SAMSUNG

GSM TELEPHONE

SGH-C520

SERVICE Manual

GSM TELEPHONE

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1. Specification

1-1. GSM General Specification

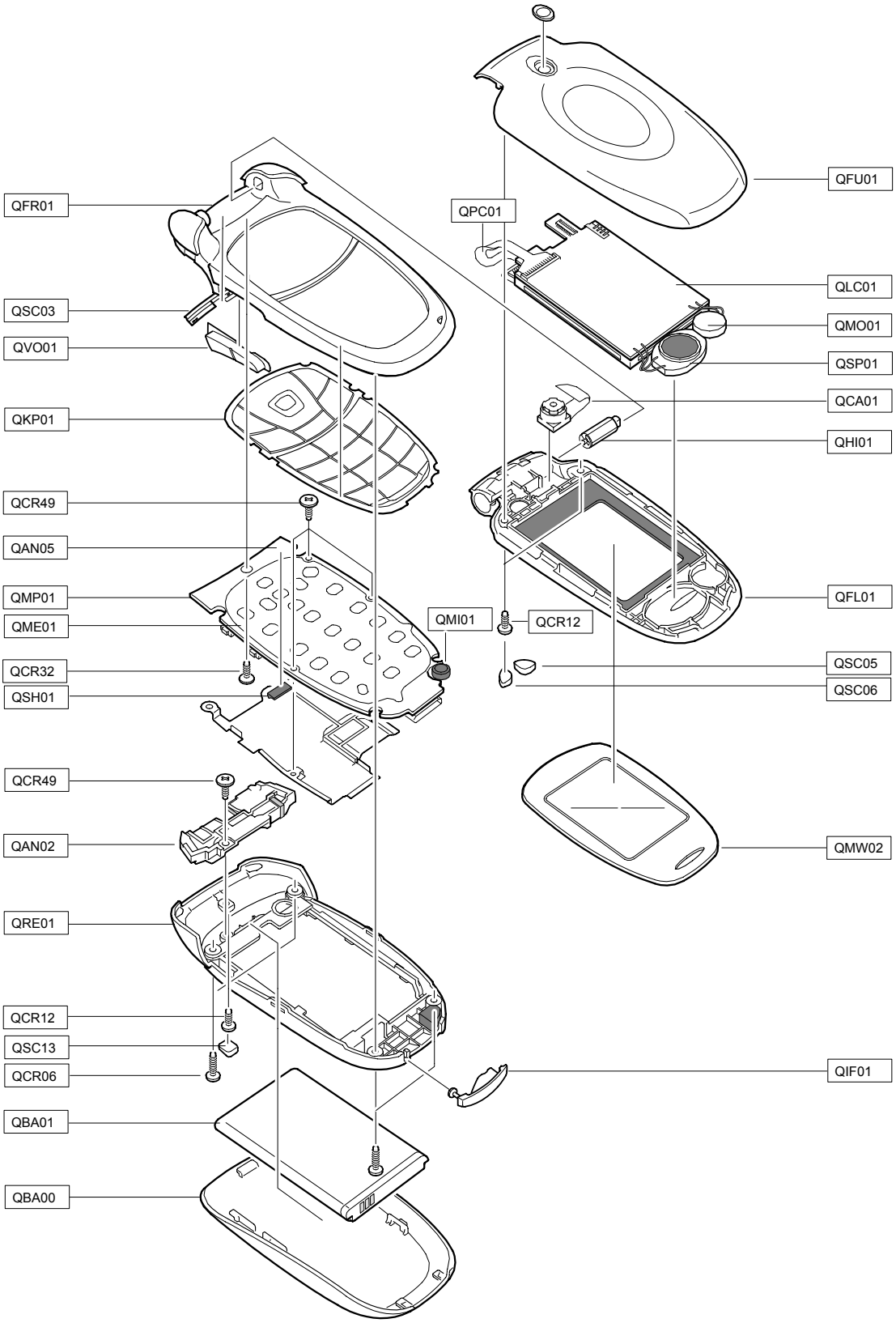
	GSM 900 Phase 1	EGSM 900 Phase 2	DCS1800 Phase 1
Freq. Band[MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880
ARFCN range	1~124	0~124 & 975~1023	512~885
Tx/Rx spacing	45 MHz	45 MHz	95 MHz
Mod. Bit rate/ Bit Period	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us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

1-2. GSM TX power class

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

2. Exploded View and Parts List

2-1. Cellular phone Exploded View



2-2. Cellular phone Parts list

Design LOC		Discription	SEC CODE
QAN02		INTENNA-SGHC520	GH42-01179A
QAN05		ASSY MEC-INTENNA CONTACT	GH75-08168A
QBA00		ASSY COVER-BATT	GH98-04111A
QBA01		INNER BATTERY PACK-750MAH,BLK,	GH43-02483A
QCA01		UNIT-CAMERA MODULE	GH59-04202A
QCR06		SCREW-MACHINE	6001-001155
QCR12		SCREW-MACHINE	6001-001530
QCR12		SCREW-MACHINE	6001-001530
QCR32		SCREW-MACHINE	6001-001700
QCR49		SCREW-MACHINE	6001-001823
QCR49		SCREW-MACHINE	6001-001823
QFR01		ASSY CASE-FRONT	GH98-04107A
QFU01		ASSY CASE-UPPER	GH98-04108A
QKP01		ASSY KEYPAD-(SER/BLK)	GH98-04708A
QLC01		ELA UNIT-SGH_C520 LCD MODULE	GH96-02549A
QME01		UNIT-DOME SHEET 22KEY	GH59-04348A
QMI01		MICROPHONE-ASSY-SGH-C520	GH30-00352A
QMO01		MOTOR DC-SPHB2300	GH31-00181A
QMP01		PBA MAIN-SGHC520	GH92-03552A
QMW02		PMO-COVER MAIN WINDOW	GH72-38467A
QPC01		FPC-CON TO CON	GH41-01626A
QSC03		PMO-BRACKET FPCB HOLE	GH72-38517A
QSC05		RMO-RUBBER SCREW FOLDER L	GH73-09293A
QSC06		RMO-RUBBER SCREW FOLDER R	GH73-09292A
QSC13		RMO-RUBBER SCREW REAR	GH73-09294A
QSH01		ASSY CASE-SHIELD CAN	GH98-04112A
QSP01		SPEAKER	3001-002143
QVO01		ASSY KEY-VOLUME	GH98-04242A
QFL01		ASSY CASE-LOWER	GH98-04109A
	QHI01	ASSY HINGE	GH98-03190A
QRE01		ASSY CASE-REAR	GH98-04110A
	QIF01	PMO-COVER IF	GH72-38465A

Discription	SEC CODE
BAG PE	6902-000297
ADAPTOR-SGHE690,BLK,EU,A_TYPE	GH44-01361A
UNIT-20P,EARPHONE,BLK,B-TYPE	GH59-04029A
MANUAL-SFC	GH68-04336A
LABEL(P)-BARCODE RUSSIA	GH68-08494A
LABEL(R)-WATER SOAK	GH68-09361A
LABEL(R)-MAIN(SER)	GH68-14667B
MANUAL USERS-EU RUSSIAN	GH68-14702A
BOX(P)-UNIT MAIN(EU)	GH69-05343B
RMO-RUBBER BGA A	GH73-09385A
RMO-RUBBER BGA B	GH73-09386A
RMO-RUBBER BGA C	GH73-09387A
MPR-REMOVE TAPE LCD	GH74-13804A
MPR-INSU TAPE	GH74-18047A
MPR-INSU TAPE	GH74-23315A
MPR-TAPE IF COVER	GH74-24740A
MPR-TAPE	GH74-27509A
MPR-INSU TAPE	GH74-27512A
MPR-TAPE	GH74-27712A
MPR-INSU TAPE	GH74-28241A
MPR-SPONGE MAIN CON	GH74-30820A
MPR-TAPE MAIN WINDOW	GH74-30961A
MPR-INSU TAPE	GH74-30998A
MPR-VINYL BOHO FOLDER LOWER A	GH74-31355A
MPR-GASK TAPE	GH74-31677A
TAPE INSU	GH74-33048A

2-3. Disassembly

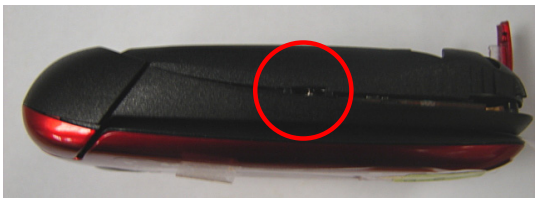
1

1) Unscrew the REAR at the 5 point after remove screw rubber cap.

※ caution

1) Be careful not to make scratch and molding damage!

2



1) Disassemble the REAR from the lower end to the upper end.

※ caution

1) Be careful not to make scratch and molding damage!
2) Please remove the lower end locker first.

3

1) Push the upper end locker of REAR, to arrow direction, and remove REAR.

※ caution

1) Be careful not to make scratch and molding damage!

4

1) Disassemble the CON TO CON FPCB, and unscrew the PBA at the 1 point.

※ caution

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage CON TO CON FPCB!

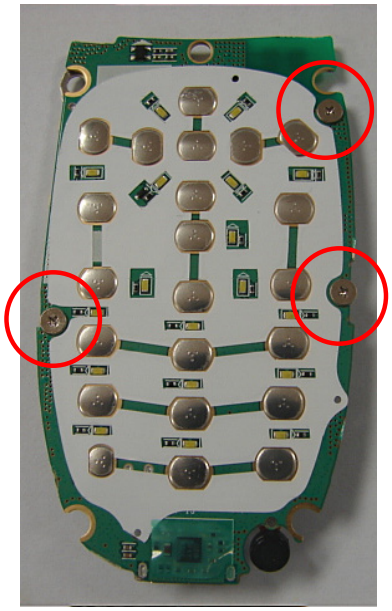
5

1) Disassemble the PBA from the FRONT ASS'Y.

※ **caution**

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage CON TO CON FPCB!

6



1) Unscrew the SHIELDCAN at the 3 point.

※ **caution**

1) Be careful not to make scratch and molding damage!

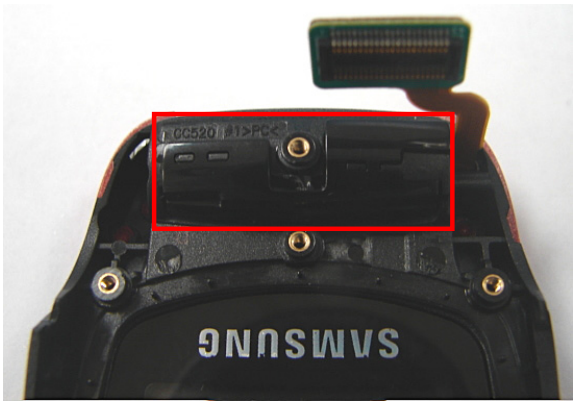
7

1) Disassemble the KEYPAD.

※ **caution**

1) Be careful not to make scratch and molding damage!

8



1) Disassemble the upper end BRACKET of FRONT.

※ **caution**

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage CON TO CON FPCB! solder in soldering part.

9

1) Push the hinge between FOLDER UPPER and FOLEDR LOWER, and disassemble FRONT from FOLDER.

※ caution

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage CON TO CON FPCB!

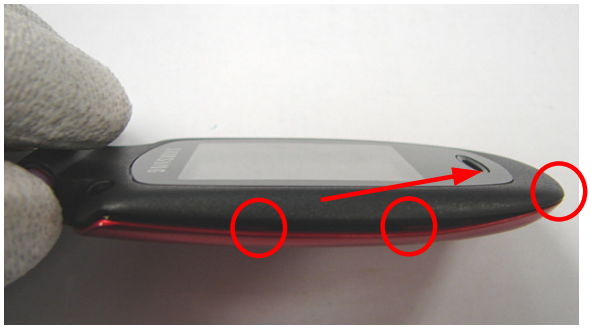
10

1) Please remove screw rubber caps and unscrew the FOLDER UPPER at the 2 point.

※ caution

1) Be careful not to make scratch and molding damage!

11

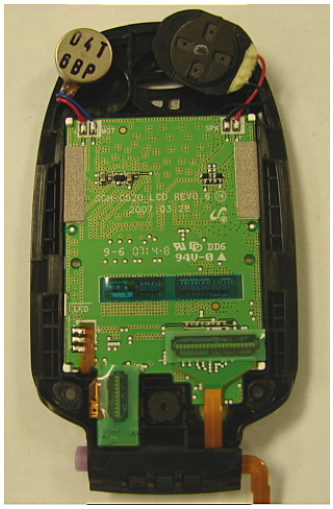


1) By using an assembly stick, disassemble FOLDER UPPER from FOLDER LOWER (Right and Left are the same process)

※ caution

1) Be careful not to make scratch and molding damage!

12



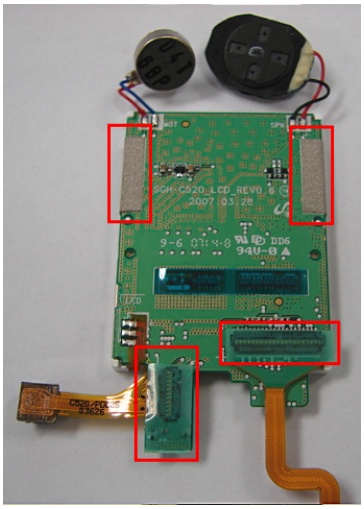
1) Disassemble the MOTOR and SPEAKER from FOLDER LOWER by using a pincette.

※ caution

1) Be careful not to make scratch and molding damage!

2-4. Assembly

1

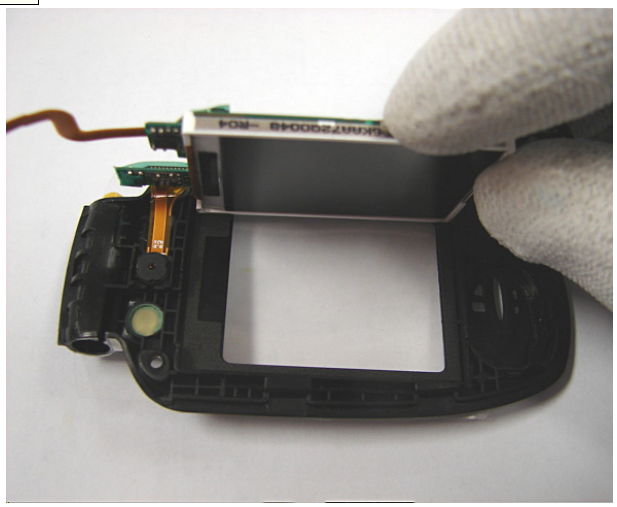


1) Insert CON TO CON to LCD and attach insulation tape.

※ caution

1) Be careful not to make scratch and molding damage!

2

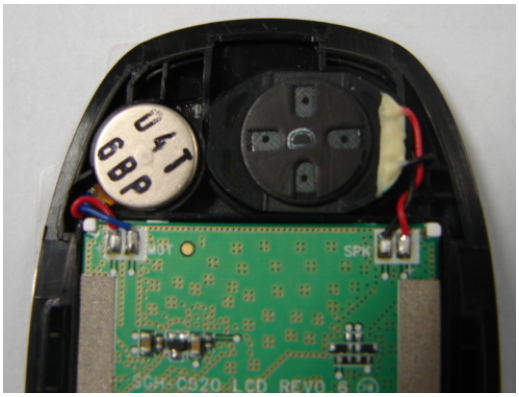


1) Insert CAMERA and LCD into FOLDER LOWER.

※ caution

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage CAMERA FPCB!

3

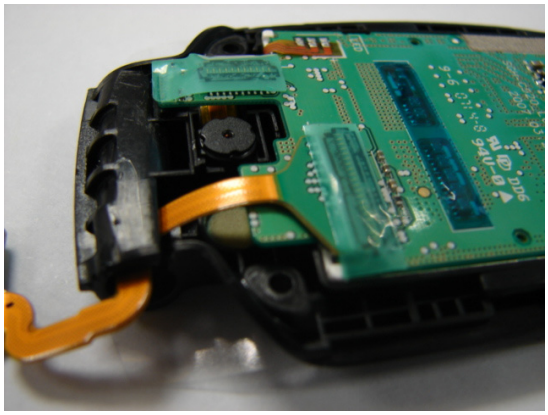


1) Twist twice SPEAKER and insert into FOLDER LOWER.
2) Twist twice MOTOR wire and insert into FOLDER LOWER.

※ caution

1) Be careful not to make scratch and molding damage!
2) Arrange Wires clearly as above picture is shown.

4



1) Insert the CON TO CON into FOLDER LOWER. detached it.

※ caution

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage CON TO CON FPCB!

5

1) Assemble FOLDER UPPER with FOLDER LOWER from the upper end to the lower end.

※ caution

1) Be careful not to make scratch and molding damage!
   Use 1.1 ± 0.1 Kgf·Cm

6

1) Screw up the FOLDER LOWER at two point.
2) Attach screw rubber caps on the screws by using a pincette.

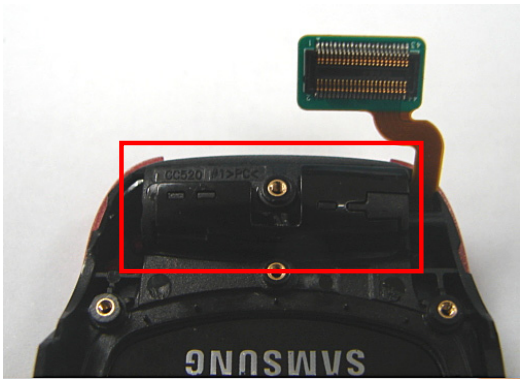
※ caution

1)Be careful not to damage CON TO CON FPCB!

7

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage CON TO CON FPCB!

8



1) Attach FRONT BRACKET.

※ caution

1) Be careful not to make scratch and molding damage!

9

1) Insert the KEYPAD into FRONT.
2) Attach insulation tape to cover metal deco.

※ **caution**

1) Be careful not to make scratch and molding damage!

10

1) Insert PBA and connect CON TO CON FPCB.
2) Screw PBA at 1 point.

※ **caution**

1) Be careful not to make scratch and molding damage!
2) Be careful not to unstable connection con to con Use 1.0 ± 0.1 Kgf·Cm

11

1) Locate VOLUME KEY and assemble REAR with FRONT. Insert left side hook as below picture.

※ **caution**

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage LOCKER.

12

1) Insert right side hook as below picture.

※ **caution**

1) Be careful not to make scratch and molding damage!
2) Be careful not to damage LOCKER.

13

1) Assemble FOLDER UPPER with FOLDER LOWER from the upper end to the lower end.

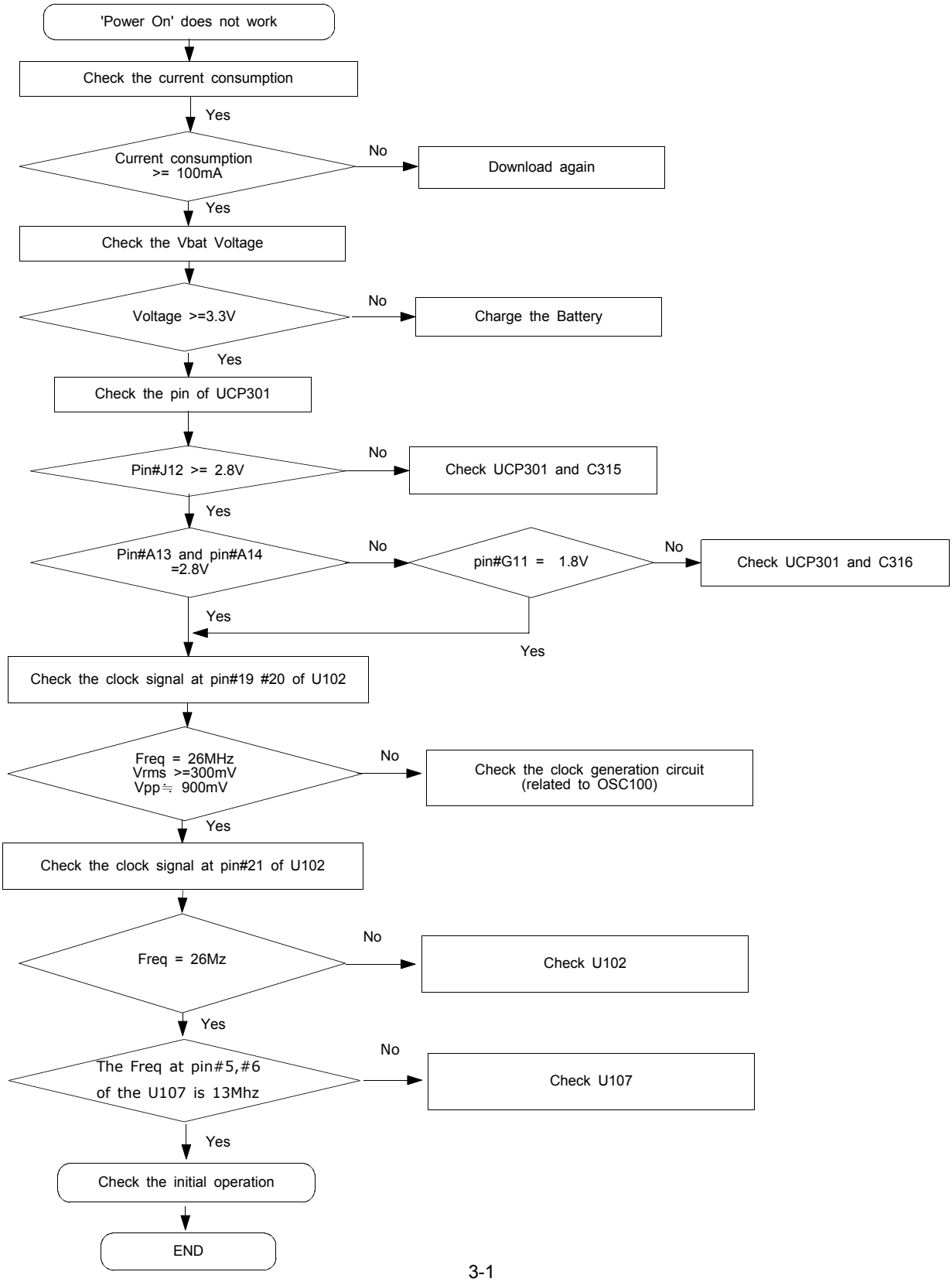
※ caution

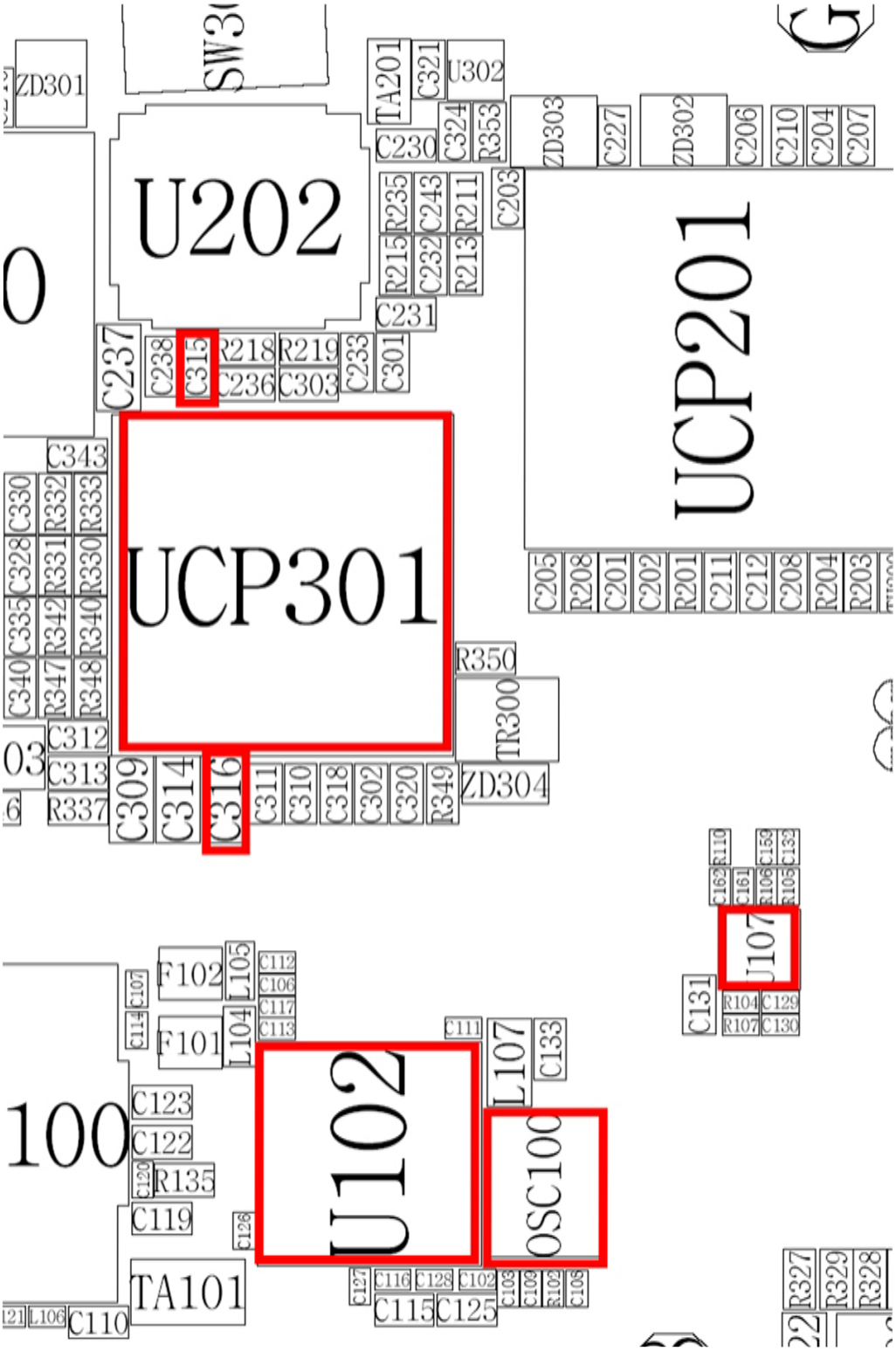
1) Be careful not to make scratch and molding damage!
   Use 1.1 ± 0.1 Kgf·Cm

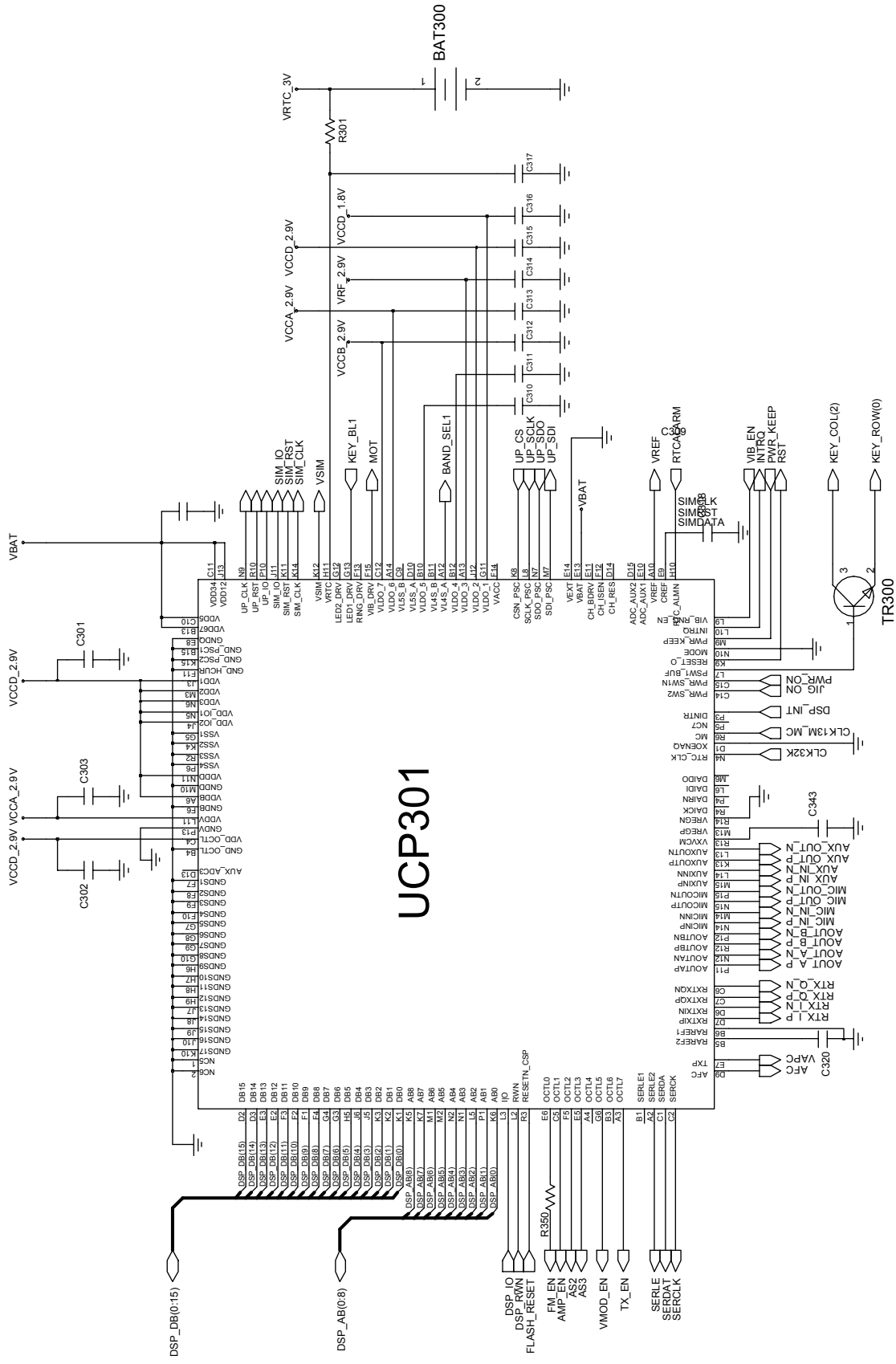
3. Flow Chart of Troubleshooting

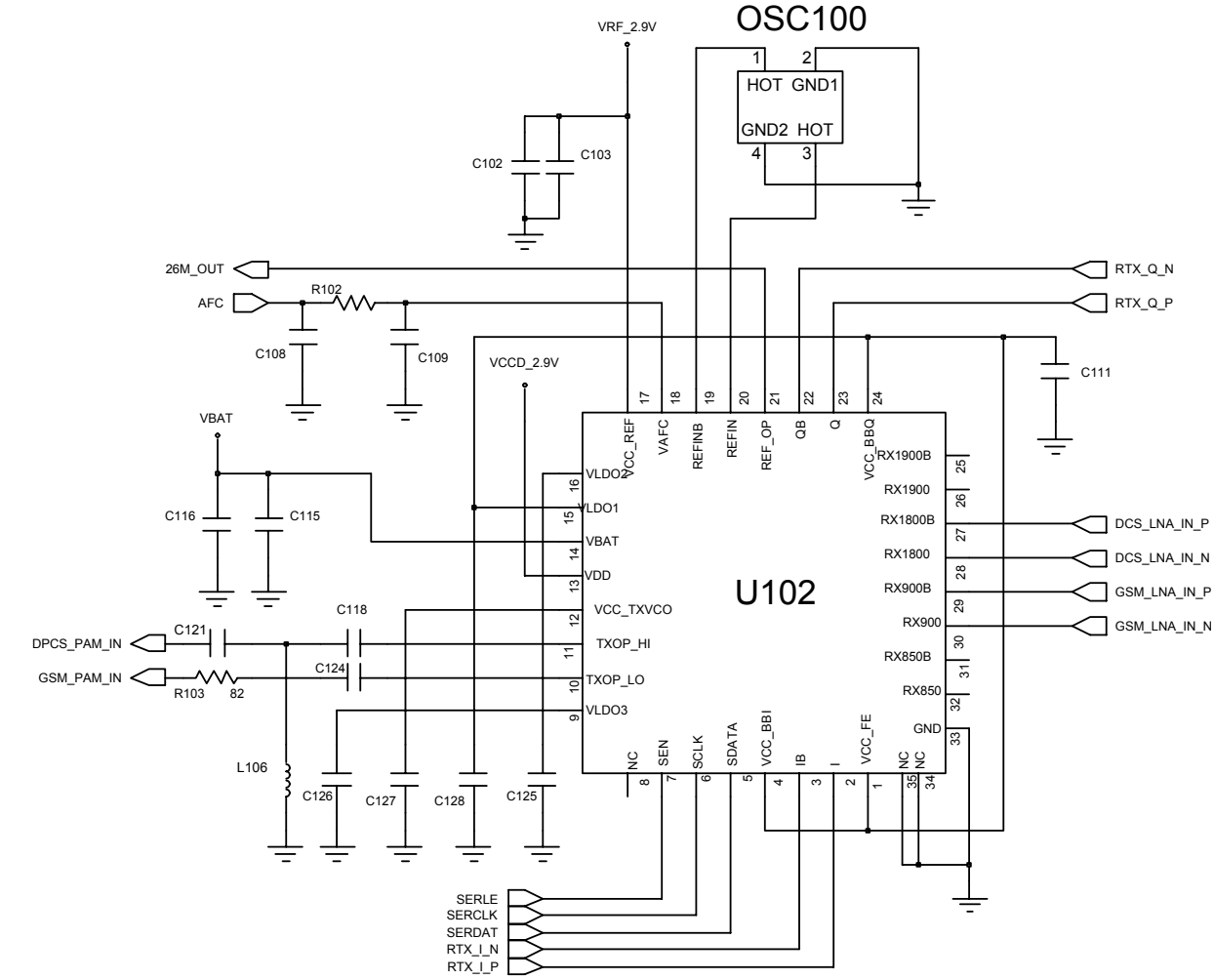
3-1.Baseband

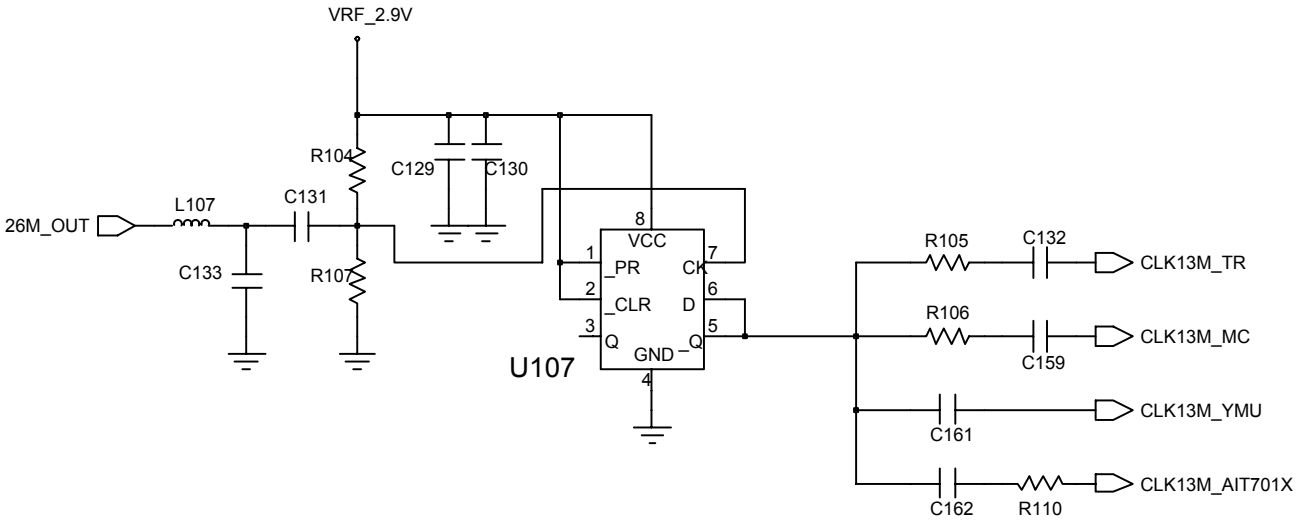
3-1-1. Power ON



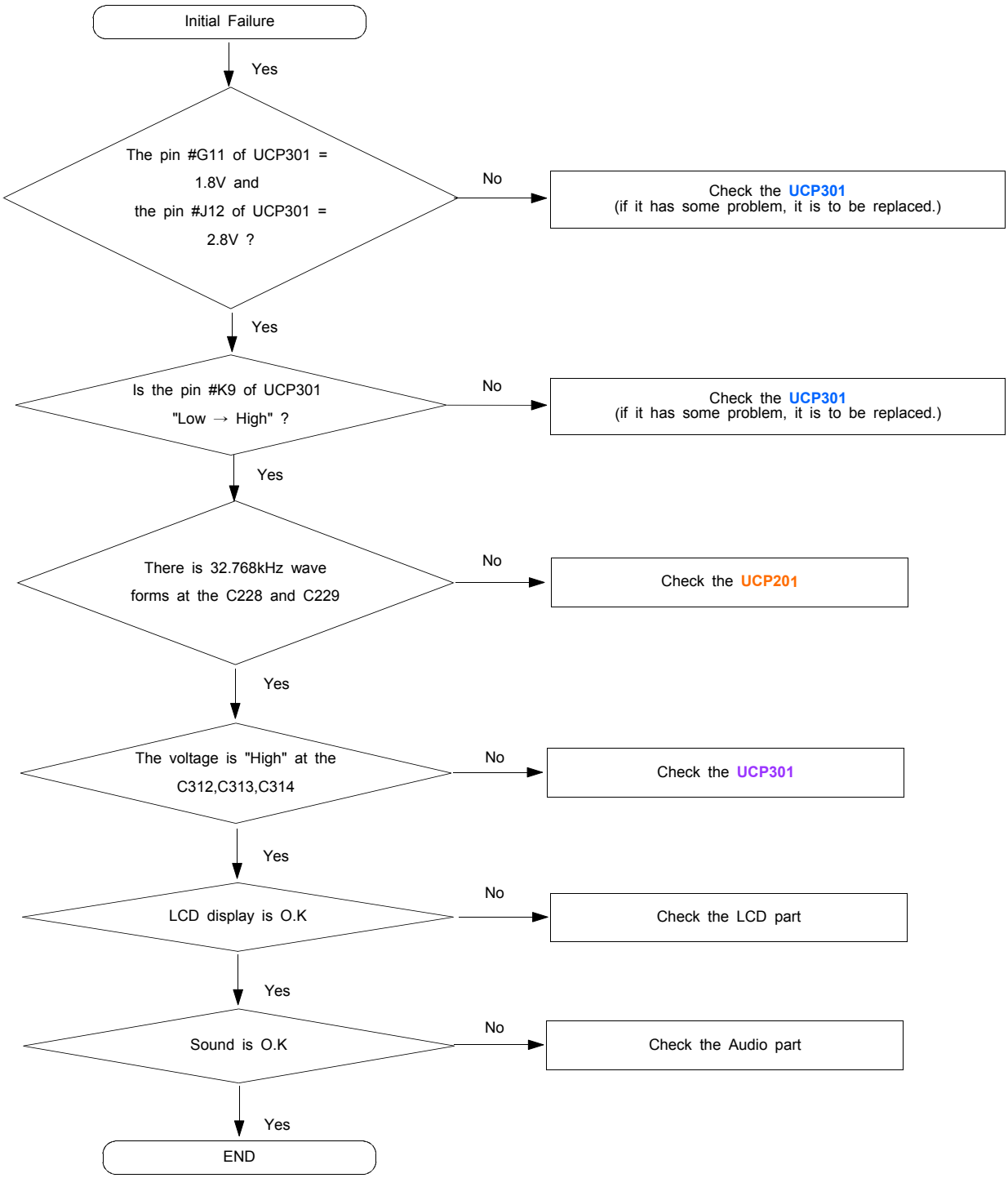


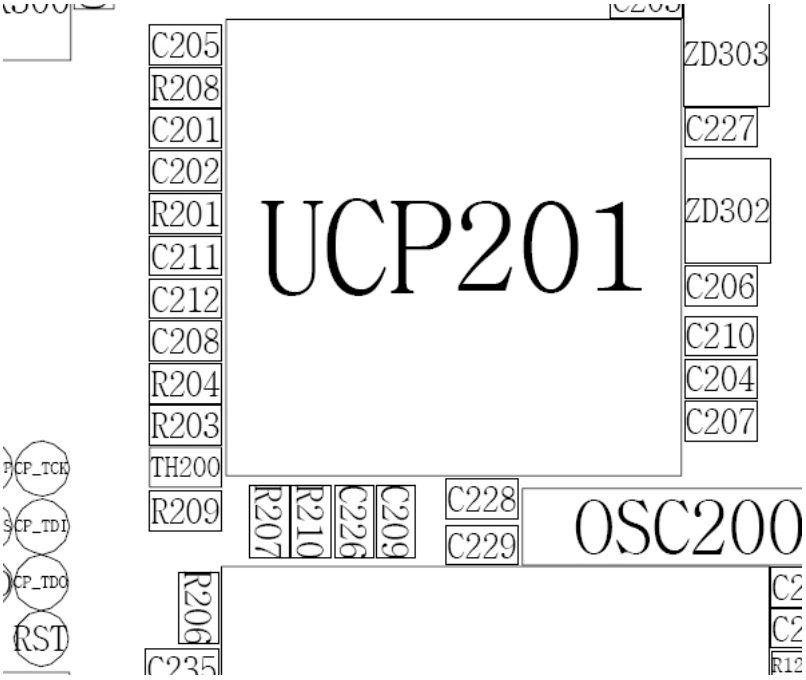


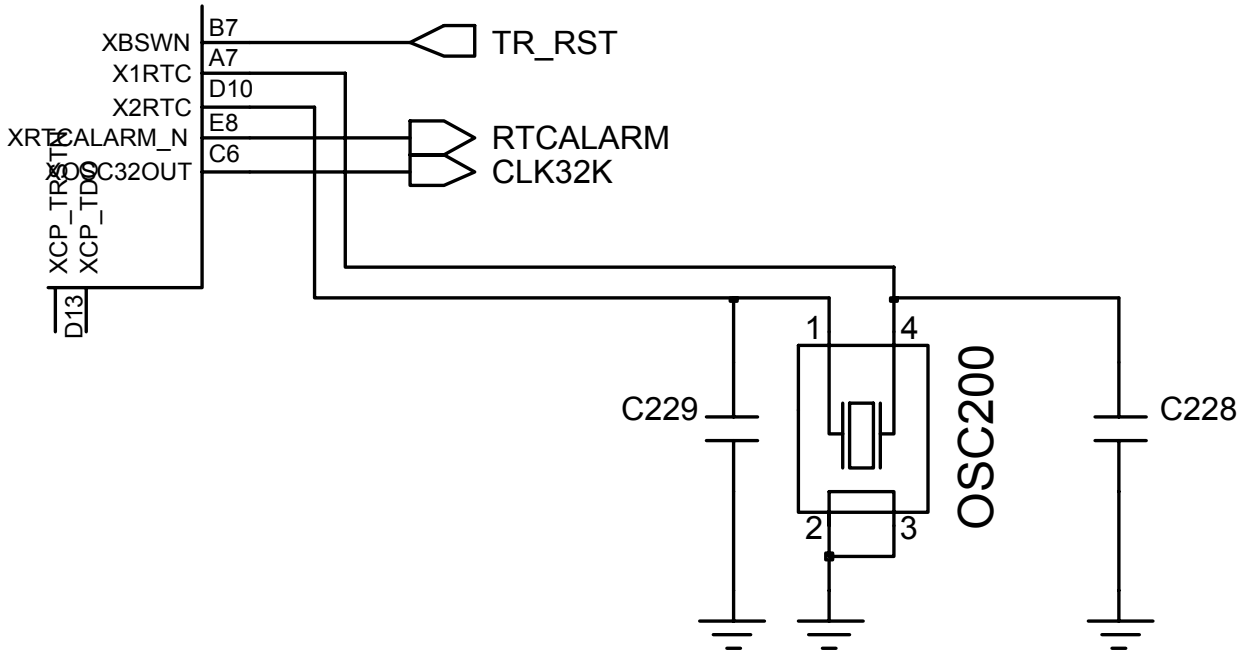




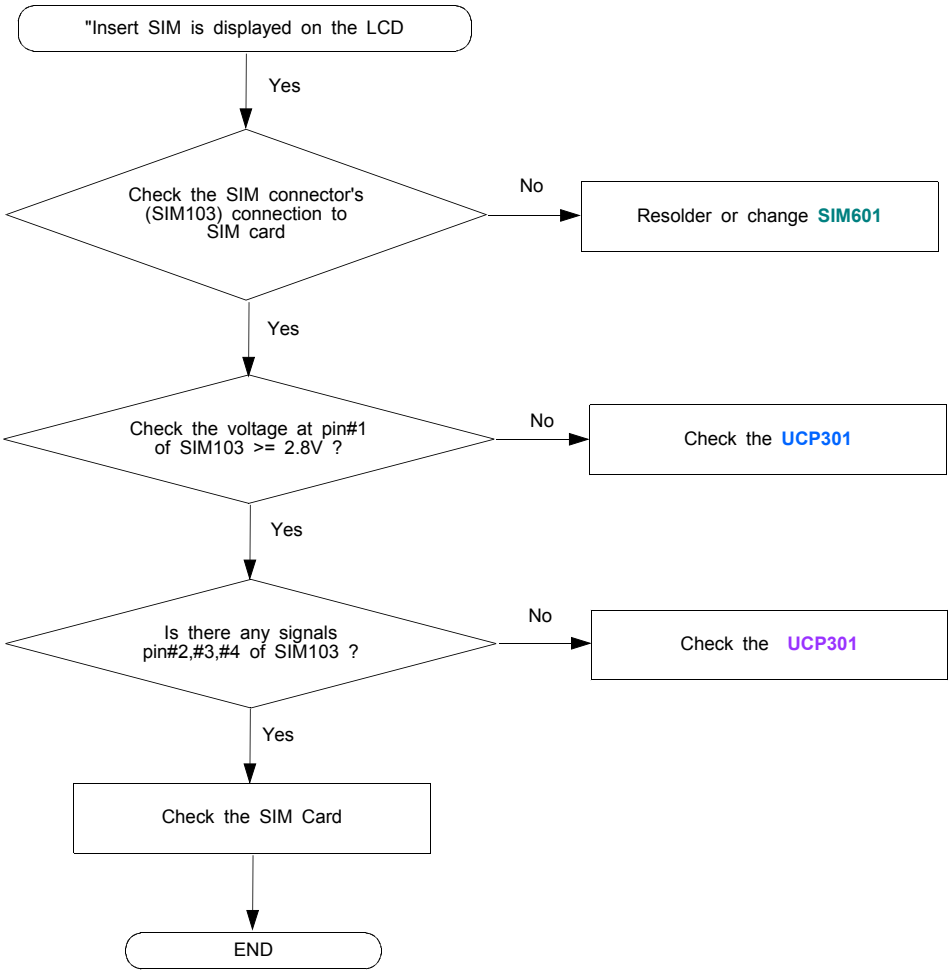
3-1-2. Initial

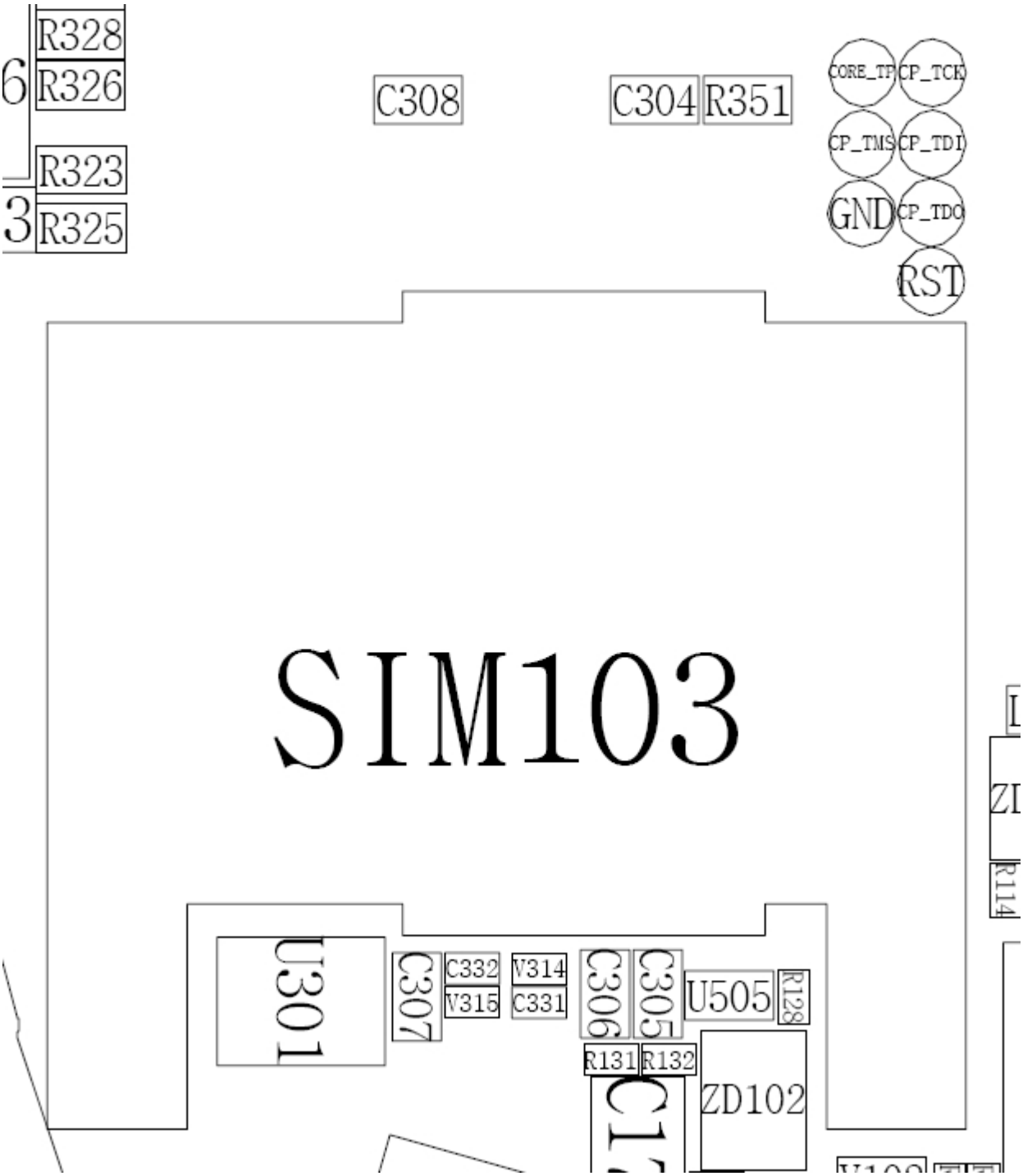


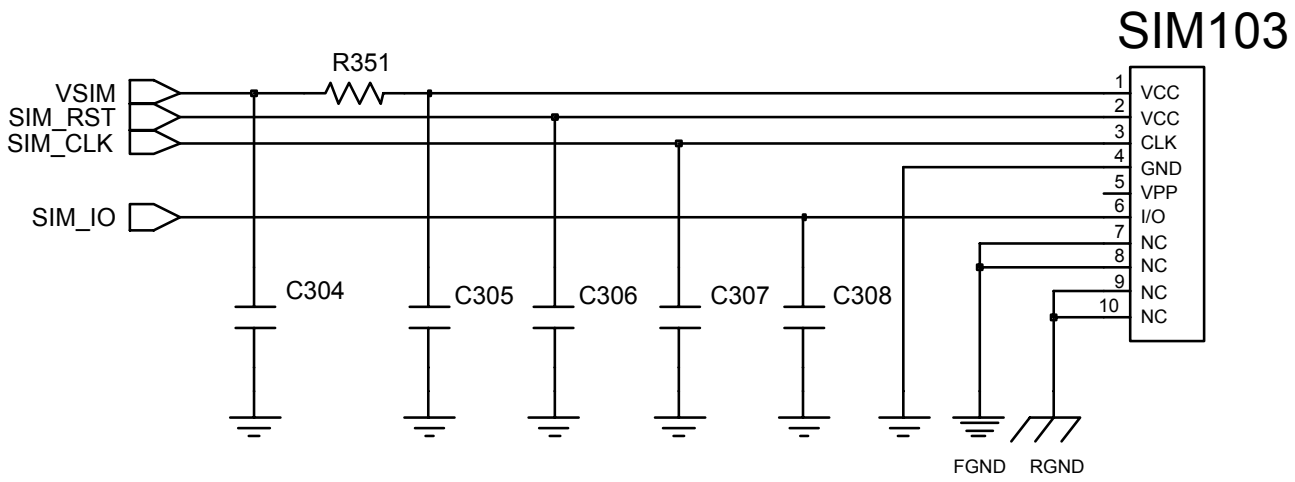




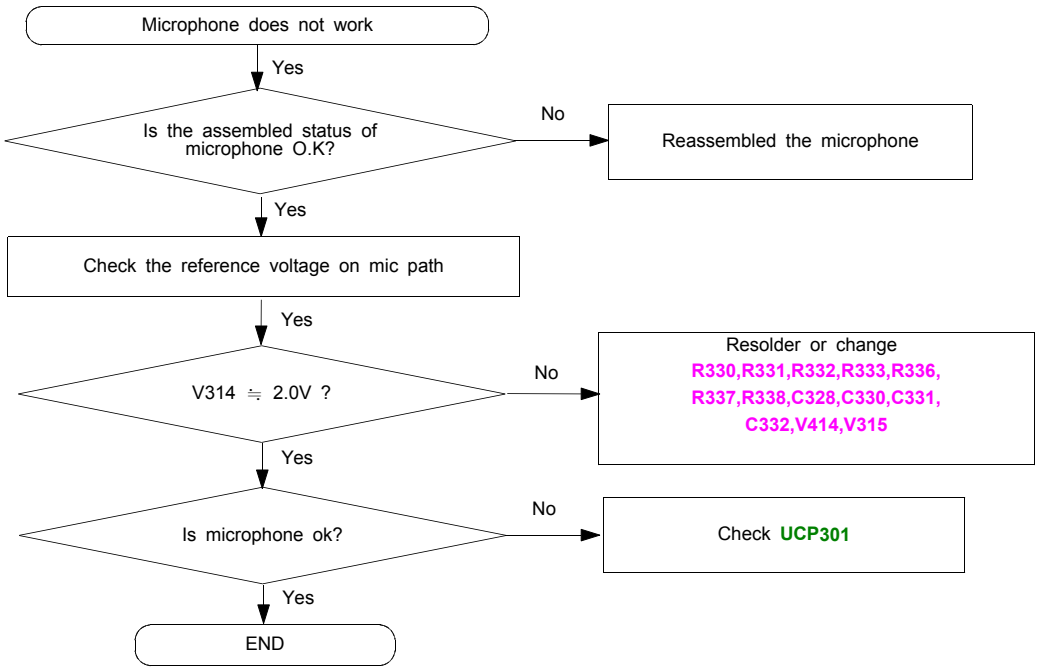
3-1-3. Sim Part

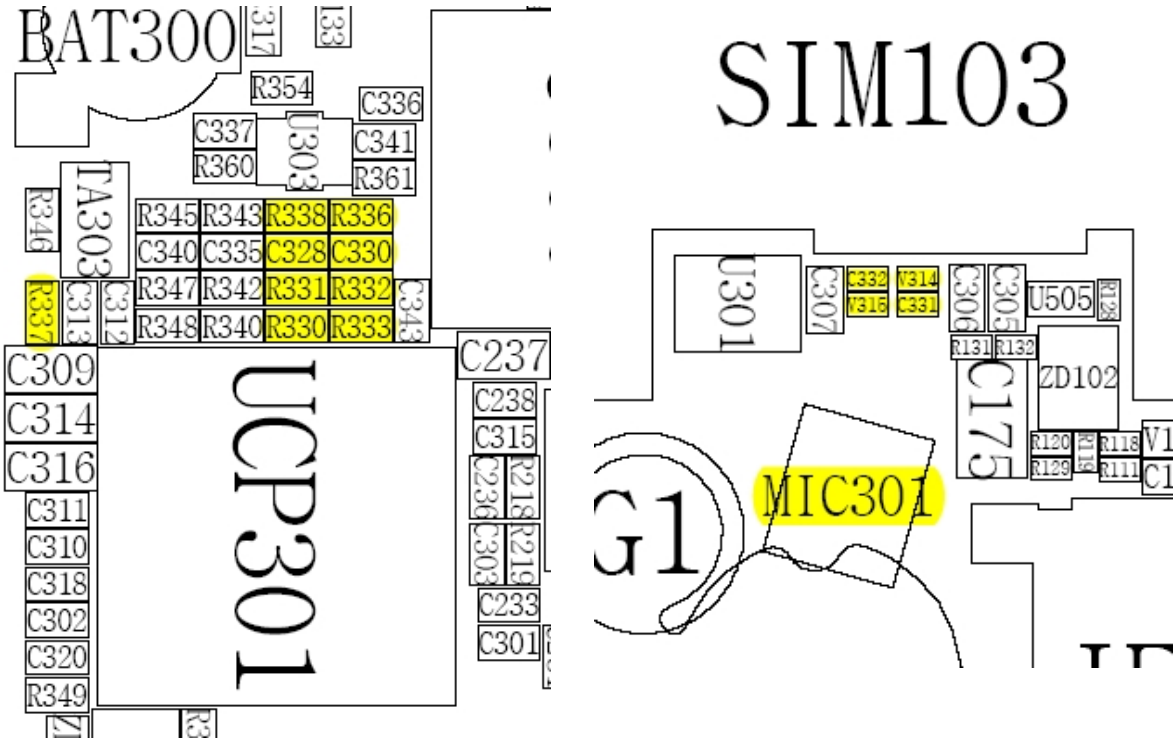


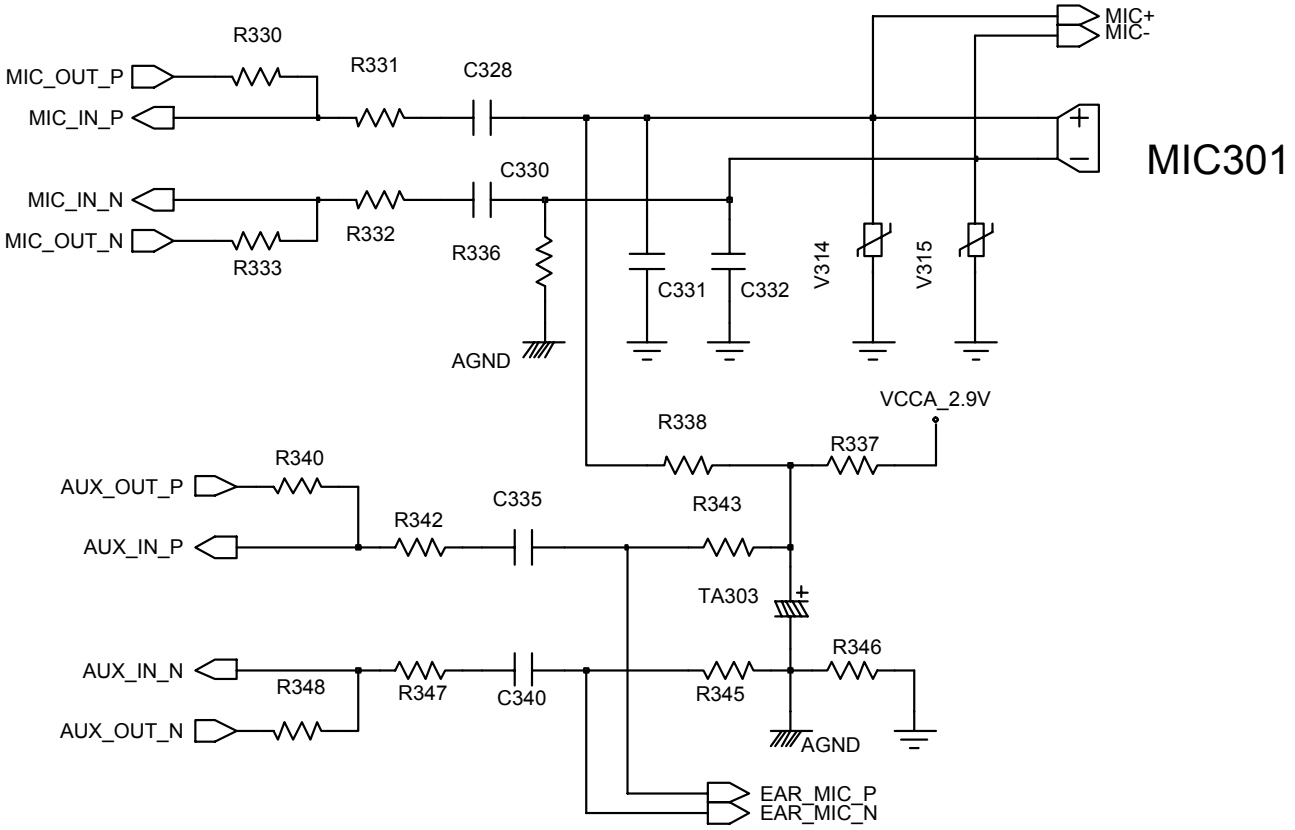




3-1-4. Microphone Part

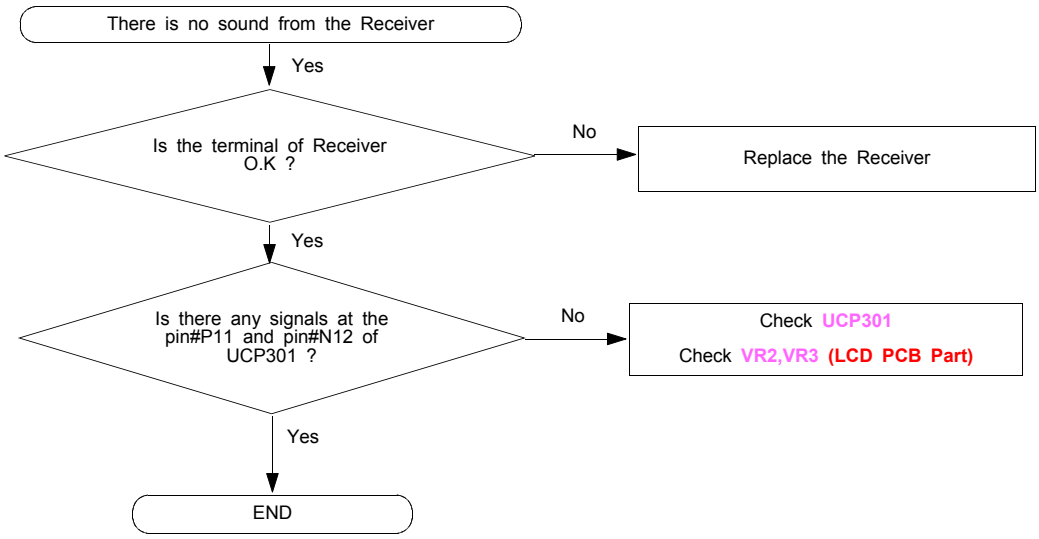




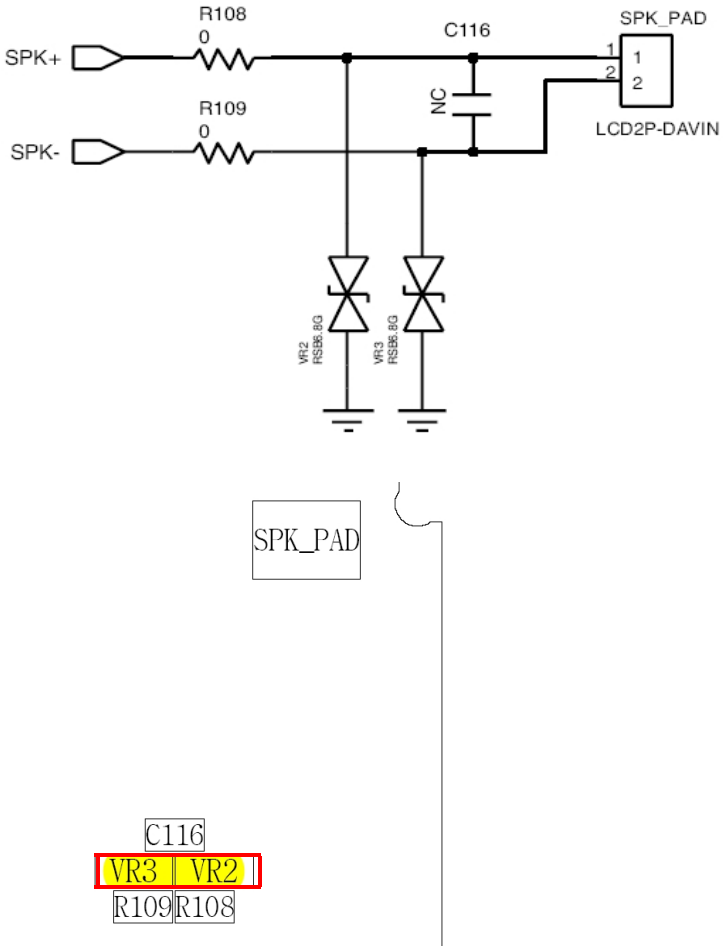


MIC301

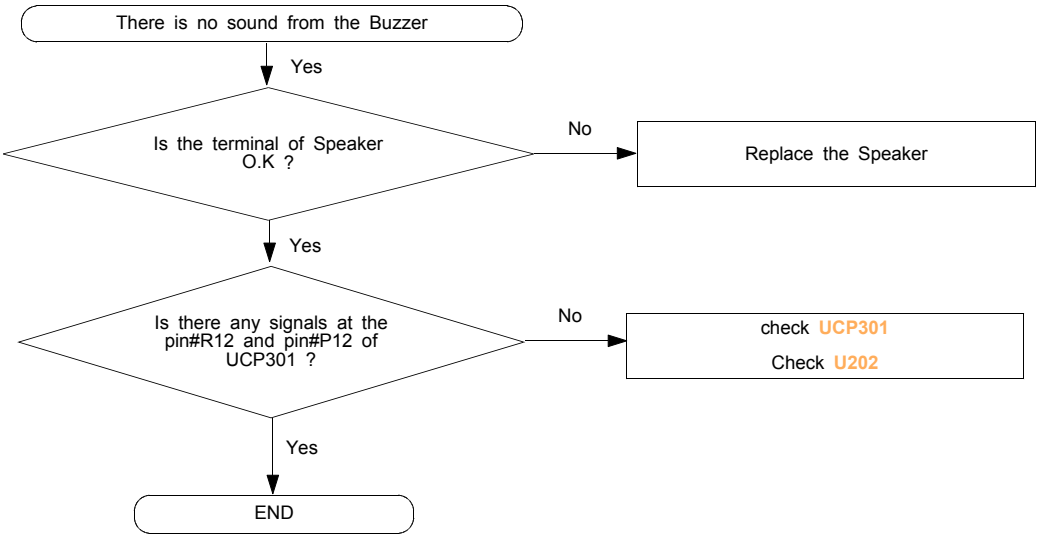
3-1-5. Receiver Part

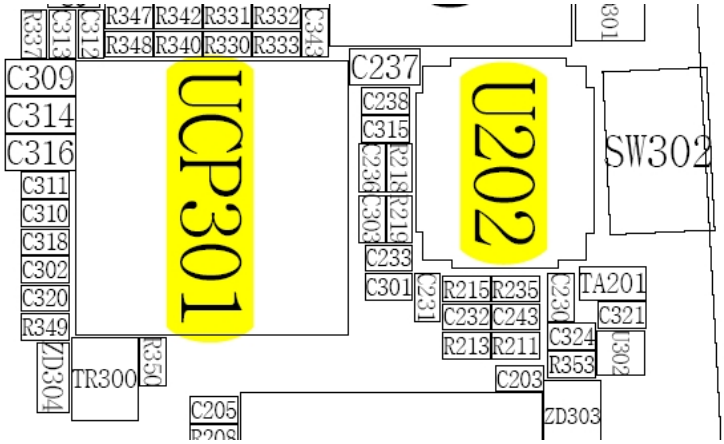


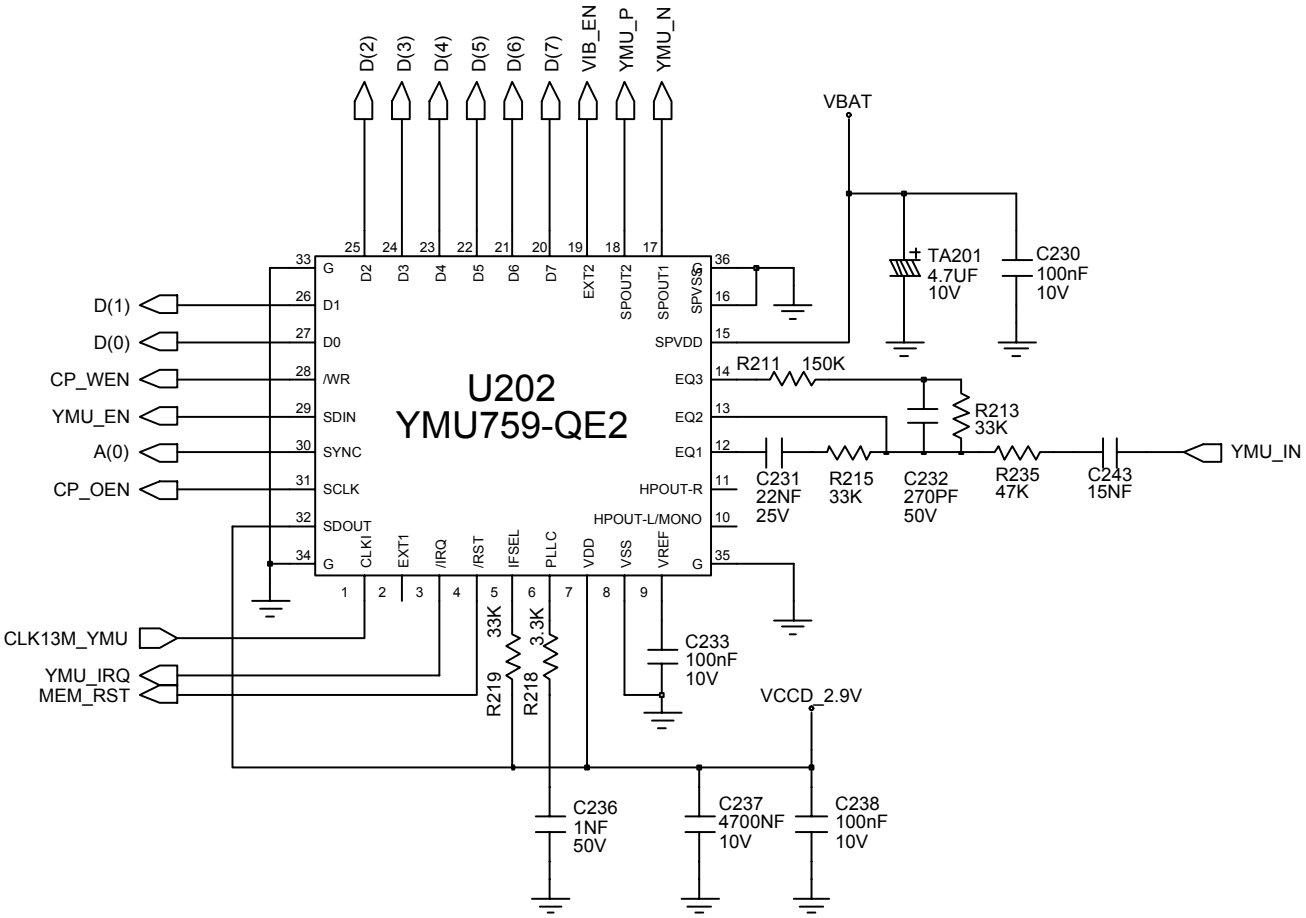
< LCD PCB Part >



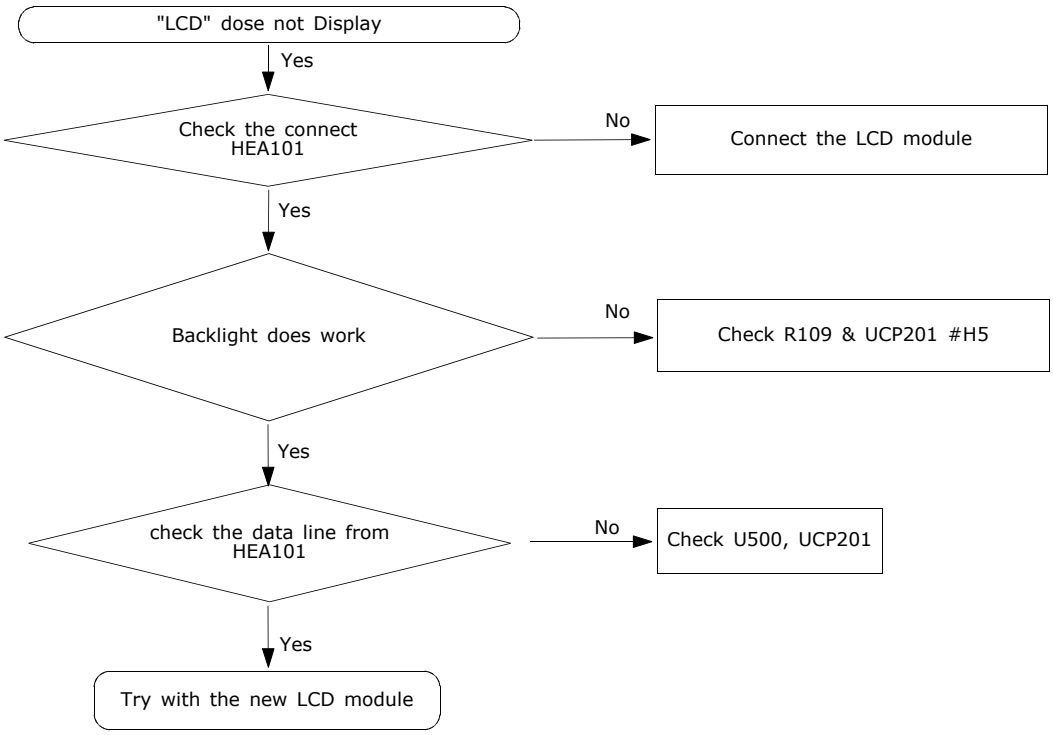
3-1-6. Speaker Part

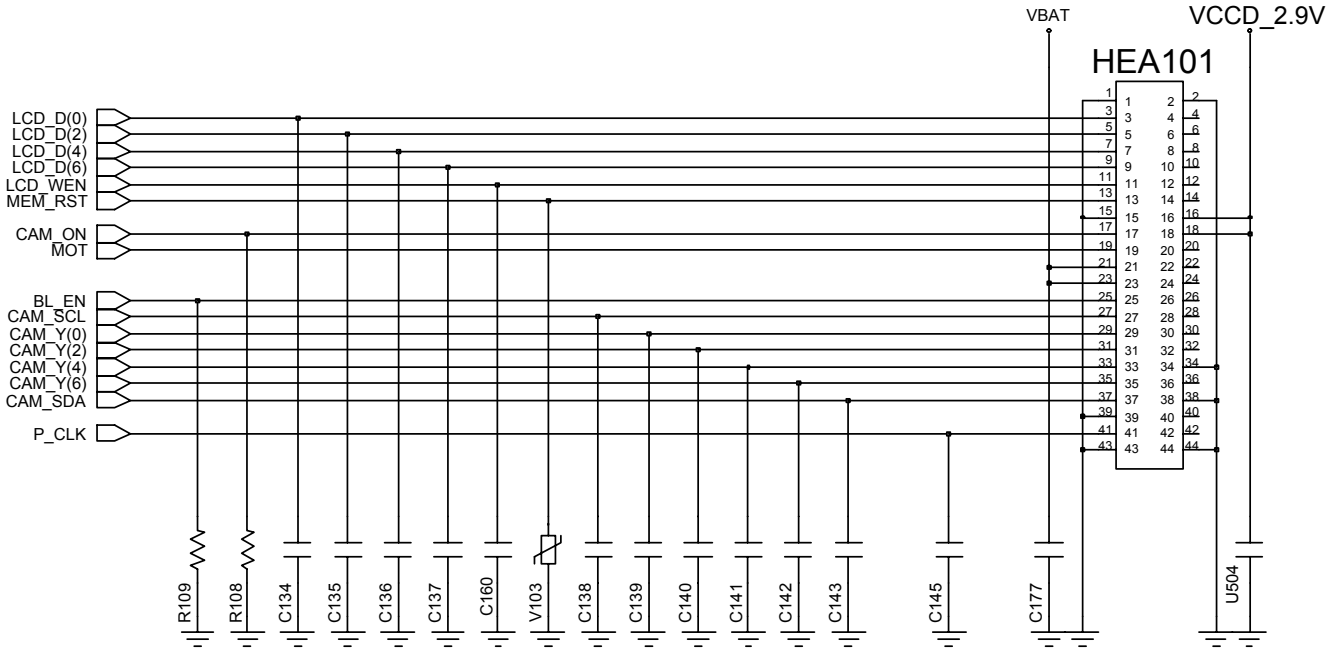


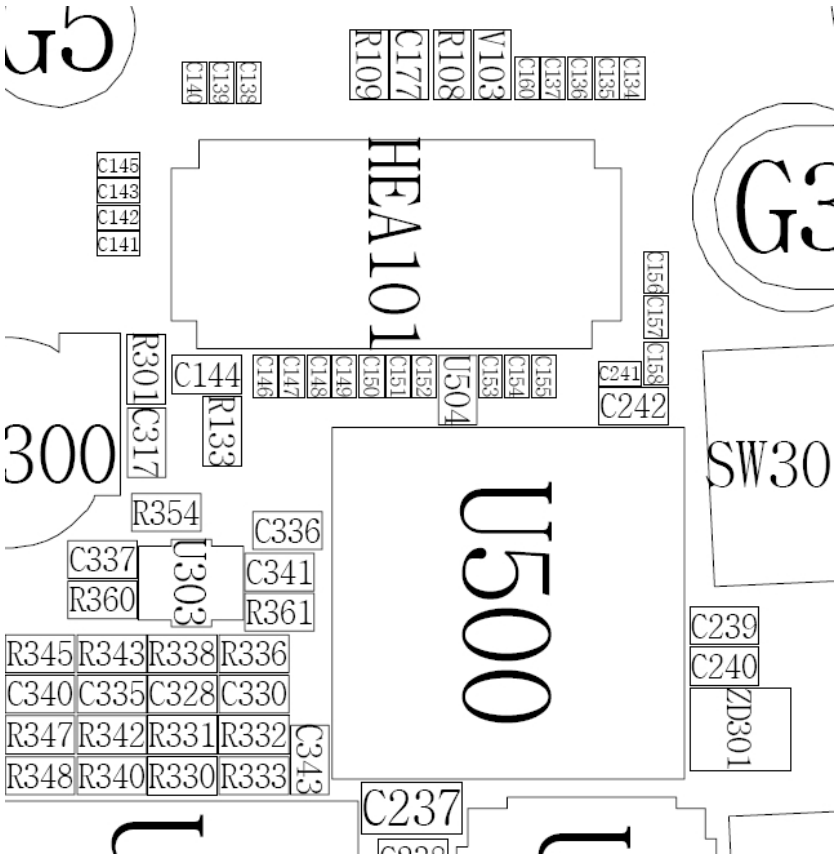




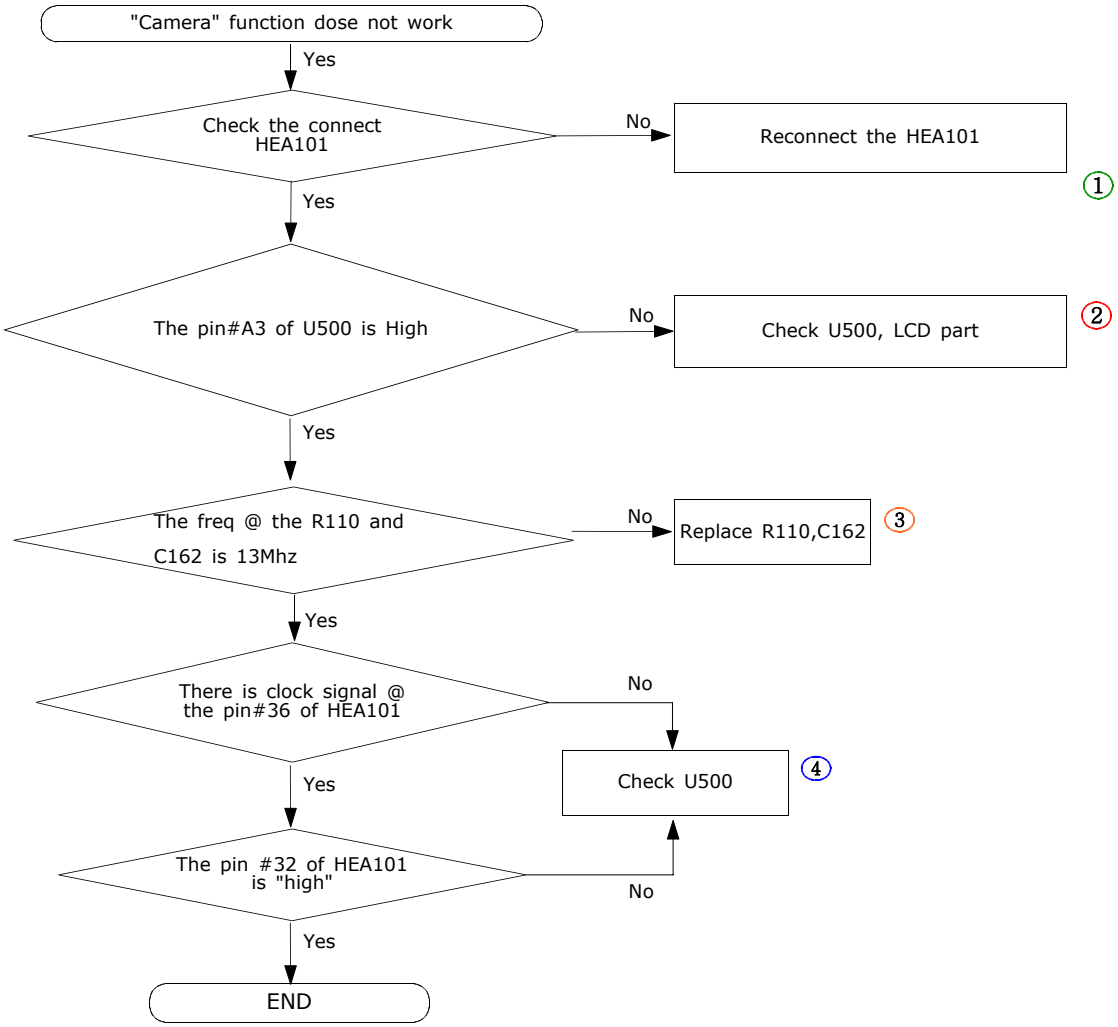
3-1-7. LCD

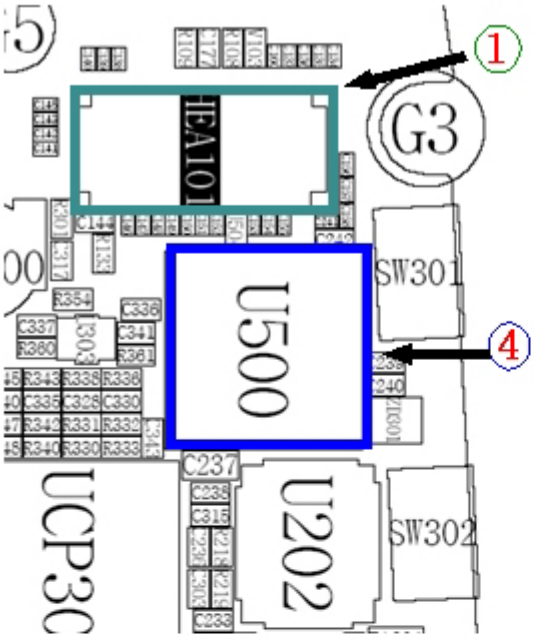


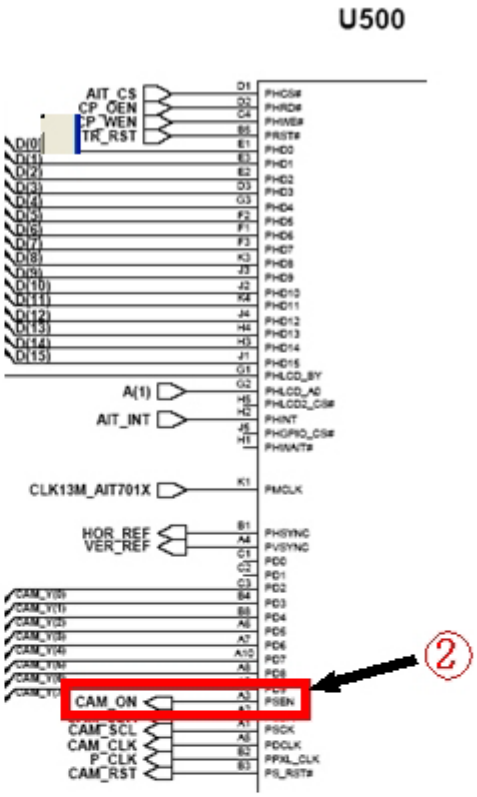




3-1-8. Camera

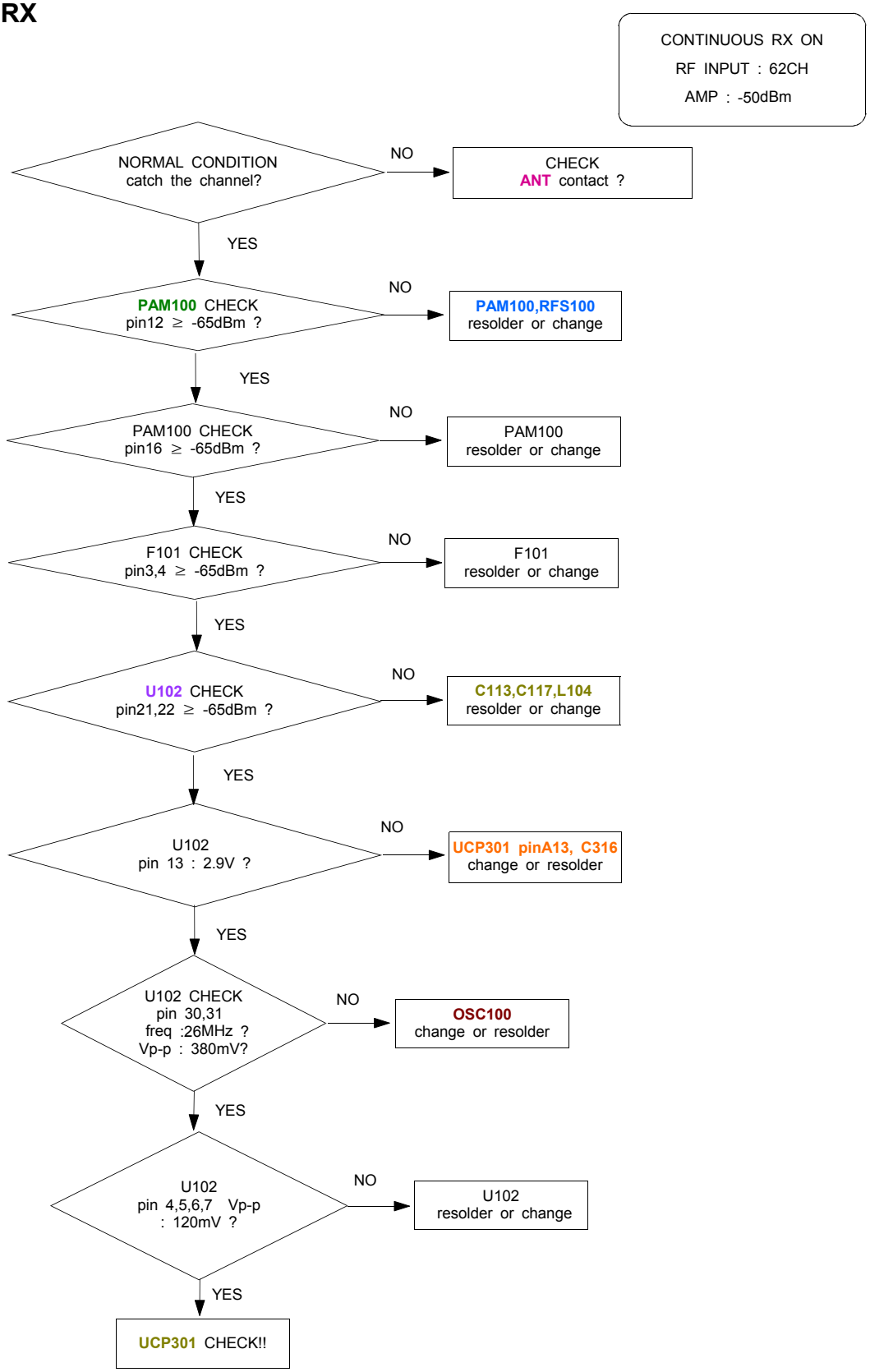






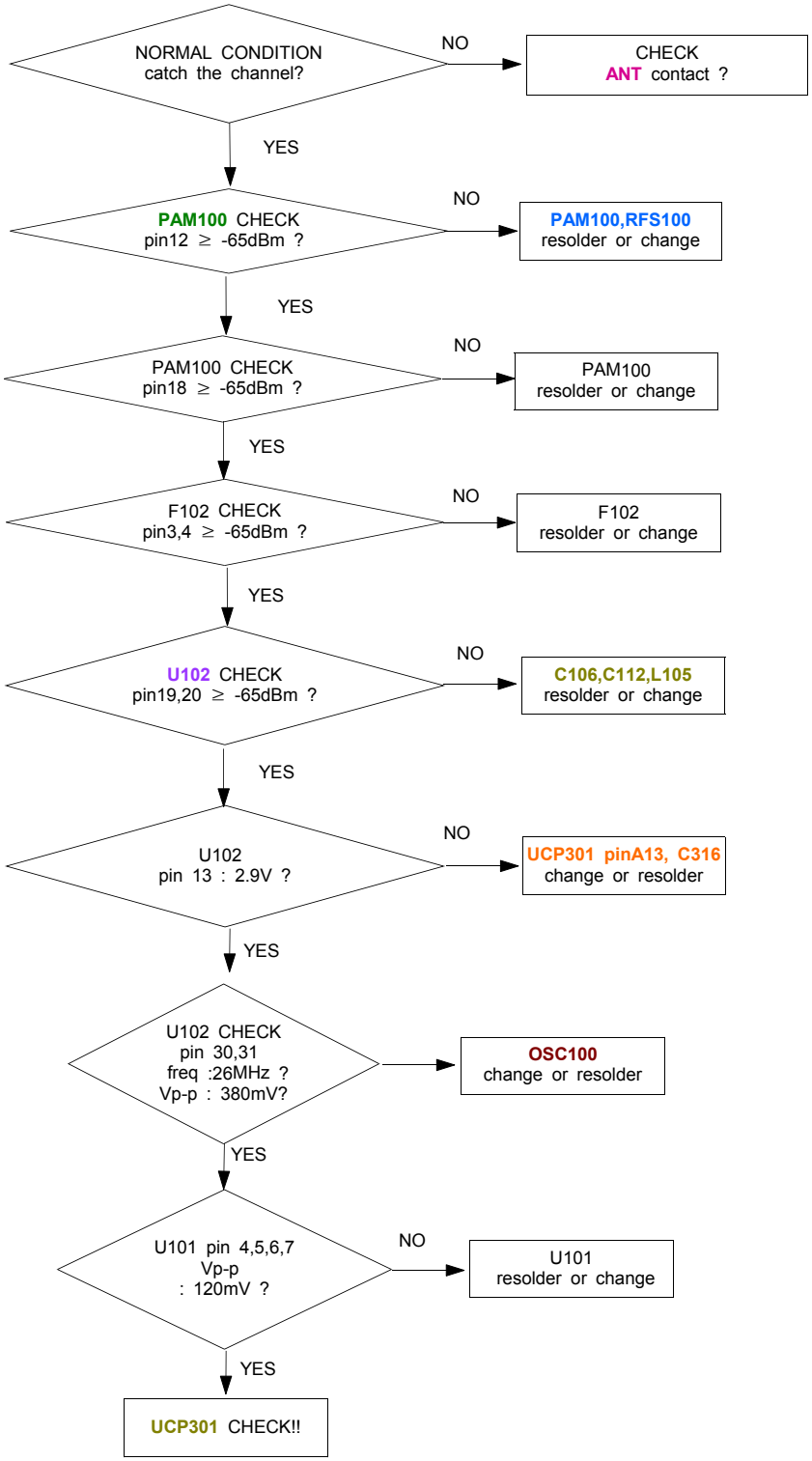
3-2.RF

3-2-1. EGSM RX

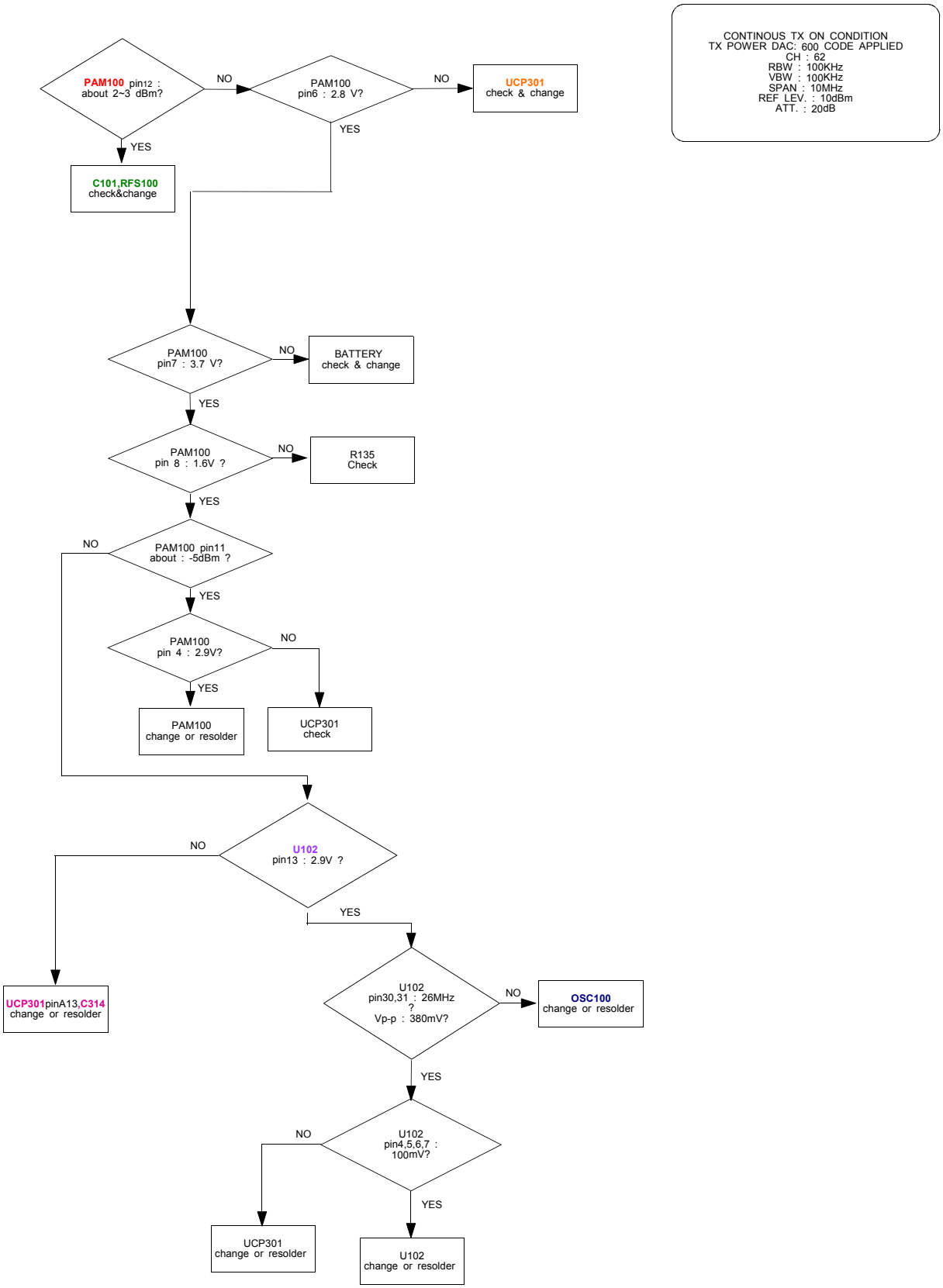


3-2-2. DCS RX

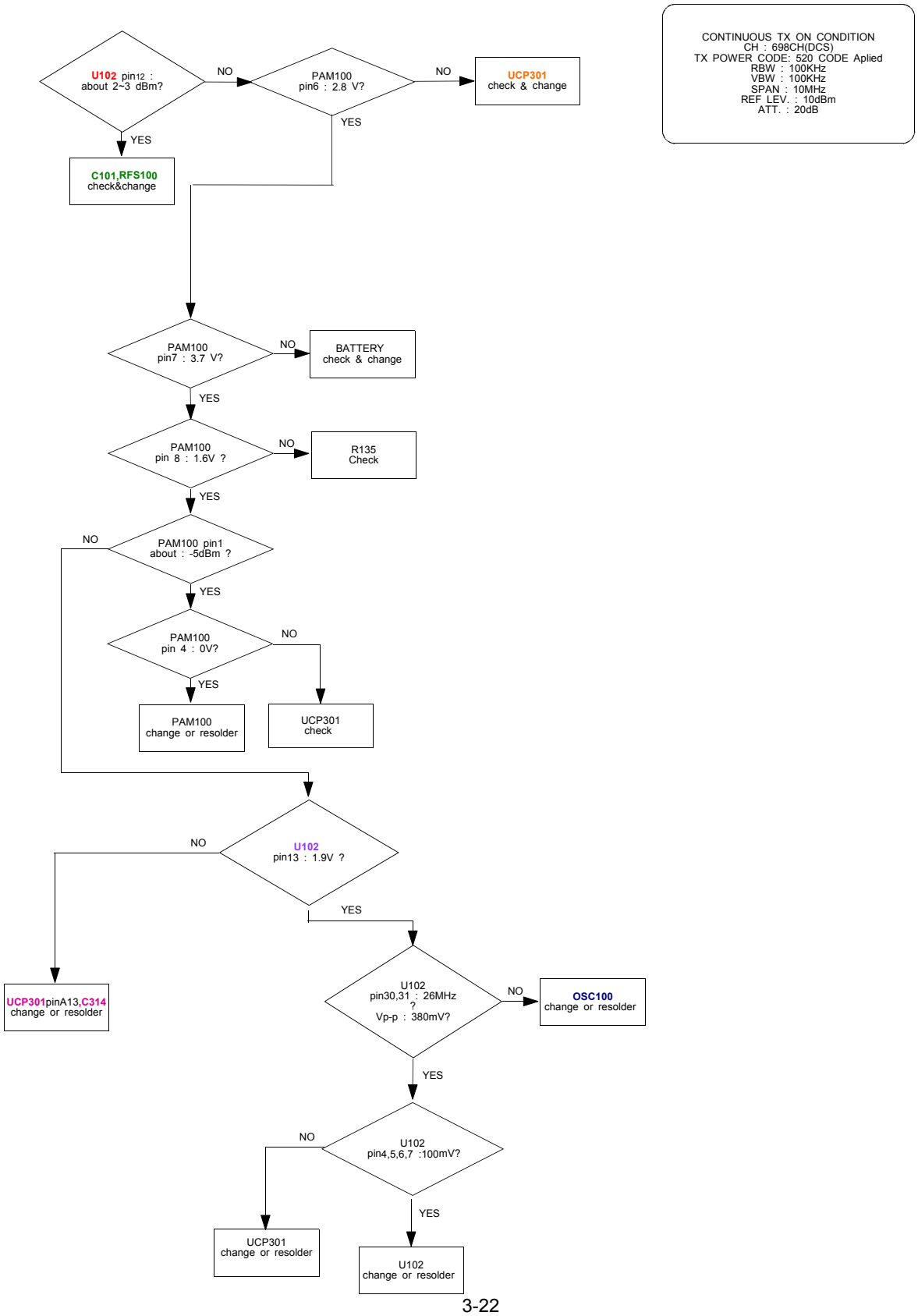
CONTINUOUS RX ON
RF INPUT : 698CH
AMP : -50dBm

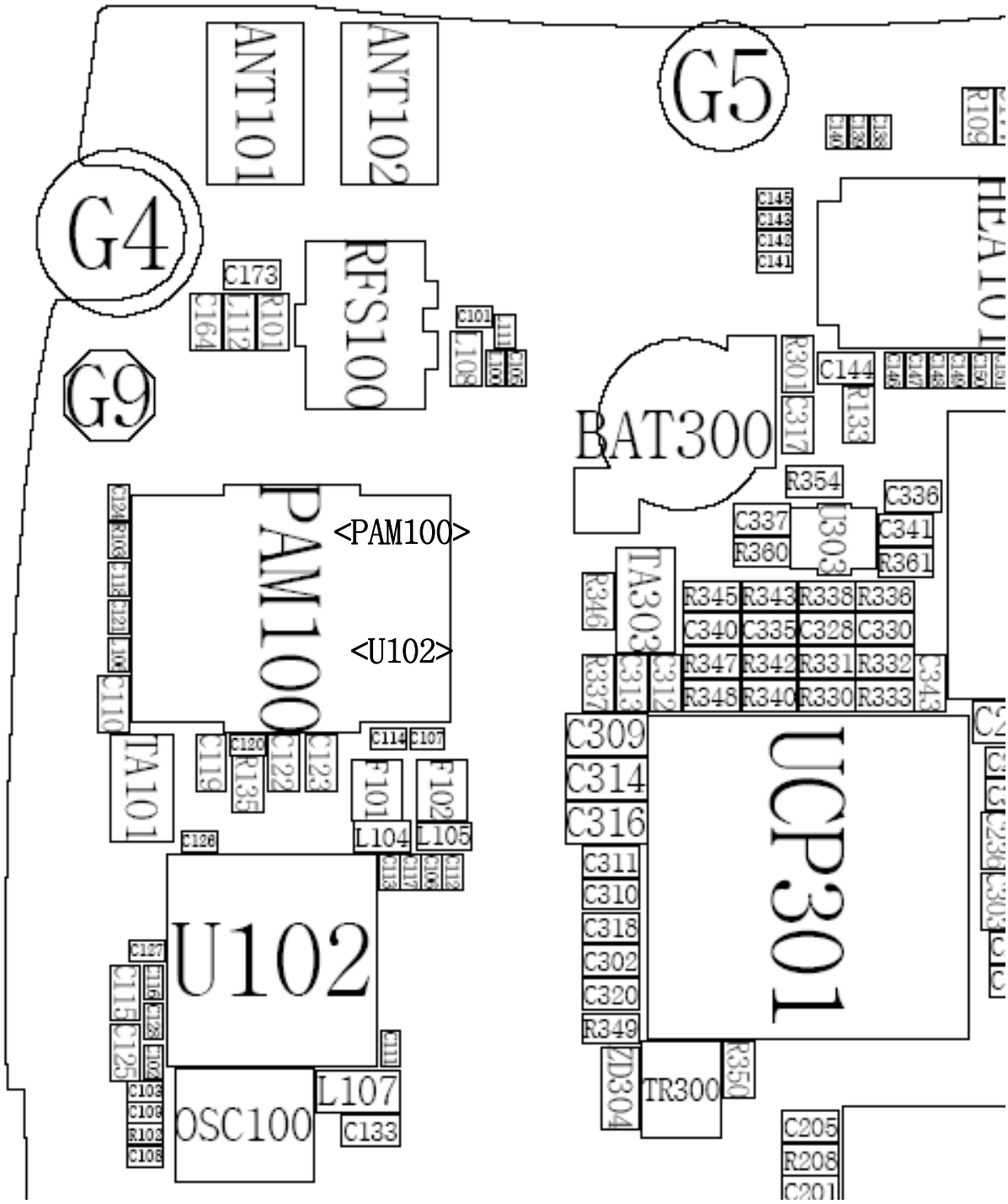


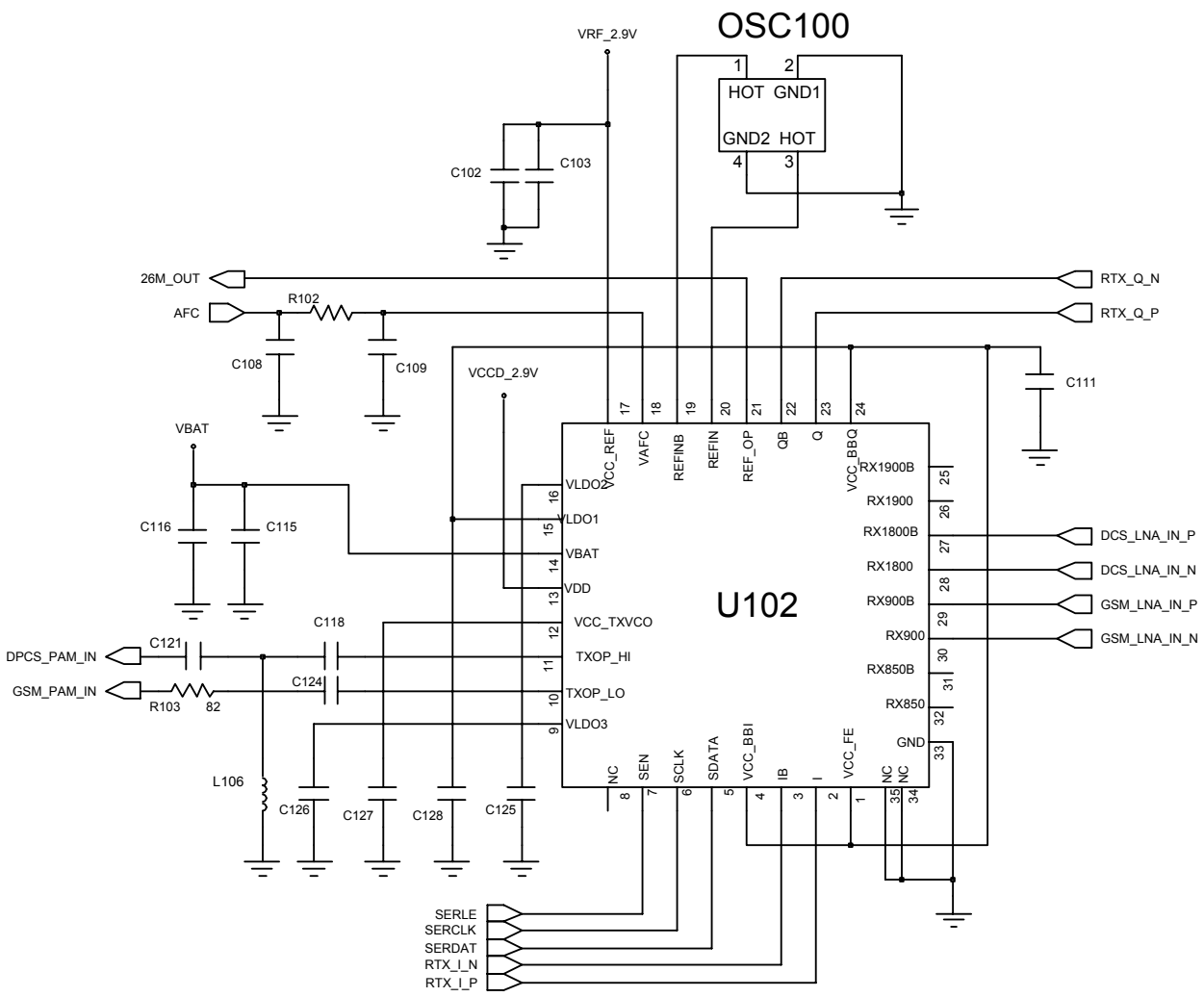
3-2-3. EGSM TX

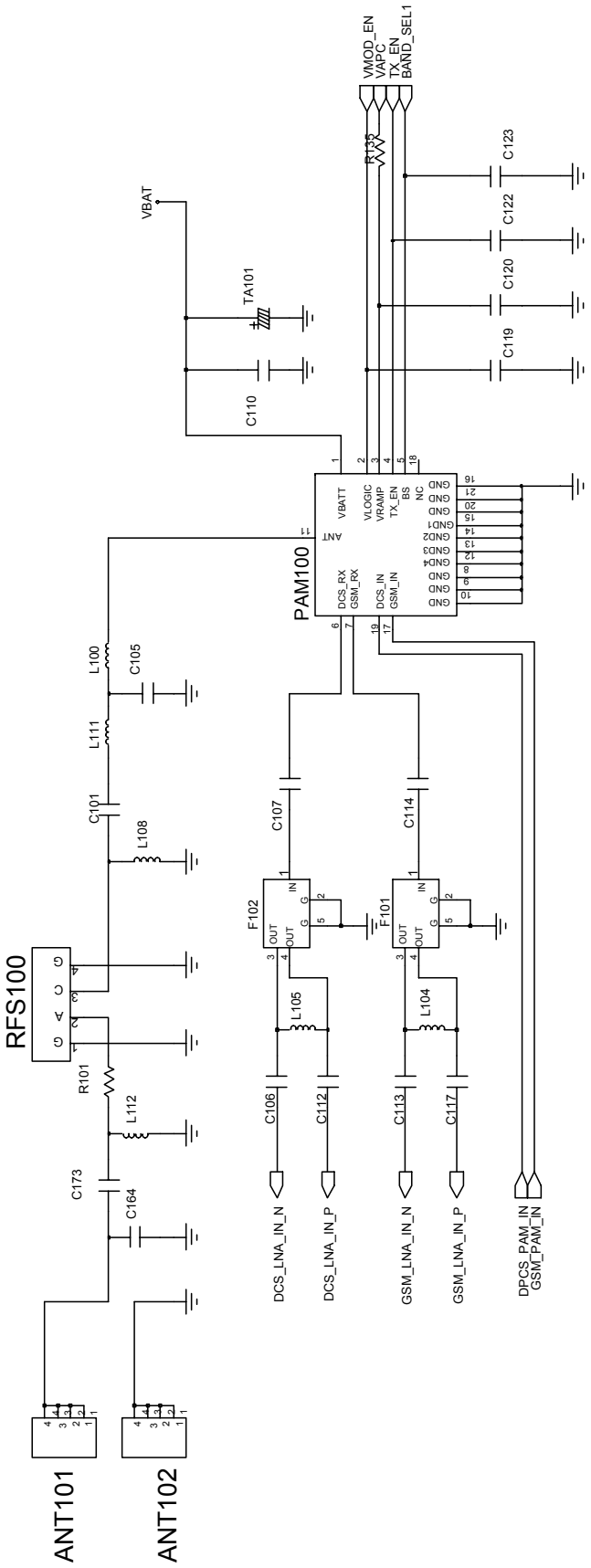


3-2-4. DCS TX









4. Array course control

Test Jig (GH80-00865A)

Test Cable (GH39-00501A)

RF Test Cable (GH39-00397A)

Software Downloading

4-1. Downloading Binary Files

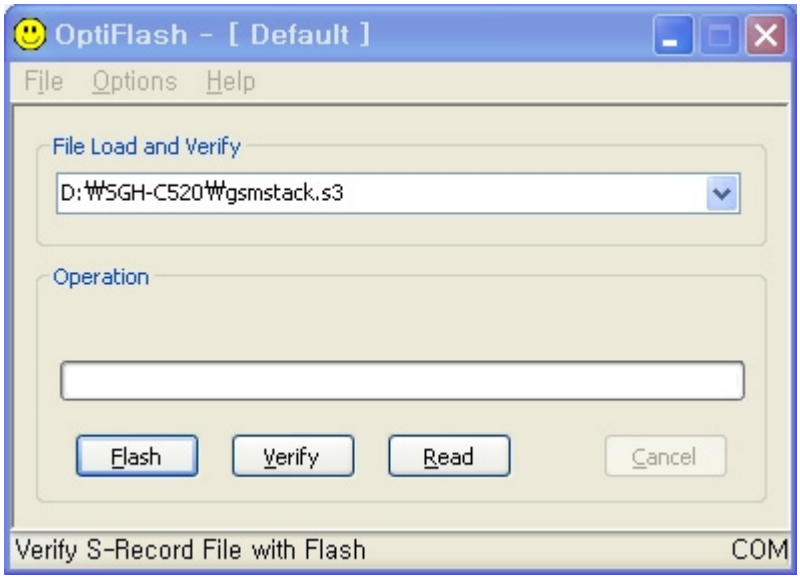
- Three binary files for downloading C520
  - C520XXYYY.s3 : Main source code binary

4-2. Pre-requsite for Downloading

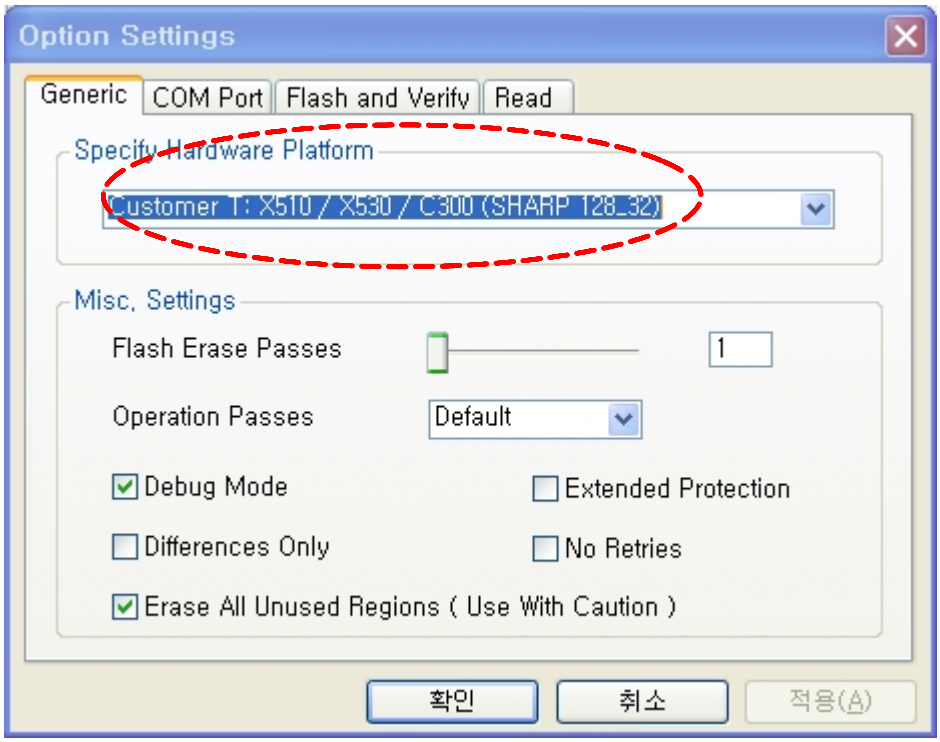
- Downloader Program(**OptiFlash.exe**)
- C520 Mobile Phone
- Data Cable
- Binary files

4-3. S/W Downloader Program

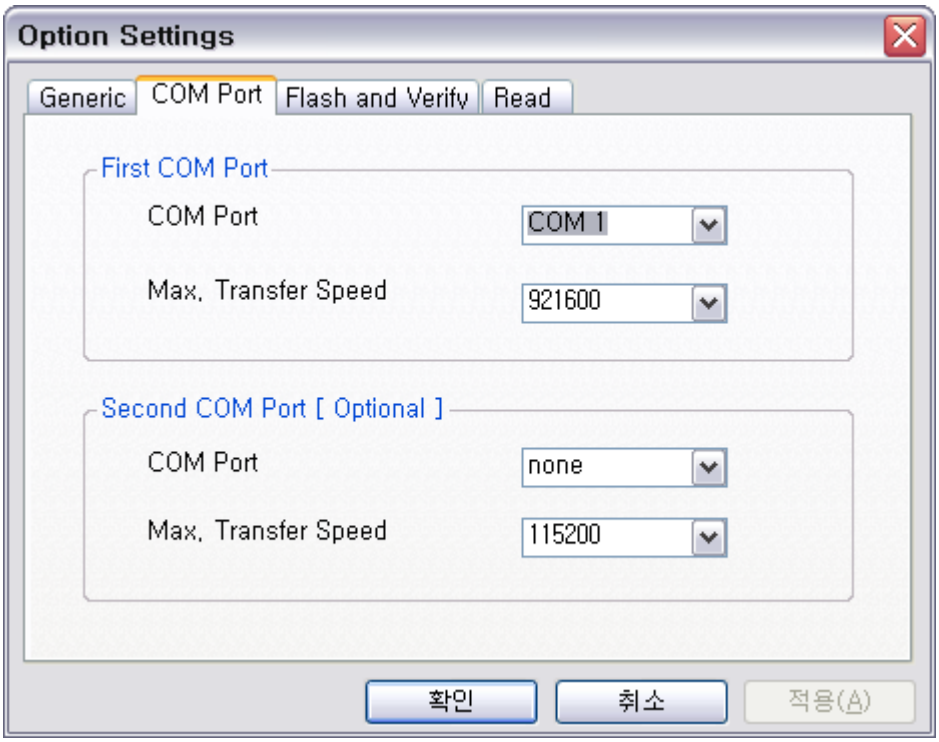
1. Load the binary download program by executing the "**Optiflash.exe**"



2. Select the **"Options" → "Settings" → "Generic" → "Specify hardware platform"**.
   Choose hardware platform for the downloader file setting.
   Set the everything else as the default values which are shown below

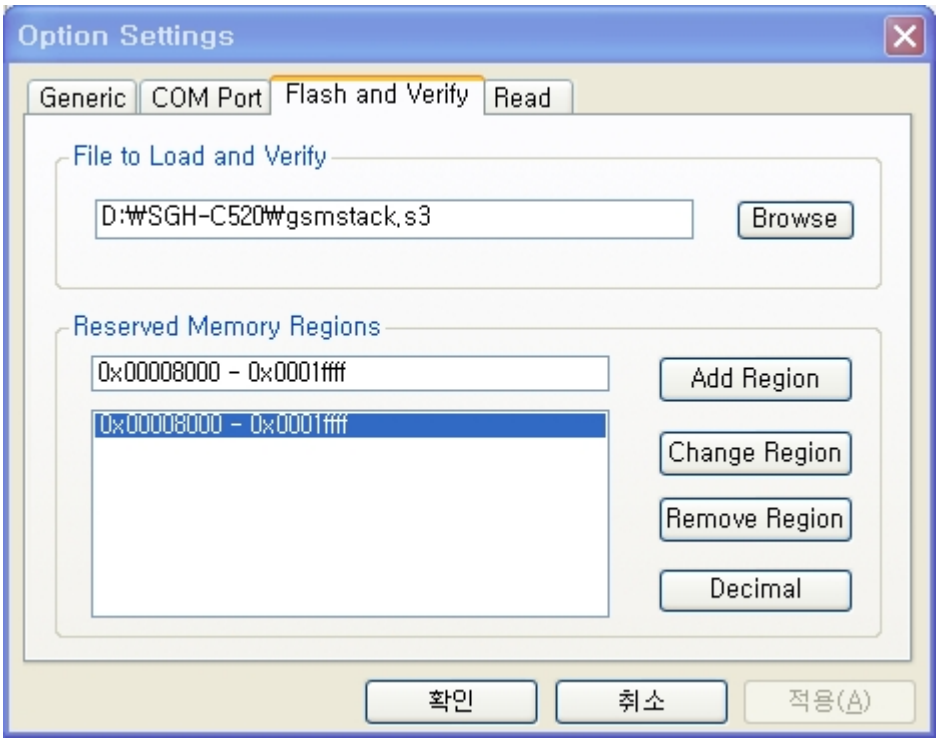


3.Select the **COM port** when the download cable is connected



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

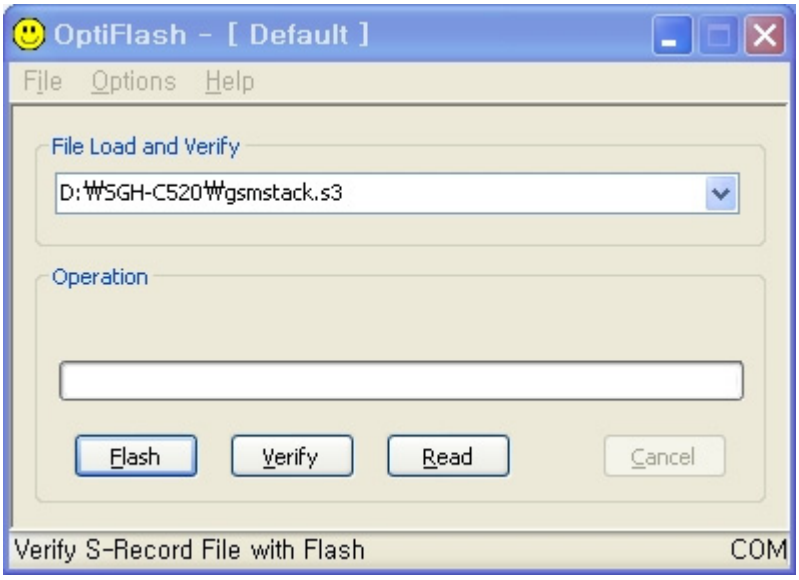
4. Select the **"Flash&Verify" → "Browse"**
Set the directory path and choose the lastet s/w binary, for example "C520XXYYY.s3", for the downloader binary setting.



Make sure that not to change the reserved memory regions.
In case of C520 the reserved regions are :
- 0x00008000 - 0x0001ffff

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.

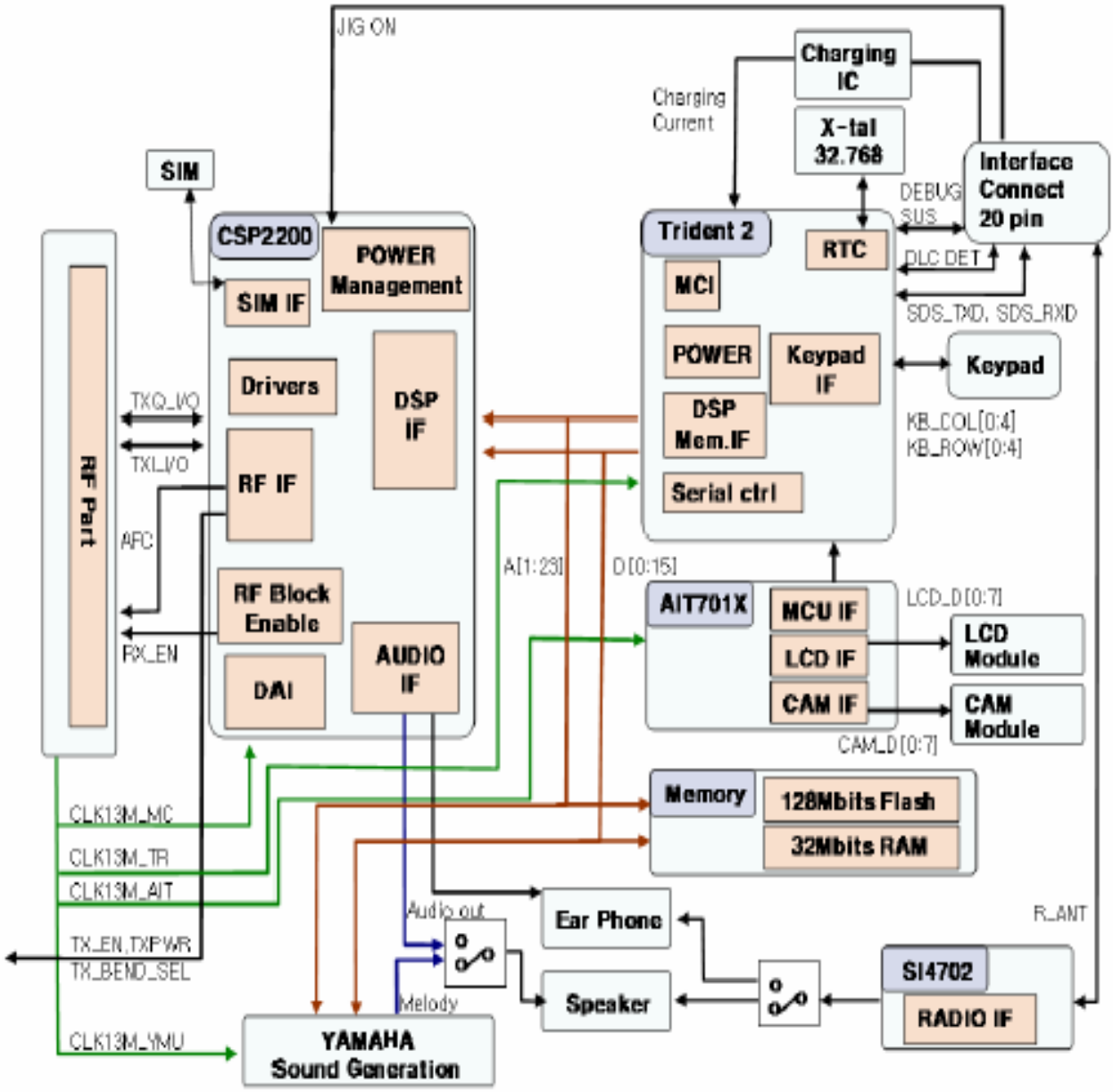


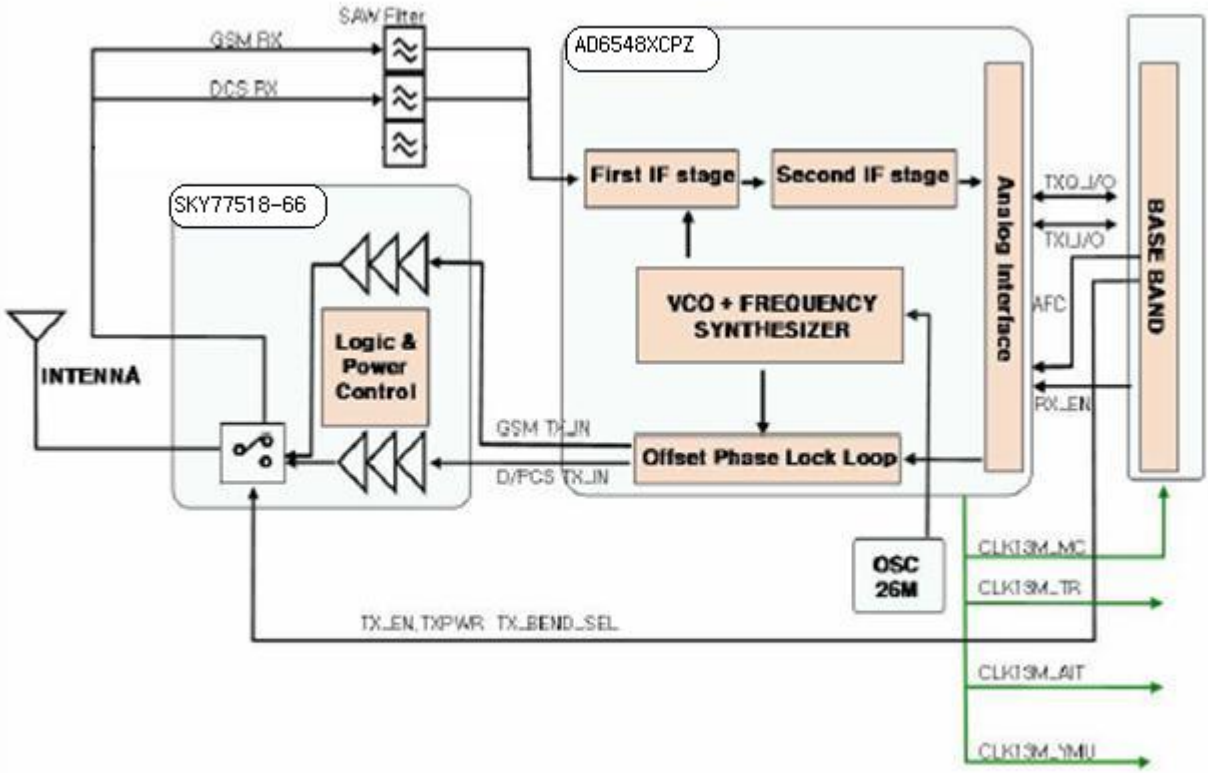
6. When downloading is finished successfully, there is a "All is well" message.

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

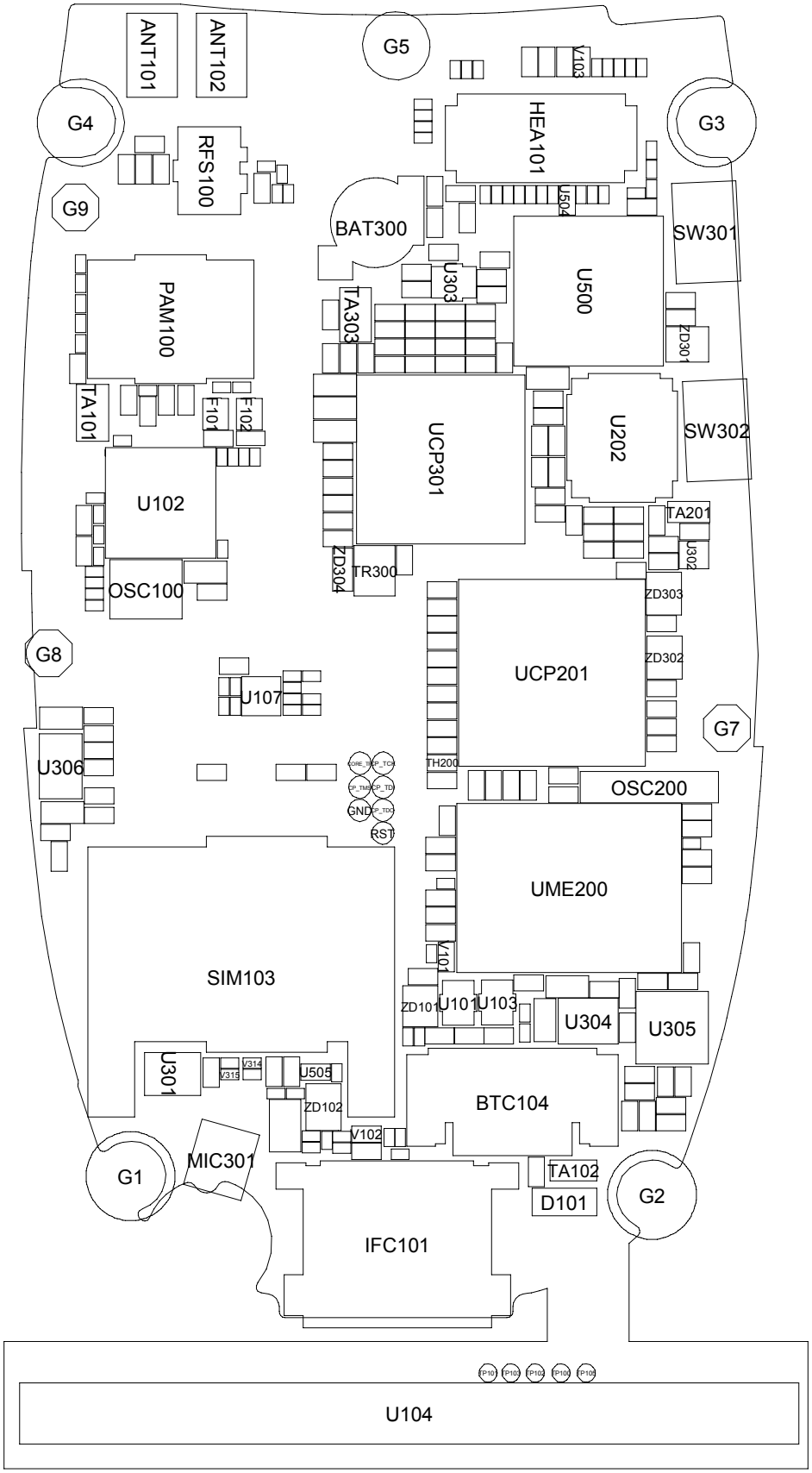
8. Confirm the downloaded version name and etc. :
***#1234#**
Full Reset :
***2767*3855#**

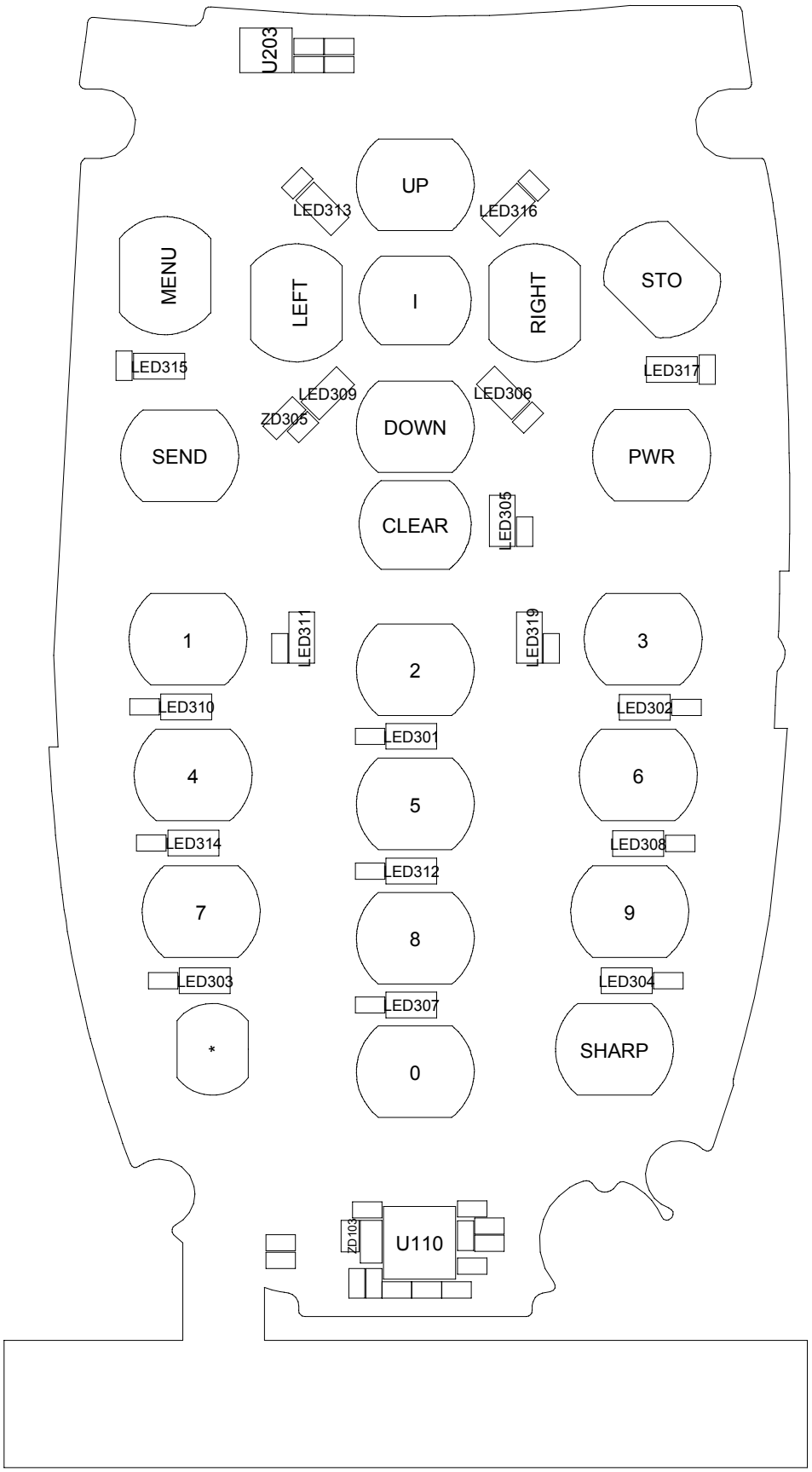
5. Block Diagrams





6. PCB Diagrams





7. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0403-001547	D101	DIODE-ZENER	SA
0406-001167	ZD302	DIODE-TVS	SA
0406-001167	ZD303	DIODE-TVS	SA
0406-001201	ZD304	DIODE-TVS	SA
0406-001201	ZD305	DIODE-TVS	SA
0406-001208	ZD102	DIODE-TVS	SA
0406-001219	ZD101	DIODE-TVS	SA
0406-001260	ZD301	DIODE-TVS	SA
0406-001267	ZD103	DIODE-TVS	SA
0504-000168	TR300	TR-DIGITAL	SA
0601-001819	LED301	LED	SA
0601-001819	LED302	LED	SA
0601-001819	LED303	LED	SA
0601-001819	LED304	LED	SA
0601-001819	LED305	LED	SA
0601-001819	LED306	LED	SA
0601-001819	LED307	LED	SA
0601-001819	LED308	LED	SA
0601-001819	LED309	LED	SA
0601-001819	LED310	LED	SA
0601-001819	LED311	LED	SA
0601-001819	LED312	LED	SA
0601-001819	LED313	LED	SA
0601-001819	LED314	LED	SA
0601-001819	LED315	LED	SA
0601-001819	LED316	LED	SA
0601-001819	LED317	LED	SA
0601-001819	LED319	LED	SA
0801-002529	U301	IC-CMOS LOGIC	SA
0801-003013	U107	IC-CMOS LOGIC	SA
1001-001394	U302	IC-ANALOG SWITCH	SA
1001-001453	U101	IC-ANALOG SWITCH	SA
1001-001453	U103	IC-ANALOG SWITCH	SA
1001-001453	U303	IC-ANALOG SWITCH	SA
1001-001459	U304	IC-ANALOG SWITCH	SA
1009-001020	U203	IC-HALL EFFECT S/W	SA
1108-000010	UME200	IC-MCP	SA

SEC CODE	Design LOC	Discription	STATUS
1201-002180	U305	IC-AUDIO AMP	SA
1201-002490	PAM100	IC-POWER AMP	SA
1203-003304	UCP301	IC-POWER SUPERVISOR	SA
1203-003663	U306	IC-BATTERY	SA
1204-001811	U202	IC-MELODY	SA
1204-002700	U110	IC-TUNER	SA
1205-003098	U102	IC-TRANSCEIVER	SA
1404-001221	TH200	THERMISTOR-NTC	SA
1405-001082	U505	VARISTOR	SA
1405-001082	V101	VARISTOR	SA
1405-001082	V102	VARISTOR	SA
1405-001082	V103	VARISTOR	SA
1405-001177	V314	VARISTOR	SA
1405-001177	V315	VARISTOR	SA
2007-000138	R349	R-CHIP	SA
2007-000140	R139	R-CHIP	SA
2007-000143	R233	R-CHIP	SA
2007-000143	R234	R-CHIP	SA
2007-000144	R301	R-CHIP	SA
2007-000148	R135	R-CHIP	SA
2007-000148	R358	R-CHIP	SA
2007-000148	R359	R-CHIP	SA
2007-000157	R108	R-CHIP	SA
2007-000157	R206	R-CHIP	SA
2007-000157	R209	R-CHIP	SA
2007-000157	R235	R-CHIP	SA
2007-000157	R328	R-CHIP	SA
2007-000157	R353	R-CHIP	SA
2007-000157	R354	R-CHIP	SA
2007-000157	R355	R-CHIP	SA
2007-000157	R362	R-CHIP	SA
2007-000159	R323	R-CHIP	SA
2007-000161	R330	R-CHIP	SA
2007-000161	R333	R-CHIP	SA
2007-000161	R340	R-CHIP	SA
2007-000161	R348	R-CHIP	SA
2007-000162	R121	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2007-000162	R202	R-CHIP	SA
2007-000162	R208	R-CHIP	SA
2007-000162	R324	R-CHIP	SA
2007-000162	R326	R-CHIP	SA
2007-000164	R211	R-CHIP	SA
2007-000171	R101	R-CHIP	SA
2007-000171	R122	R-CHIP	SA
2007-000171	R138	R-CHIP	SA
2007-000171	R214	R-CHIP	SA
2007-000171	R346	R-CHIP	SA
2007-000171	R350	R-CHIP	SA
2007-000171	R352	R-CHIP	SA
2007-000171	R363	R-CHIP	SA
2007-000172	R216	R-CHIP	SA
2007-000172	R217	R-CHIP	SA
2007-000173	R360	R-CHIP	SA
2007-000173	R361	R-CHIP	SA
2007-000775	R213	R-CHIP	SA
2007-000775	R215	R-CHIP	SA
2007-000775	R219	R-CHIP	SA
2007-000831	R356	R-CHIP	SA
2007-000831	R357	R-CHIP	SA
2007-001119	R337	R-CHIP	SA
2007-001244	R325	R-CHIP	SA
2007-001284	R201	R-CHIP	SA
2007-001284	R351	R-CHIP	SA
2007-001292	R302	R-CHIP	SA
2007-001292	R303	R-CHIP	SA
2007-001292	R306	R-CHIP	SA
2007-001292	R307	R-CHIP	SA
2007-001292	R309	R-CHIP	SA
2007-001292	R310	R-CHIP	SA
2007-001292	R311	R-CHIP	SA
2007-001292	R312	R-CHIP	SA
2007-001292	R313	R-CHIP	SA
2007-001292	R315	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2007-001292	R319	R-CHIP	SA
2007-001292	R320	R-CHIP	SA
2007-001325	R218	R-CHIP	SA
2007-007138	R327	R-CHIP	SA
2007-007142	R331	R-CHIP	SA
2007-007142	R332	R-CHIP	SA
2007-007142	R342	R-CHIP	SA
2007-007142	R347	R-CHIP	SA
2007-007197	R304	R-CHIP	SA
2007-007197	R305	R-CHIP	SA
2007-007197	R308	R-CHIP	SA
2007-007317	R336	R-CHIP	SA
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2007-007528	R338	R-CHIP	SA
2007-007528	R343	R-CHIP	SA
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2007-007573	R210	R-CHIP	SA
2007-007590	R204	R-CHIP	SA
2007-007741	R102	R-CHIP	SA
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2007-008055	R130	R-CHIP	SA
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2007-008419	R134	R-CHIP	SA

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2007-008587	R105	R-CHIP	SA
2007-008788	R114	R-CHIP	SA
2007-008788	R116	R-CHIP	SA
2007-009084	R104	R-CHIP	SA
2007-009084	R107	R-CHIP	SA
2007-009160	R329	R-CHIP	SA
2007-009170	R112	R-CHIP	SA
2203-000233	C163	C-CER,CHIP	SA
2203-000233	C178	C-CER,CHIP	SA
2203-000233	C227	C-CER,CHIP	SA
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2203-000254	C201	C-CER,CHIP	SA
2203-000254	C202	C-CER,CHIP	SA
2203-000254	C203	C-CER,CHIP	SA
2203-000254	C205	C-CER,CHIP	SA
2203-000254	C212	C-CER,CHIP	SA
2203-000254	C234	C-CER,CHIP	SA
2203-000254	C235	C-CER,CHIP	SA
2203-000254	C302	C-CER,CHIP	SA
2203-000254	C303	C-CER,CHIP	SA
2203-000386	C173	C-CER,CHIP	SA
2203-000386	C228	C-CER,CHIP	SA
2203-000386	C229	C-CER,CHIP	SA
2203-000438	C131	C-CER,CHIP	SA
2203-000438	C236	C-CER,CHIP	SA
2203-000627	C133	C-CER,CHIP	SNA
2203-000654	C232	C-CER,CHIP	SA
2203-000679	C211	C-CER,CHIP	SA
2203-000812	C119	C-CER,CHIP	SA
2203-000812	C122	C-CER,CHIP	SA
2203-000812	C123	C-CER,CHIP	SA
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2203-000812	C307	C-CER,CHIP	SA
2203-000812	C337	C-CER,CHIP	SA
2203-000812	C341	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-000995	C144	C-CER,CHIP	SA
2203-000995	C214	C-CER,CHIP	SA
2203-000995	C308	C-CER,CHIP	SA
2203-001405	C231	C-CER,CHIP	SA
2203-002709	C213	C-CER,CHIP	SA
2203-002759	C243	C-CER,CHIP	SA
2203-005234	C164	C-CER,CHIP	SA
2203-005344	C210	C-CER,CHIP	SA
2203-005344	C318	C-CER,CHIP	SA
2203-005482	C110	C-CER,CHIP	SA
2203-005482	C169	C-CER,CHIP	SA
2203-005482	C170	C-CER,CHIP	SA
2203-005482	C240	C-CER,CHIP	SA
2203-005682	C130	C-CER,CHIP	SA
2203-005682	C159	C-CER,CHIP	SA
2203-005683	C101	C-CER,CHIP	SA
2203-005683	C106	C-CER,CHIP	SA
2203-005683	C112	C-CER,CHIP	SA
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2203-005993	C328	C-CER,CHIP	SA
2203-005993	C330	C-CER,CHIP	SA
2203-005993	C335	C-CER,CHIP	SA
2203-005993	C340	C-CER,CHIP	SA
2203-006048	C172	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006048	C320	C-CER,CHIP	SA
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2203-006194	C161	C-CER,CHIP	SA
2203-006257	C305	C-CER,CHIP	SA
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2203-006260	C125	C-CER,CHIP	SA
2203-006260	C206	C-CER,CHIP	SA
2203-006260	C207	C-CER,CHIP	SA
2203-006307	C175	C-CER,CHIP	SA
2203-006318	C105	C-CER,CHIP	SA
2203-006324	C309	C-CER,CHIP	SA
2203-006348	C323	C-CER,CHIP	SA
2203-006423	C103	C-CER,CHIP	SA
2203-006423	C127	C-CER,CHIP	SA
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2203-006423	C129	C-CER,CHIP	SA
2203-006423	C241	C-CER,CHIP	SA
2203-006462	C126	C-CER,CHIP	SA
2203-006556	C124	C-CER,CHIP	SA
2203-006556	C134	C-CER,CHIP	SA
2203-006556	C135	C-CER,CHIP	SA
2203-006556	C136	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006556	C139	C-CER,CHIP	SA
2203-006556	C140	C-CER,CHIP	SA
2203-006556	C141	C-CER,CHIP	SA
2203-006556	C142	C-CER,CHIP	SA
2203-006556	C143	C-CER,CHIP	SA
2203-006556	C146	C-CER,CHIP	SA
2203-006556	C147	C-CER,CHIP	SA
2203-006556	C148	C-CER,CHIP	SA
2203-006556	C149	C-CER,CHIP	SA
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2203-006556	C151	C-CER,CHIP	SA
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2203-006556	C153	C-CER,CHIP	SA
2203-006556	C154	C-CER,CHIP	SA
2203-006556	C155	C-CER,CHIP	SA
2203-006556	C156	C-CER,CHIP	SA
2203-006556	C157	C-CER,CHIP	SA
2203-006556	C158	C-CER,CHIP	SA
2203-006562	C167	C-CER,CHIP	SA
2203-006562	C168	C-CER,CHIP	SA
2203-006562	C171	C-CER,CHIP	SA
2203-006562	C176	C-CER,CHIP	SA
2203-006562	C177	C-CER,CHIP	SA
2203-006562	C239	C-CER,CHIP	SA
2203-006562	C242	C-CER,CHIP	SA
2203-006562	C311	C-CER,CHIP	SA
2203-006562	C312	C-CER,CHIP	SA
2203-006562	C313	C-CER,CHIP	SA
2203-006562	C315	C-CER,CHIP	SA
2203-006562	C319	C-CER,CHIP	SA
2203-006562	C321	C-CER,CHIP	SA
2203-006562	C324	C-CER,CHIP	SA
2203-006562	C325	C-CER,CHIP	SA
2203-006562	C333	C-CER,CHIP	SA
2203-006562	C334	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006562	C336	C-CER,CHIP	SA
2203-006562	C338	C-CER,CHIP	SA
2203-006562	C339	C-CER,CHIP	SA
2203-006562	C343	C-CER,CHIP	SA
2203-006626	C115	C-CER,CHIP	SA
2203-006648	C166	C-CER,CHIP	SA
2203-006824	C237	C-CER,CHIP	SA
2203-006824	C314	C-CER,CHIP	SA
2203-006824	C316	C-CER,CHIP	SA
2203-006824	C322	C-CER,CHIP	SA
2203-006839	C165	C-CER,CHIP	SA
2203-006890	C327	C-CER,CHIP	SA
2203-006890	C329	C-CER,CHIP	SA
2203-006979	C116	C-CER,CHIP	SA
2203-006979	C162	C-CER,CHIP	SA
2404-001339	TA201	C-TA,CHIP	SA
2404-001374	TA101	C-TA,CHIP	SA
2404-001381	TA102	C-TA,CHIP	SA
2404-001414	TA303	C-TA,CHIP	SA
2703-001178	L112	INDUCTOR-SMD	SA
2703-001180	L108	INDUCTOR-SMD	SA
2703-001236	L107	INDUCTOR-SMD	SA
2703-001722	L104	INDUCTOR-SMD	SA
2703-001851	L114	INDUCTOR-SMD	SA
2703-002484	L105	INDUCTOR-SMD	SA
2703-002858	L106	INDUCTOR-SMD	SA
2703-002906	L100	INDUCTOR-SMD	SA
2703-002906	L111	INDUCTOR-SMD	SA
2801-003856	OSC200	CRYSTAL-SMD	SA
2801-004587	OSC100	CRYSTAL-SMD	SA
2904-001592	F101	FILTER-SAW	SA
2904-001599	F102	FILTER-SAW	SA
3301-001342	L200	BEAD-SMD	SA
3301-001659	R133	BEAD-SMD	SA
3301-001729	L101	BEAD-SMD	SA
3301-001729	L102	BEAD-SMD	SA
3301-001729	L103	BEAD-SMD	SA

SEC CODE	Design LOC	Discription	STATUS
3301-001729	L109	BEAD-SMD	SA
3301-001729	L110	BEAD-SMD	SA
3404-001152	SW301	SWITCH-TACT	SA
3404-001152	SW302	SWITCH-TACT	SA
3705-001358	RFS100	CONNECTOR-COAXIAL	SA
3709-001384	SIM103	CONNECTOR-CARD EDGE	SA
3710-002442	IFC101	SOCKET-INTERFACE	SA
3711-006141	HEA101	HEADER-BOARD TO BOARD	SA
3711-006228	BTC104	HEADER-BATTERY	SA
4302-001130	BAT300	BATTERY-LI(2ND)	SA
GH09-00036A	UCP201	IC MICOM-SGHX480	SA
GH13-00050A	U500	IC ASIC-SGHC510	SA
GH71-06338A	ANT101	NPR-BRACKET ANT CONTACT	SA
GH71-06338A	ANT102	NPR-BRACKET ANT CONTACT	SA

8. Reference data

8-1. 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

9. Safety Precautions

9-1. 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 disassembing 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.

9-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easilly 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.

10. Product Function

Main Function

- SDN(Service Dialling Numbers)
- Use the SIM service
- Read SMS or MMS message, Send SMS or MMS message, SOS message
- Web browser
- FM radio
- Voice memo
- Camera

SAMSUNG ELECTRONICS

GSPN (Global Service Partner Network)

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2007. 05. Rev.1.0