

SAMSUNG

GSM TELEPHONE

SGH-F210

***SERVICE* Manual**

GSM TELEPHONE



CONTENTS

1. Safety Precautions
2. Specification
3. Product Function
4. Array course control
5. Exploded View and Parts list
6. MAIN Electrical Parts List
7. Block Diagrams
8. PCB Diagrams
9. Chart of Troubleshooting
10. Reference data
11. Disassembly and Assembly Instructions

**SAMSUNG
ELECTRONICS**



GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
Mideast & Africa	mea.samsungportal.com

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

		E-GSM	DCS1800	PCS1900
Freq. Band[MHz] Uplink/Downlink		880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range		975~1023 0~124	512~885	512~810
Tx/Rx spacing		45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	GPRS	270.833Kbps 3.692us	270.833Kbps 3.692us	270.833Kbps 3.692us
	EDGE	812.5Kbps 3.692us	812.5Kbps 3.692us	812.5Kbps 3.692us
Time Slot Period/Frame Period		576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	GPRS	0.3GMSK	0.3GMSK	0.3GMSK
	EDGE	8PSK	8PSK	8PSK
MS Power	GPRS	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
	EDGE	26dbm~0dBm	26dBm~0dBm	26dBm~0dBm
Power Level	GPRS	5~19(class4)	0~15(class1)	0~15(class1)
	EDGE	8~19(class E2)	2~15(class E2)	2~15(class E2)
Sensitivity		-102dBm	-100dBm	-102dBm
TDMA Mux		8	8	8
Cell Radius		35Km	2Km	2Km
Operating Temperature		-20℃ ~ 45℃	-20℃ ~ 45℃	-20℃ ~ 45℃
Supply Voltage		3.7V	3.7V	3.7V
Size and Weight		Dimension : 87.7(H) × 30.9(W) × 20.4(D) mm Weight : 81.2g (with standard battery and IF cover)		

2-2. GSM Tx Power Class

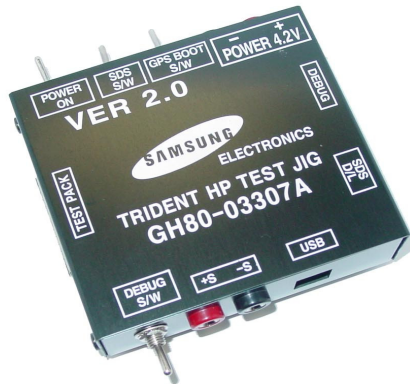
TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	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
- Synchronisation with Windows Media Player
- Music player
- FM radio
- Java
- Offline mode
- Bluetooth
- Web browser
- Multimedia Message Service(MMS)

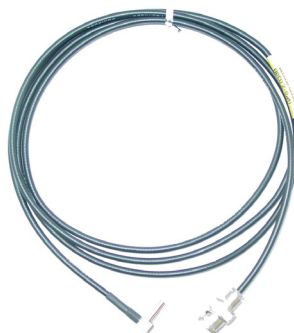
4. Array course control



Test Jig (GH80-03307A)



Test Cable (GH39-00501A)



RF Test Cable (GH39-00397A)

Software Downloading

4-1. Downloading Binary Files

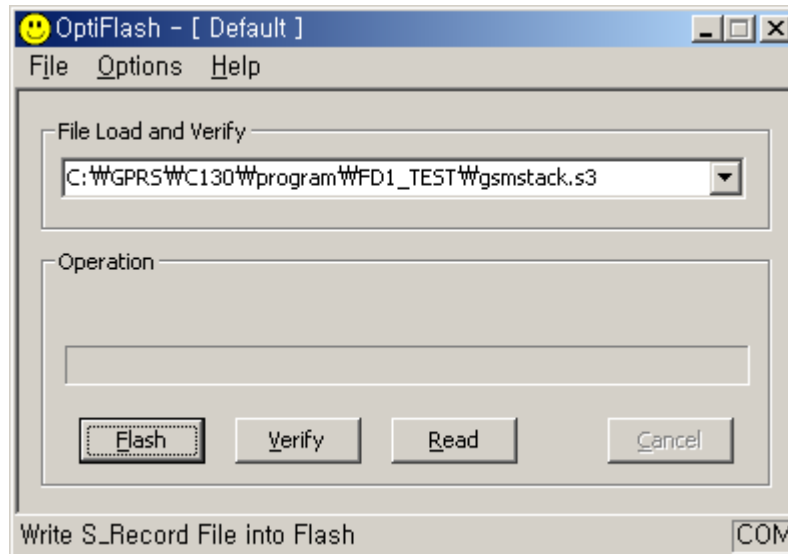
- Three binary files for downloading F210
 - F210XXYY.s3 : Main source code binary.

4-2. Pre-requisite for Downloading

- Downloader Program([OptiFlash.exe](#))
- F210 Mobile Phone
- Data Cable
- Binary files

4-3. S/W Downloader Program

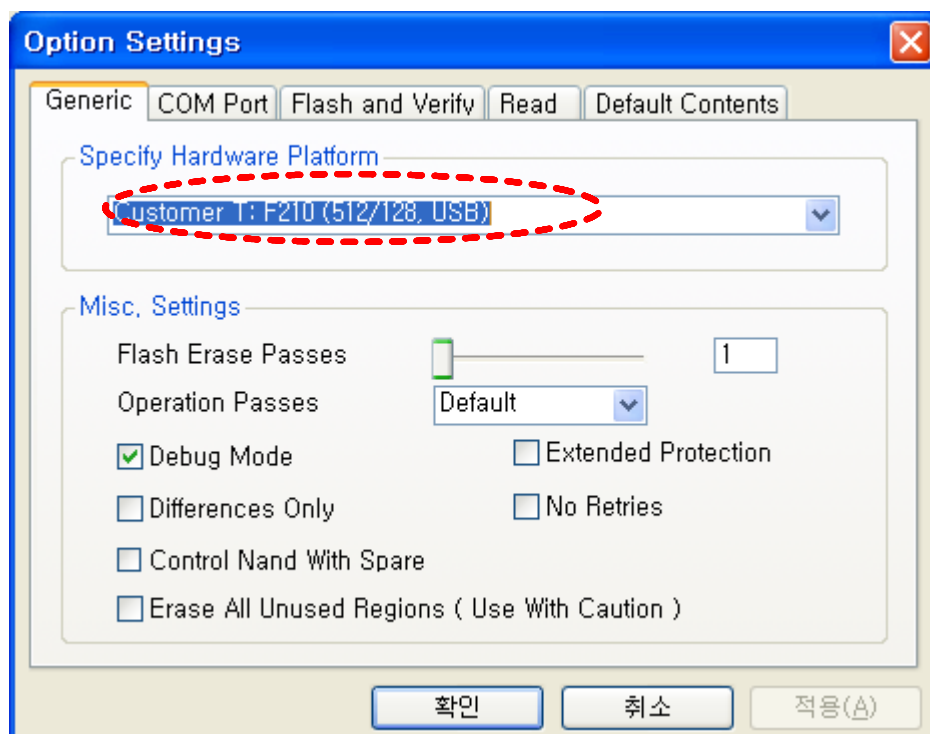
1. Load the binary download program by executing the **"OptiFlash.exe"**



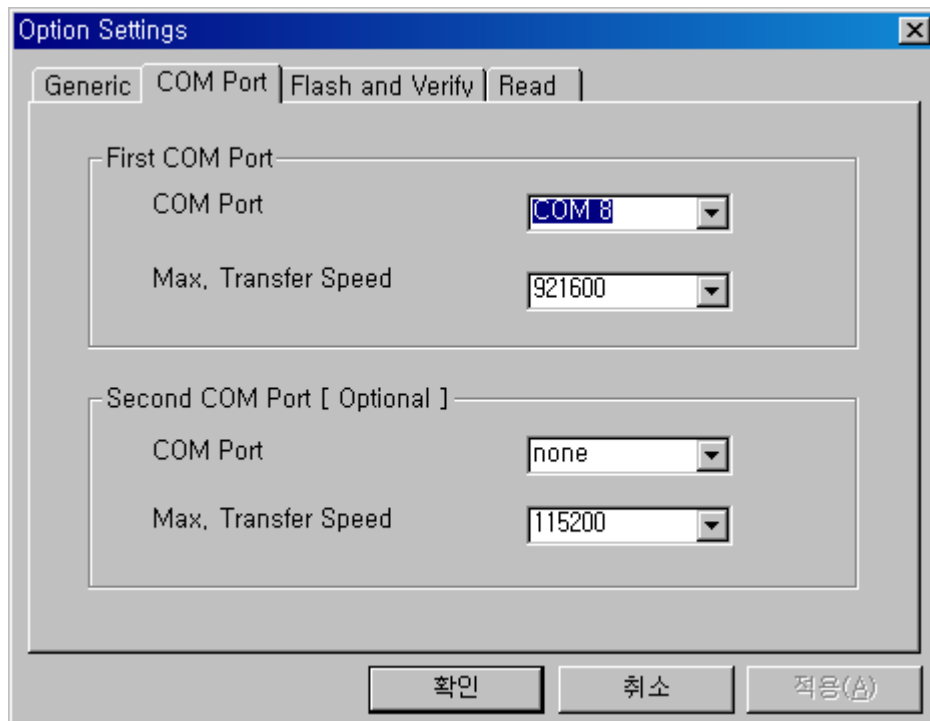
2. Select the **"Options" -> "Settings" -> "Generic" -> "Specify hardware platform"**.

Choose hardware platform for the downloader file setting.

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



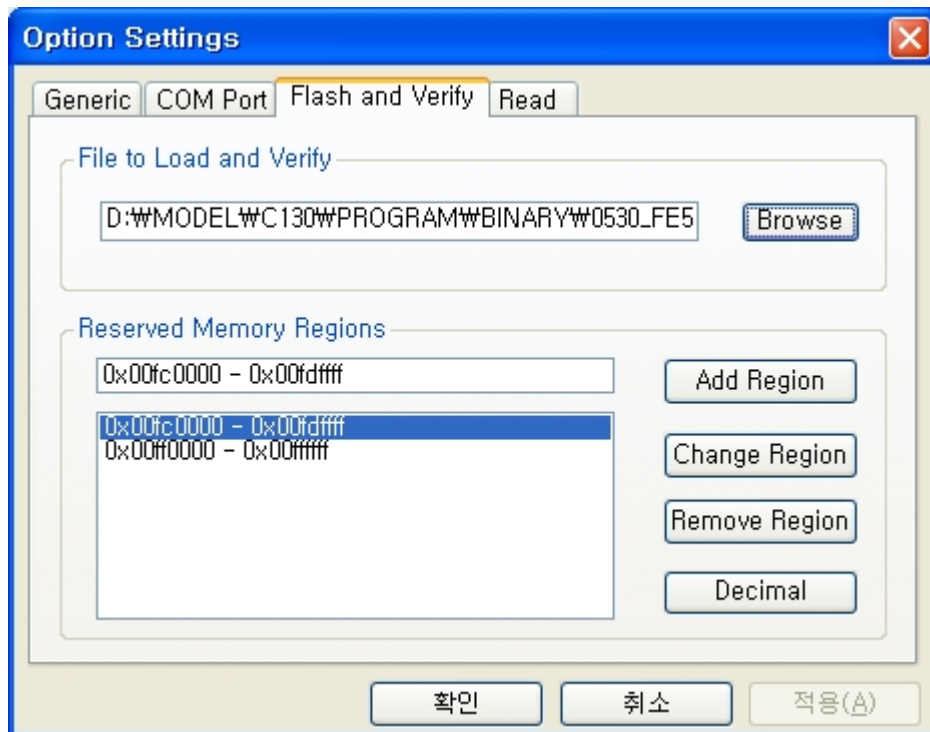
3. Select the **COM port** when the download cable is connected



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 "XC30XXYY.s3", for the downloader binary setting.



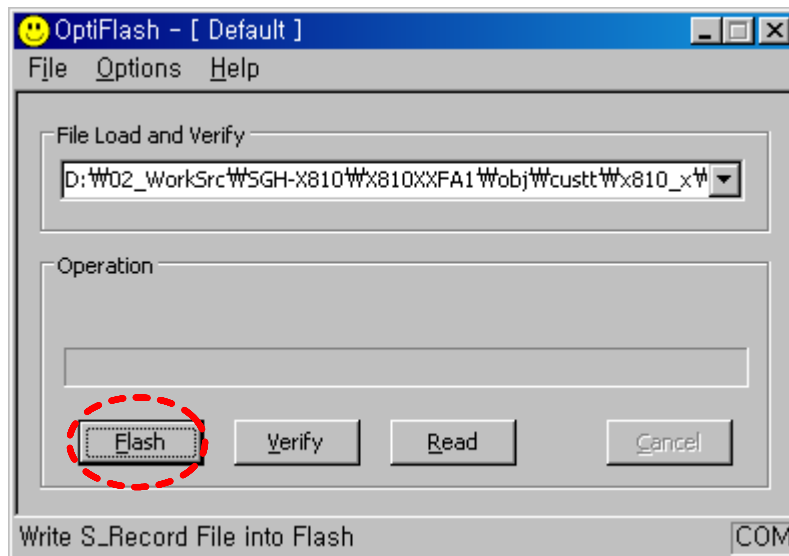
Make sure that not to change the reserved memory regions.

**In case of F200 the reserved regions are :
-0x21fe0000 - 0x21ffff**

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. :

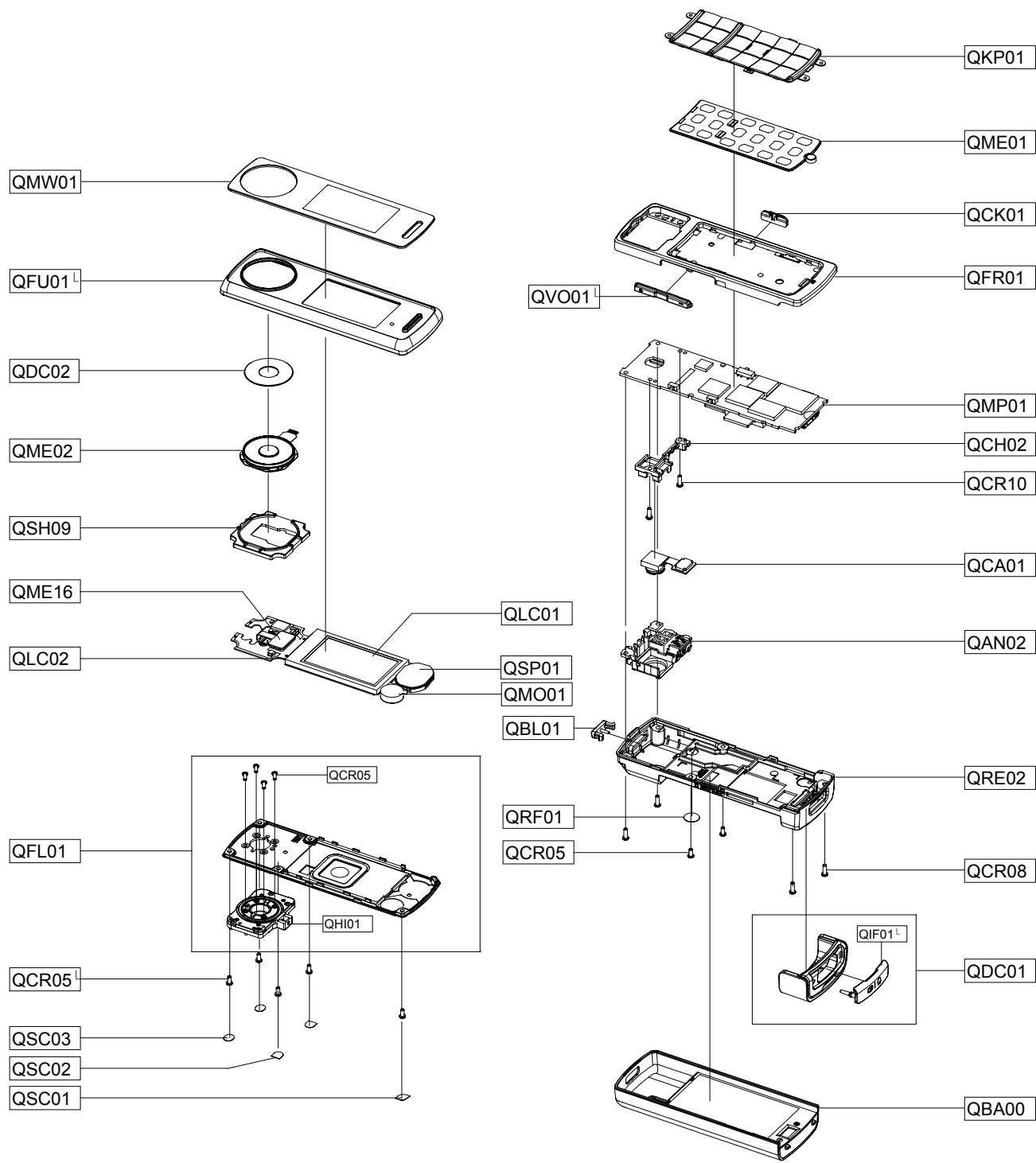
***#1234#**

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-SGH-F210	GH42-01304A
QBA00		BATTERY-750MAH,ME/BLU,ENG,M	GH43-02922A
QBL01		PMO LOCKER-BATT	GH72-39899D
QCA01		CAMERA MODULE	GH59-04536A
QCH02		PMO-CAMERA HOUSING	GH72-39898A
QCK01		PMO-KEY HOLD	GH72-39902A
QCR05		SCREW-MACHINE	6001-001478
QCR05		SCREW-MACHINE	6001-001478
QCR08		SCREW-MACHINE	6001-001611
QCR10		SCREW-MACHINE	6001-001633
QDC02		ASSY DECO-WHEEL KEY	GH98-05629A
QFR01		ASSY CASE-FRONT	GH98-04982A
QFU01		ASSY CASE-SWING UPPER	GH98-04981A
QKP01		ASSY KEYPAD-MAIN(XEN/RK)	GH98-04985D
QLC01		LCD-MAIN	GH07-00828A
QLC02		ELA UNIT-SGHF210 LCD MODULE,SV	GH96-02842A
QME01		KEY FPCB-SGHF210 KEY FPCB	GH59-04569A
QME02		KEY FPCB-WHEEL KEY,F210	GH59-04534A
QME16		FPC-CON TO CON,F210	GH41-01769A
QMO01		MOTOR DC-SGHF210	GH31-00355A
QMP01		PBA MAIN-SGHF210	GH92-03715A
QMW01		PMO COVER-MAINWINDOW	GH72-42026A
QRE02		ASSY CASE-REAR	GH98-04986D
QRF01		TAPE-SHEET RF	GH74-32459D
QSC01		TAPE-SHEET SCREW CAP TOP	GH74-32454A
QSC02		TAPE-SHEET SCREW CAP MID	GH74-32455A
QSC03		TAPE-SHEET SCREW CAP BOT L	GH74-32456A
QSH09		ASSY CASE-NAVIKEY SHIELD	GH98-04983A
QSP01		SPEAKER	3001-002175

QVO01		ASSY KEY-VOLUME	GH98-06568A
QFL01		ASSY CASE-SWING LOWER	GH98-04984A
	QCR05	SCREW-MACHINE	6001-001478
	QHI01	ASSY HINGE-FRONT	GH98-05464A
QDC01		ASSY COVER-DECO	GH98-06539A
	QIF01	PMO COVER-IF	GH72-42718D

Discription	SEC CODE
BAG PE	6902-000297
CBF INTERFACE-MIC CABLE,BLK,S2	GH39-00727A
CBF INTERFACE-DATA LINK CABLE(	GH39-00859B
ADAPTOR-ATADS10EBE,BLK,EU	GH44-01702A
S/W CD-SAMSUNG PC STUDIO 3.1,F	GH46-00439A
EARPHONE-STEREO HEADSET,S20P,M	GH59-02977A
LABEL(P)-UNIT SEAL	GH68-00518B
LABEL(R)-WATER SOAK	GH68-09361A
LABEL(R)-MAIN(EU)	GH68-15849A
MANUAL USERS-EU GERMAN	GH68-15984A
BOX(P)-UNIT MAIN(EU)	GH69-05817A
CUSHION-CASE(EU)	GH69-05819A
TAPE INSU	GH74-18904A
MPR-TAPE LCD BTM MASKING	GH74-22777A
MPR-TAPE MASKING LCD	GH74-23786A
MPR-TAPE MASKING SM LCD	GH74-24546A
SPONGE	GH74-31970A
TAPE GASK	GH74-33225A
VINYL-BOHO WINDOW	GH74-33878A

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0403-001547	D507	DIODE-ZENER	SA
0403-001547	D601	DIODE-ZENER	SA
0404-001172	D701	DIODE-SCHOTTKY	SA
0406-001150	V601	DIODE-TVS	SA
0406-001150	VR604	DIODE-TVS	SA
0406-001150	VR605	DIODE-TVS	SA
0406-001150	VR607	DIODE-TVS	SA
0406-001201	ZD604	DIODE-TVS	SA
0406-001208	ZD603	DIODE-TVS	SA
0406-001208	ZD605	DIODE-TVS	SA
0406-001241	D505	DIODE-TVS	SA
0406-001254	C610	DIODE-TVS	SA
0406-001254	D503	DIODE-TVS	SA
0406-001254	D504	DIODE-TVS	SA
0406-001254	V402	DIODE-TVS	SA
0406-001254	V403	DIODE-TVS	SA
0406-001267	ZD401	DIODE-TVS	SA
0406-001267	ZD501	DIODE-TVS	SA
0406-001267	ZD502	DIODE-TVS	SA
0801-002995	U302	IC-CMOS LOGIC	SA
0801-003121	U706	IC-CMOS LOGIC	SA
1001-001401	U202	IC-ANALOG SWITCH	SA
1001-001428	U401	IC-ANALOG MULTIPLEX	SA
1001-001428	U402	IC-ANALOG MULTIPLEX	SA
1009-001035	U601	IC-HALL EFFECT S/W	SA
1107-001703	UME202	IC-FLASH MEMORY	SA
1108-000046	UME201	IC-MCP	SA
1201-002457	U101	IC-POWER AMP	SA
1203-003563	U712	IC-POS.FIXED REG.	SA
1203-004119	CPU301	IC-POWER SUPERVISOR	SA
1203-004135	U707	IC-POS.FIXED REG.	SA
1203-004164	U701	IC-DC/DC CONVERTER	SA
1203-004172	U705	IC-DC/DC CONVERTER	SA
1203-004291	U708	IC-MULTI REG.	SA
1203-004377	U702	IC-MULTI REG.	SA
1203-004377	U704	IC-MULTI REG.	SA

SEC CODE	Design LOC	Discription	STATUS
1203-004416	U709	IC-DC/DC CONVERTER	SA
1203-004518	U301	IC-BATTERY	SA
1204-002746	U403	IC-TUNER	SA
1205-002272	U203	IC-TRANSCEIVER	SA
1205-002942	U103	IC-TRANSCEIVER	SA
1205-003093	U102	IC-TRANSCEIVER	SA
1205-003227	UCD401	IC-CODEC	SA
1404-001165	TH301	THERMISTOR-NTC	SA
1405-001082	V401	VARISTOR	SA
1405-001082	V501	VARISTOR	SA
1405-001108	VR608	VARISTOR	SA
1405-001108	ZD601	VARISTOR	SA
1405-001108	ZD602	VARISTOR	SA
2007-000138	R534	R-CHIP	SA
2007-000139	R224	R-CHIP	SA
2007-000139	R225	R-CHIP	SA
2007-000148	R201	R-CHIP	SA
2007-000148	R202	R-CHIP	SA
2007-000148	R214	R-CHIP	SA
2007-000148	R231	R-CHIP	SA
2007-000148	R714	R-CHIP	SA
2007-000148	R716	R-CHIP	SA
2007-000157	R222	R-CHIP	SA
2007-000157	R423	R-CHIP	SA
2007-000157	R624	R-CHIP	SA
2007-000157	U711	R-CHIP	SA
2007-000161	R322	R-CHIP	SA
2007-000162	R315	R-CHIP	SA
2007-000162	R320	R-CHIP	SA
2007-000162	R321	R-CHIP	SA
2007-000170	R119	R-CHIP	SA
2007-000170	R514	R-CHIP	SA
2007-000171	F601	R-CHIP	SA
2007-000171	L105	R-CHIP	SA
2007-000171	L402	R-CHIP	SA
2007-000171	R101	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-000171	R305	R-CHIP	SA
2007-000171	R426	R-CHIP	SA
2007-000171	R427	R-CHIP	SA
2007-000171	R701	R-CHIP	SA
2007-000171	R706	R-CHIP	SA
2007-000171	R713	R-CHIP	SA
2007-000171	R720	R-CHIP	SA
2007-000172	R708	R-CHIP	SA
2007-001290	R226	R-CHIP	SA
2007-001290	R227	R-CHIP	SA
2007-001290	R515	R-CHIP	SA
2007-001313	R410	R-CHIP	SA
2007-007132	R304	R-CHIP	SA
2007-007136	R309	R-CHIP	SA
2007-007142	R404	R-CHIP	SA
2007-007142	R406	R-CHIP	SA
2007-007142	R414	R-CHIP	SA
2007-007142	R416	R-CHIP	SA
2007-007308	R308	R-CHIP	SA
2007-007313	R303	R-CHIP	SA
2007-007314	R310	R-CHIP	SA
2007-007528	R223	R-CHIP	SA
2007-007528	R409	R-CHIP	SA
2007-007528	R412	R-CHIP	SA
2007-007528	R413	R-CHIP	SA
2007-007588	R408	R-CHIP	SA
2007-007590	R401	R-CHIP	SA
2007-007590	R407	R-CHIP	SA
2007-007590	R415	R-CHIP	SA
2007-007590	R417	R-CHIP	SA
2007-007698	R707	R-CHIP	SA
2007-007798	R418	R-CHIP	SA
2007-007798	R419	R-CHIP	SA
2007-008044	R606	R-CHIP	SA
2007-008044	R614	R-CHIP	SA
2007-008044	R615	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008044	R616	R-CHIP	SA
2007-008044	R617	R-CHIP	SA
2007-008044	R618	R-CHIP	SA
2007-008044	R633	R-CHIP	SA
2007-008044	R634	R-CHIP	SA
2007-008044	R635	R-CHIP	SA
2007-008044	R636	R-CHIP	SA
2007-008044	R637	R-CHIP	SA
2007-008044	R638	R-CHIP	SA
2007-008044	R639	R-CHIP	SA
2007-008044	R640	R-CHIP	SA
2007-008044	R641	R-CHIP	SA
2007-008045	R217	R-CHIP	SA
2007-008048	R111	R-CHIP	SA
2007-008049	R613	R-CHIP	SA
2007-008052	R607	R-CHIP	SA
2007-008052	R608	R-CHIP	SA
2007-008052	R609	R-CHIP	SA
2007-008052	R611	R-CHIP	SA
2007-008052	R612	R-CHIP	SA
2007-008054	R411	R-CHIP	SA
2007-008055	R216	R-CHIP	SA
2007-008055	R220	R-CHIP	SA
2007-008055	R312	R-CHIP	SA
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2007-008055	R502	R-CHIP	SA
2007-008055	R503	R-CHIP	SA
2007-008055	R504	R-CHIP	SA
2007-008055	R516	R-CHIP	SA
2007-008055	R702	R-CHIP	SA
2007-008055	R709	R-CHIP	SA
2007-008055	R712	R-CHIP	SA
2007-008056	R104	R-CHIP	SA
2007-008419	R507	R-CHIP	SA
2007-008419	R508	R-CHIP	SA
2007-008419	R509	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008419	R510	R-CHIP	SA
2007-008419	R511	R-CHIP	SA
2007-008483	R307	R-CHIP	SA
2007-008483	R319	R-CHIP	SA
2007-008483	R513	R-CHIP	SA
2007-008483	R619	R-CHIP	SA
2007-008483	R620	R-CHIP	SA
2007-008483	R705	R-CHIP	SA
2007-008486	R721	R-CHIP	SA
2007-008516	R108	R-CHIP	SA
2007-008516	R113	R-CHIP	SA
2007-008516	R212	R-CHIP	SA
2007-008516	R213	R-CHIP	SA
2007-008516	R317	R-CHIP	SA
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2007-008516	R432	R-CHIP	SA
2007-008516	R558	R-CHIP	SA
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2007-008516	R625	R-CHIP	SA
2007-008516	R718	R-CHIP	SA
2007-008516	R722	R-CHIP	SA
2007-008542	R112	R-CHIP	SA
2007-008542	R114	R-CHIP	SA
2007-008542	R115	R-CHIP	SA
2007-008542	R117	R-CHIP	SA
2007-008542	R118	R-CHIP	SA
2007-008542	R203	R-CHIP	SA
2007-008542	R215	R-CHIP	SA
2007-008542	R218	R-CHIP	SA
2007-008542	R219	R-CHIP	SA
2007-008542	R221	R-CHIP	SA
2007-008542	R299	R-CHIP	SA
2007-008542	R301	R-CHIP	SA
2007-008542	R302	R-CHIP	SA
2007-008542	R326	R-CHIP	SA
2007-008542	R405	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008542	R425	R-CHIP	SA
2007-008542	R428	R-CHIP	SA
2007-008542	R429	R-CHIP	SA
2007-008542	R430	R-CHIP	SA
2007-008542	R431	R-CHIP	SA
2007-008542	R433	R-CHIP	SA
2007-008542	R434	R-CHIP	SA
2007-008542	R517	R-CHIP	SA
2007-008542	R524	R-CHIP	SA
2007-008542	R535	R-CHIP	SA
2007-008542	R536	R-CHIP	SA
2007-008542	R537	R-CHIP	SA
2007-008542	R539	R-CHIP	SA
2007-008542	R545	R-CHIP	SA
2007-008542	R546	R-CHIP	SA
2007-008542	R642	R-CHIP	SA
2007-008542	R644	R-CHIP	SA
2007-008542	R645	R-CHIP	SA
2007-008542	R646	R-CHIP	SA
2007-008542	R647	R-CHIP	SA
2007-008542	R648	R-CHIP	SA
2007-008542	R649	R-CHIP	SA
2007-008542	R650	R-CHIP	SA
2007-008542	R651	R-CHIP	SA
2007-008542	R652	R-CHIP	SA
2007-008542	R653	R-CHIP	SA
2007-008542	R654	R-CHIP	SA
2007-008542	R655	R-CHIP	SA
2007-008542	R703	R-CHIP	SA
2007-008542	R710	R-CHIP	SA
2007-008548	R110	R-CHIP	SA
2007-008588	R402	R-CHIP	SA
2007-008588	R403	R-CHIP	SA
2007-008588	R505	R-CHIP	SA
2007-008588	R506	R-CHIP	SA
2007-008591	R520	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008591	R521	R-CHIP	SA
2007-008786	R230	R-CHIP	SA
2007-008786	R306	R-CHIP	SA
2007-008786	R522	R-CHIP	SA
2007-008786	R523	R-CHIP	SA
2007-008786	R552	R-CHIP	SA
2007-008808	R204	R-CHIP	SA
2007-008808	R205	R-CHIP	SA
2007-008808	R206	R-CHIP	SA
2007-008808	R207	R-CHIP	SA
2007-008808	R208	R-CHIP	SA
2007-008808	R209	R-CHIP	SA
2007-008808	R210	R-CHIP	SA
2007-008808	R211	R-CHIP	SA
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2007-008808	R622	R-CHIP	SA
2007-009157	R603	R-CHIP	SA
2007-009157	R643	R-CHIP	SA
2007-009158	R120	R-CHIP	SA
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2007-009168	R314	R-CHIP	SA
2007-009170	R501	R-CHIP	SA
2007-009314	R623	R-CHIP	SA
2007-009408	R316	R-CHIP	SA
2007-009419	R605	R-CHIP	SA
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2203-000278	C142	C-CER,CHIP	SA
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2203-001259	C101	C-CER,CHIP	SA
2203-001259	C425	C-CER,CHIP	SA
2203-002709	C216	C-CER,CHIP	SA
2203-002709	C218	C-CER,CHIP	SA
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2203-006562	C311	C-CER,CHIP	SA
2203-006562	C313	C-CER,CHIP	SA
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2203-006681	C623	C-CER,CHIP	SA
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2203-006825	C323	C-CER,CHIP	SA
2203-006825	C440	C-CER,CHIP	SA
2203-006825	C703	C-CER,CHIP	SA
2203-006825	C705	C-CER,CHIP	SA
2203-006825	C731	C-CER,CHIP	SA
2203-006825	TA406	C-CER,CHIP	SA
2203-006825	TA407	C-CER,CHIP	SA
2203-006825	TA602	C-CER,CHIP	SA
2203-006825	TA704	C-CER,CHIP	SA
2203-006825	TA705	C-CER,CHIP	SA
2203-006838	C136	C-CER,CHIP	SA
2203-006838	C140	C-CER,CHIP	SA
2203-006872	C307	C-CER,CHIP	SA
2203-006872	C308	C-CER,CHIP	SA
2203-006872	C309	C-CER,CHIP	SA
2203-006872	C310	C-CER,CHIP	SA
2203-006872	C420	C-CER,CHIP	SA
2203-006872	C424	C-CER,CHIP	SA
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2203-006872	C726	C-CER,CHIP	SA
2203-006872	TA605	C-CER,CHIP	SA
2404-001225	TA501	C-TA,CHIP	SA
2404-001225	TA502	C-TA,CHIP	SA
2404-001225	TA504	C-TA,CHIP	SA
2404-001225	TA603	C-TA,CHIP	SA

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2404-001381	C415	C-TA,CHIP	SA
2404-001381	C628	C-TA,CHIP	SA
2404-001381	TA101	C-TA,CHIP	SA
2404-001381	TA301	C-TA,CHIP	SA
2404-001381	TA302	C-TA,CHIP	SA
2404-001381	TA703	C-TA,CHIP	SA
2404-001381	TA706	C-TA,CHIP	SA
2404-001381	TA707	C-TA,CHIP	SA
2404-001397	TA604	C-TA,CHIP	SA
2404-001415	TA701	C-TA,CHIP	SA
2404-001478	TA403	C-TA,CHIP	SA
2404-001478	TA404	C-TA,CHIP	SA
2703-001722	C147	INDUCTOR-SMD	SA
2703-001734	L107	INDUCTOR-SMD	SA
2703-001748	L108	INDUCTOR-SMD	SA
2703-001748	L109	INDUCTOR-SMD	SA
2703-002202	L106	INDUCTOR-SMD	SA
2703-002206	L103	INDUCTOR-SMD	SA
2703-002208	L101	INDUCTOR-SMD	SA
2703-002208	L102	INDUCTOR-SMD	SA
2703-002714	L703	INDUCTOR-SMD	SA
2703-002900	L104	INDUCTOR-SMD	SA
2703-003097	L704	INDUCTOR-SMD	SA
2703-003196	L403	INDUCTOR-SMD	SA
2703-003260	L701	INDUCTOR-SMD	SA
2703-003260	L702	INDUCTOR-SMD	SA
2801-004455	OSC101	CRYSTAL-SMD	SA
2801-004458	OSC501	CRYSTAL-SMD	SA
2801-004466	OSC201	CRYSTAL-SMD	SA
2801-004506	OSC102	CRYSTAL-SMD	SA
2904-001600	F104	FILTER-SAW	SA
2904-001604	F103	FILTER-SAW	SNA
2904-001628	F102	FILTER-SAW	SA
2909-001279	F105	FILTER-LC	SA
3301-001342	F401	BEAD-SMD	SA

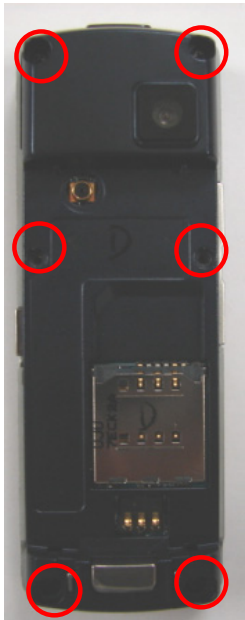
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3301-001342	F604	BEAD-SMD	SA
3301-001659	L110	BEAD-SMD	SA
3301-001729	L401	BEAD-SMD	SA
3301-001935	C432	BEAD-SMD	SA
3404-001303	TAC601	SWITCH-TACT	SA
3404-001303	TAC602	SWITCH-TACT	SA
3408-001132	SW641	SWITCH-SLIDE	SA
3705-001358	RFS101	CONNECTOR-COAXIAL	SA
3709-001465	CN601	CONNECTOR-CARD EDGE	SA
3710-002499	IFC501	SOCKET-INTERFACE	SA
3711-005581	HDC601	HEADER-BOARD TO BOARD	SA
3711-005643	HDC602	HEADER-BOARD TO BOARD	SA
3711-005659	CN602	HEADER-BOARD TO BOARD	SA
3711-005897	BTC601	HEADER-BATTERY	SA
4202-001339	ANT101	ANTENNA-CHIP	SA
4302-001201	BAT301	BATTERY-LI(2ND)	SA
GH09-00044A	CPU201	IC MICOM	SA
GH13-00055A	CPU501	IC ASIC-SGHF200	SA

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

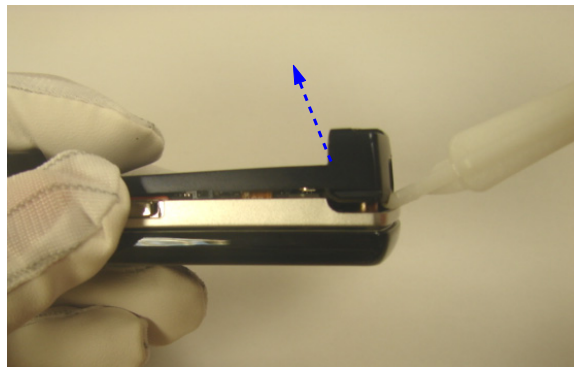
1



※ caution

1. Remove a screw at six points as shown.

2

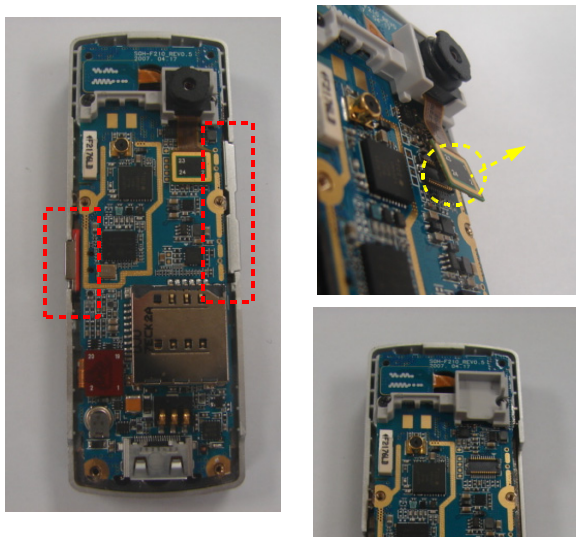


1) Be cautious not to damage the rear cover

※ caution

1. Make space between rear cover and front cover from the lower part of set, by assembly stick.

3

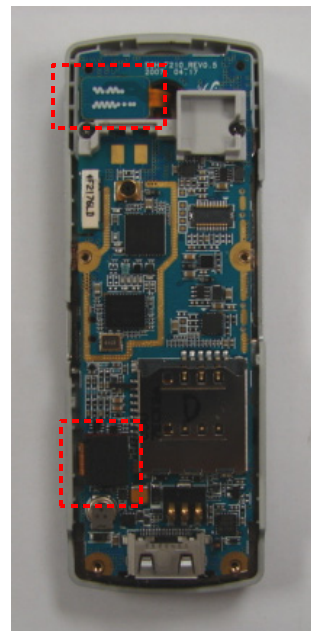


1) Be cautious not to damage FPCB and connector

※ caution

1. Remove a hold key and a volume key as shown.
2. Separate the camera connector
3. Separate the camera from the camera housing.

4

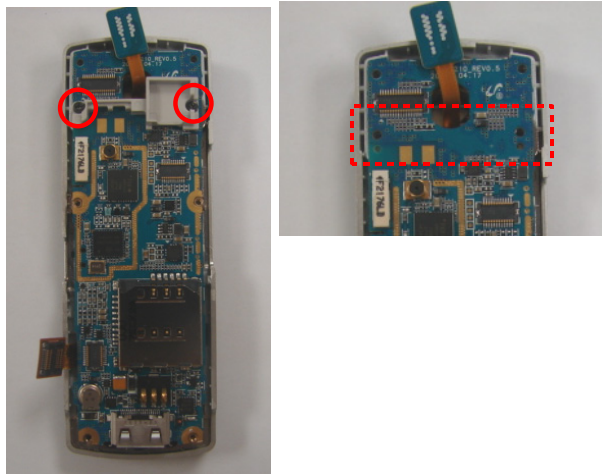


1) Be cautious not to damage FPCB and connector

※ caution

1. Separate the 3*4 key connector from the board
2. Separate the LCD connector from the board.

5

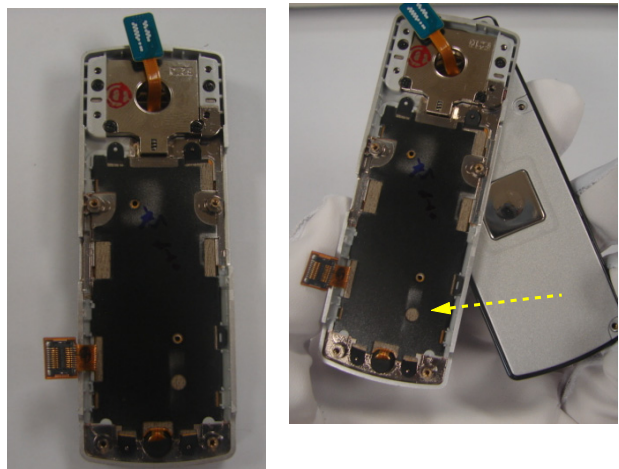


1) when removing the screws from camera housing, be careful not to damage the housing

※ caution

1. Remove the screw at the left and right side of camera housing
2. Separate the camera housing from PBA.
3. Separate the PBA from the SET.

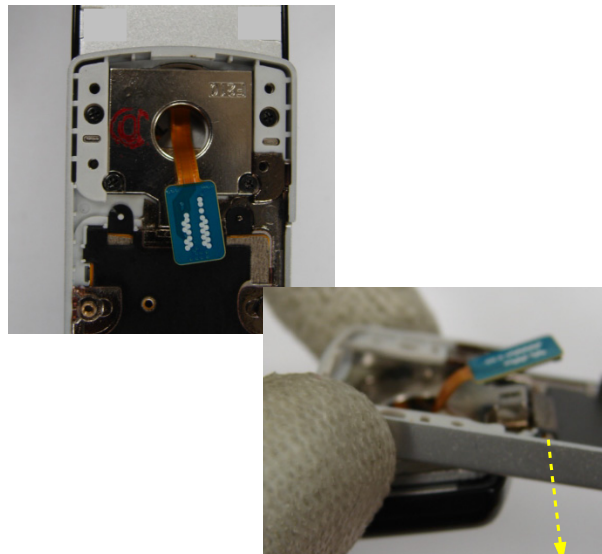
6



※ caution

1. Let it open by turning the front to the clockwise.

7



※ caution

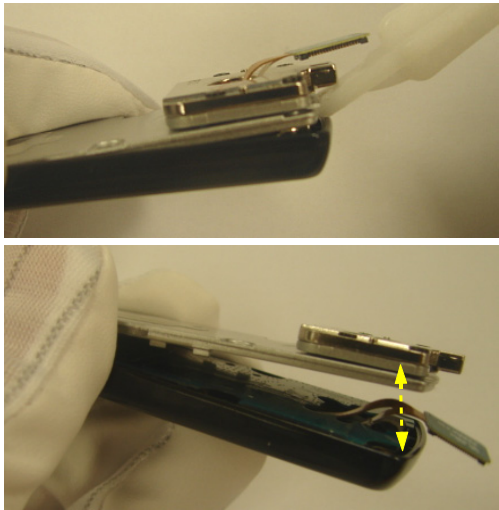
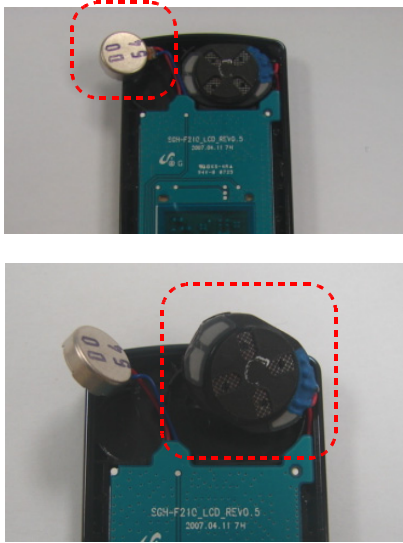
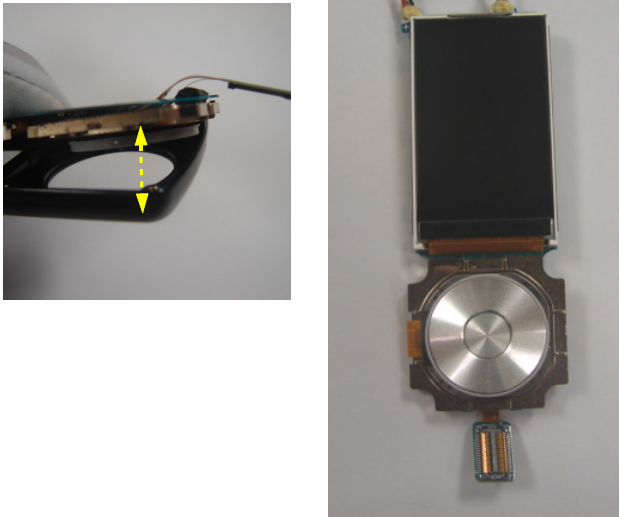
1. After the front open, pull it down as shown.
2. The swing ASS'Y and the front separate by pulling the front down.

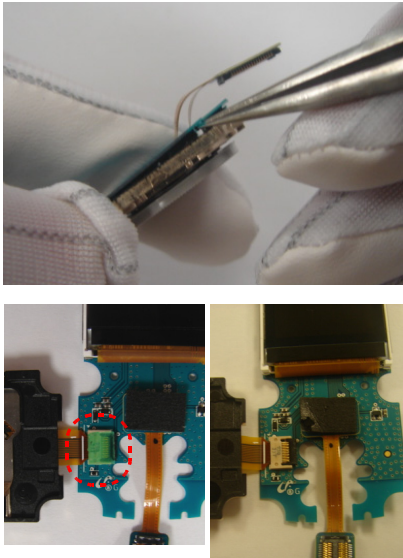
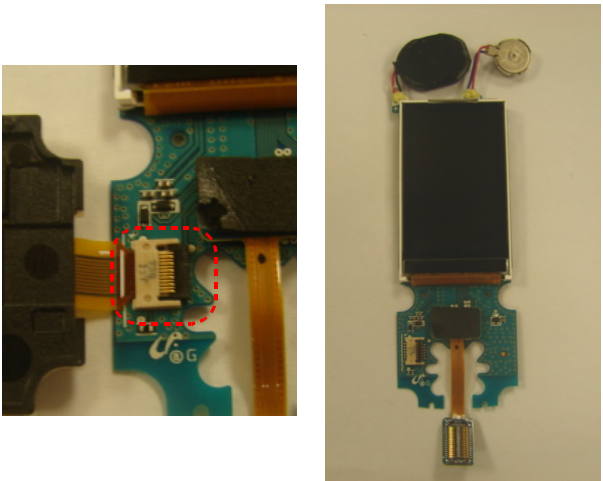
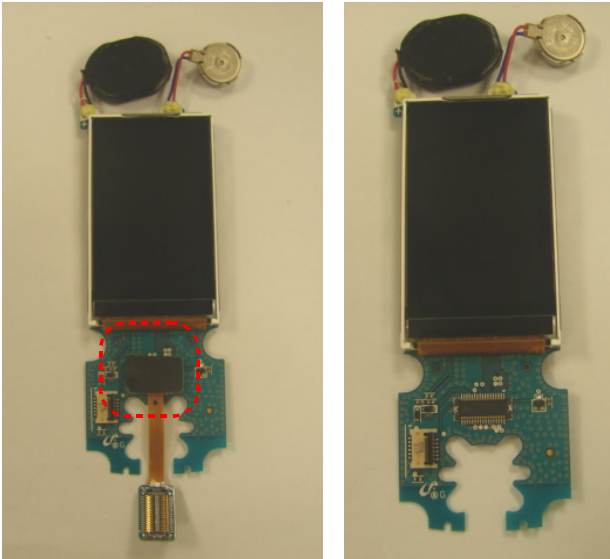
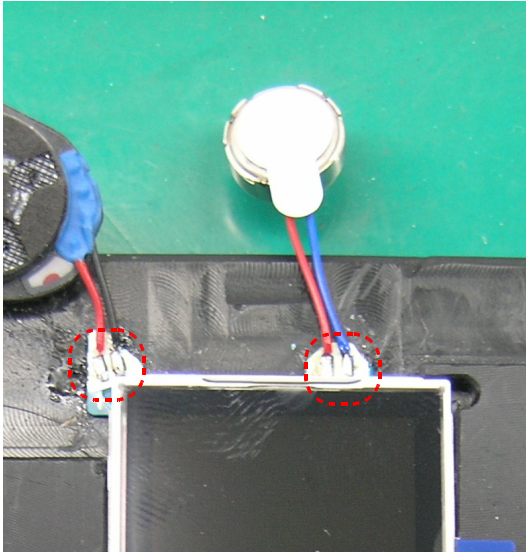
8



※ caution

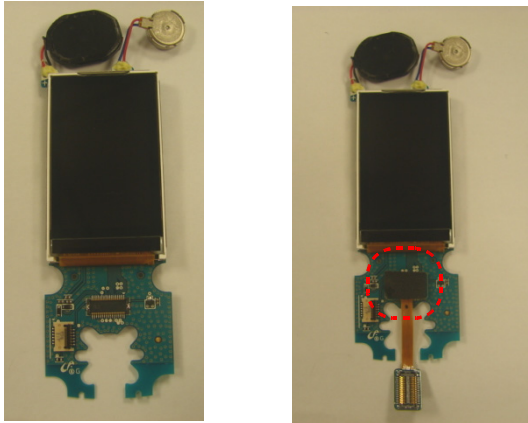
1. Swing the hinge in the counter clockwise
2. Remove the screw sheet at the five points as shown.

9 	10 
※ caution 1. Loosen the screw at the five points of lower case.	※ caution 1. By a assembly stick, separate the lower from the lower part.
11 	12 
※ caution 1.Take out the vibration motor from the land. 2.Remove the speaker.	※ caution 1. Remove the sub-PCB from upper.

13  1) When removing bracket, be cautious not to damage. ※ caution 1.Open the bracket by lifting to the left. 2.Remove the green insulated tape.	14  1) When removing bracket , be cautious not to damage FPCB. ※ caution 1. Lift the locker of connector. 2.Separate the wheel key ass'y.
15  ※ caution 1. Separate the main connector as shown.	16  ※ caution 1. Remove the bond. 2. Separate the motor and speaker after lead is removed using soldering tool.

7-2. Assembly

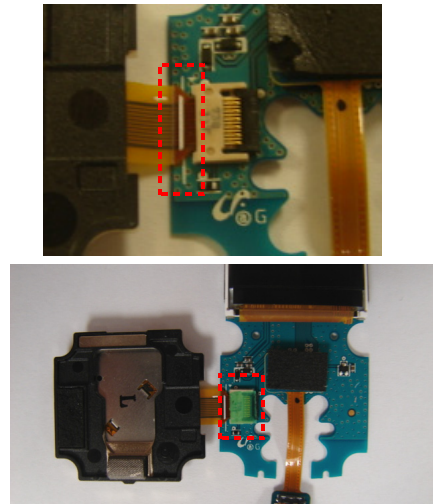
1



※ caution

1. Connect the MAIN FPCB on the LCD ASS'Y.

2

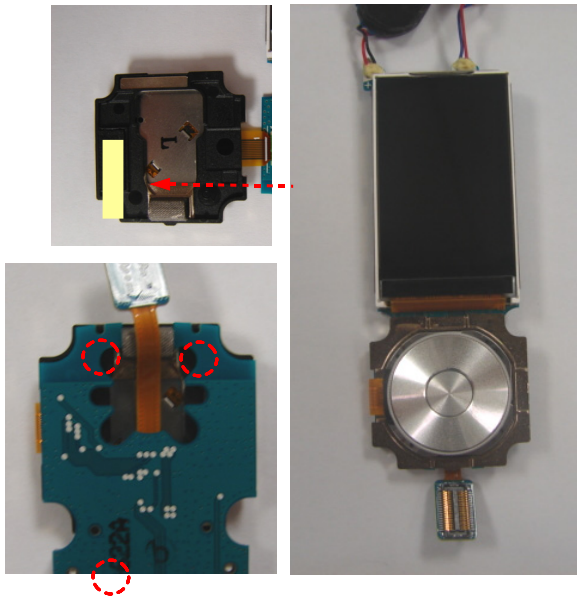


1) Insert by the shown guide line.

※ caution

1. Insert the wheel key ASS'Y according to guide line
2. Fix it by locker after inserting connector.
3. Put the tape on the locker to fix locker.

3

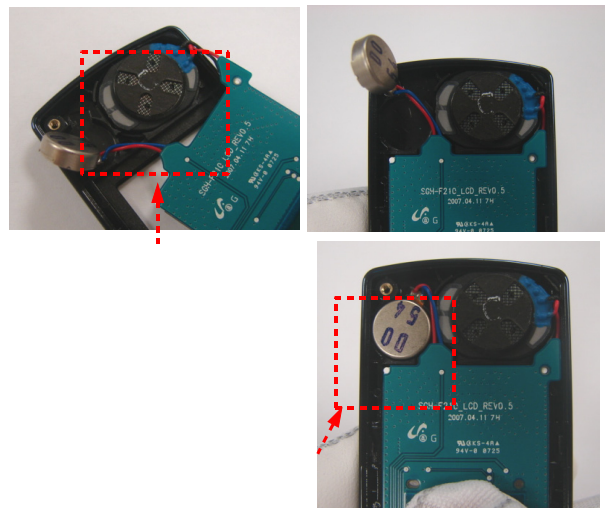


- 1) Remove tape
- 2) Check whether hole of bracket and hole of PCB are aligned.

※ caution

1. Remove the tape of the bracket.
2. Land wheel key ASS'Y according to PCB hole, folding sub-PCB.

4



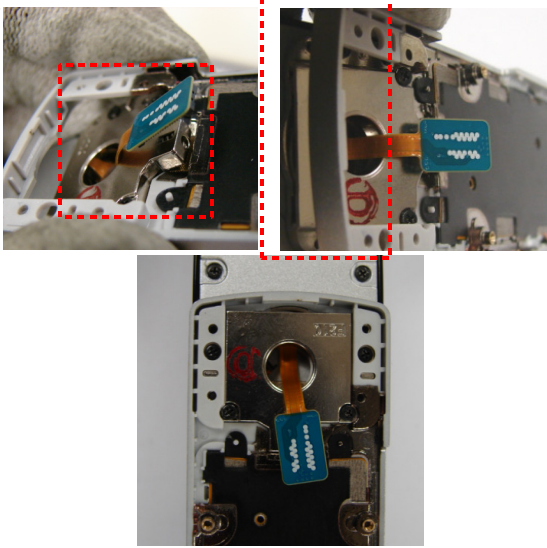
- 1) When speaker is landed, move the wire to the lower part of PCB not to damage.
- 2) When motor is landed, be cautious not to insert wire under the motor.

※ caution

1. Land the speaker at upper part.
2. Land the motor at upper part.

5	6
※ caution 1.Let the main connector go through the hole of lower.	1) Push the lower after the lower and upper are combined. ※ caution 1.Assemble upper and lower after hook of lower and locker of lower are combined.
7	8
※ caution 1.Fasten the 5 point screws at the lower.	1) Be cautious not to damage cover sticker. ※ caution 1.Put the cover sticker at the five point of the lower.

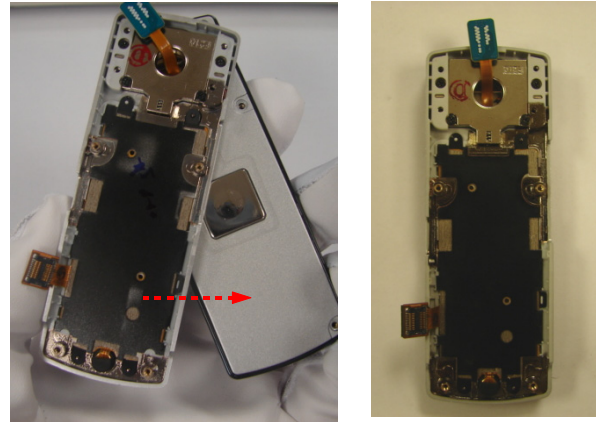
9



※ caution

1. According to the hinge shape, combine the front upper part as shown.

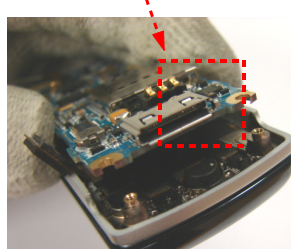
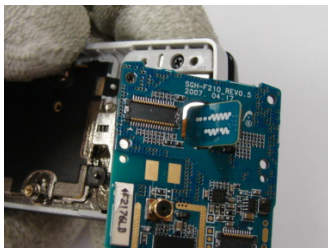
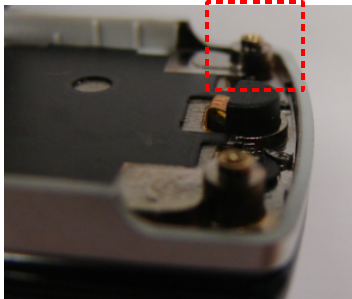
10



※ caution

1. Align the front and the lower by means of swinging to the counter clock wise.

11

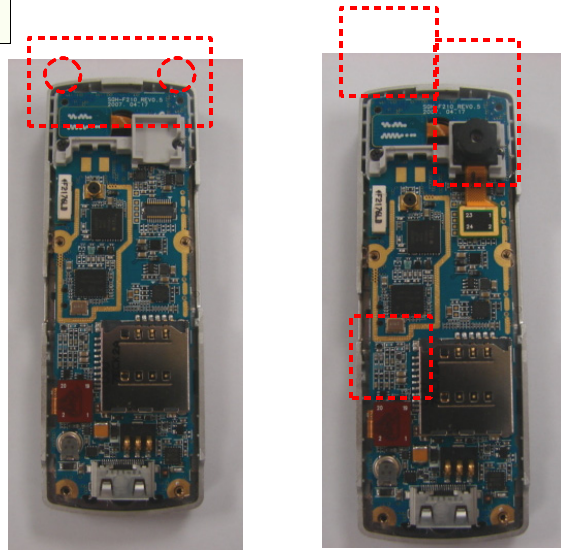


- 1) check the MIC as shown.
- 2) Check the position of MIC, again.

※ caution

1. Land the MIC on the desired position, exactly
2. Turning PBA up to 90 degree, insert FPCB into the hole.
3. Land PBA as shown.

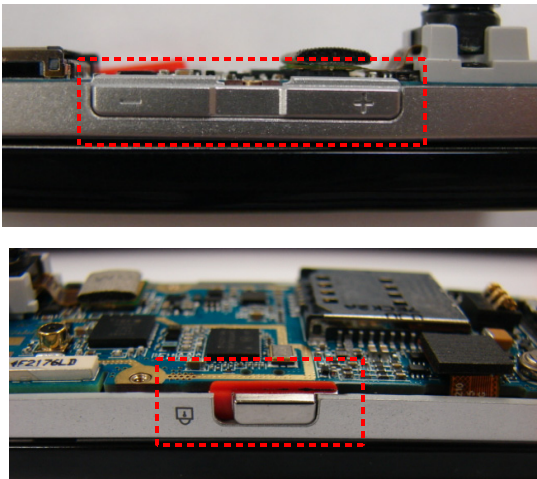
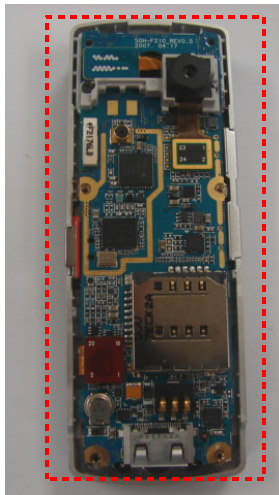
12



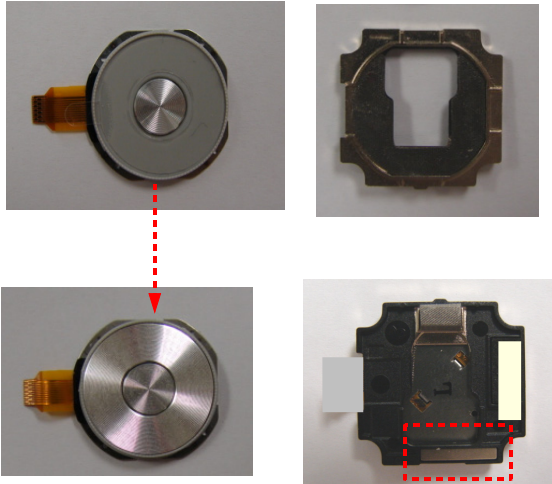
- 1) Align the hole of housing and the hole of PBA.
- 2) When combining the connectors, be cautious not to damage the pin of each connector.

※ caution

1. Land the camera housing according to the guide hole.
2. Fasten the screw at the camera housing.
3. At the upper part, combine the main connector.
4. Combine the 3*4 key connector at the lower part.
5. After landing camera at the housing, combine the connector.

13 	14 
1) Check the position of +/- ※ caution 1. Combine the volume key. 2. Combine the hold key.	※ caution 1. Check the status of each connector, volume key, and hold key.
15 	16 
1) Push rear carefully when assembling rear ※ caution 1. Combine the hook of rear's upper on the locker of front. 2. Combine sequentially from up and down.	※ caution 1. Fasten screws at the 6 point of the rear.

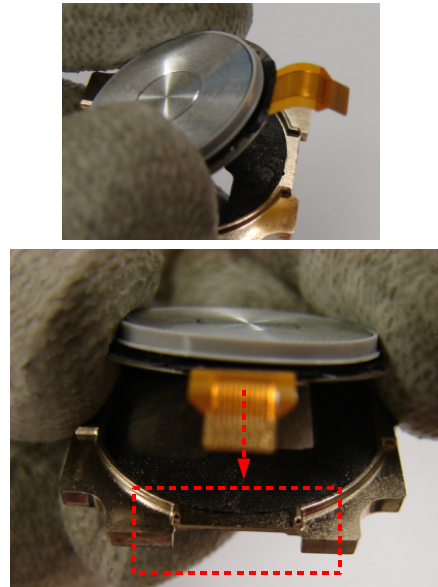
7-3. Wheel key Assembly

1

1)Check the whether a magnetic is in bracket.

※ caution

1. Attach the deco on the wheel key
2. Remove the tape on the top of bracket

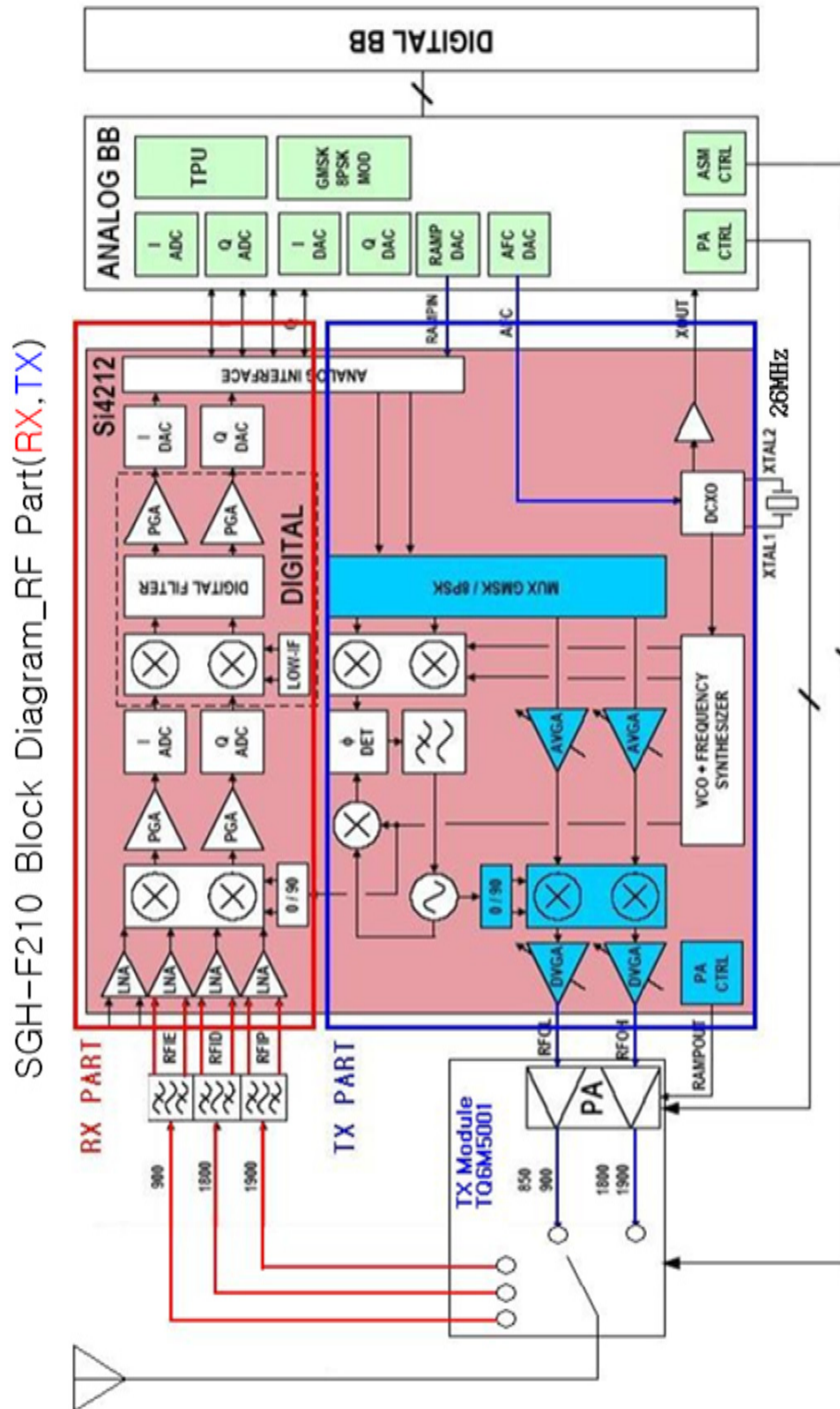
2

1)Wheel key can not be on the rib of the bracket.

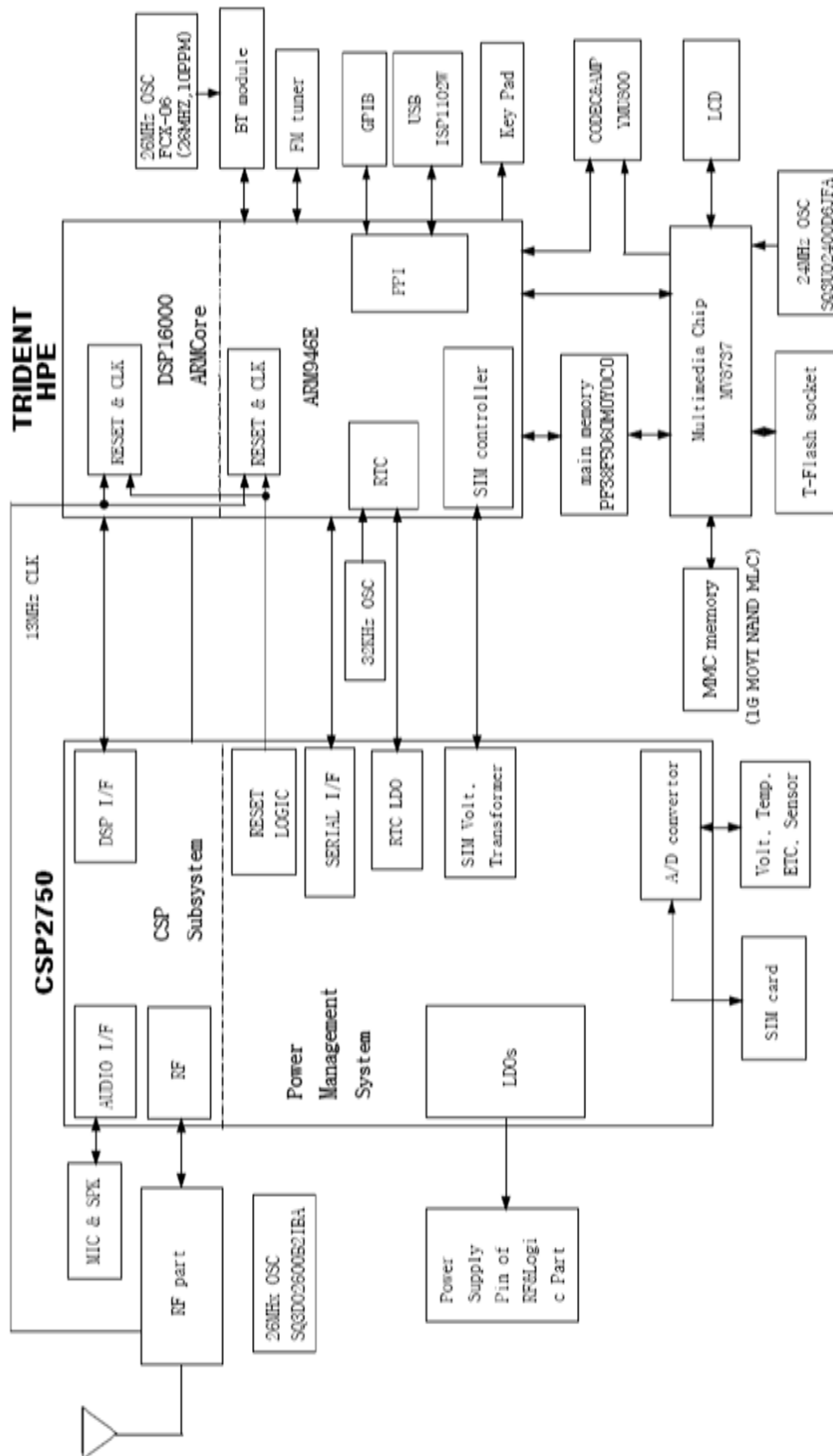
※ caution

- 1.Land the wheel key to the direction, where rib does not exist.

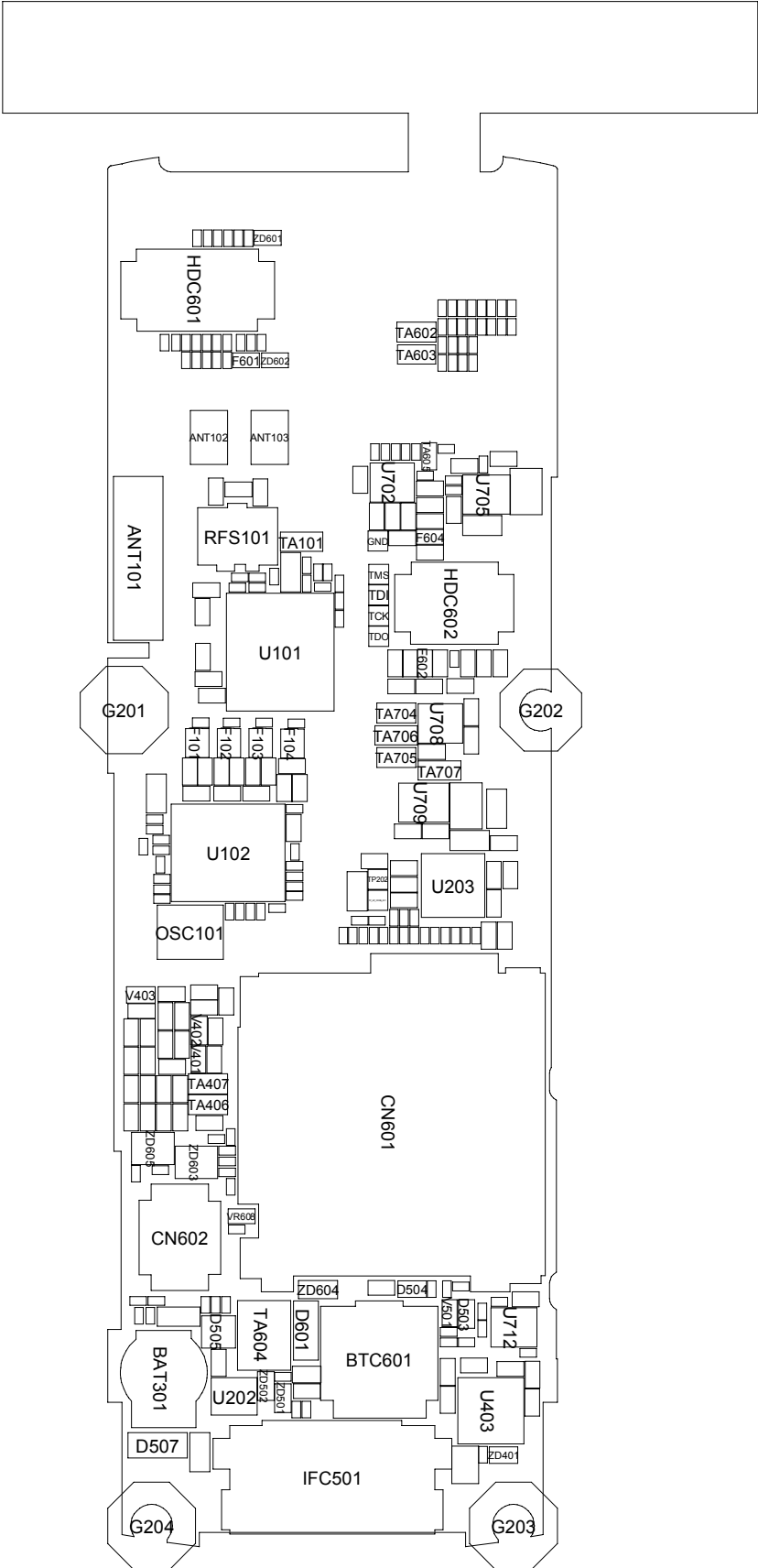
8. Block Diagrams



SGH-F210 Baseband Part Block diagram



9. PCB Diagrams

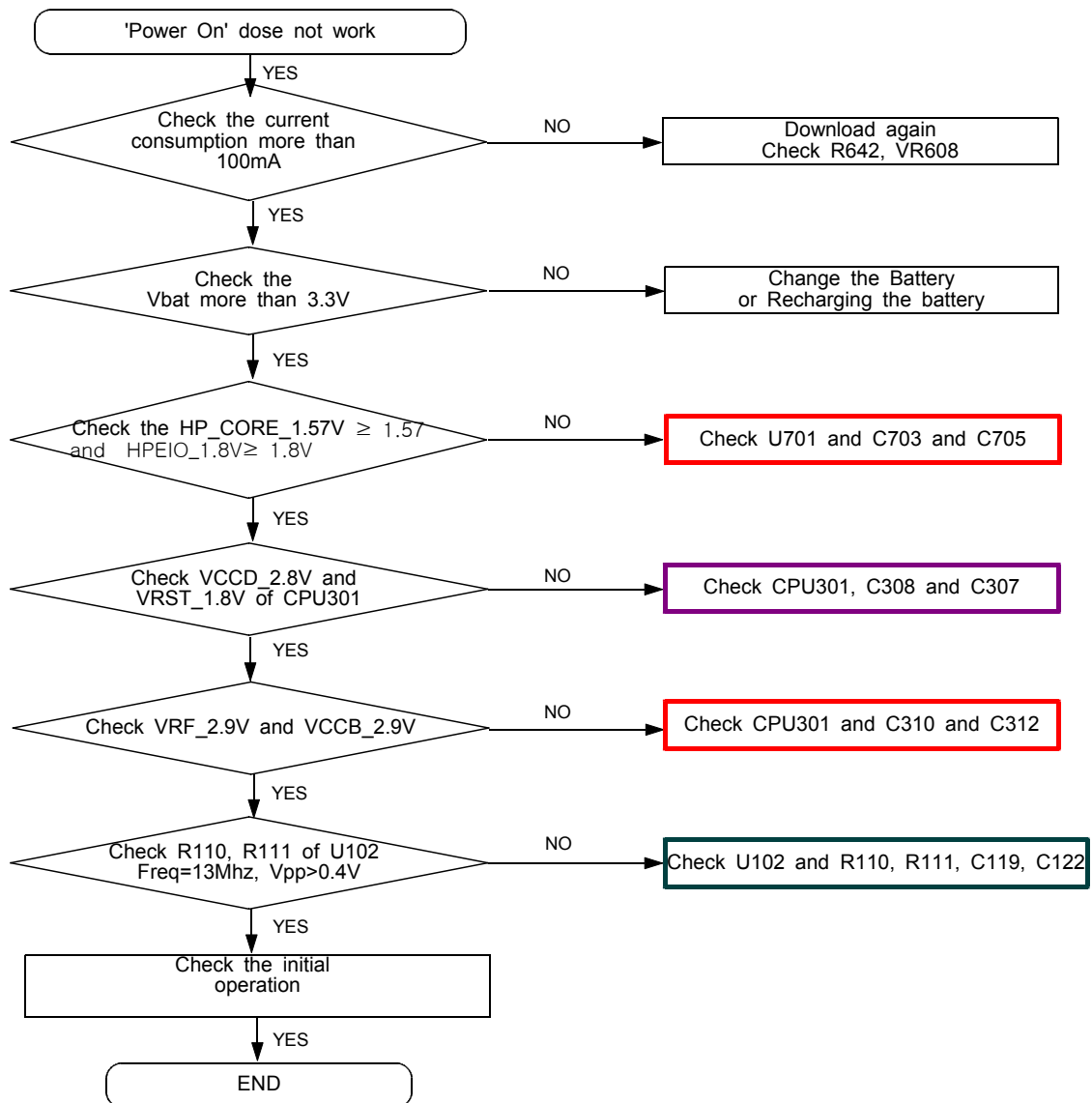


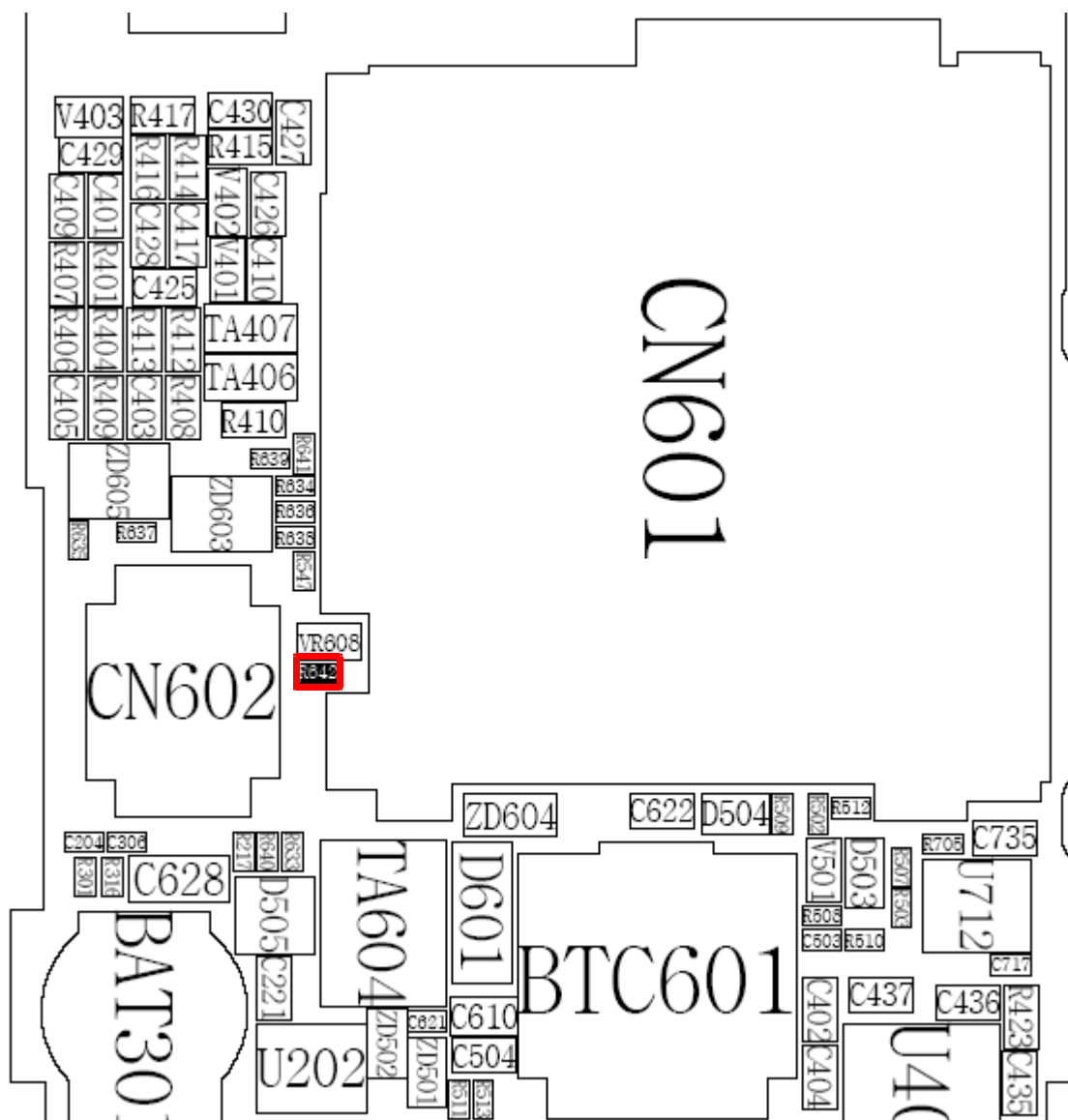


10. Chart of Troubleshooting

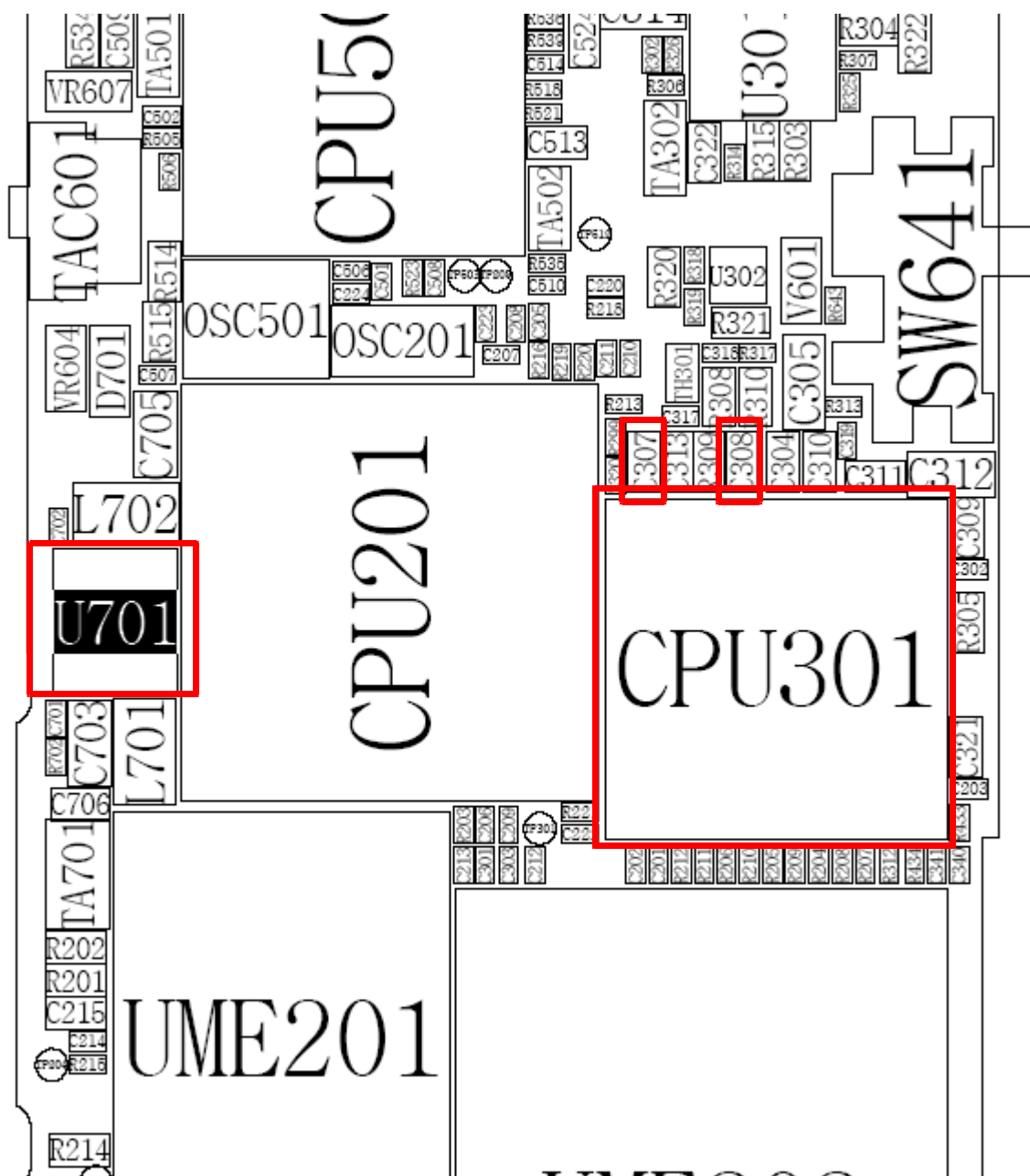
10-1.Baseband

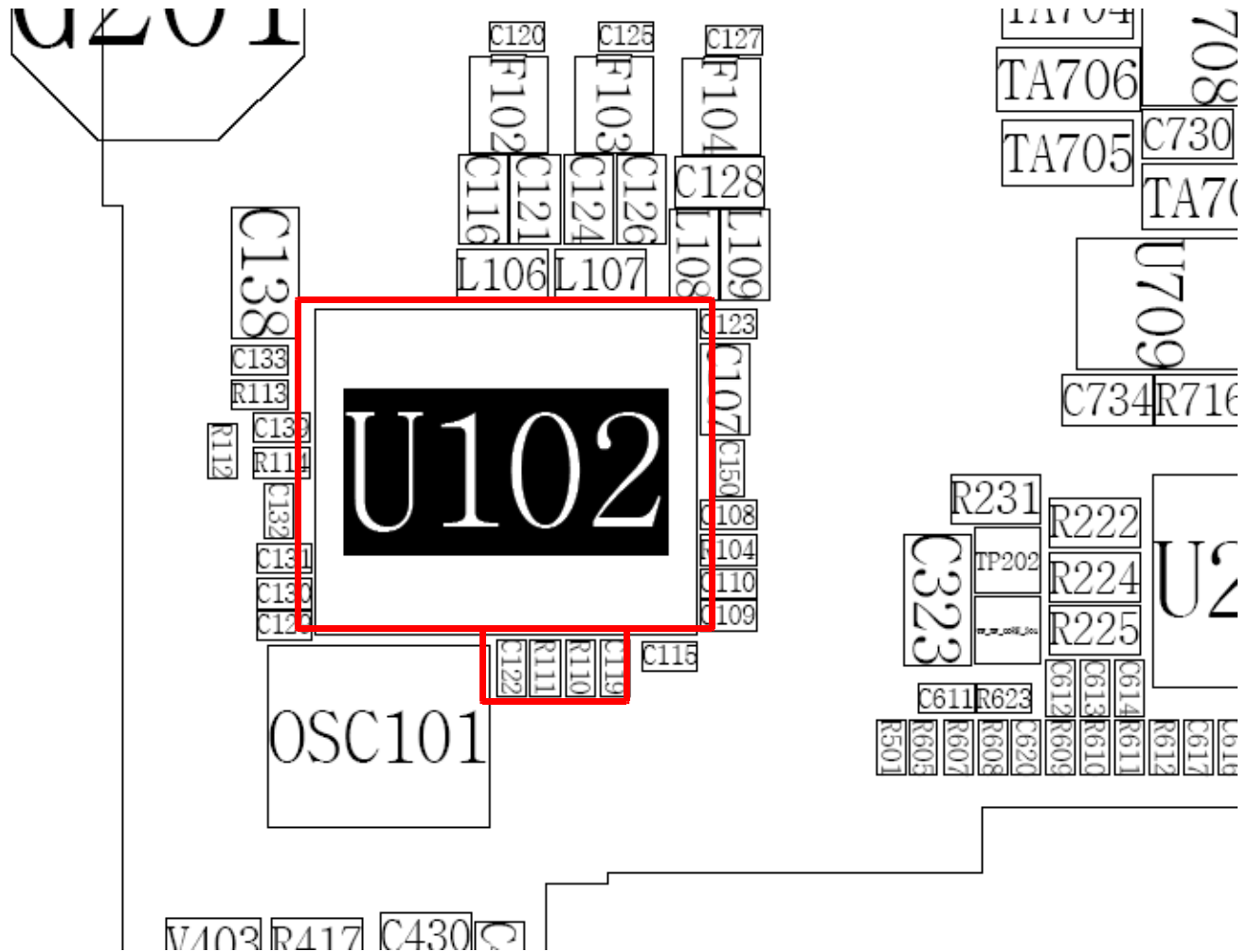
10-1-1. Power ON



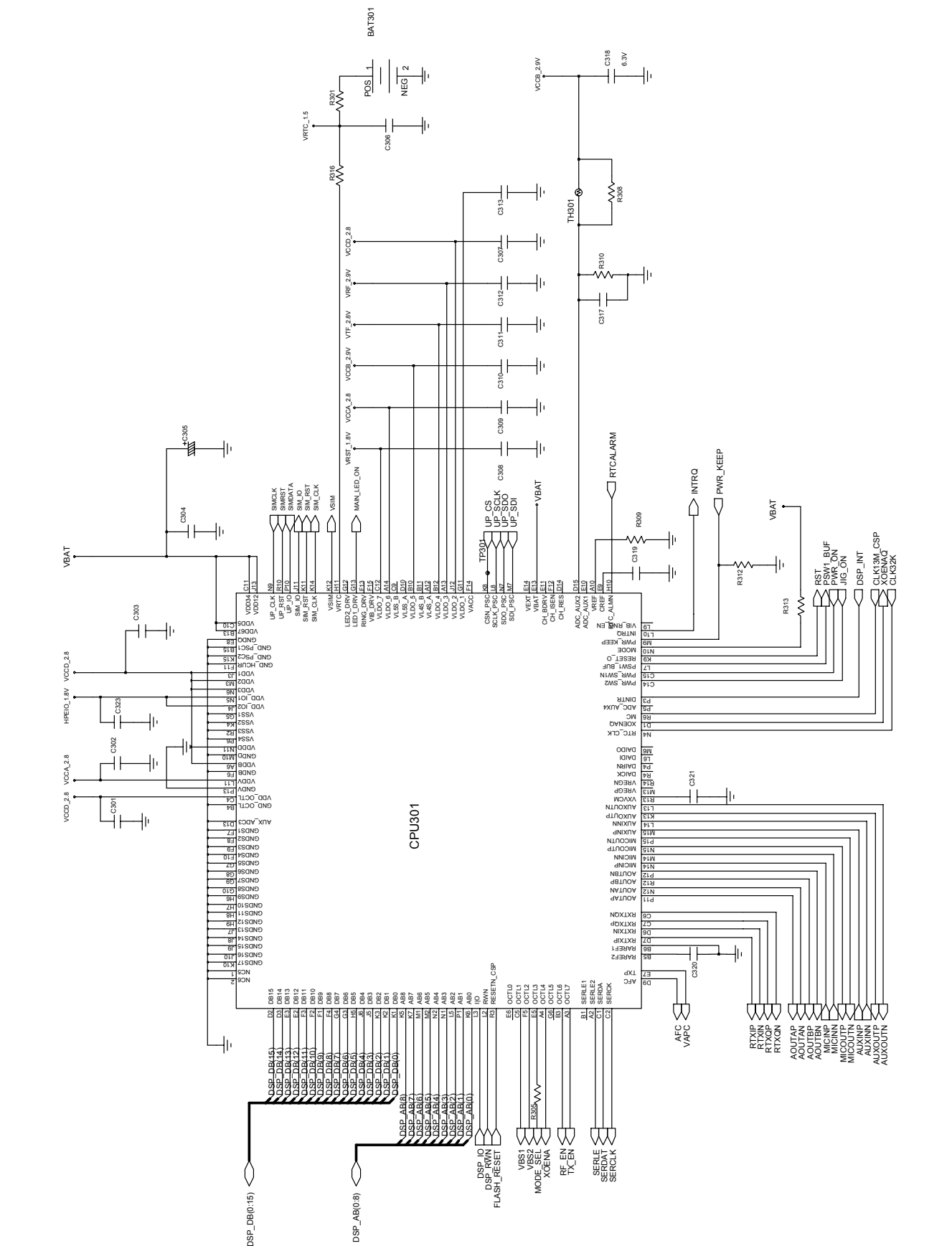


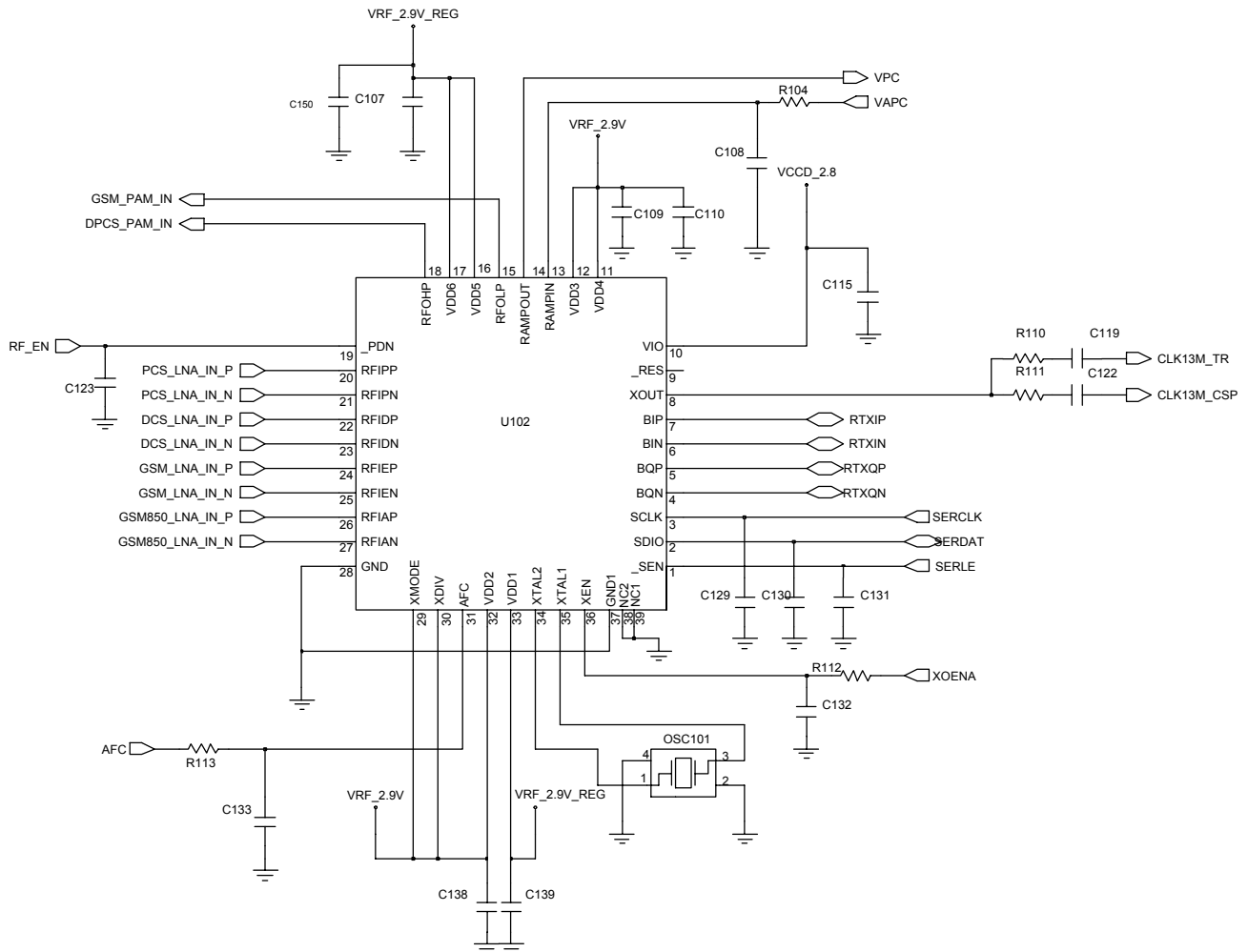
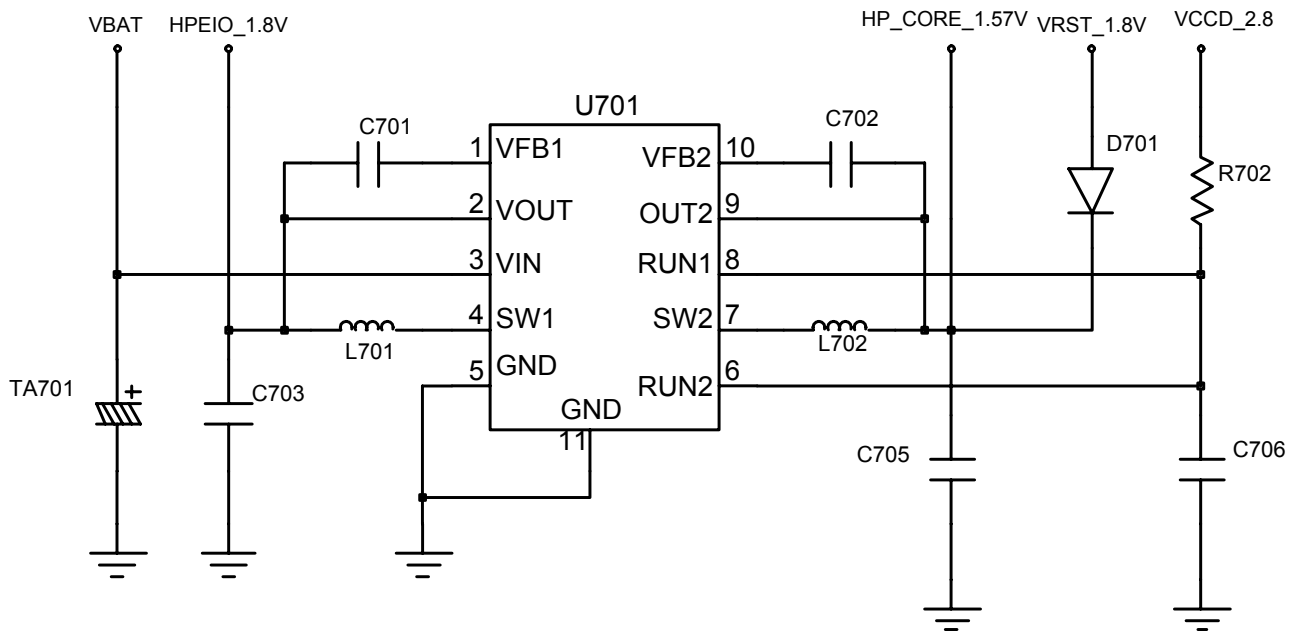
10. Chart of Troubleshooting



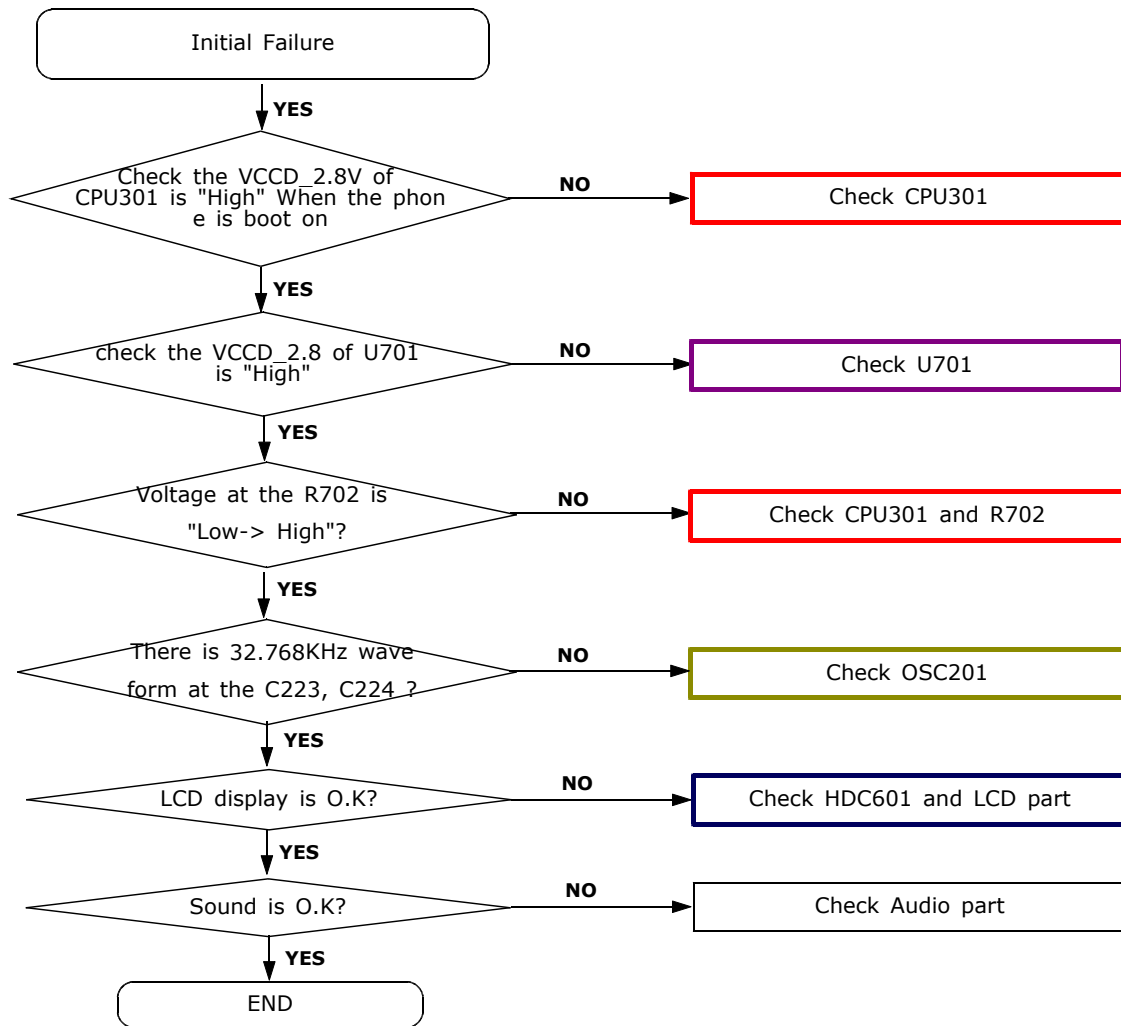


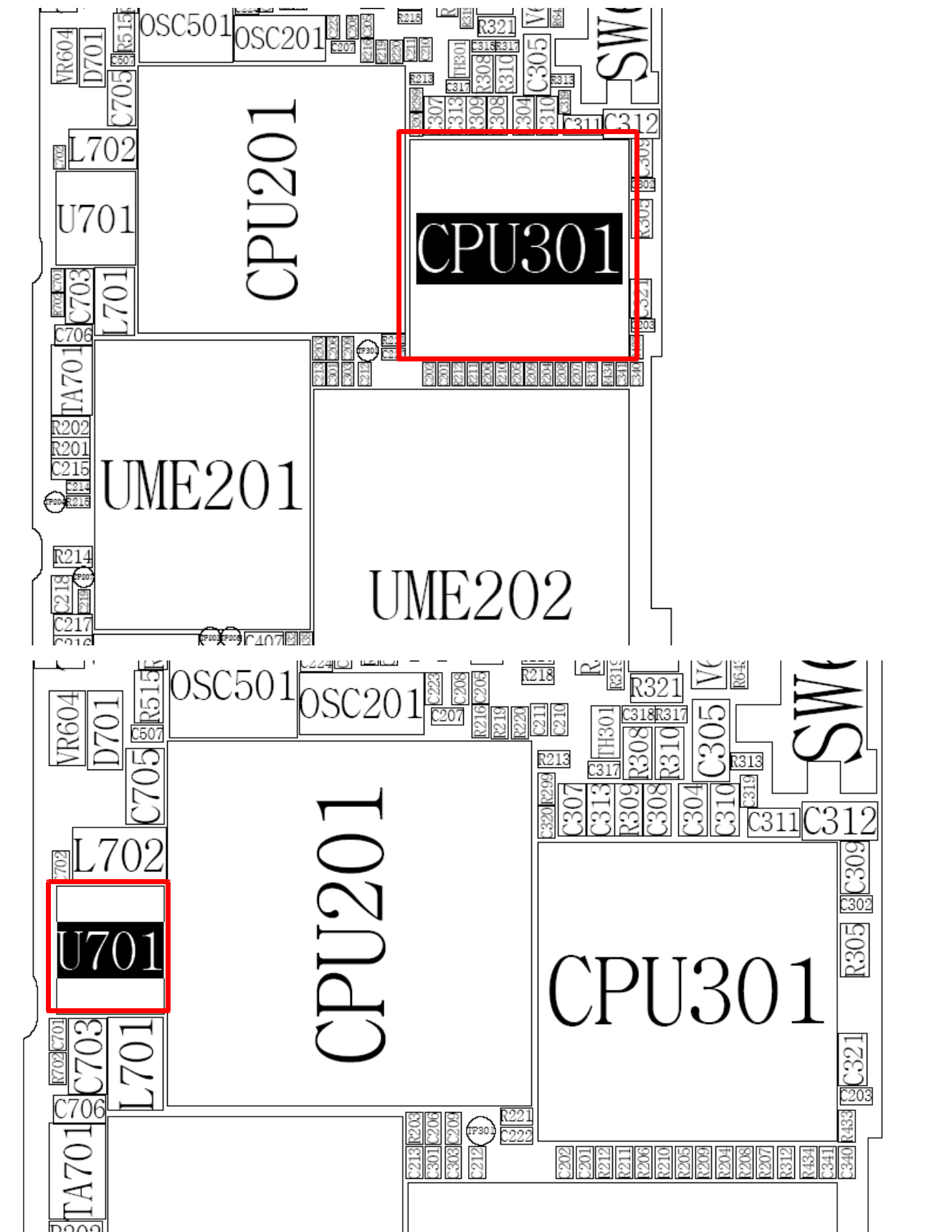
10. Chart of Troubleshooting

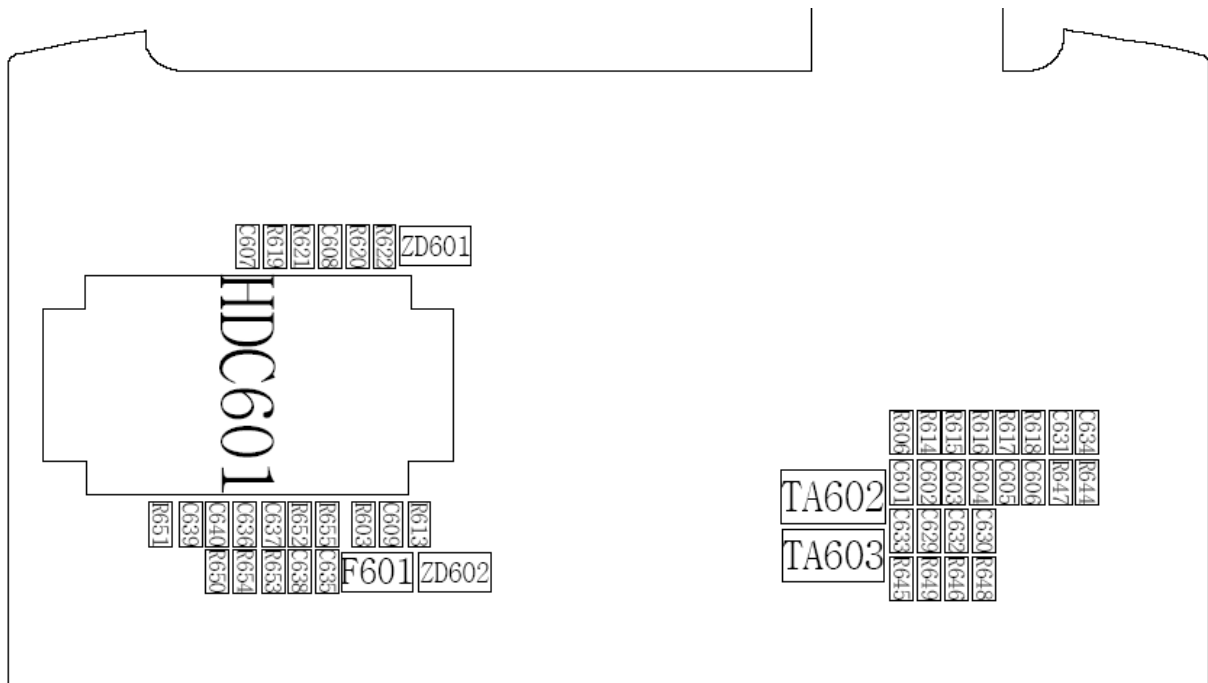




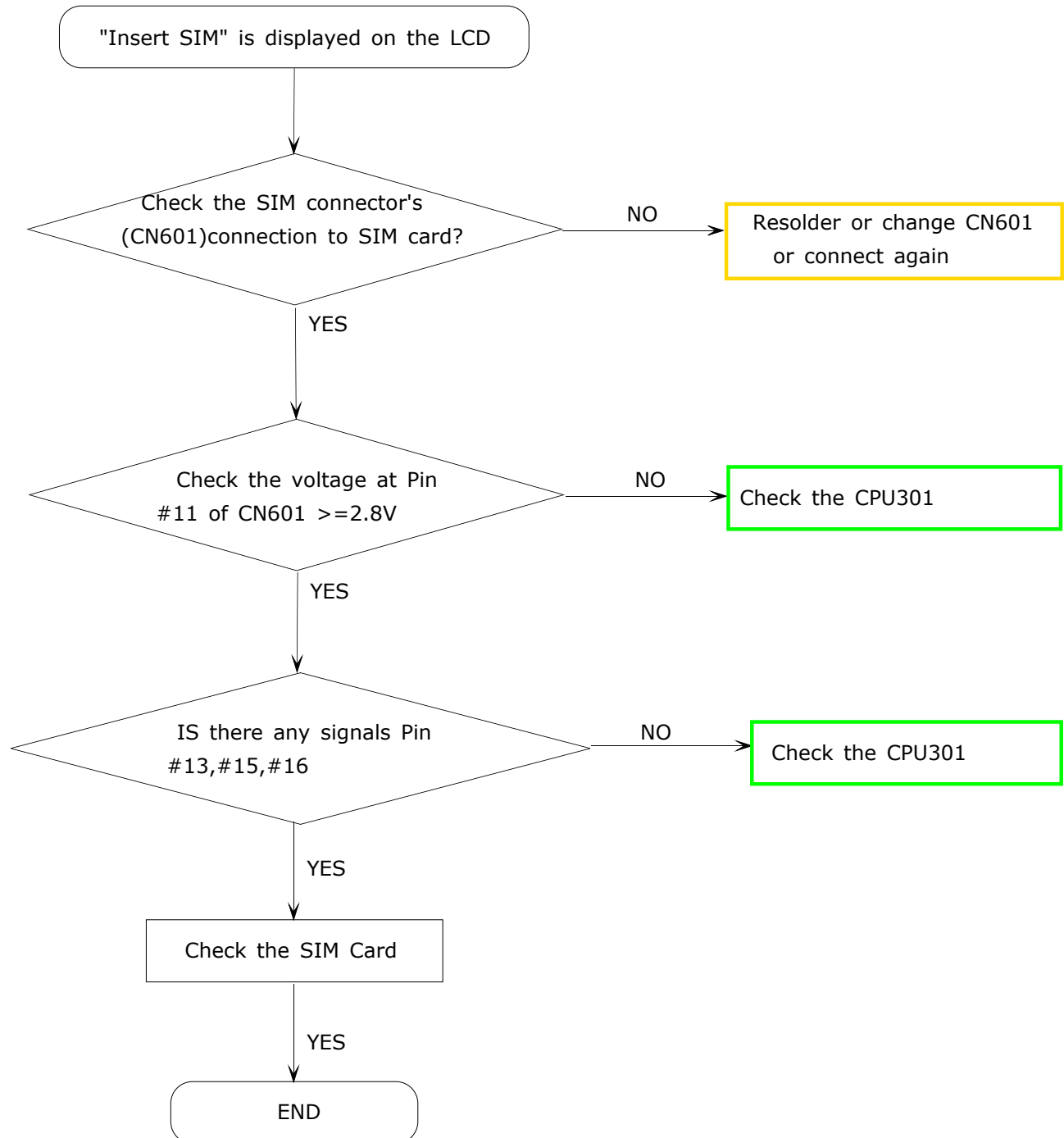
10-1-2. System Initial

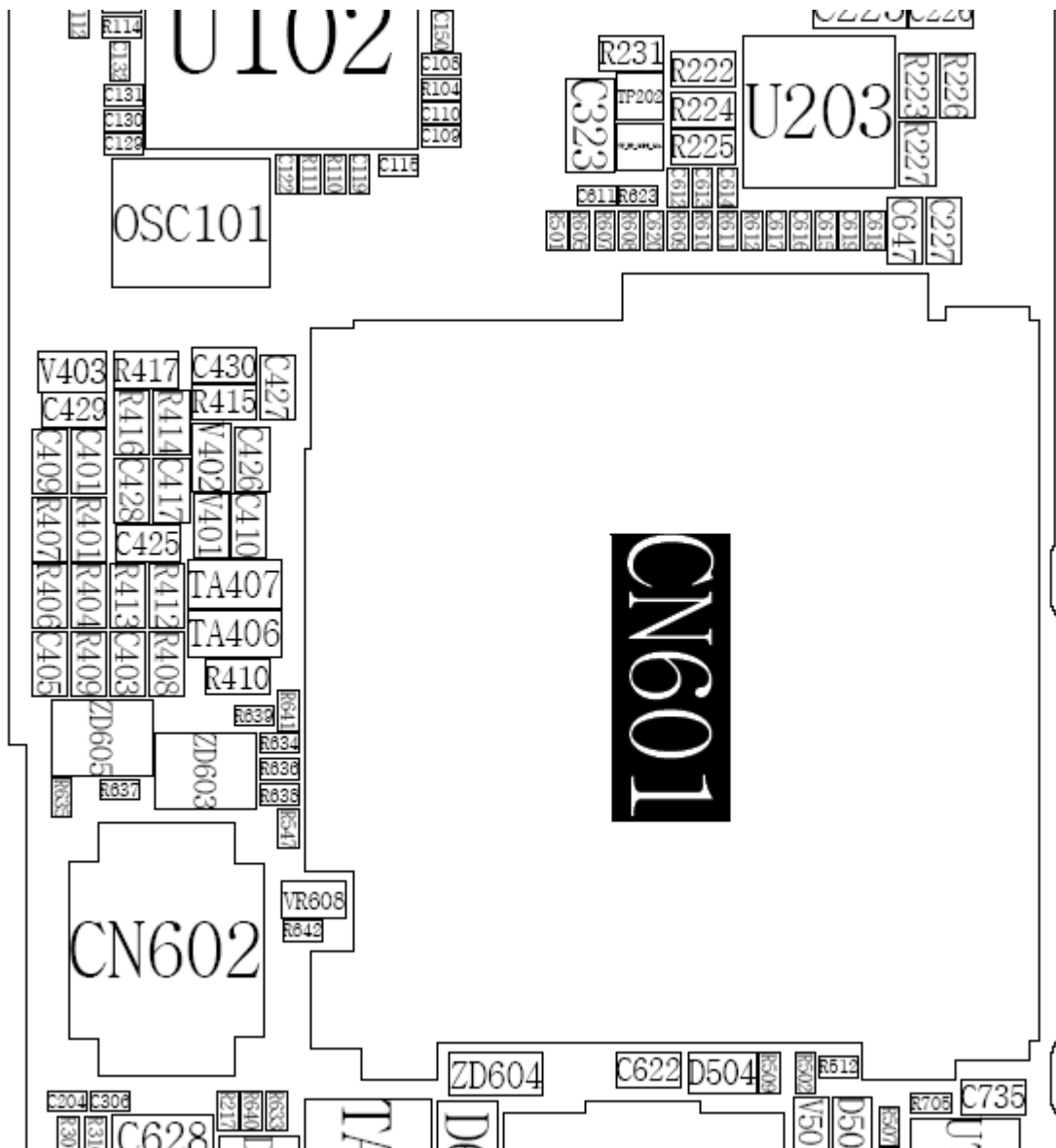




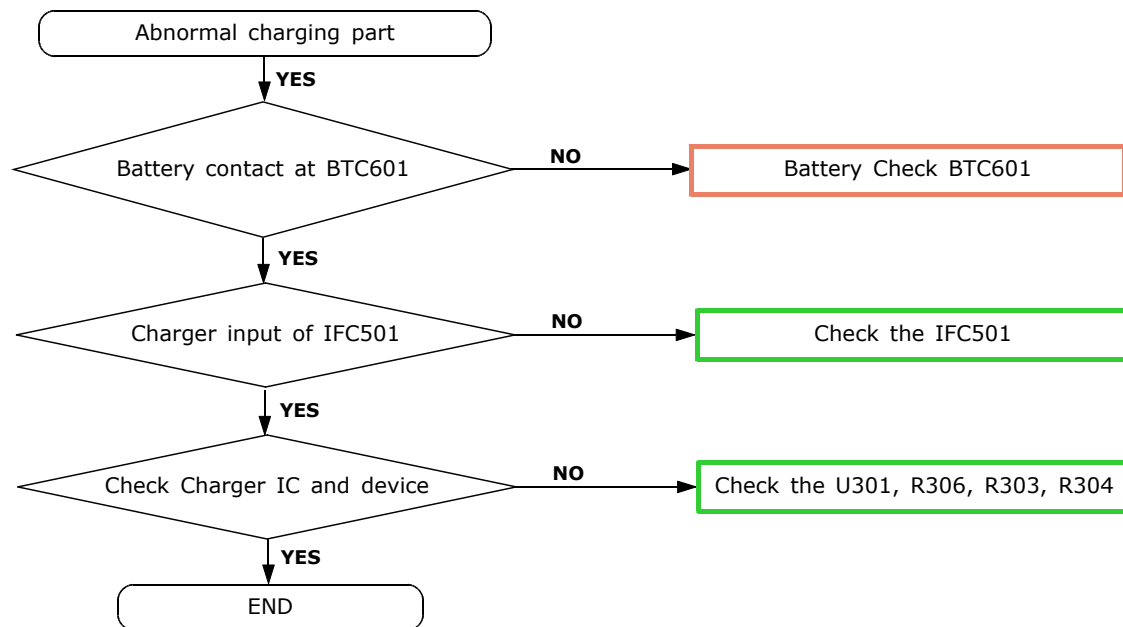


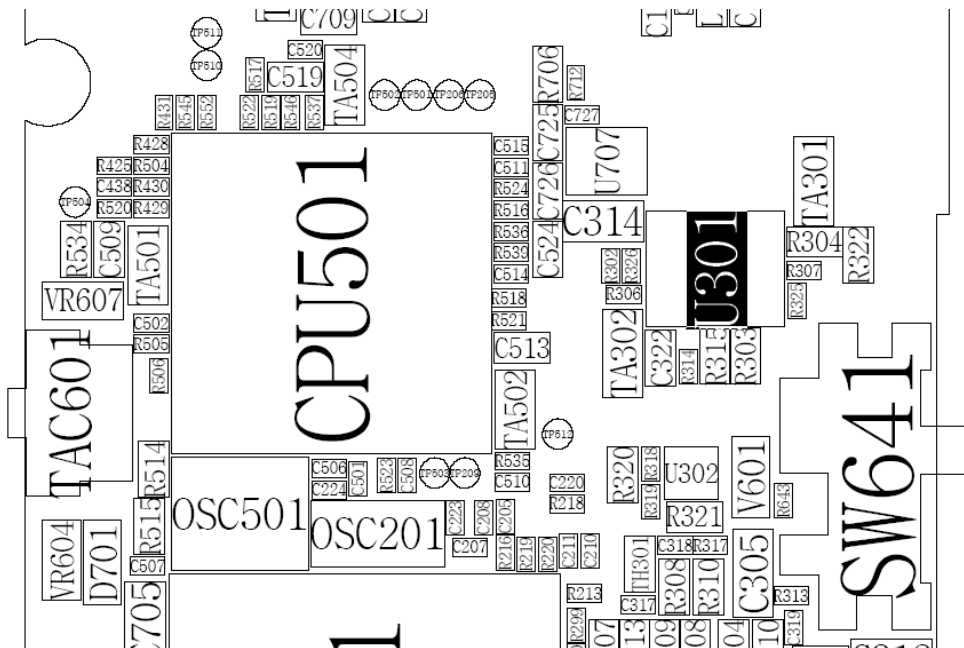
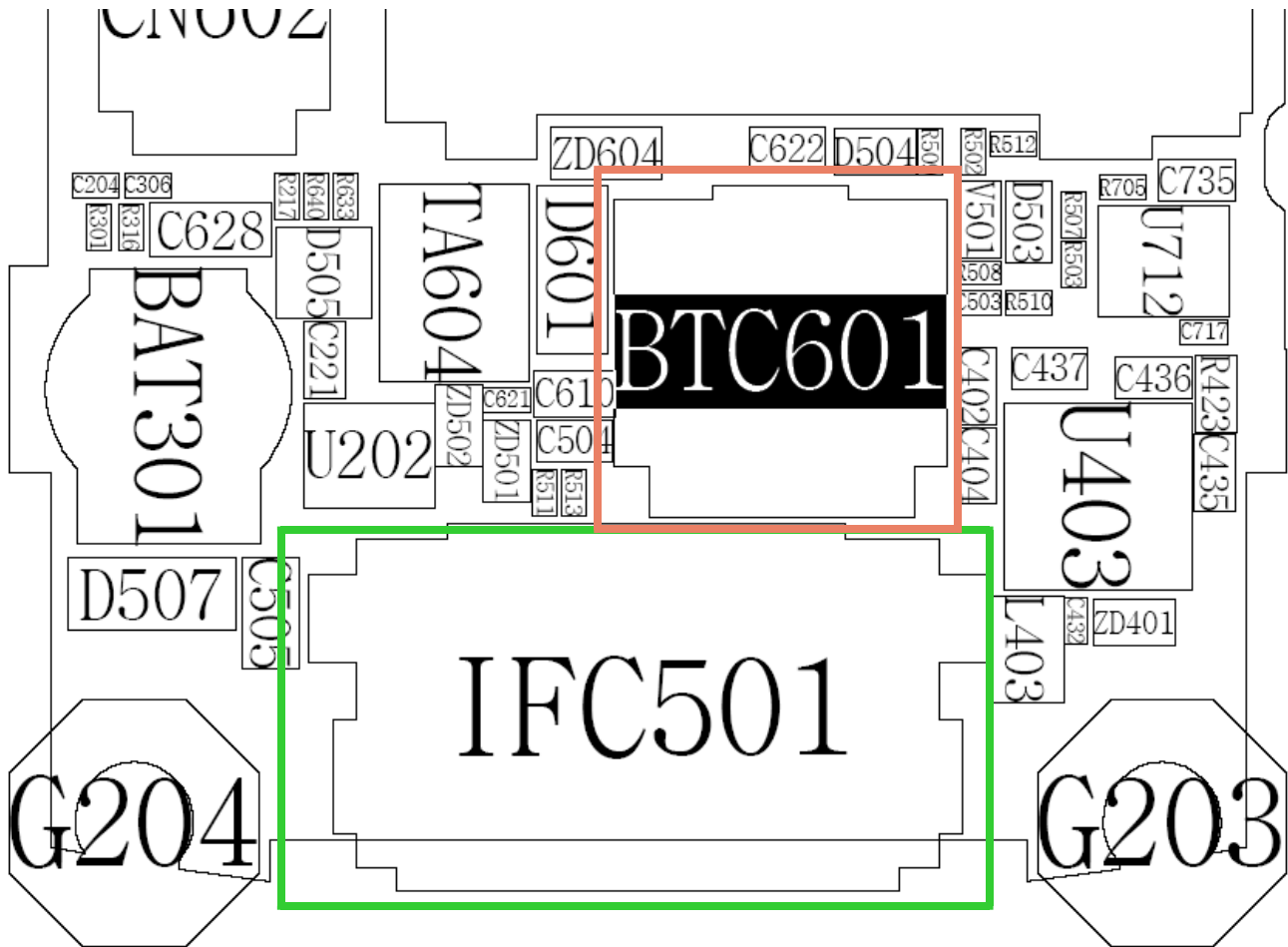
10-1-3. Sim Part



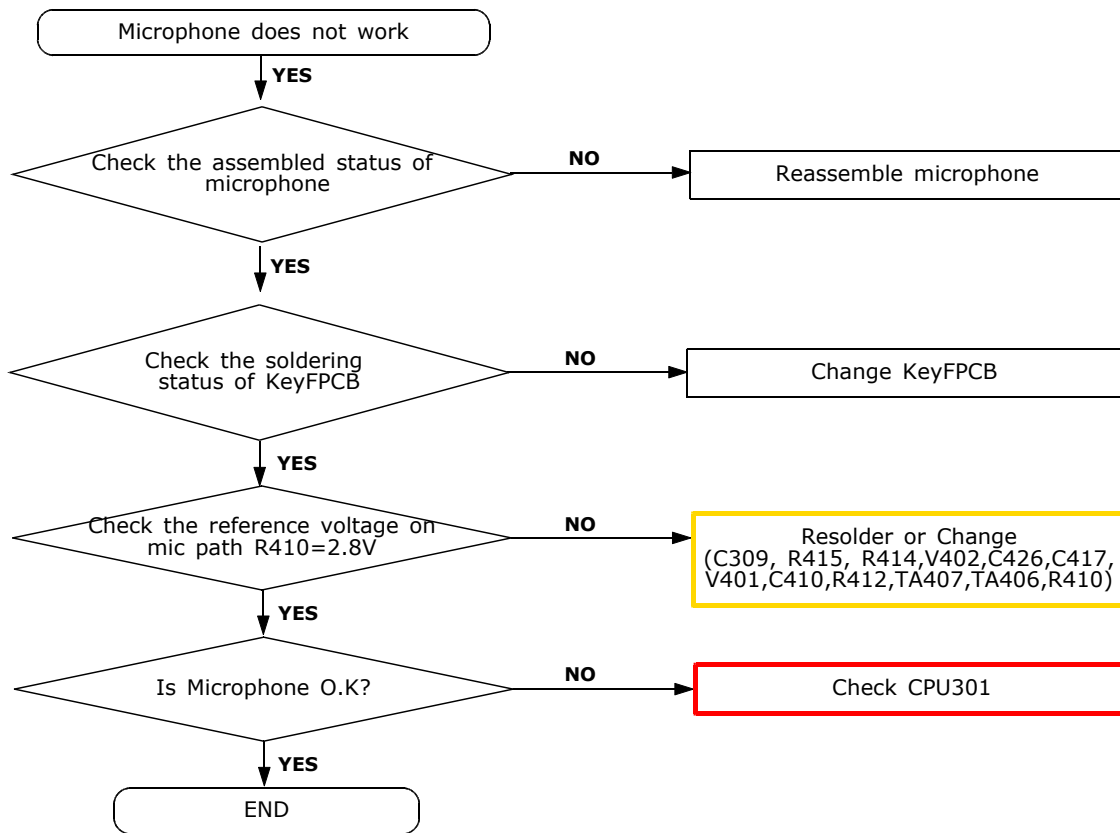


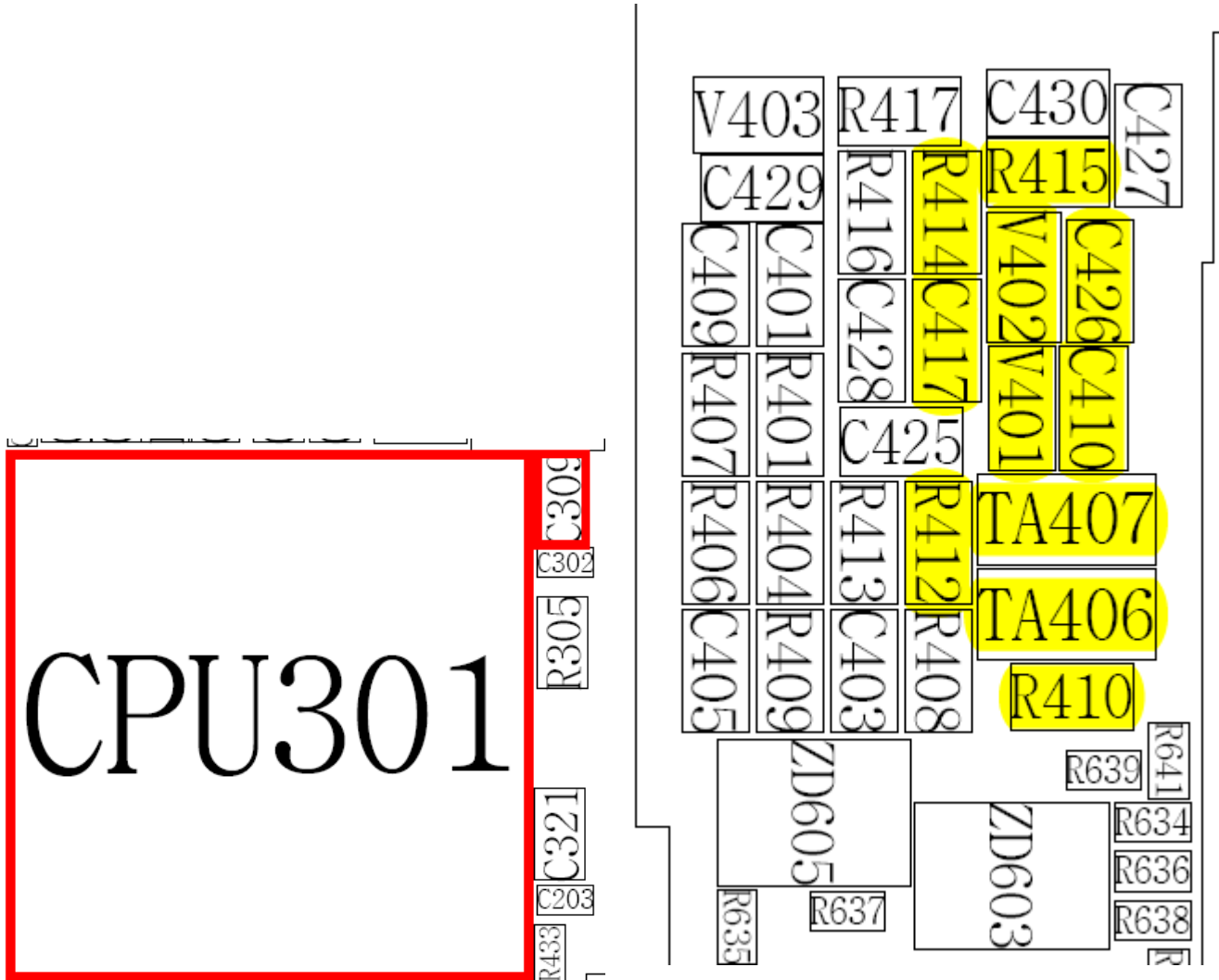
10-1-4. Charging Part



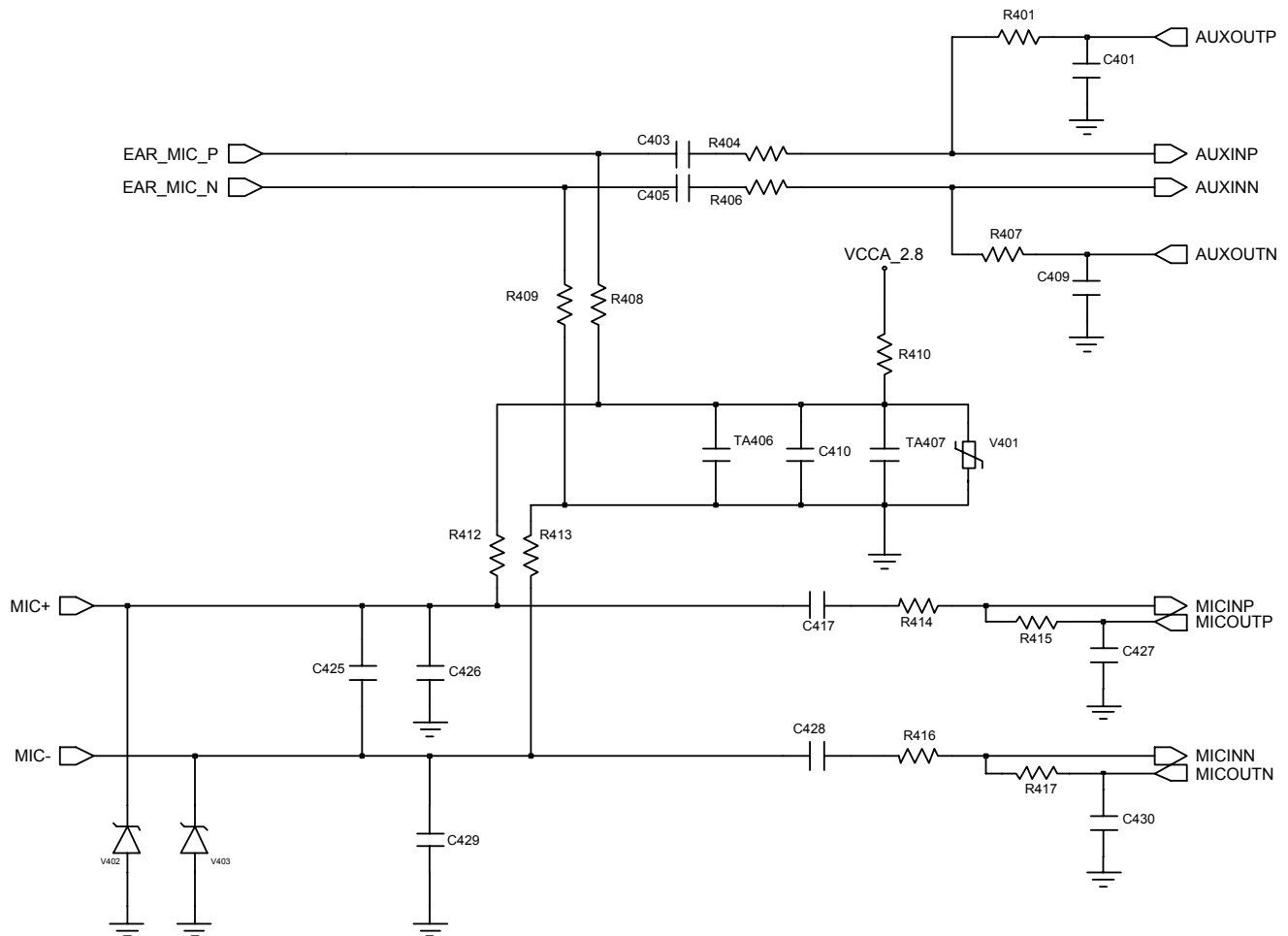


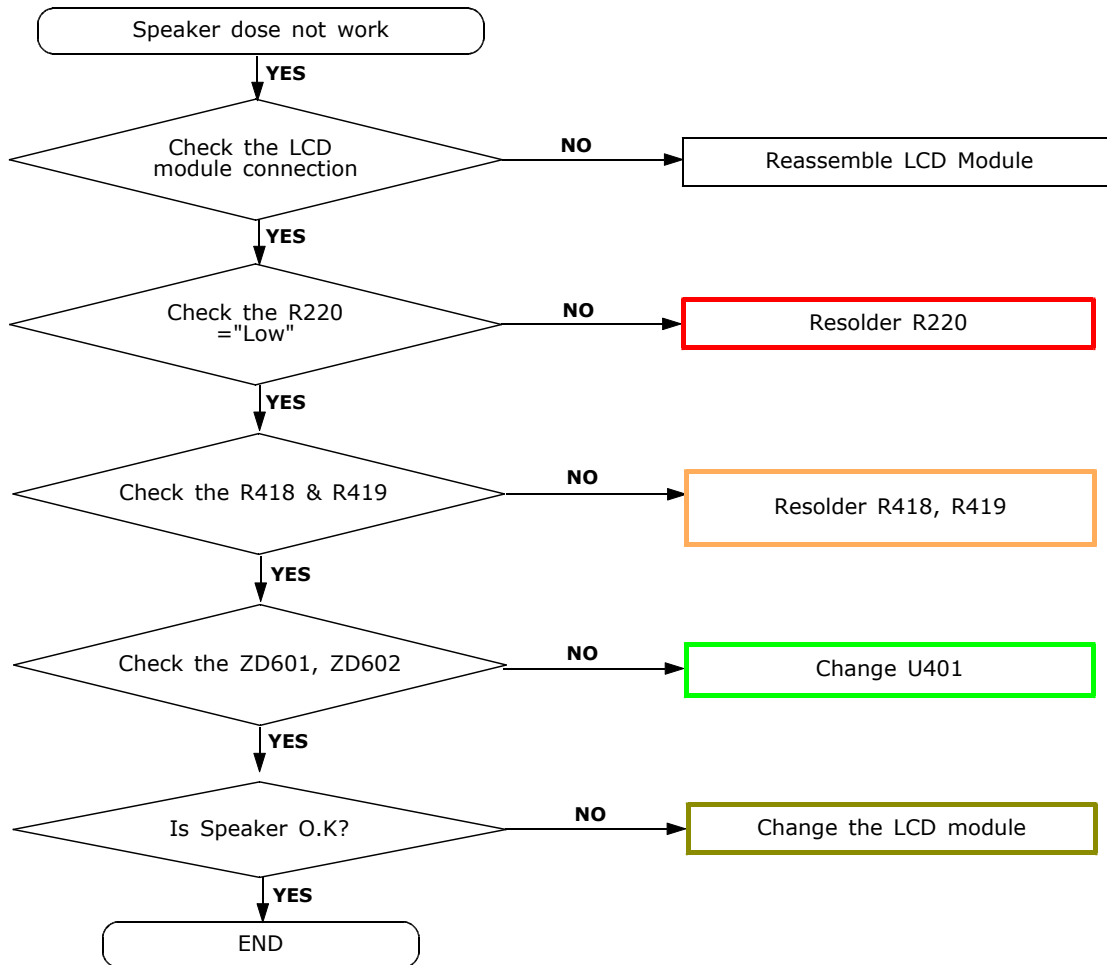
10-1-5. Microphone Part



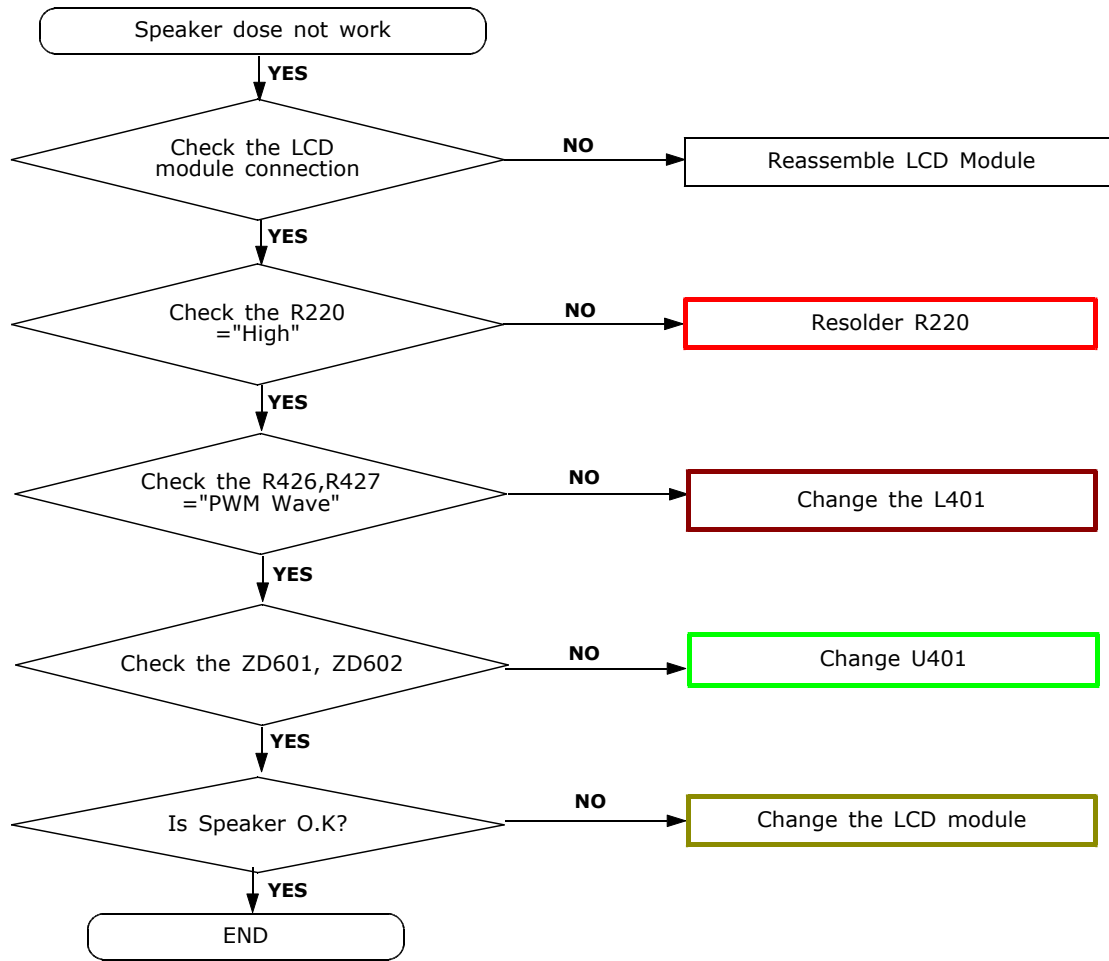


MAIN MIC

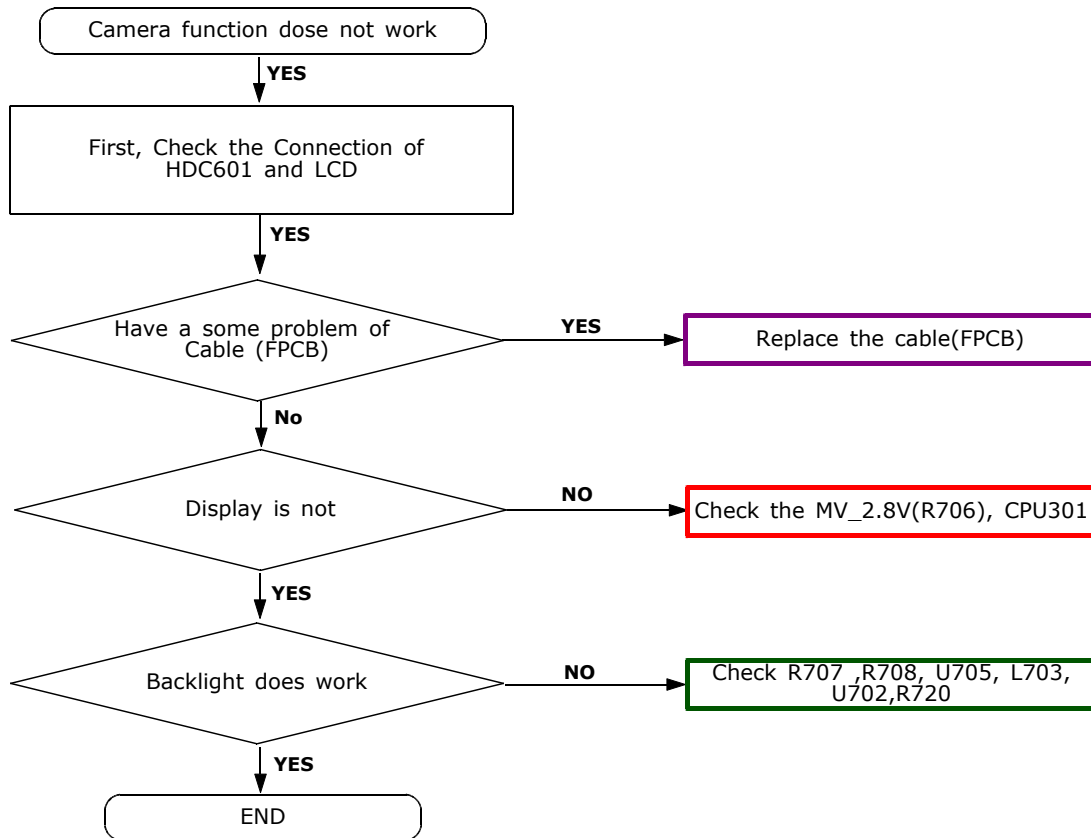


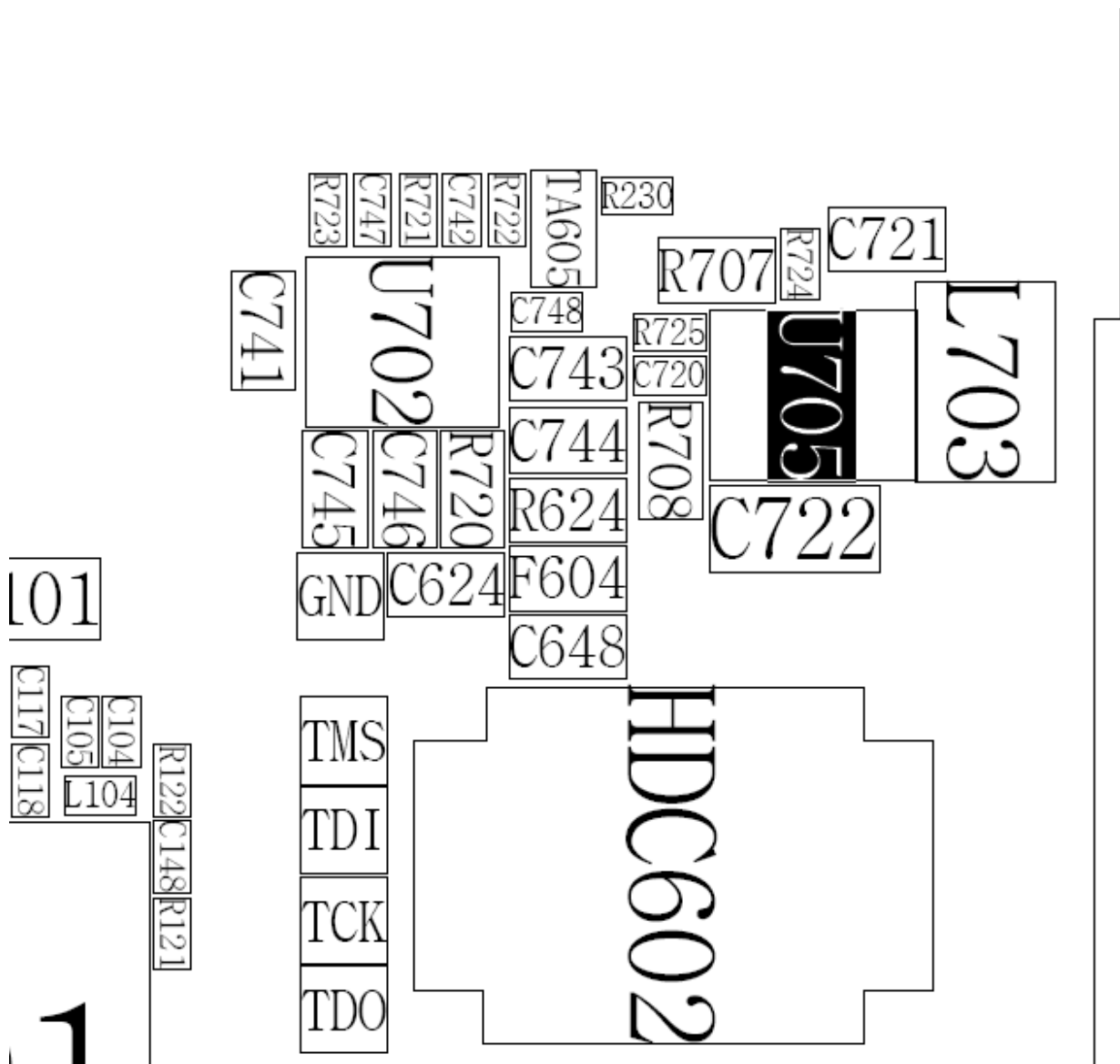
10-1-6. Receiver Part

10-1-7. Speaker Part



10-1-9. LCD





11. Reference data

11-1. 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