



# GSM TELEPHONE

## GT-i9010

# 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.

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# 1. Safety Precautions

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## 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

	<b>GSM850</b>	<b>EGSM 900</b>	<b>DCS1800</b>	<b>PCS1900</b>	<b>WCDMA 2100</b>	<b>WCDMA900</b>
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:9612~98 88DL:10562 ~10838	UL:2712~28 63,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	QPSKHQPS K	QPSKHQPS K
MS Power	33dBm~5dB m	33dBm~5dB m	30dBm~0dB m	30dBm~0dB m	24dBm~- 50dBm	24dBm~- 50dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl	3(max+24dB m)	3(max+24dB m)
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

<b>TX Power control level</b>	<b>GSM850</b>	<b>TX Power control level</b>	<b>EGSM900</b>	<b>TX Power control level</b>	<b>DCS1800</b>	<b>TX Power control level</b>	<b>PCS1900</b>
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

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### **3. Operation Instruction and Installation**

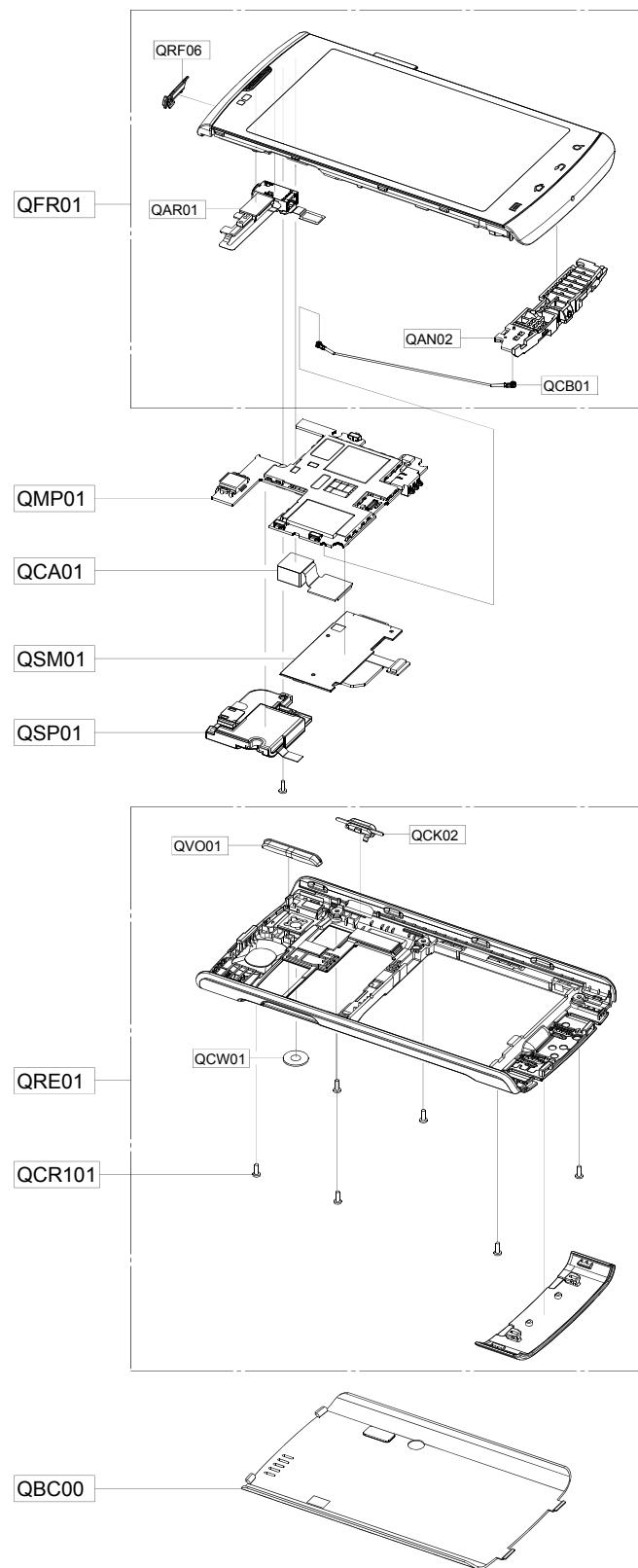
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#### **Main Function**

- Android OS: Froyo
- 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
QSM01	ASSY ETC-SIM/T-FLASH ASSY	GH59-09659A
QSP01	MODULE-GT-I9010 SPK + MOT	GH59-10479A
QMP01	A/S ASSY-PBA MAIN (COMM)	GH82-05377A
QCA01	ASSY CAMERA-SGH_I897 5M	GH96-04768A
QBC00	ASSY COVER-BATT(EU/GA3)	GH98-18086A
QFR01	MEA FRONT-OCTA LCD ASSY (EU)	GH97-11685A
QCB01	CBF COAXIAL CABLE-74MM (SGH-I897)	GH39-01436A
QAN02	INTENNA-GT-I9010	GH42-02797A
QAR01	MODULE-RCV+SENSOR FPCB(SGHI897)	GH59-09690A
QRF06	PMO COVER-USB	GH72-61668A
QRE01	ASSY CASE-REAR	GH98-18369A
QCW01	PMO COVER-CAMERA WINDOW	GH72-59293A
QVO01	PMO KEY-VOLUME	GH72-61670A
QCK02	PMO KEY-POWER	GH72-61671A

## 5. MAIN Electrical Parts List

Design LOC	SEC CODE	Description
ZD302	0403-001688	ZENER DIODE
ZD301,ZD502	0406-001231	TVS DIODE
U308	0406-001237	TVS DIODE
U913,V302,ZD303,ZD304	0406-001413	TVS DIODE
D501	0407-001002	DIODE ARRAY
Q300	0504-001138	Digital TR
U212	0801-003139	CMOS Logic
U209	0801-003227	CMOS Logic
UCP400	0902-002582	Microprocessor Unit
U304	1001-001394	Analog Switch
U301	1001-001580	Analog Switch
U508	1003-002047	Driver
U203,U206	1003-002352	Driver
UME301	1107-001959	Flash Memory
PAM104	1201-002801	Amplifier
U100	1201-002999	Amplifier
PAM103	1201-003032	Amplifier
PAM102	1201-003033	Amplifier
PAM101	1201-003034	Amplifier
U107	1201-003168	Amplifier
U204	1202-001036	Comparator
U300	1203-004339	Power Supply Circuit
U210,U214,U902	1203-004819	Power Supply Circuit
U507,U601	1203-004925	Power Supply Circuit
U309	1203-005263	Power Supply Circuit
U515	1203-005854	Power Supply Circuit
U503	1203-006186	Power Supply Circuit
U102	1203-006199	Power Supply Circuit
U509	1203-006304	Power Supply Circuit
U915	1203-006346	Power Supply Circuit
U207	1205-003943	Telecommunication Circuit
U101	1205-003949	Telecommunication Circuit
U106	1205-003966	Telecommunication Circuit
UCP200	1205-003993	Telecommunication Circuit
U501	1209-001817	Other Linear IC
U506	1209-001877	Other Linear IC

Design LOC	SEC CODE	Description
TH201,TH401	1404-001221	Thermistor
V304,V305	1405-001177	Surge Device
U302,U303	1405-001183	Surge Device
R501	2007-000144	Chip Resistor
R266,R509,R690,U504	2007-000148	Chip Resistor
R283	2007-000157	Chip Resistor
R511	2007-000162	Chip Resistor
R214,U606	2007-000167	Chip Resistor
R245	2007-000566	Chip Resistor
R412	2007-001319	Chip Resistor
R229	2007-003018	Chip Resistor
R364	2007-007009	Chip Resistor
R215,R475,R476	2007-007107	Chip Resistor
R350	2007-007139	Chip Resistor
R520	2007-007307	Chip Resistor
R518	2007-007318	Chip Resistor
R218	2007-007489	Chip Resistor
R305,R365	2007-007943	Chip Resistor
R211,R212,R216,R233 R234,R301,R421,R426	2007-008045	Chip Resistor
R404,R439,R525	2007-008052	Chip Resistor
R119,R235,R239,R342 ,R434,R435,R437, R438 ,R441,R442,R444,R457 ,R505,R506, R507	2007-008055	Chip Resistor
R237,R238	2007-008211	Chip Resistor
R522	2007-008296	Chip Resistor
R100,R414,R415,R445 ,R446,R449,R450, R462 ,R463,R467,R468,R479 ,R480,R481, R482,R483 ,R484,R485,R486	2007-008419	Chip Resistor
R249	2007-008478	Chip Resistor
R521	2007-008502	Chip Resistor
R121,R122,R123,R124 ,R125,R298,R299, R302 ,R346,R417,R418,R423 ,R428,R432, R440,R461 ,R492	2007-008516	Chip Resistor

Design LOC	SEC CODE	Description
R278,R279,R320,R367	2007-008531	Chip Resistor
R248	2007-008587	Chip Resistor
R222,R223,R224	2007-008588	Chip Resistor
R316,R317,R368	2007-008774	Chip Resistor
R118	2007-008806	Chip Resistor
R217,R345	2007-009084	Chip Resistor
R343,R344	2007-009111	Chip Resistor
R280	2007-009157	Chip Resistor
R326,R328,R329,R330, R331,R340	2007-009171	Chip Resistor
R127	2007-009398	Chip Resistor
R101,R102,R117	2007-009801	Chip Resistor
R451,R455	2007-009964	Chip Resistor
R411	2007-010029	Chip Resistor
C501,C195	2203-000233	MLC Chip
C206	2203-000254	MLC Chip
C236,C239,C517,C539	2203-000386	MLC Chip
C192	2203-000585	MLC Chip
C548	2203-000725	MLC Chip
C115,C116,C197	2203-000812	MLC Chip
C424,C427	2203-002443	MLC Chip
C344	2203-002709	MLC Chip
R473	2203-005138	MLC Chip
C150	2203-005288	MLC Chip
C198,C128	2203-005552	MLC Chip
C140,C276,C341,C342 C600	2203-005682	MLC Chip
C153	2203-005683	MLC Chip
C194,C285,C286,C288 C289	2203-005719	MLC Chip
C101,C176	2203-005725	MLC Chip
C126,C142,C145,C157	2203-005726	MLC Chip
C124	2203-005727	MLC Chip
C132,C350	2203-005729	MLC Chip
C121,C223,C224,C347	2203-005731	MLC Chip
C127,C349,U908	2203-005732	MLC Chip

Design LOC	SEC CODE	Description
C154	2203-005736	MLC Chip
C204,C246,C278,C400	2203-006048	MLC Chip
C544		
C177	2203-006120	MLC Chip
C114,C141	2203-006123	MLC Chip
C417,C418	2203-006133	MLC Chip
C541	2203-006137	MLC Chip
C205,C209,C210,C232	2203-006190	MLC Chip
C103,C104,C105,C106 ,C107,C108,C110, C111 ,C112,C130,C134,C182 ,C187,C189, C190	2203-006194	MLC Chip
C135,C173,C174,C193 ,C519,C520,C521	2203-006208	MLC Chip
C202,C228,C340	2203-006260	MLC Chip
C100,C149,C275	2203-006305	MLC Chip
C502	2203-006348	MLC Chip
C109,C203,C217,C221 ,C222,C226,C227, C264 ,C267,C269,C356,C401 ,C405,C422, C425,C503	2203-006399	MLC Chip
C123,C129,C162,C186 ,C211,C212,C214, C241 ,C259,C260,C261,C262 ,C282,C310, C346,C348 ,C361,C402,C406,C408 ,C410, C411,C414,C416 ,C419,C542	2203-006423	MLC Chip
C147	2203-006439	MLC Chip
C233	2203-006474	MLC Chip
C277,C421	2203-006556	MLC Chip
C171,C200,C201,C220 ,C242,C244,C283, C351 ,C352,C359,C360,C362 ,C515,C516, C522,C523 ,C526,C527,C528,C530 ,C532, C533,C536,C543 ,C545,C546,C552,C553 C601,C602	2203-006562	MLC Chip
C185	2203-006611	MLC Chip
C158	2203-006620	MLC Chip
C415	2203-006668	MLC Chip
C331,C336,C337	2203-006681	MLC Chip

Design LOC	SEC CODE	Description
C188	2203-006693	MLC Chip
C143	2203-006707	MLC Chip
C168,C172	2203-006824	MLC Chip
C136,C137,C420,C514 C538	2203-006839	MLC Chip
C279,C547,C549	2203-006841	MLC Chip
C148,C155,C156,C160,C161,C175,C191, C196,C208,C254,C255,C256,C263,C305, C306,C307,C314,C338,C339,C524,C525, C529,C531,C534,C535,C537	2203-006872	MLC Chip
C213,C215,C518,C554	2203-006890	MLC Chip
C159,C550	2203-006979	MLC Chip
C146	2203-007194	MLC Chip
C102,C249	2203-007210	MLC Chip
C225,C265,TA300	2203-007240	MLC Chip
C163	2203-007270	MLC Chip
C229,C304,C407,C409,C413	2203-007271	MLC Chip
U905	2203-007279	MLC Chip
C234,C235,C243,C247,C257,C258,C303, C317,C403,C404,C412	2203-007317	MLC Chip
C551,C559	2203-007369	MLC Chip
C245,C287,C308	2203-007393	MLC Chip
C133,C207,C281,C297,C298	2203-007449	MLC Chip
C230,C231	2203-007701	MLC Chip
C504,C505,C506,C507,C508,C509,C510, C511,TA500	2404-001339	Tantalum Electrallytic-SMD
C357,C358	2404-001465	Tantalum Electrallytic-SMD
C540	2404-001506	Tantalum Electrallytic-SMD
C139	2404-001516	Tantalum Electrallytic-SMD
L505,L506	2703-002309	Inductor-SMD
L103	2703-002314	Inductor-SMD
C118,C151,L109	2703-002649	Inductor-SMD
L121	2703-002775	Inductor-SMD
L105	2703-002793	Inductor-SMD

Design LOC	SEC CODE	Description
L111	2703-002858	Inductor-SMD
L120	2703-002906	Inductor-SMD
L101,L102	2703-002918	Inductor-SMD
L106	2703-002953	Inductor-SMD
L112	2703-003470	Inductor-SMD
L504	2703-003686	Inductor-SMD
L113	2703-003698	Inductor-SMD
L207,L208	2703-003869	Inductor-SMD
L501,L502,L503	2703-003892	Inductor-SMD
OSC400	2801-004458	Crystal Unit
OSC200,OSC501	2801-004902	Crystal Unit
OSC102	2804-001884	Clock Oscillator
OSC101	2809-001348	Other Oscillator
OSC100	2809-001358	Other Oscillator
F300,F301,F302,F303 ,F304,F305	2901-001413	Filter-EMI
F306,F307,F308	2901-001470	Filter-EMI
F100	2904-001939	Filter-SAW
L123	3301-001659	Core
L300	3301-001729	Core
L201,L202	3301-001812	Core
L125,L301,L302,L303,L304,L306	3301-001885	Core
L305,L401	3301-001912	Core
L205,L206	3301-001956	Core
PWR_ON VOL_DOWN VOL_UP	3404-001303	Switch-Tact
ANT102	3705-001448	Connector-Coaxial
RFS100	3705-001731	Connector-Coaxial
HEA699	3710-002632	Common User Socket
HDC301	3711-006119	Header
BTC501	3711-006299	Header
HDC300	3711-006483	Header
HDC302	3711-006650	Header
HDC401	3711-007173	Header
HEA301	3711-007467	Header
ANT103,ANT104	3712-001348	Terminal

Design LOC	SEC CODE	Description
IFC300	3722-002867	Jack
BAT501	4302-001180	Battery-Secondary
U105	4709-001844	High-Frequency Parts-ETC
SC106,SC109,SC111,SC122, SC128,SC132,SC137	GH70-03951A	IPR SHIELD-CAN CLIP
SC129,SC130,SC133,SC136	GH70-04132A	IPR SHIELD-CAN CLIP
SC100,SC101,SC104,SC113, SC116,SC117,SC121,SC123, SC124,SC125,SC126	GH70-04443A	IPR SHIELD-CAN CLIP

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

## 6. Level 1 Repair

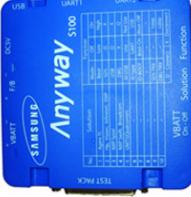
### 6-1. S/W Download

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

- Downloader Program([Odin3 v1.31.exe](#))
- GT-I9010 Mobile Phone
- Data Cable
- Binary files

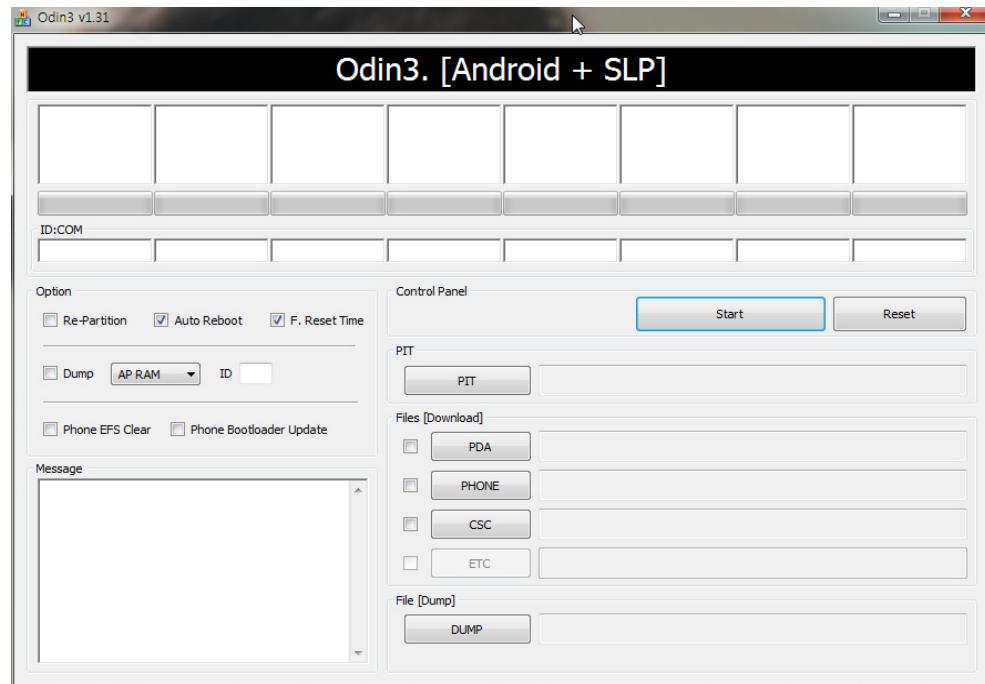
#### \* Settings



Anyway Jig	Adaptor	IF Cable	RF Cable
 GH99-36900A	 GH99-38251A	 GH39-01290A	 GH39-00985A

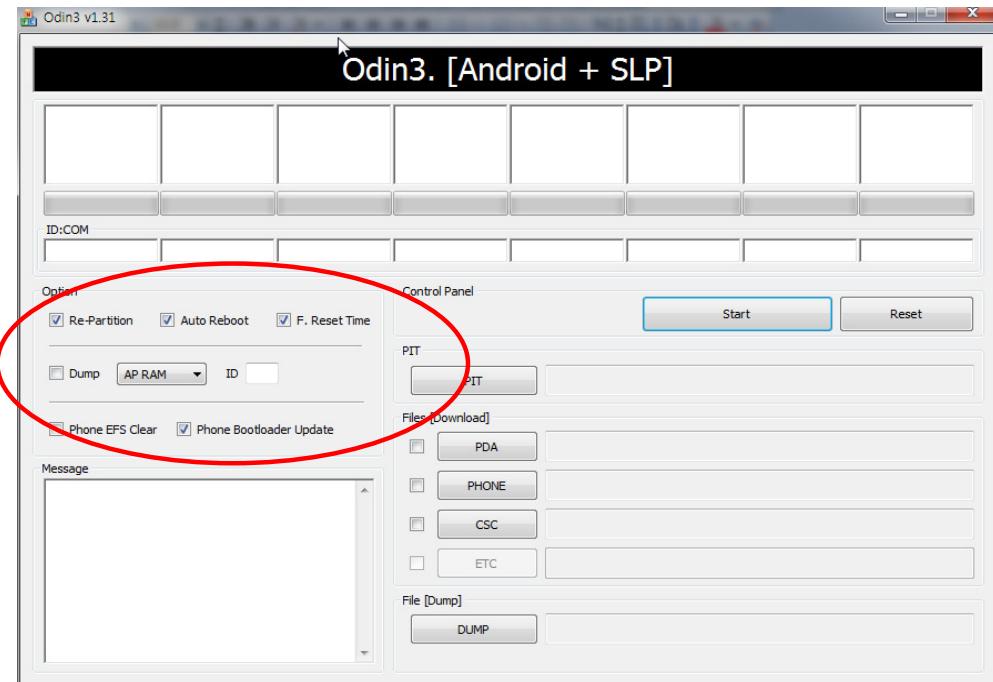
## 6-1-2. S/W Downloader Program

- Load the binary download program by executing the  
" **Odin3 v1.31.exe** " ← Run this file.

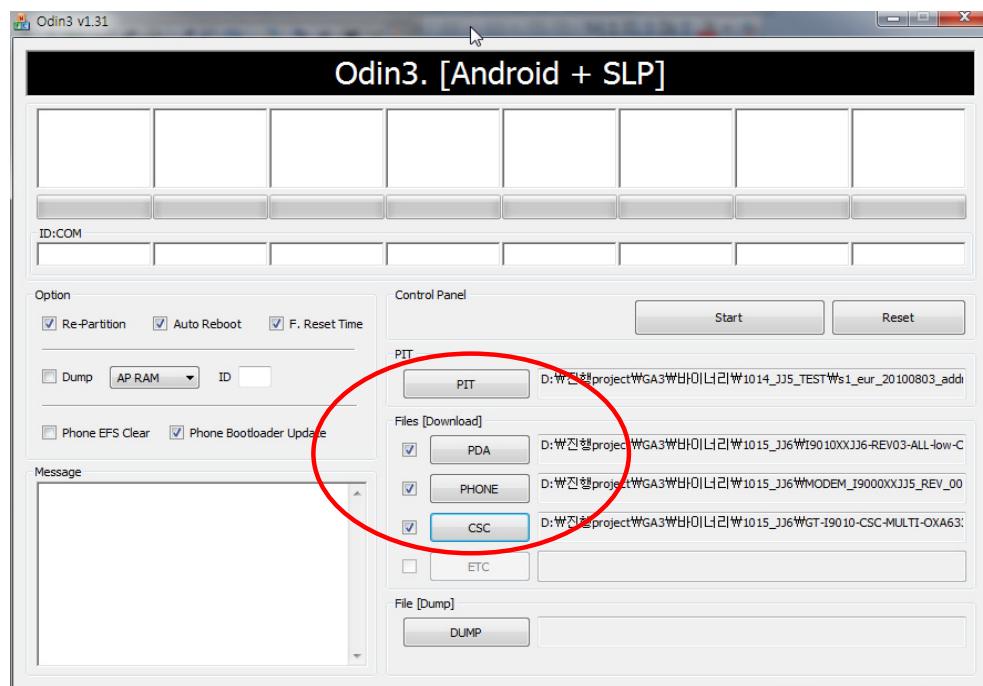


## 1. Option Selection

- Check Re-Partition and Phone Bootloader Update



## 2. Select the PIT, PDA, PHONE & CSC file.



3. Enter Device into Download Mode

- Enter the device into Download Mode
  - 1 ) press the Volume Down button
  - 2 ) press the Power on button(don't release the volume down button) and then Connect the Handset to PC via a Data Cable

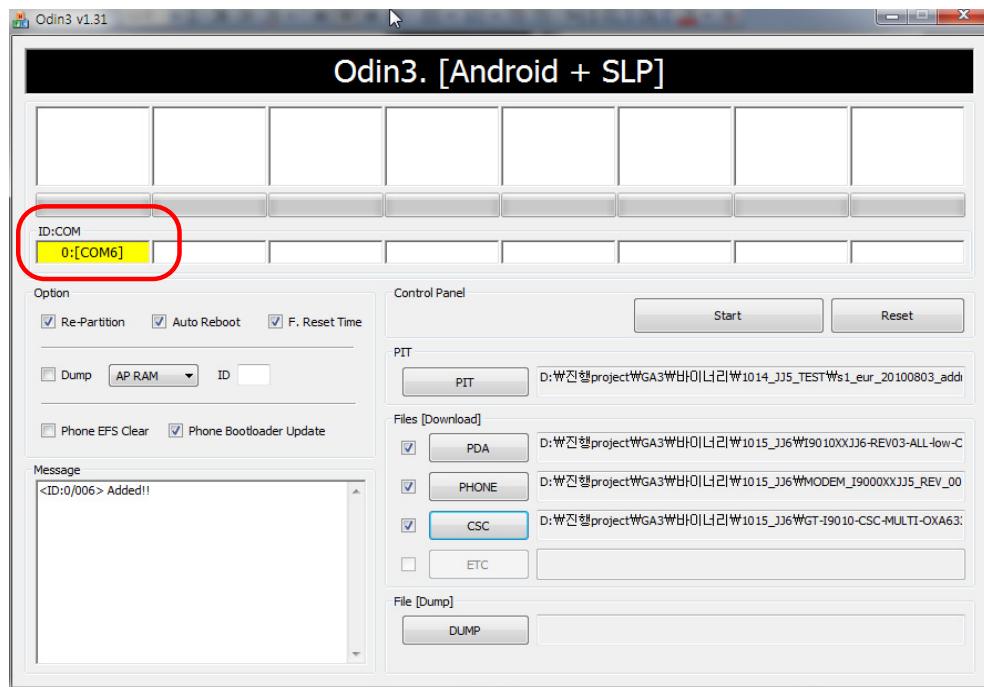
3th: Connect the Handset to PC via a Data Cable

1st: Volume Down Button

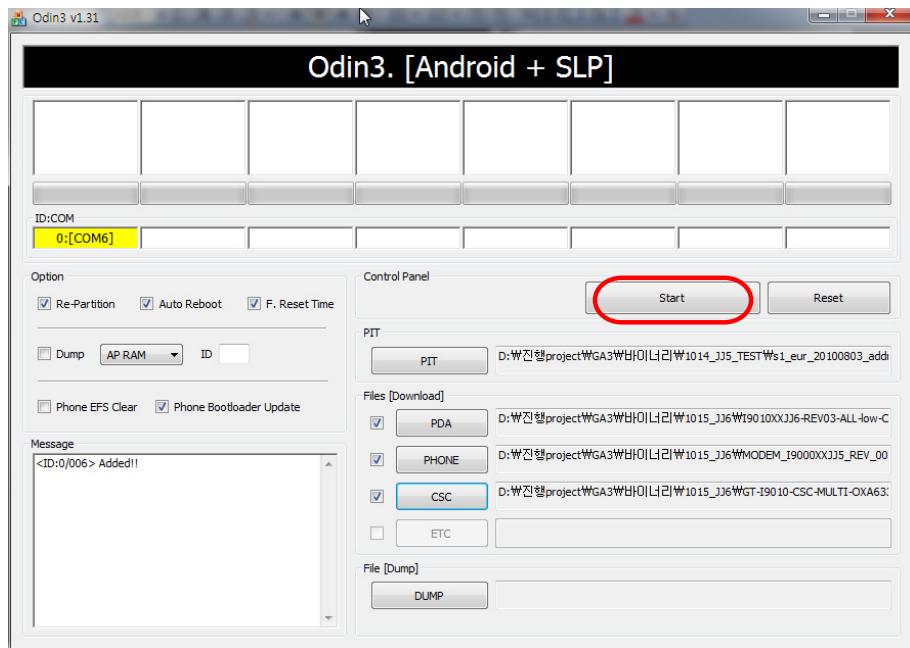


2nd: Power on Button

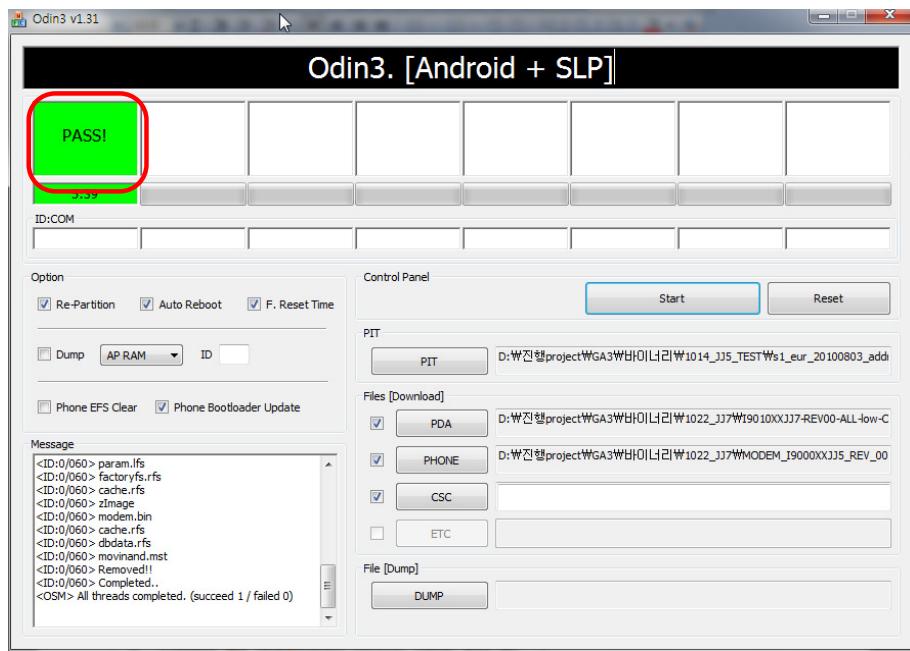
4. Make sure ID:COM box highlighted yellow to know that the handset is connected to the PC.



## 5. Start Downloading by clicking Start Button



## 6. Handset reboots when download completes.



## 7. Confirm the downloaded version name and etc. :

**\*#1234#**

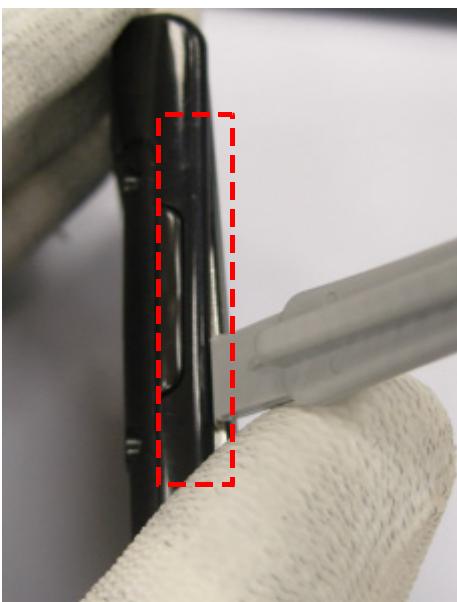
Full Reset :

**\*2767\*3855#**

## 7. Level 2 Repair

### 7-1. Disassembly and Assembly Instructions

#### 7-1-1. Disassembly

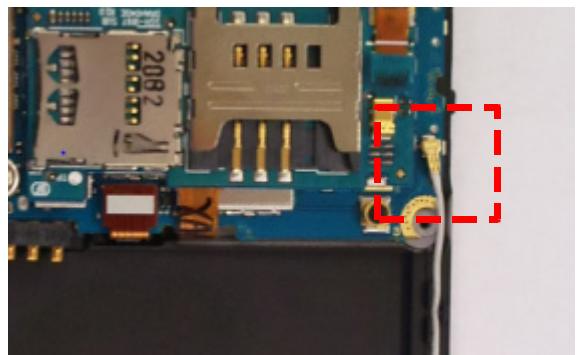
 <p>1</p>	 <p>2</p>
1) Pull down of the battery cover locker.	1) Turn 6 points of screws loosen being care of scratch.
 <p>3</p>	 <p>4</p>
1) Separate front case and rear case using plastic dissection knife (move the plastic knife along the groove between front case and rear case)	1) First, Separate left side of front case and rear case

7. Level 2 Repair

5



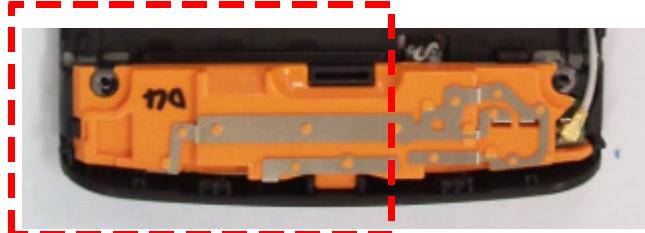
6



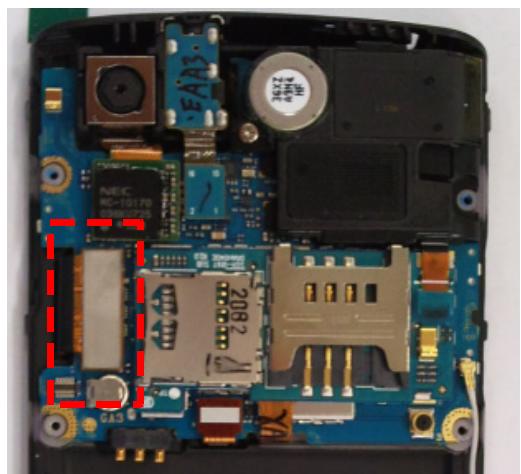
1) Second, Separate bottom of front case and rear case

1) Separate connecting plug of coaxial cable from the socket on PBA using tweezers

7

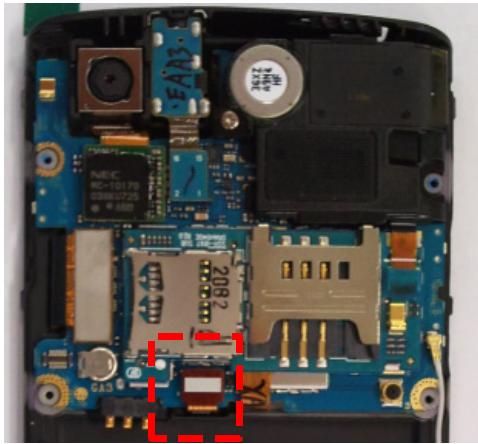
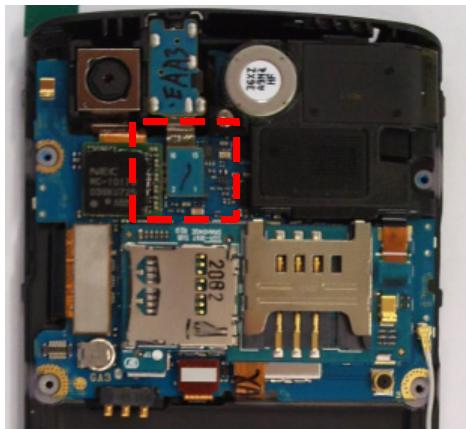


8



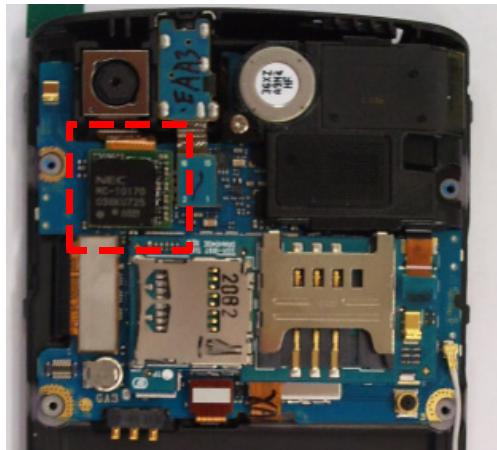
1) Separate internal antenna module from the front part using tweezers.

1) Separate sub key connecting plug and using tweezers.

**9****10**

1) Separate LCD FPCB connecting plug using tweezers.

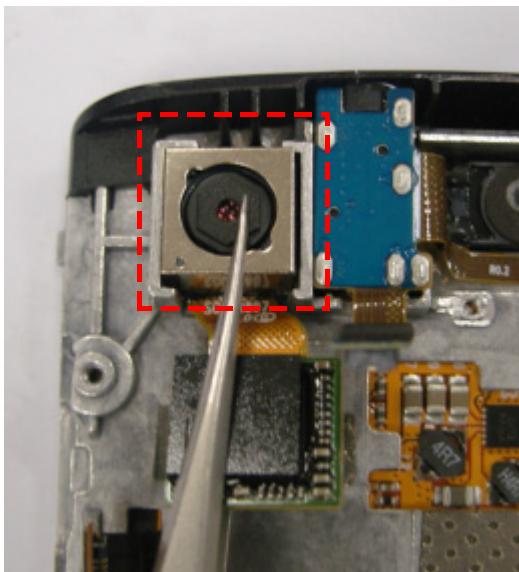
1) Separate earjack FPCB connecting plug using tweezers.

**11****12**

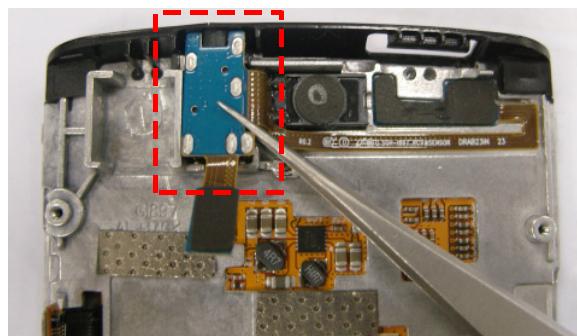
1) Separate camera connecting plug using tweezers.

1) Remove screw 1point.  
2) Separate PBA from the front case.

13



14

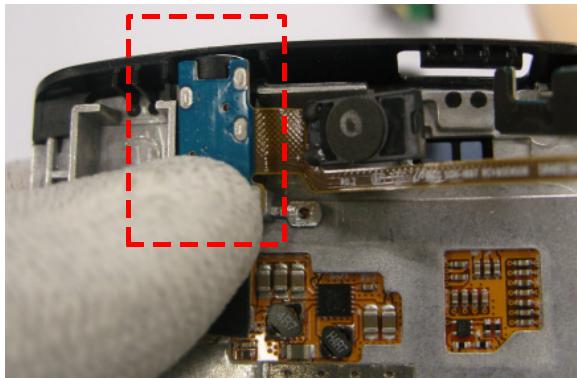


1) Pull out camera module from the front case.

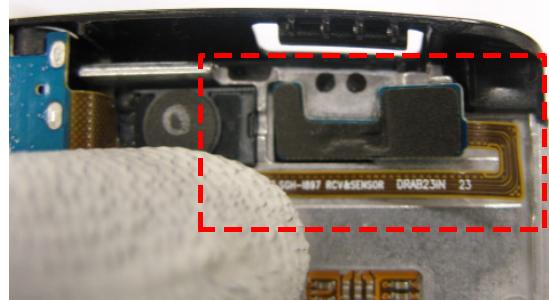
1) Pull out earjack module from the front case

## 7-1-2. Assembly

1



2

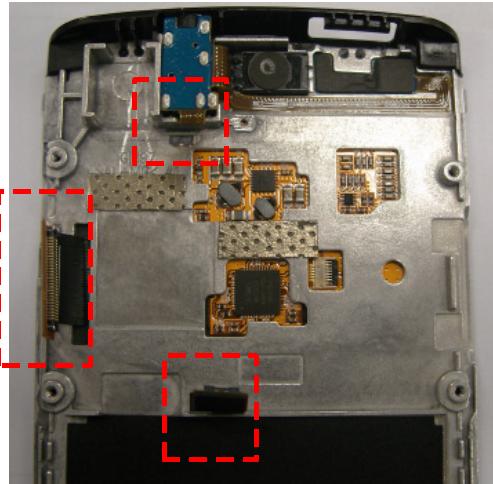


1) Put in earjack module to earjack hole.

1) Attach the earjack FPCB on the front case

1) Mount and stick motor and receiver FPCB module to the appropriate location.

3



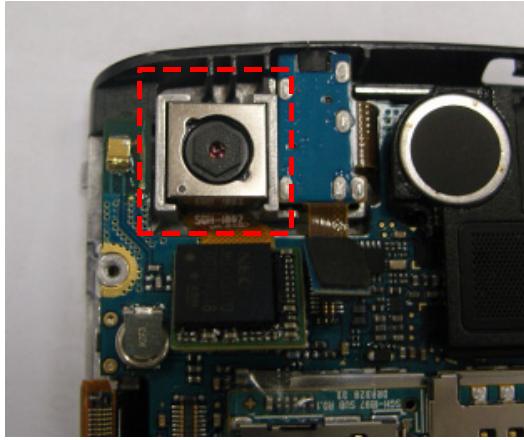
4



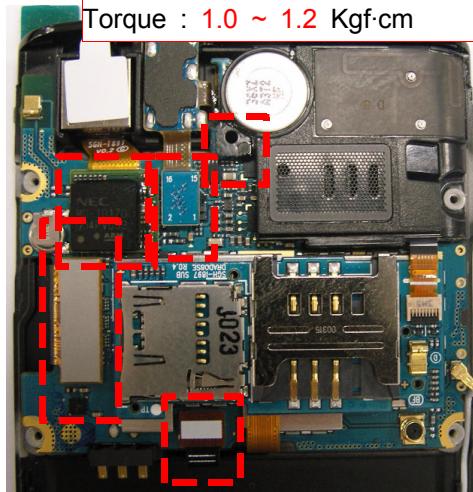
1) Stand all FPCB ( LCD, earjack, sub key )

1) lay PBA on the front case

5



6



- 1) Put in camera module to earjack hole.
- 1) Combine the LCD mounted bracket tightly with the front case accurately.

- 1) Connect all FPCB (camera, earjack, sub key, LCD).
- 1) Insert microphone into the latticed groove on the front case.

7



8



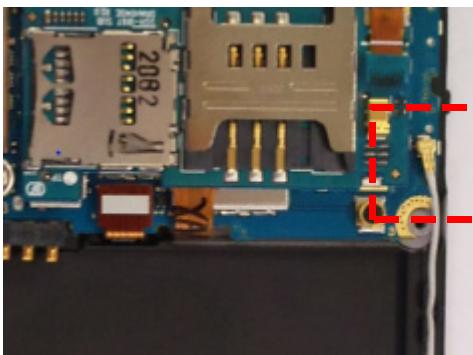
- 1) Combine Center of internal antenna module with front case.

- 1) Combine left/right of internal antenna module with front case.

**9****10**

1) Put connector coaxial cable plug to the socket on bottom of the bracket

1) Coaxial cable appropriately along the groove of bracket

**11****12**

1) Put connector coaxial cable plug to the socket on bottom of the PBA.

1) Assemble rear cover and front cover.

13

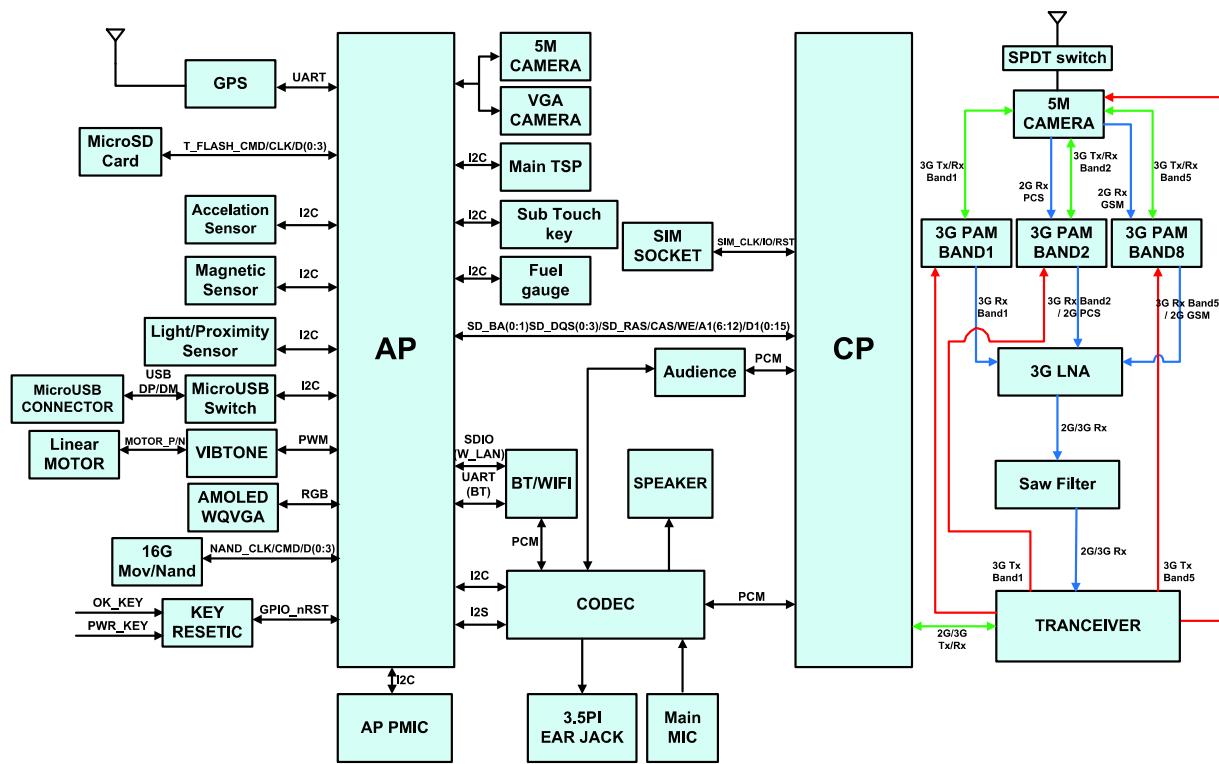
Torque : 1.0 ~ 1.2 Kgf·cm



- 1) Screw down 6 points.

## 8. Level 3 Repair

### 8-1. Block Diagram

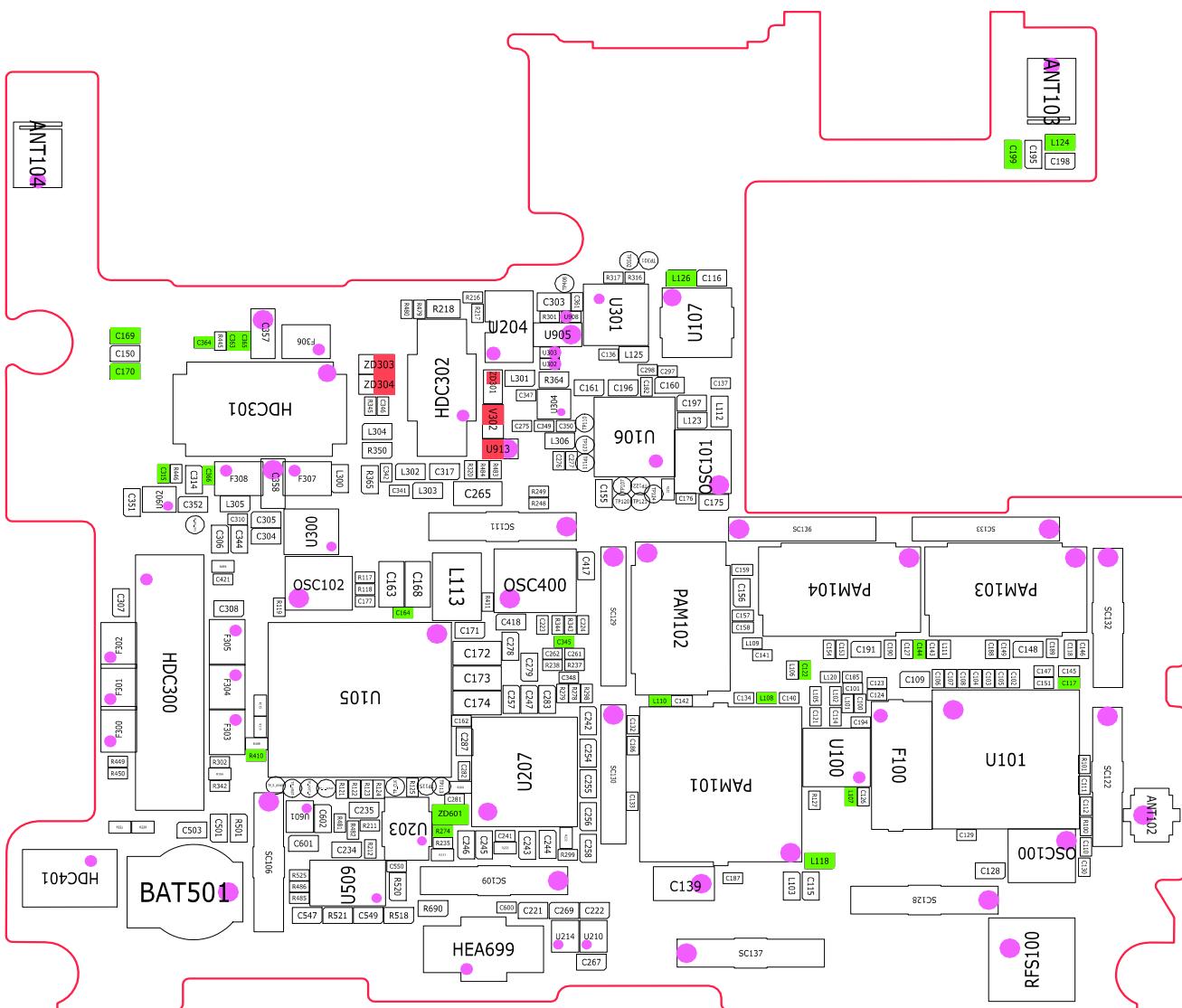


## 8-2. PCB Diagrams

## 8-2-1. Top

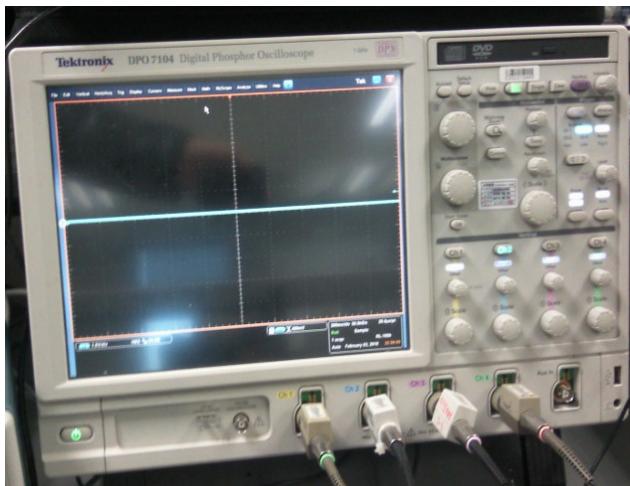


## 8-2-1. Bottom



### 8-3. Flow Chart of Troubleshooting

#### Equipments



↑ Oscilloscope



↑ Digital Multimeter

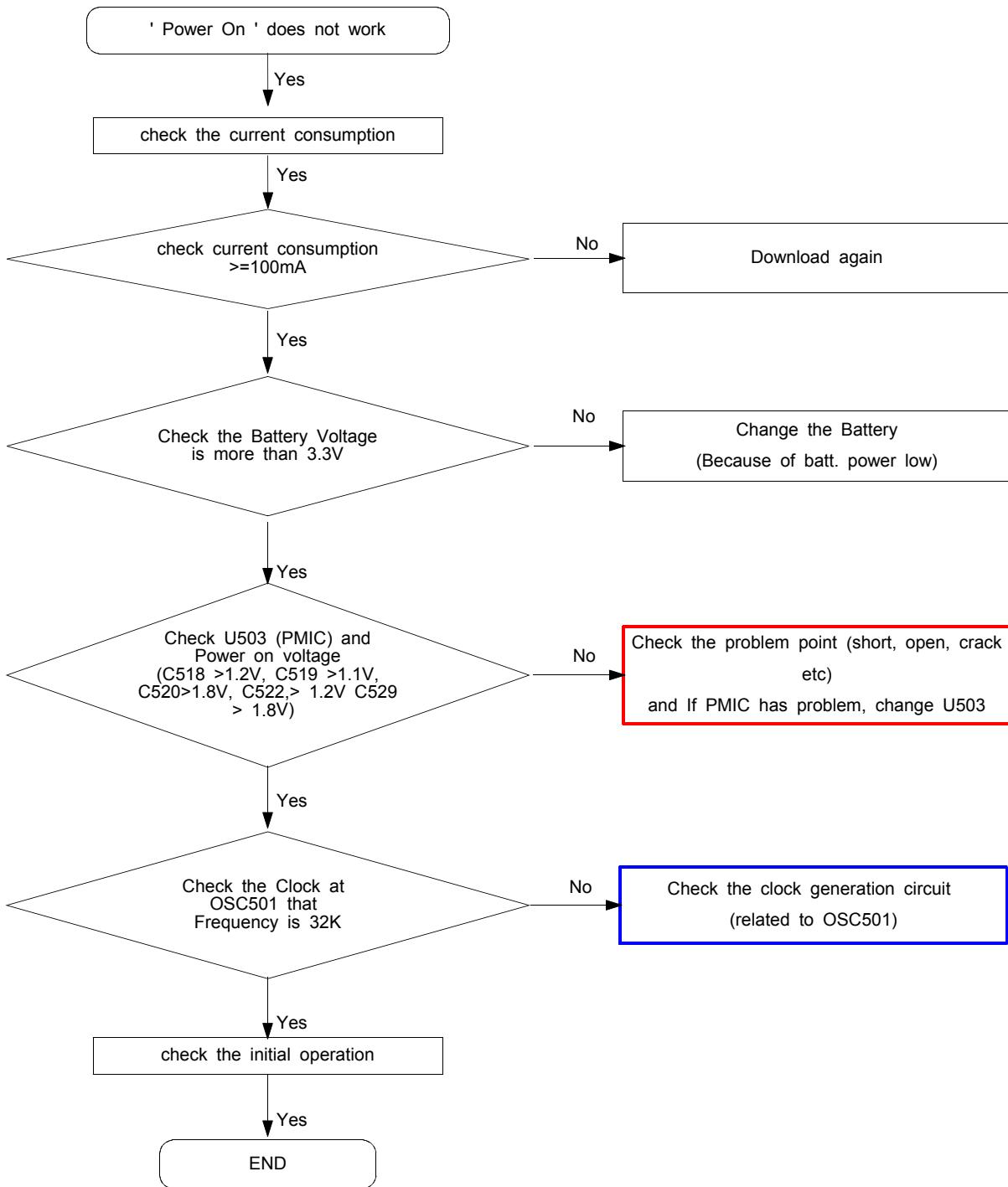


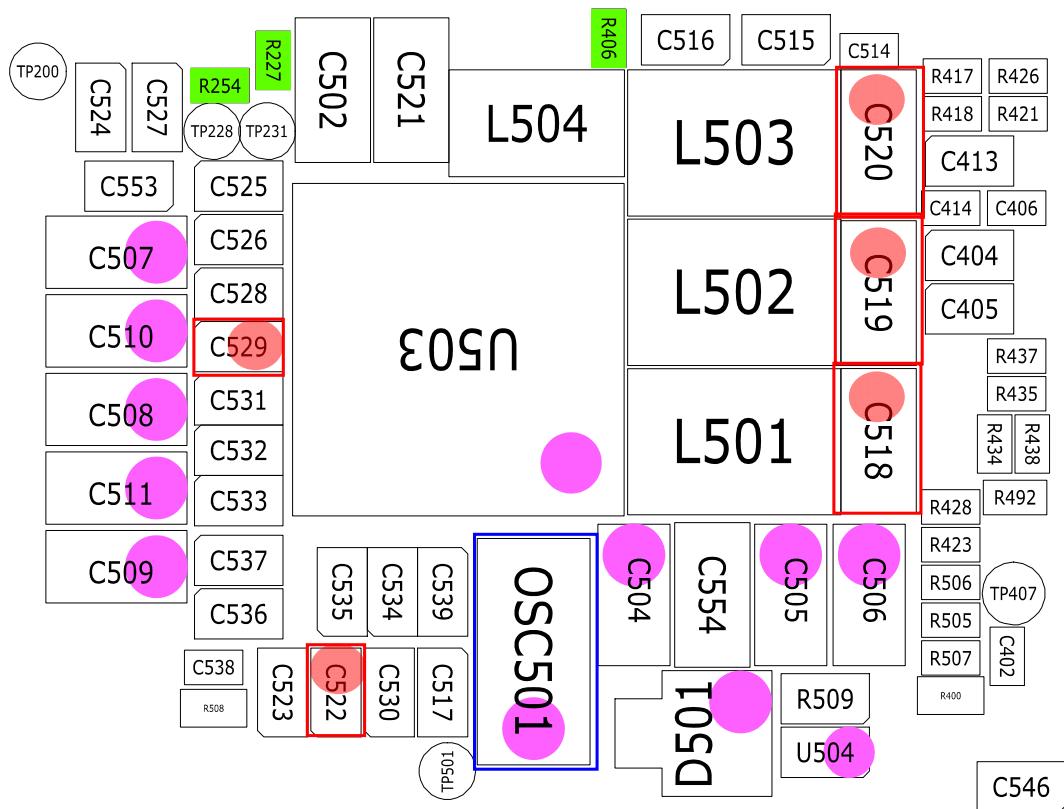
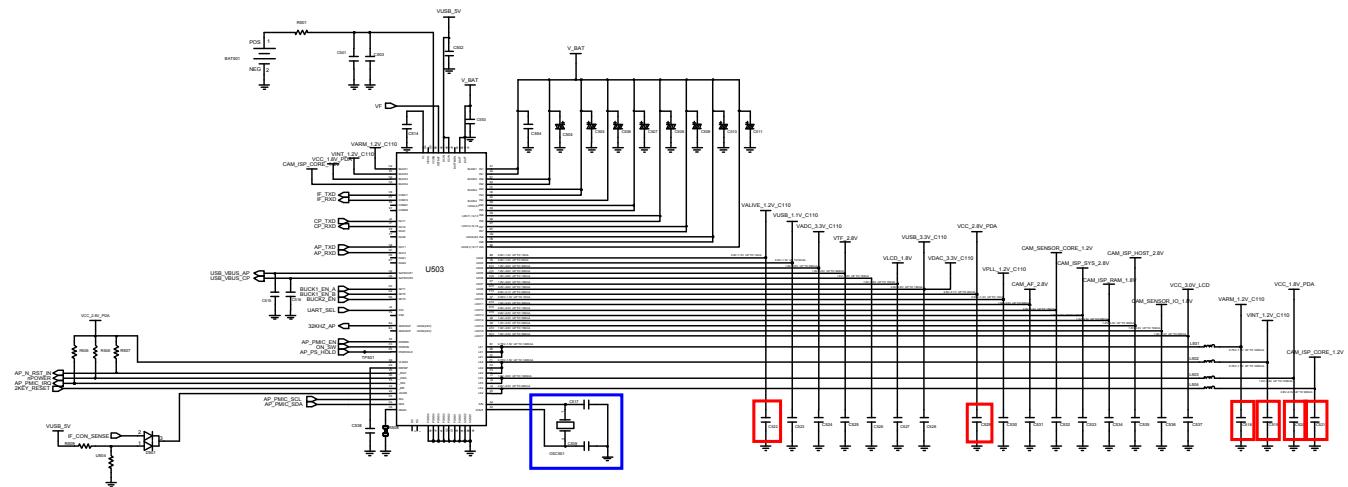
↑ Power Supply



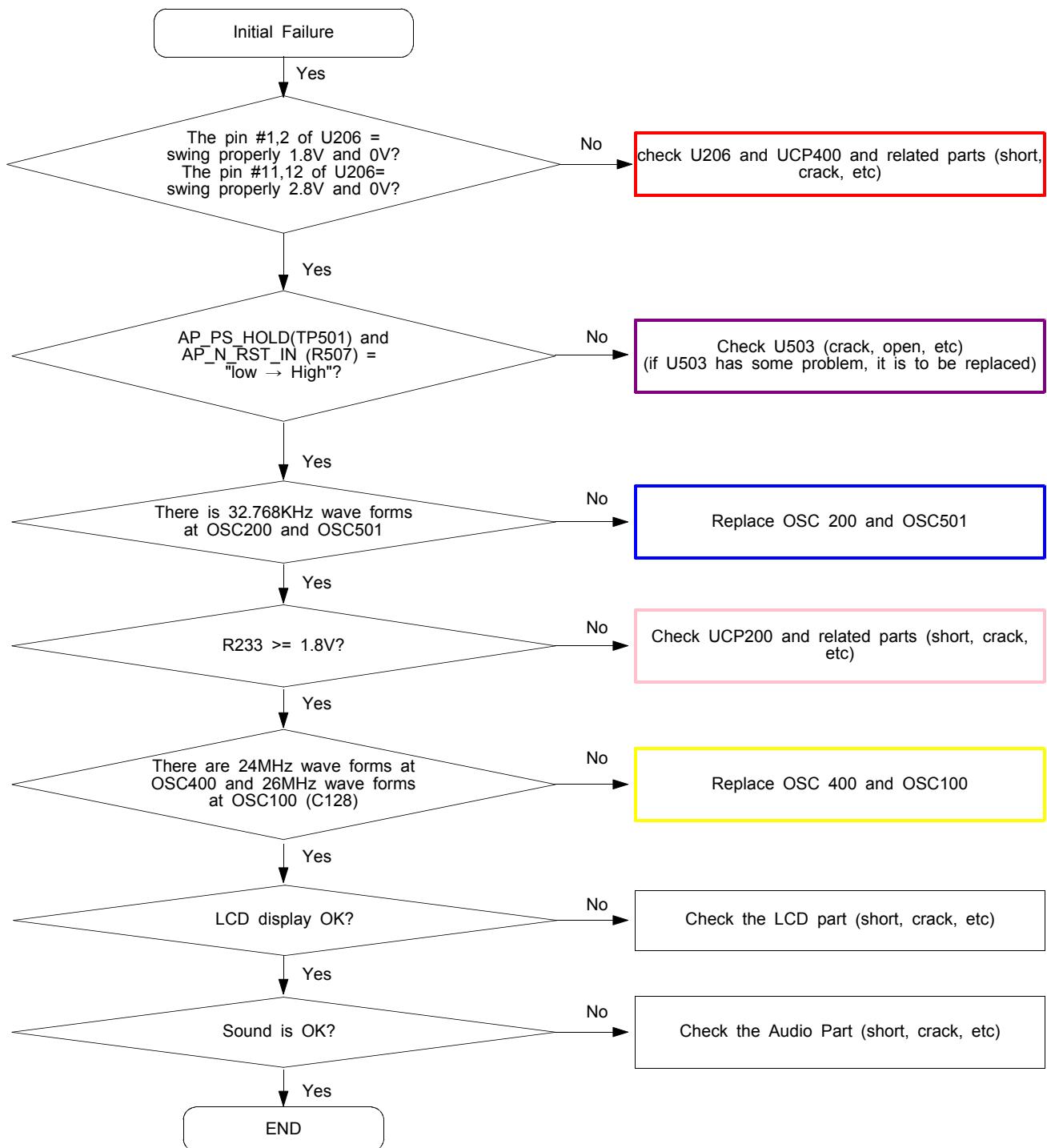
↑ + driver, Tweezer

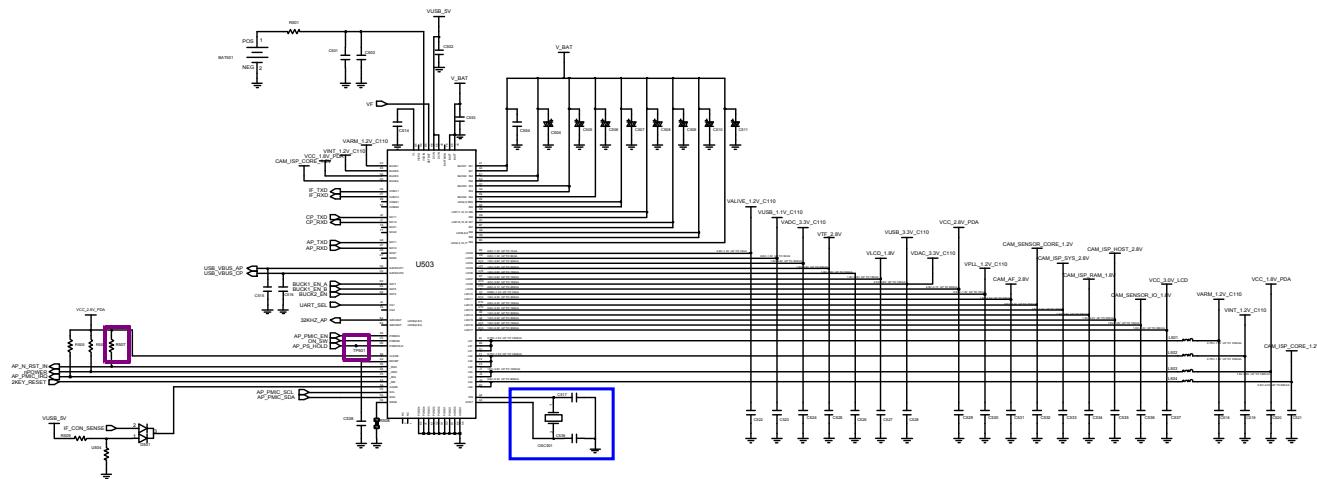
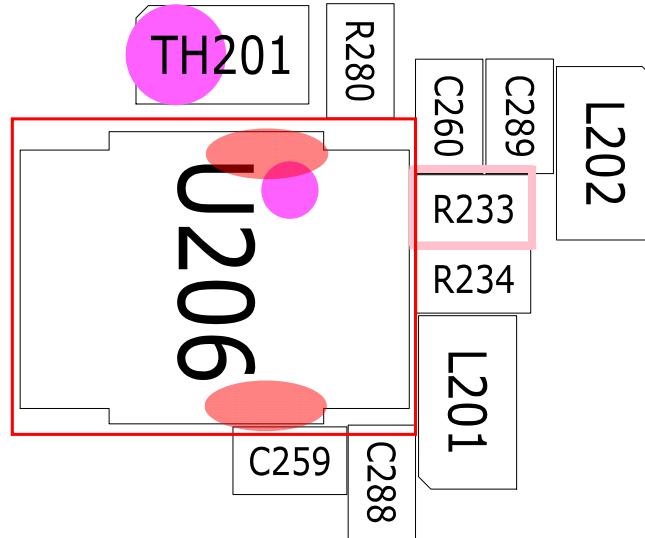
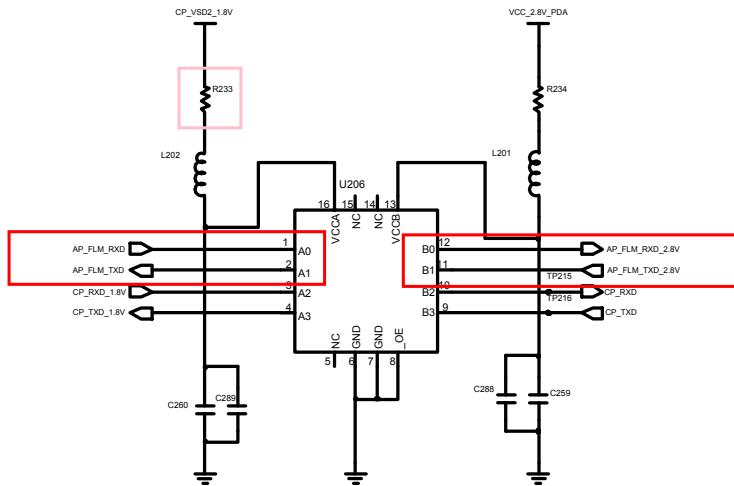
## 8-3-1. Power On

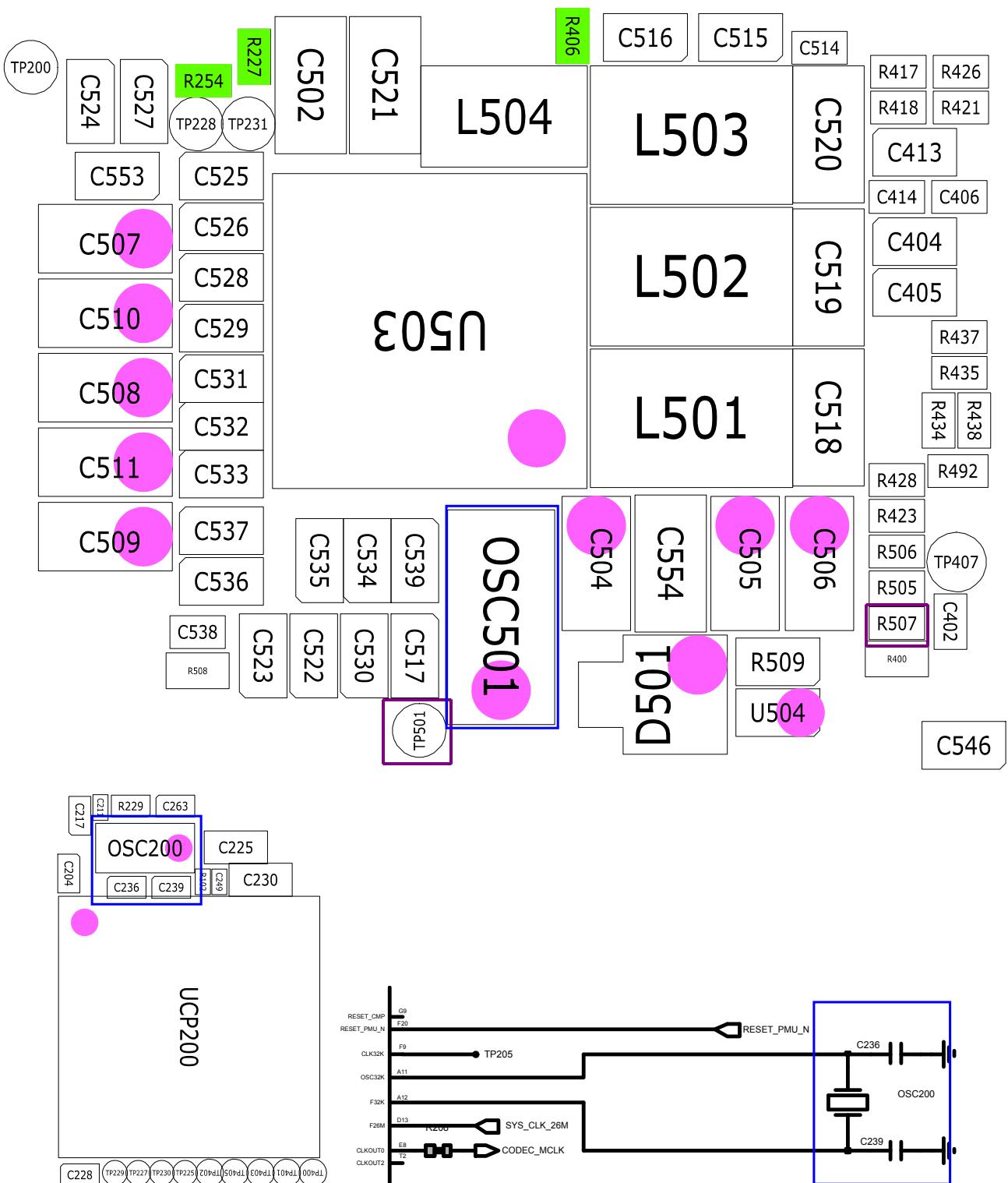


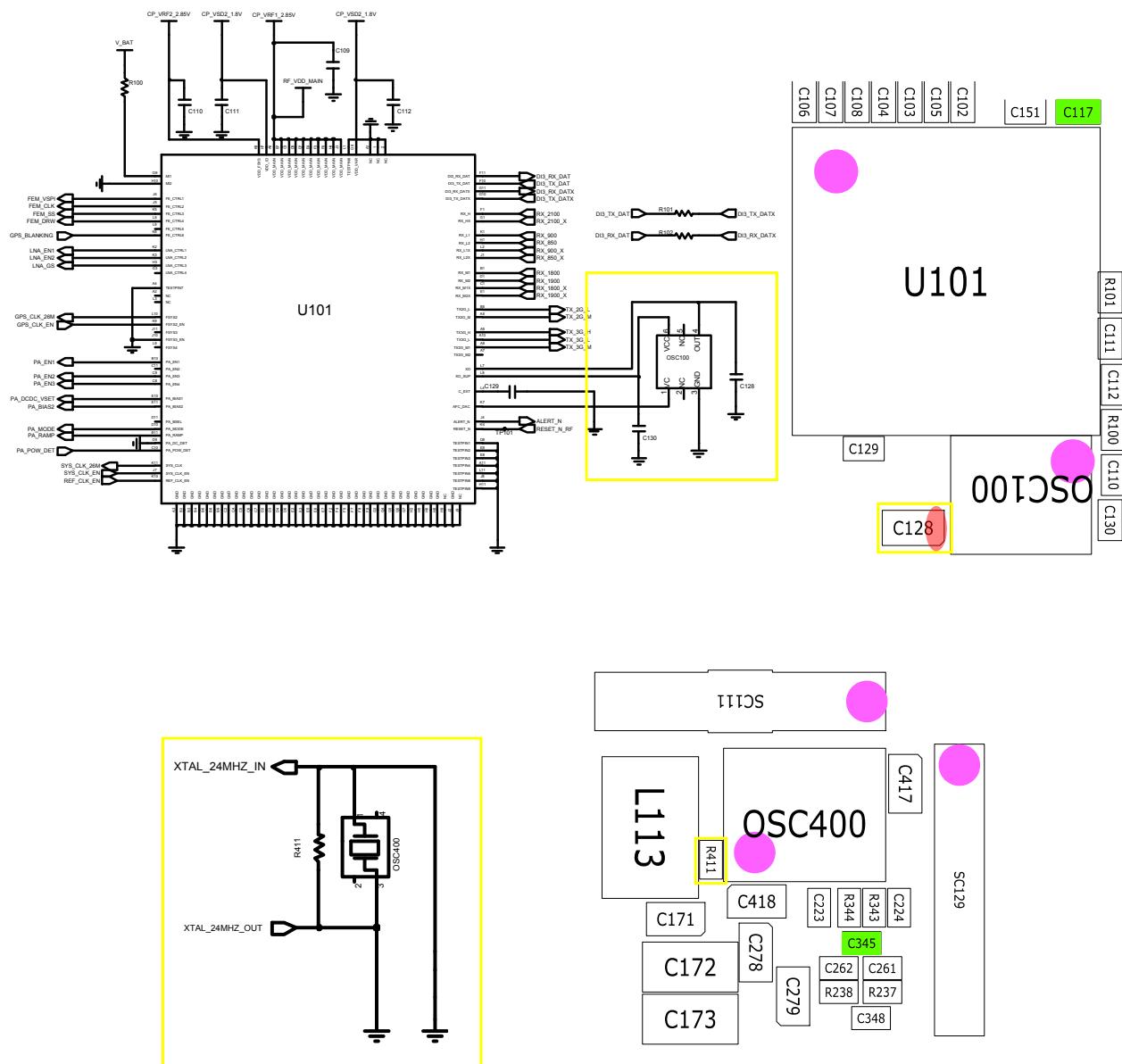


## 8-3-2. Initial

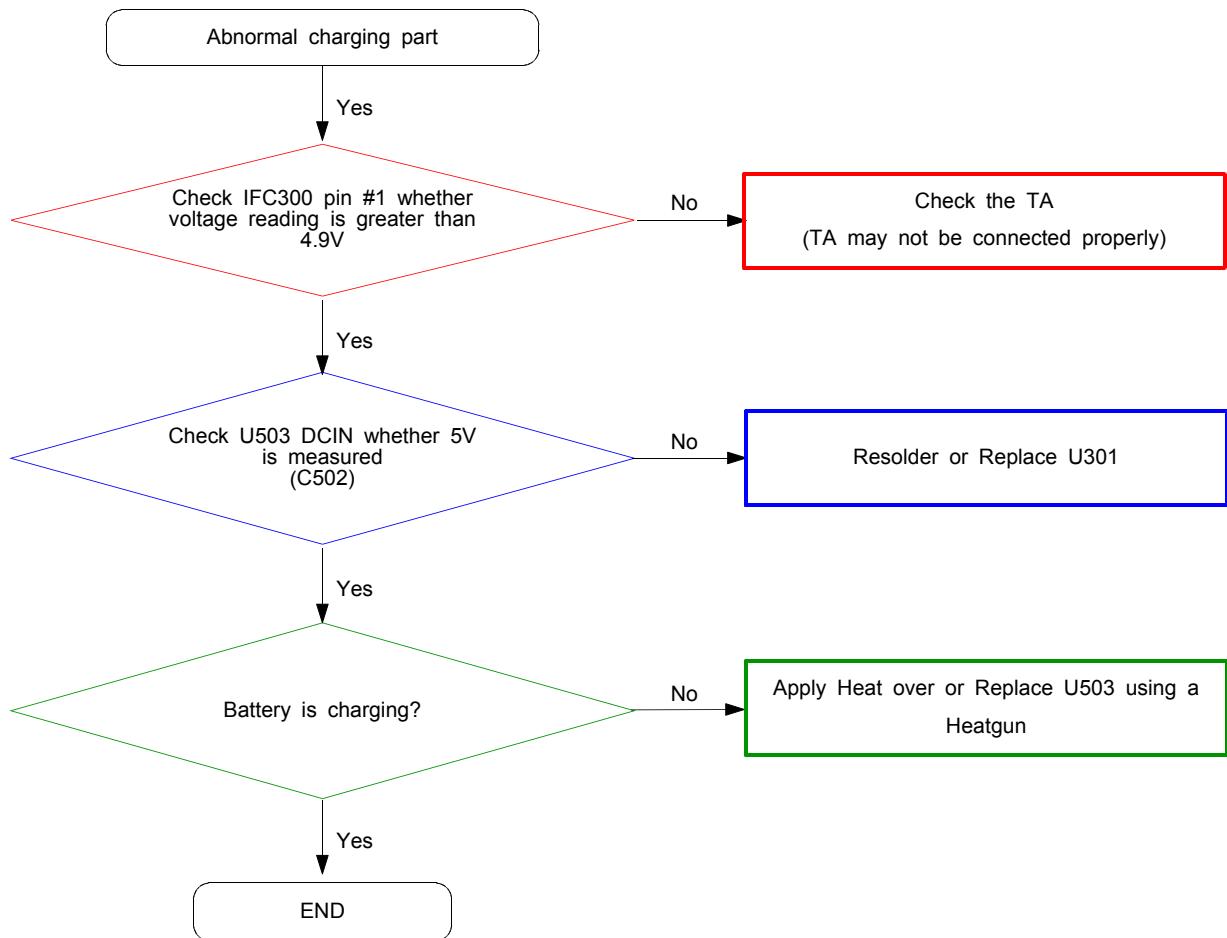


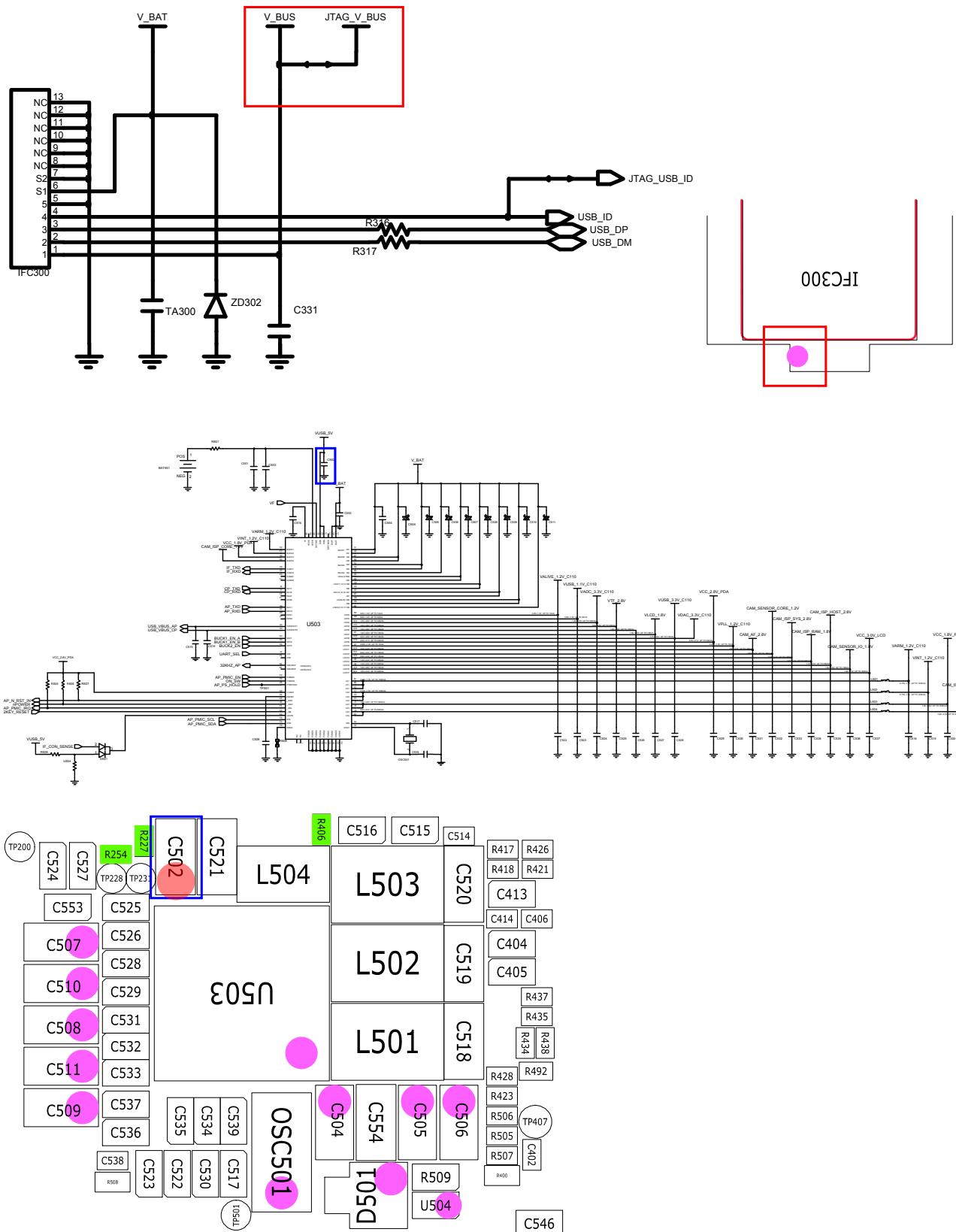




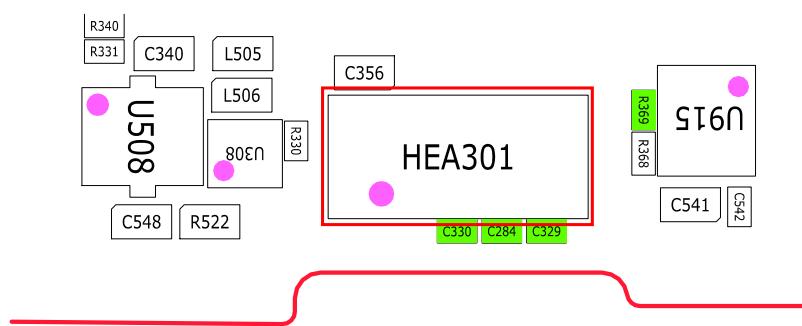
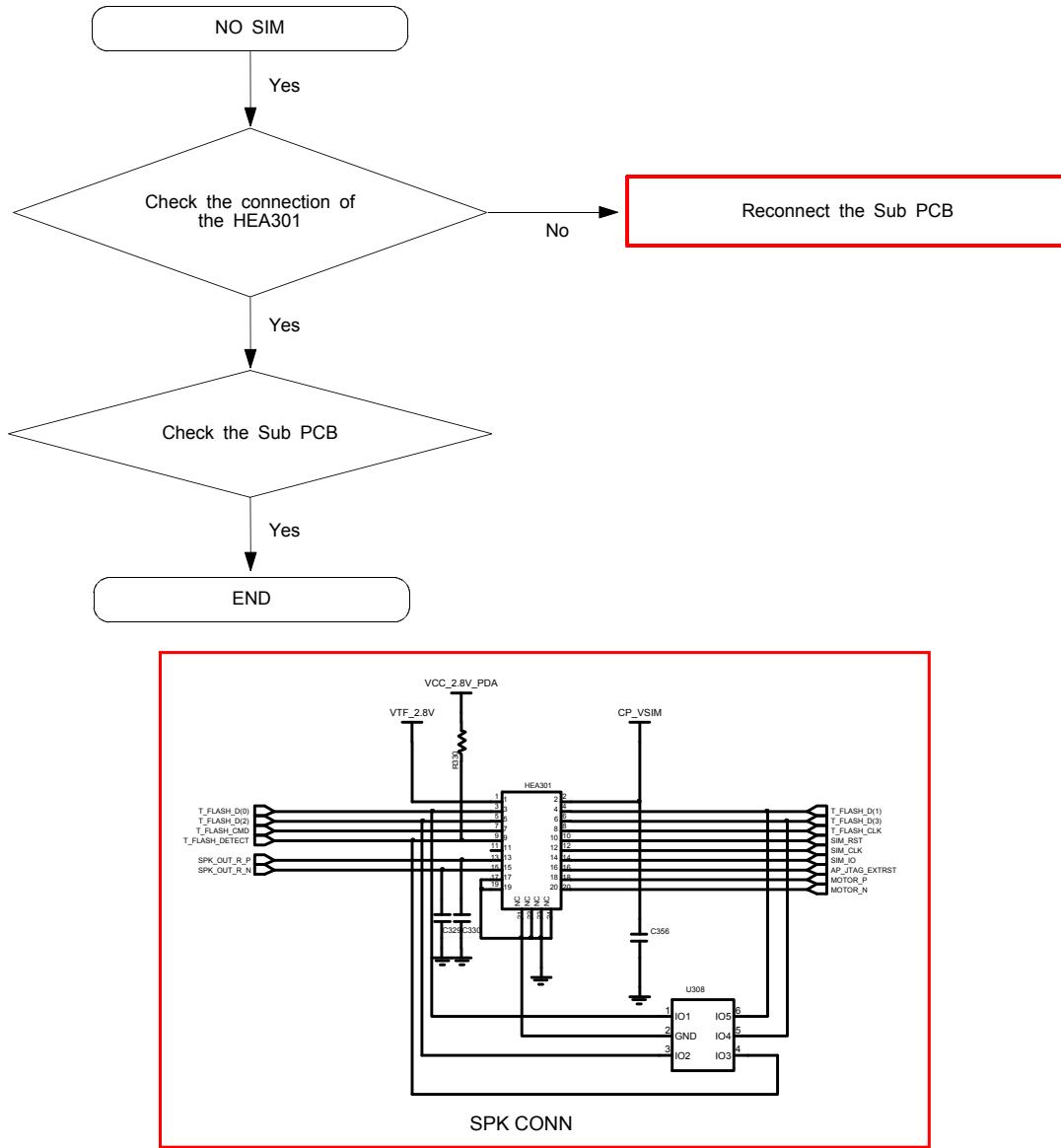


## 8-3-3. Charging Part

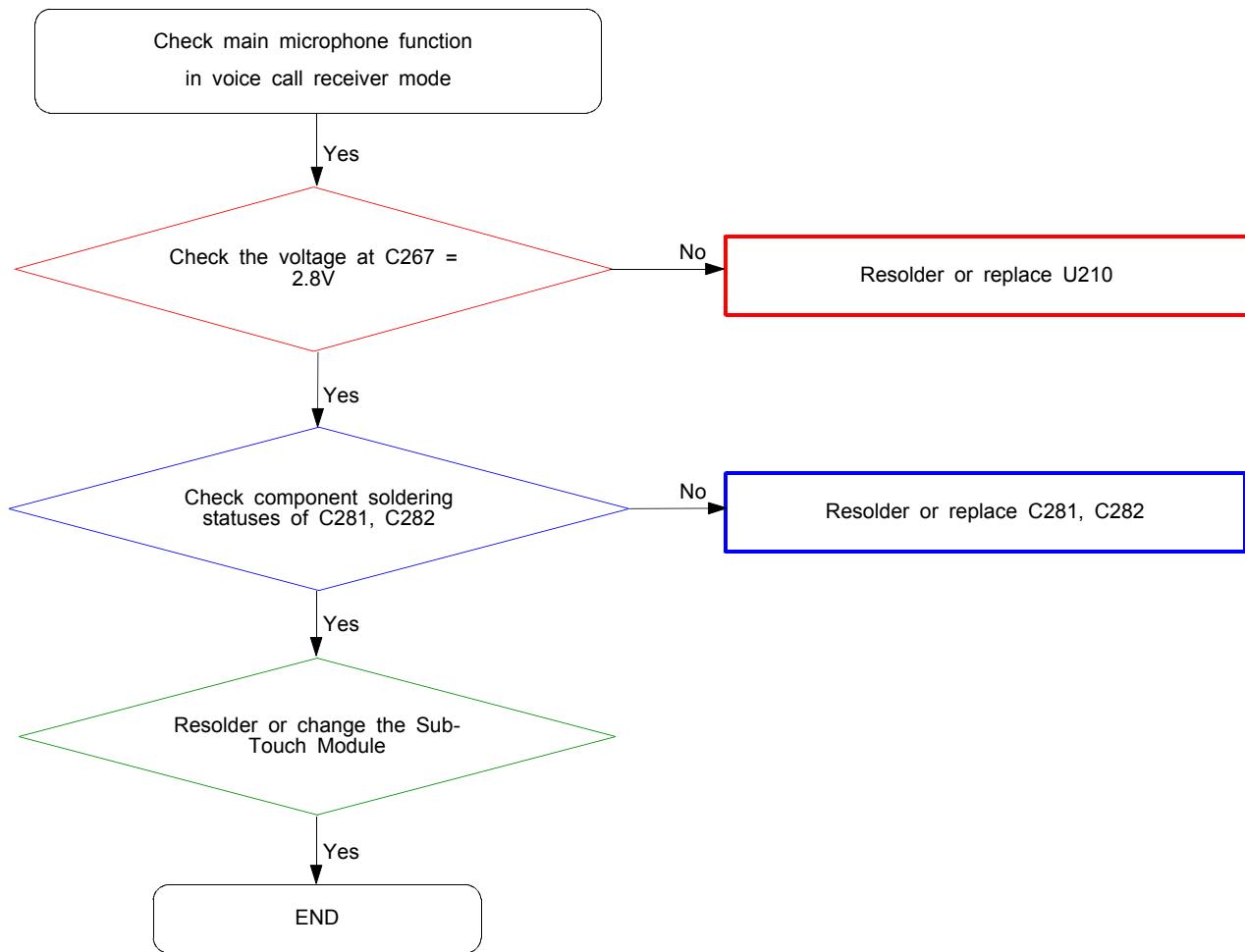


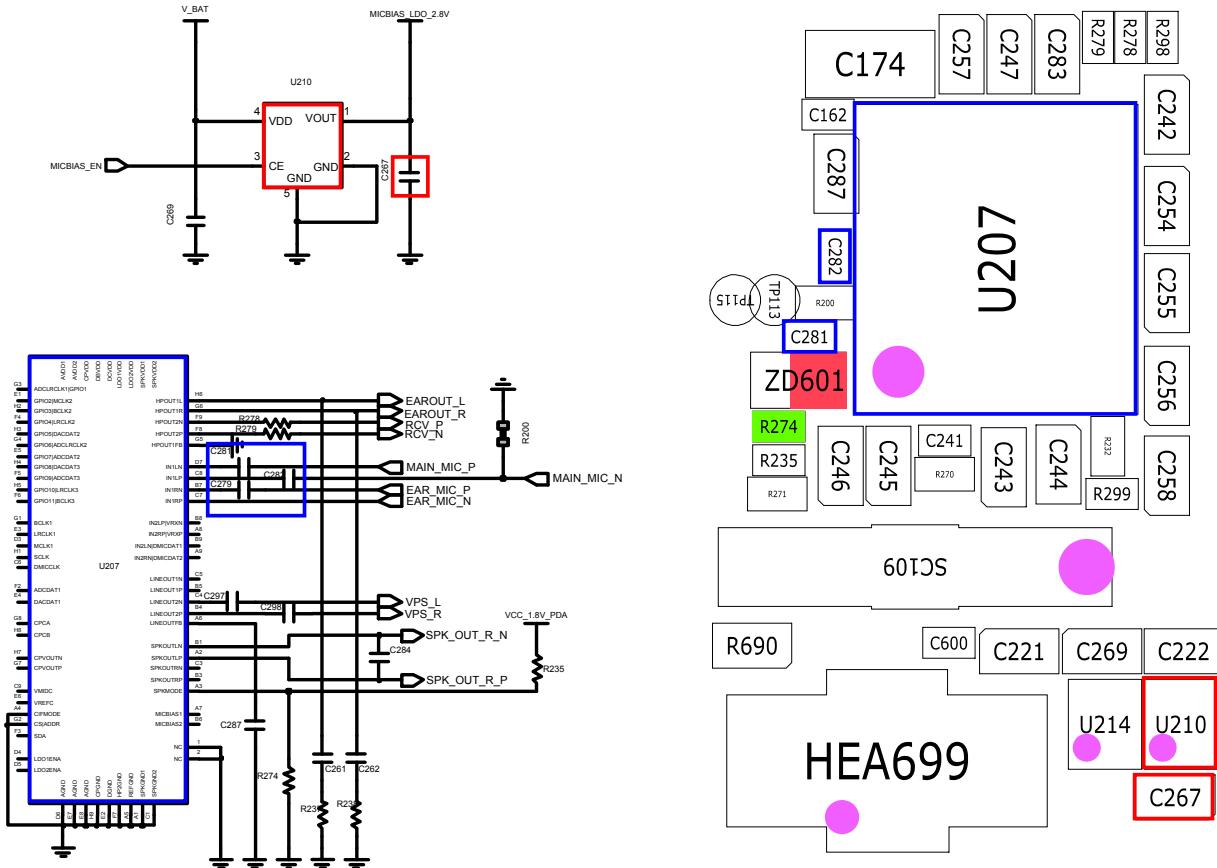


## 8-3-4. Sim Part

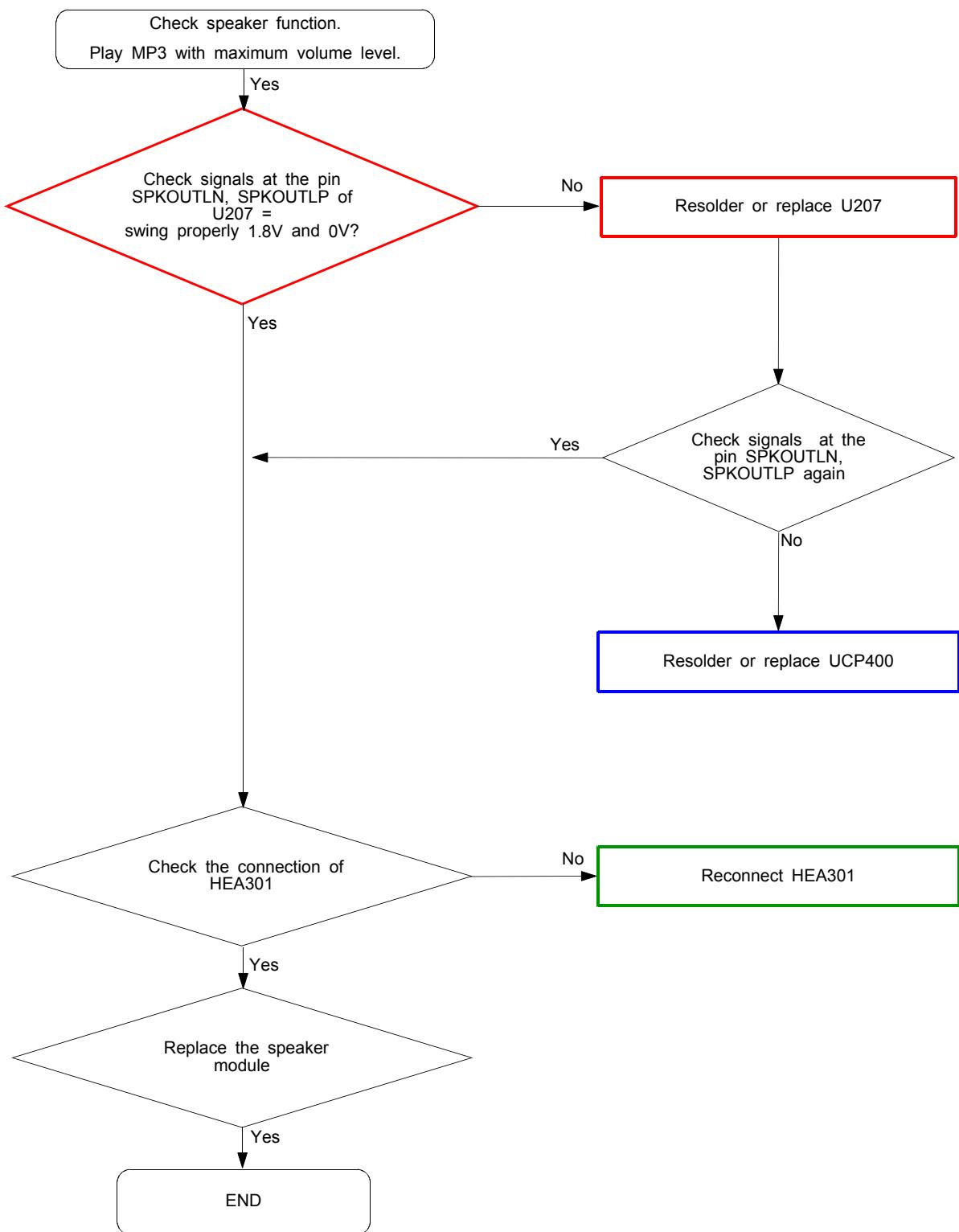


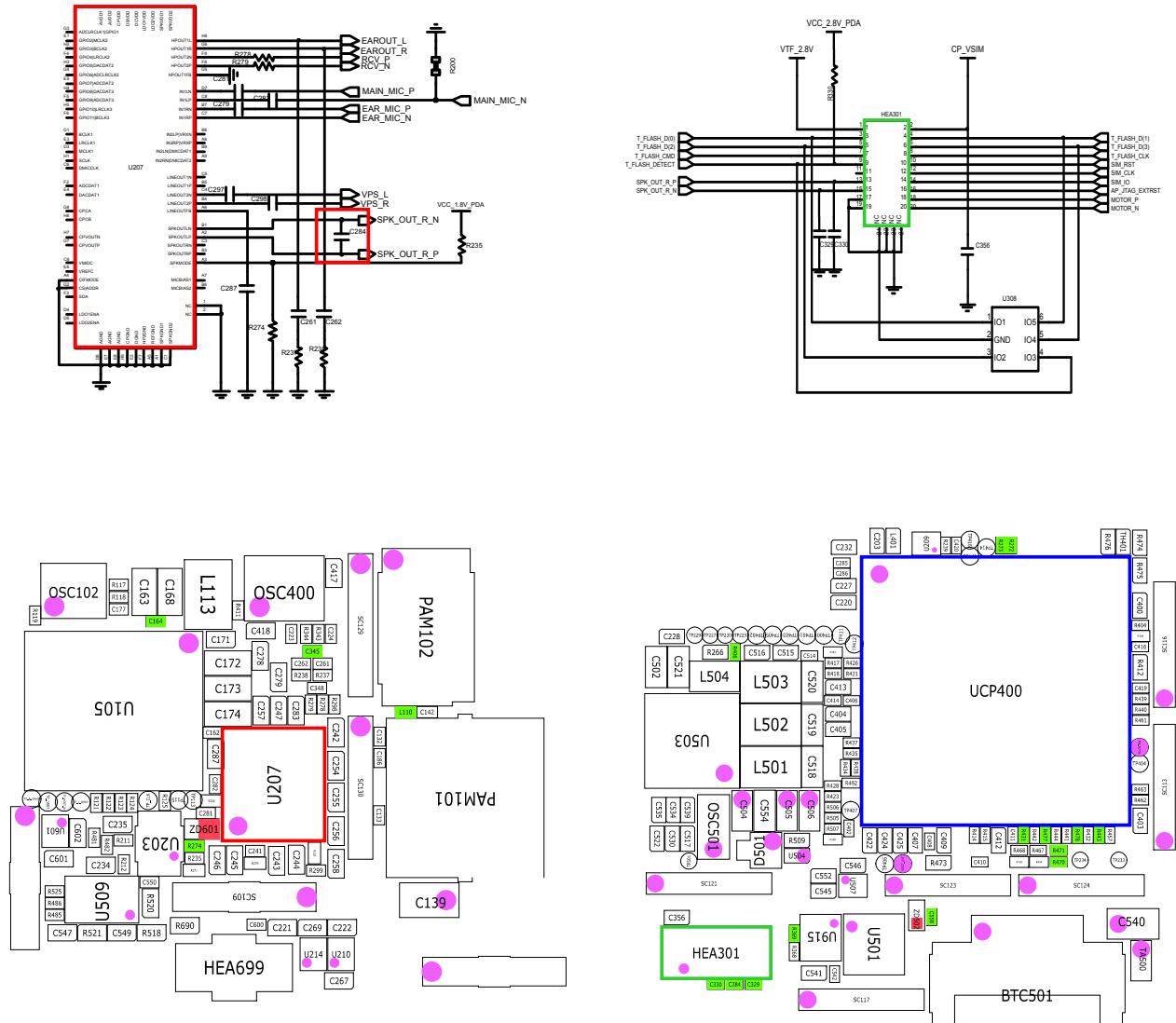
### 8-3-5. Microphone Part



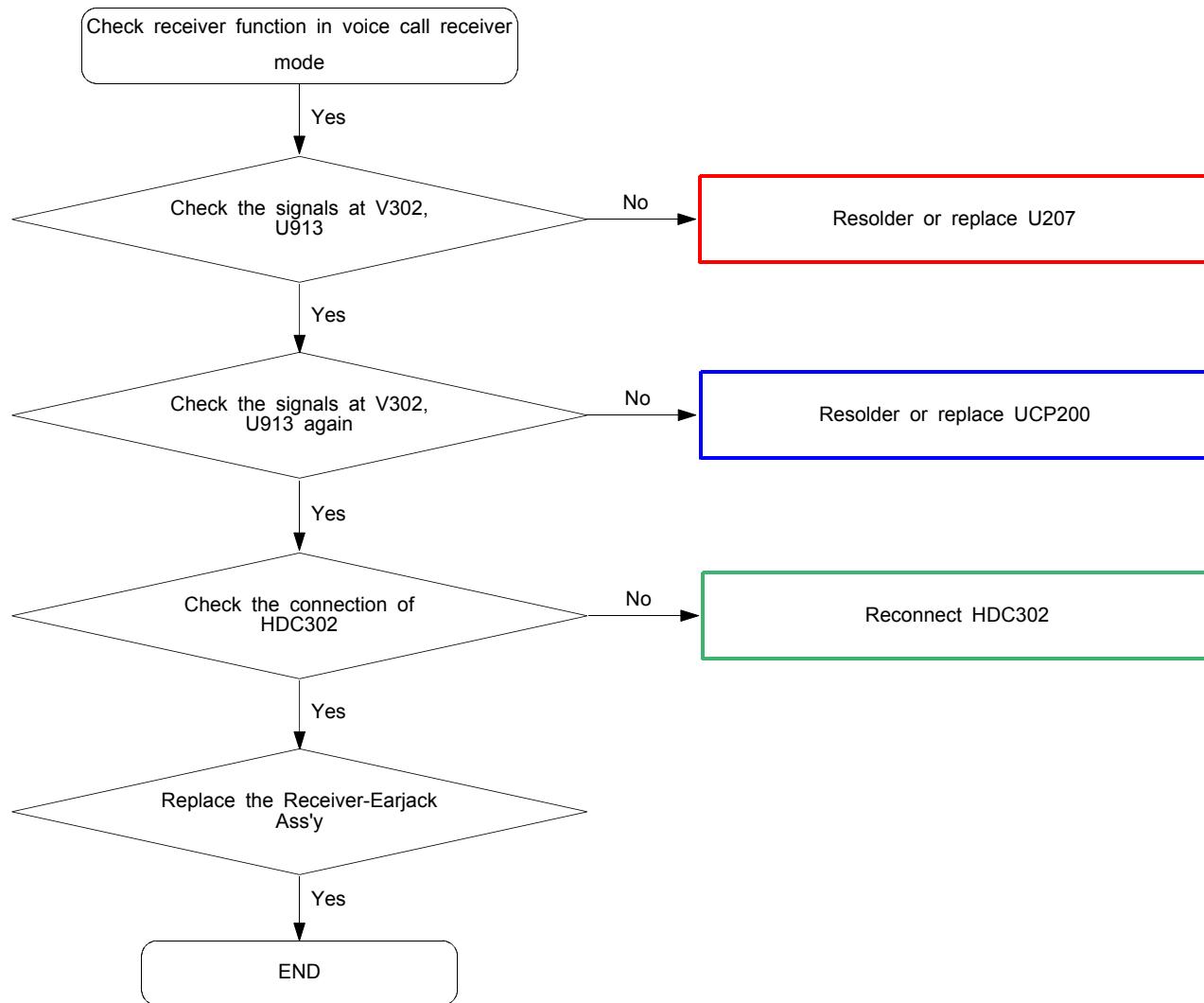


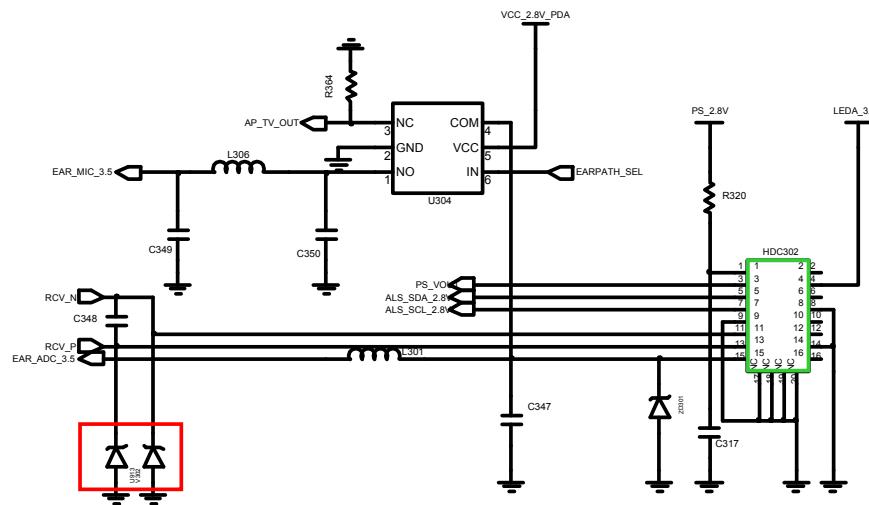
## 8-3-6. Speaker Part



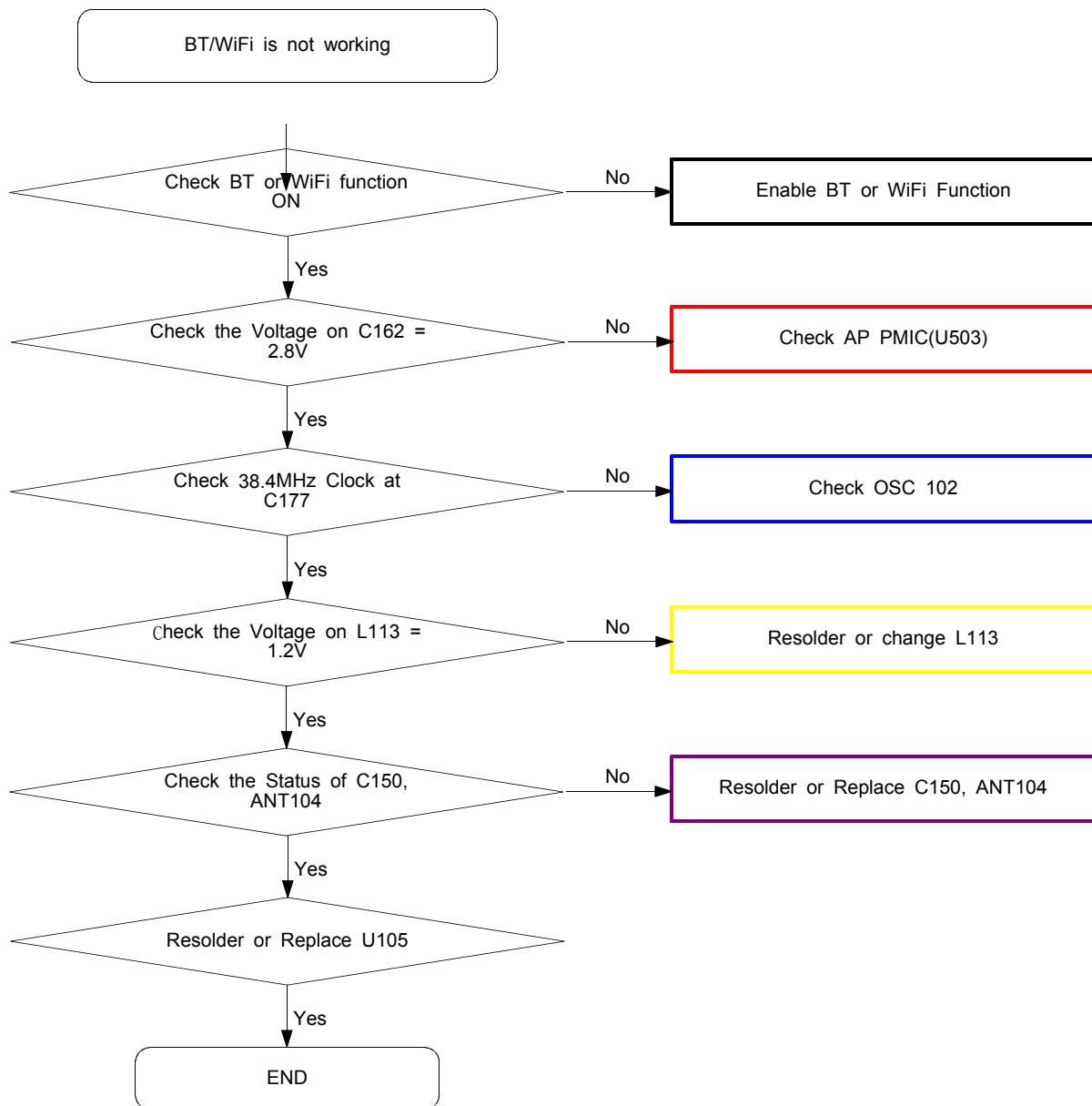


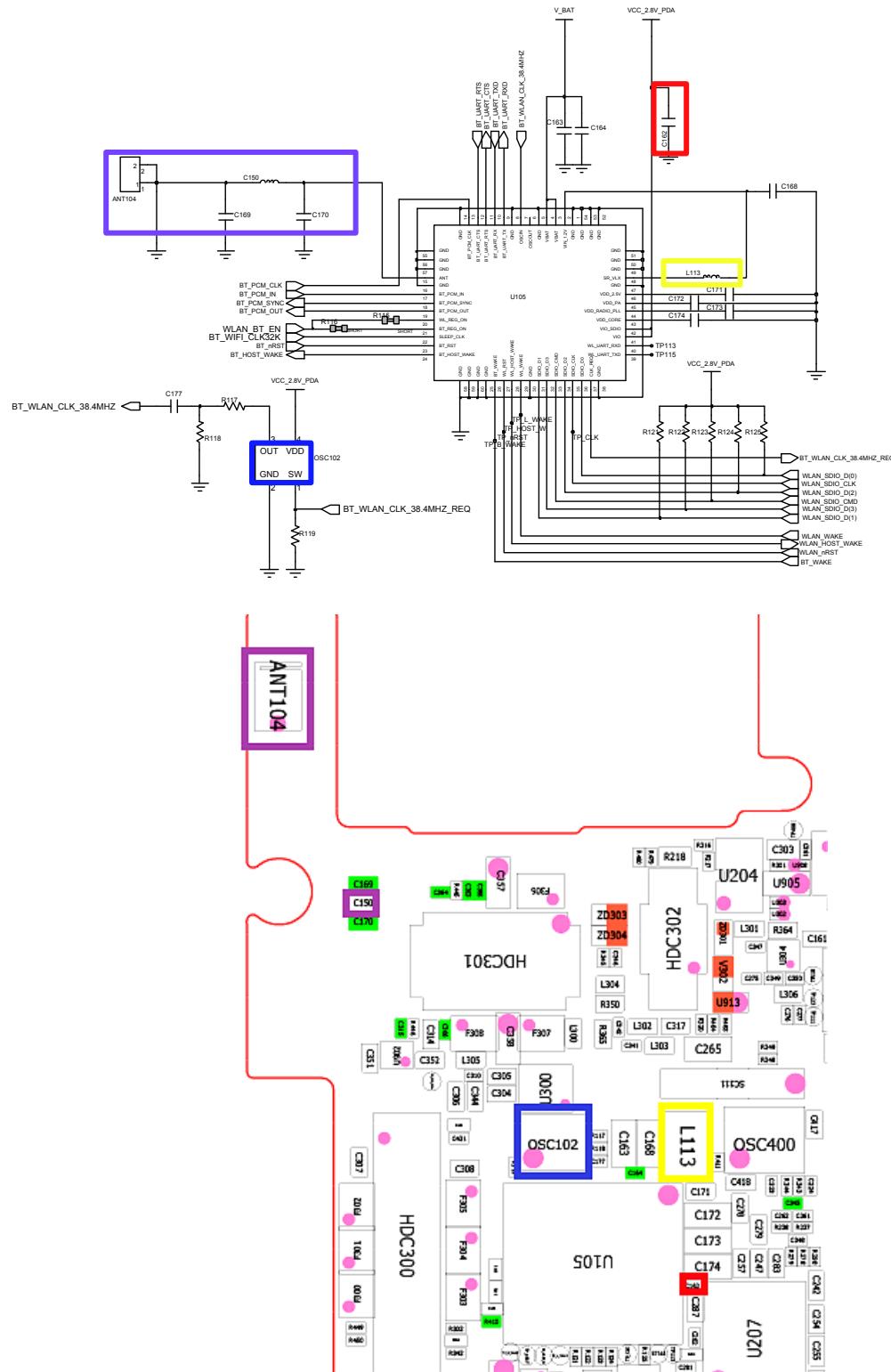
### 8-3-7. Receiver Part



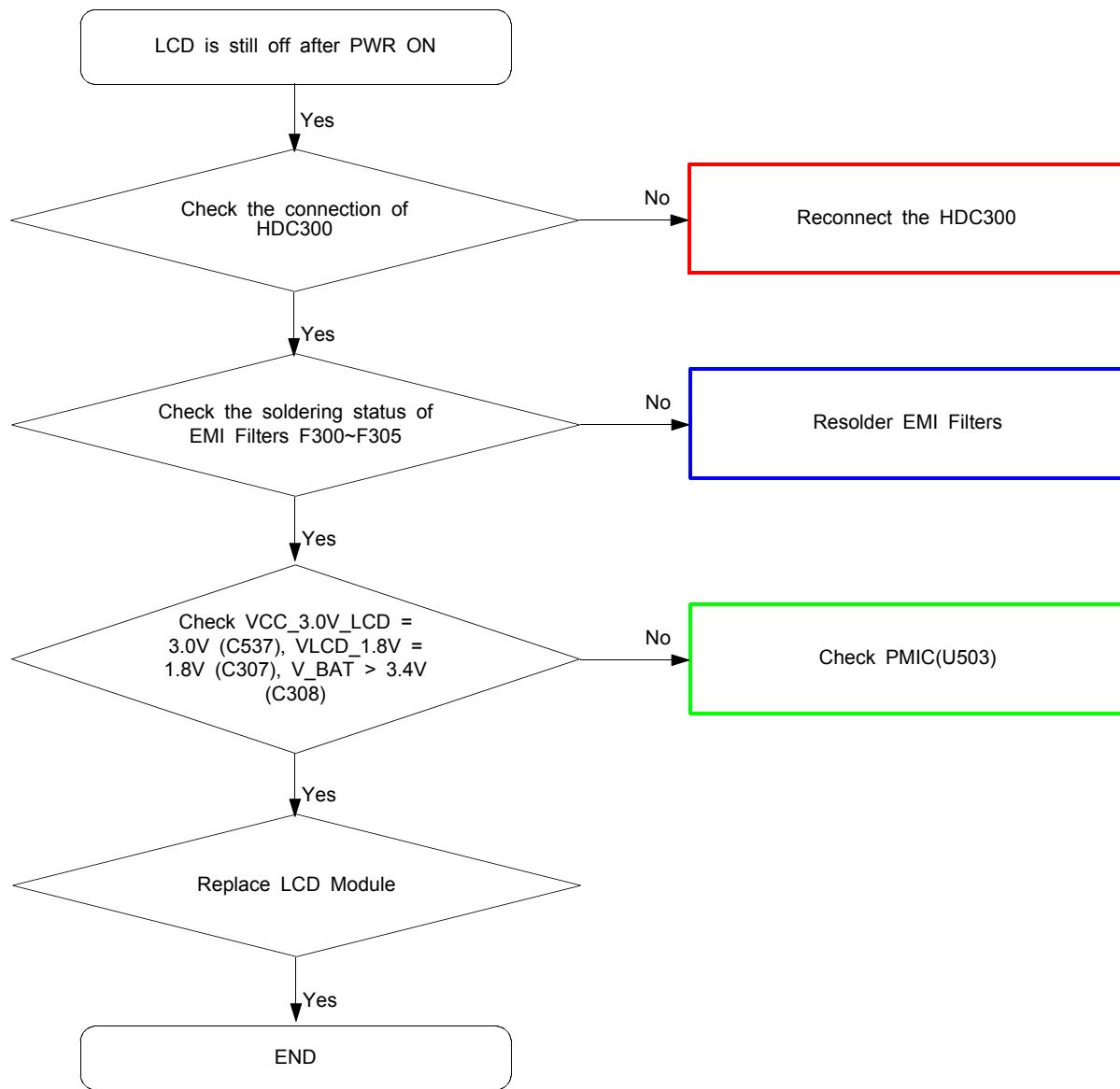


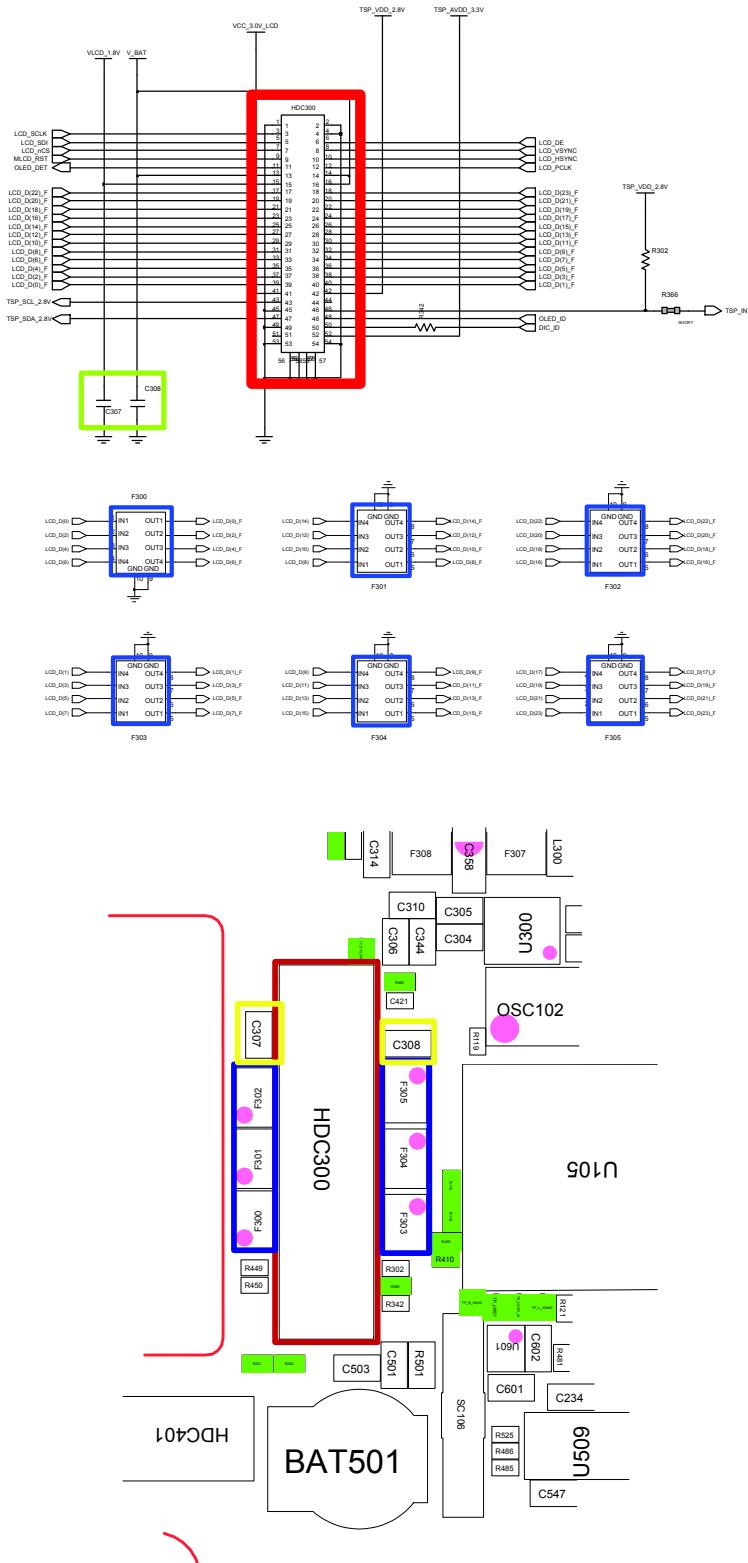
## 8-3-8. BT/WIFI



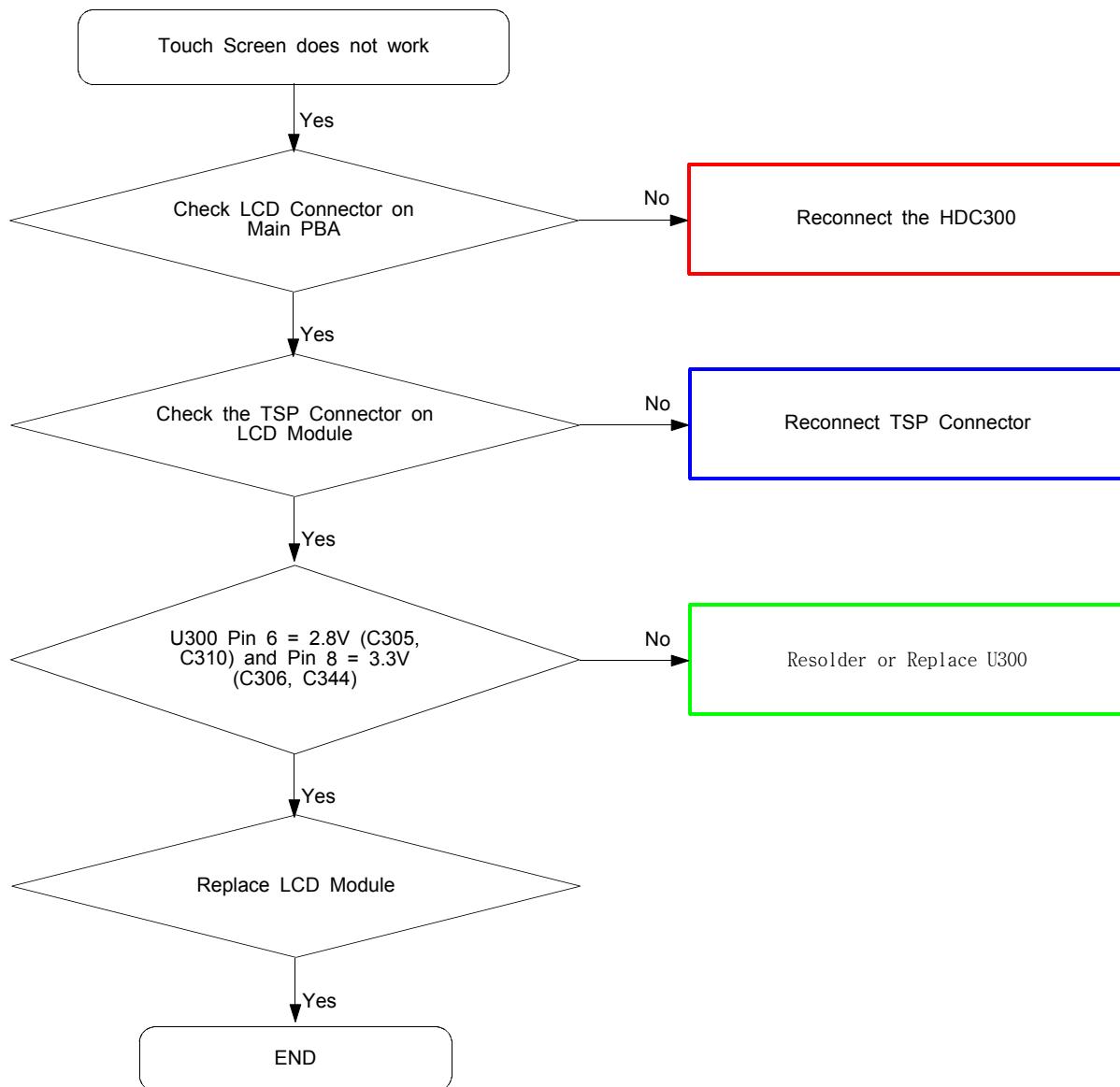


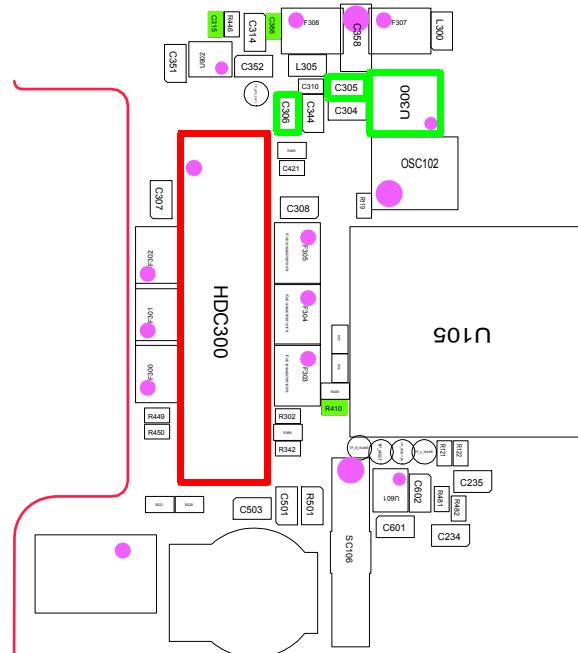
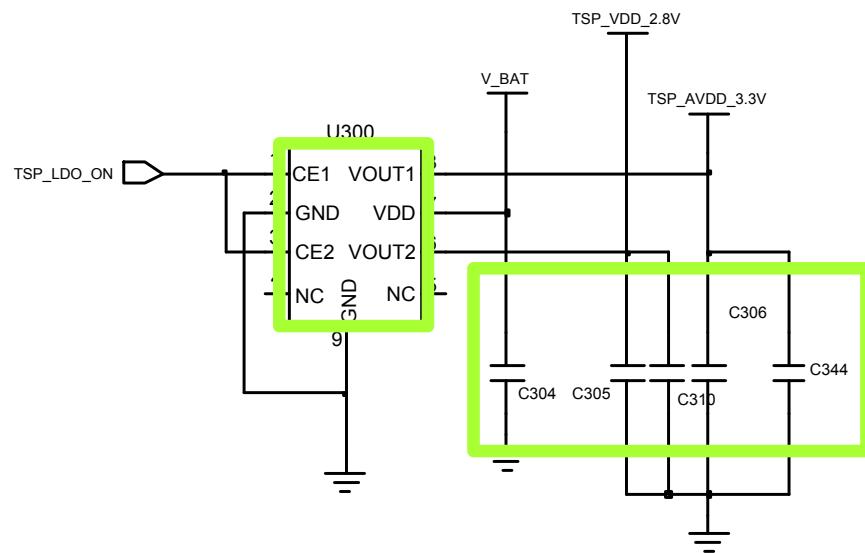
## 8-3-9. LCD



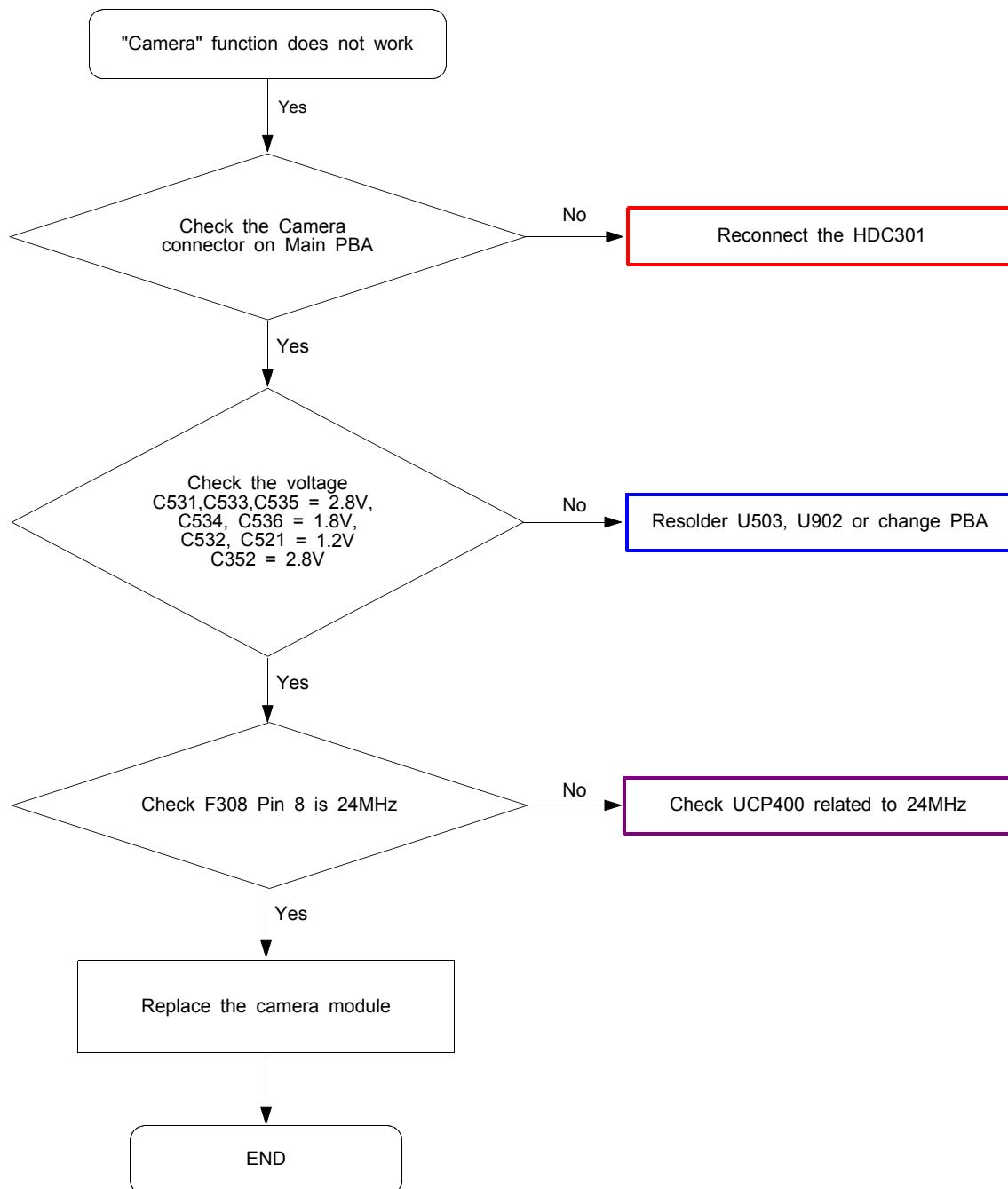


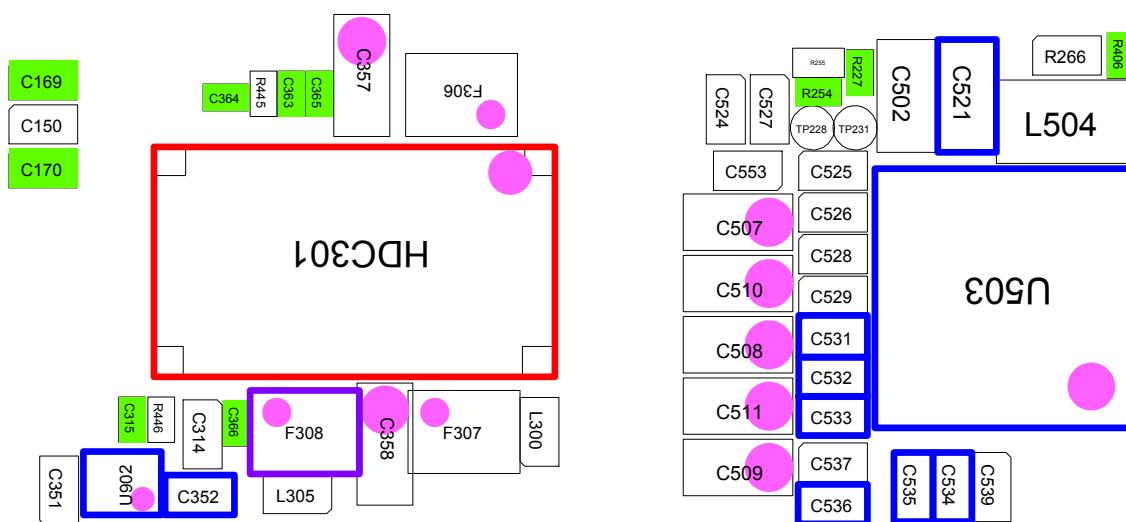
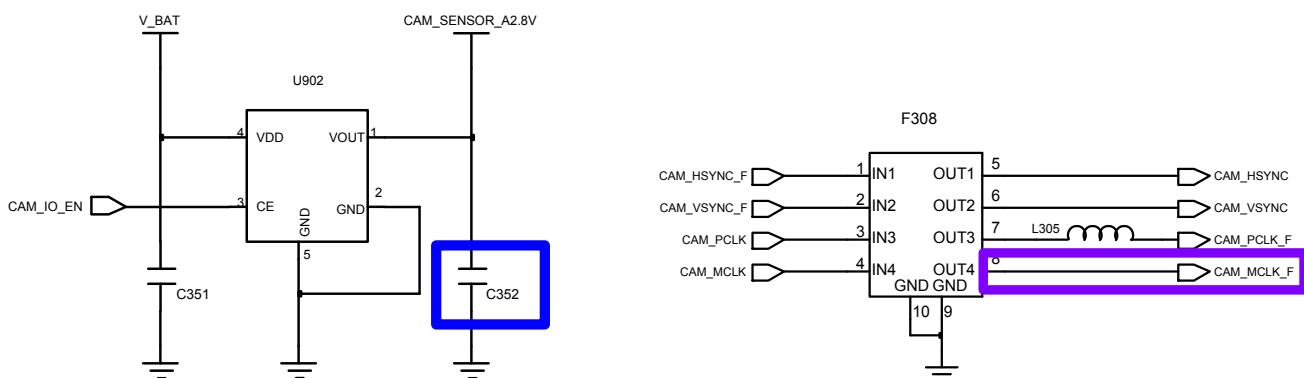
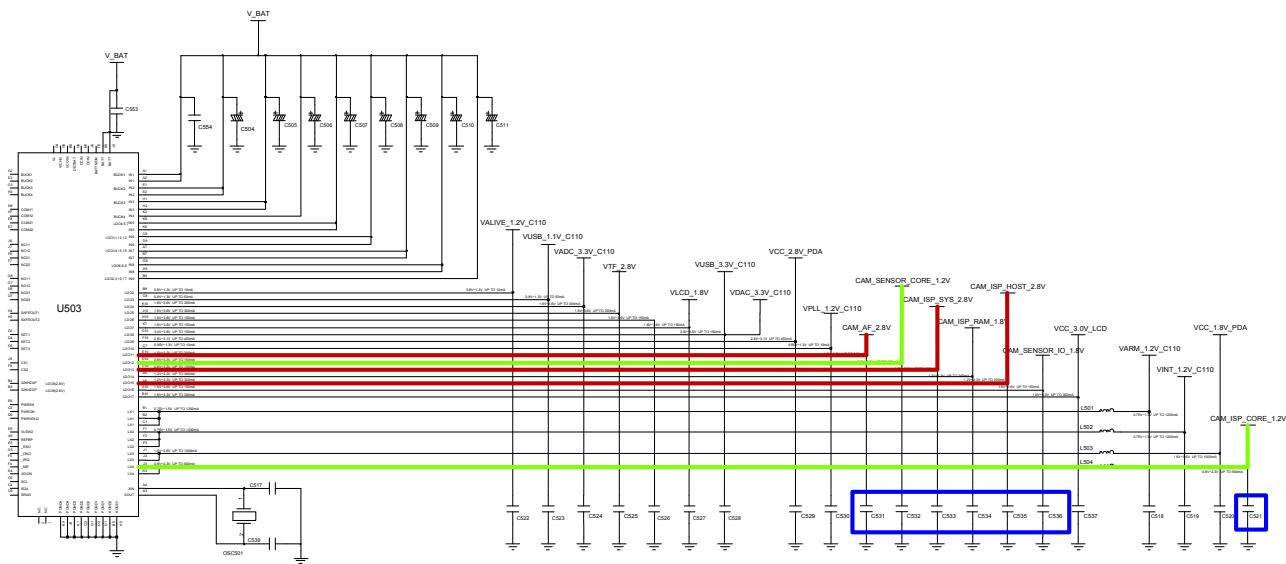
8-3-10. TSP



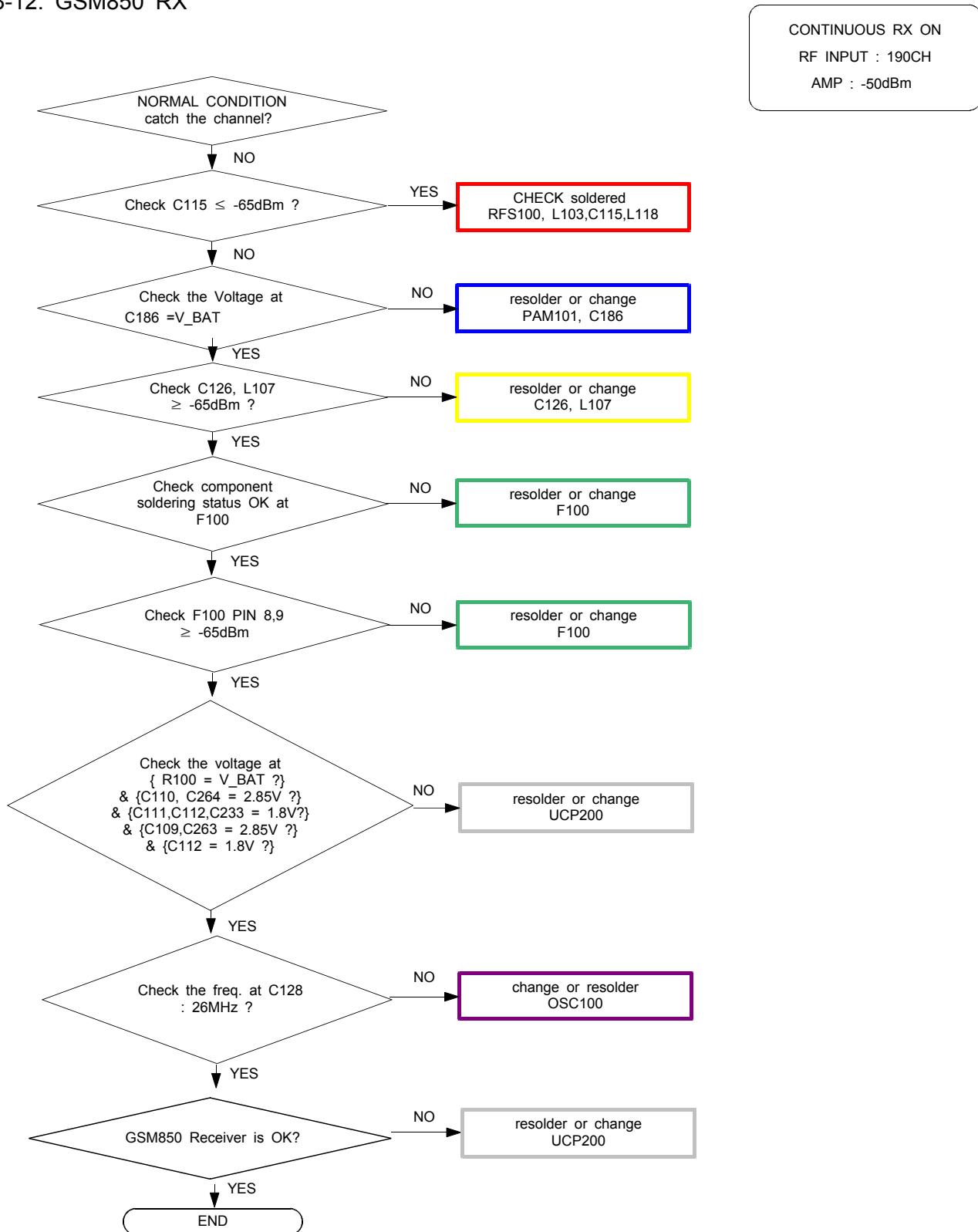


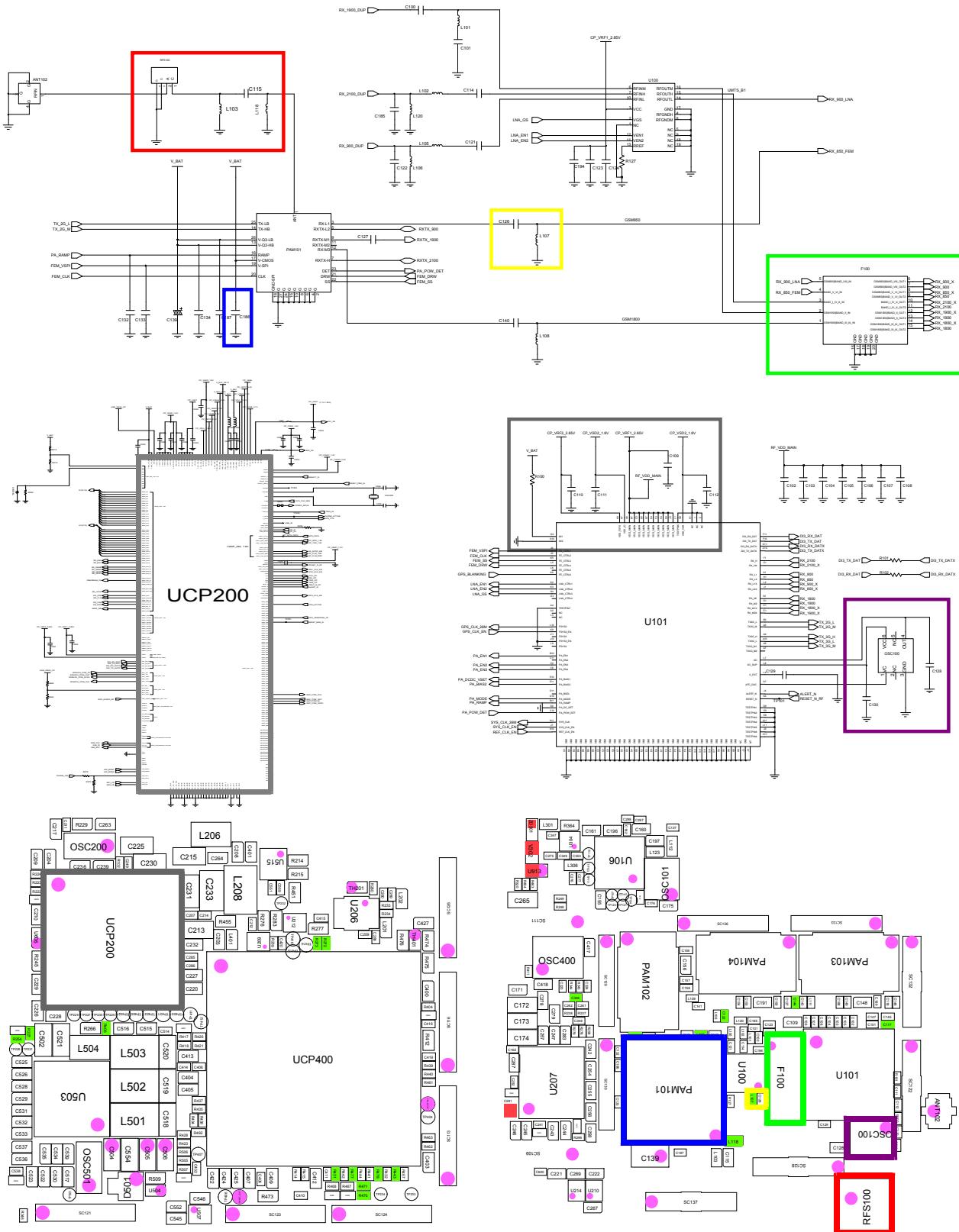
## 8-3-11. 5M CAM



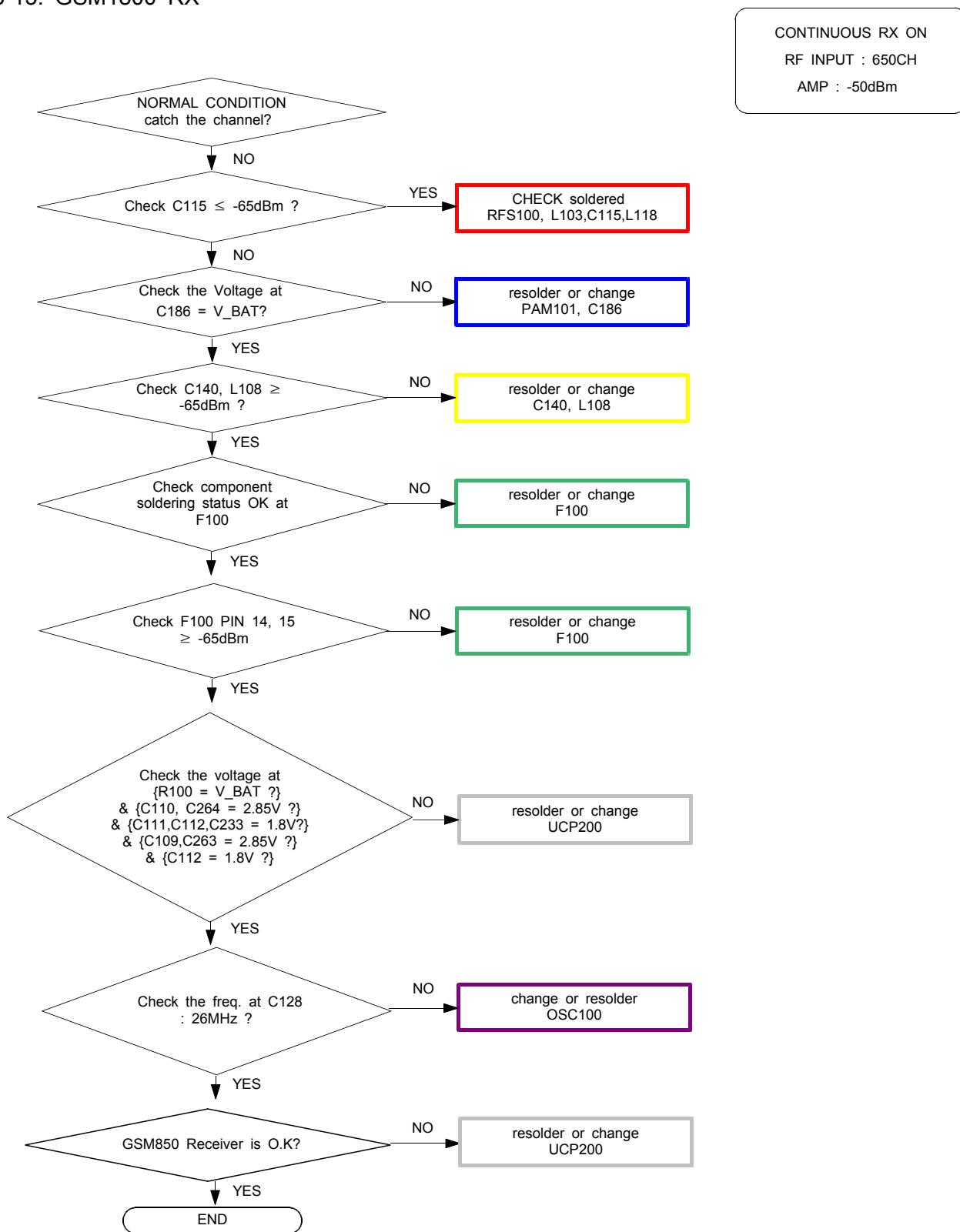


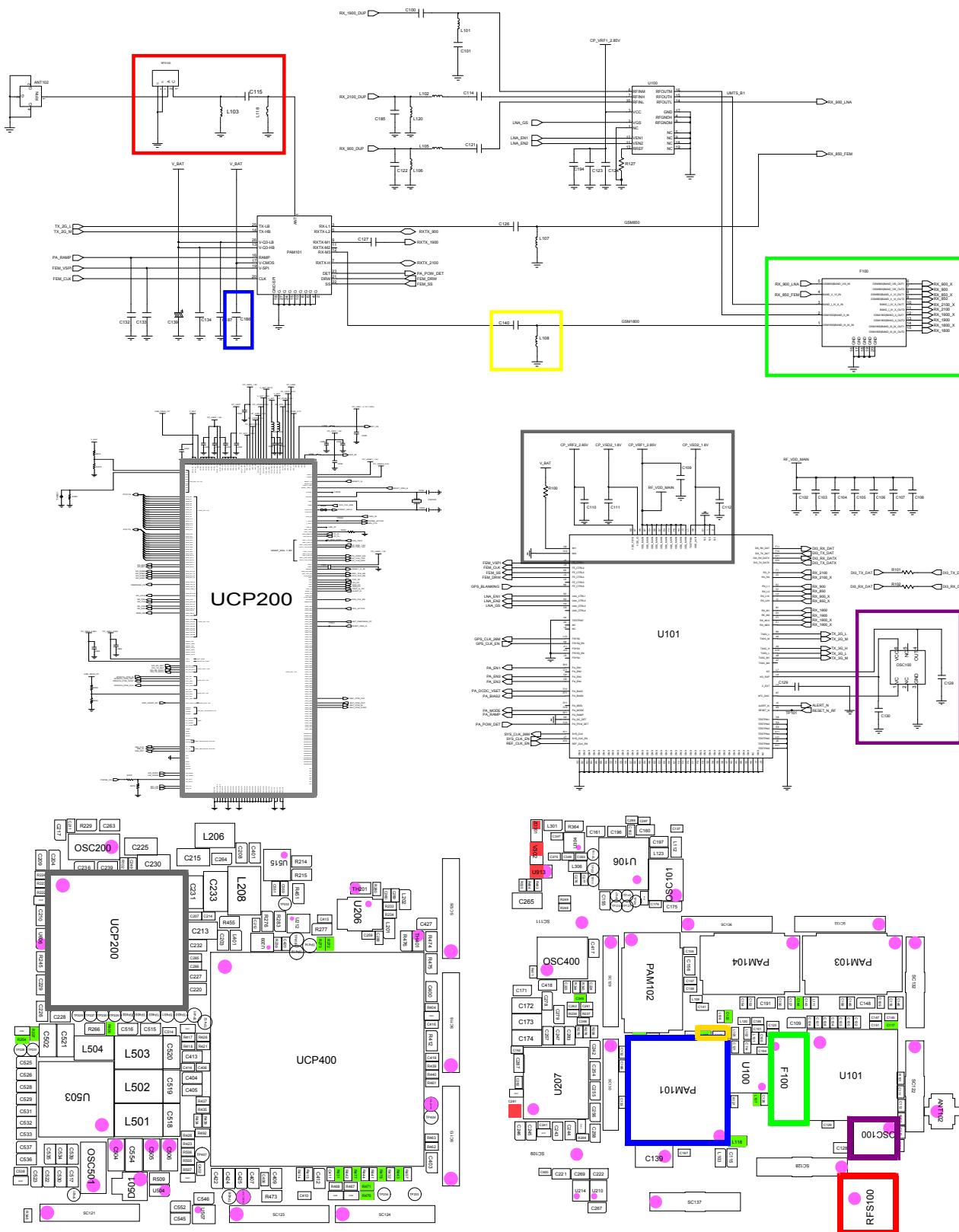
## 8-3-12. GSM850 RX



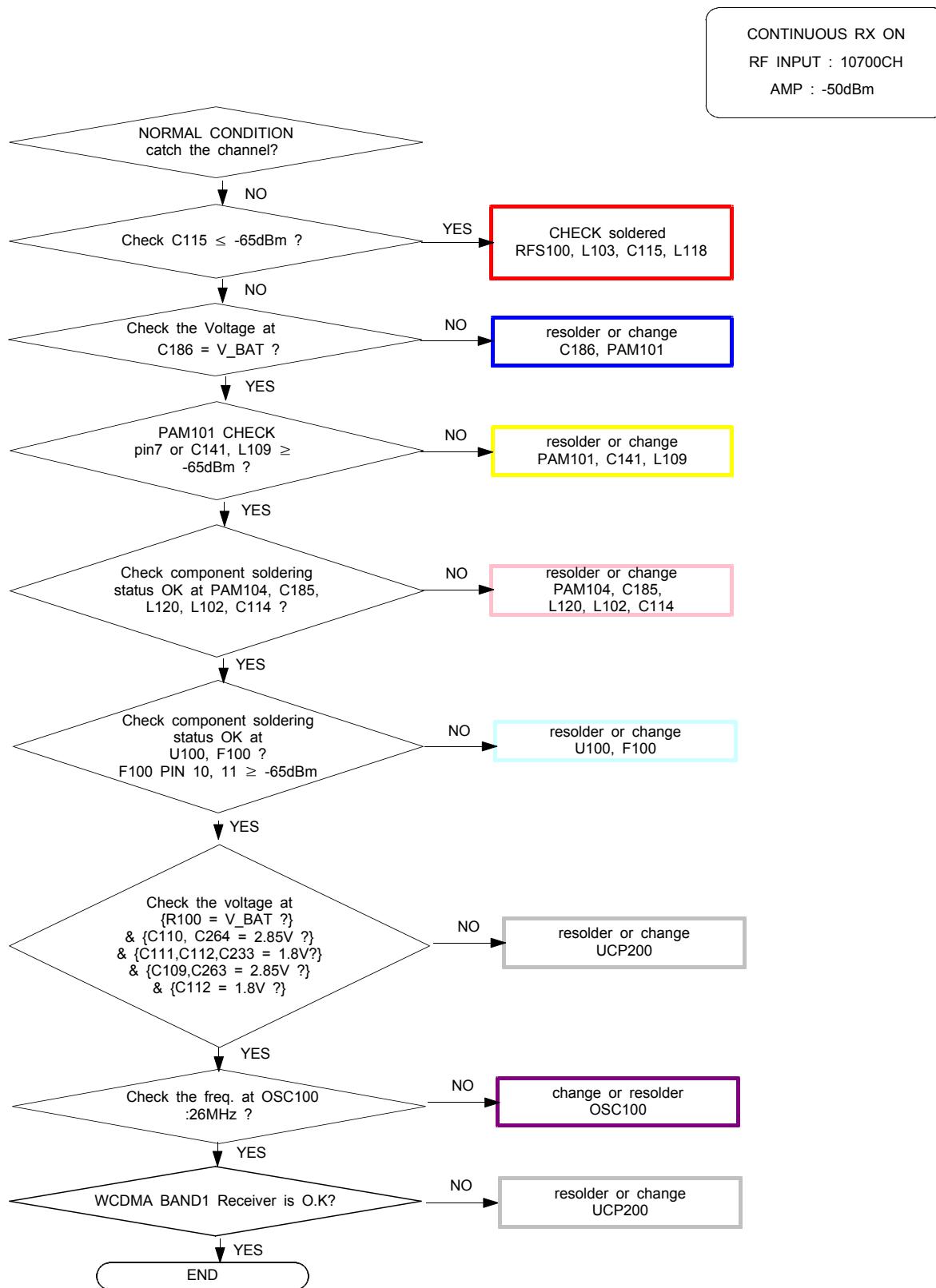


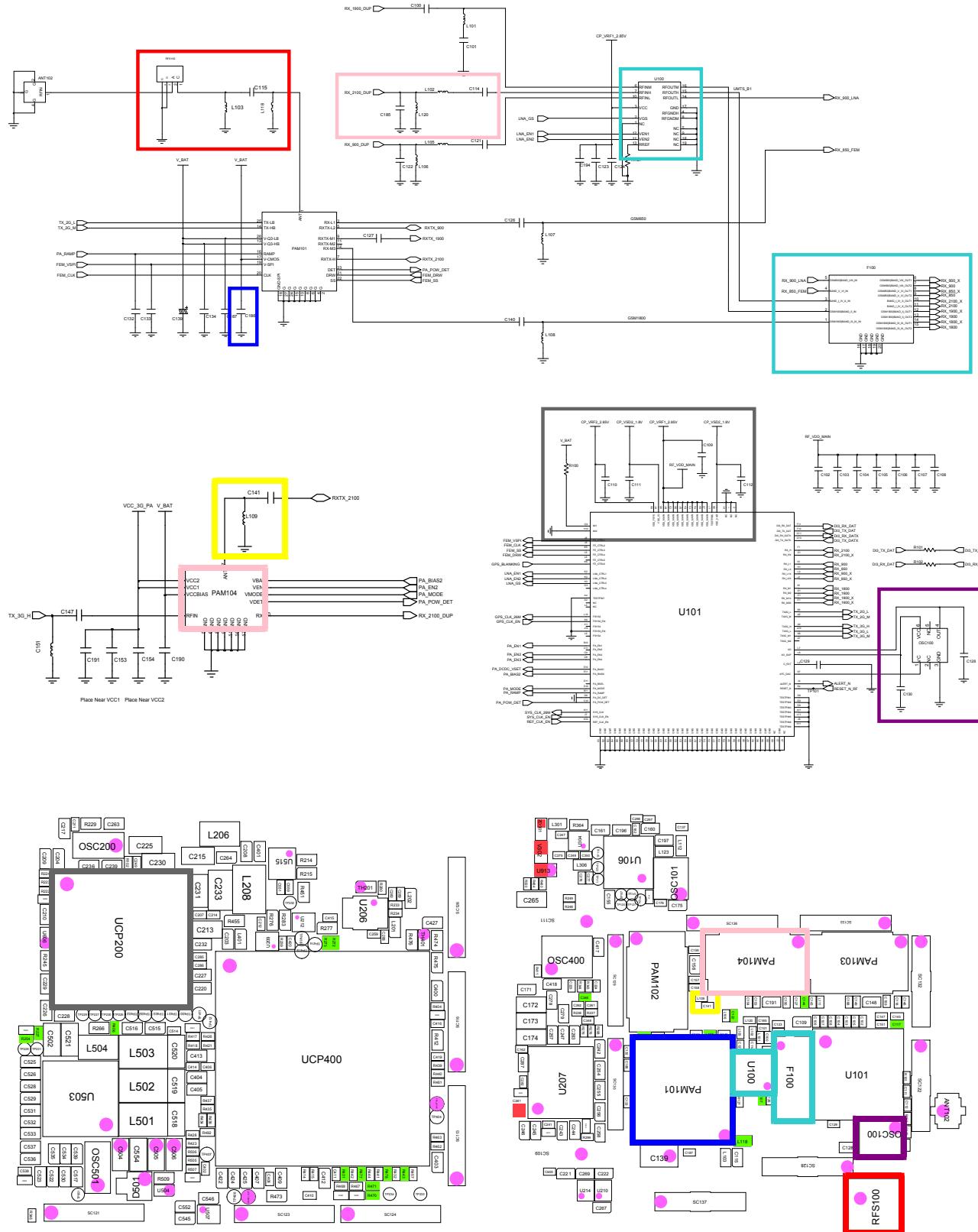
## 8-3-13. GSM1800 RX



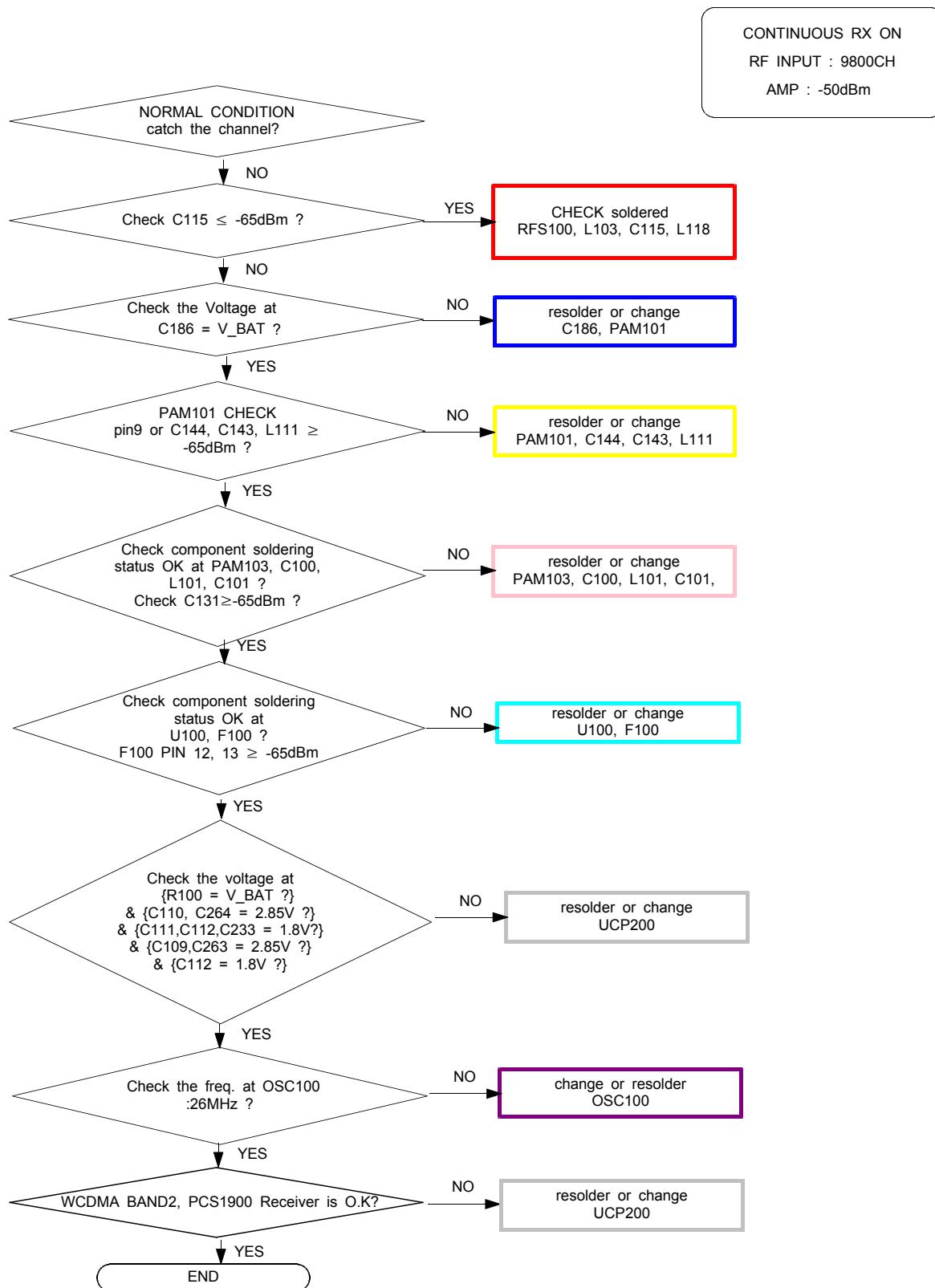


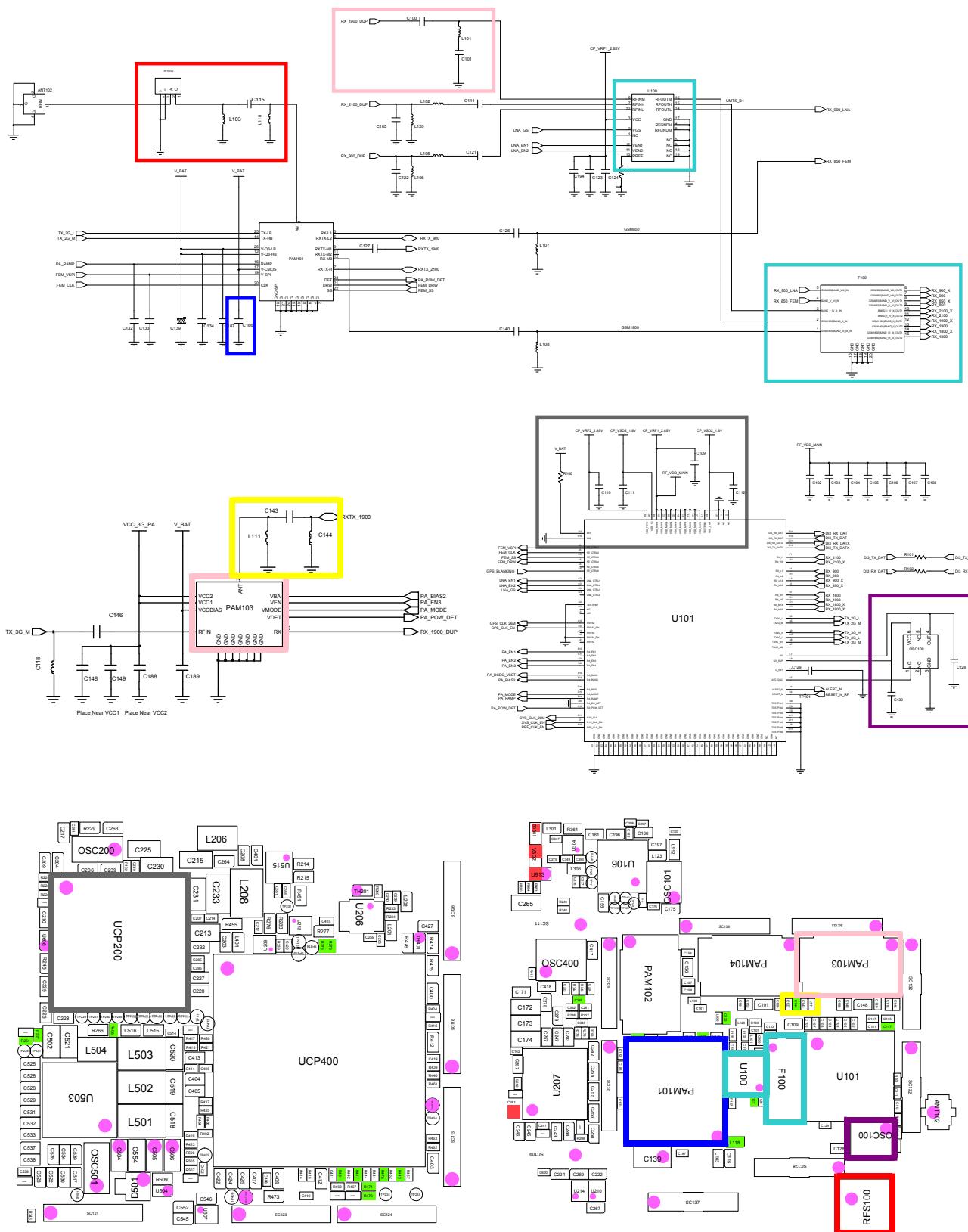
## 8-3-14. WCDMA Band1 RX



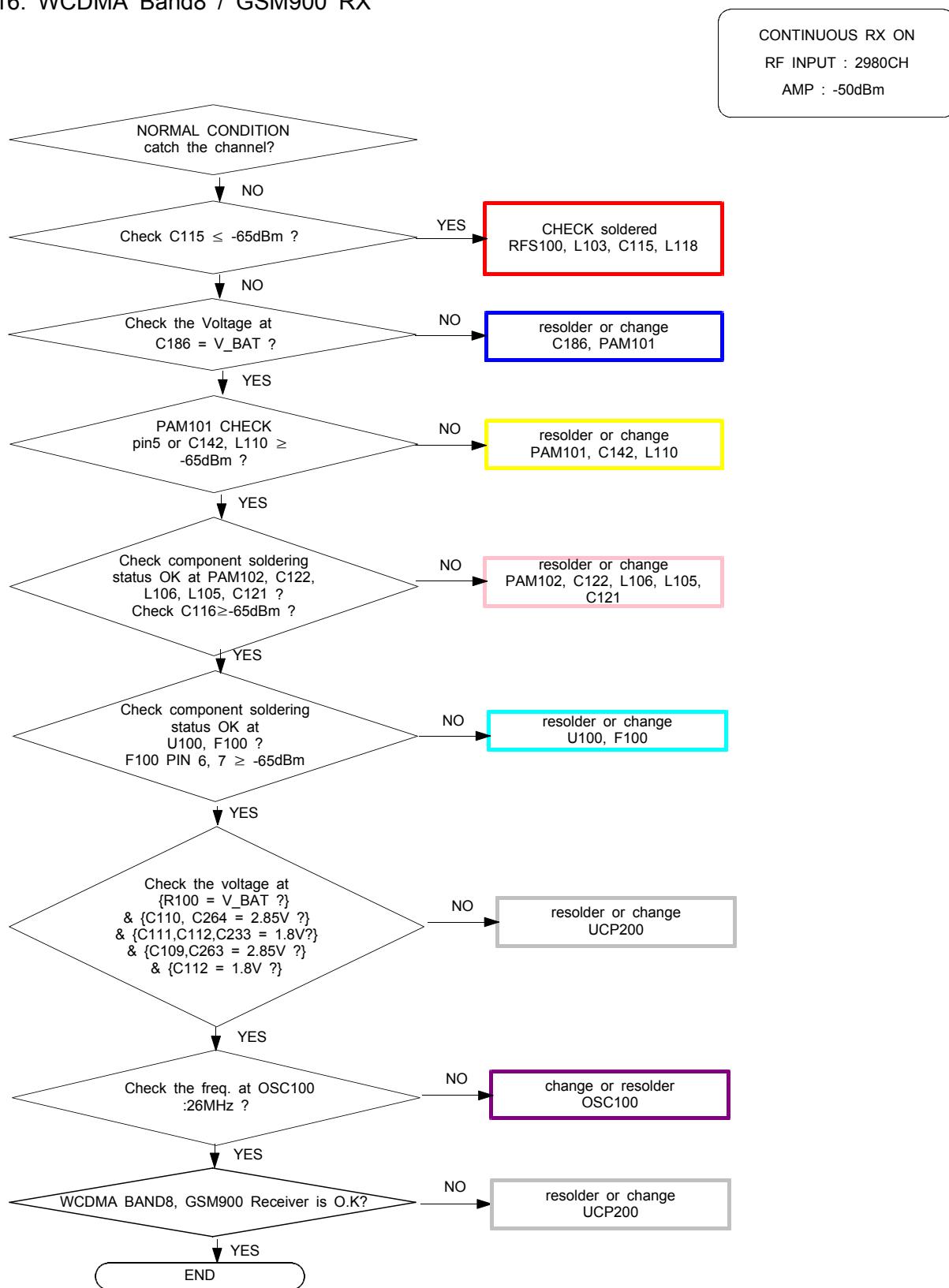


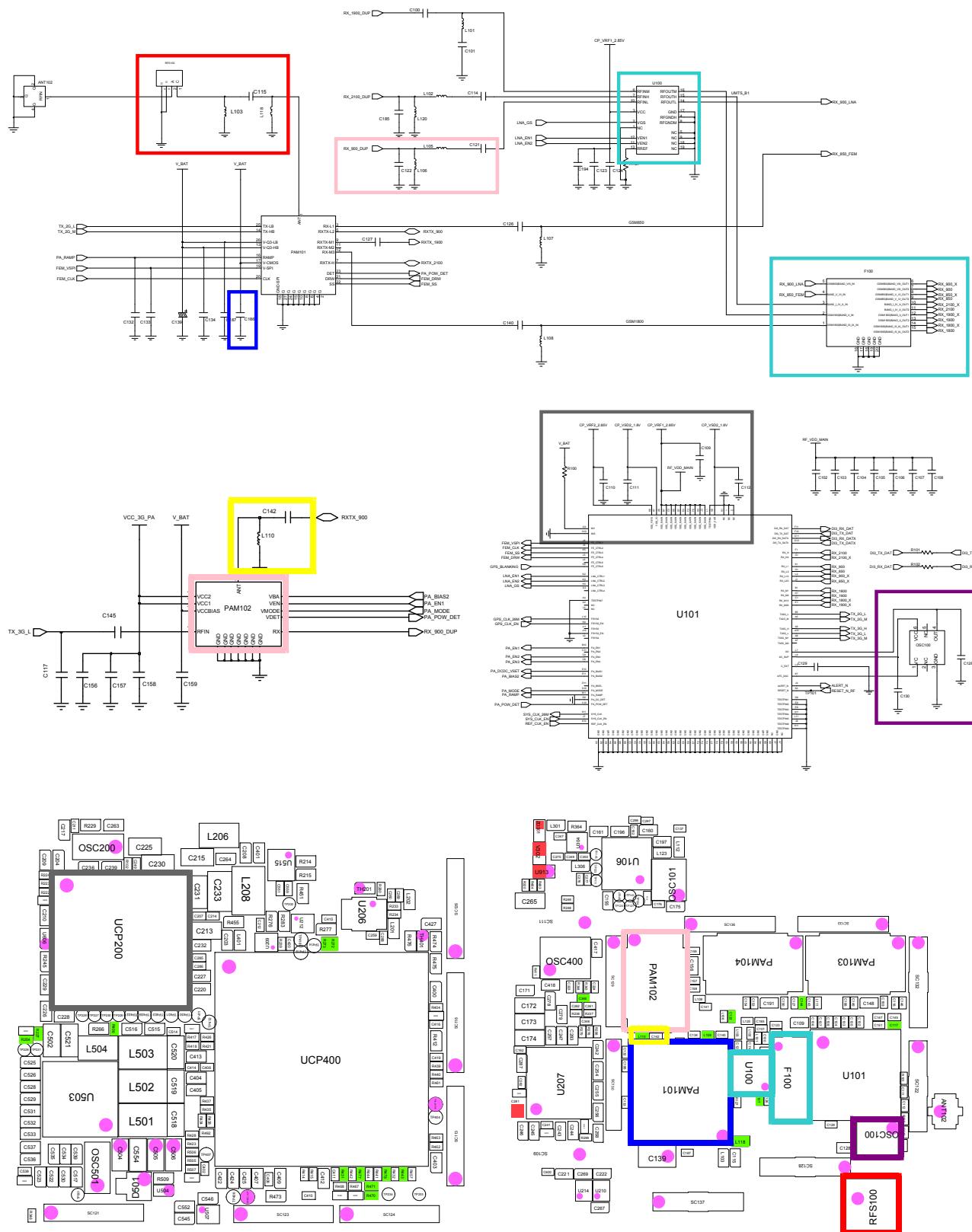
## 8-3-15. WCDMA Band2 / GSM1900 RX





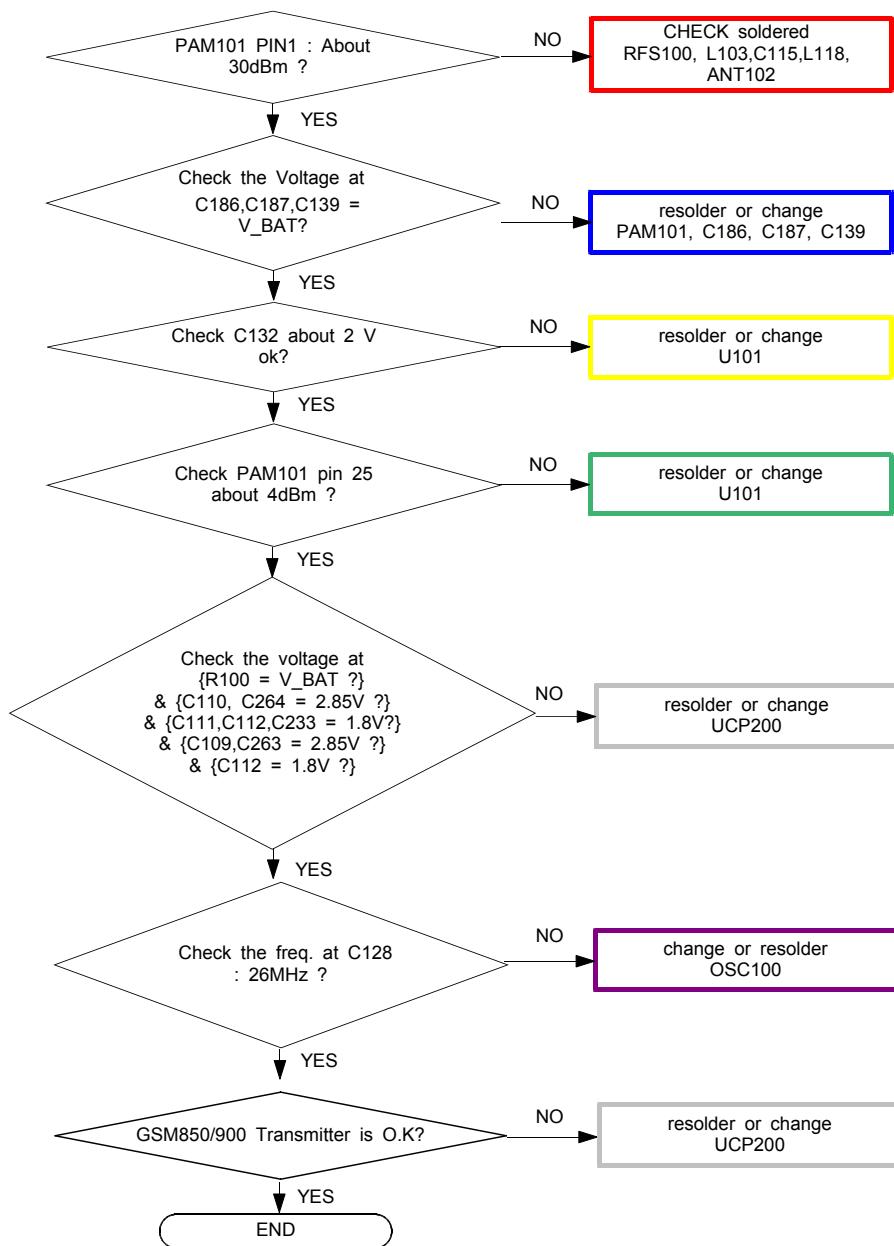
## 8-3-16. WCDMA Band8 / GSM900 RX



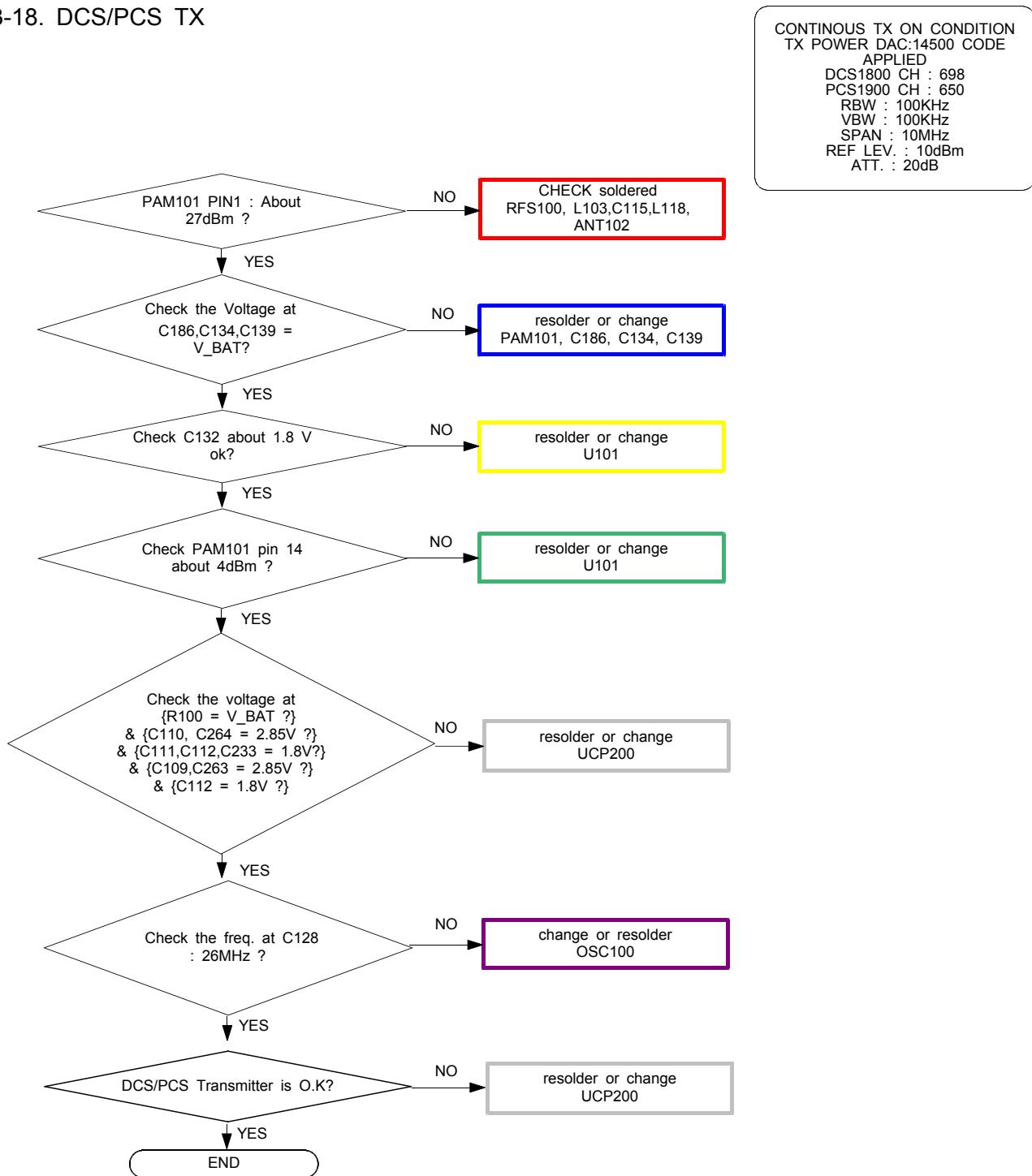


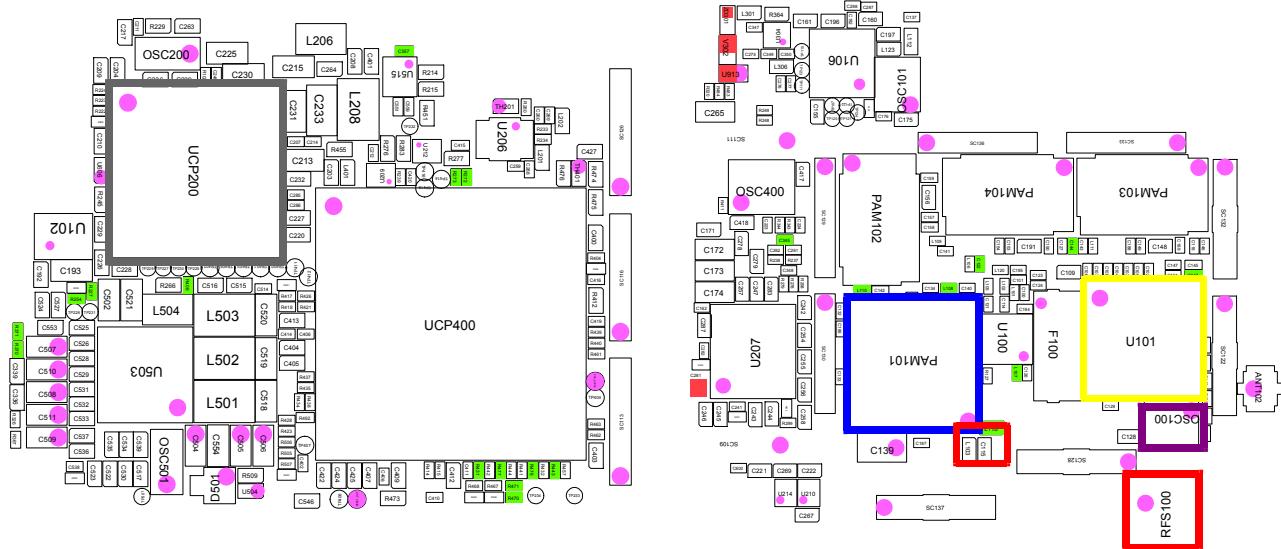
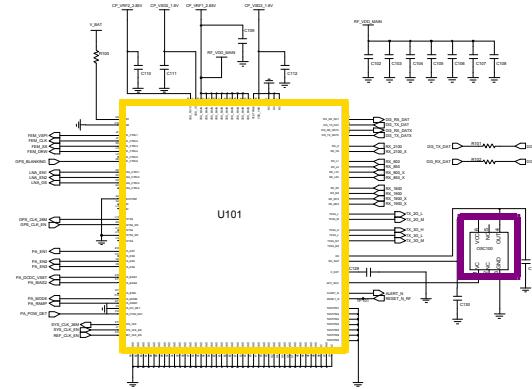
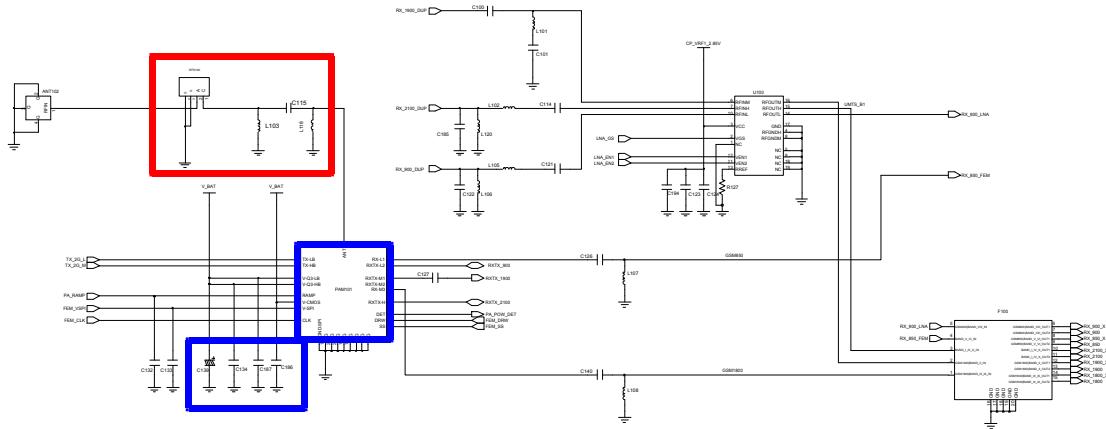
## 8-3-17. GSM850/GSM900 TX

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

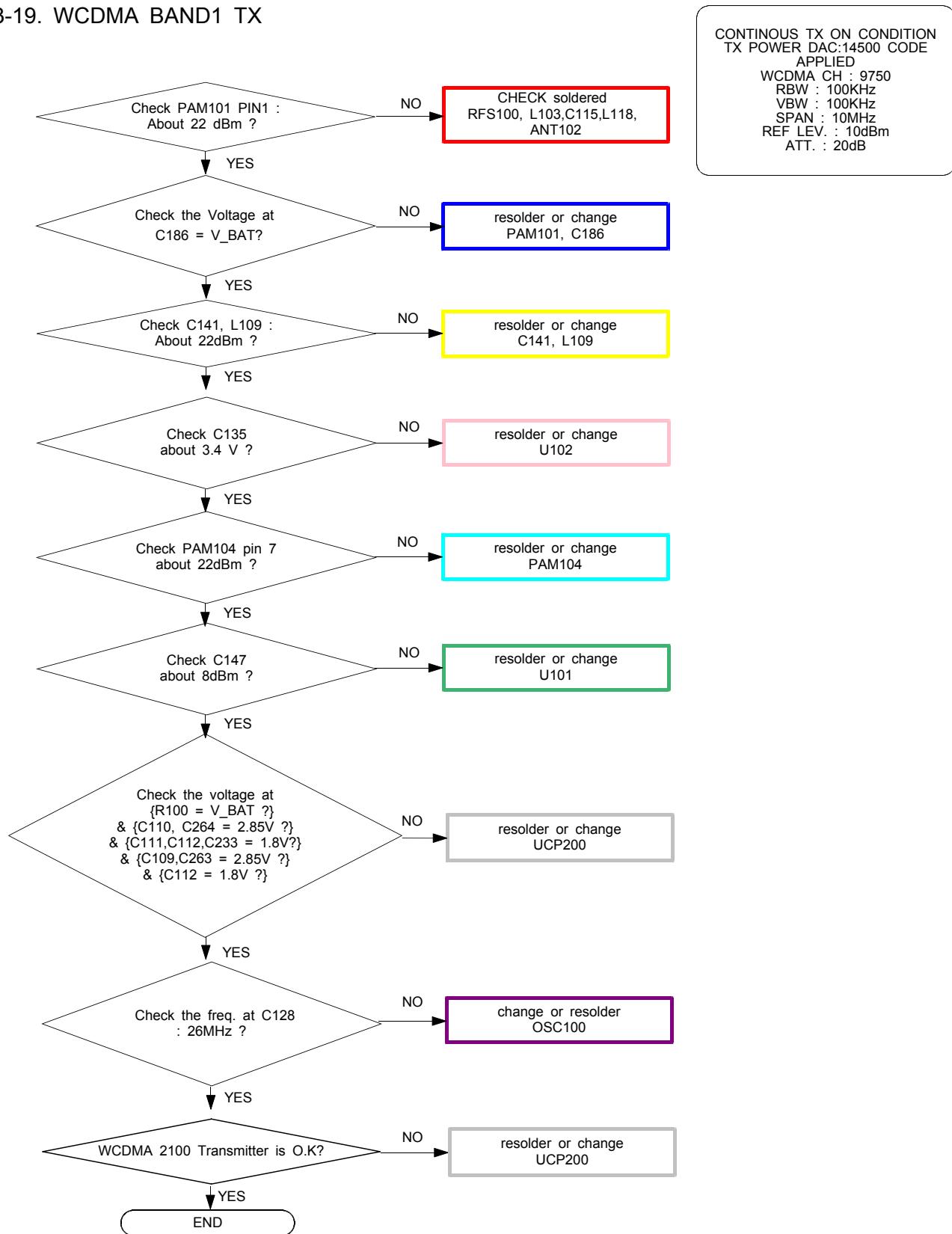


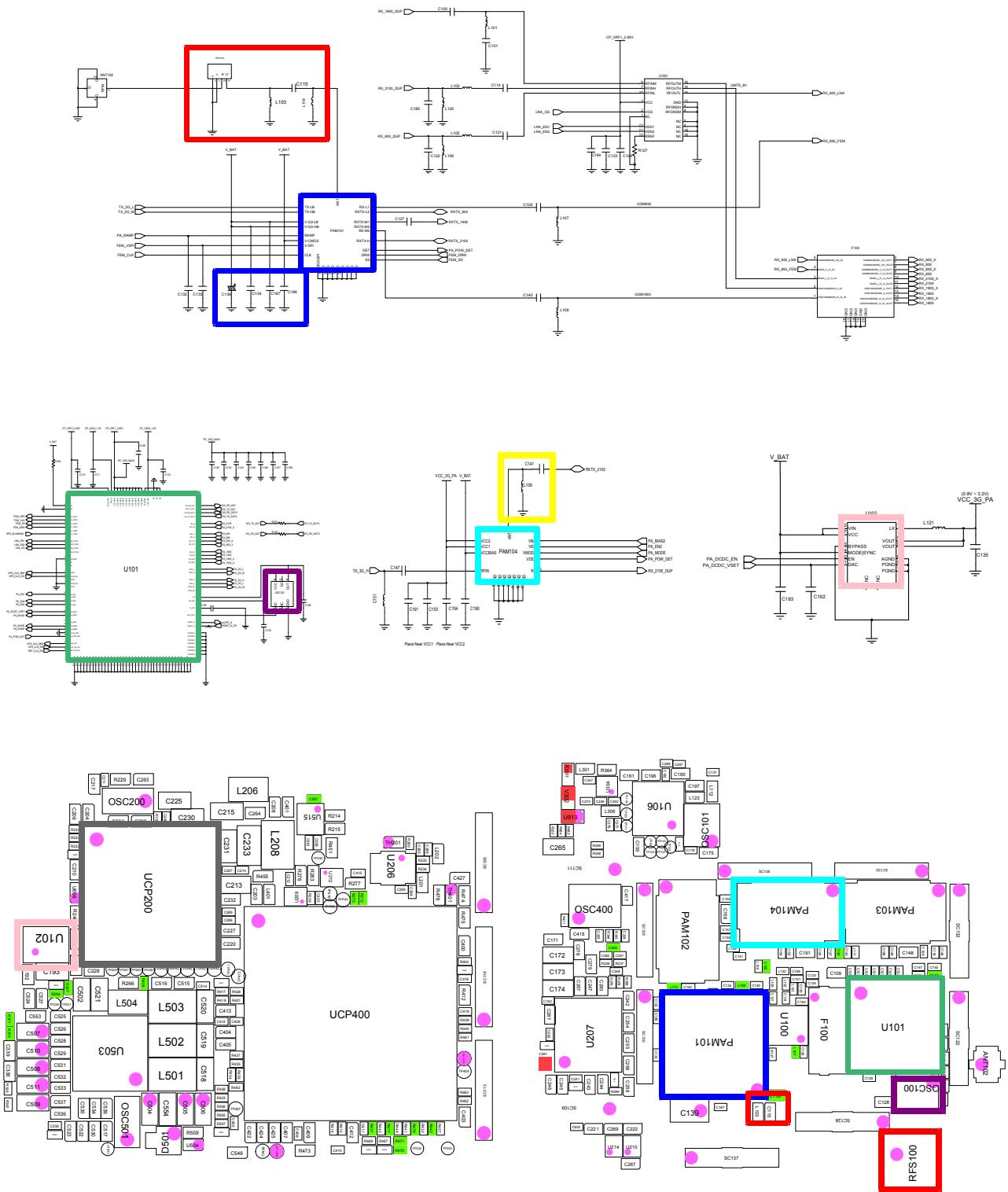
## 8-3-18. DCS/PCS TX



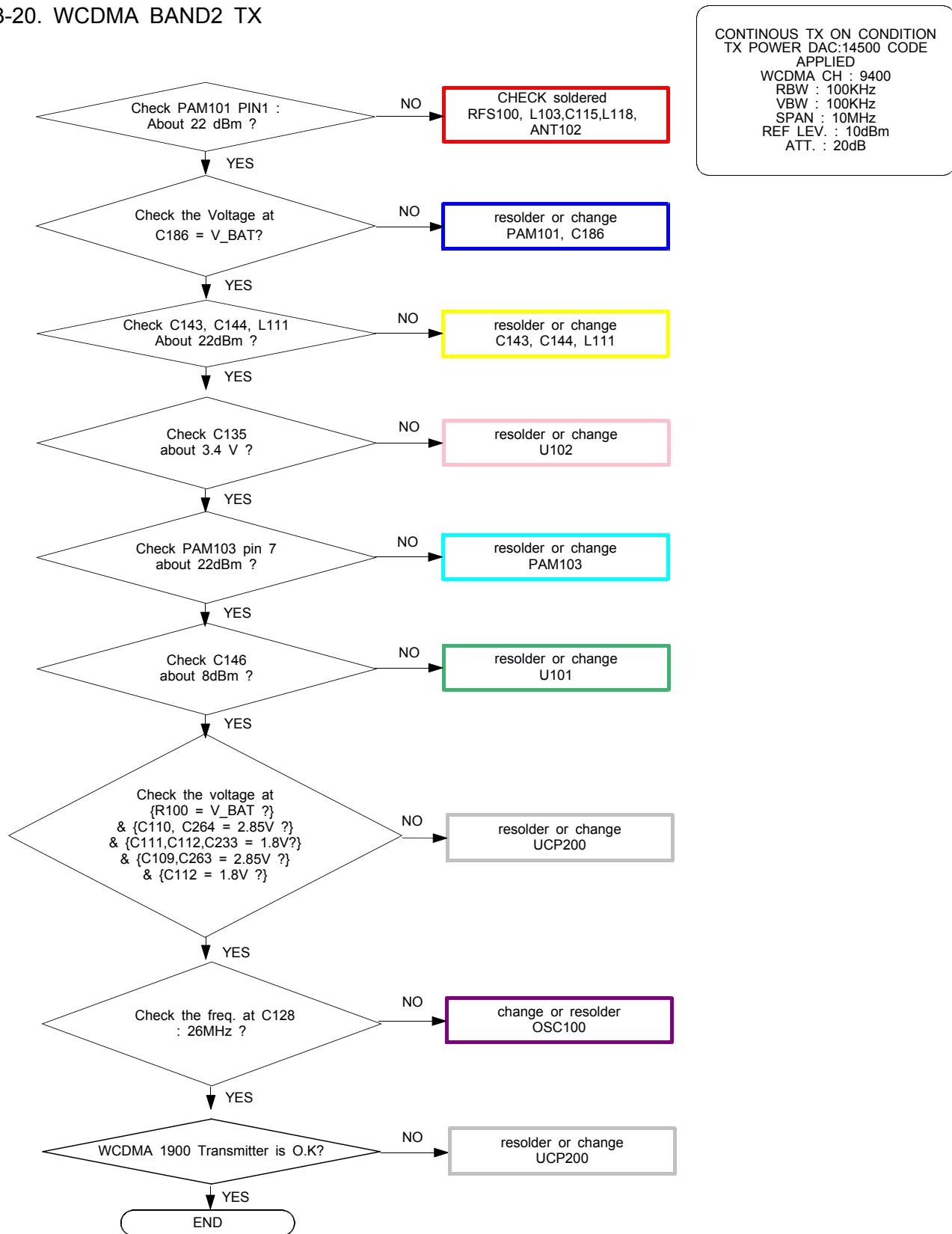


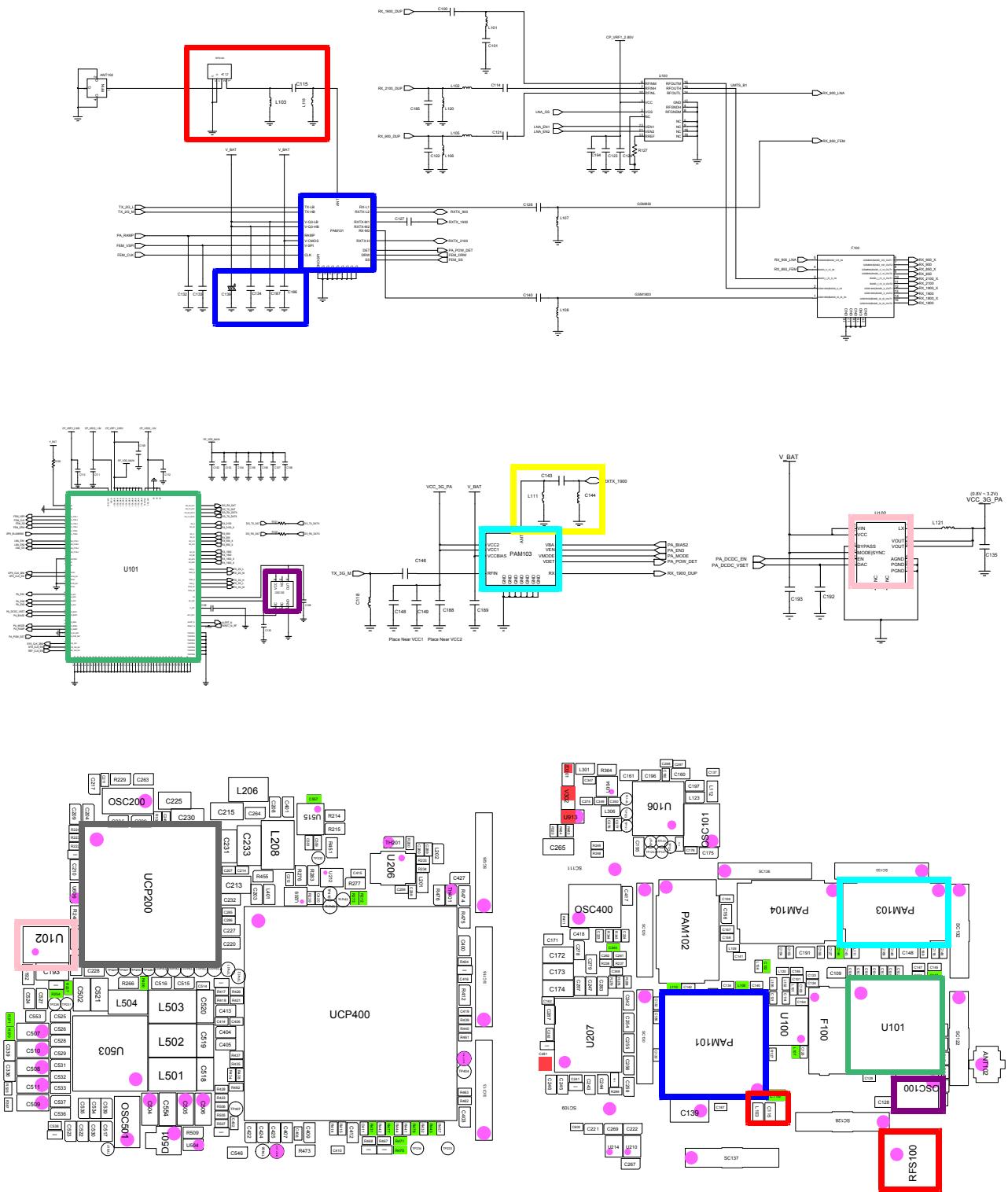
## 8-3-19. WCDMA BAND1 TX



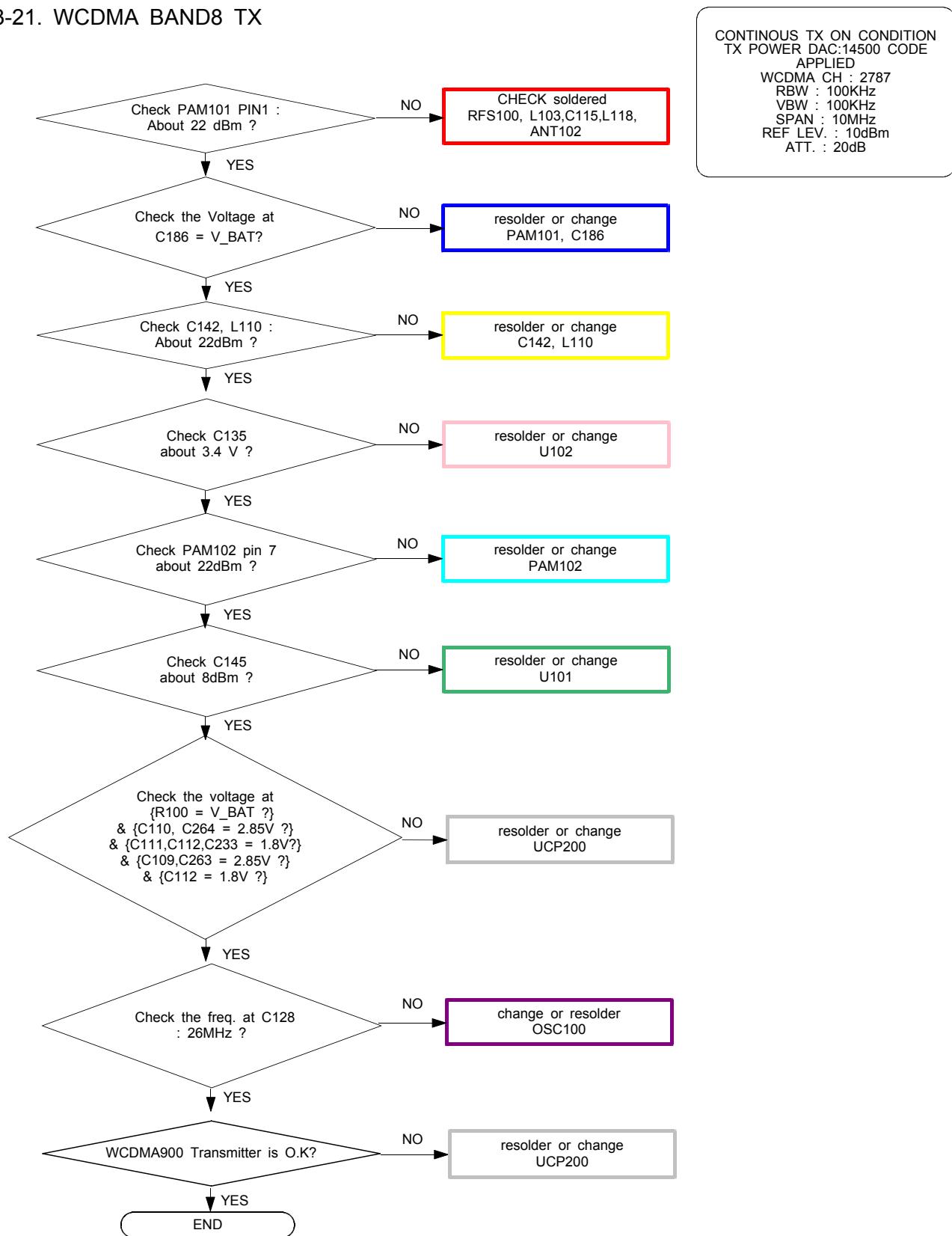


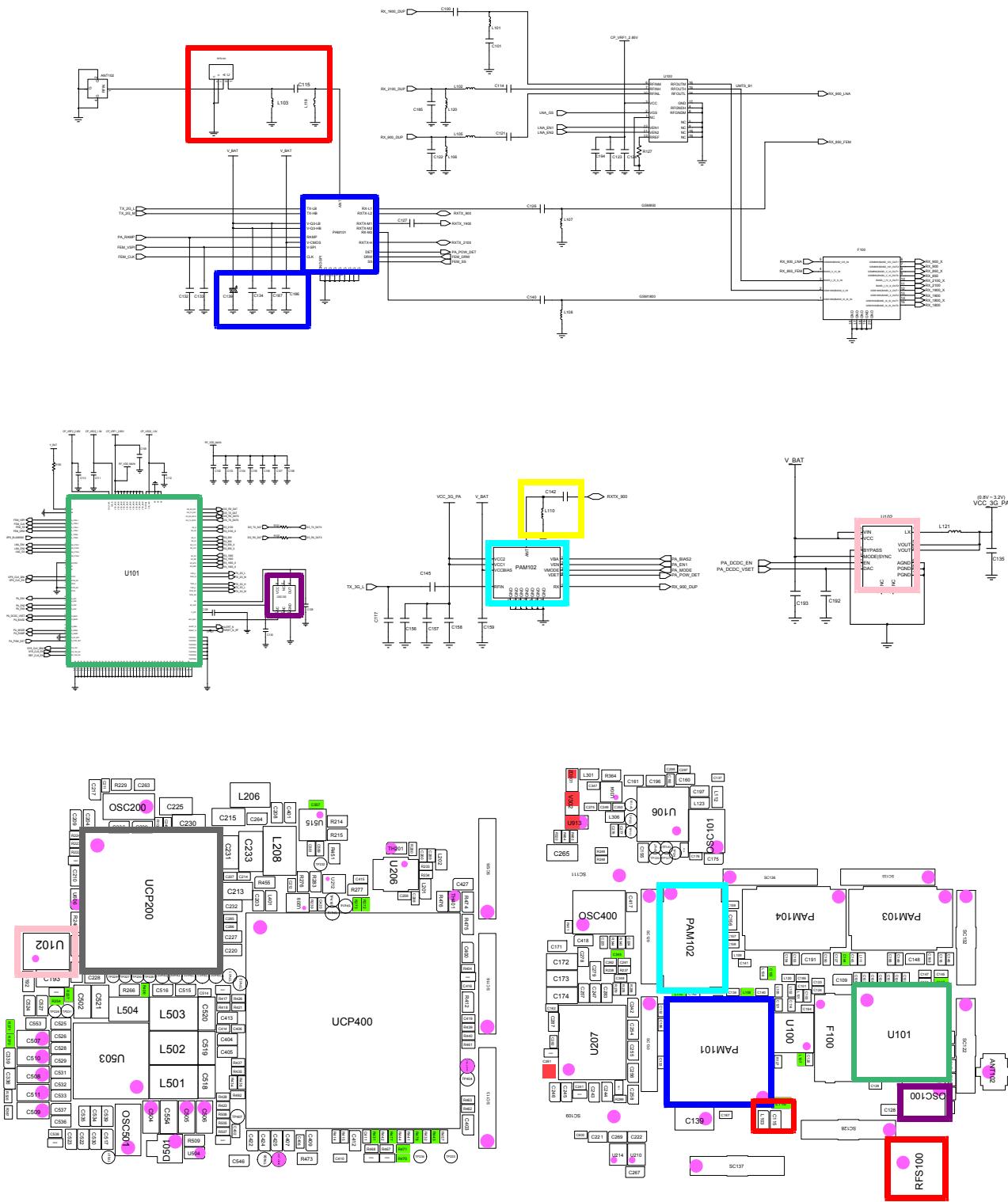
## 8-3-20. WCDMA BAND2 TX





## 8-3-21. 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																											

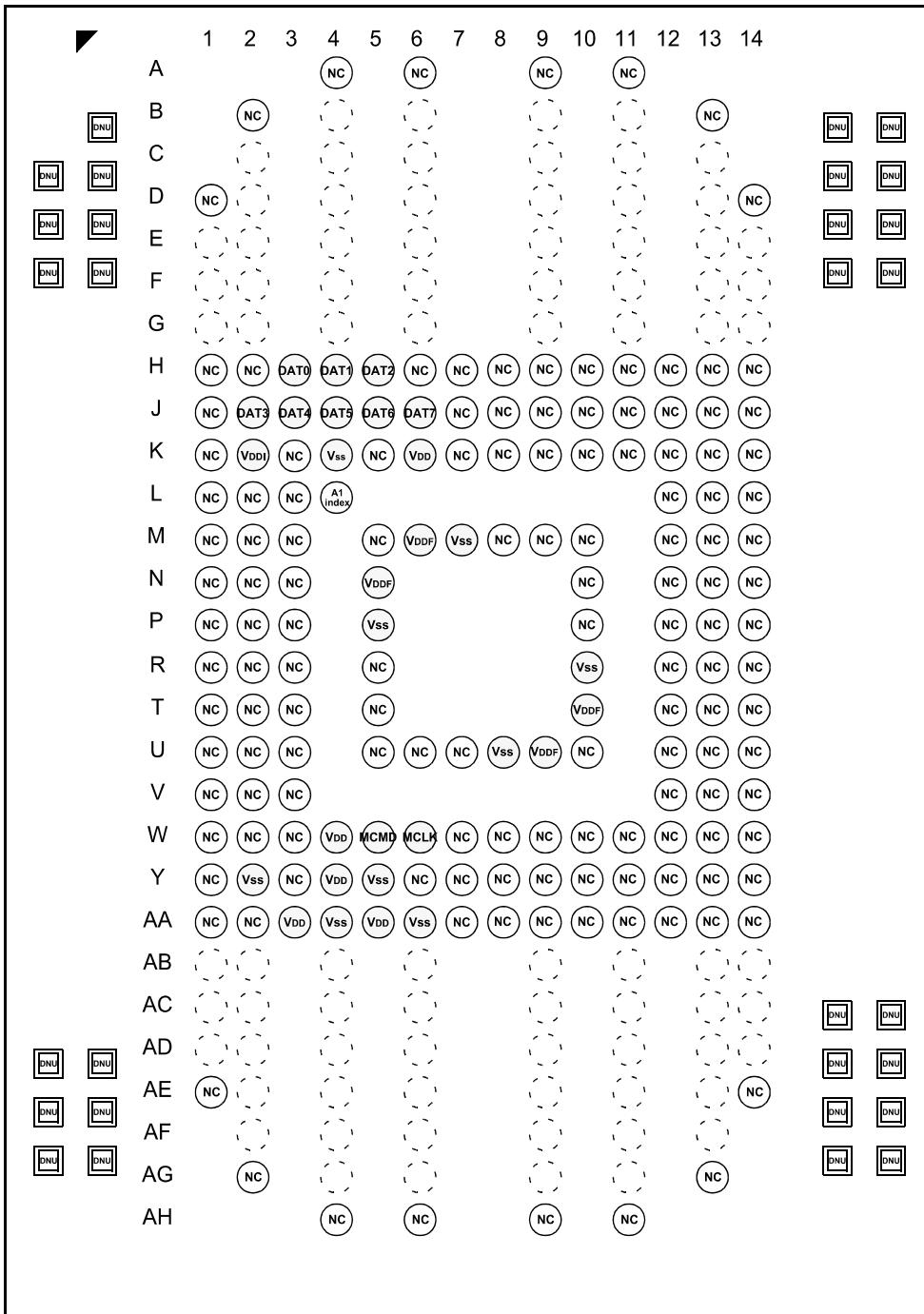
● : NC

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
																				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



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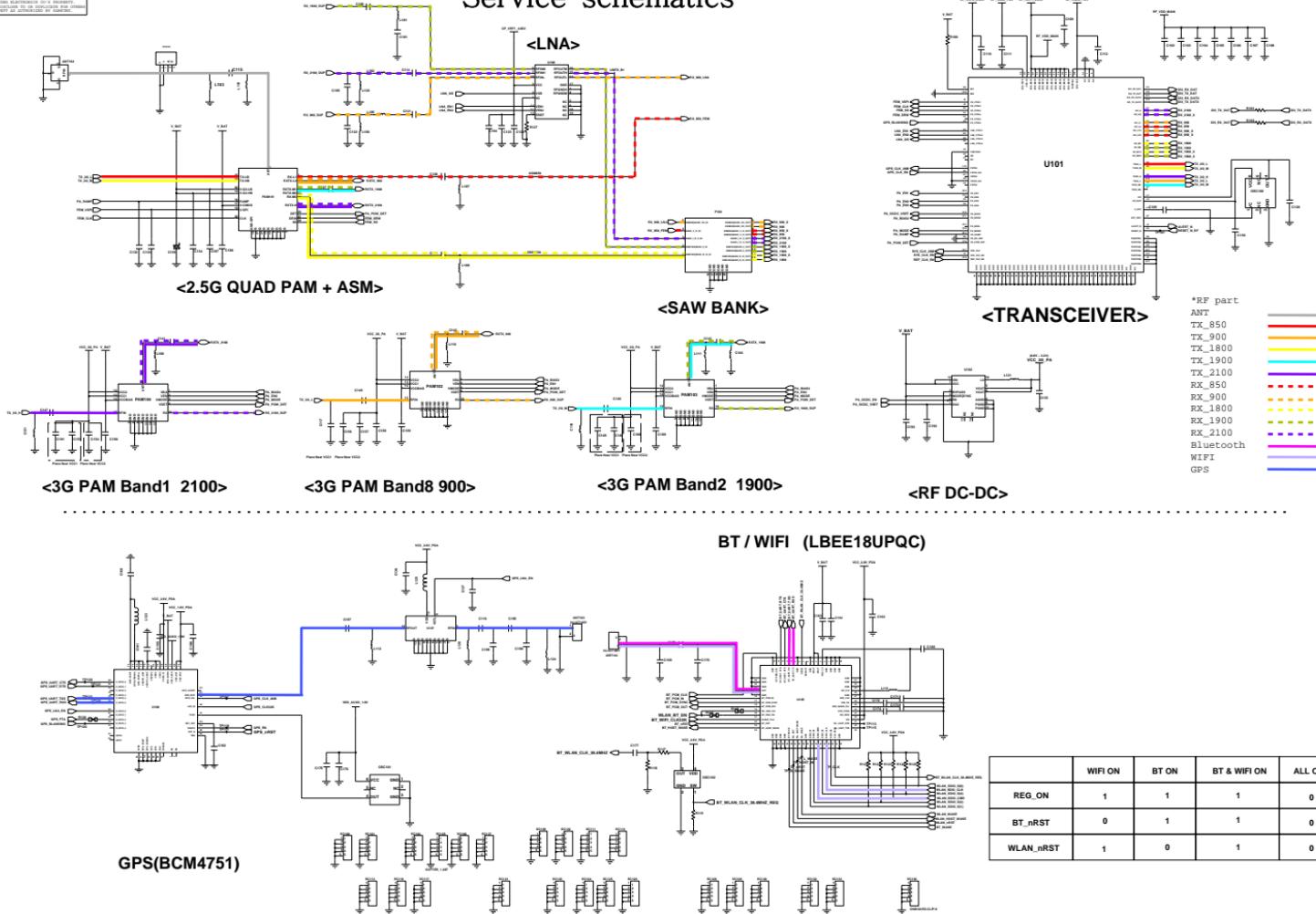
## 9. Reference Abbreviate

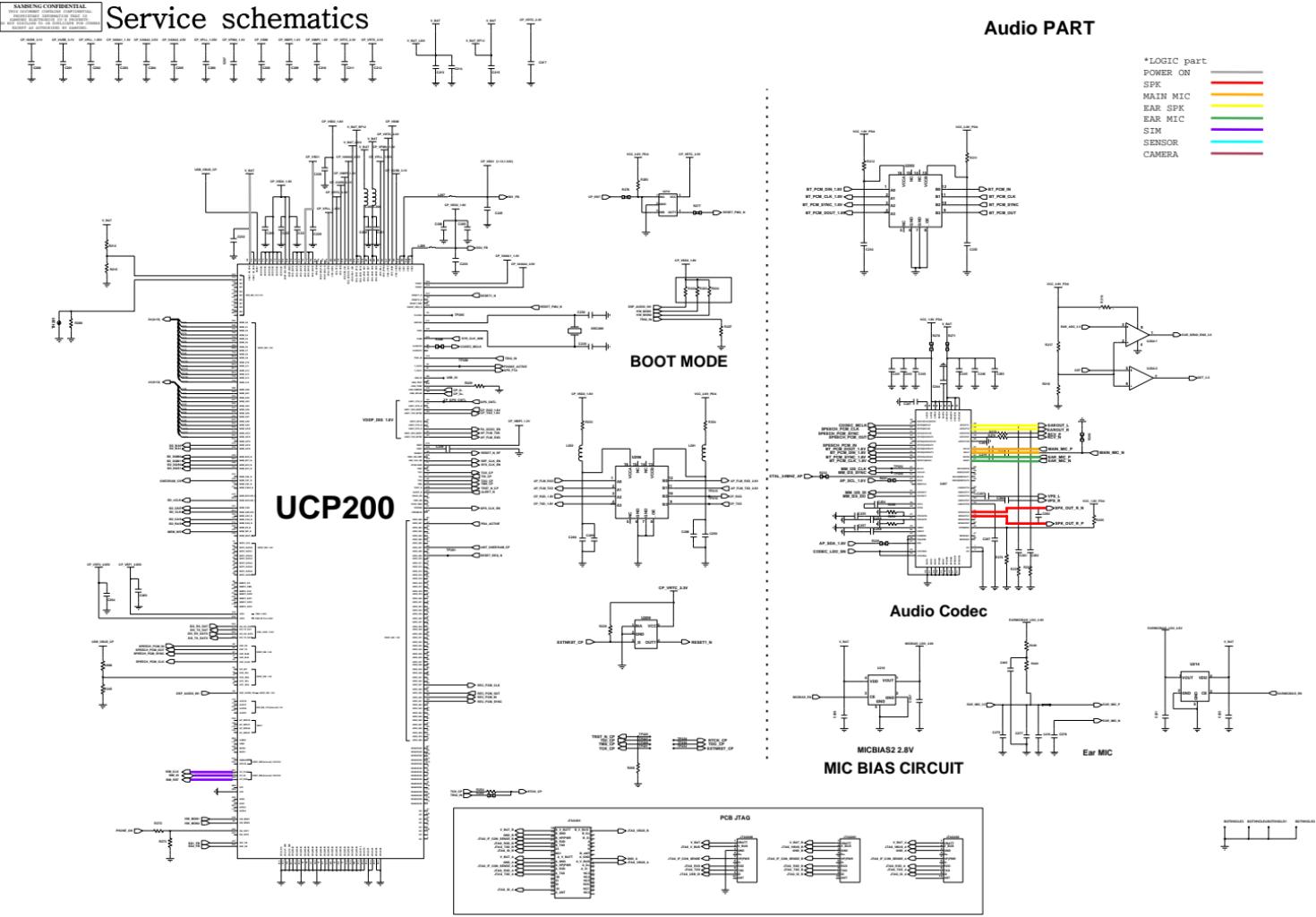
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### Reference Abbreviate

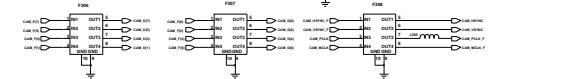
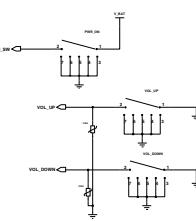
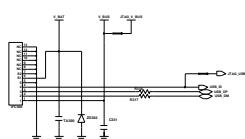
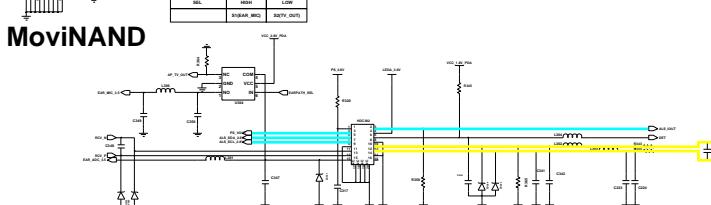
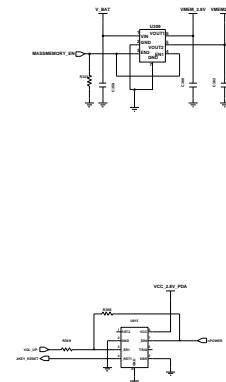
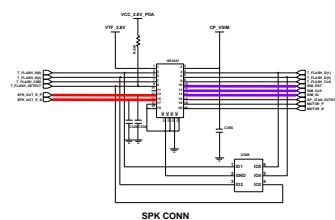
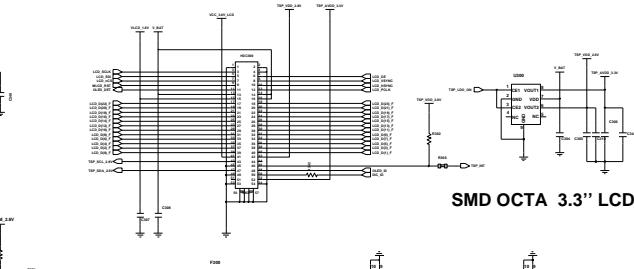
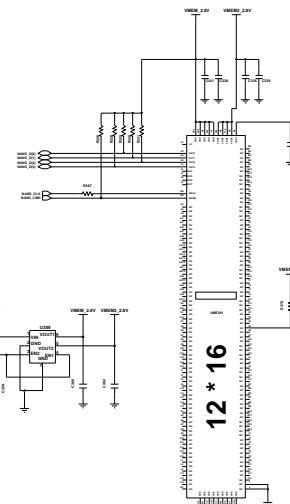
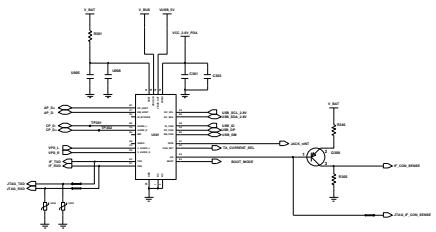
- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European 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





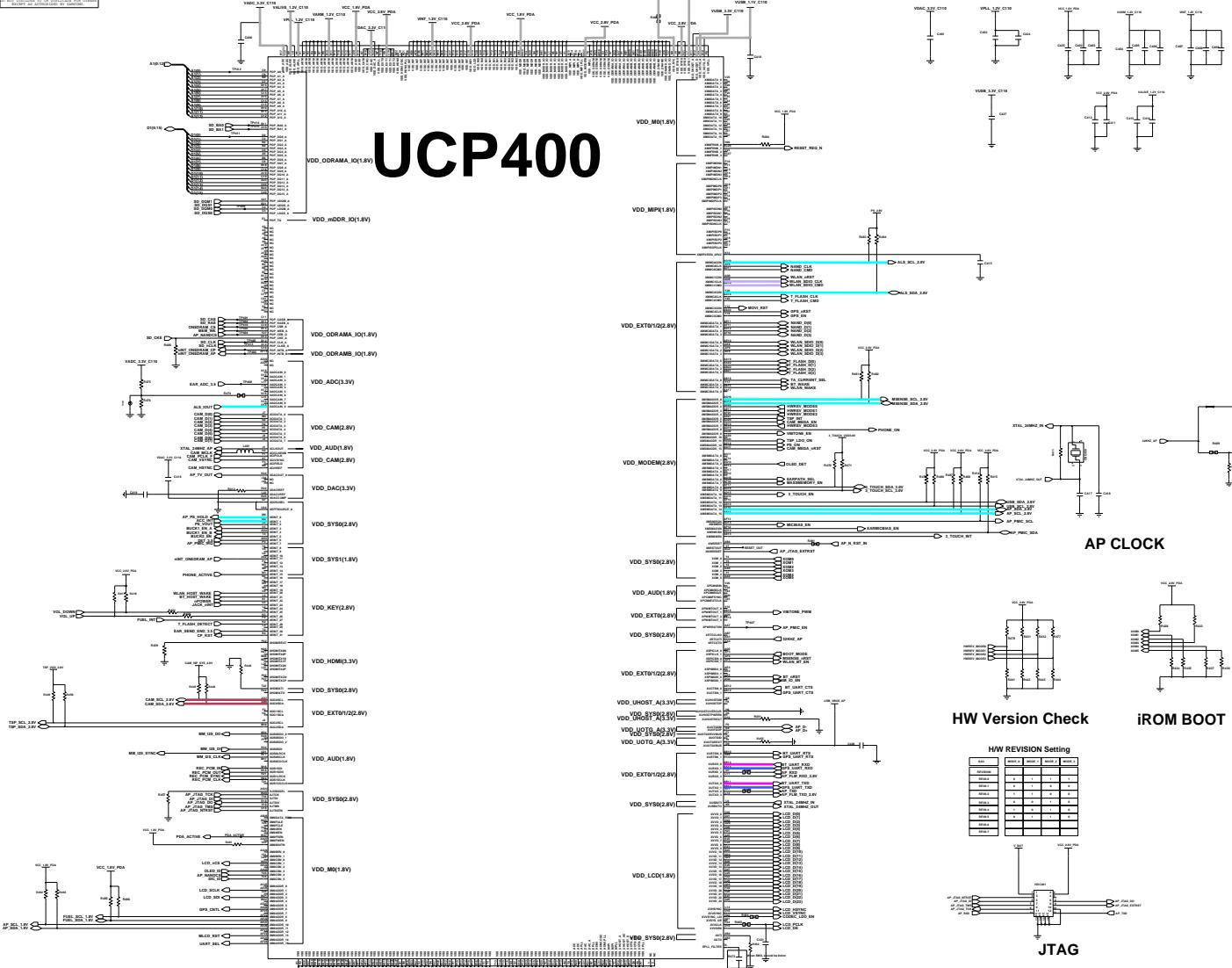
## Service schematics



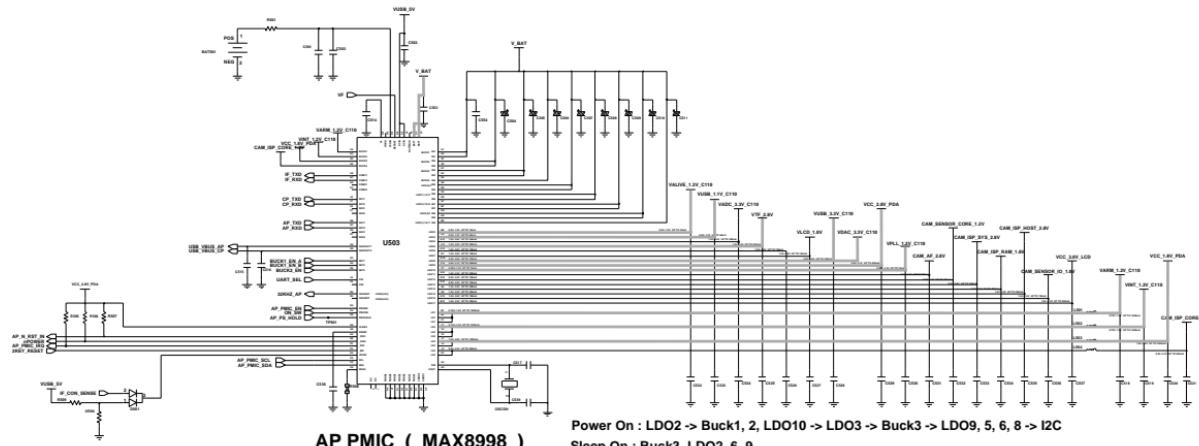
# Service schematics

VADC\_3.3V\_C118      VALVE\_1.2V\_C110      VCC\_1.8V\_PDA

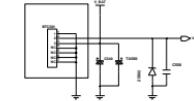
# UCP400



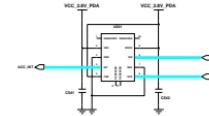
## Service schematics



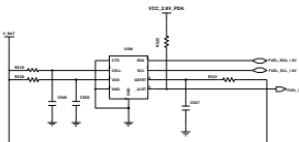
## BATTERY CON



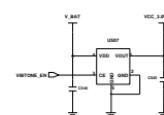
## Acceleration Sensors



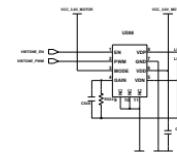
VIBTONE



## FUEL GUAGE

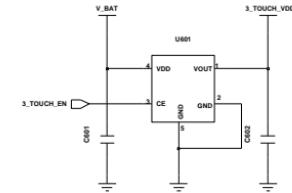
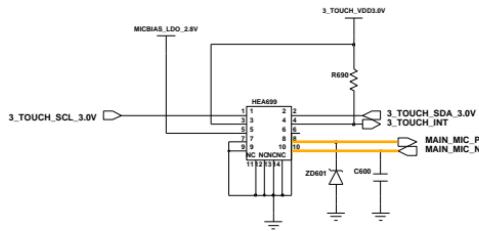


The diagram shows a logic circuit for a battery voltage sense and LED driver. It includes an input PG\_CH, a voltage reference UREF, and two operational amplifiers (OPA1 and OPA2). The output of OPA1 is connected to the non-inverting input of OPA2. The outputs of both opamps are connected to a logic inverter (INV1) and a final output stage. The output stage consists of a pMOS transistor (PMOS) and an nMOS transistor (NMOS), with a current source (I\_S) and a load resistor (R\_L) at the output. The circuit also features a feedback loop with resistors R\_F1 and R\_F2.



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# Service schematics



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