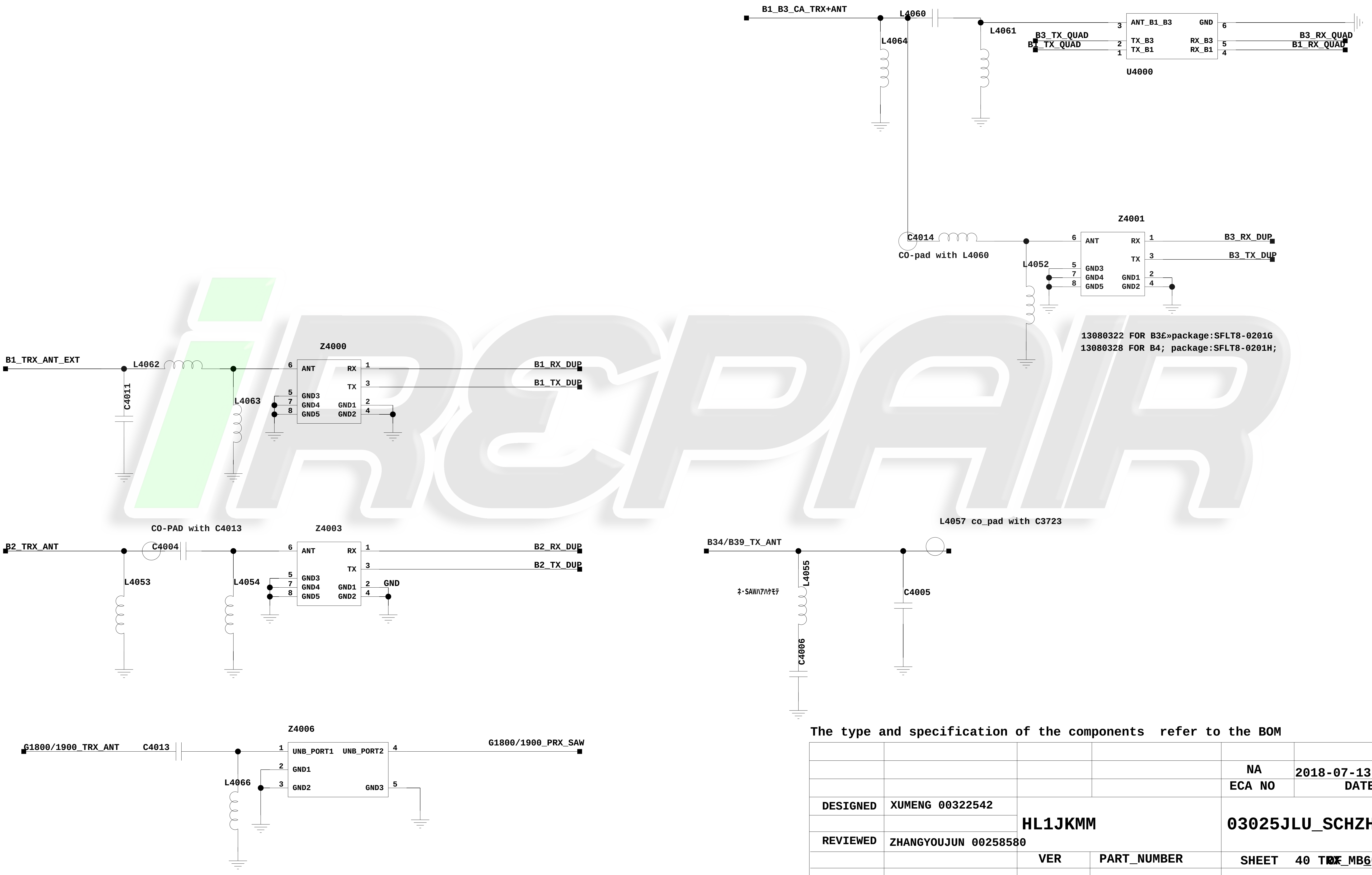
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 38 TRX_LB_1	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

39 TRX_LB_2

The type and specification of the components refer to the BOM

		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER	PART_NUMBER
		E	03025JLU
SHEET	39 TRX_LB_2 OF 60_Reserved		
		HUAWEI TECH CO.,LTD.	

40 TRX_MB_1



The type and specification of the components refer to the BOM

NA 2018-07-13
ECA NO DATE

DESIGNED XUMENG 00322542
HL1JKMM
03025JLU_SCHZH
REVIEWED ZHANGYOUJUN 00258580

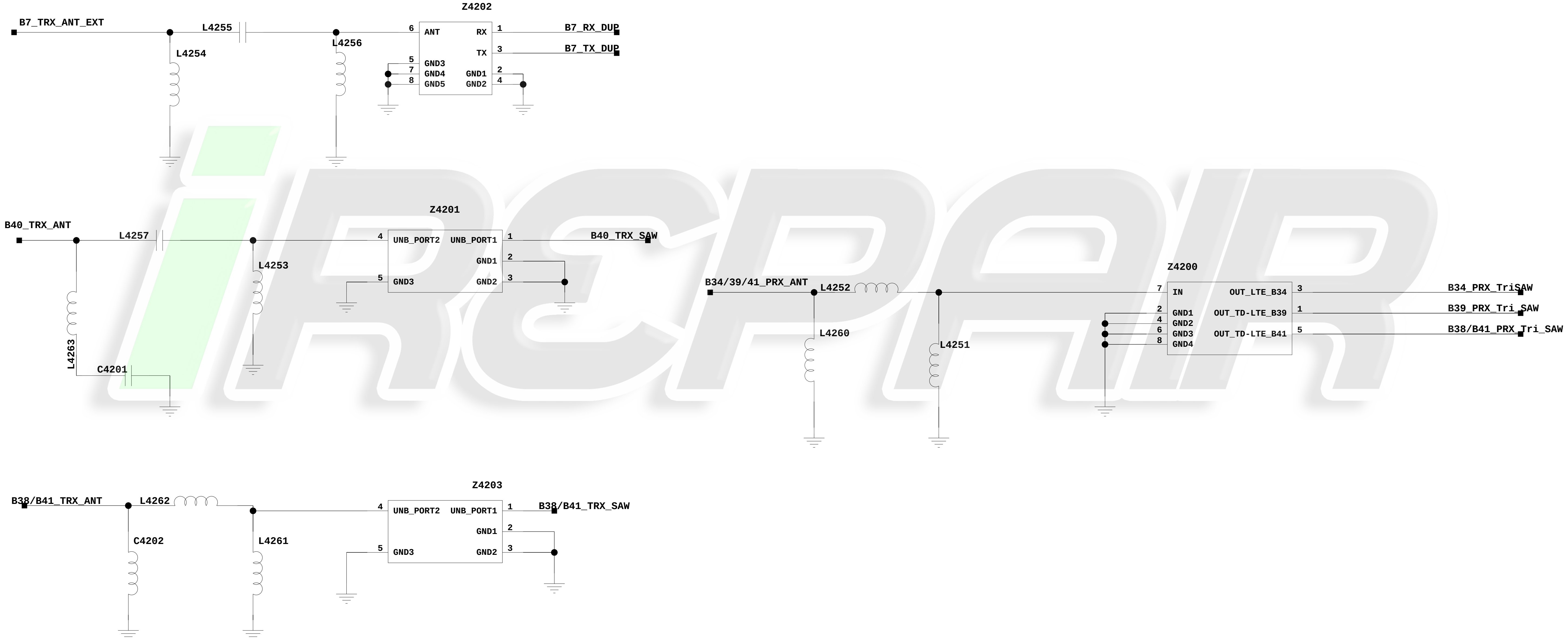
VER PART_NUMBER SHEET 40 TRX_MB_1 OF 60
E 03025JLU
HUAWEI TECH CO.,LTD.

41 TRX_MB_2

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	41 TRX_MB_2_Reserved OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

42 TRX_HB_1



The type and specification of the components refer to the BOM

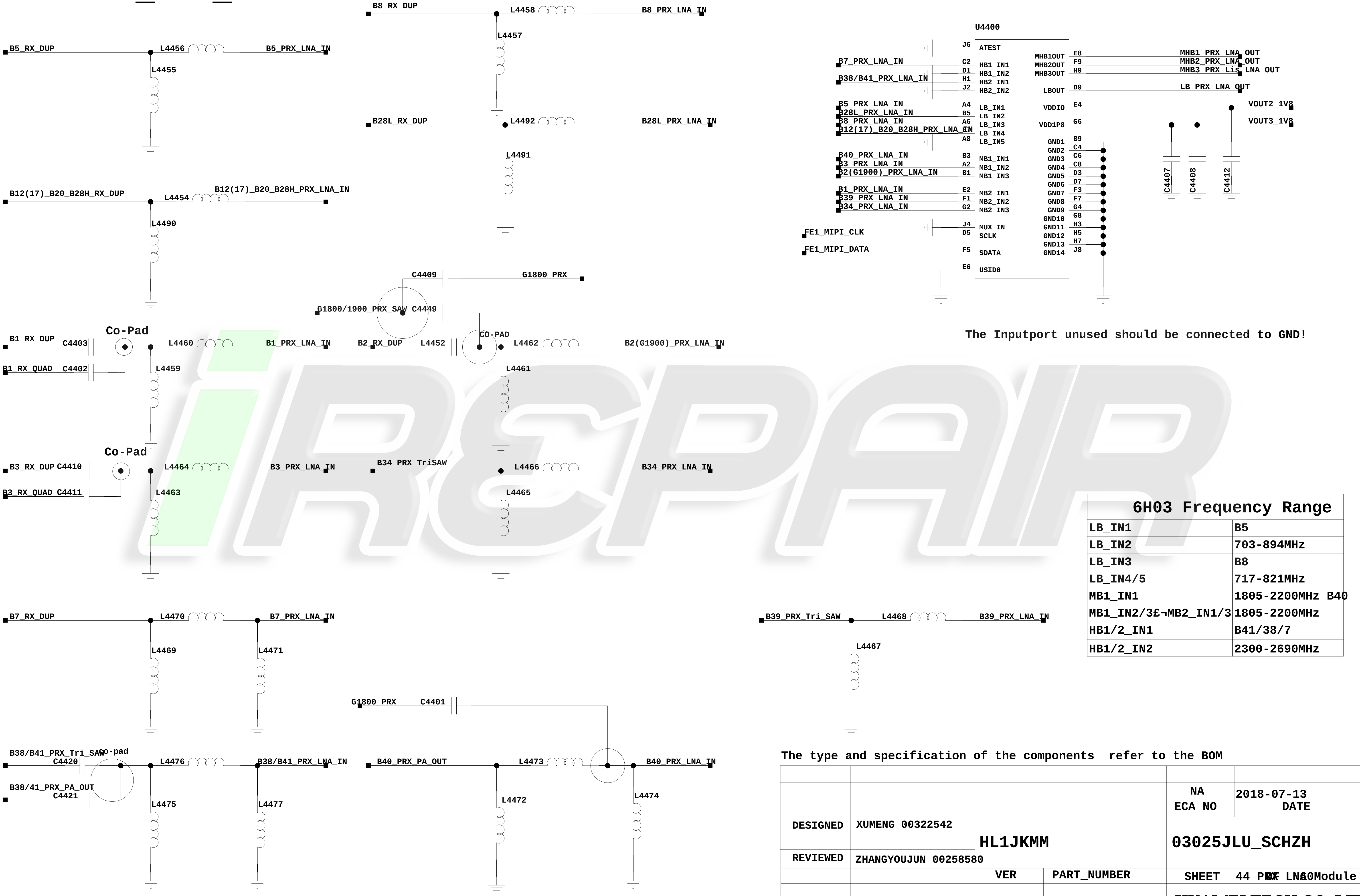
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 42 TRX_HB_1 OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

43. TRX_HB_2

The type and specification of the components refer to the BOM

				NA ECA NO	2018-07-13 DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 43 OF 60 TRX_HB_2_Reserved	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

44. PRX_LNA_Module



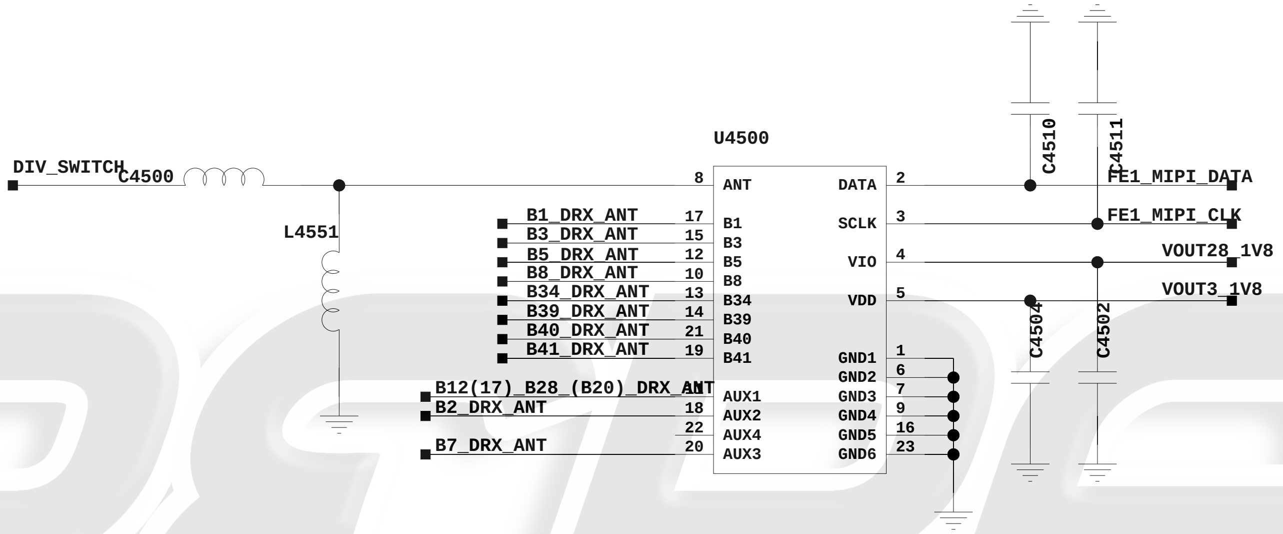
The Inputport unused should be connected to GND!

6H03 Frequency Range	
LB_IN1	B5
LB_IN2	703-894MHz
LB_IN3	B8
LB_IN4/5	717-821MHz
MB1_IN1	1805-2200MHz B40
MB1_IN2/3£¬MB2_IN1/3	1805-2200MHz
HB1/2_IN1	B41/38/7
HB1/2_IN2	2300-2690MHz

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	44 OF 180 PRX_LNA_Module
		E	03025JLU	HUAWEI TECH CO.,LTD.	

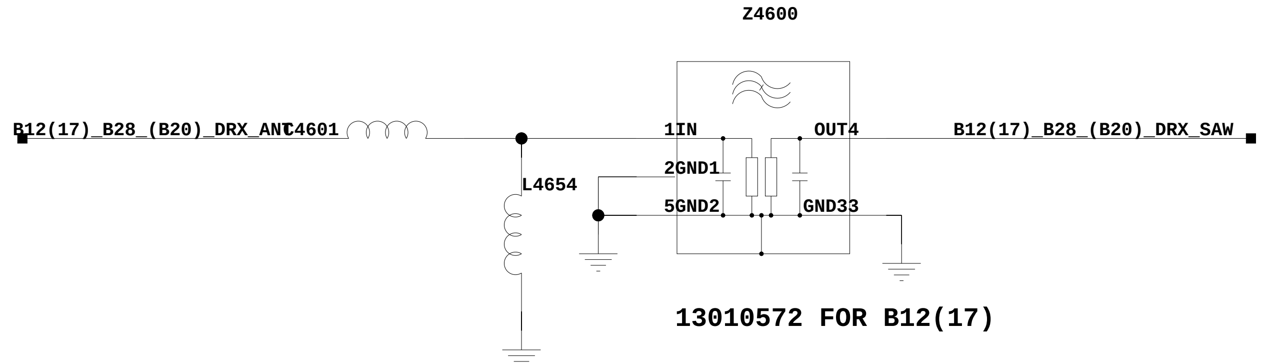
45.DRX_SWITCH



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	45 OF 60 DRX_Switch
		E	03025JLU	HUAWEI TECH CO.,LTD.	

46. DRX_LB



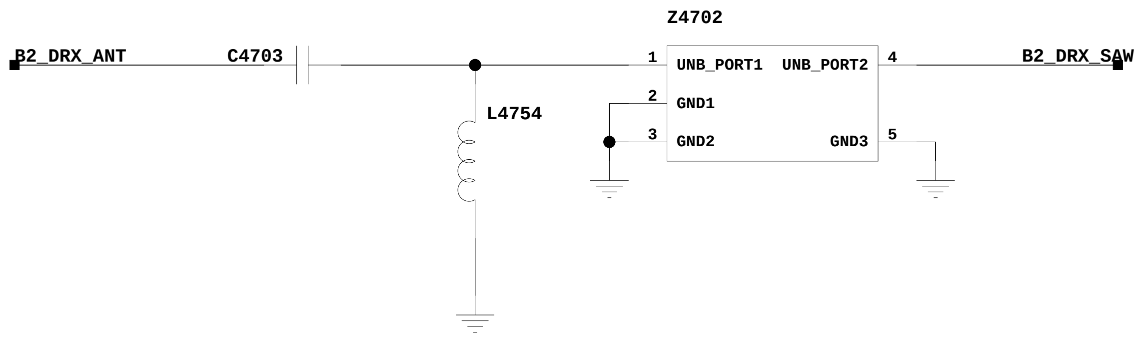
13010572 FOR B12(17)

13010655 FOR B28(FullBand)

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 46 DRX_LB OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

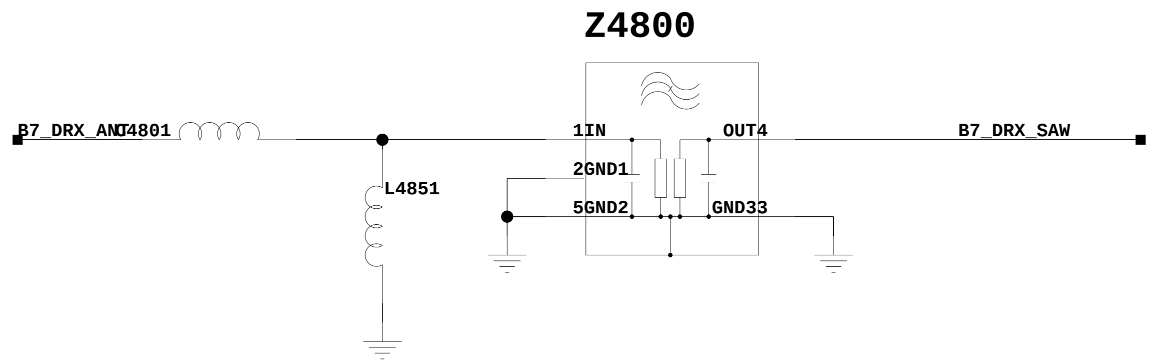
47. DRX_MB



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 47 OF 60 DRX_MB	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

48. DRX_HB

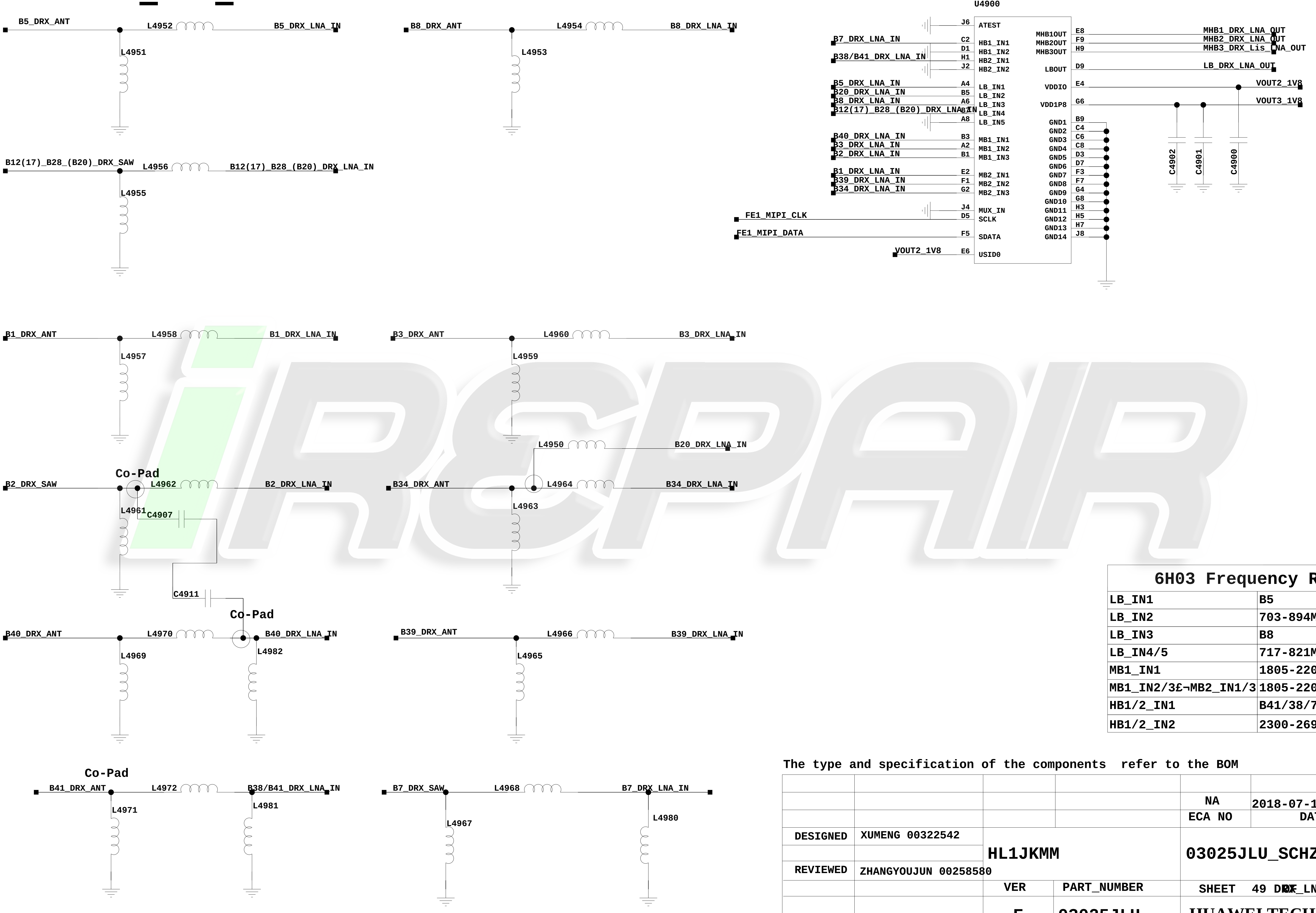


The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	48 DRX_HB OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

49. DRX_LNA_Module

The Inputport unused should be connected to GND!



6H03 Frequency Range	
LB_IN1	B5
LB_IN2	703-894MHz
LB_IN3	B8
LB_IN4/5	717-821MHz
MB1_IN1	1805-2200MHz B40
MB1_IN2/3£¬MB2_IN1/3	1805-2200MHz
HB1/2_IN1	B41/38/7
HB1/2_IN2	2300-2690MHz

The type and specification of the components refer to the BOM

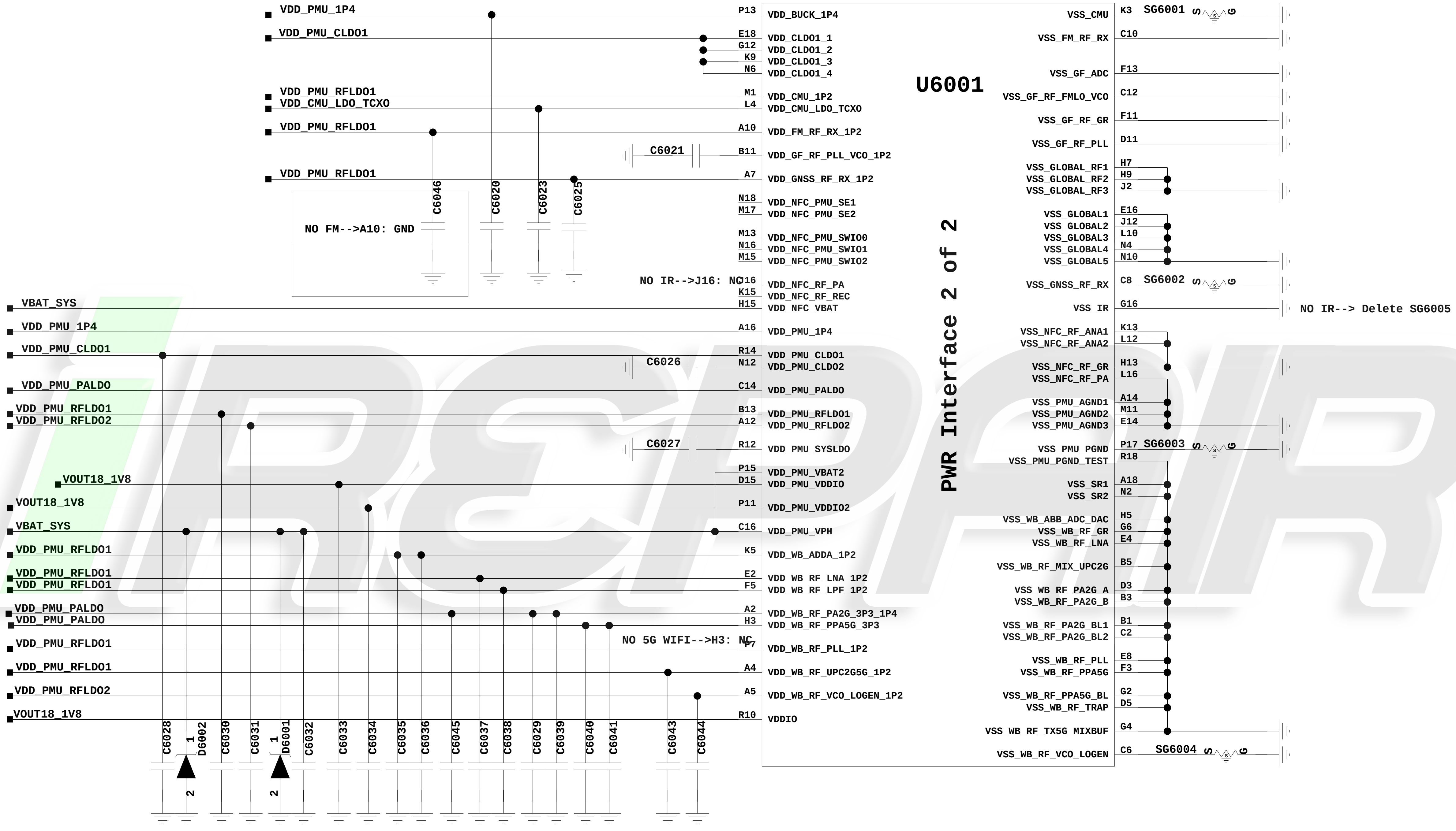
			NA	2018-07-13
			ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580			
		VER	PART_NUMBER	SHEET 49 OF 180 DRX_LNA_Module
		E	03025JLU	HUAWEI TECH CO.,LTD.

50. Reserved

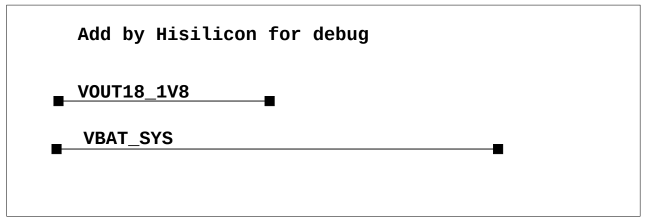
The type and specification of the components refer to the BOM

		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM	03025JLU_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER E	PART_NUMBER 03025JLU
		SHEET 50 Reserved	HUAWEI TECH CO.,LTD.

60 NC_POWER



NO 5G-->Delete D6002



Boston,Miami: VOUT2->VOUT18_1V8

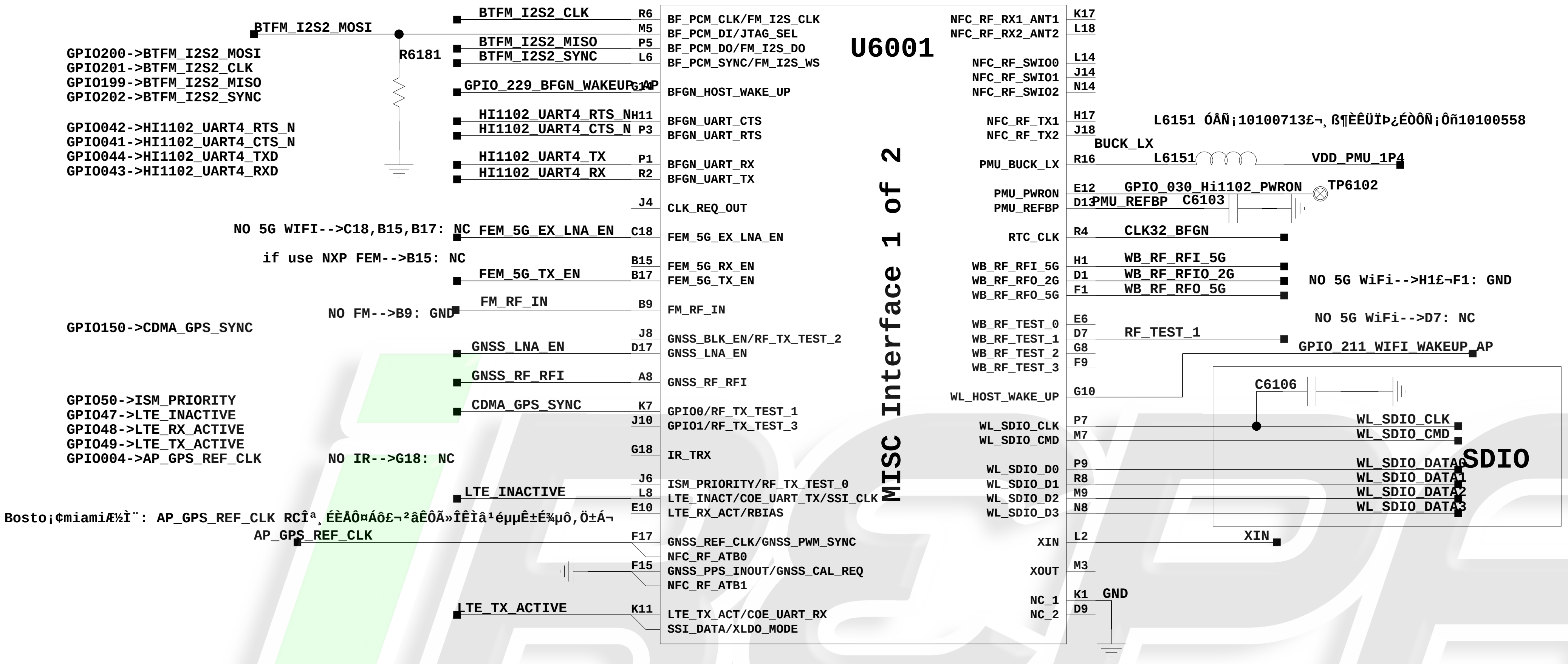
Chicago,Dallas: VOUT2

R6082¡¢R6083:Æ½Ì¨Ê×ÏîÄ¿ÊÔÖÆ±£ÁôÎ£¬×îÖÕ¹éµµÊ±É¾µô,Ö±Á¬£»·ÇÆ½Ì¨Ê×ÏîÄ¿Ö±Á¬

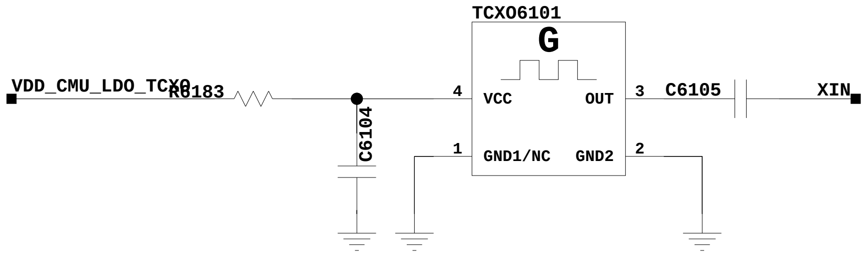
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	60 NC_POWER 60 OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

61 NC_BB



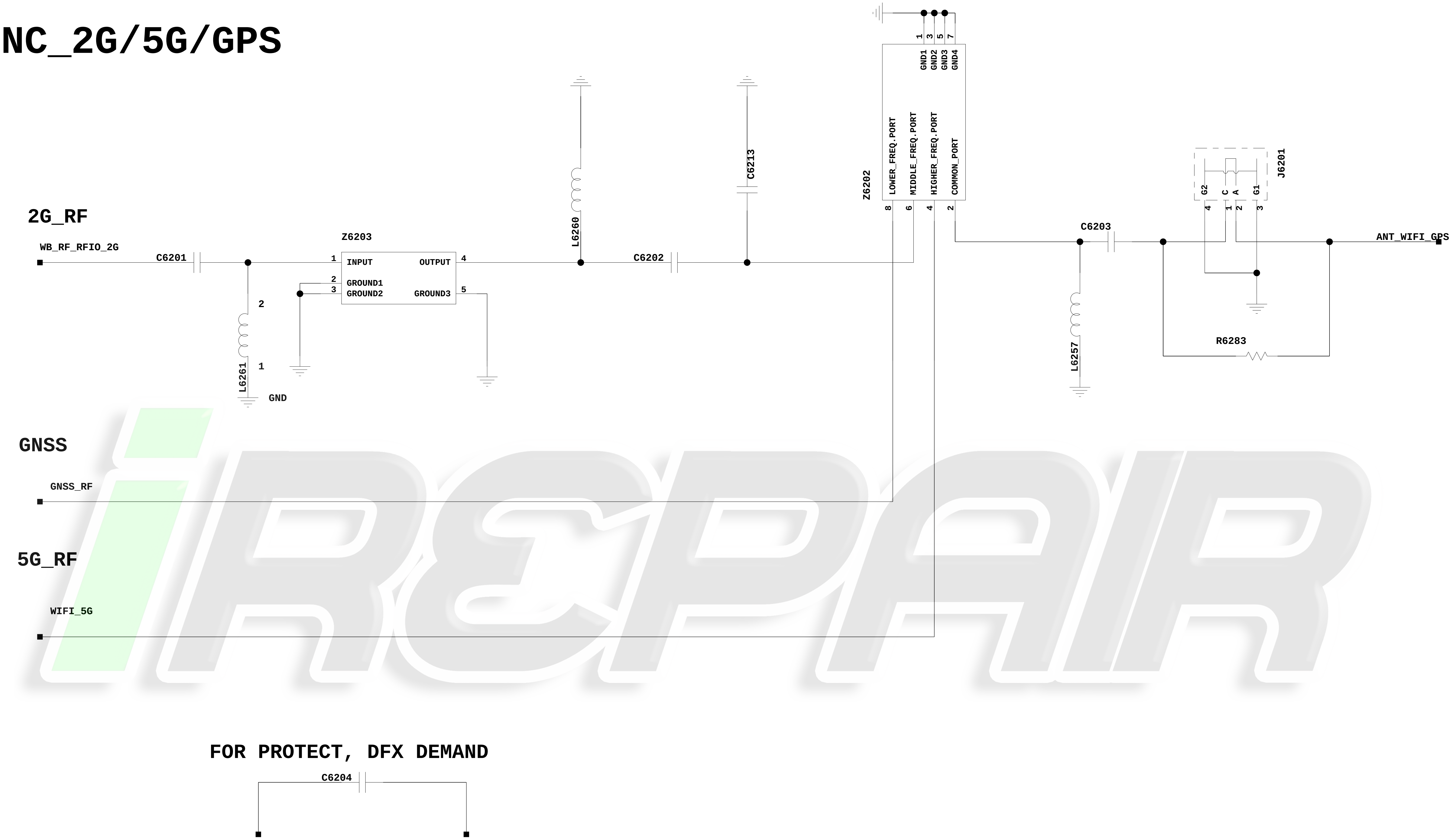
TCXO 38.4MHz



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 61 NC_BB_Miami	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

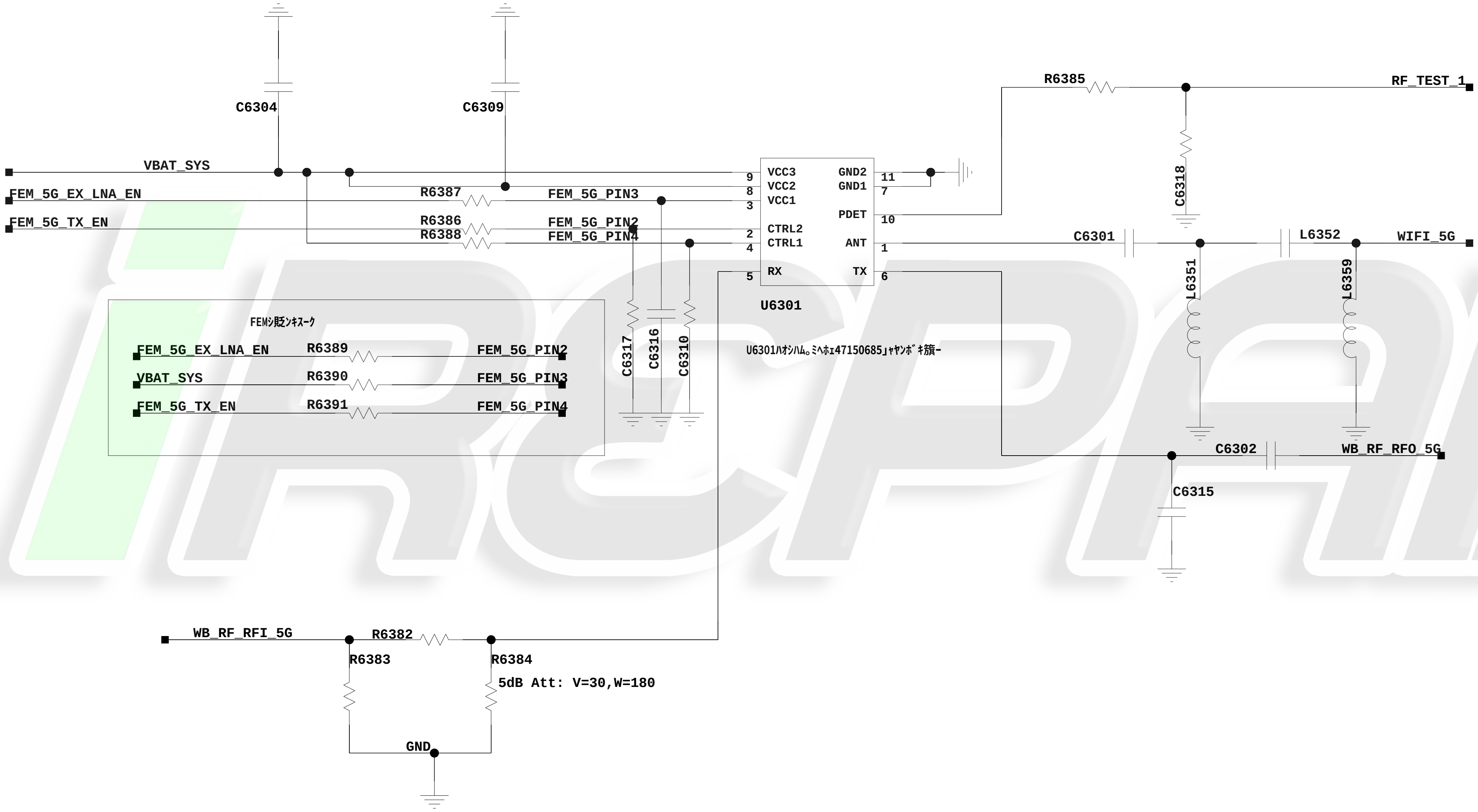
62 NC_2G/5G/GPS



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 62 NC_2G/5G/GPS OF 60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

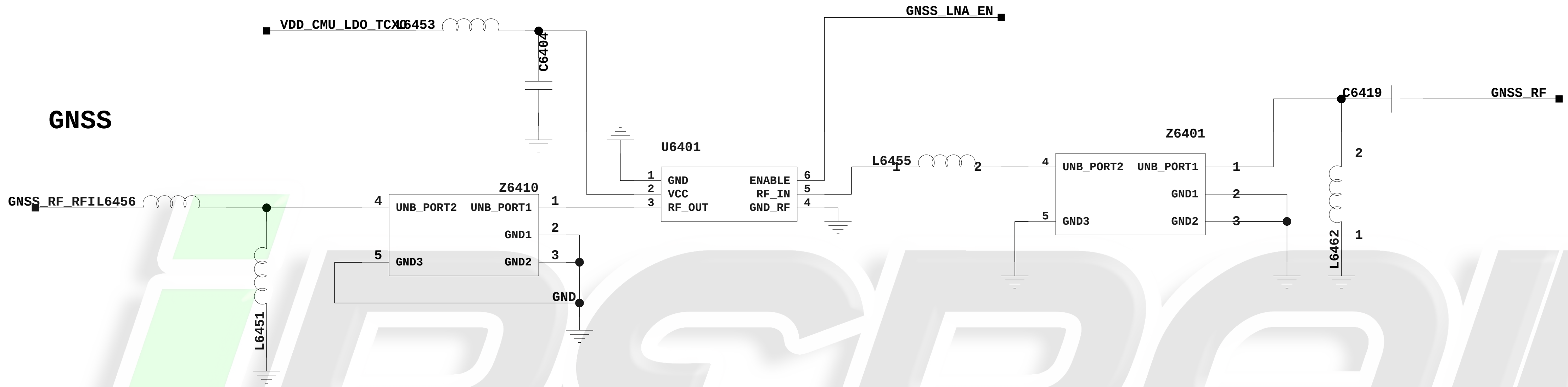
63 NC_FE_WIFI_5G



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	63 NC_FE_WIFI_5G_599 OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

64 NC_GPS



The type and specification of the components refer to the BOM

NA
ECA NO
2018-07-13
DATE

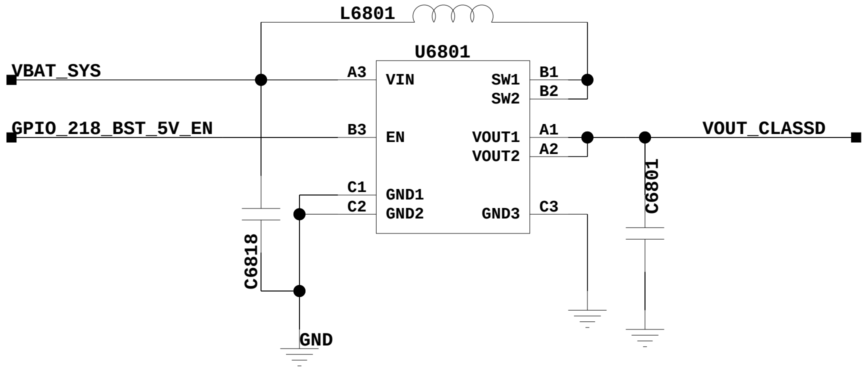
DESIGNED XUMENG 00322542
REVIEWED ZHANGYOUJUN 00258580

HL1JKMM
03025JLU_SCHZH

VER
E
PART_NUMBER
03025JLU
SHEET 64 NC_GPS OF 60
HUAWEI TECH CO.,LTD.

68. NFC_BB

ラ鮀　サッok



The type and specification of the components refer to the BOM

NA
2018-07-13
ECA NO
DATE

DESIGNED XUMENG 00322542

REVIEWED ZHANGYOUJUN 00258580

HL1JKMM

03025JLU_SCHZH

VER E

PART_NUMBER 03025JLU

SHEET 68 NFC_BB60

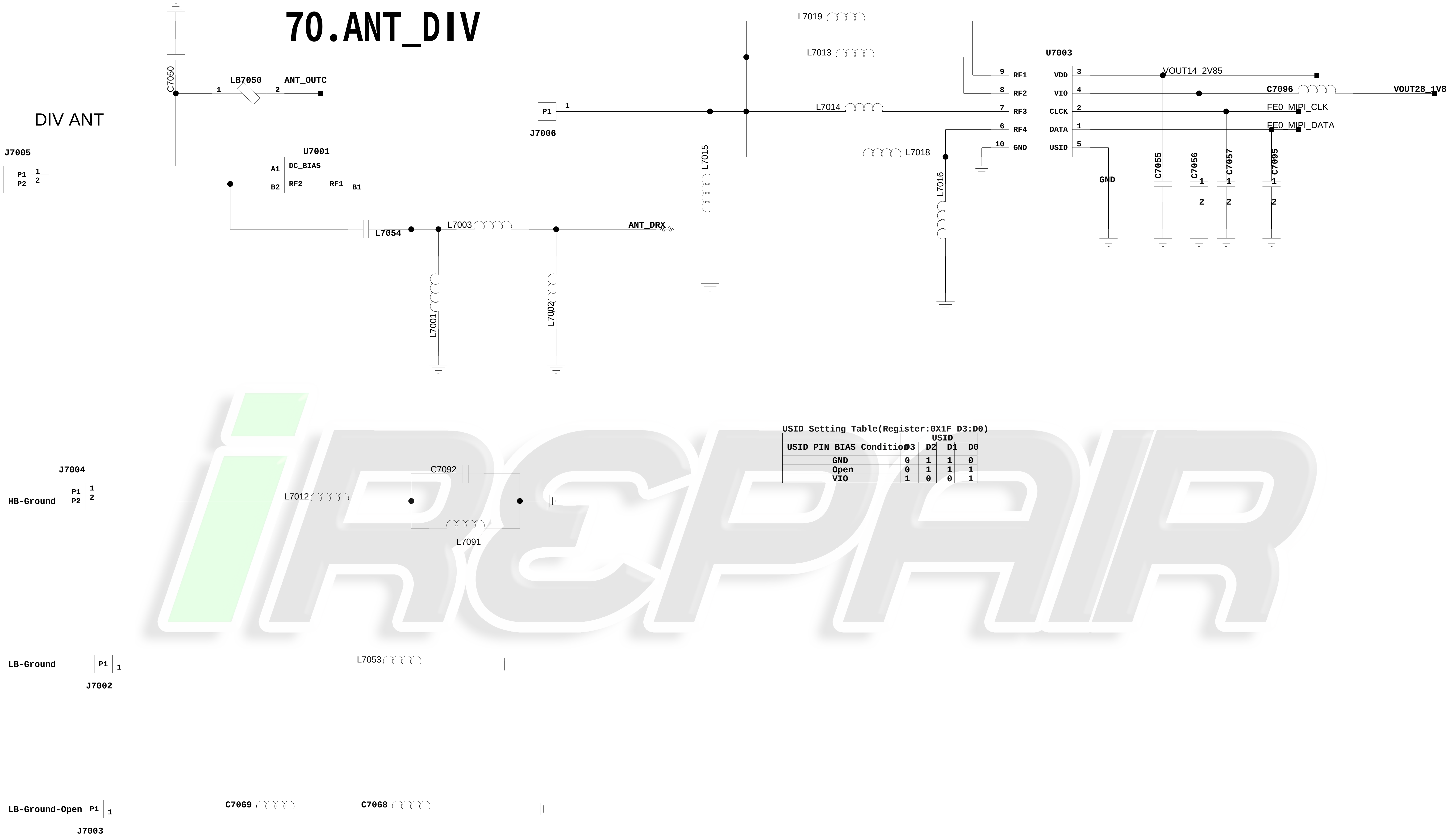
HUAWEI TECH CO.,LTD.

69. ANT_NFC

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 69 ANT_NF60	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

70.ANT_DIV



USID Setting Table(Register:0X1F D3:D0)

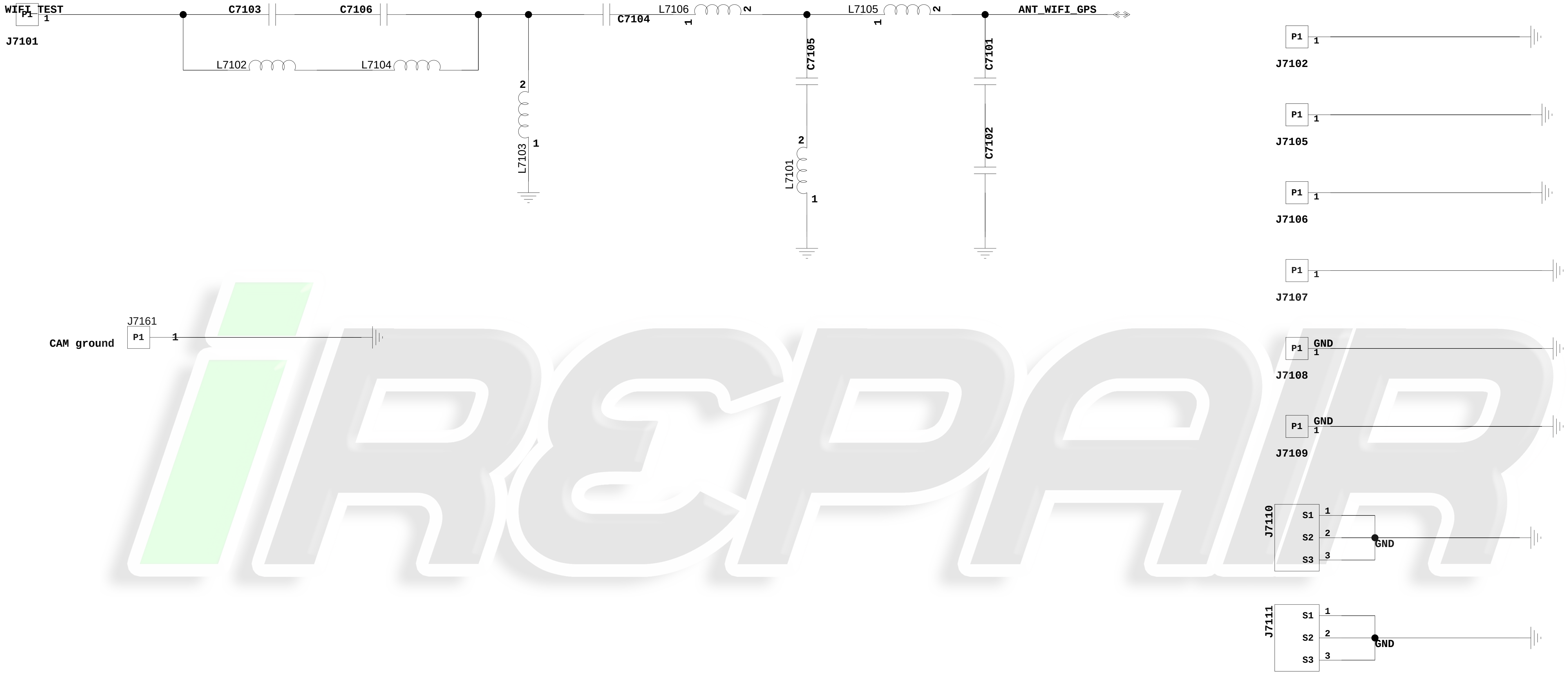
USID PIN BIAS Condition	USID			
	D3	D2	D1	D0
GND	0	1	1	0
Open	0	1	1	1
VIO	1	0	0	1

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 70 ANT_DIV OF 70	
		E	03025JLU	HUAWEI TECH CO.,LTD.	

71 ANT_GPS_WIFI

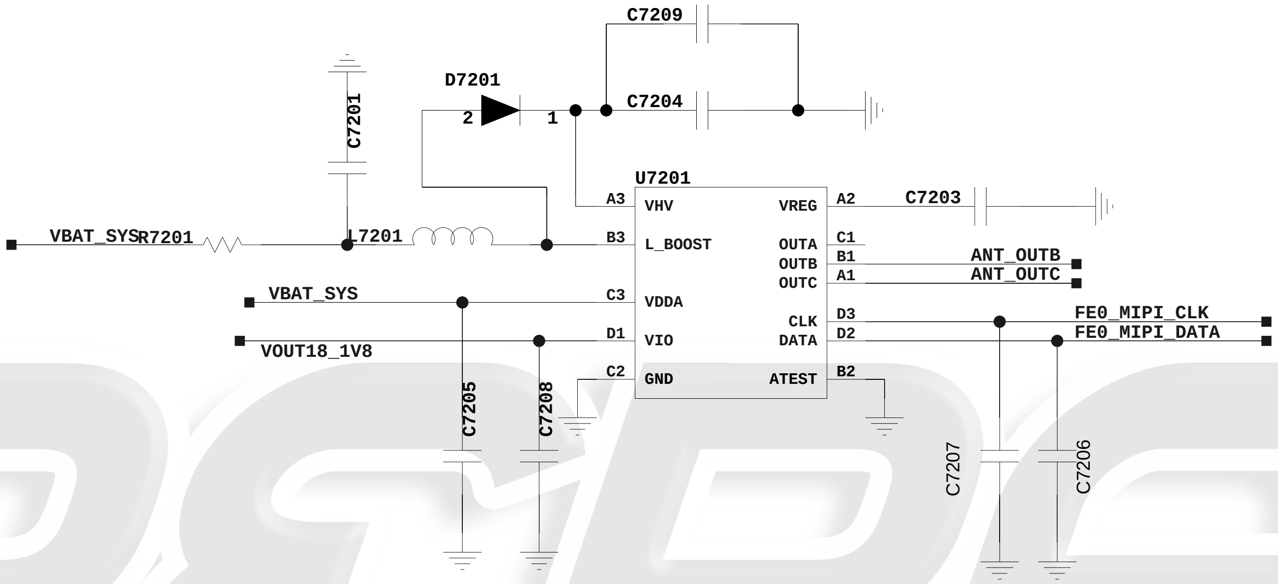
WIFI/GPS ANT



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	71 ANT_GPS_WIFI OF 60
		E	03025JLU	HUAWEI TECH CO.,LTD.	

72.ANT_Tuner_Controller



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL1JKMM		03025JLU_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	72 ANT_Tuner_Controlle OF 80
		E	03025JLU	HUAWEI TECH CO.,LTD.	

Baseband Schematic

MODEM Schematic

The type and specification of the components refer to the BOM

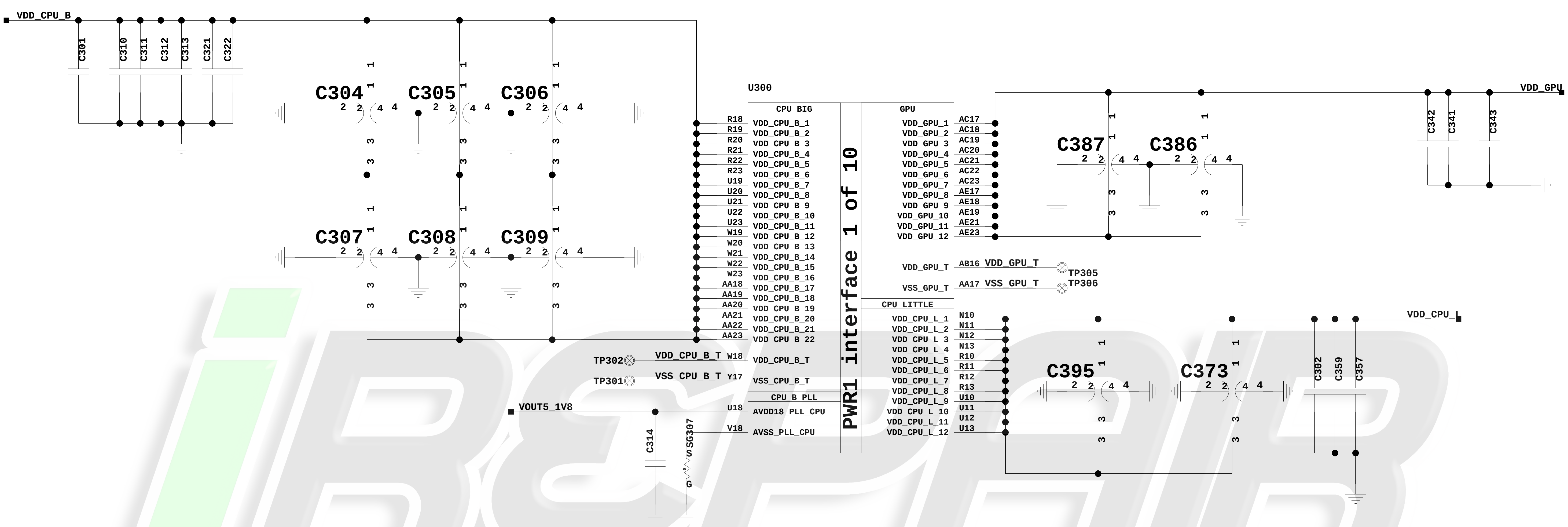
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 1 OF 180 Contents	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

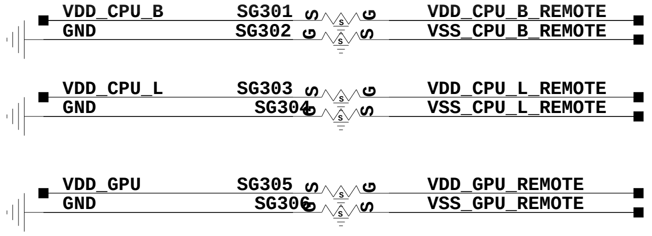
2.Block Diagramm

The type and specification of the components refer to the BOM

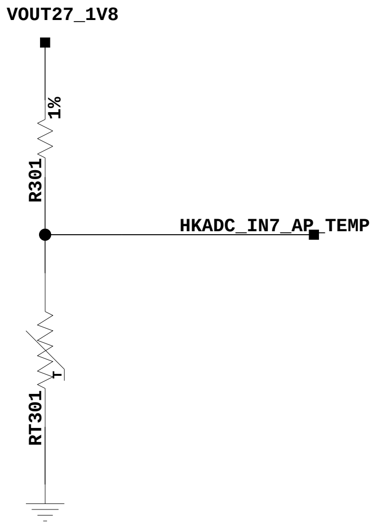
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 2 OF 60 Block Diagramm	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

3.SOC PWR1





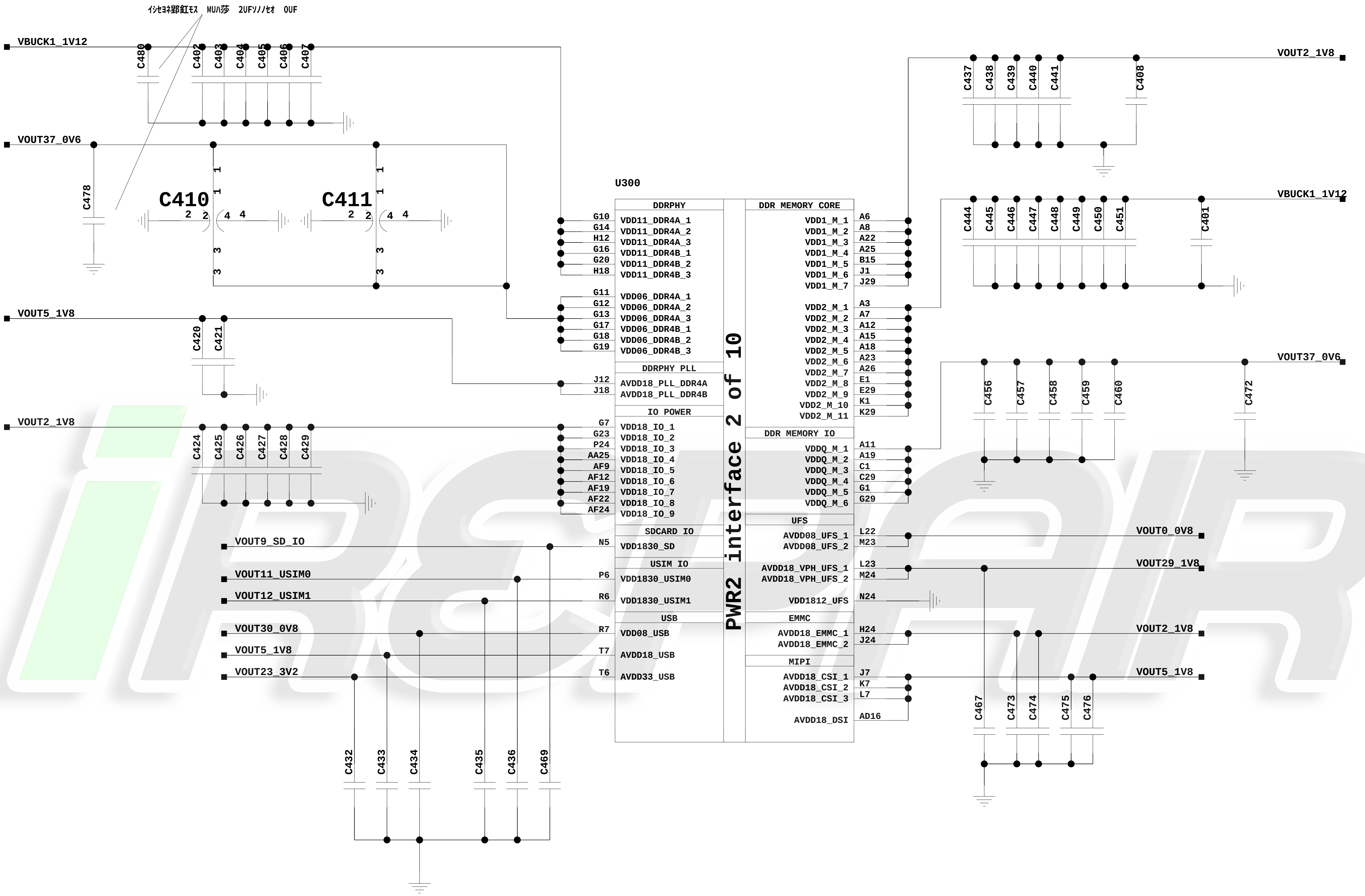
AP Temperature DET



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 3 SOC PWR1 OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

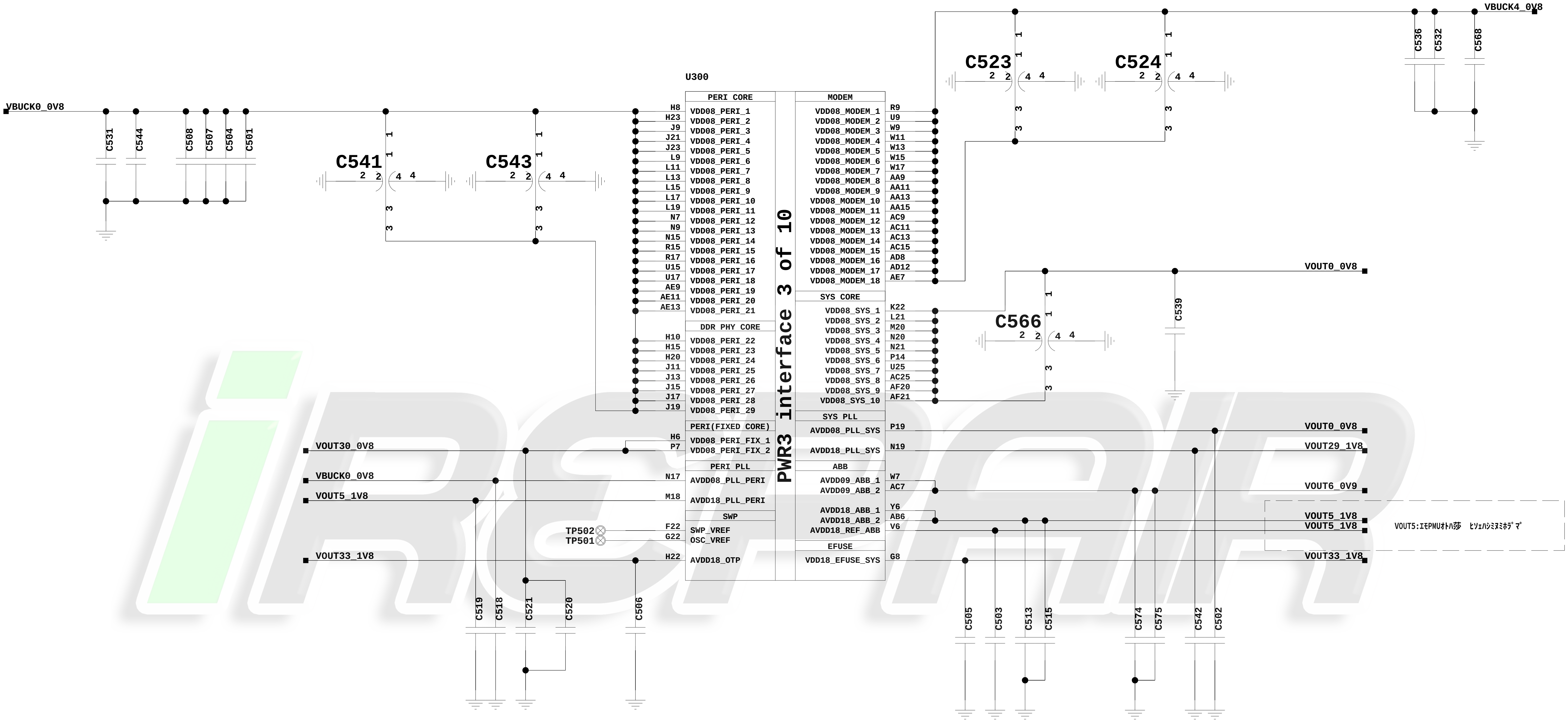
4.SOC PWR2



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 4.SOC PWR2 OF 60	
		E		HUAWEI TECH CO.,LTD.	

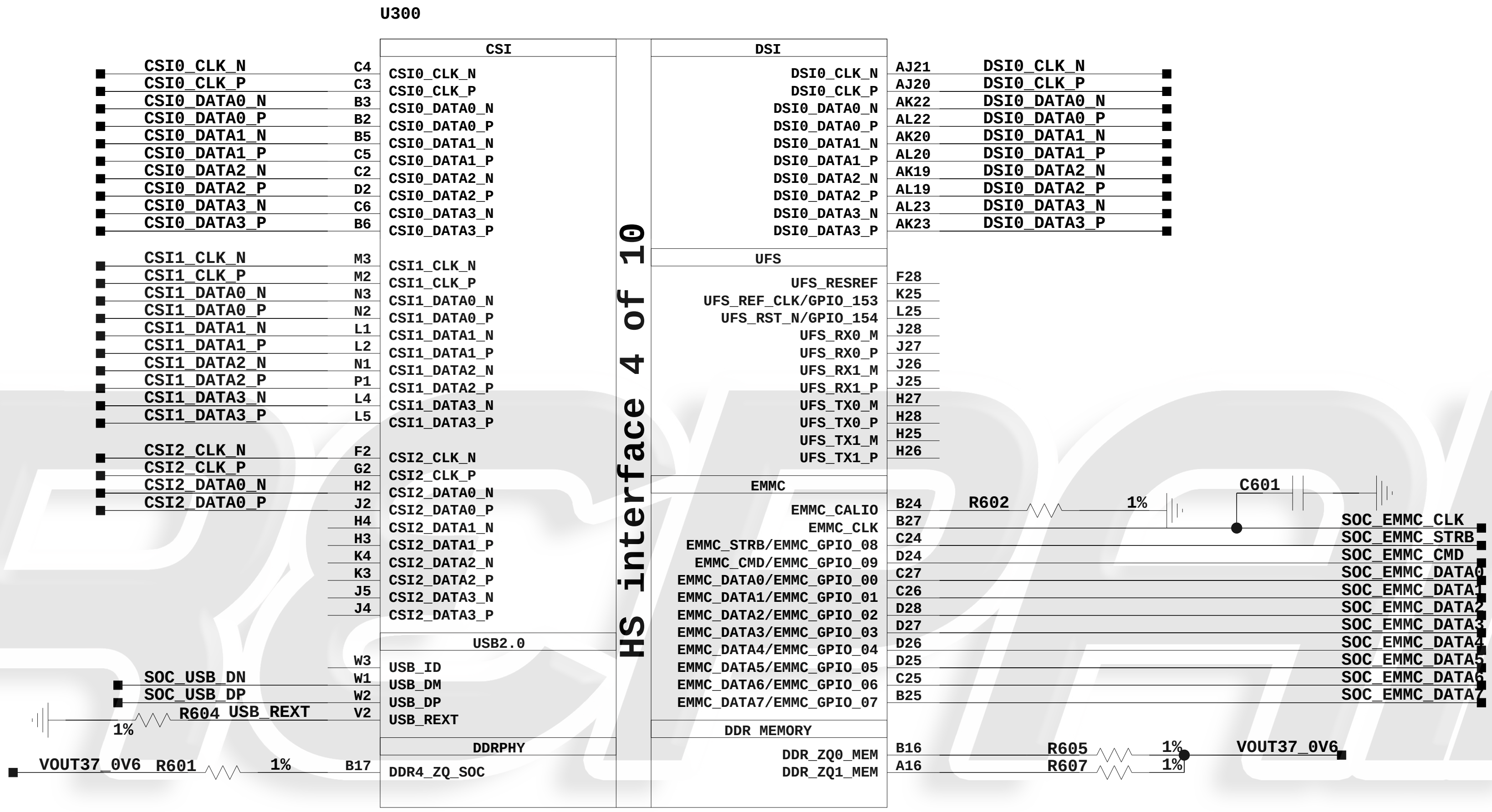
5.SOC PWR3



The type and specification of the components refer to the BOM

					2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 5.SOC PWR3 OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

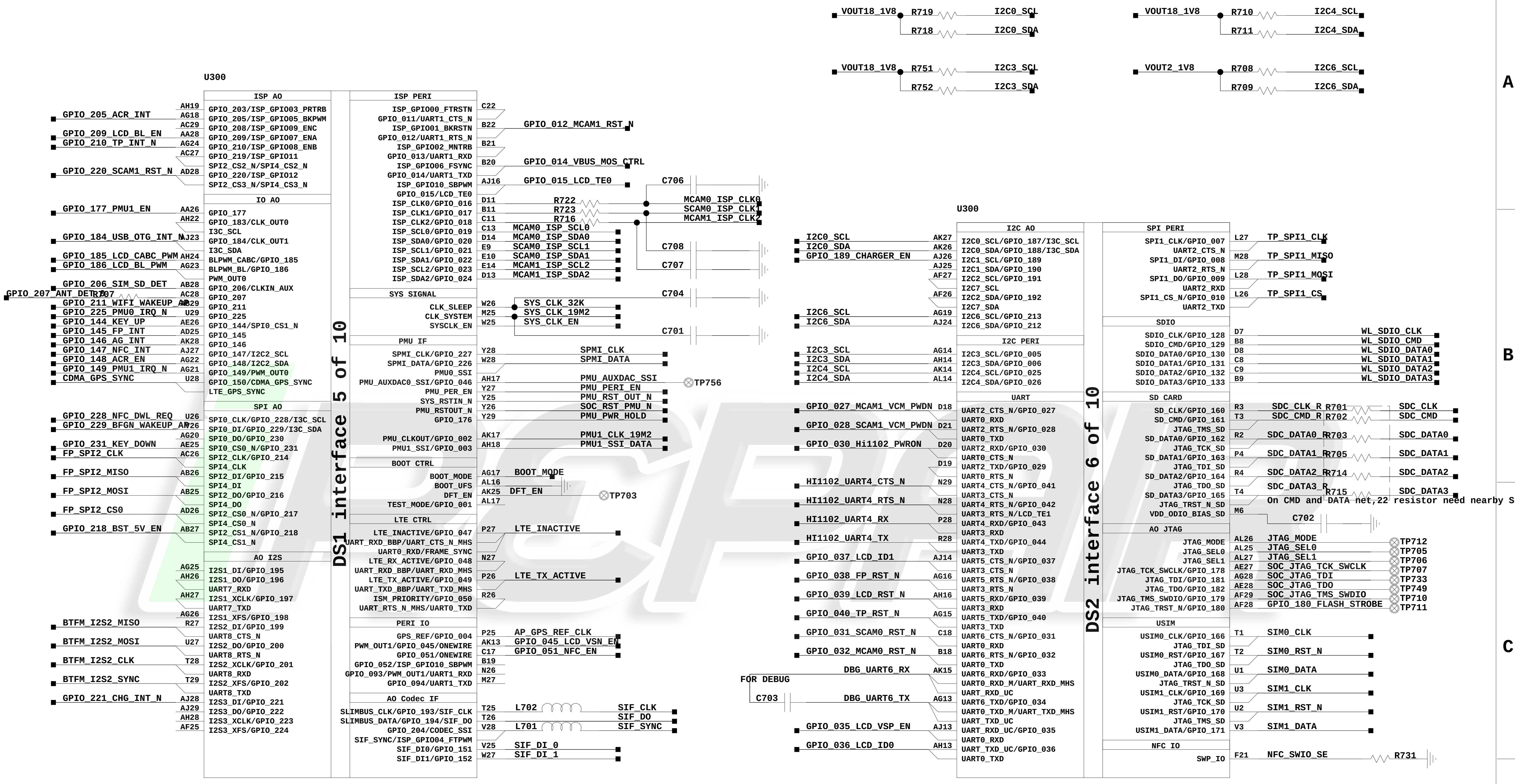
6.SOC HS INTERFACE



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	6_SOC HS Interface SHEET OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

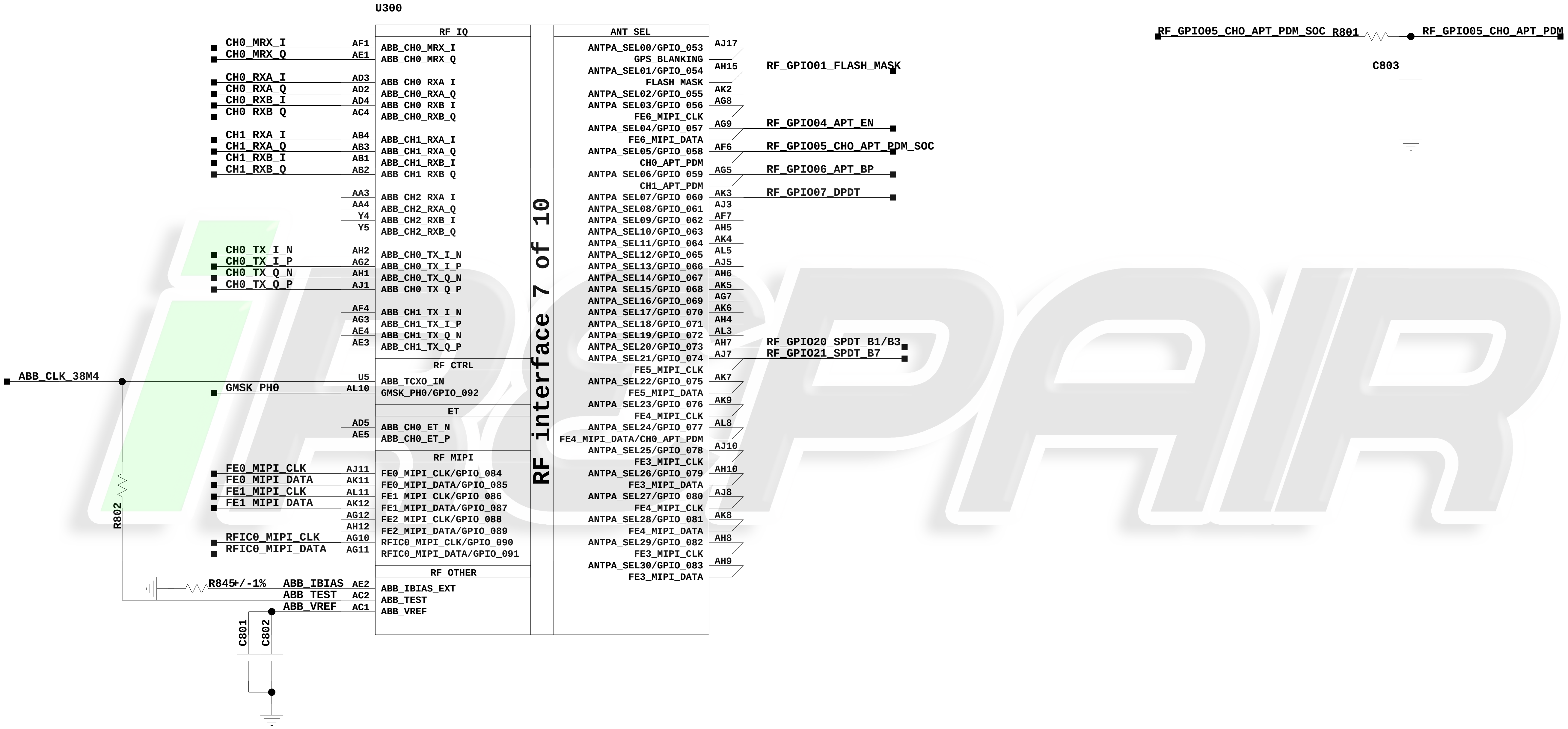
7.SOC GPIO INTERFACE1



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	7_SOC GPIO Interface SHEET OF	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

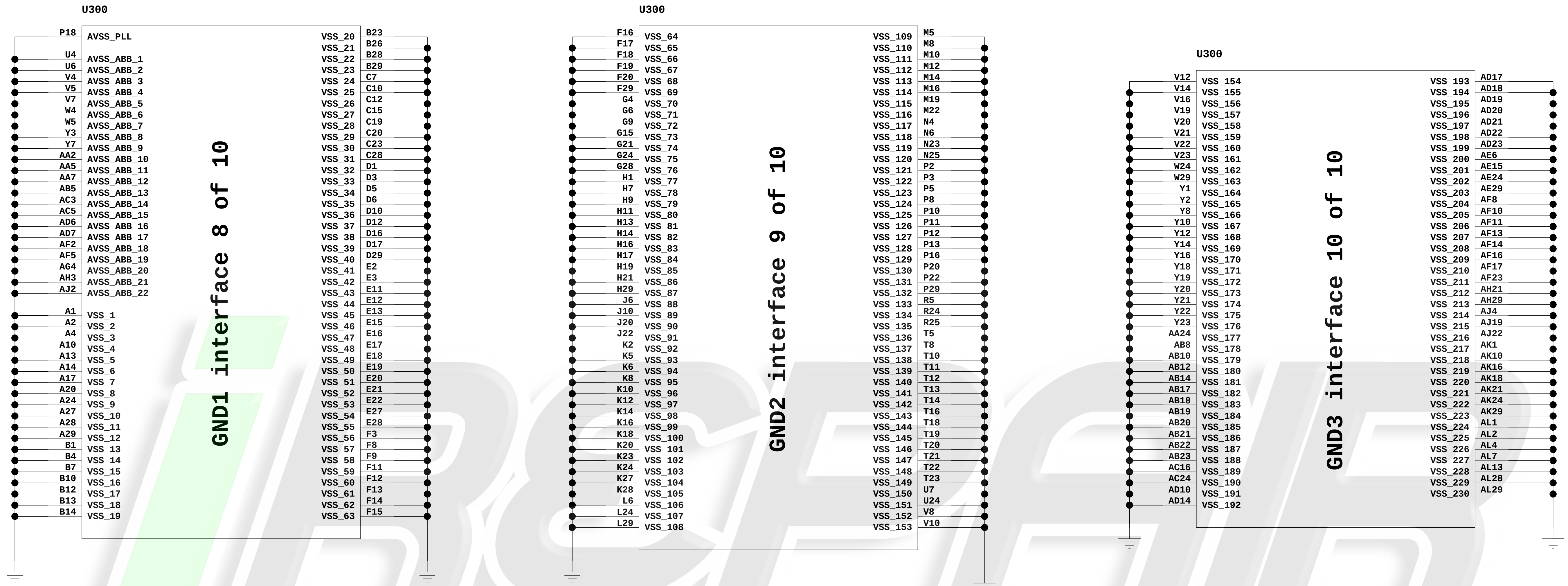
8.SOC RF INTERFACE



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	8_SOC RF Interface SHEET OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

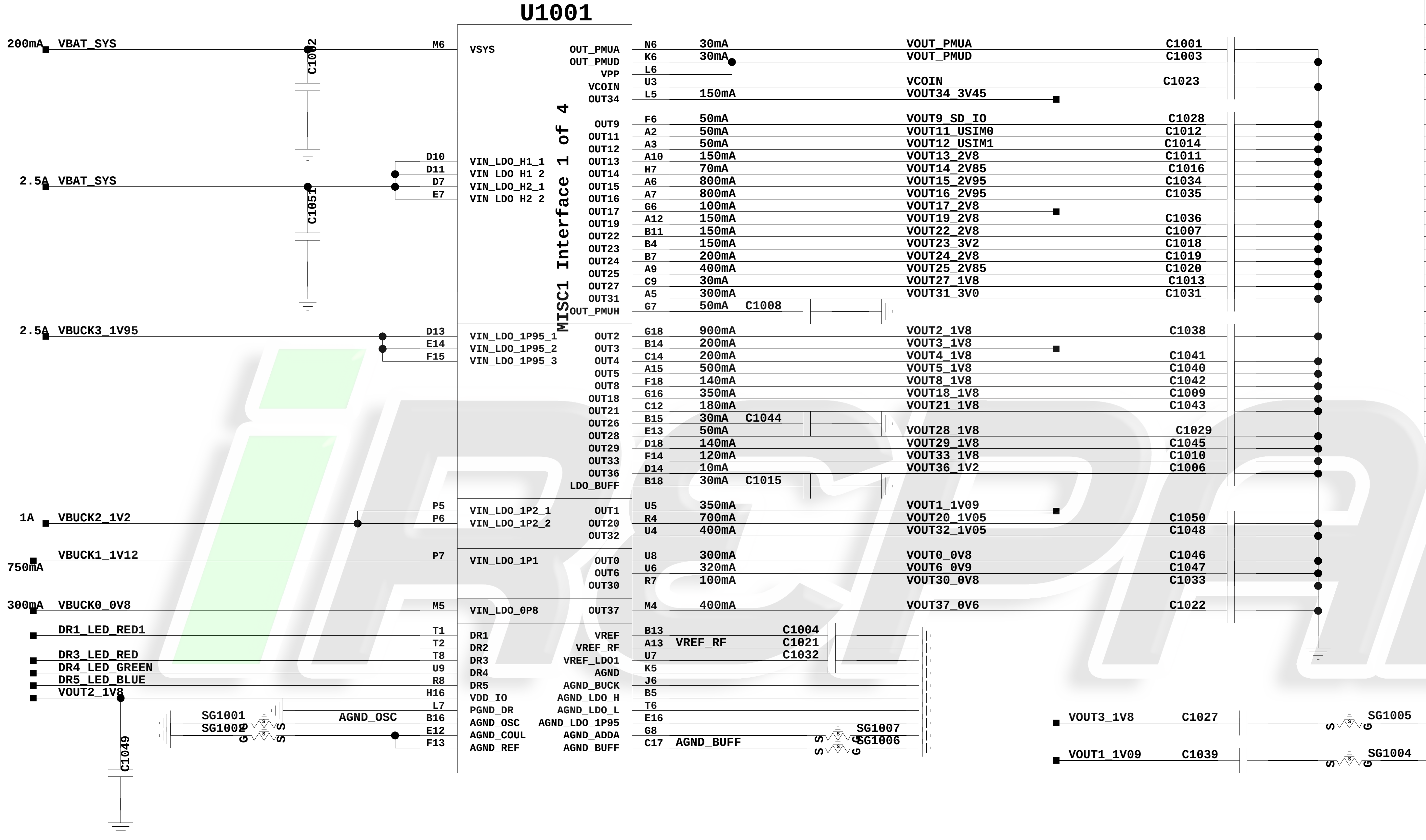
9.SOC GND



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	**DATE**
DESIGNED	**XUMENG 00322542**	**HL3JKMM**		03025HSD_SCHZH	
REVIEWED	**ZHANGYOUJUN 00258580**				
		VER	**PART_NUMBER**	**SHEET** 9_SOC GND **OF** 60	
		E	03025HSD	**HUAWEI TECH CO.,LTD.**	

10.PMU LDO

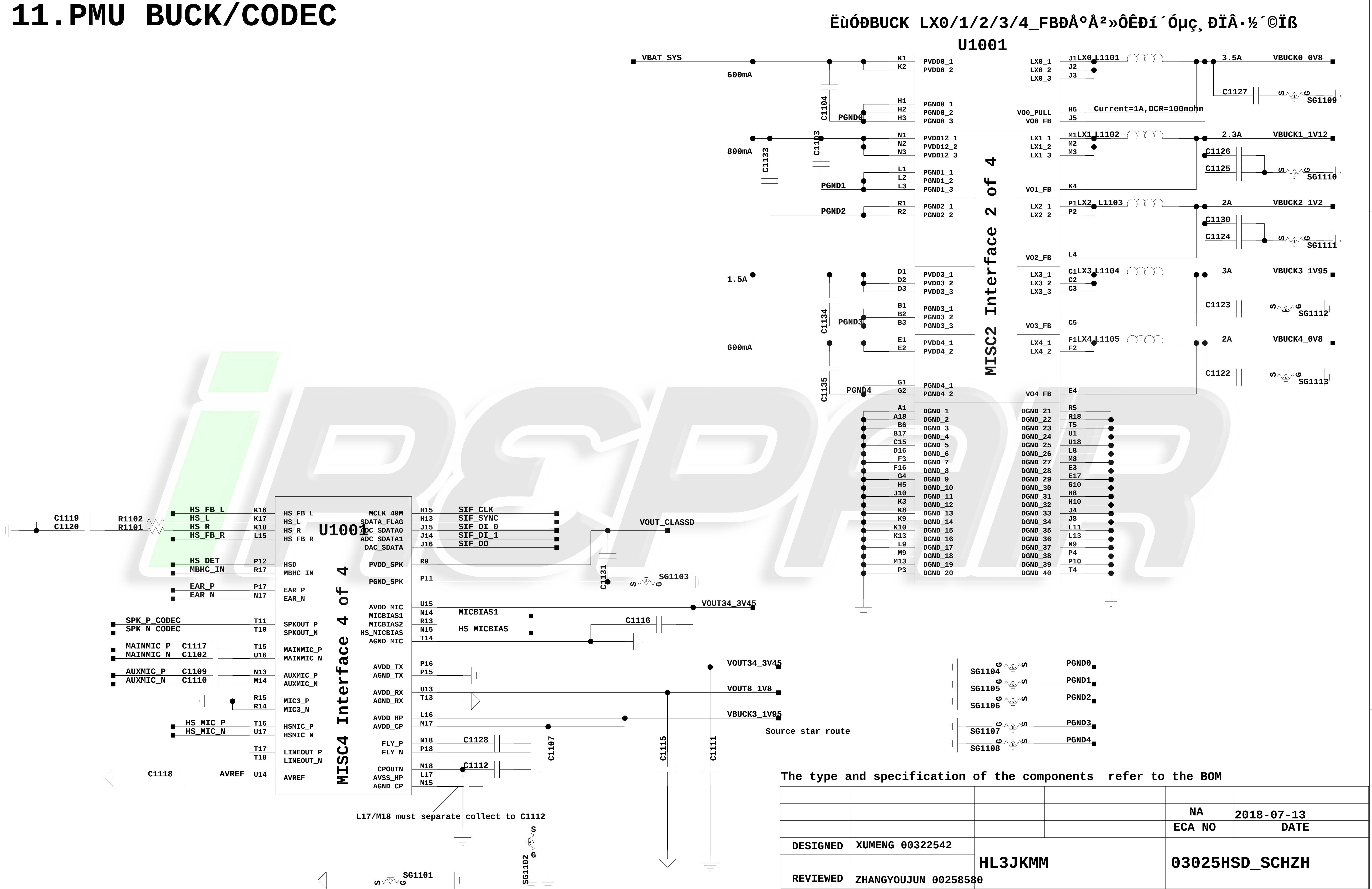


Output	default	current	TYP voltage	function
LDO1	OFF	350	1.09	RFIC0_AVDD
LDO2	ON	900	1.8	PMU dig/RFIC/SOC1V8IO/LPDDR4X VDD/UFS VCCQ2
LDO3	OFF	200	1.8	RFIC0 AVDD2
LDO4	OFF	200	1.8	LCD1V8 IO/TP1V8 IO
LDO5	ON	500	1.8	PHY ANA/ABB_AVDD1V8
LDO8	OFF	140	1.8	CLASSD1V8
LDO9	OFF	50	1.8/2.95	SD IO
LDO11	OFF	50	1.8	SIM0
LDO12	OFF	50	1.8	SIM1
LDO13	OFF	150	2.85	S camera analog
LDO14	OFF	70	2.85	RF FEM/AUXDAC
LDO15	ON	800	2.95	EMMC/UFS VDD
LDO16	OFF	800	2.95	SD card
LDO17	OFF	100	2.8	LCD TP VCI
LDO18	ON	350	1.8	fp/SENSOR IO FP AVDD/CON IO
LDO19	OFF	300	2.8	M camera anlog
LDO20	OFF	400	1.11	M Camera Core
LDO21	OFF	180	1.8	Camera io
LDO22	OFF	150	2.8	Back Camera Analog
LDO23	ON	150	3.2	HKADC
LDO24	ON	200	2.8	X Sensor AVDD
LDO25	OFF	400	2.85	Camera VCM
LDO26	ON	30	1.35	38.4_AVDD
LDO27	ON	50	1.8	HKADC
LDO28	OFF	50	1.8	RF MIPI I/O
LDO29	ON	140	1.8	UFS PHY/SYS CLK_BUF
LDO30				
LDO31	OFF	300	3.0	Vibrator
LDO32	OFF	400	1.11	S Camera Core
LDO33	OFF	120	1.8	EFUSE
LDO34	ON	150	3.45	CODEC RCV/MICBIAS

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 10.PMU LDO OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

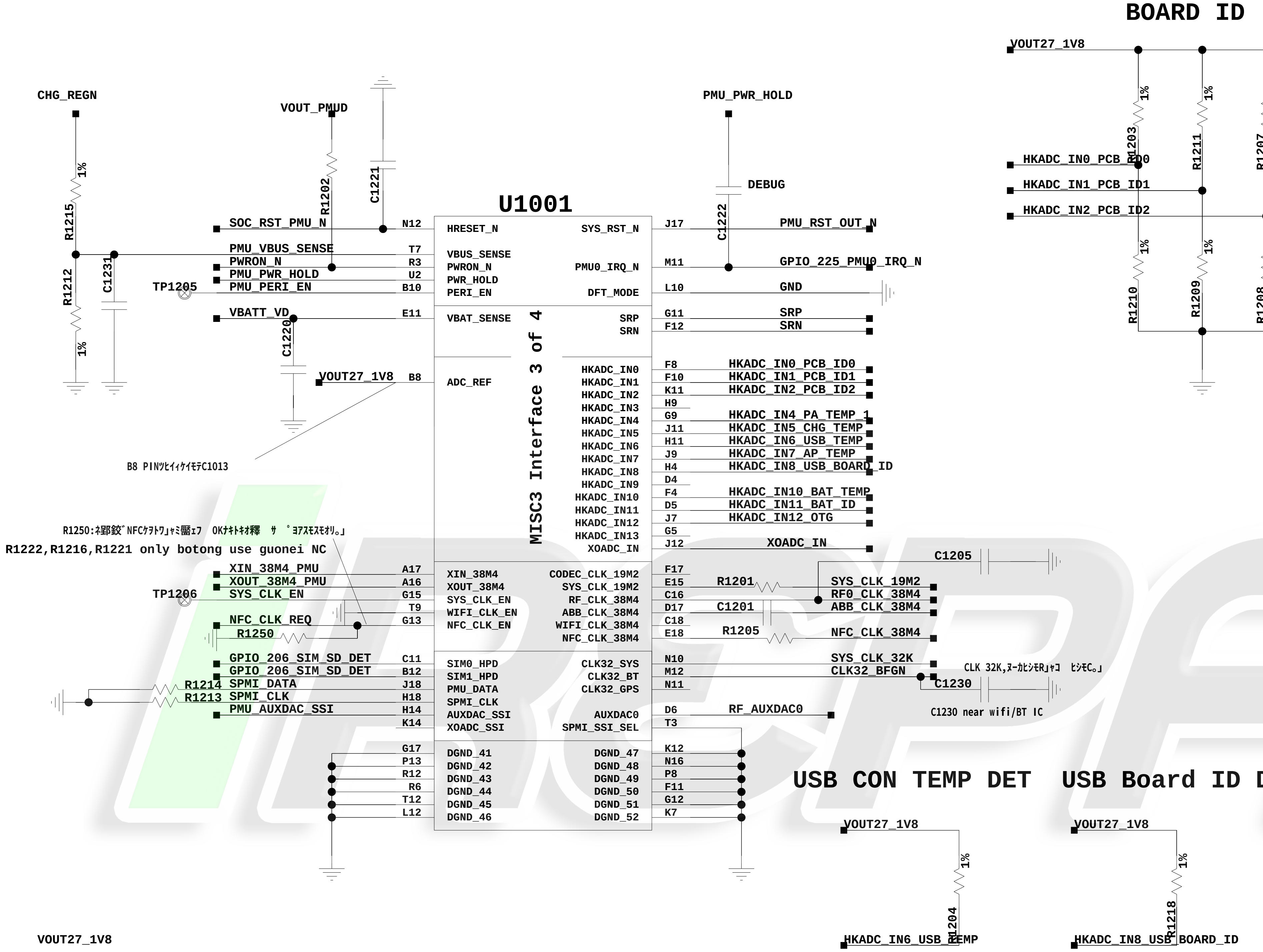
11.PMU BUCK/CODEC

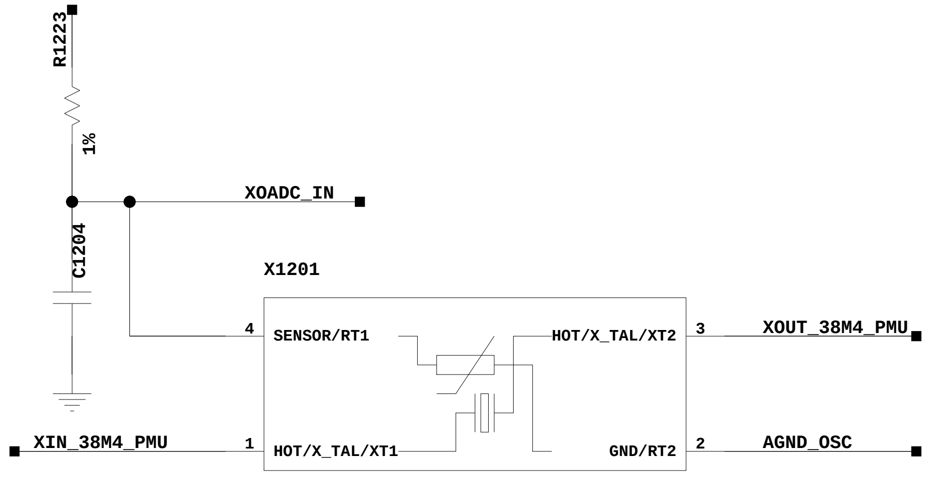


The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	11.PMU BUCK_CODEC SHEET 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

12. PMU Digital





HKADC·ÖÅä±í

HKADC_IN0	APU Board ID0(RF USE)
HKADC_IN1	APU Board ID1
HKADC_IN2	APU Board ID2
HKADC_IN3	RESERVERD
HKADC_IN4	PA TEMP DET0
HKADC_IN5	Charge TEMP
HKADC_IN6	USB_TEMP_ADC
HKADC_IN7	AP TEMP
HKADC_IN8	USB_BOARD_ID
HKADC_IN9	RESERVERD
HKADC_IN10	BATT TEMP
HKADC_IN11	BATT ID
HKADC_IN12	USB_OTG_ADC
HKADC_IN13	RESERVERD

Main Board ID

	Mode		R1203	R1210	R1211	R1209	R1207	R1208
7690	JKM-AL00(6363)	V1-V2	NC	0	150K	NC	51K	100K
7698	JKM-AL00(6353)	V2	20K	150K	150K	NC	51K	100K
7680	JKM-AL00(6353)	V3-V3.1	NC	0	20K	150K	51K	100K
7691	JKM-TL00	V1-V3.1	150K	22K	150K	NC	51K	100K
7692	JKM-AL00a	V1-V3.1	100K	30K	150K	NC	51K	100K
7693	JKM-TL10	V1-MP	200K	100K	150K	NC	51K	100K
7694	JKM-LX1	V1-V3	150K	121K	150K	NC	51K	100K
7695	JKM-LX2	V1-V3	121K	150K	150K	NC	51K	100K
7696	JKM-LX3	V1-V3	51K	100K	150K	NC	51K	100K
7697	JKM-L4A	V1-MP	30K	100K	150K	NC	51K	100K
7699	JKM-LX1C	V1-V3	150K	NC	150K	NC	51K	100K

	Mode		R1203	R1210	R1211	R1209	R1207	R1208
7685	JKM-AL00(6353)	VN1-MP	121K	150K	20K	150K	51K	100K
7686	JKM-TL00	VN1-MP	51K	100K	20K	150K	51K	100K
7687	JKM-AL00a	V3-MP	30K	100K	20K	150K	51K	100K
7681	JKM-LX1	V3.1-MP	150K	22K	20K	150K	51K	100K
7682	JKM-LX2	V3.1-MP	100K	30K	20K	150K	51K	100K
7683	JKM-LX3	V3.1-MP	200K	100K	20K	150K	51K	100K
7684	JKM-LX1C	V3.1-MP	150K	121K	20K	150K	51K	100K

USB Board ID

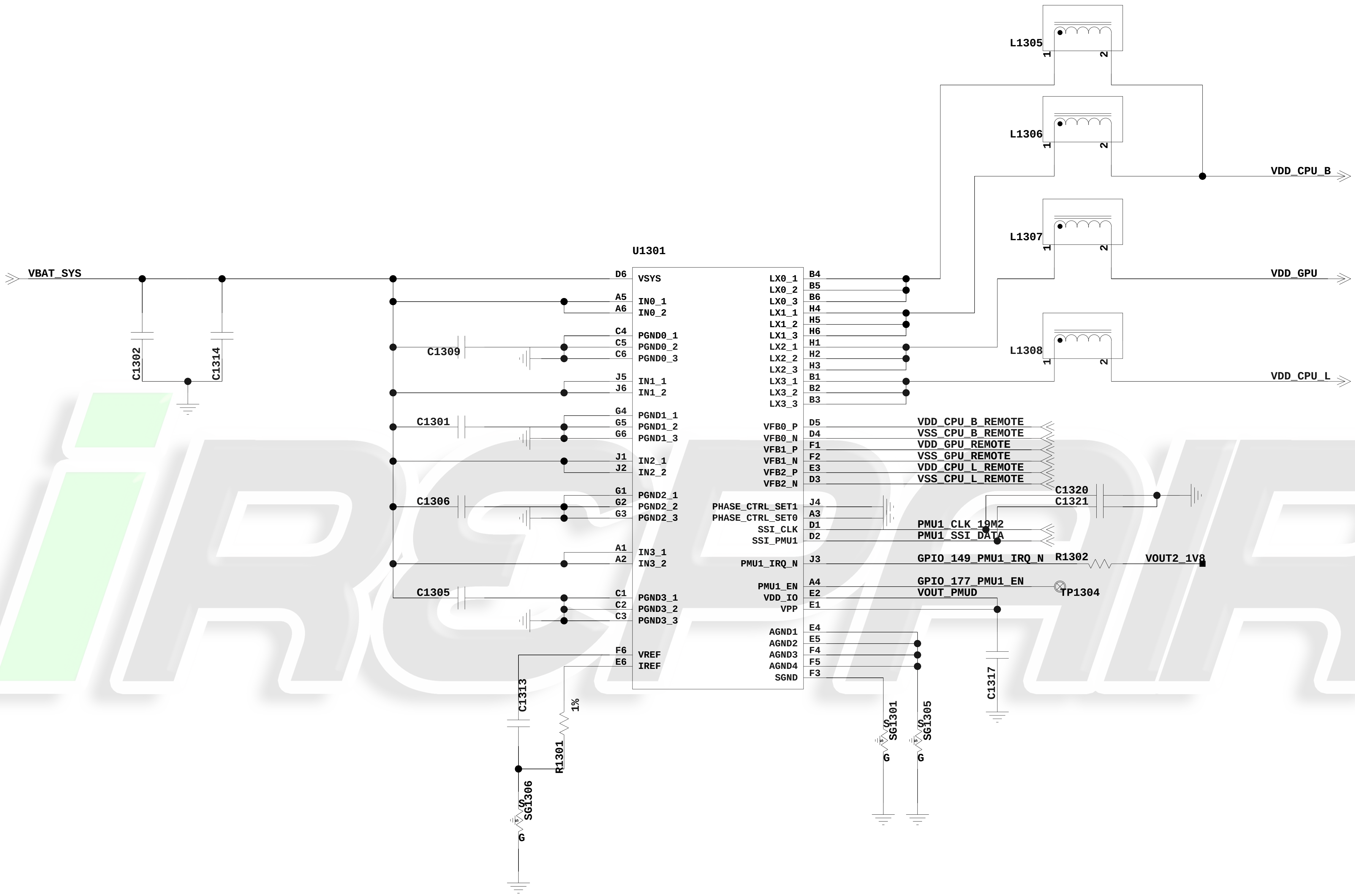
R1218	Code	Value
JKM-AL00/TL00	07091406	200k
JKM-LX1/LX2/LX3	07092138	150k
JKM-LX1C	07091246	100k
JKM-AL00a	07091408	68k
Reserved	07091302	51k
Reserved	07091299	30k
Reserved	07091172	22K
Reserved	TBD	TBD

Board ID Resistor Set			Resistor Code	
ID	UP RES	DOWN RES	Value	Code
0	NC	0K	0K	07090911
1	150K	22K	20K	07092448
2	100K	30K	22K	07091172
3	200K	100K	30K	07091299
4	150K	121K	51K	07091302
5	121K	150K	100K	07091246
6	51K	100K	121K	07091176
7	30K	100K	150K	07092138
8	20K	150K	200K	07091406
9	150K	NC		

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 12_PMU Digital 05 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

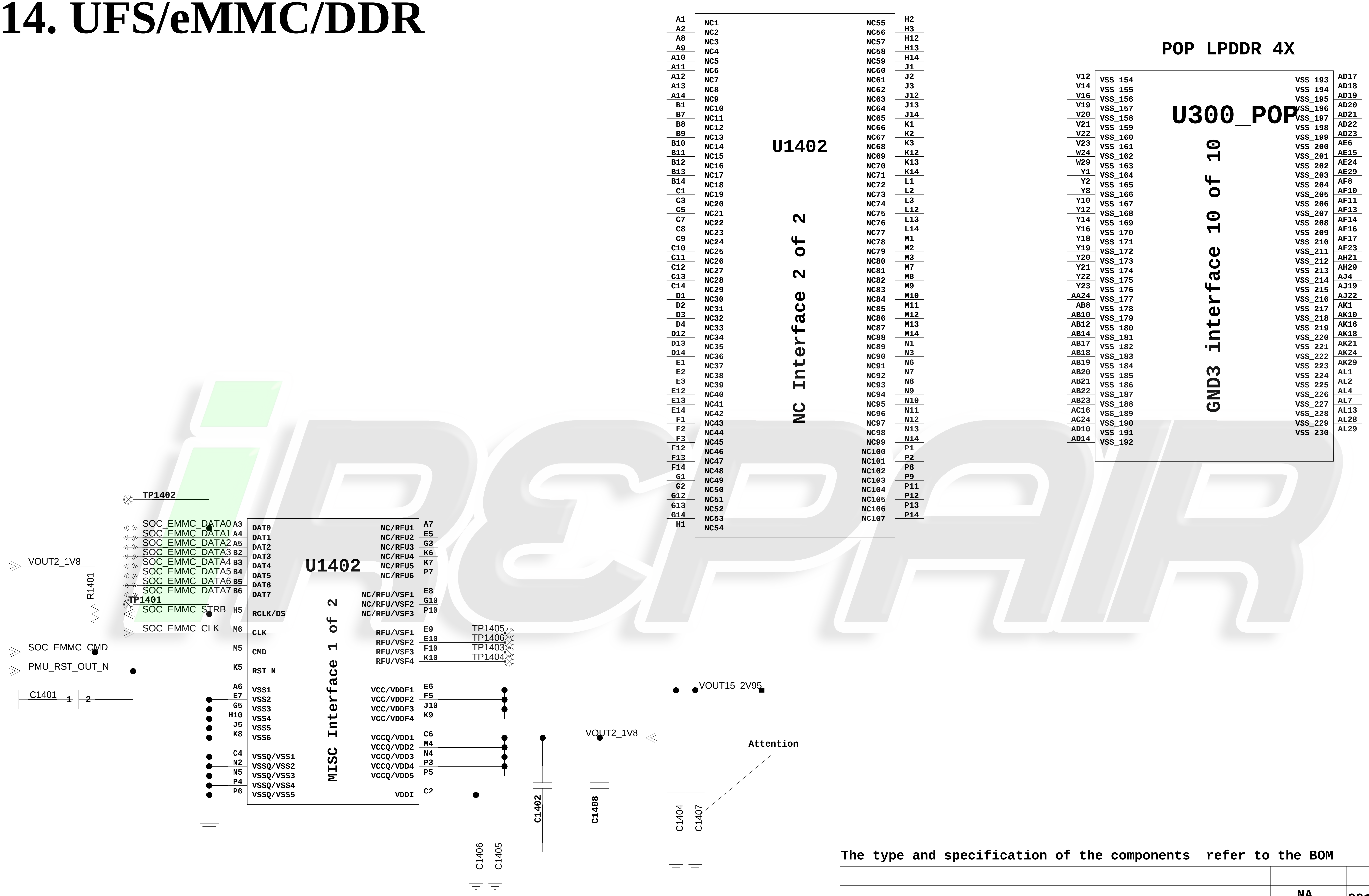
13.Hi6422



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 13_Hi6422 OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

14. UFS/eMMC/DDR

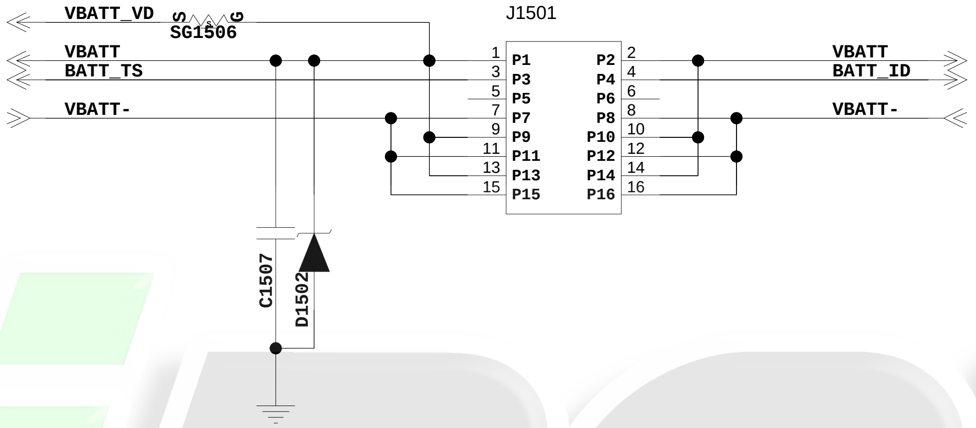


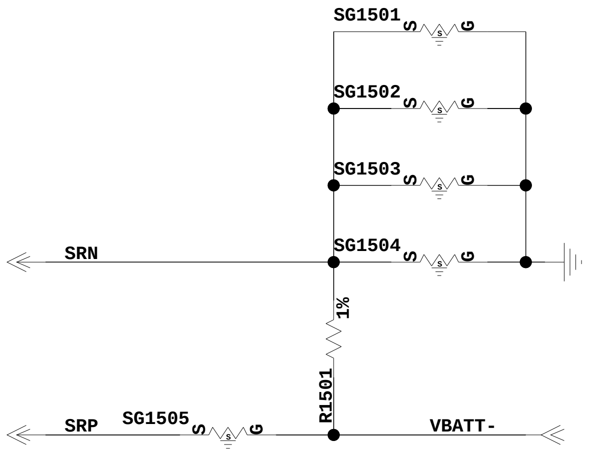
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET14_eMMC/DDR OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

15. Battery & Fuel guage

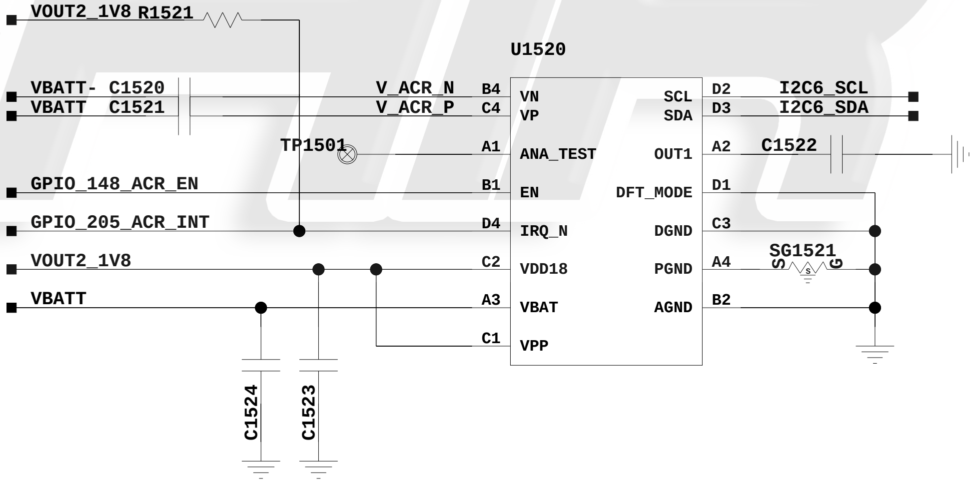
Battery Connector

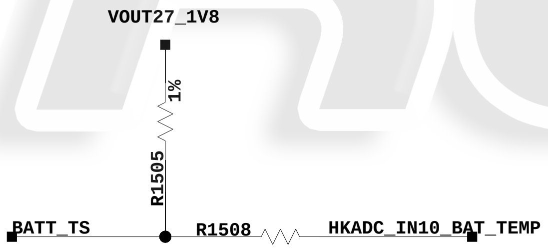


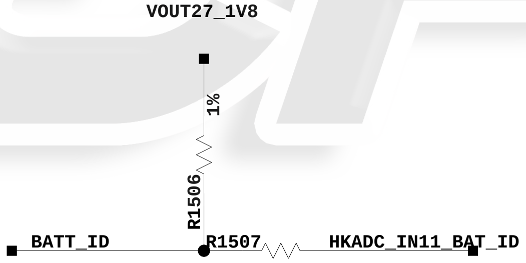


CAD note:1.Trace for 6A
2.Differential trace

Battery ACR







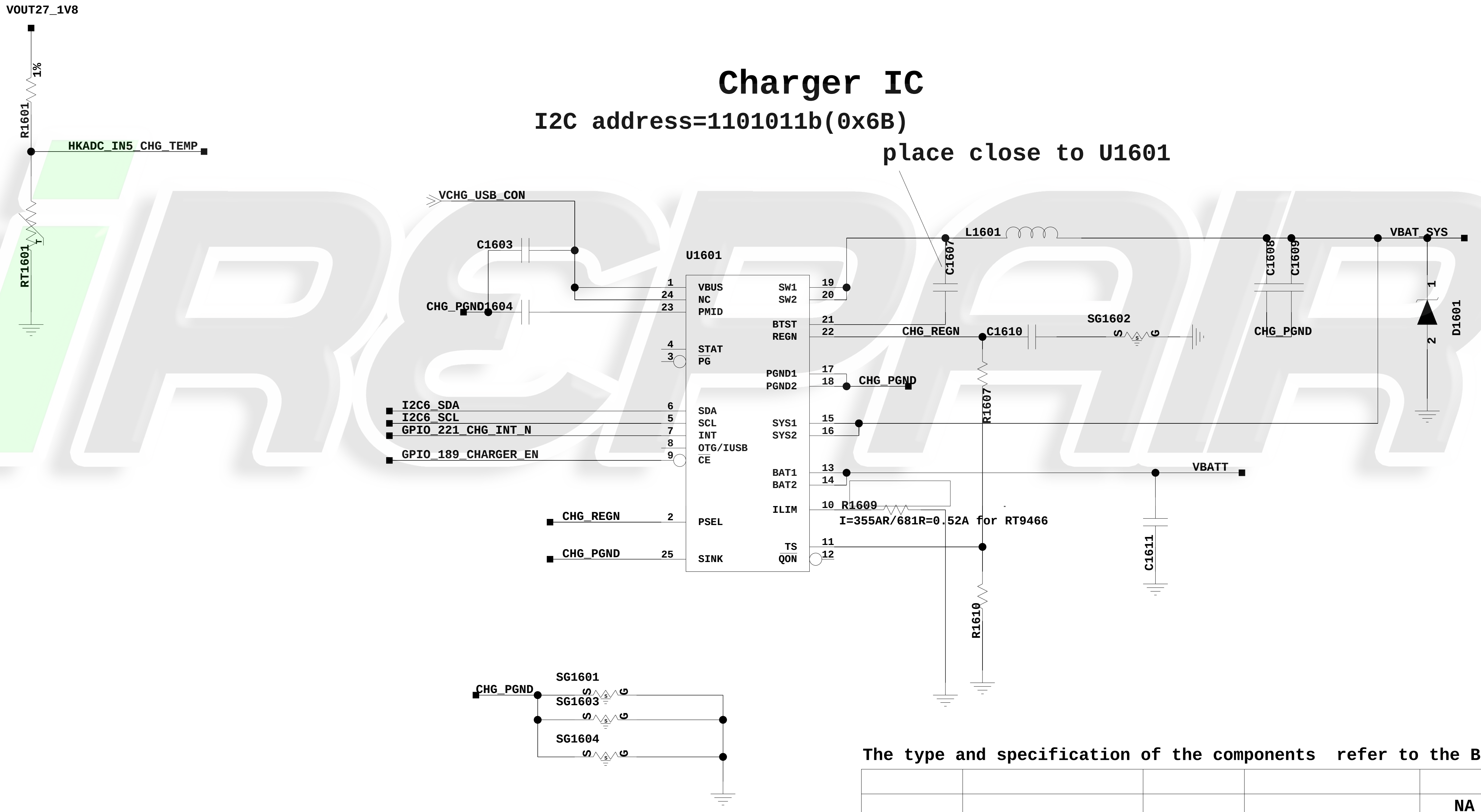
Battery Temperature

Battery ID

The type and specification of the components refer to the BOM

		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM	03025HSD_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER	PART_NUMBER	SHEET 15_Battery OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.

16. Charge Management


Charger IC

I2C address=1101011b(0x6B)

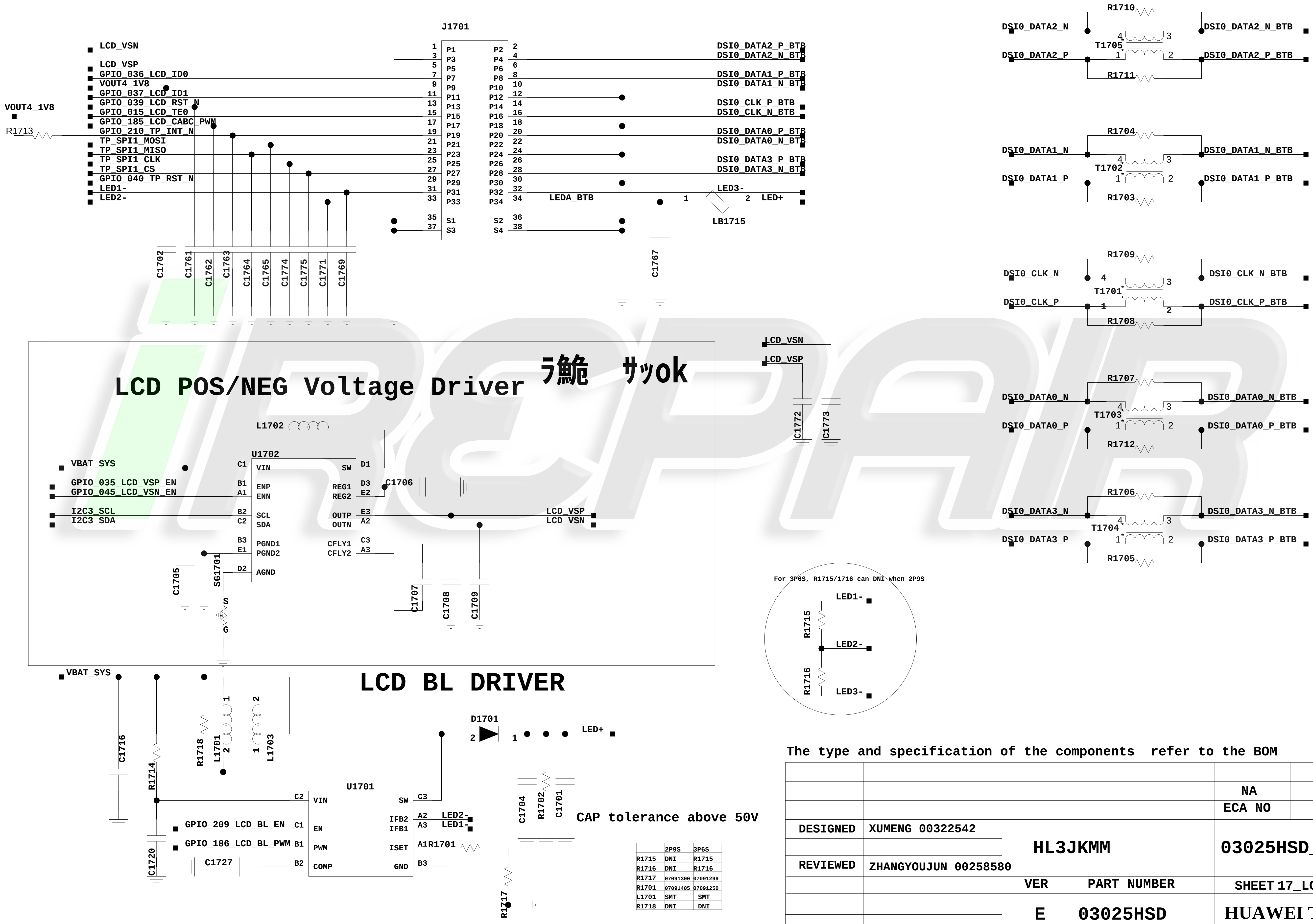
place close to U1601

I=355AR/681R=0.52A for RT9466

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 16_Scharge OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

17. LCD and TP INTERFACE



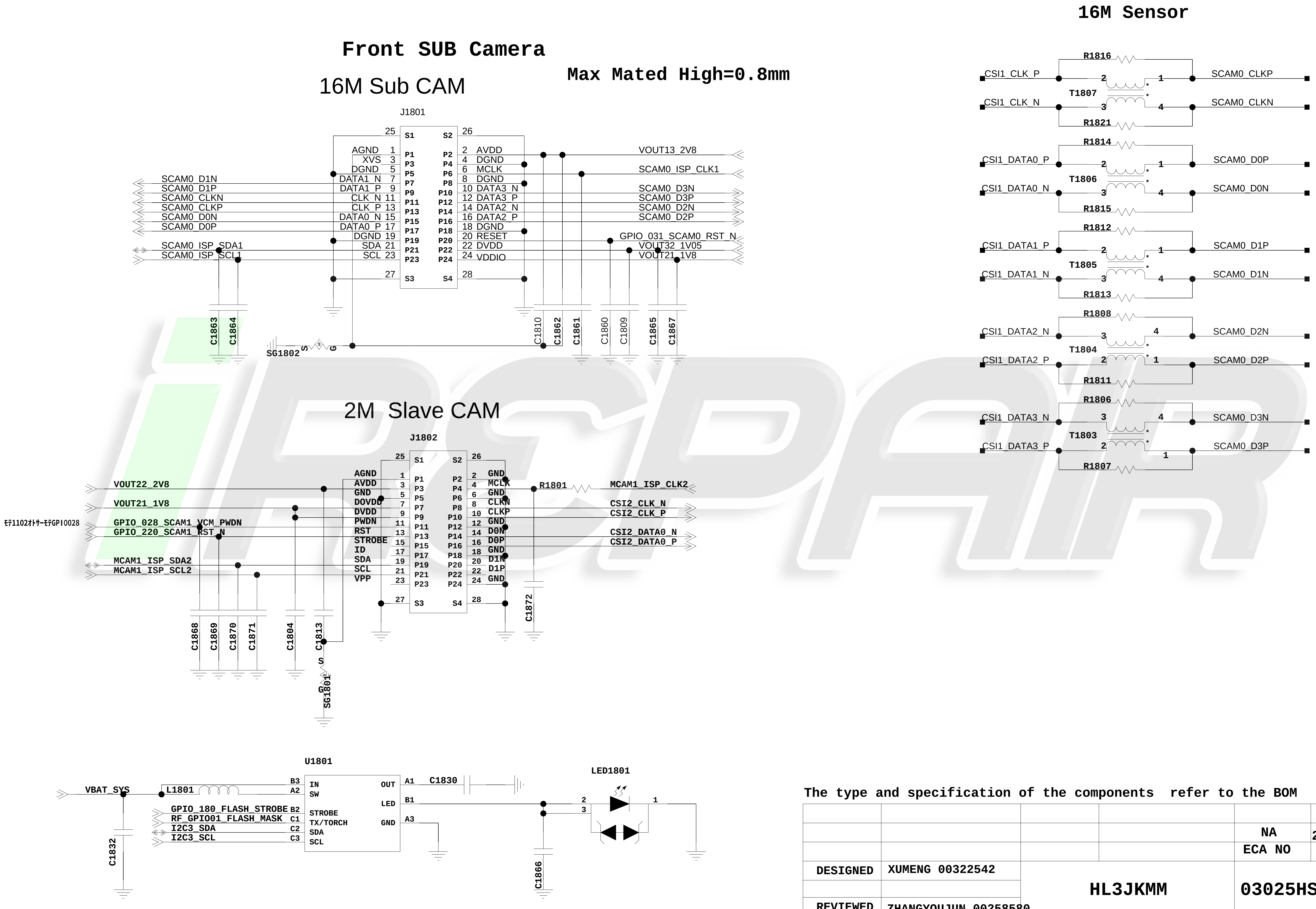
CAP tolerance above 50V

	2P9S	3P6S
R1715	DNI	R1715
R1716	DNI	R1716
R1717	07091300	07091299
R1701	07091405	07091250
L1701	SMT	SMT
R1718	DNI	DNI

The type and specification of the components refer to the BOM

		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM	03025HSD_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER	PART_NUMBER
		SHEET 17_LCDOF	60
		E	03025HSD
			HUAWEI TECH CO.,LTD.

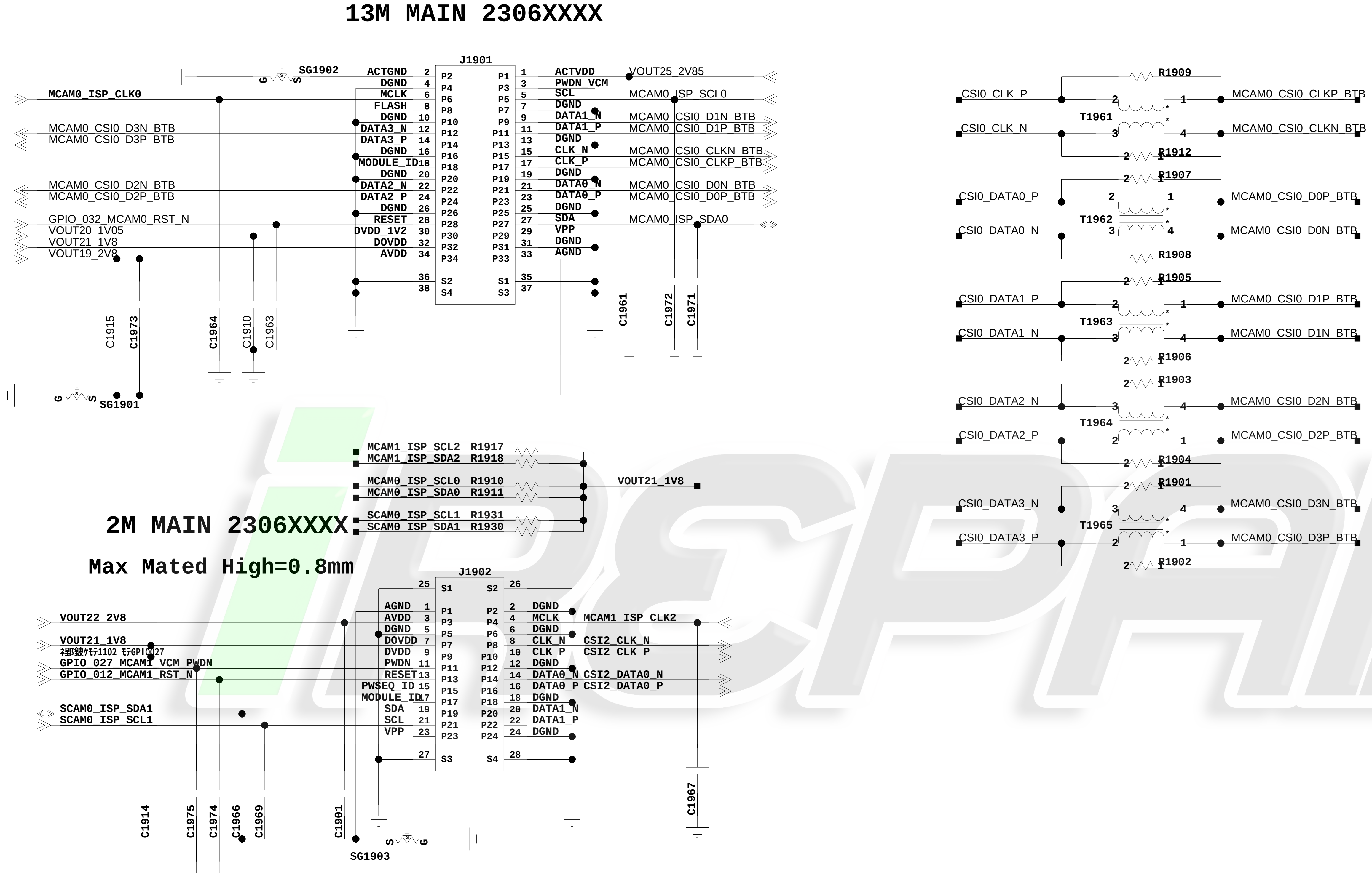
18. Flash/front Camera



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	18_Flash/Front Camera SHEET OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

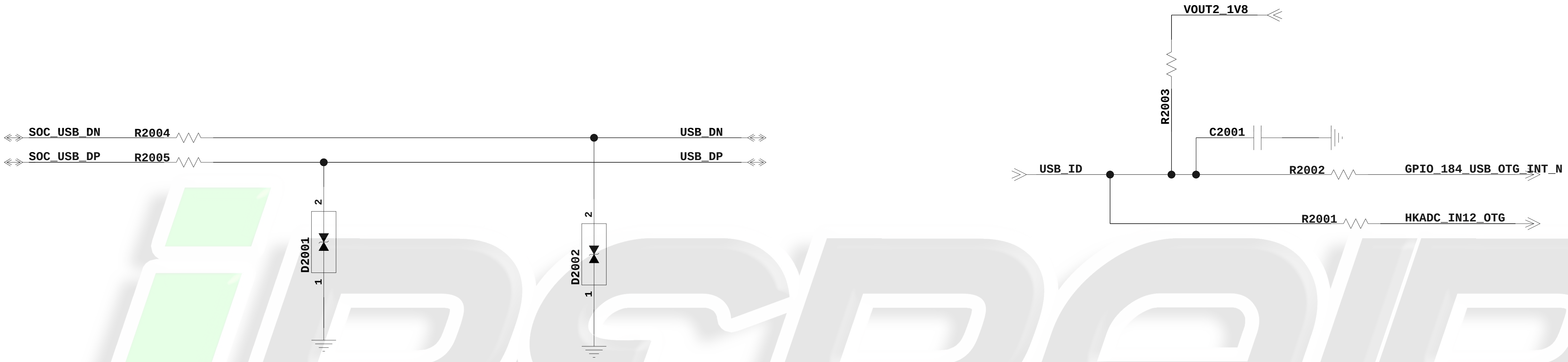
19. Main Camera



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 19_Main Camera OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

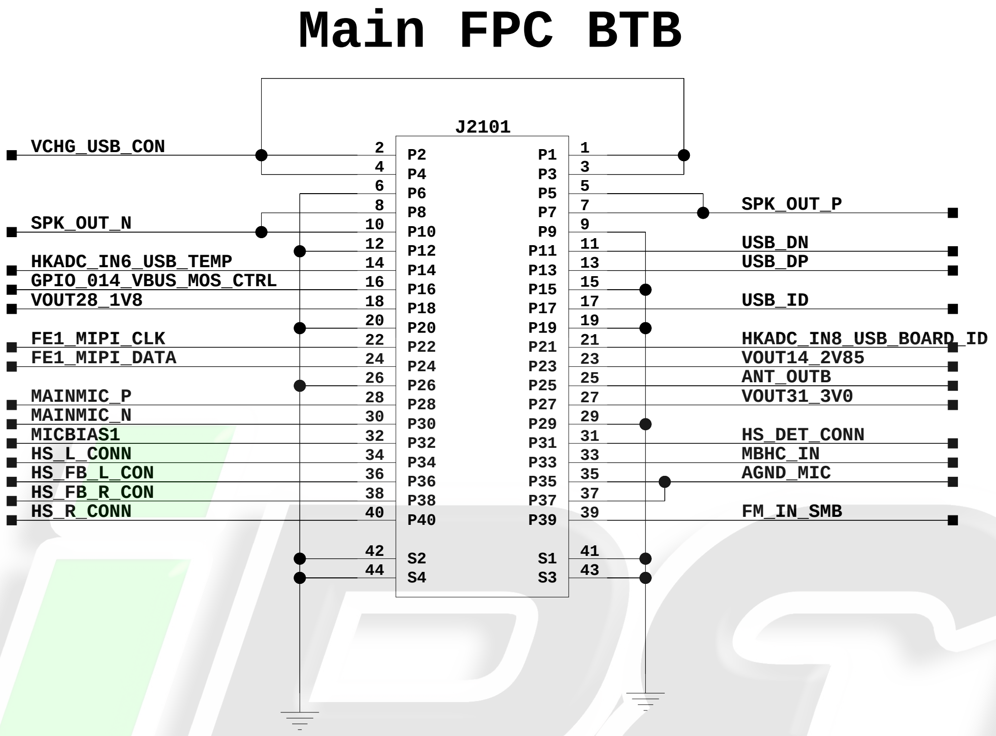
20. USB



The type and specification of the components refer to the BOM

		NA	2018-07-13
		ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM	03025HSD_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER / PART_NUMBER	SHEET 20_USB OF 60
		E / 03025HSD	HUAWEI TECH CO.,LTD.

21. Main FPC



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 21_Main FPC OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

22. NC

The type and specification of the components refer to the BOM

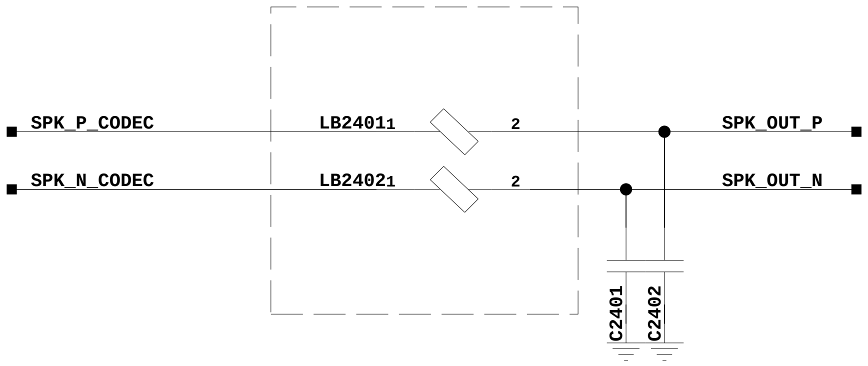
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 22_NC OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

23. NC

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 23_NC OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

24. SPK

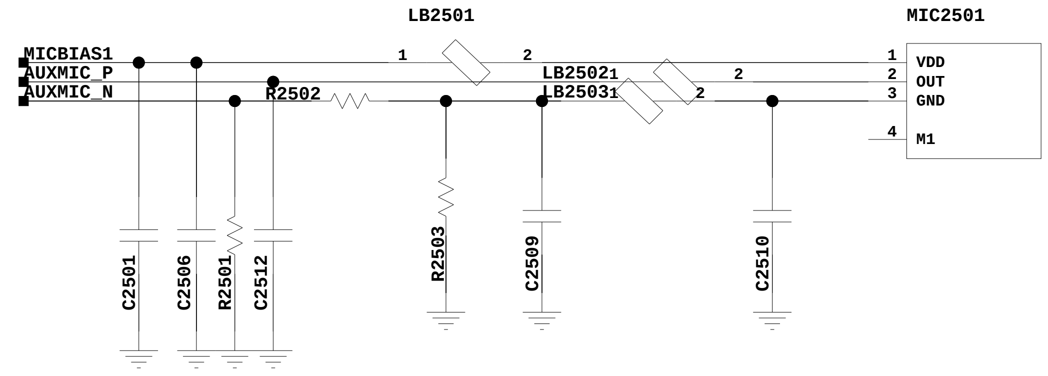


The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	24_SPK OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.	

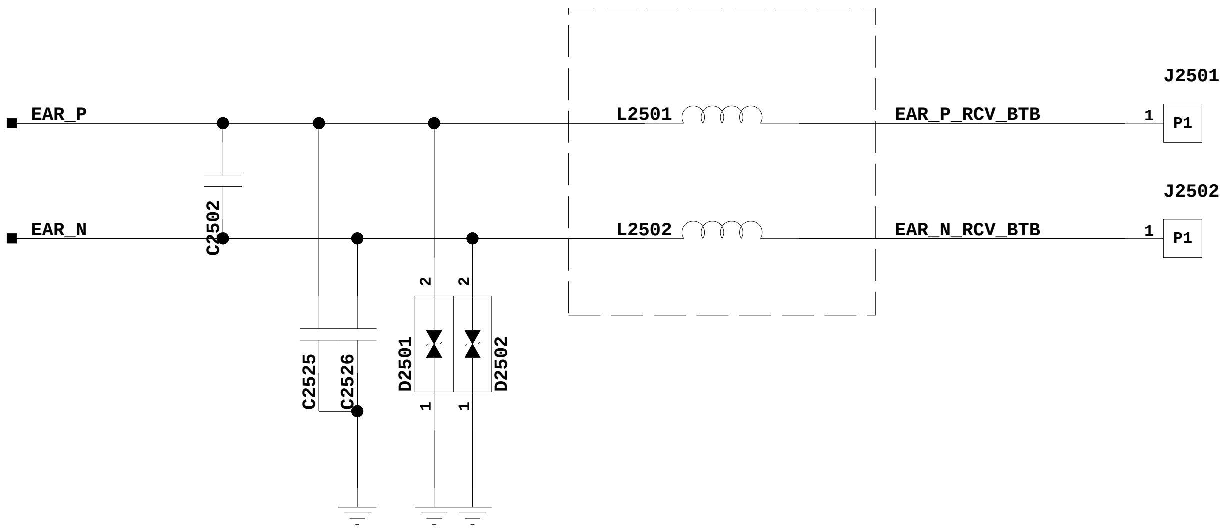
25. MIC/RCV

Second MIC



CAD note: 1,MIC need differential trace
2, MIC GND pad need use cycle via to GND net.

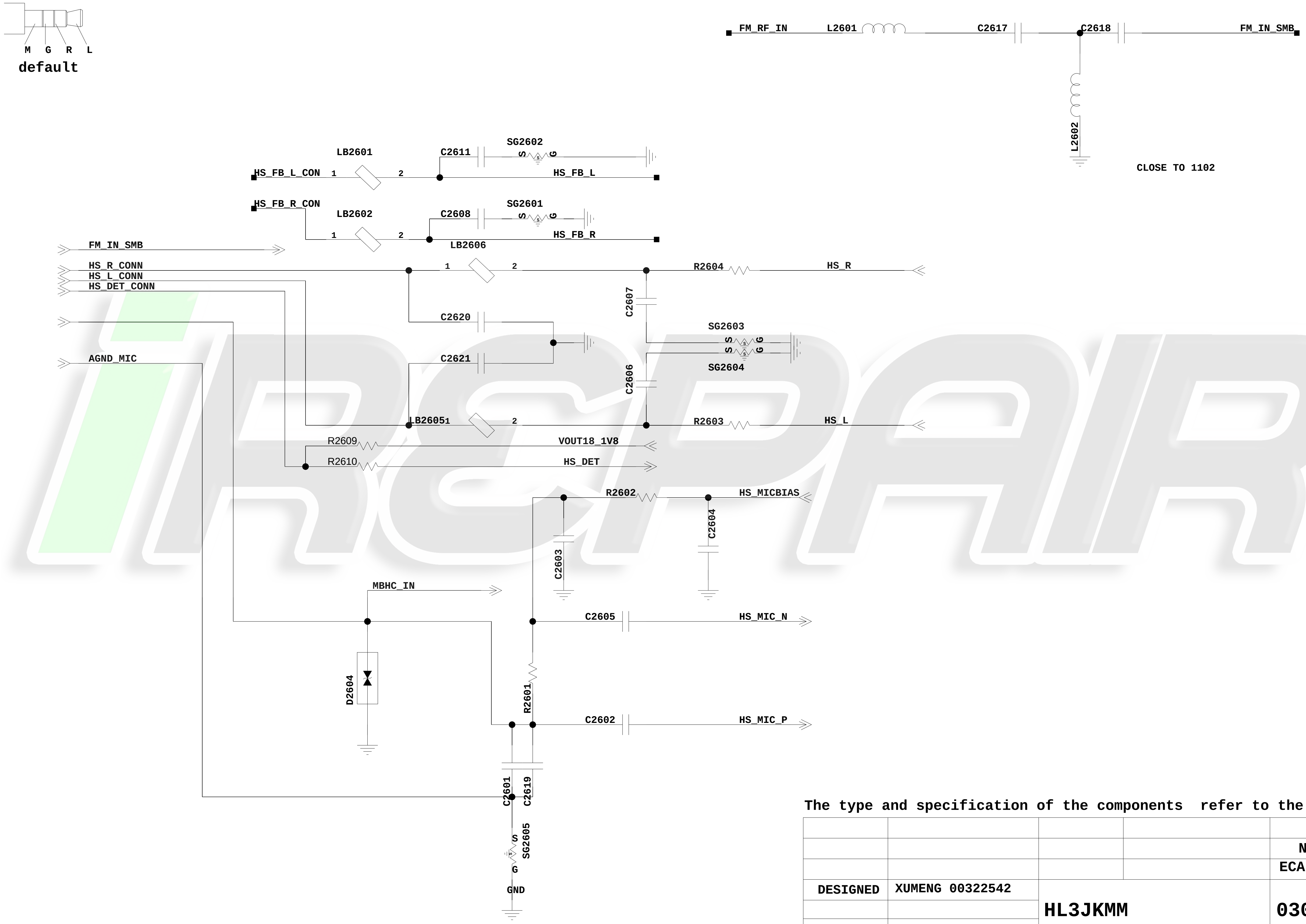
RCV



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 25_MIC/RCV OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

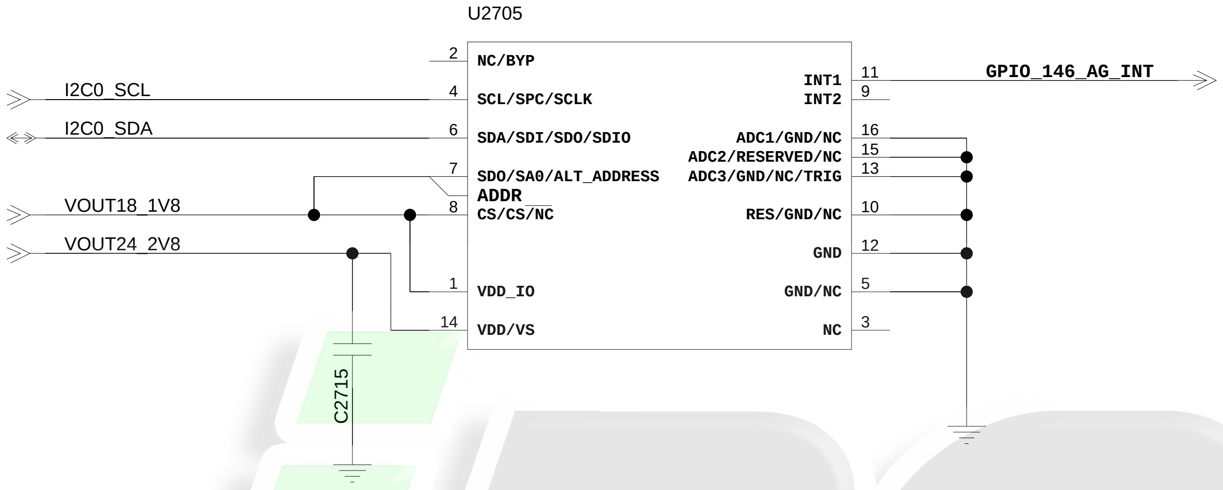
26. Headphone



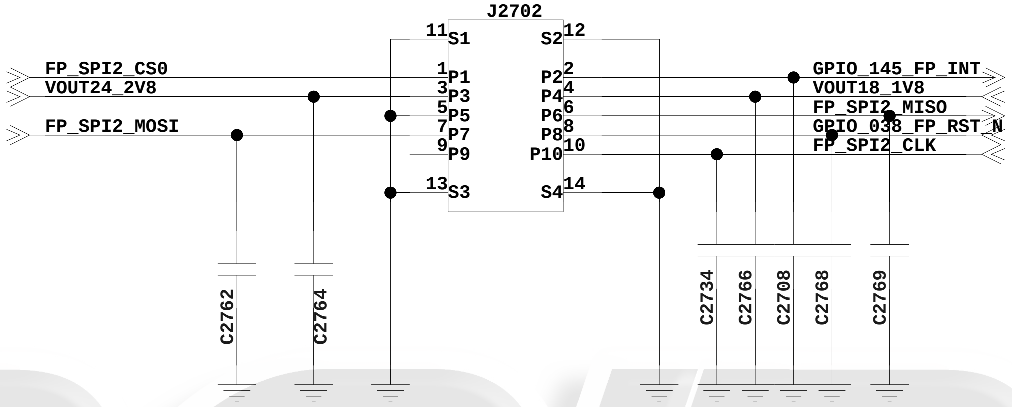
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	26_Headphone 95 60
		E	03025HSD	HUAWEI TECH CO.,LTD.	
]

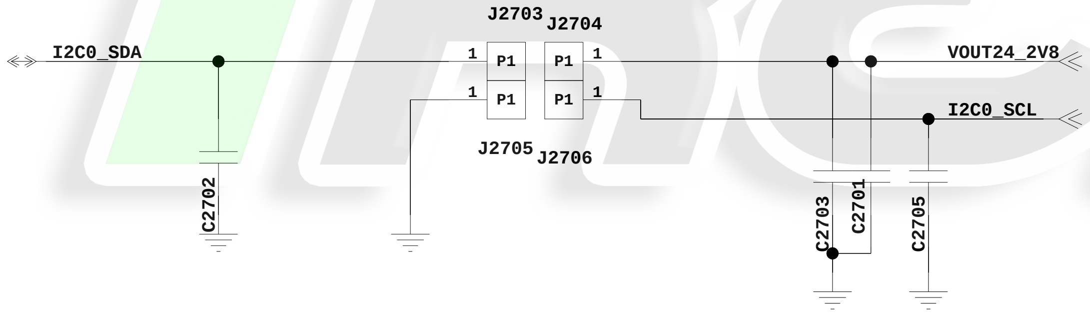
27. X-Sensor



FingerPrint ZIF

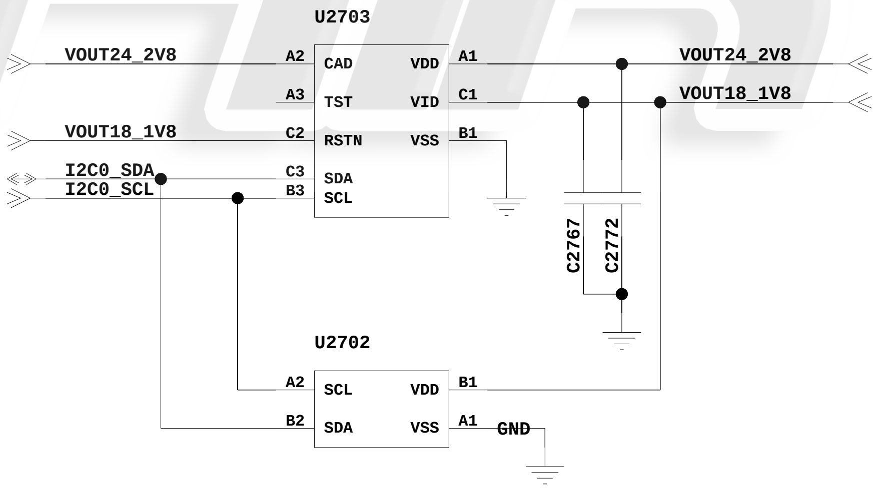


PROXIMITY&RGB AMBIENT Sensor

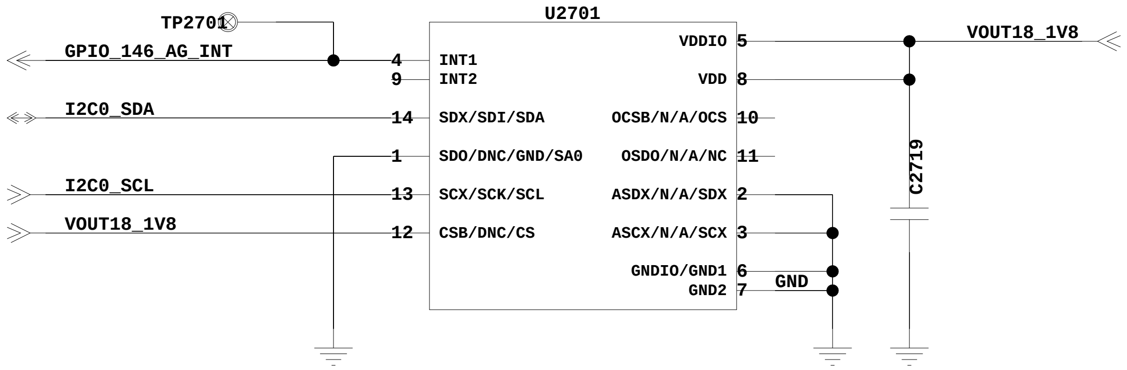


Compass

ラ鮑 サッok



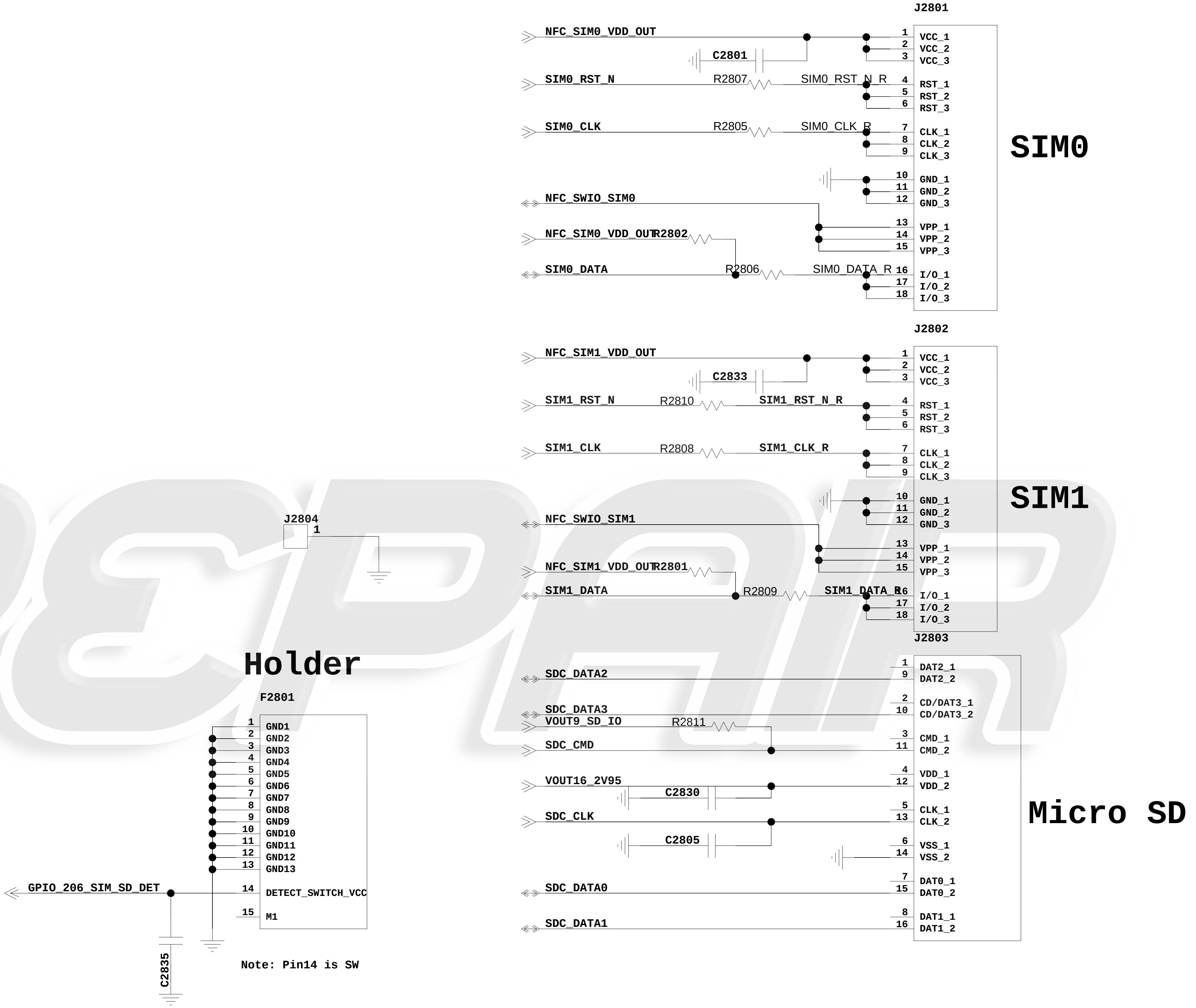
Accelerometer and Gyroscope 6-AXIS SENSOR



The type and specification of the components refer to the BOM

			NA	2018-07-13
			ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM	03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580			
		VER	PART_NUMBER	SHEET 27 X-Sensor OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.

28.SIM/uSD Card



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	28_SIM/uSDcard OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.	

29. LED/Key

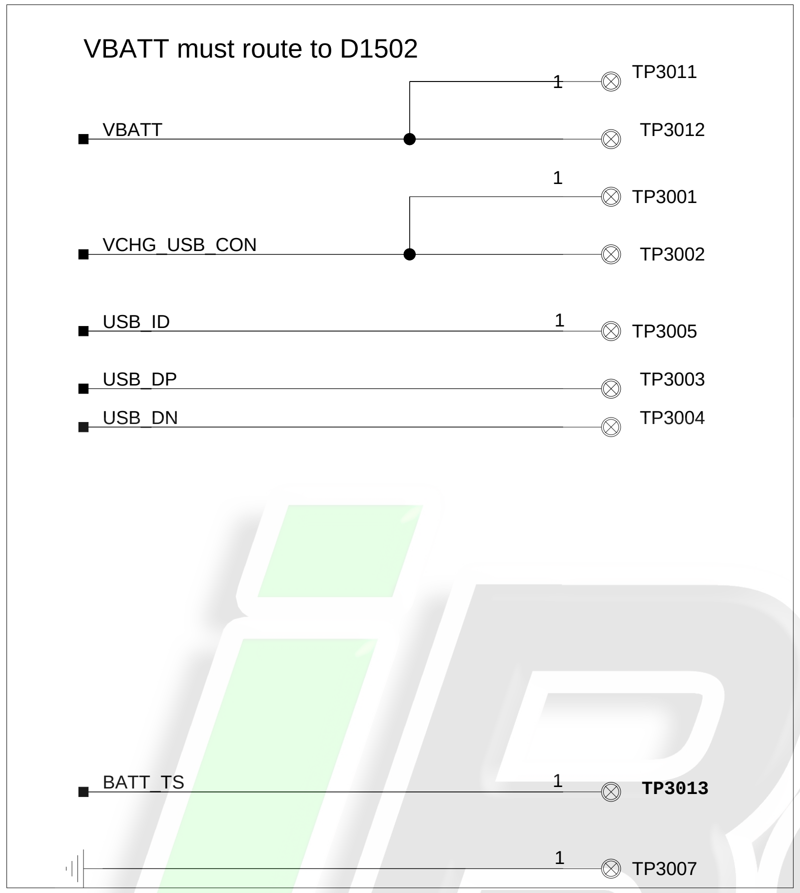
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 29 LED/Key OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

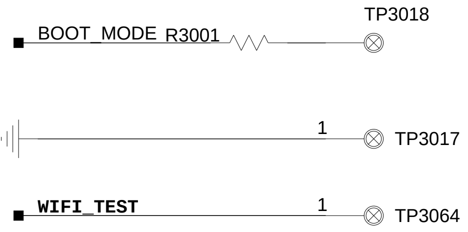
30. Test Points/Shields

CBT/PT

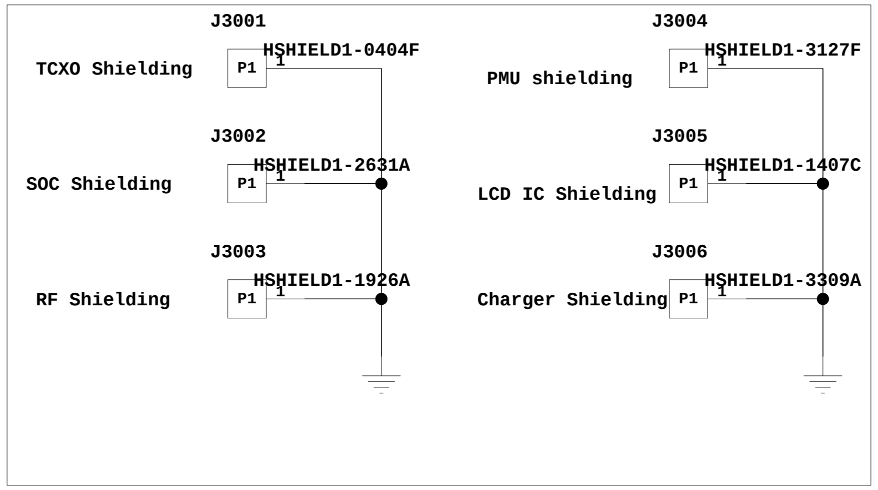
VBATT must route to D1502



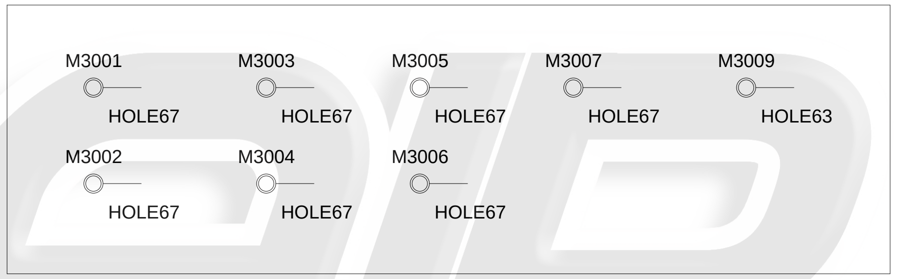
BOOT MODE



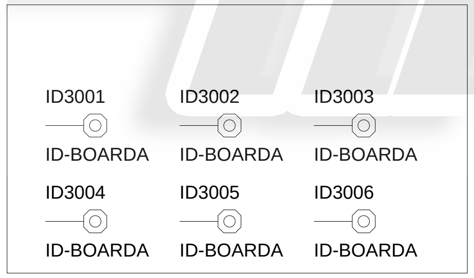
Shielding



HOLE

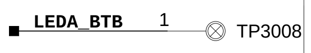


MARK POINT



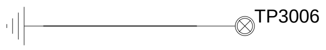
FUNCTION TEST

LCD BL



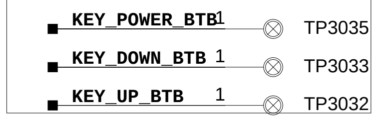
MICBIAS

GND



HEADPHONE

KEY



SPK

TYPE CC

VIBRATOR

RCV

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	30_TestPoints/Shields SHEET OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

31.RF Interface

RFIC IQ

CH0_RXA_I
CH0_RXA_Q
CH1_RXA_I
CH1_RXA_Q

CH0_RXB_I
CH0_RXB_Q
CH1_RXB_I
CH1_RXB_Q

CH0_TX_I_P
CH0_TX_I_N
CH0_TX_Q_P
CH0_TX_Q_N

CH0_MRX_I
CH0_MRX_Q

POWER

VBAT_SYS
VBATT

VOUT2_1V8
VOUT3_1V8
VOUT1_1V09
VREF_RF

VOUT14_2V85
VOUT28_1V8

VOUT27_1V8

VOUT23_3V2

NC Interface

VOUT18_1V8

BTFM_I2S2_CLK
BTFM_I2S2_MOSI
BTFM_I2S2_MISO
BTFM_I2S2_SYNC

GPIO_229_BFGN_WAKEUP_AP
HI1102_UART4_RTS_N
HI1102_UART4_CTS_N
HI1102_UART4_TX
HI1102_UART4_RX
CDMA_GPS_SYNC

LTE_INACTIVE

AP_GPS_REF_CLK
LTE_TX_ACTIVE
GPIO_030_Hi1102_PWRON
CLK32_BFGN
GPIO_211_WIFI_WAKEUP_AP

WL_SDIO_CLK
WL_SDIO_CMD
WL_SDIO_DATA0
WL_SDIO_DATA1
WL_SDIO_DATA2
WL_SDIO_DATA3

GPIO Interface

RF_GPIO04_APT_EN APT
RF_GPIO05_CHO_APT_PDM
RF_GPIO06_APT_BP

RF_GPIO07_DPDT DPDT

GPIO_207_ANT_DET_0 ANT_DETECT

MIPI Interface

RFIC0_MIPI_CLK
RFIC0_MIPI_DATA

FE0_MIPI_CLK
FE0_MIPI_DATA

FE1_MIPI_CLK
FE1_MIPI_DATA

ANT Interface

RF_GPIO20_SPDT_B1/B3
RF_GPIO21_SPDT_B7
ANT_OUTB

GSM

RF_AUXDAC0

GMSK_PH0

CLK

RF0_CLK_38M4

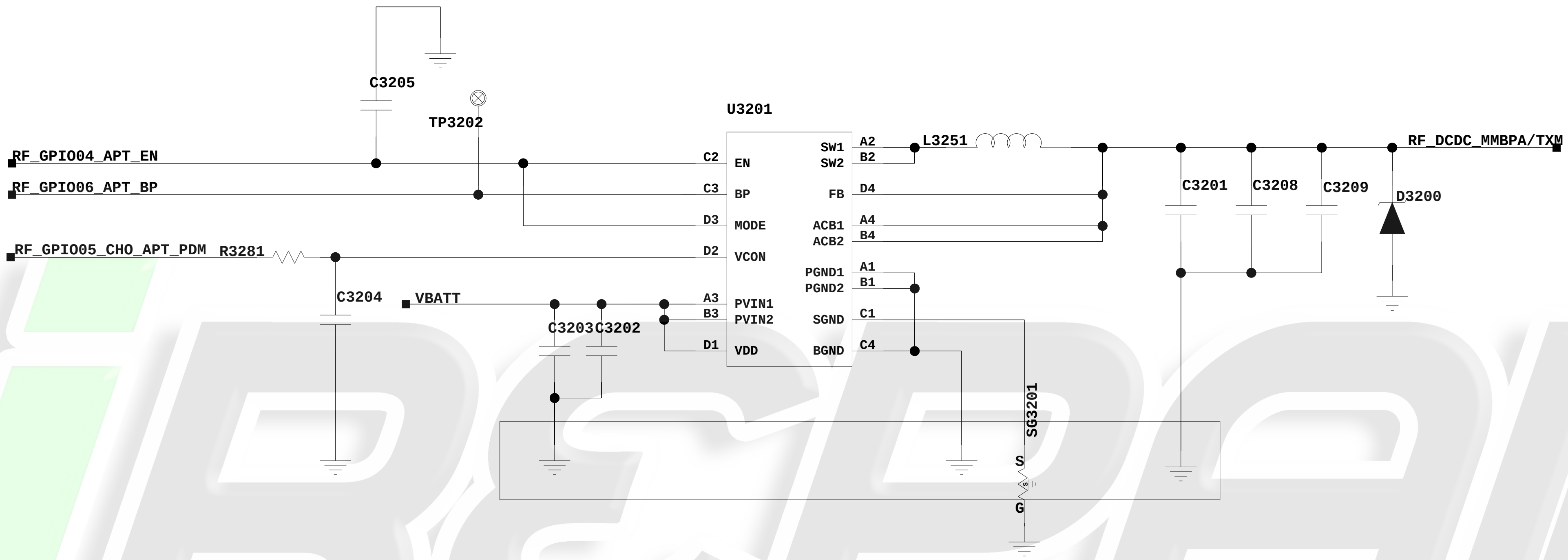
HKADC

HKADC_IN4_PA_TEMP_1

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	31 OF 80 Interface
		E	03025HSD	HUAWEI TECH CO.,LTD.	

32 APT_LM3243



1.DCDCｵ酊ｷﾎｪPAｷﾀｻ､ｹ鰓ｻｻｯｵ酊ｷｵﾄﾗ魑ﾉｲｿｷｮ

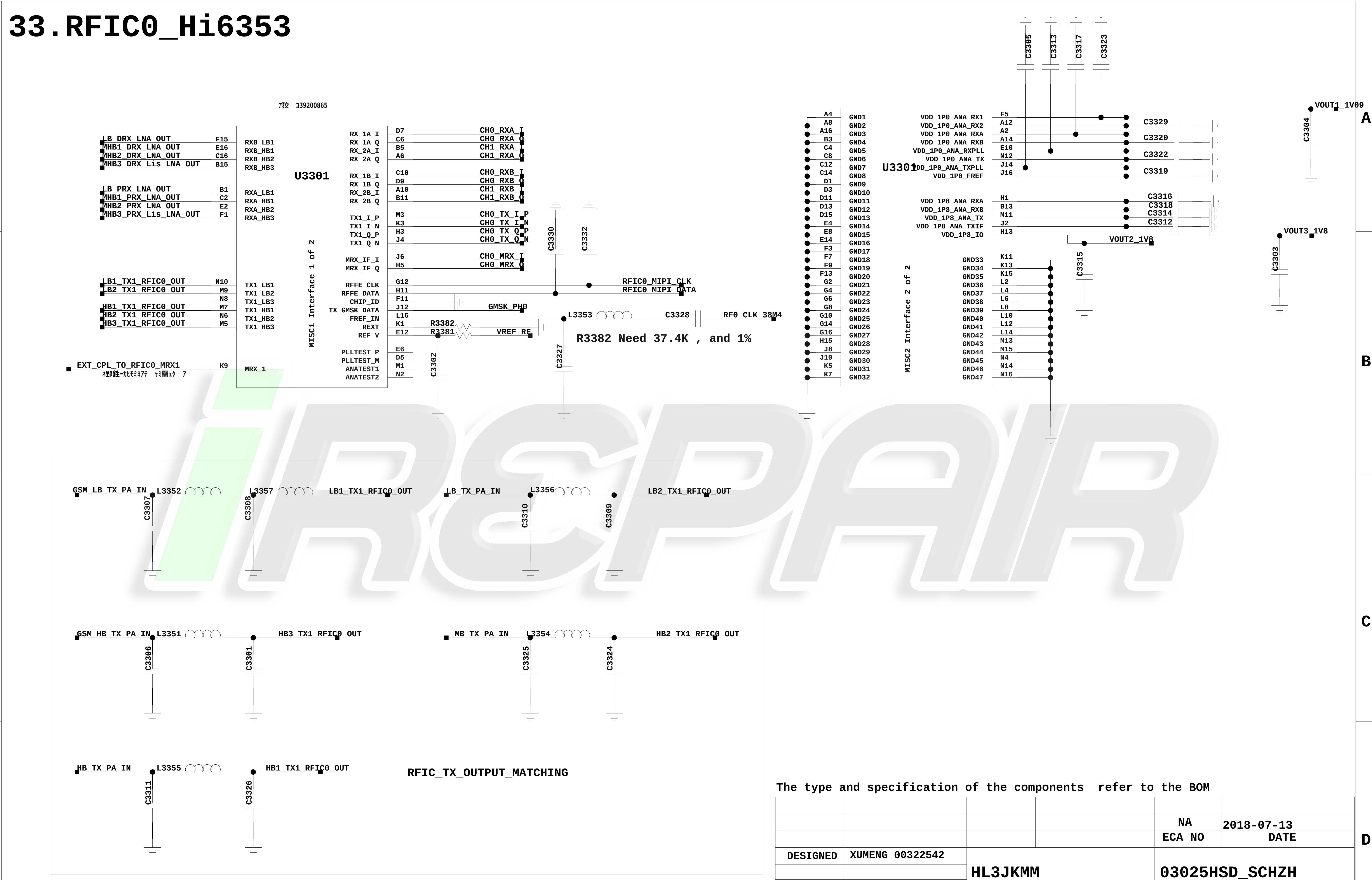
2.ｲｼﾏﾟﾊｱﾏﾈｾｭｹ　ﾎﾈﾑｹｹﾜD3200｣ｬﾔﾙﾐﾇﾐﾍﾗﾟﾏﾟｸ　AｺﾍTXMｹｩｵ

3.ｲｼﾏﾟﾊｱｿｼﾂﾇﾏﾟｿ忺ｬDCDCｸ　SMｹｩｵ醋ｱ｣ｬﾐ睢｣ｮ､ﾍｨﾁ　ｽ3A

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 32 OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

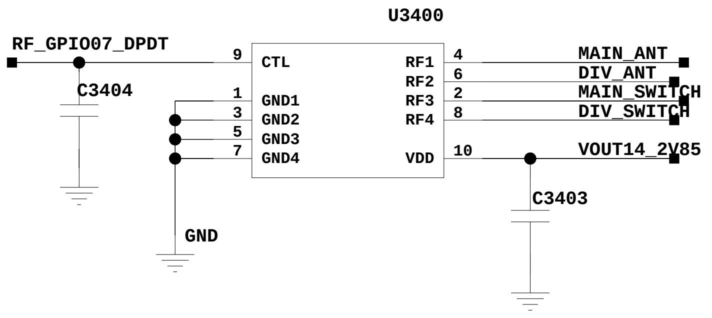
33.RFIC0_Hi6353



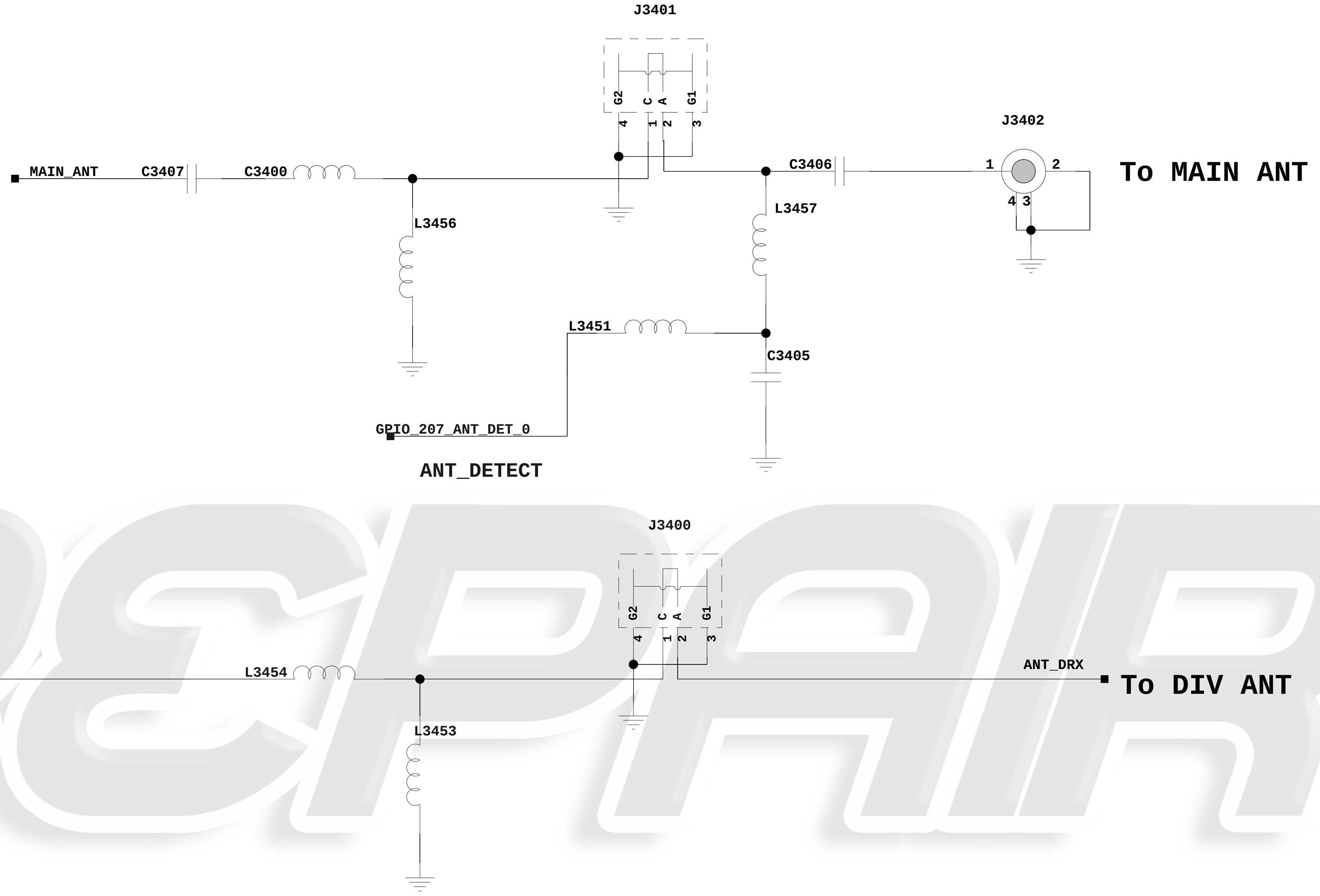
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	33 RFIC0_6353
		E	03025HSD	HUAWEI TECH CO.,LTD.	

34 DPDT_Connector



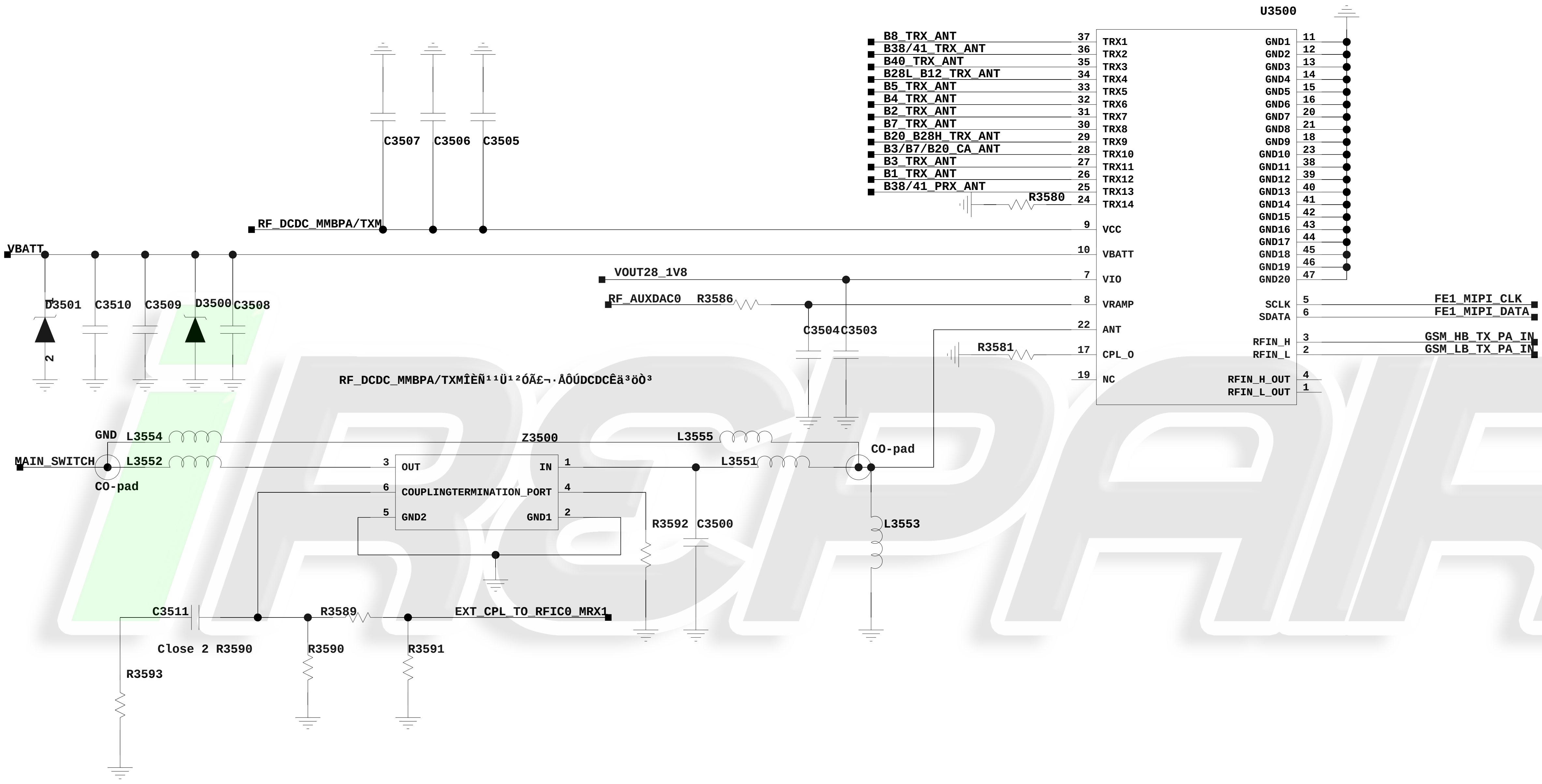
U3400 Truth Table	
CTRL1	State
0	RF1-RF3,RF2-RF4
1	RF1-RF4,RF2-RF3



The type and specification of the components refer to the BOM

NA 2018-07-13
ECA NO DATE
DESIGNED XUMENG 00322542
REVIEWED ZHANGYOUJUN 00258580
HL3JKMM
03025HSD_SCHZH
VER PART_NUMBER
E 03025HSD
SHEET 34 DPDT_Connector
HUAWEI TECH CO.,LTD.

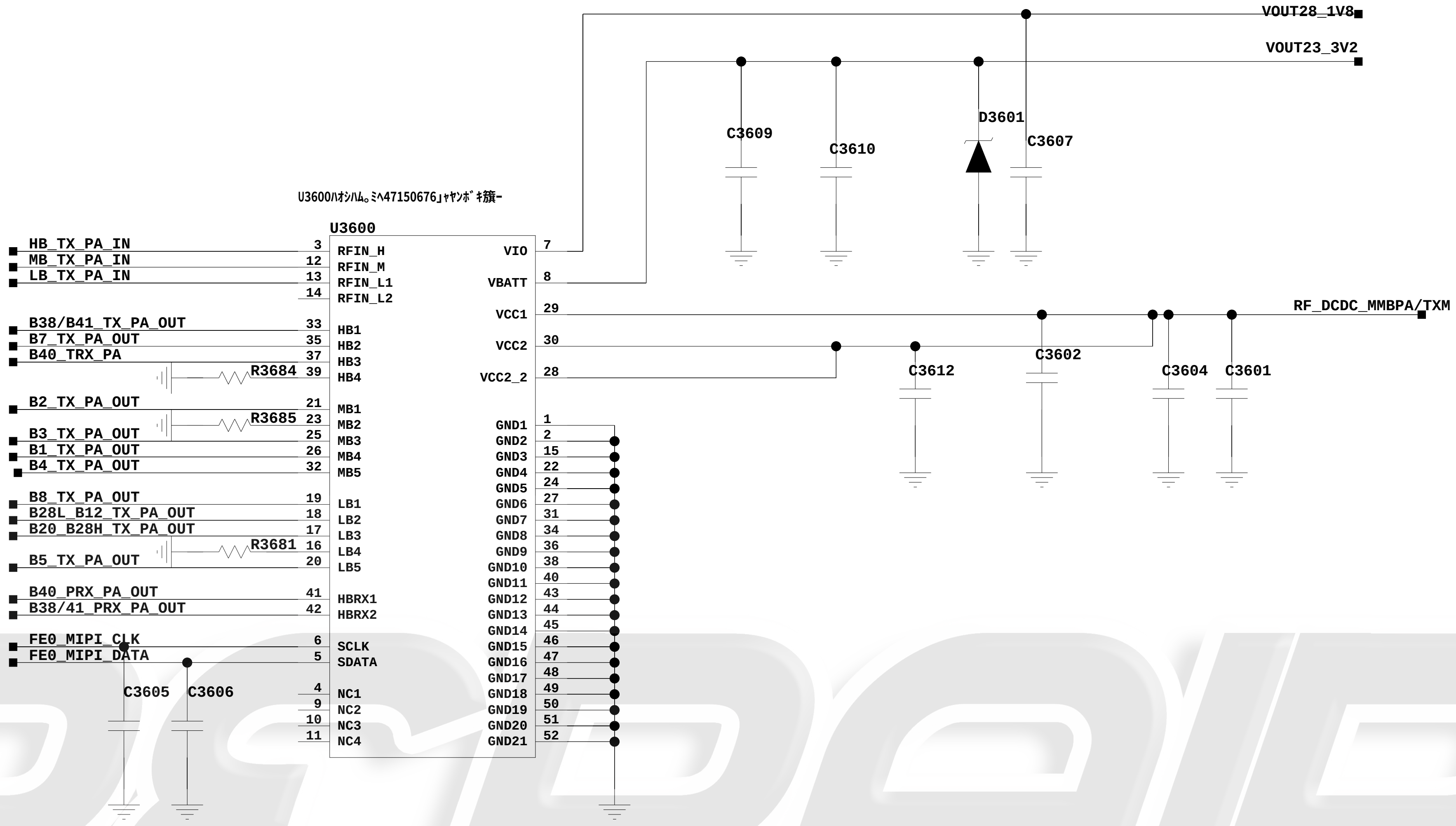
35. TXM

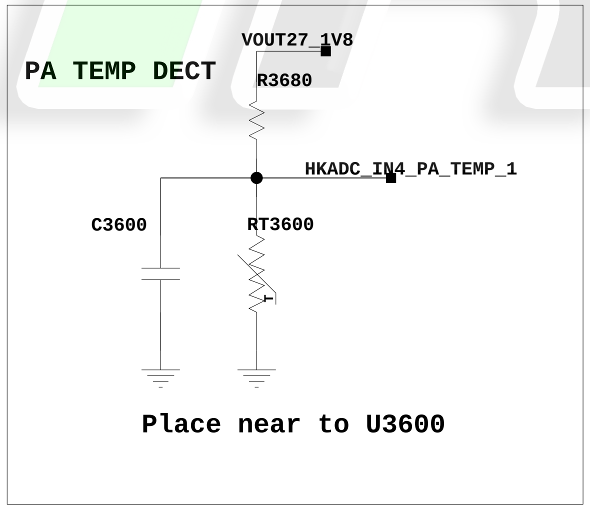


The type and specification of the components refer to the BOM

					2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM	NA	03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 35 TXM OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

36 MMBPA





1｡｢ﾈ郢鈹ｹﾓﾃｶ犠　A｣ｬﾇﾒｲｼｾﾖｾ狢　ﾜﾔｶ｣ｬｻ　ｼｾﾖﾔﾚPCBｵﾄﾒ　礬ｬｿﾉﾒﾔﾆﾀｹﾀﾔ　ｵPA_TEMP_DET2;

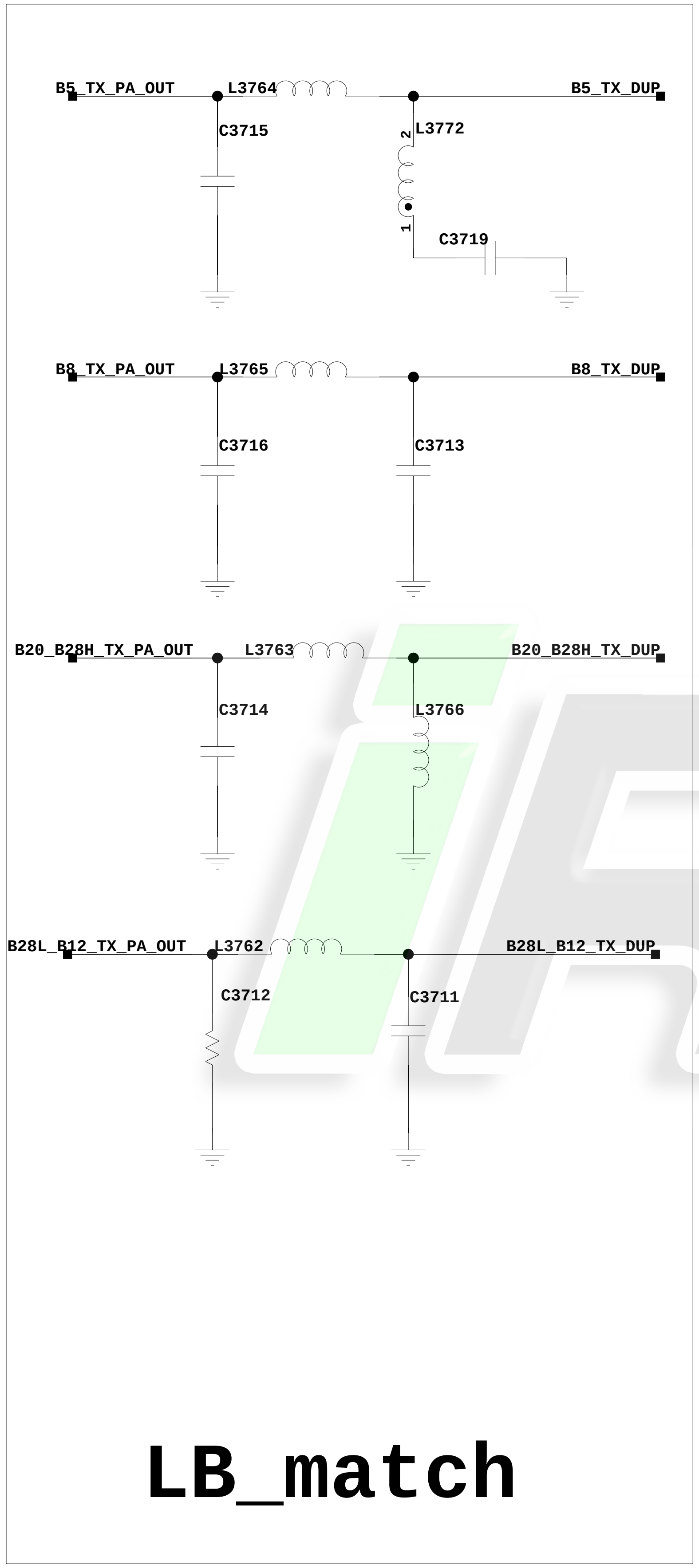
2｡｢ﾈ郢銠　ｵPA_TEMP_DET2,ﾐ罍ｪｾｭﾉ蕁ｵSub-TMGﾆﾀﾉ　ｨｹ　ｺ　ｬｽﾓｵｽHKADC_IN9.

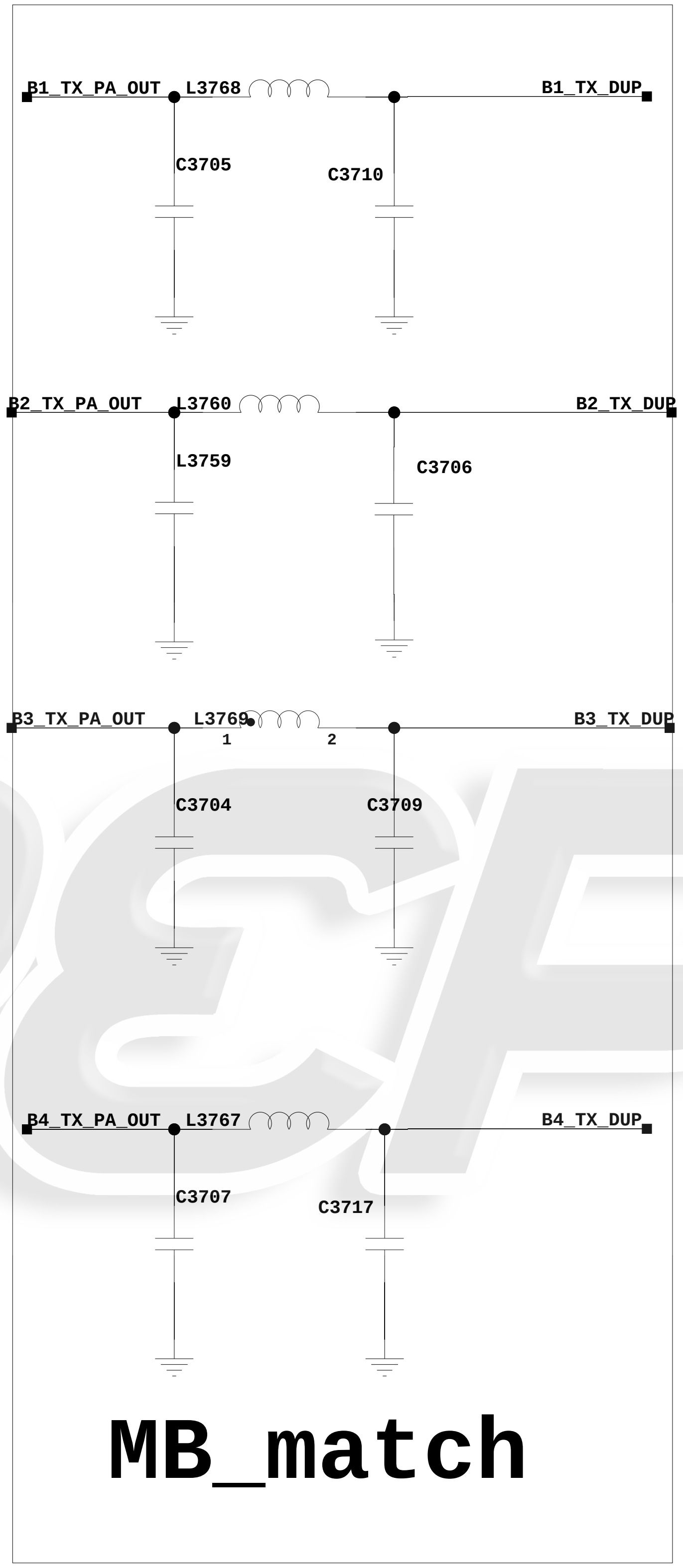
The type and specification of the components refer to the BOM

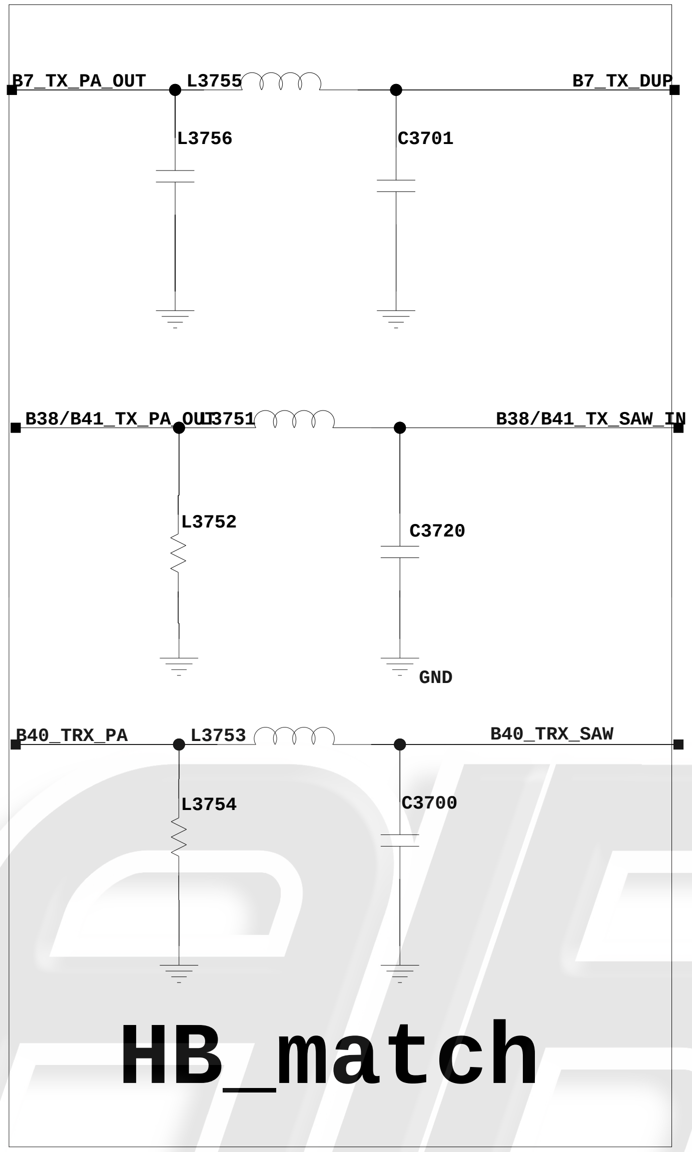
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 36 MMBPA 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

37.TX_Loadpull

µ÷ÊÔÊ±LOADPULL¾¡Á¿Ñ¡ÓÃµÍÍ¨Ä£Ê½£¬±ÜÃâÐ³²¨µ¼ÖÂµÄRSE¼°¹²´æÎÊÌâ





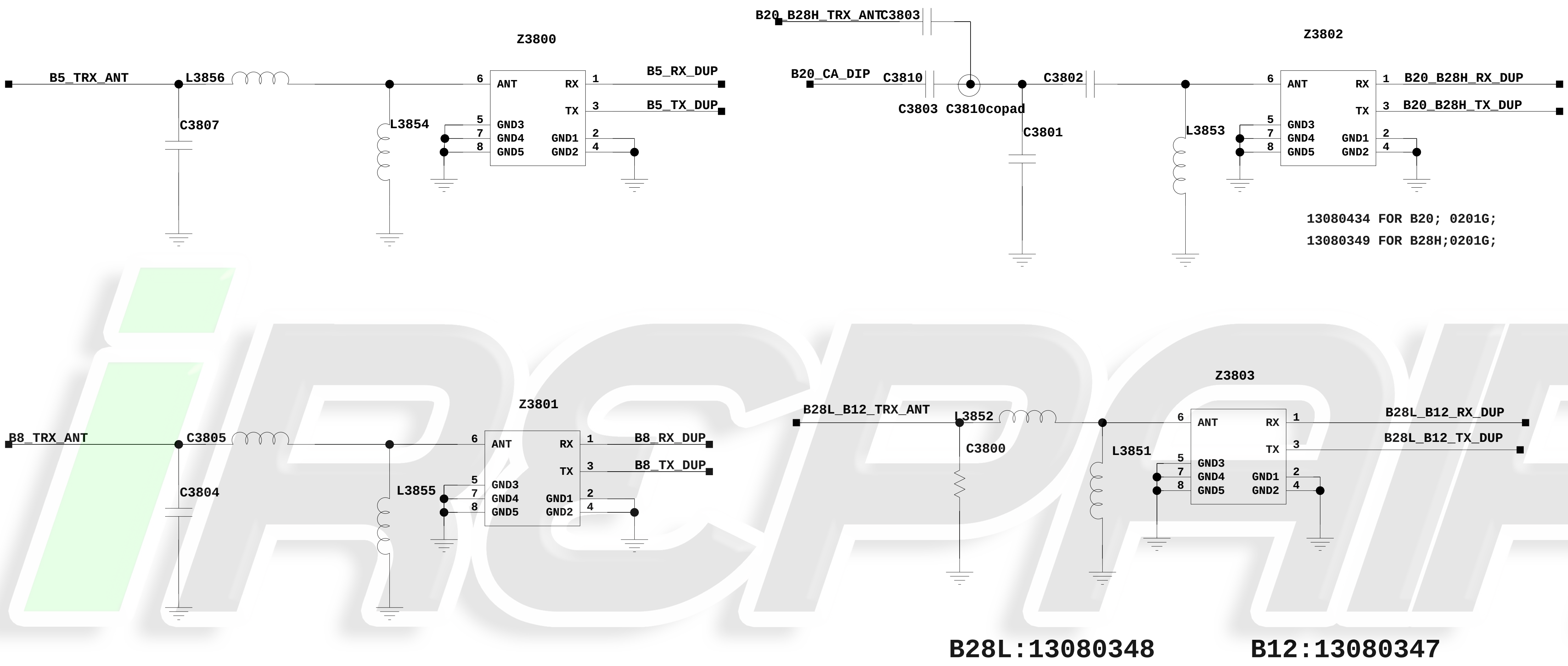


The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 37 OF 60 TX_Loadpull	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

38 TRX_LB_1

µ÷ÊÔÊ±ÊÕÁ²¾¡Á¿Ñ¡ÓÃµÍÍ¨Ä£Ê½£¬±ÜÃâÐ³²¨µ¼ÖÂµÄRSE¼°¹²´æÎÊÌâ



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 38 TRX_LB_1 OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

39 TRX_LB_2

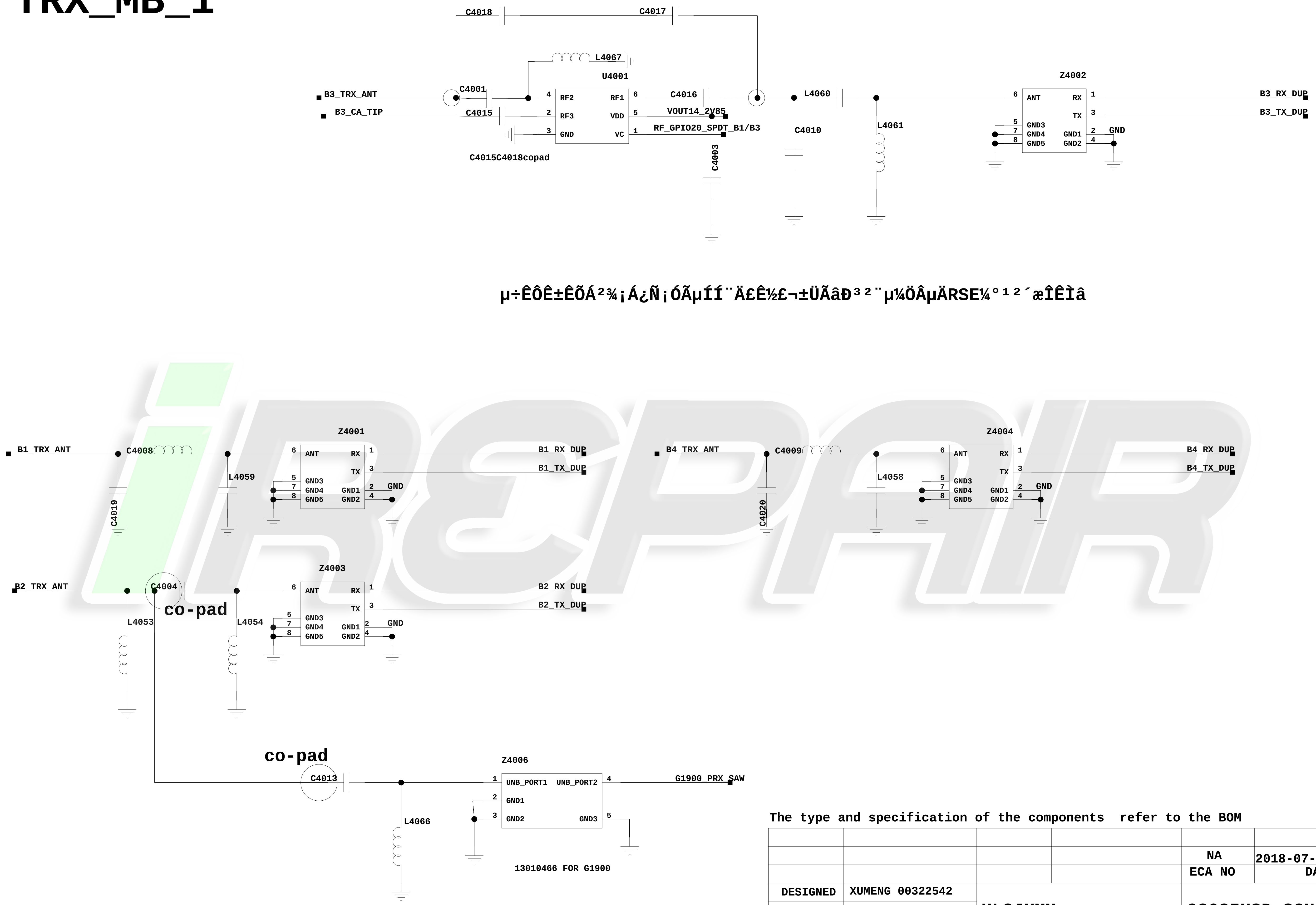
The type and specification of the components refer to the BOM

		NA ECA NO	2018-07-13 DATE
DESIGNED	XUMENG 00322542	HL3JKMM	03025HSD_SCHZH
REVIEWED	ZHANGYOUJUN 00258580		
		VER	PART_NUMBER
		E	03025HSD

SHEET 39 TRX_LB_2_Reserved OF 60

HUAWEI TECH CO.,LTD.

40 TRX_MB_1



µ÷ÊÔÊ±ÊÕÁ²¾¡Á¿Ñ¡ÓÃµÍÍ¨Ä£Ê½£¬±ÜÃâÐ³²¨µ¼ÖÂµÄRSE¼°¹²´æÎÊÌâ

The type and specification of the components refer to the BOM

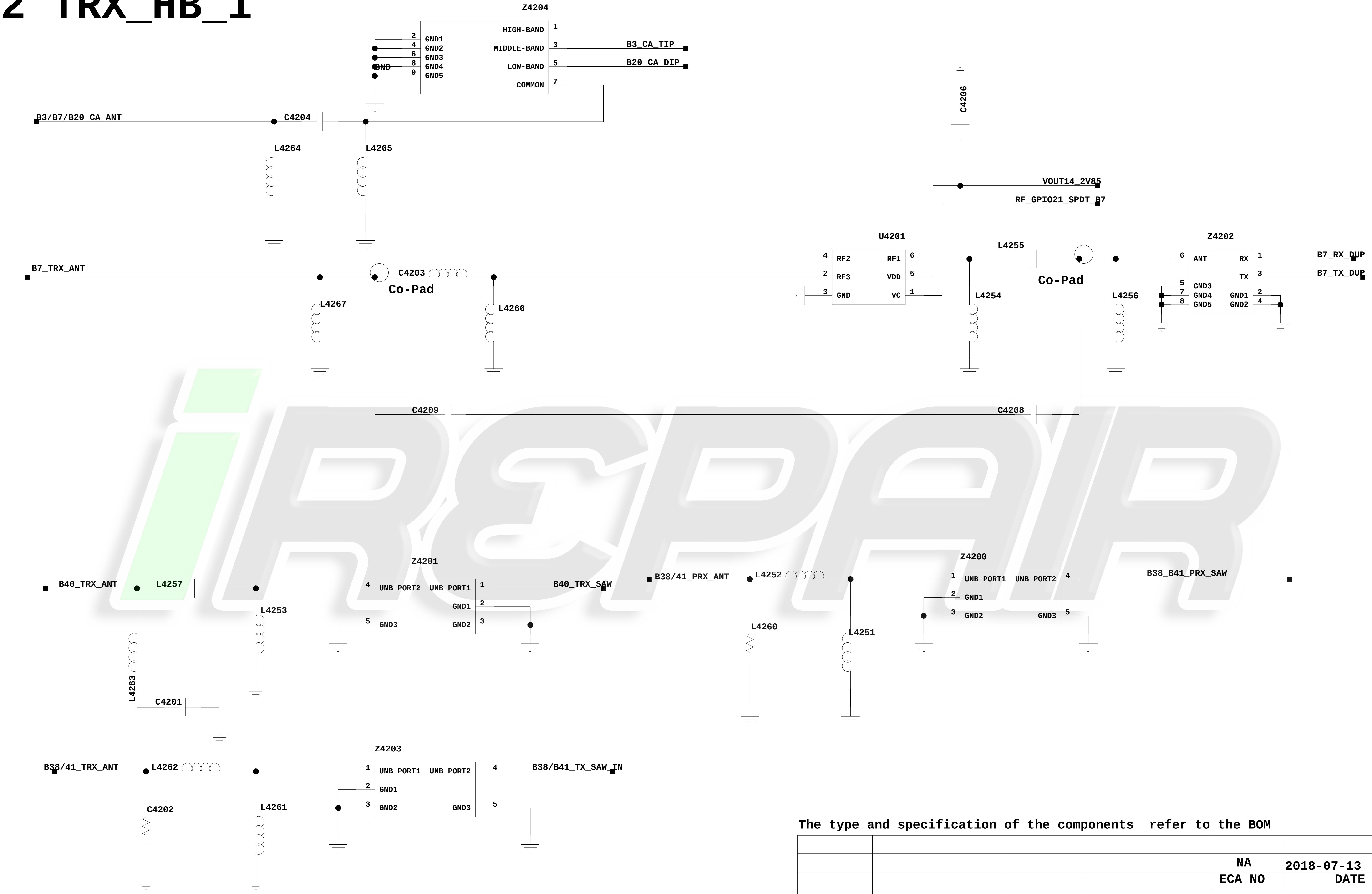
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 40 TRX_MB_1 OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

41 TRX_MB_2

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	41 TRX_MB_2 OF 60_Reserved
		E	03025HSD	HUAWEI TECH CO.,LTD.	

42 TRX_HB_1



The type and specification of the components refer to the BOM

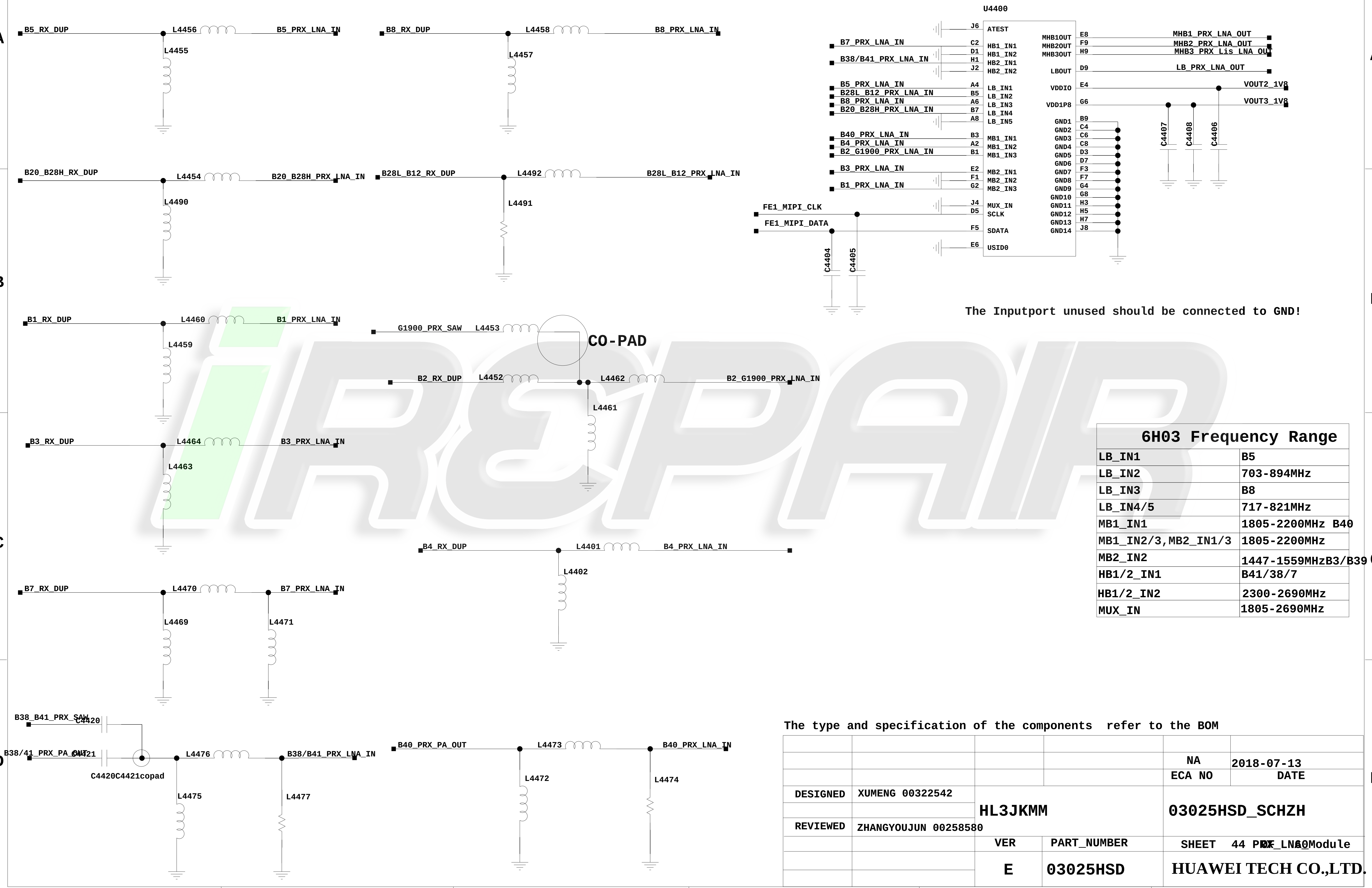
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 42 TRX_HB_1 OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

43. TRX_HB_2

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 43 OF 60 TRX_HB_2_Reserved	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

44. PRX_LNA_Module



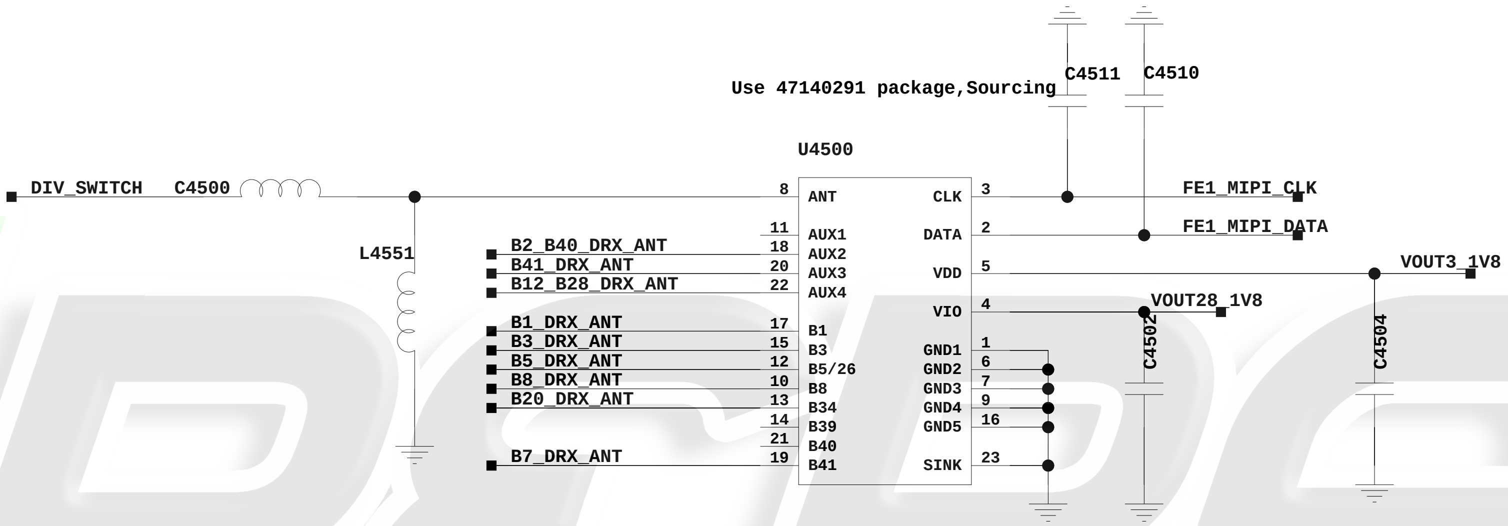
The Inputport unused should be connected to GND!

6H03 Frequency Range	
LB_IN1	B5
LB_IN2	703-894MHz
LB_IN3	B8
LB_IN4/5	717-821MHz
MB1_IN1	1805-2200MHz B40
MB1_IN2/3,MB2_IN1/3	1805-2200MHz
MB2_IN2	1447-1559MHzB3/B39
HB1/2_IN1	B41/38/7
HB1/2_IN2	2300-2690MHz
MUX_IN	1805-2690MHz

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 44 PRX_LNA_Module OF 180	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

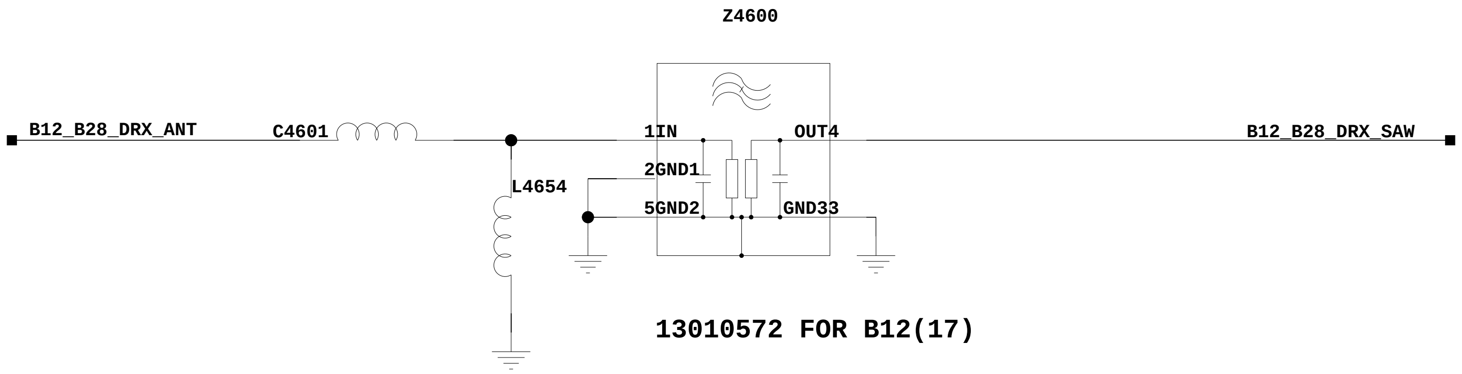
45.DRX_SWITCH



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 45 DRX_Switch OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

46. DRX_LB



13010572 FOR B12(17)

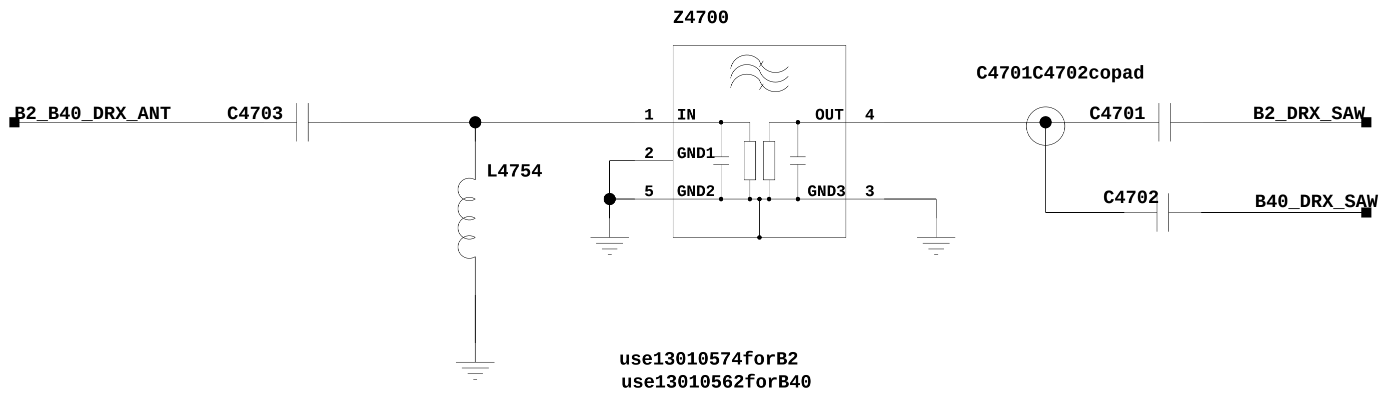
13010655 FOR B28(FullBand)

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 46 OF 60 DRX_LB	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

A B C D

47. DRX_MB

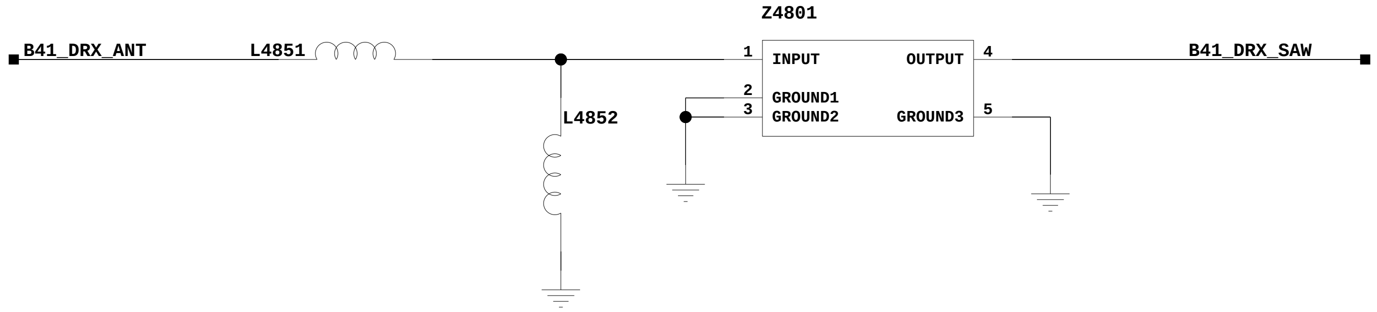


use13010574forB2
use13010562forB40

The type and specification of the components refer to the BOM

			NA	2018-07-13
			ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM	03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580			
		VER	PART_NUMBER	SHEET 47 DRX_MB OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.

48. DRX_HB

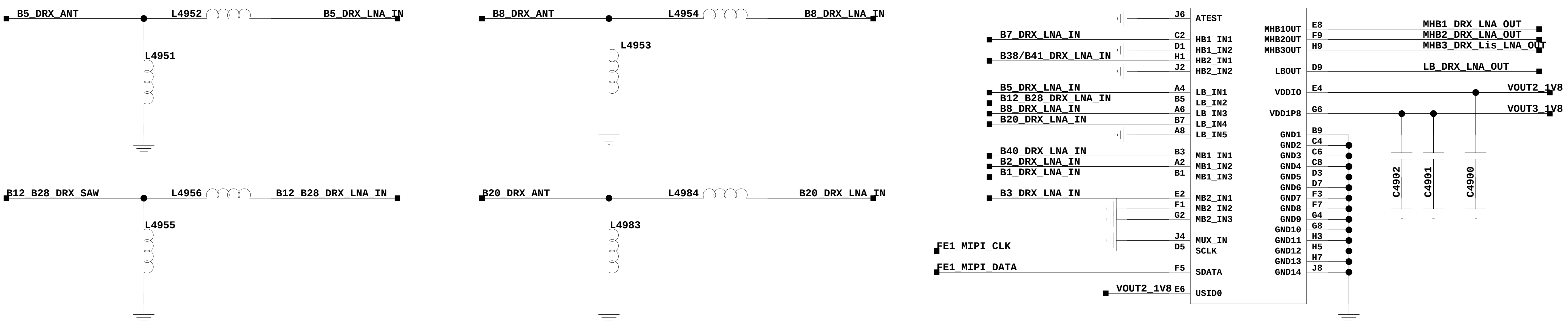


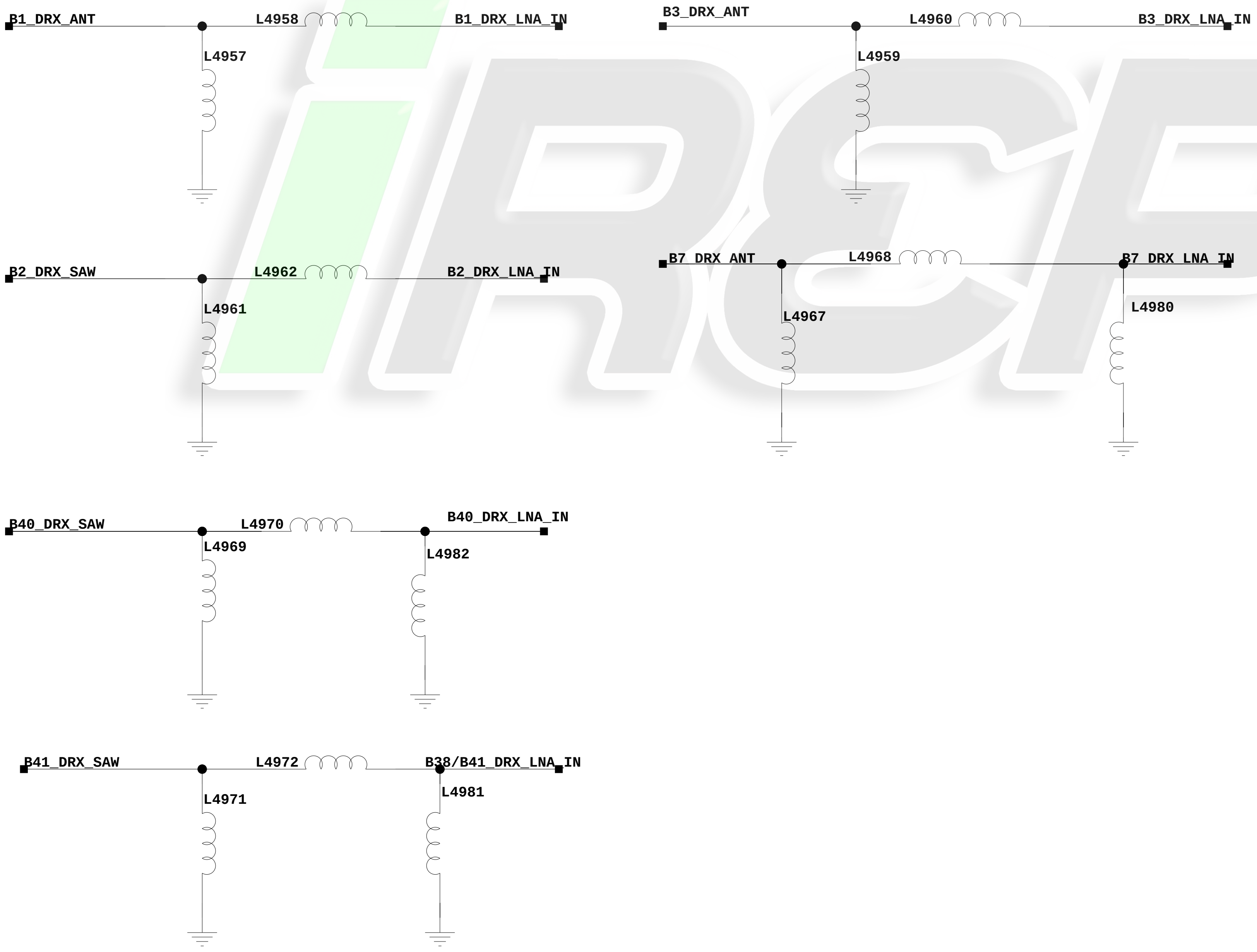
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	48 OF 60 DRX_HB
		E	03025HSD	HUAWEI TECH CO.,LTD.	

49. DRX_LNA_Module

The Inputport unused should be connected to GND!





6H03 Frequency Range	
LB_IN1	B5
LB_IN2	703-894MHz
LB_IN3	B8
LB_IN4/5	717-821MHz
MB1_IN1	1805-2200MHz B40
MB1_IN2/3,MB2_IN1/3	1805-2200MHz
MB2_IN2	1447-1559MHz,B3,B39
HB1/2_IN1	B41/38/7
HB1/2_IN2	2300-2690MHz
MUX_IN	1805-2690MHz

The type and specification of the components refer to the BOM

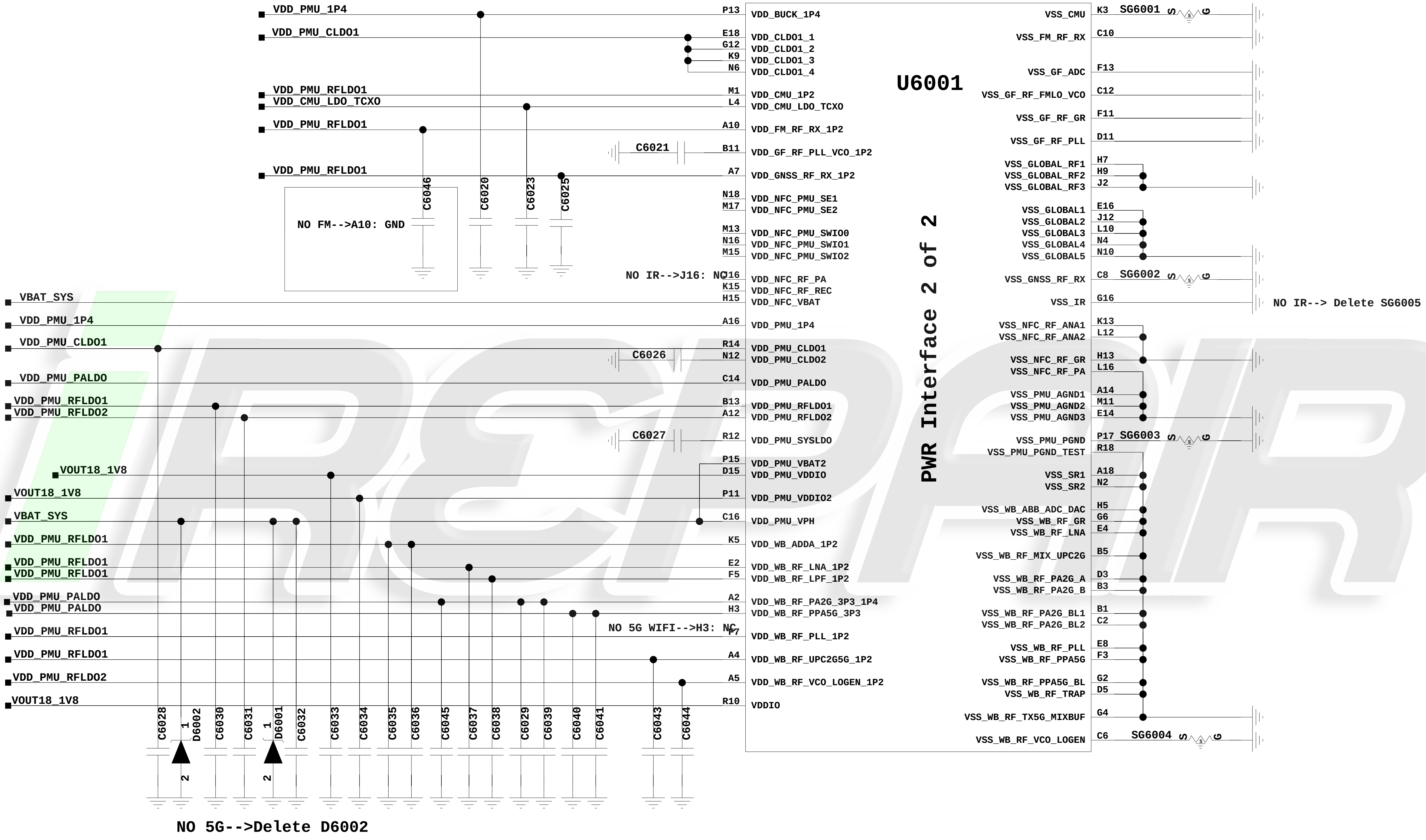
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	49 OF 60 DRX_LNA_Module
		E	03025HSD	HUAWEI TECH CO.,LTD.	

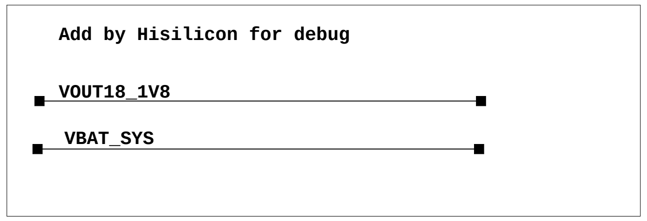
50. Reserved

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	50 Reserved
		E	03025HSD	HUAWEI TECH CO.,LTD.	

60 NC_POWER





Boston,Miami: VOUT2->VOUT18_1V8

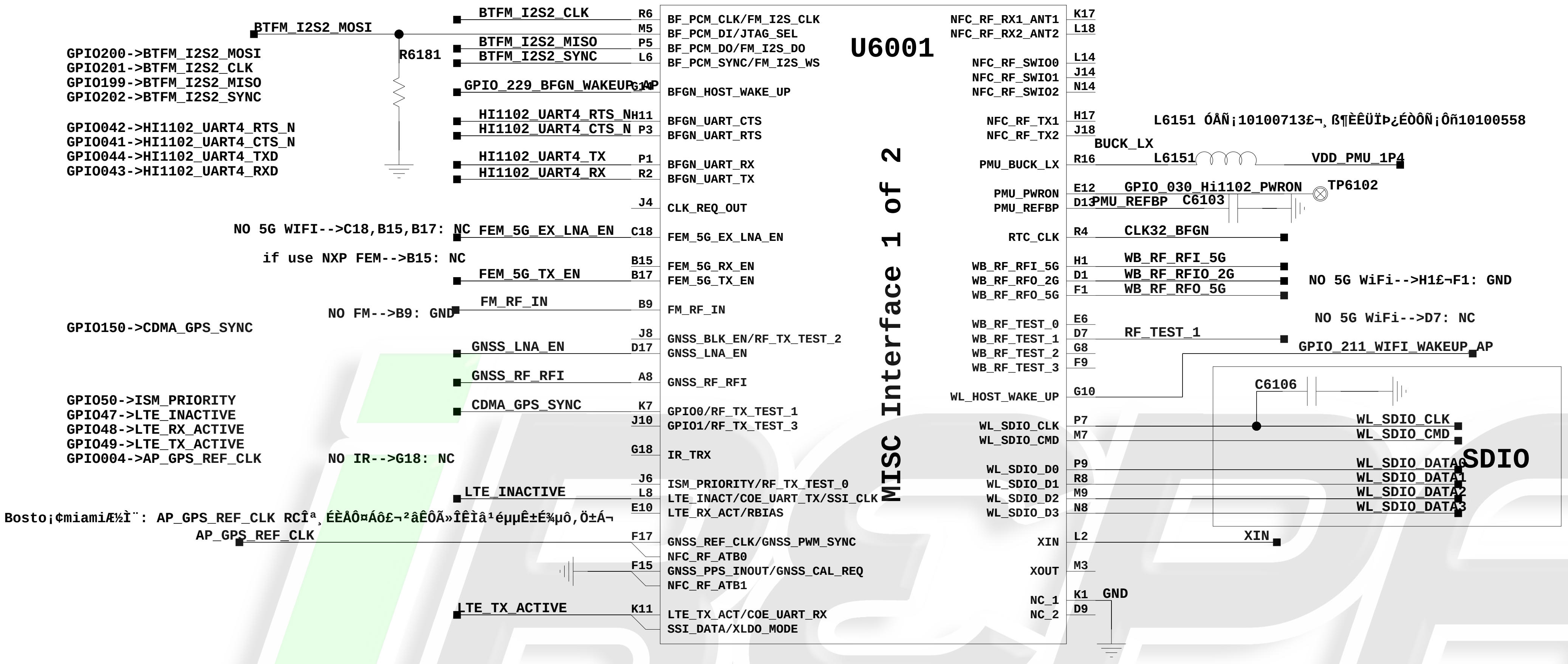
Chicago,Dallas: VOUT2

R6082¡¢R6083:Æ½Ì¨Ê×ÏîÄ¿ÊÔÖÆ±£ÁôÉ¬×îÖÕ¹éµµÊ±É¾µô,Ö±Á¬£»·ÇÆ½Ì¨Ê×ÏîÄ¿Ö±Á¬

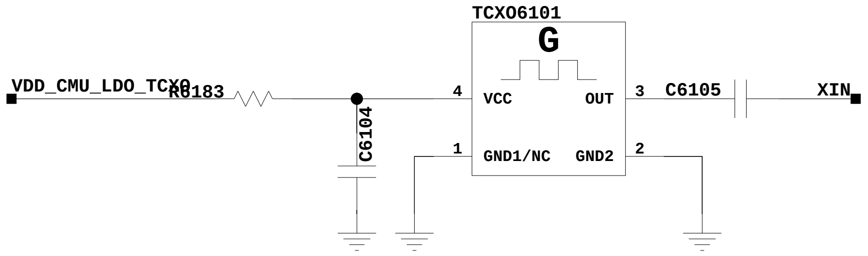
The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	60 NC_POWER OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.	

61 NC_BB



TCXO 38.4MHz



The type and specification of the components refer to the BOM

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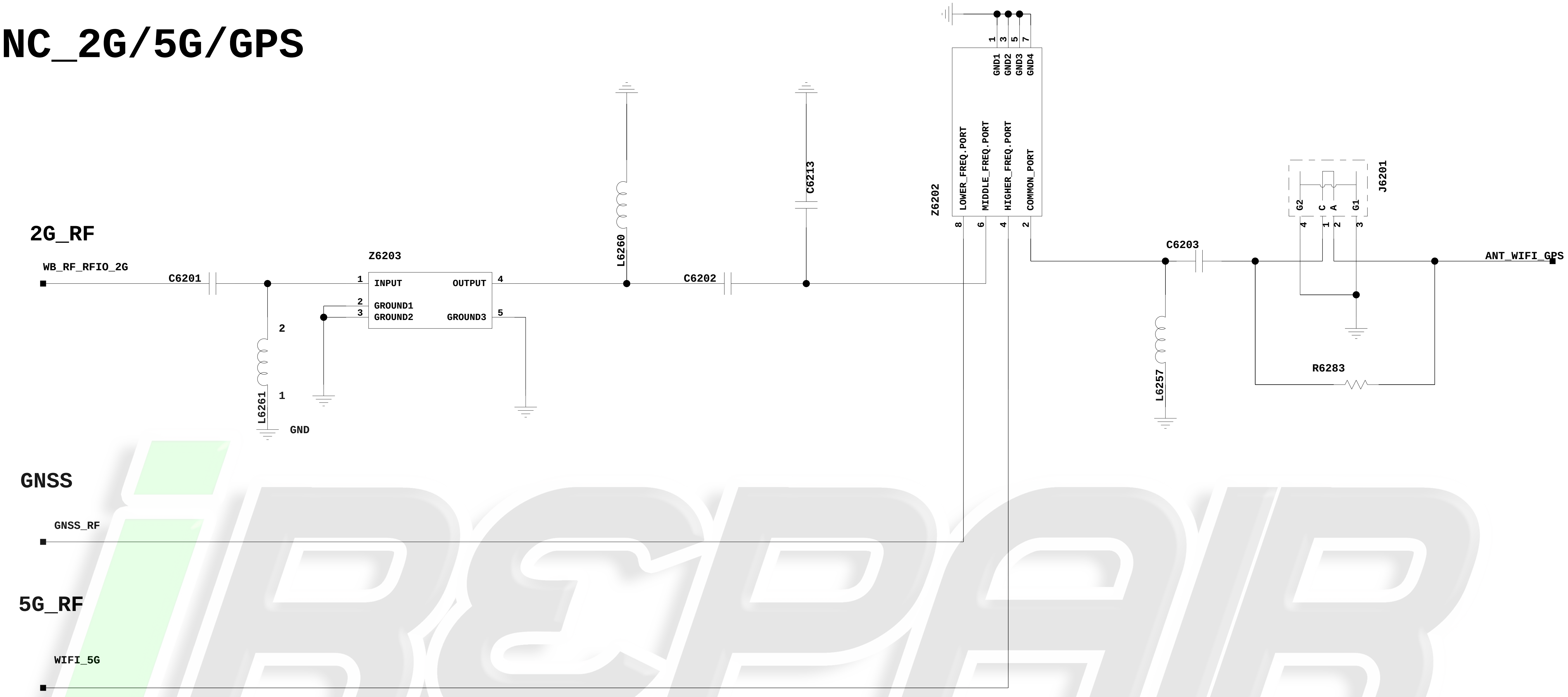
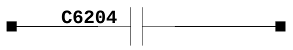
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 61 NC_BB_Miami OF	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

62 NC_2G/5G/GPS



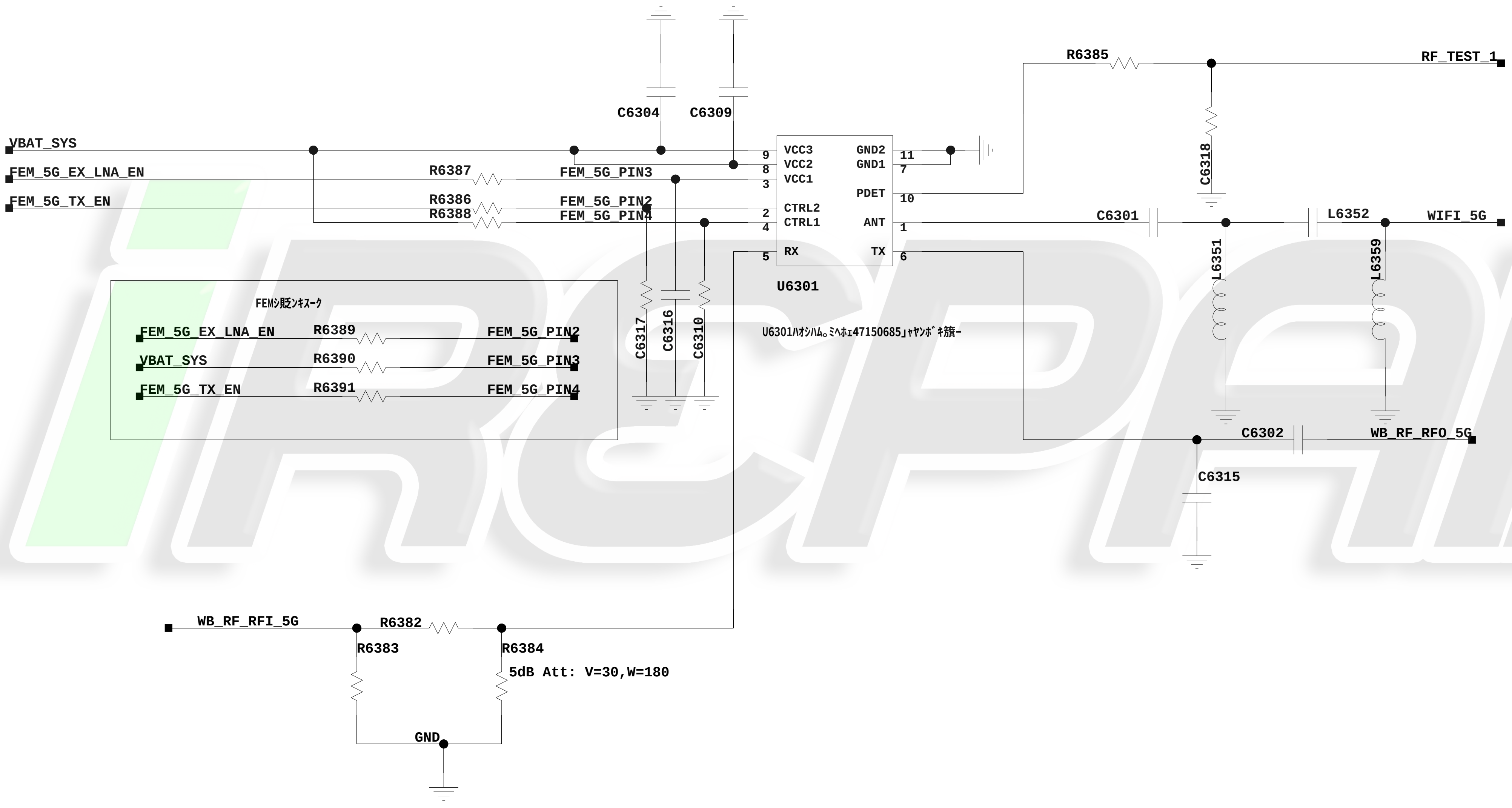
FOR PROTECT, DFX DEMAND



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 62 OF 60 NC_2G/5G/GPS	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

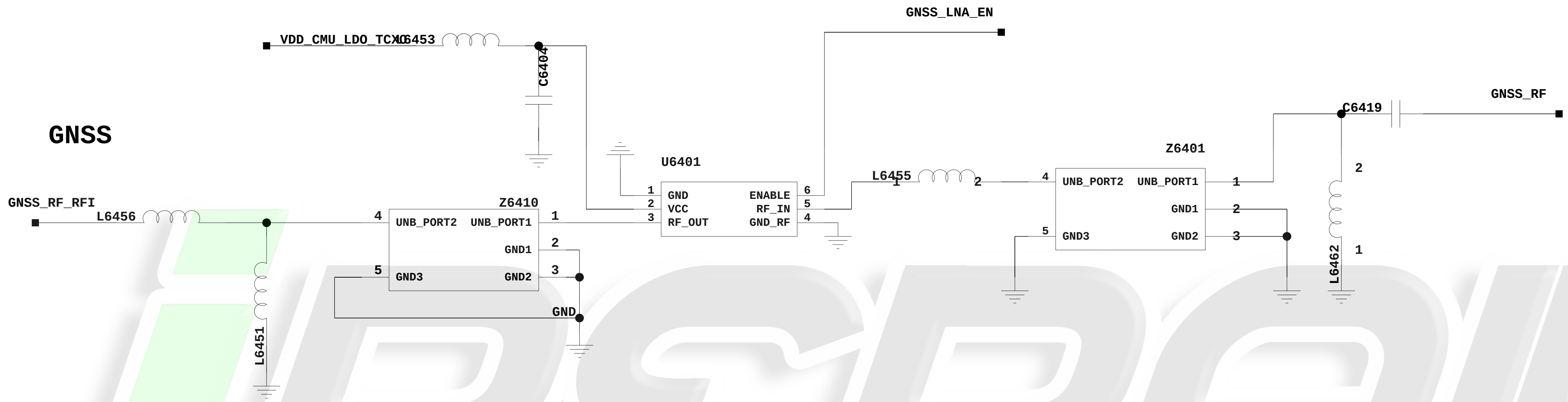
63 NC_FE_WIFI_5G



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	63 NC_FE_WIFI_5G_599 OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.	

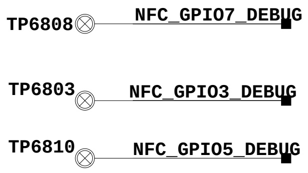
64 NC_GPS



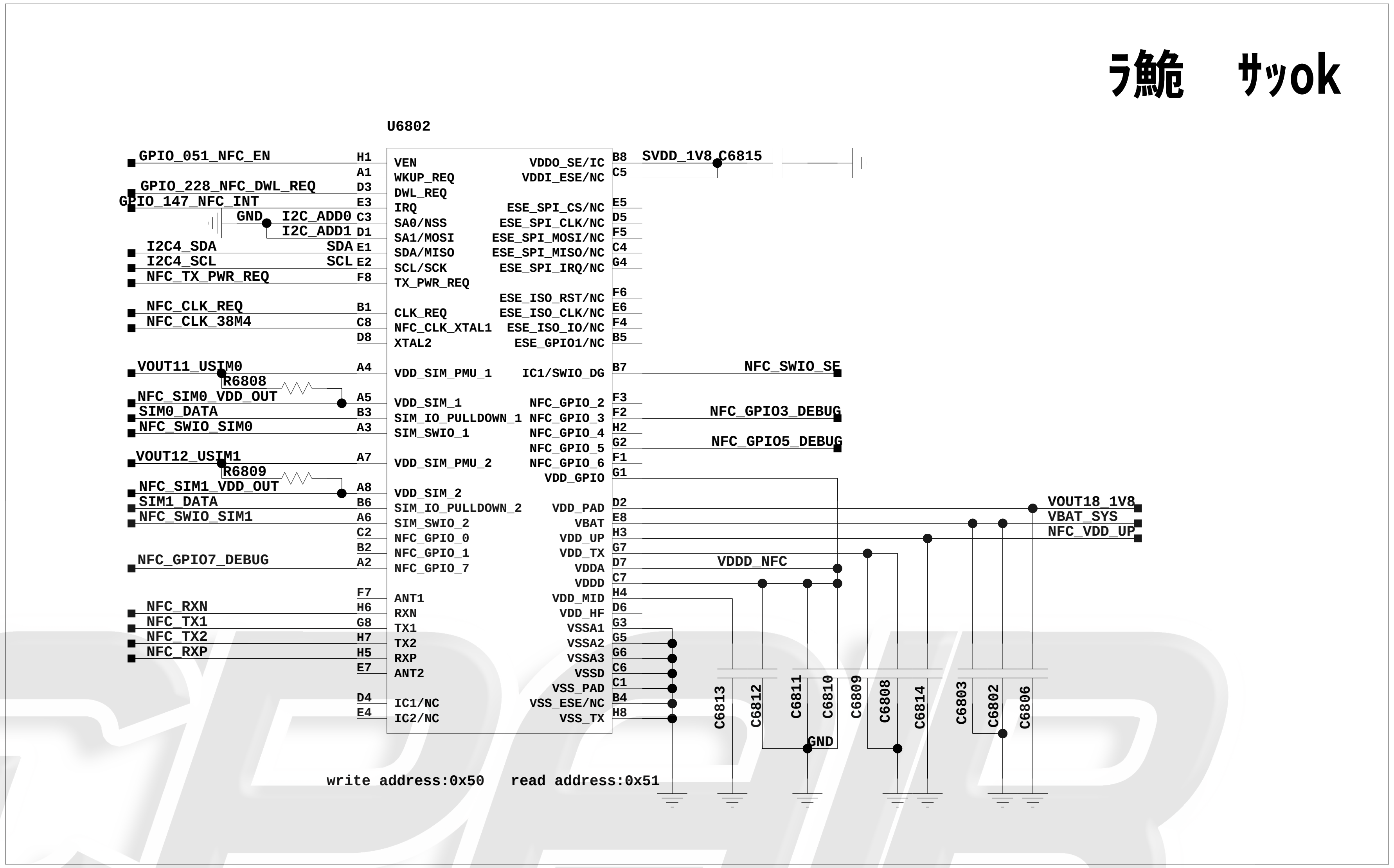
The type and specification of the components refer to the BOM

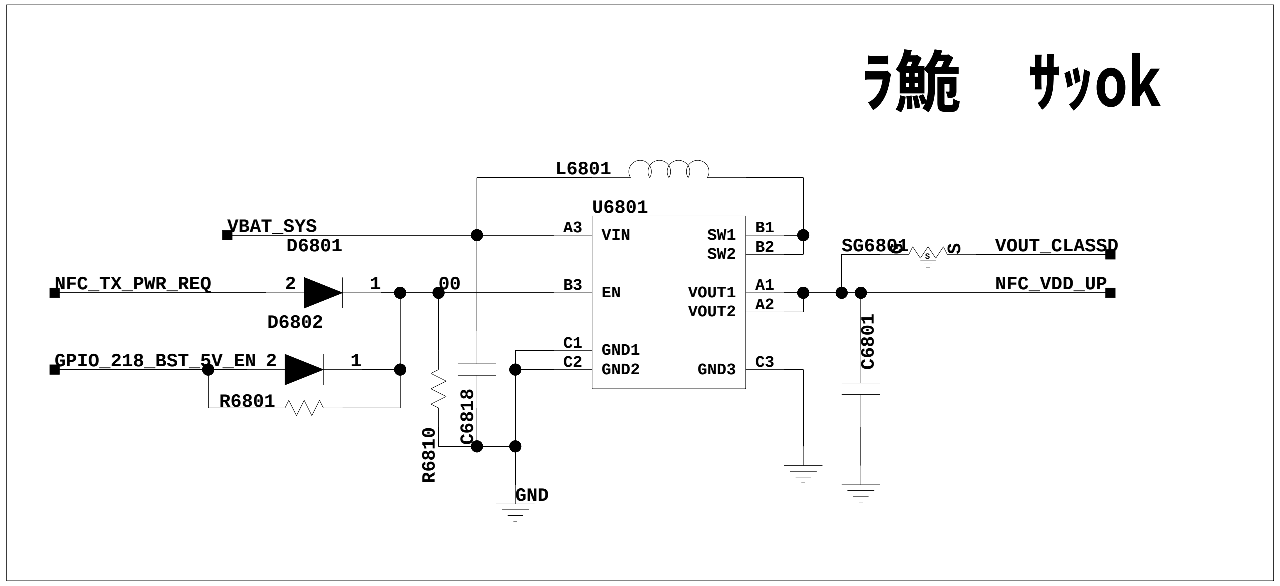
				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 64 NC_GPS OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

68. NFC_BB



page		With NFC	No NFC
page7	R710	SMT	DNI
	R711	SMT	DNI
	R731	DNI	SMT
page12	R1250	DNI	SMT
	R1205	SMT	DNI
page68	R6808	DNI	SMT
	R6809	DNI	SMT
	D6801	SMT	DNI
	D6802	SMT	DNI
	R6810	SMT	DNI
	R6801	DNI	SMT
	U6802	SMT	DNI
	C6802,C6803	SMT	DNI
	C6806,C6808	SMT	DNI
	C6809,C6810	SMT	DNI
	C6811,C6812	SMT	DNI
	C6813,C6814,C6815	SMT	DNI
	U6801	39111034	39110908

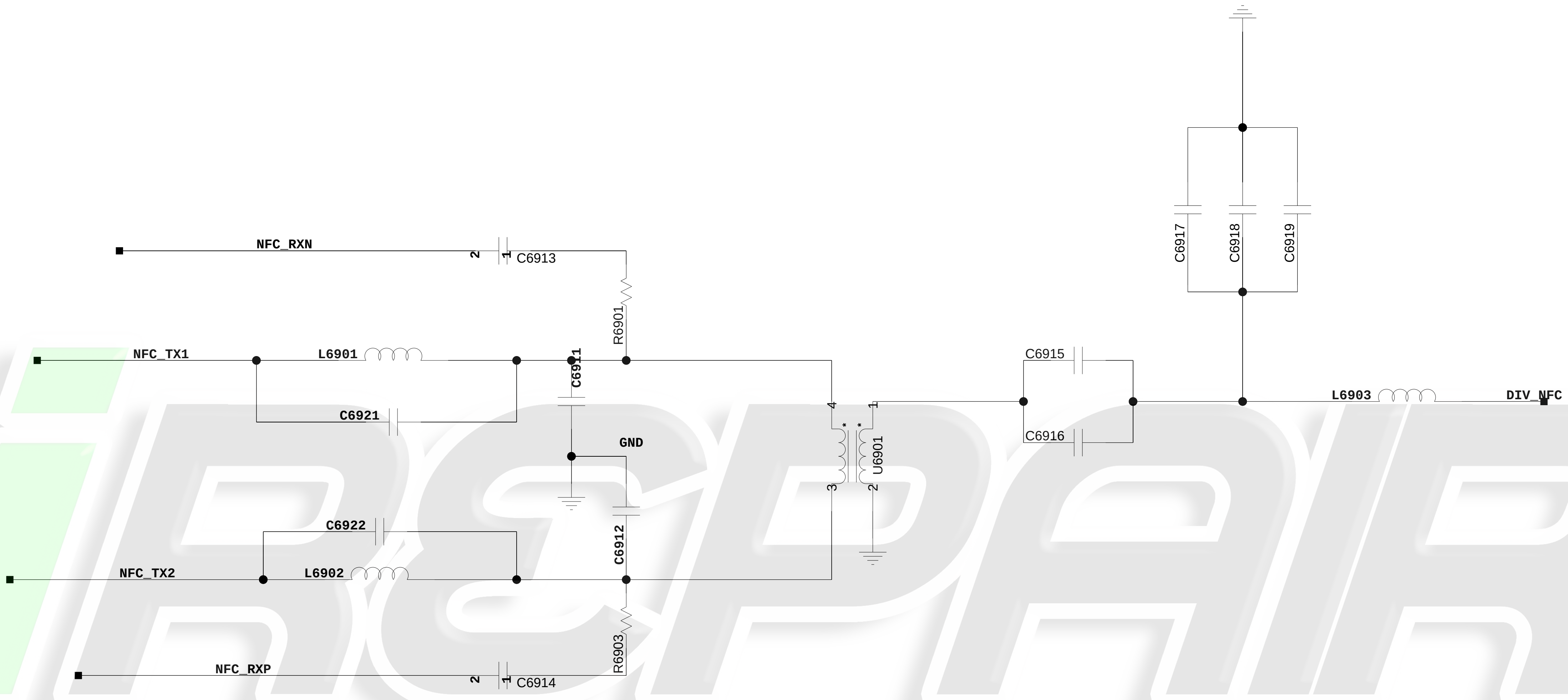




The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 68 NFC_BB OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

69. ANT_NFC



The type and specification of the components refer to the BOM

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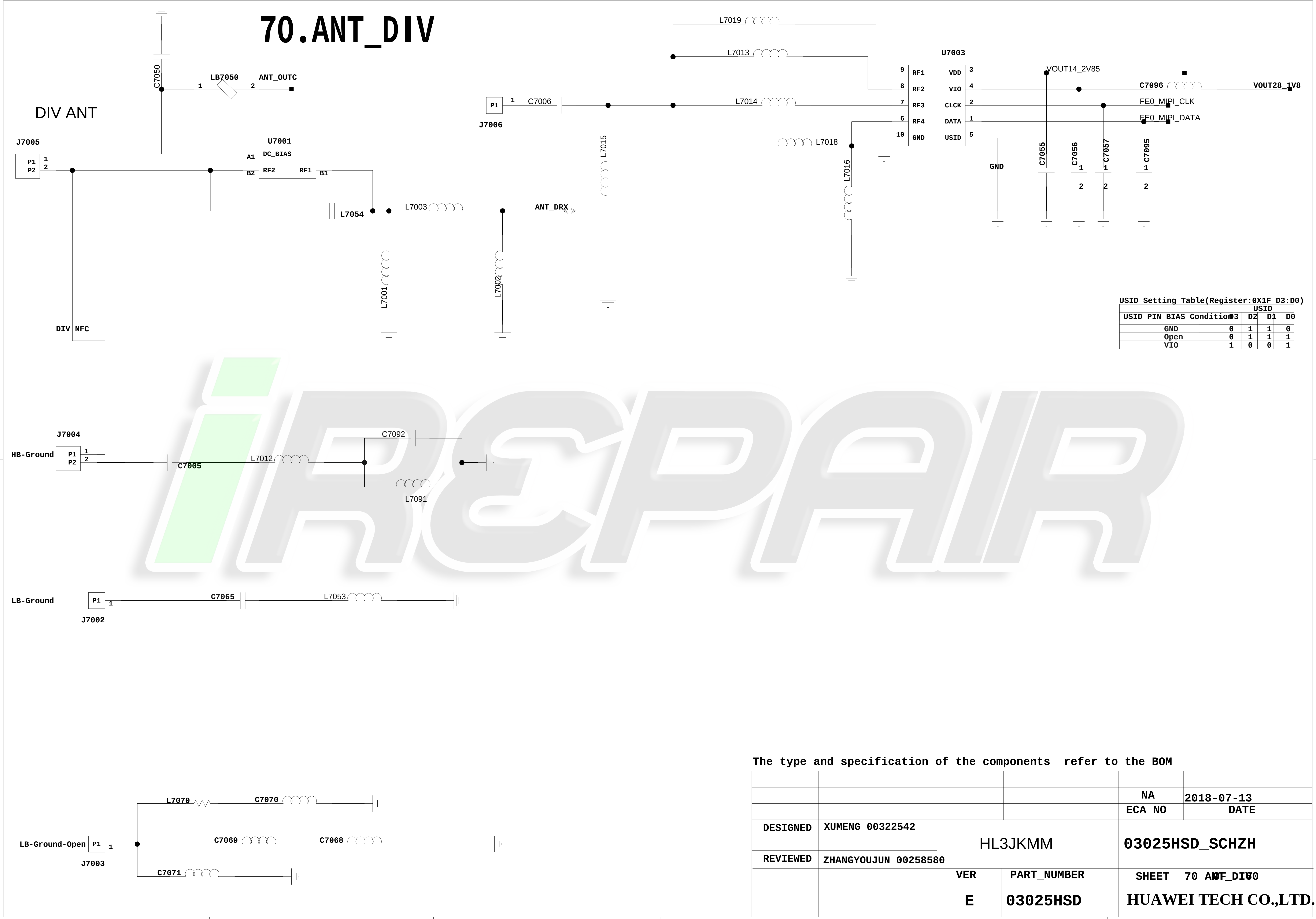
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 69 ANT_NFC OF 60	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

H5

70.ANT_DIV



USID Setting Table(Register:0X1F D3:D0)

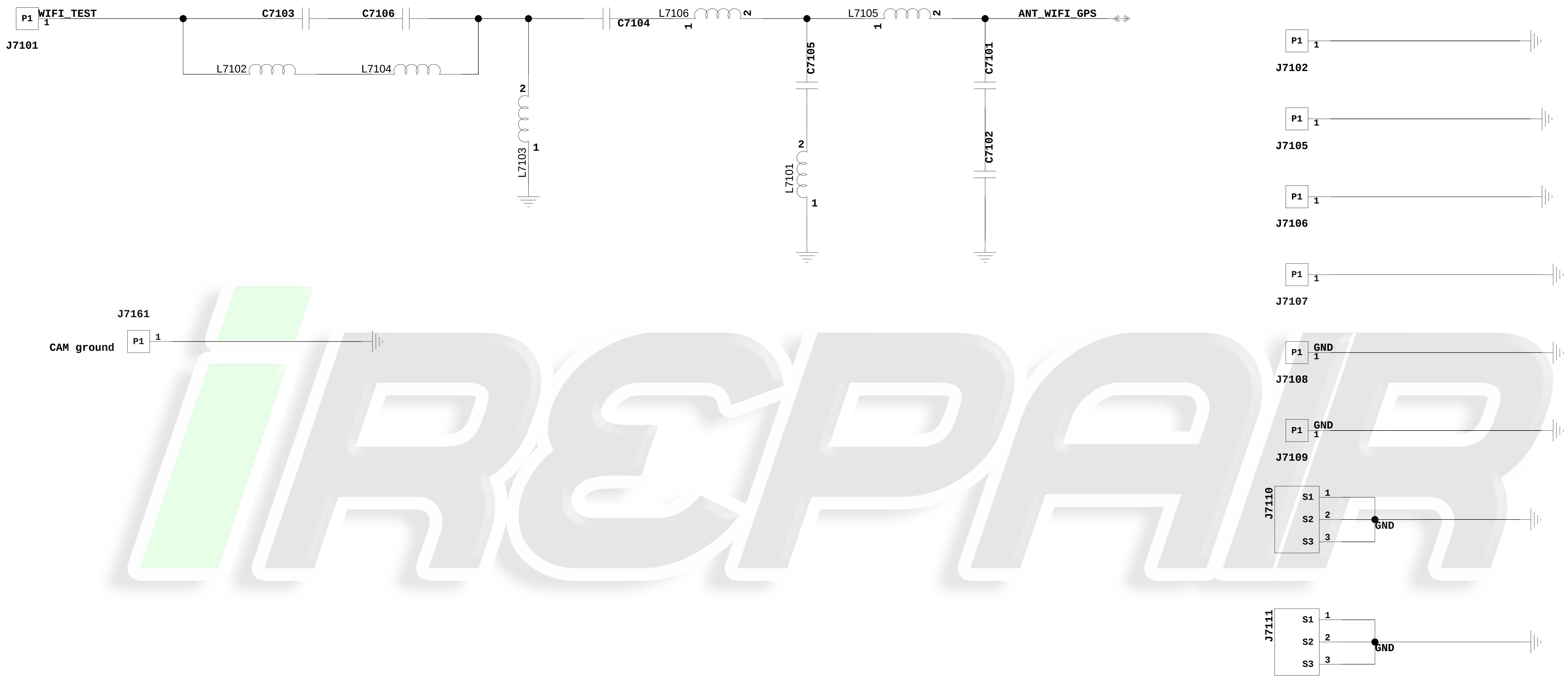
USID PIN BIAS Condition	USID			
	D3	D2	D1	D0
GND	0	1	1	0
Open	0	1	1	1
VIO	1	0	0	1

The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET 70 OF 80 ANT_DIV	
		E	03025HSD	HUAWEI TECH CO.,LTD.	

71 ANT_GPS_WIFI

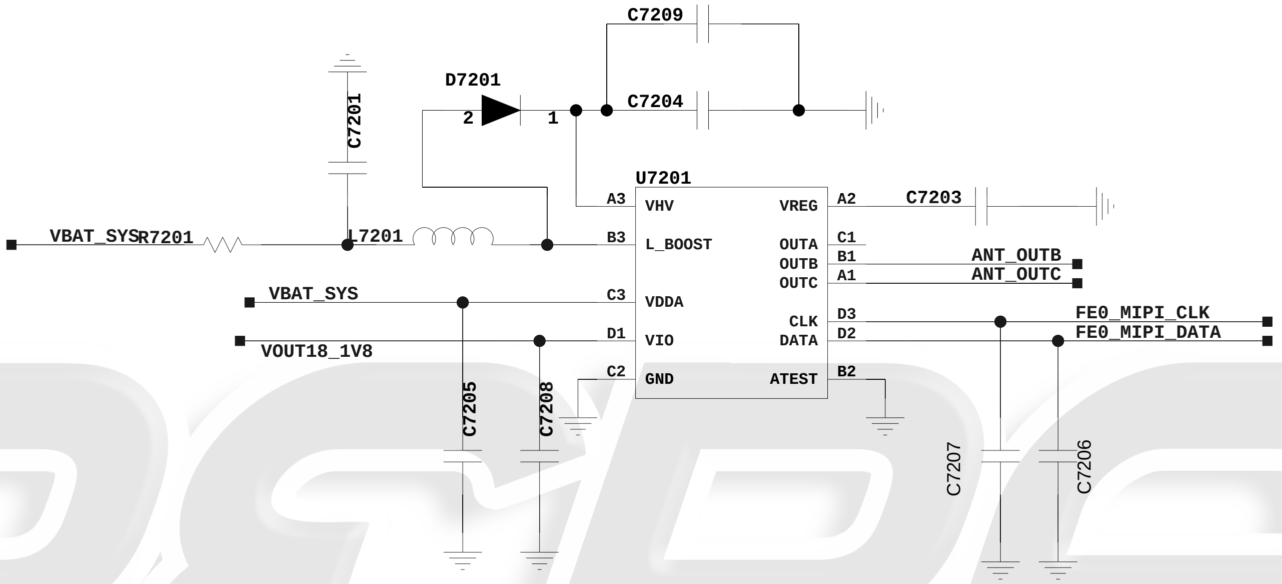
WIFI/GPS ANT



The type and specification of the components refer to the BOM

				NA	2018-07-13
				ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM		03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580				
		VER	PART_NUMBER	SHEET	71 ANT_GPS_WIFI OF 60
		E	03025HSD	HUAWEI TECH CO.,LTD.	

72.ANT_Tuner_Controller



The type and specification of the components refer to the BOM

			NA	2018-07-13
			ECA NO	DATE
DESIGNED	XUMENG 00322542	HL3JKMM	03025HSD_SCHZH	
REVIEWED	ZHANGYOUJUN 00258580			
		VER	PART_NUMBER	SHEET 72 OF 80 ANT_Tuner_Controlle
		E	03025HSD	HUAWEI TECH CO.,LTD.

Jackman Advanced Maintenance Manual

Prepared By	Yao Peng (employee ID: 00348433)	**Date**	2018-07-20
Reviewed By	Zhang Youjun (employee ID: 00258580)	**Date**	
Approved By		**Date**	

Huawei Technologies Co., Ltd.

Change History

Date	Version	Change Reason	Changed Section	Change Description	Prepared By
2018-07-20	V1.0	Released the first version.			Tang Dong (employee ID: 00323602)

Contents

1 Introduction

1.1 Applicable Scope

The Jackman Maintenance Manual is available in the simplified and advanced versions. The two versions are respectively applicable to common service centers and high-level repair centers (HLRCs) authorized by Huawei. This document provides repair instructions for technicians at HLRCs to conduct maintenance services of level 3. For maintenance services of level 1 and level 2, see the simplified maintenance manual. Being Huawei proprietary, this document is accessible only to authorized services centers (ASCs). Although every effort was made to ensure the accuracy of the document, errors may still exist. If you find any errors or have any suggestions, report them through Huawei service platform ComPartner.

1.2 Introduction

This document introduces the product's working principles, functions of PCBA components, maintenance workflow, and common troubleshooting methods. You will be able to rectify difficult faults in the product after you learn this document.

1.3 Obtaining Product and Maintenance Information

To obtain product and maintenance information, visit Huawei's service website. You are recommended to install the ComPartner platform to download maintenance-required tools and software.

To obtain the ComPartner installation package, log in to http://support.huaweidevice.com/service/, and search for **ComPartner**. You will then find the installation package.

2 Product Introduction

2.1 Product Appearance

2.2 Specifications

Item	**Description**	
Dimensions (H x W x D)	162.4 mm x 77.1 mm x 8.05 mm	
Technical standards	WCDMA/HSDPA/HSUPA: 3GPP and FDD Release 10 TD-LTE/FDD-LTE TDS-CDMA CDMA 1X/EV-DO GSM/GPRS/DEGE	
Frequency band	TD-LTE: B38/B39/B40/B41 (2545–2655 MHz, supporting AXGP) FDD-LTE: B1/B3/B5/B8 (for FDD-LTE with changed BOM: B7 and B26) TD-SCDMA: B34/B39 WCDMA: B1/B5 (roaming)/B8 CDMA: 1X and EV-DO BC0 GSM: B2 (roaming)/B3/B8	
Weight	About 173g (with battery)	
Appearance	Bar type	
Antenna	Built-in antenna	
SIM/USIM	Standard 6-pin SIM card interface, supporting the 1.8/3 V USIM card	
Charging	5 V and 2 A	
Battery	4000 mAh	
Cameras	Rear camera	CMOS 13 MP+2 MP

Item	Description	
	Front camera	CMOS 16 MP
Screen	Resolution	1080 pixels x 2340 pixels
	LCD type	LTPS
	Color level	16.7M
	LCD size	6.5 inch
Ports	Charging port	micro USB port
	USB data cable port	micro USB port
	microSD card port	Capacity: 256GB
	Headset jack	3.5 mm binaural stereo headset
Bluetooth	Bluetooth 4.2	
Wi-Fi	AL00/LX1C: 802.11 a/b/g/n/ac 2.4 GHz/5 GHz HT20, HT40, and HT80 supported TL00/LX1/LX2/LX3: 802.11 b/g/n 2.4 GHz HT20 and HT40 supported	
USB	USB 2.0, 480 Mbit/s	
Radio	Built-in radio	
GPS	GPS/GLONASS/BeiDou Navigation Satellite System (BDS)	

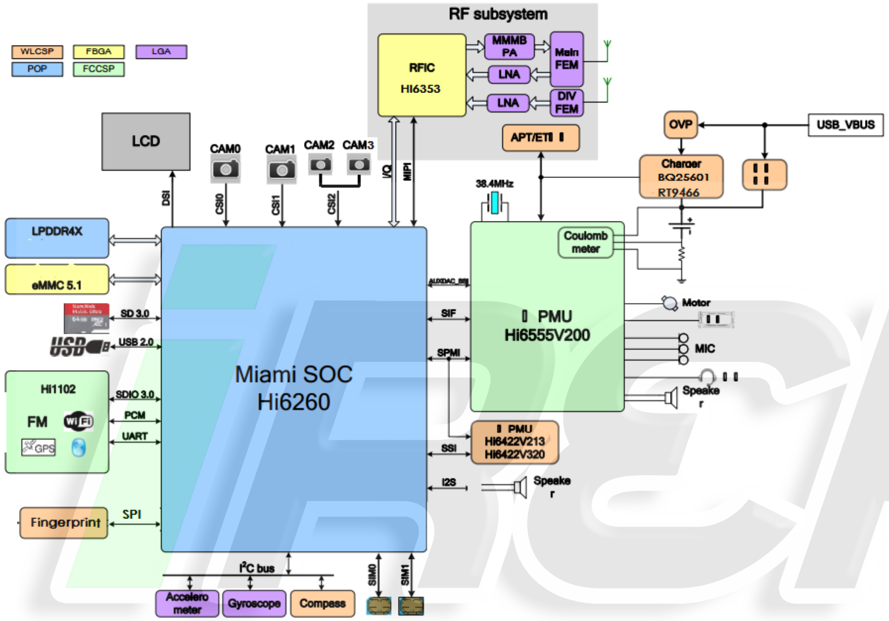
Item	Description
Storage	Separation solution: 4 GB LPDDR4X+64 GB eMMC 4 GB LPDDR4X+128 GB eMMC 6 GB LPDDR4X+64 GB eMMC 4 GB LPDDR4X+32 GB eMMC 3 GB LPDDR4X+64 GB eMMC Integration solution: 4 GB LPDDR4X+64 GB eMMCP 4 GB LPDDR4X+128 GB eMMCP
Maximum transmission power	CDMA 2000 MHz: 23–26 dBm (Power Class 2) TD-LTE Band 34/38/39/40/41: 19.5–25 dBm (Power Class 3) FDD-LTE Band 1/3/5/7/8: 19.5–25 dBm (Power Class 3) WCDMA: 19.5–25 dBm (Power Class 3) GSM 900 MHz: 33 dBm (Power Class 4) DCS 1800/1900 MHz: 30 dBm (Power Class 1)
Static sensitivity	EGSM/DCS/PCS (GSM 900/1800/1900): higher than –102 dBm/200 kHz CDMA2000 1X: higher than –104 dBm/1.23 MHz CDMA2000 EV-DO Rev.A: higher than –105.5 dBm/1.23 MHz FDD-LTE Band 1/3/5/7/8: higher than –100 dBm/5 MHz TD-LTE Band 34/38/39/40/41: higher than –98 dBm/5 MHz WCDMA Band 1/2/5/8: higher than –104 dBm/5 MHz
Temperature	Operating temperature: –20ºC to +60ºC (not being charged) Storage temperature: –20ºC to +35ºC, shorter than six months

Item	Description
Humidity	Operating humidity: 5% to 95% RH

Specifications vary by product version. For details, see the product overview document.

3 PCBA Working Principle

The conceptual block diagram is shown in the following figure.



The Hi6260 is an SoC that supports photo taking, HD video codec, 3D games, and other multimedia applications, as well as communication service applications. This chip includes the application processor ACPU, MCU, GPU, video codec, ISP, DSS, and other hardware acceleration modules, GUTCL Modem Baseband used for communication service processing, DDR controller module, as well as other external on-chip components including I2C and UART.

The Hi6555 supplies power to the memory, Wi-Fi, GPS, RF, and other external components, and controls the power-on and power-off sequence of the entire system and low power consumption. The Hi6555 also provides the overall reset signal output of the hardware subsystem, 32.768 kHz sleep clock, RTC, and the HKADC module that detects the hardware subsystem status.

The Hi6353 is the RF signal processing chip to realize the wireless data transmission and reception, with support for GSM (including EDGE), WCDMA, TDS, CDMA, and LTE modes, and diversity reception.

Based on the logical functions, the board can be divided into four subsystems: baseband, RF, power supply, and user interfaces. The following table describes the modules and units subordinated to each subsystem and their functions.

Subsystem	Module	Unit	Function
Baseband	Hi6260	Application unit	4 x Cortex A53 macrocore+4 x Cortex A53 microcore processor, communicates with the GPU module, camera module, video module, communication module, and LPDDR3 module through the internal bus, and connects to the SDIO, I2C, SPI, UART, USB, and other controllers, as well as the PHY through the internal bus.
		User interface processing unit	The Hi6260 is an SoC that supports photo taking, HD video codec, 3D games, and other multimedia applications, as well as communication service applications. This chip includes the application processor ACPU, MCU, GPU, video codec, ISP, DSS, and other hardware acceleration modules, GUTCL Modem Baseband used for communication service processing, DDR controller module, as well as other external on-chip components including I2C and UART.
		Multimedia and game engine	Provides the MPEG/JPEG hardware engine, game engine, JAVA accelerator, and MP3/MMS/MIDI functions.
		Modem unit	The protocol processor includes one Cortex A7 processor and two BBE16 DSPs. The baseband part includes the ABB and DBB for analog and digital baseband processing respectively.
	Hi6555	PMU	The Hi6555 is an integrated chip of power management, audio codec management, and multiple interfaces, supporting smartphones and tablets. It provides four BUCKs, thirty-two LDOs, one low voltage switch, one 13-channel, 12-bit HKADC, analog signal that can detect thirteen external channels, two 10-bit DACs, 32 kHz and 19.2 MHz clocks, five LED current-driven ports, SSI high-speed bus interface, and abnormal terminal signal output.
	Hi6422	Secondary PMU	The Hi6422 is a four-phase BUCK power supply chip for the SoC's ACPU macrocores, ACPU microcores, and GPU. It provides four BUCKs, SSI high-speed bus interface, abnormal terminal signal output, undervoltage/overvoltage protection, overheat protection, and overcurrent protection.

Subsystem	Module	Unit	Function
	eMMC	eMMC features, power consumption, and file system support	This module stores programs and NV items. The storage is 64 or 128 GB.
	LPDDR4 RAM		RAM for running applications, 4 GB/6 GB
	Crystal oscillator and frequency synthesizer	38.4M DCXO	This module generates the highly accurate 38.4MHz local reference clock.
RF	GSM transmission and reception		This module performs the RF function of GSM signal transmission and reception. It includes the RF chip, PMU, and peripheral circuits.
	GPS	GPS signal reception unit	This module receives and processes GPS signals, mainly including the Hi1102 chip and peripheral circuits.
	Bluetooth interface	Bluetooth unit	Implements the Bluetooth baseband function, and transmits and receives RF signals. The module mainly includes the Hi1102 and its peripheral circuits.
	Wi-Fi interface	Wi-Fi unit	This module implements the Wi-Fi baseband function, and transmits and receives RF signals. The module mainly includes the Wi-Fi part of the Hi1102 and peripheral circuits.
	Crystal oscillator	38.4 MHz TCXO and control circuit	This module generates the highly accurate 38.4 MHz TCXO.
	Antenna	External antenna, internal interface components, and antenna protection	This unit provides built-in antennas for communication. It supports WCDMA high and low frequency bands. EDGE+ phone's antennas include the main antenna, Wi-Fi/Bluetooth/GPS antenna, NFC antenna (supported on some editions), and GSM antenna for the secondary SIM card.

Subsystem	**Module**	**Unit**	**Function**
User interface	UART interface		UART3 is used for the Bluetooth, Wi-Fi, and FM chips.
	USB interface	Drive, protective circuits, and output interface components	Includes the unit circuits, such as the peripheral USB interface circuits, protective circuits, and interface connectors in the SoC and MHL subsystems. It is a main data service channel for engineering prototypes and is also used for device commissioning and testing during the R&D process.
	SIM card interface	Power supply, protective circuits, and SIM card holder	Refers to the SIM card holder and connected circuits.
	Keypad and backlight	Keypad drive circuit, external keypad, and LED backlight control circuit	The volume buttons are monitored using the interruption monitoring method through the GPIO.
	Color LCD and backlight	LCD drive, interface mode, and backlight control	The main LCD is of 1920 x 1080 pixels. The LCD backlight brightness adopts CABC.
	Speaker	Drive mode, connection mode, and speaker components	Plays polyphonic ringtones for incoming calls. The maximum power of the speaker is 500 mW. This module features good frequency response to play 20 Hz to 20 kHz audio files and can also be used as a mono speaker to play MP3 files.
	Receiver	Drive mode, connection mode, and receiver components	The power of the receiver for calls must be less than 30 mW.

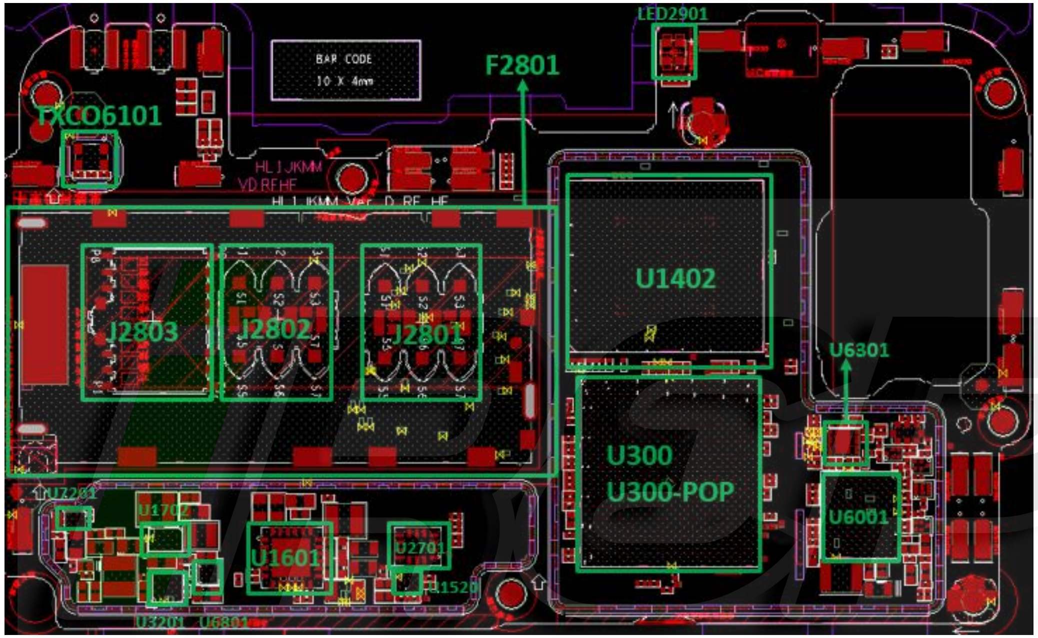
Subsystem	Module	Unit	Function
	Microphone	Interface circuit, connection mode, and microphone components	This module is a built-in microphone, with dual silicon microphone noise reduction.
	Headset	Headset, headset jack circuit, and microphone interface circuit	The phone provides a headset jack for call output and MP3 output. The microphone is located on the headset wire to pick up sound.
	Motor interface	Drive mode, connection mode, and motor	The motor vibrates when a call comes in.
	Accelerometer	I2C interface control	Senses acceleration. It is an auxiliary module of the game engine.
	Gyroscope	I2C interface control	Uses the 3-axis angular rate sensor.
	Compass	I2C interface control	Uses the geomagnetic sensor.
	Proximity sensor	I2C interface control	Senses ambient light and proximity light.
	(Optional) barometer	I2C interface control	This module senses the barometric pressure.
Power supply	Built-in battery	Li-ion battery and interface component	Li-ion polymer battery with standard output of 4.4 V/4000 mAh. It is required that the charge/discharge lifecycle is greater than 500 times. The battery must meet the GB/T 18287 standard.
	Power distribution network and power	Power distribution network	Includes filtering networks and cables for the power supply.
		Backup battery management	PMIC charges the capacitor for maintaining the RTC current.

Subsystem	Module	Unit	Function
	management	Power management of PCBA circuits (power-on and power-off analysis)	This unit indicates the LDO, which flexibly manages the power supply. The PCBA software manages power supplies to circuits on the PCBA based on the service status, protocols, or power-saving analysis to reduce power consumption. The three-channel 32 kHz clock is provided.
		Voltameter	Supports management of built-in and removable batteries, I2C bus communication, battery detection, and battery level inspection in different scenarios.
		Charging IC	Supports dynamic path management, charges the battery while providing power, and prioritizes power supply.
		RF PMIC	Provides the RF core voltage.

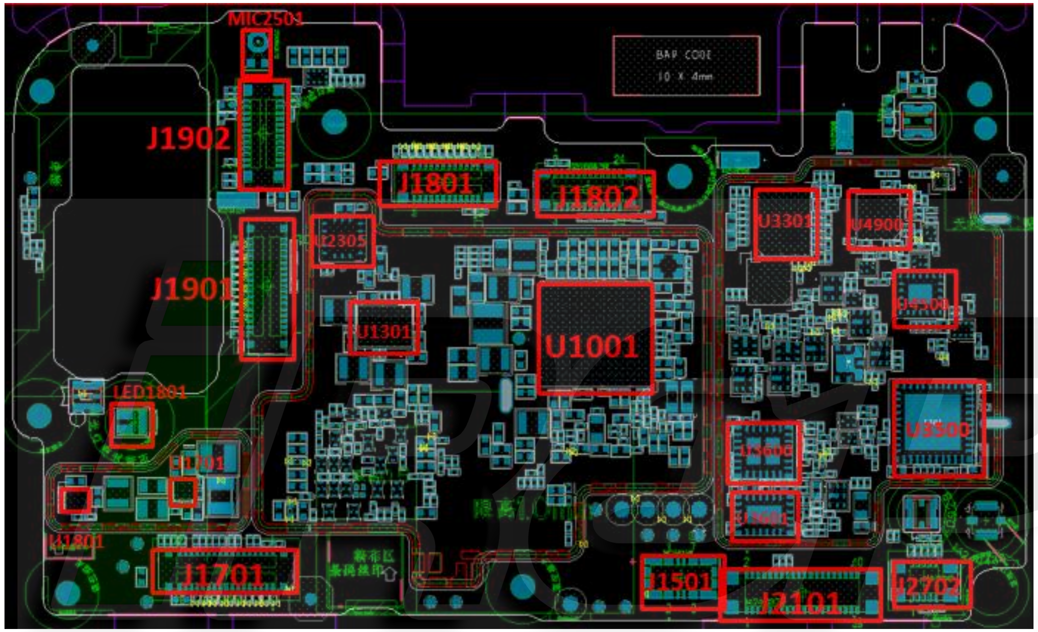
4 PCBA Components and BOM Information

The layout of PCBA components is shown in the following figures.

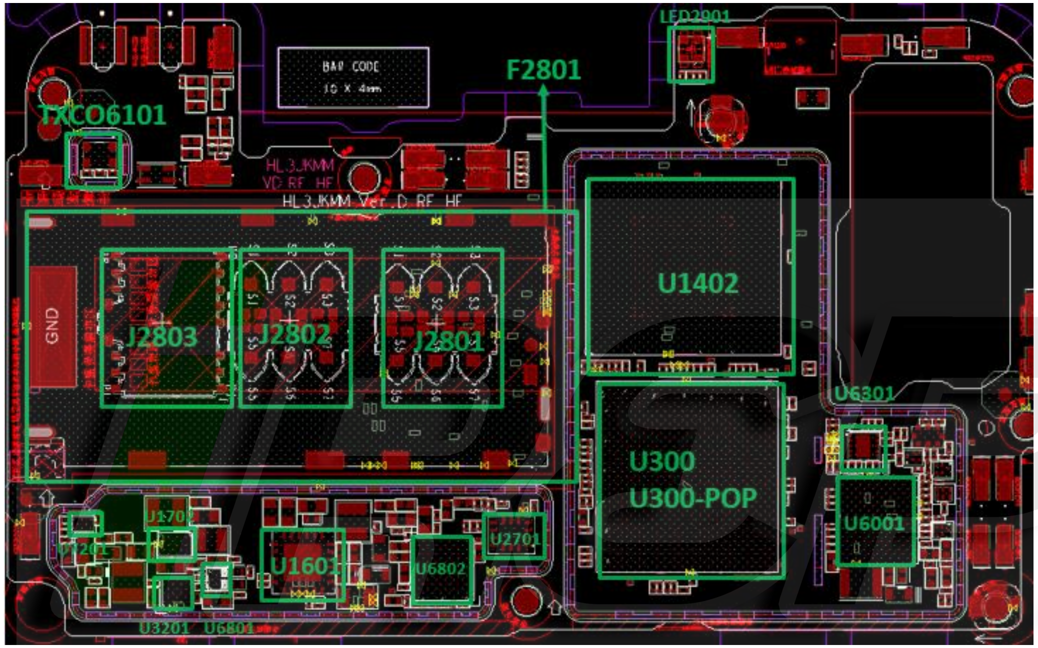
PCBA components on the top side are shown in the following figure.



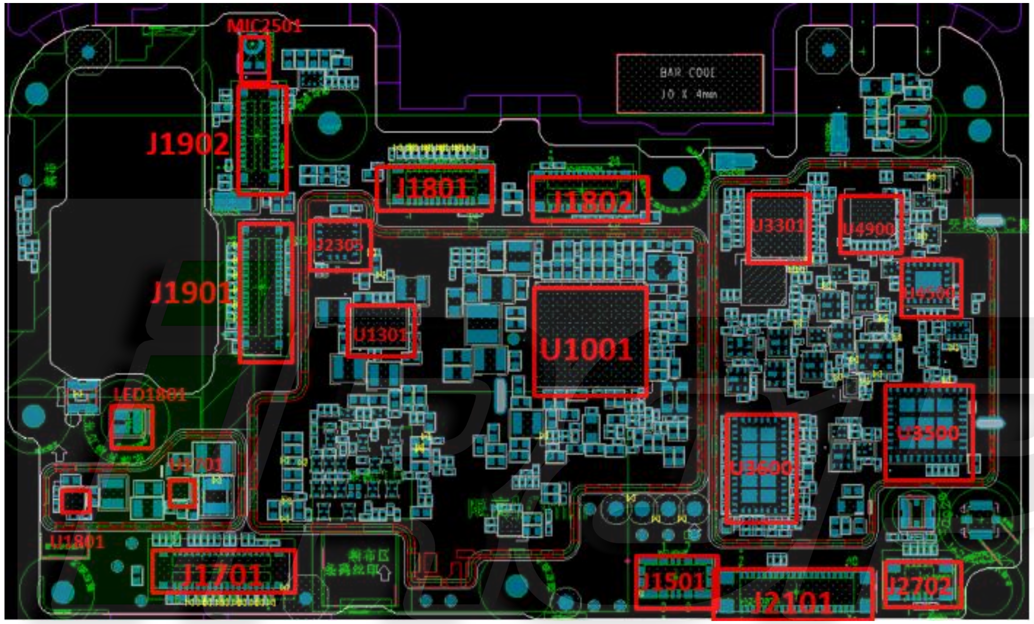
PCBA components on the bottom side are shown in the following figure.



Components on the top side of the PCBA for regions outside of China are shown in the following figure.



Components on the bottom side of the PCBA for regions outside of China are shown in the following figure.


MIC2501
BAR CODE
10 X 4mm
J1902
J1801
J1802
U3301
U4900
U2305
J1901
U4500
U1301
U1001
LED1801
U3500
U1701
U3600
U1801
J1701
J1501
J2101
J2702

4.1 Material BOM Information

Table 4-1 BOM information about components the top side

No.	Designator	Item	BOM Code
1	U300	Baseband processor Hi6260	39200881
2	U300-POP	DDR	40020491 (3 GB) 40020492 (4 GB) 40020493 (6 GB)
3	U1601	Charging IC	39070313
4	U1520	ACR chip (only for the TL00)	39070381
5	U1702	LCD bias voltage drive IC	39111334
6	U2701	Accelerometer and gyroscope	38140273
7	J2801/J2802	Three-card SIM card holder	14241312
8	J2803	Three-card SD card holder	14241313
9	F2801	Three-card holder cover	14241314
10	U1402	eMMC	40061028(32G) 40061006(64G) 40061007(128G)
11	Tcxo6101	Temperature compensated oscillator	12070082
12	Led2901	Tri-color indicator	15020254
13	U6301	5 GHz Wi-Fi FEM(available only in the AL00/LX1C)	47150685

No.	Designator	Item	BOM Code
14	U6001	Hi1102 4-in-1 chip	35020892
15	U3201	DC-DC for PA	39110714
16	U6801	External boost power supply	39110908
17	U7201	Three-output passive tunable power drive IC	39070267
18	U6802	NFC (available only in the LX1C)	39210385

Table 4-2 BOM information about components the top side

No.	Designator	Item	BOM Code
11	Mic2501	Secondary microphone	22050170
12	J1701	LCD connector	14241006
13	LED1801	Flash	15020336
14	J1901	Rear camera connector (13 MP)	14241006
15	J1902	Rear camera connector (2 MP)	14241008
16	U1801	Flash drive chip	39111181
17	U1701	Two-channel LCD backlight drive	39111417
18	J2702	Fingerprint sensor connector	14240692
19	J2101	Main FPC connector	14240375
20	J1501	Battery connector	14241048

No.	Designator	Item	BOM Code
21	U1001	PMU chip	39200882
22	U1301	Secondary PMU	35021065
23	U2305	Gravity sensor	38140099
24	J1801	Front camera connector (16 MP)	14241008
25	J1802	Front camera connector (2 MP)	14241008
26	U3301	Multi-mode multi-frequency band RF transceiver Hi6353	39200865
27	U4900	RF low noise amplifier (703 –2690 MHz)	47090164
28	U4500	RF switch-699–2690 MHz-DiFEM	47140301
29	U3500	RF multi-functional component (TXM, with SP16T)	47150488
30	U3600 (China)	RF multi-functional component -3 GHz 4 GHz MB+HB MMMB PA (5 MBs+4 HBs)-Phase 3	47150675
31	U3601 (China)	RF multi-functional component-APT 3 GHz 4 GHz LB MMMB PA (3-in-7-out)	47150674
32	U3600 (Regions outside China)	RF multi-functional component-3 GHz 4 GHz (5 LBs, 5 MBs, 4 HBs w/o GSM) MMMB PA-Phase 5	47150676

Attachments: maintenance circuit and component layout diagrams (watermarks required)

HL1JKMM_with watermark.pdf

HL3JKMM_with watermark.pdf

4.2 Checking the PCBA Version Information

4.2.1 Checking the Phone Version

Version Information on the PCBA

There is text similar to "HL*X*JKMM" on the PCBA of the phone, as shown in the following figure.

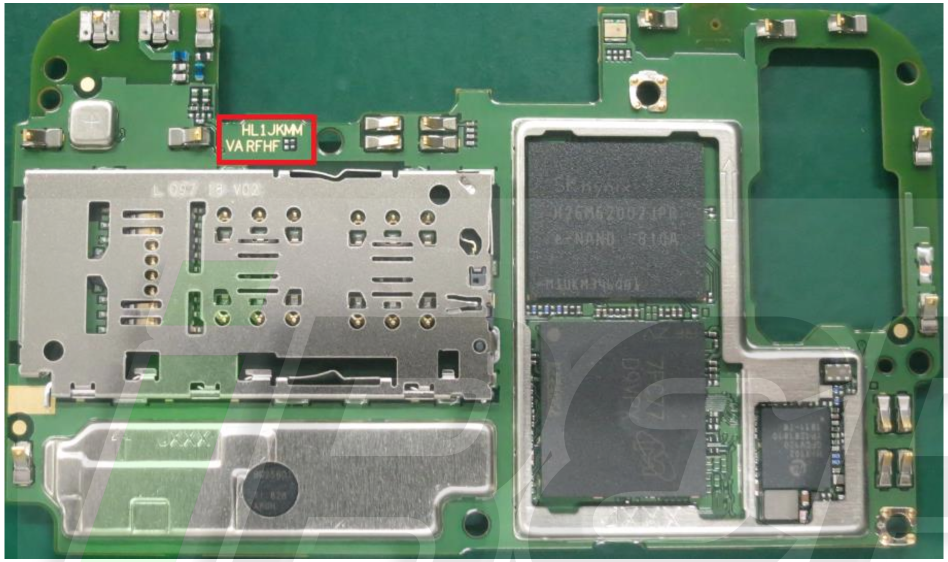
HL1JKMM (editions with the separation mode in China): AL00/TL00

HL2JKMM (eMCP 4 GB+64 GB edition in China): AL00a

HL3JKMM (editions with the separation mode for regions outside China): LX1/LX2/LX3

HL4JKMM (editions with the separation mode in Canada): L4CA

HL5JKMM (eMCP 4 GB+128 GB edition in China): AL00b

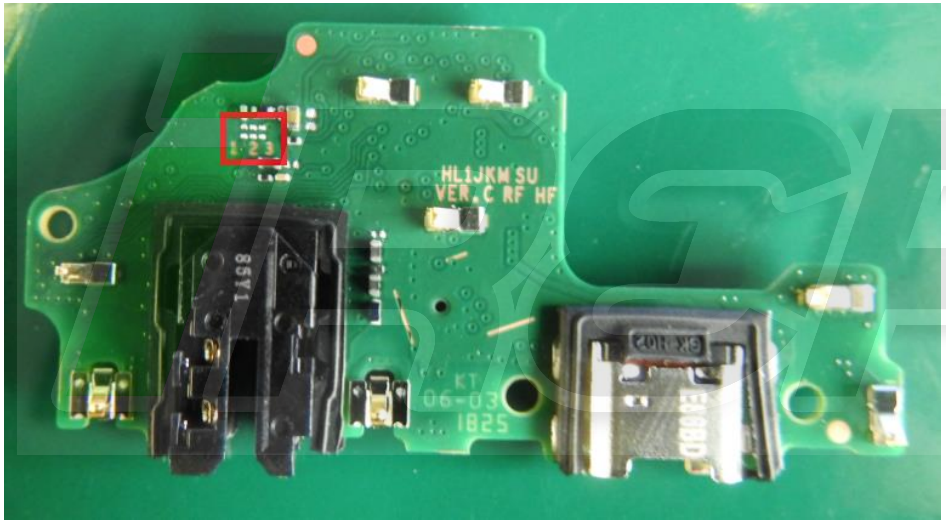


Version Information on the USB sub-board

The USB sub-board of the Jackman has three resistors, which are in the red box in the following figure. Refer to the following table to identify the version information on USB sub-board.

External Model	Resistor 1	Resistor 2	Resistor 3
JKM-AL00/TL00	Not mounted	Not mounted	Not mounted

External Model	Resistor 1	Resistor 2	Resistor 3
JKM-LX1/LX2/LX3	Not mounted	Not mounted	Mounted
JKM-AL00a	Mounted	Not mounted	Not mounted

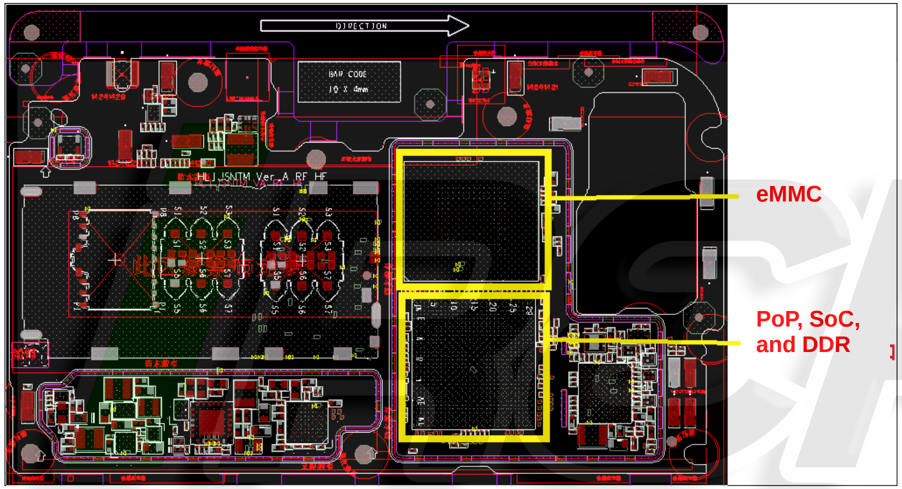


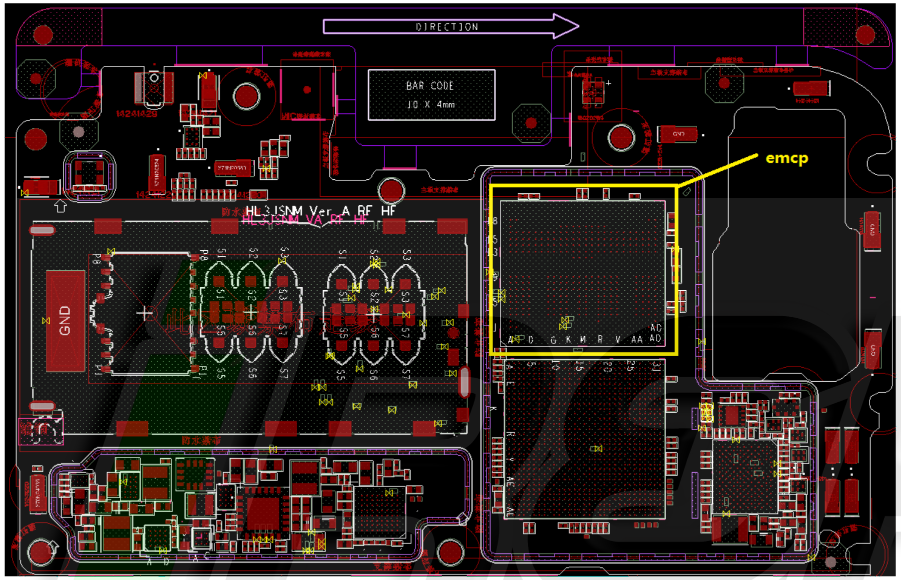
4.2.2 Checking the Memory Configuration Information

The Jackman memory configurations are classified into the eMMC+DDR separation solution and the eMCP integrated solution.

In eMCP integration mode, the memory is configured as 4+64, that is, 4 GB memory and 64 GB flash memory. The eMMC+DDR separation modes include 4+64, 4+128, 6+64, 3+64, and 4+32. On the PCBA, the eMCP, eMMC, and DDR vendor models are the unique identifiers for determining memory configuration information. You can check their manufacturer identifiers of the eMCP, eMMC, and DDR to obtain the corresponding internal storage configuration information.

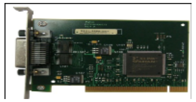
The following figure shows the position of the eMCP slave PCBA in eMCP integration mode.

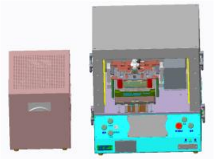
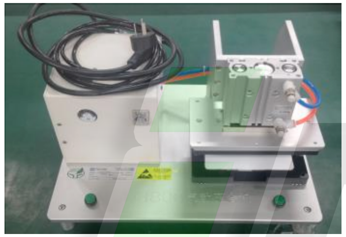
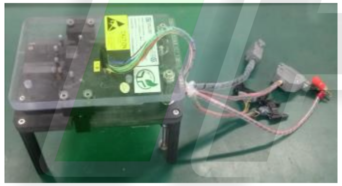


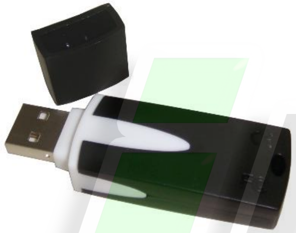


To confirm the memory configuration information about an eMMC+DDR separation-type PCBA, confirm the manufacturer model of the eMMC and DDR. The following figure shows the positions of the eMMC and DDR.

5 Maintenance Tools

	Name: GPIB card Usage: RF calibration (CBT)
	Name: GPIB cable Usage: RF calibration (CBT)
	Name: programmable power supply (Keithley 2303/2306 or Agilent 66311B) Usage: to supply power to the PCBA during RF calibration (CBT)
	Name: CMU200 (includes K47 and K48 options) W2100/1900/850, GSM850/900/1800/1900 V4.3 or later Usage: RF calibration (CBT)

	Name: Jackman TP removing fixture BOM code: 02430MDC+02430JUK Usage: to remove the TP (applicable to HLRCs)
	Name: Jackman TP press-fitting fixture BOM code: 02430GTN Usage: to install and press-fit the TP (applicable to HLRCs)
	Name: loading test fixture BOM code: 44044GYX Usage: JTAG loading and RF calibration (applicable to HLRCs)
	Name: physical number modification dongle BOM code: GJ000078 Usage: to modify IMEIs and write SIMLOCK information (applicable to HLRCs)

	Name: JTAG loading tool BOM code: GJ000084 Usage: JTAG loading of the boot software (applicable to HLRCs)
	Name: JTAG tool dongle BOM code: GJ000021 Usage: to authorize running of the JTAG software (applicable to HLRCs)

6 Software Maintenance Guide

6.1 Software Maintenance Guide (Including Tool Usage Instructions)

Jackman Software
Maintenance Guide

6.2 Maintenance Guide for Running Issues

Reworking Guide
to Issues Found i

6.3 Description of Erasing Customer Data

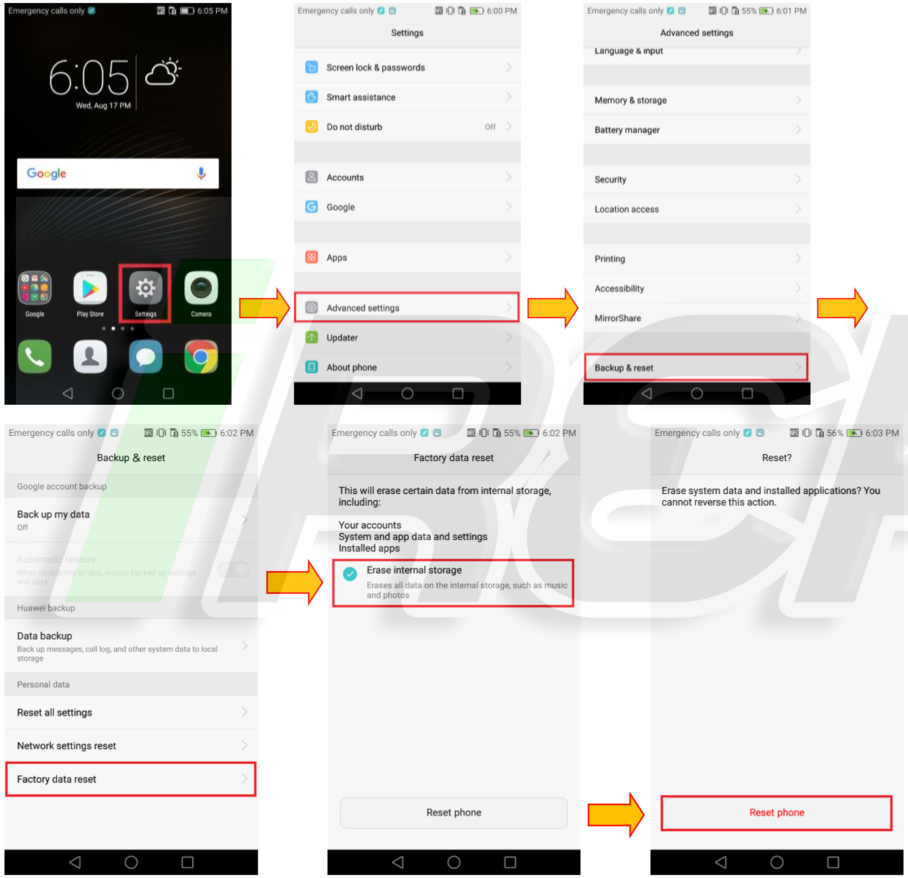
According to the Huawei cyber security requirements, customer data from security-sensitive countries is forbidden from being sent to China without written authorization from the customer. To ensure that, during manufacturing and maintenance, customer data has been erased in security-sensitive countries before the materials are transferred to a third-party or out of areas allowed by the customer's country, for example, transferred to China, the R&D department is required to provide a solution for erasing storage data.

6.3.1 Object

All the user data stored in the phone's data partition needs to be erased.

6.3.2 Method

Go to **Settings** > **System** > **Reset** > **Factory data reset**, select **Erase internal storage**, and touch **RESET PHONE**.



This will erase certain data from internal storage, including:

Your accounts
System and app data and settings
Installed apps

☑ Erase internal storage
Erases all data on the internal storage, such as music and photos

Erase system data and installed applications? You cannot reverse this action.

6.3.3 Verification

After data is erased, a message indicating that the phone has been restored to factory settings is displayed on the screen.

6.3.4 Restoration of Non-customer Data

Low-level formatting is able to back up and recover non-customer data. Ensure that the phone is not powered off during low-level formatting.

7 7 Maintenance Guide

7.1 Hardware & RF Maintenance Guide (Including Tool Instructions)

Jackman Hardware Maintenance Guide

RF Tool Use Instructions.docx

Jackman Power-on Sequence

7.2 List of Thermal Resistance Values of Johnson Thermosensitive Components

Project	Designator	BOM Code	Maximum Thermal Resistance Value	Description
Jackman	J1901	14241006	Heating temperature: 255°C–260°C Heating duration: 30s–60s	Rear camera BTB connector
Jackman	J1902	14241008	Heating temperature: 255°C–260°C Heating duration: 30s–60s	Rear camera BTB connector
Jackman	J1801	14241008	Heating temperature: 255°C–260°C Heating duration: 30s–60s	Front camera BTB connector

Project	**Designator**	**BOM Code**	**Maximum Thermal Resistance Value**	**Description**
Jackman	J1802	14241008	Heating temperature: 255°C–260°C Heating duration: 30s–60s	Front camera BTB connector
Jackman	J2101	14240375	Heating temperature: 260°C Heating duration: at most 10s	Main FPC BTB connector
Jackman	J1701	14241006	Heating temperature: 255°C–260°C Heating duration: 30s–60s	LCD BTB connector
Jackman	J1501	14241048	Heating temperature: 340°C Heating duration: at most 10s	Battery BTB connector
Jackman	J3402	14240433	Heating temperature: 250°C Heating duration: at most 10s	Coaxial cable base
Jackman	J3400 and J3401	14240928	Heating temperature: 260°C Heating duration: at most 10s	RF switch
Jackman	J2702	14240692	Heating temperature: 260°C Heating duration: at most 10s	Fingerprint sensor BTB connector
Jackman	LED2901	15020254	Heating temperature: 255°C–260°C Heating duration: at most 30s	Tri-color indicator
Jackman	MIC2501	22050170	Heating temperature: 260°C Heating duration: at most 30s	Microphone
Jackman	U300	39200881	Heating temperature: 360°C	Hi6260
Jackman	U1301	35021065	Heating temperature: 260°C Heating duration: 10s–30s	Hi6422 V213

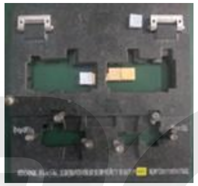
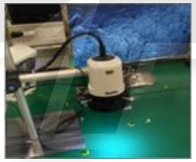
Project	Designator	BOM Code	Maximum Thermal Resistance Value	Description
Jackman	U1001	39200882	Heating temperature: 260°C Heating duration: 10s–30s	Hi6555 V200
Jackman	U6201	35020892	Heating temperature: 360°C	Hi1102

(The data is collected from the Huawei BOM system.)

8 PCBA Maintenance Operation Guide

8.1 Tool List

Tool	Recommended Model	Description	Image
ESD tweezers	Vetus ESD-11	Use tweezers whose tips are burnished to 0.1 mm in thickness to remove and scrap glue. Use unburnished tweezers to remove, clamp, and solder chips.	
Heat gun	Digital heat gun NIC 855PG	Two types of nozzles are used: ● Square nozzle: 15 mm x 15 mm ● Round nozzle (delivered with the equipment): 11.5 mm diameter	

Tool	Recommended Model	Description	Image
Heat gun	STEINEL	Nozzle: 15 mm diameter	
PCBA Fixture	BOM code: 02430THE	To fix the PCBA	
HD electronic microscope	Optical M20x-HD 1080p	To check the soldering position and appearance	

8.2 Maintenance and Verification Procedure

8.2.1 Overall Procedure of Repairing a Component

Removing the SoC shielding case > Removing the chip glue (thermal gel/UF glue) > Removing the glue dispensed chip > Clearing the residual adhesive and cleaning the pads > Aligning the chip > Heating and soldering the chip > Inspecting the appearance > Inspecting the appearance using an X-ray machine > Performing the DBC test, CT, and BT > Powering on the phone to check that it runs properly

8.3 Maintenance Specifications and Requirements

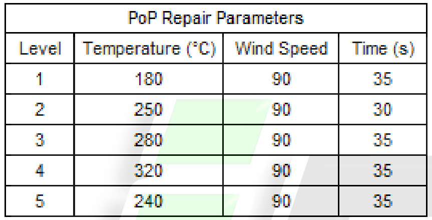
8.3.1 Temperature Parameters

Parameter	**Typical Value**	**Recommended Value**
Duration in the constant temperature zone (165°C to 217°C)	60–100s	70–90s
Minimum reflow peak temperature	230°C	240°C±5°C
Maximum reflow peak temperature	250°C	Temperature difference between key components: below 10°C
Duration for the temperature to stay above the liquid state line (217°C)	35–90s	45–80s
Duration for the temperature to stay above 230°C	25–50s	
Temperature decrease slope in the cooling stage (temperature decreasing from 217°C to 120°C)	–2°C/s to –5°C/s	
Note: For items not specified in this table, see section 3.4.3 "Temperature Curve Setting" of the *Huawei Device PCBA Maintenance Specifications*.		

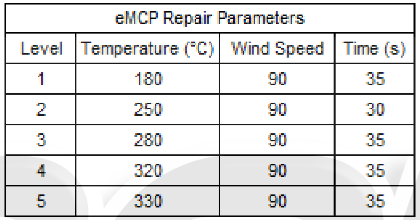
8.3.2 Glue Removal Temperature Requirement

Use a STEINEL heat gun whose nozzle diameter is 15 mm, and set the temperature to 190°C±10°C.

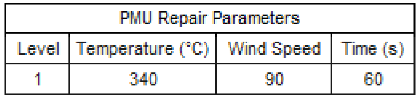
8.3.3 Digital Heat Gun Temperatures for Removing and Soldering Chips



PoP Repair Parameters			
Level	Temperature (°C)	Wind Speed	Time (s)
1	180	90	35
2	250	90	30
3	280	90	35
4	320	90	35
5	240	90	35



eMCP Repair Parameters			
Level	Temperature (°C)	Wind Speed	Time (s)
1	180	90	35
2	250	90	30
3	280	90	35
4	320	90	35
5	330	90	35



PMU Repair Parameters			
Level	Temperature (°C)	Wind Speed	Time (s)
1	340	90	60

8.4 Verification

8.4.1 Removing he Shielding Case

Components circled by the red boxes in the following figure are glue dispensed components. Remove the shielding case and remove the thermal gel.

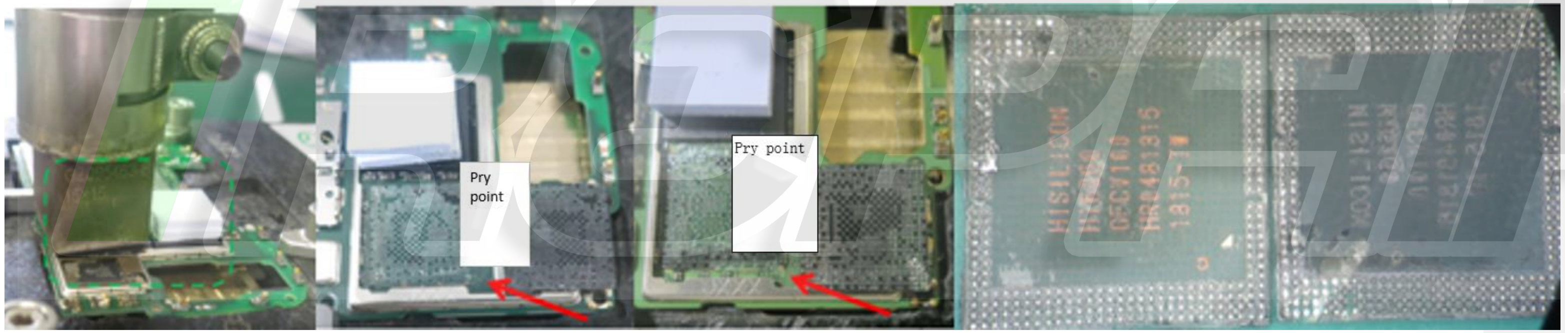
8.4.2 Removing the Glue (for Glue Dispensed Components to be Verified)

Use a STEINEL heat gun, set the temperature to 190°C±10°C, and heat the glue at the edge of the chip. After the glue is softened, use the burnished tweezers to remove the glue along the edge of the component. Move the tweezers slowly and slightly to remove glue for multiple times until the glue between the chip and peripheral components are removed. Use a magnifier to check that the glue is completely removed and peripheral components are not damaged.

8.4.3 Removing the Glue Dispensed Chips

Removing the SoC

Place the PCBA in the corresponding fixture, attach two heat dissipation pads to the UFS chip, set the temperature phases of the digital heat gun NIC 855PG, and use the heat gun to heat the SoC. The distance between the air nozzle and SoC is 3–5 mm. When the last 10s–12s of the fifth temperature phase arrives, use one tip of the tweezers to insert into the bottom of the SoC to be repaired, clamp the SoC, and lift it vertically.



Removing the UFS Chip

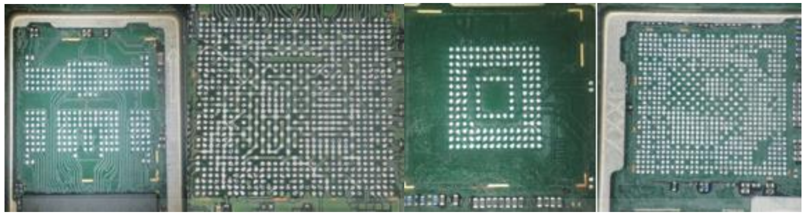
Place the PCBA in the corresponding fixture, attach two heat dissipation pads to the SoC, set the temperature phases of the digital heat gun NIC 855PG, and use the heat gun to heat the UFS chip. Remove the UFS chip in the same way of removing the SoC.

Repairing Other Components

PMU U1001: Place the PCBA in the corresponding fixture and use the heat gun whose temperature reaches 340°C to heat the PCBA for 60s and vertically take out the shielding frame.

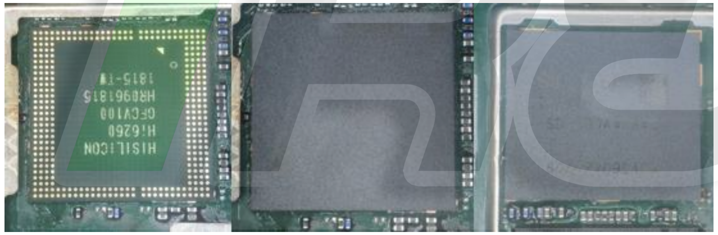
8.4.4 Clearing the PCBA Pads

After the chip is removed, do not add solder flux. Heat the PCBA at 190°C±10°C, use tweezers to remove the glue from the pads and chip edges, add solder flux, and use the soldering iron to clean the pads. Use a microscope to check whether the PCBA is clean. If no, clear the glue until the PCBA is clean. After the pads and areas around the chip are cleaned, place a lint-free cloth on the pads. Dip an ESD brush in the board-cleaning solvent, move the brush back and forth on the lint-free cloth to clear smudges from the pads, and use a microscope to check that the pads are clean.



8.4.5 Aligning and Soldering the New Components

Use a 190°C heat gun to heat the pads for 15s, add solder paste to the pads, align the new component with the silkscreen based on the polarities, and use the heat gun to heat and solder the component. The soldering conditions are the same as those in the procedure for removing components. Move away the heat gun when the fifth phase of soldering enters the last 10s. Leave the PCBA for 20s until it cools down, and the chip soldering is complete.



8.4.6 Cosmetic Inspection

For components (such as chips and BTB connectors) whose pins can be inspected, use a magnifying device to perform a cosmetic inspection after repair and check whether there are defects, such as misalignment and missing soldering.

8.4.7 X-ray Inspection

For components (such as BGA and QFN components) whose pins cannot be inspected and components in the shielding case, use X-ray to inspect soldering joints after repair and check whether there are defects, such as solder bridges, missing soldering, and misalignment.

Attachments: repair profiles

JKM Repair Verification-PoP. JKM Repair Verification-eMMC JKM-U1400-EMC P.pdf JKM-U300--EMC P.pdf

9 Assembly and Disassembly Guide

9.1 Disassembly Guide

Comentado [g1]: 待粘贴英文版拆机指导

9.2 Requirements for Putting Repaired Defective Products into Production and Reusing Materials

- Putting repaired defective products into production must comply with the *Mobile Phone Repair Process General Guide* (DKBA0.101.1891).
- To determine whether removed materials can be reused, see sheet "Disassembly Material List" in the *Jackman General Disassembly Guide*. Other materials not mentioned in the table cannot be reused if they have cosmetic or functional defects.

9.3 Assembly Guide

Comentado [g2]: 待粘贴英文版拆机指导

10 Solder Joints on the PCB and BGA Chip

Red (R: 255, G: 0, B: 0) 🟥: vacant point

Blue (R: 0, G: 0, B: 255) 🟦: signal

Attachment:

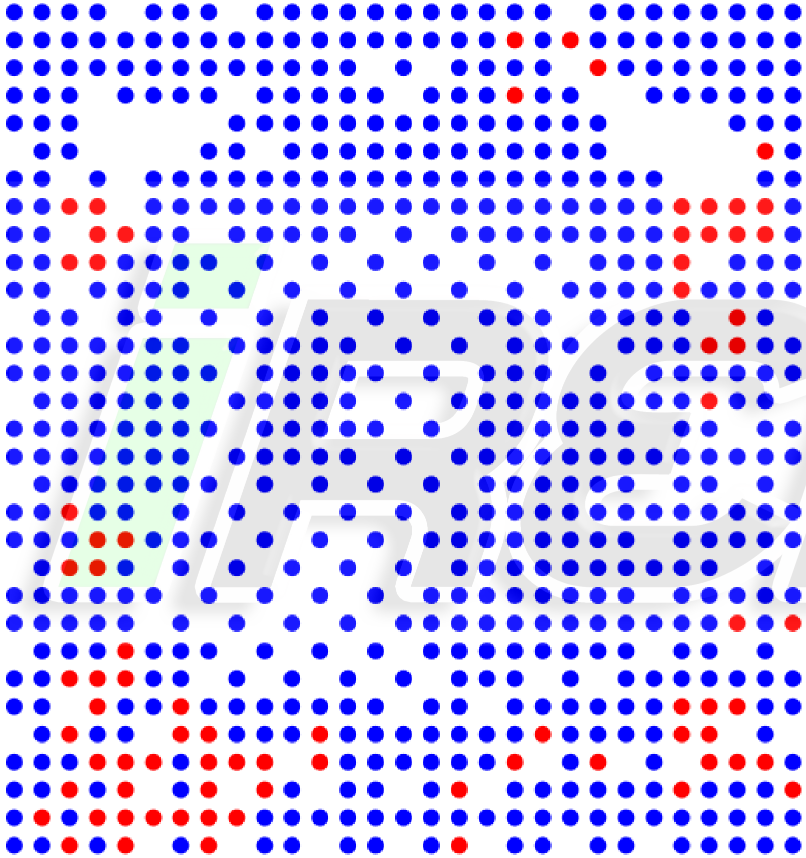
Board HL1: Solder Joints-HL1JKMM.pd

BoardHL3: Solder Joints-HL3JKMM.pd

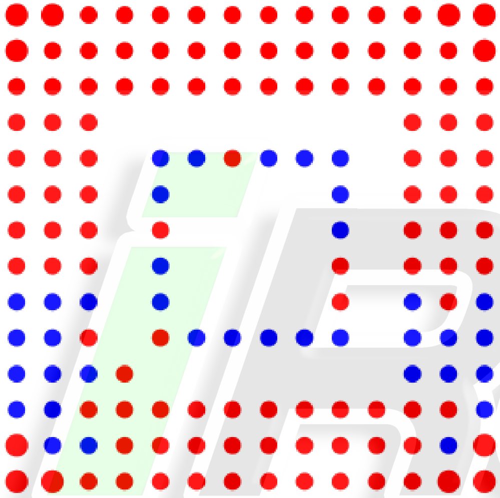
USB sub-board: Solder Joints-HL1JKMSU.p

Solder joints in detail:

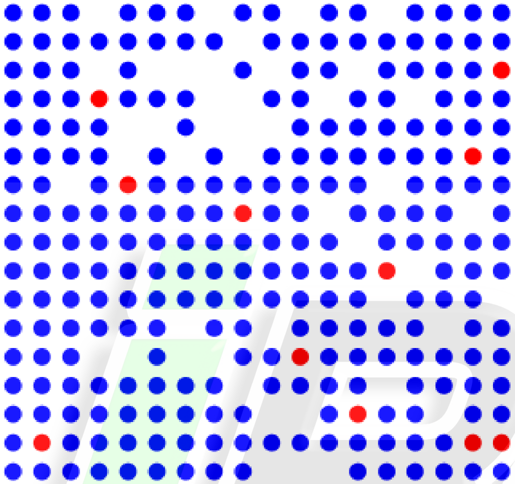
The SoC solder joints are shown in the following figure.



The eMMC solder joints are shown in the following figure.



The PMU solder joints are shown in the following figure.



Huawei Y9 2019 (Jackman) Quick Maintenance Gu

V1.0

Version	Date	Applicable Area	Application Scope	Version Change De
V1.0	12/10/2018	Global	ASC	New draft

Huawei Technologies Co., Ltd.

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Contents

Document

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V1.0

Preparation / Modification Record

Prepared/Revised On	Revised Contents and Reasons
12/10/2018	Initial release