

SAMSUNG

UMTS TELEPHONE

SGH-L770

SERVICE *Manual*

UMTS 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. Disassembly and Assembly Instructions
8. Block Diagrams
9. PCB Diagrams
10. Chart of Troubleshooting
11. Reference data

**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/DCS1800/PCS1900/WCDMA2100 General Specification

	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900	WCDMA 2100
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	9612~9888 10562~10838
Tx/Rx spacing	45 MHz	95 MHz	80 MHz	190MHz
Mod. Bit rate/ Bit Period	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us	4.096Mcps
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	QPSK
MS Power	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm	24dBm~ -50dBm
Power Class	5 pcl ~ 19 pcl	0 pcl ~ 15 pcl	0 pcl ~ 15 pcl	Power class 3
Sensitivity	-102 dBm	-100 dBm	-100 dBm	-106.7dBm
TDMA Mux	8	8	8	-
Cell Radius	35 Km	2 Km	-	-

2-2. GSM TX power class

TX Power control level	GSM850/ EGSM900	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± 3dBm	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

- MP3 Music player
- SOS message
- FM radio support
- DRM OMA V2.0 support
- Bluetooth CSR V2.0 support
- External memory support
- 2M camera support
- RF support band
 - : GSM 900 + DCS1800 + PCS 1900 + WCDMA2100 (band1)

4. Array course control

Test Jig (GH80-03307A)



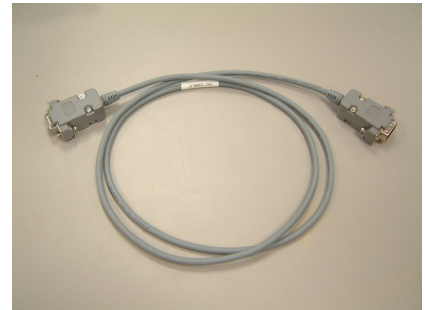
**RF Test Cable
(GH39-00397A)**



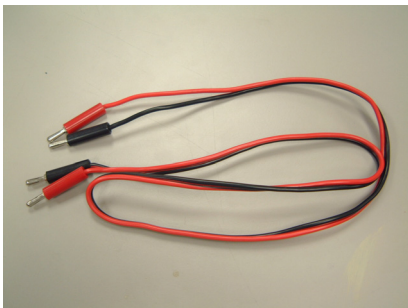
**Test Cable
(GH39-01106A / GH39-01104A)**



Serial Cable



Power Supply Cable



**DATA CABLE
(GH39-00922A)**



**TA
(GH44-01702A)**



Software Downloading

4-1. Downloading Binary Files

- Three binary files for downloading L770
 - L770XXYY.flx : Main source code binary

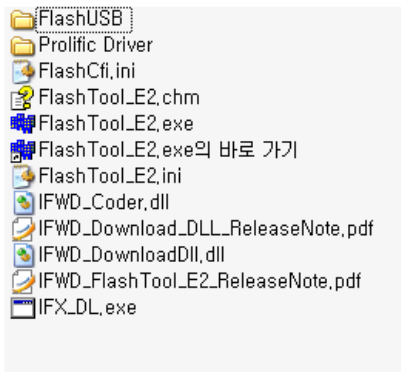
4-2. Pre-requisite for Downloading

- Driver Program([FlashUsb.sys](#))
- Downloader Program([FlashTool_E2.exe](#))
- L770 Mobile Phone
- Data Cable
- Binary files

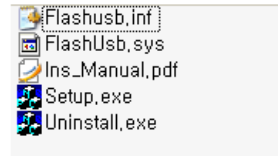
4-3. USB Driver Installation Guide

* Install Flash Loader utility USB Driver

SGH-L770 use the **USB** cable for downloading **binary** files



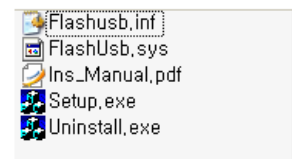
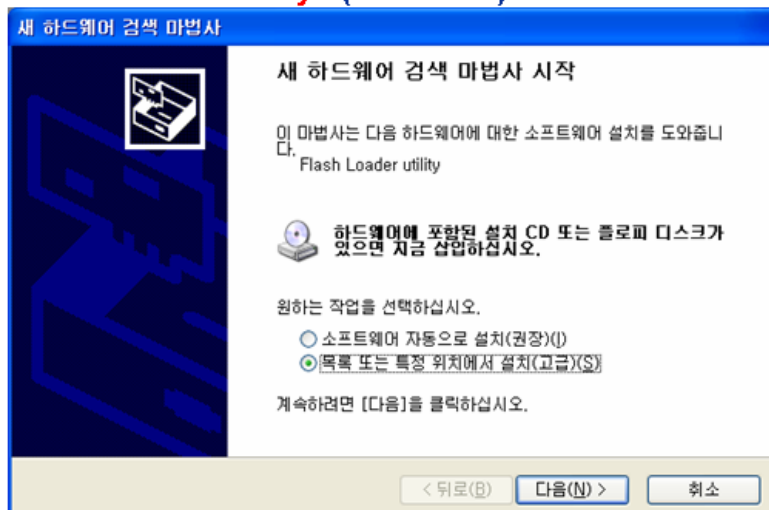
[Flash Tool]



[Flash Loader utility USB driver]

* Install Flash Loader utility USB Driver

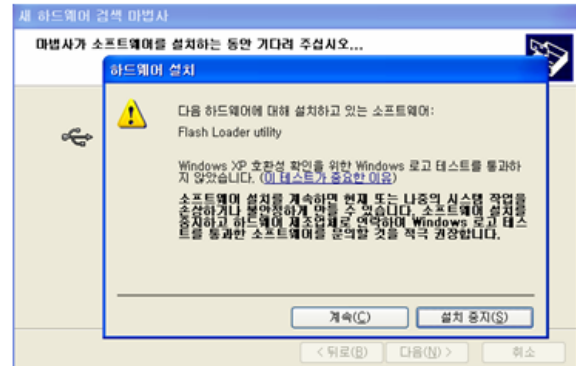
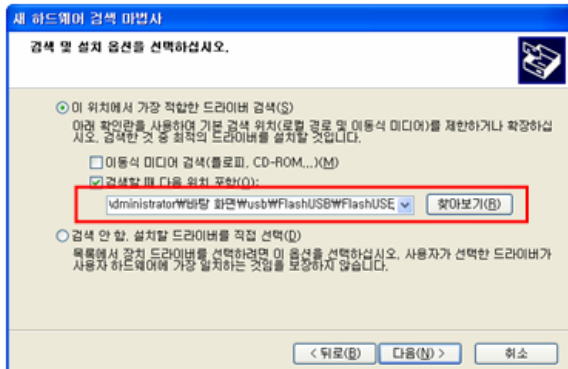
- Hardware searching wizard execute when connecting USB cable from mobile phone to PC first time.
- **Execute Setup.exe** for USB driver installation. (Method 1)
- Select **FlashUsb.sys** (Method 2)



[File List]

* Install Flash Loader utility USB Driver

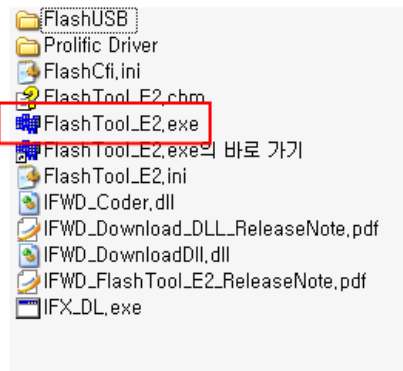
- Select the **FlashUsb.sys** in file path
- Click next button.
- Click continue button when finding “**Flash Loader Utility**” software.
- Click finish button.



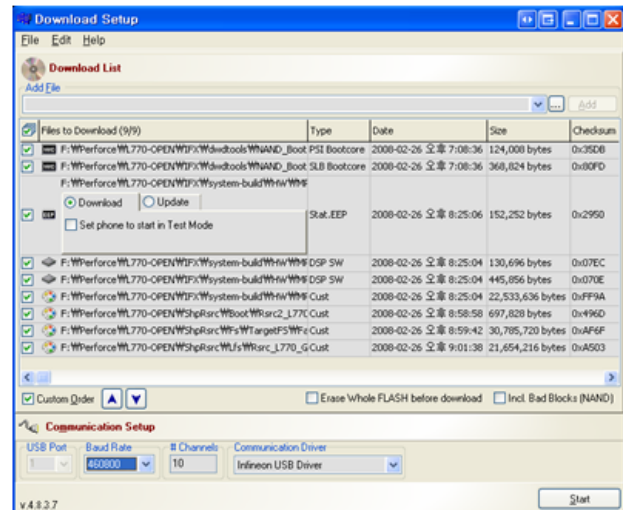
4-4. Flash Tool Usage Guide

* Install Flash Loader Tool & Run.

- Unzip **FlashTool_E2.zip** file using compression tool (winzip , winrar , etc...)
- Execute **FlashTool_E2.exe**

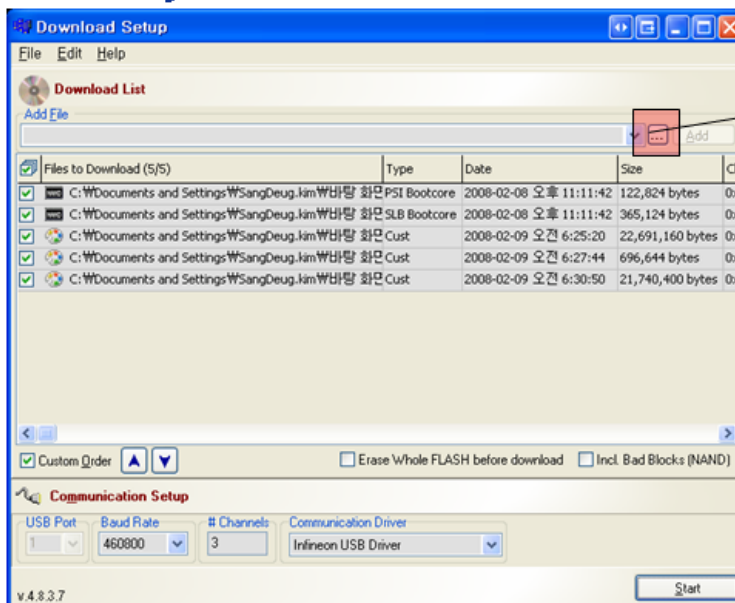


[FlashTool_E2.zip]



[FlashTool_E2.exe]

* Add binary file



Browser for file

* Download file list.

[Boot Loader]

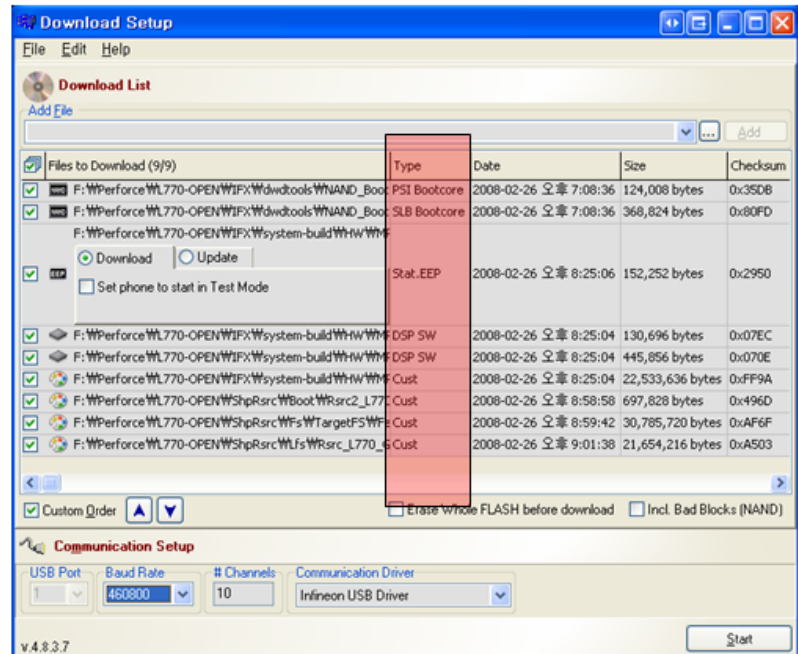
- psi_large_QVGA_comp.flb
- slb_large_QVGA_comp.flb

[Target Software & Calibration Data]

- SLEEK.flb
- SLEEK.eep
- SLEEK_gsm.dsp
- SLEEK_ums.dsp

[Resource File]

- Rsrc2_L770(Mid).cust
- FactoryFs_L770_XXX.dfat
- Rsrc_L770_XXX.cust



* Boot loader download.

[Boot Loader file]

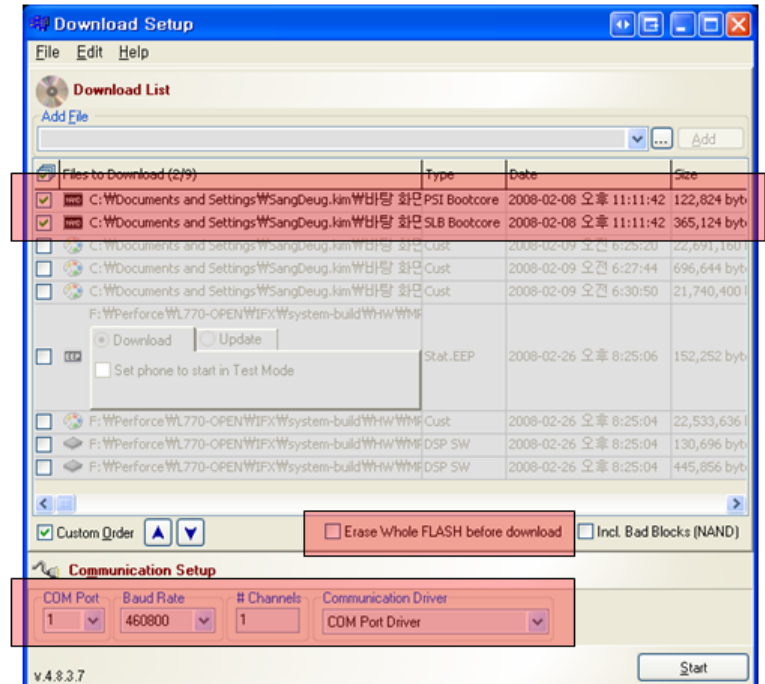
- psi_large_QVGA_comp.flb
- slb_large_QVGA_comp.flb

- Select com port

- Set Baud Rate (MAX 460800)

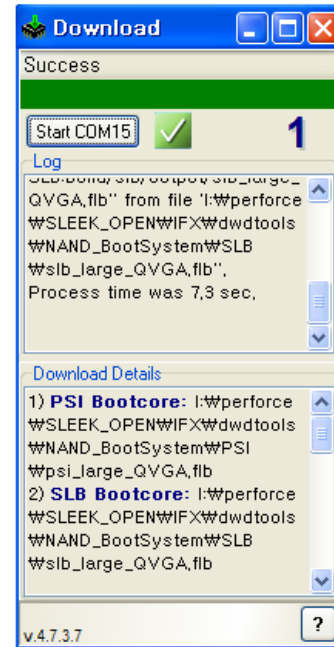
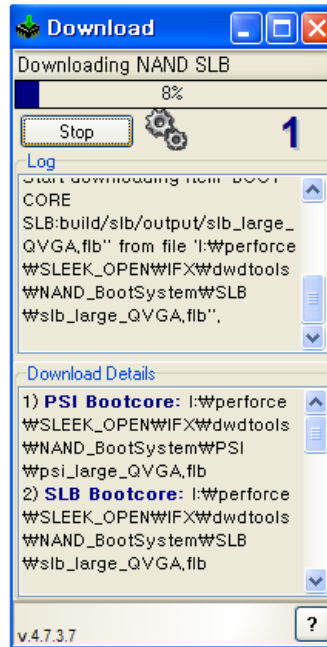
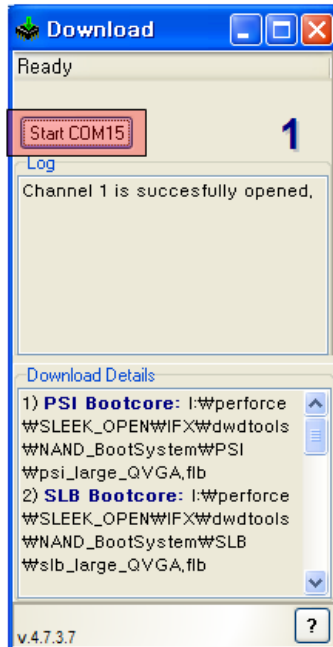
- Communication Driver : COM Port Driver

- Click [Start] Button.



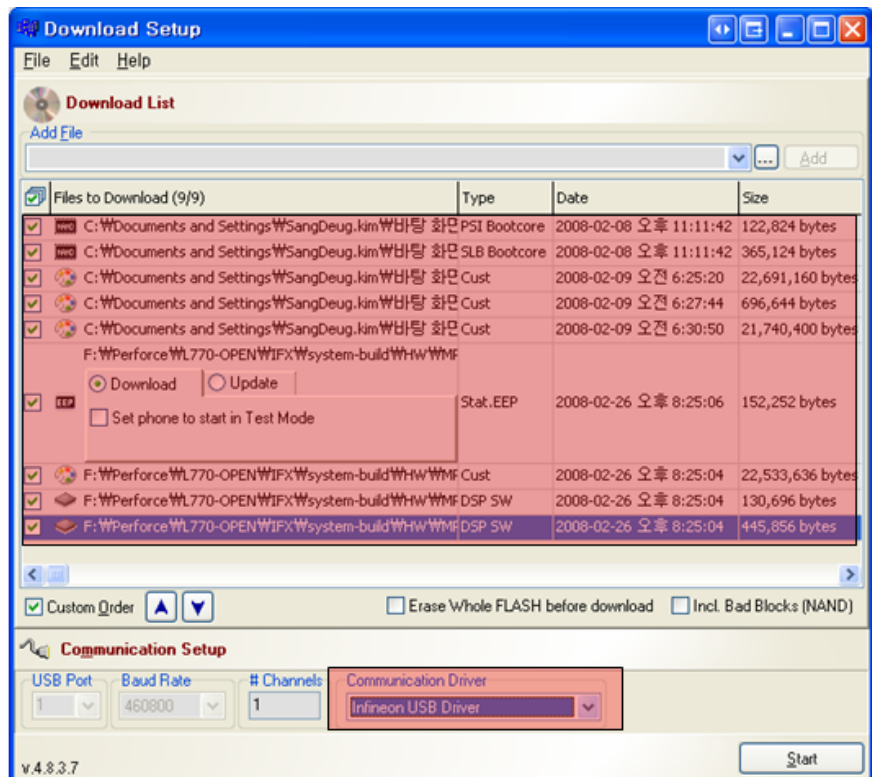
* Boot loader download.

- Click [Start COM XX] button
- Power up



* Full binary download.

- select full binary (9 files)
- Communication Driver : Infineon USB Driver
- Click [Start] Button.



* Full binary download.

- Click [Start USB XX] button
- Connecting USB cable and then pressing [*] button on mobile phone keypad



When downloading is finished successfully, there is a "Success" message.

After finishing downloading, Certain memory resets should be done to guarantee the normal performance.

Confirm the downloaded version name and etc. :

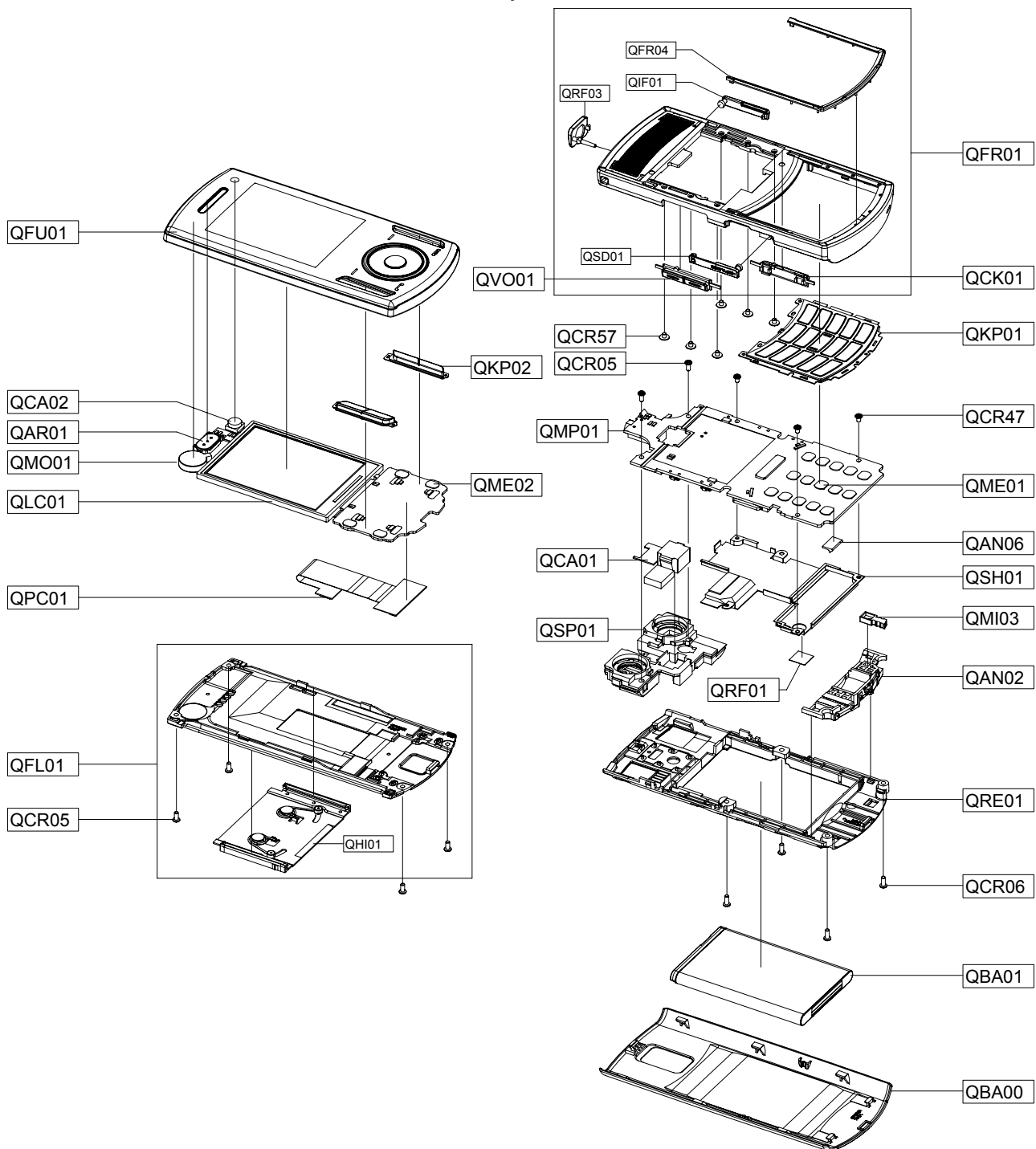
***#1234#**

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-L770	GH42-01477A
QBA00		PMO COVER-BATT(ORANGE)	GH72-46853B
QBA01		INNER BATTERY PACK-880MAH , BL	GH43-02666A
QCA01		CAMERA MODULE-SGH-L770	GH59-05708A
QCA02		KEY FPCB-SIDE CAMERA KEY	GH59-05392A
QCK01		PMO KEY-CAMERA	GH72-45847B
QCR05		SCREW-MACHINE	6001-001478
QCR72		SCREW-MACHINE	6001-002051
QFL01		ASSY CASE-SLIDE LOWER	GH98-07227B
QHI01		ASSY HINGE-MODULE	GH98-07230A
QHI04		PMO COVER-HINGE CAP	GH72-45849A
QKP02		ASSY CASE-SUB KEYPAD(OPEN)	GH98-07231A
QLC01		LCD-MODULE (SGH-L770)	GH07-01244A
QMP01		PBA MAIN-SGH_L770	GH92-04256A
QPC01		FPC-SLIDE FPCB	GH41-02038A
QRE01		ASSY CASE-REAR	GH98-07232B
QRF01		ASSY COVER-RF	GH98-07840B
QSH04		ASSY COVER-SHIELD FRONT	GH98-08144A
QSH05		ASSY COVER-SHIELD CAN REAR B	GH98-08968A
QSP01		ASSY ETC-SPK/MOT MODULE	GH59-05475A
QVK01		KEY FPCB-SIDE VOLUME KEY	GH59-05391A
QVO01		PMO KEY-VOLUME	GH72-45846B
QFU01		ASSY CASE-SLIDE UPPER(OPEN/BLK	GH98-07224B
	QMW01	ASSY COVER-WINDOW MAIN(OPEN)	GH98-07225A
QFR01		ASSY CASE-FRONT	GH98-07228B
	QIF01	PMO COVER-IF	GH72-45844B
	QSD01	PMO COVER-MICRO SD	GH72-45845B

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
GH42-01477A	ANT100, ANT102, BT_ANT,BTGND	ANTENNA-SGH-L770
GH59-05391A	L701	KEY FPCB-SIDE VOLUME KEY
GH59-05392A	L702	KEY FPCB-SIDE CAMERA KEY
0403-001427	ZD405	DIODE-ZENER
0403-001547	ZD601	DIODE-ZENER
0404-001172	D401	DIODE-SCHOTTKY
0404-001172	D402	DIODE-SCHOTTKY
0404-001250	D403	DIODE-SCHOTTKY
0404-001250	D404	DIODE-SCHOTTKY
0406-001237	ZD603	DIODE-TVS
0504-000168	Q400	TR-DIGITAL
0504-000168	Q401	TR-DIGITAL
0504-001113	Q501	TR-DIGITAL
0504-001151	Q200	TR-DIGITAL
0801-003013	U102	IC-CMOS LOGIC
0801-003031	U103	IC-CMOS LOGIC
0801-003140	U204	IC-CMOS LOGIC
1009-001035	U701	IC-HALL EFFECT S/W
1009-001035	U703	IC-HALL EFFECT S/W
1108-000157	U301	IC-MCP
1201-002195	U504	IC-AUDIO AMP
1201-002423	PAM101	IC-POWER AMP
1201-002455	PAM201	IC-POWER AMP
1201-002559	Q202	IC-MMIC AMP
1201-002597	U502	IC-AUDIO AMP
1203-004339	U607	IC-MULTI REG.
1203-004518	U403	IC-BATTERY
1203-004906	U401	IC-BATTERY
1203-005028	U402	IC-VOL. DETECTOR
1203-005118	U702	IC-MULTI REG.
1204-002746	U503	IC-TUNER
1205-003099	U201	IC-TRANSCIEVER
1205-003235	U101	IC-DATA COMM./GEN.
1205-003325	U302	IC-DATA COMM./GEN.
1404-001165	TH201	THERMISTOR-NTC
1405-001082	VR601	VARISTOR
1405-001082	VR603	VARISTOR

SEC CODE	Design LOC	Discription
1405-001082	VR604	VARISTOR
1405-001082	VR605	VARISTOR
1405-001082	VR606	VARISTOR
1405-001082	VR701	VARISTOR
1405-001082	VR702	VARISTOR
1405-001082	VR705	VARISTOR
1405-001082	VR706	VARISTOR
1405-001082	VR708	VARISTOR
1405-001082	VR722	VARISTOR
1405-001093	VR730	VARISTOR
1405-001093	VR731	VARISTOR
1405-001133	VR401	VARISTOR
1405-001133	VR402	VARISTOR
1405-001133	VR403	VARISTOR
1405-001133	VR404	VARISTOR
1405-001133	VR405	VARISTOR
1405-001133	VR406	VARISTOR
1405-001177	VR602	VARISTOR
1405-001177	VR714	VARISTOR
1405-001177	VR732	VARISTOR
1405-001177	VR733	VARISTOR
1405-001177	VR734	VARISTOR
1405-001177	VR735	VARISTOR
2007-000143	R514	R-CHIP
2007-000143	R515	R-CHIP
2007-000163	R448	R-CHIP
2007-000167	R322	R-CHIP
2007-000171	L601	R-CHIP
2007-000171	R503	R-CHIP
2007-000171	R506	R-CHIP
2007-000171	R700	R-CHIP
2007-001316	R210	R-CHIP
2007-007107	R204	R-CHIP
2007-007107	R325	R-CHIP
2007-007107	R417	R-CHIP
2007-007132	R432	R-CHIP
2007-007311	R314	R-CHIP

SEC CODE	Design LOC	Discription
2007-007314	R433	R-CHIP
2007-007317	R502	R-CHIP
2007-007317	R508	R-CHIP
2007-007741	R605	R-CHIP
2007-008040	R303	R-CHIP
2007-008040	R304	R-CHIP
2007-008040	R305	R-CHIP
2007-008040	R306	R-CHIP
2007-008040	R307	R-CHIP
2007-008040	R308	R-CHIP
2007-008040	R309	R-CHIP
2007-008040	R310	R-CHIP
2007-008040	R311	R-CHIP
2007-008040	R312	R-CHIP
2007-008040	R313	R-CHIP
2007-008045	R201	R-CHIP
2007-008045	R717	R-CHIP
2007-008045	R718	R-CHIP
2007-008045	R719	R-CHIP
2007-008045	R720	R-CHIP
2007-008045	R721	R-CHIP
2007-008045	R722	R-CHIP
2007-008045	R723	R-CHIP
2007-008045	R729	R-CHIP
2007-008051	R318	R-CHIP
2007-008051	R323	R-CHIP
2007-008052	R326	R-CHIP
2007-008052	R335	R-CHIP
2007-008052	R336	R-CHIP
2007-008052	R436	R-CHIP
2007-008054	R703	R-CHIP
2007-008054	R704	R-CHIP
2007-008054	R705	R-CHIP
2007-008054	R707	R-CHIP
2007-008055	R207	R-CHIP
2007-008055	R209	R-CHIP
2007-008055	R416	R-CHIP

SEC CODE	Design LOC	Discription
2007-008055	R427	R-CHIP
2007-008055	R434	R-CHIP
2007-008055	R435	R-CHIP
2007-008055	R441	R-CHIP
2007-008055	R511	R-CHIP
2007-008055	R710	R-CHIP
2007-008055	R725	R-CHIP
2007-008211	R111	R-CHIP
2007-008419	R412	R-CHIP
2007-008419	R437	R-CHIP
2007-008419	R444	R-CHIP
2007-008419	R603	R-CHIP
2007-008419	R604	R-CHIP
2007-008419	R606	R-CHIP
2007-008419	R608	R-CHIP
2007-008419	R609	R-CHIP
2007-008419	R610	R-CHIP
2007-008419	R611	R-CHIP
2007-008419	R712	R-CHIP
2007-008419	R726	R-CHIP
2007-008420	R641	R-CHIP
2007-008420	R642	R-CHIP
2007-008478	R330	R-CHIP
2007-008478	R332	R-CHIP
2007-008483	R114	R-CHIP
2007-008483	R407	R-CHIP
2007-008483	R408	R-CHIP
2007-008483	R421	R-CHIP
2007-008483	R422	R-CHIP
2007-008483	R423	R-CHIP
2007-008483	R424	R-CHIP
2007-008483	R428	R-CHIP
2007-008483	R431	R-CHIP
2007-008483	R440	R-CHIP
2007-008483	R445	R-CHIP
2007-008486	R430	R-CHIP
2007-008516	R112	R-CHIP

SEC CODE	Design LOC	Discription
2007-008516	R200	R-CHIP
2007-008531	R202	R-CHIP
2007-008531	R516	R-CHIP
2007-008531	R527	R-CHIP
2007-008542	R302	R-CHIP
2007-008542	R315	R-CHIP
2007-008542	R406	R-CHIP
2007-008542	R413	R-CHIP
2007-008542	R513	R-CHIP
2007-008542	R522	R-CHIP
2007-008542	R535	R-CHIP
2007-008542	R536	R-CHIP
2007-008542	R711	R-CHIP
2007-008542	R713	R-CHIP
2007-008542	R715	R-CHIP
2007-008542	R724	R-CHIP
2007-008548	R530	R-CHIP
2007-008549	R108	R-CHIP
2007-008590	R531	R-CHIP
2007-008648	R331	R-CHIP
2007-008774	R110	R-CHIP
2007-008786	R425	R-CHIP
2007-008786	R443	R-CHIP
2007-008786	R447	R-CHIP
2007-008786	R645	R-CHIP
2007-008788	R643	R-CHIP
2007-008788	R644	R-CHIP
2007-009111	R317	R-CHIP
2007-009111	R319	R-CHIP
2007-009111	R321	R-CHIP
2007-009167	R415	R-CHIP
2007-009315	R203	R-CHIP
2007-009408	R501	R-CHIP
2007-009408	R507	R-CHIP
2007-009409	R714	R-CHIP
2007-009409	R734	R-CHIP
2007-009419	R420	R-CHIP

SEC CODE	Design LOC	Discription
2203-000233	C104	C-CER,CHIP
2203-000233	L212	C-CER,CHIP
2203-000254	C123	C-CER,CHIP
2203-000438	C211	C-CER,CHIP
2203-000438	C500	C-CER,CHIP
2203-000438	C545	C-CER,CHIP
2203-000679	C447	C-CER,CHIP
2203-000679	C448	C-CER,CHIP
2203-000679	C505	C-CER,CHIP
2203-000679	C512	C-CER,CHIP
2203-000679	C514	C-CER,CHIP
2203-000679	C515	C-CER,CHIP
2203-000679	C517	C-CER,CHIP
2203-000679	C518	C-CER,CHIP
2203-000679	C539	C-CER,CHIP
2203-000812	C108	C-CER,CHIP
2203-000812	C112	C-CER,CHIP
2203-000812	C542	C-CER,CHIP
2203-000854	R116	C-CER,CHIP
2203-001072	C217	C-CER,CHIP
2203-001072	C220	C-CER,CHIP
2203-001153	C200	C-CER,CHIP
2203-001259	C546	C-CER,CHIP
2203-001259	C547	C-CER,CHIP
2203-001385	C131	C-CER,CHIP
2203-002668	C106	C-CER,CHIP
2203-002668	C110	C-CER,CHIP
2203-002668	C113	C-CER,CHIP
2203-002668	C135	C-CER,CHIP
2203-005234	C213	C-CER,CHIP
2203-005234	R106	C-CER,CHIP
2203-005281	R104	C-CER,CHIP
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2203-005288	C208	C-CER,CHIP
2203-005383	R103	C-CER,CHIP
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2203-005682	C544	C-CER,CHIP
2203-005717	C446	C-CER,CHIP
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2203-005727	C201	C-CER,CHIP
2203-005729	C124	C-CER,CHIP
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2203-005729	C238	C-CER,CHIP
2203-005729	C324	C-CER,CHIP
2203-005729	C327	C-CER,CHIP
2203-005732	C207	C-CER,CHIP
2203-005732	L222	C-CER,CHIP
2203-005736	C128	C-CER,CHIP
2203-005736	C204	C-CER,CHIP
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2203-005740	C707	C-CER,CHIP

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2203-006839	C301	C-CER,CHIP
2203-006839	C720	C-CER,CHIP
2203-006840	C527	C-CER,CHIP
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2203-006872	C409	C-CER,CHIP
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2203-006872	C709	C-CER,CHIP
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2404-001381	TA402	C-TA,CHIP
2404-001381	TA537	C-TA,CHIP
2404-001397	TA711	C-TA,CHIP
2404-001406	TA201	C-TA,CHIP
2404-001506	TA102	C-TA,CHIP

SEC CODE	Design LOC	Discription
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2703-001180	L106	INDUCTOR-SMD
2703-001180	L107	INDUCTOR-SMD
2703-001726	L204	INDUCTOR-SMD
2703-001734	C111	INDUCTOR-SMD
2703-001734	L111	INDUCTOR-SMD
2703-001734	L215	INDUCTOR-SMD
2703-001737	C219	INDUCTOR-SMD
2703-001737	L210	INDUCTOR-SMD
2703-001737	L213	INDUCTOR-SMD
2703-001747	L102	INDUCTOR-SMD
2703-001747	L103	INDUCTOR-SMD
2703-001747	L104	INDUCTOR-SMD
2703-001747	L105	INDUCTOR-SMD
2703-001748	L109	INDUCTOR-SMD
2703-001748	R115	INDUCTOR-SMD
2703-001750	C134	INDUCTOR-SMD
2703-001786	L209	INDUCTOR-SMD
2703-001990	L110	INDUCTOR-SMD
2703-001990	L200	INDUCTOR-SMD
2703-002205	L203	INDUCTOR-SMD
2703-002205	L208	INDUCTOR-SMD
2703-002314	L100	INDUCTOR-SMD
2703-002649	L101	INDUCTOR-SMD
2703-002649	L211	INDUCTOR-SMD
2703-002768	L402	INDUCTOR-SMD
2703-002768	L403	INDUCTOR-SMD
2703-002795	L201	INDUCTOR-SMD
2703-002795	L205	INDUCTOR-SMD
2703-002961	L704	INDUCTOR-SMD
2703-002961	L705	INDUCTOR-SMD
2703-002961	L706	INDUCTOR-SMD
2703-002961	L707	INDUCTOR-SMD
2703-002961	L708	INDUCTOR-SMD
2703-003125	L202	INDUCTOR-SMD
2703-003125	L206	INDUCTOR-SMD
2703-003196	L501	INDUCTOR-SMD

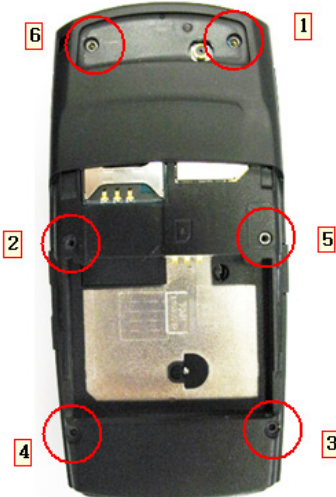
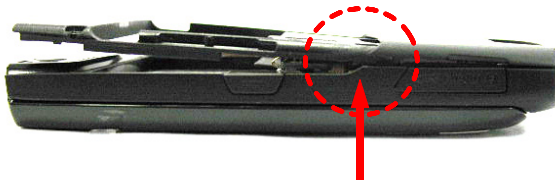
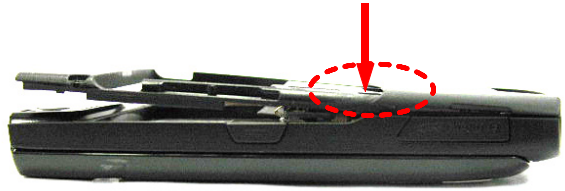
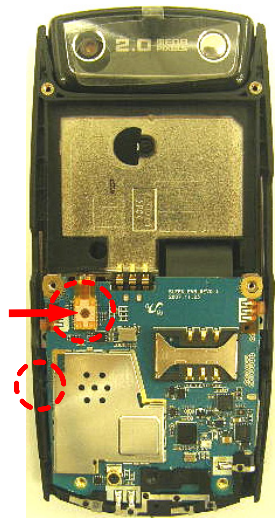
SEC CODE	Design LOC	Discription
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2801-004506	OSC101	CRYSTAL-SMD
2809-001315	TCS101	OSCILLATOR-VCTCXO
2901-001521	F701	FILTER-EMI SMD
2901-001521	F702	FILTER-EMI SMD
2901-001521	F703	FILTER-EMI SMD
2901-001521	F704	FILTER-EMI SMD
2901-001521	F705	FILTER-EMI SMD
2901-001521	F706	FILTER-EMI SMD
2904-001833	F202	FILTER-SAW
2904-001835	F201	FILTER-SAW
2909-001283	F101	FILTER-LC
2910-000024	DUF201	DUPLEXER-SAW
2911-000108	MOD101	DUPLEXER-FEM
3301-001342	L216	BEAD-SMD
3301-001342	L217	BEAD-SMD
3301-001342	L218	BEAD-SMD
3301-001342	L219	BEAD-SMD
3301-001342	L220	BEAD-SMD
3301-001342	L221	BEAD-SMD
3301-001342	L700	BEAD-SMD
3301-001342	L703	BEAD-SMD
3301-001534	L500	BEAD-SMD
3301-001534	L502	BEAD-SMD
3301-001534	L503	BEAD-SMD
3301-001534	L505	BEAD-SMD
3301-001935	L504	BEAD-SMD
3301-001946	L400	BEAD-SMD
3301-001946	L401	BEAD-SMD
3705-001358	RFS101	CONNECTOR-COAXIAL
3709-001448	CN703	CONNECTOR-CARD EDGE
3709-001487	CN701	CONNECTOR-CARD EDGE
3710-002523	IFC601	SOCKET-INTERFACE
3711-005873	HEA702	HEADER-BOARD TO BOARD
3711-006329	BTC701	HEADER-BATTERY
3711-006782	HEA701	HEADER-BOARD TO BOARD
4302-001184	M401	BATTERY-LI(2ND)

SEC CODE	Design LOC	Discription
GH70-02367A	FPC701	ICT-ON-BOARD CLIP
GH70-02367A	FPC702	ICT-ON-BOARD CLIP
GH70-02367A	FPC703	ICT-ON-BOARD CLIP
GH70-02367A	FPC704	ICT-ON-BOARD CLIP
GH70-02367A	FPC705	ICT-ON-BOARD CLIP
GH70-02367A	FPC706	ICT-ON-BOARD CLIP
GH70-02367A	FPC707	ICT-ON-BOARD CLIP
GH70-02367A	FPC708	ICT-ON-BOARD CLIP

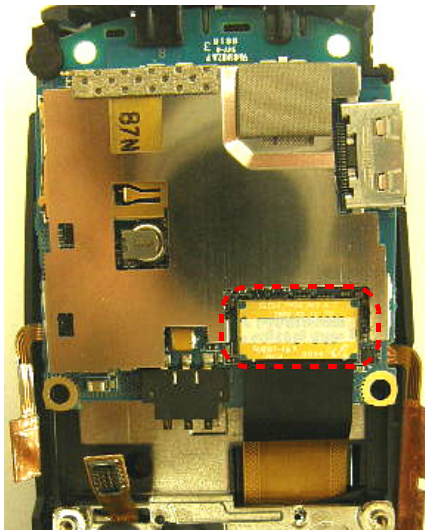
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

7. Disassembly and Assembly Instructions

7-1. Disassembly

1 	2  - Must use the disassembly apparatus. - Notice the fragile rear not be broken.
1) Remove the RF COVER. 2) Unscrew 6 points on the rear case. ※ Caution 1) Notice the rear case should not be damaged or scratched.	1) Separate the locker by inserting the disassembly apparatus into the gap between the front and the rear. ※ Caution 1) Notice the rear case not be damaged or scratched. 2) Notice the rear case not be deformed.
3 	4 
1) Separate the locker on the opposite side by inserting the disassembly apparatus into the gap between the front and the rear. 2) Remove the REAR. ※ Caution 1) Notice the rear case not be damaged or scratched. 2) Notice the rear case not be deformed.	1) Detach the KEY FPCB CONNECTOR. 2) Remove PBA pulling to left HOOK. ※ Caution 1) Notice the both ANTENNA and ANTENNA CARRIER not be damaged. 2) Notice the SLIDE FPCB not be damaged.

5

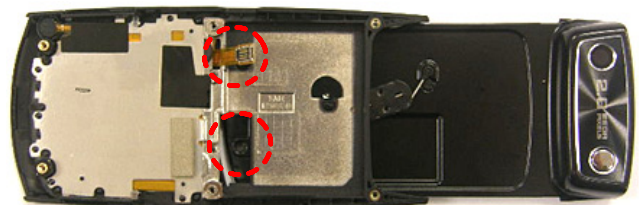


1) Detach the SLIDE FPCB CONNECTOR.

※ **Caution**

1) Notice the both PBA and FPCB not be damaged.

6



1) Unscrew 2 point on the lower case.

※ **Caution**

1) Notice the FPCB not be damaged.

7



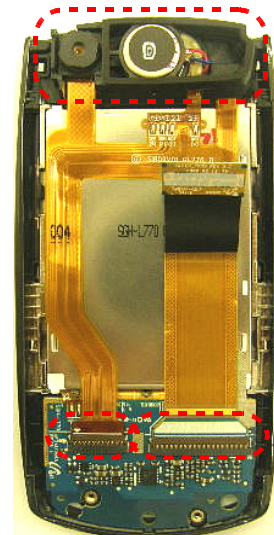
1) Separate the UPPER from lower part of FRONT case.

※ **Caution**

1) Notice the rear case should not be damaged or scratched.

2) Must use the disassembly apparatus.

8



1) Detach the SLIDE FPCB and SPK/CAM FPCB Connector. Then Separate them from PBA.

※ **Caution**

1) Notice the FPCB not be damaged.

9

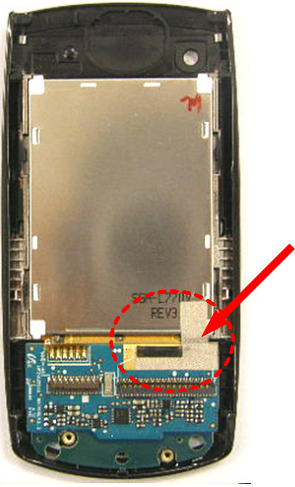
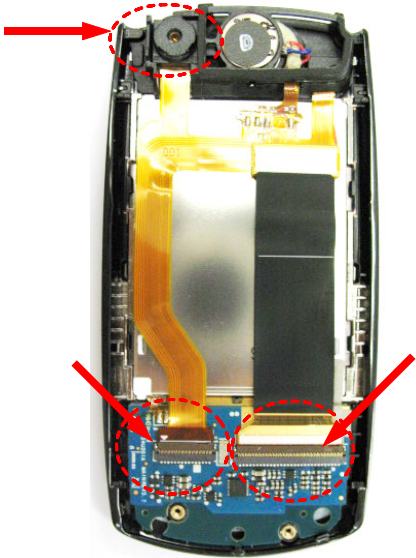


1) Separate UPPER into LCD Module, UPPER, SUB KEY PAD.

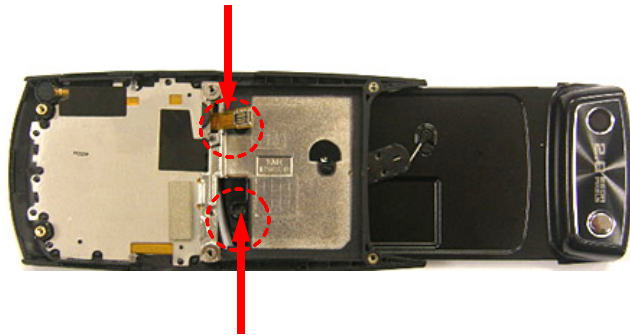
※ **Caution**

1) Notice the UPPER & LCD Module not be damaged

7-2. Assembly

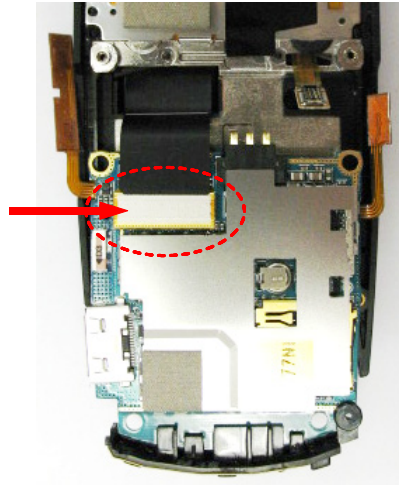
1 	2 
1) Join the SUB KEYPAD on the UPPER. ※ Caution 1) Make sure in the guideline.	1) Join the LCD module on the UPPER. 2) Attach the conductive tape. ※ Caution 1) Make sure no between the WINDOW and LCD module.
3 	4 
1) Connect the SLIDE FPCB and SPK/CAM FPCB with PBA. ※ Caution 1) Notice the FPCB not be damaged. 2) Make sure CAMERA MODULE is exactly in place.	1) Make the Slide FPCB pass through the lower case. Then assemble the UPPER. ※ Caution 1) Notice the FPCB not be damaged.

5



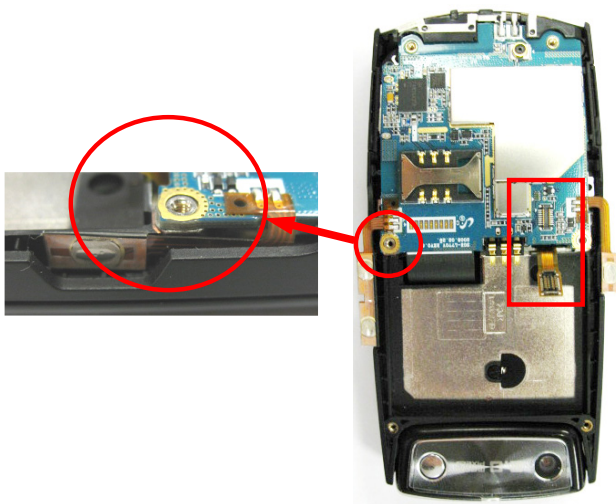
- 1) Screw 2 points on the lower case
※ **Caution**
- 1) Notice the FPCB not be damaged.

6



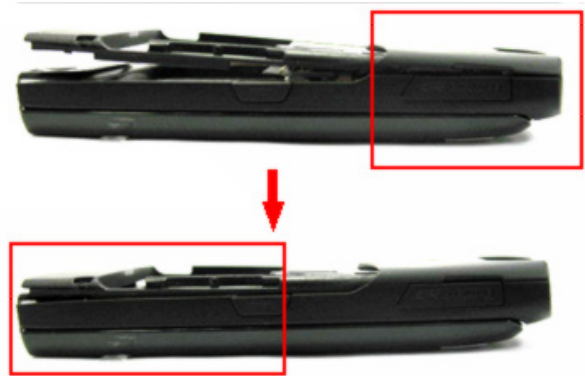
- 1) Attach the SLIDE FPCB to PBA.
※ **Caution**
- 1) Make sure the SLIDE FPCB CONNECTION.

7



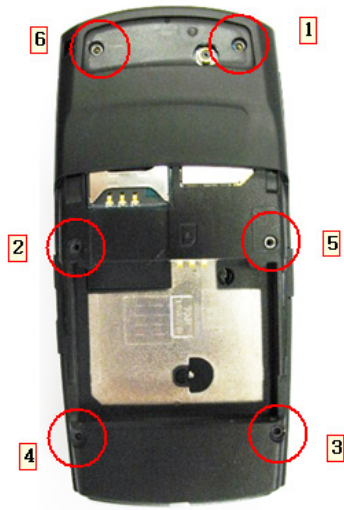
- 1) Join the PBA on the LOWER case.
- 2) Attach the KEY FPCB CONNECTOR.
※ **Caution**
- 1) Make sure the KEY FPCB CONNECTION.
- 2) Keep the guide line

8



- 1) Assemble the rear case with SET from the lower part of it.
※ **Caution**
- 1) Notice the rear case should not be damaged or scratched.
- 2) Make sure no gap between the front and rear case.

9



1) Screw 6 points on the rear case.

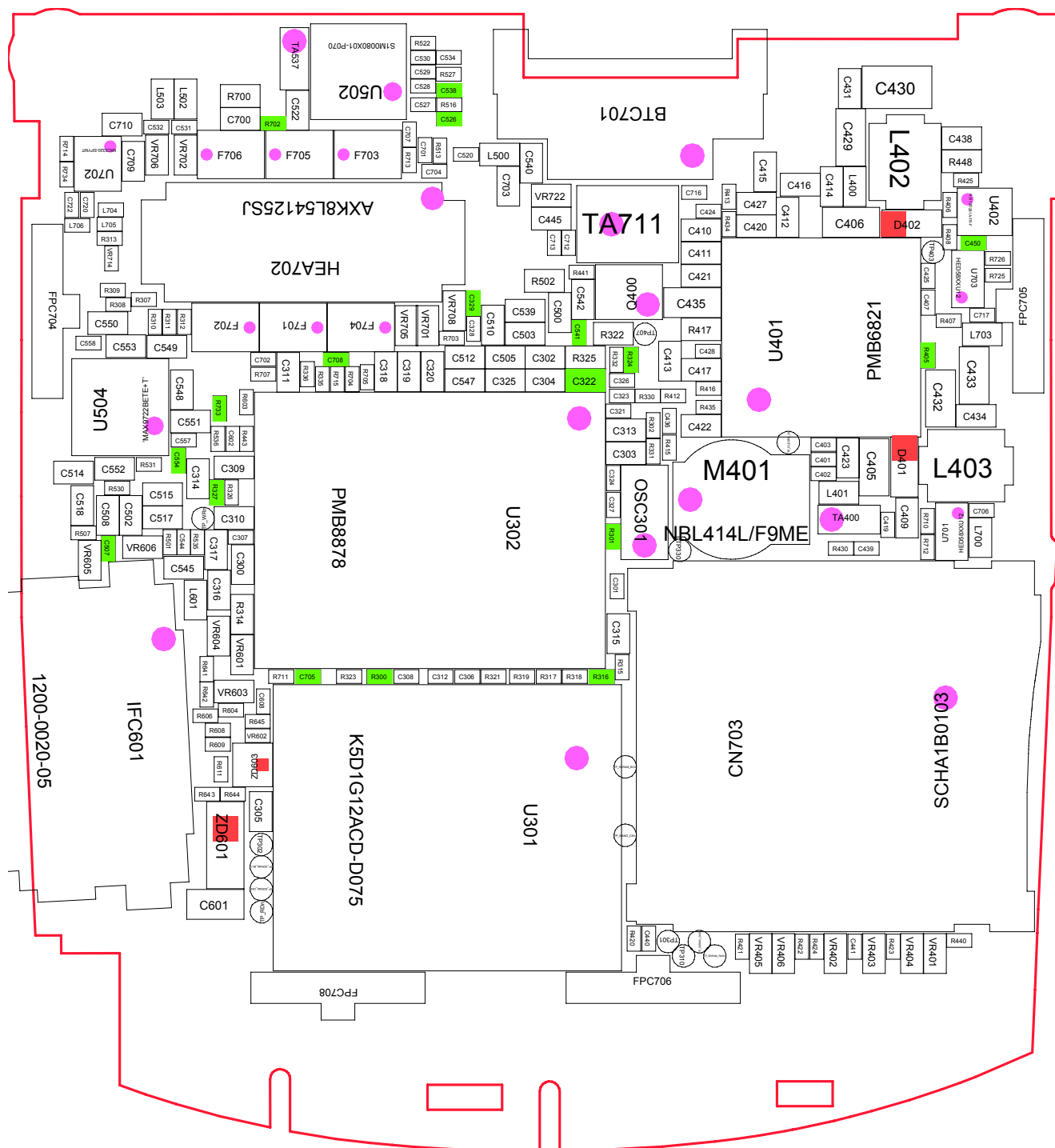
※ **Caution**

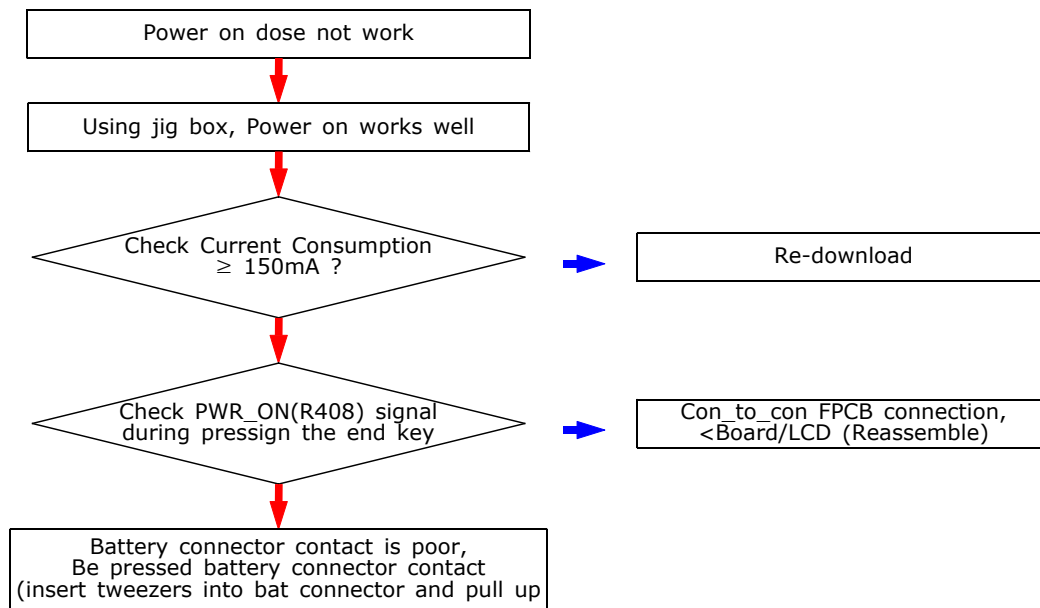
1) Notice the rear case should not be damaged or scratched.

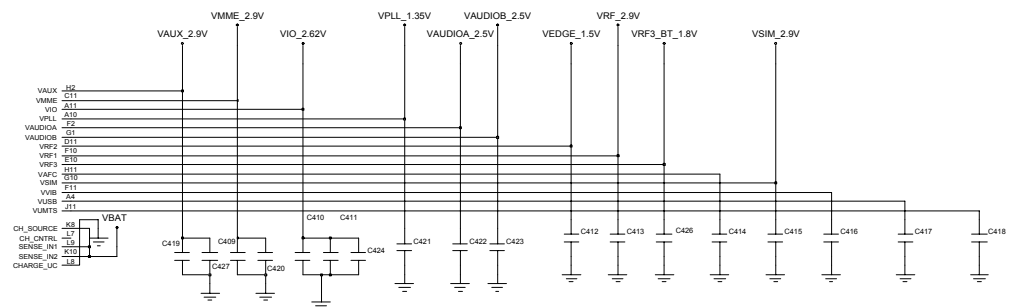
8. Block Diagrams



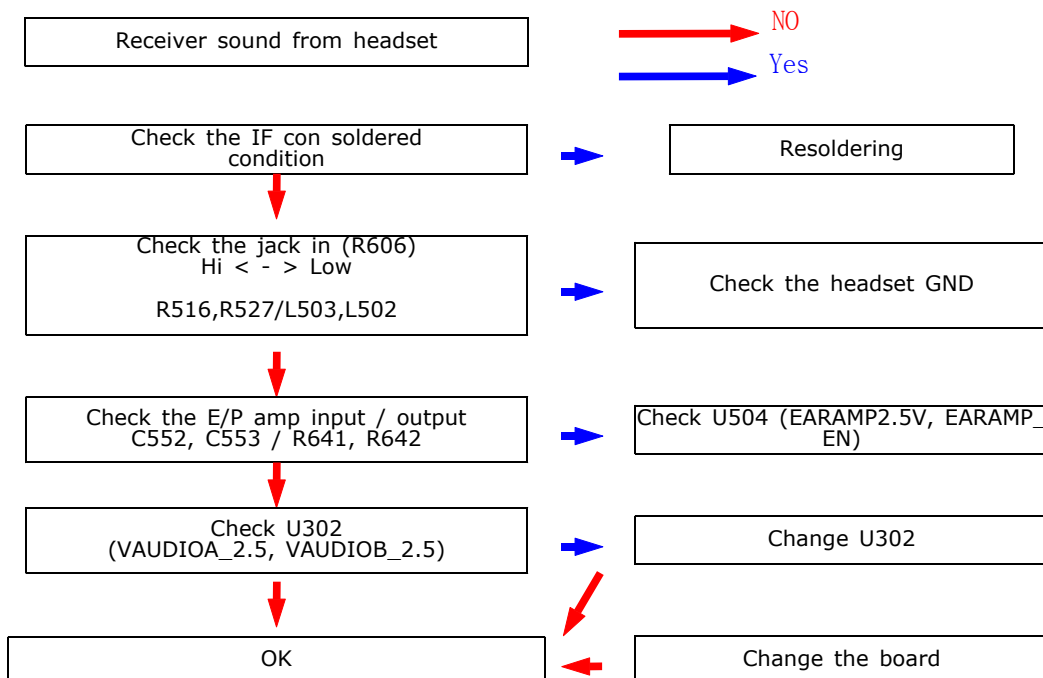
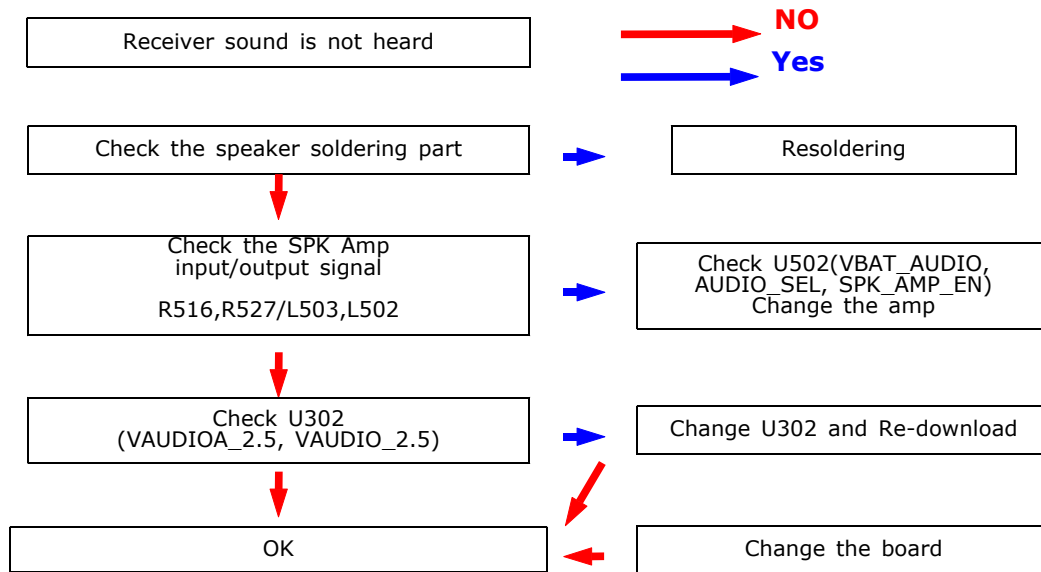
9. PCB Diagrams

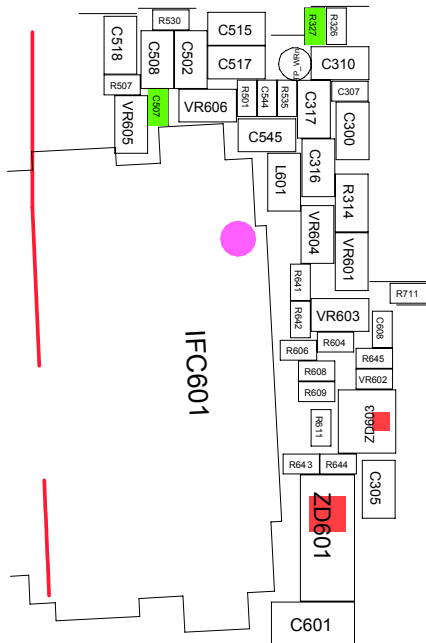
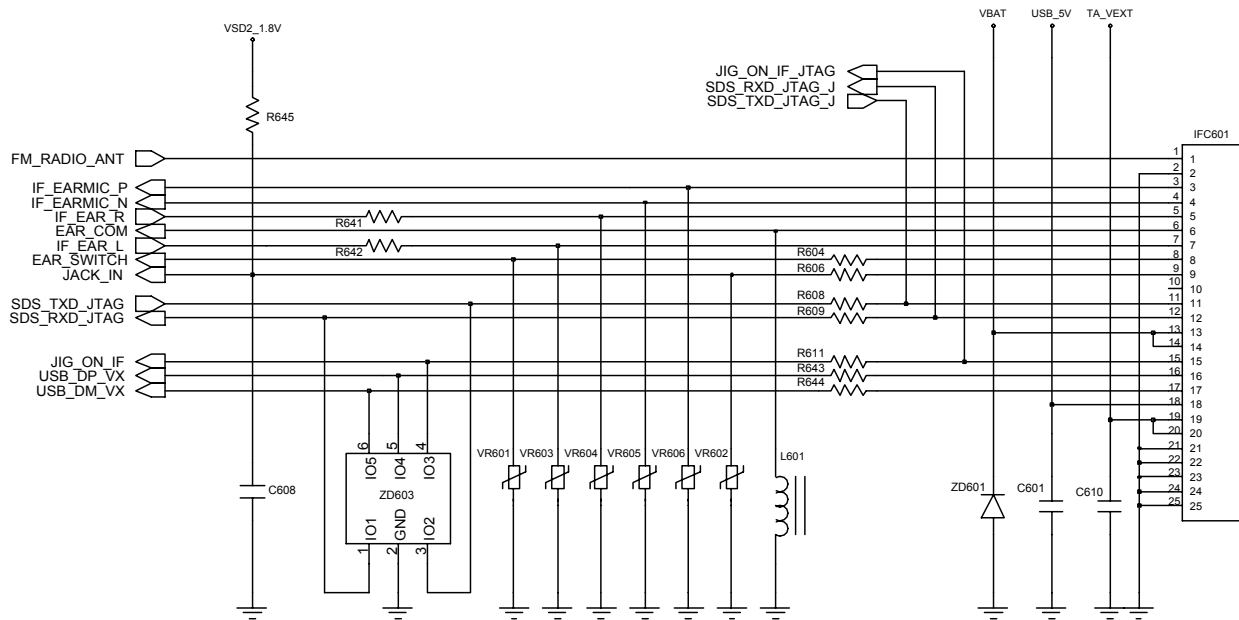






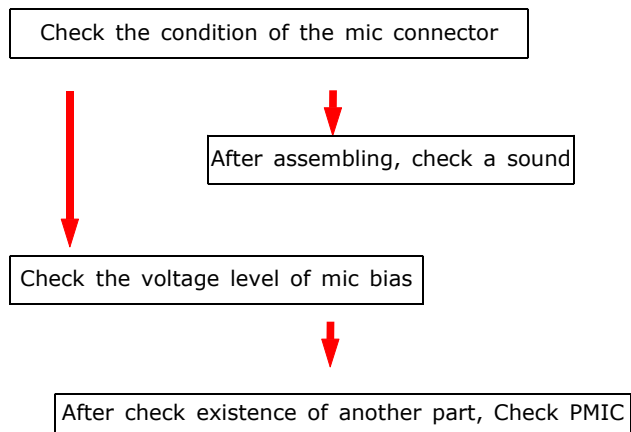
10-1-2. Audio part



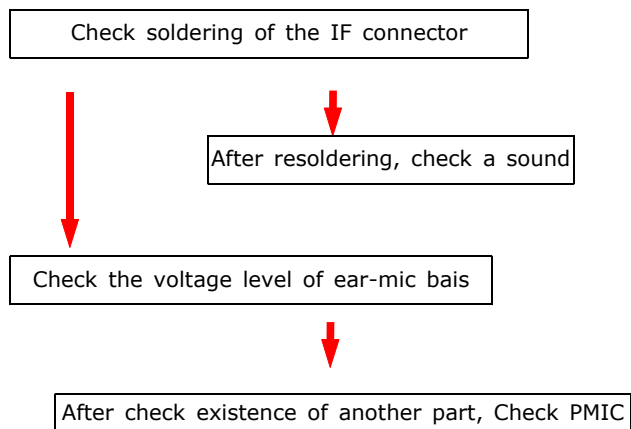


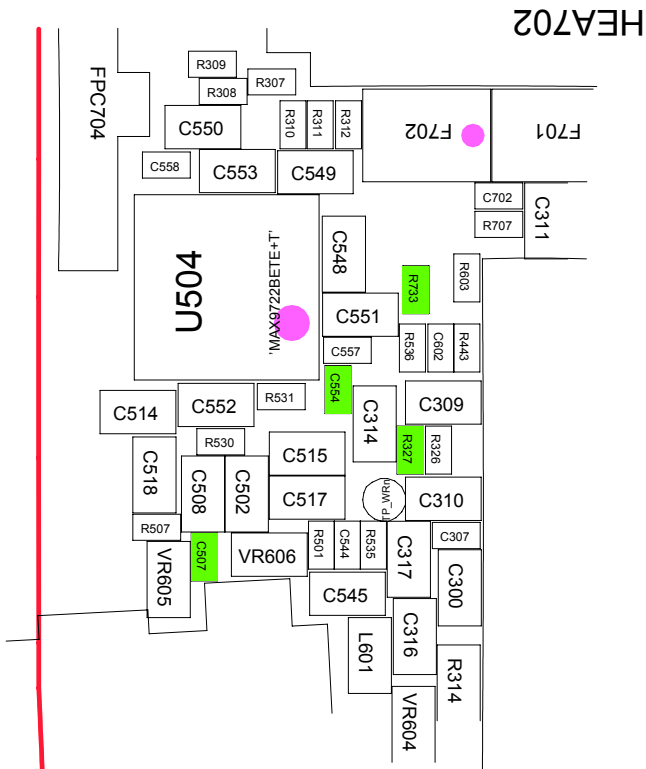
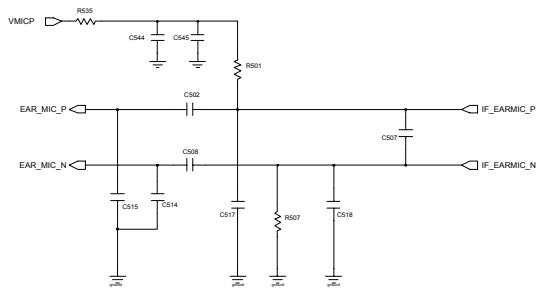
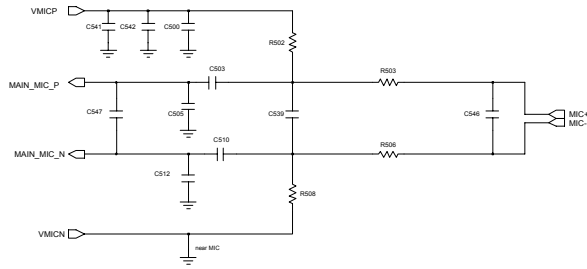
10-1-3 Microphone Part

1.

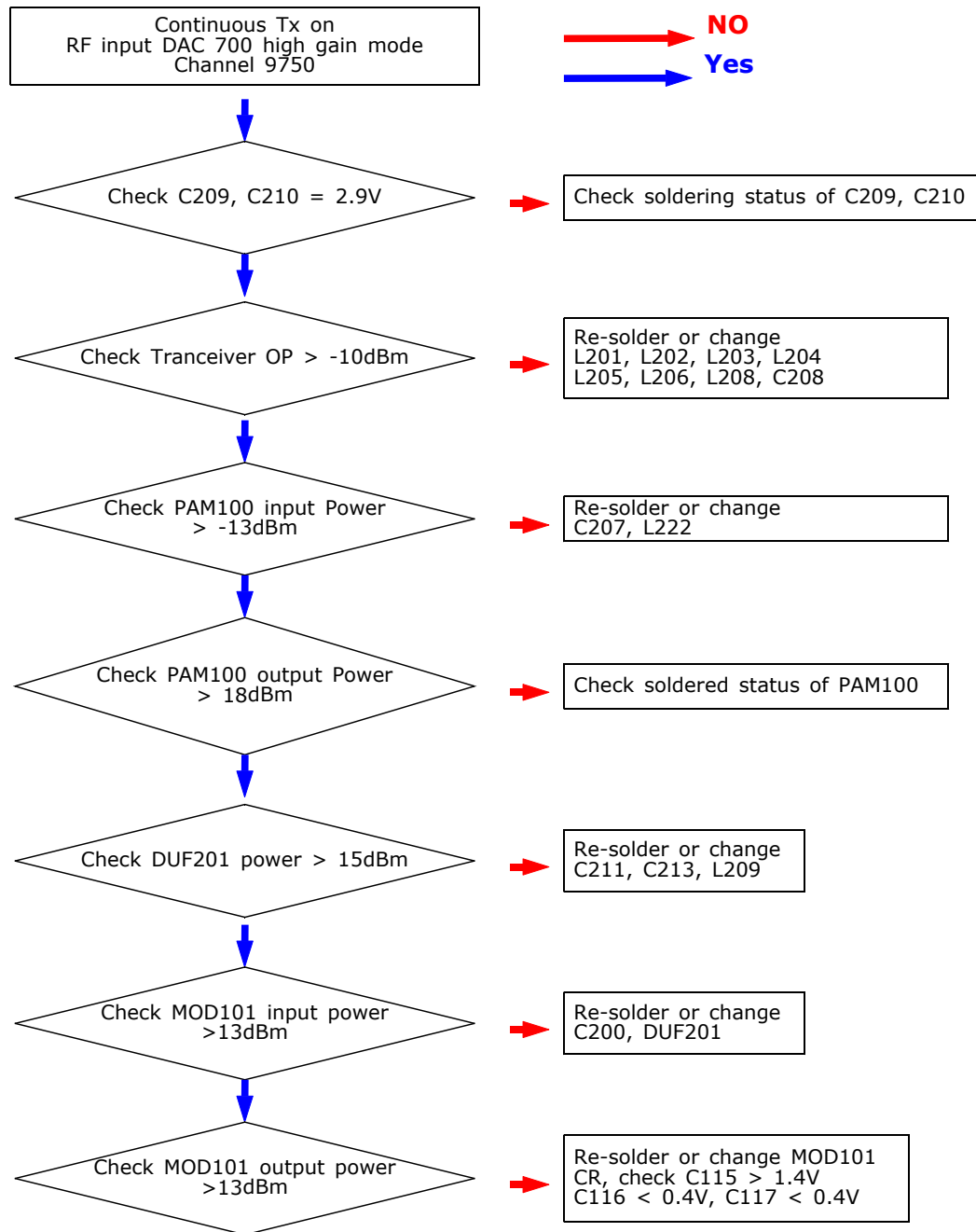


2.

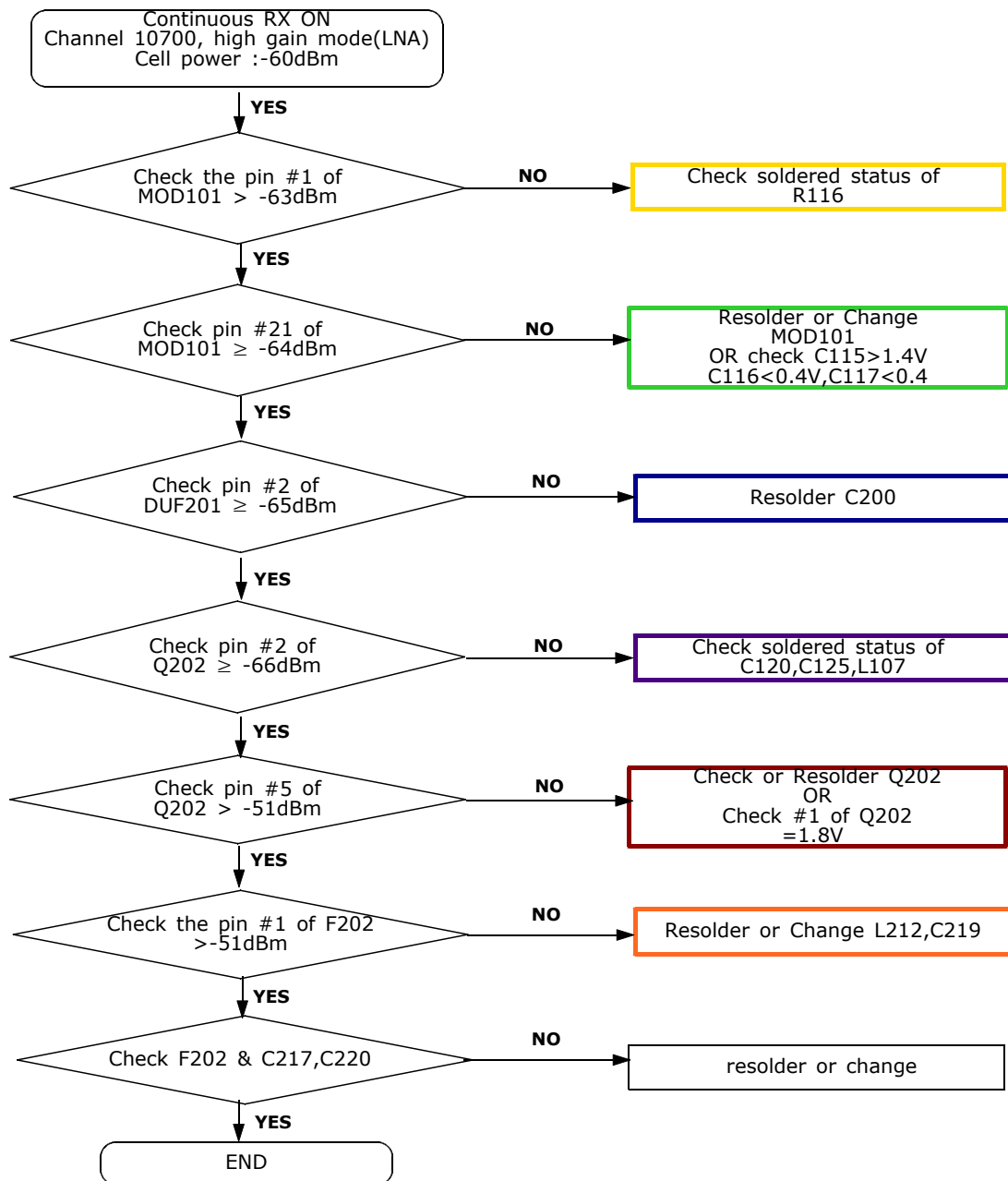


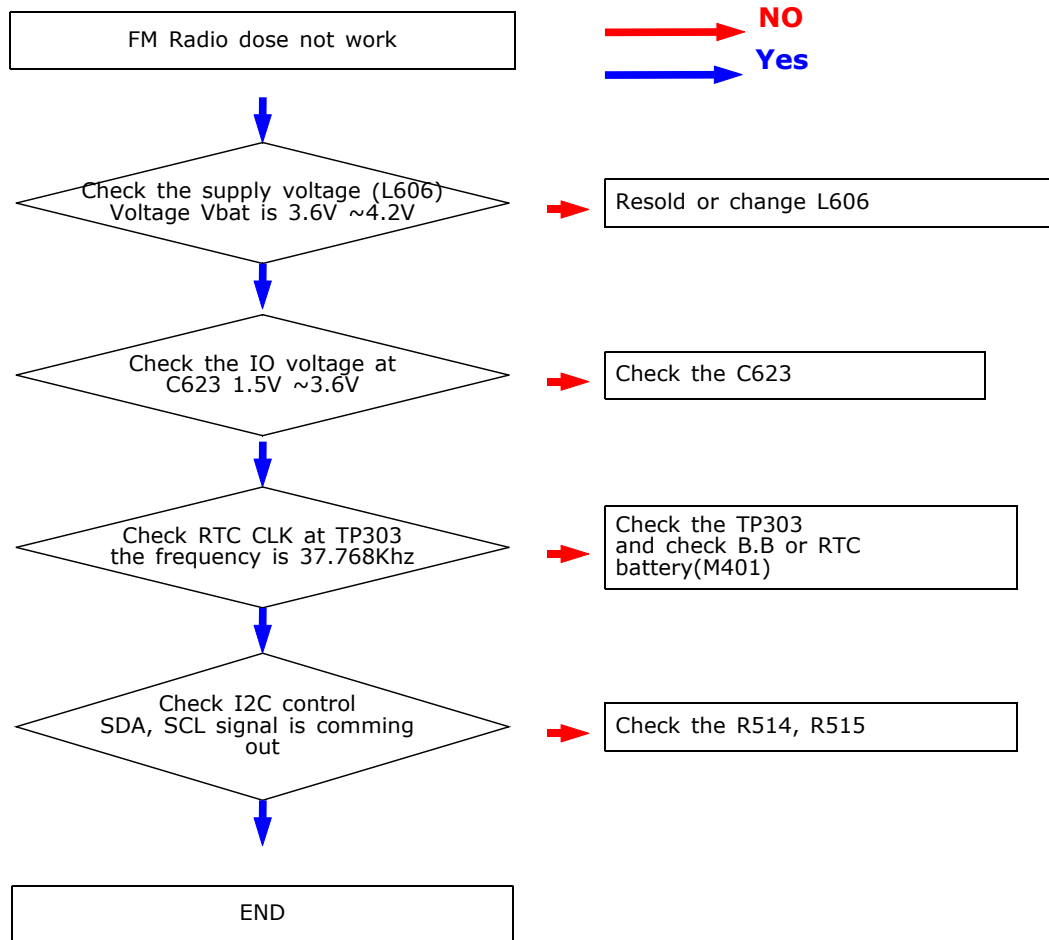


10-1-5. Transceiver 3G Tx part

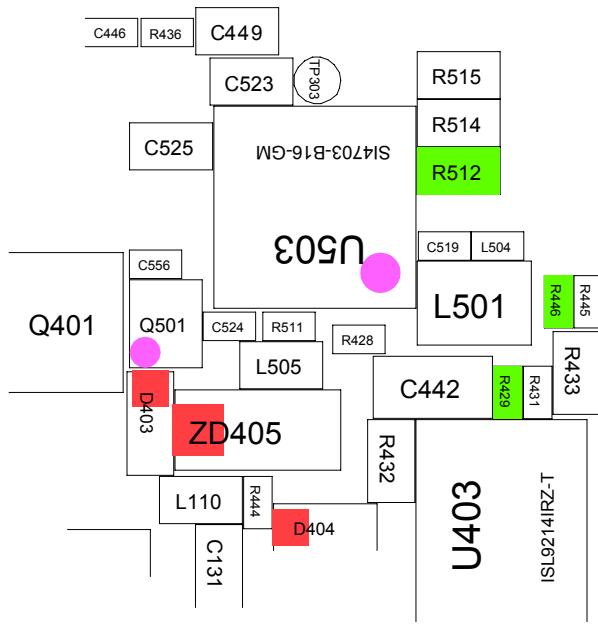
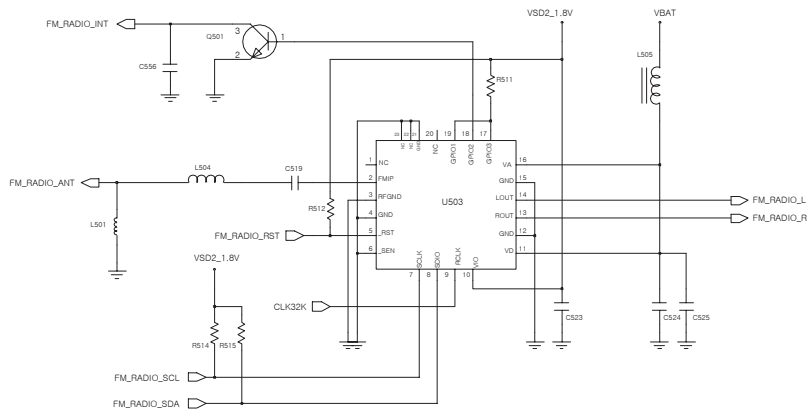


10-1-6 Transceiver 3G Rx part

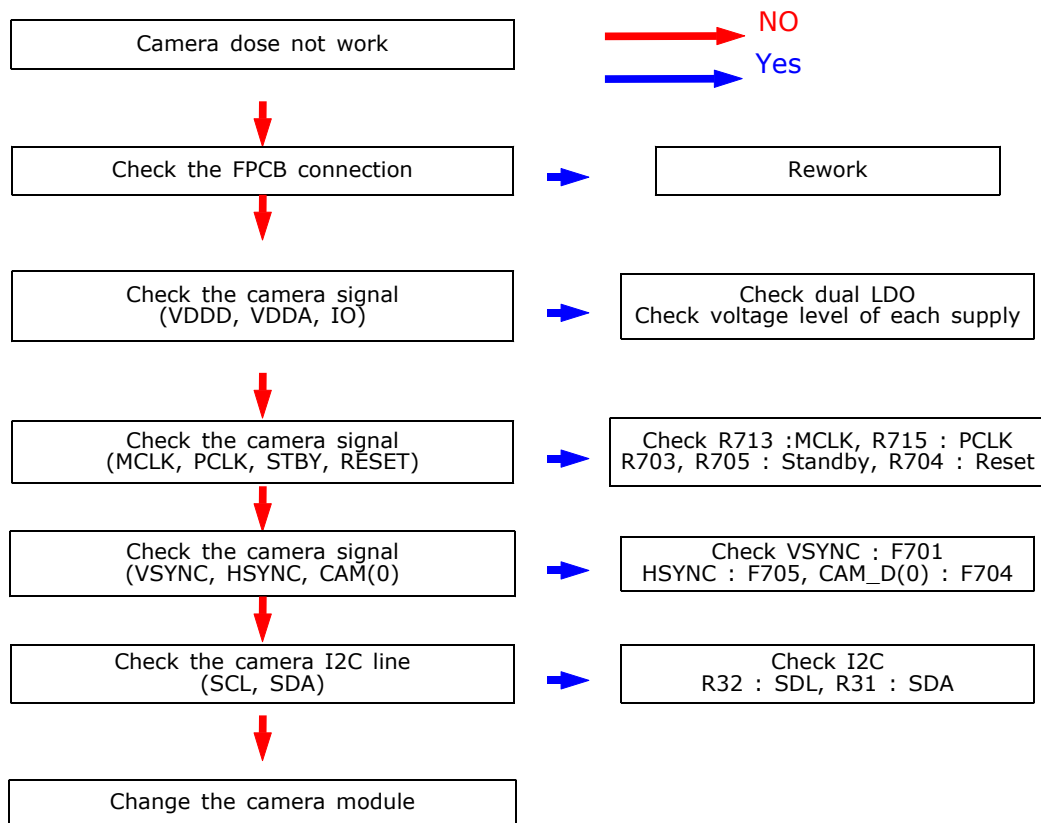


10-1-6 FM radio part

Flow Chart of Troubleshooting



10-1-6 Camera part





10-1-7 LCD part

1. LCD_3.0V always on

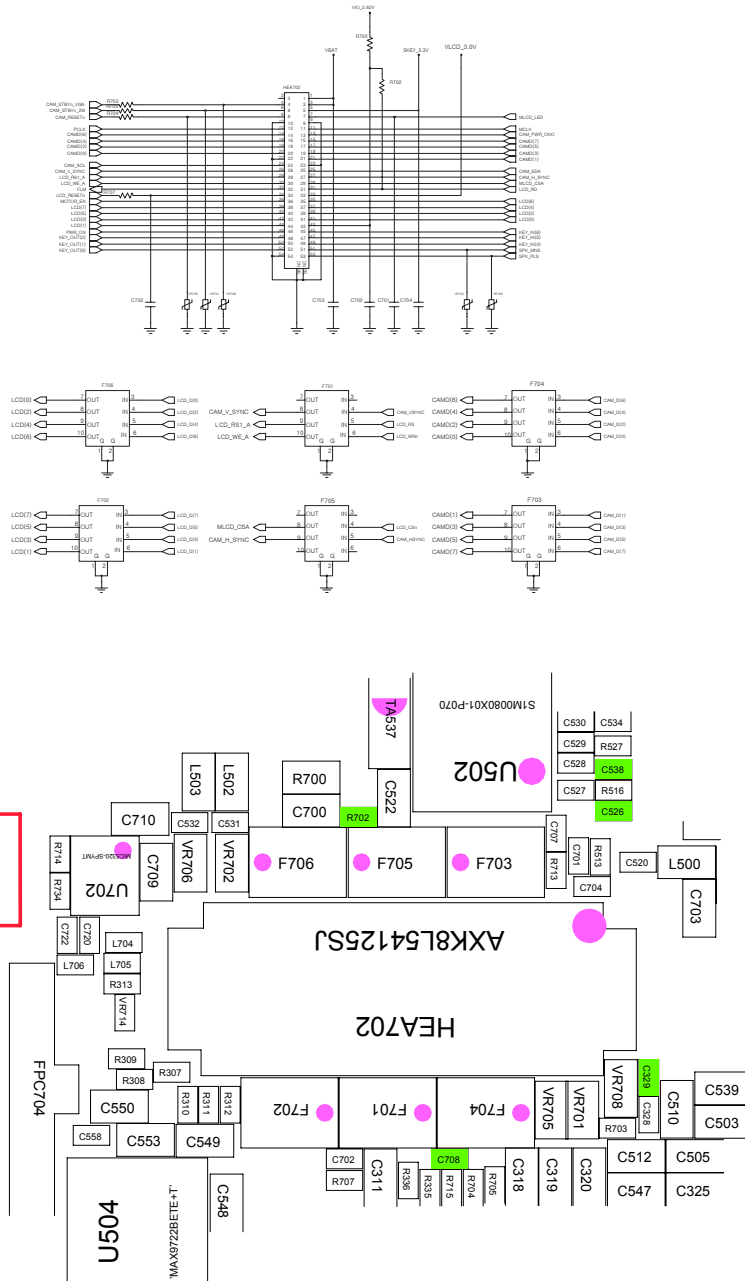


Check C709

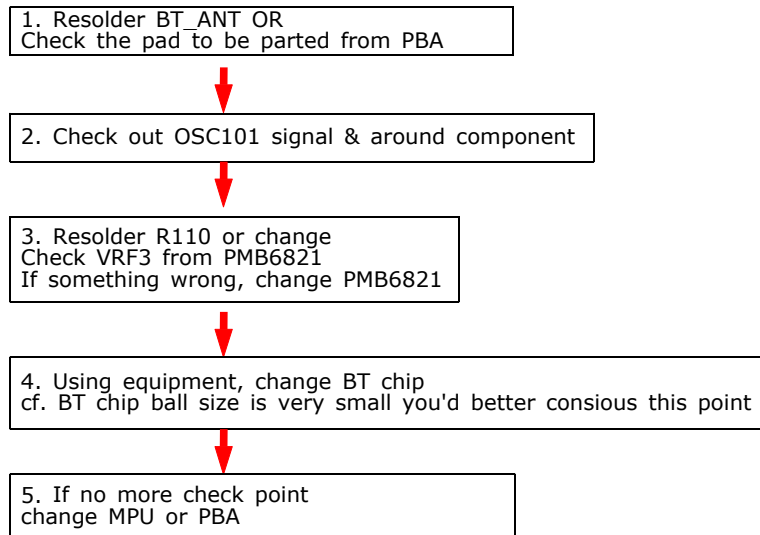
2. MLCD_LED EN/SET : 1.8V
Backlight Enable port

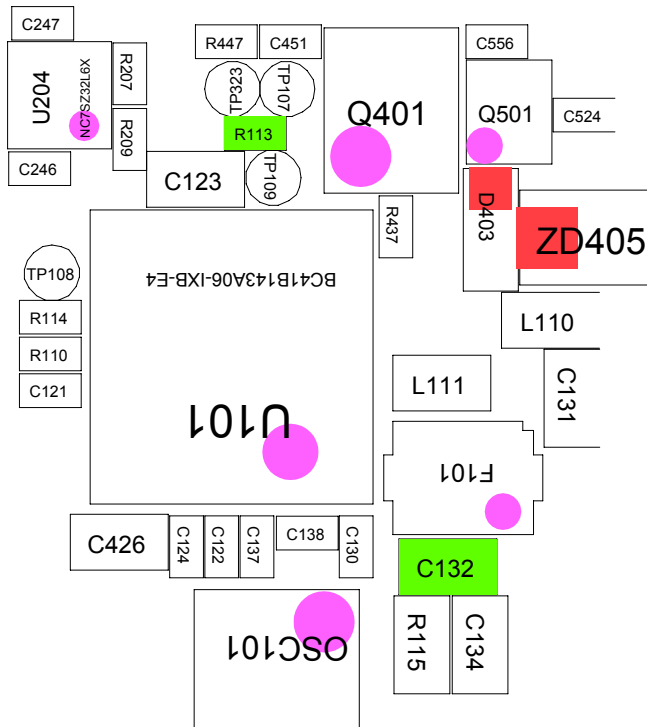
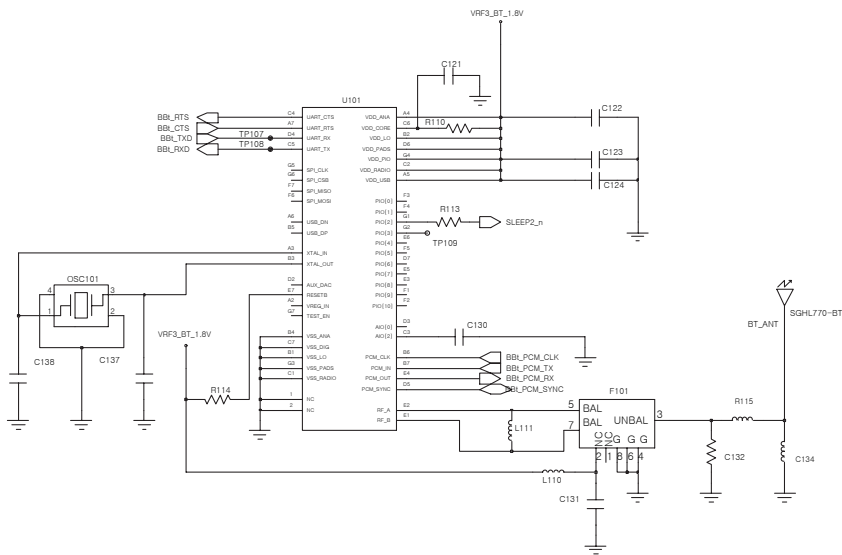


Check C701



10-1-8 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