

SAMSUNG

GSM TELEPHONE

SGH-U900

SERVICE *Manual*

GSM TELEPHONE



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**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 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.

2. Specification

2-1. GSM General Specification

	EGSM 900 Phase 2	DCS1800	PCS1900	WCDMA
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range	0~124 & 975~1023	512~885	512~810	10562~10838
Tx/Rx spacing	45 MHz	95 MHz	80MHz	190MHz
Mod. Bit rate/ Bit Period	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us	3.84Mcps/s
Time Slot Period/ Frame Period	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	10ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK	Up Link:2BPSK Down Link:QPSK
MS Power	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm	MAX:24(+1.-3) dBm MIN:<-50dBm
Power Class	5 pcl ~ 19 pcl	0 pcl ~ 15 pcl	0 pcl ~ 15 pcl	CLASS 3
Sensitivity	-102 dBm	-100 dBm	-100 dBm	-106.7 dBm
TDMA Mux	8	8	8	-
Cell Radius	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

- HSDPA 7.2Mbps
- 5M AF CMOS Camera
- Music Player
- Image editor
- Bluetooth
- USB 2.0 Highspeed
- DaCP (Dynamic adaptive Control Panel)
- UCS (Use Changed Graphic interface)

4. Array course control



TEST JIG BOX (GH80-03308A)



**TEST CABLE
(0.4M:GH39-00886A/1.5M:GH68-00890A)**



RF CABLE (GH39-00397A)

Software Downloading

4-1. Downloading Binary Files

- A boot file folder and five binary files for downloading SGH-U900

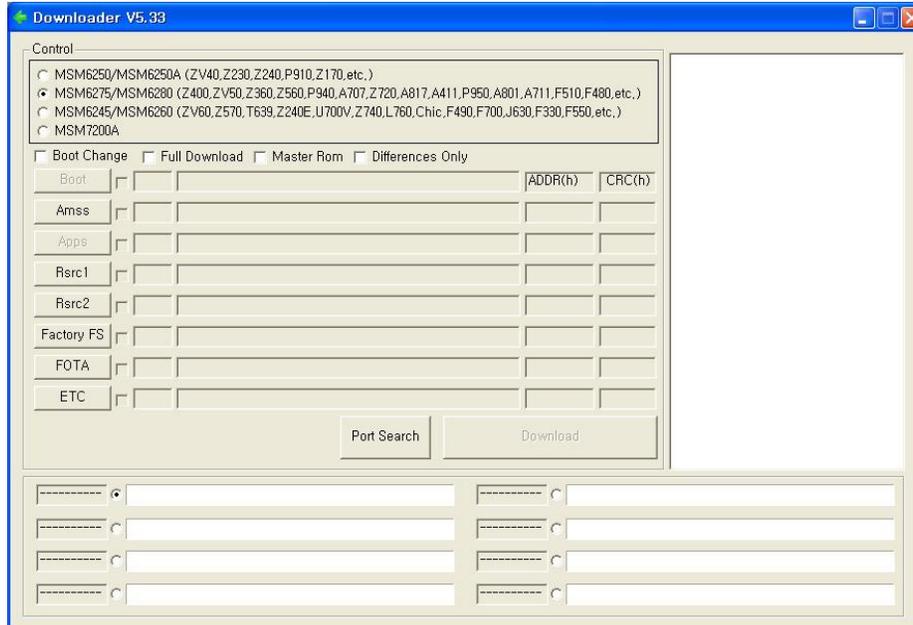
File	Comments
Boot folder	Initial booting files
amss_compressed.bin	Modem binary for common function
Rsrc_U900_Open_Europe_Common.rc1	Application files
Rsrc2_U900(Low/Mid).rc2	Power on/off animation files
FactoryFs_U900_Open_Europe_Common.ffs	Default file system for initial production

4-2. Pre-requisite for Downloading

- Downloader Program([Multiloader V5.33.exe](#))
- SGH-U900 Mobile Phone
- Data Cable
- Binary files

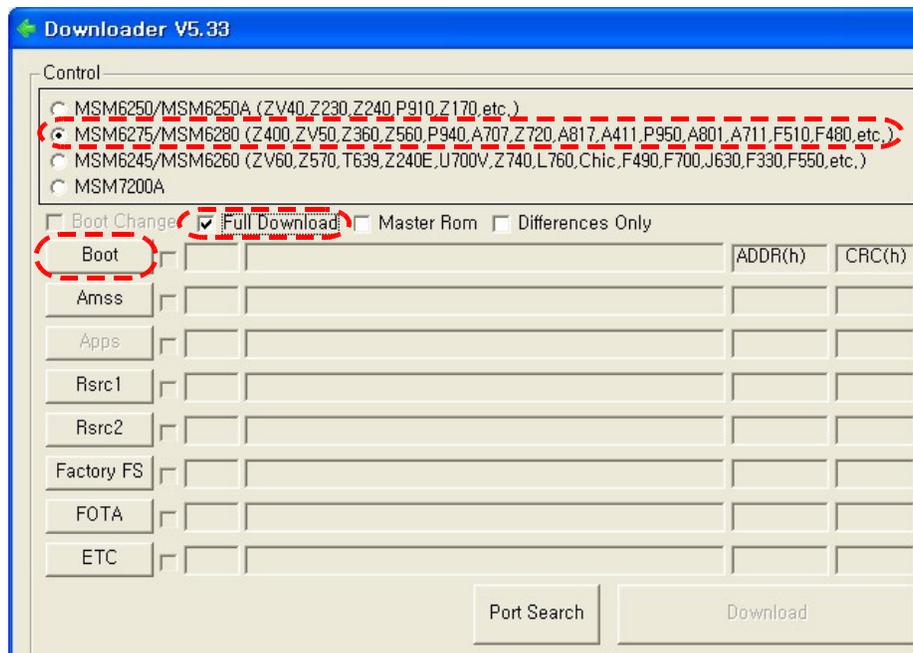
4-3. S/W Downloader Program

1. Load the binary download program by executing the "**Multiloader V5.33.exe**".

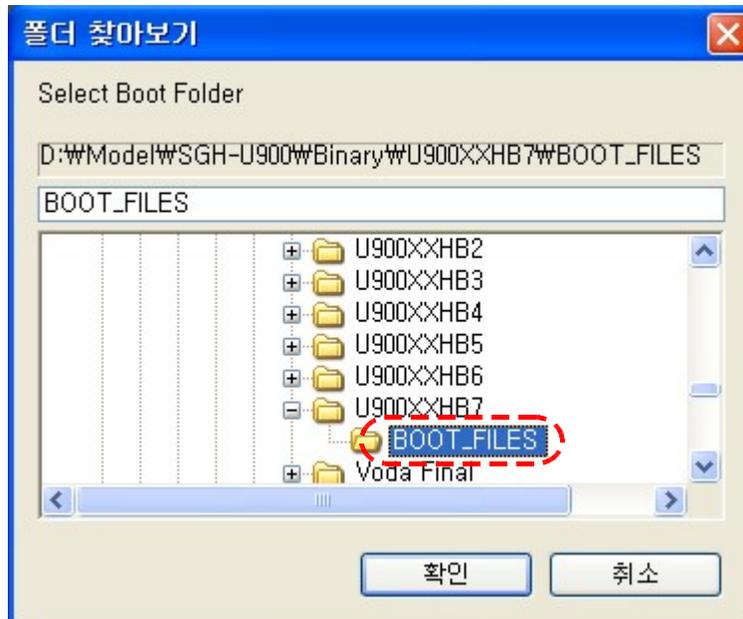


[Program main window]

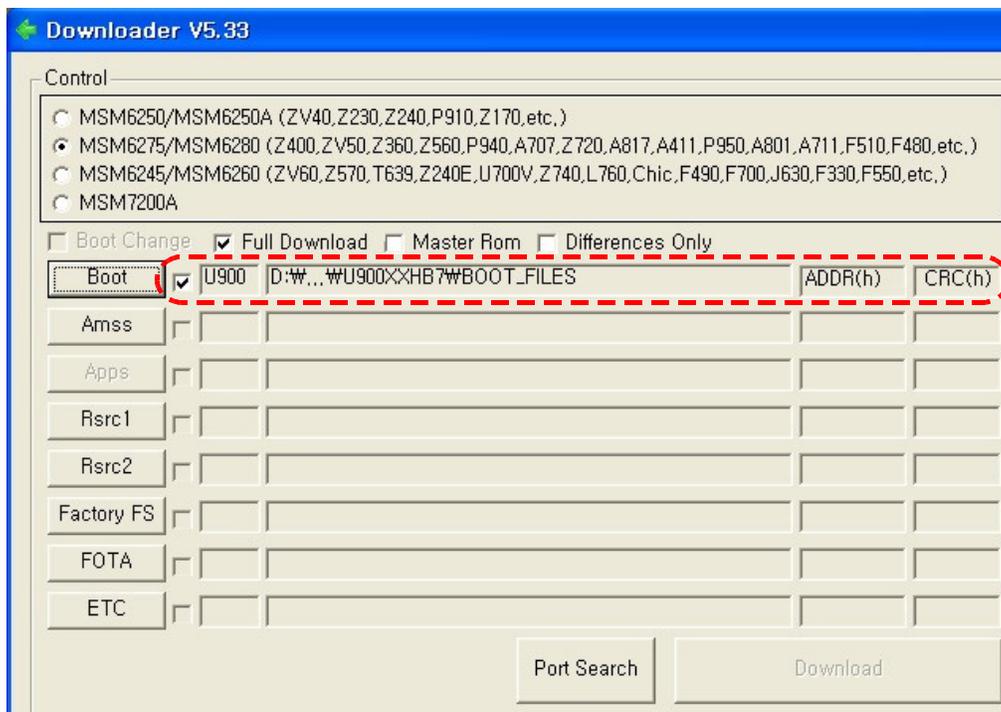
2. Click "**MSM6275/MSM6280**" to select baseband chip version of SGH-U900. Click "**Full Download**" to download binary files.



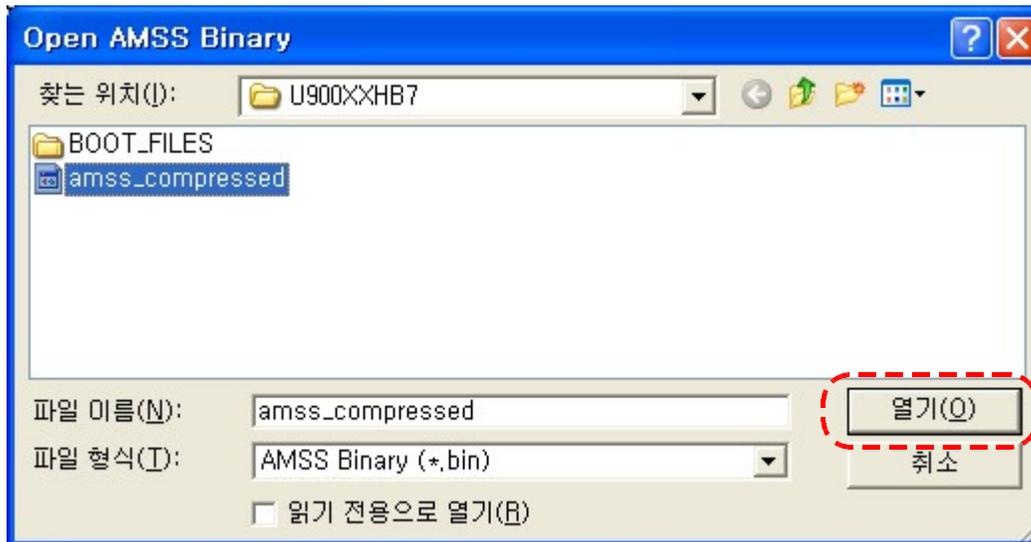
- 3. Click Boot button to load boot folder.
Select binary folder and boot folder(**BOOT_FILES**).
Click "**확인(OK)**".



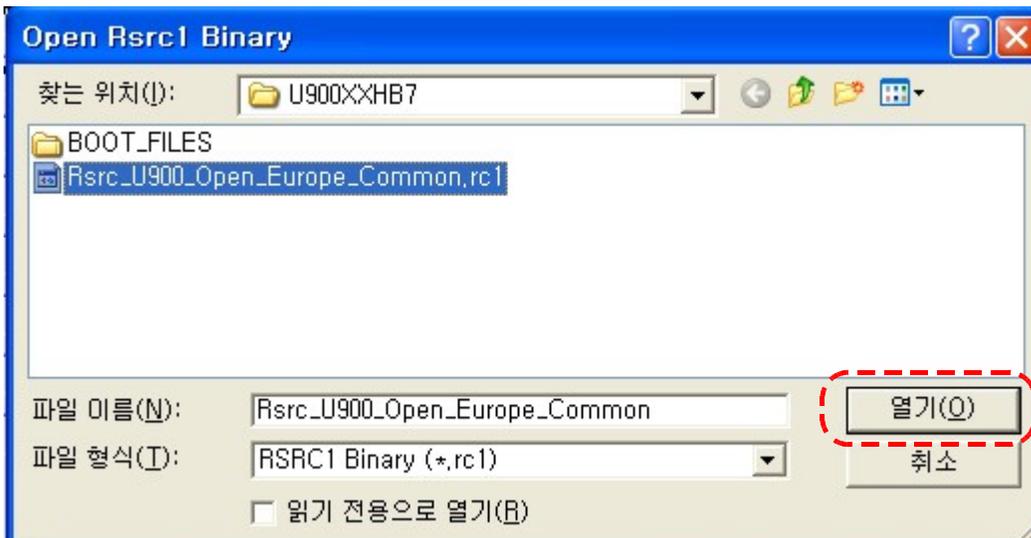
If the previous processes were successful, you can find **the condition** as below.



4. Click **AMSS** button to load "amss_compressed.bin" file.
Select "amss_compressed.bin" file and click "열기(OPEN)"



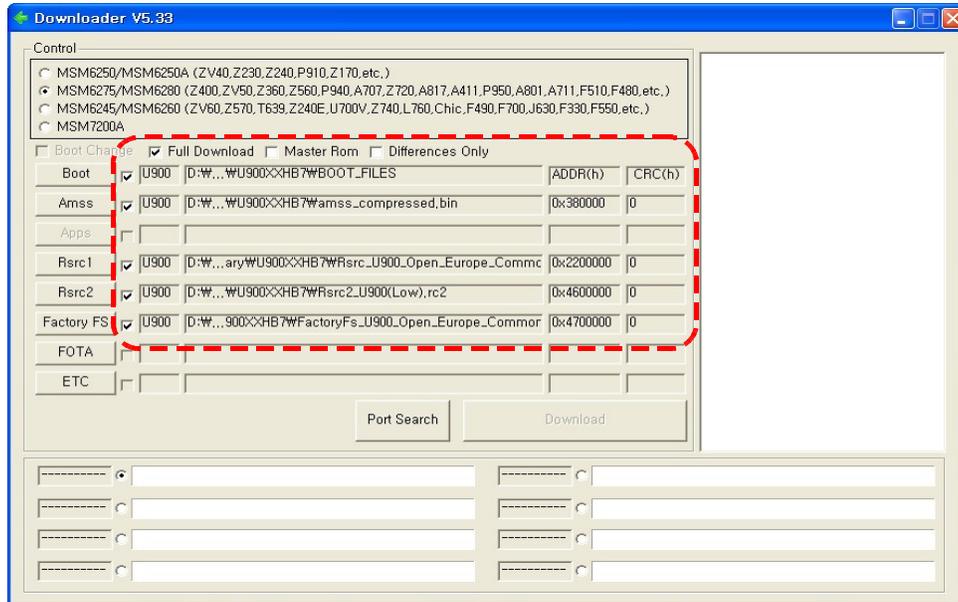
- Click **Rsrc1** button to load "Rsrc_U900_Open_Europe_Common.rc1" file.
Select "Rsrc_U900_Open_Europe_Common.rc1" file and click "열기(OPEN)"



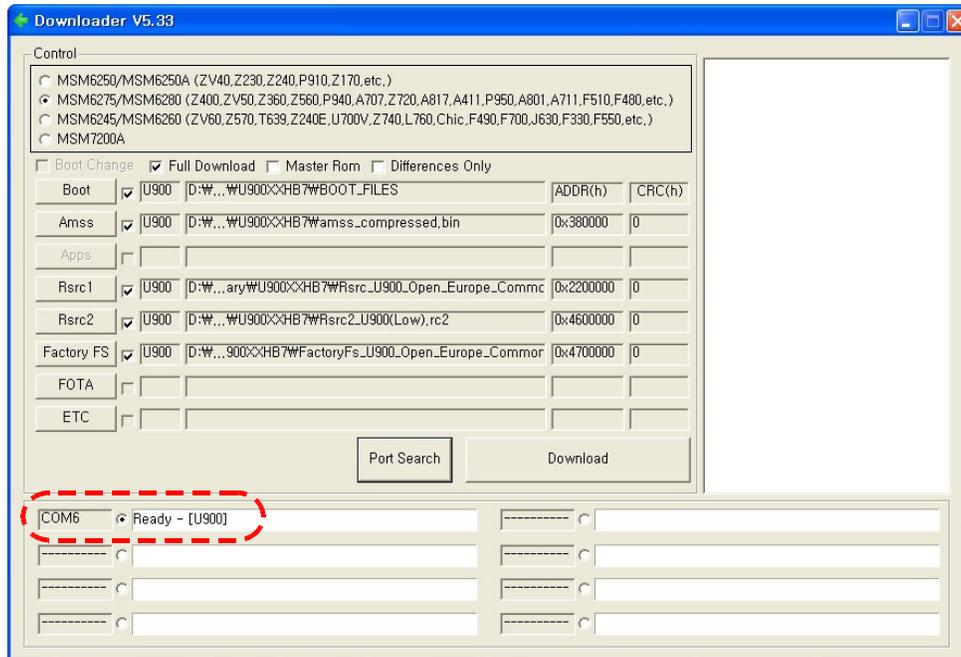
- Click **Rsrc2** button to load "Rsrc2_U900(Low).rc2" file.
Select "Rsrc2_U900(Low).rc2" file and click "열기(OPEN)"

- Click **Factory FS** button to load "FactoryFs_U900_Open_Europe_Common.ffs" file.
Select "FactoryFs_U900_Open_Europe_Common.ffs" file and click "열기(OPEN)"

5. If 3 and 4 processes were successful, you can find **the condition** as below.
All files which compose the binary file are loaded.
Don't need to click **FOTA** and **ETC**. Two buttons are not necessary.



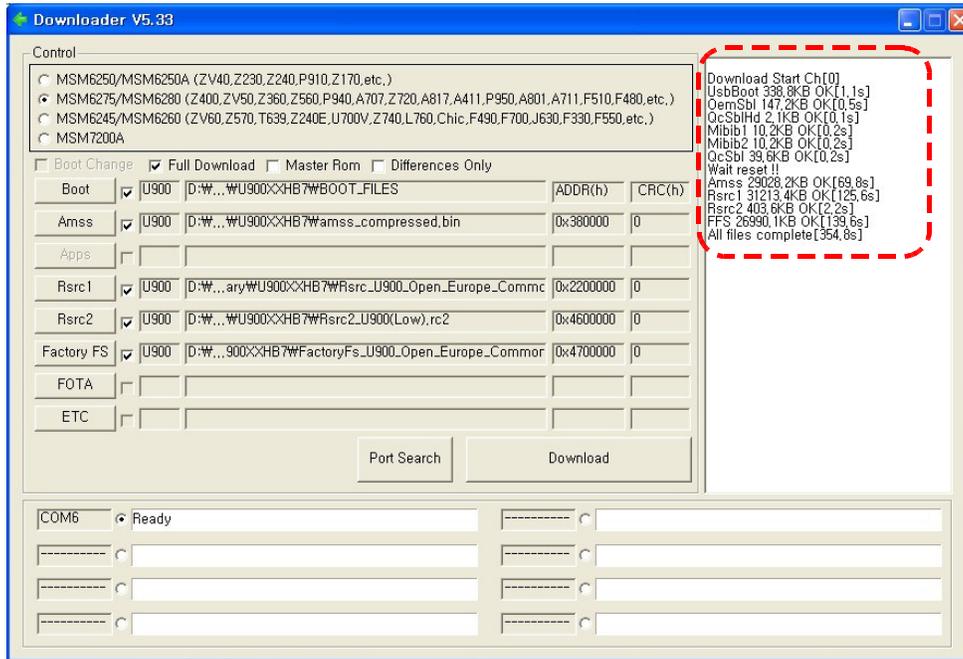
6. Connect **SGH-U900** mobile phone to computer via data cable.
And click "**Port Search**" button to examine the connection condition.
If the connection condition were successful, you can find the message below.
Eight connections are possible at the same time.



7. If all connections are ready, click "Download" to start downloading.



Process success message is "All is complete[XXX.Xs]".



8. Recommendations

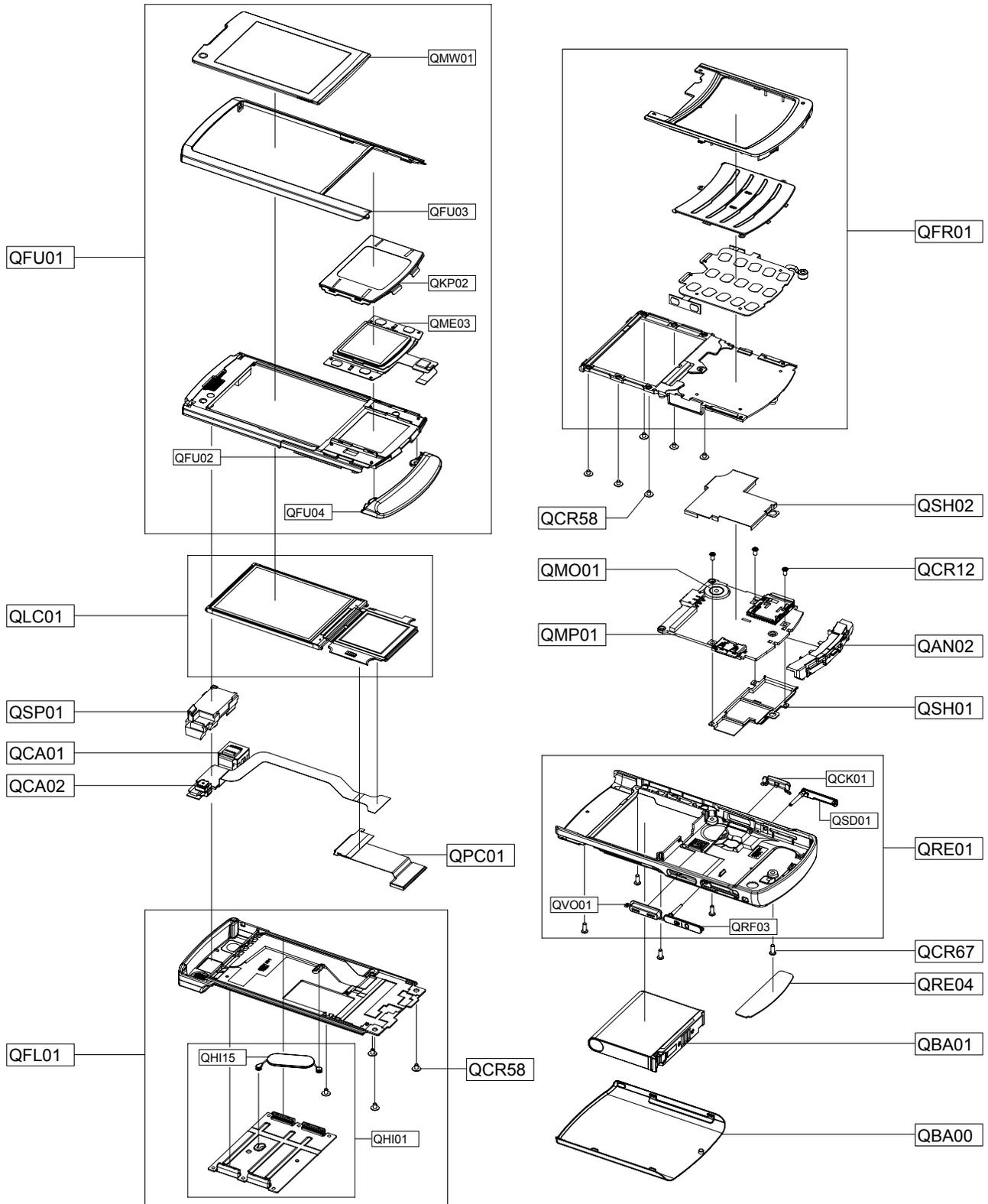
Don't touch the mobile phone while downloading to prevent disconnecting. Disconnection while downloading is critical to phone condition. Main PBA would be damaged by disconnection while downloading.

If all files are downloaded, it is recommended to do full reset.

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		ANTENNA-SGHU900	GH42-01494A
QBA00		ASSY CASE-BATT COVER SUS	GH98-07749A
QBA01		INNER BATTERY PACK-880MAH , BL	GH43-02666A
QCA01		CAMERA MODULE-SGHU900 5M	GH59-05418A
QCA02		CAMERA MODULE-SGHU900 CIF	GH59-05431A
QCR12		SCREW-MACHINE	6001-001530
QCR58		SCREW-MACHINE	6001-001870
QCR67		SCREW-MACHINE	6001-002083
QFR01		ASSY CASE-FRONT	GH98-07407A
QLC01		ELA UNIT-SGHU900 LCD HOT BAR A	GH96-03031A
QMO01		MOTOR LINEAR VIBRATION-SGHU900	GH31-00414A
QMP01		PBA MAIN-SGHU900	GH92-04365A
QPC01		MEA-SLIDE FPCB KIT	GH97-08787A
QRE04		ASSY CASE-REAR DECO	GH98-08410A
QSH01		ASSY COVER-IPR SHIELD REAR	GH98-07766A
QSH02		ASSY COVER-SHIELD FRONT	GH98-08462A
QSP01		UNIT-SGHU900 SPEAKER MODULE	GH59-05419A
QFL01		ASSY CASE-SLIDE LOWER	GH98-07402A
	QHI01	ASSY HINGE-SLIDE	GH98-07403A
	QHI15	ASSY CASE-MIDDLE LINK UNIT	GH98-08152A
QFU01		ASSY CASE-SLIDE-UPPER	GH98-07713A
	QFU02	ASSY ACCE-UPPER	GH98-07408A
	QFU03	ASSY CASE-SLIDE UPPER SUS	GH98-07748A
	QFU04	ASSY CASE-UPPER BTM	GH98-07853A
	QKP02	ASSY KEYPAD-SUB	GH98-07409A
	QME03	KEY FPCB-SGHU900 TOUCH KEY	GH59-05407A
	QMW01	ASSY COVER-MAIN WINDOW	GH98-07400A
QRE01		ASSY CASE-REAR	GH98-07406A
	QCK01	ASSY KEY-CAMERA	GH98-07411A
	QRF03	PMO COVER-EAR IF	GH72-46089A
	QSD01	PMO COVER-MICRO SD	GH72-46090A
	QVO01	ASSY KEY-VOLUME	GH98-07412A

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0403-001547	ZD601	DIODE-ZENER	SA
0403-001547	ZD607	DIODE-ZENER	SA
0404-001153	D700	DIODE-SCHOTTKY	SA
0406-001190	ZD600	DIODE-TVS	SA
0406-001239	ZD608	DIODE-TVS	SA
0406-001254	ZD602	DIODE-TVS	SA
0406-001254	ZD604	DIODE-TVS	SA
0406-001254	ZD605	DIODE-TVS	SA
0406-001254	ZD606	DIODE-TVS	SA
0406-001254	ZD700	DIODE-TVS	SA
0406-001254	ZD701	DIODE-TVS	SA
0406-001303	ZD706	DIODE-TVS	SA
0406-001303	ZD707	DIODE-TVS	SA
0406-001304	ZD702	DIODE-TVS	SA
0406-001304	ZD703	DIODE-TVS	SA
0406-001304	ZD704	DIODE-TVS	SA
0406-001304	ZD705	DIODE-TVS	SA
0407-001002	D400	DIODE-ARRAY	SA
0504-001113	TR400	TR-DIGITAL	SA
0504-001151	TR200	TR-DIGITAL	SA
1001-001336	U700	IC-ANALOG SWITCH	SA
1001-001410	U502	IC-ANALOG SWITCH	SA
1001-001410	U503	IC-ANALOG SWITCH	SA
1003-002047	U602	IC-MOTOR DRIVER	SA
1009-001035	U701	IC-HALL EFFECT S/W	SA
1009-001035	U702	IC-HALL EFFECT S/W	SA
1108-000143	UME300	IC-MCP	SA
1201-002195	U500	IC-AUDIO AMP	SA
1201-002304	U501	IC-AUDIO AMP	SA
1201-002461	PAM200	IC-POWER AMP	SA
1201-002570	PAM100	IC-POWER AMP	SA
1203-003664	U603	IC-MULTI REG.	SA
1203-003674	U600	IC-DC/DC CONVERTER	SA
1203-003769	U601	IC-POSI.FIXED REG.	SNA
1203-004252	U604	IC-POSI.FIXED REG.	SA
1203-004518	U401	IC-BATTERY	SA
1203-004778	U400	IC-POWER SUPERVISOR	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
1205-003216	U100	IC-TRANSCEIVER	SA
1205-003341	U200	IC-TRANSCEIVER	SA
1205-003360	UCP300	IC-MODEM	SA
1404-001224	VR300	THERMISTOR-NTC	SA
1405-001082	VR700	VARISTOR	SA
1405-001110	VR403	VARISTOR	SA
1405-001133	VR402	VARISTOR	SA
1405-001177	VR400	VARISTOR	SA
1405-001177	VR401	VARISTOR	SA
1405-001183	VR717	VARISTOR	SA
1405-001183	VR720	VARISTOR	SA
1405-001183	VR727	VARISTOR	SA
1405-001221	VR701	VARISTOR	SA
1405-001221	VR702	VARISTOR	SA
1405-001221	VR703	VARISTOR	SA
1405-001221	VR704	VARISTOR	SA
1405-001221	VR705	VARISTOR	SA
1405-001221	VR725	VARISTOR	SA
1405-001221	VR726	VARISTOR	SA
2007-000138	R522	R-CHIP	SA
2007-000138	R523	R-CHIP	SA
2007-000138	R700	R-CHIP	SA
2007-000138	R701	R-CHIP	SA
2007-000138	R702	R-CHIP	SA
2007-000138	R704	R-CHIP	SA
2007-000138	R706	R-CHIP	SA
2007-000138	R708	R-CHIP	SA
2007-000138	R718	R-CHIP	SA
2007-000140	R209	R-CHIP	SA
2007-000140	R723	R-CHIP	SA
2007-000140	R724	R-CHIP	SA
2007-000144	R408	R-CHIP	SA
2007-000148	R315	R-CHIP	SA
2007-000148	R316	R-CHIP	SA
2007-000148	R319	R-CHIP	SA
2007-000148	R322	R-CHIP	SA
2007-000148	R425	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-000148	R511	R-CHIP	SA
2007-000148	R514	R-CHIP	SA
2007-000148	R515	R-CHIP	SA
2007-000148	R726	R-CHIP	SA
2007-000154	R422	R-CHIP	SA
2007-000154	R501	R-CHIP	SA
2007-000154	R513	R-CHIP	SA
2007-000157	R407	R-CHIP	SA
2007-000157	R615	R-CHIP	SA
2007-000157	R617	R-CHIP	SA
2007-000162	R401	R-CHIP	SA
2007-000162	R412	R-CHIP	SA
2007-000162	R719	R-CHIP	SA
2007-000165	R411	R-CHIP	SA
2007-000165	R720	R-CHIP	SA
2007-000165	R721	R-CHIP	SA
2007-000165	R722	R-CHIP	SA
2007-000169	R414	R-CHIP	SA
2007-000171	R112	R-CHIP	SA
2007-000171	R304	R-CHIP	SA
2007-000171	R305	R-CHIP	SA
2007-000171	R314	R-CHIP	SA
2007-000171	R400	R-CHIP	SA
2007-000171	R500	R-CHIP	SA
2007-000171	R502	R-CHIP	SA
2007-000171	R503	R-CHIP	SA
2007-000171	R507	R-CHIP	SA
2007-000171	R512	R-CHIP	SA
2007-000171	R517	R-CHIP	SA
2007-000171	R521	R-CHIP	SA
2007-000171	R600	R-CHIP	SA
2007-000171	R613	R-CHIP	SA
2007-000171	R618	R-CHIP	SA
2007-000171	R619	R-CHIP	SA
2007-000171	R620	R-CHIP	SA
2007-000173	R505	R-CHIP	SA
2007-000173	R508	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-000174	R528	R-CHIP	SA
2007-000174	R531	R-CHIP	SA
2007-000636	R616	R-CHIP	SA
2007-001285	R211	R-CHIP	SA
2007-001290	R313	R-CHIP	SA
2007-001290	R527	R-CHIP	SA
2007-001290	R529	R-CHIP	SA
2007-001298	R210	R-CHIP	SA
2007-003029	R602	R-CHIP	SA
2007-007014	R403	R-CHIP	SA
2007-007132	R424	R-CHIP	SA
2007-007132	R506	R-CHIP	SA
2007-007132	R509	R-CHIP	SA
2007-007135	R303	R-CHIP	SA
2007-007142	R421	R-CHIP	SA
2007-007314	R423	R-CHIP	SA
2007-007468	R402	R-CHIP	SA
2007-007489	R109	R-CHIP	SA
2007-007741	R611	R-CHIP	SA
2007-007766	R306	R-CHIP	SA
2007-008043	R215	R-CHIP	SA
2007-008043	R216	R-CHIP	SA
2007-008045	R208	R-CHIP	SA
2007-008045	R406	R-CHIP	SA
2007-008045	R703	R-CHIP	SA
2007-008045	R705	R-CHIP	SA
2007-008045	R707	R-CHIP	SA
2007-008046	R102	R-CHIP	SA
2007-008046	R103	R-CHIP	SA
2007-008046	R107	R-CHIP	SA
2007-008046	R108	R-CHIP	SA
2007-008046	R217	R-CHIP	SA
2007-008052	R310	R-CHIP	SA
2007-008052	R311	R-CHIP	SA
2007-008055	R426	R-CHIP	SA
2007-008275	R603	R-CHIP	SA
2007-008419	R605	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008419	R606	R-CHIP	SA
2007-008419	R608	R-CHIP	SA
2007-008419	R609	R-CHIP	SA
2007-008478	R510	R-CHIP	SA
2007-008478	R520	R-CHIP	SA
2007-008483	R409	R-CHIP	SA
2007-008483	R604	R-CHIP	SA
2007-008486	R410	R-CHIP	SA
2007-008486	R415	R-CHIP	SA
2007-008516	R106	R-CHIP	SA
2007-008516	R302	R-CHIP	SA
2007-008516	R320	R-CHIP	SA
2007-008516	R416	R-CHIP	SA
2007-008516	R417	R-CHIP	SA
2007-008516	R418	R-CHIP	SA
2007-008516	R419	R-CHIP	SA
2007-008516	R420	R-CHIP	SA
2007-008516	R530	R-CHIP	SA
2007-008516	R532	R-CHIP	SA
2007-008516	R610	R-CHIP	SA
2007-008516	R725	R-CHIP	SA
2007-008542	R110	R-CHIP	SA
2007-008542	R111	R-CHIP	SA
2007-008542	R207	R-CHIP	SA
2007-008542	R413	R-CHIP	SA
2007-008542	R427	R-CHIP	SA
2007-008542	R601	R-CHIP	SA
2007-008542	R713	R-CHIP	SA
2007-008542	R714	R-CHIP	SA
2007-008544	R504	R-CHIP	SA
2007-008544	R519	R-CHIP	SA
2007-008548	R607	R-CHIP	SA
2007-008588	R518	R-CHIP	SA
2007-008806	R100	R-CHIP	SA
2007-008806	R101	R-CHIP	SA
2007-008806	R104	R-CHIP	SA
2007-008806	R309	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008806	R404	R-CHIP	SA
2007-009167	R300	R-CHIP	SA
2007-009212	R301	R-CHIP	SA
2007-009408	R105	R-CHIP	SA
2007-009420	R206	R-CHIP	SA
2007-009805	R214	R-CHIP	SA
2203-000233	C427	C-CER,CHIP	SA
2203-000233	C429	C-CER,CHIP	SA
2203-000233	C436	C-CER,CHIP	SA
2203-000254	C131	C-CER,CHIP	SA
2203-000254	C204	C-CER,CHIP	SA
2203-000254	C333	C-CER,CHIP	SA
2203-000278	C122	C-CER,CHIP	SA
2203-000278	C124	C-CER,CHIP	SA
2203-000278	C514	C-CER,CHIP	SA
2203-000278	C515	C-CER,CHIP	SA
2203-000386	C413	C-CER,CHIP	SA
2203-000386	C432	C-CER,CHIP	SA
2203-000425	C449	C-CER,CHIP	SA
2203-000438	C119	C-CER,CHIP	SA
2203-000438	C308	C-CER,CHIP	SA
2203-000438	C309	C-CER,CHIP	SA
2203-000438	C312	C-CER,CHIP	SA
2203-000438	C313	C-CER,CHIP	SA
2203-000438	C318	C-CER,CHIP	SA
2203-000438	C508	C-CER,CHIP	SA
2203-000438	C509	C-CER,CHIP	SA
2203-000489	C334	C-CER,CHIP	SA
2203-000725	C611	C-CER,CHIP	SA
2203-000812	C252	C-CER,CHIP	SA
2203-000812	C342	C-CER,CHIP	SA
2203-000812	C440	C-CER,CHIP	SA
2203-000812	C441	C-CER,CHIP	SA
2203-000812	C446	C-CER,CHIP	SA
2203-000812	C448	C-CER,CHIP	SA
2203-000812	C504	C-CER,CHIP	SA
2203-000812	C521	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-000812	C525	C-CER,CHIP	SA
2203-000812	C700	C-CER,CHIP	SA
2203-000854	C505	C-CER,CHIP	SA
2203-000854	C522	C-CER,CHIP	SA
2203-000854	C524	C-CER,CHIP	SA
2203-000995	C120	C-CER,CHIP	SA
2203-000995	C121	C-CER,CHIP	SA
2203-000995	C452	C-CER,CHIP	SA
2203-002668	C102	C-CER,CHIP	SA
2203-002677	C211	C-CER,CHIP	SA
2203-002709	C128	C-CER,CHIP	SA
2203-002709	C335	C-CER,CHIP	SA
2203-002709	C338	C-CER,CHIP	SA
2203-002709	C339	C-CER,CHIP	SA
2203-002709	C707	C-CER,CHIP	SA
2203-002709	C708	C-CER,CHIP	SA
2203-005050	C129	C-CER,CHIP	SA
2203-005288	C203	C-CER,CHIP	SA
2203-005480	C337	C-CER,CHIP	SA
2203-005480	C502	C-CER,CHIP	SA
2203-005480	C503	C-CER,CHIP	SA
2203-005482	C118	C-CER,CHIP	SA
2203-005482	C329	C-CER,CHIP	SA
2203-005482	C450	C-CER,CHIP	SA
2203-005482	C510	C-CER,CHIP	SA
2203-005482	C516	C-CER,CHIP	SA
2203-005482	C526	C-CER,CHIP	SA
2203-005552	C101	C-CER,CHIP	SA
2203-005571	C233	C-CER,CHIP	SA
2203-005571	C426	C-CER,CHIP	SA
2203-005571	C428	C-CER,CHIP	SA
2203-005682	C100	C-CER,CHIP	SA
2203-005682	C110	C-CER,CHIP	SA
2203-005682	C111	C-CER,CHIP	SA
2203-005682	C112	C-CER,CHIP	SA
2203-005682	C113	C-CER,CHIP	SA
2203-005682	C115	C-CER,CHIP	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
2203-005682	C206	C-CER,CHIP	SA
2203-005682	C219	C-CER,CHIP	SA
2203-005682	C237	C-CER,CHIP	SA
2203-005682	C269	C-CER,CHIP	SA
2203-005682	C332	C-CER,CHIP	SA
2203-005682	C411	C-CER,CHIP	SA
2203-005682	C425	C-CER,CHIP	SA
2203-005682	C442	C-CER,CHIP	SA
2203-005682	C443	C-CER,CHIP	SA
2203-005682	C444	C-CER,CHIP	SA
2203-005682	C445	C-CER,CHIP	SA
2203-005682	C453	C-CER,CHIP	SA
2203-005682	C602	C-CER,CHIP	SA
2203-005682	C701	C-CER,CHIP	SA
2203-005719	C340	C-CER,CHIP	SA
2203-005725	C223	C-CER,CHIP	SA
2203-005725	C232	C-CER,CHIP	SA
2203-005725	C234	C-CER,CHIP	SA
2203-005725	C238	C-CER,CHIP	SA
2203-005725	C245	C-CER,CHIP	SA
2203-005725	C246	C-CER,CHIP	SA
2203-005725	C247	C-CER,CHIP	SA
2203-005725	C250	C-CER,CHIP	SA
2203-005725	C256	C-CER,CHIP	SA
2203-005725	C257	C-CER,CHIP	SA
2203-005725	C260	C-CER,CHIP	SA
2203-005725	C264	C-CER,CHIP	SA
2203-005725	C266	C-CER,CHIP	SA
2203-005725	C604	C-CER,CHIP	SA
2203-005725	C605	C-CER,CHIP	SA
2203-005726	C207	C-CER,CHIP	SA
2203-005726	C268	C-CER,CHIP	SA
2203-005731	C108	C-CER,CHIP	SA
2203-005732	C114	C-CER,CHIP	SA
2203-005732	C213	C-CER,CHIP	SA
2203-005732	C214	C-CER,CHIP	SA
2203-005736	C220	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-005736	C221	C-CER,CHIP	SA
2203-005736	C222	C-CER,CHIP	SA
2203-005736	C225	C-CER,CHIP	SA
2203-005736	C235	C-CER,CHIP	SA
2203-005736	C244	C-CER,CHIP	SA
2203-005736	C248	C-CER,CHIP	SA
2203-005736	C259	C-CER,CHIP	SA
2203-005736	C261	C-CER,CHIP	SA
2203-005736	C267	C-CER,CHIP	SA
2203-005736	C331	C-CER,CHIP	SA
2203-005736	C424	C-CER,CHIP	SA
2203-005736	C431	C-CER,CHIP	SA
2203-005806	C201	C-CER,CHIP	SNA
2203-005806	C202	C-CER,CHIP	SNA
2203-005806	C209	C-CER,CHIP	SNA
2203-005806	C210	C-CER,CHIP	SNA
2203-005806	C231	C-CER,CHIP	SNA
2203-005806	C302	C-CER,CHIP	SNA
2203-005806	C319	C-CER,CHIP	SNA
2203-005806	C322	C-CER,CHIP	SNA
2203-005806	C323	C-CER,CHIP	SNA
2203-005806	C327	C-CER,CHIP	SNA
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2203-006048	C405	C-CER,CHIP	SA
2203-006048	C409	C-CER,CHIP	SA
2203-006048	C410	C-CER,CHIP	SA
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2203-006194	C236	C-CER,CHIP	SA
2203-006194	C303	C-CER,CHIP	SA
2203-006194	C304	C-CER,CHIP	SA
2203-006257	C533	C-CER,CHIP	SA
2203-006257	C535	C-CER,CHIP	SA
2203-006307	C433	C-CER,CHIP	SA
2203-006324	C406	C-CER,CHIP	SA
2203-006324	C434	C-CER,CHIP	SA
2203-006348	C437	C-CER,CHIP	SA
2203-006399	C317	C-CER,CHIP	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
2203-006399	C326	C-CER,CHIP	SA
2203-006399	C415	C-CER,CHIP	SA
2203-006399	C435	C-CER,CHIP	SA
2203-006399	C447	C-CER,CHIP	SA
2203-006423	C215	C-CER,CHIP	SA
2203-006423	C216	C-CER,CHIP	SA
2203-006423	C217	C-CER,CHIP	SA
2203-006423	C218	C-CER,CHIP	SA
2203-006423	C226	C-CER,CHIP	SA
2203-006423	C227	C-CER,CHIP	SA
2203-006423	C228	C-CER,CHIP	SA
2203-006423	C229	C-CER,CHIP	SA
2203-006423	C240	C-CER,CHIP	SA
2203-006423	C241	C-CER,CHIP	SA
2203-006423	C242	C-CER,CHIP	SA
2203-006423	C249	C-CER,CHIP	SA
2203-006423	C253	C-CER,CHIP	SA
2203-006423	C254	C-CER,CHIP	SA
2203-006423	C255	C-CER,CHIP	SA
2203-006423	C263	C-CER,CHIP	SA
2203-006423	C265	C-CER,CHIP	SA
2203-006423	C301	C-CER,CHIP	SA
2203-006423	C314	C-CER,CHIP	SA
2203-006423	C316	C-CER,CHIP	SA
2203-006423	C320	C-CER,CHIP	SA
2203-006423	C325	C-CER,CHIP	SA
2203-006423	C328	C-CER,CHIP	SA
2203-006423	C330	C-CER,CHIP	SA
2203-006423	C404	C-CER,CHIP	SA
2203-006423	C408	C-CER,CHIP	SA
2203-006423	C412	C-CER,CHIP	SA
2203-006556	C106	C-CER,CHIP	SA
2203-006556	C709	C-CER,CHIP	SA
2203-006562	C116	C-CER,CHIP	SA
2203-006562	C127	C-CER,CHIP	SA
2203-006562	C130	C-CER,CHIP	SA
2203-006562	C438	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006562	C612	C-CER,CHIP	SA
2203-006562	C613	C-CER,CHIP	SA
2203-006562	C614	C-CER,CHIP	SA
2203-006626	C511	C-CER,CHIP	SA
2203-006626	C512	C-CER,CHIP	SA
2203-006642	C606	C-CER,CHIP	SA
2203-006681	C117	C-CER,CHIP	SA
2203-006681	C306	C-CER,CHIP	SA
2203-006681	C310	C-CER,CHIP	SA
2203-006681	C311	C-CER,CHIP	SA
2203-006681	C315	C-CER,CHIP	SA
2203-006681	C321	C-CER,CHIP	SA
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2203-006681	C407	C-CER,CHIP	SA
2203-006681	C439	C-CER,CHIP	SA
2203-006681	C507	C-CER,CHIP	SA
2203-006681	C532	C-CER,CHIP	SA
2203-006681	C607	C-CER,CHIP	SA
2203-006681	C616	C-CER,CHIP	SA
2203-006712	C200	C-CER,CHIP	SA
2203-006824	C205	C-CER,CHIP	SA
2203-006824	C400	C-CER,CHIP	SA
2203-006824	C401	C-CER,CHIP	SA
2203-006824	C402	C-CER,CHIP	SA
2203-006824	C403	C-CER,CHIP	SA
2203-006824	C414	C-CER,CHIP	SA
2203-006824	C419	C-CER,CHIP	SA
2203-006824	C420	C-CER,CHIP	SA
2203-006824	C422	C-CER,CHIP	SA
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2203-006838	C305	C-CER,CHIP	SA
2203-006838	C307	C-CER,CHIP	SA
2203-006838	C501	C-CER,CHIP	SA
2203-006838	C523	C-CER,CHIP	SA
2203-006838	C537	C-CER,CHIP	SA
2203-006838	C538	C-CER,CHIP	SA
2203-006839	C105	C-CER,CHIP	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
2203-006839	C608	C-CER,CHIP	SA
2203-006841	C123	C-CER,CHIP	SA
2203-006841	C125	C-CER,CHIP	SA
2203-006841	C416	C-CER,CHIP	SA
2203-006841	C500	C-CER,CHIP	SA
2203-006841	C506	C-CER,CHIP	SA
2203-006841	C513	C-CER,CHIP	SA
2203-006841	C517	C-CER,CHIP	SA
2203-006841	C518	C-CER,CHIP	SA
2203-006841	C519	C-CER,CHIP	SA
2203-006841	C520	C-CER,CHIP	SA
2203-006841	C534	C-CER,CHIP	SA
2203-006841	C536	C-CER,CHIP	SA
2203-006841	C600	C-CER,CHIP	SA
2203-006841	C609	C-CER,CHIP	SA
2203-006841	C610	C-CER,CHIP	SA
2203-006841	C615	C-CER,CHIP	SA
2203-006841	C617	C-CER,CHIP	SA
2203-006846	C107	C-CER,CHIP	SA
2203-006846	C109	C-CER,CHIP	SA
2203-006846	C208	C-CER,CHIP	SA
2203-006872	C417	C-CER,CHIP	SA
2203-006872	C418	C-CER,CHIP	SA
2203-006872	C421	C-CER,CHIP	SA
2203-006872	C423	C-CER,CHIP	SA
2203-006872	C430	C-CER,CHIP	SA
2203-006978	C601	C-CER,CHIP	SA
2203-006979	C239	C-CER,CHIP	SA
2203-006979	C243	C-CER,CHIP	SA
2203-006979	C262	C-CER,CHIP	SA
2404-001339	TA200	C-TA,CHIP	SA
2404-001339	TA201	C-TA,CHIP	SA
2404-001377	TA300	C-TA,CHIP	SA
2404-001377	TA501	C-TA,CHIP	SA
2404-001377	TA502	C-TA,CHIP	SA
2404-001381	C451	C-TA,CHIP	SA
2404-001381	TA100	C-TA,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2404-001381	TA500	C-TA,CHIP	SA
2404-001381	TA600	C-TA,CHIP	SA
2404-001506	TA601	C-TA,CHIP	SA
2703-001724	L205	INDUCTOR-SMD	SA
2703-001750	L207	INDUCTOR-SMD	SA
2703-001751	L100	INDUCTOR-SMD	SA
2703-002313	L111	INDUCTOR-SMD	SA
2703-002313	L602	INDUCTOR-SMD	SA
2703-002313	L603	INDUCTOR-SMD	SA
2703-002365	L112	INDUCTOR-SMD	SA
2703-002368	L202	INDUCTOR-SMD	SA
2703-002557	L604	INDUCTOR-SMD	SA
2703-002793	L104	INDUCTOR-SMD	SA
2703-002793	L105	INDUCTOR-SMD	SA
2703-002793	L107	INDUCTOR-SMD	SA
2703-002793	L108	INDUCTOR-SMD	SA
2703-002795	L103	INDUCTOR-SMD	SNA
2703-002824	L600	INDUCTOR-SMD	SA
2703-002858	L206	INDUCTOR-SMD	SA
2703-002870	L101	INDUCTOR-SMD	SA
2703-002907	L200	INDUCTOR-SMD	SNA
2703-002907	L201	INDUCTOR-SMD	SNA
2703-002907	L204	INDUCTOR-SMD	SNA
2703-002910	L102	INDUCTOR-SMD	SA
2703-002910	L106	INDUCTOR-SMD	SA
2703-002910	L109	INDUCTOR-SMD	SA
2703-002958	L208	INDUCTOR-SMD	SA
2703-003009	L209	INDUCTOR-SMD	SA
2703-003009	L210	INDUCTOR-SMD	SA
2703-003249	L110	INDUCTOR-SMD	SA
2703-003258	L400	INDUCTOR-SMD	SA
2703-003258	L401	INDUCTOR-SMD	SA
2703-003258	L402	INDUCTOR-SMD	SA
2801-004466	OSC400	CRYSTAL-SMD	SA
2809-001280	TCX200	OSCILLATOR-VCTCXO	SA
2901-001409	F700	FILTER-EMI SMD	SA
2901-001409	F701	FILTER-EMI SMD	SA

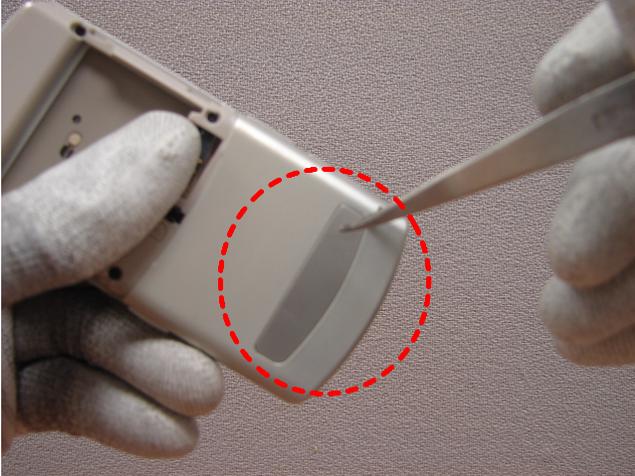
SEC CODE	Design LOC	Discription	STATUS
2901-001409	F702	FILTER-EMI SMD	SA
2901-001409	F703	FILTER-EMI SMD	SA
2901-001409	F704	FILTER-EMI SMD	SA
2901-001409	F705	FILTER-EMI SMD	SA
2904-001600	F103	FILTER-SAW	SA
2904-001604	F101	FILTER-SAW	SNA
2904-001628	F100	FILTER-SAW	SA
2904-001658	F200	FILTER-SAW	SA
2904-001702	F201	FILTER-SAW	SA
2904-001703	F102	FILTER-SAW	SA
2909-001279	F104	FILTER-LC	SA
2910-000028	DUP200	DUPLEXER-SAW	SA
3301-001158	L500	BEAD-SMD	SA
3301-001158	L501	BEAD-SMD	SA
3301-001342	L701	BEAD-SMD	SA
3301-001342	L702	BEAD-SMD	SA
3301-001534	L403	BEAD-SMD	SA
3301-001659	L113	BEAD-SMD	SA
3301-001809	L700	BEAD-SMD	SA
3301-001879	L601	BEAD-SMD	SA
3705-001503	RFS100	CONNECTOR-COAXIAL	SA
3709-001447	SIM400	CONNECTOR-CARD EDGE	SA
3709-001464	CD400	CONNECTOR-CARD EDGE	SA
3710-002523	IFC600	SOCKET-INTERFACE	SA
3711-006514	BTC400	HEADER-BATTERY	SA
3711-006593	SOC700	HEADER-BOARD TO BOARD	SA
3711-006650	HDC700	HEADER-BOARD TO BOARD	SA
4202-001172	ANT100	ANTENNA-CHIP	SA
4302-001180	BAT400	BATTERY-LI(2ND)	SA
4709-001399	CPL200	COUPLER-DIRECTION	SA
6001-001530	QCR12	SCREW-MACHINE	SA
GH70-02640A	CLIP100	ICT SHIELD-CAN CLIP	SA
GH70-02640A	CLIP101	ICT SHIELD-CAN CLIP	SA
GH70-02640A	CLIP102	ICT SHIELD-CAN CLIP	SA
GH70-02640A	CLIP103	ICT SHIELD-CAN CLIP	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



1) Disjoint REAR DECO.

※ **Caution**

1. Take care so that do not scratch on the REAR DECO.

2



1) Unscrew 5 points.

※ **Caution**

1. Unscrew 5 points to detach REAR.

3

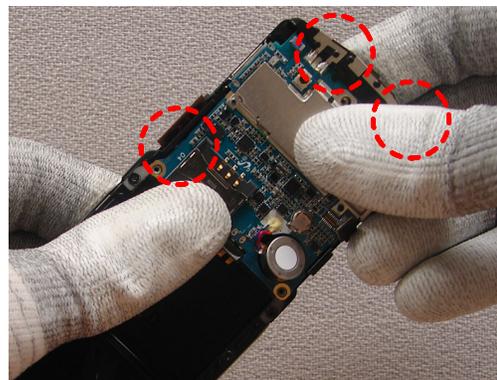


1) Detach REAR.

※ **Caution**

1. Pull upper side of REAR to detach it.

4

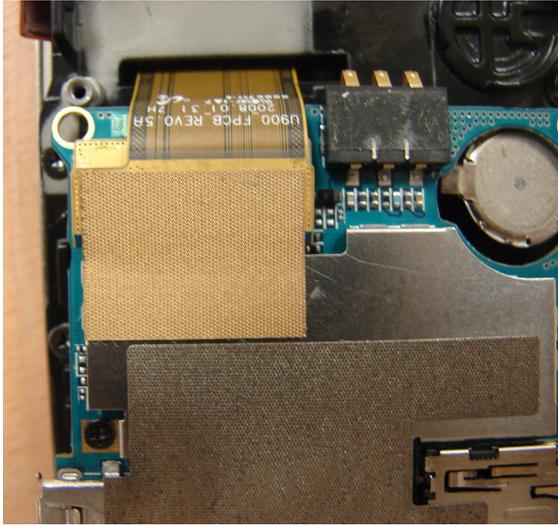


1) Disjoint PBA..

※ **Caution**

1. While checking the attachments, detach PBA carefully from set.
2. Do not force too much on Intenna and screw hole close to vibration motor.

5

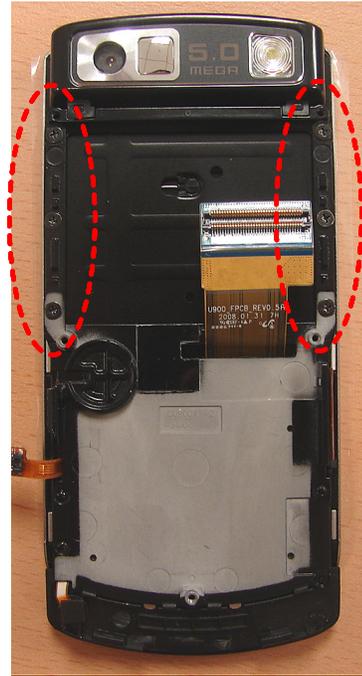


1) Remove connector gasket tape.

※ **Caution**

1. Remove connector gasket tape carefully.
2. Slight damage on SLIDE FPCB is not permitted.

6



1) Disjoint FRONT screws.

7



1) Separate FRONT from LCD ASS'Y.

※ **Caution**

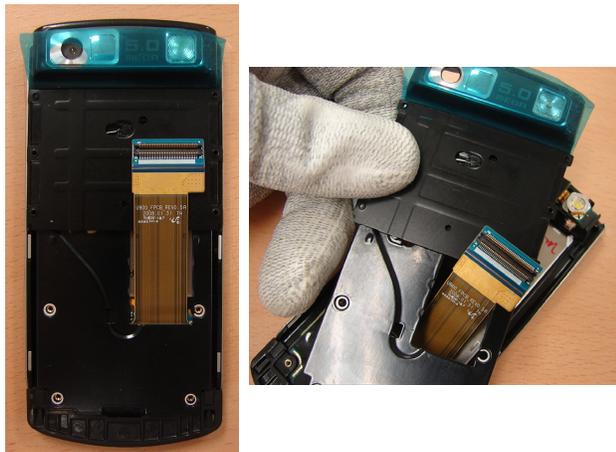
1. Down the FRONT and detach it.

8



1) Disjoint LOWER screw.

9



1) Separate LOWER.

※ **Caution**

1. Lift bottom of LOWER about 1cm and stir slightly.
2. Detach the LOWER while SLIDE FPCB damaged.

10

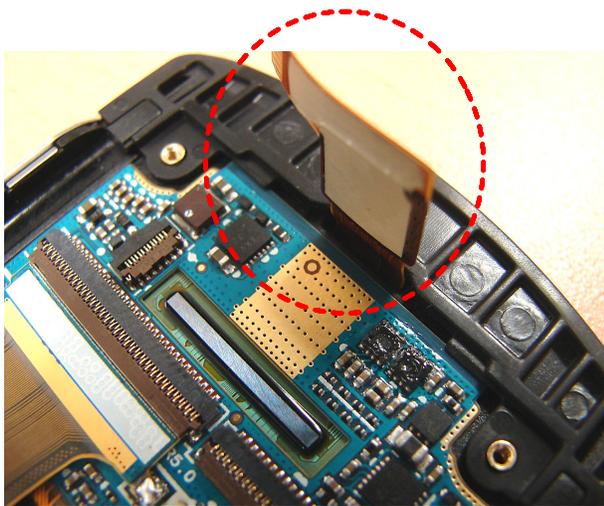


1) Remove black tape.

※ **Caution**

1. Remove the black tape carefully.

11

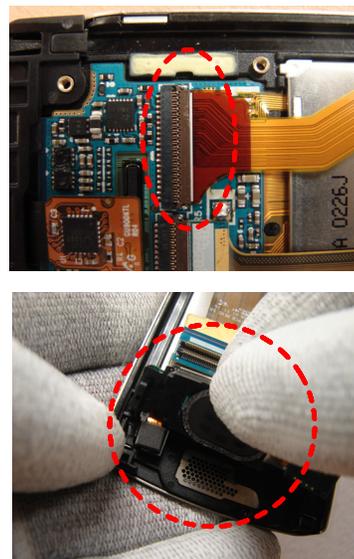


1) Disjoint TOUCH KEY FPCB.

※ **Caution**

1. Open the connector and disjoint TOUCH KEY FPCB.

12

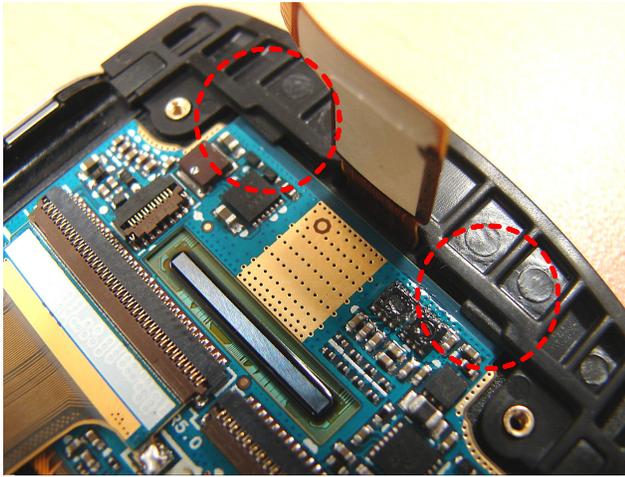


1) Disjoint camera part.

※ **Caution**

1. Disjoint the CAMERA FPCB.
2. Disjoint speaker and CIF camera.

13



- 1) Disjoint SUB LCD HOOK.
- ※ **Caution**
- 1. Lean LOWER BOTTOM to window side to disjoint it from LCD ASS'Y.

14



- 1) Separate LCD.
- ※ **Caution**
- 1. Lift the upside of LCD first and lift LCD PBA next.
 - 2. Because the FPCB between LCD and LCD PBA are easy to be torn, lift the LCD PBA with care.

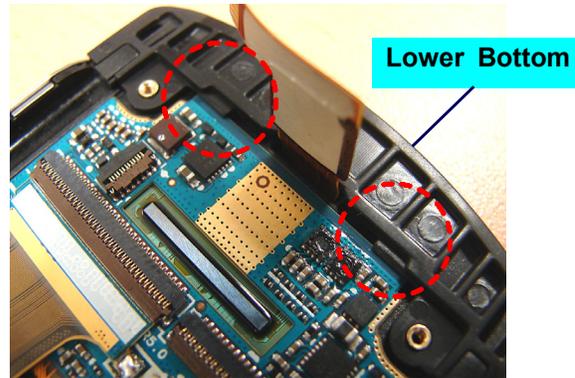
7-2. Assembly

1



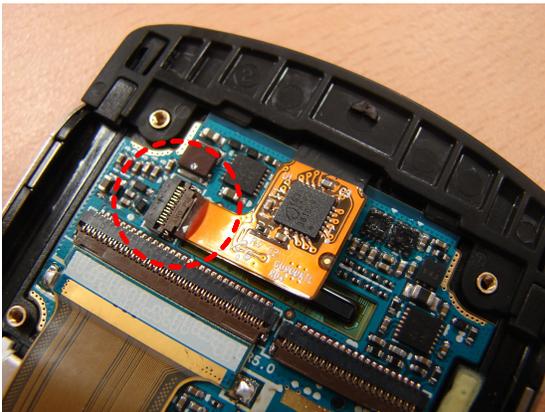
- 1) Put the main LCD in window frame.
 ※ **Caution**
 1. First, put the main LCD part in window frame.
 Main LCD consists of display part and PBA part.
 Red dashed lines point to display part.

2



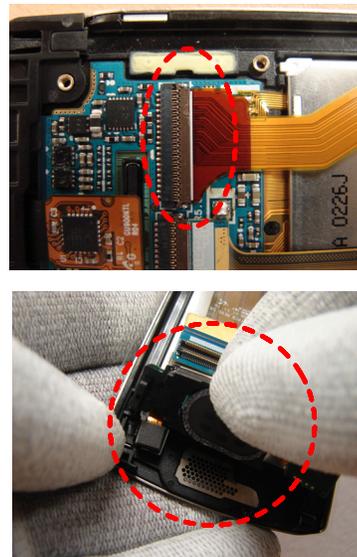
- 1) Put the lower bottom to right position.
 ※ **Caution**
 1. Insert lower bottom to LCD ASS'Y.
 2. First, match window side then lean toward PBA side.
 3. Lean the lower bottom until it sound undertone.

3



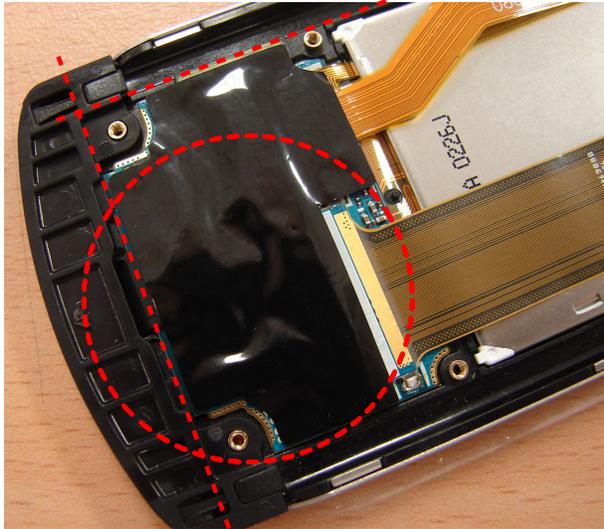
- 1) Assemble touch key FPCB to connector.
 ※ **Caution**
 1. Assemble touch key FPCB to connector (dashed line).
 2. Locate connector so that white silk lines aligned.

4



- 1) Combine camera.
 ※ **Caution**
 1. Connect camera FPCB to connector(dashed line).
 2. Keep white silk line aligned.
 3. Assemble by CIF camera/speaker/5MEGA camera order.

5



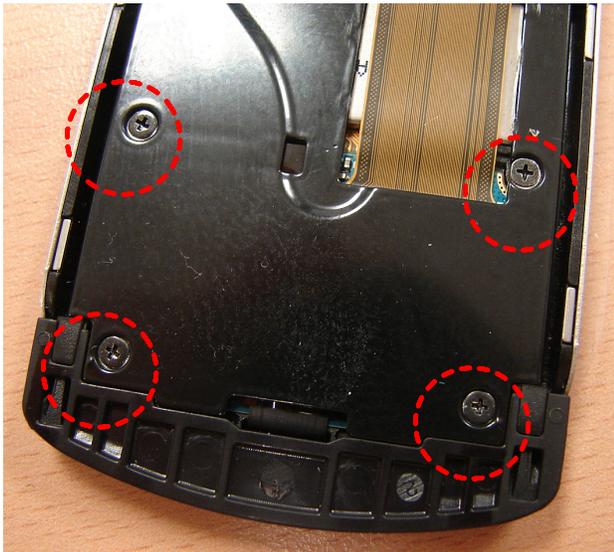
- 1) Attach black tape like picture below.
 ※ **Caution**
1. Make sure not to cross over base line above.
 2. Attach black tape like that way.

6



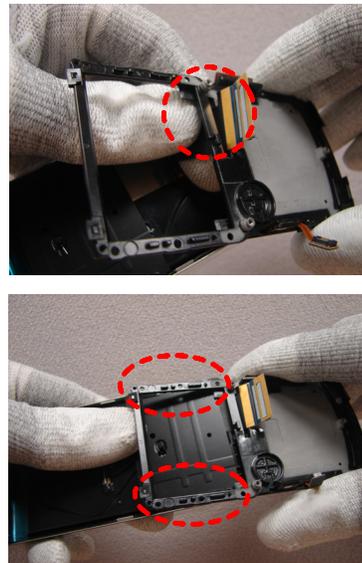
- 1) Combine LOWER.
 ※ **Caution**
1. Insert FPCB between LOWER hole.
 2. Combine top position HOOK and lower position screw assembly part.

7



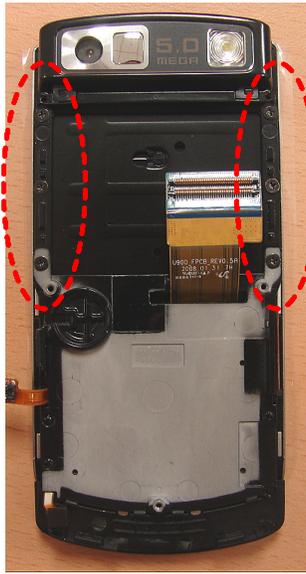
- 1) Contract LOWER screw.
 ※ **Caution**
1. Confirm screw size. (1.4* 2.5mm)
 2. Screw after dashed positions are matched.

8



- 1) Assemble FRONT.
 ※ **Caution**
1. Insert SLIDE FPCB to dashed insertion hole like upper picture.
 2. Insert FRONT lower RIB under hinge and match the six screw joint positions.

9



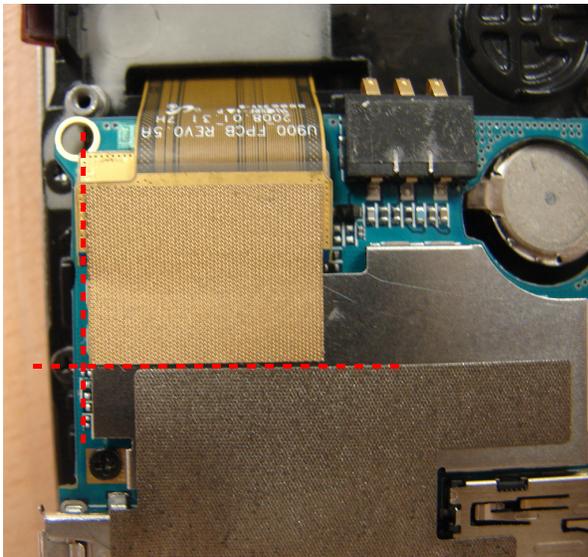
- 1) Screw six point to fix FRONT to LCD ASS'Y.
 ※ **Caution**
 1. Confirm screw size. (1.4* 2.5mm)
 2. Screw 6 points.

10



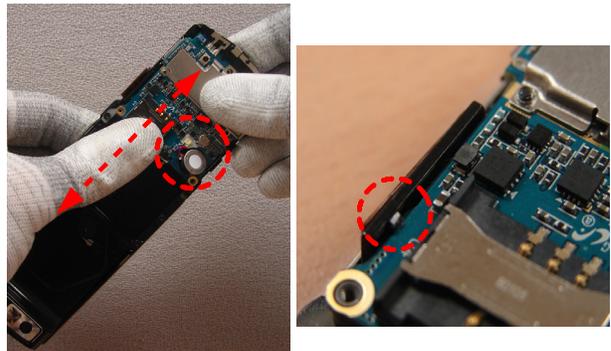
- 1) Combine PBA.
 ※ **Caution**
 1. When slide is closed, combine connector to PBA.
 2. Fold SLIDE FPCB connector like image.

11



- 1) Attach connector gasket tape.
 ※ **Caution**
 1. Place the connector gasket tape aligned like picture.

12



- 1) Put PBA.
 ※ **Caution**
 1. Open slide and place the PBA.
 2. Combine left side HOOK.
 3. Place the Vibration motor in PBA hole.

13



- 1) Combine REAR COVER.
 ※ **Caution**
 1. Combine both side HOOK from bottom.

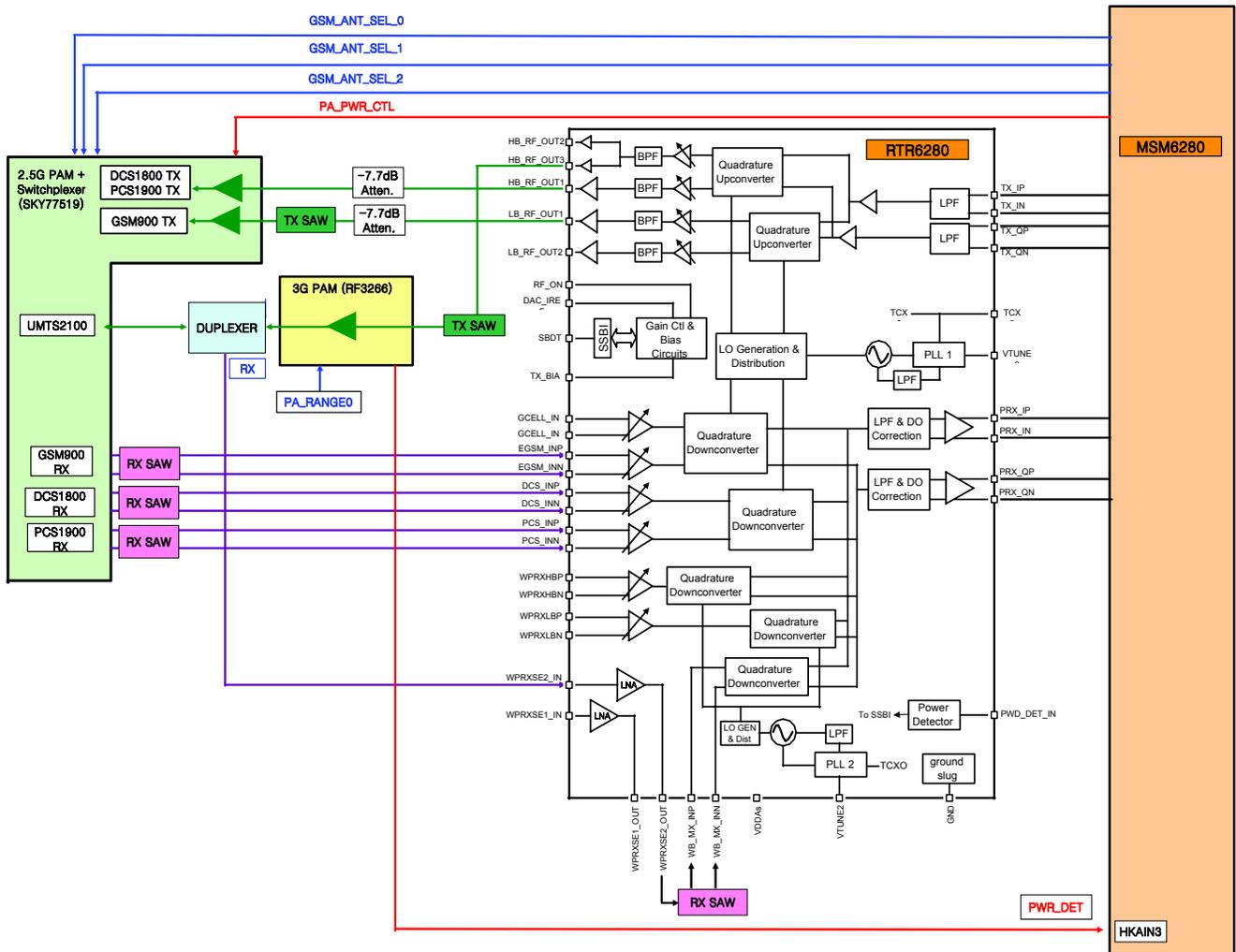
14

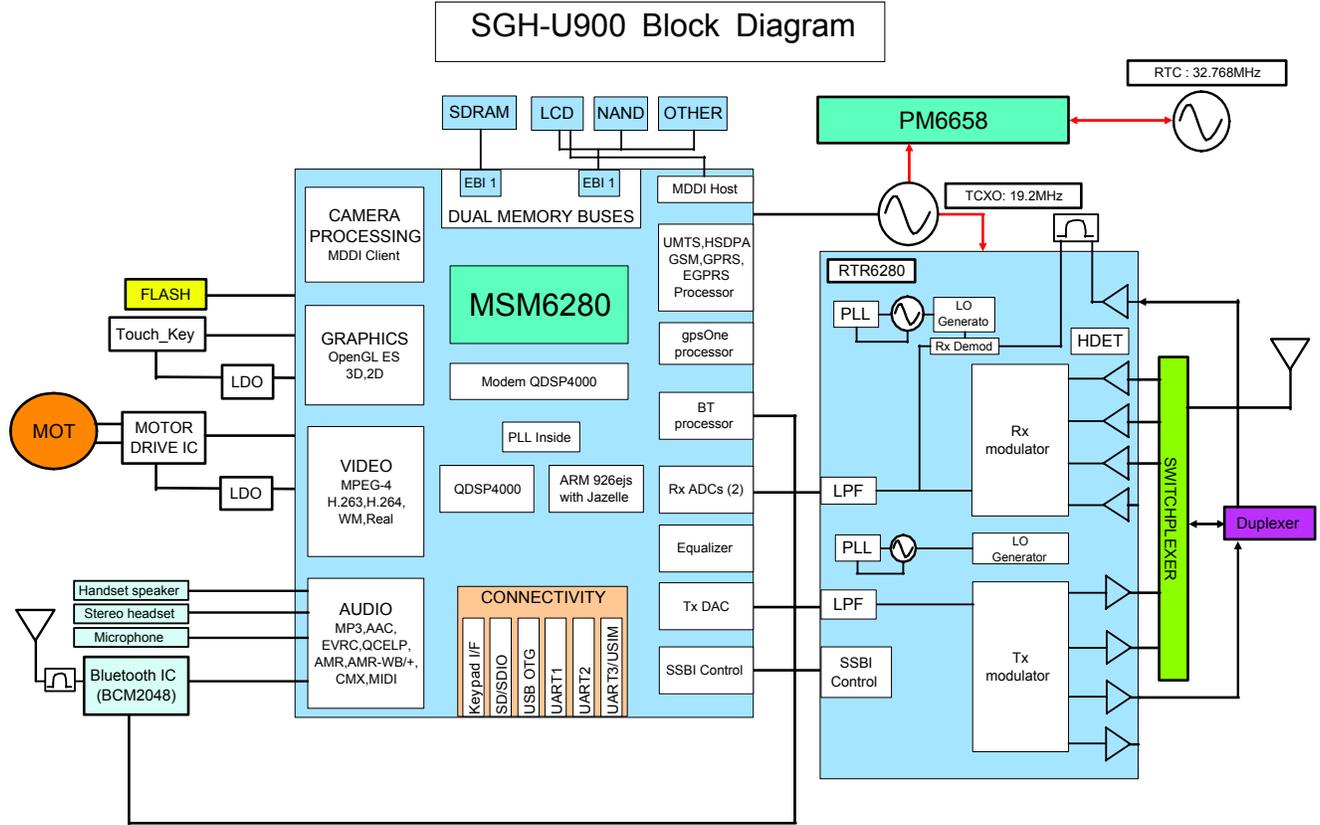


- 1) Screw REAR COVER.
 ※ **Caution**
 1. Confirm screw size.(1.4* 3.5mm)
 2. Screw 5 points.

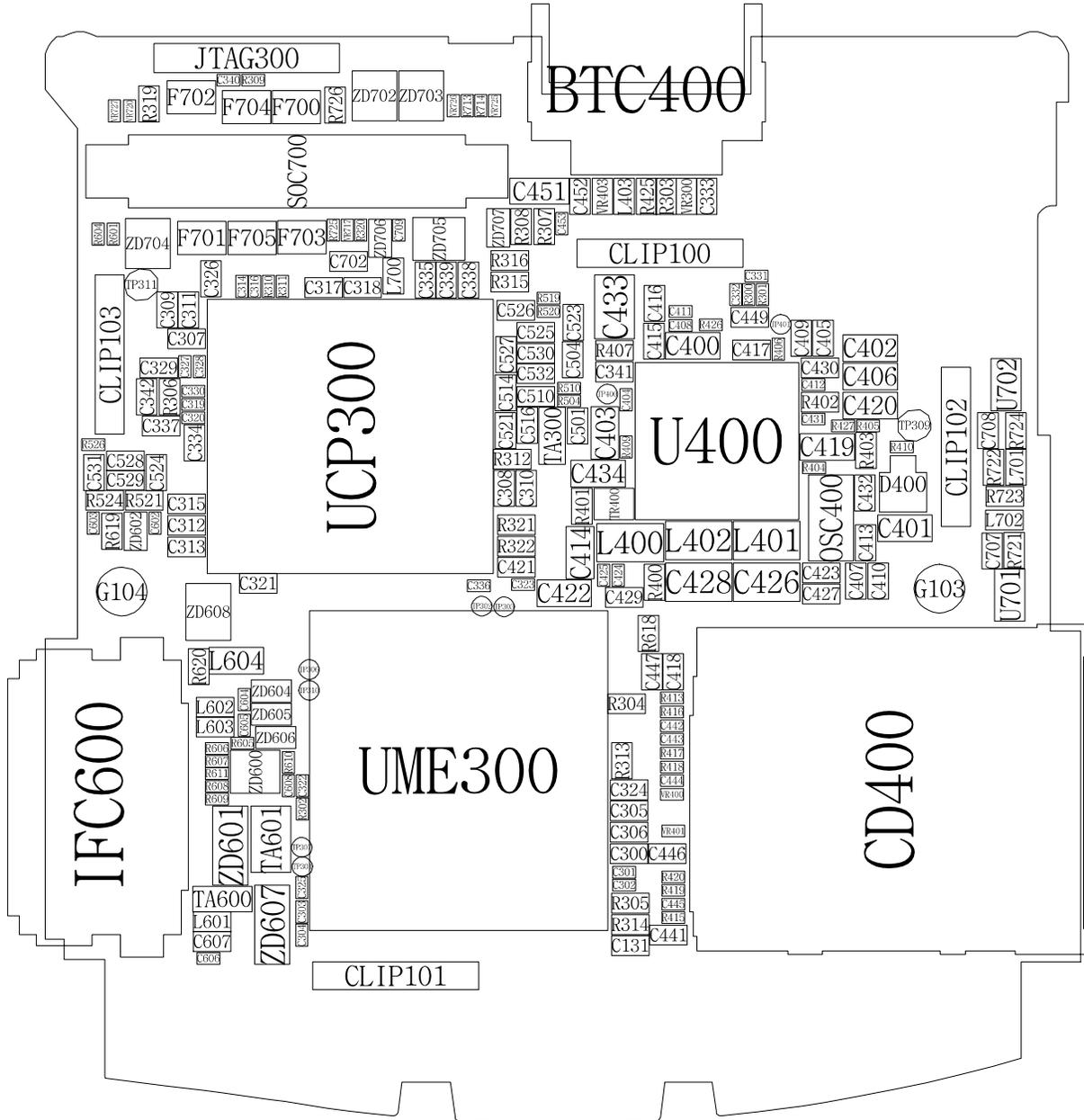
8. Block Diagrams

SGH-U900 RF Block Diagram



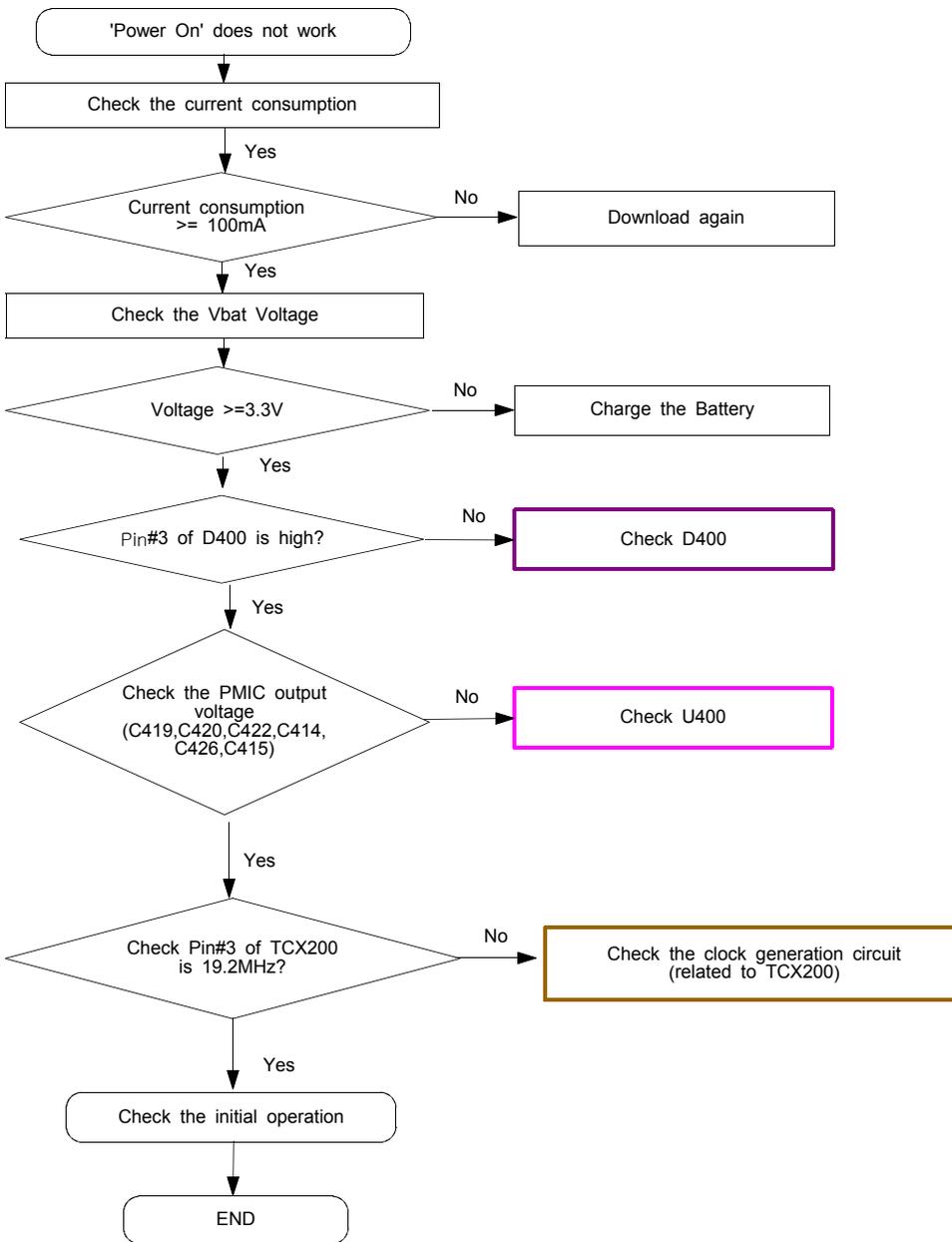


9. PCB Diagrams

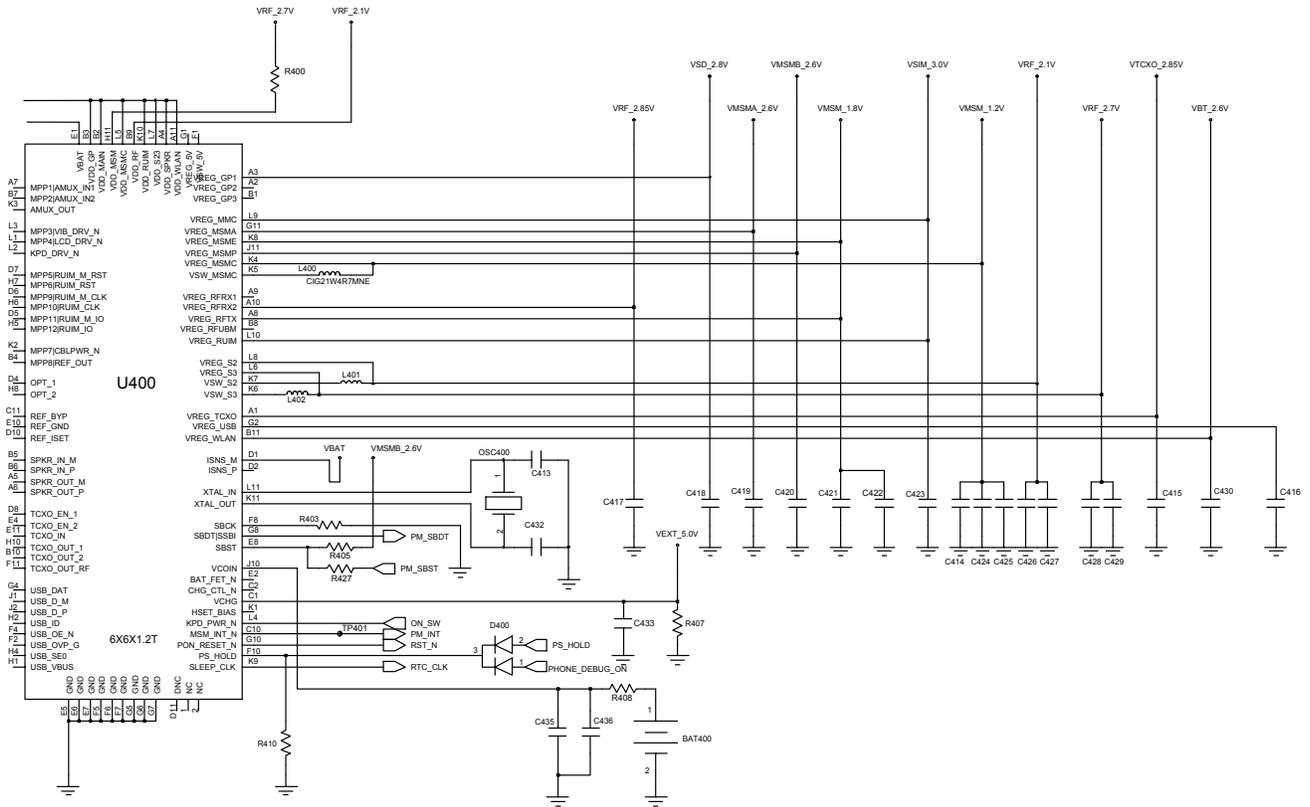


10. Flow Chart of Troubleshooting

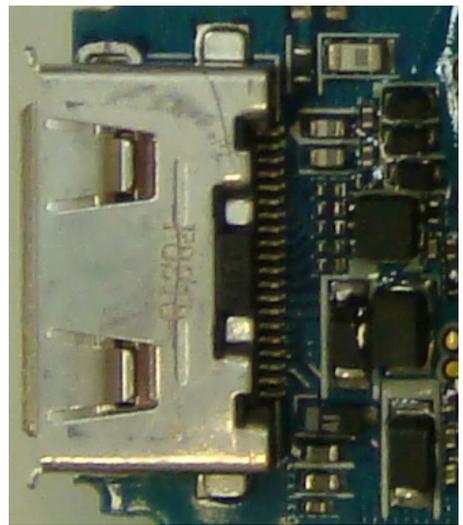
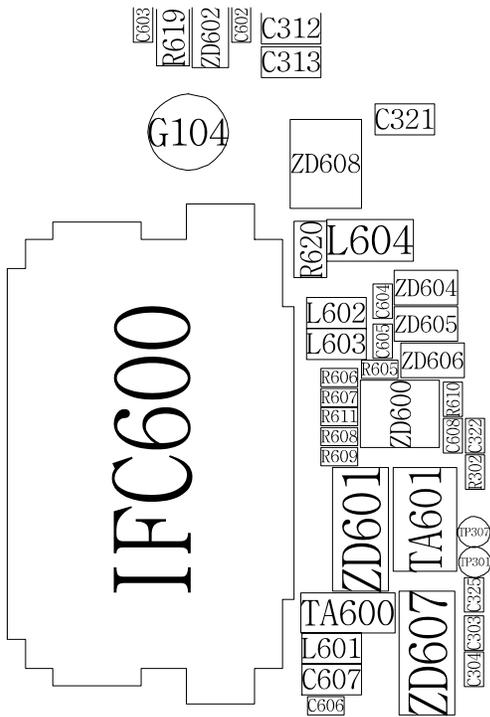
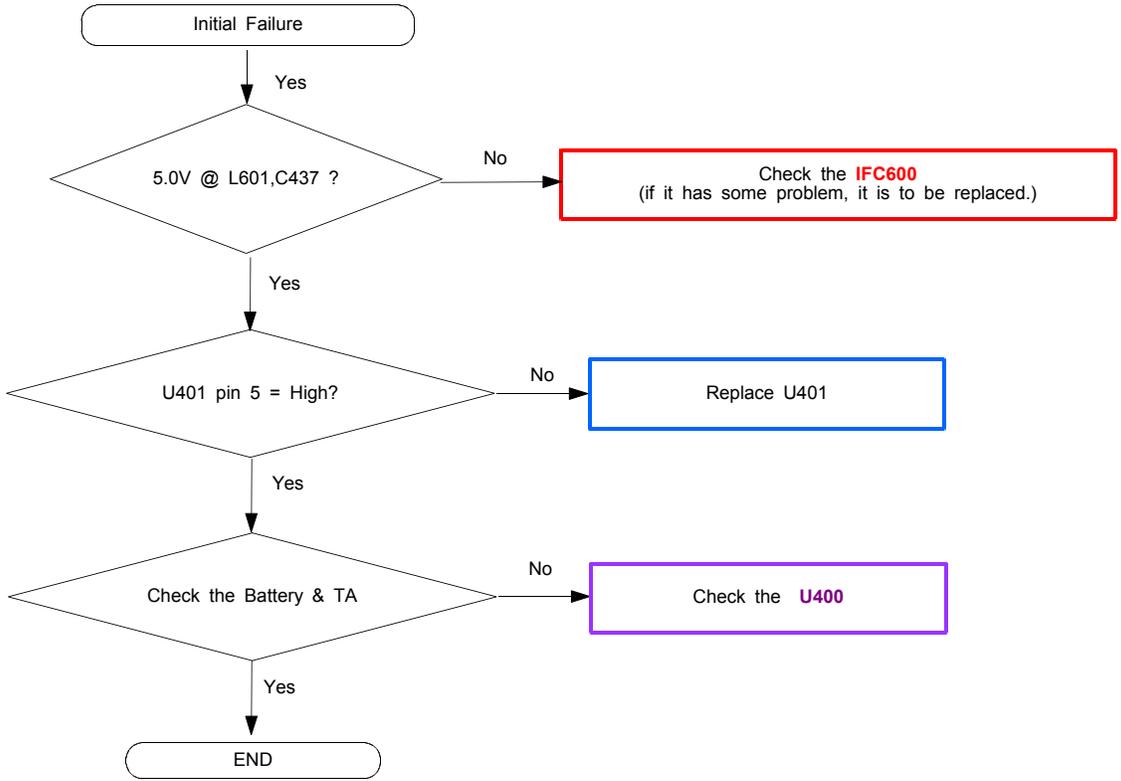
10-1-1. Power ON

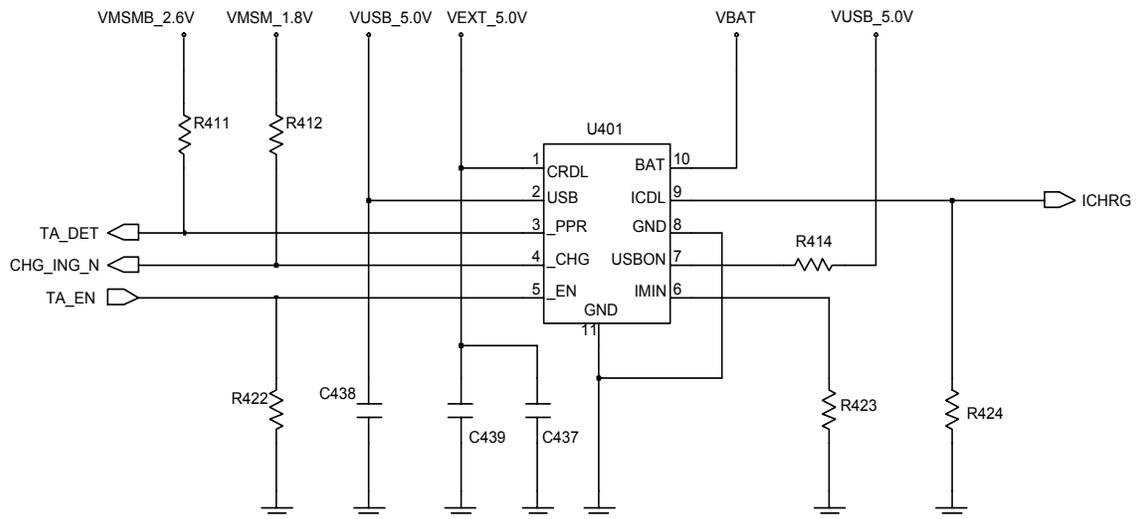
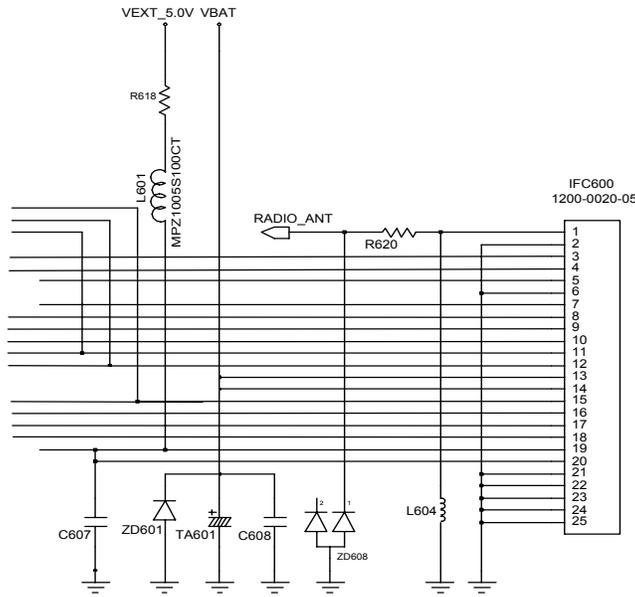
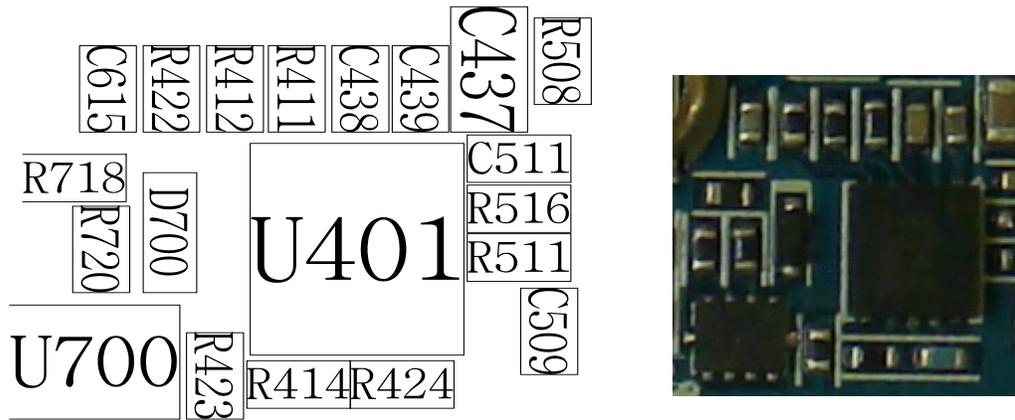


PMIC & CHARGER PART

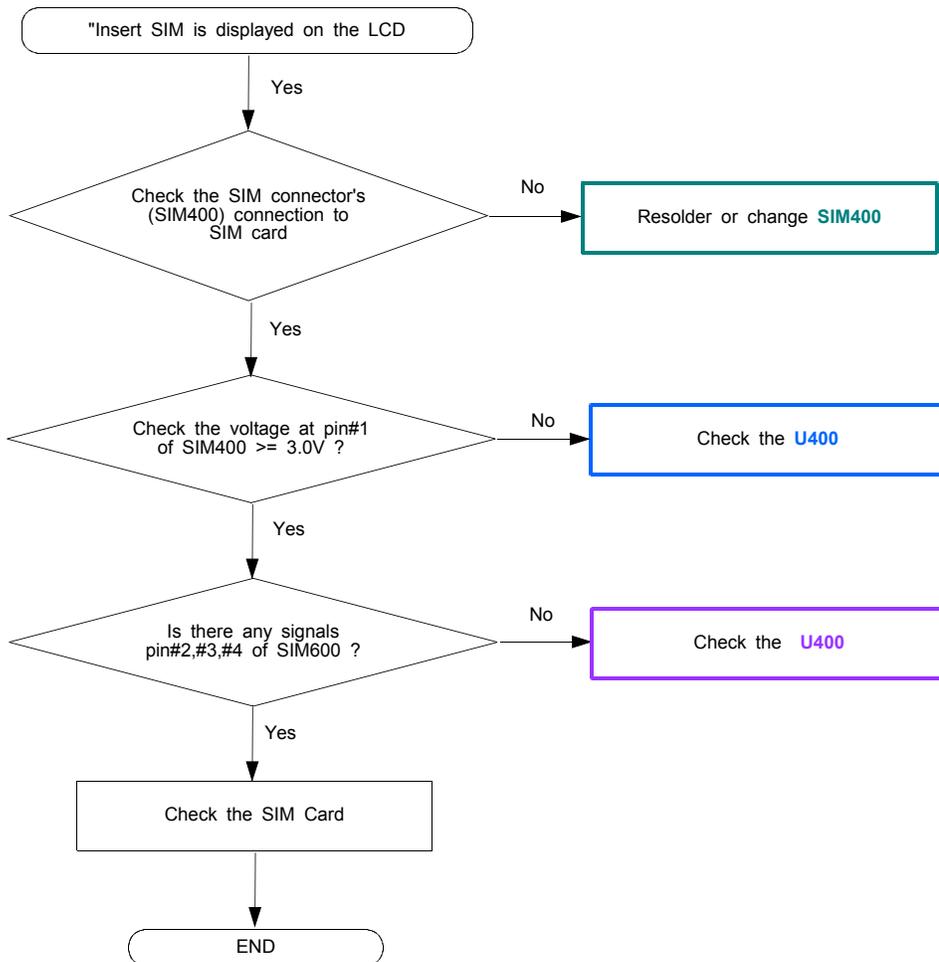


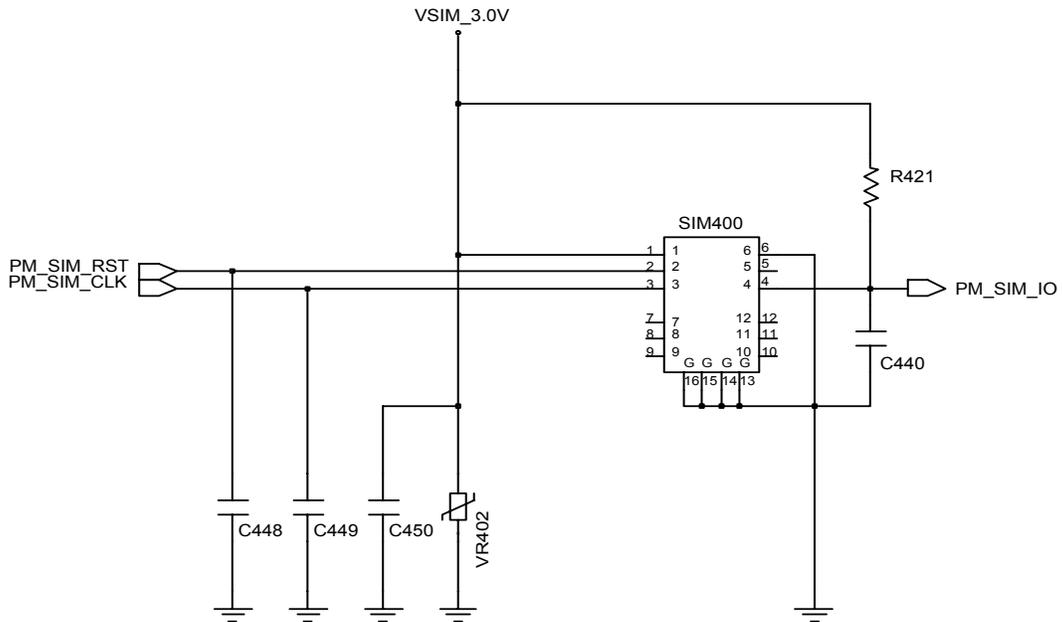
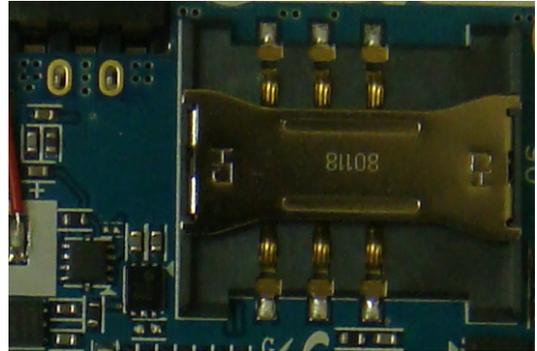
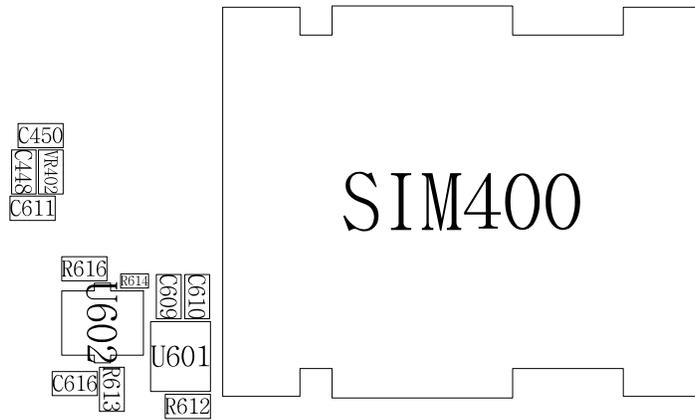
10-1-2. Charging Part



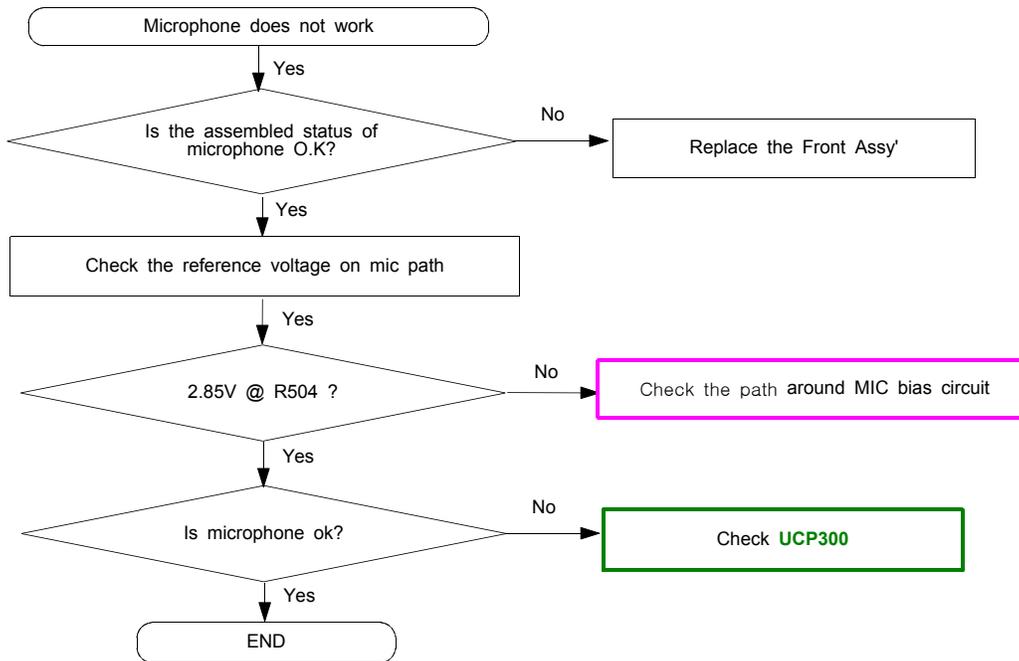


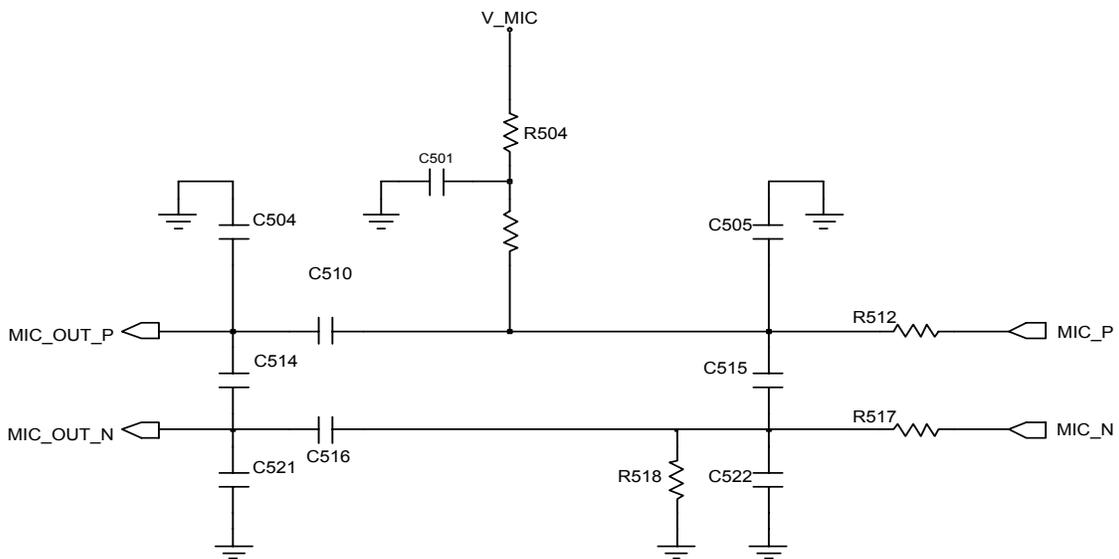
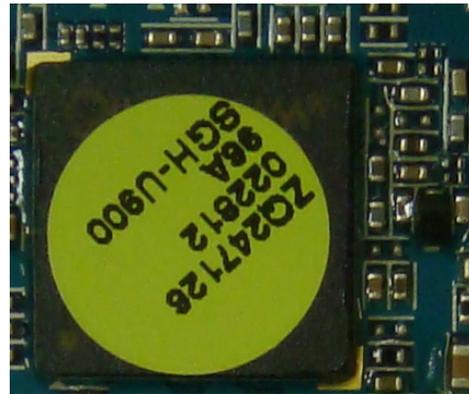
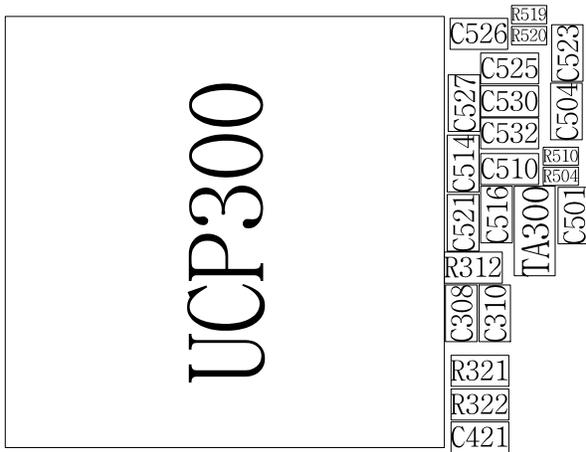
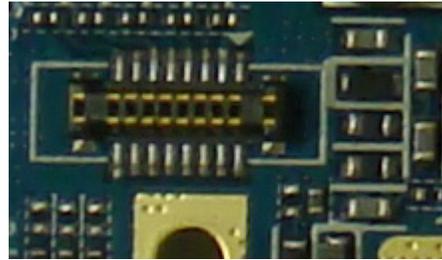
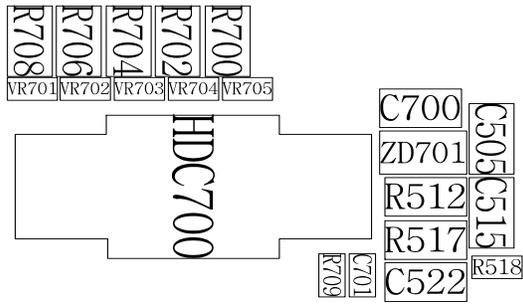
10-1-3. Sim Part



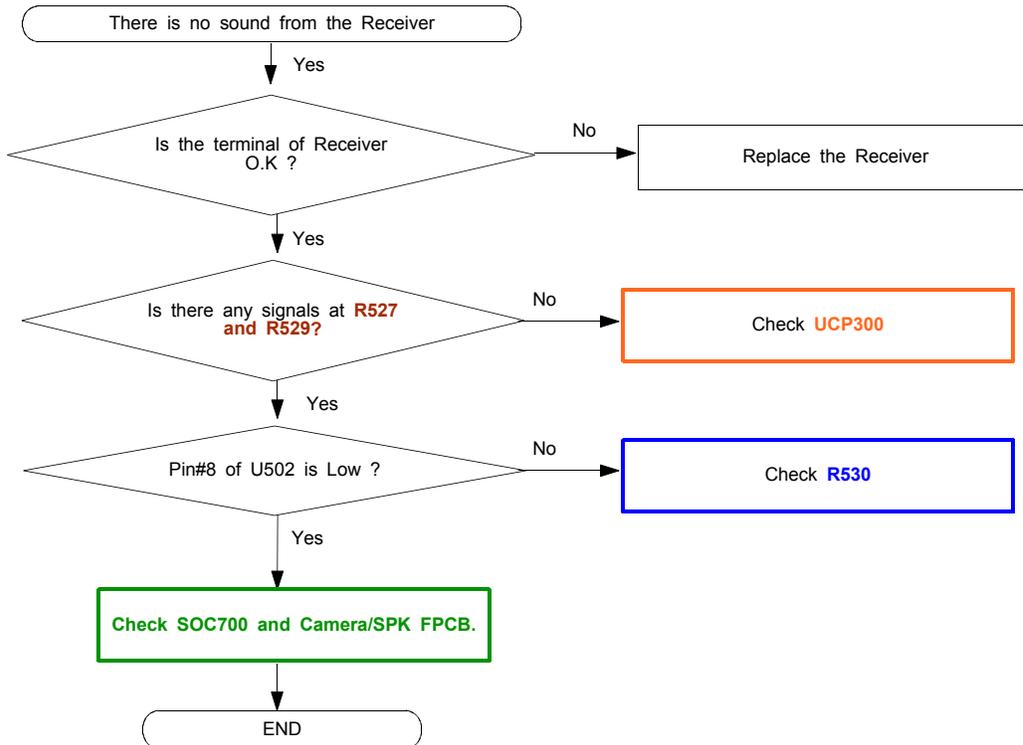


10-1-4. Microphone Part

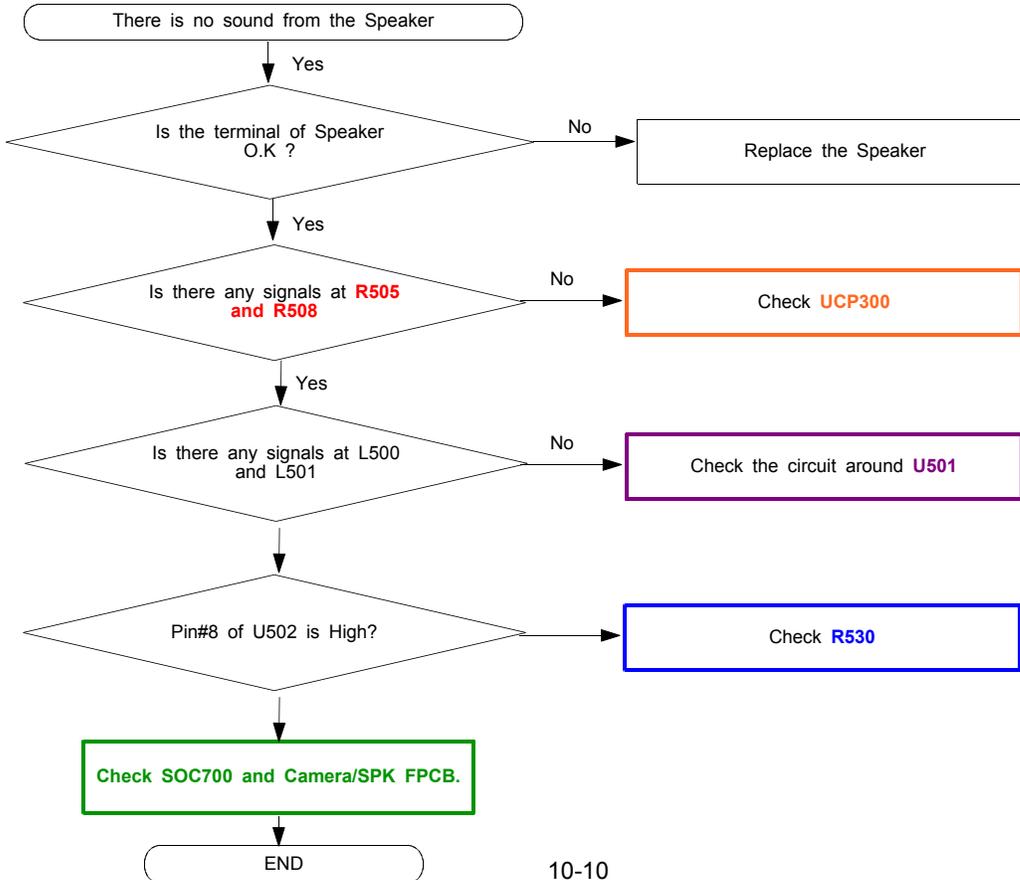


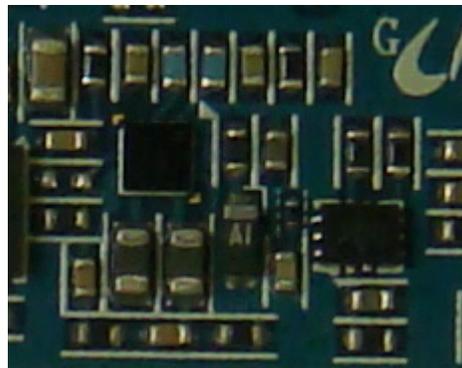
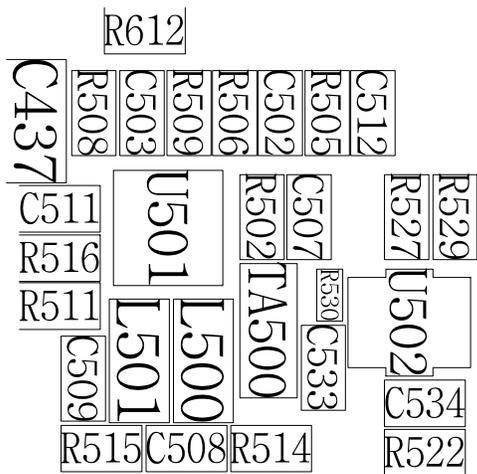
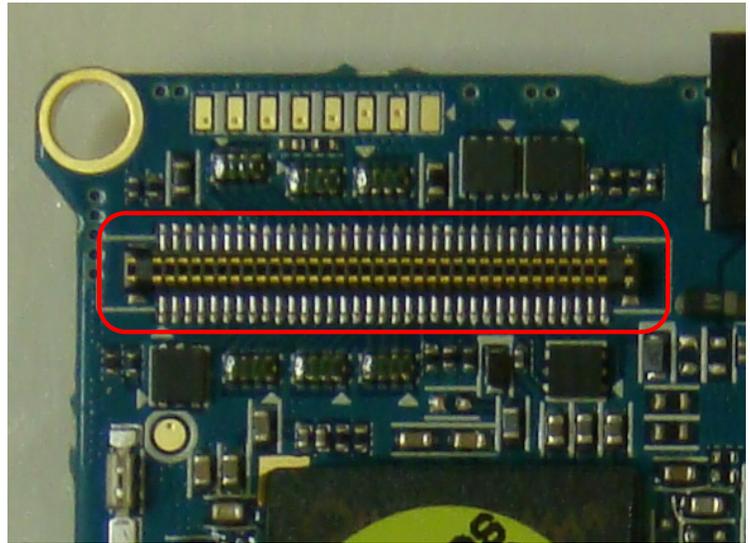
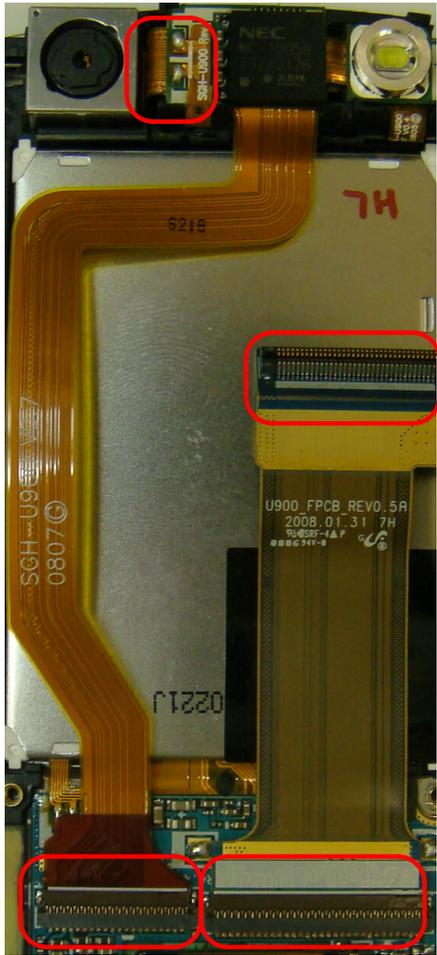


10-1-5. Receiver Part

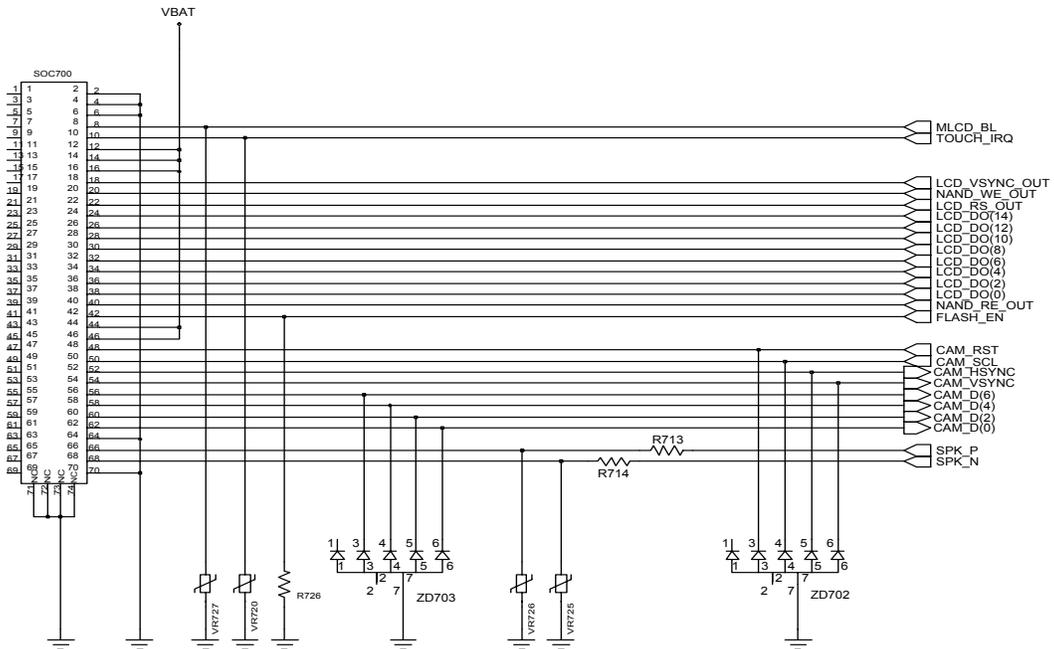
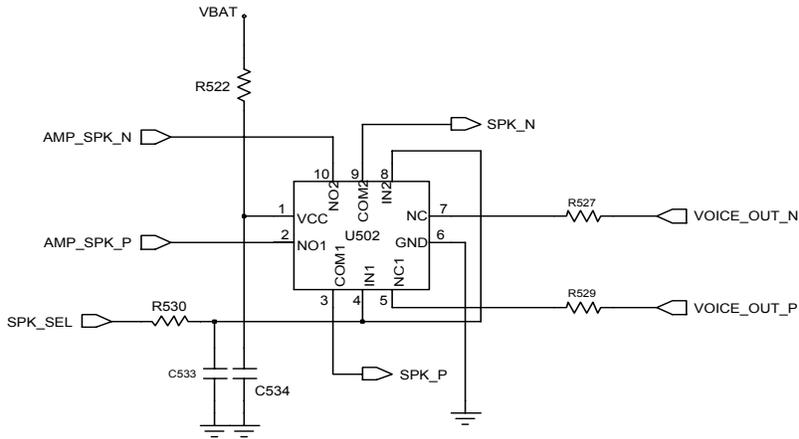
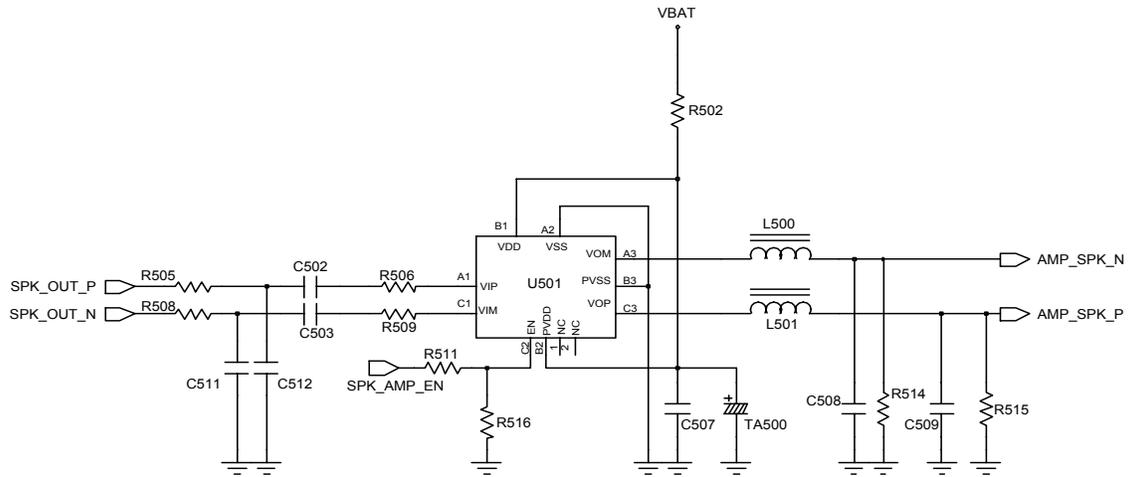


10-1-6. Speaker Part

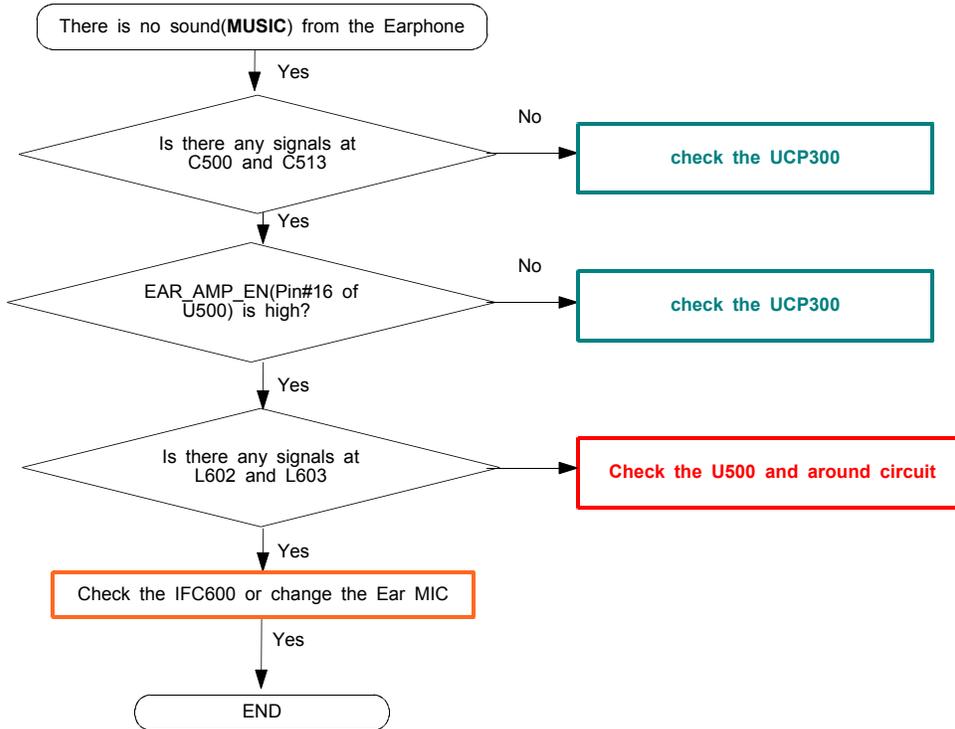
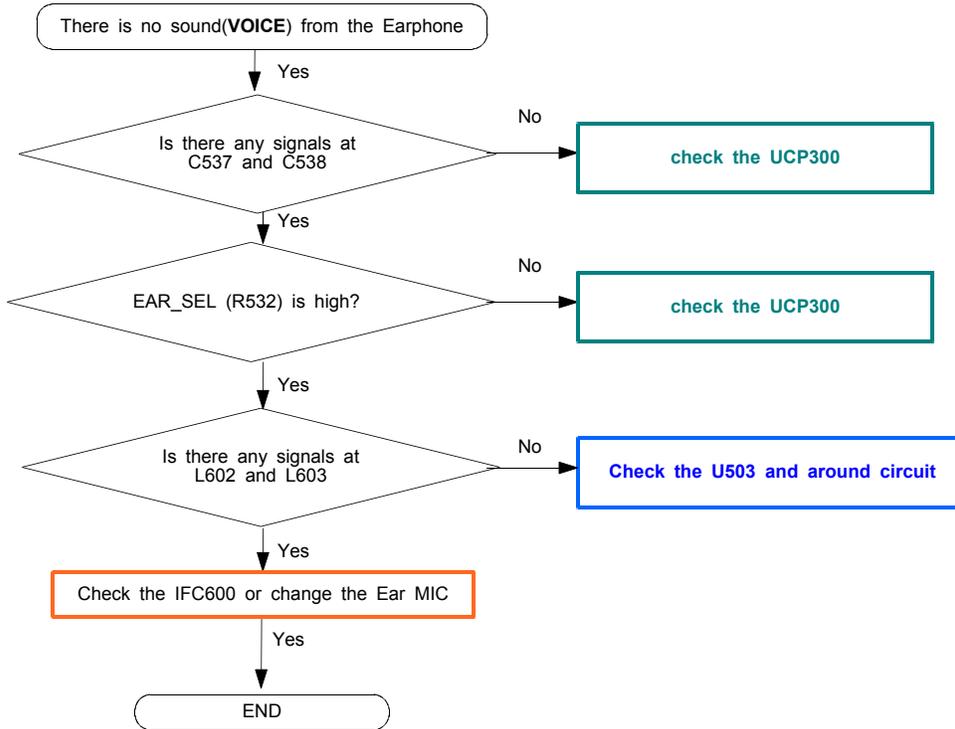


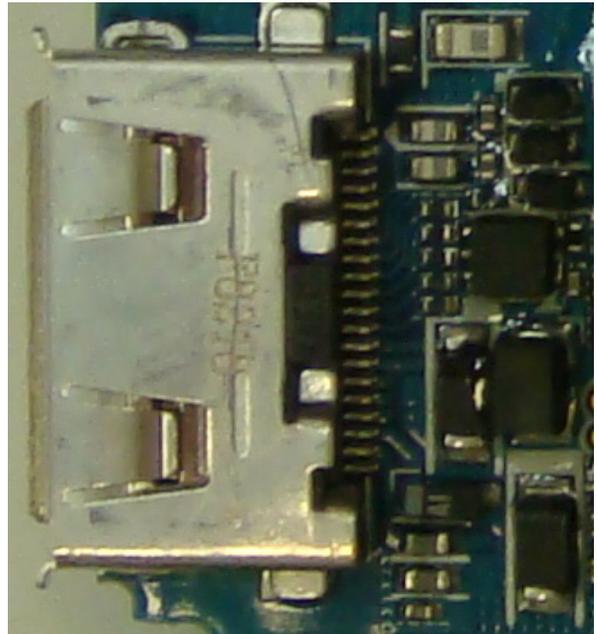
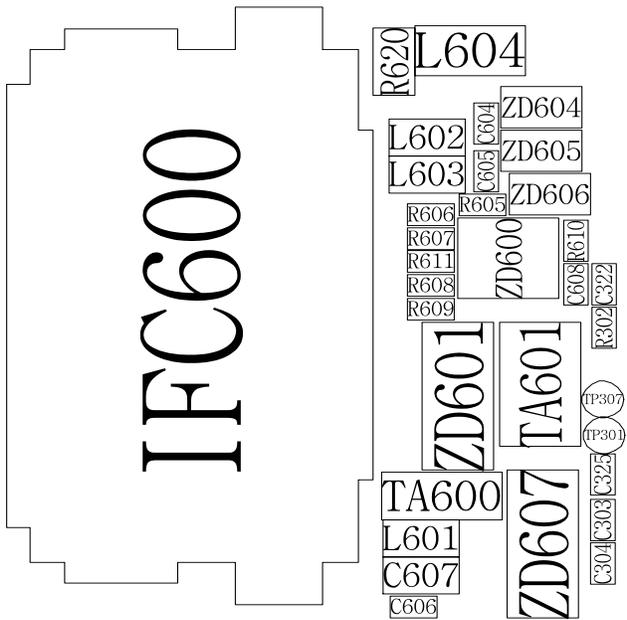
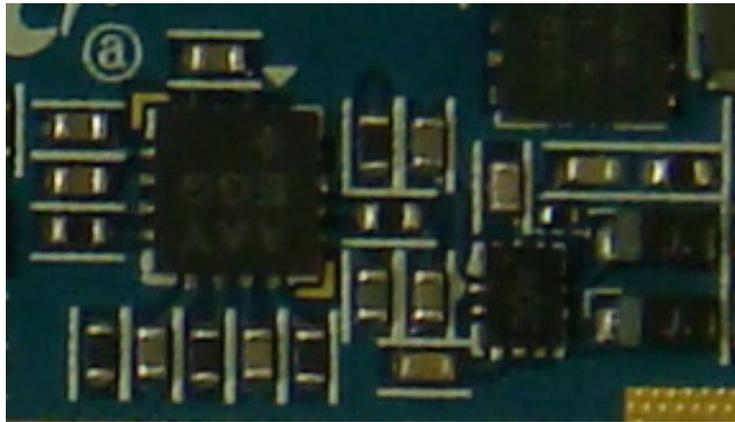
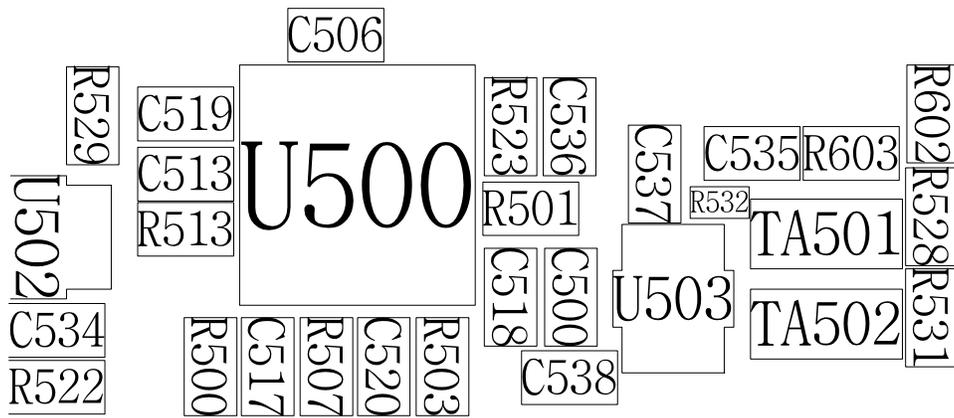


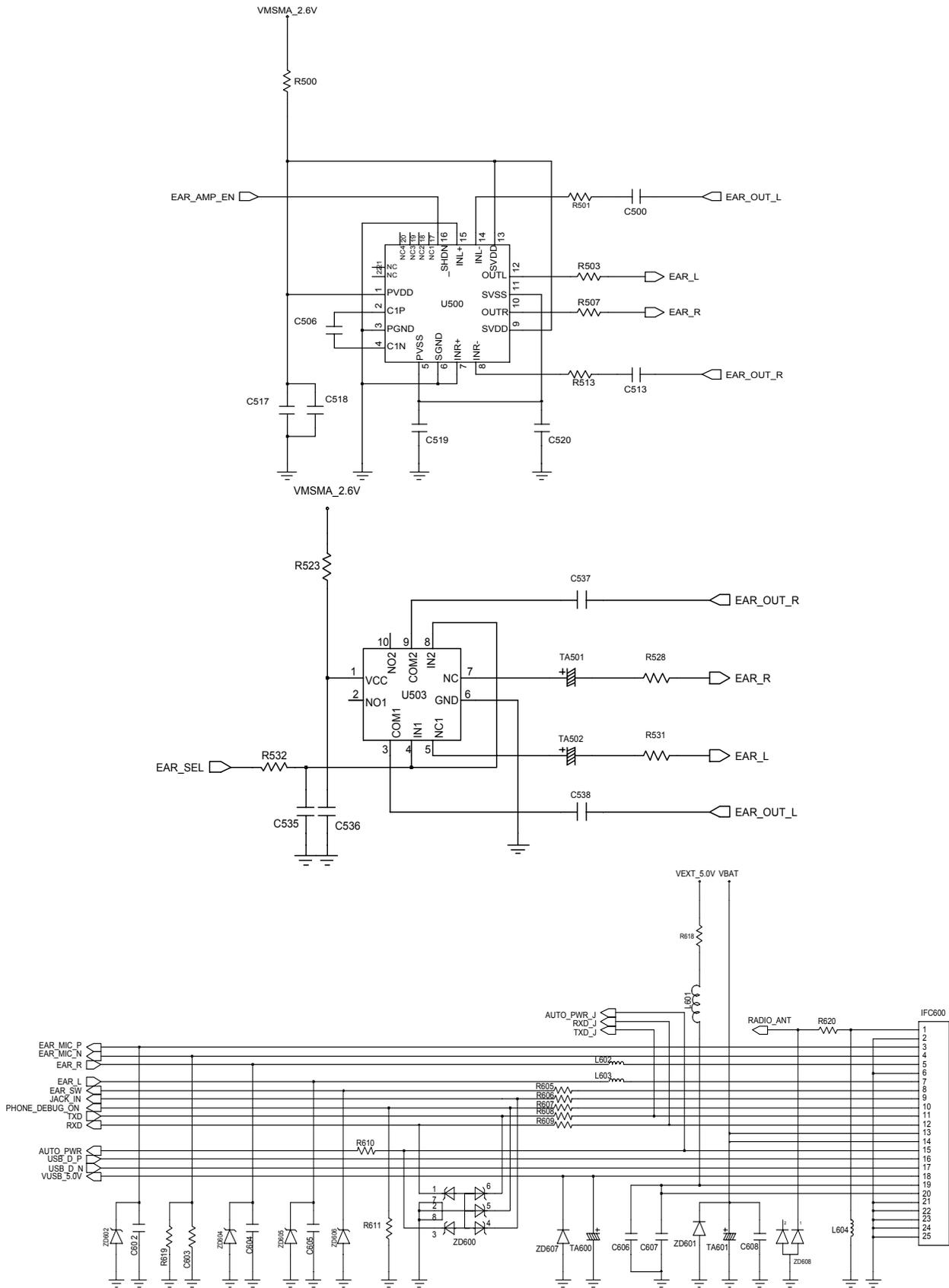
Flow Chart of Troubleshooting



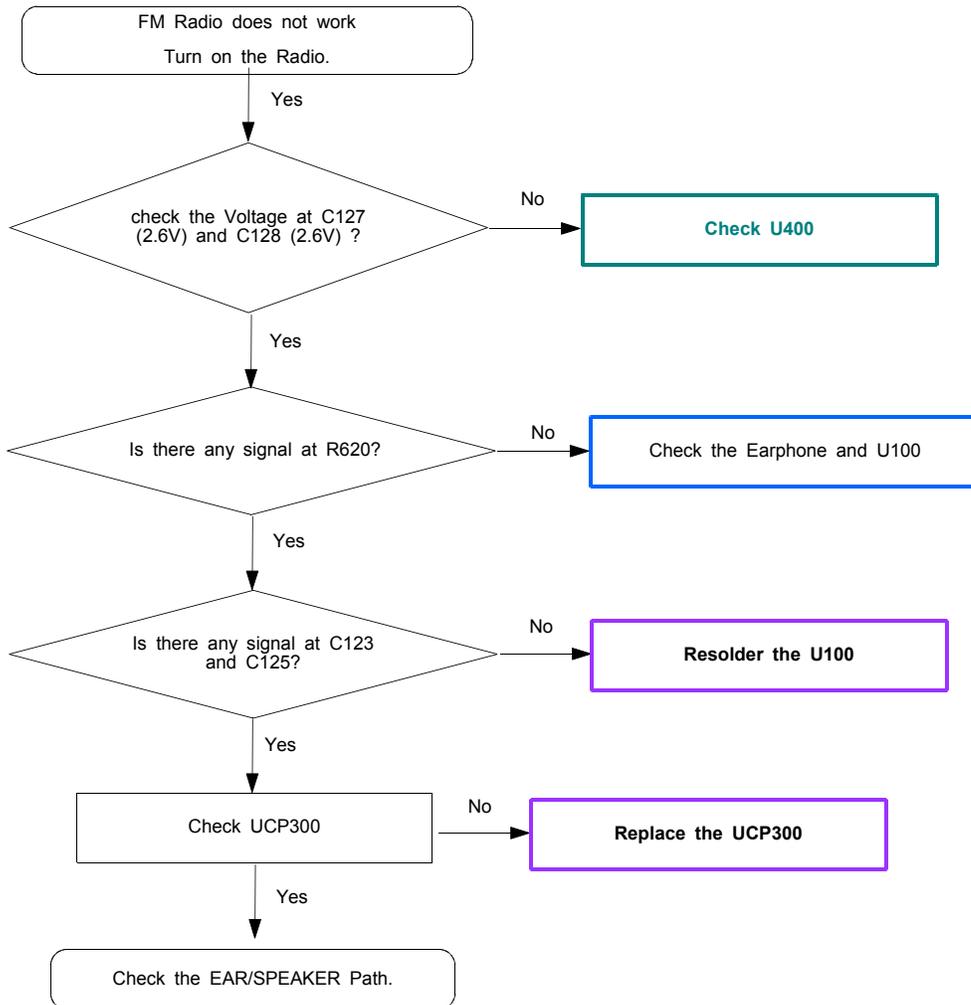
10-1-7. EARPHONE Part

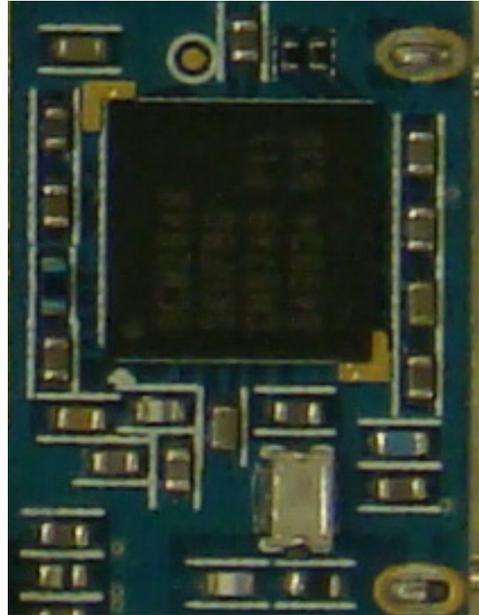
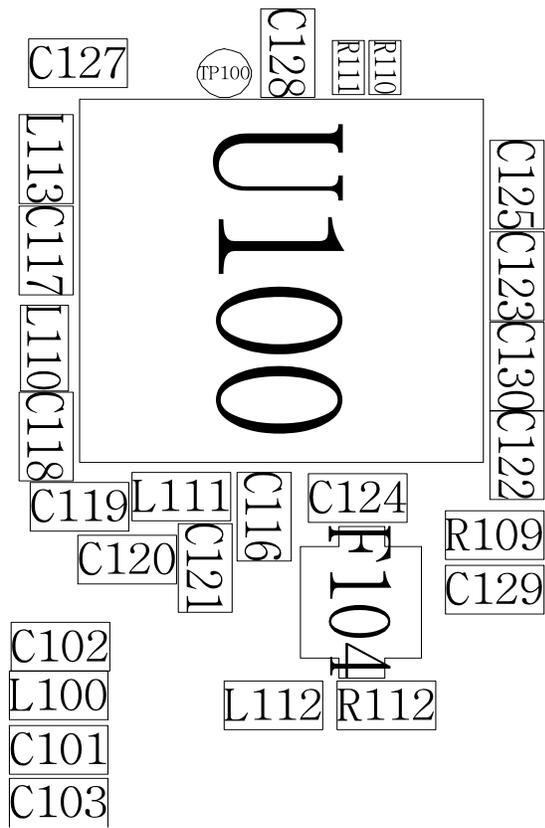






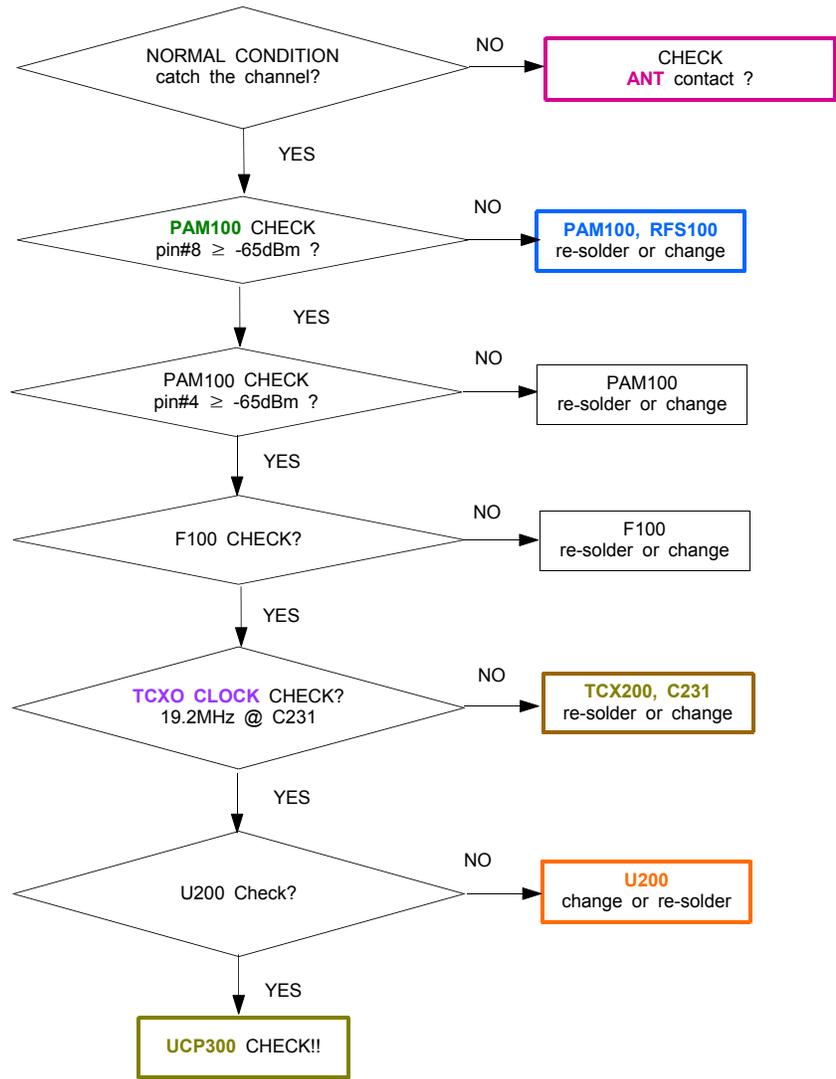
10-1-8. FM RADIO Part





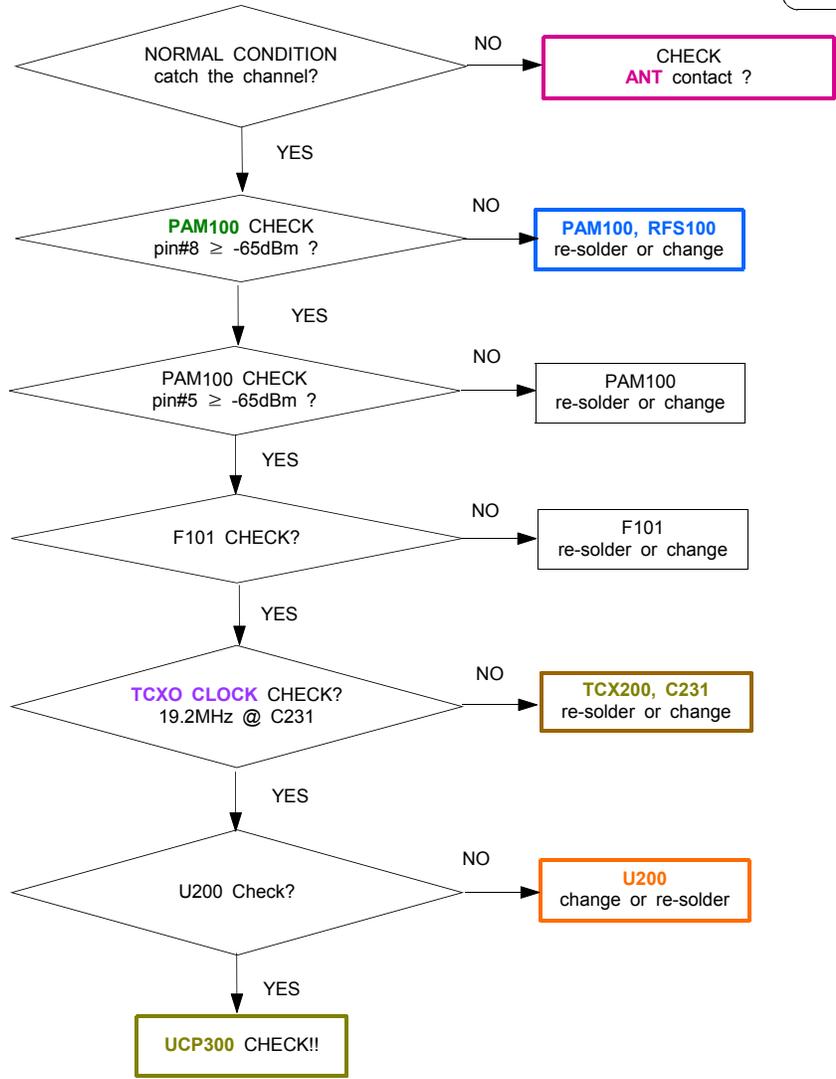
10-2-1. EGSM900 RX

Band : EGSM
 CELL POWER : -50dBm
 Channel : 62Ch



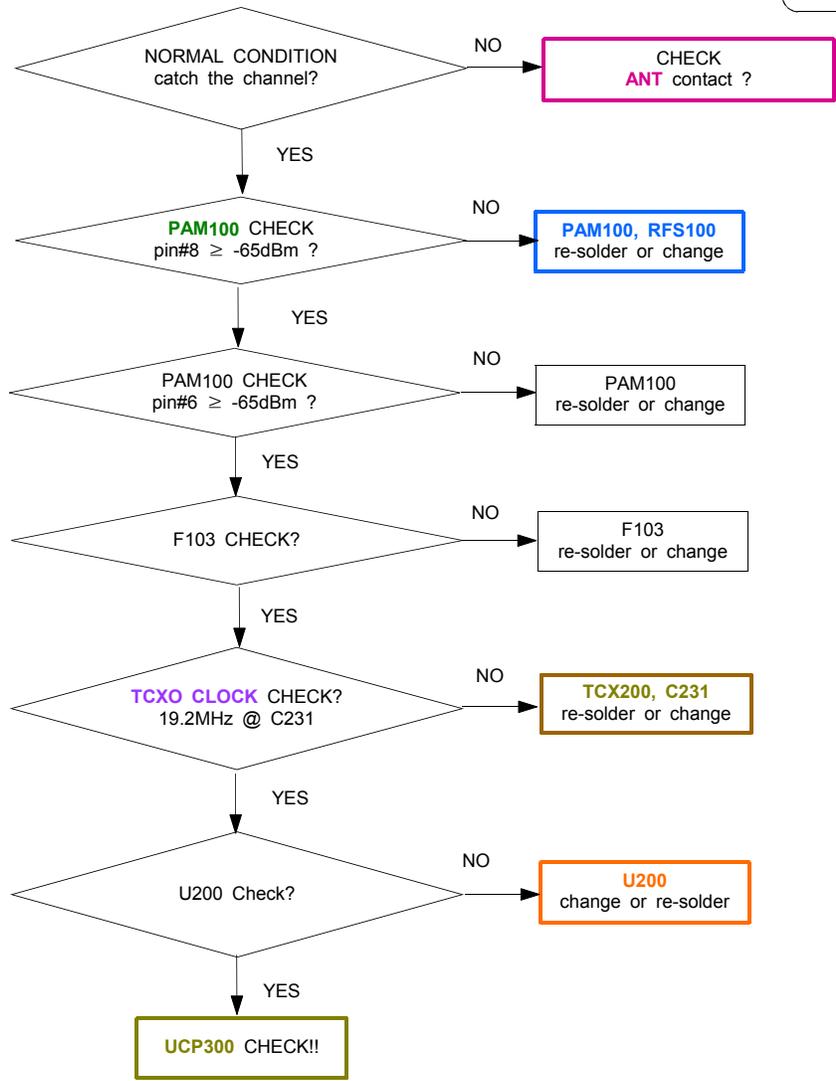
10-2-2. DCS1800 RX

Band : DCS
 CELL POWER : -50dBm
 Channel : 698Ch



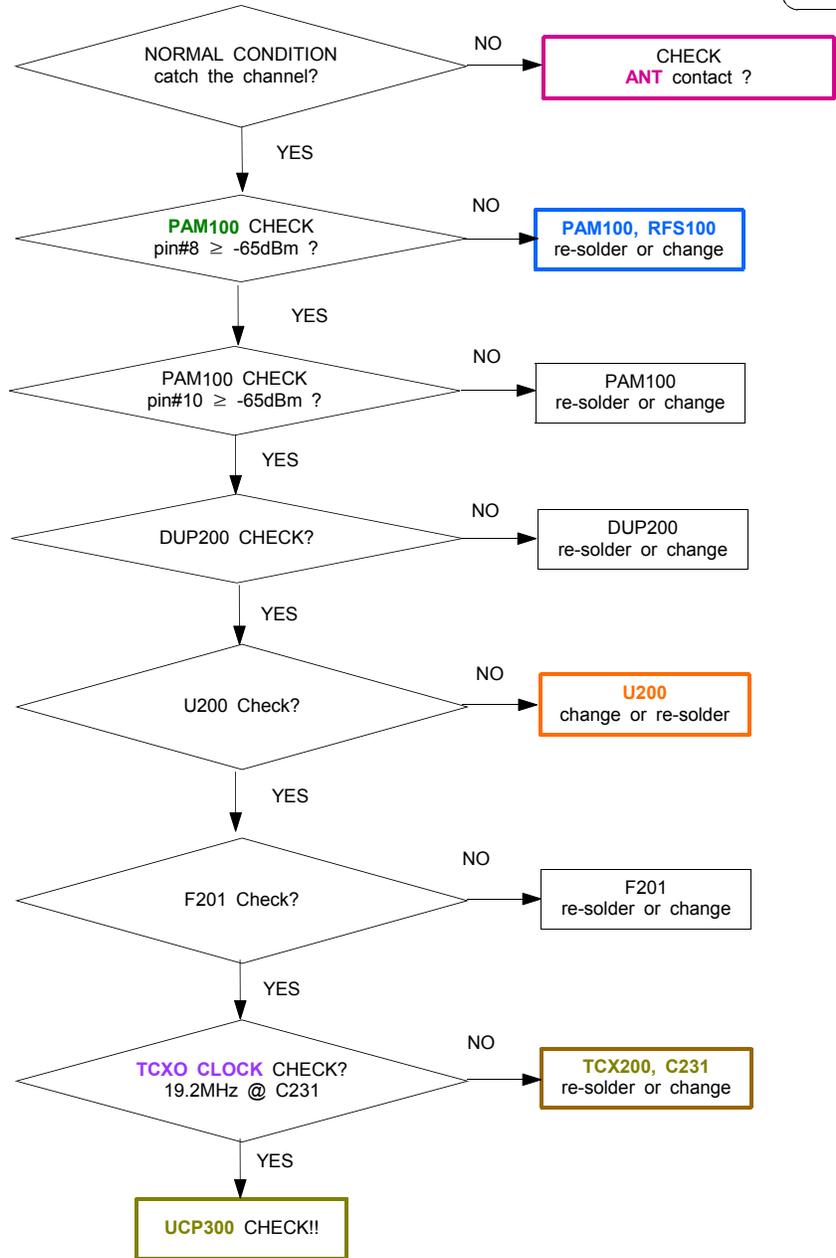
10-2-3. PCS1900 RX

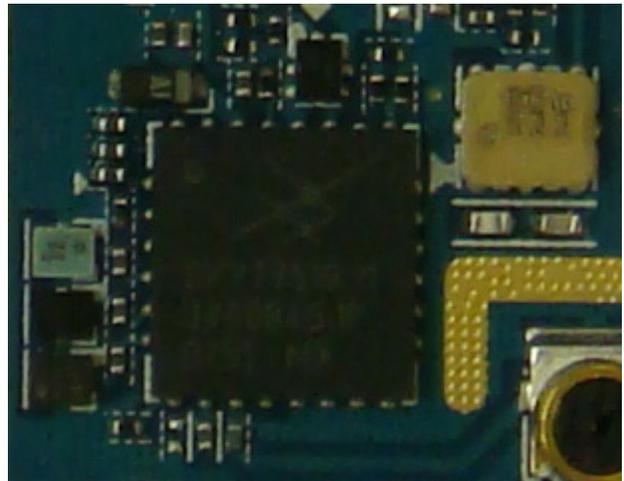
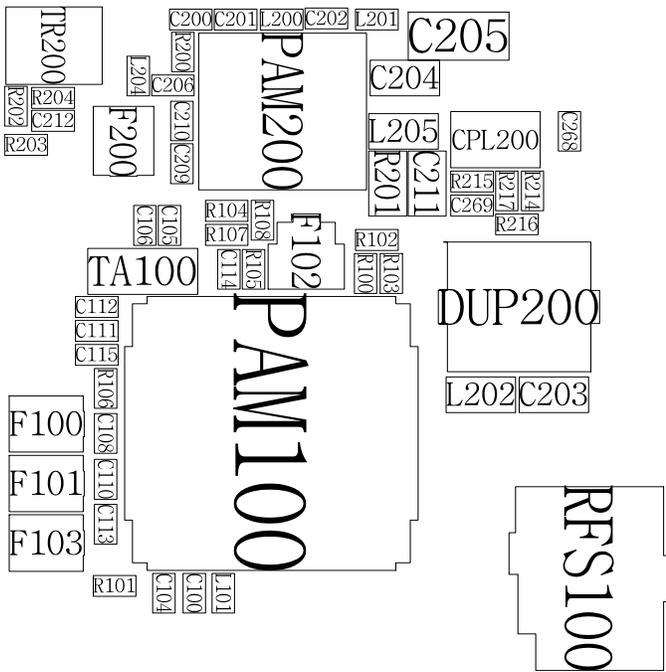
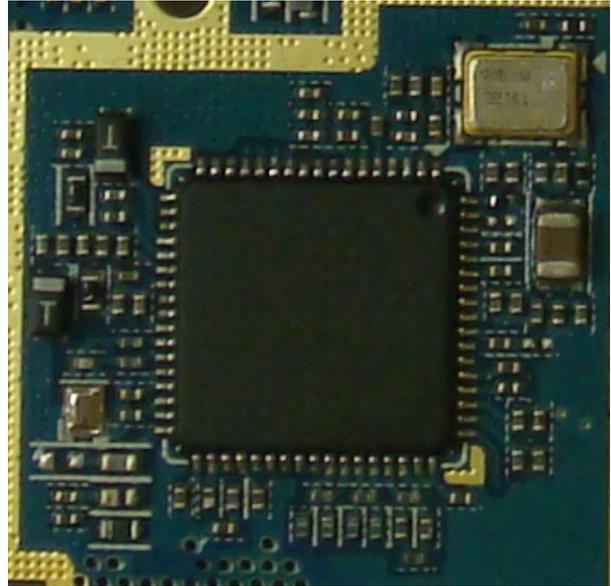
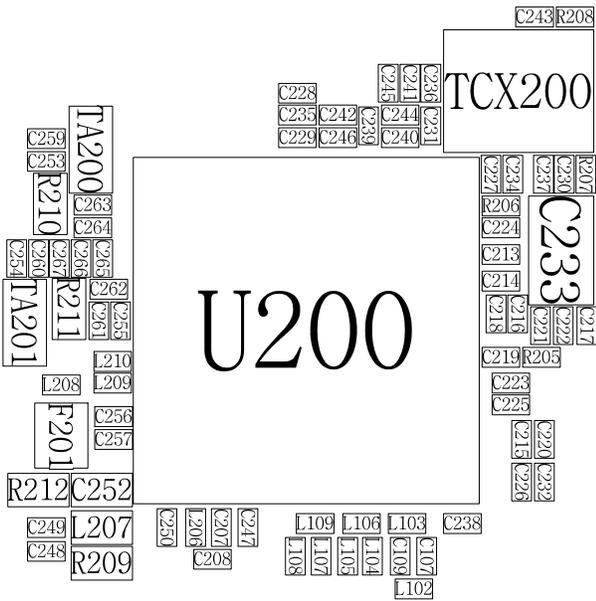
Band : PCS
 CELL POWER : -50dBm
 Channel : 661Ch

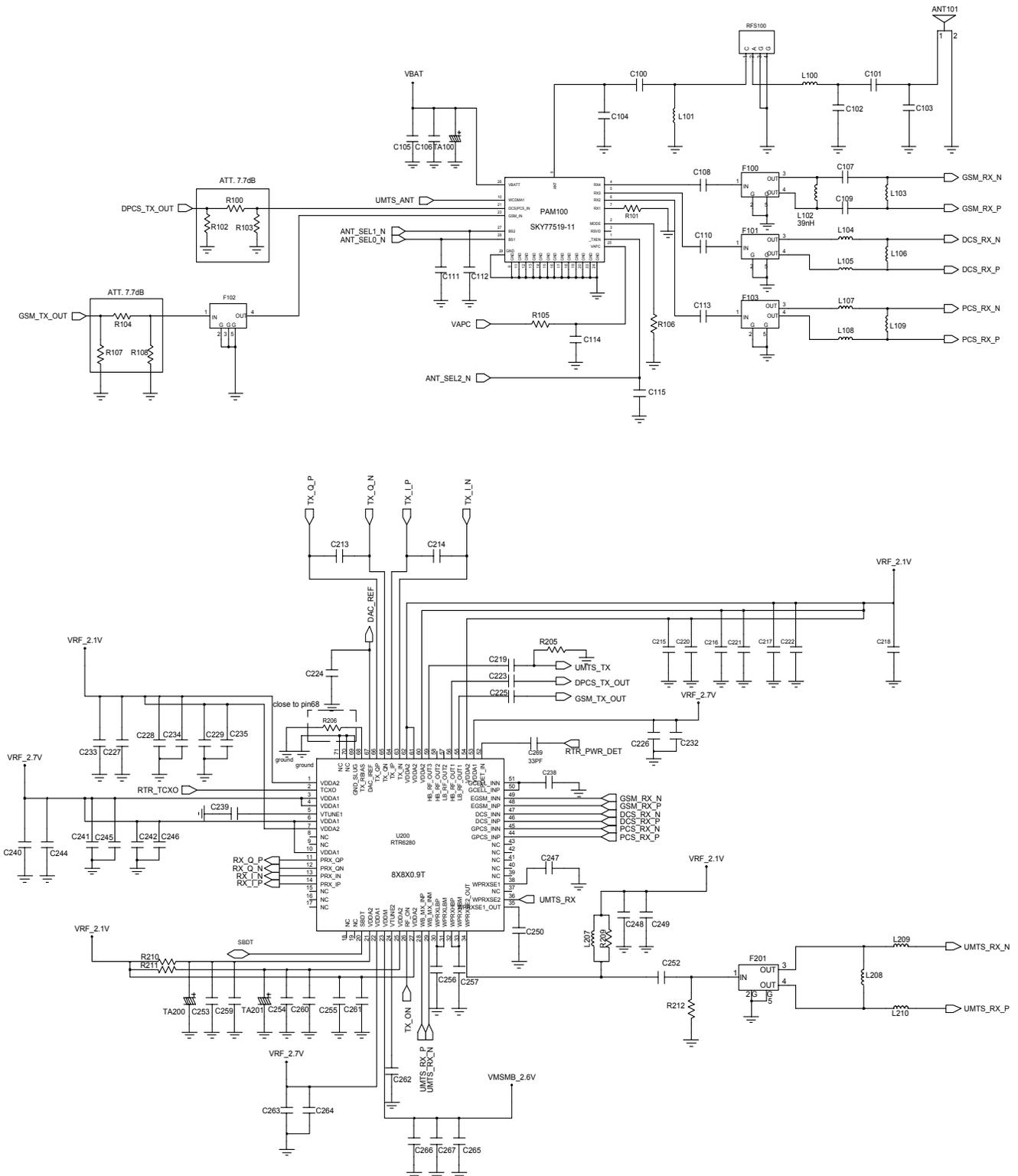


10-2-4. WCDMA2100 RX

Band : WCDMA
 CELL POWER : -50dBm
 DL Channel : 10700Ch
 UL Channel : 9750Ch

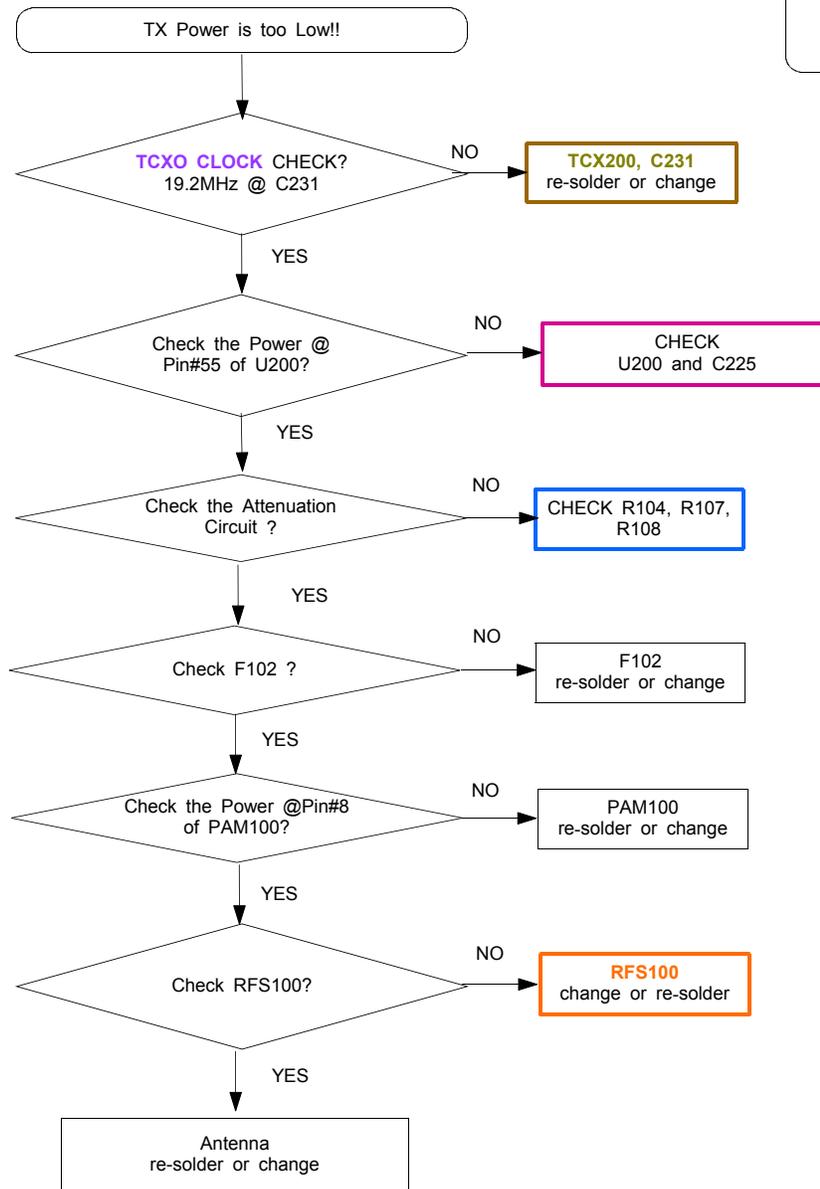




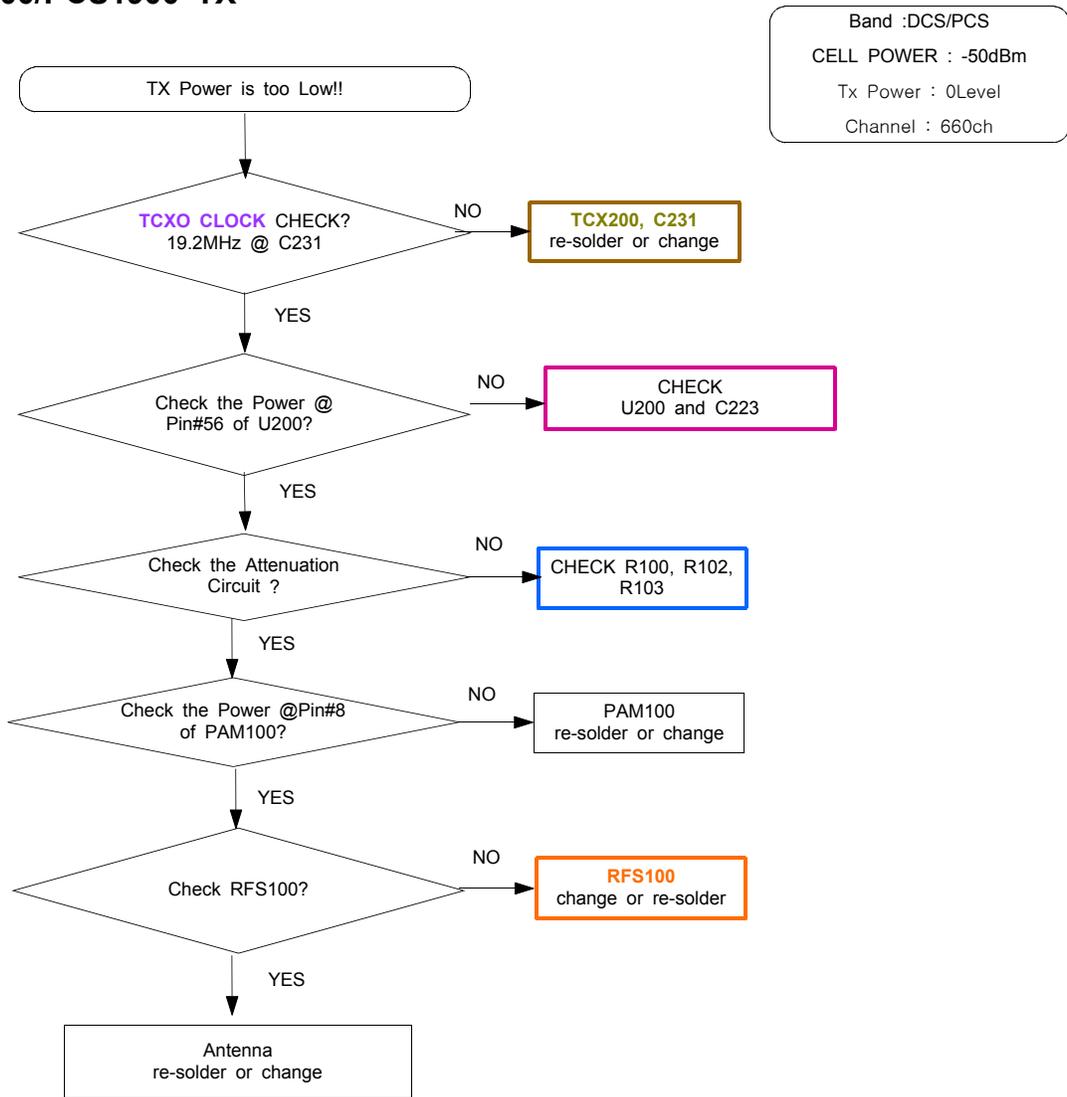


10-2-5. EGSM900 TX

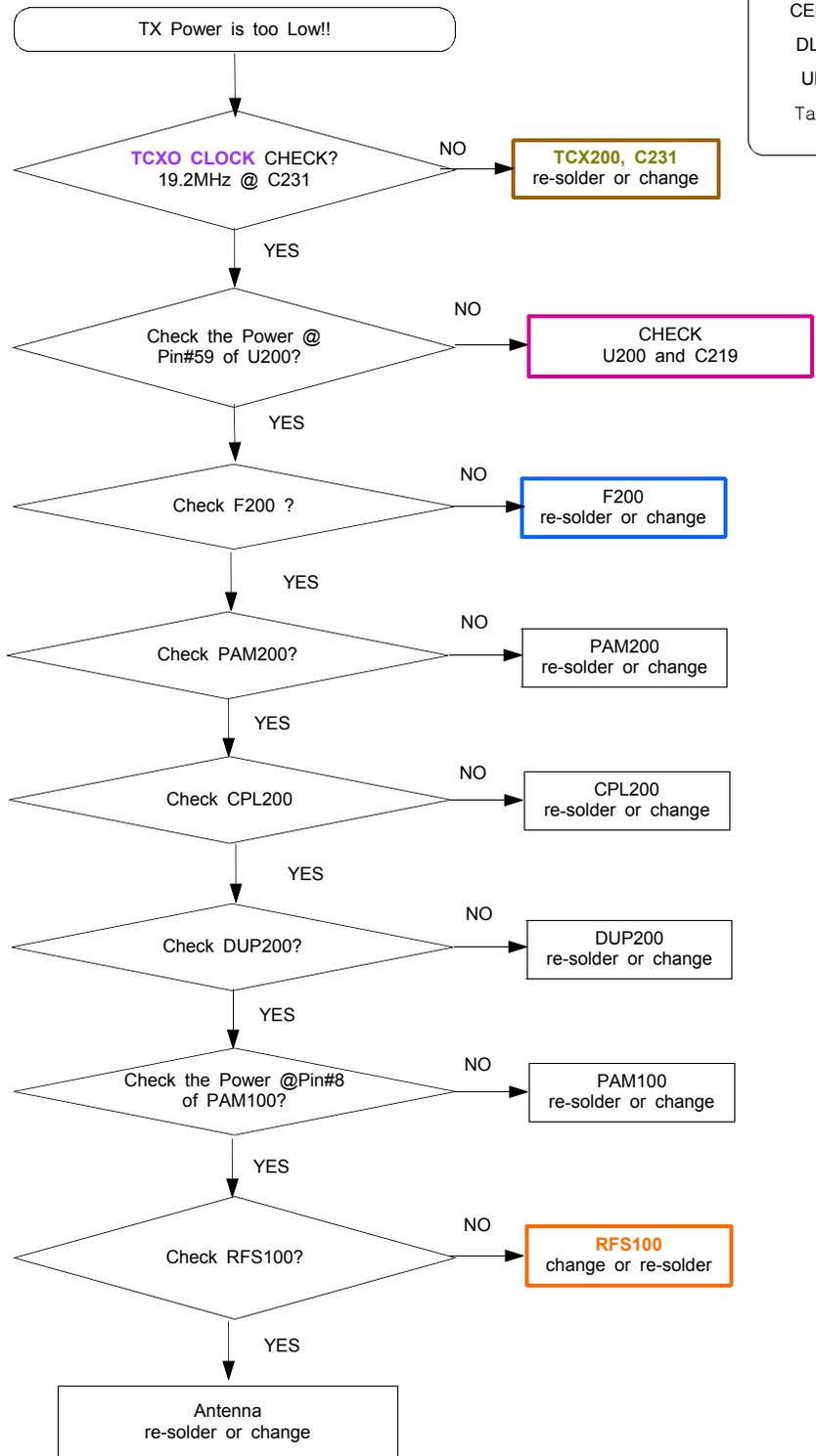
Band :GSM
CELL POWER : -50dBm
Tx Power : 5Level
Channel : 62ch



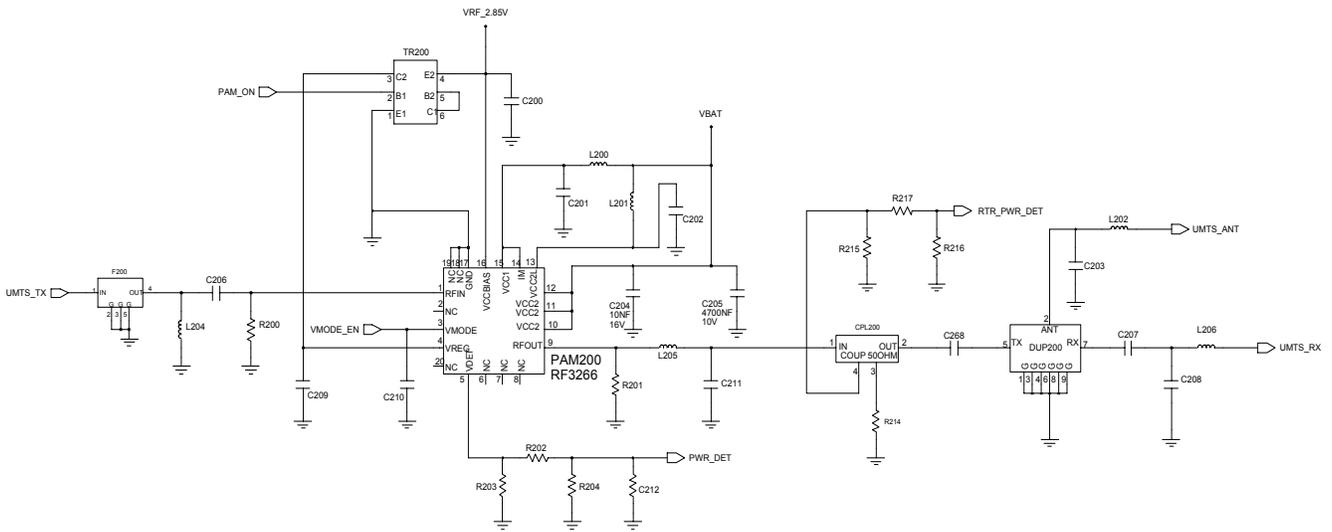
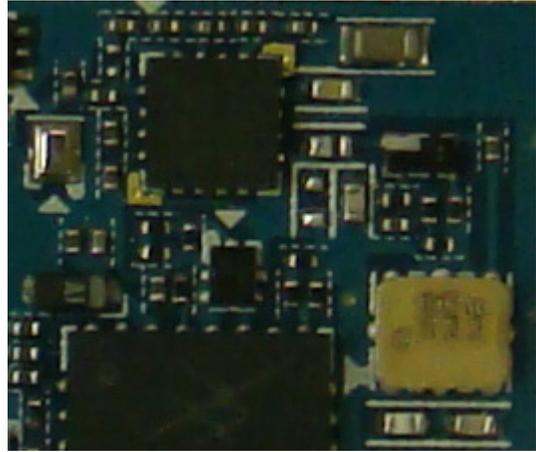
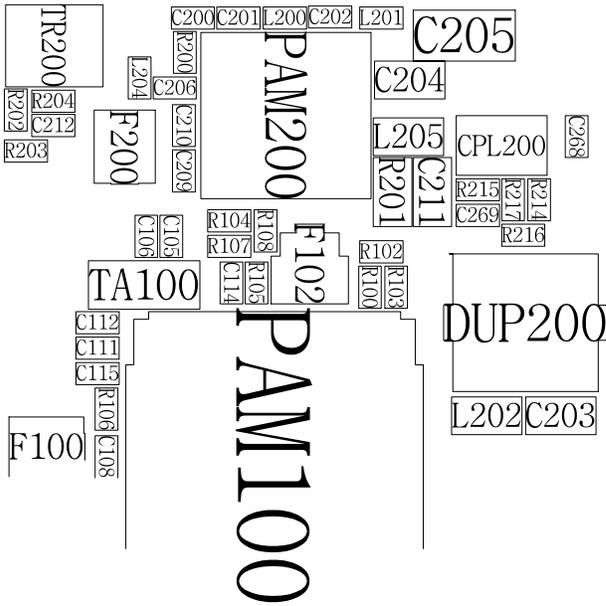
10-2-6. DCS1800/PCS1900 TX



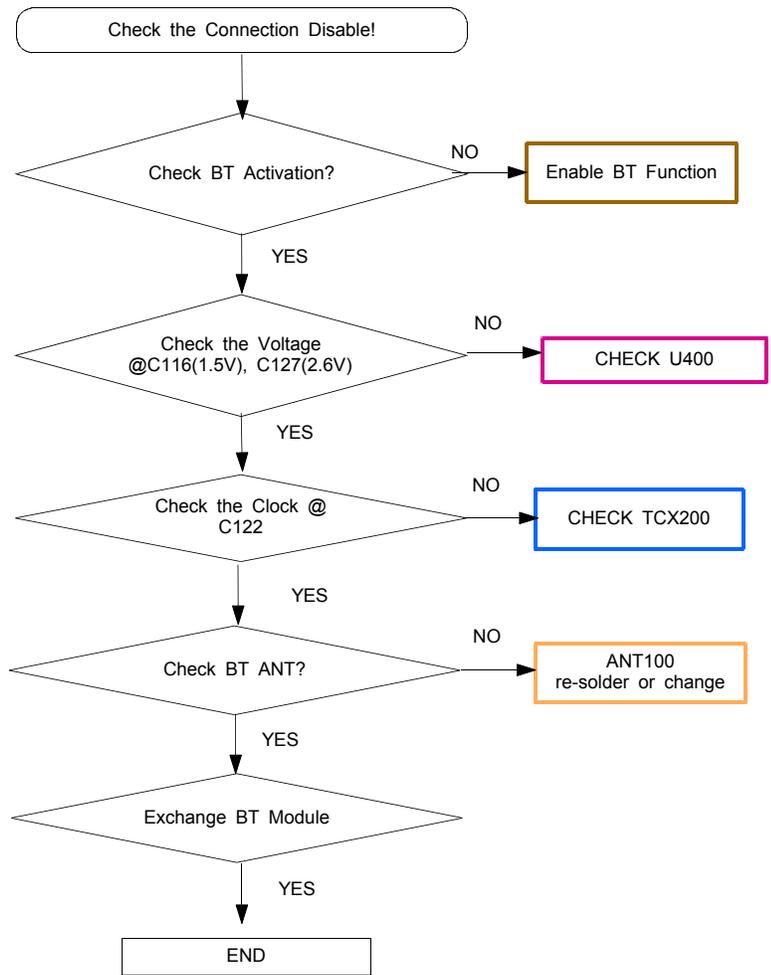
10-2-7. WCDMA2100 TX



Band :WCDMA
 CELL POWER : -50dBm
 DL Channel : 10700Ch
 UL Channel : 9750Ch
 Target Power : 24dBm



10-2-8. Bluetooth Part



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