



GSM TELEPHONE

GT-i9003

SERVICE *Manual*

GSM TELEPHONE

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Notice :

All functionality, features, specifications and other product information provided in this document including, but not limited to, the benefits, design, pricing, components, performance, availability, and capabilities of the product are subject to change without notice or obligation. Samsung reserves the right to make changes to this document and the product described herein, at anytime, without obligation on Samsung to provide notification of such change.

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning. Take specially care of tuning or test, because specificity of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool, because performance of parts is damaged by the influence of magnetic force.
- Surely use a standard screwdriver when you disassemble this product, otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level.
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
- Don't use as you pleases after change other material than replacement registered on SEC System. Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD (Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below.

You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

2. Specification

2-1. GSM General Specification

	GSM850	EGSM 900	DCS1800	PCS1900	WCDMA2100	WCDMA900
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1922~1977 2112~2167	880~915 925~960
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL:9612~9888 DL:10562~10838	UL:2712~2863, DL:2937~3088
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz	190MHz	45MHz
Mod. Bit rate/ Bit Period	270.833kbp s 3.692us	270.833kbp s 3.692us	270.833kbp s 3.692us	270.833kbp s 3.692us	3.84Mcps	3.84Mcps
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	FrameLength: h: 10ms Slotlength: 0.667ms	FrameLength: h: 10ms Slotlength: 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSKHQPSK	QPSKHQPSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~-50dBm	24dBm~-50dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl	3(max+24dBm)	3(max+24dBm)
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-106.7dBm	-106.7dBm
TDMA Mux	8	8	8	8	8	8
Cell Radius	35Km	35Km	2Km	2Km	2Km	2Km

2-2. GSM Tx Power Class

TX Power control level	GSM850	TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3dBm	17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
				15	0±5 dBm	15	0±5 dBm

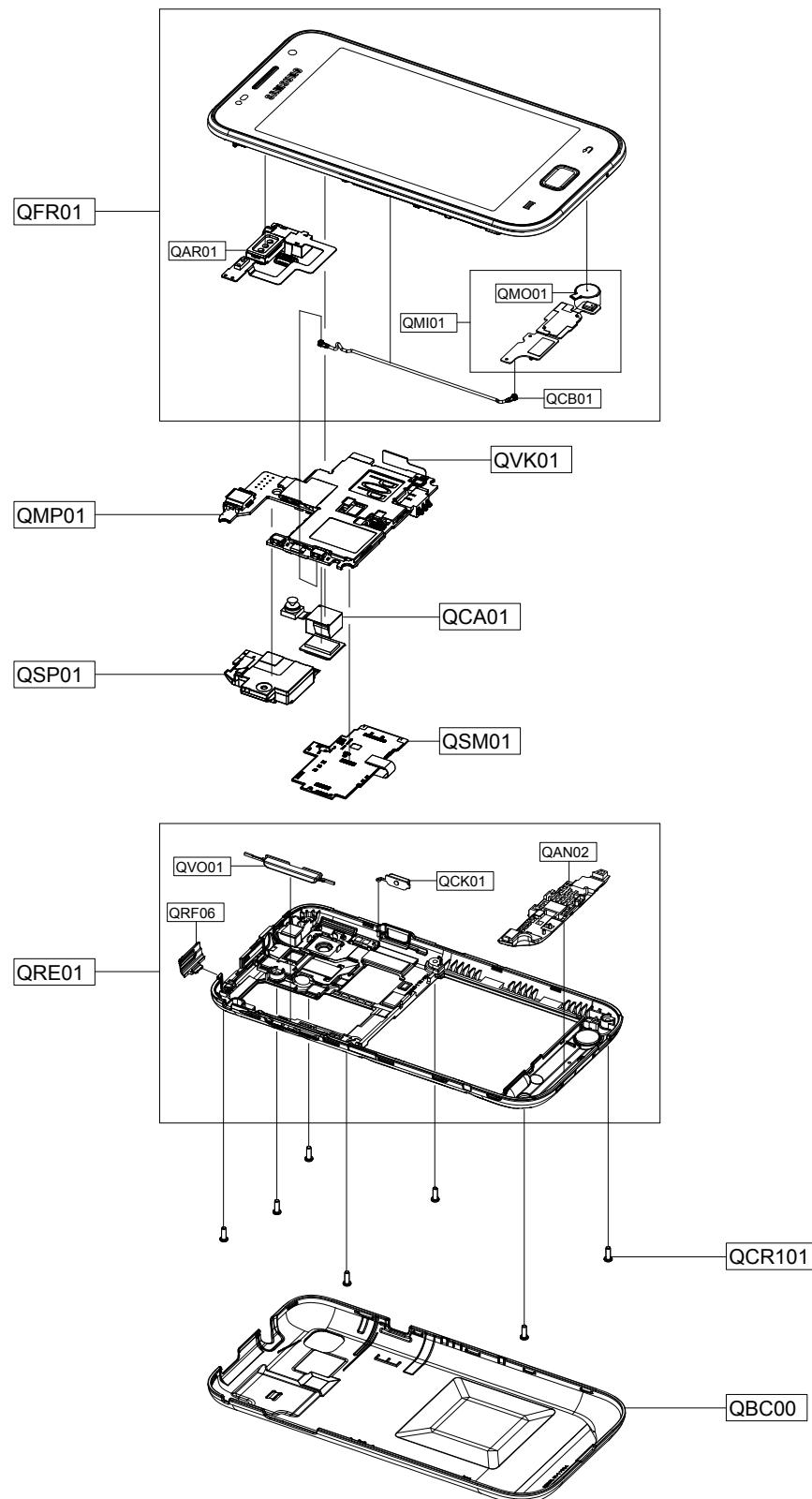
3. Operation Instruction and Installation

Main Function

- **Android OS: Eclair**
- **HSDPA 7.2Mbps / HSUPA 5.76Mbps**
- **5MP AF w/o LED Flash**
- **4.0" WVGA Super AMOLED Full Touch (C-Type)**
- **A-GPS / BT v3.0 / USB v2.0 / WiFi (802.11 b/g/n)**
- **HD Recording (720p) / Full HD Playback (1080p), DLNA**
- **Sensors: Accelerometer, Compass, Proximity, Light**
- **TouchWiz 3.0 for Android, Multistage, Augmented Reality, Integrated phonebook with SNS, IM, E-mail, Face Recognition, etc.**

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



4-2. Cellular phone Parts list

Design LOC			Description	SEC CODE
QCR101			SCREW-MACHINE	6001-002005
QSP01			MODULE-SPEAKER	GH59-09408A
QCA01			CAMERA MODULE-5M A/F CMOS (GT-I9008)	GH59-09947A
QVK01			KEY FPCB-SIDE KEY(GT-I9003)	GH59-10424A
QSM01			ASSY ETC-SIM/T-FLASH ASSY(GT_I9003)	GH59-10518A
QMP01			A/S ASSY-PBA MAIN(COMM)GT-I9003	GH82-05486A
QBC00			ASSY COVER-BATT	GH98-18749A
QRE01			ASSY CASE-REAR	GH98-18750A
	QAN02		INTENNA-MAIN_GT-I9003	GH42-02787A
	QRF06		PMO COVER-USB	GH72-62156A
	QCK01		PMO COVER-POWER KEY	GH72-62157A
	QVO01		PMO COVER-VOL KEY V3	GH72-62808A
QFR01			MEA FRONT-SUPER LCD ASSY	GH97-11829A
	QCB01		CBF COAXIAL CABLE-SGH-T959 INT CABLE (76)	GH39-01438A
	QAR01		MODULE-RCV+SENSOR FPCB(I9003)	GH59-10401A
	QMI01		ASSY ETC-MIC/MOTOR FPCB(GT-I9003)	GH59-10425A
	QMO01		MOTOR LINEAR VIBRATION-GTS8000	GH31-00475A

5. MAIN Electrical Parts List

Design LOC	SEC CODE	Description
ANT101	GH62-00016A	NPR CONTACT-ANTENNA
ANT102	3705-001448	CONNECTOR-COAXIAL
ANT103,ANT106	GH71-08731A	NPR CONTACT-ANTENNA
BAT501	4302-001180	BATTERY-LI(2ND)
BTC501	3711-006299	HEADER-BATTERY
C101,C176	2203-005725	C-CER,CHIP
C102,C202,C205,C209 C228,C232,C249	2203-007210	C-CER,CHIP
C103,C104,C105,C106 C107,C108,C110,C111 C112,C130,C134,C182 C187,C189,C190,C206	2203-006194	C-CER,CHIP
C109,C165	2203-006399	C-CER,CHIP
C113,C140,C154,C501	2203-005736	C-CER,CHIP
C114	2203-006123	C-CER,CHIP
C115	2203-005682	C-CER,CHIP
C116,C125,C127,C131 C301	2203-005732	C-CER,CHIP
C118,L105	2703-002793	C-CER,CHIP
C121,C223,C224,C239 C539	2203-005731	C-CER,CHIP
C123,C129,C204,C211 C214,C241,C259,C260 C261,C262,C302,C310 C336,C337,C344,C348 C402,C408,C410,C411 C414,C416,C419,C542	2203-006423	C-CER,CHIP
C124,C517	2203-005727	C-CER,CHIP
C126,C142,C145,C157	2203-005726	C-CER,CHIP
C128	2203-005552	C-CER,CHIP
C132,C236,C288	2203-005729	C-CER,CHIP
C133,C171,C242,C244 C250,C251,C279,C281 C282,C283,C351,C352 C515,C516,C528,C533 C545,C546,C552,C553	2203-006562	C-CER,CHIP
C135,C173,C174,C193 C519,C520,C521	2203-006208	C-CER,CHIP
C138,C183,C194	2203-000233	C-CER,CHIP
C139	2203-007133	C-CER,CHIP
C141	2203-007194	C-CER,CHIP
C143,C147,C152	2203-006674	C-CER,CHIP
C146	2203-005739	C-CER,CHIP

Design LOC	SEC CODE	Description
C148,C156,C191,C263 C305,C306,C307,C338 C339,C340,C524,C525 C529,C531,C534,C535 C537	2203-006838	C-CER,CHIP
C149,C421	2203-006305	C-CER,CHIP
C151	2703-002649	C-CER,CHIP
C153	2203-005683	C-CER,CHIP
C155,C160,C161,C175 C196,C254,C255,C256	2203-006872	C-CER,CHIP
C158	2203-006620	C-CER,CHIP
C159	2203-006979	C-CER,CHIP
C162,C246,C544	2203-006048	C-CER,CHIP
C163	2203-007270	C-CER,CHIP
C164,C424,C427	2203-006642	C-CER,CHIP
C166,C167,C541	2203-006648	C-CER,CHIP
C168,C172,C504	2203-006824	C-CER,CHIP
C177,C192	2203-006120	C-CER,CHIP
C185	2203-006611	C-CER,CHIP
C186,C556	2203-002709	C-CER,CHIP
C188	2203-006693	C-CER,CHIP
C195	2203-005234	C-CER,CHIP
C197	2203-005050	C-CER,CHIP
C198	2203-005288	C-CER,CHIP
C201,C203,C207,C208 C216,C220,C226,C227 C229,C234,C235,C264 C278,C285,C286,C317 C332,C333,C401,C405 C422,C425,C428,C430 C503,C522,C523,C526 C527,C530,C532,C536 C543,C551,C601,C602 C603,C607,U603	2203-007369	C-CER,CHIP
C225,C233	2203-006474	C-CER,CHIP
C230,C231,C518,C554	2203-006825	C-CER,CHIP
C243,C247,C257,C258 C403,C404,C412	2203-007317	C-CER,CHIP
C245,C287,C308	2203-007393	C-CER,CHIP
C265,TA300	2404-001496	C-CER,CHIP
C267	2404-001561	C-CER,CHIP
C269	2404-001572	C-CER,CHIP
C275	2203-000278	C-CER,CHIP

Design LOC	SEC CODE	Description
C276	2203-000812	C-CER,CHIP
C277	2203-000995	C-CER,CHIP
C304,C407,C413,C429	2203-007271	C-CER,CHIP
C331	2203-006681	C-CER,CHIP
C349	2203-001153	C-CER,CHIP
C350	2203-000386	C-CER,CHIP
C400,C420,C514,C538	2203-006839	C-CER,CHIP
C415	2203-006668	C-CER,CHIP
C417,C418	2203-006133	C-CER,CHIP
C431	2203-005138	C-CER,CHIP
C502	2203-006348	C-CER,CHIP
C505,C506,C507,C508,C509,C510,C511, TA502	2404-001339	C-CER,CHIP
C547,C549,C550	2203-006841	C-CER,CHIP
C548	2203-000725	C-CER,CHIP
D501	0407-001002	DIODE-TVS
F100	2904-001939	FILTER-SAW
F101	2904-001759	FILTER-SAW
F300,F301,F302,F303,F304,F305	2901-001413	FILTER-EMI SMD
F306,F307,F308	2901-001604	FILTER-EMI SMD
HDC300	3711-006483	HEADER-BOARD TO BOARD
HDC301	3711-006865	HEADER-BOARD TO BOARD
HDC302,HEA601	3711-006650	HEADER-BOARD TO BOARD
HDC401	3711-007173	HEADER-BOARD TO BOARD
HEA301	3711-006923	HEADER-BOARD TO BOARD
IFC300	3722-002867	JACK-MICRO USB
L101,L102	2703-002918	INDUCTOR-SMD
L103	2703-002870	INDUCTOR-SMD
L104,L300	3301-001729	INDUCTOR-SMD
L106	2703-002953	INDUCTOR-SMD
L109	2703-002903	INDUCTOR-SMD
L111	2703-002858	INDUCTOR-SMD
L112	2703-002815	INDUCTOR-SMD
L113,L207,L208	2703-003698	INDUCTOR-SMD
L120	2703-002906	INDUCTOR-SMD
L121	2703-002775	INDUCTOR-SMD
L123	3301-001659	INDUCTOR-SMD
L124	2703-001749	INDUCTOR-SMD

Design LOC	SEC CODE	Description
L205,L206	3301-001956	INDUCTOR-SMD
L209,L210	3301-001789	INDUCTOR-SMD
L301,L302,L303,L304	3301-001885	INDUCTOR-SMD
L305	2703-001259	INDUCTOR-SMD
L306,L311	3301-001885	INDUCTOR-SMD
L307,L308	2703-002842	INDUCTOR-SMD
L309,L601	3301-001912	INDUCTOR-SMD
L310	2703-002961	INDUCTOR-SMD
L501	2703-003182	INDUCTOR-SMD
L502,L503	2703-003343	INDUCTOR-SMD
L504	2703-003686	INDUCTOR-SMD
L505,L506	2703-002309	INDUCTOR-SMD
OSC100	2809-001358	OSCILLATOR-VCTCXO
OSC101	2809-001348	OSCILLATOR-VCTCXO
OSC102	2804-001884	OSCILLATOR
OSC200,OSC501	2801-004902	CRYSTAL-SMD
OSC400	2801-004458	CRYSTAL-SMD
PAM101	1201-003034	IC-POWER AMP
PAM102	1201-003033	IC-POWER AMP
PAM103	1201-003032	IC-POWER AMP
PAM104	1201-002801	IC-POWER AMP
Q300	0504-001138	TR-DIGITAL
R100,R113,R414,R415,R445,R446,R447, R448,R449,R450,R462,R463,R467,R468, R479,R480,R481,R482,R483,R484,R485, R486	2007-008419	R-CHIP
R101,R102,R117,R275	2007-009801	R-CHIP
R118,R601,R603	2007-008806	R-CHIP
R119,R235,R239,R342,R434,R435,R437, R438,R441,R457,R505,R506,R507,R511	2007-008055	R-CHIP
R121,R122,R123,R124,R125,R266,R286, R287,R302,R346,R417,R418,R419,R423, R428,R431,R432,R440,R461,R466,R477, R502,R509,R622	2007-008516	R-CHIP
R127	2007-000155	R-CHIP
R211,R212,R216,R233,R234,R240,R301, R335,R347,R420,R532,R604	2007-008045	R-CHIP
R214,R288	2007-000167	R-CHIP
R215,R280,R475,R476	2007-009157	R-CHIP
R217,R345	2007-009084	R-CHIP

Design LOC	SEC CODE	Description
R218	2007-007573	R-CHIP
R222,R223,R224	2007-008588	R-CHIP
R229	2007-003018	R-CHIP
R237,R238	2007-008211	R-CHIP
R245	2007-009323	R-CHIP
R248	2007-008587	R-CHIP
R249	2007-000242	R-CHIP
R278,R279,R343,R344 R401	2007-008531	R-CHIP
R283	2007-008483	R-CHIP
R303,R304,R533	2007-008774	R-CHIP
R305	2007-007943	R-CHIP
R308	2007-007009	R-CHIP
R326,R328,R329,R330,R331,R340	2007-009171	R-CHIP
R350	2007-010202	R-CHIP
R351,R404,R439	2007-008052	R-CHIP
R411	2007-010029	R-CHIP
R412	2007-008548	R-CHIP
R451,R455	2007-009964	R-CHIP
R501	2007-008809	R-CHIP
R518,R520	2007-007307	R-CHIP
R521	2007-008502	R-CHIP
RFS100	3705-001503	CONNECTOR-COAXIAL
SC601,SC602,SC603,SC604,SC605,SC606 SC607,SC608,SC610,SC611,SC612	GH70-04443A	IPR SHIELD-CAN CLIP
SC613,SC615,SC616,SC617,SC618,SC619, SC620,SC621,SC622,SC623,SC624	GH70-03951A	IPR SHIELD-CAN CLIP
SC614,SC625	GH70-04828A	IPR SHIELD-CAN CLIP
TA501	2404-001506	C-TA,CHIP
TH201,TH401	1404-001221	THERMISTOR
U100	1201-002999	IC-RF AMP
U101	1205-003949	IC-TRANSCEIVER
U102	1203-006199	IC-DC/DC CONVERTER
U104	1204-003026	IC-TUNER
U105	4709-001844	IC-W-LAN MODULE
U106	1205-003966	IC-RECEIVER
U203,U206	1003-002352	IC-LEVEL DRIVER
U207	1205-003943	IC-CODEC

Design LOC	SEC CODE	Description
U209	0801-003227	IC-CMOS LOGIC
U210,U303	1203-004819	IC-POSI.FIXED REG.
U300	1203-004339	IC-MULTI REG.
U301	1001-001580	IC-ANALOG MULTIPLEX
U302	1001-001488	IC-ANALOG SWITCH
U307	1203-005521	IC-POSI.FIXED REG.
U308	0406-001369	DIODE-TVS
U503	1203-006186	IC-POWER SUPERVISOR
U505	1209-001817	IC-SENSOR
U506	1209-001877	IC-SENSOR
U507	1203-004925	IC-POSI.FIXED REG.
U508	1003-002047	IC-MOTOR DRIVER
U509	1203-005772	IC-VOLTAGE DETECTOR
U510	2007-007592	R-CHIP
U514	1203-006372	IC-RESET
U515,U602	1203-005854	IC-MULTI REG.
U601	0801-003022	IC-CMOS LOGIC
U606	1202-001036	IC-VOLTAGE COMP.
U607	0801-003139	IC-CMOS LOGIC
UCP200	1205-003993	IC-MODEM
UCP400	0902-002582	IC-MICROPROCESSOR
UME301	1107-001876	IC-FLASH MEMORY
V304,V305,V316,ZD300	1405-001200	VARISTOR
V306,V307,V308,V309,V310,V311, V312,V313,V314,V315,ZD601	1405-001177	VARISTOR
VOL_DOWN,VOL_UP	3404-001406	SWITCH-TACT
ZD301,ZD303,ZD304, ZD306	0406-001413	DIODE-TVS
ZD302	0403-001688	DIODE-TVS
ZD307,ZD308	0406-001231	DIODE-TVS
ZD502	0406-001322	DIODE-TVS

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

6. Level 1 Repair

6-1. S/W Download

6-1-1. Pre-requisite for S/W Downloading

- Downloader Program([Odin3 v1.0.exe](#))
- GT-I9003 Mobile Phone
- Data Cable
- JIG BOX (GH99-36900A)
- RF Test Cable (GH39-00985A)
- JIG Cable (GH39-01290A)
- Adapter (GH99-38251A)
- Binary files

* Settings



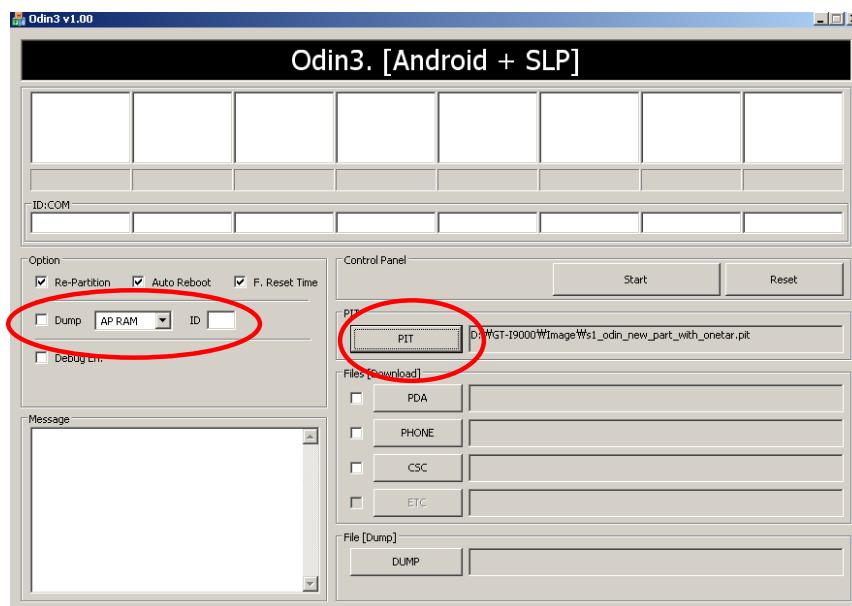
6-1-2. S/W Downloader Program

- Load the binary download program by executing the
" **Odin3 v1.0.exe** " ← Run this file.



1. Option Selection

- Check Re-Partition, Auto Reboot and F. Reset Time, then select PIT File

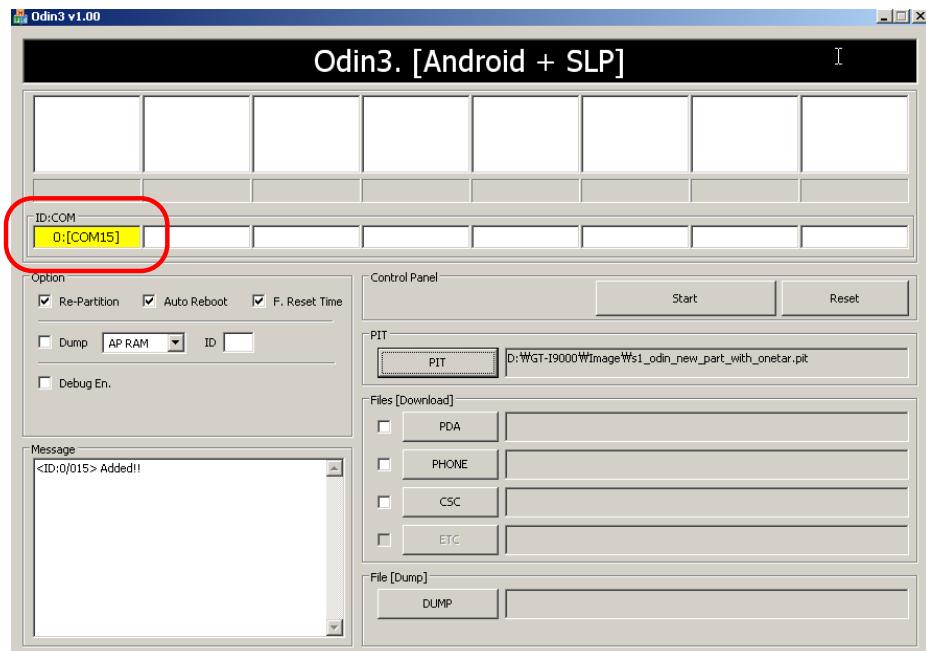


3. Enter Device into Download Mode

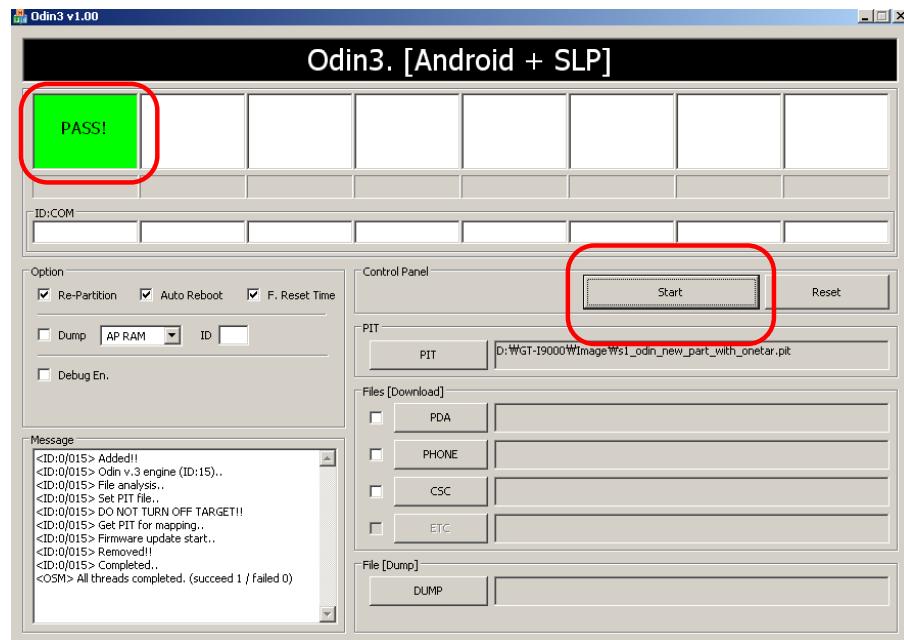
- Enter the device into Download Mode by pressing down on Volume Down button and OK button and Power On button at the same time.



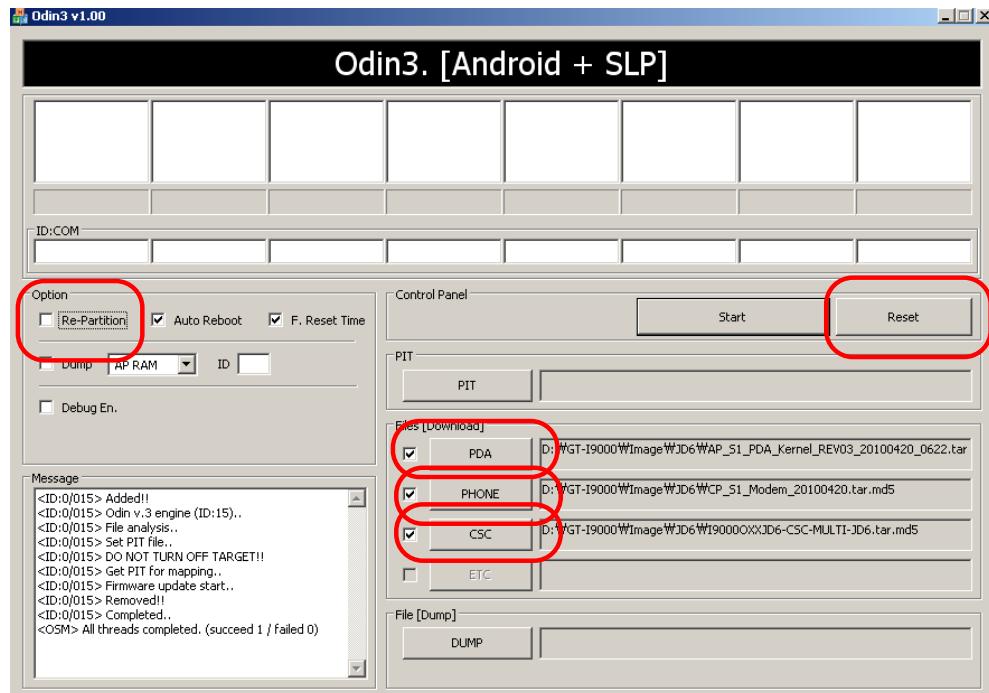
4. Connect the Handset to PC via Data Cable. Make sure ID:COM box highlighted yellow that the handset is connected to the PC.



5. Start Downloading PIT file by clicking Start Button. Then wait for "Pass" to be appear on the screen.

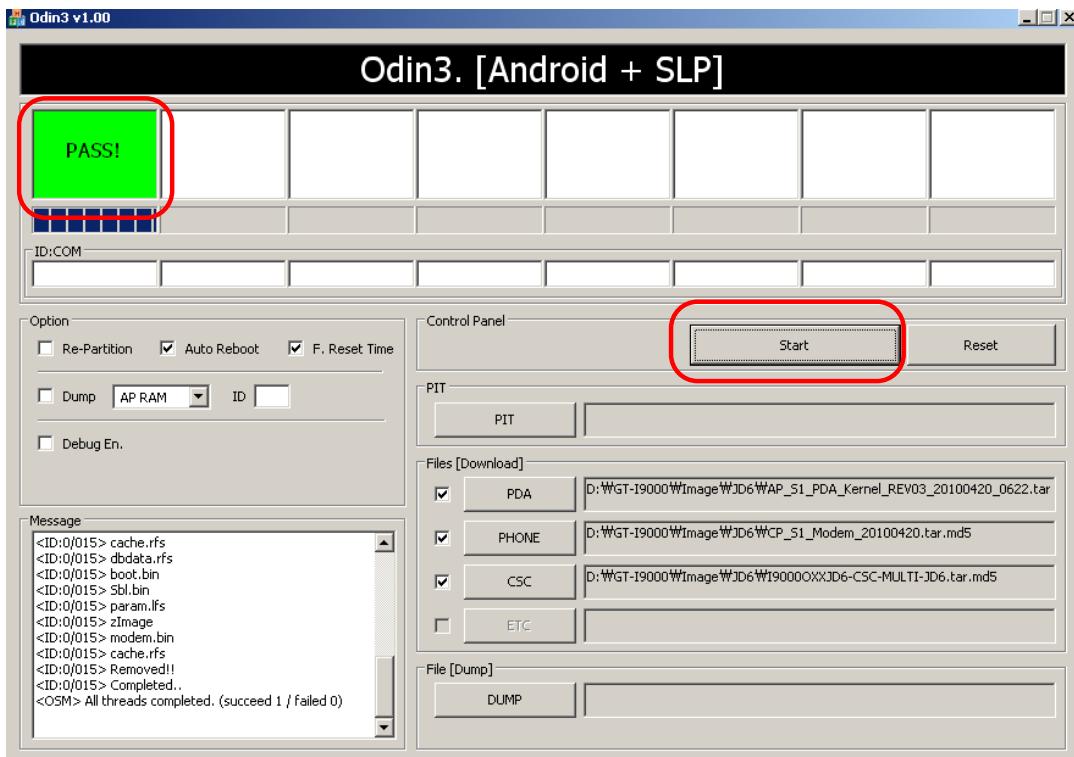


6. Click on Reset button, then unselect Re-Partition box. Then select PDA, PHONE and CSC Files.



7. Remove the battery, then enter Device into Download Mode again as in step #3. then connect to the PC.

8. Start Downloading PDA, PHONE and CSC files by clicking Start Button. Then wait for "Pass" to be appear on the screen.



9. Once the device boots up, confirm the downloaded version name and etc. :
***#1234#**

Full Reset :

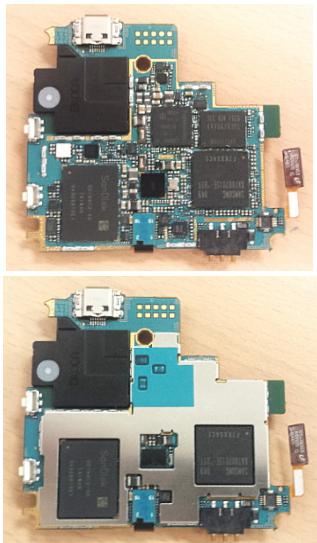
***2767*3855#**

7. Level 2 Repair

7-1. Assembly

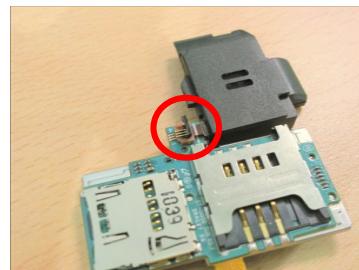
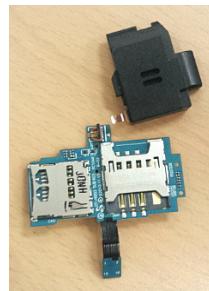
1

Place the top shield can.



2

Connect the speaker to the Sim Card PBA

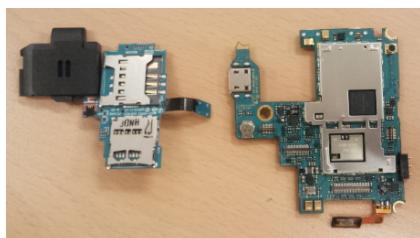


Place the top shield can on the Main PBA

Connect the speaker to the Sim Card PBA by sliding FPC into the connector.

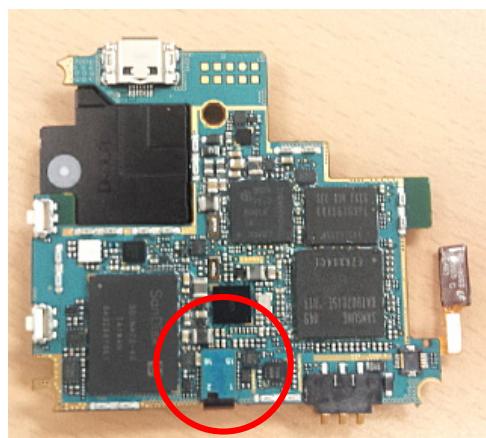
3

Place the Sim Card PBA + shield can



4

Connect the Sim Card PBA Connector



Place the bottom shield can + Sim Card PBA onto the bottom of the Main PBA. Make sure that the speaker locks into position and the shield can to be place correctly into the clips.

Connect the sim card PBA connector to the top of the main PBA.

7. Level 2 Repair

5 Place the top shield can



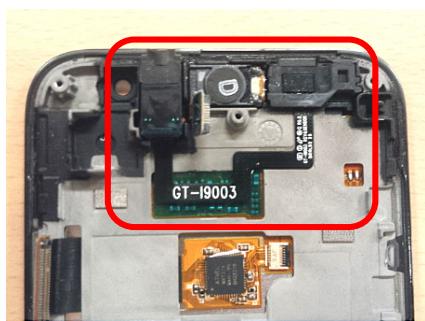
6 Place the camera module



Place the top shield can on the top of the main PBA

Connect the camera module to the Main PBA

7 Place the Receiver Module



8 Connect the Antenna Cable



Place the receiver module onto the bracket.

Connect the antenna cable to the Main Antenna PCB

9	Place the Main PBA	10	Connect LCD, Sub-touch key, Antenna and Receiver connectors and place the Power key
			
<p>Place the main PBA onto the bracket. Make sure to place the camera module into the socket correctly.</p>		<p>Connect LCD, Sub-touch key, Antenna and Receiver connectors, and place the Power key to the side of the bracket</p>	
11	Place the rear cover	12	Screw the rear cover
			
<p>Make sure all the hooks are placed correctly, and press the volume keys and the power key for tensions.</p>		<p>Screw 7 points on the rear cover screw torque : 1.2 ~ 1.4 kgf.cm</p>	

7-2. Disassembly

1 Unscrew screws on the rear



2 Unhook the rear using a disassembly knife to remove the rear cover



Unscrew 7 screws on the rear using a screw driver.
screw torque : 1.2 ~ 1.4 kgf.cm

Be careful not to damage the rear cover when unhooking it.

3 Detach the Power Key FPCB



Detach the power key FPCB, that is stick to the bracket by a double-sided tape, using tweezers. Make sure to remove all remaining tape on the bracket.

4 Disconnect connectors from the Main PBA



Disconnect LCD Connector, Receiver Connector, Sub-touch Key Connector and Antenna cable from the Main PBA

5

Pull out the Main PBA

**6**

Remove the Antenna Cable

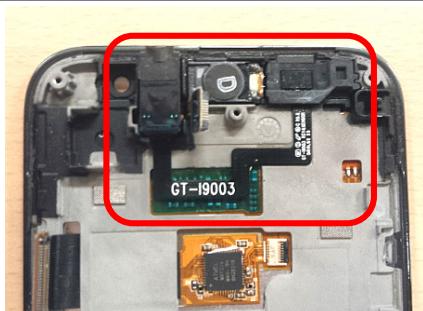


After disconnecting the connectors carefully pull the Main PBA out of the bracket.

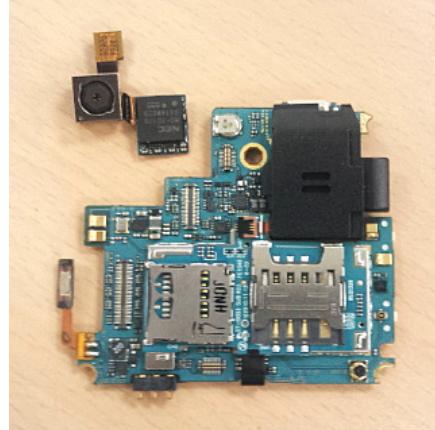
Remove the antenna cable from the main Antenna PCB on the sub-touch key module.

7

Remove the top shield can

**8**

Remove the Camera Module

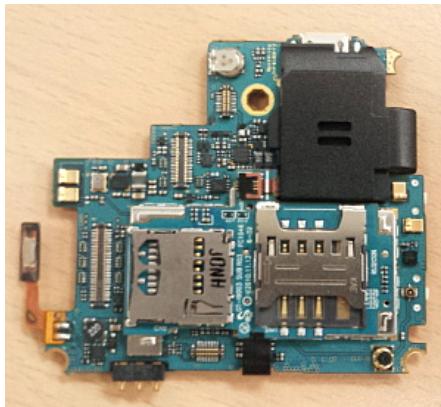


Pull out the Receiver module from the bracket. Be careful not to damage the FPC.

Remove the camera module from the Main PBA by pulling it out.

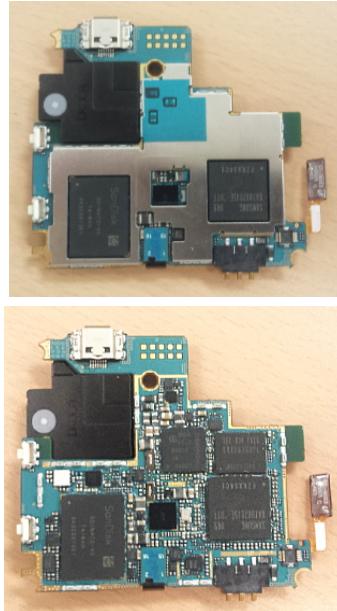
9

Pull out the Main PBA



10

Remove the top shield can

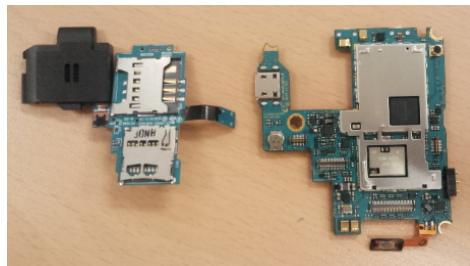
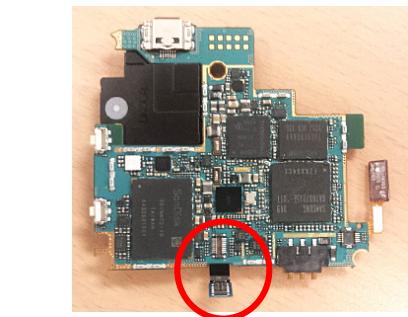


After disconnecting the connectors carefully pull the Main PBA out of the bracket.

Be careful not to damage the shield can and the components when removing it.

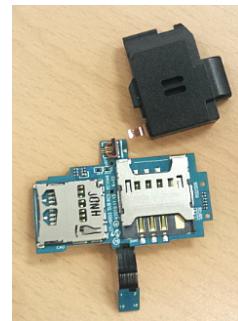
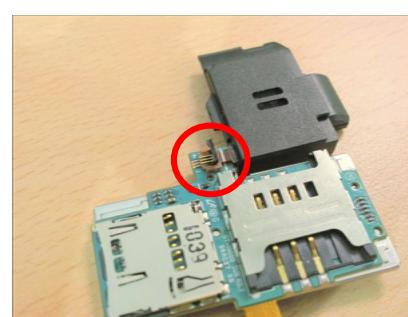
11

Remove the rear shield can + Sim Card PBA



12

Remove the speaker

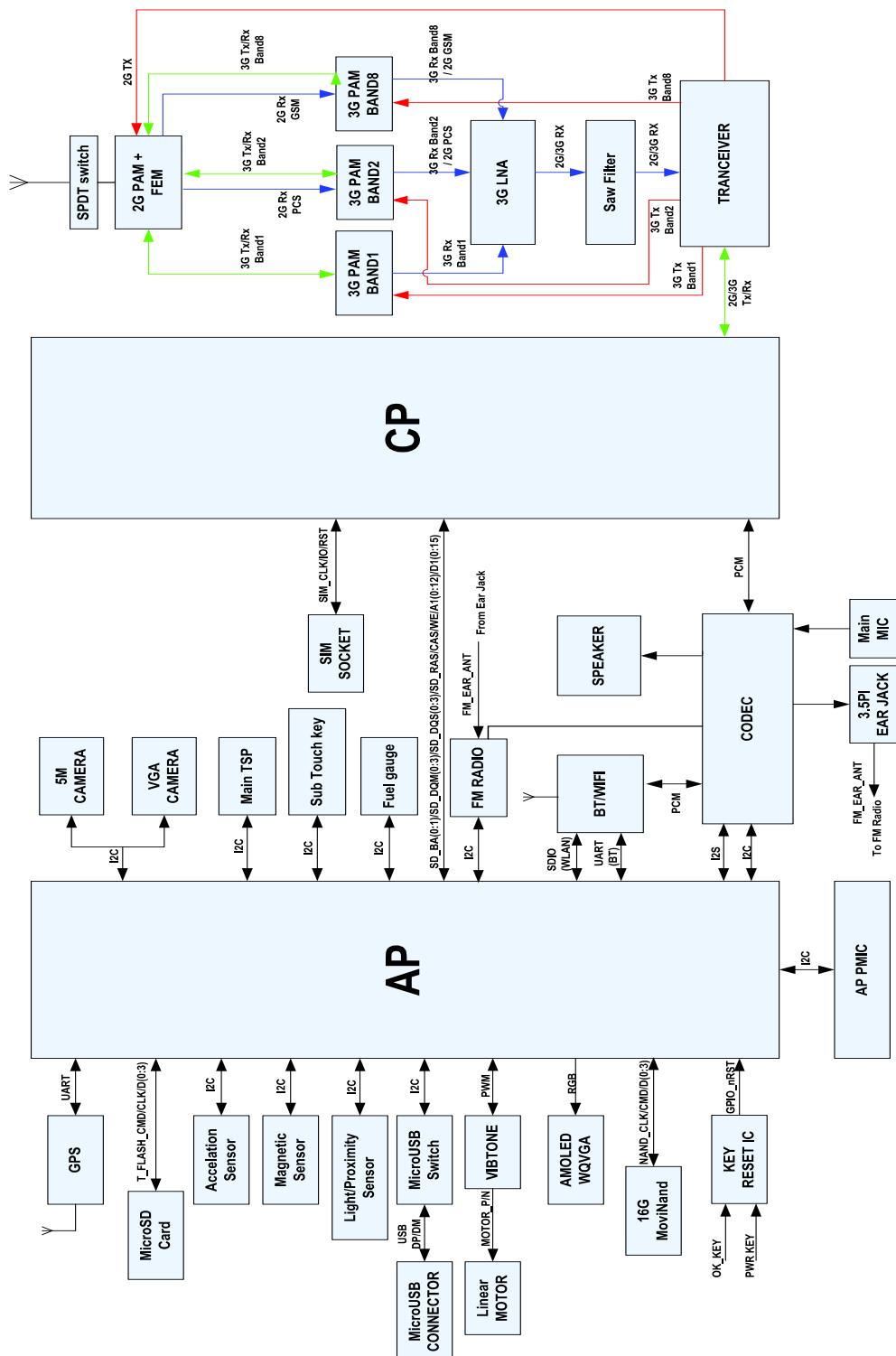


Disconnect the Sim Card PBA connector from the Main PBA then remove the rear shield can + Sim Card PBA

Remove the speaker by opening the connector.

8. Level 3 Repair

8-1. Block Diagram

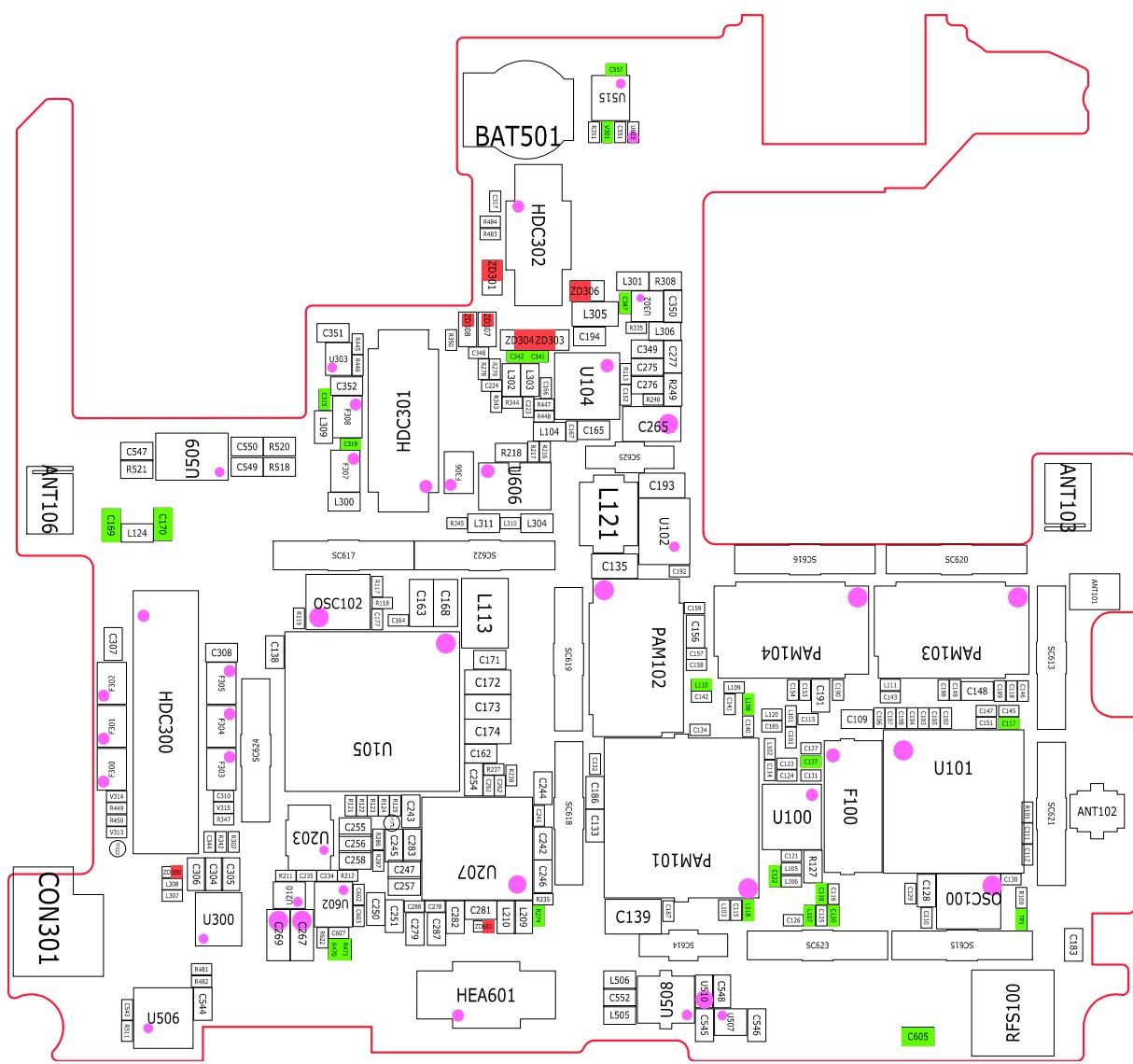


8-2. PCB Diagrams

8-2-1. Top

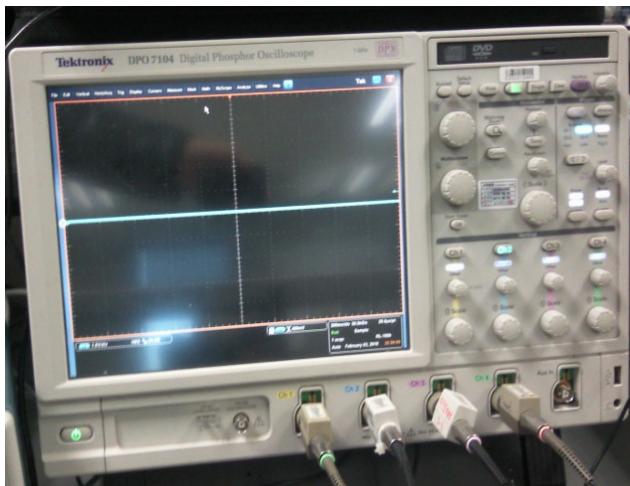


8-2-1. Bottom



8-3. Flow Chart of Troubleshooting

Equipments



↑ Oscilloscope



↑ Digital Multimeter

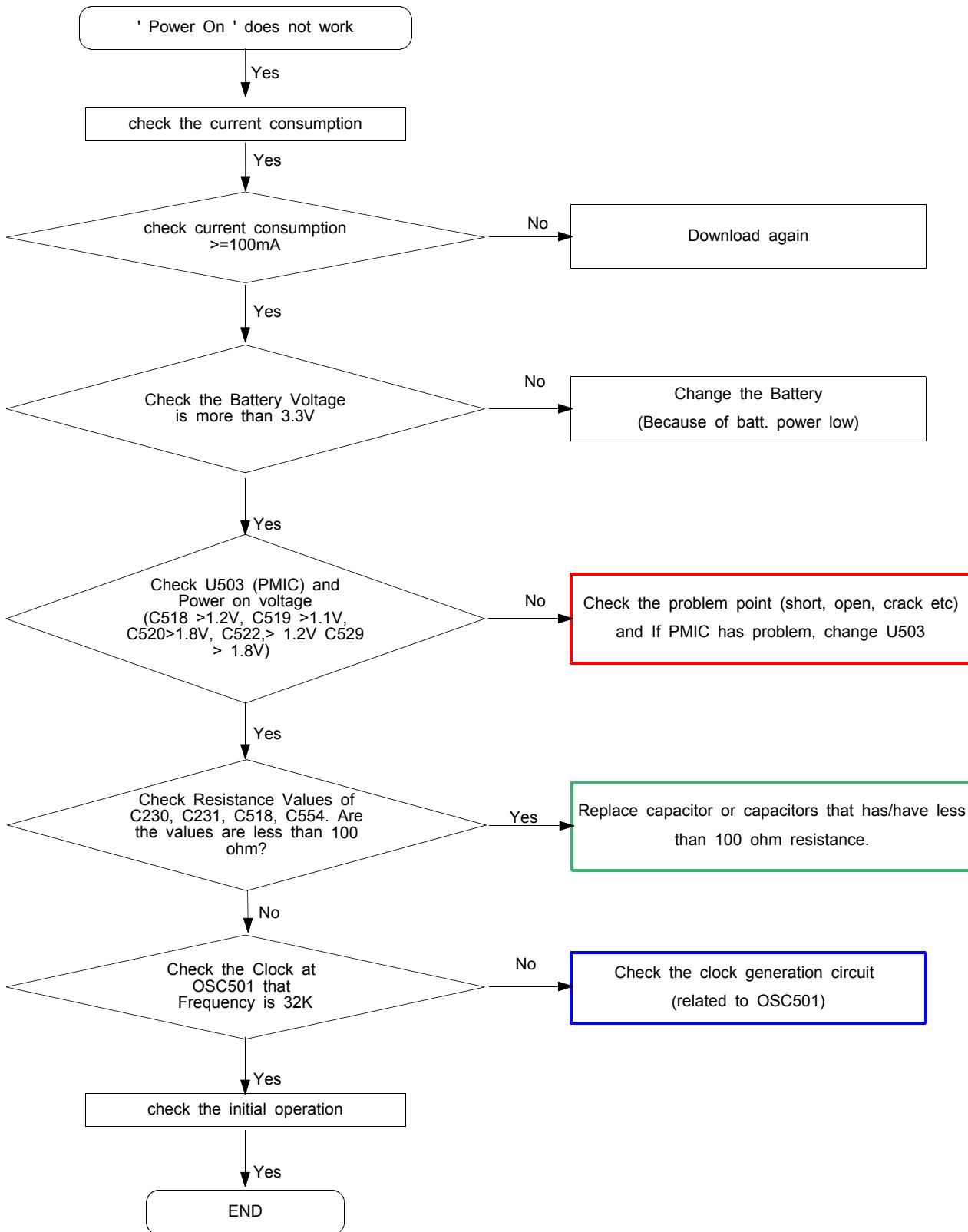


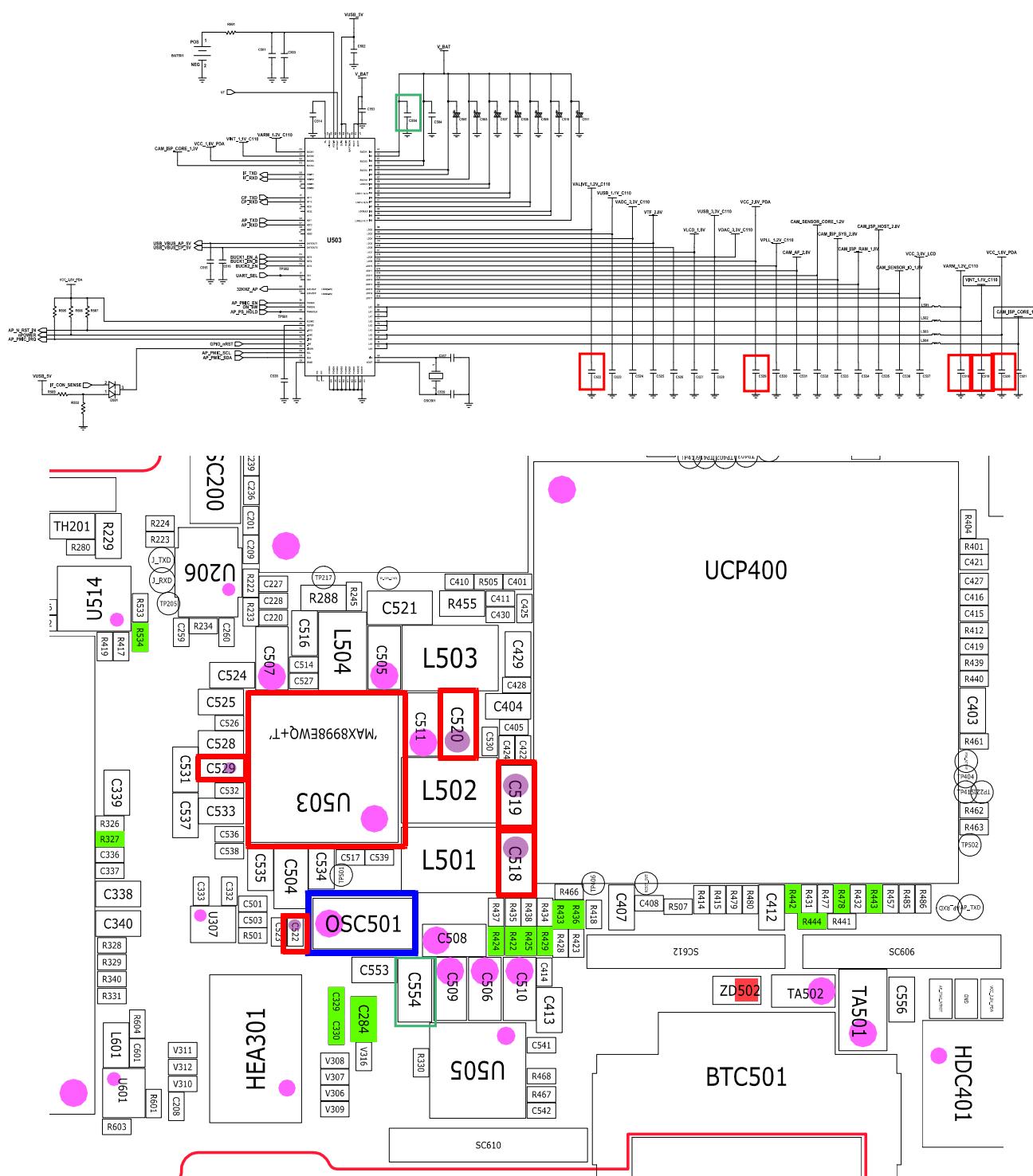
↑ Power Supply

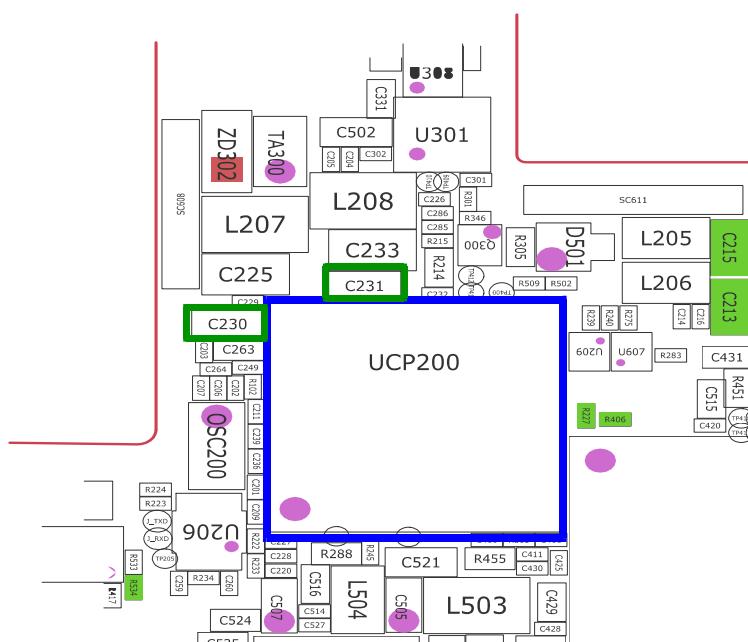
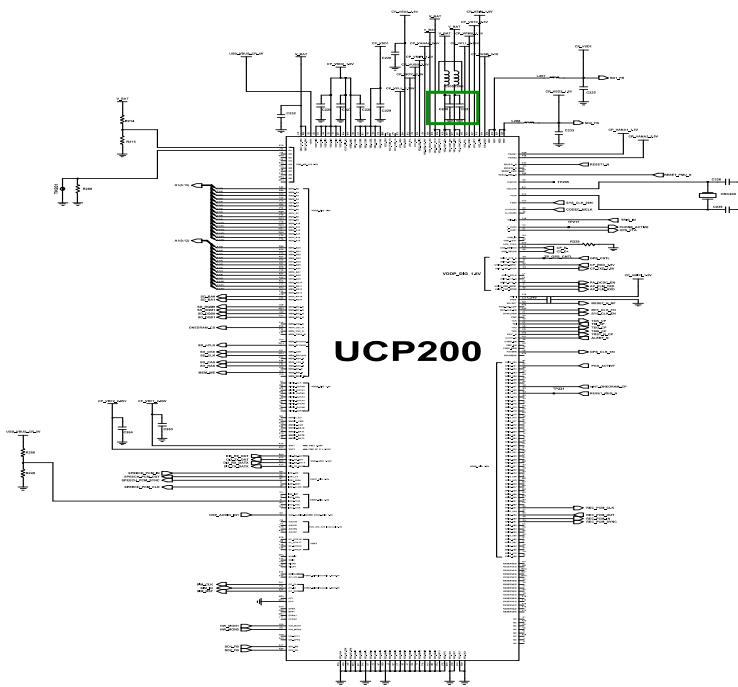


↑ + driver, Tweezer

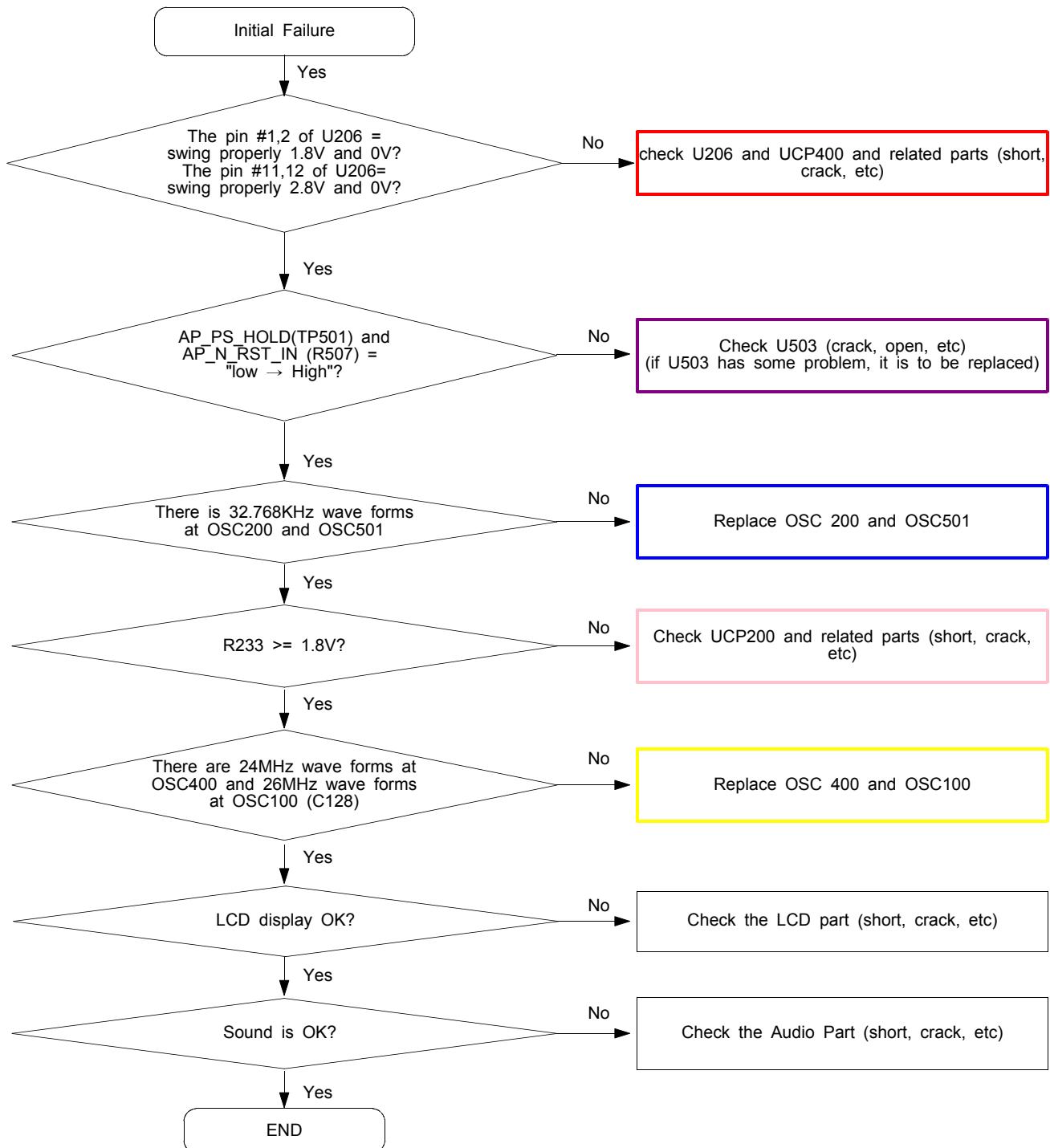
8-3-1. Power On

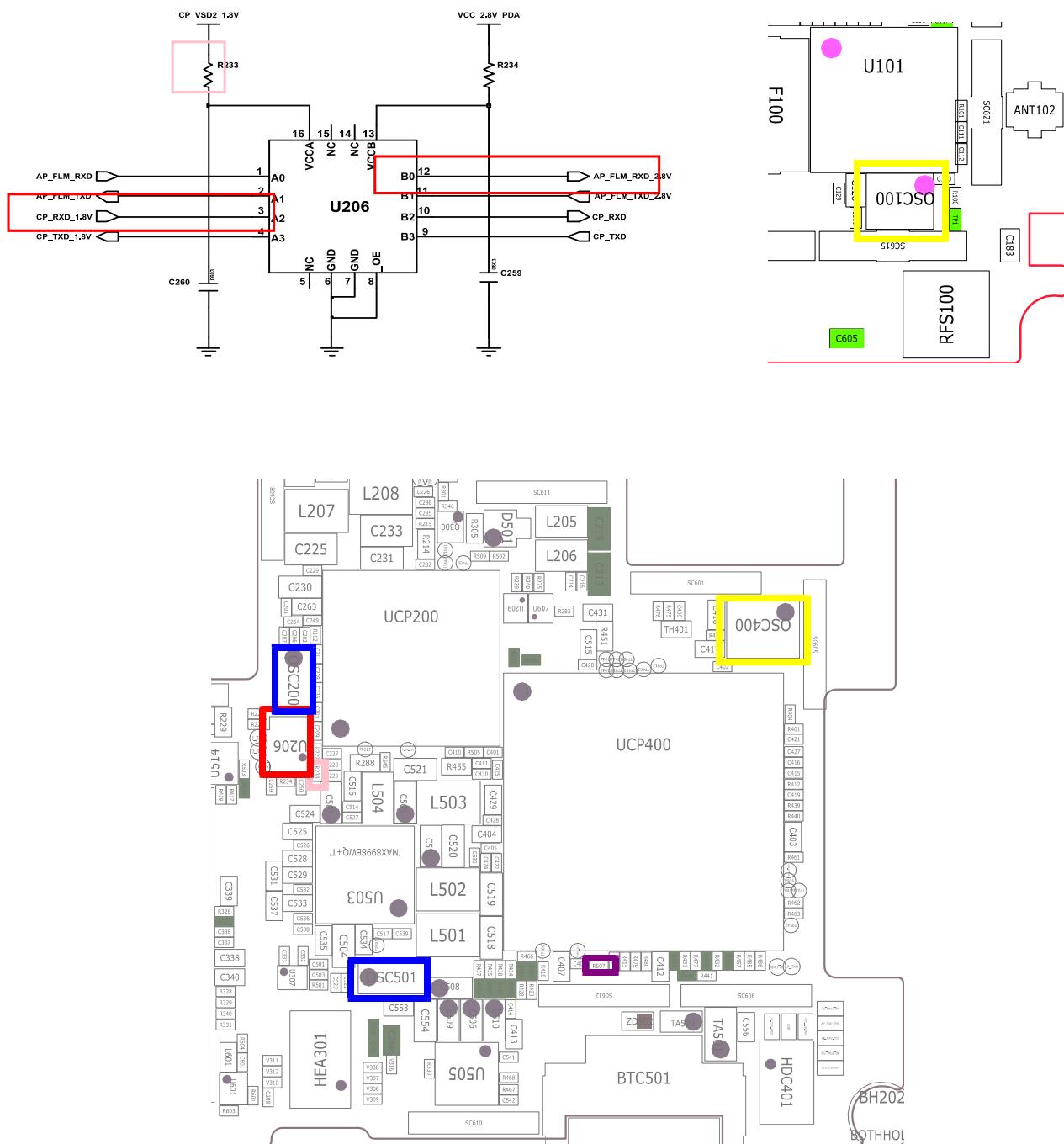




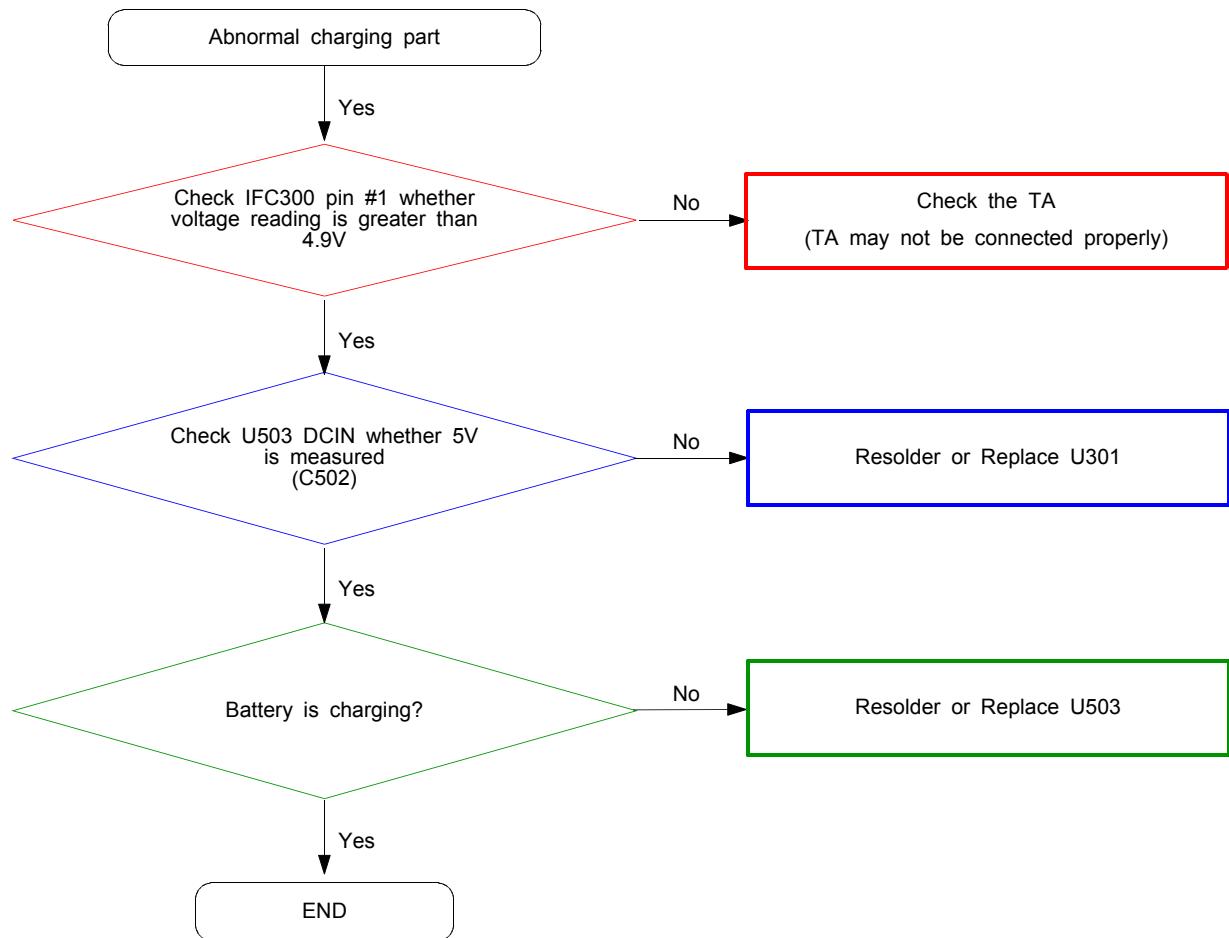


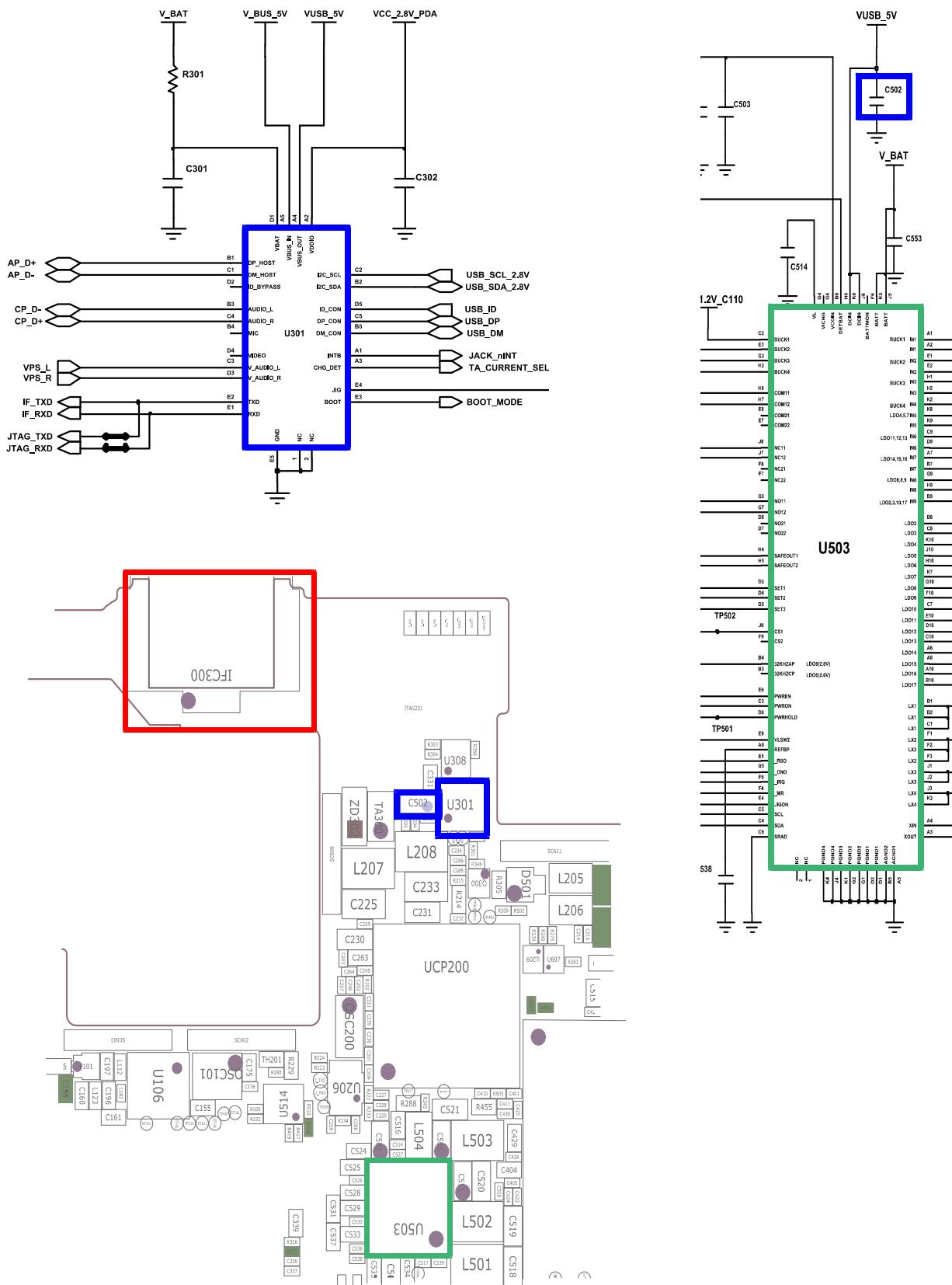
8-3-2. Initial



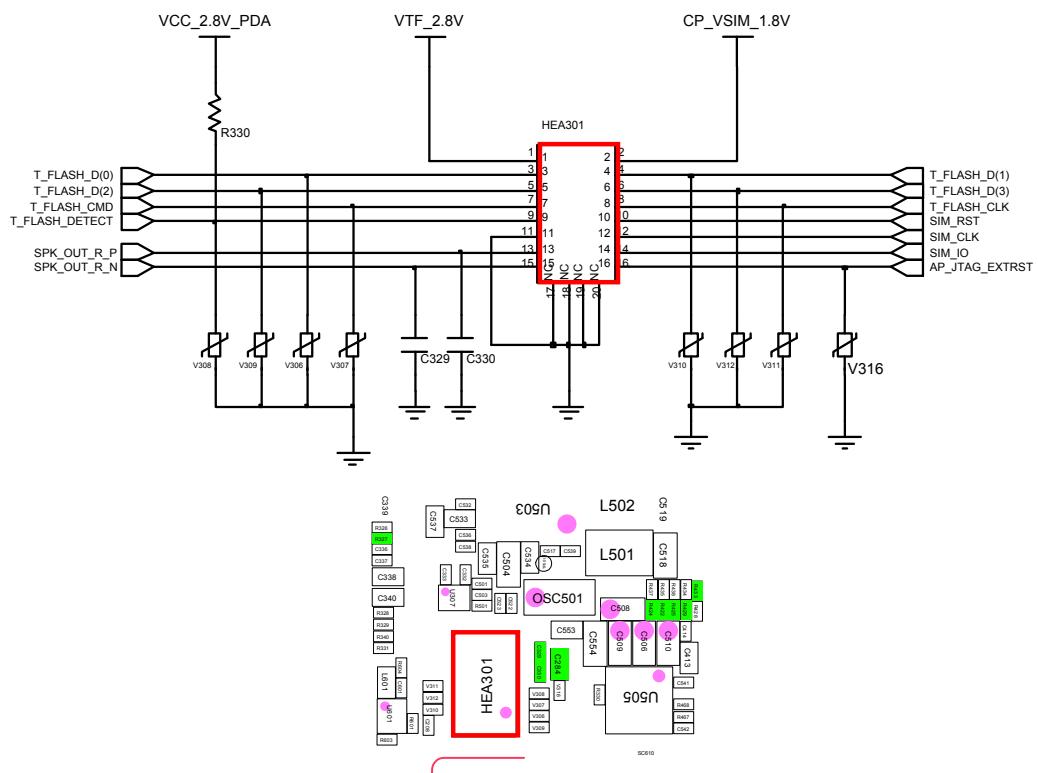
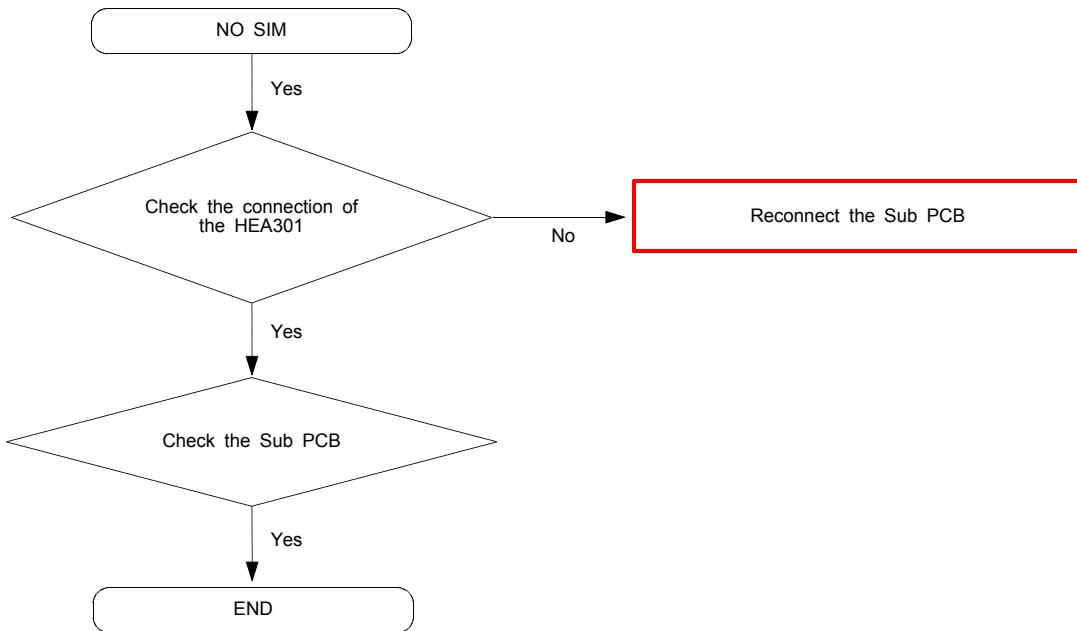


8-3-3. Charging Part

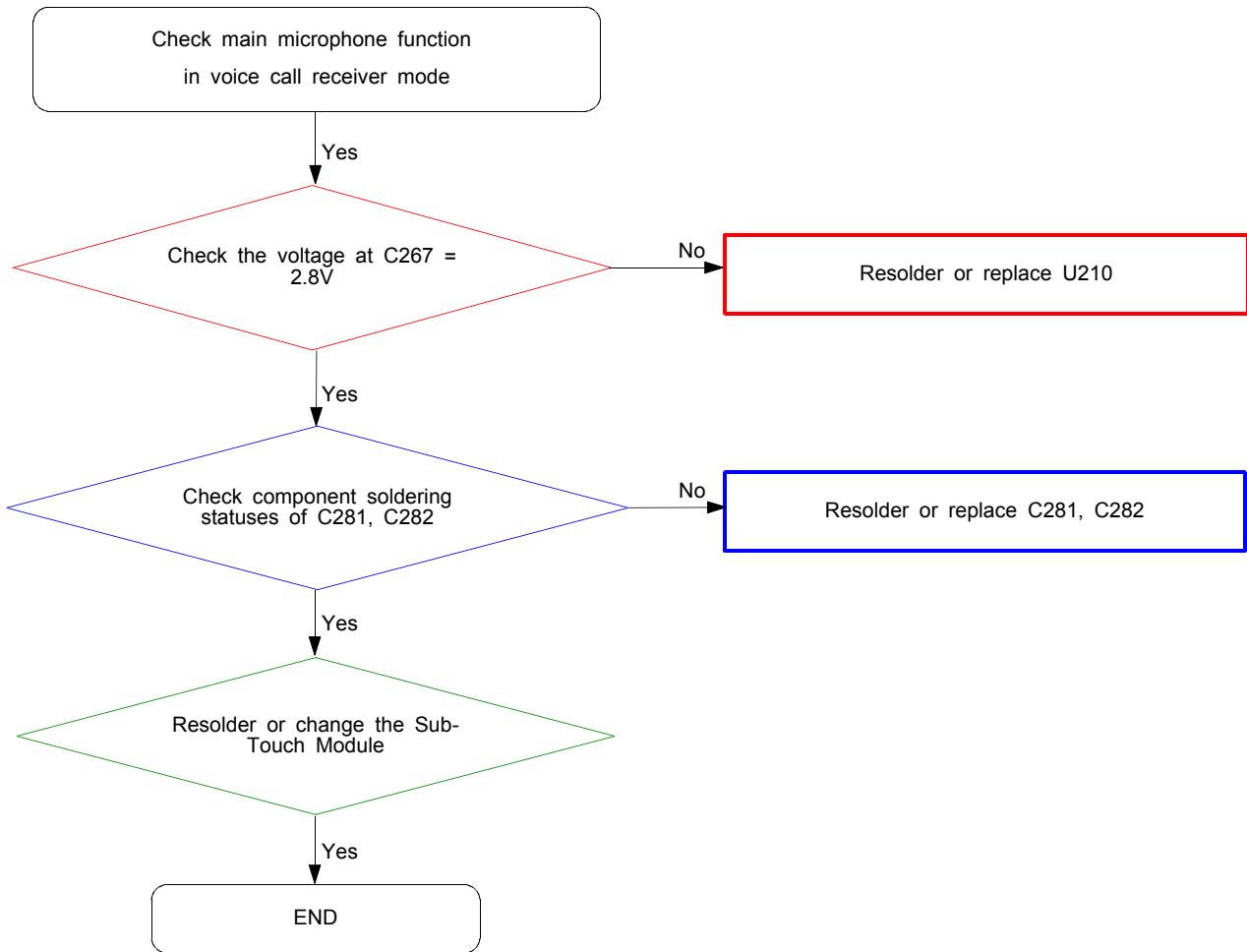


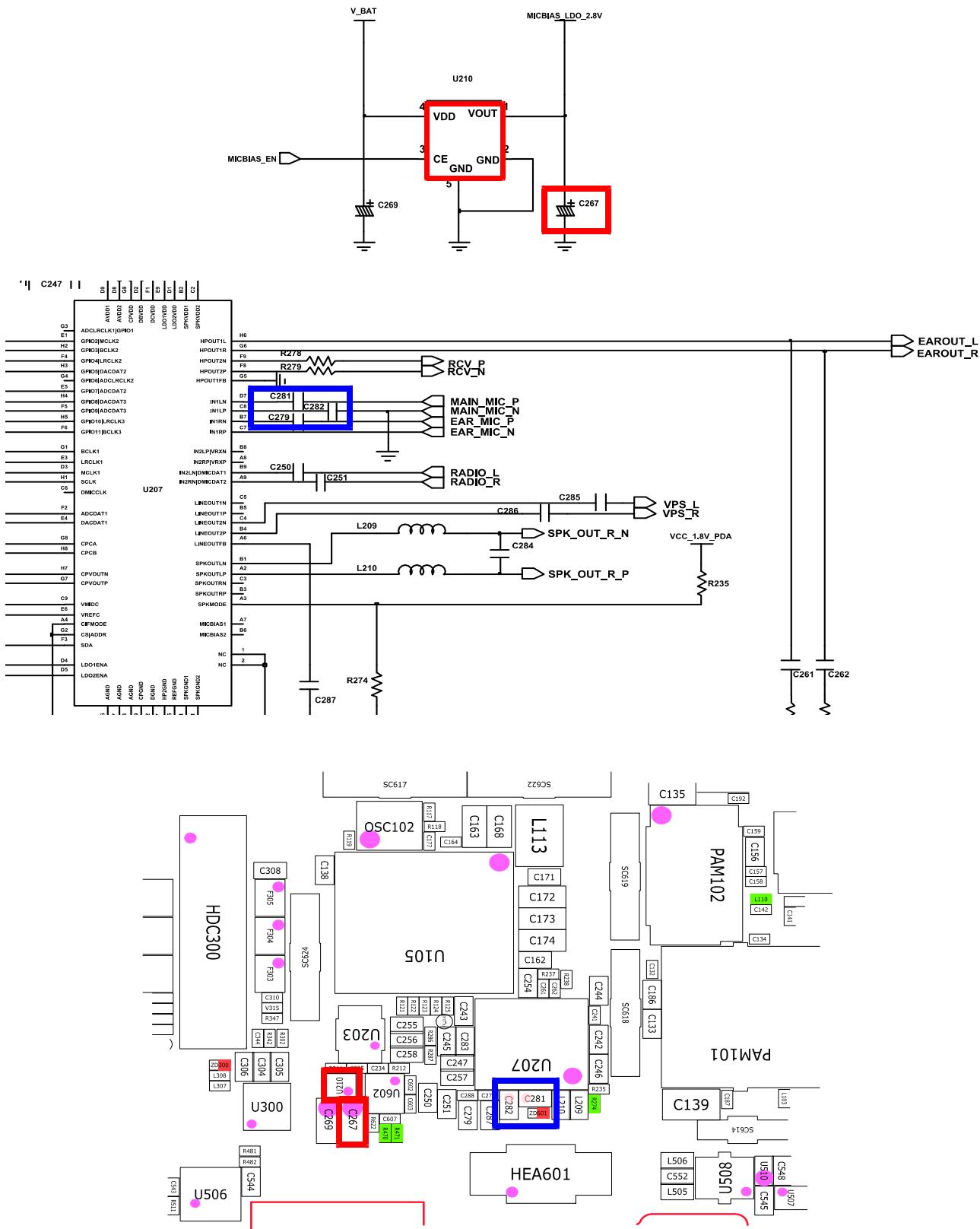


8-3-4. Sim Part

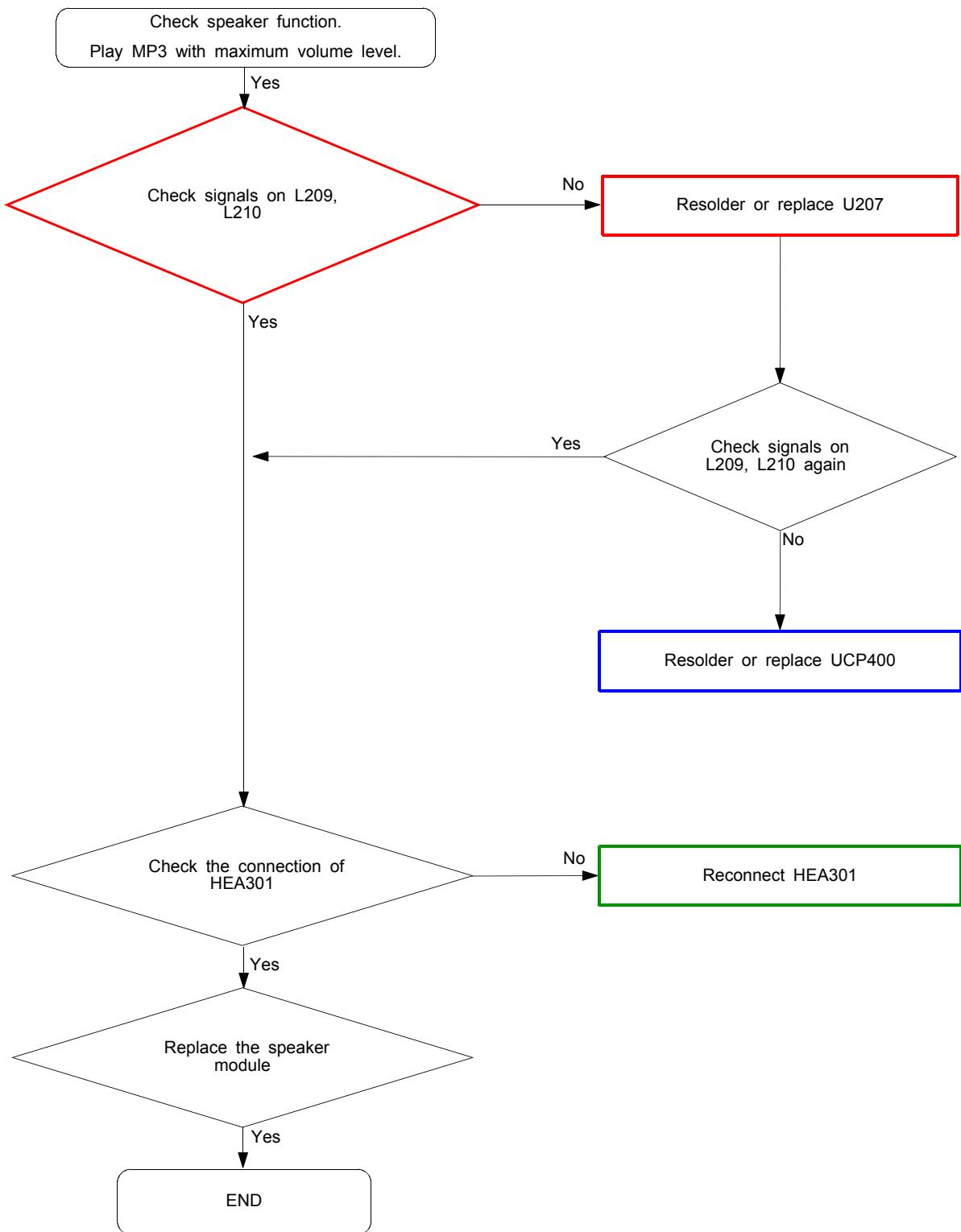


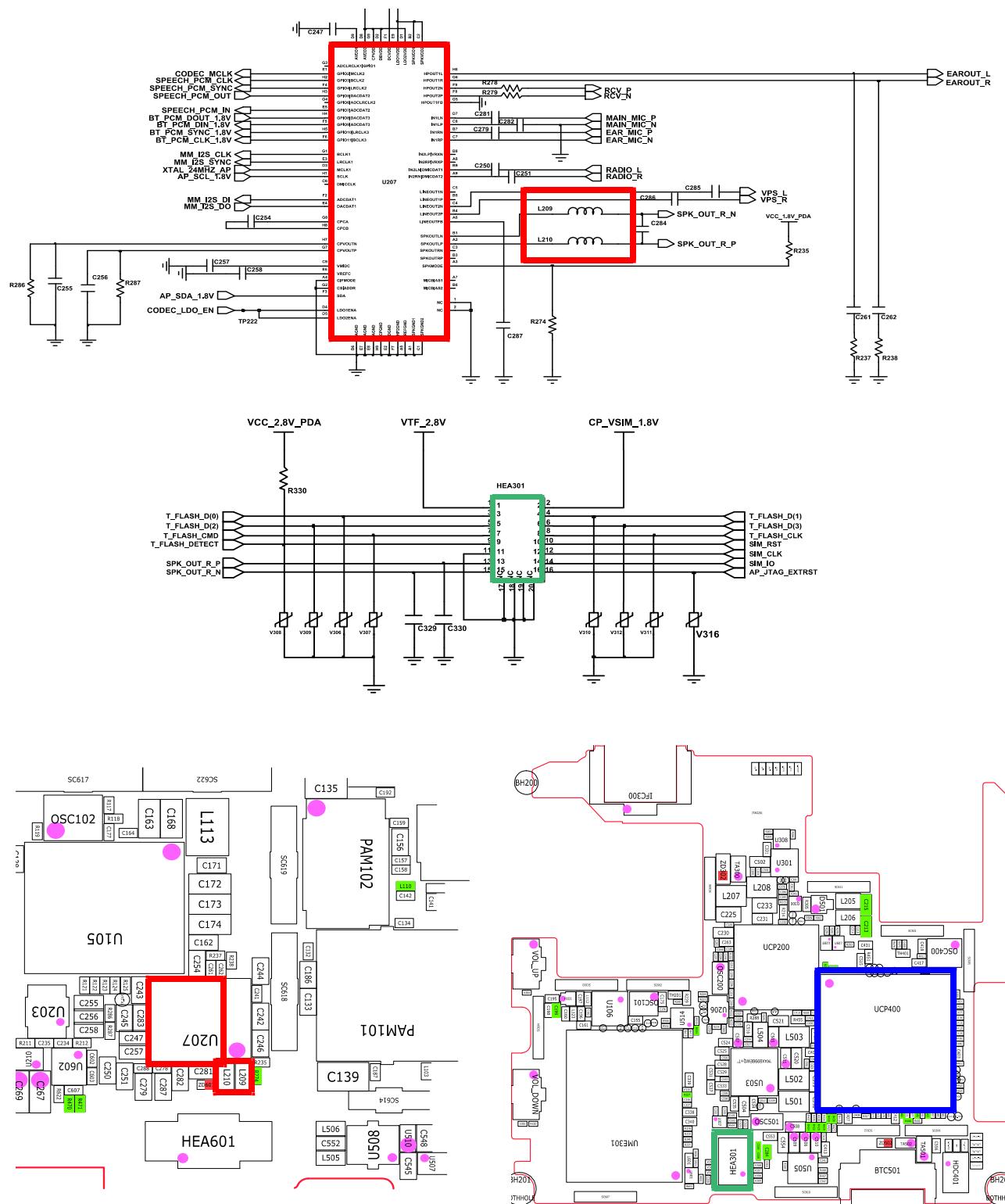
8-3-5. Microphone Part



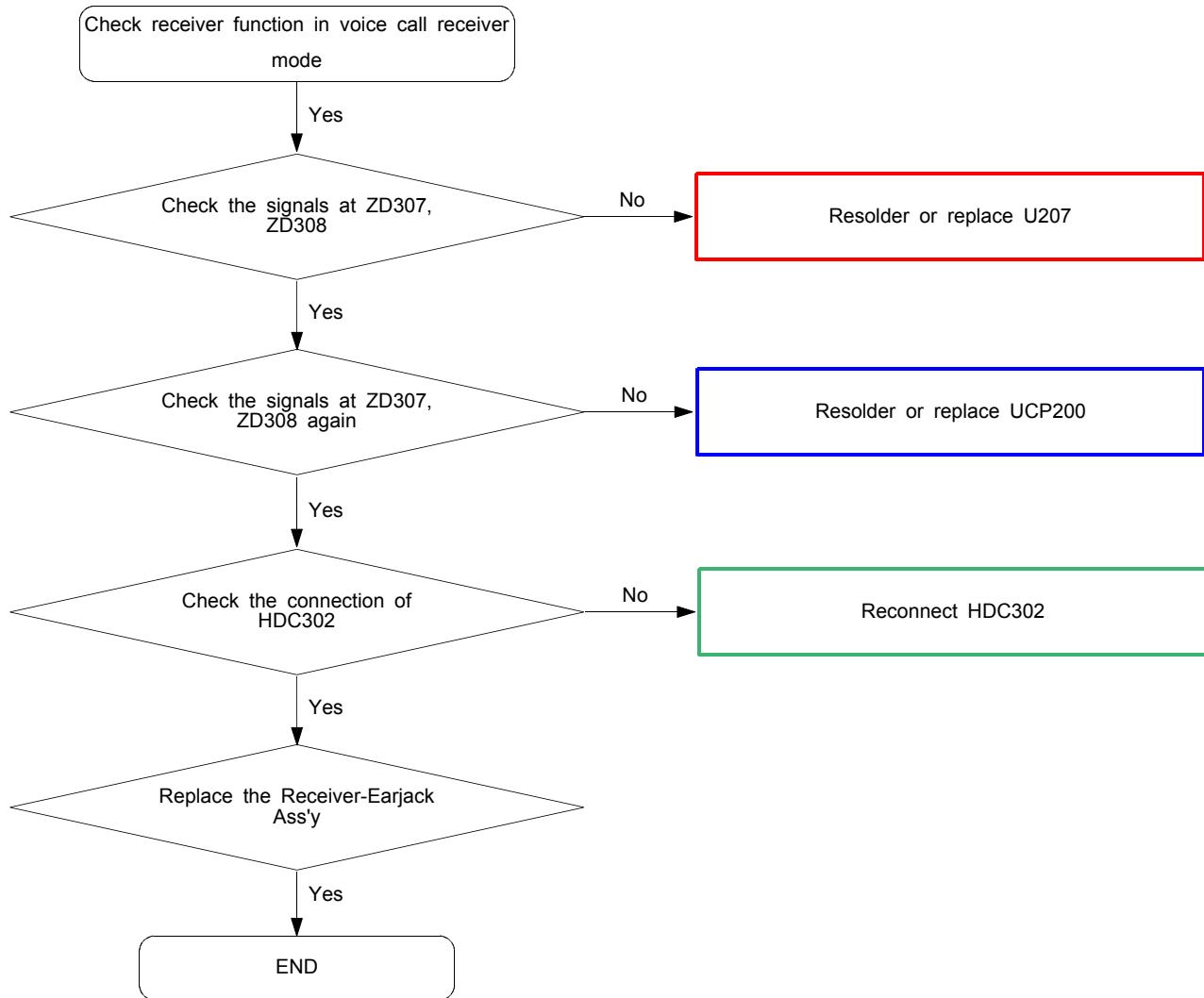


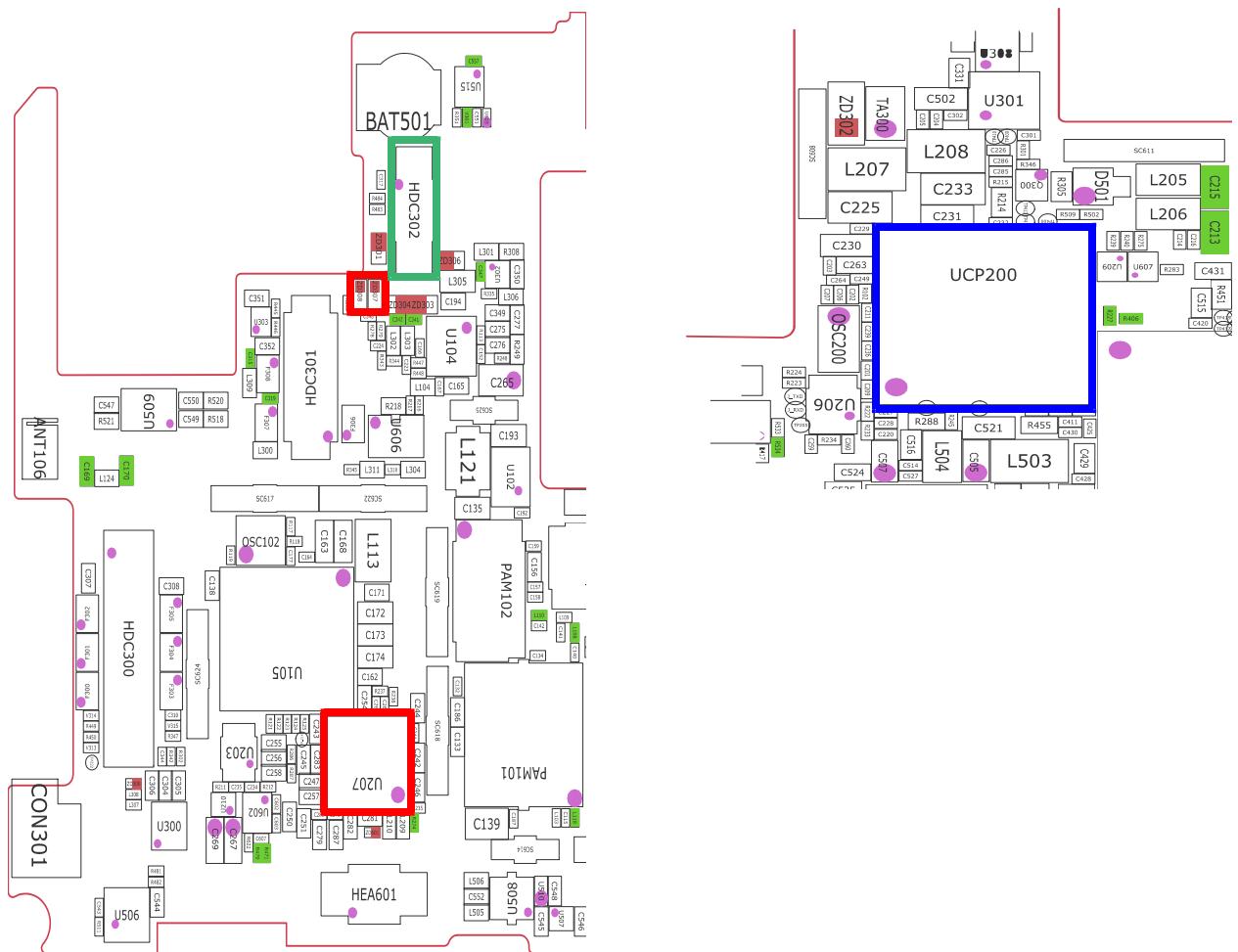
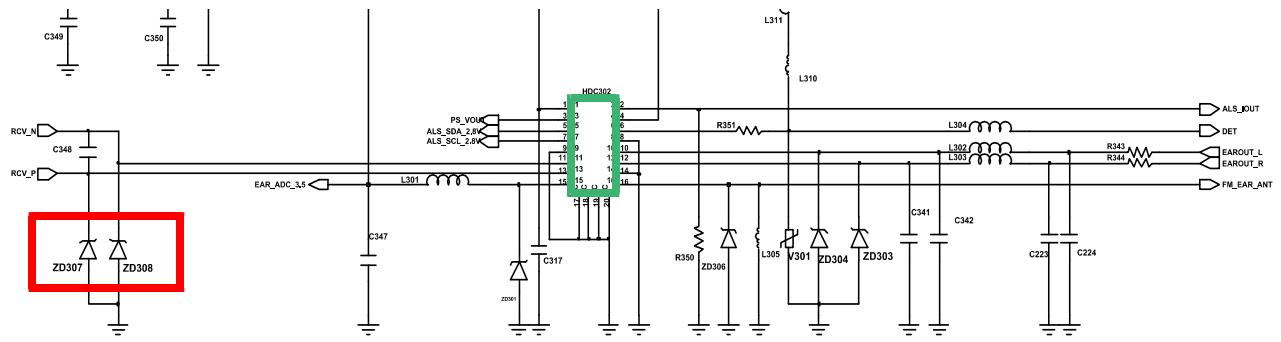
8-3-6. Speaker Part



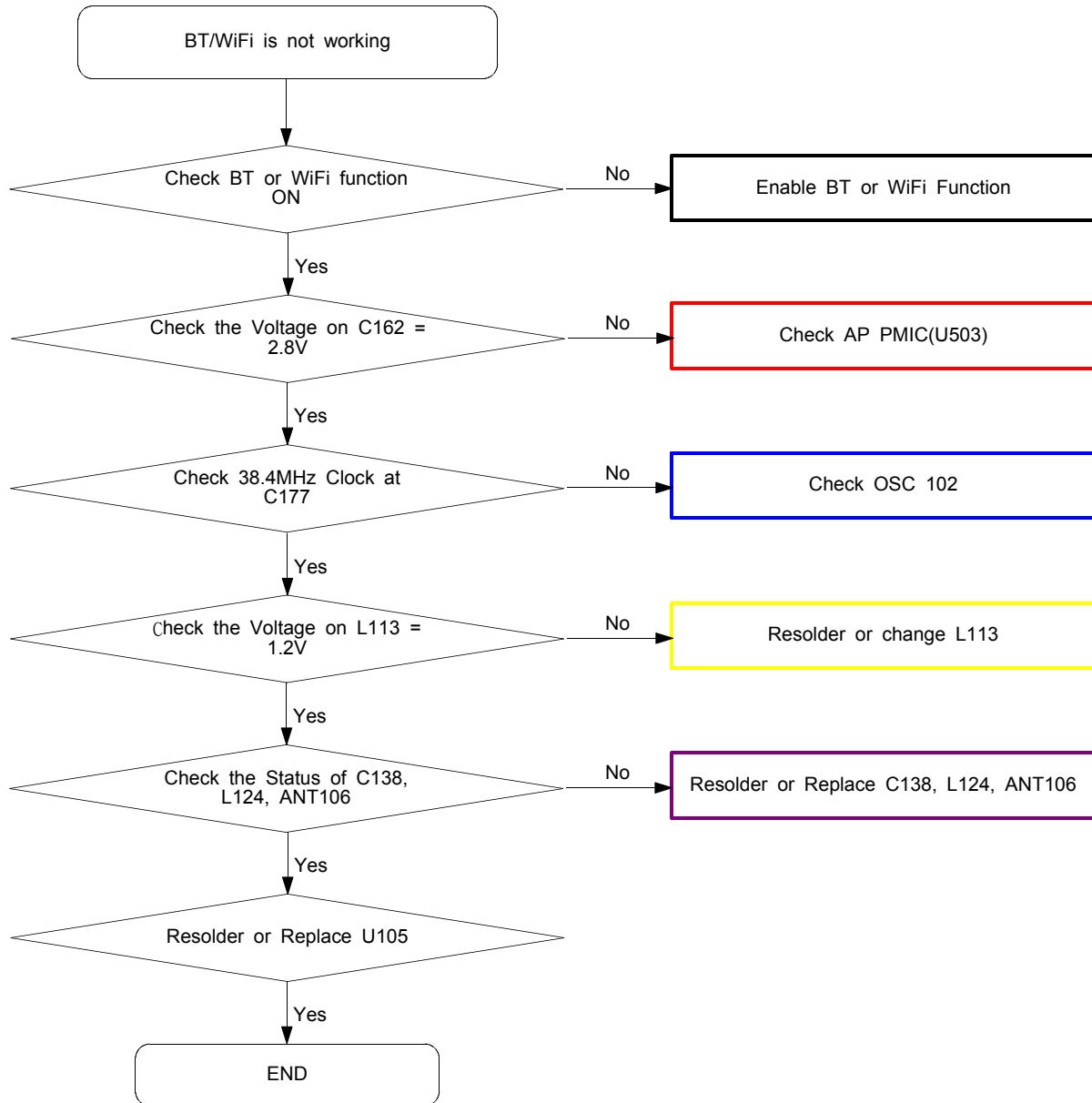


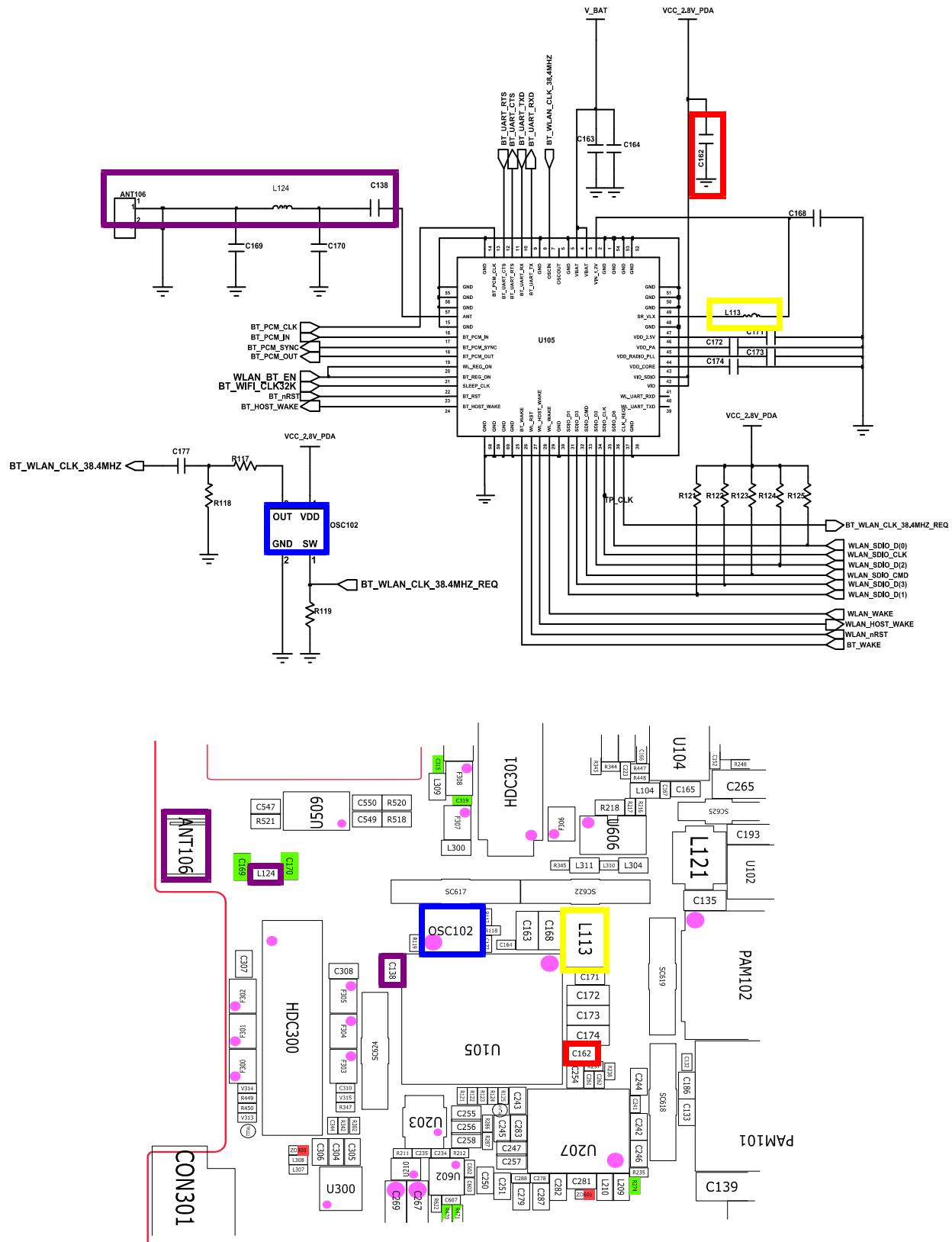
8-3-7. Receiver Part



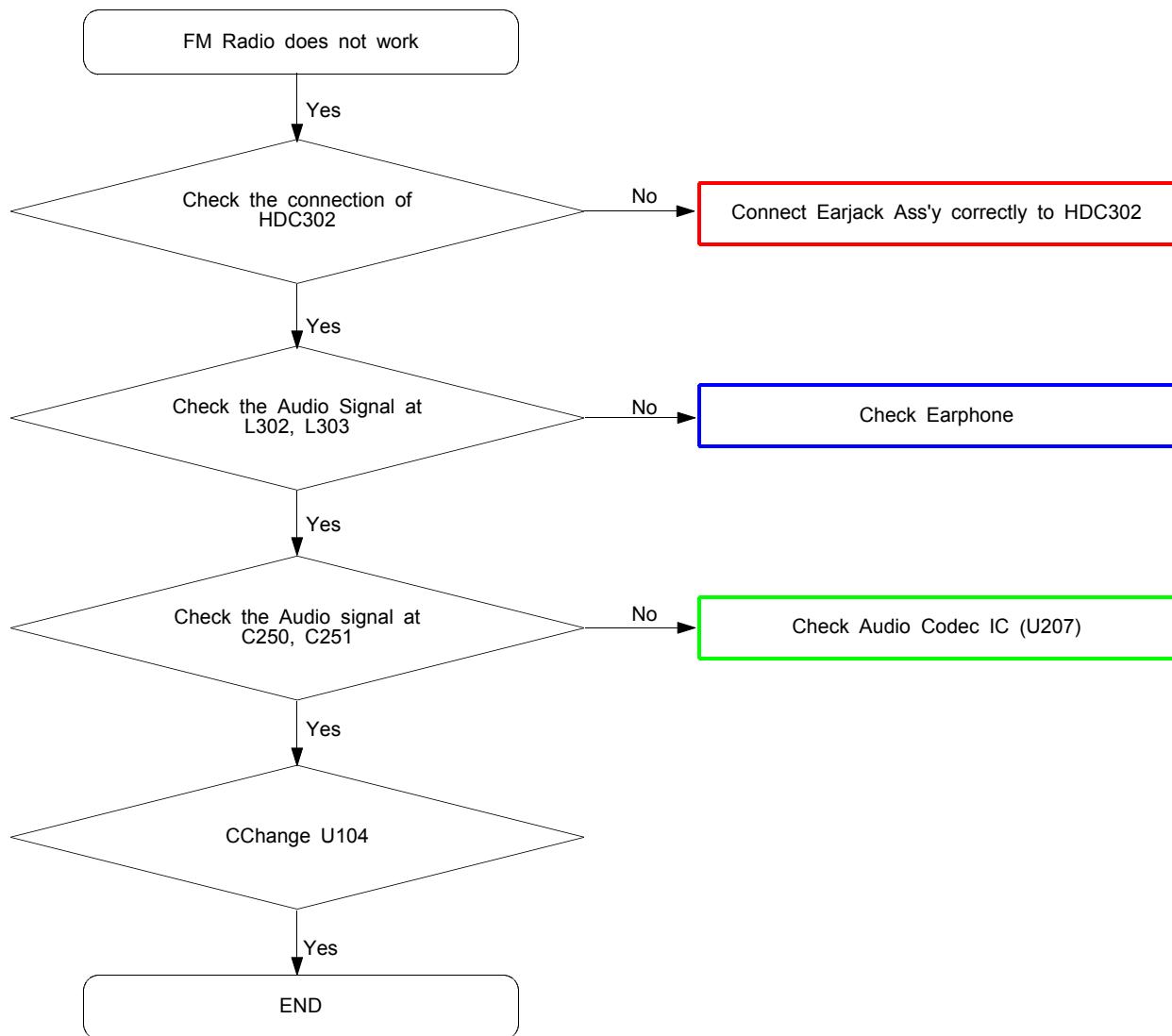


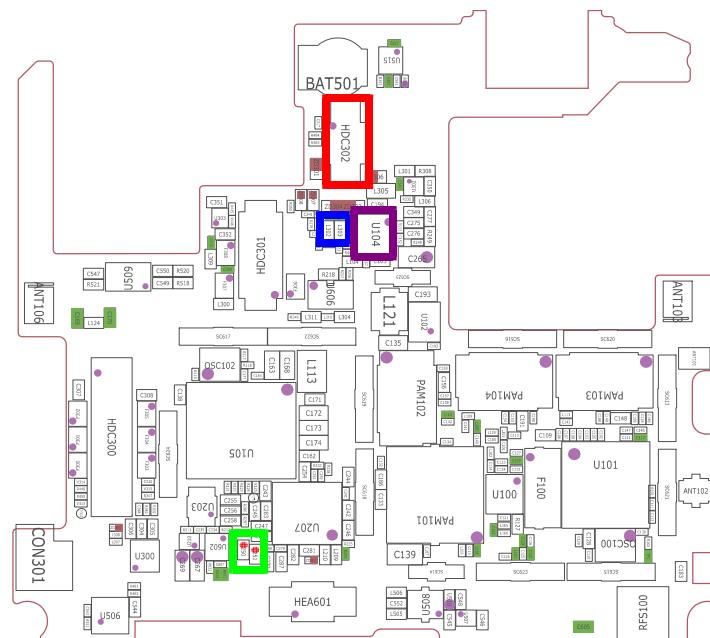
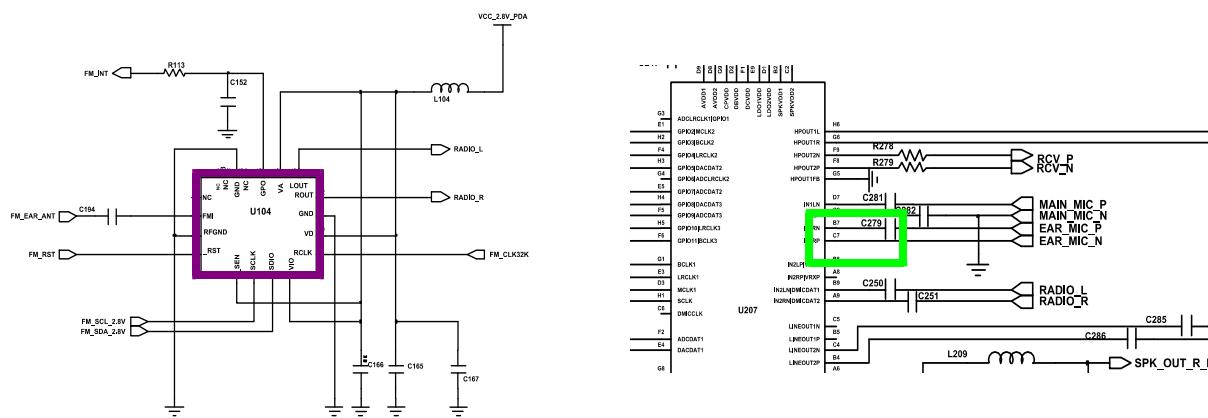
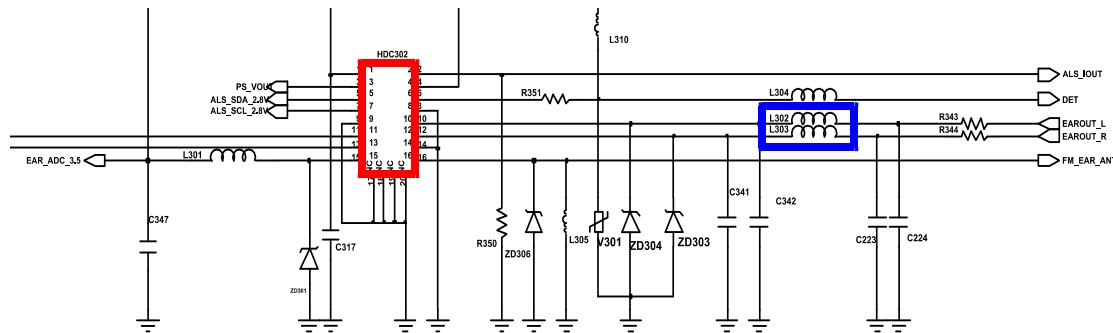
8-3-8. BT/WIFI



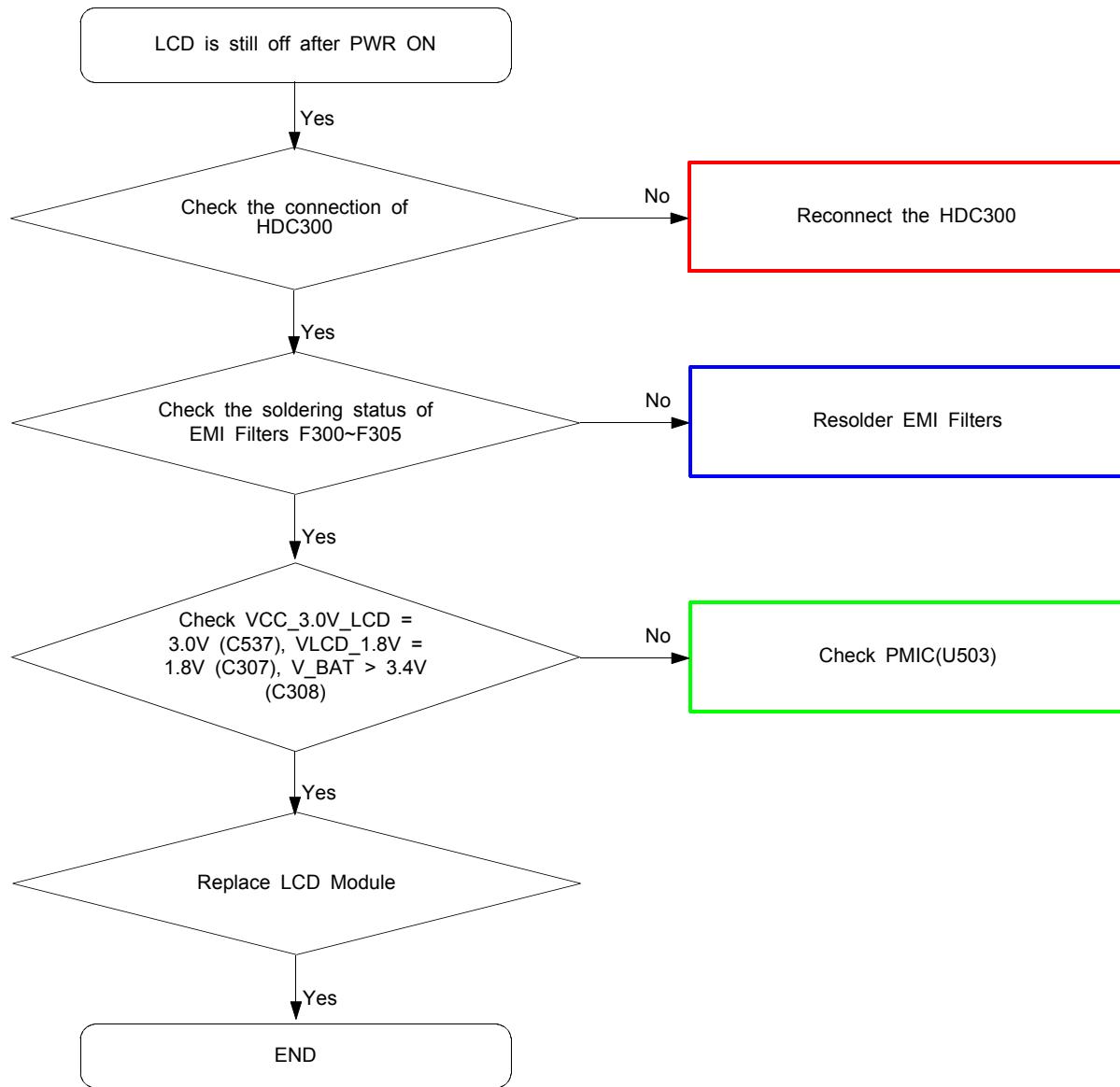


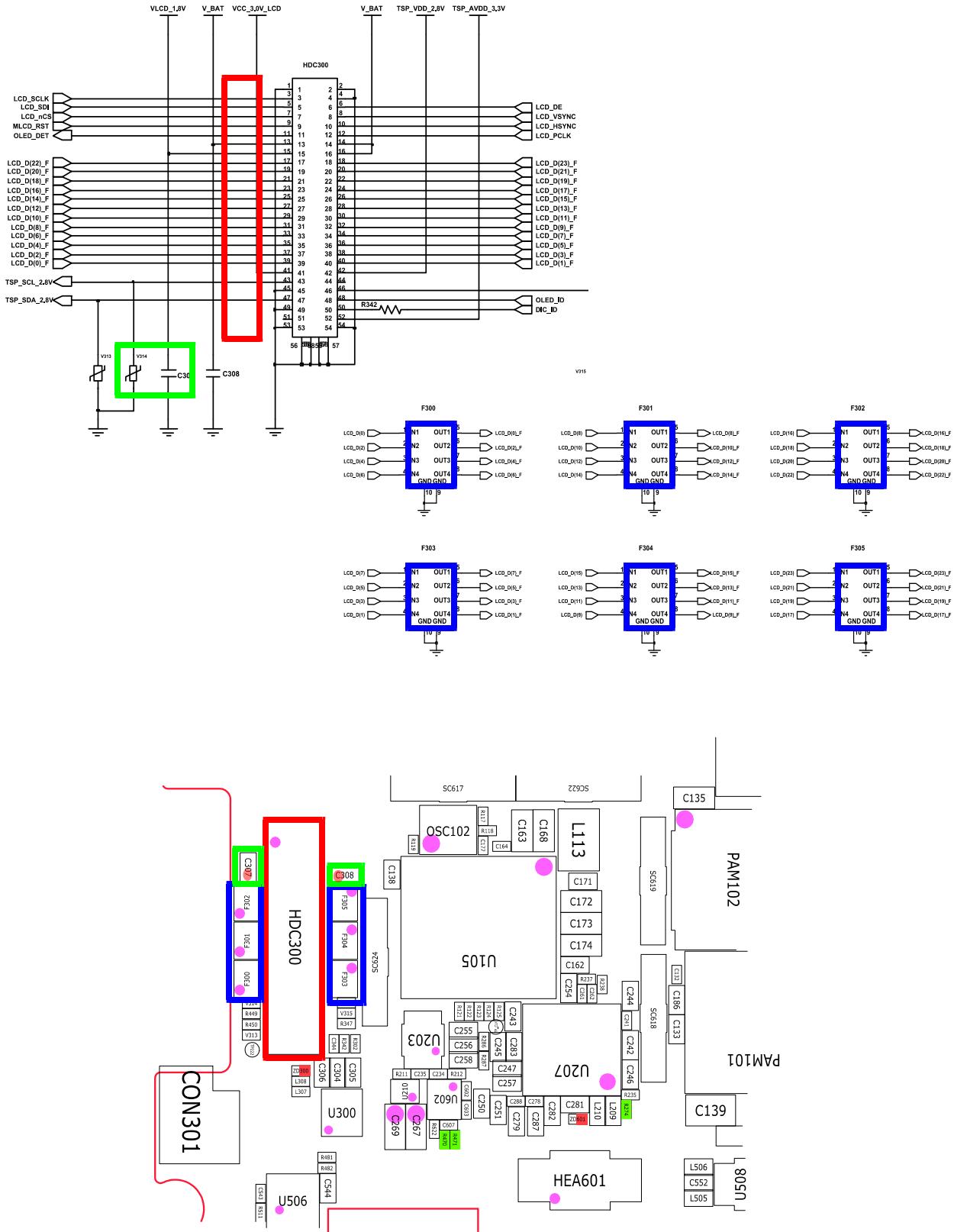
8-3-9. FM RADIO



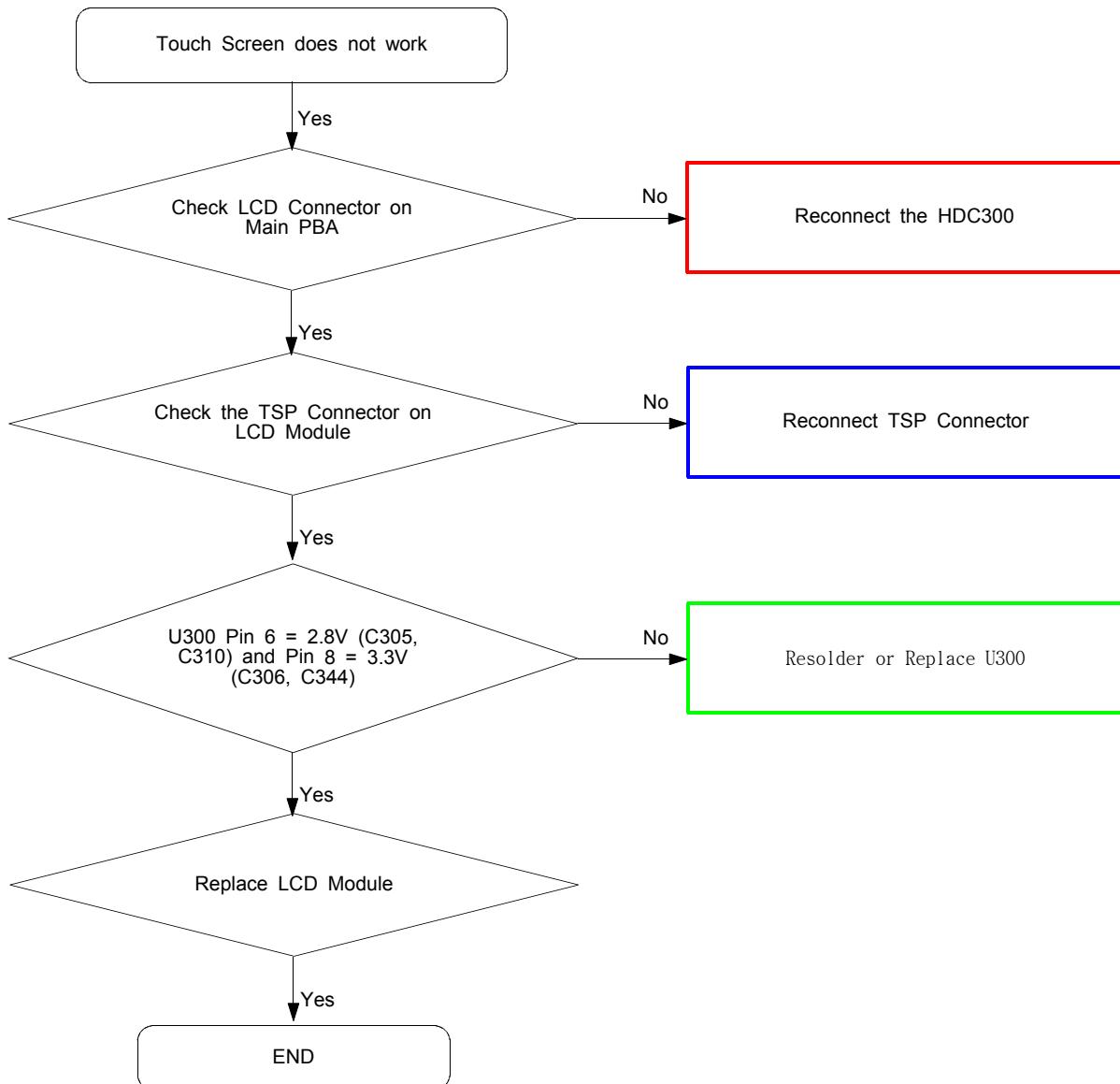


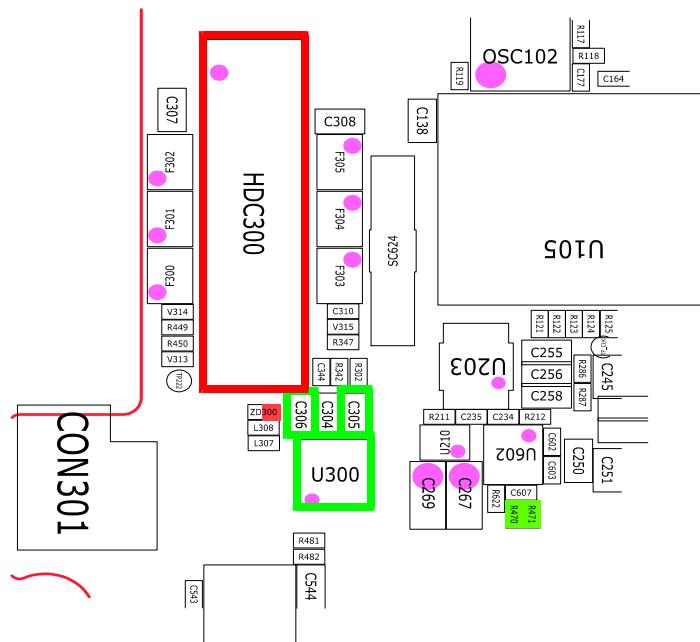
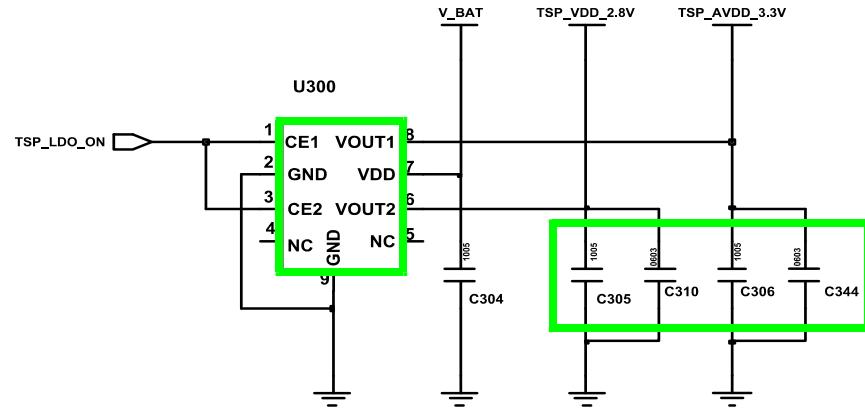
8-3-10. LCD



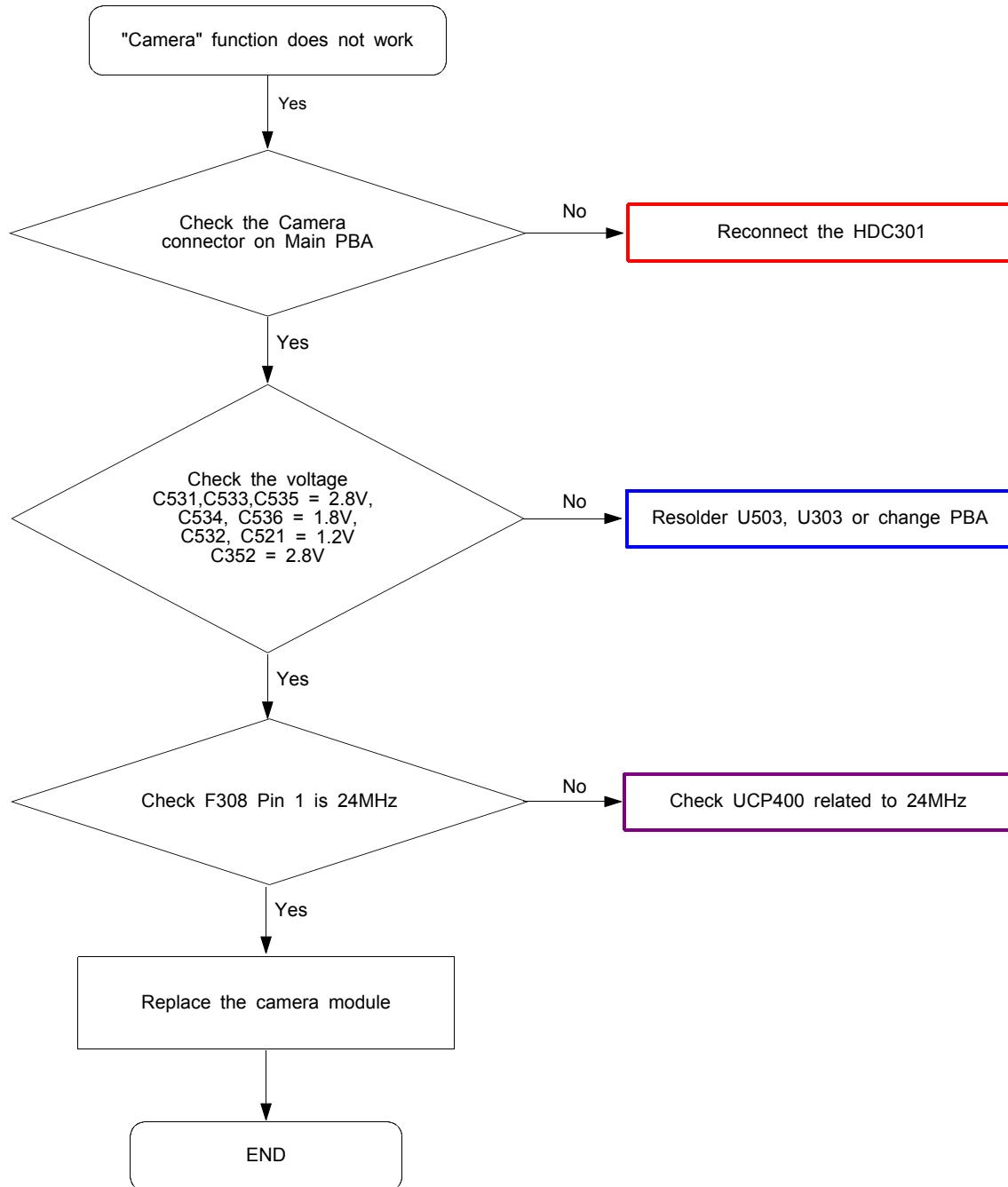


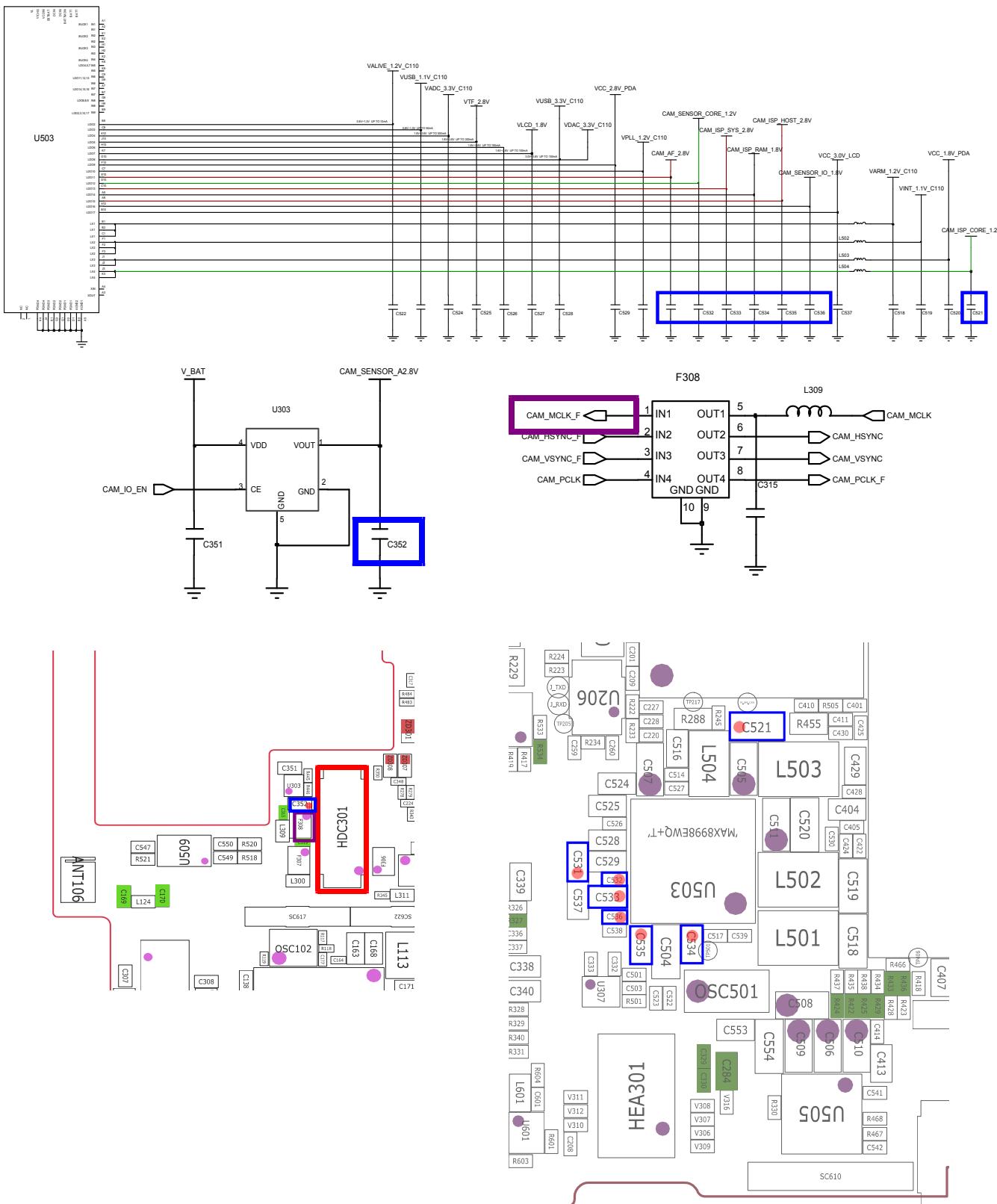
8-3-11. TSP



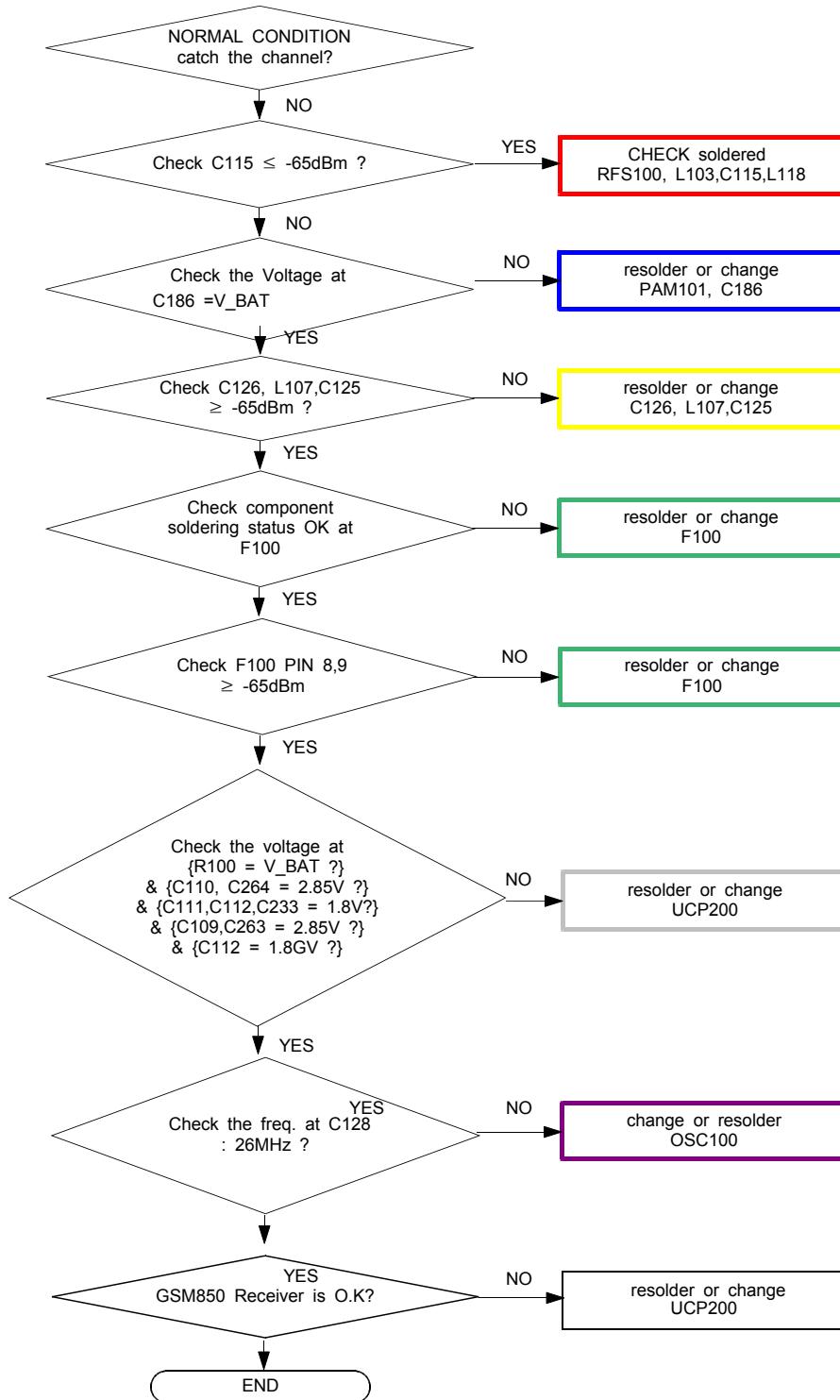


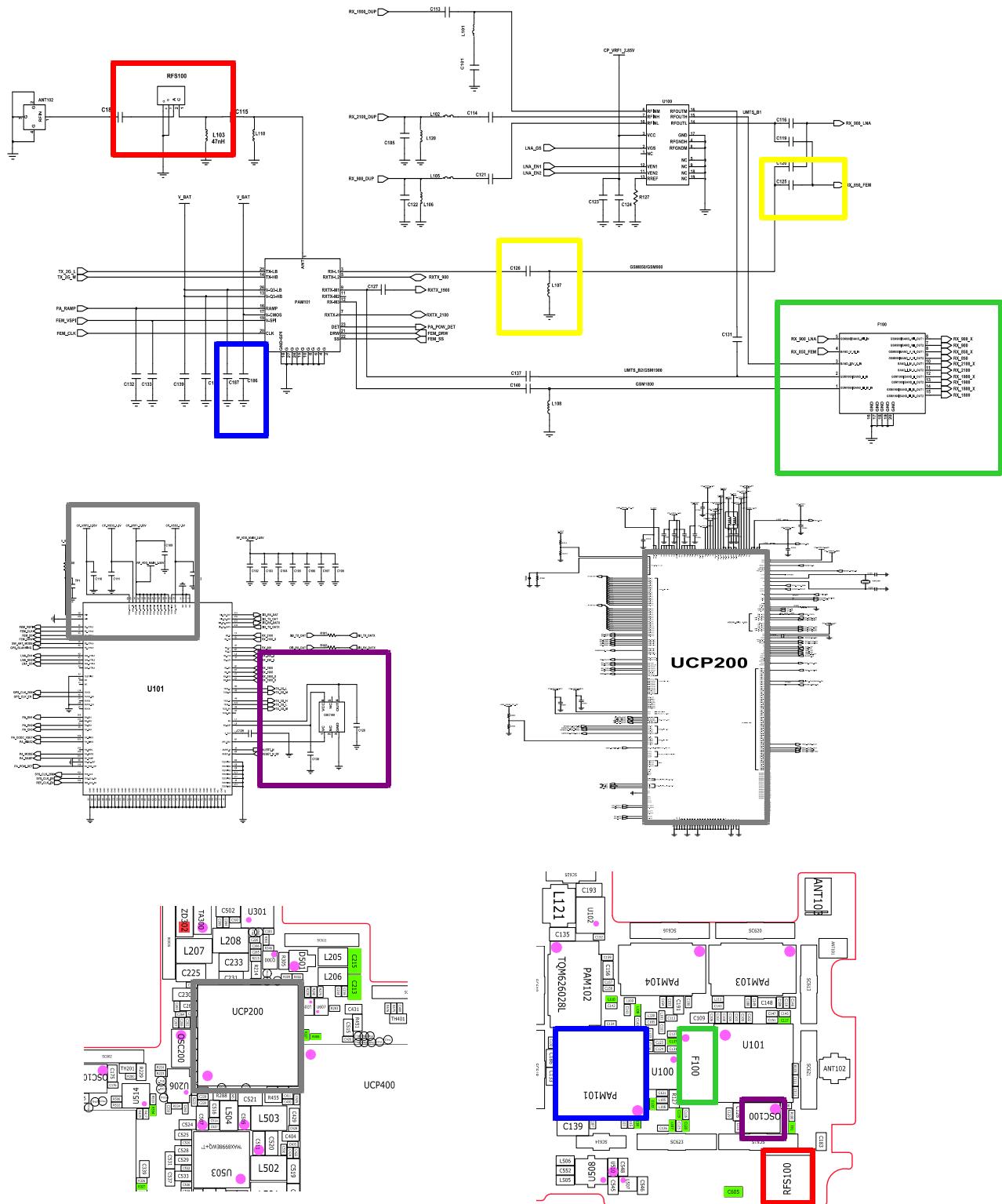
8-3-12. 5M CAM



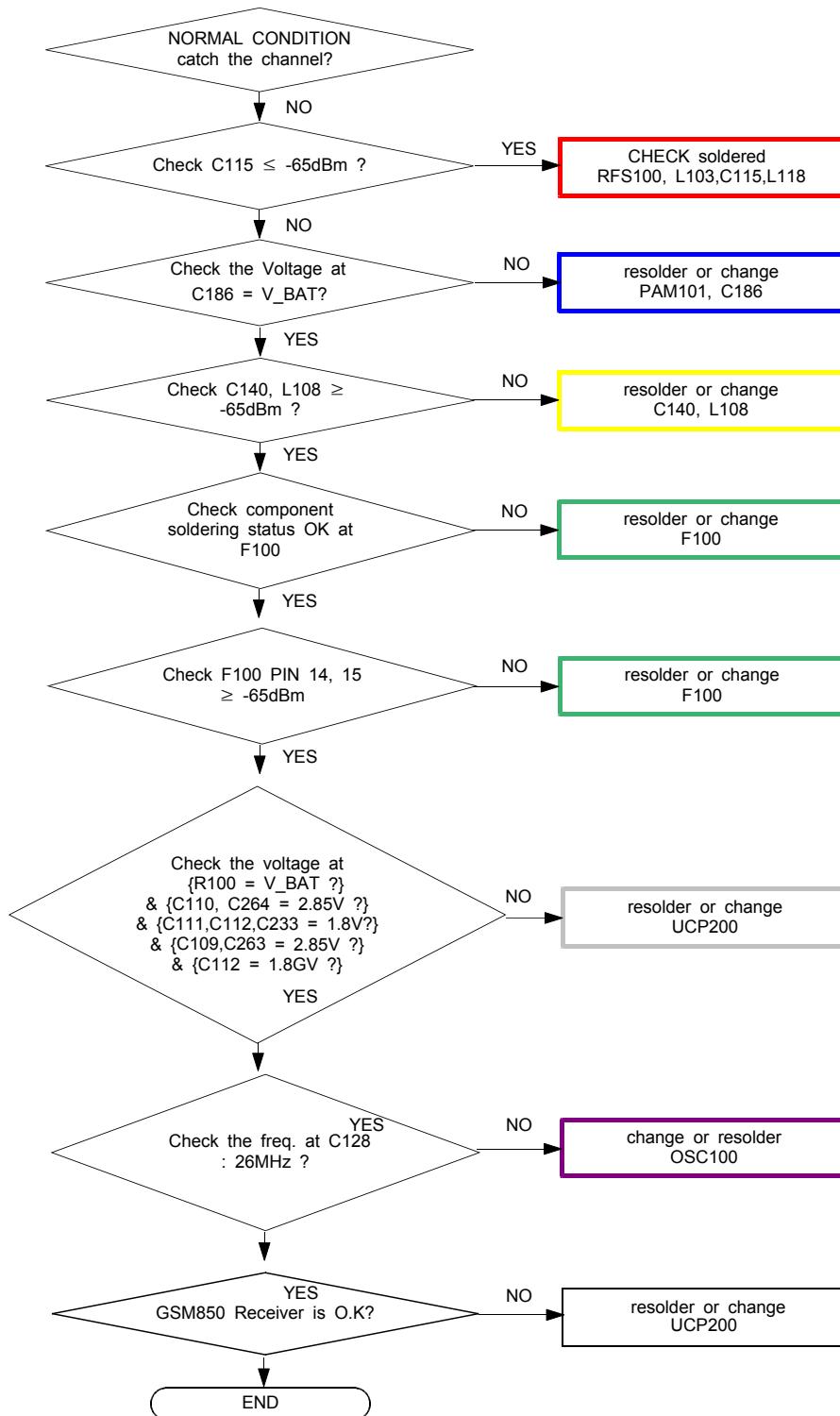


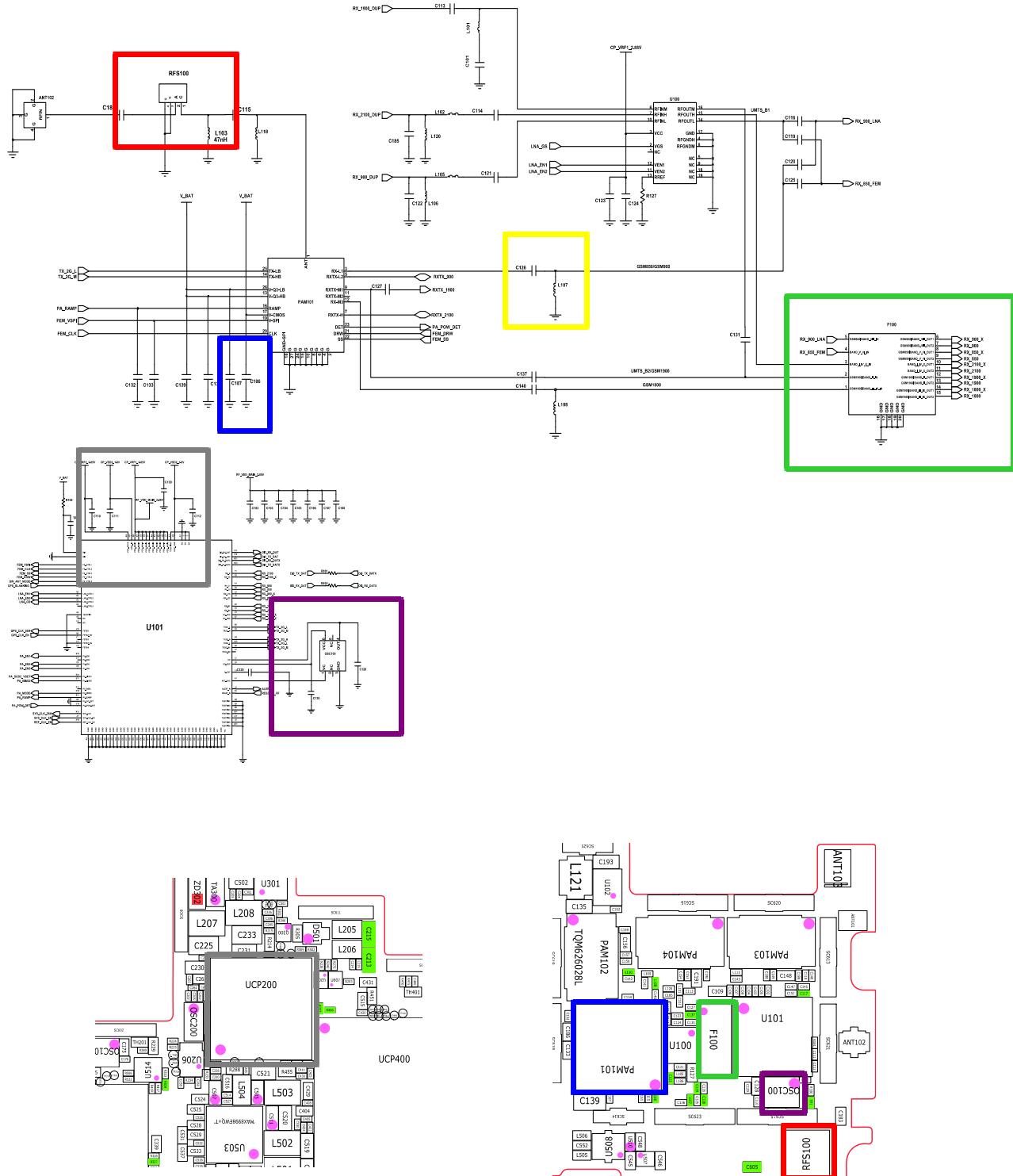
8-3-13. GSM850 RX



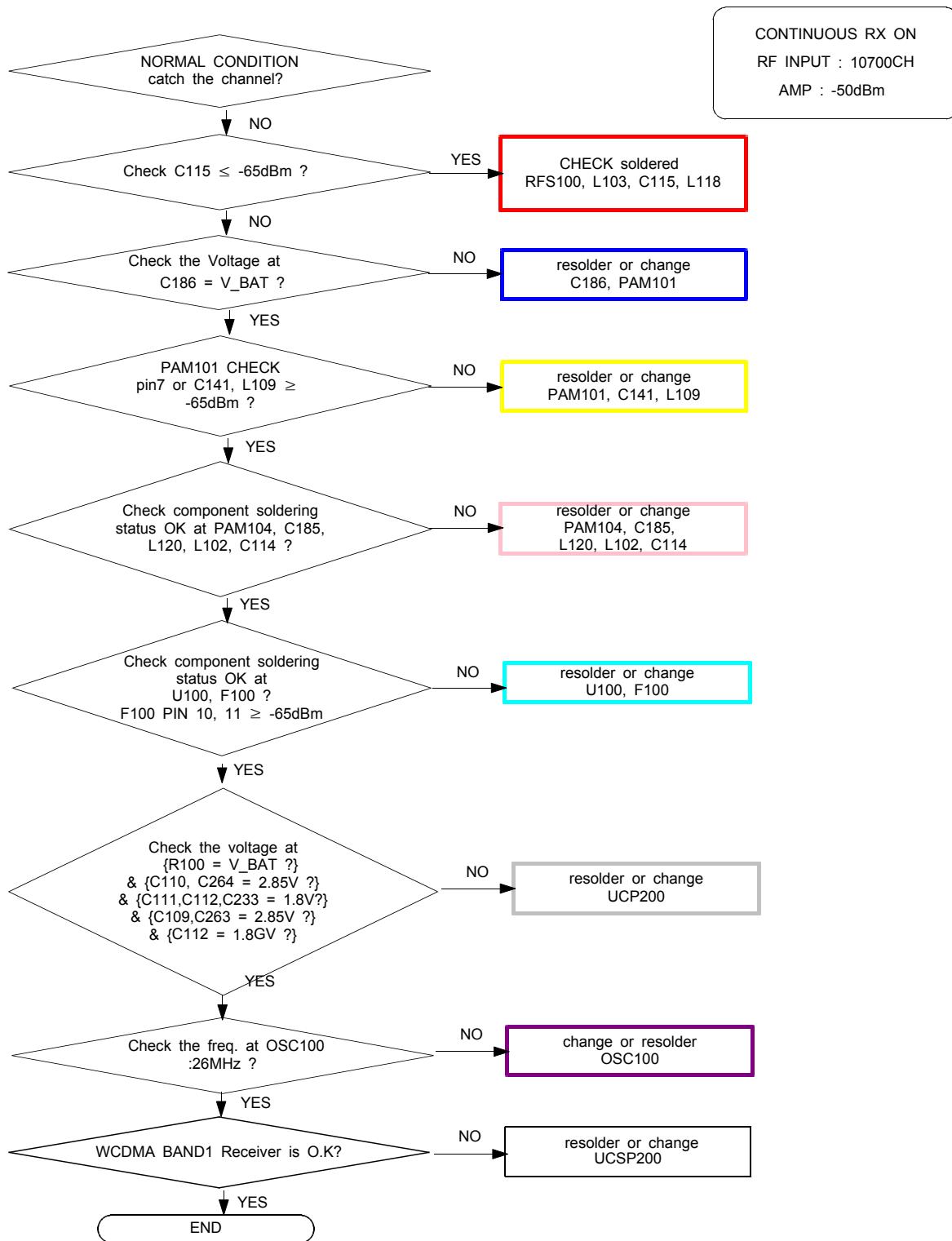


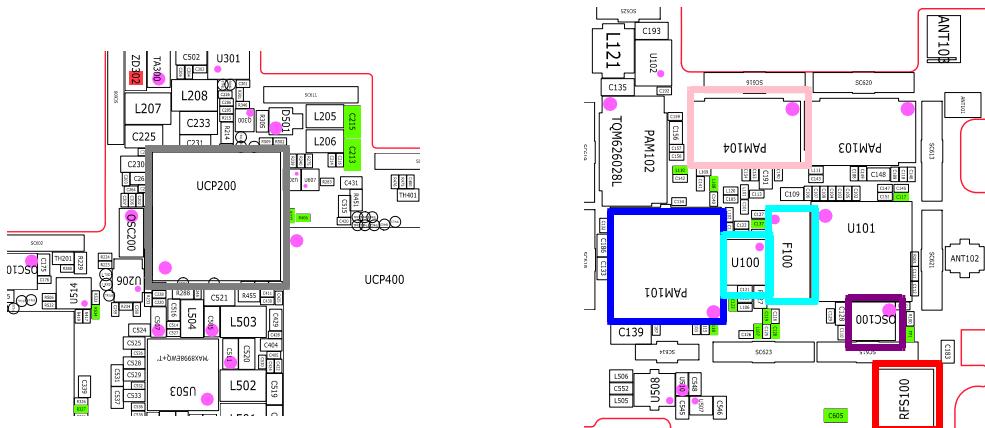
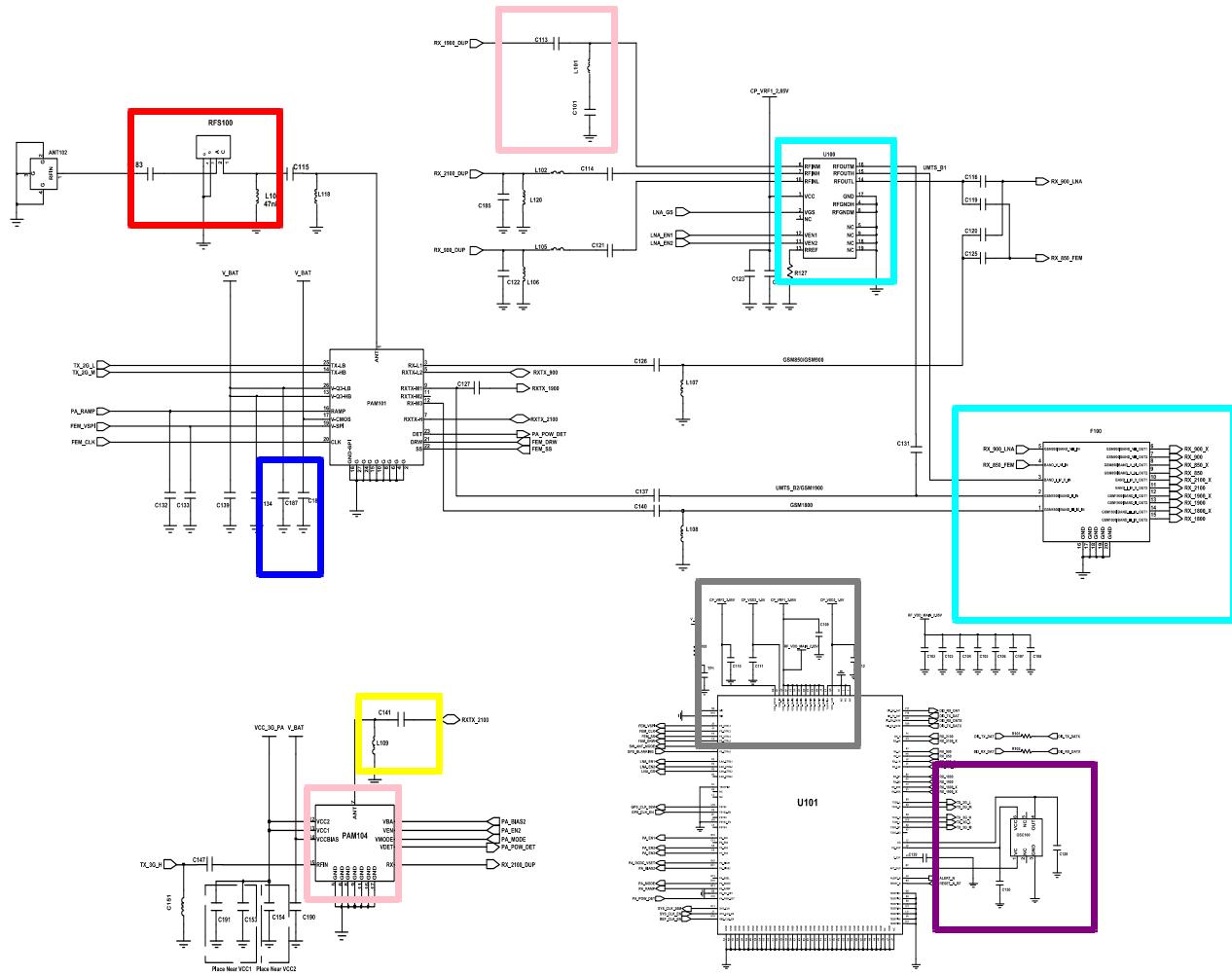
8-3-14. GSM1800 RX



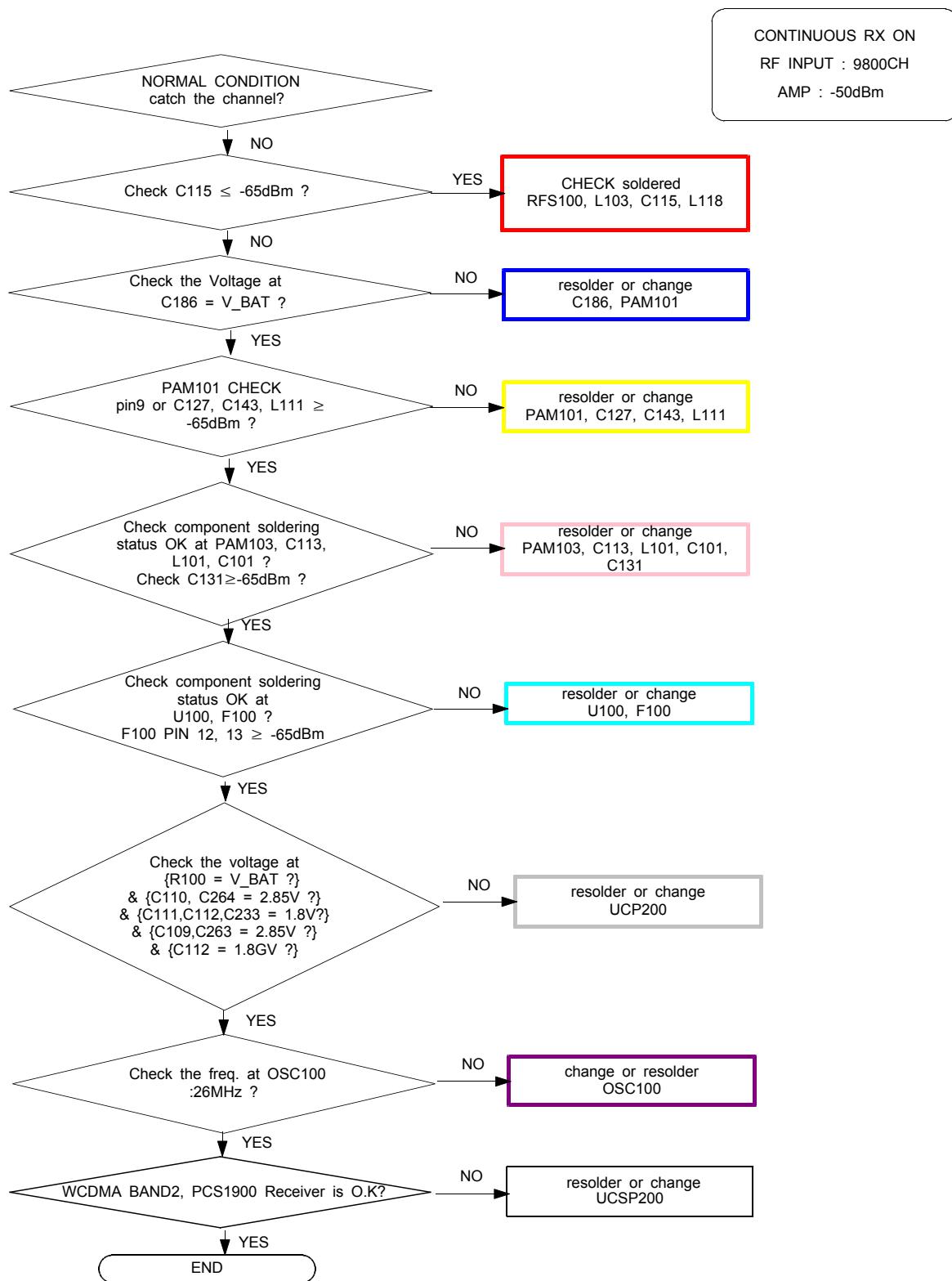


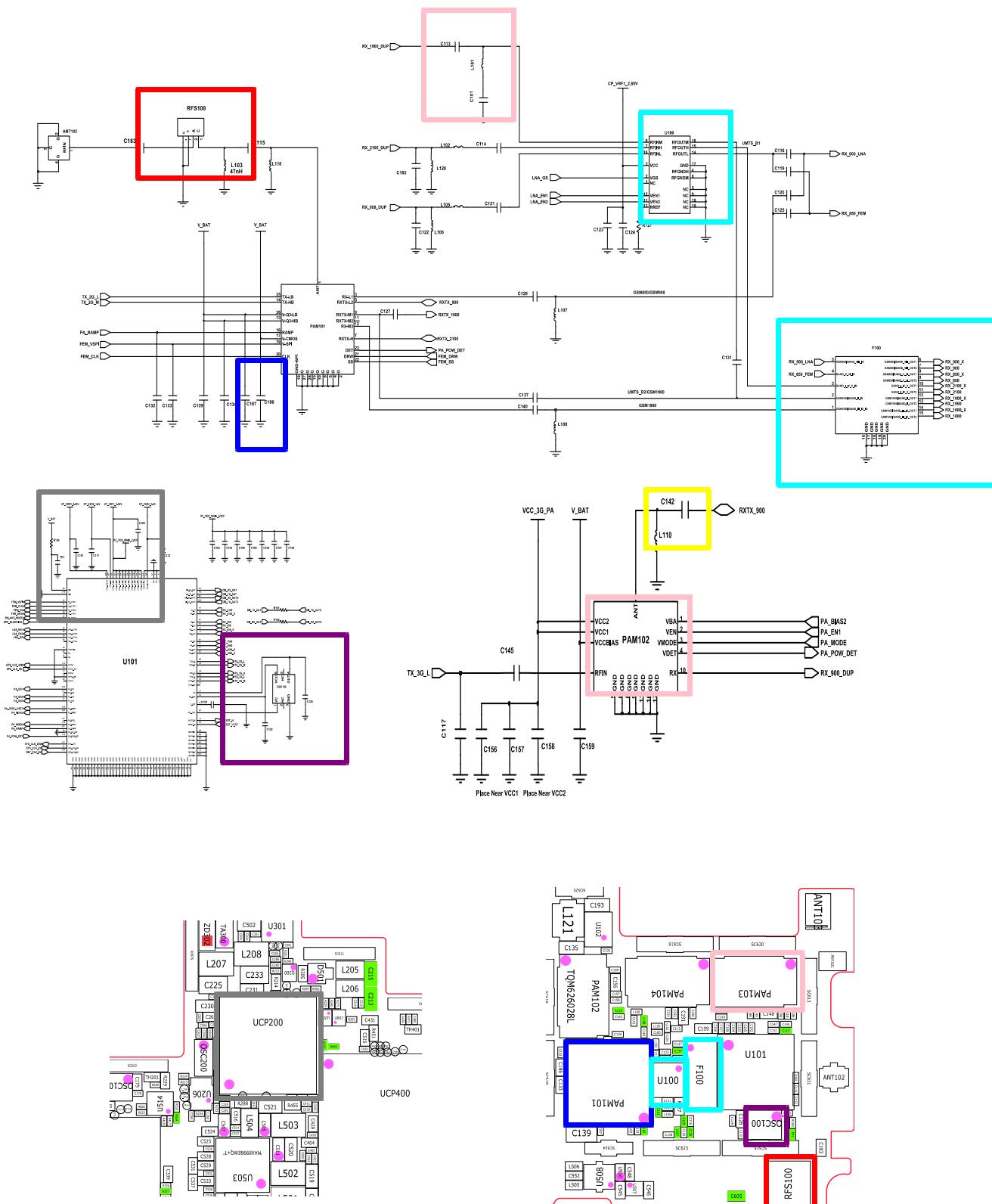
8-3-15. WCDMA Band1 RX



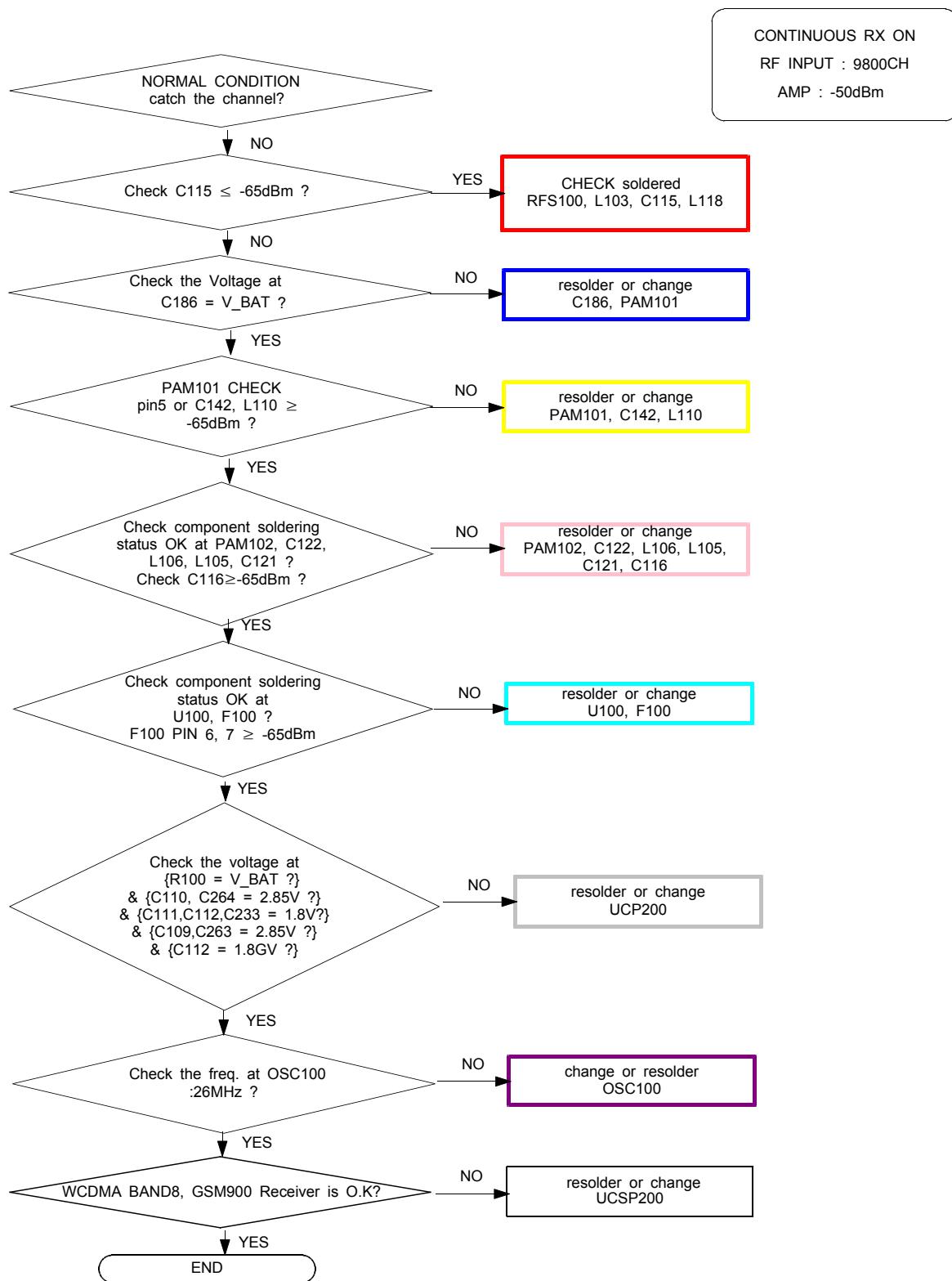


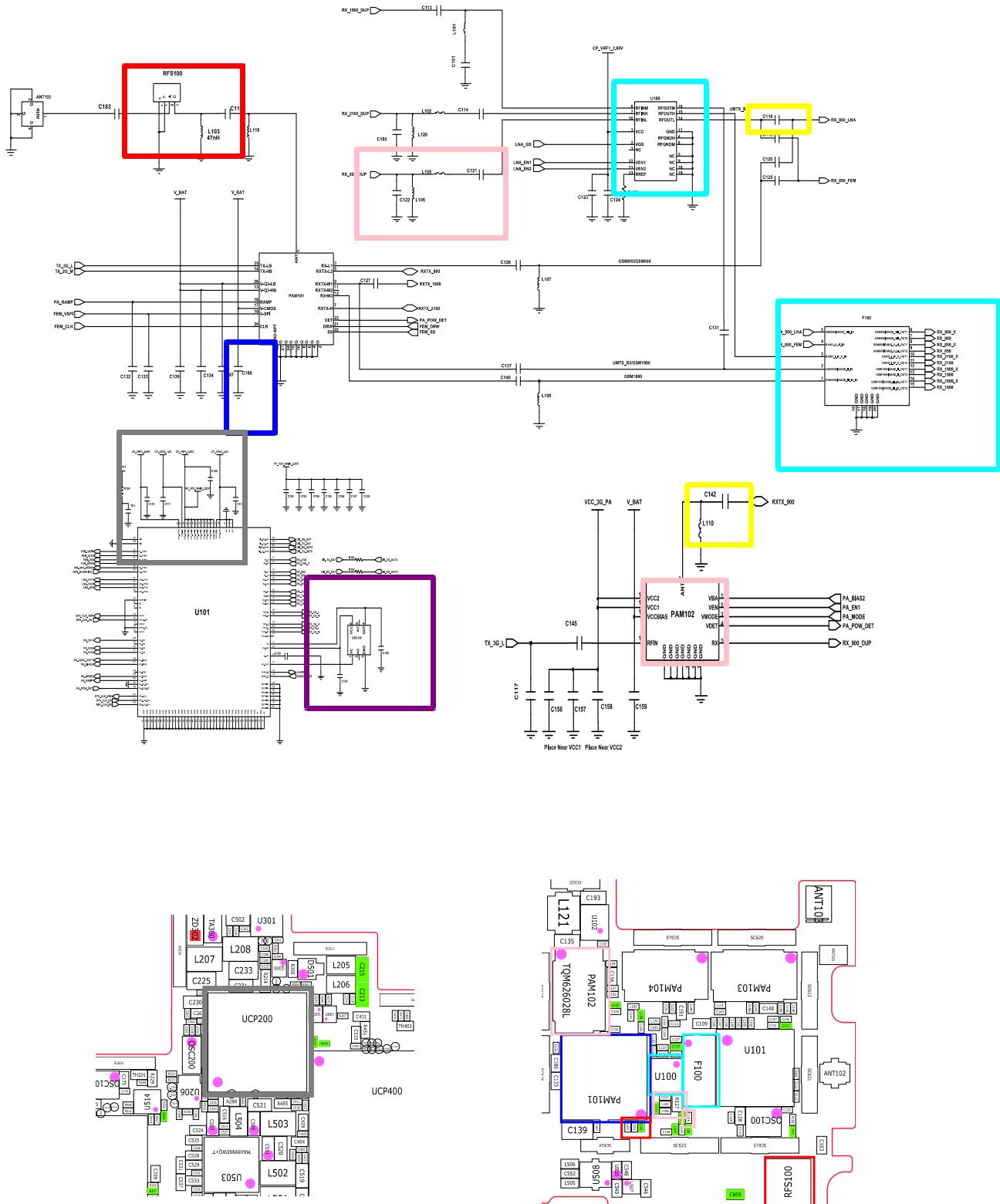
8-3-16. WCDMA Band2 / GSM1900 RX



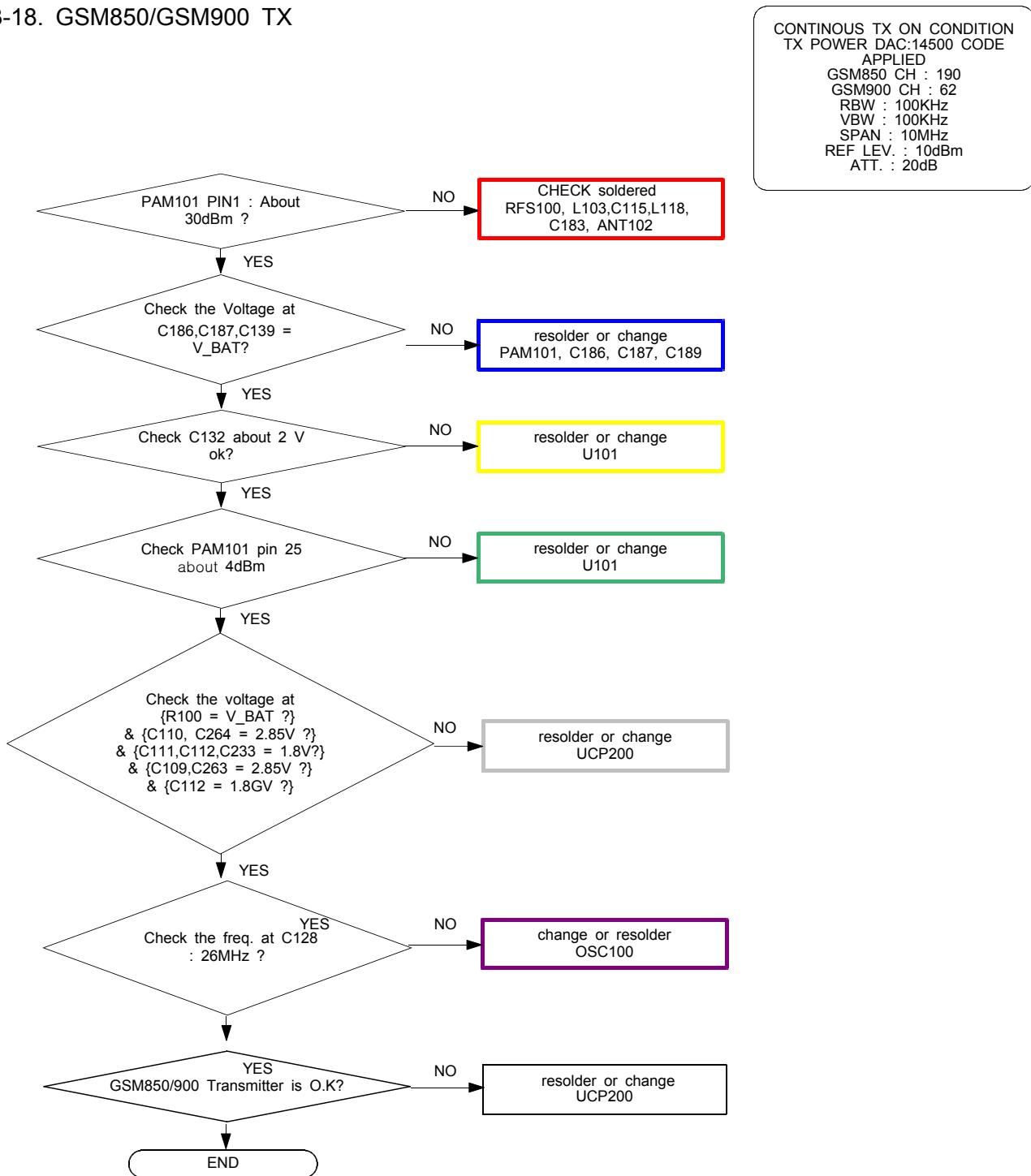


8-3-17. WCDMA Band8 / GSM900 RX



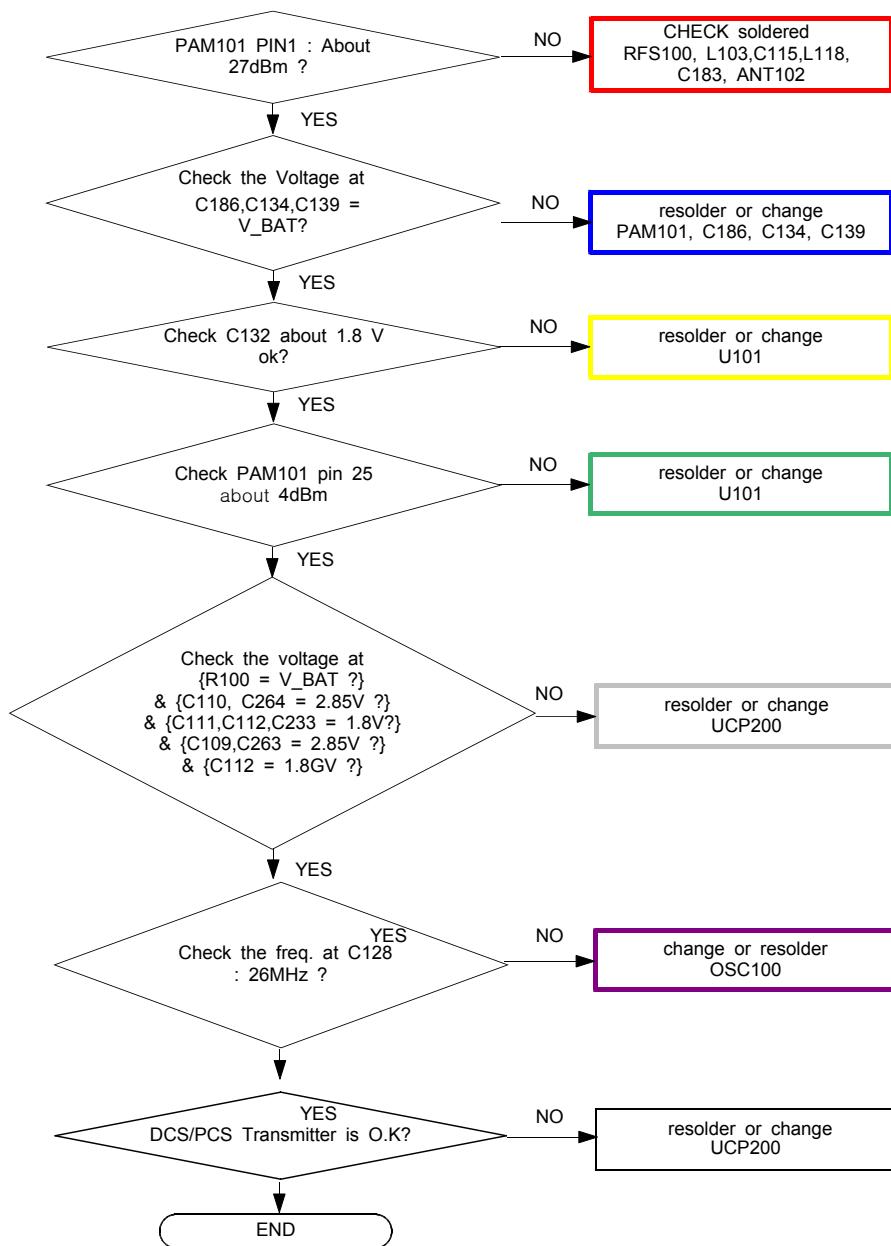


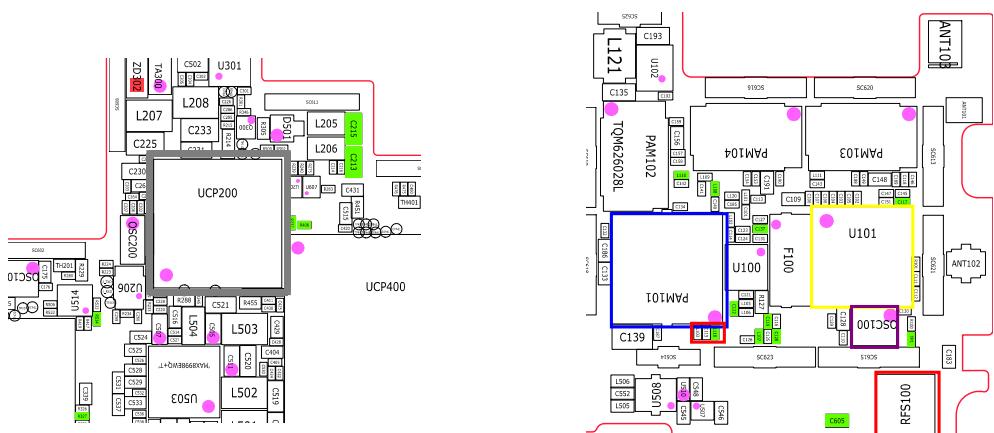
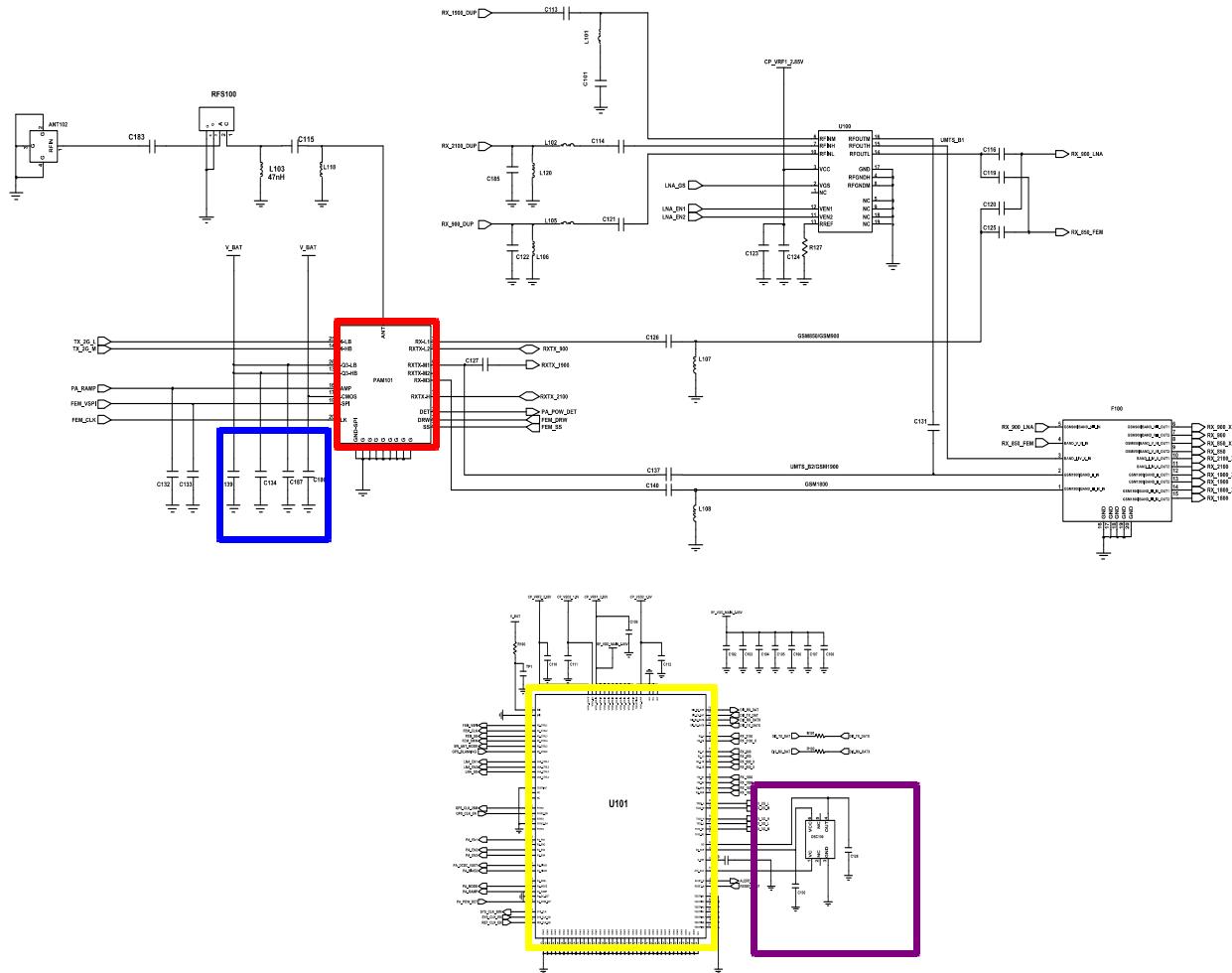
8-3-18. GSM850/GSM900 TX



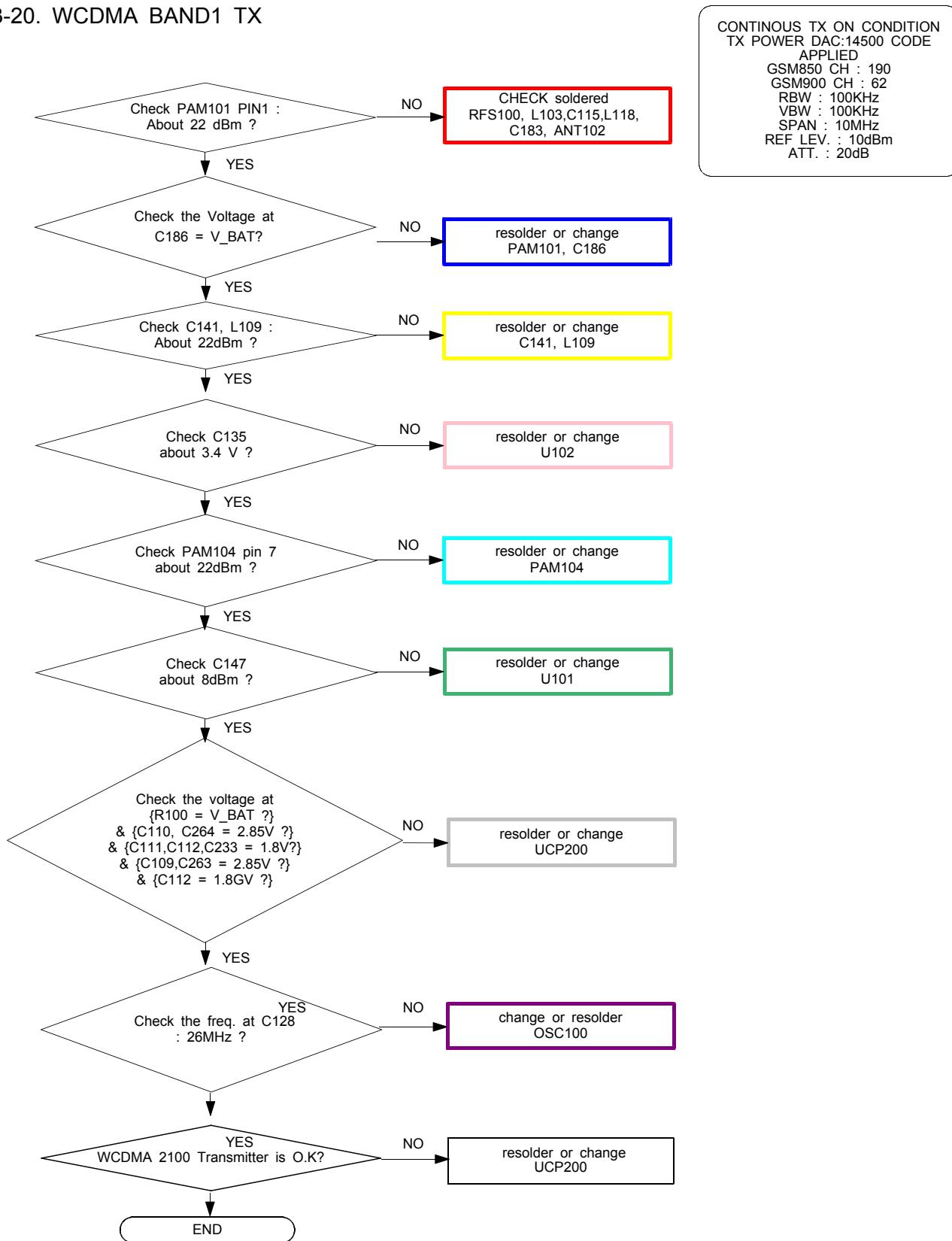
8-3-19. DCS/PCS TX

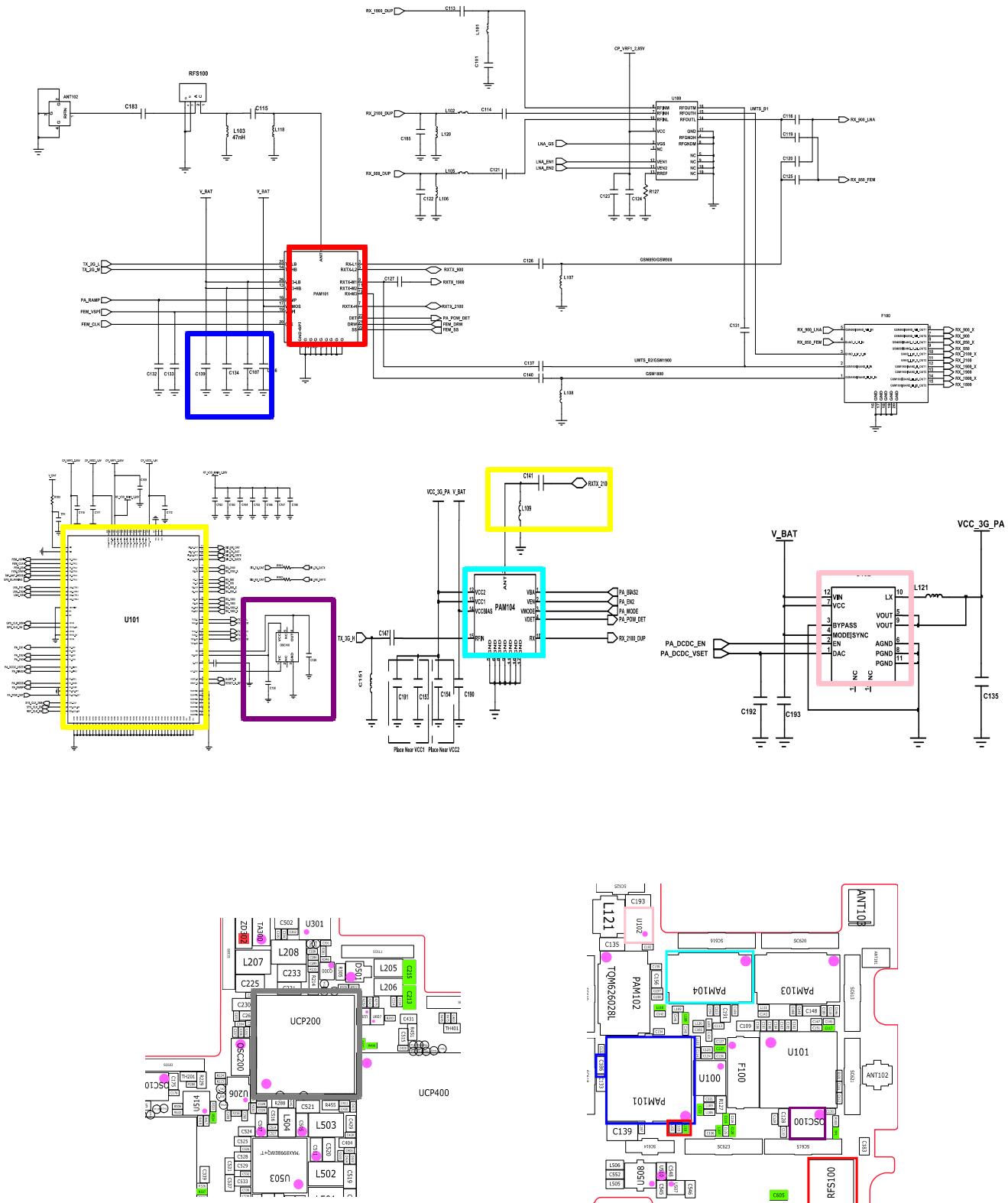
CONTINUOUS TX ON CONDITION
TX POWER DAC:14500 CODE
APPLIED
GSM850 CH : 190
GSM900 CH : 62
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



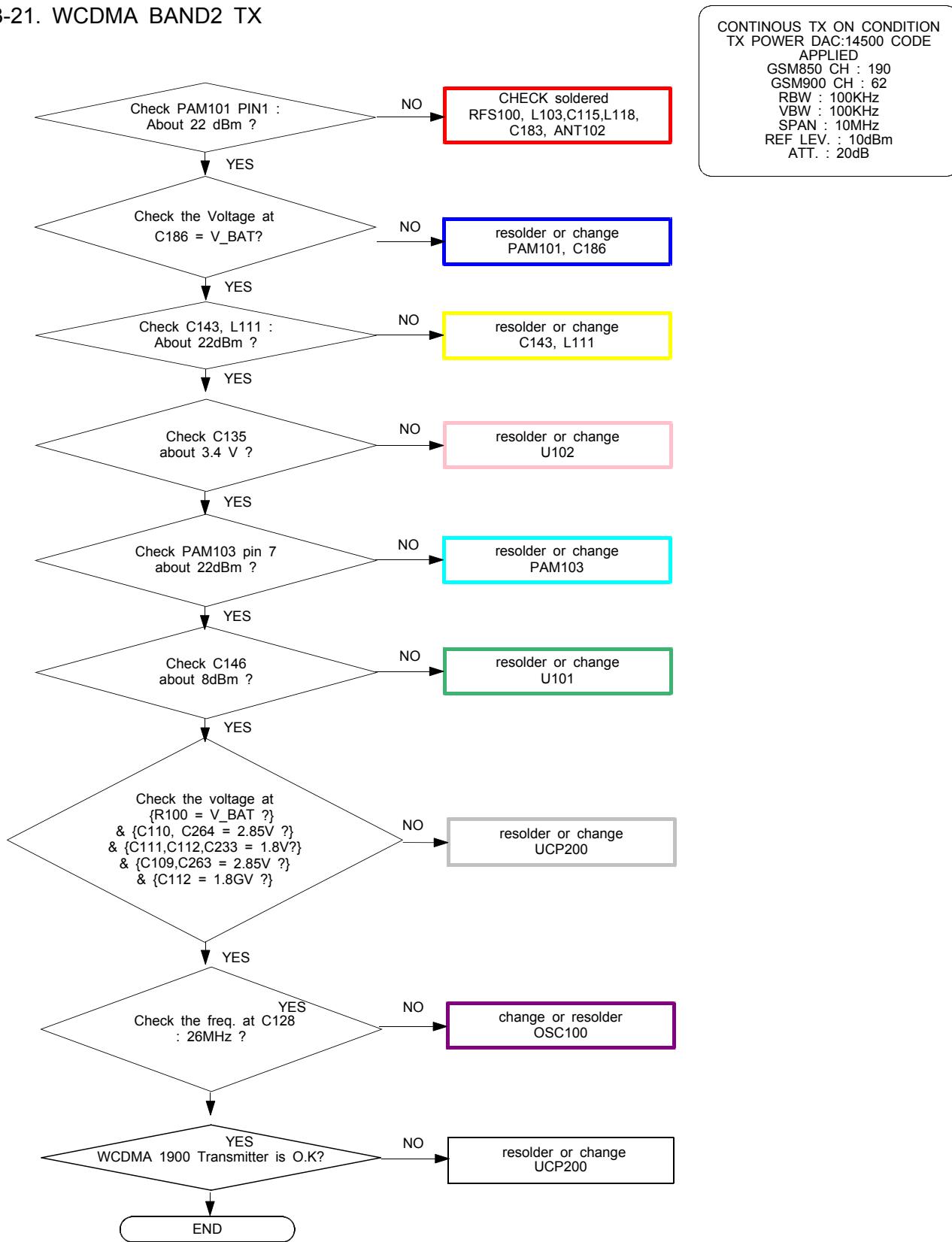


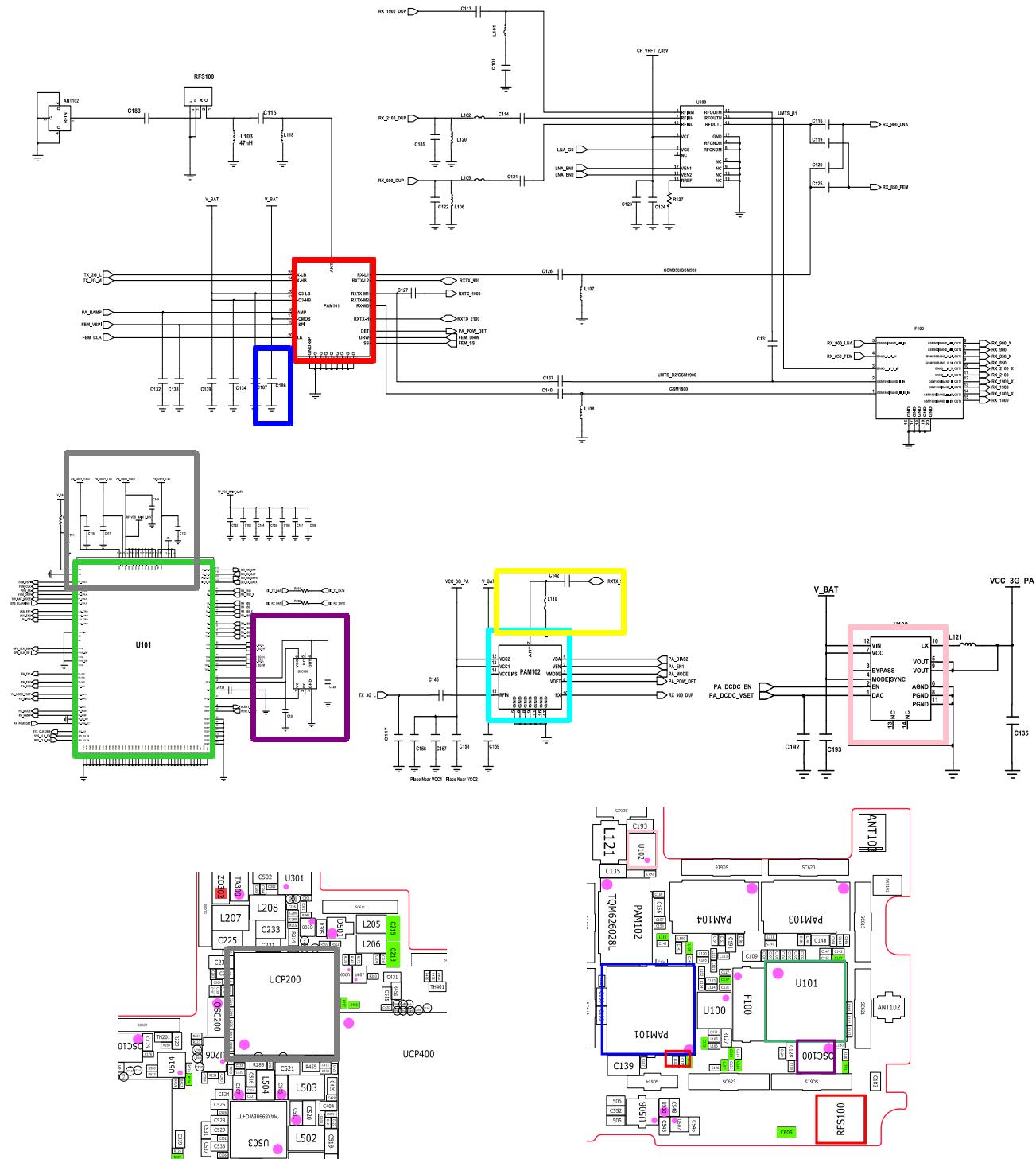
8-3-20. WCDMA BAND1 TX



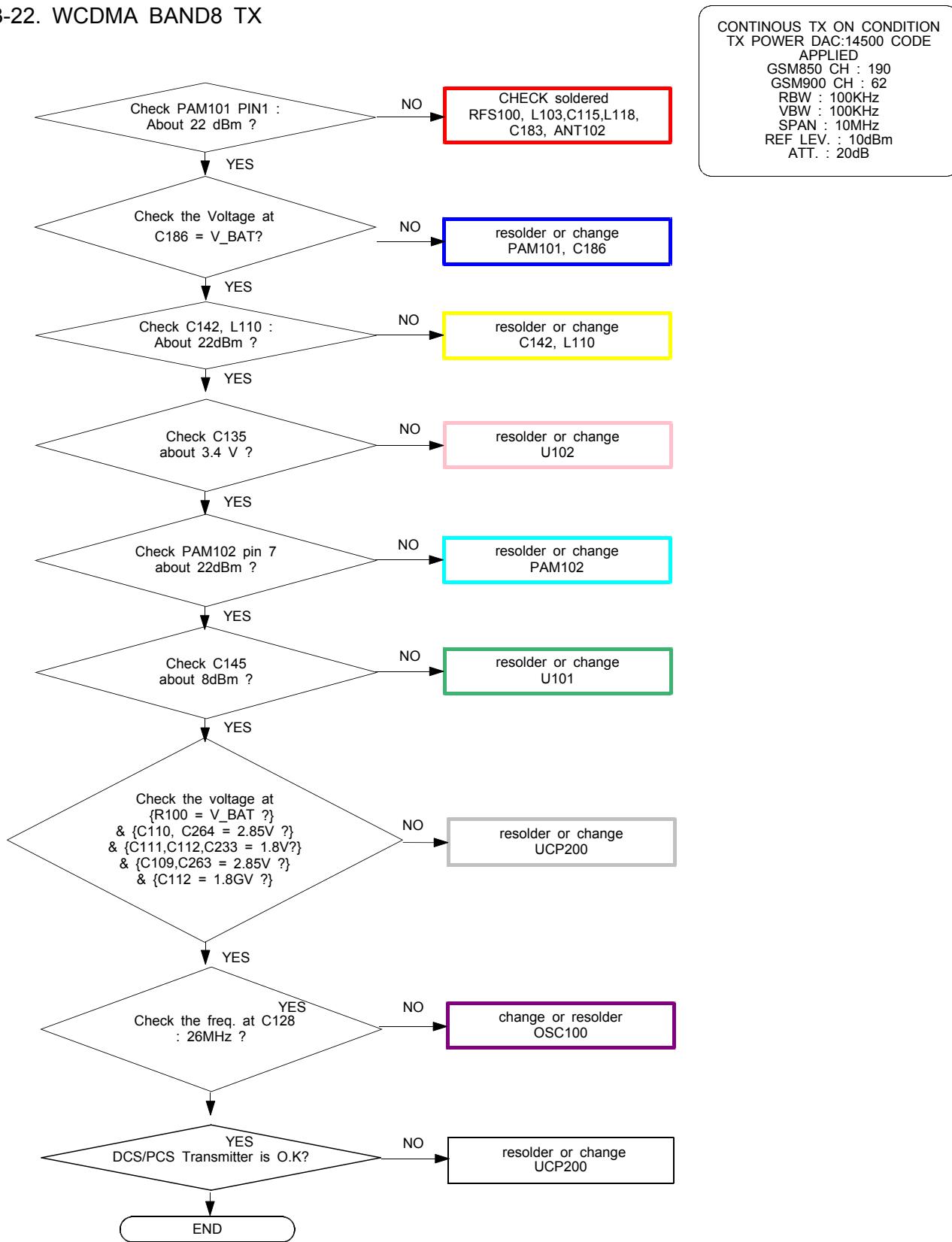


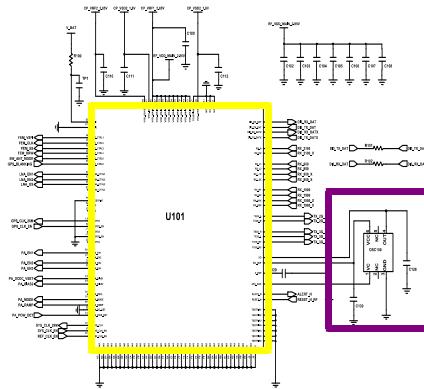
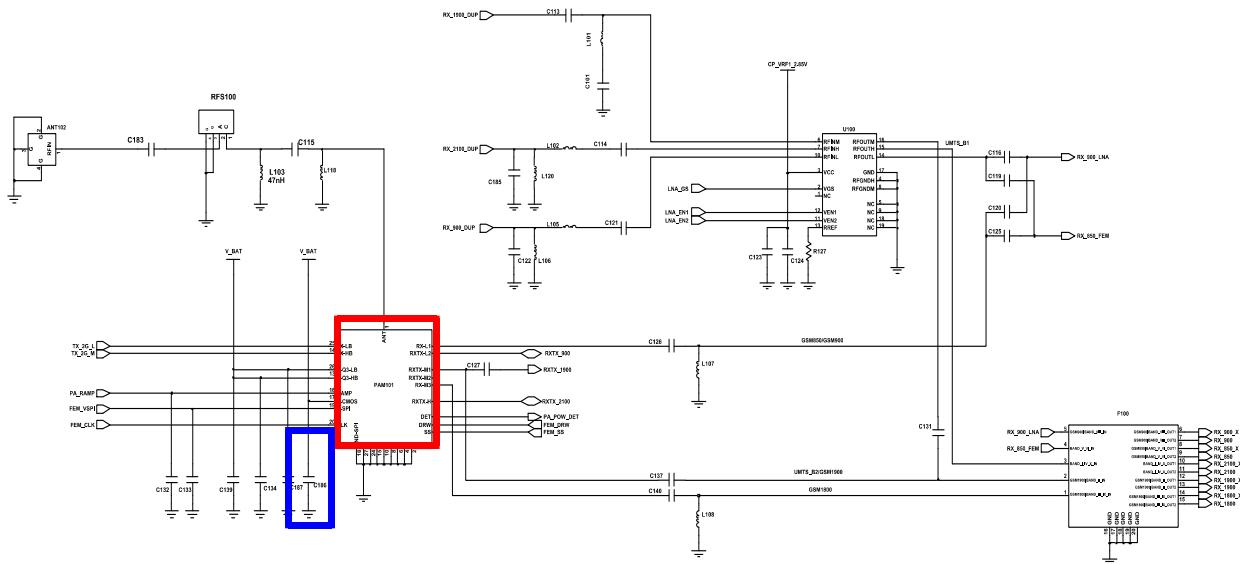
8-3-21. WCDMA BAND2 TX





8-3-22. WCDMA BAND8 TX





8-4. Service Schematics

- NC Point(Top View)

 : NC

UCP400

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
A																											
B																											
C																											
D																											
E																											
F																											
G																											
H																											
J																											
K																											
L																											
M																											
N																											
P																											
R																											
T																											
U																											
V																											
W																											
Y																											
AA																											
AB																											
AC																											
AD																											
AE																											
AF																											
AG																											

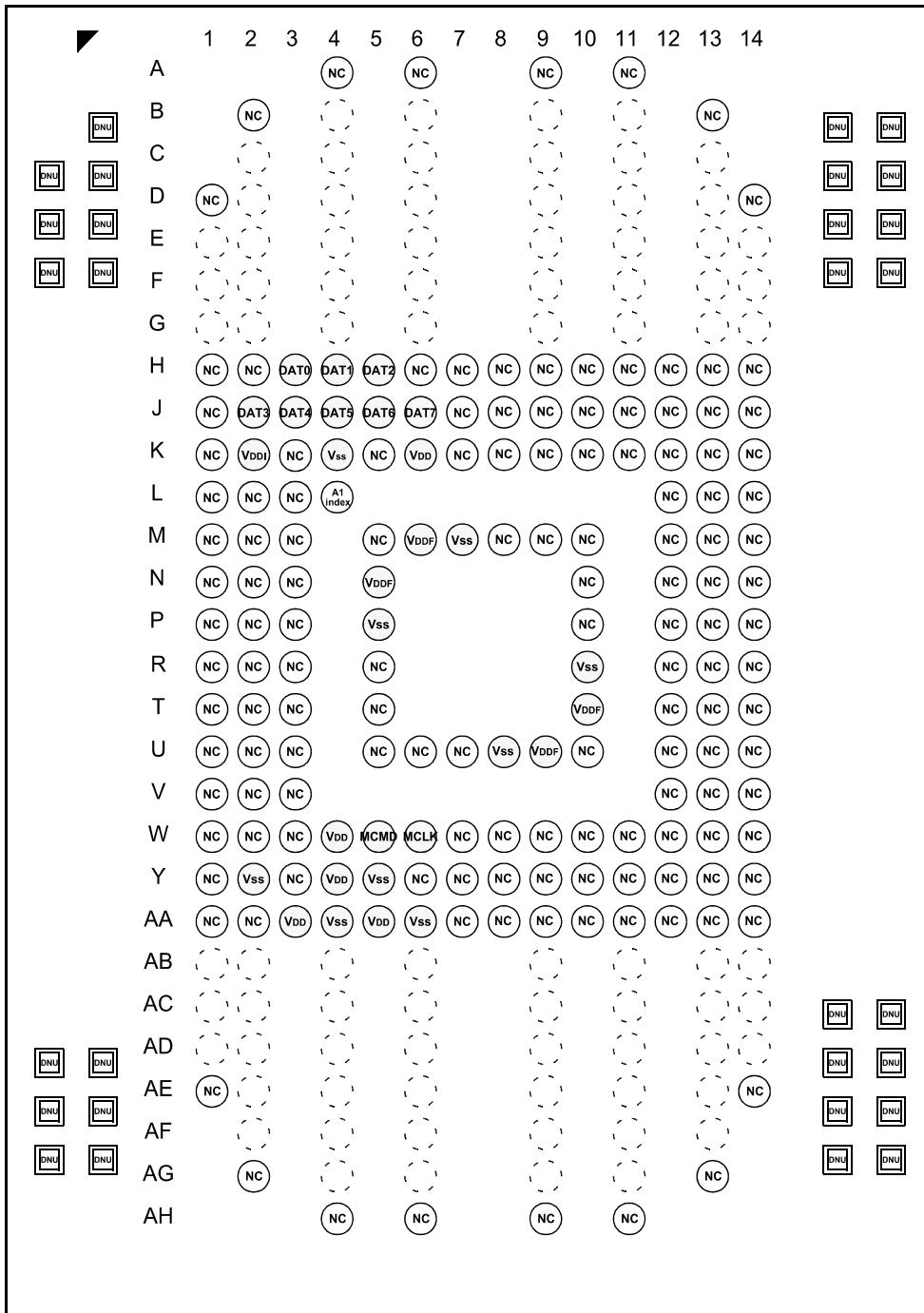
● : NC

UCP200

A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	Y	
NC																			NC	20
																				19
																				18
																				17
																				16
																				15
								-												14
																				13
																				12
																				11
																				10
																				9
																				8
																				7
		NC																NC		6
									-											5
							-													4
								-												3
									-											2
NC									-										NC	1
A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	Y	

● : NC

UME301

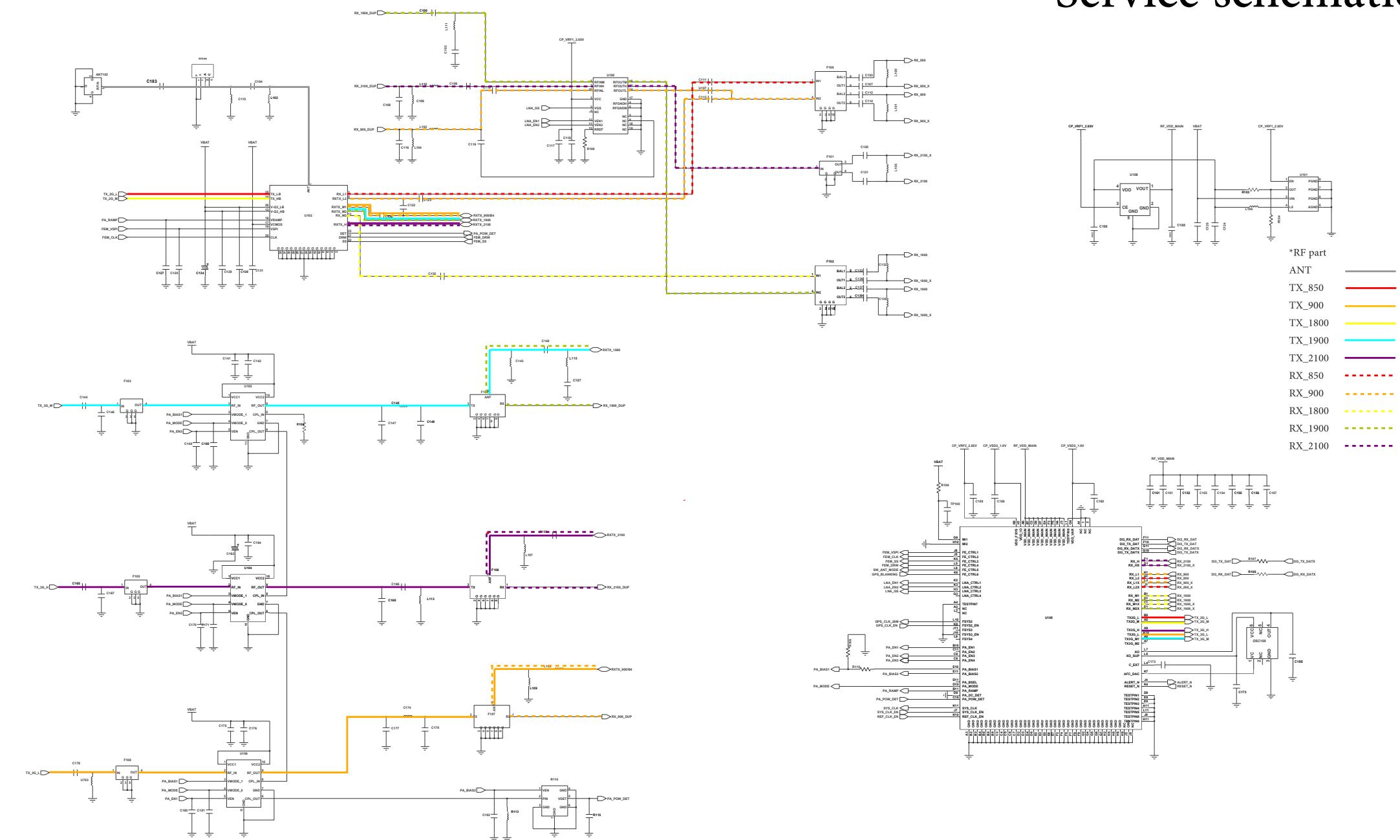


9. Reference Abbreviate

Reference Abbreviate

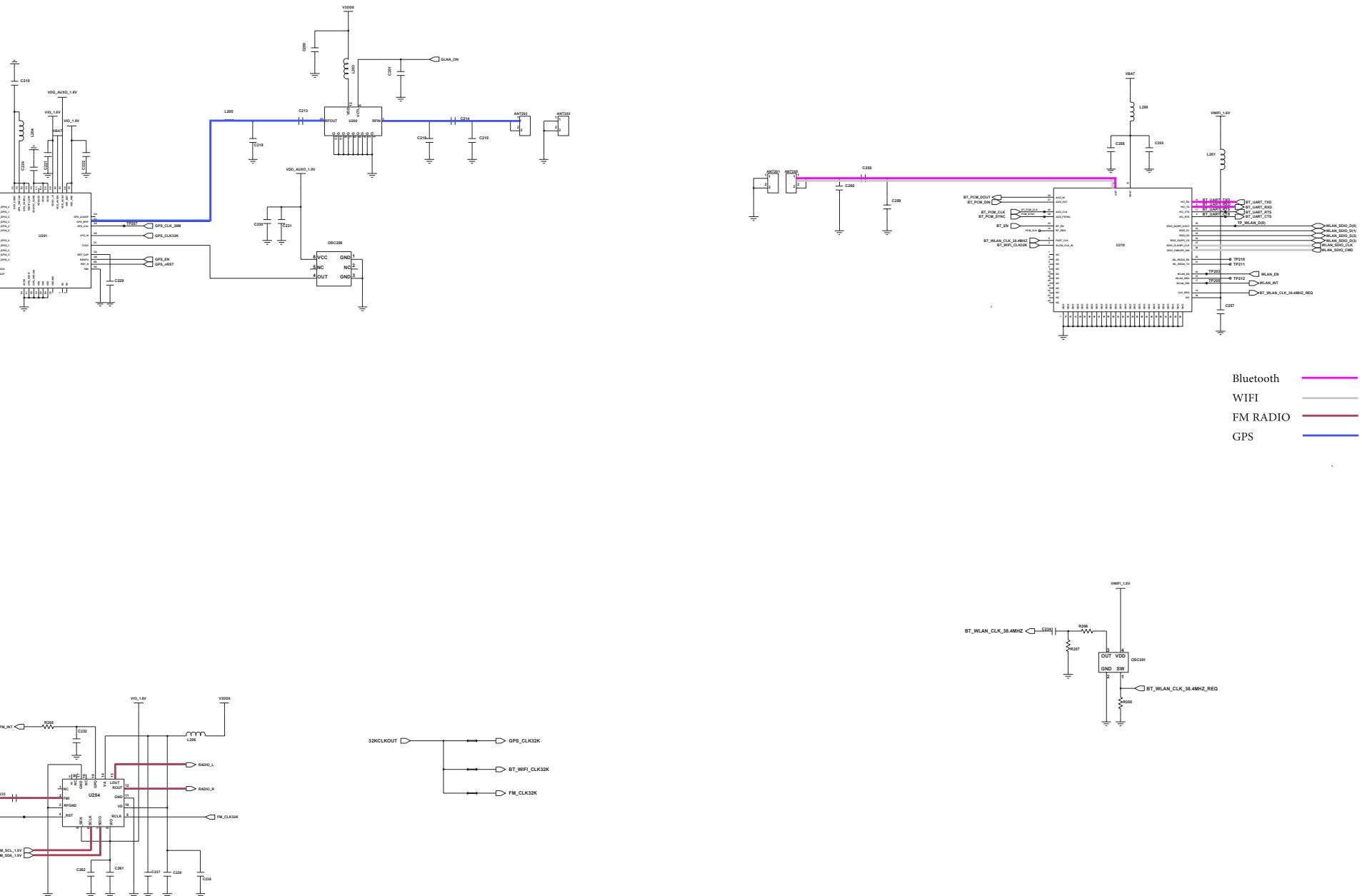
- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

Service schematics



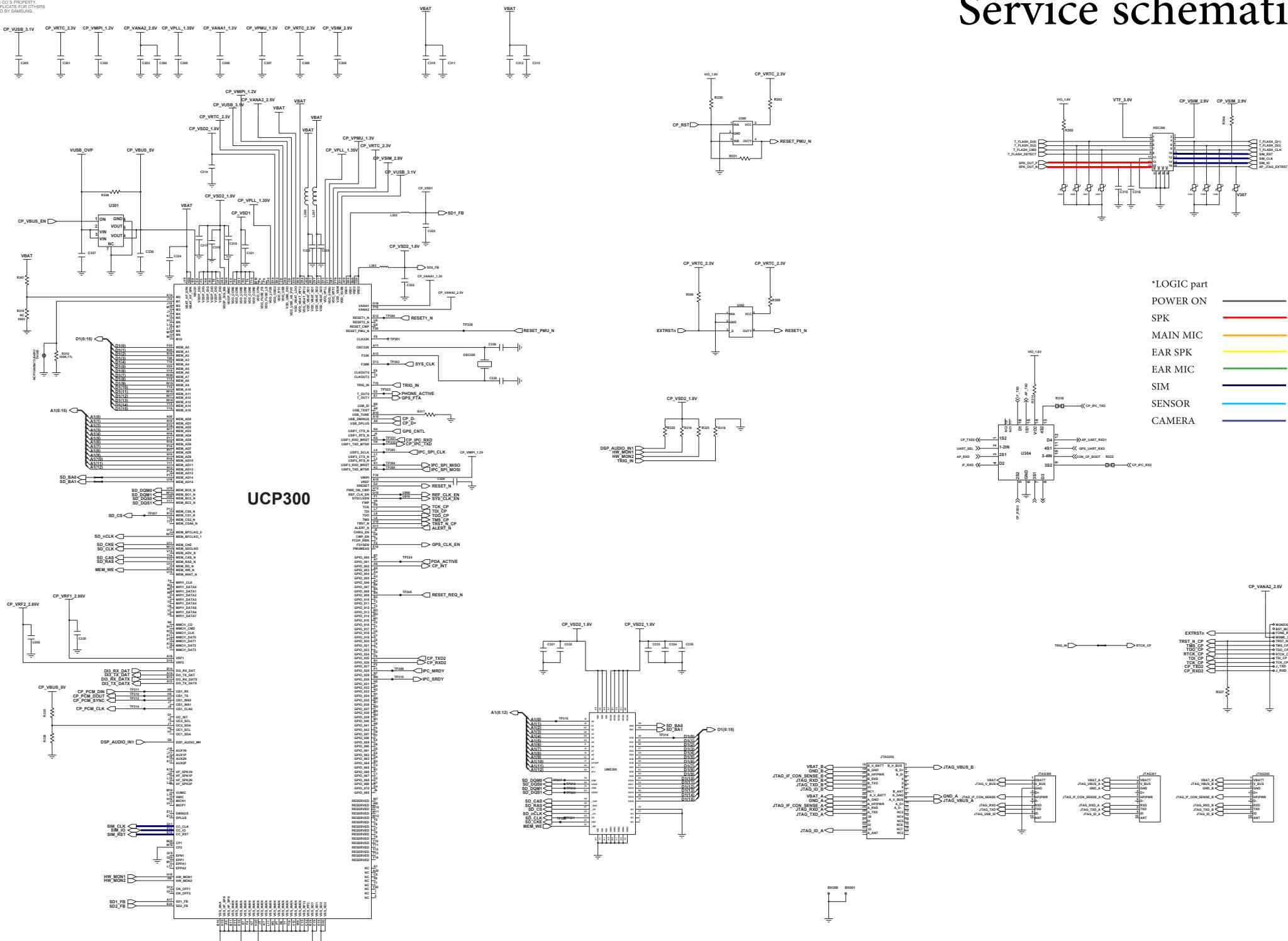
Service schematics

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Service schematics

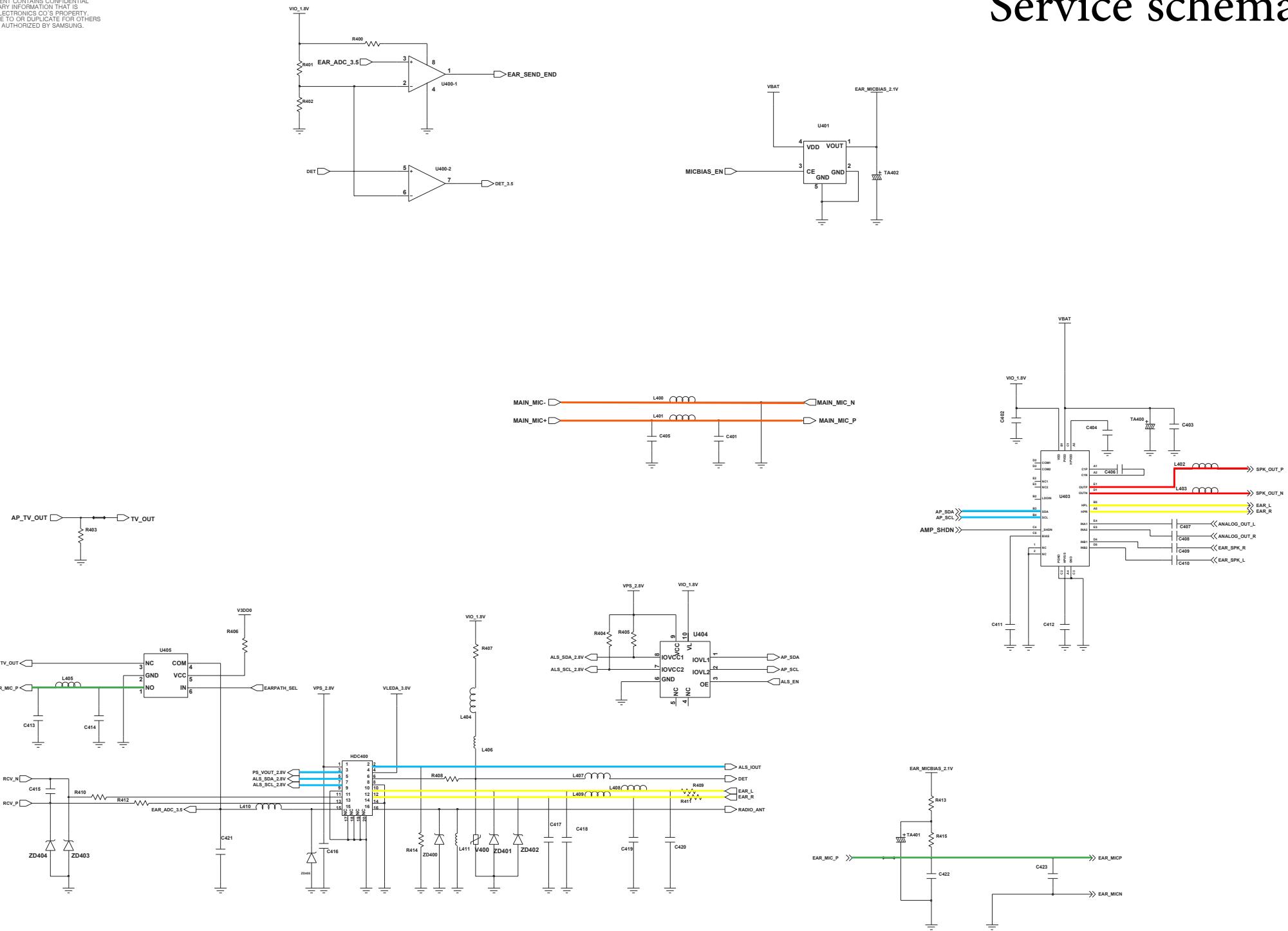
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*LOGIC part
 POWER ON
 SPK
 MAIN MIC
 EAR SPK
 EAR MIC
 SIM
 SENSOR
 CAMERA

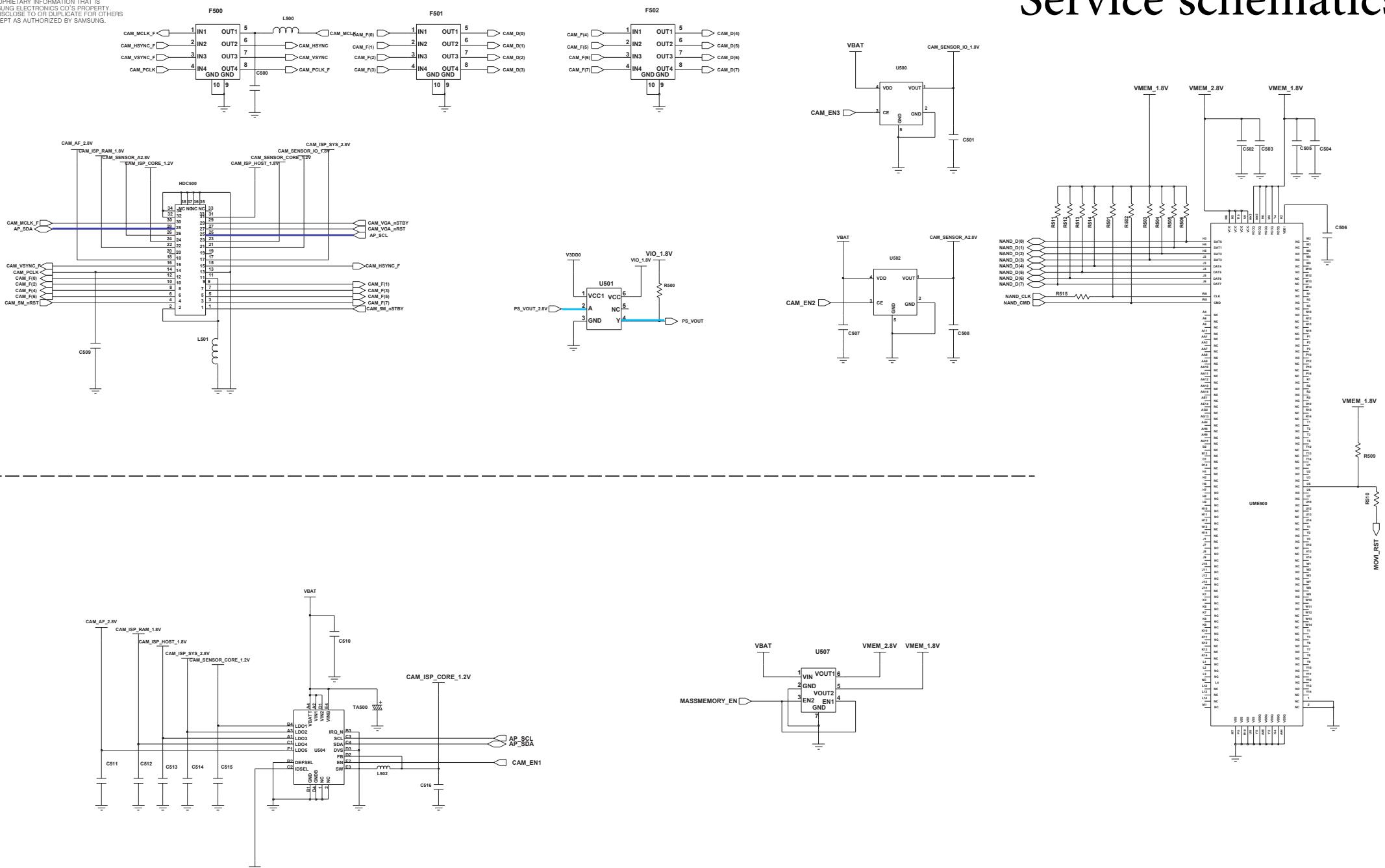
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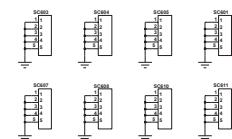
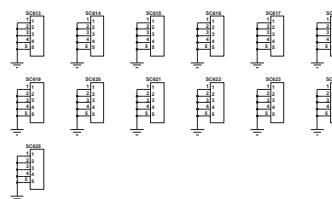
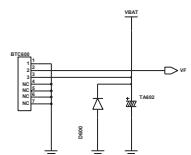
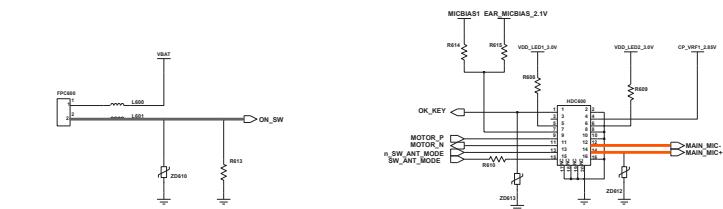
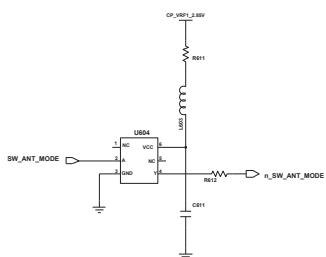
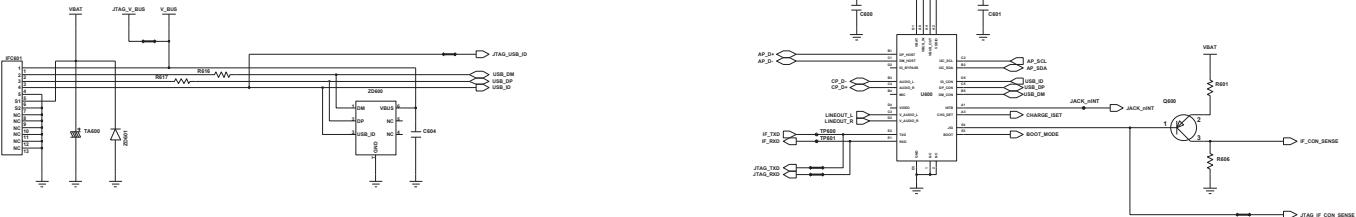


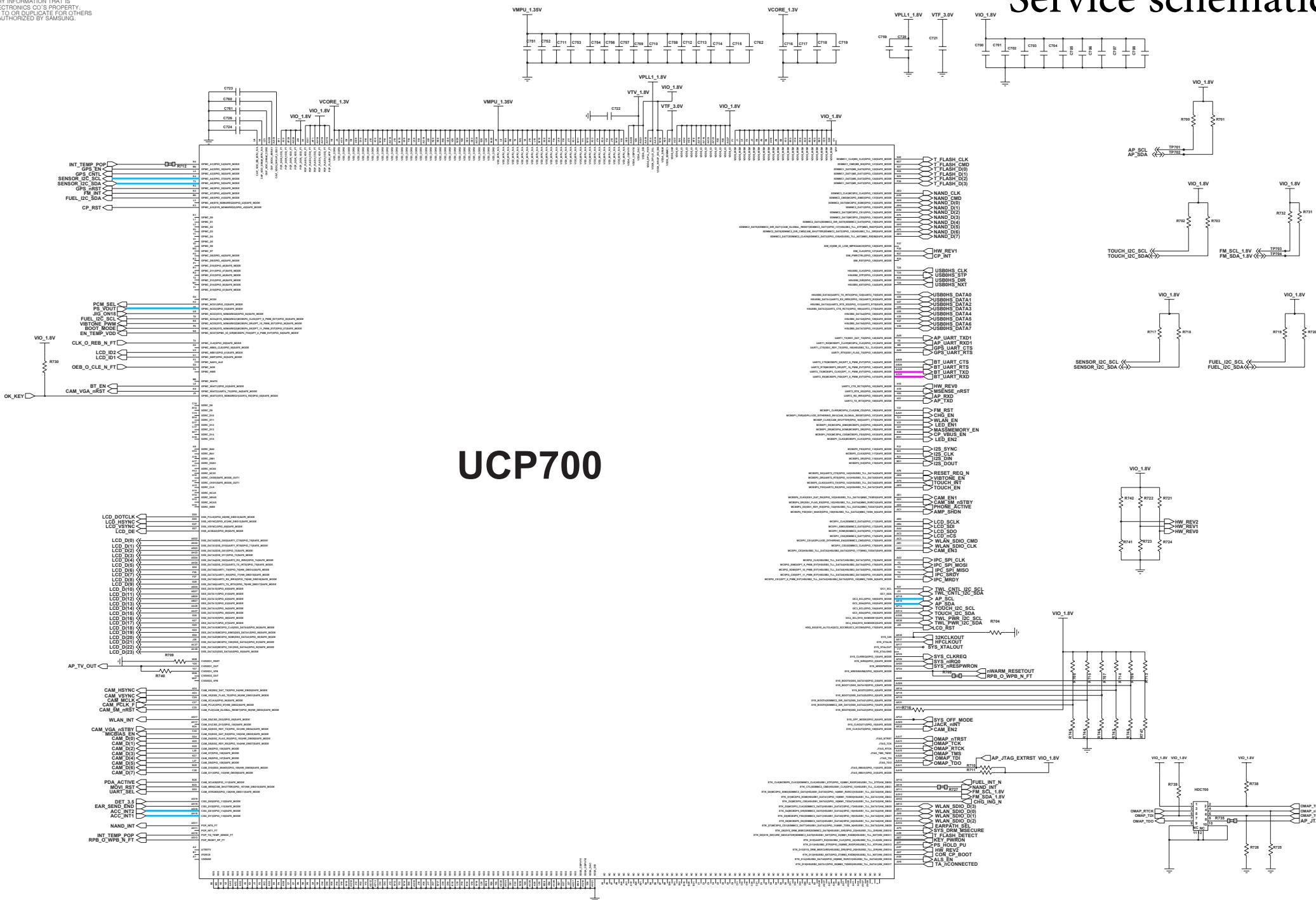
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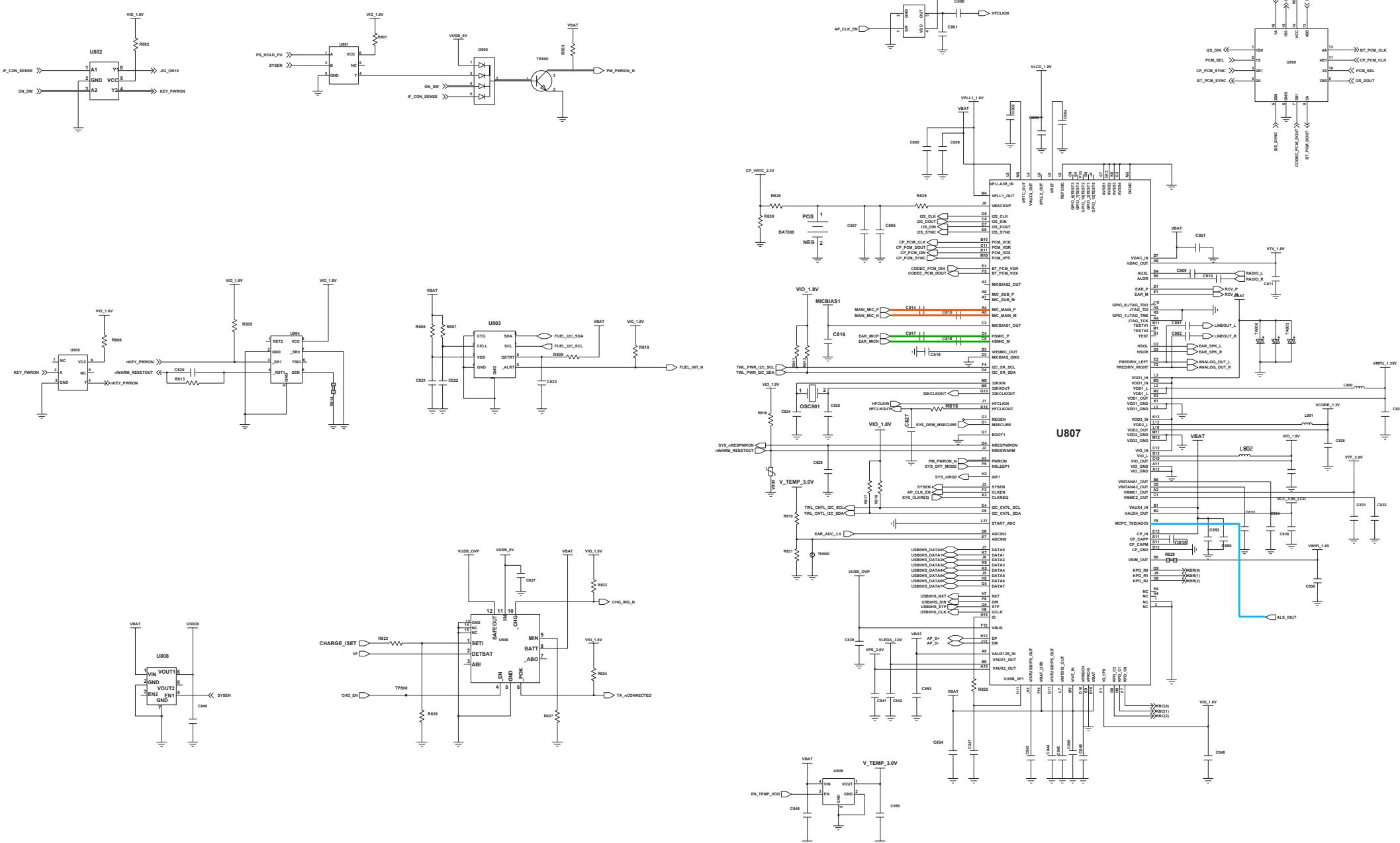


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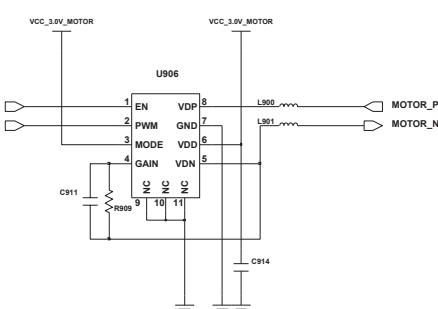
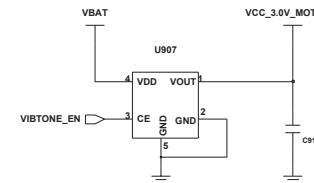
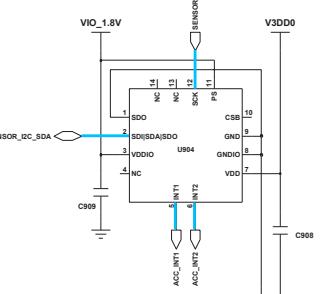
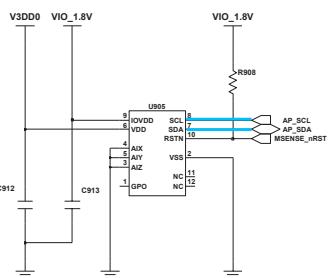
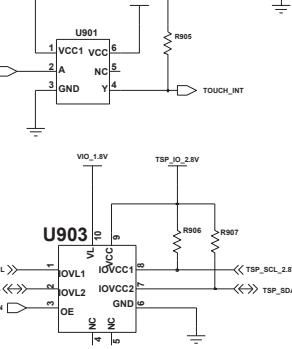
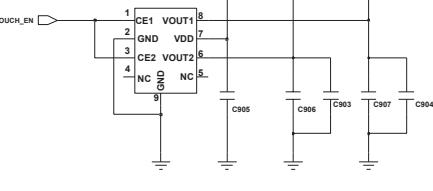
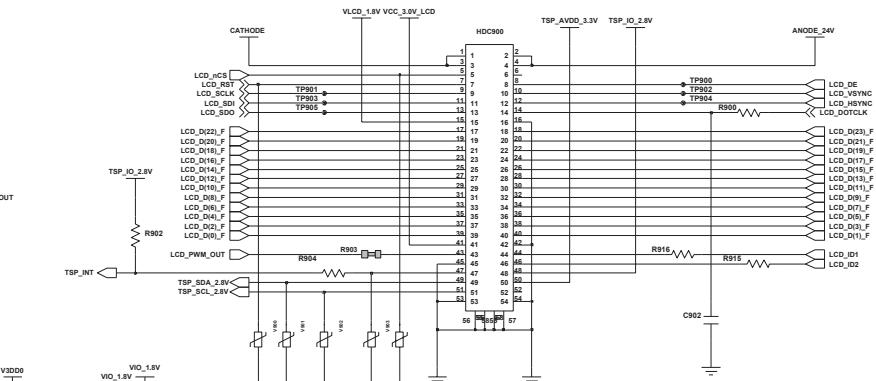
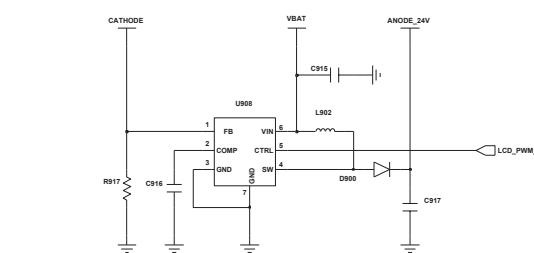
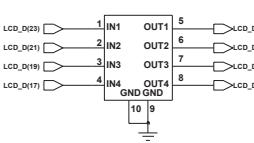
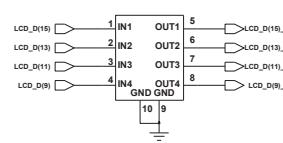
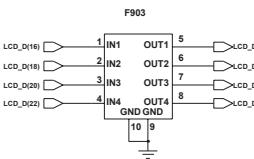
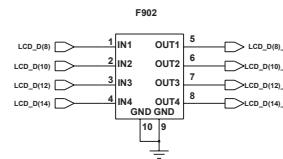
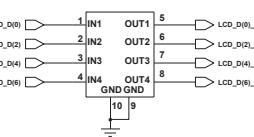
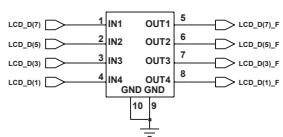


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