

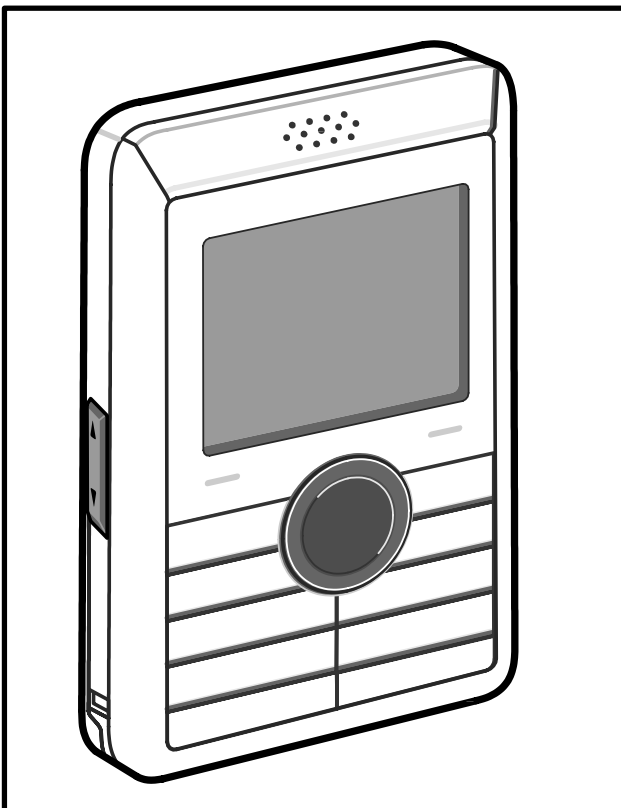
SAMSUNG

GSM TELEPHONE

SGH-P310

***SERVICE* Manual**

GSM TELEPHONE



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10. Reference data

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test,
because specipicty 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.

2. Specification

2-1. GSM General Specification

	GSM900 Phase 1	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	1~124	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	45 MHz	45 MHz	95 MHz	80 MHz
Mod. Bit rate/ Bit Period	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us
Time Slot Period/Frame Period	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK	0.3 GMSK
MS Power	33 dBm~13 dBm	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm
Power Class	5 pcl ~ 15 pcl	5 pcl ~ 19 pcl	0 pcl ~ 15 pcl	0 pcl ~ 15 pcl
Sensitivity	-102 dBm	-102 dBm	-100 dBm	-100 dBm
TDMA Mux	8	8	8	8
Cell Radius	35 Km	35 Km	2 Km	-

2-2. GSM Tx Power Class

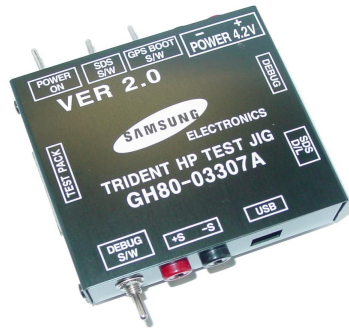
TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3 dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

3. Product Function

Main Function

- Camera and camcorder
- Image editor
- Music player
- Photo printing
- Phone to TV
- File viewer
- Bluetooth
- Web browser
- Offline mode
- E-mail
- Multimedia Message Service
- Java
- Voice recorder

4. Array course control



Test Jig (GH80-03307A)



Test Cable (GH39-00478A)



RF Test Cable (GH39-00182A)

Software Downloading

4-1. Downloading Binary Files

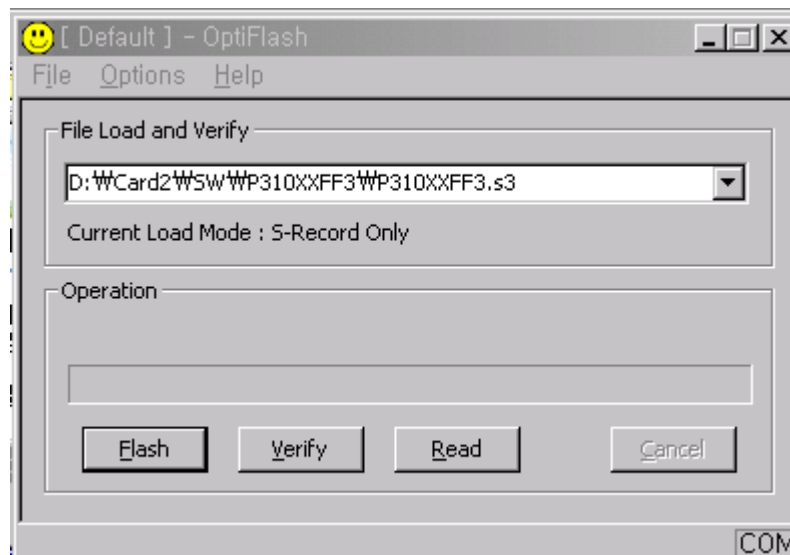
- Three binary files for downloading SGH-P310.
 - P310XXFF3.s3 : Main source code binary.

4-2. Pre-requisite for Downloading

- Downloader Program([OptiFlash.exe](#))
- SGH-P310 Mobile Phone
- Data Cable
- Binary files

4-3. S/W Downloader Program

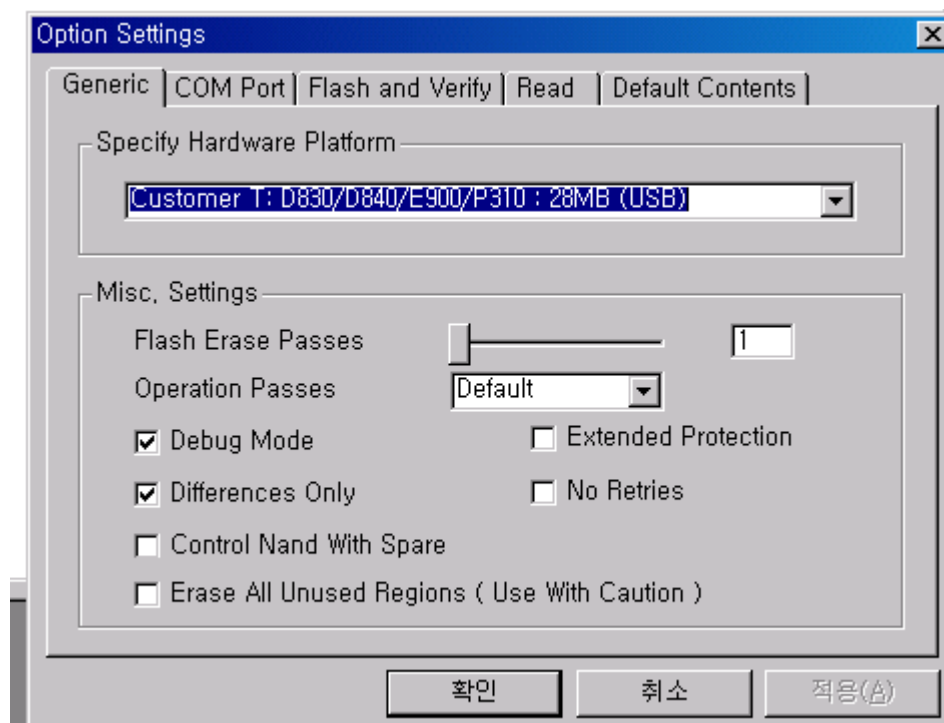
1. Load the binary download program by executing the **"OptiFlash.exe"**



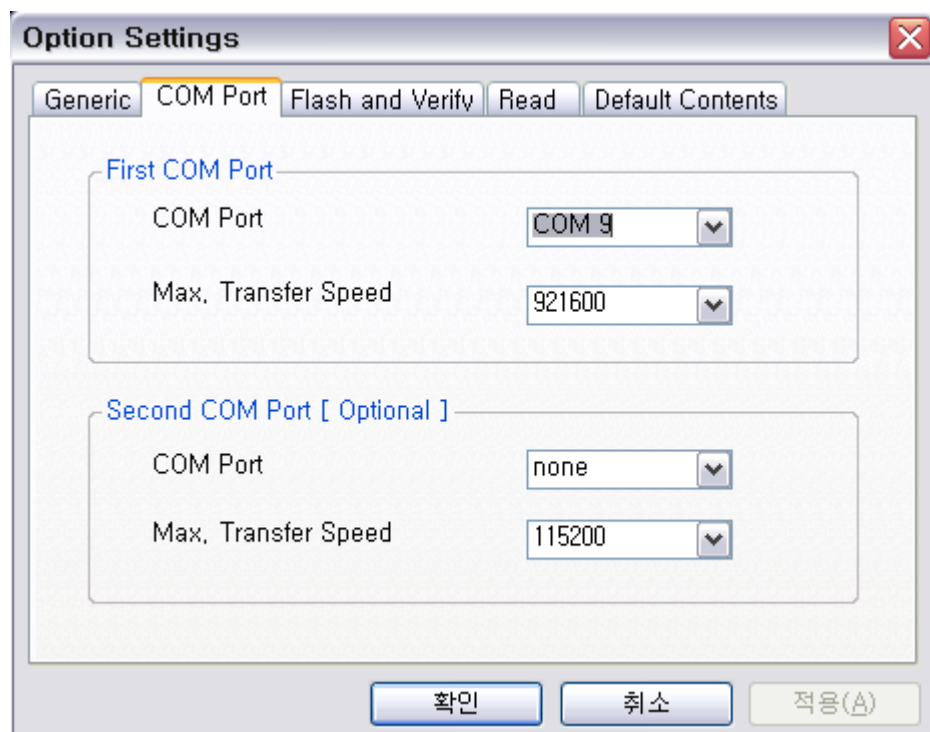
2. Select the **"Options" -> "Settings" -> "Generic" -> "Specify hardware platform"**.

Choose hardware platform for the downloader file setting.

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



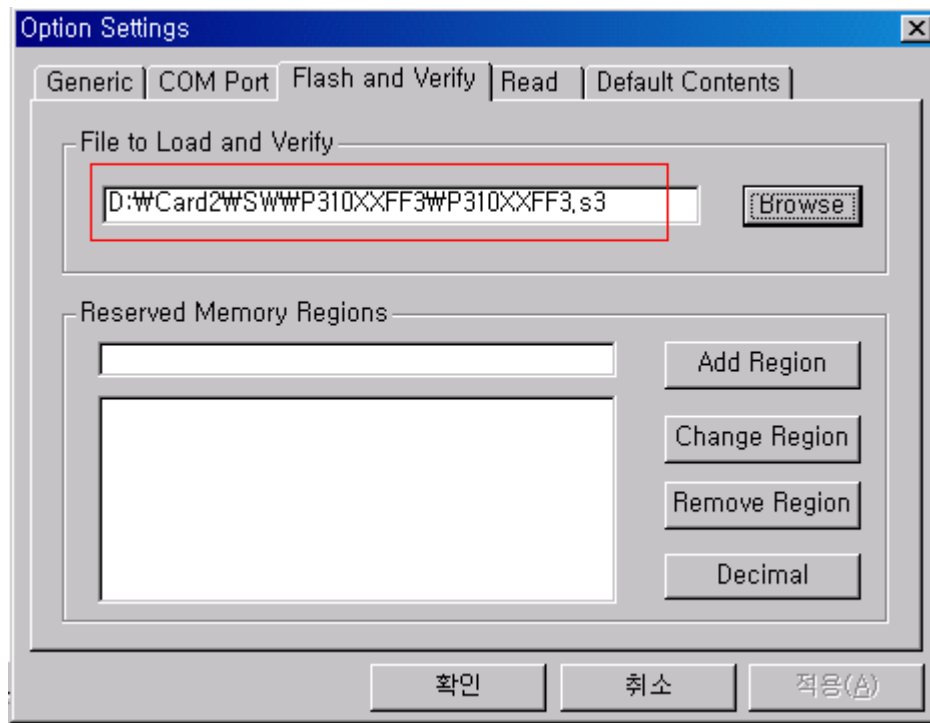
3. Select the **COM port** when the download cable is connected



Up to twelve ports are supported. 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 latest s/w binary, for example "X820XXYY.s3", for the downloader binary setting.



Make sure that not to change the reserved memory regions.

In case of X820 the reserved regions are :

-0x20000010 – 0x2000ffff

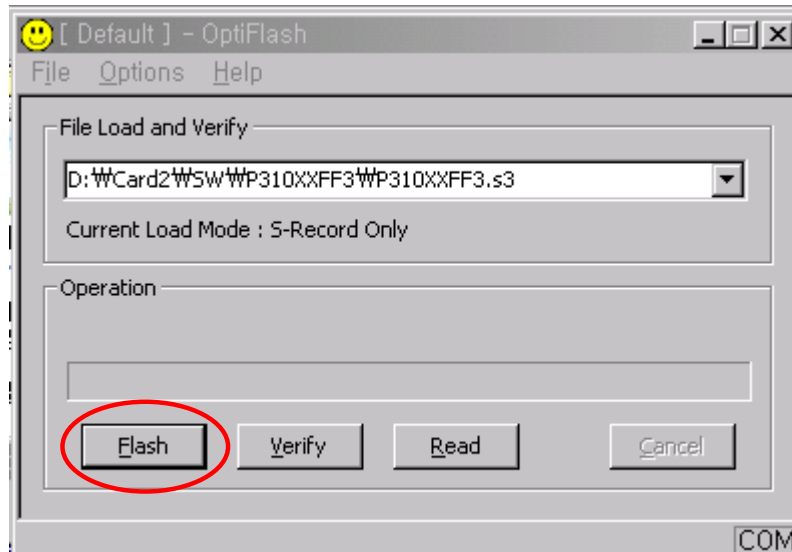
-0x21ff0000– 0x21ff1fff

-0x29000000 – 0x30000000

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. :♪

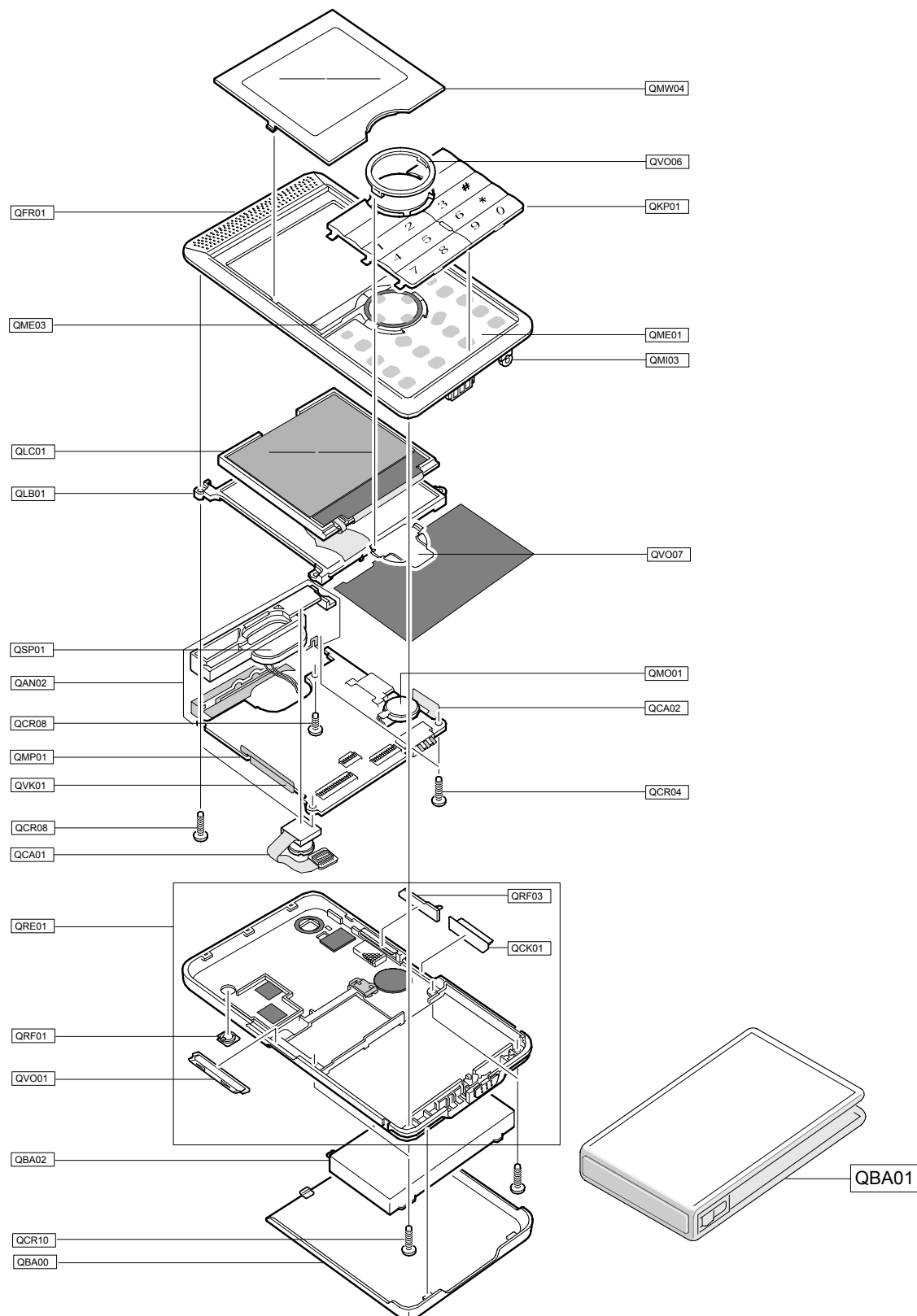
***#1234#**♪

Full Reset : ♪

***2767*3855#**

5. Exploded View and Parts List

5-1. Cellular phone Exploded View

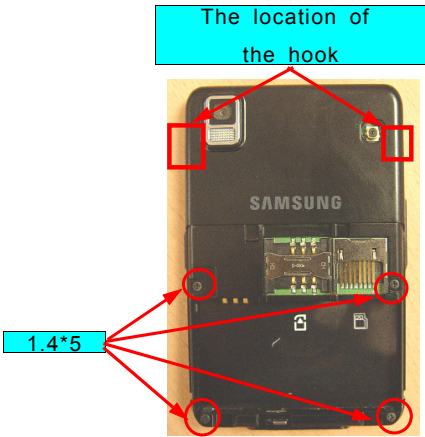
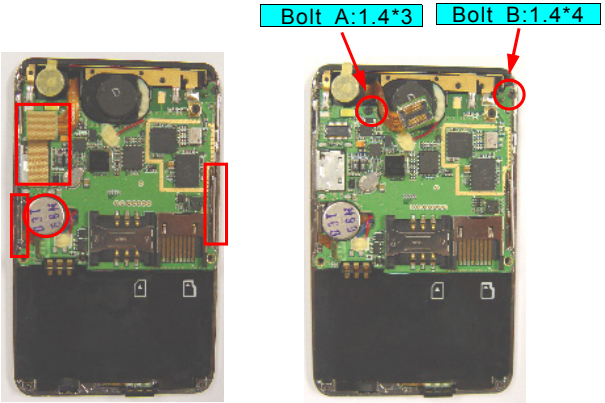
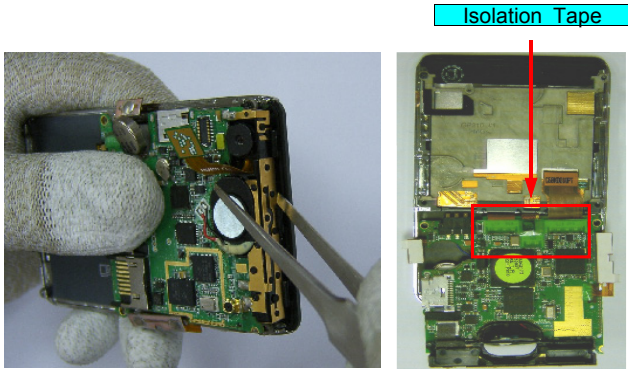
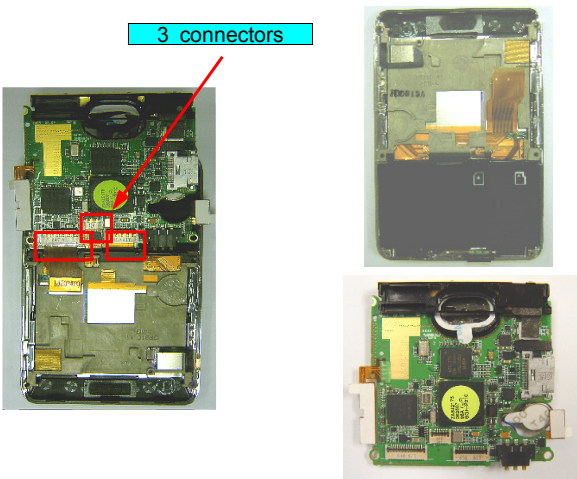


5-2. Cellular phone Parts list

Design LOC		Discription	SEC CODE
QAN02		INTENNA-SGHP310	GH42-00921A
QBA00		ASSY COVER-BATTERY	GH98-01619A
QBA01		BATTERY-1040MAH,BLK,ENG,MAIN	GH43-02564A
QBA02		BATTERY-750MAH,BLK,ENG,MAIN	GH43-02565A
QCA01		UNIT-2M CAMERA	GH59-03429A
QCA02		UNIT-CAMERA KEY	GH59-03402A
QCR04		SCREW-MACHINE	6001-001479
QCR08		SCREW-MACHINE	6001-001456
QCR10		SCREW-MACHINE	6001-001633
QFR01		ASSY CASE-FRONT	GH98-01542A
QKP01		ASSY KEYPAD-(XEF/XKA)	GH98-01620A
QLB01		ASSY BRACKET-LCD	GH98-01610A
QLC01		LCD-LCD MODULE,SGHP310	GH07-00954A
QME01		UNIT-KEY FPCB	GH59-03401A
QME03		UNIT-TOUCH KEY	GH59-03398A
QMI03		RMO-RUBBER HOLDER MIC	GH73-07572A
QMO01		MOTOR DC	GH31-00088A
QMP01		PBA MAIN-SGH P310	GH92-02774A
QMW04		ASSY COVER-MAIN WINDOW	GH98-01611A
QRF01		PMO-COVER RF	GH72-32601A
QSP01		SPEAKER	3001-002027
QVK01		UNIT-VOLUME KEY	GH59-03396A
QVO01		PMO-VOLUME KEY	GH72-32600A
QVO06		NDC-DECO KEY	GH71-06837A
QVO07		IPR-DECO KEY STOPPER	GH70-01641A
QRE01		ASSY CASE-REAR	GH98-01618A
	QRF03	PMO-COVER EAR SLIDE	GH72-32598A
	QCK01	PMO-CAMERA KEY	GH72-32599A

Discription	SEC CODE
BAG PE	6902-000297
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHD800 TA(EU)	GH44-01060A
S/W CD-SAMSUNG PC STUDIO 3.0	GH46-00307A
UNIT-EARPHONE(BLK)	GH59-02499A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(P)-OPEN MP3	GH68-11246A
LABEL(R)-MAIN(FRANCE)	GH68-12149B
MANUAL USERS-EU FRENCH	GH68-12467A
BOX(P)-UNIT MAIN(EU)	GH69-04386A
CUSHION-CASE TA2 MA4	GH69-04395A
RMO-RUBBER BT	GH73-08468A
MPR-TAPE JY VOL KEY	GH74-26344A
MPR-TAPE JY CAM KEY	GH74-26345A
MPR-TAPE FRONT	GH74-26347A
MPR-INSU TAPE KEY CONN	GH74-26619A
MPR-GASK TAPE GOLD IF CONN	GH74-26620A
MPR-ELEC TAPE CAM BT	GH74-26904A
MPR-INSU TAPE TOUCH KEY	GH74-28135A
MPR-SPONGE IF CONN	GH74-28137A
MPR-INSU TAPE	GH74-28345A

5-3. Disassembly

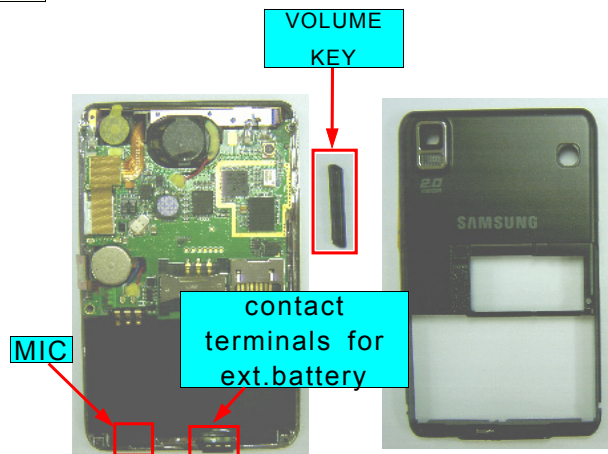
1 	2 
1) Unscrew 4 points rear bolts the back of a set. 2) First take the left side hook apart, next right side and then remove the whole Rear like upper picture. ※ caution 1) When you take a Rear apart, be careful about the damage of the hook.	1) Detach a EMI tape of IF connector and divide camera FPCB from the connector. 2) Detach a camera key FPCB, a volume key FPCB, and a motor stick to the Front then unscrew a and b. ※ caution 1) Be careful, the motor wire isn't down. 2) Be careful with the damages of FPCBS.
3 	4 
1) Insert tweezers into the upper side of Intenna like a picture, then detach PBA Ass'y from Front Ass'y with care. 2) Detach a tape of connectors. ※ caution 1) Please be careful when you detach PBA Ass'y, because there is Double-stick on the below.	1) After take 3 FPCBs out connector, detach PBA Ass'y from Front Ass'y. ※ caution 1) Be careful with the damages of connectors.

5 1) Remove a rubber with tweezers which attached left-upper side of a LCD Braket. 2) Unscrew and take apart the LCD Braket. ※ caution 1) Be careful with the damage of FPCB when removing.	6 1) Band a Front Ass'y and make a space. Squeeze a tweezers into the space and detach the LCD from a Window carefully. ※ caution 1) Detach very carefully because there is Double-stick between the LCD and the Window.
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5-4. Assembly

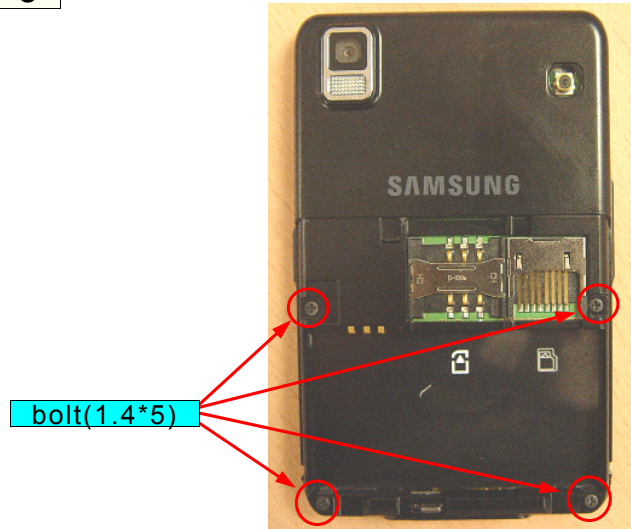
1	2
1) As seen above, insert an each FPCB in the front set to the connectors in PBA, ※ caution 1) Each connector should be certainly clicked along the marked line 2) Be careful of the possible damage on FPCB	1) Stick the insulation tape on the connectors. 2) Fold up the PBA and put it on the front set. ※ caution 1) Edge of PBA should be well-fit to the hook in LCD bracket.
3	4
1) Place the MIC as the picture below ※ caution 1) Check the MIC FPCB is OK	1) Put the MIC COVER and CREW 2) Attach KEYPAD 3) Press the KEYPAD not to be detached ※ caution 1) Check the KEY PAD is OK

5



- 1) Combine the front set and the rear cover.
 - ※ Fit the left side of the cover first.
 - 2) Insert "volume key" to the right side of the cover.
- ※ **caution**
- 1) Be cautious not to have a damage on MIC and the contact terminals for external battery.

6



- 1) Screw the 4 bolts, as seen above.
 - Check the side keys to be clicked well
- ※ **caution**
- 1) Be careful of "scratch", when screw the bolts.

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0403-001547	ZD403	DIODE-ZENER	SA
0403-001547	ZD405	DIODE-ZENER	SA
0404-001172	D300	DIODE-SCHOTTKY	SA
0406-001190	ZD402	DIODE-TVS	SA
0406-001208	ZD401	DIODE-TVS	SA
0407-000115	D500	DIODE-ARRAY	SA
0504-000168	TR402	TR-DIGITAL	SA
0505-001165	TR201	FET-SILICON	SA
0505-002116	U204	FET-SILICON	SA
0601-002015	LED400	LED	SA
0801-002529	TR400	IC-CMOS LOGIC	SA
0801-003139	U203	IC-CMOS LOGIC	SA
0801-003139	U207	IC-CMOS LOGIC	SA
0801-003139	U208	IC-CMOS LOGIC	SA
1001-001231	U404	IC-ANALOG SWITCH	SA
1001-001408	U500	IC-ANALOG SWITCH	SA
1006-001322	U304	IC-LINE TRANSCEIVER	SNA
1009-001018	U206	IC-HALL EFFECT S/W	SA
1108-000063	UCP200	IC-MCP	SA
1201-002147	U403	IC-VIDEO AMP	SA
1201-002240	U502	IC-AUDIO AMP	SA
1201-002368	PAM100	IC-POWER AMP	SA
1202-001068	U205	IC-VOLTAGE COMP.	SA
1203-003275	U400	IC-MULTI REG.	SA
1203-003340	U305	IC-POS.FIXED REG.	SA
1203-003432	U100	IC-POS.FIXED REG.	SA
1203-003523	U405	IC-POS.FIXED REG.	SA
1203-003663	U406	IC-BATTERY	SA
1203-003754	U503	IC-POS.FIXED REG.	SA
1203-003768	U506	IC-POS.FIXED REG.	SA
1203-003789	U201	IC-POWER SUPERVISOR	SA
1203-003901	U402	IC-DC/DC CONVERTER	SA
1203-004089	U401	IC-DC/DC CONVERTER	SA
1203-004119	UCP300	IC-POWER SUPERVISOR	SA
1203-004164	U300	IC-DC/DC CONVERTER	SA
1204-002138	U501	IC-MELODY	SA
1205-002272	U200	IC-TRANSCEIVER	SA
1205-002568	U202	IC-SWITCH	SA
1205-002943	U407	IC-CODEC	SA
1205-002944	UCD100	IC-TRANSCEIVER	SA

SEC CODE	Design LOC	Discription	STATUS
1205-002946	UCD500	IC-CODEC	SA
1404-001165	TH300	THERMISTOR-NTC	SA
1405-001082	V400	VARISTOR	SA
1405-001082	V401	VARISTOR	SA
1405-001082	V402	VARISTOR	SA
1405-001082	V403	VARISTOR	SA
1405-001082	V500	VARISTOR	SA
1405-001082	V501	VARISTOR	SA
1405-001177	V310	VARISTOR	SA
1405-001177	V311	VARISTOR	SA
1405-001177	V502	VARISTOR	SA
1405-001177	V503	VARISTOR	SA
1405-001177	V504	VARISTOR	SA
1405-001177	V505	VARISTOR	SA
1405-001177	V506	VARISTOR	SA
2007-000139	R111	R-CHIP	SA
2007-000139	R112	R-CHIP	SA
2007-000141	R524	R-CHIP	SA
2007-000141	R538	R-CHIP	SA
2007-000154	R432	R-CHIP	SA
2007-000157	R501	R-CHIP	SA
2007-000157	R504	R-CHIP	SA
2007-000159	R527	R-CHIP	SA
2007-000159	R532	R-CHIP	SA
2007-000159	R536	R-CHIP	SA
2007-000159	R539	R-CHIP	SA
2007-000162	R512	R-CHIP	SA
2007-000171	R102	R-CHIP	SA
2007-000171	R103	R-CHIP	SA
2007-000171	R139	R-CHIP	SA
2007-000171	R507	R-CHIP	SA
2007-000171	R508	R-CHIP	SA
2007-000171	R531	R-CHIP	SA
2007-000775	R515	R-CHIP	SA
2007-000775	R517	R-CHIP	SA
2007-001284	R410	R-CHIP	SA
2007-001284	R411	R-CHIP	SA
2007-001288	R510	R-CHIP	SA
2007-001288	R511	R-CHIP	SA
2007-001290	R110	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-001325	R519	R-CHIP	SA
2007-003014	R430	R-CHIP	SA
2007-007009	R422	R-CHIP	SA
2007-007142	R529	R-CHIP	SA
2007-007142	R530	R-CHIP	SA
2007-007142	R533	R-CHIP	SA
2007-007142	R535	R-CHIP	SA
2007-007192	R407	R-CHIP	SA
2007-007308	R306	R-CHIP	SA
2007-007317	R523	R-CHIP	SA
2007-007528	R522	R-CHIP	SA
2007-007528	R526	R-CHIP	SA
2007-007528	R537	R-CHIP	SA
2007-007741	R107	R-CHIP	SA
2007-008045	R125	R-CHIP	SA
2007-008045	R540	R-CHIP	SA
2007-008045	R541	R-CHIP	SA
2007-008052	R302	R-CHIP	SA
2007-008052	R308	R-CHIP	SA
2007-008052	R421	R-CHIP	SA
2007-008055	R130	R-CHIP	SA
2007-008055	R205	R-CHIP	SA
2007-008055	R212	R-CHIP	SA
2007-008055	R213	R-CHIP	SA
2007-008055	R229	R-CHIP	SA
2007-008055	R234	R-CHIP	SA
2007-008055	R239	R-CHIP	SA
2007-008055	R309	R-CHIP	SA
2007-008055	R403	R-CHIP	SA
2007-008055	R404	R-CHIP	SA
2007-008055	R406	R-CHIP	SA
2007-008055	R431	R-CHIP	SA
2007-008055	R434	R-CHIP	SA
2007-008055	R435	R-CHIP	SA
2007-008057	R419	R-CHIP	SA
2007-008297	R109	R-CHIP	SA
2007-008401	R230	R-CHIP	SA
2007-008401	R231	R-CHIP	SA
2007-008401	R232	R-CHIP	SA
2007-008401	R233	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008419	R412	R-CHIP	SA
2007-008419	R413	R-CHIP	SA
2007-008419	R414	R-CHIP	SA
2007-008419	R416	R-CHIP	SA
2007-008419	R417	R-CHIP	SA
2007-008419	R418	R-CHIP	SA
2007-008419	R423	R-CHIP	SA
2007-008419	R427	R-CHIP	SA
2007-008478	R208	R-CHIP	SA
2007-008478	R319	R-CHIP	SA
2007-008478	R320	R-CHIP	SA
2007-008483	R128	R-CHIP	SA
2007-008483	R200	R-CHIP	SA
2007-008483	R201	R-CHIP	SA
2007-008483	R202	R-CHIP	SA
2007-008483	R203	R-CHIP	SA
2007-008483	R204	R-CHIP	SA
2007-008483	R207	R-CHIP	SA
2007-008483	R228	R-CHIP	SA
2007-008483	R236	R-CHIP	SA
2007-008483	R237	R-CHIP	SA
2007-008483	R238	R-CHIP	SA
2007-008483	R240	R-CHIP	SA
2007-008483	R300	R-CHIP	SA
2007-008483	R402	R-CHIP	SA
2007-008483	R420	R-CHIP	SA
2007-008483	R426	R-CHIP	SA
2007-008483	R542	R-CHIP	SA
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2007-008516	R321	R-CHIP	SA
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2007-008516	R445	R-CHIP	SA
2007-008542	R401	R-CHIP	SA
2007-008542	R439	R-CHIP	SA
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2007-008542	R443	R-CHIP	SA
2007-008542	R506	R-CHIP	SA

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2007-008588	R425	R-CHIP	SA
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2007-008808	R505	R-CHIP	SA
2007-009084	R409	R-CHIP	SA
2007-009108	R235	R-CHIP	SA
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2007-009111	R210	R-CHIP	SA
2007-009157	R316	R-CHIP	SA
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2007-009167	R307	R-CHIP	SA
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2007-009211	R127	R-CHIP	SA
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2203-000438	C533	C-CER,CHIP	SA
2203-000466	C102	C-CER,CHIP	SA
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2203-005736	C316	C-CER,CHIP	SA
2203-005736	C556	C-CER,CHIP	SA
2203-005736	C557	C-CER,CHIP	SA
2203-005779	C441	C-CER,CHIP	SA
2203-005779	C442	C-CER,CHIP	SA
2203-005806	C345	C-CER,CHIP	SNA
2203-005819	C107	C-CER,CHIP	SA
2203-006121	C123	C-CER,CHIP	SA
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2203-006190	C541	C-CER,CHIP	SA
2203-006190	C547	C-CER,CHIP	SA
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2203-006194	C133	C-CER,CHIP	SA
2203-006194	C136	C-CER,CHIP	SA
2203-006194	C200	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006194	C303	C-CER,CHIP	SA
2203-006194	C318	C-CER,CHIP	SA
2203-006194	C319	C-CER,CHIP	SA
2203-006194	C343	C-CER,CHIP	SA
2203-006194	C411	C-CER,CHIP	SA
2203-006194	C503	C-CER,CHIP	SA
2203-006194	C504	C-CER,CHIP	SA
2203-006257	C310	C-CER,CHIP	SA
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2203-006305	C421	C-CER,CHIP	SA
2203-006324	C308	C-CER,CHIP	SA
2203-006324	C401	C-CER,CHIP	SA
2203-006348	C405	C-CER,CHIP	SA
2203-006361	C306	C-CER,CHIP	SA
2203-006361	C417	C-CER,CHIP	SA
2203-006379	C538	C-CER,CHIP	SA
2203-006379	U507	C-CER,CHIP	SA
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2203-006423	C108	C-CER,CHIP	SA
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2203-006423	C128	C-CER,CHIP	SA
2203-006423	C135	C-CER,CHIP	SA
2203-006423	C201	C-CER,CHIP	SA
2203-006423	C202	C-CER,CHIP	SA
2203-006423	C204	C-CER,CHIP	SA
2203-006423	C209	C-CER,CHIP	SA
2203-006423	C210	C-CER,CHIP	SA
2203-006423	C212	C-CER,CHIP	SA
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2203-006423	C216	C-CER,CHIP	SA

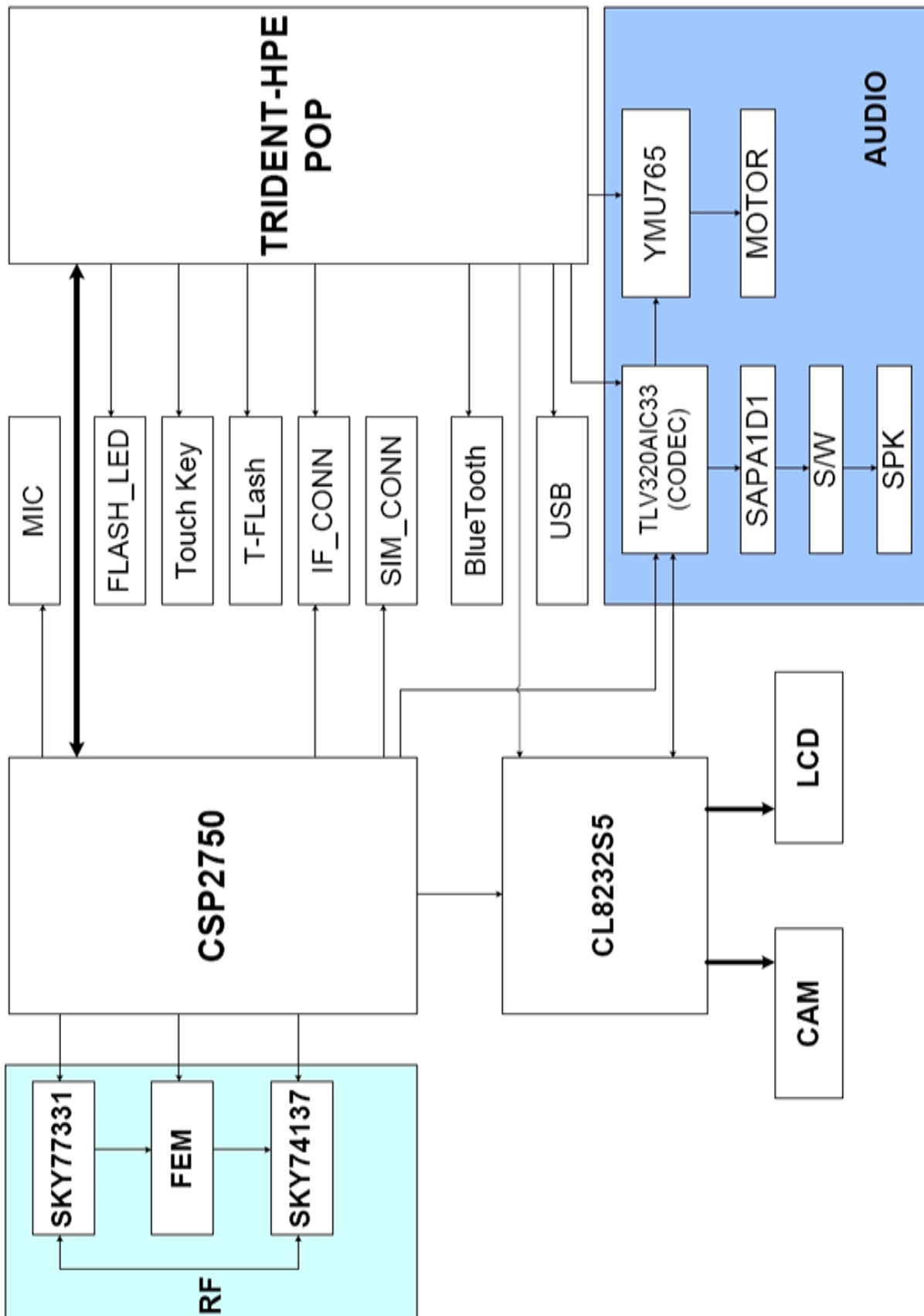
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2203-006423	C346	C-CER,CHIP	SA
2203-006423	C403	C-CER,CHIP	SA
2203-006423	C404	C-CER,CHIP	SA
2203-006423	C412	C-CER,CHIP	SA
2203-006423	C422	C-CER,CHIP	SA
2203-006423	C428	C-CER,CHIP	SA
2203-006423	C432	C-CER,CHIP	SA
2203-006423	C433	C-CER,CHIP	SA
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2203-006423	C451	C-CER,CHIP	SA
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2203-006423	C516	C-CER,CHIP	SA
2203-006423	C528	C-CER,CHIP	SA
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2203-006466	C437	C-CER,CHIP	SA
2203-006556	C223	C-CER,CHIP	SA
2203-006562	C134	C-CER,CHIP	SA
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2203-006562	C344	C-CER,CHIP	SA
2203-006562	C347	C-CER,CHIP	SA
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2203-006562	C406	C-CER,CHIP	SA

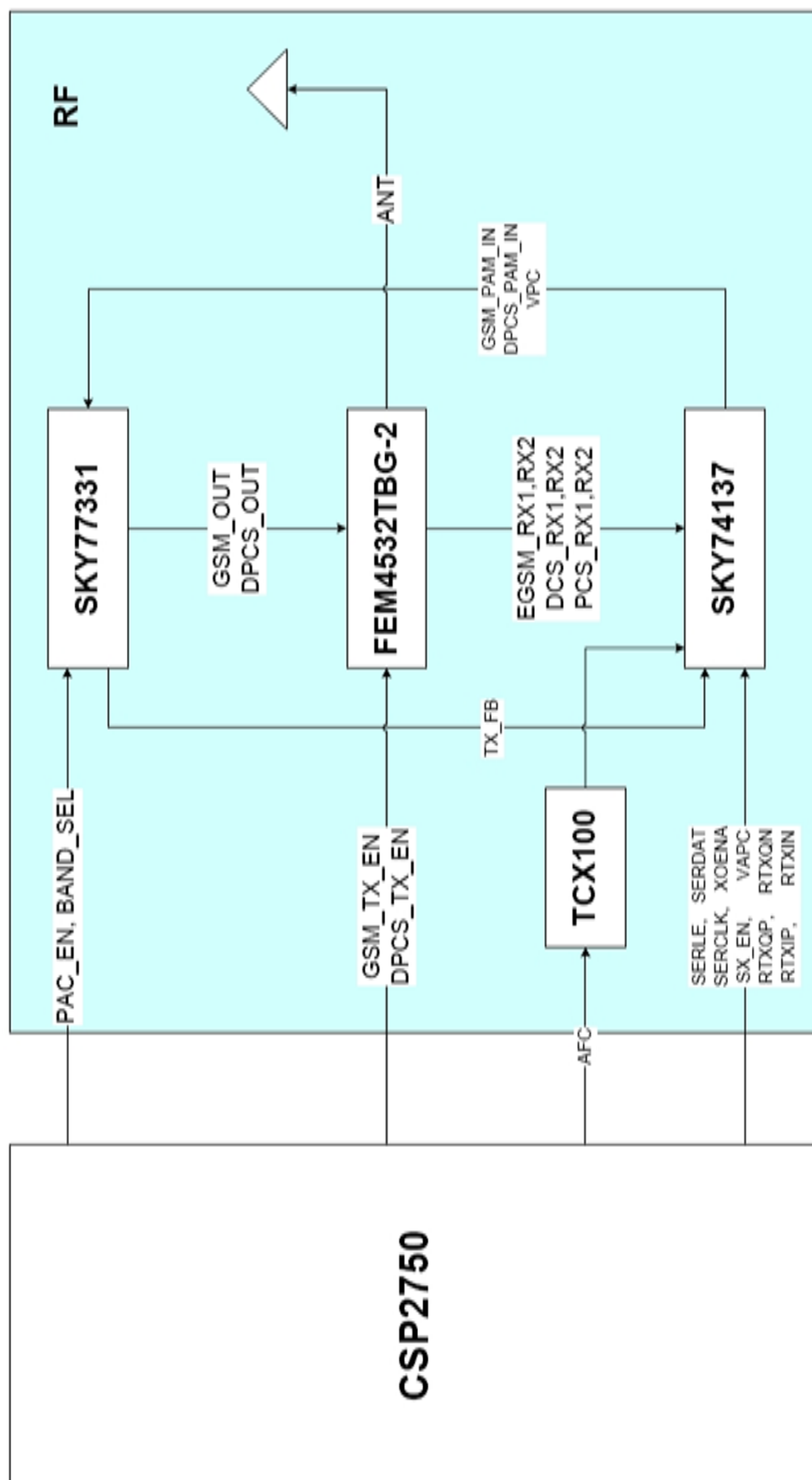
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2203-006562	C452	C-CER,CHIP	SA
2203-006562	C501	C-CER,CHIP	SA
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2203-006562	C537	C-CER,CHIP	SA
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2203-006636	C416	C-CER,CHIP	SA
2203-006642	C322	C-CER,CHIP	SA
2203-006642	C323	C-CER,CHIP	SA
2203-006647	C413	C-CER,CHIP	SA
2203-006647	C414	C-CER,CHIP	SA
2203-006648	C317	C-CER,CHIP	SA
2203-006648	C431	C-CER,CHIP	SA
2203-006681	C424	C-CER,CHIP	SA
2203-006824	C402	C-CER,CHIP	SA
2203-006824	C415	C-CER,CHIP	SA
2203-006824	C536	C-CER,CHIP	SA
2203-006825	C305	C-CER,CHIP	SA
2203-006825	C307	C-CER,CHIP	SA
2203-006872	C115	C-CER,CHIP	SA
2203-006872	C311	C-CER,CHIP	SA
2203-006872	C434	C-CER,CHIP	SA
2203-006872	C435	C-CER,CHIP	SA
2203-006872	C553	C-CER,CHIP	SA
2203-006872	C554	C-CER,CHIP	SA
2203-006963	C454	C-CER,CHIP	SA
2404-001339	TA502	C-TA,CHIP	SA
2404-001339	TA504	C-TA,CHIP	SA
2404-001352	TA505	C-TA,CHIP	SA
2404-001352	TA506	C-TA,CHIP	SA
2404-001353	C418	C-TA,CHIP	SA
2404-001353	C419	C-TA,CHIP	SA
2404-001381	C438	C-TA,CHIP	SA
2404-001406	C440	C-TA,CHIP	SA
2404-001411	C120	C-TA,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2703-001737	L107	INDUCTOR-SMD	SA
2703-001747	L105	INDUCTOR-SMD	SA
2703-001747	L106	INDUCTOR-SMD	SA
2703-001748	L103	INDUCTOR-SMD	SA
2703-001748	L104	INDUCTOR-SMD	SA
2703-001752	L100	INDUCTOR-SMD	SA
2703-001786	L101	INDUCTOR-SMD	SA
2703-001786	L102	INDUCTOR-SMD	SA
2703-002734	L300	INDUCTOR-SMD	SA
2703-002734	L301	INDUCTOR-SMD	SA
2703-002880	L110	INDUCTOR-SMD	SA
2801-004340	OSC400	CRYSTAL-SMD	SA
2801-004551	OSC200	CRYSTAL-SMD	SA
2804-001591	OSC300	OSCILLATOR-CLOCK	SA
2809-001284	TCX100	OSCILLATOR-VCTCXO	SA
2901-001308	F300	FILTER-EMI SMD	SA
2901-001308	F301	FILTER-EMI SMD	SA
2901-001308	F302	FILTER-EMI SMD	SA
2901-001308	F303	FILTER-EMI SMD	SA
2911-000034	F101	DUPLEXER-FEM	SA
3301-001158	L502	BEAD-SMD	SA
3301-001158	L503	BEAD-SMD	SA
3301-001342	L200	BEAD-SMD	SA
3301-001342	L400	BEAD-SMD	SA
3301-001342	L401	BEAD-SMD	SA
3301-001659	L500	BEAD-SMD	SA
3301-001659	L501	BEAD-SMD	SA
3301-001806	L109	BEAD-SMD	SA
3705-001421	RFS100	CONNECTOR-COAXIAL	SA
3708-002171	CN302	CONNECTOR-FPC/FFC/PIC	SA
3708-002202	HDC401	CONNECTOR-FPC/FFC/PIC	SA
3708-002236	CN303	CONNECTOR-FPC/FFC/PIC	SA
3709-001386	CN200	CONNECTOR-CARD EDGE	SA
3709-001447	SIM300	CONNECTOR-CARD EDGE	SA
3710-002363	IFC400	SOCKET-INTERFACE	SA
3711-005643	HDC400	HEADER-BOARD TO BOARD	SA
3711-006217	BTC400	HEADER-BATTERY	SA
4302-001158	BAT300	BATTERY-LI(2ND)	SA

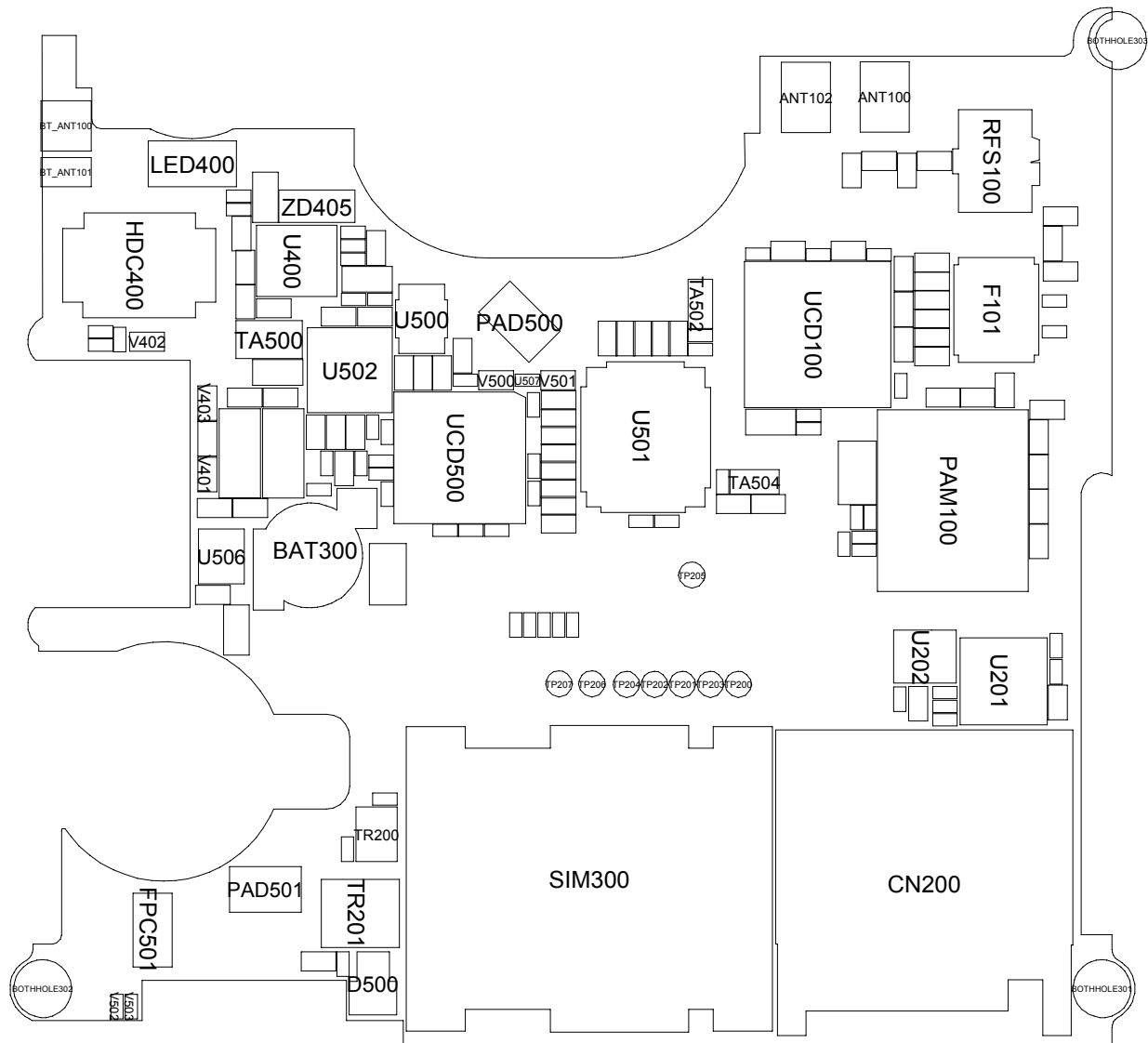
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GH09-00045A	UCP200	IC MICOM	SA

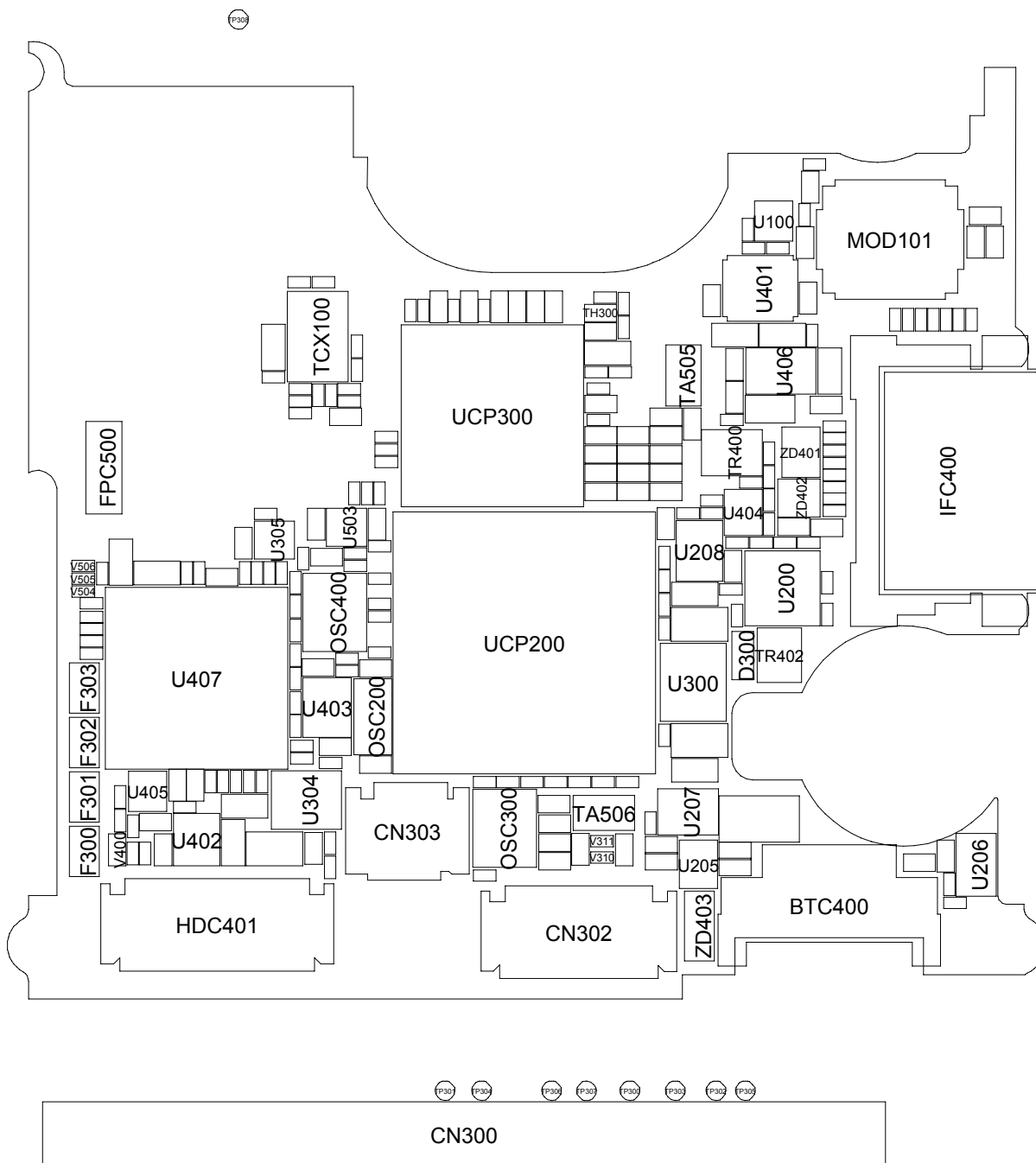
7. Block Diagrams





8. PCB Diagrams

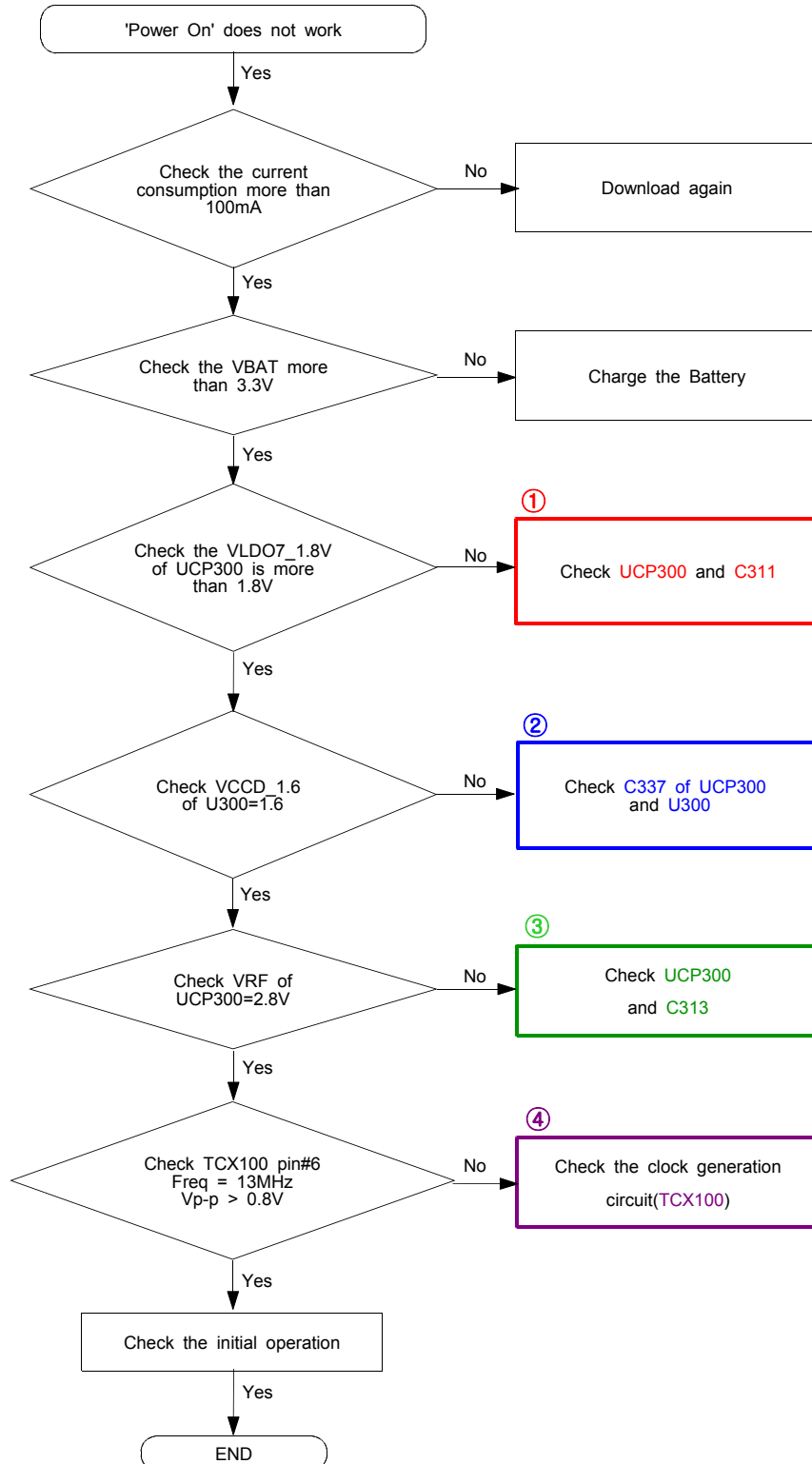


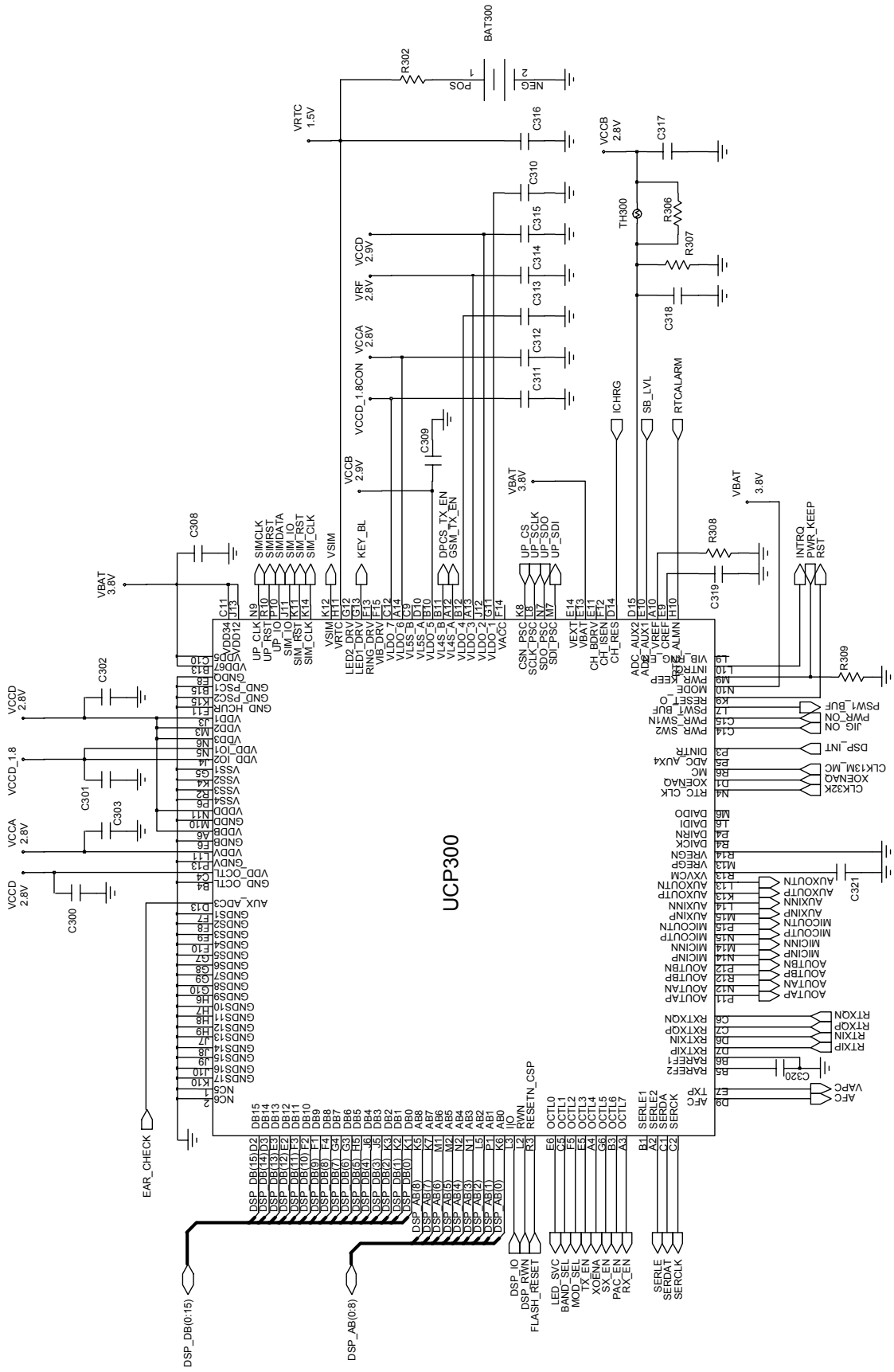


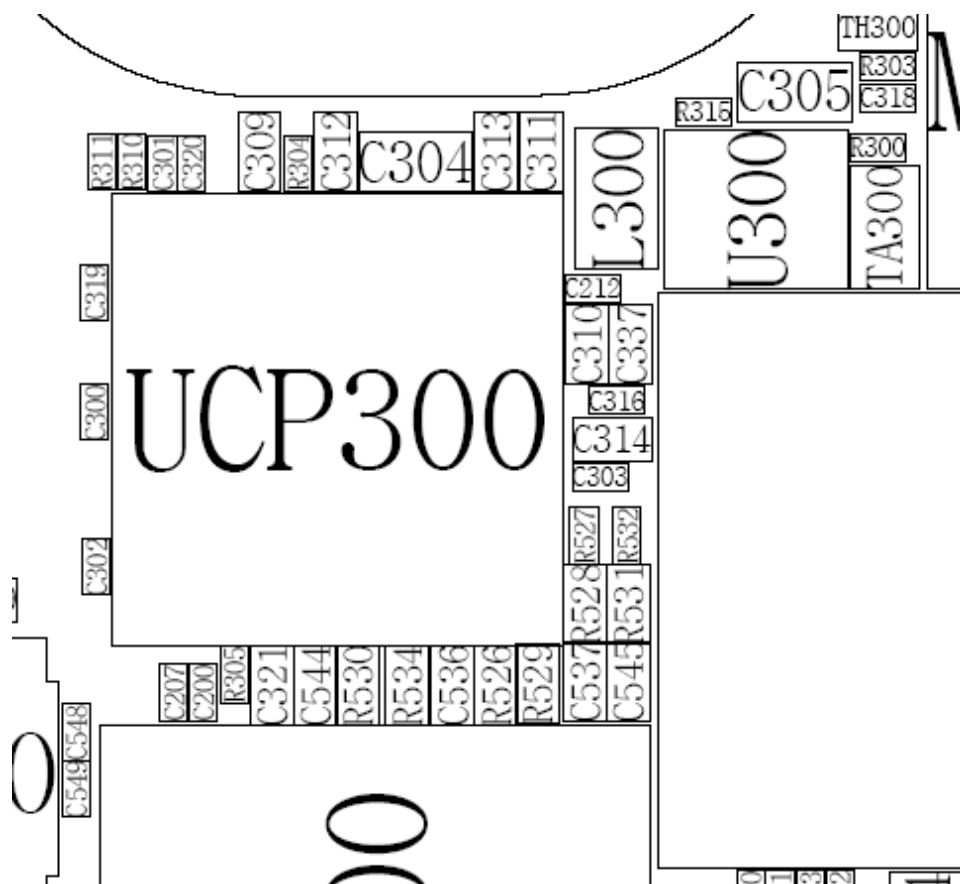
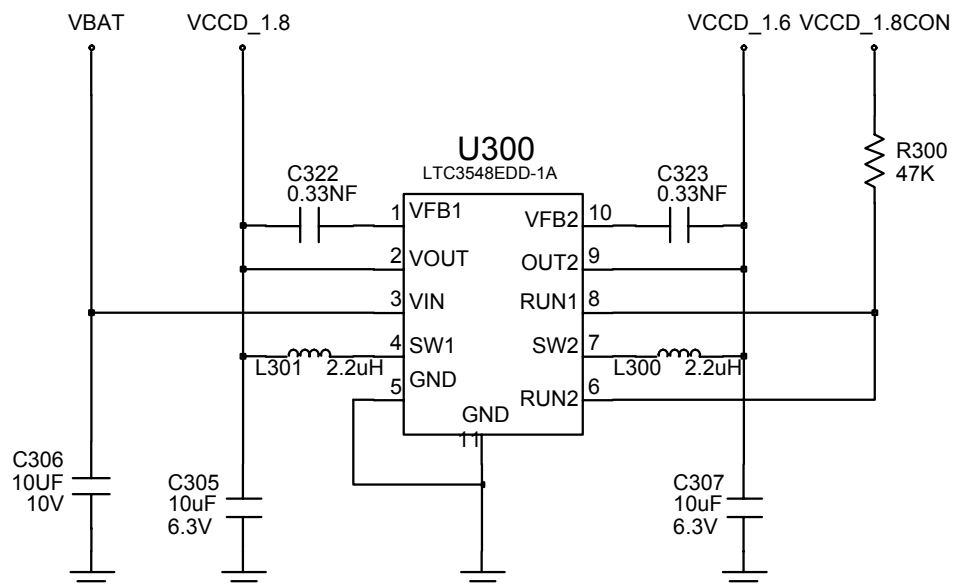
9. Flow Chart of Troubleshooting and Circuit Diagrams

9-1.Baseband

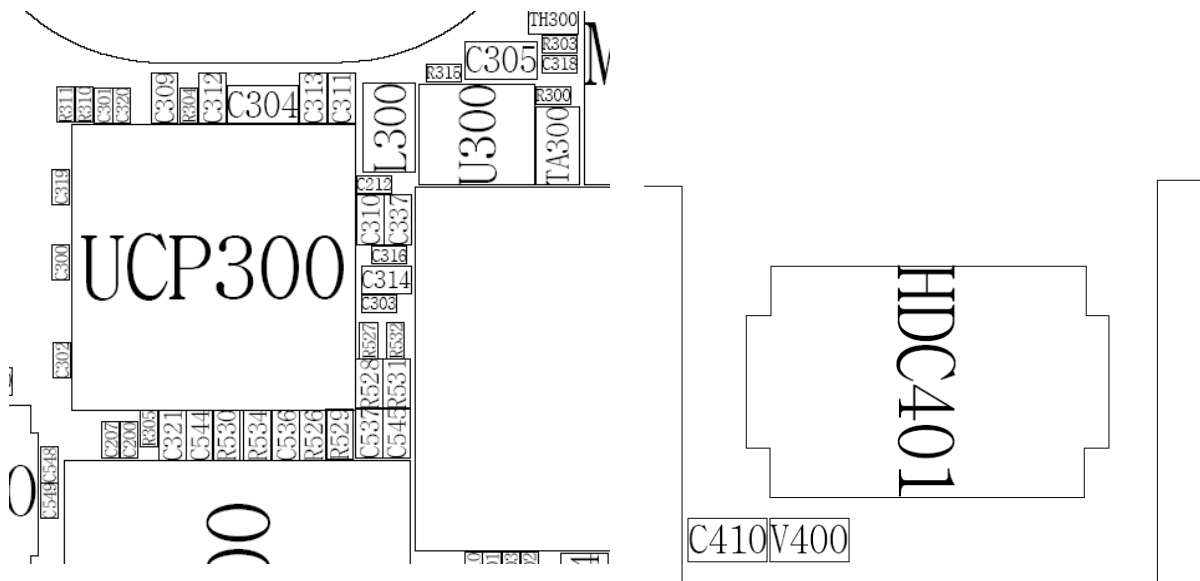
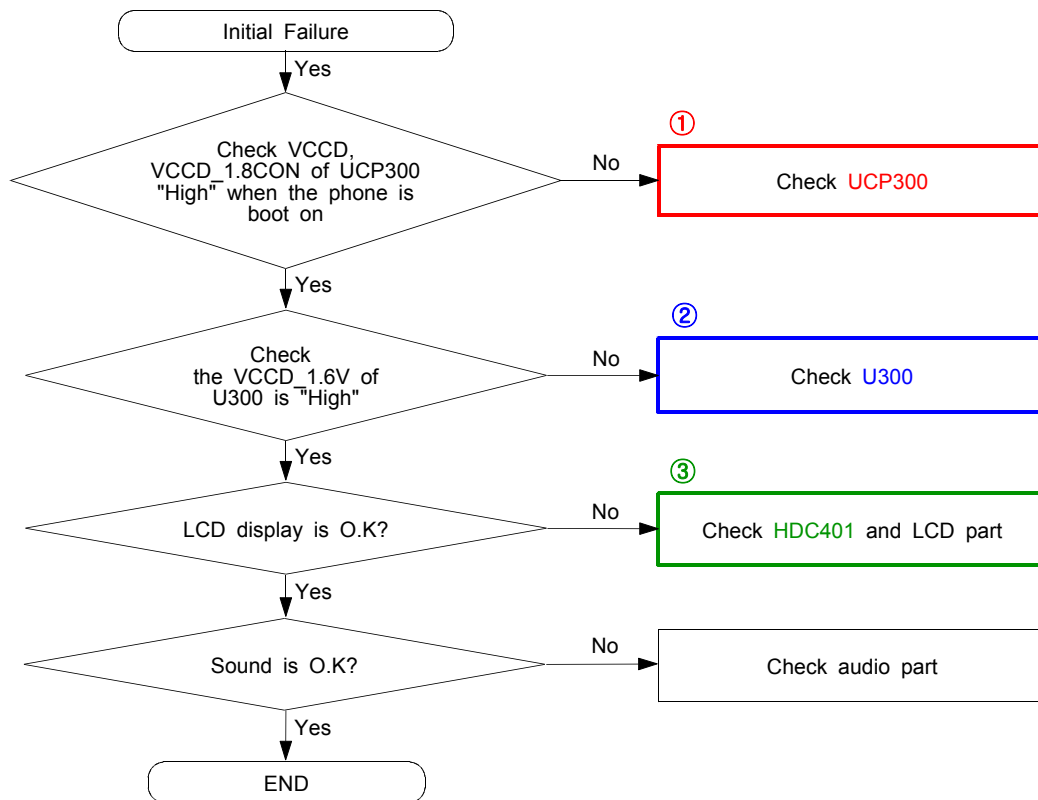
9-1-1. Power ON

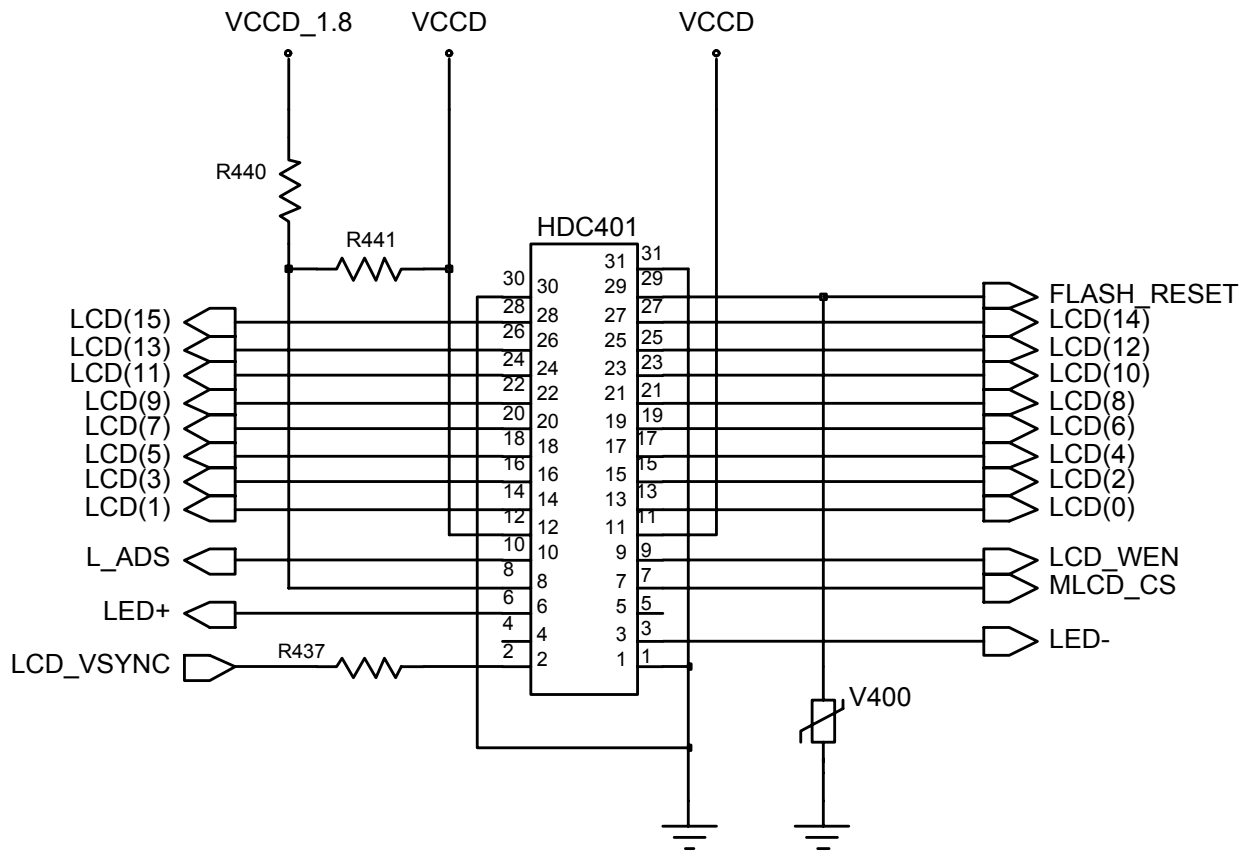




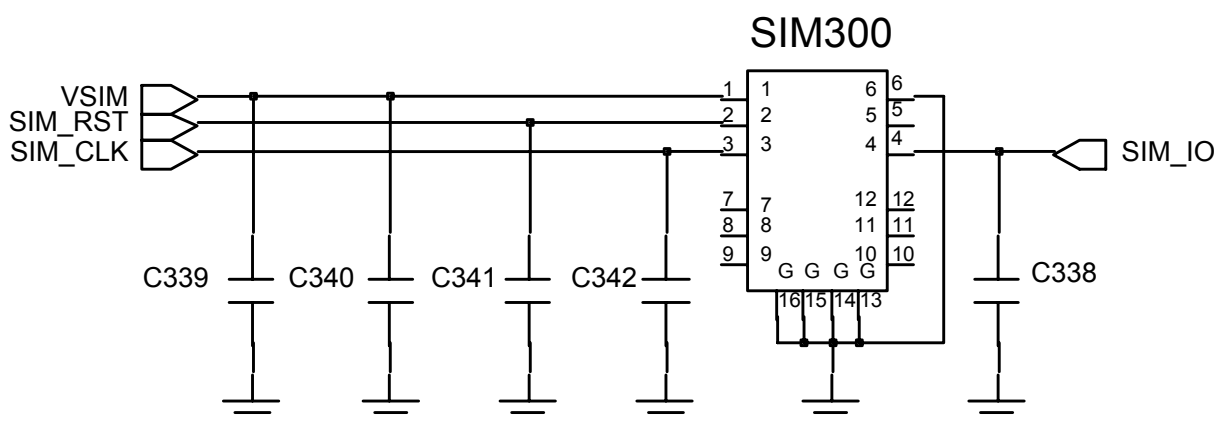
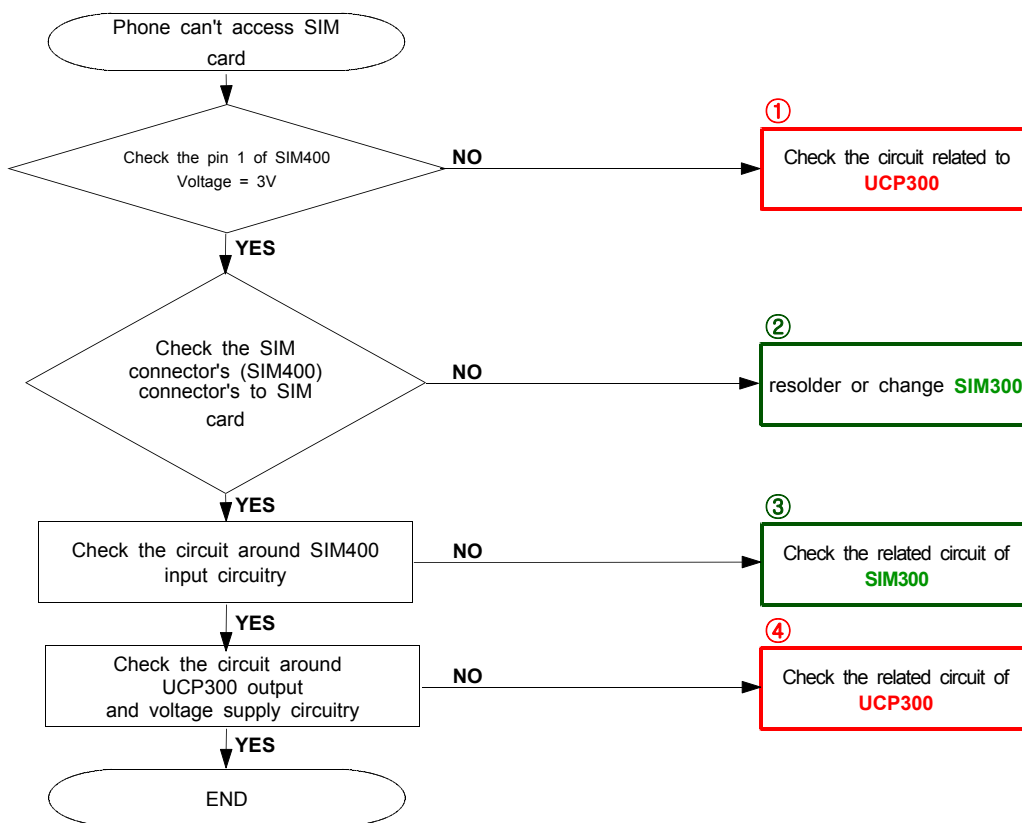


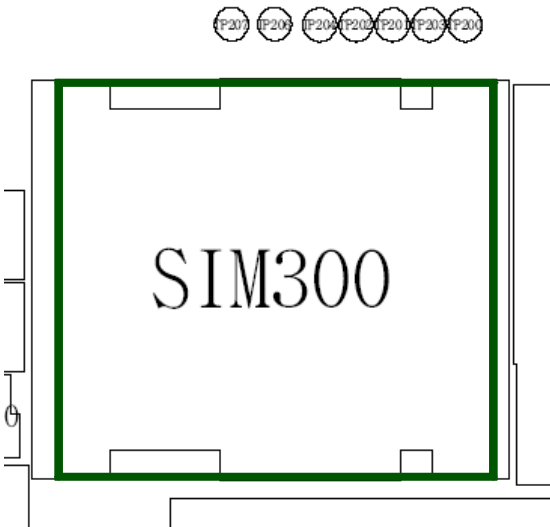
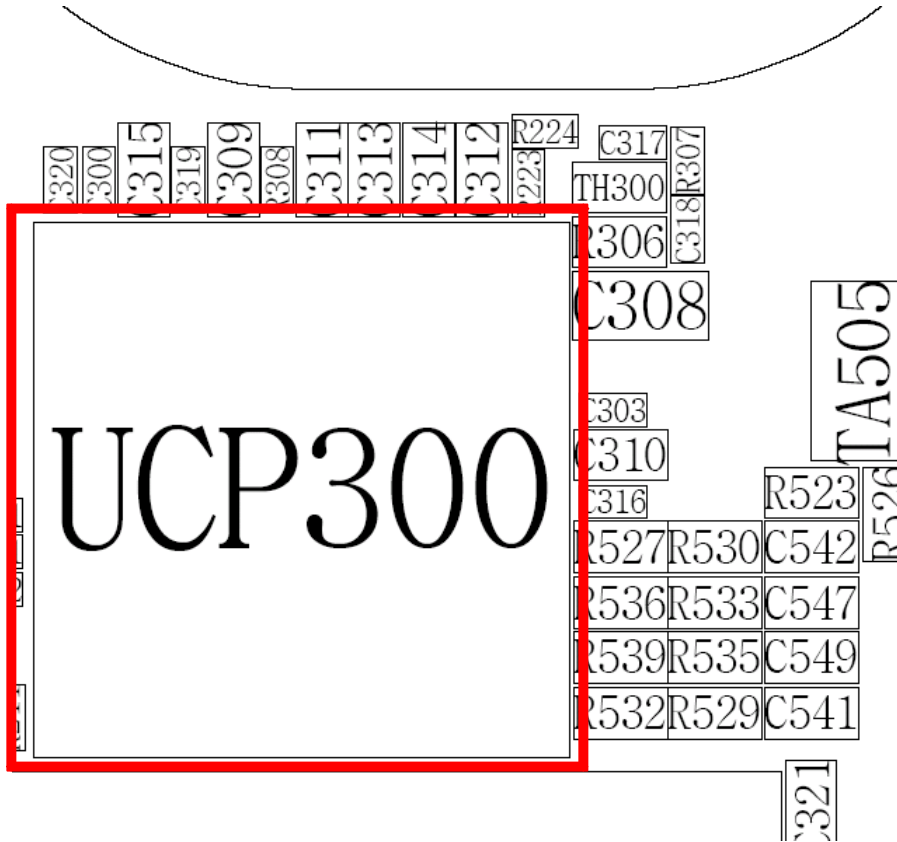
9-1-2. Initial



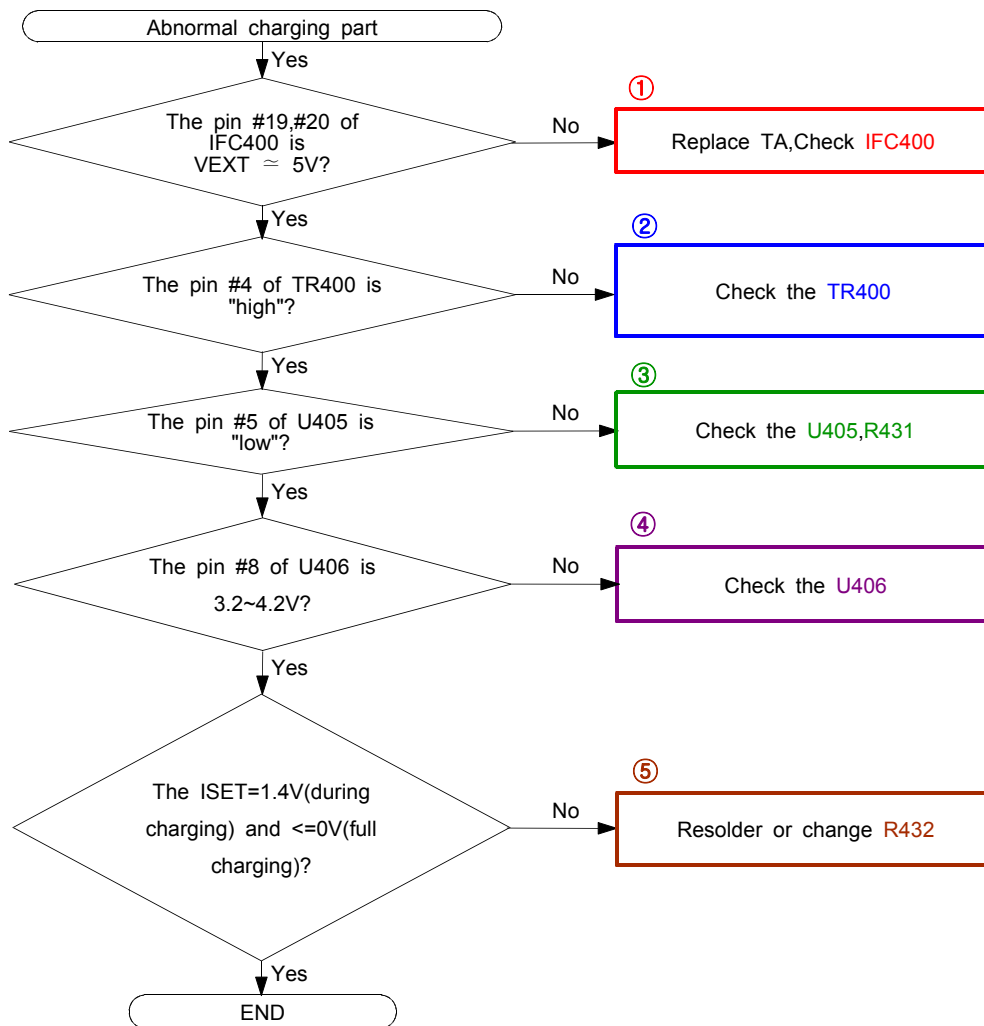


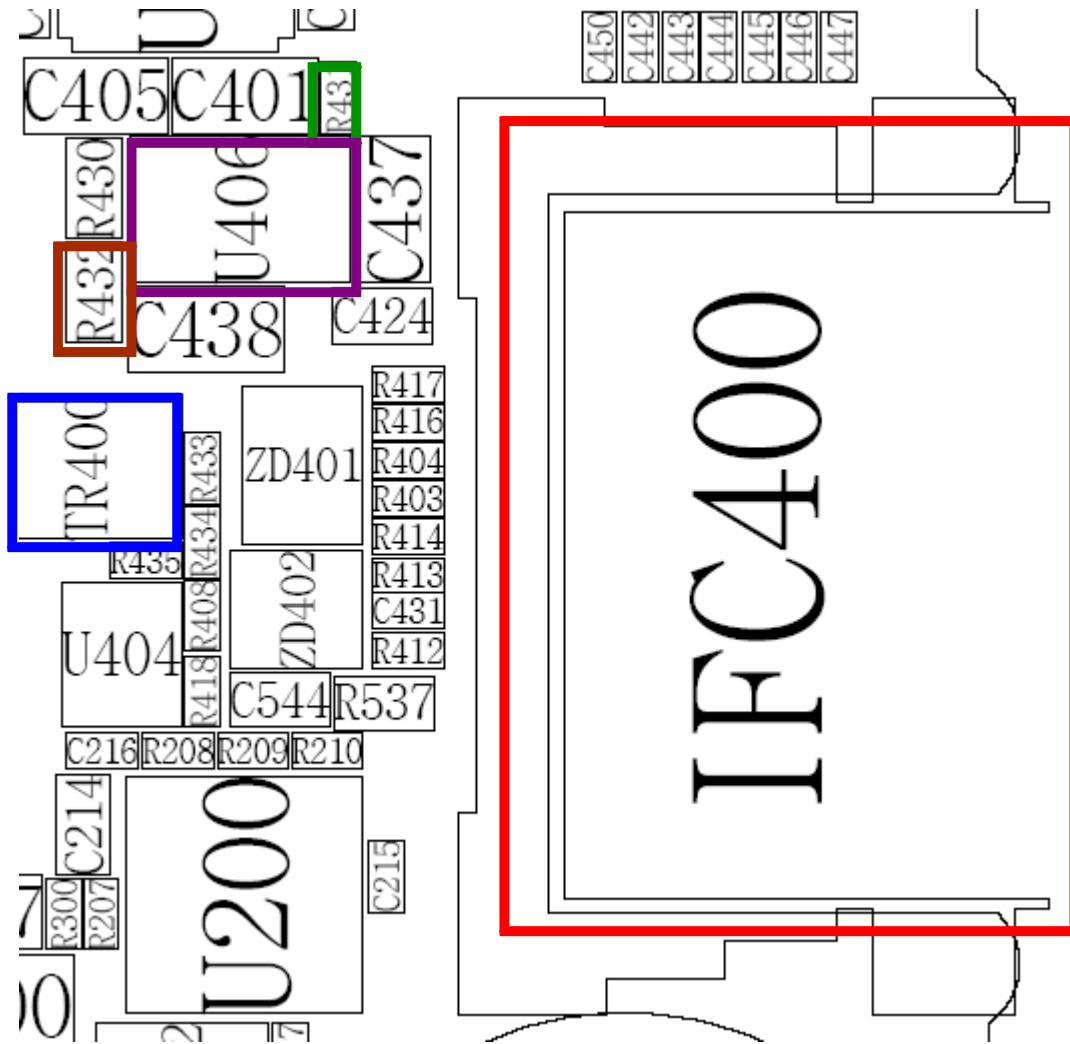
9-1-3. Sim Part

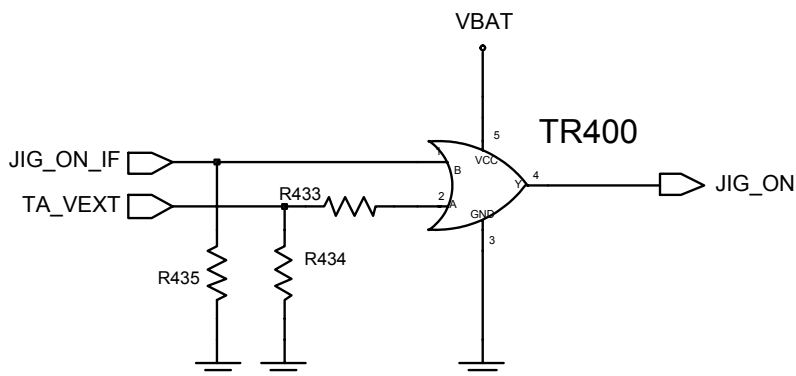
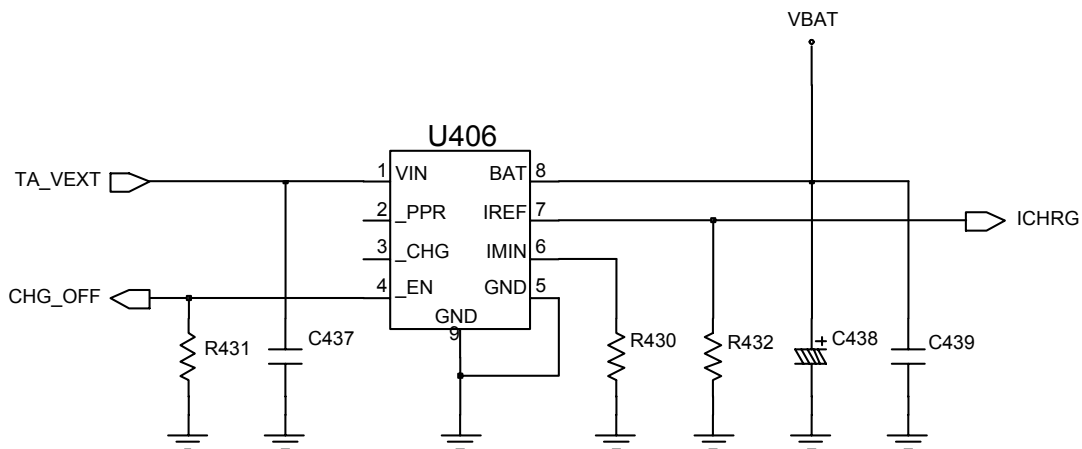
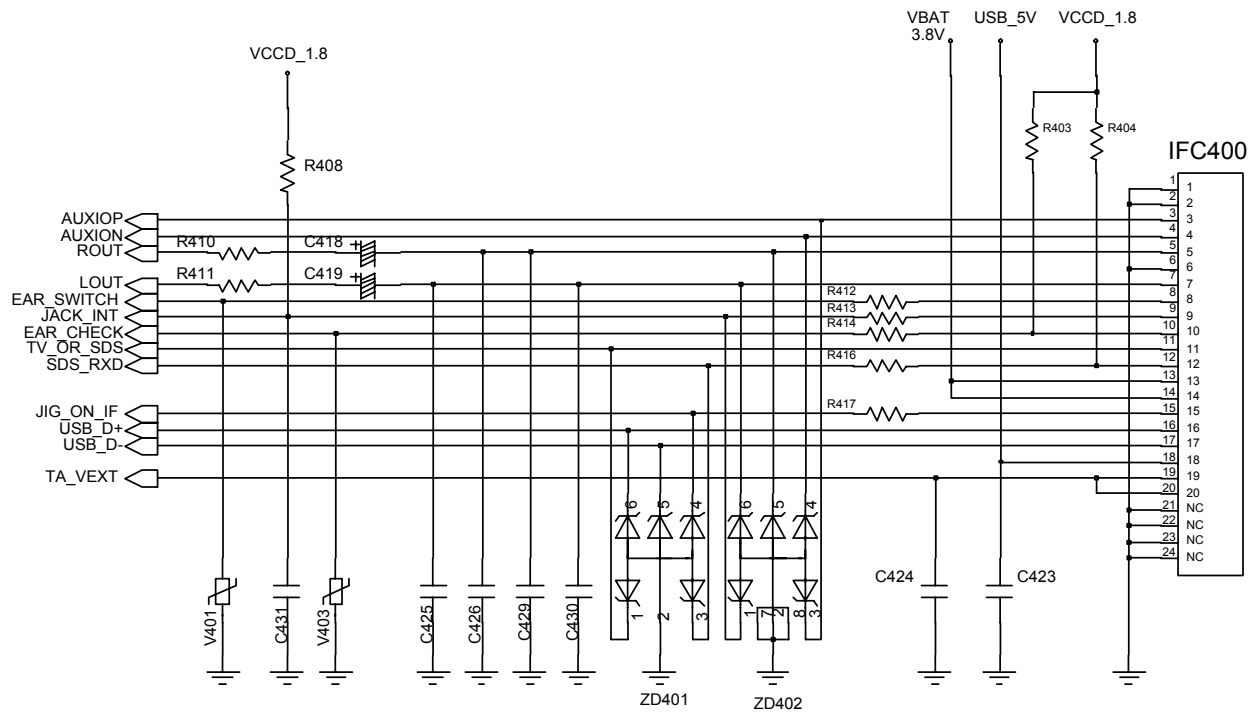




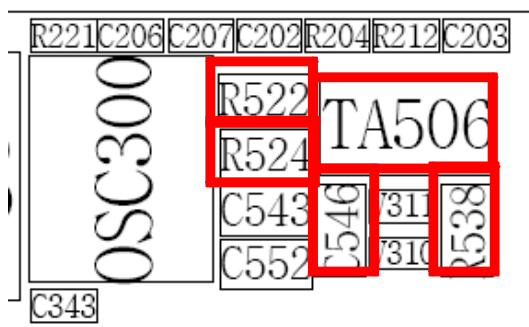
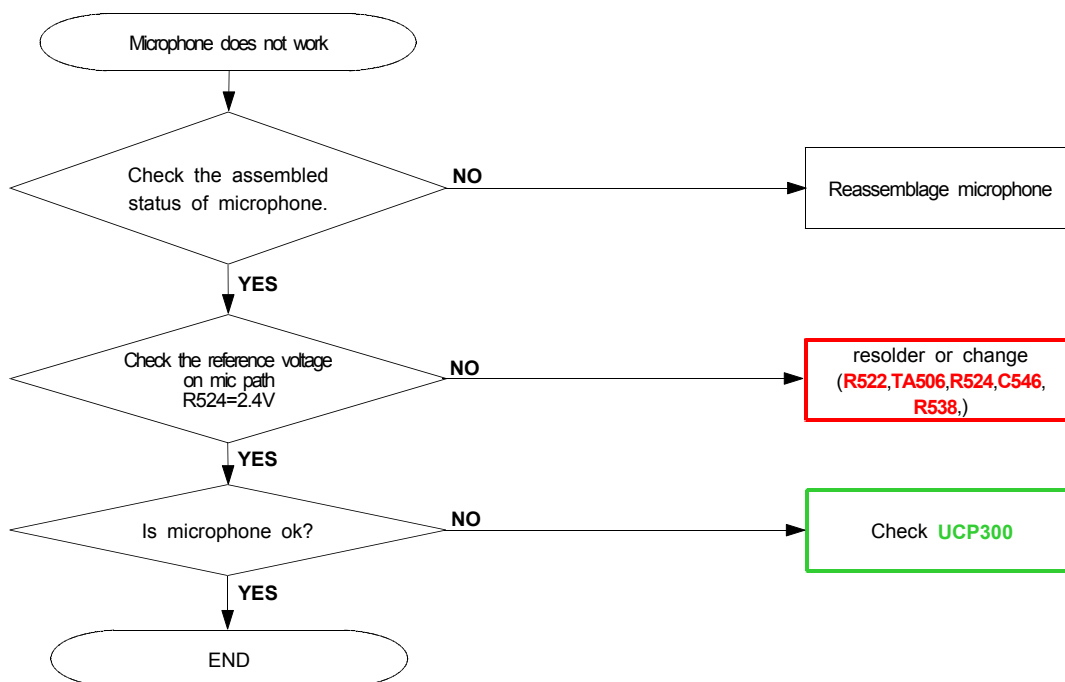
9-1-4. Charging Part

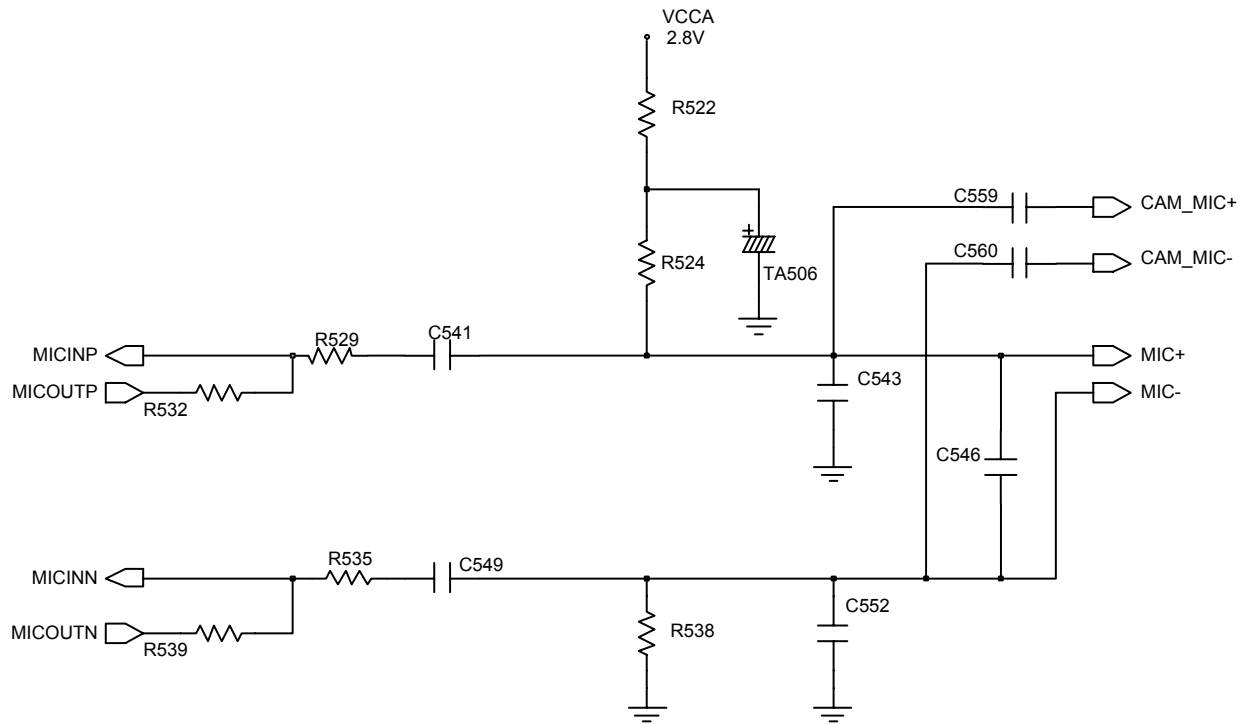


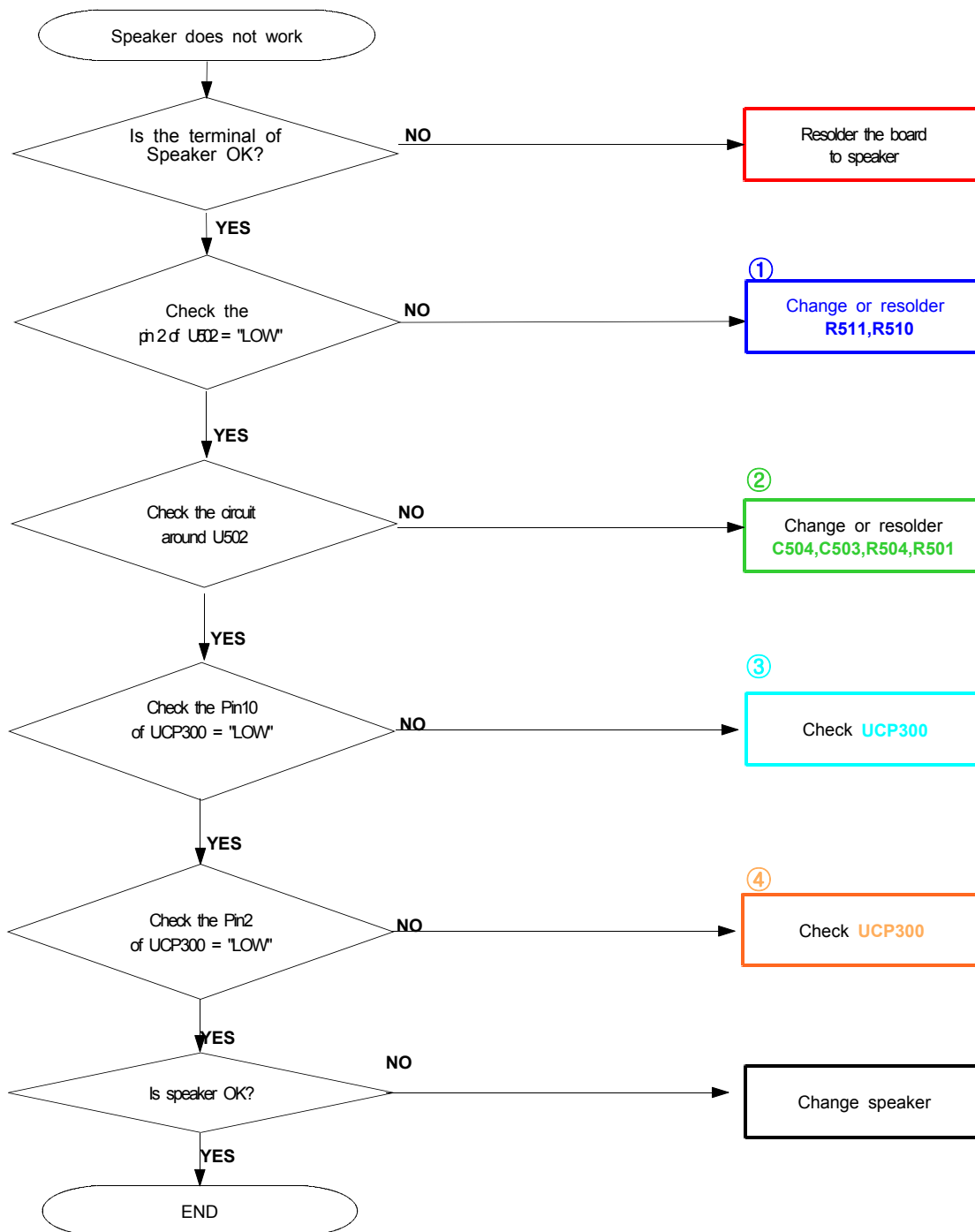


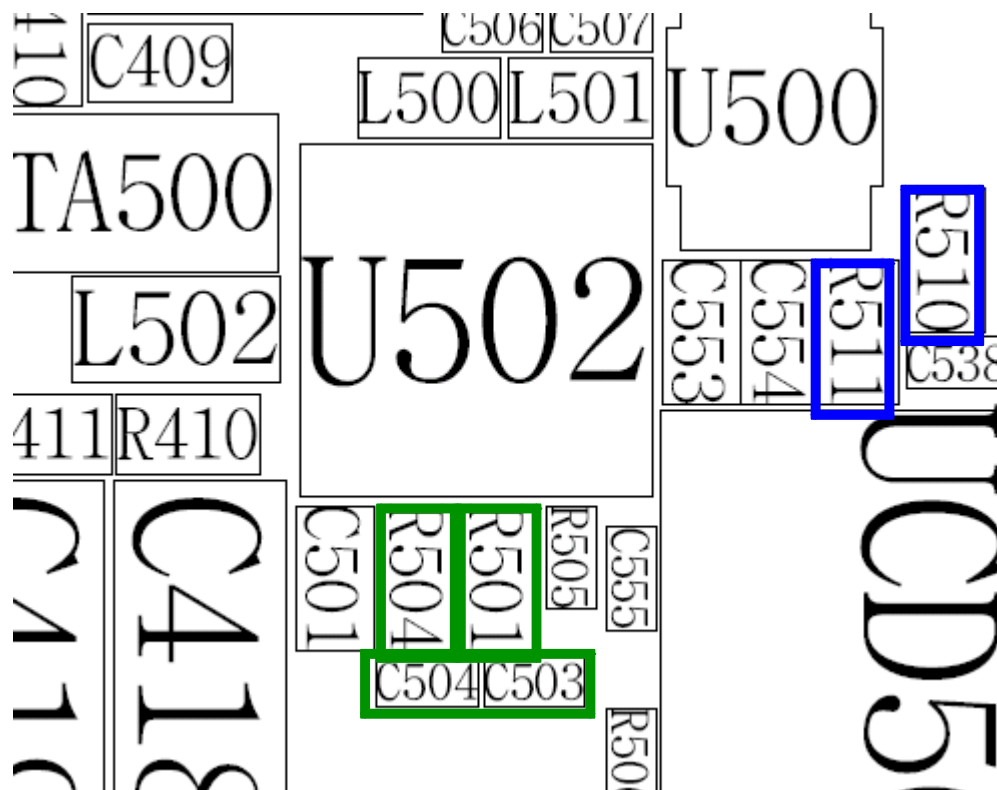


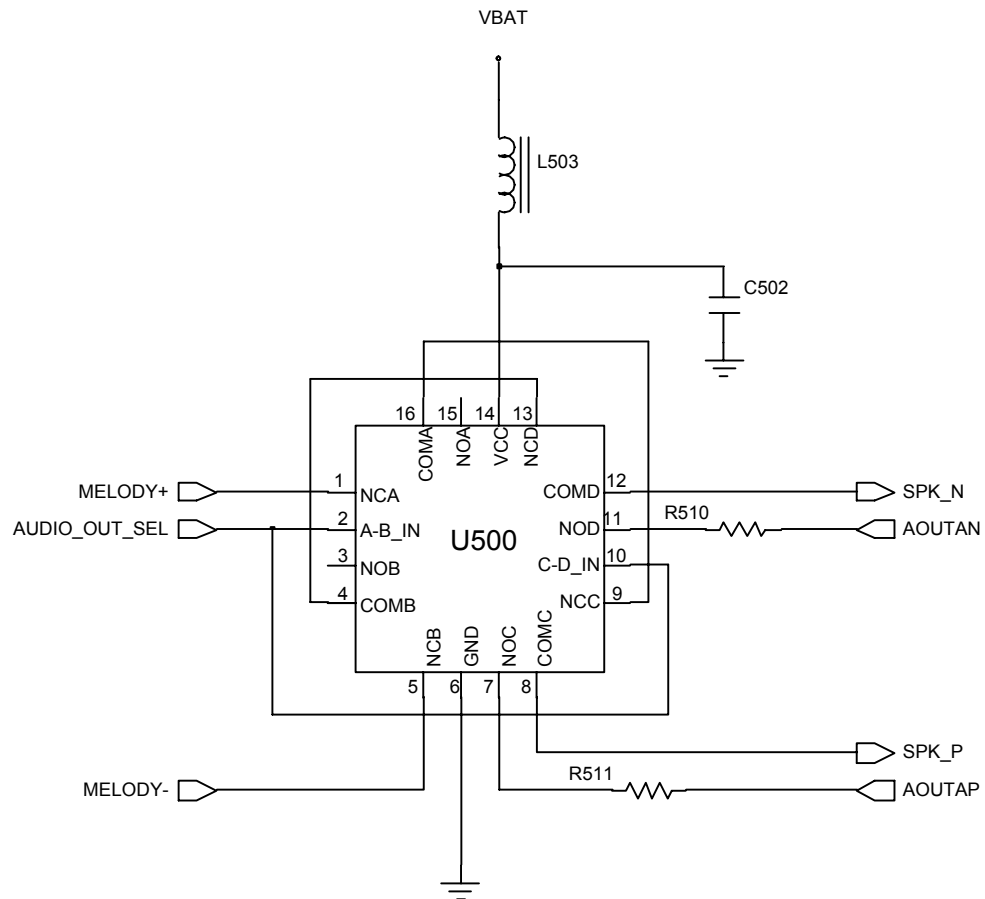
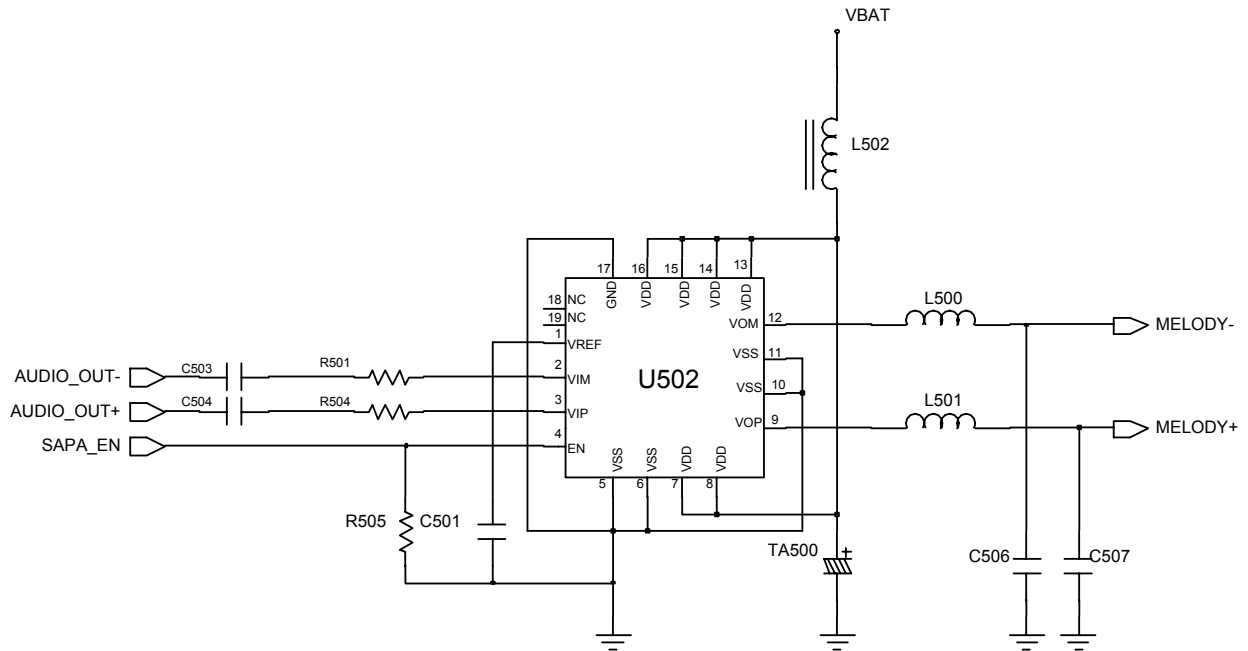
9-1-5. Microphone Part



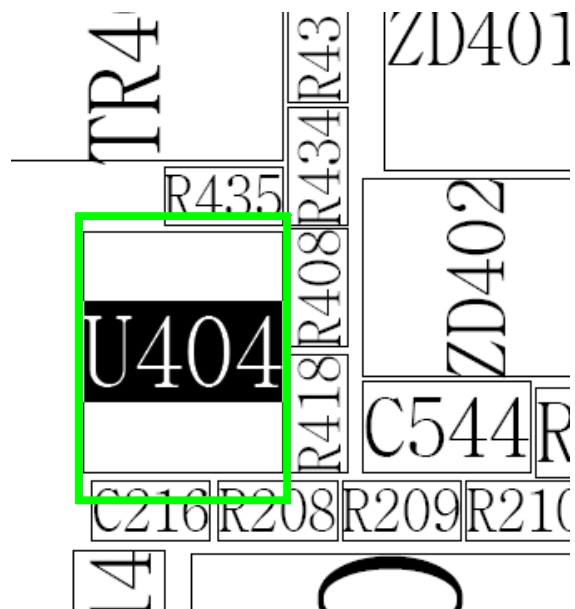
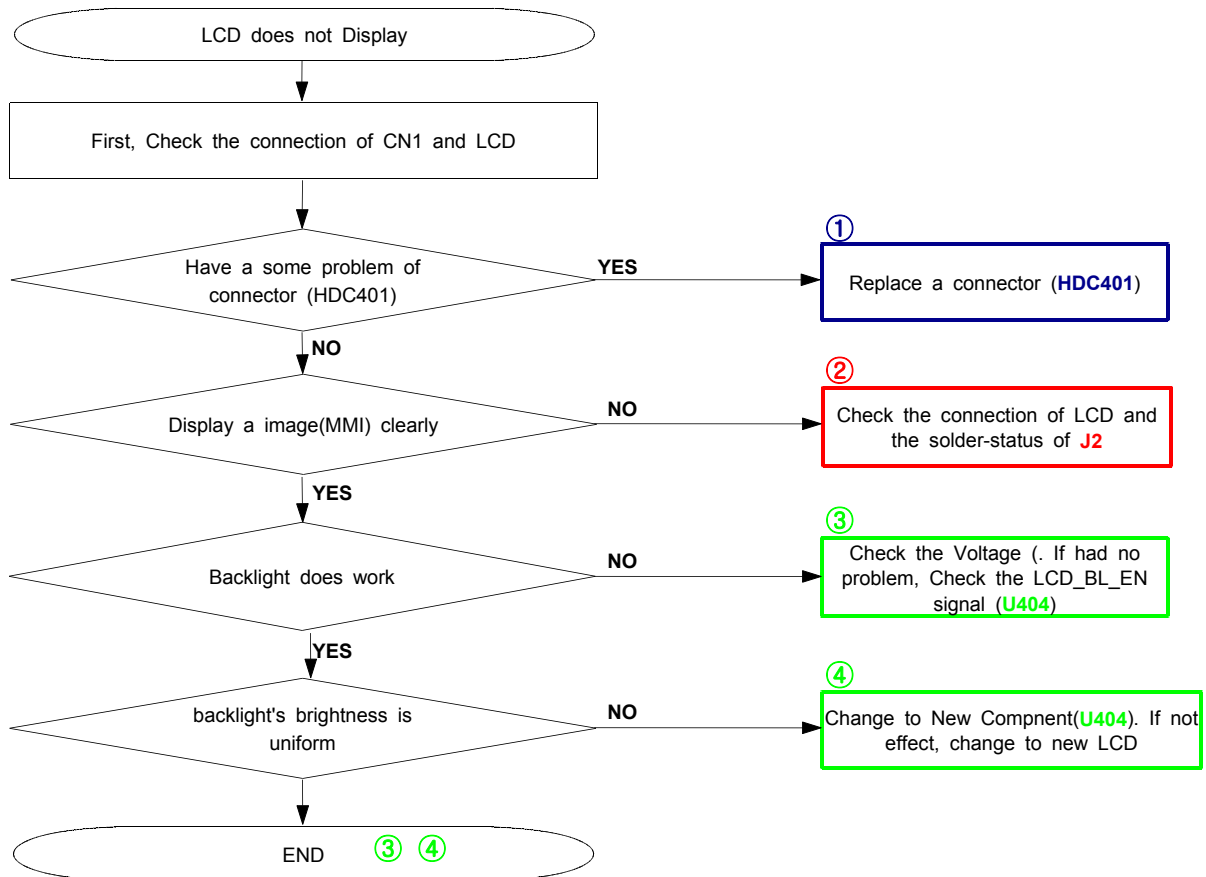


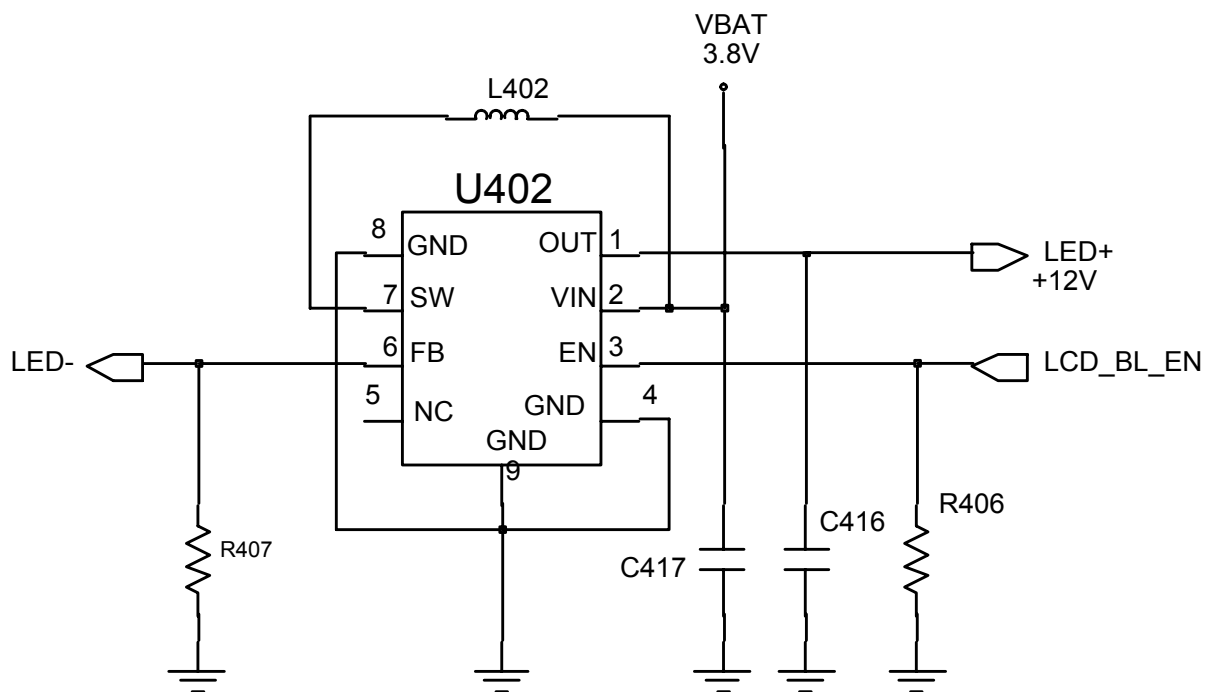
9-1-6. Speaker Part

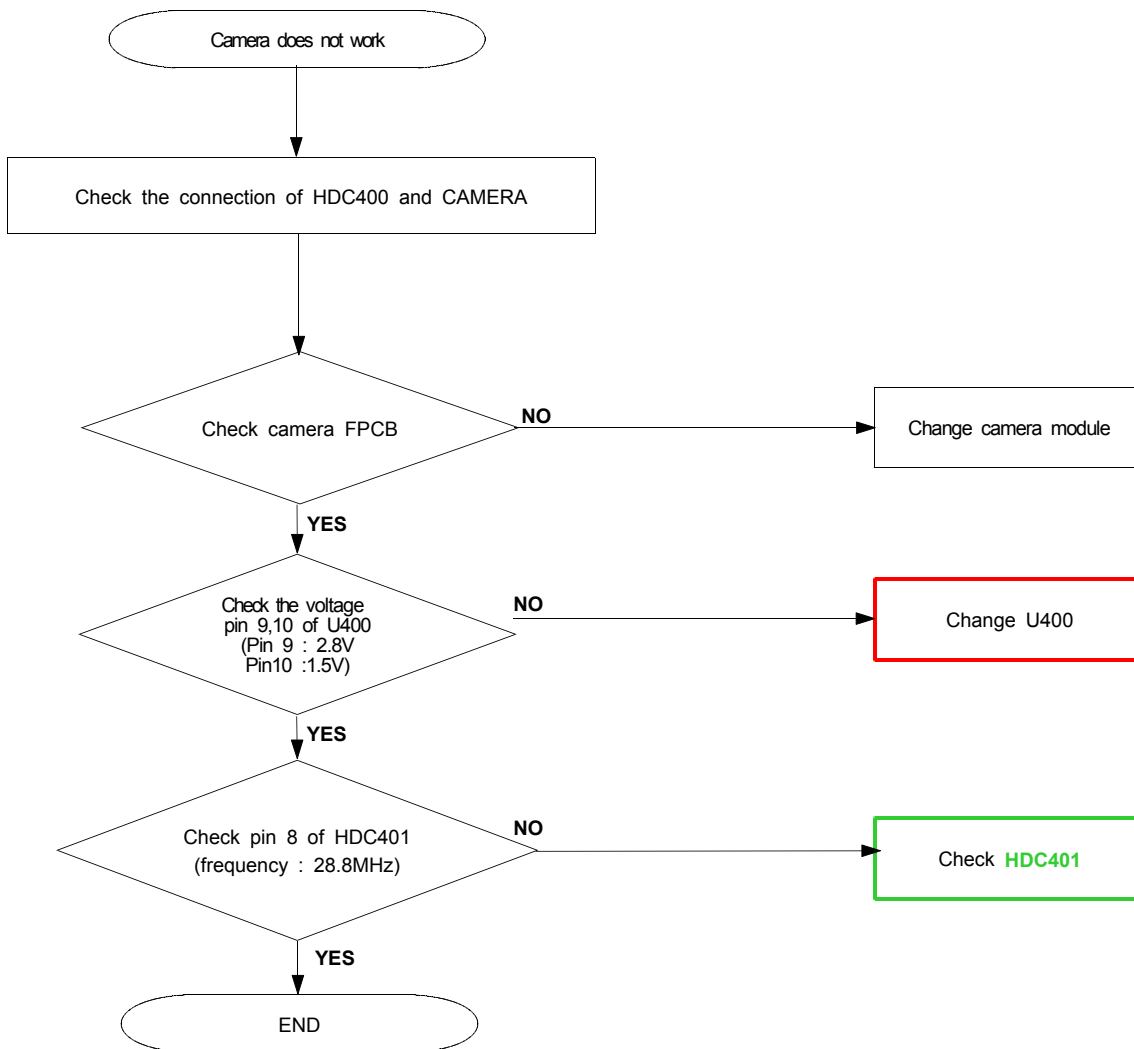


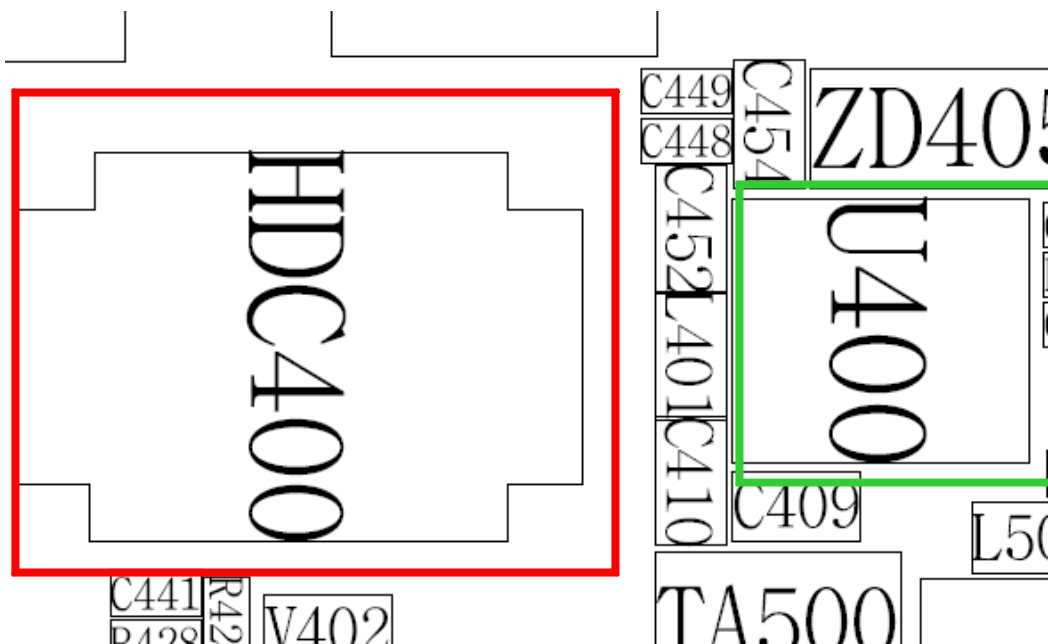


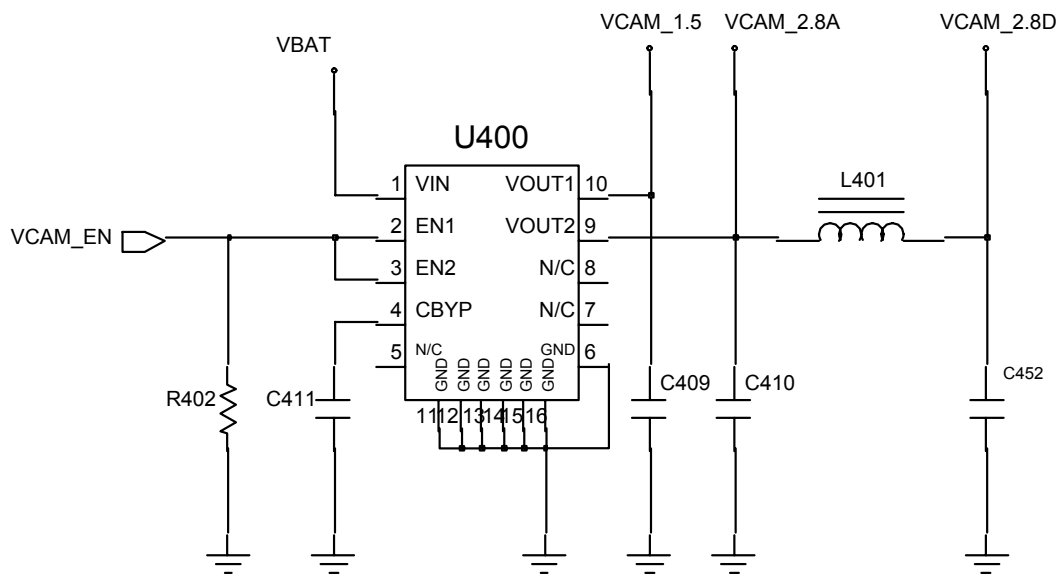
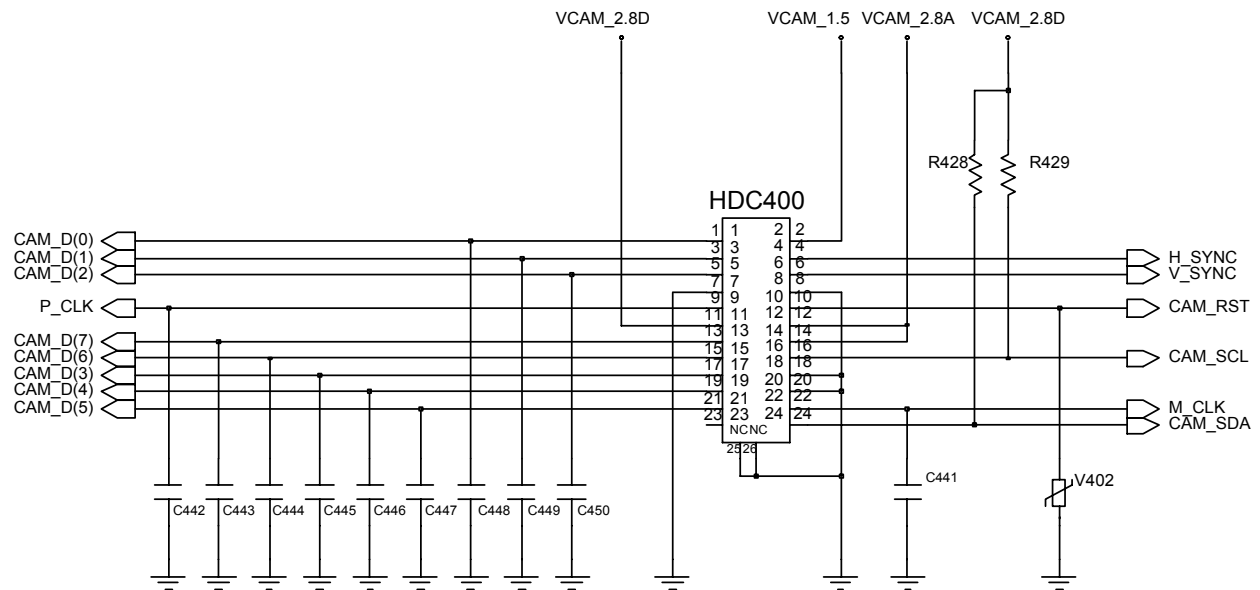
9-1-7. LCD





9-1-8. Camera

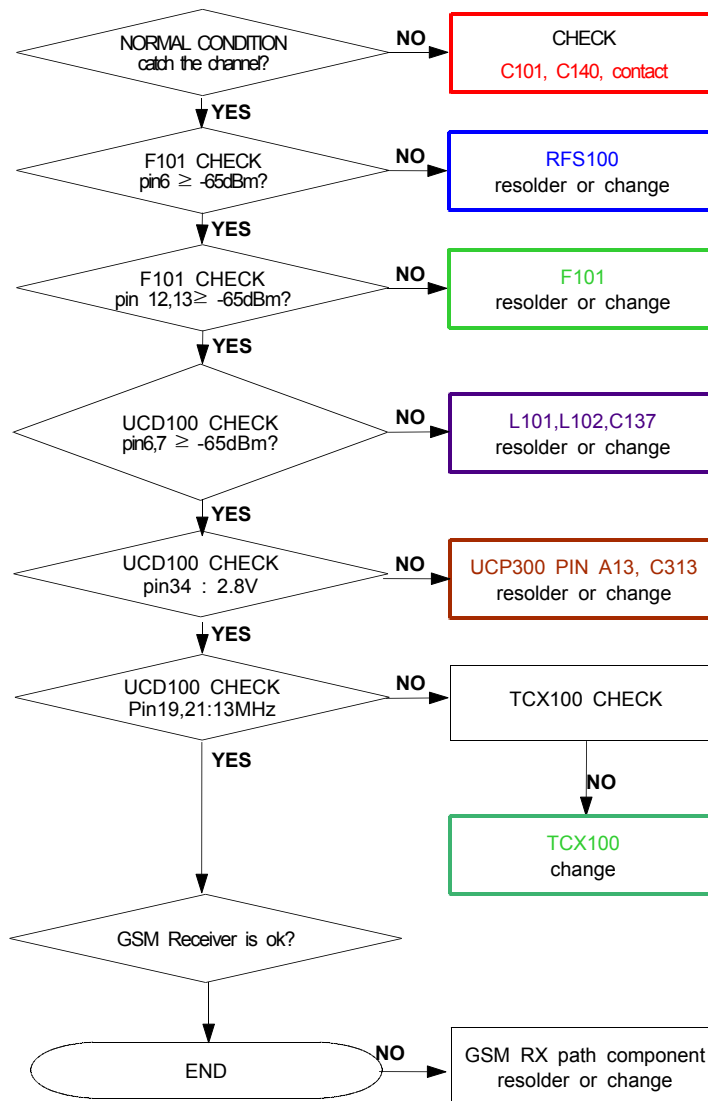




9-2.RF

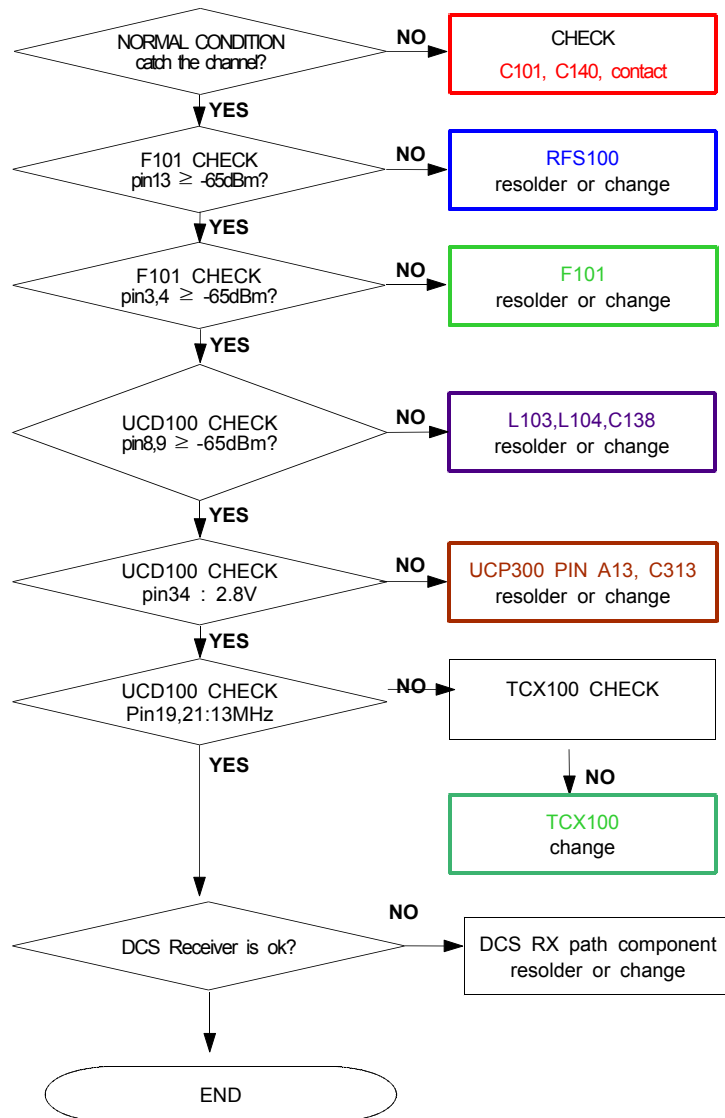
9-2-1. GSM Receiver

CONTINUOUS RX ON
RF INPUT : 62CH
Cell power : -50dBm



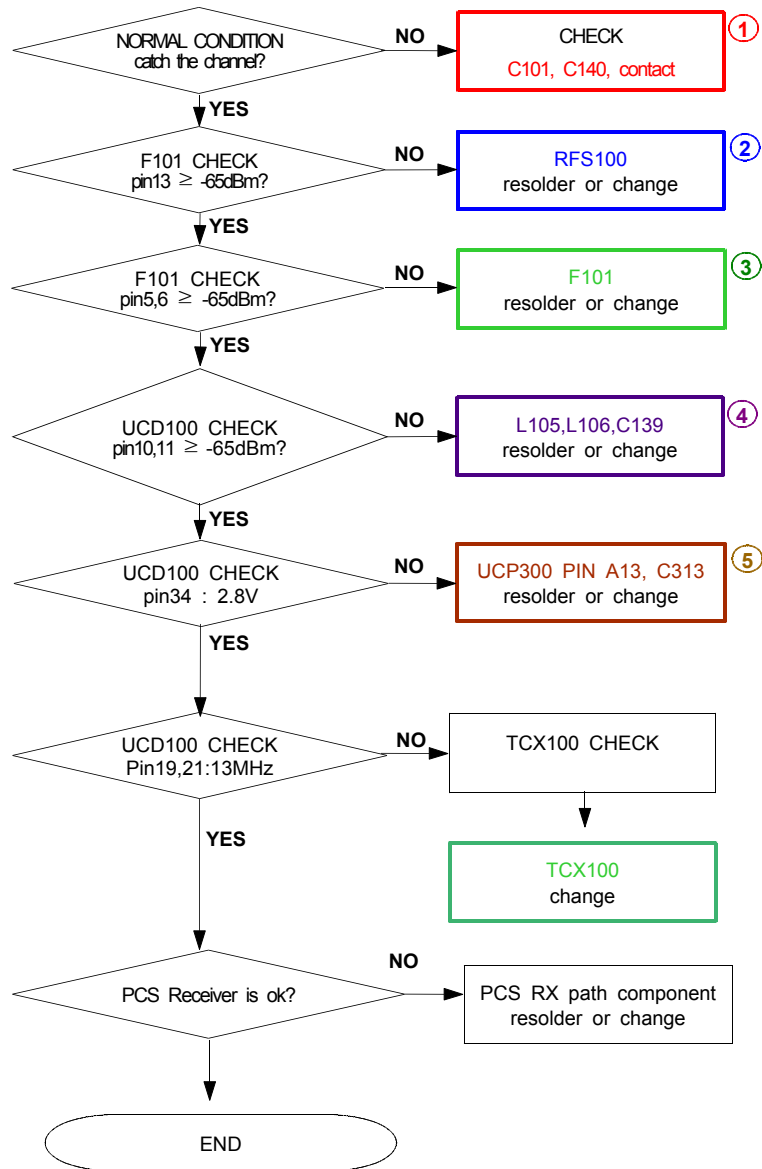
9-2-2. DCS Receiver

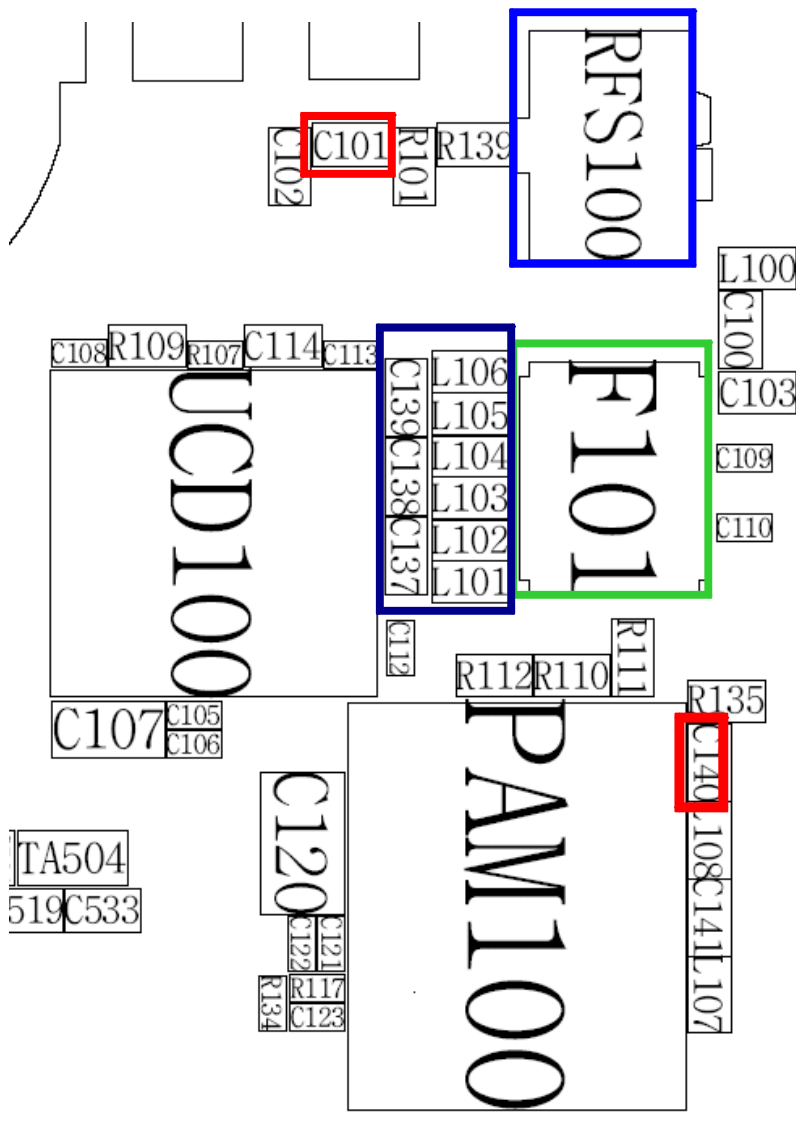
CONTINUOUS RX ON
RF INPUT : 698CH
Cell power : -50dBm

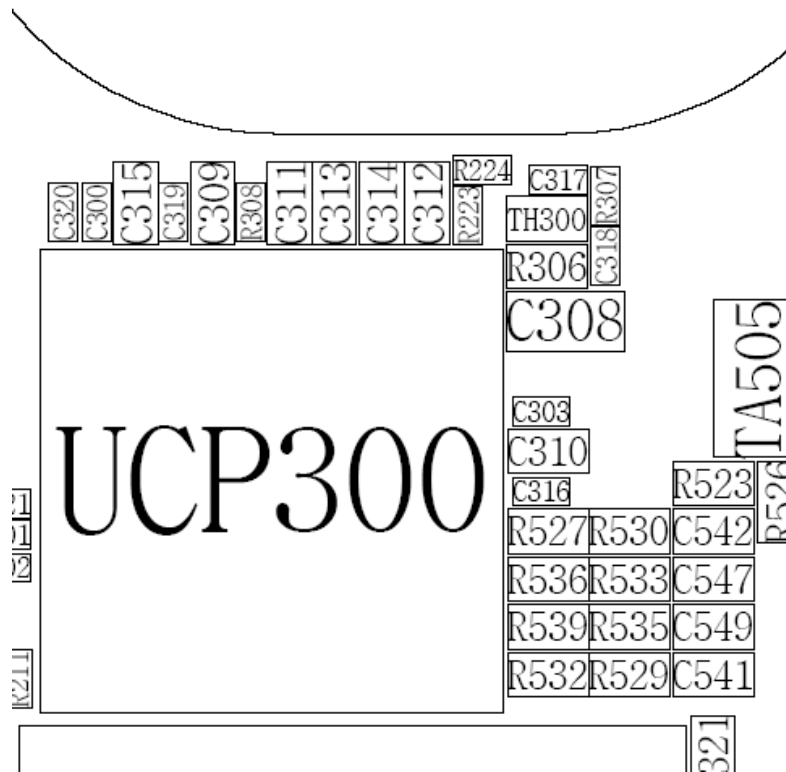


9-2-3. PCS Receiver

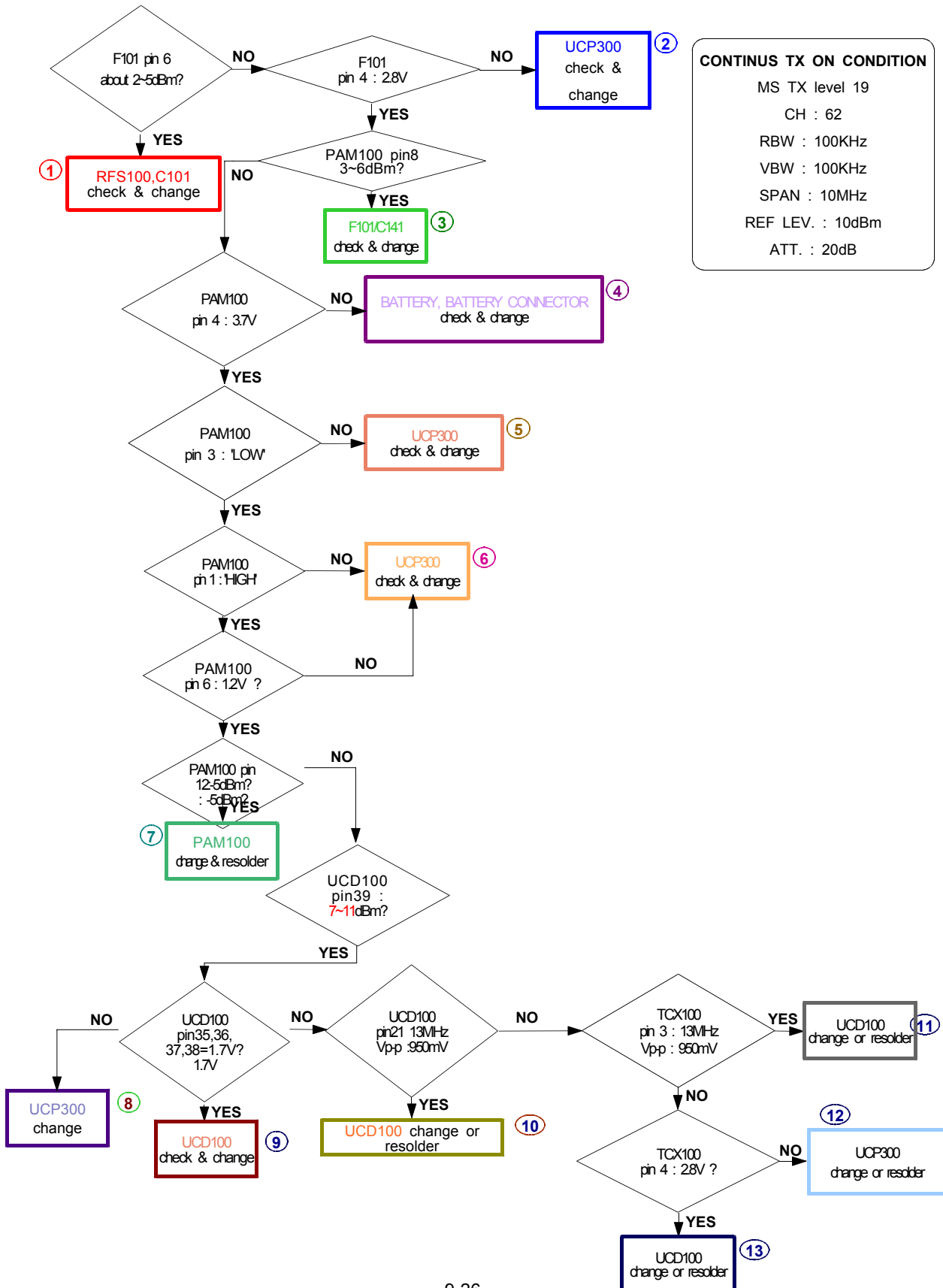
CONTINUOUS RX ON
RF INPUT : 698CH
Cell power : -50dBm



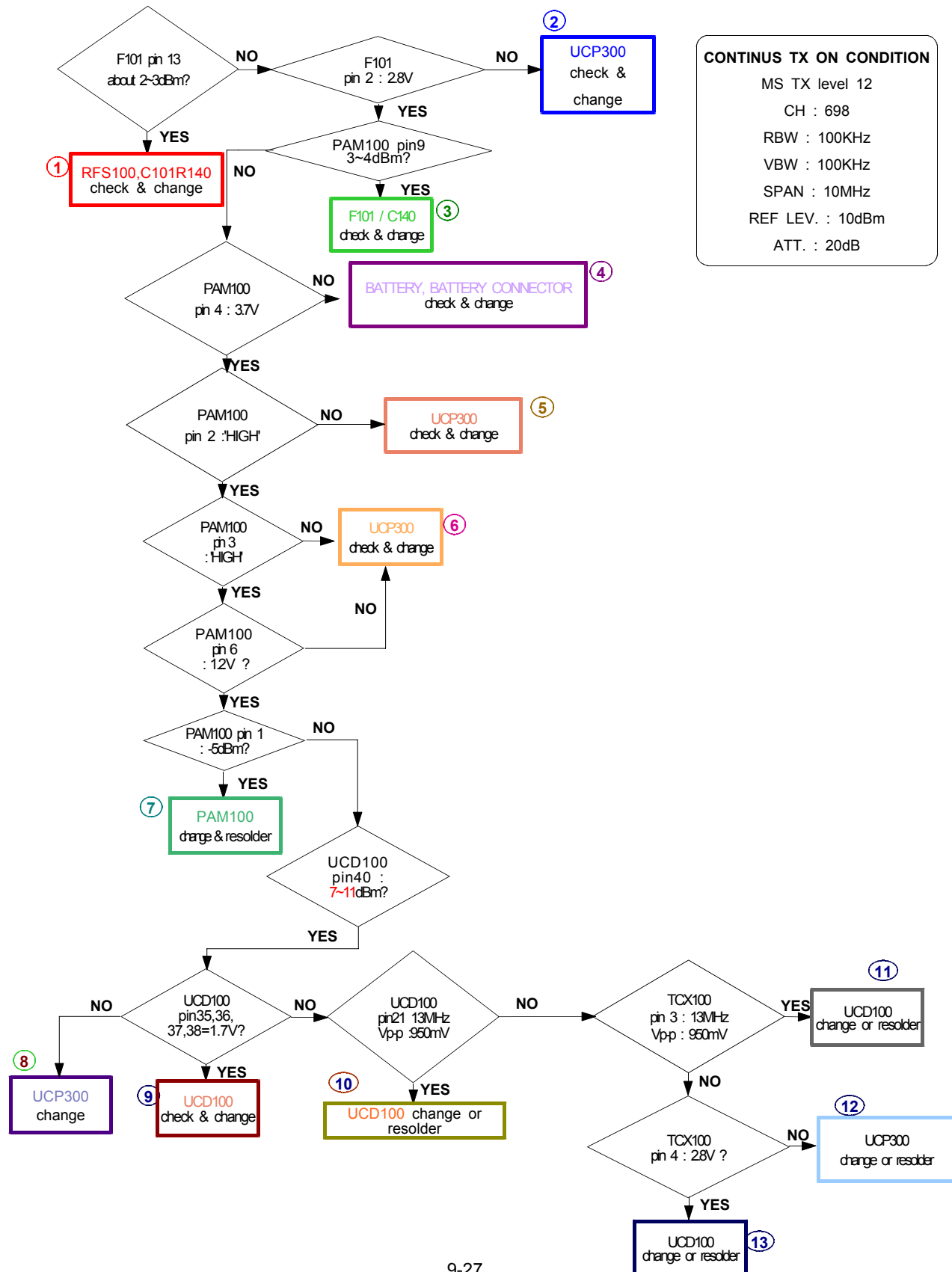




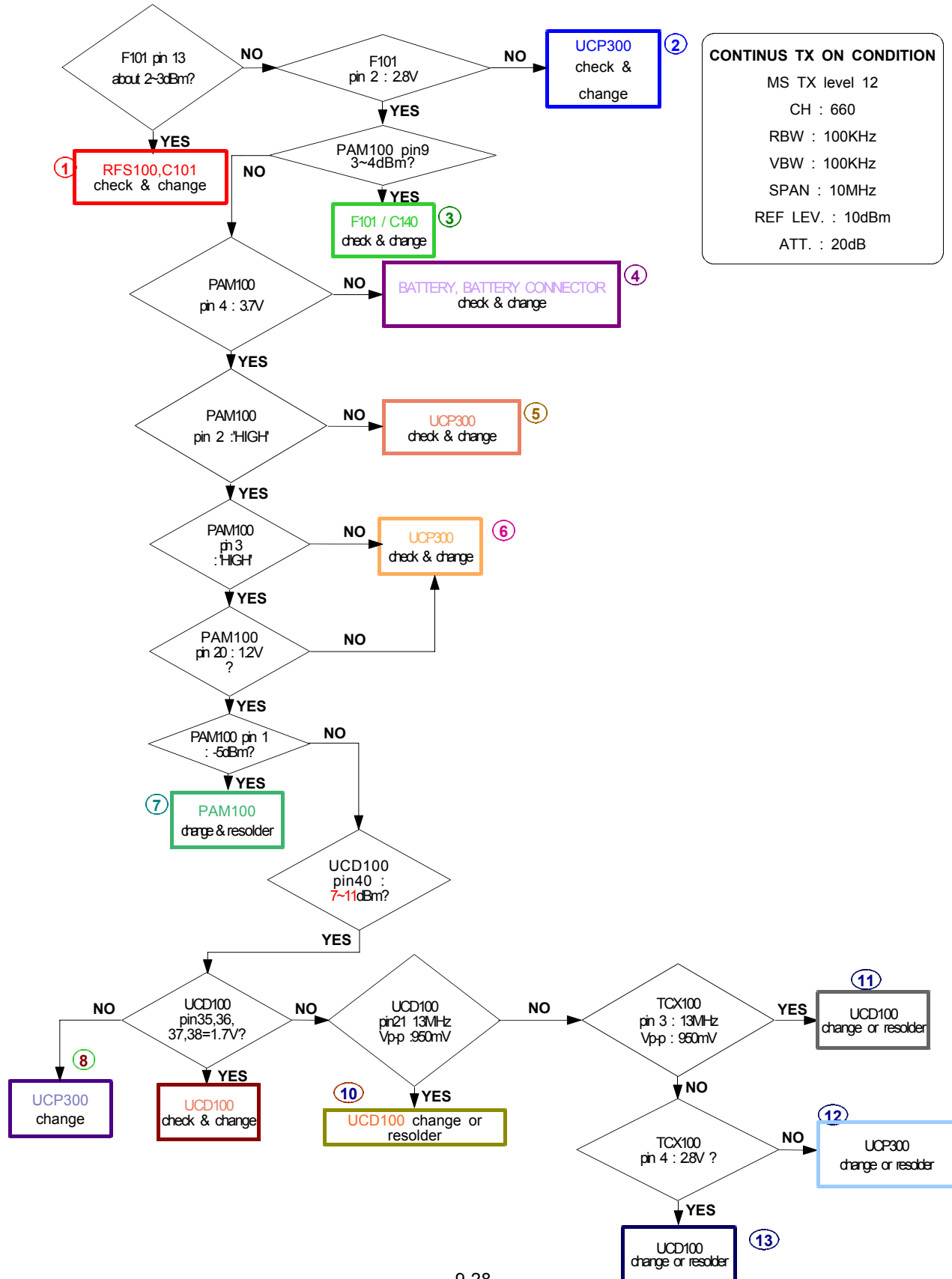
9-2-4. GSM Transmitter



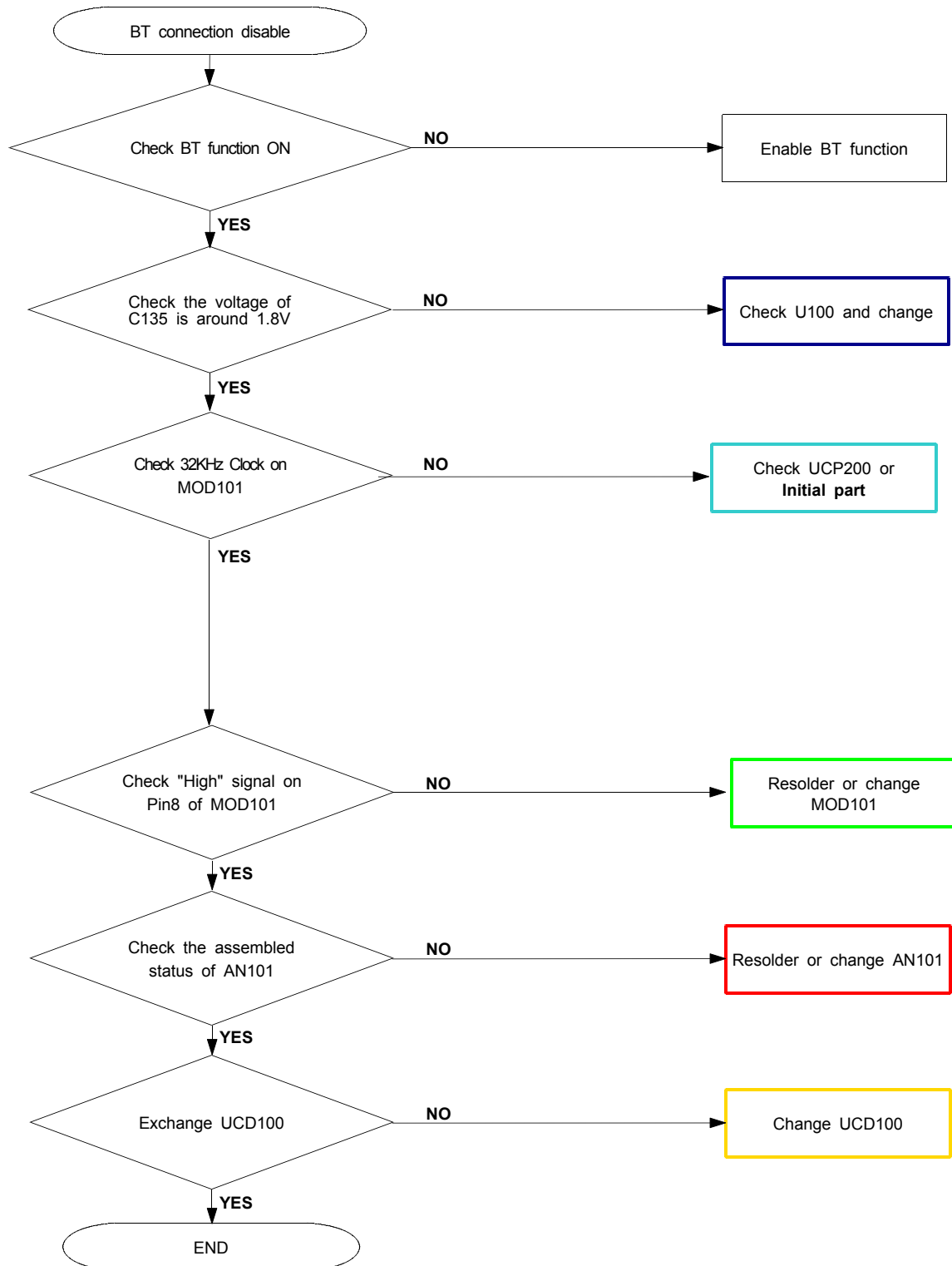
9-2-5. DCS Transmitter

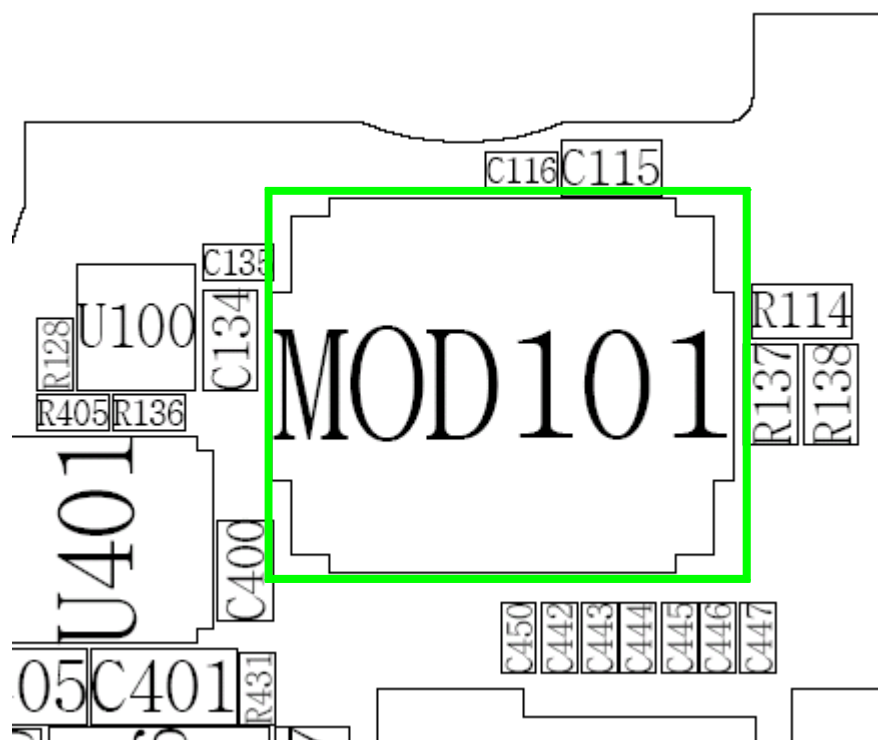


9-2-6. PCS Transmitter



9-2-7. Bluetooth Part







10. Reference data

10-1. 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

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