

SAMSUNG

GSM TELEPHONE

SGH-B520B

SERVICE *Manual*

GSM TELEPHONE



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**SAMSUNG
ELECTRONICS**



GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
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2. Specification

2-1. GSM General Specification

		E-GSM	DCS1800
Freq. Band[MHz] Uplink/Downlink		880~915 925~960	1710~1785 1805~1880
ARFCN range		975~1023 0~124	512~885
Tx/Rx spacing		45MHz	95MHz
Mod. Bit rate/ Bit Period	GPRS	270.833Kbps 3.692us	270.833Kbps 3.692us
Time Slot Period/Frame Period		576.9us 4.615ms	576.9us 4.615ms
Modulation	GPRS	0.3GMSK	0.3GMSK
MS Power	GPRS	33dBm~5dBm	30dBm~0dBm
Power Level	GPRS	5~19(class4)	0~15(class1)
Sensitivity		-102dBm	-100dBm
TDMA Mux		8	8
Cell Radius		35Km	2Km
Operating Temperature		-20℃ ~ 45℃	-20℃ ~ 45℃
Supply Voltage		3.7V	3.7V
Size and Weight		Dimention : 105(H) × 44.5(W) × 14(D) mm Weight : 79g (with standard battery)	

2-2. GSM Tx Power Class

TX Power control level	GSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3 dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	DCS1800
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

3. Product Function

Main Function

- Bluetooth 2.0 + EDR
- Voice Recording
- Speaker Phone
- WAP 2.0
- Java Games
- My Menu
- Mobile Tracker
- Auto Time Setting
- SOS Message
- Black GUI
- No Sim Mode
- Phonebook 500 entry
- Multiple Alarm
- Large Clock
- Auto-Off Mode

11. Reference data

Reference Abbreviation

- **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

1. Safety Precautions

1-1. Repair Precaution

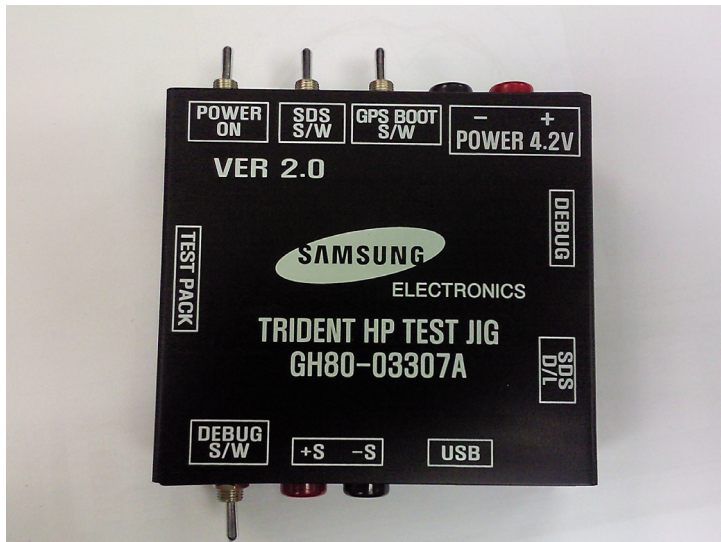
- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test,
because specipcty of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool,
because performance of parts is damaged by the influence of manetic force.
- 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.

4. Array course control



Test Jig
GH80-03307A



Test Cable
0.4M: GH39-00954A
1.0M: GH39-00953A



RF Test Cable
GH39-00985A

Software Downloading

4-1. Downloading Binary Files

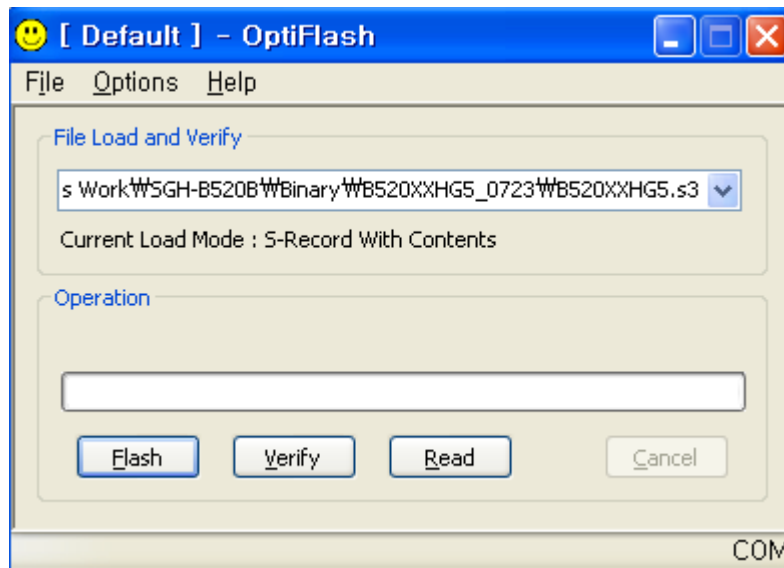
- Two binary files for downloading B520B
 - B520XXXXX.s3 : Main source code binary
 - B520XXXXX_CTS.cts : Contents file

4-2. Pre-requisite for Downloading

- Downloader Program([OptiFlash.exe](#))
- B520B Mobile Phone
- Data Cable
- Binary files

4-3. S/W Downloader Program

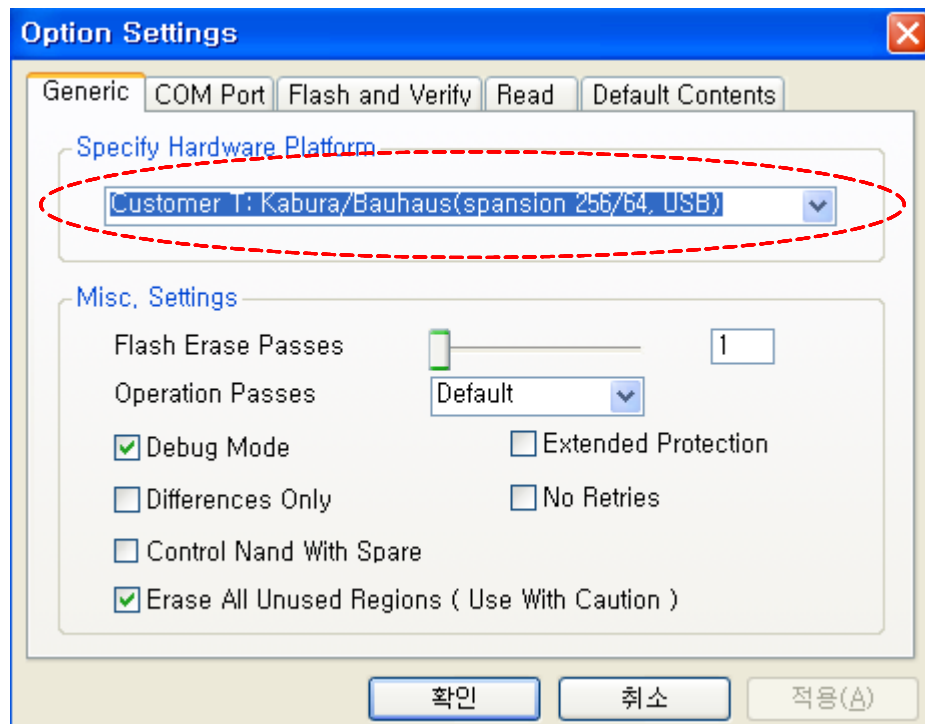
1. Load the binary download program by executing the "**Optiflash.exe**"



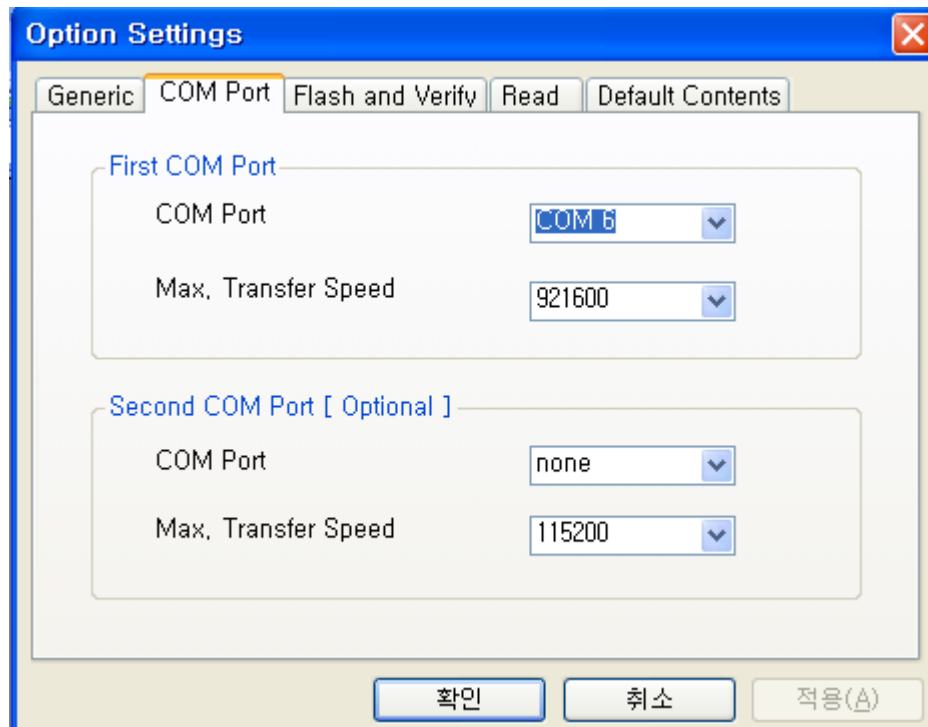
2. Select the "**Options**" → "**Settings**" → "**Generic**" → "**Specify hardware platform**".

Choose hardware platform for the downloader file setting.

Set the everything else as the default values which are shown below



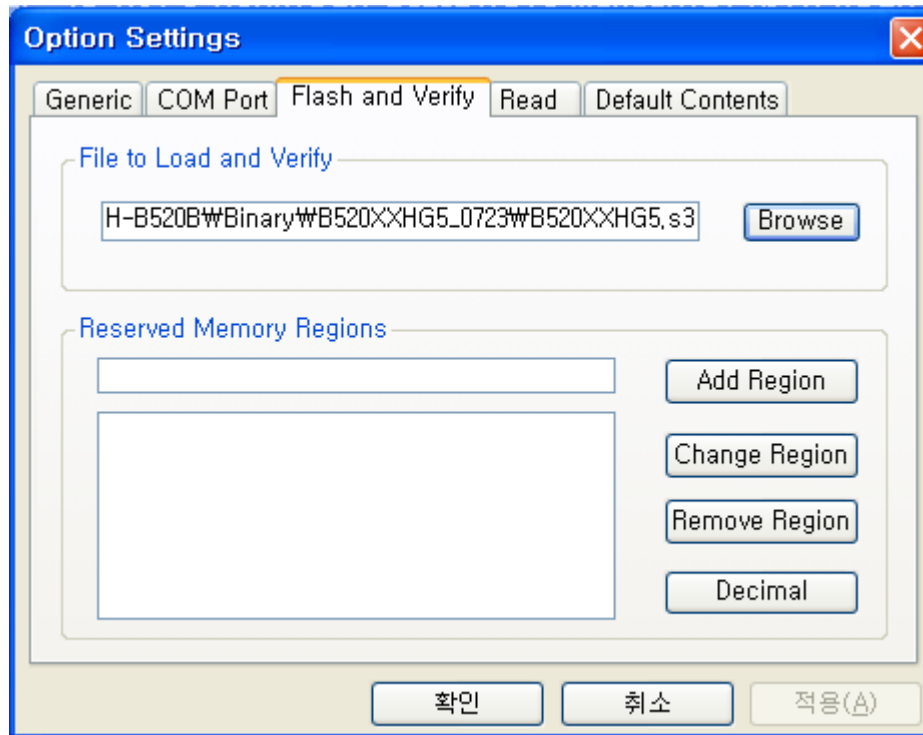
3. Select the **COM port** when the download cable is connected



Additionally you can select the maximum transfer speed OptiFlash will use to communicate with the phone. However, OptiFlash will use a slower speed if either the PC's or the phone's serial hardware is incapable of handling the selected speed

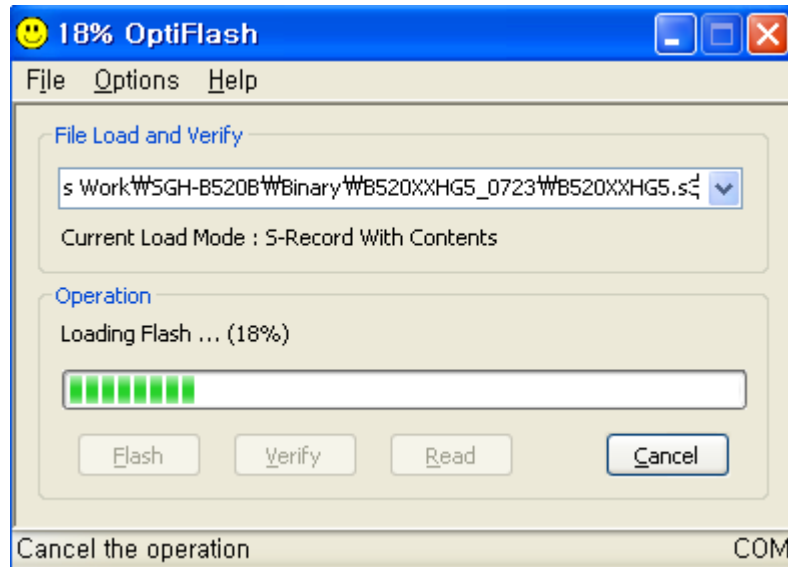
4. Select the **"Flash&Verify"** → **"Browse"**

Set the directory path and choose the lastet s/w binary, for example "B520DDXXX.s3", for the downloader binary setting.



5. Click "**OK**" button then press "**Flash**".
(Before pressing 'Flash' button, push the button **'**'and 'END' at the same time**. Then press 'Flash'.)

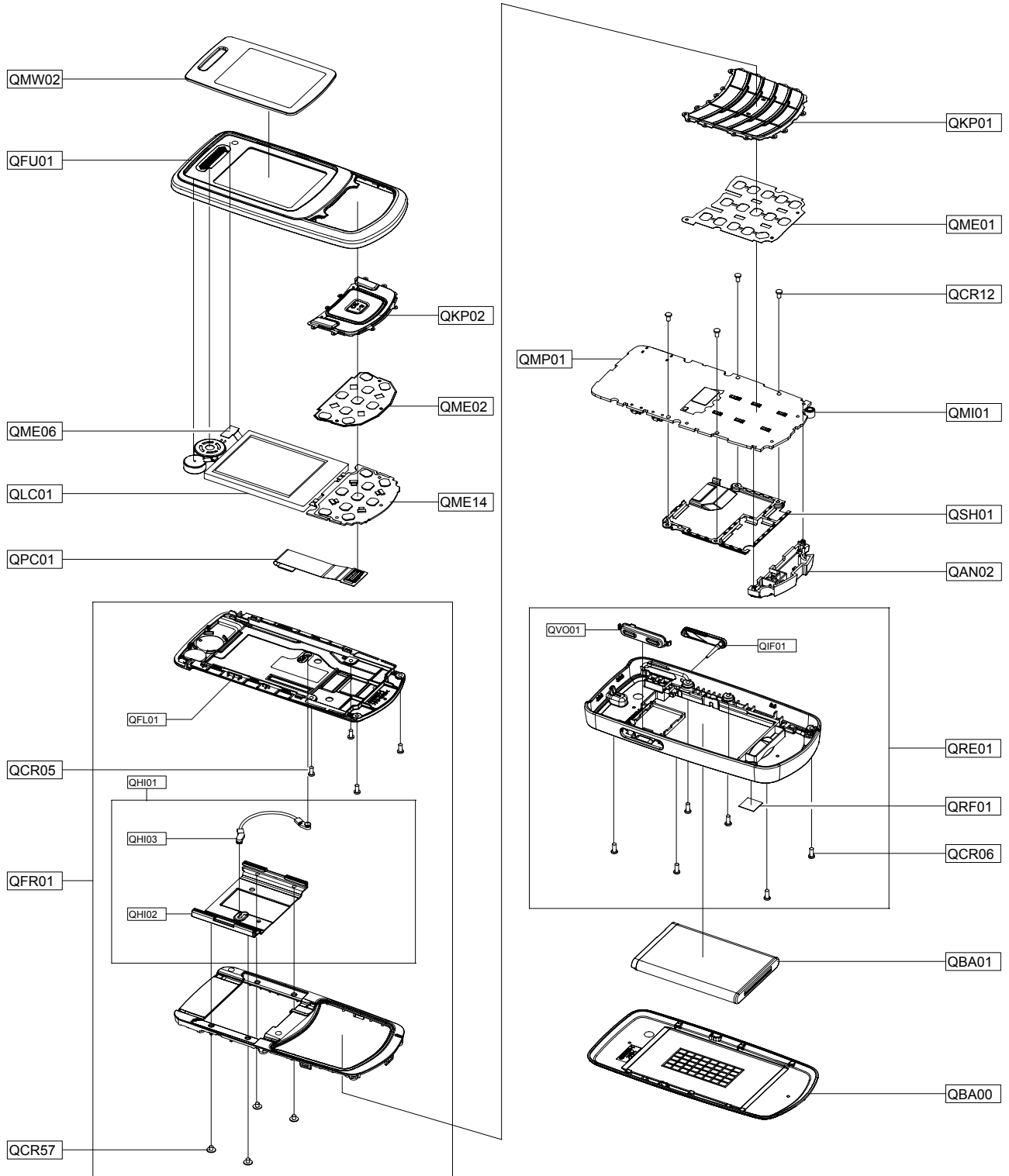
Downloader will upload the binary file as below for the downloading.



6. When downloading is finished successfully, there is a "All is well" message.
7. After finishing downloading, Certain memory resets should be done to guarantee the normal performance.
8. Confirm the downloaded version name and etc. :
***#1234#**
Full Reset :
***2767*3855#**

5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC	Description	SEC CODE
QAN02	INTENNA-SGHB520	GH42-01678A
QBA00	PMO COVER-BATTERY	GH72-48905B
QBA01	INNER BATTERY PACK-800MAH,BLK,	GH43-02483A
QCR05	SCREW-MACHINE	6001-001478
QCR06	SCREW-MACHINE	6001-001155
QCR12	SCREW-MACHINE	6001-001530
QCR57	SCREW-MACHINE	6001-002001
QFL01	ASSY CASE-SLIDE LOWER	GH98-09259A
QFR01	ASSY CASE-FRONT	GH98-09260A
QFU01	ASSY CASE-SLIDE UPPER	GH98-09258B
QHI01	ASSY HINGE-MODULE	GH98-09263A
QHI02	ASSY HINGE-BASE	GH98-09700A
QHI03	ASSY HINGE-WIRE ROPE	GH98-09701A
QIF01	PMO COVER-IF	GH72-48903A
QKP01	ASSY KEYPAD-MAIN(SAR/WR)	GH98-09666B
QKP02	ASSY KEYPAD-NAVI(SAR/WR)	GH98-09265B
QLC01	LCD-SGHB520 LCD	GH07-01323A
QME01	DOME SHEET-SGHB520,MAIN DOME 1	GH59-06038A
QME06	KEY FPCB-SGHB520,SPK_MOT FPCB	GH59-06042A
QME14	KEY FPCB-SGHB520,LCD SUB PBA	GH59-06040A
QMI01	MICROPHONE-ASSY-SGHB520 MIC	GH30-00514A
QMP01	A/S ASSY-PBA MAIN	GH82-03134A
QMW02	PMO WINDOW-MAIN	GH72-48906A
QPC01	FPC-SGHB520,SLIDE FPCB	GH41-02322A
QRE01	ASSY CASE-REAR(SEA)	GH98-09261A
QRF01	TAPE-RF SHEET	GH74-37306A
QSH01	ASSY COVER-SHIELD	GH98-09264A
QVO01	PMO KEY-VOLUME	GH72-48904A

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
0403-001547	ZD503	DIODE-ZENER
0406-001223	ZD514	DIODE-TVS
0406-001231	ZD600	DIODE-TVS
0406-001231	ZD601	DIODE-TVS
0406-001231	ZD602	DIODE-TVS
0406-001231	ZD603	DIODE-TVS
0406-001231	ZD604	DIODE-TVS
0406-001231	ZD605	DIODE-TVS
0406-001231	ZD606	DIODE-TVS
0406-001231	ZD607	DIODE-TVS
0406-001231	ZD608	DIODE-TVS
0406-001231	ZD609	DIODE-TVS
0406-001231	ZD610	DIODE-TVS
0406-001231	ZD611	DIODE-TVS
0406-001231	ZD612	DIODE-TVS
0406-001306	ZD506	DIODE-TVS
0406-001306	ZD507	DIODE-TVS
0505-001518	Q300	FET-SILICON
0601-002591	LED600	LED
0601-002591	LED601	LED
0601-002591	LED602	LED
0601-002591	LED603	LED
0601-002591	LED604	LED
0601-002591	LED605	LED
1001-001459	U402	IC-ANALOG SWITCH
1009-001038	U200	IC-HALL EFFECT S/W
1108-000166	UME200	IC-MCP
1201-002731	PAM100	IC-POWER AMP
1201-002733	U400	IC-AUDIO AMP
1203-005005	U300	IC-BATTERY
1203-005069	U301	IC-POSI.FIXED REG.
1203-005198	UCP300	IC-POWER SUPERVISOR
1205-002272	U201	IC-TRANSCEIVER
1205-003517	U100	IC-BLUETOOTH
1205-003524	UCD200	IC-MODEM

SEC CODE	Design LOC	Discription
1205-003563	RFT100	IC-TRANSCIEVER
1404-001165	TH300	THERMISTOR-NTC
1405-001082	VR200	VARISTOR
1405-001082	VR400	VARISTOR
1405-001082	VR401	VARISTOR
1405-001082	VR501	VARISTOR
1405-001082	VR600	VARISTOR
1405-001082	VR602	VARISTOR
1405-001082	VR603	VARISTOR
1405-001082	VR604	VARISTOR
1405-001082	VR605	VARISTOR
1405-001082	VR606	VARISTOR
2007-000138	R223	R-CHIP
2007-000138	R224	R-CHIP
2007-000138	R225	R-CHIP
2007-000138	R226	R-CHIP
2007-000138	R227	R-CHIP
2007-000138	R228	R-CHIP
2007-000138	R229	R-CHIP
2007-000138	R230	R-CHIP
2007-000138	R231	R-CHIP
2007-000138	R232	R-CHIP
2007-000138	R428	R-CHIP
2007-000139	R102	R-CHIP
2007-000139	R240	R-CHIP
2007-000140	R501	R-CHIP
2007-000140	R502	R-CHIP
2007-000140	R503	R-CHIP
2007-000140	R504	R-CHIP
2007-000140	R533	R-CHIP
2007-000143	R238	R-CHIP
2007-000143	R262	R-CHIP
2007-000147	R247	R-CHIP
2007-000147	R248	R-CHIP
2007-000148	R104	R-CHIP

SEC CODE	Design LOC	Discription
2007-000148	R331	R-CHIP
2007-000153	R406	R-CHIP
2007-000153	R414	R-CHIP
2007-000157	R110	R-CHIP
2007-000157	R243	R-CHIP
2007-000157	R268	R-CHIP
2007-000157	R500	R-CHIP
2007-000162	R107	R-CHIP
2007-000162	R263	R-CHIP
2007-000162	R325	R-CHIP
2007-000162	R509	R-CHIP
2007-000170	R330	R-CHIP
2007-000171	R100	R-CHIP
2007-000171	R101	R-CHIP
2007-000171	R106	R-CHIP
2007-000171	R115	R-CHIP
2007-000171	R116	R-CHIP
2007-000171	R119	R-CHIP
2007-000171	R120	R-CHIP
2007-000171	R122	R-CHIP
2007-000171	R403	R-CHIP
2007-000171	R409	R-CHIP
2007-000171	R534	R-CHIP
2007-000171	R535	R-CHIP
2007-000171	R603	R-CHIP
2007-000171	R614	R-CHIP
2007-000172	R236	R-CHIP
2007-000172	R431	R-CHIP
2007-000172	R432	R-CHIP
2007-000172	R615	R-CHIP
2007-000172	R616	R-CHIP
2007-000172	R617	R-CHIP
2007-000172	R618	R-CHIP
2007-000172	R619	R-CHIP
2007-000172	R620	R-CHIP

SEC CODE	Design LOC	Discription
2007-000242	R250	R-CHIP
2007-000758	R252	R-CHIP
2007-000758	R253	R-CHIP
2007-000775	R329	R-CHIP
2007-001119	R402	R-CHIP
2007-001292	R254	R-CHIP
2007-001292	R255	R-CHIP
2007-003015	R105	R-CHIP
2007-003015	R218	R-CHIP
2007-003112	R407	R-CHIP
2007-003112	R408	R-CHIP
2007-007308	R303	R-CHIP
2007-007314	R306	R-CHIP
2007-007317	R410	R-CHIP
2007-007317	R417	R-CHIP
2007-007528	R401	R-CHIP
2007-007528	R413	R-CHIP
2007-008213	R327	R-CHIP
2203-000189	C503	C-CER,CHIP
2203-000233	C112	C-CER,CHIP
2203-000233	C118	C-CER,CHIP
2203-000233	C124	C-CER,CHIP
2203-000254	C125	C-CER,CHIP
2203-000254	C132	C-CER,CHIP
2203-000254	C201	C-CER,CHIP
2203-000254	C207	C-CER,CHIP
2203-000254	C210	C-CER,CHIP
2203-000254	C305	C-CER,CHIP
2203-000254	C314	C-CER,CHIP
2203-000254	C315	C-CER,CHIP
2203-000254	C316	C-CER,CHIP
2203-000254	C323	C-CER,CHIP
2203-000311	C407	C-CER,CHIP
2203-000386	C126	C-CER,CHIP
2203-000425	C106	C-CER,CHIP

SEC CODE	Design LOC	Discription
2203-000425	C114	C-CER,CHIP
2203-000425	C117	C-CER,CHIP
2203-000425	C638	C-CER,CHIP
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2203-000812	C636	C-CER,CHIP
2203-000812	C637	C-CER,CHIP
2203-000854	C116	C-CER,CHIP
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2203-000940	C632	C-CER,CHIP
2203-000995	C105	C-CER,CHIP
2203-000995	C107	C-CER,CHIP
2203-000995	C204	C-CER,CHIP
2203-000995	C211	C-CER,CHIP

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2203-002709	C633	C-CER,CHIP
2203-005055	C108	C-CER,CHIP
2203-005056	C345	C-CER,CHIP
2203-005056	C346	C-CER,CHIP
2203-005281	C131	C-CER,CHIP
2203-005450	C403	C-CER,CHIP
2203-005450	C414	C-CER,CHIP
2203-005968	C100	C-CER,CHIP
2203-005968	C101	C-CER,CHIP
2203-005968	C102	C-CER,CHIP
2203-005993	C402	C-CER,CHIP
2203-005993	C412	C-CER,CHIP
2203-005993	C422	C-CER,CHIP
2203-005993	C427	C-CER,CHIP
2203-006047	C405	C-CER,CHIP
2203-006047	C406	C-CER,CHIP
2203-006048	C206	C-CER,CHIP
2203-006048	C208	C-CER,CHIP
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2203-006048	C303	C-CER,CHIP
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SEC CODE	Design LOC	Discription
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2203-006260	C408	C-CER,CHIP
2203-006260	C410	C-CER,CHIP
2203-006324	C133	C-CER,CHIP
2203-006324	C218	C-CER,CHIP
2203-006324	C342	C-CER,CHIP
2203-006324	C344	C-CER,CHIP
2203-006361	C435	C-CER,CHIP
2203-006474	C310	C-CER,CHIP
2203-006562	C311	C-CER,CHIP
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2203-006562	C320	C-CER,CHIP
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2203-006562	C329	C-CER,CHIP
2203-006562	C330	C-CER,CHIP
2203-006562	C331	C-CER,CHIP
2203-006562	C332	C-CER,CHIP
2203-006562	C400	C-CER,CHIP
2203-006562	C411	C-CER,CHIP
2203-006562	C413	C-CER,CHIP
2203-006562	C416	C-CER,CHIP
2203-006562	C417	C-CER,CHIP
2203-006562	C426	C-CER,CHIP
2203-006681	C200	C-CER,CHIP
2203-006681	C202	C-CER,CHIP
2203-006681	C203	C-CER,CHIP
2203-006681	C205	C-CER,CHIP
2203-006681	C214	C-CER,CHIP
2203-006681	C215	C-CER,CHIP

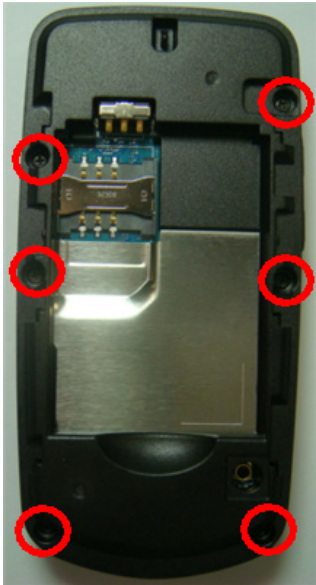
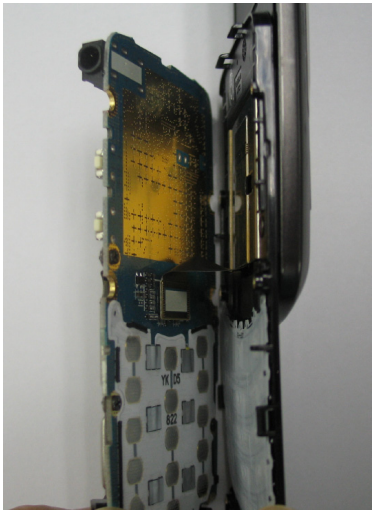
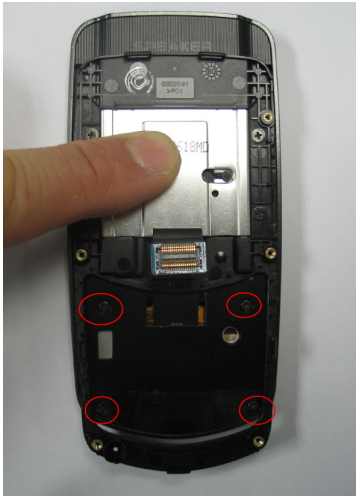
SEC CODE	Design LOC	Discription
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2203-006824	C321	C-CER,CHIP
2203-006824	C322	C-CER,CHIP
2203-006824	C401	C-CER,CHIP
2203-006838	C307	C-CER,CHIP
2203-006838	C327	C-CER,CHIP
2203-006841	C631	C-CER,CHIP
2203-006872	C128	C-CER,CHIP
2203-006901	C341	C-CER,CHIP
2404-001381	TA500	C-TA,CHIP
2404-001414	C409	C-TA,CHIP
2404-001415	C110	C-TA,CHIP
2703-001722	L101	INDUCTOR-SMD
2703-001733	L107	INDUCTOR-SMD
2703-001938	L103	INDUCTOR-SMD
2703-001938	L601	INDUCTOR-SMD
2703-001938	L602	INDUCTOR-SMD
2703-001938	L603	INDUCTOR-SMD
2703-001938	L604	INDUCTOR-SMD
2703-001990	L108	INDUCTOR-SMD
2703-002586	L105	INDUCTOR-SMD
2703-002782	L300	INDUCTOR-SMD
2703-003186	L106	INDUCTOR-SMD
2801-003856	OSC300	CRYSTAL-SMD
2801-004683	OSC100	CRYSTAL-SMD
2904-001792	F100	FILTER-SAW
2909-001283	F101	FILTER-LC
3301-001120	L301	BEAD-SMD
3301-001342	F200	BEAD-SMD
3301-001787	L408	CORE-FERRITE BEAD
3301-001787	L409	CORE-FERRITE BEAD
3301-001812	L403	BEAD-SMD
3301-001812	L404	BEAD-SMD
3301-001812	L503	BEAD-SMD

SEC CODE	Design LOC	Discription
3301-001812	L504	BEAD-SMD
3301-001885	L501	BEAD-SMD
3301-001885	L502	BEAD-SMD
3404-001152	TAC_DOWN	SWITCH-TACT
3404-001152	TAC_UP	SWITCH-TACT
3705-001503	RFS100	CONNECTOR-COAXIAL
3709-001447	SIM600	CONNECTOR-CARD EDGE
3710-002683	IFC500	SOCKET-INTERFACE
3711-005581	HDC600	HEADER-BOARD TO BOARD
3711-006228	BTC500	HEADER-BATTERY
4202-001467	ANT102	ANTENNA-CHIP

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

7. Disassembly and Assembly Instructions

7-1. Disassembly

1	2
	
1) Unscrew 6 points of the Rear. ※ Caution 1) Be careful not to make scratch and molding damage!	1) Put up the both side of the REAR with decomposition tool, and then disassemble the set ※ Caution 1) Be careful not to make scratch and molding damage!
3	4
	
1) Disassemble the CONNECTOR. ※ Caution 1) Be careful not to make scratch and molding damage!	1) Unscrew 4 points of the Upper ※ Caution 1) Be careful not to make scratch and molding damage!

5	6
	
1) Detach the Lower from the Upper. ※ Caution 1) Be care of scratch and molding damage.	1) Detach the SPK&MOTOR, SLIDE FPCB from the Connector. ※ Caution 1) Be care of scratch and molding damage.
7	8
	
1) Detach the LCD from the Upper. ※ Caution 1) Be care of scratch and molding damage.	1) Detach the SUB PBA from the Upper. ※ Caution 1) Be care of scratch and molding damage.

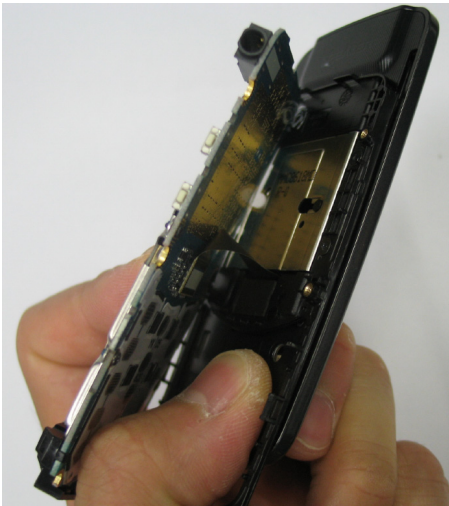
9

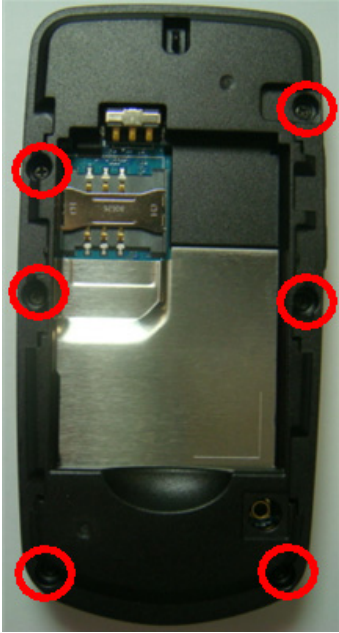


- 1) Detach the SUB KEY from the Upper.
- ※ **Caution**
- 1) Be care of scratch and molding damage.

7-2. Assembly

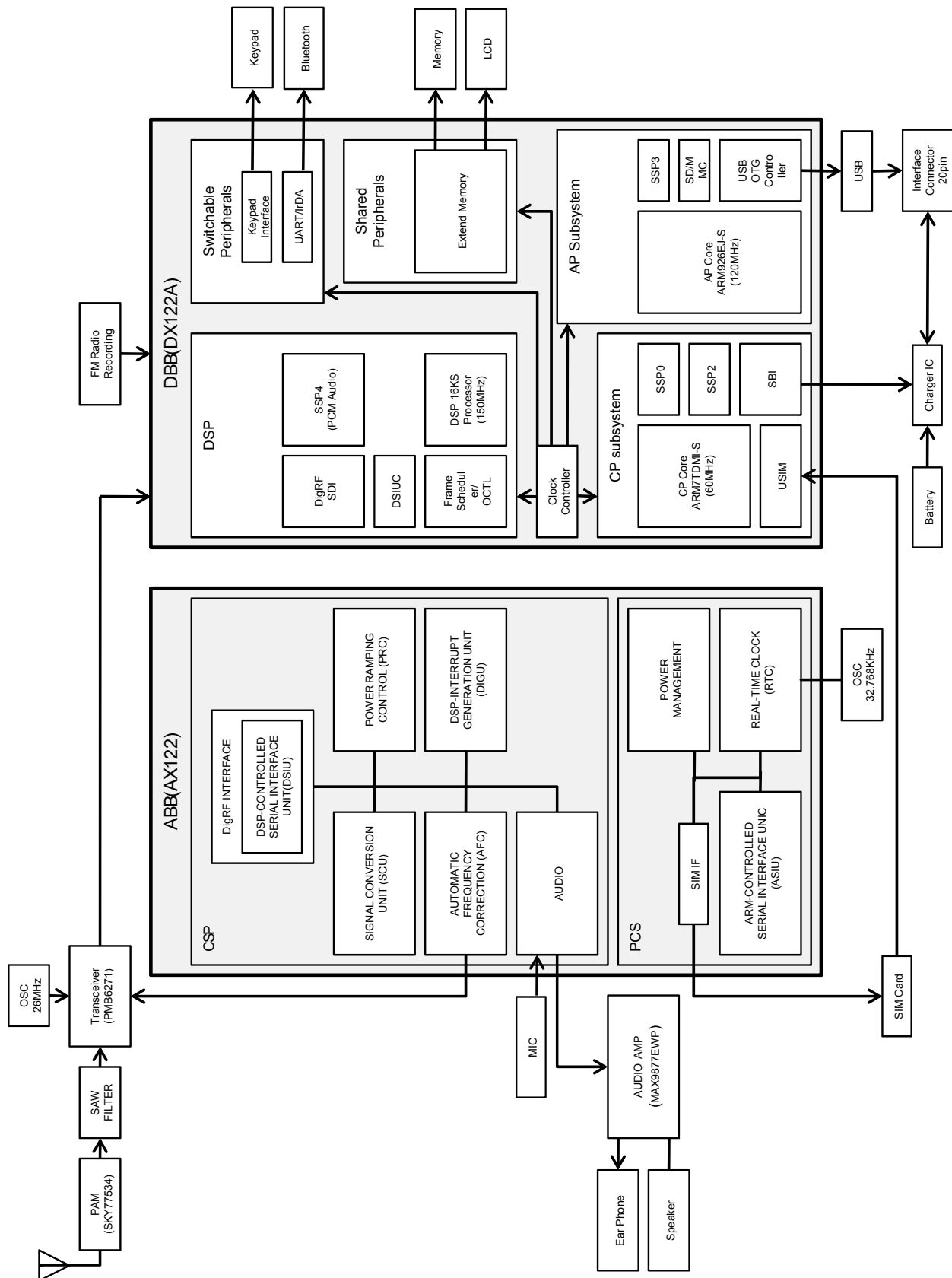
1	2
	
1) Set SUB KEYPAD on the UPPER. ※ Caution 1) Be careful not to make scratch and molding damage! 2) Be careful not to be damaged on FPCB.	1) Set SUB PBA on the KEYPAD. ※ Caution 1) Be careful not to make scratch and molding damage! 2) Be careful not to be damaged on FPCB.
3	4
	
1) Set LCD on the UPPER. ※ Caution 1) Be careful not to make scratch and molding damage! 2) Be careful not to be damaged on FPCB.	1) Set SPK&MOR FPCB on the LCD. ※ Caution 1) Be careful not to make scratch and molding damage! 2) Be careful not to be damaged on FPCB.

5 	6 
1) Set SLIDE FPCB on the UPPER. ※ Caution 1) Be careful not to make scratch and molding damage! 2) Be careful not to be damaged on FPCB.	1) After putting SLIDE FPCB into hole in the middle of LOWER ※ Caution 1) Be careful not to make scratch and molding damage! 2) Be careful not to be damaged on FPCB.
7 	8 
1) Screw 4 points. ※ Caution 1) Be careful not to make scratch and molding damage! 2) Confirm TORQUE (1.1~ 1.3 Kgf.Cm)	1) Assemble the SLIDE FPCB to the MAIN PBA. ※ Caution 1) Be careful not to make scratch and molding damage!

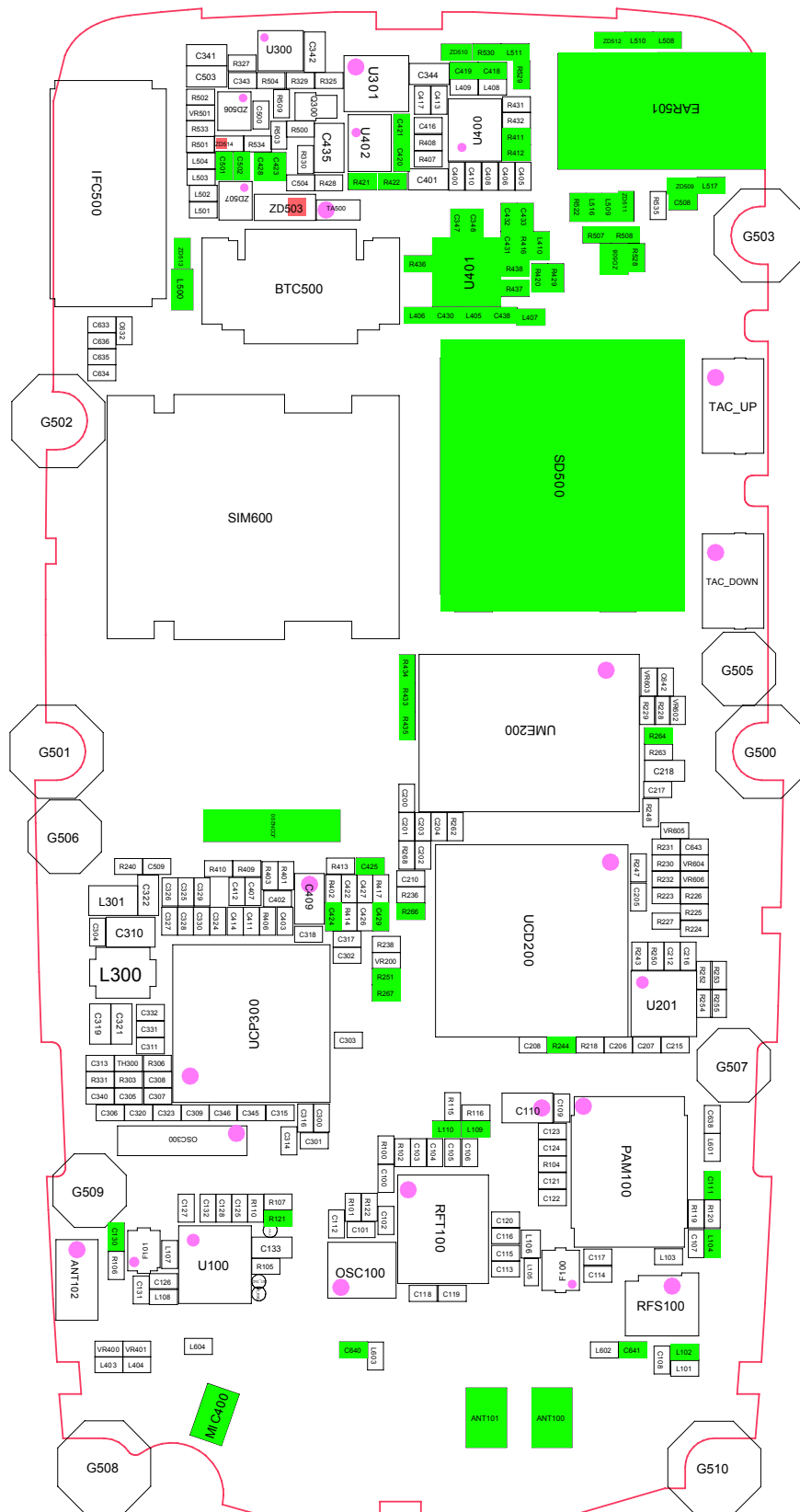
9	10
	
1) Assemble the LOWER in this way. ※ Caution 1) Be careful not to make scratch and molding damage!	1) Screw 6 points. ※ Caution 1) Be careful not to make scratch and molding damage! 2) Confirm TORQE (1.1~ 1.3 Kgf.Cm)

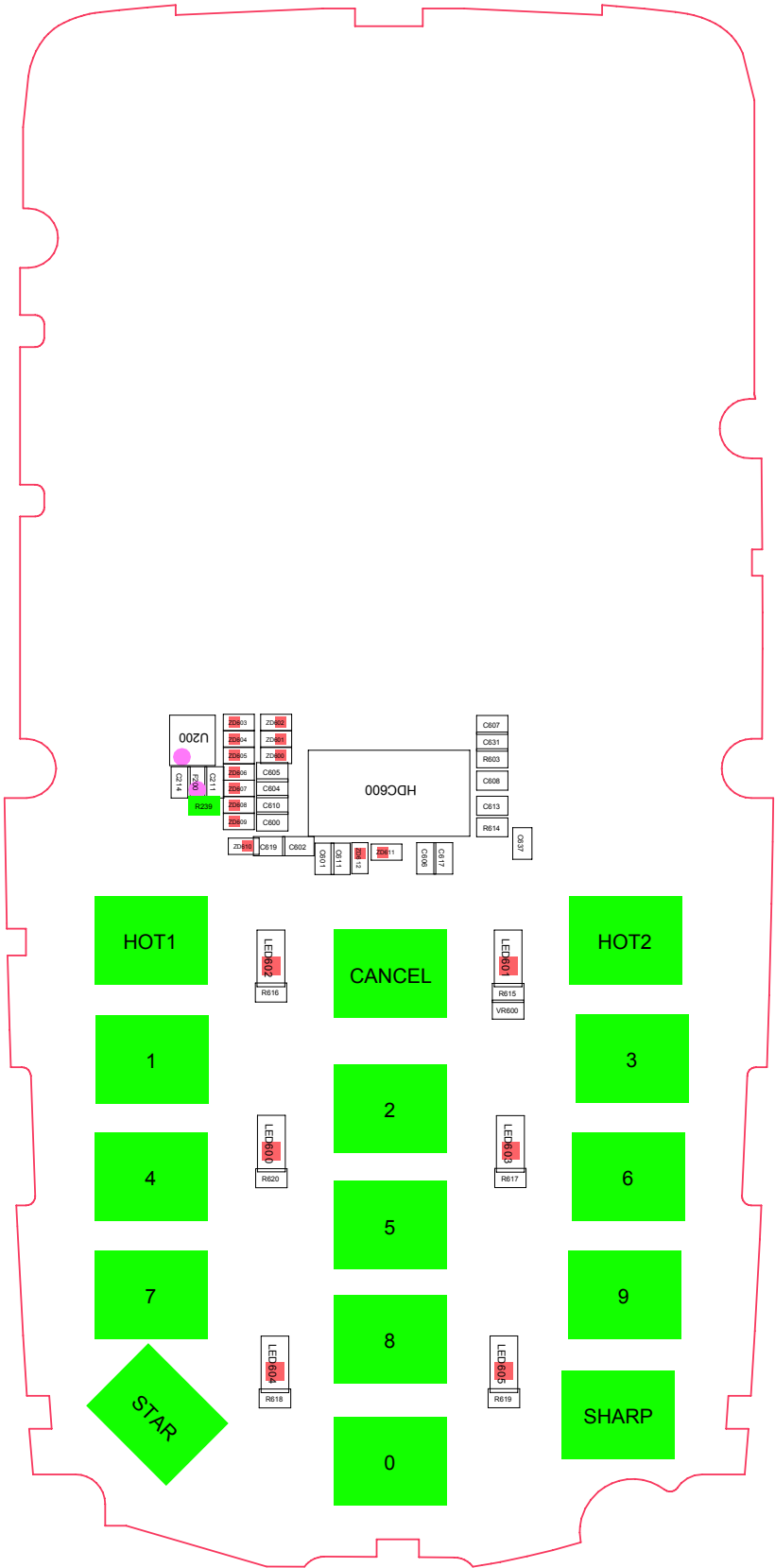
8. Block Diagrams





9. PCB Diagrams

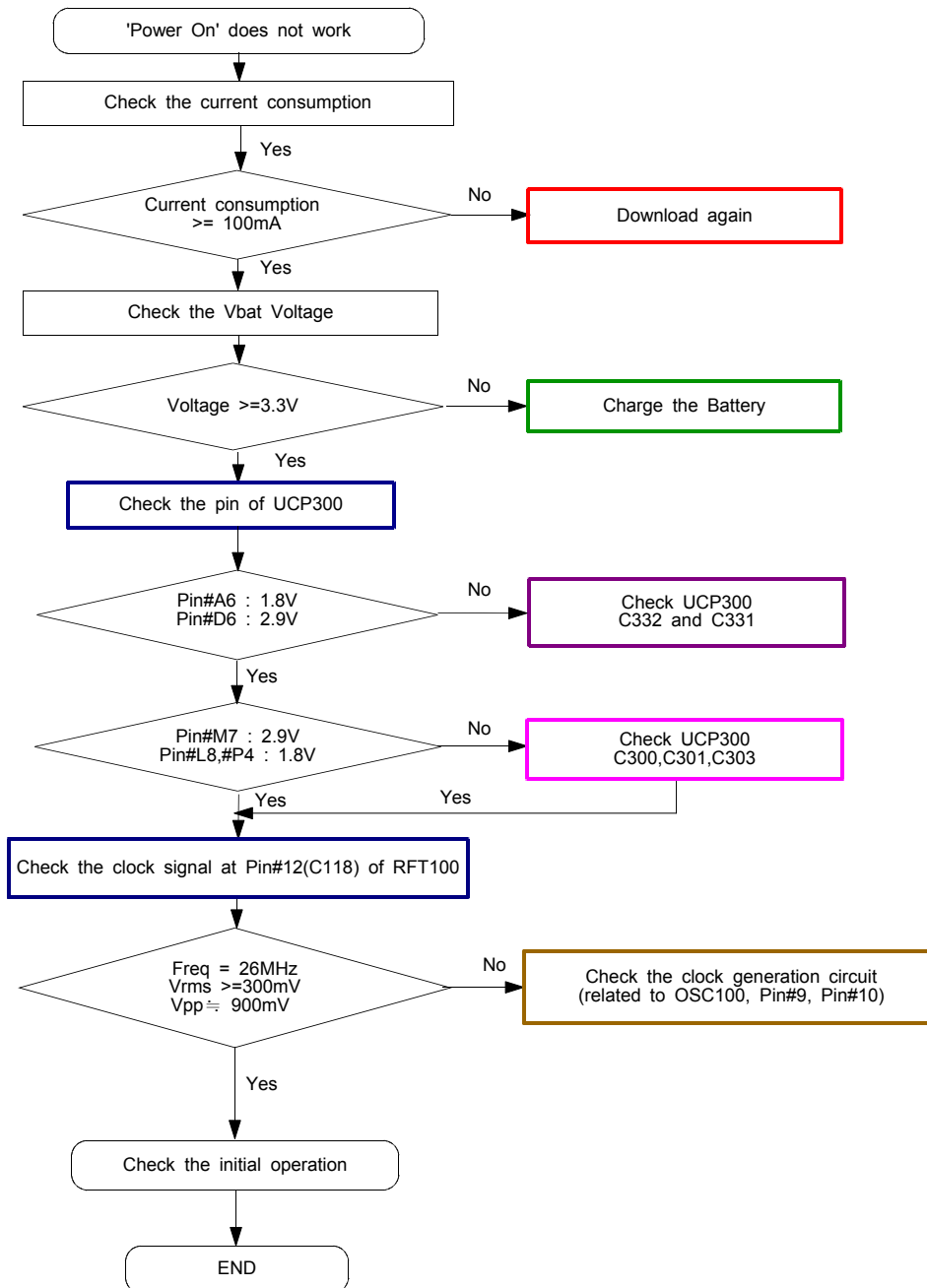


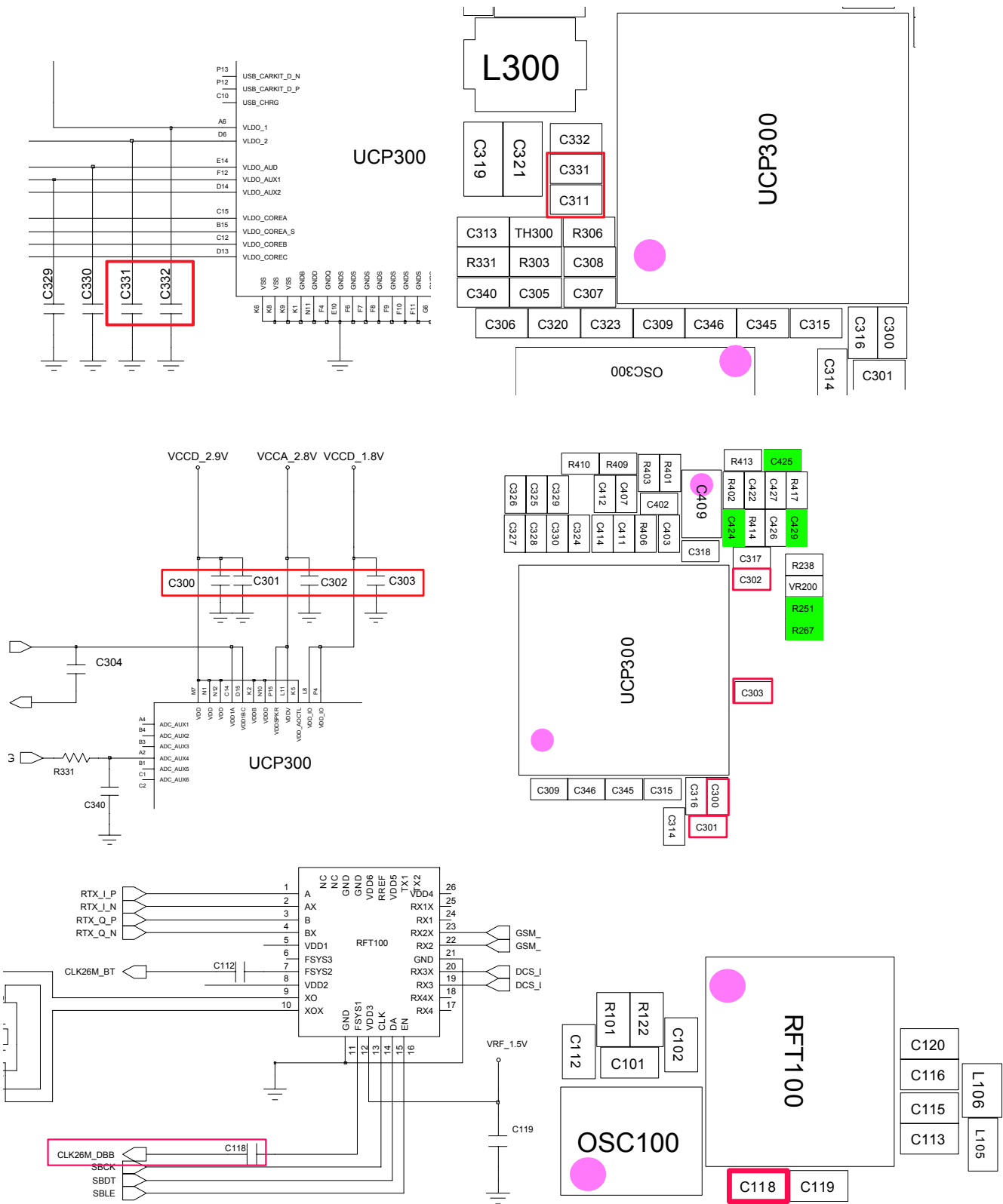


10. Flow Chart of Troubleshooting

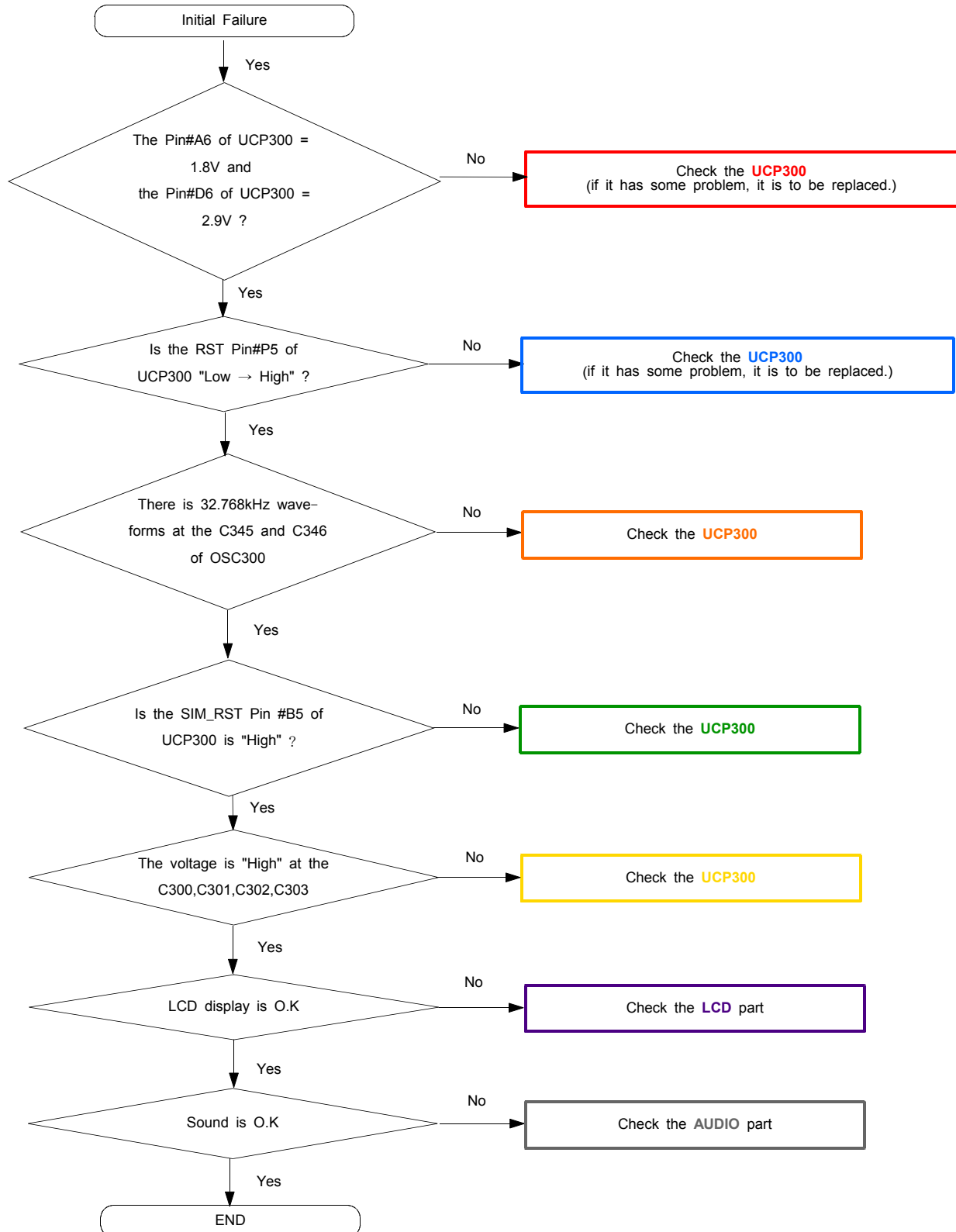
10-1.Baseband

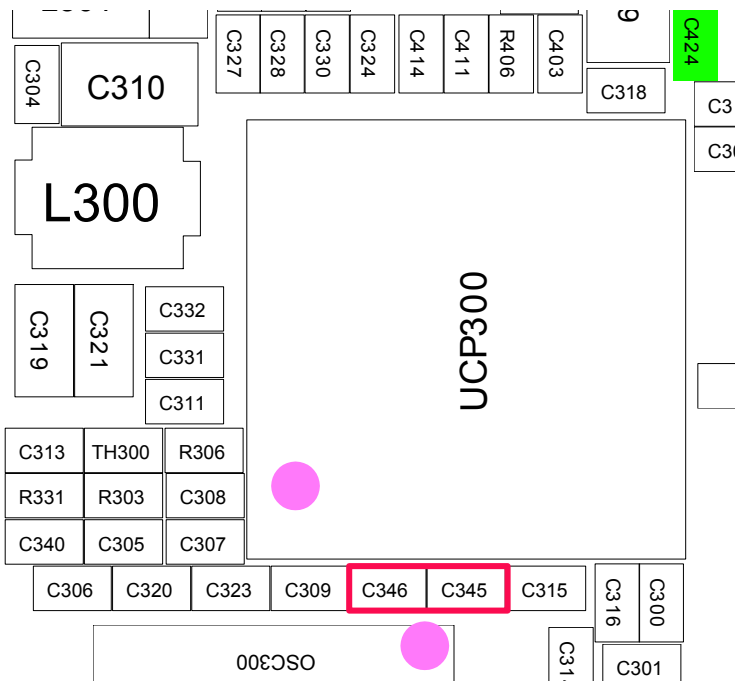
10-1-1. Power ON



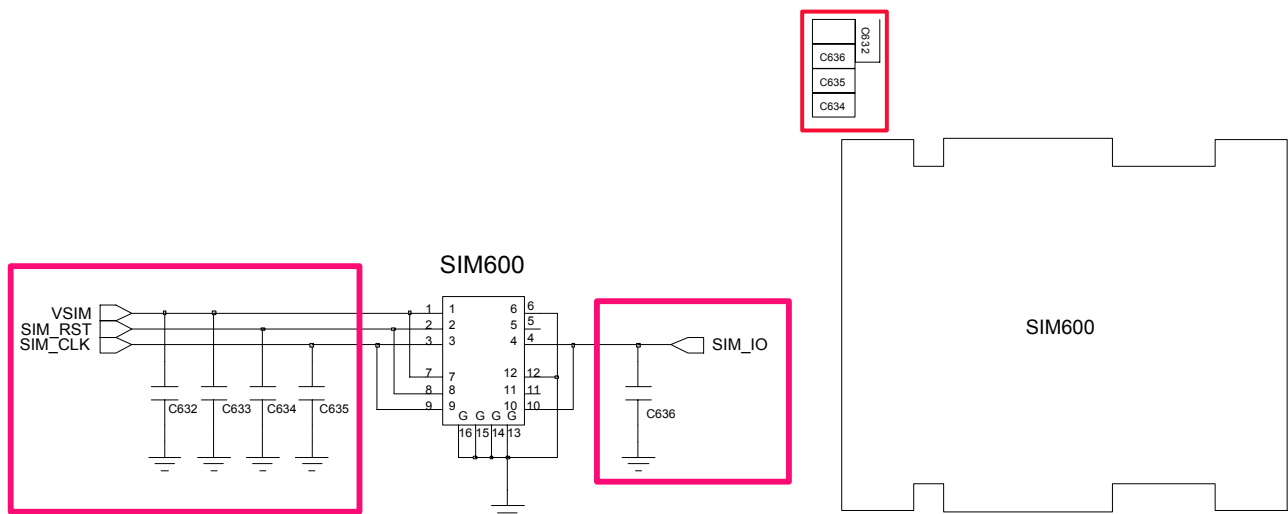
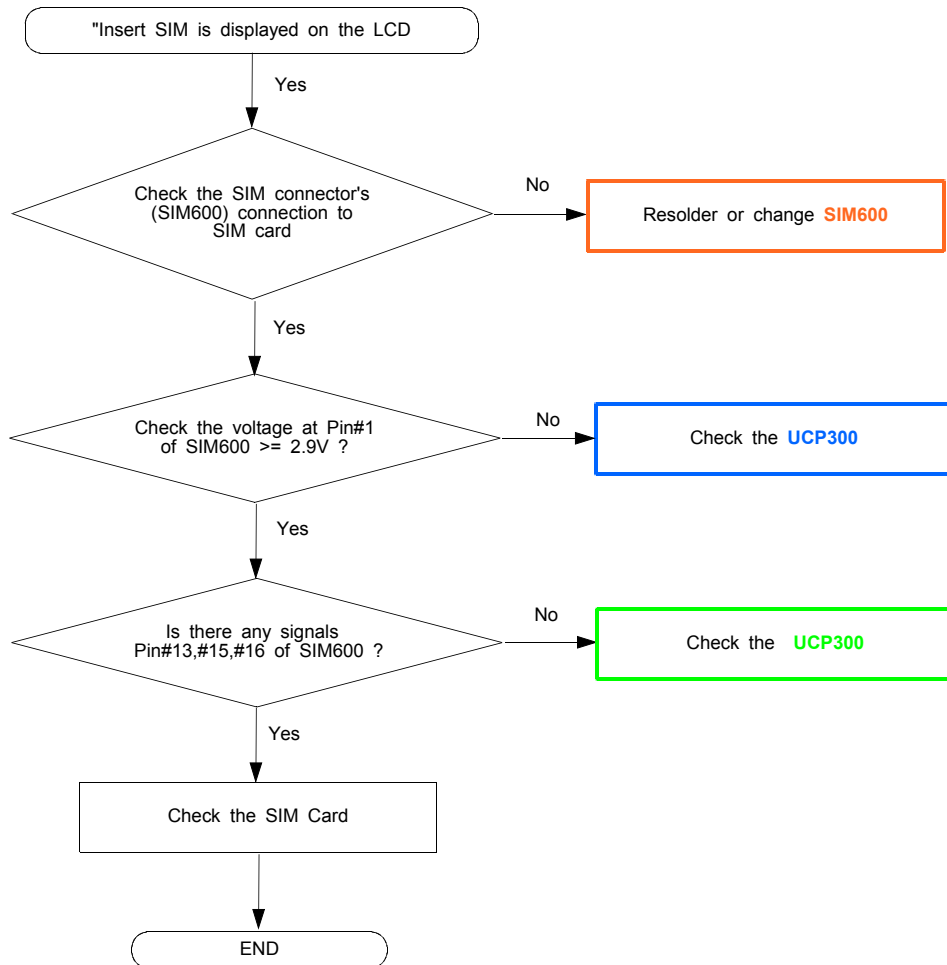


10-1-2. Initial

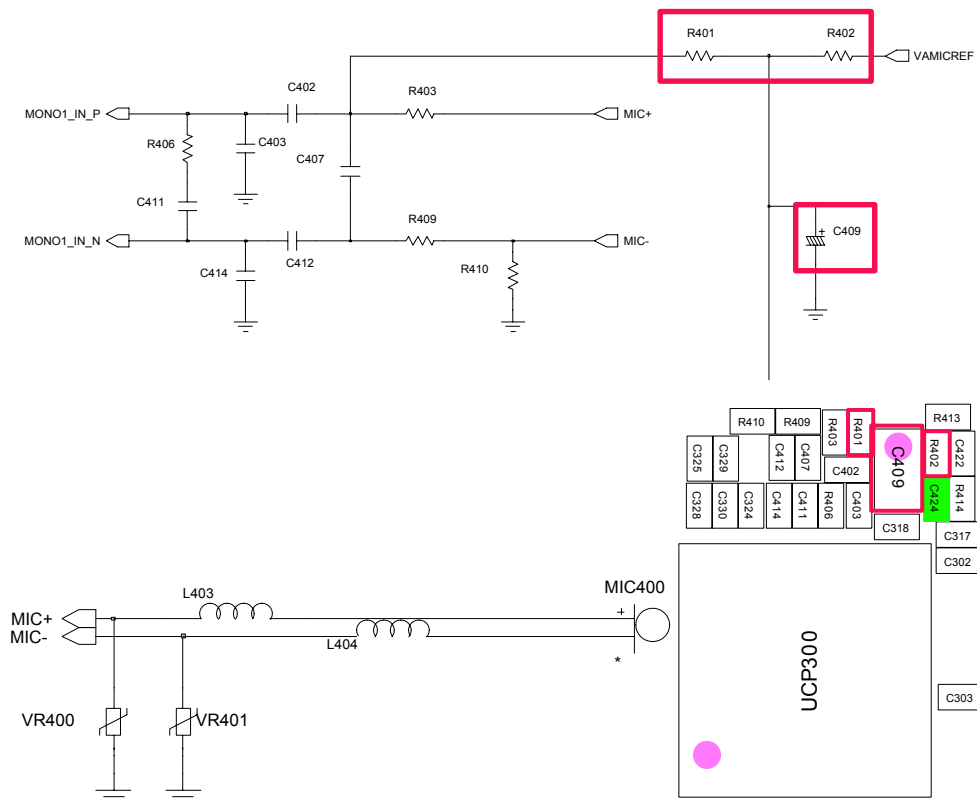
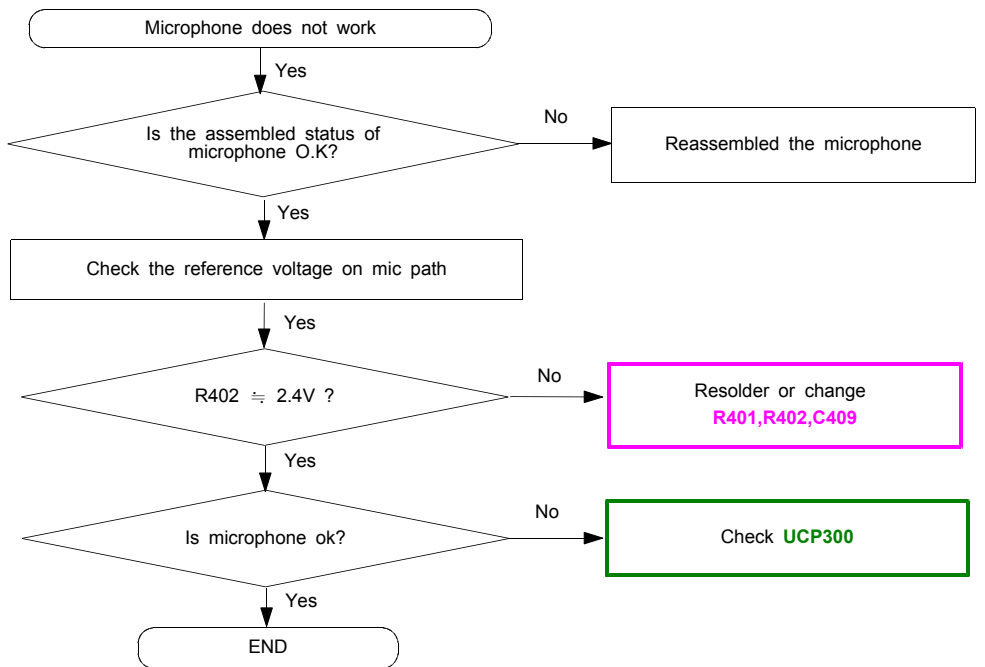


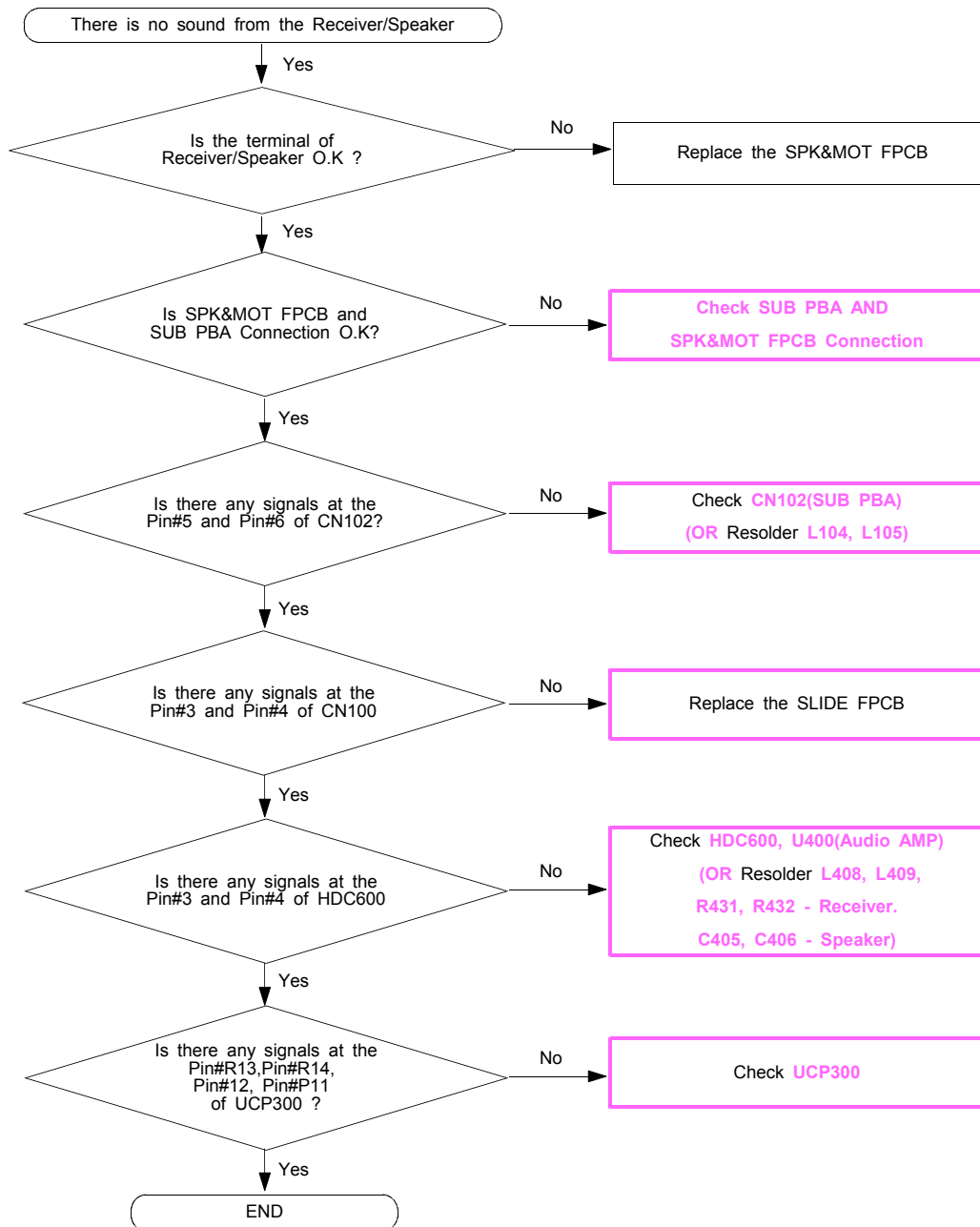


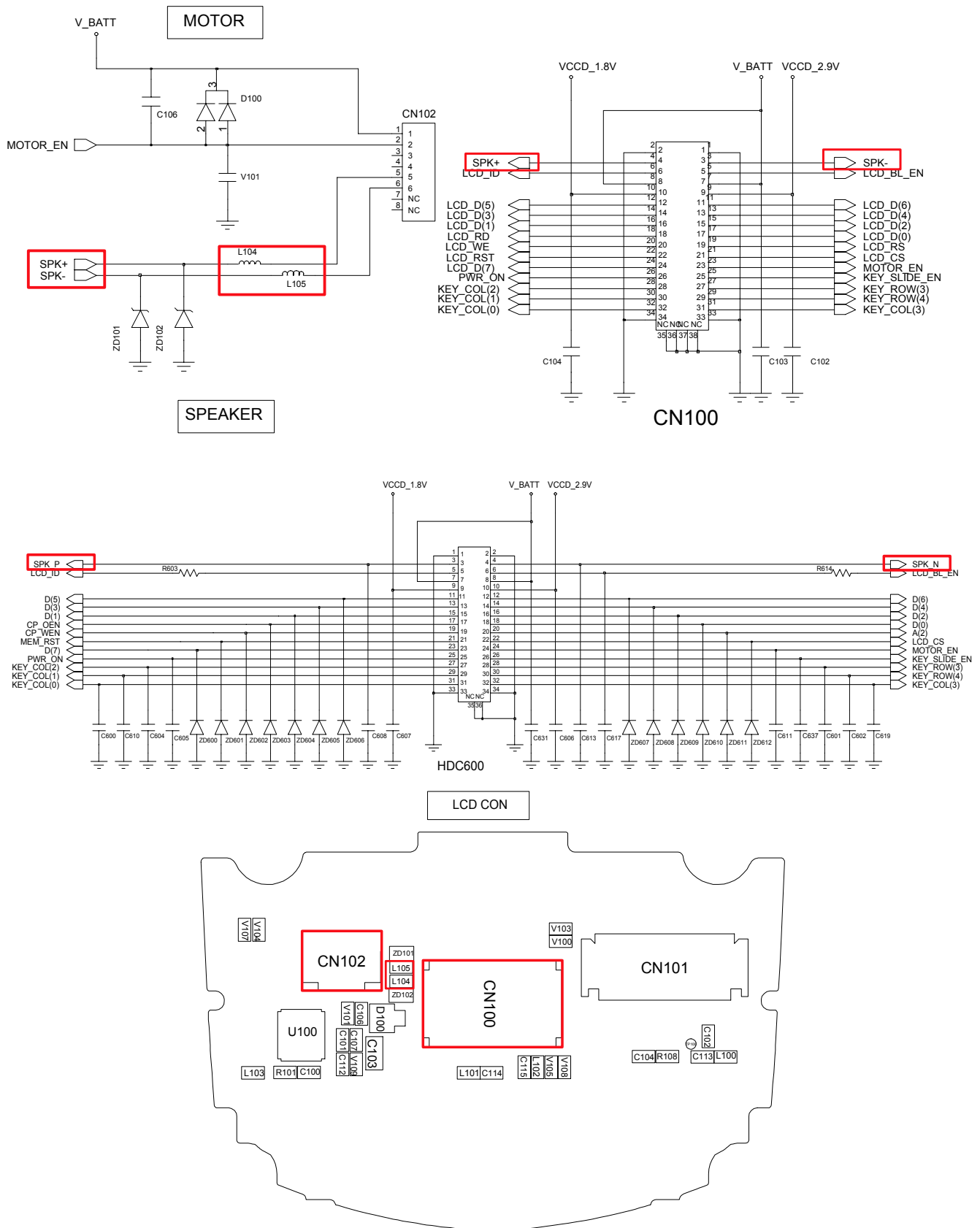
10-1-3. Sim Part

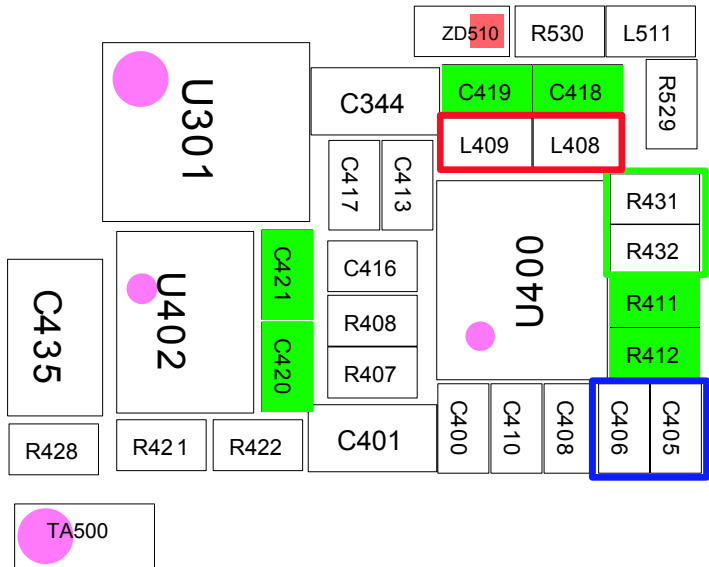
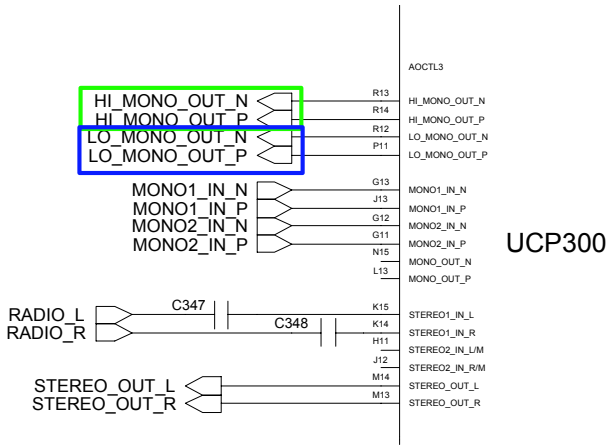
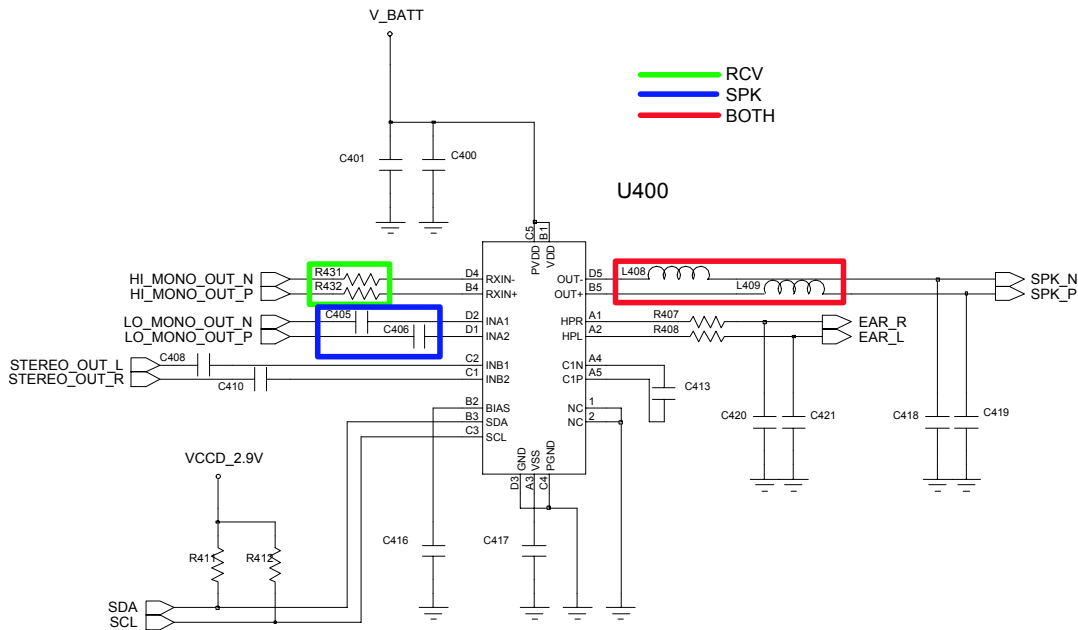


10-1-4. Microphone Part

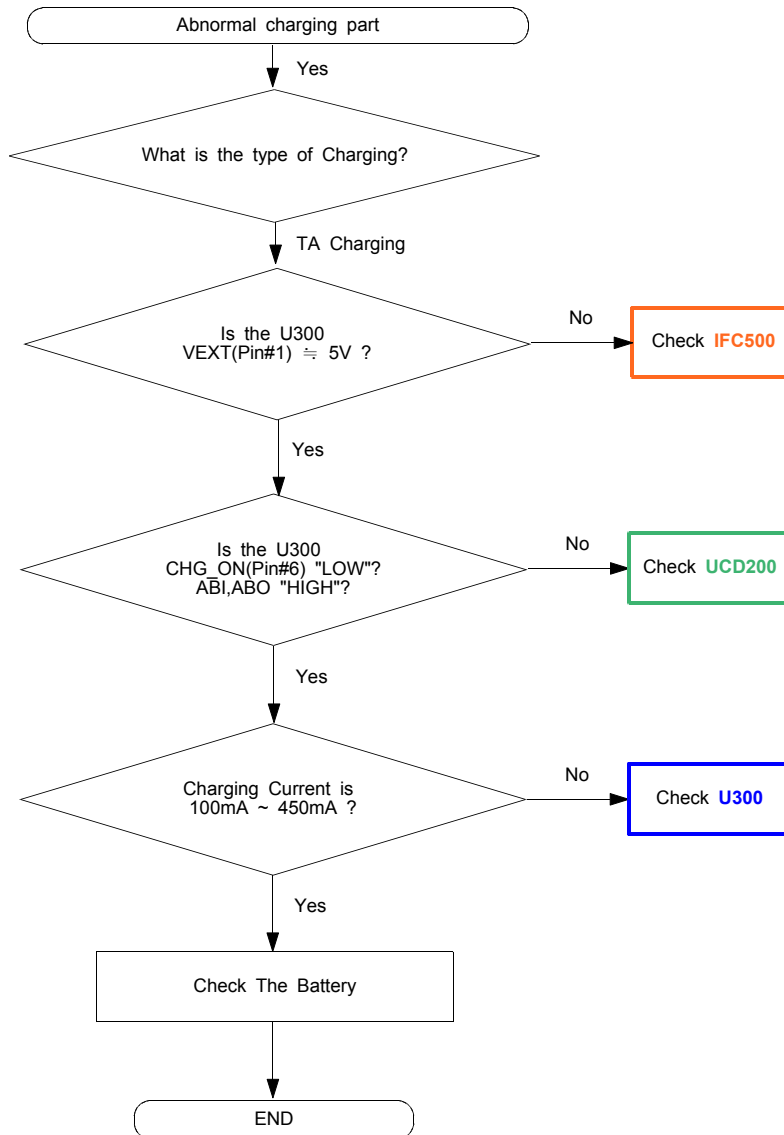


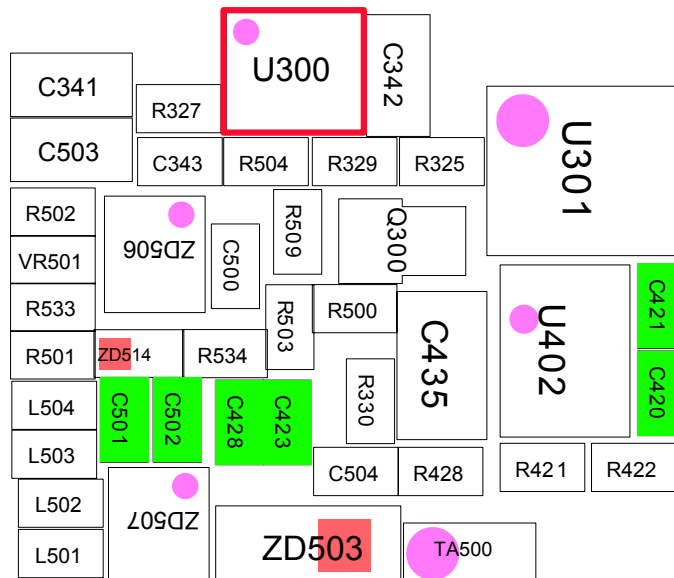
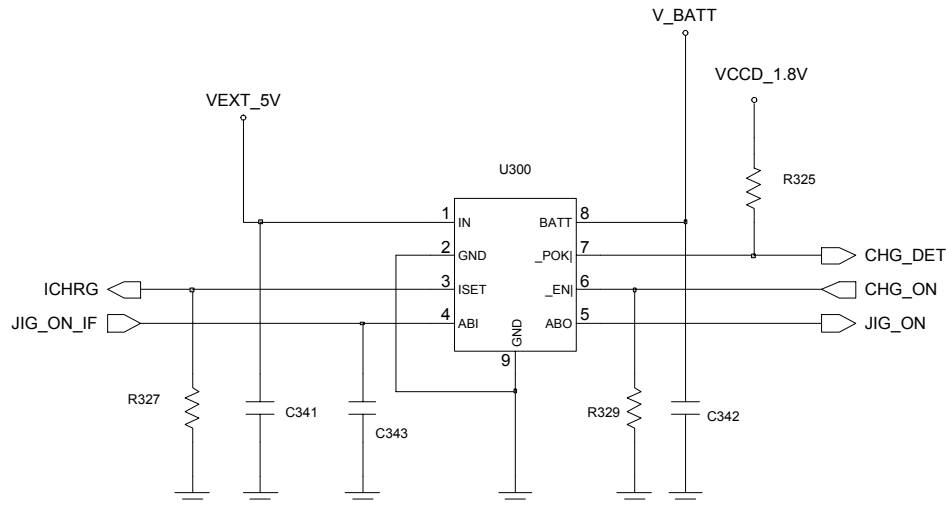
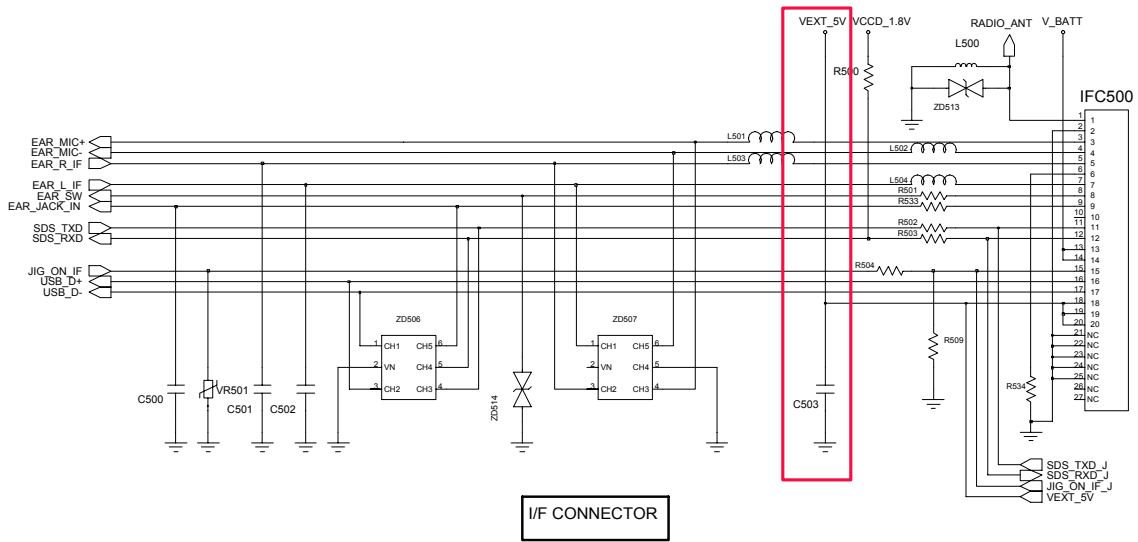
10-1-5. Receiver/Speaker Part



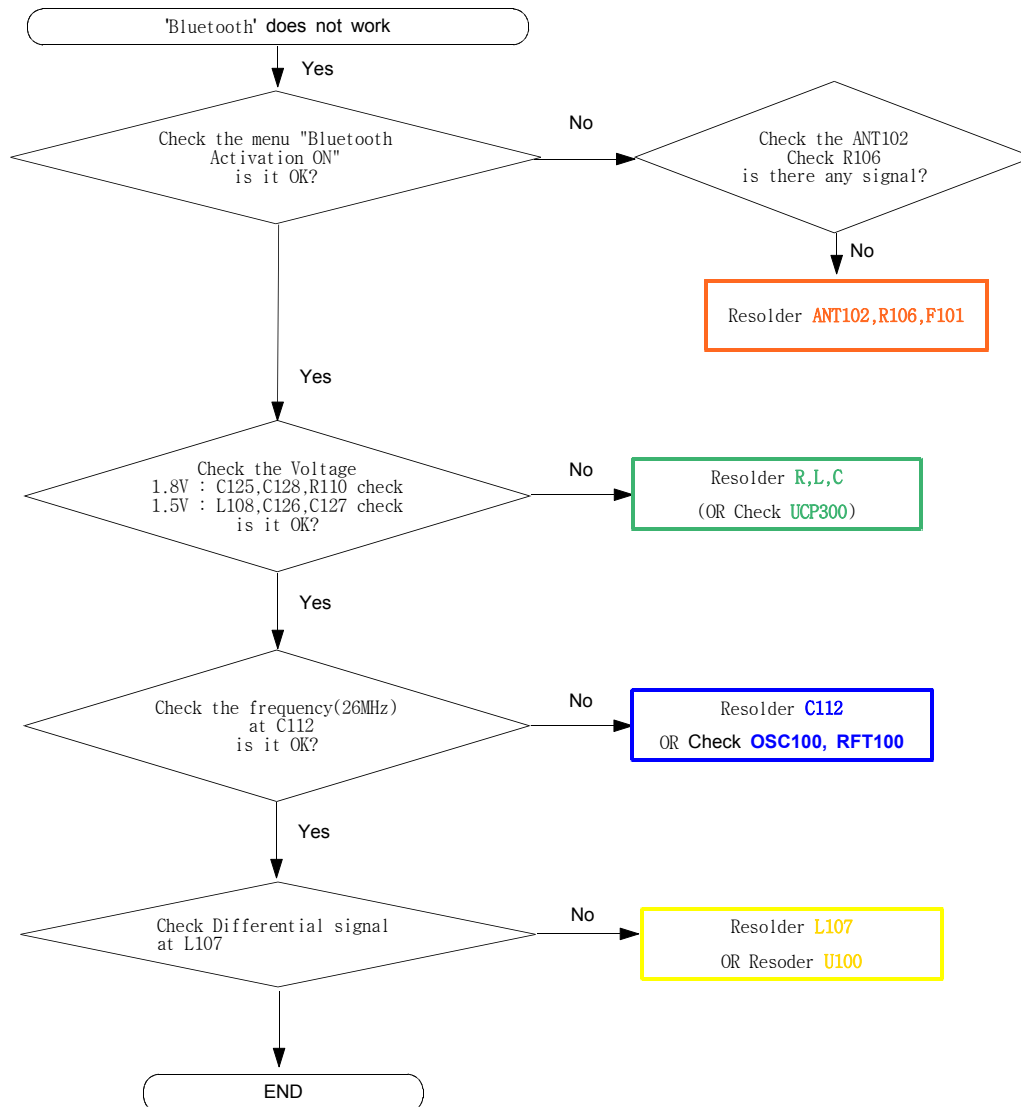


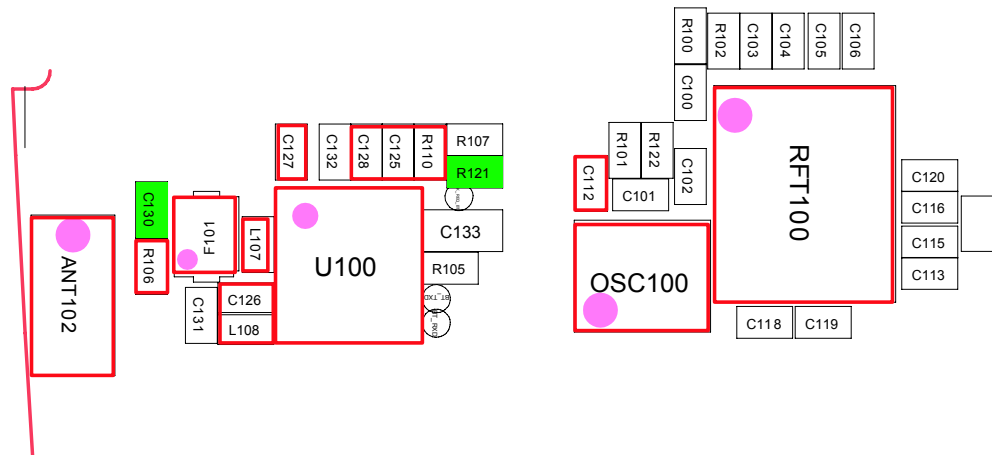
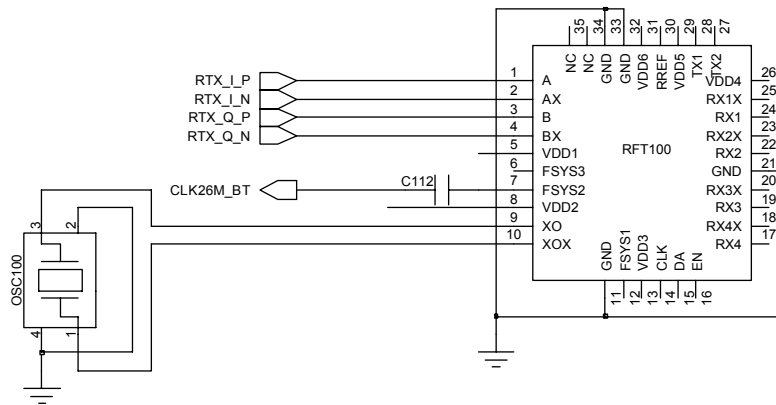
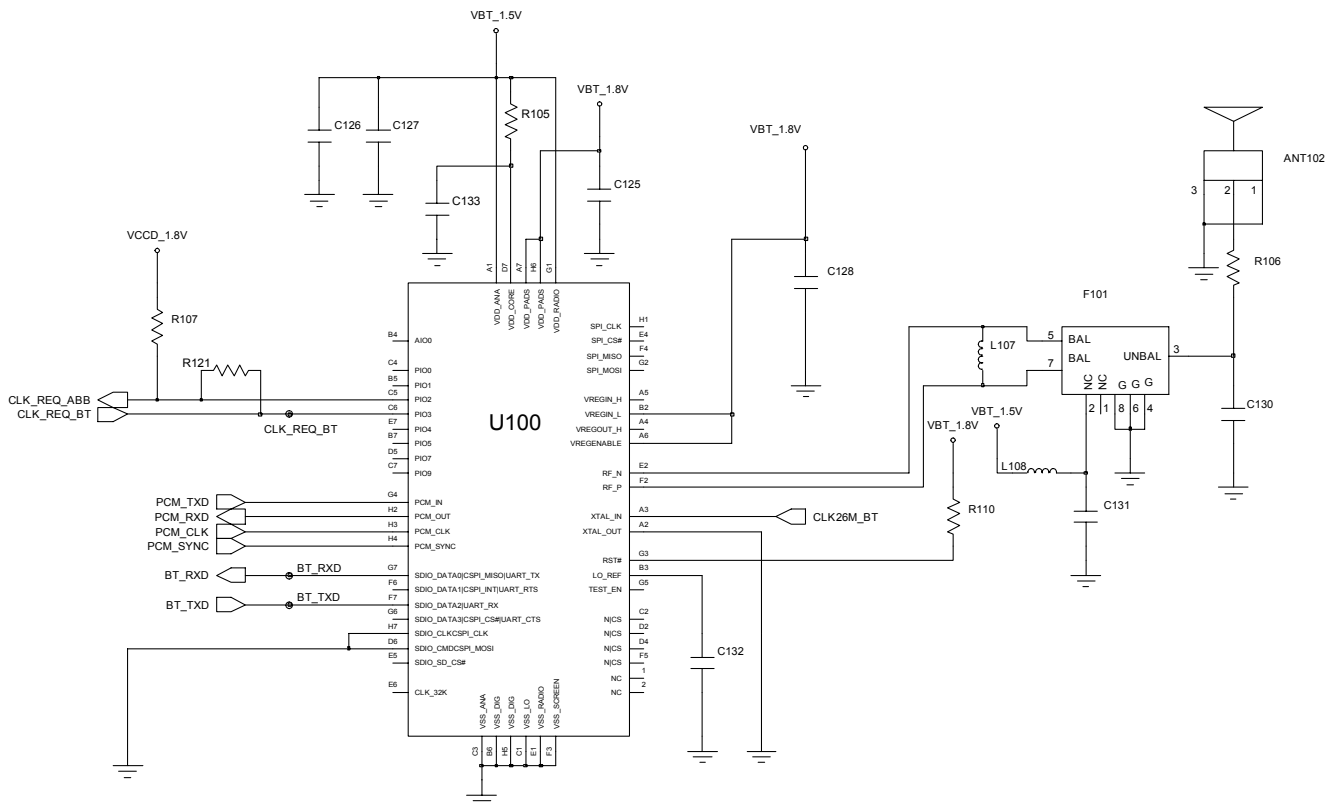
10-1-6. Charging Part



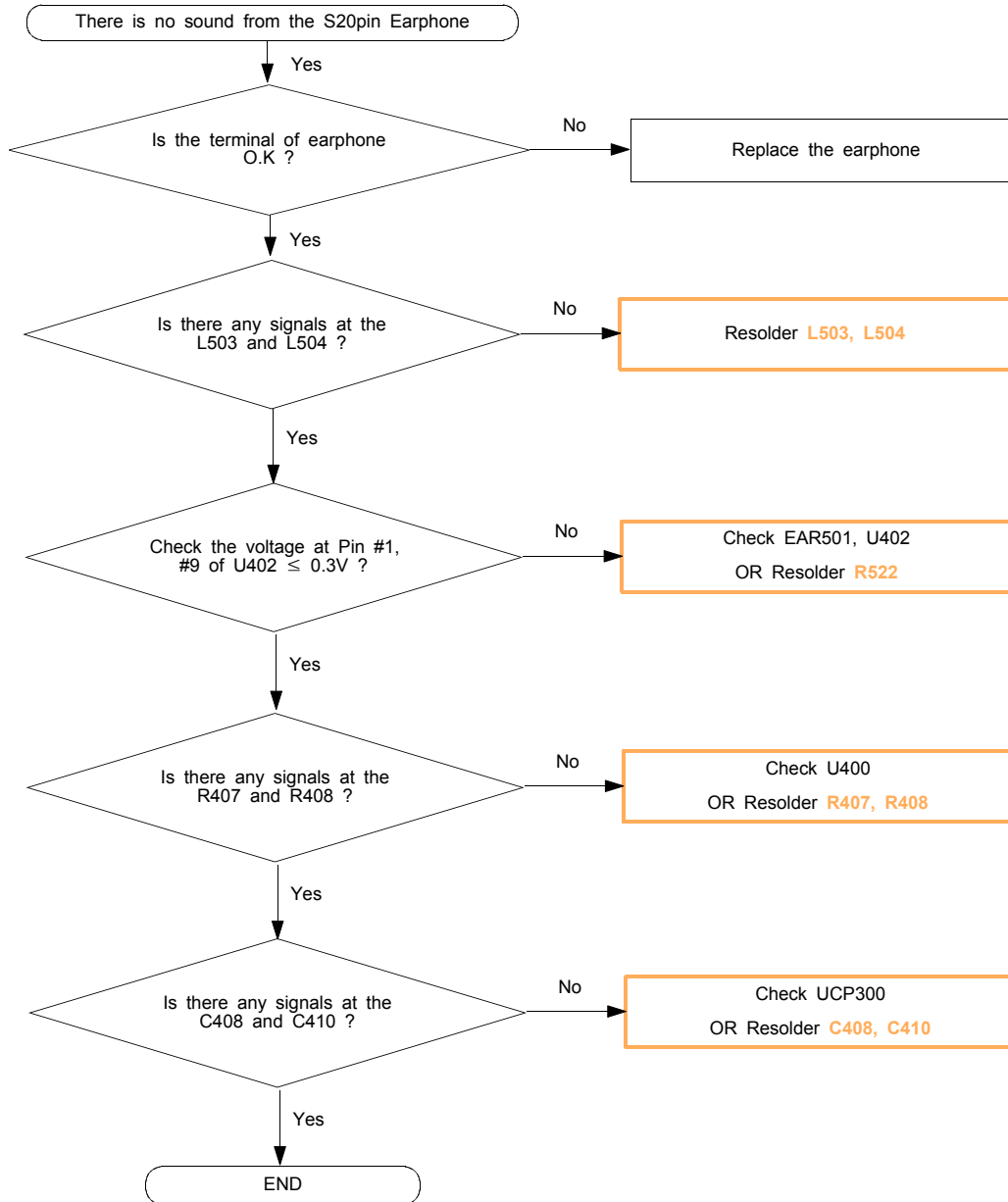


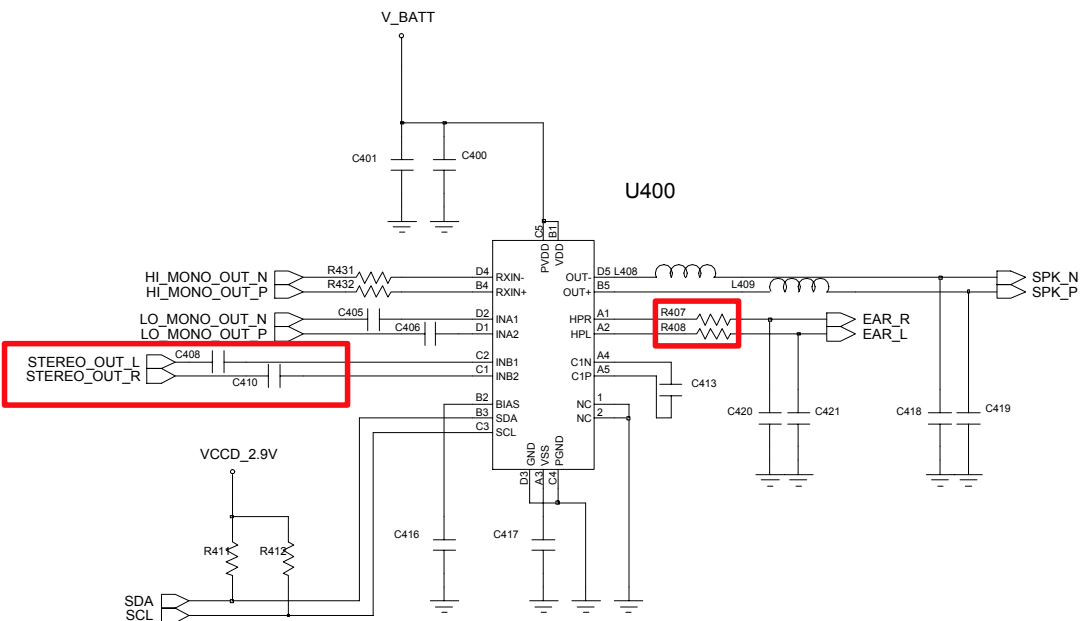
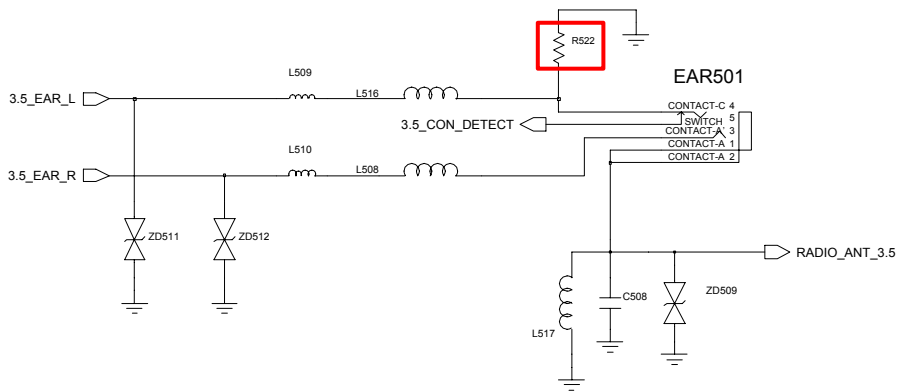
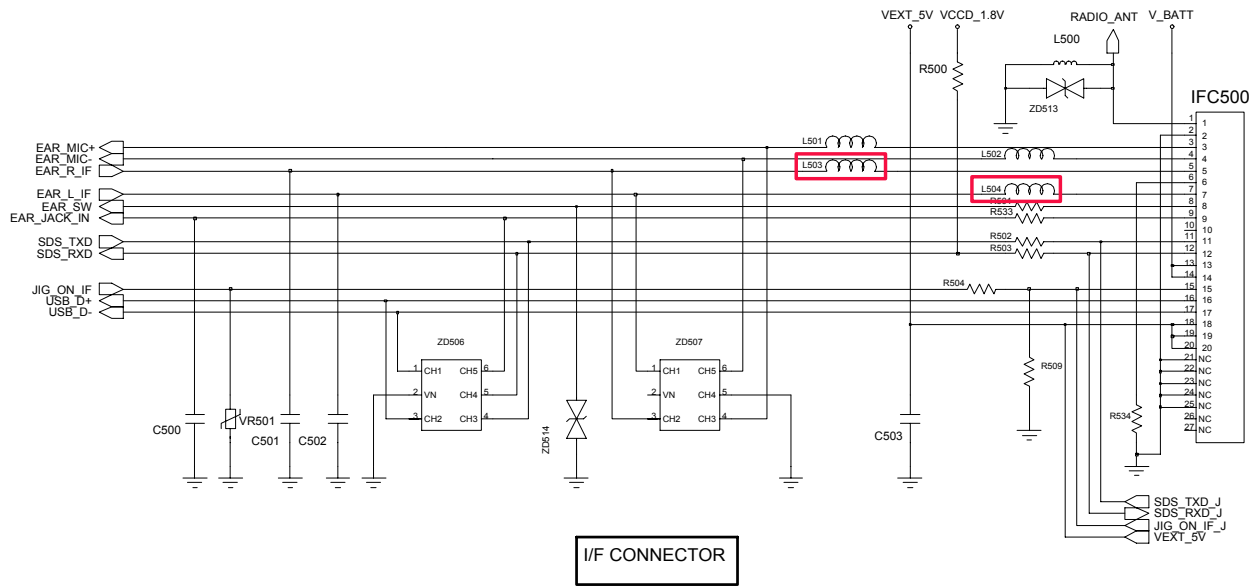
10-1-7. Bluetooth Part

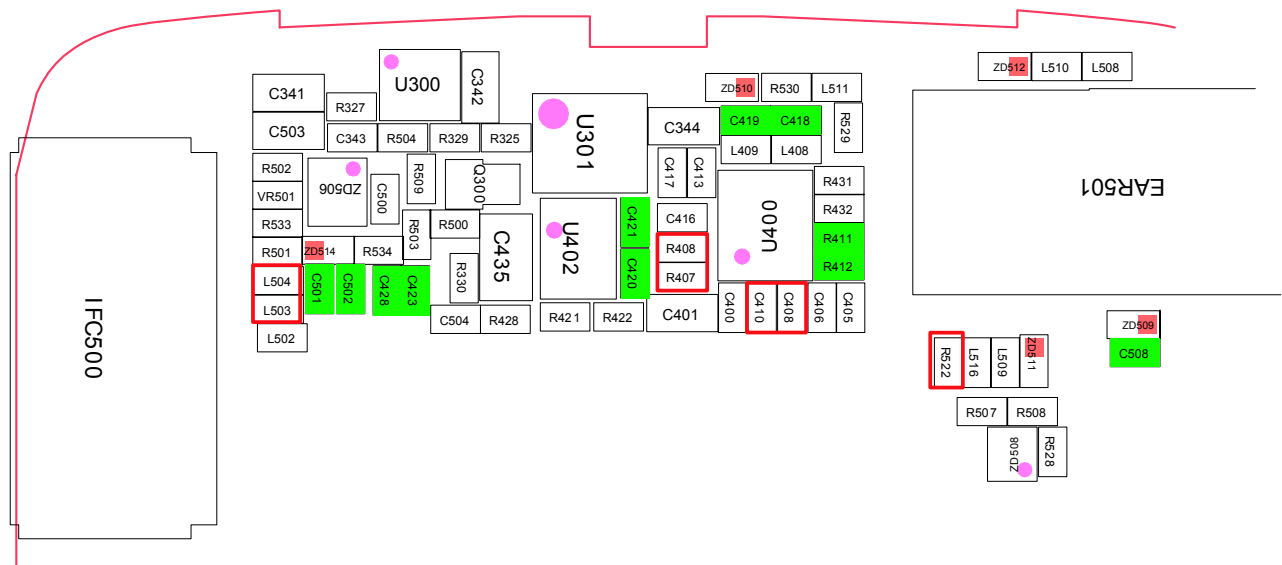




10-1-8. S20 pin Earphone Part

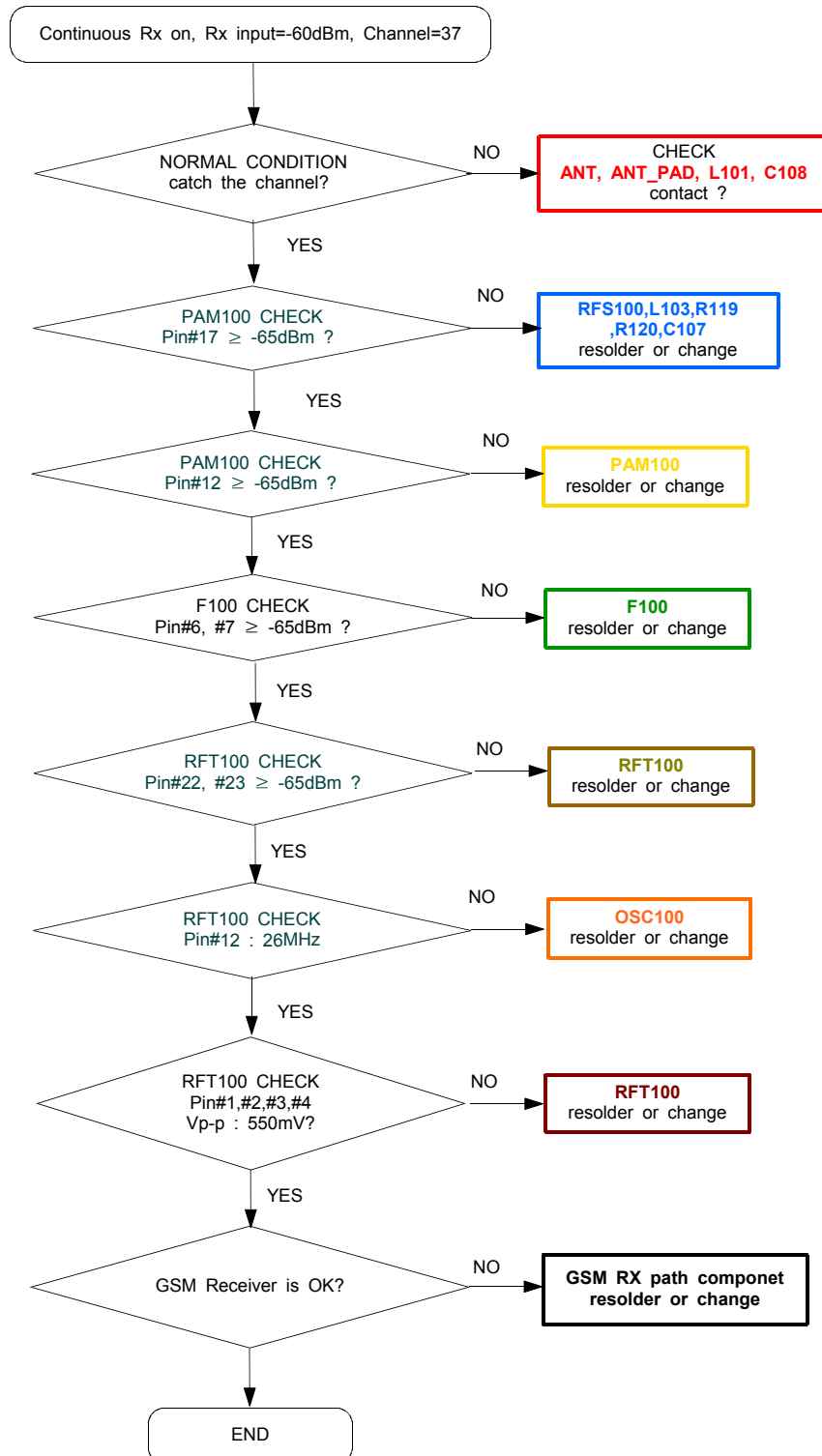




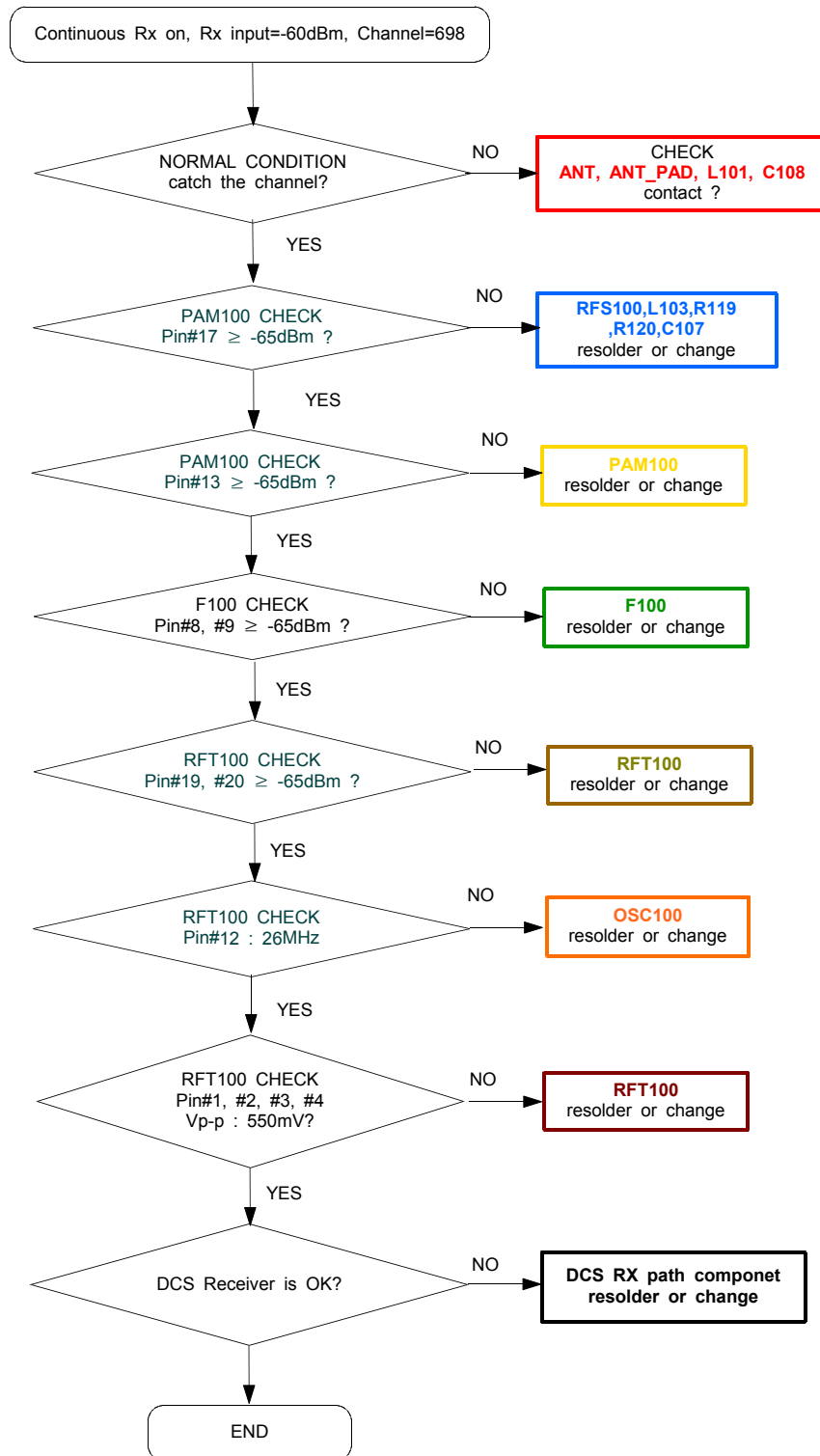


10-2. RF

10-2-1. EGSM RX

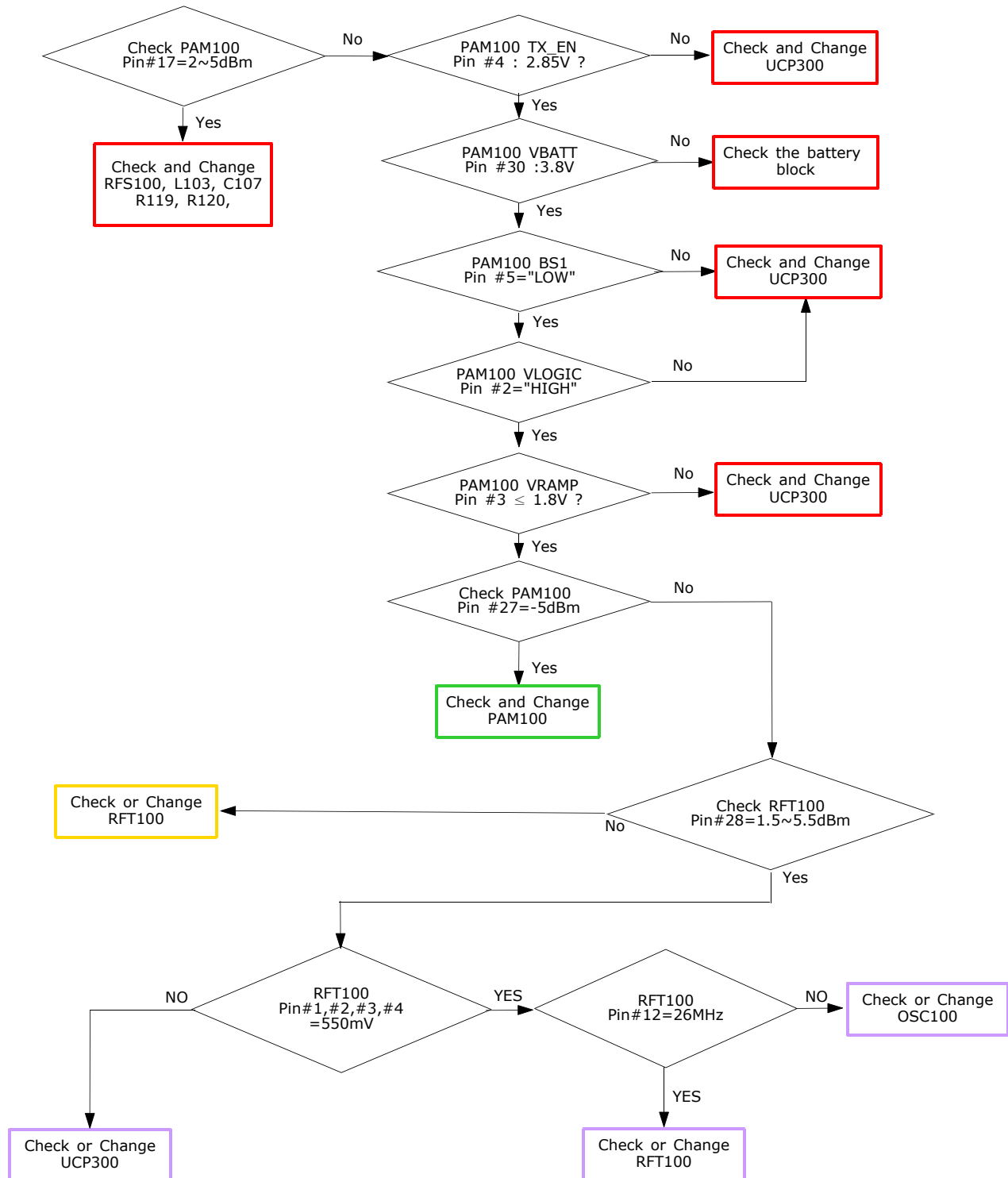


10-2-2. DCS RX



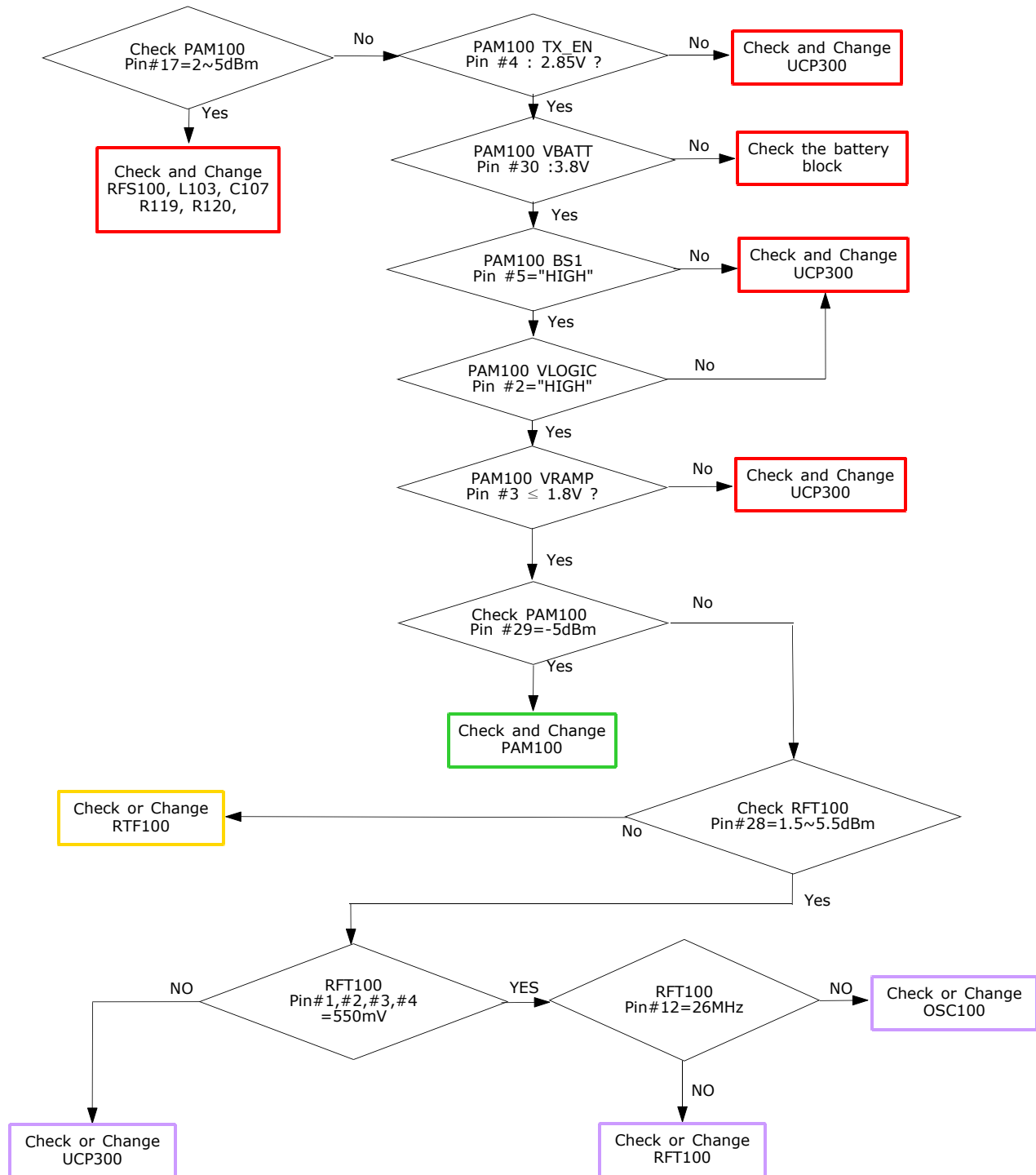
10-2-3. EGSM TX

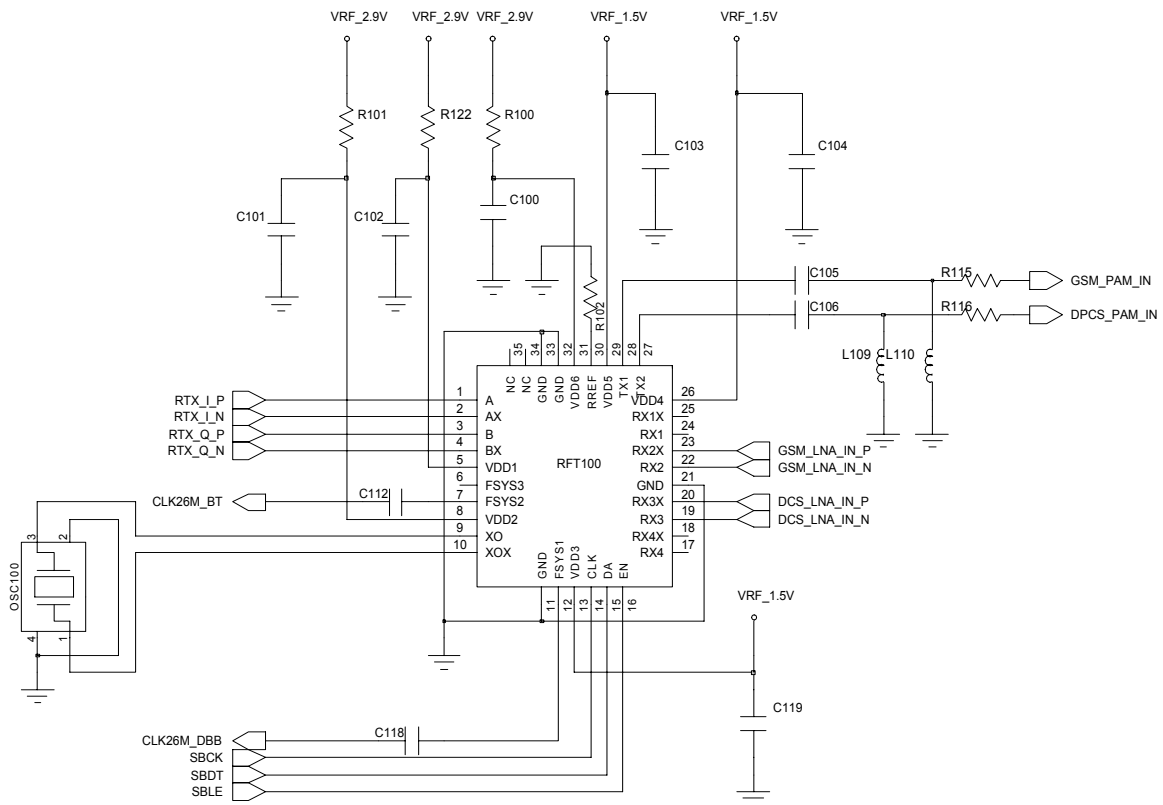
MS TX level 19, CH : 62, RBW : 100KHz, VBW : 100KHz, SPAN : 10MHz, REF LEV. : 10dBm



10-2-4. DCS TX

DCS: MS TX level 15 CH : 698, RBW : 100KHz, VBW : 100KHz, SPAN : 10MHz, REF LEV. : 10dBm





UCD200

